DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	1	374
				2	FORREST CITY-EAST (F)			

"A FULLY CONTROLLED ACCESS FACILITY"

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

CONSTRUCTION PLANS

FORREST CITY-EAST (F)

ST. FRANCIS COUNTY

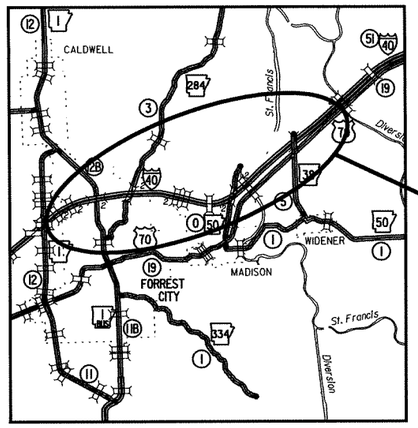
ROUTE 40 SECTION 51

F.A.P. NHPP-STPR-40-5(153)240 & 9050

JOB BB0105

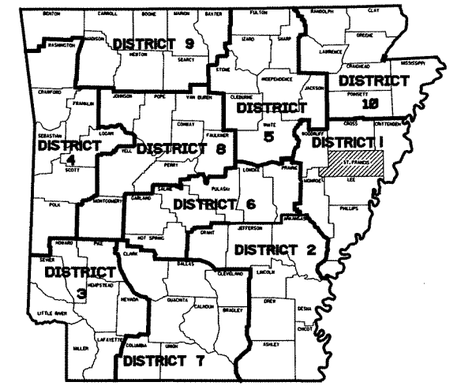
NOT TO SCALE

JOB BB0105



PROJECT LOCATION

VICINITY MAP

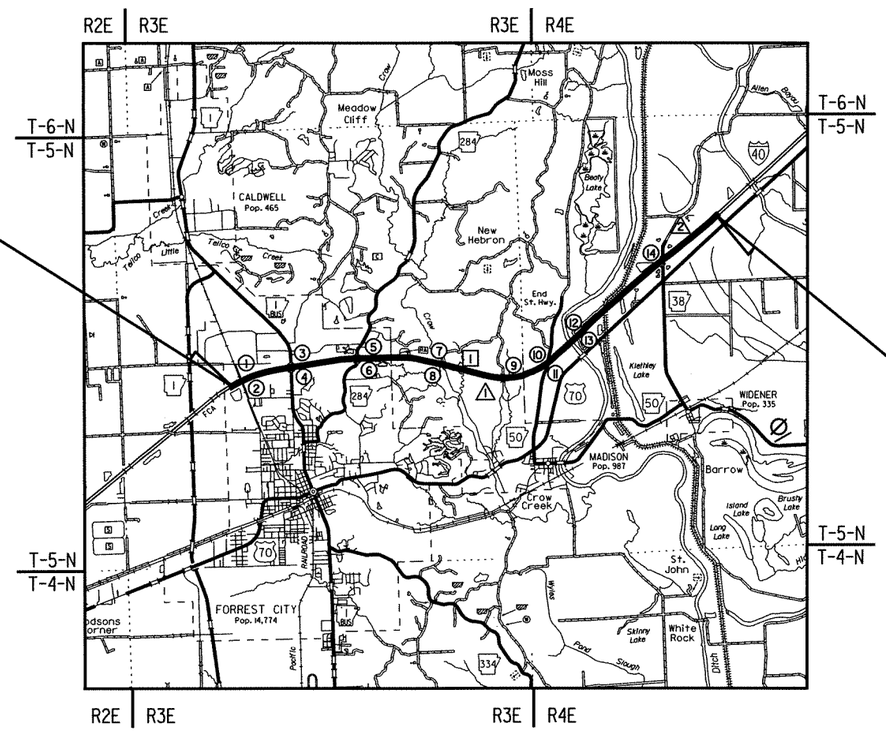


ARK. HWY. DIST. NO. 1

STA. 4050+67.90 ℄ MEDIAN I-40
BEGIN JOB BB0105
LOG MILE 239.82

SEE SHEET 2
FOR BRIDGE STRUCTURES AND
STRUCTURES OVER 20'-0" SPAN

TOTAL LENGTH OF EXCEPTIONS = 2115.48 FT.
(COMPUTED ALONG ℄ MEDIAN I-40)



N

STA. 4491+00.00 ℄ MEDIAN I-40
END JOB BB0105
LOG MILE 248.10

DESIGN TRAFFIC DATA

DESIGN YEAR	2032
2012 ADT	32000
2032 ADT	42000
2032 DHV	4620
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	56%
DESIGN SPEED	70 MPH

EQUATIONS:

△1 STA. 4258+72.90 BK.=
STA. 4261+96.60 AHD.

△2 STA. 4467+64.00 BK.=
STA. 4467+70.00 AHD.

LENGTH COMPUTED ALONG ℄ MEDIAN I-40

GROSS LENGTH OF PROJECT	43702.40	FEET OR	8.277	MILES
NET LENGTH OF ROADWAY	41586.92	FEET OR	7.876	MILES
NET LENGTH OF BRIDGES	0.00	FEET OR	0.00	MILES
NET LENGTH OF PROJECT	41586.92	FEET OR	7.876	MILES

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 35°01'59"	N 35°01'57"	N 35°04'19"
LONGITUDE	W 90°48'18"	W 90°44'11"	W 90°39'56"

P.E. JOB BB0105
NON-PART.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
3/5/13

BRIDGE STRUCTURES (EXCEPTIONS TO JOB BB0105)

(1) STA. 4058+06.90 BRIDGE END
BRIDGE NO. A6522
285'-0" CONT. COMP. W-BEAM UNIT
40'-0" CLEAR ROADWAY
287'-2¾" BRIDGE LENGTH
STA. 4060+94.13 BRIDGE END

(2) STA. 4058+01.90 BRIDGE END
BRIDGE NO. B6522
285'-0" CONT. COMP. W-BEAM UNIT
40'-0" CLEAR ROADWAY
287'-2¾" BRIDGE LENGTH
STA. 4060+89.13 BRIDGE END

(3) STA. 4098+87.33 BRIDGE END
BRIDGE NO. A6523
229'-0" CONT. COMP. W-BEAM UNIT
48'-0" CLEAR ROADWAY
231'-2 3/16" BRIDGE LENGTH
STA. 4101+18.51 BRIDGE END

(4) STA. 4098+78.62 BRIDGE END
BRIDGE NO. B6523
229'-0" CONT. COMP. W-BEAM UNIT
48'-0" CLEAR ROADWAY
231'-2 3/16" BRIDGE LENGTH
STA. 4101+09.80 BRIDGE END

(5)&(6) STA. 4152+92.60 BRIDGE END
BRIDGE NOS. A3620 & B3620
BRIDGE LENGTH= 113'-1"
PRESTRESSED CONC. BEAM SPANS (37'-37'-37')
40'-0" CLEAR ROADWAY
113.08' BRIDGE LENGTH
STA. 4154+05.68 BRIDGE END

(7)&(8) STA. 4218+98.50 BRIDGE END
BRIDGE NOS. A3621 & B3621
BRIDGE LENGTH= 257'-2"
WELDED PLATE GIRDER SPANS (85'-85'-85')
40'-0" CLEAR ROADWAY
257.17' BRIDGE LENGTH
STA. 4221+55.67 BRIDGE END

(9) STA. 1+39.41 BRIDGE END
BRIDGE NO. 03623
BRIDGE LENGTH= 226'-1"
PRESTRESSED CONC. BEAM SPANS (44'-66'-66'-48')
20'-0" CLEAR ROADWAY
226.08' BRIDGE LENGTH
STA. 3+65.49 BRIDGE END

(10) STA. 4312+53.91 BRIDGE END
BRIDGE NO. A3624
BRIDGE LENGTH= 170'-11½"
PRESTRESSED CONC. BEAM SPANS (60'-54'-54')
40'-0" CLEAR ROADWAY
STA. 4314+24.87 CHORD =
MED. STA. 4314+26.13

(11) STA. 4311+66.66 BRIDGE END
BRIDGE NO. B3624
BRIDGE LENGTH= 175'-11½"
PRESTRESSED CONC. BEAM SPANS (65'-54'-54')
40'-0" CLEAR ROADWAY
STA. 4313+42.62 CHORD =
MED. STA. 4313+41.44

(12)&(13) STA. 4335+18.91 BRIDGE END
BRIDGE NOS. A3625 & B3625
BRIDGE LENGTH=1027'-2¼"
COMPOSITE WELDED PLATE GIRDER AND BEAM SPANS
40'-0" CLEAR ROADWAY
1027.18' BRIDGE LENGTH
STA. 4345+46.09 BRIDGE END

BRIDGE CONSTRUCTION - HWY. 38

(14) STA. 211+14.65 BRIDGE END
BRIDGE NO. 07233
360'-0" CONT. COMP. W-BEAM UNIT
30'-0" CLEAR ROADWAY
362.70' BRIDGE LENGTH
36°54' RT. FWD. SKEW
STA. 214+77.35 BRIDGE END

STRUCTURES OVER 20'-0" SPAN (EXCEPTION TO JOB BB0105)

[1] STA. 4234+50 IN PLACE
DBL. 10' x 10' x 346' R.C. BOX CULV'T.
(30° RT. FWD. SKEW)
SPAN = 26.18'
RETAIN

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

STRUCTURES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	3	374

2 INDEX OF SHEETS

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NOTE: CROSS SECTIONS FOR HWY. 38 BRIDGE REPLACEMENT ARE AVAILABLE AND MAY BE HAD UPON REQUEST. THERE ARE NO CROSS SECTIONS FOR I-40 WORK IN THIS PROJECT.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/27/13

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GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - TRAINING PROGRAM - JOB BB0105
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-2	MANUAL FOR ASSESSING SAFETY HARDWARE (MASH)
102-1	BIDDING REQUIREMENTS AND CONDITIONS
103-1	DETERMINATION OF DBE PARTICIPATION
105-1	CONSTRUCTION CONTROL MARKINGS
105-2	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
105-3	CONTROL OF WORK
107-1	WORKER VISIBILITY
108-1	LIQUIDATED DAMAGES
110-1	PROTECTION OF WATER QUALITY AND WETLANDS
303-1	AGGREGATE BASE COURSE
404-1	PRODUCTION VERIFICATION OF ASPHALT CONCRETE HOT MIX
404-2	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
409-1	MINERAL AGGREGATES
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411-1	ASPHALT CONCRETE COLD PLANT MIX
501-1	INSTALLATION OF TIE BARS
507-1	INSTALLATION OF DOWEL BARS AND TIE BARS
600-1	WATER FOR VEGETATION
603-1	MAINTENANCE OF TRAFFIC
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606-1	PIPE CULVERTS FOR SIDE DRAINS
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718-2	REFLECTORIZED PAINT PAVEMENT MARKINGS
719-2	THERMOPLASTIC PAVEMENT MARKING MATERIAL
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804-1	INSTALLATION OF DOWEL BARS AND TIE BARS
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JOB BB0105	ASPHALT CONCRETE HOT MIX SURFACE COURSE SURFACE TOLERANCE AND INCENTIVE PAYMENTS
JOB BB0105	ASPHALT CURB
JOB BB0105	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB BB0105	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB BB0105	CONCRETE DITCH PAVING
JOB BB0105	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB BB0105	DRIVEN STEEL PILING BY METHOD B
JOB BB0105	EXTENSION FOR PIPE CULVERTS
JOB BB0105	GEOSYNTHETIC INTERNAL REINFORCED EMBANKMENT CONSTRUCTION
JOB BB0105	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB BB0105	HIGH PERFORMANCE PAVEMENT MARKING
JOB BB0105	INTERNET BIDDING
JOB BB0105	MAINTENANCE OF TRAFFIC
JOB BB0105	MOBILE SPEED NOTIFICATION SYSTEM
JOB BB0105	MODULAR GLARE SHIELD
JOB BB0105	MOTORIST ASSISTANCE PATROL
JOB BB0105	NESTING SITES OF MIGRATORY BIRDS
JOB BB0105	PARTNERING REQUIREMENTS
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JOB BB0105	PORTABLE CONSTRUCTION LIGHTING
JOB BB0105	PROSECUTION AND PROGRESS
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JOB BB0105	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIERS
JOB BB0105	REMOVAL AND DISPOSAL OF OVERHEAD SIGN STRUCTURE
JOB BB0105	REMOVING EXISTING PORTLAND CEMENT CONCRETE PAVEMENT
JOB BB0105	ROADWAY CONSTRUCTION CONTROL
JOB BB0105	RUMBLE STRIP REMOVAL
JOB BB0105	SCARIFYING CONCRETE PAVEMENT
JOB BB0105	SEQUENCE OF CONSTRUCTION
JOB BB0105	SHORING
JOB BB0105	SILICONE JOINT SEALANT
JOB BB0105	SIGN PANEL MATERIALS AND FABRICATION
JOB BB0105	SITE USE (A+C METHOD)
JOB BB0105	SOIL STABILIZATION
JOB BB0105	SPECIAL SAFETY REQUIREMENTS
JOB BB0105	SPECIAL SAFETY REQUIREMENTS FOR OVERHEAD SIGNS
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JOB BB0105	STEEL SIGN STRUCTURES
JOB BB0105	STORM WATER POLLUTION PREVENTION PLAN
JOB BB0105	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB BB0105	TEMPORARY IMPACT ATTENUATION BARRIER
JOB BB0105	TEMPORARY RELOCATION OF EXISTING SIGNS
JOB BB0105	TEXTURED COATING FINISH
JOB BB0105	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB BB0105	TRAFFIC CONTROL SUPERVISOR
JOB BB0105	UTILITY ADJUSTMENTS
JOB BB0105	VALUE ENGINEERING
JOB BB0105	VERY EARLY STRENGTH CONCRETE
JOB BB0105	WARM MIX ASPHALT
JOB BB0105	WIRE FENCE (TYPE A)
JOB BB0105	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS
JOB BB0105	WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS
JOB BB0105	WRECKER SERVICE
JOB BB0105	WRSF TRAINING WORKSHOP

GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
5. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
6. THE CONTRACTOR SHALL CONTACT ALL FIBER OPTIC COMPANIES INVOLVED ON THIS PROJECT AT LEAST 5 WORKING DAYS BEFORE CONSTRUCTION, INCLUDING REMOVING AND INSTALLING ANY FENCING, AND TAKE EVERY PRECAUTION NECESSARY TO AVOID CONFLICT WITH THE FIBER OPTIC CABLES. THE CONTRACTOR SHALL TELEPHONE ARKANSAS ONE-CALL SYSTEM AT 800-482-8998 TO DETERMINE THE LOCATION OF THE BURIED FIBER OPTIC CABLES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCES MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
9. THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT - REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2003, FOR PERMIT REQUIREMENTS.
10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 4/9/13

GOV. SPECS. & GEN. NOTES

DATE REVISED	DATE PLANED	DATE REVISED	DATE PLANED
4/9/13			

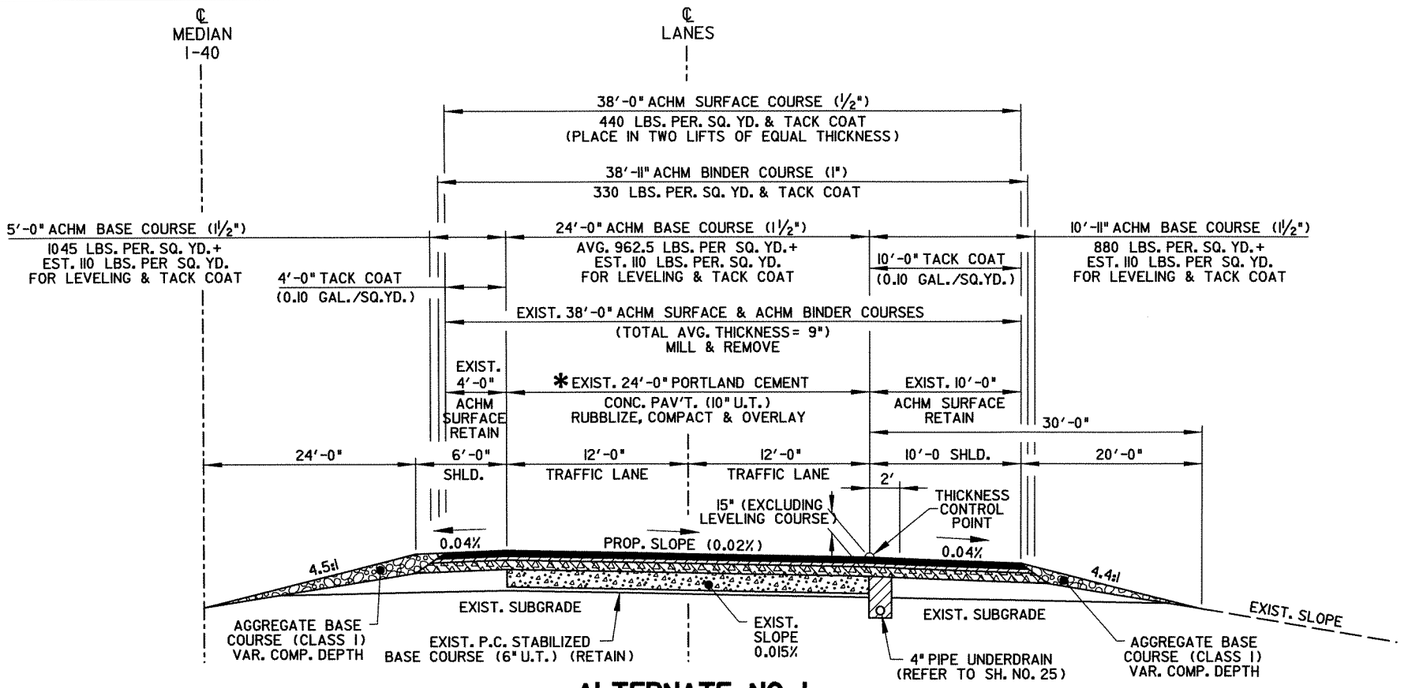
FEDERAL DISTRICT	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.		4	374

JOB NO. BB0105

GOV. SPECS. & GEN. NOTES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	5	374

(2) TYPICAL SECTIONS OF IMPROVEMENT



ALTERNATE NO. 1
RUBBLIZE & OVERLAY
TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

* EXISTING 24'-0" P.C. CONCRETE PAV'T. (10" U.T.) HAS BEEN BROKEN & SEATED IN PREVIOUS CONTRACT.

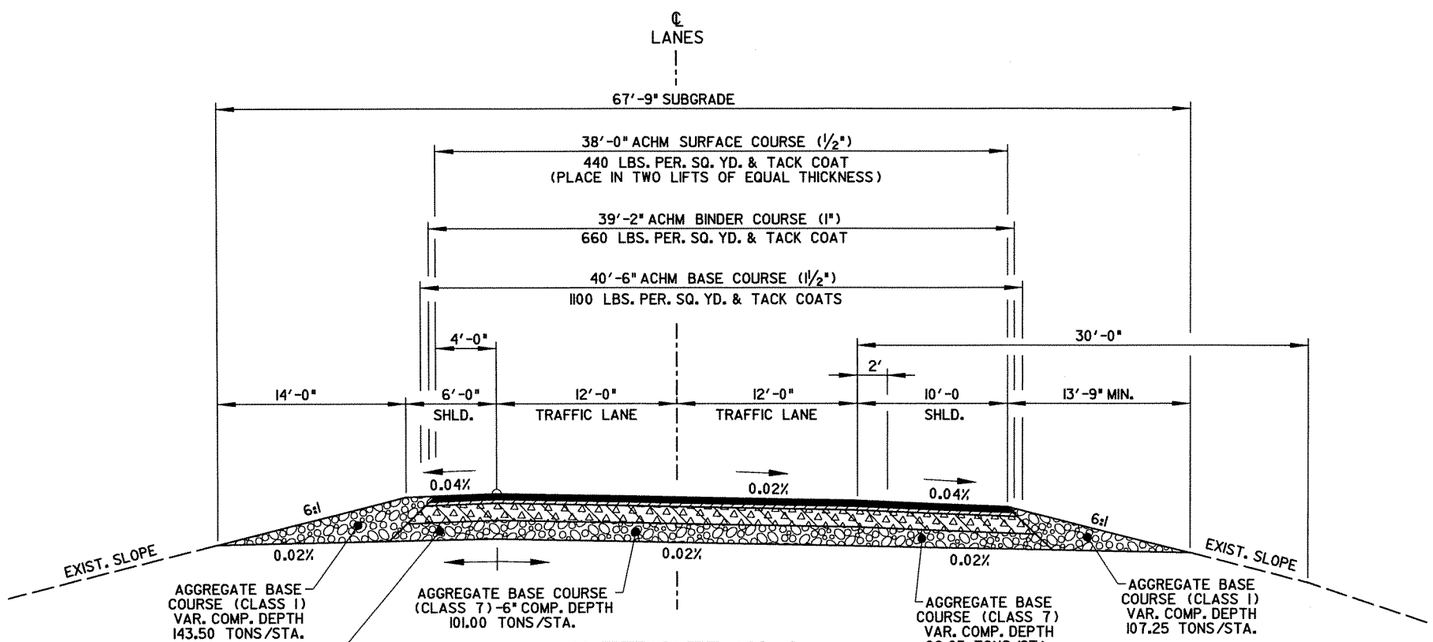
NOTES:

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

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

(3) AGGREGATE BASE COURSE (CLASS 1) SHALL BE UNIFORMLY COMPACTED, STABLE, AND FREE OF SEGREGATED AREAS. THE DENSITY REQUIREMENTS OF SECTION 303 OF THE AHTD STD. SPECS. ARE WAIVED.

(4) THE THICKNESS OF AGGREGATE BASE COURSE (CLASS 7) 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.



ALTERNATE NO. 1
FULL-DEPTH RECONSTRUCTION
TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

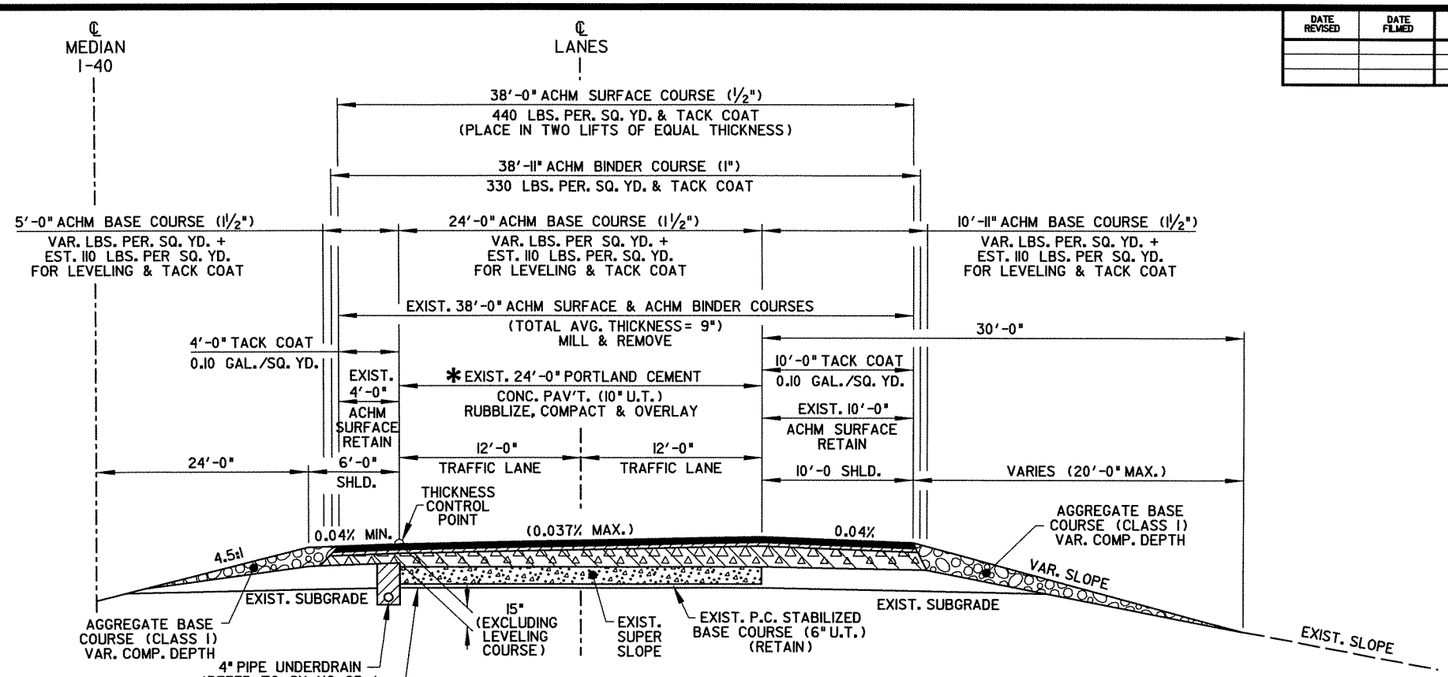
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

TYPICAL SECTIONS OF IMPROVEMENT

bb0105 typ. sections.dgn 2/8/2013 10:07:33 AM

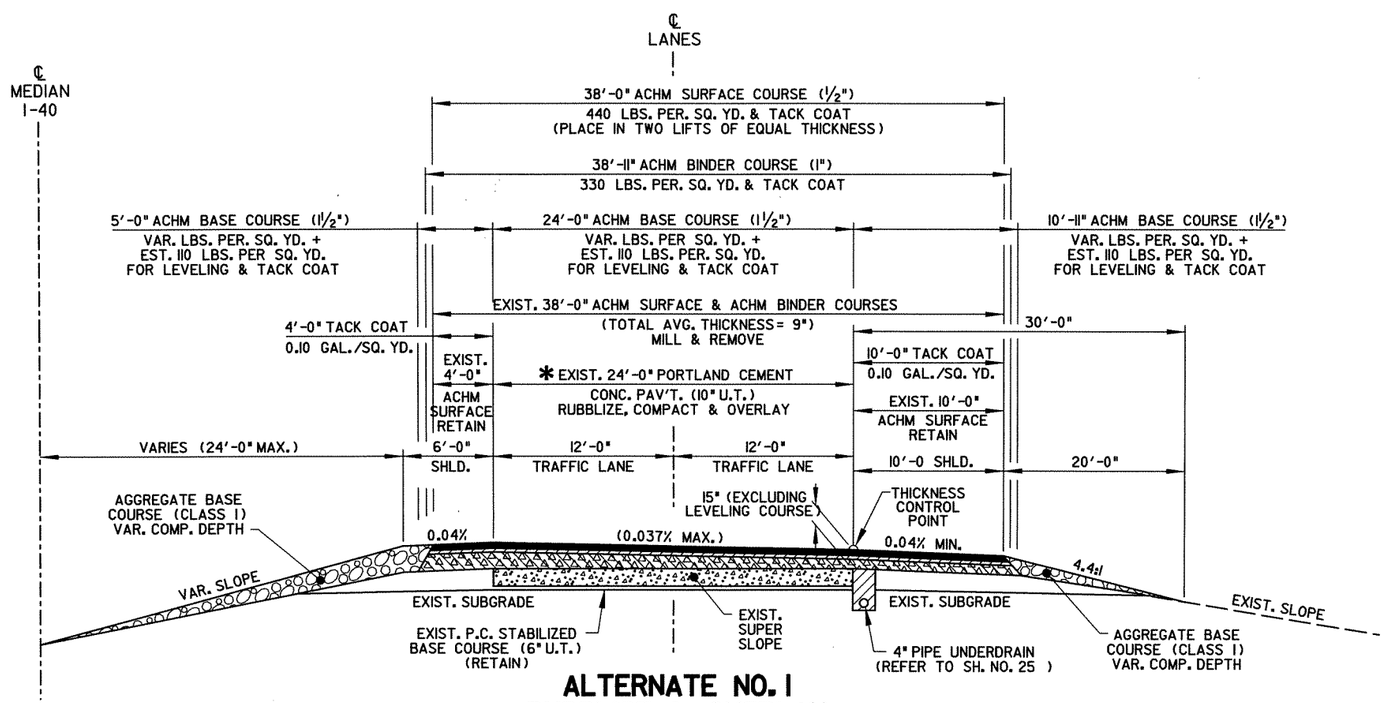
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	6	374

(2) TYPICAL SECTIONS OF IMPROVEMENT



ALTERNATE NO. 1
RUBBLIZE & OVERLAY
SUPERELEVATED CURVE TO LEFT
(SHOWN IN DIRECTION OF TRAFFIC)

* EXISTING 24'-0" P.C. CONCRETE PAV'T. (10" U.T.) HAS BEEN BROKEN & SEATED IN PREVIOUS CONTRACT.



ALTERNATE NO. 1
RUBBLIZE & OVERLAY
SUPERELEVATED CURVE TO RIGHT
(SHOWN IN DIRECTION OF TRAFFIC)

* EXISTING 24'-0" P.C. CONCRETE PAV'T. (10" U.T.) HAS BEEN BROKEN & SEATED IN PREVIOUS CONTRACT.

NOTES:

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

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

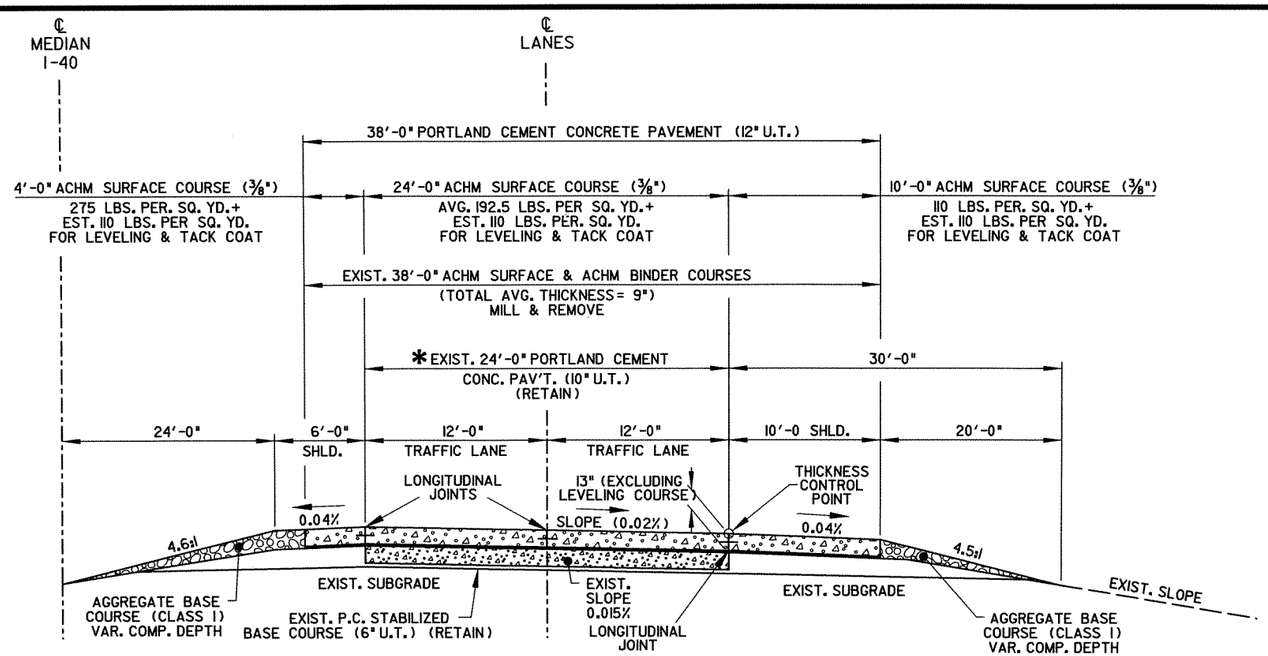
(3) AGGREGATE BASE COURSE (CLASS I) SHALL BE UNIFORMLY COMPACTED, STABLE, AND FREE OF SEGREGATED AREAS. THE DENSITY REQUIREMENTS OF SECTION 303 OF THE AHTD STD. SPECS. ARE WAIVED.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	7	374

(2) TYPICAL SECTIONS OF IMPROVEMENT



ALTERNATE NO. 2
CONCRETE OVERLAY
TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

* EXISTING 24'-0" P.C. CONCRETE PAV'T. (10" U.T.) HAS BEEN BROKEN & SEATED IN PREVIOUS CONTRACT.

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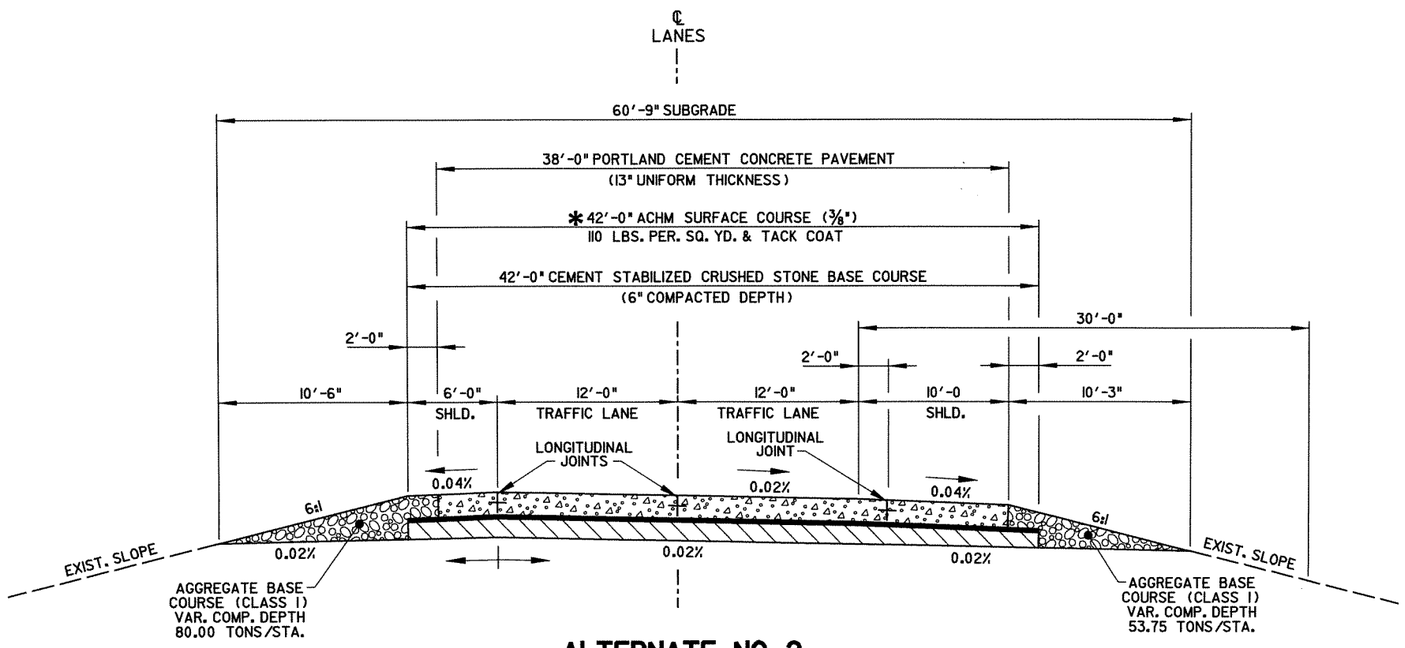


ALTERNATE NO. 2
FULL-DEPTH RECONSTRUCTION
TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

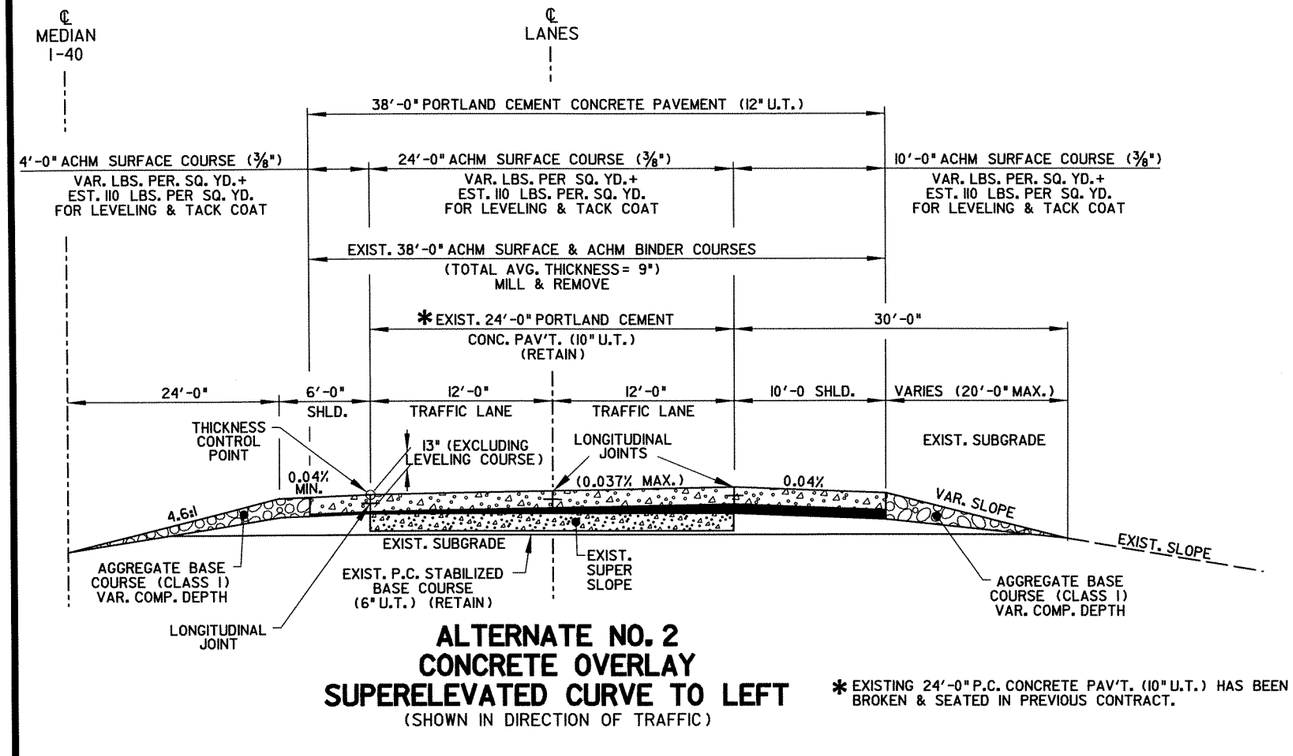
* DENSITY REQUIREMENTS WAIVED

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/63

TYPICAL SECTIONS OF IMPROVEMENT

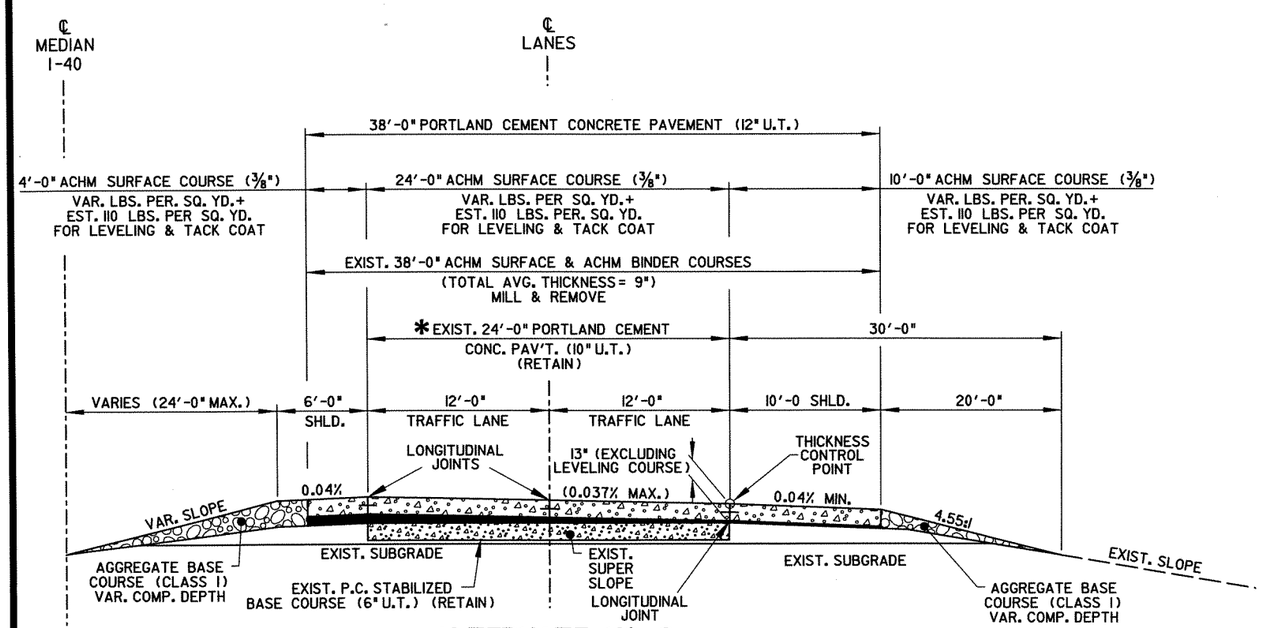
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	8	374

(2) TYPICAL SECTIONS OF IMPROVEMENT



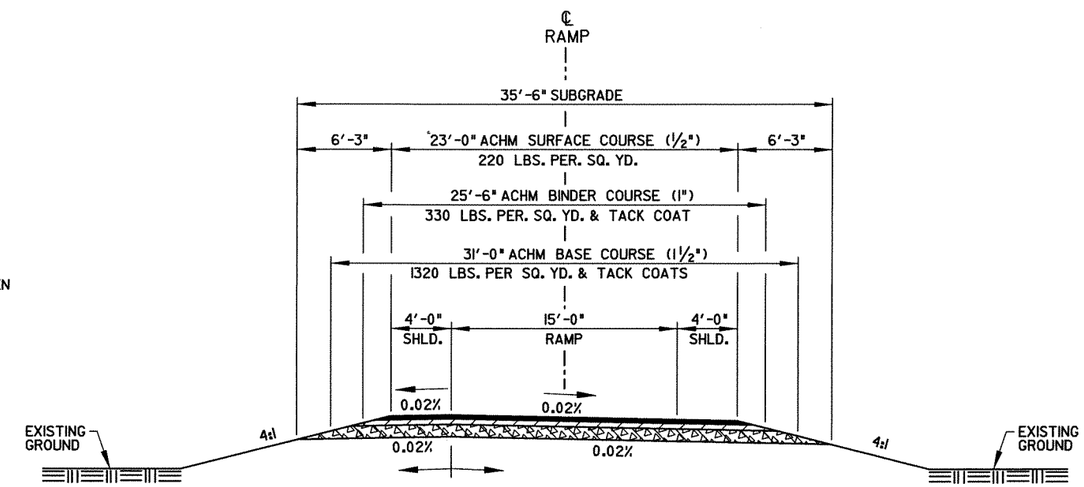
ALTERNATE NO. 2
CONCRETE OVERLAY
SUPERELEVATED CURVE TO LEFT
(SHOWN IN DIRECTION OF TRAFFIC)

* EXISTING 24'-0" P.C. CONCRETE PAV'T. (10" U.T.) HAS BEEN BROKEN & SEATED IN PREVIOUS CONTRACT.



ALTERNATE NO. 2
CONCRETE OVERLAY
SUPERELEVATED CURVE TO RIGHT
(SHOWN IN DIRECTION OF TRAFFIC)

* EXISTING 24'-0" P.C. CONCRETE PAV'T. (10" U.T.) HAS BEEN BROKEN & SEATED IN PREVIOUS CONTRACT.



ALTERNATE NO.1 & NO.2
MAIN LANE CROSSOVER RAMPS
& TEMP. INTERCHANGE RAMPS
FOR MAINTENANCE OF TRAFFIC

NOTES:

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

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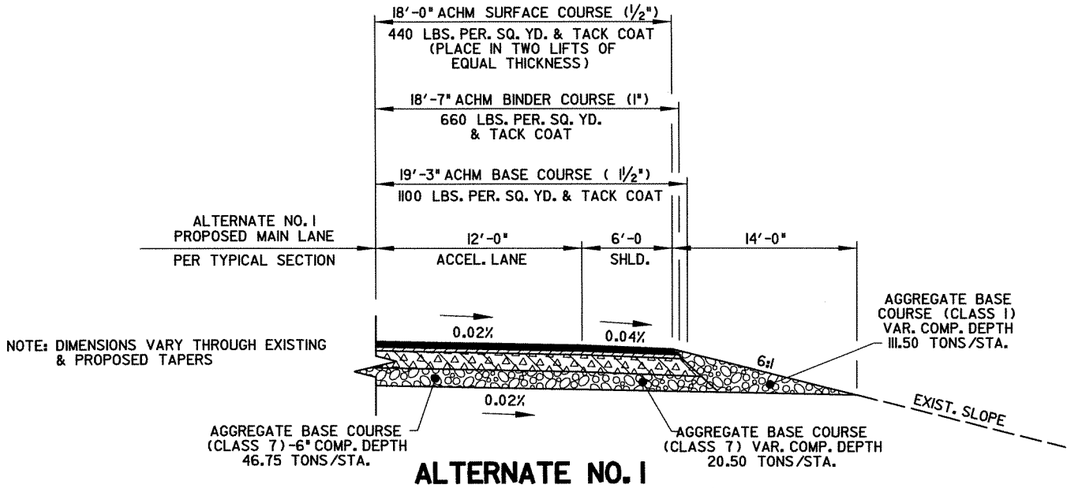
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

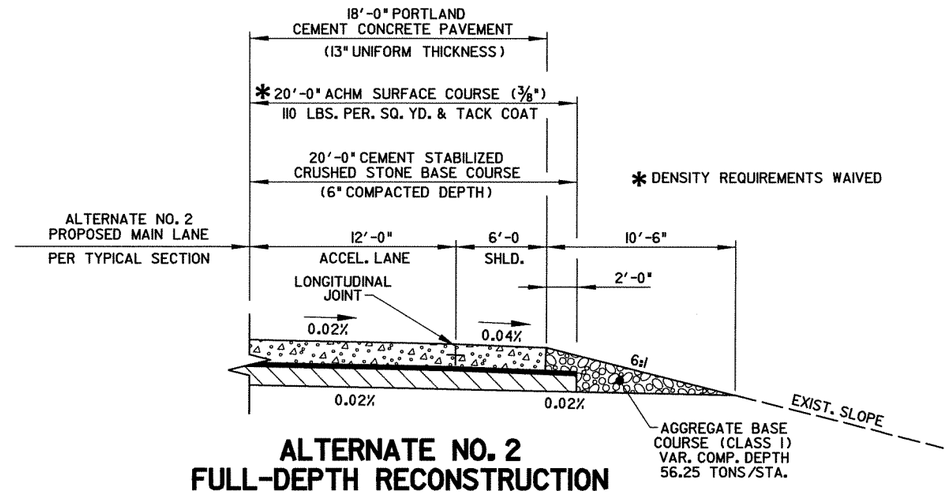
TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	9	374

② TYPICAL SECTIONS OF IMPROVEMENT



ALTERNATE NO. 1
FULL-DEPTH RECONSTRUCTION
ACCELERATION LANE
(SHOWN IN DIRECTION OF TRAFFIC)



ALTERNATE NO. 2
FULL-DEPTH RECONSTRUCTION
ACCELERATION LANE
(SHOWN IN DIRECTION OF TRAFFIC)

NOTES:

① THE FINAL 2" OF ACHM SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

② ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

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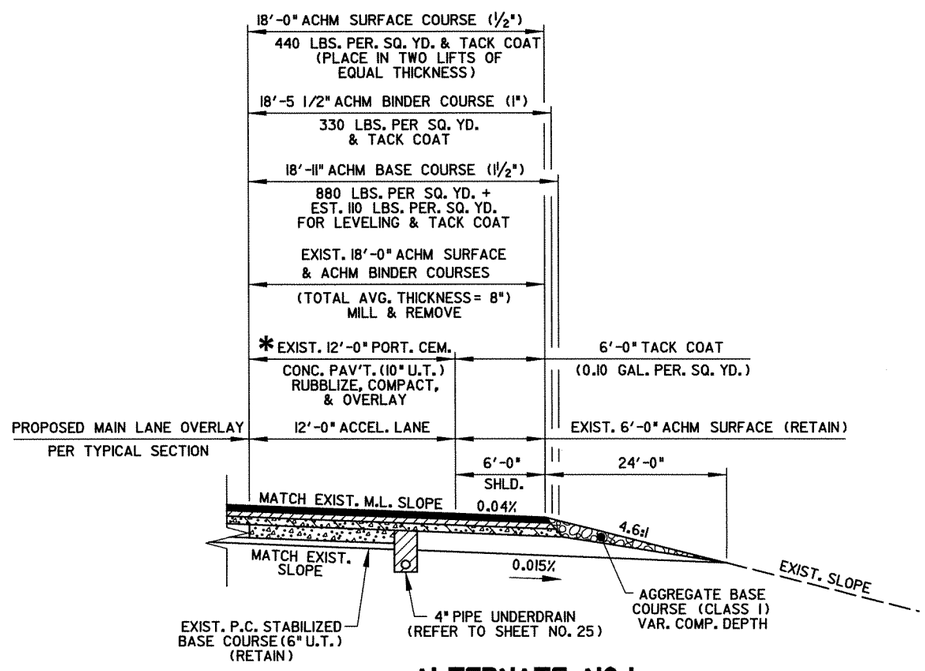
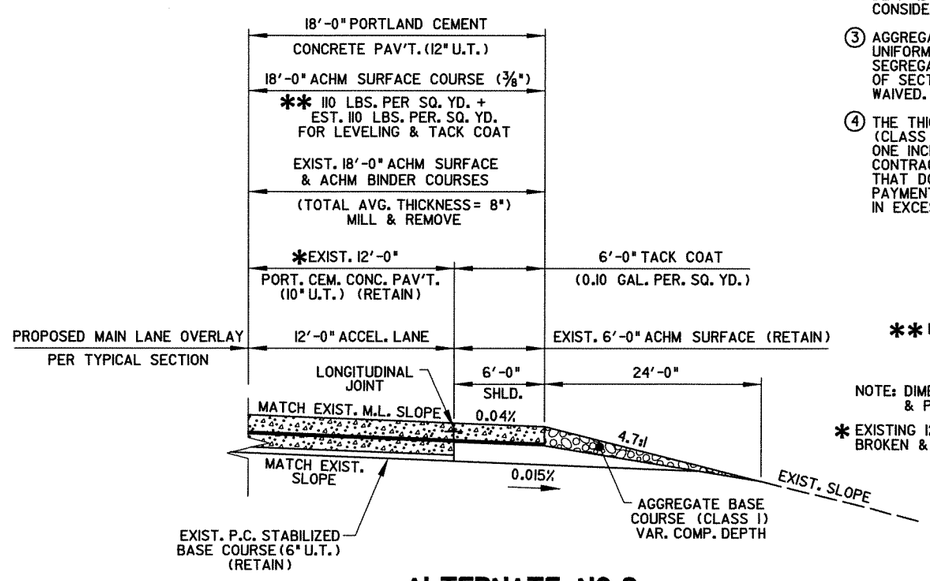


NOTE: DIMENSIONS VARY THROUGH EXISTING & PROPOSED TAPERS

* EXISTING 12'-0" P.C. CONCRETE PAV'T. (10" U.T.) HAS BEEN BROKEN & SEATED IN PREVIOUS CONTRACT.

ALTERNATE NO.1
RUBBLIZE & OVERLAY
ACCELERATION LANE



** DENSITY REQUIREMENTS WAIVED

NOTE: DIMENSIONS VARY THROUGH EXISTING & PROPOSED TAPERS

* EXISTING 12'-0" P.C. CONCRETE PAV'T. (10" U.T.) HAS BEEN BROKEN & SEATED IN PREVIOUS CONTRACT.

ALTERNATE NO.2
CONCRETE OVERLAY
ACCELERATION LANE

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/6/13

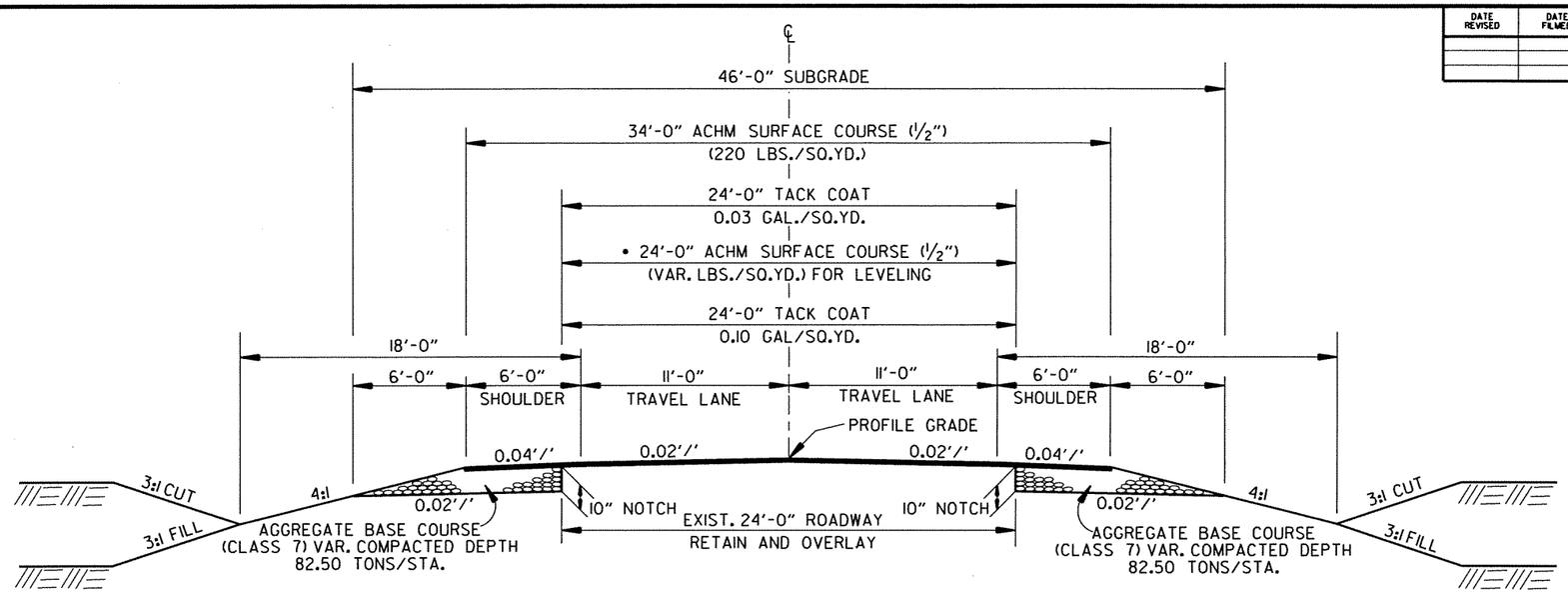
TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	10	374

(2) TYPICAL SECTIONS OF IMPROVEMENT

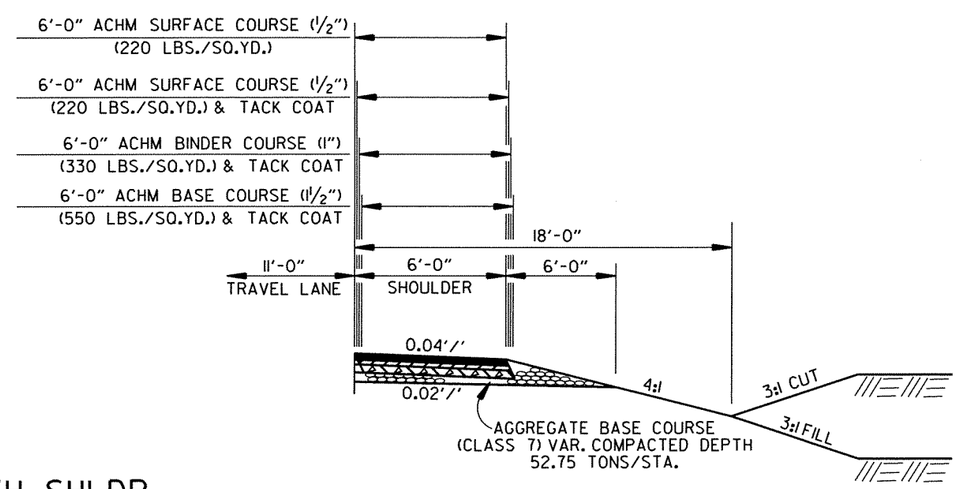
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

2-28-13



• TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

NOTCH AND WIDEN TWO LANE SECTION
HWY. 38
STA. 201+00 TO STA. 206+50
STA. 219+00 TO STA. 225+00



FULL DEPTH SHLDR.
HWY. 38
RAMP 2 RADIUS
RAMP 4 RADIUS

NOTES:

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

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

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

TYPICAL SECTIONS OF IMPROVEMENT

rbb0105typdet.dgn 11/7/12 typical sections of improvement

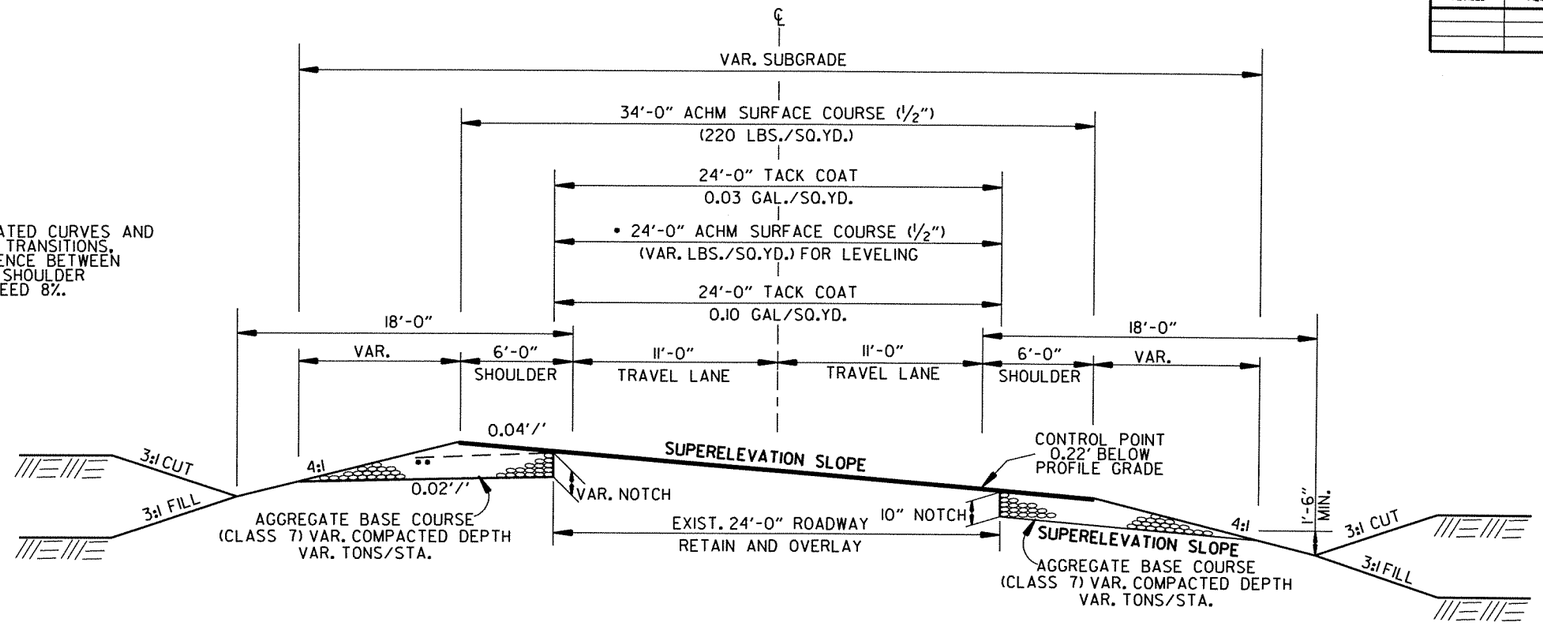
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	11	374

(2) TYPICAL SECTIONS OF IMPROVEMENT

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

2-28-13

•• ON ALL SUPERELEVATED CURVES AND THRU SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 8%.



• TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

SUPERELEVATION
HWY. 38

NOTES:

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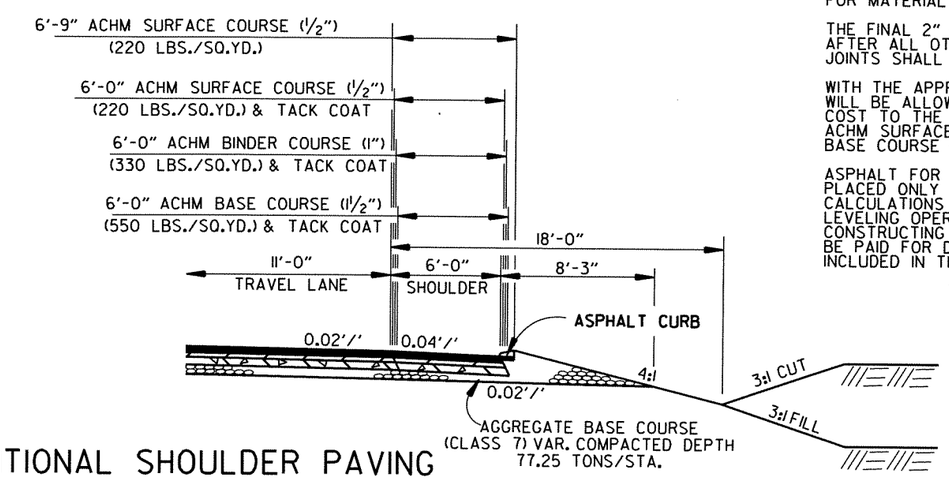


FOR ASPHALT CURB DIMENSIONS SEE SPECIAL DETAIL

ADDITIONAL SHOULDER PAVING FOR MAINTENANCE OF TRAFFIC
HWY. 38
STA. 205+30 TO STA. 207+50 RT. SIDE
STA. 217+50 TO STA. 220+50 RT. SIDE

TYPICAL SECTIONS OF IMPROVEMENT

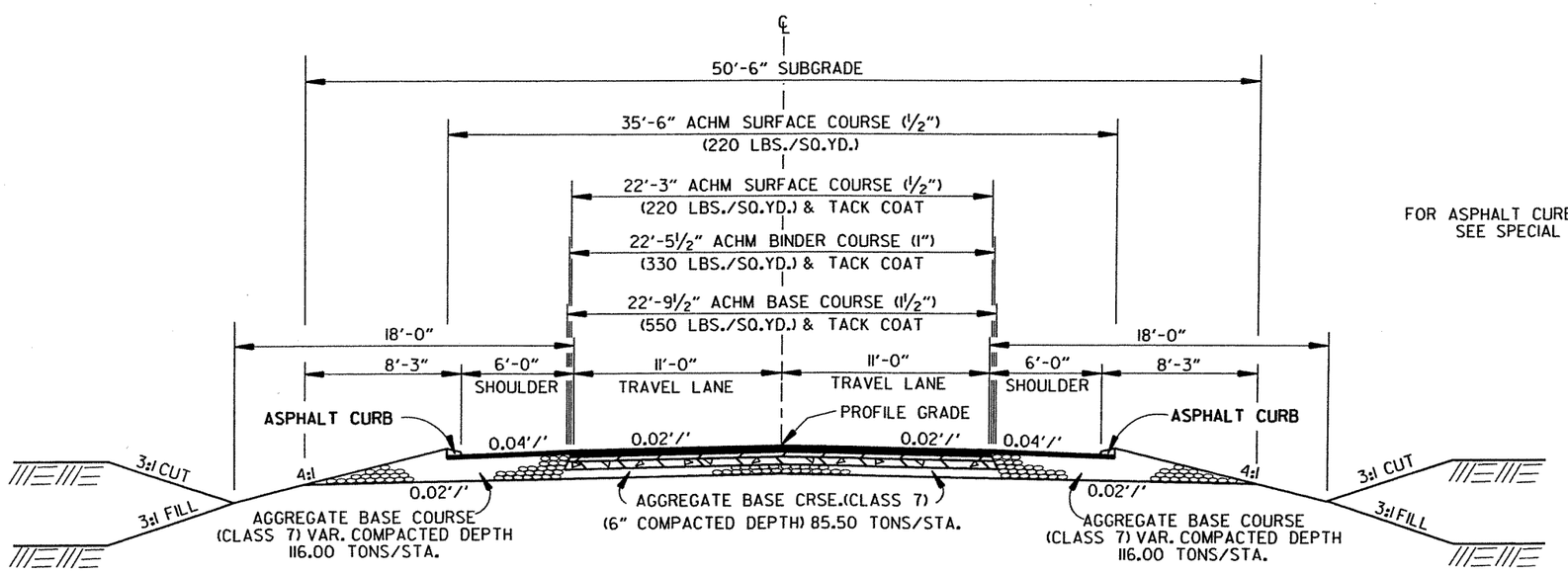
rbb0105typdet.dgn 11/7/12 typical sections of improvement

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		B80105	12	374

(2) TYPICAL SECTIONS OF IMPROVEMENT

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

2-22-13



FOR ASPHALT CURB DIMENSIONS
SEE SPECIAL DETAIL

FULL DEPTH TWO LANE SECTION
HWY. 38
STA. 206+50 TO STA. 210+78.15
STA. 215+13.85 TO STA. 219+00

NOTES:

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TYPICAL SECTIONS OF IMPROVEMENT

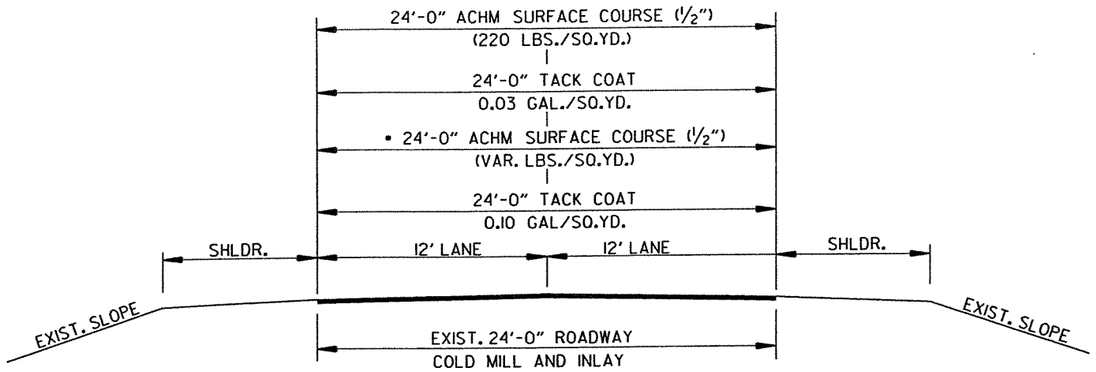
rbb0105typdet.dgn 11/7/12 typical sections of improvement

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	13	374

(2) TYPICAL SECTIONS OF IMPROVEMENT

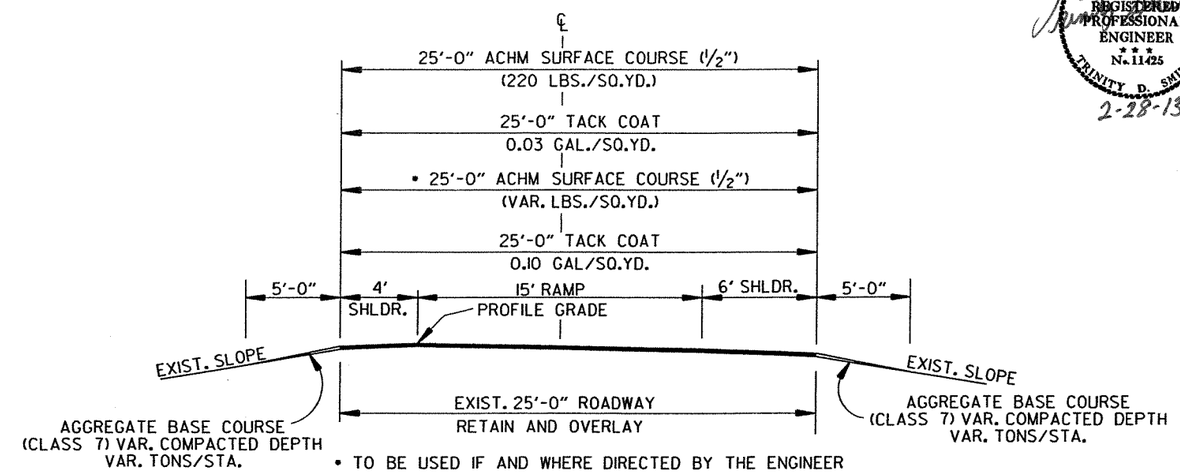
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH

2-28-13



• TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

HWY. 38 OVERLAY
STA. 196+87.52 TO STA. 201+00



• TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

RAMP OVERLAY
HWY. 38

TYPICAL SECTIONS OF IMPROVEMENT

rbb0105typdet.dgn 11/7/12 typical sections of improvement

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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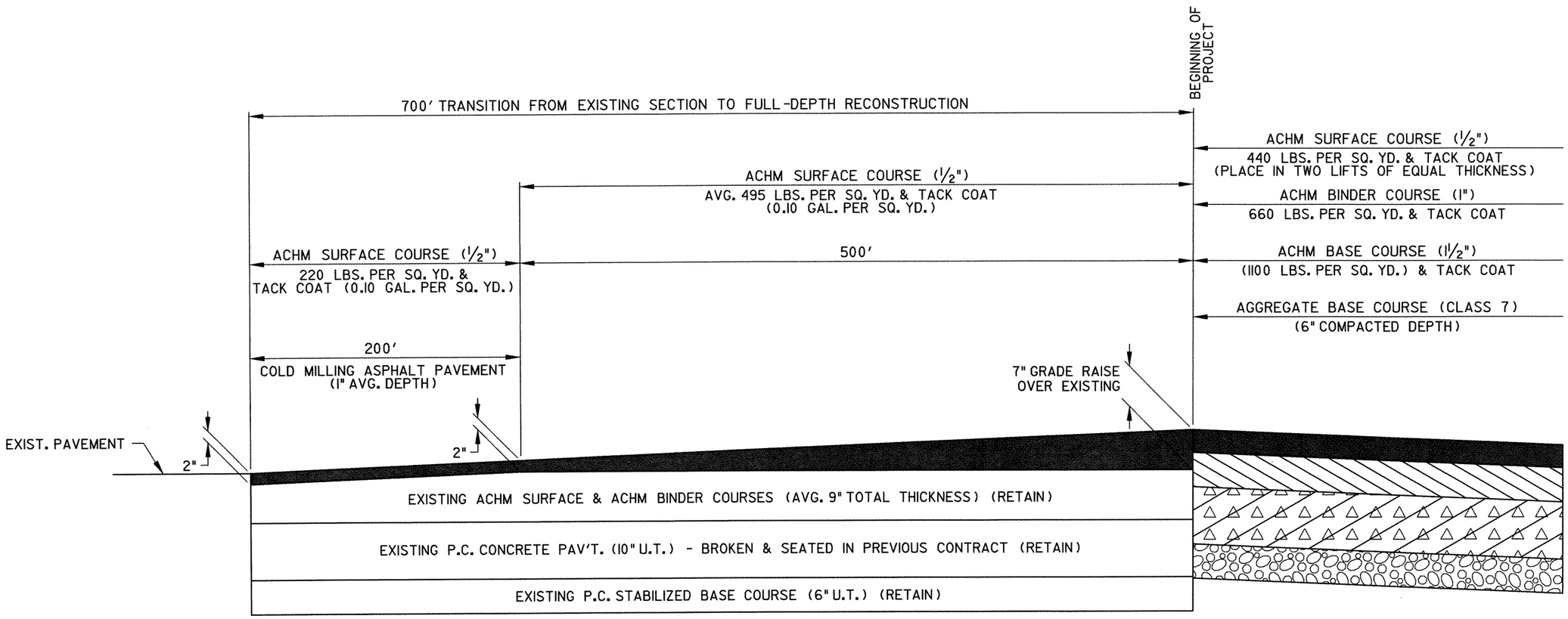
				JOB NO.		BB0105	14	374

(2) SPECIAL DETAILS



ALTERNATE NO. 1
DETAIL OF TRANSITION AT
BEGINNING OF PROJECT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

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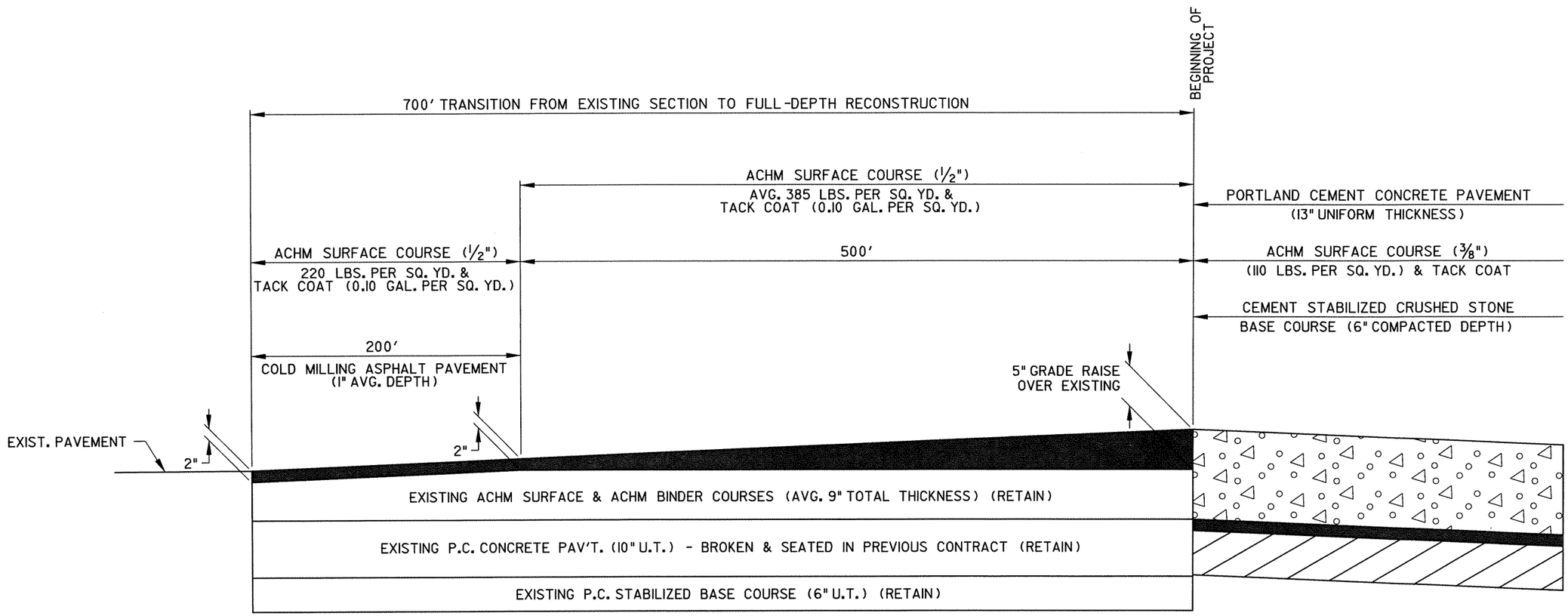

ALTERNATE NO. 2
DETAIL OF TRANSITION AT
BEGINNING OF PROJECT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

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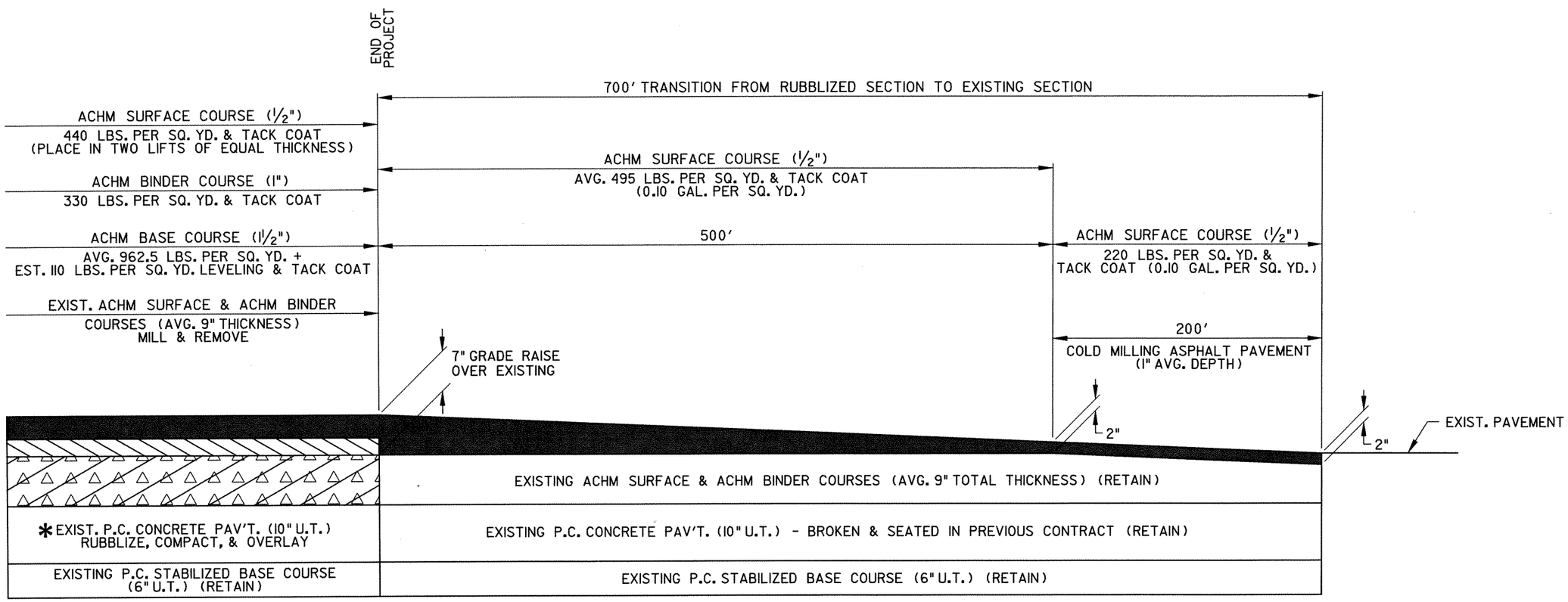

* EXISTING P.C. CONCRETE PAV'T. (10" U.T.)
HAS BEEN BROKEN & SEATED
IN PREVIOUS CONTRACT.

ALTERNATE NO. 1
DETAIL OF TRANSITION AT
END OF PROJECT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

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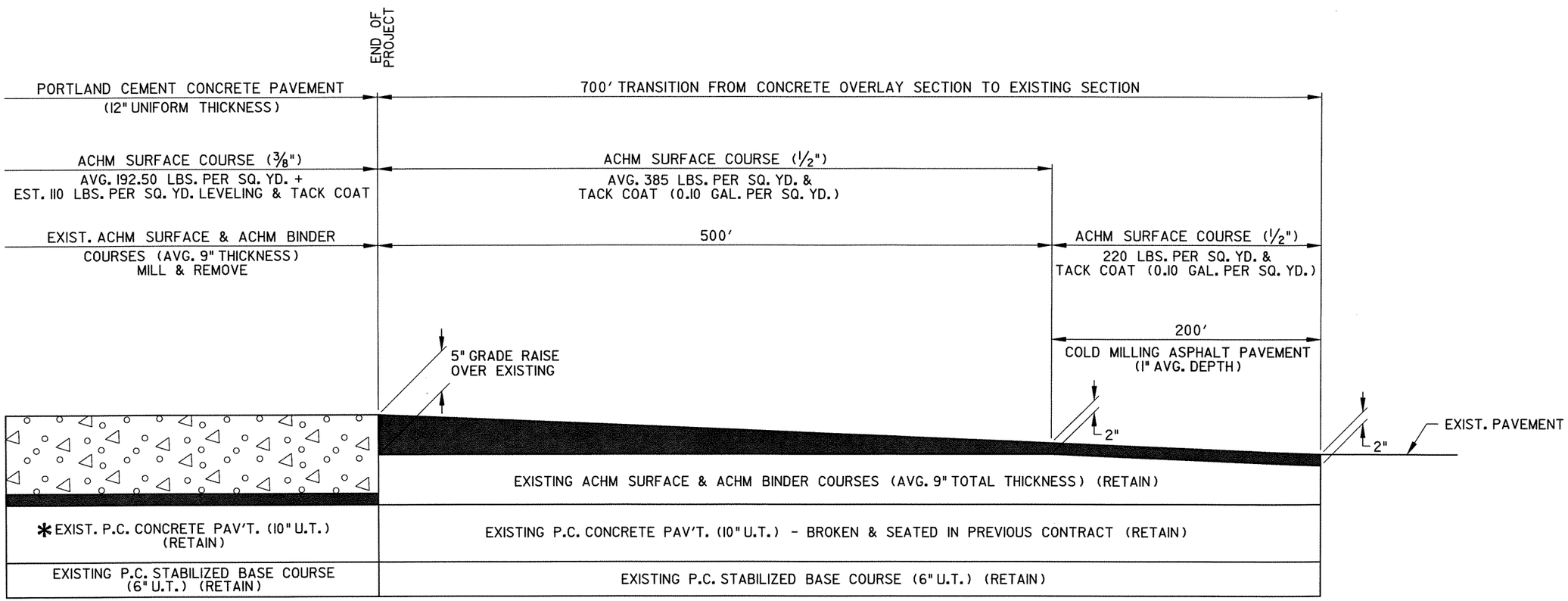

* EXISTING P.C. CONCRETE PAV'T. (10" U.T.) HAS BEEN BROKEN & SEATED IN PREVIOUS CONTRACT.

ALTERNATE NO. 2
DETAIL OF TRANSITION AT END OF PROJECT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

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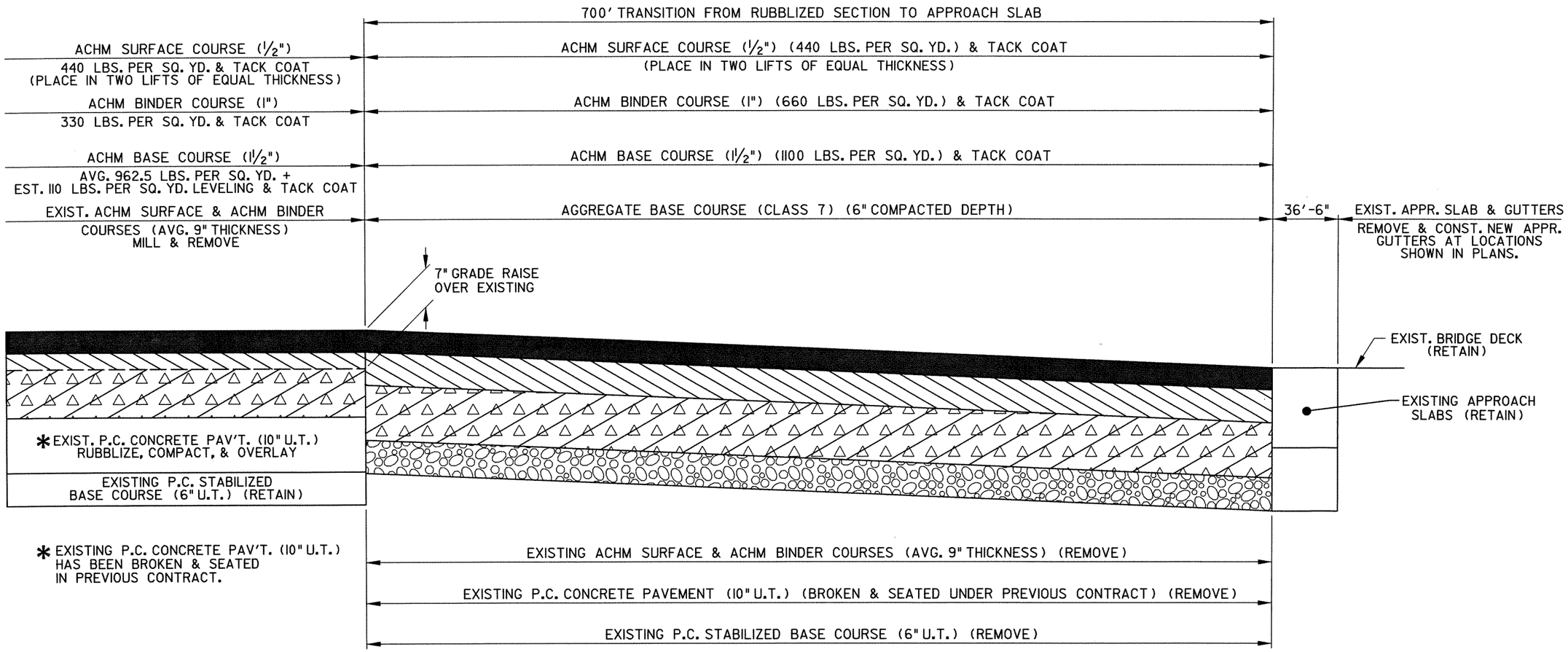

ALTERNATE NO. 1
DETAIL OF TRANSITION & FULL DEPTH PAVEMENT
REPLACEMENT AT EXISTING BRIDGE ENDS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

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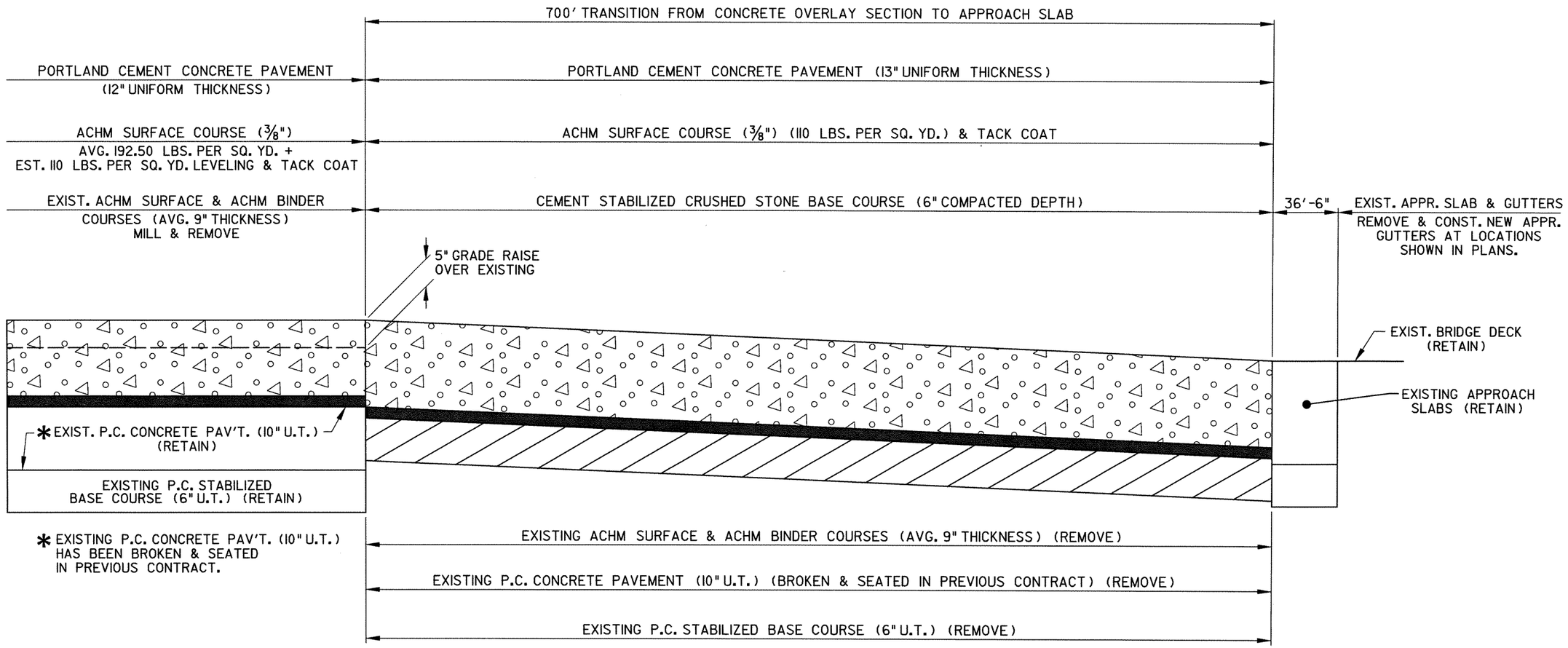

ALTERNATE NO. 2
DETAIL OF TRANSITION & FULL DEPTH PAVEMENT REPLACEMENT AT EXISTING BRIDGE ENDS

STATE OF ARKANSAS
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No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

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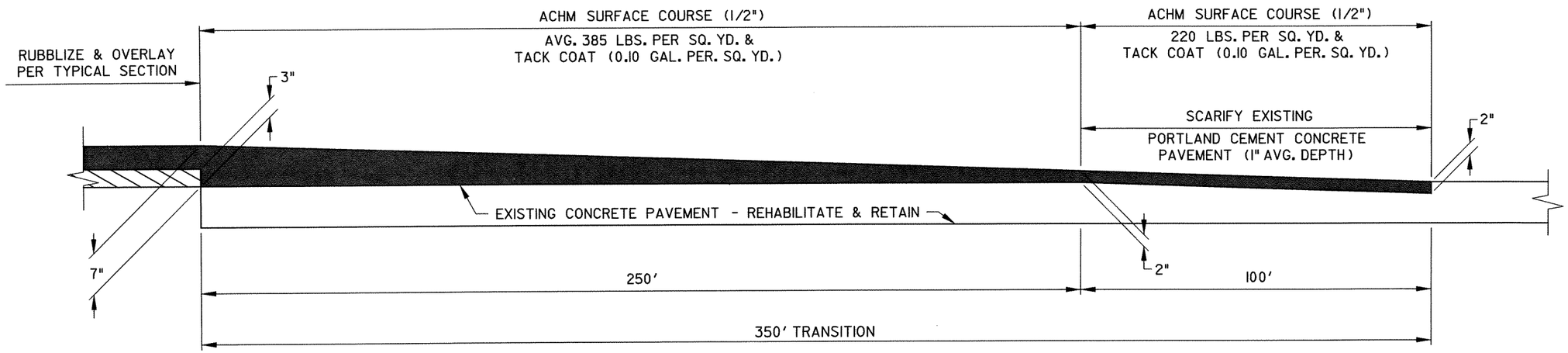
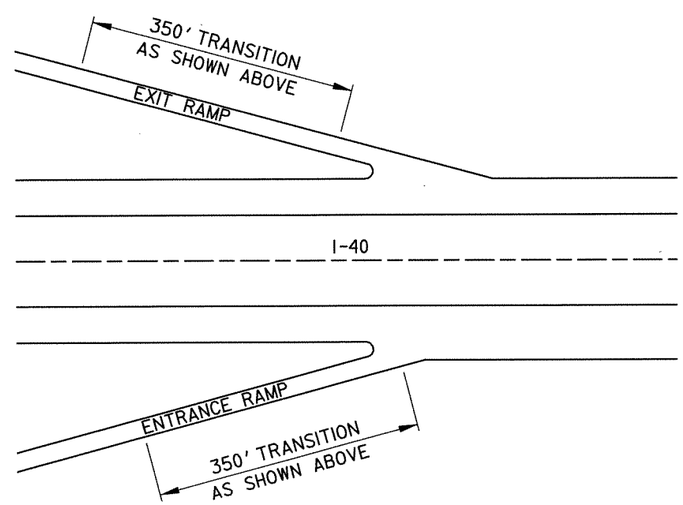


ALTERNATE NO. 1
PAVING TRANSITION AT INTERCHANGE RAMPS



PLAN OF PAVING TRANSITION AT RAMPS
ALTERNATE NO. 1

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

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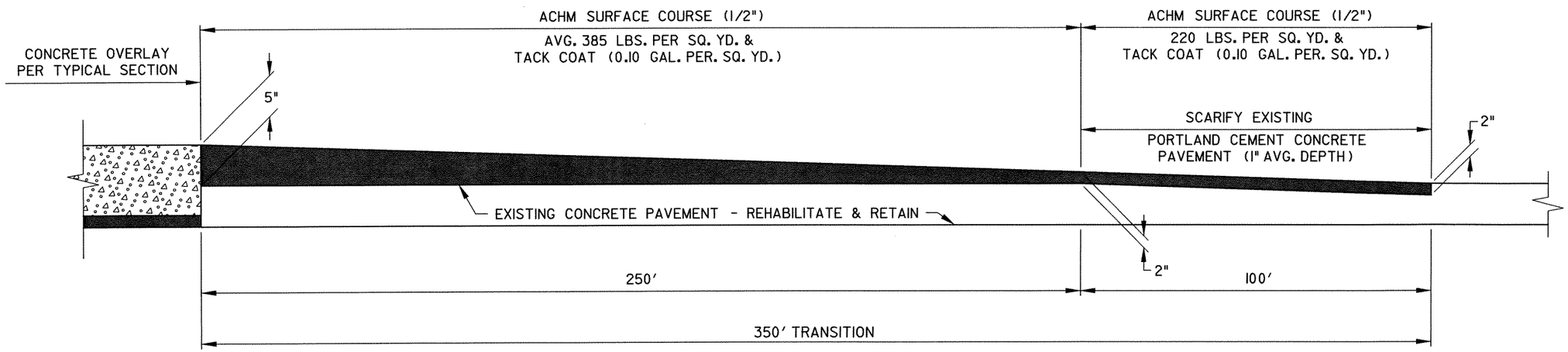

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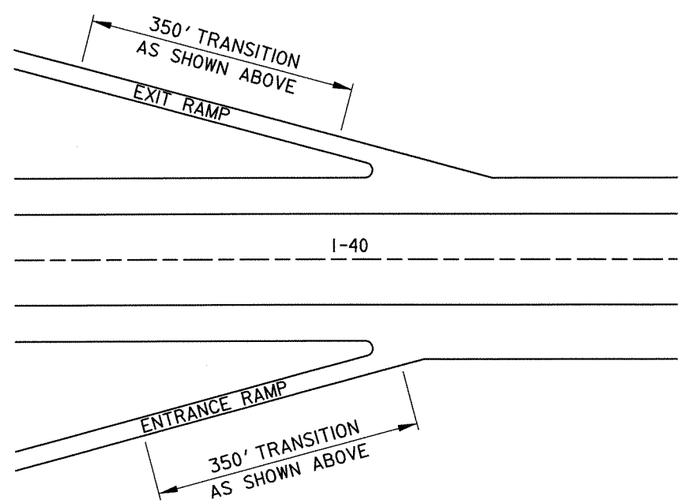

PLAN OF PAVING TRANSITION AT RAMPS
ALTERNATE NO. 2

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

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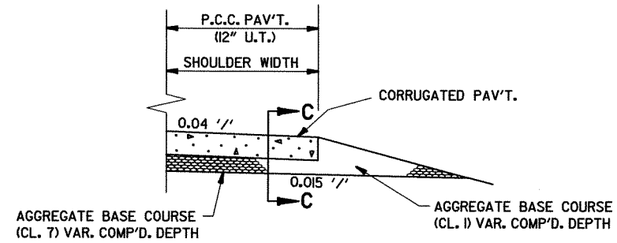
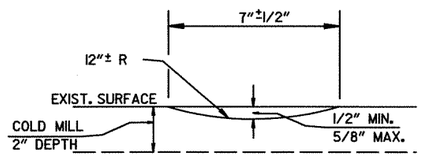
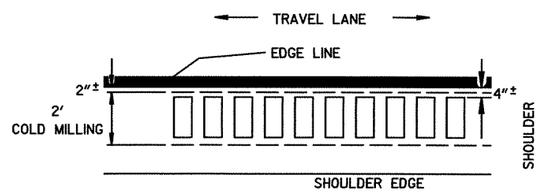


CORRUGATED CONCRETE SHOULDER AT GORE AREAS ALTERNATE 1 & ALTERNATE 2

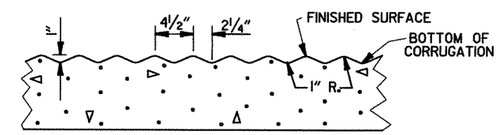


2' STRIP TO BE MILLED & INLAID WITH ACHM SURFACE COURSE (1/2") (PG 76-22) (220 LBS. PER SQ. YD.) & 2'-0" TACK COAT (0.10 GAL. PER SQ. YD.)

ELEVATION VIEW

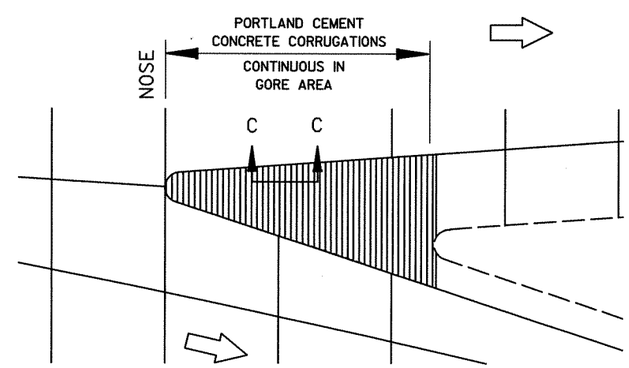


PLAN VIEW



SECTION C-C CORRUGATED CONCRETE SHOULDERS

DETAIL OF RUMBLE STRIP REMOVAL IN OUTSIDE SHOULDER OF EB LANES



LAYOUT OF SHOULDER CORRUGATIONS IN EXIT GORE AREAS

STATE OF ARKANSAS
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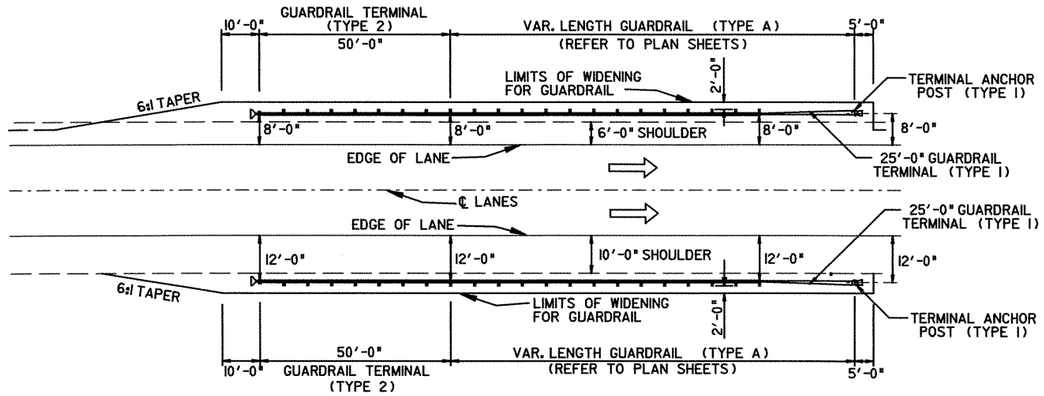
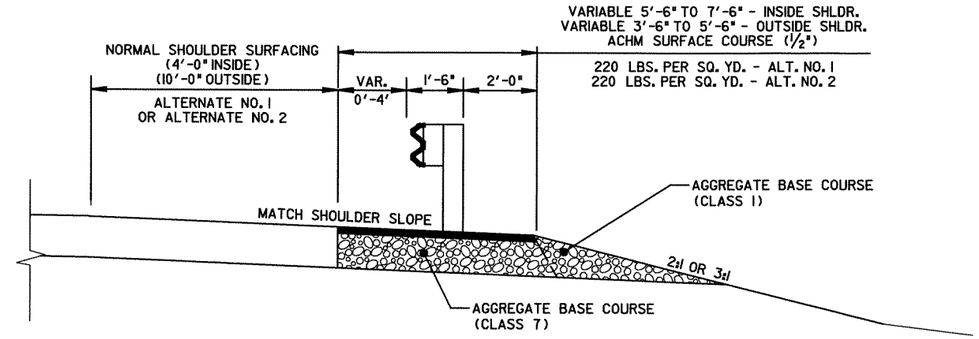
(2) SPECIAL DETAILS

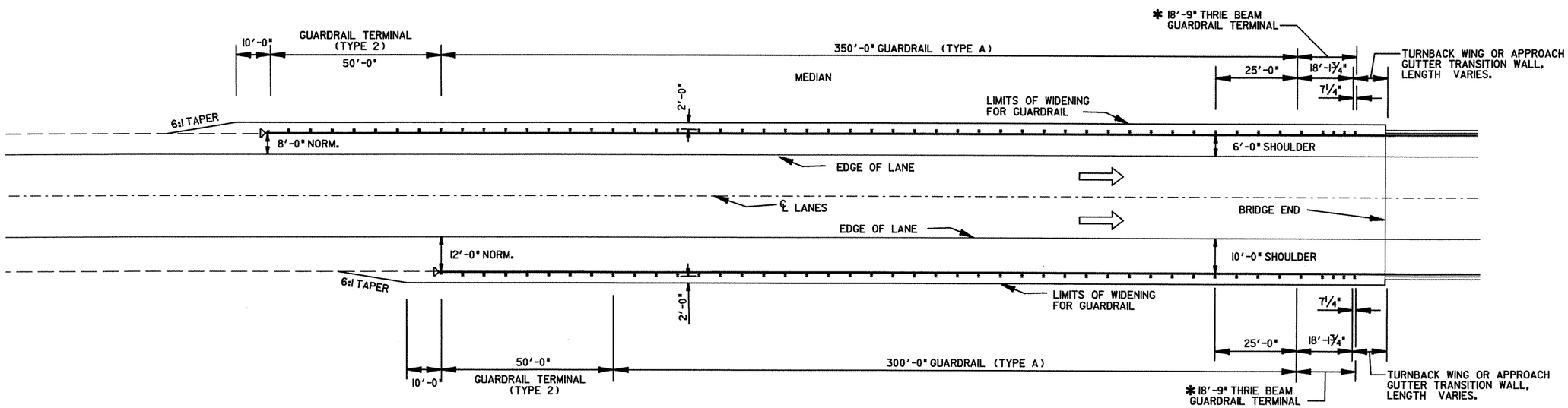


TYPICAL LAYOUT OF GUARDRAIL ALONG ROADWAY ALTERNATE NO. 1 & NO. 2



SECTION DETAIL OF WIDENING FOR GUARDRAIL ALTERNATE NO. 1 & NO. 2

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



TYPICAL LAYOUT OF GUARDRAIL AT BRIDGE ENDS ALTERNATE NO. 1 & NO. 2

* THE CONTRACTOR SHALL DRILL 1" DIA. HOLES FOR THE NEW THRIE-BEAM CONNECTION BOLTS IN THE EXISTING TRANSITION RAIL. CARE SHALL BE EXERCISED TO AVOID THE EXISTING REINFORCING STEEL IN THE RAIL. THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCLUDED IN THE VARIOUS CONTRACT ITEMS. SEE STANDARD DRAWING GR-10 FOR ADDITIONAL DETAILS.

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SPECIAL DETAILS

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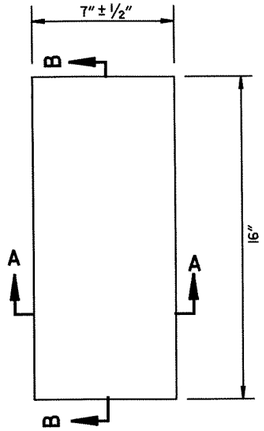
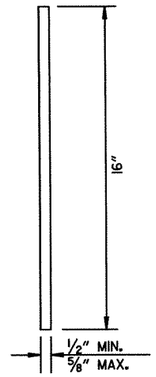
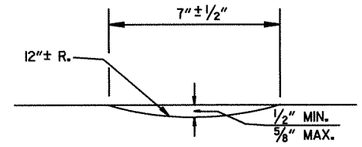
(2) SPCIAL DETAILS



PLAN

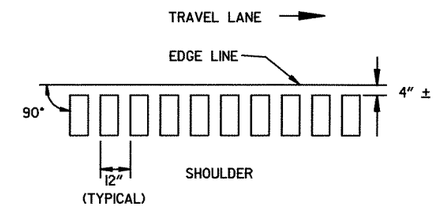


SECTION B-B



SECTION A-A

DETAILS OF RUMBLE STRIPS



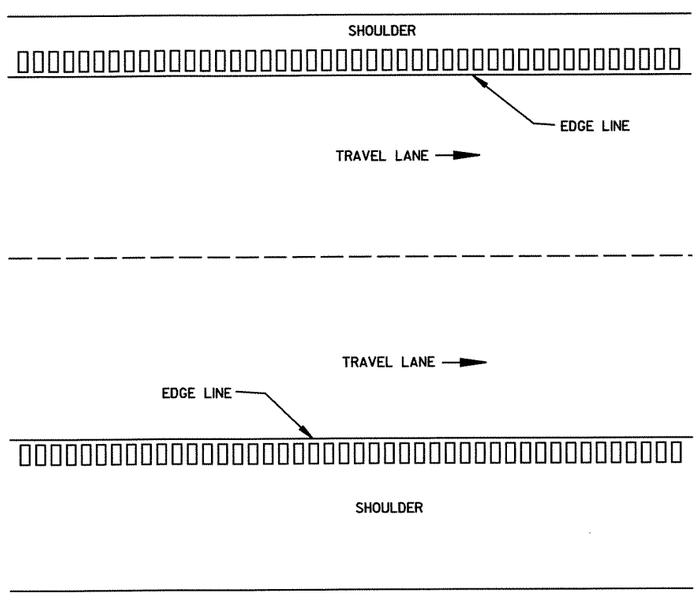
LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER

NOTES:

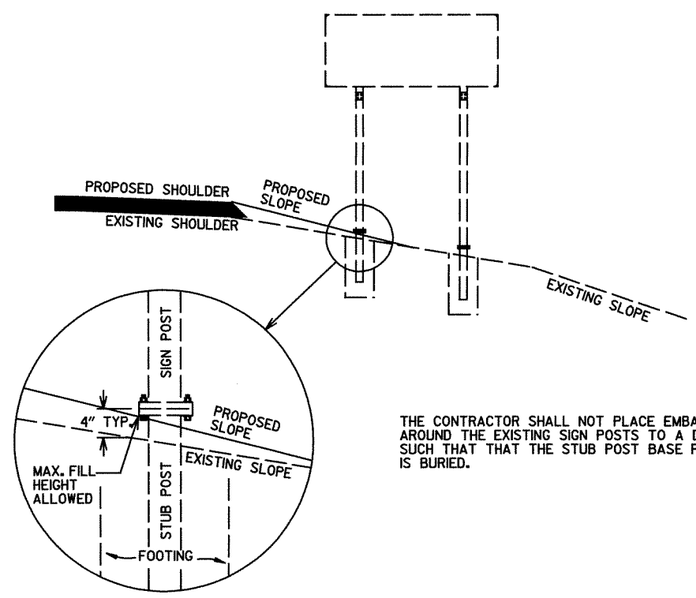
1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND OFFSET APPROXIMATELY 4" FROM THE OUTER EDGE OF THE EDGE LINE. THIS OFFSET MAY BE ADJUSTED TO ACCOMMODATE VARIATIONS IN THE EDGE LINE AS WELL AS TO AVOID EXISTING LONGITUDINAL JOINTS.

2. THE 1*2" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.

3. RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.



PLAN VIEW



THE CONTRACTOR SHALL NOT PLACE EMBANKMENT AROUND THE EXISTING SIGN POSTS TO A DEPTH SUCH THAT THAT THE STUB POST BASE PLATE IS BURIED.

DETAIL FOR THE MAINTENANCE OF
EXISTING BREAKAWAY SIGN STRUCTURES

STATE OF ARKANSAS
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2/8/13

SPECIAL DETAILS

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(2) SPECIAL DETAILS

NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE I. PAYMENT FOR GEOTEXTILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BID PER LIN. FT. FOR "4" PIPE UNDERDRAINS" IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

2. 4" NON-PERFORATED SCHEDULE 40 PVC PIPE LATERALS WITH OUTLET PROTECTORS SHALL BE INSTALLED AS SHOWN HEREON OR AS ON STD. DWG. PU-1. LATERALS WILL BE MEASURED AND PAID FOR AS "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR BY THE UNIT IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

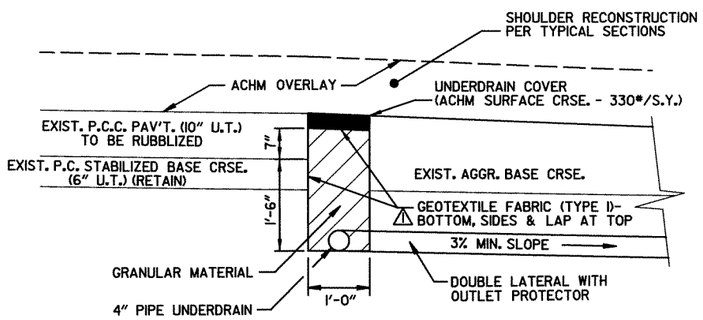
3. 4" PIPE UNDERDRAINS SHALL BE PLACED ON THE LOW SIDE OF SUPERELEVATED ROADWAYS AS SHOWN ON THE TYPICAL SECTIONS. 4" PIPE UNDERDRAINS SHALL BE CONNECTED TO MEDIAN DROP INLETS WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR CONNECTING TO DROP INLETS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR "4" PIPE UNDERDRAINS."

4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

5. THE RODENT SCREEN SHOWN HEREON SHALL BE USED IN LIEU OF THE RODENT SCREEN SHOWN ON STD. DWG. PU-1. PAYMENT FOR THE RODENT SCREEN SHALL BE INCLUDED IN THE PRICE BID PER EACH FOR "UNDERDRAIN OUTLET PROTECTORS."

6. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT FOR LATERALS TO BE REMOVED OR ABANDONED SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

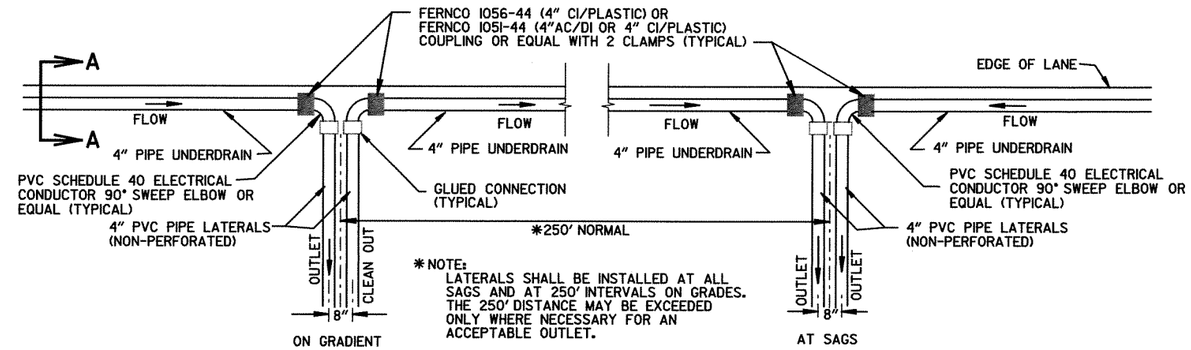
7. AT LOCATIONS WHERE A SINGLE LATERAL IS USED, THE CONTRACTOR SHALL HAVE THE FOLLOWING OPTIONS: 1.) INSTALL OUTLET PROTECTOR AS SHOWN ON STANDARD DRAWING PU-1 AND GROUT THE UNUSED HOLE OR 2.) INSTALL AN OUTLET PROTECTOR WITH A SINGLE HOLE. PAYMENT SHALL BE INCLUDED IN THE PRICE BID EACH FOR "UNDERDRAIN OUTLET PROTECTORS."



FOR WIDTH OF EXISTING SHOULDER, TRENCH FOR LATERALS SHALL BE BACKFILLED WITH GRANULAR MATERIAL OR AGGREGATE BASE COURSE (CLASS 7). PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTACT ITEMS.

SECTION A-A
ALTERNATE NO. 1

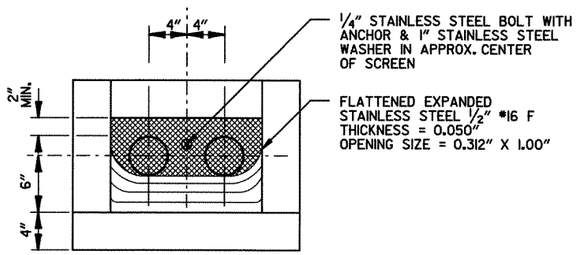
⚠ IN LIEU OF LAPPING THE GEOTEXTILE FABRIC, THE CONTRACTOR MAY (WITH APPROVAL OF THE ENGINEER) UTILIZE AN ALTERNATE METHOD FOR PROVIDING POSITIVE CLOSURE.



*NOTE:
LATERALS SHALL BE INSTALLED AT ALL SAGS AND AT 250' INTERVALS ON GRADES. THE 250' DISTANCE MAY BE EXCEEDED ONLY WHERE NECESSARY FOR AN ACCEPTABLE OUTLET.

PLAN DETAIL OF PIPE UNDERDRAIN LATERALS

NOTE:
PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE. UNDERDRAIN OUTLET PROTECTORS SHALL BE INSTALLED ON NEW LATERALS. (REFER TO STD. DWG. PU-1. & NOTE #5.)



DETAIL OF RODENT SCREEN

STATE OF ARKANSAS
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SPECIAL DETAILS

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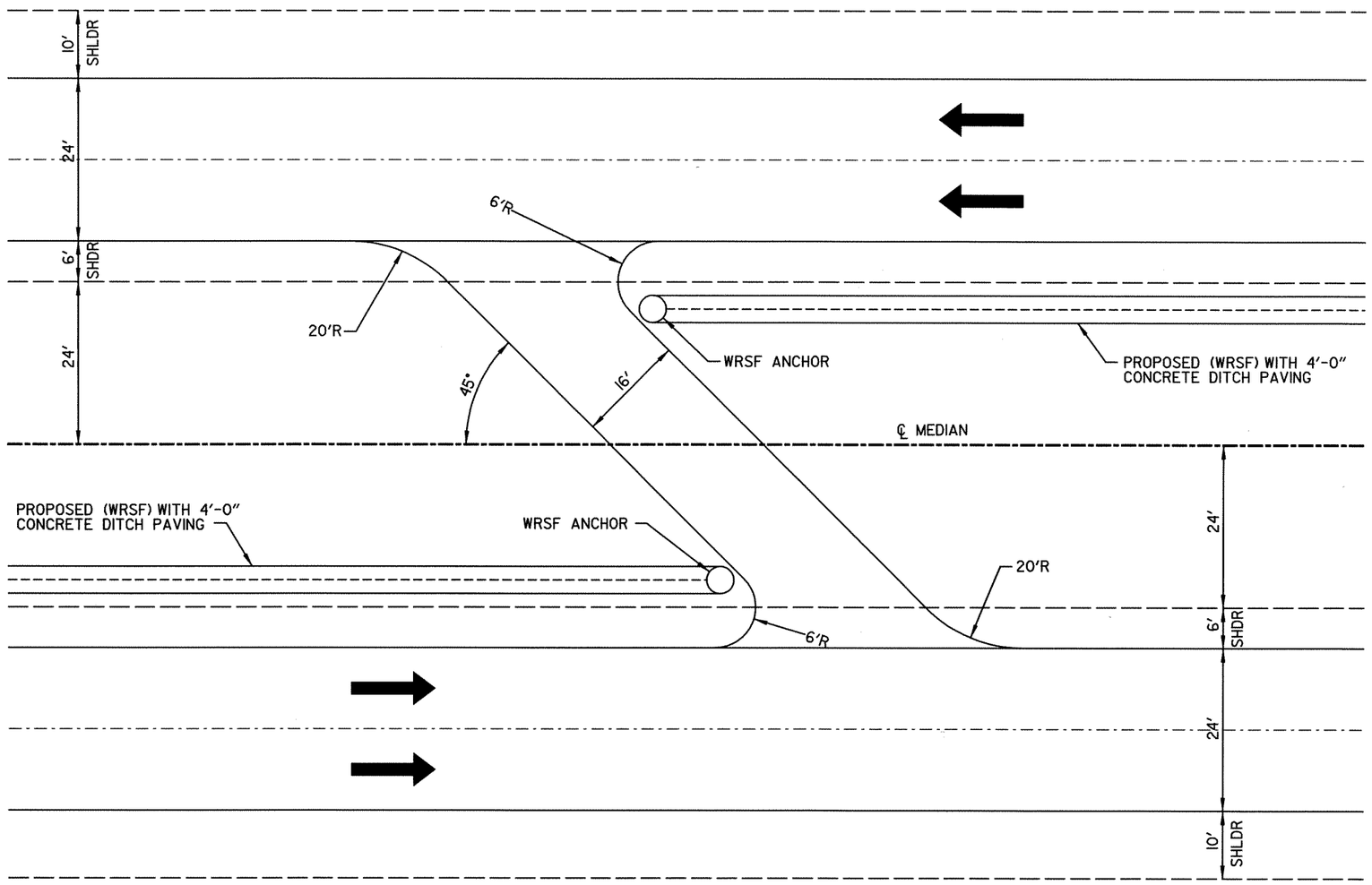
				JOB NO.		BB0105	26	374

(2) SPECIAL DETAILS



DETAIL OF MEDIAN CROSSING

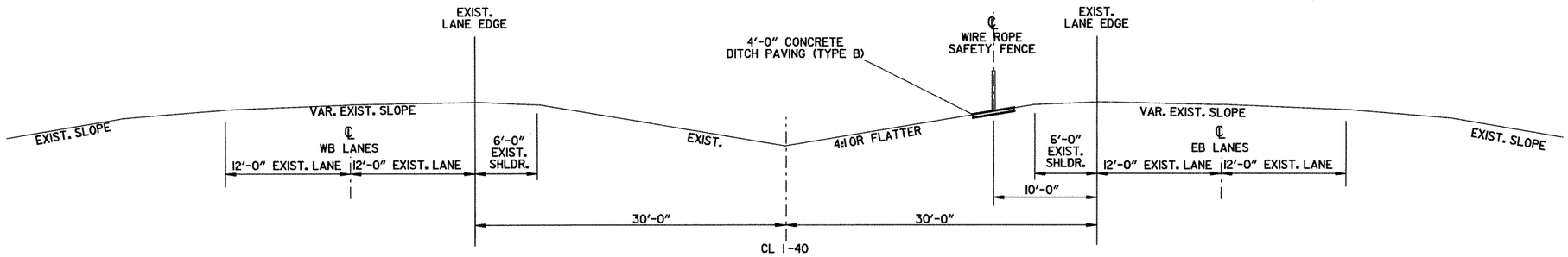
NOTE:
MEDIAN CROSSING TO BE CONSTRUCTED OF AGGREGATE BASE COURSE (CLASS 7) - 7" COMPACTED DEPTH & ACHM SURFACE COURSE (1/2") - 220 LBS. PER. SQ. YD.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/17

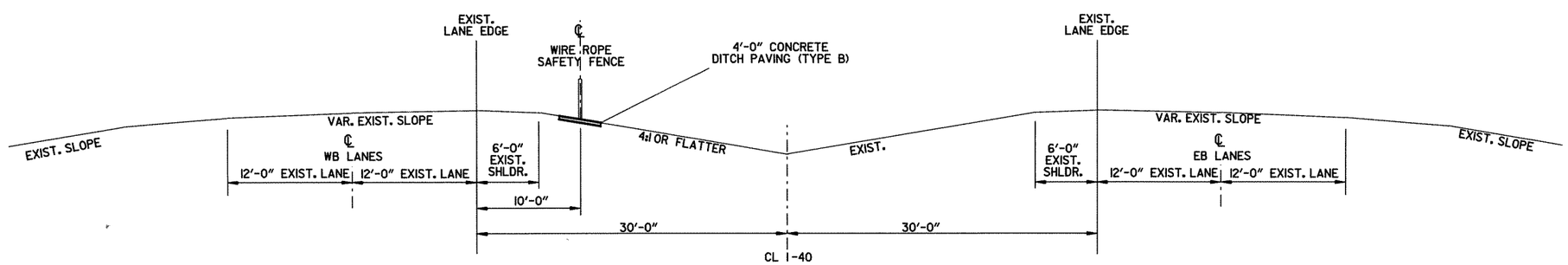
SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	27	374

(2) SPECIAL DETAILS



WIRE ROPE SAFETY FENCE ON EASTBOUND LANES FORESLOPE



WIRE ROPE SAFETY FENCE ON WESTBOUND LANES FORESLOPE

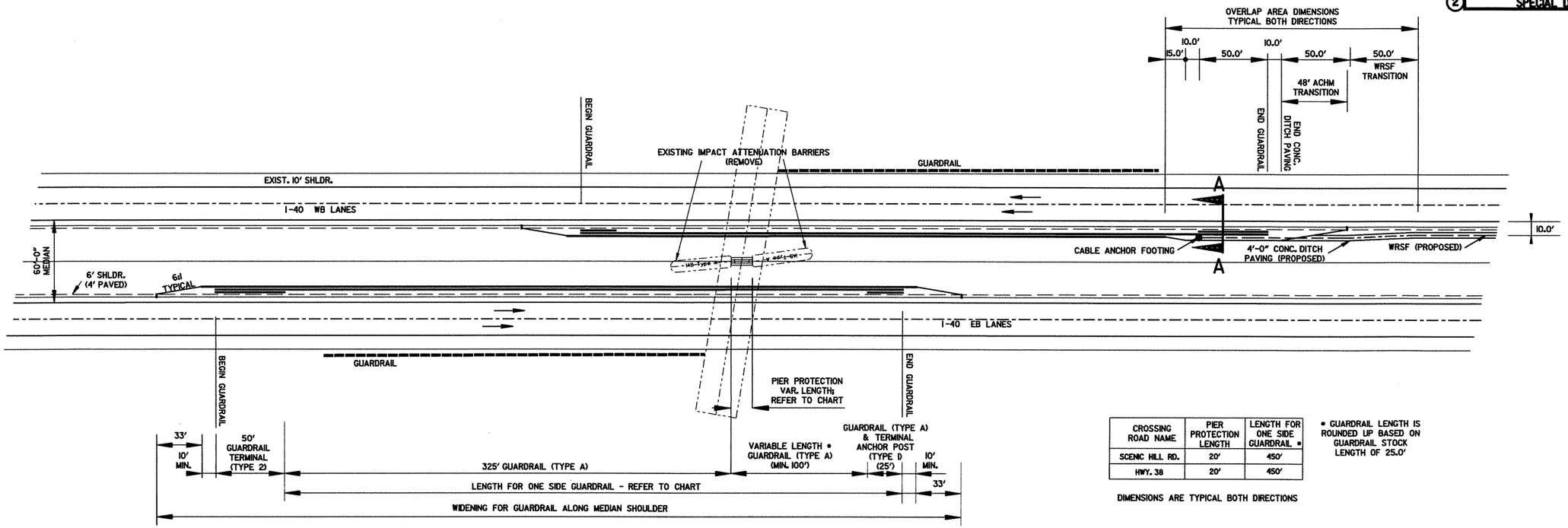
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	28	374

(2) SPECIAL DETAILS



CROSSING ROAD NAME	PIER PROTECTION LENGTH	LENGTH FOR ONE SIDE GUARDRAIL *
SCENIC HILL RD.	20'	450'
HWY. 38	20'	450'

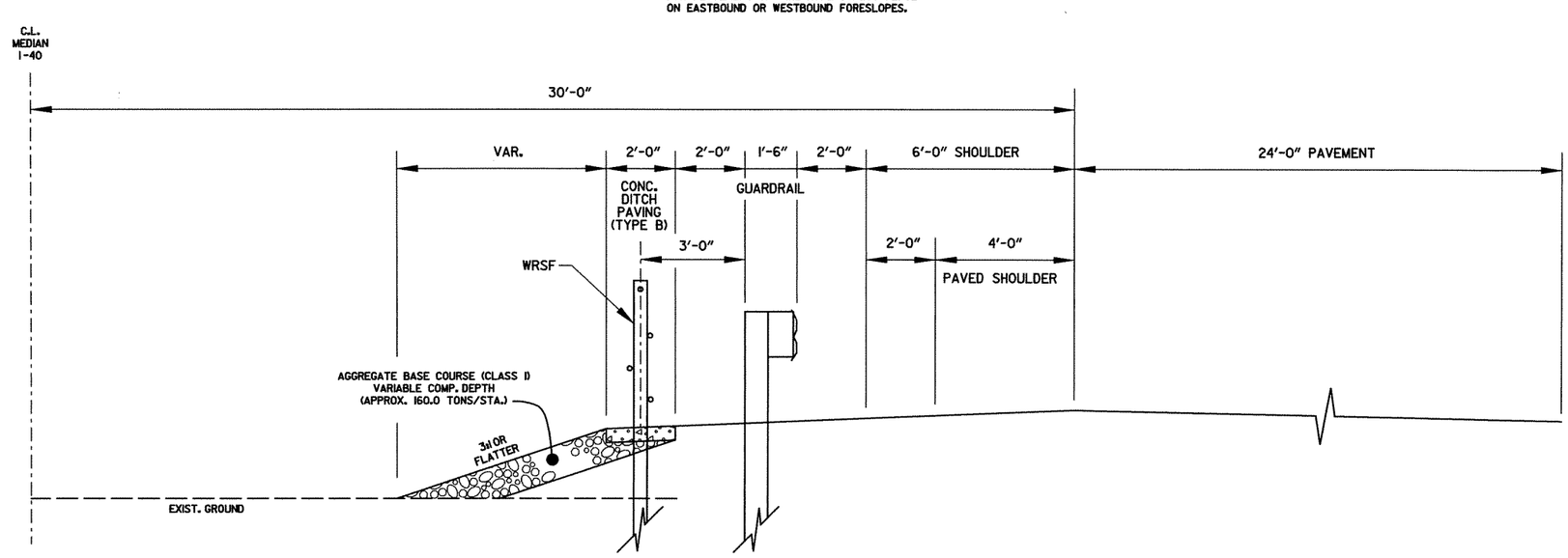
DIMENSIONS ARE TYPICAL BOTH DIRECTIONS

* GUARDRAIL LENGTH IS ROUNDED UP BASED ON GUARDRAIL STOCK LENGTH OF 25.0'

SEE GUARDRAIL WIDENING DETAILS.

DETAIL AT OVERPASSES

NOTE: REFER TO PLAN SHEETS FOR PLACEMENT OF WIRE ROPE SAFETY FENCE ON EASTBOUND OR WESTBOUND FORESLOPES.



SECTION A-A

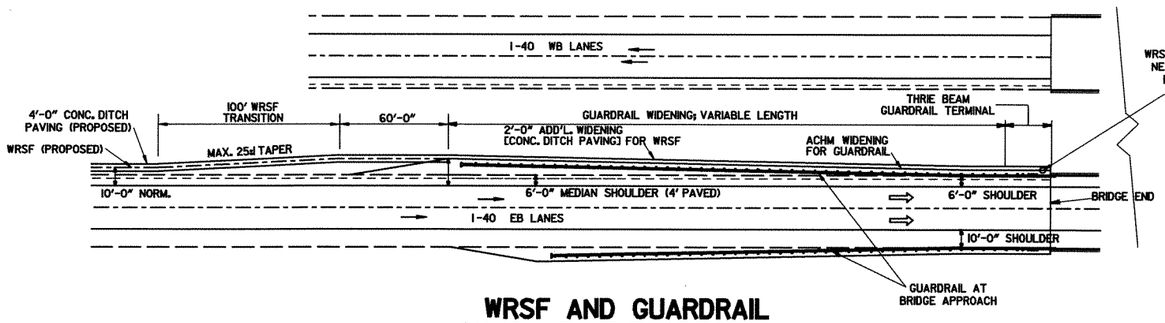
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

SPECIAL DETAILS

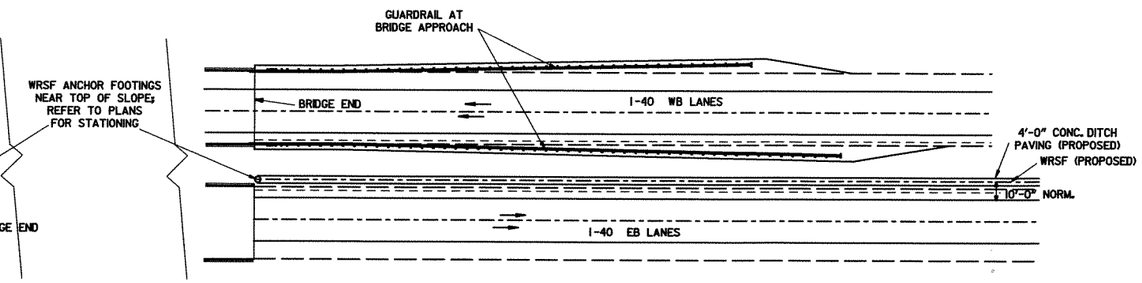
WRSF detail-2.dgn 2/8/2013 10:07:45 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	29	374

(2) SPECIAL DETAILS



WRSF AND GUARDRAIL
ON SAME SIDE OF MEDIAN



WRSF AND GUARDRAIL
ON OPPOSITE SIDES OF MEDIAN

DETAIL OF WIRE ROPE SAFETY FENCE AT EXISTING BRIDGE ENDS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

WRSF detail-3.dgn 2/8/2013 10:07:46 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	29A	374

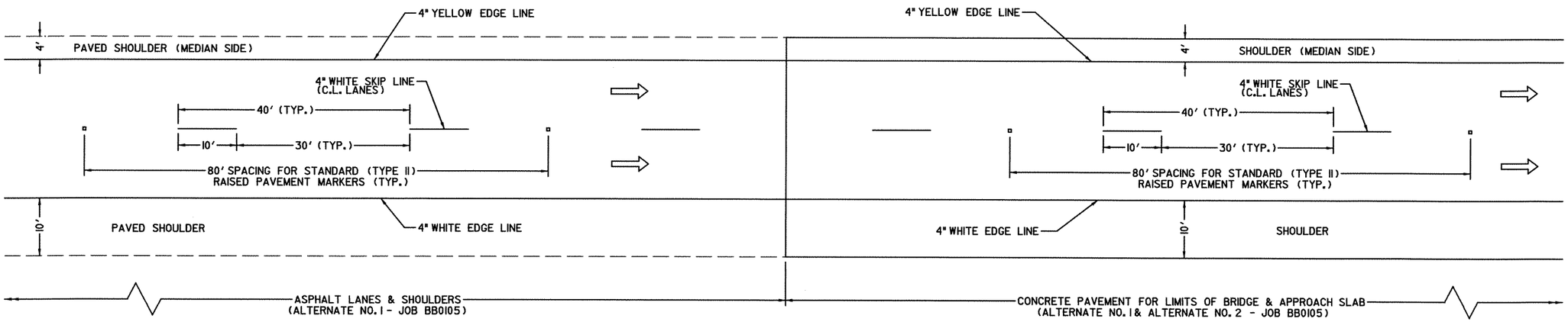
(2) SPECIAL DETAILS

ASPHALT ROADWAY

SKIP LINE - PROFILE THERMO OR HIGH PERFORMANCE MARKING TAPE
EDGE LINES - PROFILE THERMO OR HIGH PERFORMANCE MARKING TAPE
REFER TO SPECIAL PROVISION - HIGH PERFORMANCE PAVEMENT MARKING

CONCRETE BRIDGE

SKIP LINE - CONTRAST PROFILE THERMO OR HIGH PERFORMANCE CONTRAST MARKING TAPE
EDGE LINES - PROFILE THERMO OR HIGH PERFORMANCE MARKING TAPE
REFER TO SPECIAL PROVISION - HIGH PERFORMANCE PAVEMENT MARKING



PERMANENT PAVEMENT MARKING DETAILS
ALTERNATE NO. 1
EASTBOUND I-40 SHOWN ABOVE

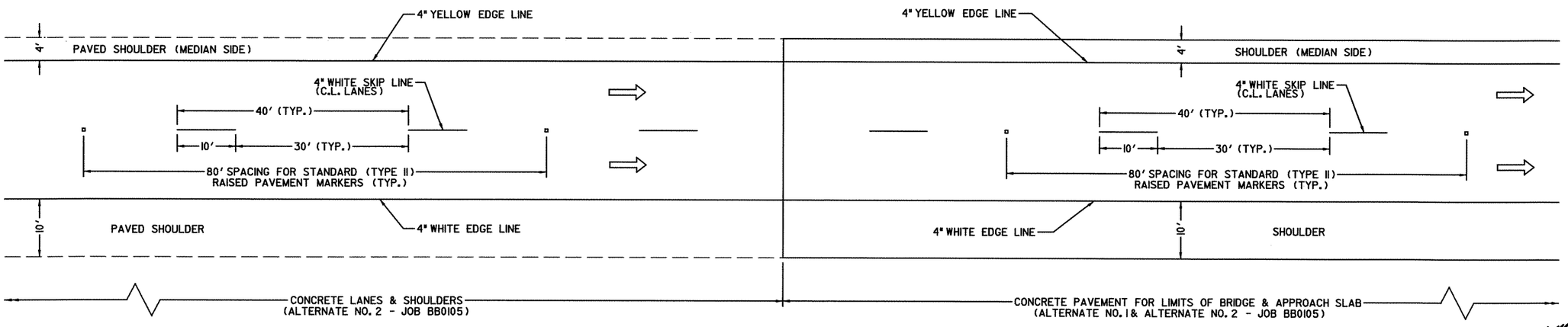
(REVERSE FOR WESTBOUND I-40)

CONCRETE ROADWAY

SKIP LINE - CONTRAST PROFILE THERMO OR HIGH PERFORMANCE CONTRAST MARKING TAPE
EDGE LINES - PROFILE THERMO OR HIGH PERFORMANCE MARKING TAPE
REFER TO SPECIAL PROVISION - HIGH PERFORMANCE PAVEMENT MARKING

CONCRETE BRIDGE

SKIP LINE - CONSTRAST PROFILE THERMO OR HIGH PERFORMANCE CONTRAST MARKING TAPE
EDGE LINES - PROFILE THERMO OR HIGH PERFORMANCE MARKING TAPE
REFER TO SPECIAL PROVISION - HIGH PERFORMANCE PAVEMENT MARKING



PERMANENT PAVEMENT MARKING DETAILS
ALTERNATE NO. 2
EASTBOUND I-40 SHOWN ABOVE

(REVERSE FOR WESTBOUND I-40)

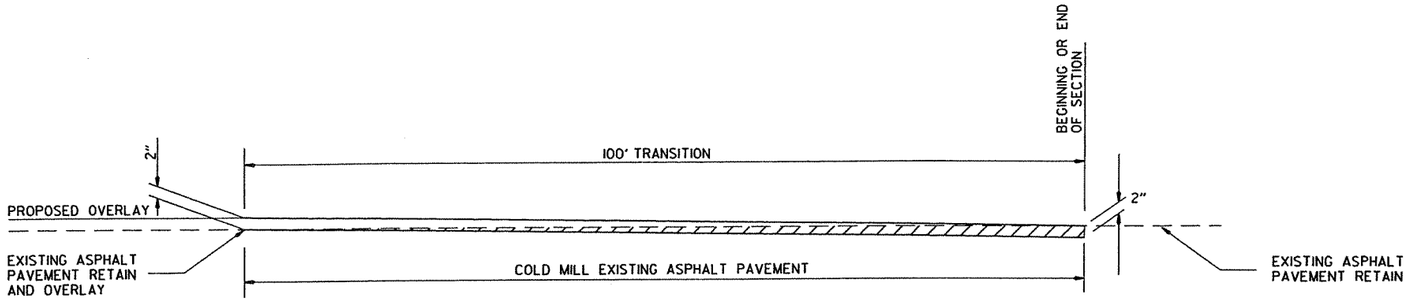
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

SPECIAL DETAILS

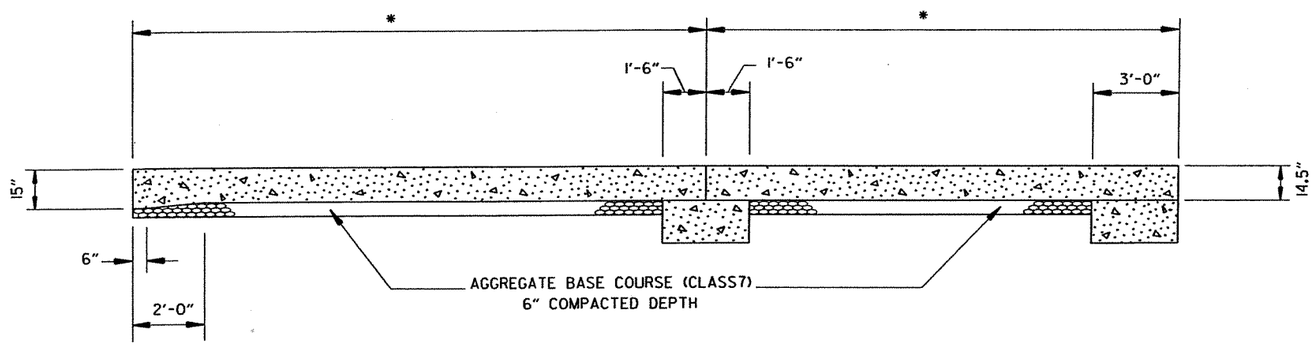
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	30	374

(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-28-13

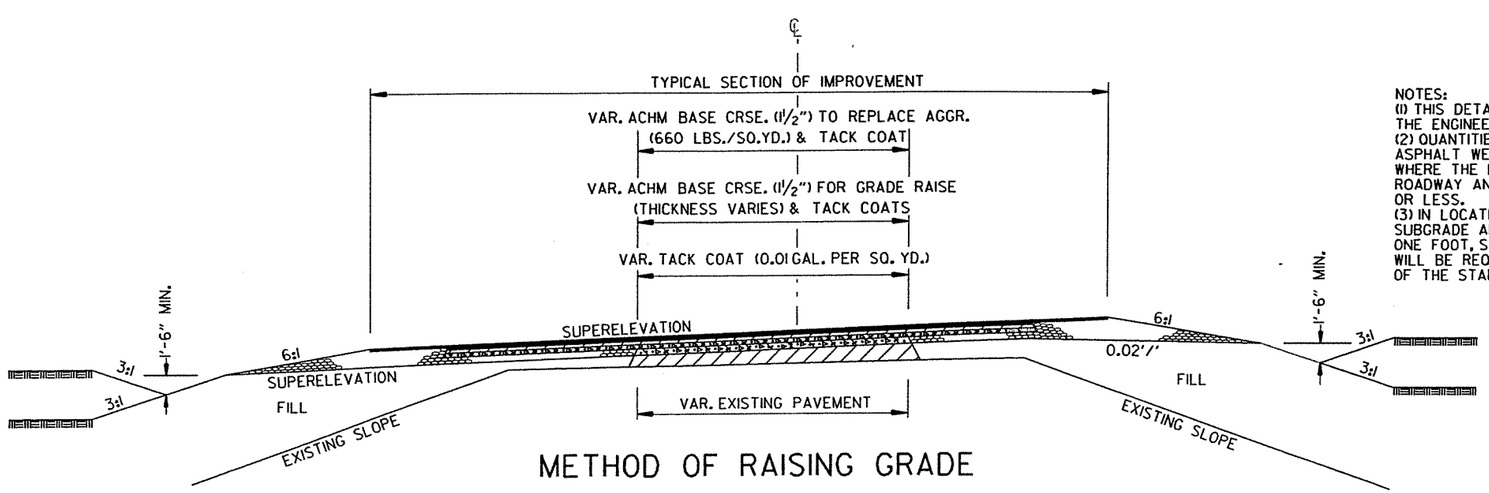


DETAIL FOR TRANSITIONS



• REFER TO BRIDGE DRAWINGS

SECTION OF APPROACH SLAB



METHOD OF RAISING GRADE

NOTES:
(1) THIS DETAIL TO BE USED ONLY IF AND WHERE DIRECTED BY THE ENGINEER.
(2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS ONE FOOT OR LESS.
(3) IN LOCATIONS WHERE THE DISTANCE BETWEEN THE PROPOSED SUBGRADE AND THE EXISTING ASPHALT ROADWAY IS MORE THAN ONE FOOT, SCARIFICATION OF THE EXISTING ASPHALT ROADWAY WILL BE REQUIRED AS STATED IN SECTION 210, SUBSECTION 210.09 OF THE STANDARD SPECIFICATIONS, EDITION OF 2003.

HWY. 38
SPECIAL DETAILS

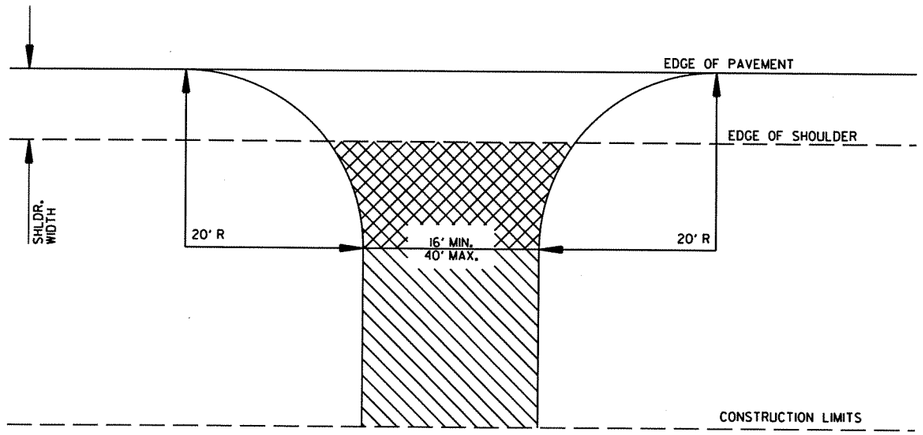
rbb0105typdet.dgn 11/7/12 special details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	31	374

(2) SPECIAL DETAILS

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

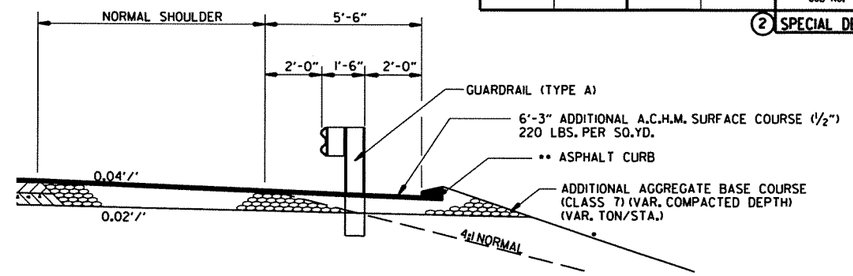
2-28-13



ASPHALT CONCRETE HOT MIX SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT DRIVE EXISTS OR
6" CONCRETE IF CONCRETE DRIVE EXISTS.

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

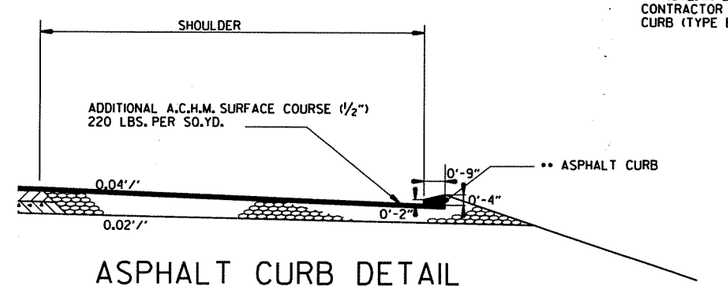
DETAIL FOR DRIVEWAY TURNOUTS



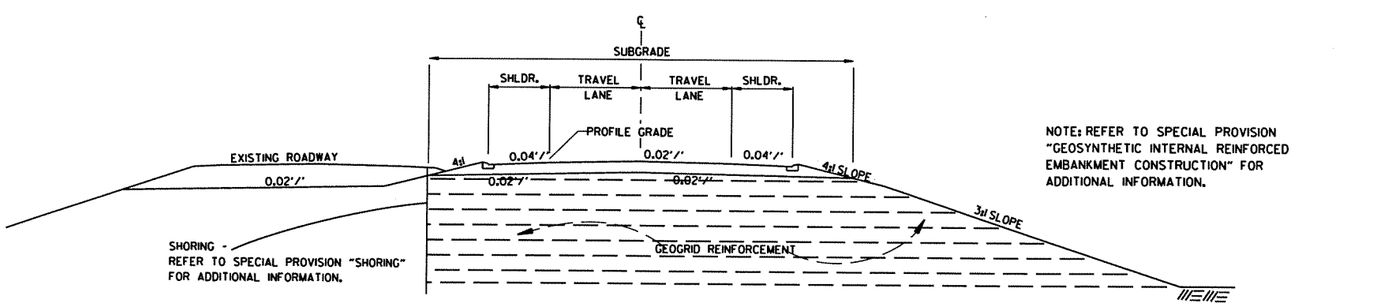
WIDENING FOR GUARDRAIL DETAIL

* NOTE: REFER TO STD. DWG GR-9A AND CROSS SECTIONS FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.

** NOTE: IN LIEU OF ASPHALT CURB THE CONTRACTOR MAY SUBSTITUTE CONCRETE CURB (TYPE B).



ASPHALT CURB DETAIL



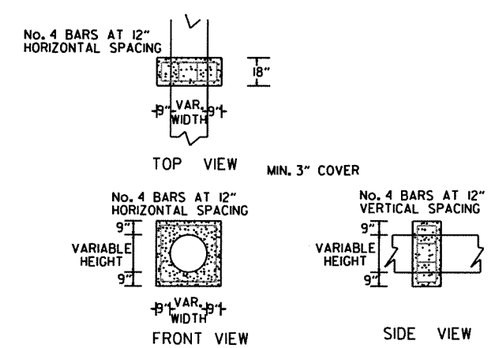
NOTE: REFER TO SPECIAL PROVISION "GEOSYNTHETIC INTERNAL REINFORCED EMBANKMENT CONSTRUCTION" FOR ADDITIONAL INFORMATION.

NOTE: NATURAL SURFACE ELEV.
APPROX. 202.0 SOUTH OF I-40
APPROX. 204.0 NORTH OF I-40

GEOSYNTHETIC INTERNAL REINFORCED EMBANKMENT CONSTRUCTION HWY. 38

NOTES:

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



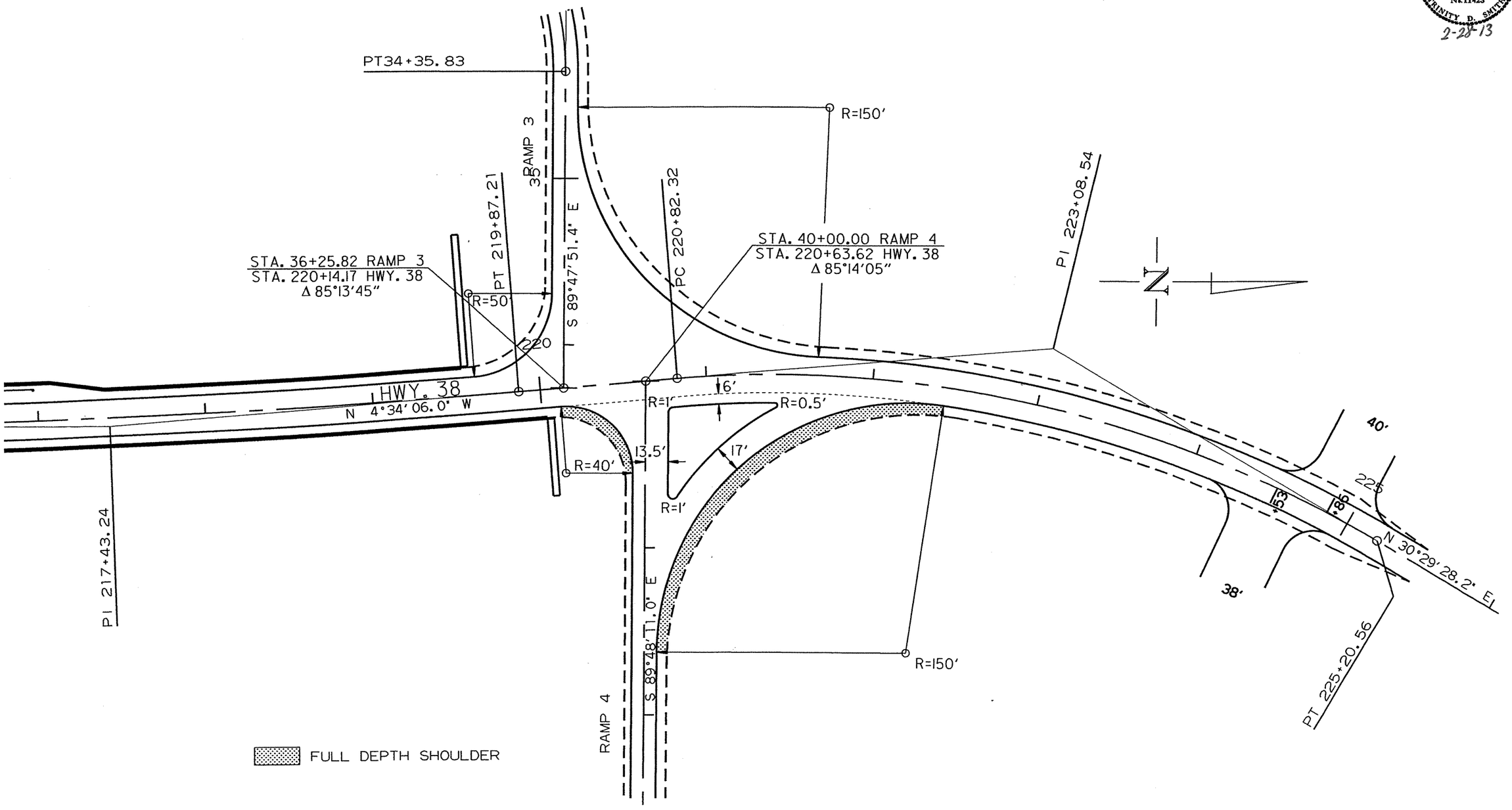
PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL

rbb0105typdet.dgn 11/7/12 special details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		B80105	32	374

(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-28-13



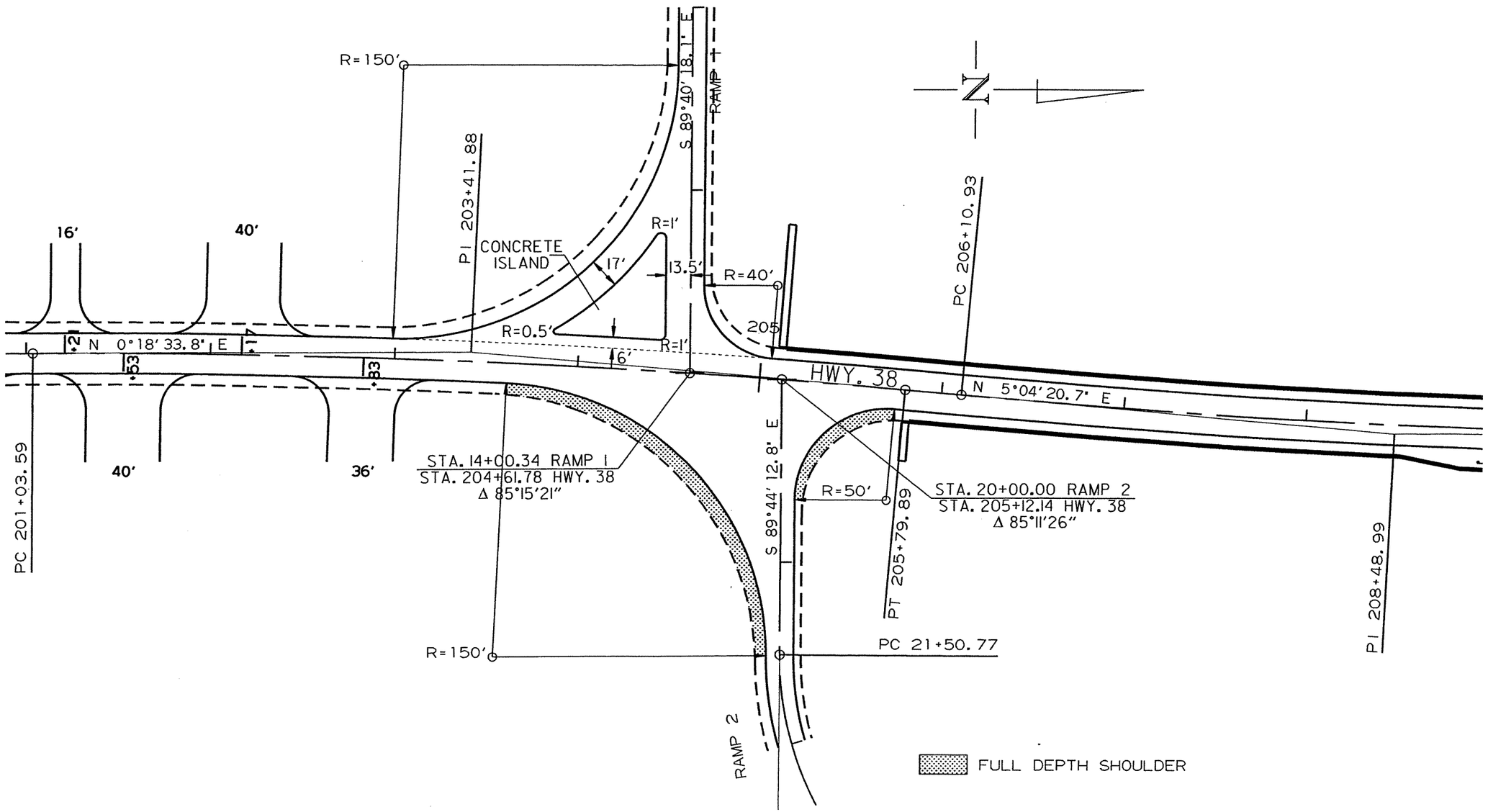
HWY. 38
SPECIAL DETAILS

rbb0105typdet.dgn 11/7/12 special details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	33	374

(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-28-13



HWY. 38
SPECIAL DETAILS

rbb0105typdet.dgn 11/7/12 special details

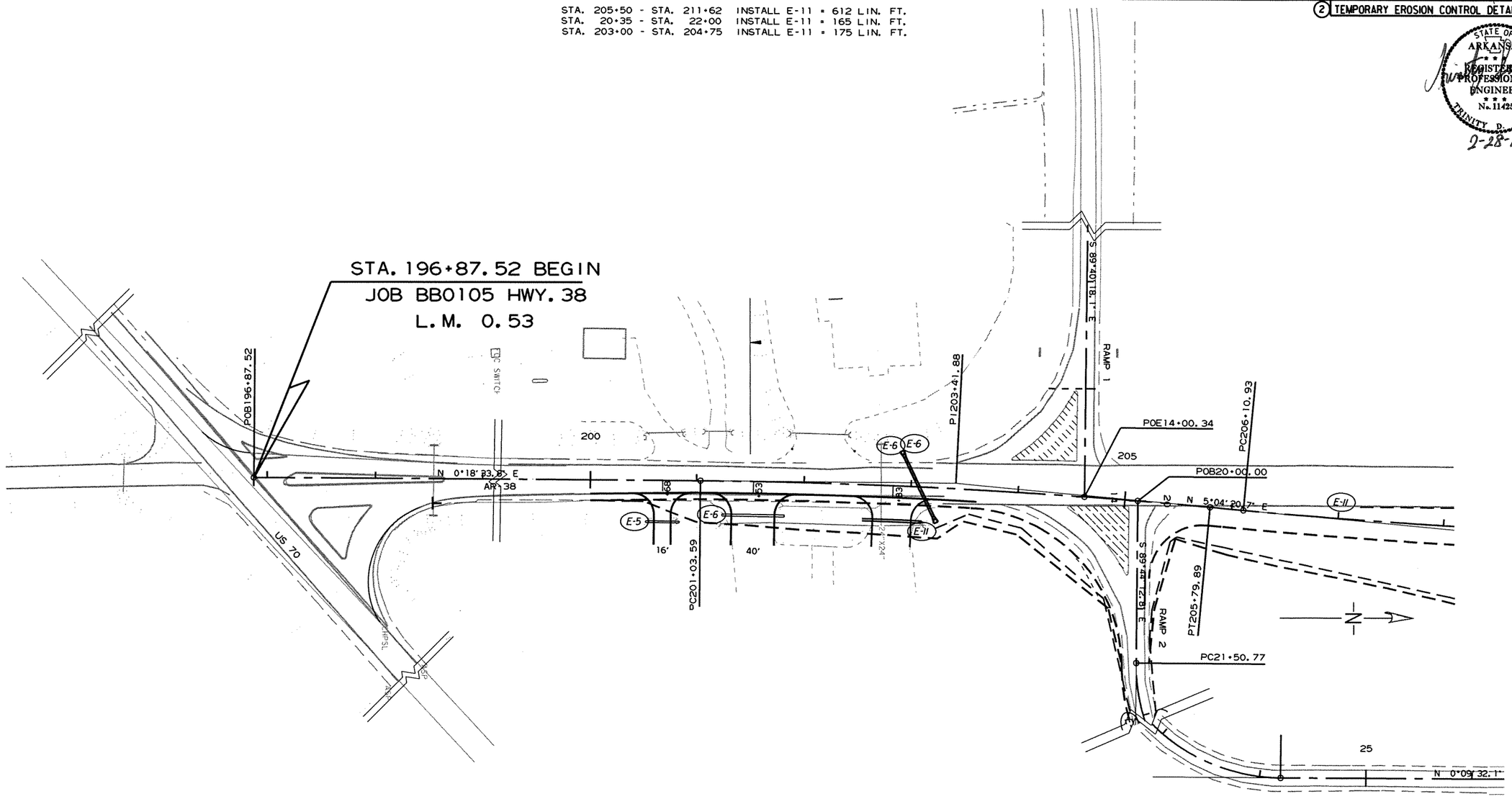
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	34	374

(2) TEMPORARY EROSION CONTROL DETAILS

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

2-28-13

STA. 205+50 - STA. 211+62 INSTALL E-11 = 612 LIN. FT.
STA. 20+35 - STA. 22+00 INSTALL E-11 = 165 LIN. FT.
STA. 203+00 - STA. 204+75 INSTALL E-11 = 175 LIN. FT.



LEGEND

- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-8) = DIVERSION DITCH
- (E-11) = SILT FENCE
- (E-12) = SLOPE DRAIN

• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL DETAILS
HWY. 38 STAGE 1-A

rbb0105_ec.dgn 11/8/12 temporary erosion control details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	35	374

(2) TEMPORARY EROSION CONTROL DETAILS

• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

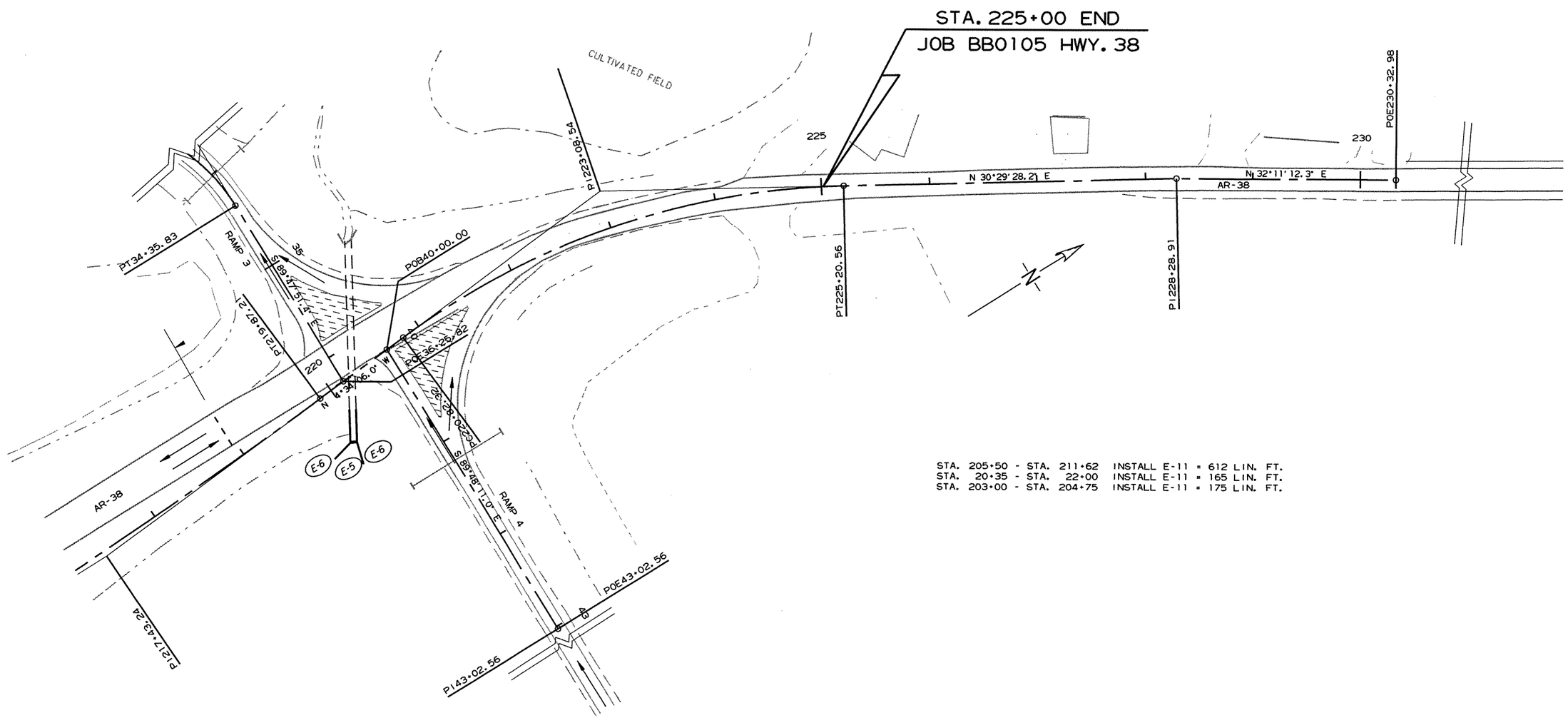
DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-8) = DIVERSION DITCH ———
- (E-11) = SILT FENCE — — —
- (E-12) = SLOPE DRAIN - - - -

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

2-28-13



STA. 205+50 - STA. 211+62 INSTALL E-11 = 612 LIN. FT.
STA. 20+35 - STA. 22+00 INSTALL E-11 = 165 LIN. FT.
STA. 203+00 - STA. 204+75 INSTALL E-11 = 175 LIN. FT.

TEMPORARY EROSION CONTROL DETAILS
HWY. 38 STAGE 1-A

bb0105_ec.dgn 11/8/12 temporary erosion control details

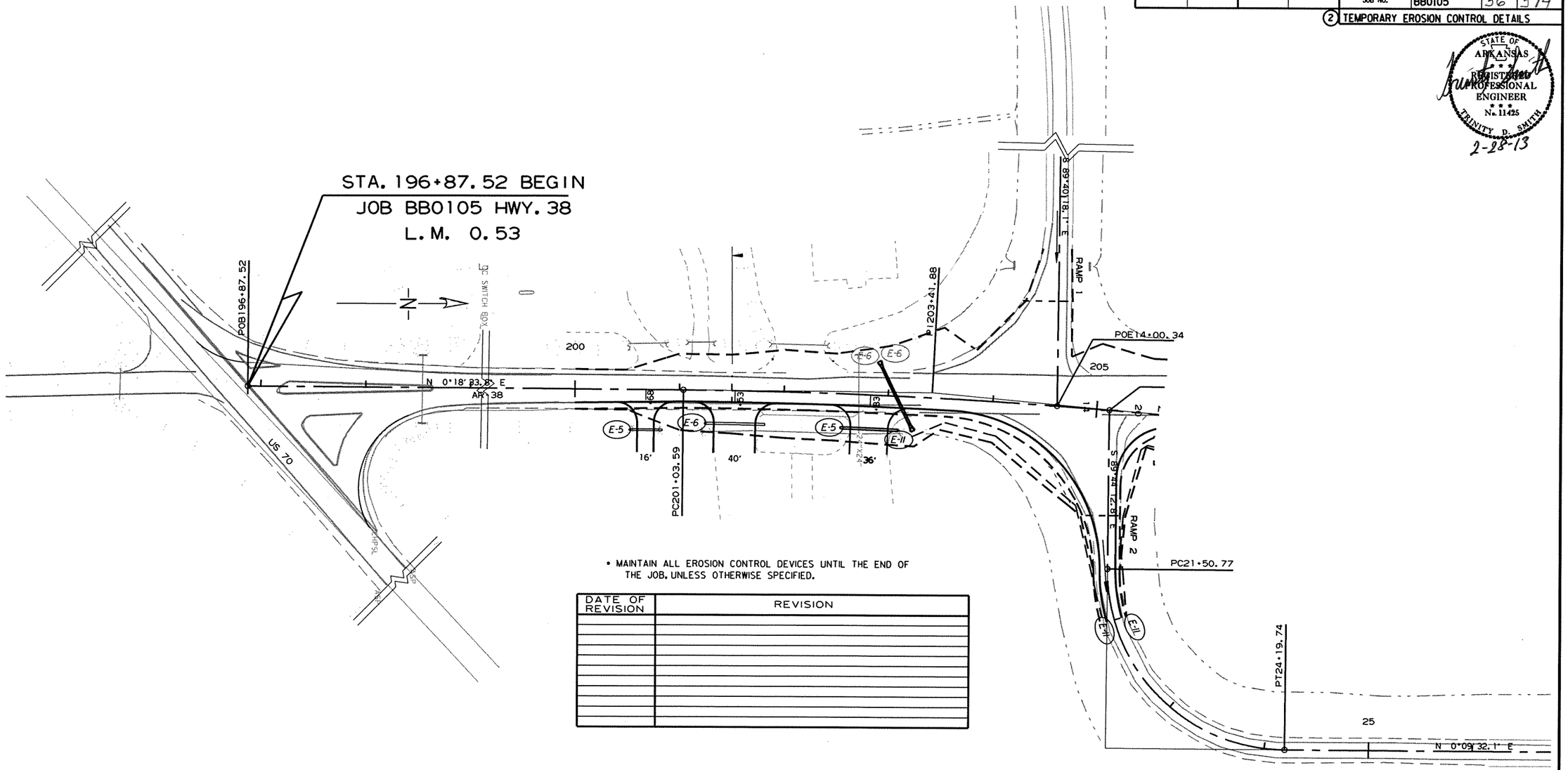
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	36	374

(2) TEMPORARY EROSION CONTROL DETAILS

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

2-28-13



• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE OF REVISION	REVISION

STA. 20+35 - STA. 22+00 INSTALL E-11 = 165 LIN. FT.
STA. 203+00 - STA. 204+75 INSTALL E-11 = 175 LIN. FT.
STA. 205+50 - STA. 211+62 INSTALL E-11 = 612 LIN. FT.
STA. 207+00 - STA. 211+62 INSTALL E-11 = 462 LIN. FT.
STA. 211+62 INSTALL E-11 = 120 LIN. FT.
STA. 214+37 INSTALL E-11 = 120 LIN. FT.
STA. 214+37 - STA. 218+50 INSTALL E-11 = 413 LIN. FT.
STA. 214+37 - STA. 220+00 INSTALL E-11 = 570 LIN. FT.

LEGEND

- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-8) = DIVERSION DITCH ———
- (E-11) = SILT FENCE — — —
- (E-12) = SLOPE DRAIN - - - -

TEMPORARY EROSION CONTROL DETAILS
HWY. 38 STAGE 1-B

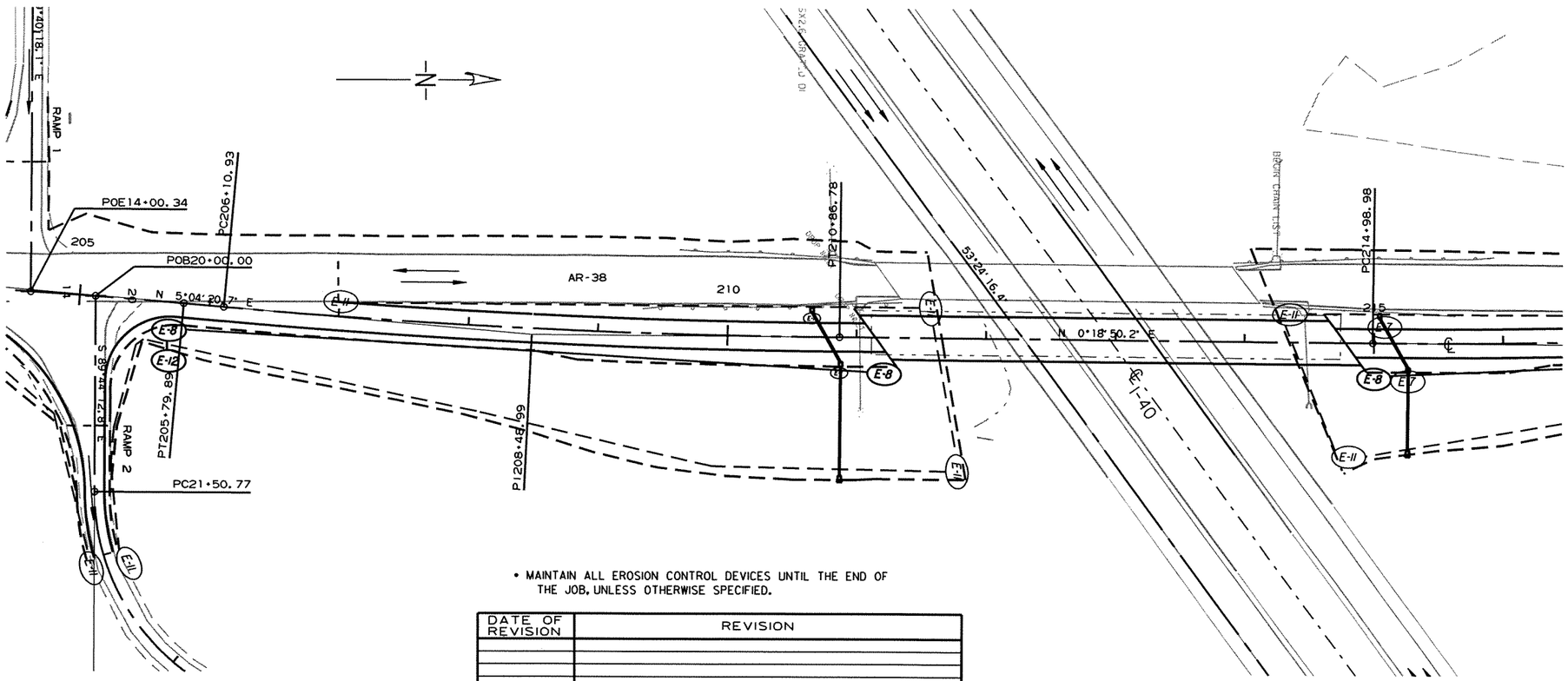
rbb0105_ec.dgn 11/8/12 temporary erosion control details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	37	374

(2) TEMPORARY EROSION CONTROL DETAILS

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

2-28-13



• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-8) = DIVERSION DITCH ———
- (E-11) = SILT FENCE — — —
- (E-12) = SLOPE DRAIN - - - -

STA. 20+35 - STA. 22+00 INSTALL E-11 = 165 LIN. FT.
STA. 203+00 - STA. 204+75 INSTALL E-11 = 175 LIN. FT.
STA. 205+50 - STA. 211+62 INSTALL E-11 = 612 LIN. FT.
STA. 207+00 - STA. 211+62 INSTALL E-11 = 462 LIN. FT.
STA. 211+62 INSTALL E-11 = 120 LIN. FT.
STA. 214+37 INSTALL E-11 = 120 LIN. FT.
STA. 214+37 - STA. 218+50 INSTALL E-11 = 413 LIN. FT.
STA. 214+37 - STA. 220+00 INSTALL E-11 = 570 LIN. FT.
STA. 205+60 - STA. 211+30 INSTALL E-8 = 570 LIN. FT.
STA. 205+60 INSTALL E-12 = 16 LIN. FT.

TEMPORARY EROSION CONTROL DETAILS
HWY. 38 STAGE 1-B

rbb0105_ec.dgn 11/8/12 temporary erosion control details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	38	374

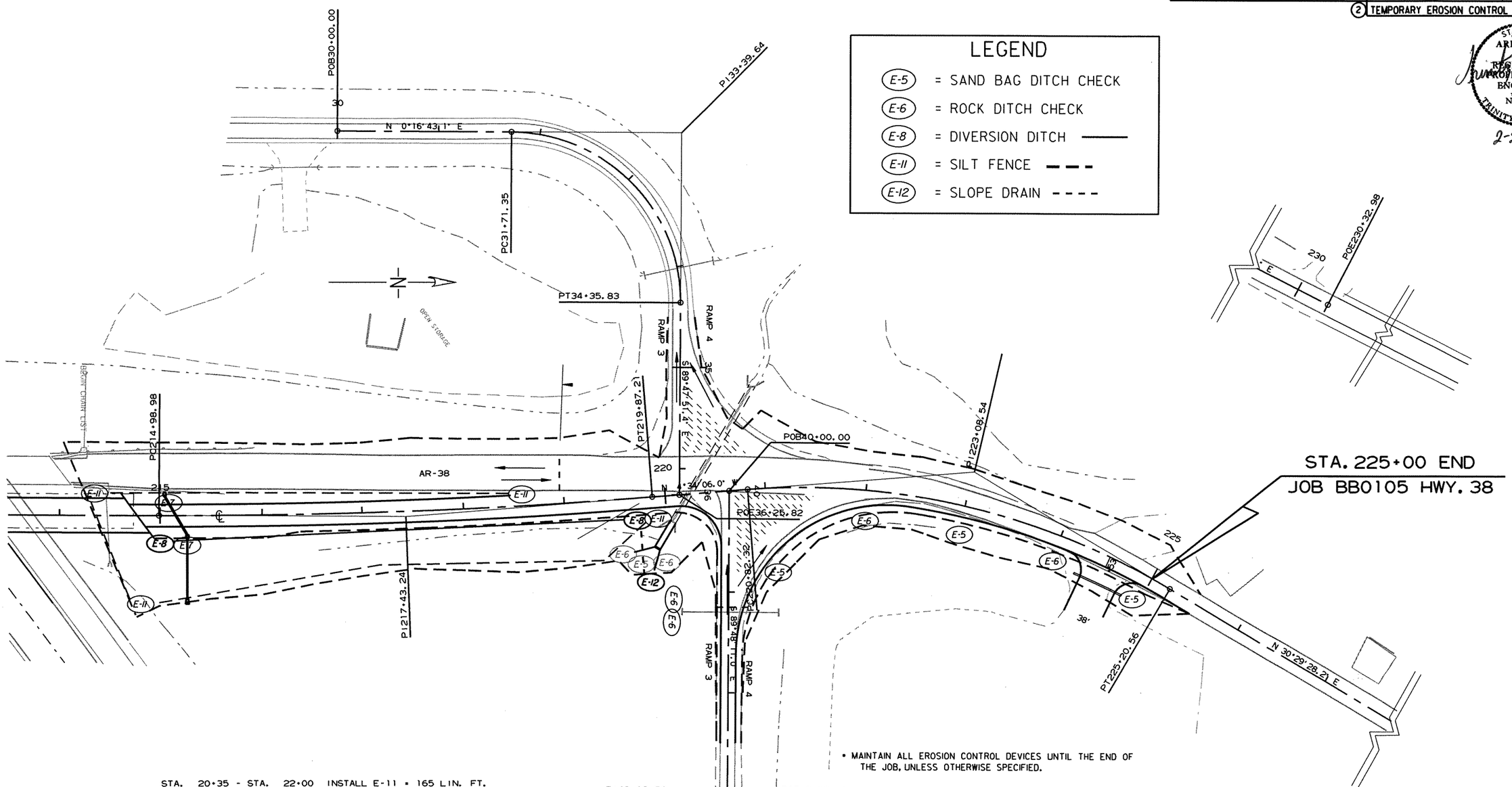
(2) TEMPORARY EROSION CONTROL DETAILS

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

2-28-13

LEGEND

- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-8) = DIVERSION DITCH ———
- (E-11) = SILT FENCE — — —
- (E-12) = SLOPE DRAIN - - - -



STA. 20+35 - STA. 22+00 INSTALL E-11 = 165 LIN. FT.
STA. 203+00 - STA. 204+75 INSTALL E-11 = 175 LIN. FT.
STA. 205+50 - STA. 211+62 INSTALL E-11 = 612 LIN. FT.
STA. 207+00 - STA. 211+62 INSTALL E-11 = 462 LIN. FT.
STA. 211+62 INSTALL E-11 = 120 LIN. FT.
STA. 214+37 INSTALL E-11 = 120 LIN. FT.
STA. 214+37 - STA. 218+50 INSTALL E-11 = 413 LIN. FT.
STA. 214+37 - STA. 220+00 INSTALL E-11 = 570 LIN. FT.
STA. 214+94 - STA. 219+94 INSTALL E-8 = 500 LIN. FT.
STA. 219+94 INSTALL E-12 = 56 LIN. FT.

• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL DETAILS
HWY. 38 STAGE 1-B

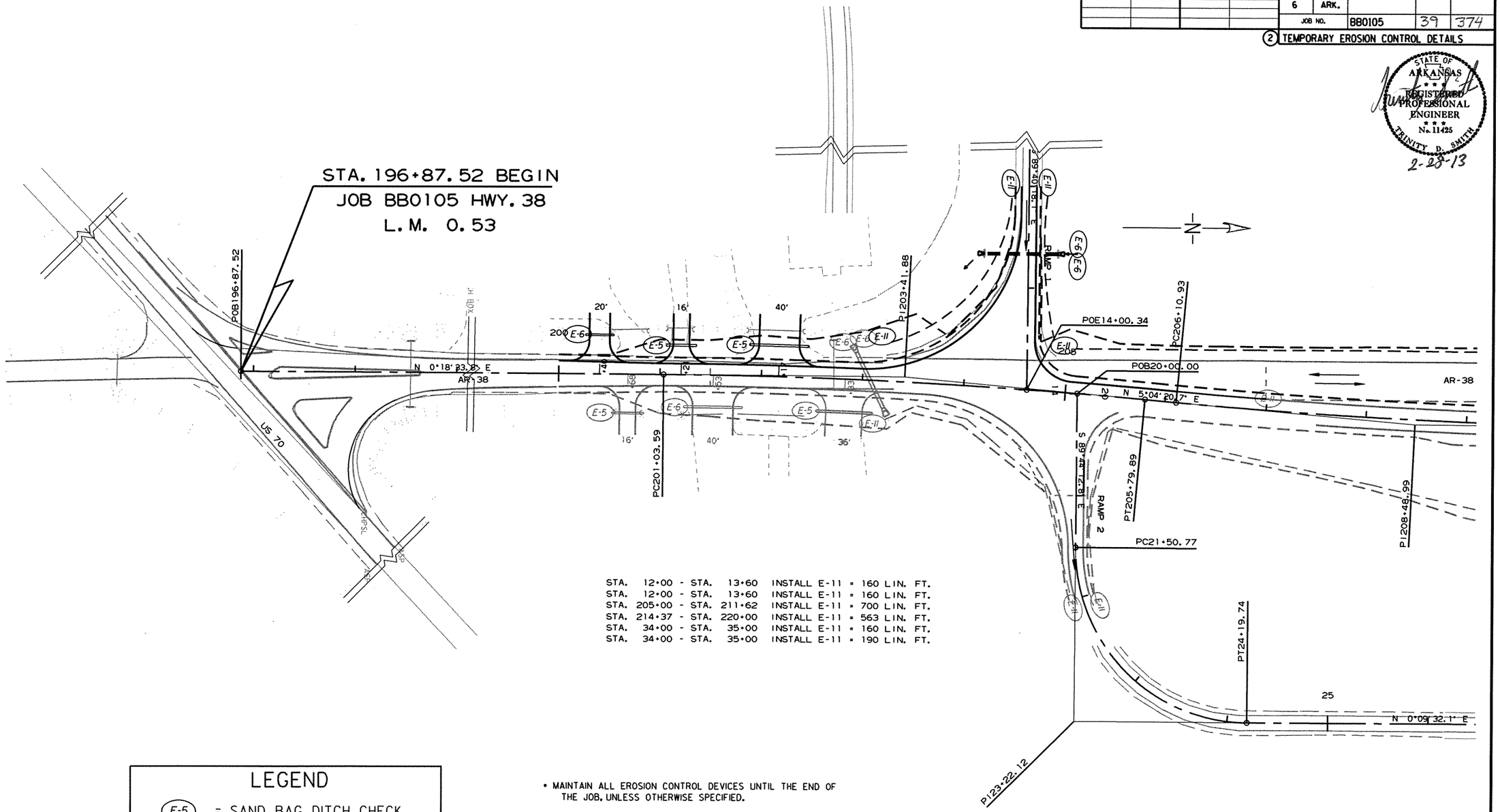
rbb0105_ec.dgn 11/8/12 temporary erosion control details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	39	374

(2) TEMPORARY EROSION CONTROL DETAILS

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

2-28-13



STA. 12+00 - STA. 13+60 INSTALL E-11 = 160 LIN. FT.
STA. 12+00 - STA. 13+60 INSTALL E-11 = 160 LIN. FT.
STA. 205+00 - STA. 211+62 INSTALL E-11 = 700 LIN. FT.
STA. 214+37 - STA. 220+00 INSTALL E-11 = 563 LIN. FT.
STA. 34+00 - STA. 35+00 INSTALL E-11 = 160 LIN. FT.
STA. 34+00 - STA. 35+00 INSTALL E-11 = 190 LIN. FT.

LEGEND

- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-8) = DIVERSION DITCH ———
- (E-11) = SILT FENCE — — —
- (E-12) = SLOPE DRAIN - - - -

• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL DETAILS
HWY. 38 STAGE 2

rbb0105_ec.dgn 11/8/12 temporary erosion control details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

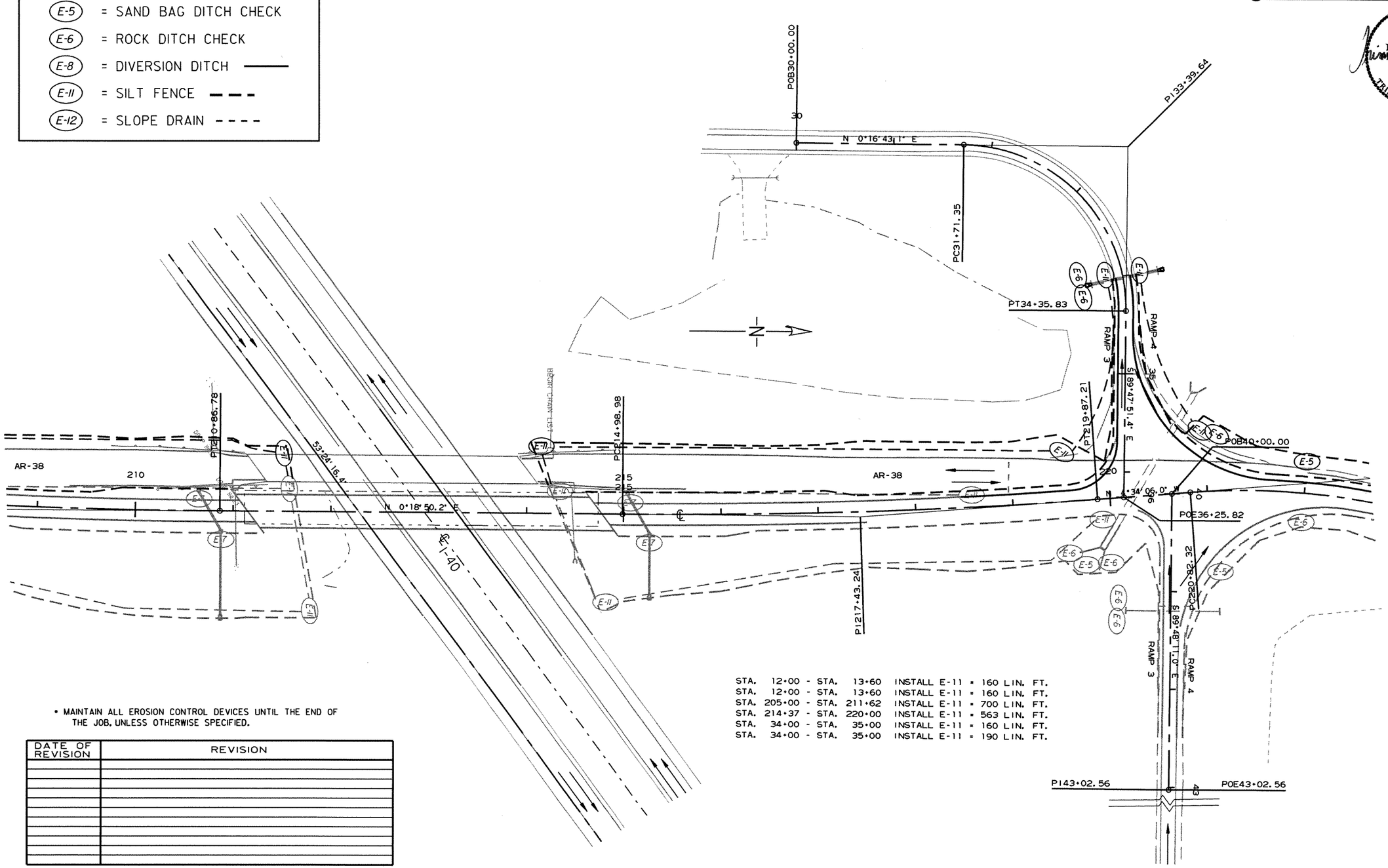
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		B80105	40	374

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH 2-25-13

LEGEND

- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-8) = DIVERSION DITCH
- (E-11) = SILT FENCE
- (E-12) = SLOPE DRAIN



STA.	12+00 -	STA. 13+60	INSTALL E-11	= 160 LIN. FT.
STA.	12+00 -	STA. 13+60	INSTALL E-11	= 160 LIN. FT.
STA.	205+00 -	STA. 211+62	INSTALL E-11	= 700 LIN. FT.
STA.	214+37 -	STA. 220+00	INSTALL E-11	= 563 LIN. FT.
STA.	34+00 -	STA. 35+00	INSTALL E-11	= 160 LIN. FT.
STA.	34+00 -	STA. 35+00	INSTALL E-11	= 190 LIN. FT.

- MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL DETAILS
HWY. 38 STAGE 2

11/8/12 temporary erosion control details

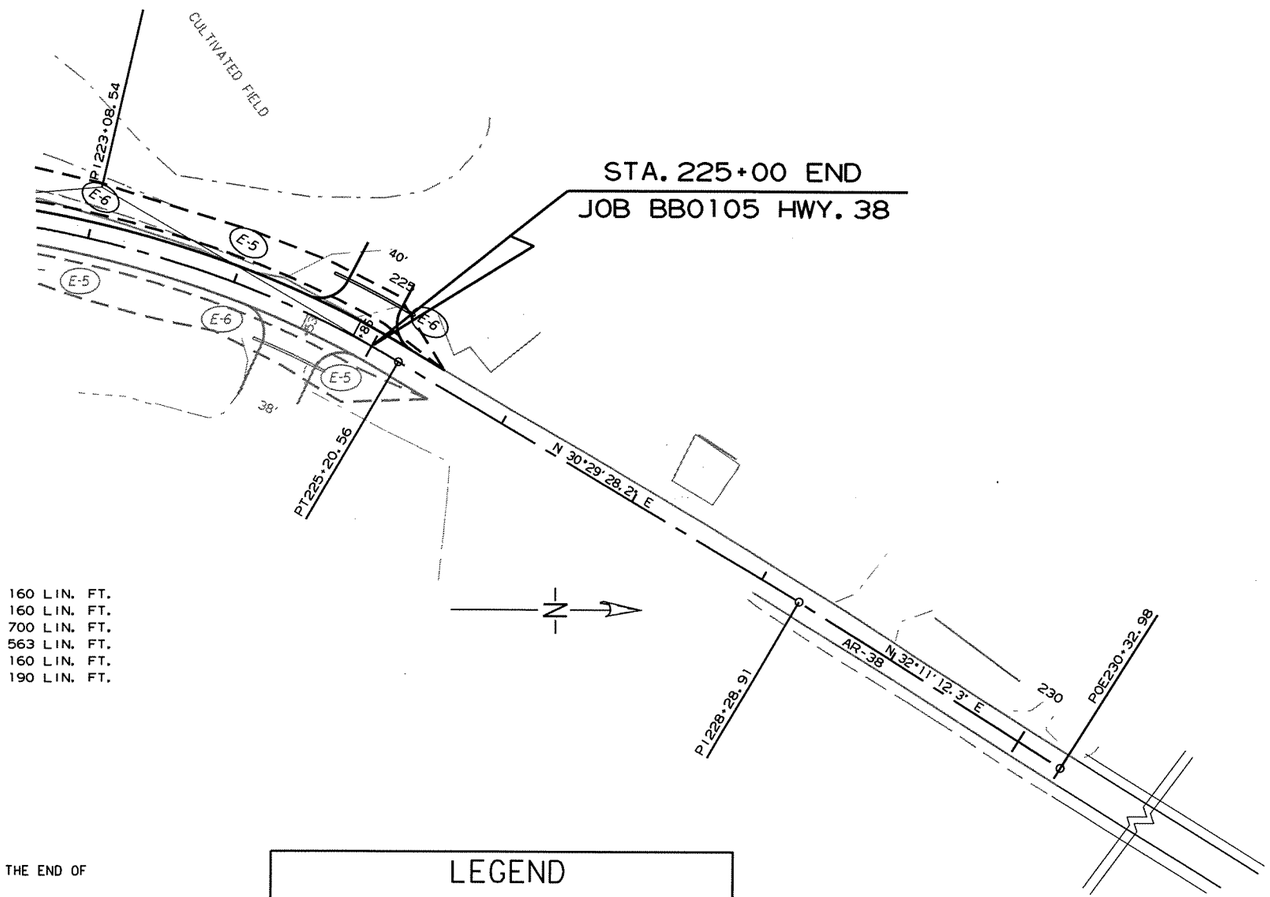
rbb0105_ec.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	41	374

(2) TEMPORARY EROSION CONTROL DETAILS

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

2-28-13



STA. 12+00 - STA. 13+60 INSTALL E-11 = 160 LIN. FT.
STA. 12+00 - STA. 13+60 INSTALL E-11 = 160 LIN. FT.
STA. 205+00 - STA. 211+62 INSTALL E-11 = 700 LIN. FT.
STA. 214+37 - STA. 220+00 INSTALL E-11 = 563 LIN. FT.
STA. 34+00 - STA. 35+00 INSTALL E-11 = 160 LIN. FT.
STA. 34+00 - STA. 35+00 INSTALL E-11 = 190 LIN. FT.

• MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB, UNLESS OTHERWISE SPECIFIED.

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-8) = DIVERSION DITCH ———
- (E-11) = SILT FENCE — — —
- (E-12) = SLOPE DRAIN - - - -

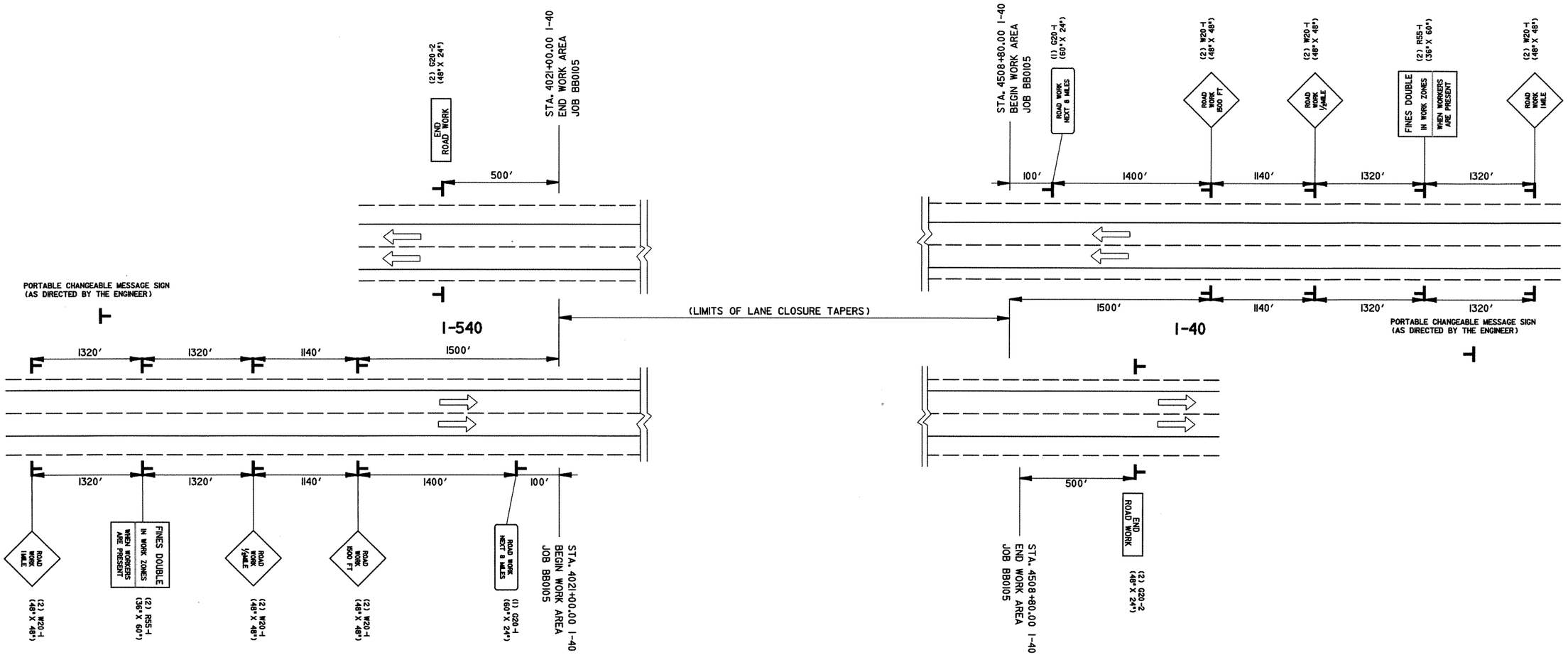
TEMPORARY EROSION CONTROL DETAILS
HWY. 38 STAGE 2

rbb0105_ec.dgn 11/8/12 temporary erosion control details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	42	374

(2) MAINTENANCE OF TRAFFIC

NOTE THAT THESE SIGNS
MAY BE TEMPORARILY REPLACED BY
SOME OF THE ADVANCE SIGNS FOR LANE CLOSURES
WHILE WORK IS UNDERWAY IN THESE AREAS.



NOTE THAT THESE SIGNS
MAY BE TEMPORARILY REPLACED BY
SOME OF THE ADVANCE SIGNS FOR LANE CLOSURES
WHILE WORK IS UNDERWAY IN THESE AREAS.

ADVANCE SIGNS AT BEGINNING AND END OF JOB BB0105
ALL STAGES

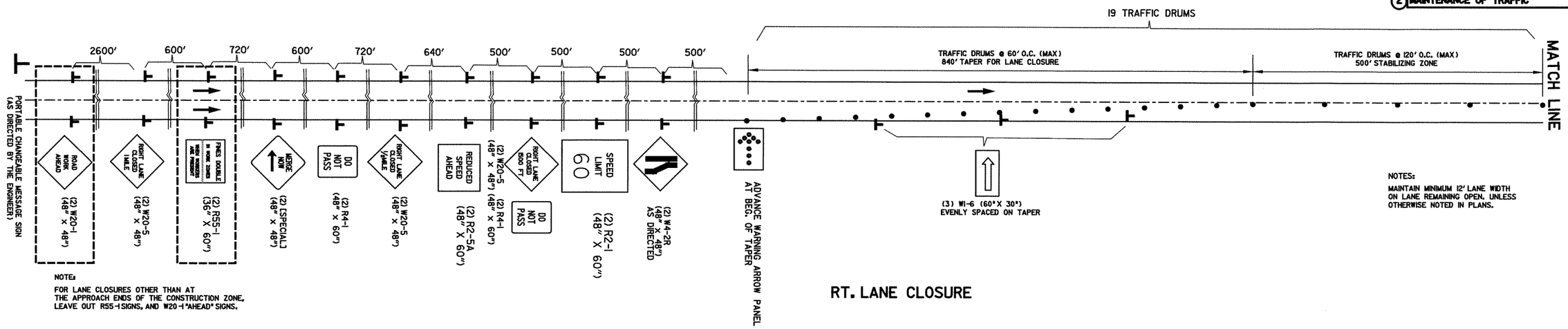
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC
ADVANCE WARNING

bb0105.adv warning.dgn 2/8/2013 10:07:46 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	43	374

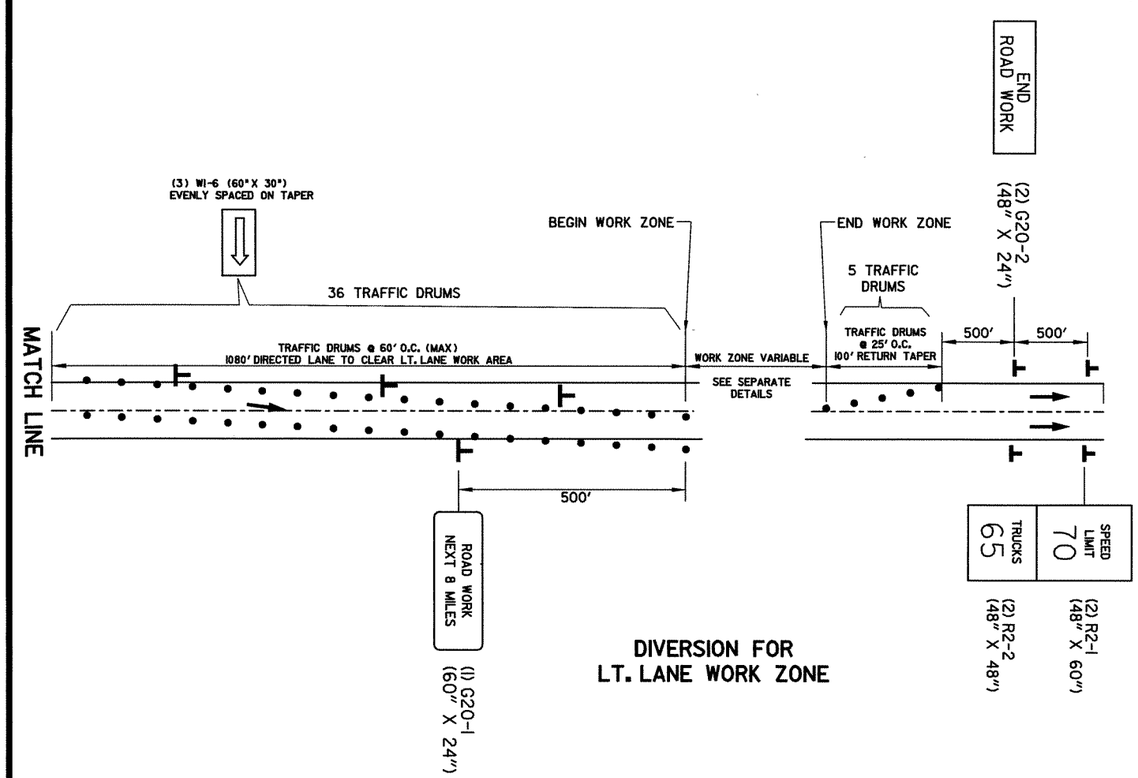
(2) MAINTENANCE OF TRAFFIC



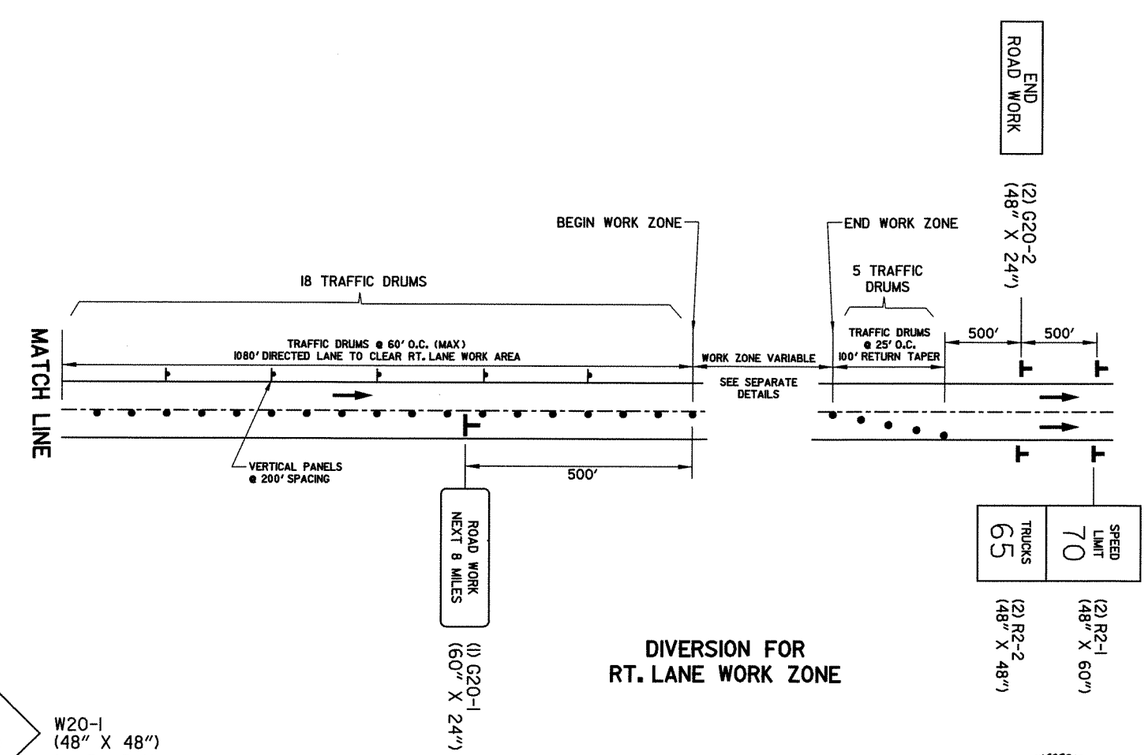
NOTE:
FOR LANE CLOSURES OTHER THAN AT THE APPROACH ENDS OF THE CONSTRUCTION ZONE, LEAVE OUT R55-1 SIGNS, AND W20-1 "AHEAD" SIGNS.

NOTES:
MAINTAIN MINIMUM 12′ LANE WIDTH ON LANE REMAINING OPEN, UNLESS OTHERWISE NOTED IN PLANS.

RT. LANE CLOSURE



DIVERSION FOR LT. LANE WORK ZONE



DIVERSION FOR RT. LANE WORK ZONE

ROAD WORK AHEAD

W20-1
(48″ X 48″)
1 @ RAMP X - HWY. 1 INTERCHANGE
2 @ RAMP X - HWY. 1B INTERCHANGE
2 @ RAMP X - HWY. 284 INTERCHANGE
2 @ RAMP X - HWY. 38 INTERCHANGE

END ROAD WORK

G20-2
(48″ X 24″)
1 @ RAMP X - HWY. 1 INTERCHANGE
2 @ RAMP X - HWY. 1B INTERCHANGE
2 @ RAMP X - HWY. 284 INTERCHANGE
2 @ RAMP X - HWY. 38 INTERCHANGE

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

ADVANCE SIGNS AND LANE CLOSURES ALL STAGES

MAINTENANCE OF TRAFFIC

bb0105.lane closure.dgn 2/8/2013 10:07:47 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
4/9/13			

FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	44	374

(2) MAINTENANCE OF TRAFFIC

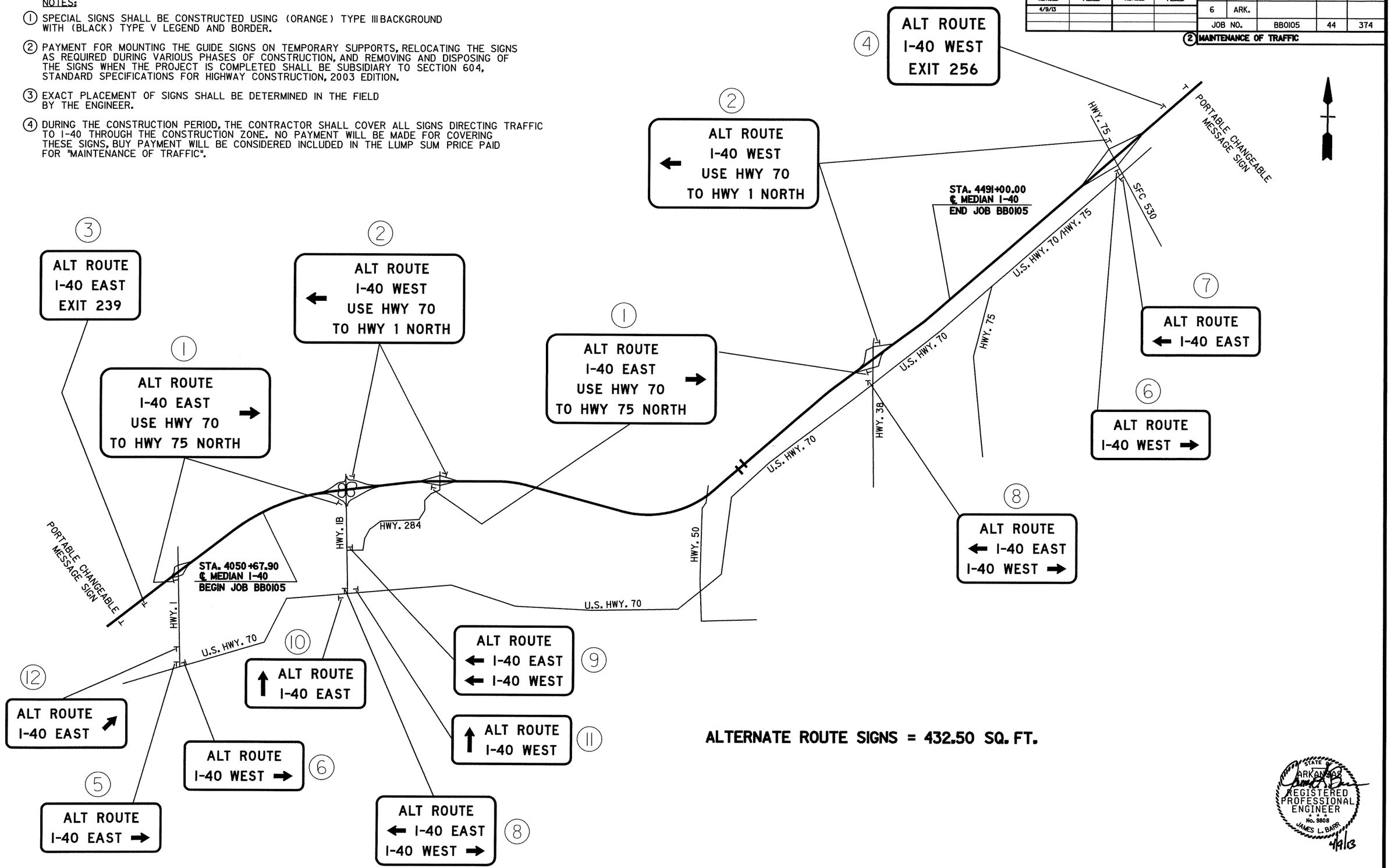
NOTES:

(1) SPECIAL SIGNS SHALL BE CONSTRUCTED USING (ORANGE) TYPE III BACKGROUND WITH (BLACK) TYPE V LEGEND AND BORDER.

(2) PAYMENT FOR MOUNTING THE GUIDE SIGNS ON TEMPORARY SUPPORTS, RELOCATING THE SIGNS AS REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION, AND REMOVING AND DISPOSING OF THE SIGNS WHEN THE PROJECT IS COMPLETED SHALL BE SUBSIDIARY TO SECTION 604, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.

(3) EXACT PLACEMENT OF SIGNS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

(4) DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL COVER ALL SIGNS DIRECTING TRAFFIC TO I-40 THROUGH THE CONSTRUCTION ZONE. NO PAYMENT WILL BE MADE FOR COVERING THESE SIGNS, BUY PAYMENT WILL BE CONSIDERED INCLUDED IN THE LUMP SUM PRICE PAID FOR "MAINTENANCE OF TRAFFIC".



ALTERNATE ROUTE SIGNS = 432.50 SQ. FT.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 4/9/13

MAINTENANCE OF TRAFFIC

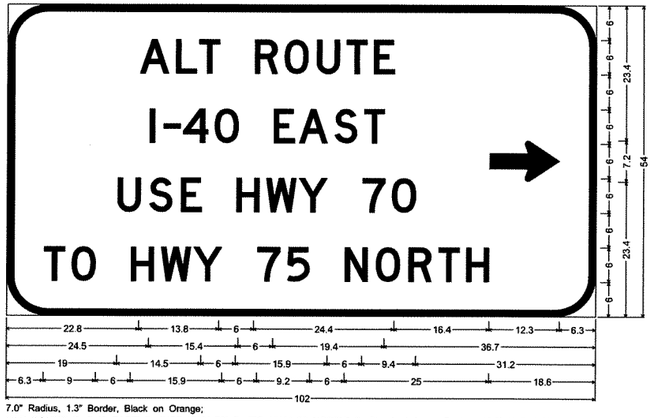
bb0105.mot detourA.dgn 4/9/2013 5:55:45 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
4/9/13			

FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	44A	374

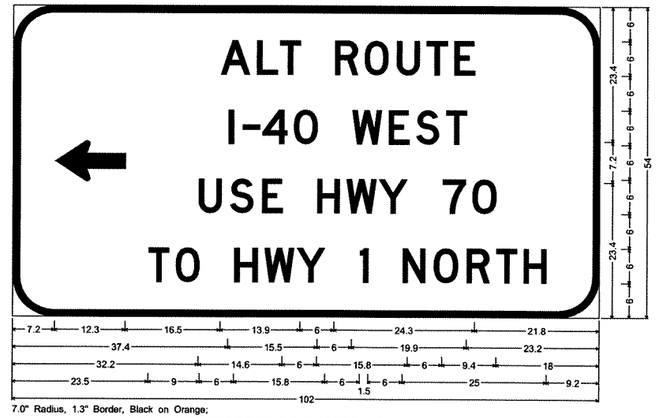
2 MAINTENANCE OF TRAFFIC

1



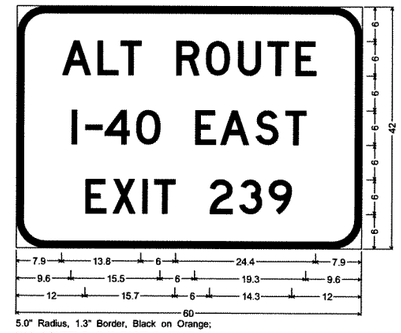
7.0" Radius, 1.3" Border, Black on Orange;
[ALT ROUTE] D; [I-40 EAST] D; [USE HWY 70] D; [TO HWY 75 NORTH] D; Standard Arrow Custom 12.3" X 7.1" 0";

2



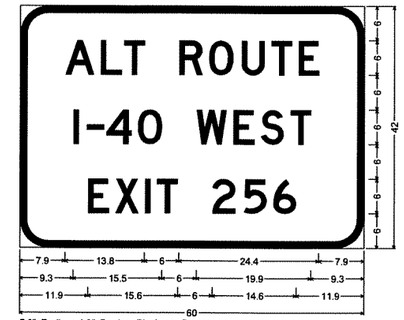
7.0" Radius, 1.3" Border, Black on Orange;
Standard Arrow Custom 12.3" X 7.1" 180"; [ALT ROUTE] D; [I-40 WEST] D; [USE HWY 70] D; [TO HWY 1 NORTH] D;

3



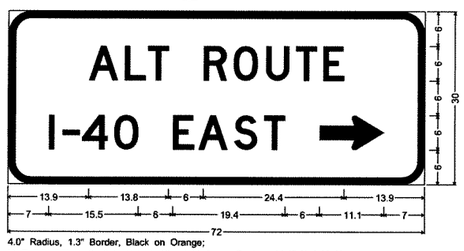
5.0" Radius, 1.3" Border, Black on Orange;
[ALT ROUTE] D; [I-40 EAST] D; [EXIT 239] D;

4



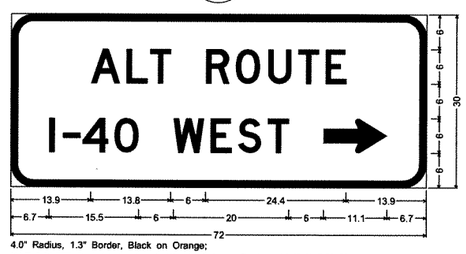
5.0" Radius, 1.3" Border, Black on Orange;
[ALT ROUTE] D; [I-40 WEST] D; [EXIT 256] D;

5



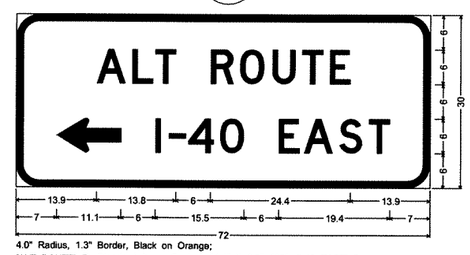
4.0" Radius, 1.3" Border, Black on Orange;
[ALT ROUTE] D; [I-40 EAST] D; Standard Arrow Custom 11.1" X 6.0" 0";

6



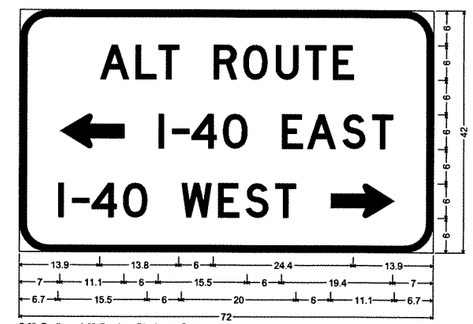
4.0" Radius, 1.3" Border, Black on Orange;
[ALT ROUTE] D; [I-40 WEST] D; Standard Arrow Custom 11.1" X 6.0" 0";

7



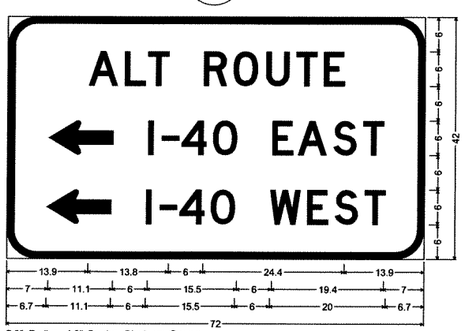
4.0" Radius, 1.3" Border, Black on Orange;
[ALT ROUTE] D; Standard Arrow Custom 11.1" X 6.0" 180"; [I-40 EAST] D;

8



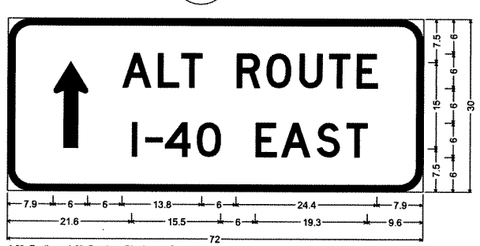
5.0" Radius, 1.3" Border, Black on Orange;
[ALT ROUTE] D; Standard Arrow Custom 11.1" X 6.0" 180"; [I-40 EAST] D;
[I-40 WEST] D; Standard Arrow Custom 11.1" X 6.0" 0";

9



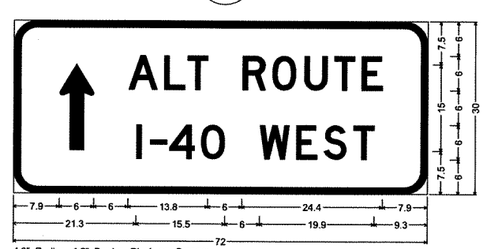
5.0" Radius, 1.3" Border, Black on Orange;
[ALT ROUTE] D; Standard Arrow Custom 11.1" X 6.0" 180"; [I-40 EAST] D;
Standard Arrow Custom 11.1" X 6.0" 180"; [I-40 WEST] D;

10



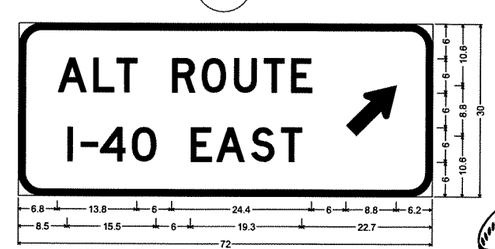
4.0" Radius, 1.3" Border, Black on Orange;
Standard Arrow Custom 15.0" X 6.0" 90"; [ALT ROUTE] D; [I-40 EAST] D;

11



4.0" Radius, 1.3" Border, Black on Orange;
Standard Arrow Custom 15.0" X 6.0" 90"; [ALT ROUTE] D; [I-40 WEST] D;

12



4.0" Radius, 1.3" Border, Black on Orange;
[ALT ROUTE] D; [I-40 EAST] D; Standard Arrow Custom 11.1" X 6.0" 45";

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
4/9/13

NOTE: ALL DIMENSIONS SHOWN ARE "INCHES"

MAINTENANCE OF TRAFFIC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

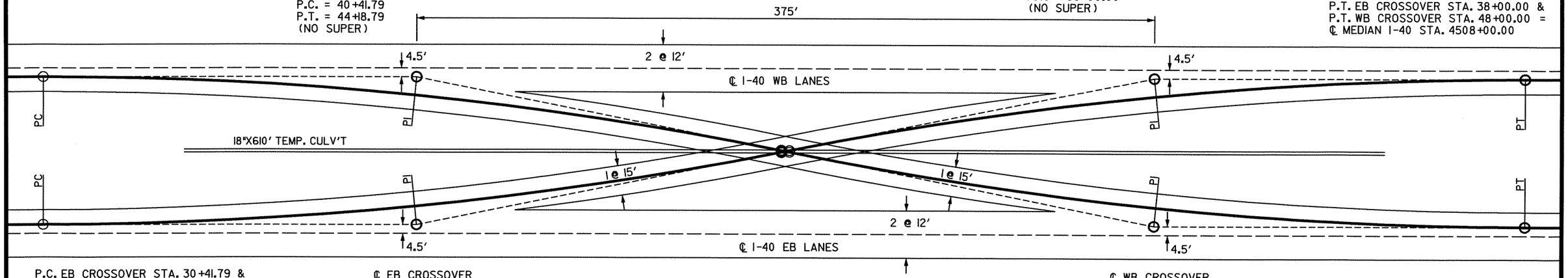
FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	45	374

(2) MAINTENANCE OF TRAFFIC

℄ WB CROSSOVER
P.I. = 42+30.90
DELTA = 11°18'36" RT
DOC = 3°00'
T = 189.11'
L = 377.00'
P.C. = 40+41.79
P.T. = 44+18.79
(NO SUPER)

℄ EB CROSSOVER
P.I. = 36+12.11
DELTA = 11°18'36" RT
DOC = 3°00'
T = 189.11'
L = 377.00'
P.C. = 34+23.00
P.T. = 38+00.00
(NO SUPER)

P.T. EB CROSSOVER STA. 38+00.00 &
P.T. WB CROSSOVER STA. 48+00.00 =
℄ MEDIAN I-40 STA. 4508+00.00



P.C. EB CROSSOVER STA. 30+41.79 &
P.C. WB CROSSOVER STA. 40+41.79 =
℄ MEDIAN I-40 STA. 4500+46.78

℄ EB CROSSOVER
P.I. = 32+30.90
DELTA = 11°18'36" LT
DOC = 3°00'
T = 189.11'
L = 377.00'
P.C. = 30+41.79
P.T. = 34+18.79
(NO SUPER)

CONSTRUCT 18"X610'
TEMP. CULV'T IN MEDIAN

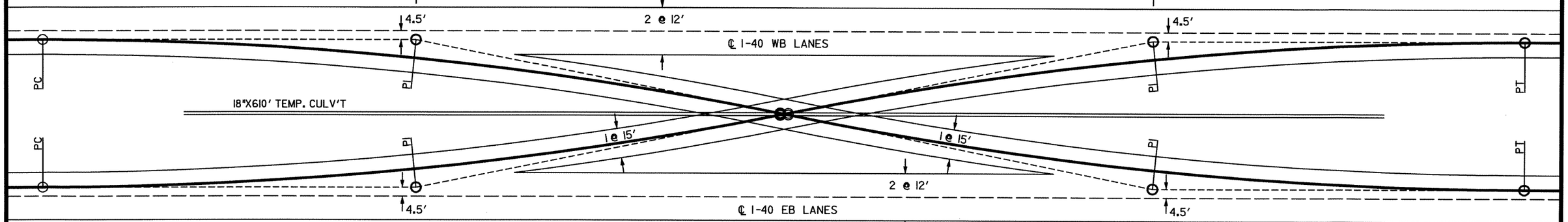
℄ WB CROSSOVER
P.I. = 46+12.11
DELTA = 11°18'36" LT
DOC = 3°00'
T = 189.11'
L = 377.00'
P.C. = 44+23.00
P.T. = 48+00.00
(NO SUPER)

SPECIAL DETAIL
MEDIAN CROSSOVER
END OF JOB

℄ WB CROSSOVER
P.I. = 22+30.90
DELTA = 11°18'36" RT
DOC = 3°00'
T = 189.11'
L = 377.00'
P.C. = 20+41.79
P.T. = 24+18.79
(NO SUPER)

℄ EB CROSSOVER
P.I. = 16+12.11
DELTA = 11°18'36" RT
DOC = 3°00'
T = 189.11'
L = 377.00'
P.C. = 14+23.00
P.T. = 1800.00
(NO SUPER)

P.T. EB CROSSOVER STA. 18+00.00 &
P.T. WB CROSSOVER STA. 28+00.00 =
℄ MEDIAN I-40 STA. 4029+00.00



P.C. EB CROSSOVER STA. 10+41.79 &
P.C. WB CROSSOVER STA. 20+41.79 =
℄ MEDIAN I-40 STA. 4021+46.78

℄ EB CROSSOVER
P.I. = 12+30.90
DELTA = 11°18'36" LT
DOC = 3°00'
T = 189.11'
L = 377.00'
P.C. = 10+41.79
P.T. = 14+18.79
(NO SUPER)

CONSTRUCT 18"X610'
TEMP. CULV'T IN MEDIAN

℄ WB CROSSOVER
P.I. = 26+12.11
DELTA = 11°18'36" LT
DOC = 3°00'
T = 189.11'
L = 377.00'
P.C. = 24+23.00
P.T. = 28+00.00
(NO SUPER)

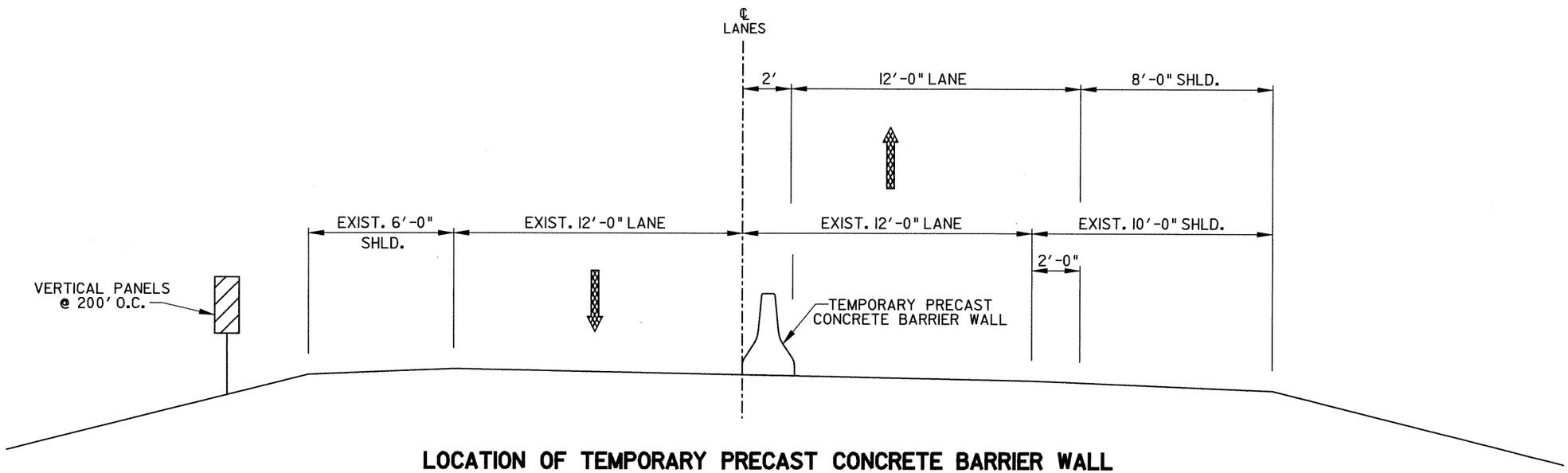
SPECIAL DETAIL
MEDIAN CROSSOVER
BEGINNING OF JOB

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	46	374

(2) MAINTENANCE OF TRAFFIC



LOCATION OF TEMPORARY PRECAST CONCRETE BARRIER WALL FOR MAINTENANCE OF TRAFFIC - RT. MAIN LANES - STAGE 2 & LT. MAIN LANES - STAGE 4

(SHOWN IN DIRECTION OF TRAFFIC)

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC

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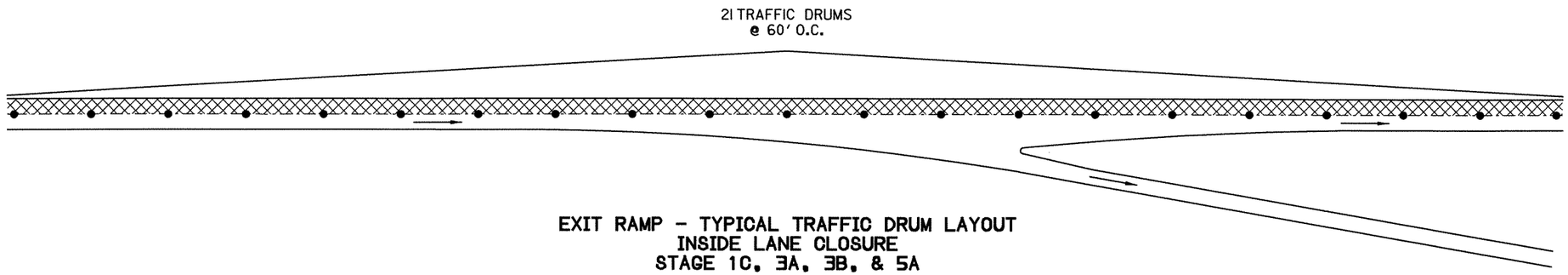
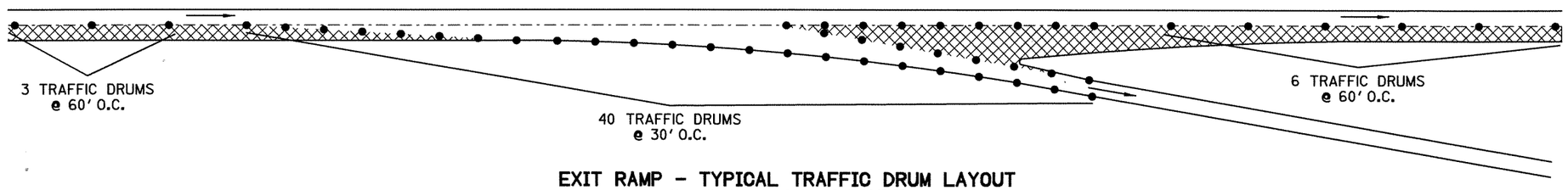
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	47	374

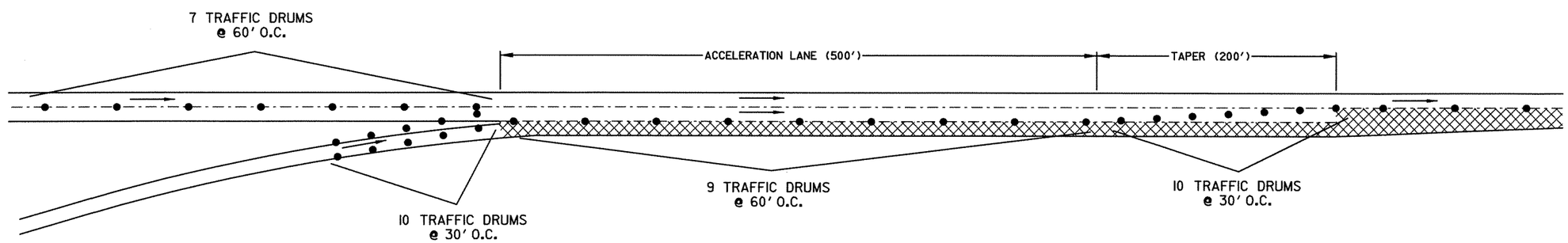
(2) MAINTENANCE OF TRAFFIC



EXIT RAMP - TYPICAL TRAFFIC DRUM LAYOUT
INSIDE LANE CLOSURE
STAGE 1C, 3A, 3B, & 5A



EXIT RAMP - TYPICAL TRAFFIC DRUM LAYOUT
OUTSIDE LANE CLOSURE
STAGE 1D, 3C, & 5B



ENTRANCE RAMP - TYPICAL TRAFFIC DRUM LAYOUT
ACCELERATION LANE CLOSURE
STAGE 1D

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

WORK AREA

DETAIL OF RAMPS WITH LANE CLOSURE

MAINTENANCE OF TRAFFIC

bb0105.MOT Ramp Traffic Drums.dgn 2/8/2013 10:07:48 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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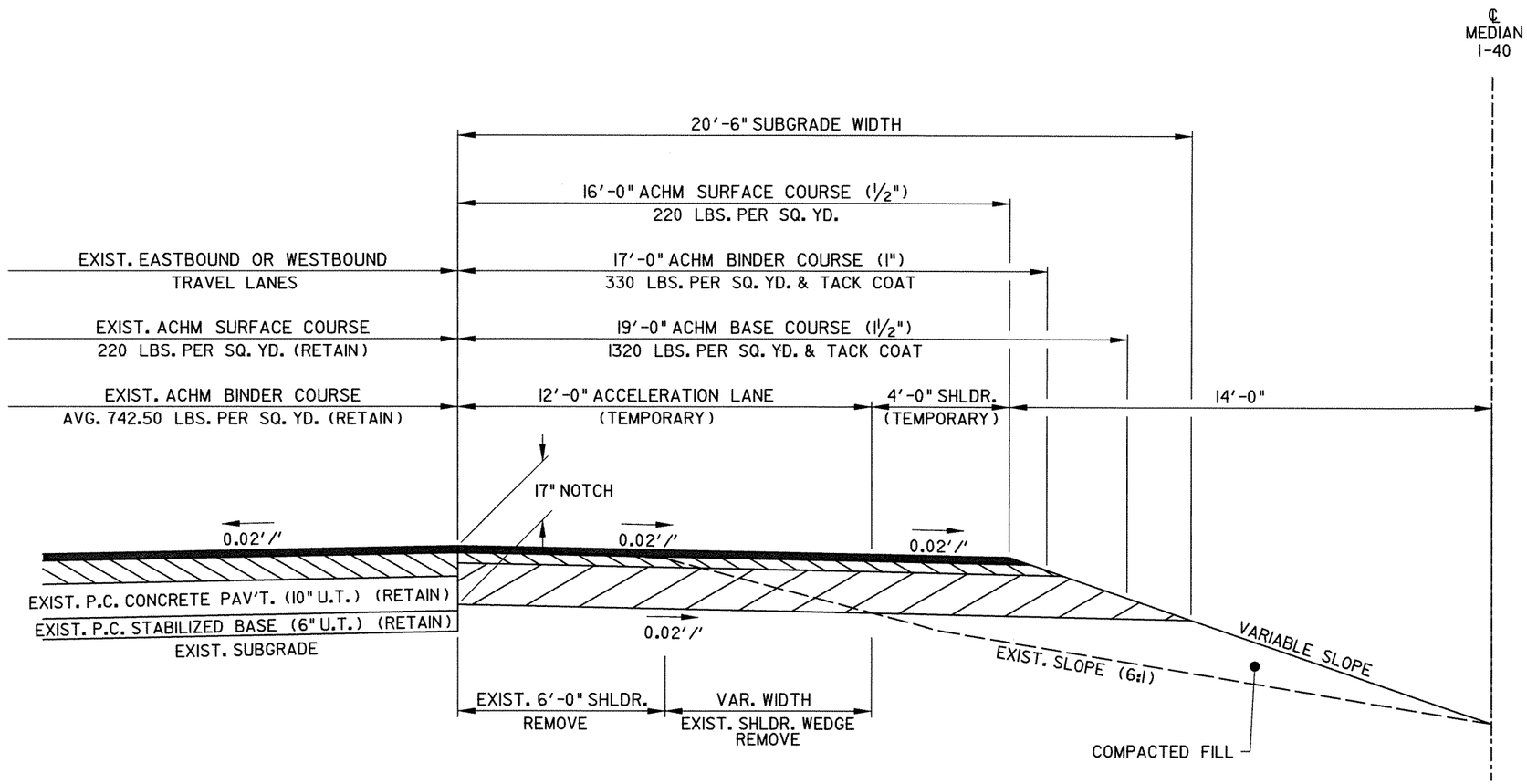
				JOB NO.		BB0105	48	374

(2) MAINTENANCE OF TRAFFIC



TEMPORARY ACCELERATION LANE IN MEDIAN WITH EXISTING MAIN LANE PAVEMENT SECTION

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC

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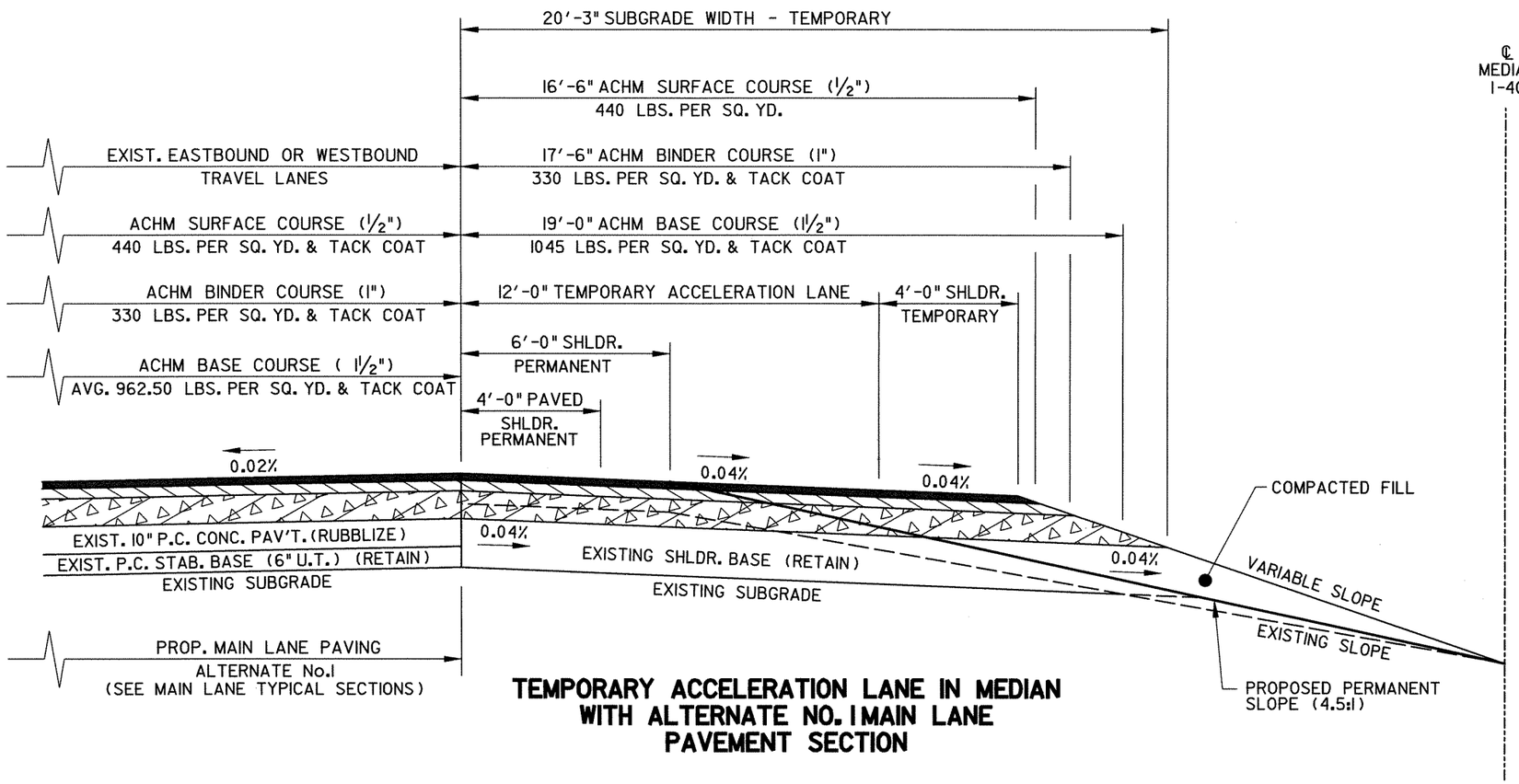
				JOB NO.		BB0105	49	374

(2) MAINTENANCE OF TRAFFIC



TEMPORARY ACCELERATION LANE IN MEDIAN WITH ALTERNATE NO. 1 MAIN LANE PAVEMENT SECTION

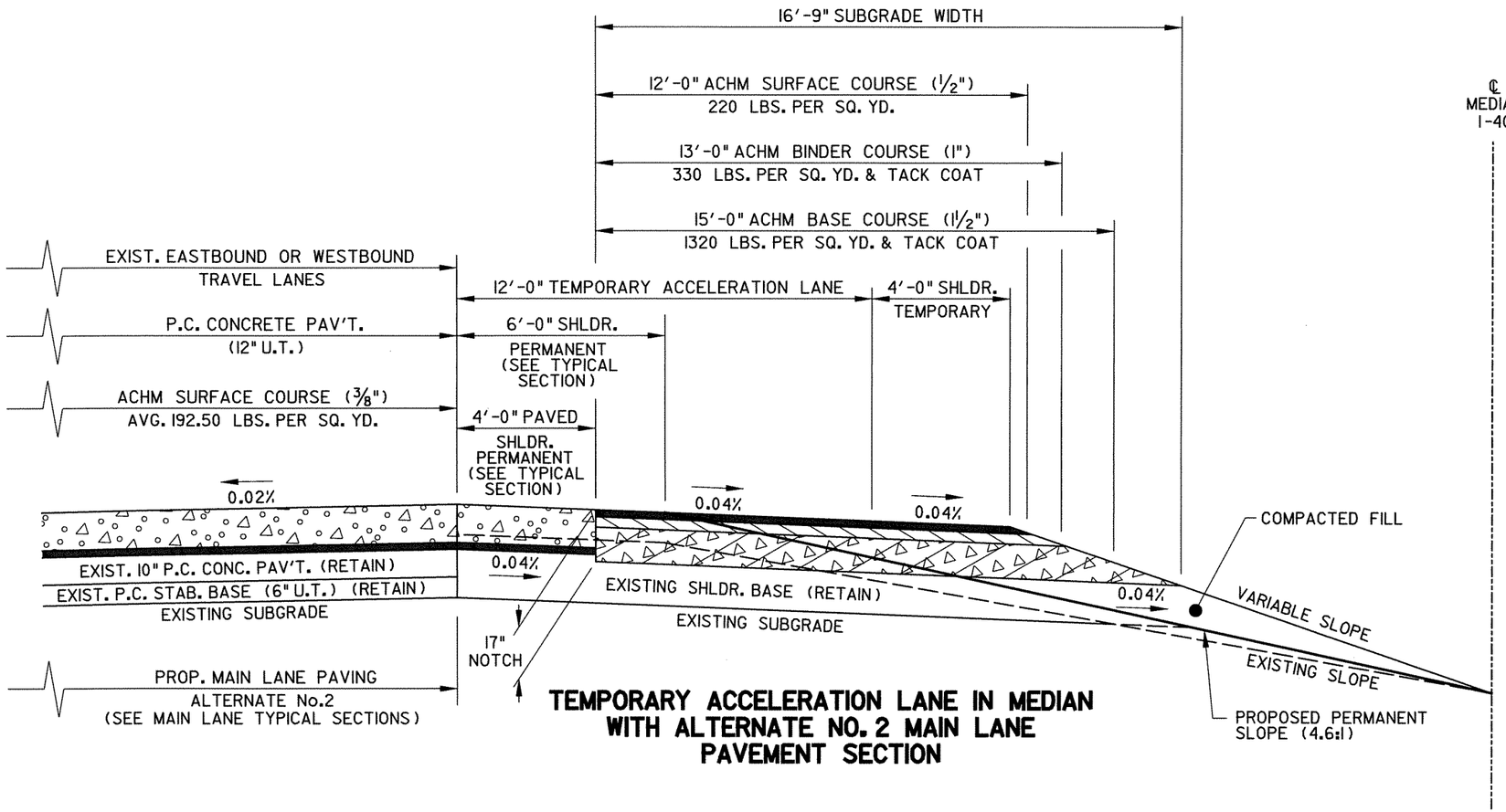
NOTE: UPON COMPLETION OF INTENDED USE OF TEMPORARY ACCELERATION LANE & TEMPORARY SHOULDER, ALL PROPOSED ACHM & FILL MATERIALS OUTSIDE 4' PAVED PERMANENT SHOULDER SHALL BE REMOVED & REPLACED WITH AGGREGATE BASE COURSE (CLASS 7) TO LIMITS OF 6' PERMANENT SHOULDER.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	50	374

(2) MAINTENANCE OF TRAFFIC



TEMPORARY ACCELERATION LANE IN MEDIAN WITH ALTERNATE NO. 2 MAIN LANE PAVEMENT SECTION

NOTE: UPON COMPLETION OF INTENDED USE OF TEMPORARY ACCELERATION LANE & TEMPORARY SHOULDER, ALL PROPOSED ACHM & FILL MATERIALS OUTSIDE 4' PAVED PERMANENT SHOULDER SHALL BE REMOVED & REPLACED WITH AGGREGATE BASE COURSE (CLASS 7) TO LIMITS OF 6' PERMANENT SHOULDER.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	51	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

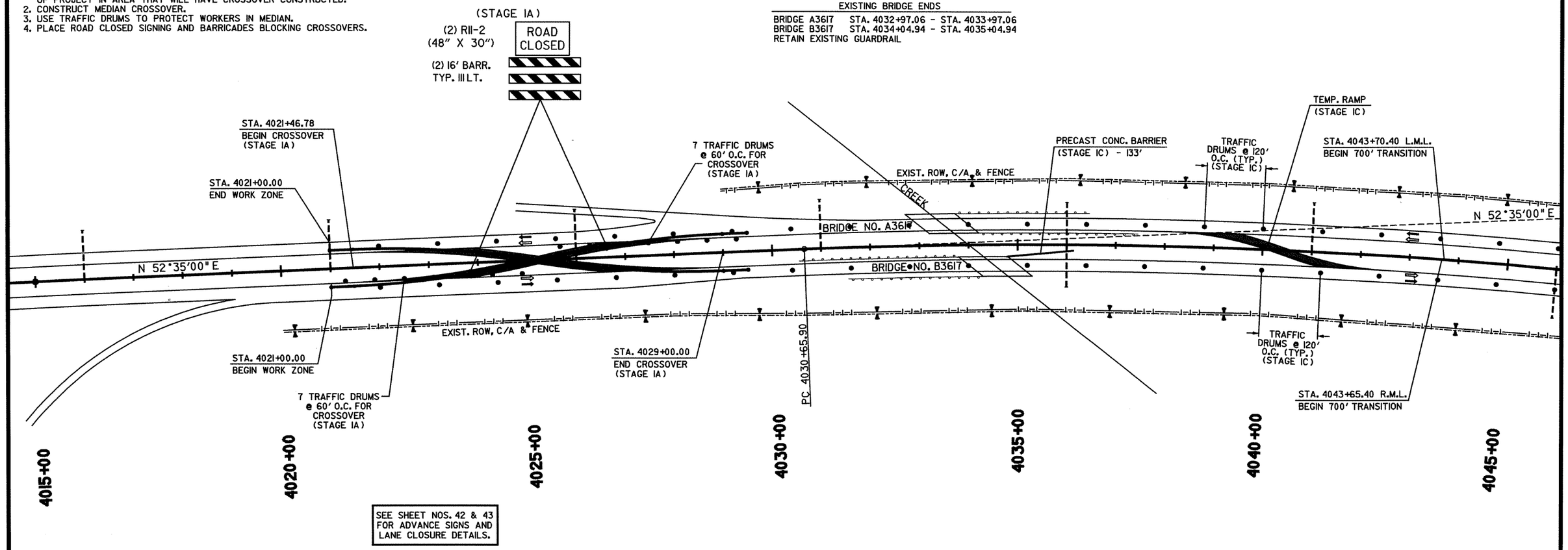
1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.

EXISTING BRIDGE ENDS

BRIDGE A3617 STA. 4032+97.06 - STA. 4033+97.06
BRIDGE B3617 STA. 4034+04.94 - STA. 4035+04.94
RETAIN EXISTING GUARDRAIL



SEE SHEET NOS. 42 & 43 FOR ADVANCE SIGNS AND LANE CLOSURE DETAILS.

LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE I

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	52	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

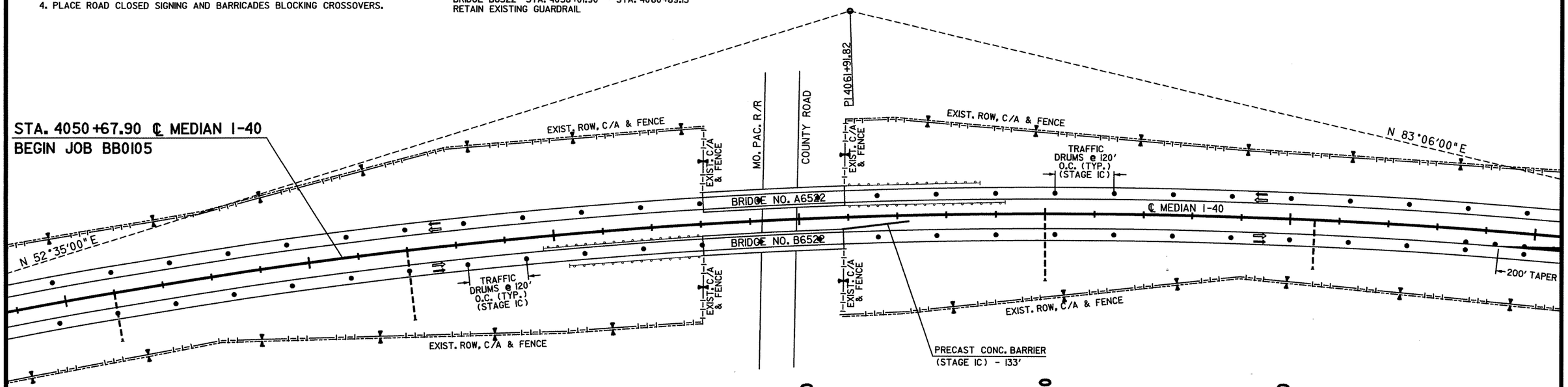
1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

EXISTING BRIDGE ENDS

BRIDGE A6522 STA. 4058+06.90 - STA. 4060+94.13
BRIDGE B6522 STA. 4058+01.90 - STA. 4060+89.13
RETAIN EXISTING GUARDRAIL

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.



℄ MEDIAN I-40
P.I. = 4061+91.82
N = 12726923.4991
E = 2298156.6666
DELTA = 30°31' RT
DOC = 0°30'
T = 3125.92'
L = 6103.33'
P.C. = 4030+65.90
P.T. = 4091+69.23
(NO SUPER)

LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE I

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
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② MAINTENANCE OF TRAFFIC DETAILS

STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

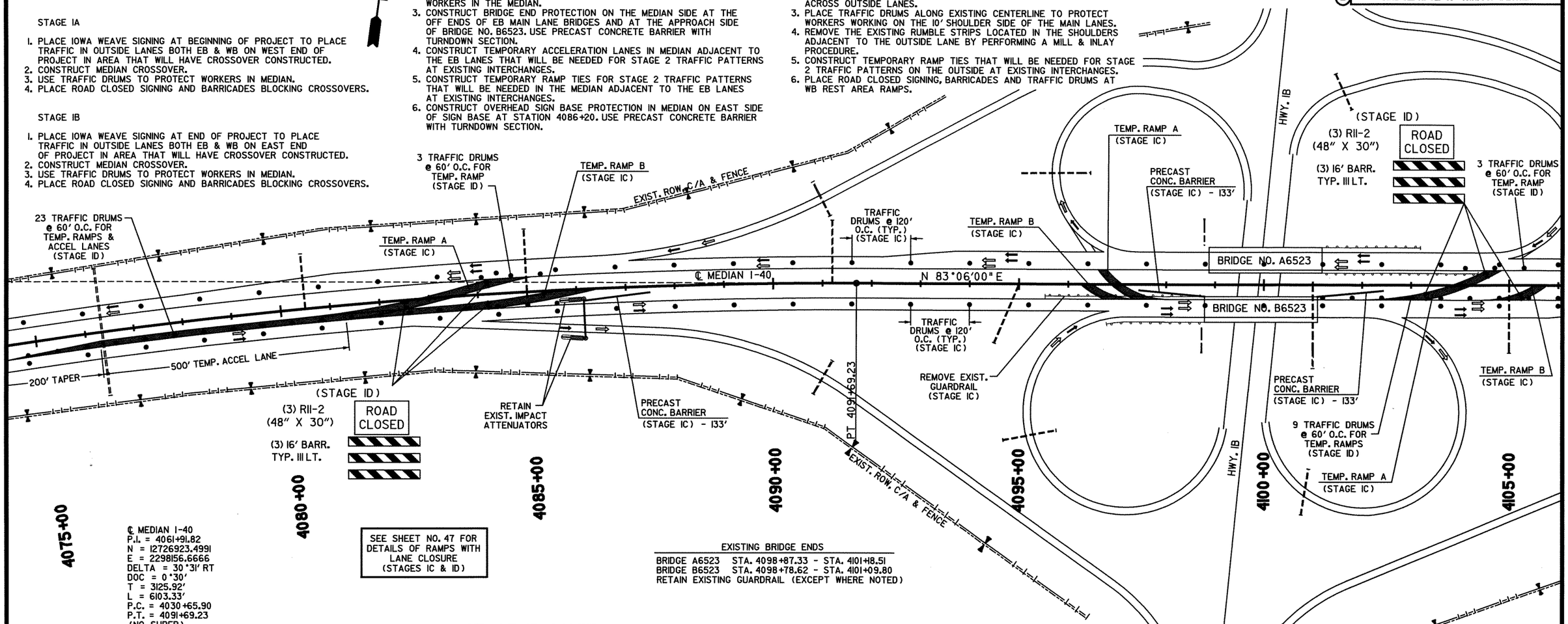
1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

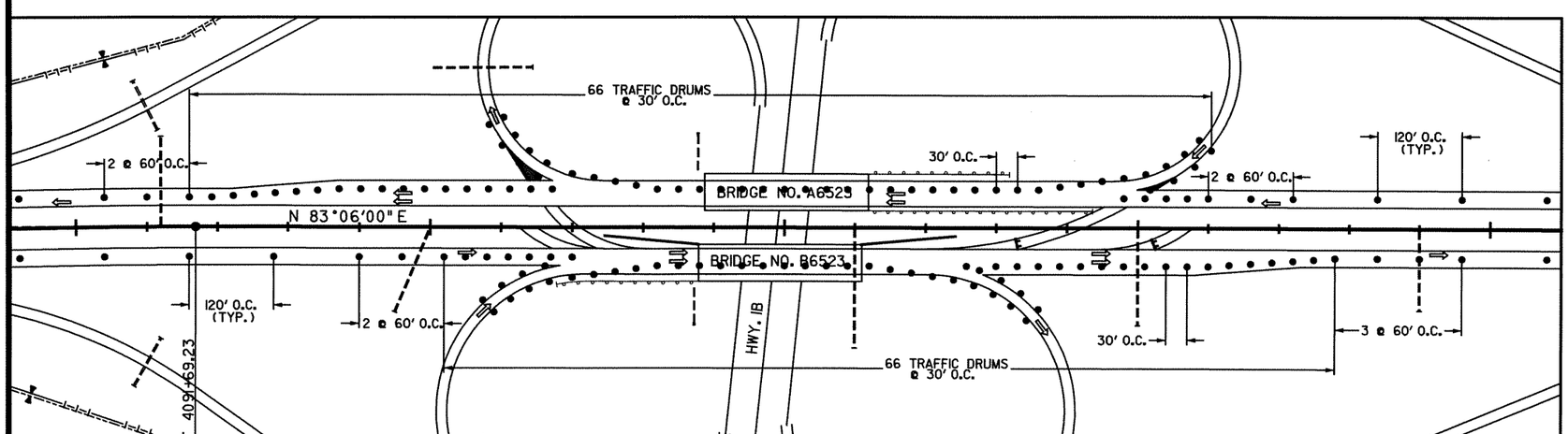
1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.



STAGE ID INSET



LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE I

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

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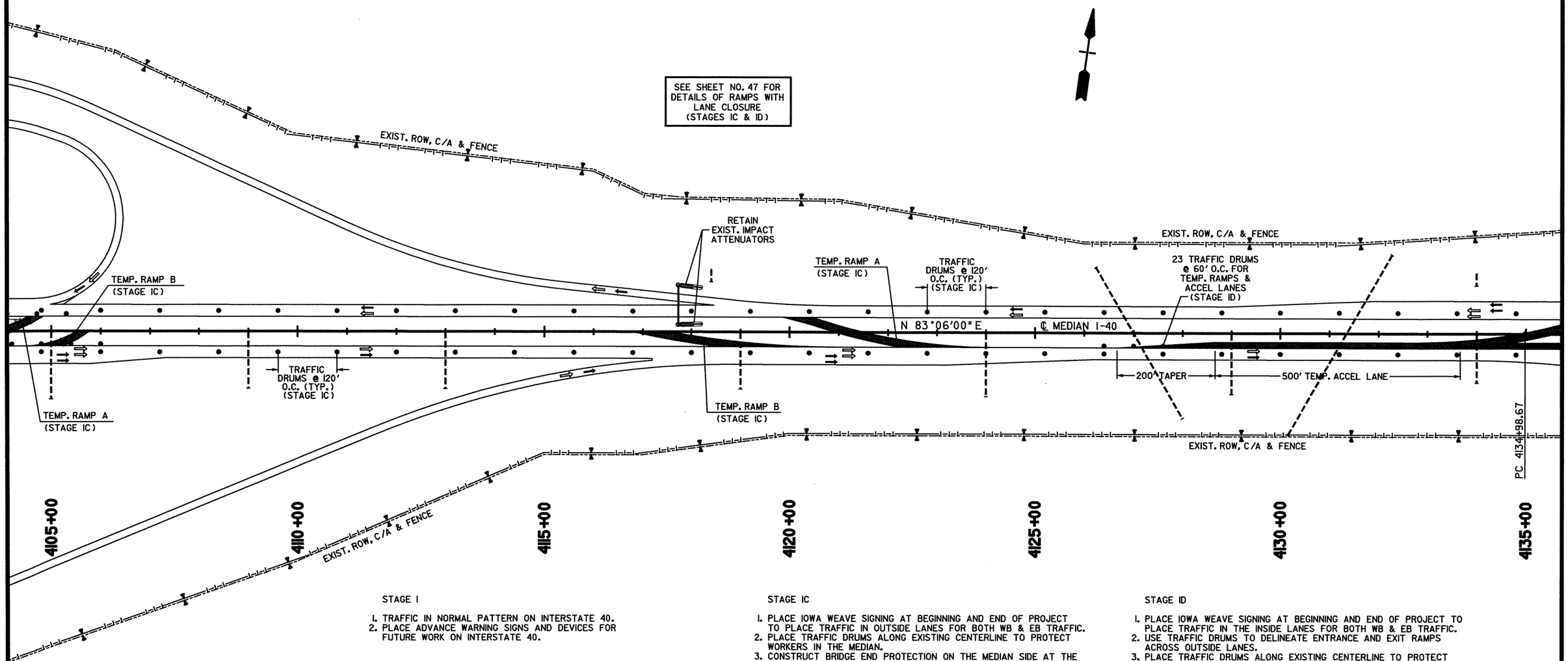
6	ARK.			
JOB NO.		BB0105	54	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.

LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE I

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.		BB0105	55	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

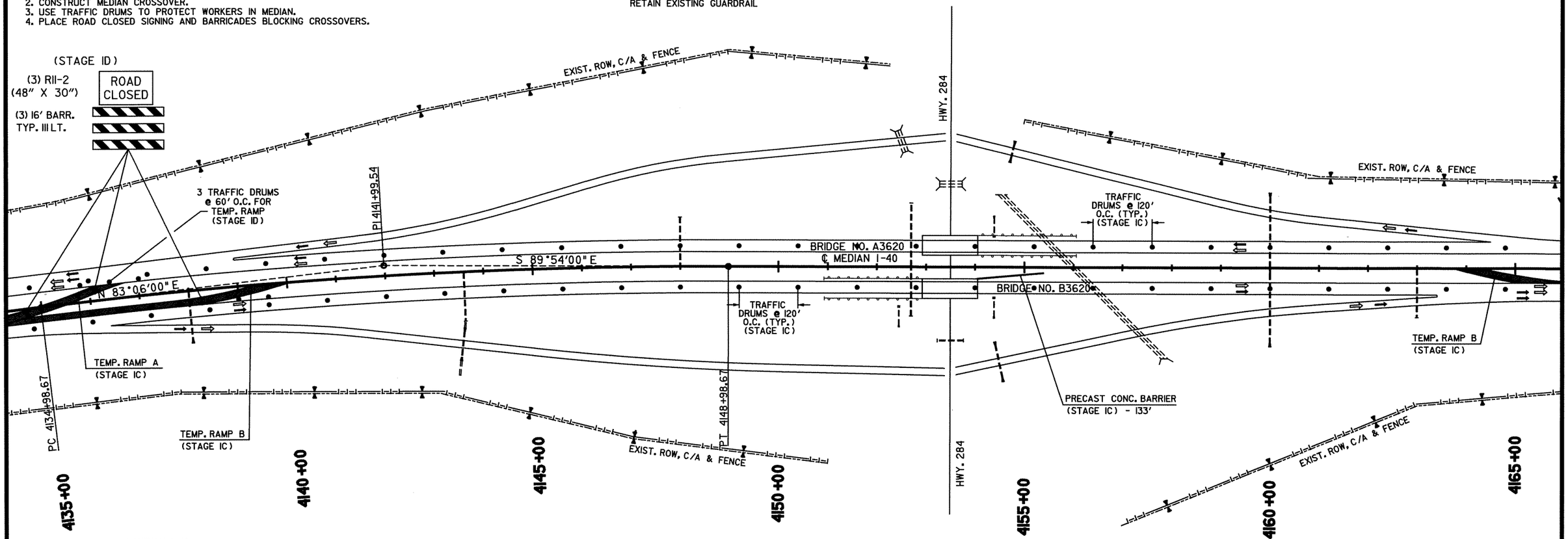
1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.

EXISTING BRIDGE ENDS

BRIDGE A3620 STA. 4152+92.60 - STA. 4154+05.68
BRIDGE B3620 STA. 4152+92.60 - STA. 4154+05.68
RETAIN EXISTING GUARDRAIL



℄ MEDIAN I-40
P.I. = 4141+99.54
N = 12727903.3616
E = 2306253.8139
DELTA = 7°00' RT
DOC = 0°30'
T = 700.87'
L = 1400.00'
P.C. = 4134+98.67
P.T. = 4148+98.67
(NO SUPER)

SEE SHEET NO. 47 FOR DETAILS OF RAMPS WITH LANE CLOSURE (STAGES IC & ID)

LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE I

bb0105.MOT Stage 1.dgn 2/8/2013 10:11:07 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	56	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

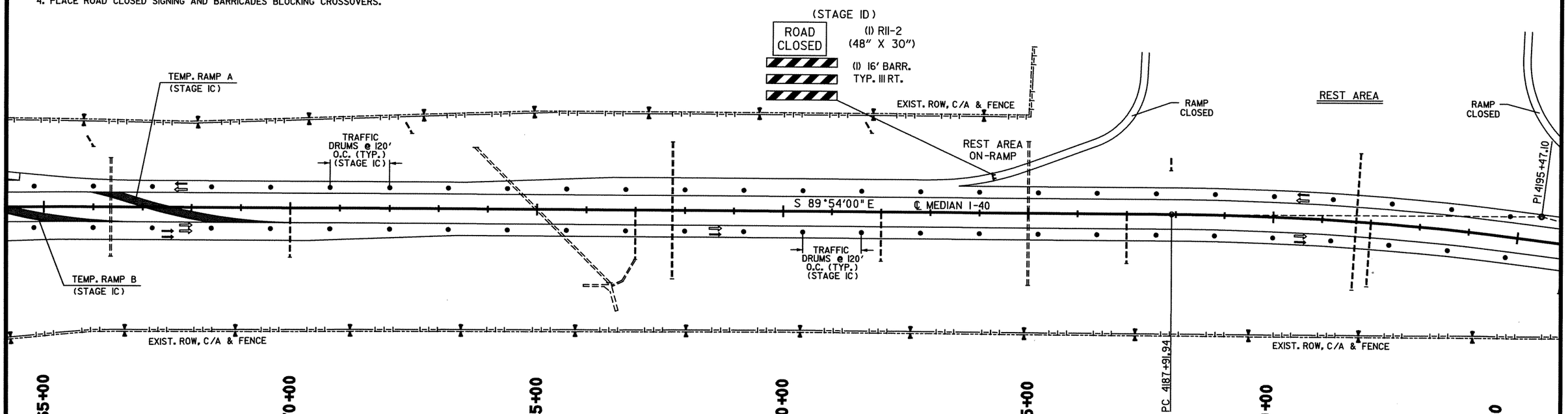
1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.



℄ MEDIAN I-40
P.I. = 4195+47.10
N = 12727894.0253
E = 2311603.1058
DELTA = 15°01' RT
DOC = 1°00'
T = 755.16'
L = 1501.67'
P.C. = 4187+91.94
P.T. = 4202+93.61
e = 0.037'/'
Ls = 350'

LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

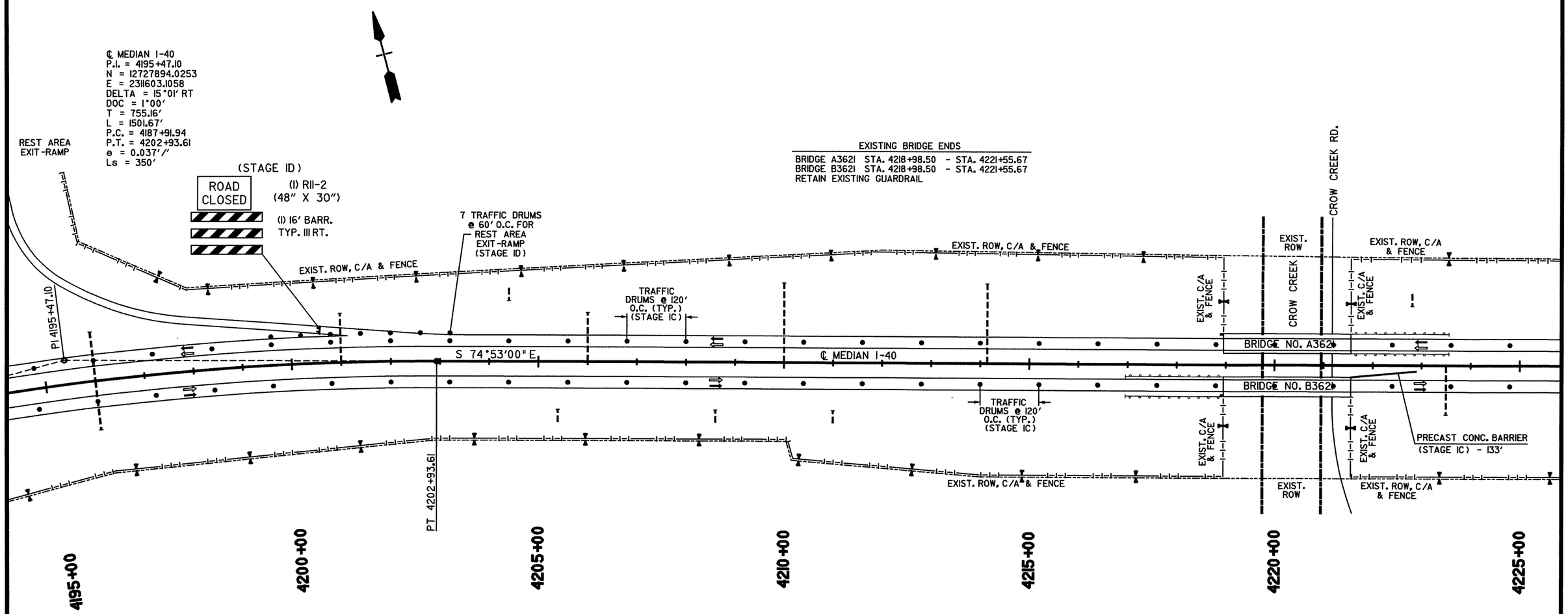
MAINTENANCE OF TRAFFIC DETAILS
STAGE I

bb0105.MOT Stage 1.dgn 2/8/2013 10:11:07 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	57	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.

LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

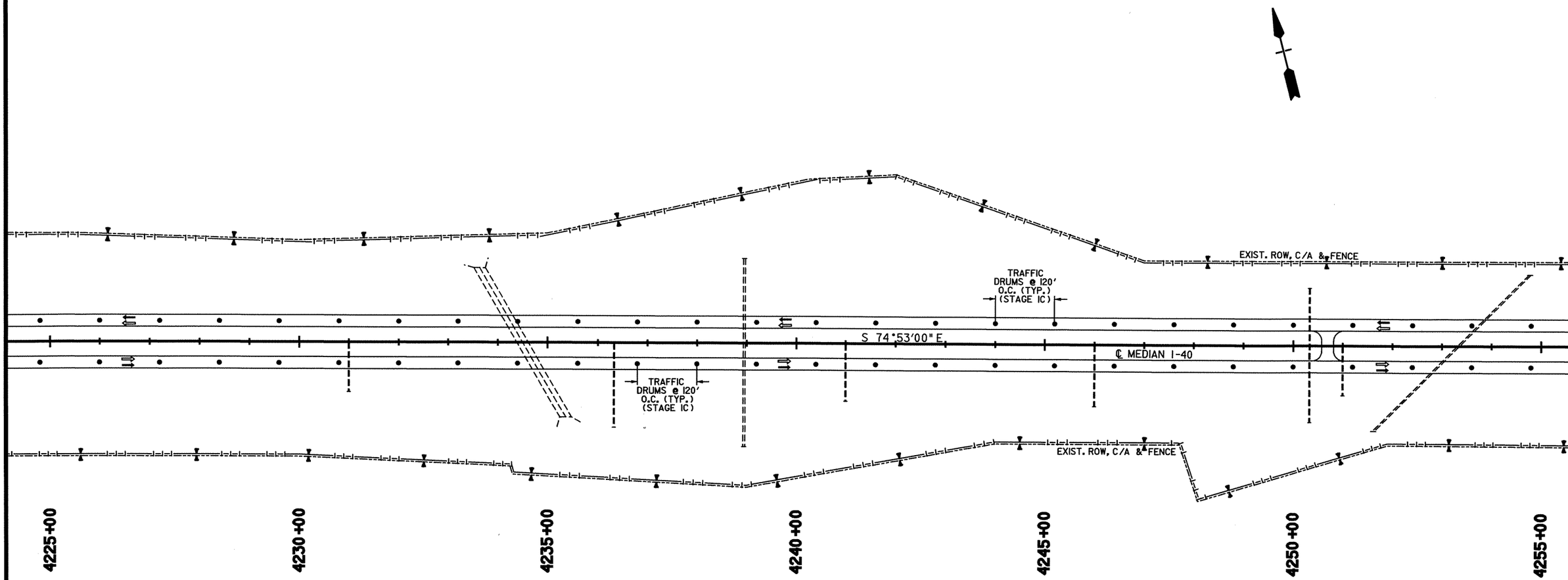
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE I

bb0105.MOT Stage 1.dgn 2/8/2013 10:11:08 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	58	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.

LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

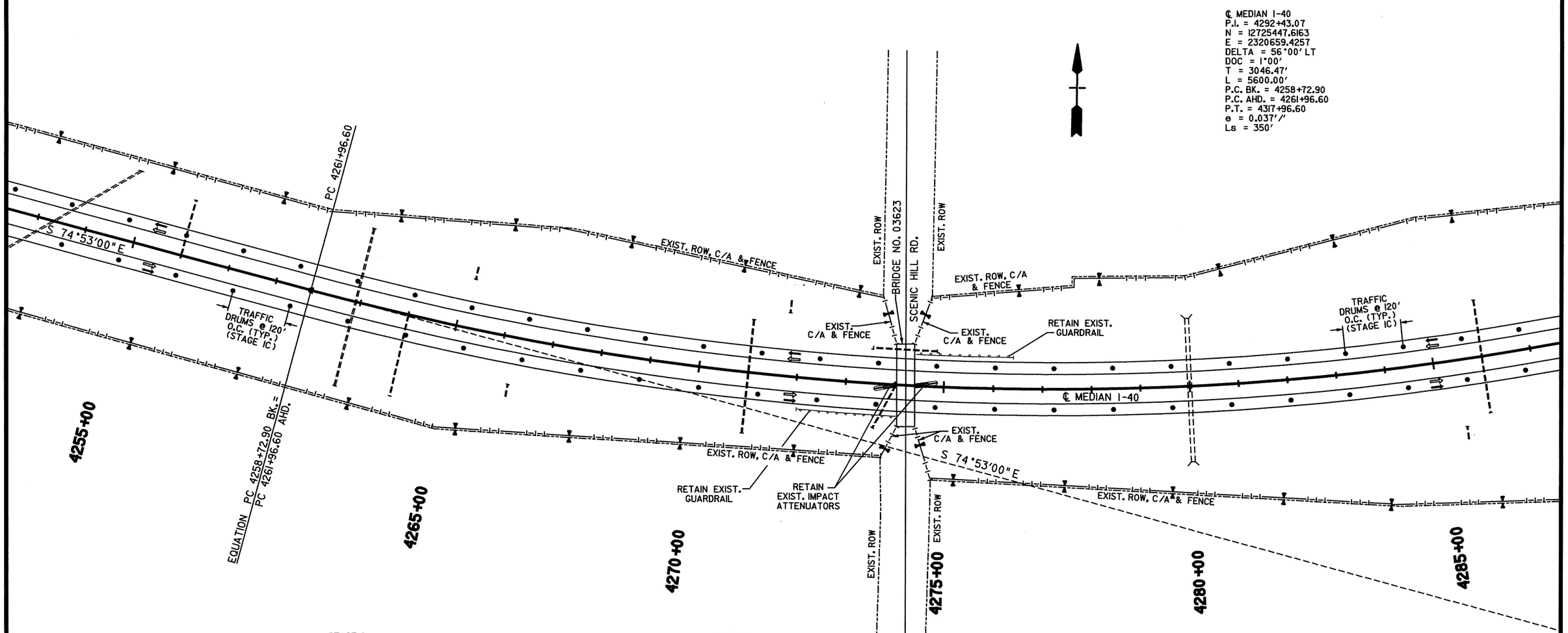
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE I

bb0105.MOT Stage 1.dgn 2/8/2013 10:11:08 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	59	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.

LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE I

bb0105.MOT Stage 1.dgn 2/8/2013 10:11:08 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	60	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

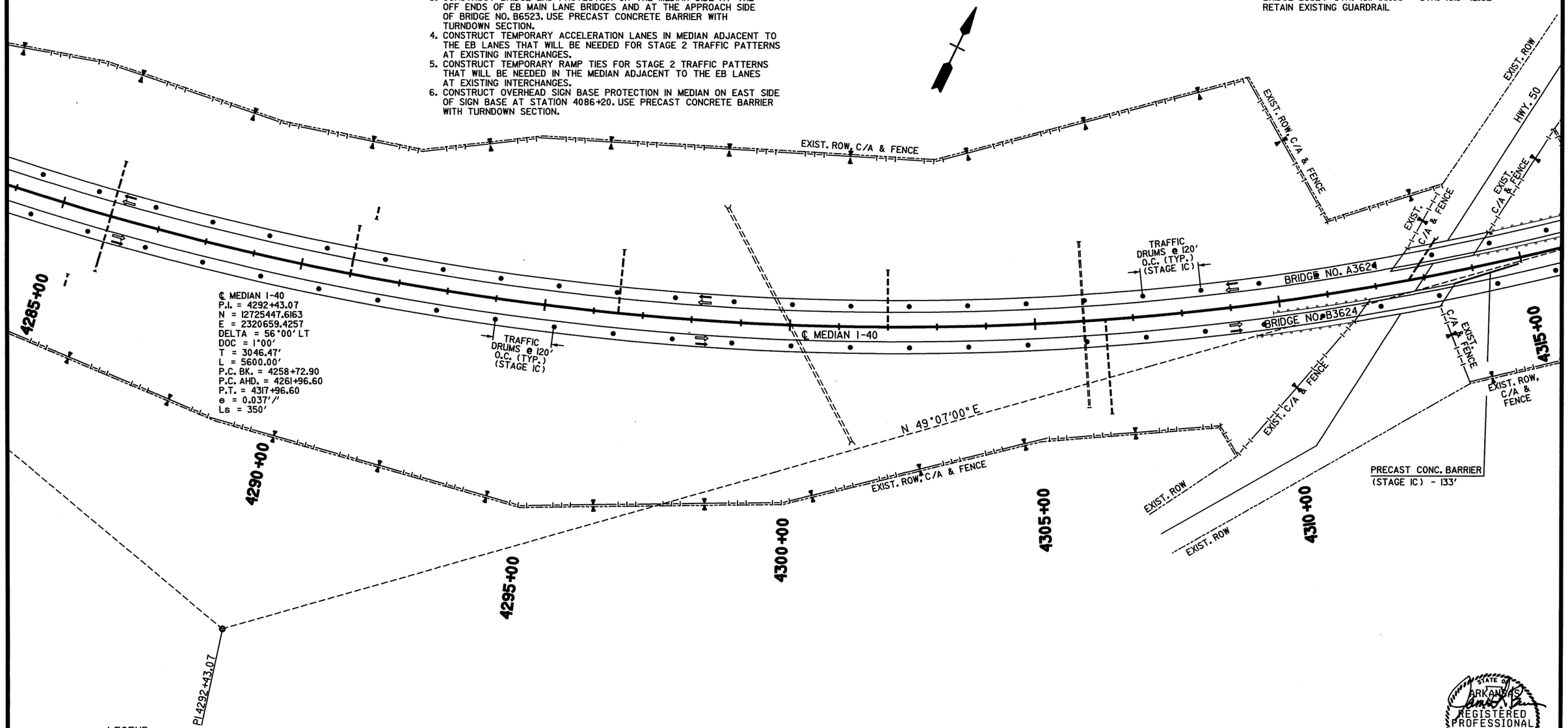
1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.

EXISTING BRIDGE ENDS

BRIDGE A3624 STA. 4312+53.91 - STA. 4314+24.87
BRIDGE B3624 STA. 4311+66.66 - STA. 4313+42.62
RETAIN EXISTING GUARDRAIL



LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE I

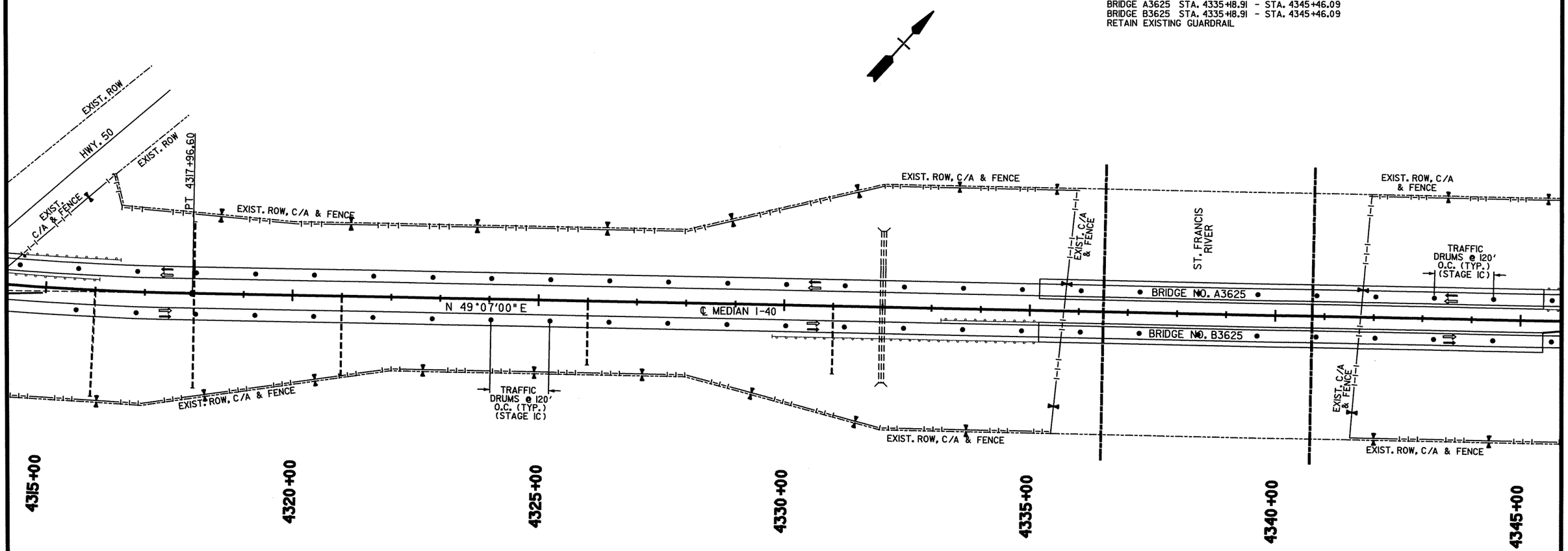
bb0105.MOT Stage 1.dgn 2/8/2013 10:11:09 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	61	374

(2) MAINTENANCE OF TRAFFIC DETAILS

EXISTING BRIDGE ENDS

BRIDGE A3625 STA. 4335+18.91 - STA. 4345+46.09
BRIDGE B3625 STA. 4335+18.91 - STA. 4345+46.09
RETAIN EXISTING GUARDRAIL



STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON EAST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IC

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE ID

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. REMOVE THE EXISTING RUMBLE STRIPS LOCATED IN THE SHOULDERS ADJACENT TO THE OUTSIDE LANE BY PERFORMING A MILL & INLAY PROCEDURE.
5. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.
6. PLACE ROAD CLOSED SIGNING, BARRICADES AND TRAFFIC DRUMS AT WB REST AREA RAMPS.

LEGEND

- UNDER CONSTRUCTION
- STAGE IC TRAFFIC
- STAGE ID TRAFFIC
- TRAFFIC DRUM

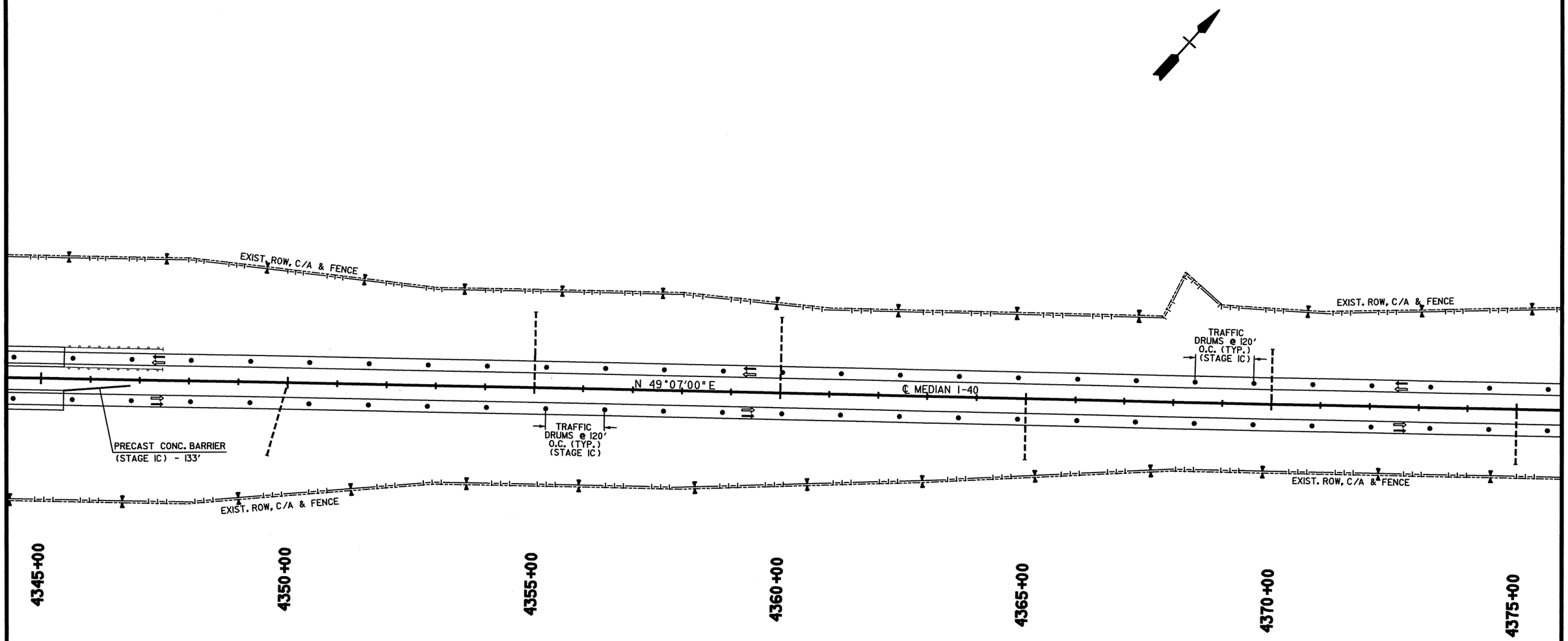
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE I

bb0105.MOT Stage 1.dgn 2/8/2013 10:11:09 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	62	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE I

1. TRAFFIC IN NORMAL PATTERN ON INTERSTATE 40.
2. PLACE ADVANCE WARNING SIGNS AND DEVICES FOR FUTURE WORK ON INTERSTATE 40.

STAGE IA

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES BOTH EB & WB ON WEST END OF PROJECT IN AREA THAT WILL HAVE CROSSOVER CONSTRUCTED.
2. CONSTRUCT MEDIAN CROSSOVER.
3. USE TRAFFIC DRUMS TO PROTECT WORKERS IN MEDIAN.
4. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE IB

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3. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS OF EB MAIN LANE BRIDGES AND AT THE APPROACH SIDE OF BRIDGE NO. B6523. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.
4. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE EB LANES THAT WILL BE NEEDED FOR STAGE 2 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
5. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 2 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE EB LANES AT EXISTING INTERCHANGES.
6. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN MEDIAN ON EAST SIDE OF SIGN BASE AT STATION 4086+20. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

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LEGEND

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N = 12733118.6341
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DOC = 0°30'
T = 443.55'
L = 886.67'
P.C. = 4400+26.63
P.T. = 4409+13.30
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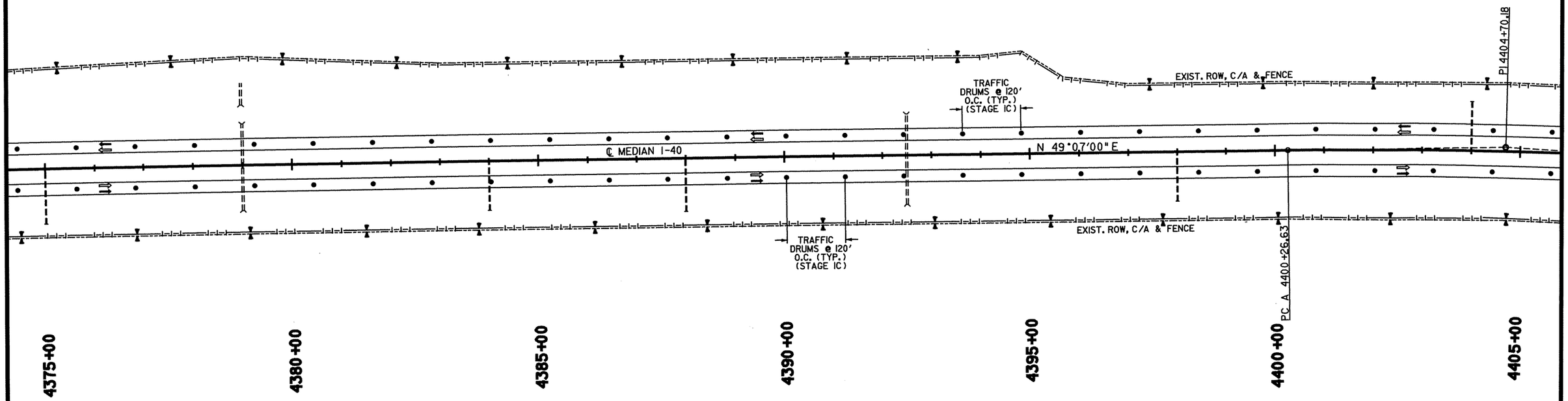

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LEGEND

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

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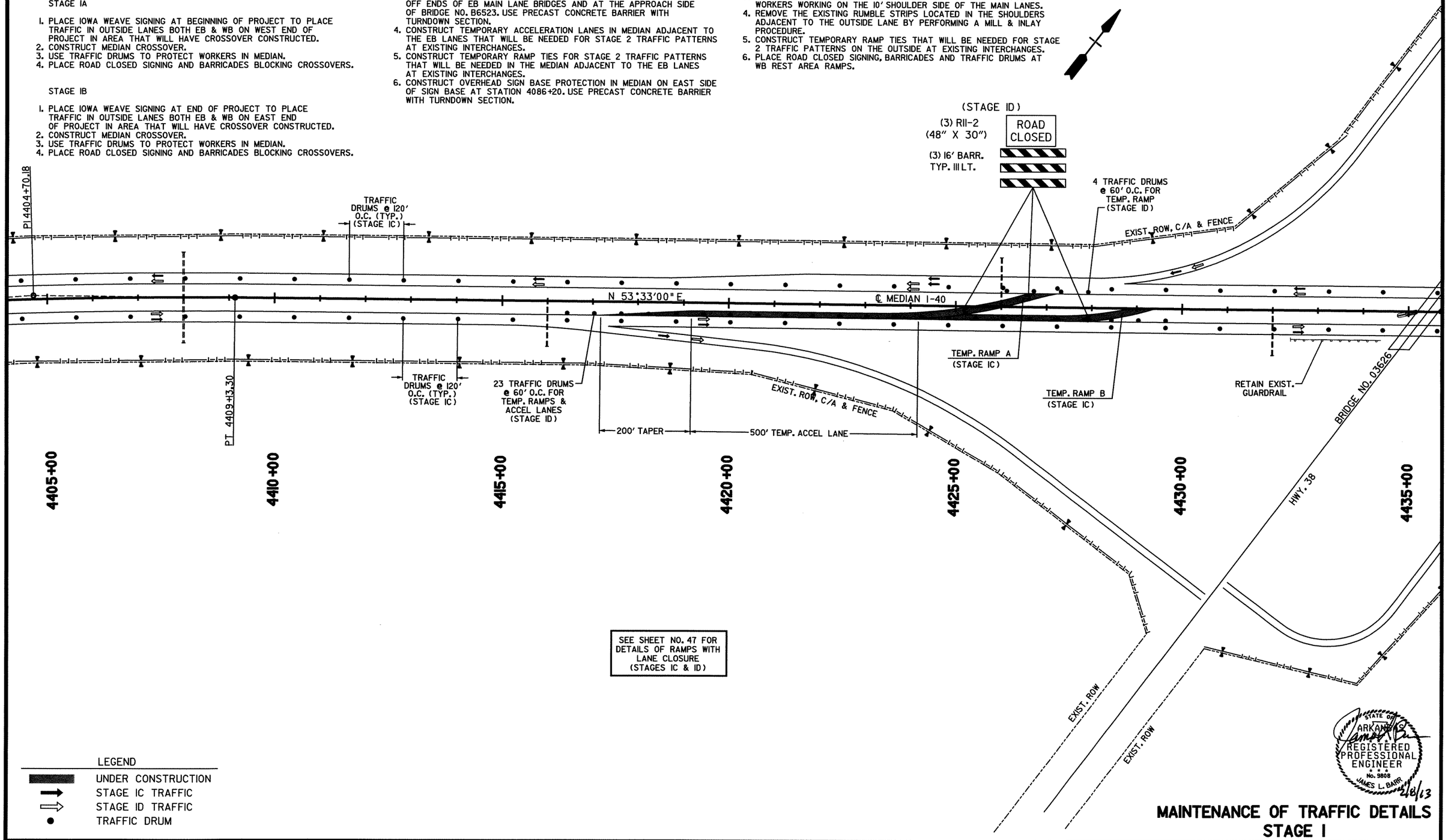

SEE SHEET NO. 47 FOR DETAILS OF RAMPS WITH LANE CLOSURE (STAGES IC & ID)

LEGEND

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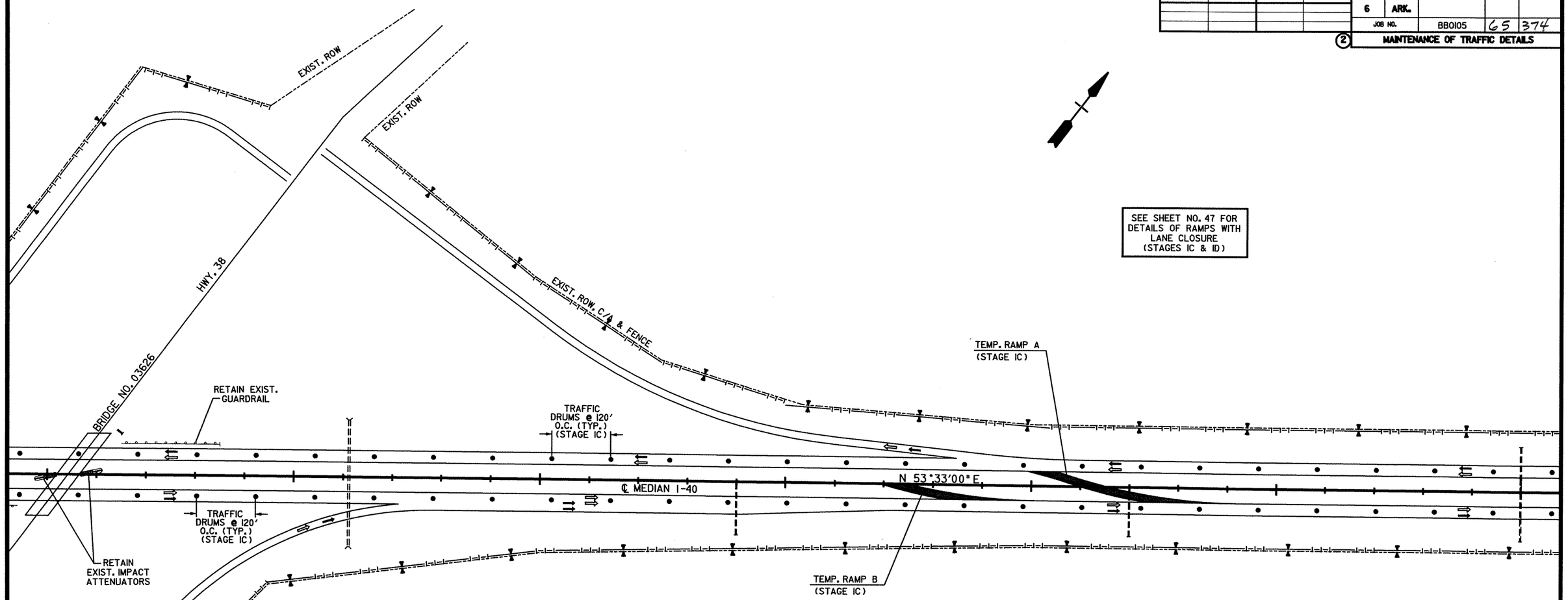

SEE SHEET NO. 47 FOR DETAILS OF RAMPS WITH LANE CLOSURE (STAGES IC & ID)

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P.I. = 4472+13.55
N = 12737121.7149
E = 2334940.0361
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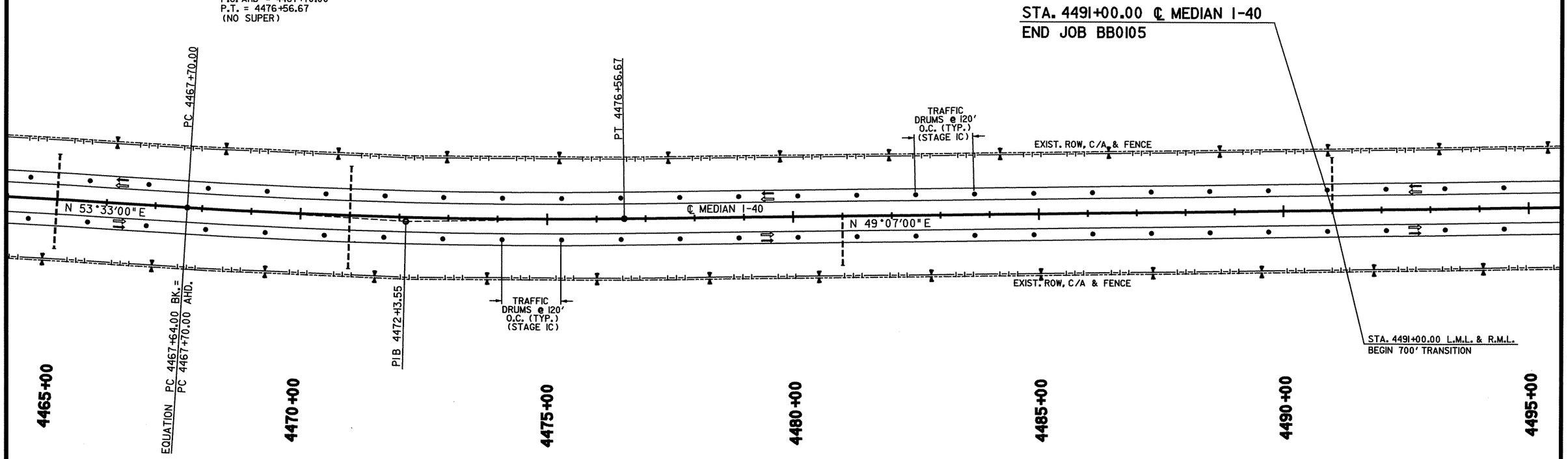
T = 443.55'
L = 886.67'
P.C. BK = 4467+64.00
P.C. AHD = 4467+70.00
P.T. = 4476+56.67
(NO SUPER)



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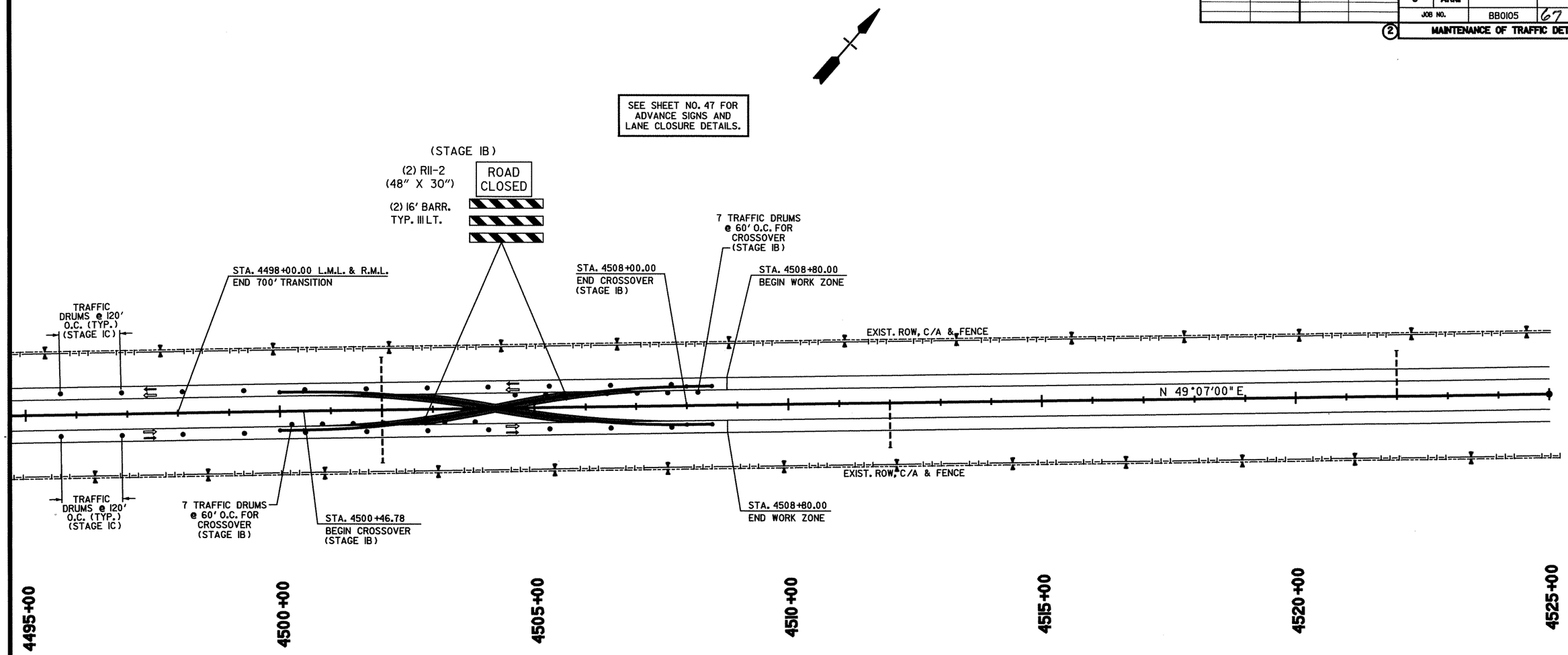

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STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

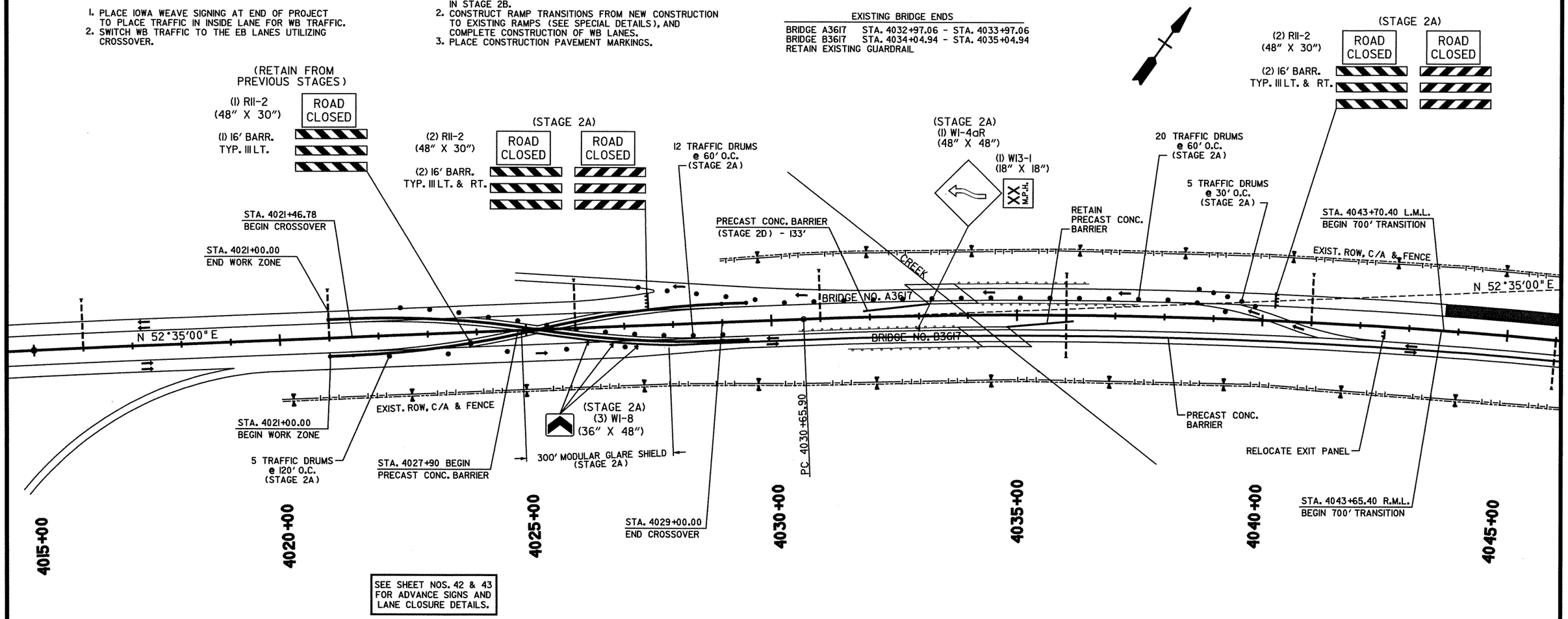
1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

EXISTING BRIDGE ENDS

BRIDGE A3617 STA. 4032+97.06 - STA. 4033+97.06
BRIDGE B3617 STA. 4034+04.94 - STA. 4035+04.94
RETAIN EXISTING GUARDRAIL



SEE SHEET NOS. 42 & 43 FOR ADVANCE SIGNS AND LANE CLOSURE DETAILS.

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:11 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	69	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

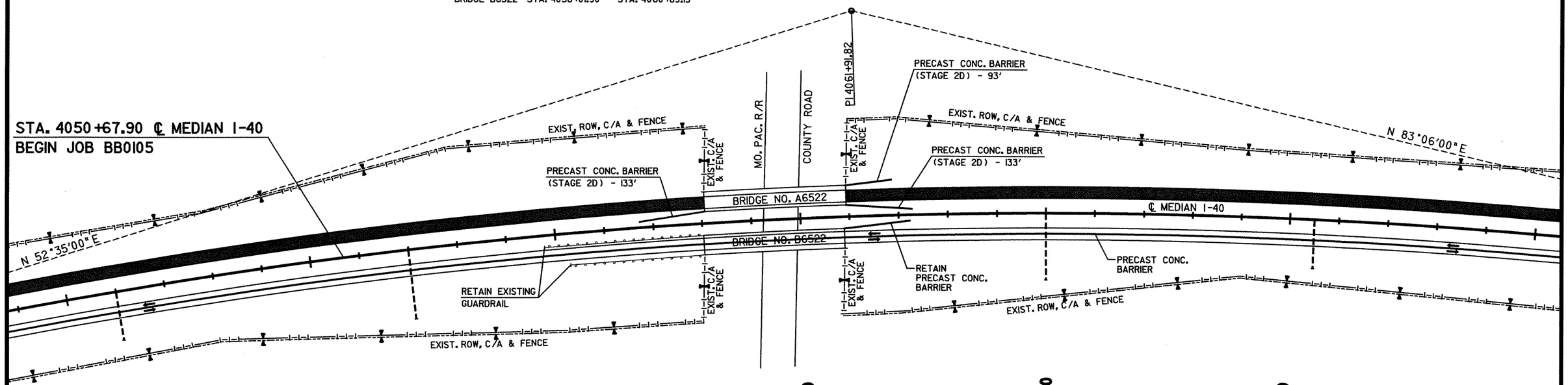
1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

EXISTING BRIDGE ENDS

BRIDGE A6522 STA. 4058+06.90 - STA. 4060+94.13
BRIDGE B6522 STA. 4058+01.90 - STA. 4060+89.13



℄ MEDIAN I-40
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DOC = 0°30'
T = 3125.92'
L = 6103.33'
P.C. = 4030+65.90
P.T. = 4091+69.23
(NO SUPER)

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:12 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	70	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

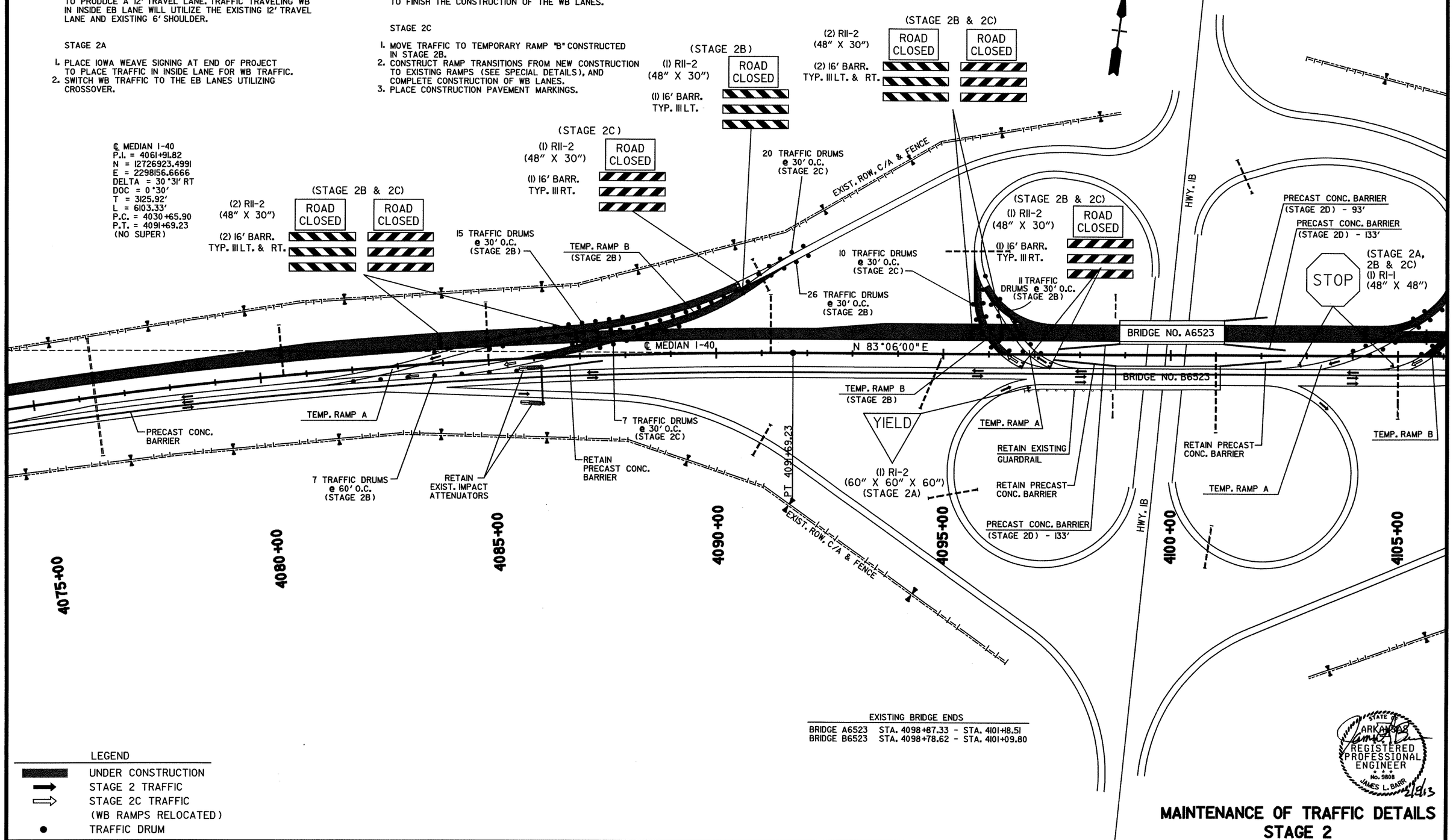
1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.



EXISTING BRIDGE ENDS

BRIDGE A6523	STA. 4098+87.33	- STA. 4101+18.51
BRIDGE B6523	STA. 4098+78.62	- STA. 4101+09.80

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

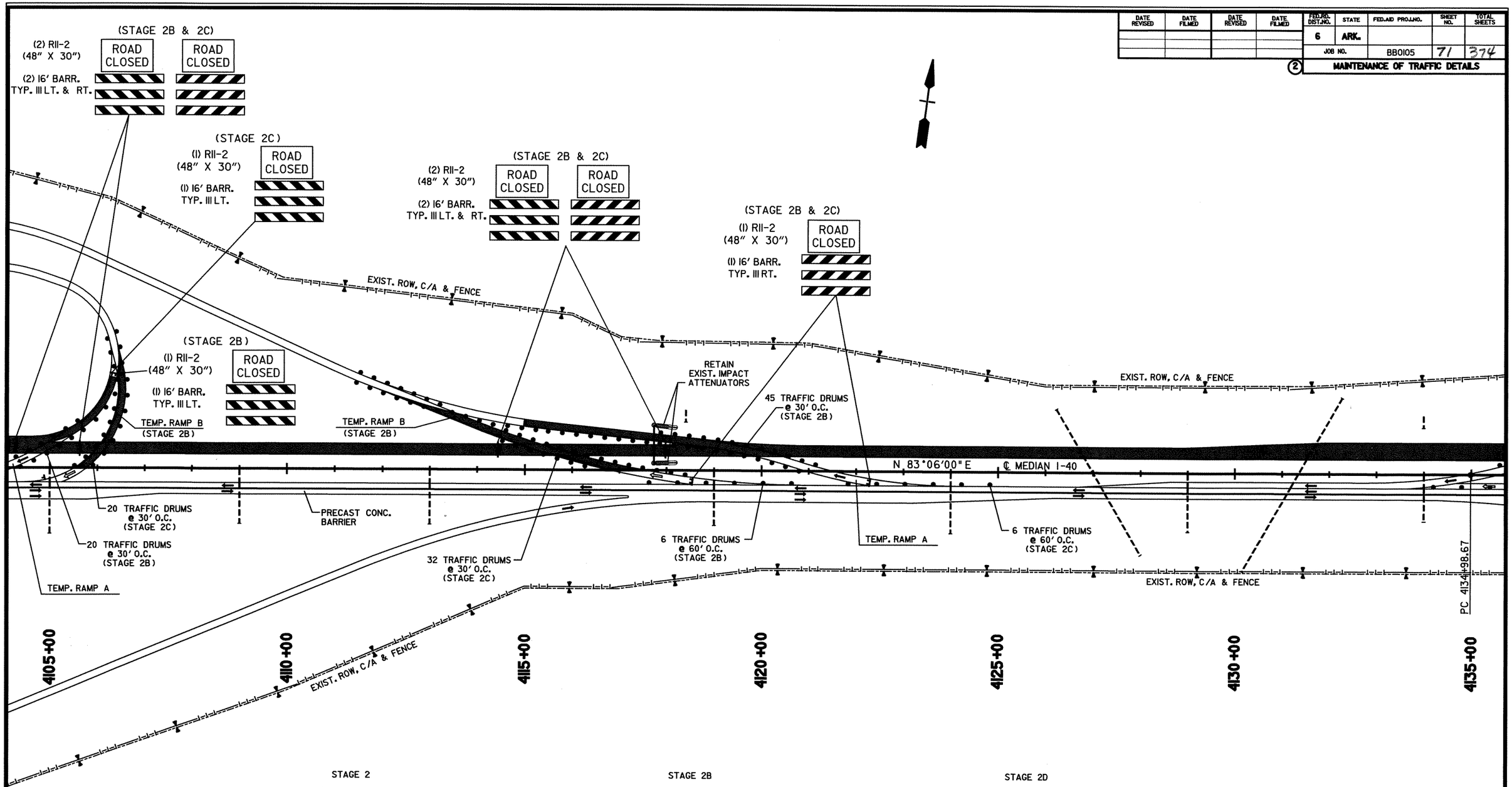
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:12 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	71	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

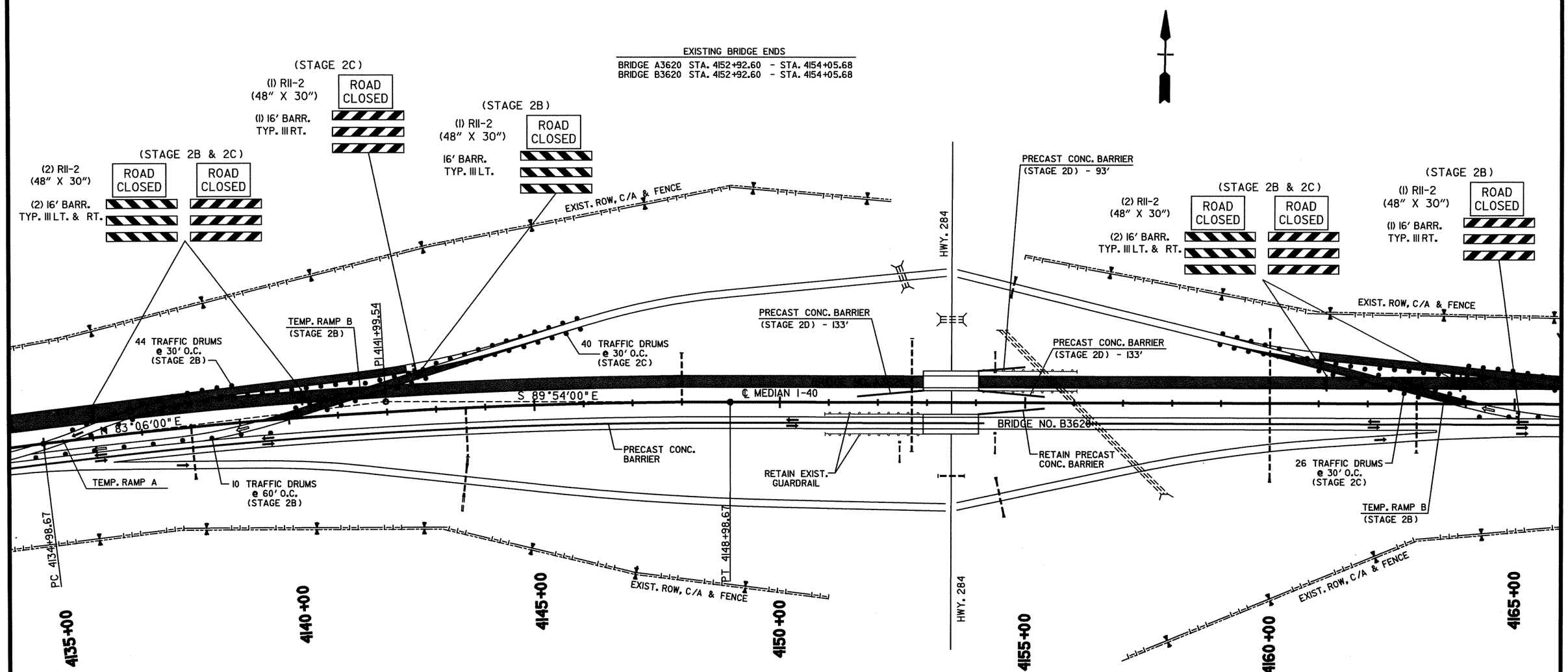
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:12 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	72	374

(2) MAINTENANCE OF TRAFFIC DETAILS



℄ MEDIAN I-40
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E = 2306253.8139
DELTA = 7°00' RT
DOC = 0°30'
T = 700.87'
L = 1400.00'
P.C. = 4134+98.67
P.T. = 4148+98.67
(NO SUPER)

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:13 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	73	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

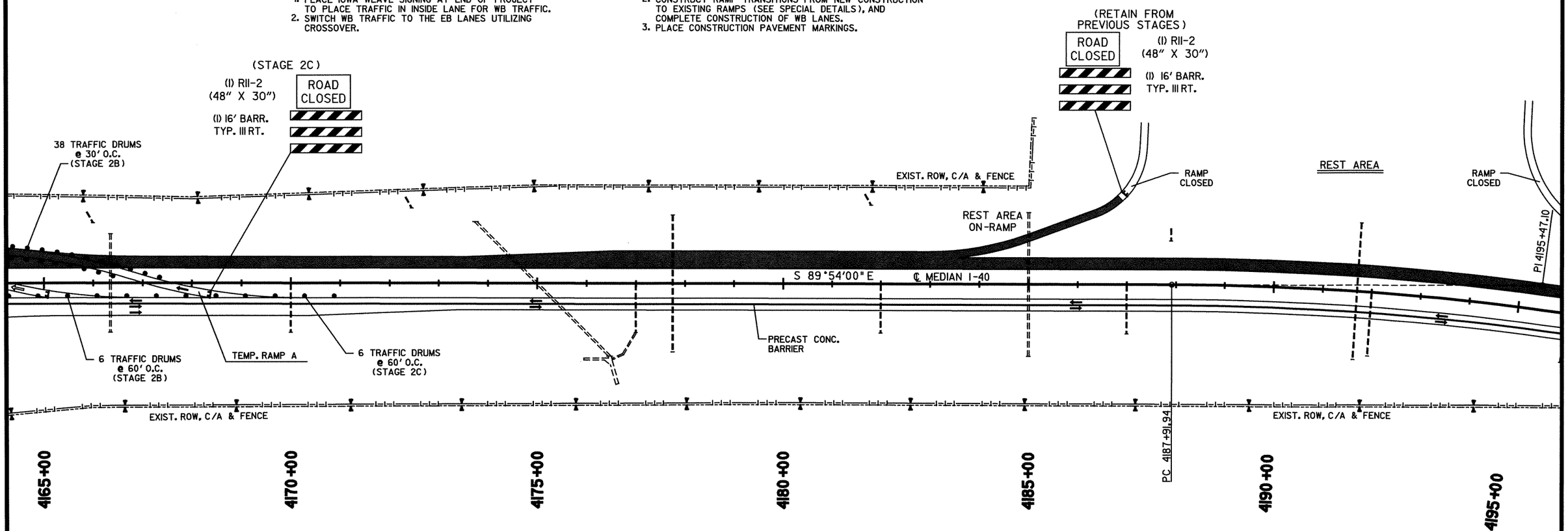
1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.



℄ MEDIAN I-40
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T = 755.16'
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P.C. = 4187+91.94
P.T. = 4202+93.61
e = 0.037'/'
Ls = 350'

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

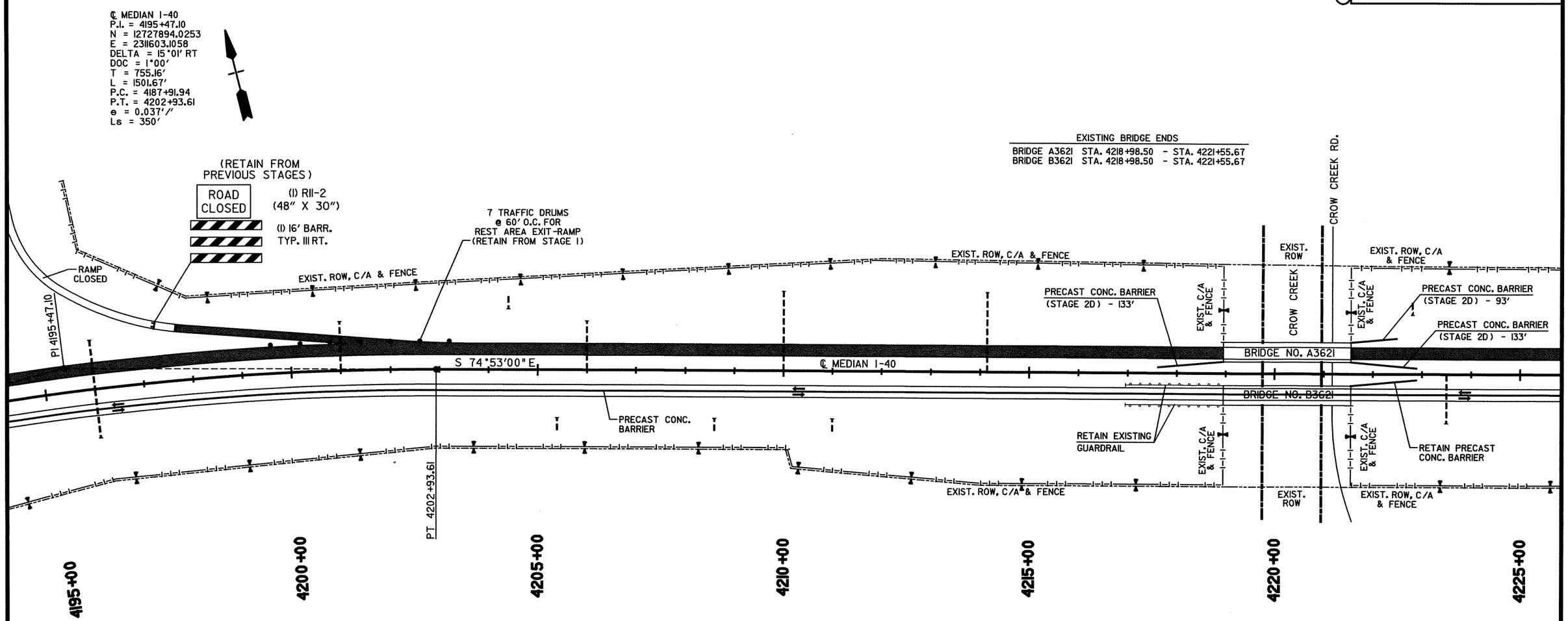
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/12/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:13 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	74	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

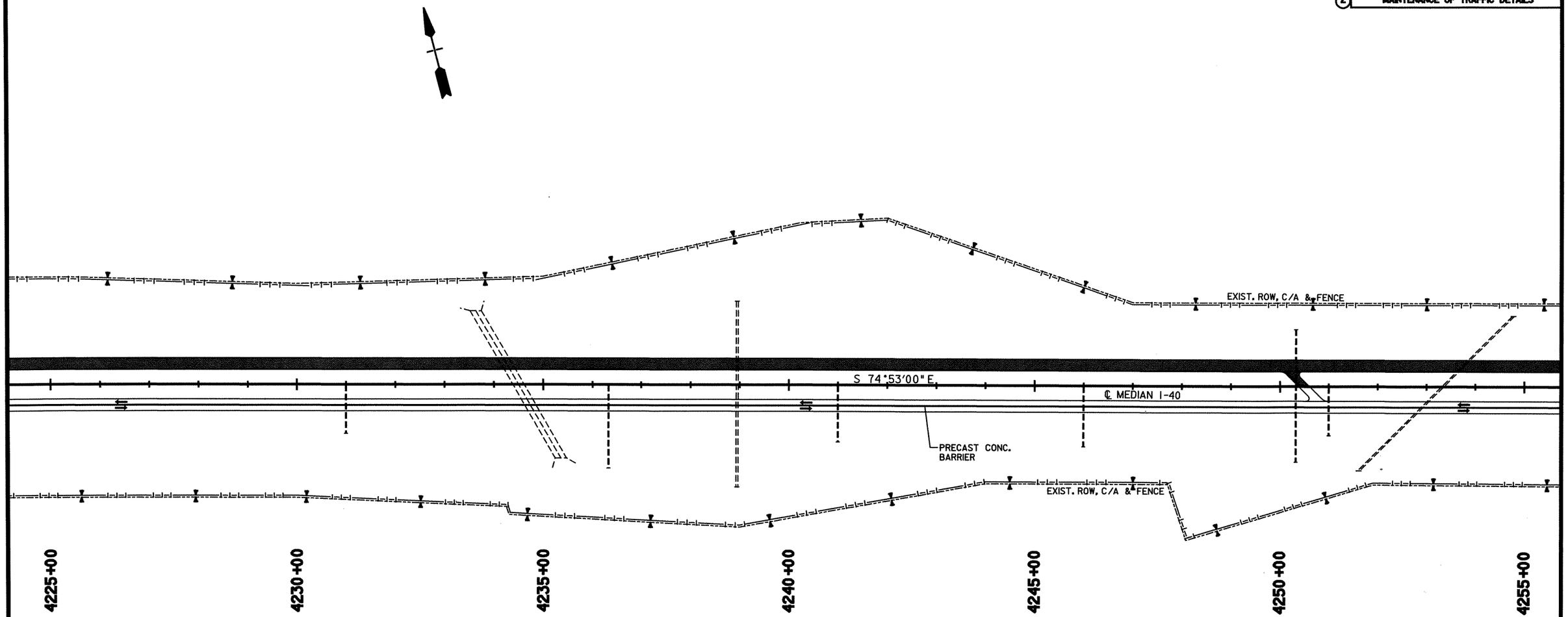
MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:13 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	75	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

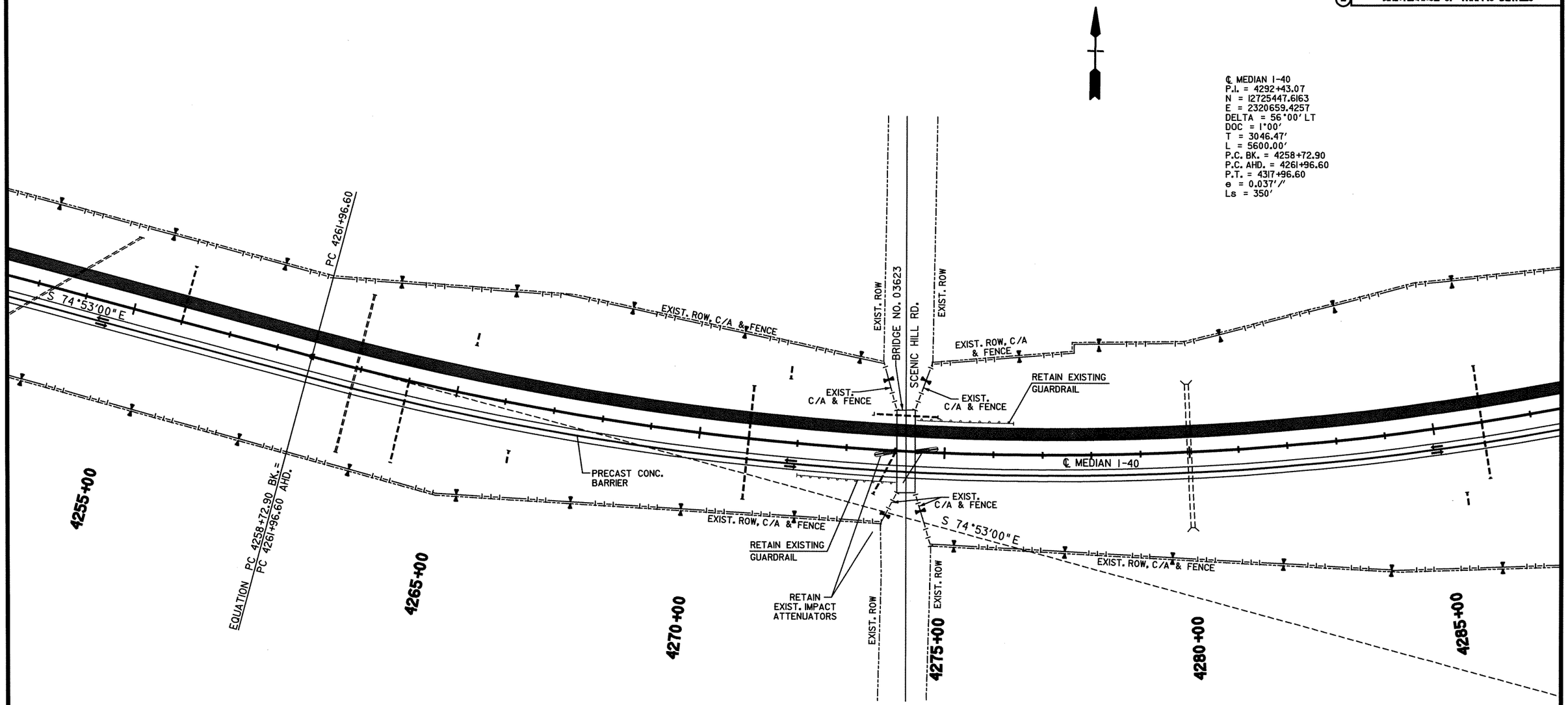
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:13 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	76	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 3808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:14 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	77	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

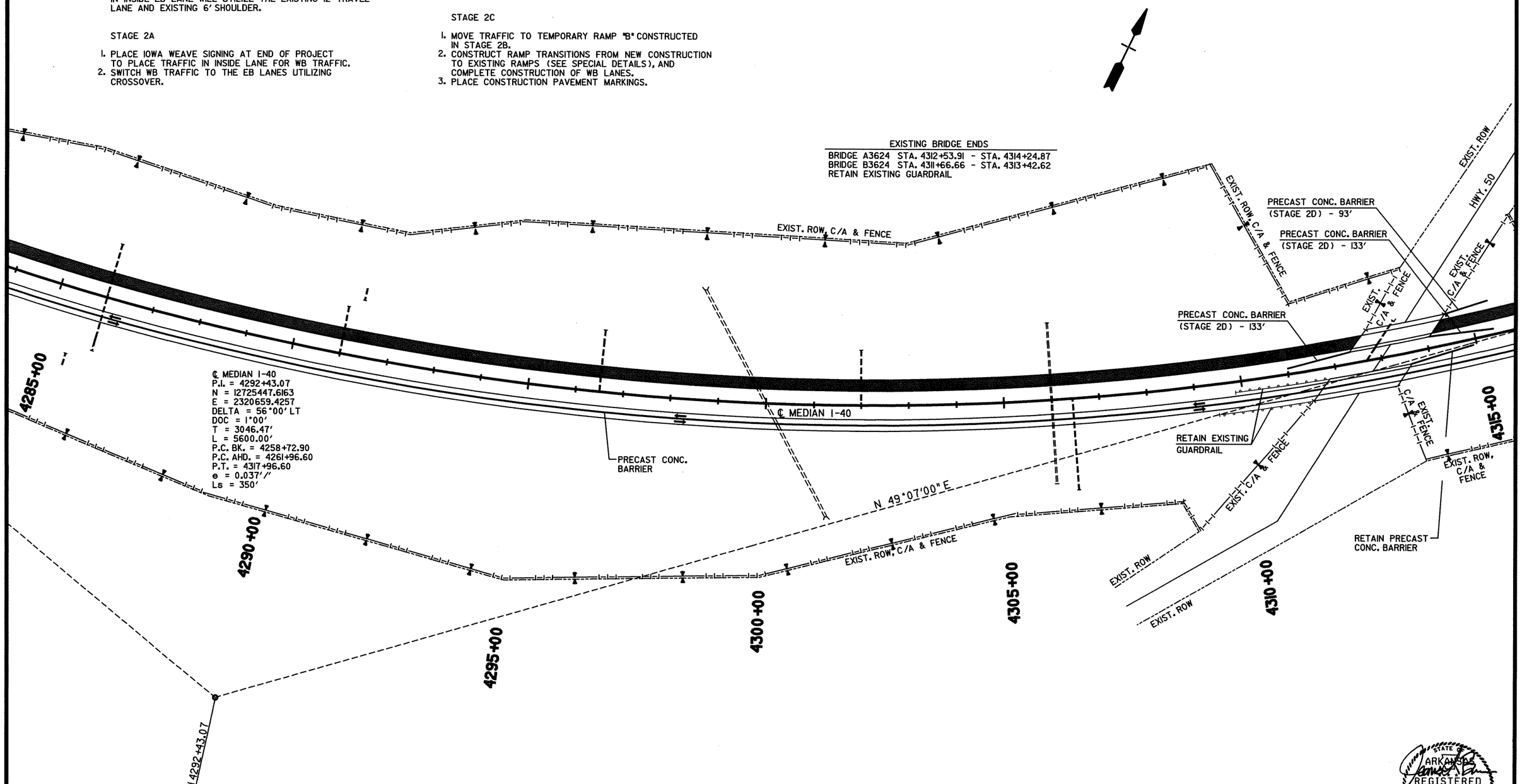
1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.



LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

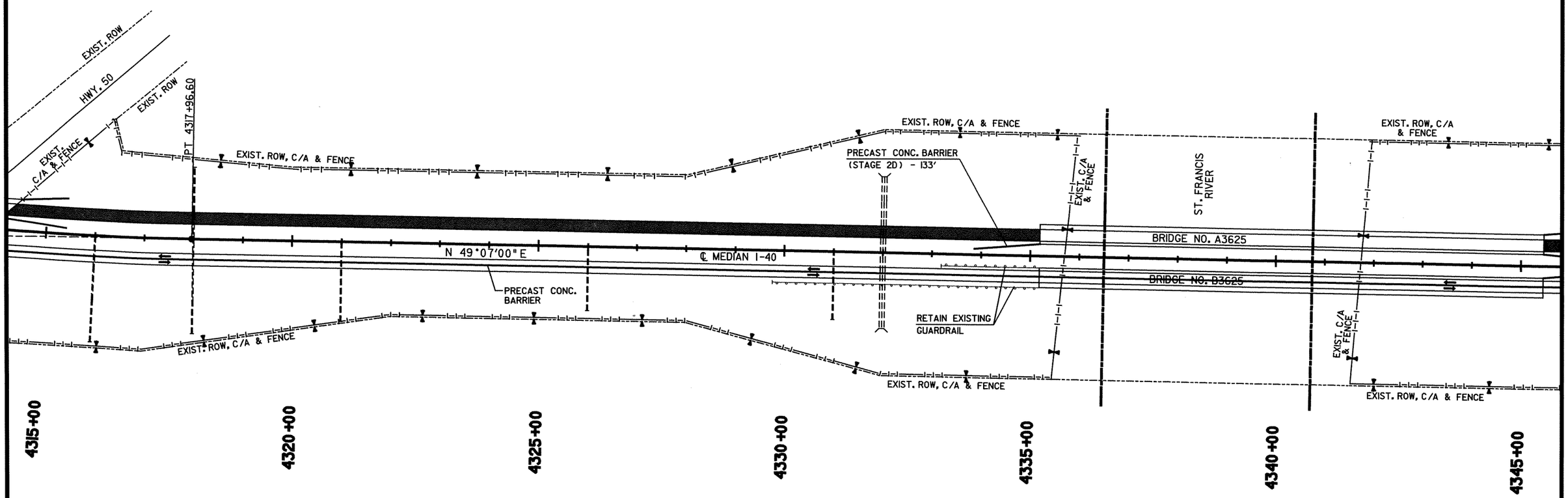
bb0105.MOT Stage 2.dgn 2/8/2013 10:11:14 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	78	374

(2) MAINTENANCE OF TRAFFIC DETAILS

EXISTING BRIDGE ENDS

BRIDGE A3625 STA. 4335+18.91 - STA. 4345+46.09
BRIDGE B3625 STA. 4335+18.91 - STA. 4345+46.09
RETAIN EXISTING GUARDRAIL



STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	79	374

2 MAINTENANCE OF TRAFFIC DETAILS

STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

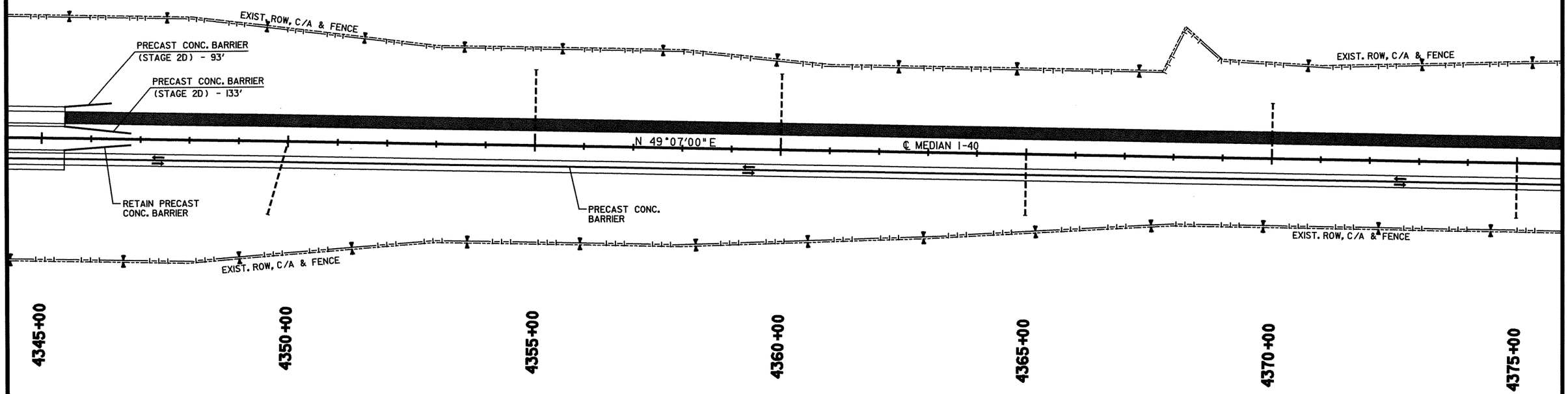
1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.



LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:15 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	80	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

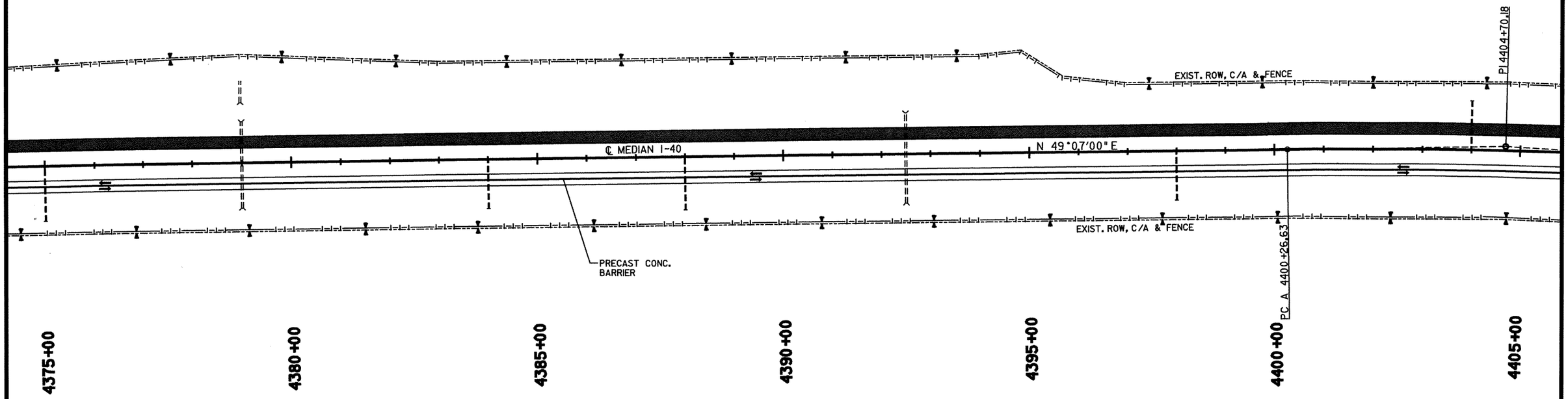
STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

℄ MEDIAN I-40
P.I. = 4404+70.18
N = 12733118.6341
E = 2329520.2979
DELTA = 4°26' RT
DOC = 0°30'
T = 443.55'
L = 886.67'
P.C. = 4400+26.63
P.T. = 4409+13.30
(NO SUPER)



LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	81	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

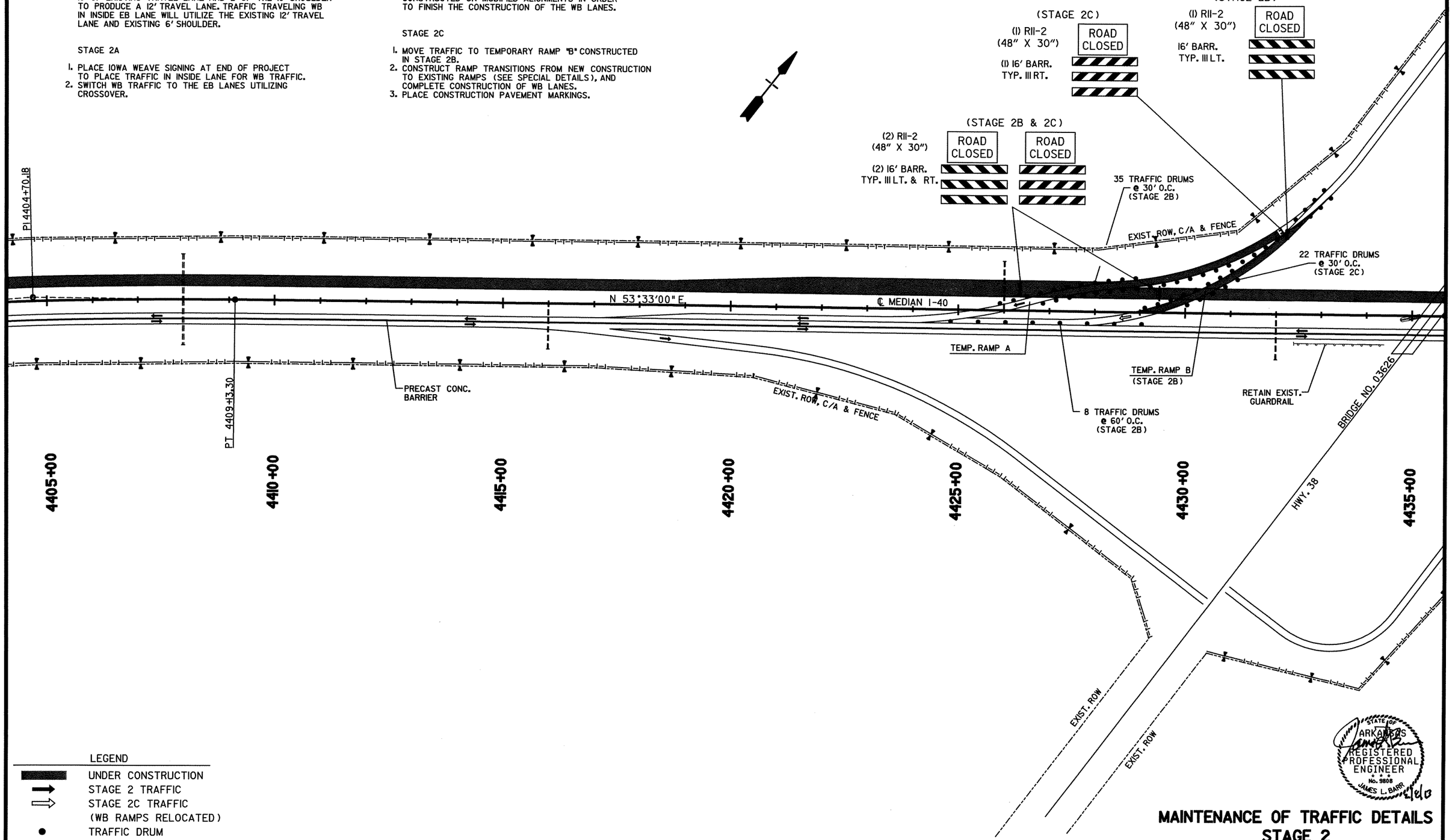
1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.



LEGEND

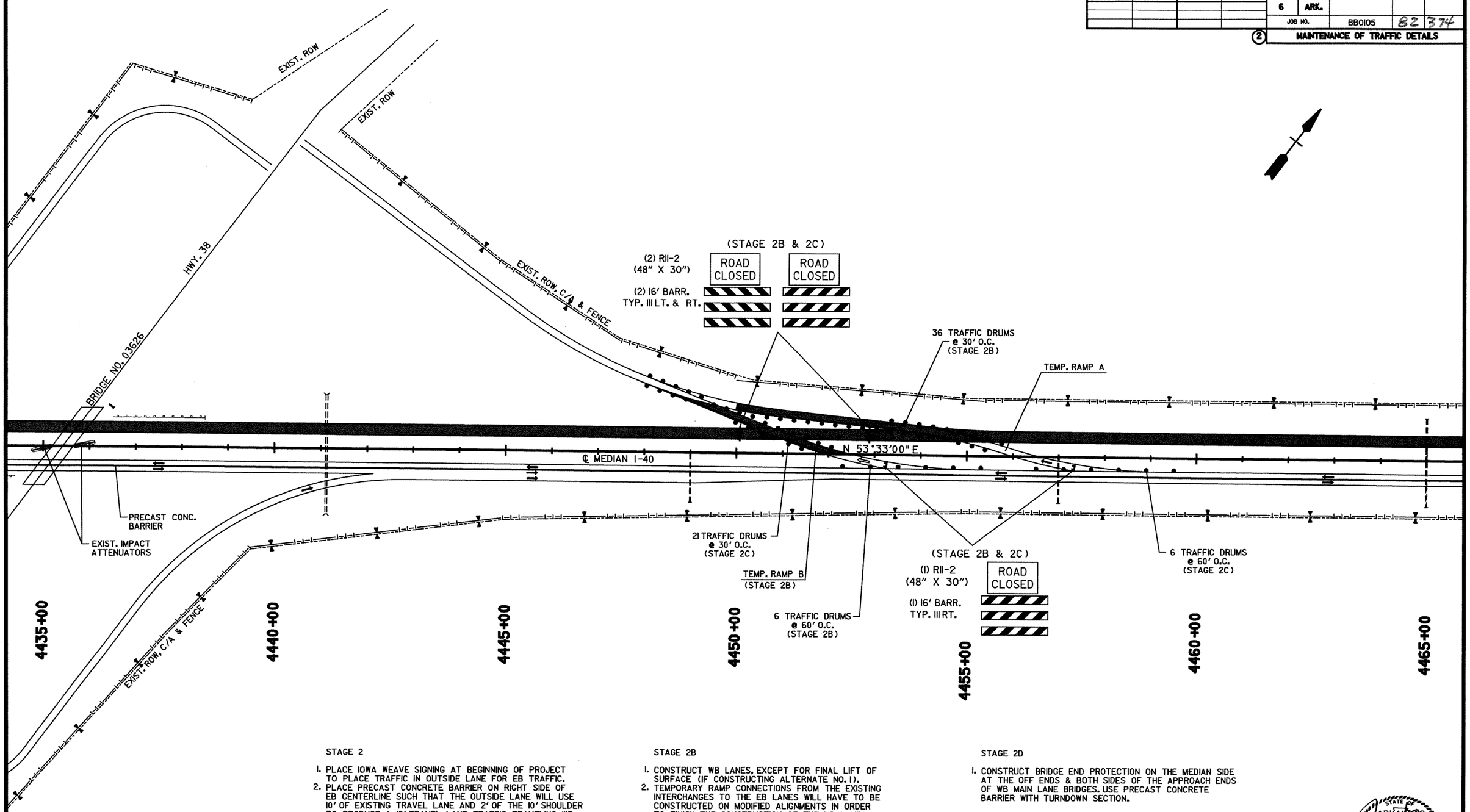
- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:15 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	82	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

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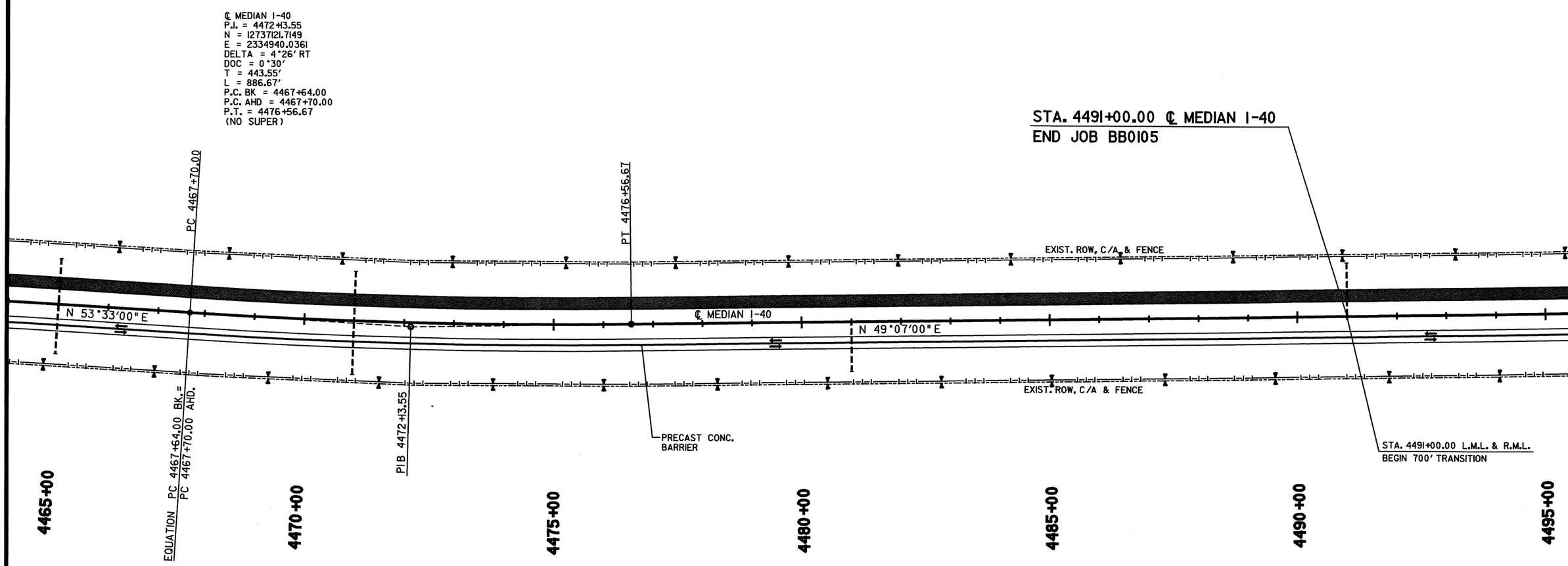
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	83	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

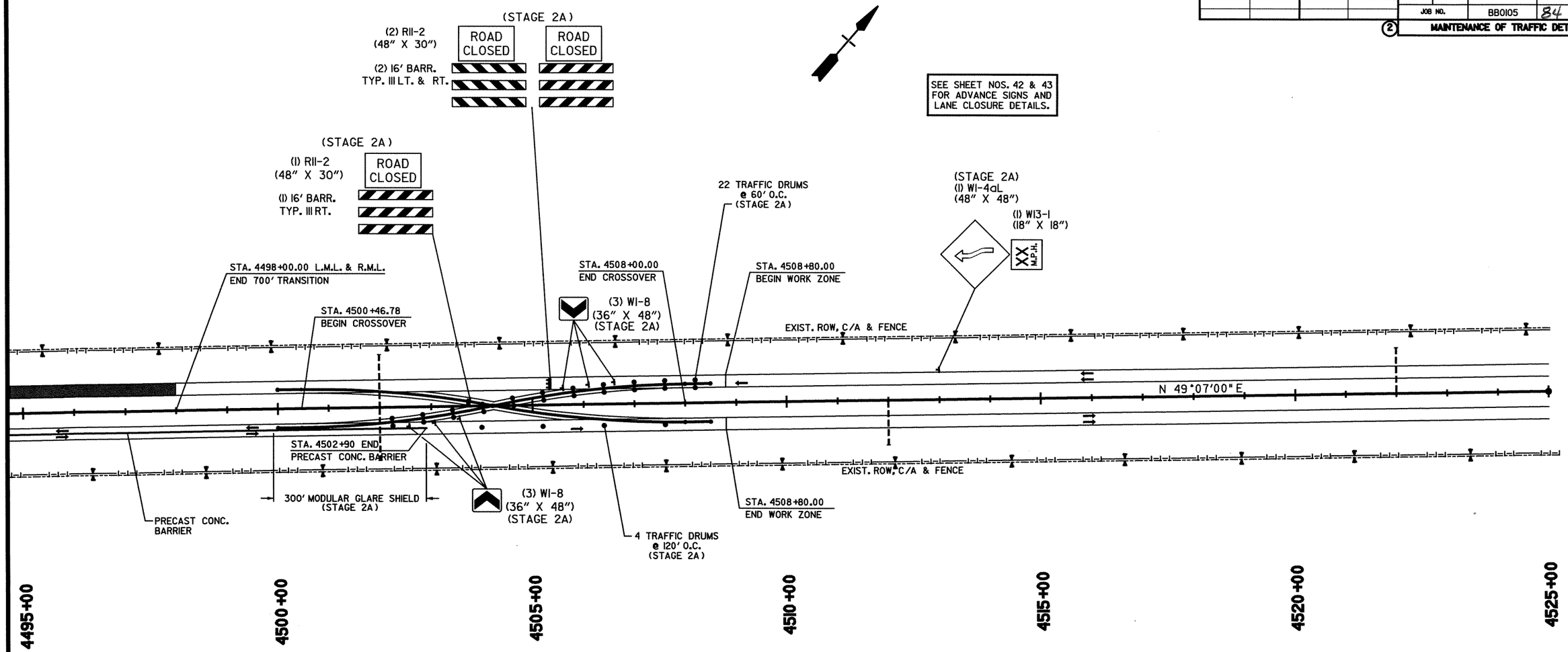
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:16 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	84	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 2

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR EB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF EB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING WB IN INSIDE EB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 2A

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR WB TRAFFIC.
2. SWITCH WB TRAFFIC TO THE EB LANES UTILIZING CROSSOVER.

STAGE 2B

1. CONSTRUCT WB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE EB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE WB LANES.

STAGE 2C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 2B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF WB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 2D

1. CONSTRUCT BRIDGE END PROTECTION ON THE MEDIAN SIDE AT THE OFF ENDS & BOTH SIDES OF THE APPROACH ENDS OF WB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 2 TRAFFIC
- STAGE 2C TRAFFIC (WB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 2

bb0105.MOT Stage 2.dgn 2/8/2013 10:11:16 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	85	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

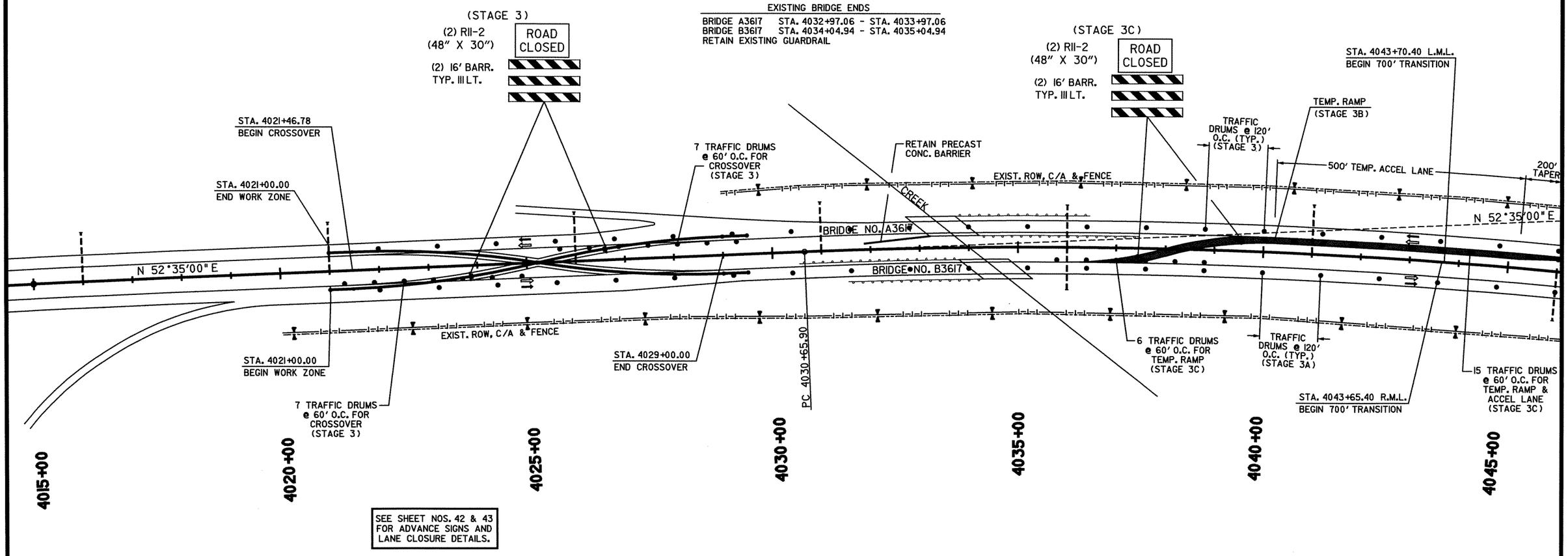
1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

EXISTING BRIDGE ENDS

BRIDGE A3617 STA. 4032+97.06 - STA. 4033+97.06
BRIDGE B3617 STA. 4034+04.94 - STA. 4035+04.94
RETAIN EXISTING GUARDRAIL



SEE SHEET NOS. 42 & 43 FOR ADVANCE SIGNS AND LANE CLOSURE DETAILS.

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

bb0105.MOT Stage 3.dgn 2/8/2013 10:11:17 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	86	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

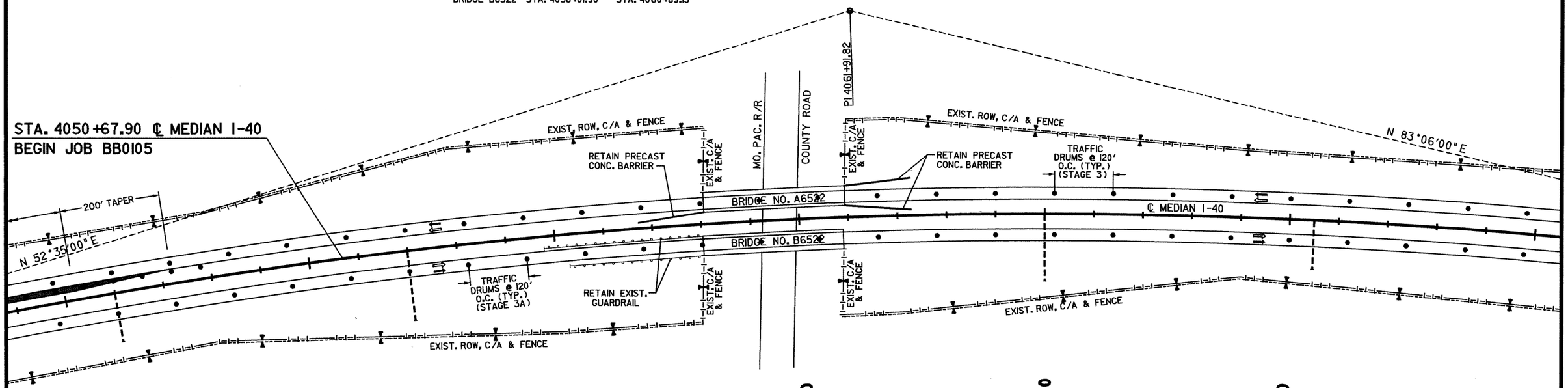
1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

EXISTING BRIDGE ENDS

BRIDGE A6522	STA. 4058+06.90	- STA. 4060+94.13
BRIDGE B6522	STA. 4058+01.90	- STA. 4060+89.13



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DOC = 0°30'
T = 3125.92'
L = 6103.33'
P.C. = 4030+65.90
P.T. = 4091+69.23
(NO SUPER)

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER NO. 5808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

bb0105.MOT Stage 3.dgn 2/8/2013 10:11:17 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	87	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

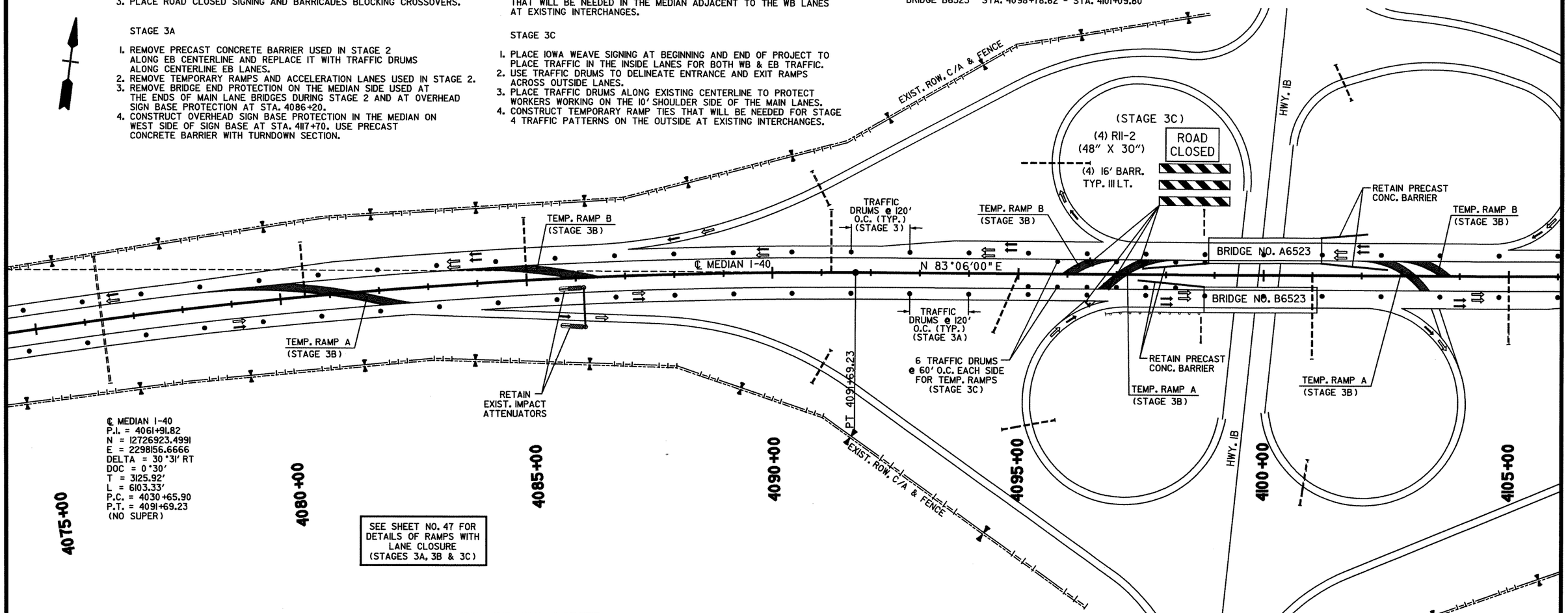
1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

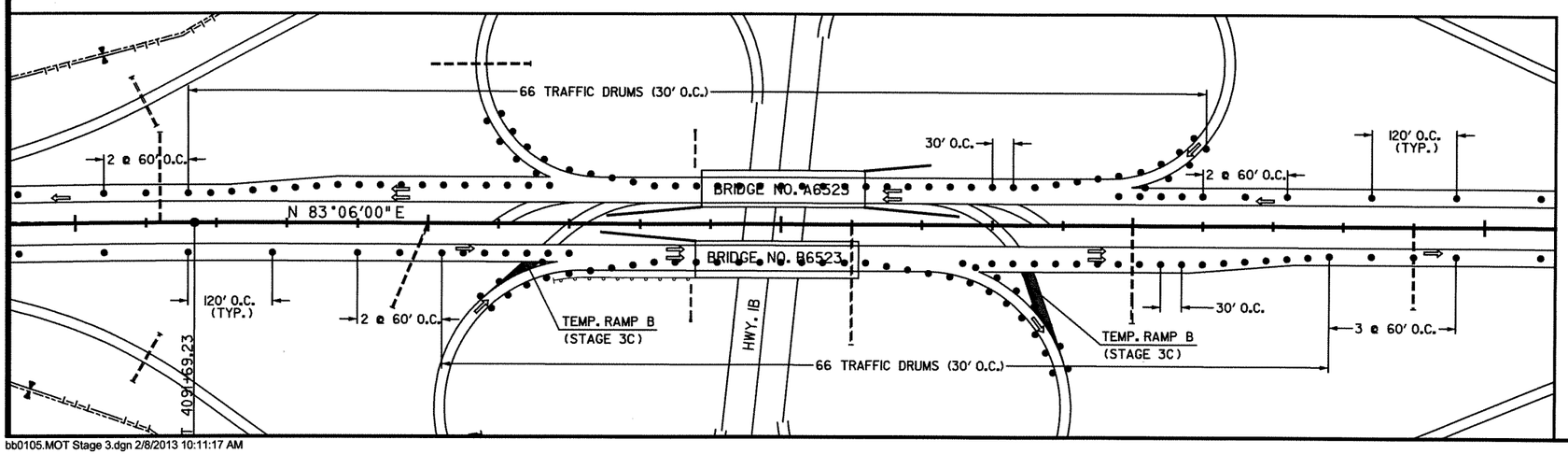
1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

EXISTING BRIDGE ENDS

BRIDGE A6523 STA. 4098+87.33 - STA. 4101+18.51
BRIDGE B6523 STA. 4098+78.62 - STA. 4101+09.80



STAGE 3C INSET



LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

bb0105.MOT Stage 3.dgn 2/8/2013 10:11:17 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	88	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

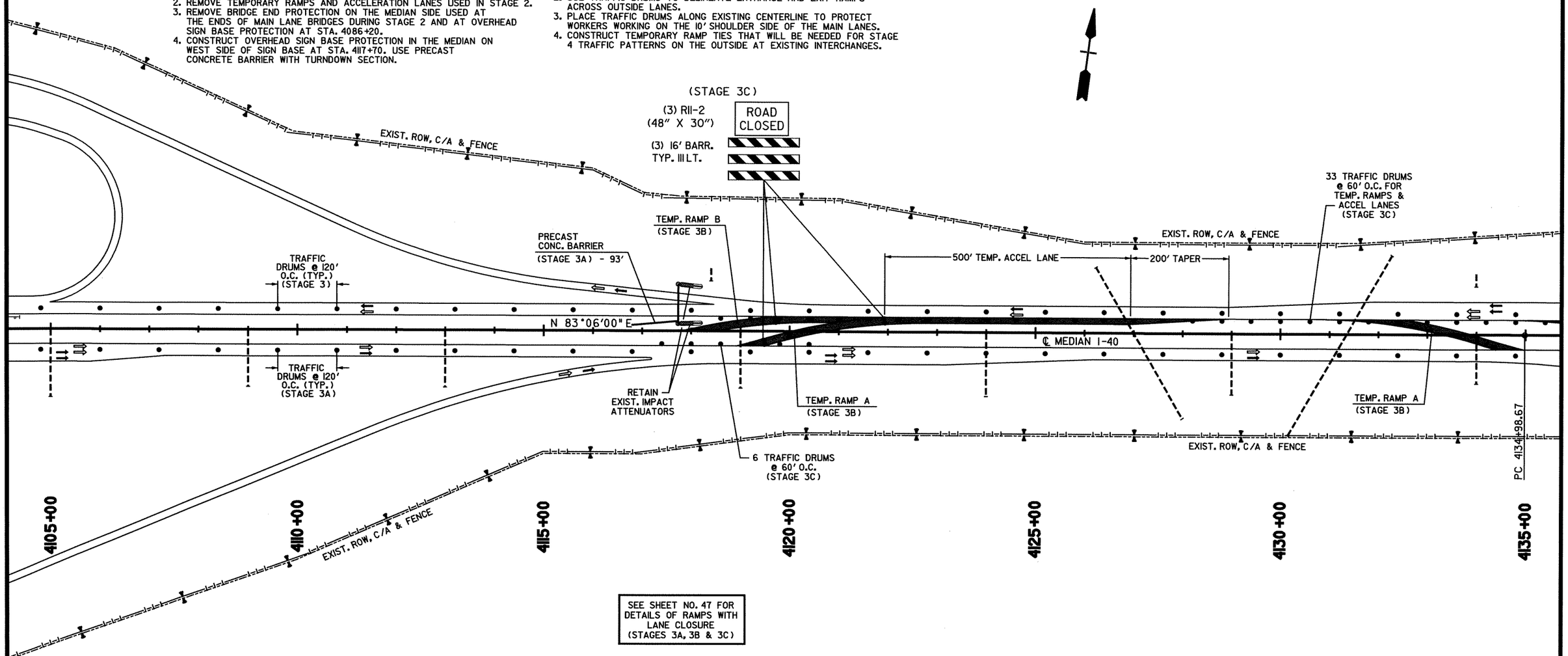
1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.



SEE SHEET NO. 47 FOR DETAILS OF RAMPS WITH LANE CLOSURE (STAGES 3A, 3B & 3C)

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 4/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

bb0105.MOT Stage 3.dgn 2/8/2013 10:11:18 AM

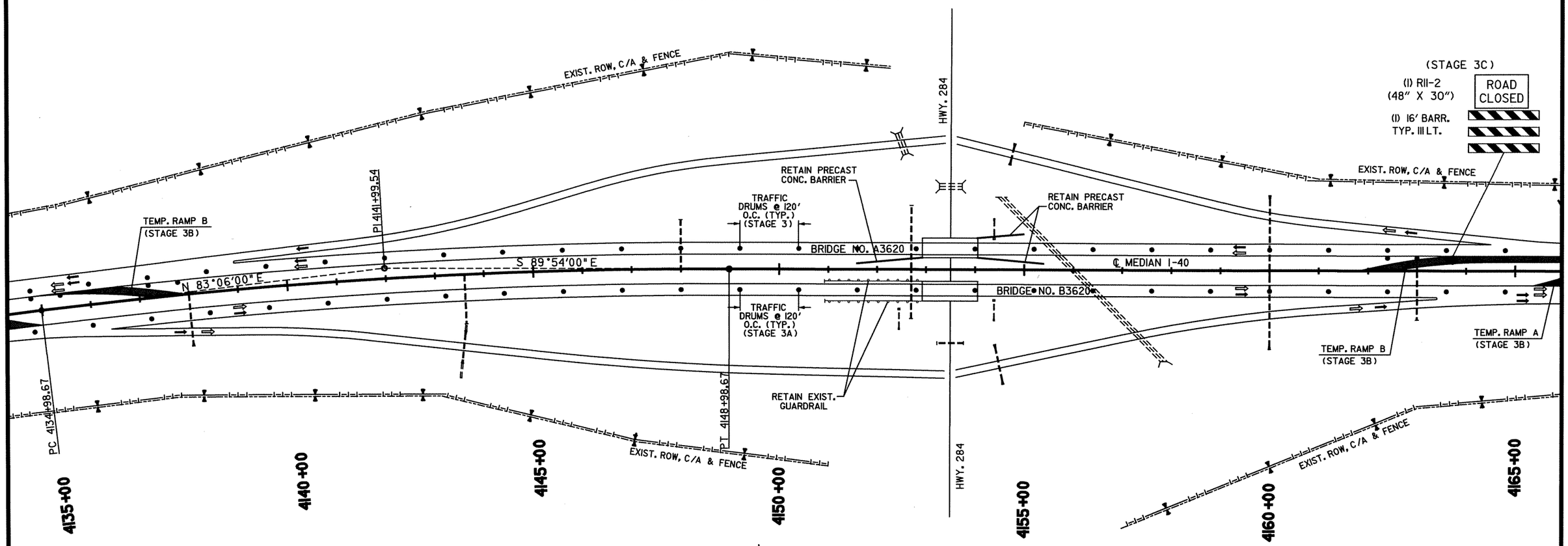
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	39	374

(2) MAINTENANCE OF TRAFFIC DETAILS

SEE SHEET NO. 47 FOR DETAILS OF RAMPS WITH LANE CLOSURE (STAGES 3A, 3B & 3C)

EXISTING BRIDGE ENDS

BRIDGE A3620 STA. 4152+92.60 - STA. 4154+05.68
BRIDGE B3620 STA. 4152+92.60 - STA. 4154+05.68



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DOC = 0°30'
T = 700.87'
L = 1400.00'
P.C. = 4134+98.67
P.T. = 4148+98.67
(NO SUPER)

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

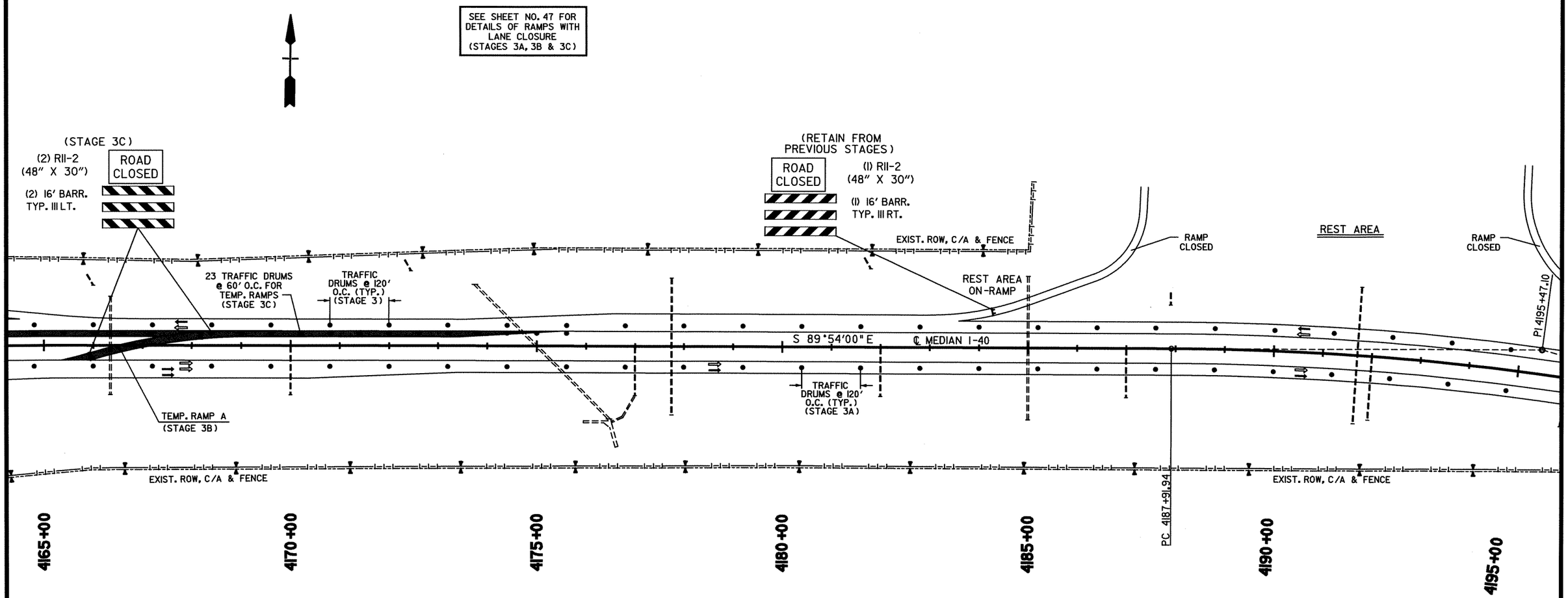
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

bb0105.MOT Stage 3.dgn 2/8/2013 10:11:18 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	90	374

(2) MAINTENANCE OF TRAFFIC DETAILS



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DOC = 1°00'
T = 755.16'
L = 1501.67'
P.C. = 4187+91.94
P.T. = 4202+93.61
e = 0.037'/'
Ls = 350'

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

bb0105.MOT Stage 3.dgn 2/8/2013 10:11:18 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	91	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

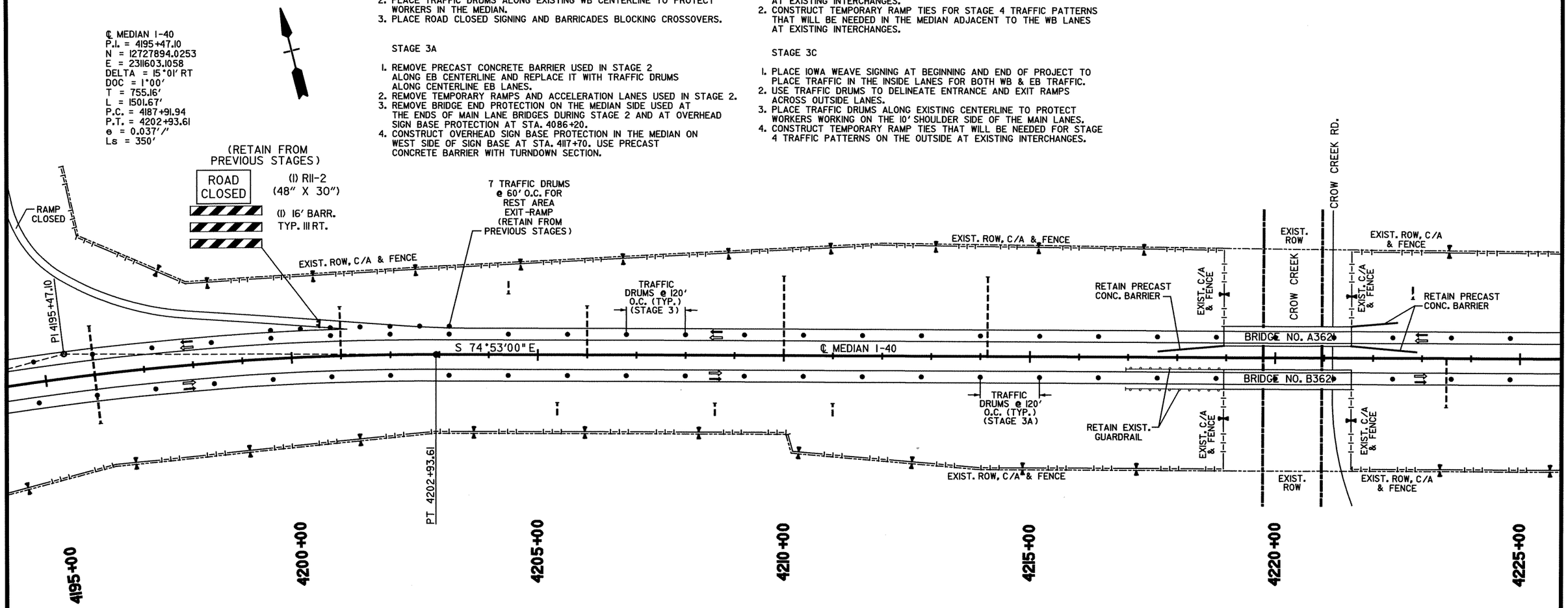
1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.



EXISTING BRIDGE ENDS

BRIDGE A3621	STA. 4218+98.50	- STA. 4221+55.67
BRIDGE B3621	STA. 4218+98.50	- STA. 4221+55.67

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

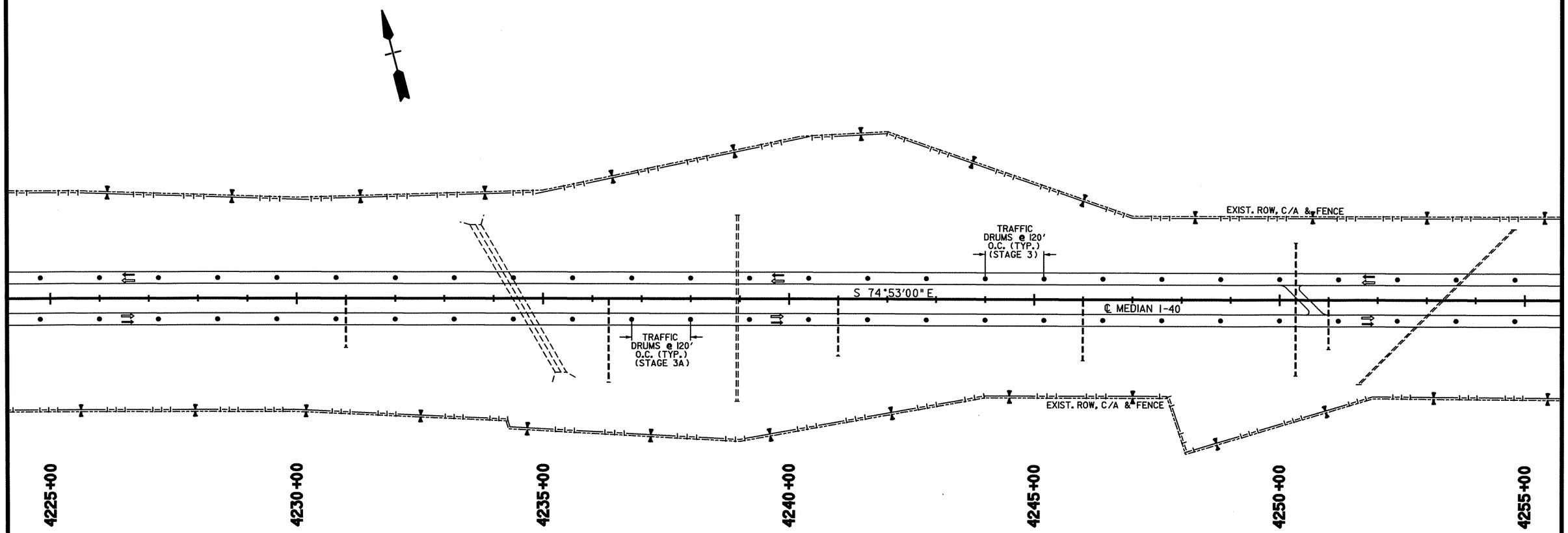
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

bb0105.MOT Stage 3.dgn 2/8/2013 10:11:19 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	92	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	93	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

℄ MEDIAN I-40
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N = 12725447.6163
E = 2320659.4257
DELTA = 56°00' LT
DOC = 1°00'
T = 3046.47'
L = 5600.00'
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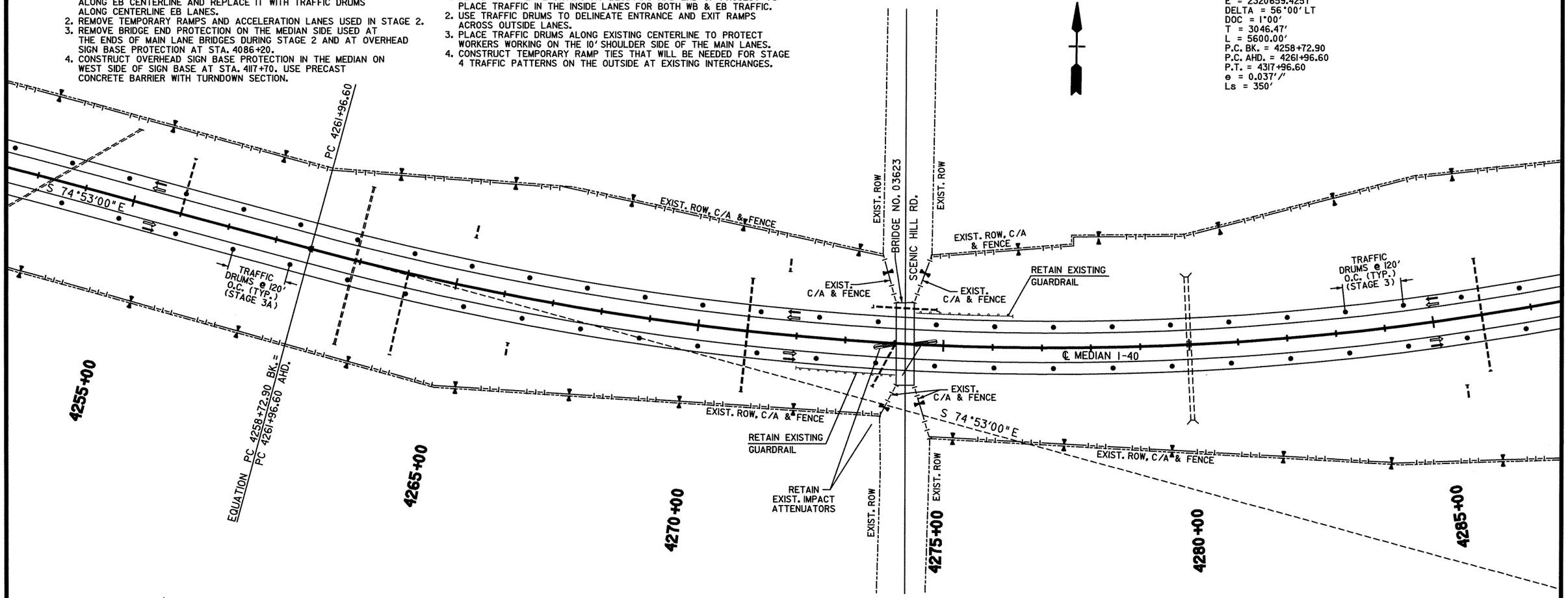
P.T. = 4317+96.60
e = 0.037'/'
Ls = 350'



LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

bb0105.MOT Stage 3.dgn 2/8/2013 10:11:19 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	94	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

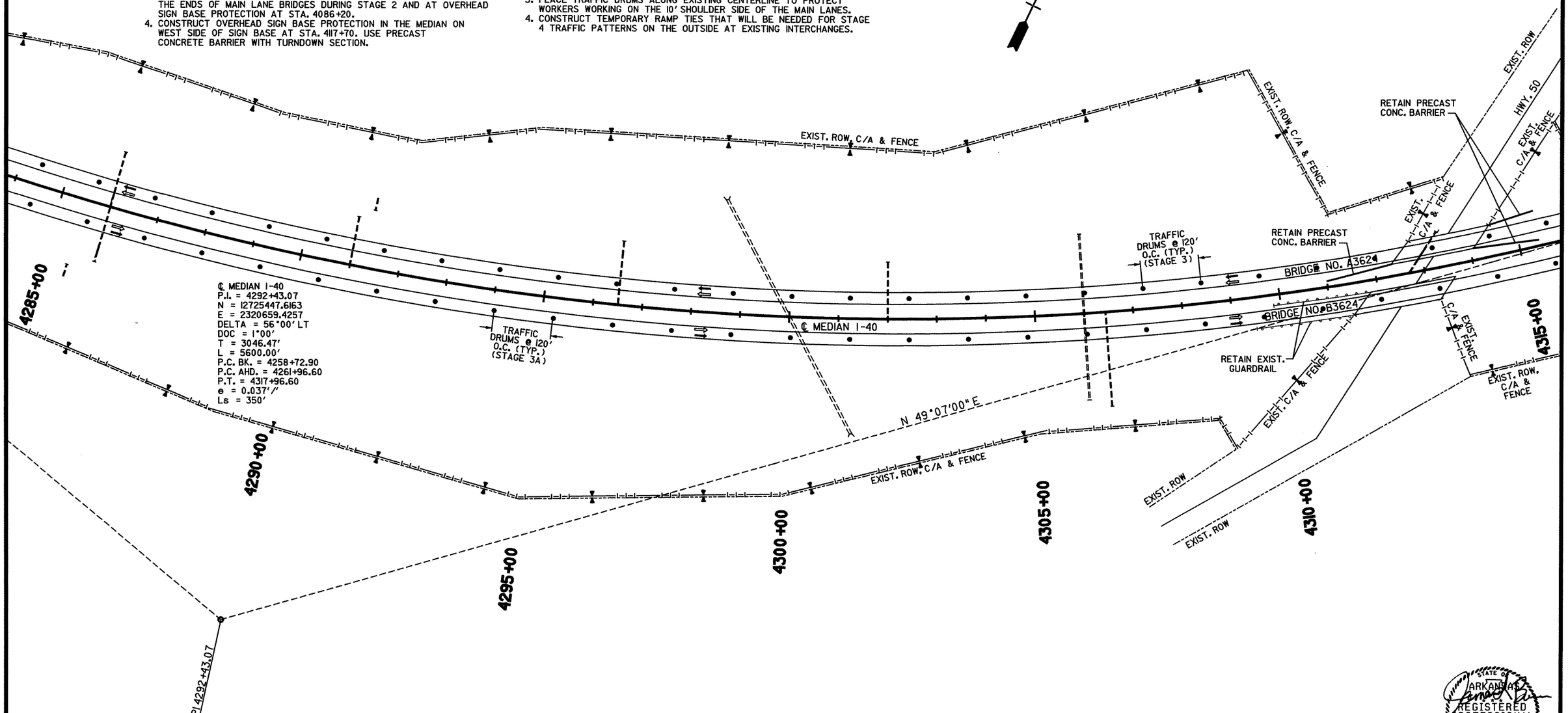
1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

EXISTING BRIDGE ENDS

BRIDGE A3624 STA. 4312+53.91 - STA. 4314+24.87
BRIDGE B3624 STA. 4311+66.66 - STA. 4313+42.62



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DOC = 1°00'
T = 3046.47'
L = 5600.00'
P.C. BK. = 4258+72.90
P.C. AHD. = 4261+96.60
P.T. = 4317+96.60
e = 0.037'/'
Ls = 350'

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

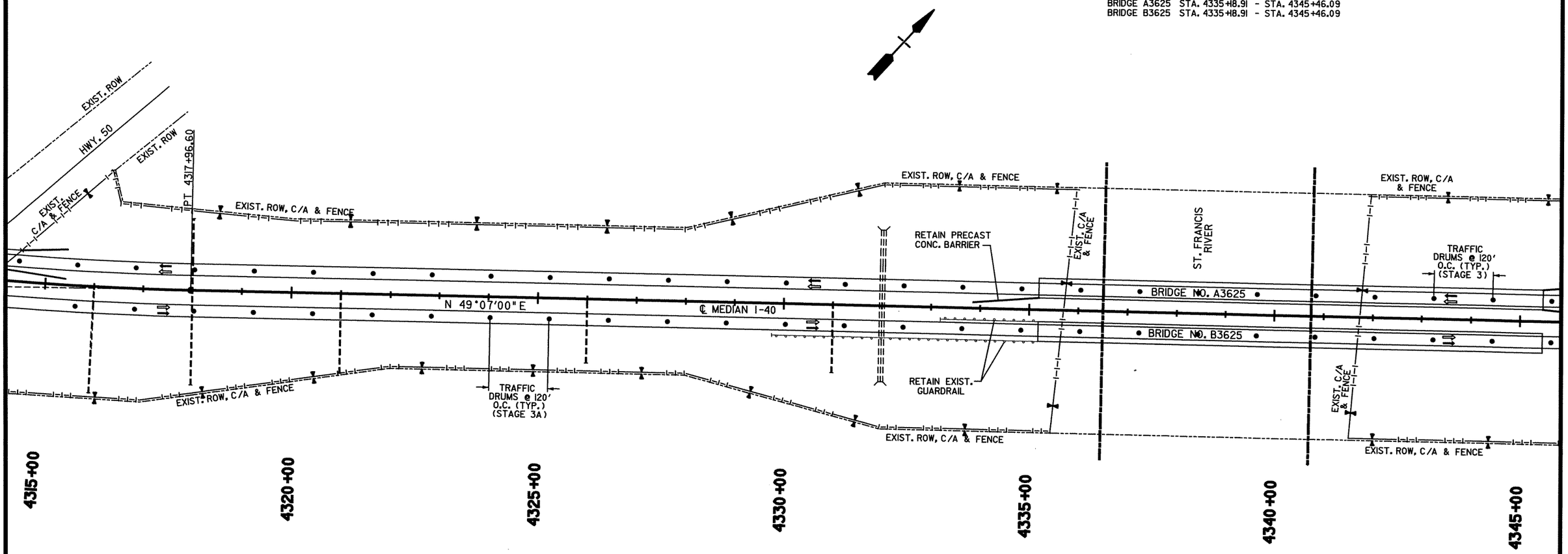
bb0105.MOT Stage 3.dgn 2/8/2013 10:11:20 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	95	374

(2) MAINTENANCE OF TRAFFIC DETAILS

EXISTING BRIDGE ENDS

BRIDGE A3625 STA. 4335+18.91 - STA. 4345+46.09
BRIDGE B3625 STA. 4335+18.91 - STA. 4345+46.09



STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

bb0105.MOT Stage 3.dgn 2/8/2013 10:11:20 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	96	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
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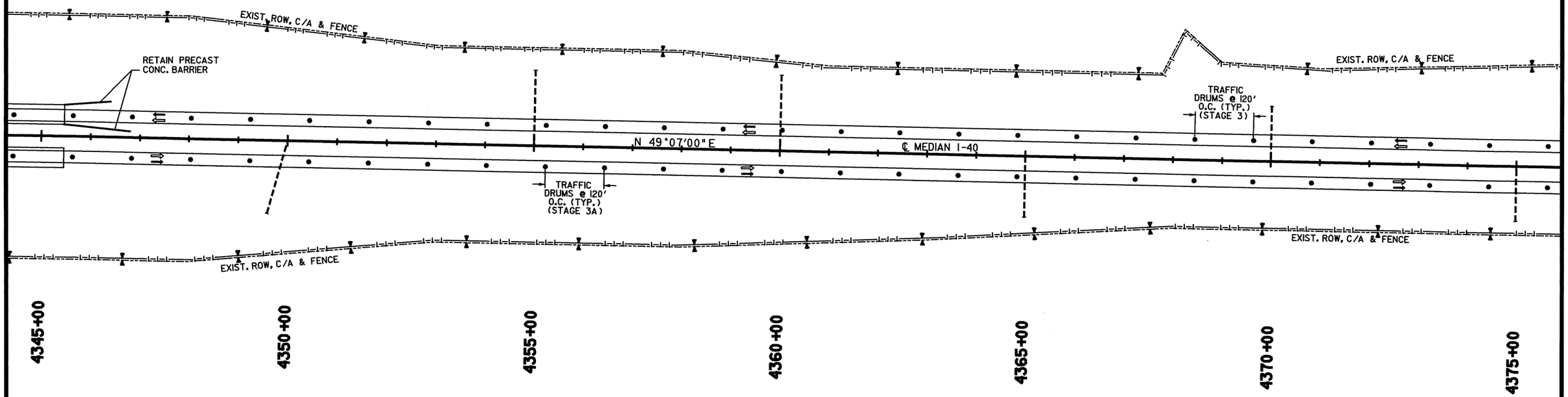
STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.



LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	97	374

(2) MAINTENANCE OF TRAFFIC DETAILS

℄ MEDIAN I-40
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E = 2329520.2979
DELTA = 4°26' RT
DOC = 0°30'
T = 443.55'
L = 886.67'
P.C. = 4400+26.63
P.T. = 4409+13.30
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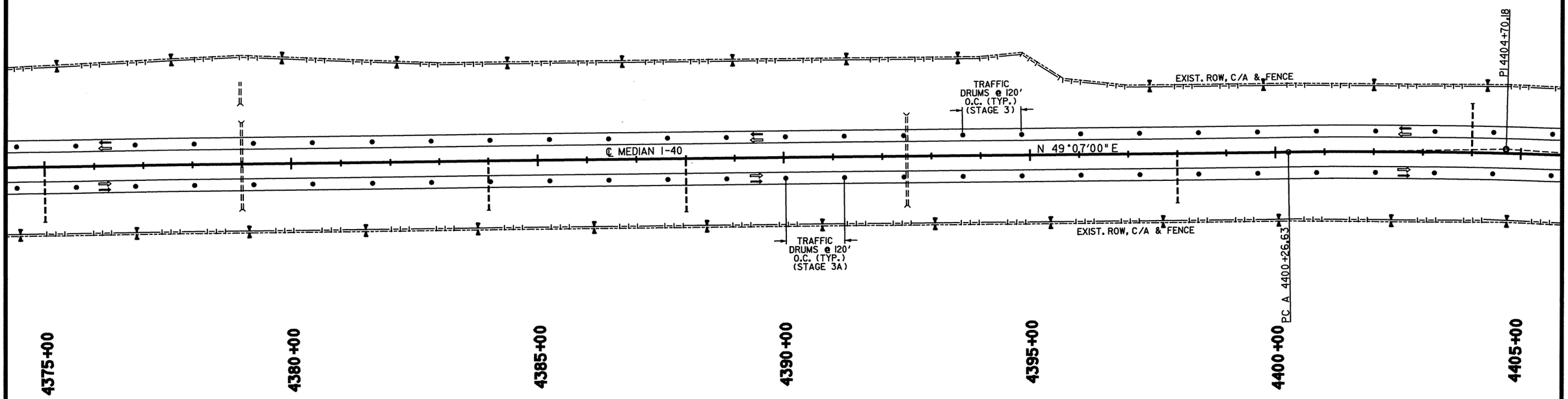

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
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3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

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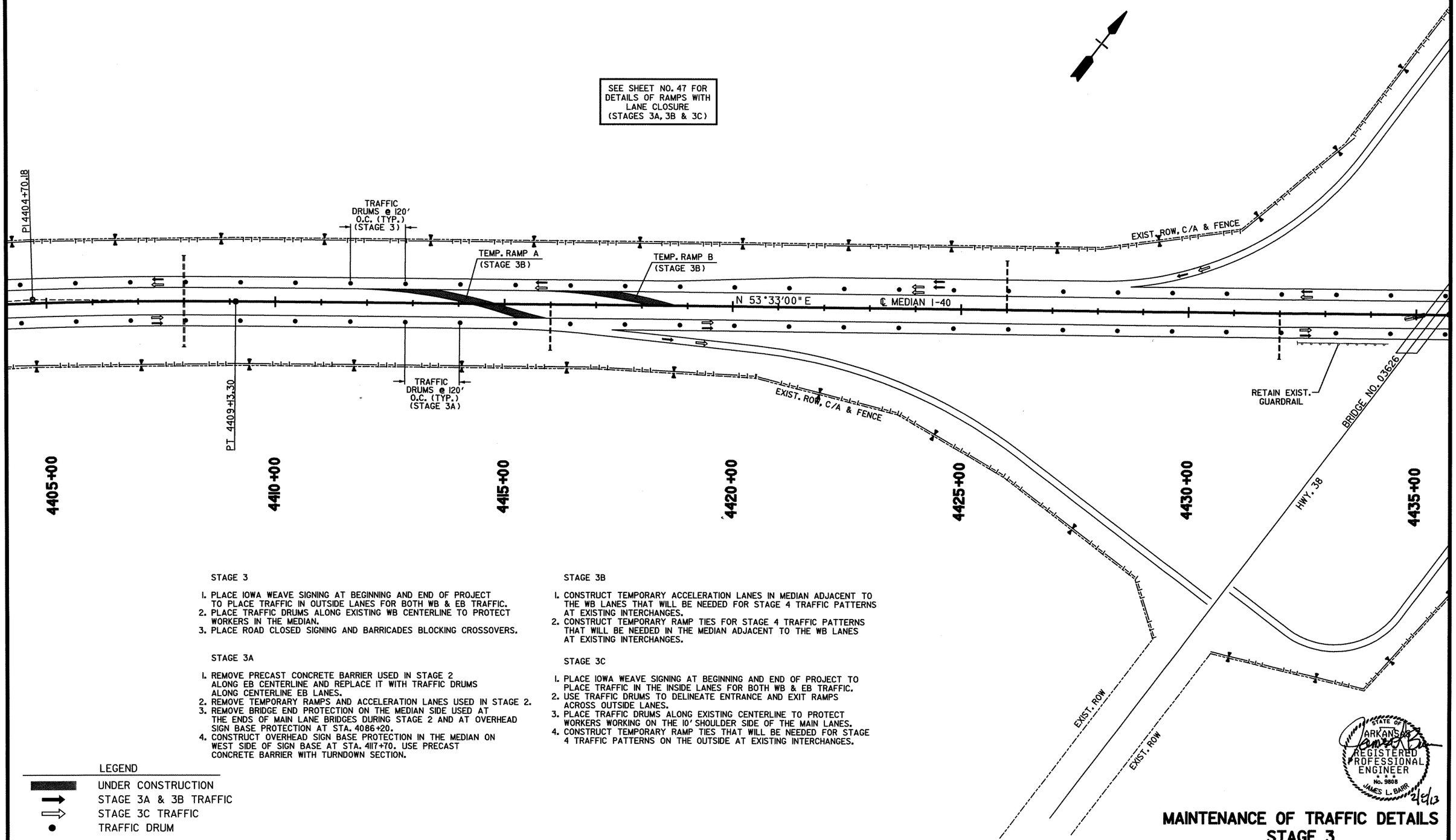
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	98	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
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4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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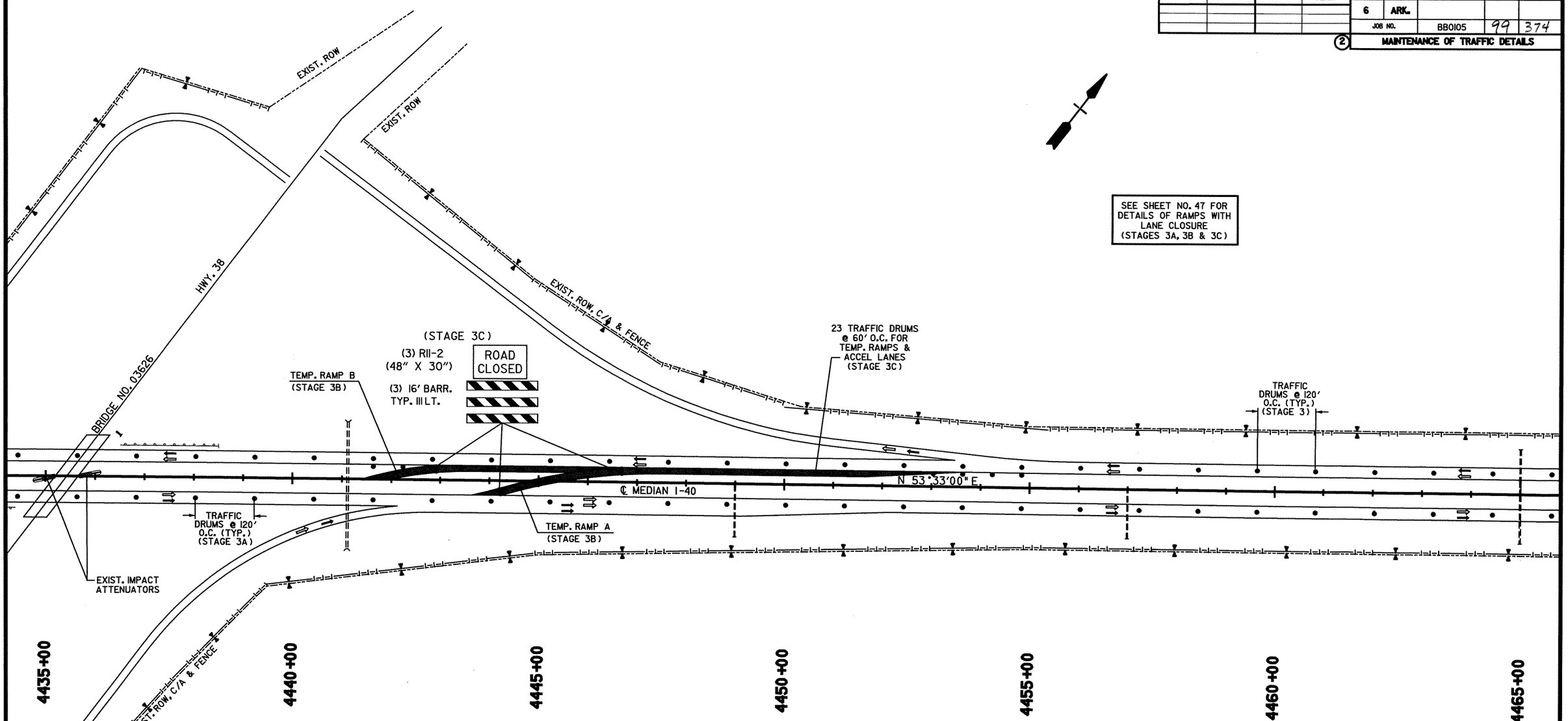
JOB NO.		BB0105	99	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
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LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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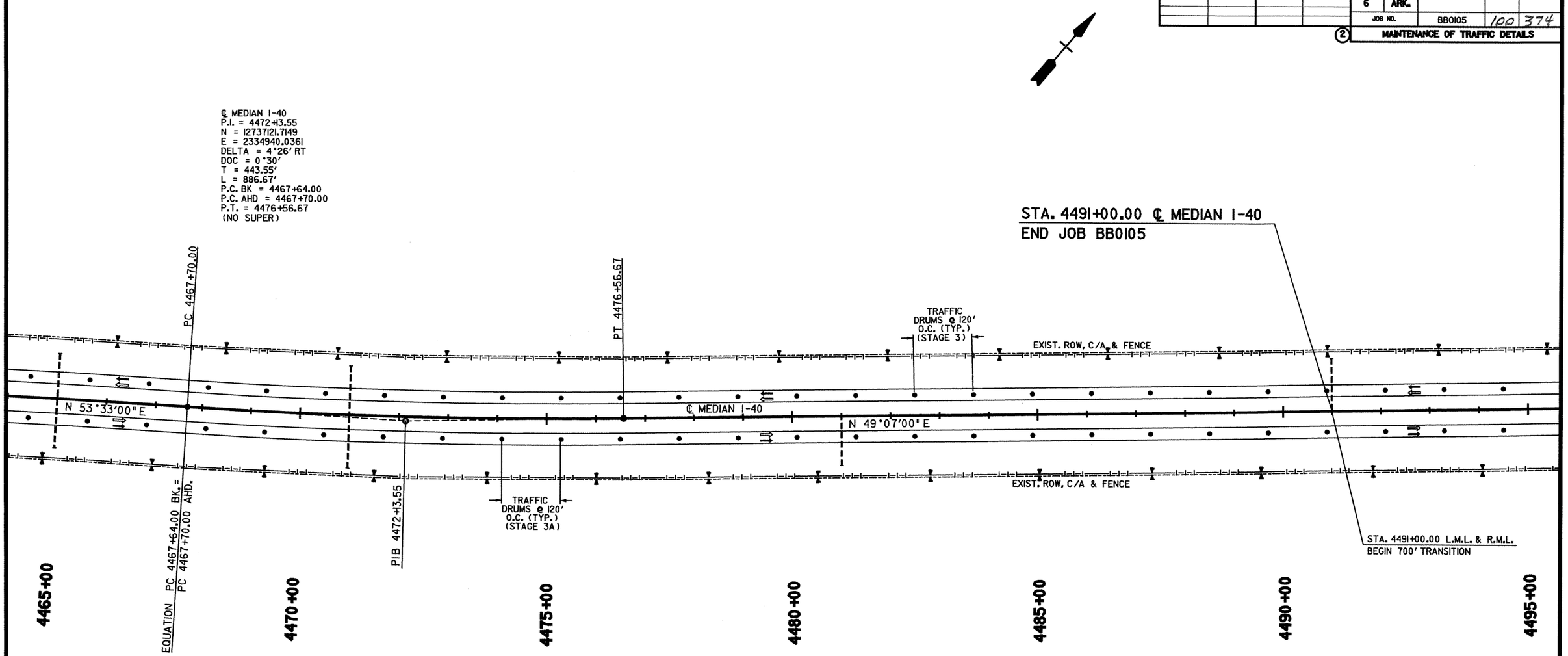

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
4. CONSTRUCT OVERHEAD SIGN BASE PROTECTION IN THE MEDIAN ON WEST SIDE OF SIGN BASE AT STA. 4117+70. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
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LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

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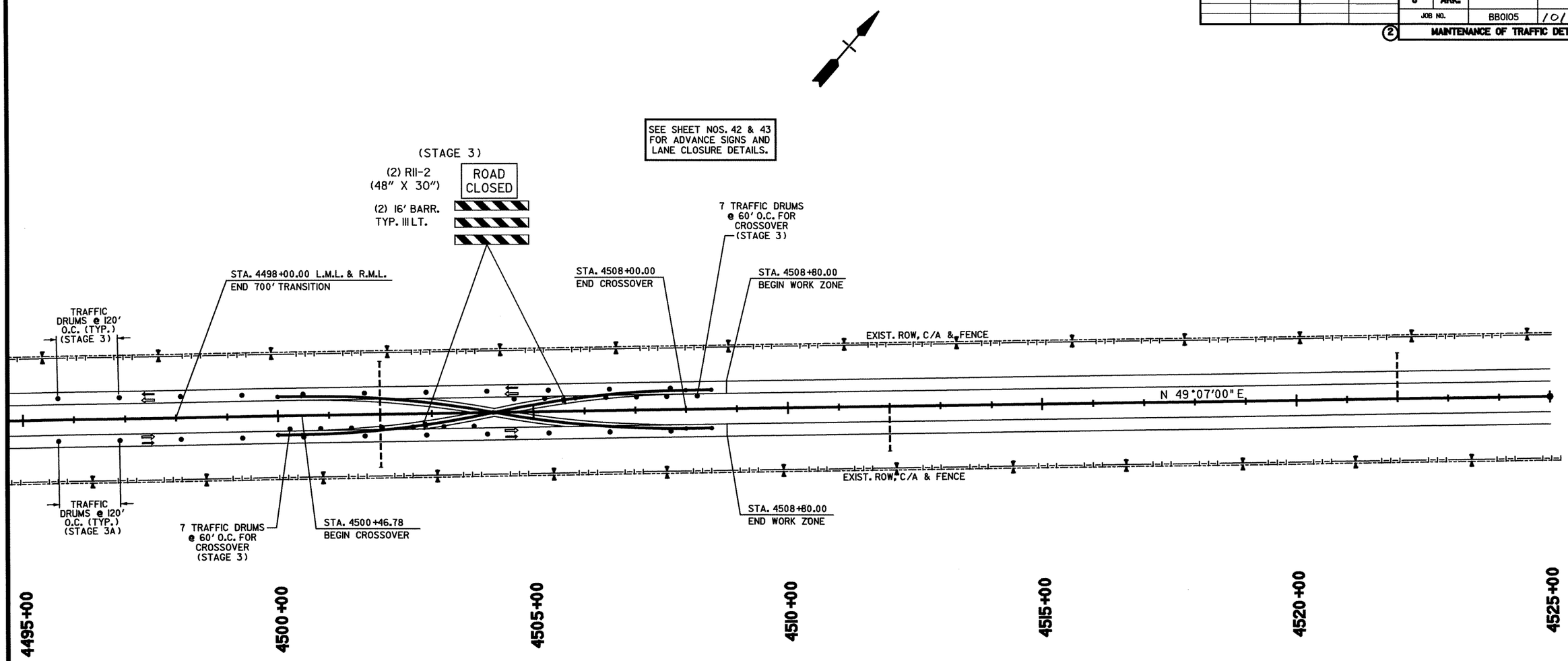

STAGE 3

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING WB CENTERLINE TO PROTECT WORKERS IN THE MEDIAN.
3. PLACE ROAD CLOSED SIGNING AND BARRICADES BLOCKING CROSSOVERS.

STAGE 3A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 2 ALONG EB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE EB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCELERATION LANES USED IN STAGE 2.
3. REMOVE BRIDGE END PROTECTION ON THE MEDIAN SIDE USED AT THE ENDS OF MAIN LANE BRIDGES DURING STAGE 2 AND AT OVERHEAD SIGN BASE PROTECTION AT STA. 4086+20.
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STAGE 3B

1. CONSTRUCT TEMPORARY ACCELERATION LANES IN MEDIAN ADJACENT TO THE WB LANES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS AT EXISTING INTERCHANGES.
2. CONSTRUCT TEMPORARY RAMP TIES FOR STAGE 4 TRAFFIC PATTERNS THAT WILL BE NEEDED IN THE MEDIAN ADJACENT TO THE WB LANES AT EXISTING INTERCHANGES.

STAGE 3C

1. PLACE IOWA WEAVE SIGNING AT BEGINNING AND END OF PROJECT TO PLACE TRAFFIC IN THE INSIDE LANES FOR BOTH WB & EB TRAFFIC.
2. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE AND EXIT RAMPS ACROSS OUTSIDE LANES.
3. PLACE TRAFFIC DRUMS ALONG EXISTING CENTERLINE TO PROTECT WORKERS WORKING ON THE 10' SHOULDER SIDE OF THE MAIN LANES.
4. CONSTRUCT TEMPORARY RAMP TIES THAT WILL BE NEEDED FOR STAGE 4 TRAFFIC PATTERNS ON THE OUTSIDE AT EXISTING INTERCHANGES.

LEGEND

- UNDER CONSTRUCTION
- STAGE 3A & 3B TRAFFIC
- STAGE 3C TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

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				6	ARK.			
				JOB NO.		BB0105	102	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

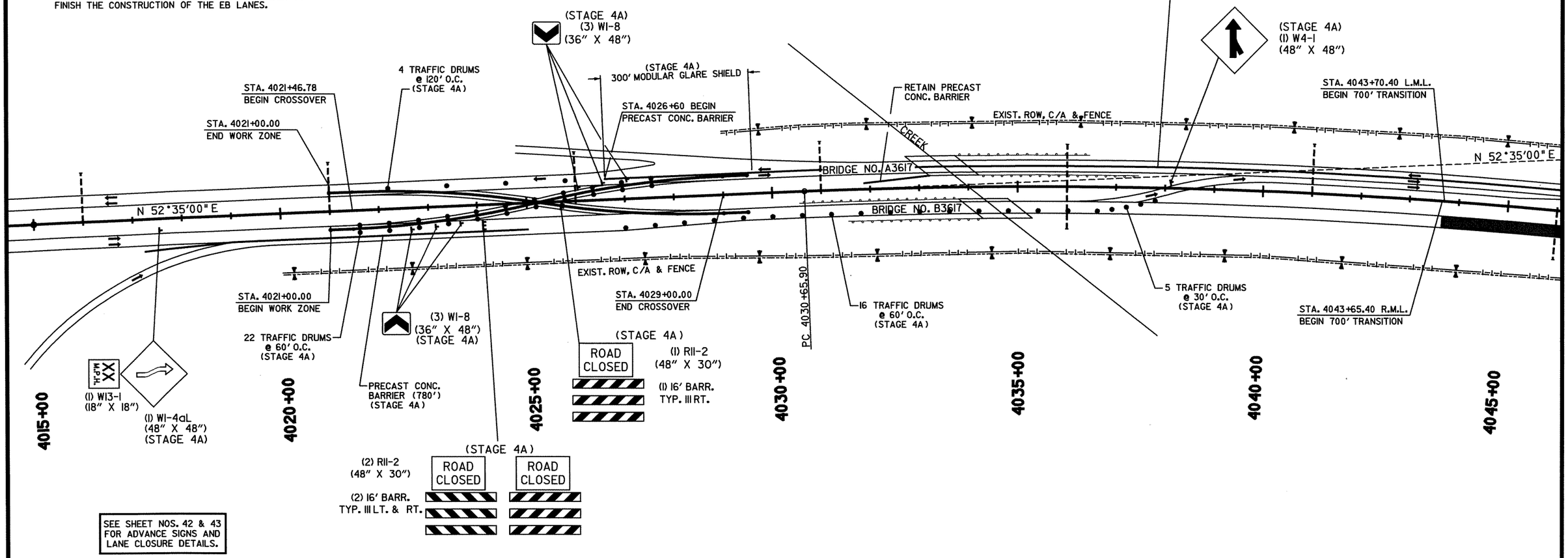
1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

EXISTING BRIDGE ENDS

BRIDGE A3617 STA. 4032+97.06 - STA. 4033+97.06
BRIDGE B3617 STA. 4034+04.94 - STA. 4035+04.94
RETAIN EXISTING GUARDRAIL



SEE SHEET NOS. 42 & 43 FOR ADVANCE SIGNS AND LANE CLOSURE DETAILS.

LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:28 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	103	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

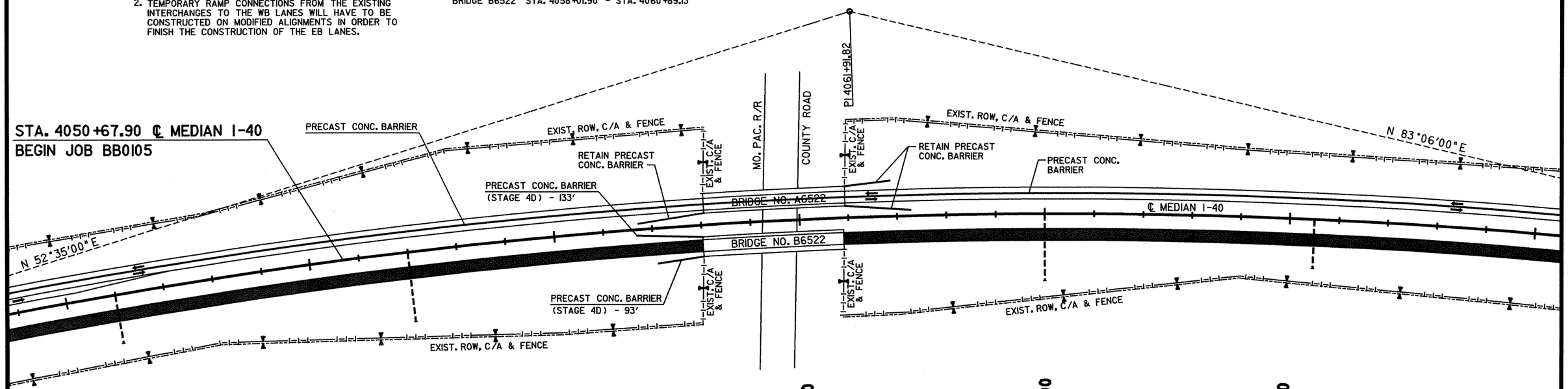
1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

EXISTING BRIDGE ENDS

BRIDGE A6522 STA. 4058+06.90 - STA. 4060+94.13
BRIDGE B6522 STA. 4058+01.90 - STA. 4060+89.13



℄ MEDIAN I-40
P.I. = 4061+91.82
N = 12726923.4991
E = 2298156.6666
DELTA = 30°31' RT
DOC = 0°30'
T = 3125.92'
L = 6103.33'
P.C. = 4030+65.90
P.T. = 4091+69.23
(NO SUPER)

LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:28 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	104	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

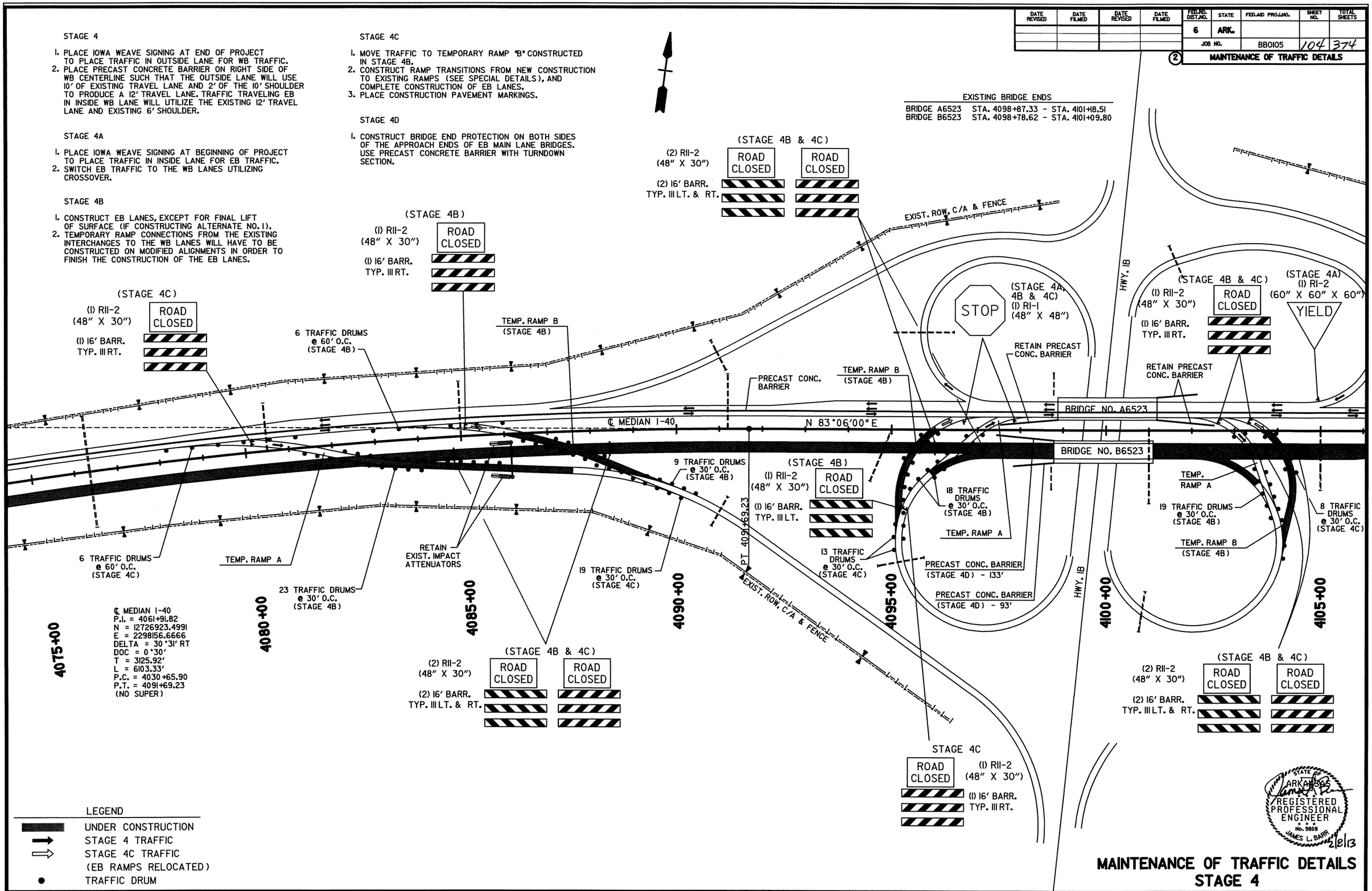
1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

EXISTING BRIDGE ENDS

BRIDGE A6523 STA. 4098+87.33 - STA. 4101+18.51
BRIDGE B6523 STA. 4098+78.62 - STA. 4101+09.80



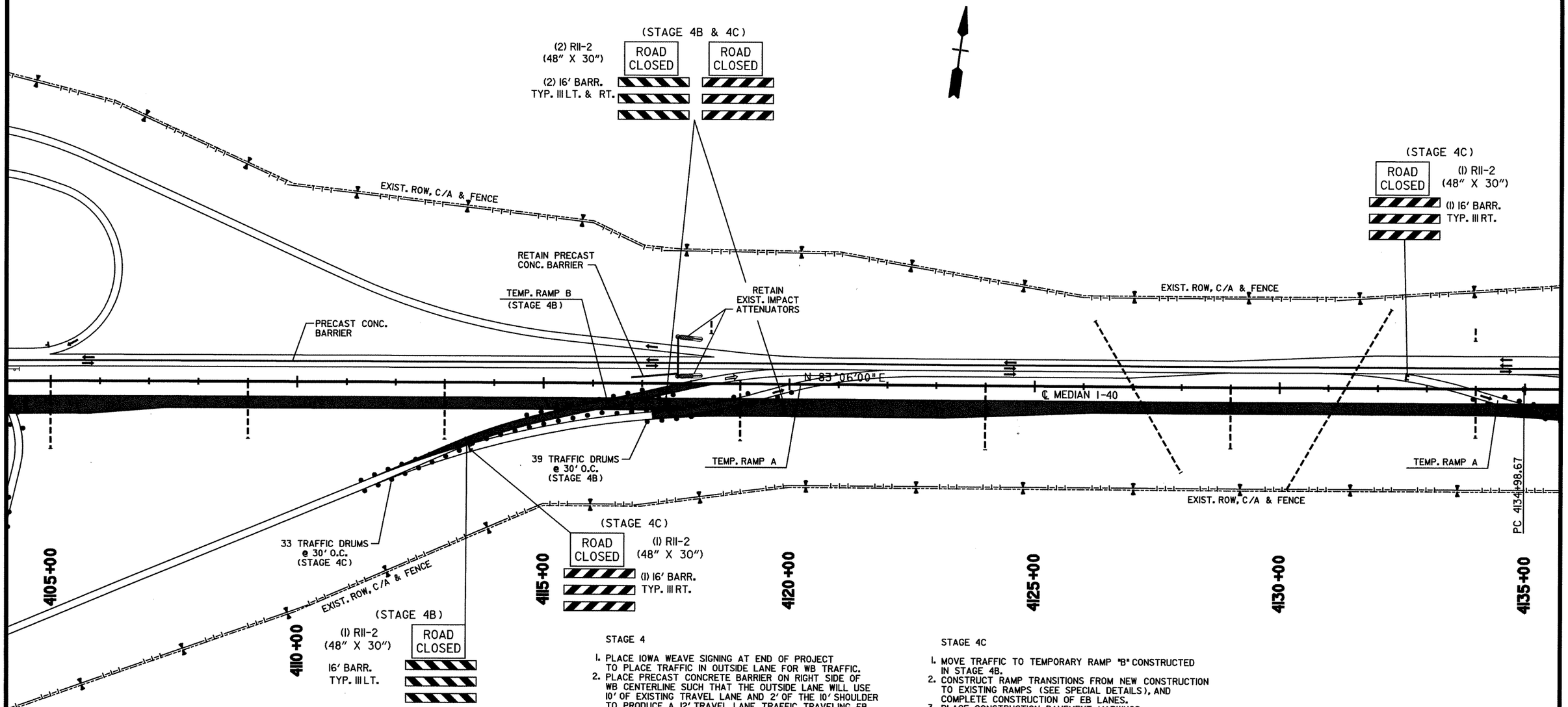
MAINTENANCE OF TRAFFIC DETAILS
STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:28 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	105	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 4

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	106	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

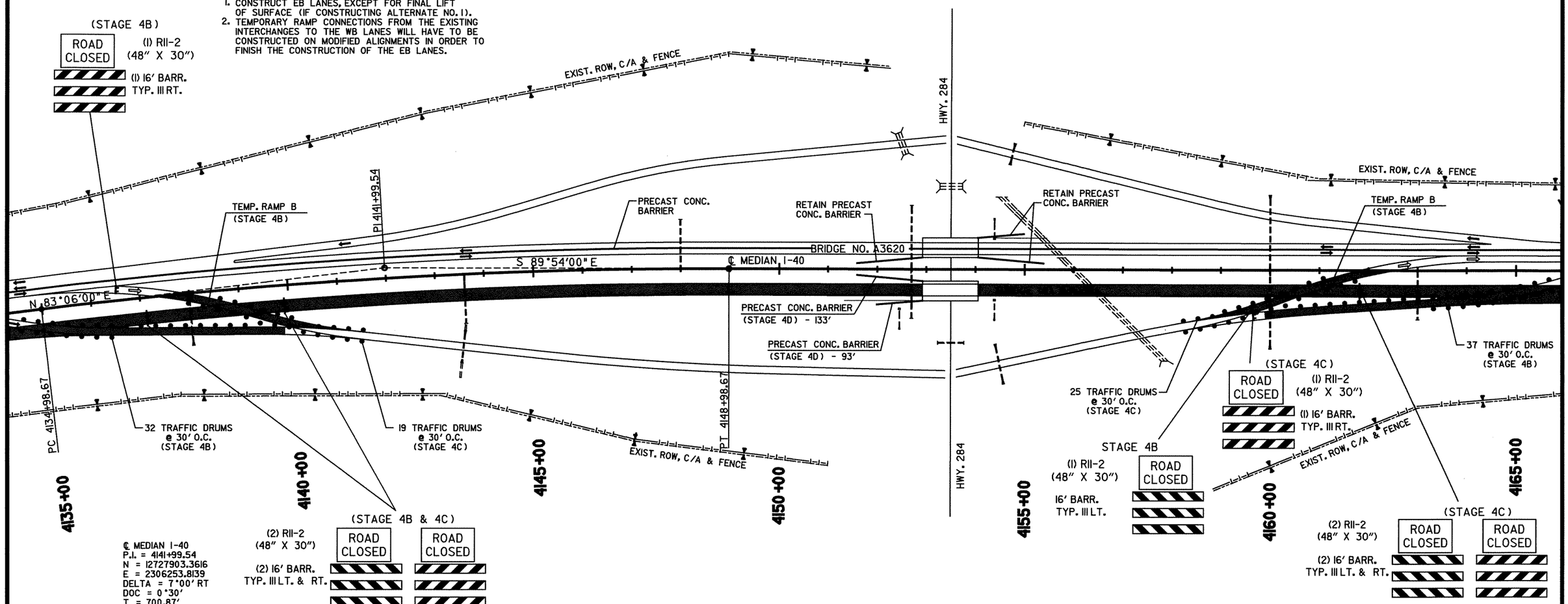
1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

EXISTING BRIDGE ENDS

BRIDGE A3620 STA. 4152+92.60 - STA. 4154+05.68
BRIDGE B3620 STA. 4152+92.60 - STA. 4154+05.68



℄ MEDIAN I-40
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E = 2306253.8139
DELTA = 7°00' RT
DOC = 0°30'
T = 700.87'
L = 1400.00'
P.C. = 4134+98.67
P.T. = 4148+98.67
(NO SUPER)

LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 4

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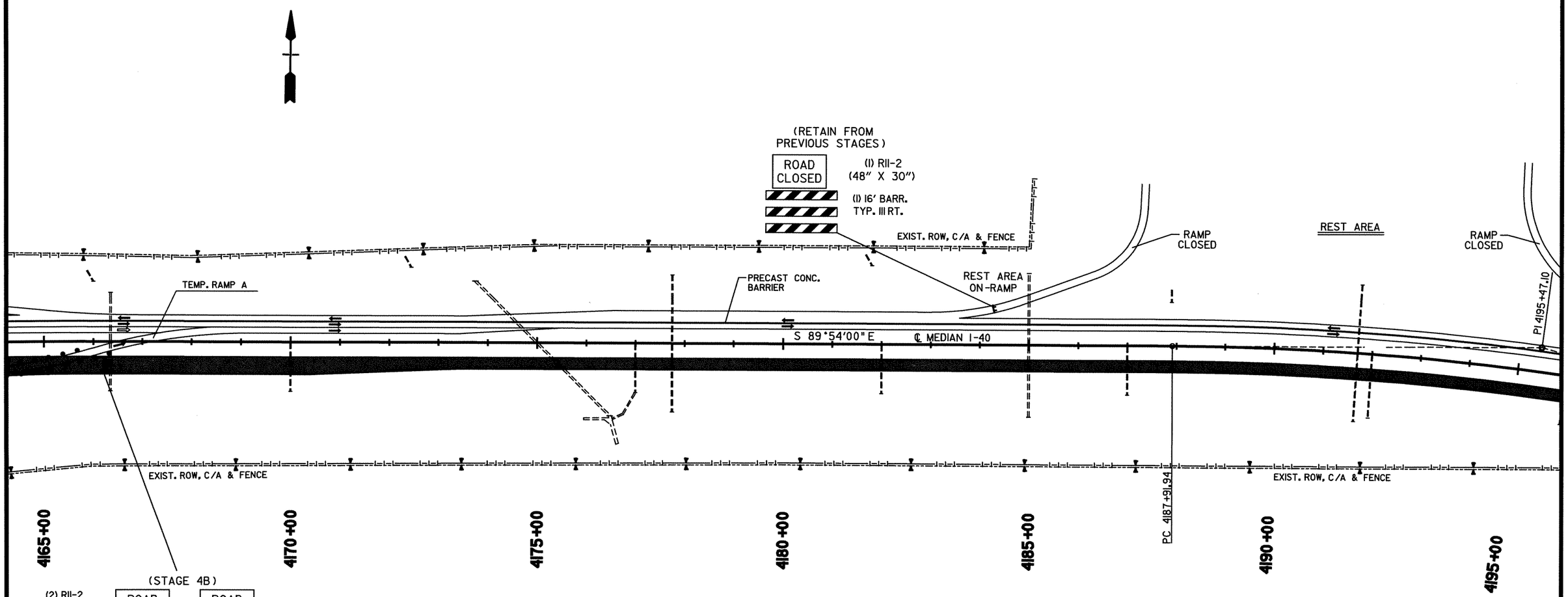
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	107	374

(2) MAINTENANCE OF TRAFFIC DETAILS



(STAGE 4B)

(2) R11-2 (48" X 30")

(2) 16' BARR. TYP. III LT. & RT.

ROAD CLOSED

ROAD CLOSED

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

℄ MEDIAN I-40
P.I. = 4195+47.10
N = 12727894.0253
E = 2311603.1058
DELTA = 15°01' RT
DOC = 1°00'
T = 755.16'
L = 1501.67'
P.C. = 4187+91.94
P.T. = 4202+93.61
e = 0.037'/'
Ls = 350'

LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

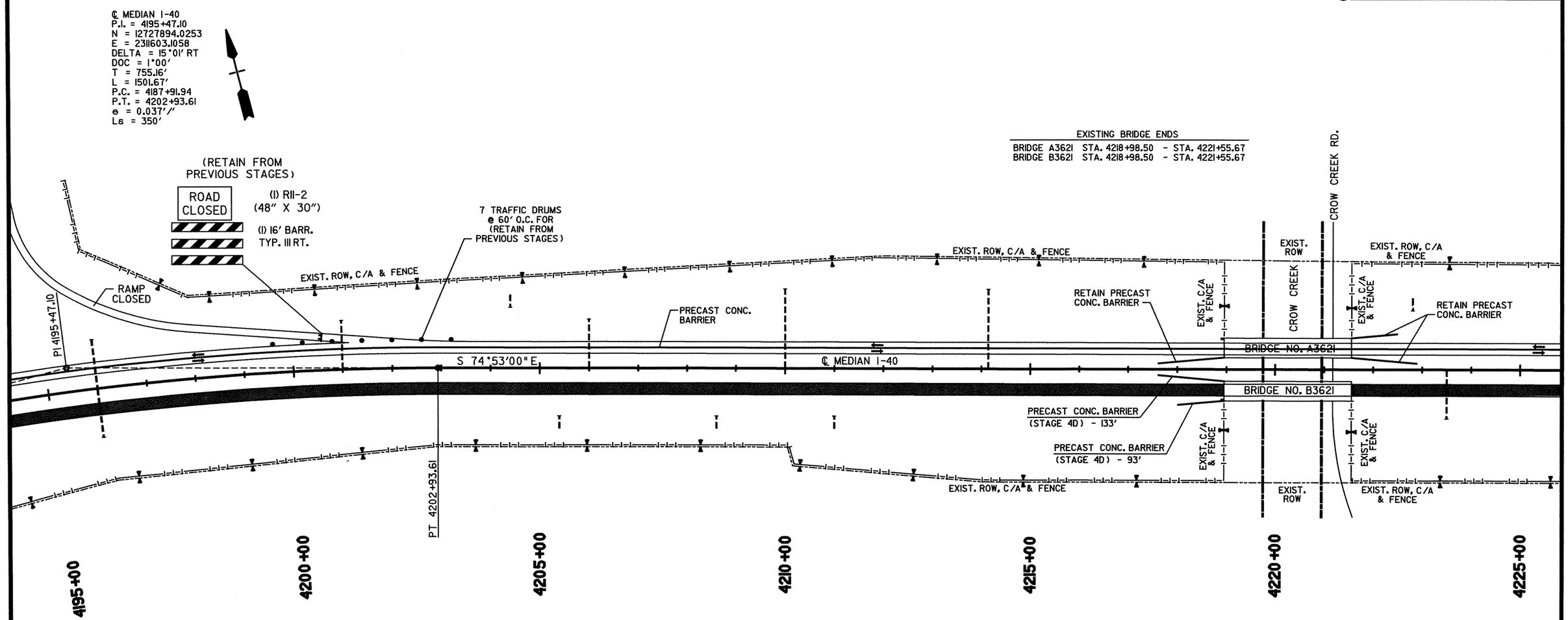
MAINTENANCE OF TRAFFIC DETAILS STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:29 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	108	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

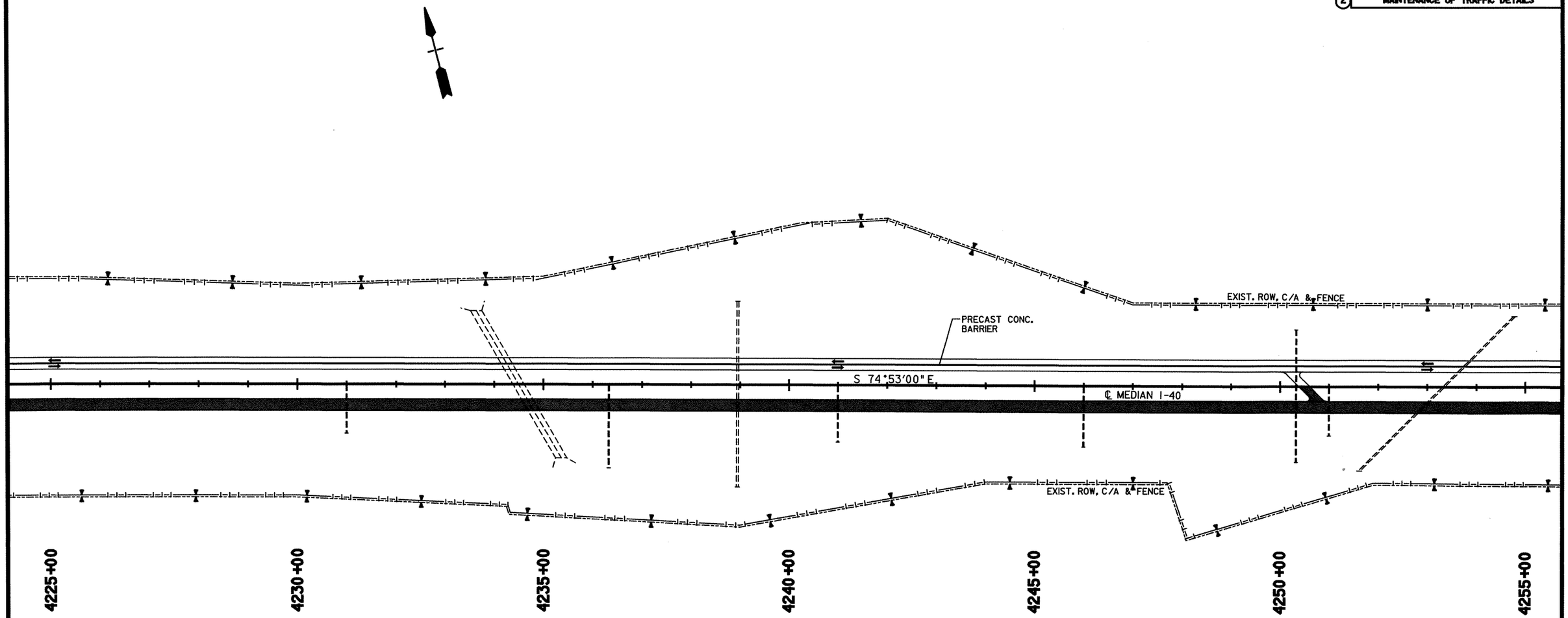
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:30 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	109	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 4

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				6	ARK.			
				JOB NO.		BB0105	110	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

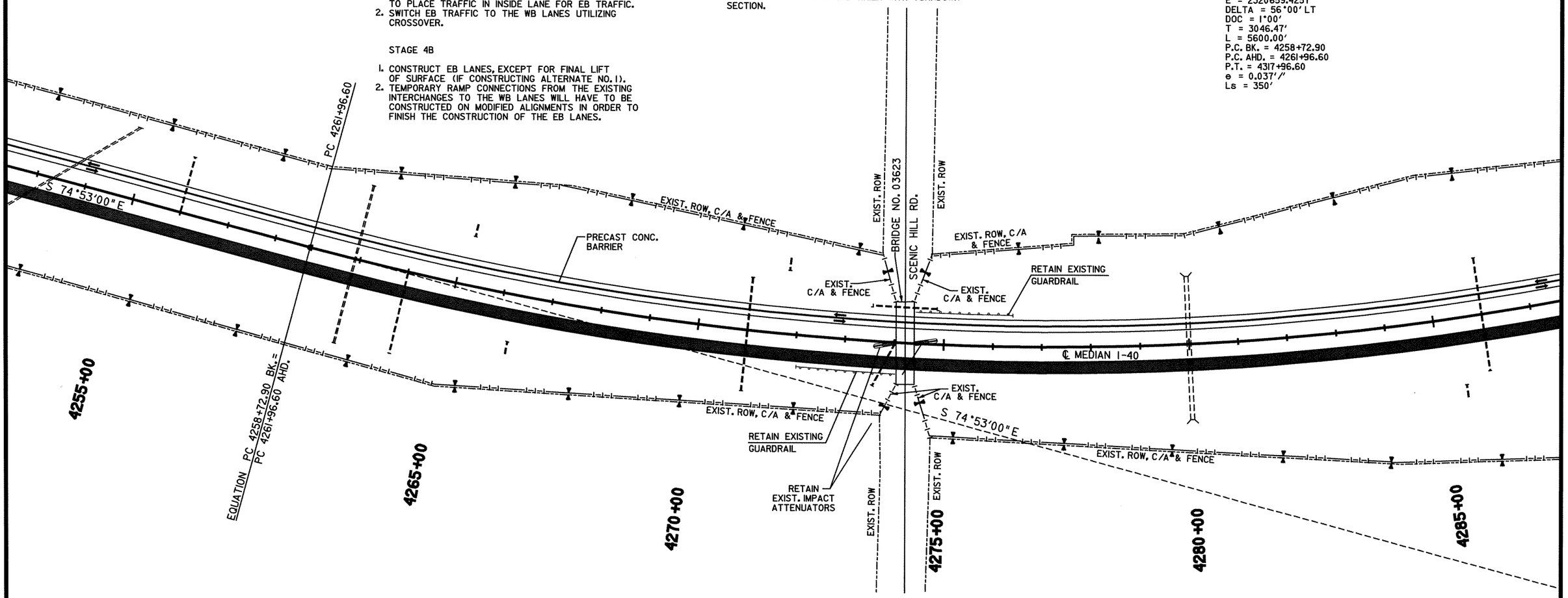
STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

℄ MEDIAN I-40
P.I. = 4292+43.07
N = 12725447.6163
E = 2320659.4257
DELTA = 56°00' LT
DOC = 1°00'
T = 3046.47'
L = 5600.00'
P.C. BK. = 4258+72.90
P.C. AHD. = 4261+96.60
P.T. = 4317+96.60
e = 0.037'/'
Ls = 350'



LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:30 AM

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				6	ARK.			
				JOB NO.		BB0105	111	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

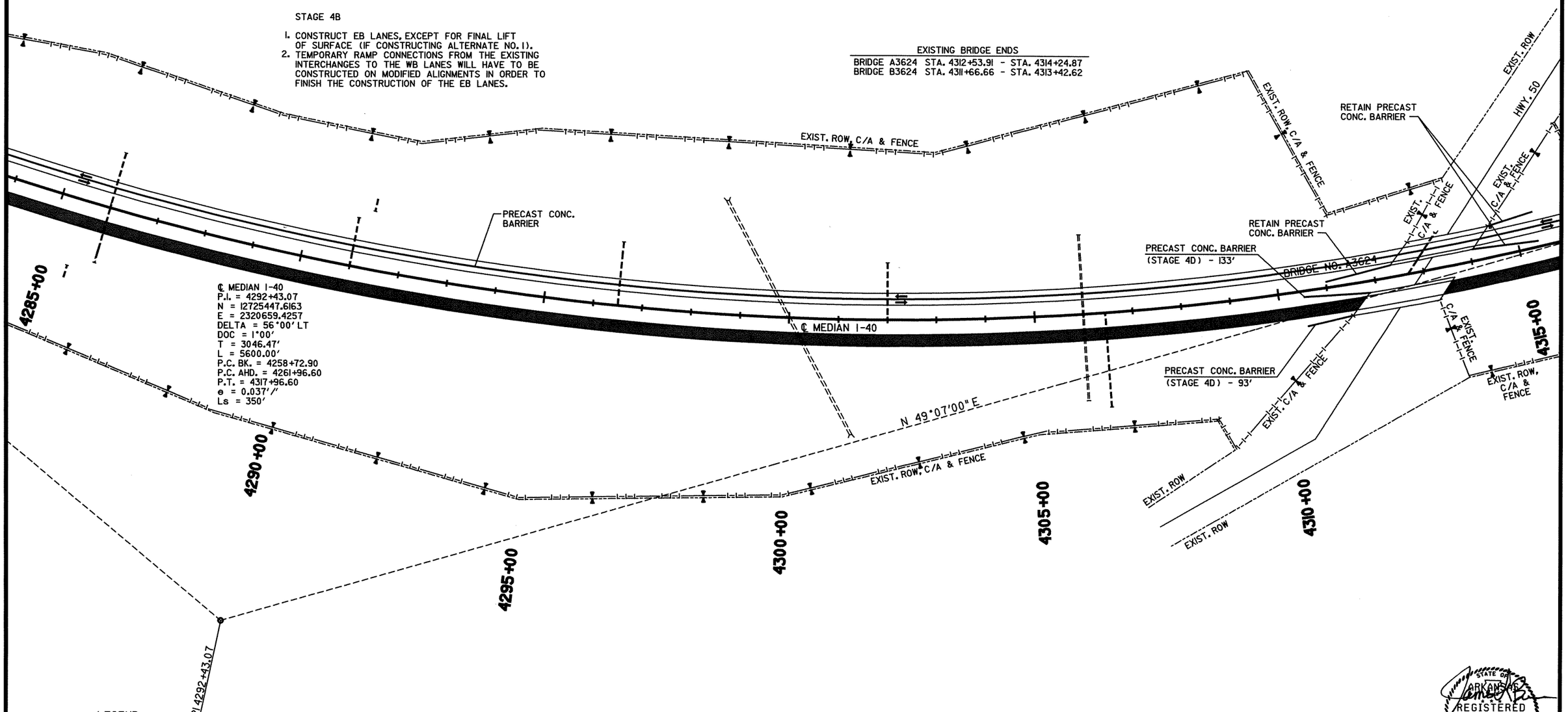
1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

EXISTING BRIDGE ENDS

BRIDGE A3624	STA. 4312+53.91	- STA. 4314+24.87
BRIDGE B3624	STA. 4311+66.66	- STA. 4313+42.62



LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:30 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	112	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

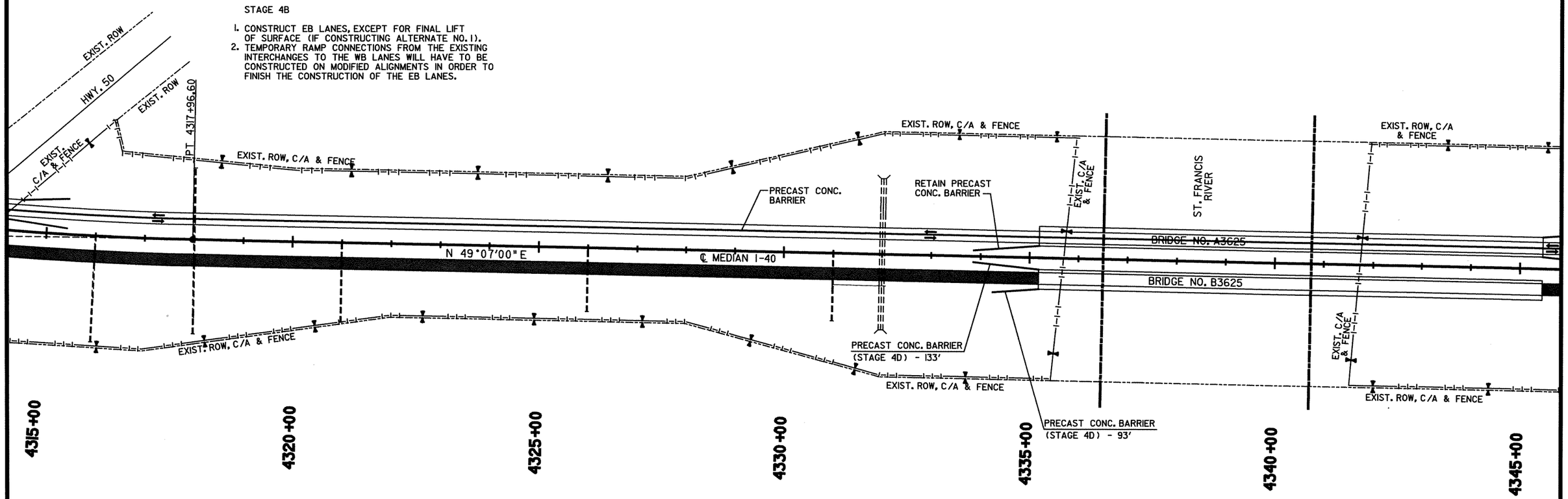
1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

EXISTING BRIDGE ENDS

BRIDGE A3625 STA. 4335+18.91 - STA. 4345+46.09
BRIDGE B3625 STA. 4335+18.91 - STA. 4345+46.09



LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:31 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	113	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

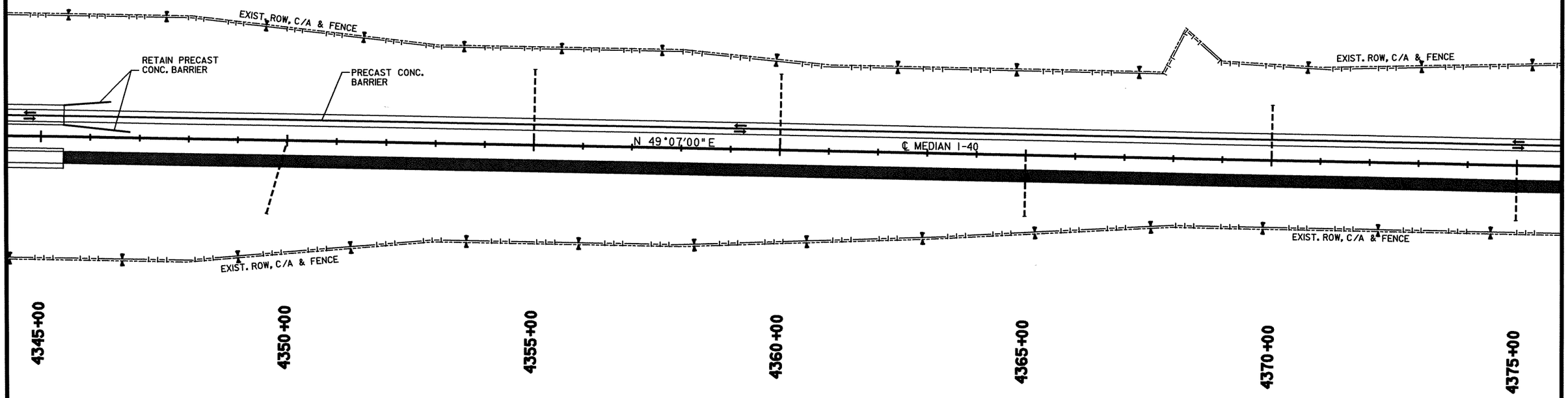
1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.



LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:31 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	114	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

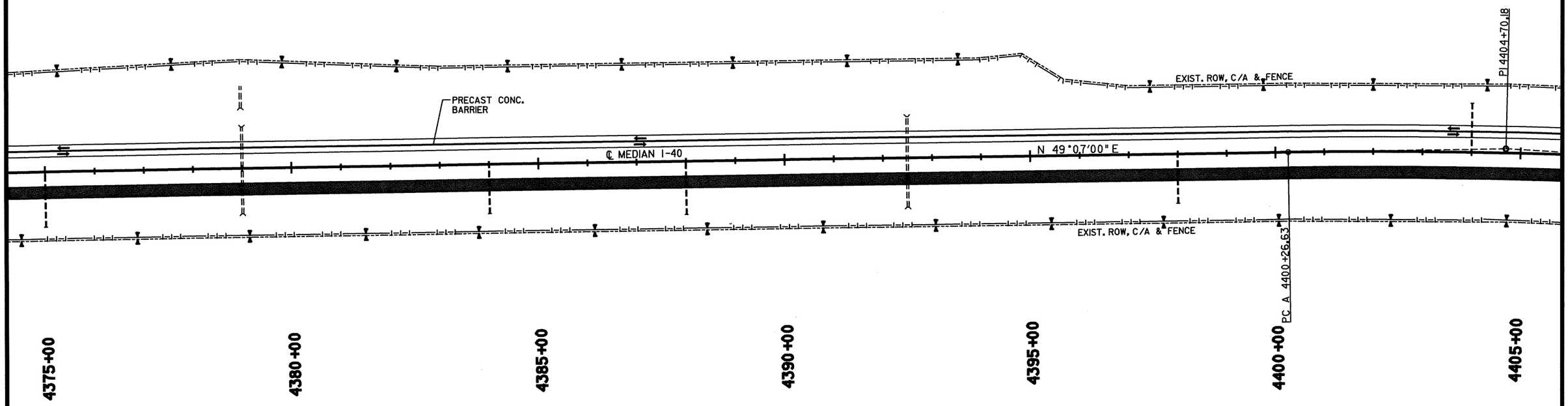
STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

℄ MEDIAN I-40
P.I. = 4404+70.18
N = 12733118.6341
E = 2329520.2979
DELTA = 4°26' RT
DOC = 0°30'
T = 443.55'
L = 886.67'
P.C. = 4400+26.63
P.T. = 4409+13.30
(NO SUPER)



LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:31 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	115	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

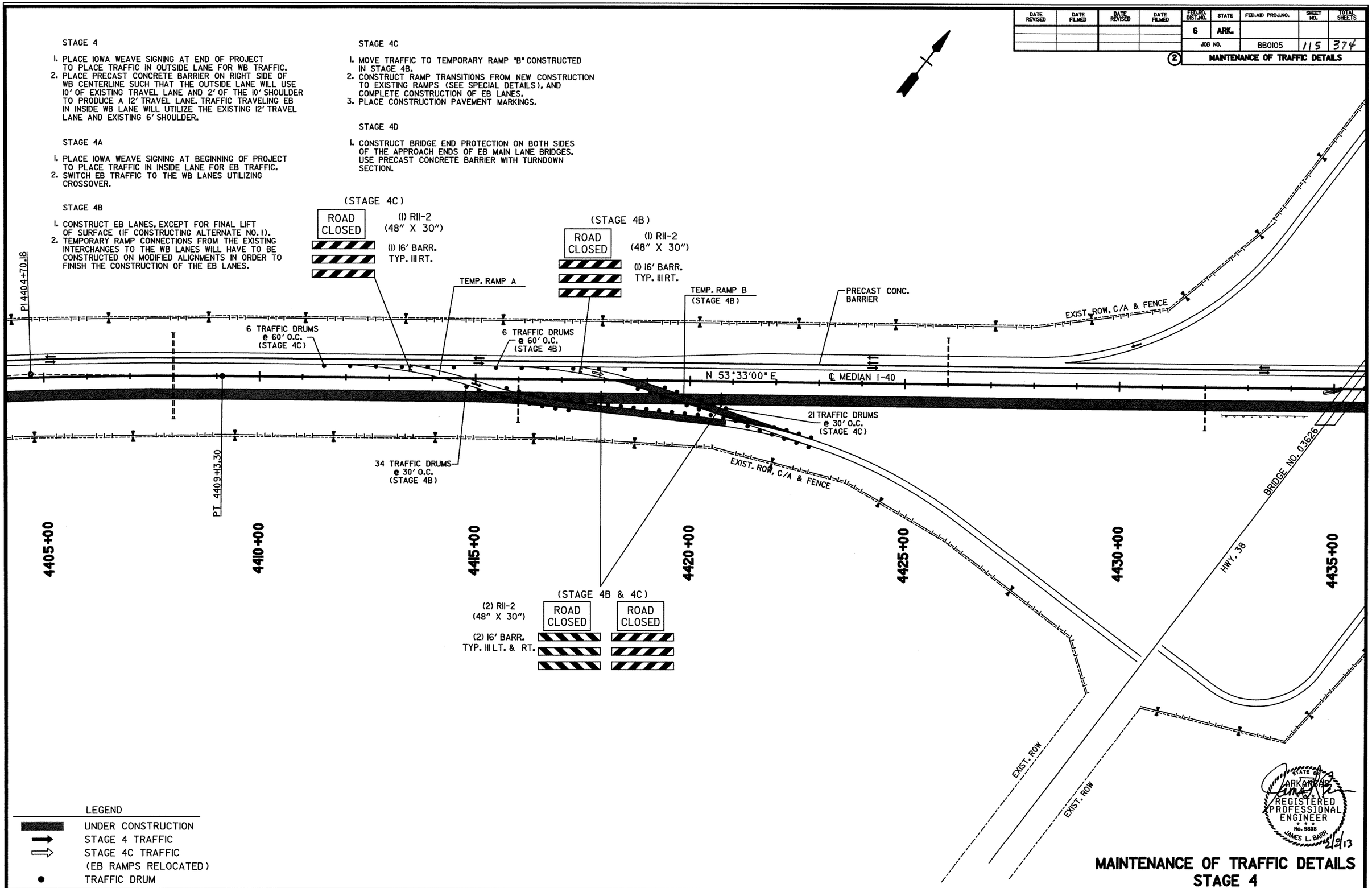
1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.



STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 4

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	116	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

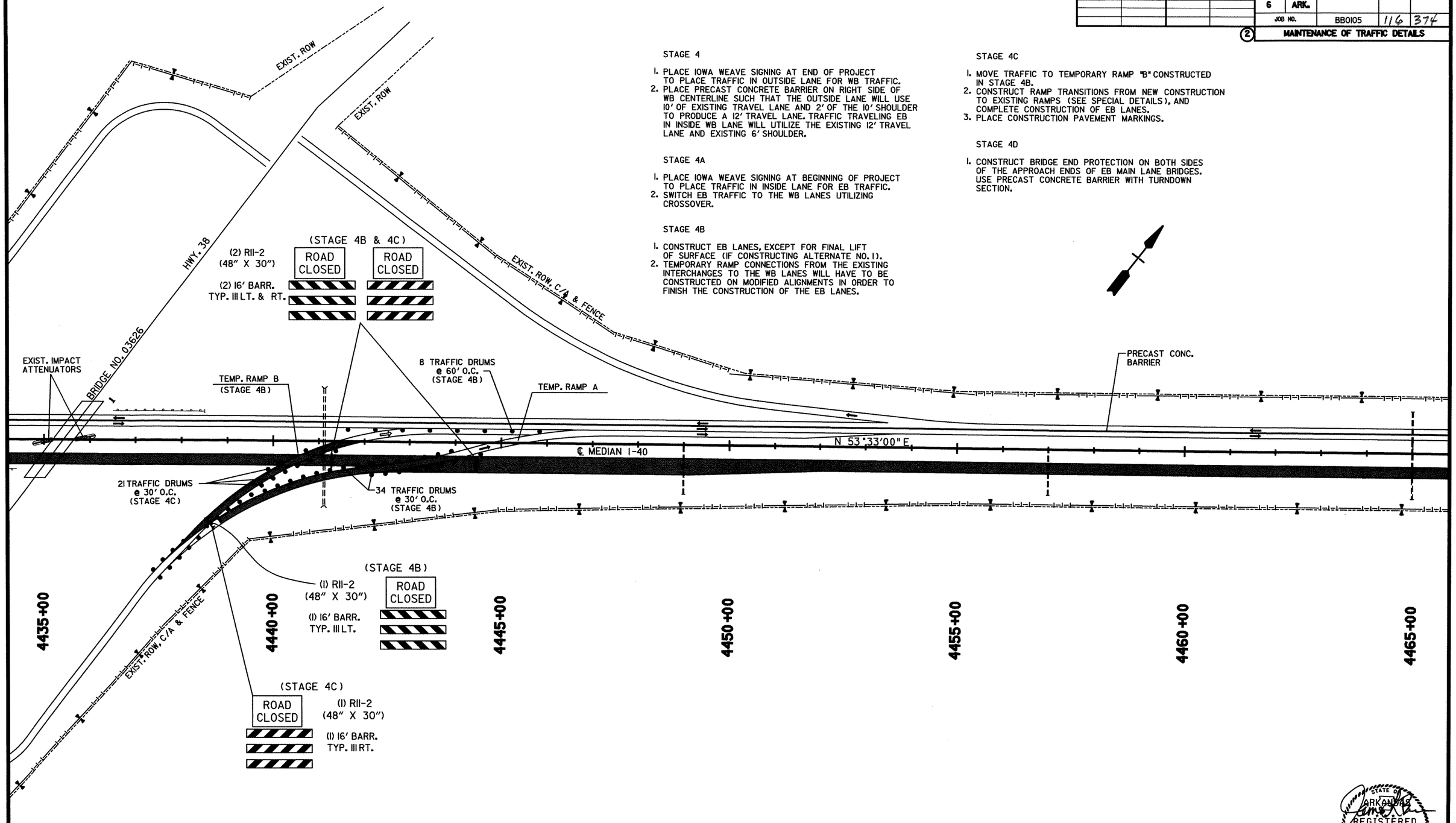
1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.



LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 4

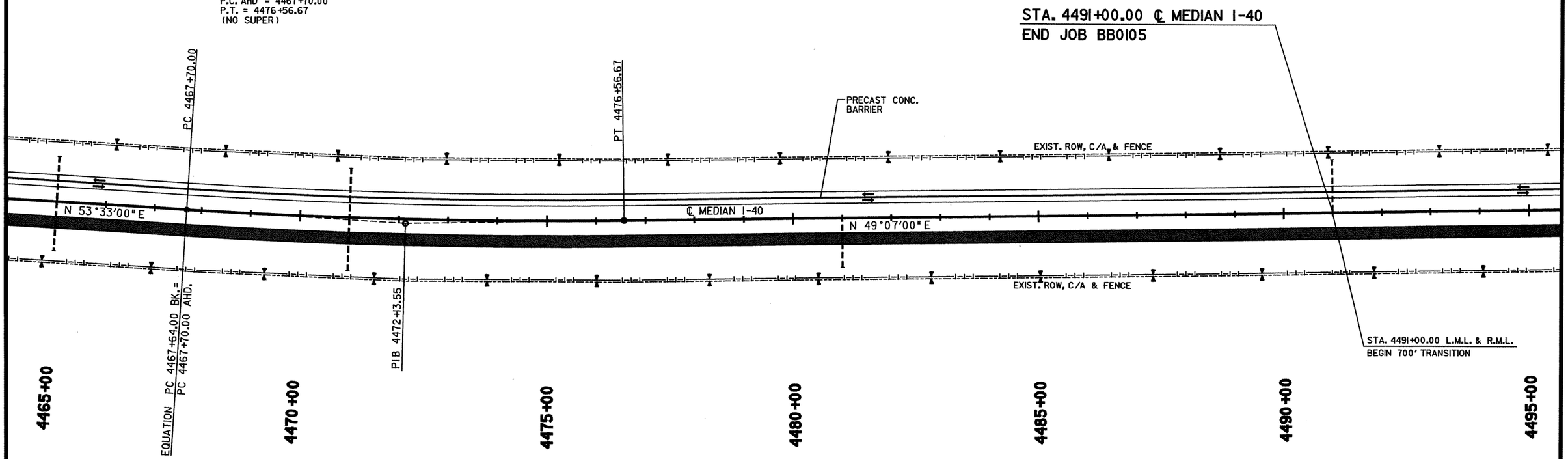
bb0105.MOT Stage 4.dgn 2/8/2013 10:11:32 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	117	374

(2) MAINTENANCE OF TRAFFIC DETAILS

℄ MEDIAN I-40
P.I. = 4472+13.55
N = 12737121.7149
E = 2334940.0361
DELTA = 4°26' RT
DOC = 0°30'
T = 443.55'
L = 886.67'
P.C. BK = 4467+64.00
P.C. AHD = 4467+70.00
P.T. = 4476+56.67
(NO SUPER)



STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

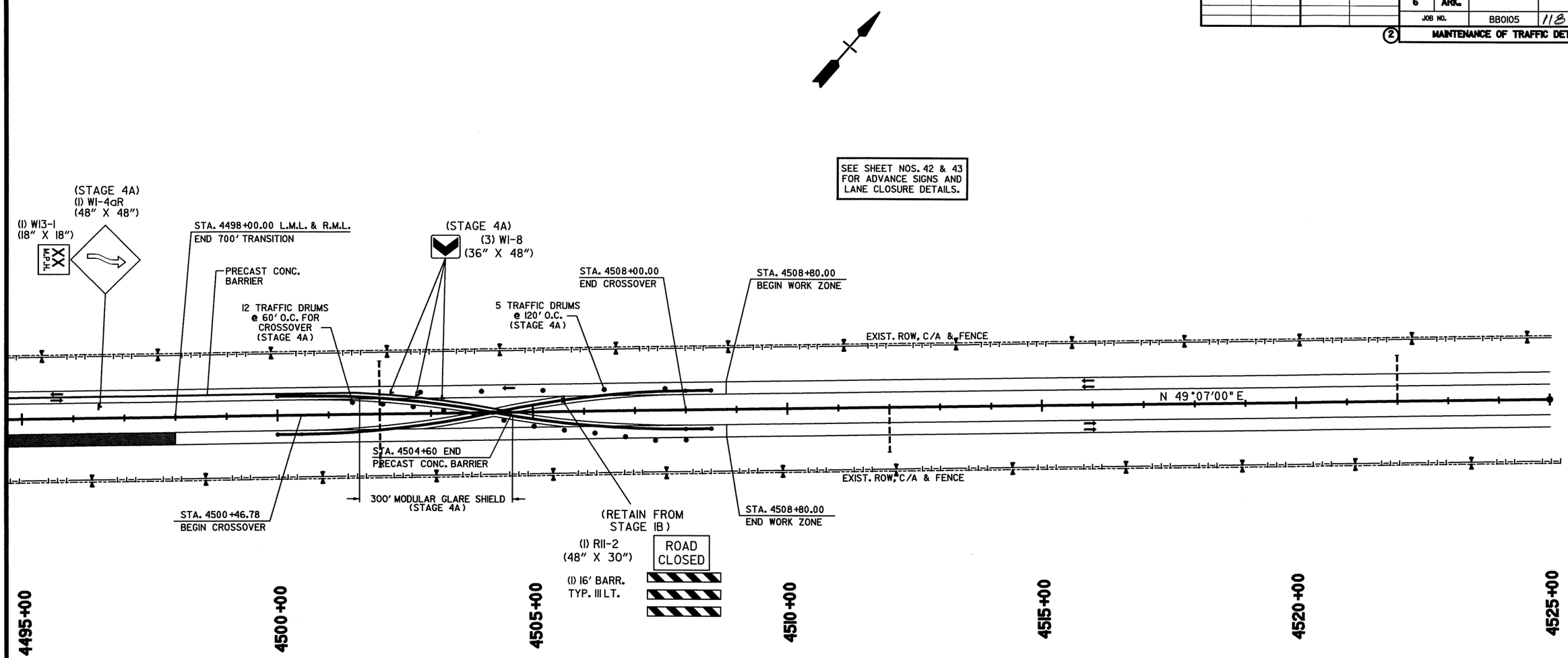
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:32 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	118	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 4

1. PLACE IOWA WEAVE SIGNING AT END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANE FOR WB TRAFFIC.
2. PLACE PRECAST CONCRETE BARRIER ON RIGHT SIDE OF WB CENTERLINE SUCH THAT THE OUTSIDE LANE WILL USE 10' OF EXISTING TRAVEL LANE AND 2' OF THE 10' SHOULDER TO PRODUCE A 12' TRAVEL LANE. TRAFFIC TRAVELING EB IN INSIDE WB LANE WILL UTILIZE THE EXISTING 12' TRAVEL LANE AND EXISTING 6' SHOULDER.

STAGE 4A

1. PLACE IOWA WEAVE SIGNING AT BEGINNING OF PROJECT TO PLACE TRAFFIC IN INSIDE LANE FOR EB TRAFFIC.
2. SWITCH EB TRAFFIC TO THE WB LANES UTILIZING CROSSOVER.

STAGE 4B

1. CONSTRUCT EB LANES, EXCEPT FOR FINAL LIFT OF SURFACE (IF CONSTRUCTING ALTERNATE NO. 1).
2. TEMPORARY RAMP CONNECTIONS FROM THE EXISTING INTERCHANGES TO THE WB LANES WILL HAVE TO BE CONSTRUCTED ON MODIFIED ALIGNMENTS IN ORDER TO FINISH THE CONSTRUCTION OF THE EB LANES.

STAGE 4C

1. MOVE TRAFFIC TO TEMPORARY RAMP "B" CONSTRUCTED IN STAGE 4B.
2. CONSTRUCT RAMP TRANSITIONS FROM NEW CONSTRUCTION TO EXISTING RAMPS (SEE SPECIAL DETAILS), AND COMPLETE CONSTRUCTION OF EB LANES.
3. PLACE CONSTRUCTION PAVEMENT MARKINGS.

STAGE 4D

1. CONSTRUCT BRIDGE END PROTECTION ON BOTH SIDES OF THE APPROACH ENDS OF EB MAIN LANE BRIDGES. USE PRECAST CONCRETE BARRIER WITH TURNDOWN SECTION.

LEGEND

- UNDER CONSTRUCTION
- STAGE 4 TRAFFIC
- STAGE 4C TRAFFIC (EB RAMPS RELOCATED)
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGE 4

bb0105.MOT Stage 4.dgn 2/8/2013 10:11:32 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	119	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

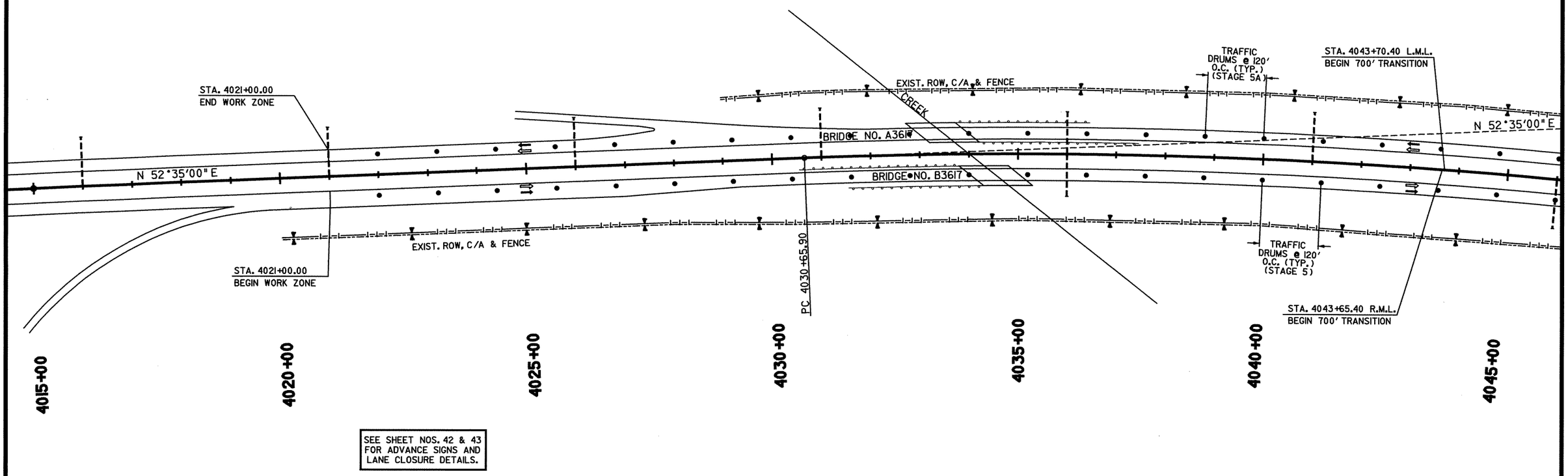
1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.

EXISTING BRIDGE ENDS

BRIDGE A3617 STA. 4032+97.06 - STA. 4033+97.06
BRIDGE B3617 STA. 4034+04.94 - STA. 4035+04.94
RETAIN EXISTING GUARDRAIL



SEE SHEET NOS. 42 & 43 FOR ADVANCE SIGNS AND LANE CLOSURE DETAILS.

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:33 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	120	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

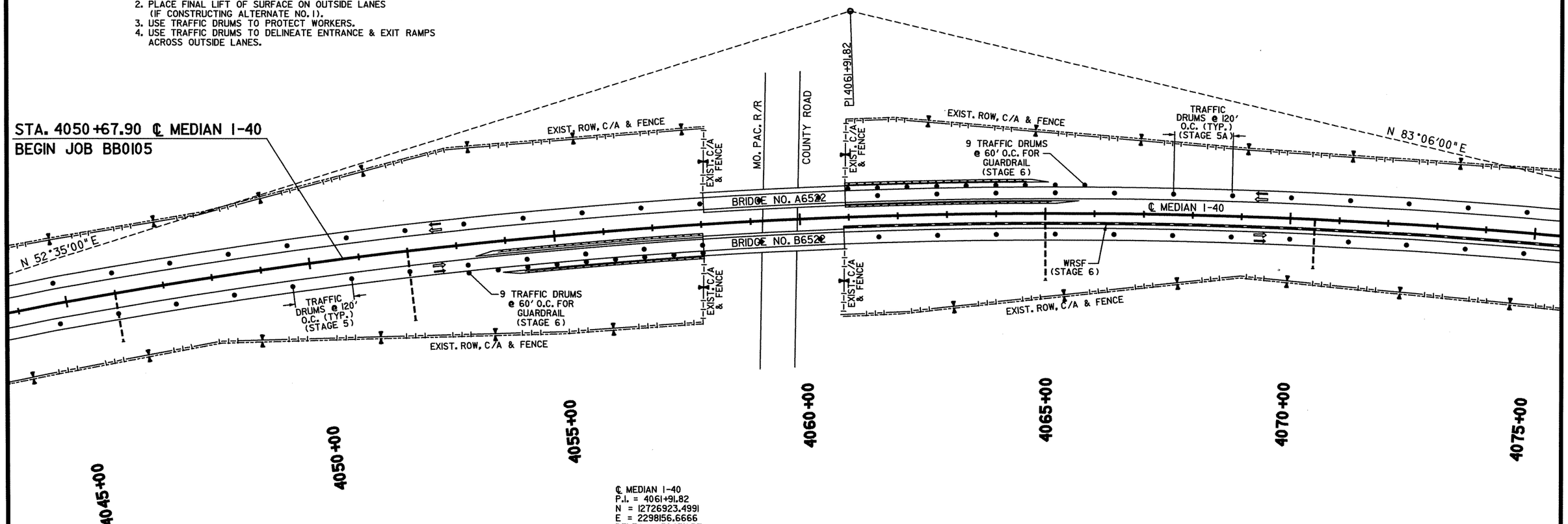
1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.

EXISTING BRIDGE ENDS

BRIDGE A6522 STA. 4058+06.90 - STA. 4060+94.13
BRIDGE B6522 STA. 4058+01.90 - STA. 4060+89.13



℄ MEDIAN I-40
P.I. = 4061+91.82
N = 12726923.4991
E = 2298156.6666
DELTA = 30°31' RT
DOC = 0°30'
T = 3125.92'
L = 6103.33'
P.C. = 4030+65.90
P.T. = 4091+69.23
(NO SUPER)

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:33 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	121	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

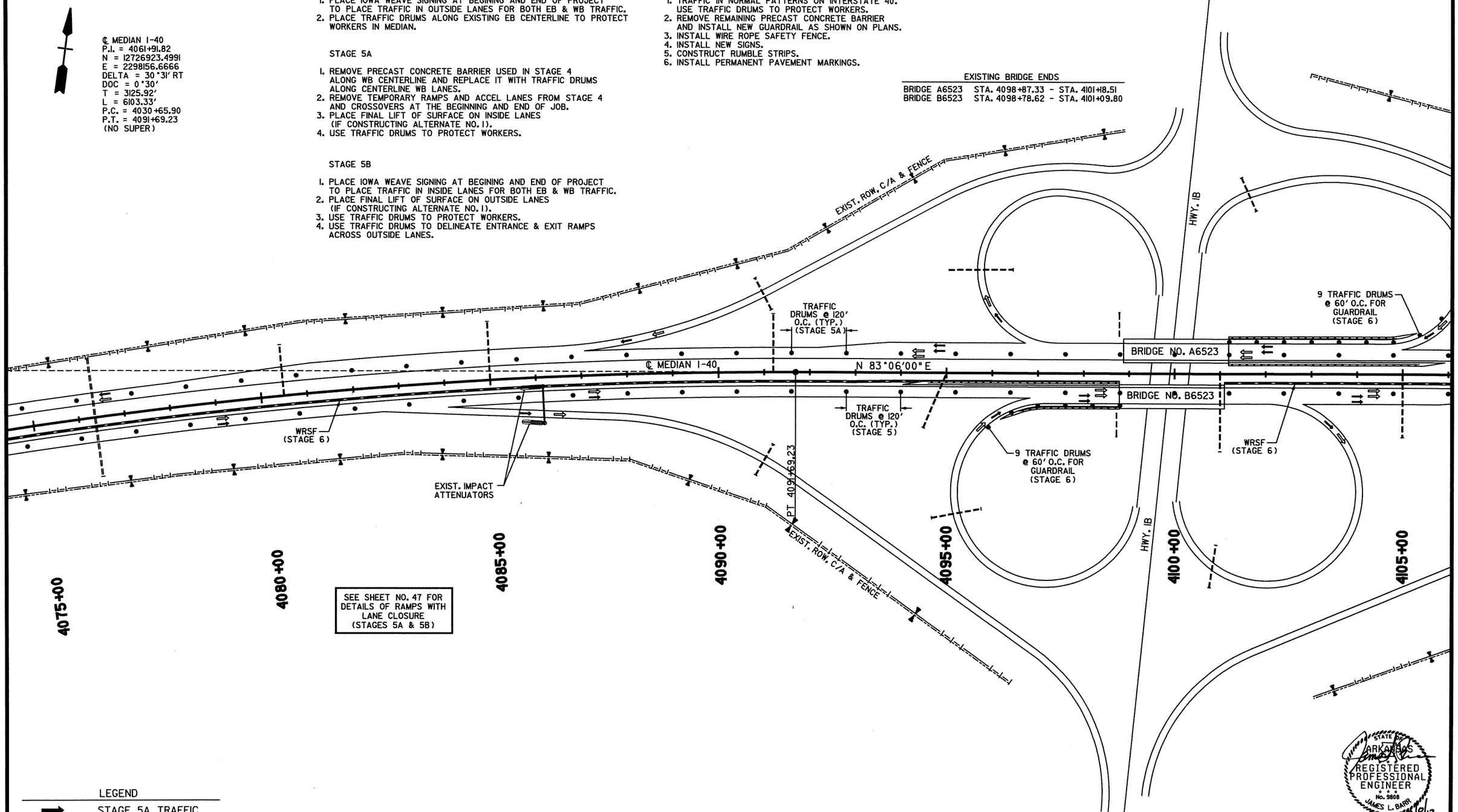
1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.

EXISTING BRIDGE ENDS

BRIDGE A6523 STA. 4098+87.33 - STA. 4101+18.51
BRIDGE B6523 STA. 4098+78.62 - STA. 4101+09.80



STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:34 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	122	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

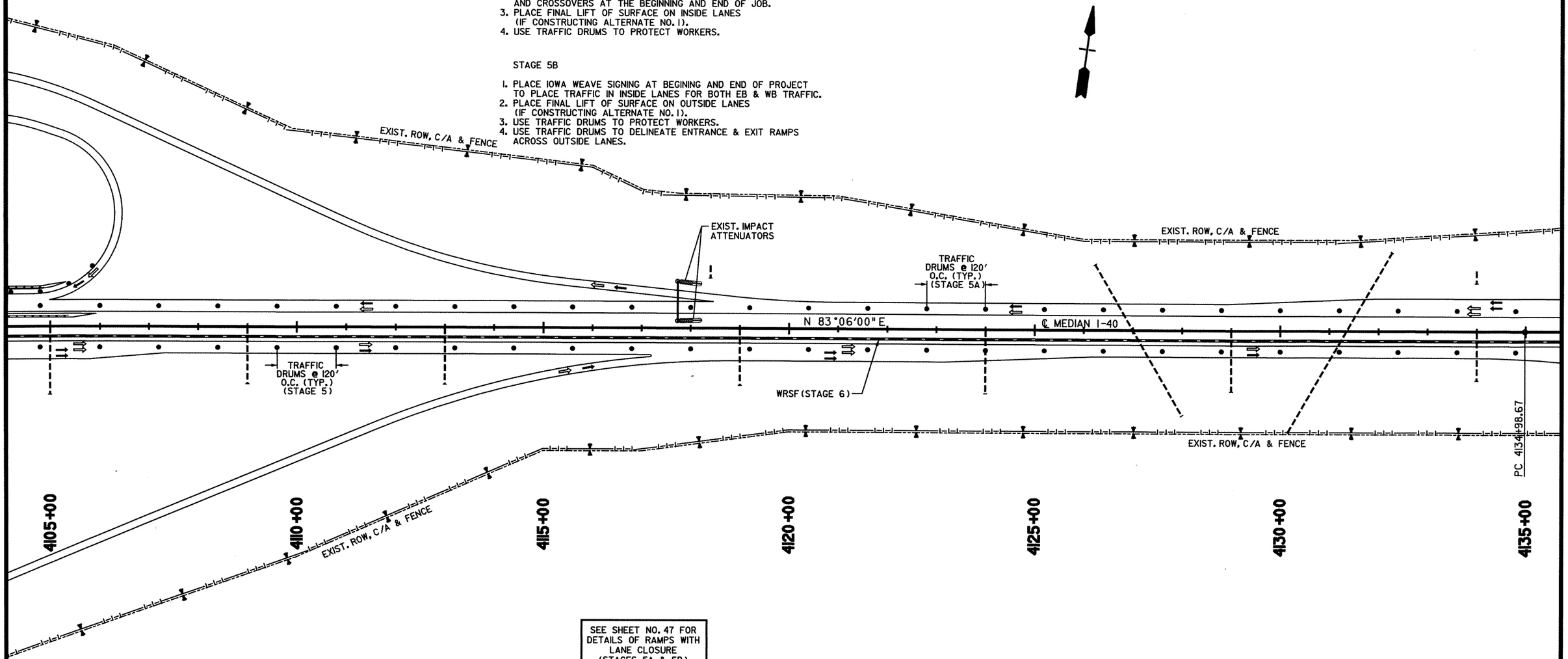
1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.



SEE SHEET NO. 47 FOR DETAILS OF RAMPS WITH LANE CLOSURE (STAGES 5A & 5B)

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:34 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	123	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

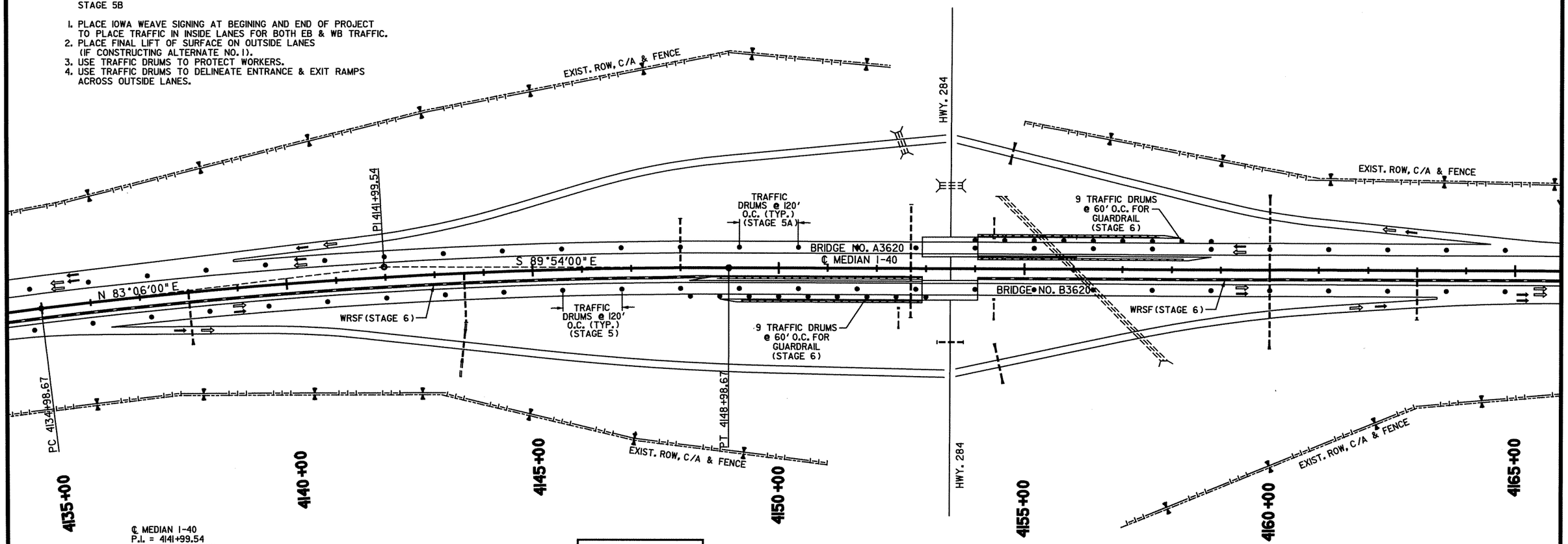
1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.

EXISTING BRIDGE ENDS

BRIDGE A3620 STA. 4152+92.60 - STA. 4154+05.68
BRIDGE B3620 STA. 4152+92.60 - STA. 4154+05.68



℄ MEDIAN I-40
P.I. = 4141+99.54
N = 12727903.3616
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DELTA = 7°00' RT
DOC = 0°30'
T = 700.87'
L = 1400.00'
P.C. = 4134+98.67
P.T. = 4148+98.67
(NO SUPER)

SEE SHEET NO. 47 FOR DETAILS OF RAMPS WITH LANE CLOSURE (STAGES 5A & 5B)

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:34 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	124	374

2 MAINTENANCE OF TRAFFIC DETAILS

STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

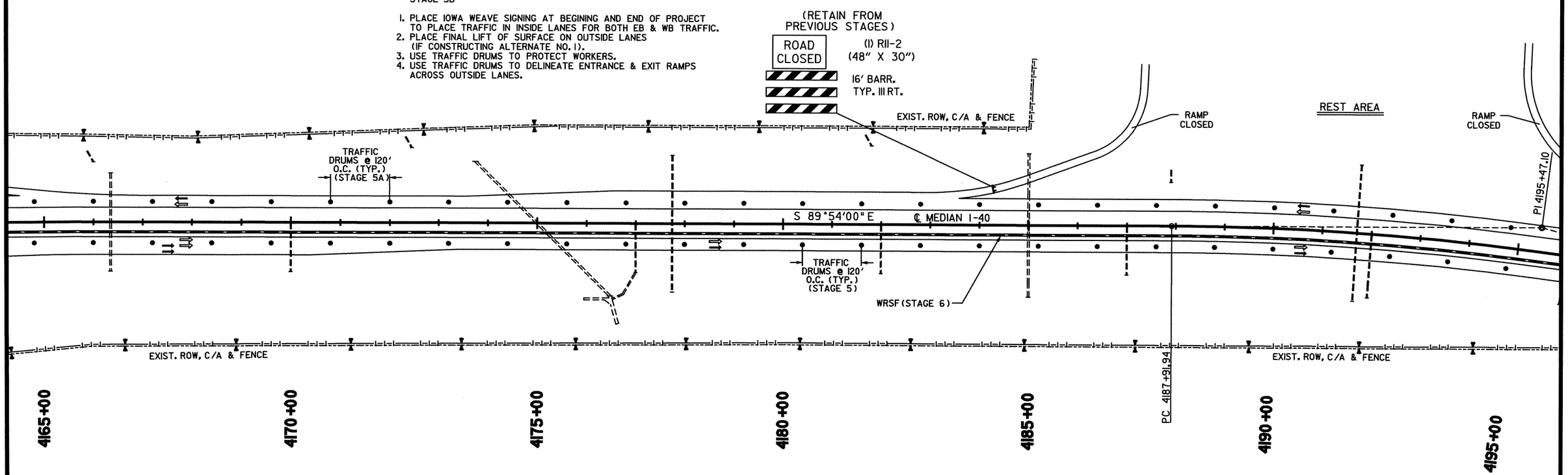
1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.



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T = 755.16'
L = 1501.67'
P.C. = 4187+91.94
P.T. = 4202+93.61
e = 0.037'/'
Ls = 350'

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:35 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	125	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

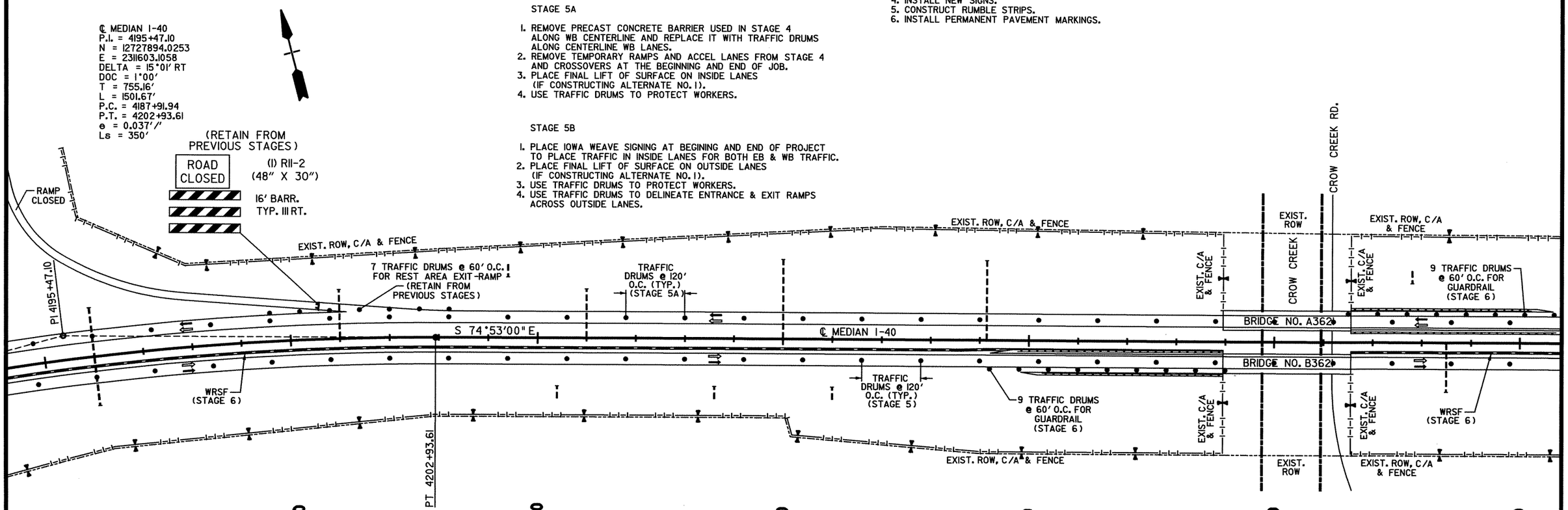
1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.



EXISTING BRIDGE ENDS

BRIDGE A3621	STA. 4218+98.50	- STA. 4221+55.67
BRIDGE B3621	STA. 4218+98.50	- STA. 4221+55.67

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

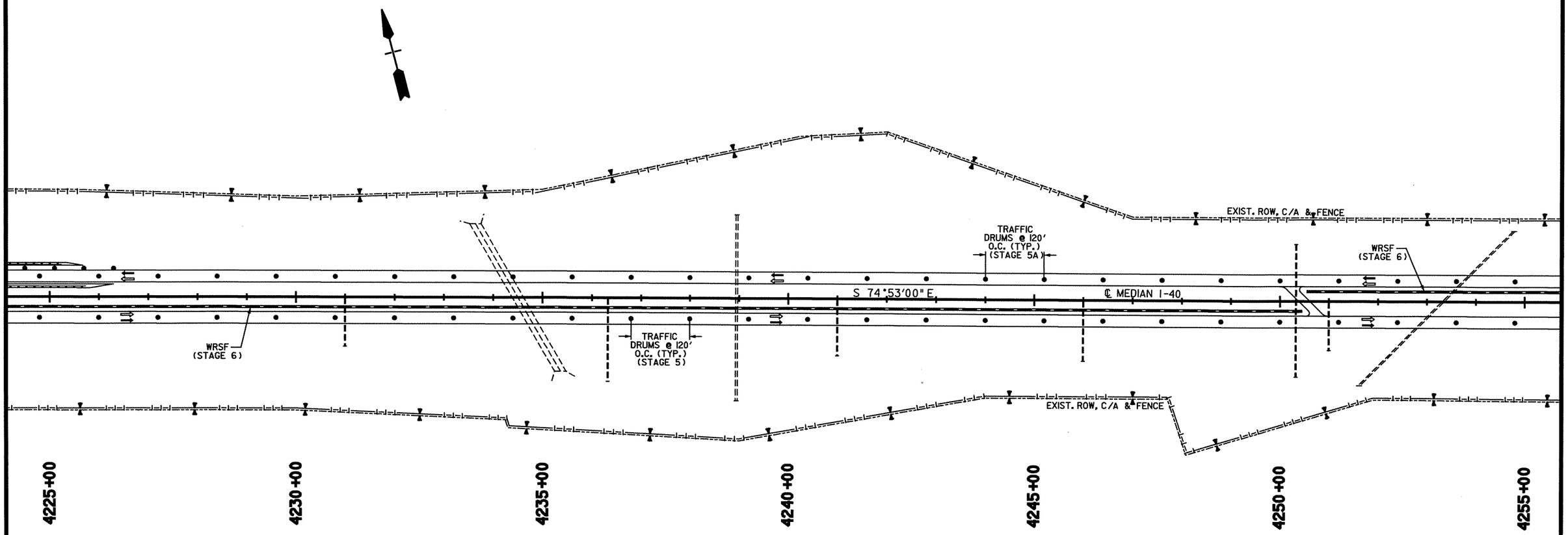
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:35 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	126	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:35 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	127	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

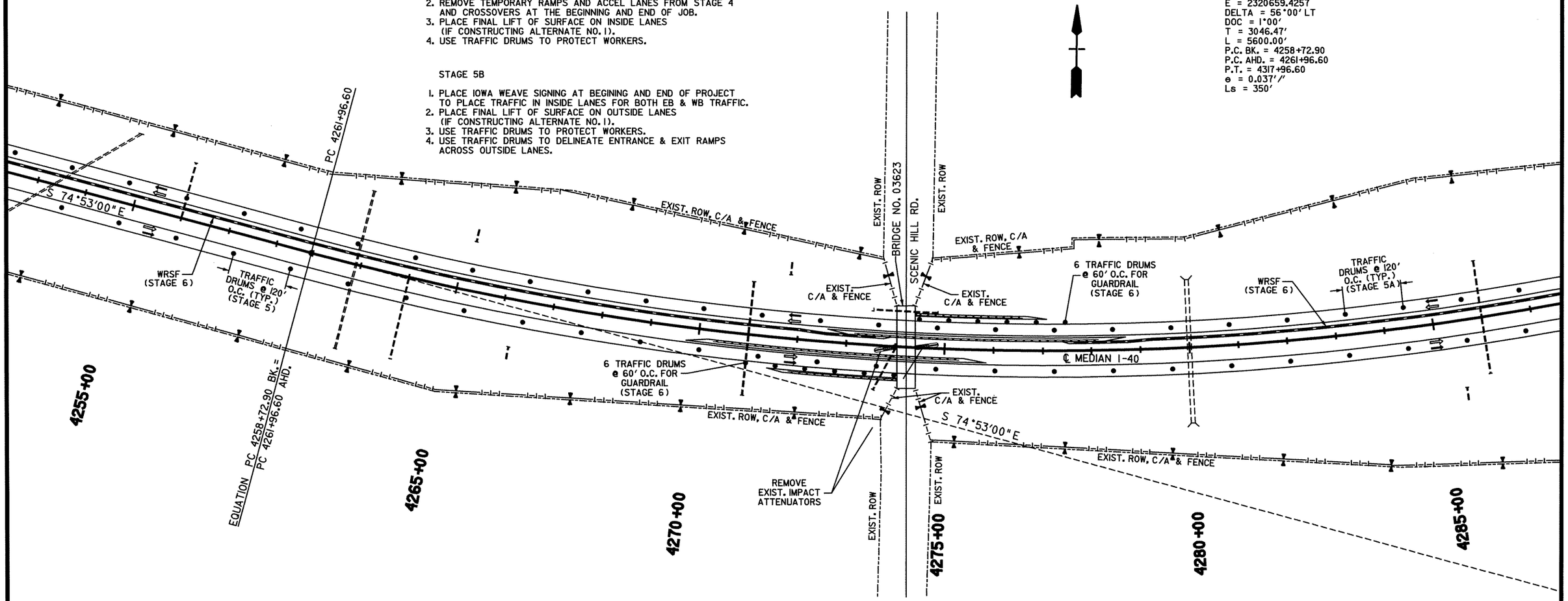
STAGE 5B

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.

℄ MEDIAN I-40
P.I. = 4292+43.07
N = 12725447.6163
E = 2320659.4257
DELTA = 56°00' LT
DOC = 1°00'
T = 3046.47'
L = 5600.00'
P.C. BK. = 4258+72.90
P.C. AHD. = 4261+96.60
P.T. = 4317+96.60
e = 0.037'/'
Ls = 350'



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

MAINTENANCE OF TRAFFIC DETAILS
STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:36 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	128	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

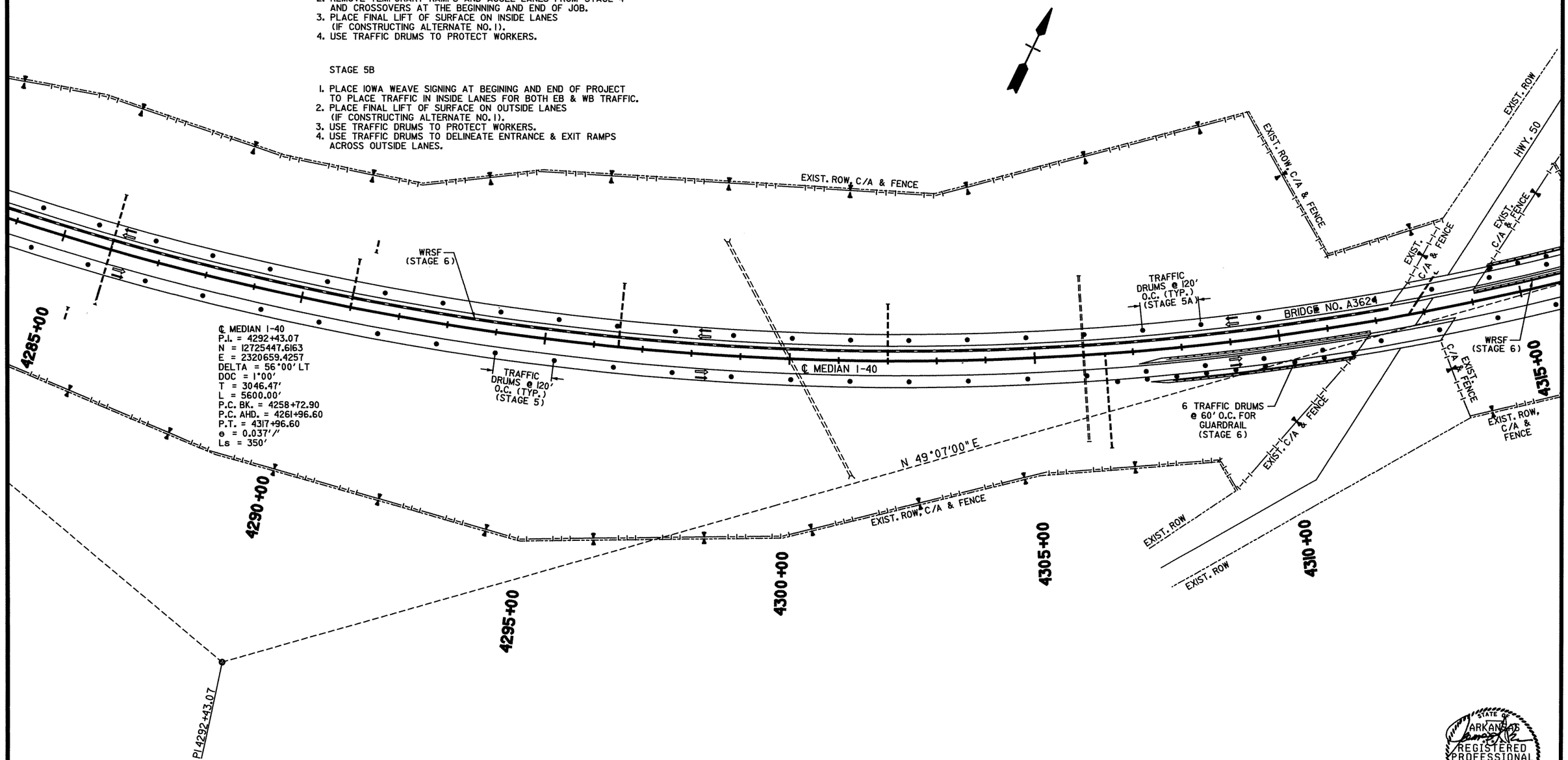
1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.



LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/6/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

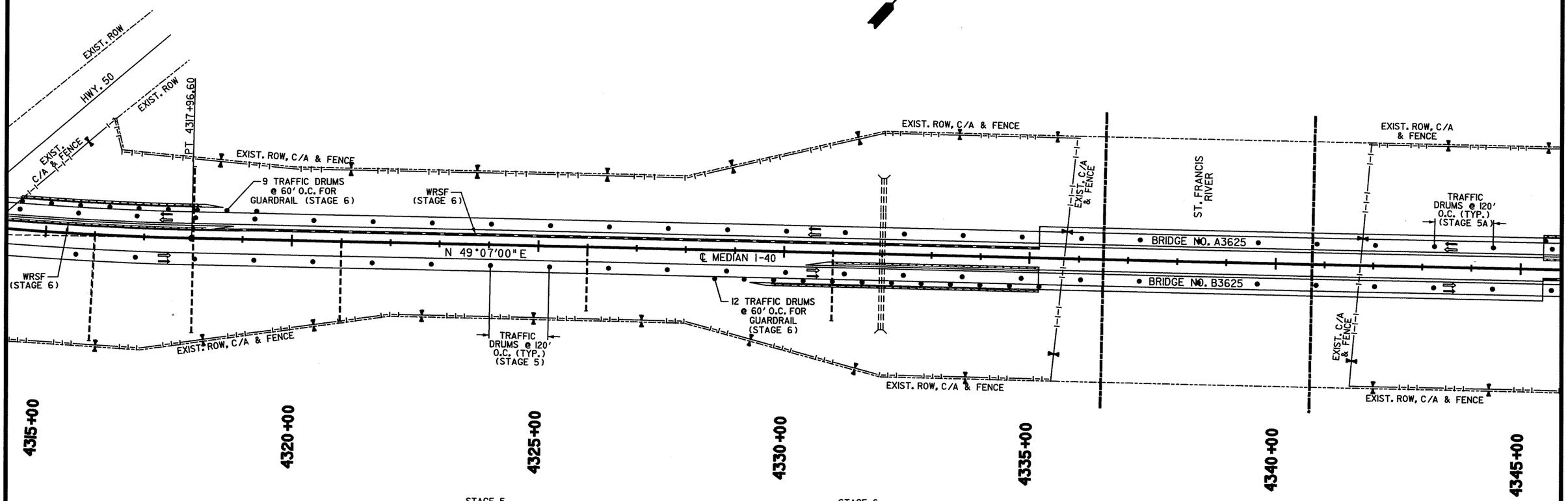
bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:36 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	129	374

(2) MAINTENANCE OF TRAFFIC DETAILS

EXISTING BRIDGE ENDS

BRIDGE A3625 STA. 4335+18.91 - STA. 4345+46.09
BRIDGE B3625 STA. 4335+18.91 - STA. 4345+46.09



STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

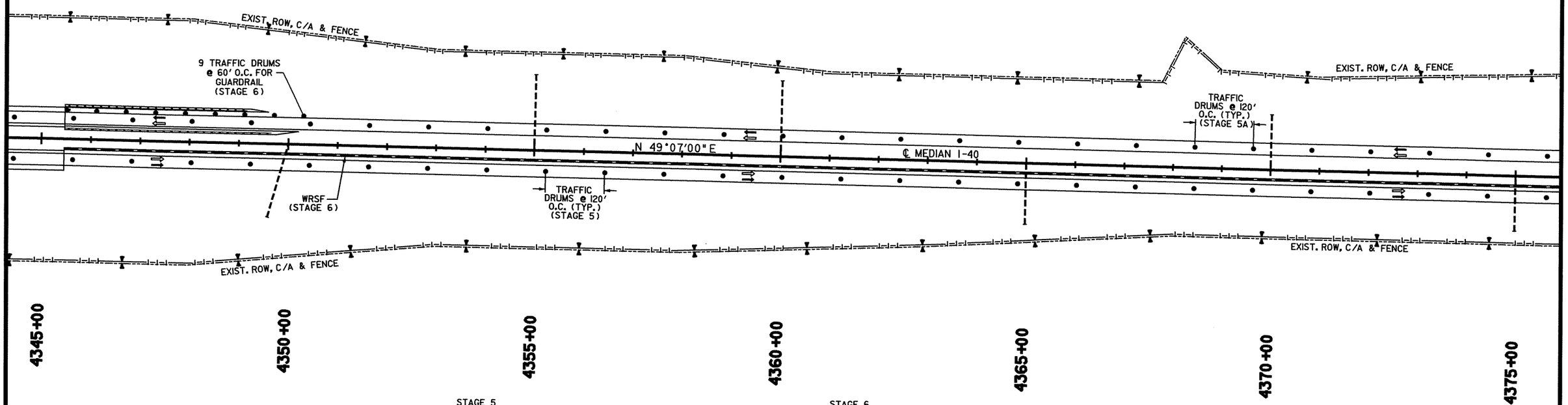
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:36 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	130	374

(2) MAINTENANCE OF TRAFFIC DETAILS



STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
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STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 5808 JAMES L. BARR 2/8/13

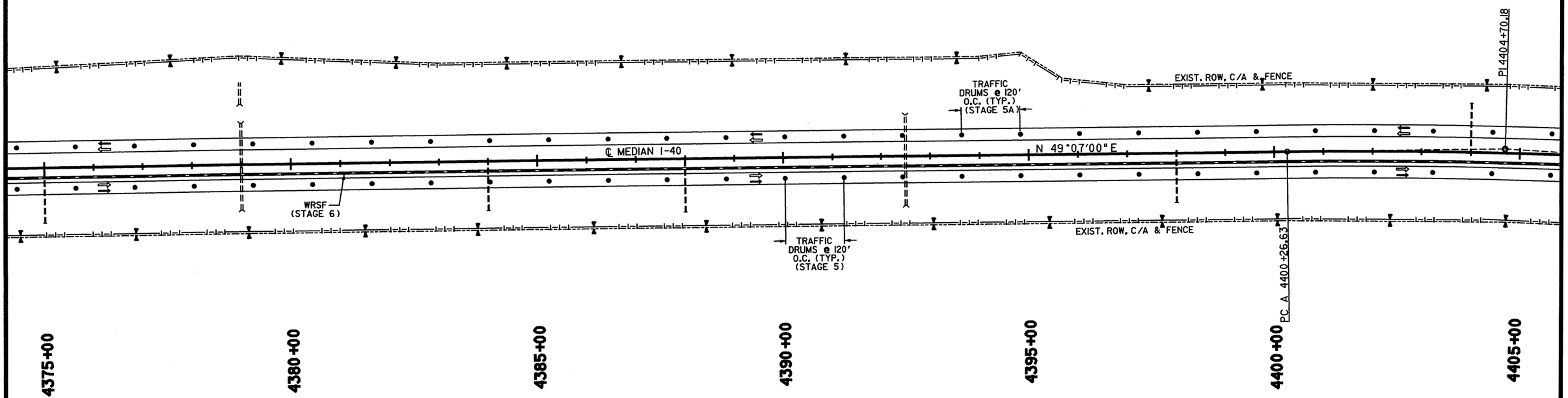
MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:36 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	131	374

(2) MAINTENANCE OF TRAFFIC DETAILS

℄ MEDIAN I-40
P.I. = 4404+70.18
N = 12733118.6341
E = 2329520.2979
DELTA = 4°26' RT
DOC = 0°30'
T = 443.55'
L = 886.67'
P.C. = 4400+26.63
P.T. = 4409+13.30
(NO SUPER)



STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE FINAL LIFT OF SURFACE ON OUTSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
3. USE TRAFFIC DRUMS TO PROTECT WORKERS.
4. USE TRAFFIC DRUMS TO DELINEATE ENTRANCE & EXIT RAMPS ACROSS OUTSIDE LANES.

STAGE 6

1. TRAFFIC IN NORMAL PATTERNS ON INTERSTATE 40. USE TRAFFIC DRUMS TO PROTECT WORKERS.
2. REMOVE REMAINING PRECAST CONCRETE BARRIER AND INSTALL NEW GUARDRAIL AS SHOWN ON PLANS.
3. INSTALL WIRE ROPE SAFETY FENCE.
4. INSTALL NEW SIGNS.
5. CONSTRUCT RUMBLE STRIPS.
6. INSTALL PERMANENT PAVEMENT MARKINGS.

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

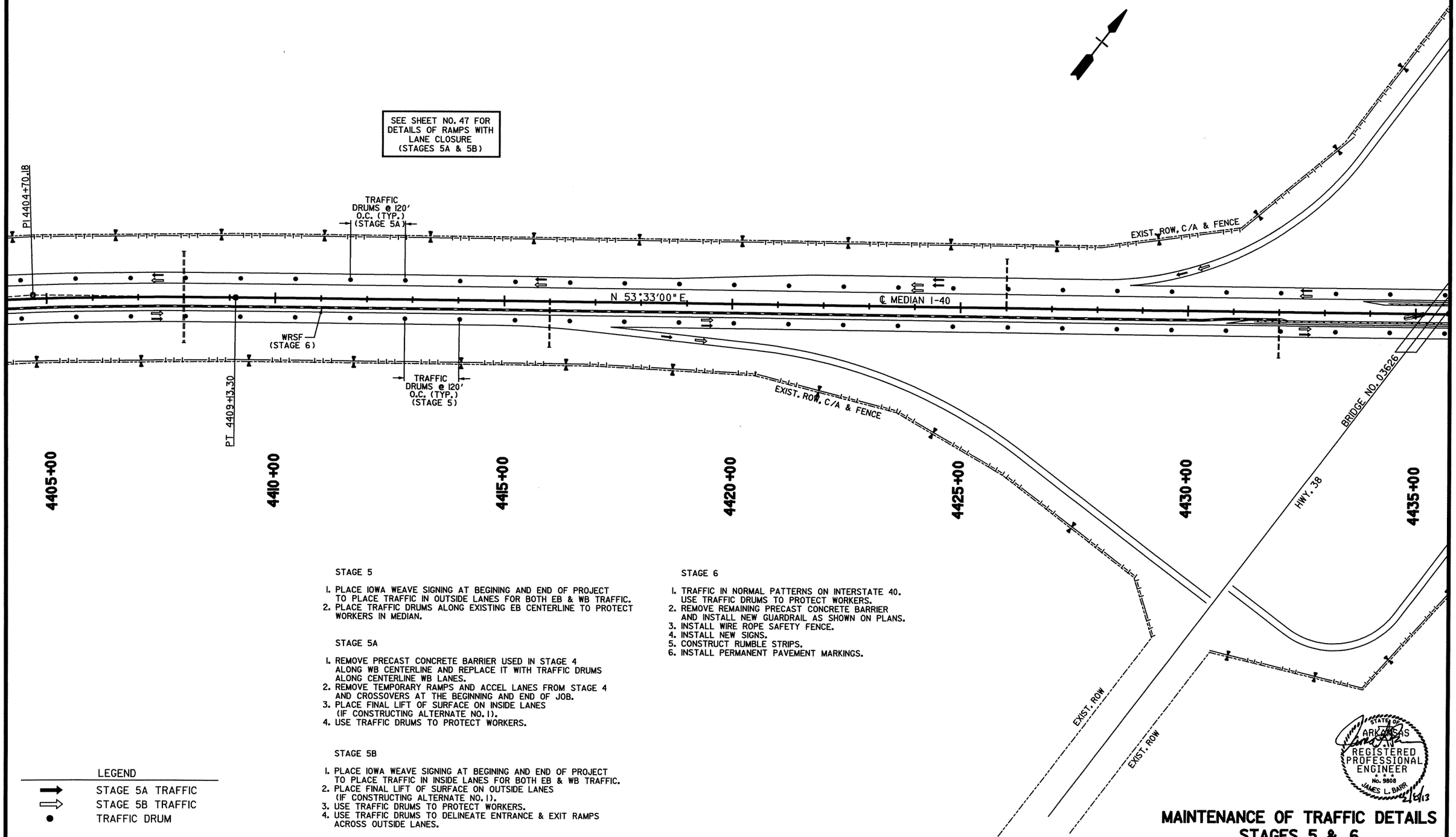
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS
STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:37 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	132	374

2 MAINTENANCE OF TRAFFIC DETAILS



STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

1. REMOVE PRECAST CONCRETE BARRIER USED IN STAGE 4 ALONG WB CENTERLINE AND REPLACE IT WITH TRAFFIC DRUMS ALONG CENTERLINE WB LANES.
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STAGE 5B

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6. INSTALL PERMANENT PAVEMENT MARKINGS.

LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

bb0105.MOT Stage 5 & 6.dgn 2/8/2013 10:11:37 AM

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				6	ARK.			
				JOB NO.		BB0105	133	374

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 5

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN OUTSIDE LANES FOR BOTH EB & WB TRAFFIC.
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STAGE 5A

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2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
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STAGE 5B

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STAGE 6

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4. INSTALL NEW SIGNS.
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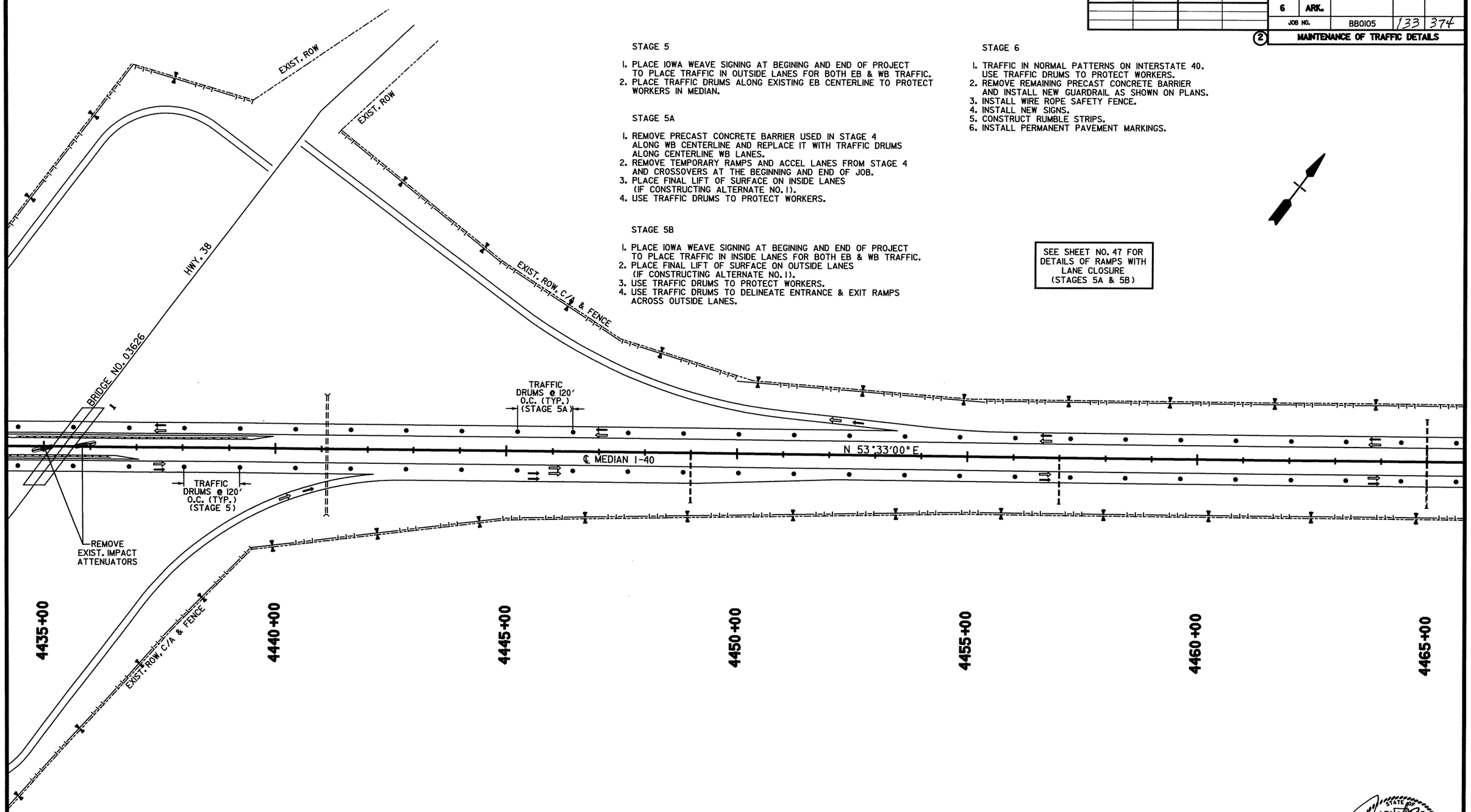
6. INSTALL PERMANENT PAVEMENT MARKINGS.

SEE SHEET NO. 47 FOR DETAILS OF RAMPS WITH LANE CLOSURE (STAGES 5A & 5B)



LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

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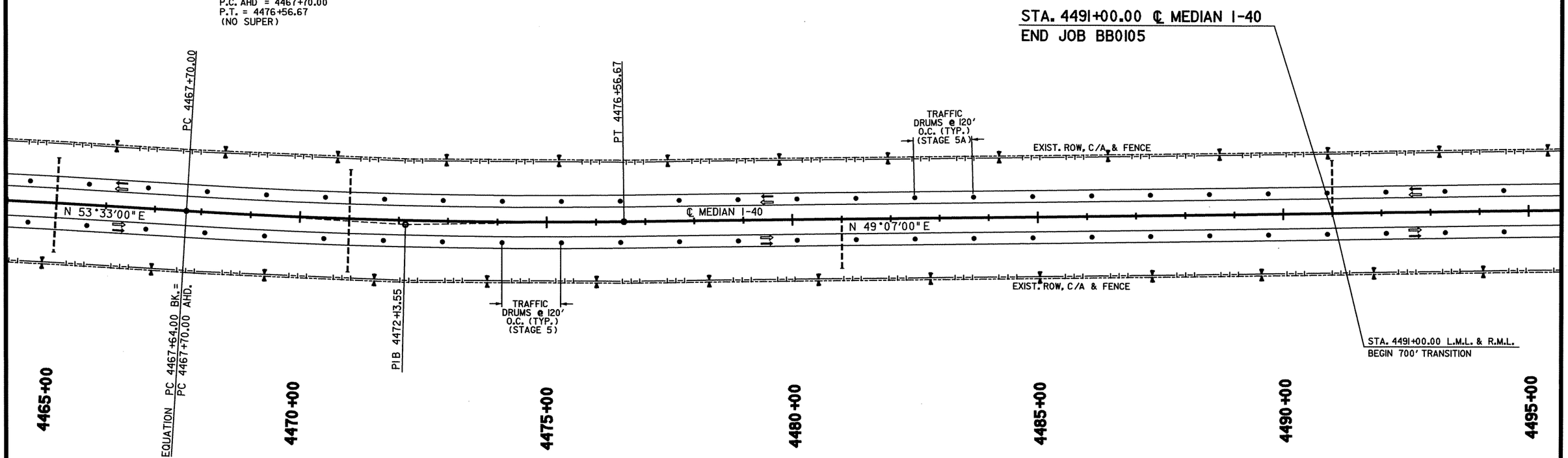
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	134	374

(2) MAINTENANCE OF TRAFFIC DETAILS

℄ MEDIAN I-40
P.I. = 4472+13.55
N = 12737121.7149
E = 2334940.0361
DELTA = 4°26' RT
DOC = 0°30'
T = 443.55'
L = 886.67'
P.C. BK = 4467+64.00
P.C. AHD = 4467+70.00
P.T. = 4476+56.67
(NO SUPER)



STAGE 5

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2. PLACE TRAFFIC DRUMS ALONG EXISTING EB CENTERLINE TO PROTECT WORKERS IN MEDIAN.

STAGE 5A

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2. REMOVE TEMPORARY RAMPS AND ACCEL LANES FROM STAGE 4 AND CROSSOVERS AT THE BEGINNING AND END OF JOB.
3. PLACE FINAL LIFT OF SURFACE ON INSIDE LANES (IF CONSTRUCTING ALTERNATE NO. 1).
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STAGE 5B

1. PLACE IOWA WEAVE SIGNING AT BEGINING AND END OF PROJECT TO PLACE TRAFFIC IN INSIDE LANES FOR BOTH EB & WB TRAFFIC.
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LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

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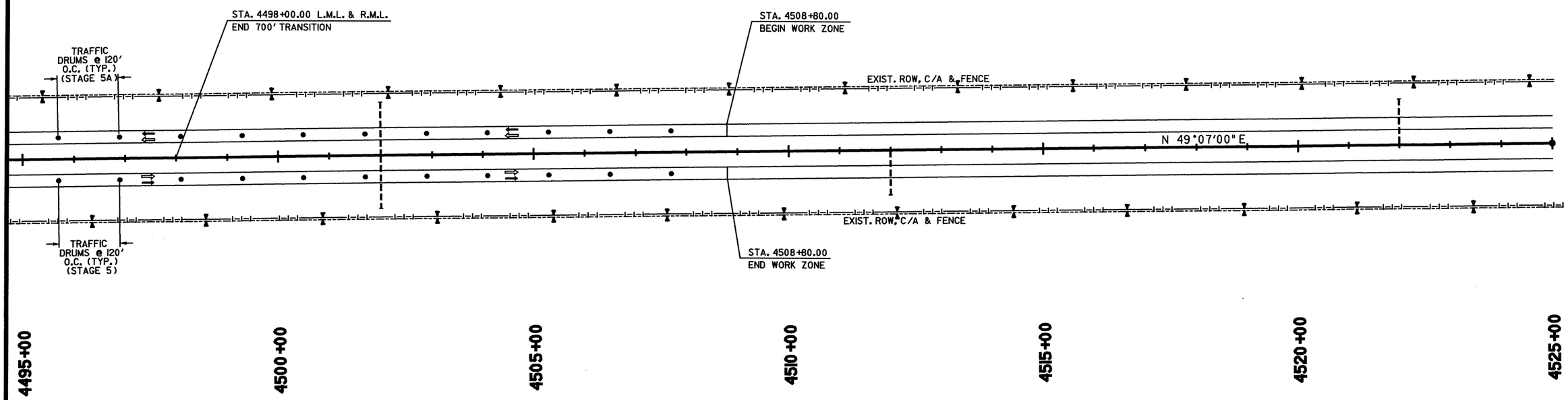
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	135	374

(2) MAINTENANCE OF TRAFFIC DETAILS

SEE SHEET NOS. 42 & 43 FOR ADVANCE SIGNS AND LANE CLOSURE DETAILS.



STAGE 5

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STAGE 5A

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4. USE TRAFFIC DRUMS TO PROTECT WORKERS.

STAGE 5B

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LEGEND

- STAGE 5A TRAFFIC
- STAGE 5B TRAFFIC
- TRAFFIC DRUM

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

MAINTENANCE OF TRAFFIC DETAILS STAGES 5 & 6

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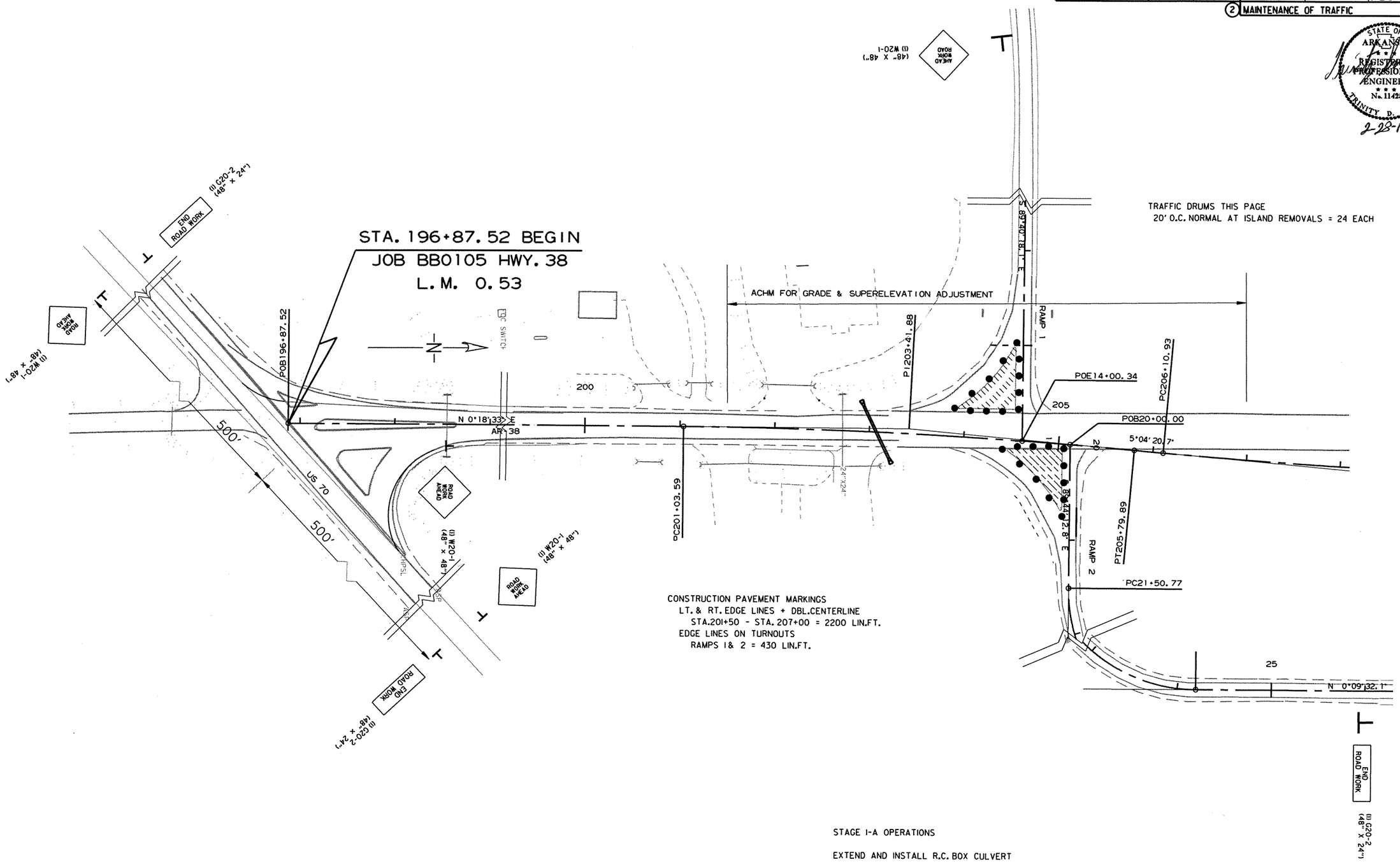
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	136	374

(2) MAINTENANCE OF TRAFFIC

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

2-28-13



STAGE 1-A OPERATIONS

EXTEND AND INSTALL R.C. BOX CULVERT
CROSS DRAINS WHERE SHOWN ON PLANS
REMOVE INTERSECTION ISLANDS;
FILL WITH PORTLAND CEMENT CONCRETE BASE
INSTALL ACHM FOR GRADE ADJUSTMENT ON HWY.38 & RAMPS

MAINTENANCE OF TRAFFIC
HWY. 38 STAGE 1-A

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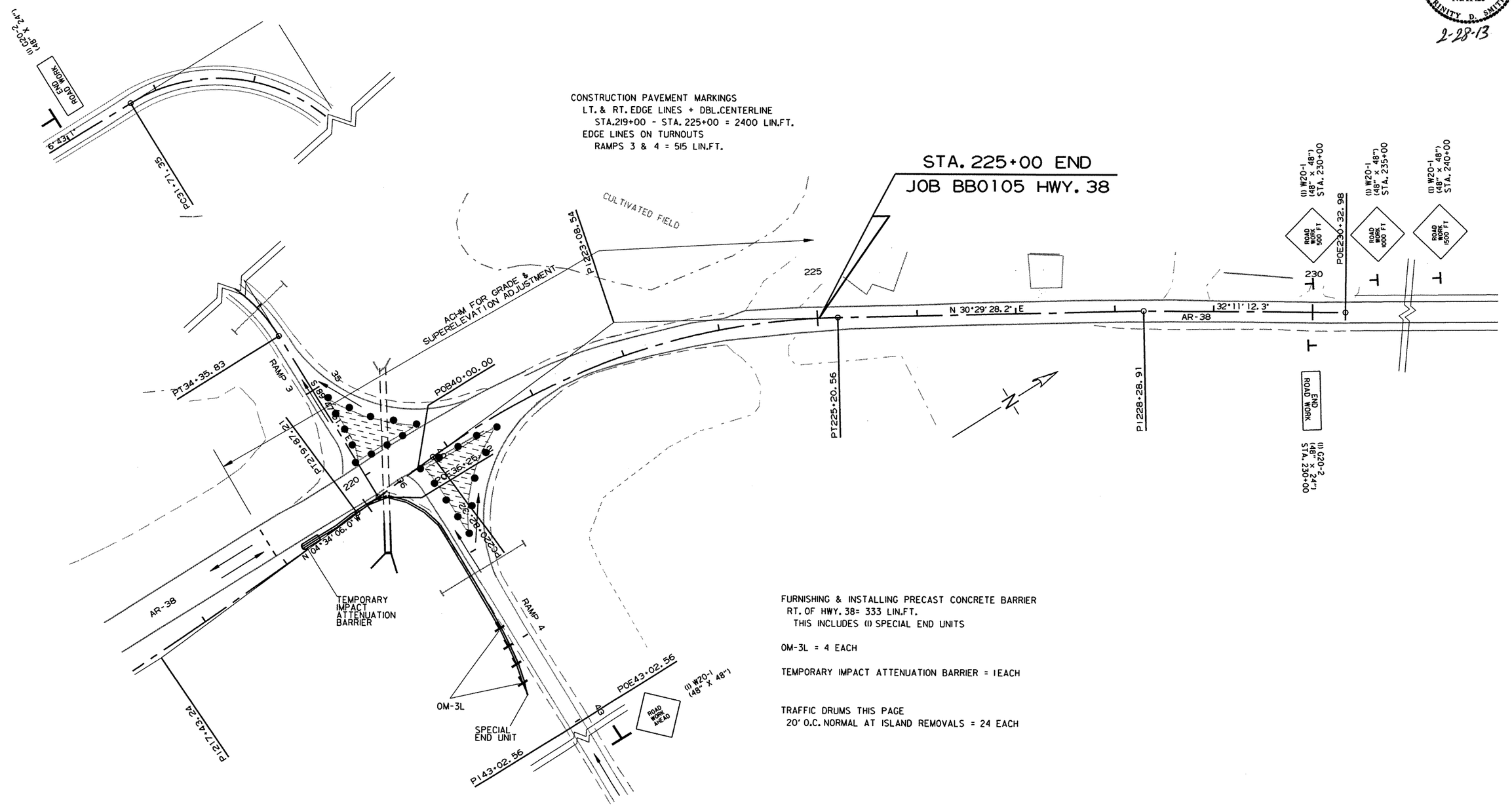
mot wla 1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	137	374

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-28-13



MAINTENANCE OF TRAFFIC
HWY. 38 STAGE 1-A

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mot wla 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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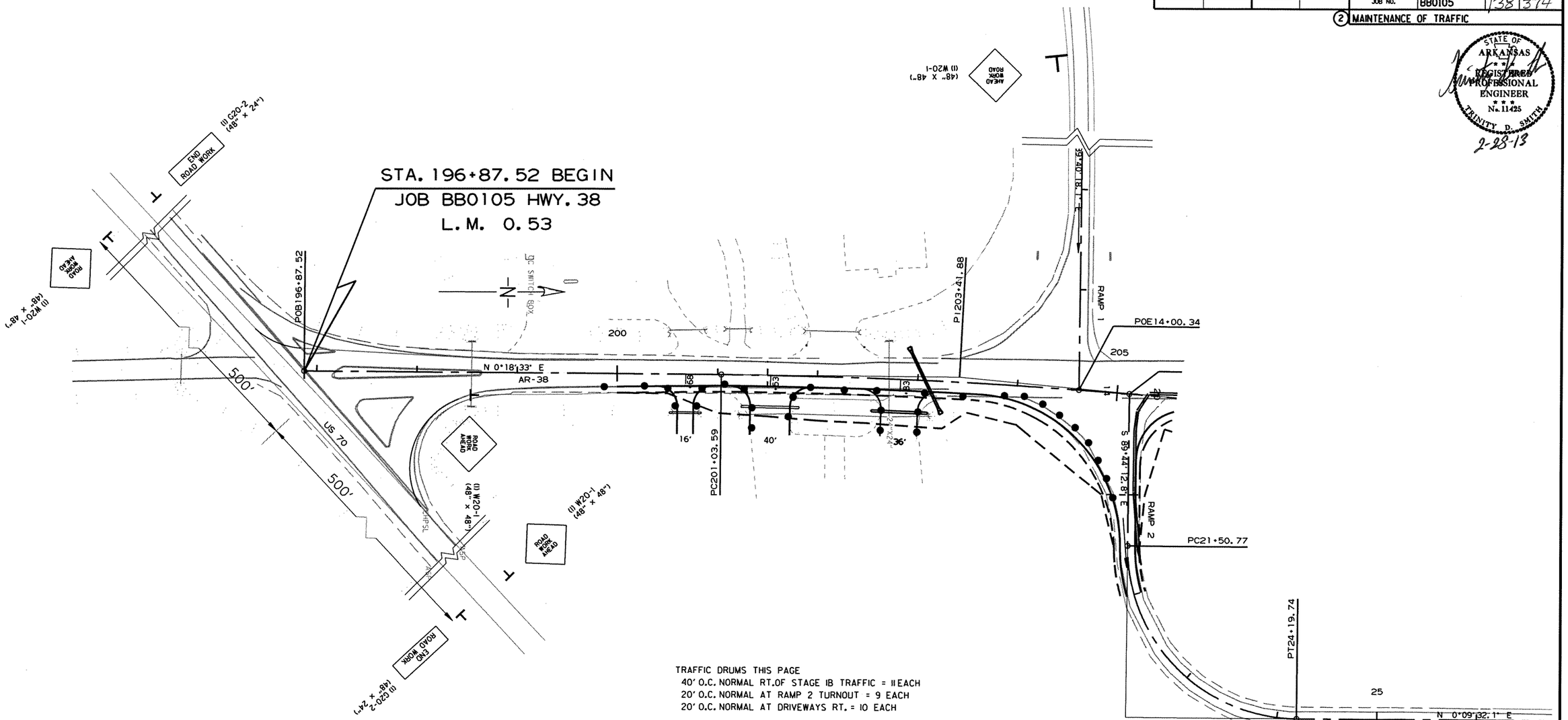
(2) MAINTENANCE OF TRAFFIC

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

2-28-13



TRAFFIC DRUMS THIS PAGE
40' O.C. NORMAL RT.OF STAGE IB TRAFFIC = 11 EACH
20' O.C. NORMAL AT RAMP 2 TURNOUT = 9 EACH
20' O.C. NORMAL AT DRIVEWAYS RT. = 10 EACH

STAGE I-B OPERATIONS

PLACE PRECAST CONCRETE BARRIER ON SHOULDERS OF I-40 BOTH DIRECTIONS
REMOVE EXISTING GUARDRAIL RT. OF EXISTING HWY; REPLACE WITH PRECAST CONC. BARRIER
INSTALL SHEET PILING & ADDITIONAL PCCB RT.OF EXISTING
CONSTRUCT NEW OVERPASS & APPROACHES RT. OF EXISTING HIGHWAY

DETOUR TRAFFIC ONTO EXIT AND ENTRANCE RAMPS DURING OPERATIONS TO PLACE STEEL BEAMS OVER I-40.

MAINTENANCE OF TRAFFIC
HWY. 38 STAGE 1-B

rbb0105_mot.dgn 11/7/12 mot pages

mot wlb 1

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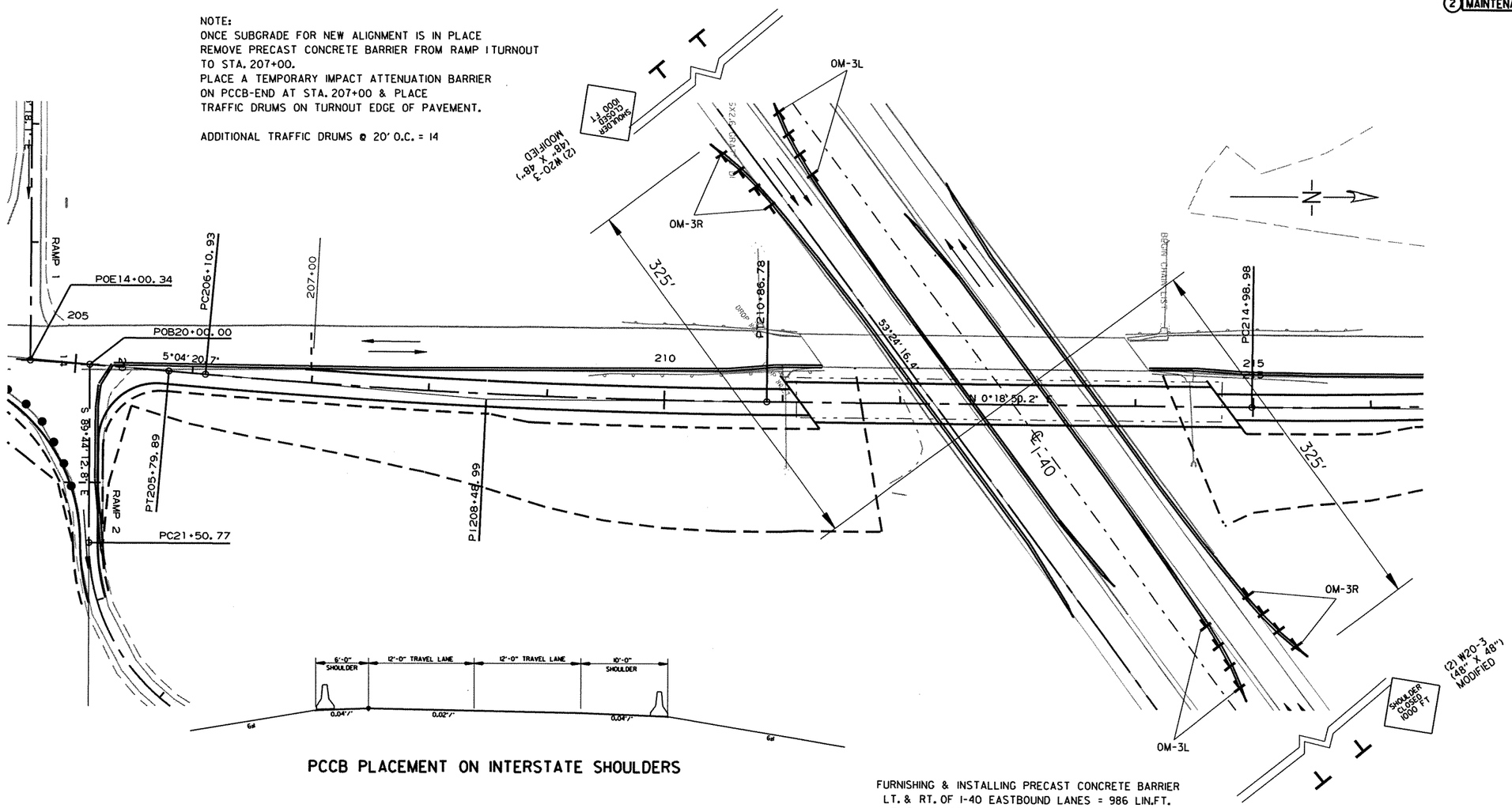
(2) MAINTENANCE OF TRAFFIC

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

2-28-13

NOTE:
ONCE SUBGRADE FOR NEW ALIGNMENT IS IN PLACE
REMOVE PRECAST CONCRETE BARRIER FROM RAMP 1 TURNOUT
TO STA. 207+00.
PLACE A TEMPORARY IMPACT ATTENUATION BARRIER
ON PCCB-END AT STA. 207+00 & PLACE
TRAFFIC DRUMS ON TURNOUT EDGE OF PAVEMENT.

ADDITIONAL TRAFFIC DRUMS @ 20' O.C. = 14



PCCB PLACEMENT ON INTERSTATE SHOULDERS

FURNISHING & INSTALLING PRECAST CONCRETE BARRIER
LT. & RT. OF I-40 EASTBOUND LANES = 986 LIN.FT.
THIS INCLUDES (2) SPECIAL END UNITS

OM-3R = 4 EACH
OM-3L = 4 EACH

FURNISHING & INSTALLING PRECAST CONCRETE BARRIER
LT. & RT. OF I-40 WESTBOUND LANES = 986 LIN.FT.
THIS INCLUDES (2) SPECIAL END UNITS

OM-3R = 4 EACH
OM-3L = 4 EACH

FURNISHING & INSTALLING PRECAST CONCRETE BARRIER
RT. OF HWY.38, RAMP 1 TO EXISTING BRIDGE = 773 LIN.FT.
THIS INCLUDES (1) SPECIAL END UNIT.

PCCB SOUTH OF STA.208+00 MAY BE REMOVED ONCE THE
EMBANKMENT FOR THE NEW ROADWAY IS LEVEL WITH OR
HIGHER THAN THE EXISTING ROADWAY.
RELOCATING PRECAST CONCRETE BARRIER = 193 LIN.FT. FOR APPROACH TURNBACK.

MAINTENANCE OF TRAFFIC
HWY. 38 STAGE 1-B

rbb0105_mot.dgn 11/7/12 mot pages

mot w1b 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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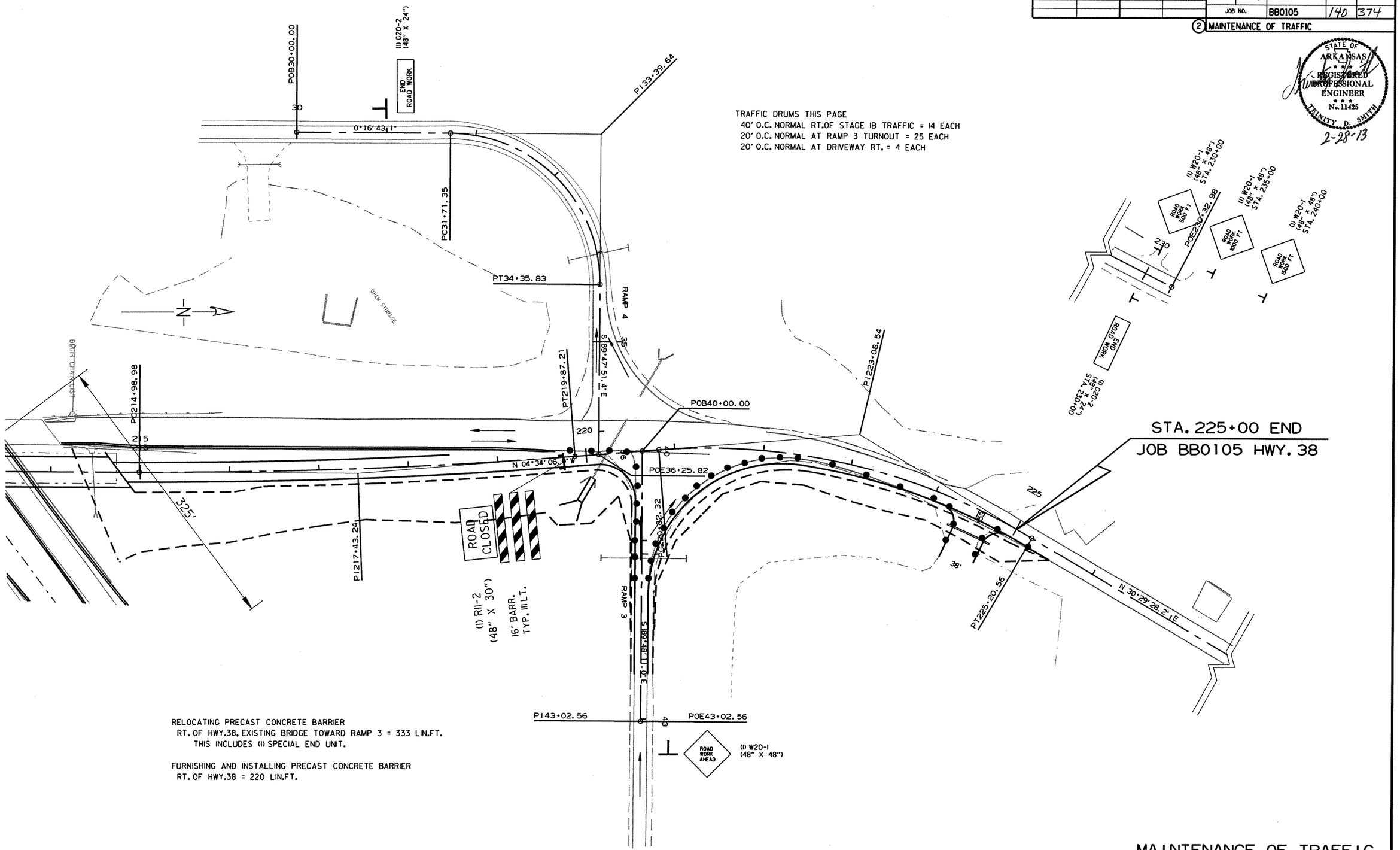
(2) MAINTENANCE OF TRAFFIC

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

2-28-13

TRAFFIC DRUMS THIS PAGE
40' O.C. NORMAL RT.OF STAGE IB TRAFFIC = 14 EACH
20' O.C. NORMAL AT RAMP 3 TURNOUT = 25 EACH
20' O.C. NORMAL AT DRIVEWAY RT. = 4 EACH



RELOCATING PRECAST CONCRETE BARRIER
RT. OF HWY.38. EXISTING BRIDGE TOWARD RAMP 3 = 333 LIN.FT.
THIS INCLUDES (1) SPECIAL END UNIT.

FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER
RT. OF HWY.38 = 220 LIN.FT.

MAINTENANCE OF TRAFFIC
HWY. 38 STAGE 1-B

rbb0105_mot.dgn 11/7/12 mot pages

mot w1b 3

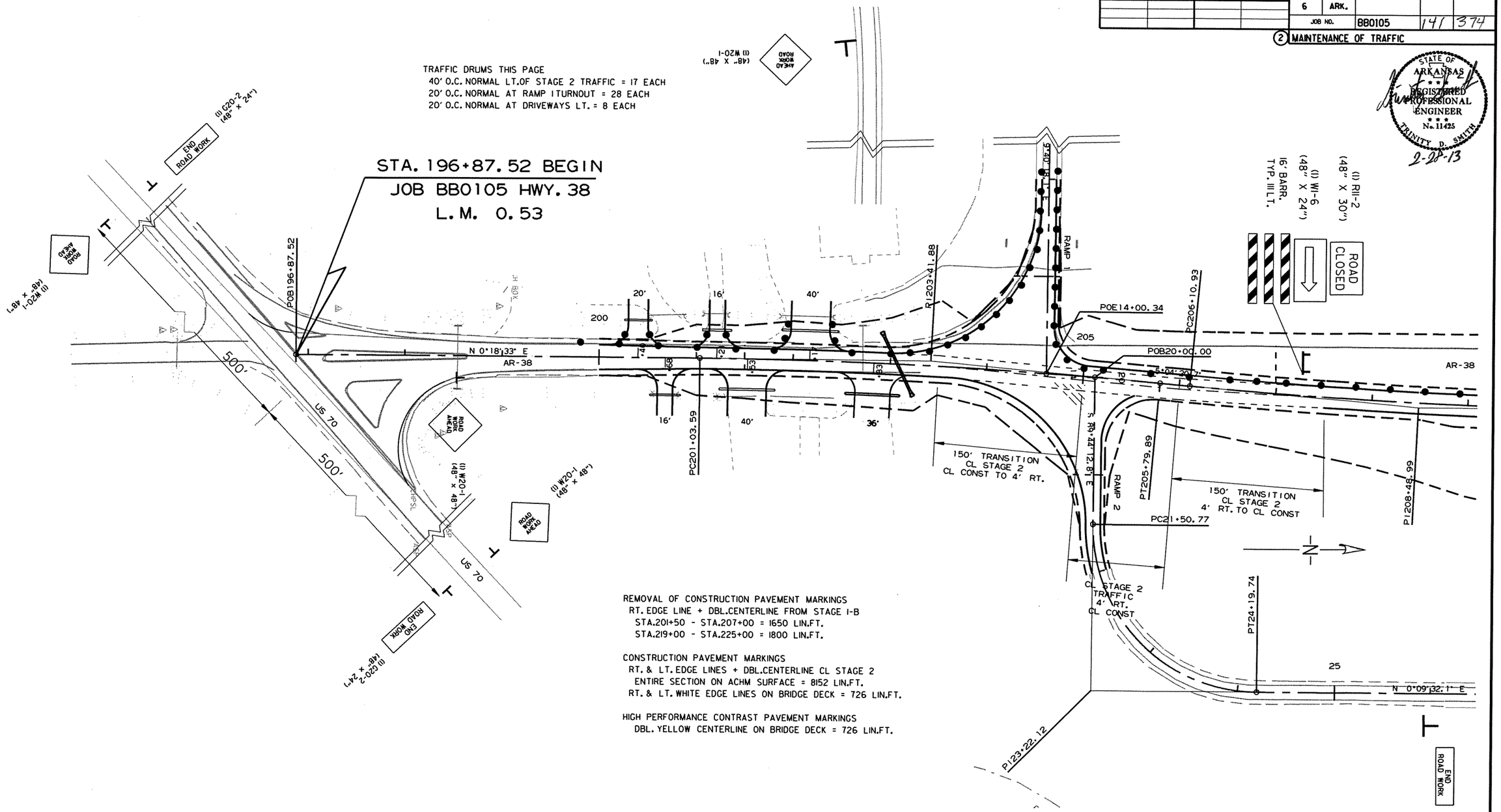
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	141	374

(2) MAINTENANCE OF TRAFFIC

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

2-20-13

TRAFFIC DRUMS THIS PAGE
40' O.C. NORMAL LT.OF STAGE 2 TRAFFIC = 17 EACH
20' O.C. NORMAL AT RAMP 1 TURNOUT = 28 EACH
20' O.C. NORMAL AT DRIVEWAYS LT. = 8 EACH



REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS
RT. EDGE LINE + DBL.CENTERLINE FROM STAGE 1-B
STA.201+50 - STA.207+00 = 1650 LIN.FT.
STA.219+00 - STA.225+00 = 1800 LIN.FT.

CONSTRUCTION PAVEMENT MARKINGS
RT. & LT. EDGE LINES + DBL.CENTERLINE CL STAGE 2
ENTIRE SECTION ON ACHM SURFACE = 8152 LIN.FT.
RT. & LT. WHITE EDGE LINES ON BRIDGE DECK = 726 LIN.FT.

HIGH PERFORMANCE CONTRAST PAVEMENT MARKINGS
DBL. YELLOW CENTERLINE ON BRIDGE DECK = 726 LIN.FT.

STAGE 2 OPERATIONS

SHIFT TRAFFIC ONTO NEW OVERPASS CL CONST & CL STAGE 2
FINISH CONSTRUCTING LEFT SIDE OF NEW PAVEMENT
REMOVE OLD OVERPASS AND REGRADE APPROACHES

DETOUR TRAFFIC ONTO EXIT AND ENTRANCE RAMPS
DURING OPERATIONS TO REMOVE STEEL BEAMS OVER I-40.

MAINTENANCE OF TRAFFIC
HWY. 38 STAGE 2

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mot w2 1

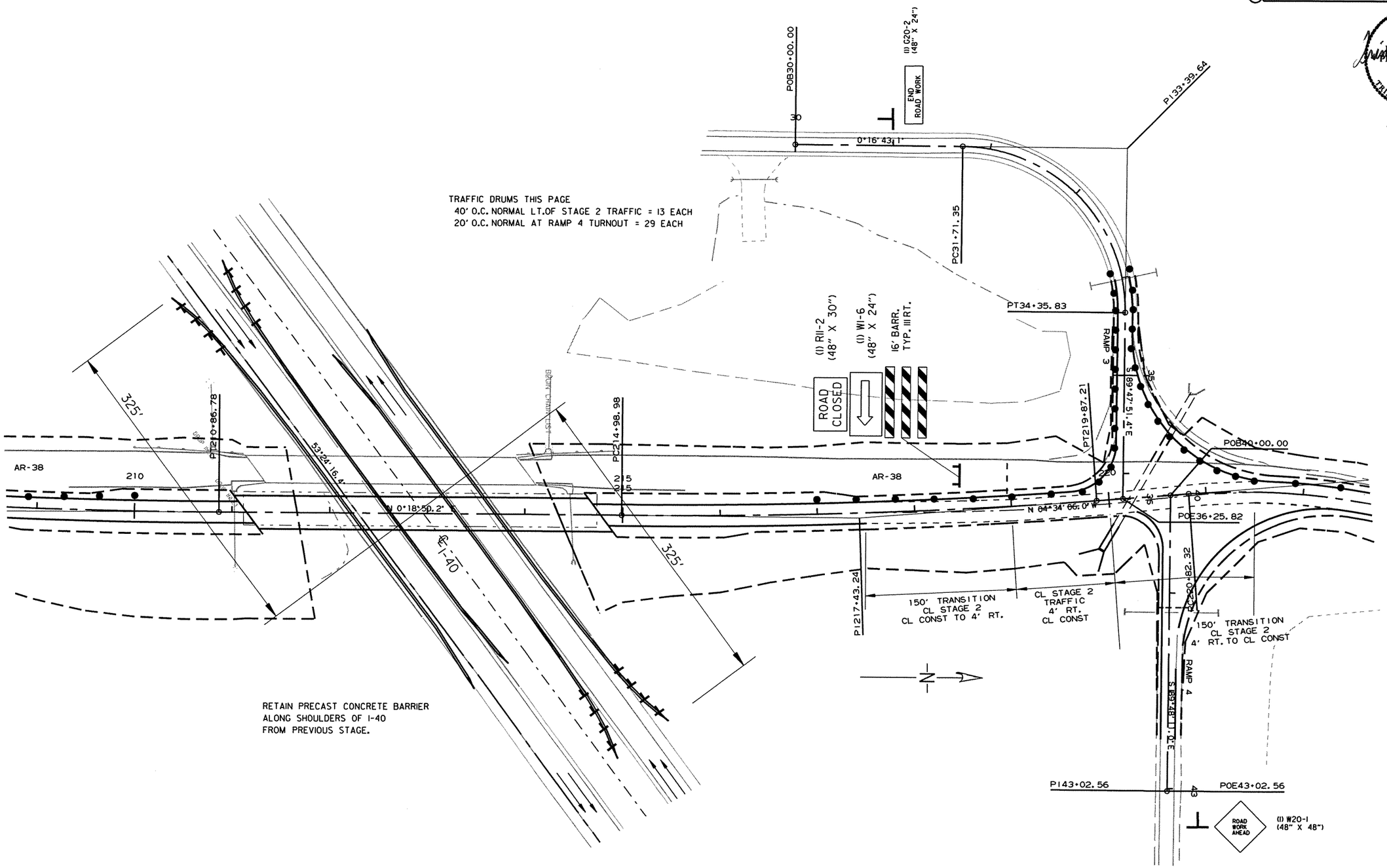
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	142	374

(2) MAINTENANCE OF TRAFFIC

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

2-28-13

TRAFFIC DRUMS THIS PAGE
40' O.C. NORMAL LT.OF STAGE 2 TRAFFIC = 13 EACH
20' O.C. NORMAL AT RAMP 4 TURNOUT = 29 EACH



RETAIN PRECAST CONCRETE BARRIER ALONG SHOULDERS OF I-40 FROM PREVIOUS STAGE.

MAINTENANCE OF TRAFFIC
HWY. 38 STAGE 2

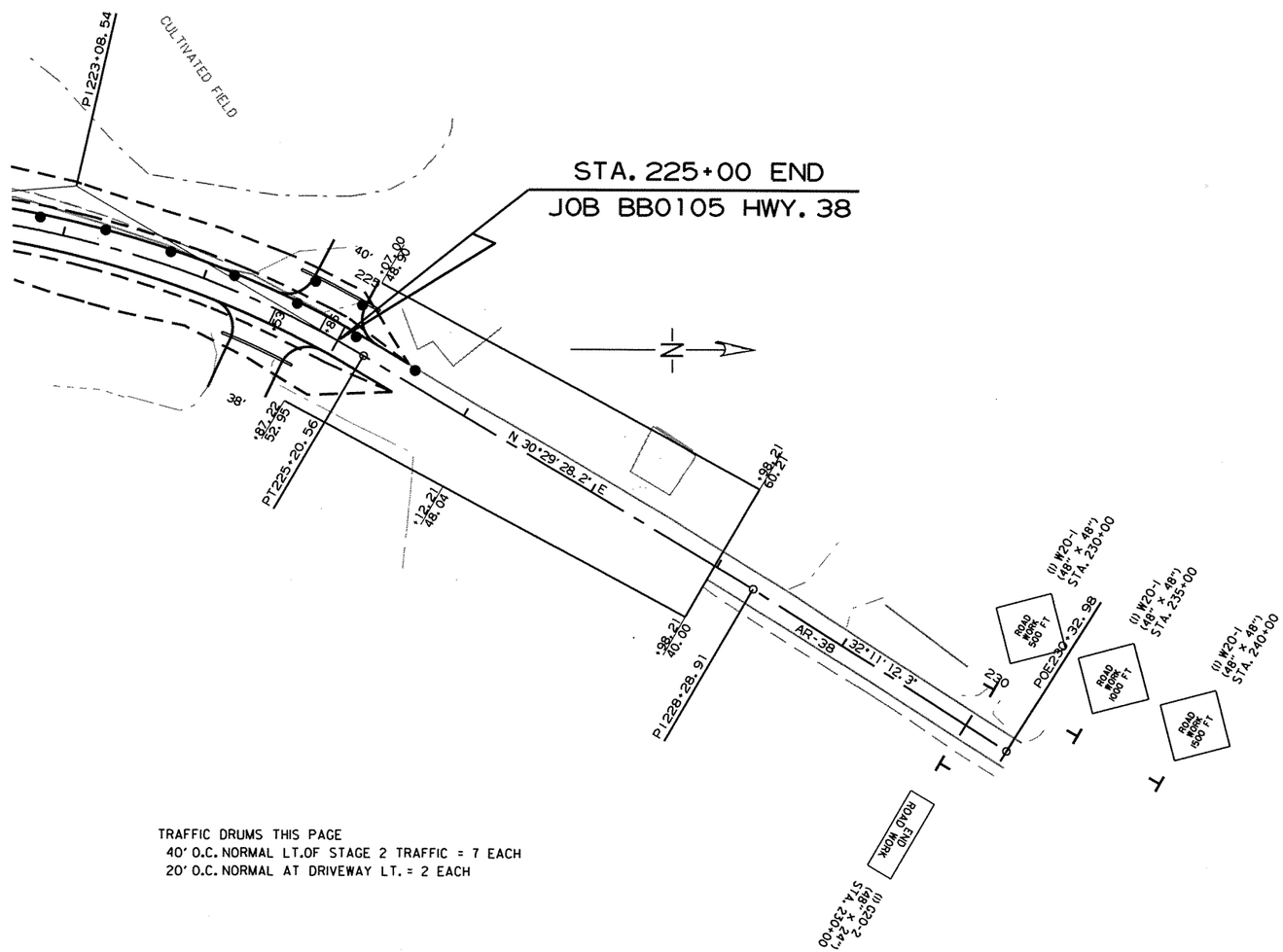
rbb0105_mot.dgn 11/7/12 mot pages

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	143	374

(2) MAINTENANCE OF TRAFFIC

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

2-28-13



TRAFFIC DRUMS THIS PAGE
40' O.C. NORMAL LT.OF STAGE 2 TRAFFIC = 7 EACH
20' O.C. NORMAL AT DRIVEWAY LT. = 2 EACH

MAINTENANCE OF TRAFFIC
HWY. 38 STAGE 2

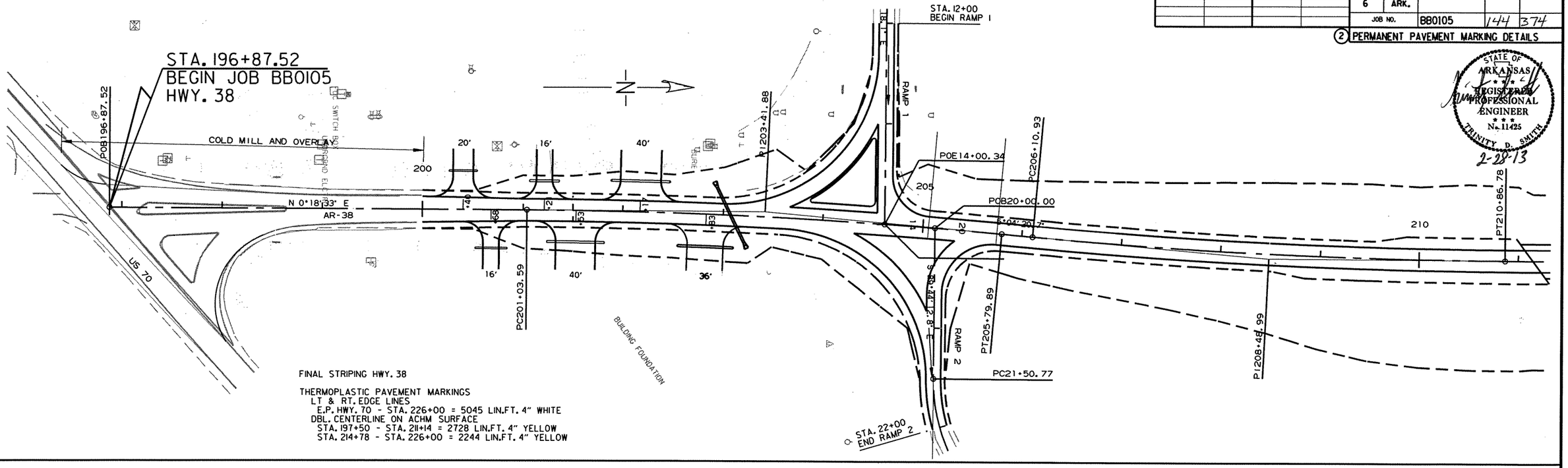
rbb0105_mot.dgn 11/7/12 mot pages

mot w2 3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	144	374

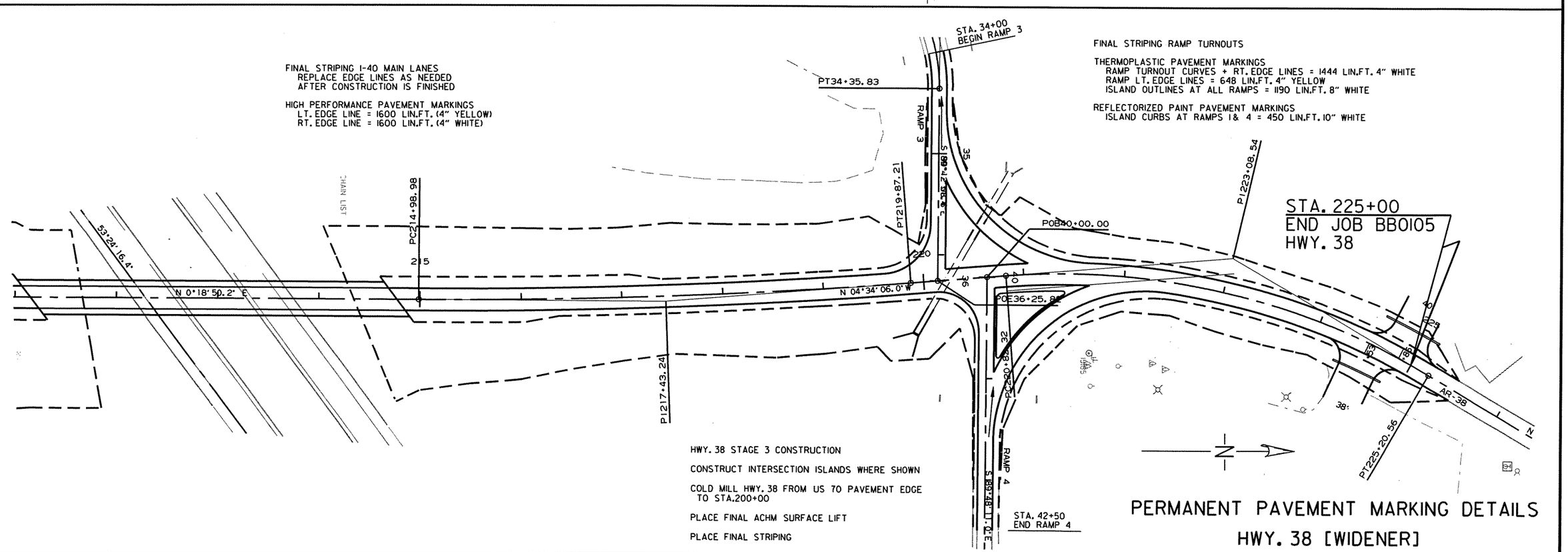
(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH 2-28-13



FINAL STRIPING HWY. 38

THERMOPLASTIC PAVEMENT MARKINGS
LT & RT. EDGE LINES
E.P. HWY. 70 - STA. 226+00 = 5045 LIN.FT. 4" WHITE
DBL. CENTERLINE ON ACHM SURFACE
STA. 197+50 - STA. 211+14 = 2728 LIN.FT. 4" YELLOW
STA. 214+78 - STA. 226+00 = 2244 LIN.FT. 4" YELLOW



FINAL STRIPING I-40 MAIN LANES
REPLACE EDGE LINES AS NEEDED
AFTER CONSTRUCTION IS FINISHED

HIGH PERFORMANCE PAVEMENT MARKINGS
LT. EDGE LINE = 1600 LIN.FT. (4" YELLOW)
RT. EDGE LINE = 1600 LIN.FT. (4" WHITE)

FINAL STRIPING RAMP TURNOUTS

THERMOPLASTIC PAVEMENT MARKINGS
RAMP TURNOUT CURVES + RT. EDGE LINES = 1444 LIN.FT. 4" WHITE
RAMP LT. EDGE LINES = 648 LIN.FT. 4" YELLOW
ISLAND OUTLINES AT ALL RAMPS = 1190 LIN.FT. 8" WHITE

REFLECTORIZED PAINT PAVEMENT MARKINGS
ISLAND CURBS AT RAMPS 1 & 4 = 450 LIN.FT. 10" WHITE

HWY. 38 STAGE 3 CONSTRUCTION

CONSTRUCT INTERSECTION ISLANDS WHERE SHOWN

COLD MILL HWY. 38 FROM US 70 PAVEMENT EDGE TO STA. 200+00

PLACE FINAL ACHM SURFACE LIFT

PLACE FINAL STRIPING

PERMANENT PAVEMENT MARKING DETAILS
HWY. 38 [WIDENER]

11/7/12 ppm pages

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	145	374

(2) SIGNING QUANTITIES SHEET

SIGNING SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	TOTAL	UNIT
SP & 202	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIERS	4	EACH
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	560	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	129	TON
SP, SS & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	7	TON
617	GUARDRAIL (TYPE A)	1,400	LIN. FT.
617	TERMINAL ANCHOR POSTS (TYPE 1)	8	EACH
617	GUARDRAIL TERMINAL (TYPE 2)	8	EACH
SP	REMOVAL AND DISPOSAL OF OVERHEAD SIGN STRUCTURE	2	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-040-68-01)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-040-68-02)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-040-68-04)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-040-68-05)	1	EACH
SS & 725	GUIDE SIGN - ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	4,413	SQ. FT.
SS & 725	GUIDE SIGN - OVERHEAD MOUNTED (DEMOUNTABLE LEGEND)	1,270	SQ. FT.
SS & 726	STANDARD SIGNS	825	SQ. FT.
SS & 727	EXIT NUMBER PANEL (TYPE A)	214	SQ. FT.
SS & 727	EXIT NUMBER PANEL (TYPE B)	158	SQ. FT.
SS & 727	EXIT NUMBER PANEL (TYPE C)	70	SQ. FT.
730	BREAKAWAY SIGN SUPPORT (TYPE G-1)	486	POUND
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	28,111	POUND
730	BREAKAWAY SIGN SUPPORT (TYPE G-3)	5,651	POUND

REMOVAL AND DISPOSAL

LOCATION	GUARDRAIL	IMPACT ATTENUATION BARRIERS	OVERHEAD SIGN STRUCTURE
	EACH	EACH	EACH
STA 4086+20		2	1
STA 4117+80		2	1
TOTAL:		4	2

STANDARD SIGNS FLAT SHEET

SIGN NO./	STANDARD SIGNS FLAT SHEET I-BEAM SIGN SUPPORTS TYPE			STANDARD SIGN	BREAKAWAY SIGN SUPPORT STEEL SECT. A-572		SIGN POST LENGTH		STUB POST		FOOTINGS			SIGN POST AND STUB
							H - 1	H - 2	H - 1	H - 2	DIA.	DEPTH	EMBED.	
LOCATION	U-1	G-1	G-2	SQ. FT.	BEAM	LBS	LIN FT		LIN FT		LIN FT			POUND
SS-040-4109+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4114+00EB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4093+00EB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4091+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4143+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4158+00EB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4188+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4434+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4437+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4039+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4054+00EB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4065+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4090+00EB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4146+00EB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4158+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4213+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4226+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4305+00EB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4320+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4329+00EB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4350+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4213+00EB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4226+00WB			1	16.00	W6	9	11.00	12.00	1.99	1.99	2.00	3.00	2.00	242.82
SS-040-4057+00WB			1	36.00	W6	9	20.00	21.00	1.99	1.99	2.00	3.00	2.00	404.82
SS-040-4185+00EB			1	36.00	W6	9	20.00	21.00	1.99	1.99	2.00	3.00	2.00	404.82
SS-040-4404+00WB			1	36.00	W6	9	20.00	21.00	1.99	1.99	2.00	3.00	2.00	404.82
SS-040-4467+00EB			1	36.00	W6	9	20.00	21.00	1.99	1.99	2.00	3.00	2.00	404.82
SS-040-4075+00WB		1		9.13	W6	9	11.50		1.99		2.00	3.00	2.00	121.41
SS-040-4414+00WB		1		9.13	W6	9	11.50		1.99		2.00	3.00	2.00	121.41
SS-040-4175+00EB		1		9.13	W6	9	11.50		1.99		2.00	3.00	2.00	121.41
SS-040-4458+00EB		1		9.13	W6	9	11.50		1.99		2.00	3.00	2.00	121.41
SS-040-4202+00WB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040--4416+00EB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040-4454+00WB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040-4165+00WB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040-4083+00EB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040-4120+00WB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040-4134+80EB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040-4070+00WB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040-4180+00EB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040-4409+00WB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040-4464+00EB			1	20.00	W6	9	12.00	13.00	1.99	1.99	2.00	3.00	2.00	260.82
SS-040-4098+60WB			1	28.00	W6	9	14.00	15.00	1.99	1.99	2.00	3.00	2.00	296.82
SS-040-4101+20EB			1	28.00	W6	9	14.00	15.00	1.99	1.99	2.00	3.00	2.00	296.82
G-1 TOTALS:		**4**		**36.51**										**485.64**
G-2 TOTALS:			**40**	**788.00**										**10666.80**
TOTALS:		**4**	**40**	**824.51**										**11152.44**

NOTE:
BREAKAWAY SIGN SUPPORT TOTAL IS CALCULATED BY TAKING THE LENGTH OF H-1, H-2, H-3 AND EACH STUB POST AND MULTIPLYING BY THE BEAM WEIGHT (LBS).

BASIS OF ESTIMATE:
NMAX = 205
MINERAL AGGREGATE 94.8%
ASPHALT BINDER 5.2%

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
2/28/13
TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	146	374

(2) SIGNING QUANTITIES SHEET

MAIN LANES SIGNING QUANTITIES

SIGN NO./ LOCATION	STRUCTURE TYPE ST	CL	OH	BM	G-2	G-3	GUIDE SIGN Length LIN. FT.	Height LIN. FT.	SQ. Ft.	BREAKAWAY SIGN SUPPORT STEEL SECT. A-572 BEAM	LBS	SIGN POST LENGTH H - 1 LIN FT	H - 2	H - 3	STUB POST H - 1 LIN FT	H - 2	H - 3	FOOTINGS DIA. LIN FT	DEPTH	EMBED.	SIGN POST AND STUB POUND	EXIT NUMBER PANEL LEGEND	TYPE A SQ. FT.	B	C	GUARDRAIL TYPE A LIN. FT.	TERM. ANCHOR POSTS TYPE 1 EACH	GUARDRAIL TERM. TYPE 2 EACH	AGG. BASE CR (CL. 7) TON	ACHM SURF. CR. (1/2") (PG 76-22) 220 LBS/SY TON
EXIT 239																														
ML-040-4068+00WB					1		12.00	12.00	144.00	W8	18.00	21.50	22.50		3.99	3.99		2.00	5.50	3.66	935.64	239	23.75							
EXIT 241A-B																														
OH-040-68-01			1																							350	2	2	140	34
0H-040-4120+00WB-A							15.50	9.50	147.25													241A		26.25						
OH-040-4120+00WB-B							11.50	10.50	120.75													241B		26.25						
OH-040-68-02			1																							350	2	2	140	34
OH-040-4083+00EB-A							11.50	9.50	109.25													241B		26.25						
OH-040-4083+00EB-B							15.00	10.50	157.50													241A		26.25						
OH-040-68-04			1																							350	2	2	140	34
OH-040-4098+60W-A							14.00	13.00	182.00																					
OH-040-4098+60W-B							15.00	14.50	217.50													241A		26.25						
OH-040-68-05			1																							350	2	2	140	34
OH-040-4101+20EB-A							13.50	12.00	162.00													242	23.75							
OH-040-4101+20EB-B							12.00	14.50	174.00													241B		26.25						
ML-040-4160+00WB					1		15.50	11.50	178.25	W8	18.00	18.50	19.50		3.99	3.99		2.50	5.50	3.66	827.64	241A-B			35.00					
ML-040-4031+00EB					1		15.50	12.00	186.00	W8	18.00	19.00	20.00		3.99	3.99		2.50	5.50	3.66	845.64	241A-B			35.00					
ML-040-4127+00WB					1		16.50	5.00	82.50	W8	18.00	12.00	13.00		3.99	3.99		2.50	5.50	3.66	593.64									
ML-040-4062+00EB					1		16.50	5.00	82.50	W8	18.00	12.00	13.00		3.99	3.99		2.50	5.50	3.66	593.64									
LF-040-4148+00WB						1	18.00	15.50	279.00	W8	18.00	22.50	23.50	24.50	3.99	3.99	3.99	3.00	5.50	3.66	1412.64									
LF-040-4052+00EB						1	18.00	15.50	279.00	W8	18.00	22.50	23.50	24.50	3.99	3.99	3.99	3.00	5.50	3.66	1412.64									
LL-040-4045+00EB						1	18.00	16.00	288.00	W8	18.00	22.50	23.50	24.50	3.99	3.99	3.99	3.00	5.50	3.66	1412.64									
LL-040-4154+20WB						1	18.00	15.50	279.00	W8	18.00	22.50	23.50	24.50	3.99	3.99	3.99	3.00	5.50	3.66	1412.64									
LG-040-4038+00EB					1		13.00	16.00	208.00	W8	18.00	23.00	24.00		3.99	3.99		2.50	5.50	3.66	989.64									
LG-040-4133+90WB					1		13.00	16.00	208.00	W8	18.00	23.00	24.00		3.99	3.99		2.50	5.50	3.66	989.64									
EX-040-4116+50WB					1		9.00	5.00	45.00	W6	9.00	5.00	6.00		2.33	2.33		1.50	3.00	2.00	140.94									
EX-040-4086+30EB					1		9.00	5.00	45.00	W6	9.00	5.00	6.00		2.33	2.33		1.50	3.00	2.00	140.94									
EX-040-4093+00WB					1		7.00	9.00	63.00	W6	9.00	7.00	8.00		2.33	2.33		1.50	3.00	2.00	176.94									
EX-040-4103+30EB					1		7.00	9.00	63.00	W6	9.00	7.00	8.00		2.33	2.33		1.50	3.00	2.00	176.94									
EXIT 242																														
ML-040-4122+00EB					1		10.50	5.00	52.50	W6	9.00	12.00	13.00		3.99	3.99		2.50	5.50	3.66	296.82									
ML-040-4194+00EB					1		13.00	5.00	65.00	W6	9.00	13.00	14.00		3.99	3.99		2.50	5.50	3.66	314.82									
EX-040-4138+00EB					1		7.50	5.00	37.50	W6	9.00	12.00	13.00		3.99	3.99		2.50	5.50	3.66	296.82									
EX-040-4162+50WB					1		7.50	5.00	37.50	W6	9.00	12.00	13.00		3.99	3.99		2.50	5.50	3.66	296.82									
ML-040-4177+00WB					1		17.00	12.00	204.00	W8	18.00	19.00	20.00		3.99	3.99		2.50	5.50	3.66	845.64									
ML-040-4127+00EB					1		17.00	12.00	204.00	W8	18.00	19.00	20.00		2.33	2.33		1.50	3.00	2.00	785.88									
ML-040-4191+80WB					1		13.50	12.00	162.00	W8	18.00	21.50	22.50		2.33	2.33		1.50	3.00	2.00	875.88	242	23.75							
ML-040-4167+00WB					1		13.00	13.00	169.00	W8	18.00	22.50	23.50		2.33	2.33		1.50	3.00	2.00	911.88	242	23.75							
ML-040-4133+90EB					1		13.00	13.00	169.00	W8	18.00	22.50	23.50		2.33	2.33		1.50	3.00	2.00	911.88	242	23.75							
EXIT 247																														
EX-040-4419+50EB					1		7.50	5.00	37.50	W6	9.00	12.00	13.00		3.99	3.99		2.50	5.50	3.66	296.82									
EX-040-4451+00WB					1		7.50	5.00	37.50	W6	9.00	12.00	13.00		3.99	3.99		2.50	5.50	3.66	296.82									
ML-040-4213+00WB					1		13.00	4.50	58.50	W6	9.00	11.50	12.50		3.99	3.99		2.50	5.50	3.66	287.82									
ML-040-4335+00EB					1		10.50	2.00	21.00	W6	9.00	9.00	10.00		3.99	3.99		2.50	5.50	3.66	242.82									
ML-040-4245+70WB					1		10.50	2.00	21.00	W6	9.00	11.00	12.00		3.99	3.99		2.50	5.50	3.66	278.82									
ML-040-4507+80WB					1		11.00	12.00	132.00	W8	18.00	17.00	18.00		3.99	3.99		2.50	5.50	3.66	773.64	247	23.75							
ML-040-4362+20EB					1		11.00	12.00	132.00	W8	18.00	17.00	18.00		3.99	3.99		2.50	5.50	3.66	773.64	247	23.75							
ML-040-4415+00EB					1		14.50	9.50	137.75	W8	18.00	19.00	20.00		3.99	3.99		2.50	5.50	3.66	845.64	247	23.75							
ML-040-4456+50WB					1		14.50	9.50	137.75	W8	18.00	19.00	20.00		3.99	3.99		2.50	5.50	3.66	845.64	247	23.75							
REST AREA																														
RA-040-4199+20WB					1		4.50	6.00	27.00	W6	9.00	14.00	15.00		2.33	2.33		1.50	3.00	2.00	302.94									
RA-040-4204+00WB					1		13.00	5.50	71.50	W6	9.00	12.50	13.50		2.33	2.33		1.50	3.00	2.00	275.94									
RA-040-4256+80WB					1		12.50	5.50	68.75	W6	9.00	12.50	13.50		2.33	2.33		1.50	3.00	2.00	275.94									
GUIDE SIGNS ROADSIDE MOUNTED TOTALS;									4413.00										G-2 TOTALS:		17444.16									
GUIDE SIGNS OVERHEAD MOUNTED TOTALS;									1270.25										G-3 TOTALS:		5650.56									
TOTALS:			4		32	4			5683.25										TOTALS:		23094.72		213.75	157.50	70.00	1400	8	8	560	136

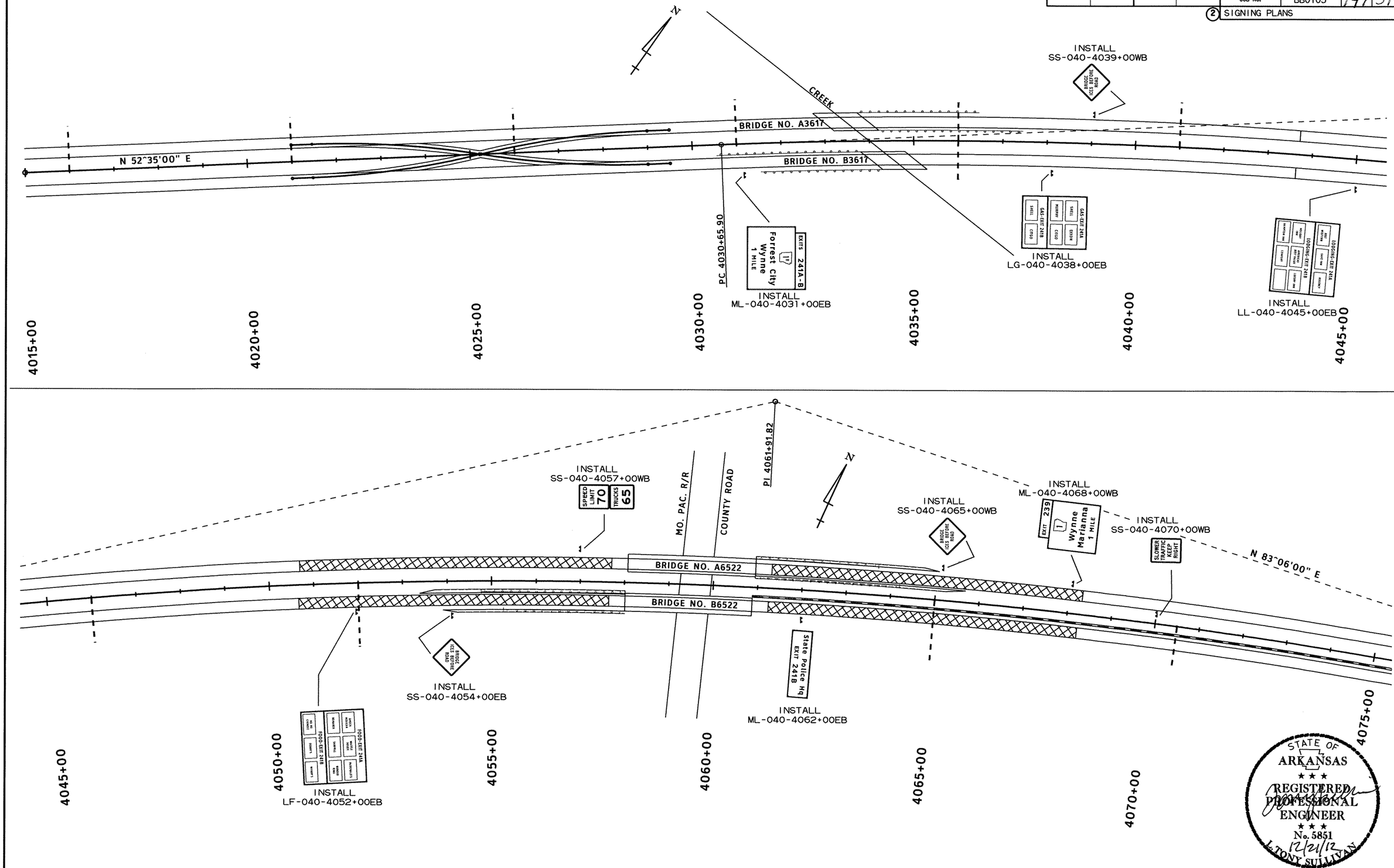
NOTE:
BREAKAWAY SIGN SUPPORT TOTAL IS CALCULATED BY TAKING THE LENGTH OF H-1, H-2, H-3 AND EACH STUB POST AND MULTIPLYING BY THE BEAM WEIGHT (LBS).

BASIS OF ESTIMATE:
NMAX = 205
MINERAL AGGREGATE 94.8%
ASPHALT BINDER 5.2%

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
2/28/13
TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	147	374

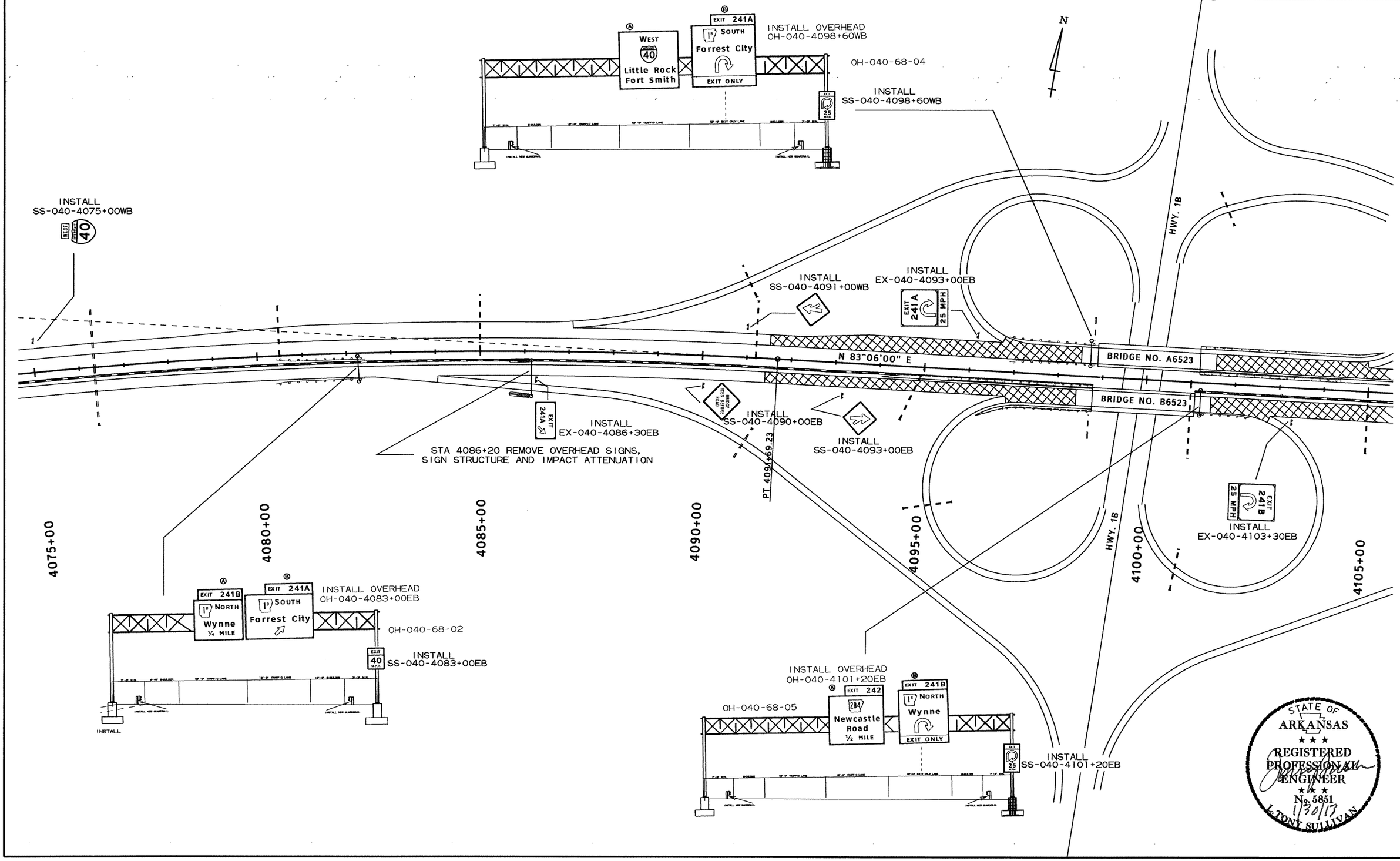
(2) SIGNING PLANS



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
L. TONY SULLIVAN

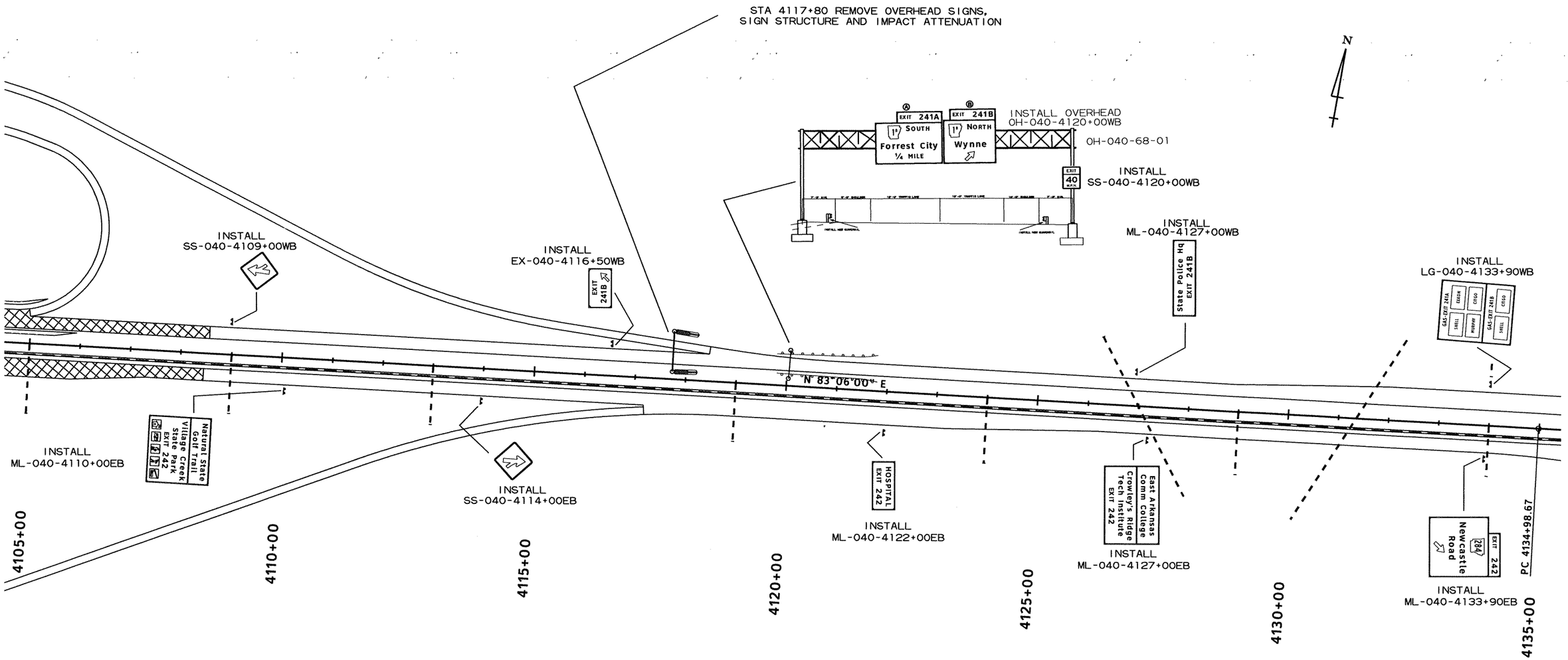
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	148	374

(2) SIGNING PLANS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	149	374

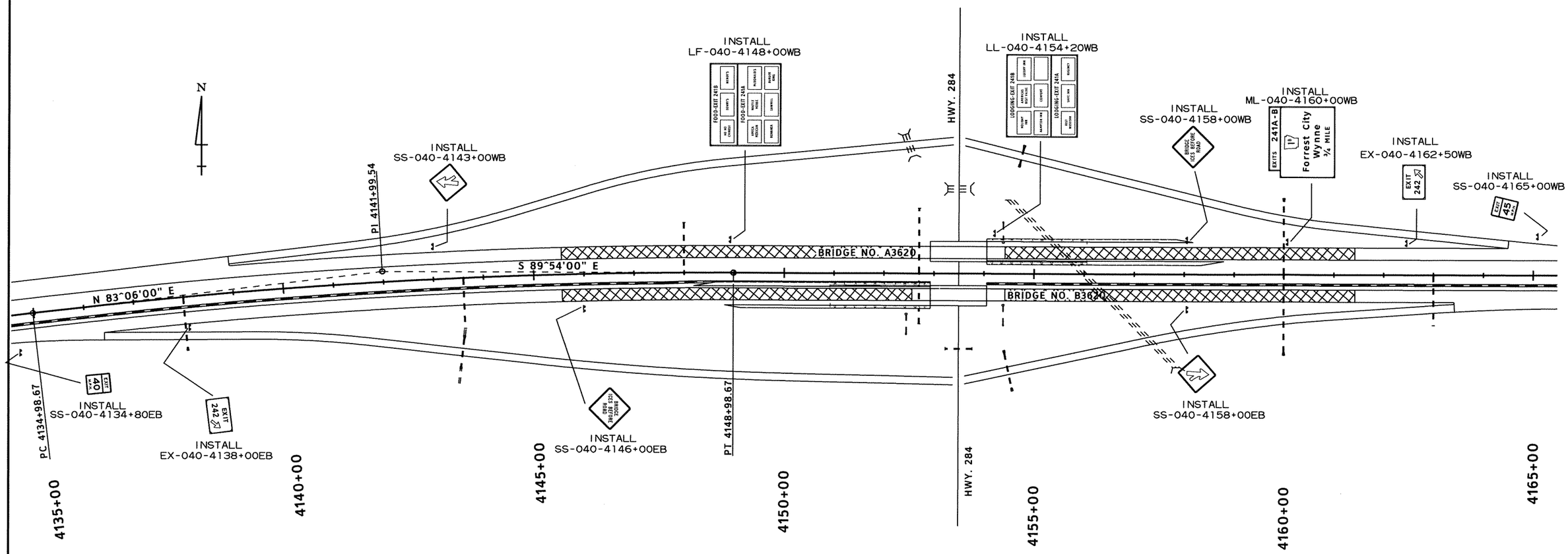
(2) SIGNING PLANS



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
1/30/13
L. TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	150	374

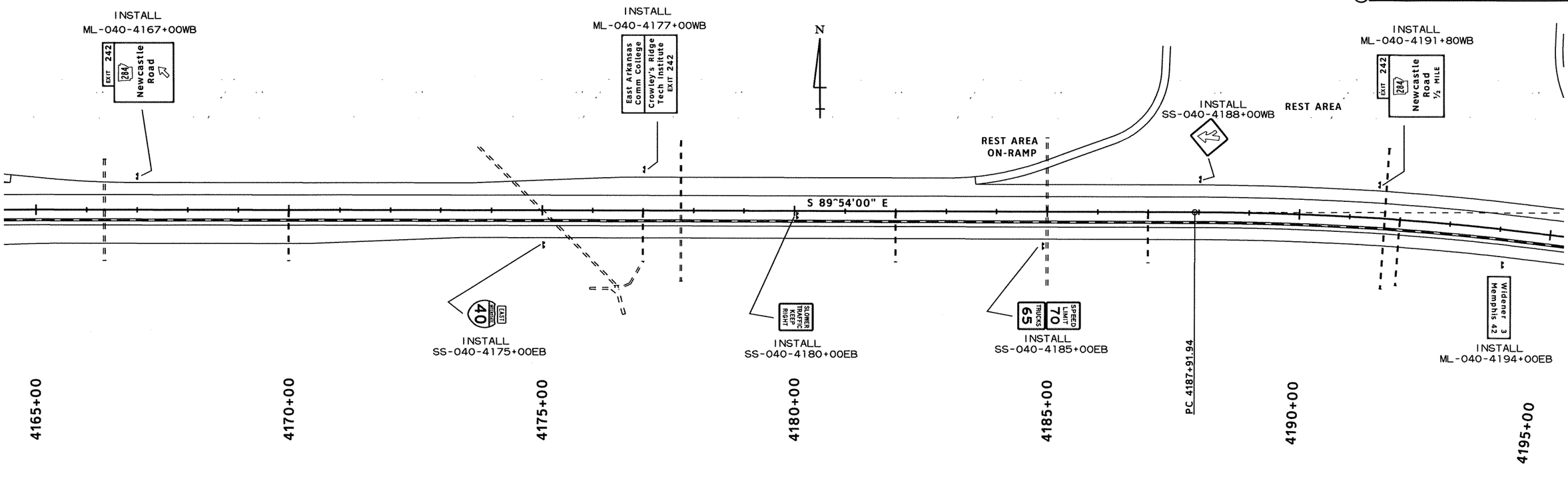
2 SIGNING PLANS

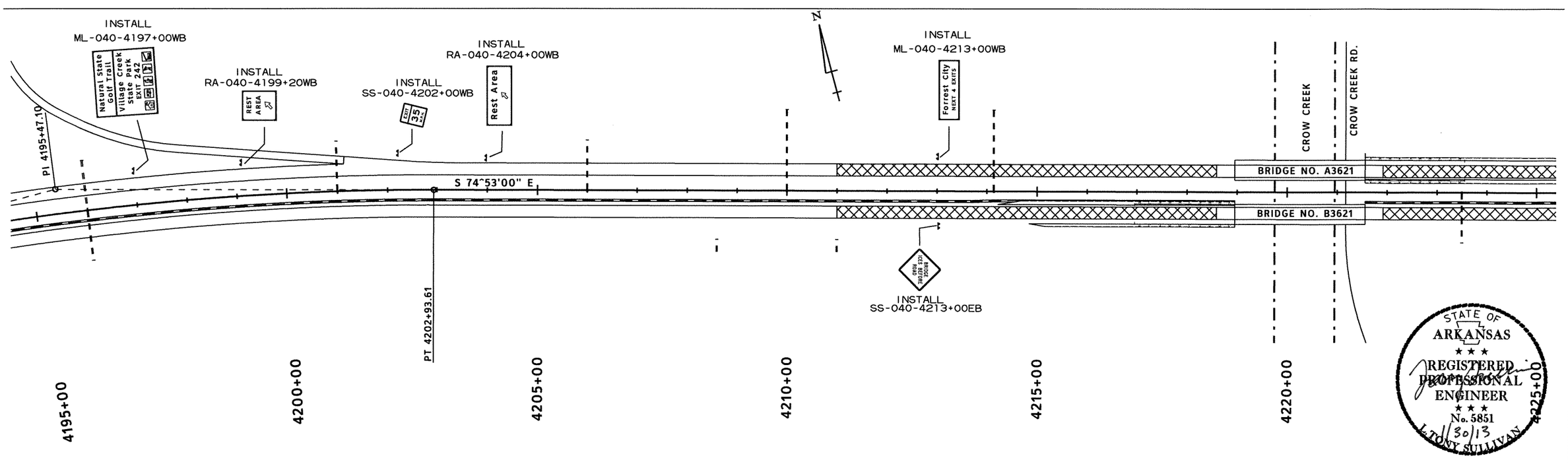


STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
L. TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	151	374

(2) SIGNING PLANS





STATE OF ARKANSAS
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1/30/13
L. TONY SULLIVAN

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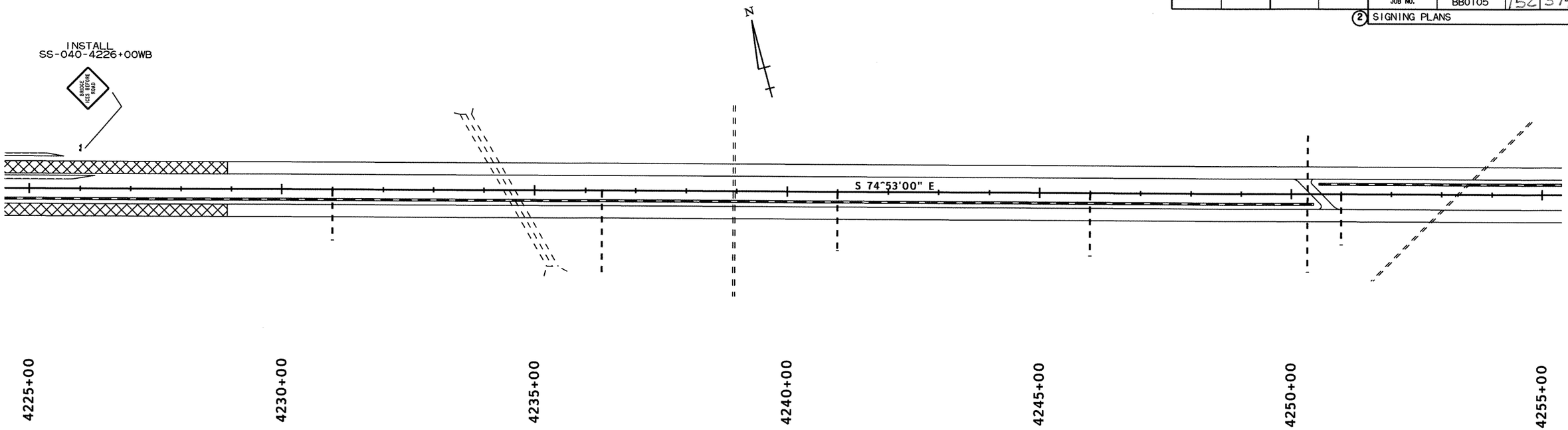
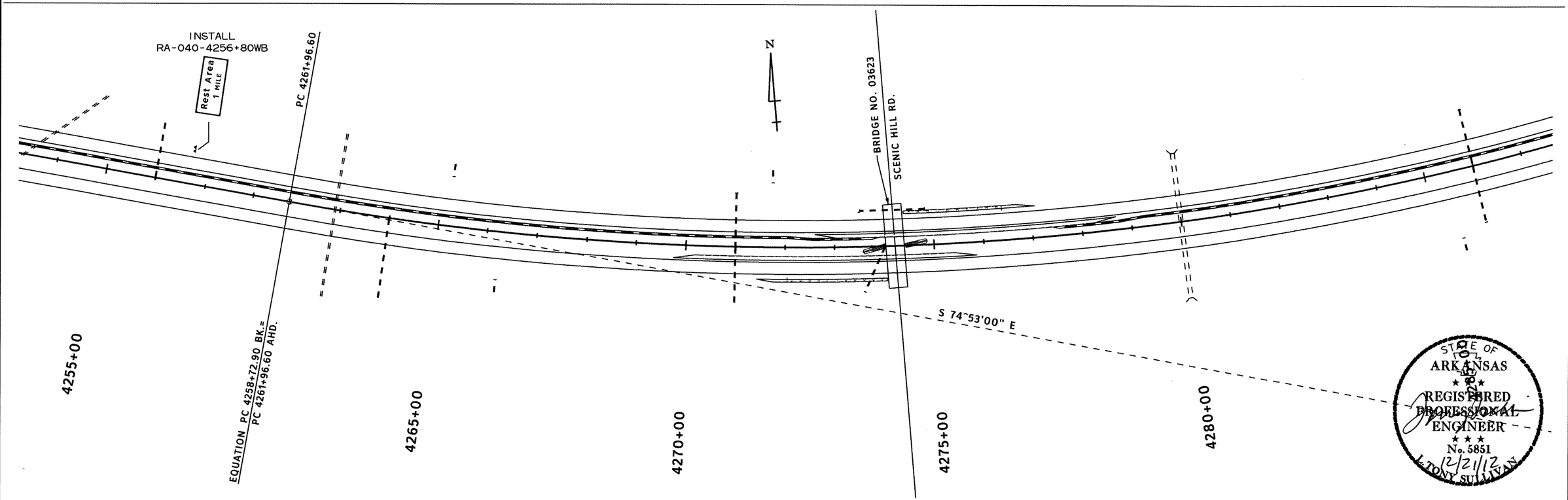
				6	ARK.			
				JOB NO.		BB0105	152	374

2 SIGNING PLANS





STATE OF ARKANSAS
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12/21/12
L. TONY SULLIVAN

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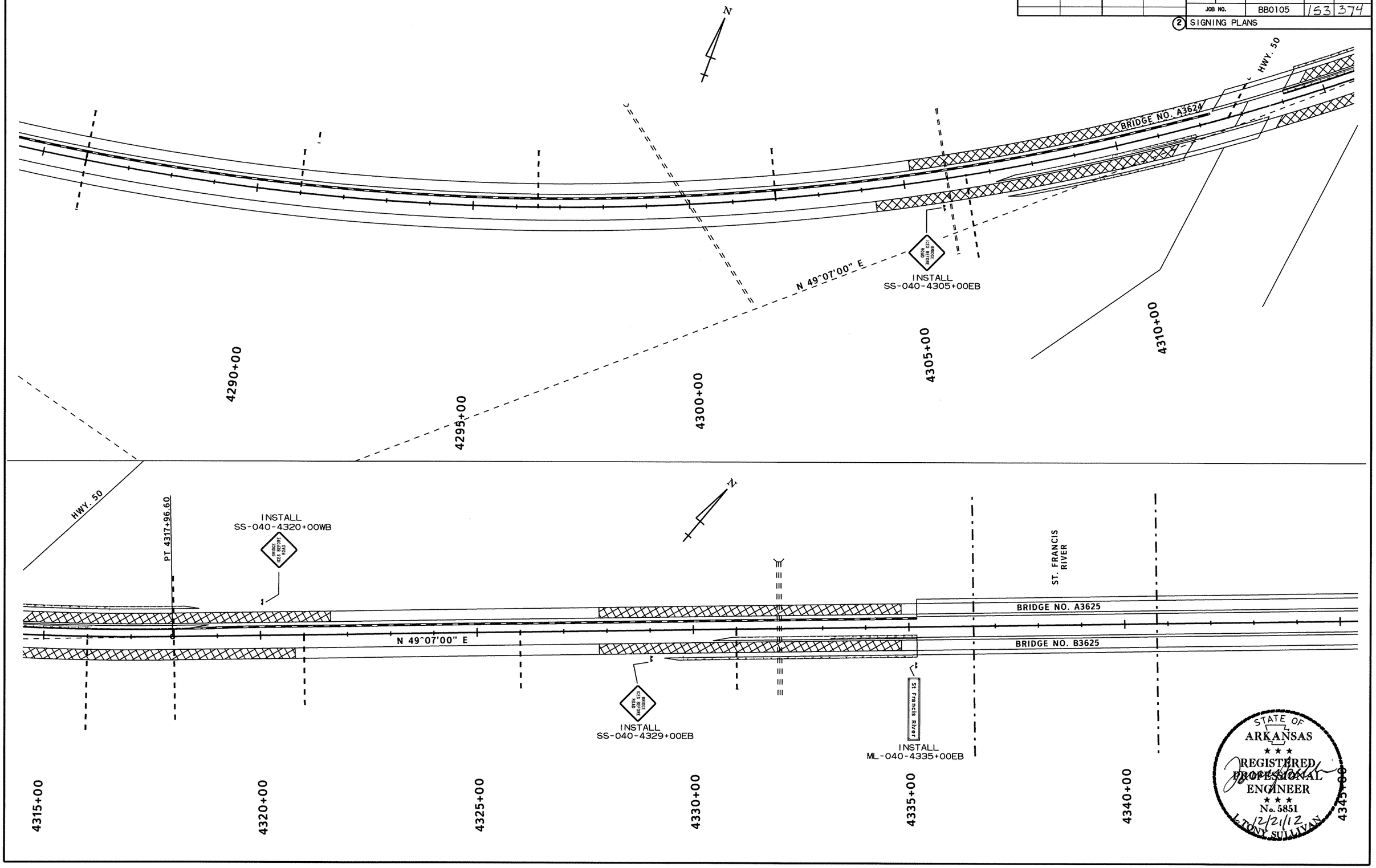
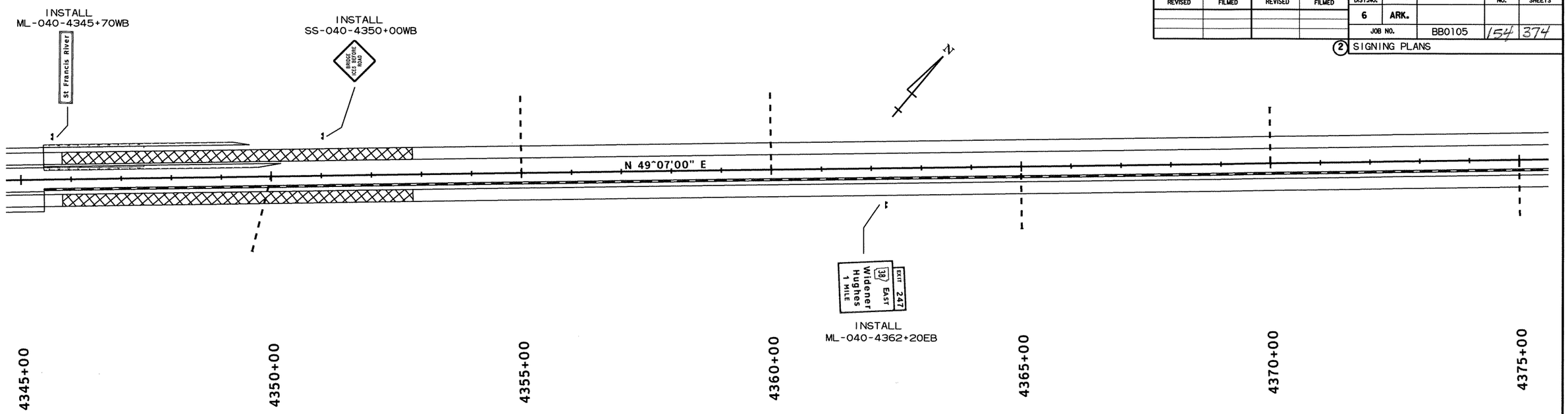
				6	ARK.			
				JOB NO.		BB0105	153	374

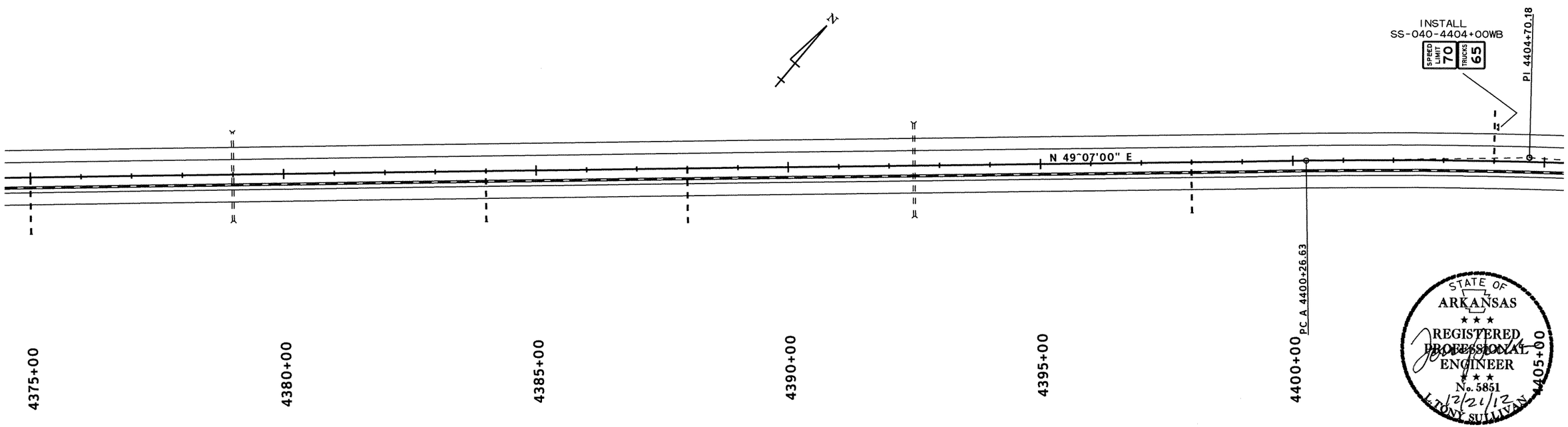
2 SIGNING PLANS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	154	374

(2) SIGNING PLANS

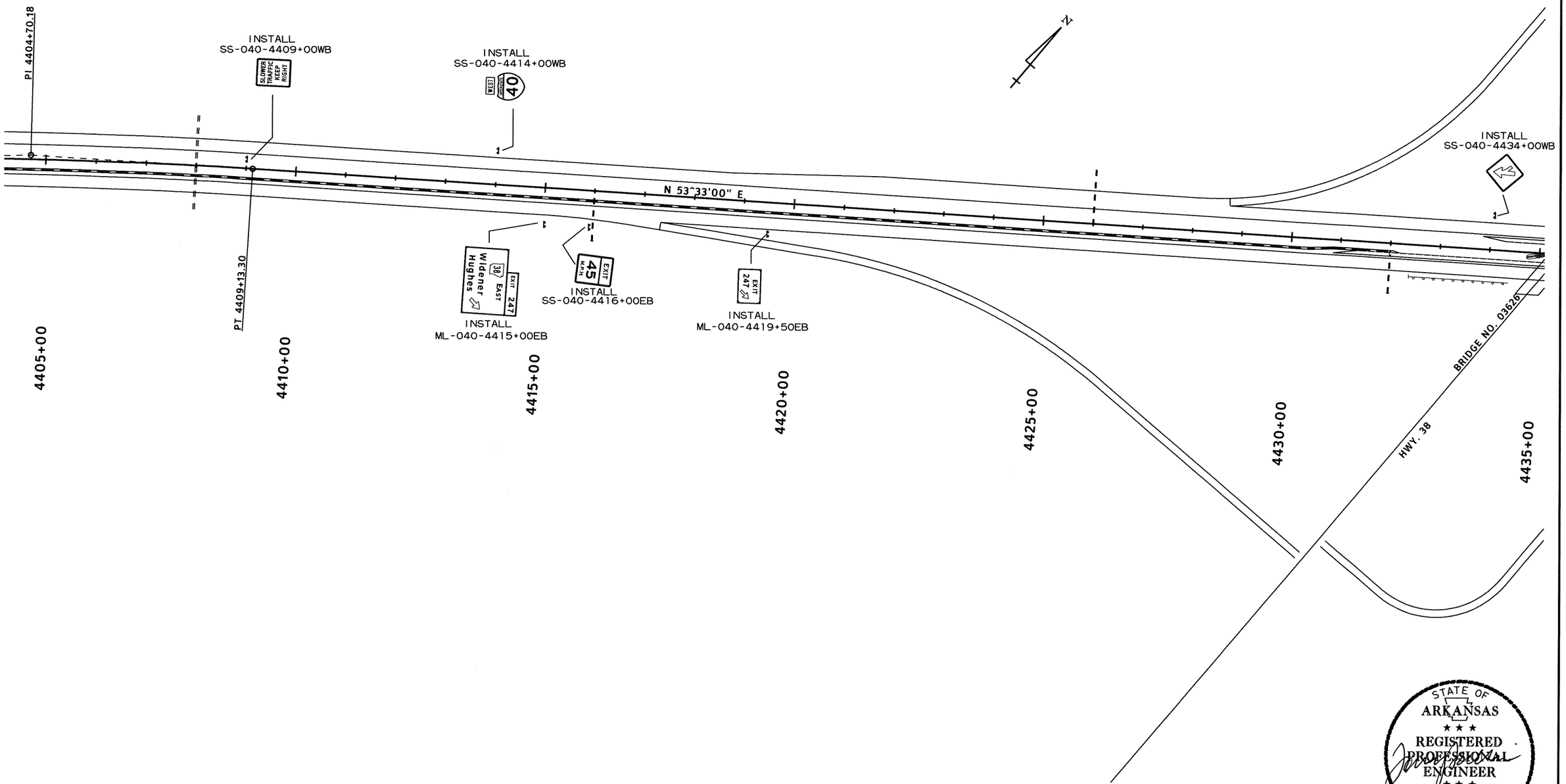




STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	155	374

(2) SIGNING PLANS



STATE OF ARKANSAS
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12/21/12
L. TONY SULLIVAN

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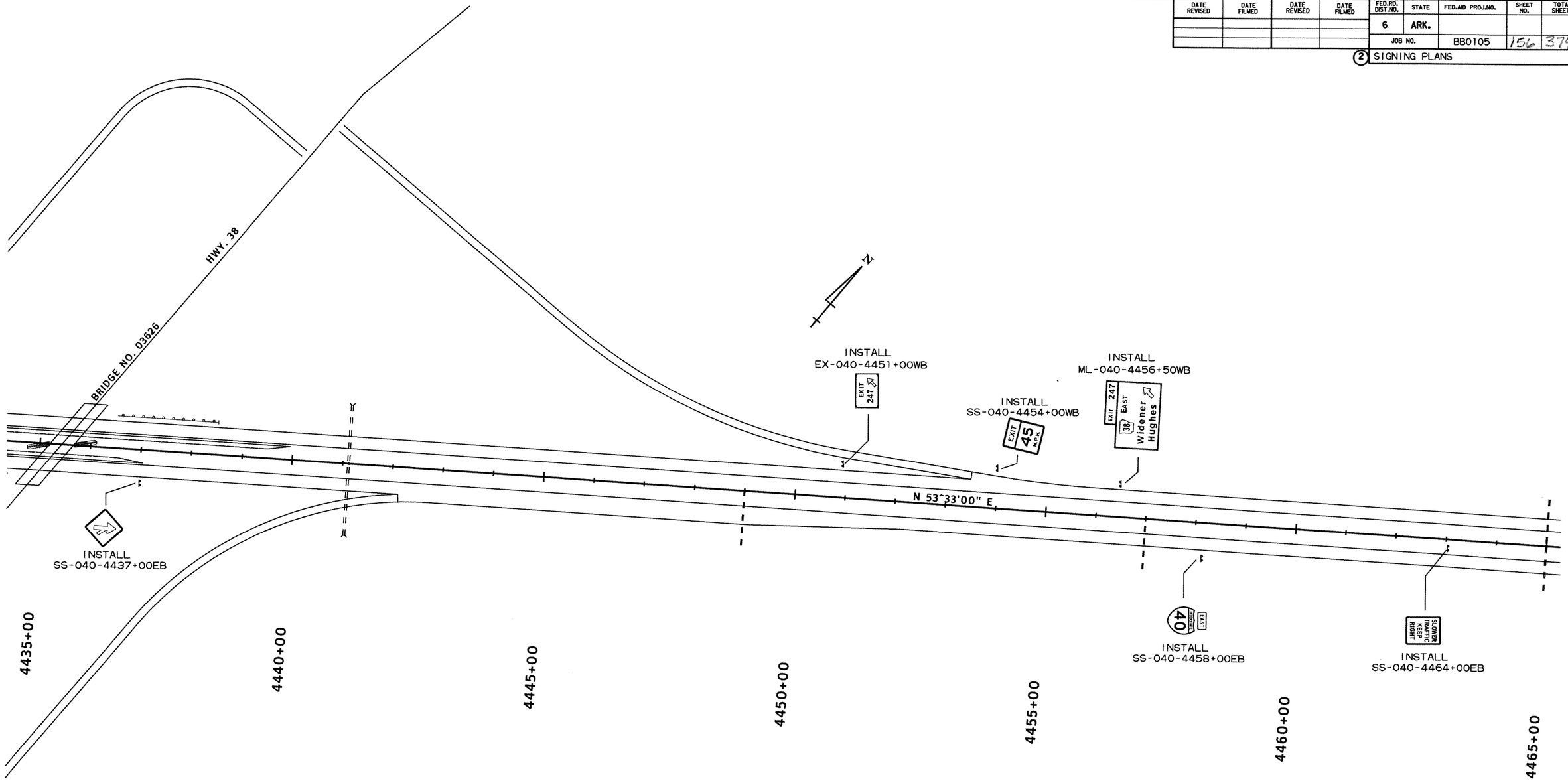
				6	ARK.			
				JOB NO.		BB0105	156	374

(2) SIGNING PLANS



STATE OF ARKANSAS
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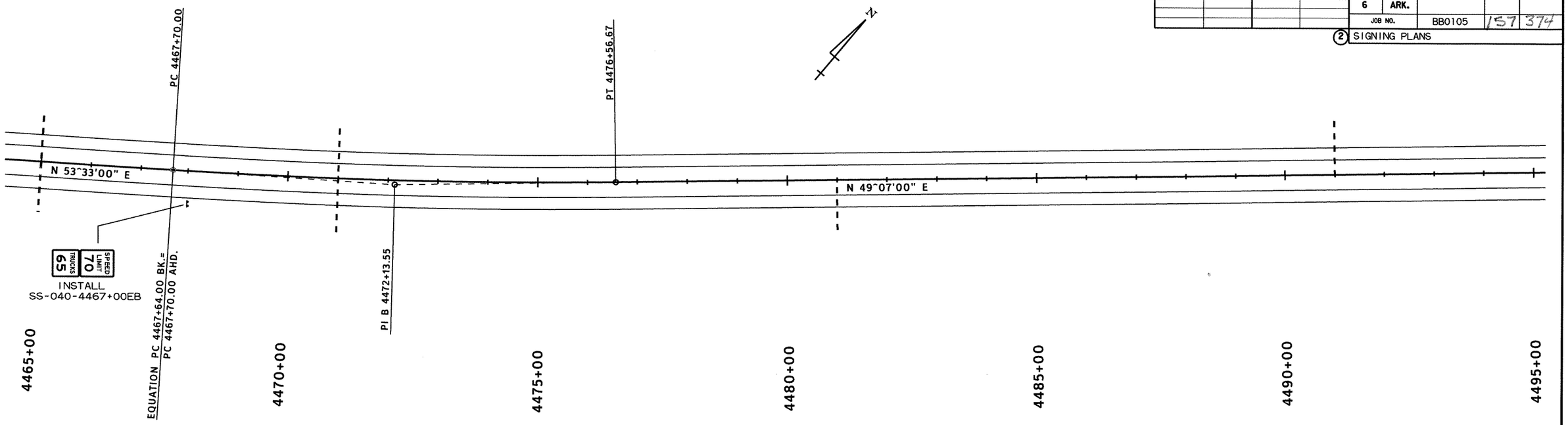
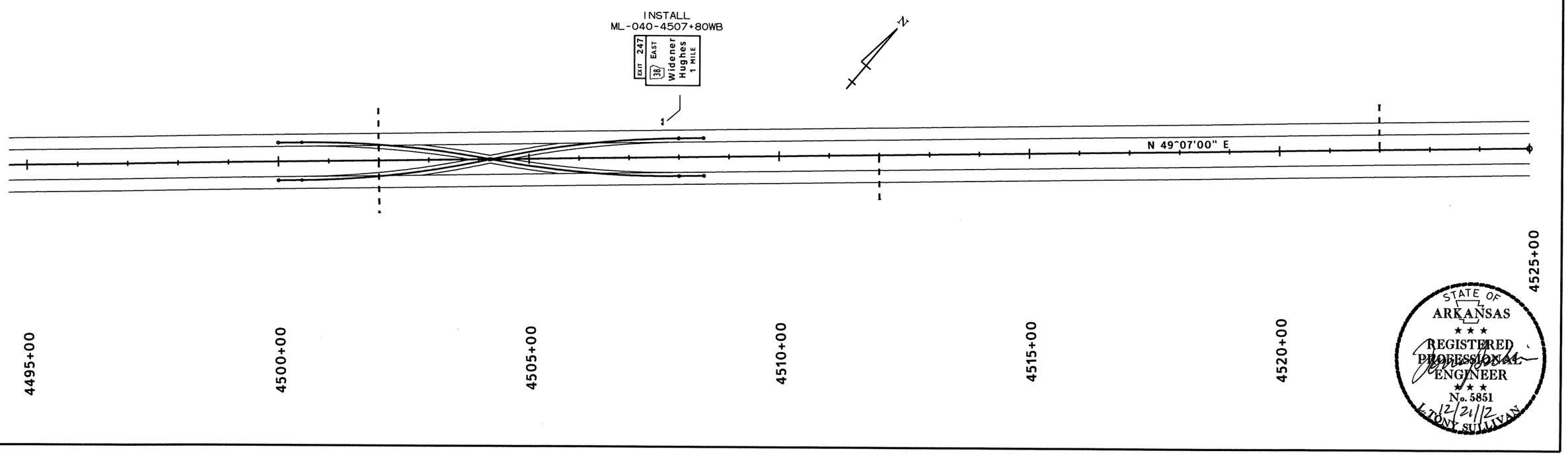
No. 5851
12/21/12
L. TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	157	374

(2) SIGNING PLANS



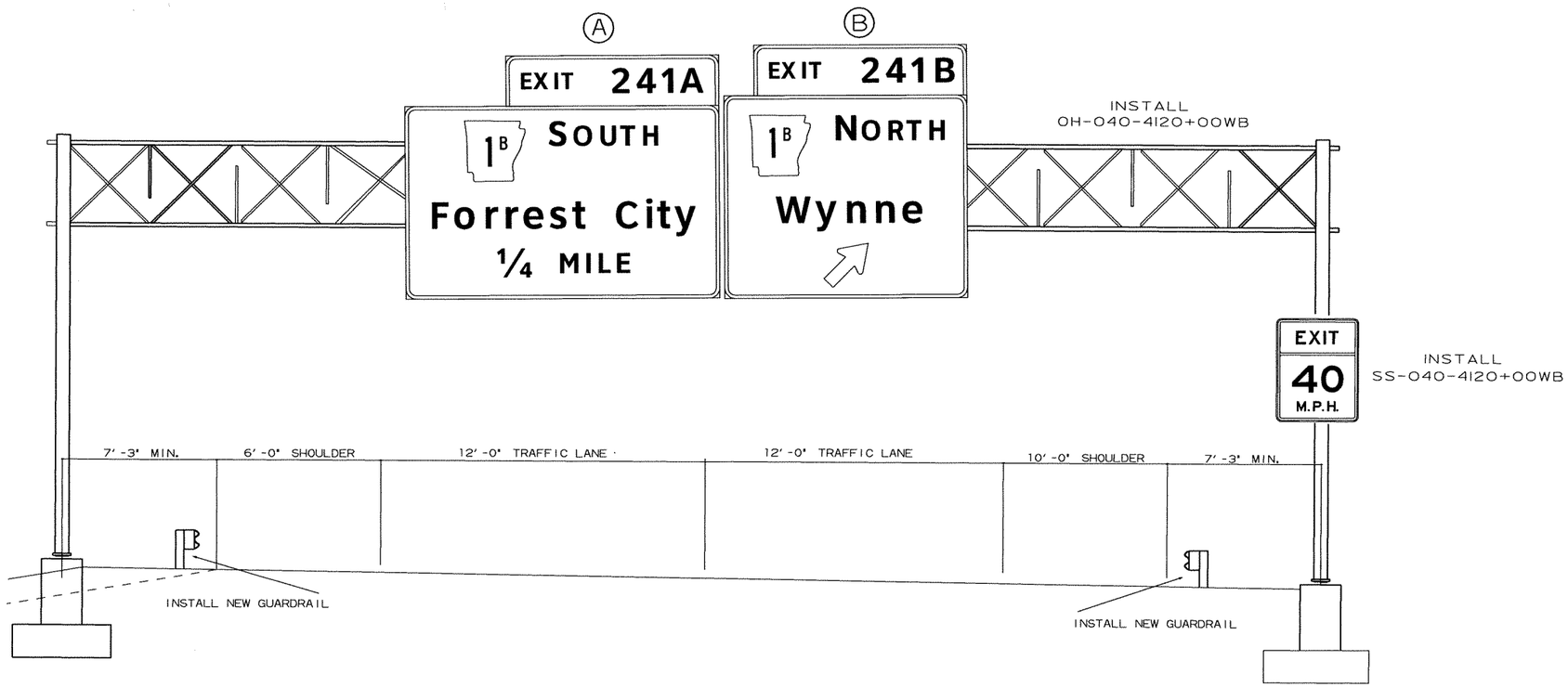


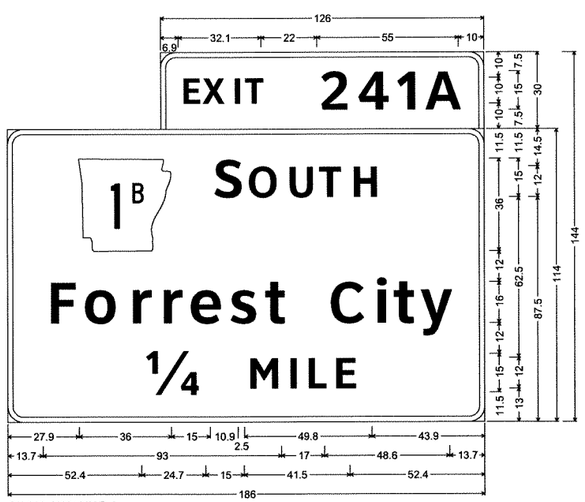
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	158	374

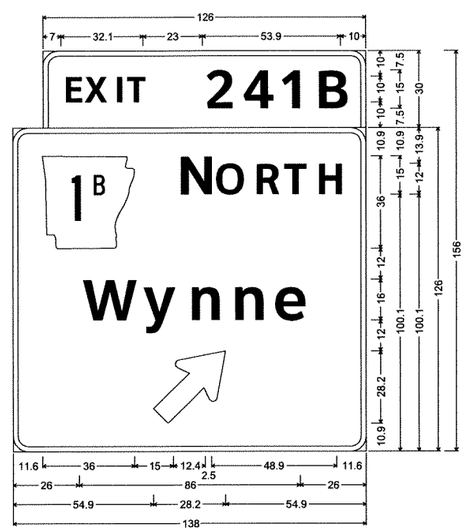
2 SIGN LAYOUT SHEET

INSTALL OVERHEAD
OH-040-68-01





OH-040-4120+00WB-A;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [241A] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [S] ClearviewHwy-5-W; [OUTH] ClearviewHwy-5-W; [Forrest City] ClearviewHwy-5-W;
[1/4] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;



OH-040-4120+00WB-B;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [241B] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [N] ClearviewHwy-5-W; [ORTH] ClearviewHwy-5-W;
[Wynne] ClearviewHwy-5-W;
Standard Arrow Custom 35.8" X 21.6" 45°;

NOTES:

ALL EXISTING GUIDE SIGNS SHALL BE MAINTAINED IN SUCH A MANNER THAT THE SIGNS ARE FULLY VISIBLE, INTACT, AND ERECT FOR THE DURATION OF THE PROJECT, AND SHALL BE REMOVED WHEN THEIR USE IS NO LONGER REQUIRED. REMOVAL AND DISPOSAL OF ROADSIDE MOUNTED SIGNS, SUPPORTS AND FOUNDATIONS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

THE EXISTING SIGNS AND POSTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE EXISTING FOOTINGS SHALL BE REMOVED AND THE HOLES FILLED WITH A SUITABLE MATERIAL AND COMPACTED.

EXISTING LOGOS WILL BE RELOCATED TO THE NEW LOGO SIGN BY THE CONTRACTOR. THE LOGO INSTALLATION SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

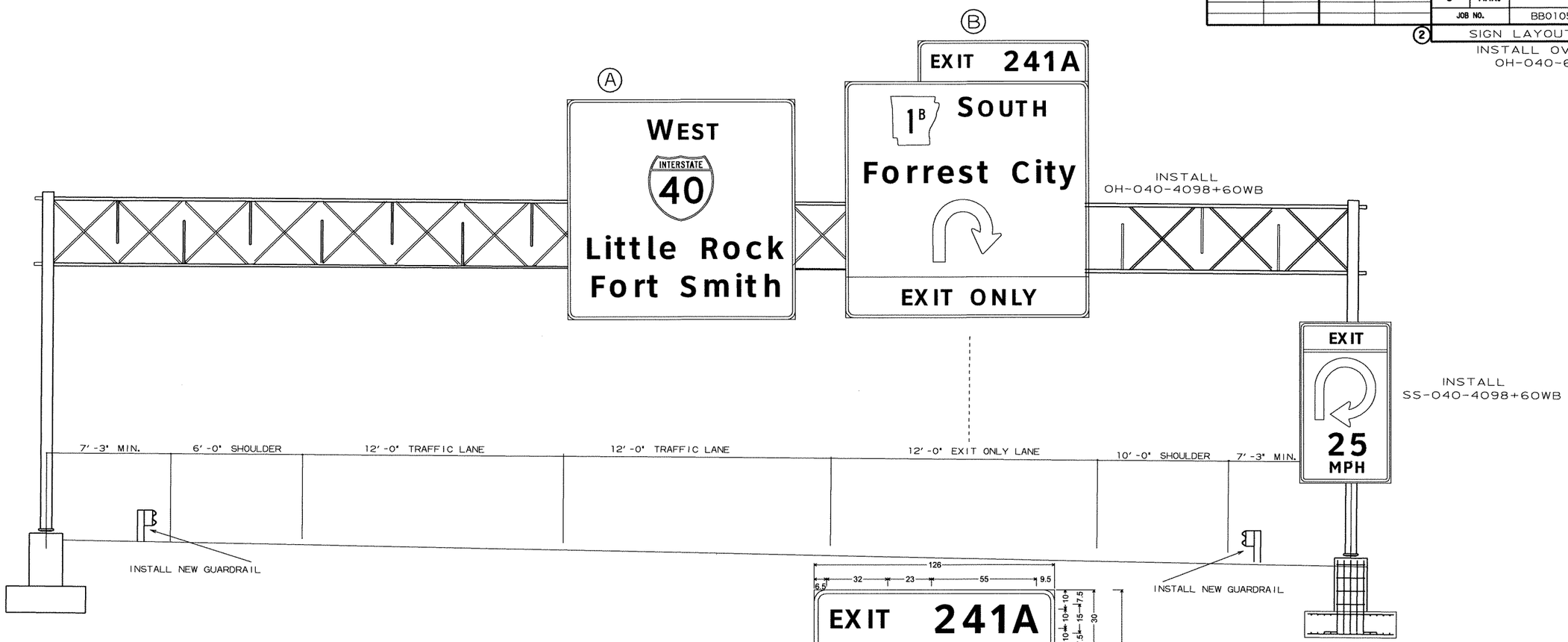
THE CLEARVIEW FONT SHALL FOLLOW THE SPACE TABLES FOR CLEARVIEW AND NOT SHS E-MODIFIED. THIS INCLUDES THE USE OF CLEARVIEW 5-W-R. FOR GENERAL GUIDANCE ON LETTER AND WORD SPACING REFER TO THE FHWA CLEARVIEW TYPEFACE SUPPLEMENT. (HTTP://MUTCD.FHWA.DOT.GOV)

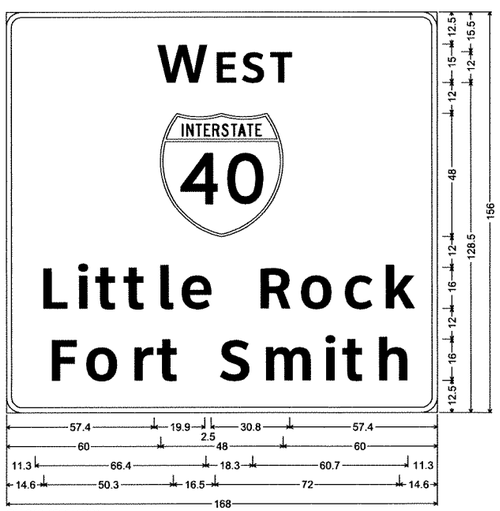
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	159	374

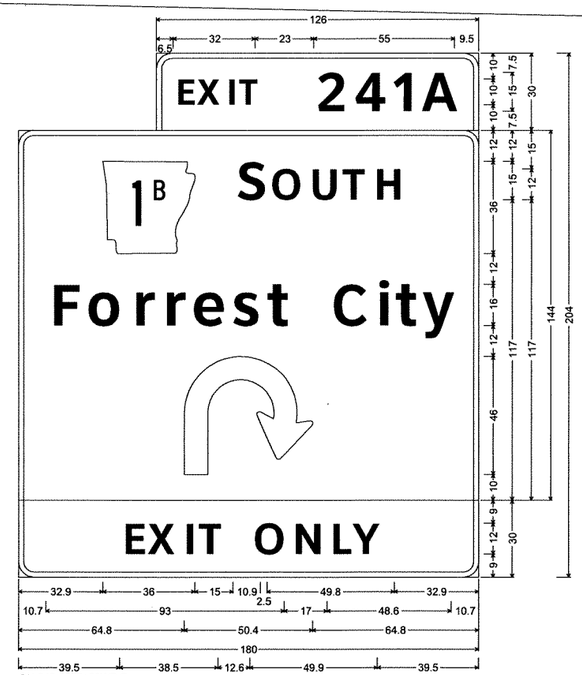
2 SIGN LAYOUT SHEET

INSTALL OVERHEAD
OH-040-68-04





OH-040-4098+60WB-A;
6.0" Radius, 2.0" Border, White on Green;
[W] ClearviewHwy-5-W; [EST] ClearviewHwy-5-W;
[Little Rock] ClearviewHwy-5-W; [Fort Smith] ClearviewHwy-5-W;



OH-040-4098+60WB-B;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [241A] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [S] ClearviewHwy-5-W; [OUTH] ClearviewHwy-5-W;
[Forrest City] ClearviewHwy-5-W; Turn Arrow Custom;
6.0" Radius, 2.0" Border, Black on Yellow;
[EXIT ONLY] ClearviewHwy-5-W;

STATE OF ARKANSAS
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12/21/12
TONY SULLIVAN

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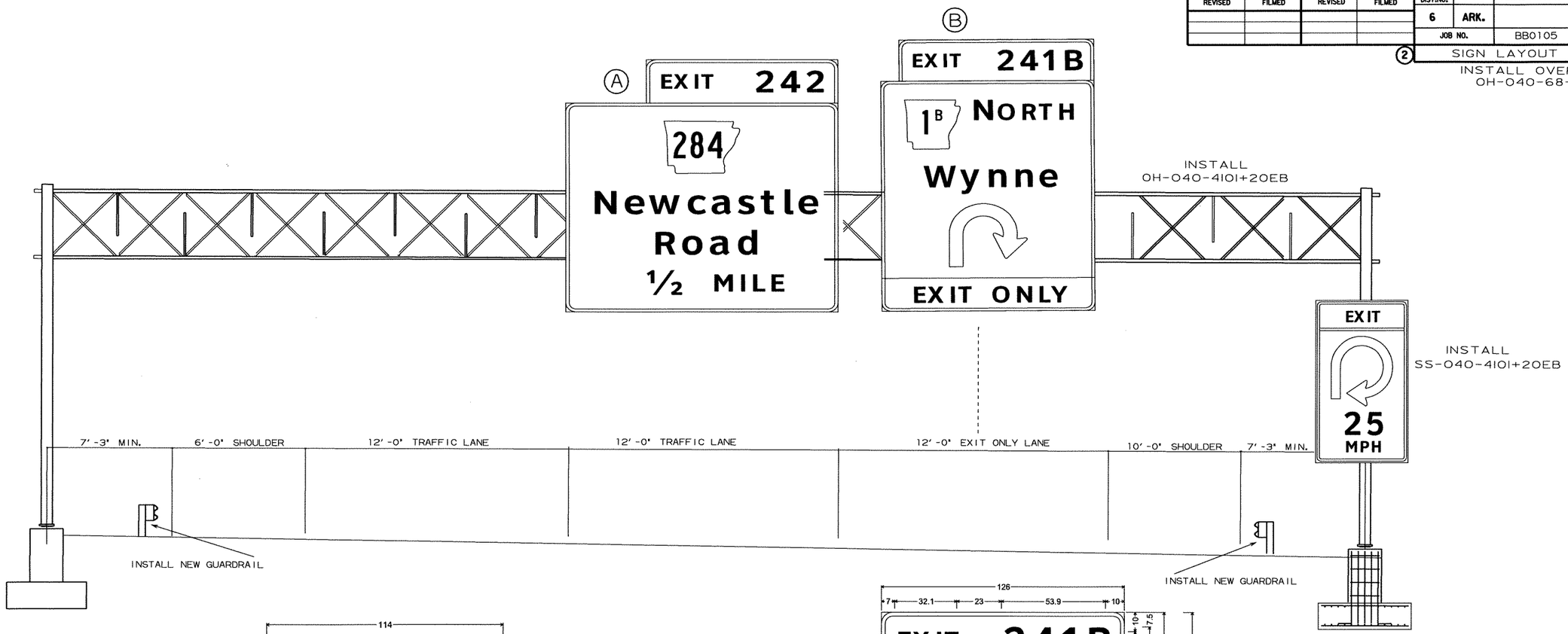
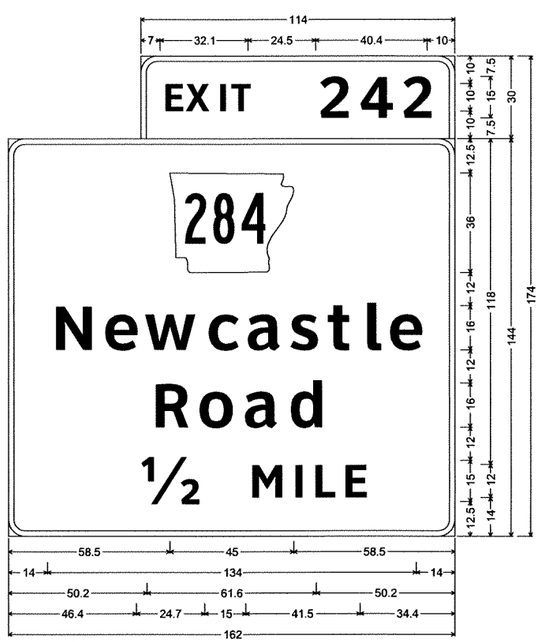
				6	ARK.			
				JOB NO.		BB0105	160	374

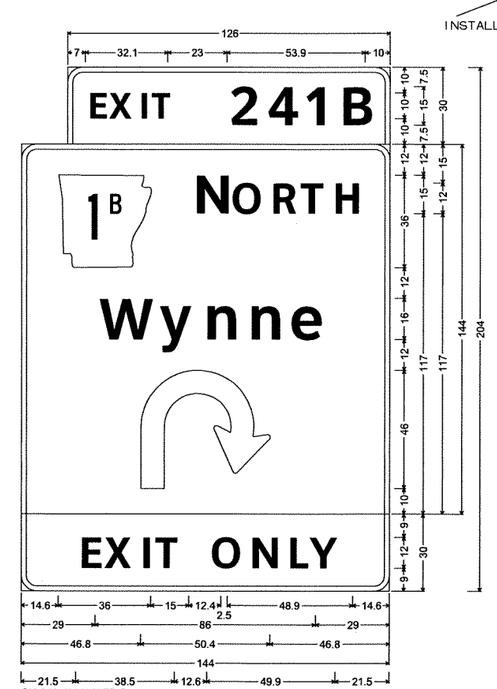
(2) SIGN LAYOUT SHEET

INSTALL OVERHEAD
OH-040-68-05





OH-040-4101+20EB-A;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [242] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Newcastle] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
[1/2] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;



OH-040-4101+20EB-B;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [241B] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [N] ClearviewHwy-5-W; [ORTH] ClearviewHwy-5-W;
[Wynne] ClearviewHwy-5-W; Turn Arrow Custom;
6.0" Radius, 2.0" Border, Black on Yellow;
[EXIT ONLY] ClearviewHwy-5-W;

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
1/22/13
TONY SULLIVAN

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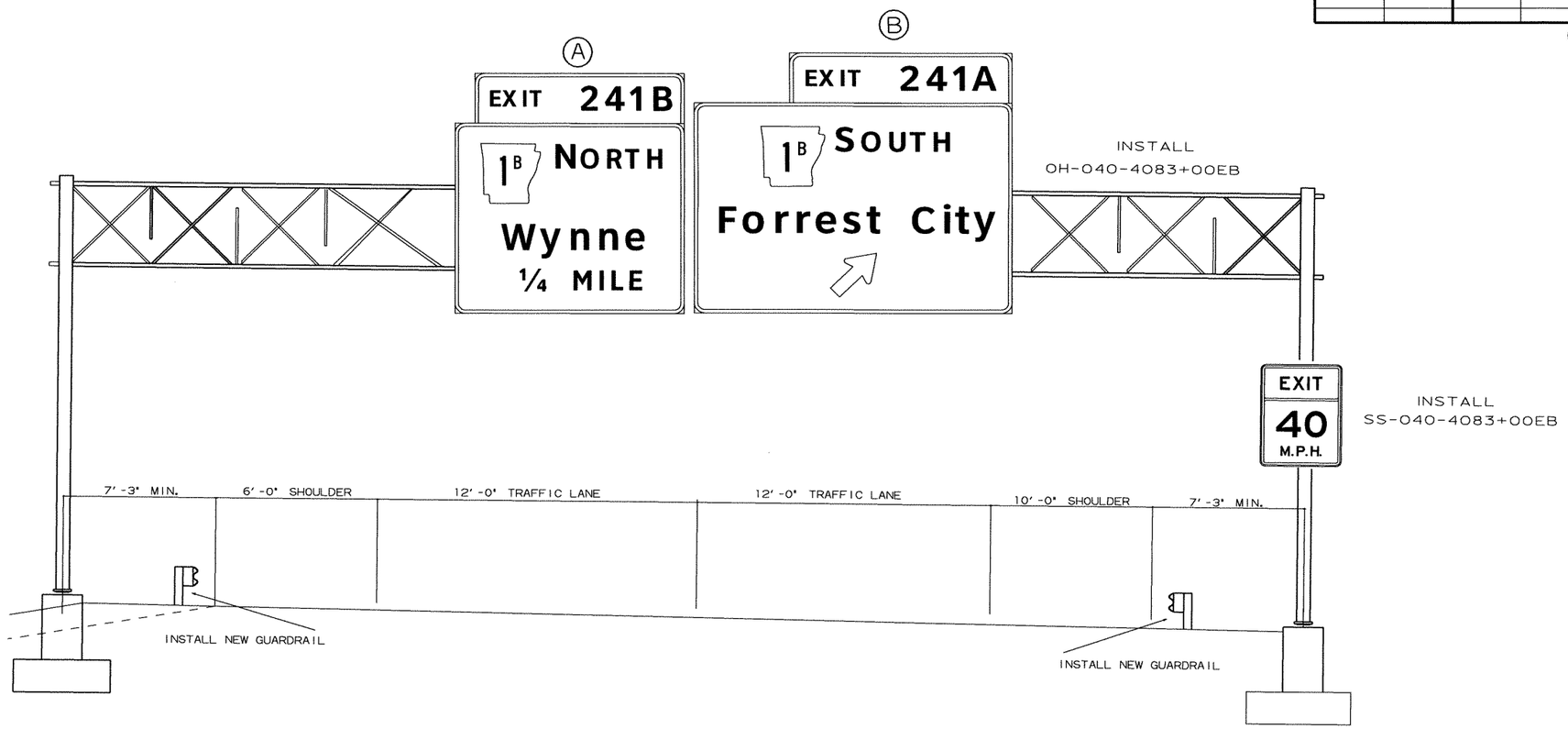
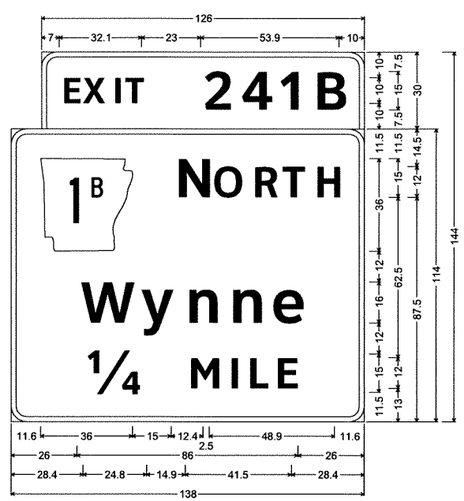
				6	ARK.			
				JOB NO.		BB0105	161	374

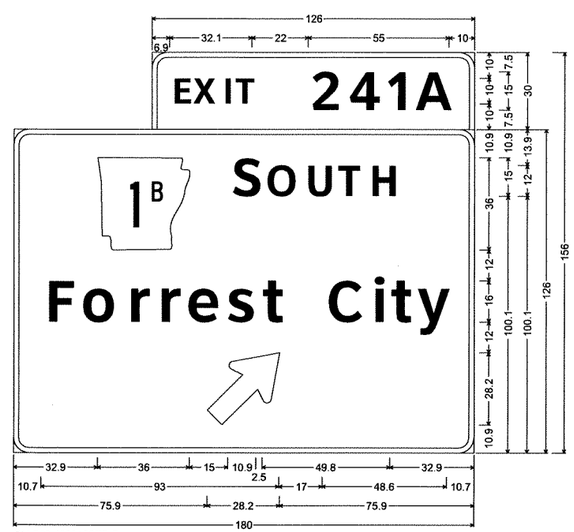
2 SIGN LAYOUT SHEET

INSTALL OVERHEAD
OH-040-68-02





OH-040-4083+00EB-A;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [241B] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [N] ClearviewHwy-5-W; [ORTH] ClearviewHwy-5-W;
[Wynne] ClearviewHwy-5-W; [1/4] ClearviewHwy-5-W;
[MILE] ClearviewHwy-5-W;

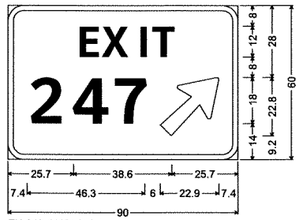


OH-040-4083+00EB-B;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [241A] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [S] ClearviewHwy-5-W; [OUTH] ClearviewHwy-5-W;
[Forrest City] ClearviewHwy-5-W; Standard Arrow Custom 35.8" X 21.6" 45°;

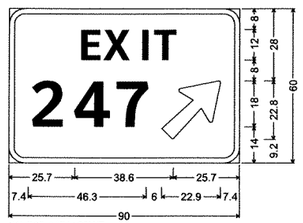
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	162	374

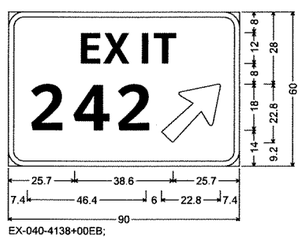
2 SIGN LAYOUT SHEET



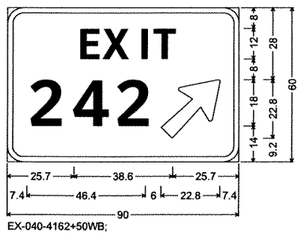
EX-040-4419+50EB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W;
[247] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;



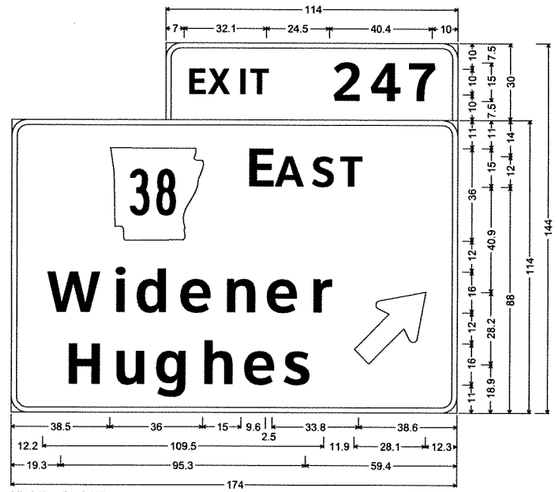
EX-040-4451+00WB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W;
[247] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;



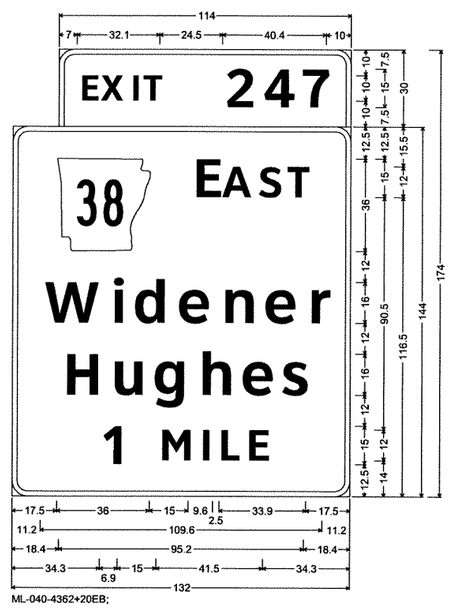
EX-040-4138+00EB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W;
[242] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;



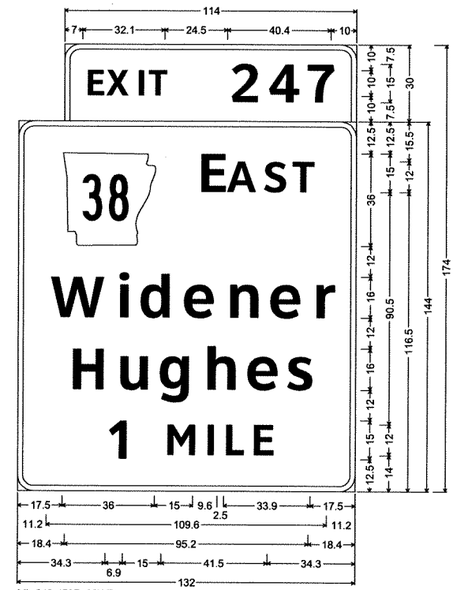
EX-040-4162+50WB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W;
[242] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;



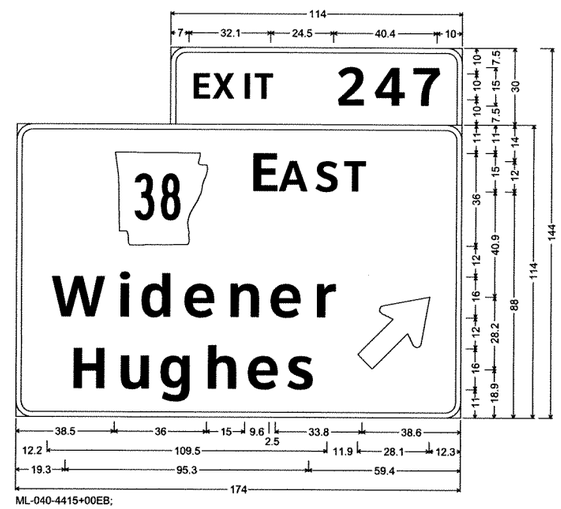
ML-040-4456+50WB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [247] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [E] ClearviewHwy-5-W; [AST] ClearviewHwy-5-W;
[Widener] ClearviewHwy-5-W; [Hughes] ClearviewHwy-5-W;
Standard Arrow Custom 35.8" X 21.6" 45°;



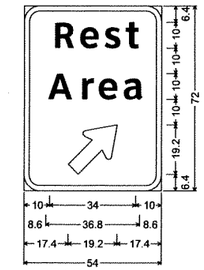
ML-040-4362+20EB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [247] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [E] ClearviewHwy-5-W; [AST] ClearviewHwy-5-W;
[Widener] ClearviewHwy-5-W; [Hughes] ClearviewHwy-5-W;
[1] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;



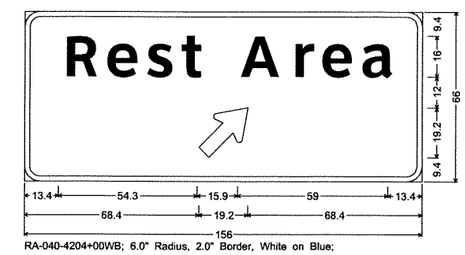
ML-040-4507+80WB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [247] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [E] ClearviewHwy-5-W; [AST] ClearviewHwy-5-W;
[Widener] ClearviewHwy-5-W; [Hughes] ClearviewHwy-5-W;
[1] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;



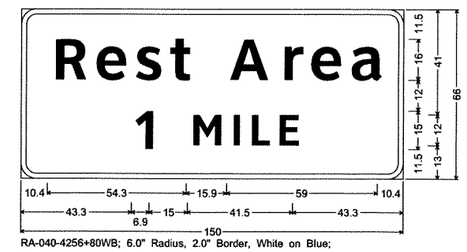
ML-040-4415+00EB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [247] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [E] ClearviewHwy-5-W; [AST] ClearviewHwy-5-W;
[Widener] ClearviewHwy-5-W; [Hughes] ClearviewHwy-5-W;
Standard Arrow Custom 35.8" X 21.6" 45°;



RA-040-4199+20WB;
6.0" Radius, 2.0" Border, White on Blue;
[Rest] ClearviewHwy-5-W;
[Area] ClearviewHwy-5-W;
Standard Arrow Custom 24.5" X 15.0" 45°;



RA-040-4204+00WB; 6.0" Radius, 2.0" Border, White on Blue;
[Rest Area] ClearviewHwy-5-W; Standard Arrow Custom 24.5" X 15.0" 45°;

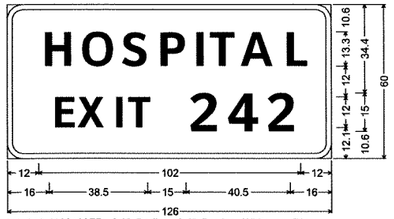


RA-040-4256+80WB; 6.0" Radius, 2.0" Border, White on Blue;
[Rest Area] ClearviewHwy-5-W; [1] ClearviewHwy-5-W;
[MILE] ClearviewHwy-5-W;

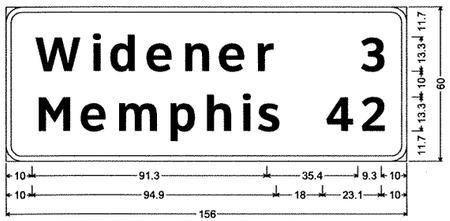
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	163	374

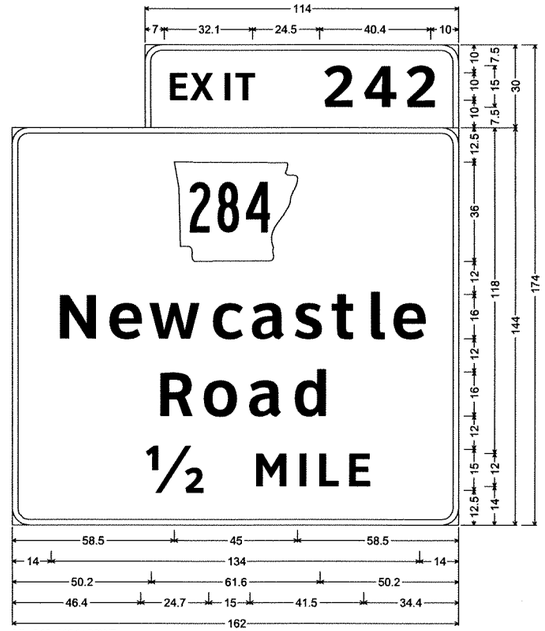
(2) SIGN LAYOUT SHEET



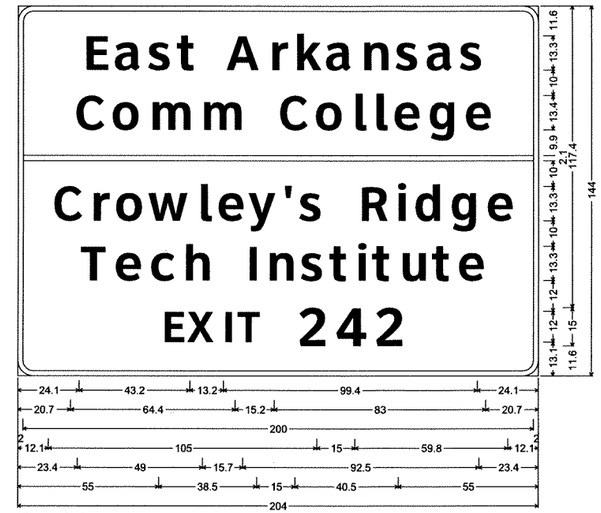
ML-040-4122+00EB; 6.0" Radius, 2.0" Border, White on Blue;
[HOSPITAL] ClearviewHwy-5-W; [EXIT] ClearviewHwy-5-W;
[242] ClearviewHwy-5-W;



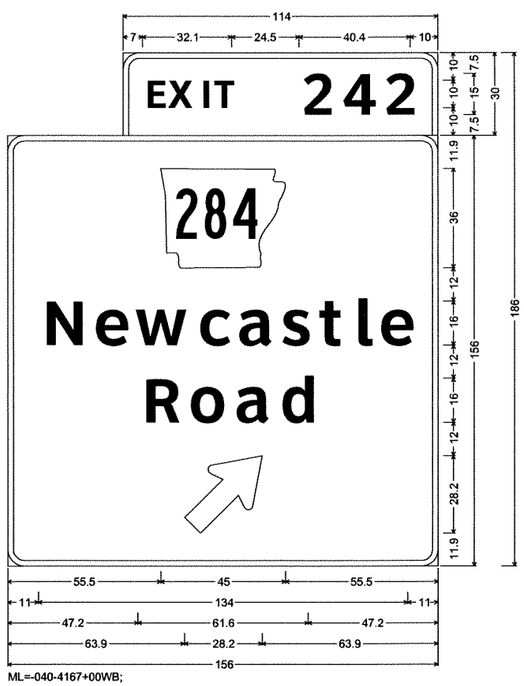
ML-040-4194+00EB; 6.0" Radius, 2.0" Border, White on Green;
[Widener] ClearviewHwy-5-W; [3] ClearviewHwy-5-W;
[Memphis] ClearviewHwy-5-W; [42] ClearviewHwy-5-W;



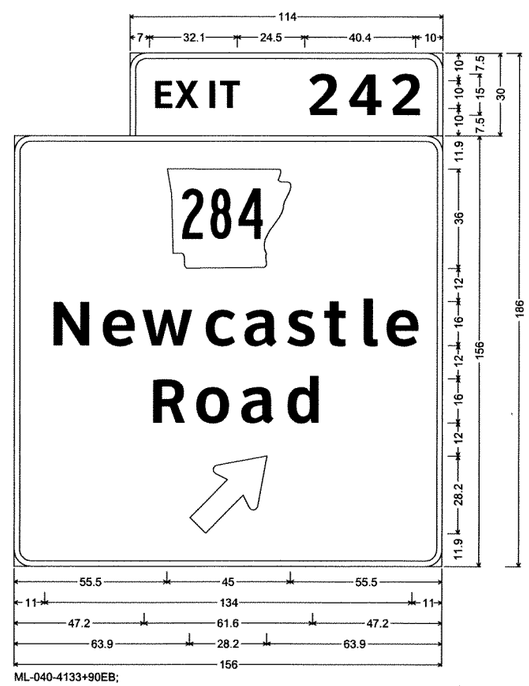
ML-040-4191+80WB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [242] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Newcastle] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
[½] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;



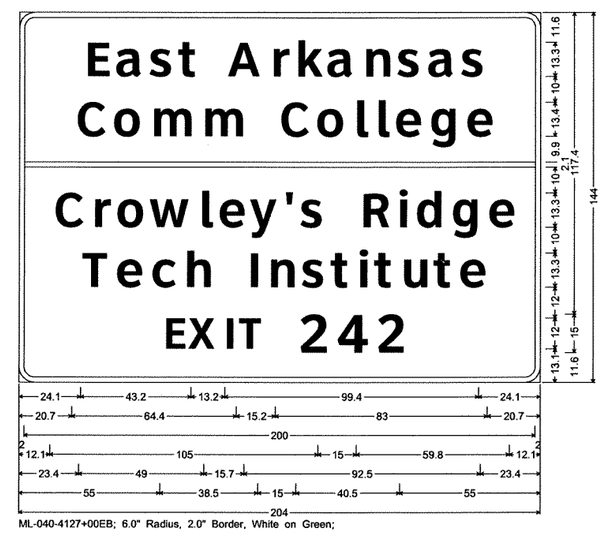
ML-040-4177+00WB; 6.0" Radius, 2.0" Border, White on Green;
[East Arkansas] ClearviewHwy-5-W; [Comm College] ClearviewHwy-5-W;
[Crowley's Ridge] ClearviewHwy-5-W; [Tech Institute] ClearviewHwy-5-W; [EXIT] ClearviewHwy-5-W;
[242] ClearviewHwy-5-W;



ML=-040-4167+00WB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [242] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Newcastle] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
Standard Arrow Custom 35.8" X 21.6" 45°;



ML-040-4133+90EB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [242] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Newcastle] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
Standard Arrow Custom 35.8" X 21.6" 45°;



ML-040-4127+00EB; 6.0" Radius, 2.0" Border, White on Green;
[East Arkansas] ClearviewHwy-5-W; [Comm College] ClearviewHwy-5-W;
[Crowley's Ridge] ClearviewHwy-5-W; [Tech Institute] ClearviewHwy-5-W; [EXIT] ClearviewHwy-5-W;
[242] ClearviewHwy-5-W;

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
1/22/13
TONY SULLIVAN

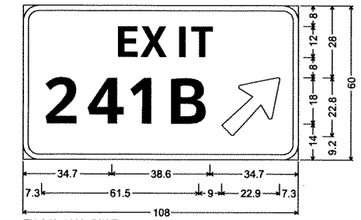
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	164	374

2 SIGN LAYOUT SHEET

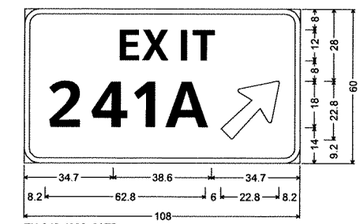
ML-040-4197+00WB; 6.0" Radius, 2.0" Border, White on Green;
[Natural State] ClearviewHwy-5-W; [Golf Trail] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Brown;
[Village Creek] ClearviewHwy-5-W; [State Park] ClearviewHwy-5-W;
[EXIT] ClearviewHwy-5-W; [242] ClearviewHwy-5-W; SYM;

ML-040-4110+00EB; 6.0" Radius, 2.0" Border, White on Green;
[Natural State] ClearviewHwy-5-W; [Golf Trail] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Brown;
[Village Creek] ClearviewHwy-5-W; [State Park] ClearviewHwy-5-W;
[EXIT] ClearviewHwy-5-W; [242] ClearviewHwy-5-W; SYM;

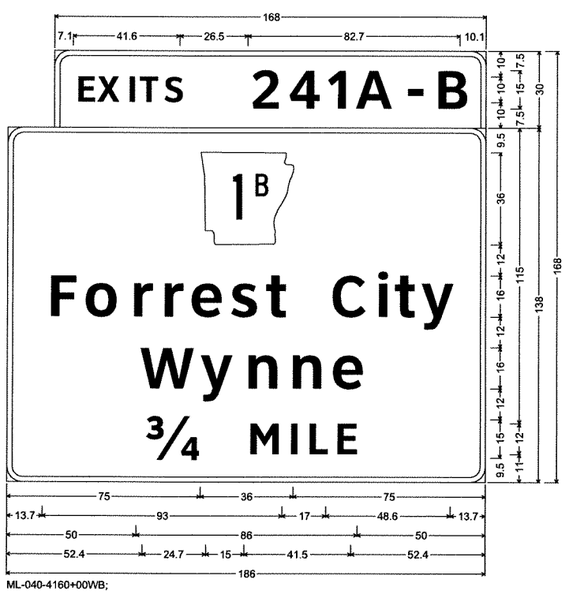
ML-040-4068+00WB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [239] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Wynne] ClearviewHwy-5-W; [Marianna] ClearviewHwy-5-W;
[1] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;



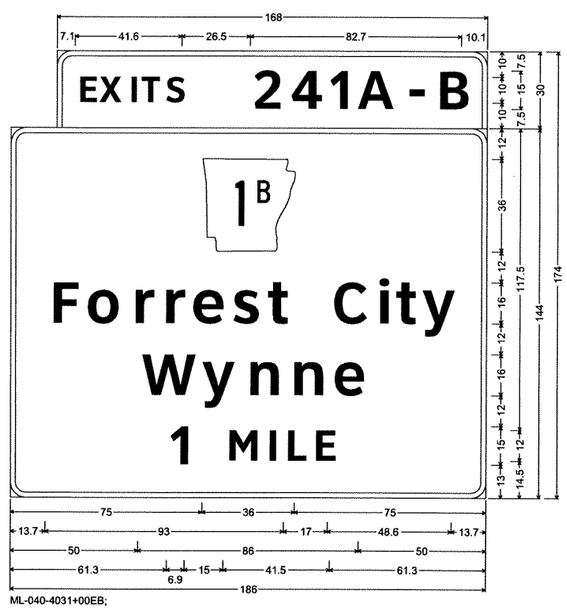
EX-040-4116+50WB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W;
[241B] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;



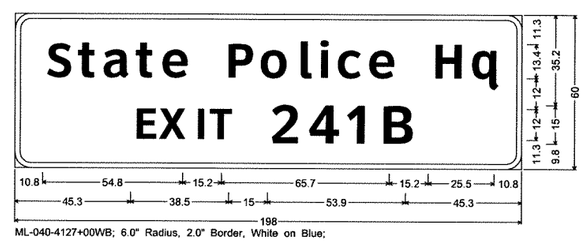
EX-040-4086+30EB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W;
[241A] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;



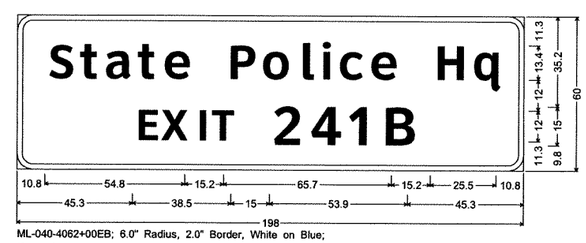
ML-040-4160+00WB;
6.0" Radius, 2.0" Border, White on Green;
[EXITS] ClearviewHwy-5-W; [241A-B] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Forrest City] ClearviewHwy-5-W; [Wynne] ClearviewHwy-5-W;
[3/4] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;



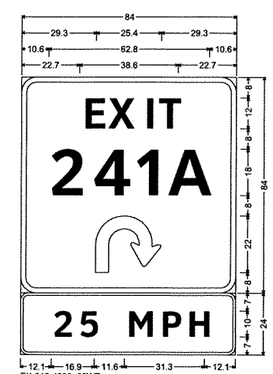
ML-040-4031+00EB;
6.0" Radius, 2.0" Border, White on Green;
[EXITS] ClearviewHwy-5-W; [241A-B] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Forrest City] ClearviewHwy-5-W; [Wynne] ClearviewHwy-5-W;
[1] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;



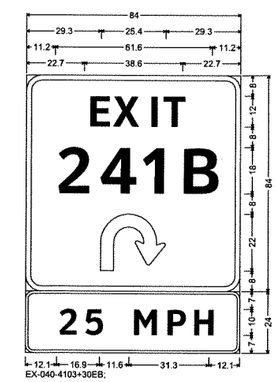
ML-040-4127+00WB; 6.0" Radius, 2.0" Border, White on Blue;
[State Police Hq] ClearviewHwy-5-W; [EXIT] ClearviewHwy-5-W; [241B] ClearviewHwy-5-W;



ML-040-4062+00EB; 6.0" Radius, 2.0" Border, White on Blue;
[State Police Hq] ClearviewHwy-5-W; [EXIT] ClearviewHwy-5-W; [241B] ClearviewHwy-5-W;



EX-040-4093+00WB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W;
[241A] ClearviewHwy-5-W-R;
Turn Arrow Custom;
3.0" Radius, 1.0" Border, Black on Yellow;
[25 MPH] ClearviewHwy-5-W;



EX-040-4103+30EB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W;
[241B] ClearviewHwy-5-W-R;
Turn Arrow Custom;
3.0" Radius, 1.0" Border, Black on Yellow;
[25 MPH] ClearviewHwy-5-W;

STATE OF ARKANSAS
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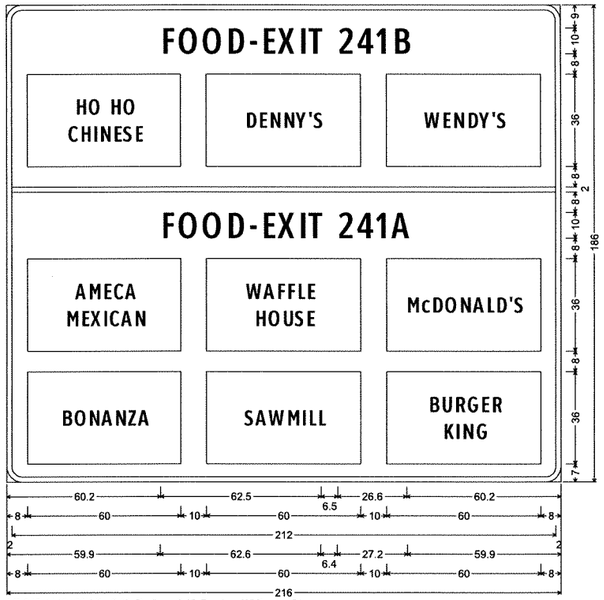
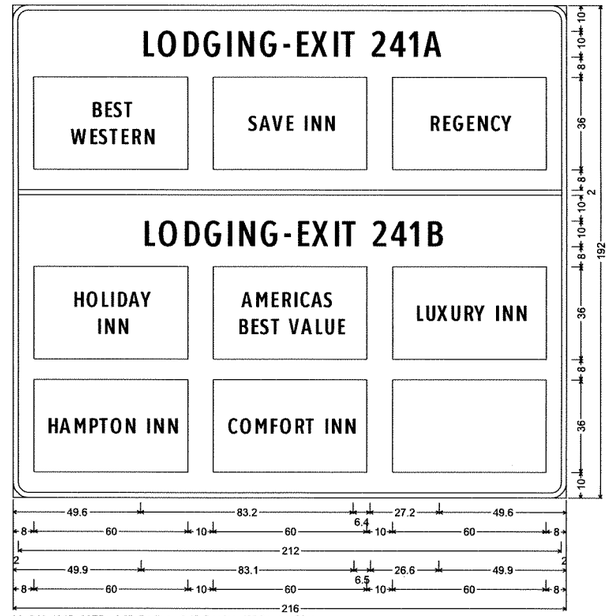
No. 5851
12/21/12
J. TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	165	374

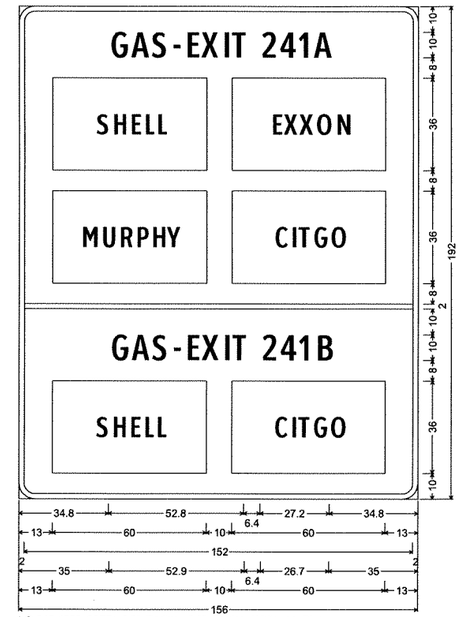
2 SIGN LAYOUT SHEET



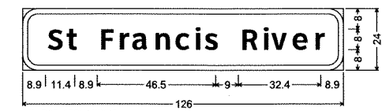
LF-040-4148+00WB; 6.0" Radius, 2.0" Border, White on Blue;
[FOOD-EXIT 241B] ClearviewHwy-2-W;
[FOOD-EXIT 241A] ClearviewHwy-2-W;



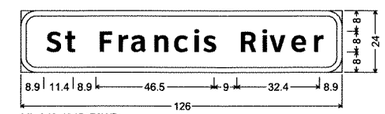
LL-040-4045+00EB; 6.0" Radius, 2.0" Border, White on Blue;
[LODGING-EXIT 241A] ClearviewHwy-2-W;
[LODGING-EXIT 241B] ClearviewHwy-2-W;



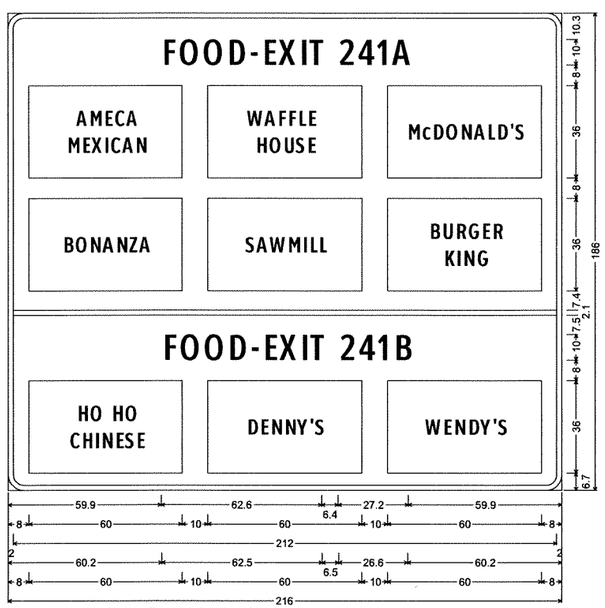
LG-040-4038+00EB; 6.0" Radius, 2.0" Border, White on Blue;
[GAS-EXIT 241A] ClearviewHwy-2-W;
[GAS-EXIT 241B] ClearviewHwy-2-W;



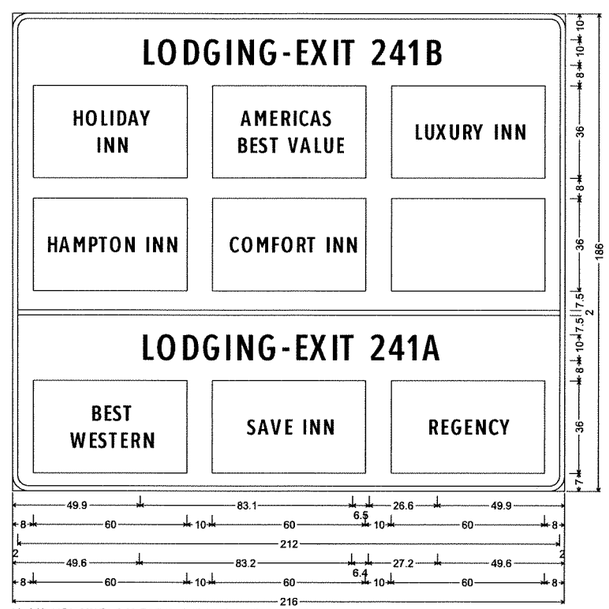
ML-040-4335+00EB;
6.0" Radius, 2.0" Border, White on Green;
[St Francis River] ClearviewHwy-5-W;



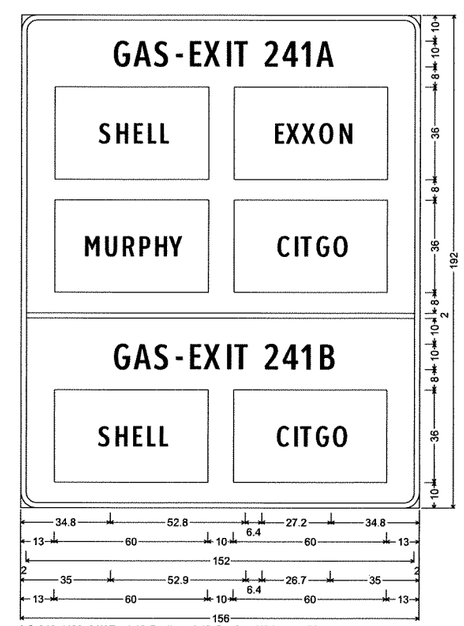
ML-040-4345+70WB;
6.0" Radius, 2.0" Border, White on Green;
[St Francis River] ClearviewHwy-5-W;



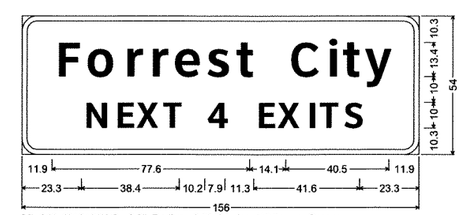
LF-040-4052+00EB; 6.0" Radius, 2.0" Border, White on Blue;
[FOOD-EXIT 241A] ClearviewHwy-2-W;
[FOOD-EXIT 241B] ClearviewHwy-2-W;



LL-040-4154+20WB; 6.0" Radius, 2.0" Border, White on Blue;
[LODGING-EXIT 241B] ClearviewHwy-2-W;
[LODGING-EXIT 241A] ClearviewHwy-2-W;



LG-040-4133+90WB; 6.0" Radius, 2.0" Border, White on Blue;
[GAS-EXIT 241A] ClearviewHwy-2-W;
[GAS-EXIT 241B] ClearviewHwy-2-W;



ML-040-4213+00WB; 6.0" Radius, 2.0" Border, White on Green;
[Forrest City] ClearviewHwy-5-W; [NEXT 4 EXITS] ClearviewHwy-5-W;

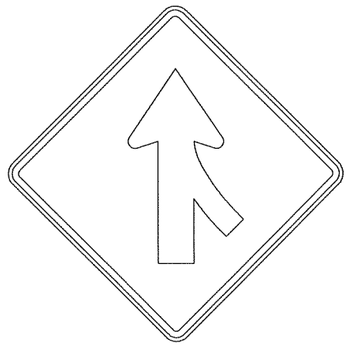
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
1/22/13
L. TONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	166	374

2 SIGN LAYOUT SHEET

FLAT SHEET
STANDARD SIGNS

G-2
W4-1R (48" X48")

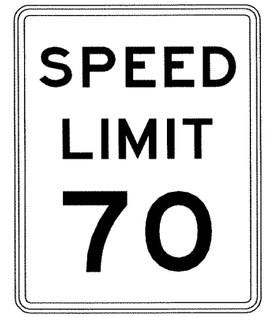


SS-040-4109+00WB
SS-040-4114+00EB
SS-040-4093+00EB
SS-040-4091+00WB
SS-040-4143+00WB
SS-040-4158+00EB
SS-040-4188+00WB
SS-040-4434+00WB
SS-040-4437+00WB

G-2
W8-13 (48" X48")

SS-040-4039+00WB
SS-040-4054+00EB
SS-040-4065+00WB
SS-040-4090+00EB
SS-040-4146+00EB
SS-040-4158+00WB
SS-040-4213+00EB
SS-040-4226+00WB
SS-040-4305+00EB
SS-040-4320+00WB
SS-040-4329+00EB
SS-040-4350+00WB
SS-040-4213+00EB
SS-040-4226+00WB

G-2



R2-1 (48" X60")

R2-2 (48" X48")

SS-040-4057+00WB
SS-040-4185+00EB
SS-040-4404+00WB
SS-040-4467+00EB

G-1

M3-4 (30" X15")

M1-1 (36" X36")

SS-040-4075+00WB
SS-040-4414+00WB

G-1

M3-2 (30" X15")

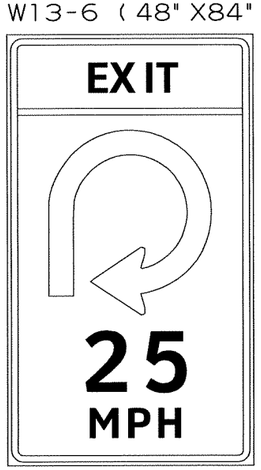
M1-1 (36" X36")

SS-040-4175+00EB
SS-040-4458+00EB

G-2
R4-3 (48" X60")

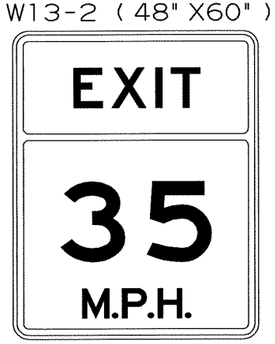
SS-040-4070+00WB
SS-040-4180+00EB
SS-040-4409+00WB
SS-040-4464+00EB

G-2
W13-6 (48" X84")



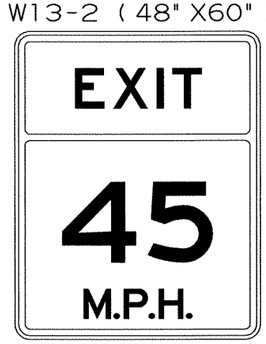
SS-040-4098+60WB
SS-040-4101+20EB

G-2
W13-2 (48" X60")



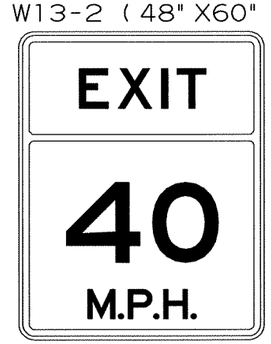
SS-040-4202+00WB

G-2
W13-2 (48" X60")



SS-040-4416+00EB
SS-040-4454+00WB
SS-040-4165+00WB

G-2
W13-2 (48" X60")



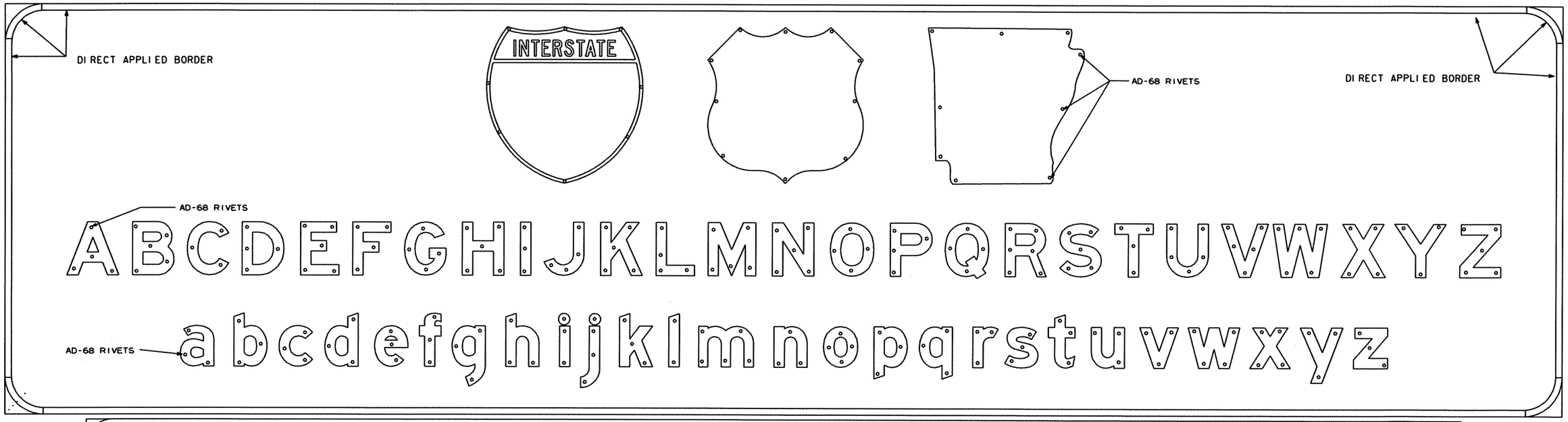
SS-040-4083+00EB
SS-040-4120+00WB
SS-040-4134+80EB

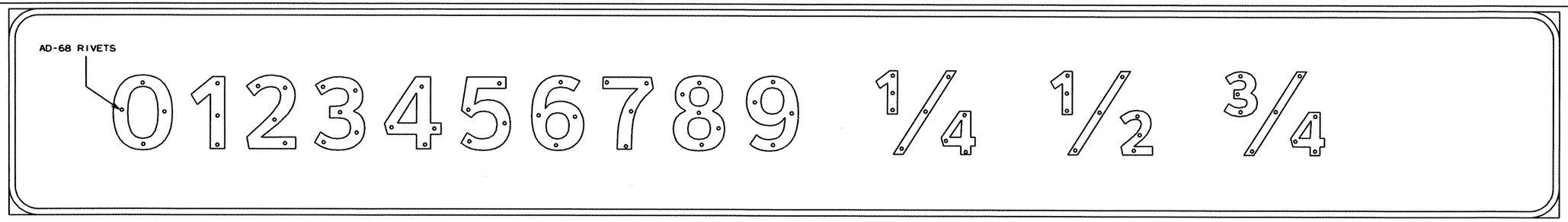
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
ANTONY SULLIVAN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		880105	167	374

(2) MOUNTING DETAILS FOR DEMOUNTABLE LEGEND ON GUIDE SIGNS

THE CONTRACTOR SHALL DRILL AND POP-RIVET LEGEND, SHIELDS, ARROWS, OR OTHER COPY AS SHOWN.



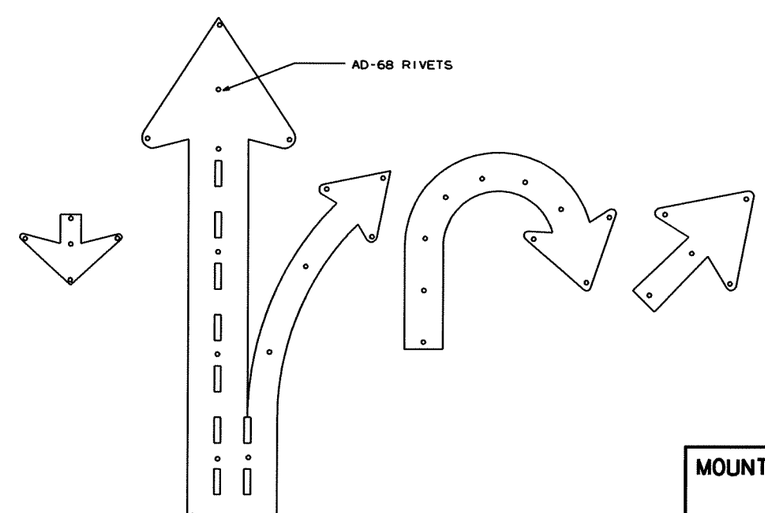


NOTE:

LEGEND ON GUIDE SIGNS ON THE MAIN LANES SHALL BE DEMOUNTABLE LEGEND.
LEGEND ON GUIDE SIGNS ON CROSS ROADS AND RAMPS SHALL BE DIRECT APPLIED.
THE DEMOUNTABLE AND DIRECT APPLIED LEGENDS SHALL BE TYPE IX SHEETING.

THE BACKGROUND ON ALL GUIDE SIGNS AND STANDARD SIGNS SHALL BE CONSTRUCTED USING TYPE III SHEETING.
TYPE IX SHEETING FOR BORDER, LEGEND, SHIELDS, ARROWS, OR OTHER COPY SHALL BE ORIENTED VERTICALLY AS PER MANUFACTURERS' DATUM MARKS, ORIENTATION MARKS, OR OTHER RECOMMENDATIONS.

SIGN LEGEND, SHIELDS, ARROWS OR OTHER COPY SHALL BE APPLIED WITH RIVETS ONLY.
NO OTHER METHOD OF APPLYING CHARACTERS IS ALLOWED.



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
TONY SULLIVAN

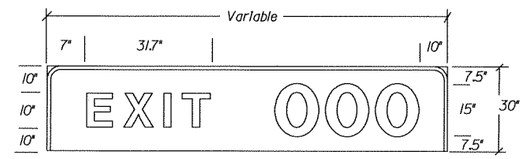
MOUNTING DETAILS FOR DEMOUNTABLE LEGEND ON GUIDE SIGNS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	168	374

(2) EXIT PANEL DETAILS

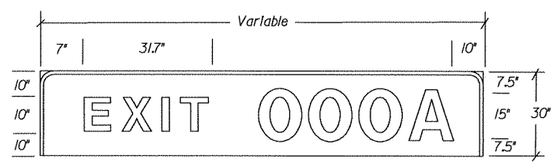
TYPICAL DETAIL

TYPE A



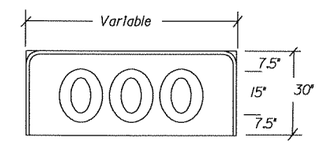
EXIT WITH 1 DIGIT 84"X30"=17.50 SF
EXIT WITH 2 DIGITS 96"X30"=20.0 SF
EXIT WITH 3 DIGITS 114"X30"=23.57 SF

TYPE B



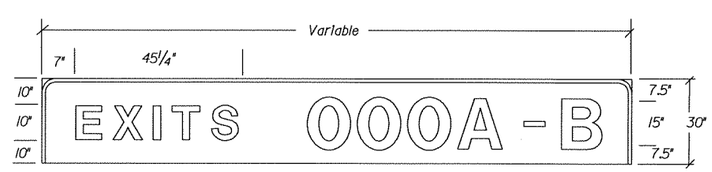
EXIT WITH 1 DIGIT PLUS "A"OR"B" 96"X30"=20.0 SF
EXIT WITH 2 DIGITS PLUS "A"OR"B" 114"X30"=23.57 SF
EXIT WITH 3 DIGITS PLUS "A"OR"B" 126"X30"=26.25 SF

TYPE D



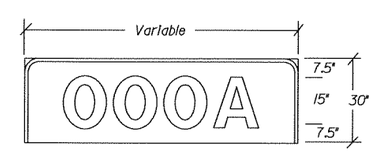
1 DIGIT 24"X30" =5.0 SF
2 DIGITS 42"X30" =8.75 SF
3 DIGITS 60"X30" =12.50 SF

TYPE C



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

TYPE E

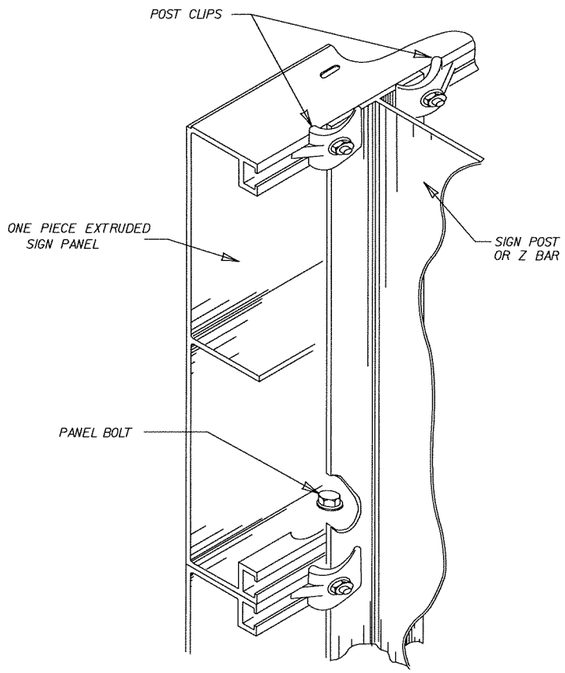


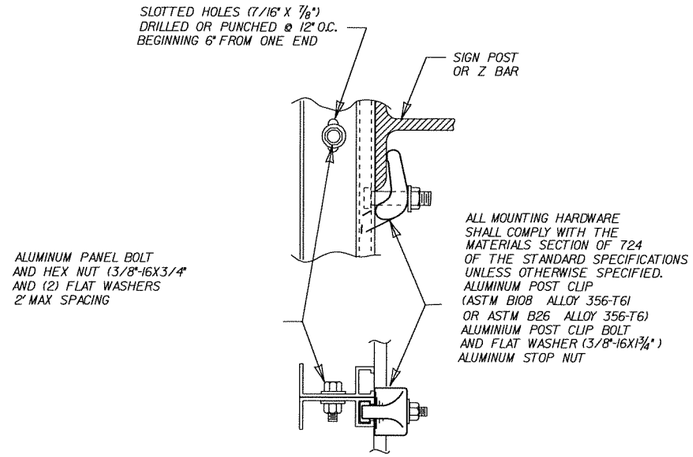
1 DIGIT PLUS "A"OR"B" 42"X30"=8.75 SF
2 DIGITS PLUS "A"OR"B" 60"X30"=12.50 SF
3 DIGITS PLUS "A"OR"B" 78"X30"=16.25 SF

EXIT PANEL DETAILS

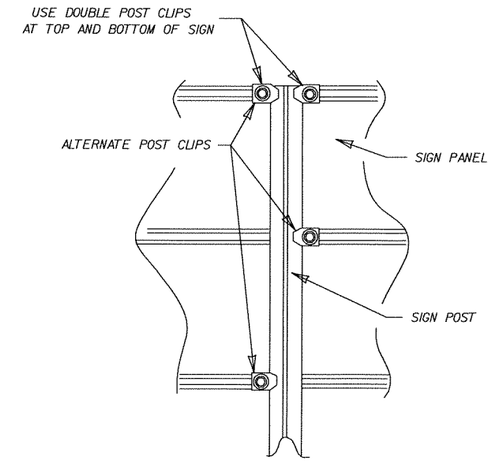
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	169	374

(2) DETAILS OF GUIDE SIGN PANELS

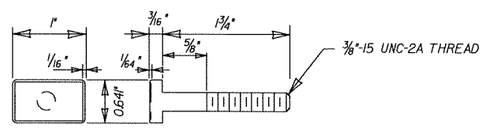




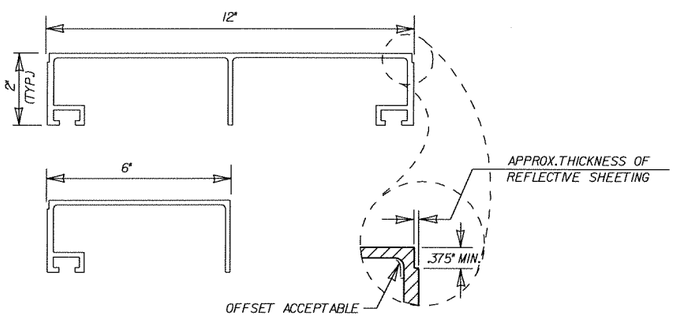
MOUNTING HARDWARE



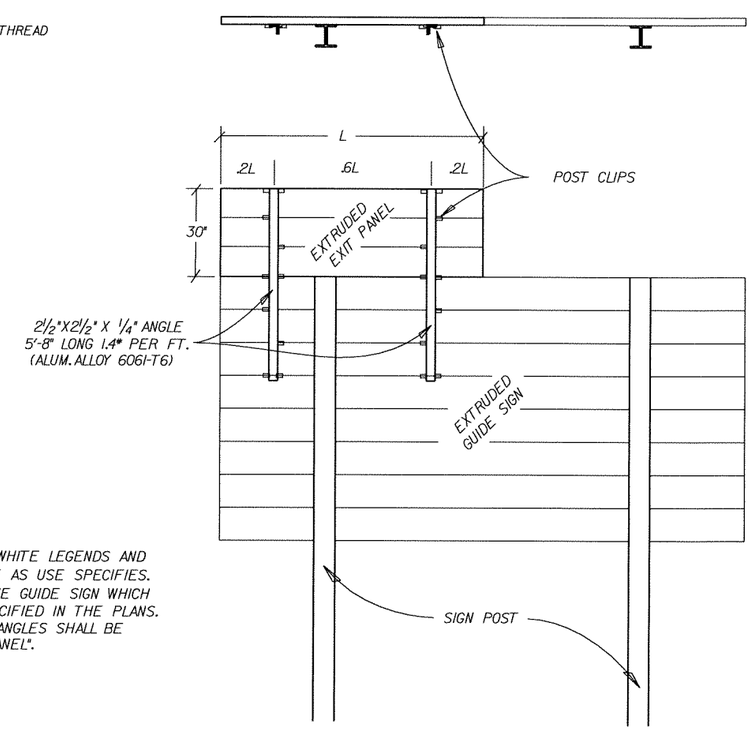
POST CLIP PLACEMENT



POST CLIP BOLT



ONE PIECE EXTRUDED SIGN PANELS



NOTE: EXIT NUMBER PANELS SHALL HAVE WHITE LEGENDS AND BORDERS. THE BACKGROUND COLOR WILL BE AS USE SPECIFIES. SHEETING TYPE WILL BE THE SAME AS THE GUIDE SIGN WHICH THE EXIT PANEL IS ATTACHED OR AS SPECIFIED IN THE PLANS. PAYMENT FOR ALL POST CLIPS, BOLTS, AND ANGLES SHALL BE SUBSIDIARY TO THE ITEM "EXIT NUMBER PANEL".

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
TONY SULLIVAN

DETAILS OF GUIDE SIGN PANELS

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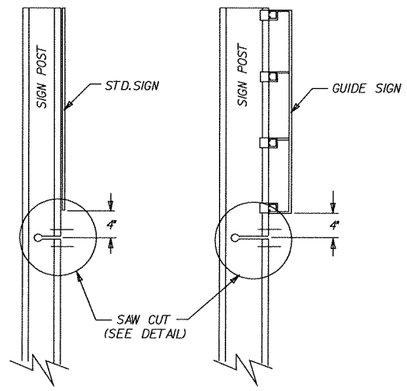
				6	ARK.			
				JOB NO.		BB0105	170	374

(2) DETAILS OF I-BEAM SIGN SUPPORTS

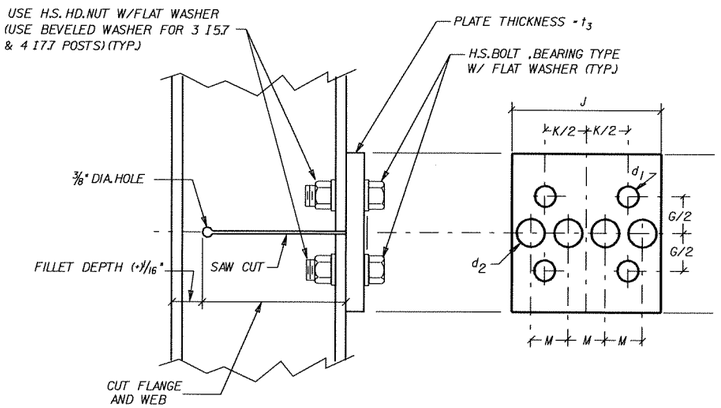
NOTE: BOLT HOLES, USED IN THE MOUNTING OF STANDARD SIGNS SHALL BE LOCATED IN THE FLANGE ADJACENT TO THE NEAR EDGE OF PAVEMENT FOR SINGLE POST ASSEMBLIES AND IN THE OUTSIDE FLANGES FOR MULTIPLE POST ASSEMBLIES.



NOTE: POST SHALL BE SAW CUT AFTER GALVANIZING AND THE CUT SURFACE TREATED, AFTER PLATE IS INSTALLED AND ALL BOLTS FULLY TIGHTENED, WITH AN APPROVED ZINC SOLDER MEETING THE FEDERAL SPEC. O-G-93 (STICK ONLY).

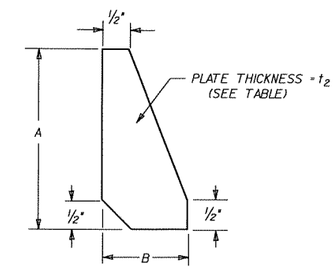
Standard Signs

Guide Signs



NOTE: USE H.S. HEX HEAD BOLTS, HEX HEAD NUTS AND BEVEL OR FLAT WASHERS (WHERE REQ.) UNDER NUTS. ALL HOLES SHALL BE DRILLED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS, HOWEVER FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM-A36, ASTM-A441, ASTM-572 GRADE 50, OR ASTM-A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.

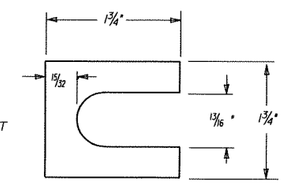
POST SIZE F	BASE CONNECTION DATA											FUSE PLATE DATA									
	BOLT SIZE	BOLT TORQUE (INCH/LBS)	A	B	C	D	E	t_1	t_2	W	R	F	G		J	K	M	d_1	d_2	t_3	BOLT SIZE	WT. OF EACH FUSE PLATE LBS.
W 6X9	5/8" x 2 3/4"	450"-680"	5"	2"	1 1/4"	2 3/4"	1 1/8"	3/4"	1/2"	1/4"	11/32"	4 1/4"	2"		4"	2 1/4"	1"	9/16"	3/4"	1/4"	1/2" x 1 1/2"	1.01
W 6X12																						
W 6X15												5"	2 1/2"		6"	3 1/2"	1 1/2"	11/16"	1 1/4"	3/8"	5/8" x 2 1/4"	2.51
W 8X18	3/4" x 3 1/2"	750"-1050"	6"	2 1/4"	1 3/8"	3 1/2"	1 1/4"	1"	3/4"	5/16"	13/32"	5"	2 1/2"		5 1/4"	2 3/4"	1 1/4"	13/16"	1 11/16"	3/8"	3/4" x 2 1/4"	2.26
W 8X21												5 1/2"	2 1/2"		5 1/4"	2 3/4"	1 1/4"	13/16"	1"	1/2"	3/4" x 2 1/4"	3.35
W 10X22												6"	3"		5 3/4"	2 3/4"	1 3/8"	13/16"	1 1/8"	1/2"	3/4" x 2 1/4"	4.03
W 10X26																						
W 12X26												6"	3"		6 1/2"	3 1/2"	1 5/8"	13/16"	1 5/16"	1/2"	3/4" x 2 1/4"	4.47



STIFFENER PLATE DETAIL

FUSE PLATE DETAILS

FURNISH 2 ~ .012"+/- THICK AND 2 ~ .032"+/- THICK SHIMS PER POST



SHIM DETAIL

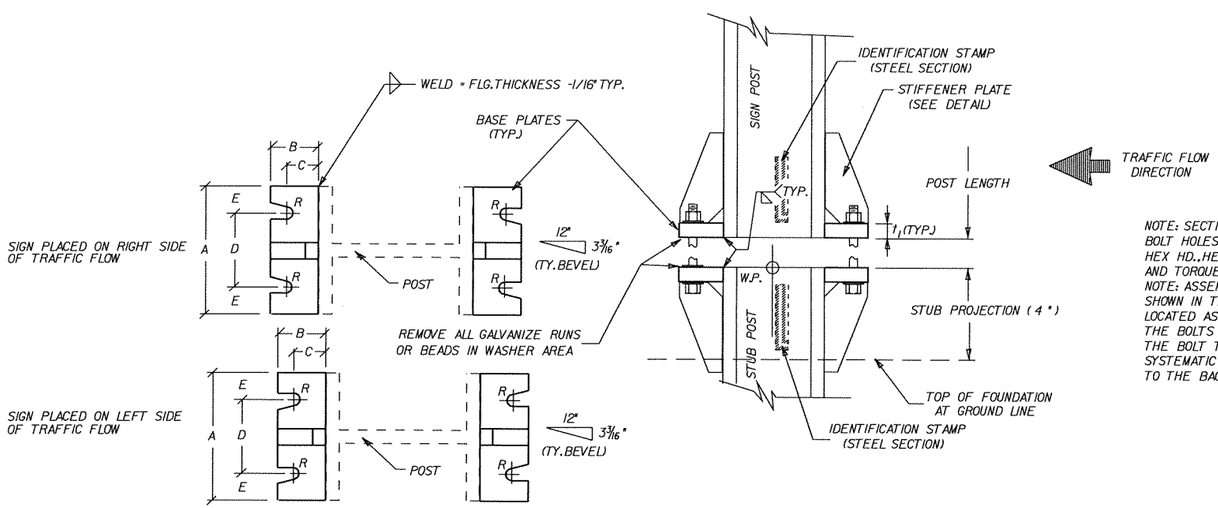
GENERAL NOTES

TIGHTEN THE HIGH STRENGTH BOLTS IN THE BASE CONNECTION ONLY TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

BASE PLATES AND STIFFENER PLATES SHALL BE OF THE SAME MATERIAL AS THE PRIMARY SUPPORT POSTS WHICH THEY ARE WELDED.

FOR FOOTING DETAILS REFER TO PLANS.

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



SIGN POST AND STUB POST

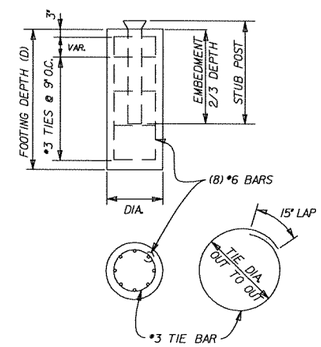
NOTE: SECTIONS SHOWN ARE FOR INSTALLATION ON THE RIGHT SHOULDER AND IN THE GORE. BOLT HOLES IN BASE PLATE ARE SLOTTED AND BEVELED AS SHOWN. USE H.S. BOLTS WITH HEX HD., HEX NUT AND THREE FLAT WASHERS FOR EACH BOLT. SEE TABLE FOR BOLT DIA. AND TORQUE.
NOTE: ASSEMBLE SIGN POST TO STUB POST USING THE BOLTS SPEC. IN THE TABLE AND AS SHOWN IN THE ELEVATION DETAILS. THERE SHALL BE THREE FLAT WASHERS ON EACH BOLT LOCATED AS SHOWN IN THE ELEVATIONS. USE A SHIM TO PLUMB THE SIGN POST, THEN TIGHTEN THE BOLTS USING A 12" TO 15" WRENCH UNTIL THE WASHERS AND SHIMS ARE SEATED AND THE BOLT THREADS ARE CLEAR, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE (SEE TABLE). THE BURR THREADS ADJACENT TO THE BACK SIDE OF THE NUT TO PREVENT LOOSENING.

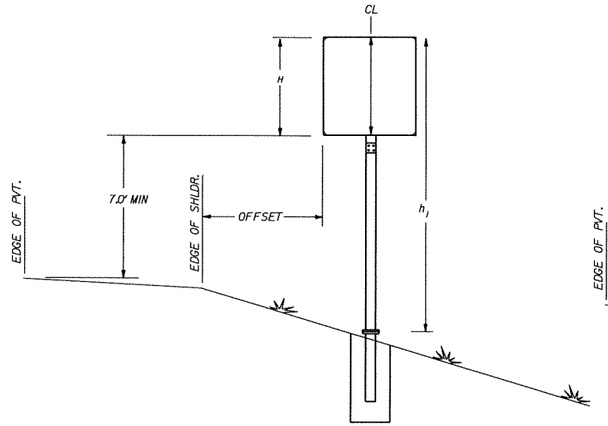
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
LARRY SULLIVAN
2/21/12

DETAILS OF I-BEAM SIGN SUPPORTS

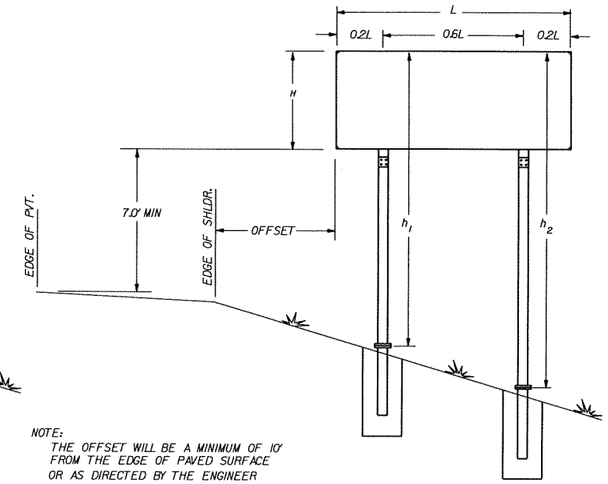
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	171	374

(2) I-BEAM SIGN SUPPORTS



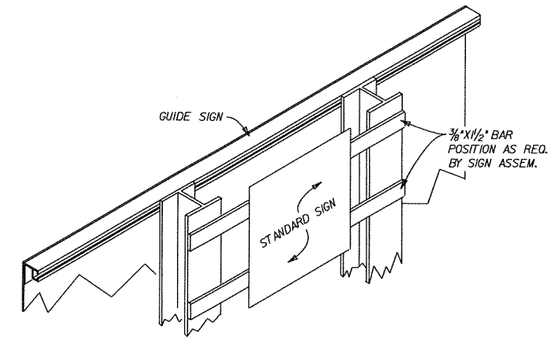


G-1

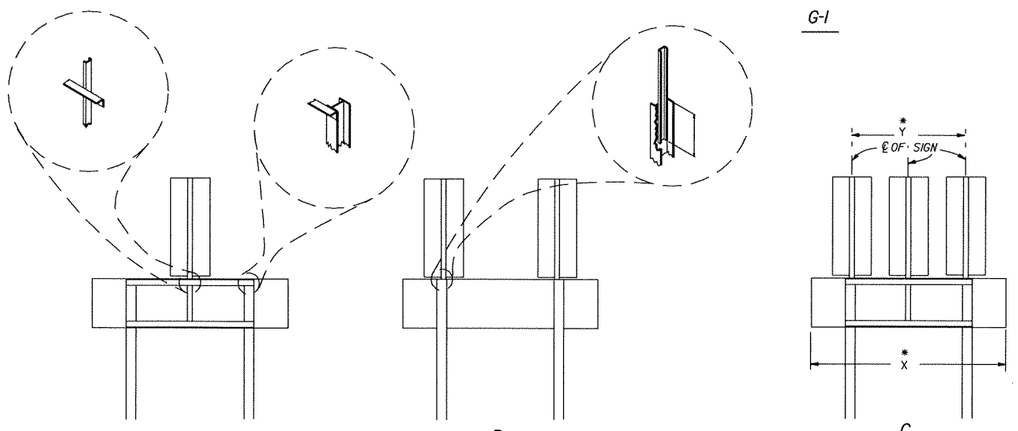


NOTE:
THE OFFSET WILL BE A MINIMUM OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER

G-2



SECONDARY SIGN INSTALLATION ON BACKSIDE OF GUIDE SIGN



A B C

TRIPLE ASSEM.(C or D)

*Y	*X	TYPE ASSEM.
4'-4"	≥ 7'-6"	G-1C
4'-4"	< 7'-6"	G-1D
4'-10"	≥ 8'-0"	G-1C
4'-10"	< 8'-0"	G-1D
5'-1"	≥ 8'-6"	G-1C
5'-1"	< 8'-6"	G-1D
5'-4"	≥ 9'-0"	G-1C
5'-4"	< 9'-0"	G-1D

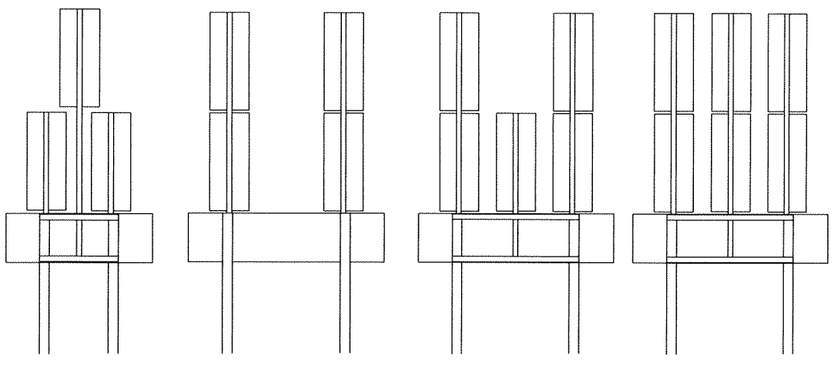
LEGEND
≥ GREATER THAN OR EQUAL TO
< LESS THAN

FOOTING QUANTITIES

FTG. DEPTH	NO. OF TIES	STUB PROJ.	18" DIA.		24" DIA.		30" DIA.		36" DIA.		"A"
			CU.YD.	# STEEL	CU.YD.	# STEEL	CU.YD.	# STEEL	CU.YD.	# STEEL	EMBED.
2'-6"	4	4"	0.16	30.5							1'-8"
3'-0"	4	4"	0.20	36.6							2'-0"
3'-6"	5	4"	0.23	44.2							2'-4"
4'-0"	6	4"	0.26	51.8	0.46	55.4					2'-8"
4'-6"	7	4"	0.29	59.5	0.52	63.6					3'-0"
5'-0"	7	4"	0.33	65.5	0.58	69.6	0.91	73.8			3'-4"
5'-6"	8	4"			0.64	77.9	1.00	82.6			3'-8"
6'-0"	9	4"			0.70	86.7	1.09	91.5	1.57	96.5	4'-0"
6'-6"	9	4"					1.18	97.5	1.70	102.6	4'-4"
7'-0"	10	4"					1.27	106.3	1.83	111.9	4'-8"
7'-6"	11	4"							1.96	121.3	5'-0"
8'-0"	11	4"							2.09	127.3	5'-4"

REINFORCING STEEL SCHEDULE

FTG. DIA. IN.	#3 TIE BARS DIA. IN.	LGTH.-EA. FT./IN.	WEIGHT LBS.	FTG. DEPTH FT./IN.	(8) #6 BARS LGTH.-EA. FT./IN.	WEIGHT LBS.	NO. TIES EA.
18"	12"	4'-4"	1.629	2'-6"	2'-0"	24.03	4
				3'-0"	2'-6"	30.04	4
24"	18"	5'-11"	2.225	3'-6"	3'-0"	36.05	5
				4'-0"	3'-6"	42.06	6
30"	24"	7'-6"	2.820	4'-6"	4'-0"	48.06	7
				5'-0"	4'-6"	54.07	7
36"	30"	9'-0"	3.384	5'-6"	5'-0"	60.08	8
				6'-0"	5'-6"	66.09	9
				6'-6"	6'-0"	72.10	9
				7'-0"	6'-6"	78.10	10
				7'-6"	7'-0"	84.11	11
				8'-0"	7'-6"	90.12	11



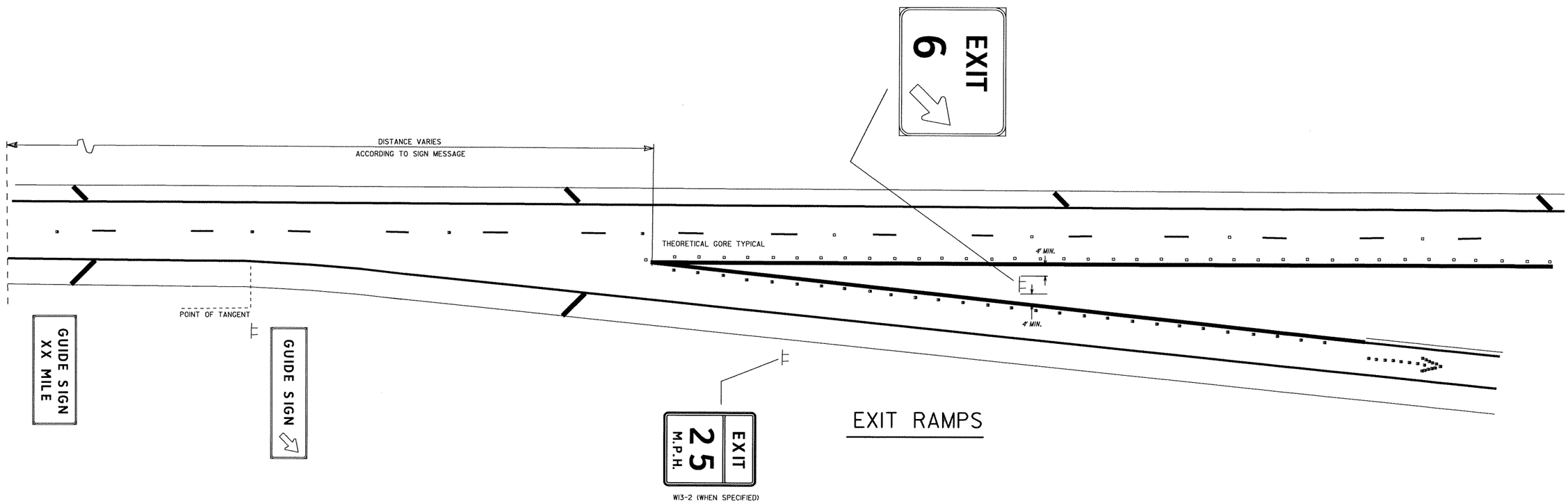
D E F G

STATE OF ARKANSAS ★★★ REGISTERED PROFESSIONAL ENGINEER ★★★ No. 5851 TONY SULLIVAN 2/21/23

I-BEAM SIGN SUPPORTS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	172	374

(2) DETAIL OF SIGN PLACEMENT

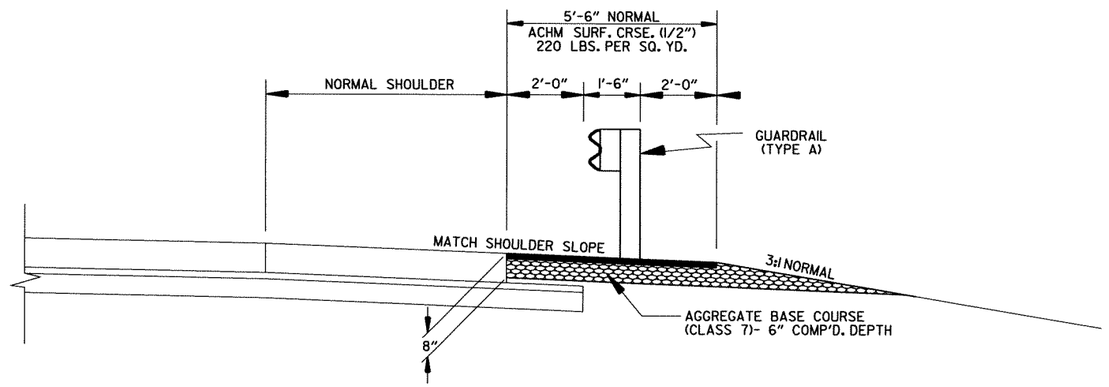


STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
2/21/12
LARRY SULLIVAN

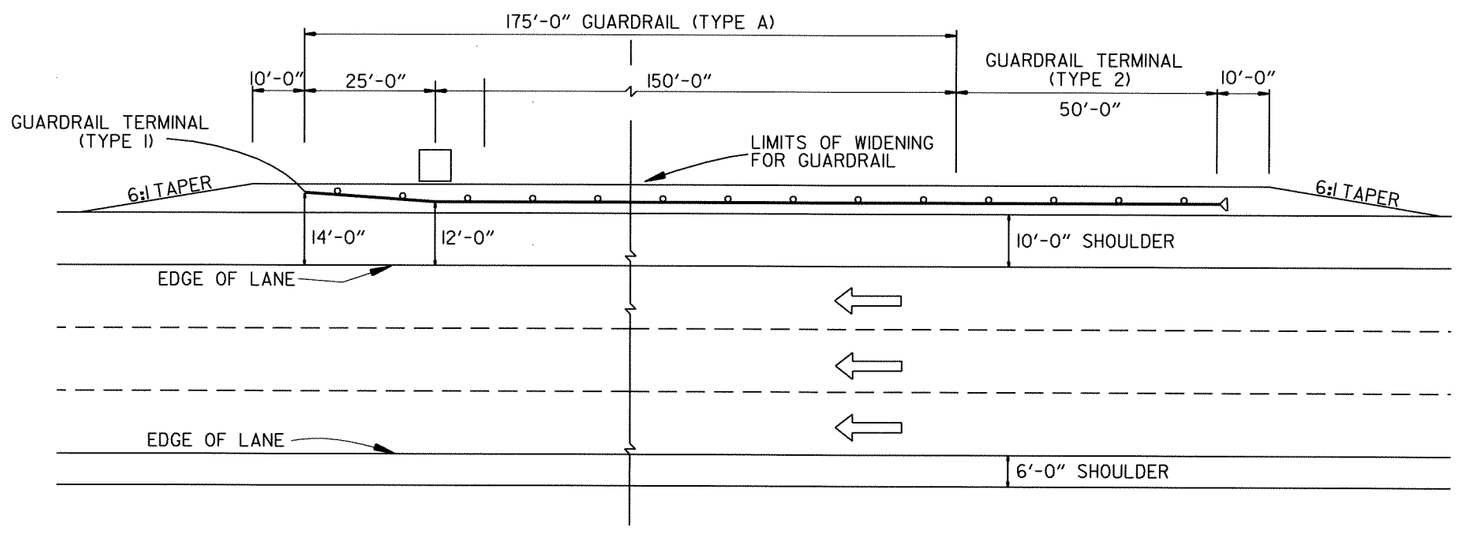
DETAIL OF SIGN PLACEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	173	374

(2) TYPICAL GUARDRAIL WIDENING (SIGN)



TYPICAL SECTION OF WIDENING FOR GUARDRAIL



TYPICAL LAYOUT OF GUARDRAIL ALONG ROADWAY

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 5851
12/21/12
ANTONY SULLIVAN

TYPICAL GUARDRAIL WIDENING (SIGN)

ADVANCE WARNING SIGNS AND DEVICES - STAGE 1

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 1A	STAGE 1B	STAGE 1C	STAGE 1D	TOTAL SIGNS REQUIRED	
			LIN.FT. - EACH					NO.	SQ. FT.
G20-1	ROAD WORK NEXT xx MILES	60"x24"	2	2	2	2	2	2	20.00
G20-2	END ROAD WORK	48"x24"	11	11	11	11	11	11	88.00
R2-1	SPEED LIMIT (60 MPH)	48"x60"		4	4	4	4	4	80.00
R2-1	SPEED LIMIT (70 MPH)	48"x60"		4	4	4	4	4	80.00
R2-2	SPEED LIMIT (TRUCKS 65 MPH)	48"x48"		4	4	4	4	4	64.00
R2-5A	REDUCED SPEED AHEAD	48"x60"		4	4	4	4	4	80.00
R4-1	DO NOT PASS	48"x48"		8	8	8	8	8	128.00
R11-2	ROAD CLOSED	48"x30"		2	4	4	18	18	180.00
R55-1	FINES DOUBLE	36"x60"	4	4	4	4	4	4	60.00
W1-6	LARGE ARROW	60"x30"		12	12	12	6	12	150.00
W4-2R	RIGHT LANE CLOSED	48"x48"		4	4	4	4	4	64.00
W20-1	ROAD WORK (I MILE)	48"x48"	4	4	4	4	4	4	64.00
W20-1	ROAD WORK (I/2 MILE)	48"x48"	4	4	4	4	4	4	64.00
W20-1	ROAD WORK (1500 FT)	48"x48"	4	4	4	4	4	4	64.00
W20-1	ROAD WORK (AHEAD)	48"x48"	7	11	11	11	11	11	176.00
W20-5	RIGHT LANE CLOSED (1 MILE)	48"x48"		4	4	4	4	4	64.00
W20-5	RIGHT LANE CLOSED (1/2 MILE)	48"x48"		4	4	4	4	4	64.00
W20-5	RIGHT LANE CLOSED (1500 FT)	48"x48"		4	4	4	4	4	64.00
SPECIAL	MERGE NOW	48"x48"		4	4	4	4	4	64.00
	ALTERNATE ROUTE SIGNS	VAR.							432.50
									2050.50

							UNITS
MODULAR GLARE SHIELD							LIN. FT.
ADVANCE WARNING ARROW PANEL	2	2	2	2	2	2	EACH
PORTABLE CHANGEABLE MESSAGE SIGN	2	2	2	2	2	2	EACH
VERTICAL PANELS							EACH
TRAFFIC DRUMS		14	42	1094	1931	1931	EACH
TYPE III BARRICADE-RT. (16')					2	32	LIN. FT.
TYPE III BARRICADE-LT. (16')		2	4	4	16	256	LIN. FT.
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER				1197	1197	1197	LIN. FT.
RELOCATING PRECAST CONCRETE BARRIER							LIN. FT.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
4/9/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4/9/13				6	ARK.			
				JOB NO.		BB0105	175	374

(2) QUANTITIES

ADVANCE WARNING SIGNS AND DEVICES - STAGE 2

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 2	STAGE 2A	STAGE 2B	STAGE 2C	STAGE 2D	TOTAL SIGNS REQUIRED	
			LIN.FT. - EACH					NO.	SQ. FT.
G20-1	ROAD WORK NEXT xx MILES	60"x24"	1	2	2	2	2	2	20.00
G20-2	END ROAD WORK	48"x24"	9	11	11	11	11	11	88.00
R1-1	STOP	48"x48"		1	1	1	1	1	16.00
R1-2	YIELD	60"X60"X60"		1	1	1	1	1	10.83
R2-1	SPEED LIMIT (60 MPH)	48"x60"	2	4	4	4	4	4	80.00
R2-1	SPEED LIMIT (70 MPH)	48"x60"	2	4	4	4	4	4	80.00
R2-2	SPEED LIMIT (TRUCKS 65 MPH)	48"x48"	2	4	4	4	4	4	64.00
R2-5A	REDUCED SPEED AHEAD	48"x60"	2	4	4	4	4	4	80.00
R4-1	DO NOT PASS	48"x48"	4	8	8	8	8	8	128.00
R11-2	ROAD CLOSED	48"x30"	3	10	30	30	6	30	300.00
R55-1	FINES DOUBLE	36"x60"	2	4	4	4	4	4	60.00
W1-4aL	REVERSE CURVE - LEFT	48"x48"		1	1	1	1	1	16.00
W1-4aR	REVERSE CURVE - RIGHT	48"x48"		1	1	1	1	1	16.00
W1-6	LARGE ARROW	60"x30"	6	9	9	9	9	9	112.50
W1-8	CHEVRON	36"X48"		9	9	9	9	9	108.00
W4-2R	RIGHT LANE CLOSED	48"x48"	2	4	4	4	4	4	64.00
W13-1	ADVISORY SPEED (xx MPH)	18"X18"		2	2	2	2	2	4.50
W20-1	ROAD WORK (AHEAD)	48"x48"	9	11	11	11	11	11	176.00
W20-5	RIGHT LANE CLOSED (1 MILE)	48"x48"	2	4	4	4	4	4	64.00
W20-5	RIGHT LANE CLOSED (1/2 MILE)	48"x48"	2	4	4	4	4	4	64.00
W20-5	RIGHT LANE CLOSED (1500 FT)	48"x48"	2	4	4	4	4	4	64.00
SPECIAL	MERGE NOW	48"x48"	2	4	4	4	4	4	64.00
	ALTERNATE ROUTE SIGNS	VAR.							432.50
									2112.33

							UNITS
MODULAR GLARE SHIELD		600	600	600	600	600	LIN. FT.
ADVANCE WARNING ARROW PANEL	2	2	2	2	2	2	EACH
PORTABLE CHANGEABLE MESSAGE SIGN	2	2	2	2	2	2	EACH
VERTICAL PANELS	238					238	EACH
TRAFFIC DRUMS	7	75	340	240	24	340	EACH
TYPE III BARRICADE-RT. (16')	2	6	16	19	4	304	LIN. FT.
TYPE III BARRICADE-LT. (16')	1	4	14	12	2	224	LIN. FT.
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	48697	48697	48697	48697	49787	49787	LIN. FT.
RELOCATING PRECAST CONCRETE BARRIER							LIN. FT.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 4/9/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4/9/13				6	ARK.			
				JOB NO.		BB0105	176	374

(2) QUANTITIES

ADVANCE WARNING SIGNS AND DEVICES - STAGE 3

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 3	STAGE 3A	STAGE 3B	STAGE 3C	TOTAL SIGNS REQUIRED	
			LIN.FT. - EACH				NO.	SQ. FT.
G20-1	ROAD WORK NEXT xx MILES	60"x24"	2	2	2	2	2	20.00
G20-2	END ROAD WORK	48"x24"	11	11	11	11	11	88.00
R2-1	SPEED LIMIT (60 MPH)	48"x60"	4	4	4	4	4	80.00
R2-1	SPEED LIMIT (70 MPH)	48"x60"	4	4	4	4	4	80.00
R2-2	SPEED LIMIT (TRUCKS 65 MPH)	48"x48"	4	4	4	4	4	64.00
R2-5A	REDUCED SPEED AHEAD	48"x60"	4	4	4	4	4	80.00
R4-1	DO NOT PASS	48"x48"	8	8	8	8	8	128.00
R11-2	ROAD CLOSED	48"x30"	6	4	4	19	19	190.00
R55-1	FINES DOUBLE	36"x60"	4	5	6	7	7	105.00
W1-6	LARGE ARROW	60"x30"	12	12	12	12	12	150.00
W20-1	ROAD WORK (AHEAD)	48"x48"	11	11	11	11	11	176.00
W20-5	RIGHT LANE CLOSED (1 MILE)	48"x48"	4	4	4	4	4	64.00
W20-5	RIGHT LANE CLOSED (1/2 MILE)	48"x48"	4	4	4	4	4	64.00
W20-5	RIGHT LANE CLOSED (1500 FT)	48"x48"	4	4	4	4	4	64.00
W4-2R	RIGHT LANE CLOSED	48"x48"	4	4	4	4	4	64.00
SPECIAL	MERGE NOW	48"x48"	4	4	4	4	4	64.00
	ALTERNATE ROUTE SIGNS	VAR.						432.50
								1913.50

							UNITS
	MODULAR GLARE SHIELD						LIN. FT.
	ADVANCE WARNING ARROW PANEL	2	2	2	2	2	EACH
	PORTABLE CHANGEABLE MESSAGE SIGN	2	2	2	2	2	EACH
	VERTICAL PANELS						EACH
	TRAFFIC DRUMS	442	975	975	1353	1353	EACH
	TYPE III BARRICADE-RT. (16')	2	2	2	2	32	LIN. FT.
	TYPE III BARRICADE-LT. (16')	2			15	240	LIN. FT.
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	2593	2686	2686	2686	2686	LIN. FT.
	RELOCATING PRECAST CONCRETE BARRIER						LIN. FT.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 4/9/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
4/9/13				6	ARK.			
				JOB NO.		BB0105	177	374

2 QUANTITIES

ADVANCE WARNING SIGNS AND DEVICES - STAGE 4

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 4	STAGE 4A	STAGE 4B	STAGE 4C	STAGE 4D	TOTAL SIGNS REQUIRED	
			LIN.FT. - EACH					NO.	SQ. FT.
G20-1	ROAD WORK NEXT xx MILES	60"x24"	3	3	3	3	3	3	30.00
G20-2	END ROAD WORK	48"x24"	13	13	13	13	13	13	104.00
R1-1	STOP	48"x48"		1	1	1	1	1	16.00
R1-2	YIELD	60"X60"X60"		1	1	1	1	1	10.83
R2-1	SPEED LIMIT (60 MPH)	48"x60"	2	2	2	2	2	2	40.00
R2-1	SPEED LIMIT (70 MPH)	48"x60"	2	2	2	2	2	2	40.00
R2-2	SPEED LIMIT (TRUCKS 65 MPH)	48"x48"	2	2	2	2	2	2	32.00
R2-5A	REDUCED SPEED AHEAD	48"x60"	2	2	2	2	2	2	40.00
R4-1	DO NOT PASS	48"x60"	4	4	4	4	4	4	80.00
R11-2	ROAD CLOSED	48"x30"	3	6	27	27	3	27	270.00
R55-1	FINES DOUBLE	36"x60"	6	6	6	6	6	6	90.00
W1-4aL	REVERSE CURVE - LEFT	48"x48"		1	1	1	1	1	16.00
W1-4aR	REVERSE CURVE - RIGHT	48"x48"		1	1	1	1	1	16.00
W1-6	LARGE ARROW	60"x30"	6	6	6	6	6	6	75.00
W1-8	CHEVRON	36"X48"		9	9	9	9	9	108.00
W4-2R	RIGHT LANE CLOSED	48"x48"	2	2	2	2	2	2	32.00
W13-1	SPEED LIMIT	18"x18"		2	2	2	2	2	4.50
W20-1	ROAD WORK (AHEAD)	48"x48"	9	9	9	9	9	9	144.00
W20-1	ROAD WORK (I MILE)	48"x48"	4	4	4	4	4	4	64.00
W20-1	ROAD WORK (I/2 MILE)	48"x48"	4	4	4	4	4	4	64.00
W20-1	ROAD WORK (1500 FT)	48"x48"	4	4	4	4	4	4	64.00
W20-5	RIGHT LANE CLOSED (1 MILE)	48"x48"	2	2	2	2	2	2	32.00
W20-5	RIGHT LANE CLOSED (1/2 MILE)	48"x48"	2	2	2	2	2	2	32.00
W20-5	RIGHT LANE CLOSED (1500 FT)	48"x48"	2	2	2	2	2	2	32.00
SPECIAL	MERGE NOW	48"x48"	2	2	2	2	2	2	32.00
	ALTERNATE ROUTE SIGNS	VAR.							432.50
W4-1	MERGE	48"x48"		1				1	16.00
									1916.83

							UNITS
MODULAR GLARE SHIELD		600	600	600	600	600	LIN. FT.
ADVANCE WARNING ARROW PANEL	2	2	2	2	2	2	EACH
PORTABLE CHANGEABLE MESSAGE SIGN	2	2	2	2	2	2	EACH
VERTICAL PANELS	239					239	EACH
TRAFFIC DRUMS		71	315	221	50	315	EACH
TYPE III BARRICADE-RT. (16')		4	14	18	2	288	LIN. FT.
TYPE III BARRICADE-LT. (16')		2	13	9	2	208	LIN. FT.
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	2678	3458	2678	2678	4034	4034	LIN. FT.
RELOCATING PRECAST CONCRETE BARRIER	47500	47500	47500	47500	47500	47500	LIN. FT.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
4/9/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
4/9/13			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	178	374

2 QUANTITIES

ADVANCE WARNING SIGNS AND DEVICES - STAGE 5

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 5	STAGE 5A	STAGE 5B			TOTAL SIGNS REQUIRED	
			LIN.FT. - EACH					NO.	SQ. FT.
G20-1	ROAD WORK NEXT xx MILES	60"x24"	3	3	1			3	30.00
G20-2	END ROAD WORK	48"x24"	13	13	11			13	104.00
R2-1	SPEED LIMIT (60 MPH)	48"x60"	4	4	4			4	80.00
R2-1	SPEED LIMIT (70 MPH)	48"x60"	4	4	2			4	80.00
R2-2	SPEED LIMIT (TRUCKS 65 MPH)	48"x48"	4	4	2			4	64.00
R2-5A	REDUCED SPEED AHEAD	48"x60"	4	4	4			4	80.00
R4-1	DO NOT PASS	48"x48"	8	8	8			8	128.00
R11-2	ROAD CLOSED	48"x30"	2	2	2			2	20.00
R55-1	FINES DOUBLE	36"x60"	6	6	6			6	90.00
W1-6	LARGE ARROW	60"x30"	12	12	6			12	150.00
W4-2R	RIGHT LANE CLOSED	48"x48"	4	4	4			4	64.00
W20-1	ROAD WORK (AHEAD)	48"x48"	11	11	11			11	176.00
W20-1	ROAD WORK (I MILE)	48"x48"	2	2	2			2	32.00
W20-1	ROAD WORK (I/2 MILE)	48"x48"	2	2	2			2	32.00
W20-1	ROAD WORK (1500 FT)	48"x48"	2	2	2			2	32.00
W20-5	RIGHT LANE CLOSED (1 MILE)	48"x48"	4	4	4			4	64.00
W20-5	RIGHT LANE CLOSED (1/2 MILE)	48"x48"	4	4	4			4	64.00
W20-5	RIGHT LANE CLOSED (1500 FT)	48"x48"	4	4	4			4	64.00
SPECIAL	MERGE NOW	48"x48"	4	4	4			4	64.00
	ALTERNATE ROUTE SIGNS	VAR.							432.50
									1850.50

								UNITS
	MODULAR GLARE SHIELD							LIN. FT.
	ADVANCE WARNING ARROW PANEL	2	2	2			2	EACH
	PORTABLE CHANGEABLE MESSAGE SIGN	2	2	2			2	EACH
	VERTICAL PANELS							EACH
	TRAFFIC DRUMS	414	947	1115			1115	EACH
	TYPE III BARRICADE-RT. (16')	2	2	2			32	LIN. FT.
	TYPE III BARRICADE-LT. (16')							LIN. FT.
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER							LIN. FT.
	RELOCATING PRECAST CONCRETE BARRIER							LIN. FT.

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QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
4/9/13			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	179	374

2 QUANTITIES

ADVANCE WARNING SIGNS AND DEVICES - STAGE 6

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 6					TOTAL SIGNS REQUIRED	
			LIN.FT. - EACH					NO.	SQ. FT.
G20-1	ROAD WORK NEXT xx MILES	60"x24"	2					2	20.00
G20-2	END ROAD WORK	48"x24"	11					11	88.00
R55-1	FINES DOUBLE	36"x60"	4					4	60.00
W20-1	ROAD WORK (I MILE)	48"x48"	4					4	64.00
W20-1	ROAD WORK (I/2 MILE)	48"x48"	4					4	64.00
W20-1	ROAD WORK (1500 FT)	48"x48"	4					4	64.00
W20-1	ROAD WORK (AHEAD)	48"x48"	7					7	112.00
	ALTERNATE ROUTE SIGNS	VAR.							432.50
									904.50

								UNITS
	MODULAR GLARE SHIELD							LIN. FT.
	ADVANCE WARNING ARROW PANEL							EACH
	PORTABLE CHANGEABLE MESSAGE SIGN	2					2	EACH
	VERTICAL PANELS							EACH
	TRAFFIC DRUMS	120					120	EACH
	TYPE III BARRICADE-RT. (16')							LIN. FT.
	TYPE III BARRICADE-LT. (16')							LIN. FT.
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER							LIN. FT.
	RELOCATING PRECAST CONCRETE BARRIER							LIN. FT.

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QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
4/9/13			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	180	374

2 QUANTITIES

ADVANCE WARNING SIGNS AND DEVICES - SUMMARY

SIGN NUMBER	DESCRIPTION	SIGN SIZE	SIGN AREA	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5	STAGE 6	TOTAL SIGNS REQUIRED	
				LIN.FT. - EACH						NO.	SQ. FT.
G20-1	ROAD WORK NEXT xx MILES	60"x24"	10.00	2	2	2	3	3	2	3	30.00
G20-2	END ROAD WORK	48"x24"	8.00	11	11	11	13	13	11	13	104.00
R1-1	STOP	48"x48"	16.00		1		1			1	16.00
R1-2	YIELD	60"X60"X60"	10.83		1		1			1	10.83
R2-1	SPEED LIMIT (60 MPH)	48"x60"	20.00	4	4	4	2	4		4	80.00
R2-1	SPEED LIMIT (70 MPH)	48"x60"	20.00	4	4	4	2	4		4	80.00
R2-2	SPEED LIMIT (TRUCKS 65 MPH)	48"x48"	16.00	4	4	4	2	4		4	64.00
R2-5A	REDUCED SPEED AHEAD	48"x60"	20.00	4	4	4	2	4		4	80.00
R4-1	DO NOT PASS	48"x48"	16.00	8	8	8	4	8		8	128.00
R11-2	ROAD CLOSED	48"x30"	10.00	18	30	19	27	2		30	300.00
R55-1	FINES DOUBLE	36"x60"	15.00	4	4	7	6	6	4	7	105.00
W1-4aL	REVERSE CURVE - LEFT	48"x48"	16.00		1		1			1	16.00
W1-4aR	REVERSE CURVE - RIGHT	48"x48"	16.00		1		1			1	16.00
W1-6	LARGE ARROW	60"x30"	12.50	12	9	12	6	12		12	150.00
W1-8	CHEVRON	36"X48"	12.00		9		9			9	108.00
W4-2R	RIGHT LANE CLOSED	48"x48"	16.00	4	4	4	2	4		4	64.00
W13-1	ADVISORY SPEED (xx MPH)	18"X18"	2.25		2		2			2	4.50
W20-1	ROAD WORK (AHEAD)	48"x48"	16.00	11	11	11	9	11	7	11	176.00
W20-1	ROAD WORK (1500 FT)	48"x48"	16.00	4			4	2	4	4	64.00
W20-1	ROAD WORK (I/2 MILE)	48"x48"	16.00	4			4	2	4	4	64.00
W20-1	ROAD WORK (I MILE)	48"x48"	16.00	4			4	2	4	4	64.00
W20-5	RIGHT LANE CLOSED (1500 FT)	48"x48"	16.00	4	4	4	2	4		4	64.00
W20-5	RIGHT LANE CLOSED (1/2 MILE)	48"x48"	16.00	4	4	4	2	4		4	64.00
W20-5	RIGHT LANE CLOSED (1 MILE)	48"x48"	16.00	4	4	4	2	4		4	64.00
	ALTERNATE ROUTE SIGNS	VAR.	453.50								432.50
SPECIAL	MERGE NOW	48"x48"	16.00	4	4	4	2	4		4	64.00
W4-1	MERGE	48"x48"	16.00				1			1	16.00
											2428.83

									UNITS
MODULAR GLARE SHIELD			600		600			600	LIN. FT.
ADVANCE WARNING ARROW PANEL		2	2	2	2	2		600	DAY
PORTABLE CHANGEABLE MESSAGE SIGN		2	2	2	2	2	2	120	WEEK
VERTICAL PANELS			238		239			239	EACH
TRAFFIC DRUMS		1931	340	1353	315	1115	120	1931	EACH
TYPE III BARRICADE-RT. (16')		32	304	32	288	32		304	LIN. FT.
TYPE III BARRICADE-LT. (16')		256	224	240	208			256	LIN. FT.
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		1197	49787	2686	4034			49787	LIN. FT.
RELOCATING PRECAST CONCRETE BARRIER					47500			47500	LIN. FT.

CONSTRUCTION AND PERMANENT PAVEMENT MARKINGS (ALL STAGES) - ALTERNATE #1 - RUBBLIZE AND OVERLAY

DESCRIPTION	UNITS	STAGE 2	STAGE 2A	STAGE 2B	STAGE 2C	STAGE 3	STAGE 4	STAGE 4A	STAGE 4B	STAGE 4C	STAGE 5	FINAL	TOTAL
REMOVAL OF PERMANENT PAVEMENT MARKINGS	LIN FT	60975											60975
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	LIN FT					40680	57600				138240		236520
CONSTRUCTION PAVEMENT MARKINGS	LIN FT	138240	12500	9000	103680	40680	138240	12500	9000	103680	57600		625120
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	LIN FT	8100	3000	2000	6075	8100	8100	3000	2000	6075	3375		49825
RAISED PAVEMENT MARKERS TYPE II	EACH											2822	2822
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	LIN FT											1308	1308
HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")	LIN FT											103202	103202
HIGH PERFORMANCE PAVEMENT MARKING WHITE (8")	LIN FT											10581	10581
HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4")	LIN FT											96259	96259

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

CONSTRUCTION AND PERMANENT PAVEMENT MARKINGS (ALL STAGES) - ALTERNATE #2 - CONCRETE OVERLAY

DESCRIPTION	UNITS	STAGE 2	STAGE 2A	STAGE 2B	STAGE 2C	STAGE 3	STAGE 4	STAGE 4A	STAGE 4B	STAGE 4C	STAGE 5	FINAL	TOTAL
REMOVAL OF PERMANENT PAVEMENT MARKINGS	LIN FT	60975											60975
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	LIN FT					40680							40680
CONSTRUCTION PAVEMENT MARKINGS	LIN FT	138240	12500	9000		40680		12500	9000				221920
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	LIN FT	8100	3000	2000	109755	8100	146340	3000	2000	109755	60975		453025
RAISED PAVEMENT MARKERS TYPE II	EACH											2822	2822
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	LIN FT											11616	11616
HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")	LIN FT											92894	92894
HIGH PERFORMANCE PAVEMENT MARKING WHITE (8")	LIN FT											10581	10581
HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4")	LIN FT											96259	96259

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

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 4/9/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	181	374

(2) QUANTITIES

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	*UNCLASSIFIED EXCAVATION	*COMPACTED EMBANKMENT	* SOIL STABILIZATION	* AGGREGATE BASE COURSE (CLASS 7)	*UNCLASSIFIED EXCAVATION
			CU. YD.			TON	CU. YD.
			ALTERNATE NO. 1 & NO. 2			ALTERNATE NO. 1	
ENTIRE	PROJECT	IF AND WHERE DIRECTED BY THE ENGINEER			3450		
ENTIRE	PROJECT	IF AND WHERE DIRECTED BY THE ENGINEER TO REPAIR SOFT AREAS IN RUBBLIZED PAVEMENT				5600	2667
ENTIRE	PROJECT	REMOVAL & DISPOSAL OF P.C. STABILIZED BASE IN FULL DEPTH RECONSTRUCTION	17360				
ENTIRE	PROJECT	CONSTRUCTION & REMOVAL OF CROSSOVERS, TEMP. RAMPS, & TEMP. ACCEL. LANES	20000	17500			
TOTALS:			37360	17500	3450	5600	2667

*QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.
NOTE: AGGREGATE BASE COURSE (CLASS 7) IS SHOWN ON SHEET 204 IN THE BASE AND SURFACING - SUMMARY.

APPROACH GUTTERS

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE PT)	REINFORCING STEEL - RDWY. (GRADE 60)	ALTERNATE NO. 1 AGGREGATE BASE CRS. (CLASS 7)	ALTERNATE NO. 2 AGGREGATE BASE CRS. (CLASS 7)
			CU.YD.	POUND	TON	
4152+56.10	4152+92.60	LT & RT. - R.M.L.	33.41	3111	58.0	28.2
4152+56.10	4152+92.60	LT & RT. - L.M.L.	33.41	3111	58.0	28.2
4154+05.68	4154+42.18	LT & RT. - R.M.L.	33.41	3111	58.0	28.2
4154+05.68	4154+42.18	LT & RT. - L.M.L.	33.41	3111	58.0	28.2
4218+62.00	4218+98.50	LT & RT. - R.M.L.	33.41	3111	58.0	28.2
4218+62.00	4218+98.50	LT & RT. - L.M.L.	33.41	3111	58.0	28.2
4221+55.67	4221+92.17	LT & RT. - R.M.L.	33.41	3111	58.0	28.2
4221+55.57	4221+92.17	LT & RT. - L.M.L.	33.41	3111	58.0	28.2
4311+30.16	4311+66.66	LT & RT. - R.M.L.	33.41	3111	58.0	28.2
4312+17.41	4312+53.91	LT & RT. - L.M.L.	33.41	3111	58.0	28.2
4313+42.62	4313+79.12	LT & RT. - R.M.L.	33.41	3111	58.0	28.2
4314+24.87	4314+61.37	LT & RT. - L.M.L.	33.41	3111	58.0	28.2
4334+82.41	4335+18.91	LT & RT. - R.M.L.	33.41	3111	58.0	28.2
4334+82.41	4335+18.91	LT & RT. - L.M.L.	33.41	3111	58.0	28.2
4345+46.09	4345+82.59	LT & RT. - R.M.L.	33.41	3111	58.0	28.2
4345+46.09	4345+82.59	LT & RT. - L.M.L.	33.41	3111	58.0	28.2
TOTALS:			534.56	49776	928.0	451.2

BASIS OF ESTIMATE:
ALTERNATE NO. 1 - AGGREGATE BASE COURSE (CLASS 7) THICKNESS = 11.5"
ALTERNATE NO. 2 - AGGREGATE BASE COURSE (CLASS 7) THICKNESS = 6"
NOTE: AGGREGATE BASE COURSE (CLASS 7) IS SHOWN ON SHEET 204 IN THE BASE AND SURFACING - SUMMARY.

STRUCTURES

STATION	DESCRIPTION	TEMPORARY PIPE CULVERT	CONCRETE SPILLWAY	DROP INLET	12" ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE (16 GAGE)
			TYPE		
		18"	A	N1	
		LIN. FT.	EACH		LIN. FT.
4025+23.00	CROSSOVER - BEGINNING PROJECT	610			
4504+23.00	CROSSOVER - END PROJECT	610			
4152+56.10	LT. - L.M.L. & RT. - R.M.L.		2	2	200
4154+42.18	LT. - L.M.L. & RT. - R.M.L.		2	2	200
4314+61.37	LT. - L.M.L.		1	1	100
4334+82.41	LT. - L.M.L. & RT. - R.M.L.		2	2	200
4345+82.59	LT. - L.M.L. & RT. - R.M.L.		2	2	200
TOTALS:		1220	9	9	900

JOINT SUPPORTS - ALTERNATE NO.2

STATION	LOCATION	WIDTH	CLASS "S" CONCRETE - ROADWAY
		FT.	CU. YD.
4057+40.40	L.M.L. & R.M.L.	24	5.34
4057+55.40	L.M.L. & R.M.L.	24	5.34
4061+45.63	L.M.L. & R.M.L.	24	5.34
4061+60.63	L.M.L. & R.M.L.	24	5.34
4098+12.12	R.M.L.	36	4.00
4098+27.12	R.M.L.	36	4.00
4098+20.83	L.M.L.	36	4.00
4098+35.83	L.M.L.	36	4.00
4101+61.30	R.M.L.	36	4.00
4101+76.30	R.M.L.	36	4.00
4101+70.01	L.M.L.	36	4.00
4101+85.01	L.M.L.	36	4.00
4152+26.10	L.M.L. & R.M.L.	24	5.34
4152+41.10	L.M.L. & R.M.L.	24	5.34
4154+57.18	L.M.L. & R.M.L.	24	5.34
4154+72.18	L.M.L. & R.M.L.	24	5.34
4218+32.00	L.M.L. & R.M.L.	24	5.34
4218+47.00	L.M.L. & R.M.L.	24	5.34
4222+07.17	L.M.L. & R.M.L.	24	5.34
4222+22.17	L.M.L. & R.M.L.	24	5.34
4311+00.16	R.M.L.	24	2.67
4311+15.16	R.M.L.	24	2.67
4311+87.41	L.M.L.	24	2.67
4312+02.41	L.M.L.	24	2.67
4313+94.12	R.M.L.	24	2.67
4314+09.12	R.M.L.	24	2.67
4314+76.37	L.M.L.	24	2.67
4314+91.37	L.M.L.	24	2.67
4334+52.41	L.M.L. & R.M.L.	24	5.34
4334+67.41	L.M.L. & R.M.L.	24	5.34
4345+97.59	L.M.L. & R.M.L.	24	5.34
4346+12.59	L.M.L. & R.M.L.	24	5.34
TOTAL:			138.80

REMOVAL OF RUMBLE STRIPS

STATION	STATION	LOCATION	LIN. FT.
4021+50.00	4033+68.44	RT. - R.M.L.	1218.44
4035+41.44	4057+65.40	RT. - R.M.L.	2223.96
4061+25.63	4083+00.00	RT. - R.M.L.	2174.37
4084+00.00	4096+80.00	RT. - R.M.L.	1280.00
4106+75.00	4117+00.00	RT. - R.M.L.	1025.00
4124+50.00	4135+50.00	RT. - R.M.L.	1100.00
4136+50.00	4152+56.10	RT. - R.M.L.	1606.10
4154+42.18	4163+50.00	RT. - R.M.L.	907.82
4172+00.00	4218+62.00	RT. - R.M.L.	4662.00
4221+92.17	4258+72.90	RT. - R.M.L.	3680.73
4261+96.60	4311+30.16	RT. - R.M.L.	4933.56
4313+79.12	4334+82.41	RT. - R.M.L.	2103.29
4345+82.59	4416+50.00	RT. - R.M.L.	7067.41
4417+50.00	4442+00.00	RT. - R.M.L.	2450.00
4450+50.00	4467+64.00	RT. - R.M.L.	1714.00
4467+70.00	4508+50.00	RT. - R.M.L.	4080.00
TOTAL:			42226.68

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/27/13

QUANTITIES

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL	TERMINAL ANCHOR POSTS (TYPE 1)
			LIN.FT.	EACH		
4053+83.15	4058+01.90	LT. - R.M.L.	350	1	1	
4054+33.15	4058+01.90	RT. - R.M.L.	300	1	1	
4060+94.13	4064+62.88	LT. - L.M.L.	300	1	1	
4060+94.13	4065+12.88	RT. - L.M.L.	350	1	1	
4094+59.87	4098+78.62	LT. - R.M.L.	350	1	1	
4096+59.87	4098+78.62	RT. - R.M.L.	150	1	1	
4101+18.51	4104+87.26	LT. - L.M.L.	300	1	1	
4101+18.51	4105+37.26	RT. - L.M.L.	350	1	1	
4148+73.85	4152+92.60	LT. - R.M.L.	350	1	1	
4149+23.85	4152+92.60	RT. - R.M.L.	300	1	1	
4154+05.68	4157+74.43	LT. - L.M.L.	300	1	1	
4154+05.68	4158+24.43	RT. - L.M.L.	350	1	1	
4214+79.75	4218+98.50	LT. - R.M.L.	350	1	1	
4215+29.75	4218+98.50	RT. - R.M.L.	300	1	1	
4221+55.67	4225+24.42	LT. - L.M.L.	300	1	1	
4221+55.67	4225+74.42	RT. - L.M.L.	350	1	1	
4270+30.00	4275+30.00	LT. - R.M.L.	450	1		1
4271+86.25	4274+05.00	RT. - R.M.L.	150	1	1	
4273+15.00	4278+15.00	RT. - L.M.L.	450	1		1
4274+40.00	4276+58.75	LT. - L.M.L.	150	1	1	
4307+66.28	4311+85.03	LT. - R.M.L.	350	1	1	
4307+75.70	4311+44.45	RT. - R.M.L.	300	1	1	
4314+06.94	4318+25.69	RT. - L.M.L.	350	1	1	
4314+47.01	4318+15.76	LT. - L.M.L.	300	1	1	
4329+75.16	4335+18.91	RT. - R.M.L.	475	1	1	
4331+00.16	4335+18.91	LT. - R.M.L.	350	1	1	
4345+46.09	4349+14.84	LT. - L.M.L.	300	1	1	
4345+46.09	4349+64.84	RT. - L.M.L.	350	1	1	
4431+45.00	4436+45.00	LT. - R.M.L.	450	1		1
4434+40.00	4439+40.00	RT. - L.M.L.	450	1		1
TOTALS:			9925	30	26	4

CONCRETE DITCH PAVING (WRSF)

STATION	STATION	LOCATION	LENGTH	CONC. DITCH PAVING (TYPE B)		AGGREGATE BASE CRSE. (CLASS 1)	
			LIN.FT.	WIDTH	SQ. YD.	TONS/STA.	TONS
4060+89.13	4094+59.87	LT. - R.M.L.	3370.74	4'-0"	1498.1		
4094+59.87	4098+78.62	LT. - R.M.L.	418.75	2'-0"	93.1	160.0	670.0
4101+09.80	4148+73.85	LT. - R.M.L.	4764.05	4'-0"	2117.4		
4148+73.85	4152+92.60	LT. - R.M.L.	418.75	2'-0"	93.1	160.0	670.0
4154+05.68	4214+79.75	LT. - R.M.L.	6074.07	4'-0"	2699.6		
4214+79.75	4218+98.50	LT. - R.M.L.	418.75	2'-0"	93.1	160.0	670.0
4221+55.67	4250+55.00	LT. - R.M.L.	2899.33	4'-0"	1288.6		
4250+45.00	4258+72.90	RT. - L.M.L.	827.90	4'-0"	368.0		
4261+96.60	4273+15.00	RT. - L.M.L.	1118.40	4'-0"	497.1		
4273+15.00	4273+65.00	RT. - L.M.L.	50.00	2'-0"	11.1	160.0	80.0
4277+65.00	4278+15.00	RT. - L.M.L.	50.00	2'-0"	11.1	160.0	80.0
4278+15.00	4312+28.58	RT. - L.M.L.	3413.58	4'-0"	1517.1		
4314+06.94	4318+25.69	RT. - L.M.L.	418.75	2'-0"	93.1	160.0	670.0
4318+25.69	4335+18.91	RT. - L.M.L.	1693.22	4'-0"	752.5		
4345+46.09	4431+45.00	LT. - R.M.L.	8598.91	4'-0"	3821.7		
4431+45.00	4431+95.00	LT. - R.M.L.	50.00	2'-0"	11.1	160.0	80.0
TOTALS:					14965.8		2920.0

NOTE: FUNDING FROM F.A.P. HSIP-40-5(153)240
NO SOLID SOD OR WATER TO BE PROVIDED WITH CONCRETE DITCH PAVING
BASED ON USE OF AGGREGATE BASE COURSE (CLASS 1).

WIRE ROPE SAFETY FENCE (WRSF)

STATION	STATION	LOCATION	LIN.FT.	WRSF MAINTENANCE MATERIALS
				LUMP SUM
ENTIRE PROJECT				1.00
4060+89.13	4098+78.62	LT. - R.M.L.	3789.49	
4101+09.80	4152+92.60	LT. - R.M.L.	5182.80	
4154+05.68	4218+98.50	LT. - R.M.L.	6492.82	
4221+55.67	4250+55.00	LT. - R.M.L.	2899.33	
4250+45.00	4258+72.90	RT. - L.M.L.	827.90	
4261+96.60	4273+65.00	RT. - L.M.L.	1168.40	
4277+65.00	4312+28.58	RT. - L.M.L.	3463.58	
4314+06.94	4335+18.91	RT. - L.M.L.	2111.97	
4345+46.09	4431+95.00	LT. - R.M.L.	8648.91	
TOTALS:			34585.20	1.00

NOTE: FUNDING FROM F.A.P. HSIP-40-5(153)240

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL					
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)	SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	LIN.FT.	LIN.FT.	CU. YD.
ENTIRE	PROJECT	AS SHOWN ON PLANS									1204	21000	
ENTIRE	PROJECT	* WHERE DIRECTED BY ENGINEER	2.00	4	2.00	204.0	2.00	1.50	1.50	30.6			
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.													250
TOTALS:			2.00	4	2.00	204.0	2.00	1.50	1.50	30.6	1204	21000	250

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING.
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING.

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

* QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	183	374
				②	QUANTITIES			

RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT - ALTERNATE NO. 1

STATION	STATION	LOCATION	LENGTH	REMOVAL OF EXISTING ASPHALT OVERLAY		RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT	
				WIDTH	SQ. YD.	WIDTH	SQ. YD.
			LIN.FT.	FEET		FEET	
4050+65.40	4057+65.40	R.M.L. - TRANSITION	700.00	38	2955.6		
4050+70.40	4057+70.40	L.M.L. - TRANSITION	700.00	38	2955.6		
4061+25.63	4068+25.63	R.M.L. - TRANSITION	700.00	38	2955.6		
4061+30.63	4068+30.63	L.M.L. - TRANSITION	700.00	38	2955.6		
4068+25.63	4082+50.00	R.M.L.	1424.37	38	6014.0	24	3798.3
4082+50.00	4084+00.00	R.M.L.	150.00	42	700.0	30	500.0
4084+00.00	4091+42.12	R.M.L.	742.12	38	3133.4	24	1979.0
4068+30.63	4078+00.00	L.M.L.	969.37	38	4092.9	24	2585.0
4078+00.00	4081+00.00	L.M.L.	300.00	42	1400.0	30	1000.0
4081+00.00	4088+00.00	L.M.L.	700.00	46	3577.8	36	2800.0
4088+00.00	4091+50.83	L.M.L.	350.83	38	1481.3	24	935.5
4091+42.12	4098+42.12	R.M.L. - TRANSITION	700.00	VAR.	3104.0		
4091+50.83	4098+50.83	L.M.L. - TRANSITION	700.00	VAR.	3445.3		
4101+46.30	4108+46.30	R.M.L. - TRANSITION	700.00	VAR.	3403.6		
4101+55.01	4108+55.01	L.M.L. - TRANSITION	700.00	VAR.	3262.2		
4108+46.30	4117+25.00	R.M.L.	878.70	38	3710.1	24	2343.2
4117+25.00	4123+25.00	R.M.L.	600.00	46	3066.7	36	2400.0
4123+25.00	4126+25.00	R.M.L.	300.00	42	1400.0	30	1000.0
4126+25.00	4134+25.00	R.M.L.	800.00	38	3377.8	24	2133.3
4134+25.00	4136+25.00	R.M.L.	200.00	42	933.3	30	533.3
4136+25.00	4145+56.10	R.M.L.	931.10	38	3931.3	24	2482.9
4108+55.01	4118+50.00	L.M.L.	994.99	38	4201.1	24	2653.3
4118+50.00	4120+00.00	L.M.L.	150.00	42	700.0	30	500.0
4120+00.00	4129+00.00	L.M.L.	900.00	38	3800.0	24	2400.0
4129+00.00	4132+00.00	L.M.L.	300.00	42	1400.0	30	1000.0
4132+00.00	4139+00.00	L.M.L.	700.00	46	3577.8	36	2800.0
4139+00.00	4145+56.10	L.M.L.	656.10	38	2770.2	24	1749.6
4145+56.10	4152+56.10	L.M.L. - TRANSITION	700.00	38	2955.6		
4145+56.10	4152+56.10	R.M.L. - TRANSITION	700.00	38	2955.6		
4154+42.18	4161+42.18	L.M.L. - TRANSITION	700.00	38	2955.6		
4154+42.18	4161+42.18	R.M.L. - TRANSITION	700.00	38	2955.6		
4161+42.18	4164+50.00	L.M.L.	307.82	38	1299.7	24	820.9
4164+50.00	4166+00.00	L.M.L.	150.00	42	700.0	30	500.0
4166+00.00	4173+50.00	L.M.L.	750.00	38	3166.7	24	2000.0
4173+50.00	4176+50.00	L.M.L.	300.00	42	1400.0	30	1000.0
4176+50.00	4183+50.00	L.M.L.	700.00	46	3577.8	36	2800.0
4183+50.00	4201+10.00	L.M.L.	1760.00	38	7431.1	24	4693.3
4201+10.00	4203+10.00	L.M.L.	200.00	42	933.3	30	666.7
4203+10.00	4211+62.00	L.M.L.	852.00	38	3597.3	24	2272.0
4161+42.18	4163+50.00	R.M.L.	207.82	38	877.5	24	554.2
4163+50.00	4170+50.00	R.M.L.	700.00	46	3577.8	36	2800.0
4170+50.00	4173+50.00	R.M.L.	300.00	42	1400.0	30	1000.0
4173+50.00	4211+62.00	R.M.L.	3812.00	38	16095.1	24	10165.3
4211+62.00	4218+62.00	L.M.L. - TRANSITION	700.00	38	2955.6		
4211+62.00	4218+62.00	R.M.L. - TRANSITION	700.00	38	2955.6		
4221+92.17	4228+92.17	L.M.L. - TRANSITION	700.00	38	2955.6		
4221+92.17	4228+92.17	R.M.L. - TRANSITION	700.00	38	2955.6		
4228+92.17	4258+72.90	L.M.L.	2980.73	38	12585.3	24	7948.6
4261+96.60	4305+17.41	L.M.L.	4320.81	38	18243.4	24	11522.2
4228+92.17	4258+72.90	R.M.L.	2980.73	38	12585.3	24	7948.6
4261+96.60	4304+30.16	R.M.L.	4233.56	38	17875.0	24	11289.5
4305+17.41	4312+17.41	L.M.L. - TRANSITION	700.00	38	2955.6		
4304+30.16	4311+30.16	R.M.L. - TRANSITION	700.00	38	2955.6		
4314+61.37	4321+61.37	L.M.L. - TRANSITION	700.00	38	2955.6		
4313+79.12	4320+79.12	R.M.L. - TRANSITION	700.00	38	2955.6		
4321+61.37	4327+82.41	L.M.L.	621.04	38	2622.2	24	1656.1
4320+79.12	4327+82.41	R.M.L.	703.29	38	2969.4	24	1875.4
4327+82.41	4334+82.41	L.M.L. - TRANSITION	700.00	38	2955.6		
4327+82.41	4334+82.41	R.M.L. - TRANSITION	700.00	38	2955.6		
4345+82.59	4352+82.59	L.M.L. - TRANSITION	700.00	38	2955.6		
4345+82.59	4352+82.59	R.M.L. - TRANSITION	700.00	38	2955.6		
4352+82.59	4418+75.00	L.M.L.	6592.41	38	27834.6	24	17579.8
4418+75.00	4421+75.00	L.M.L.	300.00	42	1400.0	30	1000.0
4421+75.00	4428+75.00	L.M.L.	700.00	46	3577.8	36	2800.0
4428+75.00	4453+50.00	L.M.L.	2475.00	38	10450.0	24	6600.0
4453+50.00	4455+00.00	L.M.L.	150.00	42	700.0	30	500.0
4455+00.00	4467+64.00	L.M.L.	1264.00	38	5336.9	24	3370.7
4467+70.00	4491+00.00	L.M.L.	2330.00	38	9837.8	24	6213.3
4352+82.59	4415+25.00	R.M.L.	6242.41	38	26356.8	24	16646.4
4415+25.00	4417+25.00	R.M.L.	200.00	42	933.3	30	666.7
4417+25.00	4442+10.00	R.M.L.	2485.00	38	10492.2	24	6626.7
4442+10.00	4449+10.00	R.M.L.	700.00	46	3577.8	36	2800.0
4449+10.00	4452+10.00	R.M.L.	300.00	42	1400.0	30	1000.0
4452+10.00	4467+64.00	R.M.L.	1554.00	38	6561.3	24	4144.0
4467+70.00	4491+00.00	R.M.L.	2330.00	38	9837.8	24	6213.3
TOTALS:					**354828.0**		**183267.1**

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	GUARDRAIL	APPROACH GUTTERS	IMPACT ATTENUATION BARRIERS
			LIN.FT.	EACH	
4055+31.90	4058+06.90	RT. - R.M.L.	275		
4054+81.90	4058+06.90	LT. - R.M.L.	325		
4060+94.13	4064+19.13	RT. - L.M.L.	325		
4060+94.13	4063+69.13	LT. - L.M.L.	275		
4096+78.62	4098+78.62	RT. - R.M.L.	200		
4095+53.62	4098+78.62	LT. - R.M.L.	325		
4101+18.51	4104+43.51	RT. - L.M.L.	325		
4101+18.51	4103+18.51	LT. - L.M.L.	200		
4150+92.60	4152+92.60	RT. - R.M.L.	200		
4150+92.60	4152+92.60	LT. - R.M.L.	200		
4154+05.68	4156+05.68	RT. - L.M.L.	200		
4154+05.68	4156+05.68	LT. - L.M.L.	200		
4152+56.10	4152+92.60	LT. & RT. - R.M.L.		2	
4152+56.10	4152+92.60	LT. & RT. - L.M.L.		2	
4154+05.68	4154+42.18	LT. & RT. - R.M.L.		2	
4154+05.68	4154+42.18	LT. & RT. - L.M.L.		2	
4218+62.00	4218+98.50	LT. & RT. - R.M.L.		2	
4218+62.00	4218+98.50	LT. & RT. - L.M.L.		2	
4221+55.67	4221+92.17	LT. & RT. - R.M.L.		2	
4221+55.67	4221+92.17	LT. & RT. - L.M.L.		2	
4216+98.50	4218+98.50	RT. - R.M.L.	200		
4216+98.50	4218+98.50	LT. - R.M.L.	200		
4221+55.67	4223+55.67	RT. - L.M.L.	200		
4221+55.67	4223+55.67	LT. - L.M.L.	200		
4274+00.00		MEDIAN			1
4274+50.00		MEDIAN			1
4272+04.20	4274+04.20	RT. - R.M.L.	200		
4274+40.20	4276+40.20	LT. - L.M.L.	200		
4309+44.45	4311+44.45	RT. - R.M.L.	200		
4309+85.03	4311+85.03	LT. - R.M.L.	200		
4314+06.94	4316+06.94	RT. - L.M.L.	200		
4314+47.01	4316+47.01	LT. - L.M.L.	200		
4311+30.16	4311+66.66	LT. & RT. - R.M.L.		2	
4312+17.41	4312+53.91	LT. & RT. - L.M.L.		2	
4313+42.62	4313+79.12	LT. & RT. - R.M.L.		2	
4314+24.87	4314+61.37	LT. & RT. - L.M.L.		2	
4329+68.91	4335+18.91	RT. - R.M.L.	550		
4333+18.91	4335+18.91	LT. - R.M.L.	200		
4345+46.09	4347+46.09	RT. - L.M.L.	200		
4345+46.09	4347+46.09	LT. - L.M.L.	200		
4334+82.41	4335+18.91	LT. & RT. - R.M.L.		2	
4334+82.41	4335+18.91	LT. & RT. - L.M.L.		2	
4345+46.09	4345+82.59	LT. & RT. - R.M.L.		2	
4345+46.09	4345+82.59	LT. & RT. - L.M.L.		2	
4432+40.00	4434+40.00	RT. - R.M.L.	200		
4435+00.00		MEDIAN			1
4436+00.00		MEDIAN			1
4436+50.00	4438+50.00	LT. - L.M.L.	200		
TOTALS:			**6600**	**32**	**4**

NOTE: THE REMOVAL AND DISPOSAL OF APPROACH GUTTERS SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE DROP INLETS, SPILLWAY PIPE, AND SPILLWAY OUTLETS AS DIRECTED IN SECTION 202 OF THE STANDARD SPECIFICATIONS.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

QUANTITIES

bb0105.qty.dgn 2/8/2013 10:57:22 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	184	374

(2) QUANTITIES

REMOVAL OF EXISTING ASPHALT OVERLAY - ALTERNATE NO. 2

STATION	STATION	LOCATION	LENGTH	REMOVAL OF EXISTING ASPHALT OVERLAY	
				WIDTH	
			LIN.FT.	FEET	SQ. YD.
4050+65.40	4057+65.40	R.M.L. - TRANSITION	700.00	38	2955.6
4050+70.40	4057+70.40	L.M.L. - TRANSITION	700.00	38	2955.6
4061+25.63	4068+25.63	R.M.L. - TRANSITION	700.00	38	2955.6
4061+30.63	4068+30.63	L.M.L. - TRANSITION	700.00	38	2955.6
4068+25.63	4082+50.00	R.M.L.	1424.37	38	6014.0
4082+50.00	4084+00.00	R.M.L.	150.00	42	700.0
4084+00.00	4091+42.12	R.M.L.	742.12	38	3133.4
4068+30.63	4078+00.00	L.M.L.	969.37	38	4092.9
4078+00.00	4081+00.00	L.M.L.	300.00	42	1400.0
4081+00.00	4088+00.00	L.M.L.	700.00	46	3577.8
4088+00.00	4091+50.83	L.M.L.	350.83	38	1481.3
4091+42.12	4098+42.12	R.M.L. - TRANSITION	700.00	VAR.	3104.0
4091+50.83	4098+50.83	L.M.L. - TRANSITION	700.00	VAR.	3445.3
4101+46.30	4108+46.30	R.M.L. - TRANSITION	700.00	VAR.	3403.6
4101+55.01	4108+55.01	L.M.L. - TRANSITION	700.00	VAR.	3262.2
4108+46.30	4117+25.00	R.M.L.	878.70	38	3710.1
4117+25.00	4123+25.00	R.M.L.	600.00	46	3066.7
4123+25.00	4126+25.00	R.M.L.	300.00	42	1400.0
4126+25.00	4134+25.00	R.M.L.	800.00	38	3377.8
4134+25.00	4136+25.00	R.M.L.	200.00	42	933.3
4136+25.00	4145+56.10	R.M.L.	931.10	38	3931.3
4108+55.01	4118+50.00	L.M.L.	994.99	38	4201.1
4118+50.00	4120+00.00	L.M.L.	150.00	42	700.0
4120+00.00	4129+00.00	L.M.L.	900.00	38	3800.0
4129+00.00	4132+00.00	L.M.L.	300.00	42	1400.0
4132+00.00	4139+00.00	L.M.L.	700.00	46	3577.8
4139+00.00	4145+56.10	L.M.L.	656.10	38	2770.2
4145+56.10	4152+56.10	L.M.L. - TRANSITION	700.00	38	2955.6
4145+56.10	4152+56.10	R.M.L. - TRANSITION	700.00	38	2955.6
4154+42.18	4161+42.18	L.M.L. - TRANSITION	700.00	38	2955.6
4154+42.18	4161+42.18	R.M.L. - TRANSITION	700.00	38	2955.6
4161+42.18	4164+50.00	L.M.L.	307.82	38	1299.7
4164+50.00	4166+00.00	L.M.L.	150.00	42	700.0
4166+00.00	4173+50.00	L.M.L.	750.00	38	3166.7
4173+50.00	4176+50.00	L.M.L.	300.00	42	1400.0
4176+50.00	4183+50.00	L.M.L.	700.00	46	3577.8
4183+50.00	4201+10.00	L.M.L.	1760.00	38	7431.1
4201+10.00	4203+10.00	L.M.L.	200.00	42	933.3
4203+10.00	4211+62.00	L.M.L.	852.00	38	3597.3
4161+42.18	4163+50.00	R.M.L.	207.82	38	877.5
4163+50.00	4170+50.00	R.M.L.	700.00	46	3577.8
4170+50.00	4173+50.00	R.M.L.	300.00	42	1400.0
4173+50.00	4211+62.00	R.M.L.	3812.00	38	16095.1
4211+62.00	4218+62.00	L.M.L. - TRANSITION	700.00	38	2955.6
4211+62.00	4218+62.00	R.M.L. - TRANSITION	700.00	38	2955.6
4221+92.17	4228+92.17	L.M.L. - TRANSITION	700.00	38	2955.6
4221+92.17	4228+92.17	R.M.L. - TRANSITION	700.00	38	2955.6
4228+92.17	4258+72.90	L.M.L.	2980.73	38	12585.3
4261+96.60	4305+17.41	L.M.L.	4320.81	38	18243.4
4228+92.17	4258+72.90	R.M.L.	2980.73	38	12585.3
4261+96.60	4304+30.16	R.M.L.	4233.56	38	17875.0
4305+17.41	4312+17.41	L.M.L. - TRANSITION	700.00	38	2955.6
4304+30.16	4311+30.16	R.M.L. - TRANSITION	700.00	38	2955.6
4314+61.37	4321+61.37	L.M.L. - TRANSITION	700.00	38	2955.6
4313+79.12	4320+79.12	R.M.L. - TRANSITION	700.00	38	2955.6
4321+61.37	4327+82.41	L.M.L.	621.04	38	2622.2
4320+79.12	4327+82.41	R.M.L.	703.29	38	2969.4
4327+82.41	4334+82.41	L.M.L. - TRANSITION	700.00	38	2955.6
4327+82.41	4334+82.41	R.M.L. - TRANSITION	700.00	38	2955.6
4345+82.59	4352+82.59	L.M.L. - TRANSITION	700.00	38	2955.6
4345+82.59	4352+82.59	R.M.L. - TRANSITION	700.00	38	2955.6
4352+82.59	4418+75.00	L.M.L.	6592.41	38	27834.6
4418+75.00	4421+75.00	L.M.L.	300.00	42	1400.0
4421+75.00	4428+75.00	L.M.L.	700.00	46	3577.8
4428+75.00	4453+50.00	L.M.L.	2475.00	38	10450.0
4453+50.00	4455+00.00	L.M.L.	150.00	42	700.0
4455+00.00	4467+64.00	L.M.L.	1264.00	38	5336.9
4467+70.00	4491+00.00	L.M.L.	2330.00	38	9837.8
4352+82.59	4415+25.00	R.M.L.	6242.41	38	26356.8
4415+25.00	4417+25.00	R.M.L.	200.00	42	933.3
4417+25.00	4442+10.00	R.M.L.	2485.00	38	10492.2
4442+10.00	4449+10.00	R.M.L.	700.00	46	3577.8
4449+10.00	4452+10.00	R.M.L.	300.00	42	1400.0
4452+10.00	4467+64.00	R.M.L.	1554.00	38	6561.3
4467+70.00	4491+00.00	R.M.L.	2330.00	38	9837.8
TOTAL:					354828.0

4" PIPE UNDERDRAIN - ALTERNATE NO. 1

STATION	STATION	LOCATION	UNDERDRAIN COVER	4" PIPE UNDERDRAINS				UNDERDRAIN OUTLET PROTECTORS	UNDERDRAIN VIDEO INSPECTION
				EDGE DRAINS	LATERALS (NON - PERFORATED		TOTAL		
			LIN.FT.	LIN.FT.	NO.	LIN. FT.	LIN. FT.	EACH	LIN. FT.
4068+25.63	4084+00.00	RT. - R.M.L.	1574	1574	7	420	1994	7	1994
4084+00.00	4091+42.12	RT. - R.M.L.	742	742	3	180	922	3	922
4068+30.63	4088+00.00	LT. - L.M.L.	1969	1969	8	480	2449	8	2449
4088+00.00	4091+50.83	LT. - L.M.L.	351	351	2	120	471	2	471
4108+46.30	4117+25.00	RT. - R.M.L.	879	879	4	240	1119	4	1119
4117+25.00	4136+25.00	RT. - R.M.L.	1900	1900	8	480	2380	8	2380
4136+25.00	4145+56.10	RT. - R.M.L.	931	931	4	240	1171	4	1171
4108+55.01	4118+50.00	LT. - L.M.L.	995	995	4	240	1235	4	1235
4118+50.00	4139+00.00	LT. - L.M.L.	2050	2050	9	540	2590	9	2590
4139+00.00	4145+56.10	LT. - L.M.L.	656	656	3	180	836	3	836
4161+42.18	4163+50.00	RT. - R.M.L.	208	208	1	60	268	1	268
4163+50.00	4211+62.00	RT. - R.M.L.	4812	4812	20	1200	6012	20	6012
4161+42.18	4164+50.00	LT. - L.M.L.	308	308	2	120	428	2	428
4164+50.00	4183+50.00	LT. - L.M.L.	1900	1900	8	480	2380	8	2380
4183+50.00	4187+75.05	LT. - L.M.L.	425	425	2	120	545	2	545
4187+75.05	4203+10.50	RT. - L.M.L.	1536	1536	7	420	1956	7	1956
4203+10.50	4211+62.00	LT. - L.M.L.	852	852	4	240	1092	4	1092
4228+92.17	4258+56.01	RT. - R.M.L.	2964	2964	12	720	3684	12	3684
4258+56.01	4258+72.90	LT. - R.M.L.	17	17	-	-	17	-	17
4261+96.60	4304+30.16	LT. - R.M.L.	4234	4234	17	1020	5254	17	5254
4228+92.17	4258+72.90	LT. - L.M.L.	2981	2981	12	720	3701	12	3701
4261+96.60	4305+17.41	LT. - L.M.L.	4321	4321	18	1080	5401	18	5401
4320+79.12	4327+82.41	RT. - R.M.L.	703	703	3	180	883	3	883
4321+61.37	4327+82.41	LT. - L.M.L.	621	621	3	180	801	3	801
4352+82.59	4417+25.00	RT. - R.M.L.	6442	6442	26	1560	8002	26	8002
4417+25.00	4442+10.00	RT. - R.M.L.	2485	2485	10	600	3085	10	3085
4442+10.00	4467+64.00	RT. - R.M.L.	2554	2554	11	660	3214	11	3214
4467+70.00	4491+00.00	RT. - R.M.L.	2330	2330	10	600	2930	10	2930
4352+82.59	4428+75.00	LT. - L.M.L.	7592	7592	31	1860	9452	31	9452
4428+75.00	4453+50.00	LT. - L.M.L.	2475	2475	10	600	3075	10	3075
4453+50.00	4467+64.00	LT. - L.M.L.	1414	1414	6	360	1774	6	1774
4467+70.00	4491+00.00	LT. - L.M.L.	2330	2330	10	600	2930	10	2930
TOTALS:			65551	65551		16500	82051	275	82051

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	LENGTH	WIDTH	COLD MILLING ASPHALT PAVEMENT
			LIN. FT.	FEET	SQ. YD.
4043+65.40	4045+65.40	R.M.L. & SHOULDERS	200.0	38	844.4
4043+70.40	4045+70.40	L.M.L. & SHOULDERS	200.0	38	844.4
4496+00.00	4498+00.00	R.M.L. & SHOULDERS	200.0	38	844.4
4496+00.00	4498+00.00	L.M.L. & SHOULDERS	200.0	38	844.4
HWY. 1B LOOP RAMP SHOULDERS			400.0	10	444.4
HWY. 1B DIAMOND RAMP SHOULDERS			400.0	10	444.4
HWY. 284 INTERCHANGE RAMP SHOULDERS			400.0	10	444.4
REST AREA RAMP SHOULDERS - WB.			200.0	10	444.4
HWY. 38 INTERCHANGE RAMP SHOULDERS			400.0	10	444.4
TOTAL:					5599.6

NOTE: AVERAGE MILLING DEPTH 1".

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	185	374

(2) QUANTITIES

REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT - ALTERNATE NO. 1 & ALTERNATE NO. 2

STATION	STATION	LOCATION	LENGTH	WIDTH	SQUARE YARD
			LIN. FT.	FEET	
4050+65.40	4057+65.40	R.M.L. - TRANSITION	700.0	24	1866.7
4050+70.40	4057+70.40	L.M.L. - TRANSITION	700.0	24	1866.7
4061+25.63	4068+25.63	R.M.L. - TRANSITION	700.0	24	1866.7
4061+30.63	4068+30.63	L.M.L. - TRANSITION	700.0	24	1866.7
4091+42.12	4098+42.12	R.M.L. - TRANSITION	700.0	VAR.	2089.3
4091+50.83	4098+50.83	L.M.L. - TRANSITION	700.0	VAR.	2601.3
4101+46.30	4108+46.30	R.M.L. - TRANSITION	700.0	VAR.	2538.7
4101+55.01	4108+55.01	L.M.L. - TRANSITION	700.0	VAR.	2326.7
4145+56.10	4152+56.10	R.M.L. - TRANSITION	700.0	24	1866.7
4145+56.10	4152+56.10	L.M.L. - TRANSITION	700.0	24	1866.7
4154+42.18	4161+42.18	R.M.L. - TRANSITION	700.0	24	1866.7
4154+42.18	4161+42.18	L.M.L. - TRANSITION	700.0	24	1866.7
4211+62.00	4218+62.00	R.M.L. - TRANSITION	700.0	24	1866.7
4211+62.00	4218+62.00	L.M.L. - TRANSITION	700.0	24	1866.7
4221+92.17	4228+92.17	R.M.L. - TRANSITION	700.0	24	1866.7
4221+92.17	4228+92.17	L.M.L. - TRANSITION	700.0	24	1866.7
4304+30.16	4311+30.16	R.M.L. - TRANSITION	700.0	24	1866.7
4305+17.41	4312+17.41	L.M.L. - TRANSITION	700.0	24	1866.7
4313+79.12	4320+79.12	R.M.L. - TRANSITION	700.0	24	1866.7
4314+61.37	4321+61.37	L.M.L. - TRANSITION	700.0	24	1866.7
4327+82.41	4334+82.41	R.M.L. - TRANSITION	700.0	24	1866.7
4327+82.41	4334+82.41	L.M.L. - TRANSITION	700.0	24	1866.7
4345+82.59	4352+82.59	R.M.L. - TRANSITION	700.0	24	1866.7
4345+82.59	4352+82.59	L.M.L. - TRANSITION	700.0	24	1866.7
TOTAL:					46890.00

SCARIFYING CONCRETE PAVEMENT

LOCATION	LENGTH	WIDTH	SQUARE YARDS
	LIN. FT.	FEET	
HWY. 1B INTERCHANGE LOOP RAMPS	400.0	15.0	666.7
HWY. 1B INTERCHANGE DIAMOND RAMPS	400.0	15.0	666.7
HWY. 284 INTERCHANGE RAMPS	400.0	15.0	666.7
REST AREA RAMPS- WB.	200.0	15.0	333.3
HWY. 38 INTERCHANGE RAMPS	400.0	15.0	666.7
TOTAL:			3000.1

NOTE: AVERAGE SCARIFYING DEPTH 1".

FENCE

STATION	STATION	LOCATION	REMOVAL & DISPOSAL OF FENCE	WIRE FENCE (TYPE A)	12' VEHICULAR GATE
			LIN. FT.		EACH
4126+00	4135+00	LT	900	900	
4126+05	4143+00	RT	1695	1695	
4143+00	9+49	RT - OFF RAMP	972	972	
4135+00	20+00	LT - OFF RAMP	1903	1903	
9+49	4166+00	RT - OFF RAMP	1376	1376	
20+00	4168+00	LT - OFF RAMP	1471	1471	
4154+45		LT & RT			2
4161+00	4185+00	LT	2400	2400	
4158+00	4190+00	RT	3200	3200	
4190+00	4207+83	RT	1742	1742	
4195+00	4207+00	LT	1175	1175	
4221+56	4222+00	LT	180	180	
4221+56	4222+00	RT	190	190	
4221+90		RT			1
4222+00	4254+00	LT	3240	3240	
4224+10	4234+50	RT	1050	1050	
4248+03	4254+00	RT	620	620	
4254+00	4289+00	LT	3115	3115	
4254+00	4289+00	RT	3295	3295	
4273+45		RT			1
4275+65		LT			1
4289+00	4321+00	LT	3145	3145	
4289+00	4291+00	RT	200	200	
4299+00	4321+00	RT	2245	2245	
4310+15		RT			1
4315+55		LT			1
4321+00	4353+00	LT	2465	2465	
4321+00	4353+00	RT	2460	2460	
4334+60		LT			1
4346+00		LT			1
4353+00	4385+00	LT	3207	3207	
4353+00	4372+80	RT	1960	1960	
4368+50		LT			1
4374+80	4385+00	RT	1020	1020	
4385+00	4417+00	LT	3200	3200	
4385+00	4417+00	RT	3191	3191	
4395+45		LT			1
4417+00	4449+00	LT	3752	3752	
4417+00	4449+00	RT	3630	3630	
4449+00	4481+00	LT	3190	3190	
4449+00	4481+00	RT	3210	3210	
4481+00	4491+00	LT & RT	2000	2000	
TOTALS:			67399	67399	11

NOTE: REMOVAL OF EXISTING GATES SHALL BE MEASURED AND PAID FOR AS "REMOVAL AND DISPOSAL OF FENCE." GATES THAT ARE IN A SERVICEABLE CONDITION AS DETERMINED BY THE ENGINEER SHALL BE STACKED AT A SAFE LOCATION TO BE PICKED UP BY STATE FORCES.

ACHM PATCHING OF EXISTING ASPHALT SHOULDERS

DESCRIPTION	TON
ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER	200
TOTAL:	200

NOTE: QUANTITY IS ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECIFICATIONS. FOR ACHM PATCHING OF EXISTING ASPHALT SHOULDERS, THE PG BINDER WILL MATCH THE PG BINDER OF THE SURFACE COURSE USED ON THE LANES.

ACHM PATCHING OF EXISTING ASPHALT ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER	200
TOTAL:	200

NOTE: QUANTITY IS ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECIFICATIONS. FOR ACHM PATCHING OF EXISTING ASPHALT ROADWAY, THE PG BINDER WILL MATCH THE PG BINDER OF THE SURFACE COURSE USED ON THE LANES.

TEMPORARY RELOCATION OF EXISTING SIGNS

	DESCRIPTION	EACH
*	ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER	12
	TOTAL:	12

* NOTE: QUANTITY IS ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECIFICATIONS.

MAINTENANCE OF TRAFFIC ITEMS

STATION	STATION	LOCATION	MOBILE SPEED NOTIFICATION SYSTEM	MOTORIST ASSISTANCE PATROL	PORTABLE CAMERA ASSEMBLY	PORTABLE CONSTRUCTION LIGHTING		WRECKER SERVICE
						TOTAL NO. REQUIRED	DAY	
			EACH	LUMP SUM	EACH			LUMP SUM
ENTIRE PROJECT AS DIRECTED BY ENGINEER			2	1.00	12			1.00
ENTIRE PROJECT - CROSSOVER LOCATIONS AND TEMPORARY RAMPS						12	4212	
TOTALS:			2	1.00	12	12	4212	1.00

ACHM CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

DESCRIPTION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER	200	400
TOTALS:	200	400

NOTE: QUANTITY IS ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECIFICATIONS.

PORTLAND CEMENT CONCRETE CORRUGATIONS

LOCATION	ALTERNATE NO. 1 & NO.2	ALTERNATE NO. 1	
	PORTLAND CEMENT CONCRETE CORRUGATIONS	PORTLAND CEMENT CONCRETE PAVEMENT	
		12" U.T.	13" U.T.
	SQUARE YARD		
HWY. 1B DIAMOND EXIT RAMPS	150	150	
HWY. 1B LOOP EXIT RAMPS	50		50
HWY. 284 DIAMOND EXIT RAMPS	150	150	
HWY. 38 DIAMOND EXIT RAMPS	150	150	
WB REST AREA EXIT RAMP	75	75	
TOTALS:	575	525	50

PORTLAND CEMENT CONCRETE PAVEMENT PATCHING

STATION	STATION	LOCATION / DESCRIPTION	REMOVAL & DISPOSAL OF CONCRETE PAVEMENT FOR PATCHING	PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (10" U.T.)
			SQ. YD.	
ENTIRE	PROJECT	IF AND WHERE DIRECTED BY THE ENGINEER	* 6000	* 6000
TOTALS:			6000	6000

* QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS. PORTLAND CEMENT CONCRETE PAVEMENT PATCHING SHALL BE DONE AT LOCATIONS DESIGNATED BY THE ENGINEER. NO MESH, DOWEL BARS OR TIE BARS REQUIRED IN THE PATCHES THAT ARE TO BE RUBBILIZED. CONCRETE PATCHING (10" U.T.) FOR RAMPS SHALL FOLLOW REQUIREMENTS OUTLINED FOR SP - VERY EARLY STRENGTH CONCRETE.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/21/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	186	374

(2) QUANTITIES

BASE AND SURFACING - LANES ONLY - ALTERNATE NO. 1

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1 1/2") LEVELING - 110 LBS. PER SQ. YD. AVG. WID.			NORMAL AVG. WID.				TOTAL	ACHM BINDER COURSE (1") AVG. WID.				ACHM SURFACE COURSE (1/2") AVG. WID.				TACK COAT 0.10 GAL. PER SQ. YD. TOTAL WID.			0.03 GAL. PER SQ. YD. TOTAL WID.			TOTAL	AGGREGATE BASE COURSE CLASS 7	
			FEET	FEET	SQ.YD.	TON	FEET	SQ.YD.	POUND / SQ.YD.	TON	PG 76-22 TON	FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	FEET	SQ.YD.	GALLON	FEET	SQ.YD.	GALLON	GALLONS	TON / STATION	TON
CL MEDIAN I-40																												
4043+70.40	4045+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-LANES ONLY	200.0													24.0	533.3	220.0	58.7	24.0	533.3	53.3				53.3		
4045+70.40	4050+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-LANES ONLY	500.0													24.0	1333.3	495.0	330.0	24.0	1333.3	133.3	24.0	1333.3	40.0	173.3		
4050+70.40	4057+70.40	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4061+30.63	4068+30.63	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4068+30.63	4078+00.00	L.M.L. REHAB -LANES ONLY	969.4	24.0	2585.1	142.2	24.0	2585.1	962.5	1244.1	1386.3	24.0	2585.1	330.0	426.5	24.0	2585.1	440.0	568.7	24.0	2585.1	258.5	96.0	10340.3	310.2	568.7		
4078+00.00	4081+00.00	L.M.L. REHAB-TAPER -LANES ONLY	300.0	30.0	1000.0	55.0	30.0	1000.0	946.0	473.0	528.0	30.0	1000.0	330.0	165.0	30.0	1000.0	440.0	220.0	30.0	1000.0	100.0	120.0	4000.0	120.0	220.0		
4081+00.00	4088+00.00	L.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0	36.0	2800.0	154.0	36.0	2800.0	935.0	1309.0	1463.0	36.0	2800.0	330.0	462.0	36.0	2800.0	440.0	616.0	36.0	2800.0	280.0	144.0	11200.0	336.0	616.0		
4088+00.00	4091+50.83	L.M.L. REHAB -LANES ONLY	350.8	24.0	935.5	51.5	24.0	935.5	962.5	450.2	501.7	24.0	935.5	330.0	154.4	24.0	935.5	440.0	205.8	24.0	935.5	93.6	96.0	3741.9	112.3	205.9		
4091+50.83	4092+25.00	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	74.2				26.0	214.4	1100.0	117.9	117.9	26.0	214.4	660.0	70.8	26.0	214.4	440.0	47.2				130.0	1071.8	32.2	32.2	101.00	74.9
4092+25.00	4093+75.00	L.M.L. FULL DEPTH RECONSTRUCTION-TAPER-LANES ONLY	150.0				30.0	500.0	1100.0	275.0	275.0	30.0	500.0	660.0	165.0	30.0	500.0	440.0	110.0				150.0	2500.0	75.0	75.0	116.75	175.1
4093+75.00	4098+50.83	L.M.L. FULL DEPTH RECONSTRUCTION-AUX LANE-LANES ONLY	475.8				36.0	1903.2	1100.0	1046.8	1046.8	36.0	1903.2	660.0	628.1	36.0	1903.2	440.0	418.7				180.0	9516.0	285.5	285.5	140.00	666.1
4101+55.01	4105+00.00	L.M.L. FULL DEPTH RECONSTRUCTION-ACCEL. LANE-LANES ONLY	345.0				36.0	1380.0	1100.0	759.0	759.0	36.0	1380.0	660.0	455.4	36.0	1380.0	440.0	303.6				180.0	6900.0	207.0	207.0	140.00	483.0
4105+00.00	4108+55.01	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	355.0				26.0	1025.6	1100.0	564.1	564.1	26.0	1025.6	660.0	338.4	26.0	1025.6	440.0	225.6				130.0	5127.8	153.8	153.8	101.00	358.6
4108+55.01	4118+50.00	L.M.L. REHAB -LANES ONLY	995.0	24.0	2653.3	145.9	24.0	2653.3	962.5	1276.9	1422.8	24.0	2653.3	330.0	437.8	24.0	2653.3	440.0	583.7	24.0	2653.3	265.3	96.0	10613.3	318.4	583.7		
4118+50.00	4120+00.00	L.M.L. REHAB-TAPER -LANES ONLY	150.0	30.0	500.0	27.5	30.0	500.0	946.0	236.5	264.0	30.0	500.0	330.0	82.5	30.0	500.0	440.0	110.0	30.0	500.0	50.0	120.0	2000.0	60.0	110.0		
4120+00.00	4129+00.00	L.M.L. REHAB -LANES ONLY	900.0	24.0	2400.0	132.0	24.0	2400.0	962.5	1155.0	1287.0	24.0	2400.0	330.0	396.0	24.0	2400.0	440.0	528.0	24.0	2400.0	240.0	96.0	9600.0	288.0	528.0		
4129+00.00	4132+00.00	L.M.L. REHAB-TAPER -LANES ONLY	300.0	30.0	1000.0	55.0	30.0	1000.0	946.0	473.0	528.0	30.0	1000.0	330.0	165.0	30.0	1000.0	440.0	220.0	30.0	1000.0	100.0	120.0	4000.0	120.0	220.0		
4132+00.00	4139+00.00	L.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0	36.0	2800.0	154.0	36.0	2800.0	935.0	1309.0	1463.0	36.0	2800.0	330.0	462.0	36.0	2800.0	440.0	616.0	36.0	2800.0	280.0	144.0	11200.0	336.0	616.0		
4139+00.00	4145+56.10	L.M.L. REHAB -LANES ONLY	656.1	24.0	1749.6	96.2	24.0	1749.6	962.5	842.0	938.2	24.0	1749.6	330.0	288.7	24.0	1749.6	440.0	384.9	24.0	1749.6	175.0	96.0	6998.4	210.0	385.0		
4145+56.10	4152+56.10	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4154+42.18	4161+42.18	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4161+42.18	4164+50.00	L.M.L. REHAB -LANES ONLY	307.8	24.0	820.8	45.1	24.0	820.8	962.5	395.0	440.1	24.0	820.8	330.0	135.4	24.0	820.8	440.0	180.6	24.0	820.8	82.1	96.0	3283.2	98.5	180.6		
4164+50.00	4166+00.00	L.M.L. REHAB-TAPER -LANES ONLY	150.0	30.0	500.0	27.5	30.0	500.0	946.0	236.5	264.0	30.0	500.0	330.0	82.5	30.0	500.0	440.0	110.0	30.0	500.0	50.0	120.0	2000.0	60.0	110.0		
4166+00.00	4173+50.00	L.M.L. REHAB -LANES ONLY	750.0	24.0	2000.0	110.0	24.0	2000.0	962.5	962.5	1072.5	24.0	2000.0	330.0	330.0	24.0	2000.0	440.0	440.0	24.0	2000.0	200.0	96.0	8000.0	240.0	440.0		
4173+50.00	4176+50.00	L.M.L. REHAB-TAPER -LANES ONLY	300.0	30.0	1000.0	55.0	30.0	1000.0	946.0	473.0	528.0	30.0	1000.0	330.0	165.0	30.0	1000.0	440.0	220.0	30.0	1000.0	100.0	120.0	4000.0	120.0	220.0		
4176+50.00	4183+50.00	L.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0	36.0	2800.0	154.0	36.0	2800.0	935.0	1309.0	1463.0	36.0	2800.0	330.0	462.0	36.0	2800.0	440.0	616.0	36.0	2800.0	280.0	144.0	11200.0	336.0	616.0		
4183+50.00	4185+29.44	L.M.L. REHAB -LANES ONLY	179.4	24.0	478.4	26.3	24.0	478.4	962.5	230.2	256.5	24.0	478.4	330.0	78.9	24.0	478.4	440.0	105.2	24.0	478.4	47.8	96.0	1913.6	57.4	105.2		
4185+29.44	4188+79.44	L.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	350.0	24.0	933.3	51.3	24.0	933.3	1094.5	510.7	562.0	24.0	933.3	330.0	154.0	24.0	933.3	440.0	205.3	24.0	933.3	93.3	96.0	3733.3	112.0	205.3		
4188+79.44	4201+10.00	L.M.L. REHAB - MAX SUPER ELEV.-LANES ONLY	1230.6	24.0	3281.6	180.5	24.0	3281.6	1226.5	2012.4	2192.9	24.0	3281.6	330.0	541.5	24.0	3281.6	440.0	722.0	24.0	3281.6	328.2	96.0	13126.4	393.8	722.0		
4201+10.00	4202+06.11	L.M.L. REHAB -TAPER- MAX SUPER ELEV.-LANES ONLY	96.1	33.1	353.4	19.4	33.1	353.4	1226.5	216.7	236.1	33.1	353.4	330.0	58.3	33.1	353.4	440.0	77.7	33.1	353.4	35.3	132.4	1413.7	42.4	77.7		
4202+06.11	4203+10.00	L.M.L. REHAB -TAPER- SUPER ELEV. TRANS. -LANES ONLY	103.9	27.1	312.9	17.2	27.1	312.9	1187.0	185.7	202.9	27.1	312.9	330.0	51.6	27.1	312.9	440.0	68.8	27.1	312.9	31.3	108.4	1251.4	37.5	68.8		
4203+10.00	4205+56.11	L.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	246.1	24.0	656.3	36.1	24.0	656.3	1055.0	346.2	382.3	24.0	656.3	330.0	108.3	24.0	656.3	440.0	144.4	24.0	656.3	65.6	96.0	2625.1	78.8	144.4		
4205+56.11	4211+62.00	L.M.L. REHAB -LANES ONLY	605.9	24.0	1615.7	88.9	24.0	1615.7	962.5	777.6	866.5	24.0	1615.7	330.0	266.6	24.0	1615.7	440.0	355.5	24.0	1615.7	161.6	96.0	6462.9	193.9	355.5		
4211+62.00	4218+62.00	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4221+92.17	4228+92.17	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4228+92.17	4256+10.40	L.M.L. REHAB -LANES ONLY	2718.2	24.0	7248.5	398.7	24.0	7248.5	962.5	3488.3	3887.0	24.0	7248.5	330.0	1196.0	24.0	7248.5	440.0	1594.7	24.0	7248.5	724.9	96.0	28994.1	869.8	1594.7		
4256+10.40	4258+72.90	L.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	262.5	24.0	700.0	38.5	24.0	700.0	1061.5	371.5	410.0	24.0	700.0	330.0	115.5	24.0	700.0	440.0	154.0	24.0	700.0	70.0	96.0	2800.0	84.0	154.0		
4261+96.60	4262+84.10	L.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	87.5	24.0	233.3	12.8	24.0	233.3	1143.5	133.4	146.2	24.0	233.3	330.0	38.5	24.0	233.3	440.0	51.3	24.0	233.3	23.3	96.0	933.3	28.0	51.3		
4262+84.10	4305+17.41	L.M.L. REHAB - MAX SUPER ELEV.-LANES ONLY	4233.3	24.0	11288.8	620.9	24.0	11288.8	1226.5	6922.9	7543.8	24.0	11288.8	330.0	1862.7	24.0	11288.8	440.0	2483.5	24.0	11288.8	1128.9	96.0	45155.2	1354.7	2483.6		
4305+17.41	4312+17.41	L.M.L. FULL DEPTH RECONSTRUCTION-MAX SUPER -LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4314+61.37	4317+09.10	L.M.L. FULL DEPTH RECONSTRUCTION-MAX SUPER -LANES ONLY	247.7				26.0	715.6	1100.0	393.6	393.6	26.0	715.6	660.0	236.1	26.0	715.6	440.0	157.4				130.0	3577.9	107.3	107.3	101.00	250.2
4317+09.10	4320+59.10	L.M.L. FULL DEPTH RECON.- SUPER ELEV. TRANS. -LANES ONLY	350.0				26.0	1011.1	1100.0	556.1	556.1	26.0	1011.1	660.0	333.7	26.0	1011.1	440.0	222.4				130.0	5055.6	151.7	151.7	101.00	353.5
4320+59.10	4321+61.37	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	102.3				26.0	295.5	1100.0	162.5	162.5	26.0	295.5	660.0	97.5	26.0	295.5	440.0	85.0				130.0	1477.7	44.3	44.3	101.00	103.3
4321+61.37	4327+82.41	L.M.L. REHAB -LANES ONLY	621.0	24.0	1656.0	91.1	24.0	1656.0	962.5	797.0	888.1	24.0	1656.0	330.0	273.2	24.0	1656.0	440.0	364.3	24.0	1656.0	185.6	96.0	6624.0	198.7	364.3		
4327+82.41	4334+82.41	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4345+82.59	4352+82.59	L.M.L. FULL DEPTH RECONSTRUCTION-LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4352+82.59	4418+75.00	L.M.L. REHAB -LANES ONLY	6592.4	24.0	17579.7	966.9	24.0	17579.7	962.5	8460.2	9427.1	24.0	17579.7	330.0	2900.7	24.0	17579.7	440.0	3867.5	24.0	17579.7	1758.0	96.0	70318.9	2109.6	3867.6		
4418+75.00	4421+75.00	L.M.L. REHAB-TAPER -LANES ONLY	300.0	30.0	1000.0	55.0	30.0	1000.0	946.0	473.0	528.0	30.0	1000.0	330.0	165.0	30.0	1000.0	440.0	220.0	30.0	1000.0	100.0	120.0	4000.0	120.0	220.0		
4421+75.00	4428+75.00	L.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0	36.0	2800.0	154.0	36.0	2800.0	935.0	1309.0	1463.0	36.0	2800.0	330.0	462.0	36.0	2800.0	440.0	616.0	36.0	2800.0	280.0	144.0	11200.0	336.0	616.0		
4428+75.00	4453+50.00	L.M.L. REHAB -LANES ONLY	2475.0	24.0	6600.0	363.0	24.0	6600.0	962.5	3176.3	3539.3	24.0	6600.0	330.0	1089.0	24.0	6600.0	440.0	1452.0	24.0	6600.0	660.0	96.0	26400.0	792.0	1452.0		
4453+50.00	4455+00.00	L.M.L. REHAB-TAPER -LANES ONLY	150.0	30.0	500.0	27.5	30.0	500.0	946.0	236.5	264.0	30.0	500.0	330.0	82.5	30.0	500.0	440.0	110.0	30.0	500.0	50.0	120.0	2000.0	60.0	110.0		
4455+00.00	4467+64.00	L.M.L. REHAB -LANES ONLY	1264.0	24.0	3370.7	185.4	24.0	3370.7	962.5	1622.1	1807.5	24.0	3370.7	330.0	556.2	24.0	3370.7	440.0	741.6	24.0	3370.7	337.1	96.0	13482.7	404.5	741.6		
4467+70.00	4491+00.00	L.M.L. REHAB -LANES ONLY	2330.0	24.0	6213.3	341.7	24.0	6213.3	962.5	2990.2	3331.9	24.0	6213.3	330.0	1025.2	24.0	6213.3	440.0	1366.9	24.0	6213.3	621.3	96.0	24853.3	745.6	1366.9		
4467+64.00	4472+64.00	L.M.L. REHAB TO EXIST.-LANES ONLY	500.0													24.0	1333.3	495.0	330.0	24.0	1333.3	133.3	24.0	1333.3	40.0	173.3		
4472+64.00	4474+64.00	L.M.L. REHAB TO EXIST.-LANES ONLY	200.0													24.0	533.3	220.0	58.7	24.0	533.3	53.3				53.3		
TOTALS THIS SHEET:											65369.5				23571.2				26651.8							24560.5		8827.7

BASIS OF ESTIMATE:

ACHM BASE COURSE (1-1/2") - MINERAL AGGREGATE = 96.1%, ASPHALT BINDER (PG 76-22) = 3.9%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 95.7%, ASPHALT BINDER (PG 76-22) = 4.3%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	187	374

(2) QUANTITIES

BASE AND SURFACING - LANES ONLY - ALTERNATE NO. 1 (CONTINUED)

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1 1/2")								ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")				TACK COAT							AGGREGATE BASE COURSE CLASS 7	
				LEVELING - 110 LBS. PER SQ. YD.			NORMAL				TOTAL									0.10 GAL. PER SQ. YD.			0.03 GAL. PER SQ. YD.			TOTAL GALLONS		
				AVG. WID. FEET	SQ.YD.	TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	TON	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	TOTAL WID. FEET	SQ.YD.	GALLON	TOTAL WID. FEET	SQ.YD.	GALLON		TON / STATION	TON
4043+65.40	4045+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-LANES ONLY	200.0													24.0	533.3	220.0	58.7	24.0	533.3	53.3				53.3		
4045+65.40	4050+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-LANES ONLY	500.0													24.0	1333.3	495.0	330.0	24.0	1333.3	133.3	24.0	1333.3	40.0	173.3		
4050+65.40	4057+65.40	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4061+25.63	4068+25.63	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4068+25.63	4082+50.00	R.M.L. REHAB -LANES ONLY	1424.4	24.0	3798.4	208.9	24.0	3798.4	962.5	1828.0	2036.9	24.0	3798.4	330.0	626.7	24.0	3798.4	440.0	835.6	24.0	3798.4	379.8	96.0	15193.6	455.8	835.6		
4082+50.00	4084+00.00	R.M.L. REHAB-TAPER -LANES ONLY	150.0	30.0	500.0	27.5	30.0	500.0	946.0	236.5	264.0	30.0	500.0	330.0	82.5	30.0	500.0	440.0	110.0	30.0	500.0	50.0	120.0	2000.0	60.0	110.0		
4084+00.00	4091+42.12	R.M.L. REHAB -LANES ONLY	742.1	24.0	1978.9	108.8	24.0	1978.9	962.5	952.3	1061.1	24.0	1978.9	330.0	326.5	24.0	1978.9	440.0	435.4	24.0	1978.9	197.9	96.0	7915.7	237.5	435.4		
4091+42.12	4096+75.00	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	532.9				26.0	1539.5	1100.0	846.7	846.7	26.0	1539.5	660.0	508.0	26.0	1539.5	440.0	338.7				130.0	7697.4	230.9	230.9	101.00	538.2
4096+75.00	4098+42.12	R.M.L. FULL DEPTH RECONSTRUCTION -AUX LANE-LANES ONLY	167.1				36.0	668.4	1100.0	367.6	367.6	36.0	668.4	660.0	220.6	36.0	668.4	440.0	147.0				180.0	3342.0	100.3	100.3	140.00	233.9
4101+46.30	4105+75.00	R.M.L. FULL DEPTH RECONSTRUCTION -ACCEL. LANE-LANES ONLY	428.7				36.0	1714.8	1100.0	943.1	943.1	36.0	1714.8	660.0	565.9	36.0	1714.8	440.0	377.3				180.0	8574.0	257.2	257.2	140.00	600.2
4105+75.00	4107+25.00	R.M.L. FULL DEPTH RECONSTRUCTION -TAPER-LANES ONLY	150.0				30.0	500.0	1100.0	275.0	275.0	30.0	500.0	660.0	165.0	30.0	500.0	440.0	110.0				150.0	2500.0	75.0	75.0	116.75	175.1
4107+25.00	4108+46.30	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	121.3				26.0	350.4	1100.0	192.7	192.7	26.0	350.4	660.0	115.6	26.0	350.4	440.0	77.1				130.0	1752.1	52.6	52.6	101.00	122.5
4108+46.30	4117+25.00	R.M.L. REHAB -LANES ONLY	878.7	24.0	2343.2	128.9	24.0	2343.2	962.5	1127.7	1256.6	24.0	2343.2	330.0	386.6	24.0	2343.2	440.0	515.5	24.0	2343.2	234.3	96.0	9372.8	281.2	515.5		
4117+25.00	4123+25.00	R.M.L. REHAB-ACCEL. LANE -LANES ONLY	600.0	36.0	2400.0	132.0	36.0	2400.0	935.0	1122.0	1254.0	36.0	2400.0	330.0	396.0	36.0	2400.0	440.0	528.0	36.0	2400.0	240.0	144.0	9600.0	288.0	528.0		
4123+25.00	4126+25.00	R.M.L. REHAB-TAPER -LANES ONLY	300.0	30.0	1000.0	55.0	30.0	1000.0	946.0	473.0	528.0	30.0	1000.0	330.0	165.0	30.0	1000.0	440.0	220.0	30.0	1000.0	100.0	120.0	4000.0	120.0	220.0		
4126+25.00	4134+25.00	R.M.L. REHAB -LANES ONLY	800.0	24.0	2133.3	117.3	24.0	2133.3	962.5	1026.7	1144.0	24.0	2133.3	330.0	352.0	24.0	2133.3	440.0	469.3	24.0	2133.3	213.3	96.0	8533.3	256.0	469.3		
4134+25.00	4136+25.00	R.M.L. REHAB-TAPER -LANES ONLY	200.0	30.0	666.7	36.7	30.0	666.7	946.0	315.3	352.0	30.0	666.7	330.0	110.0	30.0	666.7	440.0	146.7	30.0	666.7	66.7	120.0	2666.7	80.0	146.7		
4136+25.00	4145+56.10	R.M.L. REHAB -LANES ONLY	931.1	24.0	2482.9	136.6	24.0	2482.9	962.5	1194.9	1331.5	24.0	2482.9	330.0	409.7	24.0	2482.9	440.0	546.2	24.0	2482.9	248.3	96.0	9931.7	298.0	546.3		
4145+56.10	4152+56.10	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4154+42.18	4161+42.18	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4161+42.18	4163+50.00	R.M.L. REHAB -LANES ONLY	207.8	24.0	554.1	30.5	24.0	554.1	962.5	266.7	297.2	24.0	554.1	330.0	91.4	24.0	554.1	440.0	121.9	24.0	554.1	55.4	96.0	2216.5	66.5	121.9		
4163+50.00	4170+50.00	R.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0	36.0	2800.0	154.0	36.0	2800.0	935.0	1309.0	1463.0	36.0	2800.0	330.0	462.0	36.0	2800.0	440.0	616.0	36.0	2800.0	280.0	144.0	11200.0	336.0	616.0		
4170+50.00	4173+50.00	R.M.L. REHAB-TAPER -LANES ONLY	300.0	30.0	1000.0	55.0	30.0	1000.0	946.0	473.0	528.0	30.0	1000.0	330.0	165.0	30.0	1000.0	440.0	220.0	30.0	1000.0	100.0	120.0	4000.0	120.0	220.0		
4173+50.00	4185+29.44	R.M.L. REHAB -LANES ONLY	1179.4	24.0	3145.1	173.0	24.0	3145.1	962.5	1513.6	1686.6	24.0	3145.1	330.0	518.9	24.0	3145.1	440.0	691.9	24.0	3145.1	314.5	96.0	12580.3	377.4	691.9		
4185+29.44	4188+79.44	R.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	350.0	24.0	933.3	51.3	24.0	933.3	1094.5	510.7	562.0	24.0	933.3	330.0	154.0	24.0	933.3	440.0	205.3	24.0	933.3	93.3	96.0	3733.3	112.0	205.3		
4188+79.44	4202+06.11	R.M.L. REHAB - MAX SUPER ELEV.-LANES ONLY	1326.7	24.0	3537.9	194.6	24.0	3537.9	1226.5	2169.6	2364.2	24.0	3537.9	330.0	583.8	24.0	3537.9	440.0	778.3	24.0	3537.9	353.8	96.0	14151.5	424.5	778.3		
4202+06.11	4205+56.11	R.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	350.0	24.0	933.3	51.3	24.0	933.3	1094.5	510.7	562.0	24.0	933.3	330.0	154.0	24.0	933.3	440.0	205.3	24.0	933.3	93.3	96.0	3733.3	112.0	205.3		
4205+56.11	4211+62.00	R.M.L. REHAB -LANES ONLY	605.9	24.0	1615.7	88.9	24.0	1615.7	962.5	777.6	866.5	24.0	1615.7	330.0	266.6	24.0	1615.7	440.0	355.5	24.0	1615.7	161.6	96.0	6462.9	193.9	355.5		
4211+62.00	4218+62.00	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4221+92.17	4228+92.17	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4228+92.17	4256+10.40	R.M.L. REHAB -LANES ONLY	2718.2	24.0	7248.5	398.7	24.0	7248.5	962.5	3488.3	3887.0	24.0	7248.5	330.0	1196.0	24.0	7248.5	440.0	1594.7	24.0	7248.5	724.9	96.0	28994.1	869.8	1594.7		
4256+10.40	4258+72.90	R.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	262.5	24.0	700.0	38.5	24.0	700.0	1061.5	371.5	410.0	24.0	700.0	330.0	115.5	24.0	700.0	440.0	154.0	24.0	700.0	70.0	96.0	2800.0	84.0	154.0		
4261+96.60	4262+84.10	R.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	87.5	24.0	233.3	12.8	24.0	233.3	1143.5	133.4	146.2	24.0	233.3	330.0	38.5	24.0	233.3	440.0	51.3	24.0	233.3	23.3	96.0	933.3	28.0	51.3		
4262+84.10	4304+30.16	R.M.L. REHAB - MAX SUPER ELEV.-LANES ONLY	4146.1	24.0	11056.3	608.1	24.0	11056.3	1226.5	6780.3	7388.4	24.0	11056.3	330.0	1824.3	24.0	11056.3	440.0	2432.4	24.0	11056.3	1105.6	96.0	44225.1	1326.8	2432.4		
4304+30.16	4311+30.16	R.M.L. FULL DEPTH RECONSTRUCTION-MAX SUPER -LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4313+79.12	4317+09.10	R.M.L. FULL DEPTH RECONSTRUCTION-MAX SUPER -LANES ONLY	330.0				26.0	953.3	1100.0	524.3	524.3	26.0	953.3	660.0	314.6	26.0	953.3	440.0	209.7				130.0	4766.7	143.0	143.0	101.00	333.3
4317+09.10	4320+59.10	R.M.L. FULL DEPTH RECON.- SUPER ELEV. TRANS. -LANES ONLY	350.0				26.0	1011.1	1100.0	556.1	556.1	26.0	1011.1	660.0	333.7	26.0	1011.1	440.0	222.4				130.0	5055.6	151.7	151.7	101.00	353.5
4320+59.10	4320+79.12	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	20.0				26.0	57.8	1100.0	31.8	31.8	26.0	57.8	660.0	19.1	26.0	57.8	440.0	12.7				130.0	288.9	8.7	8.7	101.00	20.2
4320+79.12	4327+82.41	R.M.L. REHAB -LANES ONLY	703.3	24.0	1875.5	103.2	24.0	1875.5	962.5	902.6	1005.8	24.0	1875.5	330.0	309.5	24.0	1875.5	440.0	412.6	24.0	1875.5	187.6	96.0	7501.9	225.1	412.7		
4327+82.41	4334+82.41	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4345+82.59	4352+82.59	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0				26.0	2022.2	1100.0	1112.2	1112.2	26.0	2022.2	660.0	667.3	26.0	2022.2	440.0	444.9				130.0	10111.1	303.3	303.3	101.00	707.0
4352+82.59	4415+25.00	R.M.L. REHAB -LANES ONLY	6242.4	24.0	16646.4	915.6	24.0	16646.4	962.5	8011.1	8926.7	24.0	16646.4	330.0	2746.7	24.0	16646.4	440.0	3662.2	24.0	16646.4	1664.6	96.0	66585.6	1997.6	3662.2		
4415+25.00	4417+25.00	R.M.L. REHAB-TAPER -LANES ONLY	200.0	30.0	666.7	36.7	30.0	666.7	946.0	315.3	352.0	30.0	666.7	330.0	110.0	30.0	666.7	440.0	146.7	30.0	666.7	66.7	120.0	2666.7	80.0	146.7		
4417+25.00	4442+10.00	R.M.L. REHAB -LANES ONLY	2485.0	24.0	6626.7	364.5	24.0	6626.7	962.5	3189.1	3553.6	24.0	6626.7	330.0	1093.4	24.0	6626.7	440.0	1457.9	24.0	6626.7	662.7	96.0	26506.7	795.2	1457.9		
4442+10.00	4449+10.00	R.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0	36.0	2800.0	154.0	36.0	2800.0	935.0	1309.0	1463.0	36.0	2800.0	330.0	462.0	36.0	2800.0	440.0	616.0	36.0	2800.0	280.0	144.0	11200.0	336.0	616.0		
4449+10.00	4452+10.00	R.M.L. REHAB-TAPER -LANES ONLY	300.0	30.0	1000.0	55.0	30.0	1000.0	946.0	473.0	528.0	30.0	1000.0	330.0	165.0	30.0	1000.0	440.0	220.0	30.0	1000.0	100.0	120.0	4000.0	120.0	220.0		
4452+10.00	4467+64.00	R.M.L. REHAB -LANES ONLY	1554.0	24.0	4144.0	227.9	24.0	4144.0	962.5	1994.3	2222.2	24.0	4144.0	330.0	683.8	24.0	4144.0	440.0	911.7	24.0	4144.0	414.4	96.0	16576.0	497.3	911.7		
4467+70.00	4491+00.00	R.M.L. REHAB -LANES ONLY	2330.0	24.0	6213.3	341.7	24.0	6213.3	962.5	2990.2	3331.9	24.0	6213.3	330.0	1025.2	24.0	6213.3	440.0	1366.9	24.0	6213.3	621.3	96.0	24853.3	745.6	1366.9		
4467+64.00	4472+64.00	R.M.L. REHAB TO EXIST.-LANES ONLY	500.0													24.0	1333.3	495.0	330.0	24.0	1333.3	133.3	24.0	1333.3	40.0	173.3		
4472+64.00	4474+64.00	R.M.L. REHAB TO EXIST.-LANES ONLY	200.0													24.0	533.3	220.0	58.7	24.0	533.3	53.3				53.3		
TOTALS THIS SHEET:											64519.5				23268.8				26303.7							24229.8		8739.9

BASIS OF ESTIMATE:

ACHM BASE COURSE (1-1/2") - MINERAL AGGREGATE = 96.1%, ASPHALT BINDER (PG 76-22) = 3.9%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 95.7%, ASPHALT BINDER (PG 76-22) = 4.3%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	188	374

2 QUANTITIES

BASE AND SURFACING SHOULDERS - ALTERNATE NO. 1

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1 1/2") LEVELING - 110 LBS. PER SQ. YD. AVG. WID.			NORMAL AVG. WID.				TOTAL	ACHM BINDER COURSE (1") AVG. WID.				ACHM SURFACE COURSE (1/2") AVG. WID.				TACK COAT 0.10 GAL. PER SQ. YD. TOTAL WID.			0.03 GAL. PER SQ. YD. TOTAL WID.			TOTAL	AGGREGATE BASE COURSE CLASS 1		CLASS 7		RUMBLE STRIPS ASPHALT
			FEET	FEET	SQ.YD.	TON	FEET	SQ.YD.	POUND / SQ.YD.	TON	PG 76-22 TON	FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	FEET	SQ.YD.	GALLON	FEET	SQ.YD.	GALLON	GALLONS	TON / STATION	TON	TON / STATION	TON	LIN. FT.
CL MEDIAN I-40																															
4043+70.40	4045+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-LT. SHLD.	200.0													10.0	222.2	220.0	24.4	10.0	222.2	22.2				22.2					200
4043+70.40	4045+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-RT. SHLD.	200.0													4.0	88.9	220.0	9.8	4.0	88.9	8.9				8.9					200
4045+70.40	4050+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-LT. SHLD.	500.0													10.0	555.6	495.0	137.5	10.0	555.6	55.6	10.0	555.6	16.7	72.3	53.75	268.8			500
4045+70.40	4050+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-RT. SHLD.	500.0													4.0	222.2	495.0	55.0	4.0	222.2	22.2	4.0	222.2	6.7	28.9	71.75	358.8			500
4050+70.40	4057+70.40	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9												
4050+70.40	4057+70.40	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4061+30.63	4068+30.63	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4061+30.63	4068+30.63	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
																							22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4068+30.63	4078+00.00	L.M.L. REHAB -LT. SHLD.	969.4	10.9	1174.1	64.6	10.9	1174.1	880.0	516.6	581.2	10.46	1126.7	330.0	185.9	10.0	1077.1	440.0	237.0	10.9	1174.1	117.4	41.4	4459.2	133.8	251.2	97.25	942.7			969
4068+30.63	4078+00.00	L.M.L. REHAB -RT. SHLD.	969.4	5.0	538.6	29.6	5.0	538.6	1045.0	281.4	311.0	4.46	480.4	330.0	79.3	4.0	430.8	440.0	94.8	5.0	538.6	53.9	17.5	1884.9	56.5	110.4	149.75	1451.7			969
4078+00.00	4081+00.00	L.M.L. REHAB -TAPER-LT. SHLD.	300.0	8.9	296.7	16.3	8.9	296.7	880.0	130.5	146.8	8.46	282.0	330.0	46.5	8.0	266.7	440.0	58.7	8.9	296.7	29.7	33.4	1113.3	33.4	63.1	107.00	321.0			300
4078+00.00	4081+00.00	L.M.L. REHAB -TAPER-RT. SHLD.	300.0	5.0	166.7	9.2	5.0	166.7	1045.0	87.1	96.3	4.46	148.7	330.0	24.5	4.0	133.3	440.0	29.3	5.0	166.7	16.7	17.5	583.3	17.5	34.2	149.75	449.3			300
4081+00.00	4088+00.00	L.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0	6.9	536.7	29.5	6.9	536.7	880.0	236.1	265.6	6.46	502.4	330.0	82.9	6.0	466.7	440.0	102.7	6.9	536.7	53.7	25.4	1975.6	59.3	113.0	116.75	817.3			700
4081+00.00	4088+00.00	L.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0	5.0	388.9	21.4	5.0	388.9	1045.0	203.2	224.6	4.46	346.9	330.0	57.2	4.0	311.1	440.0	68.4	5.0	388.9	38.9	17.5	1361.1	40.8	79.7	149.75	1048.3			700
4088+00.00	4091+50.83	L.M.L. REHAB -LT. SHLD.	350.8	10.9	424.9	23.4	10.9	424.9	880.0	187.0	210.4	10.46	407.7	330.0	67.3	10.0	389.8	440.0	85.8	10.9	424.9	42.5	41.4	1613.7	48.4	90.9	97.25	341.2			351
4088+00.00	4091+50.83	L.M.L. REHAB -RT. SHLD.	350.8	5.0	194.9	10.7	5.0	194.9	1045.0	101.8	112.5	4.46	173.8	330.0	28.7	4.0	155.9	440.0	34.3	5.0	194.9	19.5	17.5	682.1	20.5	40.0	149.75	525.3			351
4091+50.83	4092+25.00	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	74.2				9.3	76.7	1100.0	42.2	42.2	8.58	70.7	660.0	23.3	8.0	66.0	440.0	14.5				42.5	350.4	10.5	10.5	107.25	79.6	26.25	19.5	74
4091+50.83	4092+25.00	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	74.2				5.3	43.7	1100.0	24.0	24.0	4.58	37.8	660.0	12.5	4.0	33.0	440.0	7.3				22.5	185.5	5.6	5.6	143.50	106.5	14.25	10.6	74
4092+25.00	4093+75.00	L.M.L. FULL DEPTH RECONSTRUCTION-TAPER -LT. SHLD.	150.0				9.3	155.0	1100.0	85.3	85.3	8.58	143.0	660.0	47.2	8.0	133.3	440.0	29.3				42.5	708.3	21.2	21.2	109.50	164.3	23.50	35.3	150
4092+25.00	4093+75.00	L.M.L. FULL DEPTH RECONSTRUCTION-TAPER -RT. SHLD.	150.0				5.3	88.3	1100.0	48.6	48.6	4.58	76.3	660.0	25.2	4.0	66.7	440.0	14.7				22.5	375.0	11.3	11.3	143.50	215.3	14.25	21.4	150
4093+75.00	4098+50.83	L.M.L. FULL DEPTH RECONSTRUCTION-AUX. LANE -LT. SHLD.	475.8				7.3	385.9	1100.0	212.2	212.2	6.58	347.9	660.0	114.8	6.0	317.2	440.0	69.8				32.5	1718.2	51.5	51.5	111.50	530.5	20.50	97.5	476
4093+75.00	4098+50.83	L.M.L. FULL DEPTH RECONSTRUCTION-AUX. LANE -RT. SHLD.	475.8				5.3	280.2	1100.0	154.1	154.1	4.58	242.1	660.0	79.9	4.0	211.5	440.0	46.5				22.5	1189.5	35.7	35.7	143.50	682.8	14.25	67.8	476
4101+55.01	4105+00.00	L.M.L. FULL DEPTH RECONSTRUCTION-ACCEL. LANE -LT. SHLD.	345.0				7.3	279.8	1100.0	153.9	153.9	6.58	252.2	660.0	83.2	6.0	230.0	440.0	50.6												
4101+55.01	4105+00.00	L.M.L. FULL DEPTH RECONSTRUCTION-ACCEL. LANE -RT. SHLD.	345.0				5.3	203.2	1100.0	111.8	111.8	4.58	175.6	660.0	57.9	4.0	153.3	440.0	33.7				32.5	1245.8	37.4	37.4	111.50	384.7	20.50	70.7	345
4105+00.00	4108+55.01	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	355.0				9.3	366.8	1100.0	201.7	201.7	8.58	338.4	660.0	111.7	8.0	315.6	440.0	69.4				22.5	862.5	25.9	25.9	143.50	495.1	14.25	49.2	345
4105+00.00	4108+55.01	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	355.0				5.3	209.1	1100.0	115.0	115.0	4.58	180.7	660.0	59.6	4.0	157.8	440.0	34.7				42.5	1676.4	50.3	50.3	107.25	380.7	26.25	93.2	355
																							22.5	887.5	26.6	26.6	143.50	509.4	14.25	50.6	355
4108+55.01	4118+50.00	L.M.L. REHAB -LT. SHLD.	995.0	10.9	1205.1	66.3	10.9	1205.1	880.0	530.2	596.5	10.46	1156.4	330.0	190.8	10.0	1105.6	440.0	243.2	10.9	1205.1	120.5	41.4	4577.0	137.3	257.8	97.25	967.6			995
4108+55.01	4118+50.00	L.M.L. REHAB -RT. SHLD.	995.0	5.0	552.8	30.4	5.0	552.8	1045.0	288.8	319.2	4.46	493.1	330.0	81.4	4.0	442.2	440.0	97.3	5.0	552.8	55.3	17.5	1934.7	58.0	113.3	149.75	1490.0			995
4118+50.00	4120+00.00	L.M.L. REHAB -TAPER-LT. SHLD.	150.0	8.9	148.3	8.2	8.9	148.3	880.0	65.3	73.5	8.46	141.0	330.0	23.3	8.0	133.3	440.0	29.3	8.9	148.3	14.8	33.4	556.7	16.7	31.5	107.00	160.5			150
4118+50.00	4120+00.00	L.M.L. REHAB -TAPER-RT. SHLD.	150.0	5.0	83.3	4.6	5.0	83.3	1045.0	43.5	48.1	4.46	74.3	330.0	12.3	4.0	66.7	440.0	14.7	5.0	83.3	8.3	17.5	291.7	8.8	17.1	149.75	224.6			150
4120+00.00	4129+00.00	L.M.L. REHAB -LT. SHLD.	900.0	10.9	1090.0	60.0	10.9	1090.0	880.0	479.6	539.6	10.46	1046.0	330.0	172.6	10.0	1000.0	440.0	220.0	10.9	1090.0	109.0	41.4	4140.0	124.2	233.2	97.25	875.3			900
4120+00.00	4129+00.00	L.M.L. REHAB -RT. SHLD.	900.0	5.0	500.0	27.5	5.0	500.0	1045.0	261.3	288.8	4.46	446.0	330.0	73.6	4.0	400.0	440.0	88.0	5.0	500.0	50.0	17.5	1750.0	52.5	102.5	149.75	1347.8			900
4129+00.00	4132+00.00	L.M.L. REHAB -TAPER-LT. SHLD.	300.0	8.9	296.7	16.3	8.9	296.7	880.0	130.5	146.8	8.46	282.0	330.0	46.5	8.0	266.7	440.0	58.7	8.9	296.7	29.7	33.4	1113.3	33.4	63.1	107.00	321.0			300
4129+00.00	4132+00.00	L.M.L. REHAB -TAPER-RT. SHLD.	300.0	5.0	166.7	9.2	5.0	166.7	1045.0	87.1	96.3	4.46	148.7	330.0	24.5	4.0	133.3	440.0	29.3	5.0	166.7	16.7	17.5	583.3	17.5	34.2	149.75	449.3			300
4132+00.00	4139+00.00	L.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0	6.9	536.7	29.5	6.9	536.7	880.0	236.1	265.6	6.46	502.4	330.0	82.9	6.0	466.7	440.0	102.7	6.9	536.7	53.7	25.4	1975.6	59.3	113.0	116.75	817.3			700
4132+00.00	4139+00.00	L.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0	5.0	388.9	21.4	5.0	388.9	1045.0	203.2	224.6	4.46	346.9	330.0	57.2	4.0	311.1	440.0	68.4	5.0	388.9	38.9	17.5	1361.1	40.8	79.7	149.75	1048.3			700
4139+00.00	4145+56.10	L.M.L. REHAB -LT. SHLD.	656.1	10.9	794.6	43.7	10.9	794.6	880.0	349.6	393.3	10.46	762.5	330.0	125.8	10.0	729.0	440.0	160.4	10.9	794.6	79.5	41.4	3018.1	90.5	170.0	97.25	638.1			656
4139+00.00	4145+56.10	L.M.L. REHAB -RT. SHLD.	656.1	5.0	364.5	20.0	5.0	364.5	1045.0	190.5	210.5	4.46	325.1	330.0	53.6	4.0	291.6	440.0	64.2	5.0	364.5	36.5	17.5	1275.8	38.3	74.8	149.75	982.5			656
4145+56.10	4152+56.10	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4145+56.10	4152+56.10	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4154+42.18	4161+42.18	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4154+42.18	4161+42.18	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4161+42.18	4164+50.00	L.M.L. REHAB -LT. SHLD.	307.8	10.9	372.8	20.5	10.9	372.8	880.0	164.0	184.5	10.46	357.7	330.0	59.0	10.0	342.0	440.0	75.2	10.9	372.8	37.3	41.4	1415.9	42.5	79.8	97.25	299.3			308
4161+42.18	4164+50.00	L.M.L. REHAB -RT. SHLD.	307.8	5.0	171.0	9.4	5.0	171.0	1045.0	89.3	98.7	4.46	152.5	330.0	25.2	4.0	136.8	440.0	30.1	5.0	171.0	17.1	17.5	598.5	18.0	35.1	149.75	460.9			308
4164+50.00	4166+00.00	L.M.L. REHAB -TAPER-LT. SHLD.	150.0	8.9	148.3	8.2	8.9	148.3	880.0	65.3	73.5	8.46	141.0	330.0	23.3	8.0	133.3	440.0	29.3	8.9	148.3	14.8	33.4	556.7	16.7	31.5	97.25	145.9			150
4164+50.00	4166+00.00	L.M.L. REHAB -TAPER-RT. SHLD.	150.0	5.0	83.3	4.6	5.0	83.3	1045.0	43.5	48.1	4.46	74.3	330.0	12.3	4.0	66.7	440.0	14.7	5.0	83.3	8.3	17.5	291.7	8.8	17.1	149.75	224.6			150
4166+00.00	4173+50.00	L.M.L. REHAB -LT. SHLD.	750.0	10.9	908.3	50.0	10.9	908.3	880.0	399.7	449.7	10.46	871.7	330.0	143.8	10.0	833.3	440.0	183.3	10.9	908.3	90.8	41.4	3450.0	103.5	194.3	97.25	729.4			750
4166+00.00	4173+50.00	L.M.L. REHAB -RT. SHLD.	750.0	5.0	416.7	22.9	5.0	416.7	1045.0	217.7	240.6	4.46	371.7	330.0	61.3	4.0	333.3	440.0	73.3	5.0	416.7	41.7	17.5	1458.3	43.7	85.4	149.75	1123.1			750
4173+50.00	4176+50.00	L.M.L. REHAB -TAPER-LT. SHLD.	300.0	8.9	296.7	16.3	8.9	296.7	880.0	130.5	146.8	8.46	282.0	330.0	46.5	8.0	266.7	440.0	58.7	8.9	296.7	29.7	33.4	1113.3	33.4	63.1	107.00	321.0			300
4173+50.00	4176+50.00	L.M.L. REHAB -TAPER-RT. SHLD.	300.0	5.0	166.7	9.2	5.0	166.7	1045.0	87.1	96.3	4.46	148.7	330.0	24.5	4.0	133.3	440.0	29.3	5.0	166.7	16.7	17.5	583.3	17.5	34.2	149.75	449.3			300
4176+50.00	4183+50.00	L.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0	6.9	536.7	29.5	6.9	536.7	880.0	236.1	265.6	6.46	502.4	330.0	82.9	6.0	466.7	440.0	102.7	6.9	536.7	53.7	25.4	1975.6	59.3	113.0	116.75	817.3			700
4176+50.00	4183+50.00	L.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0	5.0	388.9	21.4	5.0	388.9	1045.0	203.2	224.6	4.46	346.9	330.0	57.2	4.0	311.1	440.0	68.4	5.0	388.9	38.9	17.5	1361.1	40.8	79.7	149.75	1048.3			700
4183+50.00	4185+29.44	L.M.L. REHAB -LT. SHLD.	179.4	10.9	217.3	12.0	10.9	217.3	880.0	95.6	107.6	10.46	208.5	330.0	34.4	10.0	199.3	440.0	43.8	10.9	217.3	21.7	41.4	825.2	24.8	46.5	97.25	174.5			179
4183+50.00	4185+29.44	L.M.L. REHAB -RT. SHLD.	179.4	5.0	99.7	5.5	5.0	99.7	1045.0	52.1	57.6	4.46	88.9	330.0	14.7	4.0	79.7	440.0	17.5	5.0	99.7	10.0	17.5	348.8	10.5	20.5	149.75	268.7			179
4185+29.44	4188+79.44	L.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	350.0	10.9	423.9	23.3	10.9	423.9	1309.0	277.4	300.7	10.46	406.8	330.0	67.1	10.0	388.9	440.0	85.6	10.9	423.9	42.4	41.4	1610.0	48.3	90.7	117.75	412.1			350
4185+29.44	4188+79.44	L.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	350.0	5.0	194.4	10.7	5.0	194.4	880.0	85.5	96.2	4.46	173.4	330.0	28.6	4.0	155.6	440.0	34.2	5.0	194.4	19.4	17.5	680.6	20.4	39.8	149.75	524.1			350
4188+79.44	4201+10.00	L.M.L. REHAB - MAX SUPER ELEV. -LT. SHLD.	1230.6	10.9	1490.4	82.0	10.9	1490.4	1573.0	1172.2	1254.2	10.46	1430.2	330.0	236.0	10.0	1367.3	440.0	300.8	10.9	1490.4	149.0	41.4	5660.8	169.8	318.8	138.00	1698.2			1231
4188+79.44	4201+10.00	L.M.L. REHAB - MAX SUPER ELEV. -RT. SHLD.	1230.6	5.0	683.7	37.6	5.0	683.7	880.0	300.8	338.4	4.46	609.8	330.0	100.6	4.0	546.9	440.0	120.3	5.0	683.7	68.4	17.5	2392.8	71.8	140.2	149.75	1842.8			1231
4201+10.00	4202+06.11	L.M.L. REHAB -TAPER- MAX SUPER ELEV. -LT. SHLD.	96.1	7.9	84.4	4.6	7.9	84.4	1573.0	66.4	71.0	7.46	79.7	330.0	13.2	7.0	74.7	440.0	16.4	7.9	84.4	8.4	29.4	313.9	9.4	17.8	122.00	117.2			96
4201+10.00	4202+06.11	L.M.L. REHAB -TAPER- MAX SUPER ELEV. -RT. SHLD.	96.1	5.0	53.4	2.9	5.0	53.4	880.0	23.5	26.4	4.46	47.6	330.0	7.9	4.0	42.7	440.0	9.4	5.0	53.4	5.3	17.5	186.9	5.6	10.9	149.75	143.9			96
4202+06.11	4203+10.00	L.M.L. REHAB -TAPER- SUPER ELEV. TRANS. -LT. SHLD.	103.9	9.9	114.3	6.3	9.9	114.3	1470.1	84.0	90.3	9.46	109.2	330.0	18.0	9.0	103.9	440.0	22.9	9.9	114.3	11.4	37.4	431.8	13.0	24.4	122.75	127.5			104
4202+06.11	4203+10.00	L.M.L. REHAB - TAPER-SUPER ELEV. TRANS. -RT. SHLD.	103.9	5.0	57.7	3.2	5.0	57.7	904.5	26.1	29.3	4.46	51.5	330.0	8.5	4.0	46.2	440.0	10.2	5.0	57.7	5.8	17.5	202.0	6.1	11.9	149.75	155.6			104
4203+10.00	4205+56.11	L.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	246.1	10.9	298.1	16.4	10.9	298.1	1123.6	167.5	183.9	10.46	286.0	330.0	47.2	10.0	273.4	440.0	60.1	10.9	298.1	29.8	41.4	1132.1	34.0	63.8	107.75	265.2			246
4203+10.00	4205+56.11	L.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	246.1	5.0	136.7	7.5	5.0	136.7	987.0	67.5	75.0	4.46	122.0	330.0	20.1	4.0	109.4	440.0	24.1	5.0	136.7	13.7	17.5	478.5	14.4	28.1	149.75	368.5			246
4205+56.11	4211+62.00	L.M.L. REHAB -LT. SHLD.	605.9	10.9	733.8	40.4	10.9	733.8	880.0	322.9	363.3	10.46	704.2	330.0	116.2	10.0	673.2	440.0	148.1	10.9	733.8	73.4	41.4	2787.1	83.6	157.0	97.25	589.2			606
4205+56.11	4211+62.00	L.M.L. REHAB -RT. SHLD.	605.9	5.0	336.6	18.5	5.0	336.6	1045.0	175.9	194.4	4.46	300.3	330.0	49.5	4.0	269.3	440.0	59.2	5.0	336.6	33.7	17.5	1178.1	35.3	69.0	149.75	907.3			606
4211+62.00	4218+62.00	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4211+62.00	4218+62.00	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4221+92.17	4228+92.17	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4221+92.17	4228+92.17	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4228+92.17	4256+10.40	L.M.L. REHAB -LT. SHLD.	2718.2	10.9	3292.0	181.1	10.9	3292.0	880.0	1448.5	1629.6	10.46	3159.2	330.0	521.3	10.0	3020.2	440.0	664.4	10.9	3292.0	329.2	41.4	12503.7	375.1	704.3	97.25	2643.4			2718
4228+92.17	4256+10.40	L.M.L. REHAB -RT. SHLD.	2718.2	5.0	1510.1	83.1	5.0	1510.1	1045.0	789.0	872.1	4.46	1347.0	330.0	222.3	4.0	1208.1	440.0	265.8	5.0	1510.1	151.0	17.5	5285.4	158.6	309.6	149.75	4070.5			2718
TOTALS THIS SHEET:											17565.4				6199.9				6264.0							6177.7		49855.2		2217.4	40118.0

BASIS OF ESTIMATE:

ACHM BASE COURSE (1-1/2") - MINERAL AGGREGATE = 96.1%, ASPHALT BINDER (PG 76-22) = 3.9%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 95.7%, ASPHALT BINDER (PG 76-22) = 4.3%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

BASE AND SURFACING SHOULDERS - ALTERNATE NO. 1 (CONTINUED)

STATION	STATION	LOCATION	LENGTH FEET	ACHM BASE COURSE (1 1/2") LEVELING - 110 LBS. PER SQ. YD. AVG. WID. FEET	LEVELING SQ.YD.	LEVELING TON	NORMAL AVG. WID. FEET	NORMAL SQ.YD.	NORMAL POUND / SQ.YD.	NORMAL TON	TOTAL PG 76-22 TON	ACHM BINDER COURSE (1") AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	ACHM SURFACE COURSE (1/2") AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	TACK COAT 0.10 GAL. PER SQ. YD. TOTAL WID. FEET	SQ.YD.	GALLON	TACK COAT 0.03 GAL. PER SQ. YD. TOTAL WID. FEET	SQ.YD.	GALLON	TOTAL GALLONS	AGGREGATE BASE COURSE CLASS 1 TON / STATION	CLASS 1 TON	CLASS 7 TON / STATION	CLASS 7 TON	RUMBLE STRIPS ASPHALT LIN. FT.
CL MEDIAN I-40																															
4256+10.40	4258+72.90	L.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	262.5	10.9	317.9	17.5	10.9	317.9	880.0	139.9	157.4	10.46	305.1	330.0	50.3	10.0	291.7	440.0	64.2	10.9	317.9	31.8	41.4	1207.5	36.2	68.0	97.25	255.3			263
4256+10.40	4258+72.90	L.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	262.5	5.0	145.8	8.0	5.0	145.8	1243.0	90.6	98.6	4.46	130.1	330.0	21.5	4.0	116.7	440.0	25.7	5.0	145.8	14.6	17.5	510.4	15.3	29.9	155.75	408.8			263
4261+96.60	4262+84.10	L.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	87.5	10.9	106.0	5.8	10.9	106.0	880.0	46.6	52.4	10.46	101.7	330.0	16.8	10.0	97.2	440.0	21.4	10.9	106.0	10.6	41.4	402.5	12.1	22.7	97.25	85.1			88
4261+96.60	4262+84.10	L.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	87.5	5.0	48.6	2.7	5.0	48.6	1507.0	36.6	39.3	4.46	43.4	330.0	7.2	4.0	38.9	440.0	8.6	5.0	48.6	4.9	17.5	170.1	5.1	10.0	163.75	143.3			88
4262+84.10	4305+17.41	L.M.L. REHAB - MAX SUPER ELEV. -LT. SHLD.	4233.3	10.9	5127.0	282.0	10.9	5127.0	880.0	2255.9	2537.9	10.46	4920.0	330.0	811.8	10.0	4703.7	440.0	1034.8	10.9	5127.0	512.7	41.4	19473.2	584.2	1096.9	97.25	4116.9			4233
4262+84.10	4305+17.41	L.M.L. REHAB - MAX SUPER ELEV. -RT. SHLD.	4233.3	5.0	2351.8	129.3	5.0	2351.8	1573.0	1849.7	1979.0	4.46	2097.8	330.0	346.1	4.0	1881.5	440.0	413.9	5.0	2351.8	235.2	17.5	8231.4	246.9	482.1	165.75	7016.7			4233
4305+17.41	4312+17.41	L.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -LT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	141.25	988.8	31.00	217.0	700
4305+17.41	4312+17.41	L.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -RT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4314+61.37	4317+09.10	L.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -LT. SHLD.	247.7				9.3	256.0	1100.0	140.8	140.8	8.58	236.1	660.0	77.9	8.0	220.2	440.0	48.4				42.5	1169.7	35.1	35.1	141.25	349.9	31.00	76.8	248
4314+61.37	4317+09.10	L.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -RT. SHLD.	247.7				5.3	145.9	1100.0	80.2	80.2	4.58	126.1	660.0	41.6	4.0	110.1	440.0	24.2				22.5	619.3	18.6	18.6	143.50	355.4	14.25	35.3	248
4312+17.41	4320+59.10	L.M.L. FULL DEPTH RECON. - SUPER ELEV. TRANS.-LT. SHLD.	841.7				9.3	869.8	1100.0	478.4	478.4	8.58	802.4	660.0	264.8	8.0	748.2	440.0	164.6				42.5	3974.7	119.2	119.2	124.25	1045.8	28.75	242.0	842
4312+17.41	4320+59.10	L.M.L. FULL DEPTH RECON. - SUPER ELEV. TRANS.-RT. SHLD.	841.7				5.3	495.7	1100.0	272.6	272.6	4.58	428.3	660.0	141.3	4.0	374.1	440.0	82.3				22.5	2104.3	63.1	63.1	143.50	1207.8	14.25	119.9	842
4320+59.10	4321+61.37	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	102.3				9.3	105.7	1100.0	58.1	58.1	8.58	97.5	660.0	32.2	8.0	90.9	440.0	20.0				42.5	483.1	14.5	14.5	107.25	109.7	26.25	26.9	102
4320+59.10	4321+61.37	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	102.3				5.3	60.2	1100.0	33.1	33.1	4.58	52.1	660.0	17.2	4.0	45.5	440.0	10.0				22.5	255.8	7.7	7.7	143.50	146.8	14.25	14.6	102
4321+61.37	4327+82.41	L.M.L. REHAB -LT. SHLD.	621.0	10.9	752.1	41.4	10.9	752.1	880.0	330.9	372.3	10.46	721.7	330.0	119.1	10.0	690.0	440.0	151.8	10.9	752.1	75.2	41.4	2856.6	85.7	160.9	97.25	603.9			621
4321+61.37	4327+82.41	L.M.L. REHAB -RT. SHLD.	621.0	5.0	345.0	19.0	5.0	345.0	1045.0	180.3	199.3	4.46	307.7	330.0	50.8	4.0	276.0	440.0	60.7	5.0	345.0	34.5	17.5	1207.5	36.2	70.7	149.75	929.9			621
4327+82.41	4334+82.41	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4327+82.41	4334+82.41	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4345+82.59	4352+82.59	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4345+82.59	4352+82.59	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4352+82.59	4418+75.00	L.M.L. REHAB -LT. SHLD.	6592.4	10.9	7984.1	439.1	10.9	7984.1	880.0	3513.0	3952.1	10.46	7661.8	330.0	1264.2	10.0	7324.9	440.0	1611.5	10.9	7984.1	798.4	41.4	30325.0	909.8	1708.2	97.25	6411.1			6592
4352+82.59	4418+75.00	L.M.L. REHAB -RT. SHLD.	6592.4	5.0	3662.4	201.4	5.0	3662.4	1045.0	1913.6	2115.0	4.46	3266.9	330.0	539.0	4.0	2930.0	440.0	644.6	5.0	3662.4	366.2	17.5	12818.6	384.6	750.8	149.75	9872.1			6592
4418+75.00	4421+75.00	L.M.L. REHAB -TAPER-LT. SHLD.	300.0	8.9	296.7	16.3	8.9	296.7	880.0	130.5	146.8	8.46	282.0	330.0	46.5	8.0	266.7	440.0	58.7	8.9	296.7	29.7	33.4	1113.3	33.4	63.1	107.00	321.0			300
4418+75.00	4421+75.00	L.M.L. REHAB -TAPER-RT. SHLD.	300.0	5.0	166.7	9.2	5.0	166.7	1045.0	87.1	96.3	4.46	148.7	330.0	24.5	4.0	133.3	440.0	29.3	5.0	166.7	16.7	17.5	583.3	17.5	34.2	149.75	449.3			300
4421+75.00	4428+75.00	L.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0	6.9	536.7	29.5	6.9	536.7	880.0	236.1	265.6	6.46	502.4	330.0	82.9	6.0	466.7	440.0	102.7	6.9	536.7	53.7	25.4	1975.6	59.3	113.0	116.75	817.3			700
4421+75.00	4428+75.00	L.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0	5.0	388.9	21.4	5.0	388.9	1045.0	203.2	224.6	4.46	346.9	330.0	57.2	4.0	311.1	440.0	68.4	5.0	388.9	38.9	17.5	1361.1	40.8	79.7	149.75	1048.3			700
4428+75.00	4453+50.00	L.M.L. REHAB -LT. SHLD.	2475.0	10.9	2997.5	164.9	10.9	2997.5	880.0	1318.9	1483.8	10.46	2876.5	330.0	474.6	10.0	2750.0	440.0	605.0	10.9	2997.5	299.8	41.4	11385.0	341.6	641.4	97.25	2406.9			2475
4428+75.00	4453+50.00	L.M.L. REHAB -RT. SHLD.	2475.0	5.0	1375.0	75.6	5.0	1375.0	1045.0	718.4	794.0	4.46	1226.5	330.0	202.4	4.0	1100.0	440.0	242.0	5.0	1375.0	137.5	17.5	4812.5	144.4	281.9	149.75	3706.3			2475
4453+50.00	4455+00.00	L.M.L. REHAB -TAPER-LT. SHLD.	150.0	8.9	148.3	8.2	8.9	148.3	880.0	65.3	73.5	8.46	141.0	330.0	23.3	8.0	133.3	440.0	29.3	8.9	148.3	14.8	33.4	556.7	16.7	31.5	97.25	145.9			150
4453+50.00	4455+00.00	L.M.L. REHAB -TAPER-RT. SHLD.	150.0	5.0	83.3	4.6	5.0	83.3	1045.0	43.5	48.1	4.46	74.3	330.0	12.3	4.0	66.7	440.0	14.7	5.0	83.3	8.3	17.5	291.7	8.8	17.1	149.75	224.6			150
4455+00.00	4467+64.00	L.M.L. REHAB -LT. SHLD.	1264.0	10.9	1530.8	84.2	10.9	1530.8	880.0	673.6	757.8	10.46	1469.0	330.0	242.4	10.0	1404.4	440.0	309.0	10.9	1530.8	153.1	41.4	5814.4	174.4	327.5	97.25	1229.2			1264
4455+00.00	4467+64.00	L.M.L. REHAB -RT. SHLD.	1264.0	5.0	702.2	38.6	5.0	702.2	1045.0	366.9	405.5	4.46	626.4	330.0	103.4	4.0	561.8	440.0	123.6	5.0	702.2	70.2	17.5	2457.8	73.7	143.9	149.75	1892.8			1264
4467+70.00	4491+00.00	L.M.L. REHAB -LT. SHLD.	2330.0	10.9	2821.9	155.2	10.9	2821.9	880.0	1241.6	1396.8	10.46	2708.0	330.0	446.8	10.0	2588.9	440.0	569.6	10.9	2821.9	282.2	41.4	10718.0	321.5	603.7	97.25	2265.9			2330
4467+70.00	4491+00.00	L.M.L. REHAB -RT. SHLD.	2330.0	5.0	1294.4	71.2	5.0	1294.4	1045.0	676.3	747.5	4.46	1154.6	330.0	190.5	4.0	1035.6	440.0	227.8	5.0	1294.4	129.4	17.5	4530.6	135.9	265.3	149.75	3489.2			2330
4467+64.00	4472+64.00	L.M.L. REHAB TO EXIST.-LT. SHLD.	500.0													10.0	555.6	495.0	137.5	10.0	555.6	55.6	10.0	555.6	16.7	72.3	48.75	243.8			500
4467+64.00	4472+64.00	L.M.L. REHAB TO EXIST.-RT. SHLD.	500.0													4.0	222.2	495.0	55.0	4.0	222.2	22.2	4.0	222.2	6.7	28.9	75.00	375.0			500
4472+64.00	4474+64.00	L.M.L. REHAB TO EXIST.-LT. SHLD.	200.0													10.0	222.2	220.0	24.4	10.0	222.2	22.2				22.2					200
4472+64.00	4474+64.00	L.M.L. REHAB TO EXIST.-RT. SHLD.	200.0													4.0	88.9	220.0	9.8	4.0	88.9	8.9				8.9					200
4043+65.40	4045+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-LT. SHLD.	200.0													4.0	88.9	220.0	9.8	4.0	88.9	8.9				8.9					200
4043+65.40	4045+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-RT. SHLD.	200.0													10.0	222.2	220.0	24.4	10.0	222.2	22.2				22.2					200
4045+65.40	4050+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-LT. SHLD.	500.0													4.0	222.2	495.0	55.0	4.0	222.2	22.2	4.0	222.2	6.7	28.9	71.75	358.8			500
4045+65.40	4050+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-RT. SHLD.	500.0													10.0	555.6	495.0	137.5	10.0	555.6	55.6	10.0	555.6	16.7	72.3	53.75	268.8			500
4050+65.40	4057+65.40	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4050+65.40	4057+65.40	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4061+25.63	4068+25.63	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4061+25.63	4068+25.63	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4068+25.63	4082+50.00	R.M.L. REHAB -LT. SHLD.	1424.4	5.0	791.3	43.5	5.0	791.3	1045.0	413.5	457.0	4.46	705.9	330.0	116.5	4.0	633.1	440.0	139.3	5.0	791.3	79.1	17.5	2769.7	83.1	162.2	149.75	2133.0			1424
4068+25.63	4082+50.00	R.M.L. REHAB -RT. SHLD.	1424.4	10.9	1725.1	94.9	10.9	1725.1	880.0	759.0	853.9	10.46	1655.5	330.0	273.2	10.0	1582.7	440.0	348.2	10.9	1725.1	172.5	41.4	6552.2	196.6	369.1	97.25	1385.2			1424
4082+50.00	4084+00.00	R.M.L. REHAB -TAPER-LT. SHLD.	150.0	5.0	83.3	4.6	5.0	83.3	1045.0	43.5	48.1	4.46	74.3	330.0	12.3	4.0	66.7	440.0	14.7	5.0	83.3	8.3	17.5	291.7	8.8	17.1	149.75	224.6			150
4082+50.00	4084+00.00	R.M.L. REHAB -TAPER-RT. SHLD.	150.0	8.9	148.3	8.2	8.9	148.3	880.0	65.3	73.5	8.46	141.0	330.0	23.3	8.0	133.3	440.0	29.3	8.9	148.3	14.8	33.4	556.7	16.7	31.5	133.25	199.9			150
4084+00.00	4091+42.12	R.M.L. REHAB -LT. SHLD.	742.1	5.0	412.3	22.7	5.0	412.3	1045.0	215.4	238.1	4.46	367.8	330.0	60.7	4.0	329.8	440.0	72.6	5.0	412.3	41.2	17.5	1443.0	43.3	84.5	149.75	1111.3			742
4084+00.00	4091+42.12	R.M.L. REHAB -RT. SHLD.	742.1	10.9	898.8	49.4	10.9	898.8	880.0	395.5	444.9	10.46	862.5	330.0	142.3	10.0	824.6	440.0	181.4	10.9	898.8	89.9	41.4	3413.7	102.4	192.3	97.25	721.7			742
4091+42.12	4096+75.00	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	532.9				5.3	313.8	1100.0	172.6	172.6	4.58	271.2	660.0	89.5	4.0	236.8	440.0	52.1				22.5	1332.3	40.0	40.0	143.50	764.7	14.25	75.9	533
4091+42.12	4096+75.00	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	532.9				9.3	550.7	1100.0	302.9	302.9	8.58	508.0	660.0	167.6	8.0	473.7	440.0	104.2				42.5	2516.5	75.5	75.5	107.25	571.5	26.25	139.9	533
4096+75.00	4098+42.12	R.M.L. FULL DEPTH RECONSTRUCTION-AUX. LANE -LT. SHLD.	167.1				5.3	98.4	1100.0	54.1	54.1	4.58	85.0	660.0	28.1	4.0	74.3	440.0	16.3				22.5	417.8	12.5	12.5	143.50	239.8	14.25	23.8	167
4096+75.00	4098+42.12	R.M.L. FULL DEPTH RECONSTRUCTION-AUX. LANE -RT. SHLD.	167.1				7.3	135.5	1100.0	74.5	74.5	6.58	122.2	660.0	40.3	6.0	111.4	440.0	24.5				32.5	603.4	18.1	18.1	111.50	186.3	20.50	34.3	167
4101+46.30	4105+75.00	R.M.L. FULL DEPTH RECONSTRUCTION-ACCEL. LANE -LT. SHLD.	428.7				5.3	252.5	1100.0	138.9	138.9	4.58	218.2	660.0	72.0	4.0	190.5	440.0	41.9				22.5	1071.8	32.2	32.2	143.50	615.2	14.25	61.1	429
4101+46.30	4105+75.00	R.M.L. FULL DEPTH RECONSTRUCTION-ACCEL. LANE -RT. SHLD.	428.7				7.3	347.7	1100.0	191.2	191.2	6.58	313.4	660.0	103.4	6.0	285.8	440.0	62.9				32.5	1548.1	46.4	46.4	111.50	478.0	20.50	87.9	429
4105+75.00	4107+25.00	R.M.L. FULL DEPTH RECONSTRUCTION-TAPER -LT. SHLD.	150.0				5.3	88.3	1100.0	48.6	48.6	4.58	76.3	660.0	25.2	4.0	66.7	440.0	14.7				22.5	375.0	11.3	11.3	149.75	224.6	14.25	21.4	150
4105+75.00	4107+25.00	R.M.L. FULL DEPTH RECONSTRUCTION-TAPER -RT. SHLD.	150.0				8.3	138.3	1100.0	76.1	76.1	7.58	126.3	660.0	41.7	7.0	116.7	440.0	25.7				37.5	625.0	18.8	18.8	133.25	199.9	23.50	35.3	150
4107+25.00	4108+46.30	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	121.3				5.3	71.4	1100.0	39.3	39.3	4.58	61.7	660.0	20.4	4.0	53.9	440.0	11.9				22.5	303.3	9.1	9.1	143.50	174.1	14.25	17.3	121
4107+25.00	4108+46.30	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	121.3				9.3	125.3	1100.0	68.9	68.9	8.58	115.6	660.0	38.1	8.0	107.8	440.0	23.7				42.5	572.8	17.2	17.2	107.25	130.1	26.25	31.8	121
4108+46.30	4117+25.00	R.M.L. REHAB -LT. SHLD.	878.7	5.0	488.2	26.9	5.0	488.2	1045.0	255.1	282.0	4.46	435.4	330.0	71.8	4.0	390.5	440.0	85.9	5.0	488.2	48.8	17.5	1708.6	51.3	100.1	149.75	1315.9			879
4108+46.30	4117+25.00	R.M.L. REHAB -RT. SHLD.	878.7	10.9	1064.2	58.5	10.9	1064.2	880.0	468.2	526.7	10.46	1021.2	330.0	168.5	10.0	976.3	440.0	214.8	10.9	1064.2	106.4	41.4	4042.0	121.3	227.7	97.25	854.5			879
4117+25.00	4123+25.00	R.M.L. REHAB -ACCEL. LANE-LT. SHLD.	600.0	5.0	333.3	18.3	5.0	333.3	1045.0	174.1	192.4	4.46	297.3	330.0	49.1	4.0	266.7	440.0	58.7	5.0	333.3	33.3	17.5	1166.7	35.0	68.3	149.75	898.5			600
4117+25.00	4123+25.00	R.M.L. REHAB -ACCEL. LANE-RT. SHLD.	600.0	6.9	460.0	25.3	6.9	460.0	880.0	202.4	227.7	6.46	430.7	330.0	71.1	6.0	400.0	440.0	88.0	6.9	460.0	46.0	25.4	1693.3	50.8	96.8	116.75	700.5			600
4123+25.00	4126+25.00	R.M.L. REHAB -TAPER-LT. SHLD.	300.0	5.0	166.7	9.2	5.0	166.7	1045.0	87.1	96.3	4.46	148.7	330.0	24.5	4.0	133.3	440.0	29.3	5.0	166.7	16.7	17.5	583.3	17.5	34.2	149.75	449.3			300
4123+25.00	4126+25.00	R.M.L. REHAB -TAPER-RT. SHLD.	300.0	8.9	296.7	16.3	8.9	296.7	880.0	130.5	146.8	8.46	282.0	330.0	46.5	8.0	266.7	440.0	58.7	8.9	296.7	29.7	33.4	1113.3	33.4	63.1	133.25	399.8			300
4126+25.00	4134+25.00	R.M.L. REHAB -LT. SHLD.	800.0	5.0	444.4	24.4	5.0	444.4	1045.0	232.2	256.6	4.46	396.4	330.0	65.4	4.0	355.6	440.0	78.2	5.0	444.4	44.4	17.5	1555.6	46.7	91.1	149.75	1198.0			800
4126+25.00	4134+25.00	R.M.L. REHAB -RT. SHLD.	800.0	10.9	968.9	53.3	10.9	968.9	880.0	426.3	479.6	10.46	929.8	330.0	153.4	10.0	888.9	440.0	195.6	10.9	968.9	96.9	41.4	3680.0	110.4	207.3	97.25	778.0			800
4134+25.00	4136+25.00	R.M.L. REHAB -TAPER-LT. SHLD.	200.0	5.0	111.1	6.1	5.0	111.1	1045.0	58.0	64.1	4.46	99.1	330.0	16.4	4.0	88.9	440.0	19.6	5.0	111.1	11.1	17.5	388.9	11.7	22.8	149.75	299.5			200
4134+25.00	4136+25.00	R.M.L. REHAB -TAPER-RT. SHLD.	200.0	8.9	197.8	10.9	8.9	197.8	880.0	87.0	97.9	8.46	188.0	330.0	31.0	8.0	177.8	440.0	39.1	8.9	197.8	19.8	33.4	742.2	22.3	42.1	133.25	266.5			200
4136+25.00	4145+56.10	R.M.L. REHAB -LT. SHLD.	931.1	5.0	517.3	28.5	5.0	517.3	1045.0	270.3	298.8	4.46	461.4	330.0	76.1	4.0	413.8	440.0	91.0	5.0	517.3	51.7	17.5	1810.5	54.3	106.0	149.75	1394.3			931
4136+25.00	4145+56.10	R.M.L. REHAB -RT. SHLD.	931.1	10.9	1127.7	62.0	10.9	1127.7	880.0	496.2	558.2	10.46	1082.1	330.0	178.5	10.0	1034.6	440.0	227.6	10.9	1127.7	112.8	41.4	4283.1	128.5	241.3	97.25	905.5			931
4145+56.10	4152+56.10	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4145+56.10	4152+56.10	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
TOTALS THIS SHEET:											29263.5				9941.7				10801.9							10874.1		81891.6		2779.0	66468.0

BASIS OF ESTIMATE:

ACHM BASE COURSE (1-1/2") - MINERAL AGGREGATE = 96.1%, ASPHALT BINDER (PG 76-22) = 3.9%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 95.7%, ASPHALT BINDER (PG 76-22) = 4.3%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	190	374

(2) QUANTITIES

BASE AND SURFACING SHOULDERS - ALTERNATE NO. 1 (CONTINUED)

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1 1/2")								ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")				TACK COAT								AGGREGATE BASE COURSE				RUMBLE STRIPS
				LEVELING - 110 LBS. PER SQ. YD.			NORMAL				TOTAL									0.10 GAL. PER SQ. YD.			0.03 GAL. PER SQ. YD.					CLASS 1		CLASS 7		ASPHALT
				AVG. WID.	SQ.YD.	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TON	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL WID.	SQ.YD.	GALLON	TOTAL WID.	SQ.YD.	GALLON	TOTAL GALLONS	TON / STATION	TON	TON / STATION	TON	
			FEET	FEET			FEET				TON	FEET			TON	FEET			TON	FEET			FEET								LIN. FT.
CL MEDIAN I-40																																
4154+42.18	4161+42.18	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4154+42.18	4161+42.18	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4161+42.18	4163+50.00	R.M.L. REHAB -LT. SHLD.	207.8	5.0	115.4	6.3	5.0	115.4	1045.0	60.3	66.6	4.46	103.0	330.0	17.0	4.0	92.4	440.0	20.3	5.0	115.4	11.5	17.5	404.1	12.1	23.6	149.75	311.2			208
4161+42.18	4163+50.00	R.M.L. REHAB -RT. SHLD.	207.8	10.9	251.7	13.8	10.9	251.7	880.0	110.7	124.5	10.46	241.5	330.0	39.8	10.0	230.9	440.0	50.8	10.9	251.7	25.2	41.4	955.9	26.7	53.9	97.25	202.1			208
4163+50.00	4170+50.00	R.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0	5.0	388.9	21.4	5.0	388.9	1045.0	203.2	224.6	4.46	346.9	330.0	57.2	4.0	311.1	440.0	68.4	5.0	388.9	38.9	17.5	1361.1	40.8	79.7	149.75	1048.3			700
4163+50.00	4170+50.00	R.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0	6.9	536.7	29.5	6.9	536.7	880.0	236.1	265.6	6.46	502.4	330.0	82.9	6.0	466.7	440.0	102.7	6.9	536.7	53.7	25.4	1975.6	59.3	113.0	116.75	817.3			700
4170+50.00	4173+50.00	R.M.L. REHAB -TAPER-LT. SHLD.	300.0	5.0	166.7	9.2	5.0	166.7	1045.0	87.1	96.3	4.46	148.7	330.0	24.5	4.0	133.3	440.0	29.3	5.0	166.7	16.7	17.5	583.3	17.5	34.2	149.75	449.3			300
4170+50.00	4173+50.00	R.M.L. REHAB -TAPER-RT. SHLD.	300.0	8.9	296.7	16.3	8.9	296.7	880.0	130.5	146.8	8.46	282.0	330.0	46.5	8.0	266.7	440.0	58.7	8.9	296.7	29.7	33.4	1113.3	33.4	63.1	133.25	399.8			300
4173+50.00	4185+29.44	R.M.L. REHAB -LT. SHLD.	1179.4	5.0	655.2	36.0	5.0	655.2	1045.0	342.3	378.3	4.46	584.5	330.0	96.4	4.0	524.2	440.0	115.3	5.0	655.2	65.5	17.5	2293.3	68.8	134.3	149.75	1766.2			1179
4173+50.00	4185+29.44	R.M.L. REHAB -RT. SHLD.	1179.4	10.9	1428.4	78.6	10.9	1428.4	880.0	628.5	707.1	10.46	1370.7	330.0	226.2	10.0	1310.4	440.0	288.3	10.9	1428.4	142.8	41.4	5425.2	162.8	305.6	97.25	1147.0			1179
4185+29.44	4188+79.44	R.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	350.0	5.0	194.4	10.7	5.0	194.4	1309.0	127.2	137.9	4.46	173.4	330.0	28.6	4.0	155.6	440.0	34.2	5.0	194.4	19.4	17.5	680.6	20.4	39.8	157.75	552.1			350
4185+29.44	4188+79.44	R.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	350.0	10.9	423.9	23.3	10.9	423.9	880.0	186.5	209.8	10.46	406.8	330.0	67.1	10.0	388.9	440.0	85.6	10.9	423.9	42.4	41.4	1610.0	48.3	90.7	97.25	340.4			350
4188+79.44	4202+06.11	R.M.L. REHAB - MAX SUPER ELEV. -LT. SHLD.	1326.7	5.0	737.1	40.5	5.0	737.1	1573.0	579.7	620.2	4.46	657.5	330.0	108.5	4.0	589.6	440.0	129.7	5.0	737.1	73.7	17.5	2579.7	77.4	151.1	165.75	2199.0			1327
4188+79.44	4202+06.11	R.M.L. REHAB - MAX SUPER ELEV. -RT. SHLD.	1326.7	10.9	1606.8	88.4	10.9	1606.8	880.0	707.0	795.4	10.46	1541.9	330.0	254.4	10.0	1474.1	440.0	324.3	10.9	1606.8	160.7	41.4	6102.8	183.1	343.8	97.25	1290.2			1327
4202+06.11	4205+56.11	R.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	350.0	5.0	194.4	10.7	5.0	194.4	1309.0	127.2	137.9	4.46	173.4	330.0	28.6	4.0	155.6	440.0	34.2	5.0	194.4	19.4	17.5	680.6	20.4	39.8	157.75	552.1			350
4202+06.11	4205+56.11	R.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	350.0	10.9	423.9	23.3	10.9	423.9	880.0	186.5	209.8	10.46	406.8	330.0	67.1	10.0	388.9	440.0	85.6	10.9	423.9	42.4	41.4	1610.0	48.3	90.7	97.25	340.4			350
4205+56.11	4211+62.00	R.M.L. REHAB -LT. SHLD.	605.9	5.0	336.6	18.5	5.0	336.6	1045.0	175.9	194.4	4.46	300.3	330.0	49.5	4.0	269.3	440.0	59.2	5.0	336.6	33.7	17.5	1178.1	35.3	69.0	149.75	907.3			606
4205+56.11	4211+62.00	R.M.L. REHAB -RT. SHLD.	605.9	10.9	733.8	40.4	10.9	733.8	880.0	322.9	363.3	10.46	704.2	330.0	116.2	10.0	673.2	440.0	148.1	10.9	733.8	73.4	41.4	2787.1	83.6	157.0	97.25	589.2			606
4211+62.00	4218+62.00	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4211+62.00	4218+62.00	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4221+92.17	4228+92.17	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4221+92.17	4228+92.17	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4228+92.17	4256+10.40	R.M.L. REHAB -LT. SHLD.	2718.2	5.0	1510.1	83.1	5.0	1510.1	1045.0	789.0	872.1	4.46	1347.0	330.0	222.3	4.0	1208.1	440.0	265.8	5.0	1510.1	151.0	17.5	5285.4	158.6	309.6	149.75	4070.5			2718
4228+92.17	4256+10.40	R.M.L. REHAB -RT. SHLD.	2718.2	10.9	3292.0	181.1	10.9	3292.0	880.0	1448.5	1629.6	10.46	3159.2	330.0	521.3	10.0	3020.2	440.0	664.4	10.9	3292.0	329.2	41.4	12503.7	375.1	704.3	97.25	2643.4			2718
4256+10.40	4258+72.90	R.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	262.5	5.0	145.8	8.0	5.0	145.8	983.1	71.7	79.7	4.46	130.1	330.0	21.5	4.0	116.7	440.0	25.7	5.0	145.8	14.6	17.5	510.4	15.3	29.9	149.75	393.1			263
4256+10.40	4258+72.90	R.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	262.5	10.9	317.9	17.5	10.9	317.9	1243.0	197.6	215.1	10.46	305.1	330.0	50.3	10.0	291.7	440.0	64.2	10.9	317.9	31.8	41.4	1207.5	36.2	68.0	112.50	295.3			263
4261+96.60	4262+84.10	R.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	87.5	5.0	48.6	2.7	5.0	48.6	900.6	21.9	24.6	4.46	43.4	330.0	7.2	4.0	38.9	440.0	8.6	5.0	48.6	4.9	17.5	170.1	5.1	10.0	149.75	131.0			88
4261+96.60	4262+84.10	R.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	87.5	10.9	106.0	5.8	10.9	106.0	1507.0	79.9	85.7	10.46	101.7	330.0	16.8	10.0	97.2	440.0	21.4	10.9	106.0	10.6	41.4	402.5	12.1	22.7	133.00	116.4			88
4262+84.10	4304+30.16	R.M.L. REHAB - MAX SUPER ELEV. -LT. SHLD.	4146.1	5.0	2303.4	126.7	5.0	2303.4	880.0	1013.5	1140.2	4.46	2054.6	330.0	339.0	4.0	1842.7	440.0	405.4	5.0	2303.4	230.3	17.5	8061.9	241.9	472.2	149.75	6208.8			4146
4262+84.10	4304+30.16	R.M.L. REHAB - MAX SUPER ELEV. -RT. SHLD.	4146.1	10.9	5021.4	276.2	10.9	5021.4	1573.0	3949.3	4225.5	10.46	4818.7	330.0	795.1	10.0	4606.8	440.0	1013.5	10.9	5021.4	502.1	41.4	19072.1	572.2	1074.3	138.00	5721.6			4146
4304+30.16	4311+30.16	R.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -LT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	174.75	1223.3	15.50	108.5	700
4304+30.16	4311+30.16	R.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -RT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4313+79.12	4317+09.10	R.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -LT. SHLD.	330.0				5.3	194.3	1100.0	106.9	106.9	4.58	167.9	660.0	55.4	4.0	146.7	440.0	32.3				22.5	825.0	24.8	24.8	174.75	576.7	15.50	51.2	330
4313+79.12	4317+09.10	R.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -RT. SHLD.	330.0				9.3	341.0	1100.0	187.6	187.6	8.58	314.6	660.0	103.8	8.0	293.3	440.0	64.5				42.5	1558.3	46.7	46.7	107.25	353.9	26.25	86.6	330
4317+09.10	4320+59.10	R.M.L. FULL DEPTH RECON. - SUPER ELEV. TRANS.-LT. SHLD.	350.0				5.3	206.1	1100.0	113.4	113.4	4.58	178.1	660.0	58.8	4.0	155.6	440.0	34.2				22.5	875.0	26.3	26.3	159.25	557.4	15.00	52.5	350
4317+09.10	4320+59.10	R.M.L. FULL DEPTH RECON. - SUPER ELEV. TRANS.-RT. SHLD.	350.0				9.3	361.7	1100.0	198.9	198.9	8.58	333.7	660.0	110.1	8.0	311.1	440.0	68.4				42.5	1652.8	49.6	49.6	107.25	375.4	26.25	91.9	350
4320+59.10	4320+79.12	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	20.0				5.3	11.8	1100.0	6.5	6.5	4.58	10.2	660.0	3.4	4.0	8.9	440.0	2.0				22.5	50.0	1.5	1.5	143.50	28.7	14.25	2.9	20
4320+59.10	4320+79.12	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	20.0				9.3	20.7	1100.0	11.4	11.4	8.58	19.1	660.0	6.3	8.0	17.8	440.0	3.9				42.5	94.4	2.8	2.8	107.25	21.5	26.25	5.3	20
4320+79.12	4327+82.41	R.M.L. REHAB -LT. SHLD.	703.3	5.0	390.7	21.5	5.0	390.7	1045.0	204.1	225.6	4.46	348.5	330.0	57.5	4.0	312.6	440.0	68.8	5.0	390.7	39.1	17.5	1367.5	41.0	80.1	149.75	1053.2			703
4320+79.12	4327+82.41	R.M.L. REHAB -RT. SHLD.	703.3	10.9	851.8	46.8	10.9	851.8	880.0	374.8	421.6	10.46	817.4	330.0	134.9	10.0	781.4	440.0	171.9	10.9	851.8	85.2	41.4	3235.2	97.1	182.3	97.25	684.0			703
4327+82.41	4334+82.41	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4327+82.41	4334+82.41	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4345+82.59	4352+82.59	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0				5.3	412.2	1100.0	226.7	226.7	4.58	356.2	660.0	117.5	4.0	311.1	440.0	68.4				22.5	1750.0	52.5	52.5	143.50	1004.5	14.25	99.8	700
4345+82.59	4352+82.59	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0				9.3	723.3	1100.0	397.8	397.8	8.58	667.3	660.0	220.2	8.0	622.2	440.0	136.9				42.5	3305.6	99.2	99.2	107.25	750.8	26.25	183.8	700
4352+82.59	4415+25.00	R.M.L. REHAB -LT. SHLD.	6242.4	5.0	3468.0	190.7	5.0	3468.0	1045.0	1812.0	2002.7	4.46	3093.5	330.0	510.4	4.0	2774.4	440.0	610.4	5.0	3468.0	346.8	17.5	12138.0	364.1	710.9	149.75	9348.0			6242
4352+82.59	4415+25.00	R.M.L. REHAB -RT. SHLD.	6242.4	10.9	7560.2	415.8	10.9	7560.2	880.0	3326.5	3742.3	10.46	7255.1	330.0	1197.1	10.0	6936.0	440.0	1525.9	10.9	7560.2	756.0	41.4	28715.0	861.5	1617.5	97.25	6070.7			6242
4415+25.00	4417+25.00	R.M.L. REHAB -TAPER-LT. SHLD.	200.0	5.0	111.1	6.1	5.0	111.1	1045.0	58.0	64.1	4.46	99.1	330.0	16.4	4.0	88.9	440.0	19.6	5.0	111.1	11.1	17.5	388.9	11.7	22.8	149.75	299.5			200
4415+25.00	4417+25.00	R.M.L. REHAB -TAPER-RT. SHLD.	200.0	8.9	197.8	10.9	8.9	197.8	880.0	87.0	97.9	8.46	188.0	330.0	31.0	8.0	177.8	440.0	39.1	8.9	197.8	19.8	33.4	742.2	22.3	42.1	133.25	266.5			200
4417+25.00	4442+10.00	R.M.L. REHAB -LT. SHLD.	2485.0	5.0	1380.6	75.9	5.0	1380.6	1045.0	721.4	797.3	4.46	1231.5	330.0	203.2	4.0	1104.4	440.0	243.0	5.0	1380.6	138.1	17.5	4831.9	145.0	283.1	149.75	3721.3			2485
4417+25.00	4442+10.00	R.M.L. REHAB -RT. SHLD.	2485.0	10.9	3009.6	165.5	10.9	3009.6	880.0	1324.2	1489.7	10.46	2888.1	330.0	476.5	10.0	2761.1	440.0	607.4	10.9	3009.6	301.0	41.4	11431.0	342.9	643.9	97.25	2416.7			2485
4442+10.00	4449+10.00	R.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0	5.0	388.9	21.4	5.0	388.9	1045.0	203.2	224.6	4.46	346.9	330.0	57.2	4.0	311.1	440.0	68.4	5.0	388.9	38.9	17.5	1361.1	40.8	79.7	149.75	1048.3			700
4442+10.00	4449+10.00	R.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0	6.9	536.7	29.5	6.9	536.7	880.0	236.1	265.6	6.46	502.4	330.0	82.9	6.0	466.7	440.0	102.7	6.9	536.7	53.7	25.4	1975.6	59.3	113.0	116.75	817.3			700
4449+10.00	4452+10.00	R.M.L. REHAB -TAPER-LT. SHLD.	300.0	5.0	166.7	9.2	5.0	166.7	1045.0	87.1	96.3	4.46	148.7	330.0	24.5	4.0	133.3	440.0	29.3	5.0	166.7	16.7	17.5	583.3	17.5	34.2	149.75	449.3			300
4449+10.00	4452+10.00	R.M.L. REHAB -TAPER-RT. SHLD.	300.0	8.9	296.7	16.3	8.9	296.7	880.0	130.5	146.8	8.46	282.0	330.0	46.5	8.0	266.7	440.0	58.7	8.9	296.7	29.7	33.4	1113.3	33.4	63.1	133.25	399.8			300
4452+10.00	4467+64.00	R.M.L. REHAB -LT. SHLD.	1554.0	5.0	863.3	47.5	5.0	863.3	1045.0	451.1	498.6	4.46	770.1	330.0	127.1	4.0	690.7	440.0	152.0	5.0	863.3	86.3	17.5	3021.7	90.7	177.0	149.75	2327.1			1554
4452+10.00	4467+64.00	R.M.L. REHAB -RT. SHLD.	1554.0	10.9	1882.1	103.5	10.9	1882.1	880.0	828.1	931.6	10.46	1806.1	330.0	298.0	10.0	1726.7	440.0	379.9	10.9	1882.1	188.2	41.4	7148.4	214.5	402.7	97.25	1511.3			1554
4467+70.00	4491+00.00	R.M.L. REHAB -LT. SHLD.	2330.0	5.0	1294.4	71.2	5.0	1294.4	1045.0	676.3	747.5	4.46	1154.6	330.0	190.5	4.0	1035.6	440.0	227.8	5.0	1294.4	129.4	17.5	4530.6	135.9	285.3	149.75	3489.2			2330
4467+70.00	4491+00.00	R.M.L. REHAB -RT. SHLD.	2330.0	10.9	2821.9	155.2	10.9	2821.9	880.0	1241.6	1396.8	10.46	2708.0	330.0	446.8	10.0	2588.9	440.0	569.6	10.9	2821.9	282.2	41.4	10718.0	321.5	603.7	97.25	2265.9			2330
4467+64.00	4472+64.00	R.M.L. REHAB TO EXIST.-LT. SHLD.	500.0													4.0	222.2	495.0	55.0	4.0	222.2	22.2	4.0	222.2	6.7	28.9	75.00	375.0			500
4467+64.00	4472+64.00	R.M.L. REHAB TO EXIST.-RT. SHLD.	500.0													10.0	555.6	495.0	137.5	10.0	555.6	55.6	10.0	555.6	16.7	72.3	48.75	243.8			500
4472+64.00	4474+64.00	R.M.L. REHAB TO EXIST.-LT. SHLD.	200.0													4.0	88.9	220.0	9.8	4.0	88.9	8.9				8.9					200
4472+64.00	4474+64.00	R.M.L. REHAB TO EXIST.-RT. SHLD.	200.0													10.0	222.2	220.0	24.4	10.0	222.2	22.2				22.2					200
TOTALS THIS SHEET:											30471.7				9548.5				10642.0							10995.9		81943.1		2000.7	64698.0

BASIS OF ESTIMATE:

ACHM BASE COURSE (1-1/2") - MINERAL AGGREGATE = 96.1%, ASPHALT BINDER (PG 76-22) = 3.9%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 95.7%, ASPHALT BINDER (PG 76-22) = 4.3%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%

STATE ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

QUANTITIES

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STAGE CONSTRUCTION TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES - ALTERNATE NO. 1

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")				TACK COAT 0.03 GAL. PER SQ. YD.			
			FEET	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	TOTAL WID. FEET	SQ.YD.	GALLONS / SQ.YD.	GALLON
STAGE 1 BEGIN & END OF JOB TEMP. MEDIAN CROSSOVERS																			
10+41.79	12+81.79	EB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	0.03	44.2
12+81.79	15+60.00	EB MEDIAN CROSSOVER	278.2	31.0	958.2	1320.0	632.4	25.5	788.2	330.0	130.1	23.0	711.0	220.0	78.2	110.5	3415.7	0.03	102.5
15+60.00	18+00.00	EB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	0.03	44.2
30+41.79	32+81.79	EB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	0.03	44.2
32+81.79	35+60.00	EB MEDIAN CROSSOVER	278.2	31.0	958.2	1320.0	632.4	25.5	788.2	330.0	130.1	23.0	711.0	220.0	78.2	110.5	3415.7	0.03	102.5
35+60.00	38+00.00	EB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	0.03	44.2
20+41.79	22+81.79	WB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	0.03	44.2
22+81.79	25+60.00	WB MEDIAN CROSSOVER	278.2	31.0	958.2	1320.0	632.4	25.5	788.2	330.0	130.1	23.0	711.0	220.0	78.2	110.5	3415.7	0.03	102.5
25+60.00	28+00.00	WB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	0.03	44.2
40+41.79	42+81.79	WB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	0.03	44.2
42+81.79	45+60.00	WB MEDIAN CROSSOVER	278.2	31.0	958.2	1320.0	632.4	25.5	788.2	330.0	130.1	23.0	711.0	220.0	78.2	110.5	3415.7	0.03	102.5
45+60.00	48+00.00	WB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	0.03	44.2
STAGE 1 TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES																			
4038+00.00	4039+50.00	HWY. 1 RAMP SE - TEMP. RAMP - TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	0.03	27.7
4039+50.00	4041+00.00	HWY. 1 RAMP SE - TEMP. RAMP	150.0	31.0	516.7	1320.0	341.0	25.5	425.0	330.0	70.1	23.0	383.3	220.0	42.2	110.5	1841.7	0.03	55.3
4041+00.00	4042+50.00	HWY. 1 RAMP SE - TEMP. RAMP - TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	0.03	27.7
4074+50.00	4076+50.00	HWY. 1B RAMP SW-ACCEL. LANE TAPER	200.0	13.0	288.9	1320.0	190.7	11.0	244.4	330.0	40.3	10.0	222.2	220.0	24.4	47.0	1044.4	0.03	31.3
4076+50.00	4085+00.00	HWY. 1B RAMP SW-ACCEL. LANE	850.0	19.0	1794.4	1320.0	1184.3	17.0	1605.6	330.0	264.9	16.0	1511.1	220.0	166.2	71.0	6705.6	0.03	201.2
4081+50.00	4084+25.00	HWY. 1B RAMP SW- TEMP. RAMP A	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	0.03	101.3
4084+25.00	4085+00.00	HWY. 1B RAMP SW- TEMP. RAMP A-TAPER	75.0	15.5	129.2	1320.0	85.3	12.8	106.7	330.0	17.6	11.5	95.8	220.0	10.5	55.3	460.8	0.03	13.8
4085+00.00	4086+50.00	HWY. 1B RAMP SW- TEMP. RAMP B	150.0	31.0	516.7	1320.0	341.0	25.5	425.0	330.0	70.1	23.0	383.3	220.0	42.2	110.5	1841.7	0.03	55.3
4096+25.00	4096+75.00	HWY. 1B RAMP WS- TEMP. RAMP B	50.0	31.0	172.2	1320.0	113.7	25.5	141.7	330.0	23.4	23.0	127.8	220.0	14.1	110.5	613.9	0.03	18.4
4096+75.00	4097+25.00	HWY. 1B RAMP WS- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4096+00.00	4096+50.00	HWY. 1B RAMP WS-TEMP. RAMP A (STAGE 1D)-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4096+50.00	4096+75.00	HWY. 1B RAMP WS-TEMP. RAMP A (STAGE 1D)	25.0	31.0	86.1	1320.0	56.8	25.5	70.8	330.0	11.7	23.0	63.9	220.0	7.0	110.5	306.9	0.03	9.2
4096+75.00	4097+75.00	HWY. 1B RAMP WS-TEMP. RAMP A	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	0.03	36.8
4097+75.00	4098+25.00	HWY. 1B RAMP WS-TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4103+00.00	4104+00.00	HWY. 1B RAMP NW-TEMP. RAMP A-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
4104+00.00	4105+75.00	HWY. 1B RAMP NW-TEMP. RAMP A	175.0	31.0	602.8	1320.0	397.8	25.5	495.8	330.0	81.8	23.0	447.2	220.0	49.2	110.5	2148.6	0.03	64.5
4104+50.00	4105+25.00	HWY. 1B RAMP NW-TEMP. RAMP B-TAPER	75.0	15.5	129.2	1320.0	85.3	12.8	106.7	330.0	17.6	11.5	95.8	220.0	10.5	55.3	460.8	0.03	13.8
4105+25.00	4105+75.00	HWY. 1B RAMP NW-TEMP. RAMP B	50.0	31.0	172.2	1320.0	113.7	25.5	141.7	330.0	23.4	23.0	127.8	220.0	14.1	110.5	613.9	0.03	18.4
4117+50.00	4118+50.00	HWY. 1B RAMP WN-TEMP. RAMP B	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	0.03	36.8
4118+50.00	4119+75.00	HWY. 1B RAMP WN-TEMP. RAMP B-TAPER	125.0	15.5	215.3	1320.0	142.1	12.8	177.8	330.0	29.3	11.5	159.7	220.0	17.6	55.3	768.1	0.03	23.0
4120+00.00	4120+50.00	HWY. 1B RAMP WN-TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4120+50.00	4122+50.00	HWY. 1B RAMP WN-TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	0.03	73.7
4122+50.00	4123+50.00	HWY. 1B RAMP WN-TEMP. RAMP A-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
4126+75.00	4128+75.00	HWY. 284 WB ENTR.-ACCEL. LANE TAPER	200.0	13.0	288.9	1320.0	190.7	11.0	244.4	330.0	40.3	10.0	222.2	220.0	24.4	47.0	1044.4	0.03	31.3
4128+75.00	4137+75.00	HWY. 284 WB ENTR.-ACCEL. LANE	900.0	19.0	1900.0	1320.0	1254.0	17.0	1700.0	330.0	280.5	16.0	1600.0	220.0	176.0	71.0	7100.0	0.03	213.0
4133+75.00	4136+50.00	HWY. 284 WB ENTR.-TEMP. RAMP A	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	0.03	101.3
4136+50.00	4137+00.00	HWY. 284 WB ENTR.-TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4137+75.00	4139+75.00	HWY. 284 WB ENTR.-TEMP. RAMP B	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	0.03	73.7
4164+25.00	4165+00.00	HWY. 284 WB EXIT-TEMP. RAMP B	75.0	31.0	258.3	1320.0	170.5	25.5	212.5	330.0	35.1	23.0	191.7	220.0	21.1	110.5	920.8	0.03	27.6
4165+00.00	4166+00.00	HWY. 284 WB EXIT-TEMP. RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
4166+00.00	4168+00.00	HWY. 284 WB EXIT-TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	0.03	73.7
4168+00.00	4169+50.00	HWY. 284 WB EXIT-TEMP. RAMP A-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	0.03	27.7
4417+10.00	4419+10.00	HWY. 38 WB ENTR.-ACCEL. LANE TAPER	200.0	13.0	288.9	1320.0	190.7	11.0	244.4	330.0	40.3	10.0	222.2	220.0	24.4	47.0	1044.4	0.03	31.3
4419+10.00	4428+10.00	HWY. 38 WB ENTR.-ACCEL. LANE	900.0	19.0	1900.0	1320.0	1254.0	17.0	1700.0	330.0	280.5	16.0	1600.0	220.0	176.0	71.0	7100.0	0.03	213.0
4424+10.00	4426+85.00	HWY. 38 WB ENTR.-TEMP. RAMP A	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	0.03	101.3
4426+85.00	4427+35.00	HWY. 38 WB ENTR.-TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4428+10.00	4429+60.00	HWY. 38 WB ENTR.-TEMP. RAMP B	150.0	31.0	516.7	1320.0	341.0	25.5	425.0	330.0	70.1	23.0	383.3	220.0	42.2	110.5	1841.7	0.03	55.3
4452+25.00	4453+25.00	HWY. 38 WB EXIT-TEMP. RAMP B	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	0.03	36.8
4453+25.00	4454+50.00	HWY. 38 WB EXIT-TEMP. RAMP B-TAPER	125.0	15.5	215.3	1320.0	142.1	12.8	177.8	330.0	29.3	11.5	159.7	220.0	17.6	55.3	768.1	0.03	23.0
4455+00.00	4455+50.00	HWY. 38 WB EXIT-TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4455+50.00	4457+50.00	HWY. 38 WB EXIT-TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	0.03	73.7
4457+50.00	4458+50.00	HWY. 38 WB EXIT-TEMP. RAMP A-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
STAGE 2 TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES																			
4086+05.00	4090+50.00	HWY. 1B RAMP SW- TEMP. RAMP B	445.0	31.0	1532.8	1320.0	1011.6	25.5	1260.8	330.0	208.0	23.0	1137.2	220.0	125.1	110.5	5463.6	0.03	163.9
4090+50.00	4091+50.00	HWY. 1B RAMP SW- TEMP. RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
4095+50.00	4096+00.00	HWY. 1B RAMP WS- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4096+00.00	4097+50.00	HWY. 1B RAMP WS- TEMP. RAMP B	150.0	31.0	516.7	1320.0	341.0	25.5	425.0	330.0	70.1	23.0	383.3	220.0	42.2	110.5	1841.7	0.03	55.3
4105+75.00	4107+75.00	HWY. 1B RAMP NW- TEMP. RAMP B	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	0.03	73.7
4107+75.00	4108+25.00	HWY. 1B RAMP NW- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4112+00.00	4113+50.00	HWY. 1B RAMP WN- TEMP. RAMP B-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	0.03	27.7
4113+50.00	4117+50.00	HWY. 1B RAMP WN- TEMP. RAMP B	400.0	31.0	1377.8	1320.0	909.3	25.5	1133.3	330.0	187.0	23.0	1022.2	220.0	112.4	110.5	4911.1	0.03	147.3
4139+75.00	4142+50.00	HWY. 284 RAMP WB ENTR.- TEMP. RAMP B	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	0.03	101.3
4142+50.00	4144+00.00	HWY. 284 RAMP WB ENTR.- TEMP. RAMP B-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	0.03	27.7
4159+50.00	4161+00.00	HWY. 284 RAMP WB EXIT- TEMP. RAMP B-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	0.03	27.7
4161+00.00	4164+00.00	HWY. 284 RAMP WB EXIT- TEMP. RAMP B	300.0	31.0	1033.3	1320.0	682.0	25.5	850.0	330.0	140.3	23.0	766.7	220.0	84.3	110.5	3683.3	0.03	110.5
4429+60.00	4432+00.00	HWY. 38 RAMP WB ENTR.- TEMP. RAMP B	240.0	31.0	826.7	1320.0	545.6	25.5	680.0	330.0	112.2	23.0	613.3	220.0	67.5	110.5	2946.7	0.03	88.4
4432+00.00	4433+00.00	HWY. 38 RAMP WB ENTR.- TEMP. RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
4448+50.00	4449+50.00	HWY. 38 RAMP WB ENTR.- TEMP. RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
4449+50.00	4452+25.00	HWY. 38 RAMP WB ENTR.- TEMP. RAMP B	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	0.03	101.3
TOTALS THIS SHEET:							23207.7				4846.3				2933.7				3790.9

BASIS OF ESTIMATE:

ACHM BASE COURSE (1-1/2") - MINERAL AGGREGATE = 96.1%, ASPHALT BINDER (PG 76-22) = 3.9%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 95.7%, ASPHALT BINDER (PG 76-22) = 4.3%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

STAGE CONSTRUCTION TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES - ALTERNATE NO. 1 (CONTINUED)

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")				TACK COAT 0.03 GAL. PER SQ. YD.			
			FEET	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	TOTAL WID. FEET	SQ.YD.	GALLONS / SQ.YD.	GALLON
STAGE 3 TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES																			
4036+00.00	4037+50.00	HWY. 1 RAMP SE - TEMP. RAMP - TAPER	150.0	31.0	516.7	1320.0	341.0	25.5	425.0	330.0	70.1	23.0	383.3	220.0	42.2	110.5	1841.7	0.03	55.3
4037+50.00	4039+50.00	HWY. 1 RAMP SE - TEMP. RAMP	200.0	15.5	344.4	1320.0	227.3	12.8	284.4	330.0	46.9	11.5	255.6	220.0	28.1	55.3	1228.9	0.03	36.9
4039+50.00	4040+25.00	HWY. 1 RAMP SE - TEMP. RAMP - TAPER	75.0	31.0	258.3	1320.0	170.5	25.5	212.5	330.0	35.1	23.0	191.7	220.0	21.1	110.5	920.8	0.03	27.6
4040+25.00	4045+25.00	HWY. 1 RAMP SE - ACCEL. LANE	500.0	19.0	1055.6	1045.0	551.6	17.5	972.2	330.0	160.4	16.5	916.7	440.0	201.7	72.0	4000.0	0.03	120.0
4045+25.00	4047+25.00	HWY. 1 RAMP SE - ACCEL. LANE TAPER	200.0	13.0	288.9	1045.0	151.0	11.5	255.6	330.0	42.2	10.5	233.3	440.0	51.3	48.0	1066.7	0.03	32.0
4078+50.00	4080+00.00	HWY. 1B RAMP ES- TEMP. RAMP A-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	0.03	27.7
4080+00.00	4082+00.00	HWY. 1B RAMP ES- TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	0.03	73.7
4082+00.00	4082+50.00	HWY. 1B RAMP ES- TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4084+00.00	4085+25.00	HWY. 1B RAMP ES- TEMP. RAMP B-TAPER	125.0	15.5	215.3	1320.0	142.1	12.8	177.8	330.0	29.3	11.5	159.7	220.0	17.6	55.3	768.1	0.03	23.0
4085+25.00	4086+25.00	HWY. 1B RAMP ES- TEMP. RAMP B	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	0.03	36.8
4096+00.00	4096+50.00	HWY. 1B RAMP SE- TEMP. RAMP B	50.0	31.0	172.2	1320.0	113.7	25.5	141.7	330.0	23.4	23.0	127.8	220.0	14.1	110.5	613.9	0.03	18.4
4096+50.00	4097+00.00	HWY. 1B RAMP SE- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4096+50.00	4097+00.00	HWY. 1B RAMP SE- TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4097+00.00	4098+00.00	HWY. 1B RAMP SE- TEMP. RAMP A	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	0.03	36.8
4098+00.00	4098+50.00	HWY. 1B RAMP SE- TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4102+00.00	4102+25.00	HWY. 1B RAMP EN- TEMP. RAMP A-TAPER	25.0	15.5	43.1	1320.0	28.4	12.8	35.6	330.0	5.9	11.5	31.9	220.0	3.5	55.3	153.6	0.03	4.6
4102+25.00	4103+25.00	HWY. 1B RAMP EN- TEMP. RAMP A	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	0.03	36.8
4103+25.00	4103+50.00	HWY. 1B RAMP EN- TEMP. RAMP A-TAPER	25.0	15.5	43.1	1320.0	28.4	12.8	35.6	330.0	5.9	11.5	31.9	220.0	3.5	55.3	153.6	0.03	4.6
4102+75.00	4103+25.00	HWY. 1B RAMP EN- TEMP. RAMP B	50.0	31.0	172.2	1320.0	113.7	25.5	141.7	330.0	23.4	23.0	127.8	220.0	14.1	110.5	613.9	0.03	18.4
4103+25.00	4103+75.00	HWY. 1B RAMP EN- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4096+00.00	4096+25.00	HWY. 1B RAMP SW-TEMP. RAMP B (STAGE 3C)-TAPER	25.0	15.5	43.1	1320.0	28.4	12.8	35.6	330.0	5.9	11.5	31.9	220.0	3.5	55.3	153.6	0.03	4.6
4096+25.00	4096+50.00	HWY. 1B RAMP SW-TEMP. RAMP B (STAGE 3C)	25.0	31.0	86.1	1320.0	56.8	25.5	70.8	330.0	11.7	23.0	63.9	220.0	7.0	110.5	306.9	0.03	9.2
4102+50.00	4103+00.00	HWY. 1B RAMP EN-TEMP. RAMP B (STAGE 3C)	50.0	31.0	172.2	1320.0	113.7	25.5	141.7	330.0	23.4	23.0	127.8	220.0	14.1	110.5	613.9	0.03	18.4
4096+00.00	4096+50.00	HWY. 1B RAMP EN-TEMP. RAMP B (STAGE 3C)-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4118+25.00	4120+00.00	HWY. 1B RAMP NE-TEMP RAMP B	175.0	31.0	602.8	1320.0	397.8	25.5	495.8	330.0	81.8	23.0	447.2	220.0	49.2	110.5	2148.6	0.03	64.5
4119+00.00	4119+50.00	HWY. 1B RAMP NE-TEMP RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4119+50.00	4122+00.00	HWY. 1B RAMP NE-TEMP RAMP A	250.0	31.0	861.1	1320.0	568.3	25.5	708.3	330.0	116.9	23.0	638.9	220.0	70.3	110.5	3069.4	0.03	92.1
4120+00.00	4127+00.00	HWY. 1B RAMP NE-ACCEL. LANE	700.0	19.0	1477.8	1045.0	772.2	17.5	1361.1	330.0	224.6	16.5	1283.3	440.0	282.3	72.0	5600.0	0.03	168.0
4127+00.00	4129+00.00	HWY. 1B RAMP NE-ACCEL. LANE-TAPER	200.0	13.0	288.9	1045.0	151.0	11.5	255.6	330.0	42.2	10.5	233.3	440.0	51.3	48.0	1066.7	0.03	32.0
4131+50.00	4132+50.00	HWY. 284 RAMP EN- TEMP. RAMP A-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
4132+50.00	4134+50.00	HWY. 284 RAMP EN- TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	0.03	73.7
4134+50.00	4135+00.00	HWY. 284 RAMP EN- TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4135+50.00	4136+50.00	HWY. 284 EB EXIT- TEMP. RAMP A-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
4136+50.00	4137+50.00	HWY. 284 EB EXIT- TEMP. RAMP A	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	0.03	36.8
4162+25.00	4164+00.00	HWY. 284 EB ENTR.-TEMP RAMP B	175.0	31.0	602.8	1320.0	397.8	25.5	495.8	330.0	81.8	23.0	447.2	220.0	49.2	110.5	2148.6	0.03	64.5
4165+50.00	4166+00.00	HWY. 284 EB ENTR.-TEMP RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4166+00.00	4169+00.00	HWY. 284 EB ENTR.-TEMP RAMP A	300.0	31.0	1033.3	1320.0	682.0	25.5	850.0	330.0	140.3	23.0	766.7	220.0	84.3	110.5	3683.3	0.03	110.5
4164+00.00	4173+50.00	HWY. 284 EB ENTR.-ACCEL. LANE	950.0	19.0	2005.6	1045.0	1047.9	17.5	1847.2	330.0	304.8	16.5	1741.7	440.0	383.2	72.0	7600.0	0.03	228.0
4173+50.00	4175+50.00	HWY. 284 EB ENTR.-ACCEL. LANE-TAPER	200.0	13.0	288.9	1045.0	151.0	11.5	255.6	330.0	42.2	10.5	233.3	440.0	51.3	48.0	1066.7	0.03	32.0
4412+00.00	4413+50.00	HWY. 38 EB EXIT- TEMP. RAMP A-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	0.03	27.7
4413+50.00	4415+50.00	HWY. 38 EB EXIT- TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	0.03	73.7
4415+50.00	4416+00.00	HWY. 38 EB EXIT- TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4416+00.00	4417+50.00	HWY. 38 EB EXIT- TEMP. RAMP B-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	0.03	27.7
4417+50.00	4418+50.00	HWY. 38 EB EXIT- TEMP. RAMP B	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	0.03	36.8
4441+75.00	4443+50.00	HWY. 38 EB ENTR.-TEMP RAMP B	175.0	31.0	602.8	1320.0	397.8	25.5	495.8	330.0	81.8	23.0	447.2	220.0	49.2	110.5	2148.6	0.03	64.5
4443+75.00	4444+25.00	HWY. 38 EB ENTR.-TEMP RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4444+25.00	4447+25.00	HWY. 38 EB ENTR.-TEMP RAMP A	300.0	31.0	1033.3	1320.0	682.0	25.5	850.0	330.0	140.3	23.0	766.7	220.0	84.3	110.5	3683.3	0.03	110.5
4443+50.00	4451+75.00	HWY. 38 EB ENTR.-ACCEL. LANE	825.0	19.0	1741.7	1045.0	910.0	17.5	1604.2	330.0	264.7	16.5	1512.5	440.0	332.8	72.0	6600.0	0.03	198.0
4451+75.00	4453+75.00	HWY. 38 EB ENTR.-ACCEL. LANE-TAPER	200.0	13.0	288.9	1045.0	151.0	11.5	255.6	330.0	42.2	10.5	233.3	440.0	51.3	48.0	1066.7	0.03	32.0
STAGE 4 TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES																			
4086+25.00	4088+75.00	HWY. 1B RAMP ES- TEMP. RAMP B	250.0	31.0	861.1	1320.0	568.3	25.5	708.3	330.0	116.9	23.0	638.9	220.0	70.3	110.5	3069.4	0.03	92.1
4088+75.00	4089+50.00	HWY. 1B RAMP ES- TEMP. RAMP B-TAPER	75.0	15.5	129.2	1320.0	85.3	12.8	106.7	330.0	17.6	11.5	95.8	220.0	10.5	55.3	460.8	0.03	13.8
4095+10.00	4095+60.00	HWY. 1B RAMP SE- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4095+60.00	4097+60.00	HWY. 1B RAMP SE- TEMP. RAMP B	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	0.03	73.7
4103+75.00	4105+75.00	HWY. 1B RAMP EN- TEMP. RAMP B	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	0.03	73.7
4105+75.00	4106+25.00	HWY. 1B RAMP EN- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	0.03	9.2
4111+50.00	4113+50.00	HWY. 1B RAMP NE- TEMP. RAMP B-TAPER	200.0	15.5	344.4	1320.0	227.3	12.8	284.4	330.0	46.9	11.5	255.6	220.0	28.1	55.3	1228.9	0.03	36.9
4113+50.00	4118+10.00	HWY. 1B RAMP NE- TEMP. RAMP B	460.0	31.0	1584.4	1320.0	1045.7	25.5	1303.3	330.0	215.0	23.0	1175.6	220.0	129.3	110.5	5647.8	0.03	169.4
4137+75.00	4140+00.00	HWY. 284 EB EXIT- TEMP. RAMP B	225.0	31.0	775.0	1320.0	511.5	25.5	637.5	330.0	105.2	23.0	575.0	220.0	63.3	110.5	2762.5	0.03	82.9
4140+00.00	4141+00.00	HWY. 284 EB EXIT- TEMP. RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
4158+50.00	4159+25.00	HWY. 284 EB ENTR.-TEMP RAMP B-TAPER	75.0	15.5	129.2	1320.0	85.3	12.8	106.7	330.0	17.6	11.5	95.8	220.0	10.5	55.3	460.8	0.03	13.8
4159+25.00	4162+10.00	HWY. 284 EB ENTR.-TEMP RAMP B	285.0	31.0	981.7	1320.0	647.9	25.5	807.5	330.0	133.2	23.0	728.3	220.0	80.1	110.5	3499.2	0.03	105.0
4418+50.00	4421+25.00	HWY. 38 EB EXIT- TEMP. RAMP B	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	0.03	101.3
4421+25.00	4422+50.00	HWY. 38 EB EXIT- TEMP. RAMP B-TAPER	125.0	15.5	215.3	1320.0	142.1	12.8	177.8	330.0	29.3	11.5	159.7	220.0	17.6	55.3	768.1	0.03	23.0
4437+50.00	4438+50.00	HWY. 284 EB ENTR.-TEMP RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	0.03	18.4
4438+50.00	4441+75.00	HWY. 284 EB ENTR.-TEMP RAMP B	325.0	31.0	1119.4	1320.0	738.8	25.5	920.8	330.0	151.9	23.0	830.6	220.0	91.4	110.5	3990.3	0.03	119.7
TOTALS THIS SHEET:							18167.5				4062.1				3171.1				3156.3

BASIS OF ESTIMATE:

ACHM BASE COURSE (1-1/2") - MINERAL AGGREGATE = 96.1%, ASPHALT BINDER (PG 76-22) = 3.9%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 95.7%, ASPHALT BINDER (PG 76-22) = 4.3%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%

STATE ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

BASE AND SURFACING - GUARDRAIL WIDENING - ALTERNATE NO. 1

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 1)		AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
				TON / STATION	TON	TON / STATION	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22
			FEET					FEET			TON
CL MEDIAN I-40											
4053+73.15	4058+01.90	LT. OF R.M.L.	428.8	(96.5)	(413.8)	75.5	323.7	7.5	357.3	220.0	39.3
4054+23.15	4058+01.90	RT. OF R.M.L.	378.8	(63.0)	(238.6)	76.5	289.8	5.5	231.5	220.0	25.5
4060+94.13	4064+72.88	LT. OF L.M.L.	378.8	(63.0)	(238.6)	76.5	289.8	5.5	231.5	220.0	25.5
4060+94.13	4065+22.88	RT. OF L.M.L.	428.8	(96.5)	(413.8)	75.5	323.7	7.5	357.3	220.0	39.3
4094+49.87	4098+78.62	LT. OF R.M.L.	428.8	(96.5)	(413.8)	75.5	323.7	7.5	357.3	220.0	39.3
4096+49.87	4098+78.62	RT. OF R.M.L.	228.8	(63.0)	(144.1)	76.5	175.0	5.5	139.8	220.0	15.4
4101+18.51	4104+97.26	LT. OF L.M.L.	378.8	(63.0)	(238.6)	76.5	289.8	5.5	231.5	220.0	25.5
4101+18.51	4105+47.26	RT. OF L.M.L.	428.8	(96.5)	(413.8)	75.5	323.7	7.5	357.3	220.0	39.3
4148+63.85	4152+92.60	LT. OF R.M.L.	428.8	(96.5)	(413.8)	75.5	323.7	7.5	357.3	220.0	39.3
4149+13.85	4152+92.60	RT. OF R.M.L.	378.8	(63.0)	(238.6)	76.5	289.8	5.5	231.5	220.0	25.5
4154+05.68	4157+84.43	LT. OF L.M.L.	378.8	(63.0)	(238.6)	76.5	289.8	5.5	231.5	220.0	25.5
4154+05.68	4158+34.43	RT. OF L.M.L.	428.8	(96.5)	(413.8)	75.5	323.7	7.5	357.3	220.0	39.3
4214+69.75	4218+98.50	LT. OF R.M.L.	428.8	(96.5)	(413.8)	75.5	323.7	7.5	357.3	220.0	39.3
4215+19.75	4218+98.50	RT. OF R.M.L.	378.8	(63.0)	(238.6)	76.5	289.8	5.5	231.5	220.0	25.5
4221+55.67	4225+34.42	LT. OF L.M.L.	378.8	(63.0)	(238.6)	76.5	289.8	5.5	231.5	220.0	25.5
4221+55.67	4225+84.42	RT. OF L.M.L.	428.8	(96.5)	(413.8)	75.5	323.7	7.5	357.3	220.0	39.3
4270+20.00	4275+35.00	LT. OF R.M.L.	515.0	(96.5)	(497.0)	75.5	388.8	7.5	429.2	220.0	47.2
4271+76.25	4274+05.00	RT. OF R.M.L.	228.8	(63.0)	(144.1)	76.5	175.0	5.5	139.8	220.0	15.4
4273+10.00	4278+15.00	RT. OF L.M.L.	505.0	(96.5)	(487.3)	75.5	381.3	7.5	420.8	220.0	46.3
4274+40.00	4276+58.75	LT. OF L.M.L.	218.8	(63.0)	(137.8)	76.5	167.4	5.5	133.7	220.0	14.7
4309+34.45	4311+44.45	RT. OF R.M.L.	210.0	(63.0)	(132.3)	76.5	160.7	5.5	128.3	220.0	14.1
4309+75.03	4311+85.03	LT. OF R.M.L.	210.0	(96.5)	(202.7)	75.5	158.6	7.5	175.0	220.0	19.3
4314+06.94	4318+35.69	RT. OF L.M.L.	428.8	(96.5)	(413.8)	75.5	323.7	7.5	357.3	220.0	39.3
4314+47.01	4318+25.76	LT. OF L.M.L.	378.8	(63.0)	(238.6)	76.5	289.8	5.5	231.5	220.0	25.5
4329+65.16	4335+18.91	RT. OF R.M.L.	553.8	(63.0)	(348.9)	76.5	423.7	5.5	338.4	220.0	37.2
4330+90.16	4335+18.91	LT. OF R.M.L.	428.8	(96.5)	(413.8)	75.5	323.7	7.5	357.3	220.0	39.3
4345+46.09	4349+24.84	RT. OF L.M.L.	378.8	(96.5)	(365.5)	75.5	286.0	7.5	315.7	220.0	34.7
4345+46.09	4349+74.84	LT. OF L.M.L.	428.8	(63.0)	(270.1)	76.5	328.0	5.5	262.0	220.0	28.8
4431+35.00	4436+50.00	LT. OF R.M.L.	515.0	(96.5)	(497.0)	75.5	388.8	7.5	429.2	220.0	47.2
4434+35.00	4439+50.00	RT. OF L.M.L.	515.0	(96.5)	(497.0)	75.5	388.8	7.5	429.2	220.0	47.2
TOTALS:					**✱ (9770.6)**		**8977.5**				**964.5**

✱DENOTES A REDUCTION IN QUANTITY

BASIS OF ESTIMATE: ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 64-22) = 5.2%

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	194	374
				(2)	QUANTITIES			

BASE AND SURFACING - LANES ONLY - ALTERNATE NO. 2

STATION	STATION	LOCATION	LENGTH	CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMP'D. DEPTH)				PORTLAND CEMENT CONCRETE PAVEMENT				ACHM SURFACE COURSE (3/8")								ACHM SURFACE COURSE (1/2")				TACK COAT						
				AVG. WID.	PROCESSING	CEMENT	AGGREGATE	(12" U.T.)		(13" U.T.)		LEVELING - 110 LBS. PER SQ. YD.			NORMAL				TOTAL	NORMAL			TOTAL	0.10 GAL. PER SQ. YD.			0.03 GAL. PER SQ. YD.			TOTAL
			FEET	FEET	SQ. YD.	TON	TON	AVG. WID. FEET	SQ.YD.	AVG. WID. FEET	SQ.YD.	AVG. WID. FEET	SQ.YD.	TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	TON	PG 64-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	TOTAL WID. FEET	SQ.YD.	GALLON	TOTAL WID. FEET	SQ.YD.	GALLON	GALLONS
CL MEDIAN I-40																														
4043+70.40	4045+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-LANES ONLY	200.0																	24.0	533.3	220.0	58.7	24.0	533.3	53.3				53.3
4045+70.40	4050+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-LANES ONLY	500.0																	24.0	1333.3	385.0	256.7	24.0	1333.3	133.3	24.0	1333.3	40.0	173.3
4050+70.40	4057+70.40	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2	26.0	2022.2	110.0	111.2				26.0	2022.2	60.7	60.7
4061+30.63	4068+30.63	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4068+30.63	4078+00.00	L.M.L. REHAB -LANES ONLY	969.4					24.0	2585.1			24.0	2585.1	142.2	24.0	2585.1	192.5	248.8	391.0					24.0	2585.1	258.5				258.5
4078+00.00	4081+00.00	L.M.L. REHAB-TAPER -LANES ONLY	300.0					30.0	1000.0			30.0	1000.0	55.0	30.0	1000.0	176.0	88.0	143.0					30.0	1000.0	100.0				100.0
4081+00.00	4088+00.00	L.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0					36.0	2800.0			36.0	2800.0	154.0	36.0	2800.0	165.0	231.0	385.0					36.0	2800.0	280.0				280.0
4088+00.00	4091+50.83	L.M.L. REHAB -LANES ONLY	350.8					24.0	935.5			24.0	935.5	51.5	24.0	935.5	192.5	90.0	141.5					24.0	935.5	93.6				93.6
4091+50.83	4092+25.00	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	74.2	26.0	214.4	4.5	70.5			26.0	214.4				26.0	214.4	110.0	11.8	11.8								26.0	214.4	6.4	6.4
4092+25.00	4093+75.00	L.M.L. FULL DEPTH RECONSTRUCTION -TAPER-LANES ONLY	150.0	30.0	500.0	10.5	164.5			30.0	500.0				30.0	500.0	110.0	27.5	27.5								30.0	500.0	15.0	15.0
4093+75.00	4098+50.83	L.M.L. FULL DEPTH RECONSTRUCTION -AUX LANE-LANES ONLY	475.8	36.0	1903.2	40.0	626.2			36.0	1903.2				36.0	1903.2	110.0	104.7	104.7								36.0	1903.2	57.1	57.1
4101+55.01	4105+00.00	L.M.L. FULL DEPTH RECONSTRUCTION -ACCEL. LANE-LANES ONLY	345.0	36.0	1380.0	29.0	454.0			36.0	1380.0				36.0	1380.0	110.0	75.9	75.9								36.0	1380.0	41.4	41.4
4105+00.00	4108+55.01	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	355.0	26.0	1025.6	21.5	337.4			26.0	1025.6				26.0	1025.6	110.0	56.4	56.4								26.0	1025.6	30.8	30.8
4108+55.01	4118+50.00	L.M.L. REHAB -LANES ONLY	995.0					24.0	2653.3			24.0	2653.3	145.9	24.0	2653.3	192.5	255.4	401.3					24.0	2653.3	265.3				265.3
4118+50.00	4120+00.00	L.M.L. REHAB-TAPER -LANES ONLY	150.0					30.0	500.0			30.0	500.0	27.5	30.0	500.0	176.0	44.0	71.5					30.0	500.0	50.0				50.0
4120+00.00	4129+00.00	L.M.L. REHAB -LANES ONLY	900.0					24.0	2400.0			24.0	2400.0	132.0	24.0	2400.0	192.5	231.0	363.0					24.0	2400.0	240.0				240.0
4129+00.00	4132+00.00	L.M.L. REHAB-TAPER -LANES ONLY	300.0					30.0	1000.0			30.0	1000.0	55.0	30.0	1000.0	176.0	88.0	143.0					30.0	1000.0	100.0				100.0
4132+00.00	4139+00.00	L.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0					36.0	2800.0			36.0	2800.0	154.0	36.0	2800.0	165.0	231.0	385.0					36.0	2800.0	280.0				280.0
4139+00.00	4145+56.10	L.M.L. REHAB -LANES ONLY	656.1					24.0	1749.6			24.0	1749.6	96.2	24.0	1749.6	192.5	168.4	264.6					24.0	1749.6	175.0				175.0
4145+56.10	4152+56.10	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4154+42.18	4161+42.18	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4161+42.18	4164+50.00	L.M.L. REHAB -LANES ONLY	307.8					24.0	820.8			24.0	820.8	45.1	24.0	820.8	192.5	79.0	124.1					24.0	820.8	82.1				82.1
4164+50.00	4166+00.00	L.M.L. REHAB-TAPER -LANES ONLY	150.0					30.0	500.0			30.0	500.0	27.5	30.0	500.0	176.0	44.0	71.5					30.0	500.0	50.0				50.0
4166+00.00	4173+50.00	L.M.L. REHAB -LANES ONLY	750.0					24.0	2000.0			24.0	2000.0	110.0	24.0	2000.0	192.5	192.5	302.5					24.0	2000.0	200.0				200.0
4173+50.00	4176+50.00	L.M.L. REHAB-TAPER -LANES ONLY	300.0					30.0	1000.0			30.0	1000.0	55.0	30.0	1000.0	176.0	88.0	143.0					30.0	1000.0	100.0				100.0
4176+50.00	4183+50.00	L.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0					36.0	2800.0			36.0	2800.0	154.0	36.0	2800.0	165.0	231.0	385.0					36.0	2800.0	280.0				280.0
4183+50.00	4185+29.44	L.M.L. REHAB -LANES ONLY	179.4					24.0	478.4			24.0	478.4	26.3	24.0	478.4	192.5	46.0	72.3					24.0	478.4	47.8				47.8
4185+29.44	4188+79.44	L.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	350.0					24.0	933.3			24.0	933.3	51.3	24.0	933.3	324.5	151.4	202.7					24.0	933.3	93.3				93.3
4188+79.44	4201+10.00	L.M.L. REHAB - MAX SUPER ELEV.-LANES ONLY	1230.6					24.0	3281.6			24.0	3281.6	180.5	24.0	3281.6	456.5	749.0	929.5					24.0	3281.6	328.2				328.2
4201+10.00	4202+06.11	L.M.L. REHAB -TAPER- MAX SUPER ELEV.-LANES ONLY	96.1					33.1	353.4			33.1	353.4	19.4	33.1	353.4	456.5	80.7	100.1					33.1	353.4	35.3				35.3
4202+06.11	4203+10.00	L.M.L. REHAB -TAPER- SUPER ELEV. TRANS. -LANES ONLY	103.9					27.1	312.9			27.1	312.9	17.2	27.1	312.9	417.3	65.3	82.5					27.1	312.9	31.3				31.3
4203+10.00	4205+56.11	L.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	246.1					24.0	656.3			24.0	656.3	36.1	24.0	656.3	285.3	93.6	129.7					24.0	656.3	65.6				65.6
4205+56.11	4211+62.00	L.M.L. REHAB -LANES ONLY	605.9					24.0	1615.7			24.0	1615.7	88.9	24.0	1615.7	192.5	155.5	244.4					24.0	1615.7	161.6				161.6
4211+62.00	4218+62.00	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4221+92.17	4228+92.17	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4228+92.17	4256+10.40	L.M.L. REHAB -LANES ONLY	2718.2					24.0	7248.5			24.0	7248.5	398.7	24.0	7248.5	192.5	697.7	1096.4					24.0	7248.5	724.9				724.9
4256+10.40	4258+72.90	L.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	262.5					24.0	700.0			24.0	700.0	38.5	24.0	700.0	291.5	102.0	140.5					24.0	700.0	70.0				70.0
4261+96.60	4262+84.10	L.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	87.5					24.0	233.3			24.0	233.3	12.8	24.0	233.3	423.5	49.4	62.2					24.0	233.3	23.3				23.3
4262+84.10	4305+17.41	L.M.L. REHAB - MAX SUPER ELEV.-LANES ONLY	4233.3					24.0	11288.8			24.0	11288.8	620.9	24.0	11288.8	456.5	2576.7	3197.6					24.0	11288.8	1128.9				1128.9
4305+17.41	4312+17.41	L.M.L. FULL DEPTH RECONSTRUCTION-MAX SUPER -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4314+61.37	4317+09.10	L.M.L. FULL DEPTH RECONSTRUCTION-MAX SUPER -LANES ONLY	247.7	26.0	715.6	15.0	235.4			26.0	715.6				26.0	715.6	110.0	39.4	39.4								26.0	715.6	21.5	21.5
4317+09.10	4320+59.10	L.M.L. FULL DEPTH RECON.- SUPER ELEV. TRANS. -LANES ONLY	350.0	26.0	1011.1	21.2	332.7			26.0	1011.1				26.0	1011.1	110.0	55.6	55.6								26.0	1011.1	30.3	30.3
4320+59.10	4321+61.37	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	102.3	26.0	295.5	6.2	97.2			26.0	295.5				26.0	295.5	110.0	16.3	16.3								26.0	295.5	8.9	8.9
4321+61.37	4327+82.41	L.M.L. REHAB -LANES ONLY	621.0					24.0	1656.0			24.0	1656.0	91.1	24.0	1656.0	192.5	159.4	250.5					24.0	1656.0	165.6				165.6
4327+82.41	4334+82.41	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4345+82.59	4352+82.59	L.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4352+82.59	4418+75.00	L.M.L. REHAB -LANES ONLY	6592.4					24.0	17579.7			24.0	17579.7	966.9	24.0	17579.7	192.5	1692.0	2658.9					24.0	17579.7	1758.0				1758.0
4418+75.00	4421+75.00	L.M.L. REHAB-TAPER -LANES ONLY	300.0					30.0	1000.0			30.0	1000.0	55.0	30.0	1000.0	176.0	88.0	143.0					30.0	1000.0	100.0				100.0
4421+75.00	4428+75.00	L.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0					36.0	2800.0			36.0	2800.0	154.0	36.0	2800.0	165.0	231.0	385.0					36.0	2800.0	280.0				280.0
4428+75.00	4453+50.00	L.M.L. REHAB -LANES ONLY	2475.0					24.0	6600.0			24.0	6600.0	363.0	24.0	6600.0	192.5	635.3	998.3					24.0	6600.0	660.0				660.0
4453+50.00	4455+00.00	L.M.L. REHAB-TAPER -LANES ONLY	150.0					30.0	500.0			30.0	500.0	27.5	30.0	500.0	176.0	44.0	71.5					30.0	500.0	50.0				50.0
4455+00.00	4467+64.00	L.M.L. REHAB -LANES ONLY	1264.0					24.0	3370.7			24.0	3370.7	185.4	24.0	3370.7	192.5	324.4	509.8					24.0	3370.7	337.1				337.1
4467+70.00	4491+00.00	L.M.L. REHAB -LANES ONLY	2330.0					24.0	6213.3			24.0	6213.3	341.7	24.0	6213.3	192.5	598.0	939.7					24.0	6213.3	621.3				621.3
4467+64.00	4472+64.00	L.M.L. REHAB TO EXIST.-LANES ONLY	500.0																	24.0	1333.3	385.0	256.7	24.0	1333.3	133.3	24.0	1333.3	40.0	173.3
4472+64.00	4474+64.00	L.M.L. REHAB TO EXIST.-LANES ONLY	200.0																	24.0	533.3	220.0	58.7	24.0	533.3	53.3				53.3
TOTALS THIS SHEET:					25245.2	530.4	8305.6		92366.2		25245.2								17318.0				742.0							10447.6

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%
ACHM SURFACE COURSE (3/8") - MINERAL AGGREGATE = 94.3%, ASPHALT BINDER (PG 64-22) = 5.7%
CEMENT STABILIZED CRUSHED STONE BASE - AGGREGATE = 94.0%, CEMENT = 6.0%

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

QUANTITIES

bb0105.qty.dgn 2/8/2013 10:57:25 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	195	374

(2) QUANTITIES

BASE AND SURFACING - LANES ONLY - ALTERNATE NO. 2 (CONTINUED)

STATION	STATION	LOCATION	LENGTH	CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMP'D. DEPTH)				PORTLAND CEMENT CONCRETE PAVEMENT				ACHM SURFACE COURSE (3/8")								ACHM SURFACE COURSE (1/2")				TACK COAT						
								(12" U.T.)		(13" U.T.)		LEVELING - 110 LBS. PER SQ. YD.			NORMAL				TOTAL	NORMAL			TOTAL	0.10 GAL. PER SQ. YD.			0.03 GAL. PER SQ. YD.			TOTAL
			FEET	AVG. WID. FEET	PROCESSING SQ. YD.	CEMENT TON	AGGREGATE TON	AVG. WID. FEET	SQ.YD.	AVG. WID. FEET	SQ.YD.	AVG. WID. FEET	SQ.YD.	TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	TON	PG 64-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	TOTAL WID. FEET	SQ.YD.	GALLON	TOTAL WID. FEET	SQ.YD.	GALLON	GALLONS
CL MEDIAN I-40																														
4043+65.40	4045+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-LANES ONLY	200.0																	24.0	533.3	220.0	58.7	24.0	533.3	53.3				53.3
4045+65.40	4050+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-LANES ONLY	500.0																	24.0	1333.3	385.0	256.7	24.0	1333.3	133.3	24.0	1333.3	40.0	173.3
4050+65.40	4057+65.40	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4061+25.63	4068+25.63	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4068+25.63	4082+50.00	R.M.L. REHAB -LANES ONLY	1424.4					24.0	3798.4			24.0	3798.4	208.9	24.0	3798.4	192.5	365.6	574.5					24.0	3798.4	379.8				379.8
4082+50.00	4084+00.00	R.M.L. REHAB-TAPER -LANES ONLY	150.0					30.0	500.0			30.0	500.0	27.5	30.0	500.0	176.0	44.0	71.5					30.0	500.0	50.0				50.0
4084+00.00	4091+42.12	R.M.L. REHAB -LANES ONLY	742.1					24.0	1978.9			24.0	1978.9	108.8	24.0	1978.9	192.5	190.5	299.3					24.0	1978.9	197.9				197.9
4091+42.12	4096+75.00	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	532.9	26.0	1539.5	32.3	506.5			26.0	1539.5				26.0	1539.5	110.0	84.7	84.7								26.0	1539.5	46.2	46.2
4096+75.00	4098+42.12	R.M.L. FULL DEPTH RECONSTRUCTION -AUX LANE-LANES ONLY	167.1	36.0	668.4	14.0	219.9			36.0	668.4				36.0	668.4	110.0	36.8	36.8								36.0	668.4	20.1	20.1
4101+46.30	4105+75.00	R.M.L. FULL DEPTH RECONSTRUCTION -ACCEL. LANE-LANES ONLY	428.7	36.0	1714.8	36.0	564.2			36.0	1714.8				36.0	1714.8	110.0	94.3	94.3								36.0	1714.8	51.4	51.4
4105+75.00	4107+25.00	R.M.L. FULL DEPTH RECONSTRUCTION -TAPER-LANES ONLY	150.0	30.0	500.0	10.5	164.5			30.0	500.0				30.0	500.0	110.0	27.5	27.5								30.0	500.0	15.0	15.0
4107+25.00	4108+46.30	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	121.3	26.0	350.4	7.4	115.3			26.0	350.4				26.0	350.4	110.0	19.3	19.3								26.0	350.4	10.5	10.5
4108+46.30	4117+25.00	R.M.L. REHAB -LANES ONLY	878.7					24.0	2343.2			24.0	2343.2	128.9	24.0	2343.2	192.5	225.5	354.4					24.0	2343.2	234.3				234.3
4117+25.00	4123+25.00	R.M.L. REHAB-ACCEL. LANE -LANES ONLY	600.0					36.0	2400.0			36.0	2400.0	132.0	36.0	2400.0	165.0	198.0	330.0					36.0	2400.0	240.0				240.0
4123+25.00	4126+25.00	R.M.L. REHAB-TAPER -LANES ONLY	300.0					30.0	1000.0			30.0	1000.0	55.0	30.0	1000.0	176.0	88.0	143.0					30.0	1000.0	100.0				100.0
4126+25.00	4134+25.00	R.M.L. REHAB -LANES ONLY	800.0					24.0	2133.3			24.0	2133.3	117.3	24.0	2133.3	192.5	205.3	322.6					24.0	2133.3	213.3				213.3
4134+25.00	4136+25.00	R.M.L. REHAB-TAPER -LANES ONLY	200.0					30.0	666.7			30.0	666.7	36.7	30.0	666.7	176.0	58.7	95.4					30.0	666.7	66.7				66.7
4136+25.00	4145+56.10	R.M.L. REHAB -LANES ONLY	931.1					24.0	2482.9			24.0	2482.9	136.6	24.0	2482.9	192.5	239.0	375.6					24.0	2482.9	248.3				248.3
4145+56.10	4152+56.10	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4154+42.18	4161+42.18	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4161+42.18	4163+50.00	R.M.L. REHAB -LANES ONLY	207.8					24.0	554.1			24.0	554.1	30.5	24.0	554.1	192.5	53.3	83.8					24.0	554.1	55.4				55.4
4163+50.00	4170+50.00	R.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0					36.0	2800.0			36.0	2800.0	154.0	36.0	2800.0	165.0	231.0	385.0					36.0	2800.0	280.0				280.0
4170+50.00	4173+50.00	R.M.L. REHAB-TAPER -LANES ONLY	300.0					30.0	1000.0			30.0	1000.0	55.0	30.0	1000.0	176.0	88.0	143.0					30.0	1000.0	100.0				100.0
4173+50.00	4185+29.44	R.M.L. REHAB -LANES ONLY	1179.4					24.0	3145.1			24.0	3145.1	173.0	24.0	3145.1	192.5	302.7	475.7					24.0	3145.1	314.5				314.5
4185+29.44	4188+79.44	R.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	350.0					24.0	933.3			24.0	933.3	51.3	24.0	933.3	324.5	151.4	202.7					24.0	933.3	93.3				93.3
4188+79.44	4202+06.11	R.M.L. REHAB - MAX SUPER ELEV.-LANES ONLY	1326.7					24.0	3537.9			24.0	3537.9	194.6	24.0	3537.9	456.5	807.5	1002.1					24.0	3537.9	353.8				353.8
4202+06.11	4205+56.11	R.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	350.0					24.0	933.3			24.0	933.3	51.3	24.0	933.3	324.5	151.4	202.7					24.0	933.3	93.3				93.3
4205+56.11	4211+62.00	R.M.L. REHAB -LANES ONLY	605.9					24.0	1615.7			24.0	1615.7	88.9	24.0	1615.7	192.5	155.5	244.4					24.0	1615.7	161.6				161.6
4211+62.00	4218+62.00	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4221+92.17	4228+92.17	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4228+92.17	4256+10.40	R.M.L. REHAB -LANES ONLY	2718.2					24.0	7248.5			24.0	7248.5	398.7	24.0	7248.5	192.5	697.7	1096.4					24.0	7248.5	724.9				724.9
4256+10.40	4258+72.90	R.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	262.5					24.0	700.0			24.0	700.0	38.5	24.0	700.0	291.5	102.0	140.5					24.0	700.0	70.0				70.0
4261+96.60	4262+84.10	R.M.L. REHAB - SUPER ELEV. TRANS. -LANES ONLY	87.5					24.0	233.3			24.0	233.3	12.8	24.0	233.3	423.5	49.4	62.2					24.0	233.3	23.3				23.3
4262+84.10	4304+30.16	R.M.L. REHAB - MAX SUPER ELEV.-LANES ONLY	4146.1					24.0	11056.3			24.0	11056.3	608.1	24.0	11056.3	456.5	2523.6	3131.7					24.0	11056.3	1105.6				1105.6
4304+30.16	4311+30.16	R.M.L. FULL DEPTH RECONSTRUCTION-MAX SUPER -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4313+79.12	4317+09.10	R.M.L. FULL DEPTH RECONSTRUCTION-MAX SUPER -LANES ONLY	330.0	26.0	953.3	20.0	313.6			26.0	953.3				26.0	953.3	110.0	52.4	52.4								26.0	953.3	28.6	28.6
4317+09.10	4320+59.10	R.M.L. FULL DEPTH RECON.- SUPER ELEV. TRANS. -LANES ONLY	350.0	26.0	1011.1	21.2	332.7			26.0	1011.1				26.0	1011.1	110.0	55.6	55.6								26.0	1011.1	30.3	30.3
4320+59.10	4320+79.12	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	20.0	26.0	57.8	1.2	19.0			26.0	57.8				26.0	57.8	110.0	3.2	3.2								26.0	57.8	1.7	1.7
4320+79.12	4327+82.41	R.M.L. REHAB -LANES ONLY	703.3					24.0	1875.5			24.0	1875.5	103.2	24.0	1875.5	192.5	180.5	283.7					24.0	1875.5	187.6				187.6
4327+82.41	4334+82.41	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4345+82.59	4352+82.59	R.M.L. FULL DEPTH RECONSTRUCTION -LANES ONLY	700.0	26.0	2022.2	42.5	665.3			26.0	2022.2				26.0	2022.2	110.0	111.2	111.2								26.0	2022.2	60.7	60.7
4352+82.59	4415+25.00	R.M.L. REHAB -LANES ONLY	6242.4					24.0	16646.4			24.0	16646.4	915.6	24.0	16646.4	192.5	1602.2	2517.8					24.0	16646.4	1664.6				1664.6
4415+25.00	4417+25.00	R.M.L. REHAB-TAPER -LANES ONLY	200.0					30.0	666.7			30.0	666.7	36.7	30.0	666.7	176.0	58.7	95.4					30.0	666.7	66.7				66.7
4417+25.00	4442+10.00	R.M.L. REHAB -LANES ONLY	2485.0					24.0	6626.7			24.0	6626.7	364.5	24.0	6626.7	192.5	637.8	1002.3					24.0	6626.7	662.7				662.7
4442+10.00	4449+10.00	R.M.L. REHAB-ACCEL. LANE -LANES ONLY	700.0					36.0	2800.0			36.0	2800.0	154.0	36.0	2800.0	165.0	231.0	385.0					36.0	2800.0	280.0				280.0
4449+10.00	4452+10.00	R.M.L. REHAB-TAPER -LANES ONLY	300.0					30.0	1000.0			30.0	1000.0	55.0	30.0	1000.0	176.0	88.0	143.0					30.0	1000.0	100.0				100.0
4452+10.00	4467+64.00	R.M.L. REHAB -LANES ONLY	1554.0					24.0	4144.0			24.0	4144.0	227.9	24.0	4144.0	192.5	398.9	626.8					24.0	4144.0	414.4				414.4
4467+70.00	4491+00.00	R.M.L. REHAB -LANES ONLY	2330.0					24.0	6213.3			24.0	6213.3	341.7	24.0	6213.3	192.5	598.0	939.7					24.0	6213.3	621.3				621.3
4467+64.00	4472+64.00	R.M.L. REHAB TO EXIST.-LANES ONLY	500.0																	24.0	1333.3	385.0	256.7	24.0	1333.3	133.3				133.3
4472+64.00	4474+64.00	R.M.L. REHAB TO EXIST.-LANES ONLY	200.0																	24.0	533.3	220.0	58.7	24.0	533.3	53.3				53.3
TOTALS THIS SHEET:					24995.1	525.1	8223.4		91033.5		24995.1								17104.8				630.8							10266.6

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%
ACHM SURFACE COURSE (3/8") - MINERAL AGGREGATE = 94.3%, ASPHALT BINDER (PG 64-22) = 5.7%
CEMENT STABILIZED CRUSHED STONE BASE - AGGREGATE = 94.0%, CEMENT = 6.0%

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	196	374

(2) QUANTITIES

BASE AND SURFACING SHOULDERS - ALTERNATE NO. 2

STATION	STATION	LOCATION	LENGTH	CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMP'D. DEPTH)				PORTLAND CEMENT CONCRETE PAVEMENT (12" U.T.)		PORTLAND CEMENT CONCRETE PAVEMENT (13" U.T.)		ACHM SURFACE COURSE (3/8")								ACHM SURFACE COURSE (1/2")				TACK COAT							AGGREGATE BASE COURSE		RUMBLE STRIPS
												LEVELING - 110 LBS. PER SQ. YD.			NORMAL					NORMAL			TOTAL	0.10 GAL. PER SQ. YD.			0.03 GAL. PER SQ. YD.			TOTAL GALLONS	CLASS 1		PCCP
				AVG. WID.	PROCESSING	CEMENT	AGGREGATE	AVG. WID.	SQ.YD.	AVG. WID.	SQ.YD.	AVG. WID.	SQ.YD.	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TON	TOTAL PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL WID.	SQ.YD.	GALLON	TOTAL WID.	SQ.YD.	GALLON		TON / STATION	TON	LIN. FT.
			FEET	FEET	SQ. YD.	TON	TON	FEET		FEET		FEET			FEET				TON	FEET			TON	FEET			FEET						
CL MEDIAN I-40																																	
4043+70.40	4045+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-LT. SHLD.	200.0																	10.0	222.2	220.0	24.4	10.0	222.2	22.2				22.2			200
4043+70.40	4045+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-RT. SHLD.	200.0																	4.0	88.9	220.0	9.8	4.0	88.9	8.9				8.9			200
4045+70.40	4050+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-LT. SHLD.	500.0																	10.0	555.6	385.0	107.0	10.0	555.6	55.6	10.0	555.6	16.7	72.3	27.00	135.0	500
4045+70.40	4050+70.40	L.M.L. EXIST. TO FULL DEPTH RECON.-RT. SHLD.	500.0																	4.0	222.2	385.0	42.8	4.0	222.2	22.2	4.0	222.2	6.7	28.9	40.00	200.0	500
4050+70.40	4057+70.40	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4050+70.40	4057+70.40	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4061+30.63	4068+30.63	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4061+30.63	4068+30.63	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4068+30.63	4078+00.00	L.M.L. REHAB -LT. SHLD.	969.4					10.0	1077.1			10.0	1077.1	59.2	10.0	1077.1	110.0	59.2	118.4					10.0	1077.1	107.7				107.7	84.25	816.7	969
4068+30.63	4078+00.00	L.M.L. REHAB -RT. SHLD.	969.4					4.0	430.8			4.0	430.8	23.7	4.0	430.8	275.0	59.2	82.9					4.0	430.8	43.1				43.1	131.50	1274.8	969
4078+00.00	4081+00.00	L.M.L. REHAB -TAPER-LT. SHLD.	300.0					8.0	266.7			8.0	266.7	14.7	8.0	266.7	110.0	14.7	29.4					8.0	266.7	26.7				26.7	92.63	277.9	300
4078+00.00	4081+00.00	L.M.L. REHAB -TAPER-RT. SHLD.	300.0					4.0	133.3			4.0	133.3	7.3	4.0	133.3	275.0	18.3	25.6					4.0	133.3	13.3				13.3	131.50	394.5	300
4081+00.00	4088+00.00	L.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0					6.0	466.7			6.0	466.7	25.7	6.0	466.7	110.0	25.7	51.4					6.0	466.7	46.7				46.7	101.00	707.0	700
4081+00.00	4088+00.00	L.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0					4.0	311.1			4.0	311.1	17.1	4.0	311.1	275.0	42.8	59.9					4.0	311.1	31.1				31.1	131.50	920.5	700
4088+00.00	4091+50.83	L.M.L. REHAB -LT. SHLD.	350.8					10.0	389.8			10.0	389.8	21.4	10.0	389.8	110.0	21.4	42.8					10.0	389.8	39.0				39.0	84.25	295.5	351
4088+00.00	4091+50.83	L.M.L. REHAB -RT. SHLD.	350.8					4.0	155.9			4.0	155.9	8.6	4.0	155.9	275.0	21.4	30.0					4.0	155.9	15.6				15.6	131.50	461.3	351
4091+50.83	4092+25.00	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	74.2	8.0	66.0	1.4	21.7			8.0	66.0				8.0	66.0	110.0	3.6	3.6								8.0	66.0	2.0	2.0	53.75	39.9	74
4091+50.83	4092+25.00	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	74.2	6.0	49.5	1.0	16.3			4.0	33.0				6.0	49.5	110.0	2.7	2.7								6.0	49.5	1.5	1.5	80.00	59.4	74
4092+25.00	4093+75.00	L.M.L. FULL DEPTH RECONSTRUCTION-TAPER -LT. SHLD.	150.0	7.0	116.7	2.5	38.4			7.0	116.7				7.0	116.7	110.0	6.4	6.4								7.0	116.7	3.5	3.5	55.00	82.5	150
4092+25.00	4093+75.00	L.M.L. FULL DEPTH RECONSTRUCTION-TAPER -RT. SHLD.	150.0	6.0	100.0	2.1	32.9			4.0	66.7				6.0	100.0	110.0	5.5	5.5								6.0	100.0	3.0	3.0	80.00	120.0	150
4093+75.00	4098+50.83	L.M.L. FULL DEPTH RECONSTRUCTION-AUX. LANE -LT. SHLD.	475.8	6.0	317.2	6.7	104.4			6.0	317.2				6.0	317.2	110.0	17.4	17.4								6.0	317.2	9.5	9.5	56.25	267.6	476
4093+75.00	4098+50.83	L.M.L. FULL DEPTH RECONSTRUCTION-AUX. LANE -RT. SHLD.	475.8	6.0	317.2	6.7	104.4			4.0	211.5				6.0	317.2	110.0	17.4	17.4								6.0	317.2	9.5	9.5	80.00	380.6	476
4101+55.01	4105+00.00	L.M.L. FULL DEPTH RECONSTRUCTION-ACCEL. LANE -LT. SHLD.	345.0	6.0	230.0	4.8	75.7			6.0	230.0	6.0	230.0	12.7	6.0	230.0	110.0	12.7	25.4								6.0	230.0	6.9	6.9	56.25	194.1	345
4101+55.01	4105+00.00	L.M.L. FULL DEPTH RECONSTRUCTION-ACCEL. LANE -RT. SHLD.	345.0	6.0	230.0	4.8	75.7			4.0	153.3	4.0	153.3	8.4	6.0	230.0	110.0	12.7	21.1								6.0	230.0	6.9	6.9	80.00	276.0	345
4105+00.00	4108+55.01	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	355.0	8.0	315.6	6.6	103.8			8.0	315.6				8.0	315.6	110.0	17.4	17.4								8.0	315.6	9.5	9.5	53.75	190.8	355
4105+00.00	4108+55.01	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	355.0	6.0	236.7	5.0	77.9			4.0	157.8				6.0	236.7	110.0	13.0	13.0								6.0	236.7	7.1	7.1	80.00	284.0	355
4108+55.01	4118+50.00	L.M.L. REHAB -LT. SHLD.	995.0					10.0	1105.6			10.0	1105.6	60.8	10.0	1105.6	110.0	60.8	121.6					10.0	1105.6	110.6				110.6	84.25	838.3	995
4108+55.01	4118+50.00	L.M.L. REHAB -RT. SHLD.	995.0					4.0	442.2			4.0	442.2	24.3	4.0	442.2	275.0	60.8	85.1					4.0	442.2	44.2				44.2	131.50	1308.4	995
4118+50.00	4120+00.00	L.M.L. REHAB -TAPER-LT. SHLD.	150.0					8.0	133.3			8.0	133.3	7.3	8.0	133.3	110.0	7.3	14.6					8.0	133.3	13.3				13.3	92.63	138.9	150
4118+50.00	4120+00.00	L.M.L. REHAB -TAPER-RT. SHLD.	150.0					4.0	66.7			4.0	66.7	3.7	4.0	66.7	275.0	9.2	12.9					4.0	66.7	6.7				6.7	131.50	197.3	150
4120+00.00	4129+00.00	L.M.L. REHAB -LT. SHLD.	900.0					10.0	1000.0			10.0	1000.0	55.0	10.0	1000.0	110.0	55.0	110.0					10.0	1000.0	100.0				100.0	84.25	758.3	900
4120+00.00	4129+00.00	L.M.L. REHAB -RT. SHLD.	900.0					4.0	400.0			4.0	400.0	22.0	4.0	400.0	275.0	55.0	77.0					4.0	400.0	40.0				40.0	131.50	1183.5	900
4129+00.00	4132+00.00	L.M.L. REHAB -TAPER-LT. SHLD.	300.0					8.0	266.7			8.0	266.7	14.7	8.0	266.7	110.0	14.7	29.4					8.0	266.7	26.7				26.7	92.63	277.9	300
4129+00.00	4132+00.00	L.M.L. REHAB -TAPER-RT. SHLD.	300.0					4.0	133.3			4.0	133.3	7.3	4.0	133.3	275.0	18.3	25.6					4.0	133.3	13.3				13.3	131.50	394.5	300
4132+00.00	4139+00.00	L.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0					6.0	466.7			6.0	466.7	25.7	6.0	466.7	110.0	25.7	51.4					6.0	466.7	46.7				46.7	101.00	707.0	700
4132+00.00	4139+00.00	L.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0					4.0	311.1			4.0	311.1	17.1	4.0	311.1	275.0	42.8	59.9					4.0	311.1	31.1				31.1	131.50	920.5	700
4139+00.00	4145+56.10	L.M.L. REHAB -LT. SHLD.	656.1					10.0	729.0			10.0	729.0	40.1	10.0	729.0	110.0	40.1	80.2					10.0	729.0	72.9				72.9	84.25	552.8	656
4139+00.00	4145+56.10	L.M.L. REHAB -RT. SHLD.	656.1					4.0	291.6			4.0	291.6	16.0	4.0	291.6	275.0	40.1	56.1					4.0	291.6	29.2				29.2	131.50	862.8	656
4145+56.10	4152+56.10	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4145+56.10	4152+56.10	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4154+42.18	4161+42.18	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4154+42.18	4161+42.18	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4161+42.18	4164+50.00	L.M.L. REHAB -LT. SHLD.	307.8					10.0	342.0			10.0	342.0	18.8	10.0	342.0	110.0	18.8	37.6					10.0	342.0	34.2				34.2	84.25	259.3	308
4161+42.18	4164+50.00	L.M.L. REHAB -RT. SHLD.	307.8					4.0	136.8			4.0	136.8	7.5	4.0	136.8	275.0	18.8	26.3					4.0	136.8	13.7				13.7	131.50	404.8	308
4164+50.00	4166+00.00	L.M.L. REHAB -TAPER-LT. SHLD.	150.0					8.0	133.3			8.0	133.3	7.3	8.0	133.3	110.0	7.3	14.6					8.0	133.3	13.3				13.3	92.63	138.9	150
4164+50.00	4166+00.00	L.M.L. REHAB -TAPER-RT. SHLD.	150.0					4.0	66.7			4.0	66.7	3.7	4.0	66.7	275.0	9.2	12.9					4.0	66.7	6.7				6.7	131.50	197.3	150
4166+00.00	4173+50.00	L.M.L. REHAB -LT. SHLD.	750.0					10.0	833.3			10.0	833.3	45.8	10.0	833.3	110.0	45.8	91.6					10.0	833.3	83.3				83.3	84.25	631.9	750
4166+00.00	4173+50.00	L.M.L. REHAB -RT. SHLD.	750.0					4.0	333.3			4.0	333.3	18.3	4.0	333.3	275.0	45.8	64.1					4.0	333.3	33.3				33.3	131.50	986.3	750
4173+50.00	4176+50.00	L.M.L. REHAB -TAPER-LT. SHLD.	300.0					8.0	266.7			8.0	266.7	14.7	8.0	266.7	110.0	14.7	29.4					8.0	266.7	26.7				26.7	92.63	277.9	300
4173+50.00	4176+50.00	L.M.L. REHAB -TAPER-RT. SHLD.	300.0					4.0	133.3			4.0	133.3	7.3	4.0	133.3	275.0	18.3	25.6					4.0	133.3	13.3				13.3	131.50	394.5	300
4176+50.00	4183+50.00	L.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0					6.0	466.7			6.0	466.7	25.7	6.0	466.7	110.0	25.7	51.4					6.0	466.7	46.7				46.7	101.00	707.0	700
4176+50.00	4183+50.00	L.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0					4.0	311.1			4.0	311.1	17.1	4.0	311.1	275.0	42.8	59.9					4.0	311.1	31.1				31.1	131.50	920.5	700
4183+50.00	4185+29.44	L.M.L. REHAB -LT. SHLD.	179.4					10.0	199.3			10.0	199.3	11.0	10.0	199.3	110.0	11.0	22.0					10.0	199.3	19.9				19.9	84.25	151.1	179
4183+50.00	4185+29.44	L.M.L. REHAB -RT. SHLD.	179.4					4.0	79.7			4.0	79.7	4.4	4.0	79.7	275.0	11.0	15.4					4.0	79.7	8.0				8.0	131.50	235.9	179
TOTALS THIS SHEET:					6334.5	133.2	2084.0		11879.8		5401.0								1984.5				184.0							1510.6		24568.9	26616.0

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%
ACHM SURFACE COURSE (3/8") - MINERAL AGGREGATE = 94.3%, ASPHALT BINDER (PG 64-22) = 5.7%
CEMENT STABILIZED CRUSHED STONE BASE - AGGREGATE = 94.0%, CEMENT = 6.0%

STATE ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

QUANTITIES

bb0105.qty.dgn 2/8/2013 10:57:25 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	197	374
				(2)	QUANTITIES			

BASE AND SURFACING SHOULDERS - ALTERNATE NO. 2 (CONTINUED)

STATION	STATION	LOCATION	LENGTH	CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMP'D. DEPTH)				PORTLAND CEMENT CONCRETE PAVEMENT (12" U.T.)		PORTLAND CEMENT CONCRETE PAVEMENT (13" U.T.)		ACHM SURFACE COURSE (3/8")								ACHM SURFACE COURSE (1/2")				TACK COAT							AGGREGATE BASE COURSE		RUMBLE STRIPS
												LEVELING - 110 LBS. PER SQ. YD.			NORMAL					NORMAL				0.10 GAL. PER SQ. YD.			0.03 GAL. PER SQ. YD.				CLASS 1		PCCP
				AVG. WID.	PROCESSING	CEMENT	AGGREGATE	AVG. WID.		AVG. WID.		AVG. WID.			AVG. WID.				TOTAL PG 64-22	AVG. WID.		POUND / SQ.YD.	TOTAL PG 76-22	TOTAL WID.			TOTAL WID.			TOTAL GALLONS			
			FEET	FEET	SQ. YD.	TON	TON	FEET	SQ.YD.	FEET	SQ.YD.	FEET	SQ.YD.	TON	FEET	SQ.YD.	POUND / SQ.YD.	TON	TON	FEET	SQ.YD.	SQ.YD.	TON	FEET	SQ.YD.	GALLON	FEET	SQ.YD.	GALLON		TON / STATION	TON	LIN. FT.
CL MEDIAN I-40																																		
4185+29.44	4188+79.44	L.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	350.0					10.0	388.9			10.0	388.9	21.4	10.0	388.9	456.5	88.8	110.2					10.0	388.9	38.9				38.9	104.75	366.6	350
4185+29.44	4188+79.44	L.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	350.0					4.0	155.6			4.0	155.6	8.6	4.0	155.6	539.0	41.9	50.5					4.0	155.6	15.6				15.6	124.75	436.6	350
4188+79.44	4201+10.00	L.M.L. REHAB - MAX SUPER ELEV. -LT. SHLD.	1230.6					10.0	1367.3			10.0	1367.3	75.2	10.0	1367.3	803.0	549.0	624.2					10.0	1367.3	136.7				136.7	125.25	1541.3	1231
4188+79.44	4201+10.00	L.M.L. REHAB - MAX SUPER ELEV. -RT. SHLD.	1230.6					4.0	546.9			4.0	546.9	30.1	4.0	546.9	110.0	30.1	60.2					4.0	546.9	54.7				54.7	118.00	1452.1	1231
4201+10.00	4202+06.11	L.M.L. REHAB -TAPER- MAX SUPER ELEV. -LT. SHLD.	96.1					7.0	74.7			7.0	74.7	4.1	7.0	74.7	803.0	30.0	34.1					7.0	74.7	7.5				7.5	125.25	120.4	96
4201+10.00	4202+06.11	L.M.L. REHAB -TAPER- MAX SUPER ELEV. -RT. SHLD.	96.1					4.0	42.7			4.0	42.7	2.3	4.0	42.7	110.0	2.3	4.6					4.0	42.7	4.3				4.3	118.00	113.4	96
4202+06.11	4203+10.00	L.M.L. REHAB -TAPER- SUPER ELEV. TRANS. -LT. SHLD.	103.9					9.0	103.9			9.0	103.9	5.7	9.0	103.9	700.1	36.4	42.1					9.0	103.9	10.4				10.4	119.25	123.9	104
4202+06.11	4203+10.00	L.M.L. REHAB -TAPER- SUPER ELEV. TRANS. -RT. SHLD.	103.9					4.0	46.2			4.0	46.2	2.5	4.0	46.2	134.5	3.1	5.6					4.0	46.2	4.6				4.6	120.00	124.7	104
4203+10.00	4205+56.11	L.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	246.1					10.0	273.4			10.0	273.4	15.0	10.0	273.4	353.6	48.3	63.3					10.0	273.4	27.3				27.3	98.75	243.0	246
4203+10.00	4205+56.11	L.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	246.1					4.0	109.4			4.0	109.4	6.0	4.0	109.4	217.0	11.9	17.9					4.0	109.4	10.9				10.9	126.75	311.9	246
4205+56.11	4211+62.00	L.M.L. REHAB -LT. SHLD.	605.9					10.0	673.2			10.0	673.2	37.0	10.0	673.2	110.0	37.0	74.0					10.0	673.2	67.3				67.3	84.25	510.5	606
4205+56.11	4211+62.00	L.M.L. REHAB -RT. SHLD.	605.9					4.0	269.3			4.0	269.3	14.8	4.0	269.3	275.0	37.0	51.8					4.0	269.3	26.9				26.9	131.50	796.8	606
4211+62.00	4218+62.00	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4211+62.00	4218+62.00	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4221+92.17	4228+92.17	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4221+92.17	4228+92.17	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4228+92.17	4256+10.40	L.M.L. REHAB -LT. SHLD.	2718.2					10.0	3020.2			10.0	3020.2	166.1	10.0	3020.2	110.0	166.1	332.2					10.0	3020.2	302.0				302.0	84.25	2290.1	2718
4228+92.17	4256+10.40	L.M.L. REHAB -RT. SHLD.	2718.2					4.0	1208.1			4.0	1208.1	66.4	4.0	1208.1	275.0	166.1	232.5					4.0	1208.1	120.8				120.8	131.50	3574.4	2718
4256+10.40	4258+72.90	L.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	262.5					10.0	291.7			10.0	291.7	16.0	10.0	291.7	110.0	16.0	32.0					10.0	291.7	29.2				29.2	84.25	221.2	263
4256+10.40	4258+72.90	L.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	262.5					4.0	116.7			4.0	116.7	6.4	4.0	116.7	473.0	27.6	34.0					4.0	116.7	11.7				11.7	148.00	388.5	263
4261+96.60	4262+84.10	L.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	87.5					10.0	97.2			10.0	97.2	5.3	10.0	97.2	110.0	5.3	10.6					10.0	97.2	9.7				9.7	84.25	73.7	88
4261+96.60	4262+84.10	L.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	87.5					4.0	38.9			4.0	38.9	2.1	4.0	38.9	737.0	14.3	16.4					4.0	38.9	3.9				3.9	170.00	148.8	88
4262+84.10	4305+17.41	L.M.L. REHAB - MAX SUPER ELEV. -LT. SHLD.	4233.3					10.0	4703.7			10.0	4703.7	258.7	10.0	4703.7	110.0	258.7	517.4					10.0	4703.7	470.4				470.4	84.25	3566.6	4233
4262+84.10	4305+17.41	L.M.L. REHAB - MAX SUPER ELEV. -RT. SHLD.	4233.3					4.0	1881.5			4.0	1881.5	103.5	4.0	1881.5	803.0	755.4	858.9					4.0	1881.5	188.2				188.2	175.50	7429.4	4233
4305+17.41	4312+17.41	L.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -LT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	73.50	514.5	700
4305+17.41	4312+17.41	L.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -RT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4314+61.37	4317+09.10	L.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -LT. SHLD.	247.7	8.0	220.2	4.6	72.4			8.0	220.2				8.0	220.2	110.0	12.1	12.1								8.0	220.2	6.6	6.6	73.50	182.1	248
4314+61.37	4317+09.10	L.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -RT. SHLD.	247.7	6.0	165.1	3.5	54.3			4.0	110.1				6.0	165.1	110.0	9.1	9.1								6.0	165.1	5.0	5.0	80.00	198.2	248
4312+17.41	4320+59.10	L.M.L. FULL DEPTH RECON. - SUPER ELEV. TRANS.-LT. SHLD.	841.7	8.0	748.2	15.7	246.2			8.0	748.2				8.0	748.2	110.0	41.2	41.2								8.0	748.2	22.4	22.4	63.75	536.6	842
4312+17.41	4320+59.10	L.M.L. FULL DEPTH RECON. - SUPER ELEV. TRANS.-RT. SHLD.	841.7	6.0	561.1	11.8	184.6			4.0	374.1				6.0	561.1	110.0	30.9	30.9								6.0	561.1	16.8	16.8	80.00	673.4	842
4320+59.10	4321+61.37	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	102.3	8.0	90.9	1.9	29.9			8.0	90.9				8.0	90.9	110.0	5.0	5.0								8.0	90.9	2.7	2.7	53.75	55.0	102
4320+59.10	4321+61.37	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	102.3	6.0	68.2	1.4	22.4			4.0	45.5				6.0	68.2	110.0	3.8	3.8								6.0	68.2	2.0	2.0	80.00	81.8	102
4321+61.37	4327+82.41	L.M.L. REHAB -LT. SHLD.	621.0					10.0	690.0			10.0	690.0	38.0	10.0	690.0	110.0	38.0	76.0					10.0	690.0	69.0				69.0	84.25	523.2	621
4321+61.37	4327+82.41	L.M.L. REHAB -RT. SHLD.	621.0					4.0	276.0			4.0	276.0	15.2	4.0	276.0	275.0	38.0	53.2					4.0	276.0	27.6				27.6	131.50	816.6	621
4327+82.41	4334+82.41	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4327+82.41	4334+82.41	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4345+82.59	4352+82.59	L.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4345+82.59	4352+82.59	L.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4352+82.59	4418+75.00	L.M.L. REHAB -LT. SHLD.	6592.4					10.0	7324.9			10.0	7324.9	402.9	10.0	7324.9	110.0	402.9	805.8					10.0	7324.9	732.5				732.5	84.25	5554.1	6592
4352+82.59	4418+75.00	L.M.L. REHAB -RT. SHLD.	6592.4					4.0	2930.0			4.0	2930.0	161.2	4.0	2930.0	275.0	402.9	564.1					4.0	2930.0	293.0				293.0	131.50	8669.0	6592
4418+75.00	4421+75.00	L.M.L. REHAB -TAPER-LT. SHLD.	300.0					8.0	266.7			8.0	266.7	14.7	8.0	266.7	110.0	14.7	29.4					8.0	266.7	26.7				26.7	92.63	277.9	300
4418+75.00	4421+75.00	L.M.L. REHAB -TAPER-RT. SHLD.	300.0					4.0	133.3			4.0	133.3	7.3	4.0	133.3	275.0	18.3	25.6					4.0	133.3	13.3				13.3	131.50	394.5	300
4421+75.00	4428+75.00	L.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0					6.0	466.7			6.0	466.7	25.7	6.0	466.7	110.0	25.7	51.4					6.0	466.7	46.7				46.7	101.00	707.0	700
4421+75.00	4428+75.00	L.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0					4.0	311.1			4.0	311.1	17.1	4.0	311.1	275.0	42.8	59.9					4.0	311.1	31.1				31.1	131.50	920.5	700
4428+75.00	4453+50.00	L.M.L. REHAB -LT. SHLD.	2475.0					10.0	2750.0			10.0	2750.0	151.3	10.0	2750.0	110.0	151.3	302.6					10.0	2750.0	275.0				275.0	84.25	2085.2	2475
4428+75.00	4453+50.00	L.M.L. REHAB -RT. SHLD.	2475.0					4.0	1100.0			4.0	1100.0	60.5	4.0	1100.0	275.0	151.3	211.8					4.0	1100.0	110.0				110.0	131.50	3254.6	2475
4453+50.00	4455+00.00	L.M.L. REHAB -TAPER-LT. SHLD.	150.0					8.0	133.3			8.0	133.3	7.3	8.0	133.3	110.0	7.3	14.6					8.0	133.3	13.3				13.3	92.63	138.9	150
4453+50.00	4455+00.00	L.M.L. REHAB -TAPER-RT. SHLD.	150.0					4.0	66.7			4.0	66.7	3.7	4.0	66.7	275.0	9.2	12.9					4.0	66.7	6.7				6.7	131.50	197.3	150
4455+00.00	4467+64.00	L.M.L. REHAB -LT. SHLD.	1264.0					10.0	1404.4			10.0	1404.4	77.2	10.0	1404.4	110.0	77.2	154.4					10.0	1404.4	140.4				140.4	84.25	1064.9	1264
4455+00.00	4467+64.00	L.M.L. REHAB -RT. SHLD.	1264.0					4.0	561.8			4.0	561.8	30.9	4.0	561.8	275.0	77.2	108.1					4.0	561.8	56.2				56.2	131.50	1662.2	1264
4467+70.00	4491+00.00	L.M.L. REHAB -LT. SHLD.	2330.0					10.0	2588.9			10.0	2588.9	142.4	10.0	2588.9	110.0	142.4	284.8					10.0	2588.9	258.9				258.9	84.25	1963.0	2330
4467+70.00	4491+00.00	L.M.L. REHAB -RT. SHLD.	2330.0					4.0	1035.6			4.0	1035.6	57.0	4.0	1035.6	275.0	142.4	199.4					4.0	1035.6	103.6				103.6	131.50	3064.0	2330
4467+64.00	4472+64.00	L.M.L. REHAB TO EXIST.-LT. SHLD.	500.0																	10.0	555.6	385.0	107.0	10.0	555.6	55.6	10.0	555.6	16.7	72.3	42.25	211.3	500
4467+64.00	4472+64.00	L.M.L. REHAB TO EXIST.-RT. SHLD.	500.0																	4.0	222.2	385.0	42.8	4.0	222.2	22.2	4.0	222.2	6.7	28.9	65.75	328.8	500
4472+64.00	4474+64.00	L.M.L. REHAB TO EXIST.-LT. SHLD.	200.0																	10.0	222.2	220.0	24.4	10.0	222.2	22.2				22.2			200
4472+64.00	4474+64.00	L.M.L. REHAB TO EXIST.-RT. SHLD.	200.0																	4.0	88.9	220.0	9.8	4.0	88.9	8.9				8.9			200
TOTALS THIS SHEET:					7298.2	153.4	2400.8		37448.9		6255.5								6528.1				184.0							4096.3		62213.7	59518.0

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%
ACHM SURFACE COURSE (3/8") - MINERAL AGGREGATE = 94.3%, ASPHALT BINDER (PG 64-22) = 5.7%
CEMENT STABILIZED CRUSHED STONE BASE - AGGREGATE = 94.0%, CEMENT = 6.0%

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

QUANTITIES

bb0105.qty.dgn 2/8/2013 10:57:26 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	198	374

(2) QUANTITIES

BASE AND SURFACING SHOULDERS - ALTERNATE NO. 2 (CONTINUED)

STATION	STATION	LOCATION	LENGTH	CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMP'D. DEPTH)				PORTLAND CEMENT CONCRETE PAVEMENT (12" U.T.)		PORTLAND CEMENT CONCRETE PAVEMENT (13" U.T.)		ACHM SURFACE COURSE (3/8")								ACHM SURFACE COURSE (1/2")				TACK COAT							AGGREGATE BASE COURSE		RUMBLE STRIPS
												LEVELING - 110 LBS. PER SQ. YD.			NORMAL				TOTAL	NORMAL			TOTAL	0.10 GAL. PER SQ. YD.			0.03 GAL. PER SQ. YD.			TOTAL GALLONS	CLASS 1		PCCP
				AVG. WID.	PROCESSING	CEMENT	AGGREGATE	AVG. WID.	SQ.YD.	AVG. WID.	SQ.YD.	AVG. WID.	SQ.YD.	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TON	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL WID.	SQ.YD.	GALLON	TOTAL WID.	SQ.YD.	GALLON		TON / STATION	TON	
			FEET	FEET	SQ. YD.	TON	TON	FEET		FEET		FEET			FEET				TON	FEET			TON	FEET			FEET						LIN. FT.
CL MEDIAN I-40																																	
4043+65.40	4045+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-LT. SHLD.	200.0																	4.0	88.9	220.0	9.8	4.0	88.9	8.9				8.9			200
4043+65.40	4045+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-RT. SHLD.	200.0																	10.0	222.2	220.0	24.4	10.0	222.2	22.2				22.2			200
4045+65.40	4050+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-LT. SHLD.	500.0																	4.0	222.2	385.0	42.8	4.0	222.2	22.2	4.0	222.2	6.7	28.9	40.00	200.0	500
4045+65.40	4050+65.40	R.M.L. EXIST. TO FULL DEPTH RECON.-RT. SHLD.	500.0																	10.0	555.6	385.0	107.0	10.0	555.6	55.6	10.0	555.6	16.7	72.3	27.00	135.0	500
4050+65.40	4057+65.40	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4050+65.40	4057+65.40	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4061+25.63	4068+25.63	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4061+25.63	4068+25.63	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4068+25.63	4082+50.00	R.M.L. REHAB -LT. SHLD.	1424.4					4.0	633.1			4.0	633.1	34.8	4.0	633.1	275.0	87.1	121.9					4.0	633.1	63.3				63.3	131.50	1873.1	1424
4068+25.63	4082+50.00	R.M.L. REHAB -RT. SHLD.	1424.4					10.0	1582.7			10.0	1582.7	87.0	10.0	1582.7	110.0	87.0	174.0					10.0	1582.7	158.3				158.3	84.25	1200.1	1424
4082+50.00	4084+00.00	R.M.L. REHAB -TAPER-LT. SHLD.	150.0					4.0	66.7			4.0	66.7	3.7	4.0	66.7	275.0	9.2	12.9					4.0	66.7	6.7				6.7	131.50	197.3	150
4082+50.00	4084+00.00	R.M.L. REHAB -TAPER-RT. SHLD.	150.0					8.0	133.3			8.0	133.3	7.3	8.0	133.3	110.0	7.3	14.6					8.0	133.3	13.3				13.3	92.63	138.9	150
4084+00.00	4091+42.12	R.M.L. REHAB -LT. SHLD.	742.1					4.0	329.8			4.0	329.8	18.1	4.0	329.8	275.0	45.3	63.4					4.0	329.8	33.0				33.0	131.50	975.9	742
4084+00.00	4091+42.12	R.M.L. REHAB -RT. SHLD.	742.1					10.0	824.6			10.0	824.6	45.4	10.0	824.6	110.0	45.4	90.8					10.0	824.6	82.5				82.5	84.25	625.2	742
4091+42.12	4096+75.00	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	532.9	6.0	355.3	7.5	116.9			4.0	236.8				6.0	355.3	110.0	19.5	19.5								6.0	355.3	10.7	10.7	80.00	426.3	533
4091+42.12	4096+75.00	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	532.9	8.0	473.7	9.9	155.8			8.0	473.7				8.0	473.7	110.0	26.1	26.1								8.0	473.7	14.2	14.2	53.75	286.4	533
4096+75.00	4098+42.12	R.M.L. FULL DEPTH RECONSTRUCTION-AUX. LANE -LT. SHLD.	167.1	6.0	111.4	2.3	36.7			4.0	74.3				6.0	111.4	110.0	6.1	6.1								6.0	111.4	3.3	3.3	80.00	133.7	167
4096+75.00	4098+42.12	R.M.L. FULL DEPTH RECONSTRUCTION-AUX. LANE -RT. SHLD.	167.1	6.0	111.4	2.3	36.7			6.0	111.4				6.0	111.4	110.0	6.1	6.1								6.0	111.4	3.3	3.3	56.25	94.0	167
4101+46.30	4105+75.00	R.M.L. FULL DEPTH RECONSTRUCTION-ACCEL. LANE -LT. SHLD.	428.7	6.0	285.8	6.0	94.0			4.0	190.5				6.0	285.8	110.0	15.7	15.7								6.0	285.8	8.6	8.6	80.00	343.0	429
4101+46.30	4105+75.00	R.M.L. FULL DEPTH RECONSTRUCTION-ACCEL. LANE -RT. SHLD.	428.7	6.0	285.8	6.0	94.0			6.0	285.8				6.0	285.8	110.0	15.7	15.7								6.0	285.8	8.6	8.6	56.25	241.1	429
4105+75.00	4107+25.00	R.M.L. FULL DEPTH RECONSTRUCTION-TAPER -LT. SHLD.	150.0	6.0	100.0	2.1	32.9			4.0	66.7				6.0	100.0	110.0	5.5	5.5								6.0	100.0	3.0	3.0	80.00	120.0	150
4105+75.00	4107+25.00	R.M.L. FULL DEPTH RECONSTRUCTION-TAPER -RT. SHLD.	150.0	7.0	116.7	2.5	38.4			7.0	116.7				7.0	116.7	110.0	6.4	6.4								7.0	116.7	3.5	3.5	55.00	82.5	150
4107+25.00	4108+46.30	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	121.3	6.0	80.9	1.7	26.6			4.0	53.9				6.0	80.9	110.0	4.4	4.4								6.0	80.9	2.4	2.4	80.00	97.0	121
4107+25.00	4108+46.30	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	121.3	8.0	107.8	2.3	35.5			8.0	107.8				8.0	107.8	110.0	5.9	5.9								8.0	107.8	3.2	3.2	53.75	65.2	121
4108+46.30	4117+25.00	R.M.L. REHAB -LT. SHLD.	878.7					4.0	390.5			4.0	390.5	21.5	4.0	390.5	275.0	53.7	75.2					4.0	390.5	39.1				39.1	131.50	1155.5	879
4108+46.30	4117+25.00	R.M.L. REHAB -RT. SHLD.	878.7					10.0	976.3			10.0	976.3	53.7	10.0	976.3	110.0	53.7	107.4					10.0	976.3	97.6				97.6	84.25	740.3	879
4117+25.00	4123+25.00	R.M.L. REHAB -ACCEL. LANE-LT. SHLD.	600.0					4.0	266.7			4.0	266.7	14.7	4.0	266.7	275.0	36.7	51.4					4.0	266.7	26.7				26.7	131.50	789.0	600
4117+25.00	4123+25.00	R.M.L. REHAB -ACCEL. LANE-RT. SHLD.	600.0					6.0	400.0			6.0	400.0	22.0	6.0	400.0	110.0	22.0	44.0					6.0	400.0	40.0				40.0	101.00	606.0	600
4123+25.00	4126+25.00	R.M.L. REHAB -TAPER-LT. SHLD.	300.0					4.0	133.3			4.0	133.3	7.3	4.0	133.3	275.0	18.3	25.6					4.0	133.3	13.3				13.3	131.50	394.5	300
4123+25.00	4126+25.00	R.M.L. REHAB -TAPER-RT. SHLD.	300.0					8.0	266.7			8.0	266.7	14.7	8.0	266.7	110.0	14.7	29.4					8.0	266.7	26.7				26.7	92.63	277.9	300
4126+25.00	4134+25.00	R.M.L. REHAB -LT. SHLD.	800.0					4.0	355.6			4.0	355.6	19.6	4.0	355.6	275.0	48.9	68.5					4.0	355.6	35.6				35.6	131.50	1052.0	800
4126+25.00	4134+25.00	R.M.L. REHAB -RT. SHLD.	800.0					10.0	888.9			10.0	888.9	48.9	10.0	888.9	110.0	48.9	97.8					10.0	888.9	88.9				88.9	84.25	674.0	800
4134+25.00	4136+25.00	R.M.L. REHAB -TAPER-LT. SHLD.	200.0					4.0	88.9			4.0	88.9	4.9	4.0	88.9	275.0	12.2	17.1					4.0	88.9	8.9				8.9	131.50	263.0	200
4134+25.00	4136+25.00	R.M.L. REHAB -TAPER-RT. SHLD.	200.0					8.0	177.8			8.0	177.8	9.8	8.0	177.8	110.0	9.8	19.6					8.0	177.8	17.8				17.8	92.63	185.3	200
4136+25.00	4145+56.10	R.M.L. REHAB -LT. SHLD.	931.1					4.0	413.8			4.0	413.8	22.8	4.0	413.8	275.0	56.9	79.7					4.0	413.8	41.4				41.4	131.50	1224.4	931
4136+25.00	4145+56.10	R.M.L. REHAB -RT. SHLD.	931.1					10.0	1034.6			10.0	1034.6	56.9	10.0	1034.6	110.0	56.9	113.8					10.0	1034.6	103.5				103.5	84.25	784.5	931
4145+56.10	4152+56.10	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4145+56.10	4152+56.10	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4154+42.18	4161+42.18	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4154+42.18	4161+42.18	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4161+42.18	4163+50.00	R.M.L. REHAB -LT. SHLD.	207.8					4.0	92.4			4.0	92.4	5.1	4.0	92.4	275.0	12.7	17.8					4.0	92.4	9.2				9.2	131.50	273.3	208
4161+42.18	4163+50.00	R.M.L. REHAB -RT. SHLD.	207.8					10.0	230.9			10.0	230.9	12.7	10.0	230.9	110.0	12.7	25.4					10.0	230.9	23.1				23.1	84.25	175.1	208
4163+50.00	4170+50.00	R.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0					4.0	311.1			4.0	311.1	17.1	4.0	311.1	275.0	42.8	59.9					4.0	311.1	31.1				31.1	131.50	920.5	700
4163+50.00	4170+50.00	R.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0					6.0	466.7			6.0	466.7	25.7	6.0	466.7	110.0	25.7	51.4					6.0	466.7	46.7				46.7	101.00	707.0	700
4170+50.00	4173+50.00	R.M.L. REHAB -TAPER-LT. SHLD.	300.0					4.0	133.3			4.0	133.3	7.3	4.0	133.3	275.0	18.3	25.6					4.0	133.3	13.3				13.3	131.50	394.5	300
4170+50.00	4173+50.00	R.M.L. REHAB -TAPER-RT. SHLD.	300.0					8.0	266.7			8.0	266.7	14.7	8.0	266.7	110.0	14.7	29.4					8.0	266.7	26.7				26.7	92.63	277.9	300
4173+50.00	4185+29.44	R.M.L. REHAB -LT. SHLD.	1179.4					4.0	524.2			4.0	524.2	28.8	4.0	524.2	275.0	72.1	100.9					4.0	524.2	52.4				52.4	131.50	1550.9	1179
4173+50.00	4185+29.44	R.M.L. REHAB -RT. SHLD.	1179.4					10.0	1310.4			10.0	1310.4	72.1	10.0	1310.4	110.0	72.1	144.2					10.0	1310.4	131.0				131.0	84.25	993.6	1179
TOTALS THIS SHEET:					**6384.4**	**134.2**	**2100.3**		**12299.0**		**5450.8**								**2012.7**				**184.0**							**1554.0**		**24419.1**	**26626.0**

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%
ACHM SURFACE COURSE (3/8") - MINERAL AGGREGATE = 94.3%, ASPHALT BINDER (PG 64-22) = 5.7%
CEMENT STABILIZED CRUSHED STONE BASE - AGGREGATE = 94.0%, CEMENT = 6.0%

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	199	374

(2) QUANTITIES

BASE AND SURFACING SHOULDERS - ALTERNATE NO. 2 (CONTINUED)

STATION	STATION	LOCATION	LENGTH	CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMP'D. DEPTH)				PORTLAND CEMENT CONCRETE PAVEMENT (12" U.T.)		PORTLAND CEMENT CONCRETE PAVEMENT (13" U.T.)		ACHM SURFACE COURSE (3/8")								ACHM SURFACE COURSE (1/2")				TACK COAT							AGGREGATE BASE COURSE		RUMBLE STRIPS
												LEVELING - 110 LBS. PER SQ. YD.			NORMAL				TOTAL	NORMAL			TOTAL	0.10 GAL. PER SQ. YD.			0.03 GAL. PER SQ. YD.			TOTAL	CLASS 1		PCCP
				AVG. WID.	PROCESSING	CEMENT	AGGREGATE	AVG. WID.		AVG. WID.		AVG. WID.			AVG. WID.					AVG. WID.				TOTAL WID.			TOTAL WID.						
			FEET	FEET	SQ. YD.	TON	TON	FEET	SQ.YD.	FEET	SQ.YD.	FEET	SQ.YD.	TON	FEET	SQ.YD.	POUND / SQ.YD.	TON	PG 64-22 TON	FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	FEET	SQ.YD.	GALLON	FEET	SQ.YD.	GALLON	GALLONS	TON / STATION	TON	LIN. FT.
CL MEDIAN I-40																																		
4185+29.44	4188+79.44	R.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	350.0					4.0	155.6			4.0	155.6	8.6	4.0	155.6	539.0	41.9	50.5								16.0	622.2	18.7	18.7	153.25	536.4	350
4185+29.44	4188+79.44	R.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	350.0					10.0	388.9			10.0	388.9	21.4	10.0	388.9	110.0	21.4	42.8								40.0	1555.6	46.7	46.7	84.25	294.9	350
4188+79.44	4202+06.11	R.M.L. REHAB - MAX SUPER ELEV. -LT. SHLD.	1326.7					4.0	589.6			4.0	589.6	32.4	4.0	589.6	803.0	236.7	269.1								16.0	2358.6	70.8	70.8	175.50	2328.4	1327
4188+79.44	4202+06.11	R.M.L. REHAB - MAX SUPER ELEV. -RT. SHLD.	1326.7					10.0	1474.1			10.0	1474.1	81.1	10.0	1474.1	110.0	81.1	162.2								40.0	5896.4	176.9	176.9	84.25	1117.7	1327
4202+06.11	4205+56.11	R.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	350.0					4.0	155.6			4.0	155.6	8.6	4.0	155.6	539.0	41.9	50.5								16.0	622.2	18.7	18.7	153.25	536.4	350
4202+06.11	4205+56.11	R.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	350.0					10.0	388.9			10.0	388.9	21.4	10.0	388.9	110.0	21.4	42.8								40.0	1555.6	46.7	46.7	84.25	294.9	350
4205+56.11	4211+62.00	R.M.L. REHAB -LT. SHLD.	605.9					4.0	269.3			4.0	269.3	14.8	4.0	269.3	275.0	37.0	51.8					4.0	269.3	26.9				26.9	131.50	796.8	606
4205+56.11	4211+62.00	R.M.L. REHAB -RT. SHLD.	605.9					10.0	673.2			10.0	673.2	37.0	10.0	673.2	110.0	37.0	74.0					10.0	673.2	67.3				67.3	84.25	510.5	606
4211+62.00	4218+62.00	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4211+62.00	4218+62.00	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4221+92.17	4228+92.17	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4221+92.17	4228+92.17	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4228+92.17	4256+10.40	R.M.L. REHAB -LT. SHLD.	2718.2					4.0	1208.1			4.0	1208.1	66.4	4.0	1208.1	275.0	166.1	232.5					4.0	1208.1	120.8				120.8	131.50	3574.4	2718
4228+92.17	4256+10.40	R.M.L. REHAB -RT. SHLD.	2718.2					10.0	3020.2			10.0	3020.2	166.1	10.0	3020.2	110.0	166.1	332.2					10.0	3020.2	302.0				302.0	84.25	2290.1	2718
4256+10.40	4258+72.90	R.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	262.5					4.0	116.7			4.0	116.7	6.4	4.0	116.7	213.1	12.4	18.8								16.0	466.7	14.0	14.0	126.50	332.1	263
4256+10.40	4258+72.90	R.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	262.5					10.0	291.7			10.0	291.7	16.0	10.0	291.7	369.9	53.9	69.9								40.0	1166.7	35.0	35.0	99.75	261.8	263
4261+96.60	4262+84.10	R.M.L. REHAB - SUPER ELEV. TRANS. -LT. SHLD.	87.5					4.0	38.9			4.0	38.9	2.1	4.0	38.9	130.6	2.5	4.6								16.0	155.6	4.7	4.7	119.75	104.8	88
4261+96.60	4262+84.10	R.M.L. REHAB - SUPER ELEV. TRANS. -RT. SHLD.	87.5					10.0	97.2			10.0	97.2	5.3	10.0	97.2	716.4	34.8	40.1								40.0	388.9	11.7	11.7	120.25	105.2	88
4262+84.10	4304+30.16	R.M.L. REHAB - MAX SUPER ELEV. -LT. SHLD.	4146.1					4.0	1842.7			4.0	1842.7	101.3	4.0	1842.7	110.0	101.3	202.6								16.0	7370.8	221.1	221.1	118.00	4892.4	4146
4262+84.10	4304+30.16	R.M.L. REHAB - MAX SUPER ELEV. -RT. SHLD.	4146.1					10.0	4606.8			10.0	4606.8	253.4	10.0	4606.8	803.0	1849.6	2103.0								40.0	18427.1	552.8	552.8	125.25	5193.0	4146
4304+30.16	4311+30.16	R.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -LT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	99.50	696.5	700
4304+30.16	4311+30.16	R.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -RT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4313+79.12	4317+09.10	R.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -LT. SHLD.	330.0	6.0	220.0	4.6	72.4			4.0	146.7				6.0	220.0	110.0	12.1	12.1								6.0	220.0	6.6	6.6	99.50	328.4	330
4313+79.12	4317+09.10	R.M.L. FULL DEPTH RECON. - MAX SUPER ELEV. -RT. SHLD.	330.0	8.0	293.3	6.2	96.5			8.0	293.3				8.0	293.3	110.0	16.1	16.1								8.0	293.3	8.8	8.8	53.75	177.4	330
4317+09.10	4320+59.10	R.M.L. FULL DEPTH RECON. - SUPER ELEV. TRANS.-LT. SHLD.	350.0	6.0	233.3	4.9	76.8			4.0	155.6				6.0	233.3	110.0	12.8	12.8								6.0 *	233.3	7.0	7.0	89.75	314.1	350
4317+09.10	4320+59.10	R.M.L. FULL DEPTH RECON. - SUPER ELEV. TRANS.-RT. SHLD.	350.0	8.0	311.1	6.5	102.4			8.0	311.1				8.0	311.1	110.0	17.1	17.1								8.0	311.1	9.3	9.3	53.75	188.1	350
4320+59.10	4320+79.12	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	20.0	6.0	13.3	0.3	4.4			4.0	8.9				6.0	13.3	110.0	0.7	0.7								6.0	13.3	0.4	0.4	80.00	16.0	20
4320+59.10	4320+79.12	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	20.0	8.0	17.8	0.4	5.9			8.0	17.8				8.0	17.8	110.0	1.0	1.0								8.0	17.8	0.5	0.5	53.75	10.8	20
4320+79.12	4327+82.41	R.M.L. REHAB -LT. SHLD.	703.3		-			4.0	312.6			4.0	312.6	17.2	4.0	312.6	275.0	43.0	60.2					4.0	312.6	31.3				31.3	131.50	924.8	703
4320+79.12	4327+82.41	R.M.L. REHAB -RT. SHLD.	703.3					10.0	781.4			10.0	781.4	43.0	10.0	781.4	110.0	43.0	86.0					10.0	781.4	78.1				78.1	84.25	592.5	703
4327+82.41	4334+82.41	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4327+82.41	4334+82.41	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4345+82.59	4352+82.59	R.M.L. FULL DEPTH RECONSTRUCTION -LT. SHLD.	700.0	6.0	466.7	9.8	153.5			4.0	311.1				6.0	466.7	110.0	25.7	25.7								6.0	466.7	14.0	14.0	80.00	560.0	700
4345+82.59	4352+82.59	R.M.L. FULL DEPTH RECONSTRUCTION -RT. SHLD.	700.0	8.0	622.2	13.1	204.7			8.0	622.2				8.0	622.2	110.0	34.2	34.2								8.0	622.2	18.7	18.7	53.75	376.3	700
4352+82.59	4415+25.00	R.M.L. REHAB -LT. SHLD.	6242.4					4.0	2774.4			4.0	2774.4	152.6	4.0	2774.4	275.0	381.5	534.1					4.0	2774.4	277.4				277.4	131.50	8208.8	6242
4352+82.59	4415+25.00	R.M.L. REHAB -RT. SHLD.	6242.4					10.0	6936.0			10.0	6936.0	381.5	10.0	6936.0	110.0	381.5	763.0					10.0	6936.0	693.6				693.6	84.25	5259.2	6242
4415+25.00	4417+25.00	R.M.L. REHAB -TAPER-LT. SHLD.	200.0					4.0	88.9			4.0	88.9	4.9	4.0	88.9	275.0	12.2	17.1					4.0	88.9	8.9				8.9	131.50	263.0	200
4415+25.00	4417+25.00	R.M.L. REHAB -TAPER-RT. SHLD.	200.0					8.0	177.8			8.0	177.8	9.8	8.0	177.8	110.0	9.8	19.6					8.0	177.8	17.8				17.8	92.63	185.3	200
4417+25.00	4442+10.00	R.M.L. REHAB -LT. SHLD.	2485.0					4.0	1104.4			4.0	1104.4	60.7	4.0	1104.4	275.0	151.9	212.6					4.0	1104.4	110.4				110.4	131.50	3267.8	2485
4417+25.00	4442+10.00	R.M.L. REHAB -RT. SHLD.	2485.0					10.0	2761.1			10.0	2761.1	151.9	10.0	2761.1	110.0	151.9	303.8					10.0	2761.1	276.1				276.1	84.25	2093.6	2485
4442+10.00	4449+10.00	R.M.L. REHAB -ACCEL. LANE-LT. SHLD.	700.0					4.0	311.1			4.0	311.1	17.1	4.0	311.1	275.0	42.8	59.9					4.0	311.1	31.1				31.1	131.50	920.5	700
4442+10.00	4449+10.00	R.M.L. REHAB -ACCEL. LANE-RT. SHLD.	700.0					6.0	466.7			6.0	466.7	25.7	6.0	466.7	110.0	25.7	51.4					6.0	466.7	46.7				46.7	101.00	707.0	700
4449+10.00	4452+10.00	R.M.L. REHAB -TAPER-LT. SHLD.	300.0					4.0	133.3			4.0	133.3	7.3	4.0	133.3	275.0	18.3	25.6					4.0	133.3	13.3				13.3	131.50	394.5	300
4449+10.00	4452+10.00	R.M.L. REHAB -TAPER-RT. SHLD.	300.0					8.0	266.7			8.0	266.7	14.7	8.0	266.7	110.0	14.7	29.4					8.0	266.7	26.7				26.7	92.63	277.9	300
4452+10.00	4467+64.00	R.M.L. REHAB -LT. SHLD.	1554.0					4.0	690.7			4.0	690.7	38.0	4.0	690.7	275.0	95.0	133.0					4.0	690.7	69.1				69.1	131.50	2043.5	1554
4452+10.00	4467+64.00	R.M.L. REHAB -RT. SHLD.	1554.0					10.0	1726.7			10.0	1726.7	95.0	10.0	1726.7	110.0	95.0	190.0					10.0	1726.7	172.7				172.7	84.25	1309.2	1554
4467+70.00	4491+00.00	R.M.L. REHAB -LT. SHLD.	2330.0					4.0	1035.6			4.0	1035.6	57.0	4.0	1035.6	275.0	142.4	199.4					4.0	1035.6	103.6				103.6	131.50	3064.0	2330
4467+70.00	4491+00.00	R.M.L. REHAB -RT. SHLD.	2330.0					10.0	2588.9			10.0	2588.9	142.4	10.0	2588.9	110.0	142.4	284.8					10.0	2588.9	258.9				258.9	84.25	1963.0	2330
4467+64.00	4472+64.00	R.M.L. REHAB TO EXIST.-LT. SHLD.	500.0																	4.0	222.2	385.0	42.8	4.0	222.2	22.2	4.0	222.2	6.7	28.9	65.75	328.8	500
4467+64.00	4472+64.00	R.M.L. REHAB TO EXIST.-RT. SHLD.	500.0																	10.0	555.6	385.0	107.0	10.0	555.6	55.6	10.0	555.6	16.7	72.3	42.25	211.3	500
4472+64.00	4474+64.00	R.M.L. REHAB TO EXIST.-LT. SHLD.	200.0																	4.0	88.9	220.0	9.8	4.0	88.9	8.9				8.9			200
4472+64.00	4474+64.00	R.M.L. REHAB TO EXIST.-RT. SHLD.	200.0																	10.0	222.2	220.0	24.4	10.0	222.2	22.2				22.2			200
TOTALS THIS SHEET:					6533.3	137.4	2149.4		37473.8		5599.9								7076.6				184.0								4278.9		61037.3	58524.0

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%
ACHM SURFACE COURSE (3/8") - MINERAL AGGREGATE = 94.3%, ASPHALT BINDER (PG 64-22) = 5.7%
CEMENT STABILIZED CRUSHED STONE BASE - AGGREGATE = 94.0%, CEMENT = 6.0%

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	200	374

(2) QUANTITIES

STAGE CONSTRUCTION TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES - ALTERNATE NO. 2

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")				TACK COAT 0.03 GAL. PER SQ. YD.		
			FEET	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	TOTAL WID. FEET	SQ.YD.	GALLON
STAGE 1 BEGIN & END OF JOB TEMP. MEDIAN CROSSOVERS																		
10+41.79	12+81.79	EB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	44.2
12+81.79	15+60.00	EB MEDIAN CROSSOVER	278.2	31.0	958.2	1320.0	632.4	25.5	788.2	330.0	130.1	23.0	711.0	220.0	78.2	110.5	3415.7	102.5
15+60.00	18+00.00	EB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	44.2
30+41.79	32+81.79	EB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	44.2
32+81.79	35+60.00	EB MEDIAN CROSSOVER	278.2	31.0	958.2	1320.0	632.4	25.5	788.2	330.0	130.1	23.0	711.0	220.0	78.2	110.5	3415.7	102.5
35+60.00	38+00.00	EB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	44.2
20+41.79	22+81.79	WB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	44.2
22+81.79	25+60.00	WB MEDIAN CROSSOVER	278.2	31.0	958.2	1320.0	632.4	25.5	788.2	330.0	130.1	23.0	711.0	220.0	78.2	110.5	3415.7	102.5
25+60.00	28+00.00	WB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	44.2
40+41.79	42+81.79	WB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	44.2
42+81.79	45+60.00	WB MEDIAN CROSSOVER	278.2	31.0	958.2	1320.0	632.4	25.5	788.2	330.0	130.1	23.0	711.0	220.0	78.2	110.5	3415.7	102.5
45+60.00	48+00.00	WB MEDIAN CROSSOVER-TAPER	240.0	15.5	413.3	1320.0	272.8	12.8	341.3	330.0	56.3	11.5	306.7	220.0	33.7	55.3	1474.7	44.2
STAGE 1 TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES																		
4038+00.00	4039+50.00	HWY. 1 RAMP SE-TEMP. RAMP- TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	27.7
4039+50.00	4041+00.00	HWY. 1 RAMP SE-TEMP. RAMP	150.0	31.0	516.7	1320.0	341.0	25.5	425.0	330.0	70.1	23.0	383.3	220.0	42.2	110.5	1841.7	55.3
4041+00.00	4042+50.00	HWY. 1 RAMP SE-TEMP. RAMP- TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	27.7
4074+50.00	4076+50.00	HWY. 1B RAMP SW-ACCEL. LANE TAPER	200.0	13.0	288.9	1320.0	190.7	11.0	244.4	330.0	40.3	10.0	222.2	220.0	24.4	47.0	1044.4	31.3
4076+50.00	4085+00.00	HWY. 1B RAMP SW-ACCEL. LANE	850.0	19.0	1794.4	1320.0	1184.3	17.0	1605.6	330.0	264.9	16.0	1511.1	220.0	166.2	71.0	6705.6	201.2
4081+50.00	4084+25.00	HWY. 1B RAMP SW- TEMP. RAMP A	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	101.3
4084+25.00	4085+00.00	HWY. 1B RAMP SW- TEMP. RAMP A-TAPER	75.0	15.5	129.2	1320.0	85.3	12.8	106.7	330.0	17.6	11.5	95.8	220.0	10.5	55.3	460.8	13.8
4085+00.00	4086+50.00	HWY. 1B RAMP SW- TEMP. RAMP B	150.0	31.0	516.7	1320.0	341.0	25.5	425.0	330.0	70.1	23.0	383.3	220.0	42.2	110.5	1841.7	55.3
4096+25.00	4096+75.00	HWY. 1B RAMP WS- TEMP. RAMP B	50.0	31.0	172.2	1320.0	113.7	25.5	141.7	330.0	23.4	23.0	127.8	220.0	14.1	110.5	613.9	18.4
4096+75.00	4097+25.00	HWY. 1B RAMP WS- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4096+00.00	4096+50.00	HWY. 1B RAMP WS-TEMP. RAMP A (STAGE 1D)-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4096+50.00	4096+75.00	HWY. 1B RAMP WS-TEMP. RAMP A (STAGE 1D)	25.0	31.0	86.1	1320.0	56.8	25.5	70.8	330.0	11.7	23.0	63.9	220.0	7.0	110.5	306.9	9.2
4096+75.00	4097+75.00	HWY. 1B RAMP WS-TEMP. RAMP A	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	36.8
4097+75.00	4098+25.00	HWY. 1B RAMP WS-TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4103+00.00	4104+00.00	HWY. 1B RAMP NW-TEMP. RAMP A-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
4104+00.00	4105+75.00	HWY. 1B RAMP NW-TEMP. RAMP A	175.0	31.0	602.8	1320.0	397.8	25.5	495.8	330.0	81.8	23.0	447.2	220.0	49.2	110.5	2148.6	64.5
4104+50.00	4105+25.00	HWY. 1B RAMP NW-TEMP. RAMP B-TAPER	75.0	15.5	129.2	1320.0	85.3	12.8	106.7	330.0	17.6	11.5	95.8	220.0	10.5	55.3	460.8	13.8
4105+25.00	4105+75.00	HWY. 1B RAMP NW-TEMP. RAMP B	50.0	31.0	172.2	1320.0	113.7	25.5	141.7	330.0	23.4	23.0	127.8	220.0	14.1	110.5	613.9	18.4
4117+50.00	4118+50.00	HWY. 1B RAMP WN-TEMP. RAMP B	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	36.8
4118+50.00	4119+75.00	HWY. 1B RAMP WN-TEMP. RAMP B-TAPER	125.0	15.5	215.3	1320.0	142.1	12.8	177.8	330.0	29.3	11.5	159.7	220.0	17.6	55.3	768.1	23.0
4120+00.00	4120+50.00	HWY. 1B RAMP WN-TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4120+50.00	4122+50.00	HWY. 1B RAMP WN-TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	73.7
4122+50.00	4123+50.00	HWY. 1B RAMP WN-TEMP. RAMP A-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
4126+75.00	4128+75.00	HWY. 284 WB ENTR.-ACCEL. LANE TAPER	200.0	13.0	288.9	1320.0	190.7	11.0	244.4	330.0	40.3	10.0	222.2	220.0	24.4	47.0	1044.4	31.3
4128+75.00	4137+75.00	HWY. 284 WB ENTR.-ACCEL. LANE	900.0	19.0	1900.0	1320.0	1254.0	17.0	1700.0	330.0	280.5	16.0	1600.0	220.0	176.0	71.0	7100.0	213.0
4133+75.00	4136+50.00	HWY. 284 WB ENTR.-TEMP. RAMP A	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	101.3
4136+50.00	4137+00.00	HWY. 284 WB ENTR.-TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4137+75.00	4139+75.00	HWY. 284 WB ENTR.-TEMP. RAMP B	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	73.7
4164+25.00	4165+00.00	HWY. 284 WB EXIT-TEMP. RAMP B	75.0	31.0	258.3	1320.0	170.5	25.5	212.5	330.0	35.1	23.0	191.7	220.0	21.1	110.5	920.8	27.6
4165+00.00	4166+00.00	HWY. 284 WB EXIT-TEMP. RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
4166+00.00	4168+00.00	HWY. 284 WB EXIT-TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	73.7
4168+00.00	4169+50.00	HWY. 284 WB EXIT-TEMP. RAMP A-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	27.7
4417+10.00	4419+10.00	HWY. 38 WB ENTR.-ACCEL. LANE TAPER	200.0	13.0	288.9	1320.0	190.7	11.0	244.4	330.0	40.3	10.0	222.2	220.0	24.4	47.0	1044.4	31.3
4419+10.00	4428+10.00	HWY. 38 WB ENTR.-ACCEL. LANE	900.0	19.0	1900.0	1320.0	1254.0	17.0	1700.0	330.0	280.5	16.0	1600.0	220.0	176.0	71.0	7100.0	213.0
4424+10.00	4426+85.00	HWY. 38 WB ENTR.-TEMP. RAMP A	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	101.3
4426+85.00	4427+35.00	HWY. 38 WB ENTR.-TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4428+10.00	4429+60.00	HWY. 38 WB ENTR.-TEMP. RAMP B	150.0	31.0	516.7	1320.0	341.0	25.5	425.0	330.0	70.1	23.0	383.3	220.0	42.2	110.5	1841.7	55.3
4452+25.00	4453+25.00	HWY. 38 WB EXIT-TEMP. RAMP B	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	36.8
4453+25.00	4454+50.00	HWY. 38 WB EXIT-TEMP. RAMP B-TAPER	125.0	15.5	215.3	1320.0	142.1	12.8	177.8	330.0	29.3	11.5	159.7	220.0	17.6	55.3	768.1	23.0
4455+00.00	4455+50.00	HWY. 38 WB EXIT-TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4455+50.00	4457+50.00	HWY. 38 WB EXIT-TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	73.7
4457+50.00	4458+50.00	HWY. 38 WB EXIT-TEMP. RAMP A-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
STAGE 2 TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES																		
4086+05.00	4090+50.00	HWY. 1B RAMP SW- TEMP. RAMP B	445.0	31.0	1532.8	1320.0	1011.6	25.5	1260.8	330.0	208.0	23.0	1137.2	220.0	125.1	110.5	5463.6	163.9
4090+50.00	4091+50.00	HWY. 1B RAMP SW- TEMP. RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
4095+50.00	4096+00.00	HWY. 1B RAMP WS- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4096+00.00	4097+50.00	HWY. 1B RAMP WS- TEMP. RAMP B	150.0	31.0	516.7	1320.0	341.0	25.5	425.0	330.0	70.1	23.0	383.3	220.0	42.2	110.5	1841.7	55.3
4105+75.00	4107+75.00	HWY. 1B RAMP NW- TEMP. RAMP B	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	73.7
4107+75.00	4108+25.00	HWY. 1B RAMP NW- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4112+00.00	4113+50.00	HWY. 1B RAMP WN- TEMP. RAMP B-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	27.7
4113+50.00	4117+50.00	HWY. 1B RAMP WN- TEMP. RAMP B	400.0	31.0	1377.8	1320.0	909.3	25.5	1133.3	330.0	187.0	23.0	1022.2	220.0	112.4	110.5	4911.1	147.3
4139+75.00	4142+50.00	HWY. 284 RAMP WB ENTR.- TEMP. RAMP B	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	101.3
4142+50.00	4144+00.00	HWY. 284 RAMP WB ENTR.- TEMP. RAMP B-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	27.7
4159+50.00	4161+00.00	HWY. 284 RAMP WB EXIT- TEMP. RAMP B-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	27.7
4161+00.00	4164+00.00	HWY. 284 RAMP WB EXIT- TEMP. RAMP B	300.0	31.0	1033.3	1320.0	682.0	25.5	850.0	330.0	140.3	23.0	766.7	220.0	84.3	110.5	3683.3	110.5
4429+60.00	4432+00.00	HWY. 38 RAMP WB ENTR.- TEMP. RAMP B	240.0	31.0	826.7	1320.0	545.6	25.5	680.0	330.0	112.2	23.0	613.3	220.0	67.5	110.5	2946.7	88.4
4432+00.00	4433+00.00	HWY. 38 RAMP WB ENTR.- TEMP. RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
4448+50.00	4449+50.00	HWY. 38 RAMP WB ENTR.- TEMP. RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
4449+50.00	4452+25.00	HWY. 38 RAMP WB ENTR.- TEMP. RAMP B	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	101.3
TOTALS THIS SHEET:							**23207.7**				**4846.3**				**2933.7**			**3790.9**

BASIS OF ESTIMATE:

ACHM BASE COURSE (1-1/2") - MINERAL AGGREGATE = 96.1%, ASPHALT BINDER (PG 76-22) = 3.9%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 95.7%, ASPHALT BINDER (PG 76-22) = 4.3%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

QUANTITIES

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STAGE CONSTRUCTION TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES - ALTERNATE NO. 2 (CONTINUED)

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")				TACK COAT 0.03 GAL. PER SQ. YD.		
			FEET	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON	TOTAL WID. FEET	SQ.YD.	GALLON
STAGE 3 TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES																		
4036+00.00	4037+50.00	HWY. 1 RAMP SE - TEMP. RAMP - TAPER	150.0	31.0	516.7	1320.0	341.0	25.5	425.0	330.0	70.1	23.0	383.3	220.0	42.2	110.5	1841.7	55.3
4037+50.00	4039+50.00	HWY. 1 RAMP SE - TEMP. RAMP	200.0	15.5	344.4	1320.0	227.3	12.8	284.4	330.0	46.9	11.5	255.6	220.0	28.1	55.3	1228.9	36.9
4039+50.00	4040+25.00	HWY. 1 RAMP SE - TEMP. RAMP - TAPER	75.0	31.0	258.3	1320.0	170.5	25.5	212.5	330.0	35.1	23.0	191.7	220.0	21.1	110.5	920.8	27.6
4040+25.00	4045+25.00	HWY. 1 RAMP SE - ACCEL. LANE	500.0	19.0	1055.6	1320.0	696.7	17.5	972.2	330.0	160.4	16.5	916.7	220.0	100.8	72.0	4000.0	120.0
4045+25.00	4047+25.00	HWY. 1 RAMP SE - ACCEL. LANE TAPER	200.0	13.0	288.9	1320.0	190.7	11.5	255.6	330.0	42.2	10.5	233.3	220.0	25.7	48.0	1066.7	32.0
4078+50.00	4080+00.00	HWY. 1B RAMP ES- TEMP. RAMP A-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	27.7
4080+00.00	4082+00.00	HWY. 1B RAMP ES- TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	73.7
4082+00.00	4082+50.00	HWY. 1B RAMP ES- TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4084+00.00	4085+25.00	HWY. 1B RAMP ES- TEMP. RAMP B-TAPER	125.0	15.5	215.3	1320.0	142.1	12.8	177.8	330.0	29.3	11.5	159.7	220.0	17.6	55.3	768.1	23.0
4085+25.00	4086+25.00	HWY. 1B RAMP ES- TEMP. RAMP B	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	36.8
4096+00.00	4096+50.00	HWY. 1B RAMP SE- TEMP. RAMP B	50.0	31.0	172.2	1320.0	113.7	25.5	141.7	330.0	23.4	23.0	127.8	220.0	14.1	110.5	613.9	18.4
4096+50.00	4097+00.00	HWY. 1B RAMP SE- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4096+50.00	4097+00.00	HWY. 1B RAMP SE- TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4097+00.00	4098+00.00	HWY. 1B RAMP SE- TEMP. RAMP A	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	36.8
4098+00.00	4098+50.00	HWY. 1B RAMP SE- TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4102+00.00	4102+25.00	HWY. 1B RAMP EN- TEMP. RAMP A-TAPER	25.0	15.5	43.1	1320.0	28.4	12.8	35.6	330.0	5.9	11.5	31.9	220.0	3.5	55.3	153.6	4.6
4102+25.00	4103+25.00	HWY. 1B RAMP EN- TEMP. RAMP A	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	36.8
4103+25.00	4103+50.00	HWY. 1B RAMP EN- TEMP. RAMP A-TAPER	25.0	15.5	43.1	1320.0	28.4	12.8	35.6	330.0	5.9	11.5	31.9	220.0	3.5	55.3	153.6	4.6
4102+75.00	4103+25.00	HWY. 1B RAMP EN- TEMP. RAMP B	50.0	31.0	172.2	1320.0	113.7	25.5	141.7	330.0	23.4	23.0	127.8	220.0	14.1	110.5	613.9	18.4
4103+25.00	4103+75.00	HWY. 1B RAMP EN- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4096+00.00	4096+25.00	HWY. 1B RAMP SW-TEMP. RAMP B (STAGE 3C)-TAPER	25.0	15.5	43.1	1320.0	28.4	12.8	35.6	330.0	5.9	11.5	31.9	220.0	3.5	55.3	153.6	4.6
4096+25.00	4096+50.00	HWY. 1B RAMP SW-TEMP. RAMP B (STAGE 3C)	25.0	31.0	86.1	1320.0	56.8	25.5	70.8	330.0	11.7	23.0	63.9	220.0	7.0	110.5	306.9	9.2
4102+50.00	4103+00.00	HWY. 1B RAMP EN-TEMP. RAMP B (STAGE 3C)	50.0	31.0	172.2	1320.0	113.7	25.5	141.7	330.0	23.4	23.0	127.8	220.0	14.1	110.5	613.9	18.4
4096+00.00	4096+50.00	HWY. 1B RAMP EN-TEMP. RAMP B (STAGE 3C)-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4118+25.00	4120+00.00	HWY. 1B RAMP NE-TEMP RAMP B	175.0	31.0	602.8	1320.0	397.8	25.5	495.8	330.0	81.8	23.0	447.2	220.0	49.2	110.5	2148.6	64.5
4119+00.00	4119+50.00	HWY. 1B RAMP NE-TEMP RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4119+50.00	4122+00.00	HWY. 1B RAMP NE-TEMP RAMP A	250.0	31.0	861.1	1320.0	568.3	25.5	708.3	330.0	116.9	23.0	638.9	220.0	70.3	110.5	3069.4	92.1
4120+00.00	4127+00.00	HWY. 1B RAMP NE-ACCEL. LANE	700.0	19.0	1477.8	1320.0	975.3	17.5	1361.1	330.0	224.6	16.5	1283.3	220.0	141.2	72.0	5600.0	168.0
4127+00.00	4129+00.00	HWY. 1B RAMP NE-ACCEL. LANE-TAPER	200.0	13.0	288.9	1320.0	190.7	11.5	255.6	330.0	42.2	10.5	233.3	220.0	25.7	48.0	1066.7	32.0
4131+50.00	4132+50.00	HWY. 284 RAMP EN- TEMP. RAMP A-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
4132+50.00	4134+50.00	HWY. 284 RAMP EN- TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	73.7
4134+50.00	4135+00.00	HWY. 284 RAMP EN- TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4135+50.00	4136+50.00	HWY. 284 EB EXIT- TEMP. RAMP A-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
4136+50.00	4137+50.00	HWY. 284 EB EXIT- TEMP. RAMP A	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	36.8
4162+25.00	4164+00.00	HWY. 284 EB ENTR.-TEMP RAMP B	175.0	31.0	602.8	1320.0	397.8	25.5	495.8	330.0	81.8	23.0	447.2	220.0	49.2	110.5	2148.6	64.5
4165+50.00	4166+00.00	HWY. 284 EB ENTR.-TEMP RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4166+00.00	4169+00.00	HWY. 284 EB ENTR.-TEMP RAMP A	300.0	31.0	1033.3	1320.0	682.0	25.5	850.0	330.0	140.3	23.0	766.7	220.0	84.3	110.5	3683.3	110.5
4164+00.00	4173+50.00	HWY. 284 EB ENTR.-ACCEL. LANE	950.0	19.0	2005.6	1320.0	1323.7	17.5	1847.2	330.0	304.8	16.5	1741.7	220.0	191.6	72.0	7600.0	228.0
4173+50.00	4175+50.00	HWY. 284 EB ENTR.-ACCEL. LANE-TAPER	200.0	13.0	288.9	1320.0	190.7	11.5	255.6	330.0	42.2	10.5	233.3	220.0	25.7	48.0	1066.7	32.0
4412+00.00	4413+50.00	HWY. 38 EB EXIT- TEMP. RAMP A-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	27.7
4413+50.00	4415+50.00	HWY. 38 EB EXIT- TEMP. RAMP A	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	73.7
4415+50.00	4416+00.00	HWY. 38 EB EXIT- TEMP. RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4416+00.00	4417+50.00	HWY. 38 EB EXIT- TEMP. RAMP B-TAPER	150.0	15.5	258.3	1320.0	170.5	12.8	213.3	330.0	35.2	11.5	191.7	220.0	21.1	55.3	921.7	27.7
4417+50.00	4418+50.00	HWY. 38 EB EXIT- TEMP. RAMP B	100.0	31.0	344.4	1320.0	227.3	25.5	283.3	330.0	46.7	23.0	255.6	220.0	28.1	110.5	1227.8	36.8
4441+75.00	4443+50.00	HWY. 38 EB ENTR.-TEMP RAMP B	175.0	31.0	602.8	1320.0	397.8	25.5	495.8	330.0	81.8	23.0	447.2	220.0	49.2	110.5	2148.6	64.5
4443+75.00	4444+25.00	HWY. 38 EB ENTR.-TEMP RAMP A-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4444+25.00	4447+25.00	HWY. 38 EB ENTR.-TEMP RAMP A	300.0	31.0	1033.3	1320.0	682.0	25.5	850.0	330.0	140.3	23.0	766.7	220.0	84.3	110.5	3683.3	110.5
4443+50.00	4451+75.00	HWY. 38 EB ENTR.-ACCEL. LANE	825.0	19.0	1741.7	1320.0	1149.5	17.5	1604.2	330.0	264.7	16.5	1512.5	220.0	166.4	72.0	6600.0	198.0
4451+75.00	4453+75.00	HWY. 38 EB ENTR.-ACCEL. LANE-TAPER	200.0	13.0	288.9	1320.0	190.7	11.5	255.6	330.0	42.2	10.5	233.3	220.0	25.7	48.0	1066.7	32.0
STAGE 4 TEMP. RAMP CONNECTIONS, CROSSOVERS & ACCEL. LANES																		
4086+25.00	4088+75.00	HWY. 1B RAMP ES- TEMP. RAMP B	250.0	31.0	861.1	1320.0	568.3	25.5	708.3	330.0	116.9	23.0	638.9	220.0	70.3	110.5	3069.4	92.1
4088+75.00	4089+50.00	HWY. 1B RAMP ES- TEMP. RAMP B-TAPER	75.0	15.5	129.2	1320.0	85.3	12.8	106.7	330.0	17.6	11.5	95.8	220.0	10.5	55.3	460.8	13.8
4095+10.00	4095+60.00	HWY. 1B RAMP SE- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4095+60.00	4097+60.00	HWY. 1B RAMP SE- TEMP. RAMP B	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	73.7
4103+75.00	4105+75.00	HWY. 1B RAMP EN- TEMP. RAMP B	200.0	31.0	688.9	1320.0	454.7	25.5	566.7	330.0	93.5	23.0	511.1	220.0	56.2	110.5	2455.6	73.7
4105+75.00	4106+25.00	HWY. 1B RAMP EN- TEMP. RAMP B-TAPER	50.0	15.5	86.1	1320.0	56.8	12.8	71.1	330.0	11.7	11.5	63.9	220.0	7.0	55.3	307.2	9.2
4111+50.00	4113+50.00	HWY. 1B RAMP NE- TEMP. RAMP B-TAPER	200.0	15.5	344.4	1320.0	227.3	12.8	284.4	330.0	46.9	11.5	255.6	220.0	28.1	55.3	1228.9	36.9
4113+50.00	4118+10.00	HWY. 1B RAMP NE- TEMP. RAMP B	460.0	31.0	1584.4	1320.0	1045.7	25.5	1303.3	330.0	215.0	23.0	1175.6	220.0	129.3	110.5	5647.8	169.4
4137+75.00	4140+00.00	HWY. 284 EB EXIT- TEMP. RAMP B	225.0	31.0	775.0	1320.0	511.5	25.5	637.5	330.0	105.2	23.0	575.0	220.0	63.3	110.5	2762.5	82.9
4140+00.00	4141+00.00	HWY. 284 EB EXIT- TEMP. RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
4158+50.00	4159+25.00	HWY. 284 EB ENTR.-TEMP RAMP B-TAPER	75.0	15.5	129.2	1320.0	85.3	12.8	106.7	330.0	17.6	11.5	95.8	220.0	10.5	55.3	460.8	13.8
4159+25.00	4162+10.00	HWY. 284 EB ENTR.-TEMP RAMP B	285.0	31.0	981.7	1320.0	647.9	25.5	807.5	330.0	133.2	23.0	728.3	220.0	80.1	110.5	3499.2	105.0
4418+50.00	4421+25.00	HWY. 38 EB EXIT- TEMP. RAMP B	275.0	31.0	947.2	1320.0	625.2	25.5	779.2	330.0	128.6	23.0	702.8	220.0	77.3	110.5	3376.4	101.3
4421+25.00	4422+50.00	HWY. 38 EB EXIT- TEMP. RAMP B-TAPER	125.0	15.5	215.3	1320.0	142.1	12.8	177.8	330.0	29.3	11.5	159.7	220.0	17.6	55.3	768.1	23.0
4437+50.00	4438+50.00	HWY. 284 EB ENTR.-TEMP RAMP B-TAPER	100.0	15.5	172.2	1320.0	113.7	12.8	142.2	330.0	23.5	11.5	127.8	220.0	14.1	55.3	614.4	18.4
4438+50.00	4441+75.00	HWY. 284 EB ENTR.-TEMP RAMP B	325.0	31.0	1119.4	1320.0	738.8	25.5	920.8	330.0	151.9	23.0	830.6	220.0	91.4	110.5	3990.3	119.7
TOTALS THIS SHEET:							19189.8				4062.1				2468.7			3156.3

BASIS OF ESTIMATE:

ACHM BASE COURSE (1-1/2") - MINERAL AGGREGATE = 96.1%, ASPHALT BINDER (PG 76-22) = 3.9%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 95.7%, ASPHALT BINDER (PG 76-22) = 4.3%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 2/8/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	202	374

(2) QUANTITIES

BASE AND SURFACING - GUARDRAIL WIDENING - ALTERNATE NO. 2

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 1)		AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
			FEET	TON / STATION	TON	TON / STATION	TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 64-22 TON
CL MEDIAN I-40											
4053+73.15	4058+01.90	LT. OF R.M.L.	428.8	(54.8)	(235.0)	54.0	231.6	7.5	357.3	220.0	39.3
4054+23.15	4058+01.90	RT. OF R.M.L.	378.8	(29.3)	(111.0)	48.8	184.9	5.5	231.5	220.0	25.5
4060+94.13	4064+72.88	LT. OF L.M.L.	378.8	(29.3)	(111.0)	48.8	184.9	5.5	231.5	220.0	25.5
4060+94.13	4065+22.88	RT. OF L.M.L.	428.8	(54.8)	(235.0)	54.0	231.6	7.5	357.3	220.0	39.3
4094+49.87	4098+78.62	LT. OF R.M.L.	428.8	(54.8)	(235.0)	54.0	231.6	7.5	357.3	220.0	39.3
4096+49.87	4098+78.62	RT. OF R.M.L.	228.8	(29.3)	(67.0)	48.8	111.7	5.5	139.8	220.0	15.4
4101+18.51	4104+97.26	LT. OF L.M.L.	378.8	(29.3)	(111.0)	48.8	184.9	5.5	231.5	220.0	25.5
4101+18.51	4105+47.26	RT. OF L.M.L.	428.8	(54.8)	(235.0)	54.0	231.6	7.5	357.3	220.0	39.3
4148+63.85	4152+92.60	LT. OF R.M.L.	428.8	(54.8)	(235.0)	54.0	231.6	7.5	357.3	220.0	39.3
4149+13.85	4152+92.60	RT. OF R.M.L.	378.8	(29.3)	(111.0)	48.8	184.9	5.5	231.5	220.0	25.5
4154+05.68	4157+84.43	LT. OF L.M.L.	378.8	(29.3)	(111.0)	48.8	184.9	5.5	231.5	220.0	25.5
4154+05.68	4158+34.43	RT. OF L.M.L.	428.8	(54.8)	(235.0)	54.0	231.6	7.5	357.3	220.0	39.3
4214+69.75	4218+98.50	LT. OF R.M.L.	428.8	(54.8)	(235.0)	54.0	231.6	7.5	357.3	220.0	39.3
4215+19.75	4218+98.50	RT. OF R.M.L.	378.8	(29.3)	(111.0)	48.8	184.9	5.5	231.5	220.0	25.5
4221+55.67	4225+34.42	LT. OF L.M.L.	378.8	(29.3)	(111.0)	48.8	184.9	5.5	231.5	220.0	25.5
4221+55.67	4225+84.42	RT. OF L.M.L.	428.8	(54.8)	(235.0)	54.0	231.6	7.5	357.3	220.0	39.3
4270+20.00	4275+35.00	LT. OF R.M.L.	515.0	(54.8)	(282.2)	54.0	278.1	7.5	429.2	220.0	47.2
4271+76.25	4274+05.00	RT. OF R.M.L.	228.8	(29.3)	(67.0)	48.8	111.7	5.5	139.8	220.0	15.4
4273+10.00	4278+15.00	RT. OF L.M.L.	505.0	(54.8)	(276.7)	54.0	272.7	7.5	420.8	220.0	46.3
4274+40.00	4276+58.75	LT. OF L.M.L.	218.8	(29.3)	(64.1)	48.8	106.8	5.5	133.7	220.0	14.7
4309+34.45	4311+44.45	RT. OF R.M.L.	210.0	(29.3)	(61.5)	48.8	102.5	5.5	128.3	220.0	14.1
4309+75.03	4311+85.03	LT. OF R.M.L.	210.0	(54.8)	(115.1)	54.0	113.4	7.5	175.0	220.0	19.3
4314+06.94	4318+35.69	RT. OF L.M.L.	428.8	(54.8)	(235.0)	54.0	231.6	7.5	357.3	220.0	39.3
4314+47.01	4318+25.76	LT. OF L.M.L.	378.8	(29.3)	(111.0)	48.8	184.9	5.5	231.5	220.0	25.5
4329+65.16	4335+18.91	RT. OF R.M.L.	553.8	(29.3)	(162.3)	48.8	270.3	5.5	338.4	220.0	37.2
4330+90.16	4335+18.91	LT. OF R.M.L.	428.8	(54.8)	(235.0)	54.0	231.6	7.5	357.3	220.0	39.3
4345+46.09	4349+24.84	RT. OF L.M.L.	378.8	(54.8)	(207.6)	54.0	204.6	7.5	315.7	220.0	34.7
4345+46.09	4349+74.84	LT. OF L.M.L.	428.8	(29.3)	(125.6)	48.8	209.3	5.5	262.0	220.0	28.8
4431+35.00	4436+50.00	LT. OF R.M.L.	515.0	(54.8)	(282.2)	54.0	278.1	7.5	429.2	220.0	47.2
4434+35.00	4439+50.00	RT. OF L.M.L.	515.0	(54.8)	(282.2)	54.0	278.1	7.5	429.2	220.0	47.2
TOTALS:					**✱(5231.5)**		**6132.5**				**964.5**

✱DENOTES A REDUCTION IN QUANTITY

BASIS OF ESTIMATE: ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 64-22) = 5.2%

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	203	374
				(2)	QUANTITIES			

BASE AND SURFACING - RAMP TRANSITIONS - ALTERNATE NO. 1 & ALTERNATE NO. 2

STATION	STATION	LOCATION	LENGTH	ACHM SURFACE COURSE (1/2")				TACK COAT						
								0.10 GAL. PER SQ. YD.			0.03 GAL. PER SQ. YD.			TOTAL GALLONS
				AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL WID.	SQ.YD.	GALLON	TOTAL WID.	SQ.YD.	GALLON	
			FEET	FEET			TON	FEET			FEET			
		HWY. 1B RAMP ES TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 1B RAMP ES TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 1B RAMP SE TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 1B RAMP SE TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	220.0	76.4	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 1B RAMP EN TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	220.0	76.4	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 1B RAMP EN TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 1B RAMP SW TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 1B RAMP SW TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 1B RAMP WS TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 1B RAMP WS TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	220.0	76.4	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 1B RAMP NW TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	357.5	124.1	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 1B RAMP NW TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 284 EB EXIT RAMP TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 284 EB EXIT RAMP TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 284 EB ENTR. RAMP TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 284 EB ENTR. RAMP TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 284 WB ENTR. RAMP TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 284 WB ENTR. RAMP TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 284 WB EXIT RAMP TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 284 WB EXIT RAMP TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		REST AREA ENTR. RAMP TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		REST AREA ENTR. RAMP TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		REST AREA EXIT RAMP TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		REST AREA EXIT RAMP TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 38 EB EXIT RAMP TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 38 EB EXIT RAMP TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 38 EB ENTR. RAMP TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 38 EB ENTR. RAMP TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 38 WB ENTR. RAMP TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
		HWY. 38 WB ENTR. RAMP TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 38 WB EXIT RAMP TRANS.-LANE WITH SHLDS	100.0	25.0	277.8	220.0	30.6	15.0	166.7	16.7				16.7
		HWY. 38 WB EXIT RAMP TRANS.-LANE WITH SHLDS	250.0	25.0	694.4	385.0	133.7	15.0	416.7	41.7	15.0	416.7	12.5	54.2
TOTALS:							2447.3							1134.4

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 64-22) = 5.2%

MEDIAN CROSSING - ALTERNATE NO. 1 & ALTERNATE NO. 2

STATION	LOCATION	WIDTH	LENGTH	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)
		FEET	FEET	SQ. YD.	TON	TON
4250+00	CL MEDIAN I-40	16	80	142.2	15.6	82.4
TOTALS:					15.6	82.4

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 64-22) = 5.2%

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

QUANTITIES

BASE AND SURFACING - SUMMARY

LOCATION	AGGREGATE BASE COURSE (CLASS 1)		AGGREGATE BASE COURSE (CLASS 7)		ACHM BASE COURSE (1-1/2") (PG 76-22)		ACHM BINDER COURSE (1") (PG 76-22)		ACHM SURFACE COURSE (1/2") (PG 64-22)		ACHM SURFACE COURSE (1/2") (PG 76-22)		ACHM SURFACE COURSE (3/8") (PG 64-22)		CEMENT STAB. CRUSHED STONE BASE CRS.			P.C.C. PAVEMENT (12" U.T.)	P.C.C. PAVEMENT (13" U.T.)	RUMBLE STRIPS		TACK COAT	
															PROCESSING	CEMENT	AGGREGATE			ASPHALT	PCCP		
	TON														SQ. YD.	TON		SQ. YD.		LIN. FT.		GALLON	
	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 1	ALT. 2	ALT. 2					ALT. 1	ALT. 2	ALT. 1	ALT. 2
CL MEDIAN I-40 - LANES ONLY	-	-	17567.6	-	129889.0	-	46840.0	-	-	-	52955.5	1372.8	-	34422.8	50240.3	1055.5	16529.0	183399.7	50240.3	-	-	48790.3	20714.2
CL MEDIAN I-40 - SHOULDERS	213689.9	172239.0	6997.1	-	77300.6	-	25690.1	-	-	-	27707.9	736.0	-	17601.9	26550.4	558.2	8734.5	99101.5	22707.2	171284.0	171284.0	28047.7	11439.8
MEDIAN CROSSING	-	-	82.4	82.4	-	-	-	-	15.6	15.6	-	-	-	-	-	-	-	-	-	-	-	-	-
GUARDRAIL WIDENING	(9770.6)	(5231.5)	8977.5	6132.5	-	-	-	-	964.5	964.5	-	-	-	-	-	-	-	-	-	-	-	-	-
RAMP TRANSITIONS	-	-	-	-	-	-	-	-	-	-	2447.3	2447.3	-	-	-	-	-	-	-	-	-	1134.4	1134.4
STAGE CONST. TEMP. RAMP CONNECTIONS	-	-	-	-	41375.2	42397.5	8908.4	8908.4	-	-	6105.4	5402.4	-	-	-	-	-	-	-	-	-	6947.2	6947.2
APPROACH GUTTERS	-	-	928.0	451.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RUBBLIZATION SOFT AREAS	-	-	5600.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS	**203919.3**	**167007.5**	**40152.6**	**6666.1**	**248564.8**	**42397.5**	**81438.5**	**8908.4**	**980.1**	**980.1**	**89216.1**	**9958.5**	**0.0**	**52024.7**	**76790.7**	**1613.7**	**25263.5**	**282501.2**	**72947.5**	**171284.0**	**171284.0**	**84919.6**	**40235.6**

BASIS OF ESTIMATE:
ACHM BASE COURSE (1 1/2") - MINERAL AGGREGATE = 96.1%, ASPHALT BINDER (PG 76-22) = 3.9%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 95.7%, ASPHALT BINDER (PG 76-22) = 4.3%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 64-22) = 5.2%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.8%, ASPHALT BINDER (PG 76-22) = 5.2%
ACHM SURFACE COURSE (3/8") - MINERAL AGGREGATE = 94.3%, ASPHALT BINDER (PG 64-22) = 5.7%
CEMENT STABILIZED CRUSHED STONE BASE - AGGREGATE = 94.0%, CEMENT = 6.0%
Nmax = 115 (PG 64-22)
Nmax = 205 (PG 76-22)

NOTE: THE BASE AND SURFACING - SUMMARY SHOWN ABOVE DOES NOT INCLUDE ANY HWY. 38 BASE AND SURFACING QUANTITIES SHOWN ON PAGE 209.

STATE OF ARKANSAS
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JAMES L. BARR
2/8/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		B80105	705	374

(2) QUANTITIES

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

2-28-13

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1-A	STAGE 1-B	STAGE 2	END OF JOB	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN.BARR. (REPAIR)
											RIGHT	LEFT				
			LIN. FT. - EACH					NO.	SQ. FT.	EACH	LIN. FT.				EACH	
W20-1	ROAD WORK 1500 FT.	48"x48"	1	1	1		1	1	16.0							
W20-1	ROAD WORK 1000 FT.	48"x48"	1	1	1		1	1	16.0							
W20-1	ROAD WORK 500 FT.	48"x48"	1	1	1		1	1	16.0							
W20-1	ROAD WORK AHEAD	48"x48"	5	5	5		5	5	80.0							
G20-2	END ROAD WORK	48"x24"	5	5	5		5	5	40.0							
W20-3 MODIFIED	SHOULDER CLOSED 1000 FT	48"x48"		4			4	4	64.0							
R11-2	ROAD CLOSED	48"x30"		1	2		2	2	20.0							
OM-3L	OBJECT MARKER	12"x36"	4	8			8	8	24.0							
OM-3R	OBJECT MARKER	12"x36"		8			8	8	24.0							
W1-6	LARGE ARROW	48"x24"			2		2	2	16.0							
	TRAFFIC DRUMS		48	87	104		104			104						
	TYPE III BARRICADE-RT. (16')				1		1	1			16					
	TYPE III BARRICADE-LT. (16')			1	1		1					16				
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		333	2965			3298						3298			
	RELOCATING PRECAST CONCRETE BARRIER			526			526							526		
	TEMPORARY IMPACT ATTENUATION BARRIER		1	1			1								1	
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)						1									1
TOTALS - HWY. 38									316.0	104	16	16	3298	526	1	1

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1-A	STAGE 1-B	STAGE 2	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	THERMOPLASTIC PAVEMENT MARKINGS			REFLECTORIZED PAINT PAVEMENT MARKINGS	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING	HIGH PERFORMANCE PAVEMENT MARKING	
							4"		8" WHITE	10"	4"		
							WHITE	YELLOW		WHITE	YELLOW	WHITE	YELLOW
	LIN. FT. - EACH				LIN. FT.	LIN. FT.	LIN. FT.						
CONSTRUCTION PAVEMENT MARKINGS	5545		8878		14423								
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS			3450			3450							
THERMOPLASTIC PAVEMENT MARKINGS WHITE (4")				6489			6489						
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (4")				5620				5620					
THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")				1190					1190				
REFLECTORIZED PAINT PAVEMENT MARKINGS WHITE (10")				450						450			
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")			726								726		
HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")				1600								1600	
HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4")				1600									1600
TOTALS - HWY. 38					14423	3450	6489	5620	1190	450	726	1600	1600

NOTE: I-40 IS A HIGH TRAFFIC VOLUME ROADS AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.
NOTE: HWY. 38 IS A LOW VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.

rbb0105.dgn 11/8/12 quantities

HWY. 38
QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	206	374

(2) QUANTITIES

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

2-28-13

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
202+00	203+00	HWY. 38	1	1
205+00	212+00	HWY. 38	7	7
215+00	221+00	HWY. 38	6	6
TOTALS - HWY. 38			14	14

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)
	EACH	
ENTIRE PROJECT HWY. 38	2	2
TOTALS - HWY. 38	2	2

REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS	JUNCTION BOXES
		EACH	EACH
200+68	18"X24' C.M. PIPE CULVERT ON RT.	1	
200+69	18"X36' C.M. PIPE CULVERT ON LT.	1	
201+20	24"X24' C.M. PIPE CULVERT ON LT.	1	
201+47	24"X48' C.M. PIPE CULVERT ON RT.	1	
202+14	24"X53' C.M. PIPE CULVERT ON LT.	1	
202+22	24"X98' C.M. PIPE CULVERT ON RT.	1	
202+73	JUNCTION BOX		1
202+95	36"X37' C.M. PIPE CULVERT ON RT.	1	
TOTALS - HWY. 38		7	1

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

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE A)
			LIN. FT.
203+19	203+89	HWY. 38 LT.	244
TOTAL - HWY. 38			244

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
211+27	RIGHT CORNER OF BRIDGE END	1
219+88	RIGHT HEADWALL OF BOX CULVERT	1
TOTAL - HWY. 38		2

NOTE: SHOWN FOR INFORMATION ONLY. BENCH MARKS SHALL BE FURNISHED AND PLACED BY STATE FORCES.

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	COMPACTED EMBANKMENT (SPECIAL)	** GEOGRID REINFORCEMENT	* SOIL STABILIZATION
			CU. YD.			SQ. YD.	TON
200+00	225+50	STAGE 1-HWY. 38 RT.	24378	846	47438	103371	
200+00	225+50	STAGE 2-HWY. 38 LT.	4384				
32+50	36+00	I-40 EASTBOUND RT./ BRIDGE END	3192				
44+00	47+50	I-40 WESTBOUND LT./ BRIDGE END	2955	3			
20+11	22+00	STAGE 1-RAMP 2 RT.	53				
20+11	22+00	STAGE 2-RAMP 2 LT.	16	3			
40+11	42+50	STAGE 1-RAMP 4 RT.	16				
40+11	42+50	STAGE 2-RAMP 4 LT.	20	10			
200+00	225+50	APPROACHES		570			
* ENTIRE	PROJECT	TO BE USED IF AND WHERE					100
		DIRECTED BY THE ENGINEER					
TOTALS - HWY. 38			35014	1432	47438	103371	100

* QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
** QUANTITY ESTIMATED FOR BIDDING PURPOSES ONLY, NOT FOR PAYMENT.
SEE SPECIAL PROVISION "GEOSYNTHETIC INTERNAL REINFORCED EMBANKMENT CONSTRUCTION".

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	POSTS	CONCRETE PIER PROTECTION	SIGN FOUNDATIONS	GUARDRAIL	SIGNS
			LIN. FT.	EACH	LIN. FT.	EACH	LIN. FT.	EACH
34+95		I-40 EAST RT.			34			
35+40		I-40 EAST LT.			48			
45+07		I-40 WEST LT.			34			
201+38		HWY. 38 LT.						1
201+50		HWY. 38 LT.		1				
202+14		HWY. 38 RT.						1
203+92	204+52	HWY. 38 LT.	227			1		
204+47	205+09	HWY. 38 RT.	211			3		
209+34	211+36	HWY. 38 LT.					200	
209+61	211+12	HWY. 38 LT.					150	
213+90	215+94	HWY. 38 LT.					200	
214+14	215+63	HWY. 38 LT.					150	
220+20	220+85	HWY. 38 LT.	223			1		
220+65	221+48	HWY. 38 RT.	262			2		
TOTALS - HWY. 38			923	1	116	7	700	2

SOIL LOG

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC		FEET				
202+00	35	3	11.90	90	41	22.70	5' RT.	0-5	39	24	A-6(15)	BROWN
225+00	35	3	39.50	90	41	21.10	5' LT.	0-5	36	20	A-6(13)	BROWN
225+00	35	3	34.50	90	41	21.20	25' LT.	0-5	33	16	A-6(10)	BROWN
225+00	35	3	34.50	90	41	21.20	25' LT.	0-5	33	16	A-6(12)	BROWN

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

rbb0105.dgn 11/8/12 quantities

HWY. 38
QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		880105	207	374

(2) QUANTITIES

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

2-28-13

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL: SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY EROSION CONTROL: TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)	DIVERSION DITCH (E-8)	SLOPE DRAIN (E-12): PIPE FOR SLOPE DRAINS	SLOPE DRAIN (E-12): DUMPED RIPRAP	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.		ACRE		M.GAL.	BAG	CU.YD.	LIN. FT.			CU.YD.				
200+00	225+50	HWY. 38 STAGE 1-RT.	2.66	5.32	2.66	271.3	2.66				154	30	100	3589	1070	72	4	222	222	359
200+00	225+50	HWY. 38 STAGE 2-LT.	1.51	3.02	1.51	154.0	1.51				88	24		1933						72
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.								5.00	5.00	102.0	100	20		800				222	222	252
TOTALS - HWY. 38			4.17	8.34	4.17	425.3	4.17	5.00	5.00	102.0	342	74	100	6322	1070	72	4	444	444	683

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING.
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING.
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

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

*QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

DUMPED RIPRAP AND FILTER BLANKET

STATION	LOCATION	DUMPED RIPRAP (GROUTED)	FILTER BLANKET
		CU. YDS.	SQ. YDS.
203+26	OUTLET OF PIPE CULVERT	14	28
* TO BE USED IF AND WHERE		10	20
DIRECTED BY THE ENGINEER			
TOTALS - HWY. 38		24	48

*NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS

NOTE: FILTER BLANKET SHALL BE GEOTEXTILE FABRIC (TYPE 5).

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
			LIN. FT.	EACH	
209+97.24	210+90.99	HWY. 38 LT. SIDE	75	1	1
208+94.76	211+13.51	HWY. 38 RT. SIDE	150	1	1
214+78.49	216+97.24	HWY. 38 LT. SIDE	150	1	1
215+01.01	215+94.76	HWY. 38 RT. SIDE	75	1	1
TOTALS - HWY. 38			450	4	4

ASPHALT CURB

STATION	STATION	LOCATION	ASPHALT CURB
			LIN. FT.
205+13	210+64	HWY. 38 LT.	550
205+83	210+86	HWY. 38 RT.	504
215+06	219+54	HWY. 38 LT.	447
215+28	220+03	HWY. 38 RT.	477
TOTAL - HWY. 38			1978

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
208+00	211+50	HWY. 38 RT. DITCH	350.0	311.1
TOTAL - HWY. 38				311.1

NOTE: AVERAGE WIDTH = 8'-0"

CONCRETE BASE

STATION	LOCATION	PORTLAND CEMENT CONCRETE BASE 9" U.T.")
		SQ. YD.
204+32	HWY. 38 LT.	196.6
204+85	HWY. 38 RT.	185.9
220+44	HWY. 38 LT.	204.4
220+92	HWY. 38 RT.	270.1
TOTAL - HWY. 38		857.0

CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND
			SQ.YD.
204+16	HWY. 38 RAMP 1	B	196
221+12	HWY. 38 RAMP 4	B	195
TOTAL - HWY. 38			391

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
* ENTIRE PROJECT TO BE USED IF AND			1000	10
WHERE DIRECTED BY THE ENGINEER				
TOTALS - HWY. 38			1000	10

* NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

HWY. 38
QUANTITIES

11/8/12 quantities

rbb0105.dgn

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		B80105	208	374

(2) QUANTITIES

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

2-28-13

STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	36"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	36"	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.-ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.			EACH			LIN. FT.			CU.YD.	POUND	CU.YD.	SQ.YD.	M.GAL	
203+07	CONSTRUCT R.C. PIPE CULVERT ON 28^ RT. FWD. SKEW W/FES LT. & RT.			62			2							34	0.43	FES-1, FES-2, PCC-1
220+24	EXTEND R.C. BOX CULVERT ON 30^ LT. FWD. SKEW 29' RT. W/3:1 WINGS RT.							6	4	29	22.28	2369	13	9	0.11	RCB-1, 2, 3, R-130X-1, R-100X-X1, W-X30, W-X303-1
12+66	REMOVE HDWLS. LT. & RT. AND ADD FES LT. & RT.		8			2								16	0.20	FES-1, FES-2, PCC-1
41+20	REMOVE HDWLS. LT. & RT. AND ADD FES LT. & RT.	8			2									10	0.13	FES-1, FES-2, PCC-1
TOTALS - HWY. 38		8	8	62	2	2	2				22.28	2369	13	69	0.87	

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.

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

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

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
			LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
205+11		HWY. 38 LT.	68.00	4	30.22	30.22	0.38
205+81		HWY. 38 RT.	21.00	4	9.33	9.33	0.12
217+50	219+65	HWY. 38 RT.	215.00	6	143.33	95.56	1.20
219+56		HWY. 38 LT.	80.00	4	35.56	35.56	0.45
220+05		HWY. 38 RT.	47.00	4	20.89	20.89	0.26
TOTALS - HWY. 38					239.33	191.56	2.41

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

STATION	LOCATION	WIDTH	LENGTH	TON
		FEET		
203+07	HWY. 38	9.67	29	27
TOTAL - HWY. 38				27

AVG. DEPTH = 14

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	25
ENGINEER	
TOTAL - HWY. 38	25

NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

APPROACH GUTTERS AND SLABS

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE C)	APPROACH SLABS TYPE SPECIAL 1	REINFORCING STEEL RDWY. (GR 60)	AGGREGATE BASE CRS. (CLASS 7)	DROP INLETS (TYPE N2)	CONCRETE SPILLWAY (TYPE A)	12" ZINC COATED (GALVANIZED) CORR. STEEL PIPE CULVERTS (16 GAUGE)	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"
			CU.YD.		POUND	TON	EACH		LIN. FT.	
210+66.89	211+03.39	LT. SIDE	14.79		807		1			46
210+78.15	211+14.65	LANES		60.50	7374	56.8				
210+89.41	211+25.91	RT. SIDE	14.79		807		1	1	80	
214+66.09	215+02.59	LT. SIDE	14.79		807		1			46
214+77.35	215+13.85	LANES		60.50	7374	56.8				
214+88.61	215+25.11	RT. SIDE	14.79		807		1	1	66	
TOTALS - HWY. 38			59.16	121.00	17976	113.6	4	2	146	92

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

rbb0105.dgn 1/2/13 quantities

HWY. 38
QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		880105	209	374

(2) QUANTITIES

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

2-28-13

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	50
DIRECTED BY THE ENGINEER	
TOTAL - HWY. 38	50

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

COLD MILLING PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT	SCARIFYING CONCRETE PAVEMENT
			FEET	SQ. YD.	SQ. YD.
196+88	201+00	HWY. 38	24	2134.78	
224+50	225+50	HWY. 38	24	266.67	
12+00	13+00	HWY. 38 RAMP 1	15		166.67
21+00	22+00	HWY. 38 RAMP 2	15		166.67
34+00	35+00	HWY. 38 RAMP 3	15		166.67
41+50	42+50	HWY. 38 RAMP 4	15		166.67
TOTALS - HWY. 38				2401.45	666.68

NOTE: AVERAGE MILLING DEPTH 1".

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS	
							18"	24"
			FEET	SQ. YD.	TON	TON	LIN. FT.	
199+45	LT.	HWY. 38 / DRIVE	40	184.4	20.3	75.3		
200+40	LT.	HWY. 38 / DRIVE	20	99.4	10.9	40.6	28	
200+68	RT.	HWY. 38 / DRIVE	16	30.4	3.3	38.6	32	
201+21	LT.	HWY. 38 / DRIVE	16	30.4	3.3	39.9		30
201+53	RT.	HWY. 38 / DRIVE	40	193.4	21.3	79.0		58
202+17	LT.	HWY. 38 / DRIVE	40	181.9	20.0	74.3		58
202+83	RT.	HWY. 38 / DRIVE	36	164.5	18.1	67.2		56
224+53	RT.	HWY. 38 / DRIVE	38	64.6	7.1	80.5	52	
224+86	LT.	HWY. 38 / DRIVE	40	67.7	7.4	98.0		
* HWY. 38- TEMPORARY DRIVES						300.0		
TOTALS - HWY. 38				1016.7	111.7	893.4	112	202

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
* QUANTITY ESTIMATED
SEE SECTION 104.03 OF THE STD. SPECS.
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")			
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22
			FEET			FEET				FEET			TON	FEET			TON	FEET			TON
196+88	200+00	HWY. 38 OVERLAY	312.0			VAR.	1758.9	0.10	175.9									VAR.	1758.9	220.0	193.5
200+00	201+00	HWY. 38 TRANSITION	100.0	165.00	165.0	24.0	266.7	0.10	26.7									57.0	633.3	220.0	69.7
201+00	205+30	HWY. 38	430.0	165.00	709.5	24.0	1146.7	0.03	34.4									58.0	2771.1	220.0	304.8
205+30	205+45	HWY. 38 MOT WIDENING	15.0	152.50	22.9	41.5	69.2	0.03	2.1	7.5	12.5	550.0	3.4	5.0	8.3	330.0	1.4	63.1	105.2	220.0	11.6
201+00	206+50	HWY. 38 LEVELING	550.0			24.0	1466.7	0.10	146.7											VAR.	242.0
205+45	206+50	HWY. 38 MOT WIDENING	105.0	154.00	161.7	41.5	484.2	0.03	14.5	7.5	87.5	550.0	24.1	5.0	58.3	330.0	9.6	61.6	718.7	220.0	79.1
206+50	207+50	HWY. 38 MOT WIDENING	100.0	278.75	278.8	85.3	947.8	0.03	28.4	28.8	320.0	550.0	88.0	28.5	316.7	330.0	52.3	70.5	783.3	220.0	86.2
207+50	210+78	HWY. 38	328.0	317.50	1041.4	67.5	2460.0	0.03	73.8	22.8	830.9	550.0	228.5	22.5	820.0	330.0	135.3	57.8	2106.5	220.0	231.7
215+14	219+00	HWY. 38	386.0	317.50	1225.6	67.5	2895.0	0.03	86.9	22.8	977.9	550.0	268.9	22.5	965.0	330.0	159.2	57.8	2479.0	220.0	272.7
219+00	220+50	HWY. 38	150.0	159.75	239.6	42.0	700.0	0.03	21.0	6.0	100.0	550.0	27.5	6.0	100.0	330.0	16.5	40.8	680.0	220.0	74.8
220+50	225+00	HWY. 38	450.0	165.00	742.5	24.0	1200.0	0.03	36.0									34.0	1700.0	220.0	187.0
219+00	225+00	HWY. 38 LEVELING	600.0			24.0	1600.0	0.10	160.0											VAR.	620.0
225+00	226+00	HWY. 38 TRANSITION	100.0	117.50	117.5	23.0	255.6	0.10	25.6									28.0	311.1	220.0	34.2
12+00	13+00	RAMP 1 TRANSITION	100.0			35.0	388.9	0.10	38.9									35.0	388.9	220.0	42.8
13+00	13+89	RAMP 1	89.0			VAR.	955.4	0.03	28.7									VAR.	955.4	220.0	105.1
13+00	13+89	RAMP 1 LEVELING	89.0			VAR.	955.4	0.10	95.5											VAR.	40.7
20+11	21+00	RAMP 2	89.0	VAR.	107.7	VAR.	876.5	0.03	26.3	VAR.	238.6	550.0	65.6	VAR.	238.6	330.0	39.4	VAR.	876.5	220.0	96.4
20+11	21+00	RAMP 2 LEVELING	89.0			VAR.	876.5	0.10	87.7											VAR.	38.2
21+00	22+00	RAMP 2 TRANSITION	100.0			30.7	341.1	0.10	34.1									30.7	341.1	220.0	37.5
34+00	35+00	RAMP 3 TRANSITION	100.0			29.0	322.2	0.10	32.2									29.0	322.2	220.0	35.4
35+00	36+15	RAMP 3	115.0			VAR.	1084.7	0.03	32.5									VAR.	1084.7	220.0	119.3
35+00	36+15	RAMP 3 LEVELING	115.0			VAR.	1084.7	0.10	108.5											VAR.	107.4
40+11	41+50	RAMP 4	139.0	VAR.	113.8	VAR.	1124.9	0.03	33.7	VAR.	384.1	550.0	105.6	VAR.	384.1	330.0	63.4	VAR.	1124.9	220.0	123.7
40+11	41+50	RAMP 4 LEVELING	139.0			VAR.	1124.9	0.10	112.5											VAR.	44.8
41+50	42+50	RAMP 4 TRANSITION	100.0			25.0	277.8	0.10	27.8									25.0	277.8	220.0	30.6
		ADDITIONAL FOR GUARDRAIL	624.0	57.00	355.7													5.5	381.3	220.0	41.9
		ADDITIONAL FOR SUPERELEVATION			234.9																
TOTALS - HWY. 38					5516.6		24663.8		1490.4		2951.5		811.6		2891.0		477.1		19799.9		3271.1

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.7% MIN. AGGR.....4.3% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.1% MIN. AGGR.....3.9% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

11/8/12 quantities

rbb0105.dgn

HWY. 38
QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	210	374
				① 07233		QUANTITIES		52473

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. BB0105

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	205	801	SP & 802	802	803	SS & 804	SS & 804	SP & 805	807	807	808	812	816	SP JOB BB0105	SP JOB BB0105
				ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	CLASS S CONCRETE-BRIDGE	CLASS S(AE) CONCRETE-BRIDGE	CLASS 1 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL-BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	① STEEL SHELL PILING (18" DIAMETER)	STRUCTURAL STEEL IN BEAM SPANS (M 270, GRADE 50)	② PAINTING STRUCTURAL STEEL	ELASTOMERIC BEARINGS	BRIDGE NAME PLATE (TYPE D)	CONCRETE RIPRAP	SILICONE JOINT SEALANT	SHORING (SITE NO. 1)
				UNIT	LUMP SUM	CU. YD.	CU. YD.	CU. YD.	GAL.	LB.	LB.	LIN. FT.	LB.	TON	CU. IN.	EACH	CU. YD.	LIN. FT.	LUMP SUM
07233	X771	Highway 38	BENT NO. 1			14	34.32		0.3	4,309	475	375	710		1,856.0		106		
			BENT NO. 2			192	114.84			17,920		1,800			2,340.0				
			BENT NO. 3			149	114.33			19,372		2,400			2,340.0				
			BENT NO. 4			216	115.15			17,920		1,800			2,340.0				
			BENT NO. 5			14	34.56		0.3	4,309	475	375	710		1,856.0		132		
			360'-0" CONT. COMP. W-BEAM UNIT					397.20	29.7		99,530		418,740	210		1		81	
			SITE NO. 1 (STA. 212+96)																
			TOTALS FOR JOB NO. BB0105		1	585	413.20	397.20	30.3	63,830	100,480	6,750	420,160	210	10,732.0	1	238	81	1

① STEEL SHELL PILES SHALL CONFORM TO ASTM A252, GRADE 3, Fy = 45 ksi.

ONLY CONICAL OR VANED PILE TIPS SHALL BE PERMITTED FOR STEEL SHELL PILES IN BENTS 1 AND 5 OF ALL BRIDGES. FLAT PILE TIPS MAY BE USED AT INTERIOR BENTS.

② PAINT SHALL CONFORM TO FEDERAL STANDARD 595B, COLOR CHIP NO. 36270, GRAY.

AILEEN SCHUBEL
DESIGN SECTION SUPERVISOR

STATE OF ARKANSAS
Carl J. Fuselier
REGISTERED PROFESSIONAL ENGINEER
No. 7510
9/26/12
CARL J. FUSELIER

BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
FORREST CITY - EAST (F)
ST. FRANCIS COUNTY

ROUTE 40 SEC. 51
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 9-14-11 FILENAME: bbb0105_q1.dgn
CHECKED BY: KWY DATE: 1/9/13 SCALE: NONE
DESIGNED BY: DATE:

BRIDGE NO. 07233 DRAWING NO. 52473

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	ALTERNATE NO. 1 ASPHALT QUANTITIES			ALTERNATE NO. 2 CONCRETE QUANTITIES			UNIT
		9050	NHPP-40-5 (153)240	TOTAL	9050	NHPP-40-5 (153)240	TOTAL	
201	CLEARING		14	14		14	14	STATION
201	GRUBBING		14	14		14	14	STATION
202	REMOVAL AND DISPOSAL OF APPROACH GUTTERS		32	32		32	32	EACH
202	REMOVAL AND DISPOSAL OF CURB		923	923		923	923	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE PIER PROTECTION		116	116		116	116	LIN. FT.
202	REMOVAL AND DISPOSAL OF FENCE		67399	67399		67399	67399	LIN. FT.
202	REMOVAL AND DISPOSAL OF POSTS		1	1		1	1	EACH
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS		7	7		7	7	EACH
SP	REMOVAL AND DISPOSAL OF OVERHEAD SIGN STRUCTURE		2	2		2	2	EACH
202	REMOVAL AND DISPOSAL OF JUNCTION BOXES		1	1		1	1	EACH
SP	REMOVAL AND DISPOSAL OF GUARDRAIL		7300	7300		7300	7300	LIN. FT.
202	REMOVAL AND DISPOSAL OF SIGNS		2	2		2	2	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS		7	7		7	7	EACH
SP	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIERS		8	8		8	8	EACH
SP & 202	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT		46890	46890		46890	46890	SQ. YD.
SP	REMOVAL OF RUMBLE STRIPS		42227	42227		42227	42227	LIN. FT.
SP & 210	SOIL STABILIZATION		3550	3550		3550	3550	TON
SP & 210	COMPACTED EMBANKMENT (SPECIAL)		47438	47438		47438	47438	CU. YD.
210	COMPACTED EMBANKMENT		18932	18932		18932	18932	CU. YD.
210	UNCLASSIFIED EXCAVATION		75041	75041		72374	72374	CU. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 1)	2920	203919	206839	2920	167008	169928	TON
SS & 303	AGGREGATE BASE COURSE (CLASS 7)		46676	46676		13190	13190	TON
308	AGGREGATE IN CEMENT STABILIZED CRUSHED STONE BASE COURSE					25264	25264	TON
308	CEMENT IN CEMENT STABILIZED CRUSHED STONE BASE COURSE					1614	1614	TON
308	PROCESSING CEMENT STABILIZED CRUSHED STONE BASE COURSE					76791	76791	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (9" UNIFORM THICKNESS)		857	857		857	857	SQ. YD.
401	TACK COAT		86810	86810		42126	42126	GAL.
SP, SS & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1½")		239650	239650		41524	41524	TON
SP, SS & 405	ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1½")		9726	9726		1685	1685	TON
SP, SS & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")		78394	78394		8982	8982	TON
SP, SS & 406	ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1")		3522	3522		404	404	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		88842	88842		13706	13706	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")		57	57		57	57	TON
SP, SS & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")		4816	4816		695	695	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (3/8")					49060	49060	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (3/8")					2965	2965	TON
SP	SCARIFYING CONCRETE PAVEMENT		3667	3667		3667	3667	SQ. YD.
412	COLD MILLING ASPHALT PAVEMENT		8001	8001		8001	8001	SQ. YD.
SP, SS & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC		200	200		200	200	TON
SP, SS & 415	ACHM PATCHING OF EXISTING ROADWAY		250	250		250	250	TON
SP	ASPHALT CURB		1978	1978		1978	1978	LIN. FT.
SS & 501	PORTLAND CEMENT CONCRETE PAVEMENT (12" UNIFORM THICKNESS)		525	525		282501	282501	SQ. YD.
SS & 501	PORTLAND CEMENT CONCRETE PAVEMENT (13" UNIFORM THICKNESS)		50	50		72948	72948	SQ. YD.
504	APPROACH SLABS (TYPE SPECIAL 1)		121.00	121.00		121.00	121.00	CU. YD.
504	APPROACH GUTTERS (TYPE PT)		534.56	534.56		534.56	534.56	CU. YD.
504	APPROACH GUTTERS (TYPE C)		59.16	59.16		59.16	59.16	CU. YD.
506	PORTLAND CEMENT CONCRETE CORRUGATIONS		575	575		575	575	SQ. YD.
SS & 507	PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (10" UNIFORM THICKNESS)		6000	6000		6000	6000	SQ. YD.
507	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT FOR PATCHING		6000	6000		6000	6000	SQ. YD.
513	REMOVAL OF EXISTING ASPHALT OVERLAY		354828	354828		354828	354828	SQ. YD.
513	RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT		183267	183267				SQ. YD.
601	MOBILIZATION		1.00	1.00		1.00	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE		1	1		1	1	EACH
SP & 603	TRAFFIC CONTROL SUPERVISOR		1.00	1.00		1.00	1.00	LUMP SUM
603	18" TEMPORARY CULVERT		1220	1220		1220	1220	LIN. FT.
SP, SS & 603	MAINTENANCE OF TRAFFIC		1.00	1.00		1.00	1.00	LUMP SUM
SP, SS & 604	ADVANCE WARNING ARROW PANEL		600	600		600	600	DAY
SP, SS & 604	PORTABLE CHANGEABLE MESSAGE SIGN		120	120		120	120	WEEK
SP	PORTABLE CAMERA ASSEMBLY		12	12		12	12	EACH
SS & 604	BARRICADES		592	592		592	592	LIN. FT.
SS & 604	CONSTRUCTION PAVEMENT MARKINGS		639543	639543		236343	236343	LIN. FT.
SS & 604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		53085	53085		53085	53085	LIN. FT.
SS & 604	RELOCATING PRECAST CONCRETE BARRIER		48026	48026		48026	48026	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		49825	49825		453025	453025	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		239970	239970		44130	44130	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS		60975	60975		60975	60975	LIN. FT.
SS & 604	TRAFFIC DRUMS		2035	2035		2035	2035	EACH
SS & 604	SIGNS		2745	2745		2745	2745	SQ. FT.
SS & 604	VERTICAL PANELS		239	239		239	239	EACH
SP & 605	CONCRETE DITCH PAVING (TYPE B)	14966	239	15205	14966	239	15205	SQ. YD.
SP, SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		100	100		100	100	LIN. FT.
SP, SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		8	8		8	8	LIN. FT.
SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		62	62		62	62	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	2		2	2	EACH
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	2		2	2	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	2		2	2	EACH
SP, SS & 606	18" SIDE DRAINS		112	112		112	112	LIN. FT.
SP, SS & 606	24" SIDE DRAINS		202	202		202	202	LIN. FT.
606	12" ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)		1046	1046		1046	1046	LIN. FT.
606	SELECTED PIPE BEDDING		25	25		25	25	CU. YD.
609	DROP INLETS (TYPE N1)		9	9		9	9	EACH
609	DROP INLETS (TYPE N2)		4	4		4	4	EACH
611	UNDERDRAIN COVER		65551	65551				LIN. FT.
611	4" PIPE UNDERDRAINS		83051	83051		1000	1000	LIN. FT.
611	UNDERDRAIN VIDEO INSPECTION		82051	82051				LIN. FT.
611	UNDERDRAIN OUTLET PROTECTORS		285	285		10	10	EACH
614	CONCRETE SPILLWAY (TYPE A)		11	11		11	11	EACH
615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)		27	27		27	27	TON
SS & 617	GUARDRAIL (TYPE A)		11775	11775		11775	11775	LIN. FT.
SS & 617	TERMINAL ANCHOR POSTS (TYPE 1)		12	12		12	12	EACH
SS & 617	GUARDRAIL TERMINAL (TYPE 2)		42	42		42	42	EACH
SS & 617	THRIE BEAM GUARDRAIL TERMINAL		30	30		30	30	EACH
SP & 619	WIRE FENCE (TYPE A)		67643	67643		67643	67643	LIN. FT.
* 619	12' ALUMINUM GATES - ALTERNATE NO. 1		11	11		11	11	EACH
* 619	12' STEEL GATES - ALTERNATE NO. 2		11	11		11	11	EACH
620	LIME		12	12		12	12	TON
620	MULCH COVER		12.67	12.67		12.67	12.67	ACRE
620	SEEDING		6.17	6.17		6.17	6.17	ACRE
SS & 620	WATER		765.2	765.2		765.2	765.2	M. GAL.
621	ROCK DITCH CHECKS		74	74		74	74	CU. YD.
621	DROP INLET SILT FENCE		1304	1304		1304	1304	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL		933	933		933	933	CU. YD.
621	SILT FENCE		27322	27322		27322	27322	LIN. FT.
621	SAND BAG DITCH CHECKS		342	342		342	342	BAG
621	DIVERSION DITCH		1070	1070		1070	1070	LIN. FT.
621	PIPE FOR SLOPE DRAINS		72	72		72	72	LIN. FT.
621	SEDIMENT BASIN		444	444		444	444	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN		444	444		444	444	CU. YD.
621	TEMPORARY SEEDING		6.50	6.50		6.50	6.50	ACRE
623	SECOND SEEDING APPLICATION		6.17	6.17		6.17	6.17	ACRE
624	SOLID SODDING		261	261		261	261	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)		311	311		311	311	SQ. YD.

* DENOTES ALTERNATE BID ITEMS

SUMMARY OF QUANTITIES (1 OF 2)

ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 4/9/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
4/9/13			

2 SUMMARY OF QUANTITIES

FEDERAL DISTRICT	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.	BB005	211	374

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SUMMARY OF QUANTITIES - CONTINUED

ITEM NUMBER	ITEM	ALTERNATE NO. 1 ASPHALT QUANTITIES			ALTERNATE NO. 2 CONCRETE QUANTITIES			UNIT
		9050	NHPP-40-5 (153)240	TOTAL	9050	NHPP-40-5 (153)240	TOTAL	
632	CONCRETE ISLAND		391	391		391	391	SQ. YD.
SP & 635	ROADWAY CONSTRUCTION CONTROL		1.00	1.00		1.00	1.00	LUMP SUM
637	MAILBOXES		2	2		2	2	EACH
637	MAILBOX SUPPORTS (SINGLE)		2	2		2	2	EACH
642	RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS					171284	171284	LIN. FT.
642	RUMBLE STRIPS IN ASPHALT SHOULDERS		171284	171284				LIN. FT.
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")		450	450		450	450	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4") - ALT. NO. 1		104802	104802		94494	94494	LIN. FT.
SP	HIGH PERFORMANCE MARKING TAPE WHITE (4") - ALTERNATE NO. 2		104802	104802		94494	94494	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4") - ALT. NO. 1		97859	97859		97859	97859	LIN. FT.
SP	HIGH PERFORMANCE MARKING TAPE YELLOW (4") - ALTERNATE NO. 2		97859	97859		97859	97859	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4") - ALT. NO. 1		1308	1308		11616	11616	LIN. FT.
SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4") - ALTERNATE NO. 2		1308	1308		11616	11616	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (8") - ALT. NO. 1		10581	10581		10581	10581	LIN. FT.
SP	HIGH PERFORMANCE MARKING TAPE WHITE (8") - ALTERNATE NO. 2		10581	10581		10581	10581	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING YELLOW (4") - ALT. NO. 1		726	726		726	726	LIN. FT.
SP	HIGH PERFORMANCE CONTRAST MARKING TAPE YELLOW (4") - ALTERNATE NO. 2		726	726		726	726	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")		6489	6489		6489	6489	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")		5620	5620		5620	5620	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")		1190	1190		1190	1190	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)		2822	2822		2822	2822	LIN. FT.
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-040-68-01)		1	1		1	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-040-68-02)		1	1		1	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-040-68-04)		1	1		1	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-040-68-05)		1	1		1	1	EACH
SS & 725	GUIDE SIGN - ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)		4413	4413		4413	4413	SQ. FT.
SS & 725	GUIDE SIGN - OVERHEAD MOUNTED (DEMOUNTABLE LEGEND)		1270	1270		1270	1270	SQ. FT.
SS & 726	STANDARD SIGN		825	825		825	825	SQ. FT.
SS & 727	EXIT NUMBER PANEL (TYPE A)		214	214		214	214	SQ. FT.
SS & 727	EXIT NUMBER PANEL (TYPE B)		158	158		158	158	SQ. FT.
SS & 727	EXIT NUMBER PANEL (TYPE C)		70	70		70	70	SQ. FT.
730	BREAKAWAY SIGN SUPPORT (TYPE G-1)		1007	1007		1007	1007	POUND
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)		28111	28111		28111	28111	POUND
730	BREAKAWAY SIGN SUPPORT (TYPE G-3)		5651	5651		5651	5651	POUND
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY		13	13		13	13	CU. YD.
802	CLASS S CONCRETE - ROADWAY		22.28	22.28		161.08	161.08	CU. YD.
SS & 804	REINFORCING STEEL - ROADWAY (GRADE 60)		70121	70121		70121	70121	LB.
816	DUMPED RIPRAP		4	4		4	4	CU. YD.
816	DUMPED RIPRAP (GROUTED)		24	24		24	24	CU. YD.
816	FILTER BLANKET		48	48		48	48	SQ. YD.
SP	ACHM PATCHING OF EXISTING SHOULDERS		200	200		200	200	TON
SP	MOBILE SPEED NOTIFICATION SYSTEM		2	2		2	2	EACH
SP	MODULAR GLARE SHIELD		600	600		600	600	LIN. FT.
SP	MOTORIST ASSISTANCE PATROL		1.00	1.00		1.00	1.00	LUMP SUM
SP	PORTABLE CONSTRUCTION LIGHTING		4212	4212		4212	4212	DAY
SP	TEMPORARY IMPACT ATTENUATION BARRIER		1	1		1	1	EACH
SP	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		1	1		1	1	EACH
SP	TEMPORARY RELOCATION OF EXISTING SIGNS		12	12		12	12	EACH
SP	WIRE ROPE SAFETY FENCE	34585		34585	34585		34585	LIN. FT.
SP	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS	1.00		1.00	1.00		1.00	LUMP SUM
SP	WRECKER SERVICE		1.00	1.00		1.00	1.00	LUMP SUM

* DENOTES ALTERNATE BID ITEMS

SUMMARY OF QUANTITIES - STRUCTURES OVER 20' SPAN

ITEM NUMBER	ITEM	ALTERNATE NO. 1 ASPHALT QUANTITIES	ALTERNATE NO. 2 CONCRETE QUANTITIES	UNIT
		STPR-40-5 (153)240	STPR-40-5 (153)240	
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.00	1.00	LUMP SUM
636	BRIDGE CONSTRUCTION CONTROL	1.00	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES - BRIDGE	585	585	CU. YD.
SP & 802	CLASS S CONCRETE - BRIDGE	413.20	413.20	CU. YD.
802	CLASS S (AE) CONCRETE - BRIDGE	397.20	397.20	CU. YD.
803	CLASS I PROTECTIVE SURFACE TREATMENT	30.3	30.3	GAL.
SS & 804	REINFORCING STEEL - BRIDGE (GRADE 60)	63830	63830	LB.
SS & 804	EPOXY COATED REINFORCING STEEL - BRIDGE (GRADE 60)	100480	100480	LB.
SP & 805	STEEL SHELL PILING (18" DIAMETER)	6750	6750	LIN. FT.
807	STRUCTURAL STEEL IN BEAM SPANS (M270-GR50)	420160	420160	LB.
807	PAINTING STRUCTURAL STEEL	210	210	TON
808	ELASTOMERIC BEARINGS	10732.0	10732.0	CU. IN.
812	BRIDGE NAME PLATE (TYPE D)	1	1	EACH
816	CONCRETE RIPRAP	238	238	CU. YD.
SP	SILICONE JOINT SEALANT	81	81	LIN. FT.
SP	SHORING (SITE NO. 1)	1.00	1.00	LUMP SUM

REVISIONS

DATE		SHEET NO.
4/9/13	ADDED SPECIAL PROVISION - NESTING SITES OF MIGRATORY BIRDS, REVISED SPECIAL PROVISION - WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS, REVISED ALTERNATE ROUTE SIGNS AND QUANTITES, ADDED SPECIAL PROVISION - SEQUENCE OF CONSTRUCTION	4, 44, 44A, 174-180, 211 & 212

SUMMARY OF QUANTITIES (2 OF 2) & REVISIONS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
4/9/13			

2 SUMMARY OF QUANTITIES & REVISIONS

FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.	BBO105	212	374

JOB NO.

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SURVEY CONTROL COORDINATES

Project Name: s110543
Date: 12/16/2011
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
4	238231.2161	1639829.6339	212.664	CTL	5/8"REBAR W/2"CAP
5	238597.2389	1640547.7864	211.791	CTL	5/8"REBAR W/2"CAP
6	238957.8585	1641239.5855	209.410	CTL	5/8"REBAR W/2"CAP
12	265160.5552	1703836.4102	208.009	CTL	5/8"REBAR W/2"CAP
13	265645.0565	1704480.0241	207.083	CTL	5/8"REBAR W/2"CAP
14	266104.1770	1705102.9702	207.138	CTL	5/8"REBAR W/2"CAP
20	294348.2562	1763656.1102	207.676	CTL	5/8"REBAR W/2"CAP
22	294455.3646	1765532.0169	205.430	CTL	5/8"REBAR W/2"CAP
67	265885.6765	1704585.7514	227.187	CTL	5/8"REBAR W/2"CAP
68	238432.7153	1640490.8480	232.317	CTL	5/8"REBAR W/2"CAP
69	238660.2608	1640388.9844	232.631	CTL	5/8"REBAR W/2"CAP
70	239233.2986	1640203.2305	207.445	CTL	5/8"REBAR W/2"CAP
71	264791.5352	1704533.6876	203.769	CTL	5/8"REBAR W/2"CAP
72	266626.9989	1704637.6605	201.162	CTL	5/8" REBAR W/2"CAP
73	265574.2778	1704583.9229	227.564	CTL	5/8"REBAR W/2"CAP
74	294411.9403	1764729.8846	206.794	CTL	5/8"REBAR W/2"CAP
75	293275.0525	1765290.9624	207.393	CTL	5/8" REBAR W/2"CAP
76	293830.4147	1765106.7189	210.334	CTL	5/8"REBAR W/2"CAP
77	294303.5324	1764885.1274	228.437	CTL	5/8"REBAR W/2"CAP
78	237986.1140	1640657.7507	212.975	GPS	AHTD GPS 680011A
79	294598.3792	1764745.3917	228.443	CTL	5/8"REBAR W/2"CAP
80	295183.9581	1764476.3857	204.677	CTL	5/8"REBAR W/2"CAP
81	263471.4275	1704586.0667	201.849	GPS	AHTD GPS 680012
82	293263.3347	1764089.0851	204.129	GPS	AHTD GPS 680013
100	236850.5490	1641325.2938	210.816	GPS	AHTD GPS 680011
103	261232.6802	1704582.3306	201.459	GPS	AHTD GPS 680012A
105	291327.2243	1765118.1705	202.568	GPS	AHTD GPS 680013A
900	233243.8110	1638622.0395	212.880	TBM	5/8" REBAR W/2"CAP
901	256195.6771	1704904.6868	205.657	TBM	5/8" REBAR W/2"CAP
902	258618.7036	1704622.9219	201.880	TBM	5/8" REBAR W/2"CAP
903	277874.2421	1764125.7242	202.302	TBM	AHTD ALUM CAP
904	280200.7005	1764173.1537	200.241	TBM	5/8" REBAR W/2"CAP
905	283536.8338	1764121.9791	200.786	TBM	5/8" REBAR W/2"CAP
906	288390.6659	1764130.6094	199.762	TBM	5/8" REBAR W/2"CAP
907	238683.4776	1640425.9604	233.803	TBM	BRIDGE
908	239630.4005	1640107.5324	205.526	TBM	GAS FILLER ISLAND
909	264785.6711	1704540.8513	202.226	TBM	CH SQ IN IN CTR HEAD WALL
910	265897.7472	1704526.0518	229.015	TBM	CH SQ IN NE COR BR
911	266607.6456	1704682.8918	201.657	TBM	CH SQ IN CTR OF N HEADWAL
912	293259.8115	1765135.8571	210.420	TBM	CH SQ NE COR OF BR,16' N OF C/L US-70
913	294266.9303	1764871.1567	230.168	TBM	CH SQ SE COR OF BR
990	234268.6493	1639859.1595	205.140	BM	NGS MARK S 169
991	232911.1765	1635962.2306	210.170	BM	NGS MARK R169
992	253679.3177	1705769.9961	205.502	BM	NGS MARK G 170
993	277274.0482	1764550.5216	199.209	BM	NGS MARK H 173

*Note - Rebar and Cap - Standard -†" Rebar with 2" Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
A PROJECT CAF OF 0.9999684494 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME.s110543gi.ctl
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.

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

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 680011 - 680011A 680012 - 680012A 680013 - 680013A
CONVERGENCE ANGLE:00-45-45.9 RIGHT AT LT:35-03-20.8 LG:090-41-22.4
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER N.11435 RAINEY D. SMITH
2-28-13

DATE REVISED	DATE PLANED	DATE REVISED	DATE PLANED

FEDERAL DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.		213	374

JOB NO. B80105

2 SURVEY CONTROL DETAILS

HWY. 38

SURVEY CONTROL DETAILS

CONST 38

POINT NO.	TYPE	STATION	NORTHING	EASTING
8005	POB	196+87.52	264145.0437	1704556.1103
8006	PC	201+03.59	264561.1028	1704558.3570
8008	PT	205+79.89	265036.7417	1704580.7119
8009	PC	206+10.93	265067.6622	1704583.4565
8011	PT	210+86.78	265542.8453	1704605.8089
8012	PC	214+98.98	265955.0433	1704608.0676
8014	PT	219+87.21	266442.7889	1704589.9510
8015	PC	220+82.32	266537.5937	1704582.3759
8017	PT	225+20.56	266958.0397	1704679.1453
8018	PI	228+28.91	267223.7476	1704835.6040
8019	POE	230+32.98	267396.4531	1704944.3066

CONST 38 RAMP 1

POINT NO.	TYPE	STATION	NORTHING	EASTING
8083	POB	10+00.00	264921.2874	1704171.1504
8084	POE	14+00.34	264918.9935	1704571.4825

CONST 38 RAMP 2

POINT NO.	TYPE	STATION	NORTHING	EASTING
8085	POB	20+00.00	264969.2224	1704575.1209
8086	PC	21+50.77	264968.5301	1704725.8928
8088	PT	24+19.74	265139.0861	1704897.7097
8089	POE	27+84.25	265503.5902	1704898.7208

CONST 38 RAMP 3

POINT NO.	TYPE	STATION	NORTHING	EASTING
8090	POB	30+00.00	266131.2966	1704227.8712
8091	PC	31+71.35	266302.6418	1704228.7046
8093	PT	34+35.83	266470.3382	1704397.8148
8094	POE	36+25.82	266469.6671	1704587.8034

CONST 38 RAMP 4

POINT NO.	TYPE	STATION	NORTHING	EASTING
8095	POB	40+00.00	266518.9508	1704583.8655
8096	POE	43+02.56	266517.9108	1704886.4285

38 EAST

POINT NO.	TYPE	STATION	NORTHING	EASTING
8105	POB	30+00.00	265353.3938	1704159.9855
8106	POE	39+99.96	265949.5321	1704962.8202

38 WEST

POINT NO.	TYPE	STATION	NORTHING	EASTING
8107	POB	40+00.00	265489.1149	1704163.1897
8108	POE	50+00.00	266085.1037	1704966.1788

HWY. 38
SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TIMOTHY D. SMITH
2-22-13

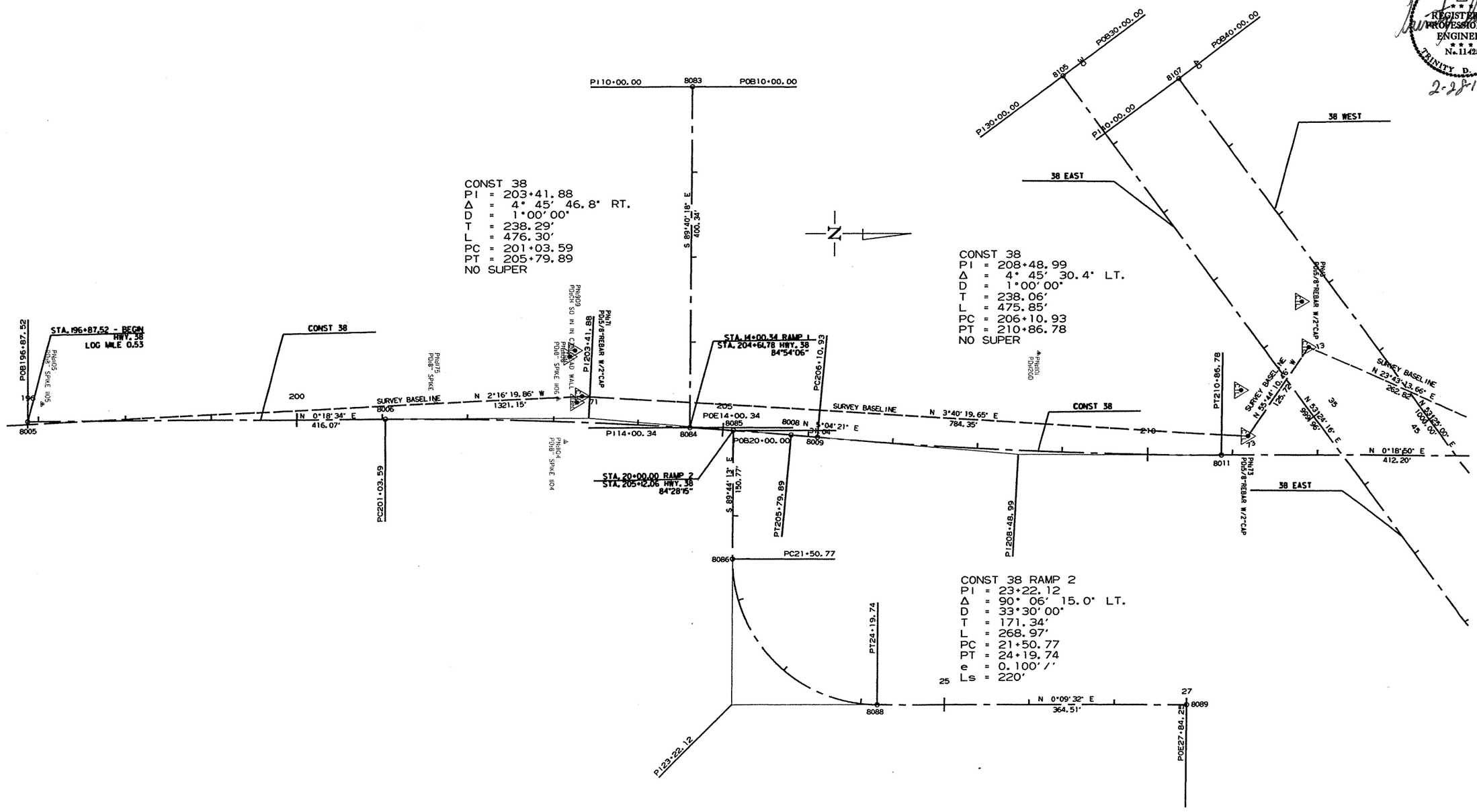
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.AID. PROJ.NO.	STATE	JOB NO.	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	880105		214	374

2 SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		B80105	215	374

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-22-13



HWY. 38
SURVEY CONTROL DETAILS

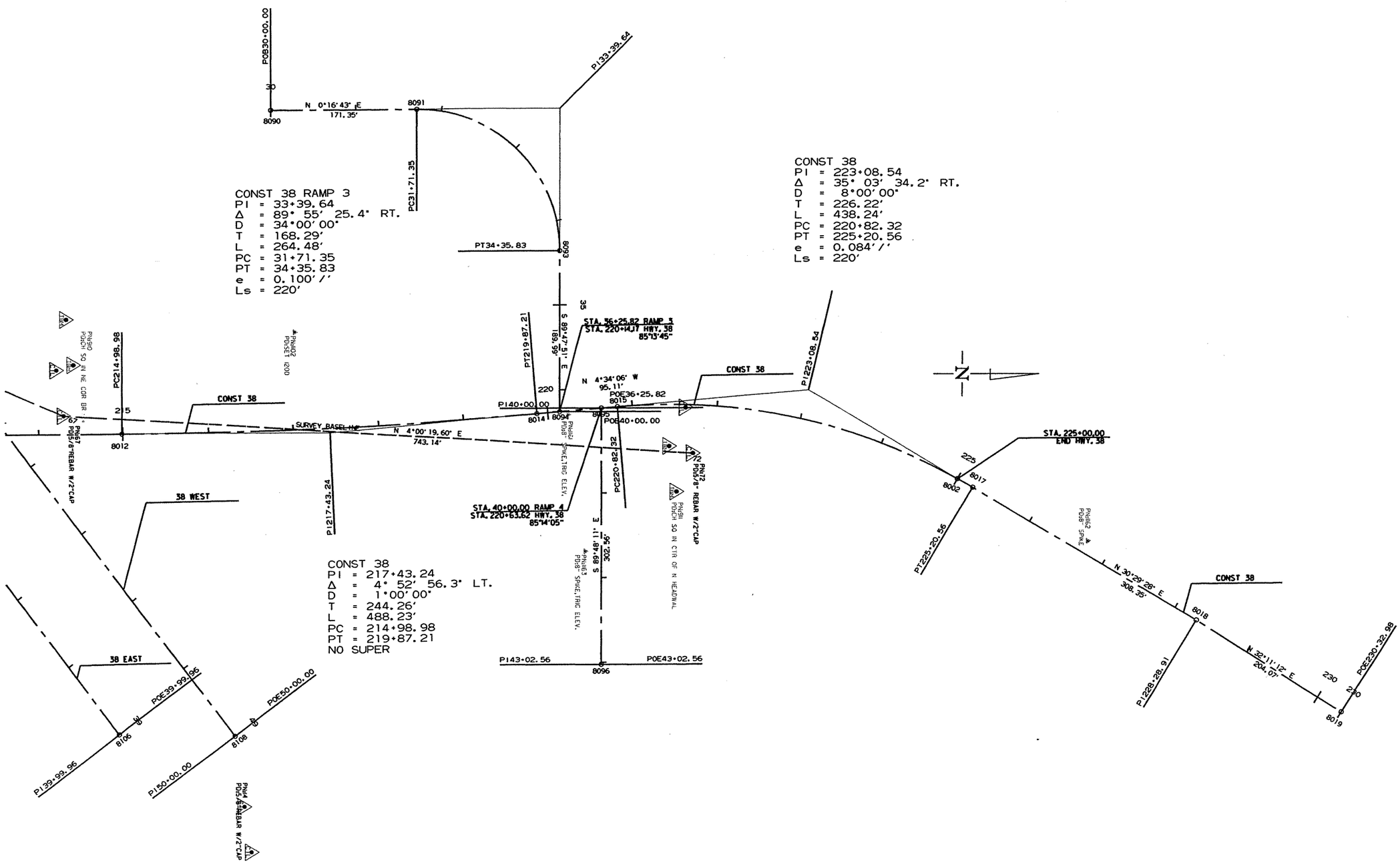
rbb0105survey control.dgn 11/8/12 survey control details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		B80105	216	374

(2) SURVEY CONTROL DETAILS

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

2-28-13

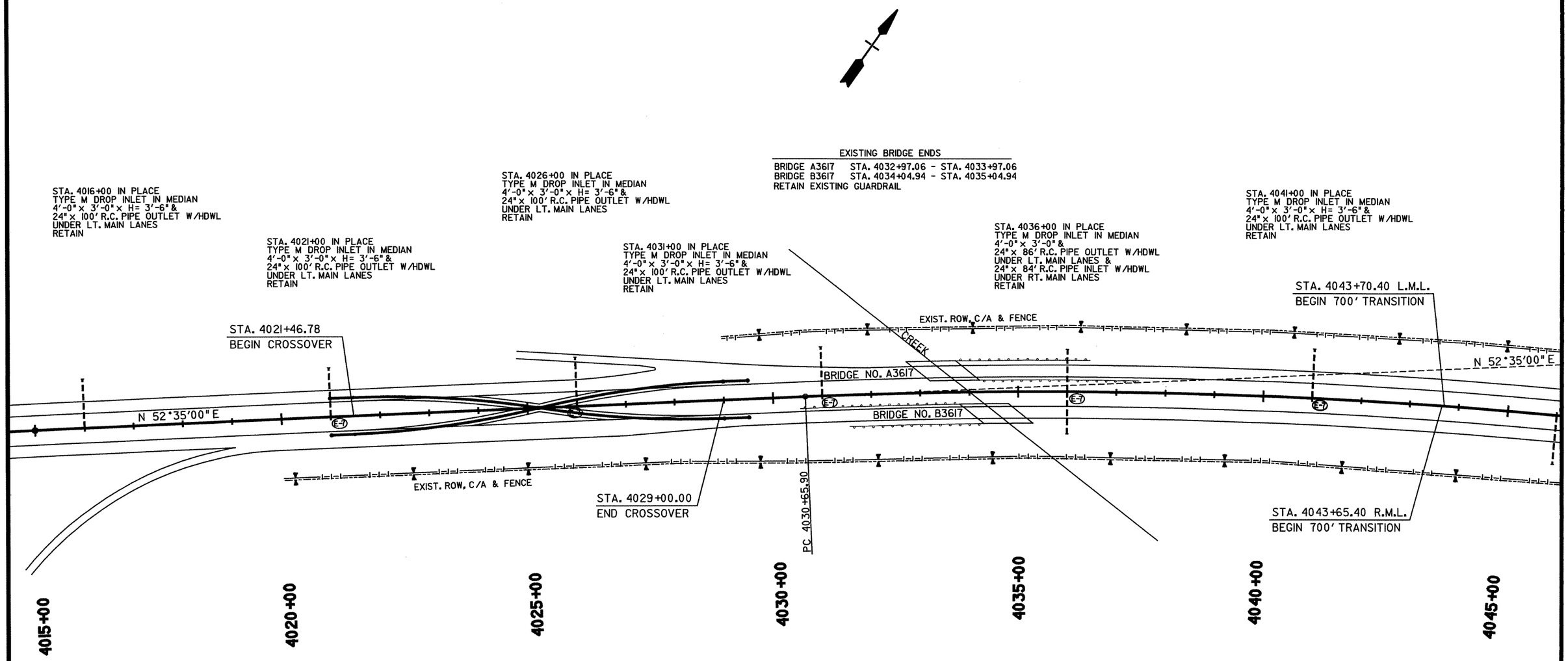


HWY. 38
SURVEY CONTROL DETAILS

rbb0105survey control.dgn 11/8/12 survey control details

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	217	374

(2) PLAN STA. 4015+00 TO 4045+00



EROSION CONTROL LEGEND

E-7	DROP INLET SILT FENCE

REVISIONS

DATE	DESCRIPTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	218	374

(2) PLAN STA. 4045+00 TO 4075+00

PROPOSED GUARDRAIL LOCATION		GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL
STA. 4053+83.15 TO STA. 4058+01.90	℄ MEDIAN I-40 LT.-R.M.L.	- 350 LIN. FT.	1 EACH	1 EACH
STA. 4054+33.15 TO STA. 4058+01.90	℄ MEDIAN I-40 RT.-R.M.L.	- 300 LIN. FT.	1 EACH	1 EACH
STA. 4060+94.13 TO STA. 4064+62.88	℄ MEDIAN I-40 LT.-L.M.L.	- 300 LIN. FT.	1 EACH	1 EACH
STA. 4060+94.13 TO STA. 4065+12.88	℄ MEDIAN I-40 RT.-L.M.L.	- 350 LIN. FT.	1 EACH	1 EACH

EXISTING BRIDGE ENDS

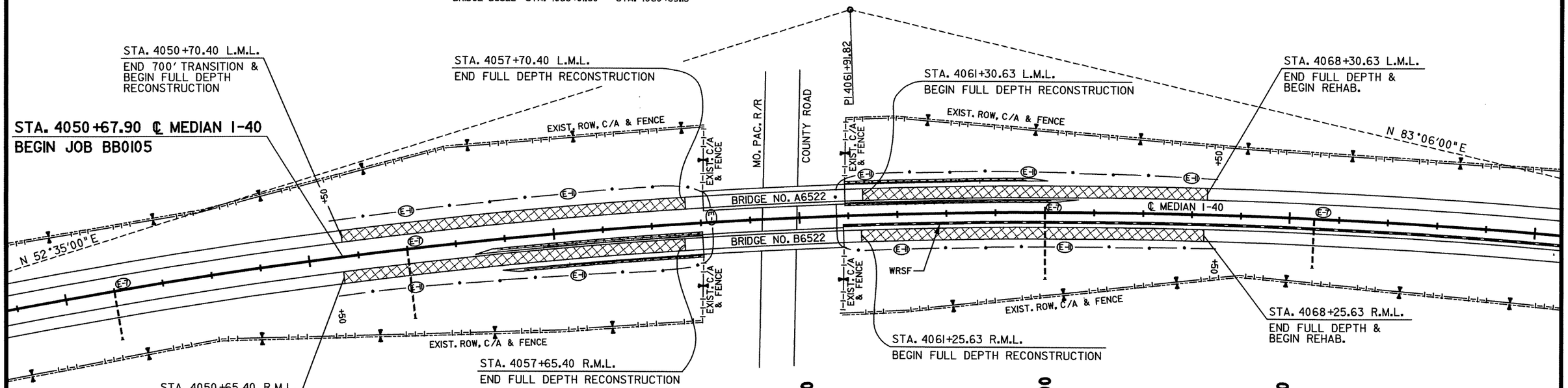
BRIDGE A6522 STA. 4058+06.90 - STA. 4060+94.13
BRIDGE B6522 STA. 4058+01.90 - STA. 4060+89.13

EXISTING APPROACH SLABS & GUTTERS (RETAIN)

STA. 4057+65.40 TO STA. 4058+01.90 - R.M.L.
STA. 4057+70.40 TO STA. 4058+06.90 - L.M.L.
STA. 4060+89.13 TO STA. 4061+25.63 - R.M.L.
STA. 4060+94.13 TO STA. 4061+30.63 - L.M.L.

REMOVAL OF EXISTING PORTLAND CEMENT CONC. PAVEMENT

STA. 4050+65.40 TO STA. 4057+65.40 - R.M.L. - 1866.7 SQ. YD.
STA. 4050+70.40 TO STA. 4057+70.40 - L.M.L. - 1866.7 SQ. YD.
STA. 4061+25.63 TO STA. 4068+25.63 - R.M.L. - 1866.7 SQ. YD.
STA. 4061+30.63 TO STA. 4068+30.63 - L.M.L. - 1866.7 SQ. YD.



STA. 4046+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4052+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
24" x 142' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

℄ MEDIAN I-40
P.I. = 4061+91.82
N = 12726923.4991
E = 2298156.6666
DELTA = 30°31' RT
DOC = 0°30'
T = 3125.92'
L = 6103.33'
P.C. = 4030+65.90
P.T. = 4091+69.23
(NO SUPER)

STA. 4060+89.13 BEGIN
WIRE ROPE SAFETY FENCE
LT.-R.M.L.

STA. 4065+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
24" x 136' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4070+50 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE
• —— (E-11) —— •	SILT FENCE

REVISIONS

DATE	DESCRIPTION

FULL DEPTH RECONSTRUCTION

EXISTING GUARDRAIL LOCATION (REMOVE)		GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
STA. 4055+31.90 TO STA. 4058+06.90	℄ MEDIAN I-40 RT.-R.M.L.	- 225 LIN. FT.	1 EACH
STA. 4054+81.90 TO STA. 4058+06.90	℄ MEDIAN I-40 LT.-R.M.L.	- 275 LIN. FT.	1 EACH
STA. 4060+94.13 TO STA. 4064+19.13	℄ MEDIAN I-40 RT.-L.M.L.	- 275 LIN. FT.	1 EACH
STA. 4060+94.13 TO STA. 4063+69.13	℄ MEDIAN I-40 LT.-L.M.L.	- 225 LIN. FT.	1 EACH

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/12/13

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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	219	374

(2) PLAN STA. 4075+00 TO 4105+00

EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE
• —— (E-11) —— •	SILT FENCE

REVISIONS

DATE	DESCRIPTION

FULL DEPTH RECONSTRUCTION

℄ MEDIAN I-40
P.I. = 4061+91.82
N = 12726923.4991
E = 2298156.6666
DELTA = 30°31' RT
DOC = 0°30'
T = 3125.92'
L = 6103.33'
P.C. = 4030+65.90
P.T. = 4091+69.23
(NO SUPER)

STA. 4080+50 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 112' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

STA. 4085+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 128' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

30" x 78' R.C. PIPE
UNDER ON-RAMP
RETAIN

EXISTING BRIDGE ENDS

BRIDGE A6523 STA. 4098+87.33 - STA. 4101+18.51
BRIDGE B6523 STA. 4098+78.62 - STA. 4101+09.80

PROPOSED GUARDRAIL LOCATION		GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL
STA. 4094+59.87 TO STA. 4098+78.62	℄ MEDIAN I-40 LT.-R.M.L.	- 350 LIN. FT.	1 EACH	1 EACH
STA. 4096+59.87 TO STA. 4098+78.62	℄ MEDIAN I-40 RT.-R.M.L.	- 150 LIN. FT.	1 EACH	1 EACH
STA. 4101+18.51 TO STA. 4104+87.26	℄ MEDIAN I-40 LT.-L.M.L.	- 300 LIN. FT.	1 EACH	1 EACH
STA. 4101+18.51 TO STA. 4105+37.26	℄ MEDIAN I-40 RT.-L.M.L.	- 350 LIN. FT.	1 EACH	1 EACH

EXISTING APPROACH SLABS & GUTTERS (RETAIN)

STA. 4098+42.12 TO STA. 4098+78.62 - R.M.L.
STA. 4098+50.83 TO STA. 4098+87.33 - L.M.L.
STA. 4101+09.80 TO STA. 4101+46.30 - R.M.L.
STA. 4101+18.51 TO STA. 4101+55.01 - L.M.L.

12" C.M. PIPE CULVERT
W/SPILLWAY - ABANDONED
RETAIN

24" x 80' R.C. PIPE
UNDER ON-RAMP
RETAIN

EXIST. ROW, C/A & FENCE

STA. 4091+50.83 L.M.L.
END REHAB. &
BEGIN FULL DEPTH
RECONSTRUCTION

24" x 140' CROSS DRAIN
UNDER EXIT-RAMP
RETAIN

STA. 4098+50.83 L.M.L.
END FULL DEPTH
RECONSTRUCTION

HWY. IB

STA. 4101+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 170' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4101+55.01 L.M.L.
BEGIN FULL DEPTH
RECONSTRUCTION

STA. 4091+20 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 128' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

WRSF

BRIDGE NO. A6523

℄ MEDIAN I-40 N 83°06'00" E

BRIDGE NO. B6523

WRSF

STA. 4086+00 IN PLACE
IMPACT ATTENUATION BARRIER
RT. & LT. OF R.M.L.
REMOVE

STA. 4095+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
24" x 130' R.C. PIPE OUTLET W/HDWL
(23° RT. BKWD. SKEW)
UNDER RT. MAIN LANES
RETAIN

PT 4091+69.23

STA. 4098+42.12 R.M.L.
END FULL DEPTH
RECONSTRUCTION

STA. 4101+46.30 R.M.L.
BEGIN FULL DEPTH
RECONSTRUCTION

STA. 4091+42.12 R.M.L.
END REHAB. &
BEGIN FULL DEPTH
RECONSTRUCTION

24" x 110' R.C. PIPE
UNDER ON-RAMP
RETAIN

12" C.M. PIPE CULVERT
W/SPILLWAY - ABANDONED
RETAIN

STA. 4101+09.80 BEGIN
WIRE ROPE SAFETY FENCE
LT.-R.M.L.

4075+00 4080+00 4085+00 4090+00 4095+00 4100+00 4105+00

STA. 4076+35 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
36" x 130' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES &
36" x 130' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

EXIST. ROW, C/A & FENCE

30" x 78' R.C. PIPE
UNDER EXIT-RAMP
RETAIN

STA. 4098+78.62 END
WIRE ROPE SAFETY FENCE
LT.-R.M.L.

24" x 94' CROSS DRAIN
UNDER EXIT-RAMP
RETAIN

STA. 4105+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 138' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

EXISTING GUARDRAIL LOCATION (REMOVE)		GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
STA. 4096+78.62 TO STA. 4098+78.62	℄ MEDIAN I-40 RT.-R.M.L.	- 150 LIN. FT.	1 EACH
STA. 4095+53.62 TO STA. 4098+78.62	℄ MEDIAN I-40 LT.-R.M.L.	- 275 LIN. FT.	1 EACH
STA. 4101+18.51 TO STA. 4104+43.51	℄ MEDIAN I-40 RT.-L.M.L.	- 275 LIN. FT.	1 EACH
STA. 4101+18.51 TO STA. 4103+18.51	℄ MEDIAN I-40 LT.-L.M.L.	- 150 LIN. FT.	1 EACH

REMOVAL OF EXISTING PORTLAND CEMENT CONC. PAVEMENT

STA. 4091+42.12 TO STA. 4098+42.12 - R.M.L. - 2089.3 SQ. YD.
STA. 4091+50.83 TO STA. 4098+50.83- L.M.L. - 2601.3 SQ. YD.
STA. 4101+46.30 TO STA. 4108+46.30 - R.M.L. - 2538.7 SQ. YD.
STA. 4101+55.01 TO STA. 4108+55.01 - L.M.L. - 2326.7 SQ. YD.

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				6	ARK.			
				JOB NO.		BB0105	220	374

(2) PLAN STA. 4105+00 TO 4135+00

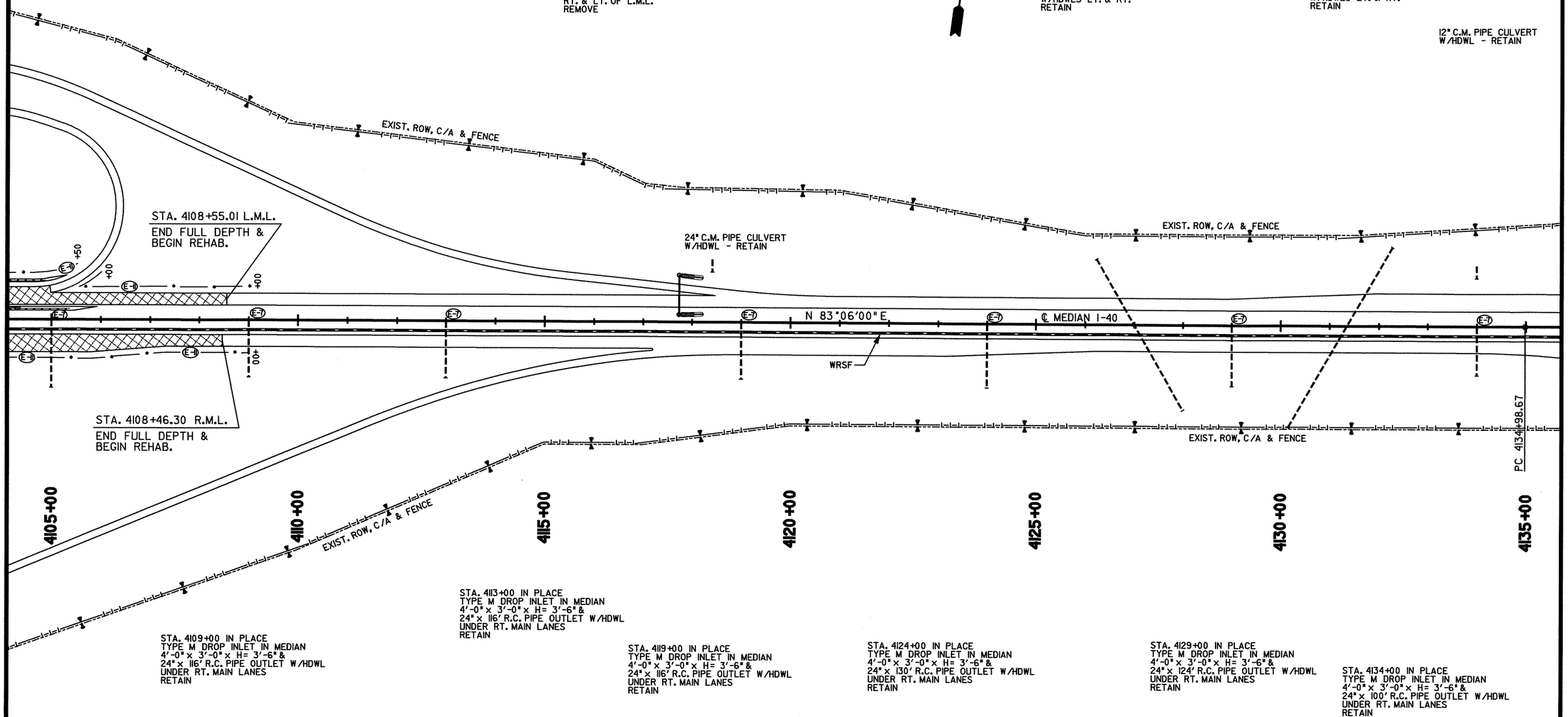
EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE
• —— (E-11) —— •	SILT FENCE

REVISIONS

DATE	DESCRIPTION

FULL DEPTH RECONSTRUCTION



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(2) PLAN STA. 4135+00 TO 4165+00

EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE
• —— (E-11) —— •	SILT FENCE

REVISIONS

DATE	DESCRIPTION

FULL DEPTH RECONSTRUCTION

PROPOSED GUARDRAIL LOCATION			GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL
STA. 4148+73.85 TO STA. 4152+92.60	℄ MEDIAN I-40	LT.-R.M.L. -	350 LIN. FT.	1 EACH	1 EACH
STA. 4149+23.85 TO STA. 4152+92.60	℄ MEDIAN I-40	RT.-R.M.L. -	300 LIN. FT.	1 EACH	1 EACH
STA. 4154+05.68 TO STA. 4157+74.43	℄ MEDIAN I-40	LT.-L.M.L. -	300 LIN. FT.	1 EACH	1 EACH
STA. 4154+05.68 TO STA. 4158+24.43	℄ MEDIAN I-40	RT.-L.M.L. -	350 LIN. FT.	1 EACH	1 EACH

EXISTING BRIDGE ENDS

BRIDGE A3620 STA. 4152+92.60 - STA. 4154+05.68
BRIDGE B3620 STA. 4152+92.60 - STA. 4154+05.68

24" x 32' CROSS DRAIN W/F.E.S. UNDER EXIT-RAMP RETAIN

EXISTING GUARDRAIL LOCATION (REMOVE)			GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
STA. 4150+92.60 TO STA. 4152+92.60	℄ MEDIAN I-40	RT.-R.M.L. -	150 LIN. FT.	1 EACH
STA. 4150+92.60 TO STA. 4152+92.60	℄ MEDIAN I-40	LT.-R.M.L. -	150 LIN. FT.	1 EACH
STA. 4154+05.68 TO STA. 4156+05.68	℄ MEDIAN I-40	RT.-L.M.L. -	150 LIN. FT.	1 EACH
STA. 4154+05.68 TO STA. 4156+05.68	℄ MEDIAN I-40	LT.-L.M.L. -	150 LIN. FT.	1 EACH

REMOVAL OF EXISTING PORTLAND CEMENT CONC. PAVEMENT

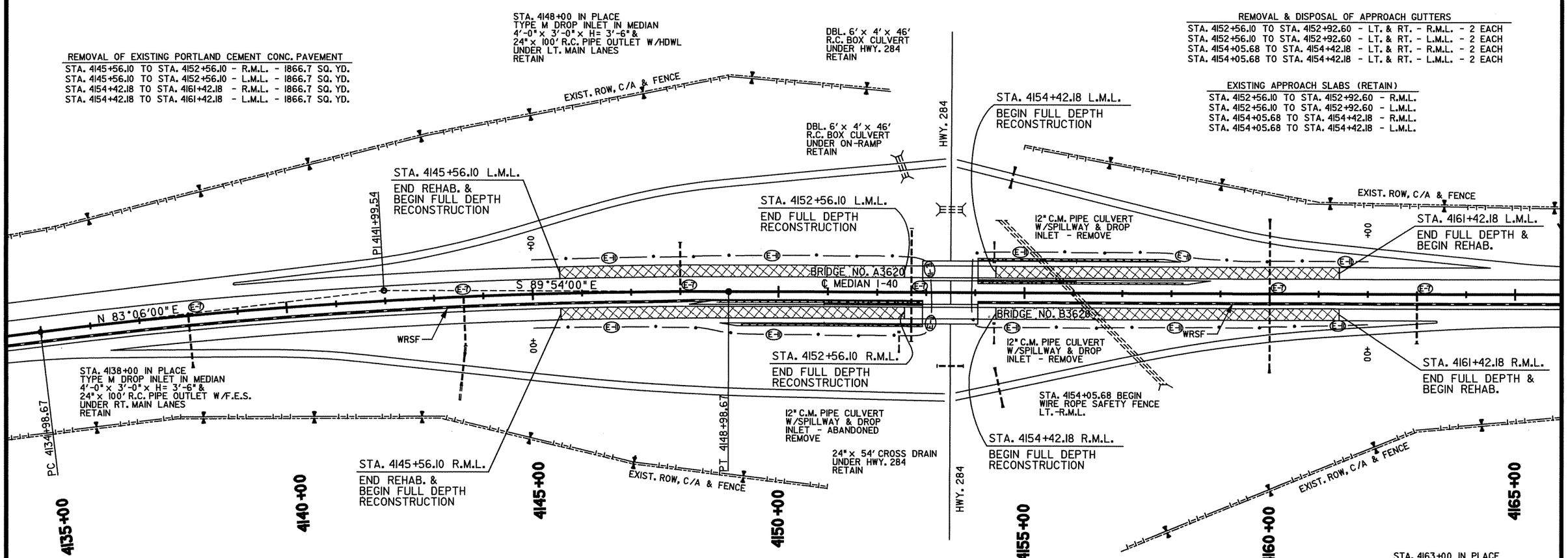
STA. 4145+56.10 TO STA. 4152+56.10 - R.M.L. - 1866.7 SQ. YD.
STA. 4145+56.10 TO STA. 4152+56.10 - L.M.L. - 1866.7 SQ. YD.
STA. 4154+42.18 TO STA. 4161+42.18 - R.M.L. - 1866.7 SQ. YD.
STA. 4154+42.18 TO STA. 4161+42.18 - L.M.L. - 1866.7 SQ. YD.

REMOVAL & DISPOSAL OF APPROACH GUTTERS

STA. 4152+56.10 TO STA. 4152+92.60 - LT. & RT. - R.M.L. - 2 EACH
STA. 4152+56.10 TO STA. 4152+92.60 - LT. & RT. - L.M.L. - 2 EACH
STA. 4154+05.68 TO STA. 4154+42.18 - LT. & RT. - R.M.L. - 2 EACH
STA. 4154+05.68 TO STA. 4154+42.18 - LT. & RT. - L.M.L. - 2 EACH

EXISTING APPROACH SLABS (RETAIN)

STA. 4152+56.10 TO STA. 4152+92.60 - R.M.L.
STA. 4152+56.10 TO STA. 4152+92.60 - L.M.L.
STA. 4154+05.68 TO STA. 4154+42.18 - R.M.L.
STA. 4154+05.68 TO STA. 4154+42.18 - L.M.L.



STA. 4163+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4160+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 146' R.C. PIPE OUTLET W/F.E.S.
UNDER LT. MAIN LANES & EXIT-RAMP
24" x 154' R.C. PIPE OUTLET W/F.E.S.
UNDER RT. MAIN LANES & ON-RAMP
RETAIN

℄ MEDIAN I-40
P.I. = 4141+99.54
N = 12727903.3616
E = 2306253.8139
DELTA = 7°00' RT
DOC = 0°30'
T = 700.87'
L = 1400.00'
P.C. = 4134+98.67
P.T. = 4148+98.67
(NO SUPER)

24" x 54' R.C. PIPE
UNDER EXIT-RAMP
RETAIN

STA. 4143+60 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4152+92.60 END
WIRE ROPE SAFETY FENCE
LT.-R.M.L.

STA. 4152+70 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 130' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

24" x 70' CROSS DRAIN
W/F.E.S. UNDER ON-RAMP
RETAIN

STA. 4156+00 IN PLACE
DBL. 5' x 5' x 470' R.C. BOX CULVERT
(45° RT. FWD. SKEW)
RETAIN

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6	ARK.			
JOB NO.		BB0105	222	374

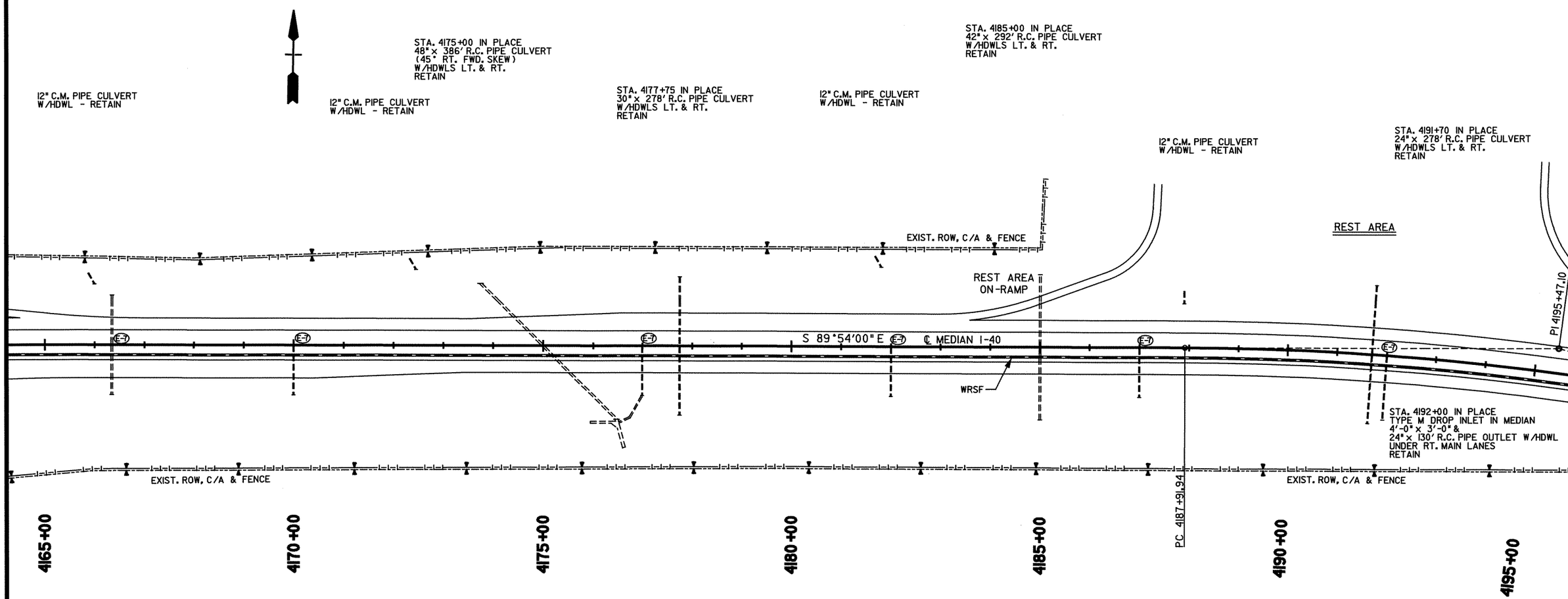
(2) PLAN STA. 4165+00 TO 4195+00

REVISIONS

DATE	DESCRIPTION

EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE



STA. 4166+35 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 4'-6" &
42" x 100' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES &
42" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4170+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4177+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4182+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4187+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

℄ MEDIAN I-40
P.I. = 4195+47.10
N = 12727894.0253
E = 2311603.1058
DELTA = 15°01' RT
DOC = 1°00'
T = 755.16'
L = 1501.67'
P.C. = 4187+91.94
P.T. = 4202+93.61
e = 0.037'/'
Ls = 350'

STA. 4185+29.44 BEG. SUPERELEVATION
STA. 4188+79.44 MAX. SUPERELEVATION (0.037%)
STA. 4202+06.11 MAX. SUPERELEVATION (0.037%)
STA. 4205+56.11 END SUPERELEVATION

STATE OF ARKANSAS
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6	ARK.			
JOB NO.		BB0105	223	374

(2) PLAN STA. 4195+00 TO 4225+00

℄ MEDIAN I-40
P.I. = 4195+47.10
N = 12727894.0253
E = 2311603.1058
DELTA = 15°01' RT
DOC = 1°00'
T = 755.16'
L = 1501.67'
P.C. = 4187+91.94
P.T. = 4202+93.61
e = 0.037'/'
Ls = 350'

PROPOSED GUARDRAIL LOCATION			GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL
STA. 4214+79.75 TO STA. 4218+98.50	℄ MEDIAN I-40	LT.-R.M.L. -	350 LIN. FT.	1 EACH	1 EACH
STA. 4215+29.75 TO STA. 4218+98.50	℄ MEDIAN I-40	RT.-R.M.L. -	300 LIN. FT.	1 EACH	1 EACH
STA. 4221+55.67 TO STA. 4225+24.42	℄ MEDIAN I-40	LT.-L.M.L. -	300 LIN. FT.	1 EACH	1 EACH
STA. 4221+55.67 TO STA. 4225+74.42	℄ MEDIAN I-40	RT.-L.M.L. -	350 LIN. FT.	1 EACH	1 EACH

EXISTING GUARDRAIL LOCATION (REMOVE)			GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
STA. 4216+98.50 TO STA. 4218+98.50	℄ MEDIAN I-40	RT.-R.M.L. -	150 LIN. FT.	1 EACH
STA. 4216+98.50 TO STA. 4218+98.50	℄ MEDIAN I-40	LT.-R.M.L. -	150 LIN. FT.	1 EACH
STA. 4221+55.67 TO STA. 4223+55.67	℄ MEDIAN I-40	RT.-L.M.L. -	150 LIN. FT.	1 EACH
STA. 4221+55.67 TO STA. 4223+55.67	℄ MEDIAN I-40	LT.-L.M.L. -	150 LIN. FT.	1 EACH

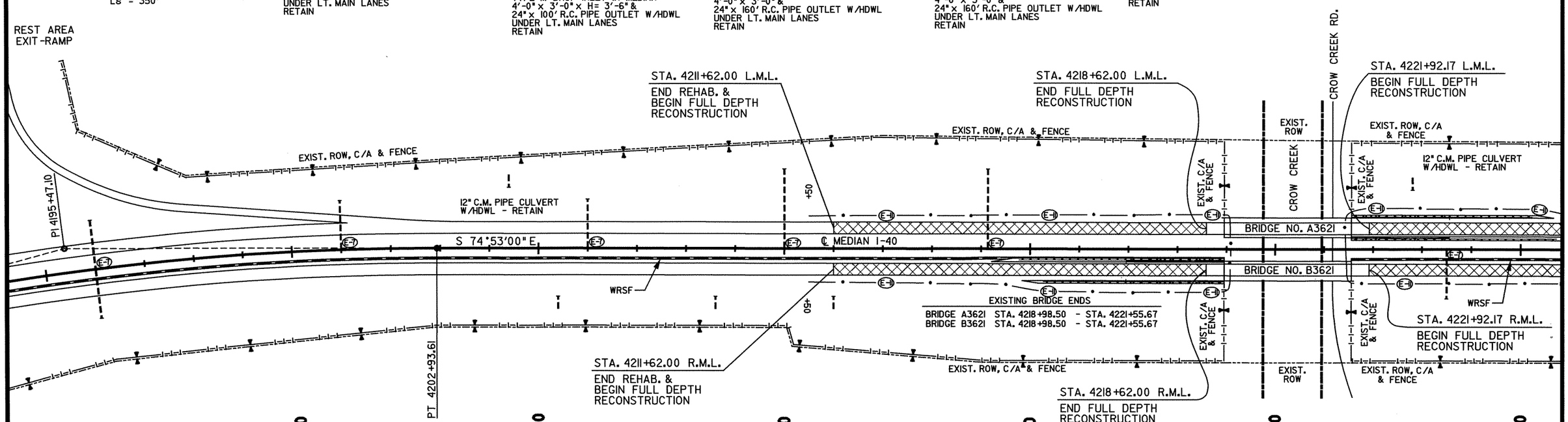
STA. 4201+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

STA. 4206+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

STA. 4210+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
24" x 160' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

STA. 4214+14 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
24" x 160' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

DROP INLET GRATE FOUND
PIPE & OUTLET NOT FOUND
RETAIN



STA. 4221+55.67 BEGIN
WIRE ROPE SAFETY FENCE
LT.-R.M.L.

STA. 4196+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
30" x 100' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES &
30" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

12" C.M. PIPE CULVERT
W/HDWL - RETAIN

12" C.M. PIPE CULVERT
W/HDWL - RETAIN

12" C.M. PIPE CULVERT
W/HDWL - RETAIN

DROP INLET GRATE FOUND
PIPE & OUTLET NOT FOUND
RETAIN

STA. 4218+98.50 END
WIRE ROPE SAFETY FENCE
LT.-R.M.L.

STA. 4223+50 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

REMOVAL OF EXISTING PORTLAND CEMENT CONC. PAVEMENT
STA. 4211+62.00 TO STA. 4218+62.00 - R.M.L. - 1866.7 SQ. YD.
STA. 4211+62.00 TO STA. 4218+62.00 - L.M.L. - 1866.7 SQ. YD.
STA. 4221+92.17 TO STA. 4228+92.17 - R.M.L. - 1866.7 SQ. YD.
STA. 4221+92.17 TO STA. 4228+92.17 - L.M.L. - 1866.7 SQ. YD.

STA. 4185+29.44 BEG. SUPERELEVATION
STA. 4188+79.44 MAX. SUPERELEVATION (0.037%)
STA. 4202+06.11 MAX. SUPERELEVATION (0.037%)
STA. 4205+56.11 END SUPERELEVATION

REMOVAL & DISPOSAL OF APPROACH GUTTERS
STA. 4218+62.00 TO STA. 4218+98.50 - LT. & RT. - R.M.L. - 2 EACH
STA. 4218+62.00 TO STA. 4218+98.50 - LT. & RT. - L.M.L. - 2 EACH
STA. 4221+55.67 TO STA. 4221+92.17 - LT. & RT. - R.M.L. - 2 EACH
STA. 4221+55.67 TO STA. 4221+92.17 - LT. & RT. - L.M.L. - 2 EACH

EXISTING APPROACH SLABS (RETAIN)
STA. 4218+62.00 TO STA. 4218+98.50 - R.M.L.
STA. 4218+62.00 TO STA. 4218+98.50 - L.M.L.
STA. 4221+55.67 TO STA. 4221+92.17 - R.M.L.
STA. 4221+55.67 TO STA. 4221+92.17 - L.M.L.

EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE
• —— (E-11) —— •	SILT FENCE

REVISIONS

DATE	DESCRIPTION

FULL DEPTH RECONSTRUCTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

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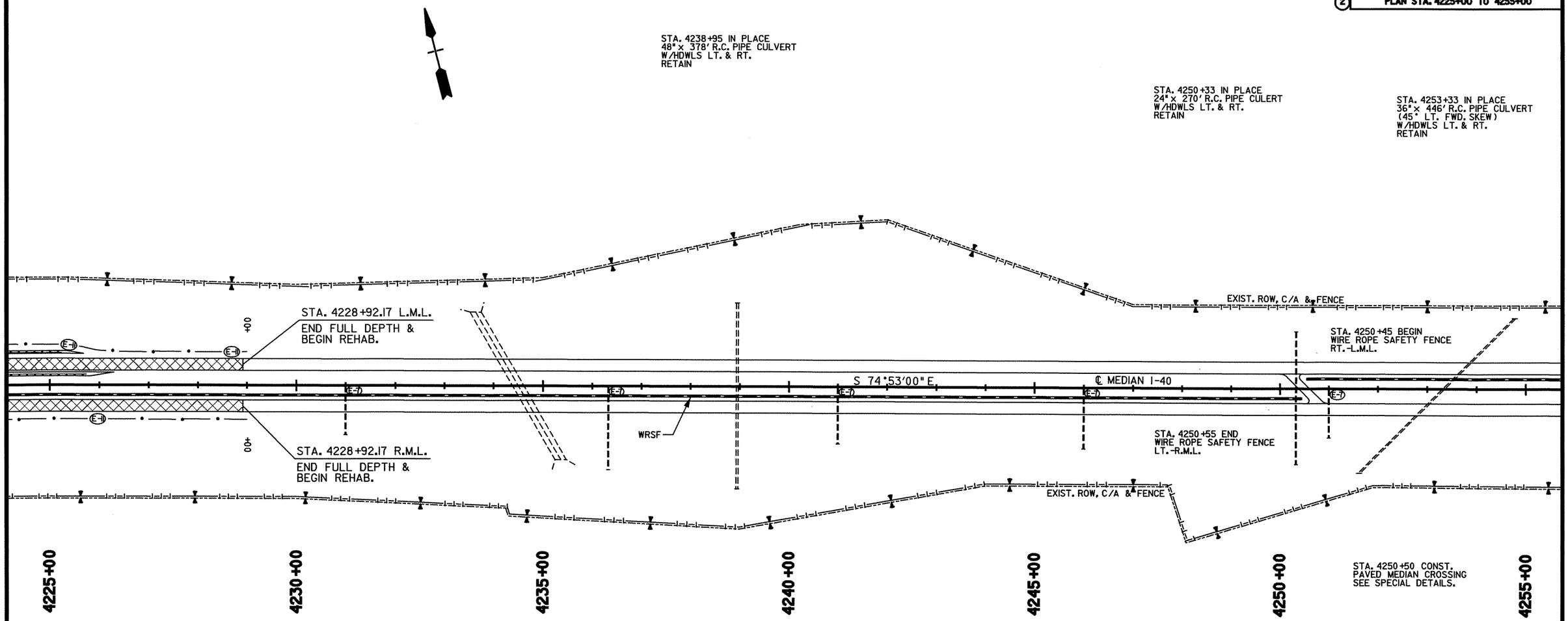
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	224	374

(2) PLAN STA. 4225+00 TO 4255+00



STA. 4231+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4234+50 IN PLACE
DBL. 10' x 10' x 346' R.C. BOX CULVERT
(30° RT. FWD. SKEW)
SPAN = 26.18'
RETAIN

STA. 4236+33 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 170' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4241+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 116' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4246+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 124' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4251+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE
• —— (E-11) —— •	SILT FENCE

REVISIONS

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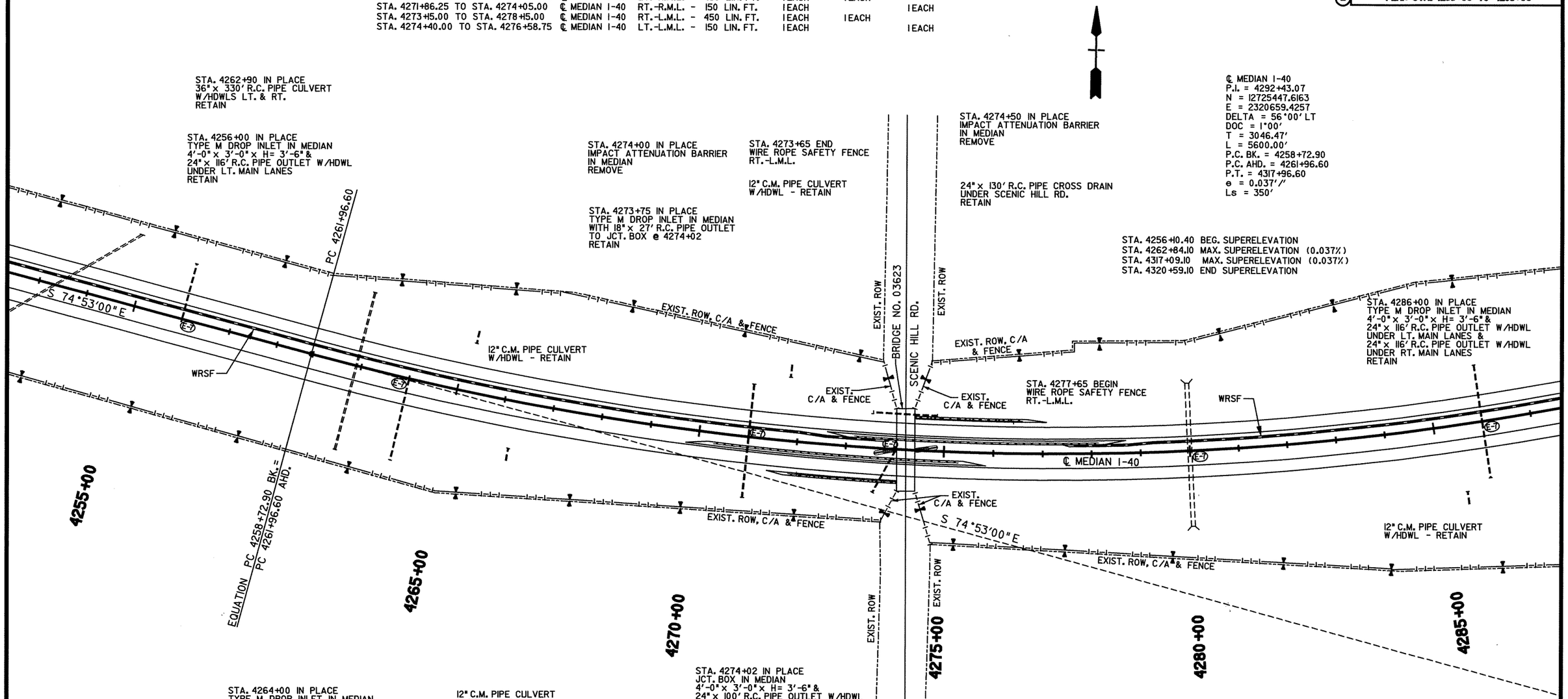
6	ARK.			
JOB NO.		BB0105	225	374

(2) PLAN STA. 4255+00 TO 4285+00

PROPOSED GUARDRAIL LOCATION		GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	TERMINAL ANCHOR POST (TYPE 1)	THRIE BEAM GUARDRAIL TERMINAL
STA. 4270+30.00 TO STA. 4275+30.00	℄ MEDIAN I-40 LT.-R.M.L. -	450 LIN. FT.	1 EACH	1 EACH	
STA. 4271+86.25 TO STA. 4274+05.00	℄ MEDIAN I-40 RT.-R.M.L. -	150 LIN. FT.	1 EACH		1 EACH
STA. 4273+15.00 TO STA. 4278+15.00	℄ MEDIAN I-40 RT.-L.M.L. -	450 LIN. FT.	1 EACH	1 EACH	
STA. 4274+40.00 TO STA. 4276+58.75	℄ MEDIAN I-40 LT.-L.M.L. -	150 LIN. FT.	1 EACH		1 EACH



STA. 4264+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
24" x 170' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

12" C.M. PIPE CULVERT
W/HDWL - RETAIN

STA. 4274+02 IN PLACE
JCT. BOX IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4271+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
30" x 108' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES &
30" x 124' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4280+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
6' x 8' x 292' R.C. BOX CULVERT
UNDER RT. MAIN LANES
RETAIN

EXISTING GUARDRAIL LOCATION (REMOVE)		GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
STA. 4272+04.20 TO STA. 4274+04.20	℄ MEDIAN I-40 RT.-R.M.L. -	150 LIN. FT.	1 EACH
STA. 4274+40.20 TO STA. 4276+40.20	℄ MEDIAN I-40 LT.-L.M.L. -	150 LIN. FT.	1 EACH

EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE

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(2) PLAN STA. 4285+00 TO 4315+00

STA. 4291+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

12" C.M. PIPE CULVERT
W/HDWL - RETAIN

STA. 4296+50 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 130' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

STA. 4300+00 IN PLACE
5' x 4' x 538' R.C. BOX CULVERT
(30° RT. FWD. SKEW)
RETAIN

STA. 4312+28.58 END
WIRE ROPE SAFETY FENCE
RT.-L.M.L.

EXISTING GUARDRAIL LOCATION (REMOVE)	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
STA. 4309+44.45 TO STA. 4311+44.45 ℄ MEDIAN I-40 RT.-R.M.L.	- 150 LIN. FT.	1 EACH
STA. 4309+85.03 TO STA. 4311+85.03 ℄ MEDIAN I-40 LT.-R.M.L.	- 150 LIN. FT.	1 EACH

STA. 4302+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 116' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

STA. 4306+00 IN PLACE
36" x 338' R.C. PIPE CULVERT
W/HDWLS LT. & RT.
RETAIN

REMOVAL OF EXISTING PORTLAND CEMENT CONC. PAVEMENT

STA. 4304+30.16 TO STA. 4311+30.16 - R.M.L. - 1866.7 SQ. YD.
STA. 4305+17.41 TO STA. 4312+17.41 - L.M.L. - 1866.7 SQ. YD.
STA. 4313+79.12 TO STA. 4320+79.12 - R.M.L. - 1866.7 SQ. YD.
STA. 4314+61.37 TO STA. 4321+61.37 - L.M.L. - 1866.7 SQ. YD.

REMOVAL & DISPOSAL OF APPROACH GUTTERS

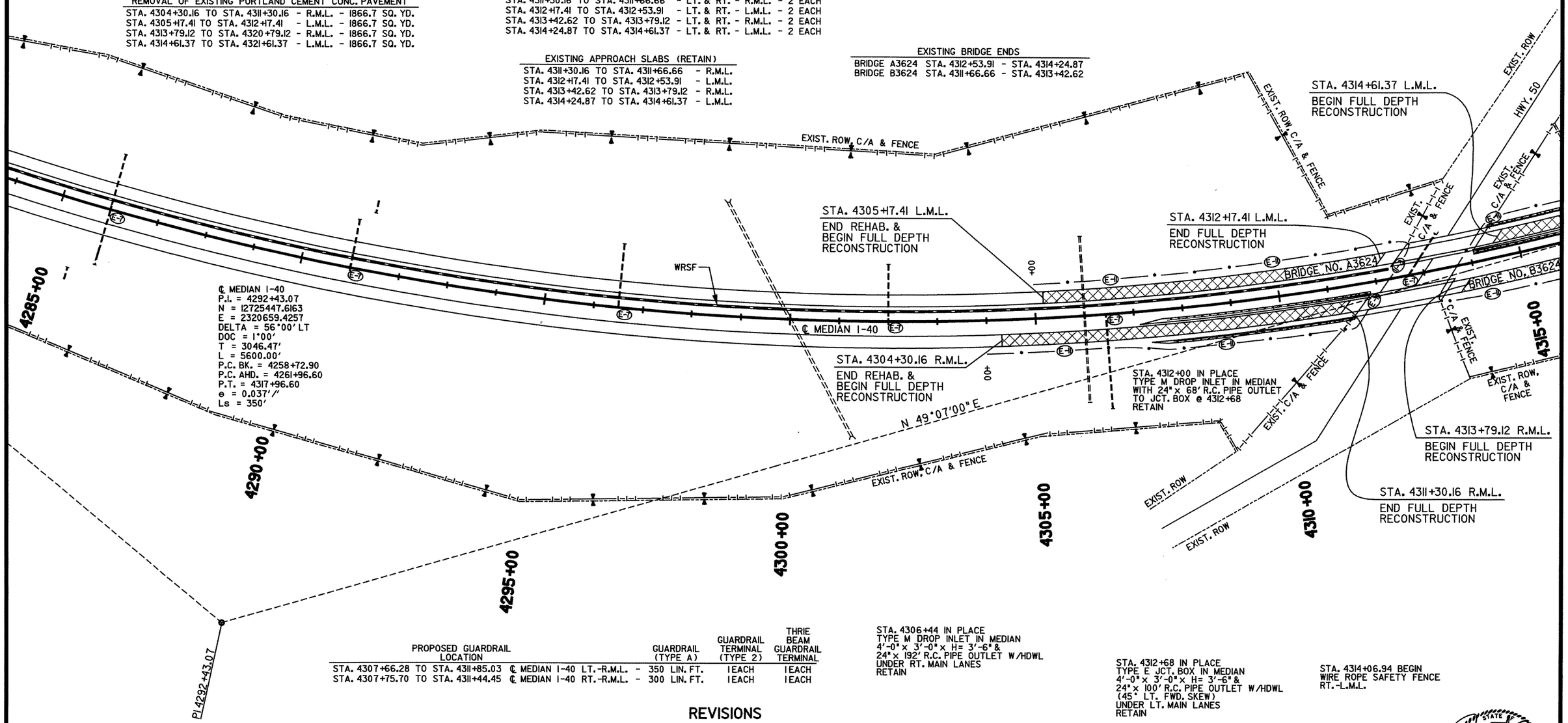
STA. 4311+30.16 TO STA. 4311+66.66 - LT. & RT. - R.M.L. - 2 EACH
STA. 4312+17.41 TO STA. 4312+53.91 - LT. & RT. - L.M.L. - 2 EACH
STA. 4313+42.62 TO STA. 4313+79.12 - LT. & RT. - R.M.L. - 2 EACH
STA. 4314+24.87 TO STA. 4314+61.37 - LT. & RT. - L.M.L. - 2 EACH

EXISTING APPROACH SLABS (RETAIN)

STA. 4311+30.16 TO STA. 4311+66.66 - R.M.L.
STA. 4312+17.41 TO STA. 4312+53.91 - L.M.L.
STA. 4313+42.62 TO STA. 4313+79.12 - R.M.L.
STA. 4314+24.87 TO STA. 4314+61.37 - L.M.L.

EXISTING BRIDGE ENDS

BRIDGE A3624 STA. 4312+53.91 - STA. 4314+24.87
BRIDGE B3624 STA. 4311+66.66 - STA. 4313+42.62



PROPOSED GUARDRAIL LOCATION	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL
STA. 4307+66.28 TO STA. 4311+85.03 ℄ MEDIAN I-40 LT.-R.M.L.	- 350 LIN. FT.	1 EACH	1 EACH
STA. 4307+75.70 TO STA. 4311+44.45 ℄ MEDIAN I-40 RT.-R.M.L.	- 300 LIN. FT.	1 EACH	1 EACH

STA. 4306+44 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 192' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4312+68 IN PLACE
TYPE E JCT. BOX IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
(45° LT. FWD. SKEW)
UNDER LT. MAIN LANES
RETAIN

STA. 4314+06.94 BEGIN
WIRE ROSE SAFETY FENCE
RT.-L.M.L.

EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE
• —— (E-11) —— •	SILT FENCE

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				6	ARK.			
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(2) PLAN STA. 4315+00 TO 4345+00

PROPOSED GUARDRAIL LOCATION			GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL
STA. 4314+06.94 TO STA. 4318+25.69	℄ MEDIAN I-40	RT.-L.M.L. -	350 LIN. FT.	1 EACH	1 EACH
STA. 4314+47.01 TO STA. 4318+15.76	℄ MEDIAN I-40	LT.-L.M.L. -	300 LIN. FT.	1 EACH	1 EACH
STA. 4329+75.16 TO STA. 4335+18.91	℄ MEDIAN I-40	RT.-R.M.L. -	475 LIN. FT.	1 EACH	1 EACH
STA. 4331+00.16 TO STA. 4335+18.91	℄ MEDIAN I-40	LT.-R.M.L. -	350 LIN. FT.	1 EACH	1 EACH

EXISTING GUARDRAIL LOCATION (REMOVE)			GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
STA. 4314+06.94 TO STA. 4316+06.94	℄ MEDIAN I-40	RT.-L.M.L. -	150 LIN. FT.	1 EACH
STA. 4314+47.01 TO STA. 4316+47.01	℄ MEDIAN I-40	LT.-L.M.L. -	150 LIN. FT.	1 EACH
STA. 4329+68.91 TO STA. 4335+18.91	℄ MEDIAN I-40	RT.-R.M.L. -	500 LIN. FT.	1 EACH
STA. 4333+18.91 TO STA. 4335+18.91	℄ MEDIAN I-40	LT.-R.M.L. -	150 LIN. FT.	1 EACH

REMOVAL OF EXISTING PORTLAND CEMENT CONC. PAVEMENT

STA. 4327+82.41 TO STA. 4334+82.41 - R.M.L. - 1866.7 SQ. YD.
STA. 4327+82.41 TO STA. 4334+82.41 - L.M.L. - 1866.7 SQ. YD.

REMOVAL & DISPOSAL OF APPROACH GUTTERS

STA. 4334+82.41 TO STA. 4335+18.91 - LT. & RT. - R.M.L. - 2 EACH
STA. 4334+82.41 TO STA. 4335+18.91 - LT. & RT. - L.M.L. - 2 EACH
STA. 4345+46.09 TO STA. 4345+82.59 - LT. & RT. - R.M.L. - 2 EACH
STA. 4345+46.09 TO STA. 4345+82.59 - LT. & RT. - L.M.L. - 2 EACH

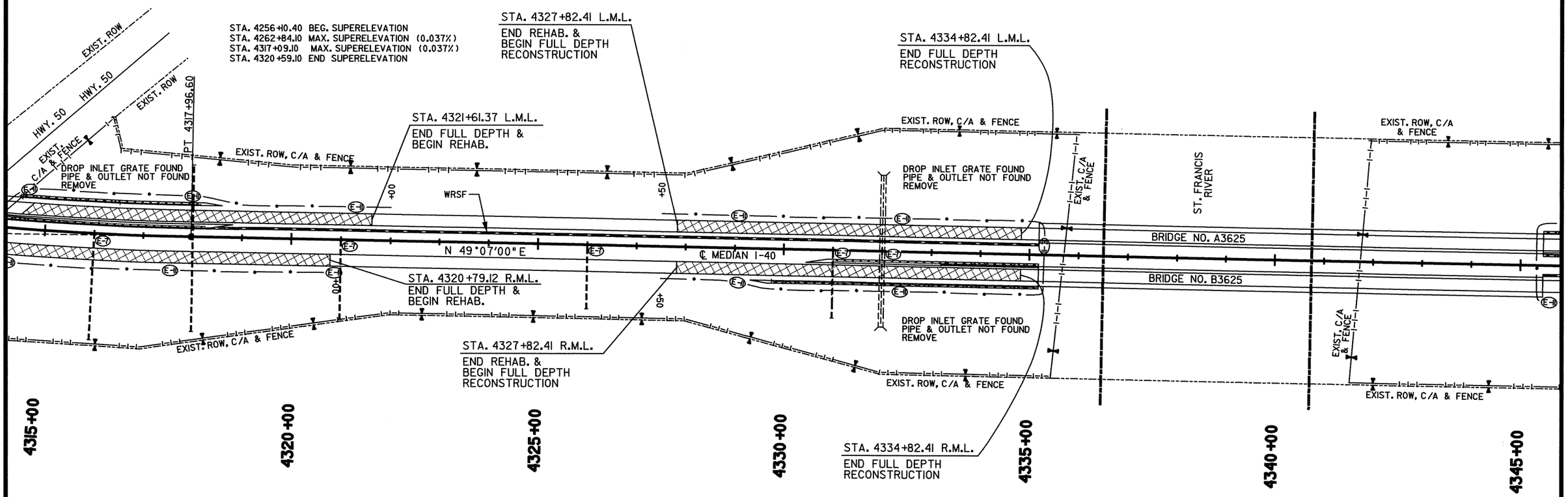
EXISTING APPROACH SLABS (RETAIN)

STA. 4334+82.41 TO STA. 4335+18.91 - R.M.L.
STA. 4334+82.41 TO STA. 4335+18.91 - L.M.L.
STA. 4345+46.09 TO STA. 4345+82.59 - R.M.L.
STA. 4345+46.09 TO STA. 4345+82.59 - L.M.L.

EXISTING BRIDGE ENDS

BRIDGE A3625 STA. 4335+18.91 - STA. 4345+46.09
BRIDGE B3625 STA. 4335+18.91 - STA. 4345+46.09

STA. 4335+18.91 END
WIRE ROPE SAFETY FENCE
RT.-L.M.L.



STA. 4318+00 IN PLACE
24" x 338' R.C. PIPE CULVERT
W/HDWLS LT. & RT.
RETAIN

STA. 4321+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 162' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4331+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 138' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4332+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
DBL. 5' x 7' x 308' R.C. BOX CULVERT
RETAIN

STA. 4316+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 216' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4326+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 130' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4320+00 - STA. 4335+00
ENVIRONMENTALLY SENSITIVE AREA. IMPACTS TO INTACT GROUND WITHIN THESE LOCATIONS SHOULD BE MINIMIZED. DIGGING IN EXCESS OF TWO FEET IN DEPTH SHOULD BE AVOIDED.

EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE
• —— (E-1) —— •	SILT FENCE

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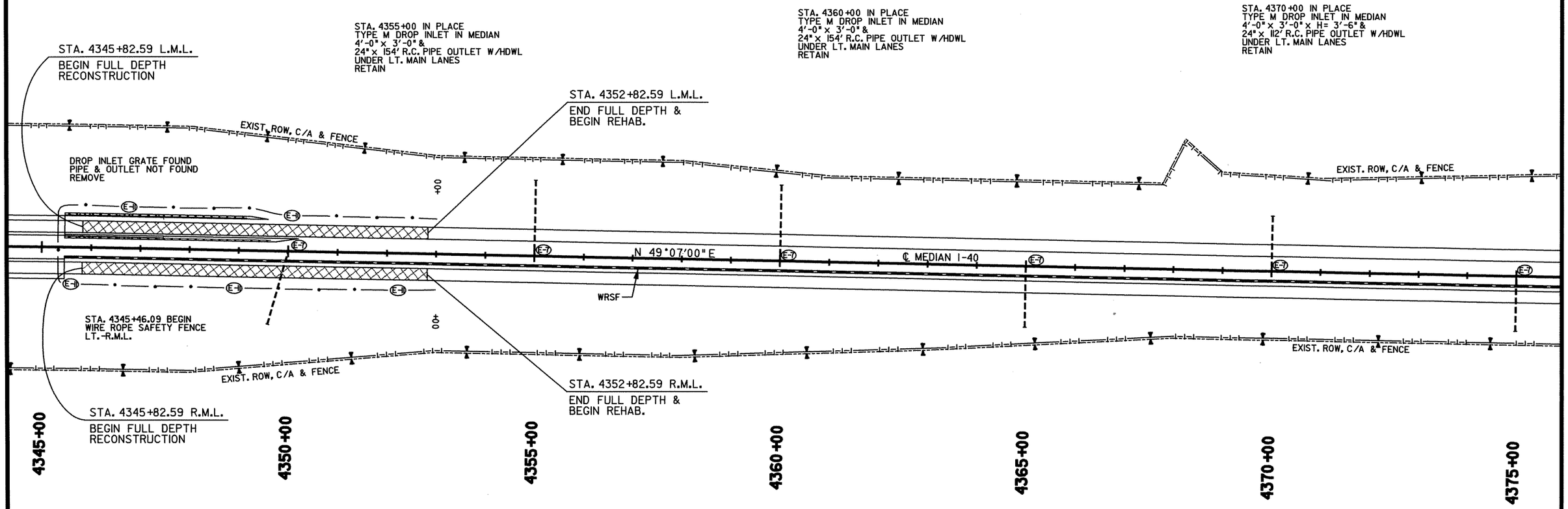
(2) PLAN STA. 4345+00 TO 4375+00

EXISTING GUARDRAIL LOCATION (REMOVE)			GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
STA. 4345+46.09 TO STA. 4347+46.09	℄ MEDIAN I-40	RT.-L.M.L. -	150 LIN. FT.	1 EACH
STA. 4345+46.09 TO STA. 4347+46.09	℄ MEDIAN I-40	LT.-L.M.L. -	150 LIN. FT.	1 EACH

PROPOSED GUARDRAIL LOCATION			GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL
STA. 4345+46.09 TO STA. 4349+14.84	℄ MEDIAN I-40	LT.-L.M.L. -	300 LIN. FT.	1 EACH	1 EACH
STA. 4345+46.09 TO STA. 4349+64.84	℄ MEDIAN I-40	RT.-L.M.L. -	350 LIN. FT.	1 EACH	1 EACH



STA. 4350+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
24" x 154' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
(15° RT. BK. SKEW)
RETAIN

REMOVAL OF EXISTING PORTLAND CEMENT CONC. PAVEMENT

STA. 4345+82.59 TO STA. 4352+82.59 - R.M.L. - 1866.7 SQ. YD.
STA. 4345+82.59 TO STA. 4352+82.59 - L.M.L. - 1866.7 SQ. YD.

STA. 4354+00 - STA. 4360+00
ENVIRONMENTALLY SENSITIVE AREA. IMPACTS TO INTACT GROUND WITHIN THESE LOCATIONS SHOULD BE MINIMIZED. DIGGING IN EXCESS OF TWO FEET IN DEPTH SHOULD BE AVOIDED.

STA. 4365+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 124' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4375+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 112' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

EROSION CONTROL LEGEND

E-7	DROP INLET SILT FENCE
• —— E-11 —— •	SILT FENCE

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6	ARK.			
JOB NO.		BB0105	229	374

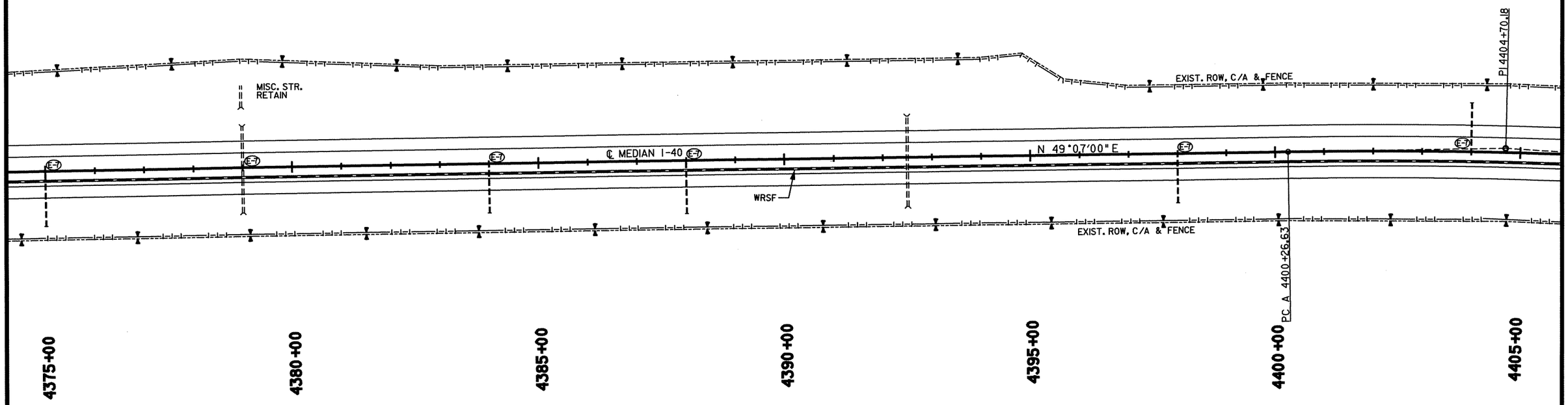
(2) PLAN STA. 4375+00 TO 4405+00

℄ MEDIAN I-40
P.I. = 4404+70.18
N = 12733118.6341
E = 2329520.2979
DELTA = 4°26' RT
DOC = 0°30'
T = 443.55'
L = 886.67'
P.C. = 4400+26.63
P.T. = 4409+13.30
(NO SUPER)

STA. 4379+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" &
6' x 2' x 176' R.C. BOX CULVERT
RETAIN

STA. 4392+50 IN PLACE
6' x 4' x 184' R.C. BOX CULVERT
RETAIN

STA. 4404+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN



STA. 4384+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4388+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 108' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4398+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

EROSION CONTROL LEGEND

(E-7)	DROP INLET SILT FENCE

REVISIONS

DATE	DESCRIPTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
2/8/13

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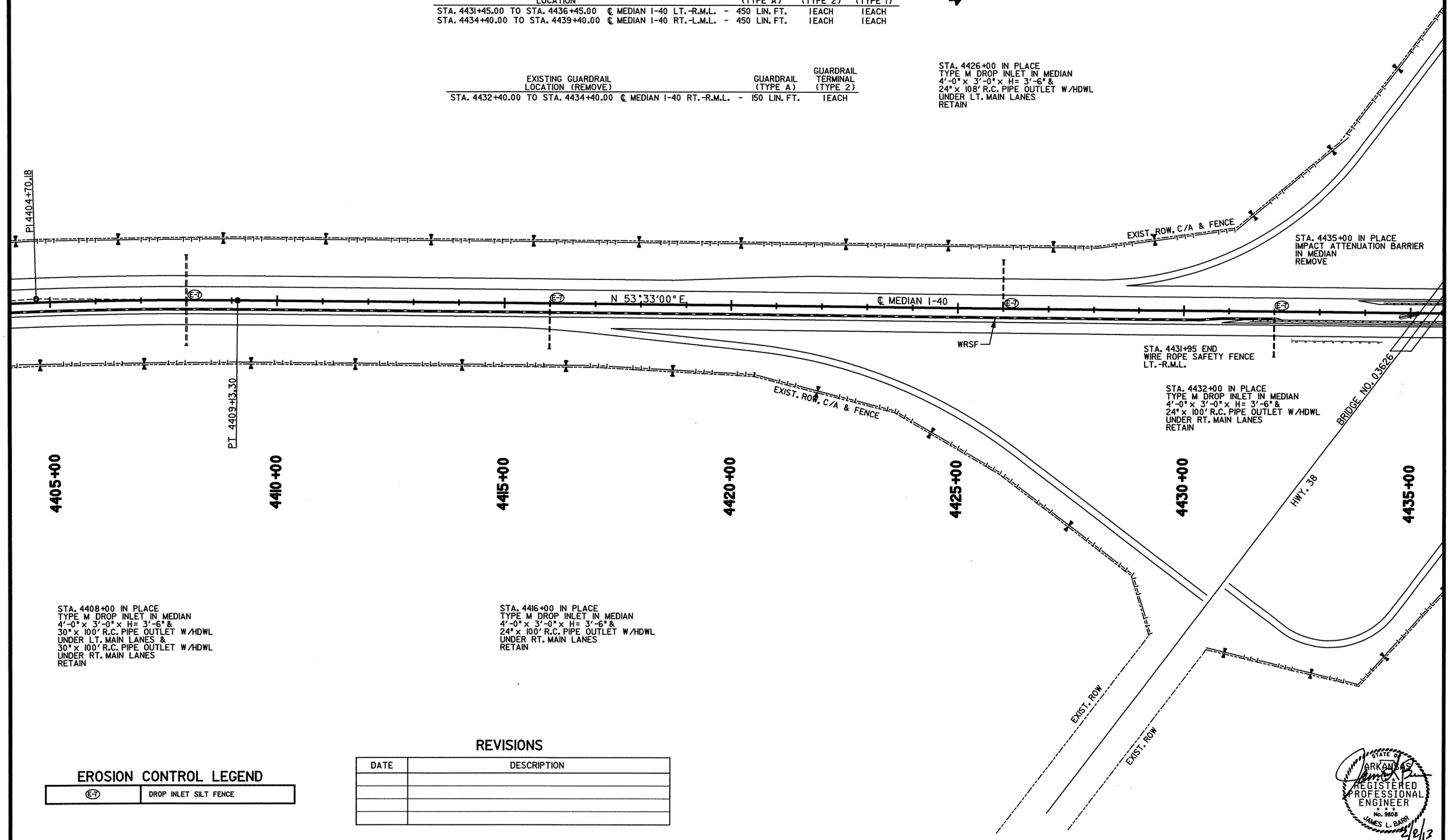
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	230	374

(2) PLAN STA. 4405+00 TO 4435+00

PROPOSED GUARDRAIL LOCATION	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	TERMINAL ANCHOR POST (TYPE 1)
STA. 4431+45.00 TO STA. 4436+45.00 ℄ MEDIAN I-40 LT.-R.M.L. -	450 LIN. FT.	1 EACH	1 EACH
STA. 4434+40.00 TO STA. 4439+40.00 ℄ MEDIAN I-40 RT.-L.M.L. -	450 LIN. FT.	1 EACH	1 EACH

EXISTING GUARDRAIL LOCATION (REMOVE)	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
STA. 4432+40.00 TO STA. 4434+40.00 ℄ MEDIAN I-40 RT.-R.M.L. -	150 LIN. FT.	1 EACH

STA. 4426+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 108' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN



STA. 4408+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
30" x 100' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES &
30" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

STA. 4416+00 IN PLACE
TYPE M DROP INLET IN MEDIAN
4'-0" x 3'-0" x H= 3'-6" &
24" x 100' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

EROSION CONTROL LEGEND

E-7	DROP INLET SILT FENCE

REVISIONS

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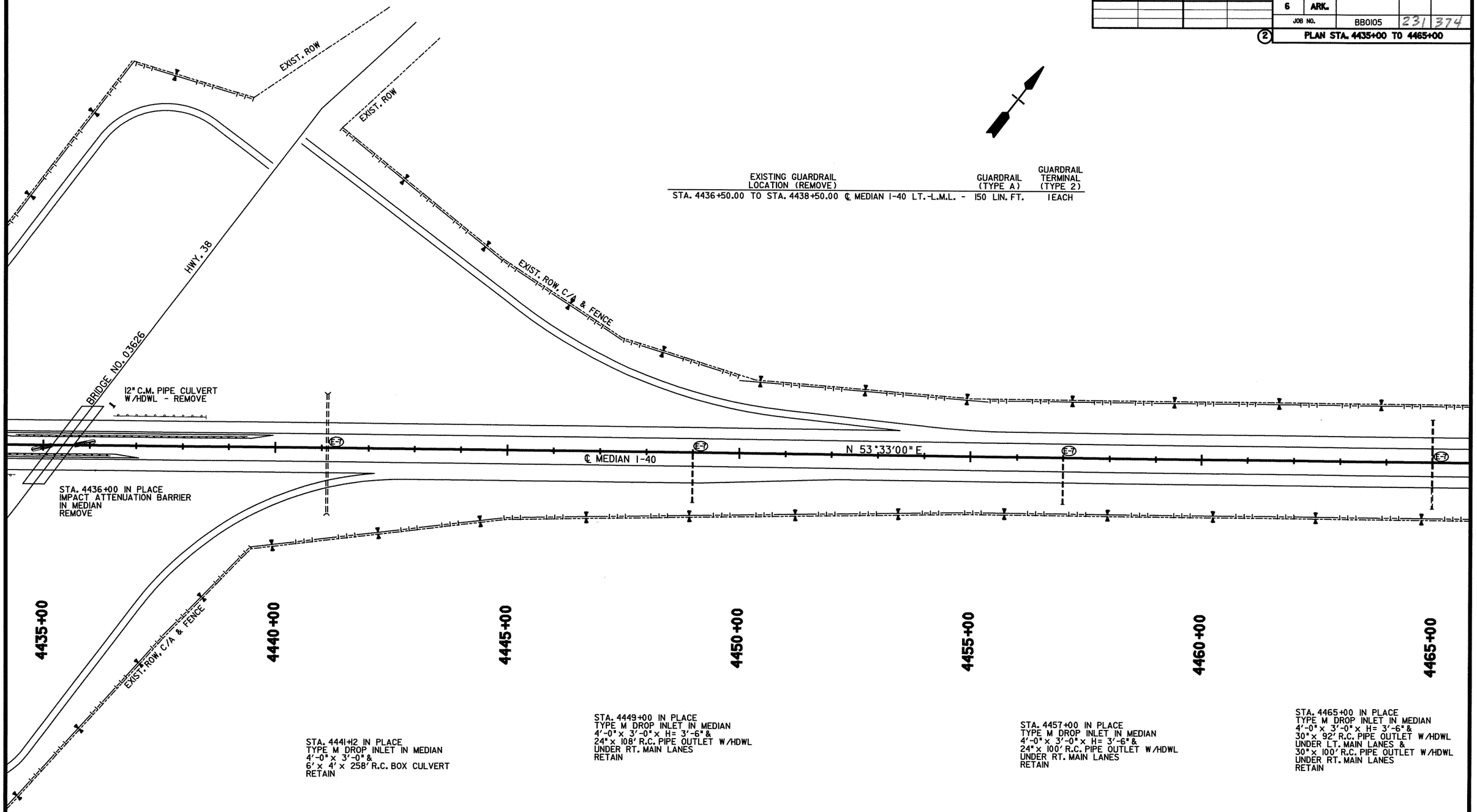
				6	ARK.			
				JOB NO.		BB0105	231	374

(2) PLAN STA. 4435+00 TO 4465+00



EXISTING GUARDRAIL LOCATION (REMOVE)	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)
STA. 4436+50.00 TO STA. 4438+50.00 ℄ MEDIAN I-40 LT.-L.M.L. -	150 LIN. FT.	1 EACH

EROSION CONTROL LEGEND

E-7	DROP INLET SILT FENCE

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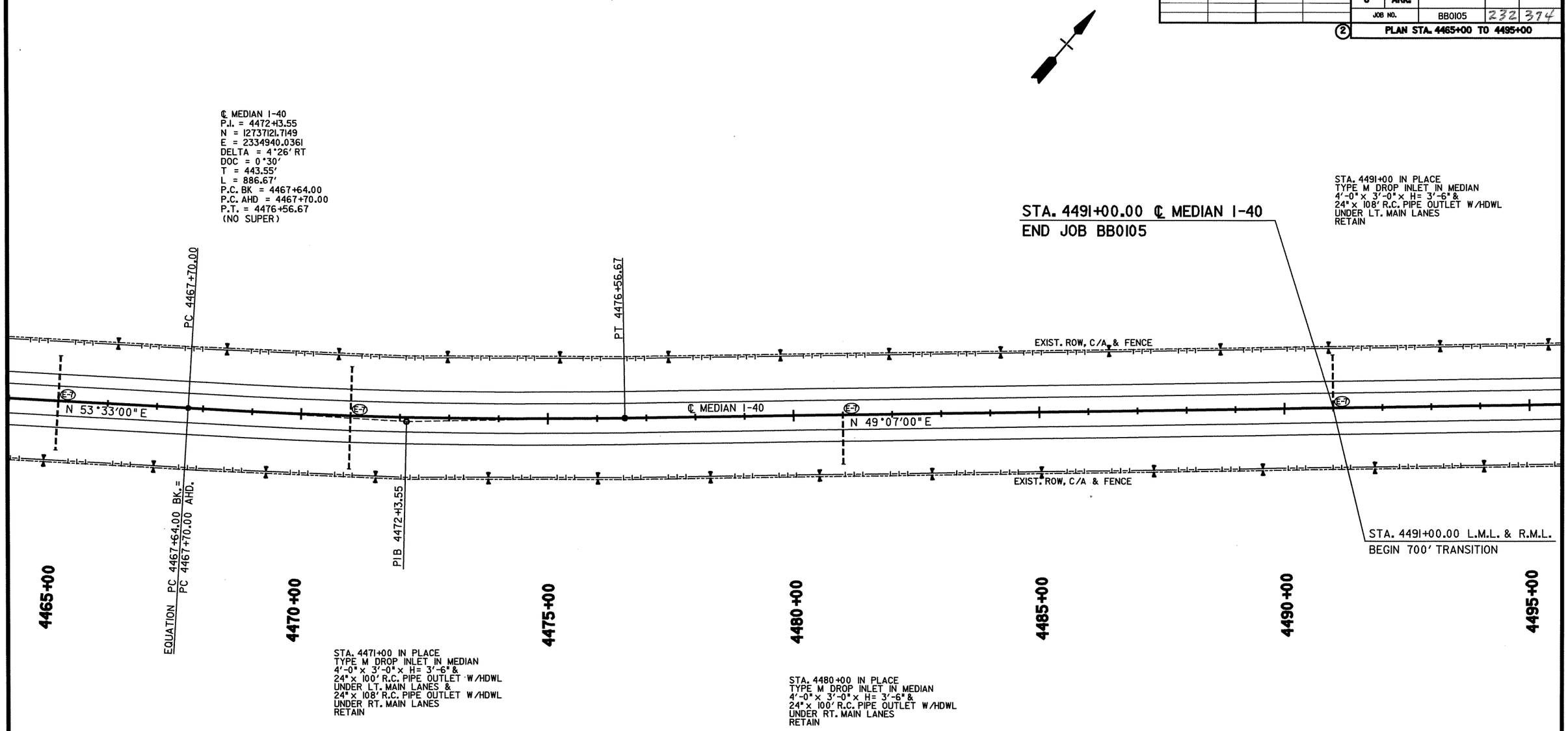
				6	ARK.			
				JOB NO.		BB0105	232	374

(2) PLAN STA. 4465+00 TO 4495+00



EROSION CONTROL LEGEND

E-7	DROP INLET SILT FENCE

REVISIONS

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				6	ARK.			
				JOB NO.		BB0105	233	374

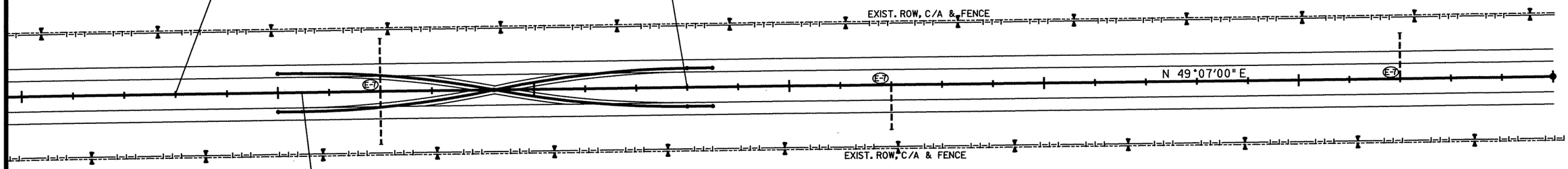
(2) PLAN STA. 4495+00 TO 4525+00

STA. 4502+00 IN PLACE
36" x 208' R.C. PIPE CULVERT
WITH TYPE "H" DROP INLET
4'-0" x 4'-8" x 9'-0" IN MEDIAN
RETAIN

STA. 4522+00 IN PLACE
TYPE "H" DROP INLET IN MEDIAN
4'-0" x 4'-0" x 2'-10" &
24" x 90' R.C. PIPE OUTLET W/HDWL
UNDER LT. MAIN LANES
RETAIN

STA. 4498+00.00 L.M.L. & R.M.L.
END 700' TRANSITION

STA. 4508+00.00
END CROSSOVER



STA. 4500+46.78
BEGIN CROSSOVER

4495+00 4500+00 4505+00 4510+00 4515+00 4520+00 4525+00

STA. 4512+00 IN PLACE
TYPE "H" DROP INLET IN MEDIAN
4'-0" x 4'-0" x 2'-10" &
24" x 88' R.C. PIPE OUTLET W/HDWL
UNDER RT. MAIN LANES
RETAIN

EROSION CONTROL LEGEND

E-7	DROP INLET SILT FENCE

REVISIONS

DATE	DESCRIPTION

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				6	ARK.			
				JOB NO.	B80105		234	374

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER N. 11425 TRINITY D. SMITH 1-23-12

STA. 199+45 UNCLASSIFIED EXC. ON LT. = 30 CU. YDS.

STA. 200+69 IN PLACE
18" X 36' C.M. PIPE CULV'T.
LT. SIDE DRAIN
REMOVE AND INSTALL @ +40
18" X 28' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. ON LT. = 30 CU. YDS.

STA. 201+20 IN PLACE
24" X 24' C.M. PIPE CULV'T.
LT. SIDE DRAIN
REMOVE AND INSTALL @ +21
24" X 30' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. ON LT. = 55 CU. YDS.

STA. 202+14 IN PLACE
24" X 53' C.M. PIPE CULV'T.
LT. SIDE DRAIN
REMOVE AND INSTALL @ +17
24" X 58' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. ON LT. = 100 CU. YDS.

STA. 203+07 CONSTRUCT
36" X 62' R.C. PIPE CULVERT
ON 28° RT. FWD. SKEW
(CLASS III)(TYPE 3 BEDDING) WITH
FES LT. & RT.
D.A. = 24.4 AC., Q50 = 37.5 C.F.S.
36" R.C. PIPE = 62 LIN. FT.
36" FES = 2 EACH

STA. 202+72 IN PLACE
24" X 76' R.C. PIPE CULVERT
W/HDWLS. LT. & RT.
PLUG AND ABANDON

C.L. CONSTRUCT
PI = 208+48.99
Δ = 4°45'30.4" LT.
D = 1°00'00"
T = 238.06'
L = 475.85'
PC = 206+10.93
PT = 210+86.78
NO SUPER

STA. 210+66.88 CONSTRUCT
TYPE N-2 DROP INLET LT.
H = 3'-0"
WITH 18" x 46' R.C. PIPE OUTLET
(CLASS III)(TYPE 3 BEDDING)
CONNECT TO D.T. @ STA. 210+89.41 RT.

STA. 200+68 IN PLACE
18" X 24' C.M. PIPE CULV'T.
RT. SIDE DRAIN
REMOVE AND INSTALL
18" X 32' PIPE CULV'T.
RT. SIDE DRAIN
CONST. APPR. ON RT. = 50 CU. YDS.

STA. 201+47 IN PLACE
24" X 48' C.M. PIPE CULV'T.
RT. SIDE DRAIN
REMOVE AND INSTALL @ +53
24" X 58' PIPE CULV'T.
RT. SIDE DRAIN
CONST. APPR. ON RT. = 110 CU. YDS.

STA. 198+54 IN PLACE
24" X 66' R.C. PIPE CULVERT
W/HDWLS. LT. & RT.
RETAIN

STA.	STA.	WIRE FENCE SIDE	TYPE	LIN. FT.
203+19	203+89	LT.	A	244

STA. 196+87.52 - BEGIN
HWY. 38
LOG MILE 0.53

STA. 202+95 IN PLACE
36" X 37' C.M. PIPE CULV'T.
24" X 98' C.M. PIPE CULV'T.
JUNCTION BOX
RT. SIDE DRAINS
REMOVE AND INSTALL @ +83
24" X 56' PIPE CULV'T.
RT. SIDE DRAIN
CONST. APPR. ON RT. = 110 CU. YDS.

C.L. CONSTRUCT
PI = 203+41.88
Δ = 4°45'46.8" RT.
D = 1°00'00"
T = 238.29'
L = 476.30'
PC = 201+03.59
PT = 205+79.89
NO SUPER

STA. 210+89.41 CONSTRUCT
TYPE N-2 DROP INLET RT.
H = 3'-9"
WITH 12" x 80' C.M. PIPE OUTLET
WITH CONCRETE SPILLWAY (TYPE A)

EROSION CONTROL MATTING

STA.	STA.	SIDE	SQ. YDS.
208+00	211+50	RT.	311.1

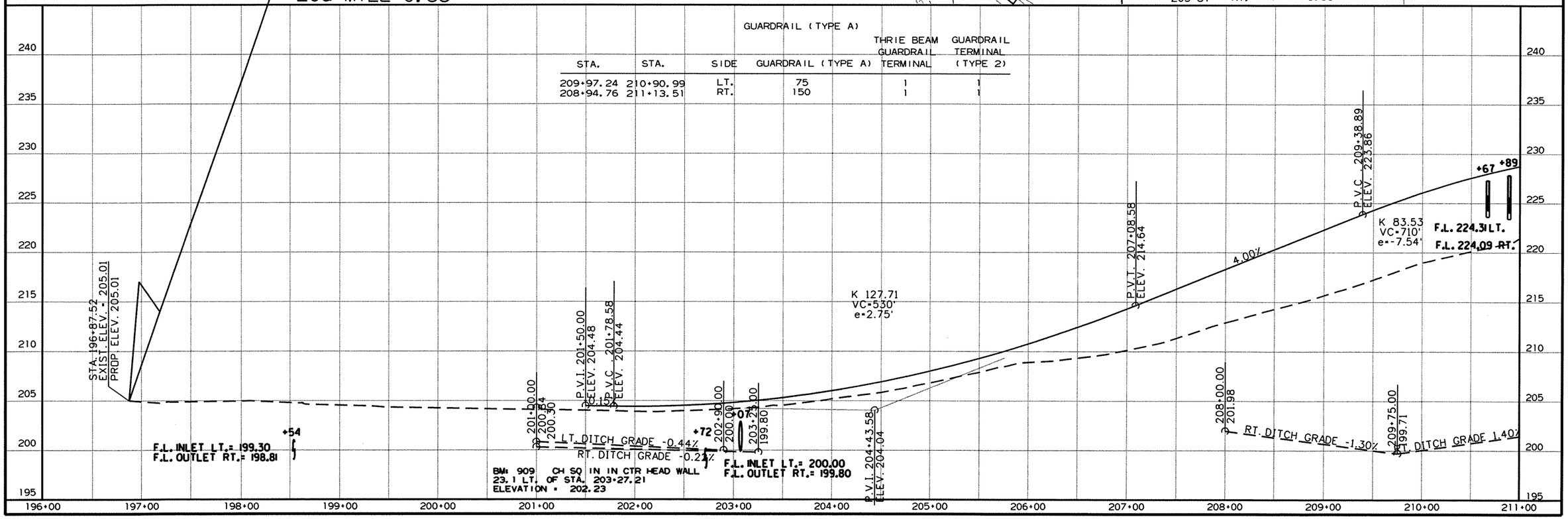
CONCRETE DITCH PAVING

STA.	SIDE	W'	SQ. YDS.
205+11	LT.	4'	30.22
205+81	RT.	4'	9.33

HWY. 38

GUARDRAIL (TYPE A)

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
209+97.24	210+90.99	LT.	75	1	1
208+94.76	211+13.51	RT.	150	1	1



11/7/12 plan and profile sheets

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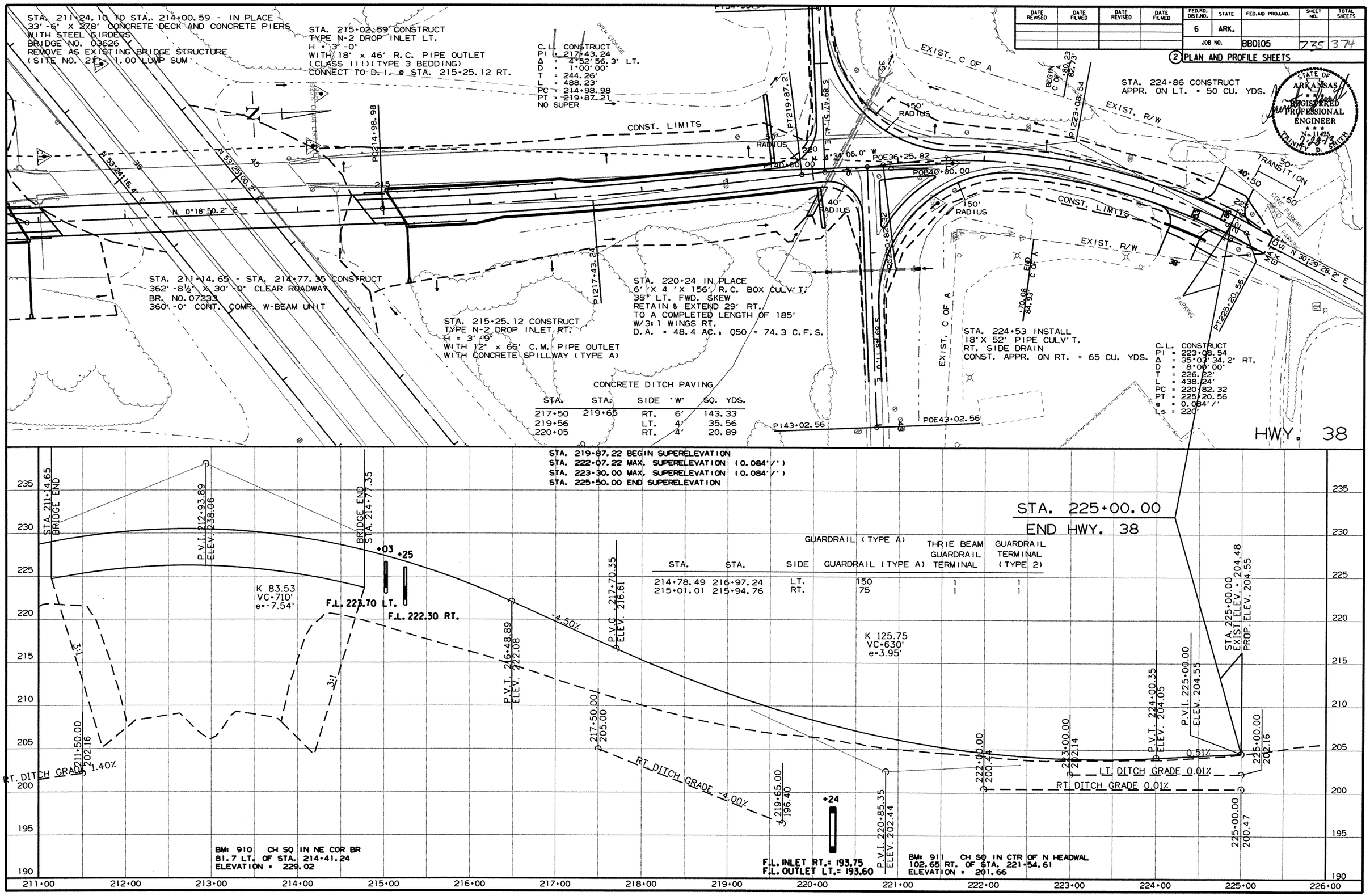
				JOB NO.		BB0105	735	374

(2) PLAN AND PROFILE SHEETS



CONCRETE DITCH PAVING

STA.	STA.	SIDE	"W"	SQ. YDS.
217+50	219+65	RT.	6'	143.33
219+56		LT.	4'	35.56
220+05		RT.	4'	20.89

GUARDRAIL (TYPE A)

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
214+78.49	216+97.24	LT.	150	1	1
215+01.01	215+94.76	RT.	75	1	1

11/7/12 plan and profile sheets

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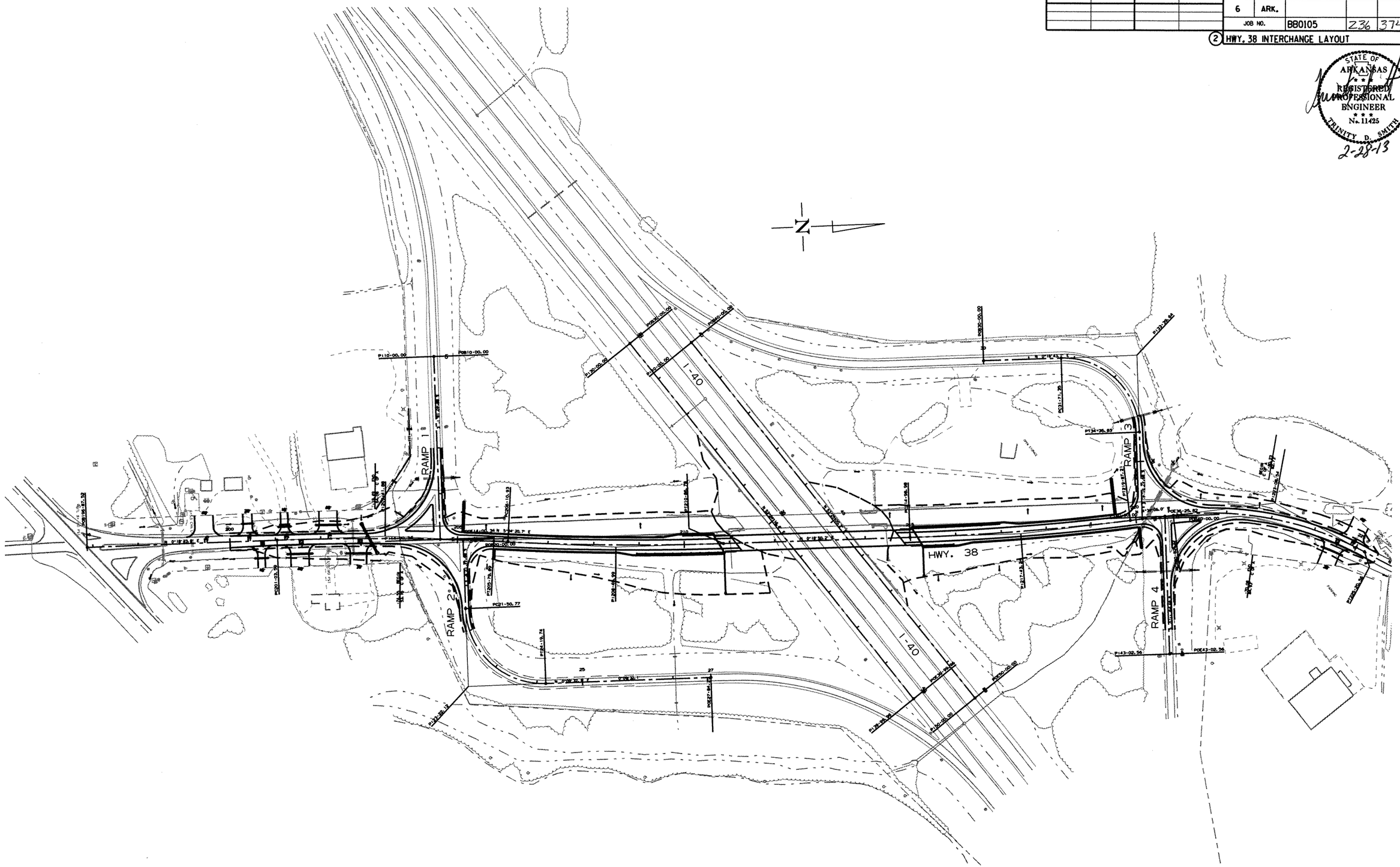
				6	ARK.			
				JOB NO.		BB0105	236	374

(2) HWY. 38 INTERCHANGE LAYOUT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-28-13



HWY. 38 INTERCHANGE LAYOUT
SCALE: 1" = 200'

rbb0105 11/7/12 plan and profile sheets

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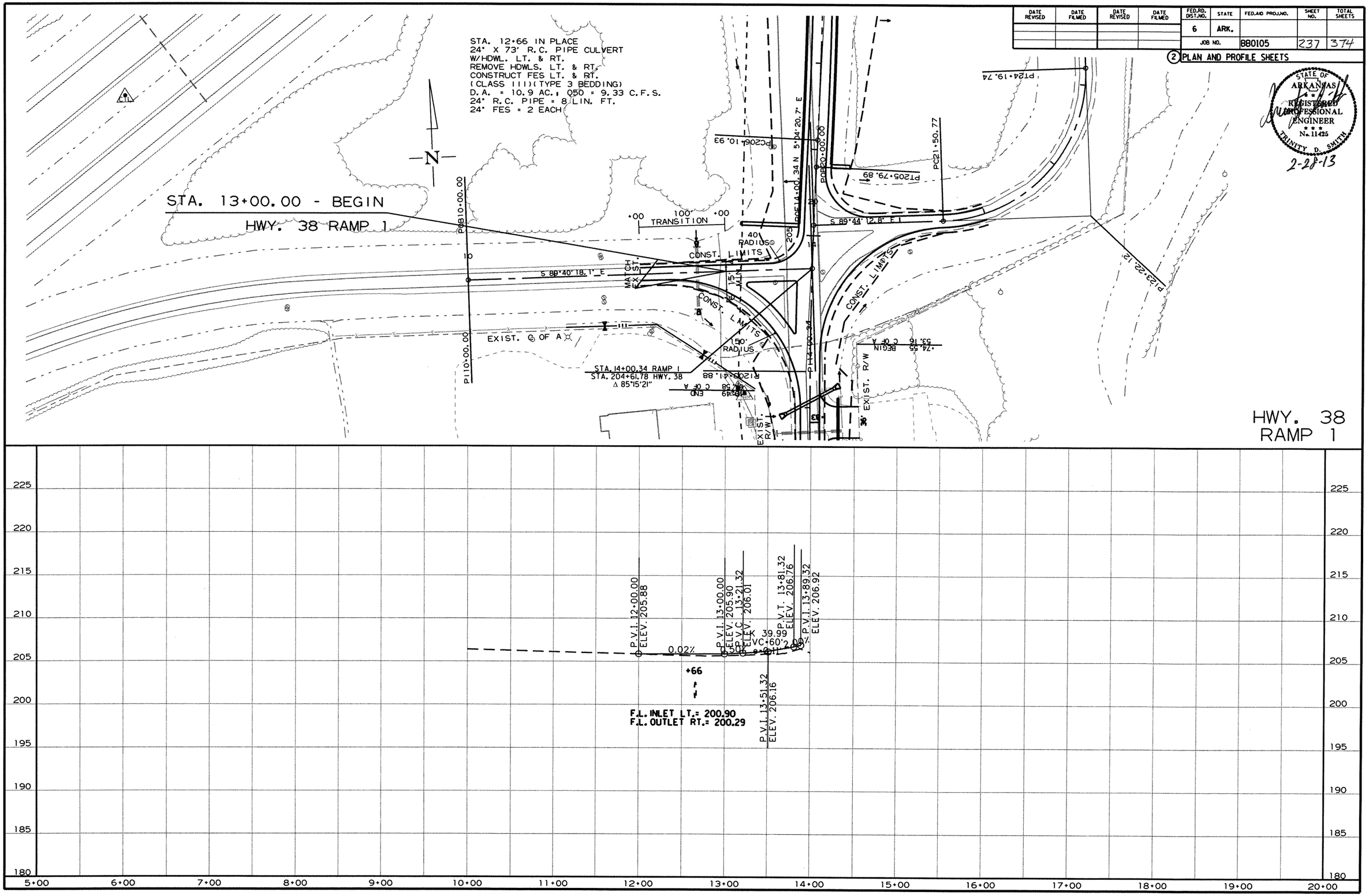
				6	ARK.			
				JOB NO.		BB0105	237	374

(2) PLAN AND PROFILE SHEETS

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

2-28-13



rbb0105.dgn 11/7/12 plan and profile sheets

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				6	ARK.			
				JOB NO.		BB0105	238	374

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
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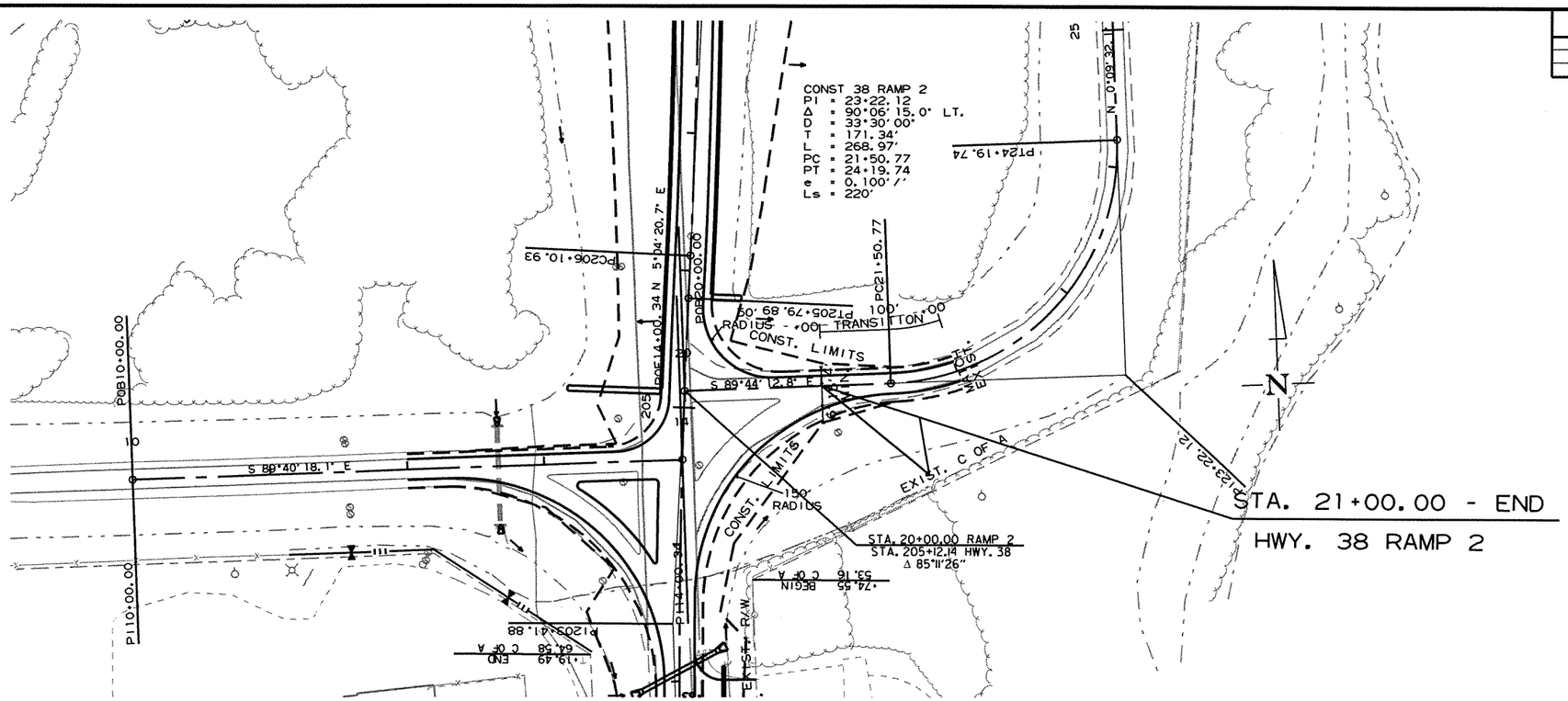
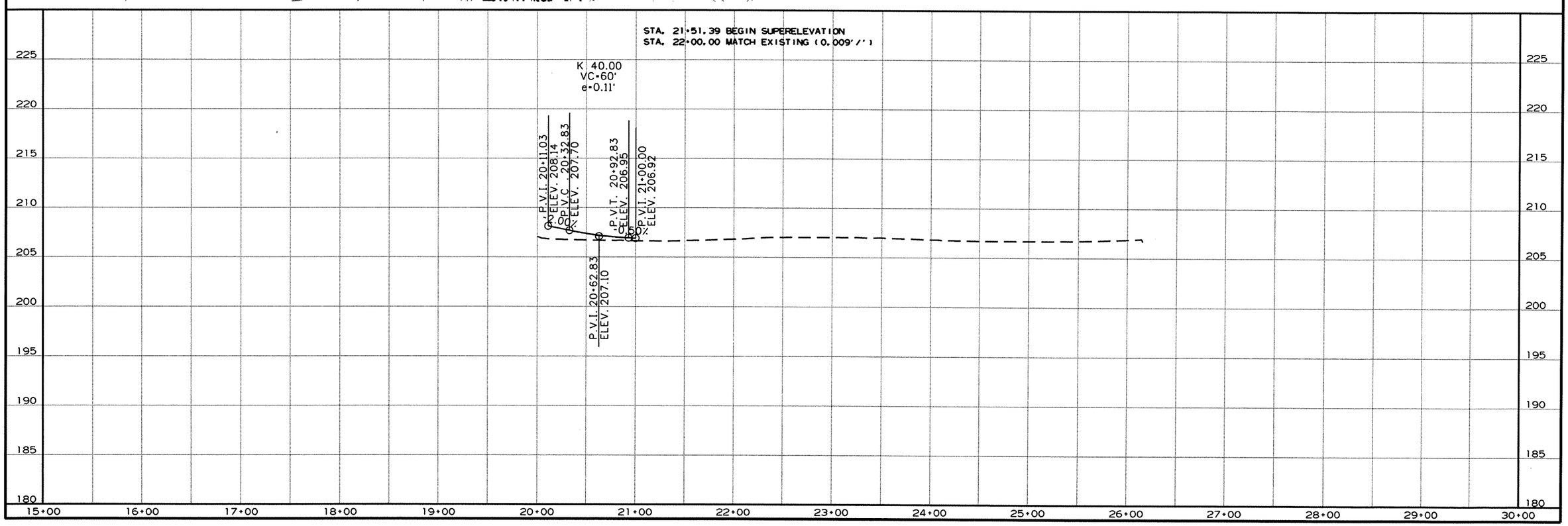
2-28-13



HWY. 38
RAMP 2



11/7/12 plan and profile sheets

rbb0105

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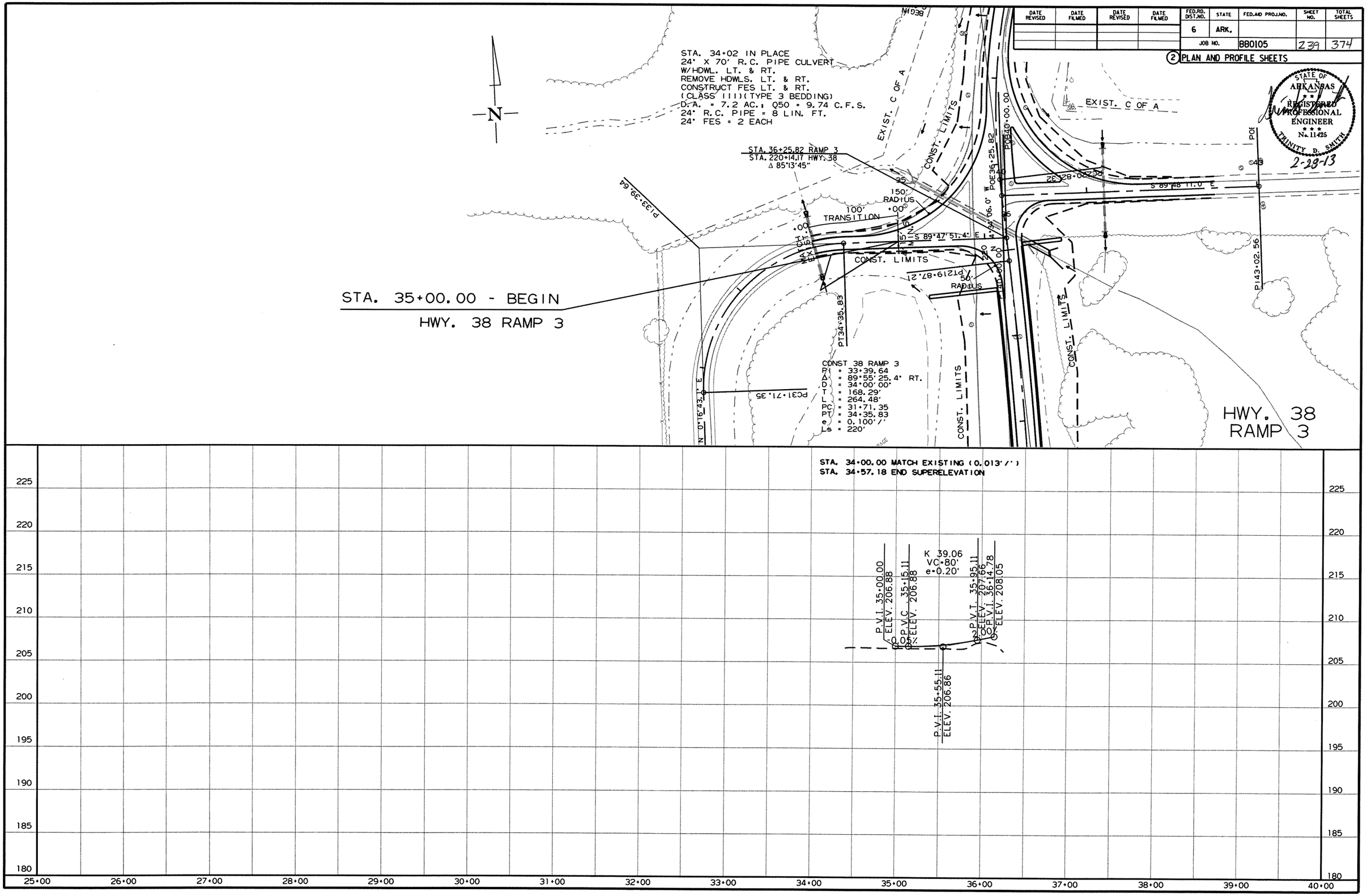
				6	ARK.			
				JOB NO.		BB0105	239	374

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH 2-28-13



rbb0105.dgn 11/7/12 plan and profile sheets

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(2) PLAN AND PROFILE SHEETS

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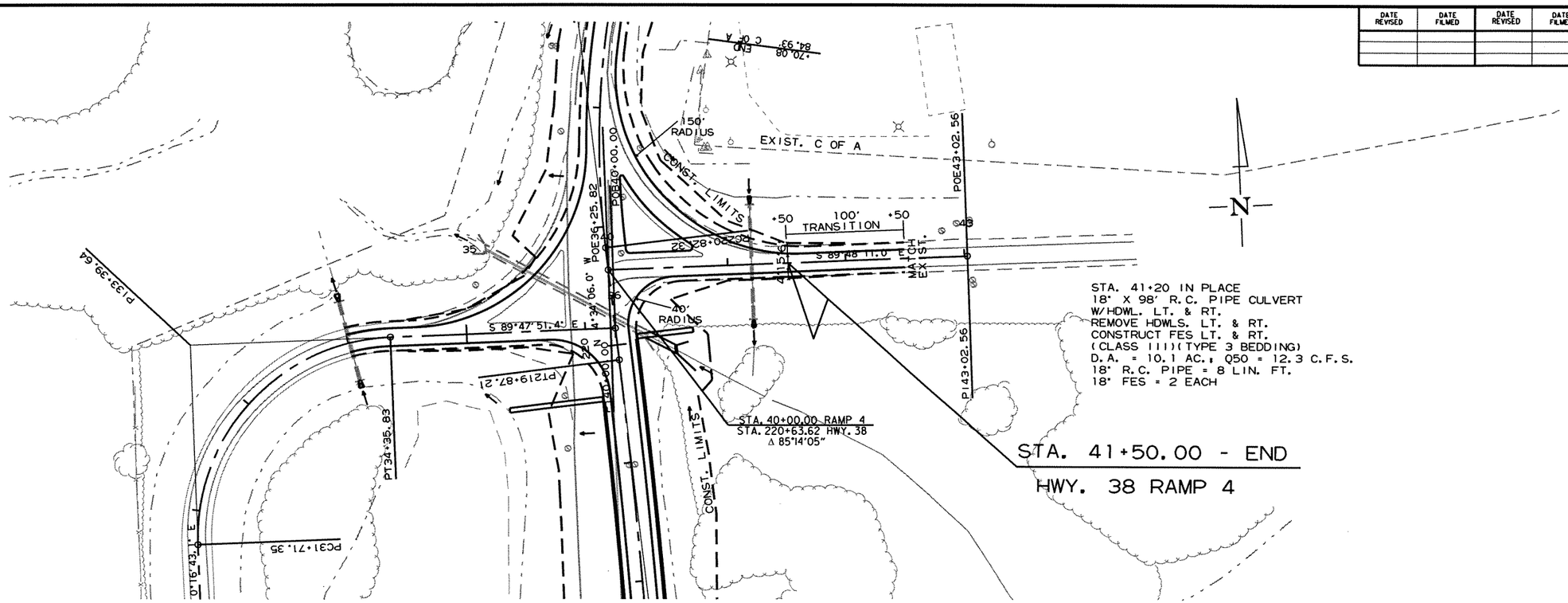
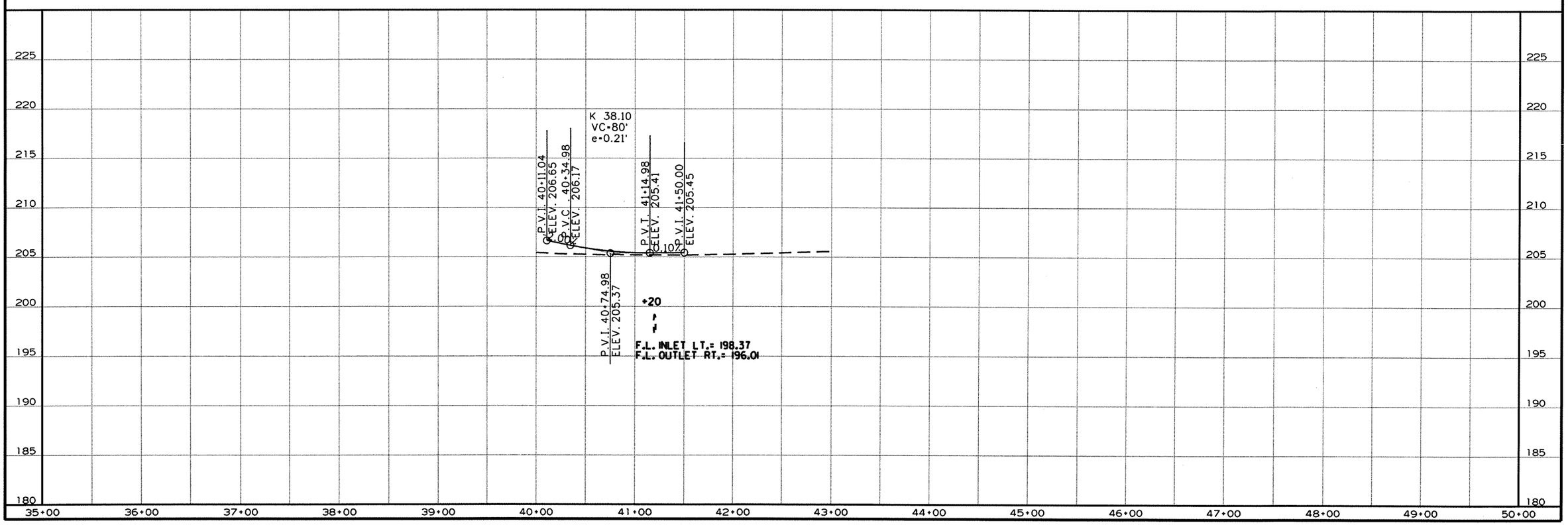


STA. 41+20 IN PLACE
18" X 98' R.C. PIPE CULVERT
W/HDWL. LT. & RT.
REMOVE HDWLS. LT. & RT.
CONSTRUCT FES LT. & RT.
(CLASS III)(TYPE 3 BEDDING)
D.A. = 10.1 AC.; Q50 = 12.3 C.F.S.
18" R.C. PIPE = 8 LIN. FT.
18" FES = 2 EACH

STA. 41+50.00 - END
HWY. 38 RAMP 4

HWY. 38
RAMP 4



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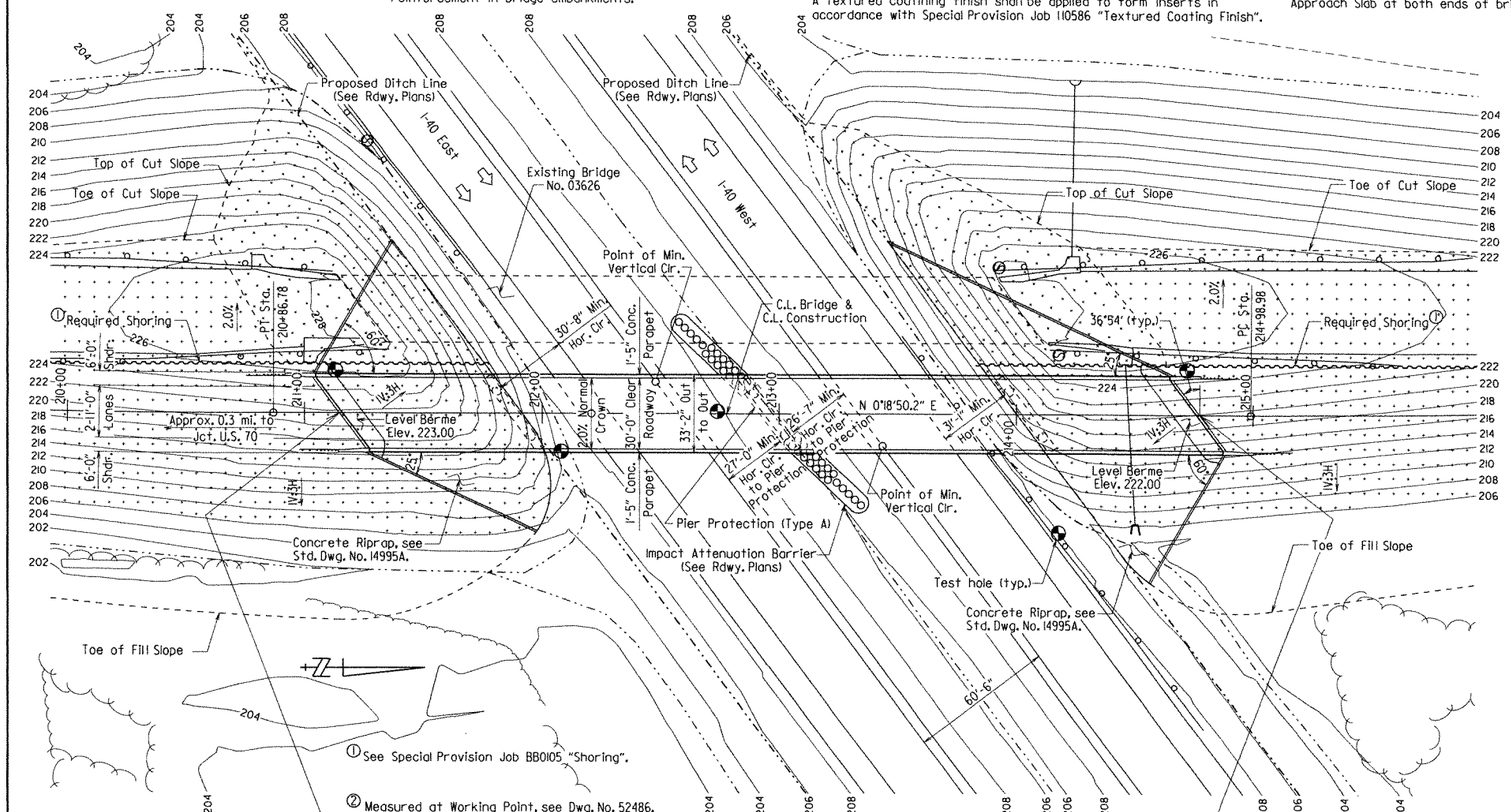
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	260	374
				① 07233		LAYOUT		52474

For R/W Data, see Rdwy. plans.

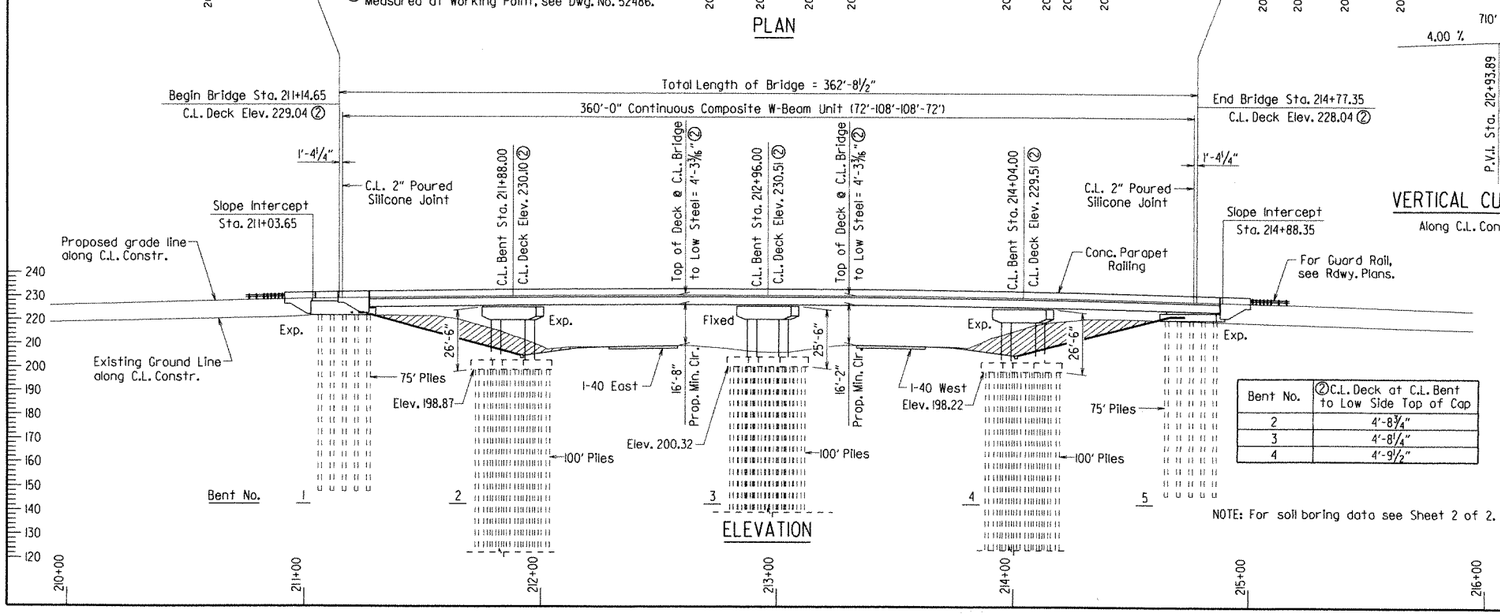
NOTE: See Special Provision Job BB0105 "Geosynthetic Internal Reinforced Embankment Construction" for details of geogrid reinforcement in bridge embankments.

NOTE: State of Arkansas Form Inserts shall be placed on both sides of wingwalls at ends of bridge in accordance with Dwg. No. 52479. A textured coating finish shall be applied to form inserts in accordance with Special Provision Job 110586 "Textured Coating Finish".

NOTE: Use Type C Approach Gutters ("W" = 4'-0") at both ends of bridge, see Standard Drawing No. 2016C. Use Type Special 1 Approach Slab at both ends of bridge, see Dwg. No. 52494.



PLAN



ELEVATION

Bent No.	② C.L. Deck at C.L. Bent to Low Side Top of Cap
2	4'-8¾"
3	4'-8¼"
4	4'-9½"

NOTE: For soil boring data see Sheet 2 of 2.

710' V.C.
4.00 % -4.50 %
P.V.I. Sta. 212+93.89
Elev. 238.055

VERTICAL CURVE DATA
Along C.L. Construction

GENERAL NOTES

BENCH MARK: ⅝" rebar with 2" cap, 75.67' left of Station 214+20.81, elevation 227.19.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 Edition) with applicable supplemental specifications and special provisions. Unless otherwise noted, Section and subsection refer to the Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Fifth Edition, with 2010 Interim Revisions.

LIVE LOADING: HL93
SEISMIC PERFORMANCE ZONE: 4

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (superstructure)	f'c = 4,000 psi
Class S Concrete (substructure)	f'c = 3,500 psi
Reinforcing Steel (AASHTO M 31 or M 53, Gr. 60)	fy = 60,000 psi
Structural Steel (AASHTO M 270, Gr. 50)	Fy = 50,000 psi
Structural Steel (AASHTO M 270, Gr. 36)	Fy = 36,000 psi

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.

STEEL SHELL PILING: End bent piling shall be 18" diameter concrete filled steel shell piles and shall be driven to a minimum ultimate bearing capacity of 180 tons per pile. Piling in Bents 2 thru 4 shall be 18" diameter concrete filled steel shell piles and shall be driven to a minimum ultimate bearing capacity of 245 tons per pile. All piling shall be driven with an approved air, steam or diesel hammer to a minimum tip elevation of 150.0 or lower at Bents 1 & 5 and 102.0 or lower at Bents 2, 3 & 4. Piling in end bents shall be driven after embankment to bottom of cap is in place.

Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. No additional payment will be made for cut-off or build-up. Test Piles are not required but may be driven for the Contractor's information in accordance with subsection 805.08(g).

Water jetting or other methods as approved by the Engineer may be required to achieve minimum penetration. This work shall not be paid for directly, but shall be considered incidental to the Item "Steel Shell Piling (18" Dia.)".

DRIVING SYSTEM: The driving system approval and ultimate bearing capacity determination for piling shall be based on the requirements of subsection 805.09(b) "Method B-Wave Equation Analysis (WEAP)". It is estimated that a minimum rated hammer energy of 27,000 ft.-lbs. per blow will be required to obtain the ultimate bearing capacity at Bents 1 & 5 and 42,000 ft.-lbs. per blow will be required to obtain the ultimate bearing capacity at Bents 2, 3 & 4.

FOOTINGS: Footings at Bents 2 thru 4 shall be set a minimum of 2' below natural ground or at the elevations shown on the plans, whichever is lower. Foundations for footings shall be prepared in accordance with subsection 801.04.

PAINTING: All Grade 50 structural steel except galvanized members shall be painted as specified in subsection 807.75. The color of paint shall be Gray and shall match Federal Std. 595B, Color Chip 36270.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in subsection 802.19 for Class S Tined Bridge Roadway Surface Finish.

DETAIL DRAWINGS	DRAWING NOS.
End Bents	52476-52478
Steel Shell Piling	52480
Intermediate Bents	52481-52484
Elastomeric Bearings	52485
360'-0" Cont. Comp. W-Beam Unit	52486-52493
Type Special 1 Approach Slabs	52494

EXISTING BRIDGE: Existing Bridge No. 03626 (I-40 Logmile 247.05) is 33.5' wide and 278' long and consists of steel I-beam spans supported by concrete columns on concrete pile footings.

REMOVAL AND SALVAGE: After the new bridge is open to traffic, existing bridge no. 03626 shall be removed in accordance with Section 205. All material from the existing bridge shall become the property of the Contractor.

MAINTENANCE OF TRAFFIC: See Roadway Plans for maintenance of traffic.

STATE OF ARKANSAS
Carl J. Fuselier
REGISTERED PROFESSIONAL ENGINEER
No. 7510
8/26/11
CARL J. FUSELIER

BRIDGE ENGINEER

SHEET 1 OF 2

LAYOUT OF BRIDGE
HWY. 38 OVER INTERSTATE 40
FORREST CITY - EAST (F)
ST. FRANCIS COUNTY

ROUTE 40 SEC. 51

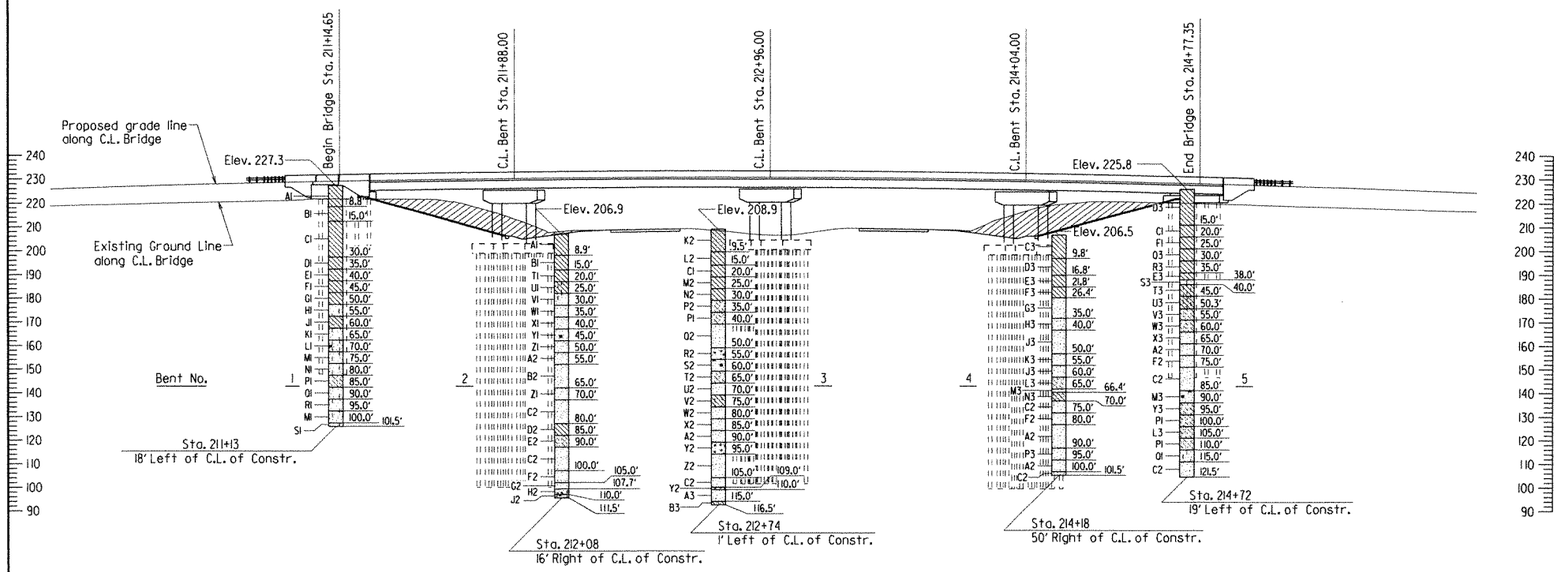
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KWY DATE: 5-23-11 FILENAME: bbb0105_L1.dgn
CHECKED BY: PGT DATE: 9-22-11 SCALE: 1" = 30'
DESIGNED BY: KWY DATE: 5/11

BRIDGE NO. 07233 DRAWING NO. 52474

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	261	374
				1 07233		LAYOUT		52475



ELEVATION OF SOIL BORINGS

BORING LEGEND

A1-Moist, Medium Stiff, Brown Clay
B1-Moist, Stiff, Brown and Gray Clay
C1-Moist, Medium Stiff, Gray Clay
D1-Moist, Stiff, Gray and Brown Clay
E1-Moist, Medium Stiff, Gray and Brown Clay some Organic Matter
F1-Moist, Medium Stiff, Gray Clay with some Organic Matter
G1-Wet, Medium Stiff, Brown Clay with some Sand
H1-Wet, Medium Dense, Brown Silty Sand
J1-Wet, Medium Stiff, Gray Clay with Sand
K1-Wet, Medium Dense, Brown and Gray Sand with Silt
L1-Wet, Medium Dense, Gray Sand with Silt and Organic Matter
M1-Wet, Medium Dense, Gray Sand with Silt
N1-Wet, Dense, Gray Silty Sand
P1-Wet, Medium Dense, Gray Sand with Clay
Q1-Wet, Medium Dense, Gray Silty Sand
R1-Wet, Medium Dense, Gray Silty Sand with Trace of Gravel
S1-Wet, Dense, Gray Sand with Silt
T1-Moist, Medium Stiff, Brown and Gray Clay with some Organic Matter
U1-Wet, Medium Stiff, Brown Silty Clay
V1-Wet, Loose, Gray and Brown Silty Sand
W1-Wet, Loose, Brown and Gray Sand
X1-Wet, Medium Dense, Gray and Brown Sand
Y1-Wet, Medium Dense, Gray and Brown Sand with Organic Matter
Z1-Wet, Medium Dense, Gray Sand with Trace of Gravel
A2-Wet, Medium Dense, Gray Sand with Trace of Organic Matter
B2-Wet, Medium Dense, Gray Sand
C2-Wet, Medium Dense, Gray Sand
D2-Wet, Medium Stiff, Gray Clay
E2-Wet, Medium Dense, Gray Sand with Clay and some Organic Matter
F2-Wet, Dense, Gray Sand
G2-Wet, Very Dense, Gray Sand
H2-Wet, Very Dense, Gray Sand with Gravel
J2-Wet, Dense, Gray Sand with Gravel, Clay and Cemented Sand Seams
K2-Moist, Medium Stiff, Gray Clay with Sand and some Organic Matter
L2-Moist, Stiff, Brown and Gray Clay with some Organic Matter
M2-Wet, Medium Stiff, Gray and Brown Clay
N2-Wet, Soft, Brown and Gray Clay
P2-Wet, Loose, Brown and Gray Clayey Sand
Q2-Wet, Medium Dense, Gray and Brown Sand with Trace of Gravel and Organic Matter
R2-Wet, Medium Dense, Gray and Brown Sand with Gravel and some Organic Matter
S2-Wet, Medium Dense, Gray and Brown Sand with Organic Matter and some Gravel
T2-Wet, Dense, Gray Sand with Clay
U2-Wet, Medium Dense, Gray and Brown Sand with Trace of Organic Matter
V2-Wet, Soft, Gray Silty Clay
W2-Wet, Medium Dense, Gray Sand with some Gravel and Organic Matter
X2-Wet, Medium Dense, Gray Sand with some Clay and Organic Matter
Y2-Wet, Medium Dense, Gray Sand with Gravel
Z2-Wet, Medium Dense, Gray Sand with some Organic Matter
A3-Wet, Very Dense, Gray Sand with Cemented Sand and Trace of Organic Matter
B3-Wet, Hard, Gray Clay with Sand
C3-Moist, Stiff, Brown Clay
D3-Moist, Medium Stiff, Brown and Gray Clay
E3-Moist, Medium Stiff, Brown Clay with some Organic Matter
F3-Moist, Medium Stiff, Brown and Gray Clay with Trace of Sand
G3-Wet, Medium Dense, Brown and Gray Sand with Trace of Organic Matter
H3-Wet, Medium Dense, Gray and Brown Sand with Trace of Organic Matter and Gravel
J3-Wet, Medium Dense, Gray Sand with Trace of Organic Matter and Gravel
K3-Wet, Dense, Gray Sand with Trace of Gravel
L3-Wet, Loose, Gray Sand with Clay
M3-Wet, Medium Dense, Gray Sand with Organic Matter
N3-Wet, Stiff, Gray Sandy Clay
P3-Wet, Medium Dense, Gray Sand with some Clayey Sand
Q3-Moist, Stiff, Gray Clay
R3-Moist, Stiff, Brown Clay with some Organic Matter
S3-Wet, Loose, Brown Silty Sand
T3-Wet, Soft, Brown Silty Clay with some Organic Matter
U3-Wet, Soft, Gray Silty Clay with Sand
V3-Wet, Medium Dense, Brown Sand with Clay
W3-Wet, Loose, Gray Clayey Sand
X3-Wet, Medium Dense, Gray Sand with some Clay
Y3-Wet, Very Loose, Gray Clayey Sand

Sta. 211+13 - 18' Left of C.L. of Constr.

4.3- 5.3, N=6
9.3- 10.3, N=10
15.5- 16.5, N=5
20.5- 21.5, N=7
25.5- 26.5, N=6
30.5- 31.5, N=11
35.5- 36.5, N=8
40.5- 41.5, N=8
45.5- 46.5, N=8
50.5- 51.5, N=11
55.5- 56.5, N=7
60.5- 61.5, N=25
65.5- 66.5, N=22
70.5- 71.5, N=21
75.5- 76.5, N=41
80.5- 81.5, N=26
85.5- 86.5, N=29
90.5- 91.5, N=29
95.5- 96.5, N=29
100.5-101.5, N=31

Sta. 212+08 - 16' Right of C.L. of Constr.

4.4- 5.4, N=8
9.4- 10.4, N=11
15.5- 16.5, N=8
20.5- 21.5, N=6
25.5- 26.5, N=6
30.5- 31.5, N=10
35.5- 36.5, N=22
40.5- 41.5, N=14
45.5- 46.5, N=20
50.5- 51.5, N=24
55.5- 56.5, N=28
60.5- 61.5, N=19
65.5- 66.5, N=27
70.5- 71.5, N=24
75.5- 76.5, N=26
80.5- 81.5, N=5
85.5- 86.5, N=18
90.5- 91.5, N=27
95.5- 96.5, N=25
100.5-101.5, N=37
105.5-106.5, N=61
110.5-111.5, N=50

Sta. 212+74 - 1' Left of C.L. of Constr.

5.0- 6.0, N=8
10.0- 11.0, N=10
15.5- 16.5, N=7
20.5- 21.5, N=6
25.5- 26.5, N=4
30.5- 31.5, N=8
35.5- 36.5, N=19
40.5- 41.5, N=16
45.5- 46.5, N=21
50.5- 51.5, N=21
55.5- 56.5, N=25
60.5- 61.5, N=37
65.5- 66.5, N=28
70.5- 71.5, N=4
75.5- 76.5, N=25
80.5- 81.5, N=19
85.5- 86.5, N=20
90.5- 91.5, N=19
95.5- 96.5, N=28
100.5-101.5, N=30
105.5-106.5, N=26
110.5-111.2, N=109(9")
115.5-116.5, N=42

Sta. 214+18 - 50' Right of C.L. of Constr.

7.3- 8.3, N=9
12.3- 13.3, N=7
17.3- 18.3, N=5
22.3- 23.3, N=7
25.5- 26.5, N=4
30.5- 31.5, N=14
35.5- 36.5, N=26
40.5- 41.5, N=17
45.5- 46.5, N=29
50.5- 51.5, N=33
55.5- 56.5, N=25
60.5- 61.5, N=7
65.5- 66.5, N=25
70.5- 71.5, N=29
75.5- 76.5, N=37
80.5- 81.5, N=27
85.5- 86.5, N=25
90.5- 91.5, N=26
95.5- 96.5, N=26
100.5-101.5, N=30

Sta. 214+72 - 19' Left of C.L. of Constr.

4.6- 5.6, N=7
9.6- 10.6, N=6
15.5- 16.5, N=6
20.5- 21.5, N=8
25.5- 26.5, N=9
30.5- 31.5, N=9
35.5- 36.5, N=6
40.5- 41.5, N=2
45.5- 46.5, N=2
50.5- 51.5, N=20
55.5- 56.5, N=8
60.5- 61.5, N=13
65.5- 66.5, N=22
70.5- 71.5, N=36
75.5- 76.5, N=27
80.5- 81.5, N=15
85.5- 86.5, N=16
90.5- 91.5, N=2
95.5- 96.5, N=27
100.5-101.5, N=10
105.5-106.5, N=15
110.5-111.5, N=19
115.5-116.5, N=19
120.5-121.5, N=25

"N" VALUES

STATE OF ARKANSAS
Carl J. Fuselier
REGISTERED PROFESSIONAL ENGINEER
No. 7510
9/26/11
CARL J. FUSELIER

BRIDGE ENGINEER

SHEET 2 OF 2

LAYOUT OF BRIDGE
HWY. 38 OVER INTERSTATE 40
FORREST CITY - EAST (F)
ST. FRANCIS COUNTY
ROUTE 40 SEC. 51
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

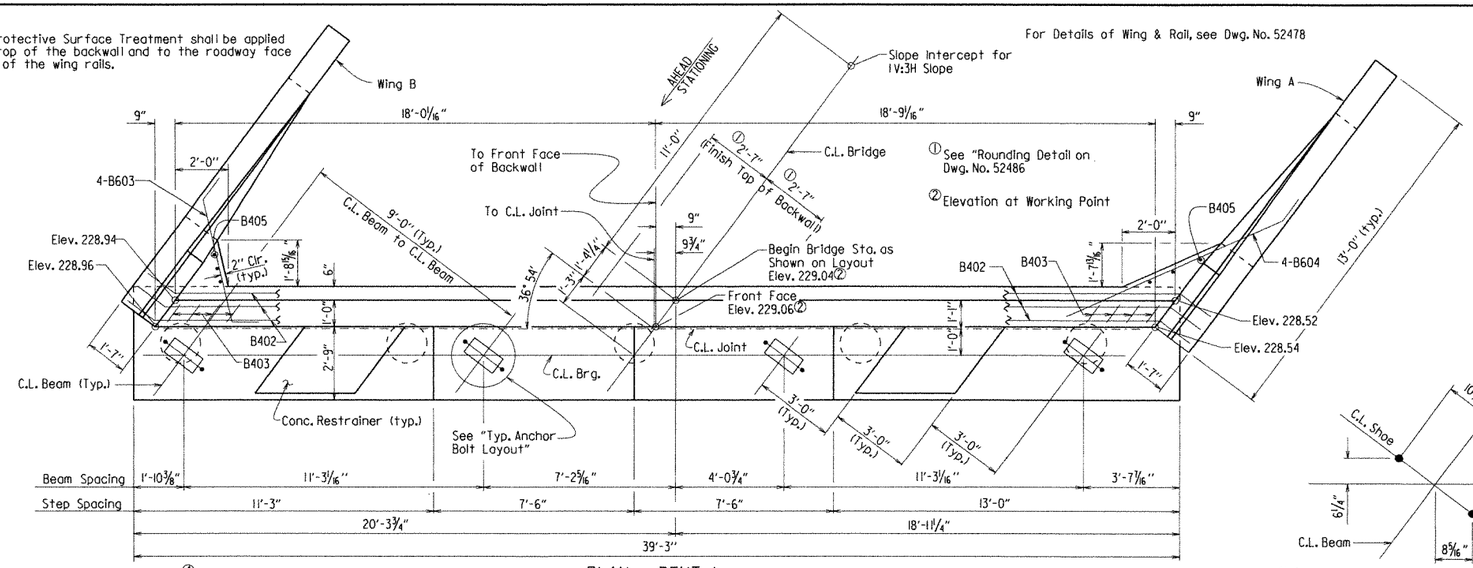
DRAWN BY: KWY DATE: 5-23-11 FILENAME: bbb0105_L1.dgn
CHECKED BY: PGT DATE: 9-22-11 SCALE: 1" = 30'
DESIGNED BY: KWY DATE: 5/11

BRIDGE NO. 07233 DRAWING NO. 52475

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	262	374
				① 07233		END BENTS		52476

Note:
Class I Protective Surface Treatment shall be applied to the top of the backwall and to the roadway face and top of the wing rails.

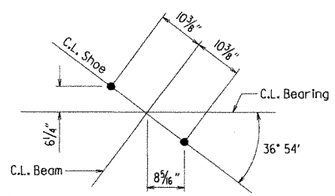
For Details of Wing & Rail, see Dwg. No. 52478



④ Adjust spacing of D601E bars as necessary to provide 3" clear from the longitudinal construction joint between the approach slab and gutters.

PLAN - BENT 1

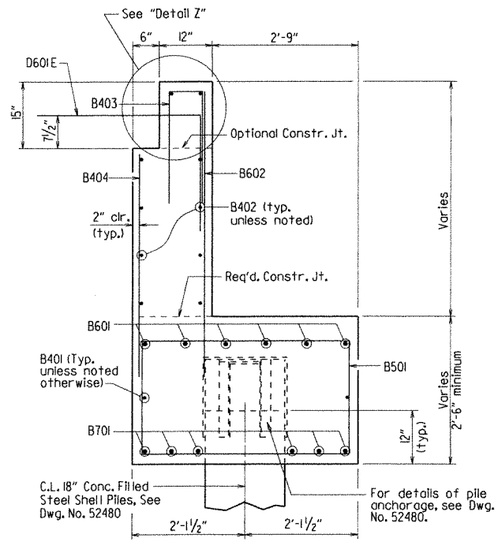
⅜" = 1'-0"



Note:
For details of elastomeric bearings, see Dwg. No. 52485.

TYPICAL ANCHOR BOLT LAYOUT

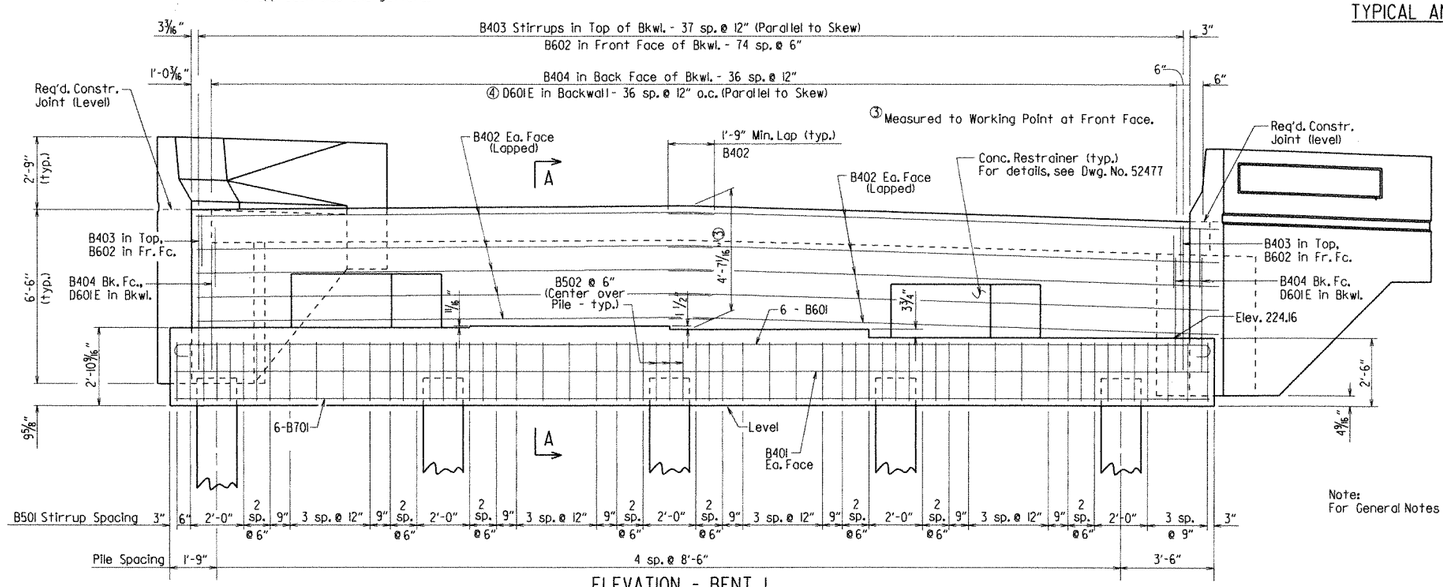
¾" = 1'-0"



SECTION A-A

¾" = 1'-0"

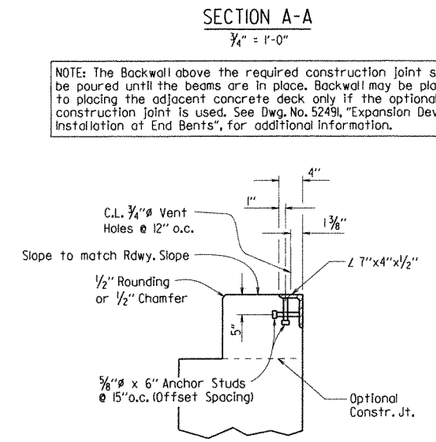
NOTE: The Backwall above the required construction joint shall not be poured until the beams are in place. Backwall may be placed prior to placing the adjacent concrete deck only if the optional backwall construction joint is used. See Dwg. No. 52491, "Expansion Device Installation at End Bents", for additional information.



ELEVATION - BENT 1

Looking Back
⅜" = 1'-0"

Note:
For General Notes & Bar List, See Dwg. No. 52478

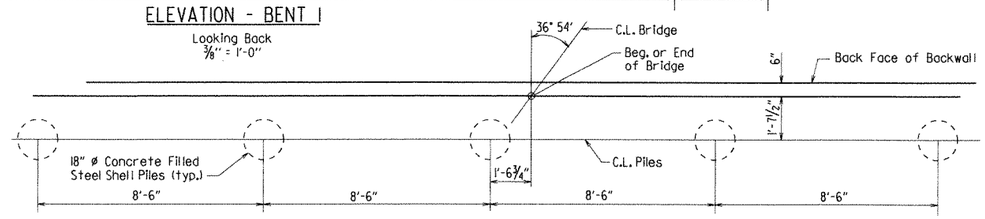


NOTE: For additional joint details, see Dwg. No. 52491.

DETAIL Z

No Scale

NOTE: Concrete shall be hand packed under the joint armor in the backwall.



Note: For details of piles and pile anchorage, see Dwg. No. 52480.

LAYOUT OF PILES

⅜" = 1'-0"

STATE OF ARKANSAS
Carl A. Fuselier
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No. 7510
9/26/11
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BRIDGE ENGINEER

SHEET 1 OF 3
DETAILS OF END BENTS
HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

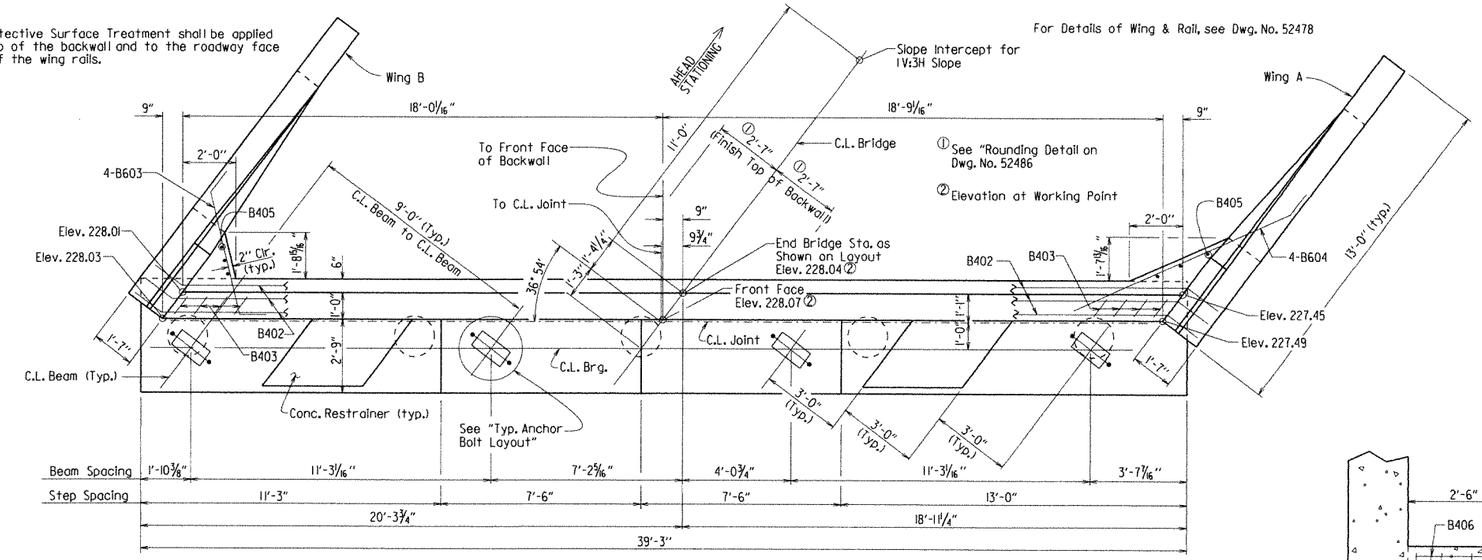
DRAWN BY: AMS. DATE: 8/16/11 FILENAME: bbb0105_b1.dgn
CHECKED BY: KWY DATE: 9/25/12 SCALE: As Shown
DESIGNED BY: KWY DATE: 6/11

BRIDGE NO. 07233 DRAWING NO. 52476

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	263	374
				1 07233		END BENTS		52477

Note:
Class I Protective Surface Treatment shall be applied to the top of the backwall and to the roadway face and top of the wing rails.

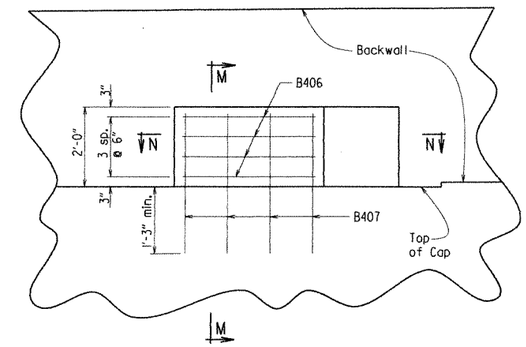
For Details of Wing & Rail, see Dwg. No. 52478



PLAN - BENT 5

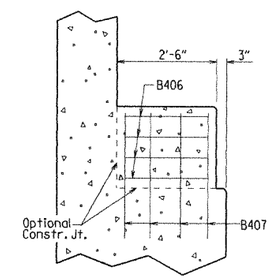
3/8" = 1'-0"

④ Adjust spacing of D601E bars as necessary to provide 3" clear from the longitudinal construction joint between the approach slab and gutters.



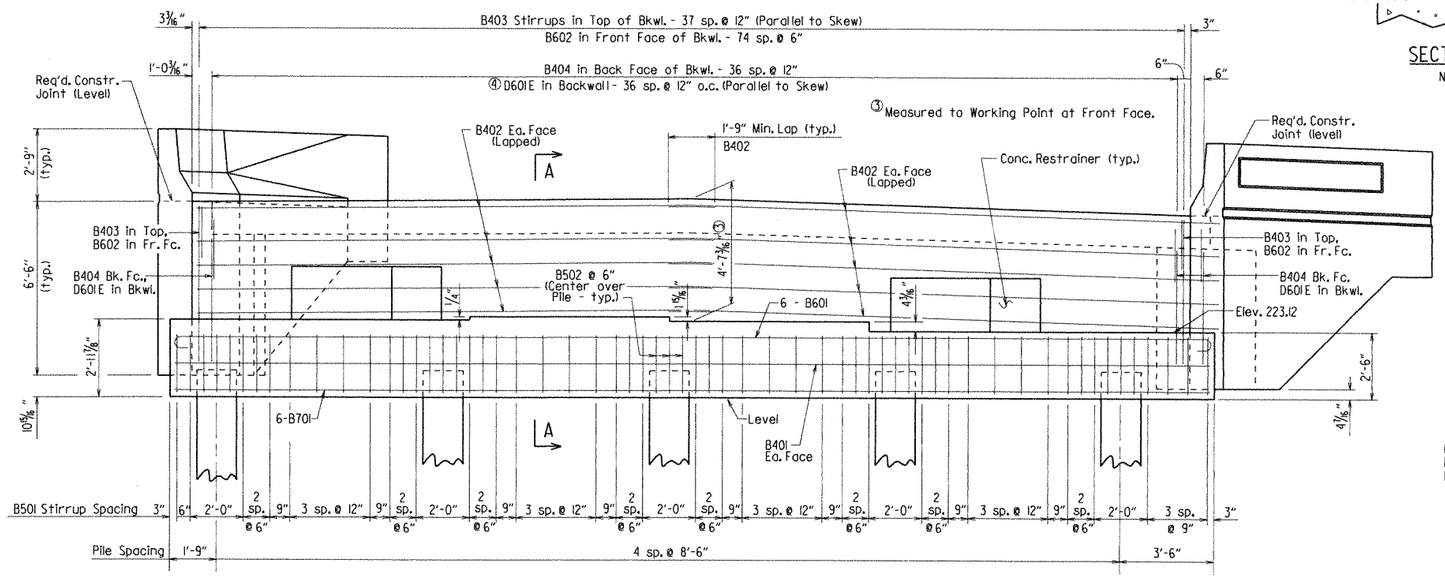
ELEVATION - CONCRETE RESTRAINER

Looking Back Bent 1; Looking Ahead Bent 5
No Scale"



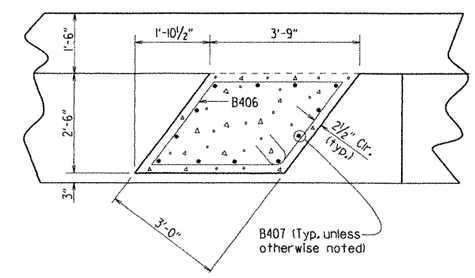
SECTION M-M

No Scale



ELEVATION - BENT 5

Looking Ahead
3/8" = 1'-0"



SECTION N-N

No Scale

Notes:
For General Notes & Bar List, See Dwg. No. 52478
For "Section A-A" & Typical Anchor Bolt Layout, See Dwg. No. 52476

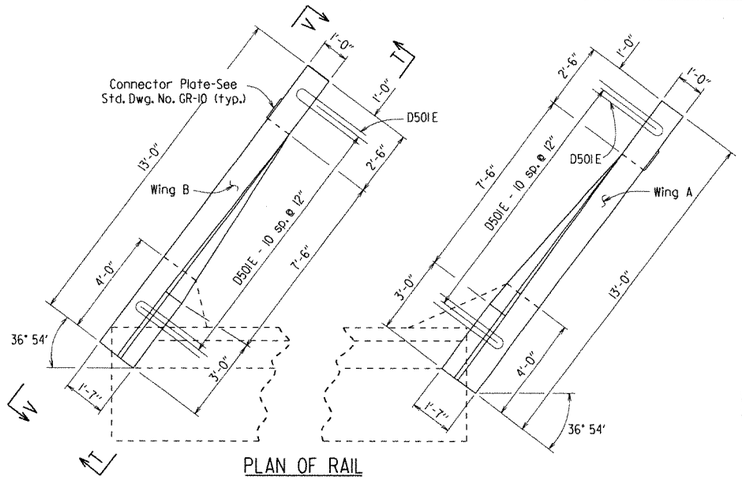
STATE OF ARKANSAS
Carl J. Fuselier
REGISTERED PROFESSIONAL ENGINEER
No. 7510
7/26/11
CARL J. FUSELIER

BRIDGE ENGINEER

SHEET 2 OF 3
DETAILS OF END BENTS
HWY. 38 OVER INTERSTATE 40
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

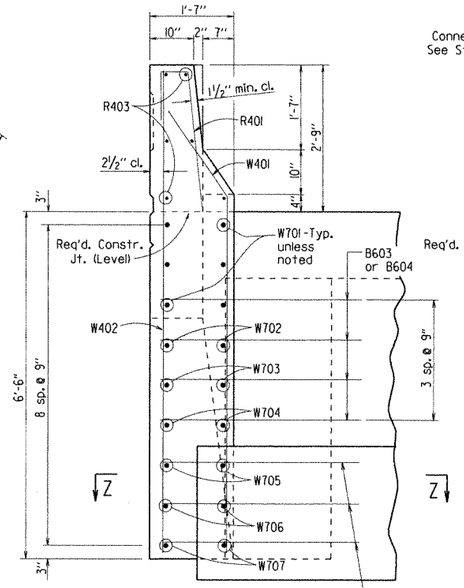
DRAWN BY: A.M.S. DATE: 8/16/11 FILENAME: bbb0105_bl.dgn
CHECKED BY: KWY DATE: 9/25/12 SCALE: As Shown
DESIGNED BY: KWY DATE: 6/11
BRIDGE NO. 07233 DRAWING NO. 52477

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	264	374
				07233		END BENTS		52478



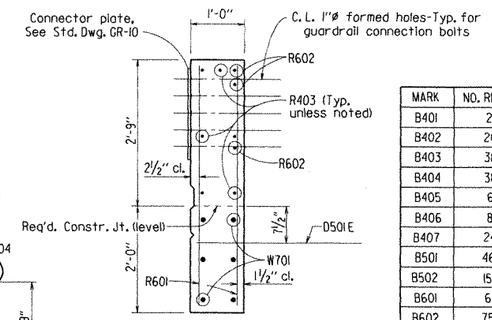
PLAN OF RAIL

Scale : 3/8" = 1'-0"



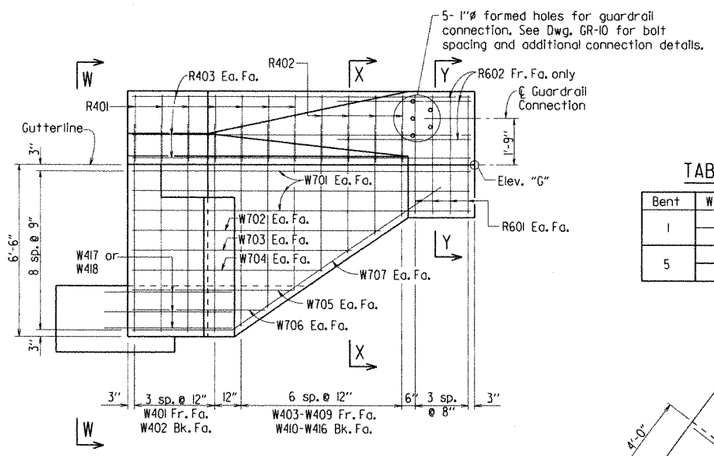
VIEW W-W

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



SECTION Y-Y

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

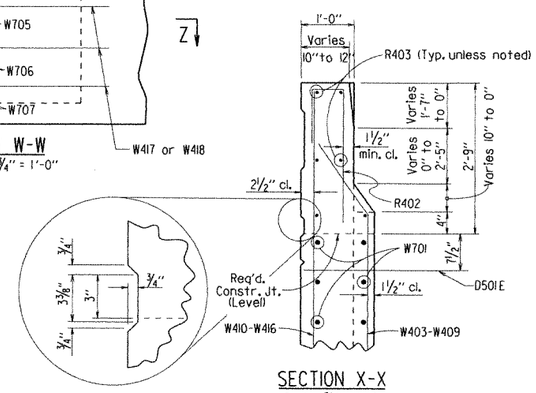


VIEW T-T

Scale: 3/8" = 1'-0"

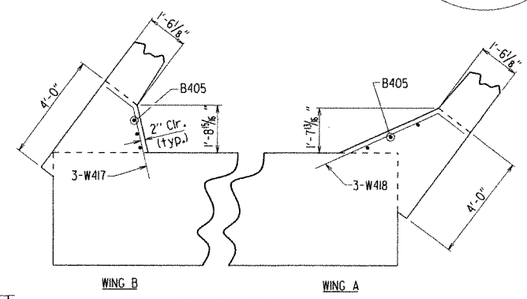
TABLE OF VARIABLES

Bent	Wing	"F"	Elev. "G"
1	A	4'-2¾"	228.27
	B	4'-3¼"	228.73
5	A	4'-1⅞"	227.14
	B	4'-2⅜"	227.73



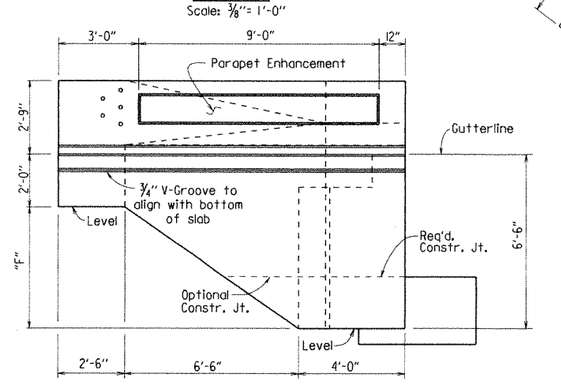
SECTION X-X

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



SECTION Z-Z

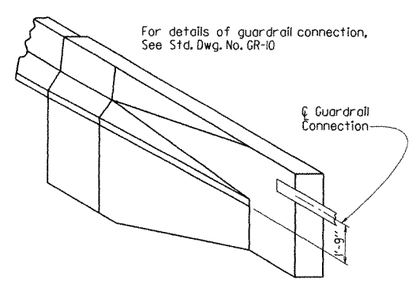
Scale : 3/8" = 1'-0"



VIEW V-V

Scale: 3/8" = 1'-0"

Note:
For additional details of parapet enhancement, See Dwg. No. 52493



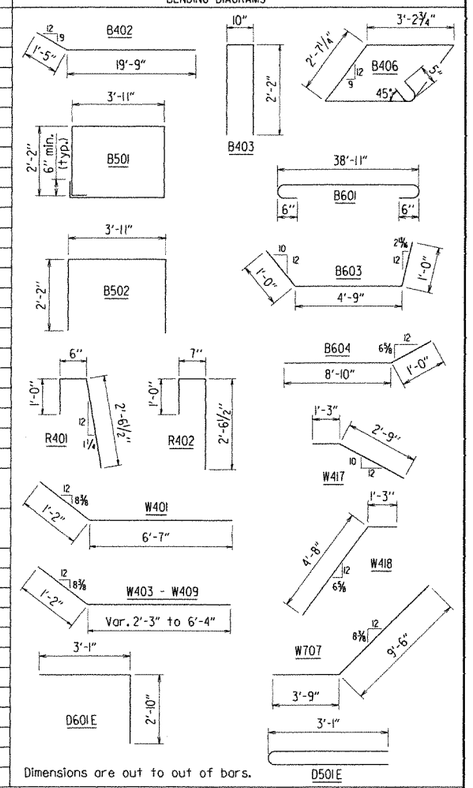
THREE DIMENSIONAL VIEW OF RAIL

No Scale

BAR LIST - PER BENT

MARK	NO. REQ'D.	LENGTH	P.D.
B401	2	38-11"	Str.
B402	20	21'-2"	2"
B403	38	5'-0"	2"
B404	38	4'-5"	Str.
B405	6	4'-11"	Str.
B406	8	12'-4"	3"
B407	24	3'-1"	Str.
B501	46	12'-8"	2½"
B502	15	8'-1"	2½"
B601	6	40'-3"	4½"
B602	75	6'-0"	Str.
B603	4	6'-7"	4½"
B604	4	9'-10"	4½"
B701	6	38'-11"	Str.
R401	14	3'-11"	2"
R402	8	4'-0"	2"
R403	12	12'-8"	Str.
R601	16	4'-5"	Str.
R602	6	5'-0"	Str.
W401	8	7'-9"	2"
W402	8	8'-10"	Str.
W403-W409	2 each	Var. 3'-5" to 7'-6"	2"
W410-W416	2 each	Var. 4'-7" to 8'-8"	Str.
W417	3	4'-0"	2"
W418	3	5'-11"	2"
W701	12	12'-8"	Str.
W702	4	9'-8"	Str.
W703	4	8'-6"	Str.
W704	4	7'-4"	Str.
W705	4	6'-2"	Str.
W706	4	5'-0"	Str.
W707	4	13'-3"	5¼"
D501E	22	6'-4"	3¾"
D601E	38	5'-9"	4½"

BENDING DIAGRAMS



Dimensions are out to out of bars.

Note: Bars designated with an "E" suffix shall be epoxy coated.

GENERAL NOTES

All concrete shall be Class "S" with a minimum 28 day compressive strength f'c = 3,500 psi. Concrete shall be poured in the dry and all exposed corners to be chamfered ¾" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Grade 60 (yield strength = 60,000 psi.).

Structural steel in end bents shall be M270, Gr. 50W and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50)".

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

For additional information, see Layout.

STATE OF ARKANSAS
Carl J. Fuselier
REGISTERED PROFESSIONAL ENGINEER
No. 7510
7/26/13
CARL J. FUSELIER

BRIDGE ENGINEER

SHEET 3 OF 3
DETAILS OF END BENTS
HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

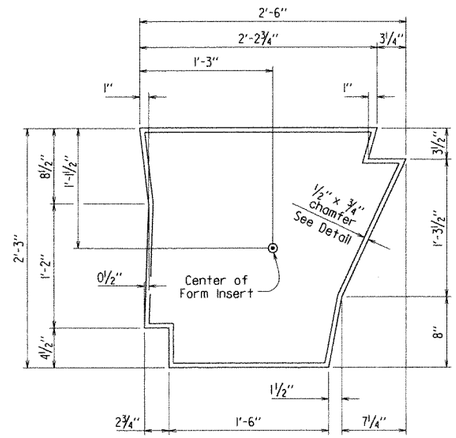
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: AMS. DATE: 8/16/11 FILENAME: bbb0105_bl.dgn
CHECKED BY: KWY DATE: 9/25/12 SCALE: As Shown
DESIGNED BY: KWY DATE: 6/11

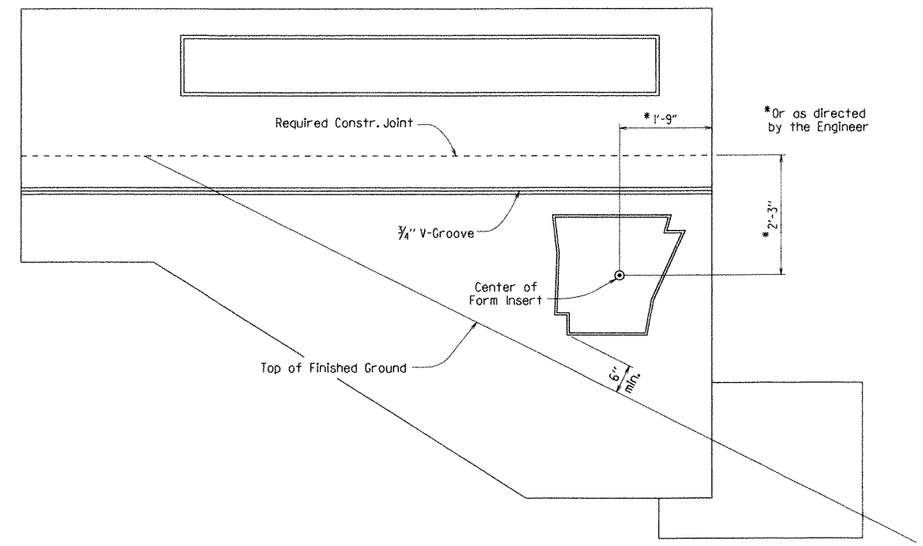
BRIDGE NO. 07233 DRAWING NO. 52478

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	365	374
				(1) 07233		ARK. FORM INSERT		52479



FORM INSERT DETAILS

Scale: 1½" = 1'-0"



PLACEMENT AT WINGS

END BENT

No Scale

GENERAL NOTES:

Use form insert on designated bents as noted on layout or as shown on detail drawings.

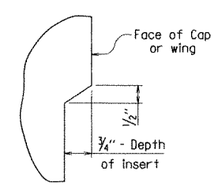
Fabricate form insert as a one piece unit, without the use of splices, joints or glue.

Wash and clean multi-use form inserts before each use.

All work and materials for form inserts shall be included in the unit price bid for Class S Concrete-Bridge.

Damaged or worn form inserts shall be replaced at the Contractor's expense.

The form insert shall be approved by the Engineer before its use.



CHAMFER DETAILS

Scale: 1½" = 1'-0"

STATE OF ARKANSAS
Carl J. Fuselier
REGISTERED PROFESSIONAL ENGINEER
No. 7510
9/26/12
CARL J. FUSELIER

BRIDGE ENGINEER

DETAILS OF STATE OF ARKANSAS FORM INSERT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 9-14-11 FILENAME: BBB0105_LOGO.DGN

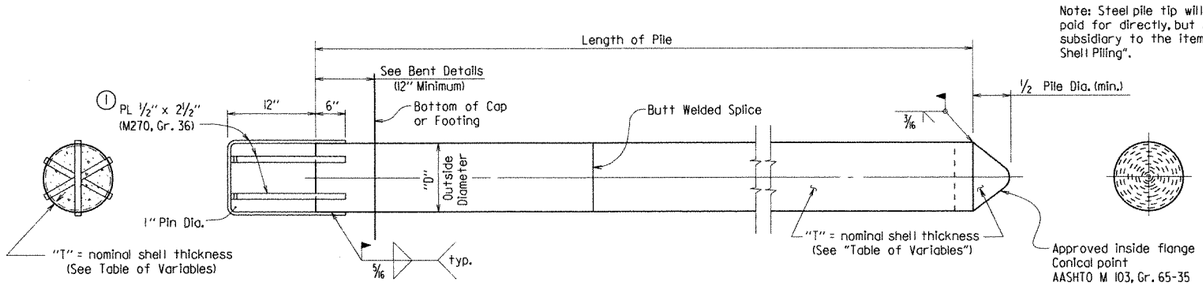
CHECKED BY: AMS DATE: 9-22-11 SCALE: AS NOTED

DESIGNED BY: STD DATE:

BRIDGE NO. 07233 DRAWING NO. 52479

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BBB0105	266	374

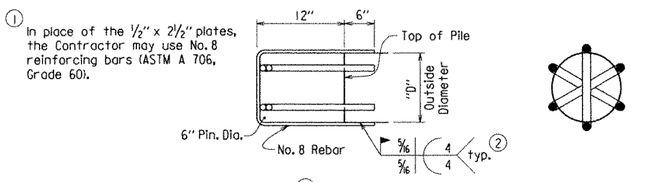
(1) 07233 STEEL SHELL PILES 52480



Note: Steel pile tip will not be paid for directly, but shall be subsidiary to the item "Steel Shell Piling".

(1) Pile anchorage shall be placed to minimize interference with anchor bolts and reinforcing in cap or footing.

CONCRETE FILLED STEEL SHELL PILE



(2) Welding shall comply with ANSI/AWS D1.4 Structural Welding Code-Reinforcing Steel and applicable portions of ANSI/AWS D1.5 Bridge Welding Code.

ALTERNATE FOR 1/2" x 2 1/2" PLATE

GENERAL NOTES FOR CONCRETE FILLED STEEL SHEEL PILES:

Seismic Performance Zone: 4

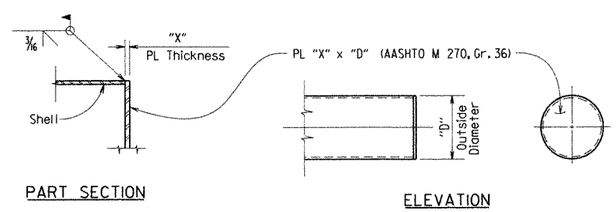
Steel shell piles shall conform to ASTM A252, Grade 3, (Fy = 45,000 psi).

Steel shell piles 50' in length or less shall be completely filled with Class S Concrete with a minimum 28-day compressive strength, f'c = 3,500 psi, and shall be poured in the dry. At the Contractor's option, pile lengths greater than 50' may be filled with sand up to 50' below the top plan elevation of the steel shell pile and the remaining 50' filled with Class S Concrete. Sand used for filling of steel shell piles shall be clean and free of any organic matter.

Steel shell piles that extend above the ground and are not protected by pile encasement shall be painted in accordance with subsection 805.02 of the Standard Specifications for Highway Construction.

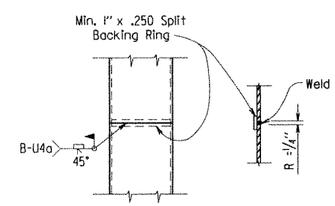
See Bridge Layout for size and estimated length of steel shell piles and for additional driving information.

Concrete, sand, structural steel, reinforcing steel (including welding), and painting will not be paid for separately, but will be considered included in the contract unit price bid for "Steel Shell Piling".

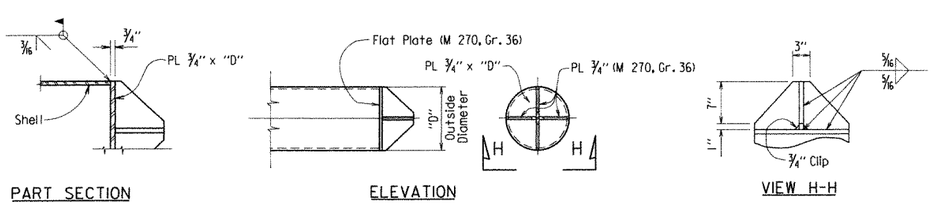


ALTERNATE FLAT TIP DETAIL

(ALTERNATE FLAT PILE TIPS SHALL NOT BE USED ON PILES IN END BENTS)



TYPICAL SPLICE DETAILS



ALTERNATE VANED TIP DETAIL

TABLE OF VARIABLES

OUTSIDE DIAMETER "D"	NOMINAL SHELL THICKNESS "T"	PLATE THICKNESS "X"
18"	0.50"	1 1/4"

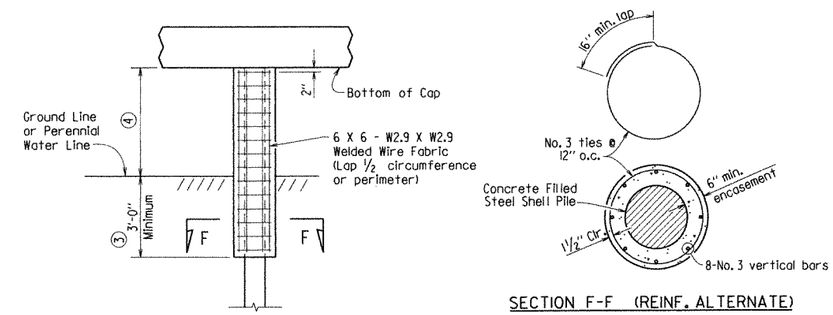
GENERAL NOTES FOR PILE ENCASEMENTS:

See Bridge Layout for required location of pile encasements. Only interior trestle pile bents shall have pile encasements.

Concrete shall be Class S with a minimum 28-day compressive strength, f'c = 3,500 psi. If concrete cannot be placed in the dry, Seal Concrete may be used from top to bottom of encasement.

Reinforcing steel shall conform to AASHTO M 31 or M 53, Grade 60.

Concrete, welded wire fabric or reinforcing steel, and galvanized pipe will not be paid for separately, but will be considered included in the unit price bid for "Pile Encasement".



SECTION F-F (REINF. ALTERNATE)

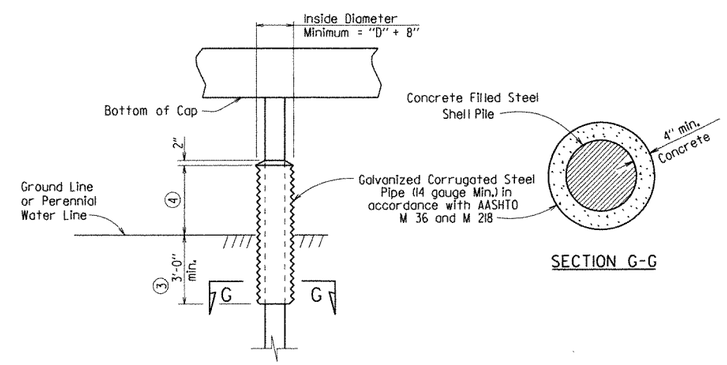
PILE ENCASEMENT DETAIL FOR STEEL SHELL PILES

(Shown with Encasement to Bottom of Cap)(5)

(3) Unless otherwise noted on Bridge Layout.

(4) See Bridge Layout for height of pile encasement (3'-0" Minimum).

(5) Pile encasement, when not extended to bottom of cap, shall have 2" concrete taper for water runoff as shown in the detail for partial height encasement.



SECTION G-G

ALTERNATE PILE ENCASEMENT DETAIL FOR STEEL SHELL PILES

(Shown with Partial Height Encasement)

STATE OF ARKANSAS
Carl J. Fuselier
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REGISTERED PROFESSIONAL ENGINEER
4/22/12
CARL J. FUSELIER

BRIDGE ENGINEER

DETAILS OF CONCRETE FILLED STEEL SHELL PILES AND PILE ENCASEMENTS

ROUTE SECTION

ARKANSAS STATE HIGHWAY COMMISSION

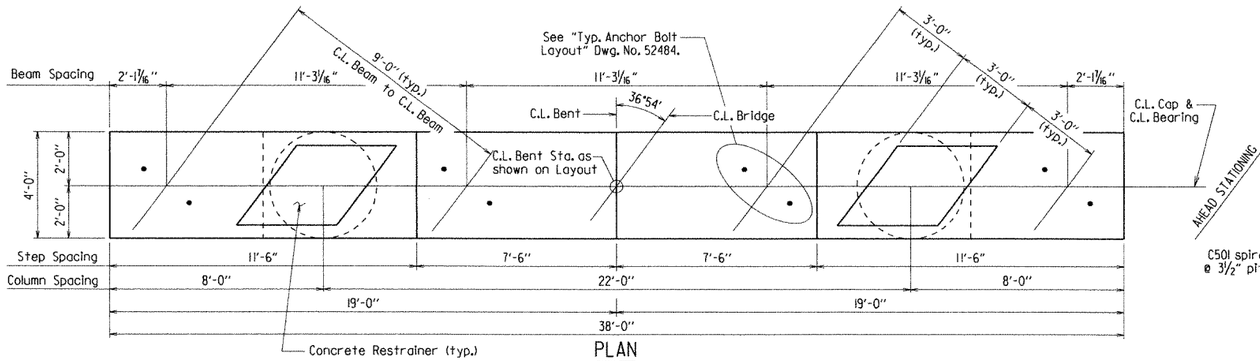
LITTLE ROCK, ARK.

DRAWN BY:	JYP	DATE:	9/14/11	FILENAME:	bbb0105_piles.dgn
CHECKED BY:	KWY	DATE:	9/25/12	SCALE:	NONE
DESIGNED BY:	STD.	DATE:	—		

BRIDGE NO. 07233 DRAWING NO. 52480

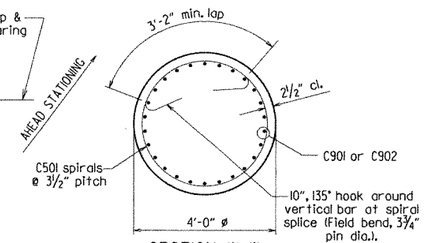
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	267	374
07233		INT. BENTS		52481



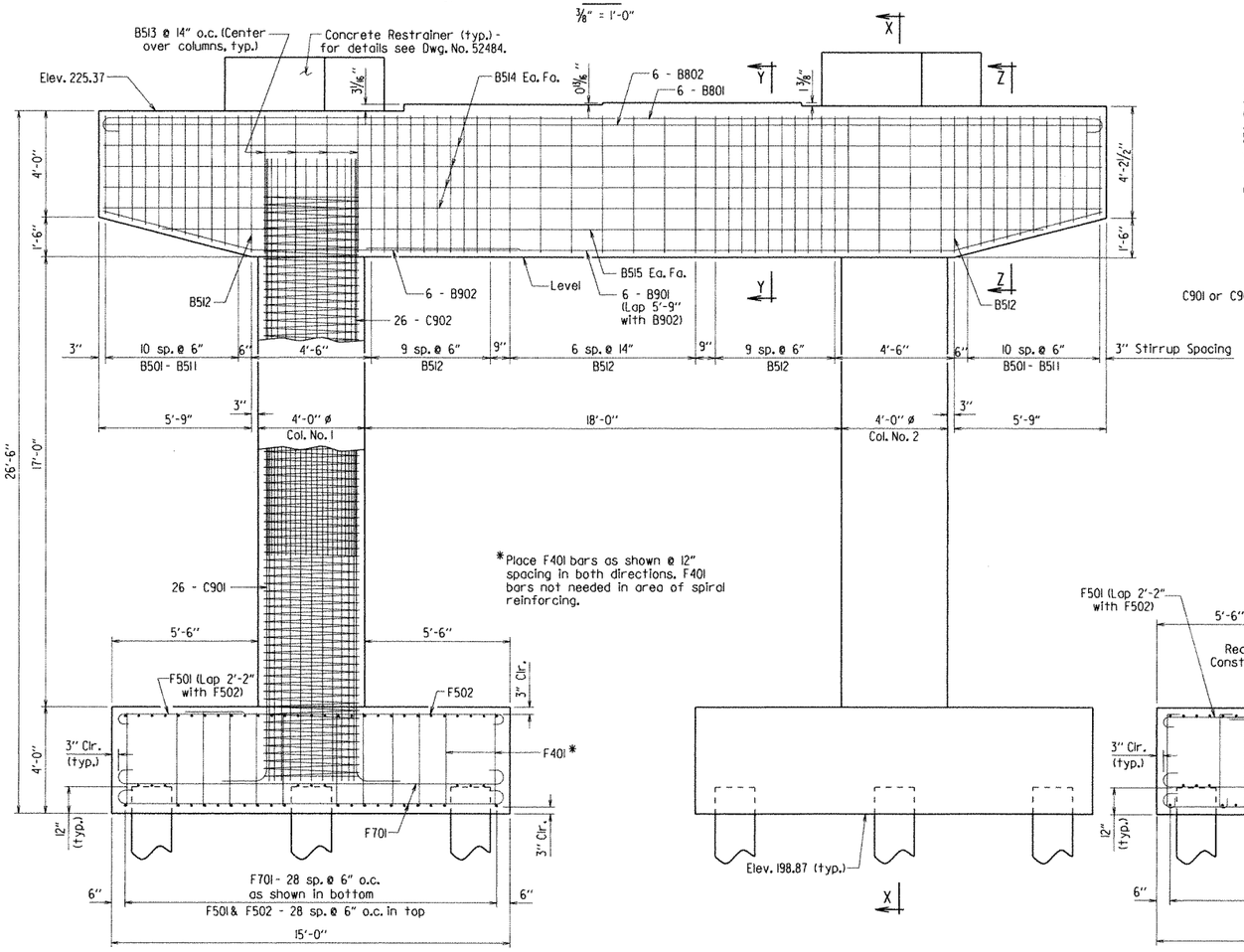
PLAN

3/8" = 1'-0"



SECTION W-W

1/2" = 1'-0"

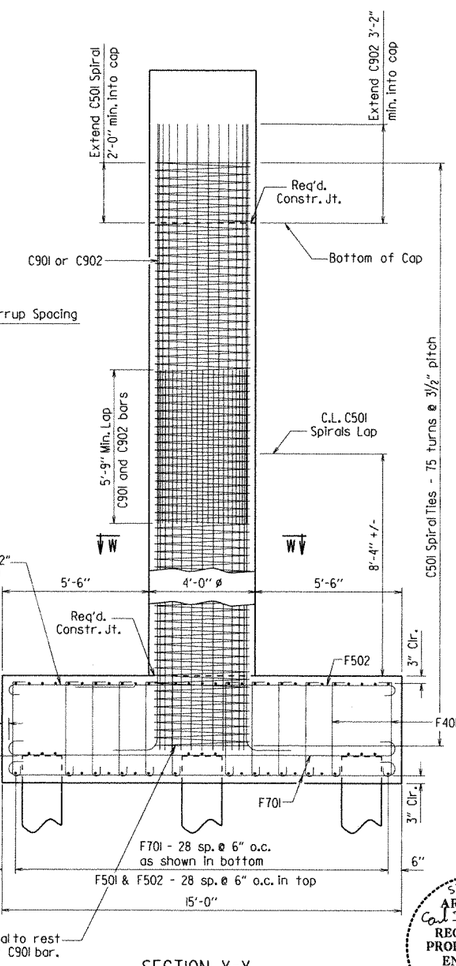


*Place F401 bars as shown @ 12" spacing in both directions. F401 bars not needed in area of spiral reinforcing.

ELEVATION

Looking Ahead

3/8" = 1'-0"



SECTION X-X

3/8" = 1'-0"

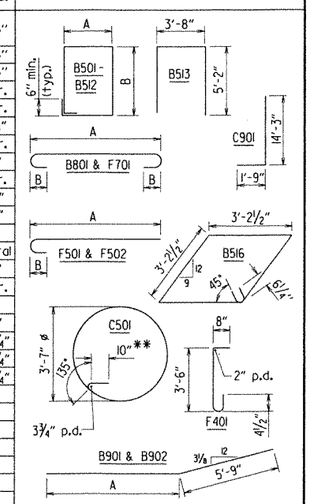
NOTE: For General Notes & "Plan of Footings" see Dwg. No. 52484.

NOTE: Reinforcing for columns and footings is typical.

BAR LIST

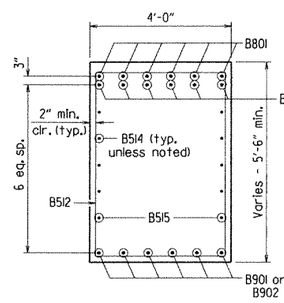
Mark	No. Req'd.	Length	A	B	Pin Dia.
B501 - B511	2 ea.	15'-2" - 17'-10"	3'-8"	3'-8" - 5'-0"	2 1/2"
B512	29	18'-2"	3'-8"	5'-2"	2 1/2"
B513	8	13'-10"			2 1/2"
B514	8	37'-8"			Str.
B515	2	33'-3"			Str.
B516	8	13'-6"			3 3/4"
B601	28	3'-4"			Str.
B801	6	39'-6"	37'-8"	8"	6"
B802	6	37'-8"			Str.
B901	6	28'-0"	22'-3"		9"
B902	6	15'-9"	10'-0"		9"
C501	4	438'-0"			Spiral
C901	52	15'-9"			9"
C902	52	15'-0"			Str.
F401	280	4'-7"			3"
F501	116	5'-3"	4'-8"	5"	3 3/4"
F502	116	12'-7"	12'-0"	5"	3 3/4"
F701	116	16'-2"	14'-6"	7"	5 1/4"

Bending Diagrams



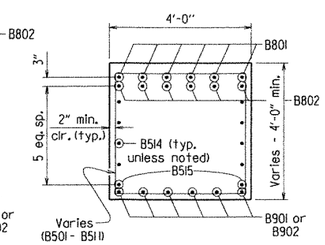
** At the lapped splice end of the spiral, the hook may be field bent around a vertical bar.

(Dimensions are out to out of bars.)



SECTION Y-Y

1/2" = 1'-0"



SECTION Z-Z

1/2" = 1'-0"

STATE OF ARKANSAS
Carl Fuselier
REGISTERED PROFESSIONAL ENGINEER
No. 7510
7/26/13
CARL FUSELIER

BRIDGE ENGINEER

DETAILS OF BENT 2
HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

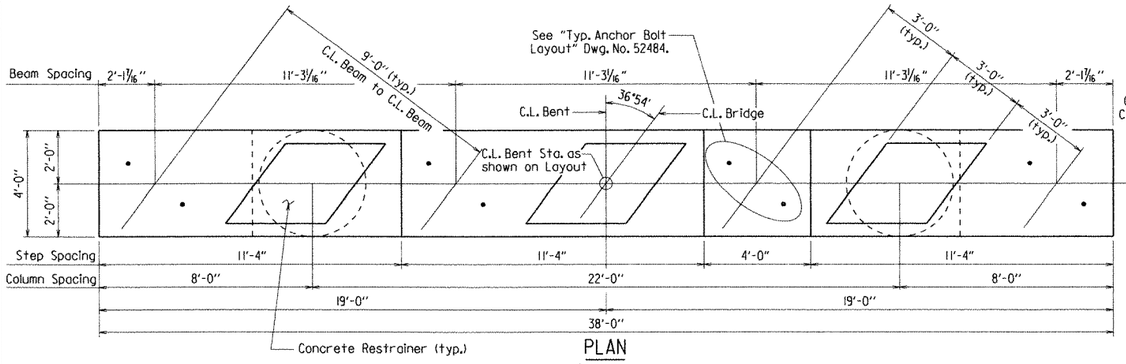
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: ACW	DATE: 07/11	FILENAME: bbb0105_b2.dgn
CHECKED BY: KWY	DATE: 11/8/13	SCALE: As Shown
DESIGNED BY: KWY	DATE: 6/11	

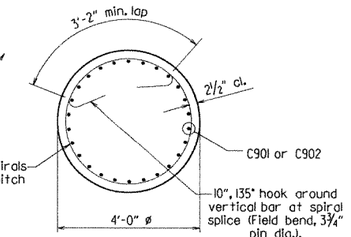
BRIDGE NO. 07233 DRAWING NO. 52481

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	268	374
				1	07233	INT. BENTS		52482



PLAN

3/8" = 1'-0"



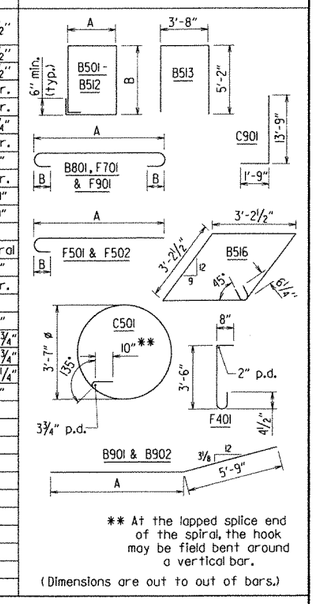
SECTION W-W

1/2" = 1'-0"

BAR LIST

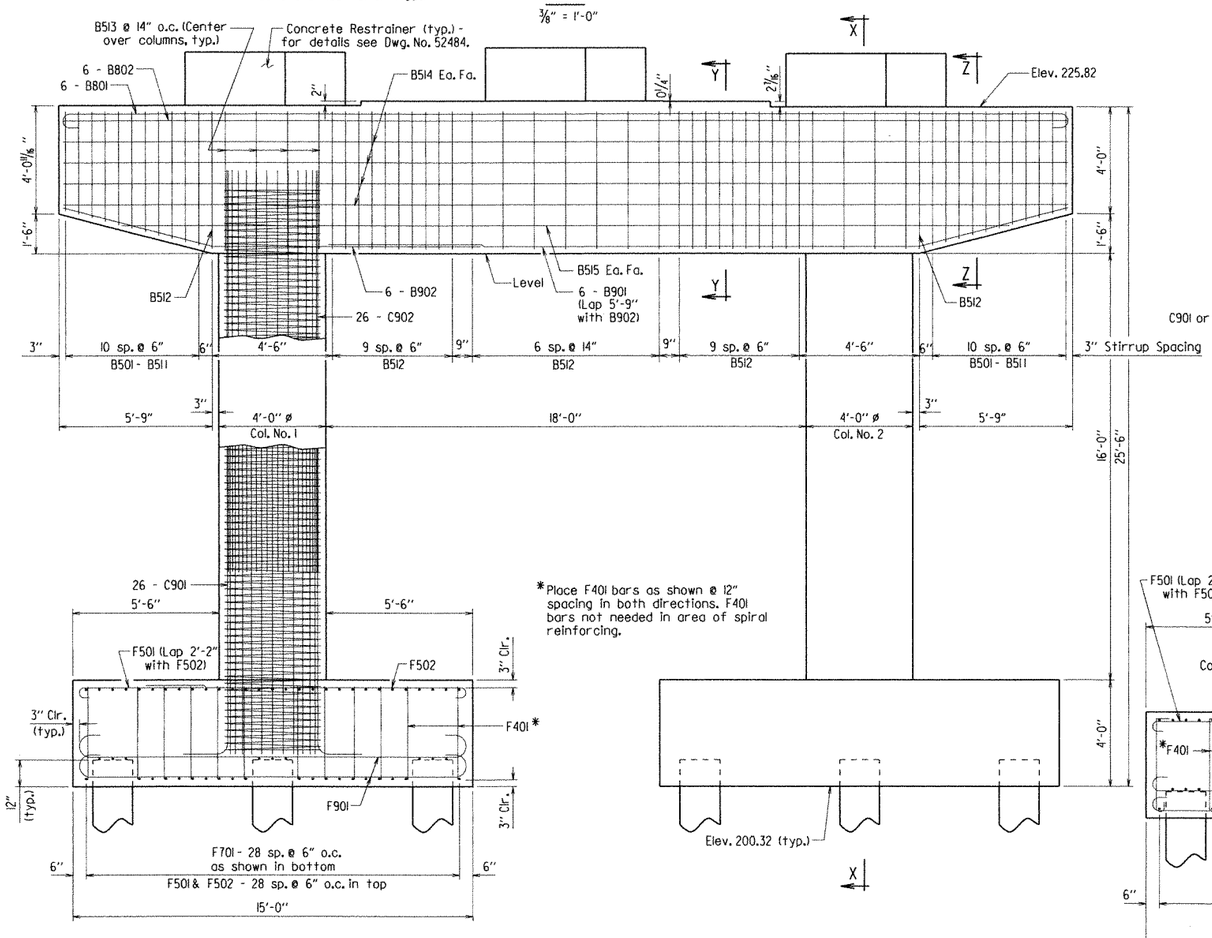
Mark	No. Req'd.	Length	A	B	Pin Dia.
B501 - B511	2 ea.	15'-2" - 17'-10"	3'-8"	3'-8" - 5'-0"	2 1/2"
B512	29	18'-2"	3'-8"	5'-2"	2 1/2"
B513	8	13'-10"			2 1/2"
B514	8	37'-8"			Str.
B515	2	33'-3"			Str.
B516	12	13'-6"			3 3/4"
B601	42	3'-4"			Str.
B801	6	39'-6"	37'-8"	8"	6"
B802	6	37'-8"			Str.
B901	6	28'-0"	22'-3"		9"
B902	6	15'-9"	10'-0"		9"
C501	4	488'-0"			Spiral
C901	52	15'-3"			9"
C902	52	14'-6"			Str.
F401	252	4'-7"			3"
F501	116	5'-3"	4'-8"	5"	3 3/4"
F502	116	12'-7"	12'-0"	5"	3 3/4"
F701	58	16'-2"	14'-6"	7"	5 1/4"
F901	58	17'-0"	14'-6"	10"	9"

Bending Diagrams



** At the lapped splice end of the spiral, the hook may be field bent around a vertical bar.

(Dimensions are out to out of bars.)

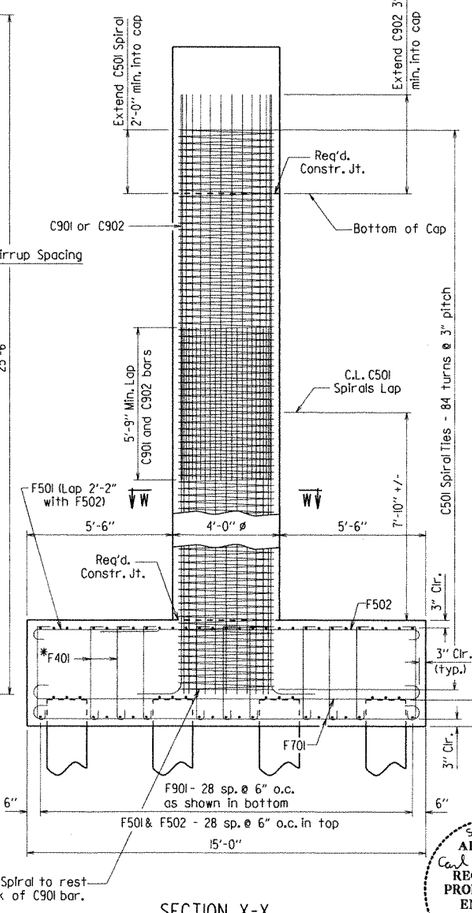


*Place F401 bars as shown @ 12" spacing in both directions. F401 bars not needed in area of spiral reinforcing.

ELEVATION

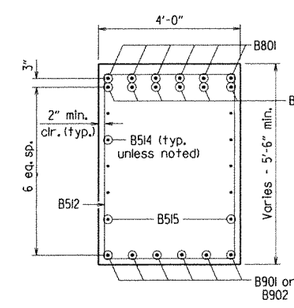
Looking Ahead

3/8" = 1'-0"



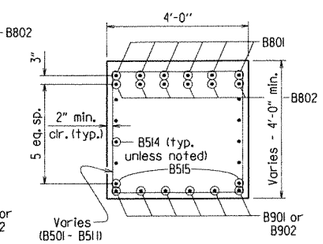
SECTION X-X

3/8" = 1'-0"



SECTION Y-Y

1/2" = 1'-0"



SECTION Z-Z

1/2" = 1'-0"

NOTE: For General Notes & "Plan of Footings" see Dwg. No. 52484.

NOTE: Reinforcing for columns and footings is typical.

STATE OF ARKANSAS
Carl R. Fussellier
REGISTERED PROFESSIONAL ENGINEER
No. 7510
9/26/12
CARL R. FUSSELLIER

BRIDGE ENGINEER

DETAILS OF BENT 3
HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

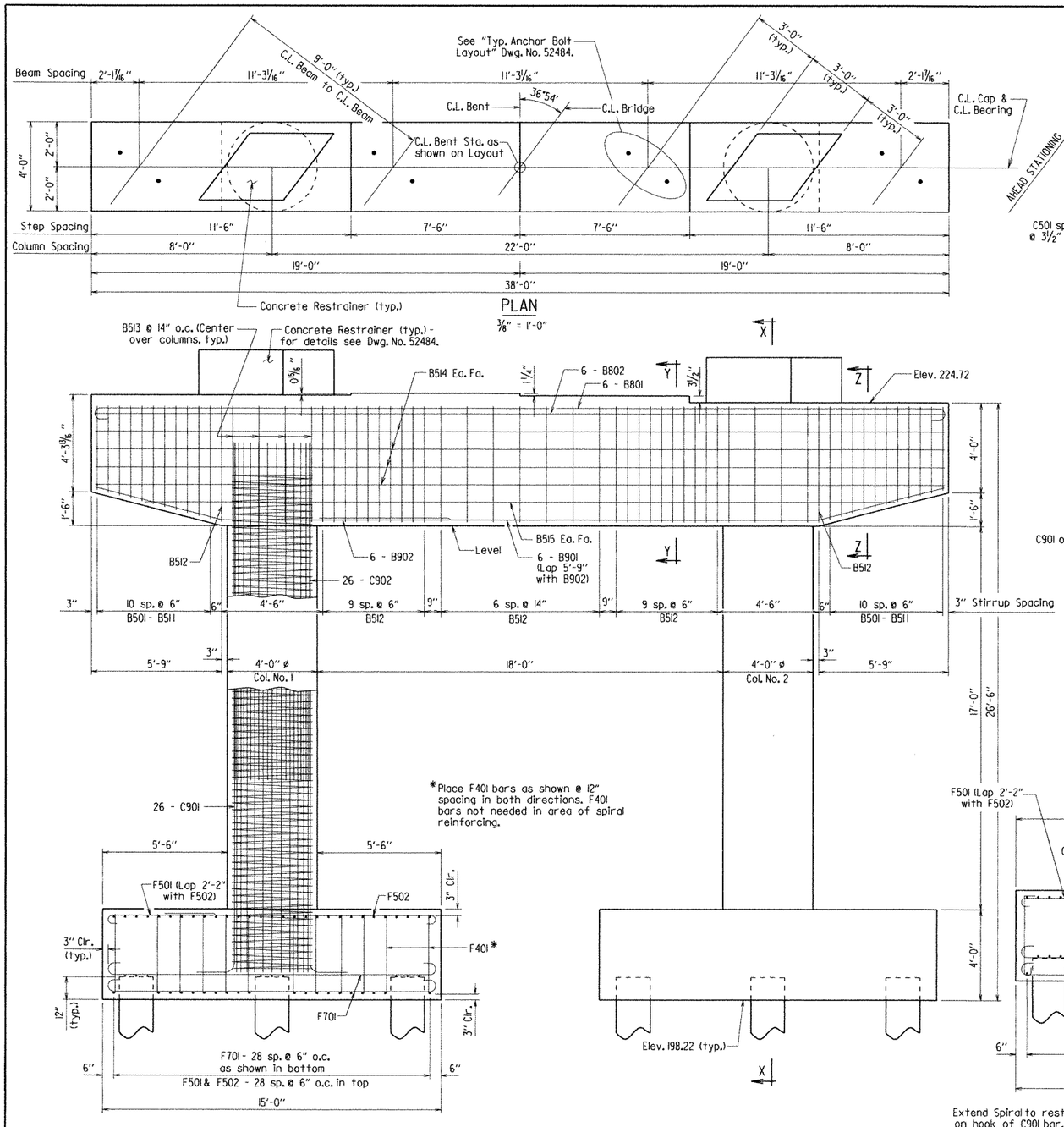
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	ACW	DATE:	07/11	FILENAME:	bbb0105_b2.dgn
CHECKED BY:	KWY	DATE:	1/8/13	SCALE:	As Shown
DESIGNED BY:	KWY	DATE:	6/11		

BRIDGE NO. 07233 DRAWING NO. 52482

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	269	374
				1	07233	INT. BENTS		52483



BAR LIST

Mark	No. Req'd.	Length	A	B	Pin Dia.
B501 - B511	2 ea.	15'-2" - 17'-10"	3'-8"	3'-8" - 5'-0"	2 1/2"
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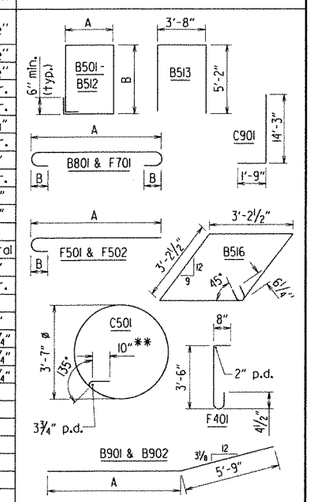
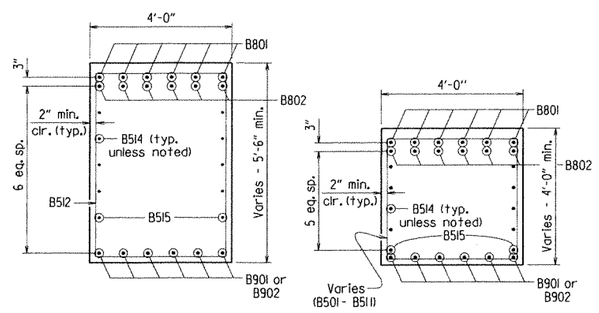
B513	8	13'-10"			2 1/2"
B514	8	37'-8"			Str.
B515	2	33'-3"			Str.
B516	8	13'-6"			3 3/4"
B601	28	3'-4"			Str.
B801	6	39'-6"	37'-8"	8"	6"
B802	6	37'-8"			Str.
B901	6	28'-0"	22'-3"		9"
B902	6	15'-9"	10'-0"		9"
C501	4	438'-0"			Spiral
C901	52	15'-9"			9"
C902	52	15'-0"			Str.
F401	280	4'-7"			3"
F501	116	5'-3"	4'-8"	5"	3 3/4"
F502	116	12'-7"	12'-0"	5"	3 3/4"
F701	116	16'-2"	14'-6"	7"	5 1/4"

Bending Diagrams



** At the lapped splice end of the spiral, the hook may be field bent around a vertical bar.

(Dimensions are out to out of bars.)



SECTION Y-Y
1/2" = 1'-0"

SECTION Z-Z
1/2" = 1'-0"

NOTE: For General Notes & "Plan of Footings" see Dwg. No. 52484.

NOTE: Reinforcing for columns and footings is typical.

STATE OF ARKANSAS
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DETAILS OF BENT 4
HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

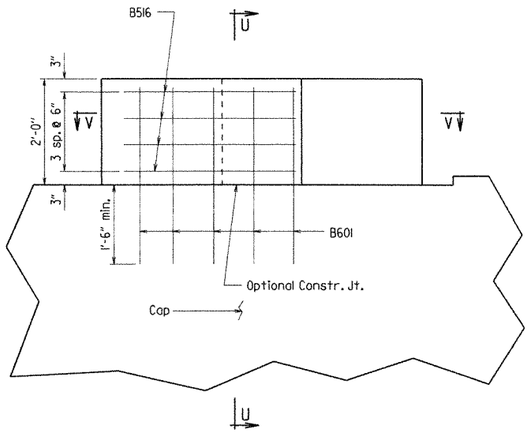
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: ACW	DATE: 07/11	FILENAME: bbb0105_b2.dgn			
CHECKED BY: KWY	DATE: 1/8/13	SCALE: As Shown			
DESIGNED BY: KWY	DATE: 6/11				

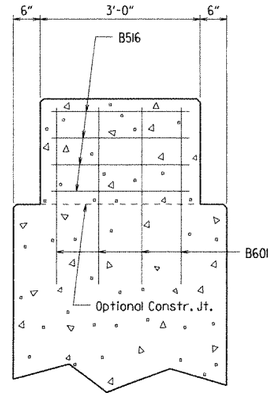
BRIDGE NO. 07233 DRAWING NO. 52483

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	270	374
				1 07233		INT. BENTS		52484



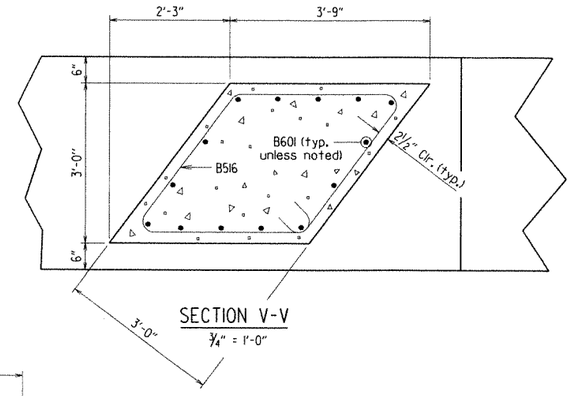
ELEVATION - CONCRETE RESTRAINER

3/4" = 1'-0"



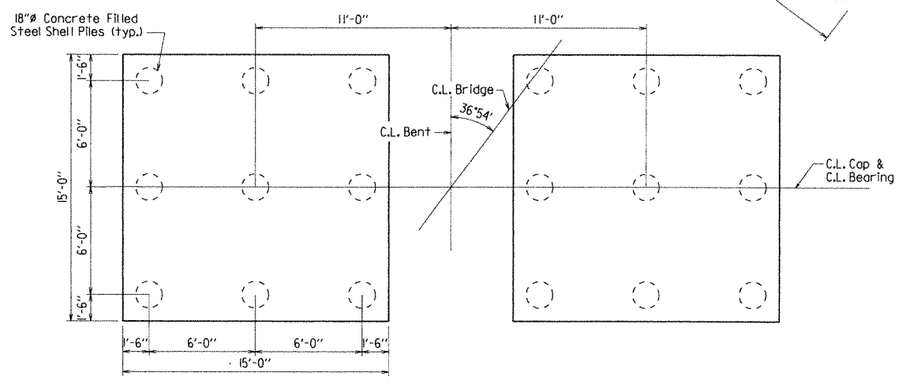
SECTION U-U

3/4" = 1'-0"



SECTION V-V

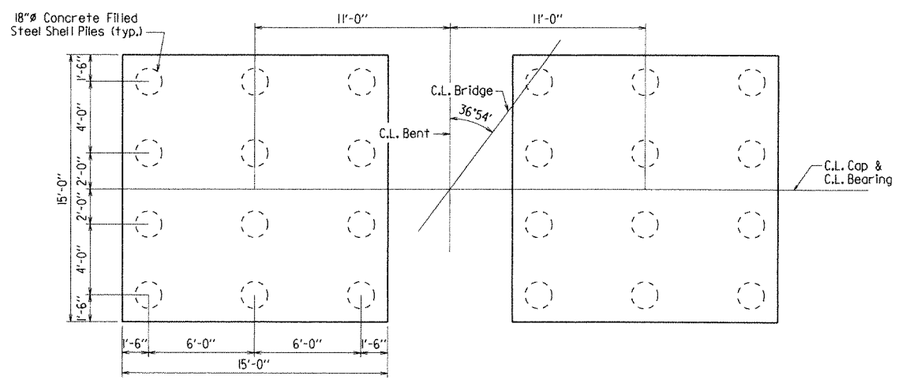
3/4" = 1'-0"



NOTE: For details of piles and pile anchorage, see Dwg. No. 52480.

PLAN OF FOOTINGS BENTS 2 & 4

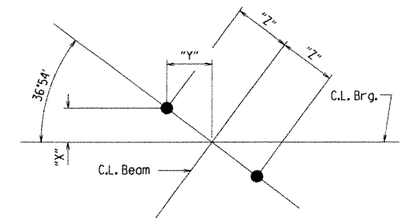
1/4" = 1'-0"



NOTE: For details of piles and pile anchorage, see Dwg. No. 52480

PLAN OF FOOTINGS BENT 3

1/4" = 1'-0"



For details of elastomeric bearings, see Dwg. No. 52485.

TYPICAL ANCHOR BOLT LAYOUT

1/2" = 1'-0"

TABLE OF VARIABLES

Bent(s)	"X"	"Y"	"Z"
2 & 4	7 5/8"	10 3/16"	1'-0 3/4"
3	9 1/16"	1'-0 1/8"	1'-3 1/8"

GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Grade 60. If anchor bolts are drilled into cap, top reinforcing bars shall be properly placed to avoid damage.

All piling shall be Grade 3, Fy = 45 ksi.

For additional information, see Layout.

NOTES FOR SPIRAL REINFORCING:

Spiral reinforcing shall be plain round or deformed steel bars meeting the requirements of AASHTO M31 or M53 (Grade 60) or shall be cold drawn wire meeting the requirements of AASHTO M32 or M225 (Grade 70) with a minimum diameter of 0.625".

Spiral reinforcement shall be paid for at the contract unit price bid per pound for "Reinforcing Steel-Bridge (Grade 60)". No additional payment shall be made for spacers, additional splices or bracing needed for assembly, shipping, handling or erecting.

The Contractor may elect to use a different number of spiral lapped splices per column. In no case shall a spiral be lapped within 4'-0" of the top or bottom of the column.

Splices in spiral reinforcement shall be lapped a minimum of 60 bar diameters.

Spiral reinforcement at lapped splices shall be terminated by a 135° hook with a 10" tail around a vertical bar. Hook may be field bent. Ends of spirals not lapped shall be terminated with 1 1/2 turns and a 135° hook with a 10" tail around a vertical bar.

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DETAILS COMMON TO INTERMEDIATE BENTS
HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

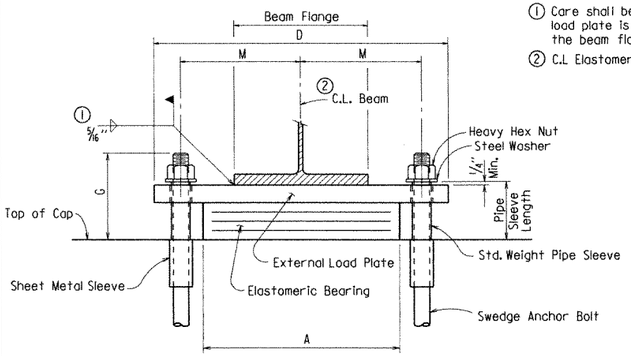
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: ACW DATE: 07/11 FILENAME: bbb0105_b2.dgn
CHECKED BY: KWY DATE: 9/25/12 SCALE: As Shown
DESIGNED BY: KWY DATE: 6/11

BRIDGE NO. 07233 DRAWING NO. 52484

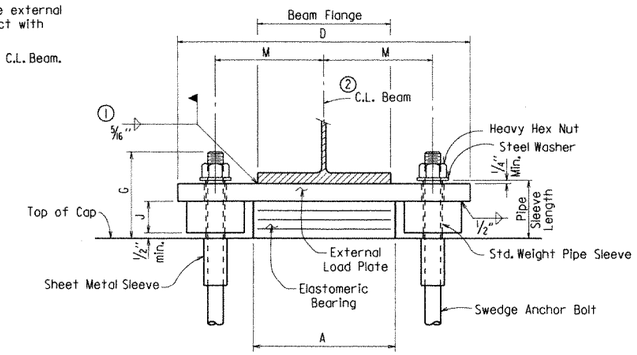
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	271	374
				1	07233	ELASTOMERIC BEARINGS		52485



FRONT VIEW AT BENTS 1-2 & 4-5

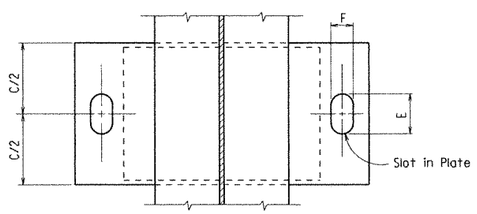
① Care shall be taken to ensure that the external load plate is in full and complete contact with the beam flange before welding begins.

② C.L Elastomeric pad shall be aligned with C.L. Beam.

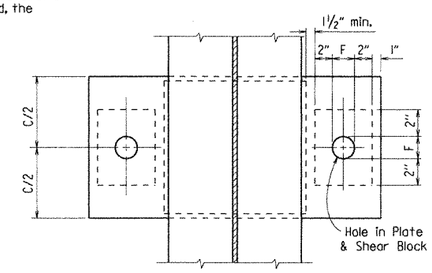


FRONT VIEW AT BENT 3

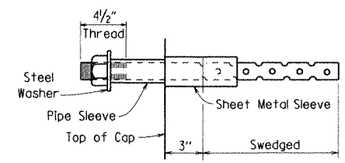
Unless otherwise approved by the Engineer, welding of the external load plate at expansion bearings to the beam will be allowed only when: 1) the approximate average air temperature during the 24 hour period immediately preceding welding is between 40° F and 80° F; and 2) the slots in the external load plate are positioned to center on the anchor bolts; and 3) no horizontal deformation of the elastomeric pad is evident. If welding at other temperatures is required, the Engineer will provide adjustment data.



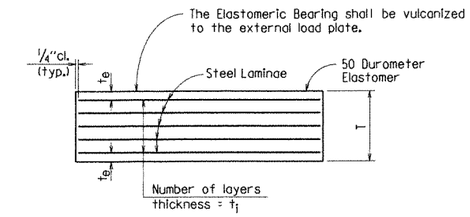
PLAN VIEW AT BENTS 1-2 & 4-5



PLAN VIEW AT BENT 3



ANCHOR BOLT DETAIL



t_e = thickness of elastomer cover on top and bottom of pad

t_1 = thickness of elastomer between steel laminae

N = number of elastomer layers of thickness t_1

ELASTOMERIC BEARING

NOTE: Anchor Bolts may be cast in place or drilled and grouted into place. If Anchor Bolts are to be cast in place, the Galvanized Sheet Metal Sleeves will not be required.

If Anchor Bolts are to be drilled and grouted in place, the Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with styrofoam, urethane foam or approved equal prior to pouring of concrete. After pouring of the cap and prior to erection of Structural Steel, the dry pack shall be removed and holes for the anchor bolts shall be accurately drilled into the masonry. Bolts placed in drilled holes shall be accurately set and fixed using a OPL approved epoxy or non-shrink grout that completely fills the holes. Galvanized Sheet Metal Sleeves will not be paid for directly, but will be considered subsidiary to the item "Structural Steel in Beam Spans (M 270, Gr. 50)".

GENERAL NOTES

Elastomeric Bearings shall conform to Section 808 of the Standard Specifications and shall be paid for at the unit price bid for "Elastomeric Bearings."

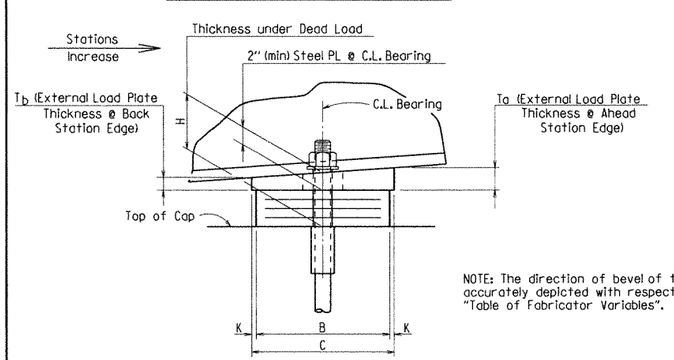
External load plates and shear blocks shall conform to AASHTO M 270, Grade 50. Pipe sleeves shall be ASTM A53, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or AASHTO M 298, Class 50.

External load plates and shear blocks shall be completely fabricated (including bevel, bolt holes and all shop welding) and shall be cleaned before vulcanizing to the elastomeric bearing. Surfaces in contact with the elastomeric bearing shall be cleaned in accordance with subsection 808.03. Other surfaces shall be blast cleaned in accordance with subsection 807.84(b) for painted steel and 807.84(e) for unpainted Grade 50W steel.

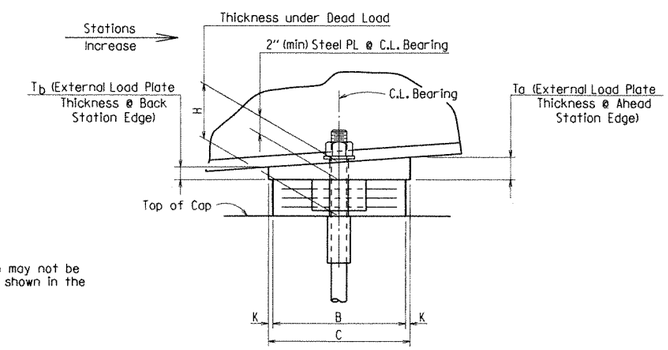
Anchor Bolts, Washers and Nuts shall conform to subsection 807.07 of the Standard Specifications. The anchor bolt grade of steel shall be as specified in the "Table of Fabricator Variables". Indentations shall be circular with rounded bottoms and staggered as shown in the details.

Pipe Sleeves, Anchor Bolts, Washers and Nuts shall be paid for at the unit price bid for "Structural Steel in Beam Spans (M270, Gr. 50)". External load plates and shear blocks will not be measured or paid for separately but will be considered included in the unit bid price for "Elastomeric Bearings".

Bearings shall be seated in accordance with subsection 808.08. This work and materials are considered as subsidiary to the item "Elastomeric Bearings" and will not be paid for directly.



SIDE VIEW AT BENTS 1-2 & 4-5



SIDE VIEW AT BENT 3

NOTE: The direction of bevel of the external load plate may not be accurately depicted with respect to T_a and T_b values shown in the "Table of Fabricator Variables".

TABLE OF FABRICATOR VARIABLES

* Maximum Design Load = Service I Limit State

BRIDGE NO.	LOCATION: BENT NO(S).	LOCATION: BEAM OR GIRDER NO.	BEARING TYPE	NO. of BEARINGS EACH BENT	*MAXIMUM DESIGN LOAD (KIPS)	G	H	ELASTOMERIC PAD: A	B	N	t_1	t_e	NO. & THICKNESS OF STEEL LAMINAE	T	EXTERNAL LOAD PLATE: C	D	E	F	J	K	M	T_a	T_b	ANCHOR BOLT: ANCHOR BOLT (ø x L)	GRADE	PIPE SLEEVE SIZE (ø x L)	SHEET METAL SLEEVE SIZE (ø x L)	STEEL WASHER SIZE (O.D.)
07233	1	All	Exp.	4	125	8 3/8"	5 9/16"	16"	8"	5	1/2"	1/4"	6 @ 12 ga.	3 5/8"	9"	26 1/4"	5 1/8"	2 1/4"	N/A	1/2"	10 3/8"	2.08"	1.92"	1 1/2"øx26"	55	1 1/2"øx 5 7/8"	3"øx 9"	3"
	2	All	Exp.	4	301	7 7/8"	4 3/8"	20"	12"	3	1/2"	1/4"	4 @ 12 ga.	2 7/16"	13"	32"	5"	3 1/8"	N/A	1/2"	12 3/4"	2.07"	1.93"	2 1/4"øx33"	55	2 1/2"øx 4 5/8"	4"øx 9"	4"
	3	All	Fix	4	341	7 5/8"	4 3/8"	20"	12"	3	1/2"	1/4"	4 @ 12 ga.	2 7/16"	13"	39 3/8"	N/A	3 1/8"	1 7/8"	1/2"	15 1/8"	1.98"	2.02"	2"øx30"	55	2 1/2"øx 4 5/8"	4"øx 9"	3 3/4"
	4	All	Exp.	4	301	7 7/8"	4 3/8"	20"	12"	3	1/2"	1/4"	4 @ 12 ga.	2 7/16"	13"	32"	5"	3 1/8"	N/A	1/2"	12 3/4"	1.90"	2.10"	2 1/4"øx33"	55	2 1/2"øx 4 5/8"	4"øx 9"	4"
	5	All	Exp.	4	125	8 3/8"	5 9/16"	16"	8"	5	1/2"	1/4"	6 @ 12 ga.	3 5/8"	9"	26 1/4"	5 1/8"	2 1/4"	N/A	1/2"	10 3/8"	1.89"	2.11"	1 1/2"øx26"	55	1 1/2"øx 5 7/8"	3"øx 9"	3"

STATE OF ARKANSAS
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DETAILS OF ELASTOMERIC BEARINGS
HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: PGT DATE: 9-7-11 FILENAME: bbb0105_el.dgn

CHECKED BY: AJS DATE: 9-16-11 SCALE: NONE

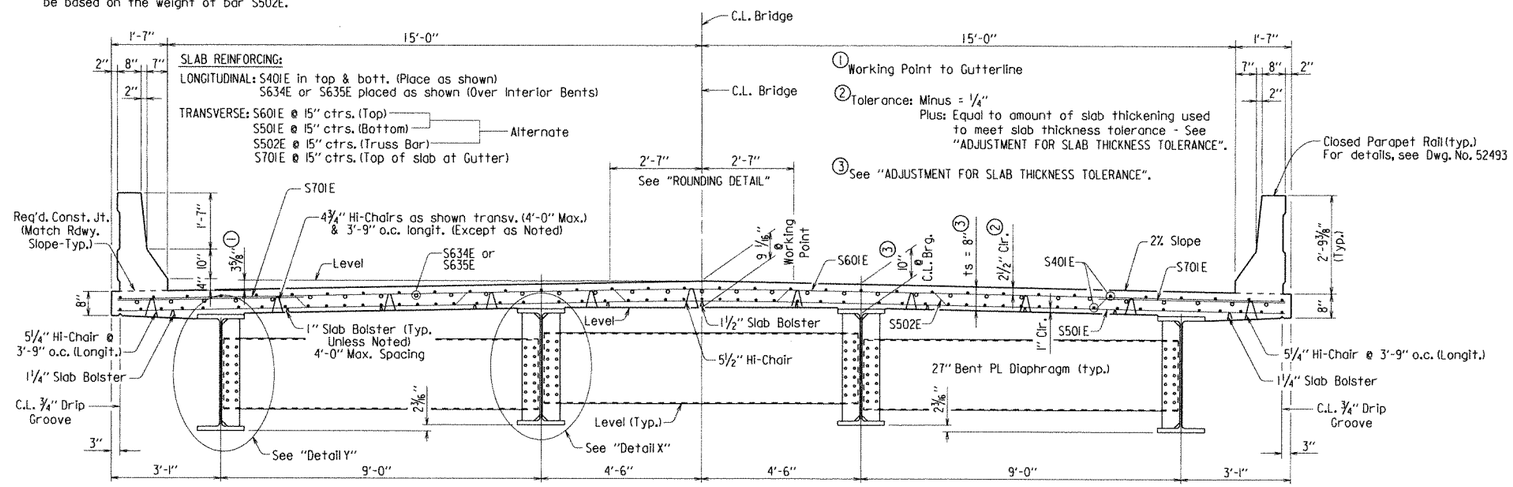
DESIGNED BY: KWY DATE: 6/11

BRIDGE NO. 07233 DRAWING NO. 52485

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	272	374
				07233		360' UNIT		52486

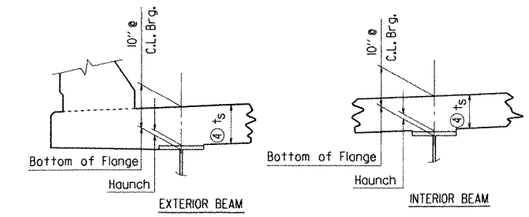
NOTE: At the Contractor's option, two straight epoxy coated #5 bars may be substituted for bar S502E. Payment for reinforcing will be based on the weight of bar S502E.

NOTE: Class I Protective Surface Treatment shall be applied to the Roadway Surface and to the Roadway Face & Top of the Concrete Parapet Rail.



TYPICAL ROADWAY SECTION

1/2" = 1'-0"



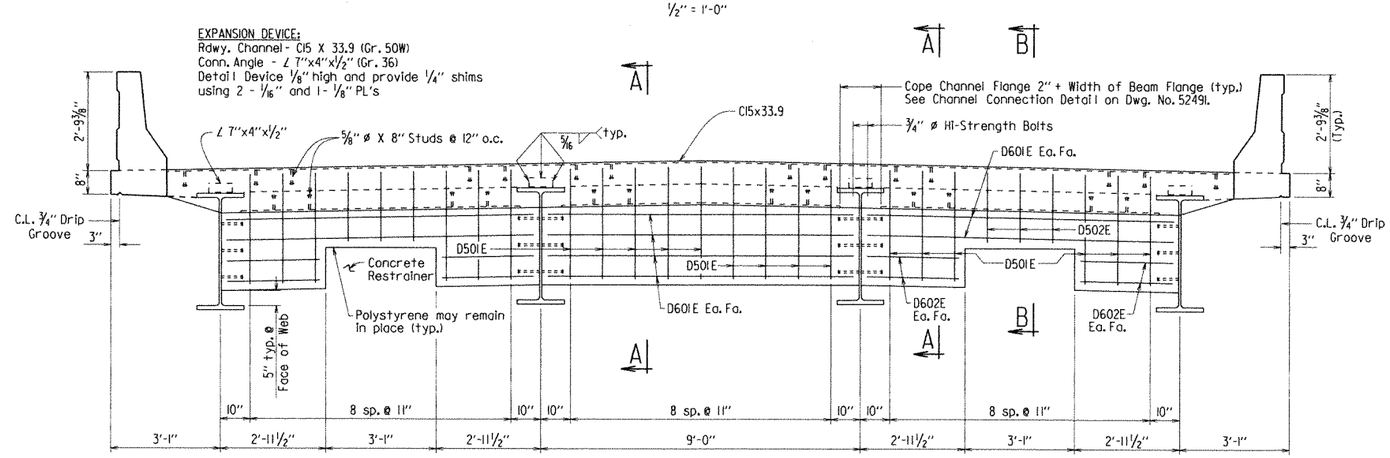
④ Tolerance when removable deck forming is used is + 1/2", - 1/4". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

Notes:
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance : Minimum - occurs when top flange contacts bottom reinforcing steel; Maximum - top flange thickness plus 1 3/4". No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 14991 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

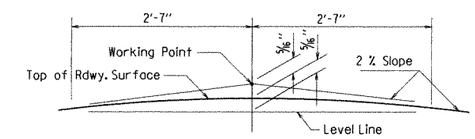
NTS



TYPICAL ROADWAY SECTION NEAR JOINT

1/2" = 1'-0"

Note: 1/2" polystyrene shall be used as a bond breaker between the concrete restrainer and the concrete diaphragm and may remain in place. Polystyrene will not be paid for directly, but will be considered subsidiary to Class S(AE) Concrete - Bridge.



NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL

N.T.S.

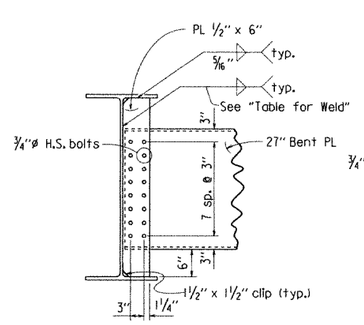
Notes: For "Section A-A" and "Section B-B" see Dwg. No. 52487.

For Detail of Poured Silicone Joint, See Dwg. No. 52491.

TABLE FOR WELD

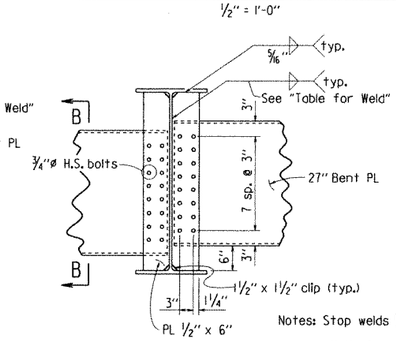
Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To 3/4" Inclusive	1/4"	
Over 3/4"	5/16"	

NOTE: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.



DETAIL Y

NTS

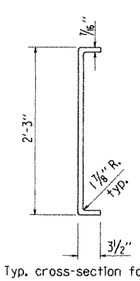


DETAIL X

NTS

Notes: Stop welds 1/4" to 1" from end of clip (typ.).

Bolts in connection shall be properly installed and tightened in accordance with subsection 807.71.



Typ. cross-section for all 27" bent plate diaphragms.

SECTION B-B

NTS

STATE OF ARKANSAS
Carl 3 Fuseller
REGISTERED PROFESSIONAL ENGINEER
No. 7510
CARL 9/20/11 FUSELIER

BRIDGE ENGINEER

SHEET 1 OF 7
DETAILS OF
360'-0" CONTINUOUS W-BEAM UNIT
HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

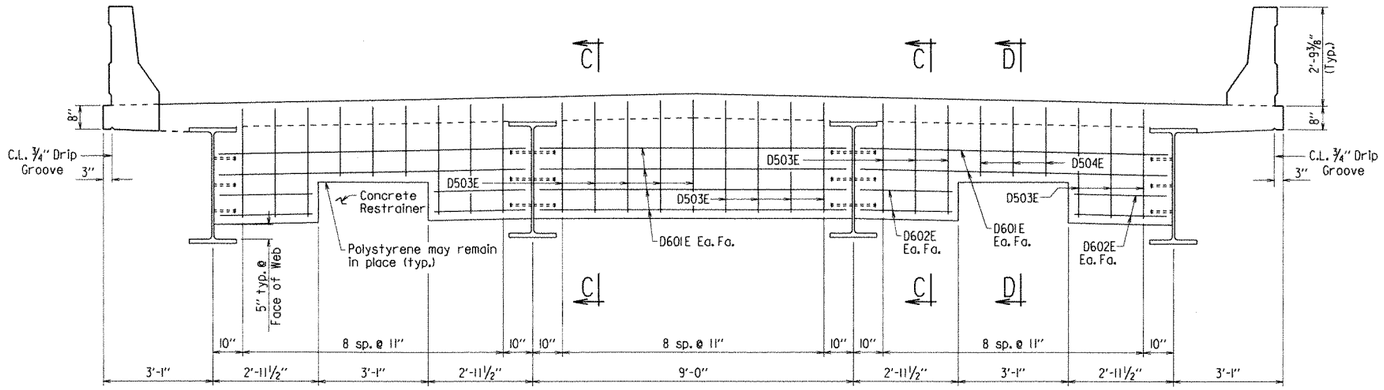
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: PGT DATE: 7-11 FILENAME: bbb0105_sl.dgn
CHECKED BY: AMS DATE: 9-16-11 SCALE: As Noted
DESIGNED BY: KWH DATE: 6/11

BRIDGE NO. 07233 DRAWING NO. 52486

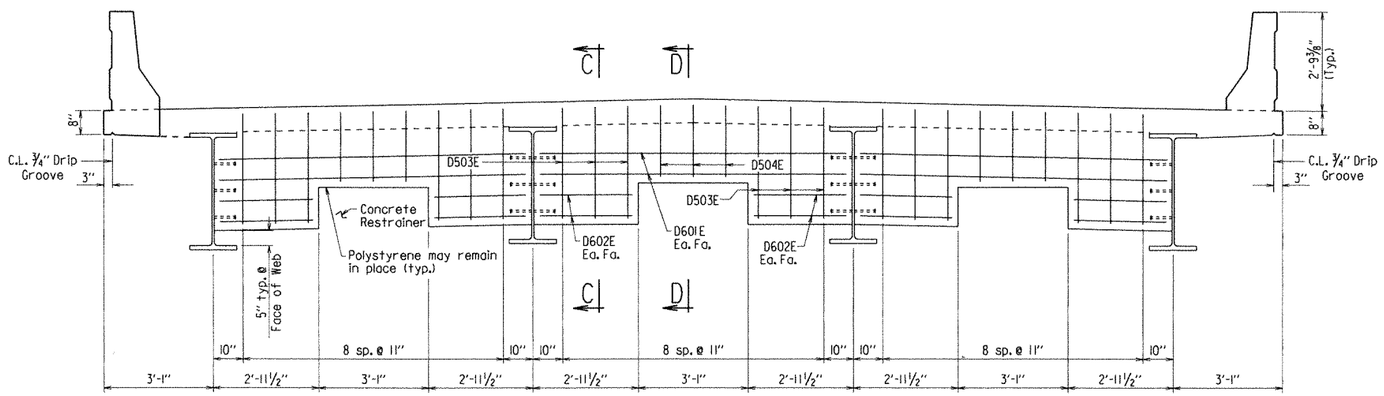
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	273	374
				1	07233	360' UNIT		52487



Note: For dimensions and reinforcing not shown, see "Typical Roadway Section" on Dwg. No. 52486

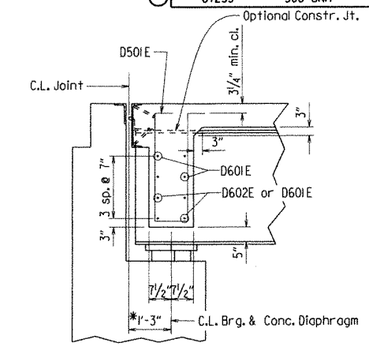
TYPICAL ROADWAY SECTION AT BENTS 2 and 4

½" = 1'-0"



TYPICAL ROADWAY SECTION AT BENT 3

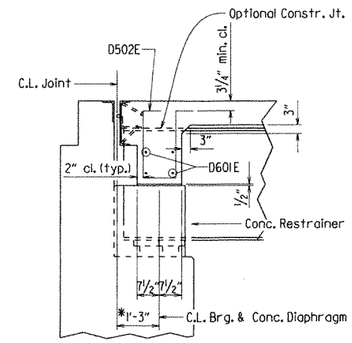
½" = 1'-0"



SECTION A-A

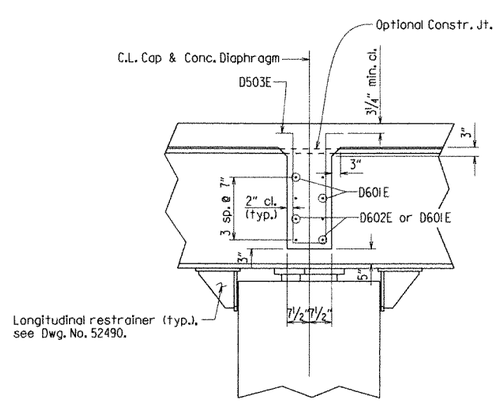
Section taken normal to conc. diaphragm.
½" = 1'-0"

* Measured along Beam.



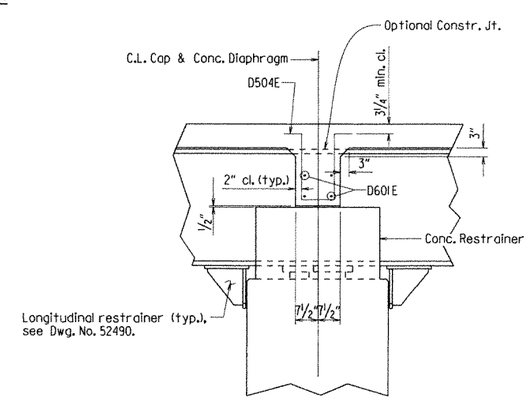
SECTION B-B

Section taken normal to conc. diaphragm.
½" = 1'-0"



SECTION C-C

Section taken normal to conc. diaphragm.
½" = 1'-0"



SECTION D-D

Section taken normal to conc. diaphragm.
½" = 1'-0"

NOTES: Forms for concrete diaphragms shall be removable.

Concrete diaphragms shall be vertical.

STATE OF ARKANSAS
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SHEET 2 OF 7

DETAILS OF 360'-0" CONTINUOUS W-BEAM UNIT HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

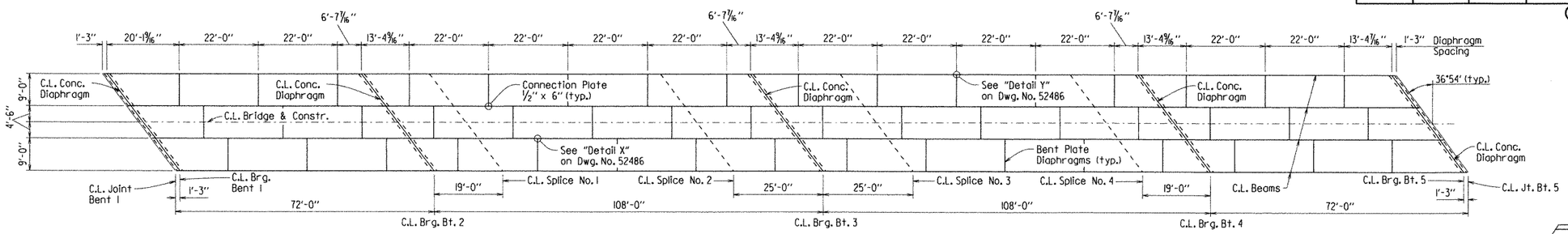
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: PGT DATE: 7-11 FILENAME: bbb0105_sl.dgn
CHECKED BY: AMS DATE: 9-16-11 SCALE: As Noted
DESIGNED BY: KWY DATE: 6/11

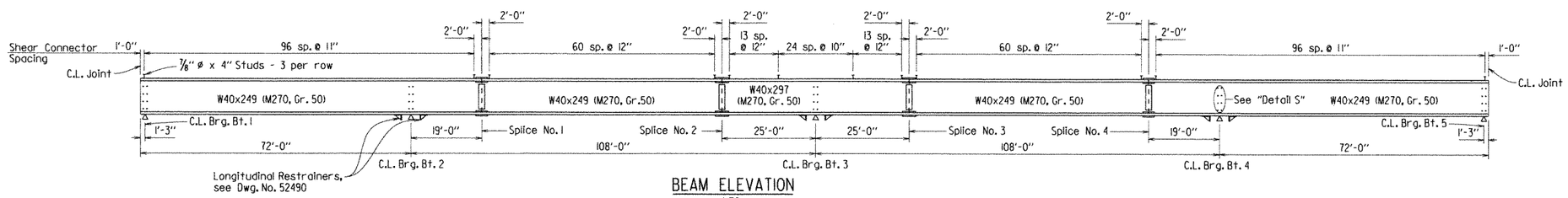
BRIDGE NO. 07233 DRAWING NO. 52487

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	274	374
				(1) 07233		360' UNIT		52488



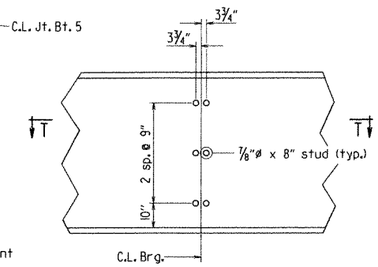
FRAMING PLAN

1/16" = 1'-0"



BEAM ELEVATION

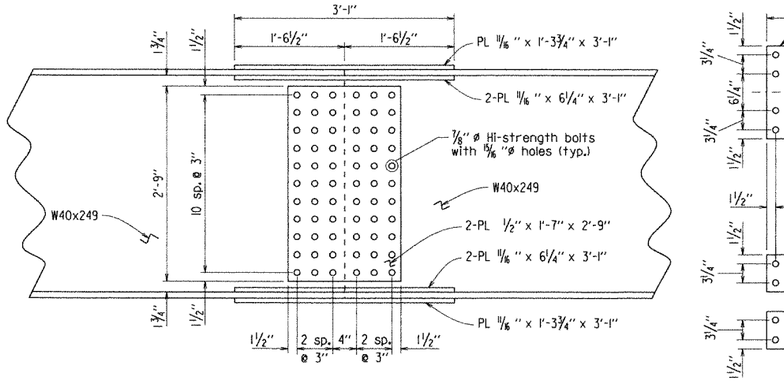
NTS

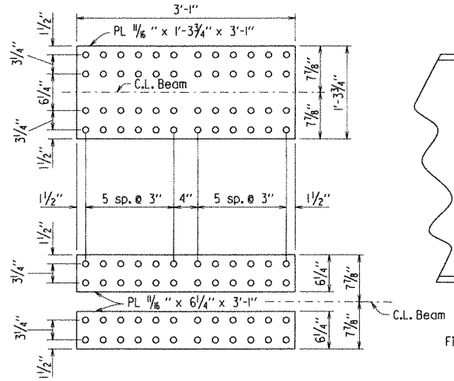


Note: Stud placement at int Bents shown, placement at End Bents similar.

DETAIL S

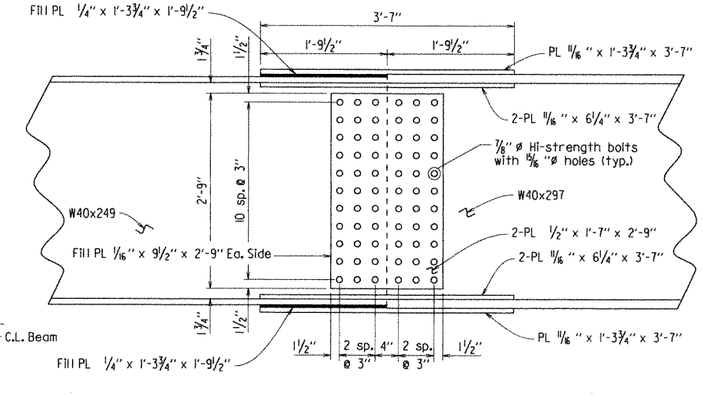
NTS

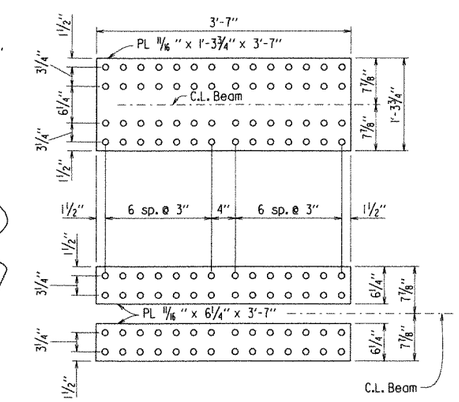




DETAILS OF BOLTED FIELD SPLICE NOS. 1 AND 4

1" = 1'-0"



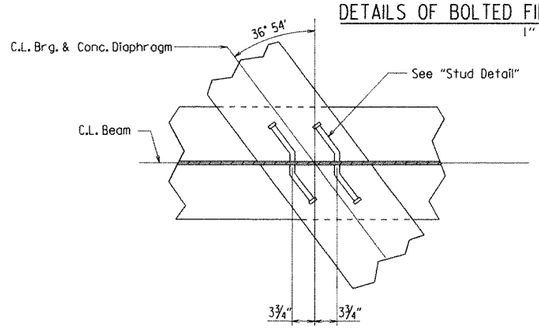


DETAILS OF BOLTED FIELD SPLICE NOS. 2 AND 3

1" = 1'-0"

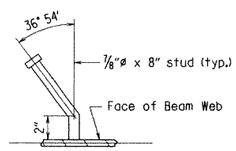
Note: All field splice plates shall be AASHTO M270, Gr. 50 Steel.

Note: Bolted field splices shown may be eliminated or shop welded, splices may be substituted with approval of the engineer. Payment will be made on the basis of the plan quantities.



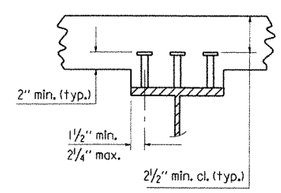
SECTION T-T

NTS



STUD DETAIL

NTS



Stud Shear Connectors shown shall be 7/8"ø x 4" long, granular flux filled, solid fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. 3/4"ø studs may be used in place of the 7/8"ø studs shown, at the ratio of 1.361 - 3/4"ø studs in place of one 7/8"ø stud. 7/8"ø studs will be used as basis for measurement of structural steel in shear connectors.

SHEAR CONNECTOR DETAIL

NTS

STATE OF ARKANSAS
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9/26/11
CARL J. FUSELIER

BRIDGE ENGINEER

SHEET 3 OF 7
DETAILS OF 360'-0" CONTINUOUS W-BEAM UNIT HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: PGT	DATE: 6-11	FILENAME: bbb0105_s1.dgn			
CHECKED BY: AMS	DATE: 9-16-11	SCALE: As Noted			
DESIGNED BY: KWY	DATE: 6/11				

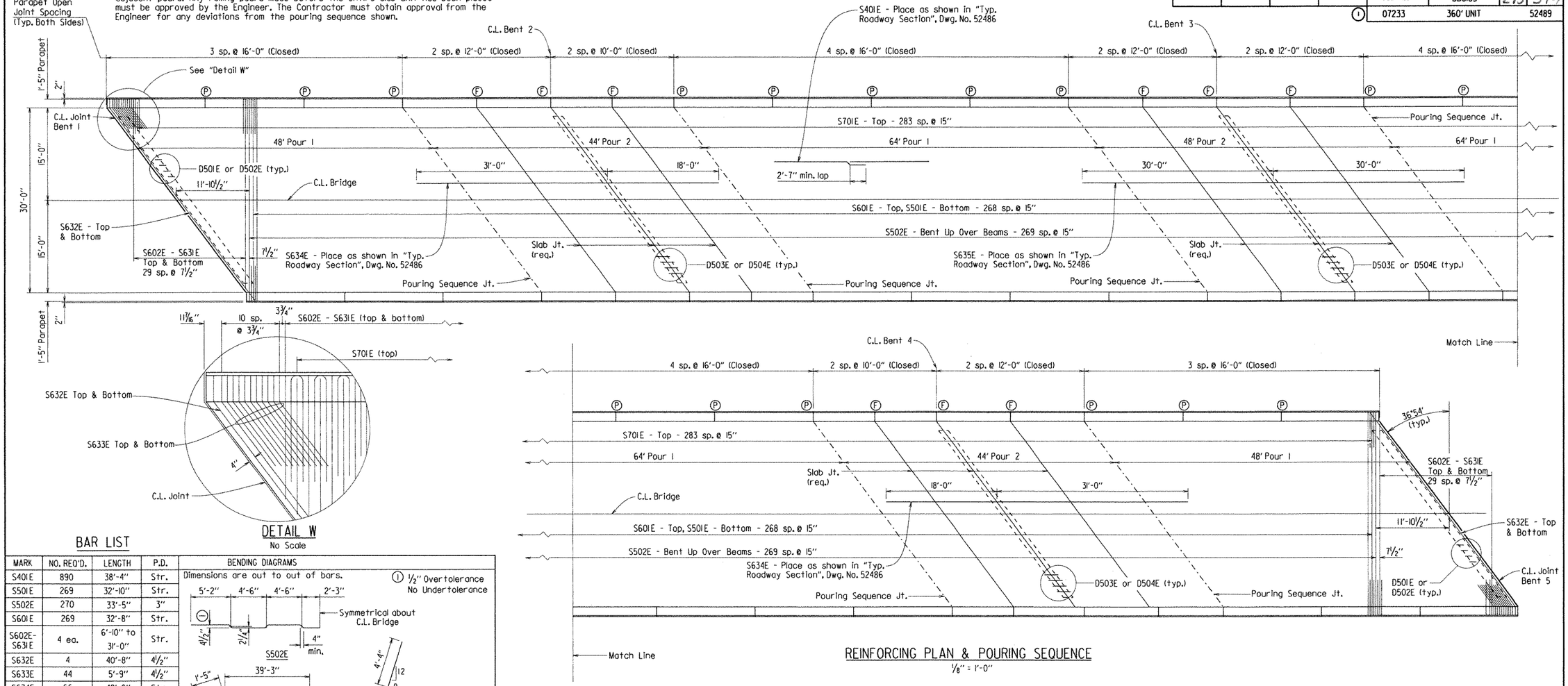
BRIDGE NO. 07233 DRAWING NO. 52488

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	275	374
				(1) 07233		360' UNIT		52489

NOTE: Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pour (2) can be placed. 48 hours shall elapse between the end of a pour and the start of the next pour. 72 hours shall elapse between adjacent pours. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.

NOTE: Required Slab Joints and Pouring Sequence Construction Joints shall align with parapet joints at front face of parapet.

(P) Partial depth parapet joint at this location (typ. both sides).
(F) Full depth parapet joint at this location (typ. both sides).



REINFORCING PLAN & POURING SEQUENCE
⅛" = 1'-0"

DETAIL W
No Scale

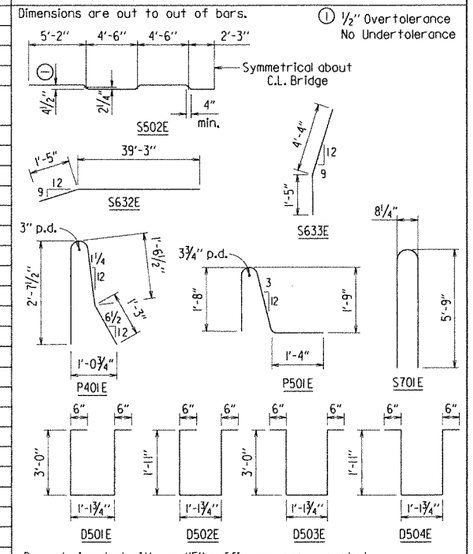
BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
S401E	890	38'-4"	Str.
S501E	269	32'-10"	Str.
S502E	270	33'-5"	3"
S601E	269	32'-8"	Str.
S602E-S631E	4 ea.	6'-10" to 3'-0"	Str.
S632E	4	40'-8"	4½"
S633E	44	5'-9"	4½"
S634E	66	49'-0"	Str.
S635E	33	60'-0"	Str.
S701E	568	11'-11"	6½"
P401E	1,440	5'-6"	3"
P402E	128	5'-6"	Str.
P403E	56	9'-8"	Str.
P404E	112	11'-8"	Str.
P405E	196	15'-8"	Str.
P501E	1,440	5'-0"	3¾"
D501E	42	7'-9"	2½"
D502E	12	5'-7"	2½"
D503E	60	7'-9"	2½"
D504E	21	5'-7"	2½"
D601E	76	10'-9"	Str.
D602E	88	3'-2"	Str.

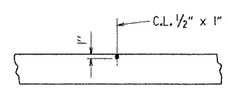
BENDING DIAGRAMS

Dimensions are out to out of bars.

(1) ½" Overtolerance
No Undertolerance

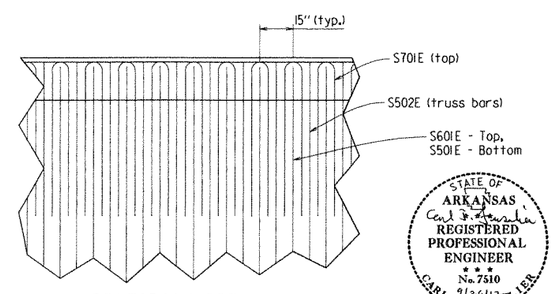


Bars designated with an "E" suffix are epoxy coated.



Use Type 3, 4, or 6 Joint Sealer. See subsections 501.02(h) and 501.05(j). Backer Rod filler will not be required. Joint Sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. Slab Joints shall extend to the outside edge of the deck slab and shall align with open joints at the front face of the parapet. Slab joints shall be installed before the parapet railing is poured. If slab joints are to be sawed, they shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the slab. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations. The joint sealer shall extend across the deck from gutterline to gutterline.

SLAB JOINT DETAIL
No Scale



REINFORCING DETAIL
No Scale

STATE OF ARKANSAS
Carl J. Fuselier
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No. 7510
9/26/11
CARL J. FUSELIER

BRIDGE ENGINEER

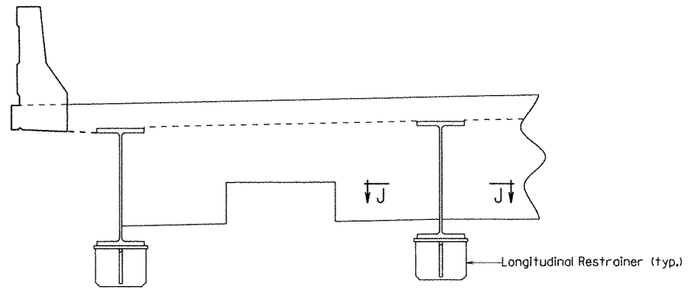
SHEET 4 OF 7
DETAILS OF
360'-0" CONTINUOUS W-BEAM UNIT
HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

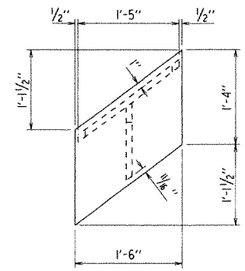
DRAWN BY: PGT DATE: 7-11 FILENAME: bbb0105_sl.dgn
CHECKED BY: AMS DATE: 9-16-11 SCALE: As Noted
DESIGNED BY: KWY DATE: 6/11
BRIDGE NO. 07233 DRAWING NO. 52489

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	276	374
				(1) 07233		360' UNIT		52490



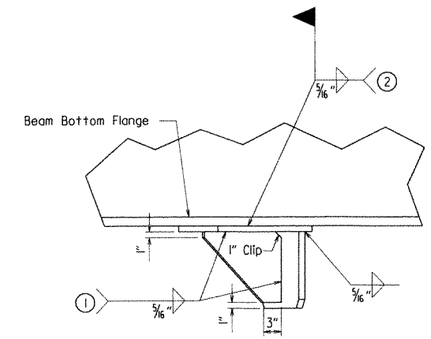
SKETCH OF LONGITUDINAL RESTRAINER DEVICES AT INTERMEDIATE BENTS

1/2" = 1'-0"



PLAN OF LONGITUDINAL RESTRAINER

1" = 1'-0"

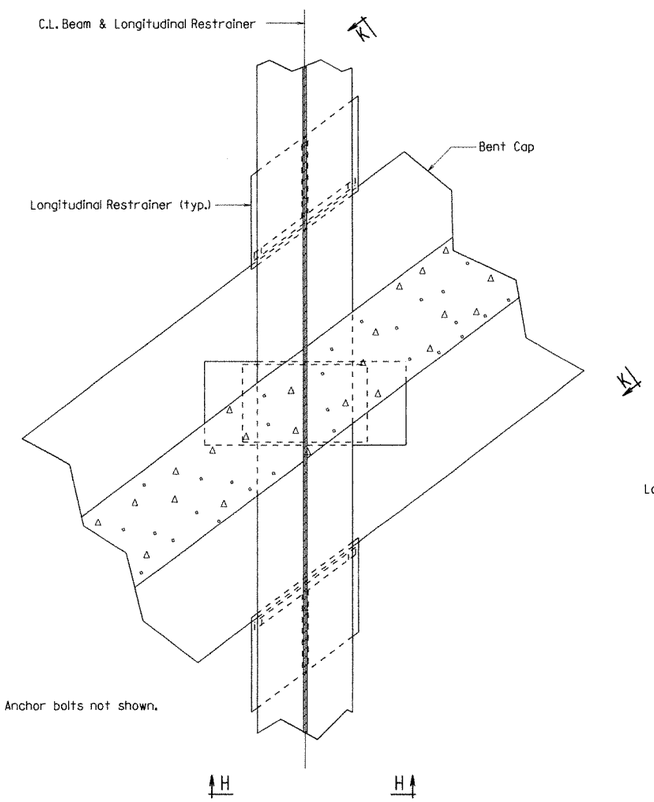


VIEW L-L

1" = 1'-0"

(1) Stop weld 1/2" from end of clip.

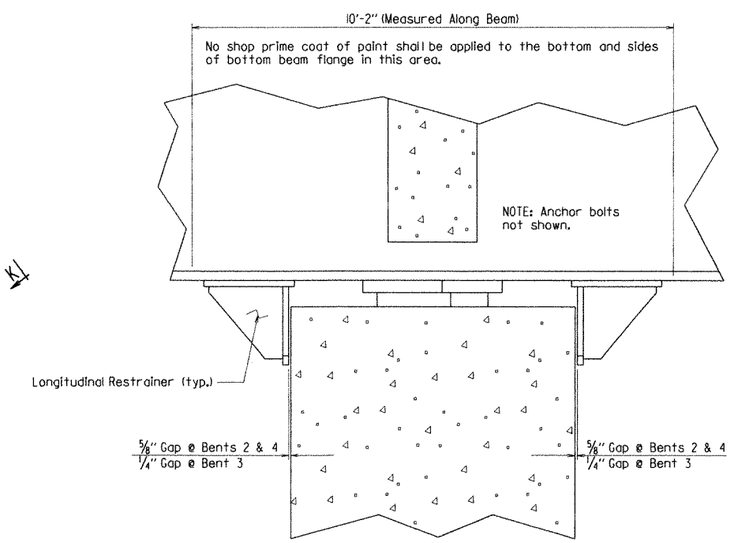
(2) Lonitudinal restrainer shall not be welded to beam until deck has been poured.



NOTE: Anchor bolts not shown.

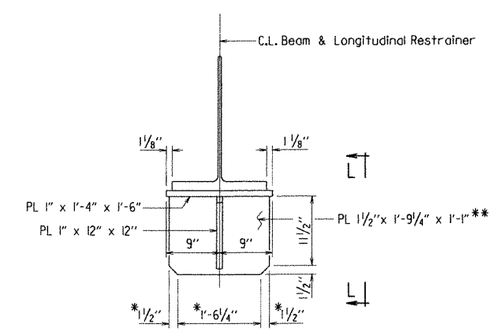
VIEW J-J

1" = 1'-0"



VIEW K-K

1" = 1'-0"



VIEW H-H

1" = 1'-0"

*Measured along face of plate.

NOTE: All plates shall be Grade 50.

**Longitudinal restrainer shall be fabricated to account for grade so the final position of this plate will be vertical.

STATE OF ARKANSAS
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SHEET 5 OF 7

DETAILS OF

360'-0" CONTINUOUS W-BEAM UNIT

HWY. 38 OVER INTERSTATE 40

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

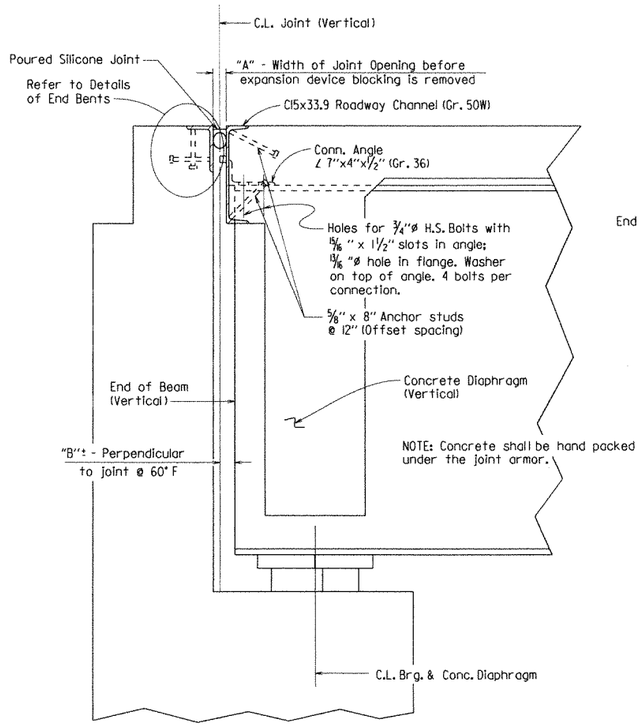
DRAWN BY: PGT DATE: 6-11 FILENAME: bbb0105_s1.dgn

CHECKED BY: AMS DATE: 9-16-11 SCALE: As Noted

DESIGNED BY: KWY DATE: 6/11

BRIDGE NO. 07233 DRAWING NO. 52490

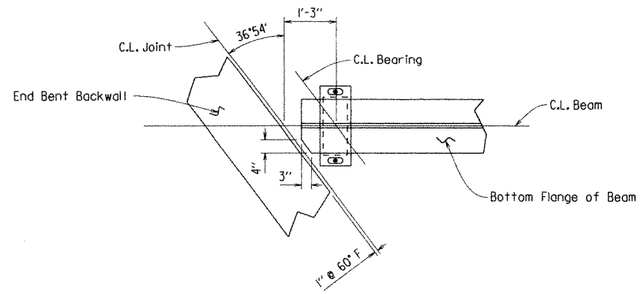
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	277	374
				(1) 07233		360' UNIT		52491



NOTE: Section taken normal to C.L. Joint

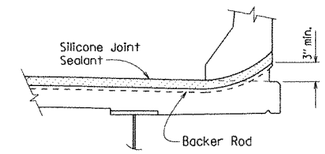
SECTION THRU JOINT AT END BENT

No Scale



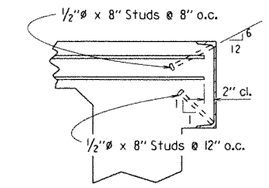
PLAN OF BEARING AT END BENT

No Scale



JOINT SEAL PLACEMENT AT CURB

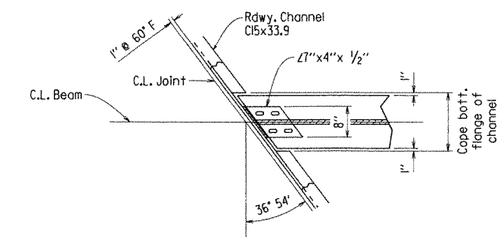
No Scale



NOTE: As an alternate to ⅝"ø studs, ½"ø x 8" studs spaced as shown may be used. Use weight of ⅝" ø stud as basis of measurement of structural steel in anchors.

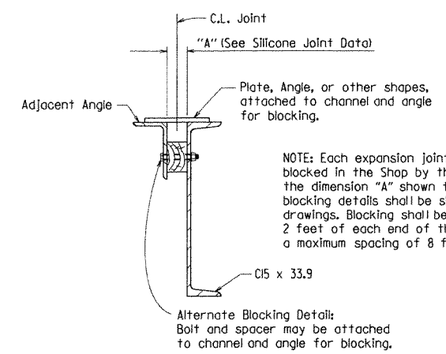
DETAILS OF ALTERNATE ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT

No Scale



CHANNEL CONNECTION DETAIL

No Scale



DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

No Scale

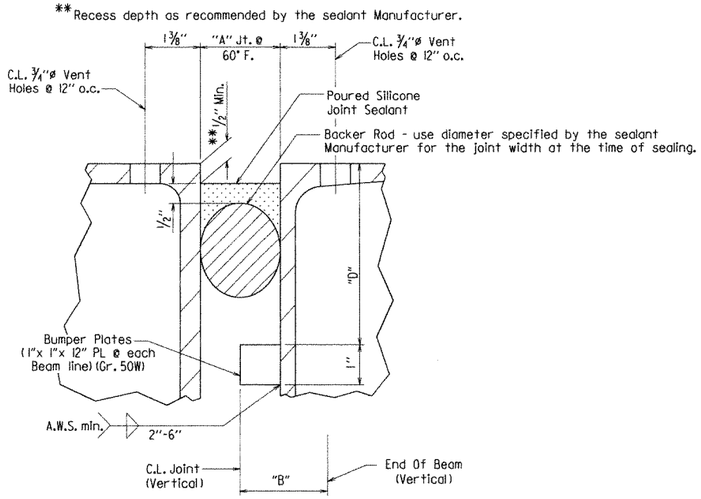
EXPANSION DEVICE INSTALLATION AT END BENTS:

The Contractor may elect to install the expansion device using one of the following two alternatives:

1) The concrete span pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the beams erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to pouring the backwall concrete, the blocking shall be removed, the opening adjusted for temperature and grade, and the backwall constructed.

2) The backwall shall be poured to the optional construction joint after beams are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent, immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted for temperature.

**Recess depth as recommended by the sealant Manufacturer.



DETAIL OF POURED SILICONE JOINT

No Scale

SILICONE JOINT DATA

"A" Width Perpendicular to Joint at 24 Hour Average Temperature* Of:			"B" Perpendicular to Joint at 60°F	"D"	Bumper Plate Size
40°F	60°F	80°F			
2¼"	2"	1¾"	2¼"±	4½"	1"x 1"x 12"

*The temperature used to set the joint opening shall be the approximate average air temperature during the 24 hour period immediately before the bolts are tightened. The Engineer shall establish the temperature. Interpolation of the table may be necessary.

NOTES:
The temperature limitations recommended by the sealant Manufacturer shall be observed. The sealant shall be installed only when the average 24 hour air temperature is between 40° and 80° F.

Use an appropriately sized backer rod at the depth shown in the Manufacturer's literature based on the joint width at the time of sealing. Unless otherwise noted, do not install more backer rod than can be sealed in the same day.

The Contractor shall verify separation of the backer rod from the joint material after the joint material has set.

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SHEET 6 OF 7
DETAILS OF
360'-0" CONTINUOUS W-BEAM UNIT
HWY. 38 OVER INTERSTATE 40
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: PGT DATE: 6-11 FILENAME: bbb0105_sl.dgn
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				6	ARK.			
				JOB NO.		BB0105	278	374
				1 07233		360' UNIT		52492

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 edition) with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Fifth Edition with 2010 Interim Revisions.

MATERIALS AND STRENGTHS:

Class S(AE) Concrete	f'c =	4,000 psi
Reinforcing Steel (AASHTO M31 or M53, Gr. 60)	fy =	60,000 psi
Structural Steel (M 270, Gr. 50)	Fy =	50,000 psi
Structural Steel (M 270, Gr. 36)	Fy =	36,000 psi

CONCRETE :
Concrete shall be poured in the dry and all exposed corners to be chamfered ¾" unless otherwise noted. All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4,000 psi.

The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete. See Standard Drawing No. 14991 for allowable modifications and for tolerances when Permanent Steel Bridge Deck Forms are used.

Concrete in bridge superstructure shall be placed, consolidated and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

The concrete deck shall be given a tine finish in accordance with subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the beam. If a longitudinal strike-off is used, a vertical camber adjustment must be made in the strike-off to account for the future dead load deflection due to the railing. A minimum of 72 hours shall elapse between completion of the slab and the pouring of the parapet railing.

REINFORCING STEEL :
All reinforcing steel shall conform to AASHTO M31 or M53, Grade 60. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly, but will be considered subsidiary to the item "Epoxy Coated Reinforcing Steel (Grade 60)".

STRUCTURAL STEEL :
All structural steel shall be AASHTO M 270, Grade 50 unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (M 270, Gr. 50)". All exposed surfaces shall be cleaned in accordance with subsection 807.84. Structural steel completely embedded in concrete may be AASHTO M 270, Grade 36 unless otherwise noted.

All Grade 50 and Grade 36 structural steel except galvanized steel and steel which is completely encased in concrete shall be painted in accordance with subsection 807.75. The color of paint shall conform to Federal Standard 595B, Color Chip No. 36270, Gray.

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

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

Beams and field splice plates are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Beam Spans (M270, Gr. 50)".

All beams shall be assembled in the shop as specified in Section 807.54 and blocked in their true position with webs horizontal. The camber, length of sections, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram. All beam dimensions are based on a temperature of 60 degrees F. A tolerance of ¼" +/- is allowed for camber.

Flange field splice plates for shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether permanent or temporary, a formal request with detailed drawings shall be submitted to the Engineer for approval; however, additional welds used for attaching falsework support devices or screed rail supports to the structural steel that do not exceed the limitations of subsection 802.13 will not require approval prior to construction. All welding shall conform to subsection 807.26.

Field connections shall be bolted with high-strength bolts and shall be ¾" ø bolts unless otherwise noted. Bolts shall be placed with heads on the outside face of the exterior beam webs and on the bottom of the beam flanges. Holes for ¾" ø high-strength bolts may be ⅞" ø diameter if a washer is supplied for use under both the nut and head of the bolt.

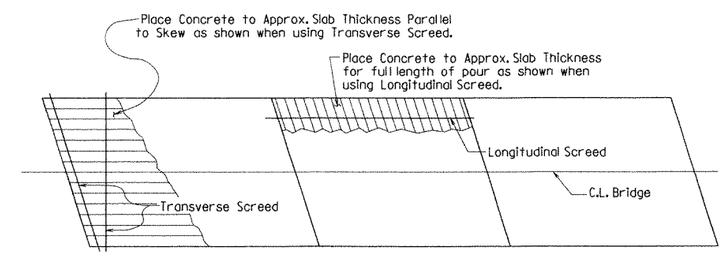
Diaphragms shall be installed as beams are erected. All bolts in diaphragms and field splices shall be installed and tightened in accordance with subsection 807.71 prior to pouring the concrete deck unless otherwise noted.

All shear connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with recommendations of the Manufacturer.

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Span	Point of Deflection	Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet		
		Exterior	Interior	Exterior	Interior	Exterior	Interior	
1	1.0	0	0	0	0	0	0	
	1.1	0.028	0.029	0.121	0.146	0.134	0.159	
	1.2	0.051	0.053	0.219	0.263	0.243	0.286	
	1.3	0.065	0.067	0.278	0.333	0.309	0.362	
	1.4	0.067	0.070	0.290	0.347	0.322	0.377	
	1.5	0.059	0.061	0.255	0.306	0.283	0.333	
	1.6	0.042	0.044	0.184	0.221	0.204	0.240	
	1.7	0.021	0.022	0.093	0.112	0.103	0.121	
	1.8	0.001	0.001	0.008	0.010	0.009	0.011	
	1.9	-0.009	-0.009	-0.037	-0.044	-0.041	-0.048	
2	2.0	0	0	0	0	0	0	
	2.1	0.063	0.065	0.264	0.317	0.294	0.345	
	2.2	0.155	0.160	0.649	0.778	0.722	0.847	
	2.3	0.241	0.248	1.009	1.209	1.122	1.317	
	2.4	0.297	0.306	1.244	1.490	1.383	1.623	
	2.5	0.310	0.320	1.297	1.553	1.442	1.692	
	2.6	0.277	0.286	1.158	1.387	1.288	1.511	
	2.7	0.207	0.213	0.861	1.031	0.958	1.123	
	2.8	0.118	0.121	0.487	0.583	0.542	0.635	
	2.9	0.037	0.038	0.151	0.181	0.168	0.197	
	3.0	0	0	0	0	0	0	Half-point of unit

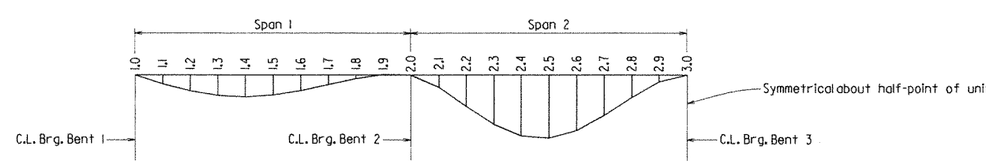
Note: Table is symmetrical about half-point of unit.



NOTE: At the Contractor's Option, the Transverse Screed may be placed parallel to the skew or perpendicular to C.L. Bridge.

CONCRETE PLACEMENT PROCEDURE

No Scale



DEAD LOAD DEFLECTION DIAGRAM

NOTE: Camber for Dead Load Deflection +/- ¼" tolerance. Deflections shown are along C.L. Beam from a chord from C.L. Bearing to C.L. Bearing. Negative sign (-) indicates point above chord. Vertical curve corrections not included.

STATE OF ARKANSAS
Carl J. Fuselier
REGISTERED PROFESSIONAL ENGINEER
No. 7510
9/26/12
CARL J. FUSELIER

BRIDGE ENGINEER

SHEET 7 OF 7
DETAILS OF
360'-0" CONTINUOUS W-BEAM UNIT
HWY. 38 OVER INTERSTATE 40
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: PGT DATE: 6-11 FILENAME: bbb0105_sl.dgn
CHECKED BY: AMS DATE: 9-16-11 SCALE: As Noted
DESIGNED BY: KWY DATE: 6/11
BRIDGE NO. 07233 DRAWING NO. 52492

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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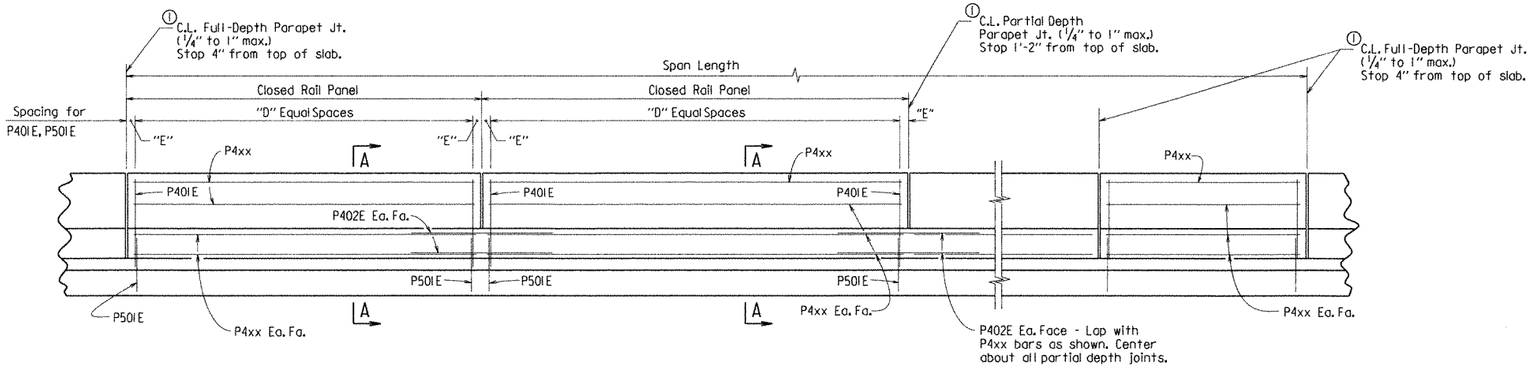
				JOB NO.		BB0105	279	374
				1 07233		PARAPET		52493



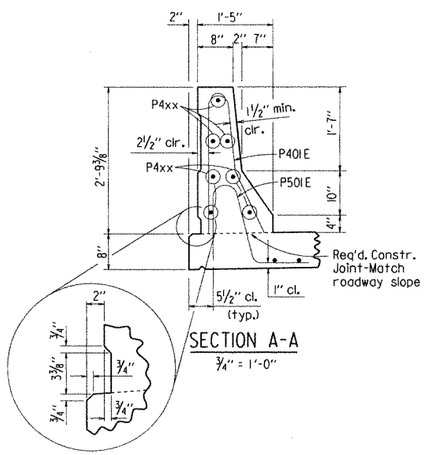
ELEVATION - CONCRETE PARAPET RAIL

1/2" = 1'-0"

1 For location of full and partial depth parapet joints, see "Reinforcing Plan & Pouring Sequence".

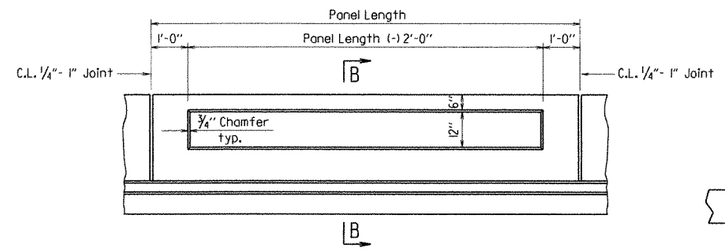
TABLE OF VARIABLES

Bridge No.	Closed Rail Panels			
	Length	"D"	"E"	P4xx Bar
07233 (Hwy. 38)	10'-0"	19	3"	P403E
	12'-0"	23	3"	P404E
	16'-0"	31	3"	P405E



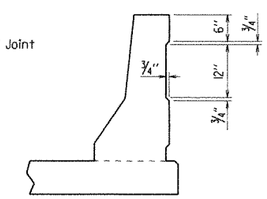
SECTION A-A

3/4" = 1'-0"



DETAILS OF PARAPET ENHANCEMENT

No Scale



SECTION B-B

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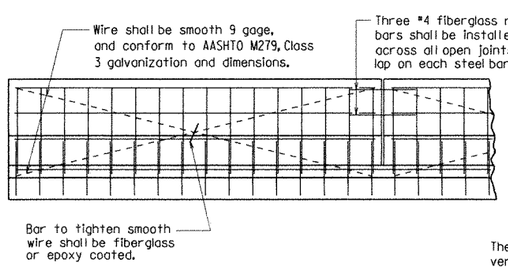
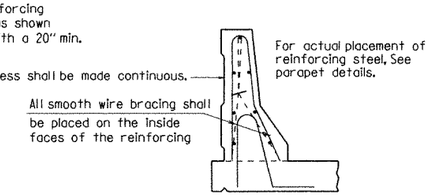


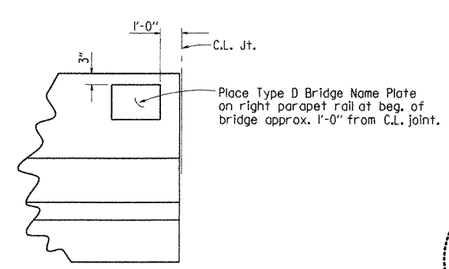


All panels shall be braced as required to prevent racking. All open joints shall be sawed as soon as practical to a minimum width of 1/4". To control cracking before sawing, all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.

The extruded parapet shall conform to the horizontal and vertical lines shown on the plans or as directed by the Engineer and shall present a smooth, uniform appearance and texture. Unless otherwise noted, exposed surfaces may be given a light brush finish or a Class 3 Textured Coating Finish in place of Class 2 Rubbed Finish.

DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET RAIL

No Scale



VIEW SHOWING LOCATION OF NAME PLATE

No Scale

STATE OF ARKANSAS
Carl J. Pusbeiler
REGISTERED PROFESSIONAL ENGINEER
No. 7510
9/26/11
CARL J. PUSBEILER

BRIDGE ENGINEER

DETAILS OF PARAPET RAIL

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: PGT DATE: 6-11 FILENAME: bbb0105_sl.dgn
CHECKED BY: AMS DATE: 9-19-11 SCALE: As Noted
DESIGNED BY: PGT DATE: 5-11

BRIDGE NOS. 07233 DRAWING NO. 52493

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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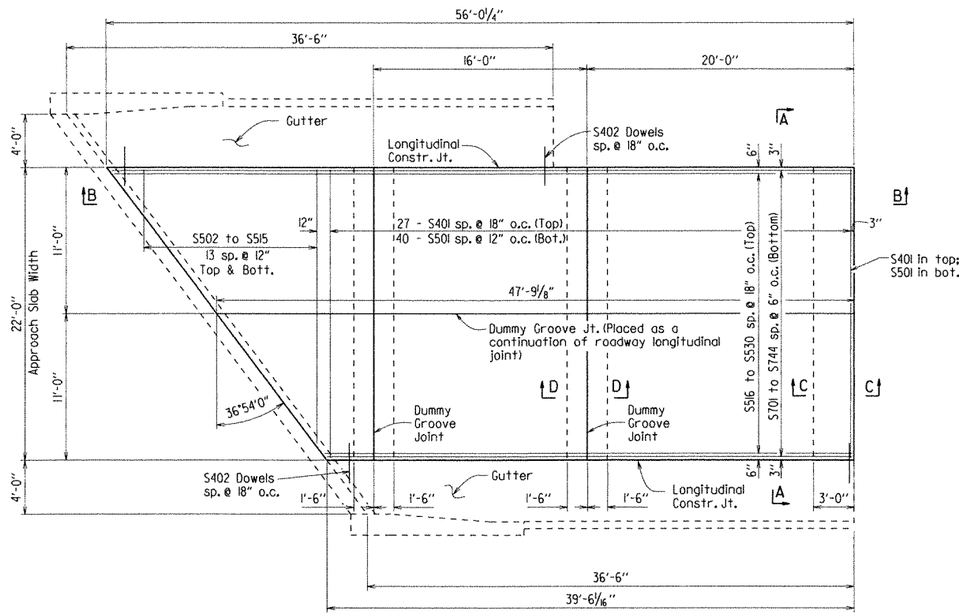
				JOB NO.		BB0105	280	374
				1	07233	APPROACH SLAB		52494



PLAN OF TYPE SPECIAL I APPROACH SLAB

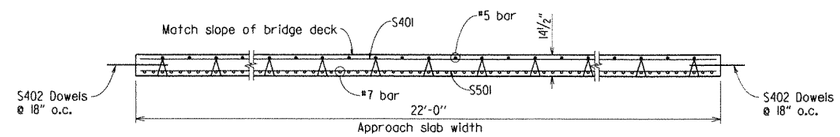
Scale: 3/16" = 1'-0"

QUANTITIES FOR ONE TYPE SPECIAL I APPROACH SLAB

Length (ft.)	Reinforcing Steel (lbs.)	Concrete (cubic yards)
47'-9⅛"	7374	60.50

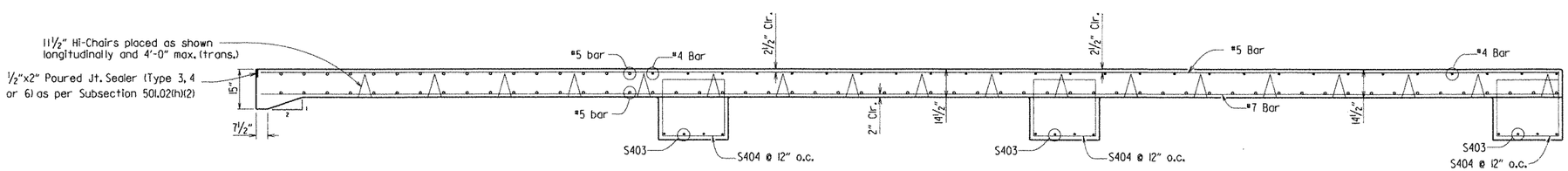
BAR LIST TYPE SPECIAL I APPROACH SLAB

Mark	No. Req'd	Length	P.D.	Bending Diagram
S401	27	21'-8"	Str.	2'-7" / S404 / 2'-5" / 4½" Min. (Typ.)
S402	48	3'-0"	Str.	
S403	12	21'-8"	Str.	
S404	66	10'-4"	2"	
S501	40	21'-8"	Str.	
S502 to S515	2 ea.	3'-3" to 20'-6"	Str.	
S516 to S530	1 ea.	39'-6" to 55'-4"	Str.	
S701 to S744	1 ea.	39'-4" to 55'-6"	Str.	Dimensions are out to out of bar.



SECTION A-A

Scale: ⅜" = 1'-0"



SECTION B-B

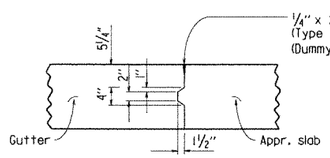
Scale: ⅜" = 1'-0"

GENERAL NOTES

Concrete shall be Class S (AE) (f'c = 4,000 psi).

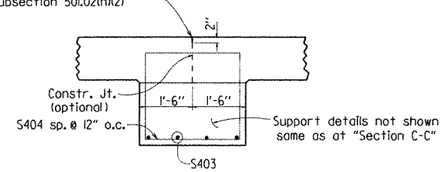
Reinforcement Steel shall conform to AASHTO M31 or M53, Grade 60 (fy = 60,000 psi).

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



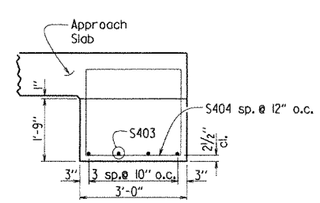
DETAILS OF LONGITUDINAL CONSTRUCTION JOINT

¾" = 1'-0"



SECTION D-D

Scale: None



SECTION C-C

Scale: None

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7510 CARL J. FUSELIER 9/20/11

BRIDGE ENGINEER

DETAILS OF TYPE SPECIAL I APPROACH SLAB

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: AOW DATE: 05-16-11 FILENAME: bbb0105_as.dgn

CHECKED BY: PGT DATE: 9-19-11 SCALE: As Noted

DESIGNED BY: STD. DATE:

BRIDGE NO. 07233 DRAWING NO. 52494

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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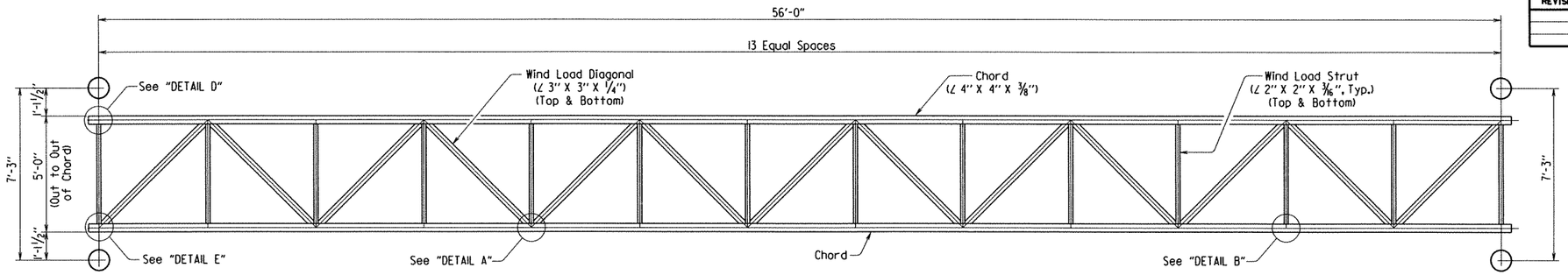
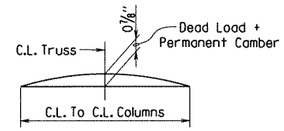
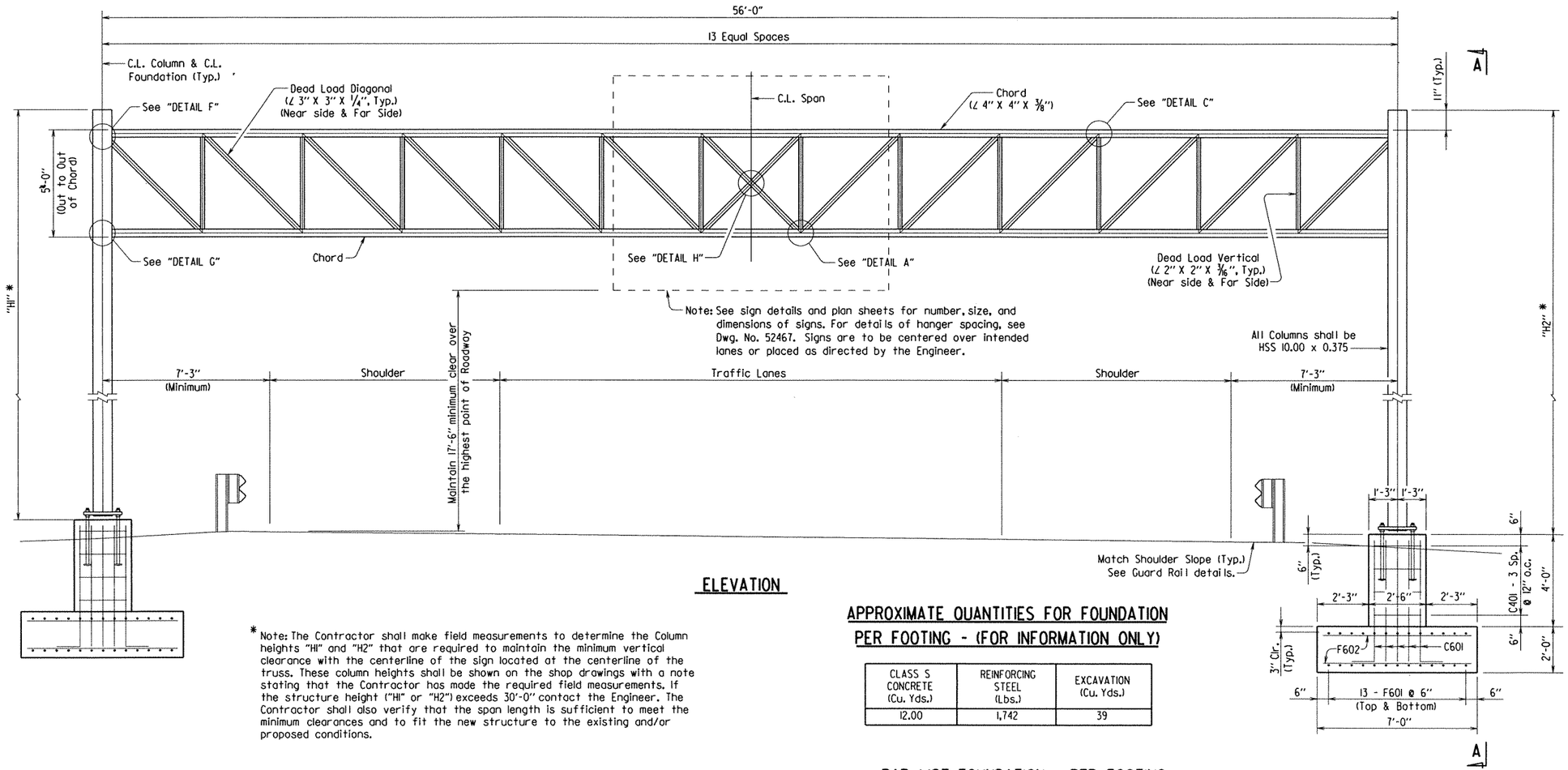


PLAN



TRUSS CAMBER DIAGRAM



ELEVATION

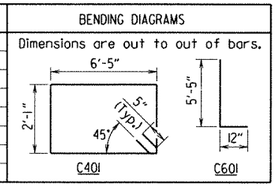
* Note: The Contractor shall make field measurements to determine the Column heights "H1" and "H2" that are required to maintain the minimum vertical clearance with the centerline of the sign located at the centerline of the truss. These column heights shall be shown on the shop drawings with a note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

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

CLASS S CONCRETE (Cu. Yds.)	REINFORCING STEEL (Lbs.)	EXCAVATION (Cu. Yds.)
12.00	1,742	39

BAR LIST-FOUNDATION - PER FOOTING

MARK	NO. REQ'D	LENGTH	P.D.	BENDING DIAGRAMS
C401	8	17'-6"	2"	Dimensions are out to out of bars.
C601	46	6'-4"	4 1/2"	
F601	26	15'-6"	Str.	
F602	62	6'-6"	Str.	



STATE OF ARKANSAS
Carl J. Fussler
REGISTERED PROFESSIONAL ENGINEER
No. 7510
12/17/12
CARL J. FUSSLER
BRIDGE ENGINEER

SHEET 1 OF 5
DETAILS FOR
56' STEEL OVERHEAD SIGN STRUCTURES

ROUTE 40 SEC. 51

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12/14/12 FILENAME: bbb0105_ohsign1.dgn
CHECKED BY: AMS DATE: 12/17/12 SCALE: NOT TO SCALE
DESIGNED BY: STD. DATE:
STR. NO. OH-040-68-03 OH-040-68-06 DRAWING NO. 52463

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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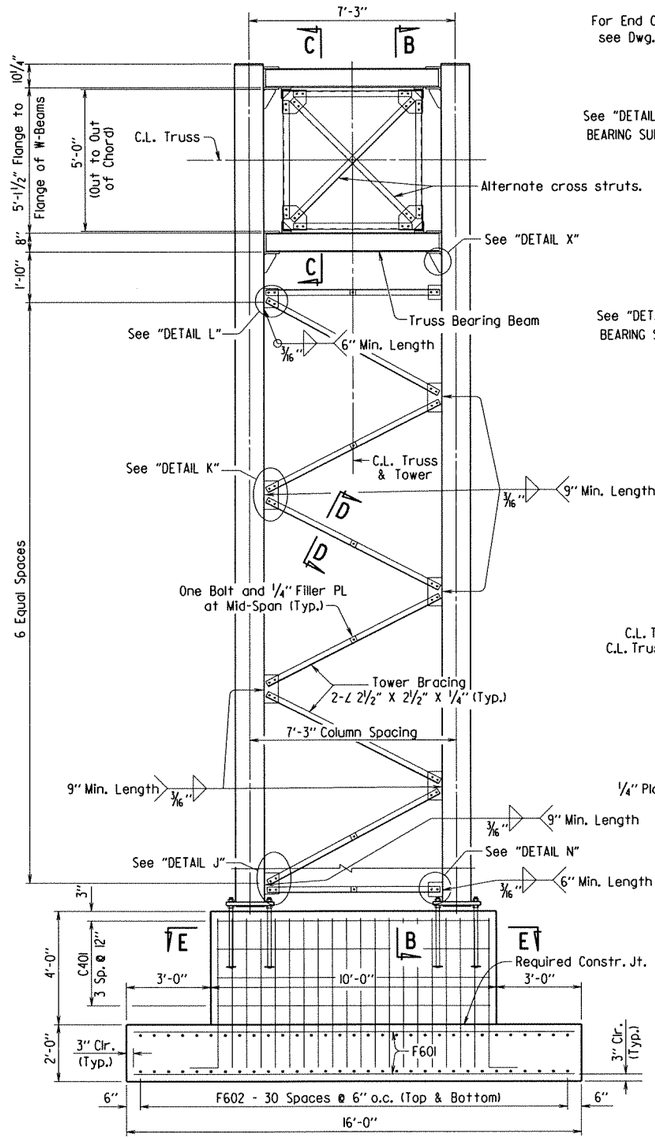
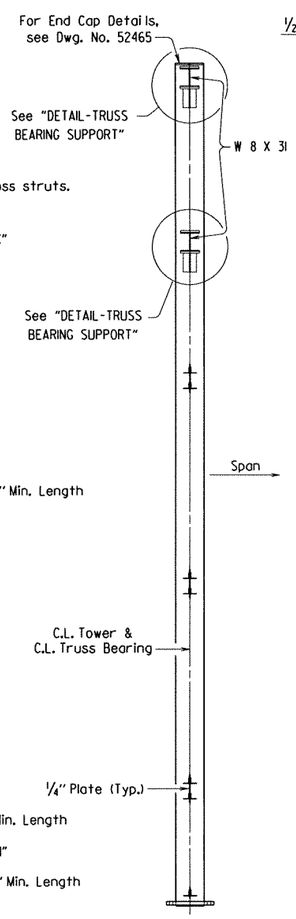
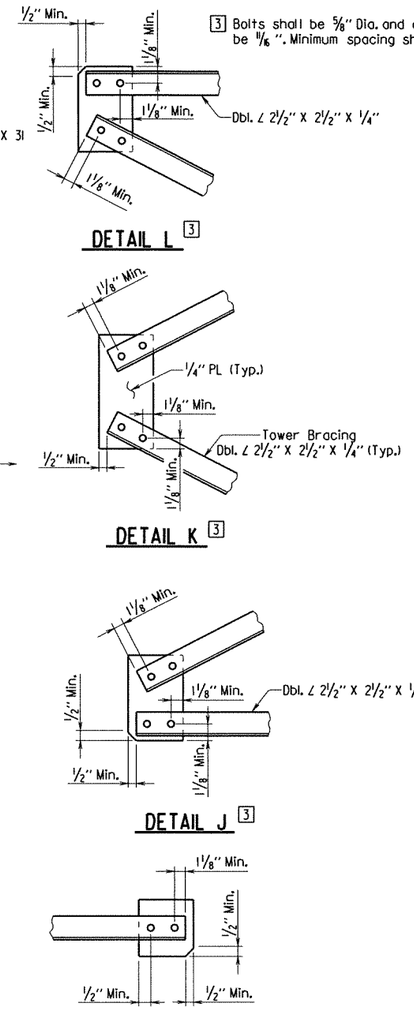


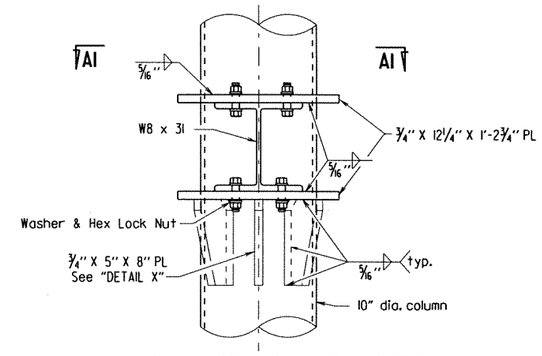
VIEW A-A



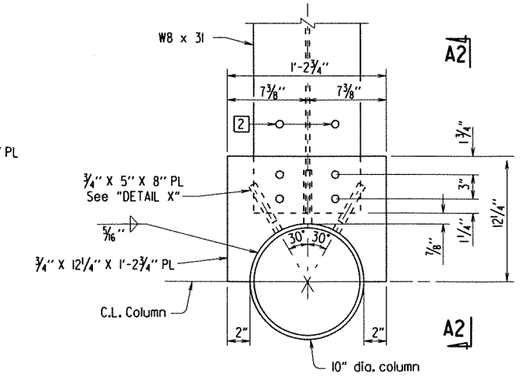
SECTION B-B



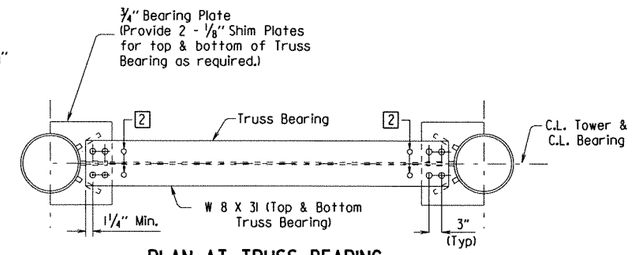
3 Bolts shall be ⅝" Dia. and open holes shall be 11/16". Minimum spacing shall be 2¼".



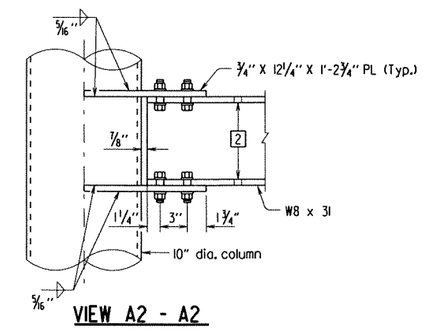
DETAIL - TRUSS BEARING SUPPORT



VIEW A1 - A1



PLAN AT TRUSS BEARING

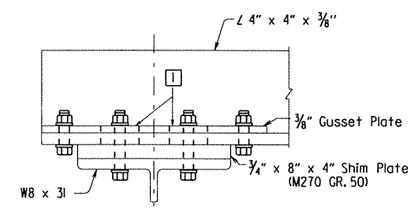


VIEW A2 - A2

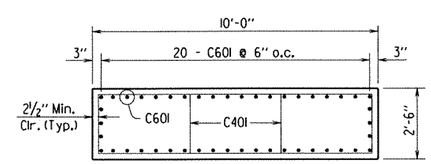
¾" X 5" X 8" Plate not shown for clarity

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

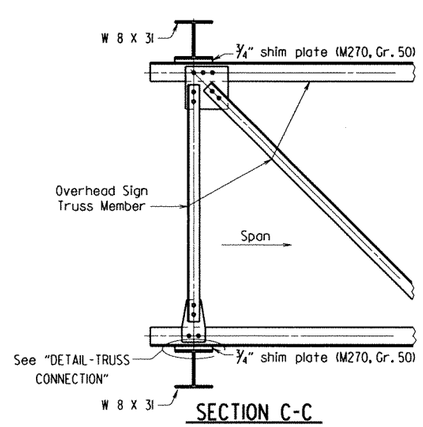
2 11/16" Dia. holes at top or bottom flanges as required.



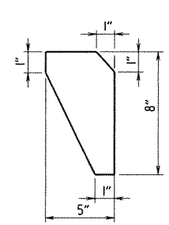
DETAIL - TRUSS CONNECTION



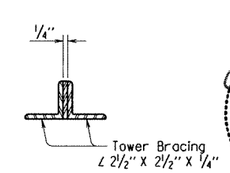
SECTION E-E



SECTION C-C



DETAIL X



SECTION D-D

STATE OF ARKANSAS
Carl J. Fussner
REGISTERED PROFESSIONAL ENGINEER
No. 7510
12/17/12
CARL J. FUSSNER

BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS FOR
56' STEEL OVERHEAD SIGN STRUCTURES

ROUTE 40 SEC. 51

ARKANSAS STATE HIGHWAY COMMISSION

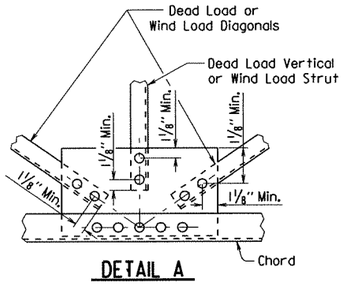
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12/14/12 FILENAME: bbb0105_ohsign1.dgn
CHECKED BY: AHS DATE: 12/17/12 SCALE: NOT TO SCALE
DESIGNED BY: STD. DATE:
STR. NO. OH-040-68-03 OH-040-68-06 DRAWING NO. 52464

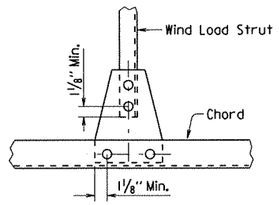
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	283	374
				1	OH-040-68-03 OH-040-68-06	SIGN STRUCTURE	52465	

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

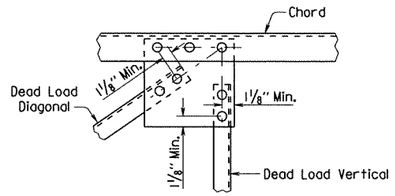
[1] Slotted Hole in Gusset Plate and Chord Angle 11/16" X 2". Use plate washer on Gusset plate side. 11/16" ø holes in 3/4" shim plate and beam flange.



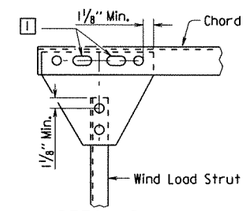
DETAIL A



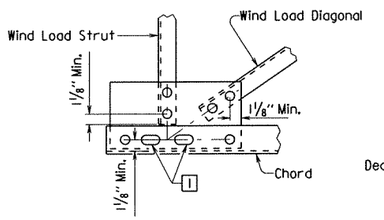
DETAIL B



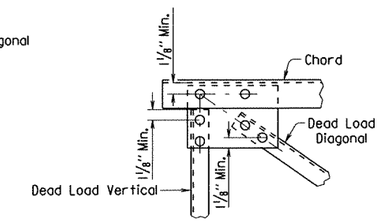
DETAIL C



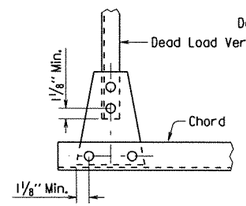
DETAIL D



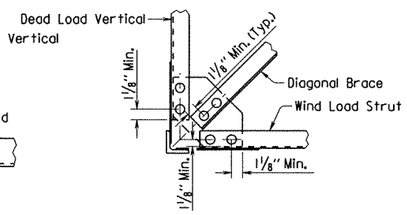
DETAIL E



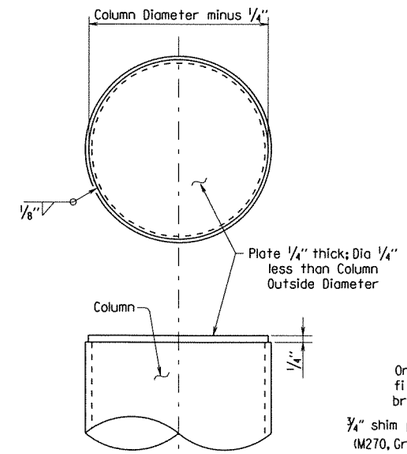
DETAIL F



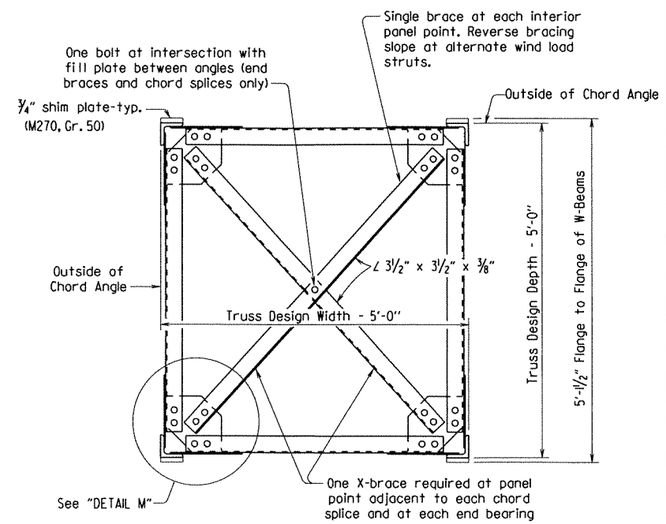
DETAIL G



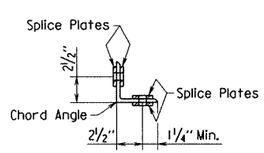
DETAIL M



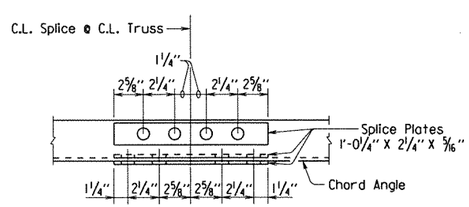
END CAP DETAILS



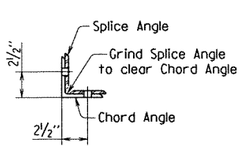
TRUSS SECTION



SECTION ON C.L. SPLICE

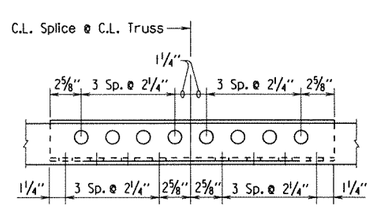


CHORD SPLICE USING PLATES



SECTION ON C.L. SPLICE

(4" ∠ Shown)

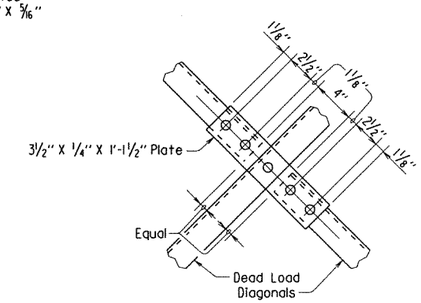


OPTIONAL CHORD SPLICE USING ANGLES

Place Splice Angle on inside of Truss

(4" ∠ Shown)

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



DETAIL "H"

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7510
12/17/12
CARL J. FUSELIER

BRIDGE ENGINEER

SHEET 3 OF 5
DETAILS FOR
56' STEEL OVERHEAD SIGN STRUCTURES

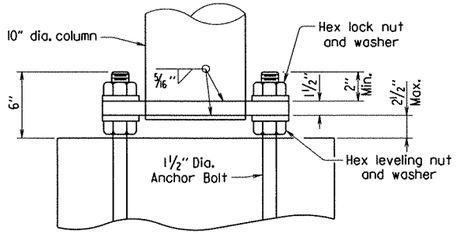
ROUTE 40 SEC. 51

ARKANSAS STATE HIGHWAY COMMISSION

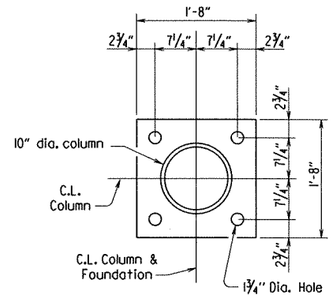
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12/14/12 FILENAME: bbb0105.ohsignl.dgn
CHECKED BY: AHS DATE: 12/17/12 SCALE: NOT TO SCALE
DESIGNED BY: STD. DATE:
STR. NO. OH-040-68-03 OH-040-68-06 DRAWING NO. 52465

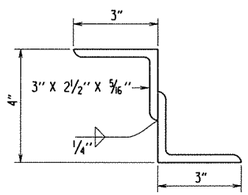
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	284	374
				1	OH-040-68-03 OH-040-68-06	SIGN STRUCTURE 52466		



ELEVATION - COLUMN BASE

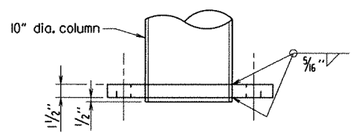


PLAN - COLUMN BASE



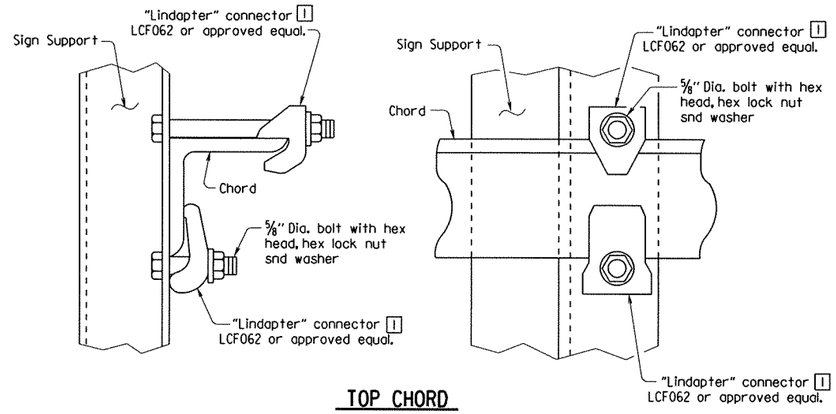
NOTE: Structural Z support may be fabricated from angles as shown.

DETAILS OF ALTERNATE Z SUPPORT

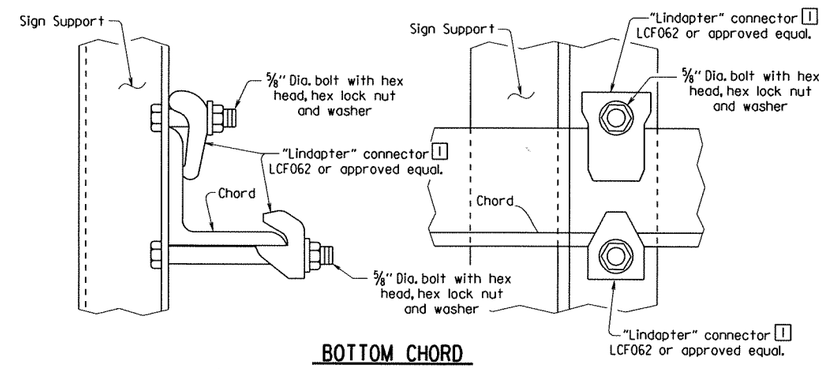


Note: Diameter of hole in base plate to be 1/8" larger than column diameter.

DETAIL OF COLUMN CONNECTION TO BASE PLATE



TOP CHORD

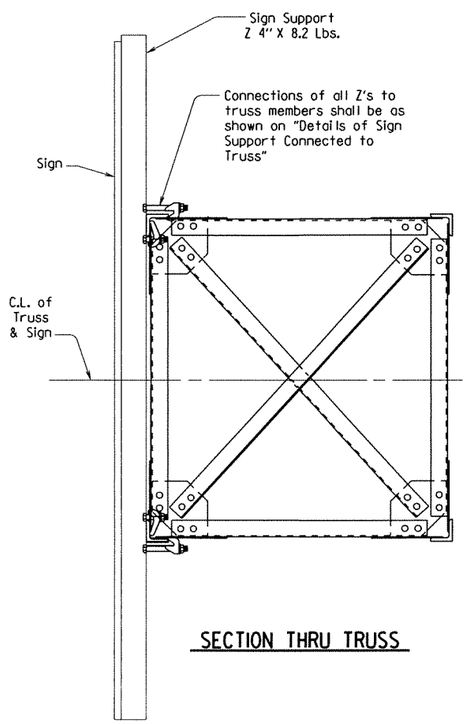


BOTTOM CHORD

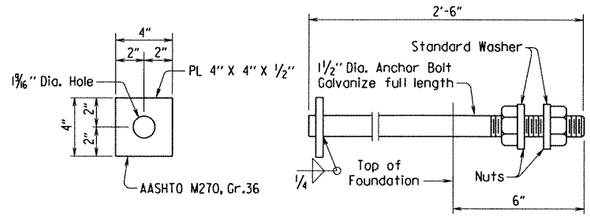
1 Note: All "Lindapter" connectors or approved equal shall be installed according to manufacturer's recommendations. All connectors, bolts, nuts and washers shall be galvanized.

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

DETAIL OF SIGN SUPPORT CONNECTED TO TRUSS



SECTION THRU TRUSS



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

ANCHOR BOLT DETAIL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7510 CARL J. PUSHKAR JR. 12/12/12

BRIDGE ENGINEER

SHEET 4 OF 5
DETAILS FOR
56' STEEL OVERHEAD SIGN STRUCTURES

ROUTE 40 SEC. 51

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12/14/12 FILENAME: bbb0105_ohsign1.dgn
CHECKED BY: AMS DATE: 12/17/12 SCALE: NOT TO SCALE
DESIGNED BY: STD. DATE:
STR. NO. OH-040-68-03 OH-040-68-06 DRAWING NO. 52466

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	285	374
				1	OH-040-68-03 OH-040-68-06	SIGN STRUCTURE	52467	

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

Design Specifications: Standard Specifications for Structural supports for Highway Signs, Luminaries and Traffic Signals, AASHTO Fifth Edition (2009) with 2011 Interims.

Basic Wind Speed = 90 m.p.h.

Fatigue Category I excluding fatigue design for galloping loads.

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

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

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

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

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

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

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

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

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

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

Anchor bolts shall comply with AASHTO M314, Grade 55, with Supplementary Requirement SI, and galvanized according to Section 807.07. Nuts and washers for anchor bolts shall be furnished and galvanized in accordance with subsection 807.07. Anchor Bolts shall be pretensioned in accordance with Special Provision BB0105 "STEEL SIGN STRUCTURES".

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

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

All main load carrying tension members greater than ½" in thickness shall conform to the requirements of the Longitudinal Charpy V-notch test specified for Zone I minimum service temperature. This work and materials shall be paid for in accordance with Special Provision Job BB0105 "STEEL SIGN STRUCTURES".

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

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

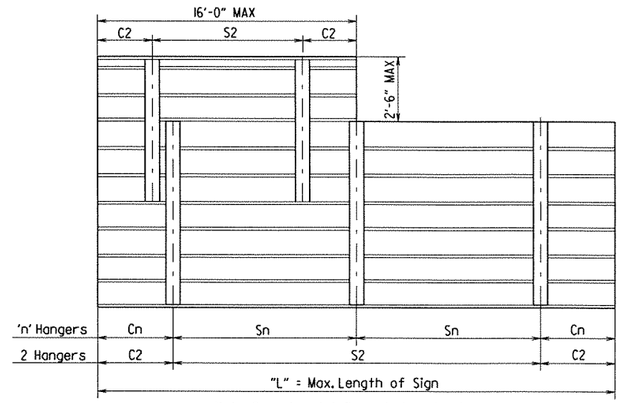
Lock nuts to be equipped with nylon locking inserts or other approved type locking system. Locknuts to be installed according to manufacturer's recommendations.

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

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

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

Shoring may be required to protect existing shoulders during excavation. Any shoring required shall not be paid for directly, but shall be considered incidental to the item "Steel Overhead Sign Structure". The excavations for the footings shall be backfilled before the structure is attached to the foundations.



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

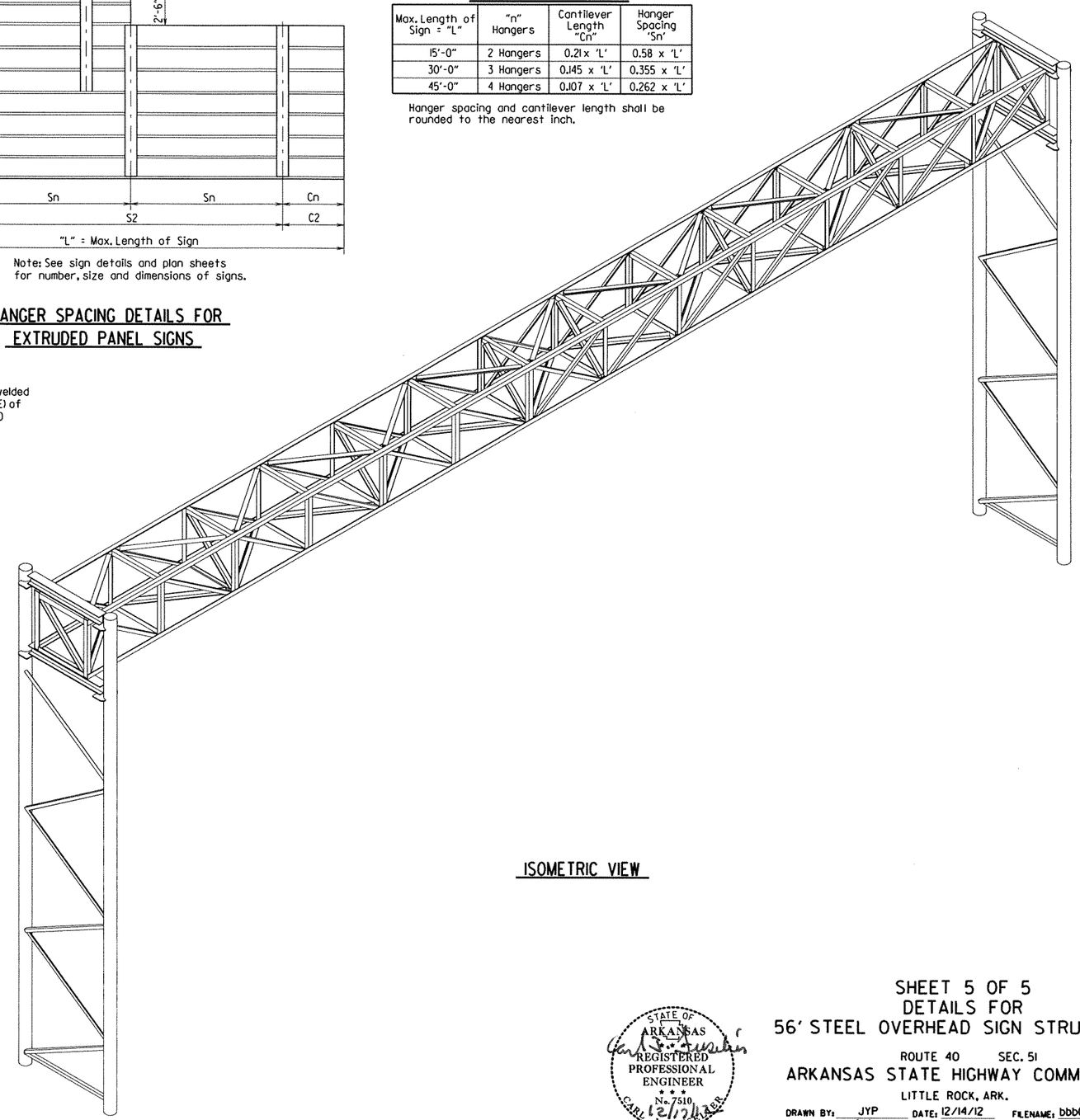
HANGER SPACING DETAILS FOR EXTRUDED PANEL SIGNS

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

HANGER VARIABLES

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

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



ISOMETRIC VIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7510
CARL J. FUSELIER
12/17/12

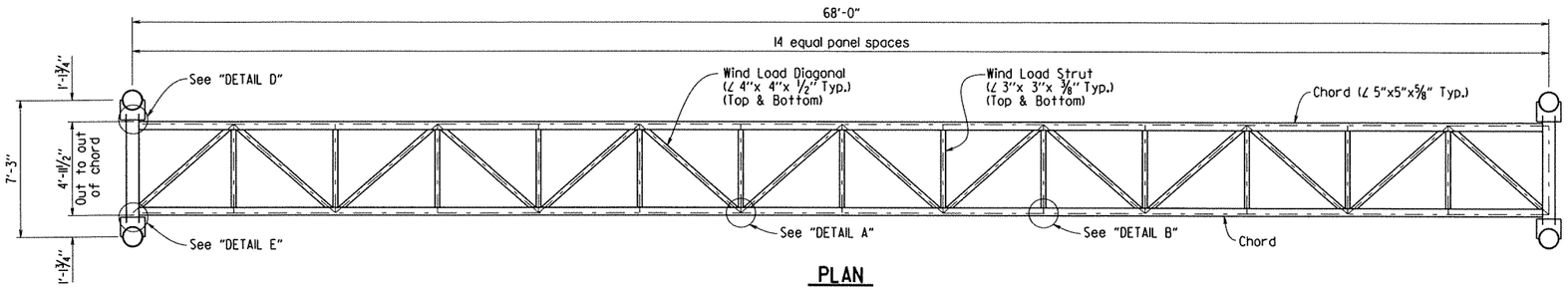
BRIDGE ENGINEER

SHEET 5 OF 5
DETAILS FOR
56' STEEL OVERHEAD SIGN STRUCTURES

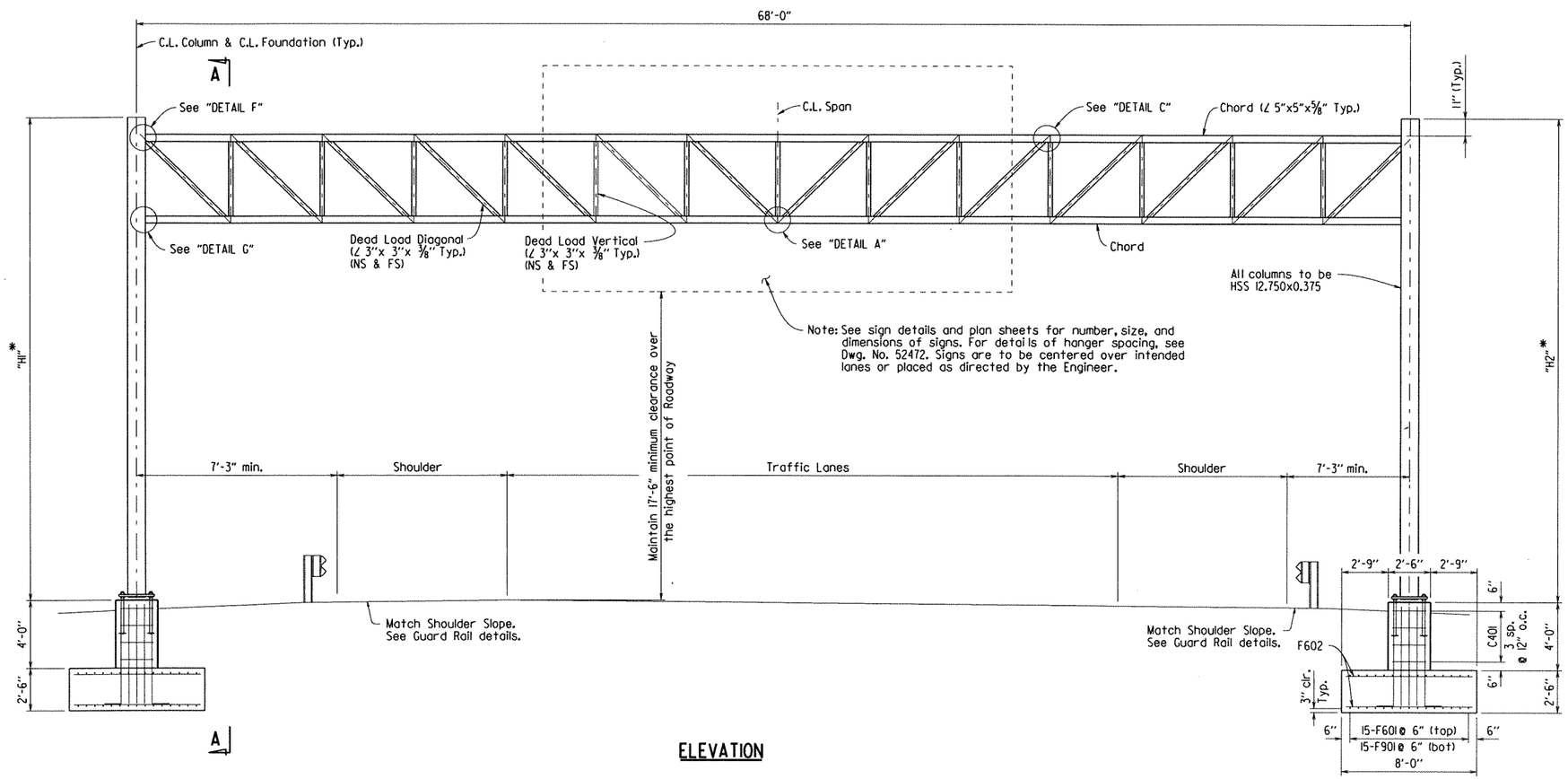
ROUTE 40 SEC. 51
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12/14/12 FILENAME: bbb0105_ohsign1.dgn
CHECKED BY: AHS DATE: 12/17/12 SCALE: NOT TO SCALE
DESIGNED BY: STD. DATE:
STR. NO. OH-040-68-03 OH-040-68-06 DRAWING NO. 52467

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	286	374
				1 OH-040-68-04 OH-040-68-05		SIGN STRUCTURE		52468



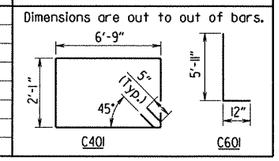
PLAN

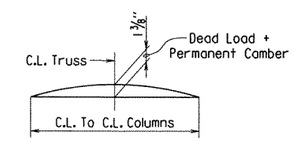


ELEVATION

BAR LIST-FOUNDATION - PER FOOTING

MARK	NO. REQ'D	LENGTH	P.D.	BENDING DIAGRAMS
C401	8	18'-2"	2"	Dimensions are out to out of bars.
C601	48	6'-9"	4½"	
F601	15	17'-6"	Str.	
F602	70	7'-6"	Str.	
F901	15	17'-6"	Str.	





TRUSS CAMBER DIAGRAM

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

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

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

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

12/17/12

BRIDGE ENGINEER

SHEET 1 OF 5
DETAILS FOR
68' STEEL OVERHEAD SIGN STRUCTURES

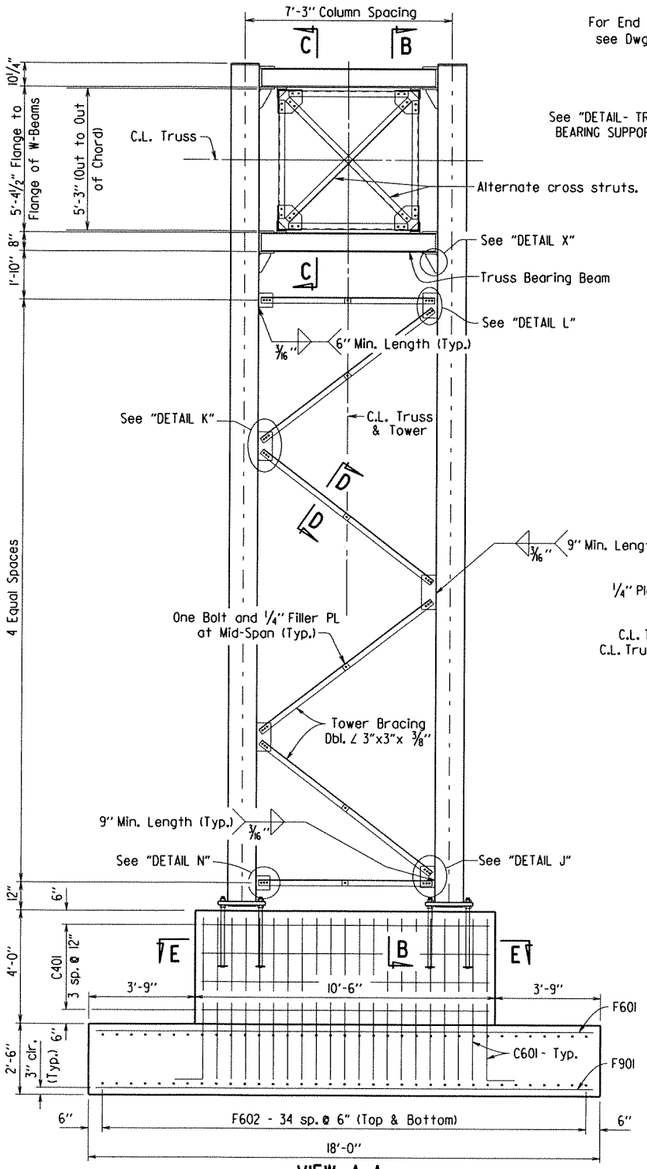
ROUTE 40 SEC. 51

ARKANSAS STATE HIGHWAY COMMISSION

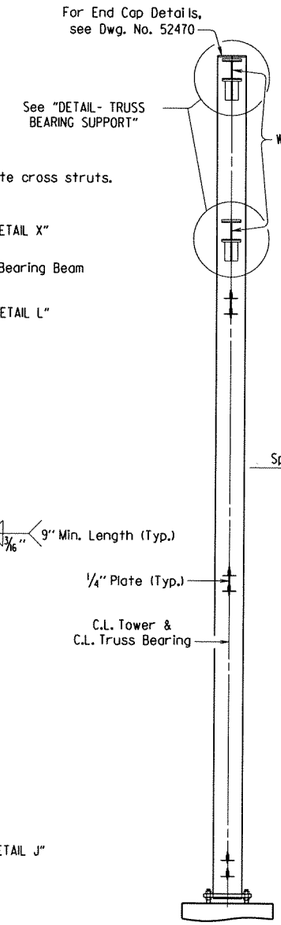
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12/14/12 FILENAME: bbb0105_ohsign2.dgn
CHECKED BY: AMS DATE: 12/17/12 SCALE: NOT TO SCALE
DESIGNED BY: STD. DATE:
STR. NO. OH-040-68-04 OH-040-68-05 DRAWING NO. 52468

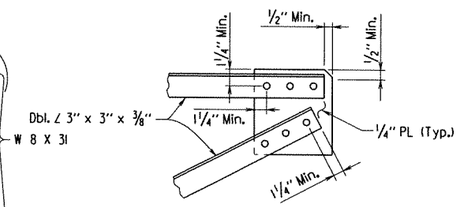
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	287	374
				1 OH-040-68-04 OH-040-68-05		SIGN STRUCTURE		52469



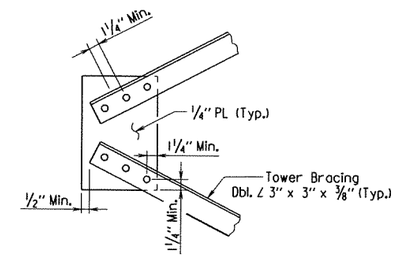
VIEW A-A



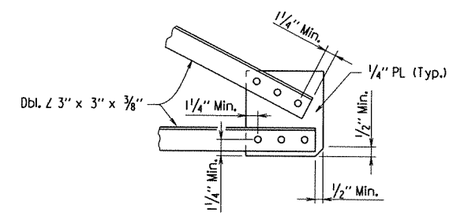
SECTION B-B



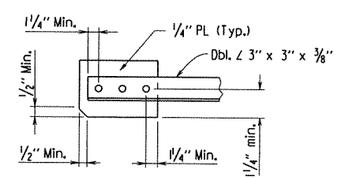
DETAIL L



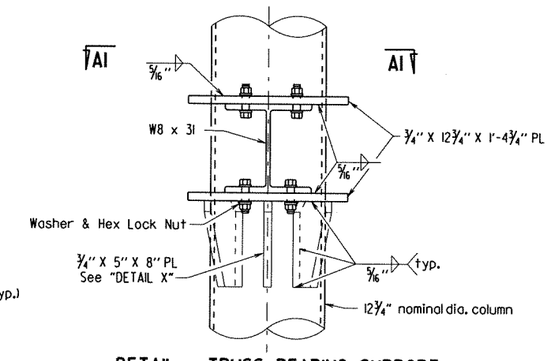
DETAIL K



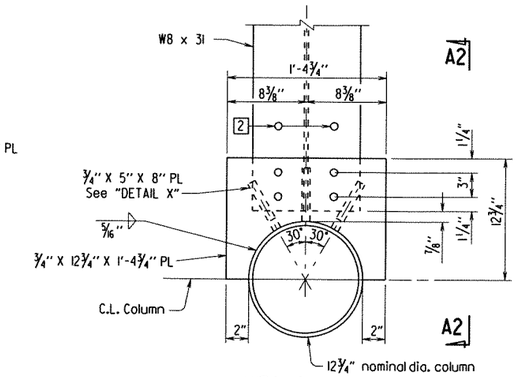
DETAIL J



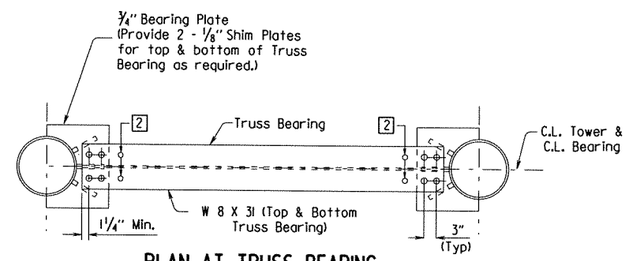
DETAIL N



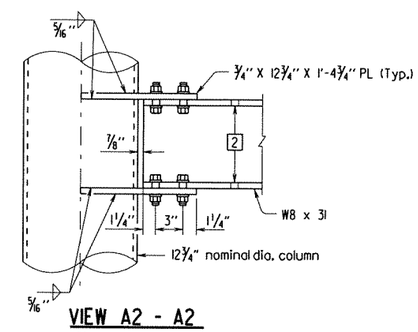
DETAIL - TRUSS BEARING SUPPORT



VIEW A1 - A1



PLAN AT TRUSS BEARING

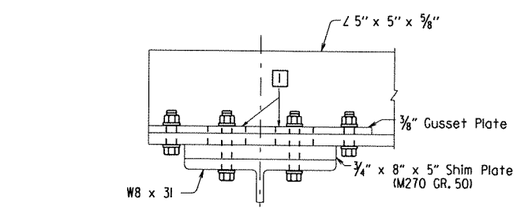


VIEW A2 - A2

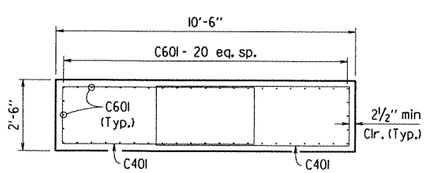
¾" X 5" X 8" Plate not shown for clarity

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

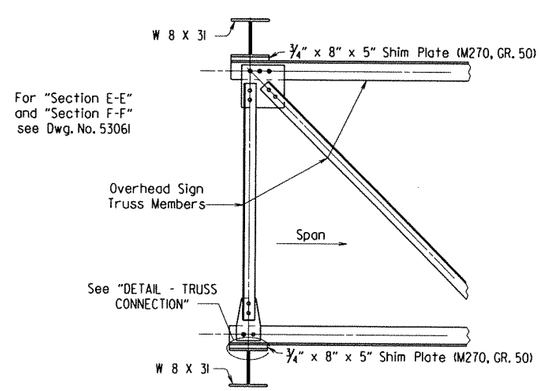
2 11/16" Dia. holes at top or bottom flanges as required.



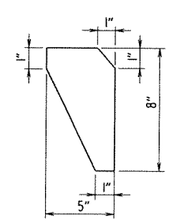
DETAIL - TRUSS CONNECTION



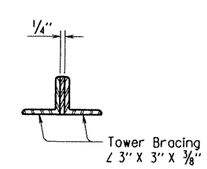
SECTION E-E



SECTION C-C



DETAIL X



SECTION D-D

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7510
CARL E. FUSELIER
12/17/12

BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS FOR
68' STEEL OVERHEAD SIGN STRUCTURES

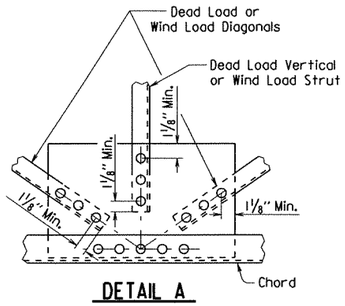
ROUTE 40 SEC. 51
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12/14/12 FILENAME: bbb0105_ohsign2.dgn
CHECKED BY: AHS DATE: 12/17/12 SCALE: NOT TO SCALE
DESIGNED BY: STD. DATE:
STR. NO. OH-040-68-04 OH-040-68-05 DRAWING NO. 52469

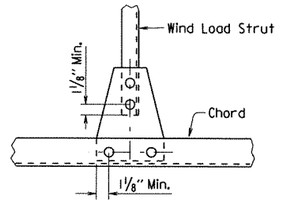
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	288	374
				1	OH-040-68-04 OH-040-68-05	SIGN STRUCTURE		52470

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

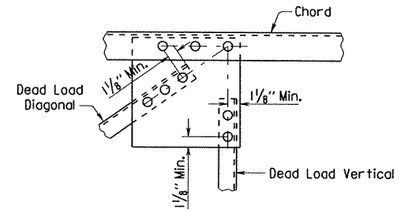
Note: All Gusset Plate thicknesses shall be 3/8".



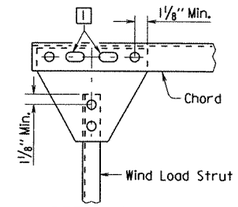
DETAIL A



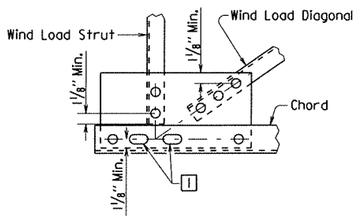
DETAIL B



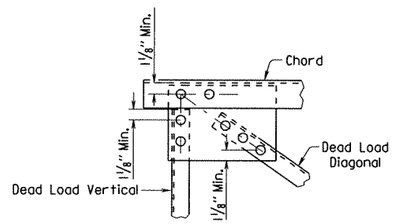
DETAIL C



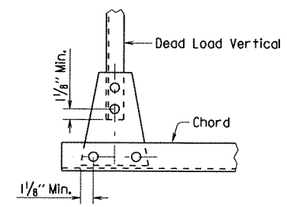
DETAIL D



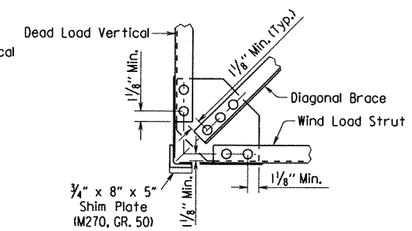
DETAIL E



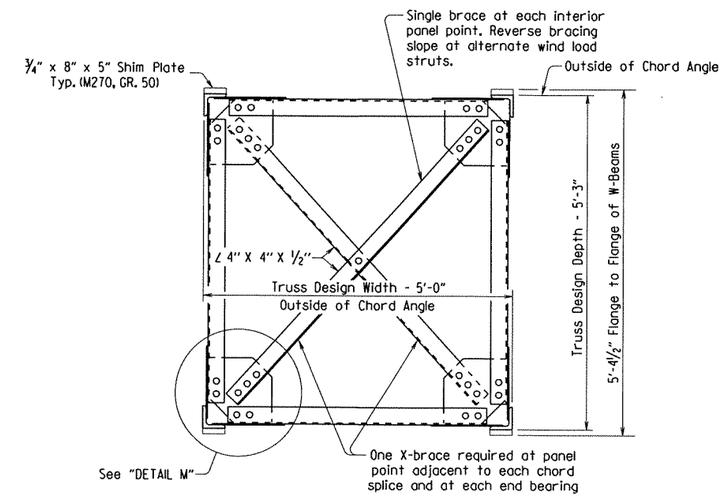
DETAIL F



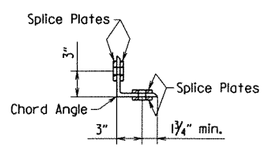
DETAIL G



DETAIL M

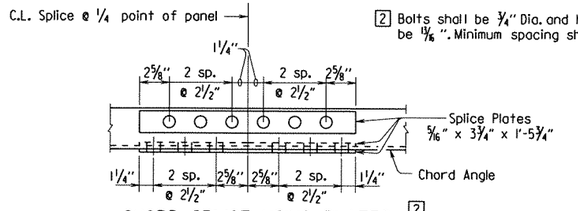


TRUSS SECTION

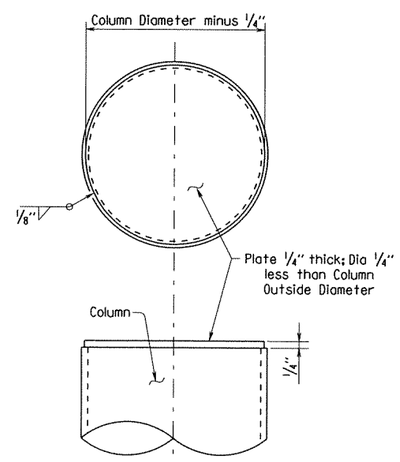


SECTION ON C.L. SPLICE

2 Bolts shall be 3/4" Dia. and holes shall be 13/16". Minimum spacing shall be 2 1/2".



CHORD SPLICE USING PLATES 2



END CAP DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7510
CARL L. FUSSELLER
12/17/12

BRIDGE ENGINEER

SHEET 3 OF 5
DETAILS FOR
68' STEEL OVERHEAD SIGN STRUCTURES

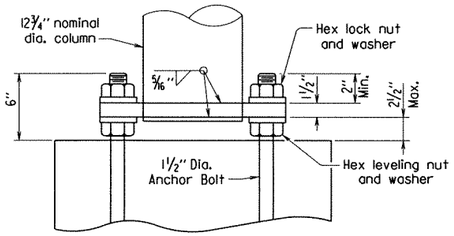
ROUTE 40 SEC. 51
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12/14/12
CHECKED BY: AMS DATE: 12/17/12
DESIGNED BY: STD. DATE:
STR. NO. OH-040-68-04 OH-040-68-05

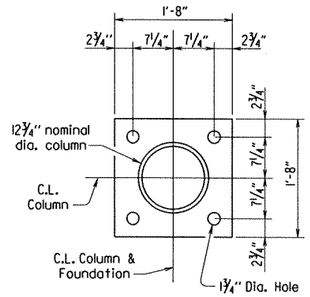
FILENAME: bbb0105_ohsign2.dgn
SCALE: NOT TO SCALE

DRAWING NO. 52470

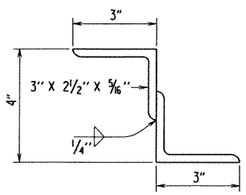
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0105	289	374
				1 OH-040-68-04 OH-040-68-05		SIGN STRUCTURE		52471



ELEVATION - COLUMN BASE

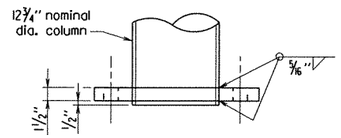


PLAN - COLUMN BASE



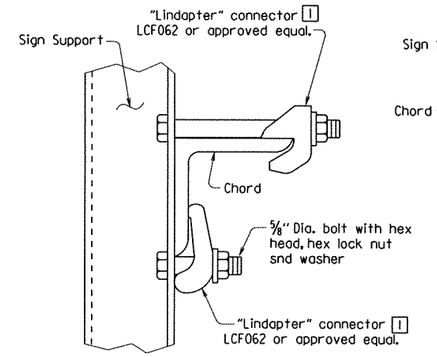
NOTE: Structural Z support may be fabricated from angles as shown.

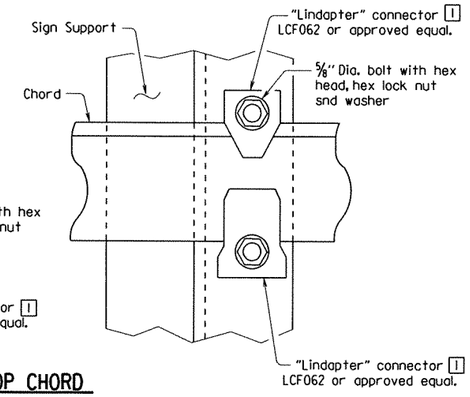
DETAILS OF ALTERNATE Z SUPPORT



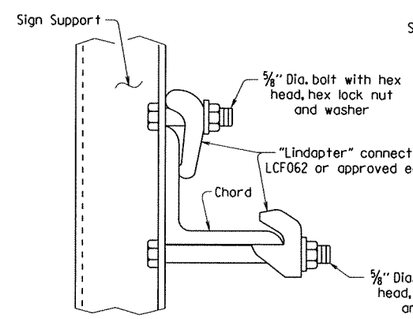
Note: Diameter of hole in base plate to be ⅛" larger than column diameter.

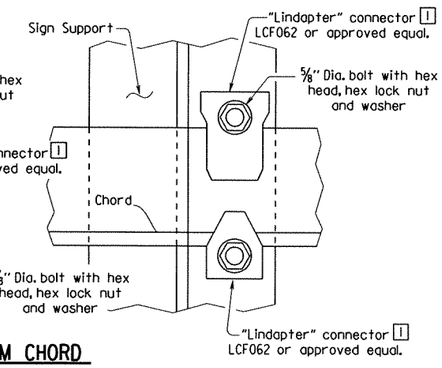
DETAIL OF COLUMN CONNECTION TO BASE PLATE





TOP CHORD



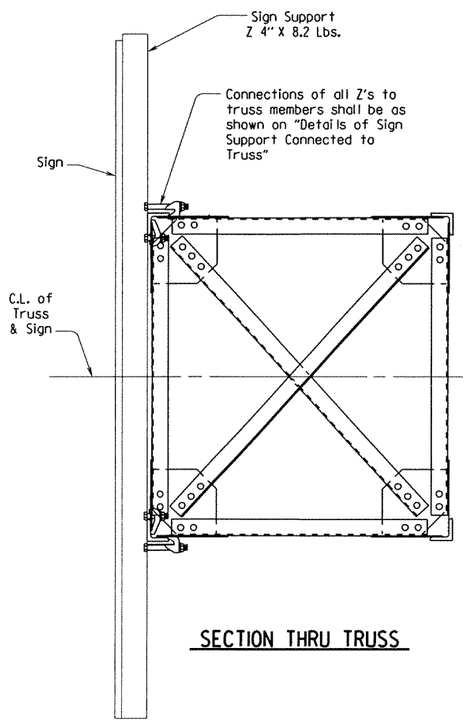


BOTTOM CHORD

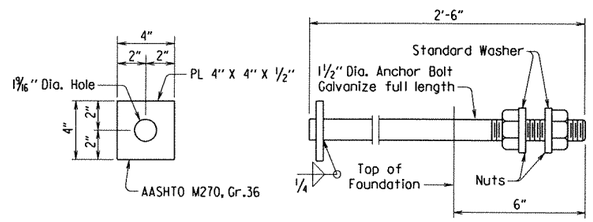
1 Note: All "Lindapter" connectors or approved equal shall be installed according to manufacturer's recommendations. All connectors, bolts, nuts and washers shall be galvanized.

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

DETAIL OF SIGN SUPPORT CONNECTED TO TRUSS



SECTION THRU TRUSS



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

ANCHOR BOLT DETAIL

STATE OF ARKANSAS
Carl E. Fussner
REGISTERED PROFESSIONAL ENGINEER
No. 7510
CARL E. FUSSNER
12/17/12

BRIDGE ENGINEER

SHEET 4 OF 5
DETAILS FOR
68' STEEL OVERHEAD SIGN STRUCTURES

ROUTE 40 SEC. 51
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 12/14/12 FILENAME: bbb0105_ohsign2.dgn
CHECKED BY: AMS DATE: 12/17/12 SCALE: NOT TO SCALE
DESIGNED BY: STD. DATE:
STR. NO. OH-040-68-04 OH-040-68-05 DRAWING NO. 52471

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0105	290	374
1 OH-040-68-04 OH-040-68-05		SIGN STRUCTURE		52472

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

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

Basic Wind Speed = 90 m.p.h.

Fatigue Category I excluding fatigue design for galloping loads.

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

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

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

Angles:	AASHTO M270, Grade 36 (Fy = 36,000 psi).
Plate, W-Section, WT-Section:	AASHTO M270, Grade 50 (Fy = 50,000 psi).
[1] Pipe:	ASTM A139 Grade C, straight-seam welded (Fy = 42,000 psi).
	ASTM A500 Grade B (Fy = 42,000 psi).
	ASTM A501 Grade B (Fy = 50,000 psi).
	ASTM A714 Class 2, Grade II, Type E or S (Fy = 50,000 psi).

All grades of pipe require Heat traceability back to the original melting mill

Z-Shapes:	AASHTO M270, Grade 36 (Fy = 36,000 psi).
Shim Plates:	ASTM A1011, SS, Grade 36, Type 2, or Grade 40.
Bolts:	AASHTO M164, Type I.
Locknuts - Approved Type:	Meeting or exceeding AASHTO M292
Washers:	AASHTO M293
Nuts:	AASHTO M291 or M292, Grade 2H or Grade DH (Grade IOS)

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

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

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

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

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

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

Anchor bolts shall comply with AASHTO M314, Grade 55, with Supplementary Requirement SI, and galvanized according to Section 807.07. Nuts and washers for anchor bolts shall be furnished and galvanized in accordance with subsection 807.07. Anchor bolts shall be pretensioned in accordance with Special Provision Job BB0105 "STEEL SIGN STRUCTURES".

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

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

All main load carrying tension members greater than ½" in thickness shall conform to the requirements of the Longitudinal Charpy V-notch test specified for Zone I minimum service temperature. This work and materials shall be paid for in accordance with Special Provision Job BB0105 "STEEL SIGN STRUCTURES".

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

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

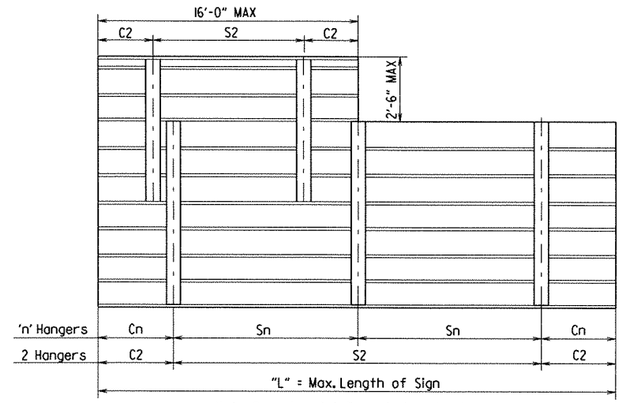
Lock nuts to be equipped with nylon locking inserts or other approved type locking system. Lock nuts to be installed according to manufacturer's recommendations.

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

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

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

Shoring may be required to protect existing shoulders during excavation. Any shoring required shall not be paid for directly, but shall be considered incidental to the item "Steel Overhead Sign Structure". The excavations for the footings shall be backfilled before the structure is attached to the foundations.



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

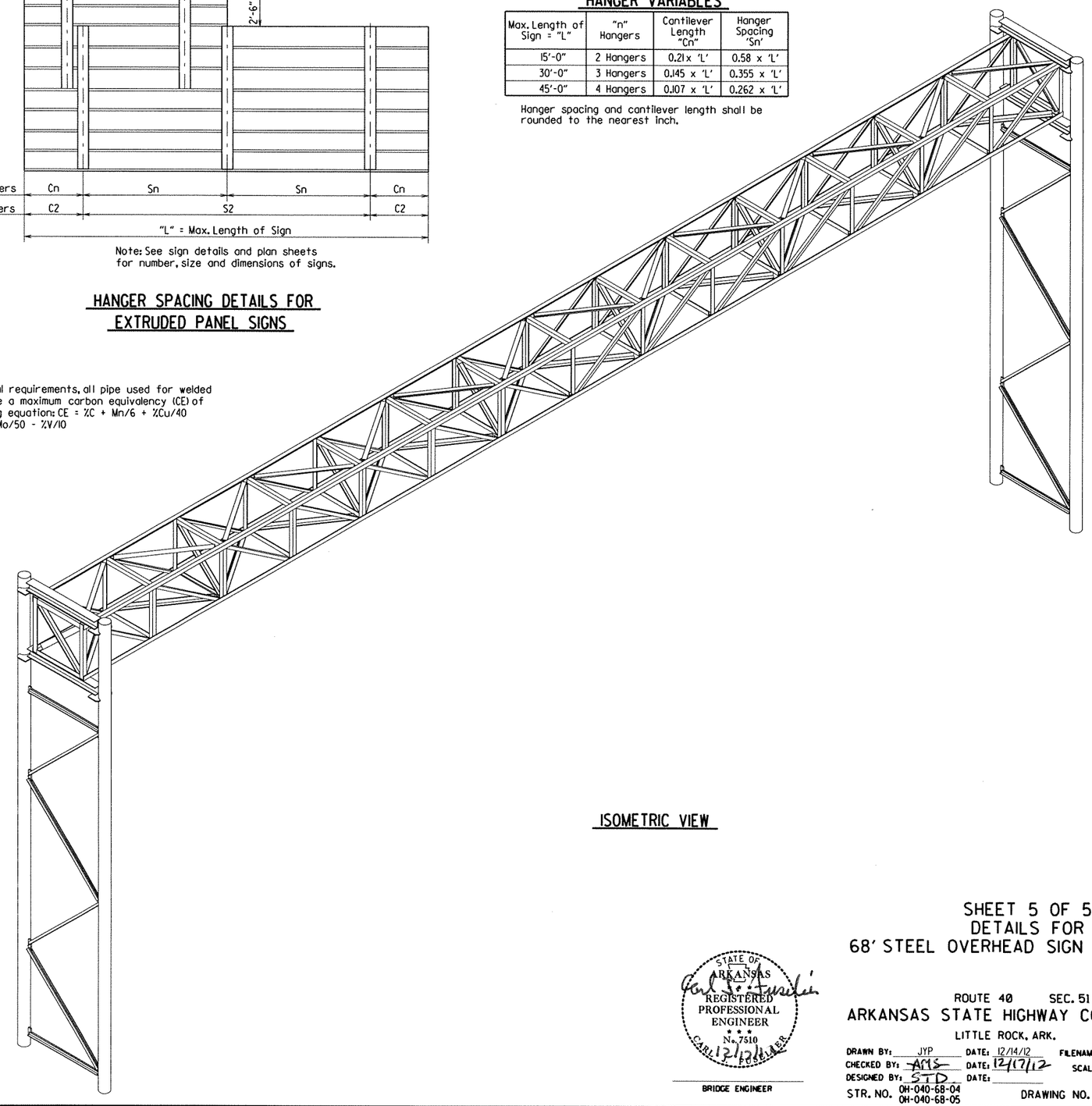
HANGER SPACING DETAILS FOR EXTRUDED PANEL SIGNS

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

HANGER VARIABLES

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

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



ISOMETRIC VIEW

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

12/17/12

BRIDGE ENGINEER

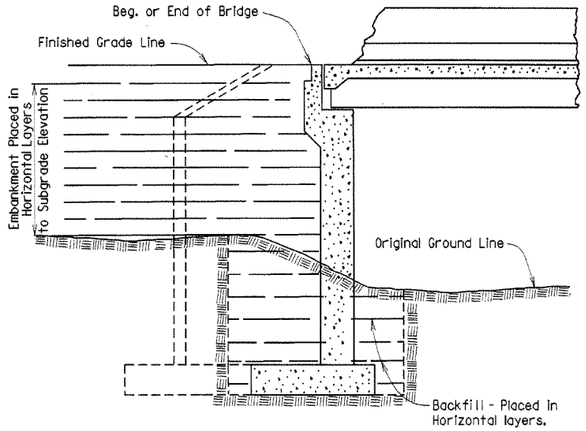
SHEET 5 OF 5
DETAILS FOR
68' STEEL OVERHEAD SIGN STRUCTURES

ROUTE 40 SEC. 51
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

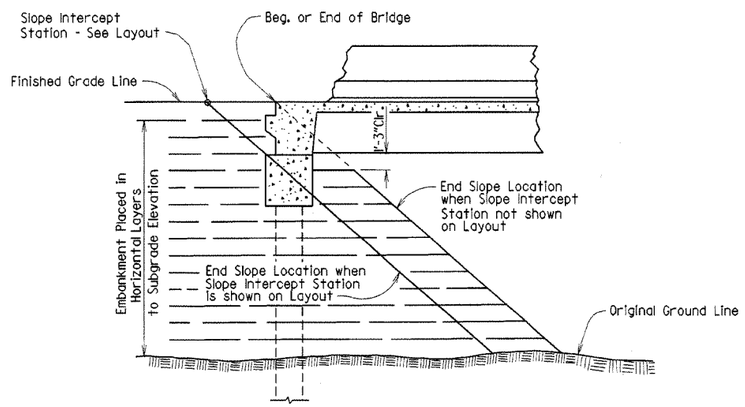
DRAWN BY: JYP DATE: 12/14/12 FILENAME: bbb0105_ohsign2.dgn
CHECKED BY: AMS DATE: 12/17/12 SCALE: NOT TO SCALE
DESIGNED BY: STD DATE:
STR. NO. OH-040-68-04 OH-040-68-05 DRAWING NO. 52472

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
04-10-2003				6	ARK.		291	
				JOB NO.				

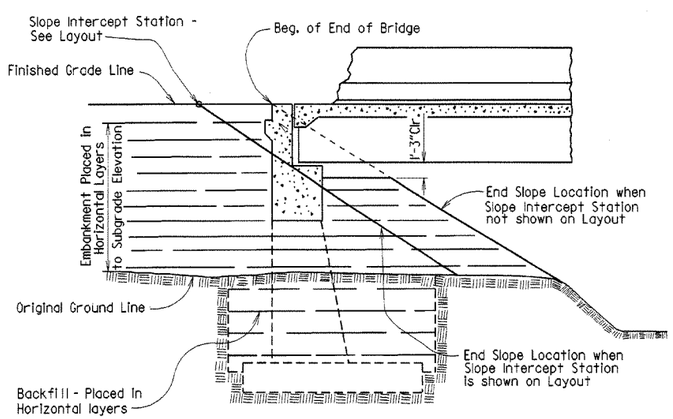
1 EMBANKMENT & BACKFILL 1888A



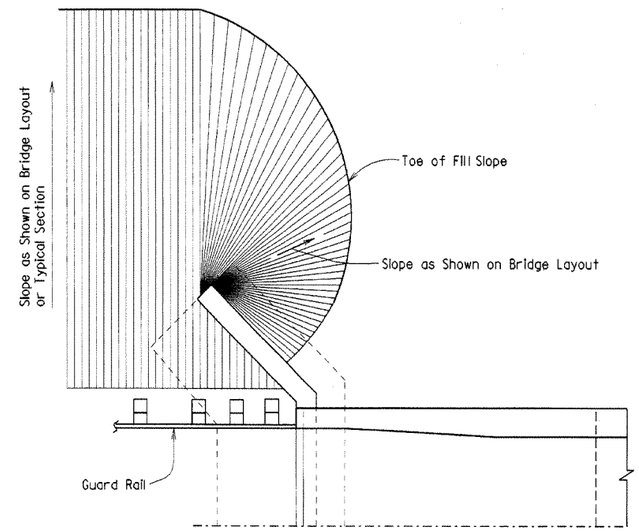
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



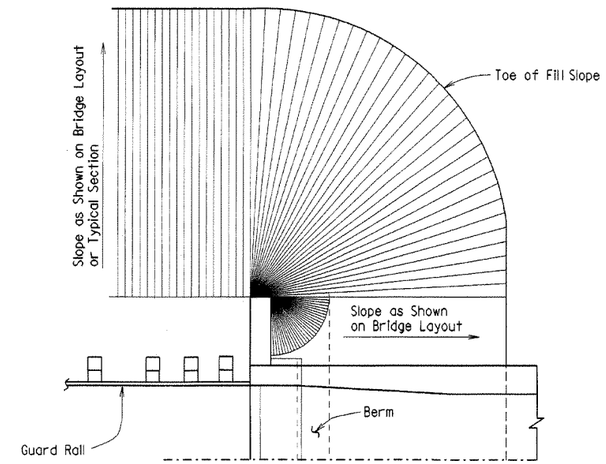
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



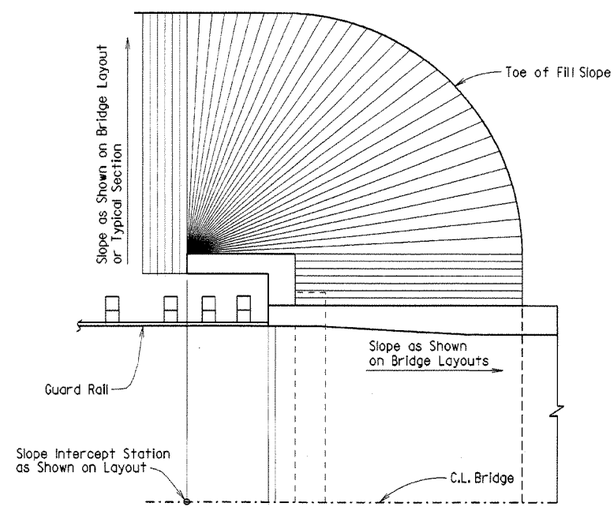
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



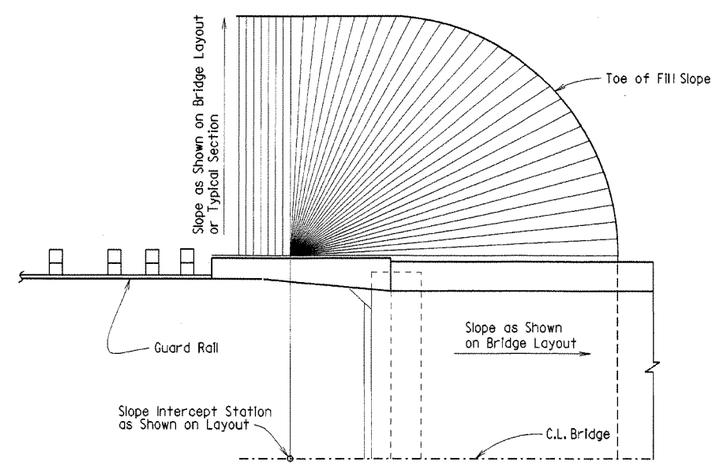
VERTICAL WALL ABUTMENTS



SPILL-THROUGH END BENTS WITH STUB WING



SPILL-THROUGH END BENTS WITH TURNBACK WING



SPILL-THROUGH END BENTS WITH TRANSITION WING

METHOD OF DETERMINING FILL SLOPE LOCATION AT BRIDGE ENDS

GENERAL NOTES

The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the side slopes and slopes under the bridge end including around the end of wingwalls. Embankment adjacent to structures shall be constructed in 4 inch horizontal layers (loose measure) and compacted by the use of mechanical equipment to the satisfaction of the Engineer. Refer to subsections 210.09, 210.10 and 801.08 of the Specifications for construction requirements.

⚠ Revised and redrawn MJT 04-10-2003
Chk'd. By: CJF 04-10-2003

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 4337
CHARLES P. BRAND

BRIDGE ENGINEER

EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

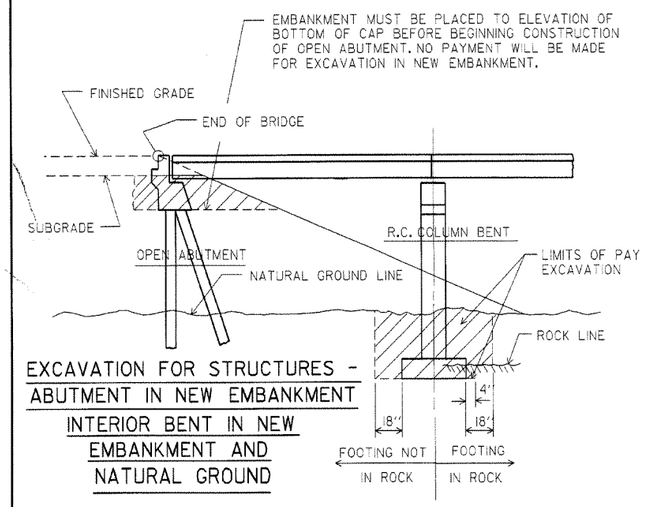
DRAWN BY: MJT DATE: 04-10-2003 FILENAME: BI888A.STD
CHECKED BY: CJF DATE: 04-10-2003 SCALE: NO SCALE
DESIGNED BY: STD. DATE: —

BRIDGE NO. DRAWING NO. 1888A

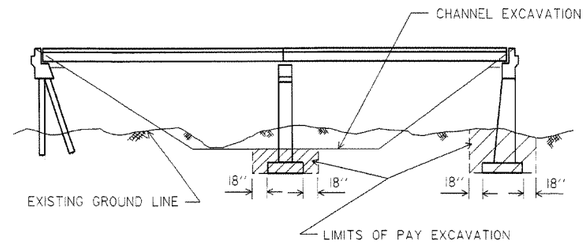
BI888A.STD

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
04-10-2003				6	ARK.		292	
				JOB NO.				

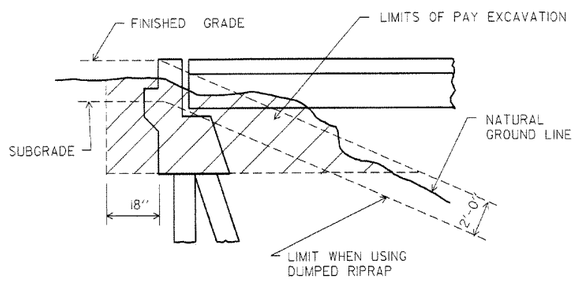
1 RIP. & EXCAV. 1891F



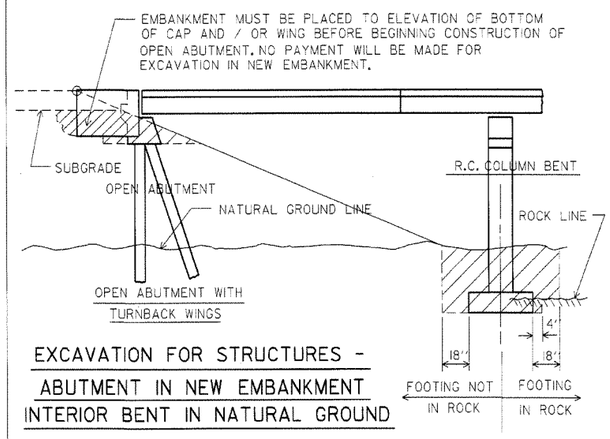
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND



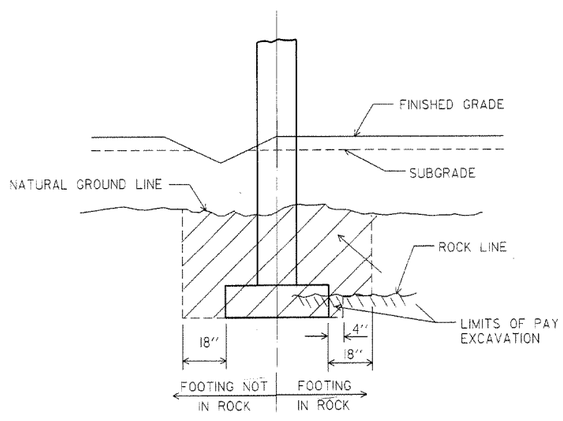
EXCAVATION FOR STRUCTURES - BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



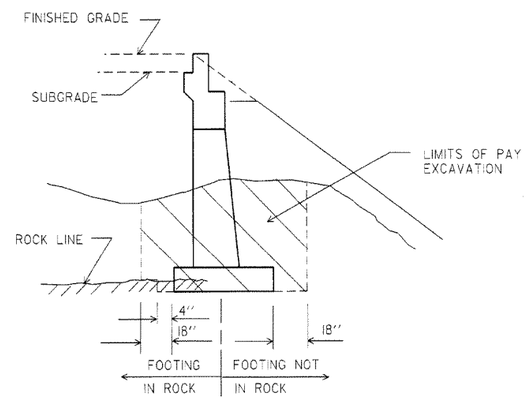
EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND



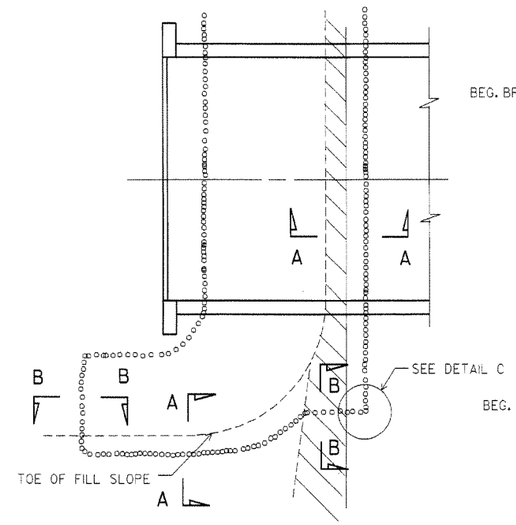
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NATURAL GROUND



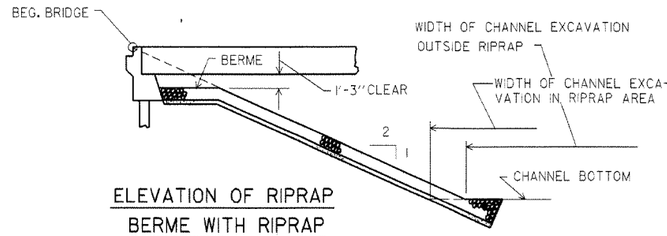
EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND



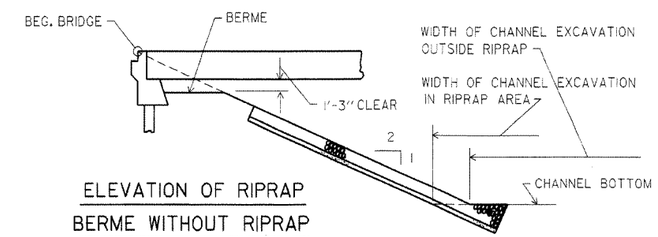
EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT



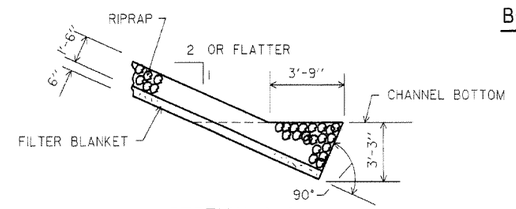
PLAN OF DUMPED RIPRAP



ELEVATION OF RIPRAP BERME WITH RIPRAP



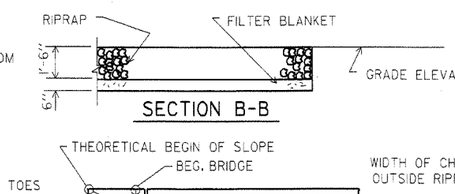
ELEVATION OF RIPRAP BERME WITHOUT RIPRAP



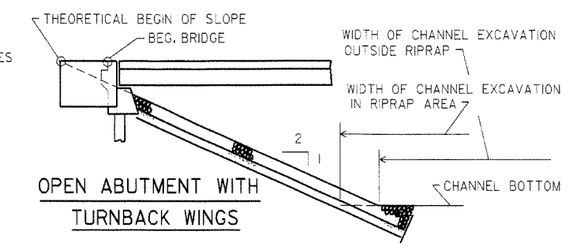
SECTION A-A

(TOE EXCAVATION IN SOIL)

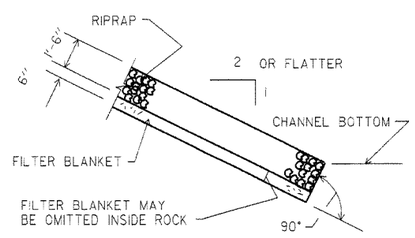
EXCAVATION FOR TOES IS NOT A PAY ITEM



SECTION B-B



OPEN ABUTMENT WITH TURNBACK WINGS



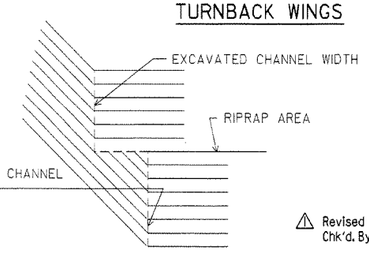
SECTION A-A

(TOE EXCAVATION IN ROCK)

NOTE : USE THIS TYPE OF TOE WHEN ROCK IS ENCOUNTERED WHICH IS IN A STABLE CONDITION.

NOTE : IN LIEU OF AN AGGREGATE FILTER BLANKET, A SYNTHETIC FIBER GEOTEXTILE FABRIC COMPLYING WITH THE REQUIREMENTS OF SUBSECTION 816.02(e) MAY BE USED.

NOTE : DETAILS FOR COMPUTING EXCAVATION FOR STRUCTURES ARE INCLUDED FOR INFORMATION AS TO HOW PLAN QUANTITIES WERE CALCULATED AND FOR USE WHEN ADJUSTING QUANTITIES WHEN CHANGING FOOTING ELEVATION.



DETAIL C

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 4337 CHARLES P. BRAND

BRIDGE ENGINEER

⚠ Revised and redrawn MJT 04-10-2003
Chk'd. By: CJF 04-10-2003

DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND DETAILS FOR COMPUTING EXCAVATION FOR STRUCTURES

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

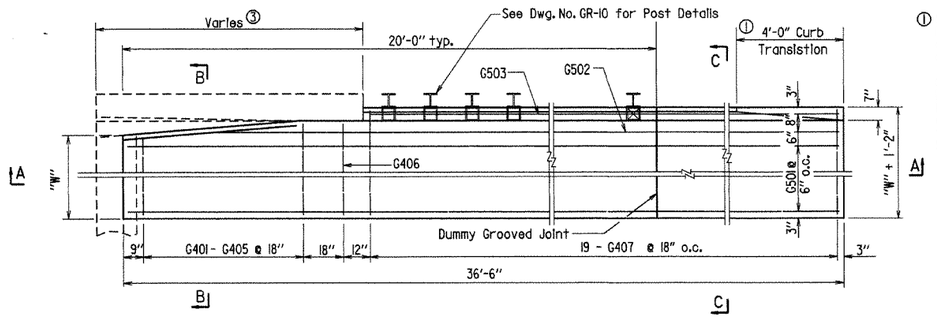
LITTLE ROCK, ARK.

DRAWN BY:	MJT	DATE:	04-10-2003	FILENAME:	B1891F.STD
CHECKED BY:	CJF	DATE:	04-10-2003	SCALE:	NO SCALE
DESIGNED BY:	STD.	DATE:	—		

BRIDGE NO. DRAWING NO. 1891F

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
4-10-2003				6	ARK.		293	
07-14-2010				JOB NO.				

① TYPE C GUTTERS - 2016C

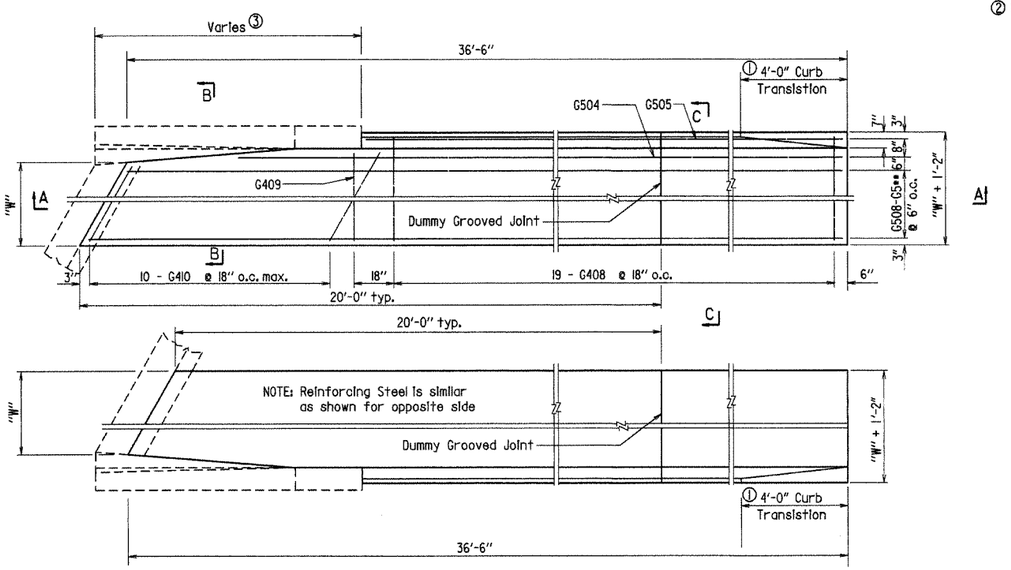


HALF PLAN OF APPROACH GUTTERS FOR SQUARE BRIDGE

① Construct gutter curb with height-transition as shown if drop inlet is not placed at end of gutter.

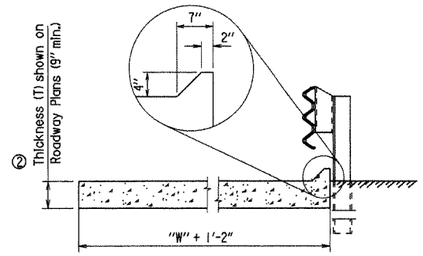
Construct gutter curb full height (no height-transition) if drop inlet is placed at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.

③ Length Varies See End Bt. Details for Actual Length. Quantities Shown are for 10'-0" Transition Rail.

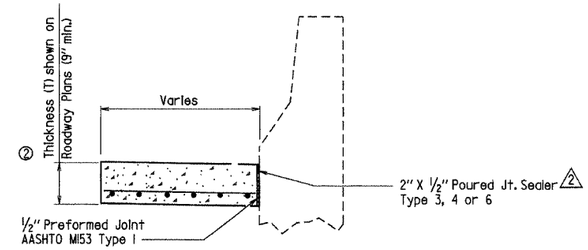


PLAN OF APPROACH GUTTERS FOR SKEWED BRIDGE

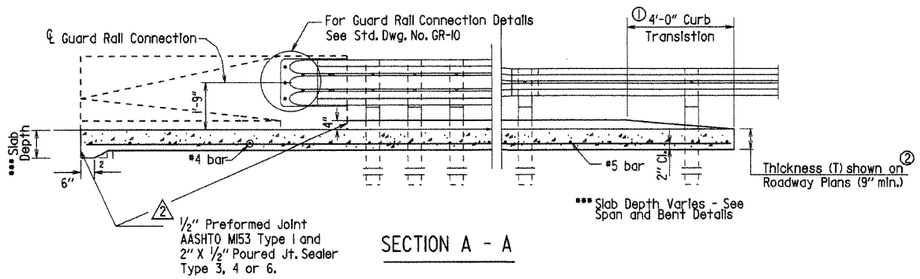
② Thickness shall match Approach Slab Thickness. Thickness shall be 9" if Approach Slab is not used.



SECTION C - C
N.T.S.



SECTION B - B
N.T.S.



SECTION A - A

***BAR LIST FOR ONE TYPE C GUTTER

*** Special bar list required when skew angle exceeds 35° for W = 10'; 40° for W = 8'; 50° for W = 6'; or 60° for W = 4'.

Mark	No. Req'd. for Width "W" 4'-0"	6'-0"	8'-0"	10'-0"	Length	Square or Skewed
G401-G405	1 each	1 each	1 each	1 each	"W"-3" to "W"+3"	Square
G406	1	1	1	1	"W"+3"	Square
G407	19	19	19	19	"W"+ 10"	Square
G408	19	19	19	19	"W"+ 10"	Skewed
G409	1	1	1	1	"W"+3"	Skewed
G410	10	10	10	10	*	Skewed
G501	8	12	16	20	36'-2"	Square
G502	1	1	1	1	31'-8"	Square
G503	1	1	1	1	27'-2"	Square
G504	1	1	1	1	*	Skewed
G505	1	1	1	1	*	Skewed
G508 - G5__ **	1 each	1 each	1 each	1 each	*	Skewed

* Bar Lengths vary with Skew.

** G515 for W = 4'
G519 for W = 6'
G523 for W = 8'
G527 for W = 10'

GENERAL NOTES

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

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

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

1 Revised and redrawn 4-10-2003. By KDH Ck. By: CJF 4-10-2003

2 Added joint sealer type
07-14-2010 by MJT Checked by: CJF 7-14-2010

QUANTITIES FOR ONE SQUARE APPROACH GUTTER ③

"W" Width (ft.)	Reinforcing Steel (lbs.)	Concrete (cubic yards) T=9"	T=10"	T=11"	T=12"	T=14 1/2"
4	439	5.19	5.75	6.31	6.88	8.25
6	623	7.24	8.02	8.80	9.59	11.52
8	807	9.28	10.29	11.30	12.32	14.79
10	991	11.33	12.56	13.79	15.03	18.06

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 4337
CHARLES P. BRAND

BRIDGE ENGINEER

DETAILS OF STANDARD TYPE C APPROACH GUTTERS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

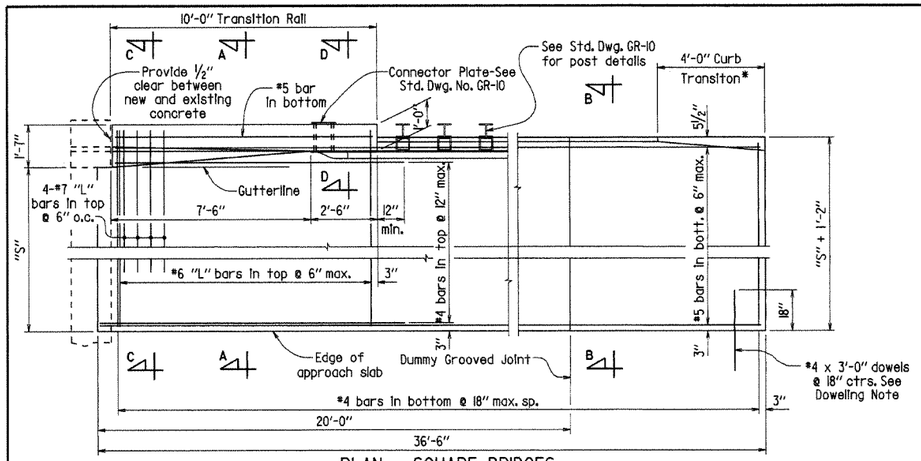
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 4-10-2003 FILENAME: B2016C.STD
CHECKED BY: CJF DATE: 4-10-2003 SCALE: 3/8" = 1'-0"
DESIGNED BY: STD. DATE:

BRIDGE NO. DRAWING NO. 2016C

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
4-10-2003				6	ARK.		294	
07-14-2010				JOB NO.				

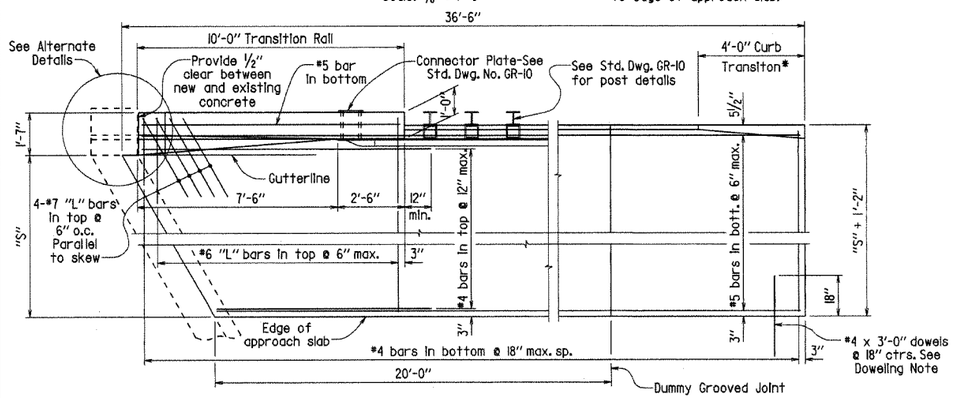
1 TYPE PT APPR. GUTTER - 2091

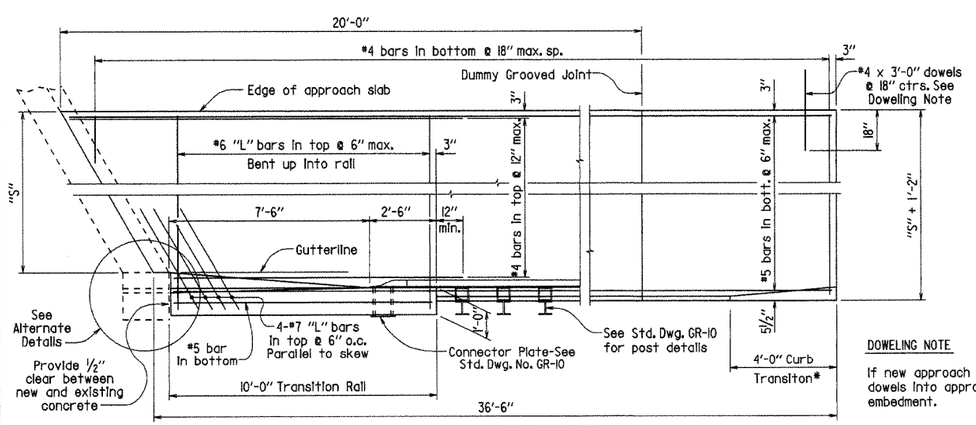


PLAN - SQUARE BRIDGES

Scale: 3/8" = 1'-0"

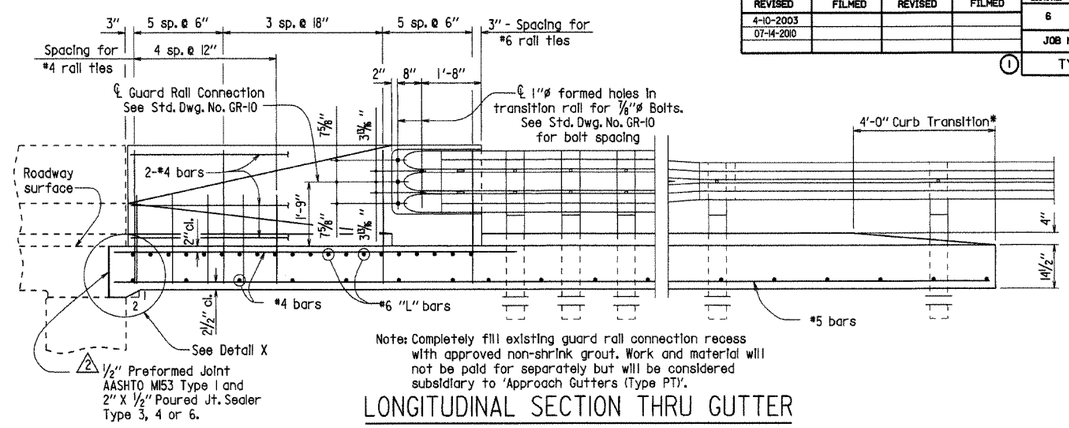
'S' = Distance from gutterline to edge of approach slab.





PLAN - SKEWED BRIDGES

Scale: 3/8" = 1'-0"



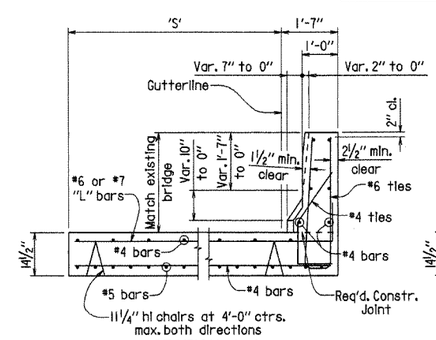
Note: Completely fill existing guard rail connection recess with approved non-shrink grout. Work and material will not be paid for separately but will be considered subsidiary to 'Approach Gutters (Type PT)'.

* Construct curb with height-transition as shown if drop inlet is not used at end of gutter.

Construct curb full height (no height-transition) if drop inlet is used at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.

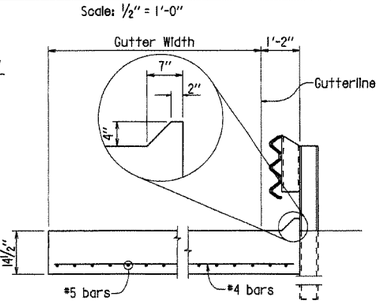
LONGITUDINAL SECTION THRU GUTTER

Scale: 1/2" = 1'-0"



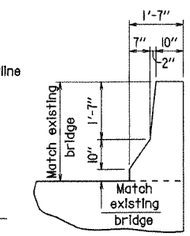
SECTION A-A

Scale: 1/2" = 1'-0"



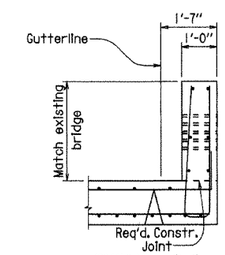
SECTION B-B

Scale: 1/2" = 1'-0"



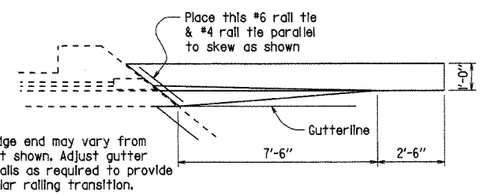
SECTION C-C

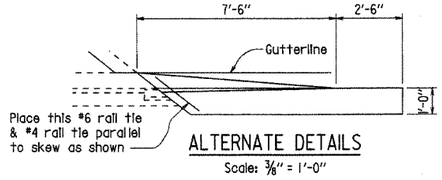
At End of Transition Rail
Scale: 1/2" = 1'-0"



SECTION D-D

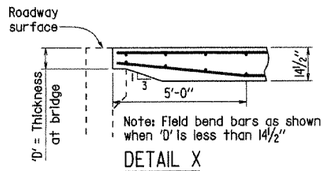
Scale: 1/2" = 1'-0"





ALTERNATE DETAILS

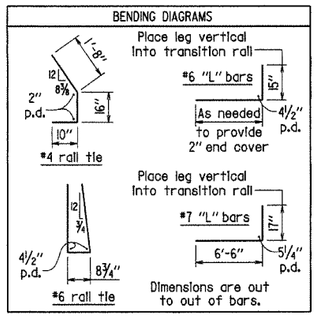
Scale: 3/8" = 1'-0"



Note: Field bend bars as shown when 'D' is less than 14 1/2"

DETAIL X

Scale: 3/8" = 1'-0"



GENERAL NOTES

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

Reinforcing steel shall conform to AASHTO M31 or M53, Grade 60 (fy = 60,000 psi.) Fabricate bar lengths to provide 2" minumum cover at each end.

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

DOWELING NOTE

If new approach slab is used, place dowels into approach slab using 18" embedment.

If existing approach slab is retained, dowels shall be drilled and grouted 18" into existing slab. At the Contractor's option, existing dowels may be retained, cleaned and incorporated into new gutters. Work for drilling and grouting, or retaining and cleaning will not be paid for separately but will be considered subsidiary to 'Approach Gutters (Type PT)'.

1 Revised and redrawn 4-10-2003. By KDH Ck. By: CJF 4-10-2003

2 Added joint sealer type 07-14-2010 by MJT Checked by: CJF 7-14-2010

QUANTITIES FOR ONE SQUARE APPROACH GUTTER

'S'	Concrete	Reinforcing Steel
5'-6"	12.49 cu.yd.	1227 lb.
5'-9"	12.91 cu.yd.	1276 lb.
6'-0"	13.34 cu.yd.	1296 lb.
9'-6"	19.23 cu.yd.	1746 lb.
9'-9"	19.65 cu.yd.	1795 lb.
10'-0"	20.07 cu.yd.	1815 lb.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 4337
CHARLES P. BRAND

BRIDGE ENGINEER

DETAILS OF STANDARD TYPE 'PT' APPROACH GUTTERS (BRIDGES WITH CONCRETE PARAPET RAILING)

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 4-10-2003 FILENAME: B2091.STD
CHECKED BY: CJF DATE: 4-10-2003 SCALE: AS NOTED
DESIGNED BY: STD. DATE:

BRIDGE NO. DRAWING NO. 2091

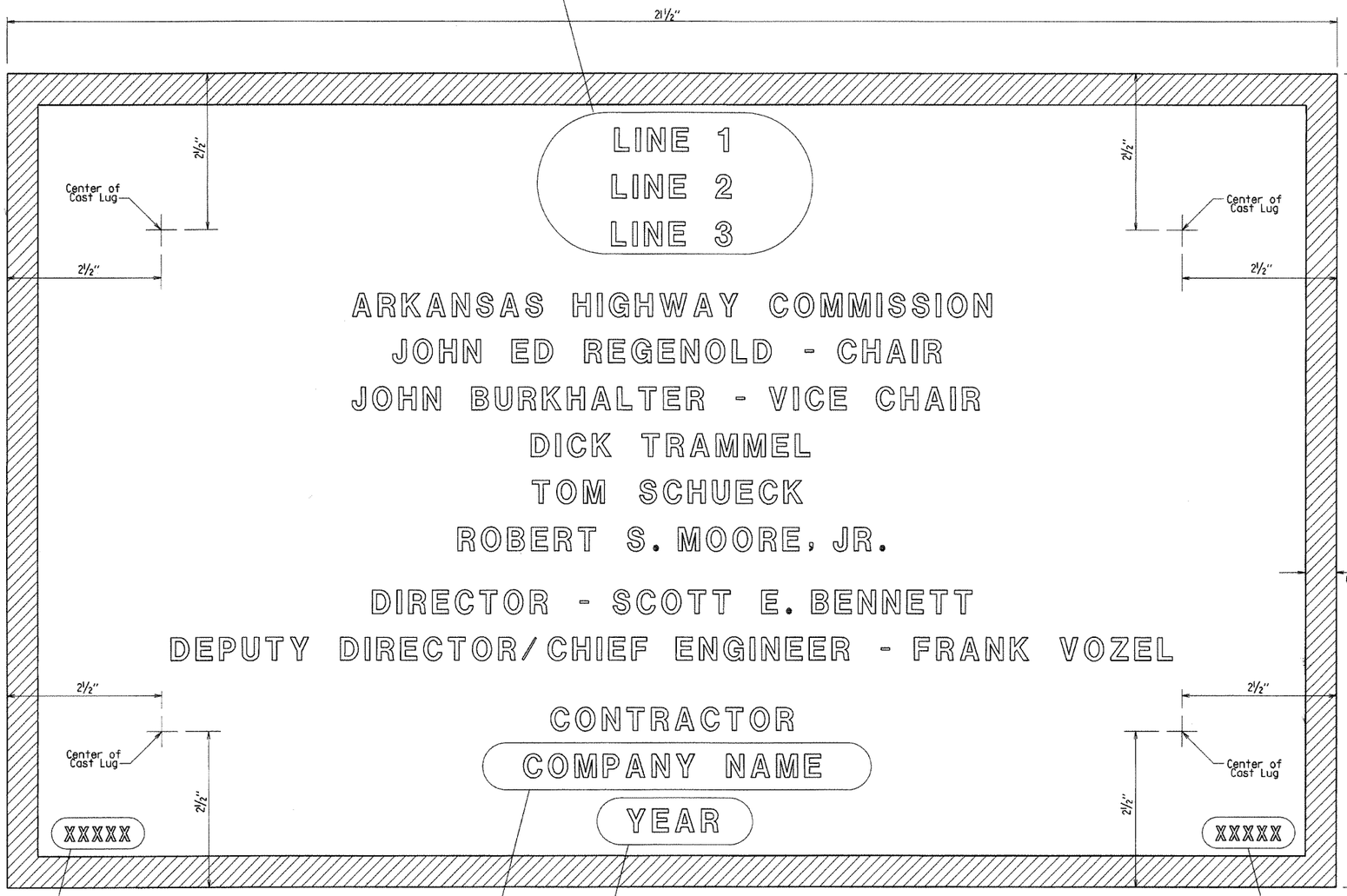
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
9-8-11			
1-3-13			
1-10-13			

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.		295	
JOB NO.				

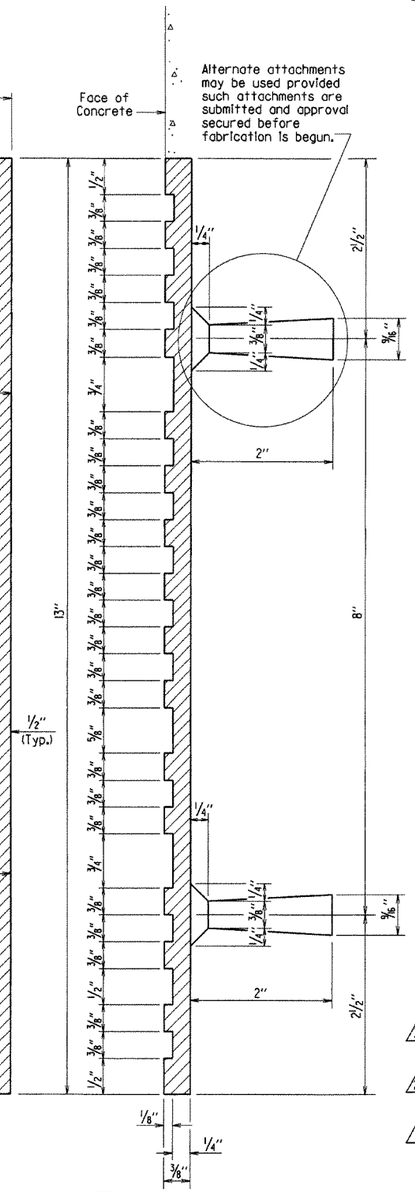
1 NAME PLATE 2387

The name of the bridge as shown on the plans shall be placed on Lines 1 - 3 using 1/8" raised letters and numerals 3/8" high.

	Example 1	Example 2	Example 3	Example 4
Line 1	Red River	Southern	Saline	
Line 2	Relief	Railroad	River	Highway 5
Line 3		Overpass	Relief	



TYPICAL BRIDGE NAME PLATE



GENERAL NOTES

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2003 Edition) with applicable Supplemental Specifications and Special Provisions.

Name plates shall be cast bronze and shall meet the material requirements as specified in Section 812 of the Standard Specifications.

Body of plate shall be 1/4" thick and shall include four tapering cone lugs 3/8" to 9/16" x 2" long. The border and all lettering shall be raised 1/8" above the face of plate and shall be polished.

All lettering shall be plain gothic, square cut and not tapered. The number of plates required and the location and name on the plate for each bridge shall be as designated on the plans.

3 Revised Commission Names 1-10-13 KDH Checked By: CJF

2 Revised Commission Names 1-3-13 KDH Checked By: CJF

1 Revised and Redrawn 9-8-11 KDH Checked By: CRE

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

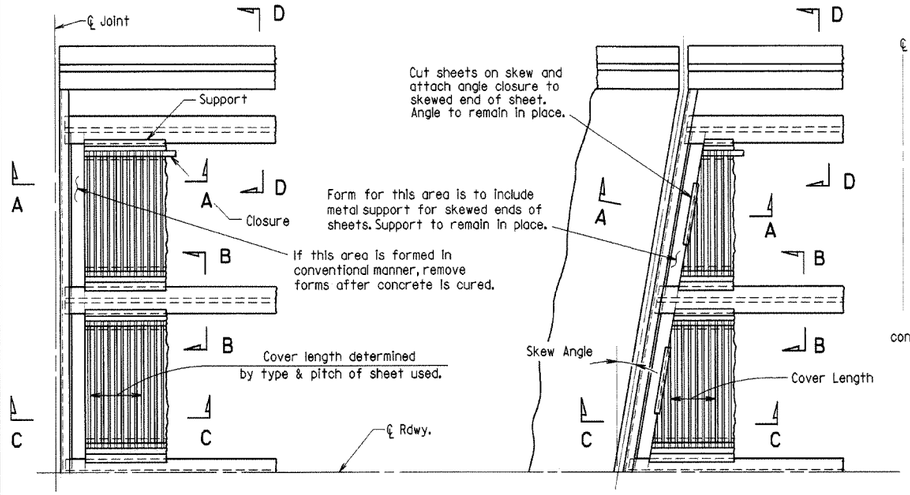
BRIDGE ENGINEER

DETAILS OF STANDARD TYPE D
BRIDGE NAME PLATE
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 9-8-11 FILENAME: b2387_std.dgn
CHECKED BY: CRE DATE: 9-8-11 SCALE: 1'-0" = 1'-0" OR AS NOTED
DESIGNED BY: STD. DATE: —
BRIDGE NO. DRAWING NO. 2387

PRINT DATE: 1/18/2013

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11-27-96						6	ARK.		296	
04-10-2003						JOB NO.				
						①	BR. DECK FORMS		14991	

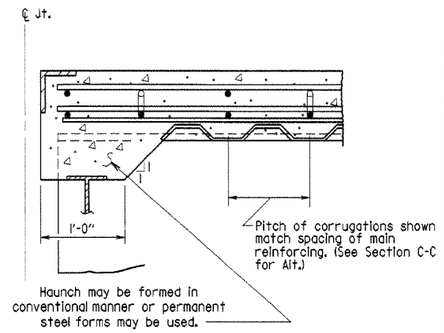


PART PLAN - SQUARE SPAN

3/8" = 1'-0"

PART PLAN - SKEWED SPAN

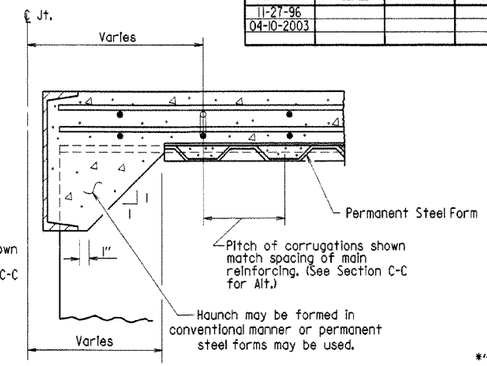
3/8" = 1'-0"



SECTION A-A

N.T.S.

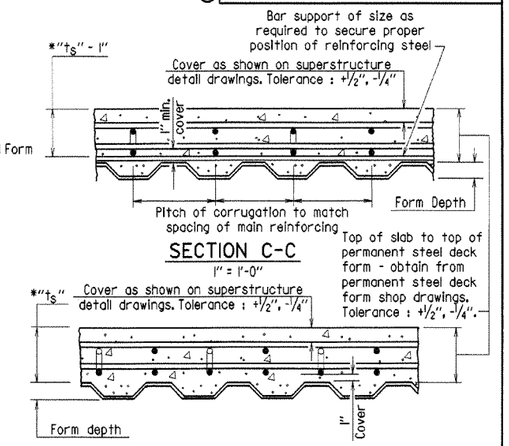
(Angle at end of span)



SECTION A-A

N.T.S.

(Channel at end of span)



SECTION C-C

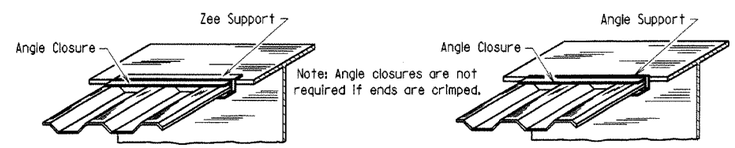
1" = 1'-0"

SECTION C-C - ALTERNATE

1" = 1'-0"

(Applicable when corrugations do not match spacing of main reinforcement)

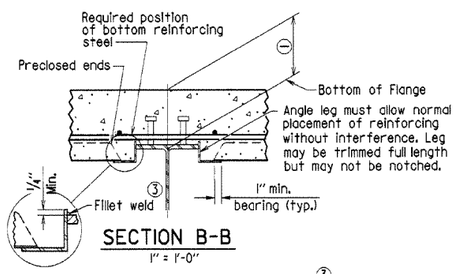
*t_s = slab thickness as shown on superstructure detail drawings.



Note: Angle closures are not required if ends are crimped.

SKETCH OF PERMISSIBLE SUPPORTS

N.T.S.

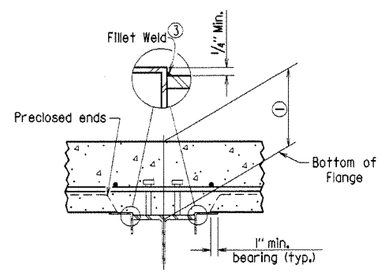


SECTION B-B

1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)

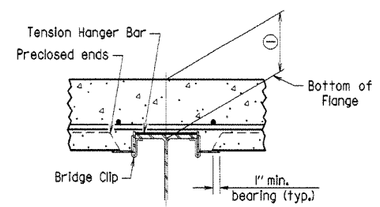
③ Minimum weld: 1/8" x 1" @ 18". More weld may be required; maximum length per weld = 1 1/2" (typ.)



SECTION B-B

1" = 1'-0"

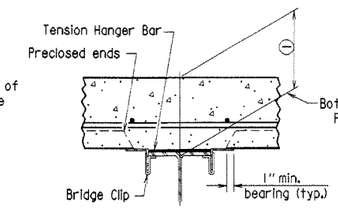
(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)



SECTION B-B

1" = 1'-0"

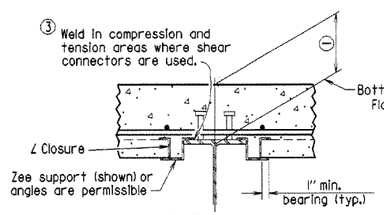
(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

1" = 1'-0"

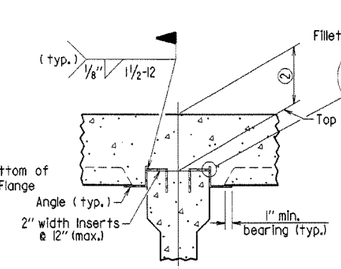
(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

1" = 1'-0"

(Showing ∠ Closure)

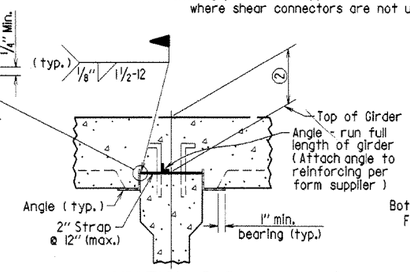


SECTION B-B

(FOR CONCRETE GIRDERS)

1" = 1'-0"

(Showing support by insert cast in girder)

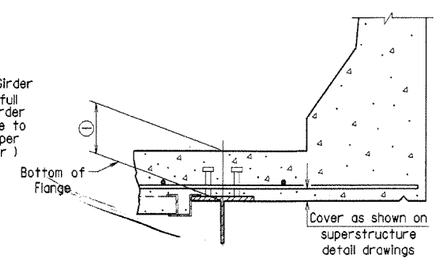


SECTION B-B

(FOR CONCRETE GIRDERS)

1" = 1'-0"

(Showing support by Strap)



SECTION D-D

1" = 1'-0"

Note: Only Bottom Reinforcing is shown.

GENERAL NOTES

Permanent steel deck forms may be used at the Contractor's option and shall be at no additional cost to the Department. Such use may result in changes to the dead load deflection of the girder. Any cost for adjustments due to a change in the dead load deflection will be borne by the Contractor. Payment for deck concrete and structural steel will not be increased due to use of permanent steel deck forms.

Permanent steel deck forms shall conform to subsection 802.14(b) of the Standard Specifications. Detailed plans, including detailed calculations and manufacturer's technical brochure, shall be submitted to and approved by the Bridge Engineer before work of forming the bridge deck is started.

Welding of form supports to the tension flange of steel girders will be permitted only in areas where shear connectors are used. When welding is not allowed, the method of fastening Z or ∠ supports to the flange must be approved by the Bridge Engineer.

Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Bridge Engineer.

When the pitch of form corrugations match the reinforcing spacing, transversely align form sheets across the bridge to maintain the correct orientation of continuous reinforcing bars in the corrugations.

Bar support rods, when used, shall be sized and spaced to adequately support the bottom reinforcing mat at the required position.

High chairs shall be sized to support the top mat of reinforcing at the proper position. High chairs shall be placed at locations shown on the detail drawings.

△2 Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 Edition), with applicable supplemental specifications and special provisions.

① Distance from top of slab to bottom of top flange as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances : Minimum - occurs when either the top flange or the support angle leg contacts the bottom reinforcing steel; Maximum = t_s + 1 3/4" + flange thickness. See Section C-C for slab thickness tolerance between adjacent girder flanges.

② Distance from top of slab to top of girder as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances : Minimum - occurs when either the top of girder or the support angle leg contacts the bottom reinforcing steel; Maximum - value shown on the superstructure detail drawings when removable forms are used. See Section C-C for slab thickness tolerance between adjacent girder flanges.

△2 Revised for 2003 AHTD Construction Specifications and CPB Seal. MJT 04-10-2003
Chk'd. By: CJF 04-10-2003

△1 Redrawn and revised 11/27/96; MJT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 4637
CHARLES P. BRAND

BRIDGE ENGINEER

DETAILS OF PERMISSIBLE TYPE PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

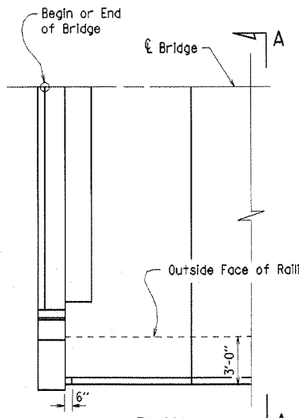
LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: 10-17-96
CHECKED BY: CPB DATE: 10-17-96
DESIGNED BY: STD. DATE: —
SCALE: as noted

BRIDGE NO. DRAWING NO. 14991

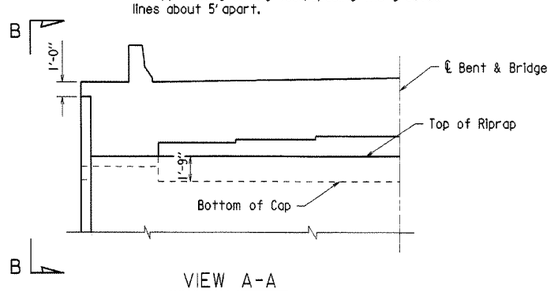
BI499I.STD

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
04-10-2003				6	ARK.		297	
				JOB NO.				
				1	RIPRAP & PILE - 14995A			

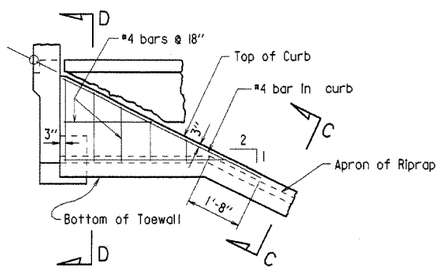


PLAN

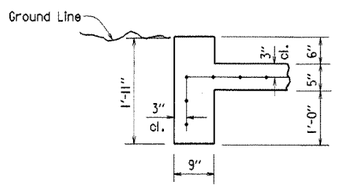
Note:
Sloped surfaces of concrete riprap to be marked off into blocks (construction joints optional) with an approved grooving tool, spacing the grooved lines about 5' apart.



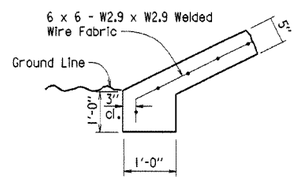
VIEW A-A



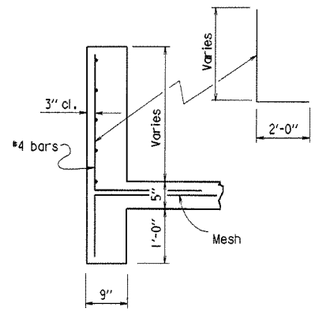
VIEW B-B



SECTION C-C

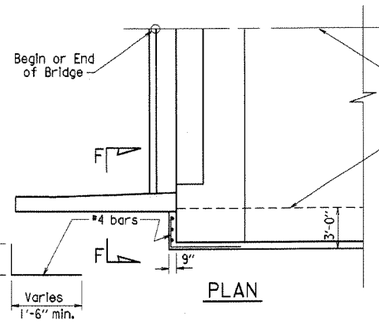


TOE WALL



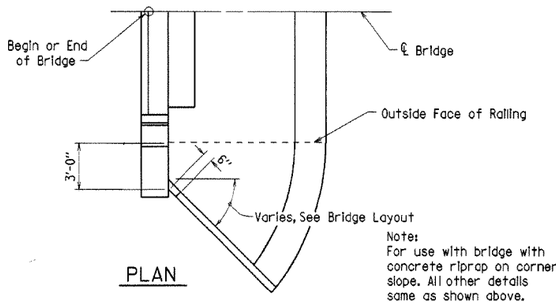
SECTION D-D

DETAILS OF CONCRETE RIPRAP



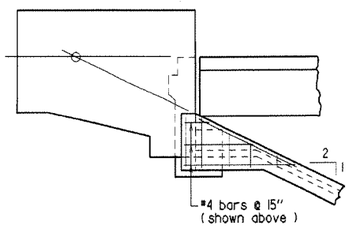
PLAN

Note:
For use on bridges with turned back wings.
All other details same as shown above.

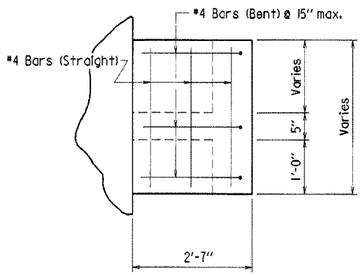


PLAN

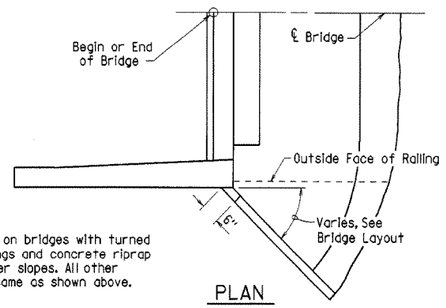
Note:
For use with bridge with concrete riprap on corner slope. All other details same as shown above.



ELEVATION

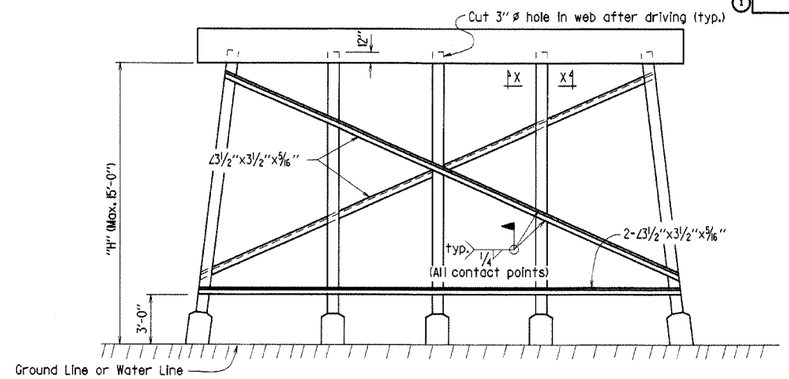


SECTION F-F



PLAN

Note:
For use on bridges with turned back wings and concrete riprap on corner slopes. All other details same as shown above.



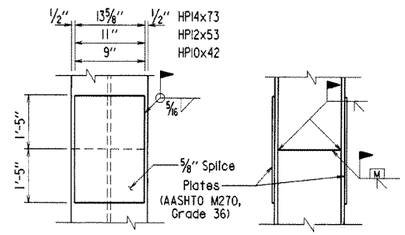
Note:
All bracing shall be cut and welded in the field. Each brace shall be furnished in one piece. Payment shall be made under Item 807.

Omit bottom bracing where "H" is less than 10 ft. Omit all bracing where "H" is less than 5 ft.

Note:
Where required by the bridge layout sheet, pile encasements shall be constructed.

Omit bracing (and V-groove in cap) where pile encasement is extended to bottom of bent cap.

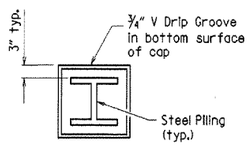
TYPICAL BRACING FOR INT. STEEL PILE BENTS



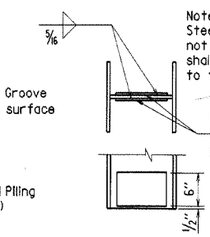
Note:
The contractor may for his own convenience and at this own expense provide as many as three splices per pile for steel bearing piling. Minimum spacing between splices shall be 5 ft.

PILE SPLICE DETAIL

Scale : 1" = 1'-0"



VIEW X-X

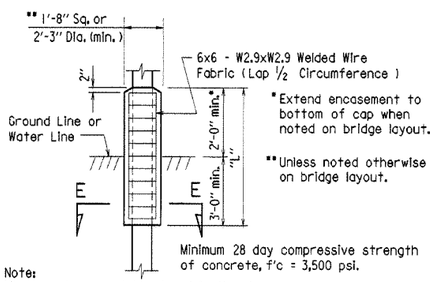


Note:
Steel pile tip reinforcing will not be paid for directly, but shall be considered subsidiary to the item of "Steel Piling."

HP14x73 - PL 1/2"x6"x11"
HP12x53 - PL 1/2"x6"x9"
HP10x42 - PL 1/2"x6"x7"

REINFORCING DETAIL FOR STEEL PILE TIP

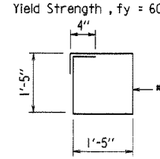
Scale : 1" = 1'-0"

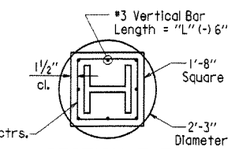


Note:
If concrete cannot be placed in the dry, seal concrete may be deposited under water. Concrete & welded wire fabric or reinforcing in encasements shall be paid for at the contract unit price per linear foot bid for "Pile Encasement."

PILE ENCASEMENT DETAIL

Reinforcing Alternate
#3 Vertical - 8 per encasement
#3 ties @ 12" ctrs.
Yield Strength, fy = 60,000 psi.





SECTION E-E
REINF. ALTERNATE

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 4337
CHARLES P. BRAND

BRIDGE ENGINEER

1 Revised and redrawn MJT 04-10-2003
Chk'd. By: CJF 04-10-2003

DETAILS OF CONCRETE RIPRAP
AND MISC. DETAILS OF STEEL PILING

ROUTE SEC.

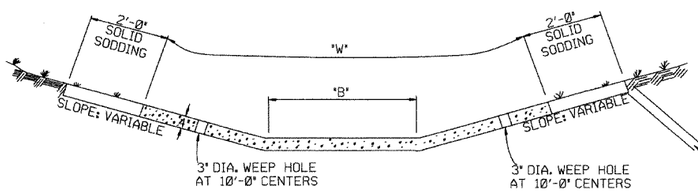
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: 04-10-2003 FILENAME: BI4995A.STD
CHECKED BY: CJF DATE: 04-10-2003 SCALE: No Scale or As Noted
DESIGNED BY: STD. DATE: —

BRIDGE NO. DRAWING NO. 14995A

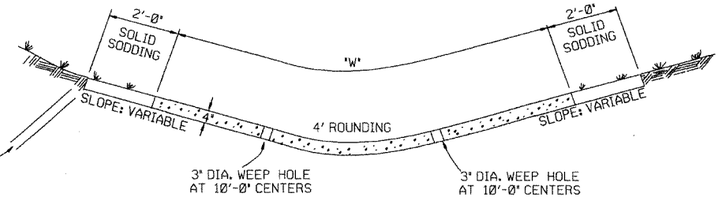
REFER TO TABULATION OF QUANTITIES FOR 'W' & 'B' DIMENSIONS



EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.

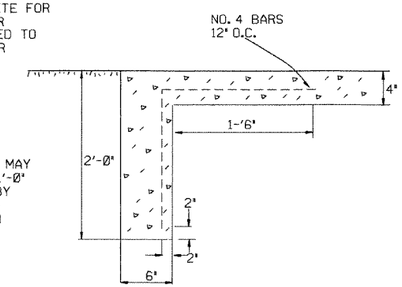
TYPE A

REFER TO TABULATION OF QUANTITIES FOR 'W' DIMENSIONS



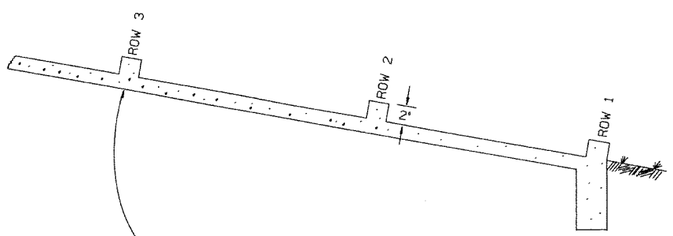
TYPE B

THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR 'CONCRETE DITCH PAVING.'



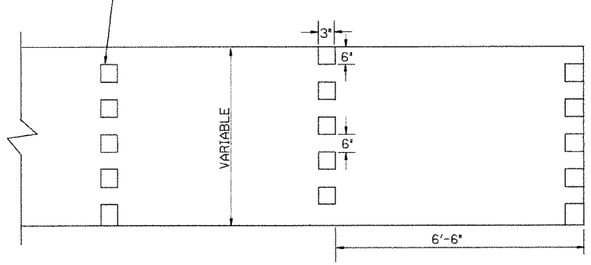
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

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



ENERGY DISSIPATORS
(NO SCALE)

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

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

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

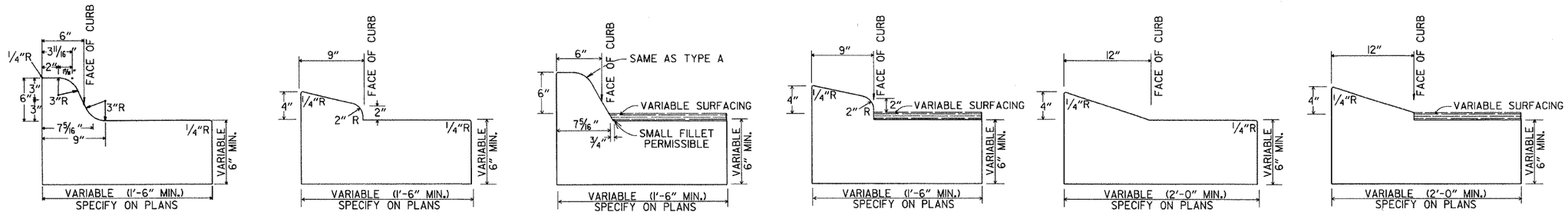
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

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

ARKANSAS STATE HIGHWAY COMMISSION

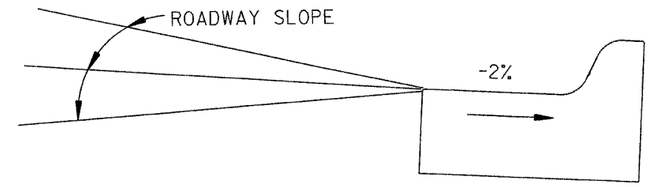
CONCRETE DITCH PAVING

STANDARD DRAWING CDP-1



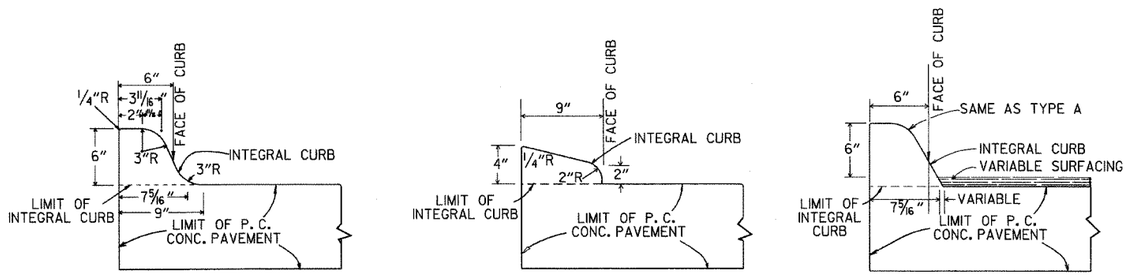
TYPE A | TYPE B-1 | TYPE C | TYPE B-2 | TYPE E-1 | TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER



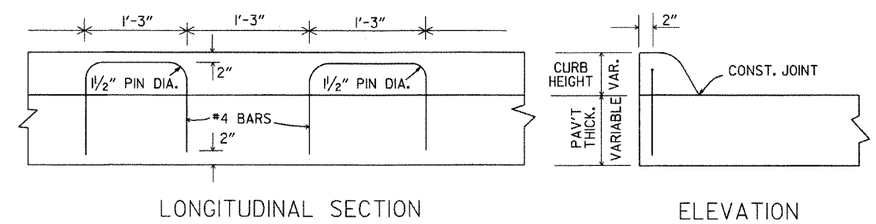
DETAIL OF GUTTER SLOPE

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



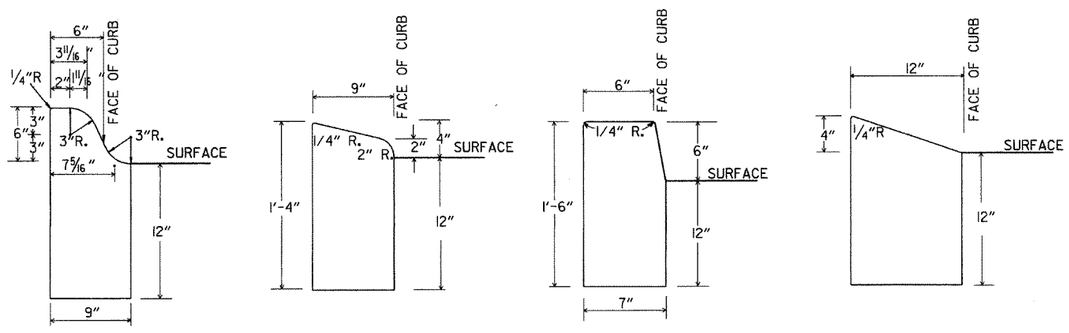
TYPE A | TYPE B | TYPE C

INTEGRAL CURB



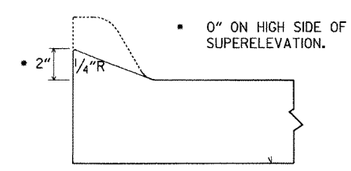
LONGITUDINAL SECTION | ELEVATION

ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



TYPE A | TYPE B | TYPE D | TYPE E

CONCRETE CURB



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

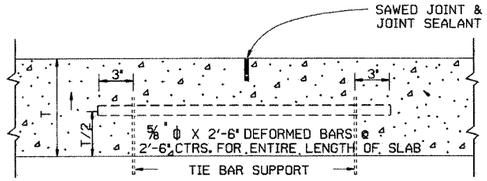
DETAILS OF MODIFIED CURB

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

ARKANSAS STATE HIGHWAY COMMISSION

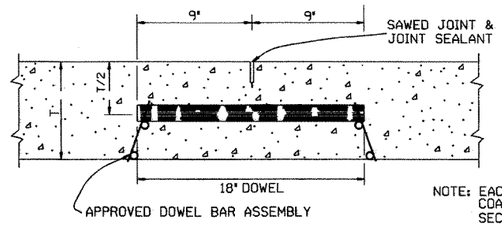
CURBING DETAILS

STANDARD DRAWING CG-1



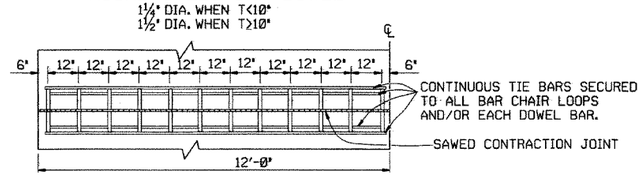
LONGITUDINAL JOINT

NOTE: THE TIE BAR SUPPORT SHOWN ABOVE MAY BE ELIMINATED IF OTHER APPROVED METHODS FOR PLACING AND SUPPORTING THE TIE BARS ARE PROVIDED.
TIE BARS SHALL BE 15" FROM TRANSVERSE JOINTS.



NOTE: EACH DOWEL TO BE COATED ACCORDING TO SECTION 502 OF THE STANDARD SPECIFICATIONS.

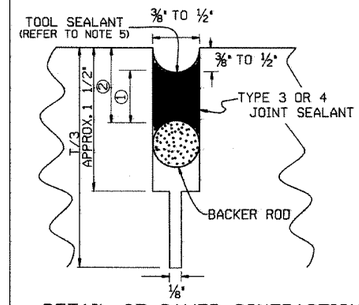
ROUND STEEL BAR DOWEL
1¼" DIA. WHEN T<10"
1½" DIA. WHEN T≥10"



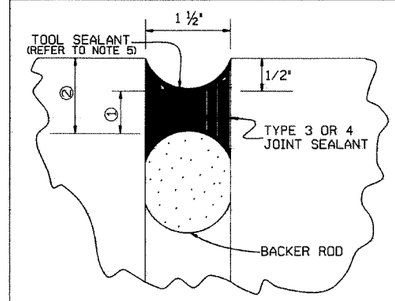
ONE-HALF 24' PAVEMENT
12 DOWELS
PLAN

NOTE: FOR 20' PAVEMENT USE 20 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR.
FOR 15' PAVEMENT USE 15 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR.
FOR 26' PAVEMENT USE 26 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR.
FOR PAVEMENT WIDTHS OTHER THAN THOSE SHOWN ABOVE, USE DOWELS AT 12" CTRS. WITH 6" MAX. SPACING FROM C.L. TO FIRST BAR. DISTANCE FROM EDGE OF SLAB TO FIRST BAR SHALL BE ADJUSTED TO MAINTAIN 12" DOWEL BAR SPACING

CONTRACTION JOINT DETAILS



DETAIL OF SAWED CONTRACTION JOINT



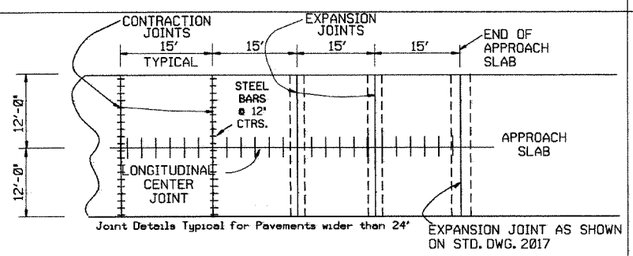
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR TYPE 3 OR 4 JOINT SEALANT

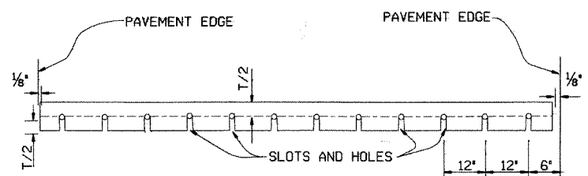
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	¼	⅜	½
⅜	¼	½	½
½	¼	⅝	½
⅝	5/16	¾	9/16
¾	⅜	⅞	⅞
1 ½	¾	2	1 ¼

JOINT CONFIGURATION FOR TYPE 5 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	½	⅜	¾
⅜	¾	½	1

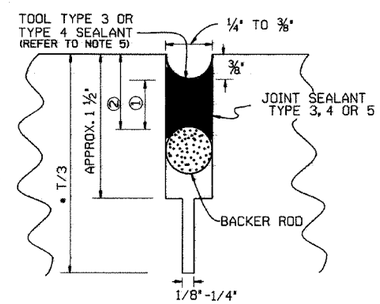


PLAN SHOWING EXPANSION JOINTS AT BRIDGE APPROACH SLABS



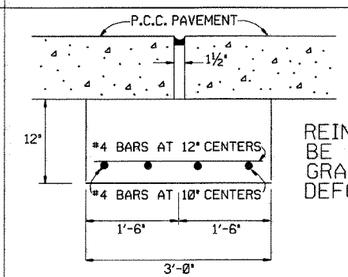
ELEVATION

NOTE: ALL DOWEL BARS SHALL CONFORM TO THE DETAILS FOR CONTRACTION JOINTS.



*NOTE: T/3 SAW CUT NOT REQUIRED FOR LONGITUDINAL CONSTRUCTION JOINT.

DETAIL OF SAWED
LONGITUDINAL JOINT
AND LONGITUDINAL CONSTRUCTION JOINT

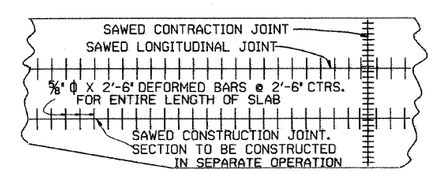


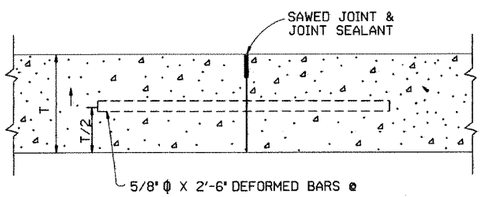
REINFORCING SHALL BE GRADE 40 OR GRADE 60 DEFORMED BARS.

DETAIL OF JOINT SUPPORT
FOR EXPANSION JOINTS

GENERAL NOTES

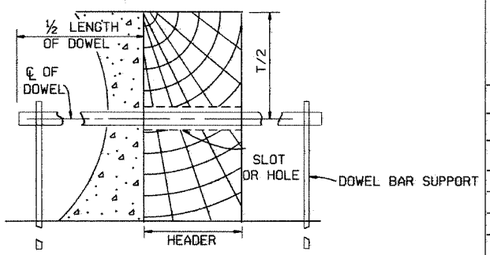
1. "T" DENOTES THICKNESS OF SLAB.
2. DOWEL BARS SHALL BE PLACED IN ACCORDANCE WITH THE DIMENSIONS SHOWN. A TOLERANCE OF PLUS OR MINUS ONE INCH WILL BE ALLOWED FOR THE VERTICAL AND LATERAL PLACEMENT AND A TOLERANCE OF PLUS OR MINUS ¼" WILL BE ALLOWED FOR THE TILT AND SKEW. DOWEL BARS SHALL BE FIELD COATED FOR A MINIMUM DISTANCE OF 2" GREATER THAN HALF THE LENGTH OF THE BAR WITH AN APPROVED GREASE AS A BOND BREAKER JUST PRIOR TO PLACEMENT OF CONCRETE.
3. THE EXPANSION JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S" OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE SPECIFIED IN THE PLANS. PAYMENT FOR ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.
4. CONTRACTION JOINTS SHALL BE CONSTRUCTED ON 15' CENTERS.
5. TOOLING NOT REQUIRED FOR SELF-LEVELING SILICONE.
6. UNLESS OTHERWISE SPECIFIED IN THE PLANS, CONCRETE SHOULDERS SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS SHOWN HEREON. CONTRACTION JOINTS SHALL MATCH CONTRACTION JOINTS IN THE LANES.
7. TIE WIRES IN DOWEL BAR ASSEMBLIES SHALL NOT BE CUT PRIOR TO PLACEMENT OF PAVING CONCRETE.





NOTE: TIE BARS SHALL BE 15" FROM TRANSVERSE JOINTS.

LONGITUDINAL CONSTRUCTION JOINT



SECTION

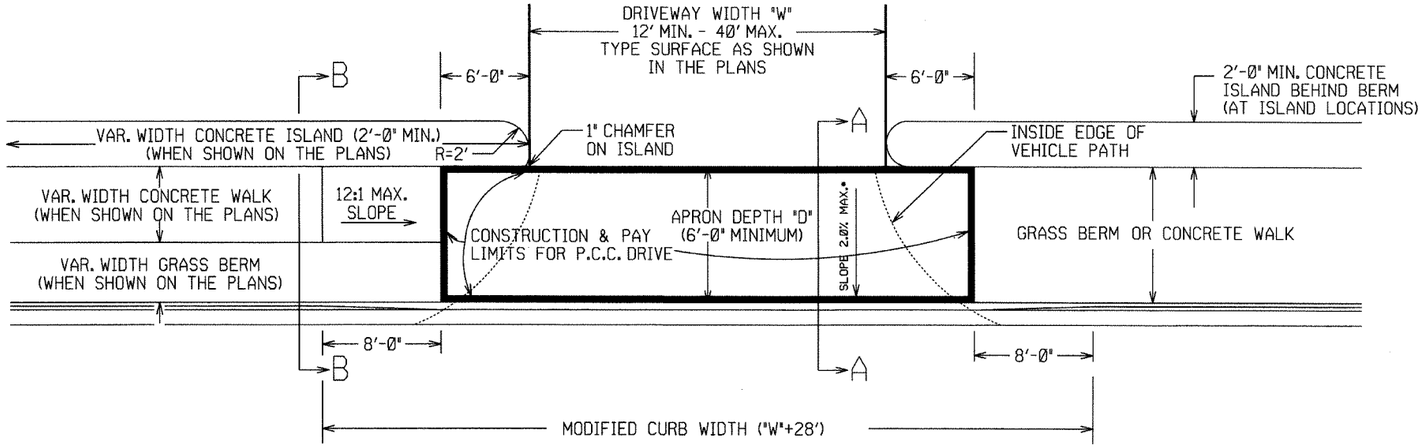
TRANSVERSE
CONSTRUCTION JOINT

DATE	REVISION	DATE FILMED
5-25-06	ADDED GENERAL NOTE 7	
10-9-03	REMOVED TIE BAR COATING & REVISED GENERAL NOTES	
11-16-01	ADDED TOOL SEALANT AND NOTE 5; REVISED NOTE 3	
4-26-96	REVISED CONTRACTION JOINT NOTE	
11- 3-94	ADDED NOTE RE: REINF. BARS	
4- 1-93	REVISED DOWEL BARS & GEN. NOTES	4- 1-93
10- 1-92	REVISED DOWEL SPACING	10- 1-92
8- 15-91	ADDED SPAC FOR CONTR JTS & DEL KEYWAY	
05-24-90	REVISED TIE BAR, DOWEL & JOINT SIZE	
01-25-90	ADDED EXPANSION JOINT	01-25-90
11-30-89	CHANGED T/4+1 TO T/3+1	11-30-89
03-23-89	ALTERED SAWED JOINT & ADDED NOTE	512-03-23-89
07-15-88	REVISED AND REDRAWN	632-07-15-88

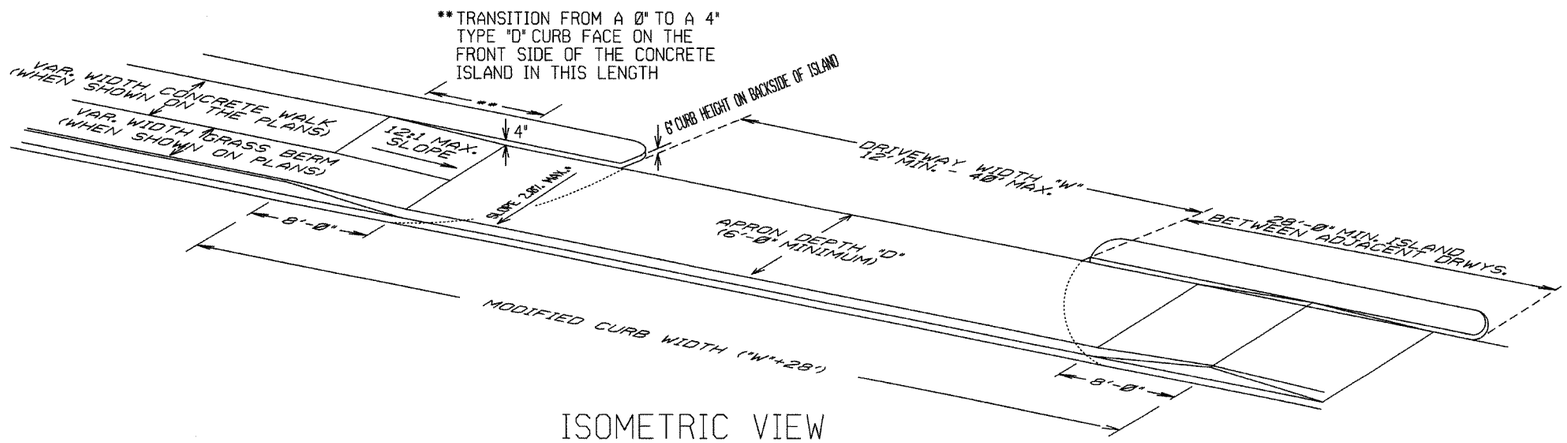
ARKANSAS STATE HIGHWAY COMMISSION

TRANSVERSE & LONGITUDINAL JOINTS
FOR CONCRETE PAVEMENT (NON-REINFORCED)

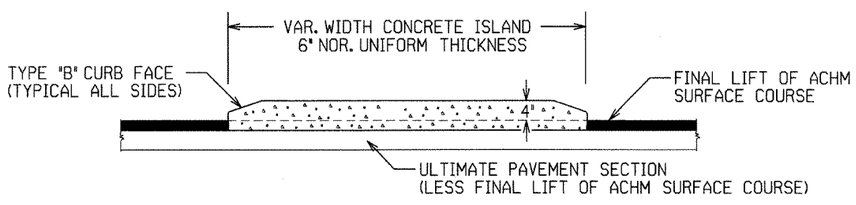
STANDARD DRAWING CPTJ - 6A

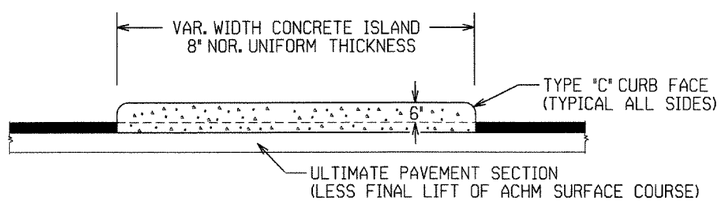


PLAN VIEW



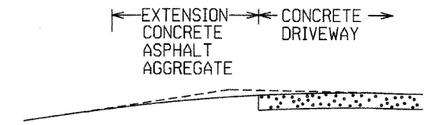
ISOMETRIC VIEW





CURBED ISLANDS FOR CHANNELIZATION

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



EXTENSION TYPICAL SECTIONS

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

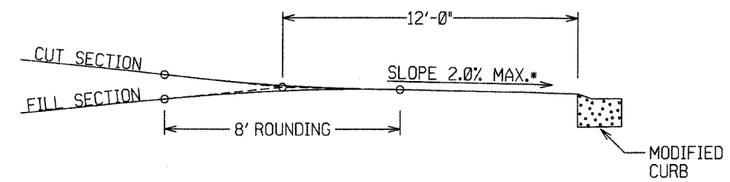
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE.(1") OR
4" ACHM BASE COURSE (1-1/2")

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

4: AGGREGATE - 6" AGGREGATE BASE COURSE

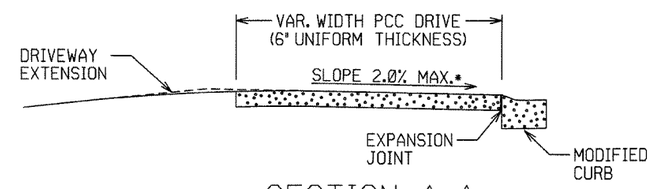
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

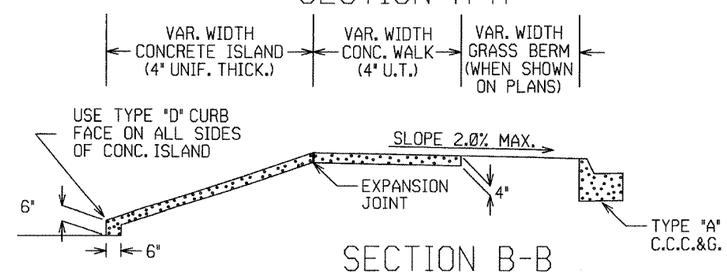


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



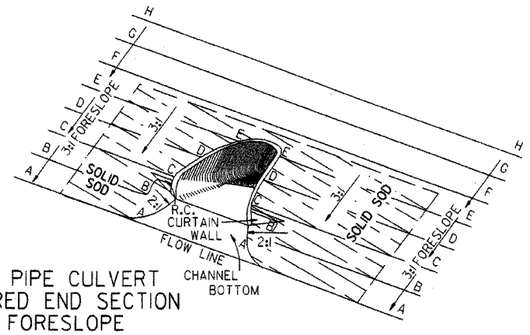
SECTION A-A



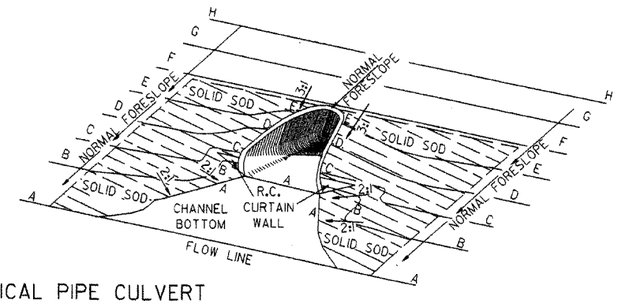
SECTION B-B
CURBED ISLAND BEHIND WALK

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

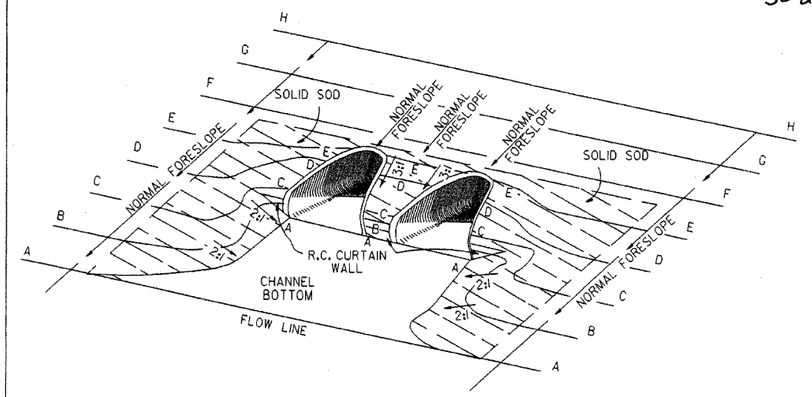
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



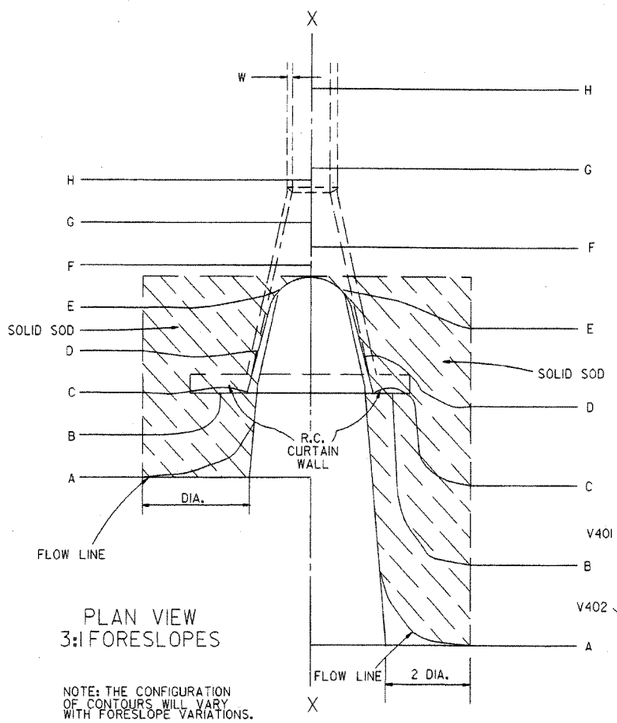
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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



PLAN VIEW
3:1 FORESLOPES

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

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

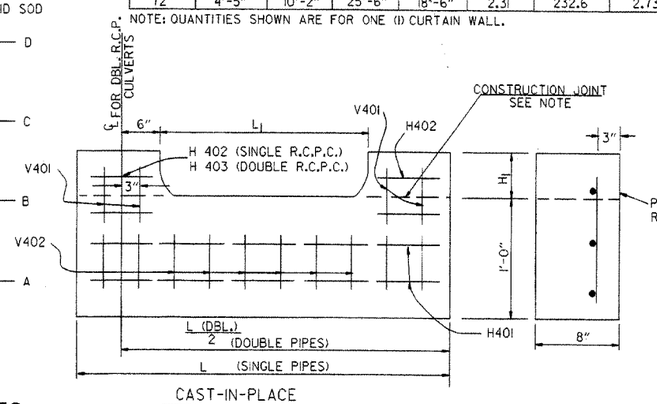
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0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

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

REINFORCING STEEL SCHEDULE

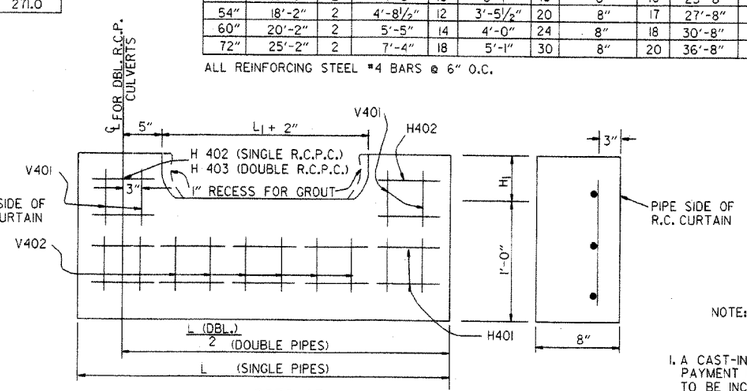
PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	V401 L	V401 NO.	V402 L	V402 NO.	DOUBLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	H403 L	H403 NO.	V401 L	V401 NO.	V402 L	V402 NO.
18"	7'-8"	2	1'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"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

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



CAST-IN-PLACE

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



PRECAST

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

R.C. CURTAIN WALL DETAILS

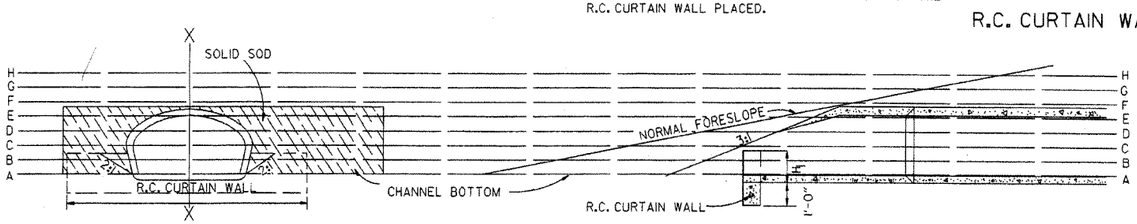
SOLID SODDING

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

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

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

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

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-1

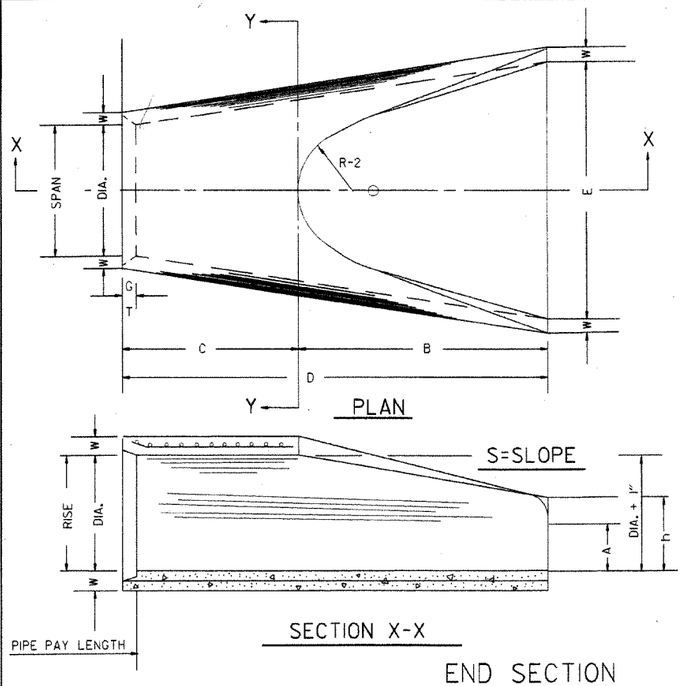


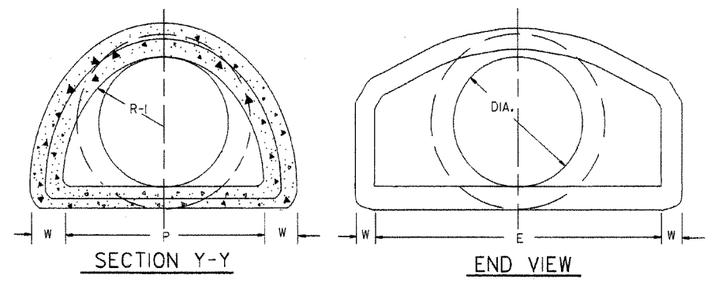
TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	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'-11 1/2"	4'-0"	3:1	25"	33 3/16"	16 13/16"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 11/16"	24 5/16"	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 7/8"	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 1/8"	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 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 13/16"	38 15/16"	24"	5"	13250	4'-6"

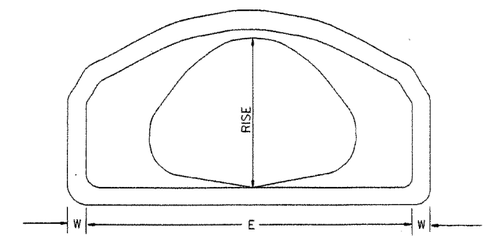
ARCH PIPE

EQUIV. DIA.	* SPAN AASHTO M 206	* SPAN AHD NOMINAL	* RISE AASHTO M 206	* RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
INCHES														
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	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 11/16"	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 11/16"	20"	3"	2 1/2:1
36	43 3/4	44	26 5/8	27	4"	10 1/2"	4'-0"	2'-11 1/2"	6'-1 1/2"	6'-6"	54 5/16"	22"	3 1/2"	2 1/2:1
42	51 1/8	51	31 5/16	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 5/16"	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 1/16"	24"	4 3/4"	2 1/4:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 13/16"	24"	5"	2 1/4:1

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

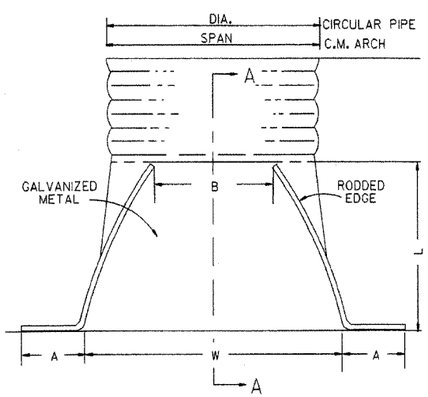


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

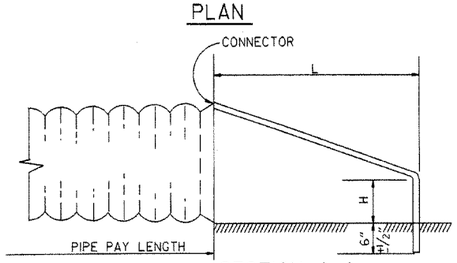


END VIEW
CONCRETE ARCH PIPE

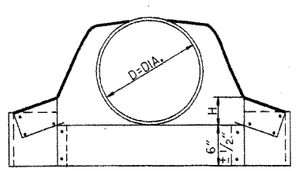
END SECTION
FOR REINFORCED CONCRETE PIPE CULVERTS



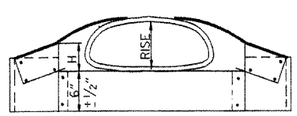
PLAN



SECTION A-A



CIRCULAR PIPE



C.M. ARCH PIPE

CIRCULAR PIPE

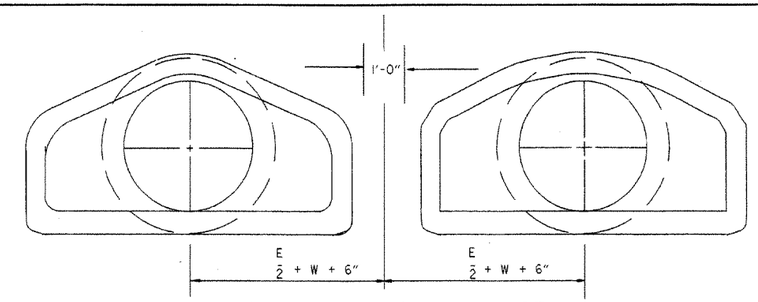
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2 1/2:1
15	16	7	8	6	26	30	2 1/2:1
18	16	8	10	6	31	36	2 1/2:1
21	16	9	12	6	36	42	2 1/2:1
24	16	10	13	6	41	48	2 1/2:1
30	14	12	16	8	51	60	2 1/2:1
36	14	14	19	9	60	72	2 1/2:1
42	12	16	22	11	69	84	2 1/2:1
48	12	18	27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

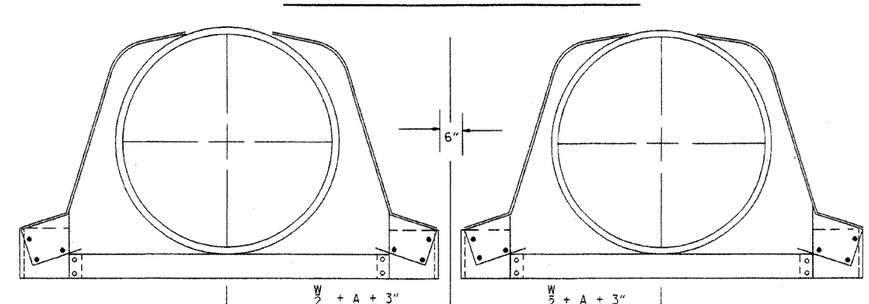
EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	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

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

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

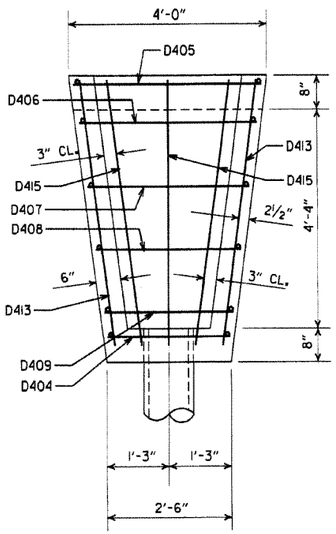
DATE	REVISION	FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74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

ARKANSAS STATE HIGHWAY COMMISION

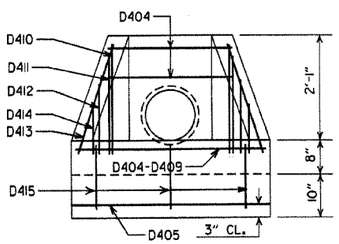
FLARED END SECTION

STANDARD DRAWING FES-2

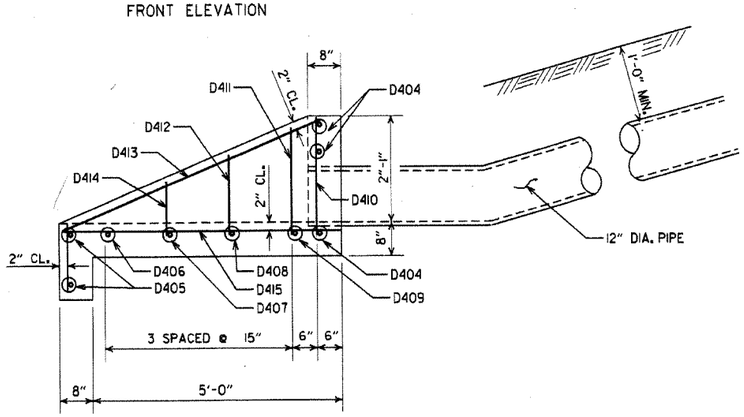
stdfes2.dgn



PLAN



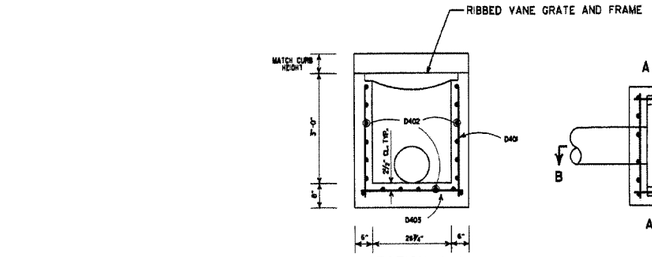
FRONT ELEVATION



SIDE ELEVATION
CONCRETE SPILLWAY

BAR LIST (CONCRETE SPILLWAY)

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



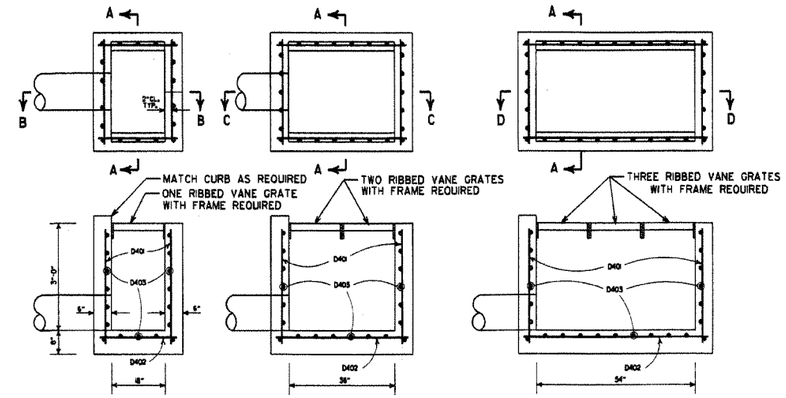
DETAILS OF CONCRETE SPILLWAY (TYPE A)

SECTION A-A

BAR LIST (DROP INLET)

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

ALL BARS #4 @ 6" SPACING



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

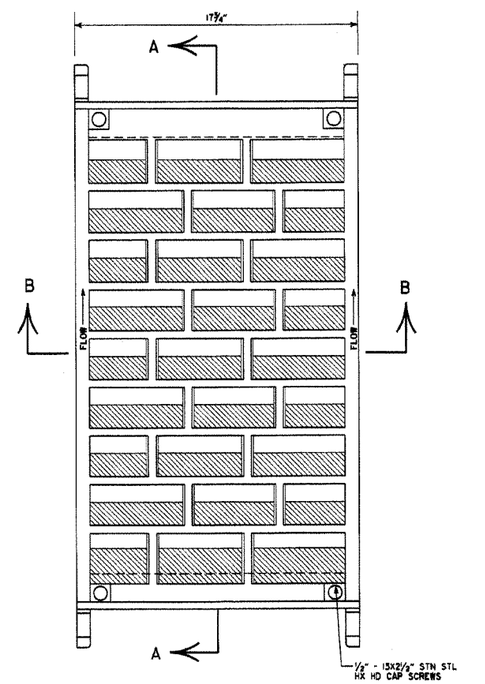
SECTION C-C
DETAILS OF DROP INLET
(TYPE N-2)

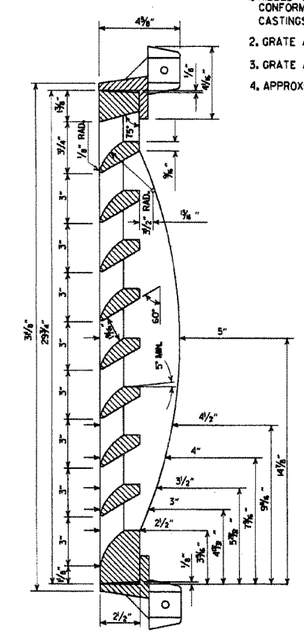
SECTION D-D
DETAILS OF DROP INLET
(TYPE N-3)

DETAILS OF DROP INLET

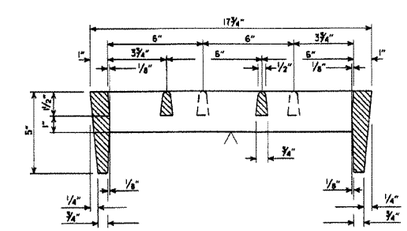
GENERAL NOTES (GRATE & FRAME)

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

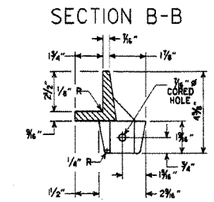




SECTION A-A



SECTION B-B



SECTION THRU FRAME

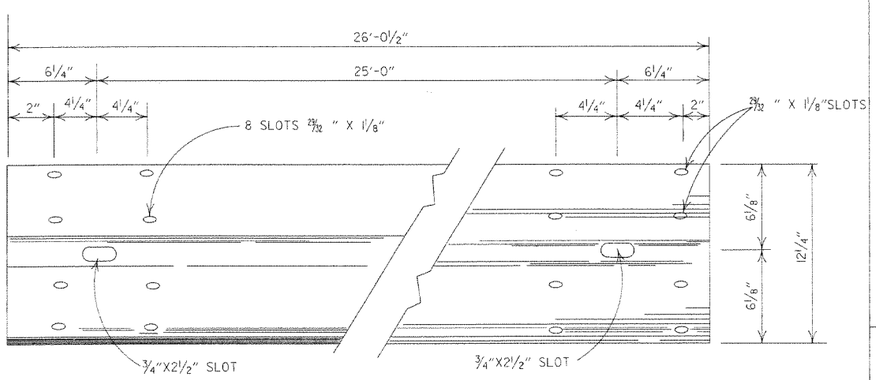
DETAILS OF RIBBED VANE GRATE AND FRAME

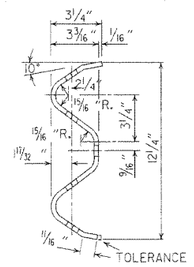
DATE REVISED	DATE FILMED	DESCRIPTION
7-02-98	7-2-98	REVISED SECT. A-A DETAIL OF DROP INLET & ADDED AASHTO REF. TO NOTE 1. REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
8-15-91		ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS AND SPILLWAY OUTLET

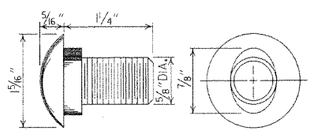
STANDARD DRAWING FPC-9N



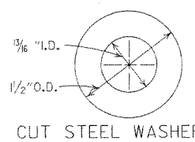


DETAILS OF
W-BEAM GUARD RAIL

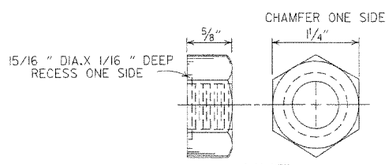
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



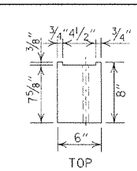
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



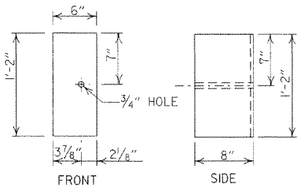
CUT STEEL WASHER



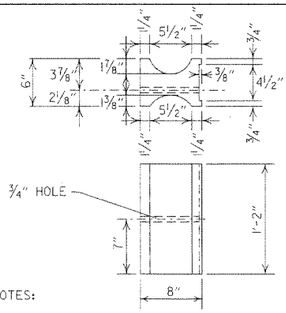
NUT



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



WOOD BLOCKOUT
(W-BEAM)

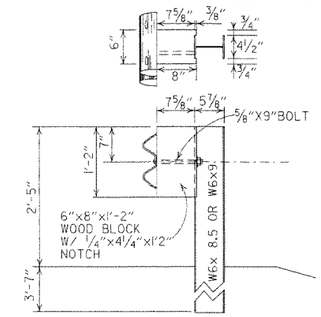


NOTES:

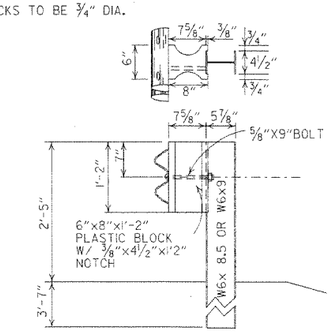
1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

PLASTIC BLOCKOUT
(W-BEAM)

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

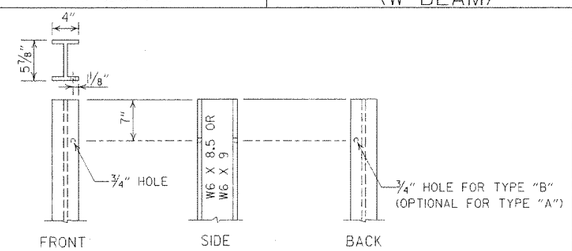


WOOD BLOCKOUT CONNECTIONS

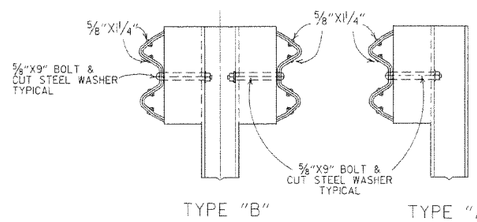


PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS
(W-BEAM)



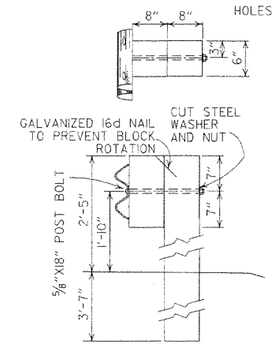
STEEL POST



TYPE "B" TYPE "A"

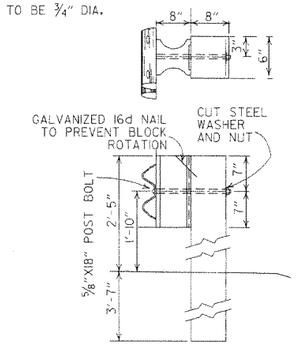
DETAILS OF STEEL LINE POST CONNECTIONS
(W-BEAM)

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



POSTS AND BLOCKS TO BE ROUGH SAWN 6"X8" WITH A TOLERANCE OF + OR - 1/4".

WOOD BLOCKOUT CONNECTIONS



PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF WOOD LINE POST CONNECTIONS
(W-BEAM)

-GENERAL NOTES-

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

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

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

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

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

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 (1350 f SOUTHERN PINE.

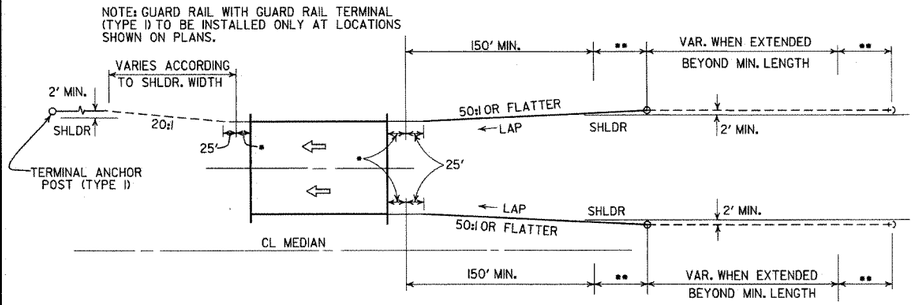
CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
10-15-09	ADDED REFERENCE TO MASH	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & ON STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
3-30-00	REMOVED GUARD RAIL AT BRIDGE ENDS	
1-12-00	ADDED PLASTIC BLOCKOUT	
8-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARD RAIL REPLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK, & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
4-3-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
6-2-94	ADDED ALT. STEEL POST SIZE	
8-5-93	REVISED STEEL POST SIZE	8-5-93
10-1-92	REDRAWN & REVISED	10-1-92
8-15-91	REVISED WASHER NOTE	8-15-91
8-2-90	REV. GEN. NOTE & DEPHT OF ANC. POST IN ROCK	8-2-90
7-15-88	REVISED SECTION 3 & GENERAL NOTES	
3-4-88	REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-9-87	REDRAWN & REVISED	802-10-9-87

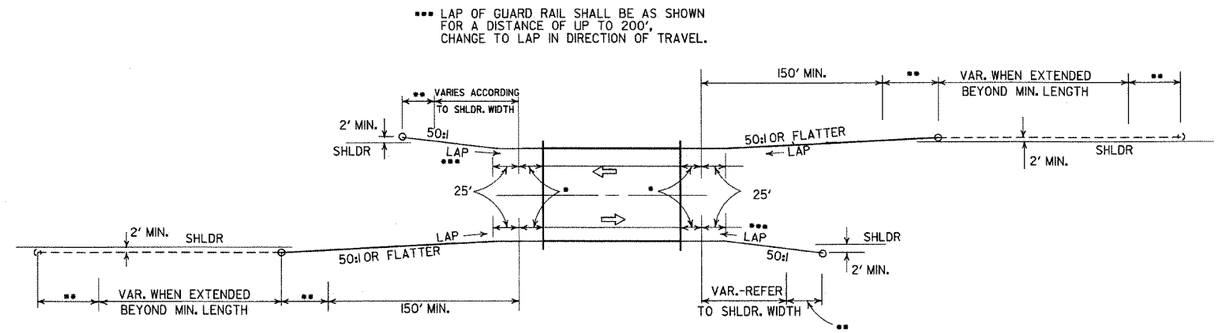
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-8



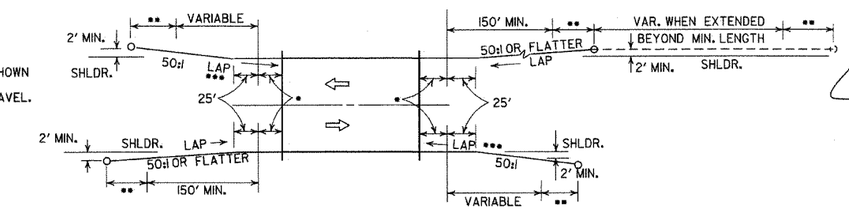
ONE-WAY TRAFFIC



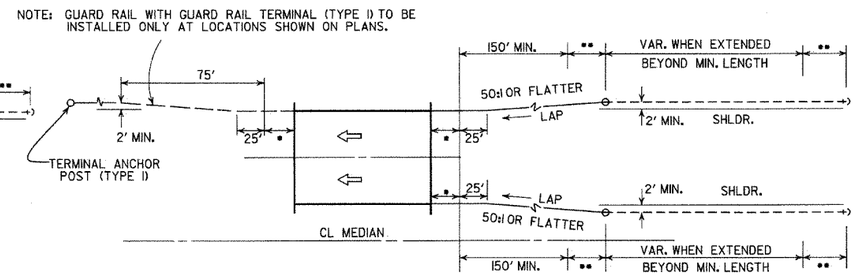
TWO-WAY TRAFFIC

METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

••• LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



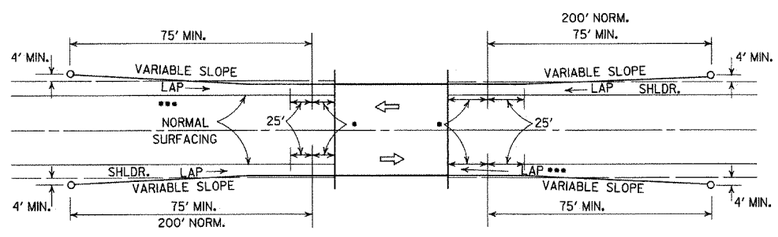
TWO-WAY TRAFFIC



ONE-WAY TRAFFIC

METHOD OF INSTALLATION OF GUARD RAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

••• LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE I) (FULL SHOULDER WIDTH OR LESS BRIDGES)

LEGEND

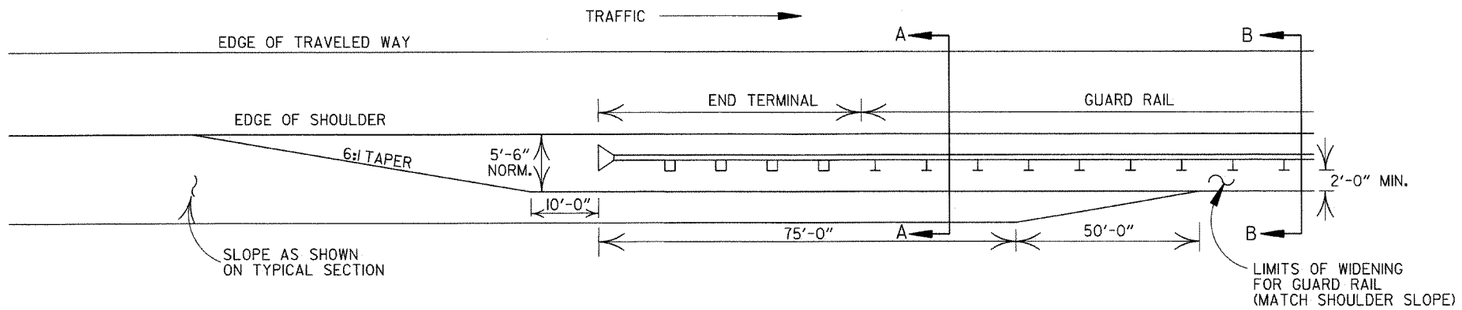
- • THRIE BEAM GUARD RAIL TERMINAL
- •• GUARD RAIL TERMINAL (TYPE 2)

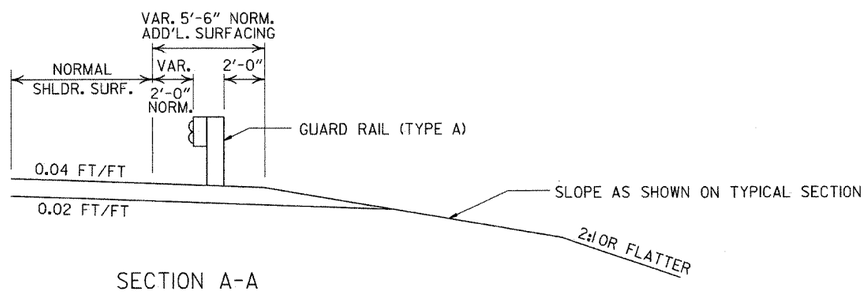
DATE	REVISION	DATE FILM
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. I)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	

ARKANSAS STATE HIGHWAY COMMISSION

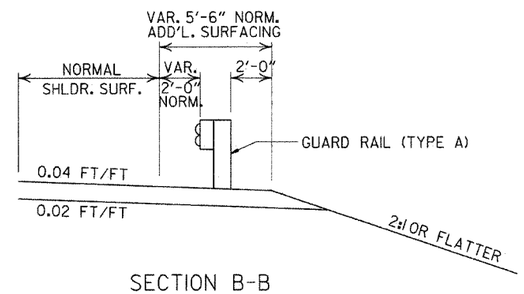
GUARD RAIL DETAILS

STANDARD DRAWING GR-9





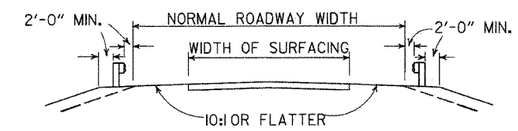
SECTION A-A



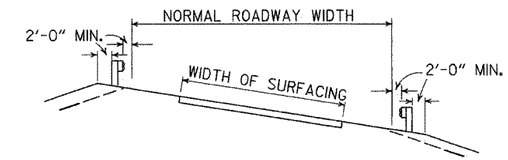
SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.

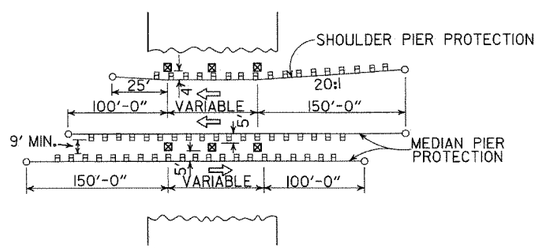


SECTION ON TANGENT



SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY



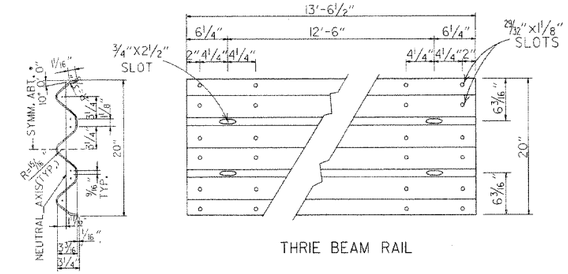
METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

DATE	REVISION	DATE FILM
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

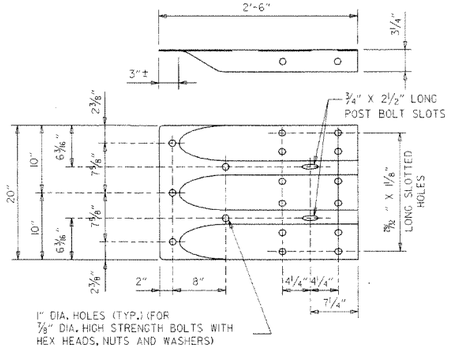
GUARD RAIL DETAILS

STANDARD DRAWING GR-9A

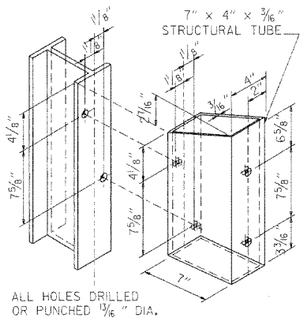


THRIE BEAM RAIL

SECTION THRU THRIE BEAM RAIL

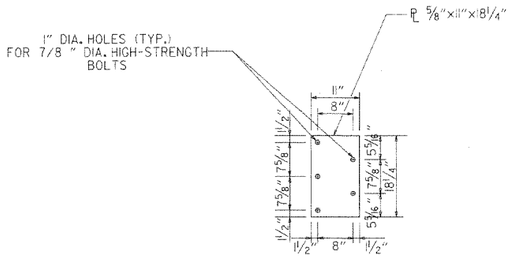


SPECIAL END SHOE



ATTACH BLOCKOUT TO POST USING ⅝" DIA. HEX HEAD BOLTS WITH 1½" O.D. CUT STEEL WASHERS AND NUT.

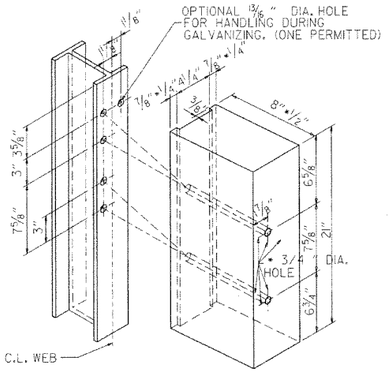
STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



NOTE:
SEE STANDARD DRAWING GR-10A FOR GUARD RAIL POST EMBEDMENT DEPTHS.

CONNECTOR PLATE

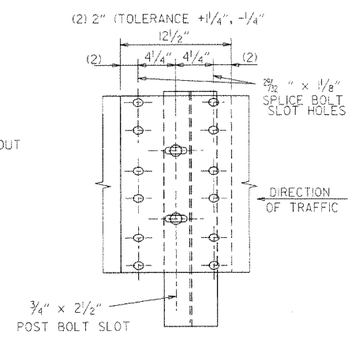
CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING ⅞" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



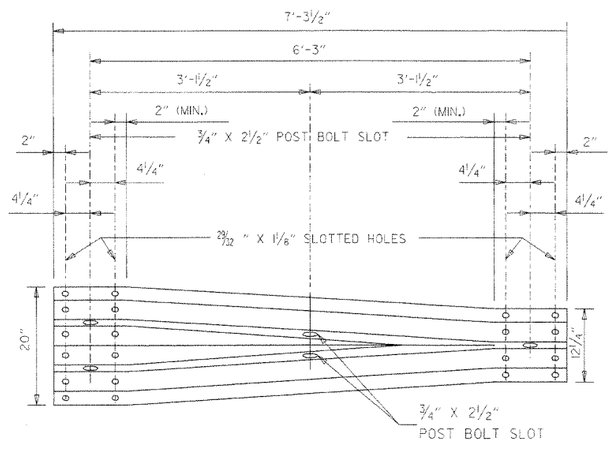
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED

HOLE PUNCHING DETAIL
FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

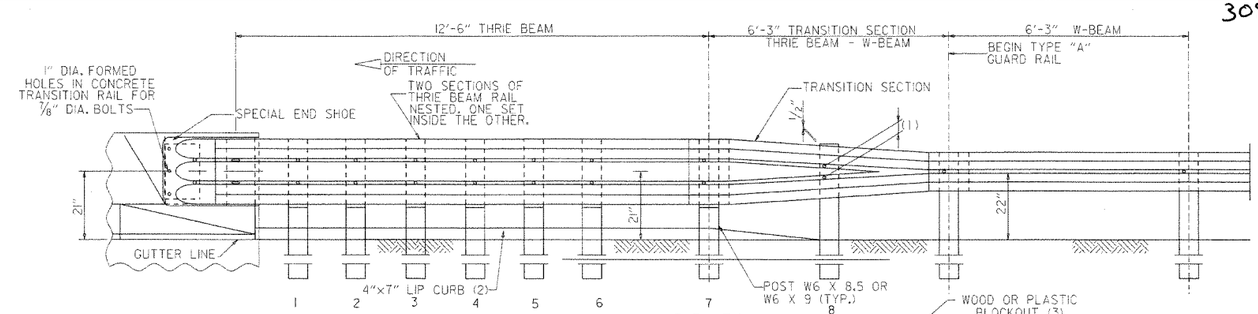
NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.



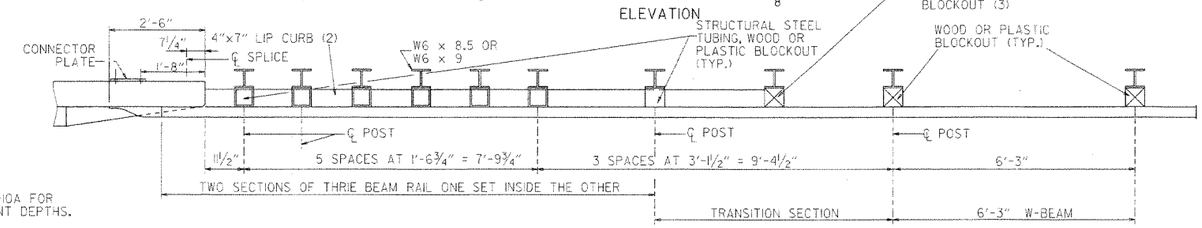
THRIE BEAM RAIL SPLICE AT POST



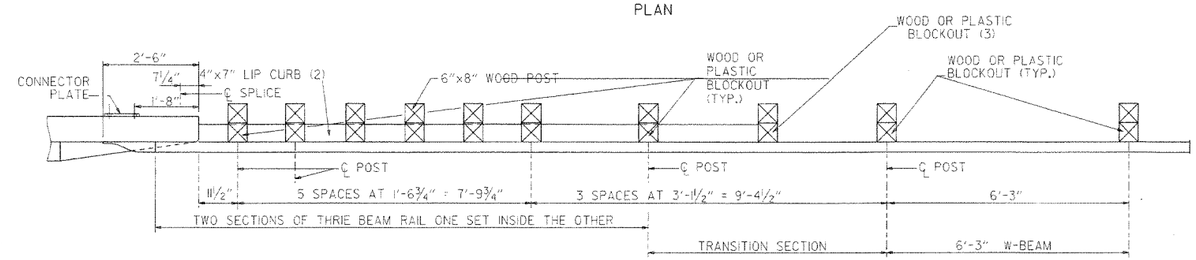
TRANSITION SECTION



ELEVATION



PLAN



PLAN

(1) VERIFY BOLT SPACING FROM RAIL TRANSITION PRODUCER.
(2) REFER TO APPROACH GUTTER DETAILS.
(3) LENGTH OF BLOCKOUT ON POST 8 TO BE MODIFIED TO FIT RAIL WIDTH.

THRIE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE I.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN ¾" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-11.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7# (1400 f) OR NO. 1 (1350 f) SOUTHERN PINE.

REFER TO STD. DRWG. GR-10A FOR POST DETAILS.

USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

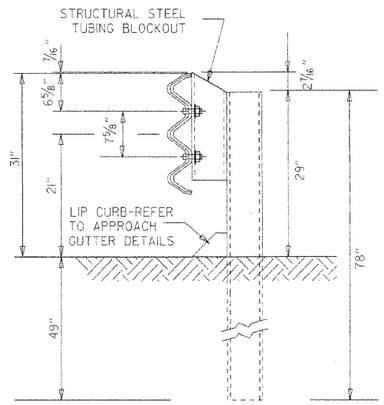
THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED NOTE (2)	
6-29-00	MOVED DIMENSION LINES	
5-18-00	ADDED NOTE	
3-30-00	DRAWN & ISSUED	

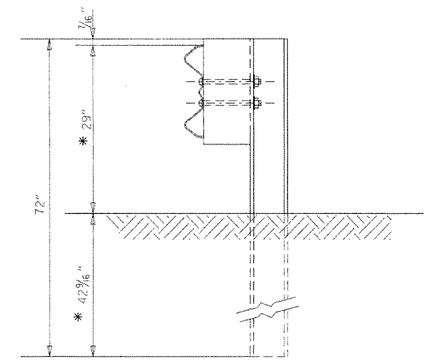
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10

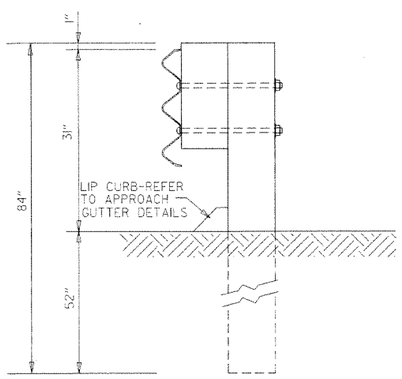


THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7

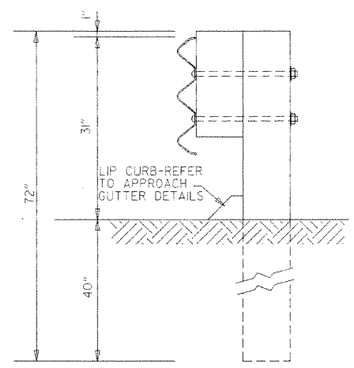


W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

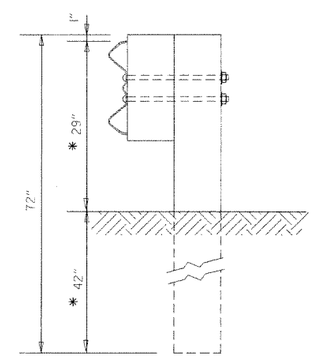
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 21" MID POINT OF THRIE BEAM TO 22" MID POINT OF W-BEAM.



THRIE BEAM RAIL
WITH WOOD OR PLASTIC
BLOCKOUTS & WOOD POSTS
POSTS 1-6



THRIE BEAM RAIL
WITH WOOD OR PLASTIC
BLOCKOUT & WOOD POST
POST 7



W-BEAM TO THRIE BEAM
TRANSITION RAIL WITH WOOD OR
PLASTIC BLOCKOUT & WOOD POST
POST 8

GENERAL NOTES:
RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

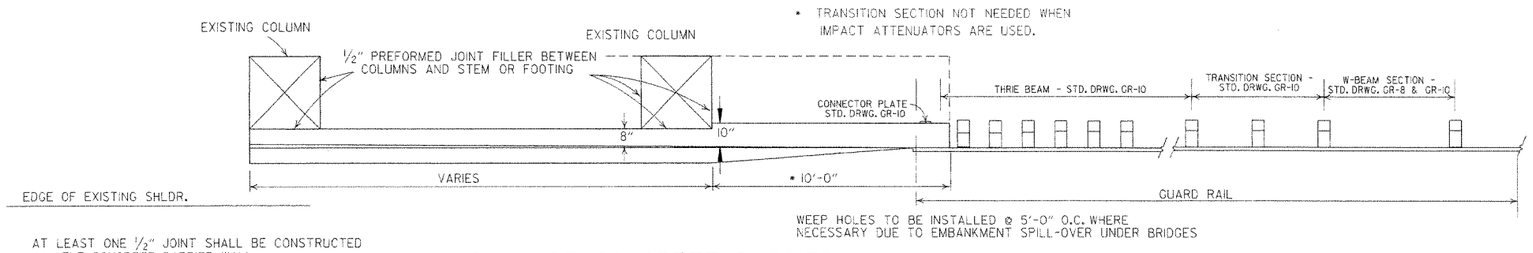
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	DATE FILM
7-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
8-22-02	REVISED LIP CURB NOTE	
3-30-00	DRAWN & ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

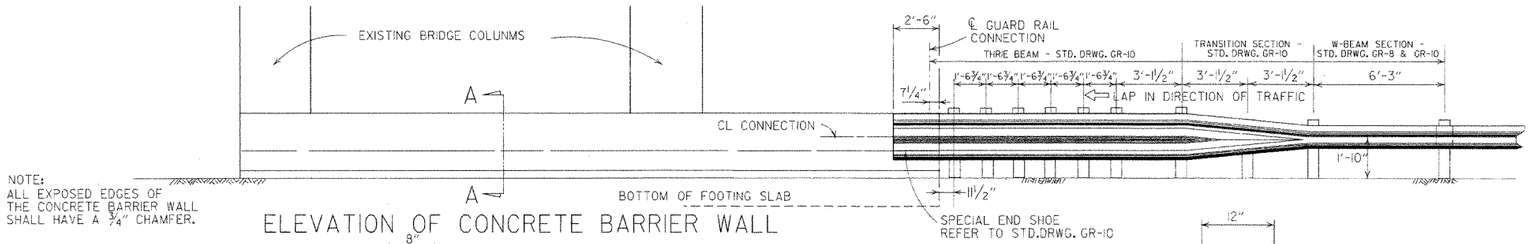
GUARD RAIL DETAILS

STANDARD DRAWING GR-10A



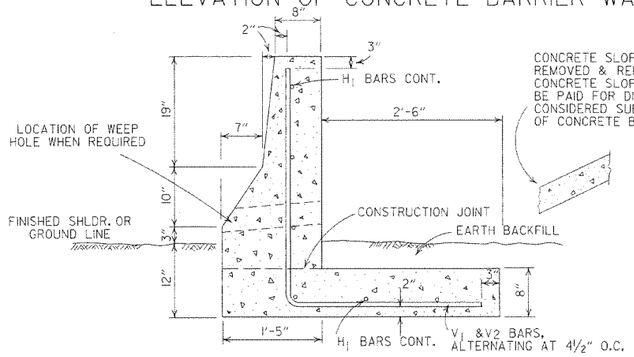
AT LEAST ONE 1/2" JOINT SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL. JOINTS SHALL BE EQUALLY SPACED AT A MAXIMUM OF 25'-0" O.C. FILL JOINT WITH PREFORMED JOINT FILLER.

PLAN OF CONCRETE BARRIER WALL



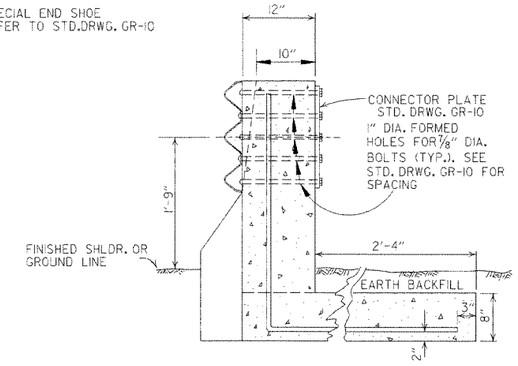
NOTE:
ALL EXPOSED EDGES OF THE CONCRETE BARRIER WALL SHALL HAVE A 3/4" CHAMFER.

ELEVATION OF CONCRETE BARRIER WALL

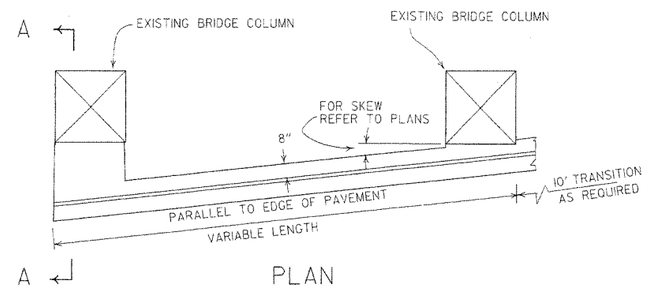


CONCRETE SLOPE PAVING TO BE REMOVED & REPLACED WHERE REQ'D. CONCRETE SLOPE PAVING WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM OF CONCRETE BARRIER WALL.

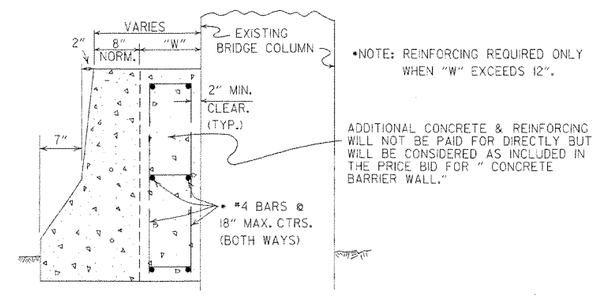
SECTION A-A



SECTION THRU CONNECTION



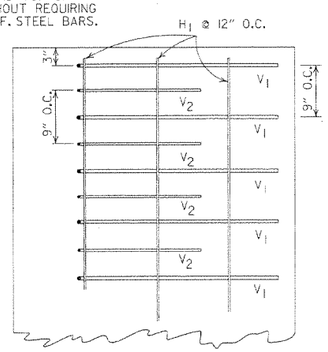
PLAN



SECTION A-A

DETAILS OF CONCRETE BARRIER WALL WHEN PIERS ARE SKEWED TO ROADWAY

IF FOR ANY REASON IT IS NECESSARY TO CONSTRUCT THE FOOTING AT A LOWER ELEVATION THAN IS SHOWN, THE STEM MAY BE LENGTHENED 1'-0" BETWEEN FIN. SHLDR. AND TOP OF FOOTING WITHOUT REQUIRING HEAVIER REINF. STEEL BARS.

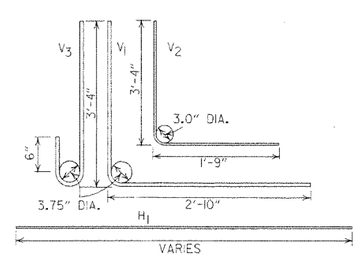


PLAN OF REINFORCING STEEL IN FOOTING

BAR LIST

MARK	NO.	SIZE	LENGTH
V1		#5	6'-2¼"
V2		#4	5'-1"
V3		#5	4'-1⅛"
H1	6	4	VAR.

THE V3 BARS SHALL BE USED IN PLACE OF THE V1 & V2 BARS IN FRONT OF PIERS.



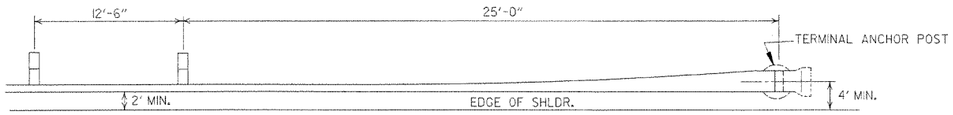
BEND DIAGRAMS

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF W-BEAM 1"	
8-22-02	REV. SECTION A-A OF DETAILS OF CONCRETE BARRIER WALL	
6-29-00	MOVED DIMENSION LINE	
5-18-00	ADDED NOTE	
3-30-00	REVISED TO INCLUDE THRIE BEAM	
6-2-94	ADDED TRANSITION SECTION NOTE	
10-1-92	REDRAWN & REVISED	10-1-92
8-15-91	REVISED DRAWING PLAN CONC. BARR.	8-15-91
2-16-89	ADDED SKEWED DETAILS	594-2-16-89
7-14-88	CHANGED TITLE	
10-9-87	REDRAWN & REVISED	

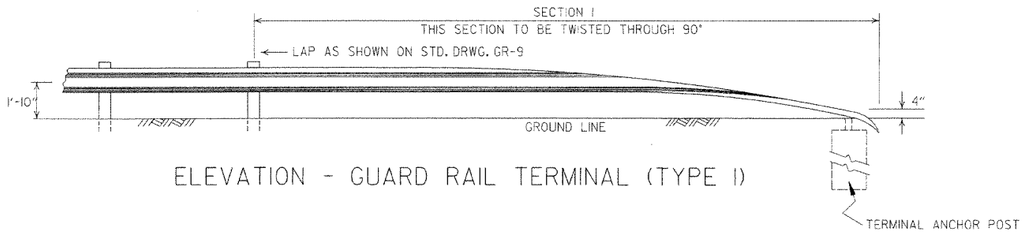
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE BARRIER WALL
(PIER PROTECTION TYPE A)

STANDARD DRAWING GR-11

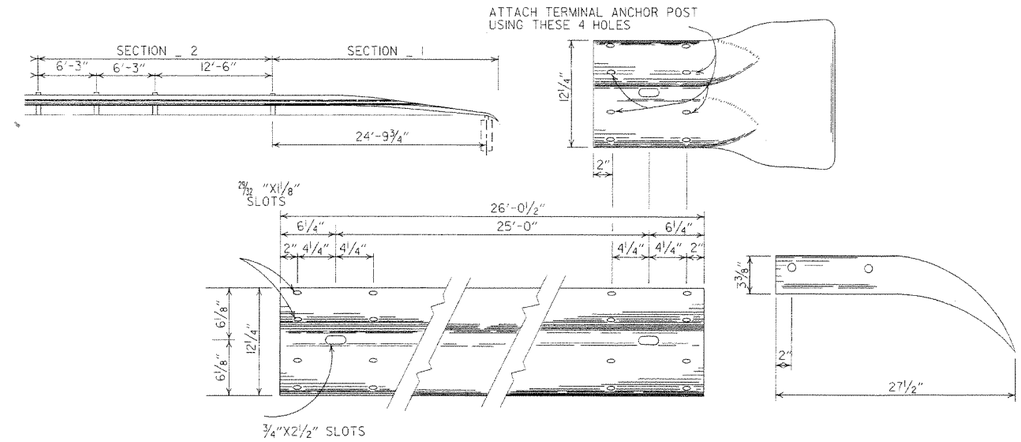


PLAN - GUARD RAIL TERMINAL (TYPE I)



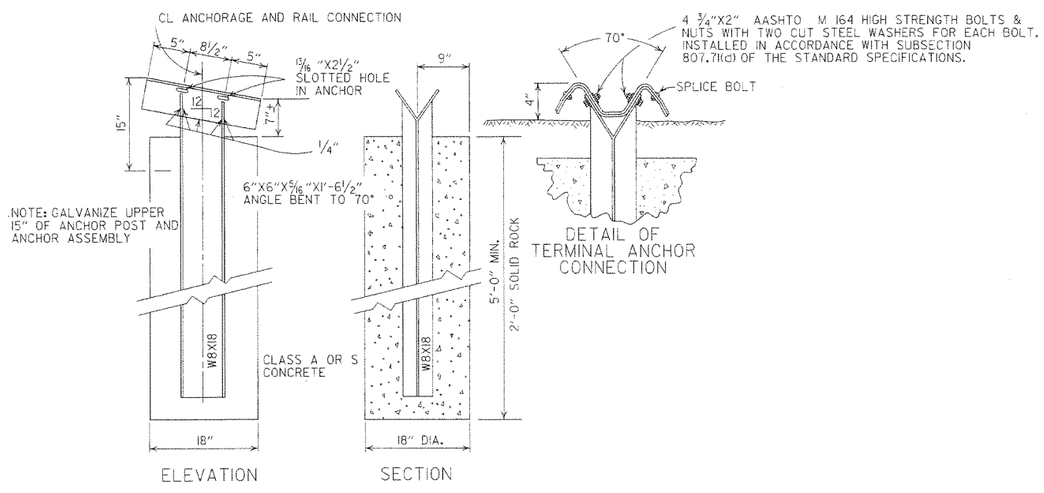
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

NOTE:
SECTIONS 1 AND 2 OF GUARD RAIL TERMINAL SHALL BE PAID FOR AT THE PRICE BID PER LINEAR FOOT OF THE TYPE OF GUARD RAIL SPECIFIED.



SECTION 1

TERMINAL SECTION



ELEVATION

SECTION

NOTE: RAIL MEMBERS MAY BE BOLTED TO ANGLE AT TERMINAL ANCHOR AND THE TWO ASSEMBLIES POSITIONED TO PROPER ALIGNMENT PRIOR TO PLACING CONCRETE AROUND 8 WF 17 POST IF CONTRACTOR SO DESIRES.

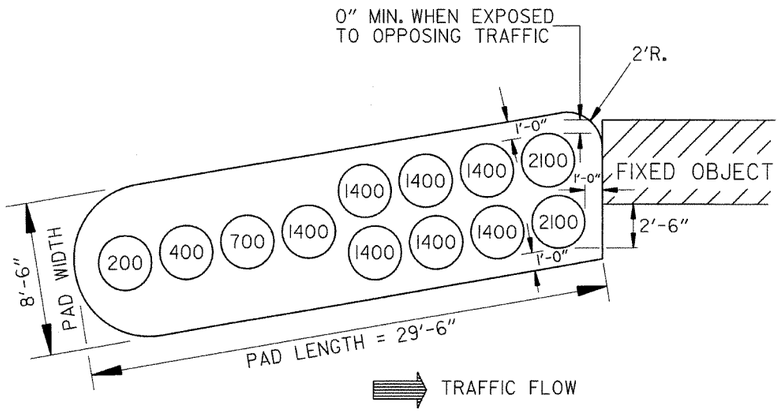
DETAIL OF TERMINAL ANCHOR POST (TYPE I)

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
6-26-97	REVISED LAP NOTE	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-3-94	DIMENSION TERMINAL DETAIL	
11-11-92	ADDED NOTE FOR PAYMENT	11-11-92
10-1-92	DRAWN & ISSUED	10-1-92

ARKANSAS STATE HIGHWAY COMMISSION

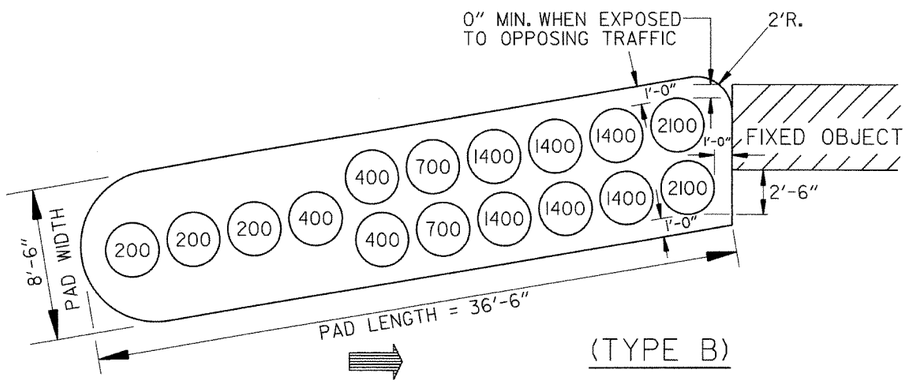
GUARD RAIL DETAILS

STANDARD DRAWING GRT-1



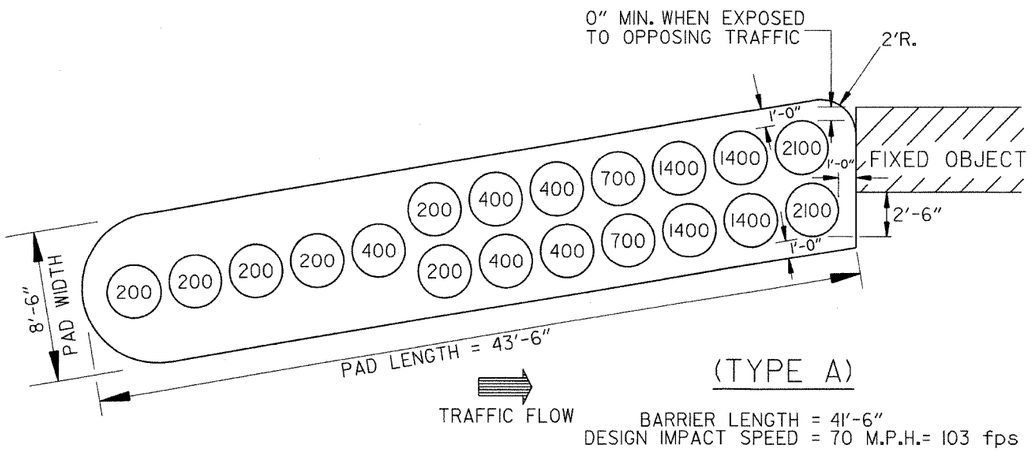
(TYPE C)

BARRIER LENGTH = 27'-6"
DESIGN IMPACT SPEED = 50 M.P.H.= 73.3 fps



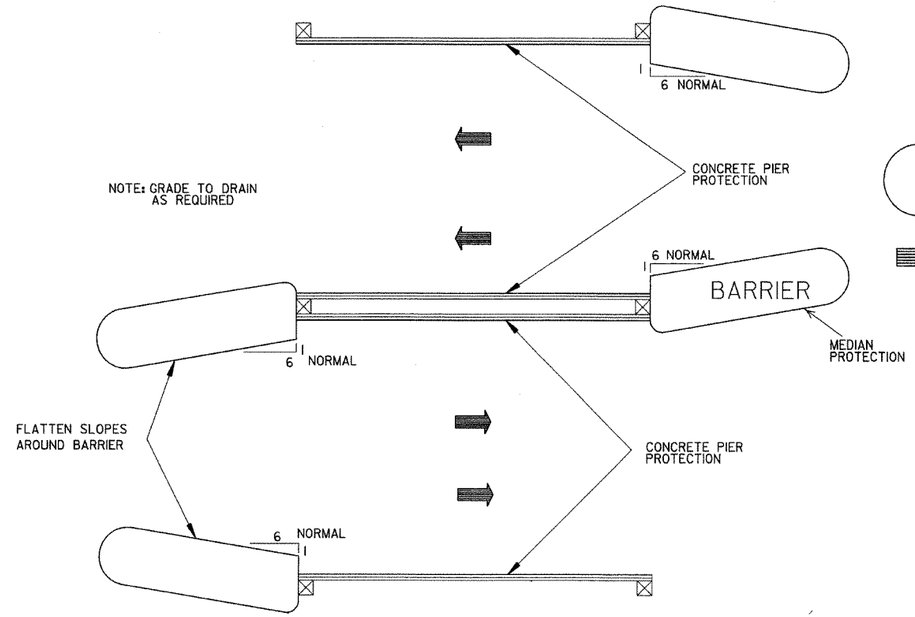
(TYPE B)

BARRIER LENGTH = 34'-6"
DESIGN IMPACT SPEED = 60 M.P.H.= 88 fps

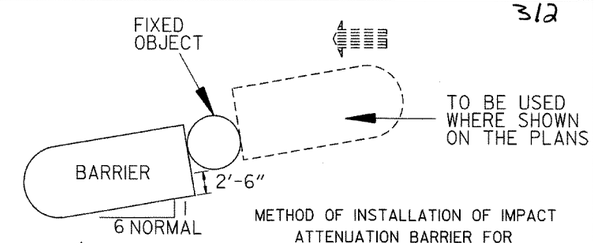


(TYPE A)

BARRIER LENGTH = 41'-6"
DESIGN IMPACT SPEED = 70 M.P.H.= 103 fps



METHOD OF INSTALLATION OF IMPACT ATTENUATION BARRIER FOR PIER PROTECTION



METHOD OF INSTALLATION OF IMPACT ATTENUATION BARRIER FOR SHIELDING INDIVIDUAL HAZARDS

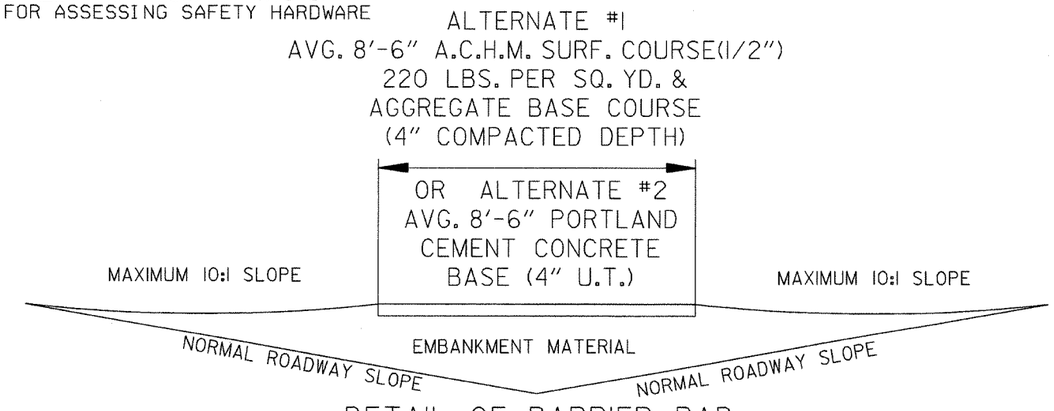
APPROXIMATE QUANTITIES PER PAD

TYPE	ALTERNATE #1		ALTERNATE #2
	AGGR. BASE COURSE	A.C.H.M. SURFACE COURSE	P.C.CONC. BASE (4"U.T.)
	TONS	TONS	SQ.YDS.
A	9.7	4.6	41.6
B	8.1	3.8	34.9
C	6.6	3.1	28.3

NOTE: APPROXIMATE QUANTITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. PAYMENT TO BE INCLUDED IN UNIT PRICE BID FOR IMPACT ATTENUATION BARRIER.

GENERAL NOTES

1. DIMENSIONS SHOWN ARE TO TOP OF PLASTIC MODULES.
2. SPACING BETWEEN PLASTIC MODULES SHALL NOT EXCEED 6" AT THE TOP.
3. PLASTIC MODULES SHALL MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



DETAIL OF BARRIER PAD

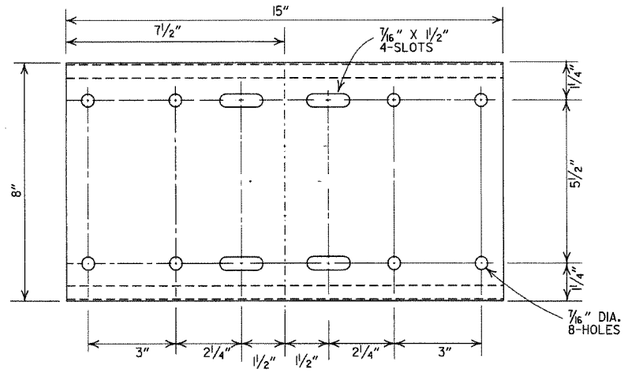
NOTE: BARRIER PAD TO BE SKEWED TOWARD ONCOMING TRAFFIC A MAXIMUM OF 6:1 WITH 6:1 BEING NORMAL

DATE	REVISION	DATE FILMED
10-15-09	ADDED REFERENCE TO MASH	
11-29-07	REVISED TY. A & TY. C ARRAYS	
11-19-98	REVISED FIXED OBJECT	
11-18-98	REV. NOTES & TYPE A MOD. WTS.	
10-18-96	REDRAWN	
7-15-88	CONFORMED TO 1988 SPECS	
7-29-87	REDRAWN	

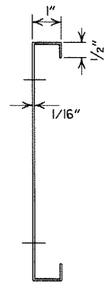
ARKANSAS STATE HIGHWAY COMMISSION

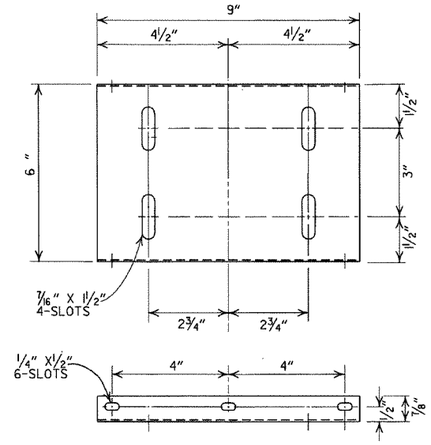
IMPACT ATTENUATION BARRIER

STANDARD DRAWING IB-1

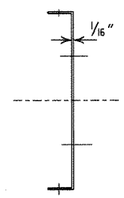


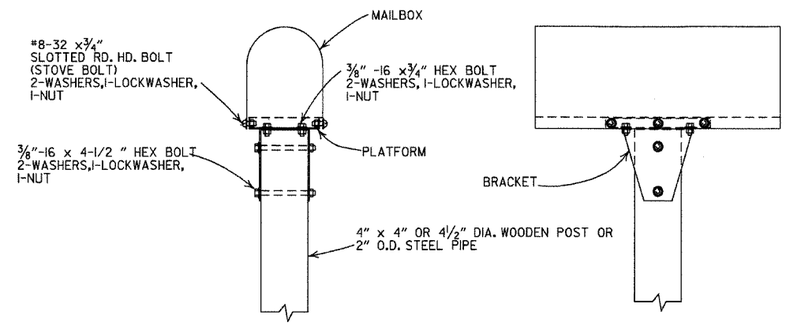
SHELF



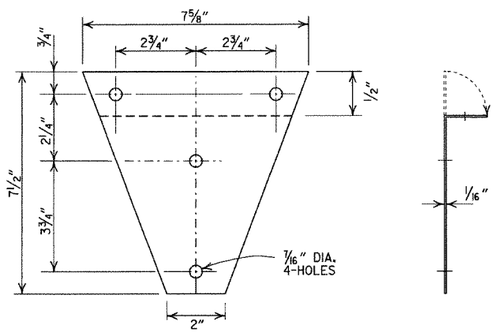


PLATFORM





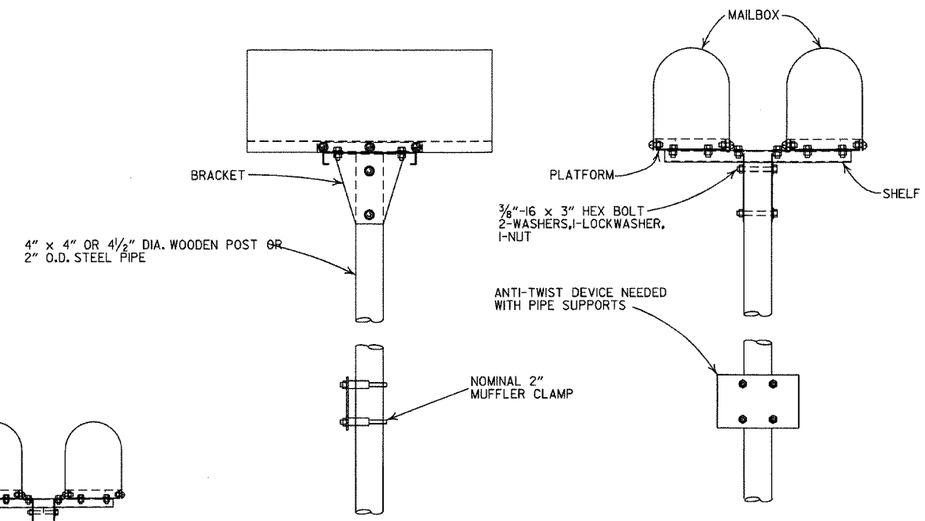
SINGLE INSTALLATION



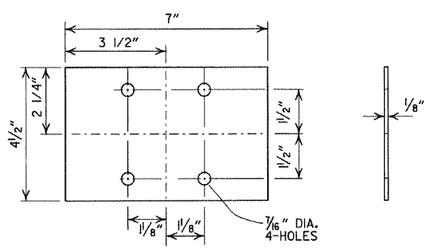
BRACKET

GENERAL NOTES

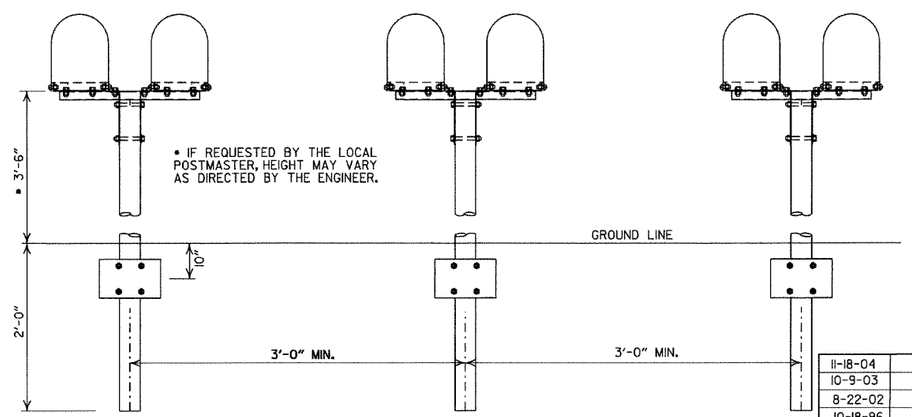
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF ¾" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X¾" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE AHTD QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



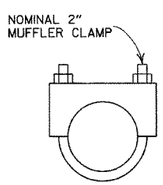
DOUBLE INSTALLATION



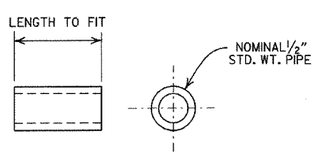
ANTI-TWIST PLATE



SPACING FOR MULTIPLE POST INSTALLATION



CLAMP



SPACER

DATE	FILMED	REVISION
11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	20-7-15-88	ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31 9/16	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

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

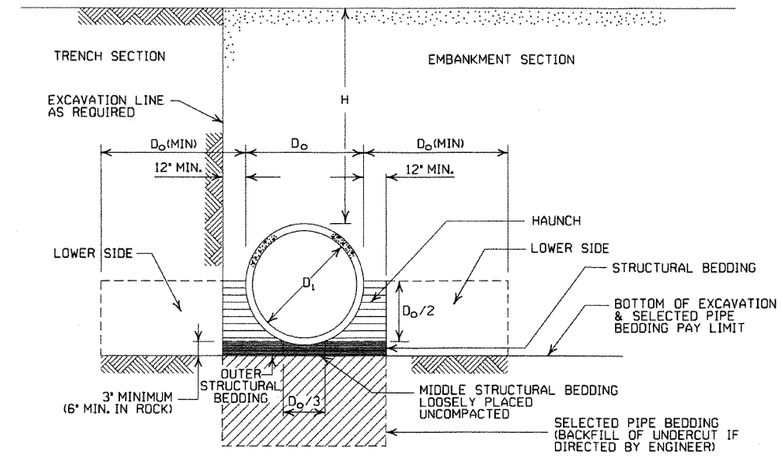
- LEGEND -

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

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

* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

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

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

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

CORRUGATED ALUMINUM PIPE (ROUND)

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

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL MIN. THICKNESS REQUIRED INCHES	STEEL ① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	STEEL MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	ALUMINUM MIN. THICKNESS REQUIRED INCHES	ALUMINUM ① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	ALUMINUM MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1
			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM		
15	17x13	3	0.064	2	15	0.060	2	15
18	21x15	3	0.064	2	15	0.060	2	15
21	24x18	3	0.064	2.25	15	0.060	2.25	15
24	28x20	3	0.064	2.5	15	0.075	2.5	15
30	35x24	3	0.079	3	12	0.075	3	12
36	42x29	3½	0.079	3	12	0.105	3	12
42	49x33	4	0.079	3	12	0.105	3	12
48	57x38	5	0.109	3	13	0.135	3	13
54	64x43	6	0.109	3	14	0.135	3	14
60	71x47	7	0.138	3	15	0.164	3	15
66	77x52	8	0.168	3	15			
72	83x57	9	0.168	3	15			

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL MIN. THICKNESS REQUIRED INCHES	STEEL ② INSTALLATION TYPE 2	STEEL ② INSTALLATION TYPE 1	STEEL MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 2	STEEL MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1
			② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM				
36	40x31	5	0.079	3	2	12	15
42	46x36	6	0.079	3	2	13	15
48	53x41	7	0.079	3	2	13	15
54	60x46	8	0.079	3	2	13	15
60	66x51	9	0.079	3	2	13	15
66	73x55	12	0.079	3	2	15	15
72	81x59	14	0.079	3	2	15	15
78	87x63	14	0.079	3	2	15	15
84	95x67	16	0.109	3	2	15	15
90	103x71	16	0.109	3	2	15	15
96	112x75	18	0.109	3	2	15	15
102	117x79	18	0.109	3	2	15	15
108	128x83	18	0.138	3	2	15	15

CONSTRUCTION SEQUENCE

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

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

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

③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

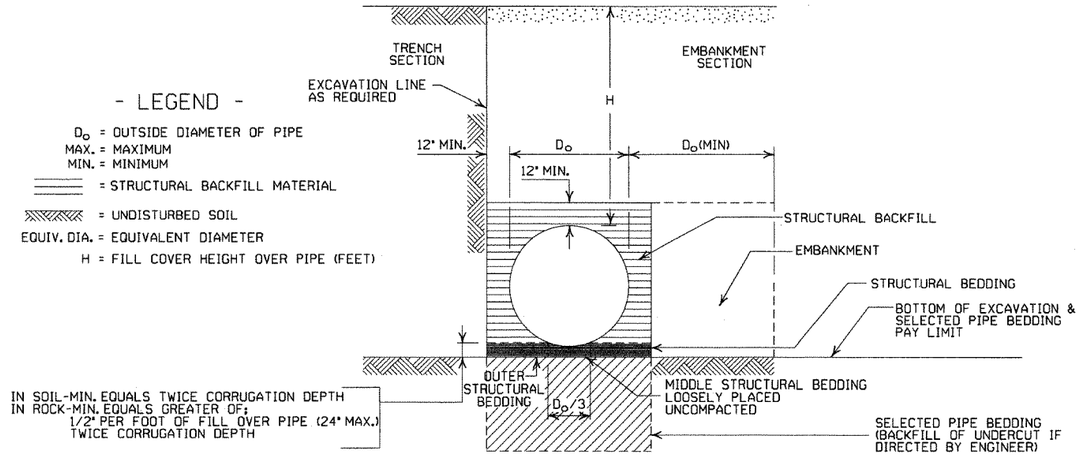
METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8

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

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

- LEGEND -

D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM
= STRUCTURAL BACKFILL MATERIAL
= UNDISTURBED SOIL
EQUIV. DIA. = EQUIVALENT DIAMETER
H = FILL COVER HEIGHT OVER PIPE (FEET)



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 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."

DATE	REVISION	DATE FILMED
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

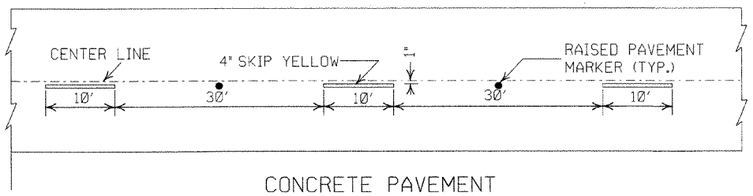
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

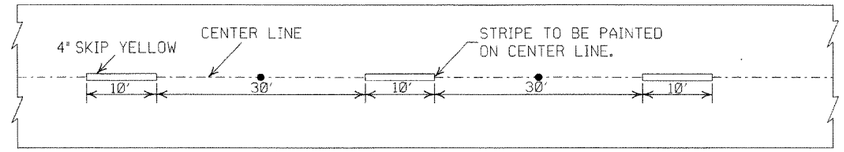
STANDARD DRAWING PCM-1

NOTES:

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

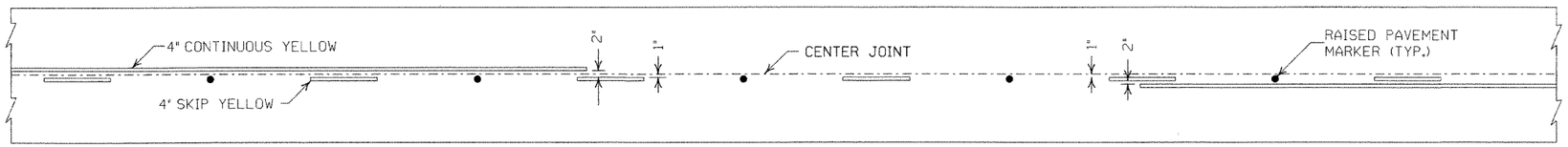


CONCRETE PAVEMENT

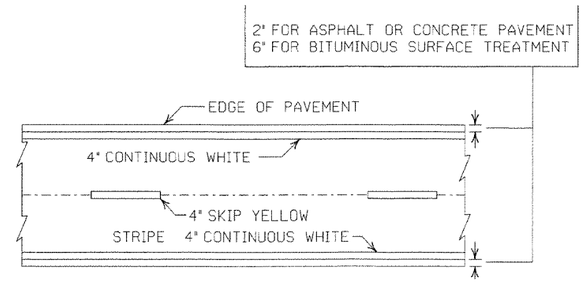


ASPHALT PAVEMENT

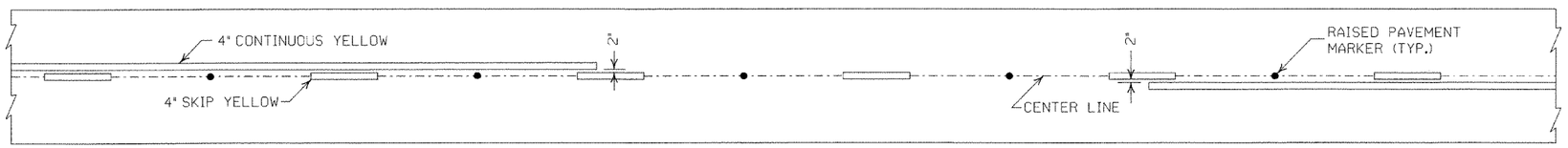
BROKEN LINE STRIPING



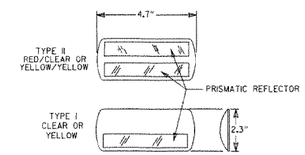
SOLID LINE STRIPING ON CONCRETE PAVEMENT



PAVEMENT EDGE LINE MARKING

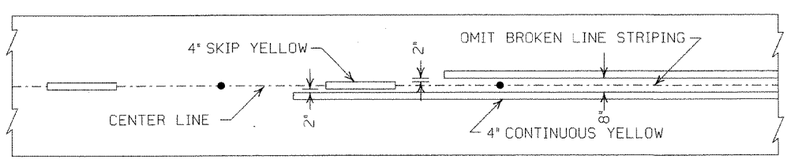


SOLID LINE STRIPING ON ASPHALT PAVEMENT

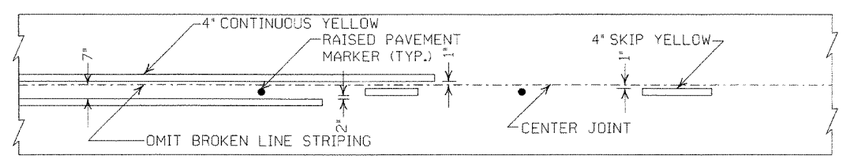


NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS



ASPHALT PAVEMENT



CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

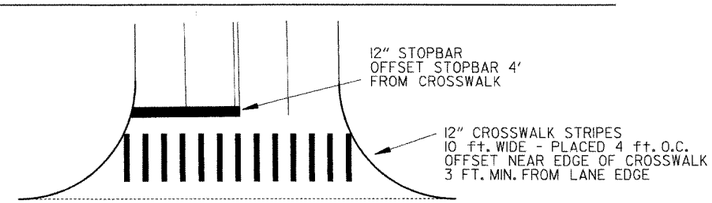
GENERAL NOTES:

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

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

NOTE:

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



CROSSWALK AND STOPBAR DETAILS

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

ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

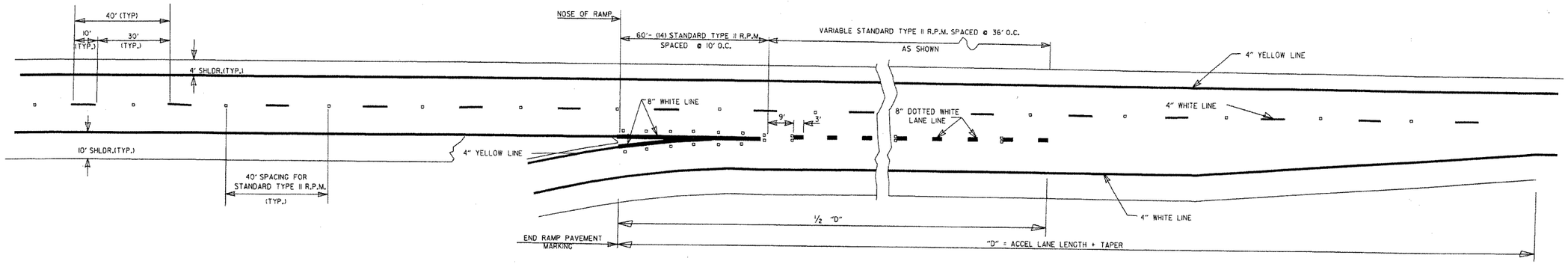
PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

ENTRANCE RAMP

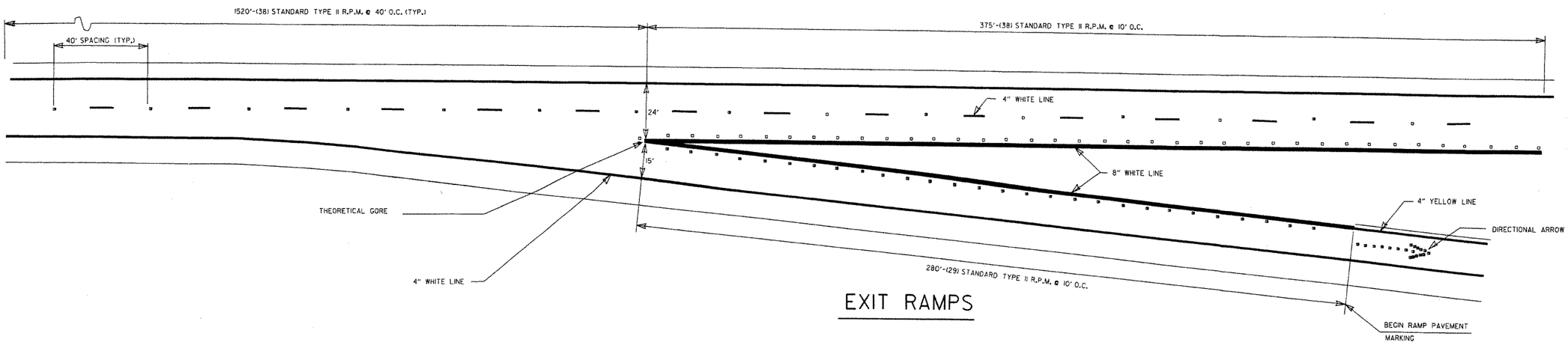
8" WHITE = 228 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

EXIT RAMP

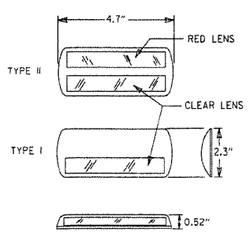
4" WHITE = 280 LIN. FT.
8" WHITE = 655 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH



ENTRANCE RAMPS

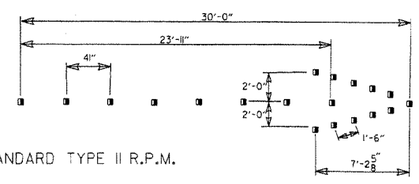


EXIT RAMPS



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

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



(19) STANDARD TYPE II R.P.M.

DIRECTIONAL ARROWS

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

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

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

DATE	REVISION	FILMED
7/26/12	REVISED RPM NOTATION	
12-15-11	REVISED RPMs ACCORDING TO LATEST POLICY	
11-17-10	REMOVED PLOWABLE PAVEMENT MARKERS	
6-3-10	REVISED PER 2009 MUTCD	
11-18-04	REVISED NOTES	
8-22-02	ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMPS	
5-18-00	REMOVED HASHMARKS	
7-02-98	CHANGED TYPES TO ROMAN NUMERALS	
4-26-96	ADDED DIMENSIONS & QUANTITIES; REVISED LANE WIDTH ON EXIT RAMP	
2-2-95	PLACED IN USE	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

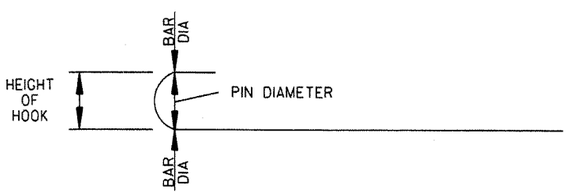
PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS

STANDARD DRAWING PM-2

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

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2¼"	4"
4	3 "	4½"
5	3¾"	5"
6	4½"	6"
7	5¼"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2¾ INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



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

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

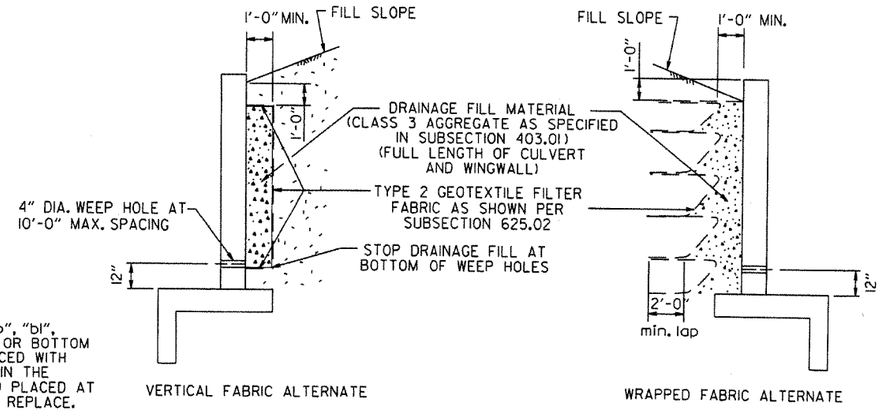
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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

REPLACEMENT BAR LENGTHS TABLE

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

L = "OW" - 3 INCHES



WINGWALL & CULVERT DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI.

REINFORCING STEEL SHALL BE AASHTO M 31 OR M 53, GRADE 60.

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

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

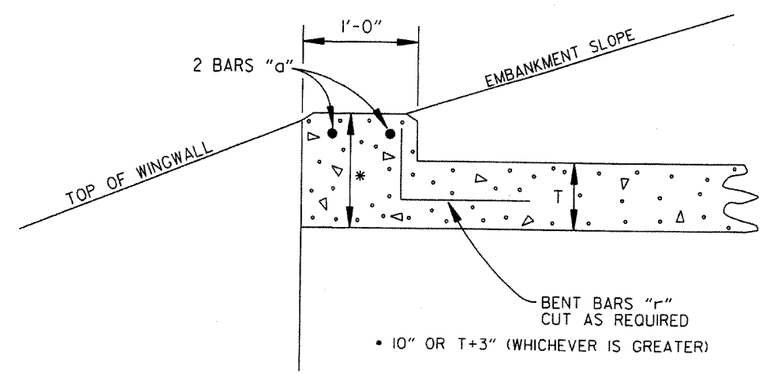
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSI MANUAL SHALL BE MINUS ZERO TO PLUS ½ INCH.

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

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

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



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

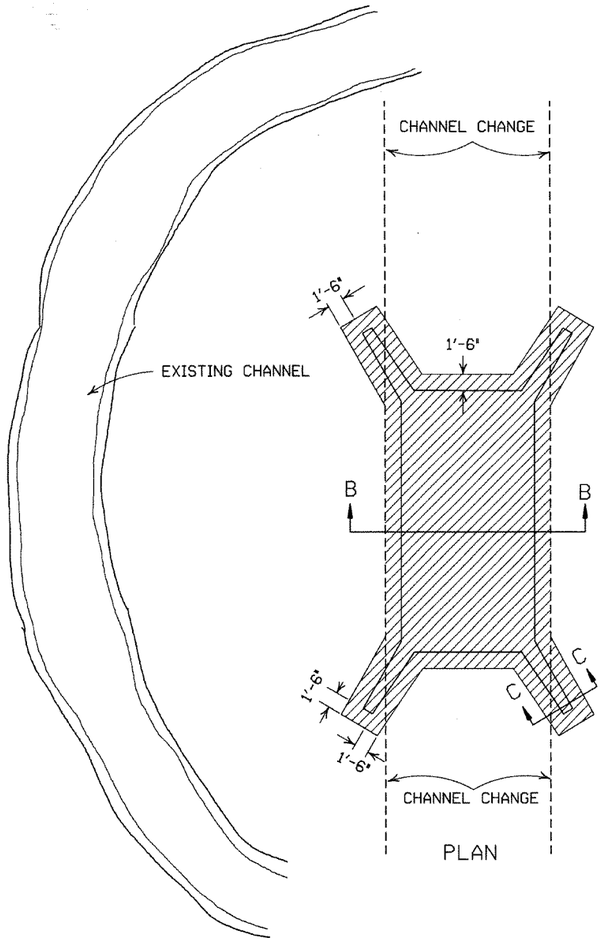
R.C. BOX CULVERT HEADWALL MODIFICATIONS

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

ARKANSAS STATE HIGHWAY COMMISSION

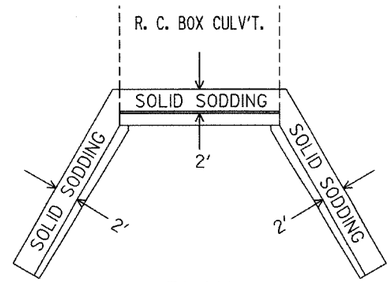
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



PLAN

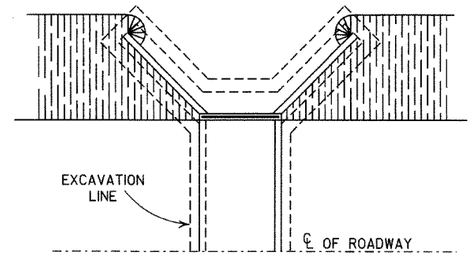
SOLID SODDING



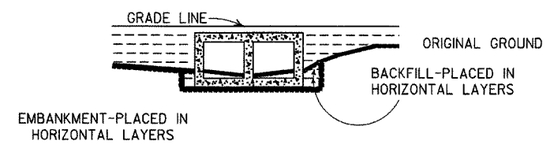
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

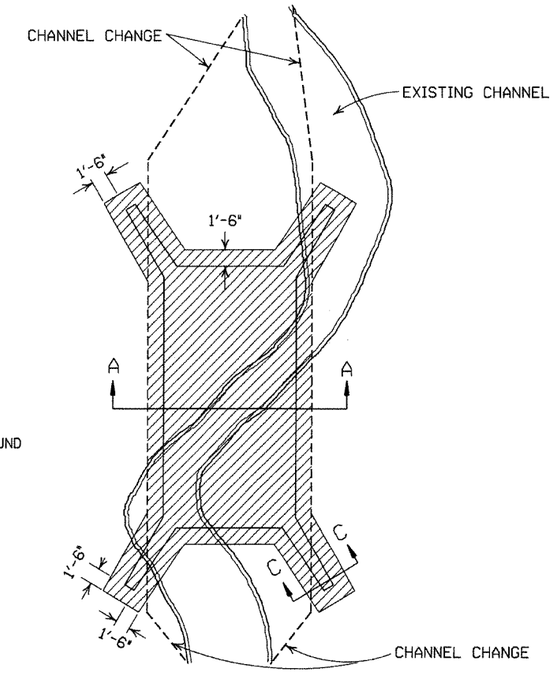


PLAN

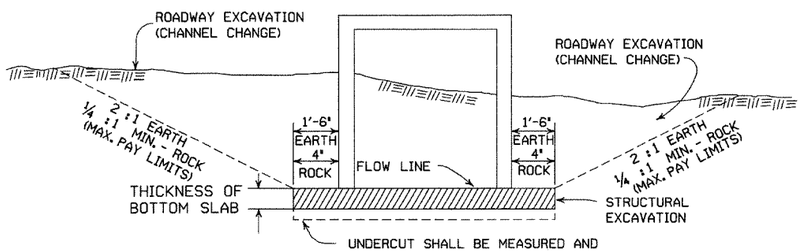


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

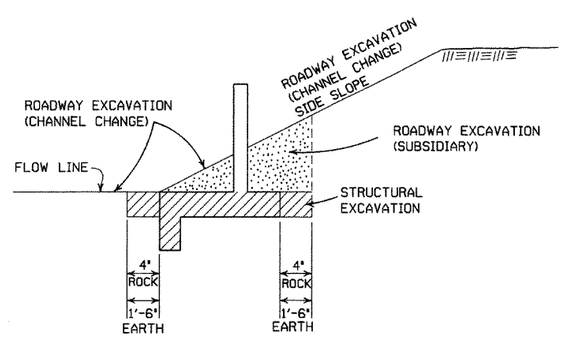


PLAN

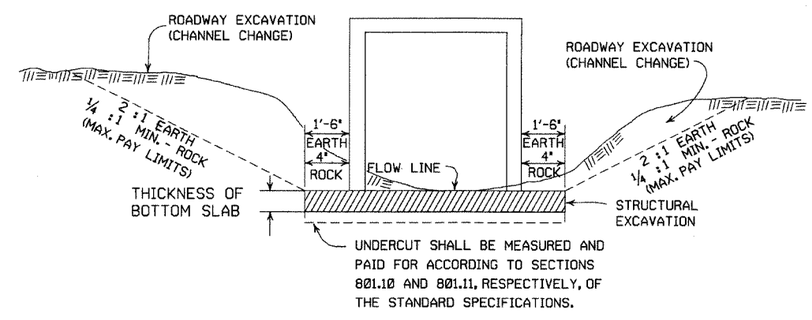


SECTION B-B

DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A

DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

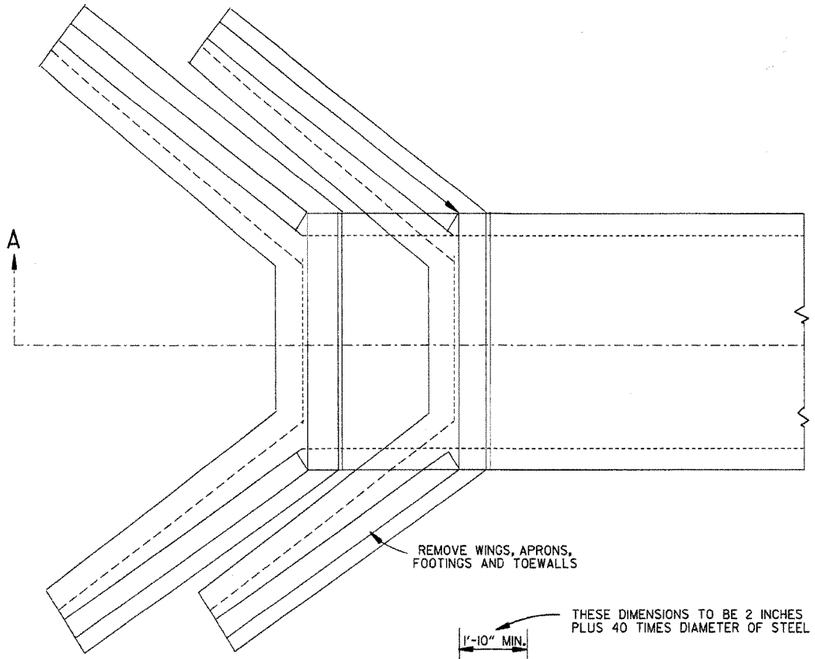
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

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

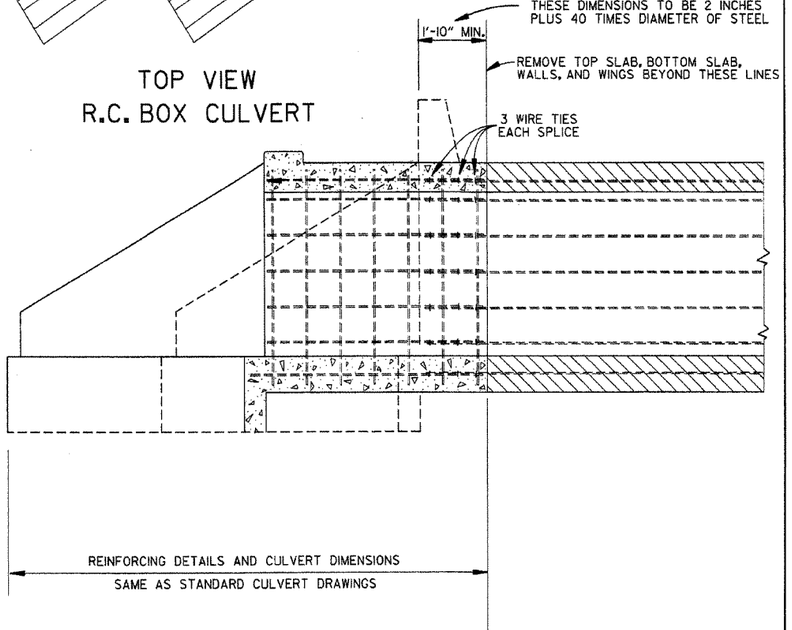
ARKANSAS STATE HIGHWAY COMMISSION

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

STANDARD DRAWING RCB-2

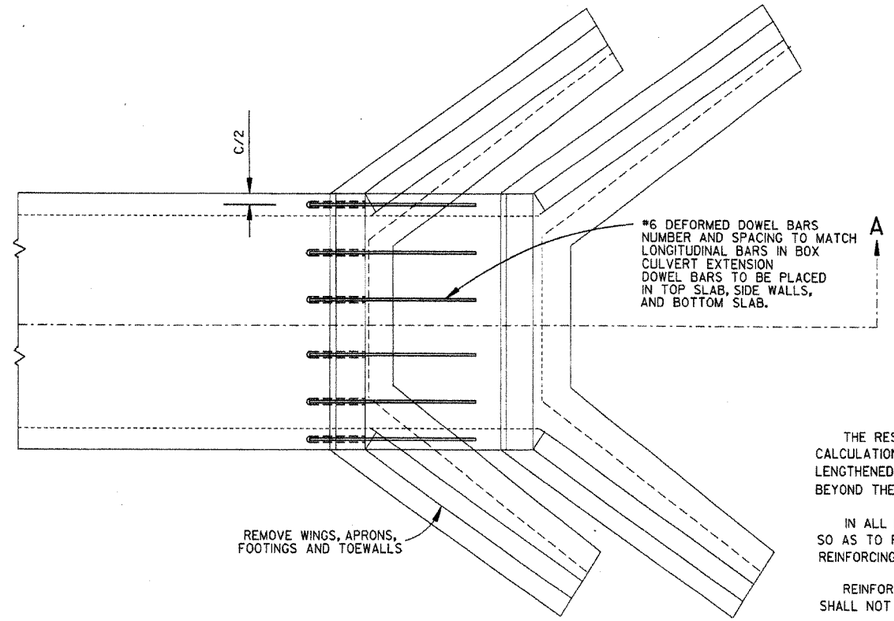


TOP VIEW
R.C. BOX CULVERT

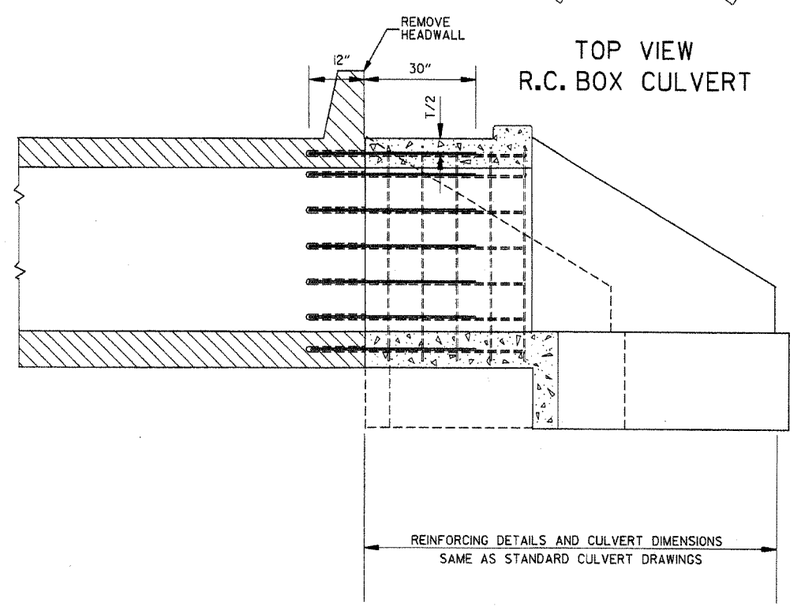


SECTION A-A

METHOD 1



TOP VIEW
R.C. BOX CULVERT



SECTION A-A

METHOD 2

GENERAL NOTES

	USE FOR METHOD
THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.	1
IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.	1
REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.	1&2
ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON; THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE WILL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.	1&2
MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.	2
DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER, THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER, AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY SURROUNDS THE BARS AND FILLS THE HOLES.	2
THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 OR METHOD 2. REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1.	1&2

NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.

SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

DATE	REVISION	DATE FILM
10-12-95	CHANGED DRAWING # FROM 144-A	
4-1-93	ADDED GENERAL NOTE	
10-1-92	ADDED ALT. METHOD OF EXTENSION	
11-30-89	REDRAWN	
1-4-83	ELIMINATED CONCRETE CLASS	
12-20-56	RETRACED	

ARKANSAS STATE HIGHWAY COMMISSION

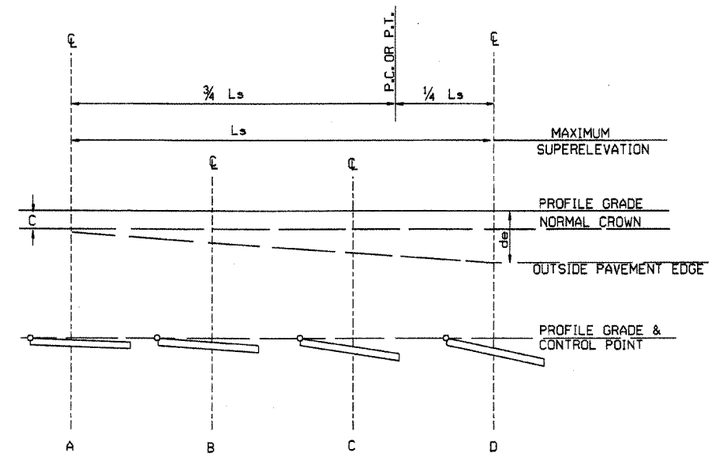
METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS

STANDARD DRAWING RCB-3

SUPERELEVATION TABLE FOR ONE - WAY TRAFFIC

DEGREE OF CURVE	30 MPH e	30 MPH Ls (FT) MINIMUM	30 MPH Ls (FT) DESIRABLE	40 MPH e	40 MPH Ls (FT) MINIMUM	40 MPH Ls (FT) DESIRABLE	50 MPH e	50 MPH Ls (FT) MINIMUM	50 MPH Ls (FT) DESIRABLE	55 MPH e	55 MPH Ls (FT) MINIMUM	55 MPH Ls (FT) DESIRABLE	60 MPH e	60 MPH Ls (FT) MINIMUM	60 MPH Ls (FT) DESIRABLE	65 MPH e	65 MPH Ls (FT) MINIMUM	65 MPH Ls (FT) DESIRABLE	70 MPH e	70 MPH Ls (FT) MINIMUM	70 MPH Ls (FT) DESIRABLE
0° 15′	N.C.	150	250	N.C.	175	250	N.C.	200	300	N.C.	225	350	N.C.	250	350	N.C.	250	350	N.C.	275	350
0° 30′	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 45′	N.C.			N.C.			R.C.			0.022			0.023			0.025			0.028		
1° 00′	N.C.			N.C.			0.021			0.026			0.030			0.033			0.037		
1° 15′	N.C.			R.C.			0.026			0.032			0.037			0.041			0.046		
1° 30′	N.C.			0.021			0.031			0.037			0.043			0.048			0.054		
1° 45′	N.C.			0.025			0.036			0.043			0.049			0.055			0.062		
2° 00′	R.C.			0.028			0.040			0.048			0.055			0.062			0.070		
2° 15′	R.C.			0.031			0.045			0.053			0.061			0.069	265		0.078	300	
2° 30′	0.021			0.034			0.049			0.058			0.067			0.075	280		0.085	315	400
2° 45′	0.023			0.037			0.053			0.063			0.072			0.081	300		0.091	335	
3° 00′	0.025			0.040			0.057			0.067	230		0.077	260		0.087	315		0.096	350	
3° 15′	0.027			0.043			0.061			0.072	245		0.082	275		0.090	325	400	0.098	360	450
3° 30′	0.029			0.046			0.065	205		0.076	255		0.086	285		0.095	340		0.100	360	
3° 45′	0.031			0.049			0.069	215		0.080	265		0.090	295		0.097	345				
4° 00′	0.033			0.051			0.072	225		0.083	270		0.093	305	400	0.099	350				
4° 30′	0.037			0.056			0.078	240		0.087	280		0.096	315							
5° 00′	0.040			0.061			0.083	250		0.091	295		0.098	320							
5° 30′	0.043			0.066	185		0.088	260		0.094	300	400									
6° 00′	0.046			0.070	190		0.092	270		0.096	305										
6° 30′	0.050			0.074	200		0.095	280	350	0.100	315										
7° 00′	0.053			0.078	210		0.098	285													
7° 30′	0.056			0.081	215		0.099	290													
8° 00′	0.058			0.084	220		0.100	290													
8° 30′	0.061			0.087	225	300															
9° 00′	0.063			0.089	230																
10° 00′	0.068	160		0.094	235																
11° 00′	0.072	170		0.097	250																
12° 00′	0.076	175		0.099	250																
13° 00′	0.080	180		0.100	250																
14° 00′	0.083	190																			
15° 00′	0.086	195																			
16° 00′	0.089	200	300																		
17° 00′	0.091	200																			
18° 00′	0.093	205																			
19° 00′	0.095	210																			
20° 00′	0.097	215																			
21° 00′	0.098	215																			
22° 00′	0.099	215																			
23° 00′	0.099	215																			
24° 00′	0.100	220																			

D MAX = 24° 45′ | D MAX = 13° 15′ | D MAX = 8° 15′ | D MAX = 6° 30′ | D MAX = 5° 15′ | D MAX = 4° 15′ | D MAX = 3° 30′



ONE-WAY TRAFFIC
INSIDE LANE

SUPERELEVATION FORMULA = $S = -\frac{L(de-C)}{Ls} - C$

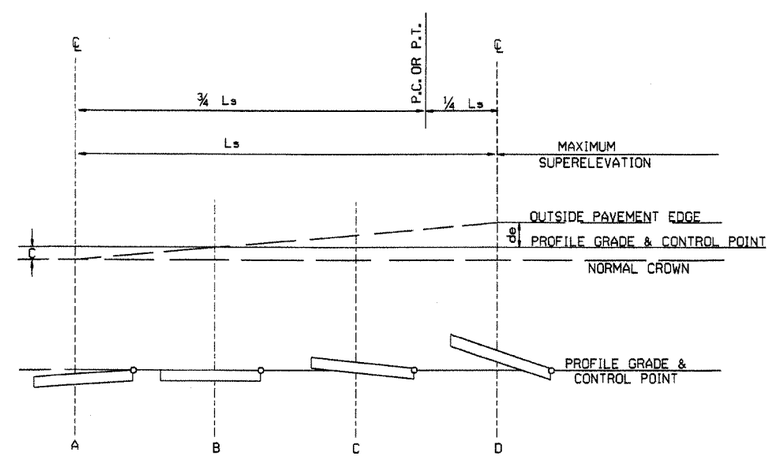
ABBREVIATIONS

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

GENERAL NOTES

1. ON PAVEMENT WITH ONE-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE PROFILE GRADE POINT.
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR Ls MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. MINIMUM Ls VALUES MAY BE USED FOR RAMPS; DESIRABLE VALUES SHALL APPLY TO MAIN LANES.
5. DIVIDED PAVEMENTS WIDER THAN 4 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLOWS:

6 LANE DIVIDED---------+20%
8 LANE DIVIDED---------+50%



ONE-WAY TRAFFIC
OUTSIDE LANE

SUPERELEVATION FORMULA = $S = +\frac{L(de+C)}{Ls} - C$

DATE	REVISION	DATE FILMED
01-09-87	ISSUED	578-1-15-87

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC

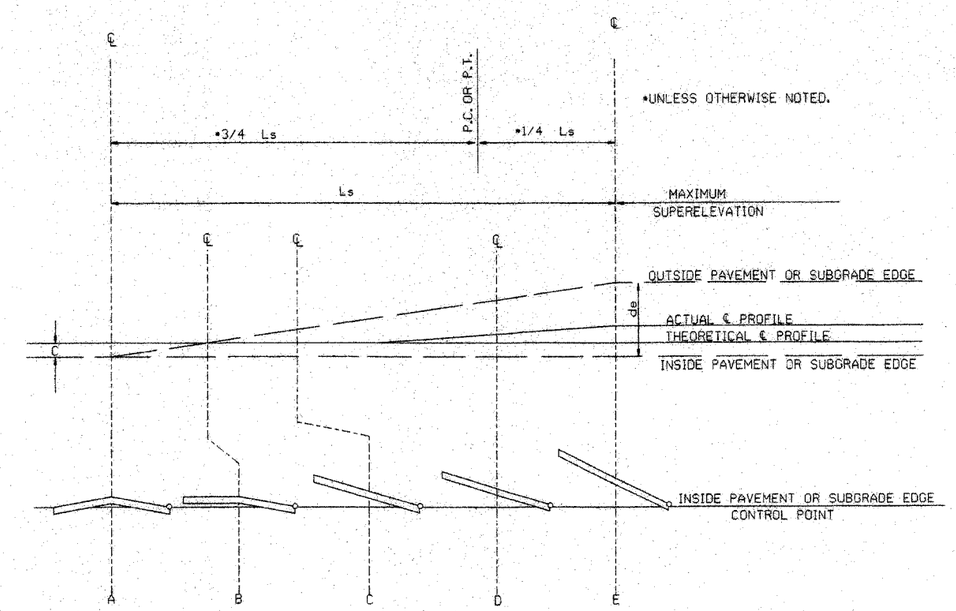
STANDARD DRAWING SE-1

SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH e	30 MPH Ls (FT) MINIMUM	30 MPH Ls (FT) DESIRABLE	40 MPH e	40 MPH Ls (FT) MINIMUM	40 MPH Ls (FT) DESIRABLE	50 MPH e	50 MPH Ls (FT) MINIMUM	50 MPH Ls (FT) DESIRABLE	55 MPH e	55 MPH Ls (FT) MINIMUM	55 MPH Ls (FT) DESIRABLE	60 MPH e	60 MPH Ls (FT) MINIMUM	60 MPH Ls (FT) DESIRABLE	70 MPH e	70 MPH Ls (FT) MINIMUM	70 MPH Ls (FT) DESIRABLE
0° 15′	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 30′	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 45′	N.C.			N.C.			R.C.			0.022			0.023			0.028		
1° 00′	N.C.			N.C.			0.021			0.026			0.030			0.037	275	300
1° 15′	N.C.			R.C.			0.026			0.032			0.037			0.046		
1° 30′	N.C.			0.021			0.031	200		0.037			0.043	250		0.054		
1° 45′	N.C.			0.025	175		0.036			0.043	225		0.049		300	0.062		
2° 00′	R.C.			0.028			0.040			0.048			0.055			0.070		
2° 15′	R.C.			0.031			0.045		250	0.053			0.061			0.078	300	
2° 30′	0.021			0.034			0.049			0.058			0.067			0.085	315	350
2° 45′	0.023			0.037		200	0.053			0.063			0.072			0.091	335	
3° 00′	0.025			0.040			0.057			0.067	230		0.077	260		0.096	350	
3° 15′	0.027	150		0.043			0.061			0.072	245		0.082	275		0.098	360	400
3° 30′	0.029			0.046			0.065	205		0.076	255		0.086	285		0.100	360	
3° 45′	0.031		200	0.049			0.069	215		0.080	265		0.090	295				
4° 00′	0.033			0.051			0.072	225		0.083	270		0.093	305	350			
4° 30′	0.037			0.056			0.078	240		0.087	280		0.096	315				
5° 00′	0.040			0.061			0.083	250		0.091	295		0.098	320				
5° 30′	0.043			0.066	185		0.088	260		0.094	300	350						
6° 00′	0.046			0.070	190		0.092	270		0.096	305							
6° 30′	0.050			0.074	200		0.095	280	300	0.100	315							
7° 00′	0.053			0.078	210		0.098	285										
7° 30′	0.056			0.081	215		0.099	290										
8° 00′	0.058			0.084	220		0.100	290										
8° 30′	0.061			0.087	225	250												
9° 00′	0.063			0.089	230													
10° 00′	0.068	160		0.094	235													
11° 00′	0.072	170		0.097	250													
12° 00′	0.076	175		0.099	250													
13° 00′	0.080	180		0.100	250													
14° 00′	0.083	190																
15° 00′	0.086	195																
16° 00′	0.089	200																
17° 00′	0.091	200																
18° 00′	0.093	205																
19° 00′	0.095	210																
20° 00′	0.097	215	250															
21° 00′	0.098	215																
22° 00′	0.099	215																
23° 00′	0.099	215																
24° 00′	0.100	220																
D MAX = 24° 45′				D MAX = 13° 15′			D MAX = 8° 15′			D MAX = 6° 30′			D MAX = 5° 15′			D MAX = 3° 30′		

ABBREVIATIONS

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



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

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

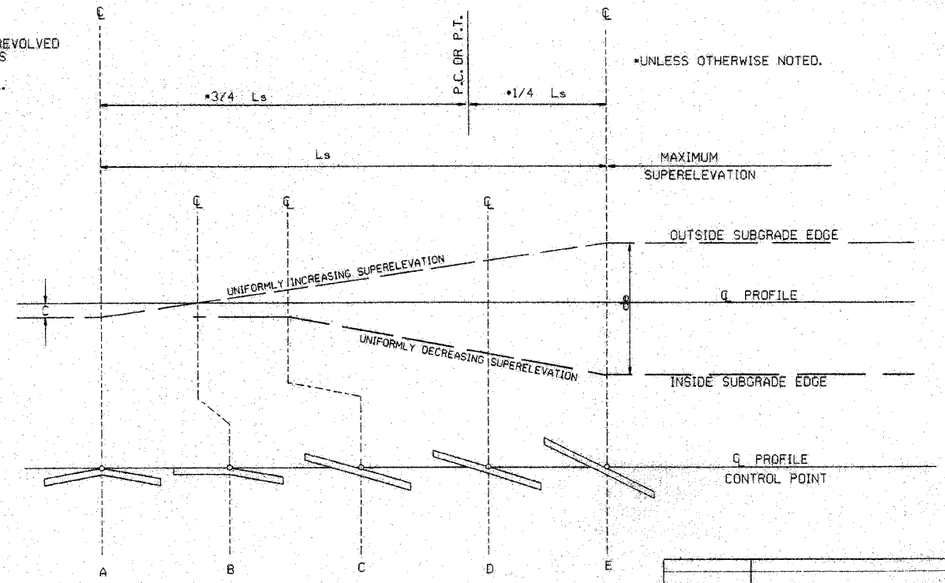
GENERAL NOTES

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

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

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

RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

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

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

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

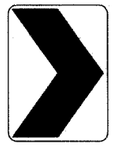
STANDARD DRAWING SE-2

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.		323	
JOB NO.				

(4) STD. HWY. SIGNS & SUP ASSEMB

R1-1
30"X30"

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



W1-8
18"X24"

W2-5
30"X30"

W3-1
36"X36"

W5-1
36"X36"

M6-3
21"X15"

R1-2
36"X36"X36"

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

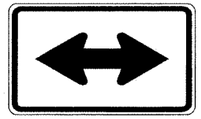
W2-1
30"X30"

S1-1
36"X36"

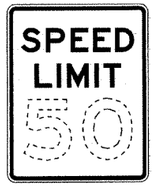
W3-2
36"X36"

County
Route Marker
M1-5
24"X24"

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

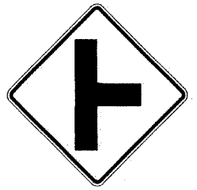


M6-4
21"X15"



R2-1
24"X30"

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

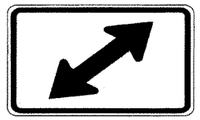


W2-2
30"X30"

W5-2
36"X36"

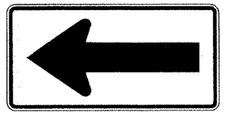
W8-3
36"X36"

R1-3
12"X6"

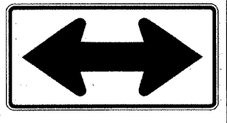


M6-5
21"X15"

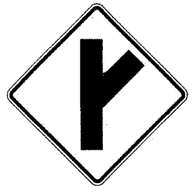
W1-1
30"X30"
(LT. or RT.)



W1-6
48"X24"

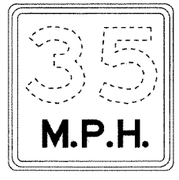


W1-7
48"X24"

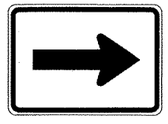


W2-3
30"X30"
(LT. or RT.)

W5-3
36"X36"

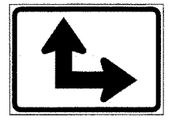


W13-1
18"X18"



M6-1
21"X15"

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

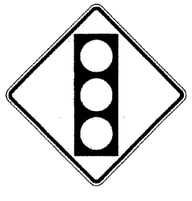


M6-6
21"X15"

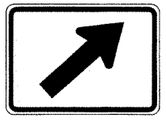
W1-2
30"X30"
(LT. or RT.)

W2-4
30"X30"

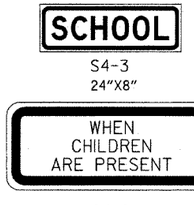
W10-1
36" DIAMETER



W3-3
36"X36"

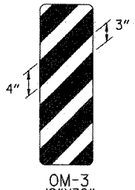


M6-2
21"X15"



S4-3
24"X8"

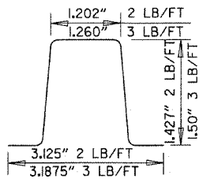
S4-2
24"X10"



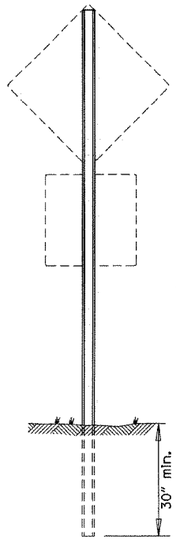
OM-3
12"X36"
(LT. or RT.)

MINIMUM DIMENSIONS SHOWN

SUPPORT SECTION

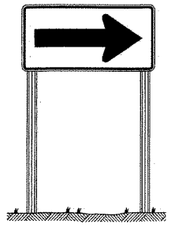


(U-CHANNEL)
STANDARD SUPPORT
ASSEMBLIES

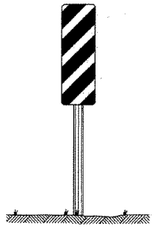


TYPE A

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



TYPE B



TYPE C

MINIMUM WEIGHT

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

STANDARD HIGHWAY SIGNS

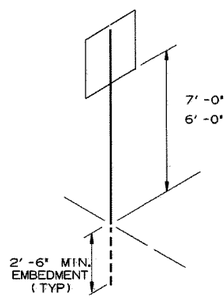
DATE	REVISION	DATE FILMED
4-17-08	REVISED SIGN DESIGNATION - W3-1& W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED W1-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED W14-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2# - 3# ADDED S4-2 & S4-3	504-5-3-76
8-12-74	REV. HT. TYPE "C" ASSEMBLY	500-8-21-74
12-21-72	ADDED M6-2,3,4,5,6	500-12-21-72
12-1-72	ISSUED	562-12-1-72

SUPPORT ASSEMBLIES

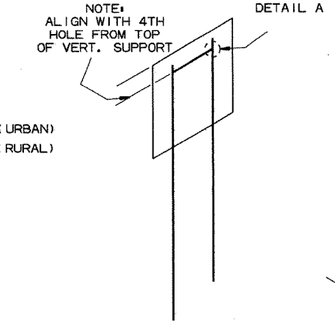
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD HIGHWAY SIGNS
AND SUPPORT ASSEMBLIES

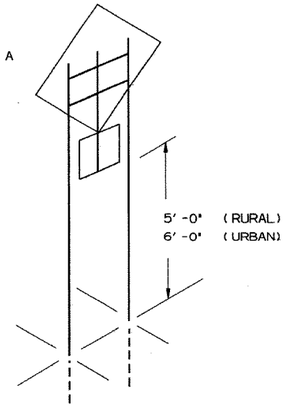
STANDARD DRAWING SHS-1



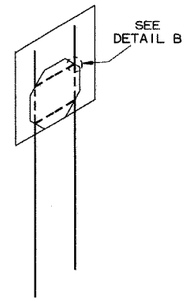
U-1



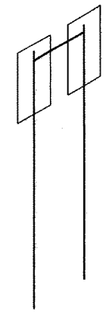
U-2



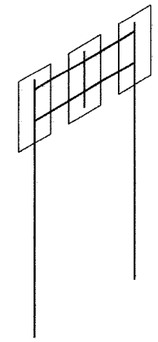
U-2 (A)



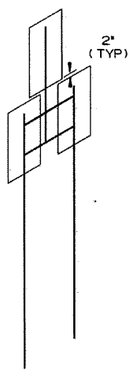
U-2 (B)



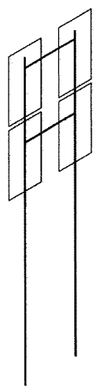
U-2 (1)



U-2 (2)



U-2 (3)



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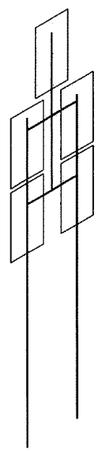
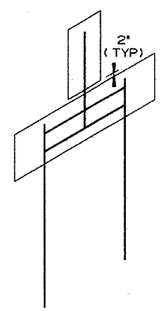
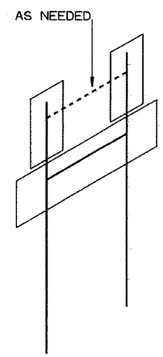


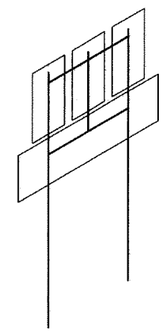
U-2 (5)



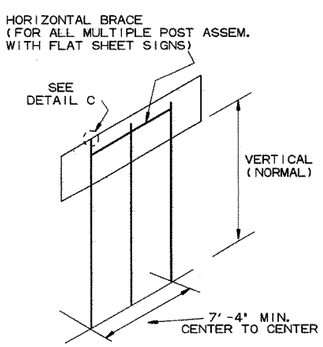
U-2 (6)



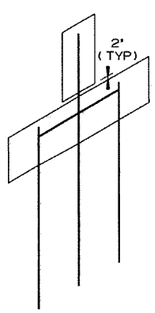
U-2 (7)



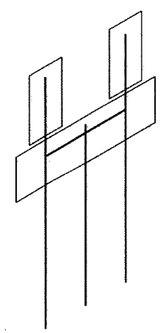
U-2 (8)



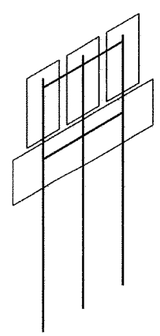
U-3



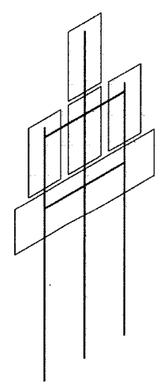
U-3 (1)



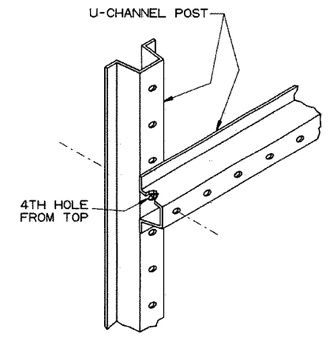
U-3 (2)



U-3 (3)

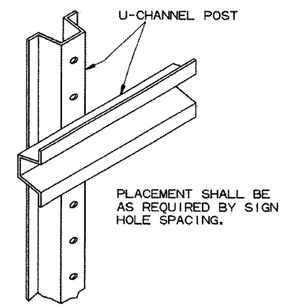


U-3 (4)



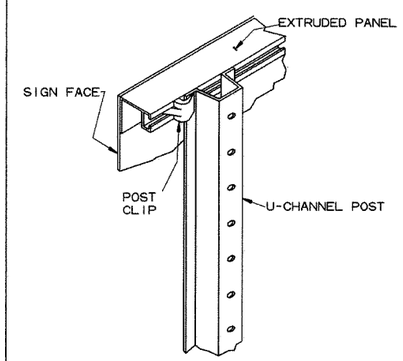
DETAIL A

SHOWING HORIZONTAL BRACE



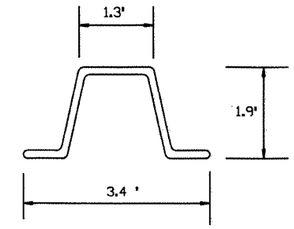
DETAIL B

SHOWING BACK-TO-BACK INSTALLATION



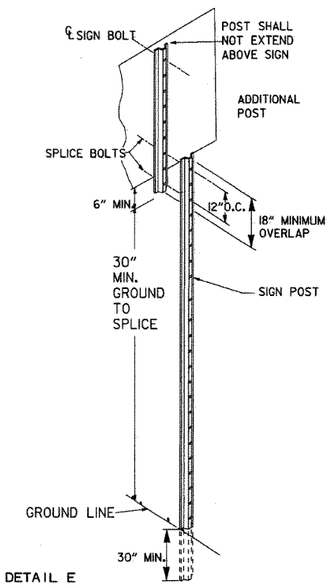
DETAIL C

SHOWING GUIDE SIGN MOUNTING WITH EXTRUDED PANELS



DETAIL D

(3 LB. U-CHANNEL POST)



DETAIL E

NOTES:

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

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

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

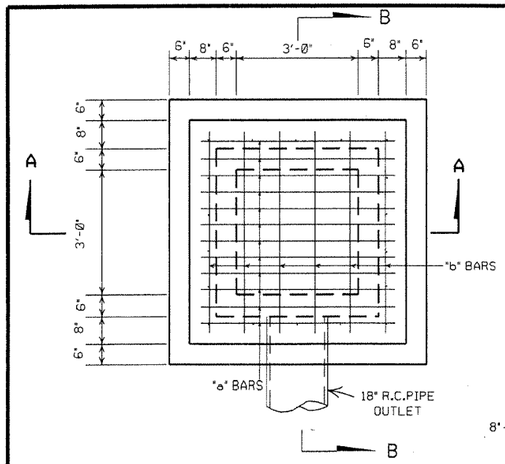
ALL SIGN POSTS SHALL BE PLUMB.

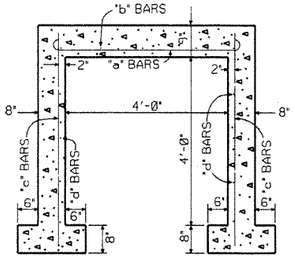
DATE	REVISION	FILMED
10-9-03	REMOVED ROUND POST & REVISED SPACING	10-9-03
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

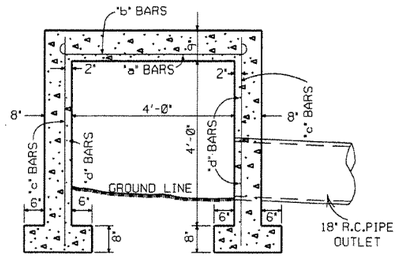
U-CHANNEL POST ASSEMBLIES

STANDARD DRAWING SHS-2





SEC A-A

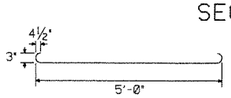


SEC B-B

STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"a"	11	6'-0"	5"
"b"	6	6'-0"	10"
"c"	16	5'-1"	12"
"d"	16	5'-0"	12"

ALL STEEL TO BE #4 BARS



"a" & "b" BARS

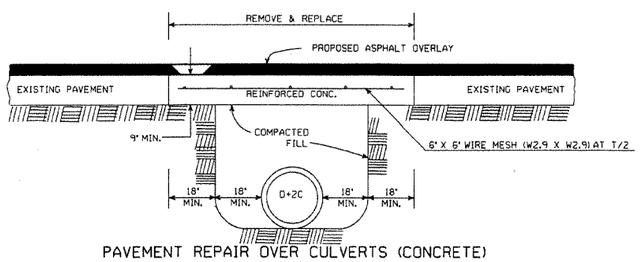
QUANTITIES

CONCRETE 3.40 CU. YDS.
REINFORCING STEEL 176 LB.

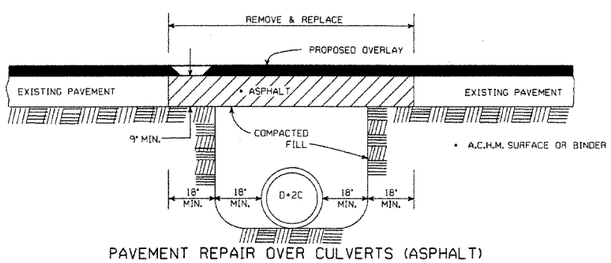
GENERAL NOTE:

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

REINFORCED CONCRETE SPRING BOX



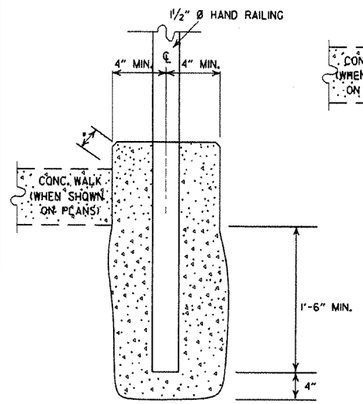
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



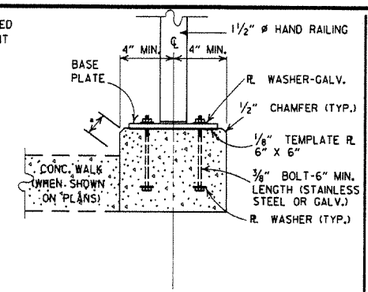
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

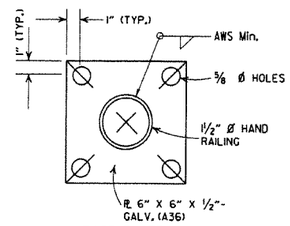
* A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

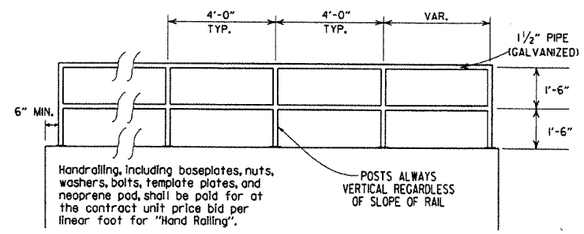


POST CONNECTION TO WALL

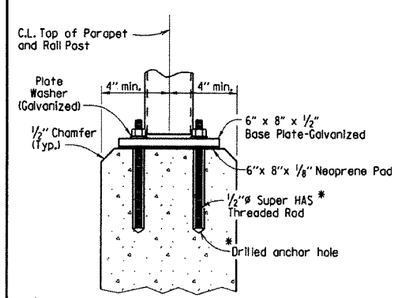


BASE PLATE

POST CONNECTION DETAILS



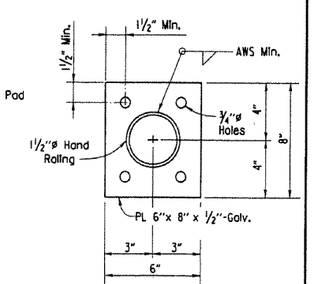
Hand railing shall conform to Section 633.



*HILTI HIT RE 500 Epoxy Adhesive Anchor System with 4½" embedment or approved equal.

The Adhesive Anchor System shall be installed in accordance with Manufacturer's recommendations.

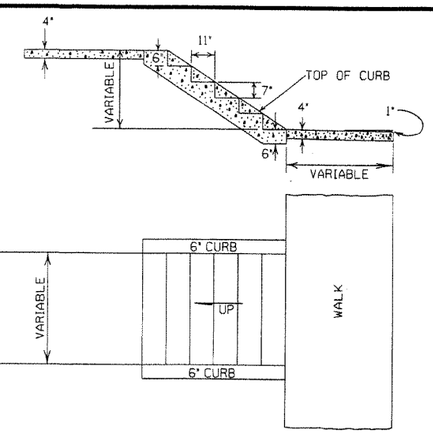
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

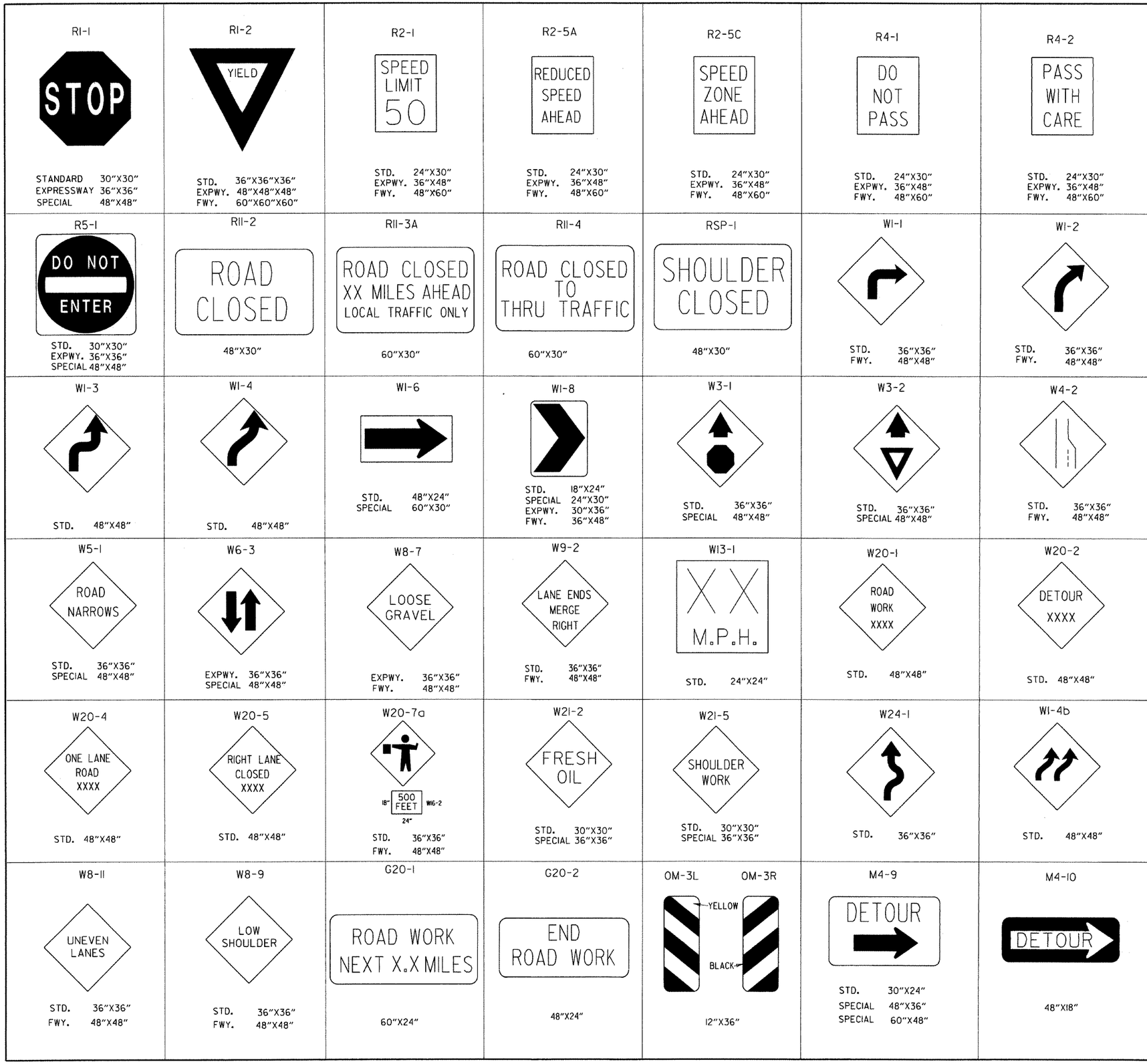
DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-96	ADD WEEP HOLE; REV. JOINT SPACING IN RET. WALL	
6-2-94	**CHANGED CONST. TO CONTRACTION JOINT**	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V_1 BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR	649-7-15-88
	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:

1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.

2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.

3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.

• 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.

• 5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.

6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.

7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.

8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.

9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.

10. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

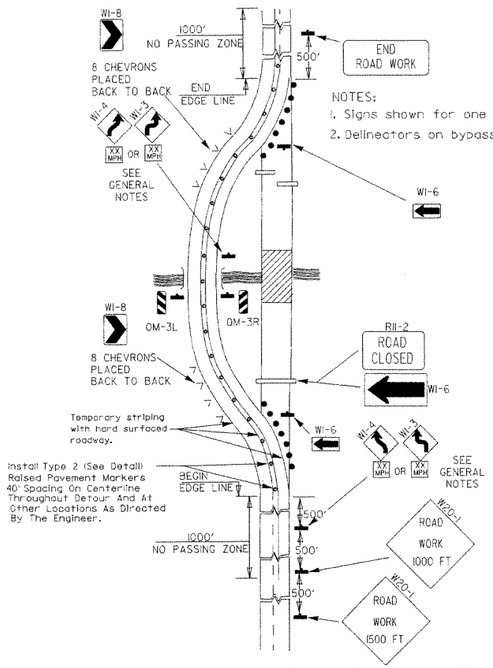
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

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

ARKANSAS STATE HIGHWAY COMMISSION

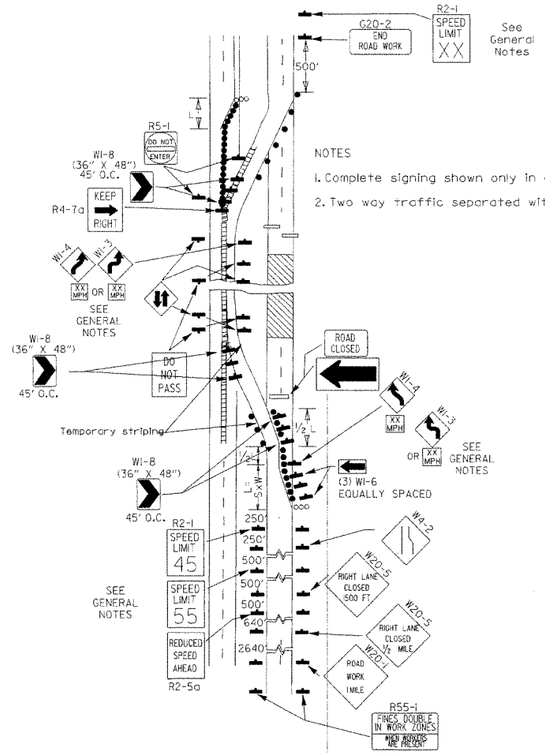
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



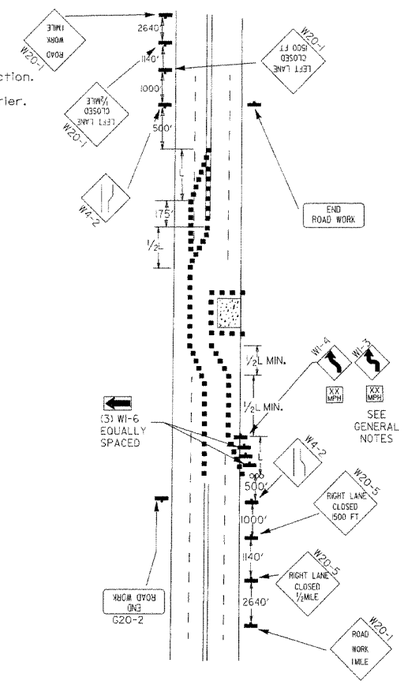
NOTES:
1. Signs shown for one direction of travel only.
2. Delineators on bypass where needed.

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

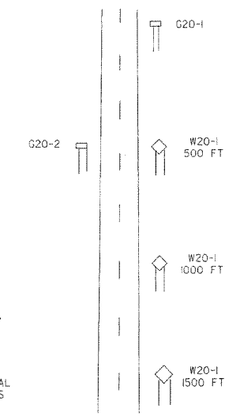


NOTES
1. Complete signing shown only in crossover direction.
2. Two way traffic separated with positive barrier.

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



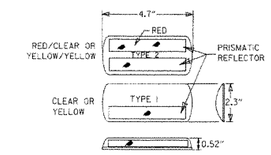
(C) Typical application - 4-lane undivided roadway where half of the roadway is closed.



Typical advance warning sign placement

KEY:

- Flagger
- Positive Barrier
- Arrow Panel(If Required)
- Type III Barricade
- Channelizing Device
- Traffic Drum
- Raised Pavement Marker



Detail of raised pavement markers

Taper formulae:

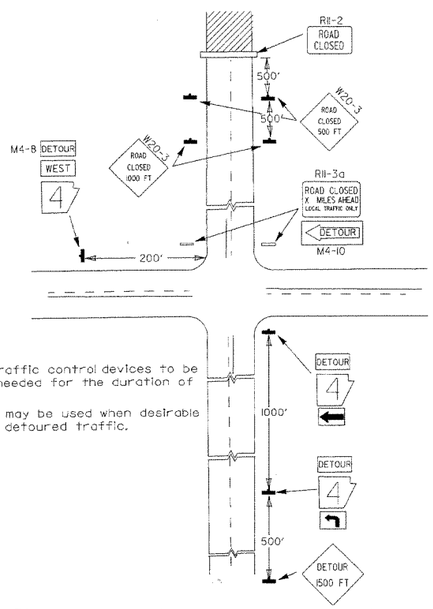
L=SxW for speeds of 45mph or more.

$L = \frac{WS^2}{60}$ for speeds of 40mph or less.

Where:
L= Minimum length of taper.
S= Numerical value of posted speed limit prior to work or 85th percentile speed.
W= Width of offset.

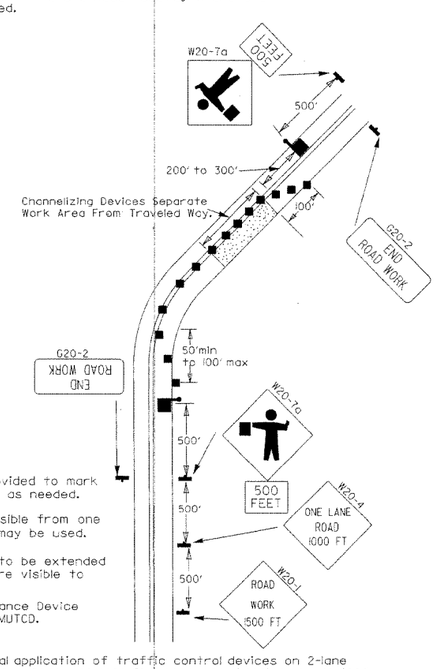
GENERAL NOTES:

1. Advisory speed posted on W1-3 or W1-4 curve warning signs to be determined at site. Use W1-4 when speed is greater than 30mph and W1-3 when 30mph or less.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(xx) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-1 55mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(xx) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit, or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



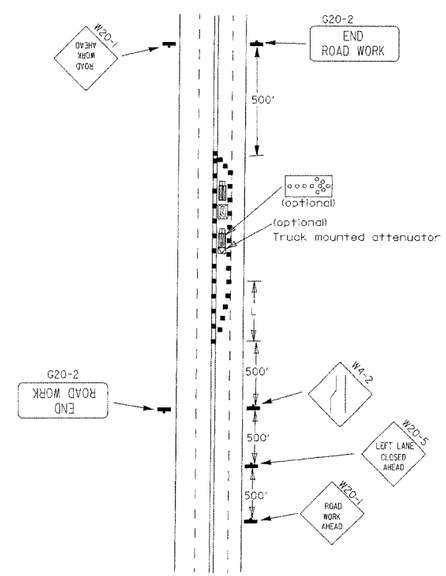
NOTES:
1. Regulatory traffic control devices to be modified as needed for the duration of the detour.
2. Street names may be used when desirable for directing detoured traffic.

(D) Typical application - roadway closed beyond detour point.



NOTES:
1. Flood lights should be provided to mark flagger stations at night as needed.
2. If entire work area is visible from one station, a single flagger may be used.
3. Channelizing devices are to be extended to a point where they are visible to approaching traffic.
4. Automated Flagger Assistance Device (AFAD) optional. Refer to MUTCD.

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



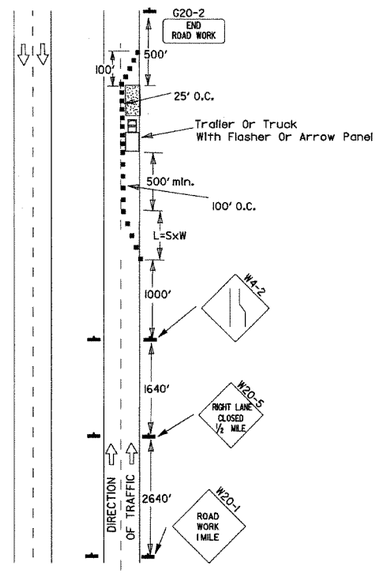
(F) Typical application - 4-lane undivided roadway with inside lane closed.

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

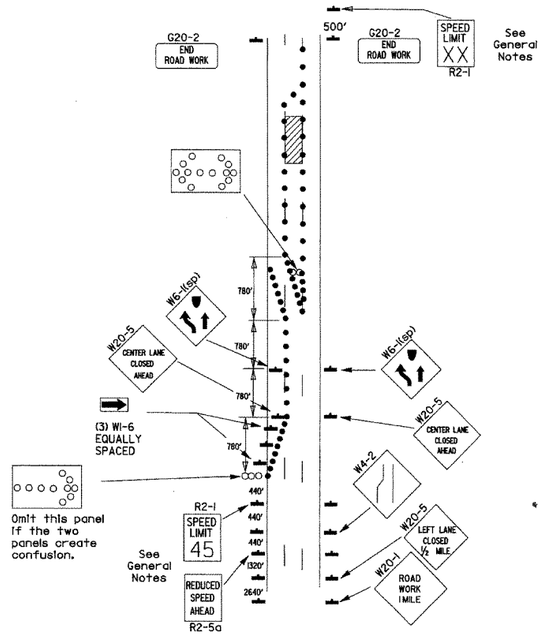
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

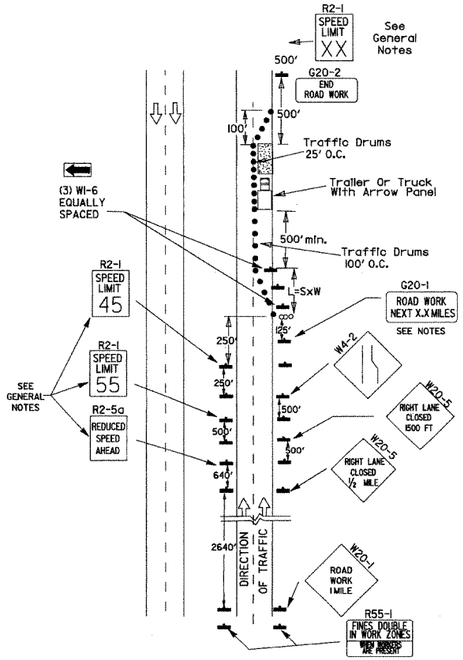
STANDARD DRAWING TC-2



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



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



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

KEY:

ooo Arrow Panel (If Required)

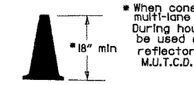
■ Channelizing Device

● Traffic drum

GENERAL NOTES:

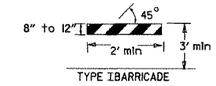
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional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

Channelizing devices



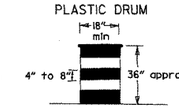
* When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.

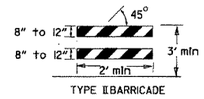
CONES



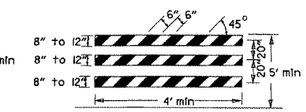
TYPE I BARRICADE

PLASTIC DRUM



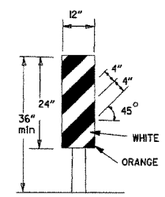


TYPE II BARRICADE



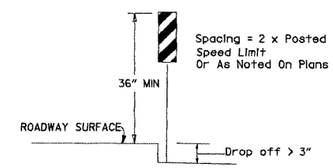
TYPE III BARRICADE

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



VERTICAL PANEL
VP-1R

VERTICAL PANEL PLACEMENT



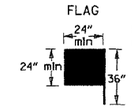
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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

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

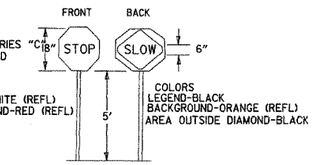
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

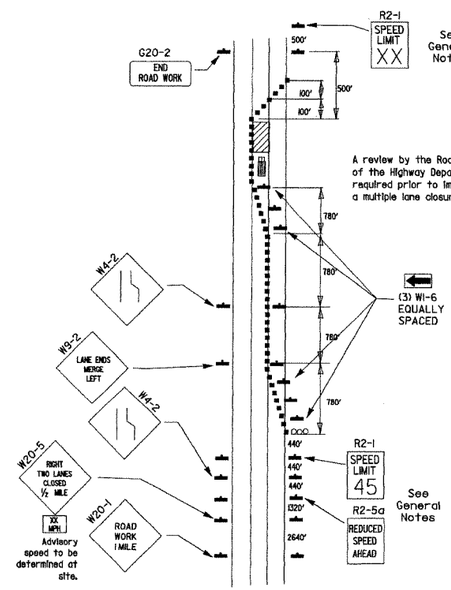
FLAG



Flag shall be of good grade red material

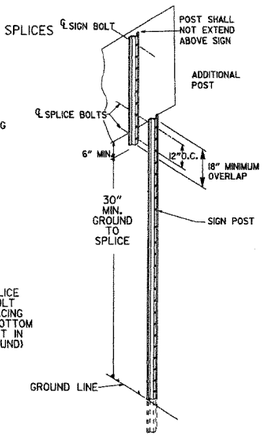
STOP SLOW PADDLE





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

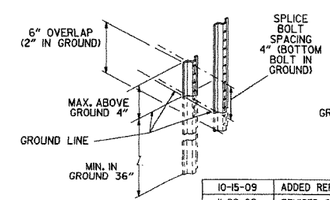
DETAIL OF SPLICES



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

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

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



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

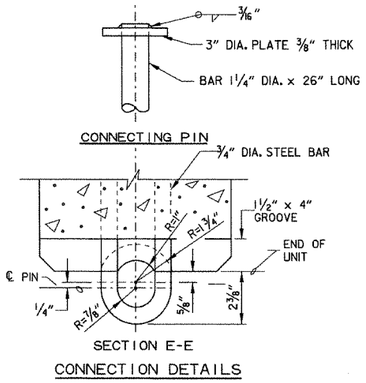
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

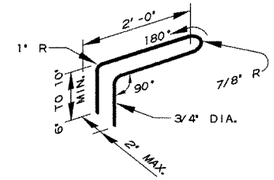
STANDARD DRAWING TC-3

REINFORCING BAR TABLE PER BARRIER UNIT

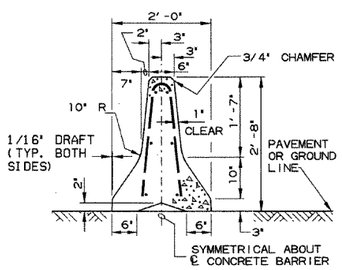
MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	2'-5", 90°, 3 3/8" R, LIFTING HOLE
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 7", 1'-6", 1" MIN. CLEAR TO BAR; 5'-1" BAR W/(4) 1 1/2" R BENDS & MIN. 1'-0" OVERLAP
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4'-9", 2 3/16" R, 12°, ±9 1/2", 2'-1 3/8", 4 3/8"



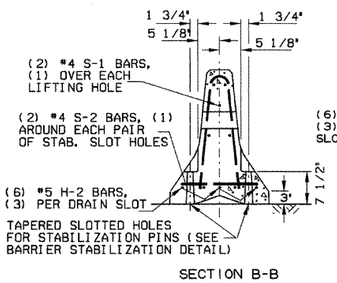
CONNECTION DETAILS



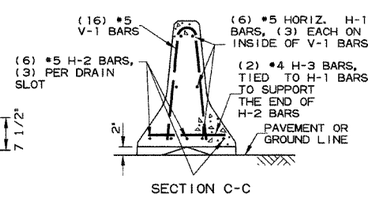
CONNECTION LOOP



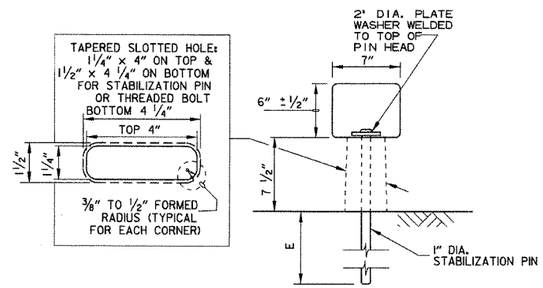
SECTION A-A



SECTION B-B



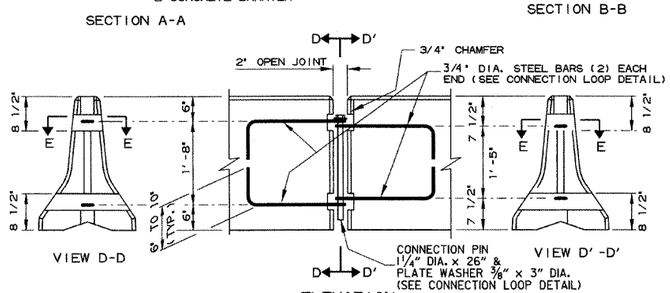
SECTION C-C

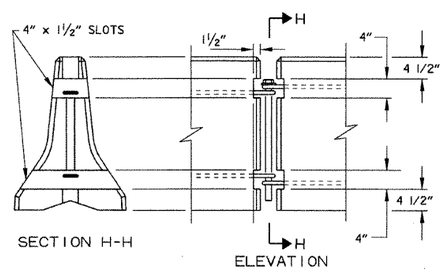


BARRIER STABILIZATION DETAIL

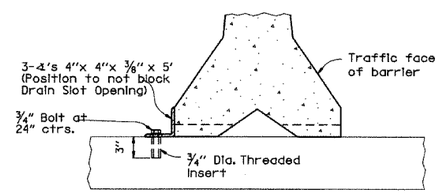
ROADWAY SECTION

(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas





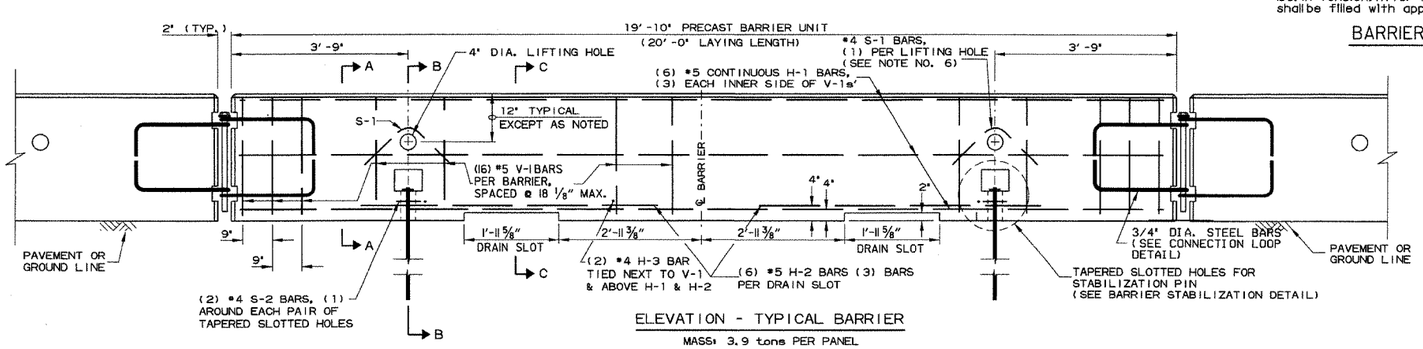
BARRIER REMOVAL SLOT DETAILS



NOTE: 3/4" Threaded Inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks to be retained. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the inserts shall be filled with approved non-shrink epoxy.

BARRIER STABILIZATION DETAIL

BRIDGE DECKS



ELEVATION - TYPICAL BARRIER

MASS: 3.9 tons PER PANEL

General Notes

1. The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.

2. Materials shall meet the following minimum requirements:
   Concrete: 2500 psi compressive strength at 28 days.
   Reinforcing Steel: AASHTO M 31 or M 53, Grade 60
   Structural Steel: AASHTO-M270 Grade 36 shall be used for the Connection Pin, Connection Loops, and Stabilization Pins. A One Piece Pin with a 3" rounded top may be used in place of the detailed Connection Pin.
   Delineators: Delineators shall be mounted at 10' spacing on top of precast barrier.

   In applications where barrier wall is within 6 feet of a traffic lane, additional delineators shall be placed on the barrier at 10' spacing approximately one (1) foot from the top of the barrier. Delineators shall be on the AHTD Qualified Products List for Construction Concrete Barrier Markers.
   Delineator color shall be in accordance with the Manual on Uniform Traffic Control Devices.
   Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and Installing Precast Concrete Barrier". The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.

3. Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.

4. Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.

5. Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.

6. A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

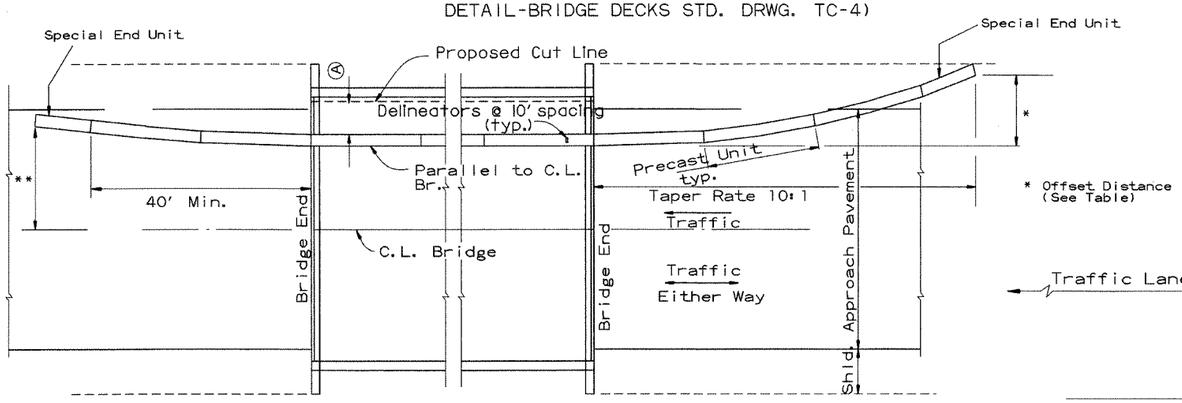
DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

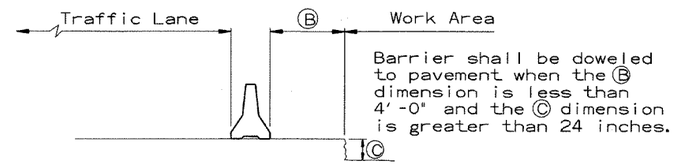
Ⓐ 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



* Offset Distance (See Table)

BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

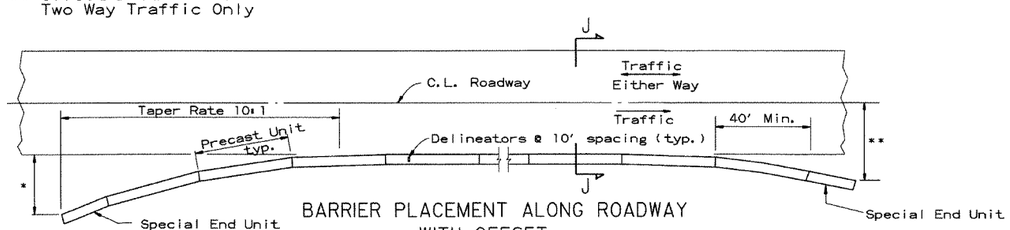


Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

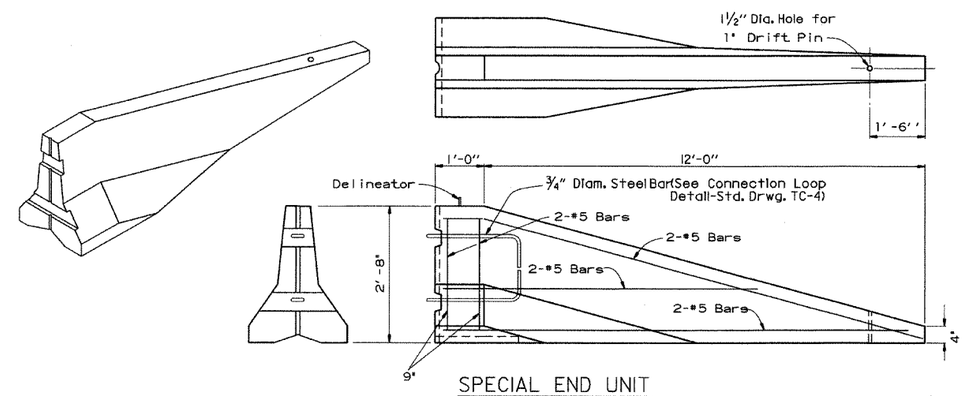
** Offset Distance For Two Way Traffic Only

* Offset Distance (See Table)

Offset Distance Table

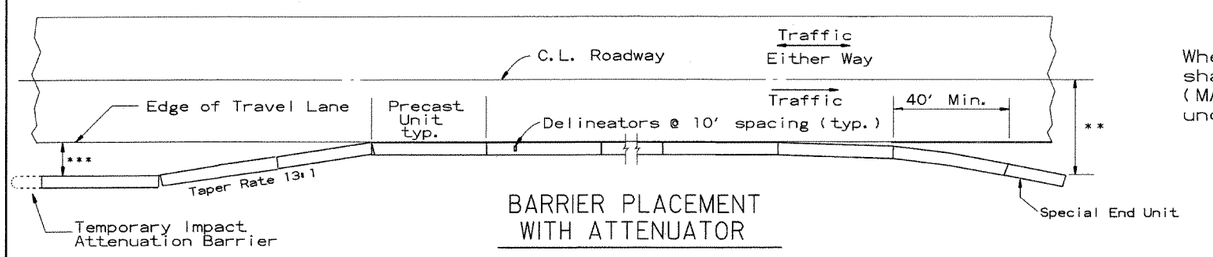
Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see 'Barrier Placement With Attenuator' Detail shown below.



SPECIAL END UNIT

No Scale



BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

*** Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator

General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."

DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

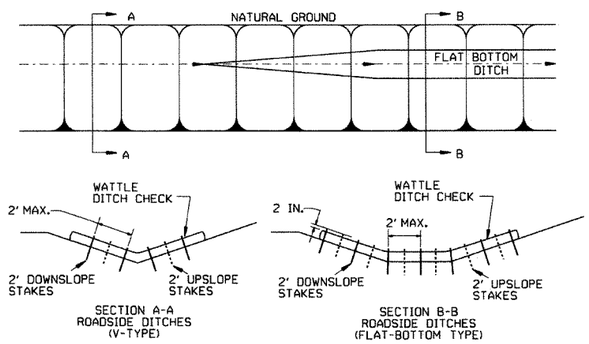
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

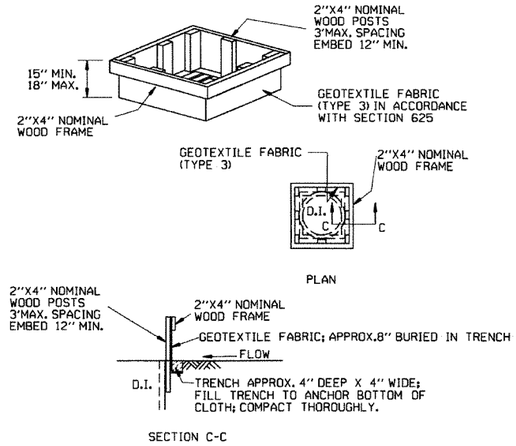
STANDARD DRAWING TC-5

GENERAL NOTES

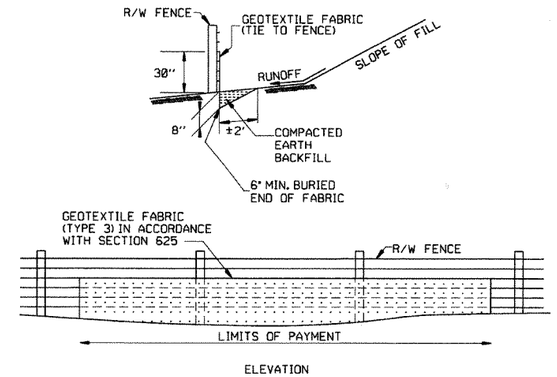
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



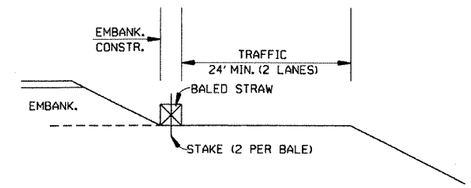
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

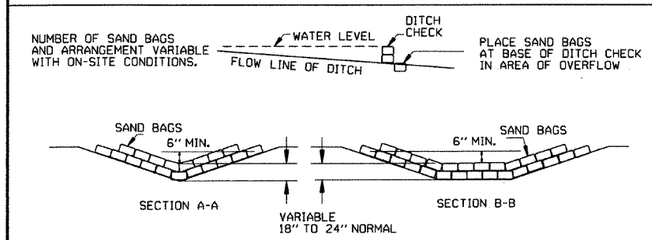
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

GENERAL NOTES

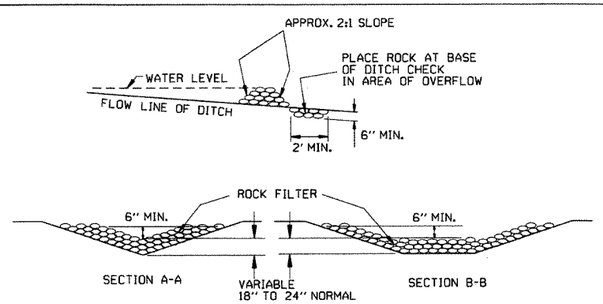
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. NO GAPS SHALL BE LEFT BETWEEN BALES.
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED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



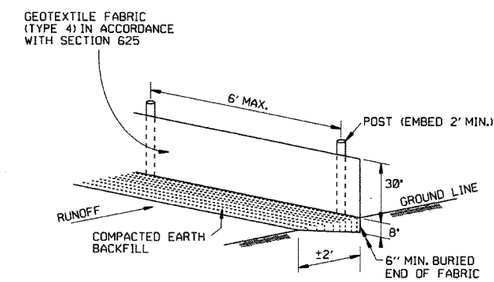
BALED STRAW FILTER BARRIER (E-2)



SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



SILT FENCE (E-11)

GENERAL NOTES

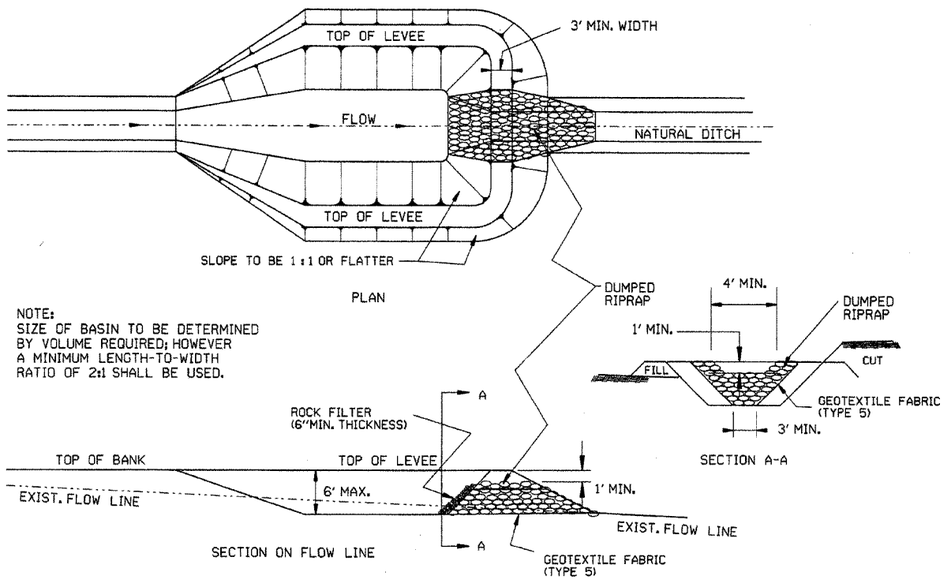
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

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

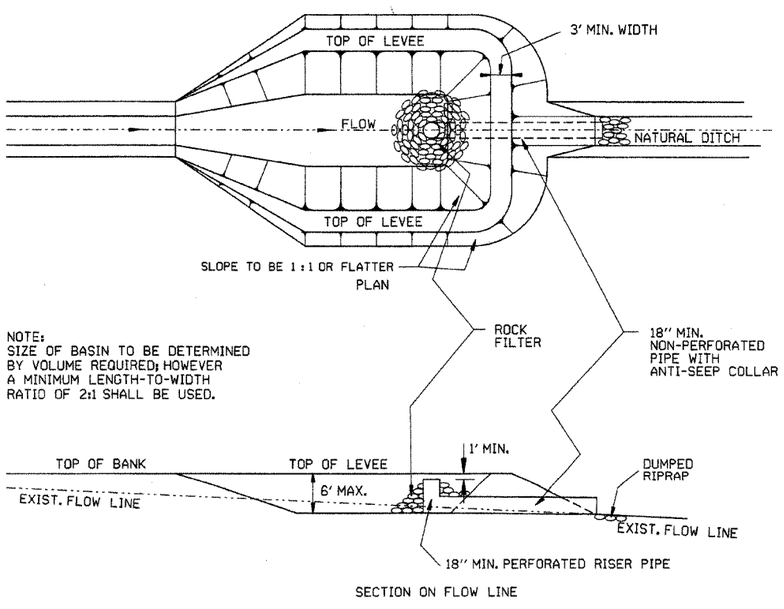
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

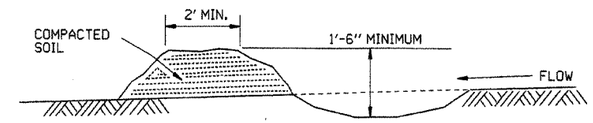
STANDARD DRAWING TEC-1



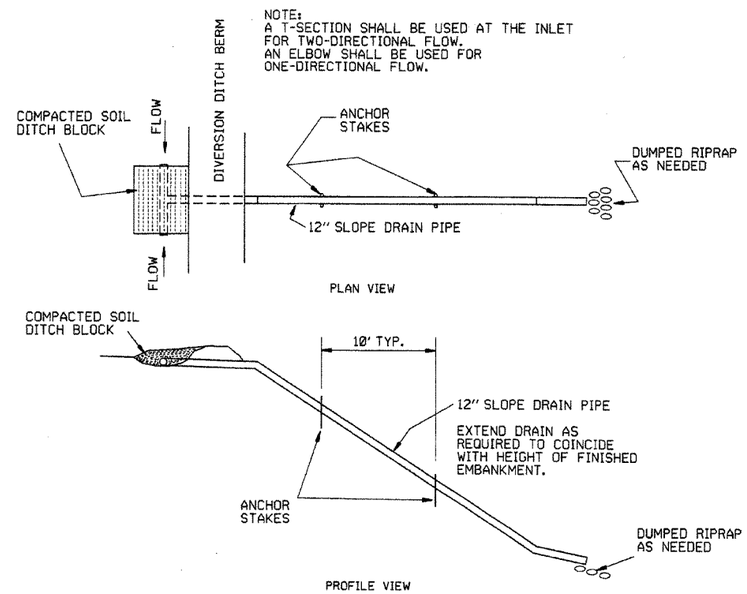
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



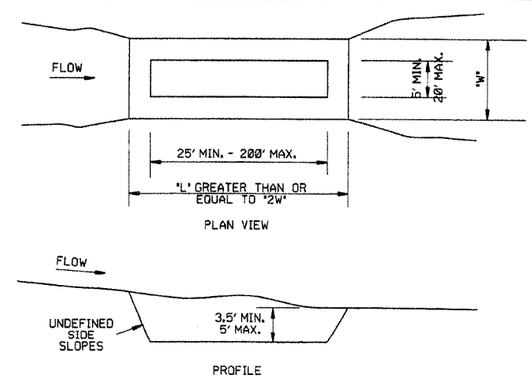
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

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

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

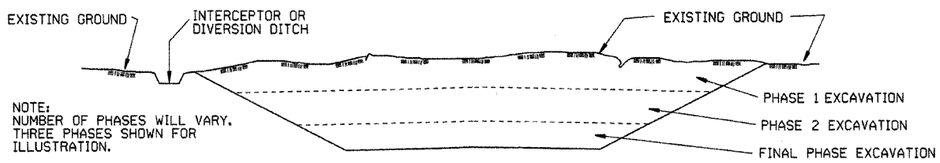
STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



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

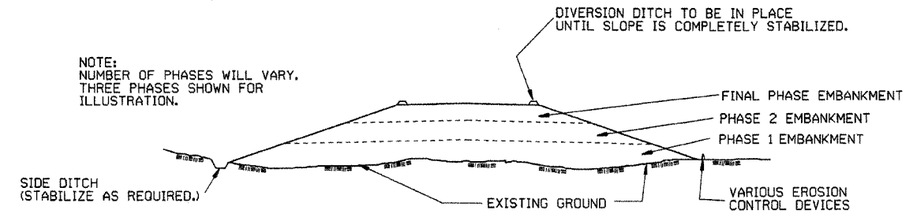
GENERAL NOTE

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

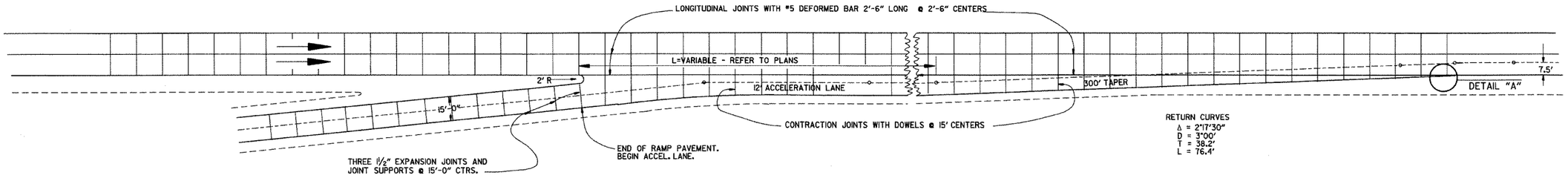
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD 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.

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

ARKANSAS STATE HIGHWAY COMMISSION

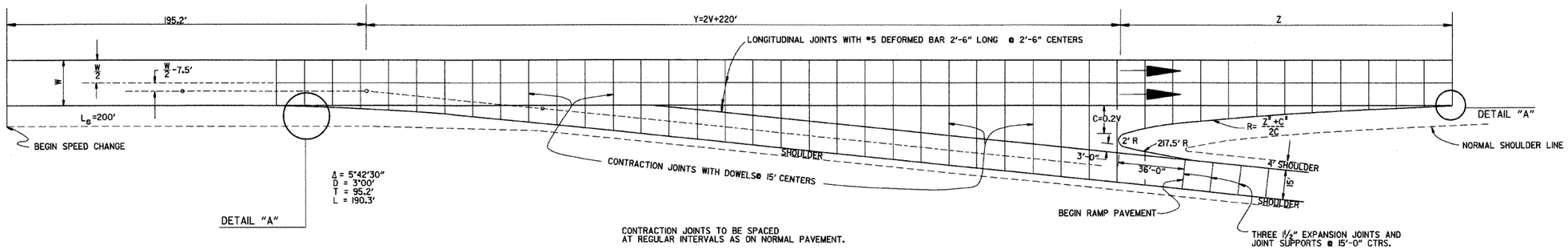
TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3



ENTRANCE RAMP

NOTE: JOINT SPACING ON THE MAIN LANES SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO THESE JOINT LAYOUTS. THE MAIN LANE JOINT SPACING MAY BE REDUCED TO A 12' MINIMUM.

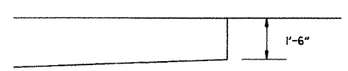


CONTRACTION JOINTS TO BE SPACED AT REGULAR INTERVALS AS ON NORMAL PAVEMENT.

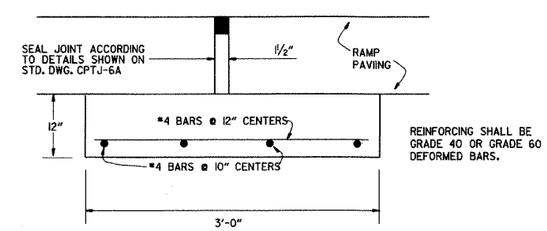
EXIT RAMP

EXIT RAMP

DESIGN SPEED V	Y	NOSE OFFSET C	LENGTH NOSE TAPER Z	RETURN RADIUS R	ADDITIONAL SURFACING SQ. YDS.
40	300.0	8.0	96.0	580.0	602.43
50	320.0	10.0	120.0	725.0	687.29
60	340.0	12.0	168.0	1182.0	790.55
70	360.0	14.0	210.0	1582.0	902.27



DETAIL "A"



DETAIL OF EXPANSION JOINT & JOINT SUPPORT

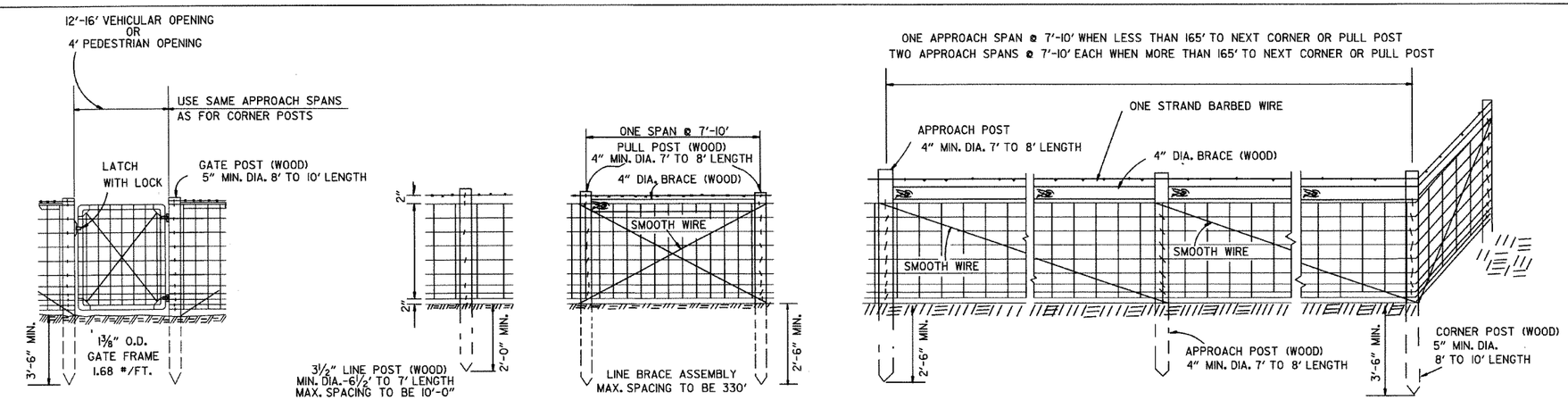
NOTE: THE EXPANSION JOINTS SHALL BE MEASURED AND PAID FOR AS P.C.C. PAVEMENT (RAMP THICKNESS). WHEN RAMP PAVING IS ASPHALT, EXPANSION JOINT IS NOT REQUIRED.
THE JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S", OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE USED. ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.

DATE	REVISION	DATE FILM'D
8-22-02	DELETED NOTE	
11-16-01	CORRECTED SPELLING ON ENTRANCE RAMP NOTE	
5-13-99	ADDED, EDITED AND DELETED NOTES	
11-03-94	ADDED NOTE RE: REINF. BARS	
10-1-92	ADDED DETAIL A & OTHER MINOR CHANGES	10-1-92
1-25-90	REVISED EXPANSION JOINT	1-25-90
7-15-88	CONFORM'D TO 1988 SPECIFICATIONS	65C-7-15-88
3-2-81	ISSUED	511-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

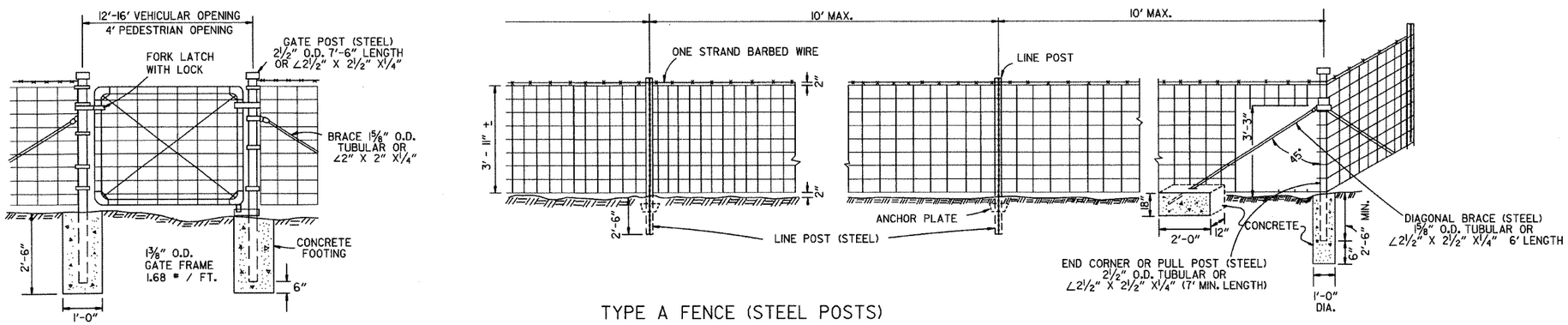
DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS (NON-REINFORCED)

STANDARD DRAWING TR-1A



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

TYPE A FENCE (WOOD POSTS)



TYPE A FENCE (STEEL POSTS)

GENERAL NOTES:

STEEL LINE POSTS SHALL BE GALVANIZED, 7 FT. IN LENGTH.

TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK).

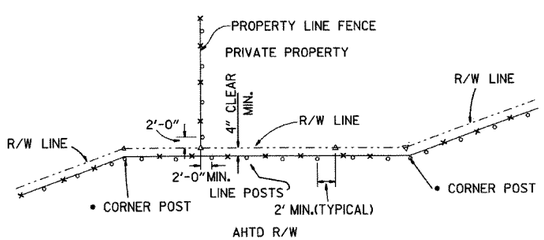
THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF WOOD LINE POSTS OF 7' LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

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

AT STREAM CROSSINGS THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF BANK TO THE BRIDGE STRUCTURE, A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFIEICNT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO THE BRIDGE ABUTMENTS OR CULVERT WINGWALLS.

SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE "WESTERN UNION METHOD" AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

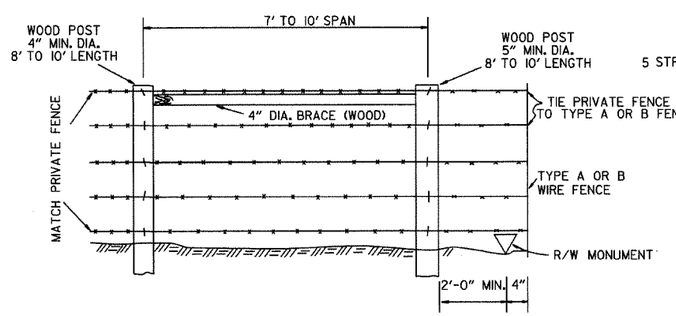
SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE "EYE METHOD": AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRE A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.



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

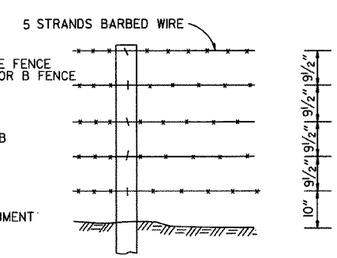
△ - R/W MONUMENTS
∘ - FENCE POSTS

RIGHT-OF-WAY FENCE LOCATION



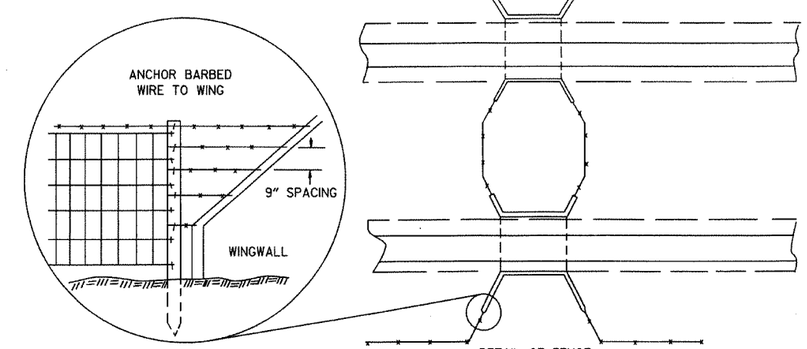
WHERE EXISTING PRIVATE FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN WITH TYPE A FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.

PRIVATE FENCE
TERMINAL INSTALLATION



SPACING AND SIZE OF POSTS FOR TYPE B FENCE SHALL BE THE SAME AS TYPE A FENCE.

TYPE B FENCE



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

DATE	REVISION	DATE FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	ADDED CORNER POST NOTE	6-2-94
8-5-93	REVISED R-O-W LOCATION DETAIL	8-5-93
10-1-92	ADDED STAPLE NOTE	
8-2-90	REV'D PULL POST LENGTH	
11-30-89	DELETED CLASS CONC.	
7-15-88	ADDED SPLICE NOTES	
7-15-88	ADDED HEIGHT DIMENSION	
4-3-87	REVISED VARIOUS NOTES	
	AND GENERAL NOTES	
11-1-84	MAX. POST SPACING	
1-4-83	MIN. DIA. LINE POST	
10-2-72	REVISED & REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE
TYPE A AND B

STANDARD DRAWING WF-1

RESHOT 3-4-93

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			336	
JOB No.					

BAR LIST FOR VARIOUS SECTIONS OF BARREL

SECTION & BAR GROUP	LENGTH OF SECTIONS	DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	"a" bars STRAIGHT In Top and Bottom Slabs of Barrel. 2 Add'l in Apron and Headwall - Each.				"b" bars BENT - See Diagram at Right In Top and Bottom Slabs of Barrel Alternate with "a" bars.					"d" bars STRAIGHT Longitudinal in Top Slab of Barrel			"d" bars STRAIGHT Longitudinal in Sidewalls			"d" bars. Longitudinal in Bottom Slab of Barrel			"f" bars STRAIGHT Verticals in Sidewalls		
					SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH
SECTION "A" & BAR GROUP "A"	4:1 = 32'-0"	0' TO 10'-0"	1' @ 4', 1' @ 5', 1' @ 6'	3'	#4	12"	48	68	#4	12"	44	64	5'-7"	#4	12"	5	#4	12"	6	#4	12"	5	#4	12"	44	64	3'-10"
				4'			48	68			44	64	5'-7"			5			8			5			44	64	4'-10"
				5'			48	68			44	64	5'-7"			5			10			5			44	64	5'-10"
				6'			48	68			44	64	5'-9"			5			12			5			44	64	6'-10"
				3'	#5	12"	48	68	#5	12"	44	64	6'-8"	#4	12"	6	#4	12"	6	#4	12"	6	#4	12"	44	64	3'-11"
				4'			48	68			44	64	6'-8"			6			8			6			44	64	4'-11"
				5'			48	68			44	64	6'-8"			6			10			6			44	64	5'-11"
				6'			48	68			44	64	6'-10"			6			12			6			44	64	6'-11"
				7'			48	68			44	64	6'-11"			6			14			6			44	64	7'-11"
				4'	#5	12"	48	68	#6	12"	44	64	7'-10"	6"	12"	7	6"	12"	8	6"	12"	7	6"	12"	44	64	5'-0"
				5'			48	68			44	64	7'-10"			7			10			7			44	64	6'-0"
				6'			48	68			44	64	8'-10"			7			12			7			44	64	7'-0"
				7'			48	68			44	64	8'-11"			7			14			7			10"	54	78	8'-0"
				8'			48	68			44	64	8'-12"			7			16			7			#5	11"	48	70	9'-0"
SECTION "B" & BAR GROUP "B"	4:1 = 16'-0"	10'-0" TO 15'-0"	1' @ 4', 1' @ 5', 1' @ 6'	3'	#4	12"	22	32	#5	12"	22	32	5'-8"	#4	12"	5	#4	12"	6	#4	12"	5	#4	12"	22	32	3'-10"
				4'			22	32			22	32	5'-8"			5			8			5			22	32	4'-10"
				5'			22	32			22	32	5'-8"			5			10			5			22	32	5'-10"
				6'			22	32			22	32	5'-10"			5			12			5			22	32	6'-10"
				3'	#5	12"	22	32	#6	12"	22	32	6'-10"	#4	12"	6	#4	12"	6	#4	12"	6	#4	12"	22	32	3'-11"
				4'			22	32			22	32	6'-10"			6			8			6			22	32	4'-11"
				5'			22	32			22	32	6'-10"			6			10			6			22	32	5'-11"
				6'			22	32			22	32	7'-10"			6			12			6			22	32	6'-11"
				7'			22	32			22	32	7'-11"			6			14			6			22	32	7'-11"
				4'	#6	12"	22	32	#6	12"	22	32	7'-10"	6"	12"	7	6"	12"	8	6"	12"	7	6"	12"	22	32	5'-1"
				5'			22	32			22	32	7'-10"			7			10			7			22	32	6'-1"
				6'			22	32			22	32	8'-10"			7			12			7			10"	28	40	7'-1"
				7'			22	32			22	32	8'-11"			7			14			7			#5	11"	26	34	8'-1"
				8'			22	32			22	32	8'-12"			7			16			7			#6	12"	22	32	9'-1"
SECTION "C" & BAR GROUP "C"	4:1 = 16'-0"	15'-0" TO 20'-0"	1' @ 4', 1' @ 5', 1' @ 6'	3'	#5	12"	22	32	#5	12"	22	32	5'-8"	#4	12"	5	#4	12"	6	#4	12"	5	#4	12"	22	32	3'-10"
				4'			22	32			22	32	5'-8"			5			8			5			22	32	4'-10"
				5'			22	32			22	32	5'-8"			5			10			5			10"	28	40	5'-10"
				6'			22	32			22	32	5'-10"			5			12			5			#5	11"	26	34	6'-10"
				3'	#5	11"	24	36	#6	11"	24	34	6'-10"	#4	12"	6	#4	12"	6	#4	12"	6	#4	12"	22	32	4'-11"
				4'			24	36			24	34	6'-10"			6			8			6			22	32	5'-11"
				5'			24	36			24	34	6'-10"			6			10			6			11"	26	34	6'-11"
				6'			24	36			24	34	7'-10"			6			12			6			#5	11"	26	34	7'-11"
				7'			24	36			24	34	7'-11"			6			14			6			#6	11"	26	34	8'-11"
				4'	#6	11"	24	36	#6	11"	24	34	7'-10"	6"	12"	7	6"	12"	8	6"	12"	7	6"	12"	22	32	5'-2"
				5'			24	36			24	34	7'-10"			7			10			7			22	32	6'-2"
				6'			24	36			24	34	8'-10"			7			12			7			11"	26	34	7'-2"
				7'			24	36			24	34	8'-11"			7			14			7			#6	11"	26	34	8'-2"
				8'			24	36			24	34	8'-12"			7			16			7			10"	26	40	9'-2"
SECTION "D" & BAR GROUP "D"	4:1 = 16'-0"	20'-0" TO 25'-0"	1' @ 4', 1' @ 5', 1' @ 6'	3'	#5	11"	24	36	#5	11"	24	34	5'-8"	#4	12"	5	#4	12"	6	#4	12"	5	#4	12"	22	32	3'-11"
				4'			24	36			24	34	5'-8"			5			8			5			22	32	4'-11"
				5'			24	36			24	34	5'-8"			5			10			5			22	32	5'-11"
				6'			24	36			24	34	5'-10"			5			12			5			22	32	6'-11"
				3'	#6	12"	22	32	#6	12"	22	32	6'-10"	#4	12"	6	#4	12"	6	#4	12"	6	#4	12"	22	32	4'-11"
				4'			22	32			22	32	6'-10"			6			8			6			22	32	5'-11"
				5'			22	32			22	32	6'-10"			6			10			6			11"	26	34	6'-11"
				6'			22	32			22	32	7'-10"			6			12			6			#5	11"	26	34	7'-11"
				7'			22	32			22	32	7'-11"			6			14			6			#6	11"	26	34	8'-11"
				4'	#6	12"	22	32	#6	12"	22	32	7'-10"	6"	12"	7	6"	12"	8	6"	12"	7	6"	12"	22	32	5'-3"
				5'			22	32			22	32	7'-10"			7			10			7			22	32	6'-3"
				6'			22	32			22	32	8'-10"			7			12			7			11"	26	34	7'-3"
				7'			22	32			22	32	8'-11"			7			14			7			#5	11"	26	34	8'-3"
				8'			22	32			22	32	8'-12"			7			16			7			#6	12"	22	32	9'-3"
SECTION "E" & BAR GROUP "E"	4:1 = 16'-0"	25'-0" TO 30'-0"	1' @ 4', 1' @ 5', 1' @ 6'	3'	#6	12"	22	32	#5	12"	22	32	5'-8"	#4	12"	5	#4	12"	6	#4	12"	5	#4	12"	22	32	4'-0"
				4'			22	32			22	32	5'-8"			5			8			5			22	32	5'-0"
				5'			22	32			22	32	5'-9"			5			10			5			22	32	6'-0"
				6'			22	32			22	32	5'-11"			5			12			5			22	32	7'-0"
				3'	#6	11"	24	34	#6	11"	24	36	6'-10"	#4	12"	6	#4	12"	6	#4	12"	6	#4	12"	22	32	4'-3"
				4'			24	34			24	36	6'-10"			6			8			6			22	32	5'-3"
				5'			24	34			24	36	7'-10"			6			10			6			10"	28	40	6'-3"
				6'			24	34			24	36	7'-11"			6			12			6			11"	26	34	7'-3"
				7'			24	34			24	36	7'-12"			6			14			6			#5	11"	26	34	8'-3"
				4'	#6	11"	24	34	#6	11"	24	36	7'-10"	6"	12"	7	6"	12"	8	6"	12"	7	6"	12"	22	32	5'-5"
				5'			24	34			24	36	8'-10"			8			10			8			11"	26	36	6'-5"
				6'			24	34			24	36	8'-11"			8			12			8			11"	26	36	7'-5"
				7'			24	34			24	36	8'-12"			8			14			8			10"	26	38	8'-5"
				8'			24	34			24	36	8'-13"			8			16			8			10"	26	38	9'-5"
SECTION "F" & BAR GROUP "F"	4:1 = 16'-0"	30'-0" TO 35'-0"	1' @ 4', 1' @ 5', 1' @ 6'	3'	#6	18"	20	30	#6	13"	20	30	5'-10"	6"	12"	5	6"	12"	6	6"	12"	5	6"	12"	22	32	4'-1"
				4'			20	30			20	30	5'-10"			5			8			5			22	32	5'-1"
				5'			20	30			20	30	6'-10"			5			10			5			12"	22	32	6'-1"
				6'			20	30			20	30	6'-12"			5			12			5			10"	26	36	7'-1"
				3'	#7	12"	22	32	#6	12"	22	32	6'-10"	6"	12"	7	6"	12"	6	6"	12"	7	6"	12"	22	32	4'-2"
				4'			22	32			22	32	6'-11"			7			8			7			22	32	5'-2"
				5'			22	32			22	32	7'-11"			7			10			7			10"	28	40	6'-2"
				6'			22	32			22	32	7'-12"			7			12			7			11"	26	36	7'-2"
				7'			22	32			22	32	8'-11"			7			14			7			10"	26	38	8'-2"
				8'			22	32			22	32	8'-12"			7			16			7			10"	26	38	9'-2"
SECTION "G" & BAR GROUP "G"	Varies with Length of Barrel	35'-0" TO 40'-0"	1' @ 4', 1' @ 5', 1' @ 6'	3'	#7	12"	Varies with Length of Barrel		#7	12"	Varies with Length of Barrel		6'-10"	6"	12"	9	6"	12"	6	6"	12"	9	6"	12"	Varies with Length of Barrel		5'-9"
				4'									7'-0"			9			8			9					6'-9"
				5'									8'-8"			9			10			9					7'-9"
				6'									8'-11"			9			12			9					8'-9"
				7'									8'-11"			9			14			9					9'-9"
				8'									7'-12"			9			16			9					9'-9"
				3'	#7	12"	Varies with Length of Barrel		#7	12"	Varies with Length of Barrel		5'-10"	6"	12"	6	6"	12"	6	6"	12"	6	6"	12"	Varies with Length of Barrel		4'-8"
				4'									4'-10"			6			8			6					5'-8"
				5'									5'-10"			6			10			6					6'-8"
				6'									5'-12"			6			12			6					7'-8"
				3'	#7	11"	Varies with Length of Barrel		#6	11"	Varies with Length of Barrel		6'-10"	6"	12"	7	6"	12"	6	6"	12"	7	6"	12"	Varies with Length of Barrel		5'-9"
				4'									7'-10"			7			8			7					6'-9"
				5'									8'-10"			7			10			7					7'-9"
				6'									8'-11"			7			12			7					8'-9"
				7'									8'-11"			7			14			7					9'-9"
				8'									8'-12"			7			16			7					9'-9"

NOTE:- Bars for each Section to be marked with the Section letter, thus for Section B, the bars should be marked Ba, Bb, Bc, Bd, Be and Bf.

Designed By:- W.C.H. 9-5-62 Checked By:- R.H.S. 11-8-62
Drawn By:- W.C.H. 10-10-62 Checked By:- J.E.M. 11-12-62
Quantities By:- W.C.H. 11-7-62 Checked By:- E.N. 11-16-62

DIMENSIONS / QUANTITIES

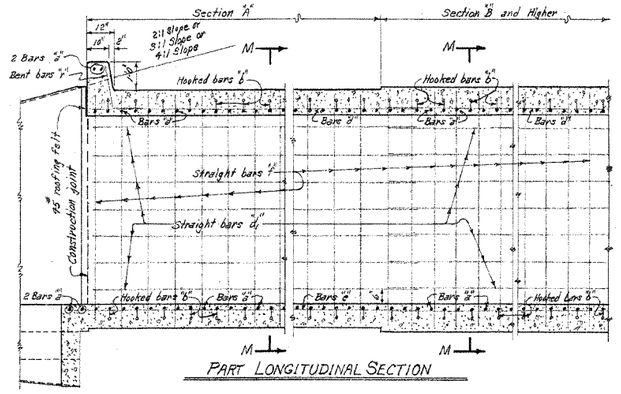
MAX. DESIGN DEPTH OF COVER	BARREL DIMENSIONS: CLEAR SPAN	CLEAR HEIGHT	SQ. FT. OPENING	OVERALL WIDTH	THICKNESS OF TOP SLAB	THICKNESS OF SIDEWALLS	THICKNESS OF BOTTOM SLAB	OVERALL HEIGHT	UNIT QUANTITIES: CLASS S CONC. PER LIN. FT. OF BARREL	REINFORCING STEEL PER LIN. FT. BARREL	REINFORCING STEEL PER LAP	ADDITIONAL TWO HEADWALLS & APRONS
D	S	H	A	OW	T	C	B	OH	CU.YD.	LB.	LB.	LB.
SECTION "A" - 10'-0"	3'	12	5'-0"		6"		4'-1"		0.312	29.62	13.36	51.44
	4'	16	5'-0"	6½"	6"	6½"	5'-1"		0.349	32.29	15.03	51.44
	5'	20	5'-0"		6"		6'-1"		0.386	34.96	16.70	51.44
	6'	24	5'-2"		7"		7'-1"		0.467	38.08	18.37	52.33
	3'	15	6'-0"		6"		4'-2"		0.370	43.16	15.03	79.37
	4'	20	6'-0"		6"		5'-2"		0.907	45.83	16.70	79.37
	5'	25	6'-0"	7"	6"	7"	6'-2"		0.444	48.50	18.37	79.37
	6'	30	6'-2"		7"		7'-2"		0.526	51.87	20.04	80.77
	7'	35	6'-3"		7½"		8'-2"		0.594	57.00	21.71	81.46
	4'	24	7'-0"		6"		5'-3"		0.472	59.99	18.37	93.29
	5'	30	7'-0"	7½"	6"	7½"	6'-3"		0.509	61.66	20.04	93.29
	6'	36	7'-2"		7"		7'-3"		0.591	65.18	21.71	94.68
	7'	42	7'-3"		7½"		8'-3"		0.660	70.41	23.38	95.37
	8'	48	7'-4"		8"		9'-3"		0.735	73.63	25.05	96.07
SECTION "B" - 15'-0"	3'	12	5'-0"		6"		4'-1"		0.312	33.98	13.36	
	4'	16	5'-0"	6½"	6"	6½"	5'-1"		0.349	36.65	15.03	
	5'	20	5'-0"		6"		6'-1"		0.386	39.32	16.70	
	6'	24	5'-2"		7"		7'-1"		0.467	44.39	18.37	
	3'	15	6'-0"		6"		4'-2"		0.370	49.78	15.03	
	4'	20	6'-0"		6"		5'-2"		0.407	52.45	16.70	
	5'	25	6'-0"	7"	6"	7"	6'-2"		0.444	55.12	18.37	
	6'	30	6'-2"		7"		7'-2"		0.526	59.48	20.04	
	7'	35	6'-3"		7½"		8'-2"		0.594	67.68	21.71	
	4'	24	7'-0"		6"		5'-4½"		0.499	65.30	18.37	
	5'	30	7'-0"	8½"	6"	8½"	6'-4½"		0.536	66.63	20.04	
	6'	36	7'-2"		7"		7'-4½"		0.619	73.53	21.71	
	7'	42	7'-3"		7½"		8'-4½"		0.688	82.91	23.38	
	8'	48	7'-4"		8"		9'-4½"		0.763	92.19	25.05	
SECTION "C" - 20'-0"	3'	12	5'-0"		6"		4'-1½"		0.316	37.54	13.36	
	4'	16	5'-0"	6½"	6"	6½"	5'-1½"		0.353	40.21	15.03	
	5'	20	5'-0"		6"		6'-1½"		0.390	44.44	16.70	
	6'	24	5'-2"		7"		7'-1½"		0.471	51.38	18.37	
	3'	15	6'-0"		6"		4'-2½"		0.394	52.85	15.03	
	4'	20	6'-0"	7½"	6"	7½"	5'-2½"		0.431	55.52	16.70	
	5'	25	6'-0"		6"		6'-2½"		0.468	58.92	18.37	
	6'	30	6'-2"		7"		7'-2½"		0.550	67.04	20.04	
	7'	35	6'-3"		7½"		8'-2½"		0.618	78.27	21.71	
	4'	24	7'-0"		6"		5'-2½"		0.526	69.39	18.37	
	5'	30	7'-0"	9½"	6"	9"	6'-2½"		0.563	72.06	20.04	
	6'	36	7'-2"		7"		7'-2½"		0.644	81.20	21.71	
	7'	42	7'-3"		7½"		8'-2½"		0.716	92.67	23.38	
	8'	48	7'-4"		8"		9'-2½"		0.791	103.06	25.05	
SECTION "D" - 25'-0"	3'	12	5'-0"		6"		4'-2"		0.327	39.63	13.36	
	4'	16	5'-0"	6¾"	6"	7½"	5'-2"		0.369	42.30	15.03	
	5'	20	5'-0"		6"		6'-2"		0.901	49.91	16.70	
	6'	24	5'-2"		7"		7'-2"		0.483	55.19	18.37	
	3'	15	6'-0"		6"		4'-4½"		0.417	55.28	15.03	
	4'	20	6'-0"	8"	6"	8½"	5'-4½"		0.459	57.95	16.70	
	5'	25	6'-0"		6"		6'-4½"		0.501	61.61	18.37	
	6'	30	6'-2"		7"		7'-4½"		0.585	71.20	20.04	
	7'	35	6'-4"		8"		8'-4½"		0.668	81.95	21.71	
	4'	24	7'-0"		6"		5'-7"		0.559	72.95	18.37	
	5'	30	7'-1"	9¾"	6½"	9¾"	6'-7"		0.614	76.21	20.04	
	6'	36	7'-2½"		7½"		7'-7"		0.691	85.22	21.71	
	7'	42	7'-4"		8"		8'-7"		0.776	97.23	23.38	
	8'	48	7'-5½"		8½"		9'-7"		0.869	108.02	25.05	
SECTION "E" - 30'-0"	3'	12	5'-0"		6"		4'-3"		0.343	42.12	13.36	
	4'	16	5'-0"	7½"	6"	7½"	5'-3"		0.383	44.79	15.03	
	5'	20	5'-1"		6½"		6'-3"		0.936	52.39	16.70	
	6'	24	5'-3"		7½"		7'-3"		0.521	63.09	18.37	
	3'	15	6'-0"		6"		4'-6"		0.444	58.94	15.03	
	4'	20	6'-0"	8½"	6"	9½"	5'-6"		0.491	61.61	16.70	
	5'	25	6'-1½"		6½"		6'-6"		0.549	66.77	18.37	
	6'	30	6'-3½"		7½"		7'-6"		0.637	75.68	20.04	
	7'	35	6'-5"		8½"		8'-6"		0.724	88.37	21.71	
	4'	24	7'-0"		6"		5'-8½"		0.591	79.04	20.04	
	5'	30	7'-2"	10"	7"	10"	6'-8½"		0.669	83.78	21.71	
	6'	36	7'-4"		8"		7'-8½"		0.760	92.53	23.38	
	7'	42	7'-5½"		8½"		8'-8½"		0.850	104.59	25.05	
	8'	48	7'-7"		9"		9'-8½"		0.989	115.61	26.72	
SECTION "F" - 35'-0"	3'	12	5'-0"		6"		4'-4"		0.358	45.89	13.36	
	4'	16	5'-0"	7¾"	6"	8¼"	5'-4"		0.395	48.16	15.03	
	5'	20	5'-1"		6½"		6'-4"		0.471	56.32	16.70	
	6'	24	5'-3"		8"		7'-4"		0.560	67.17	18.37	
	3'	15	6'-0"		6"		4'-7"		0.463	63.18	16.70	
	4'	20	6'-0"	9¼"	6"	9¾"	5'-7"		0.509	66.11	18.37	
	5'	25	6'-1½"		7"		6'-7"		0.588	71.65	20.04	
	6'	30	6'-3½"		8"		7'-7"		0.679	80.70	21.71	
	7'	35	6'-5"		9"		8'-7"		0.770	93.59	23.38	
	4'	24	7'-1"		6"		5'-10"		0.641	85.81	21.71	
	5'	30	7'-3"	10¾"	7½"	11¼"	6'-10"		0.724	91.60	23.38	
	6'	36	7'-5"		8½"		7'-10"		0.818	99.56	25.05	
	7'	42	7'-7"		9½"		8'-10"		0.925	112.23	26.72	
	8'	48	7'-8½"		10½"		9'-10"		1.030	123.01	28.39	
SECTION "G" - 40'-0"	3'	12	5'-0"		6"		4'-5"		0.373	49.38	15.03	
	4'	16	5'-1"	8¼"	6"	8¾"	5'-5"		0.427	52.56	16.70	
	5'	20	5'-3"		6½"		6'-5"		0.507	60.85	18.37	
	6'	24	5'-5"		8½"		7'-5"		0.599	71.86	20.04	
	3'	15	6'-0"		6"		4'-8"		0.481	67.30	16.70	
	4'	20	6'-1½"	9¾"	6½"	10¼"	5'-8"		0.595	70.89	18.37	
	5'	25	6'-3½"		7½"		6'-8"		0.628	76.56	20.04	
	6'	30	6'-5½"		8½"		7'-8"		0.928	85.28	21.71	
	7'	35	6'-7"		9½"		8'-8"		0.817	98.84	23.38	

DOWEL BARS FOR TWO HEADWALLS

BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS	Bars "b"
#4	2"	4"	0'-10½"	
#5	2½"	4⅝"	0'-11½"	
#6	3"	5"	1'-2"	
#7	3⅝"	5⅞"	1'-4"	

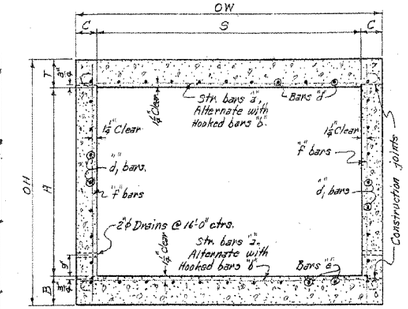
Note:- Dimensions are to centers of bars.

SPAN	SIZE	SPACING	NO. REQ'D	LENGTH	X	Bars "f" Dowel bars in Headwalls
4'	#4	11"	12	2'-5"	1'-2½"	
5'	#4	11½"	14	2'-6"	1'-3"	
6'	#4	12"	16	2'-7"	1'-3½"	

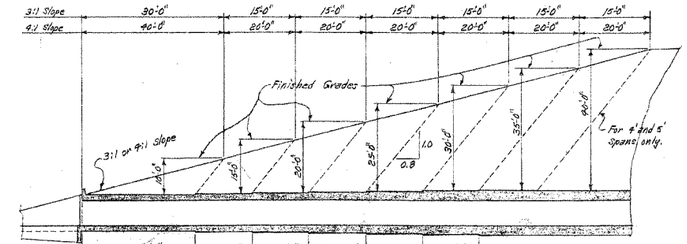


PART LONGITUDINAL SECTION

NOTE:- For details of wings and bar lists, see Drawing Nos. W-X002-1, W-X003-1, and W-X004-1.



TYPICAL SECTION M-M



3:1 Slope =	SECTIONS	A = 22'-0"	B = 11'-0"	C = 11'-0"	D = 11'-0"	E = 11'-0"	F = 11'-0"	MID-SECTION G-Varies
	Bar Group	A	B	C	D	E	F	G
4:1 Slope =	SECTIONS	A = 32'-0"	B = 16'-0"	C = 16'-0"	D = 16'-0"	E = 16'-0"	F = 16'-0"	MID-SECTION G-Varies
	Bar Group	A	B	C	D	E	F	G

TYPICAL LONGITUDINAL SECTION-SHOWING SECTIONS AND BAR GROUPS FOR VARIOUS DEPTHS OF COVER

NOTE:- Lengths of Sections, with Bar Groups to be shown on Cross Section Sheets.

SECTIONS AND BAR GROUPS TO BE USED FOR VARIOUS DEPTHS OF COVER

DEPTHS OF COVER	SECTIONS & BAR GROUPS FOR END SECTIONS: A	B	C	D	E	F	MID-SECTION AND BAR GROUP
5.0' to 9.5'	✓						A
10.0' to 14.5'	✓	✓					B
15.0' to 19.5'	✓	✓					C
20.0' to 24.5'	✓

Reshot 3-8-93

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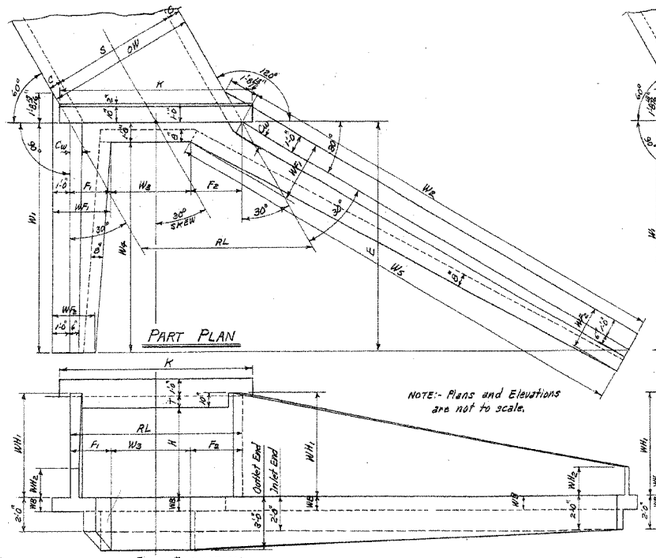
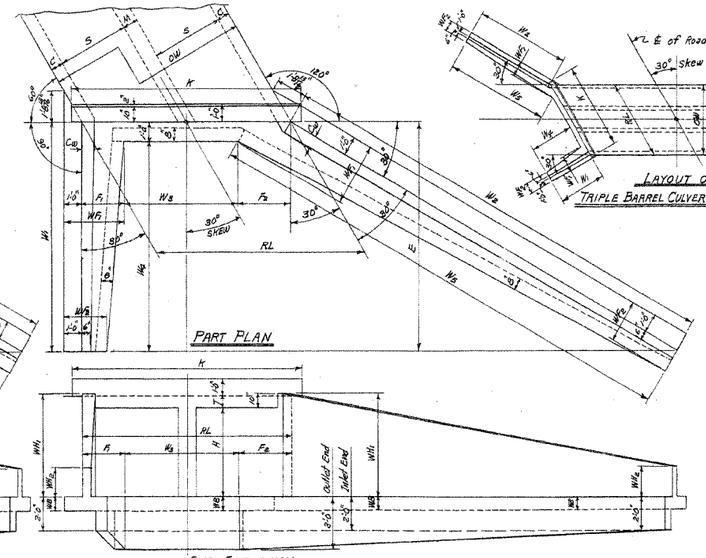
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			337	
JOB No.					



SINGLE BARREL CULVERT-30° SKEW RIGHT FORWARD

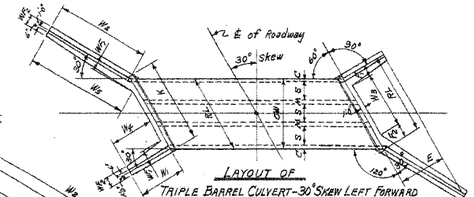
Details of Culvert with 30° Skew Left Forward is reversed, see Layout below.



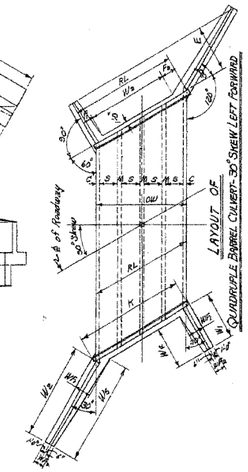
DOUBLE BARREL CULVERT-30° SKEW RIGHT FORWARD

Details of Culvert with 30° Skew Left Forward is reversed, see Layout below.

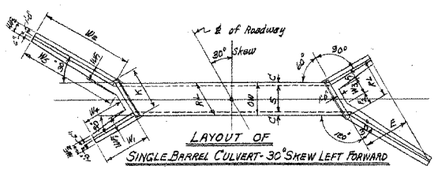
NOTE:- The length of the wings for the Plans, Elevations, and Layouts, as drawn, are proportioned for 3:1 slopes. For 2:1 slopes the wings are proportionally shorter, while for 4:1 slopes they are longer.



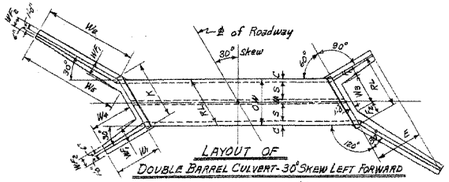
LAYOUT OF TRIPLE BARREL CULVERT-30° SKEW LEFT FORWARD



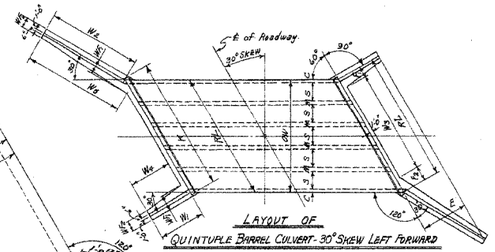
LAYOUT OF QUADRUPLE BARREL CULVERT-30° SKEW LEFT FORWARD



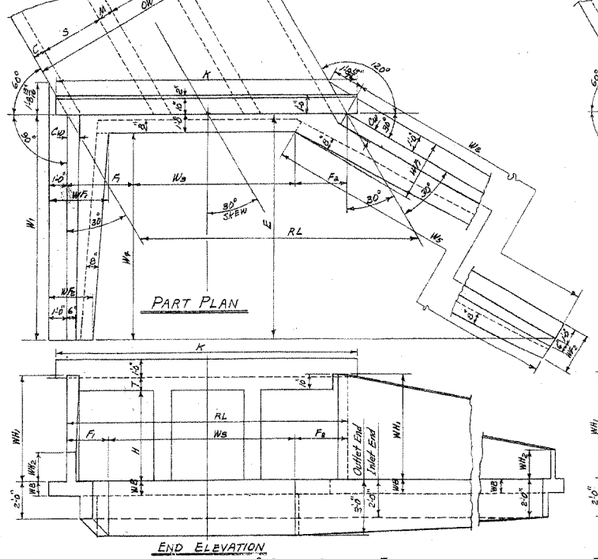
LAYOUT OF SINGLE BARREL CULVERT-30° SKEW LEFT FORWARD



LAYOUT OF DOUBLE BARREL CULVERT-30° SKEW LEFT FORWARD

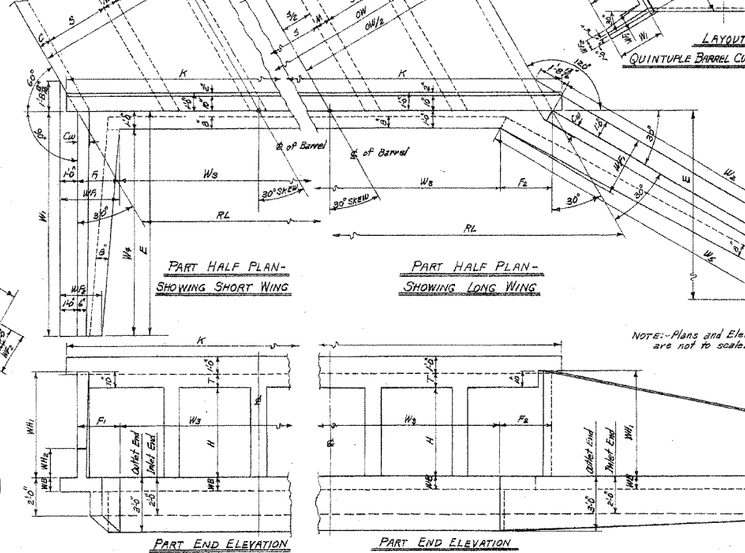


LAYOUT OF QUINTUPLE BARREL CULVERT-30° SKEW LEFT FORWARD



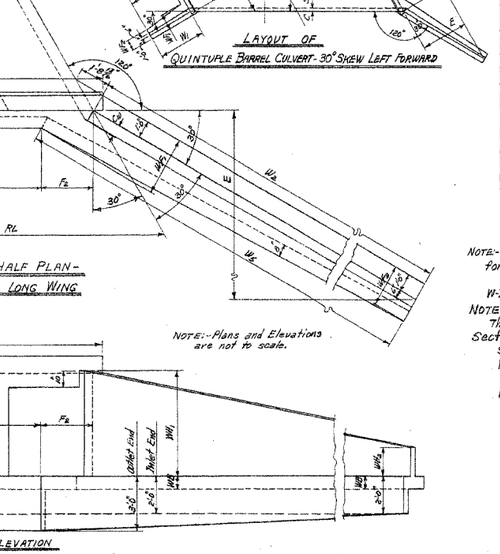
TRIPLE BARREL CULVERT-30° SKEW RIGHT FORWARD

Details of Culvert with 30° Skew Left Forward is reversed, see Layout at top center of sheet.



QUADRUPLE BARREL CULVERT-30° SKEW RT. FWD.

Details of Culvert with 30° Skew Left Forward is reversed, see Layout at above center.



QUINTUPLE BARREL CULVERT-30° SKEW RT. FWD.

Details of Culvert with 30° Skew Left Forward is reversed, see Layout above.

ROADWAY LENGTH RL — HEADWALL LENGTH K — APRON DIMENSION W_3

$RL = OW \times 1.1547$ — $K = RL + (F_1 + F_2)$ — $W_3 = RL - (F_1 + F_2)$

USE WITH DRAWING No.	CLEAR SPAN S	CLEAR HEIGHT H	SUM OF FOOTING DIMENSIONS $F_1 + F_2$	SINGLE BARREL CULVERT OW	RL	K	W_3	DOUBLE BARREL CULVERT OW	RL	K	W_3	TRIPLE BARREL CULVERT OW	RL	K	W_3	QUADRUPLE BARREL CULVERT OW	RL	K	W_3	QUINTUPLE BARREL CULVERT OW	RL	K	W_3
W-X302-1 , W-X303-1 or W-X304-1. (FOR H=8'0" OR LESS)	4'	2'	2'-3¾	5'-0"	5'-9⅝	6'-11⅝	3'-1⅞	9'-8"	11'-2"	12'-3⅝	8'-10⅝	14'-6"	16'-6⅝	17'-8½	14'-3⅝	19'-0"	21'-11⅛	23'-1"	19'-8	23'-8"	27'-4"	28'-5⅝	25'-0⅝
		3'	2'-3¾	5'-0"	"	"	2'-6"	9'-8"	"	"	7'-10⅝	14'-9"	"	"	13'-3⅝	19'-0"	"	"	18'-8	23'-8"	"	"	29'-0⅝
		4'	4'-3¾	5'-0"	"	"	1'-6"	9'-8"	"	"	6'-10⅝	14'-9"	"	"	12'-8⅝	19'-0"	"	"	17'-8	23'-8"	"	"	23'-0⅝
	5'	2'	3'-3¾	6'-0"	6'-11⅝	8'-1"	3'-7⅞	11'-8	13'-5⅝	14'-7⅝	10'-2⅝	17'-4"	20'-0⅝	21'-2"	16'-9"	23'-0	26'-6⅝	27'-8⅝	23'-3⅝	28'-8"	33'-1⅛	34'-3"	29'-10"
		3'	3'-3¾	6'-0"	"	"	2'-7⅞	11'-8	"	"	9'-2⅝	17'-4"	"	"	15'-9	23'-0	"	"	22'-3⅝	28'-8"	"	"	28'-10"
		4'	4'-3¾	6'-0"	"	"	2'-7⅞	11'-8	"	"	9'-2⅝	17'-4"	"	"	15'-9	23'-0	"	"	22'-3⅝	28'-8"	33'-1⅛	34'-3"	27'-10".
	6'	2'	4'-3¾	6'-12"	7'-1⅛	8'-8⅝	0'-10⅝	11'-11"	13'-9⅝	14'-11"	7'-5⅝	17'-8	20'-4⅝	21'-6⅝	14'-1⅝	23'-5	27'-0⅝	28'-2⅝	20'-9⅝	29'-2	33'-9⅝	34'-10"	27'-5"
		7'	7'-9¾	6'-8"	7'-2⅝	8'-4⅝	Ⓐ 0"	12'-1"	13'-11⅝	15'-1⅝	6'-2⅝	17'-11"	20'-8⅝	21'-10"	12'-11"	23'-9"	27'-5⅝	28'-7"	19'-8"	29'-7"	34'-2"	35'-3⅝	26'-9⅝
W-X302-1 , W-X303-1 or W-X304-1. (FOR H=8'0" OR LESS)	6'	3'	3'-3¾	7'-0"	8'-1"	9'-2⅞	4'-9⅝	13'-8	15'-9⅝	16'-11⅝	12'-2⅝	20'-4"	23'-5⅝	24'-7⅝	20'-2⅝	27'-0	31'-2⅝	32'-4"	27'-1"	33'-8	38'-10⅝	40'-0⅝	35'-7⅝
		4'	4'-3¾	7'-0"	"	"	3'-9⅝	13'-8	"	"	11'-4⅝	20'-4"	"	"	19'-2⅝	27'-0	"	"	26'-1"	33'-8	"	"	34'-7⅝
		5'	5'-3¾	7'-0"	8'-1"	9'-2⅞	2'-9⅝	12'-8	15'-9⅝	16'-11⅝	10'-4⅝	20'-4	23'-5⅝	24'-7⅝	18'-3⅝	27'-0	31'-2⅝	32'-4"	25'-11"	33'-8	38'-10⅝	40'-0⅝	33'-7⅝
		6'	6'-3¾	7'-12"	8'-3⅝	9'-5⅝	2'-0"	13'-11	16'-0⅝	17'-2⅝	9'-9⅝	20'-8	23'-10⅝	25'-0⅝	17'-7⅝	27'-5	31'-7⅝	32'-9⅝	25'-9⅝	34'-2	39'-5⅝	40'-7⅝	33'-2⅝
		7'	7'-9¾	7'-3"	8'-4⅝	9'-6⅝	0'-7⅝	14'-1"	16'-3⅝	17'-5"	8'-6"	20'-11"	24'-1⅝	25'-3⅝	16'-9⅝	27'-9	32'-1⅝	33'-3⅝	24'-3⅝	34'-7"	39'-10⅝	41'-1"	32'-2"
		8'	9'-3¾	7'-9"	8'-5⅝	9'-7⅝	Ⓐ 0"	14'-2	16'-9⅝	17'-6⅝	7'-1"	21'-0"	24'-5	25'-7⅝	14'-11⅝	27'-10	32'-4⅝	33'-3⅝	22'-10⅝	34'-8"	40'-0⅝	41'-2⅝	30'-9⅝
	7'	4'	4'-3¾	8'-0"	9'-2⅝	10'-9⅝	4'-11⅝	15'-8	18'-1⅛	19'-5"	13'-9⅝	23'-4"	26'-11⅝	28'-14	22'-8"	31'-0	35'-9½	36'-11⅝	31'-6⅝	38'-8"	44'-7⅝	45'-9⅝	40'-0½
		5'	5'-3¾	8'-0"	9'-2⅝	10'-9⅝	3'-11⅝	15'-8	18'-1⅛	19'-8	12'-9⅝	23'-4	26'-11⅝	28'-14	21'-8"	31'-0	35'-9½	36'-11⅝	30'-4⅝	38'-8	44'-7⅝	45'-9⅝	39'-4⅝
		6'	6'-3¾	8'-12"	9'-5⅝	10'-7"	3'-2"	15'-11	18'-4½	19'-6⅝	12'-1⅝	23'-8	27'-4"	28'-5⅝	21'-0⅝	31'-5	36'-3⅝	37'-5⅝	30'-0"	39'-2"	45'-2⅝	46'-4½	38'-11⅝
		7'	7'-9¾	8'-13"	9'-6⅝	10'-8⅝	1'-9"	16'-1"	18'-6½	19'-8⅝	10'-3⅝	23'-11"	27'-7⅝	28'-9⅝	19'-11⅝	31'-9	36'-8"	37'-9⅝	28'-10⅝	39'-7"	45'-8⅝	46'-10⅝	37'-11⅝
		8'	9'-3¾	8'-9"	9'-7½	10'-9⅝	0'-4⅝	16'-2"	18'-8	19'-9⅝	9'-4⅝	24'-0	27'-8½	28'-10⅝	18'-5⅝	31'-10	36'-9½	37'-11⅝	27'-4"	39'-8"	45'-9⅝	46'-11⅝	36'-6⅝
	8'	4'	4'-3¾	9'-0"	10'-4⅝	11'-6½	6'-1½	17'-8	20'-4⅝	21'-6⅝	16'-1⅝	26'-4	30'-4⅝	31'-6⅝	26'-1⅝	35'-0	40'-5"	41'-6⅝	36'-1⅝	43'-8	50'-5⅝	51'-7"	46'-1⅝
		5'	5'-3¾	9'-12"	10'-7"	11'-8⅝	5'-3⅝	17'-11"	20'-8⅝	21'-10"	15'-5"	26'-8	30'-9½	31'-11⅝	25'-6⅝	35'-5"	40'-10⅝	42'-0½	35'-2⅝	44'-2	51'-0"	52'-1⅝	45'-8⅝
		6'	6'-3¾	9'-2"	10'-7"	11'-8⅝	4'-3⅝	17'-11"	20'-8⅝	21'-10"	14'-5"	26'-8	30'-9½	31'-11⅝	24'-6⅝	35'-5"	40'-10⅝	42'-0½	34'-2⅝	44'-2	51'-0"	52'-1⅝	44'-8⅝
		7'	7'-9¾	9'-3"	10'-8⅝	11'-10"	2'-11"	18'-1"	20'-10⅝	22'-0½	13'-1⅝	26'-11"	31'-1"	32'-2⅝	23'-3⅝	35'-9	41'-3⅝	42'-5⅝	33'-1⅝	44'-7	51'-5⅝	52'-7½	43'-8⅝
		8'	9'-3¾	9'-4"	10'-9⅝	11'-11⅝	1'-6⅝	18'-2"	20'-11⅝	22'-1⅝	11'-8⅝	27'-0	31'-2⅝	32'-4"	21'-11"	35'-10	41'-4⅝	42'-6⅝	32'-1⅝	44'-8	51'-7"	52'-8⅝	42'-3⅝
	9'	5'	5'-3¾	10'-2"	11'-8⅝	12'-10⅝	6'-5⅝	19'-11"	23'-0	24'-1⅝	17'-8⅝	29'-8	34'-3⅝	35'-5"	28'-1⅝	39'-5	45'-6⅝	46'-8"	40'-3"	49'-2	56'-3⅝	57'-11⅝	51'-6"
		6'	6'-3¾	10'-3"	11'-10"	13'-0"	5'-6⅝	20'-1"	23'-2⅝	24'-4⅝	16'-11"	29'-11"	34'-6⅝	35'-8⅝	28'-3⅝	39'-9	45'-10⅝	47'-0⅝	39'-7⅝	49'-7"	57'-3"	58'-5"	50'-11⅝
		7'	7'-9¾	10'-3"	11'-10"	13'-0"	4'-0⅝	20'-1"	23'-2⅝	24'-4⅝	15'-5"	29'-11"	34'-6⅝	35'-8⅝	26'-9⅝	39'-9	45'-10⅝	47'-0⅝	38'-1⅝	49'-7"	57'-3"	58'-5"	49'-5⅝
		8'	9'-3¾	10'-4"	11'-11⅝	13'-1"	2'-8"	20'-2"	23'-3⅝	24'-5⅝	14'-0⅝	30'-0"	34'-7⅝	35'-9⅝	25'-4⅝	39'-10	46'-0"	47'-1⅝	36'-8⅝	49'-8	57'-4⅝	58'-6"	48'-1"
	10'	5'	5'-3¾	11'-2"	12'-10⅝	14'-0⅝	7'-7⅝	21'-11"	25'-5⅝	26'-5⅝	20'-0⅝	32'-8	37'-8⅝	38'-10⅝	32'-5½	43'-5	50'-1⅝	51'-3⅝	44'-10⅝	54'-2	62'-4⅝	63'-5½	57'-3⅝
		6'	6'-3¾	11'-3"	12'-11⅝	14'-1⅝	6'-8⅝	22'-1"	25'-6"	26'-7⅝	19'-2⅝	32'-11"	38'-0⅝	39'-2"	31'-9"	43'-9	50'-6⅝	51'-8"	44'-3"	54'-7"	63'-0⅝	64'-2⅝	56'-9"
		7'	7'-9¾	11'-3"	12-11⅝	14-1⅝	5'-2⅝	22'-1"	25'-6"	26'-7⅝	17'-8⅝	32'-11"	38'-0⅝	39'-2"	30'-3"	43'-9	50'-6⅝	51'-8"	42'-9"	54'-7"	63'-0⅝	64'-2⅝	55'-8"
		8'	9'-3¾	11'-4"	12'-1"	14'-3"	3'-9⅝	22'-2"	25'-7⅝	26'-9"	16'-4"	33'-0	38'-1⅝	39'-3"	28'-10"	43'-10	50'-7⅝	51'-9⅝	41'-0⅝	54'-8	63'-1⅝	64'-3⅝	53'-10⅝
	11'	6'	6'-3¾	12'-4"	14'-2⅝	15'-4⅝	7'-11⅝	24'-2"	27'-10⅝	29'-0⅝	21'-7⅝	36'-0	41'-4⅝	42'-8⅝	35'-3⅝	47'-10	55'-2⅝	56'-4⅝	48'-10⅝	—	—	—	—
		7'	7'-9¾	12'-5"	"	"	6'-5⅝	24'-2"	"	"	20'-1⅝	36'-0	"	"	32'-9⅝	47'-10	"	"	47'-1⅝	—	—	—	—
		8'	9'-3¾	12'-4"	"	"	4'-11⅝	24'-2"	"	"	18'-7⅝	36'-0	"	"	32'-3⅝	47'-10	"	"	45'-11⅝	—	—	—	—
	12'	6'	6'-3¾	13'-4"	15'-0⅝	16'-4⅝	9'-1⅝	26'-2"	30'-2⅝	31'-4⅝	23'-1⅝	39'-0	45'-0⅝	46'-2⅝	38'-9⅝	51'-10	59'-10⅝	61'-0"	53'-7"	—	—	—	—
		7'	7'-9¾	13'-4"	"	"	7'-7⅝	26'-2"	"	"	22'-5⅝	39'-0	"	"	37'-3⅝	51'-10	"	"	52'-1"	—	—	—	—
		8'	9'-3¾	13'-4"	"	"	6'-1⅝	26'-2"	"	"	20'-11⅝	39'-0	"	"	35'-9⅝	51'-10	"	"	50'-7"	—	—	—	—
W-X302-2, W-X303-2 or W-X304-2. (FOR H=9'0" & OVER)	8'	7'		9'-10⅝	8'-6"	9'-9⅝	10'-11⅝	Ⓐ 0"	16'-5"	18'-11⅝	20'-1⅝	8'-2⅝	28'-6"	28'-7⅝	29'-3"	17'-9"	32'-3"	37'-2⅝	38'-8⅝	26'-5⅝	40'-0"	46'-9⅝	47'-6⅝	36'-7⅝
		8'	9'	10'-9⅝	9'-6"	10'-11⅝	12'-1⅝	0'-2⅝	18'-5"	21'-3⅝	22'-5"	10'-6"	27'-8"	31'-1⅝	32'-8⅝	20'-9½	36'-8"	41'-10⅝	43'-0⅝	31'-1"	45'-2"	52'-1⅝	53'-3⅝	41'-8⅝
			10'	12'-3⅝	9'-8"	11'-2"	12'-3⅝	Ⓐ 0"	18'-8"	21'-6⅝	22'-8⅝	9'-3⅝	27'-8"	31'-11⅝	33'-1⅝	19'-8⅝	36'-8	42'-1⅝	43'-2"	30'-10⅝	45'-8"	52'-8⅝	53'-10⅝	40'-5⅝
		9'	9'	10'-9⅝	10'-6"	12'-1½	13'-3⅝	1'-4⅝	20'-5"	23'-6⅝	24'-8⅝	12'-3⅝	30'-4"	35'-0⅝	36'-2⅝	22'-1⅝	40'-5	47'-7⅝	48'-9⅝	35'-8⅝	50'-2"	57'-11⅝	59'-1"	47'-2"
			10'	12'-3⅝	10'-8"	12'-3½	13'-5⅝	0'-0⅝	20'-5"	23'-10⅝	25'-0⅝	11'-7⅝	30'-8"	35'-4⅝	36'-8⅝	23'-1⅝	40'-5	47'-11⅝	49'-1⅝	34'-3⅝	50'-8"	58'-4"	59'-8"	46'-2⅝
			11'	13'-9⅝	10'-10"	12'-6⅝	13'-8"	Ⓐ 0"	20'-10	24'-0⅝	25'-2⅝	10'-8⅝	30'-10	35'-7⅝	36'-9"	21'-10"	40'-10	47'-7⅝	48'-9⅝	33'-7⅝	50'-10	58'-8⅝	59'-10⅝	44'-11⅝
		10'	9'	10'-9⅝	11'-6"	13'-3⅝	14'-5⅝	2'-6⅝	22'-5"	25'-10⅝	27'-0⅝	15'-3⅝	33'-4"	38'-5⅝	39'-7⅝	27'-8⅝	44'-3"	51'-1⅝	52'-3"	40'-1"	55'-2"	63'-8⅝	64'-10⅝	52'-11⅝
			10'	12'-3⅝	11'-8"	13'-5⅝	14-7⅝	1'-2⅝	22'-8"	26'-2⅝	27'-4"	13'-10⅝	33'-8"	38'-10⅝	40'-0⅝	26'-7⅝	44'-8"	51'-7"	52'-8⅝	39'-3⅝	55'-8"	64'-3⅝	65'-5⅝	52'-0"
			11'	13'-9⅝	11'-10"	13'-8"	14'-9⅝	Ⓐ 0"	22'-10	26'-6⅝	27'-6⅝	12'-7⅝	33'-10	39'-0⅝	40'-2⅝	25'-3⅝	44'-10	51'-9⅝	52'-11"	38'-0"	55'-10	64'-5⅝	65'-7⅝	50'-8½"
			12'	15'-3⅝	12'-0"	13'-10⅝	15'-0⅝	Ⓐ 0"	23'-0"	26'-6⅝	27'-8⅝	11'-3⅝	34'-0	39'-1⅝	40'-5"	24'-0"	45'-0	51'-11⅝	53'-1⅝	36'-8⅝	56'-0"	64'-8"	65'-9⅝	49'-9⅝
		11'	9'	10'-9⅝	12'-6"	14'-5⅝	15'-7"	3'-8"	24'-5"	28'-2⅝	29'-4⅝	17'-5"	36'-4"	41'-11⅝	43'-1⅝	31'-2⅝	49'-3	55'-8⅝	56'-10⅝	44'-11⅝	—	—	—	—
			10'	12'-3⅝	12'-8"	14'-7⅝	15'-9⅝	2'-4⅝	24'-8"	28'-5⅝	29'-7⅝	16'-2⅝	36'-8"	42'-4⅝	43'-6"	30'-0⅝	49'-3	56'-2⅝	57'-4⅝	43'-1⅝	—	—	—	—
			11'	13'-9⅝	12'-10"	14'-9⅝	15'-11⅝	1'-0⅝	24'-10"	28'-8⅝	29'-10"	14'-11"	36'-10	42'-6⅝	43'-8⅝	28'-9⅝	49'-10	56'-4⅝	57'-6⅝	42'-1⅝	—	—	—	—
			12'	15'-3⅝	13'-0"	15'-0⅝	16'-2"	Ⓐ 0"	25'-0	28'-10⅝	30'-0⅝	13'-7⅝	37'-0	42'-8⅝	43'-10⅝	27'-5⅝	49'-0	56'-7"	57'-8⅝	41'-3⅝	—	—	—	—
	12'	9'		10'-9⅝	13'-6"	15'-7⅝	16'-9"	4'-3⅝	26'-5"	30'-2"	31'-8"	19'-8⅝	39'-1"	45'-5"	46'-7"	34'-7⅝	52'-3"	60'-5"	61'-8⅝	49'-6⅝	—	—	—	—
		10'		12'-3⅝	13'-8"	15'-9⅝	16'-11⅝	3'-6⅝	26'-8"	30'-9⅝	31'-11⅝	18'-4⅝	39'-8	45'-9⅝	46'-11⅝	33'-6⅝	52'-8	60'-9⅝	61'-11⅝	48'-6⅝	—	—	—	—
		11'		13'-9⅝	13'-10"	15'-11⅝	17'-1⅝	2'-2⅝	26'-10"	30'-11⅝	32'-1⅝	17'-2⅝	39'-10	46'-0"	47'-1⅝	32'-2⅝	52'-10	61'-0⅝	62'-2"	47'-2⅝	—	—	—	—
		12'		15'-3⅝	14'-0"	16'-2"	17'-3⅝	0'-10⅝	27'-0	31'-2⅝	32'-4"	15'-11"	40'-0	46'-2⅝	47'-4"	30'-11"	53'-0	61'-2⅝	62'-3⅝	45'-11⅝	—	—	—	—

Ⓐ Special case for these boxes. See Detail 'A' and Table 'A' for revised values of F_1, F_2, W_4 and W_5, when apron width is more than 1'-0" and W_3=0. For Details 'A' and Tables 'A' for each slope, see Drawing Nos. W-X302-1, W-X302-2, or W-X303-1, W-X303-2, or W-X304-1, W-X304-2.

NOTE:- This drawing to be used in conjunction with Standard Wing Drawings for 30° Skews for each slope as listed below.

2:1 Slopes	3:1 Slopes	4:1 Slopes
W-X302-1 or W-X302-2	W-X303-1 or W-X303-2	W-X304-1 or W-X304-2.

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos.-

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-130X-0	R-230X-01	R-330X-01	R-430X-01	R-530X-01
	R-230X-02	R-330X-02	R-430X-02	R-530X-02
R-130X-1	R-230X-1	R-330X-1	R-430X-1	R-530X-1
	R-230X-2	R-330X-2		

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS

FOR

REINFORCED CONCRETE BOX CULVERTS

30° SKEW

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 2:1, 3:1 & 4:1 SLOPES

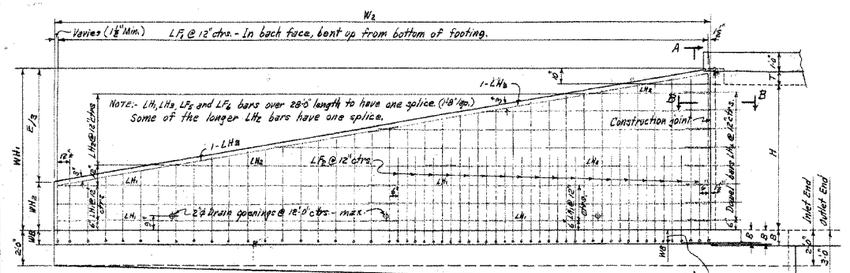
SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER H=2', 3', 4', 5', 6', 7', 8', 9', 10', 11' & 12'.

STANDARD DRAWING NO. W-X30

Designed by:- W.C.H. 5-16-63 Checked by:- FSMS-8-21-63
Drawn by:- W.C.H. 7-15-63 Checked by:-
Quantities by:- Checked by:-

Reshot 3-8-93

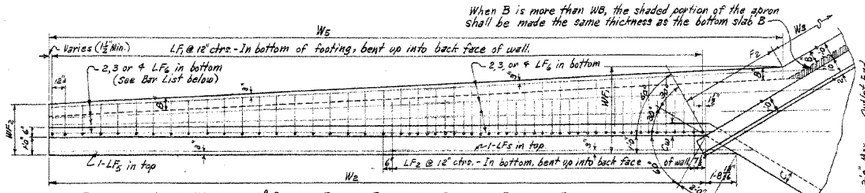
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			338	
JOB No.					



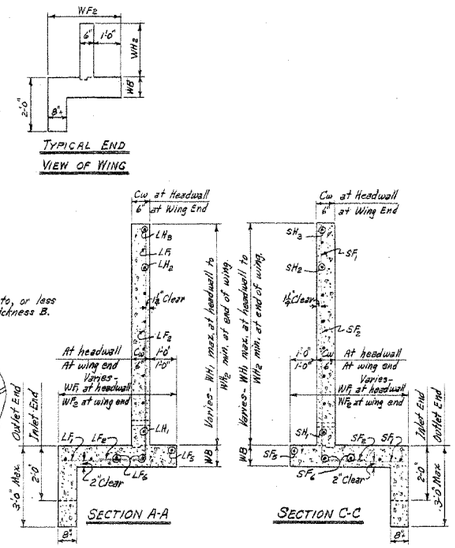
REAR ELEVATION OF LONG WING - 30° SKEW RIGHT FORWARD - SHOWING BACK FACE REINFORCING

WB may be more, equal to, or less than the bottom slab thickness B.

When B is more than WB, the shaded portion of the apron shall be made the same thickness as the bottom slab B

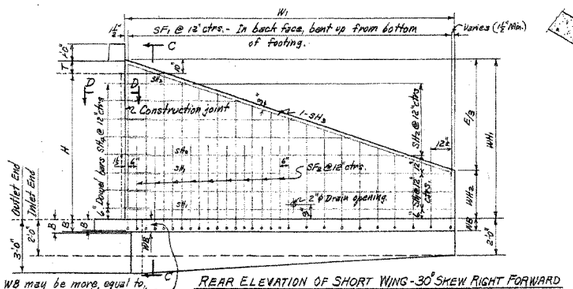


PLAN OF LONG WING - 30° SKEW RIGHT FORWARD - SHOWING FOOTING REINFORCING



SECTION A-A

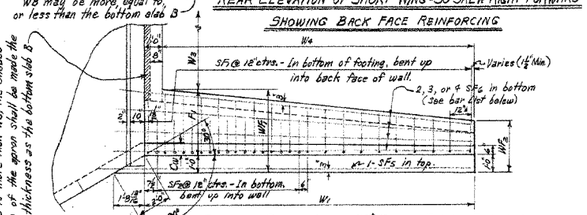
SECTION C-C



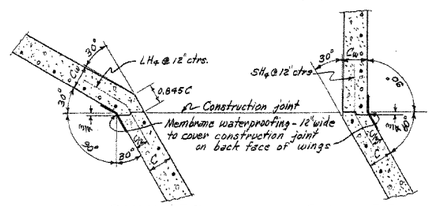
REAR ELEVATION OF SHORT WING - 30° SKEW RIGHT FORWARD SHOWING BACK FACE REINFORCING

WB may be more, equal to, or less than the bottom slab B

What B is more than WB, the shaded portion of the apron shall be made the same thickness as the bottom slab B



PLAN OF SHORT WING - 30° SKEW RIGHT FORWARD SHOWING FOOTING REINFORCING

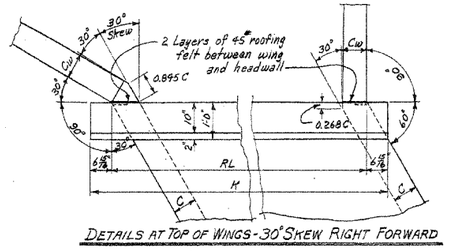


SECTION B-B

SECTION D-D

SECTIONS THRU CONSTRUCTION JOINTS

NOTE:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.



DETAILS AT TOP OF WINGS - 30° SKEW RIGHT FORWARD

REGULAR WING DIMENSIONS - 3:1 SLOPES

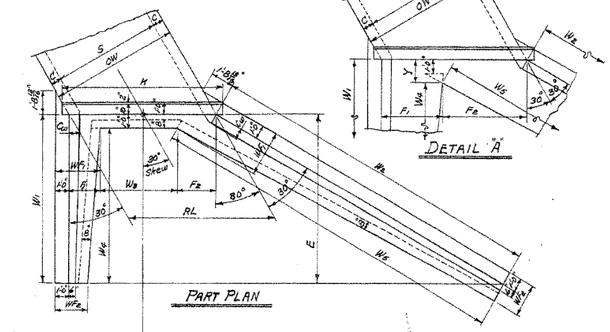
CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING	THICKNESS OF WING AT HDW. & C	WINGWALL HEIGHTS AT HEADWALL	WINGWALL HEIGHTS AT END OF WING	WIDTHS OF WING FOOTINGS AT HEADWALL	WIDTHS OF WING FOOTINGS AT END OF WING	FOOTING DIMENSION PARALLEL WITH HEADWALL SHORT WING	FOOTING DIMENSION PARALLEL WITH HEADWALL LONG WING	PERPENDICULAR DIST. FROM HDW. TO END OF WING	LENGTHS OF WINGWALLS SHORT WING	LENGTHS OF WINGWALLS LONG WING	INSIDE FOOTING DIMENSION SHORT WING	INSIDE FOOTING DIMENSION LONG WING	* QUANTITY PER WING CLASS S CONCRETE INLET END SHORT WING	INLET END LONG WING	OUTLET END SHORT WING	OUTLET END LONG WING
H	WB	Cw	WH₁	WH₂	WF₁	WF₂	F₁	F₂	E	W₁	W₂	W₄	W₅	CU.YD.	CU.YD.	CU.YD.	CU.YD.
2'	7"	6"	2'-10"	0'-8"	2'-6"	2'-0"	1'-4"	0'-11½"	6'-6"	6'-6"	13'-0"	5'-6"	19'-3¾"	0.752	1.599	0.836	1.717
3'	7"	6"	3'-10"	1'-0"	2'-8"	2'-1⅛"	1'-8"	1'-7⅛"	8'-6"	8'-6"	17'-0"	7'-6"	17'-10⅜"	1.130	2.340	1.239	2.565
4'	7"	6"	4'-10"	1'-4"	3'-0"	2'-3"	2'-0"	2'-3⅛"	10'-6"	10'-6"	21'-0"	9'-6"	22'-5⅛"	1.577	3.270	1.711	3.552
5'	7"	6"	5'-10"	1'-8"	3'-4"	2'-4½"	2'-4"	2'-11⅛"	12'-6"	12'-6"	25'-0"	11'-6"	27'-0⅛"	2.093	4.391	2.252	4.680
		7"	5'-10"	1'-8"	3'-4"	2'-4½"	2'-4"	2'-11⅛"	12'-6"	12'-6"	25'-0"	11'-6"	27'-0⅛"	2.179	4.524	2.337	4.862
① 6'	8"	7"	6'-10"	2'-0"	3'-8"	2'-6"	2'-8"	3'-7⅛"	14'-6"	14'-6"	29'-0"	13'-6"	31'-7⅛"	2.908	6.024	3.092	6.419
		8"	6'-10"	2'-0"	3'-8"	2'-6"	2'-8"	3'-7⅛"	14'-6"	14'-6"	29'-0"	13'-6"	31'-7⅛"	3.025	6.272	3.208	6.667
① 7'	8½"	7⅛"	7'-10"	2'-4"	4'-2"	2'-7⅛"	3'-2"	4'-7⅛"	16'-6"	16'-6"	33'-0"	15'-6"	36'-5⅜"	3.811	7.895	4.019	8.350
		8"	7'-10"	2'-4"	4'-2"	2'-7⅛"	3'-2"	4'-7⅛"	16'-6"	16'-6"	33'-0"	15'-6"	36'-5⅜"	3.887	8.057	4.095	8.512
① 8'	9"	8"	8'-10"	2'-8"	4'-8"	2'-9"	3'-8"	5'-7⅛"	18'-6"	18'-6"	37'-0"	17'-6"	41'-4⅜"	4.874	10.097	5.107	10.612

* Quantity per wing does not include headwall or that portion of apron or toewall for the length W_3.

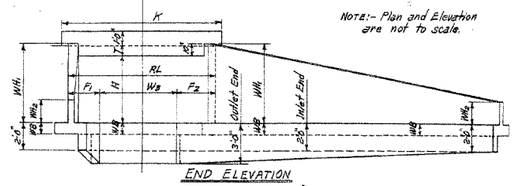
① See Table "A" for special values of F_1 & F_2 and W_4 & W_5 for Single 4'x6', 5'x7' and 6'x8' Box Culverts.

TABLE "A" - DIMENSIONS FOR DETAIL "A"

S	H	F₁	F₂	W₃	Y	W₄	W₅
4'	6'	2'-7⅞"	3'-3⅜"	0"	1'-1⅜"	13'-6⅜"	31'-3⅜"
5'	7'	3'-1⅞"	4'-1"	0"	1'-3⅜"	15'-2⅜"	35'-10⅜"
6'	8'	3'-7⅞"	4'-10⅜"	0"	1'-6⅜"	17'-1⅛"	40'-6"



NOTE:- Plan and Elevation are not to scale.



SINGLE BARREL CULVERT - 30° SKEW RIGHT FORWARD

Details of Culvert with 30° Skew Left Forward is reversed, see Drawing No. W-X.30.

TYPICAL WING DETAILS

NOTE:-
For remainder of General Plans and Elevations of Single, Double, Triple, Quadruple and Quintuple Span Culverts, see Std. Drawing No. W-X.30.
For values of RL, K and W_3 for each box, see above Std. also.

MEMBRANE:- A membrane waterproofing 12" wide, consisting of three mappings of waterproofing asphalt and two alternate layers of treated, cotton fabric, shall be applied to the back face of wing to cover the construction joints of wings.

QUANTITIES

CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	① REINFORCING STEEL - LB. FOR 4 WINGS	CLASS S CONCRETE - 4 WINGS: SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT
					HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS				
S	H	Cw	WB	LB.	CU.YD.	CU.YD.	CU.YD.	CU.YD.	CU.YD.
4'	2'	6"	7"	141	5.80	6.90	8.01	9.12	10.23
	3'	6"	7"	213	8.09	9.18	10.29	11.40	12.51
	4'	6"	7"	327	10.78	11.88	12.99	14.10	15.21
	5'	6"	7"	460	13.90	15.00	16.11	17.22	18.32
	6'	7"	8"	762	18.05	19.99	21.13	22.27	23.41
5'	3'	6"	7"	213	8.33	9.67	11.01	12.36	13.70
	4'	6"	7"	327	11.03	12.36	13.71	15.06	16.40
	5'	6"	7"	460	13.14	15.48	16.83	18.17	19.52
	6'	7"	8"	762	18.11	20.48	21.86	23.24	24.62
	7'	7½"	8½"	1474	24.51	25.94	27.35	28.75	30.16
6'	3'	6"	7"	213	8.57	10.17	11.73	13.33	14.92
	4'	6"	7"	327	11.27	12.86	14.43	16.03	17.62
	5'	6"	7"	460	14.38	15.98	17.55	19.15	20.73
	6'	7"	8"	762	19.35	20.98	22.59	24.21	25.83
	7'	7½"	8½"	1474	24.79	26.44	28.08	29.73	31.38
	8'	8"	9"	1870	31.15	32.87	34.51	36.17	37.83
7'	4'	6"	7"	327	11.52	13.37	15.19	17.05	18.85
	5'	6"	7"	460	14.63	16.49	18.31	20.16	21.97
	6'	7"	8"	762	19.61	21.98	23.32	25.20	27.04
	7'	7½"	8½"	1474	25.05	26.94	28.82	30.71	32.59
	8'	8"	9"	1870	31.47	33.37	35.25	37.16	39.05
8'	4'	6"	7"	327	11.77	13.89	15.97	18.09	20.12
	5'	7"	7"	460	15.94	17.60	19.70	21.83	23.89
	6'	7"	8"	762	19.86	21.98	24.05	26.17	28.20
	7'	7½"	8½"	1474	25.30	27.94	29.58	31.73	33.81
	8'	8"	9"	1870	31.72	33.88	36.00	38.16	40.27
9'	5'	7"	7"	460	15.72	18.13	20.47	22.87	25.15
	6'	7½"	8"	762	20.50	22.93	25.29	27.71	30.01
	7'	7½"	8½"	1474	25.55	27.98	30.34	32.76	35.07
	8'	8"	9"	1870	31.97	34.39	36.76	39.18	41.49
10'	5'	7"	7"	460	15.98	18.65	21.25	23.80	26.42
	6'	7½"	8"	762	20.76	23.45	26.07	28.64	31.28
	7'	7½"	8½"	1474	25.81	28.50	31.12	33.70	36.34
	8'	8"	9"	1870	32.22	34.91	37.54	40.12	42.76
11'	6'	8"	8"	762	21.39	24.38	27.25	30.11	——
	7'	8"	8½"	1474	26.55	29.53	32.41	35.27	——
	8'	8"	9"	1870	32.47	35.45	38.33	41.18	——
12'	6'	8"	8"	762	21.66	24.93	28.05	31.20	——
	7'	8"	8½"	1474	26.81	30.08	33.21	36.36	——
	8'	8"	9"	1870	32.73	35.99	39.13	42.28	——

① For reinforcing steel in Headwalls and Aprons, see Drawing Nos. of Barrel Sections listed below.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.

REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

UNIT STRESSES:-
Class S Concrete (n=10) 1200#/□"
Reinforcing steel 20,000#/□"

NOTE:-
This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos.-

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-130X-0	R-230X-01	R-330X-01	R-430X-01	R-530X-01
	R-230X-02	R-330X-02	R-430X-02	R-530X-02
R-130X-1	R-230X-1	R-330X-1	R-430X-1	R-530X-1
	R-230X-2	R-330X-2		

CLASS S CONCRETE

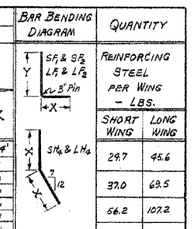
BAR LIST FOR ONE SHORT AND ONE LONG WING - 2 EACH REQUIRED

CLEAR HEIGHT	WING LOCATION	SF₁ & LF₁ BENT: In bottom of footing, bent up into back face of wing. One bar of each length: SIZE	SPACING	No. REQ'D	LENGTHS VARY MAX.	MIN.	X MIN.	X MAX.	Y MIN.	Y MAX.	SF₂ & LF₂ BENT: In bottom of footing, bent up into back face of wing. Alt. with F₁ bars: SIZE	SPACING	No. REQ'D	LENGTH	X	Y	SF₅ & LF₅ STRAIGHT: Longitudinal in top of wing footing heel: SIZE	No. REQ'D	LENGTH	SF₆ & LF₆ STRAIGHT: Longitudinal in bottom of wing footing toe: SIZE	No. REQ'D	LENGTH	SH₁ & LH₁ STRAIGHT: Horizontal in back face of wing: SIZE	SPACING	No. REQ'D	LENGTH	SH₂ & LH₂ STRAIGHT: Horizontal in back face of wing. One bar of each length.* SIZE	SPACING	No. REQ'D	LENGTHS VARY MAX.	MIN.	SH₃ & LH₃ In back face of wing at top - on slope: SIZE	No. REQ'D	LENGTH	SH₄ & LH₄ BENT: Dowels thru construction joint at headwall: SIZE	SPACING	No. REQ'D	LENGTH	X
H	SHORT OR LONG																																											
2'	Short	#3	12"	7	1'-7"	3'-11"	0'-8"	1'-0"	1'-0"	3'-0"	—	—	—	—	—	—	#3	1	9'-0"	#3	2	8'-0"	#3	12"	1	6'-3"	#3	12"	1	—	3'-3"	#3	1	6'-7"	#3	12"	2	2'-8"	1'-4"
	Long	#3	12"	14	1'-5"	3'-11"	0'-8"	1'-0"	0'-10"	3'-0"	—	—	—	—	—	—	#3	1	15'-6"	#3	2	15'-6"	#3	12"	1	—	#3	12"	1	—	6'-6"	#3	1	12'-11"	#3	12"	2	"	"
3'	Short	#3	12"	9	2'-1"	5'-3"	0'-10"	1'-4"	1'-4"	4'-0"	—	—	—	—	—	—	#3	1	11'-0"	#3	2	10'-0"	#3	12"	1	6'-3"	#3	12"	1	6'-3"	3'-3"	#3	1	9'-8"	#3	12"	3	"	"
	Long	#3	12"	18	1'-11"	5'-3"	0'-10"	1'-4"	1'-2"	4'-0"	—	—	—	—	—	—	#3	1	19'-6"	#3	2	20'-2"	#3	12"	1	16'-8"	#3	12"	2	12'-6"	6'-6"	#3	1	14'-11"	#3	12"	3	"	"
4'	Short	#3	12"	11	2'-6"	6'-7"	0'-11"	1'-8"	1'-8"	5'-0"	—	—	—	—	—	—	#3	1	13'-0"	#3	3	12'-0"	#3	12"	1	10'-3"	#3	12"	3	9'-8"	3'-3"	#3	1	10'-9"	#3	12"	4	"	"
	Long	#3	12"	22	2'-4"	6'-6"	0'-11"	1'-7"	1'-6"	5'-0"	—	—	—	—	—	—	#3	1	23'-6"	#3	3	24'-6"	#3	12"	1	20'-8"	#3	12"	3	18'-6"	6'-6"	#3	1	21'-0"	#3	12"	4	"	"
5'	Short	#3	12"	13	2'-11"	7'-11"	1'-0"	2'-0"	2'-0"	6'-0"	#3	12"	3	3'-6"	1'-1"	2'-6"	#3	1	15'-0"	#3	3	14'-0"	#3	12"	2	12'-3"	#3	12"	3	9'-3"	3'-3"	#3	1	12'-11"	#3	12"	5	"	"
	Long	#3	12"	26	2'-9"	7'-10"	1'-0"	1'-11"	1'-10"	6'-0"	#3	12"	6	3'-6"	1'-11"	2'-6"	#3	1	27'-6"	#3	6	15'-7"	#3	12"	2	24'-8"	#3	12"	3	18'-6"	6'-6"	#3	1	25'-1"	#3	12"	5	"	"
6'	Short	#4	12"	15	3'-6"	9'-4"	1'-2"	2'-9"	2'-5"	7'-1"	#3	12"	3	4'-6"	1'-4"	3'-3"	#3	1	17'-0"	#3	3	16'-0"	#3	12"	2	14'-3"	#3	12"	4	12'-3"	3'-3"	#3	1	15'-0"	#3	12"	6	"	"
	Long	#4	12"	30	3'-4"	9'-3"	1'-2"	2'-8"	2'-3"	7'-1"	#3	12"	6	4'-6"	1'-4"	3'-3"	#3	2	16'-8"	#3	6	18'-0"	#3	12"	4	15'-8"	#3	12"	4	24'-6"	6'-6"	#3	2	15'-5"	#3	12"	6	2'-8"	1'-4"
7'	Short	#4	12"	17	3'-11"	10'-10"	1'-3"	2'-10"	2'-9"	8'-1"	#4	12"	6	5'-6"	1'-7"	4'-0"	#4	1	19'-0"	#4	4	18'-0"	#4	12"	2	16'-3"	#4	12"	5	15'-3"	3'-3"	#4	1	17'-1"	#4	12"	7	3'-6"	1'-9"
	Long	#4	12"	34	3'-9"	10'-9"	1'-3"	2'-8"	2'-7"	8'-1"	#4	12"	12	5'-6"	1'-7"	4'-0"	#4	2	18'-8"	#4	8	20'-9"	#4	12"	4	17'-2"	#4	12"	5	30'-6"	6'-6"	#4	2	17'-5"	#4	12"	7	"	"
8'	Short	#4	12"	19	4'-6"	12'-5"	1'-5"	3'-4"	3'-2"	9'-2"	#4	12"	9	6'-6"	1'-10"	4'-9"	#4	1	21'-0"	#4	4	20'-0"	#4	12"	3	18'-3"	#4	12"	5	15'-3"	3'-3"	#4	1	19'-3"	#4	12"	8	"	"
	Long	#4	12"	38	4'-6"	12'-3"	1'-5"	3'-2"	3'-0"	9'-2"	#4	12"	18	6'-6"	1'-10"	4'-9"	#4	2	20'-8"	#4	8	22'-9"	#4	12"	6	19'-2"	#4	12"	5	30'-6"	6'-6"	#4	2	19'-6"	#4	12"	8	3'-6"	1'-9"

NOTE:- Bars for short wing shall be marked with prefix letter "S", while those for long wing shall be marked with letter "L".

* Length without splice. Bars over 28'-0" length may be spliced (1'-8" lap.)

BAR BENDING DIAGRAM



NOTE:- Dimensions are to bar centers.

QUANTITY: REINFORCING STEEL PER WING - LBS. SHORT WING	LONG WING
29.7	45.6
37.0	69.5
56.2	107.2
78.0	152.2
127.8	253.1
267.0	499.8
312.9	622.3

REVISIONS:- Membrane added. 5-10-66 W.C.H.

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS 30° SKEW

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES

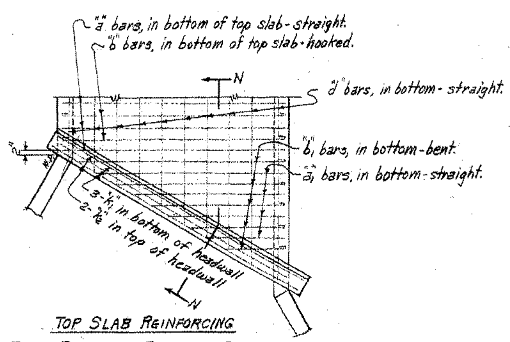
SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

STANDARD DRAWING No. W-X303-1

Designed By:- W.C.H. 5-13-63 Checked By:- RWS. 8-19-63
Drawn By:- W.C.H. 7-26-63 Checked By:- DMT 7-15-64
Quantities By:- W.C.H. 1-7-64 Checked By:- DMT 7-15-64

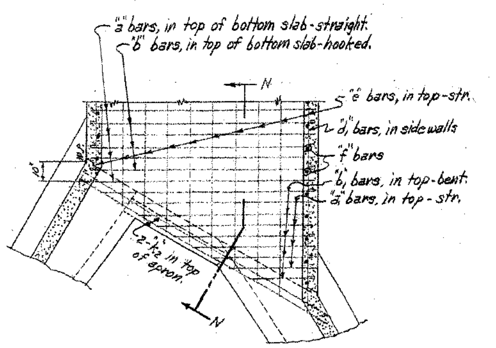
Reshot 3-8-93

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			339	
JOB No.					



TOP SLAB REINFORCING

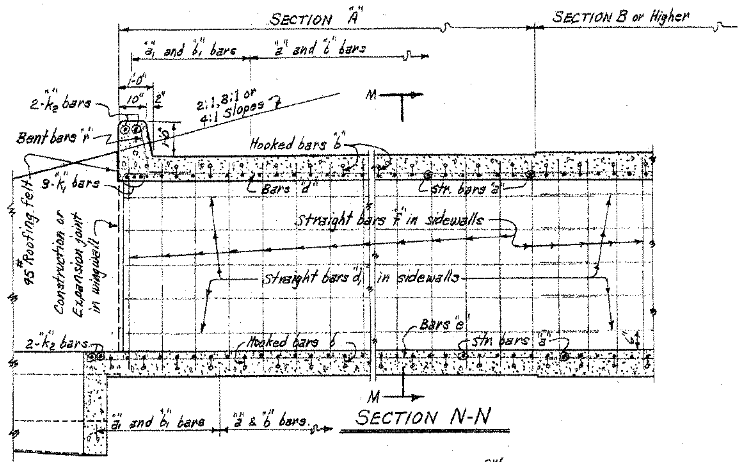
PART PLAN AT END OF CULVERT



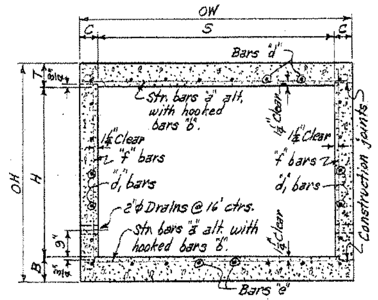
BOTTOM SLAB REINFORCING

PART PLAN AT END OF CULVERT

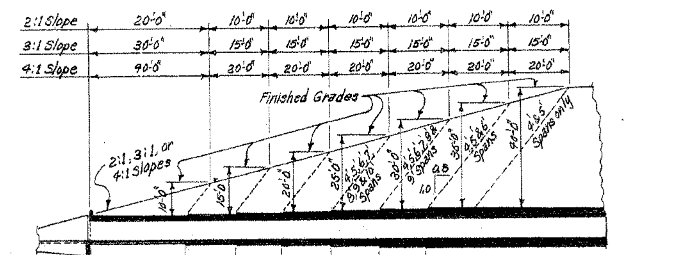
NOTE:- The "d", "d1" and "e" bars vary in length. They should extend 1'-9" min. into SECTION "B".



SECTION N-N



TYPICAL SECTION M-M

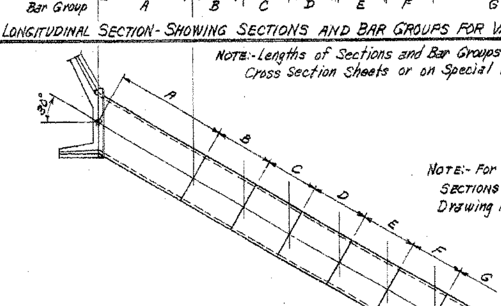


Slope		A	B	C	D	E	F	Mid-Section
2:1 Slope	Sections	A=13'-0"	B=6'-0"	C=6'-0"	D=6'-0"	E=6'-0"	F=6'-0"	Mid-Section G - Varies
	Bar Group	A	B	C	D	E	F	G
3:1 Slope	Sections	A=22'-0"	B=11'-0"	C=11'-0"	D=11'-0"	E=11'-0"	F=11'-0"	Mid-Section G - Varies
	Bar Group	A	B	C	D	E	F	G
4:1 Slope	Sections	A=32'-0"	B=16'-0"	C=16'-0"	D=16'-0"	E=16'-0"	F=16'-0"	Mid-Section G - Varies
	Bar Group	A	B	C	D	E	F	G

These lengths are perpendicular to ℄ of roadway. See Table of Show Lengths below.

TYPICAL LONGITUDINAL SECTION - SHOWING SECTIONS AND BAR GROUPS FOR VARIOUS DEPTHS OF COVER

NOTE:- Lengths of Sections and Bar Groups are to be shown on Cross Section Sheets or on Special Culvert Layout Sheet.



NOTE:- For Details and Bar Lists for Sections B thru G, see Barrel Drawing Nos. R-100X-X.1 or R-100X-X.2.

PART PLAN

LENGTH OF SECTIONS ON 30° SKEW

SLOPE	2:1		3:1		4:1	
SECTIONS	A	B, C, D, E & F	A	B, C, D, E & F	A	B, C, D, E & F
LENGTHS	13'-10¼"	6'-11⅛"	25'-4¾"	12'-8⅜"	36'-11¼"	18'-5¾"

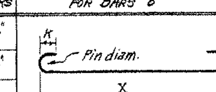
NOTE:- Minimum ℄ Length of SECTION "A" on 30° Skew = (0.288675 OW + 2").

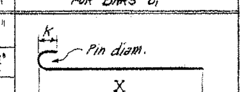
SECTIONS AND BAR GROUPS TO BE USED FOR VARIOUS DEPTHS OF COVER

DEPTHS OF COVER	Sections & Bar Groups for End Sections A	B	C	D	E	F	MID-SECTION AND BAR GROUP
5.0' to 9.5'	A						A
10.0' to 14.5'	A						B
15.0' to 19.5'	A	B					C
20.0' to 24.5'	A	B	C				D
25.0' to 29.5'	A	B	C	D			E
30.0' to 34.5'	A	B	C	D	E		F
35.0' to 40.0'	A	B	C	D	E	F	G

OR ALT.

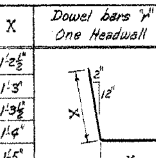
DEPTHS OF COVER	Sections & Bar Groups for End Sections A	B	C	D	E	F	MID-SECTION AND BAR GROUP
5.0' to 9.5'	A						A
10.0' to 14.5'	A						B
15.0' to 19.5'	A	B					C
20.0' to 24.5'	A	2@C					D
25.0' to 29.5'	A	B	2@D				E
30.0' to 34.5'	A	2@C		2@E			F
35.0' to 40.0'	A	B	2@D		2@F		G

BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS	BENDING DIAGRAM FOR BARS "b"
#4	2"	4"	0'-10½"	
#5	2½"	4¼"	0'-11½"	
#6	3"	5"	1'-2"	
#7	3½"	5¾"	1'-4"	

BAR SIZE	PIN DIAM.	K	ADD FOR 1 HOOK	BENDING DIAGRAM FOR BARS "b1"
#4	2"	4"	0'-5¼"	
#5	2½"	4¼"	0'-5¾"	
#6	3"	5"	0'-7"	
#7	3½"	5¾"	0'-8"	

NOTE:- Dimensions are to centers of bars. ("b" and "b1")

DOWEL BARS FOR ONE HEADWALL

SPAN	SIZE	SPACING	No. REQ'D	LENGTH	X	Dowel bars "r" in One Headwall
4'	#4	12"±	6	2'-5"	1'-2½"	
5'	#4	12"±	8	2'-6"	1'-3"	
6'	#4	12"±	9	2'-7"	1'-3½"	
7'	#4	12"±	10	2'-8"	1'-4"	
8'	#4	12"±	11	2'-10"	1'-5"	
9'	#4	12"±	13	3'-0"	1'-6"	
10'	#4	12"±	14	3'-2"	1'-7"	

DESIGN LIVE LOAD

H20-S16 LOADING A.A.S.H.O. 1961

AND

SPECIAL MILITARY LOADING

Two 24,000 Lb. Axles @ 4'-0" ctrs.

UNIT STRESSES:-

Class S Concrete (n=10) 1200#/□"
Reinforcing Steel 20,000#/□"

GENERAL NOTES

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.

REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls and slabs shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

BARREL DIMENSIONS / * QUANTITIES - ONE SECTION "A"

SECTION "A" = 10'-0" (Max. Design Depth of Cover D)

Clear Spans S	Clear Height H	Sq.Ft. Opening A	Overall Width OW	Thickness of Top Slab T	Thickness of Sidewalls C	Thickness of Bottom Slab B	Overall Height OH	Roadway Length RL	Length of Headwall K	Class S Concrete, Barrel Only 2:1 Cu.Yd.	3:1 Cu.Yd.	4:1 Cu.Yd.	Reinforcing Steel, Barrel, Apron and Headwall 2:1 Lb.	3:1 Lb.	4:1 Lb.
1 @ 4'	2'	8	5'-0"	6½"	6"	6½"	3'-1"	5'-9¼"	6'-11⅛"	3.81	6.98	10.16	453	764	1074
	3'	12	5'-0"		6"		4'-1"	"	"	4.32	7.92	11.53	492	834	1175
	4'	16	5'-0"		6"		5'-1"	"	"	4.84	8.86	12.89	531	904	1276
	5'	20	5'-0"		6"		6'-1"	"	"	5.35	9.80	14.26	571	975	1377
	6'	24	5'-2"		7"		7'-1"	5'-11⅝"	7'-1½"	6.47	11.86	17.25	614	1053	1492
1 @ 5'	3'	15	6'-0"	7"	6"	7"	4'-2"	6'-11⅝"	8'-1"	5.13	9.40	13.67	687	1183	1693
	4'	20	6'-0"		6"		5'-2"	"	"	5.64	10.34	15.03	726	1253	1794
	5'	25	6'-0"		6"		6'-2"	"	"	6.15	11.28	16.40	765	1323	1895
	6'	30	6'-2"		7"		7'-2"	7'-1½"	8'-3¼"	7.29	13.36	19.43	816	1413	2024
	7'	35	6'-3"		7½"		8'-2"	7'-2⅝"	8'-4½"	8.23	15.09	21.94	899	1525	2171
1 @ 6'	3'	18	7'-0"	7½"	6"	7½"	4'-3"	8'-1"	9'-2⅞"	6.03	11.05	16.07	894	1538	2192
	4'	24	7'-0"		6"		5'-3"	"	"	6.54	11.99	17.44	934	1609	2293
	5'	30	7'-0"		6"		6'-3"	"	"	7.05	12.93	18.80	978	1679	2394
	6'	36	7'-2"		7"		7'-3"	8'-3¼"	9'-5⅛"	8.19	15.01	21.83	1027	1773	2529
	7'	42	7'-3"		7½"		8'-3"	8'-4⅜"	9'-6⅜"	9.14	16.76	24.38	1105	1908	2727
	8'	48	7'-4"		8"		9'-3"	8'-5⅝"	9'-7½"	10.18	18.67	27.15	1242	2156	3080
1 @ 7'	4'	28	8'-0"	8"	6"	8½"	5'-4½"	9'-2⅞"	10'-4¾"	7.70	14.12	20.54	1054	1815	2565
	5'	35	8'-0"		6"		6'-4½"	"	"	8.22	15.06	21.90	1094	1885	2666
	6'	42	8'-2"		7"		7'-4½"	9'-5¼"	10'-7"	9.35	17.14	24.93	1147	1979	2800
	7'	49	8'-3"		7½"		8'-4½"	9'-6½"	10'-8⅛"	10.31	18.89	27.48	1210	2088	2956
	8'	56	8'-4"		8"		9'-4½"	9'-7½"	10'-9⅜"	11.35	20.80	30.25	1282	2263	3234
	9'	63	8'-6"		9"		10'-4½"	9'-9¾"	10'-11⅝"	12.93	23.69	34.46	1432	2484	3525
1 @ 8'	4'	32	9'-0"	8½"	6"	9½"	5'-6"	10'-4⅞"	11'-6½"	8.98	16.46	23.94	1293	2219	3141
	5'	40	9'-2"		7"		6'-6"	10'-7"	11'-8⅝"	10.04	18.41	26.78	1362	2329	3294
	6'	48	9'-2"		7"		7'-6"	"	"	10.65	19.53	28.41	1401	2400	3395
	7'	56	9'-3"		7½"		8'-6"	10'-8¼"	11'-10"	11.61	21.28	30.95	1438	2474	3506
	8'	64	9'-4"		8"		9'-6"	10'-9⅜"	11'-11⅛"	12.66	23.21	33.76	1584	2735	3884
	9'	72	9'-6"		9"		10'-6"	10'-11⅝"	12'-1⅜"	14.24	26.11	37.97	1683	2907	4128
	10'	80	9'-8"		10"		11'-6"	11'-2"	12'-3¾"	15.99	29.31	42.63	1789	3089	4398
1 @ 9'	5'	45	10'-2"	9½"	7"	10½"	6'-8"	11'-8⅞"	12'-10⅝"	11.69	21.43	31.18	1674	2940	4221
	6'	54	10'-3"		7½"		7'-8"	11'-10"	13'-0"	12.61	23.11	33.61	1792	3096	4416
	7'	63	10'-3"		7½"		8'-8"	"	"	13.26	24.30	35.35	1831	3166	4517
	8'	72	10'-4"		8"		9'-8"	11'-11⅛"	13'-1"	14.31	26.23	38.16	1981	3435	4905
	9'	81	10'-6"		9"		10'-8"	12'-1⅛"	13'-3⅛"	15.91	29.15	42.40	2085	3615	5161
	10'	90	10'-8"		10"		11'-8"	12'-3⅞"	13'-5¾"	17.68	32.41	47.13	2196	3806	5445
	11'	99	10'-10"		11"		12'-8"	12'-6⅛"	13'-8"	19.62	35.96	52.30	2357	4104	5869
1 @ 10'	5'	50	11'-2"	10½"	7"	11½"	6'-10"	12'-10⅜"	14'-0½"	13.49	24.74	35.98	1980	3417	4898
	6'	60	11'-3"		7½"		7'-10"	12'-11⅞"	14'-1⅜"	14.44	26.46	38.49	2047	3522	5042
	7'	70	11'-3"		7½"		8'-10"	"	"	15.07	27.63	40.19	2103	3621	5183
	8'	80	11'-4"		8"		9'-10"	13'-1"	14'-3"	16.14	29.59	43.03	2224	3852	5524
	9'	90	11'-6"		9"		10'-10"	13'-3⅜"	14'-5½"	17.75	32.53	47.32	2298	3981	5658
	10'	100	11'-8"		10"		11'-10"	13'-5⅜"	14'-7½"	19.52	35.78	52.05	2445	4231	6024
	11'	110	11'-10"		11"		12'-10"	13'-8"	14'-9¾"	21.47	39.36	57.25	2609	4534	6455
	12'	120	12'-0"		12"		13'-10"	13'-10⅛"	15'-0¼"	23.61	43.27	62.94	2758	4790	6817

* For remainder of quantities see Std. Wing and Barrel Drawings listed below. Total steel quantities listed above include one lap of longitudinal bars.

NOTE:- This drawing to be used in conjunction with Standard Wing Drawing Nos. W-X302-1 or W-X302-2, W-X303-1 or W-X303-2, and W-X304-1 or W-X304-2. Also W-X30.
For Barrels of 4, 5 & 6' Spans, See Drawing No. R-100X-X.1.
For Barrels of 7, 8, 9 & 10' Spans, See Drawing No. R-100X-X.2.

BAR LIST FOR SECTION "A" ON 30° SKEW - ONE END ONLY.

Section & Bar Group: SECTION "A" & BAR GROUP "A"; Length of Section: 2:1 = 13'-10¼", 3:1 = 25'-4¾", 4:1 = 36'-11¼"; Depth of Cover D: 0'-0" TO 10'-0" MAXIMUM.

"a" bars — Straight — In Top and Bottom Slabs of Barrel. "a1" bars ▼ — Straight — In Top and Bottom Slab of Barrel - (Two of each Length.) "b" bars — Bent - See Diagrams at Right — In Top and Bottom Slabs of Barrel - hooked. Alternate with "a" bars.

S	H	"a" Size	"a" Spacing	"a" No. Req'd 2:1	3:1	4:1	"a" Length	"a1" Size	"a1" Spacing	"a1" No. Req'd	"a1" Length Max.	"a1" Length Min.	"b" Size	"b" Spacing	"b" No. Req'd 2:1	3:1	4:1	"b" Length	"b" X
1 @ 4'	2'	#4	12"	27	49	73	4'-9"	#4	12"	2	3'-0"	—	#4	12"	25	49	71	5'-7"	4'-8½"
	3'			27	49	73	"			2	"	—			25	49	71	"	"
	4'			27	49	73	"			2	"	—			25	49	71	"	"
	5'			27	49	73	"			2	"	—			25	49	71	"	"
	6'			27	49	73	4'-11"			2	3'-2"	—			25	49	71	5'-9"	4'-10½"
1 @ 5'	3'	#5	12"	25	49	73	5'-9"	#5	12"	4	4'-0"	2'-3"	#5	12"	25	47	71	6'-8"	5'-8½"
	4'			25	49	73	"			4	"	"			25	47	71	"	"
	5'			25	49	73	"			4	"	"			25	47	71	"	"
	6'			25	49	73	5'-11"			4	4'-2"	2'-5"			25	47	71	6'-10"	5'-10½"
	7'			25	49	73	6'-0"			4	4'-3"	2'-6"			25	47	71	6'-11"	5'-11½"
1 @ 6'	3'	#5	12"	25	49	71	6'-9"	#5	12"	4	5'-0"	3'-3"	#6	12"	25	47	71	7'-10"	6'-8"
	4'			25	49	71	"			4	"	"			25	47	71	"	"
	5'			25	49	71	"			4	"	"			25	47	71	"	"
	6'			25	49	71	6'-11"			4	5'-2"	3'-5"			25	47	71	8'-0"	6'-10"
	7'			25	49	71	7'-0"			4	5'-3"	3'-6"			25	47	71	8'-1"	6'-11"
	8'			25	49	71	7'-1"			4	5'-4"	3'-7"			25	47	71	8'-2"	7'-0"
1 @ 7'	4'	#5	12"	25	47	71	7'-9"	#5	12"	6	6'-0"	2'-6"	#6	12"	23	47	69	8'-10"	7'-8"
	5'			25	47	71	"			6	"	"			23	47	69	"	"
	6'			25	47	71	7'-11"			6	6'-2"	2'-8"			23	47	69	9'-0"	7'-10"
	7'			25	47	71	8'-0"			6	6'-3"	2'-9"			23	47	69	9'-1"	7'-11"
	8'			25	47	71	8'-1"			6	6'-4"	2'-10"			23	47	69	9'-2"	8'-0"
	9'			25	47	71	8'-3"			6	6'-6"	3'-0"			23	47	69	9'-4"	8'-2"
1 @ 8'	4'	#6	12"	25	47	71	8'-9"	#6	12"	6	7'-0"	3'-6"	#6	12"	23	47	69	9'-10"	8'-8"
	5'			25	47	71	8'-11"			6	7'-2"	3'-8"			23	47	69	10'-0"	8'-10"
	6'			25	47	71	"			6	"	"			23	47	69	"	"
	7'			25	47	71	9'-0"			6	7'-3"	3'-9"			23	47	69	10'-1"	8'-11"
	8'			25	47	71	9'-1"			6	7'-4"	3'-10"			23	47	69	10'-2"	9'-0"
	9'			25	47	71	9'-3"			6	7'-6"	4'-0"			23	47	69	10'-4"	9'-2"
	10'			25	47	71	9'-5"			6	7'-8"	4'-2"			23	47	69	10'-6"	9'-4"
1 @ 9'	5'	#6	11"	25	51	75	9'-11"	#6	11"	8	8'-4"	3'-7"	#7	11"	25	49	75	11'-2"	9'-10"
	6'			25	51	75	10'-0"			8	8'-5"	3'-8"			25	49	75	11'-3"	9'-11"
	7'			25	51	75	"			8	"	"			25	49	75	"	"
	8'			25	51	75	10'-1"			8	8'-6"	3'-9"			25	49	75	11'-4"	10'-0"
	9'			25	51	75	10'-3"			8	8'-8"	3'-11"			25	49	75	11'-6"	10'-2"
	10'			25	51	75	10'-5"			8	8'-10"	4'-1"			25	49	75	11'-8"	10'-4"
	11'			25	51	75	10'-7"			8	9'-0"	4'-3"			25	49	75	11'-10"	10'-6"
1 @ 10'	5'	#7	12"	23	45	69	10'-11"	#7	12"	10	9'-2"	2'-2"	#7	12"	21	45	69	12'-2"	10'-10"
	6'			23	45	69	11'-0"			10	9'-3"	2'-3"			21	45	69	12'-3"	10'-11"
	7'			23	45	69	"			10	"	"			21	45	69	"	"
	8'			23	45	69	11'-1"			10	9'-4"	2'-4"			21	45	69	12'-4"	11'-0"
	9'			23	45	69	11'-3"			10	9'-6"	2'-6"			21	45	67	12'-6"	11'-2"
	10'			23	45	69	11'-5"			10	9'-8"	2'-8"			21	45	67	12'-8"	11'-4"
	11'			23	45	69	11'-7"			10	9'-10"	2'-10"			21	45	67	12'-10"	11'-6"
	12'			23	45	69	11'-9"			10	10'-0"	3'-0"			21	45	67	13'-0"	11'-8"

"b1" bars ▼ — Bent - See Diagrams at Right — In Top and Bottom Slabs of Barrel - one end hooked. (Two of each Length) Alternate with "a1" bars. "d" bars — Straight — Longitudinal in Top Slab of Barrel. "d1" bars — Longitudinal in Sidewalls. "e" bars — Longitudinal in Bottom Slab of Barrel. "f" bars — Straight — Verticals in Sidewalls. "k1" bars ▼ — Straight — In Bottom of Headwall. "k2" bars ▼ — In Top of Headwall and Apron. (2 Each)

Lengths of "d", "d1" and "e" bars: Lengths Vary - Average Length; "d" bars: 2:1 = 15'-6", 3:1 = 27'-1", 4:1 = 38'-8"; "d1" bars: 2:1 = 15'-6", 3:1 = 27'-1", 4:1 = 38'-8"; "e" bars: 2:1 = 16'-8", 3:1 = 28'-3", 4:1 = 39'-10".

S	H	"b1" Size	"b1" Spacing	"b1" No. Req'd	"b1" Length Max.	"b1" Length Min.	"b1" X Max.	"b1" X Min.	"d" Size	"d" Spacing	"d" No. Req'd	"d1" Size	"d1" Spacing	"d1" No. Req'd	"e" Size	"e" Spacing	"e" No. Req'd	"f" Size	"f" Spacing	"f" No. Req'd 2:1	3:1	4:1	"f" Length	"k1" Size	"k1" No. Req'd	"k1" Length	"k2" Size	"k2" No. Req'd	"k2" Length
1 @ 4'	2'	#4	12"	4	4'-3"	2'-6"	3'-10"	2'-1"	#4	12"	5	#4	12"	4	#4	12"	5	#4	12"	28	51	74	2'-10"	#5	3	5'-6"	#5	4	6'-8"
	3'			4	"	"	"	"			5			6			5			28	51	74	3'-10"		3	"		4	"
	4'			4	"	"	"	"			5			8			5			28	51	74	4'-10"		3	"		4	"
	5'			4	"	"	"	"			5			10			5			28	51	74	5'-10"		3	"		4	"
	6'			4	4'-5"	2'-8"	4'-0"	2'-3"			5			12			5			28	51	74	6'-10"		3	5'-8"		4	6'-10"
1 @ 5'	3'	#5	12"	4	5'-4"	3'-7"	4'-10"	3'-1"	#4	12"	6	#4	12"	6	#4	12"	6	#4	12"	28	51	74	3'-11"	#5	3	6'-8"	#5	4	7'-10"
	4'			4	"	"	"	"			6			8			6			28	51	74	4'-11"		3	"		4	"
	5'			4	"	"	"	"			6			10			6			28	51	74	5'-11"		3	"		4	"
	6'			4	5'-6"	3'-9"	5'-0"	3'-3"			6			12			6			28	51	74	6'-11"		3	6'-10"		4	8'-0"
	7'			4	5'-7"	3'-10"	5'-1"	3'-4"			6			14			6		10"	34	61	89	7'-11"		3	6'-11"		4	8'-1"
1 @ 6'	3'	#6	12"	6	6'-5"	2'-11"	5'-10"	2'-4"	#4	12"	7	#4	12"	6	#4	12"	7	#4	12"	28	51	74	4'-0"	#5	3	7'-10"	#5	4	9'-0"
	4'			6	"	"	"	"			7			8			7			28	51	74	5'-0"		3	"		4	"
	5'			6	"	"	"	"			7			10			7			28	51	74	6'-0"		3	"		4	"
	6'			6	6'-7"	3'-1"	6'-0"	2'-6"			7			12			7			28	51	74	7'-0"		3	8'-0"		4	9'-2"
	7'			6	6'-8"	3'-2"	6'-1"	2'-7"			7			14			7		10"	34	61	89	8'-0"		3	8'-1"		4	9'-3"
	8'			6	6'-9"	3'-3"	6'-2"	2'-8"			7			16			7	#5	11"	31	56	81	9'-0"		3	8'-2"		4	9'-4"
1 @ 7'	4'	#6	12"	6	7'-5"	3'-11"	6'-10"	3'-4"	#4	12"	8	#4	12"	8	#4	12"	8	#4	12"	28	51	74	5'-1"	#6	3	9'-0"	#6	4	10'-2"
	5'			6	"	"	"	"			8			10			8			28	51	74	6'-1"		3	"		4	"
	6'			6	7'-7"	4'-1"	7'-0"	3'-6"			8			12			8			28	51	74	7'-1"		3	9'-2"		4	10'-4"
	7'			6	7'-8"	4'-2"	7'-1"	3'-7"			8			14			8		11"	31	56	81	8'-1"		3	9'-3"		4	10'-5"
	8'			6	7'-9"	4'-3"	7'-2"	3'-8"			8			16			8	#5	12"	28	51	74	9'-1"		3	9'-4"		4	10'-6"
	9'			6	7'-11"	4'-5"	7'-4"	3'-10"			8			18			8		11"	31	56	81	10'-1"		3	9'-6"		4	10'-8"
1 @ 8'	4'	#6	12"	8	8'-5"	3'-2"	7'-10"	2'-7"	#4	12"	9	#4	12"	8	#4	12"	9	#4	12"	28	51	74	5'-3"	#6	3	10'-1"	#6	4	11'-3"
	5'			8	8'-7"	3'-4"	8'-0"	2'-9"			9			10			9			28	51	74	6'-3"		3	10'-4"		4	11'-6"
	6'			8	"	"	"	"			9			12			9			28	51	74	7'-3"		3	"		4	"
	7'			8	8'-8"	3'-5"	8'-1"	2'-10"			9			14			9			28	51	74	8'-3"		3	10'-5"		4	11'-7"
	8'			8	8'-9"	3'-6"	8'-2"	2'-11"			9			16			9	#5	12"	28	51	74	9'-3"		3	10'-6"		4	11'-8"
	9'			8	8'-11"	3'-8"	8'-4"	3'-1"			9			18			9		11"	31	56	81	10'-3"		3	10'-8"		4	11'-10"
	10'			8	9'-1"	3'-10"	8'-6"	3'-3"			9			20			9		10"	34	61	89	11'-3"		3	10'-11"		4	12'-0"
1 @ 9'	5'	#7	11"	10	9'-9"	3'-5"	9'-1"	2'-9"	#4	12"	10	#4	12"	10	#4	12"	10	#4	12"	28	51	74	6'-5"	#6	3	11'-5"	#6	4	12'-7"
	6'			10	9'-10"	3'-6"	9'-2"	2'-10"			10			12			10			28	51	74	7'-5"		3	11'-7"		4	12'-9"
	7'			10	"	"	"	"			10			14			10			28	51	74	8'-5"		3	"		4	"
	8'			10	9'-11"	3'-7"	9'-3"	2'-11"			10			16			10	#5	12"	28	51	74	9'-5"		3	11'-8"		4	12'-10"
	9'			10	10'-1"	3'-9"	9'-5"	3'-1"			10			18			10		11"	31	56	81	10'-5"		3	11'-10"		4	13'-0"
	10'			10	10'-3"	3'-11"	9'-7"	3'-3"			10			20			10		10"	34	61	89	11'-5"		3	12'-1"		4	13'-2"
	11'			10	10'-5"	4'-1"	9'-9"	3'-5"			10			22			10	#6	12"	28	51	74	12'-5"		3	12'-3"		4	13'-5"
1 @ 10'	5'	#7	12"	10	10'-8"	3'-8"	10'-0"	3'-0"	#4	12"	11	#4	12"	10	#4	12"	11	#4	12"	28	51	74	6'-7"	#7	3	12'-7"	#7	4	13'-9"
	6'			10	10'-9"	3'-9"	10'-1"	3'-1"			11			12			11			28	51	74	7'-7"		3	12'-8"		4	13'-10"
	7'			10	"	"	"	"			11			14			11		11"	31	56	81	8'-7"		3	"		4	"
	8'			10	10'-10"	3'-10"	10'-2"	3'-2"			11			16			11	#5	12"	28	51	74	9'-7"		3	12'-10"		4	14'-0"
	9'			10	11'-0"	4'-0"	10'-4"	3'-4"			11			18			11			28	51	74	10'-7"		3	13'-0"		4	14'-2"
	10'			10	11'-2"	4'-2"	10'-6"	3'-6"			11			20			11		10"	34	61	89	11'-7"		3	13'-2"		4	14'-4"
	11'			10	11'-4"	4'-4"	10'-8"	3'-8"			11			22			11	#6	12"	28	51	74	12'-7"		3	13'-5"		4	14'-6"
	12'			10	11'-6"	4'-6"	10'-10"	3'-10"			11			24			11		11"	31	56	81	13'-7"		3	13'-7"		4	14'-9"

▼ These bars are in the skewed portion of barrel only. The length of "a1" bars and overall length X of "b1" bars vary by 1'-9" for 12" spacing and 1'-7" for 11" spacing.

Designed by- W.C.H. 9-5-62 Checked by- R.H.S. 11-8-62
Drawn by- W.C.H. 1-24-64 Checked by-
Quantities by- W.C.H. 4-21-64 Checked by-

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS

30° SKEW - SECTIONS "A" ONLY

4, 5, 6, 7, 8, 9 & 10' SPANS SINGLES

2:1, 3:1 OR 4:1 SLOPES OVER 5'-0" COVER

STANDARD DRAWING NO. R-130X-1