"A FULLY CONTROLLED ACCESS FACILITY"

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

CONSTRUCTION PLANS

HWY. 22 - I-40 (F)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE 540 SECTIONS 1 & 2

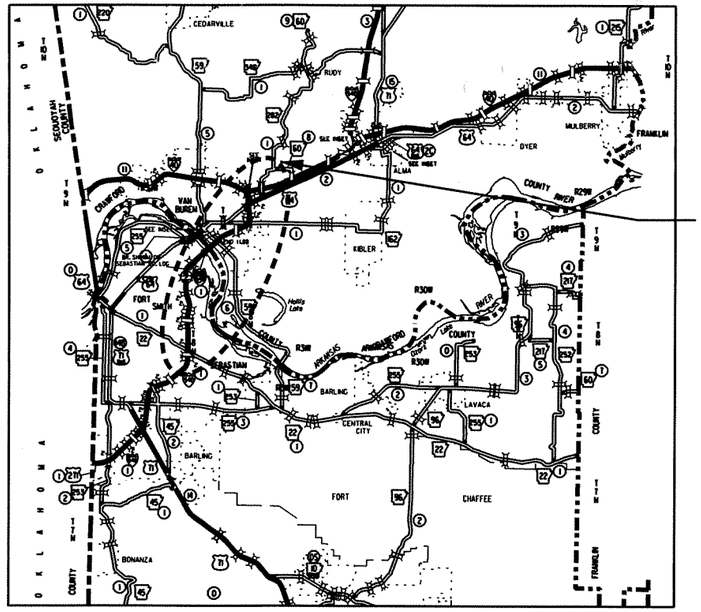
FEDERAL AID PROJECT

BIM-B540(230) & HSIP-540-1(82)0

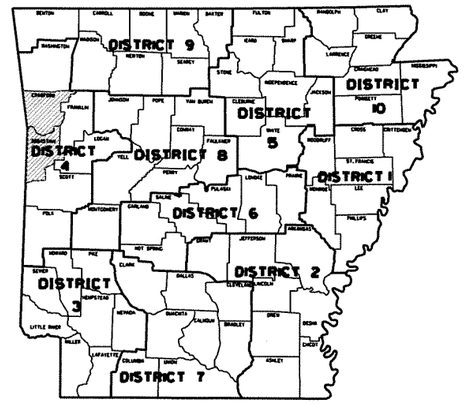
JOB BB0407

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	1	464

(2) HWY. 22 - I-40 (F)

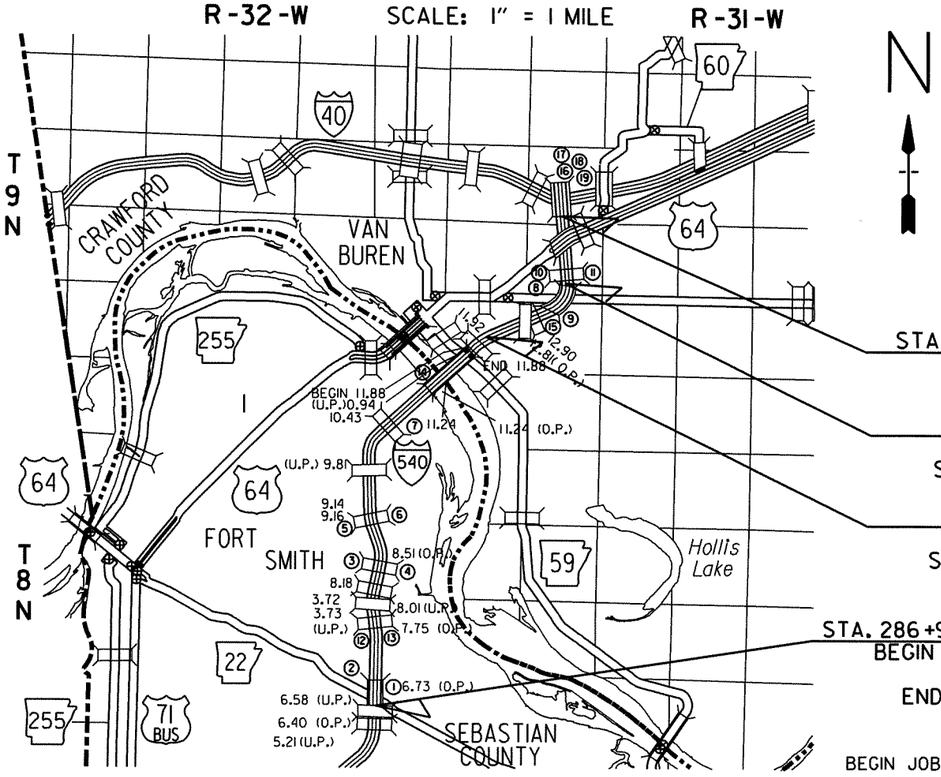


VICINITY MAP



ARK. HWY. DIST. NO. 4

R-32-W SCALE: 1" = 1 MILE R-31-W



STA. 719+13.59 ℄ I-540
END JOB BB0407
L.M. 14.71

EQUATION
STA. 659+75.75 BK
STA. 661+42.40 AHD

EQUATION
STA. 596+53.34 BK
STA. 596+44.58 AHD

STA. 286+91.50 ℄ I-540
BEGIN JOB BB0407
L.M. 6.55
END JOB B40104

	LATITUDE	LONGITUDE
BEGIN JOB	N35°21'24"	W94°21'54"
MID POINT	N35°24'49"	W94°21'36"
END JOB	N35°27'18"	W94°19'15"

• DESIGN TRAFFIC DATA •

DESIGN YEAR	2026
2006 ADT	45700
2026 ADT	73100
2026 DHV	8041
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	12%
DESIGN SPEED	65 MPH

BRIDGE DATA

(1) STA. 295+42.86 - BR. END
BR. NO. B6877
CONT. COMP. W-BEAM UNIT
BRIDGE LENGTH = 190.44'
CLEAR ROADWAY = 48'-0"
STA. 297+33.29 - BR. END

(2) STA. 295+85.97 - BR. END
BR. NO. A6877
CONT. COMP. W-BEAM UNIT
BRIDGE LENGTH = 190.44'
CLEAR ROADWAY VARIES
STA. 297+76.41 - BR. END

(3) STA. 389+23.09 - BR. END
BR. NO. A6878
CONT. COMP. W-BEAM UNIT
BRIDGE LENGTH = 174.19'
CLEAR ROADWAY = 40'-0"
STA. 390+97.28 - BR. END

(4) STA. 389+38.63 - BR. END
BR. NO. B6878
CONT. COMP. W-BEAM UNIT
BRIDGE LENGTH = 174.19'
CLEAR ROADWAY = 40'-0"
STA. 391+12.82 - BR. END

(5) STA. 422+79.97 - BR. END
BR. NO. B6879
CONT. COMP. W-BEAM UNIT
BRIDGE LENGTH = 162.06'
CLEAR ROADWAY = 40'-0"
STA. 424+42.02 - BR. END

(6) STA. 423+77.47 - BR. END
BR. NO. A6879
CONT. COMP. W-BEAM UNIT
BRIDGE LENGTH = 162.06'
CLEAR ROADWAY = 40'-0"
STA. 425+39.52 - BR. END

(7) STA. 491+06.55 - BR. END
BR. NO. 06880
COMP. W-BEAM UNIT
BRIDGE LENGTH = 573.91'
CLEAR ROADWAY = 2 @ 37'-0"
STA. 496+80.46 - BR. END

(8) STA. 646+58.91 - BR. END
BR. NO. A3957
COMPOSITE W-BEAM SPAN
BRIDGE LENGTH = 164.43'
CLEAR ROADWAY = 40'-0"
STA. 648+23.34 - BR. END

(9) STA. 648+34.03 - BR. END
BR. NO. B3957
COMPOSITE W-BEAM SPAN
BRIDGE LENGTH = 164.42'
CLEAR ROADWAY = 40'-0"
STA. 649+98.45 - BR. END

(10) STA. 663+28.42 - BR. END
BR. NO. A6881
CONT. COMP. W-BEAM UNIT
BRIDGE LENGTH = 487.56'
CLEAR ROADWAY = 40'-0"
STA. 668+15.98 - BR. END

(11) STA. 663+99.64 - BR. END
BR. NO. B6881
CONT. COMP. W-BEAM UNIT
BRIDGE LENGTH = 487.56'
CLEAR ROADWAY = 40'-0"
STA. 668+87.20 - BR. END

EXCEPTIONS TO JOB (BRIDGES)

(12) STA. 349+39.26 - BR. END
BR. NO. A3604
COMPOSITE W-BEAM SPAN
BRIDGE LENGTH = 134.22'
CLEAR ROADWAY = 40'-00"
STA. 350+73.48 - BR. END

(13) STA. 349+20.24 - BR. END
BR. NO. B3604
COMPOSITE I-BEAM SPAN
BRIDGE LENGTH = 134.22'
CLEAR ROADWAY = 40'-00"
STA. 350+54.46 - BR. END

(14) STA. 533+81.80 - BR. END
BR. NO. 03609
WELDED PLATE GIRDER SPAN
BRIDGE LENGTH = 3396.39'
CLEAR ROADWAY = 28'-6"
STA. 567+78.19 - BR. END

(15) STA. 621+38.93 - BR. END
BR. NO. A&B3956
COMPOSITE I-BEAM SPAN
BRIDGE LENGTH = 122.13'
CLEAR ROADWAY = 39'-0"
STA. 622+61.06 - BR. END

RAMP 1
(16) STA. 719+20.97 - BR. END
BR. NO. 03452
COMPOSITE I-BEAM SPAN
BRIDGE LENGTH = 222.22'
CLEAR ROADWAY = 28'-0"
STA. 721+43.19 - BR. END

RAMP 2
(17) STA. 719+06.21 - BR. END
BR. NO. 03453
COMPOSITE I-BEAM SPAN
BRIDGE LENGTH = 222.21'
CLEAR ROADWAY = 20'-0"
STA. 721+28.42 - BR. END

RAMP 1
(18) STA. 729+22.00 - BR. END
BR. NO. 03455
COMPOSITE I-BEAM SPAN
BRIDGE LENGTH = 161.14'
CLEAR ROADWAY = 28'-0"
STA. 730+83.14 - BR. END

RAMP 2
(19) STA. 728+06.29 - BR. END
BR. NO. 03456
COMPOSITE I-BEAM SPAN
BRIDGE LENGTH = 146.14'
CLEAR ROADWAY = 26'-0"
STA. 729+52.43 - BR. END

NOTE: BRIDGES (16) - (19) ARE LOCATED IN THE I-40 INTERCHANGE BEYOND THE ℄ I-540 END JOB STATION. THEREFORE, THEY ARE NOT INCLUDED IN THE EXCEPTION.

TOTAL LENGTH OF EXCEPTIONS (MEASURED ALONG ℄ MEDIAN) = 3652.74'

LENGTH COMPUTED ALONG CENTERLINE MEDIAN

GROSS LENGTH OF PROJECT	43064.20	FEET OR	8.156	MILES
NET LENGTH OF ROADWAY	37658.97	FEET OR	7.132	MILES
NET LENGTH OF BRIDGES	1752.59	FEET OR	0.332	MILES
NET LENGTH OF PROJECT	39411.46	FEET OR	7.464	MILES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
9-12-12

P.E. JOB BB0407
NON-PARTICIPATING

9/12/2012 10:35:04 AM

INDEX OF SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	2	464

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

SHEET NO.	TITLE	BRIDGE NO.	DRWG. NO.
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2-3	INDEX OF SHEETS, GOVERNING SPECIFICATIONS AND GENERAL NOTES		
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15-16	TYPICAL SECTIONS OF STAGE CONSTRUCTION		
17-43C	SPECIAL DETAILS		
44-72A	MAINTENANCE OF TRAFFIC		
73-105	QUANTITIES		
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107-108	SUMMARY OF QUANTITIES AND REVISIONS		
109	SUPERELEVATION RATES AND TRANSITION LIMITS		
110-121	PLAN SHEETS		
122	MODIFICATION DETAILS FOR BRIDGE NO. A&B3959 (SHEET 1 OF 2)	A&B3959	48428
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125	LAYOUT OF U.S. HIGHWAY 64 INTERCHANGE (RIGHT LANES) (FOR INFORMATION ONLY)	A&B3959	48431
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127	DETAILS OF BENTS 2, 3, 4, 5 U.S. HIGHWAY 64 INTERCHANGE (FOR INFORMATION ONLY)	A&B3959	48433
128	DETAILS OF STANDARD COMPOSITE I-BEAM SPANS (FOR INFORMATION ONLY)	A&B3959	48434
129	SUPPLEMENTAL DETAILS FOR SUPERSTRUCTURE U.S. HIGHWAY 64 INTERCHANGE (FOR INFORMATION ONLY)	A&B3959	48435
130	DETAILS COMMON TO STANDARD 35'-90' COMPOSITE I-BEAMS SPANS (FOR INFORMATION ONLY)	A&B3959	48436
131	REMODELING DETAILS FOR BRIDGES OVER HWY. 162	A&B3957	48437
132	TYPICAL SECTION I-540 BRIDGE OVER HWY. 162	A&B3957	48438
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135	BRIDGE A & B DETAILS OF END BENTS (SHEET 3 OF 4)	A&B3957	48440
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140	REMODELING DETAILS OF 54'-0" COMPOSITE W-BEAM UNIT (SHEET 3 OF 6)	A&B3957	48443A
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176	DETAILS OF BENT NO. 1 (SHEET 3 OF 3)	B6877	48471
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179	DETAILS OF BENT NO. 3 (SHEET 1 OF 3)	B6877	48474
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288	DETAILS OF BENT NO. 2	A688I	48583
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298	DETAILS OF 485'-0" CONT. COMP. W-BEAM UNIT (SHEET 3 OF 6)	A688I	48590A
299	DETAILS OF 485'-0" CONT. COMP. W-BEAM UNIT (SHEET 4 OF 6)	A688I	48591
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320	DETAILS OF ARMORED JOINT WITH NEOPRENE STRIP SEAL	A&B688I	48611
321	GENERAL NOTES AND MISC. DETAILS	A&B688I	48612
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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

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463	WIRE FENCE TYPE A AND B	WF-1		8-22-02
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*SHEET 41 NOT INCLUDED IN PLANS

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 SERVICEORGANIZATIONS 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. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENT REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
9. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEATLINE. 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.

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.		BB0407	3	464

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

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 BB0407
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
410-3	DENSITY TESTING FOR ACHM LEVELING COURSES AND BOND BREAKERS
411-1	ASPHALT CONCRETE COLD PLANT MIX
507-1	INSTALLATION OF DOWEL BARS AND TIE BARS
600-1	WATER FOR VEGETATION
603-1	MAINTENANCE OF TRAFFIC
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-2	INSPECTION OF TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-2	PIPE CULVERTS
718-2	REFLECTORIZED PAINT PAVEMENT MARKINGS
719-2	THERMOPLASTIC PAVEMENT MARKING MATERIAL
723-1	GENERAL REQUIREMENTS FOR SIGNS
804-1	INSTALLATION OF DOWEL BARS AND TIE BARS
821-1	INSTALLATION OF DOWEL BARS AND TIE BARS
JOB BB0407	AIRPORT CLEARANCE REQUIREMENTS
JOB BB0407	APPROACH SLABS AND GUTTERS
JOB BB0407	ARMORED JOINT WITH NEOPRENE STRIP SEAL
JOB BB0407	ASPHALT CONCRETE HOT MIX PATCHING OF EXISTING SHOULDERS
JOB BB0407	ASPHALT CONCRETE HOT MIX SURFACE COURSE SURFACE TOLERANCE AND INCENTIVE PAYMENTS
JOB BB0407	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB BB0407	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB BB0407	CONCRETE DITCH PAVING
JOB BB0407	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB BB0407	ELASTOMERIC BEARINGS
JOB BB0407	FAST SETTING CEMENT
JOB BB0407	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB BB0407	HIGH PERFORMANCE PAVEMENT MARKING
JOB BB0407	INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (UPRR)
JOB BB0407	INTERNET BIDDING
JOB BB0407	LUMINAIRE POLE RELOCATION
JOB BB0407	MAINTENANCE OF TRAFFIC
JOB BB0407	MOBILE SPEED NOTIFICATION SYSTEM
JOB BB0407	MOBILIZATION
JOB BB0407	MODIFICATION OF RAISED BRIDGE STRUCTURE
JOB BB0407	MODULAR GLARE SHIELD
JOB BB0407	MOTORIST ASSISTANCE PATROL
JOB BB0407	NESTING SITES OF MIGRATORY BIRDS
JOB BB0407	OFF-SITE RESTRAINING CONDITIONS FOR AMERICAN BURYING BEETLE
JOB BB0407	PARTNERING REQUIREMENTS
JOB BB0407	PORTABLE CAMERA ASSEMBLY
JOB BB0407	RAISING EXISTING STRUCTURE
JOB BB0407	REMOVAL AND DISPOSAL OF FENCE
JOB BB0407	REMOVAL AND DISPOSAL OF GUARDRAIL
JOB BB0407	ROADWAY CONSTRUCTION CONTROL
JOB BB0407	SCARIFYING CONCRETE PAVEMENT
JOB BB0407	SECTION 404 NATIONWIDE 23 PERMIT REQUIREMENTS
JOB BB0407	SEQUENCE OF CONSTRUCTION
JOB BB0407	SHAPING DITCH
JOB BB0407	SHORING
JOB BB0407	SIGN PANEL MATERIALS AND FABRICATION
JOB BB0407	SITE USE (A+C METHOD)
JOB BB0407	SOIL STABILIZATION
JOB BB0407	SPECIAL SAFETY REQUIREMENTS FOR BRIDGES
JOB BB0407	SPECIAL SAFETY REQUIREMENTS FOR OVERHEAD SIGNS
JOB BB0407	STEEL GRATE ASSEMBLIES ADJUSTED TO GRADE
JOB BB0407	STEEL OVERHEAD, CANTILEVER, AND BRIDGE MOUNTED SIGN STRUCTURES
JOB BB0407	STORM WATER POLLUTION PREVENTION PLAN
JOB BB0407	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
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JOB BB0407	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB BB0407	TRAFFIC CONTROL SUPERVISOR
JOB BB0407	UTILITY ADJUSTMENTS
JOB BB0407	VALUE ENGINEERING
JOB BB0407	VERY EARLY STRENGTH CONCRETE
JOB BB0407	WARM MIX ASPHALT
JOB BB0407	WATTLES
JOB BB0407	WIRE FENCE TYPE (A)
JOB BB0407	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS
JOB BB0407	WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS
JOB BB0407	WRSF TRAINING WORKSHOP

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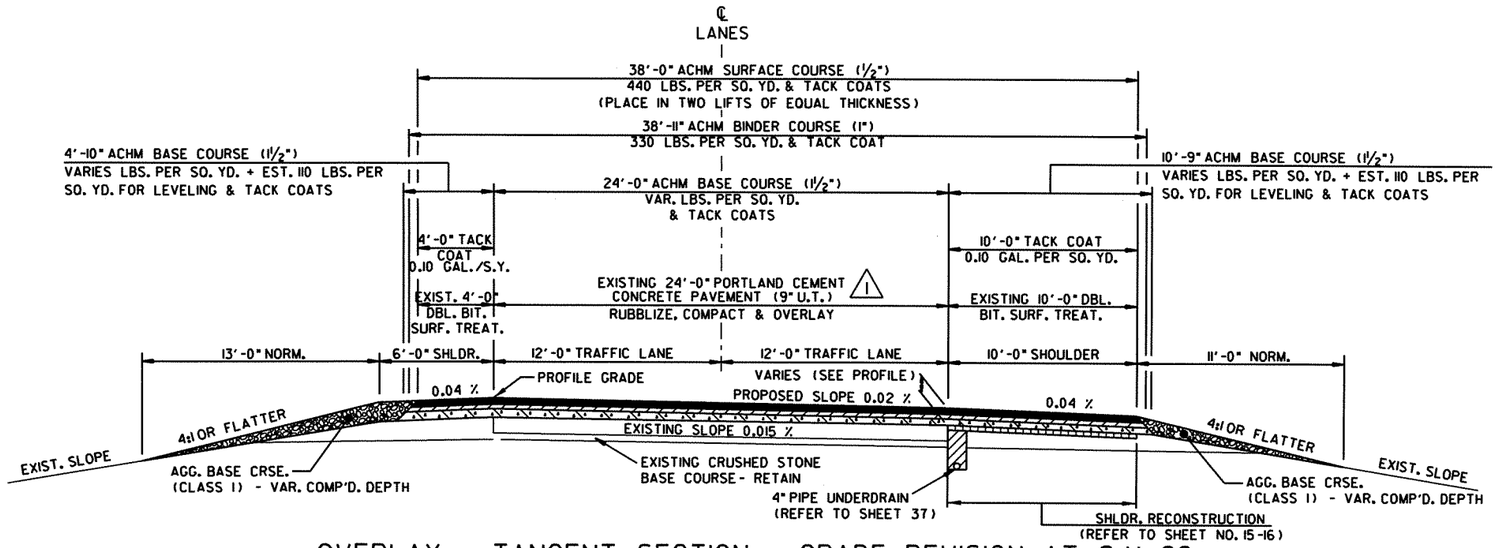
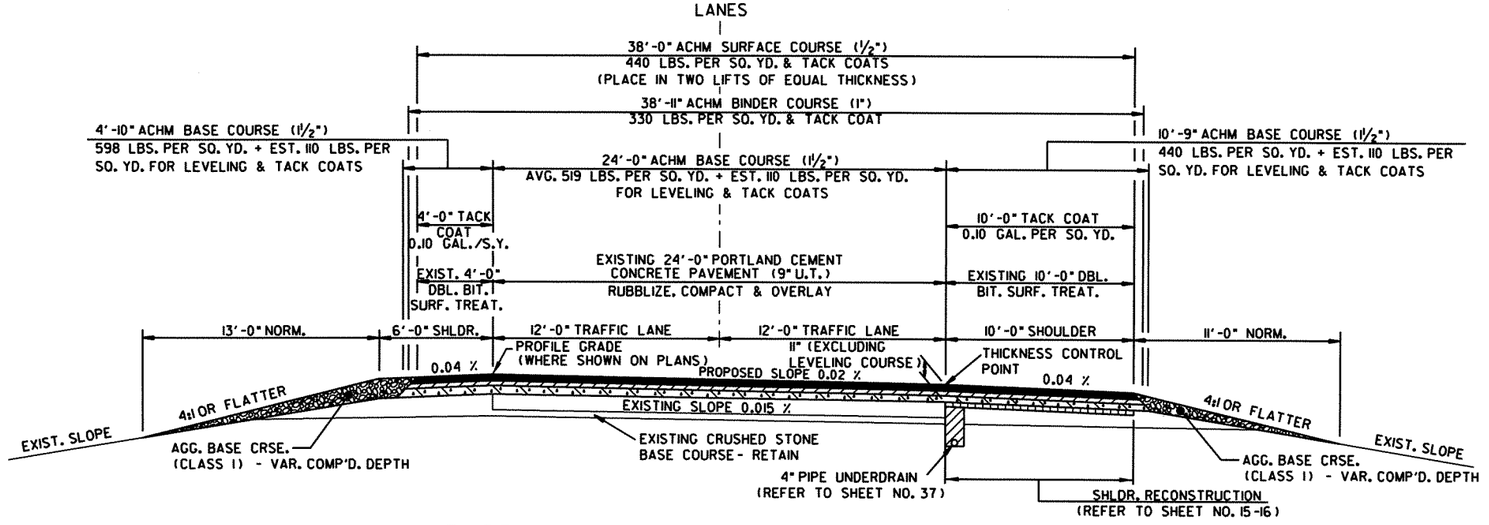
				6	ARK.			
				JOB NO.		BB0407	4	464

(2) TYPICAL SECTIONS OF IMPROVEMENT



OVERLAY - TANGENT SECTION - GRADE REVISION AT S.H. 22
(SHOWN IN DIRECTION OF TRAFFIC)
STA. 286+91.50 N.B. & S.B. LANES TO STA. 307+90.96 N.B. & S.B. LANES
(SEE GRADE SKETCH SHEET 18)



RUBBLIZE & OVERLAY - TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 307+90.96 N.B. LANES TO STA. 335+26.39 N.B. LANES
STA. 355+30.11 N.B. LANES TO STA. 356+46.67 N.B. LANES
STA. 372+28.77 N.B. LANES TO STA. 389+02.13 N.B. LANES
STA. 409+26.13 N.B. LANES TO STA. 415+73.32 N.B. LANES
STA. 432+88.32 N.B. LANES TO STA. 465+13.72 N.B. LANES
STA. 593+88.50 N.B. LANES TO STA. 614+03.30 N.B. LANES
STA. 628+61.06 N.B. LANES TO STA. 633+16.86 N.B. LANES
STA. 669+11.02 N.B. LANES TO STA. 706+55.89 N.B. LANES

STA. 307+90.96 S.B. LANES TO STA. 335+26.39 S.B. LANES
STA. 355+30.11 S.B. LANES TO STA. 356+46.67 S.B. LANES
STA. 372+28.77 S.B. LANES TO STA. 388+86.59 S.B. LANES
STA. 409+26.13 S.B. LANES TO STA. 415+73.32 S.B. LANES
STA. 432+88.32 S.B. LANES TO STA. 465+13.72 S.B. LANES
STA. 593+88.50 S.B. LANES TO STA. 613+89.88 S.B. LANES
STA. 628+61.06 S.B. LANES TO STA. 633+16.86 S.B. LANES
STA. 668+40.23 S.B. LANES TO STA. 710+48.67 S.B. LANES
STA. 710+48.67 RAMP I (I-540/I-40 INT.) TO STA. 714+31.45 RAMP I (I-540/I-40 INT.)

NOTES:
LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

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

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

FOR SECTIONS CONTROLLED BY PROFILE GRADE, ADDITIONAL PAVEMENT THICKNESS TO BE ACCOMMODATED BY INCREASING THICKNESS OF ACHM BASE COURSE.

⚠1 SEE GRADE SKETCH SHEET 18 FOR LIMITS OF RUBBLIZATION.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

TYPICAL SECTIONS OF IMPROVEMENT

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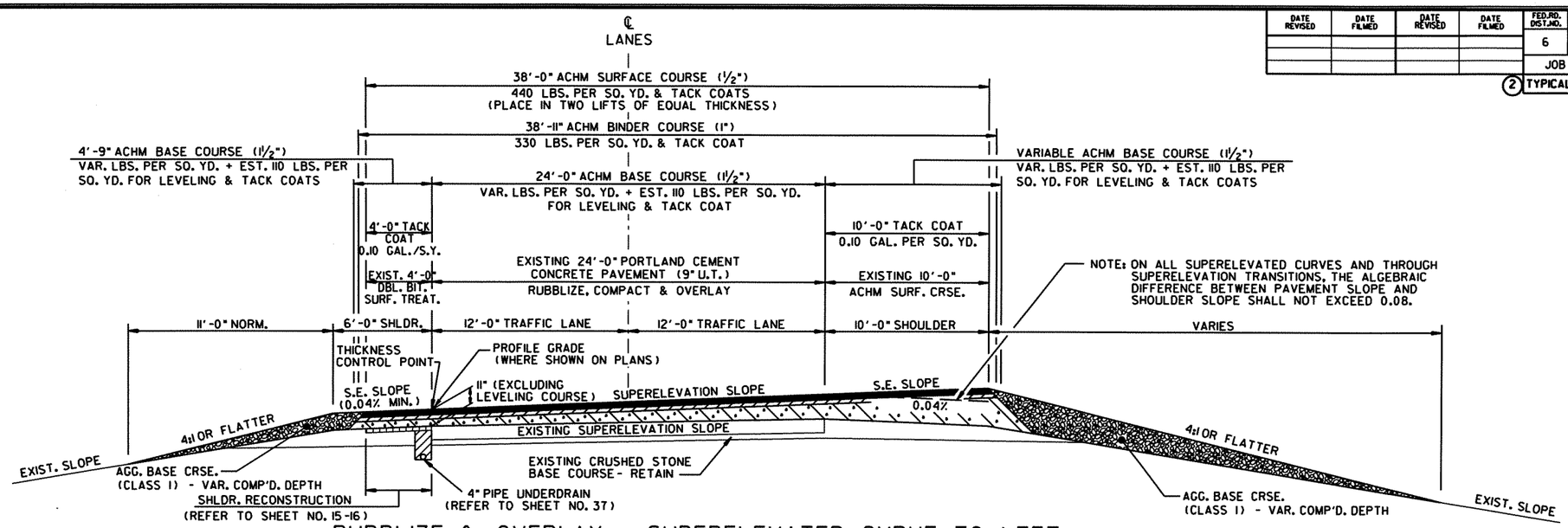
				6	ARK.			
				JOB NO.		BB0407	5	464

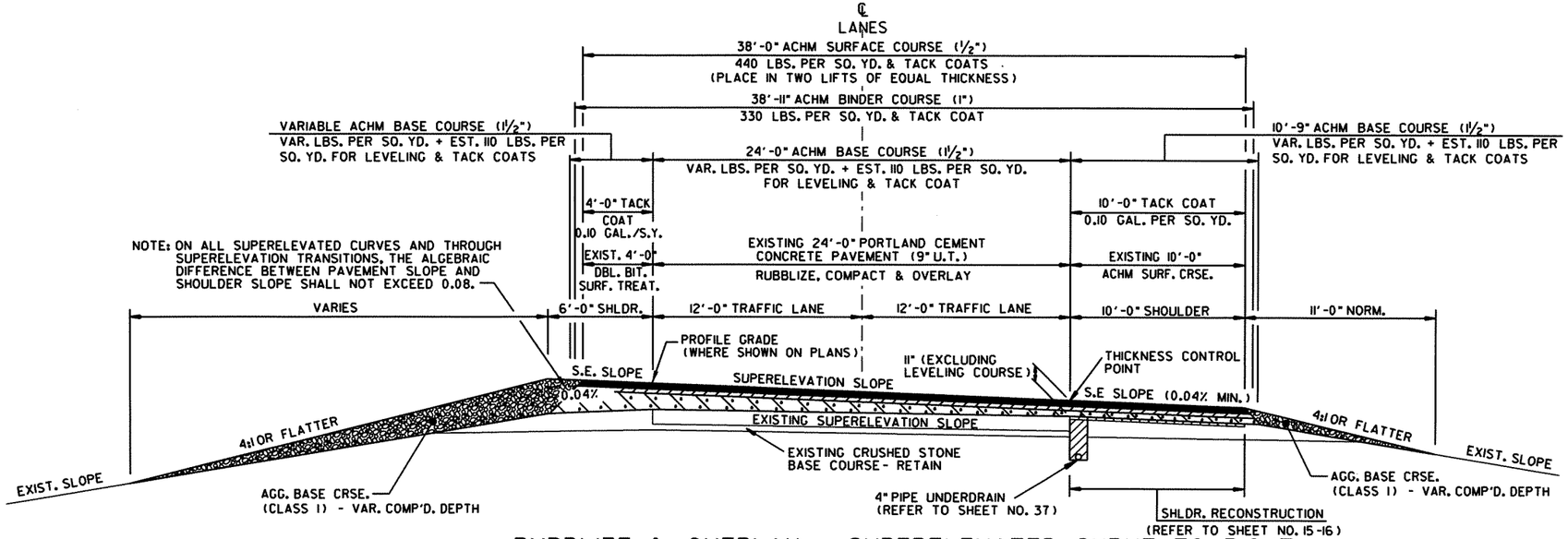
(2) TYPICAL SECTIONS OF IMPROVEMENT



RUBBLIZE & OVERLAY - SUPERELEVATED CURVE TO LEFT

(SHOWN IN DIRECTION OF TRAFFIC)

STA. 335+26.39 N.B. LANES TO STA. 343+20.24 N.B. LANES
STA. 356+46.67 S.B. LANES TO STA. 372+28.77 S.B. LANES
STA. 391+49.32 N.B. LANES TO STA. 409+26.13 N.B. LANES
STA. 415+73.32 S.B. LANES TO STA. 423+40.97 S.B. LANES
STA. 425+76.02 S.B. LANES TO STA. 432+88.32 S.B. LANES
STA. 465+13.72 S.B. LANES TO STA. 482+40.00 S.B. LANES
STA. 577+13.25 S.B. LANES TO STA. 593+88.50 S.B. LANES
STA. 633+16.86 N.B. LANES TO STA. 647+47.15 N.B. LANES
STA. 649+94.20 N.B. LANES TO STA. 663+65.46 N.B. LANES
STA. 734+67.00 RAMP 1 (I-540/I-40 INT.) TO STA. 737+50.32 RAMP 1 (I-540/I-40 INT.)



RUBBLIZE & OVERLAY - SUPERELEVATED CURVE TO RIGHT

(SHOWN IN DIRECTION OF TRAFFIC)

STA. 335+26.39 S.B. LANES TO STA. 343+39.26 S.B. LANES
STA. 356+46.67 N.B. LANES TO STA. 372+28.77 N.B. LANES
STA. 391+33.78 S.B. LANES TO STA. 409+26.13 S.B. LANES
STA. 415+73.32 N.B. LANES TO STA. 422+43.47 N.B. LANES
STA. 424+78.52 N.B. LANES TO STA. 432+88.32 N.B. LANES
STA. 465+13.72 N.B. LANES TO STA. 482+40.00 N.B. LANES
STA. 577+13.25 N.B. LANES TO STA. 593+88.50 N.B. LANES
STA. 633+16.86 S.B. LANES TO STA. 646+49.95 S.B. LANES
STA. 649+20.33 S.B. LANES TO STA. 662+94.67 S.B. LANES
STA. 706+55.89 N.B. LANES TO STA. 713+50.00 RAMP 4 I-540/I-40 INT.
STA. 737+50.32 RAMP 1 (I-540/I-40 INT.) TO STA. 741+00.00 RAMP 1 (I-540/I-40 INT.)

NOTES:
LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

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

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

FOR SECTIONS CONTROLLED BY PROFILE GRADE, ADDITIONAL PAVEMENT THICKNESS TO BE ACCOMMODATED BY INCREASING THICKNESS OF ACHM BASE COURSE.

STATE OF ARKANSAS
JAMES L. BARR
REGISTERED PROFESSIONAL ENGINEER
No. 9808
8/31/12

TYPICAL SECTIONS OF IMPROVEMENT

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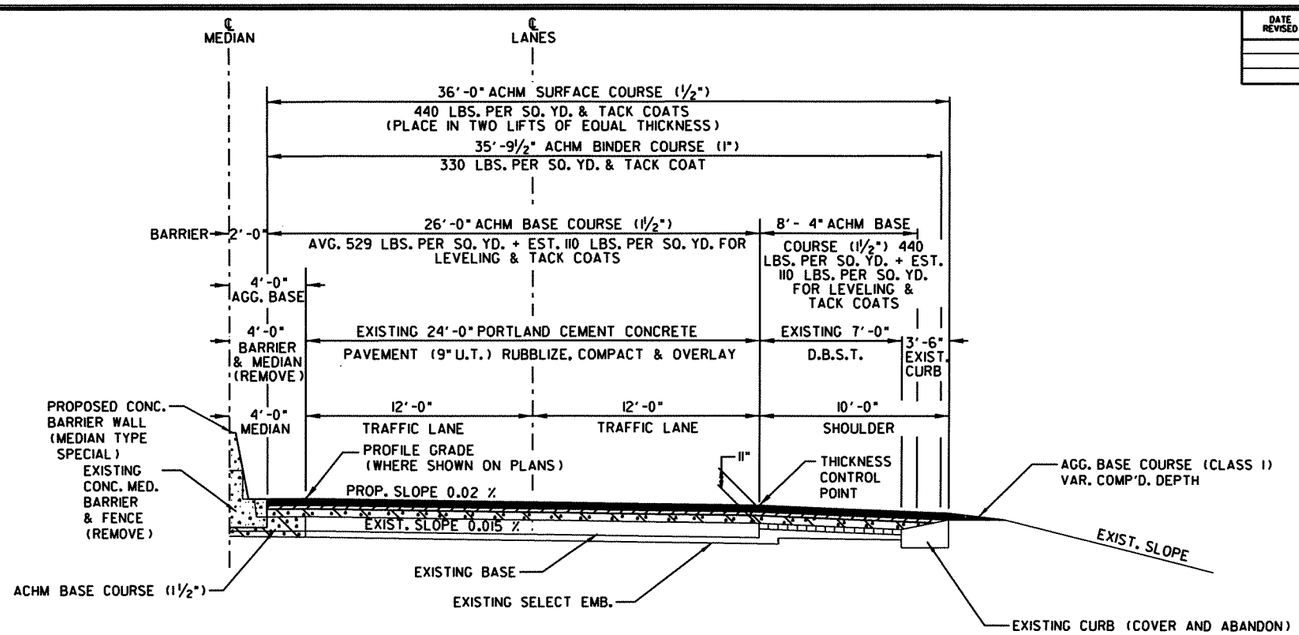
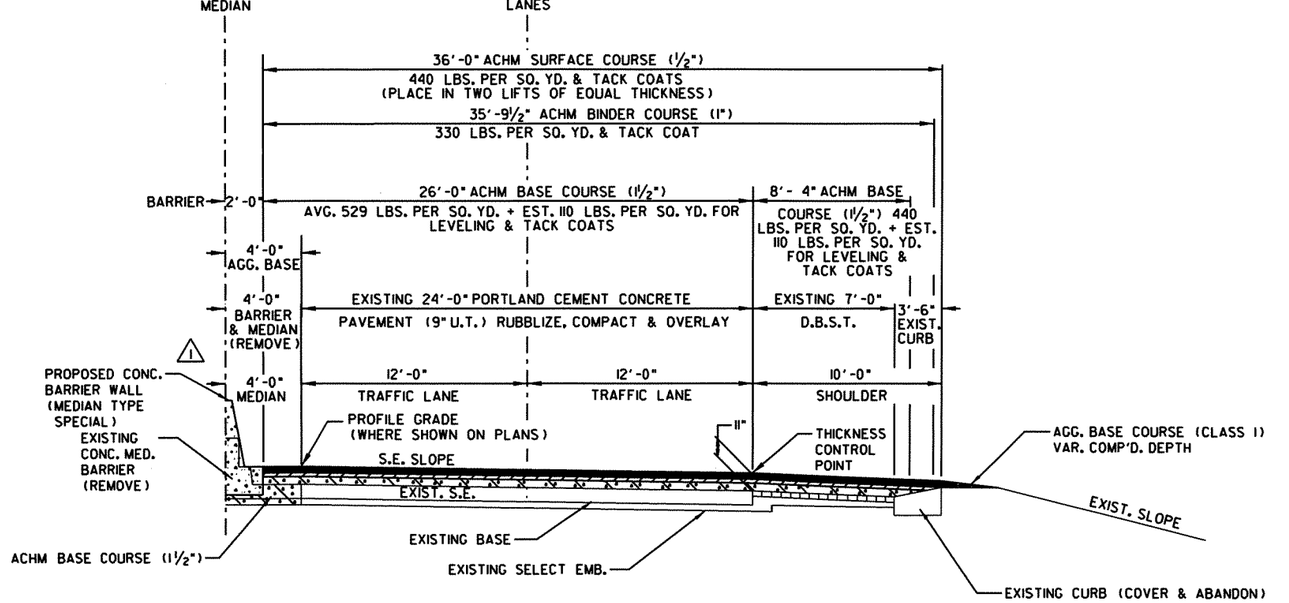
				6	ARK.			
				JOB NO.		BB0407	6	464

(2) TYPICAL SECTIONS OF IMPROVEMENT



RUBBLIZE & OVERLAY - TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 489+41.22 N.B. & S.B. LANES TO STA. 490+70.05 N.B. & S.B. LANES
STA. 497+16.96 N.B. & S.B. LANES TO STA. 525+81.80 N.B. & S.B. LANES



RUBBLIZE & OVERLAY - SUPERELEVATED SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 482+40.00 N.B. & S.B. LANES TO STA. 489+41.22 N.B. & S.B. LANES

1 MEDIAN WIDTH VARIES FROM 11.6' @ STA. 482+40 TO 4' @ STA. 486+53.72

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

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

EXISTING CURB & GUTTER TO BE COVERED AND ABANDONED. EXISTING DROP INLETS TO BE FILLED WITH CONCRETE AND ABANDONED. EXISTING HEADWALLS TO BE REMOVED AND DAMAGED AREAS TO BE REDRESSED AND SEEDED. ALL COSTS TO BE INCLUDED IN PRICE BID FOR "REMOVAL AND DISPOSAL OF HEADWALLS" AND VARIOUS CONTRACT ITEMS. EXISTING SLOPES ARE NOT TO BE DISTURBED EXCEPT WHERE REQUIRED TO REMOVE EXISTING HEADWALLS AND REDRESS SLOPES.

FOR SECTIONS CONTROLLED BY PROFILE GRADE, ADDITIONAL PAVEMENT THICKNESS TO BE ACCOMMODATED BY INCREASING THICKNESS OF ACHM BASE COURSE.

STATE OF ARKANSAS JAMES L. BARR REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

TYPICAL SECTIONS OF IMPROVEMENT

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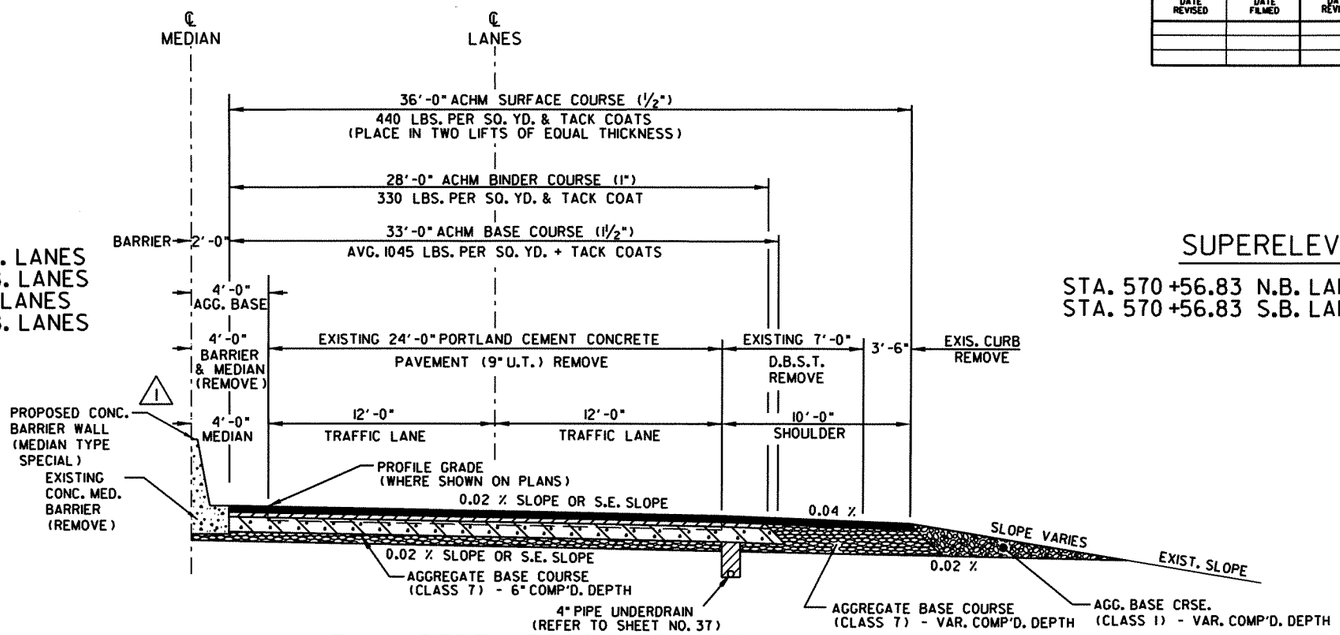
(2) TYPICAL SECTIONS OF IMPROVEMENT

TANGENT SECTIONS

STA. 525+81.80 N.B. LANES TO STA. 533+81.80 N.B. LANES
STA. 567+80.93 N.B. LANES TO STA. 570+56.83 N.B. LANES
STA 525+81.80 S.B. LANES TO STA. 533+81.80 S.B. LANES
STA 567+75.46 S.B. LANES TO STA. 570+56.83 S.B. LANES



FULL-DEPTH RECONSTRUCTION
(SHOWN IN DIRECTION OF TRAFFIC)

1 MEDIAN WIDTH VARIES FROM 4' @ STA. 573+19.33 TO 14' @ STA. 577+13.25

SUPERELEVATED SECTIONS

STA. 570+56.83 N.B. LANES TO STA. 577+13.25 N.B. LANES
STA. 570+56.83 S.B. LANES TO STA. 577+13.25 S.B. LANES

NOTE:
EXISTING CURB & GUTTER TO BE REMOVED, DROP INLET FILLED WITH CONCRETE AND ABANDONED, PIPE HEADWALLS REMOVED, AND SLOPES TO BE REDRESSED AND SEEDED. ALL COSTS TO BE INCLUDED IN PRICE BID FOR "REMOVAL AND DISPOSAL OF CONCRETE CURB & GUTTER", "REMOVAL AND DISPOSAL OF HEADWALLS" AND VARIOUS CONTRACT ITEMS. EXISTING SLOPES ARE NOT TO BE DISTURBED EXCEPT WHERE REQUIRED TO REMOVE EXISTING HEADWALLS AND REDRESS SLOPES.

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.

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

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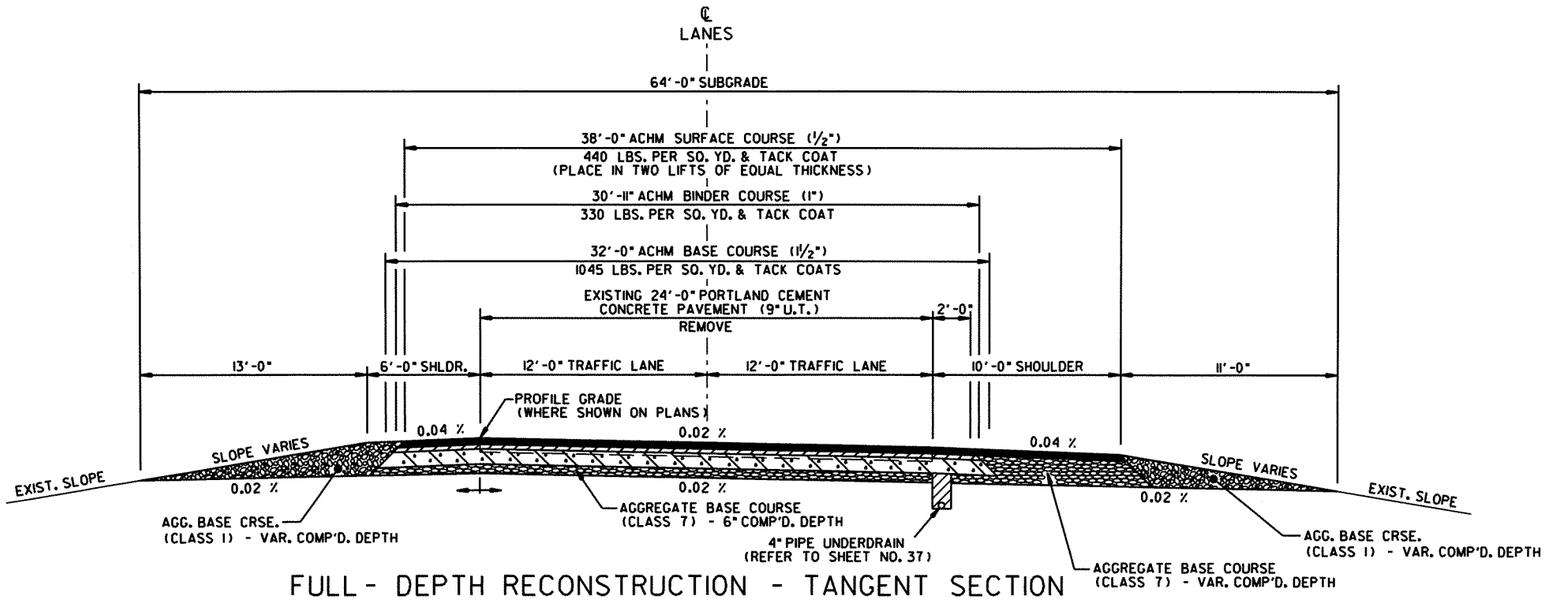

FULL-DEPTH RECONSTRUCTION - TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 350+54.46 N.B. LANES TO STA. 355+30.11 N.B. LANES
STA. 614+03.30 N.B. LANES TO STA. 621+38.93 N.B. LANES
STA. 622+61.06 N.B. LANES TO STA. 628+61.06 N.B. LANES
STA. 714+97.81 N.B. LANES TO STA. 717+04.93 RAMP 2 (I-540/I-40 INT.)

STA. 350+73.48 S.B. LANES TO STA. 355+30.11 S.B. LANES
STA. 613+89.88 S.B. LANES TO STA. 621+38.93 S.B. LANES
STA. 622+61.06 S.B. LANES TO STA. 628+61.06 S.B. LANES
STA. 714+31.45 RAMP 1 (I-540/I-40 INT.) TO STA. 714+31.94 RAMP 1 (I-540/I-40 INT.)

STATE OF ARKANSAS
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TYPICAL SECTIONS OF IMPROVEMENT

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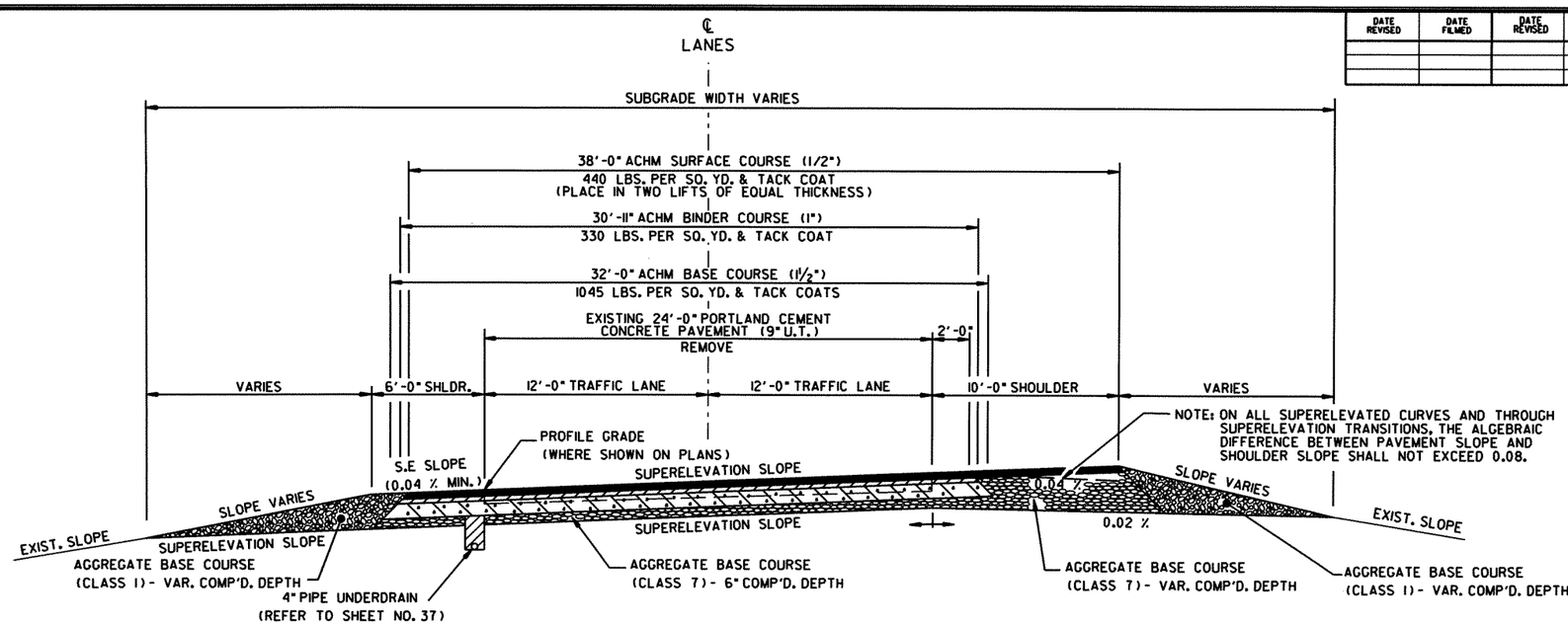
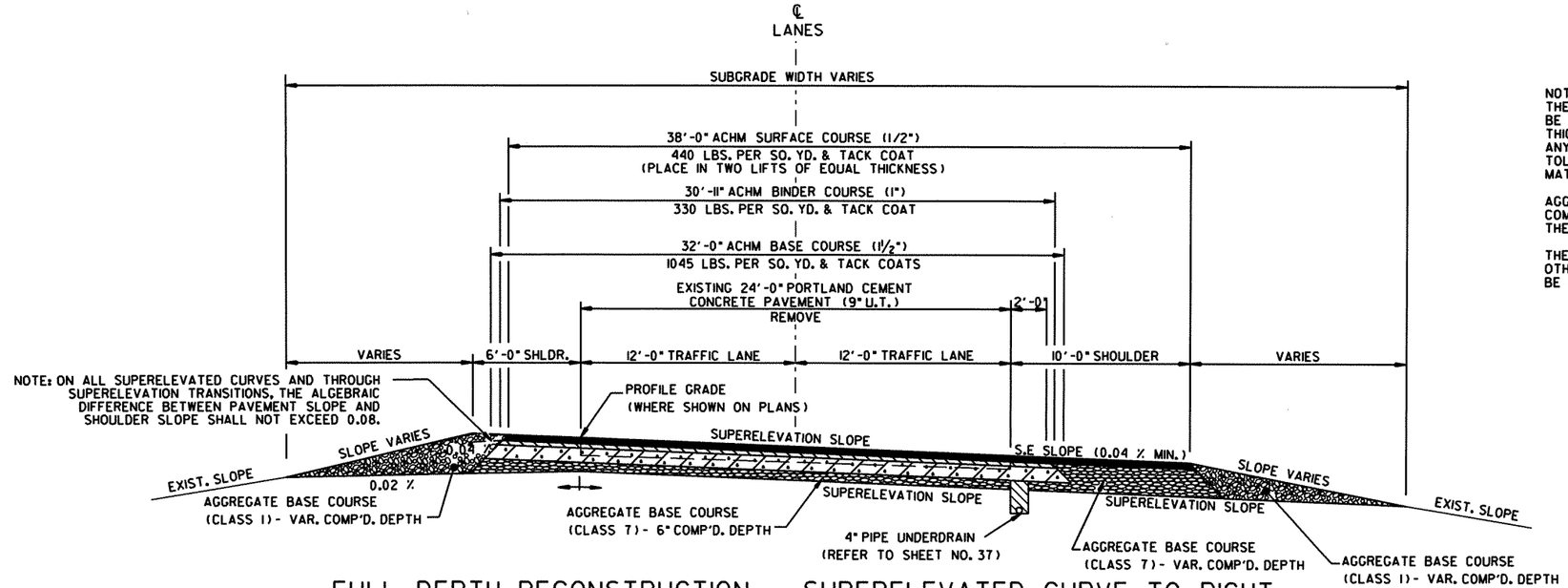
				6	ARK.			
				JOB NO.		BB0407	8	464

(2) TYPICAL SECTIONS OF IMPROVEMENT



FULL-DEPTH RECONSTRUCTION - SUPERELEVATED CURVE TO LEFT
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 343+20.24 N.B. LANES TO STA. 349+20.24 N.B. LANES
STA. 714+31.94 RAMP 1 (I-540/I-40 INT.) TO STA. 719+20.97 RAMP 1 (I-540/I-40 INT.)
STA. 721+43.19 RAMP 1 (I-540/I-40 INT.) TO STA. 729+22.00 RAMP 1 (I-540/I-40 INT.)
STA. 730+83.14 RAMP 1 (I-540/I-40 INT.) TO STA. 734+67.00 RAMP 1 (I-540/I-40 INT.)



FULL-DEPTH RECONSTRUCTION - SUPERELEVATED CURVE TO RIGHT
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 343+39.26 S.B. LANES TO STA. 349+39.26 S.B. LANES
STA. 713+50.00 RAMP 4 (I-540/I-40 INT.) TO STA. 719+00.00 RAMP 4 (I-540/I-40 INT.)

NOTE:
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.

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

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TYPICAL SECTIONS OF IMPROVEMENT

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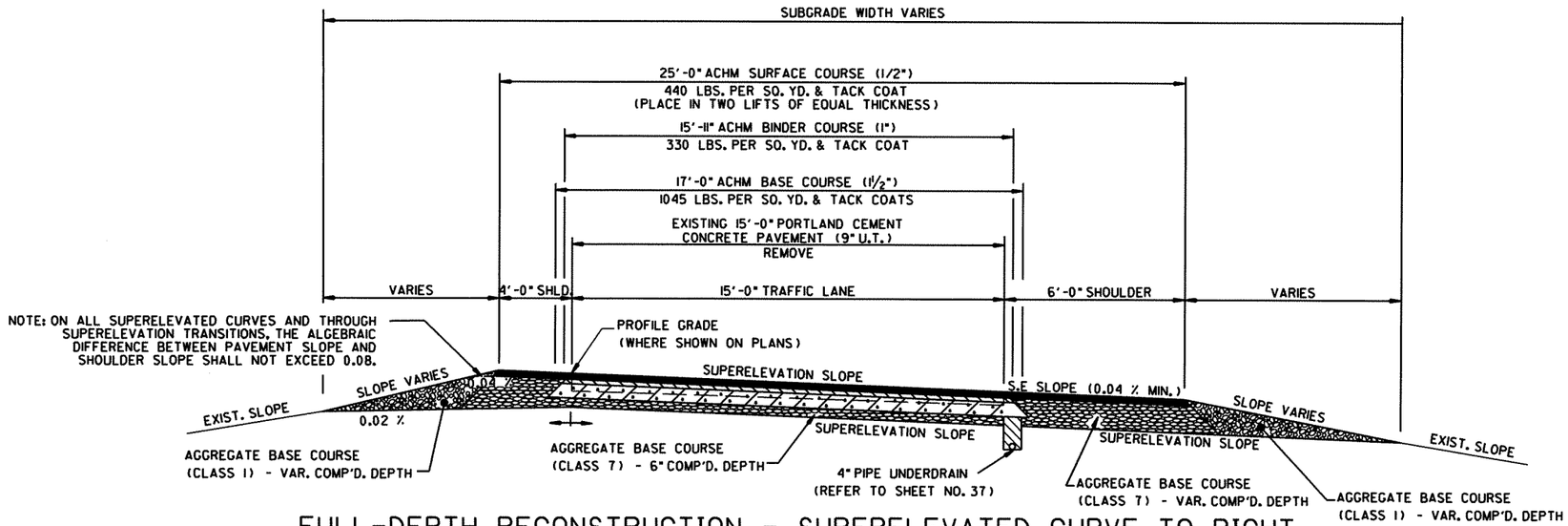
(2) TYPICAL SECTIONS OF IMPROVEMENT



FULL-DEPTH RECONSTRUCTION - SUPERELEVATED CURVE TO RIGHT
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 715+54.93 RAMP 2 (I-540/I-40 INT.) TO STA. 719+06.21 RAMP 2 (I-540/I-40 INT.)
STA. 721+28.42 RAMP 2 (I-540/I-40 INT.) TO STA. 728+06.29 RAMP 2 (I-540/I-40 INT.)
STA. 729+52.43 RAMP 2 (I-540/I-40 INT.) TO STA. 735+58.30 RAMP 2 (I-540/I-40 INT.)
STA. 387+00.00 RAMP 3 (I-540/I-40 INT.) TO STA. 392+50.00 RAMP 3 (I-540/I-40 INT.)

NOTE:
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.

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

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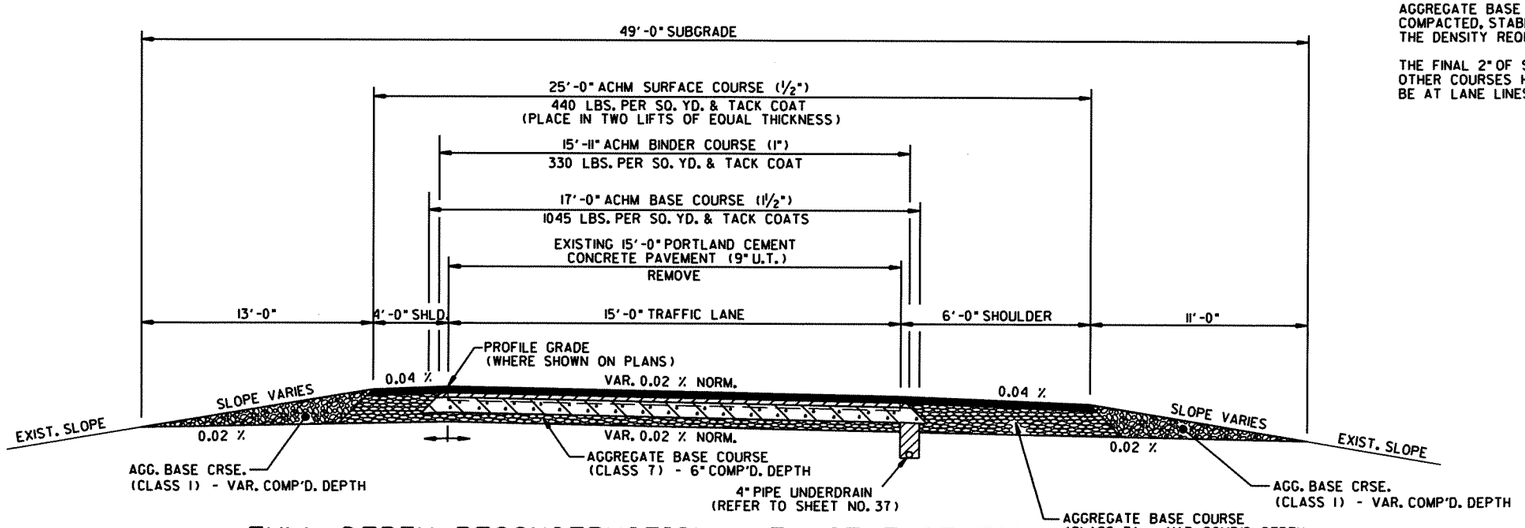

FULL-DEPTH RECONSTRUCTION - TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 714+88.65 RAMP 2 (I-540/I-40 INT.) TO STA. 715+54.93 RAMP 2 (I-540/I-40 INT.)

STATE OF ARKANSAS
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TYPICAL SECTIONS OF IMPROVEMENT

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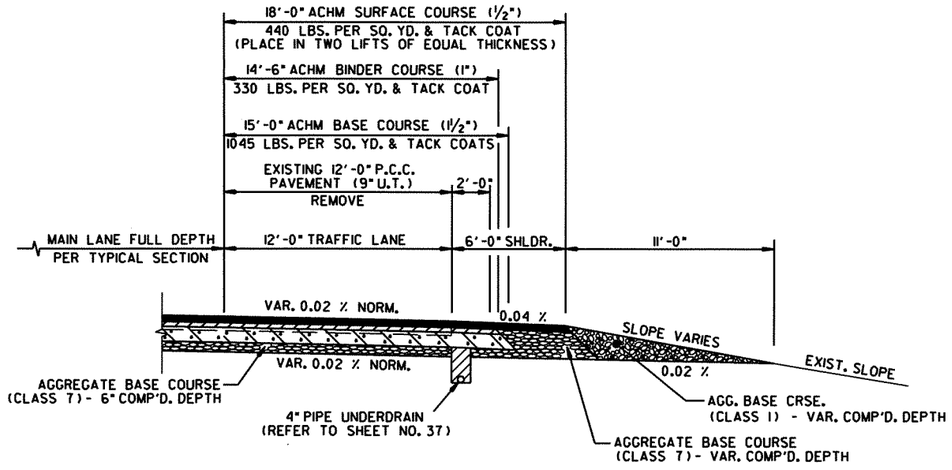
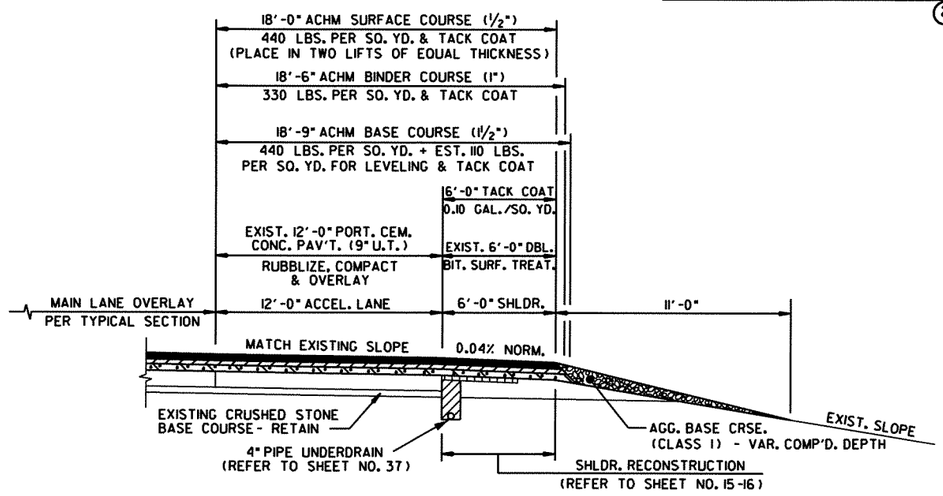
(2) TYPICAL SECTIONS OF IMPROVEMENT

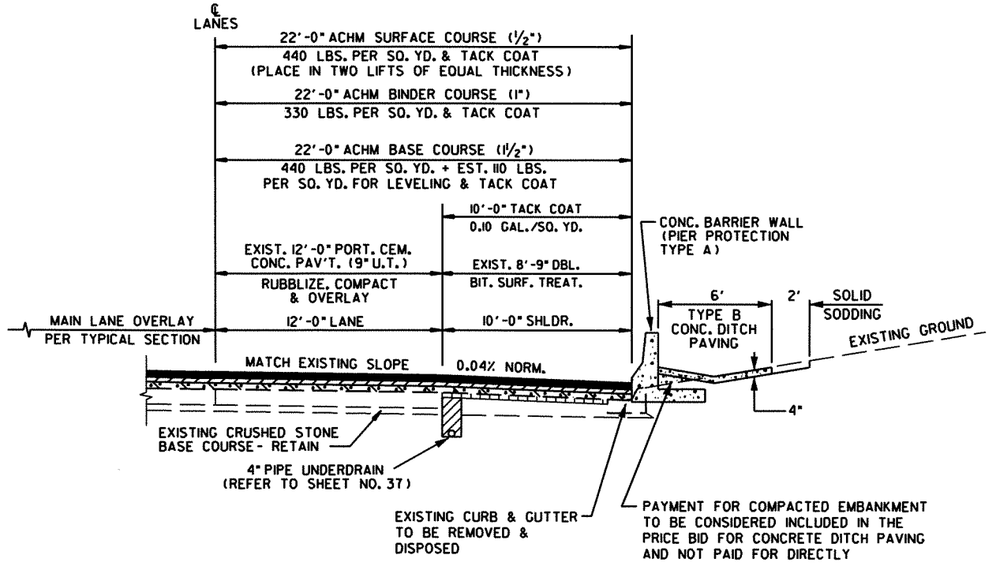


FULL-DEPTH RECONSTRUCTION - ACCELERATION LANE
(SHOWN IN DIRECTION OF TRAFFIC)



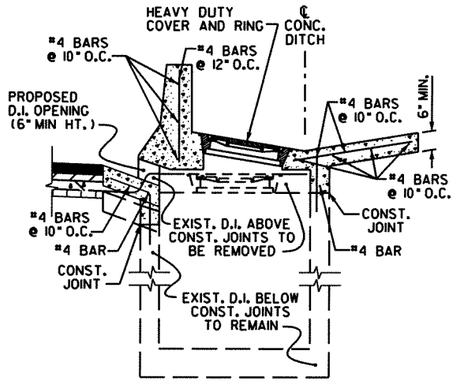
RUBBLIZE & OVERLAY - ACCELERATION LANE
(SHOWN IN DIRECTION OF TRAFFIC)

NOTE: LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.



SPECIAL DETAIL - RIGHT SHOULDER
(SHOWN IN DIRECTION OF TRAFFIC)
STA. 360+15 N.B. LANES TO STA. 369+41 N.B. LANES

NOTE: LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.



SPECIAL DETAIL
MODIFICATION OF EXISTING TYPE C INLETS RT. OF N.B. LANES
STA. 364+90, STA. 367+34 & STA. 369+34

NOTES:

EXISTING CURB INLETS TO BE RAISED AND DROP INLETS TO BE MODIFIED TO FIT CONCRETE BARRIER WALL (PIER PROTECTION TYPE A) AND CONCRETE DITCH PAVING.

COSTS OF BARRIER WALL (PIER PROTECTION TYPE A) AND CONCRETE DITCH PAVING QUANTITIES WITHIN THE LIMITS OF THE INLET ARE TO BE PAID UNDER THEIR RESPECTIVE QUANTITIES ELSE WHERE. ALL OTHER COSTS RELATED TO THE MODIFICATION ARE TO BE INCLUDED IN PRICE BID FOR "MODIFYING DROP INLETS".

REFER TO STD. DWG. FPC-9E FOR ADDITIONAL INLET DETAILS.

NOTES:

REFER TO STD. DWG. CDP-1 FOR ADDITIONAL CONC. DITCH PAVING DETAILS.

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

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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.

STATE OF ARKANSAS
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TYPICAL SECTIONS OF IMPROVEMENT

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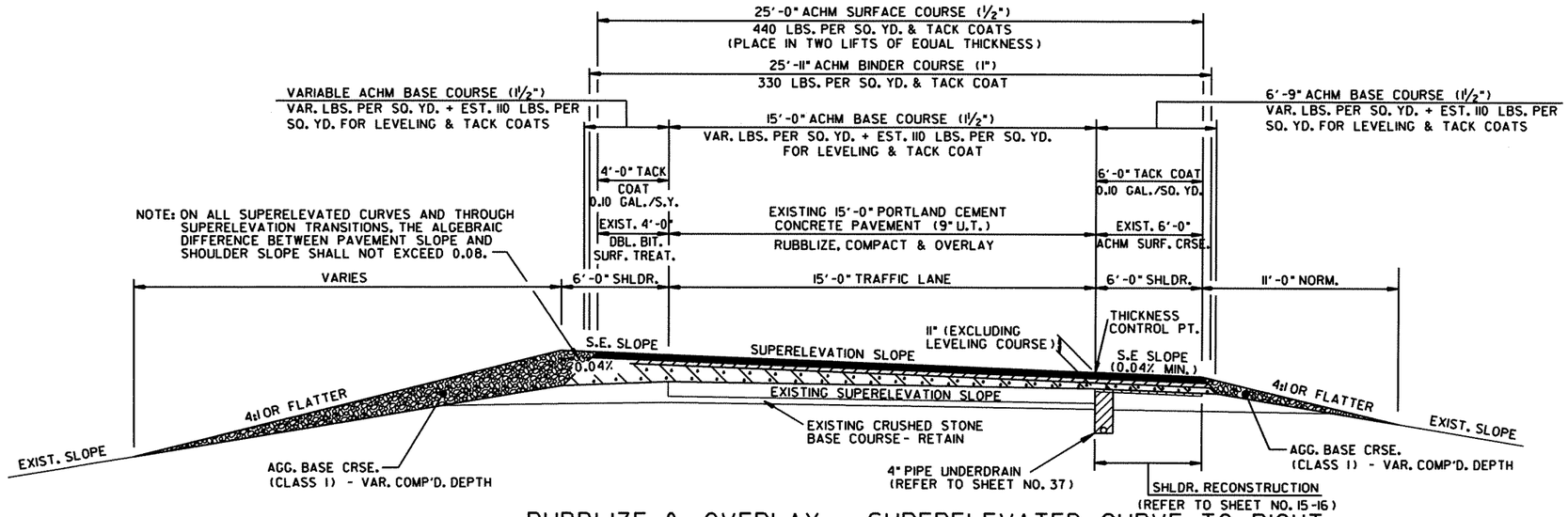
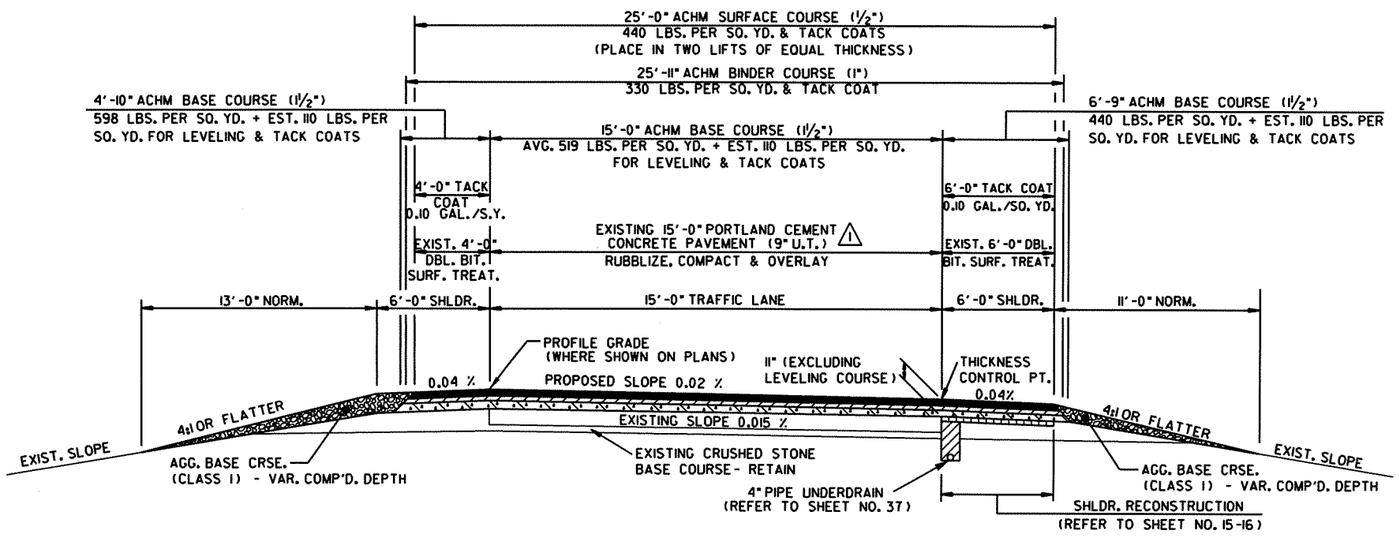
(2) TYPICAL SECTIONS OF IMPROVEMENT



RUBBLIZE & OVERLAY - SUPERELEVATED CURVE TO RIGHT
(SHOWN IN DIRECTION OF TRAFFIC)
STA. 709+37.38 S.B. LANES TO STA. 392+50.00 RAMP 3 (I-540/I-40 INT.)



RUBBLIZE & OVERLAY - TANGENT SECTION
(SHOWN IN DIRECTION OF TRAFFIC)
STA. 706+55.89 N.B. LANES TO STA. 714+88.65 RAMP 2 (I-540/I-40 INT.)

⚠1 NOTE: WIDTH VARIES FROM 12' TO 15' THROUGH GORE AREA WITH RAMP 4.

NOTE:
FOR SECTIONS CONTROLLED BY PROFILE GRADE, ADDITIONAL PAVEMENT THICKNESS TO BE ACCOMMODATED BY INCREASING THICKNESS OF ACHM BASE COURSE.

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

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
9/31/12

TYPICAL SECTIONS OF IMPROVEMENT

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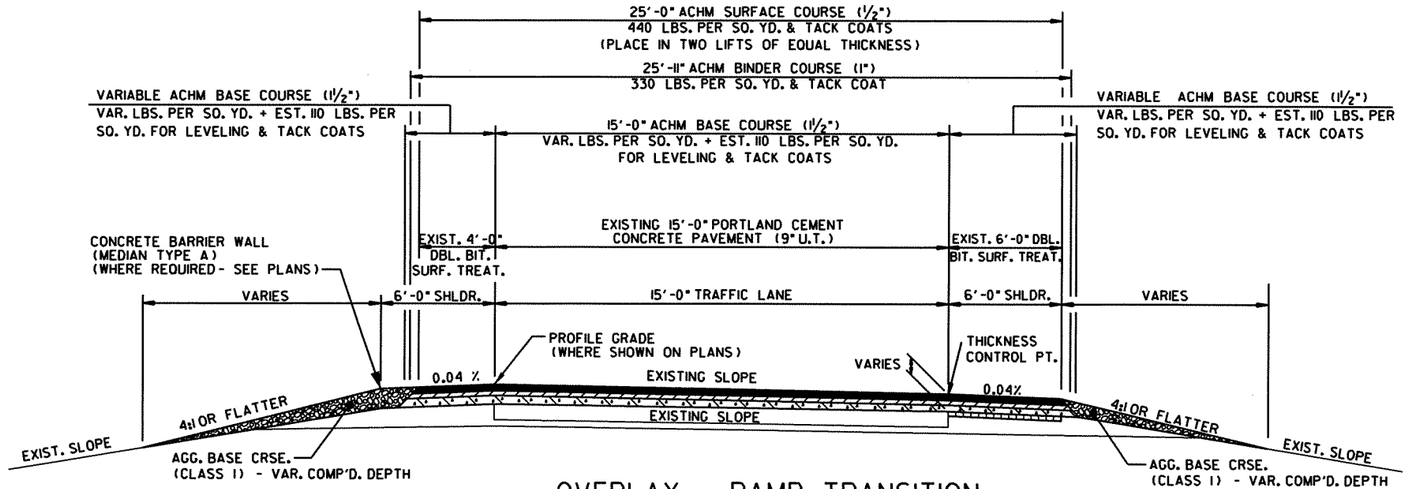
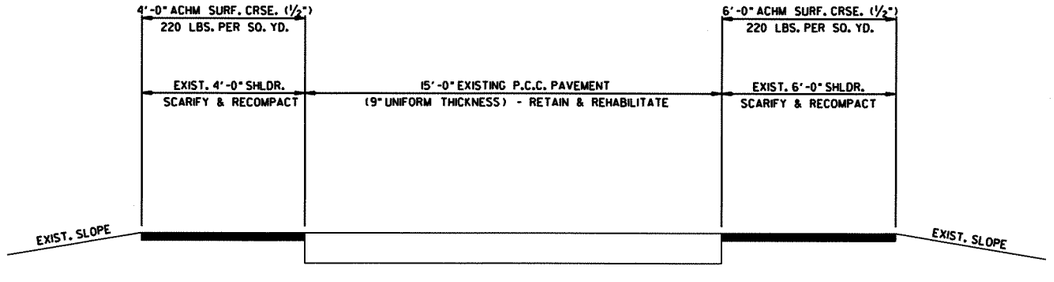
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	12	464

(2) TYPICAL SECTIONS OF IMPROVEMENT



OVERLAY - RAMP TRANSITION
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 3+70 RAMP 1 (I-540/S.H. 22 INT.) TO STA. 6+01 RAMP 1 (I-540/S.H. 22 INT.)
STA. 4+62 RAMP 2 (I-540/S.H. 22 INT.) TO STA. 7+66 RAMP 2 (I-540/S.H. 22 INT.)
STA. 394+72 RAMP 3 (I-540/GRAND AVE. INT.) TO STA. 400+81 RAMP 3 (I-540/GRAND AVE. INT.)



PAVEMENT REHABILITATION - RAMPS

NOTE:
FOR SECTIONS CONTROLLED BY PROFILE GRADE, ADDITIONAL PAVEMENT THICKNESS TO BE ACCOMMODATED BY INCREASING THICKNESS OF ACHM BASE COURSE.

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STATE OF ARKANSAS
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8/31/12

TYPICAL SECTIONS OF IMPROVEMENT

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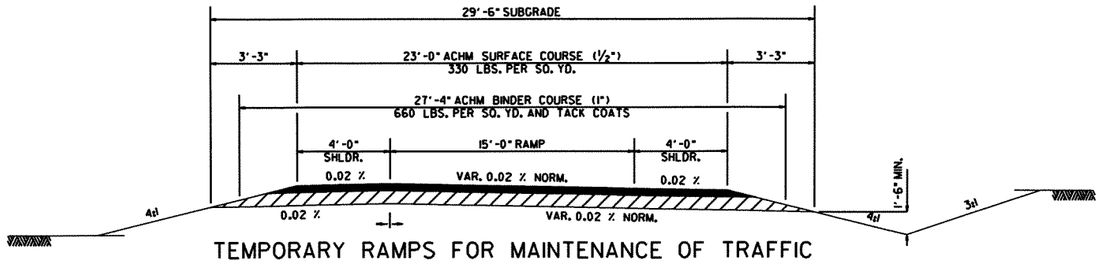
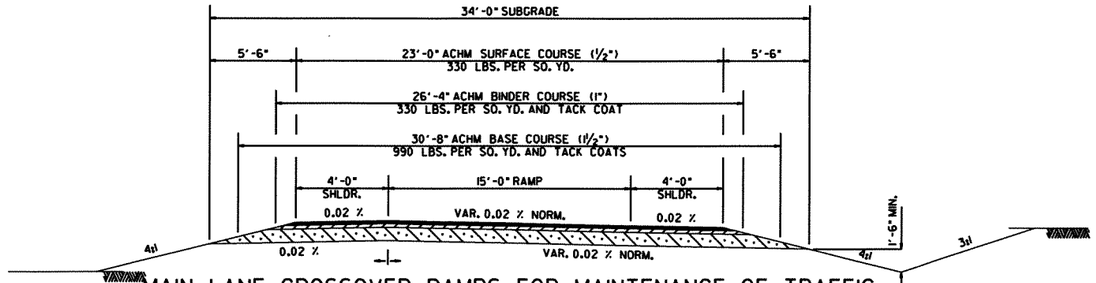
				6	ARK.			
				JOB NO.		BB0407	13	464

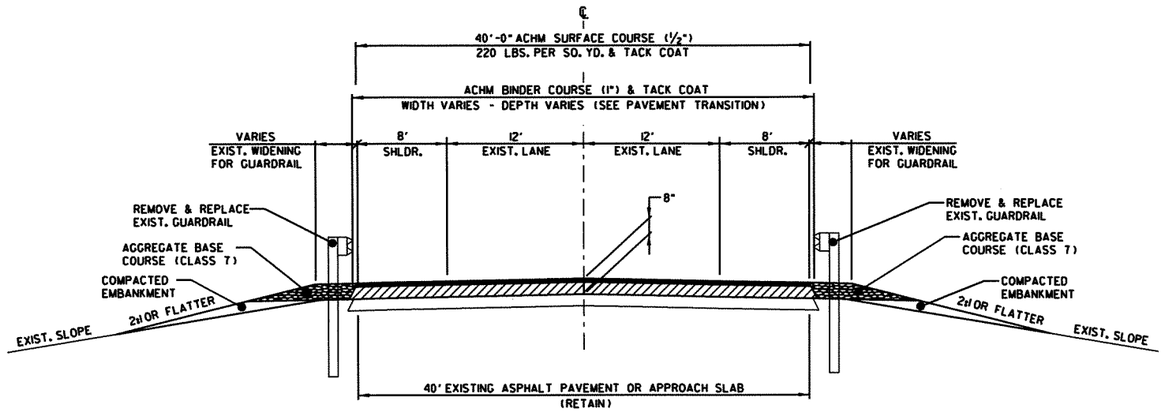
(2) TYPICAL SECTIONS OF IMPROVEMENT



TEMPORARY RAMPS FOR MAINTENANCE OF TRAFFIC

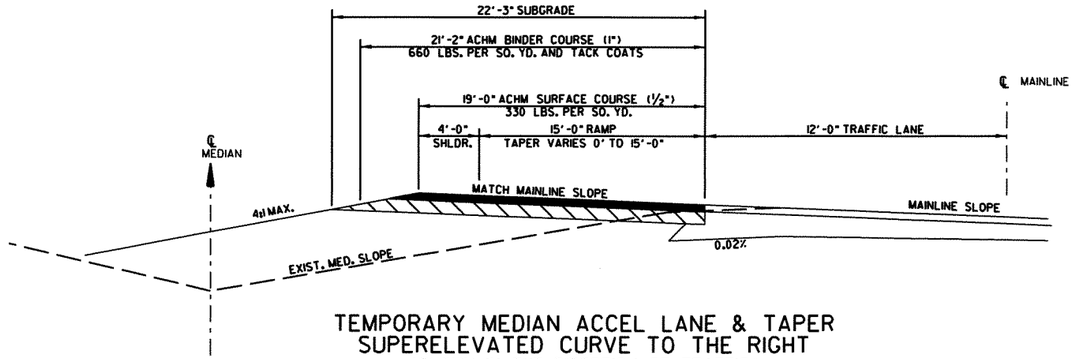


MAIN LANE CROSSOVER RAMPS FOR MAINTENANCE OF TRAFFIC



TYPICAL SECTION
BUILD-UP OF APPROACHES AT U.S. 64 BRIDGE JACKING

NOTES:
EXISTING APPROACH GUTTERS, DROP INLETS, SPILLWAY PIPE & OUTLETS, AND GUARDRAIL TO BE REMOVED. EXISTING TRANSITION WALLS AND ANCHOR POSTS TO BE REMOVED IF PRESENT.



TEMPORARY MEDIAN ACCEL LANE & TAPER
SUPERELEVATED CURVE TO THE RIGHT
(SHOWN IN THE DIRECTION OF TRAFFIC)

STA. 364+73.04 N.B. TO STA. 379+00.15 N.B.
STA. 401+66.54 N.B. TO STA. 409+32.98 N.B.
STA. 434+75.62 N.B. TO STA. 448+16.22 N.B.
STA. 468+68.48 N.B. TO STA. 476+58.52 N.B.
STA. 367+80.97 S.B. TO STA. 379+84.26 S.B.
STA. 402+08.38 S.B. TO STA. 417+46.65 S.B.
STA. 437+79.87 S.B. TO STA. 448+45.14 S.B.
STA. 468+33.77 S.B. TO STA. 480+09.71 S.B.

NOTE:
FOR SECTIONS CONTROLLED BY PROFILE GRADE, ADDITIONAL PAVEMENT THICKNESS TO BE ACCOMMODATED BY INCREASING THICKNESS OF ACHM BASE COURSE.

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

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STATE OF ARKANSAS
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8/31/12

TYPICAL SECTIONS OF IMPROVEMENT

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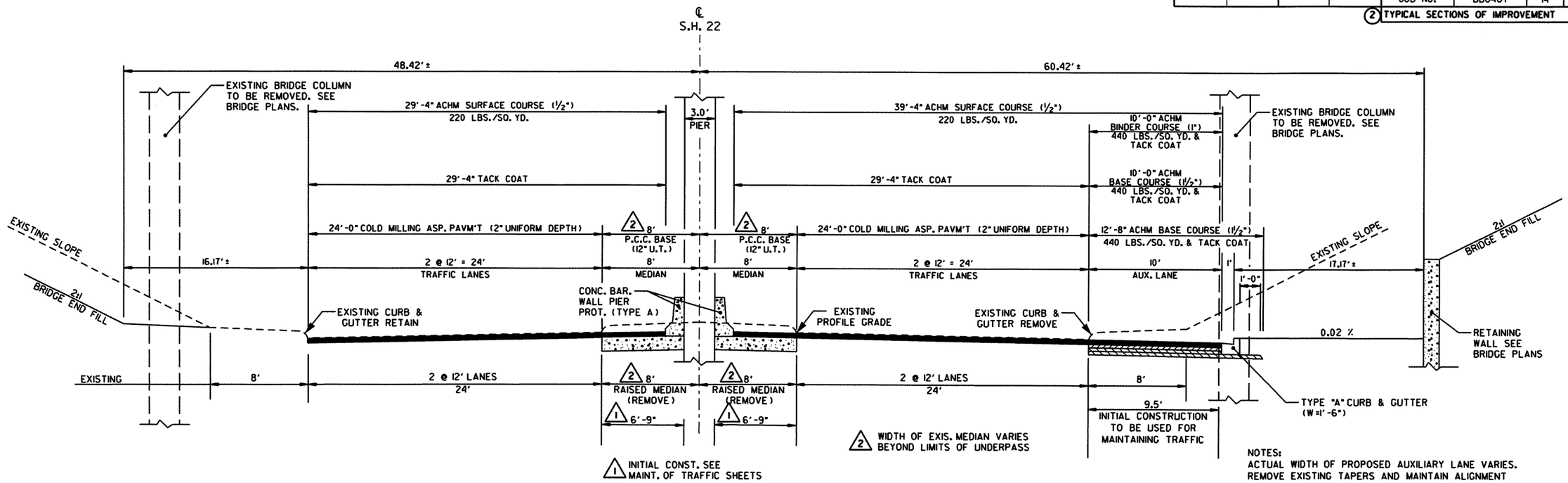
				6	ARK.			
				JOB NO.		BB0407	14	464

(2) TYPICAL SECTIONS OF IMPROVEMENT



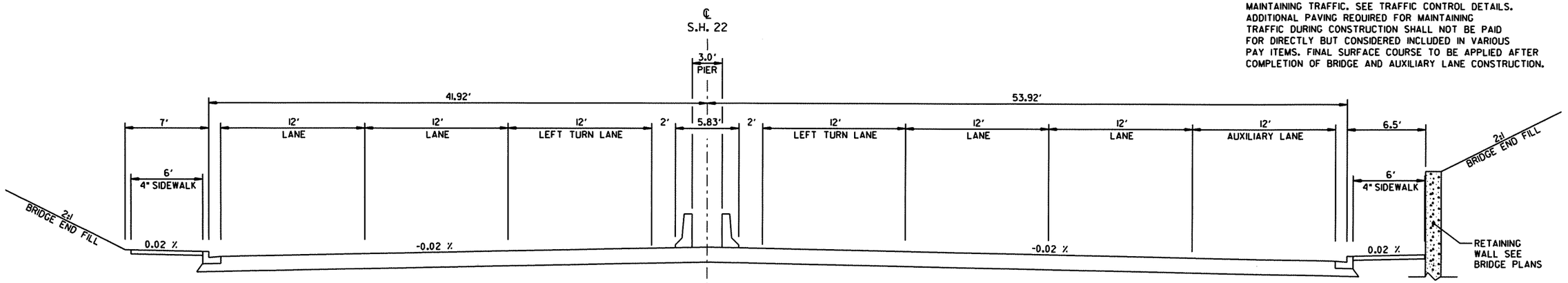
1 INITIAL CONST. SEE MAINT. OF TRAFFIC SHEETS

2 WIDTH OF EXIS. MEDIAN VARIES BEYOND LIMITS OF UNDERPASS

TYPICAL SECTION
S.H. 22 IMPROVEMENTS ⌀ I-540 UNDERPASS

NOTES:
ACTUAL WIDTH OF PROPOSED AUXILIARY LANE VARIES. REMOVE EXISTING TAPERS AND MAINTAIN ALIGNMENT BETWEEN EXISTING CURBS ALONG RIGHT EDGE OF ACCEL & DECEL LANE. CONSTRUCT AUXILIARY LANE BY CONNECTING EXISTING DECEL LANE FROM I-540 RAMP 2 TO EXISTING ACCEL LANE FOR I-540 RAMP 1.

INITIAL CONSTRUCTION OF SOME IMPROVEMENTS REQUIRED PRIOR TO BRIDGE CONSTRUCTION FOR USE IN MAINTAINING TRAFFIC. SEE TRAFFIC CONTROL DETAILS. ADDITIONAL PAVING REQUIRED FOR MAINTAINING TRAFFIC DURING CONSTRUCTION SHALL NOT BE PAID FOR DIRECTLY BUT CONSIDERED INCLUDED IN VARIOUS PAY ITEMS. FINAL SURFACE COURSE TO BE APPLIED AFTER COMPLETION OF BRIDGE AND AUXILIARY LANE CONSTRUCTION.



TYPICAL SECTION
FUTURE IMPROVEMENT
S.H. 22 ⌀ I-540 UNDERPASS

STATE OF ARKANSAS
JAMES L. BARR
REGISTERED PROFESSIONAL ENGINEER
No. 9808
8/31/12

TYPICAL SECTIONS OF IMPROVEMENT

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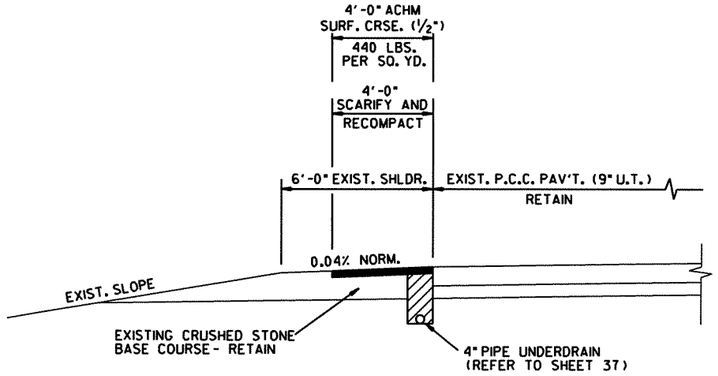
				6	ARK.			
				JOB NO.		BB0407	15	464

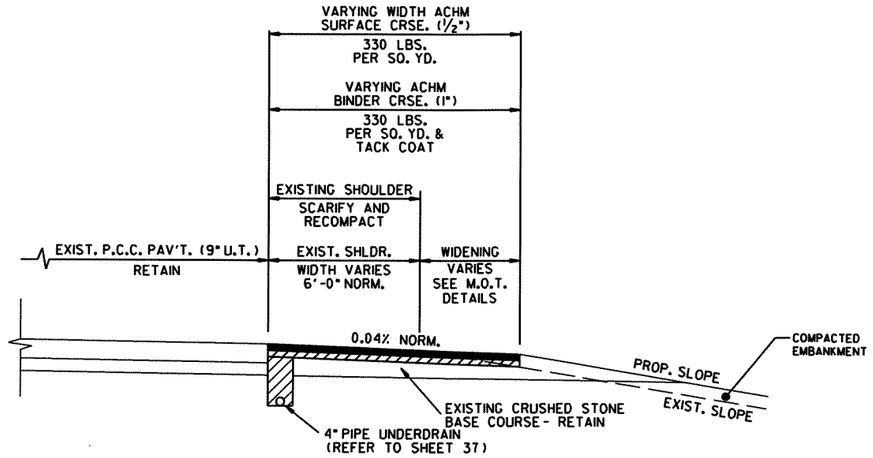
(2) TYPICAL SECTIONS OF STAGE CONSTRUCTION



INSIDE SHOULDER RECONSTRUCTION (STAGE I)
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 334+76 N.B. LANES TO STA. 343+20 N.B. LANES

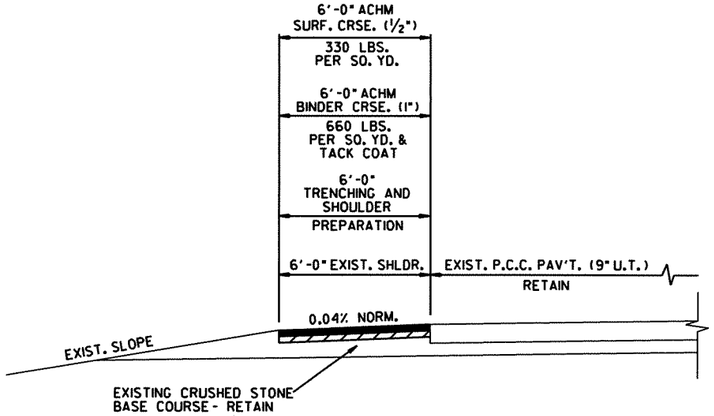
STA. 577+13 S.B. LANES TO STA. 592+56 S.B. LANES



OUTSIDE SHOULDER WIDENING & RECONSTRUCTION
FOR RAMPS & ACCEL LANES (STAGE I)
(SHOWN IN DIRECTION OF TRAFFIC)

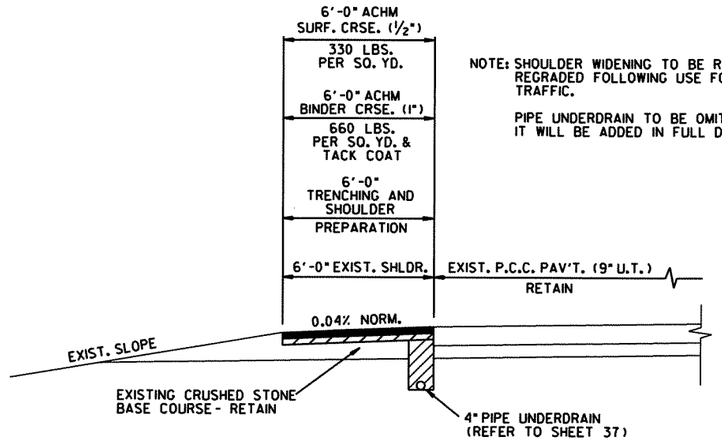
STA. 286+06 N.B. LANES TO STA. 291+52 N.B. LANES
STA. 297+56 N.B. LANES TO STA. 302+97 N.B. LANES
STA. 702+00 N.B. LANES TO STA. 721+40 RAMP 4 (I-540 & I-40)

STA. 280+80 S.B. LANES TO STA. 291+57 RAMP 6 (I-540 & S.H. 22)
STA. 290+20 S.B. LANES TO STA. 295+61 S.B. LANES
STA. 297+85 S.B. LANES TO STA. 305+53 S.B. LANES
STA. 704+55 S.B. LANES TO STA. 712+37 S.B. LANES
STA. 394+61 RAMP 3 (I-540 & I-40) TO STA. 387+00 RAMP 3 (I-540 & I-40)
STA. 713+55 S.B. LANES TO STA. 741+00 RAMP 1 (I-540 & I-40)



INSIDE SHOULDER RECONSTRUCTION BETWEEN CROSSOVERS (STAGE I)
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 343+20 N.B. LANES TO STA. 389+43 N.B. LANES
STA. 408+41 N.B. LANES TO STA. 486+54 N.B. LANES
STA. 610+55 N.B. LANES TO STA. 634+20 N.B. LANES
STA. 663+40 N.B. LANES TO STA. 671+52 N.B. LANES
STA. 704+70 N.B. LANES TO STA. 708+00 N.B. LANES



NOTE: SHOULDER WIDENING TO BE REMOVED AND SLOPE REGRADED FOLLOWING USE FOR MAINTENANCE OF TRAFFIC.

PIPE UNDERDRAIN TO BE OMITTED IN AREAS WHERE IT WILL BE ADDED IN FULL DEPTH RECONSTRUCTION

INSIDE SHOULDER RECONSTRUCTION BETWEEN CROSSOVERS (STAGE I)
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 390+92 N.B. LANES TO STA. 408+41 N.B. LANES
STA. 634+20 N.B. LANES TO STA. 663+40 N.B. LANES

STATE OF ARKANSAS
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TYPICAL SECTIONS OF STAGE CONSTRUCTION

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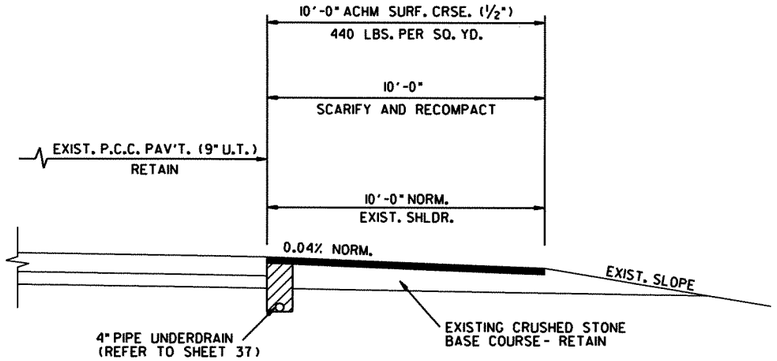
				JOB NO.		BB0407	16	464

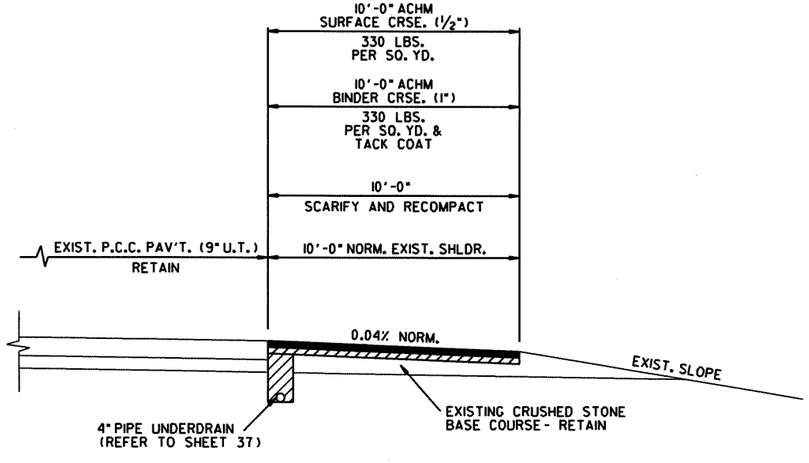
(2) TYPICAL SECTIONS OF STAGE CONSTRUCTION



OUTSIDE SHOULDER RECONSTRUCTION (STAGE I)
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 315+32 N.B. LANES TO STA. 336+41 N.B. LANES
STA. 594+03 N.B. LANES TO STA. 604+00 N.B. LANES
STA. 680+00 N.B. LANES TO STA. 689+39 N.B. LANES
STA. 695+38 N.B. LANES TO STA. 702+00 N.B. LANES

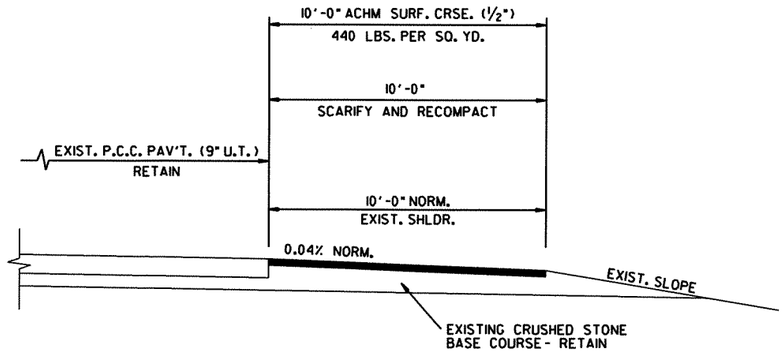
STA. 308+00 S.B. LANES TO STA. 338+09 S.B. LANES
STA. 592+56 S.B. LANES TO STA. 610+00 S.B. LANES
STA. 680+87 S.B. LANES TO STA. 686+62 S.B. LANES
STA. 692+50 S.B. LANES TO STA. 700+90 S.B. LANES



OUTSIDE SHOULDER RECONSTRUCTION (STAGE I)
(SHOWN IN DIRECTION OF TRAFFIC)

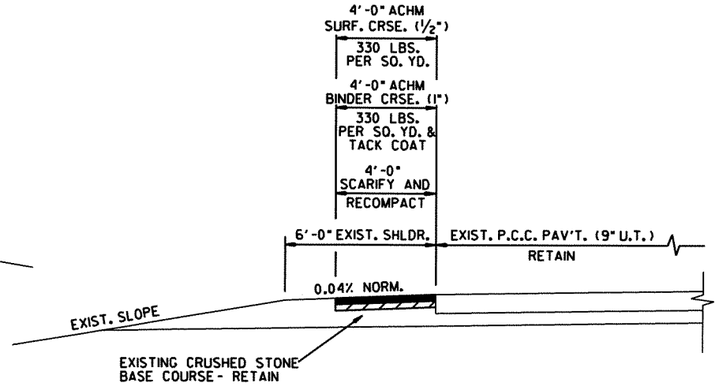
STA. 279+96 N.B. LANES TO STA. 282+98 N.B. LANES
STA. 302+97 N.B. LANES TO STA. 308+33 N.B. LANES
STA. 387+85 N.B. LANES TO STA. 392+72 N.B. LANES
STA. 421+08 N.B. LANES TO STA. 425+83 N.B. LANES
STA. 489+50 N.B. LANES TO STA. 498+37 N.B. LANES
STA. 508+95 N.B. LANES TO STA. 525+82 N.B. LANES
STA. 577+13 N.B. LANES TO STA. 587+18 N.B. LANES
STA. 662+54 N.B. LANES TO STA. 670+40 N.B. LANES

STA. 279+85 S.B. LANES TO STA. 280+80 S.B. LANES
STA. 508+95 S.B. LANES TO STA. 525+82 S.B. LANES



OUTSIDE SHOULDER RECONSTRUCTION (STAGE I)
(SHOWN IN DIRECTION OF TRAFFIC)

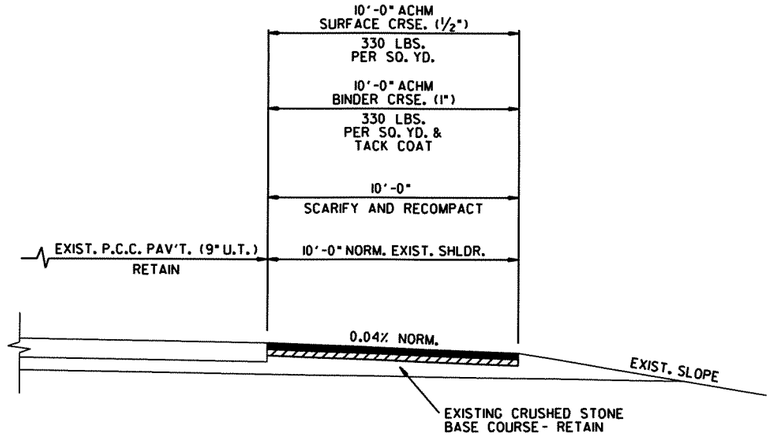
STA. 336+41 N.B. LANES TO STA. 343+20 N.B. LANES
STA. 590+27 S.B. LANES TO STA. 592+56 S.B. LANES



INSIDE SHOULDER RECONSTRUCTION (STAGE I)
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 717+31 S.B. LANES TO STA. 741+00 RAMP I (I-540 & I-40)

*NOTE: 4" PIPE UNDERDRAIN TO BE INSTALLED
WITH FULL DEPTH PAVEMENT CONSTRUCTION.

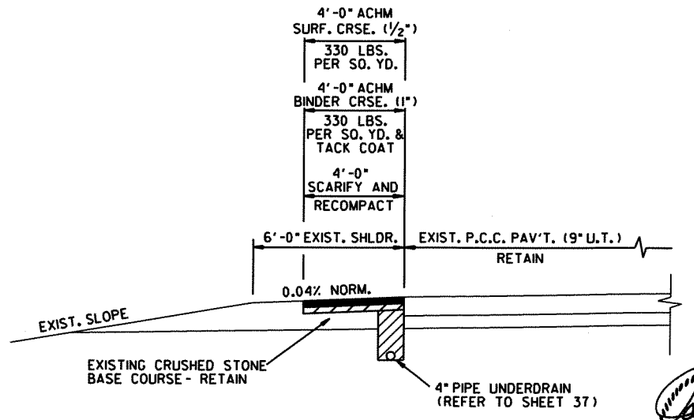


OUTSIDE SHOULDER RECONSTRUCTION (STAGE I)
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 525+82 N.B. LANES TO STA. 533+47 N.B. LANES
STA. 568+15 N.B. LANES TO STA. 577+13 N.B. LANES

STA. 525+82 S.B. LANES TO STA. 533+47 S.B. LANES
STA. 568+14 S.B. LANES TO STA. 590+16 S.B. LANES

*NOTE: 4" PIPE UNDERDRAIN TO BE INSTALLED
WITH FULL DEPTH PAVEMENT CONSTRUCTION.



INSIDE SHOULDER RECONSTRUCTION (STAGE I)
(SHOWN IN DIRECTION OF TRAFFIC)

STA. 575+00 S.B. LANES TO STA. 593+39 S.B. LANES

STATE OF ARKANSAS
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8/31/12

TYPICAL SECTIONS OF STAGE CONSTRUCTION

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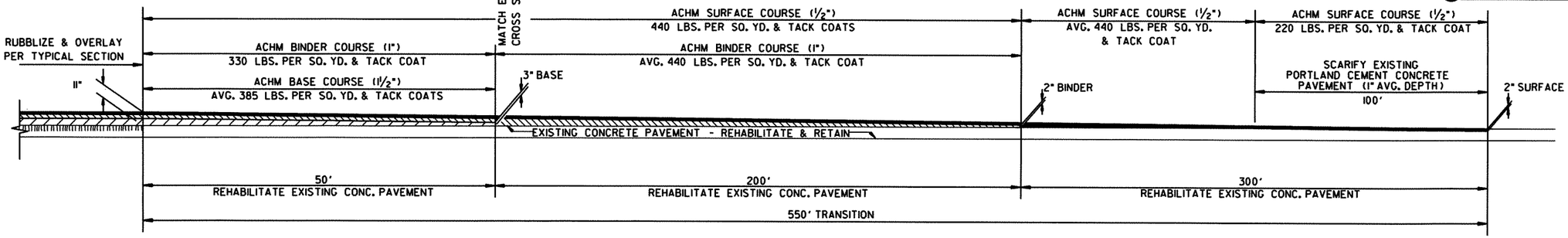
				6	ARK.			
				JOB NO.		BB0407	17	464

(2) SPECIAL DETAILS

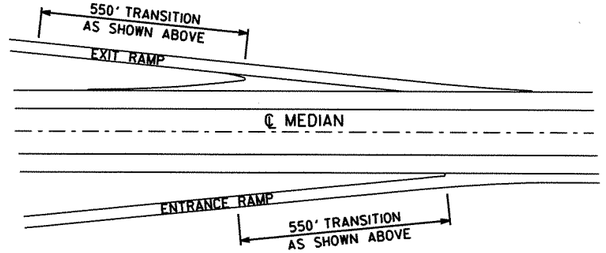


PAVING TRANSITION AT INTERCHANGE RAMPS

STA. 378+48.83 TO STA. 383+98.83 RAMP 1 (I-540/GRAND AVE. INTERCHANGE)
STA. 399+19.66 TO STA. 404+69.66 RAMP 2 (I-540/GRAND AVE. INTERCHANGE)
STA. 376+65.95 TO STA. 382+15.95 RAMP 4 (I-540/GRAND AVE. INTERCHANGE)
STA. 448+49.03 TO STA. 453+99.03 RAMP 1 (I-540/KELLEY HWY. INTERCHANGE)
STA. 462+28.47 TO STA. 467+78.47 RAMP 2 (I-540/KELLEY HWY. INTERCHANGE)
STA. 462+49.70 TO STA. 467+99.70 RAMP 3 (I-540/KELLEY HWY. INTERCHANGE)
STA. 446+67.87 TO STA. 452+17.87 RAMP 4 (I-540/KELLEY HWY. INTERCHANGE)
STA. 680+10.33 TO STA. 685+60.33 RAMP 1 (I-540/U.S. 64 INTERCHANGE)
STA. 683+92.93 TO STA. 689+42.93 RAMP 2 (I-540/U.S. 64 INTERCHANGE)
STA. 695+35.51 TO STA. 700+85.51 RAMP 3 (I-540/U.S. 64 INTERCHANGE)
STA. 696+62.91 TO STA. 702+12.91 RAMP 4 (I-540/U.S. 64 INTERCHANGE)
STA. 696+42.10 TO STA. 701+92.10 RAMP 5 (I-540/U.S. 64 INTERCHANGE)
STA. 692+46.41 TO STA. 697+96.41 RAMP 6 (I-540/U.S. 64 INTERCHANGE)
STA. 681+15.69 TO STA. 686+65.69 RAMP 7 (I-540/U.S. 64 INTERCHANGE)
STA. 680+85.36 TO STA. 686+35.36 RAMP 8 (I-540/U.S. 64 INTERCHANGE)

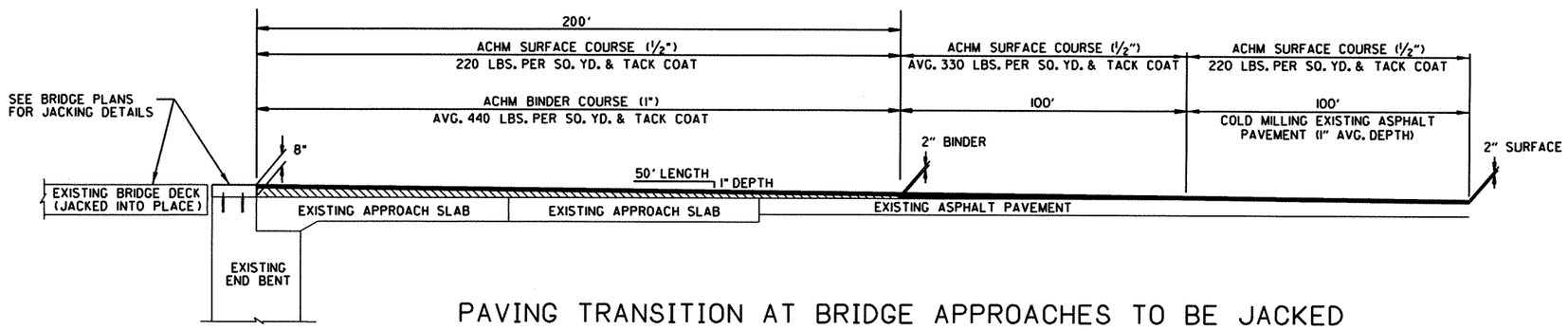
STA. 4+44.41 TO STA. 9+94.41 RAMP 3 (I-540/S.H. 22 INTERCHANGE)
STA. 9+26.78 TO STA. 14+76.78 RAMP 4 (I-540/S.H. 22 INTERCHANGE)
STA. 576+00.00 TO STA. 581+50.00 RAMP 1 (I-540/4TH STREET INTERCHANGE)
STA. 581+42.65 TO STA. 586+92.65 RAMP 2 (I-540/4TH STREET INTERCHANGE)
STA. 587+91.49 TO STA. 593+41.49 RAMP 3 (I-540/4TH STREET INTERCHANGE)
STA. 584+72.43 TO STA. 590+22.43 RAMP 4 (I-540/4TH STREET INTERCHANGE)

NOTE: SEE SEPARATE SPECIAL SHEET DETAILS FOR
RAMP 3 (I-540/GRAND AVE. INTERCHANGE)
RAMP 1 (I-540/S.H. 22 INTERCHANGE)
RAMP 2 (I-540/S.H. 22 INTERCHANGE)
RAMP 1 (I-540/I-40 INTERCHANGE)
RAMP 2 (I-540/I-40 INTERCHANGE)



PLAN OF PAVING TRANSITION AT RAMPS

NOTE: THICKNESSES SHOWN ARE AT THE THICKNESS CONTROL POINT SHOWN ON TYPICAL SECTIONS



PAVING TRANSITION AT BRIDGE APPROACHES TO BE JACKED
FOR BRIDGE OVERPASSES AT U.S. 64 E.B. & U.S. 64 W.B.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

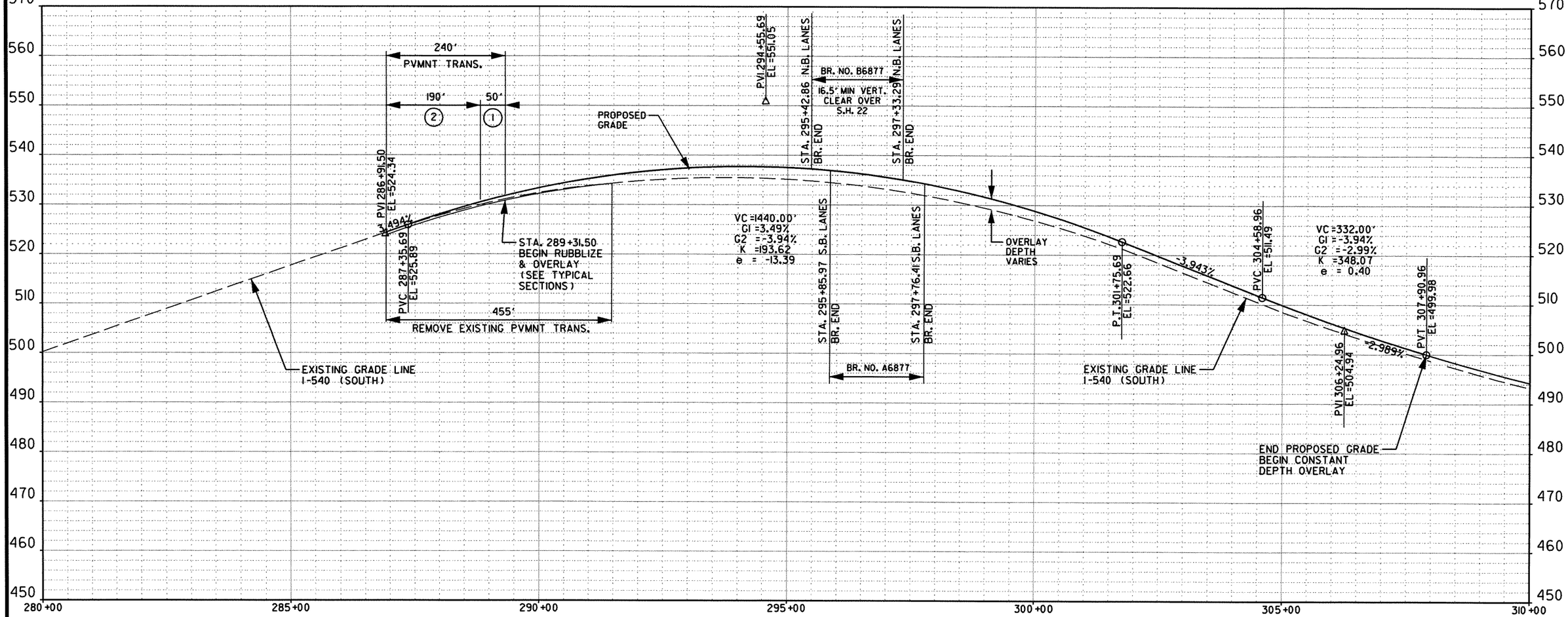
SPECIAL DETAILS

8/24/2012 3:07:39 PM

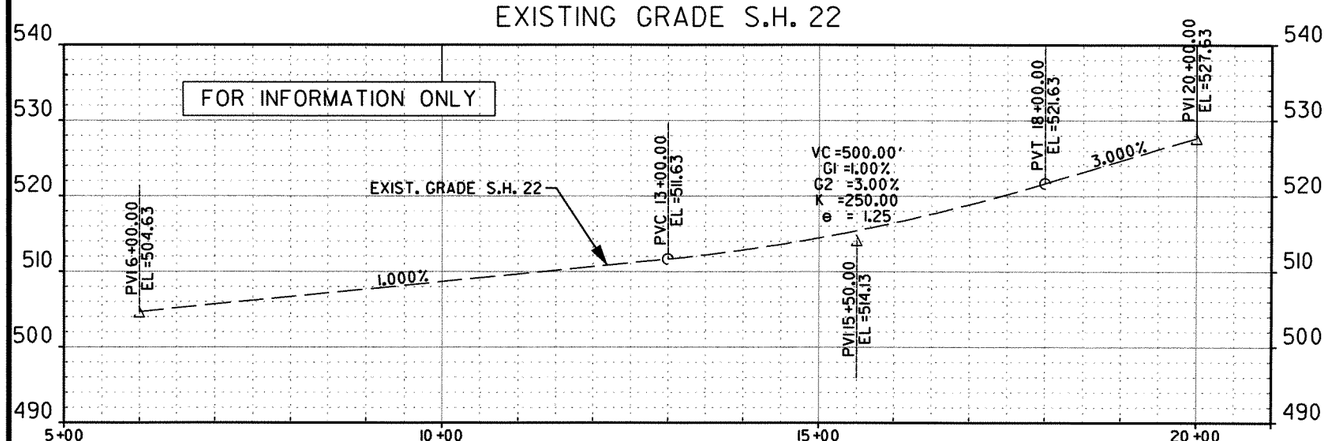
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	18	464

(2) SPECIAL DETAILS

N.B. & S.B. I-540 @ S.H.22 FINISHED GRADE



EXISTING GRADE S.H. 22



OVERLAY PAVEMENT TRANSITION

(1)

ACHM SURFACE COURSE (½")
440 LBS. PER SQ.YD. & TACK COATS
ACHM BINDER COURSE (1")
330 LBS. PER SQ.YD. & TACK COAT
ACHM BASE COURSE (1½")
AVG. 385 LBS. PER SQ.YD.

(2)

ACHM SURFACE COURSE (½")
440 LBS. PER SQ.YD. & TACK COATS
ACHM BINDER COURSE (1")
AVG. 468 LBS. PER SQ.YD. & TACK COAT

NOTES:
ELEVATIONS SHOWN REPRESENT THEORETICAL VALUES AND MAY NOT MATCH ACTUAL VALUES. EXISTING GRADE TO BE FIELD VERIFIED AND ADJUSTMENTS MADE AS NEEDED TO PROPOSED GRADE. ANY DEVIATIONS IN PROPOSED RATES OF CURVATURE (K) OR MINIMUM VERTICAL CLEARANCES MUST BE APPROVED BY THE ENGINEER.

THROUGH LIMITS OF PROPOSED GRADE, ADDITIONAL OVERLAY DEPTH IS TO BE ACCOMMODATED BY ADDITIONAL DEPTH OF BASE COURSE.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

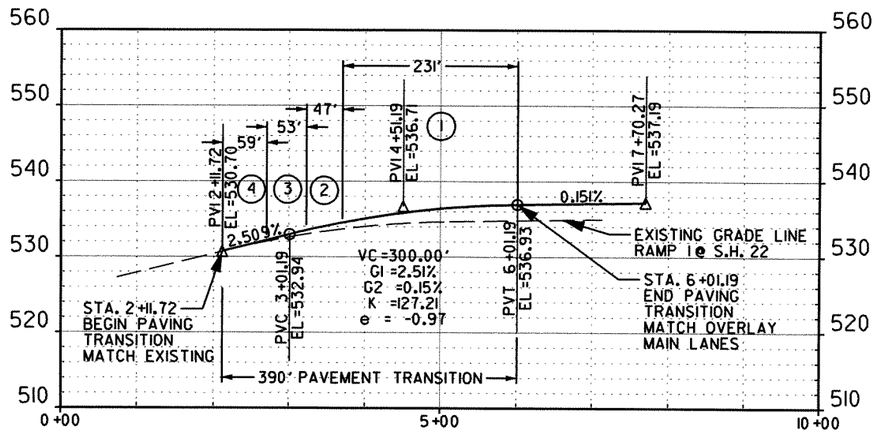
SPECIAL DETAILS

8/24/2012 3:54:53 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	19	464

(2) SPECIAL DETAILS

RAMP 1@ S.H. 22 PAVEMENT TRANSITION



OVERLAY PAVEMENT TRANSITION

(1)

ACHM SURFACE COURSE (½")
440 LBS. PER SQ.YD. & TACK COATS
ACHM BINDER COURSE (1")
330 LBS. PER SQ.YD. & TACK COAT
ACHM BASE COURSE (1½")
AVG. 1192 LBS. PER SQ.YD.

(3)

ACHM SURFACE COURSE (½")
AVG. 440 LBS. PER SQ.YD. & TACK COAT

(2)

ACHM SURFACE COURSE (½")
440 LBS. PER SQ.YD. & TACK COATS
ACHM BINDER COURSE (1")
AVG. 440 LBS. PER SQ.YD. & TACK COAT

(4)

ACHM SURFACE COURSE (½")
220 LBS. PER SQ.YD. & TACK COAT

OVERLAY PAVEMENT TRANSITION

(1)

ACHM SURFACE COURSE (½")
440 LBS. PER SQ.YD. & TACK COATS
ACHM BINDER COURSE (1")
330 LBS. PER SQ.YD. & TACK COAT
ACHM BASE COURSE (1½")
AVG. 1925 LBS. PER SQ.YD.

(2)

ACHM SURFACE COURSE (½")
440 LBS. PER SQ.YD. & TACK COATS
ACHM BINDER COURSE (1")
AVG. 440 LBS. PER SQ.YD. & TACK COAT

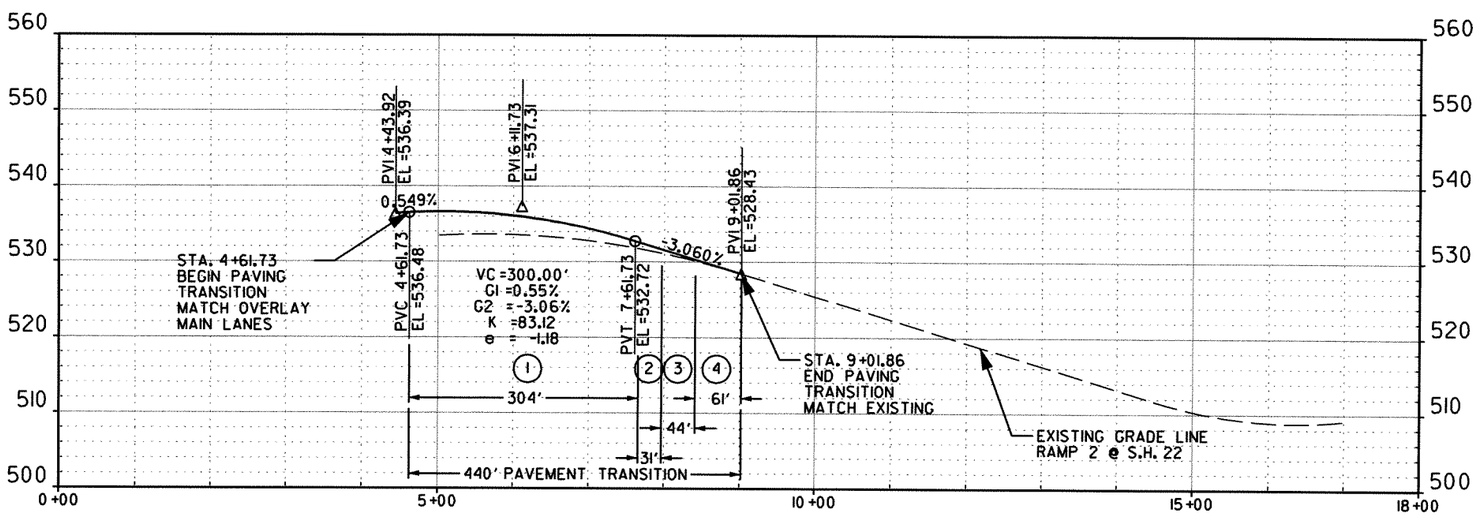
(3)

ACHM SURFACE COURSE (½")
AVG. 440 LBS. PER SQ.YD. & TACK COAT

(4)

ACHM SURFACE COURSE (½")
220 LBS. PER SQ.YD. & TACK COAT

RAMP 2 @ S.H. 22 PAVEMENT TRANSITION



NOTES:
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THROUGH LIMITS OF PROPOSED GRADE, ADDITIONAL OVERLAY DEPTH IS TO BE ACCOMMODATED BY ADDITIONAL DEPTH OF BASE COURSE.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

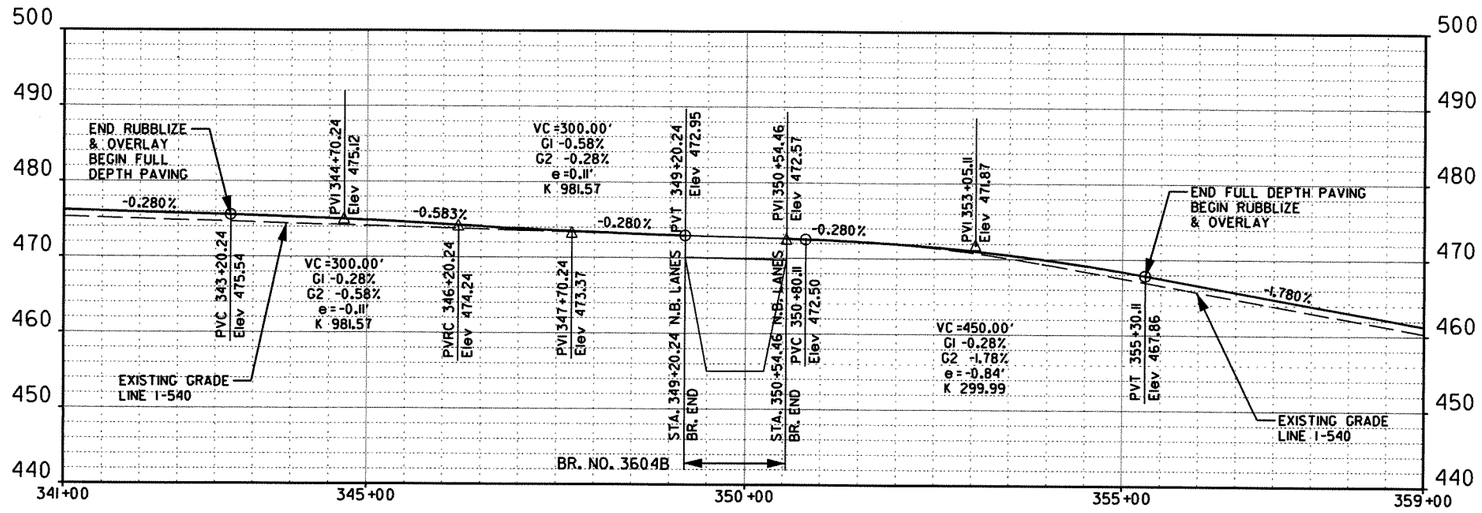
SPECIAL DETAILS

8/24/2012 3:54:54 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	20	464

(2) SPECIAL DETAILS

R.M.L. I-540 @ FREE FERRY RD. PAVEMENT TRANSITION



L.M.L. I-540 @ FREE FERRY RD. PAVEMENT TRANSITION

NOTES:
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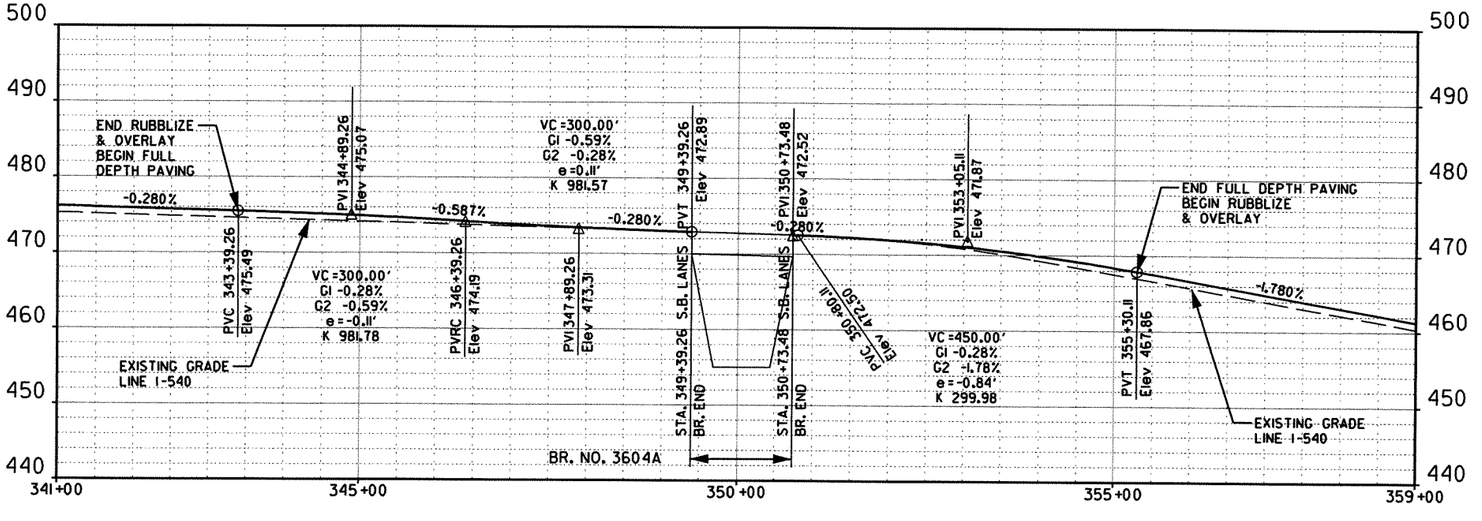
THROUGH LIMITS OF PROPOSED GRADE. ADDITIONAL OVERLAY DEPTH IS TO BE ACCOMMODATED BY ADDITIONAL DEPTH OF BASE COURSE.



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

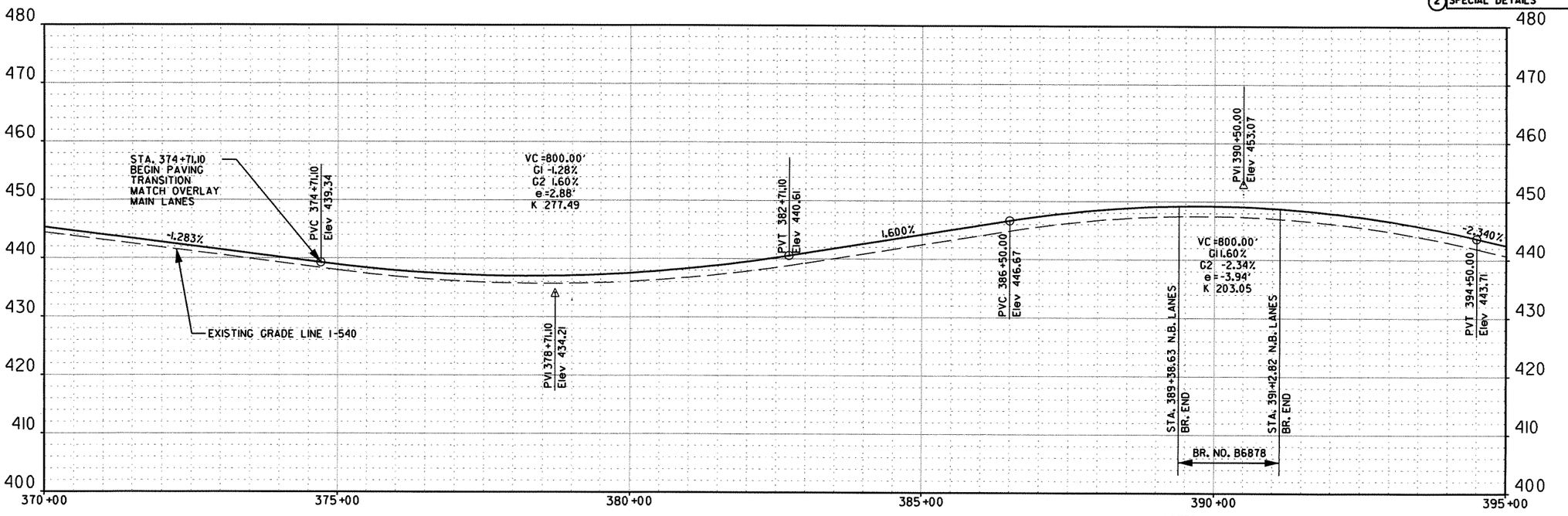
SPECIAL DETAILS

8/24/2012 3:54:54 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		B80407	21	464

(2) SPECIAL DETAILS

I-540 R.M.L. @ GRAND AVENUE PAVEMENT TRANSITION



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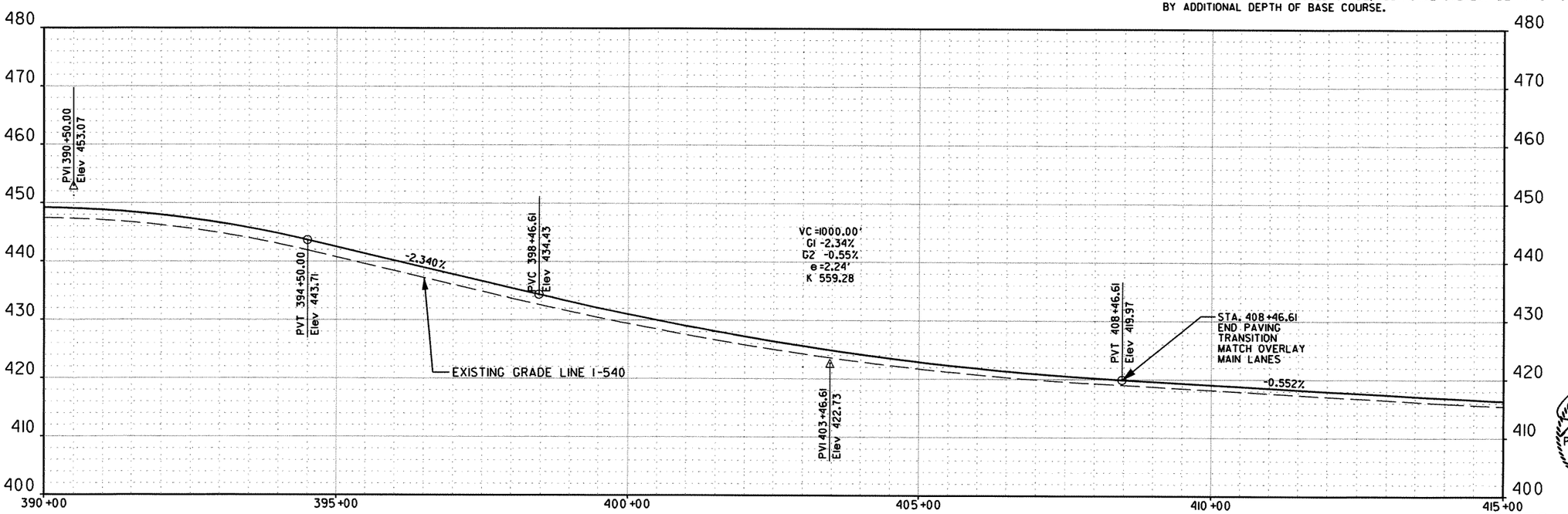
THROUGH LIMITS OF PROPOSED GRADE, ADDITIONAL OVERLAY DEPTH IS TO BE ACCOMMODATED BY ADDITIONAL DEPTH OF BASE COURSE.

I-540 R.M.L. @ GRAND AVENUE PAVEMENT TRANSITION



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

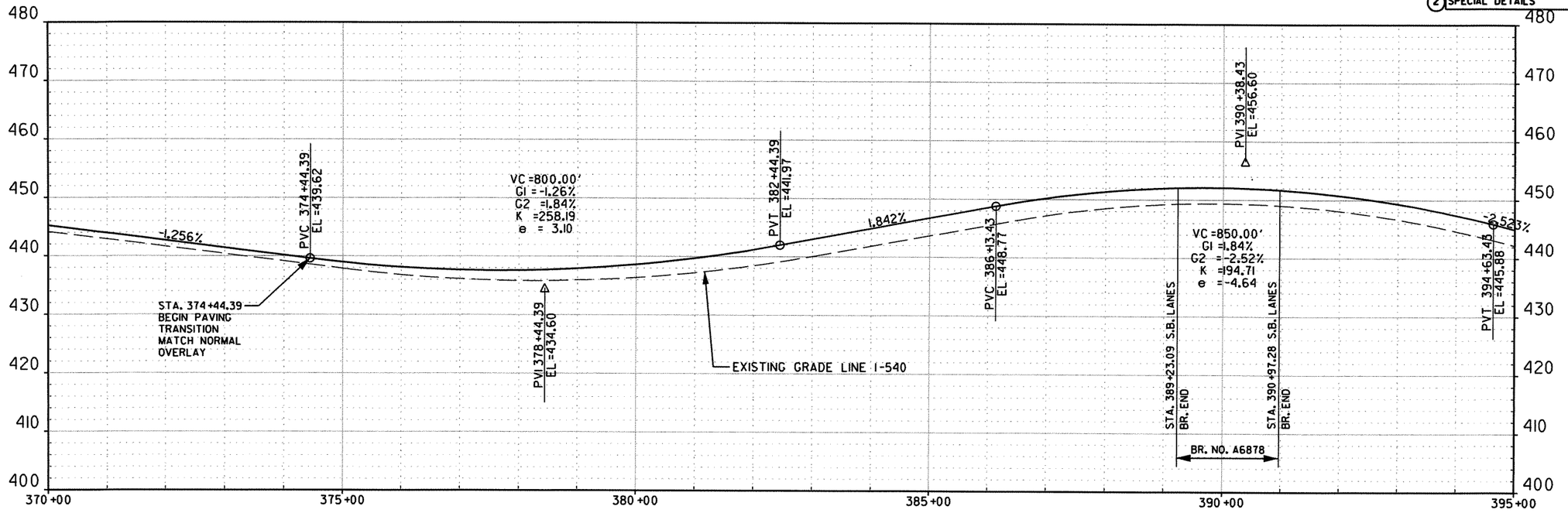
SPECIAL DETAILS

8/24/2012 5:12:32 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	22	464

(2) SPECIAL DETAILS

I-540 L.M.L. @ GRAND AVENUE PAVEMENT TRANSITION



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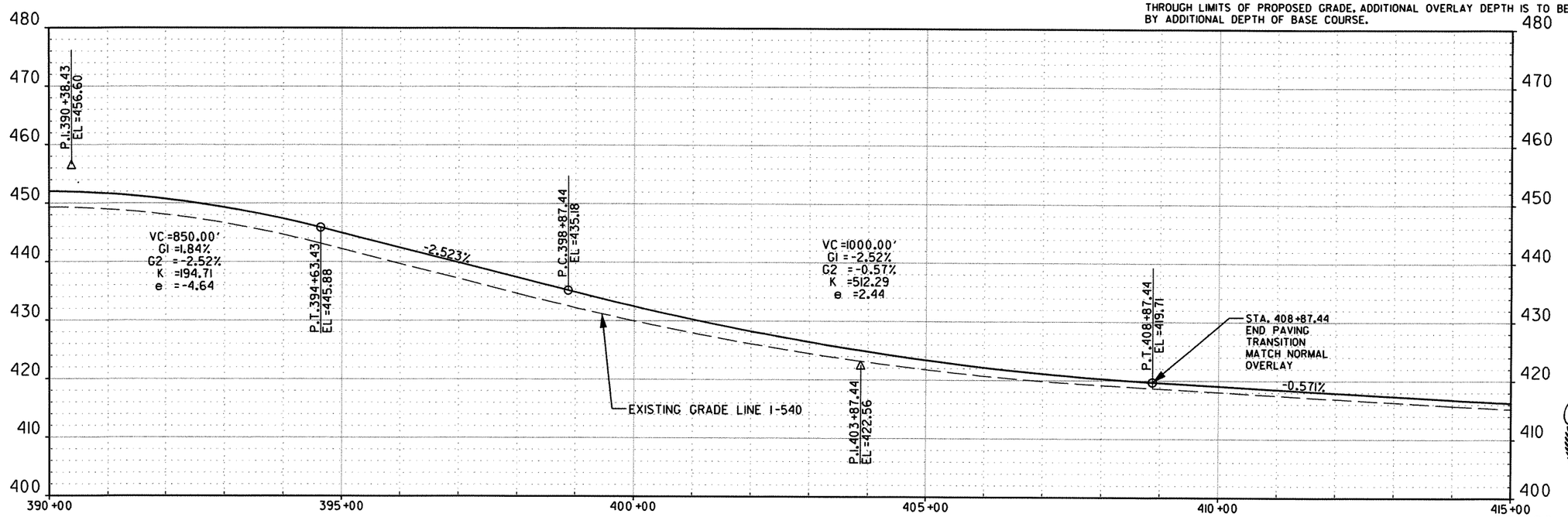
THROUGH LIMITS OF PROPOSED GRADE, ADDITIONAL OVERLAY DEPTH IS TO BE ACCOMMODATED BY ADDITIONAL DEPTH OF BASE COURSE.

I-540 L.M.L. @ GRAND AVENUE PAVEMENT TRANSITION



STATE OF ARKANSAS
JAMES L. BARR
REGISTERED PROFESSIONAL ENGINEER
No. 9808
8/31/12

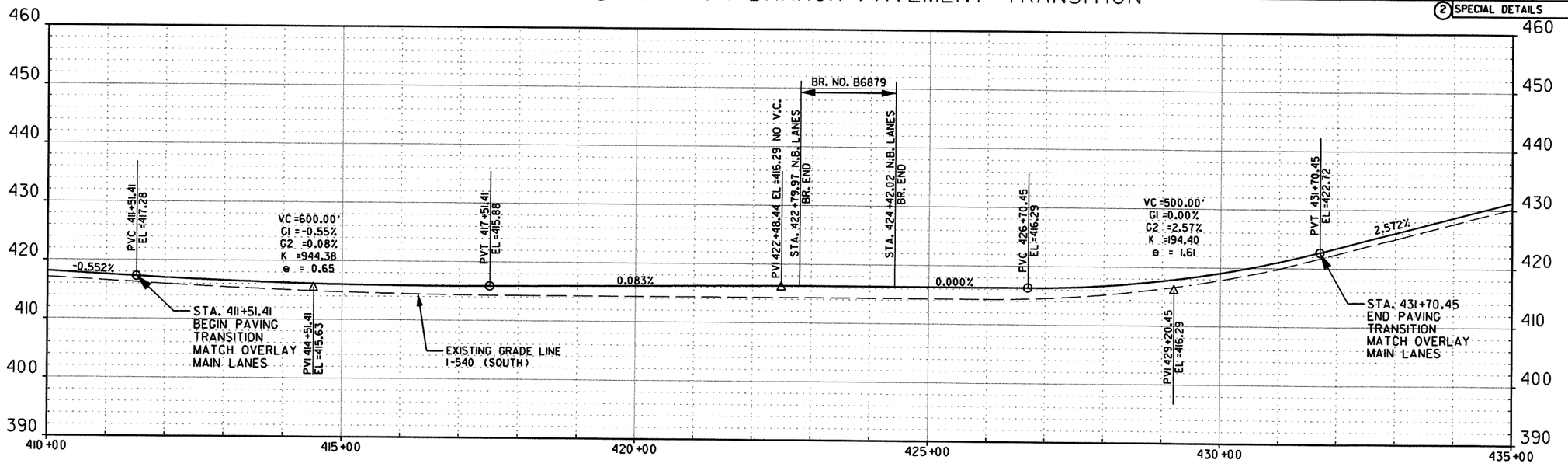
SPECIAL DETAILS

8/24/2012 5:12:32 PM

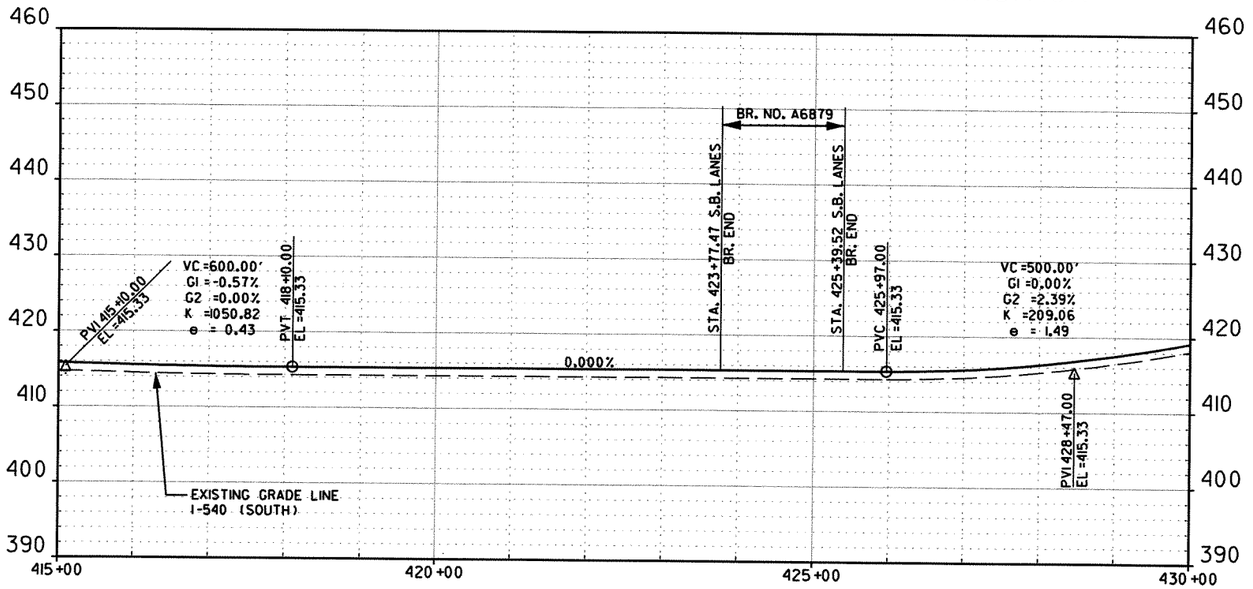
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	23	464

(2) SPECIAL DETAILS

I-540 R.M.L. @ CLAYTON BRANCH PAVEMENT TRANSITION



I-540 L.M.L. @ CLAYTON BRANCH PAVEMENT TRANSITION



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THROUGH LIMITS OF PROPOSED GRADE. ADDITIONAL OVERLAY DEPTH IS TO BE ACCOMMODATED BY ADDITIONAL DEPTH OF BASE COURSE.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

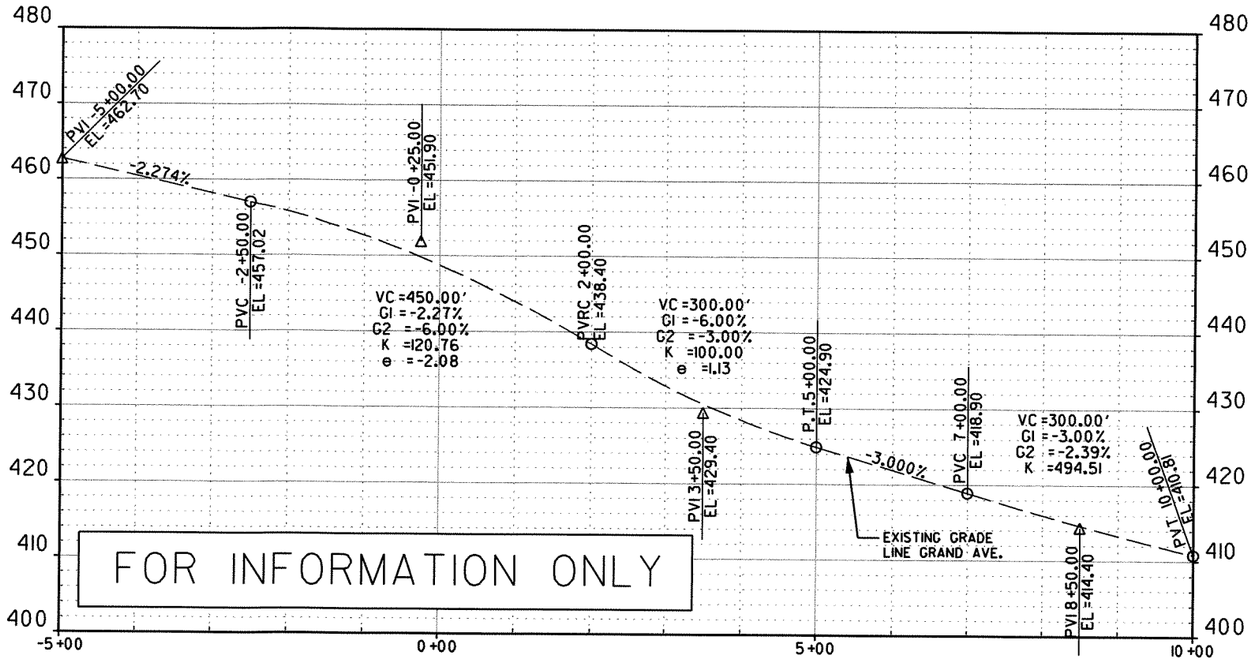
SPECIAL DETAILS

8/24/2012 5:36:31 PM

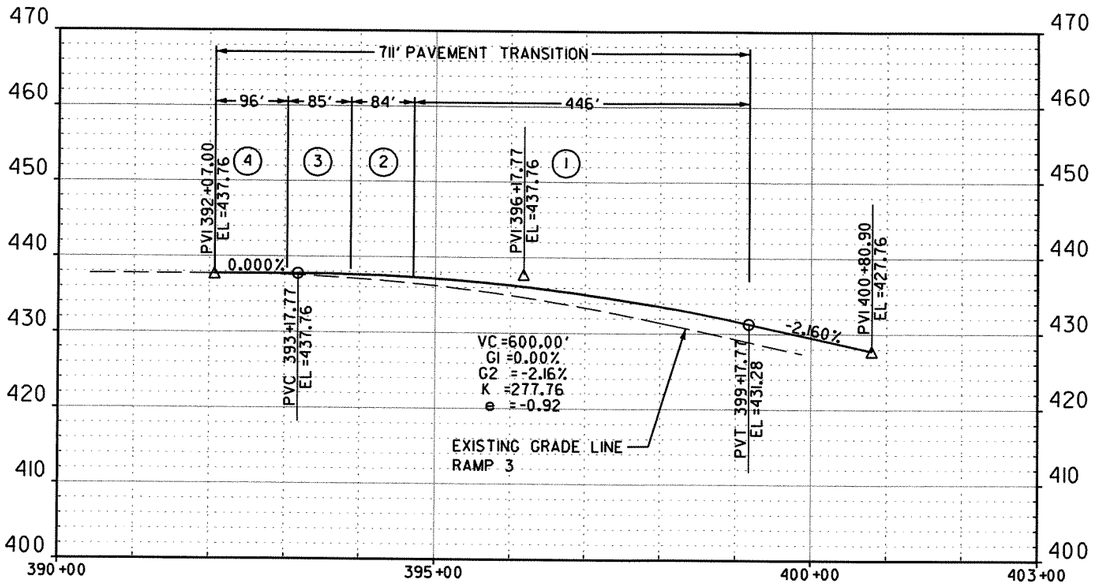
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	24	464

(2) SPECIAL DETAILS

EXISTING GRADE GRAND AVE.



RAMP 3 @ GRAND AVE. PAVEMENT TRANSITION



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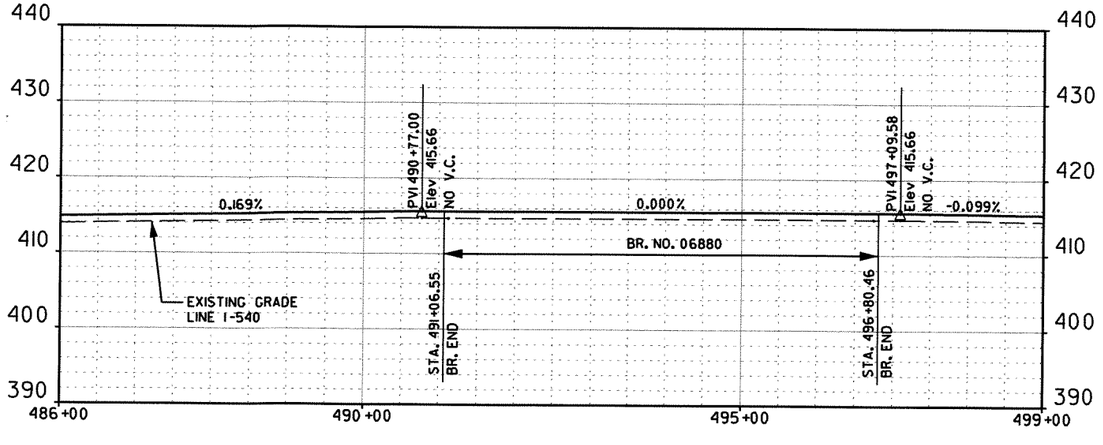
THROUGH LIMITS OF PROPOSED GRADE, ADDITIONAL OVERLAY DEPTH IS TO BE ACCOMMODATED BY ADDITIONAL DEPTH OF BASE COURSE.

I-540 @ ARKANSAS RIVER RELIEF BRIDGE



OVERLAY PAVEMENT TRANSITION

(1)
ACHM SURFACE COURSE (½")
440 LBS. PER SQ.YD. & TACK COATS
ACHM BINDER COURSE (1")
330 LBS. PER SQ.YD. & TACK COAT
ACHM BASE COURSE (1½")
AVG. 1359 LBS. PER SQ.YD.

(3)
ACHM SURFACE COURSE (½")
AVG. 440 LBS. PER SQ.YD. & TACK COAT

(2)
ACHM SURFACE COURSE (½")
440 LBS. PER SQ.YD. & TACK COATS
ACHM BINDER COURSE (1")
AVG. 440 LBS. PER SQ.YD. & TACK COAT

(4)
ACHM SURFACE COURSE (½")
220 LBS. PER SQ.YD. & TACK COAT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

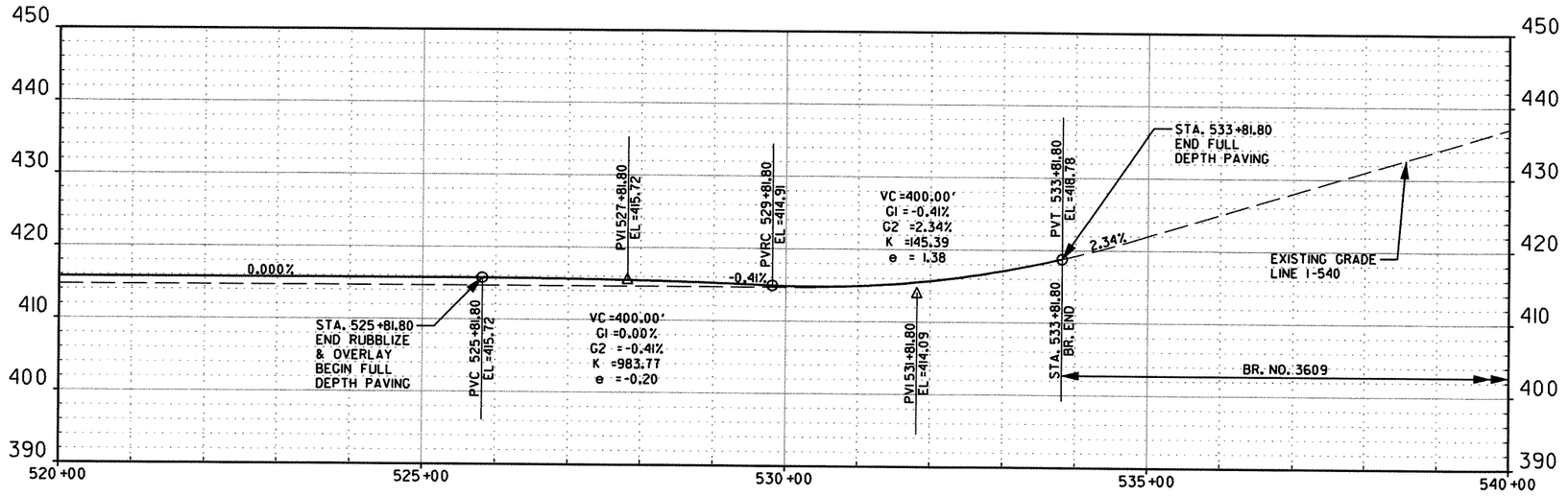
SPECIAL DETAILS

8/24/2012 5:36:31 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	25	464

(2) SPECIAL DETAILS

I-540 @ ARKANSAS RIVER BRIDGE PAVEMENT TRANSITION



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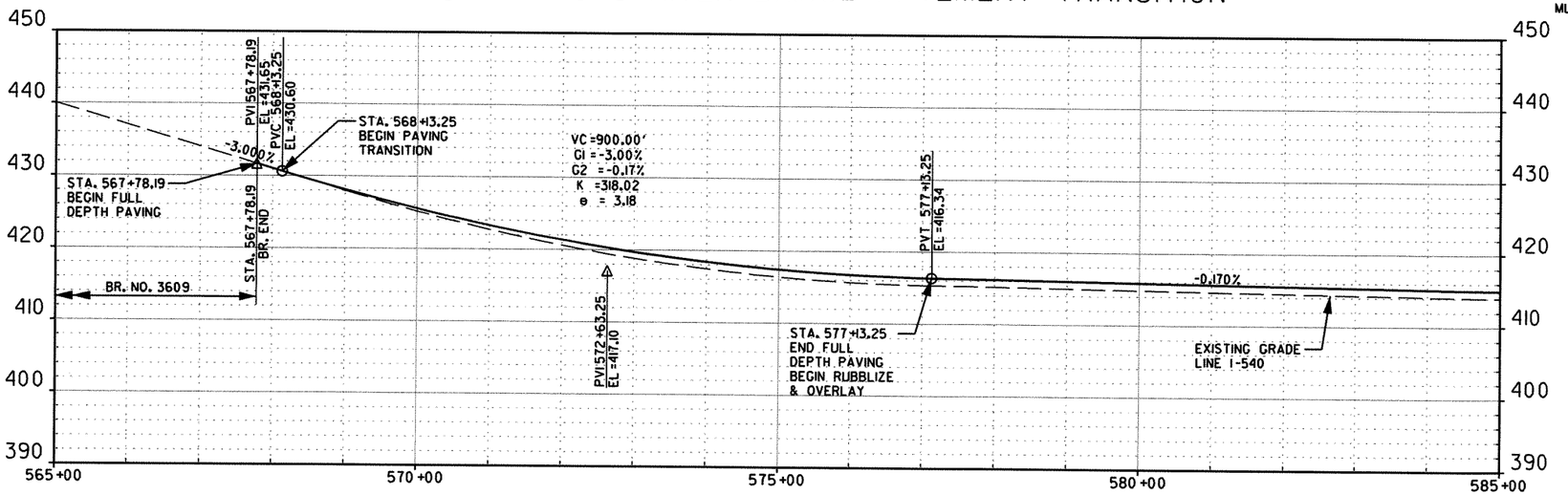
I-540 @ ARKANSAS RIVER BRIDGE PAVEMENT TRANSITION



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BAKER
8/31/12

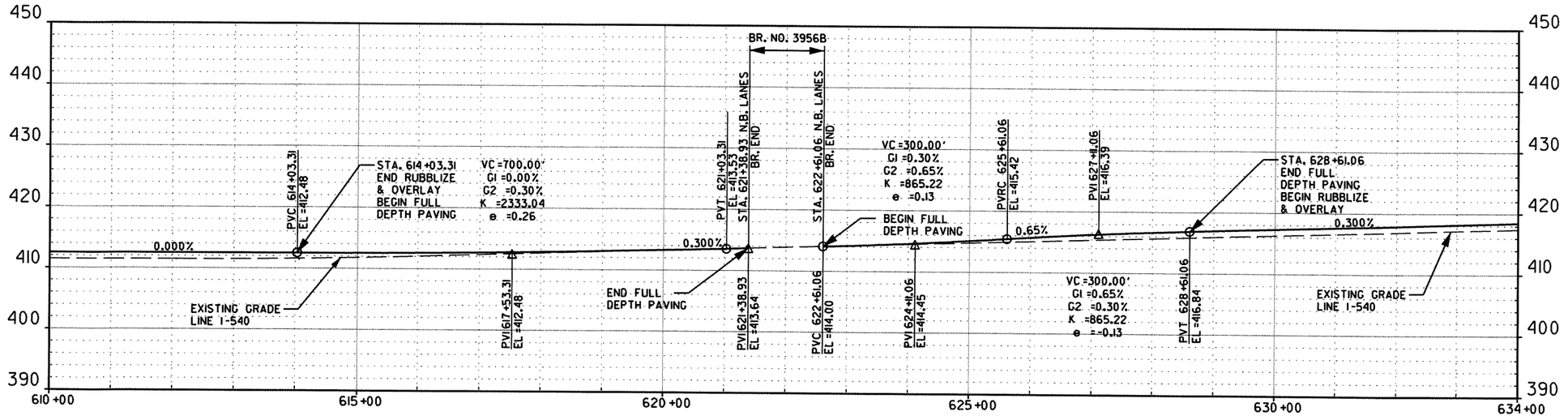
SPECIAL DETAILS

8/24/2012 5:36:32 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	26	464

(2) SPECIAL DETAILS

I-540 R.M.L. @ FLAT ROCK CREEK PAVEMENT TRANSITION



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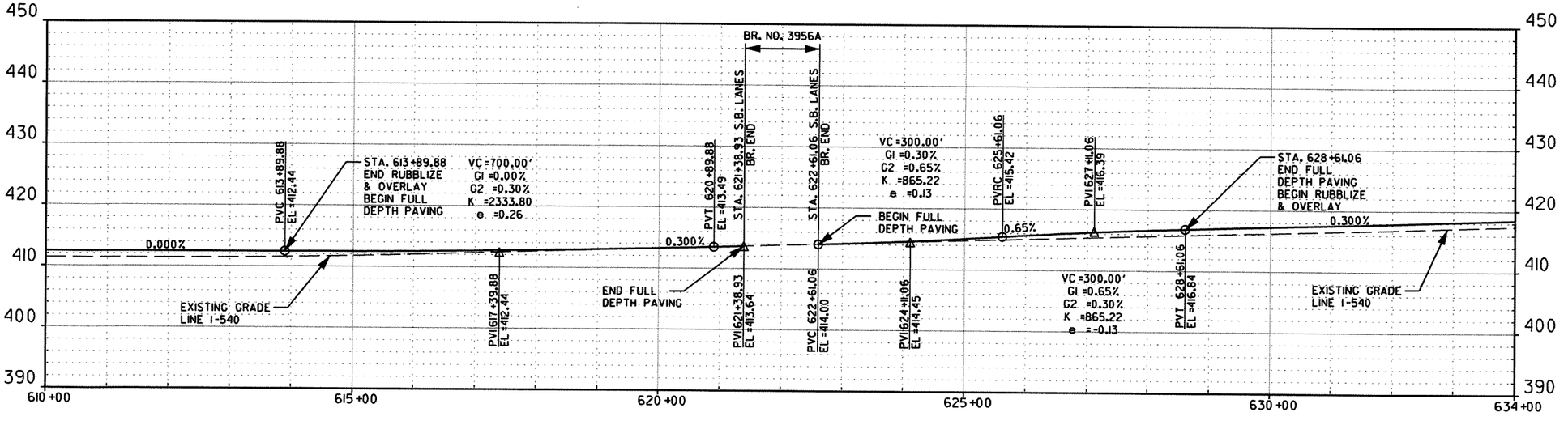
I-540 L.M.L. @ FLAT ROCK CREEK PAVEMENT TRANSITION



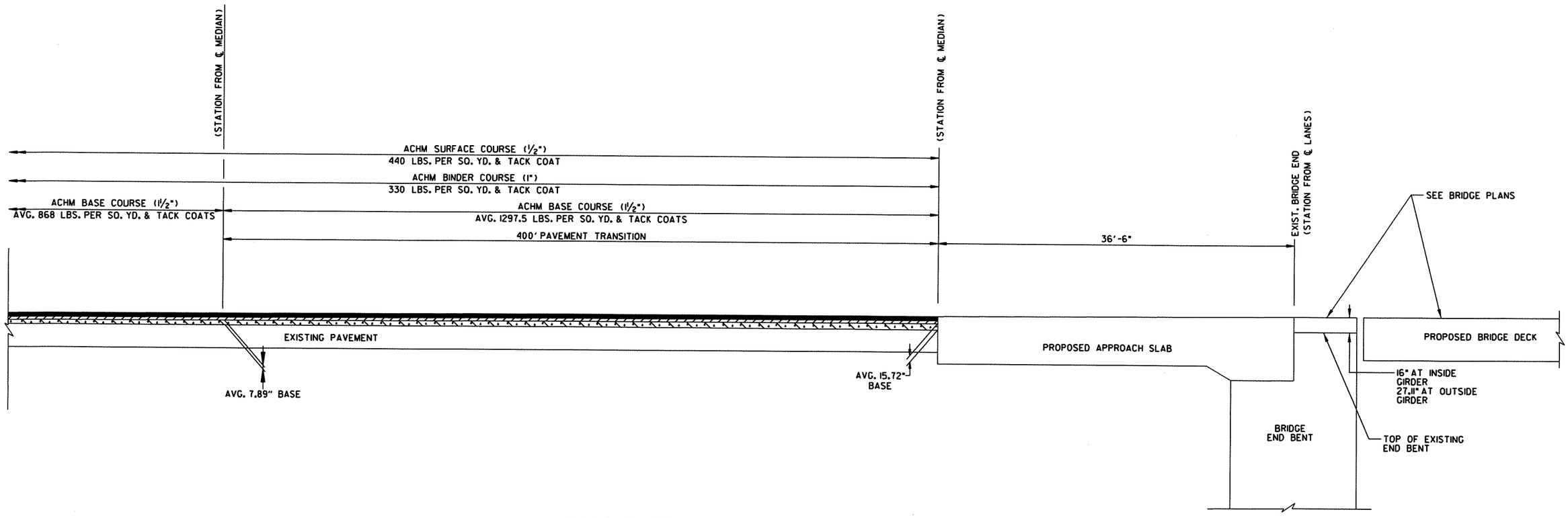
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

SPECIAL DETAILS

8/24/2012 5:36:32 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	27	464

(2) SPECIAL DETAILS



PAVING TRANSITION AT BRIDGE APPROACHES

FOR BRIDGES (3957A & 3957B) OVER U.S. 162
STA. 642+61.94 TO STA. 646+61.94 (I-540 S.B. LANES)
STA. 643+56.02 TO STA. 647+56.02 (I-540 N.B. LANES)
*STA. 649+09.25 TO STA. 653+09.25 (I-540 S.B. LANES)
*STA. 649+84.56 TO STA. 653+84.56 (I-540 N.B. LANES)

*MIRROR DETAIL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

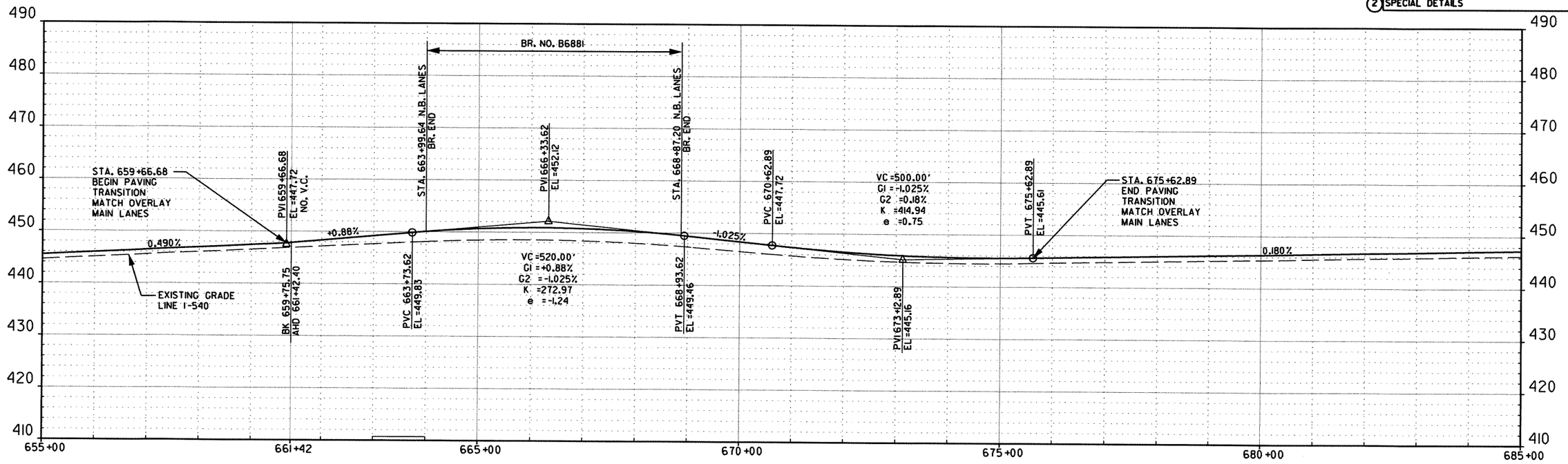
SPECIAL DETAILS

8/24/2012 5:36:32 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		B80407	28	464

(2) SPECIAL DETAILS

I-540 R.M.L. @ UNION PACIFIC RAILROAD PAVEMENT TRANSITION



NOTES:
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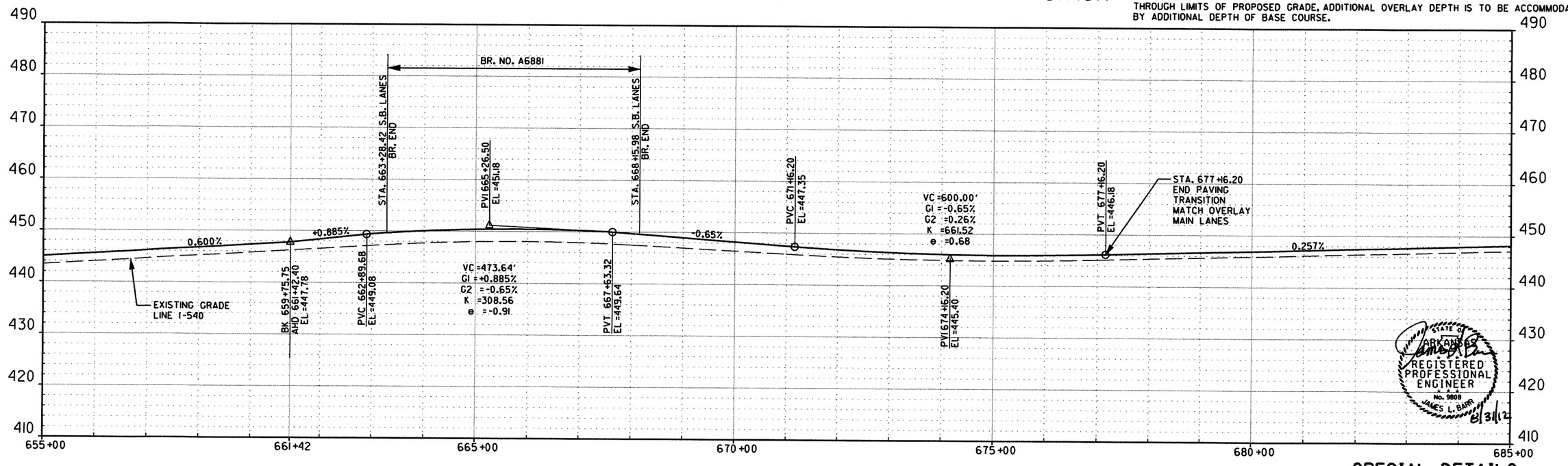
THROUGH LIMITS OF PROPOSED GRADE, ADDITIONAL OVERLAY DEPTH IS TO BE ACCOMMODATED BY ADDITIONAL DEPTH OF BASE COURSE.

I-540 L.M.L. @ UNION PACIFIC RAILROAD PAVEMENT TRANSITION



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

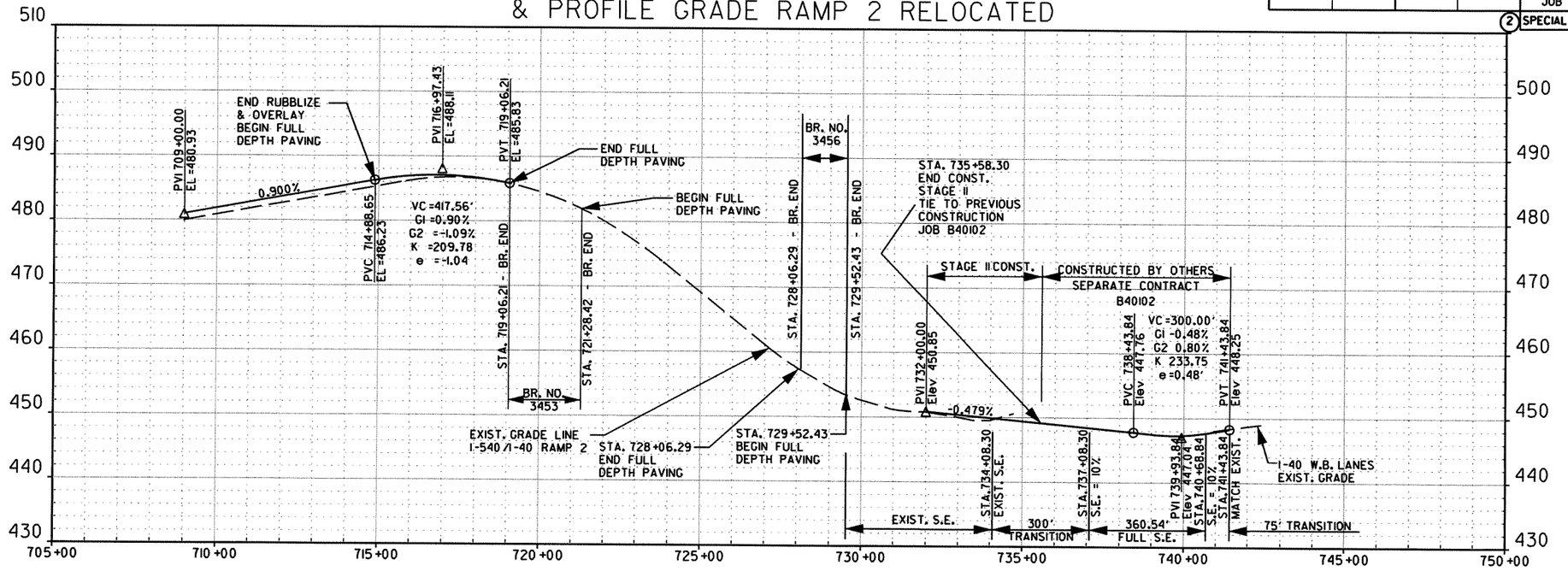
SPECIAL DETAILS

8/27/2012 9:17:48 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.		BB0407	29	464

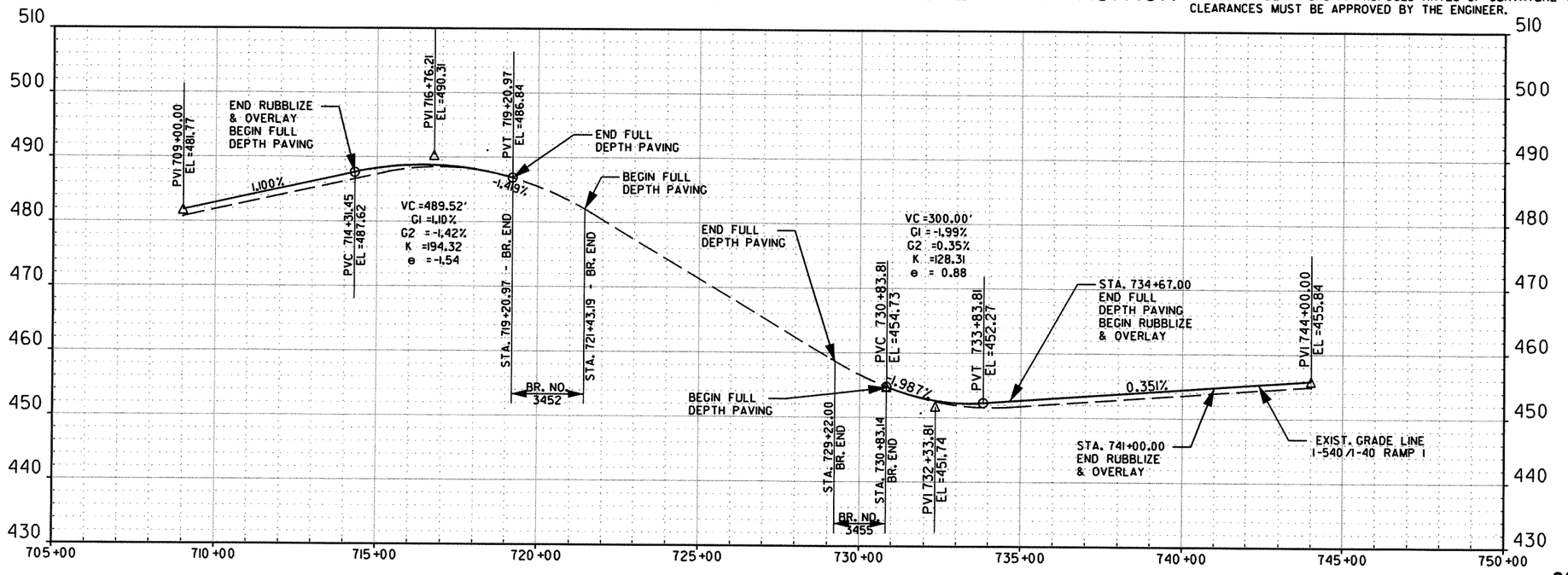
(2) SPECIAL DETAILS

RAMP 2 I-540/I-40 INTERCHANGE PAVEMENT TRANSITION & PROFILE GRADE RAMP 2 RELOCATED



RAMP 1 I-540/I-40 INTERCHANGE PAVEMENT TRANSITION

NOTES:
ELEVATIONS SHOWN REPRESENT THEORETICAL VALUES AND MAY NOT MATCH ACTUAL VALUES. EXISTING GRADE TO BE FIELD VERIFIED AND ADJUSTMENTS MADE AS NEEDED TO PROPOSED GRADE. ANY DEVIATIONS IN PROPOSED RATES OF CURVATURE (K) OR MINIMUM VERTICAL CLEARANCES MUST BE APPROVED BY THE ENGINEER.



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

SPECIAL DETAILS

8/27/2012 9:52:44 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.		BB0407	30	464

(2) SPECIAL DETAILS

℄ MEDIAN I-540
PI 342+72.00
Delta = 12°02'00"
Dc = 1°15'00"
T = 483.11'
L = 962.67'
R = 4583.66'

STA. 337+00 - STA. 346+00 CONST.
18"X900' TEMP. CULV'T IN MEDIAN
CONSTRUCT STAGE IB REMOVE STAGE VA

335+00
PI 336+71.92
PC 337+88.89
340+00
EXISTING R/W
EXISTING R/W
EXISTING C OF A
345+00
PI 346+41.97
PT 347+55.25
PT 347+51.56
EXISTING R/W & C OF A
EXISTING R/W & C OF A
PC 335+10.19
(1)
℄ MEDIAN I-540
N2°45'00"E
483.11'
PC 337+00.24
(3)
18" TEMP. CULV'T
(4)
N9°17'00"W
483.11'
(2)
BR. NO. 3604A
B.E. 349+39.26
BR. NO. 3604B
B.E. 349+20.24
E-5
EXISTING C OF A
FRONTAGE ROAD
EXISTING R/W
BOLTON ROAD
PI 341+17.32
PI 342+72.00
PI 342+99.76
EXISTING C OF A
FRONTAGE ROAD
EXISTING R/W
PT 347+58.10

CURVE (1)
Delta = 6°27'45" RT.
Dc = 2°00'00"
T = 161.73'
L = 323.12'
R = 2864.79'
PC = 335+10.19
PRC = 338+33.31

CURVE (2)
Delta = 18°29'45" LT.
Dc = 2°00'00"
T = 466.45'
L = 924.79'
R = 2864.79'
PRC = 338+33.31
PT = 347+58.10

CURVE (3)
Delta = 16°34'00" LT.
Dc = 2°00'00"
T = 417.08'
L = 828.34'
R = 2864.79'
PC = 337+00.24
PRC = 345+28.58

CURVE (4)
Delta = 4°32'00" RT.
Dc = 2°00'00"
T = 113.40'
L = 226.67'
R = 2864.79'
PRC = 345+28.58
PT = 347+55.25

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

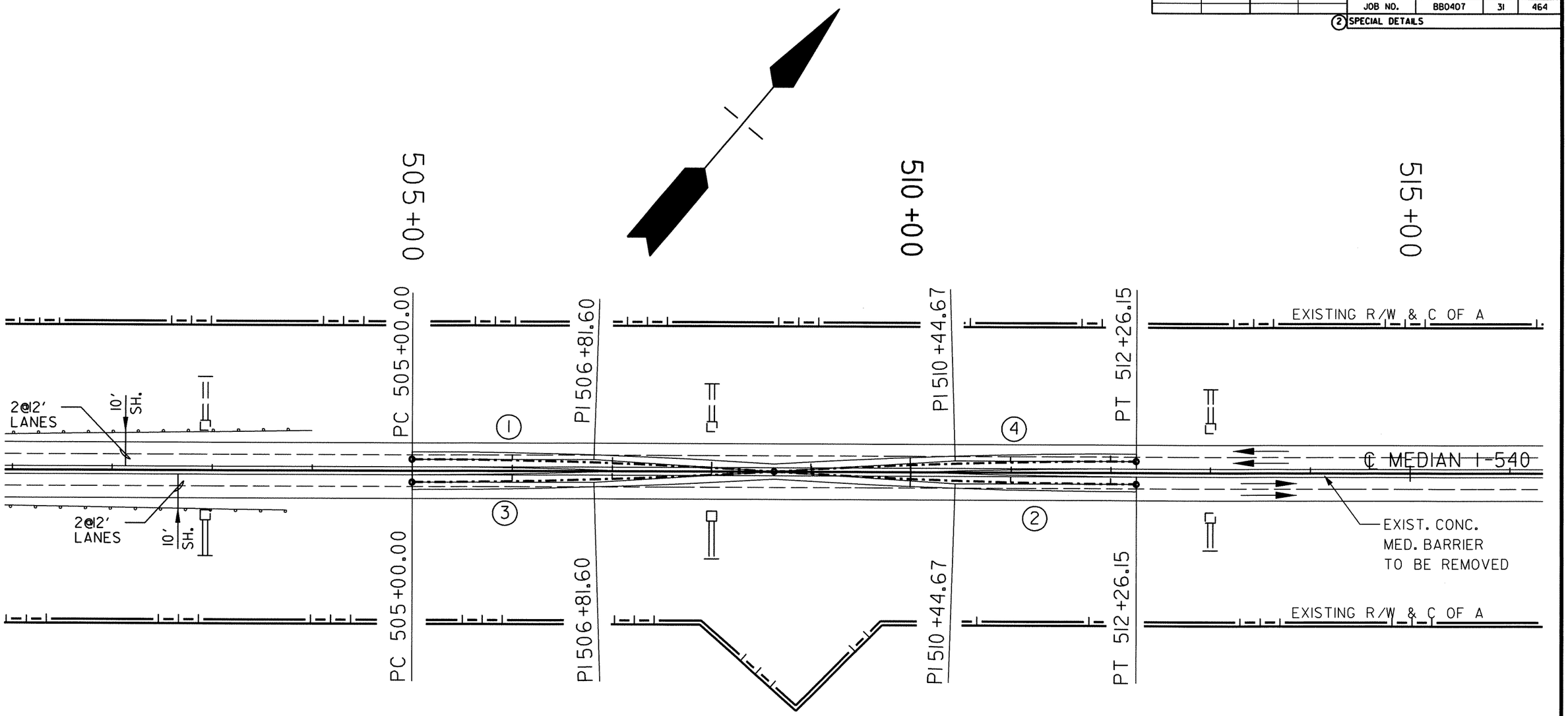
ALIGNMENT DATA FOR CROSSOVER NORTH OF S.H. 22 INTERCHANGE

SPECIAL DETAILS

8/27/2012 9:17:49 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.		BB0407	31	464

(2) SPECIAL DETAILS



CURVE ①
Delta = 3°37'51" RT.
Dc = 1°00'00"
T = 181.60'
L = 363.08'
R = 5729.58'
PC = 505+00.00
PRC = 508+63.08

CURVE ②
Delta = 3°37'51" LT.
Dc = 1°00'00"
T = 181.60'
L = 363.07'
R = 5729.58'
PRC = 508+63.08
PT = 512+26.15

CURVE ③
Delta = 3°37'51" LT.
Dc = 1°00'00"
T = 181.60'
L = 363.07'
R = 5729.58'
PC = 505+00.00
PRC = 508+63.08

CURVE ④
Delta = 3°37'51" RT.
Dc = 1°00'00"
T = 181.60'
L = 363.07'
R = 5729.58'
PRC = 508+63.08
PT = 512+26.15

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

ALIGNMENT DATA FOR CROSSOVER SOUTH OF ARKANSAS RIVER BRIDGE

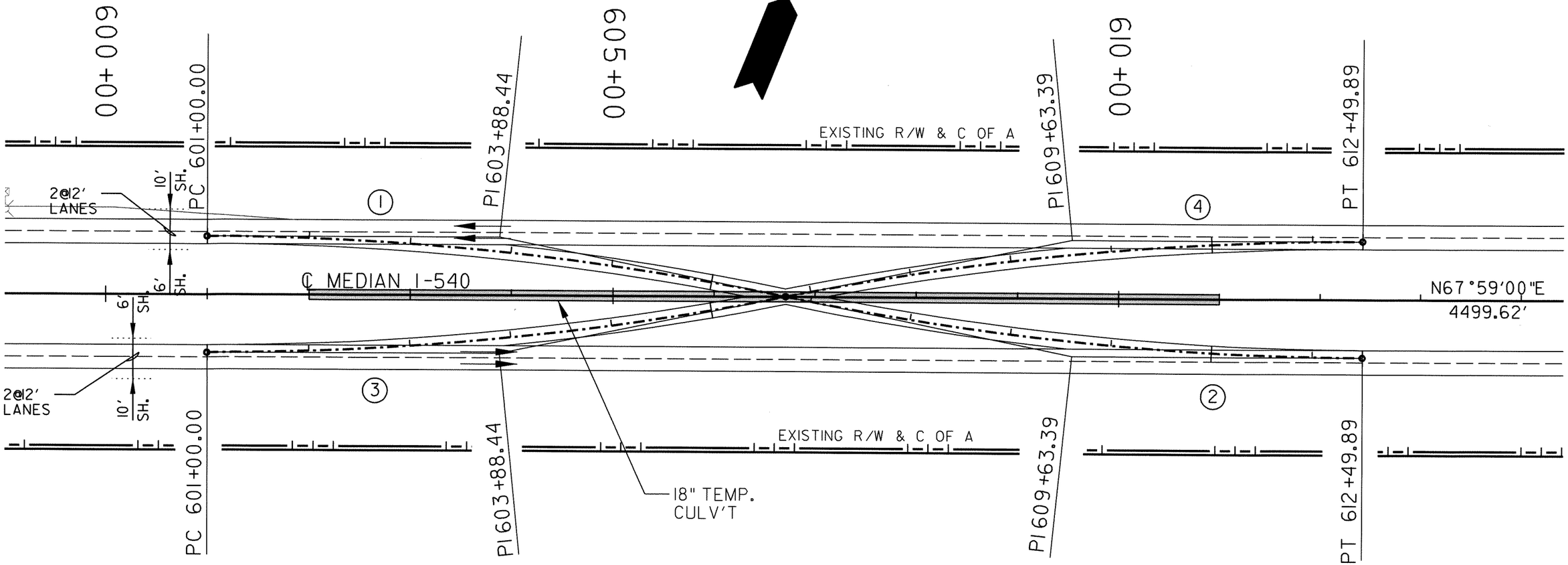
SPECIAL DETAILS

8/27/2012 9:17:50 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.		BB0407	32	464

(2) SPECIAL DETAILS

STA. 602+00 - STA. 611+00 CONST.
18"X900' TEMP. CULV'T IN MEDIAN
CONST. STAGE IB REMOVE STAGE VA



CURVE (1)
Delta = 11°29'56" RT.
Dc = 2°00'00"
T = 288.44'
L = 574.95'
R = 2864.79'
PC = 601+00.00
PRC = 606+74.95

CURVE (2)
Delta = 11°29'56" LT.
Dc = 2°00'00"
T = 288.44'
L = 574.95'
R = 2864.79'
PRC = 606+74.95
PT = 612+49.89

CURVE (3)
Delta = 11°29'56" LT.
Dc = 2°00'00"
T = 288.44'
L = 574.95'
R = 2864.79'
PC = 601+00.00
PRC = 606+74.95

CURVE (4)
Delta = 11°29'56" RT.
Dc = 2°00'00"
T = 288.44'
L = 574.95'
R = 2864.79'
PRC = 606+74.95
PT = 612+49.89

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BAKER
5/31/12

ALIGNMENT DATA FOR CROSSOVER NORTH OF 4TH STREET INTERCHANGE

SPECIAL DETAILS

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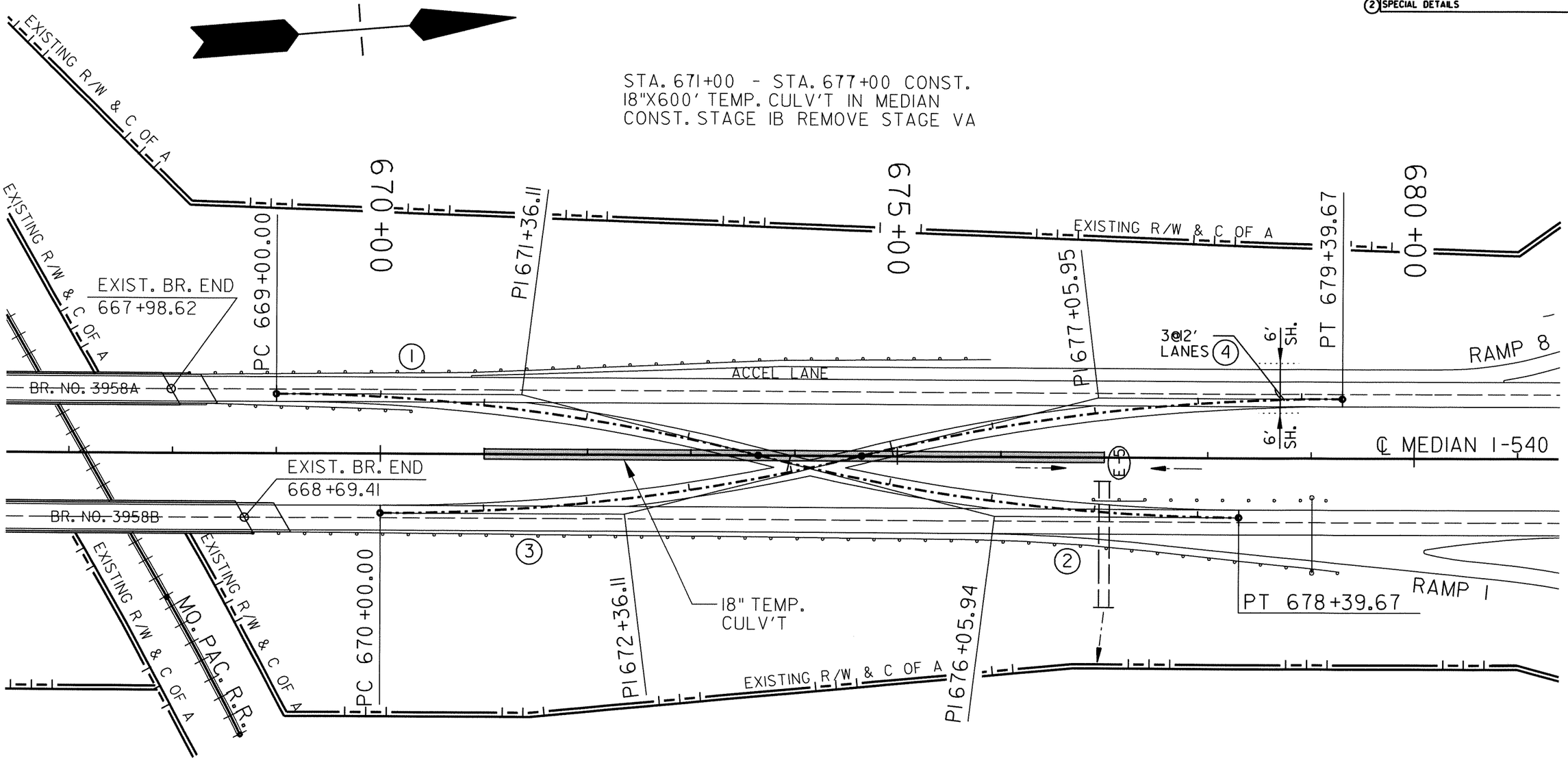
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	33	464
				(2) SPECIAL DETAILS				

STA. 671+00 - STA. 677+00 CONST.
18"X600' TEMP. CULV'T IN MEDIAN
CONST. STAGE IB REMOVE STAGE VA



CURVE (1)
Delta = 14°05'42" RT.
Dc = 3°00'00"
T = 236.11'
L = 469.84'
R = 1909.86'
PC = 669+00.00
PRC = 673+69.84

CURVE (2)
Delta = 14°05'42" LT.
Dc = 3°00'00"
T = 236.11'
L = 469.84'
R = 1909.86'
PRC = 673+69.84
PT = 678+39.67

CURVE (3)
Delta = 14°05'42" LT.
Dc = 3°00'00"
T = 236.11'
L = 469.84'
R = 1909.86'
PC = 670+00.00
PRC = 674+69.84

CURVE (4)
Delta = 14°05'42" RT.
Dc = 3°00'00"
T = 236.11'
L = 469.84'
R = 1909.86'
PRC = 674+69.84
PT = 679+39.67

STATE OF ARKANSAS
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No. 9808
JAMES L. BARR
8/31/12

ALIGNMENT DATA FOR CROSSOVER SOUTH OF U.S. 64 INTERCHANGE

SPECIAL DETAILS

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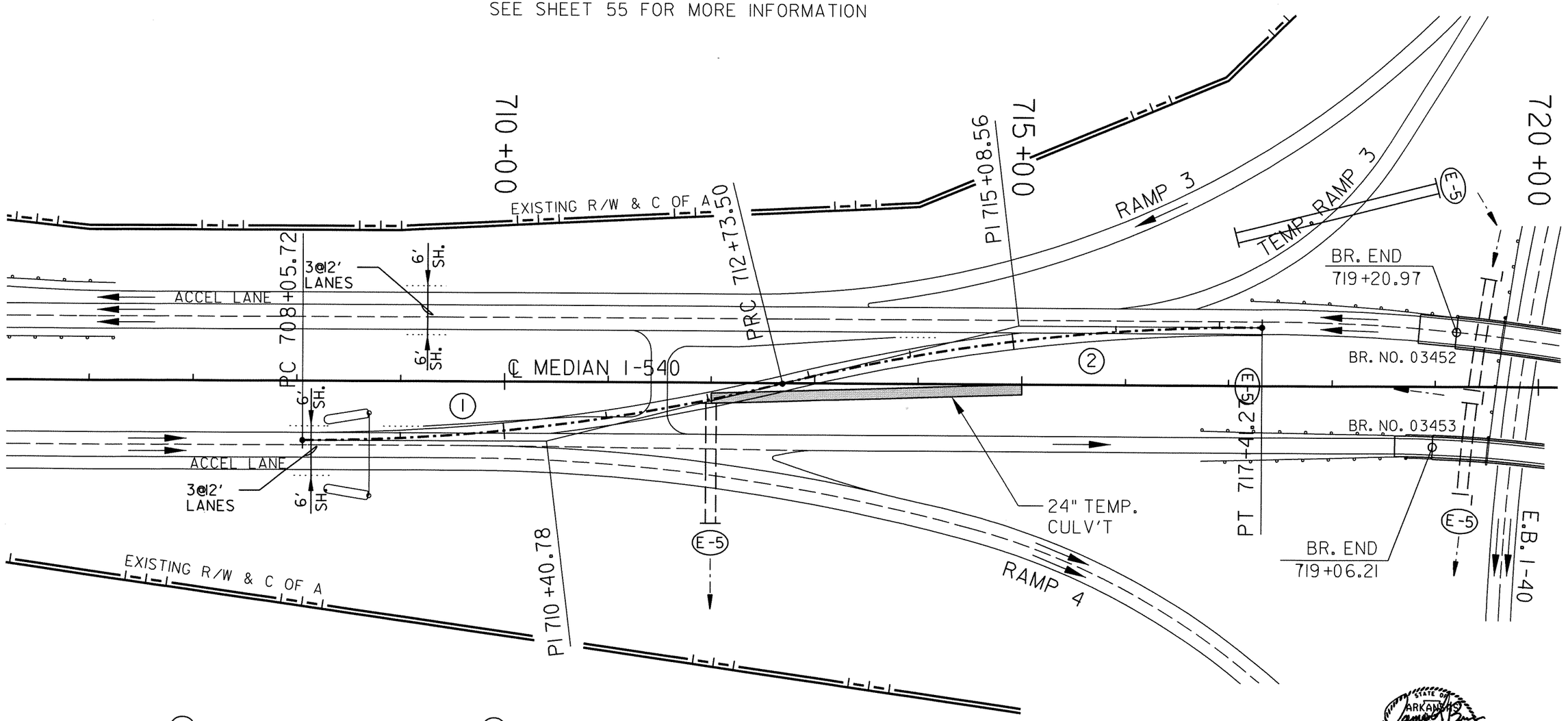
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	34	464
				(2) SPECIAL DETAILS				

STA. 712+00 - STA. 715+00 CONST.
24"X300' TEMP. CULV'T IN MEDIAN STAGE I
REMOVE WITH REMOVAL OF TEMP.
CROSSOVERS STAGE VA
SEE SHEET 55 FOR MORE INFORMATION



CURVE (1)
Delta = 14°02'00" LT.
Dc = 3°00'00"
T = 235.06'
L = 467.78'
R = 1909.86'
PC = 708+05.72
PRC = 712+73.50

CURVE (2)
Delta = 14°02'00" RT.
Dc = 3°00'00"
T = 235.06'
L = 467.77'
R = 1909.86'
PT = 717+41.27
PRC = 712+73.50

NOTE: REMOVE EXISTING MEDIAN CROSSING PRIOR TO CONSTRUCTION OF TEMPORARY CROSSOVER RAMP. RECONSTRUCT MEDIAN CROSSING PER SPECIAL DETAILS.

STATE OF ARKANSAS
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8/31/12

ALIGNMENT DATA FOR CROSSOVER SOUTH OF I-40 INTERCHANGE

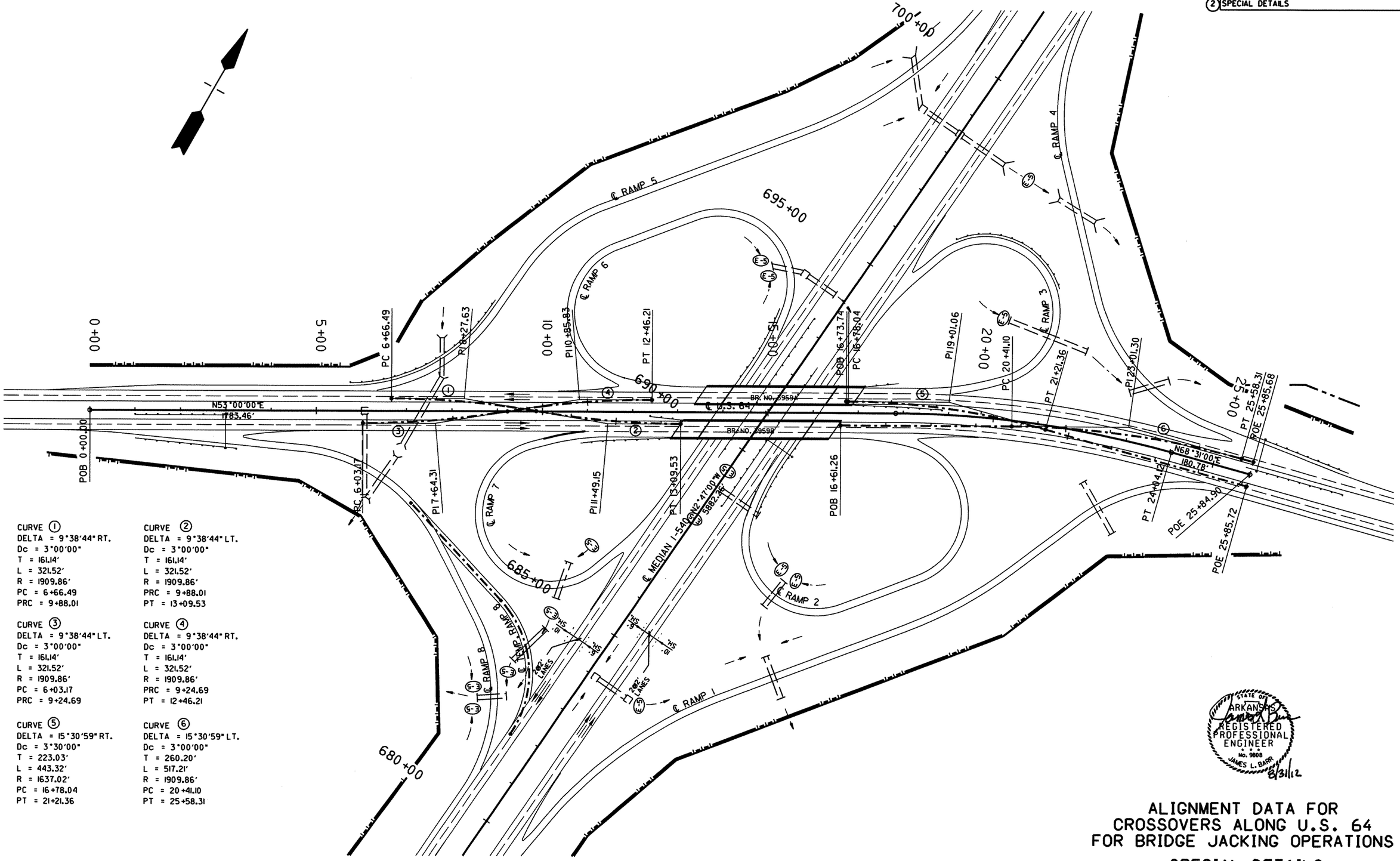
SPECIAL DETAILS

8/27/2012 9:17:51 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.		BB0407	35	464

(2) SPECIAL DETAILS



CURVE (1)
DELTA = 9°38'44" RT.
Dc = 3°00'00"
T = 161.14'
L = 321.52'
R = 1909.86'
PC = 6+66.49
PRC = 9+88.01

CURVE (2)
DELTA = 9°38'44" LT.
Dc = 3°00'00"
T = 161.14'
L = 321.52'
R = 1909.86'
PRC = 9+88.01
PT = 13+09.53

CURVE (3)
DELTA = 9°38'44" LT.
Dc = 3°00'00"
T = 161.14'
L = 321.52'
R = 1909.86'
PC = 6+03.17
PRC = 9+24.69

CURVE (4)
DELTA = 9°38'44" RT.
Dc = 3°00'00"
T = 161.14'
L = 321.52'
R = 1909.86'
PRC = 9+24.69
PT = 12+46.21

CURVE (5)
DELTA = 15°30'59" RT.
Dc = 3°30'00"
T = 223.03'
L = 443.32'
R = 1637.02'
PC = 16+78.04
PT = 21+21.36

CURVE (6)
DELTA = 15°30'59" LT.
Dc = 3°00'00"
T = 260.20'
L = 517.21'
R = 1909.86'
PC = 20+41.10
PT = 25+58.31

STATE OF ARKANSAS
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JAMES L. BARR
8/31/12

ALIGNMENT DATA FOR CROSSOVERS ALONG U.S. 64 FOR BRIDGE JACKING OPERATIONS

SPECIAL DETAILS

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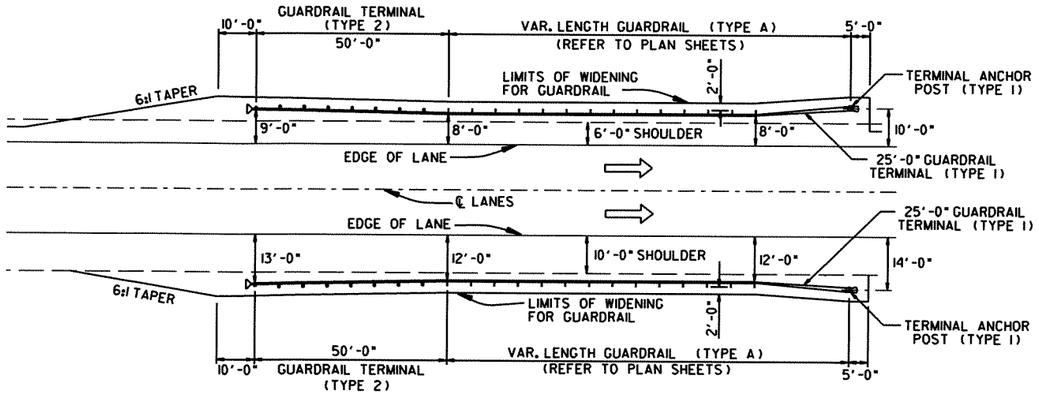
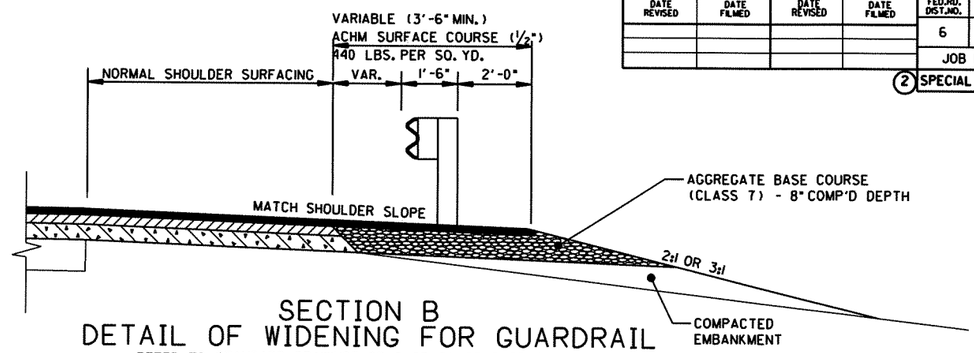
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	36	464

(2) SPECIAL DETAILS

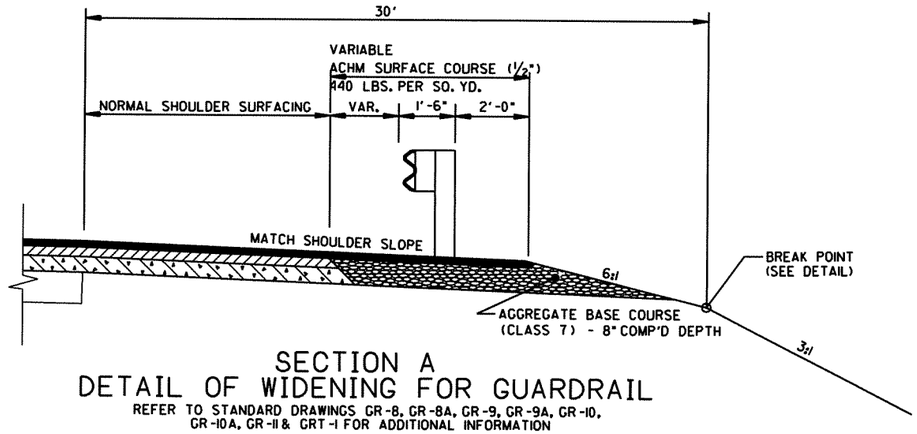


TYPICAL LAYOUT OF GUARDRAIL ALONG ROADWAY



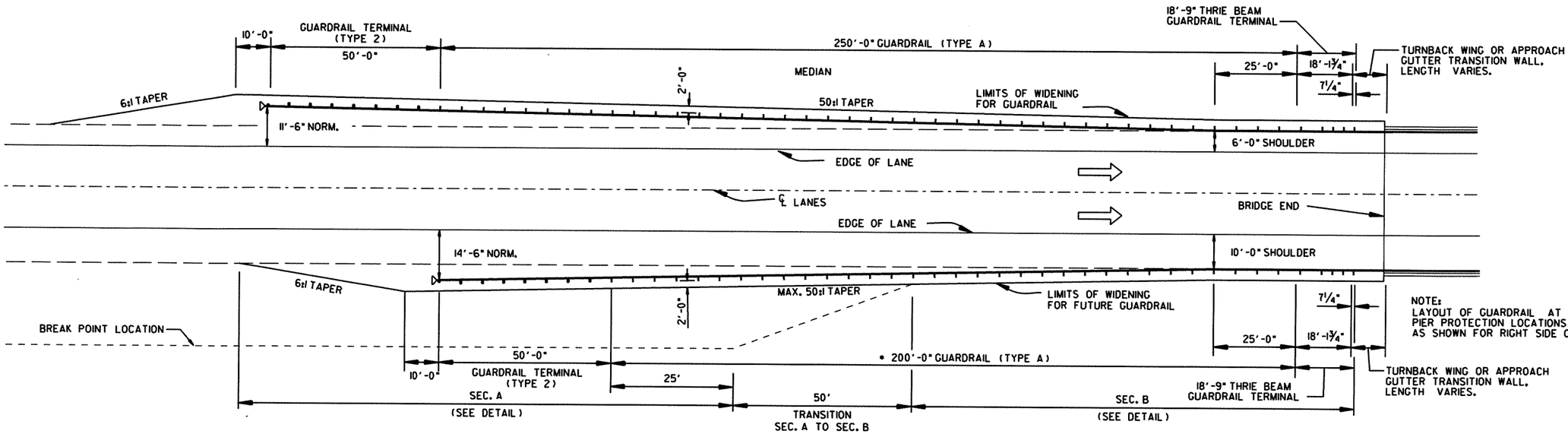
SECTION B
DETAIL OF WIDENING FOR GUARDRAIL

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



SECTION A
DETAIL OF WIDENING FOR GUARDRAIL

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



NOTE:
LAYOUT OF GUARDRAIL AT CONCRETE PIER PROTECTION LOCATIONS SHALL BE AS SHOWN FOR RIGHT SIDE OF BRIDGE.

• WHEN LENGTH OF GUARDRAIL EXCEEDS 200', FLATTEN TAPER TO MAINTAIN 14'-6" OFFSET AT APPROACH END.

TYPICAL LAYOUT OF GUARDRAIL AT BRIDGE ENDS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
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JAMES L. BARR
8/31/12

SPECIAL DETAILS

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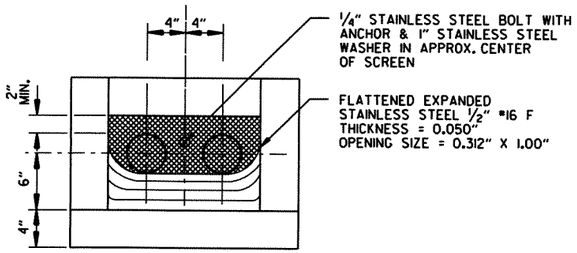
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RO. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	37	464

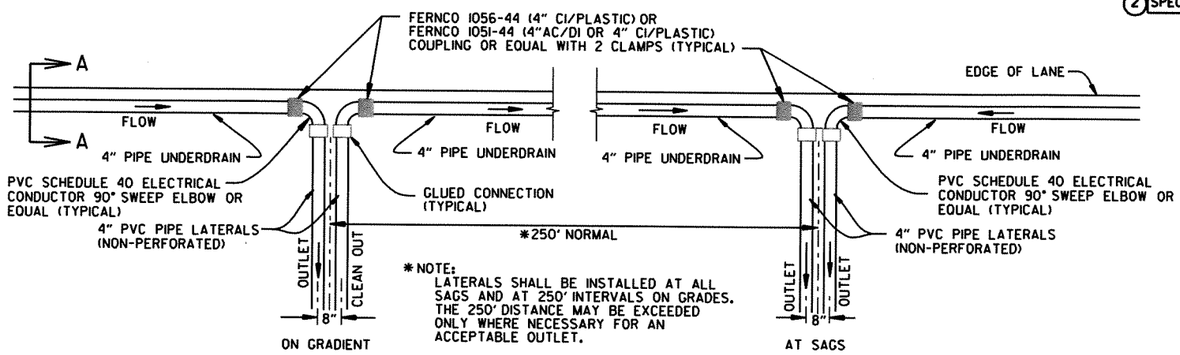
(2) SPECIAL DETAILS

NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE I. PAYMENT FOR GEOTEXTILE FABRIC, GRANULAR FILTER MATERIAL, AND FLOWABLE SELECT 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 WIRE MESH 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 LIN. FT. FOR "4" PIPE UNDERDRAINS."
6. EXISTING UNDERDRAIN OUTLET PROTECTORS TO BE REMOVED AND PAID FOR UNDER THE ITEM "REMOVAL AND DISPOSAL OF UNDERDRAIN OUTLET PROTECTORS". EXISTING UNDERDRAIN AND LATERALS TO BE REMOVED OR ABANDONED. NO DIRECT PAYMENT TO BE MADE FOR REMOVING OR ABANDONING UNDERDRAINS AND/OR LATERALS BUT ALL COSTS TO BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

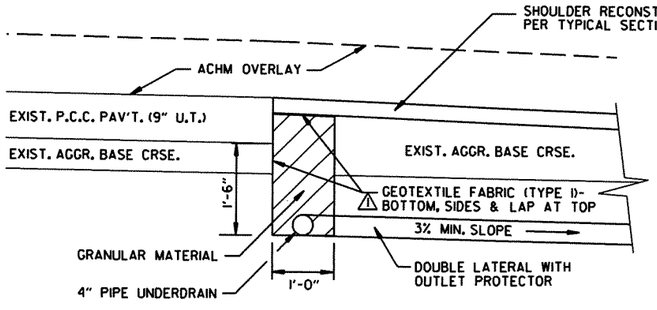


DETAIL OF RODENT SCREEN



PLAN DETAIL OF PIPE UNDERDRAIN LATERALS

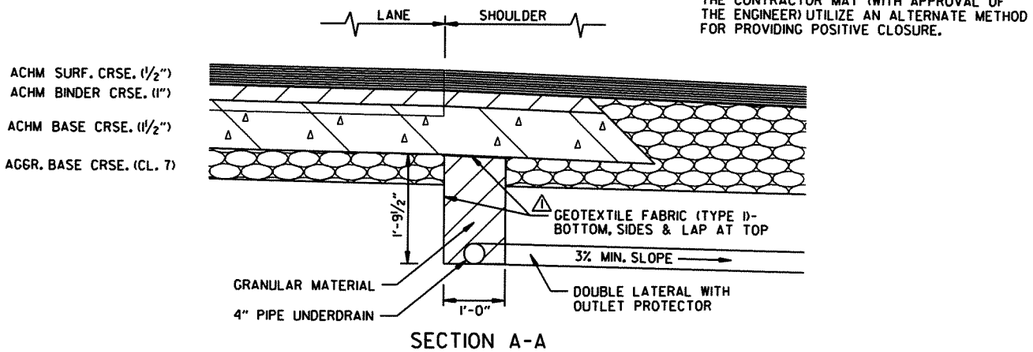
NOTE:
PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE. UNDERDRAIN OUTLET PROTECTORS SHALL BE INSTALLED ON NEW LATERALS. (REFER TO STD. DWG. PU-1. & NOTE *5.)



SECTION A-A

NOTE: TRENCH FOR LATERALS SHALL BE BACKFILLED WITH GRANULAR MATERIAL TO A DEPTH 6" ABOVE THE TOP OF THE 4" PIPE AND THE REMAINDER OF THE TRENCH BACKFILLED WITH FLOWABLE SELECT MATERIAL MEETING SPECIFICATIONS OF SECTION 207 OF THE STANDARD SPECIFICATIONS. PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR 4" PIPE UNDERDRAIN.

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



SECTION A-A

LT. OF S.B. LANES

STA. 343+39 TO STA. 349+07
STA. 351+14 TO STA. 355+30
STA. 525+82 TO STA. 533+45
STA. 568+09 TO STA. 571+89
STA. 613+90 TO STA. 621+02
STA. 622+98 TO STA. 628+61

RT. OF S.B. LANES

STA. 571+89 TO STA. 577+13

RT. OF N.B. LANES

STA. 350+87 TO STA. 355+30
STA. 525+82 TO STA. 533+45
STA. 568+20 TO STA. 577+13
STA. 614+03 TO STA. 621+03
STA. 622+98 TO STA. 628+61

LT. OF N.B. LANES

STA. 343+20 TO STA. 348+87

RAMPS AT I-40

RAMP 1
LT. STA. 714+31 TO STA. 715+07
RT. STA. 715+07 TO STA. 718+84
RT. STA. 721+80 TO STA. 728+85
RT. STA. 731+20 TO STA. 734+67
RAMP 2
RT. STA. 714+89 TO STA. 718+70
RT. STA. 721+65 TO STA. 727+70
RT. STA. 729+89 TO STA. 735+58
RAMP 3
LT. STA. 387+00 TO STA. 392+50
RAMP 4
RT. STA. 713+50 TO STA. 719+00

LT. OF S.B. LANES

STA. 286+92 TO STA. 295+58
STA. 298+22 TO STA. 343+39
STA. 355+30 TO STA. 357+28
STA. 371+47 TO STA. 388+83
STA. 391+31 TO STA. 416+76
STA. 431+85 TO STA. 465+91
STA. 488+64 TO STA. 490+70
STA. 497+17 TO STA. 525+82
STA. 592+56 TO STA. 613+90
STA. 628+61 TO STA. 646+13
STA. 648+68 TO STA. 663+03
STA. 668+49 TO STA. 709+37

RT. OF S.B. LANES

STA. 357+28 TO STA. 371+47
STA. 416+76 TO STA. 423+30
STA. 425+54 TO STA. 431+85
STA. 465+91 TO STA. 488+64
STA. 577+13 TO STA. 592+56

RT. OF N.B. LANES

STA. 286+92 TO STA. 294+98
STA. 297+61 TO STA. 336+41
STA. 355+30 TO STA. 389+05
STA. 408+44 TO STA. 422+31
STA. 424+68 TO STA. 490+70
STA. 497+17 TO STA. 525+82
STA. 577+13 TO STA. 614+03
STA. 628+61 TO STA. 633+92
STA. 663+39 TO STA. 663+75
STA. 669+21 TO STA. 706+56

LT. OF N.B. LANES

STA. 336+41 TO STA. 343+20
STA. 391+47 TO STA. 408+44
STA. 633+92 TO STA. 647+89
STA. 650+27 TO STA. 663+39

RAMPS AT I-40

RAMP 1
LT. STA. 713+51 TO STA. 714+31
LT. STA. 737+50 TO STA. 741+00
RT. STA. 734+67 TO STA. 737+50
RAMP 2
RT. STA. 712+75 TO STA. 714+89
RAMP 3
LT. STA. 709+37 TO STA. 392+50
RAMP 4
RT. STA. 706+56 TO STA. 713+50

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BAIRD
8/31/12

SPECIAL DETAILS

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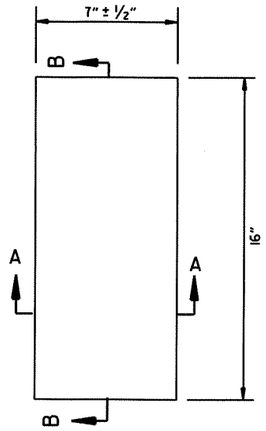
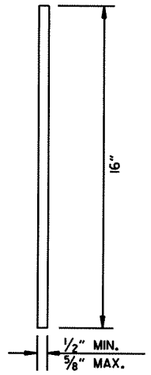
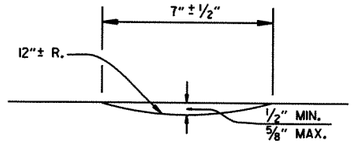
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	38	464
				(2) SPECIAL DETAILS				



PLAN

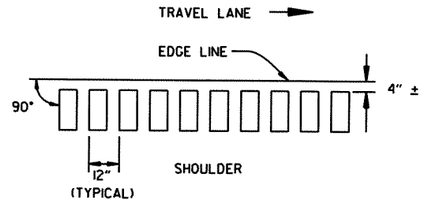


SECTION B-B



SECTION A-A

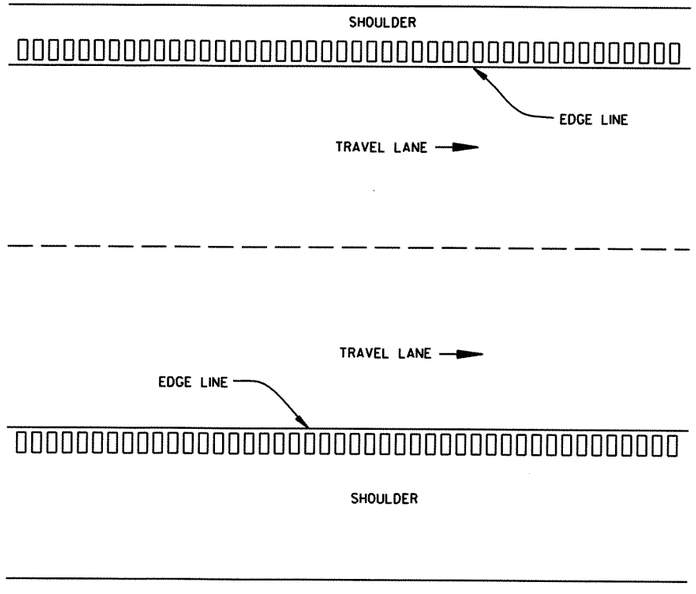
DETAILS OF RUMBLE STRIPS



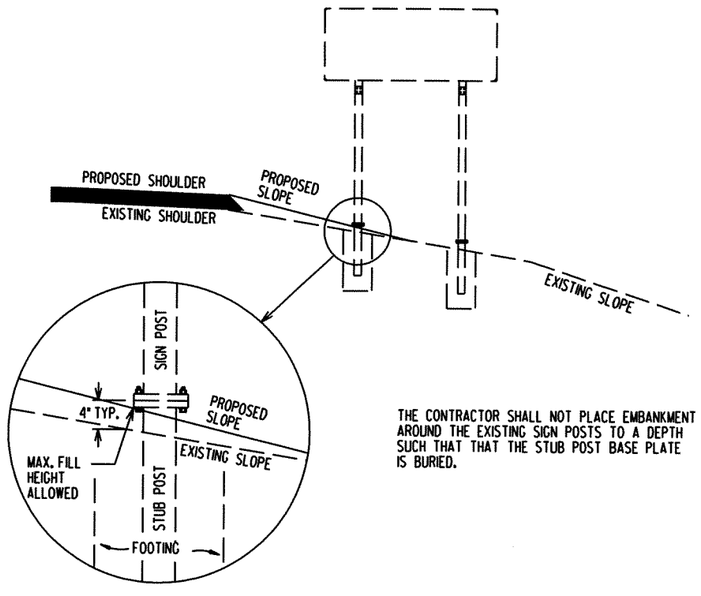
LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER

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 ½" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.
3. RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.



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
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

SPECIAL DETAILS

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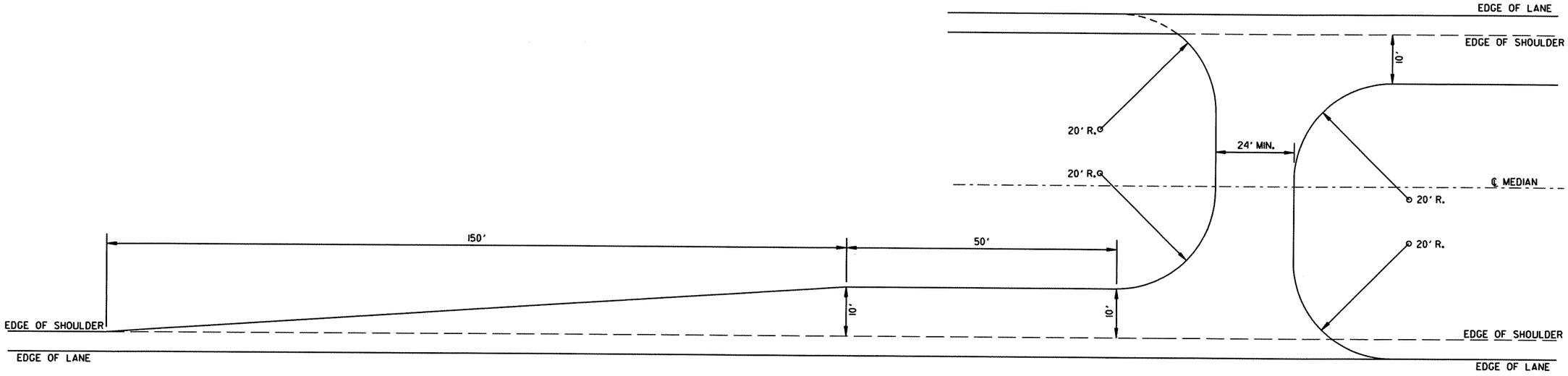
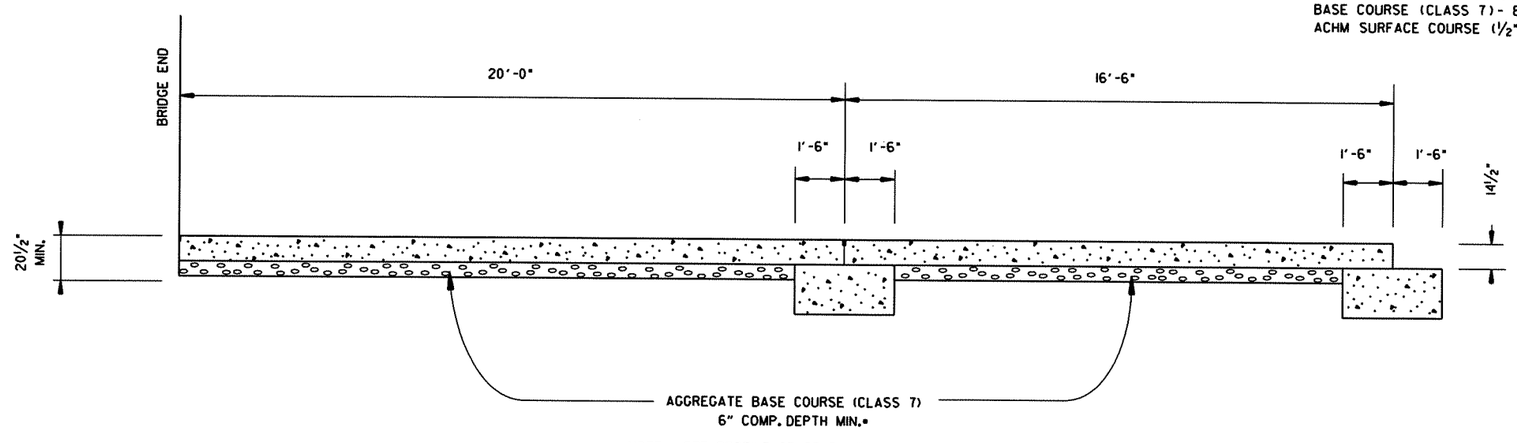


DETAIL OF MEDIAN CROSSING
STA. 711+50

NOTE: MEDIAN CROSSING TO BE CONSTRUCTED OF AGGREGATE BASE COURSE (CLASS 7) - 8½" COMPACTED DEPTH & ACHM SURFACE COURSE (½") - 440 LBS. PER SQ. YD.



• NOTE : SEE PROFILE GRADE PAVEMENT TRANSITIONS AND OTHER DETAILS FOR VARING PAVEMENT DEPTHS.

LONGITUDINAL SECTION OF APPROACH SLAB

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
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JAMES L. BARR
8/31/12

SPECIAL DETAILS

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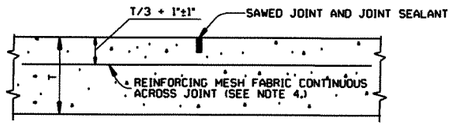
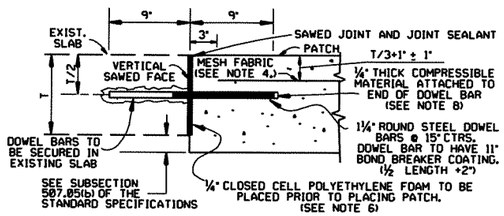


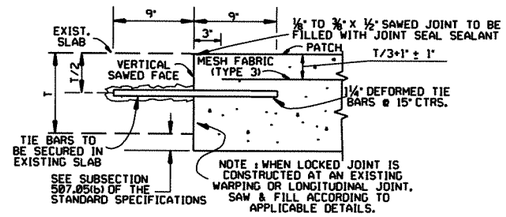
SECTION B-B

WARPING JOINT



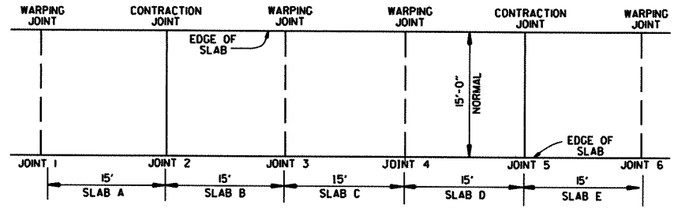
SECTION E-E

FREE TRANSVERSE JOINT



SECTION D-D

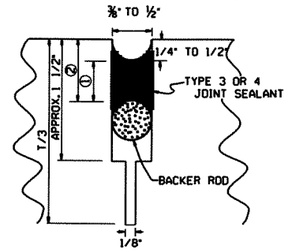
LOCKED JOINT



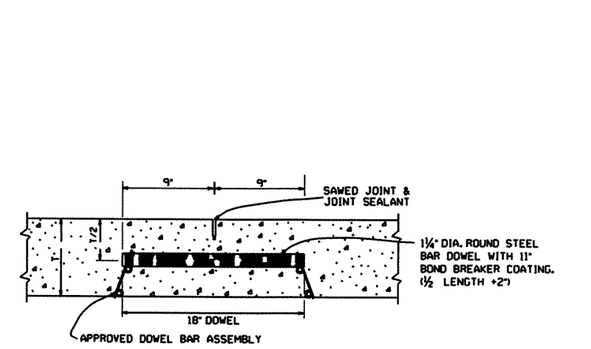
PLAN OF PAVEMENT REPAIR
(FULL SLABS)

TYPICAL SLAB REPLACEMENT EXAMPLES

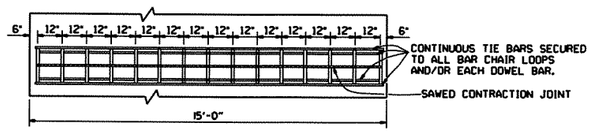
SLAB(S) TO BE RECONSTRUCTED	TYPE OF JOINT TO BE CONSTRUCTED					
	JOINT 1	JOINT 2	JOINT 3	JOINT 4	JOINT 5	JOINT 6
A OR D	LOCKED	FREE		LOCKED	FREE	
B OR E		FREE	LOCKED		FREE	LOCKED
A & B OR D & E	LOCKED	CONTRACTION	LOCKED	LOCKED	CONTRACTION	LOCKED
B & C		FREE	WARPING	LOCKED		
B, C & D		FREE	WARPING	WARPING	FREE	
C			LOCKED	LOCKED		



DETAIL OF SAWED CONTRACTION JOINT



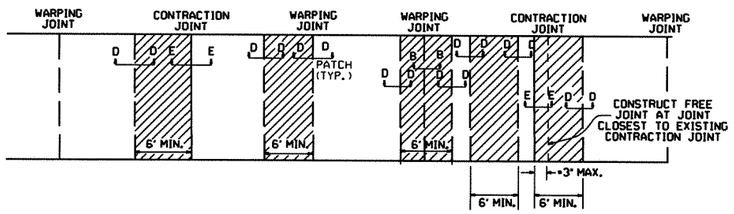
SECTION C-C



15' PAVEMENT
15 DOWELS
PLAN - CONTRACTION JOINT

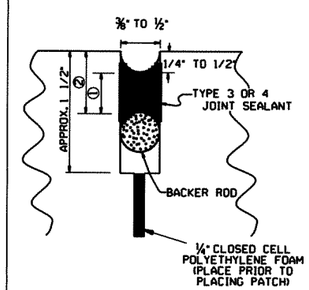
NOTE: FOR 15' PAVEMENT USE 15 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR PAVEMENT WIDTHS OTHER THAN THOSE SHOWN ABOVE, USE DOWELS AT 12" CTRS. WITH 6" MAX. SPACING FROM C.L. TO FIRST BAR. DISTANCE FROM EDGE OF SLAB TO FIRST BAR SHALL BE ADJUSTED TO MAINTAIN 12" DOWEL BAR SPACING

CONTRACTION JOINT DETAILS

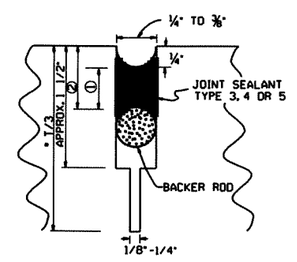


* IF DISTANCE EXCEEDS 3' RECONSTRUCT CONTRACTION JOINT AT EXISTING LOCATION.

PLAN OF PAVEMENT REPAIR
(PARTIAL SLABS)

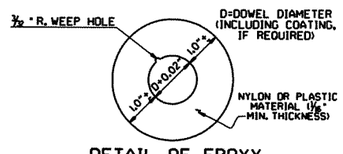


DETAIL OF SAWED FREE
TRANSVERSE JOINT



*NOTE: T/3 SAW CUT NOT REQUIRED FOR LONGITUDINAL CONSTRUCTION JOINT.

DETAIL OF SAWED WARPING JOINT



DETAIL OF EPOXY
RETENTION DISK

NOTE: EPOXY RETENTION DISK SHALL BE SLIPPED TIGHTLY OVER TIE BARS AND FIRMLY AGAINST THE SLAB FACE AFTER INSERTING TIE BAR AND EPOXY INTO HOLE

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

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

NOTES FOR PAVEMENT REPAIR

1. EXACT SIZE AND LOCATION OF AREA TO BE REPAIRED SHALL BE DETERMINED BY THE ENGINEER. ALL PATCHES SHALL EXTEND ACROSS THE FULL WIDTH OF THE SLAB AS SHOWN IN THESE DETAILS.
2. THE FINAL SURFACE FINISH FOR PATCHES SHALL MATCH THAT OF THE EXISTING PAVEMENT.
3. WHEN AREA TO BE REPAIRED INCLUDES AN EXISTING JOINT, THE JOINT SHALL BE RECONSTRUCTED TO THE CONFIGURATION SHOWN IN THESE DETAILS.
4. ALL REPAIRED AREAS SHALL BE REINFORCED WITH MESH FABRIC AS SHOWN. DEPTH OF MESH PLACEMENT SHALL HAVE A TOLERANCE OF ±1 INCH. MESH FABRIC SHALL BE 12 x 12 - W4 x W4 WELDED WIRE FABRIC (MINIMUM WIRE SIZE). LAPS SHALL BE MINIMUM 6" IN EACH DIRECTION.
5. FORMS FOR PAVEMENT REPAIR SHALL BE METAL UNLESS OTHERWISE APPROVED BY THE ENGINEER.
6. CLOSED CELL POLYETHYLENE FOAM SHALL BE SECURED TO SAWED FACE OF EXISTING P.C.C. PAVEMENT WITH ADHESIVE OR ADHESIVE TAPE AS APPROVED BY THE ENGINEER AND TRIMMED FLUSH WITH TOP OF EXISTING SLAB TO PREVENT DISPLACEMENT WHEN THE PATCH IS BEING PLACED.
7. WHEN THE PATCH IS PLACED OVER GRANULAR BASE, REMOVE ANY LOOSE BASE MATERIAL, COMPACT REMAINING BASE AS NECESSARY AND PLACE PATCH. WHEN PATCH IS PLACED OVER TREATED BASE, REMOVE ANY LOOSE BASE MATERIAL AND PLACE PATCH.
8. ¼" THICK COMPRESSIBLE MATERIAL SHALL BE ATTACHED TO THE ENDS OF DOWEL BARS AT ALL FREE TRANSVERSE JOINTS (SEE SECTION E-E). THE MATERIAL SHALL BE THE SAME DIAMETER AS THE DOWEL BAR. A PLASTIC CAP OR OTHER TYPE OF DEVICE MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
9. SAWING AND SEALING OF ALL JOINTS IN AND AROUND CONCRETE PAVEMENT PATCHES SHALL BE DONE BEFORE PATCHED LANE IS RE-OPENED TO TRAFFIC.
10. DOWEL BARS SHALL BE PLACED IN ACCORDANCE WITH THE DIMENSIONS SHOWN. A TOLERANCE OF PLUS OR MINUS ONE INCH WILL BE ALLOWED FOR VERTICAL AND LATERAL PLACEMENT AND A TOLERANCE OF PLUS OR MINUS ¼" WILL BE ALLOWED FOR THE TILT AND SKEW.

DETAILS OF PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (RAMPS)

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

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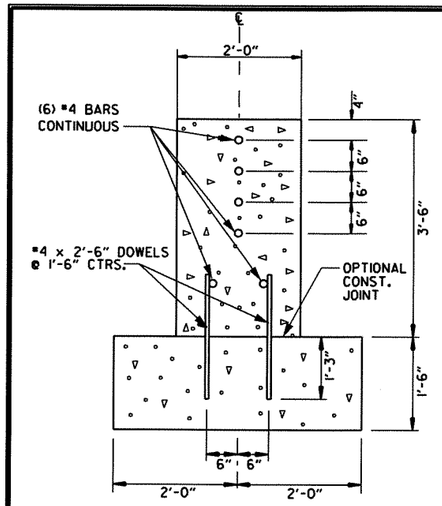
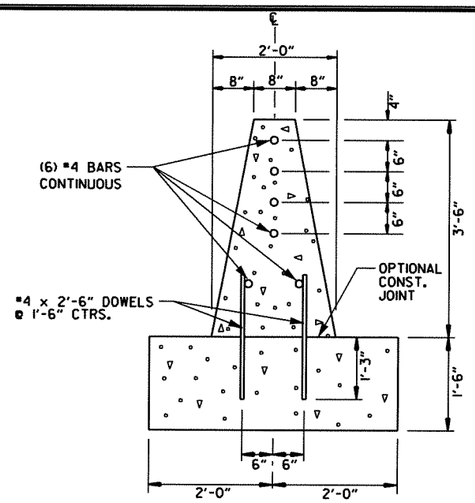
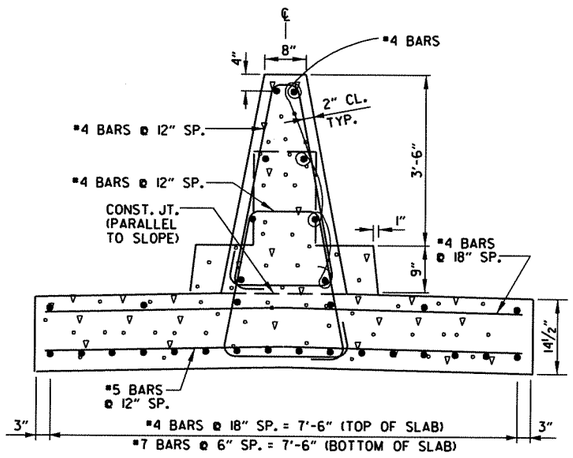
(2) SPECIAL DETAILS



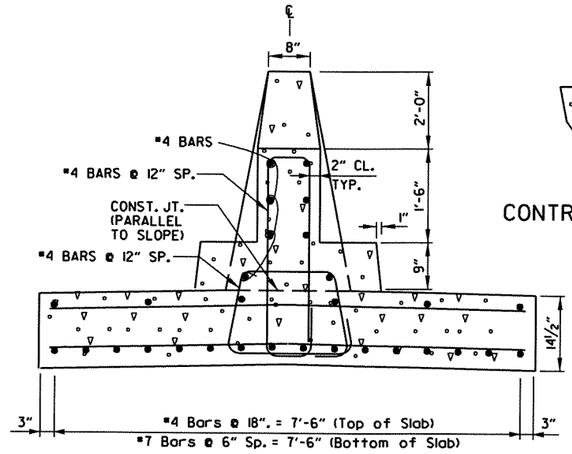
DETAIL OF CONCRETE BARRIER WALL
(SECTION B-B)



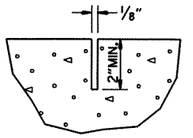
DETAIL OF CONCRETE BARRIER WALL
(MEDIAN TYPE SPECIAL)
(SECTION A-A)



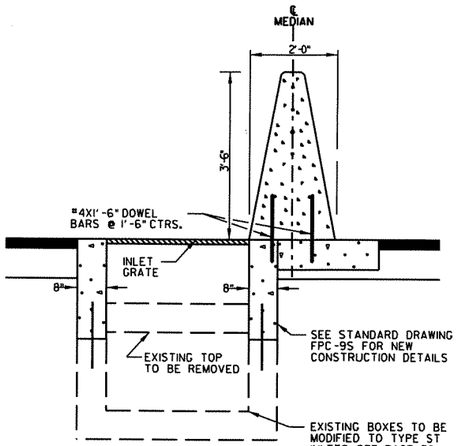
SECTION OF EXISTING
BARRIER WALL
(SECTION C-C)



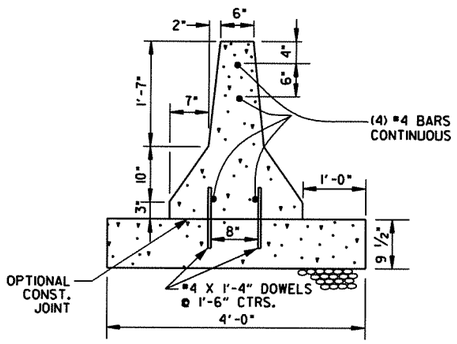
SECTION OF EXISTING
BARRIER WALL
(SECTION D-D)



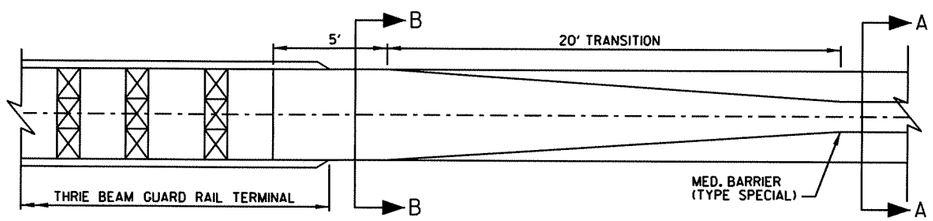
CONTRACTION JOINT DETAIL



MODIFICATION AT EXISTING
MEDIAN DROP INLET

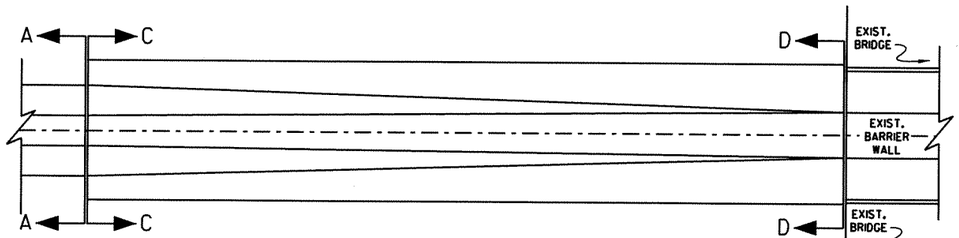


DETAIL OF CONCRETE
BARRIER WALL
(MEDIAN TYPE A)

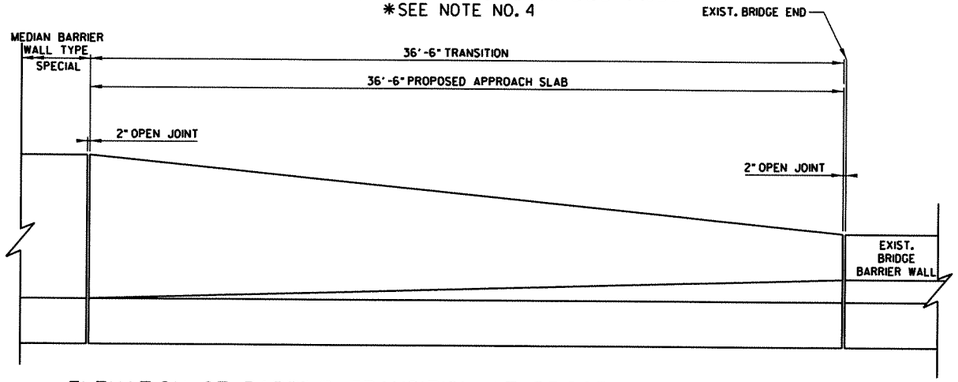


NOTE: ALL COSTS FOR ATTACHING THRIE BEAM GUARD RAIL TERMINALS TO MEDIAN BARRIER AS SHOWN ON STD. DWG. GR-10 INCLUDED IN VARIOUS PAY ITEMS.

TRANSITION DETAIL OF CONCRETE BARRIER WALL
(MEDIAN TYPE SPECIAL)
STA. 482+40 TO STA. 482+65



PLAN OF BARRIER TRANSITION AT BRIDGE OVER ARKANSAS RIVER
STA. 533+45.30 TO STA. 533+81.80
STA. 567+78.19 TO STA. 568+14.69
*SEE NOTE NO. 4



ELEVATION OF BARRIER TRANSITION AT BRIDGE OVER ARKANSAS RIVER
STA. 533+45.30 TO STA. 533+81.80
STA. 567+78.19 TO STA. 568+14.69
*SEE NOTE NO. 4

NOTES FOR MEDIAN BARRIER:

1. ALL EXPOSED EDGES SHALL HAVE ¾" CHAMFERS.
2. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT 15'-0" MAXIMUM SPACING IN TOP AND SIDES OF MEDIAN BARRIER AND SHALL BE FORMED IN FRESH CONCRETE.
3. CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATIONS.
4. BARRIER TRANSITIONS WILL BE MEASURED AND PAID FOR AS "CONCRETE BARRIER WALL OF THE TYPE TRANSITIONING FROM (MEDIAN TYPE A OR TYPE SPECIAL)". PER FOOT COST INCLUDES ALL CONCRETE, REINFORCING AND LABOR.
5. ALL REINFORCING BARS SHALL HAVE 2" MINIMUM COVER.
6. DOWEL BARS WILL NOT BE REQUIRED IF BARRIER AND BASE ARE CAST AT A COMPLETE UNIT.
7. 2" OPEN EXPANSION JOINTS SHALL BE PLACED AT A MAXIMUM SPACING OF 400'.

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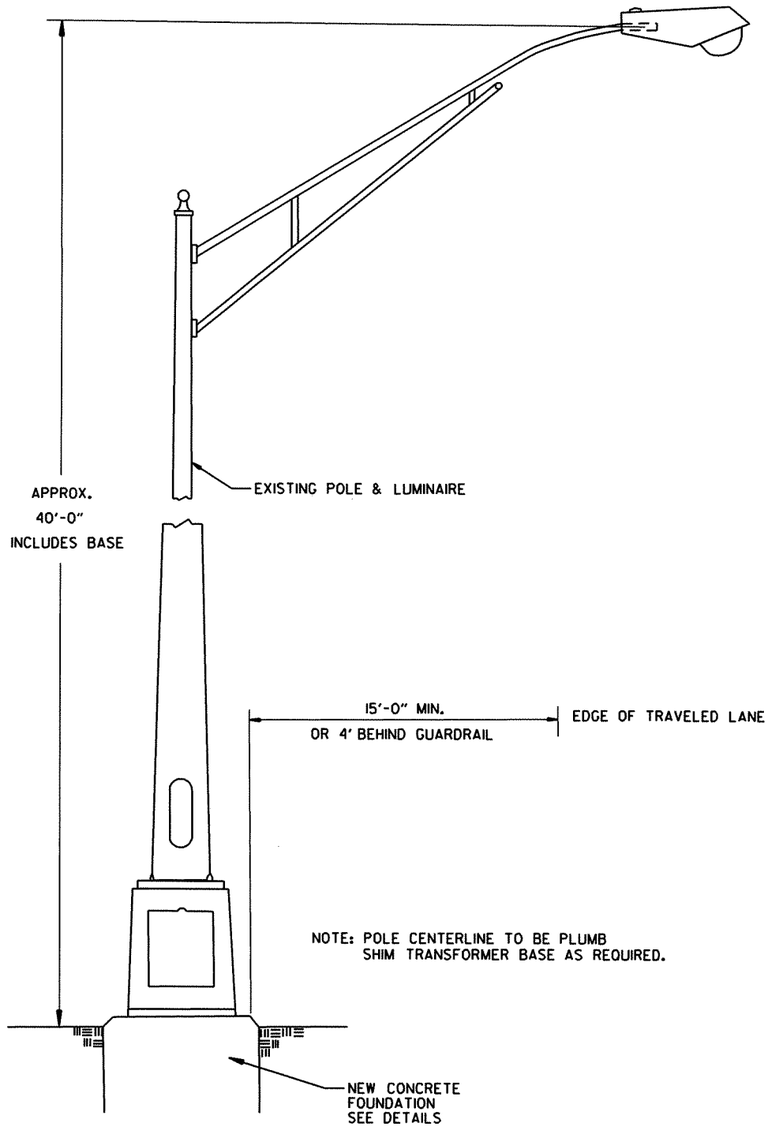
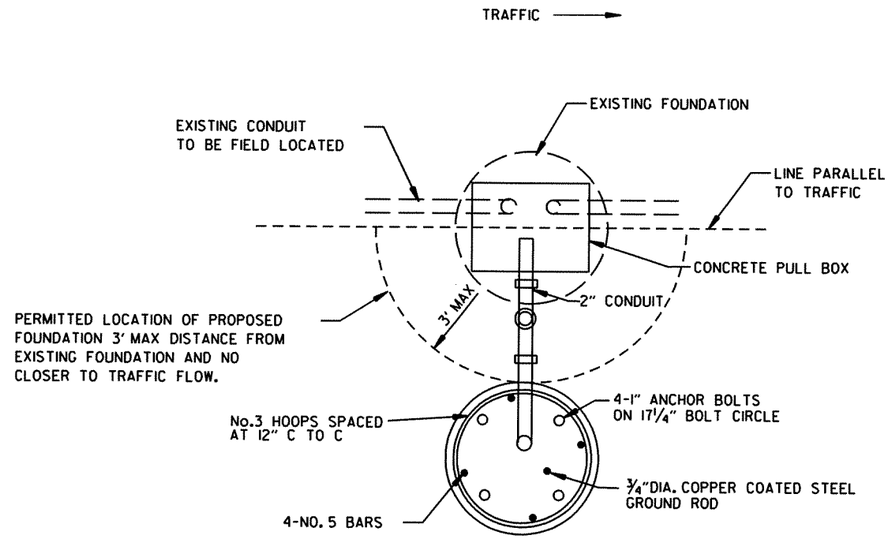
				JOB NO.		BB0407	43	464

(2) SPECIAL DETAILS



COBRA HEAD LUMINAIRE WITH BREAKAWAY TRANSFORMER BASE ON CONCRETE FOUNDATION



CONCRETE BASE PLAN VIEW

GENERAL NOTES:

1) THE EXISTING WIRING AND CONDUIT SHALL BE FIELD LOCATED PRIOR TO ANY EXCAVATION OR TRENCHING FOR NEW CONDUIT OR FOUNDATION CONSTRUCTION. THE CONTRACTOR SHALL NOT DISTURB EXISTING WIRING OR CONDUIT EXCEPT AS REQUIRED TO CREATE THE CONNECTION FROM EXISTING LOCATION TO NEW. ANY DAMAGE TO THE EXISTING CONDUIT OR WIRING, EXCEPT FOR THAT REQUIRED FOR ESTABLISHING NEW CONNECTION, SHALL BE REPAIRED TO EXISTING CONDITION AT NO COST TO THE DEPARTMENT.

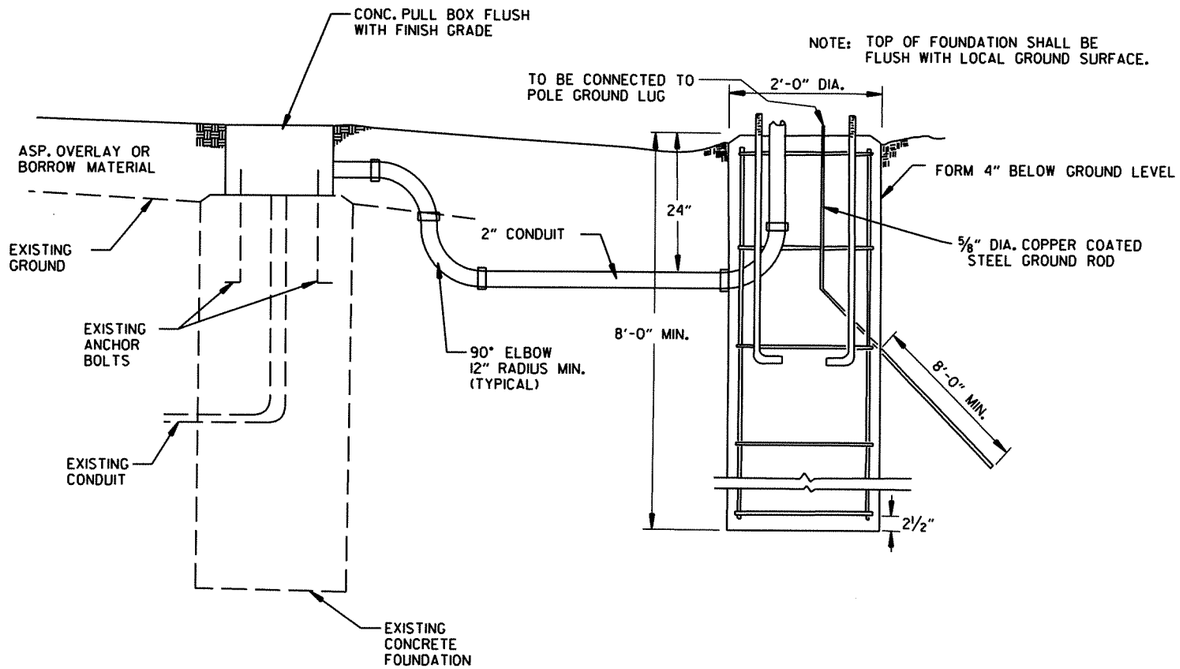
2) EXISTING LUMINAIRE, MAST, POLE, TRANSFORMER BASE, AND ALL HARDWARE SHALL BE REMOVED AND RETAINED IN EXISTING CONDITION. ANY ITEMS DAMAGED DURING REMOVAL, RELOCATION OR REINSTALLATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

3) EXISTING CONCRETE FOUNDATION SHALL REMAIN IN PLACE AND NEW CONCRETE FOUNDATION LOCATED WITHIN 3' OF THE EXISTING FOUNDATION AND NO CLOSER TO TRAFFIC FLOW, UNLESS APPROVED BY THE ENGINEER.

4) UNDERGROUND CONDUIT SHALL BE 2" PVC WITH 24" (MINIMUM) COVER UNLESS NOTED OTHERWISE.

5) ALL UNDERGROUND ELECTRICAL SPLICES SHALL BE INSTALLED USING ENCAPSULATING SPLICE KITS APPROVED BY THE ENGINEER.

6) ALL COSTS REQUIRED FOR REMOVAL AND RELOCATION OF LIGHT FIXTURES TO FULLY OPERABLE CONDITION SHALL BE INCLUDED IN THE UNIT COST BID FOR "LUMINAIRE POLE RELOCATION". SEE SPECIAL PROVISIONS FOR MORE DETAILS.



CONCRETE BASE SECTION VIEW

STATE OF ARKANSAS
James L. Barr
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

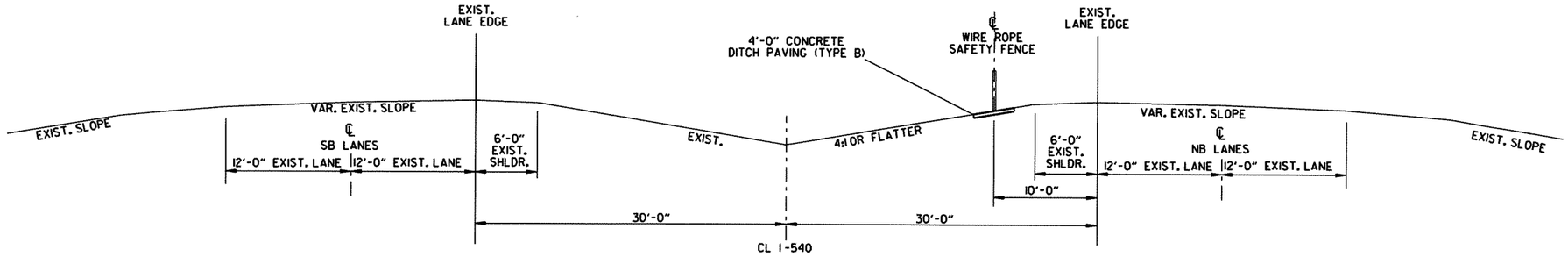
SPECIAL DETAILS

8/27/2012 9:24:30 AM

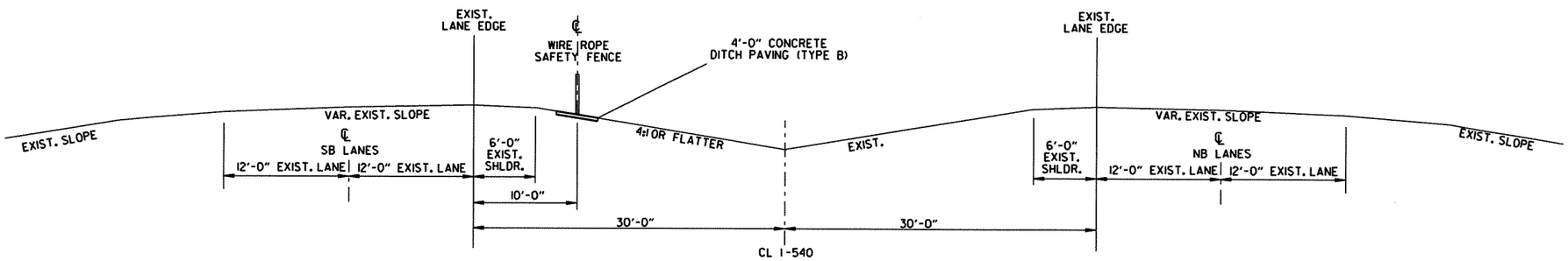
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	43A	464

(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12



WIRE ROPE SAFETY FENCE ON NORTHBOUND LANES FORESLOPE



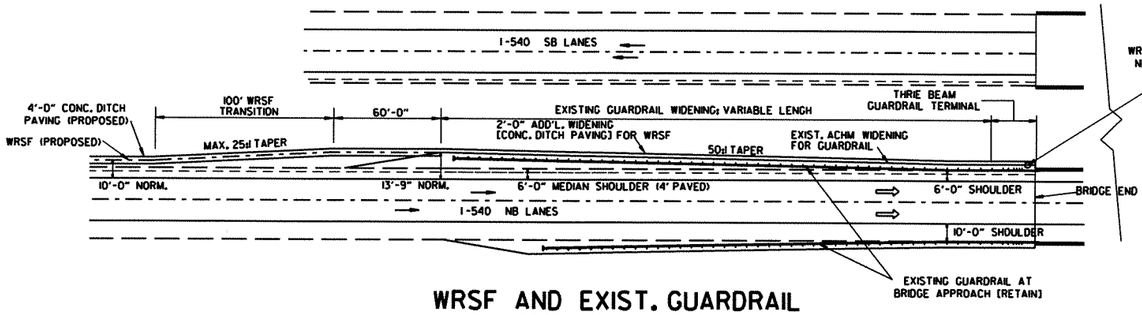
WIRE ROPE SAFETY FENCE ON SOUTHBOUND LANES FORESLOPE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

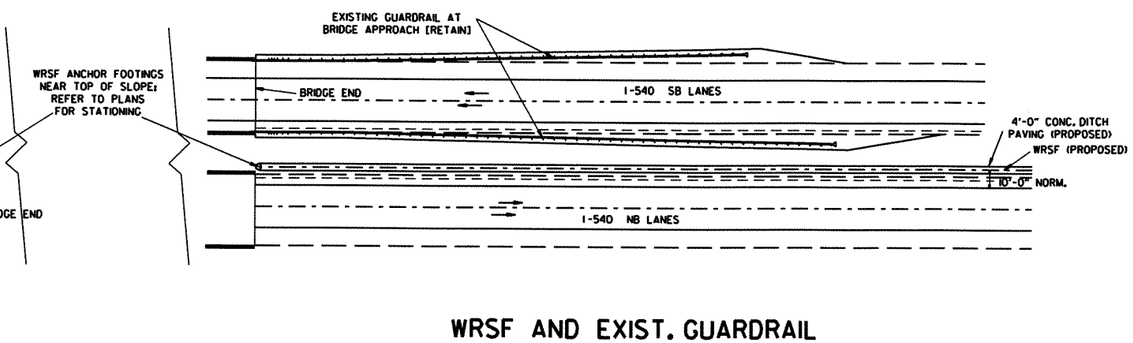
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	43B	464

(2) SPECIAL DETAILS

STATE OF ARKANSAS
JAMES L. BARR
REGISTERED PROFESSIONAL ENGINEER
No. 9808
8/31/12



WRSF AND EXIST. GUARDRAIL
ON SAME SIDE OF MEDIAN



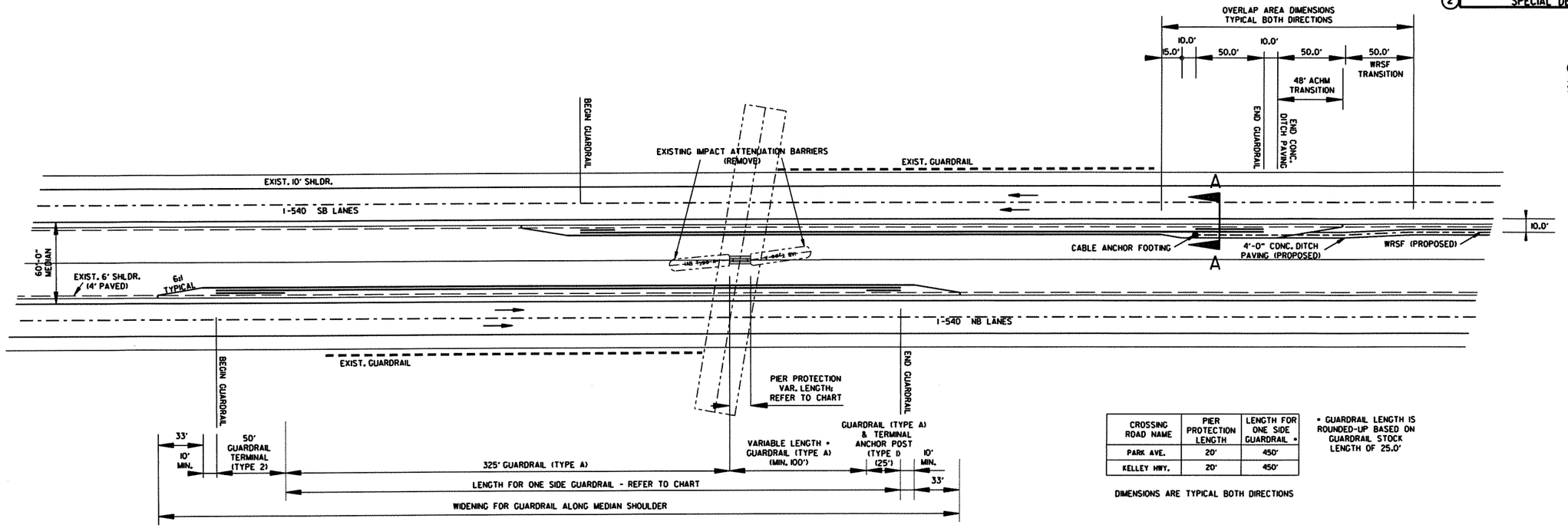
WRSF AND EXIST. GUARDRAIL
ON OPPOSITE SIDES OF MEDIAN

DETAIL OF WIRE ROPE SAFETY FENCE AT EXISTING BRIDGE ENDS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	43C	464

(2) SPECIAL DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 9-6-12



CROSSING ROAD NAME	PIER PROTECTION LENGTH	LENGTH FOR ONE SIDE GUARDRAIL *
PARK AVE.	20'	450'
KELLEY HWY.	20'	450'

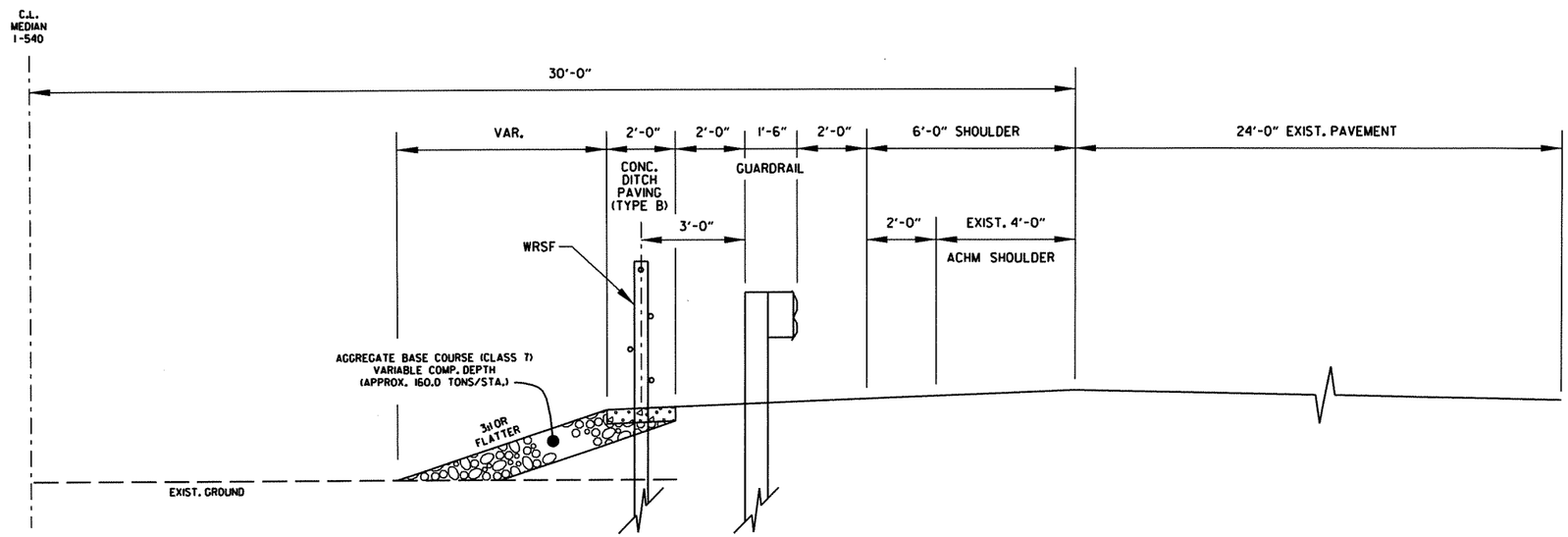
* GUARDRAIL LENGTH IS ROUNDED-UP BASED ON GUARDRAIL STOCK LENGTH OF 25.0'

DIMENSIONS ARE TYPICAL BOTH DIRECTIONS

SEE SHEET 36 FOR GUARDRAIL WIDENING DETAILS.

DETAIL AT OVERPASSES

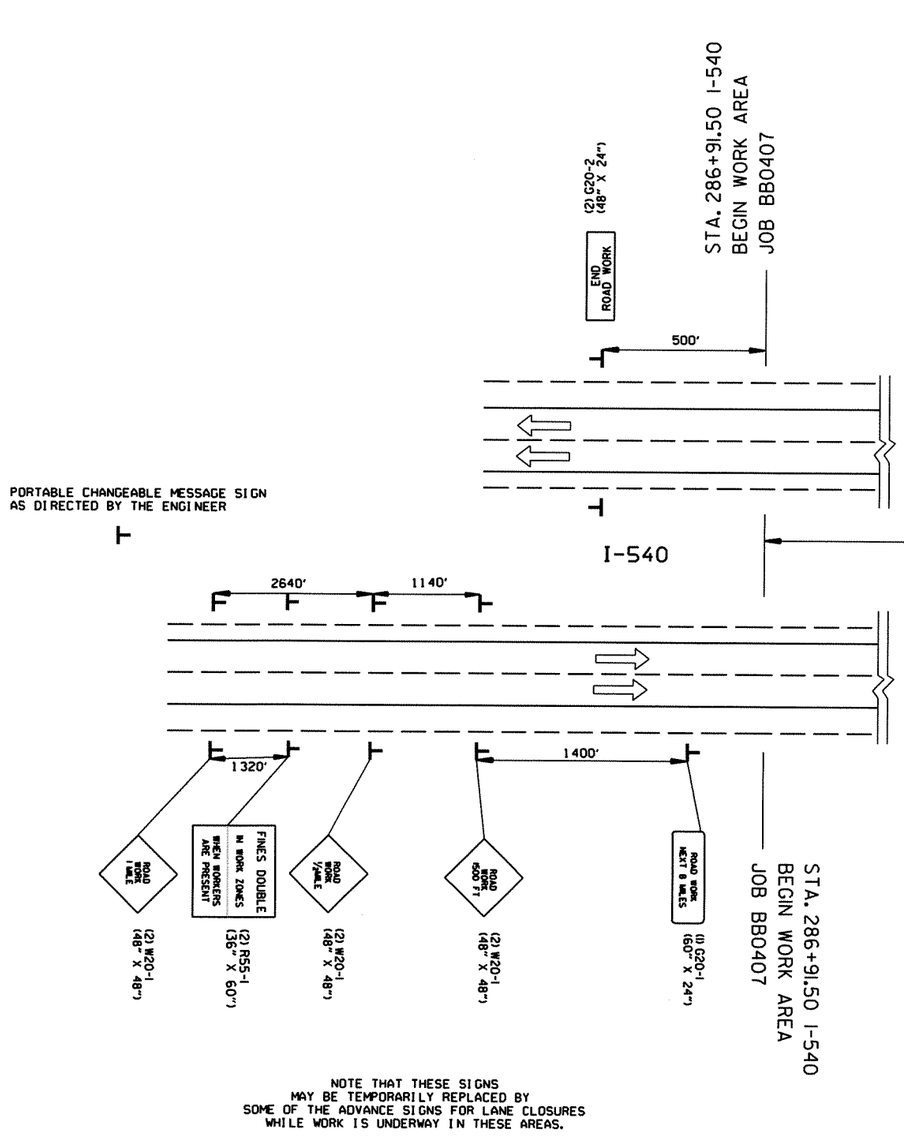
NOTE: REFER TO PLAN SHEETS FOR PLACEMENT OF WIRE ROPE SAFETY FENCE ON NORTHBOUND OR SOUTHBOUND FORESLOPES.



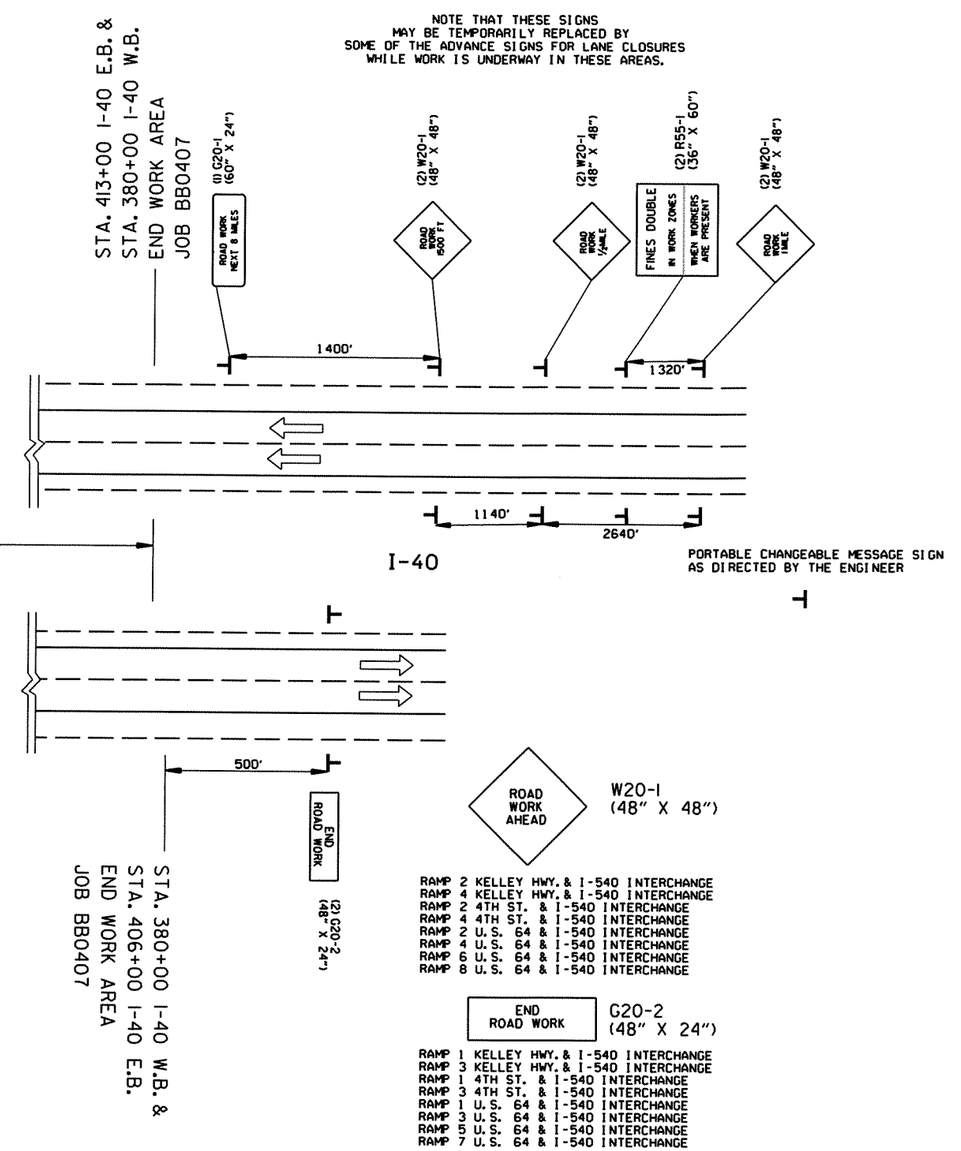
SECTION A-A

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	44	464

(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.



ROAD WORK AHEAD — W20-1 (48" X 48")

RAMP 2 KELLEY HWY. & I-540 INTERCHANGE
RAMP 4 KELLEY HWY. & I-540 INTERCHANGE
RAMP 2 4TH ST. & I-540 INTERCHANGE
RAMP 4 4TH ST. & I-540 INTERCHANGE
RAMP 2 U.S. 64 & I-540 INTERCHANGE
RAMP 4 U.S. 64 & I-540 INTERCHANGE
RAMP 6 U.S. 64 & I-540 INTERCHANGE
RAMP 8 U.S. 64 & I-540 INTERCHANGE

END ROAD WORK — G20-2 (48" X 24")

RAMP 1 KELLEY HWY. & I-540 INTERCHANGE
RAMP 3 KELLEY HWY. & I-540 INTERCHANGE
RAMP 1 4TH ST. & I-540 INTERCHANGE
RAMP 3 4TH ST. & I-540 INTERCHANGE
RAMP 1 U.S. 64 & I-540 INTERCHANGE
RAMP 3 U.S. 64 & I-540 INTERCHANGE
RAMP 5 U.S. 64 & I-540 INTERCHANGE
RAMP 7 U.S. 64 & I-540 INTERCHANGE

SEE SHEET 52 & 53 FOR ADVANCE WARNING SIGNS AND DEVICES FOR S.H. 22. SEE SHEET 61 & 62 FOR ADVANCE WARNING SIGNS AND DEVICES FOR GRAND AVE.

ADVANCE SIGNS AT BEGINNING AND END OF JOB BB0407
ALL STAGES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC
ADVANCE WARNING

8/27/2012 9:26:41 AM

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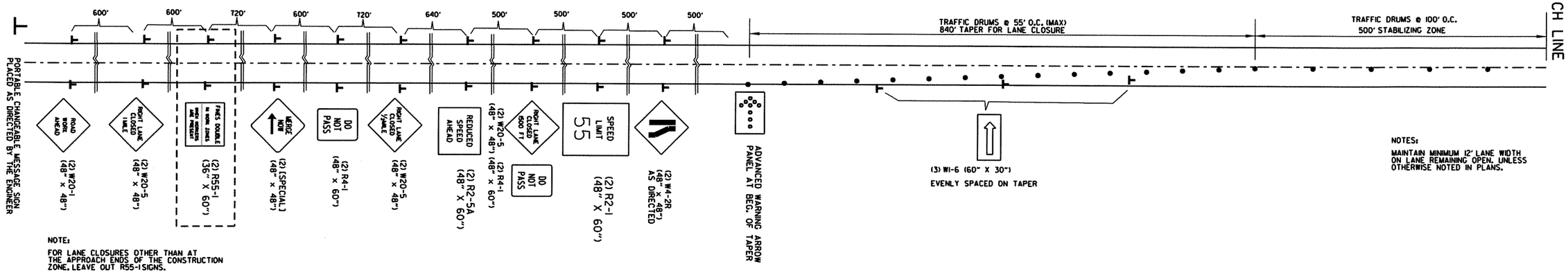
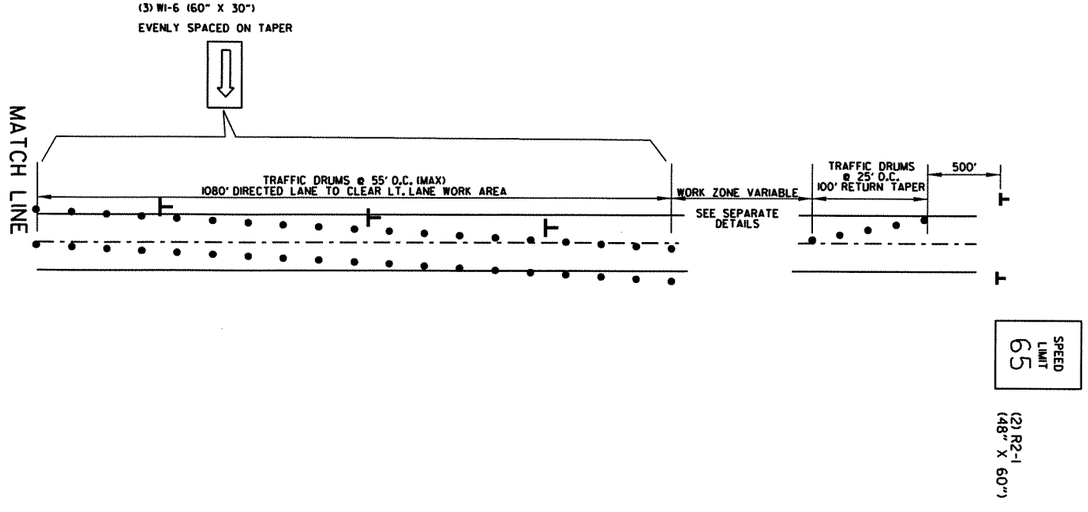
				6	ARK.			
				JOB NO.		BB0407	45	464

(2) MAINTENANCE OF TRAFFIC

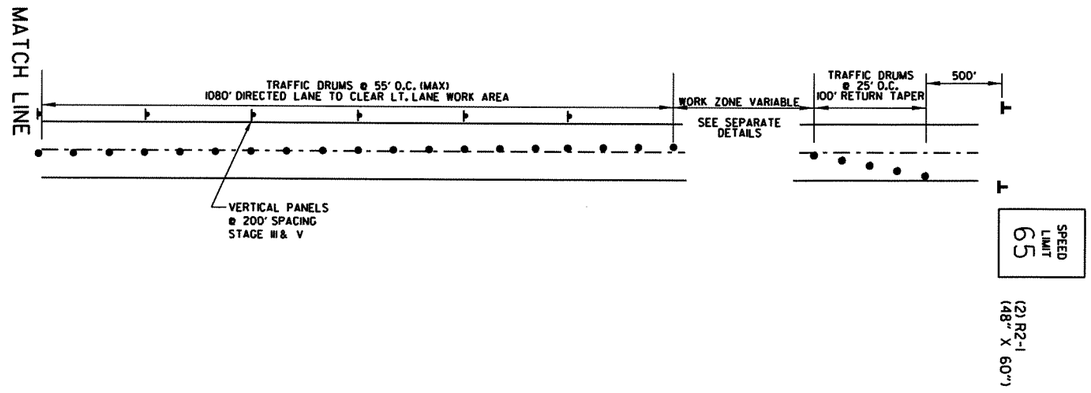


NOTE:
FOR LANE CLOSURES OTHER THAN AT THE APPROACH ENDS OF THE CONSTRUCTION ZONE, LEAVE OUT R55-1 SIGNS.

RT. LANE CLOSURE



DIVERSION FOR LT. LANE WORK ZONE



DIVERSION FOR RT. LANE WORK ZONE

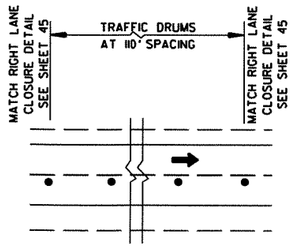
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC RIGHT LANE CLOSURE

8/27/2012 9:26:41 AM

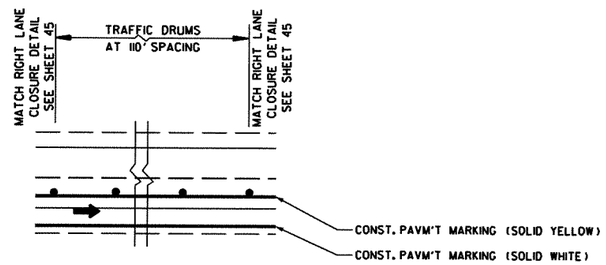
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	46	464

(2) MAINTENANCE OF TRAFFIC

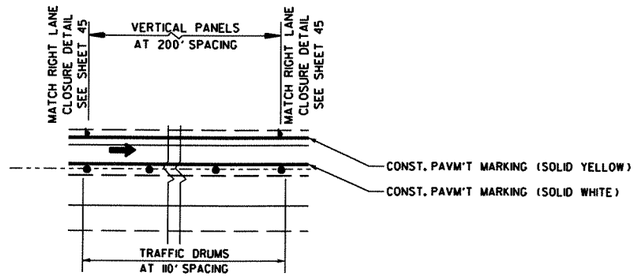


USE EXISTING STRIPES

STAGE I
CLOSE ONE LANE OF INTERSTATE
HIGHWAY FOR REBUILDING
OUTSIDE SHOULDER



STAGE II & IV
CLOSE ONE LANE OF INTERSTATE
HIGHWAY FOR SURFACING
INSIDE LANE & SHOULDER



STAGE III & V
CLOSE ONE LANE OF INTERSTATE
HIGHWAY FOR SURFACING OUTSIDE
LANE & SHOULDER

STAGE II

REMOVAL OF PERMANENT PAVEMENT MARKINGS	20205	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	41010	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	1040	LIN. FT.

STAGE IV

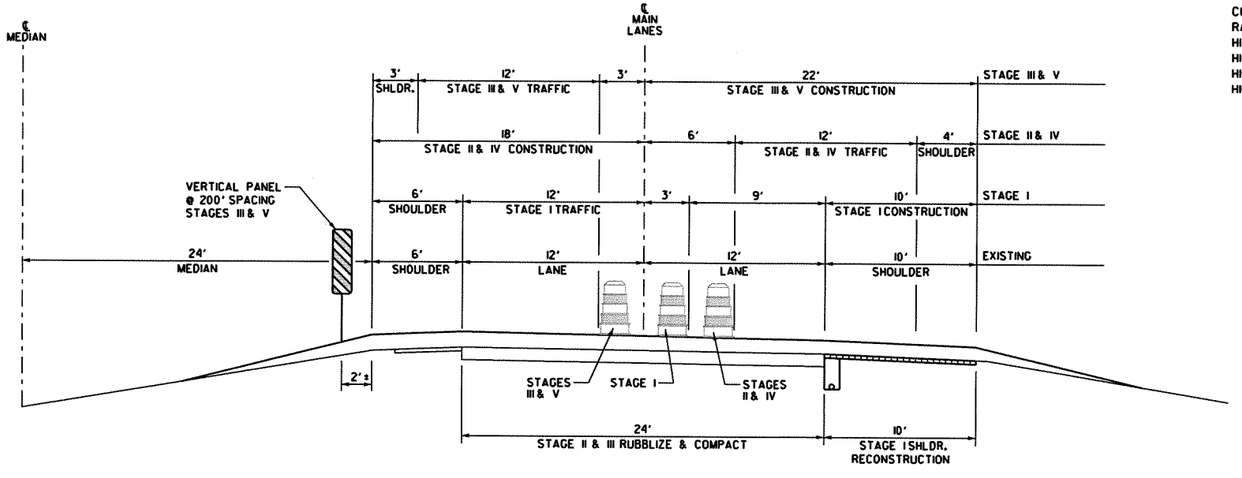
CONSTRUCTION PAVEMENT MARKINGS	39970	LIN. FT.

STAGE IIIA

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	550	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	37730	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	1040	LIN. FT.

STAGE FINAL

CONSTRUCTION PAVEMENT MARKINGS	40030	LIN. FT.
RAISED PAVEMENT MARKERS (TYPE II)	256	EACH
HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")	28189	LIN. FT.
HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4")	18382	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	1460	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	1320	LIN. FT.



TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
FOR RUBBLIZATION & OVERLAY - N.B. LANES
(REVERSE FOR S.B. LANES)

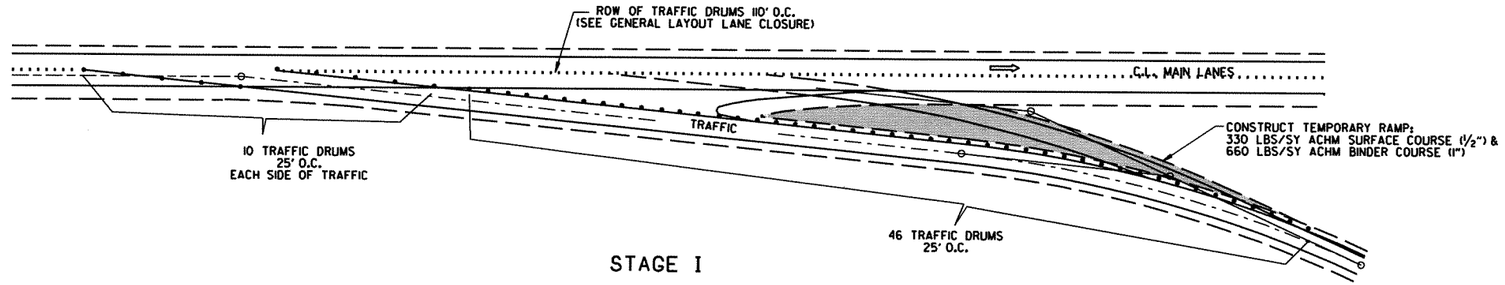
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC
OVERLAY SECTIONS

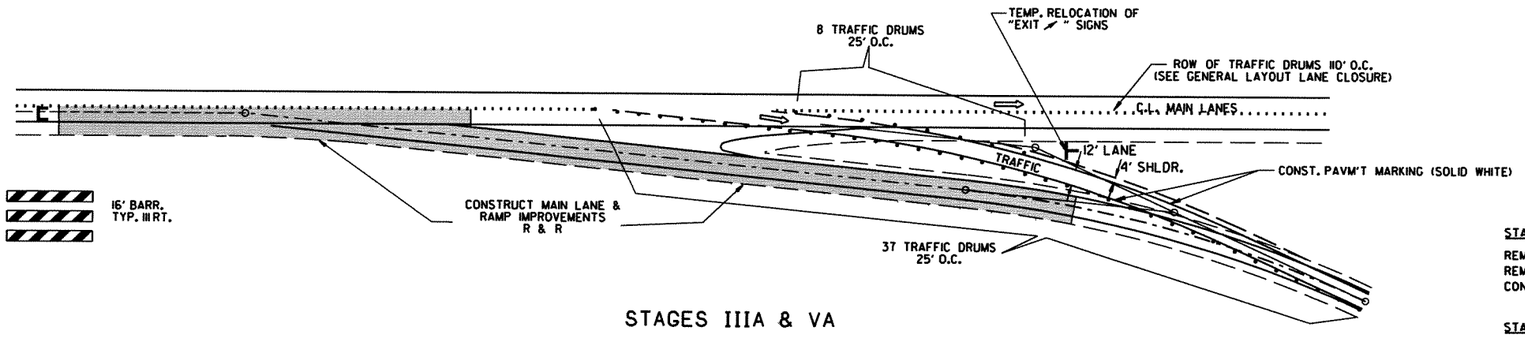
8/27/2012 9:26:42 AM

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.		BB0407	47	464

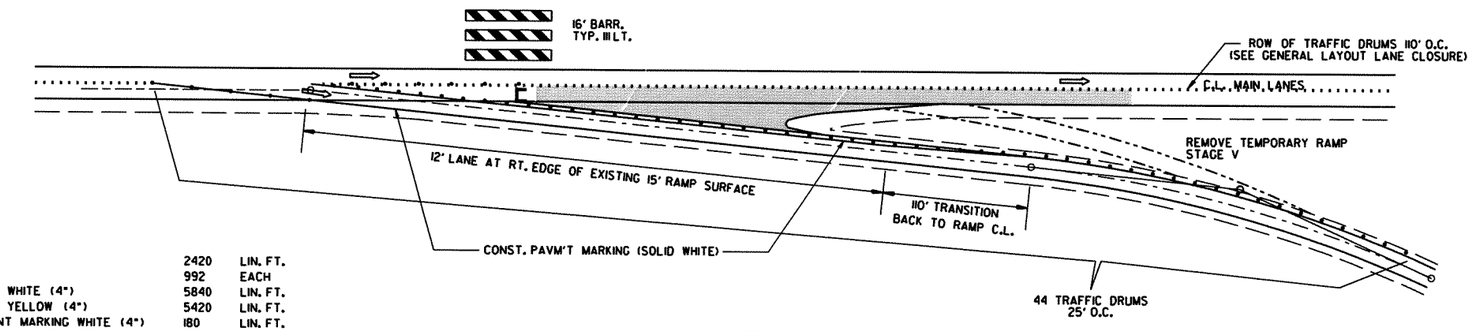
(2) MAINTENANCE OF TRAFFIC



STAGE I



STAGES IIIA & VA



STAGES IIIB & VB

STAGE FINAL

CONSTRUCTION PAVEMENT MARKINGS	2420	LIN. FT.
RAISED PAVEMENT MARKERS (TYPE II)	992	EACH
HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")	5840	LIN. FT.
HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4")	5420	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	180	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	230	LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	5725	LIN. FT.

STAGE IIIA

REMOVAL OF PERMANENT PAVEMENT MARKINGS	600	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	1600	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	4850	LIN. FT.

STAGE VA

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	500	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	1100	LIN. FT.

STAGE IV

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	1550	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	2240	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	300	LIN. FT.

STAGE IIIB

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	1500	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	6000	LIN. FT.

STAGE VB

CONSTRUCTION PAVEMENT MARKINGS	6000	LIN. FT.

LAYOUT OF TEMPORARY WIDENING OF EXIT RAMPS FOR MAINTENANCE OF TRAFFIC
RAMP 3 S.H. 22 INTERCHANGE, RAMP 3 4TH STREET INTERCHANGE, & RAMPS 1, 3, 5, & 7 U.S. 64 INTERCHANGE

NOTE: THESE DETAILS ARE TO PROVIDE A METHOD OF MAINTAINING RAMP TRAFFIC EXITING I-540. ADJUSTMENTS MAY BE MADE TO EXPEDITE CONSTRUCTION IF APPROVED BY THE ENGINEER.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC OVERLAY SECTIONS EXIT RAMPS

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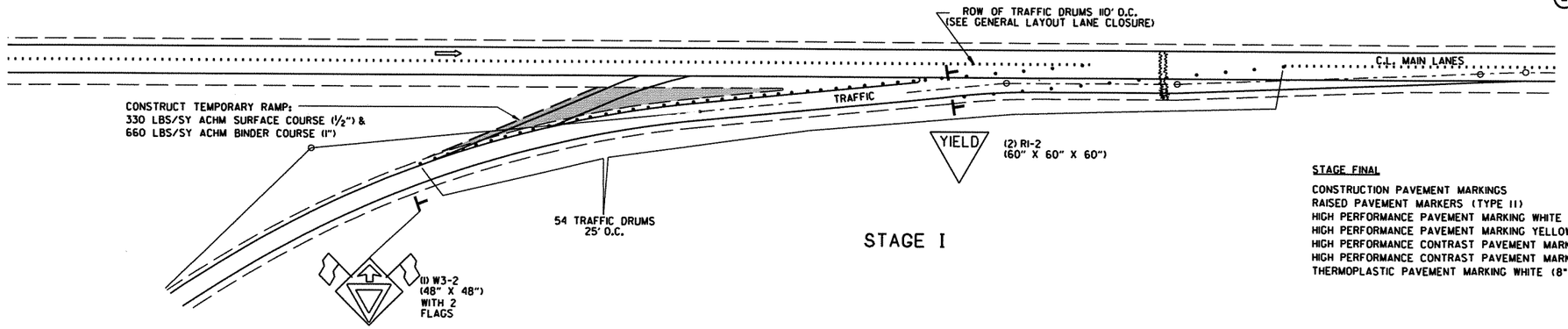
				6	ARK.			
				JOB NO.		BB0407	48	464

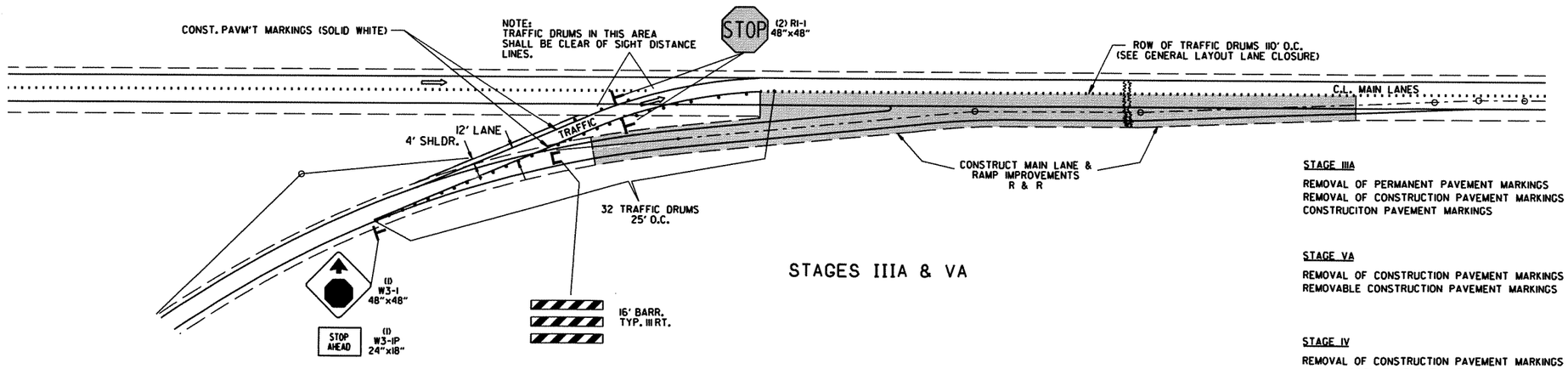
(2) MAINTENANCE OF TRAFFIC



STAGE I

STAGE FINAL

CONSTRUCTION PAVEMENT MARKINGS	1540	LIN. FT.
RAISED PAVEMENT MARKERS (TYPE II)	306	EACH
HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")	5380	LIN. FT.
HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4")	6390	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	295	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	295	LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	1680	LIN. FT.



STAGES IIIA & VA

STAGE IIIA

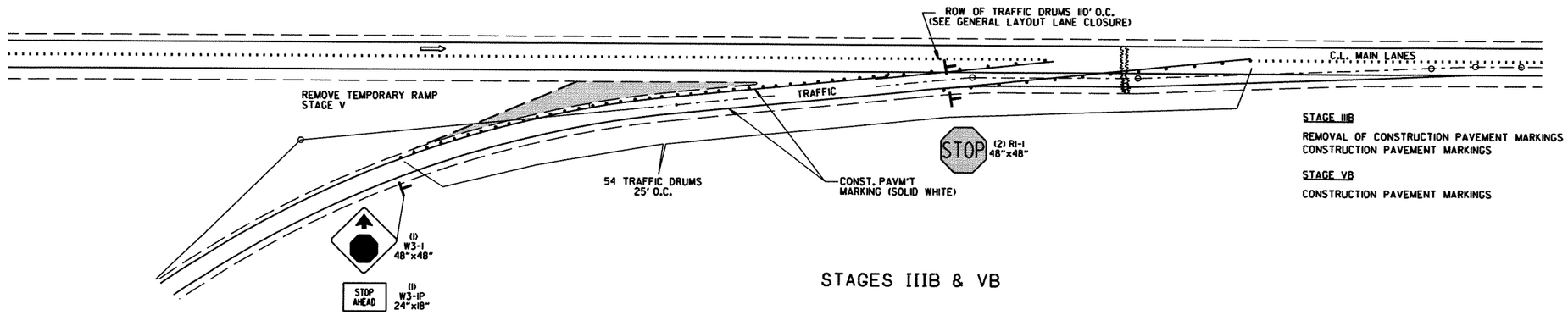
REMOVAL OF PERMANENT PAVEMENT MARKINGS	600	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	1600	LIN. FT.
CONSTRUCITON PAVEMENT MARKINGS	4600	LIN. FT.

STAGE VA

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	500	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	1400	LIN. FT.

STAGE IV

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	1800	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	3270	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	450	LIN. FT.



STAGES IIIB & VB

STAGE IIIB

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	1500	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	6000	LIN. FT.

STAGE VB

CONSTRUCTION PAVEMENT MARKINGS	6000	LIN. FT.

LAYOUT OF TEMPORARY WIDENING OF ENTRANCE RAMPS FOR MAINTENANCE OF TRAFFIC
RAMP 4 S.H. 22 INTERCHANGE, RAMP 2 4TH STREET INTERCHANGE, & RAMPS 2, 4, 6, & 8 U.S. 64 INTERCHANGE

NOTE: THESE DETAILS ARE TO PROVIDE A METHOD OF MAINTAINING RAMP TRAFFIC ENTERING I-540. ADJUSTMENTS MAY BE MADE TO EXPEDITE CONSTRUCTION IF APPROVED BY THE ENGINEER. DURATION OF STOP CONDITION SHALL BE MINIMIZED. REFER TO SPECIAL PROVISION - MAINTENANCE OF TRAFFIC FOR ADDITIONAL INFORMATION.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC OVERLAY SECTIONS ENTRANCE RAMPS

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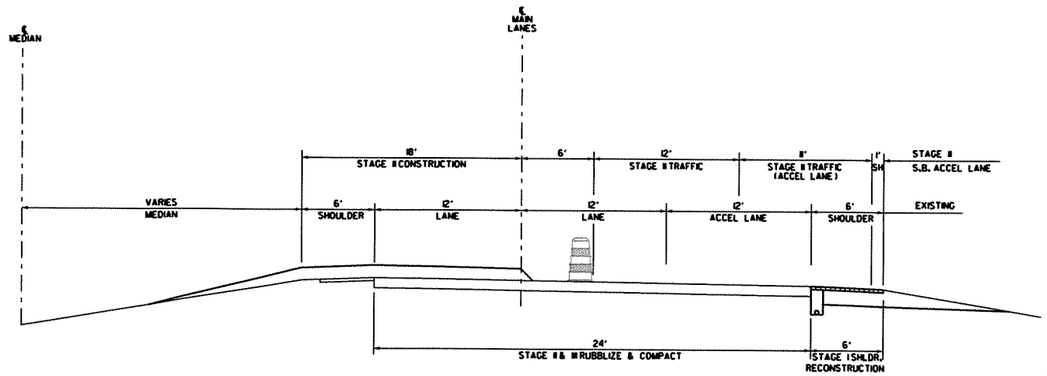
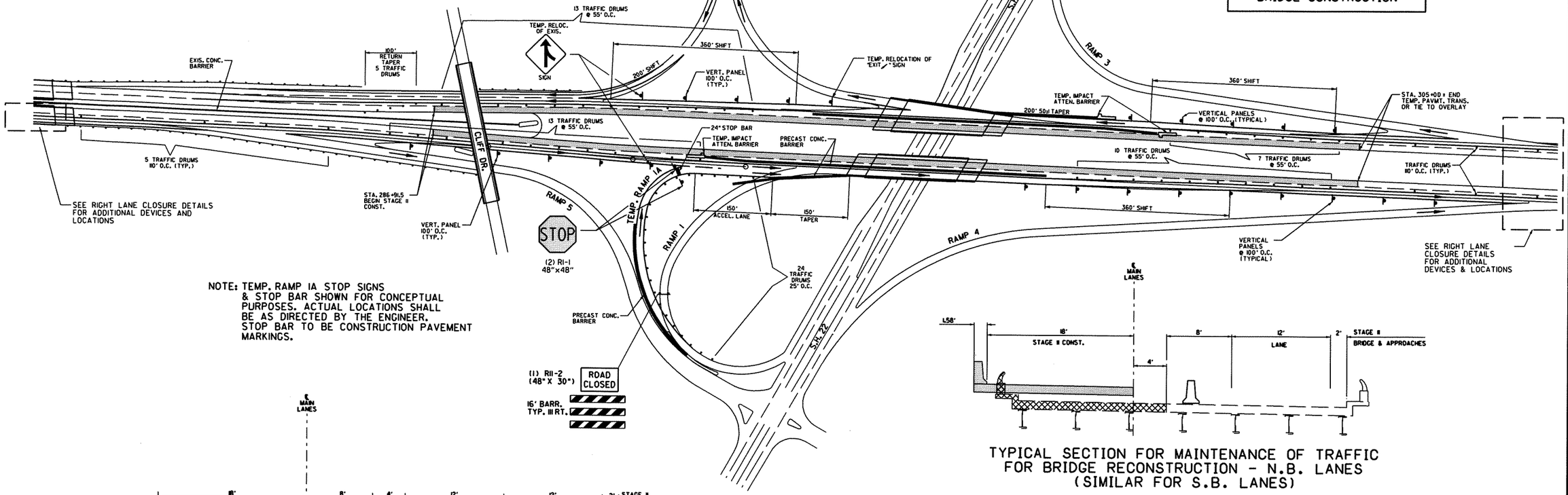
				6	ARK.			
				JOB NO.		BB0407	49	464

(2) MAINTENANCE OF TRAFFIC

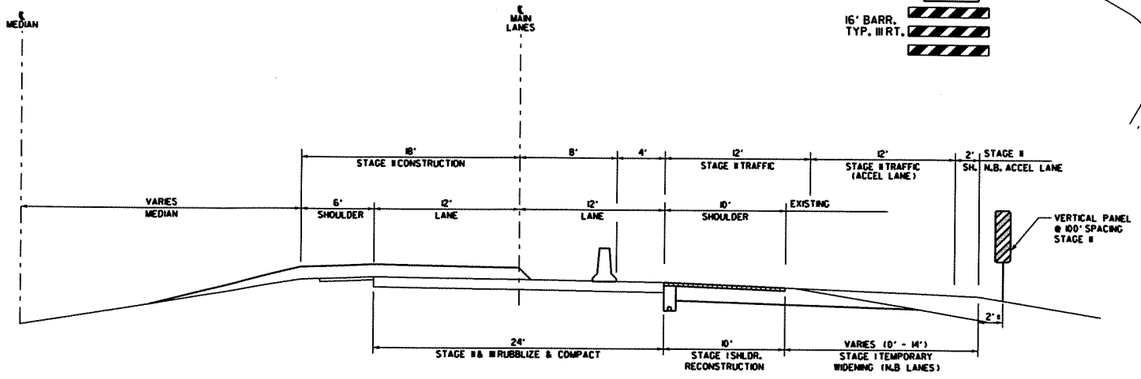


TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
FOR RUBBLIZATION & OVERLAY - S.B. LANES
THRU RAMP 6 ACCEL LANE



NOTE: TEMP. RAMP 1A STOP SIGNS & STOP BAR SHOWN FOR CONCEPTUAL PURPOSES. ACTUAL LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER. STOP BAR TO BE CONSTRUCTION PAVEMENT MARKINGS.

TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
FOR BRIDGE RECONSTRUCTION - N.B. LANES
(SIMILAR FOR S.B. LANES)



TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
FOR RUBBLIZATION & OVERLAY - N.B. LANES
THRU TEMP. RAMP 1A ACCEL LANE

STAGE II

REMOVAL OF PERMANENT PAVEMENT MARKINGS	1525	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	800	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT	1190	LIN. FT.

NOTE: INCLUDES S.H.22 QUANTITIES

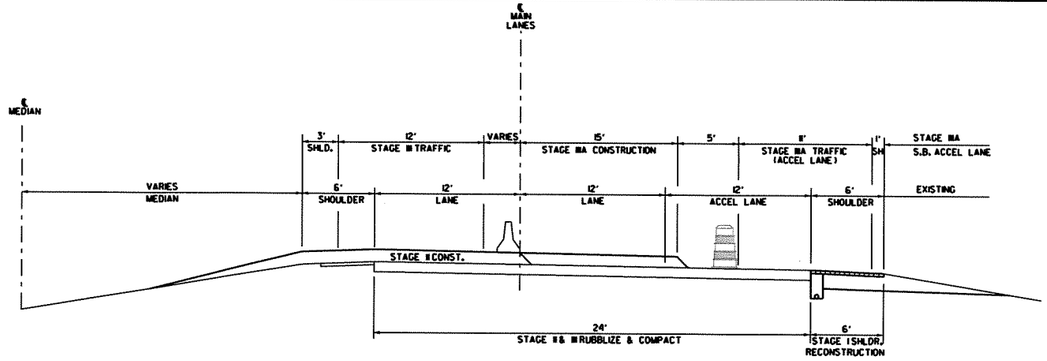
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC OVERLAY SECTIONS S.H.22 BRIDGE & APPROACHES STAGE II

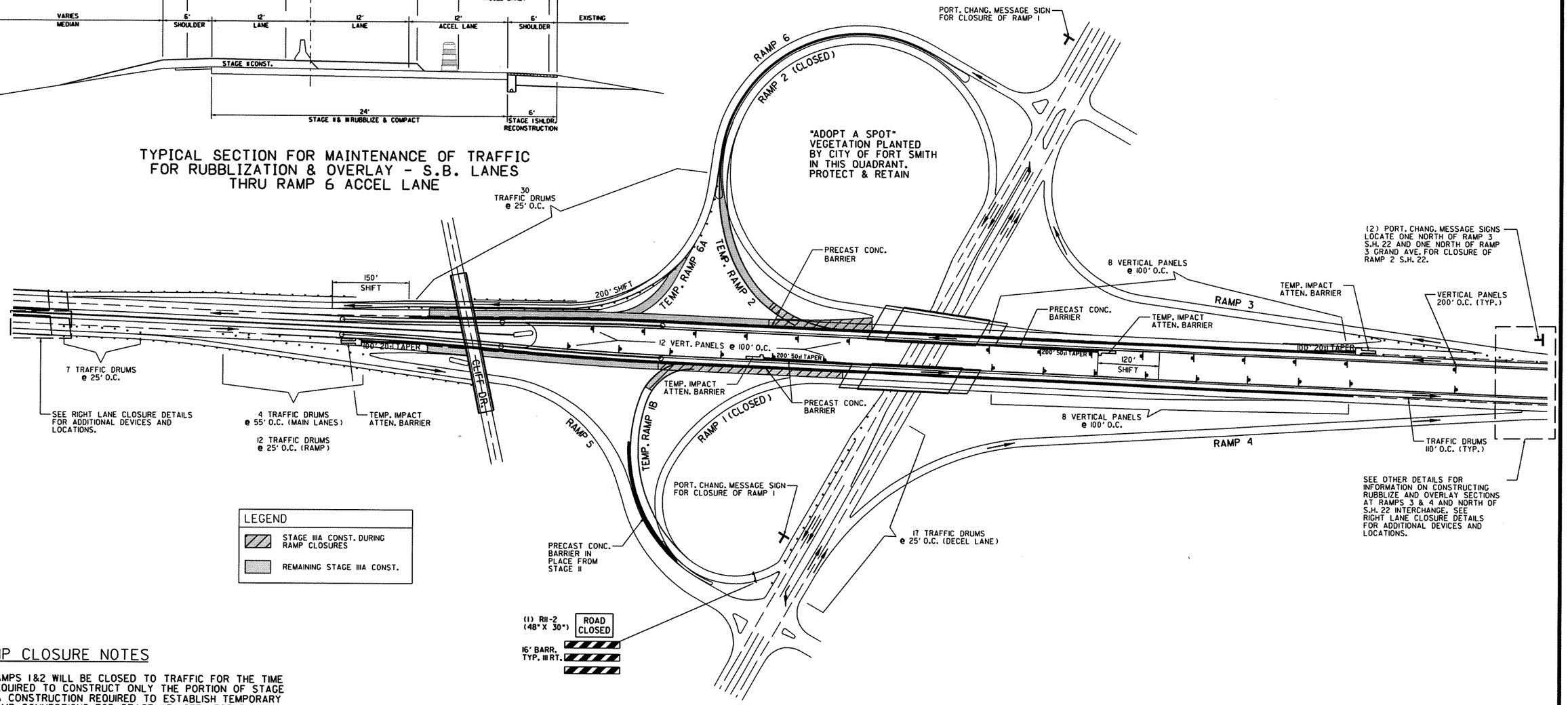
8/27/2012 9:26:43 AM

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.		BB0407	50	464

(2) MAINTENANCE OF TRAFFIC



TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC FOR RUBBLIZATION & OVERLAY - S.B. LANES THRU RAMP 6 ACCEL LANE



LEGEND

- STAGE IIIA CONST. DURING RAMP CLOSURES
- REMAINING STAGE IIIA CONST.

RAMP CLOSURE NOTES

① RAMPS 1&2 WILL BE CLOSED TO TRAFFIC FOR THE TIME REQUIRED TO CONSTRUCT ONLY THE PORTION OF STAGE IIIA CONSTRUCTION REQUIRED TO ESTABLISH TEMPORARY RAMP CONNECTIONS FOR STAGE IIIB. SEE LEGEND AND LAYOUT FOR APPROXIMATE LIMITS OF AREAS TO BE CONSTRUCTED DURING RAMP CLOSURES. TEMP. RAMPS 1B & 2 TO BE COMPLETED AND OPENED TO TRAFFIC AS DETAILED IN STAGE IIIB IMMEDIATELY UPON COMPLETION OF THESE AREAS AND PRIOR TO COMPLETION OF REMAINING STAGE IIIA CONST.

② PORTABLE CHANGEABLE MESSAGE SIGNS TO BE PLACED A MINIMUM OF 48 HOURS PRIOR TO ANY CLOSURE WARNING OF THE SCHEDULED CLOSURE AND DURATION. ACTUAL LOCATIONS OF MESSAGE SIGNS TO BE AS DIRECTED BY ENGINEER.

③ ALL EXISTING GUIDE SIGNS DIRECTING TRAFFIC TO RAMP 1& RAMP 2 TO BE COVERED DURING RAMP CLOSURE PERIODS.

④ SEE SPECIAL PROVISIONS, SEQUENCE OF CONSTRUCTION & MAINTENANCE OF TRAFFIC FOR ALLOWABLE CLOSURE PERIODS AND OTHER DETAILS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC OVERLAY OPERATIONS S.H.22 BRIDGE & APPROACHES STAGE IIIA

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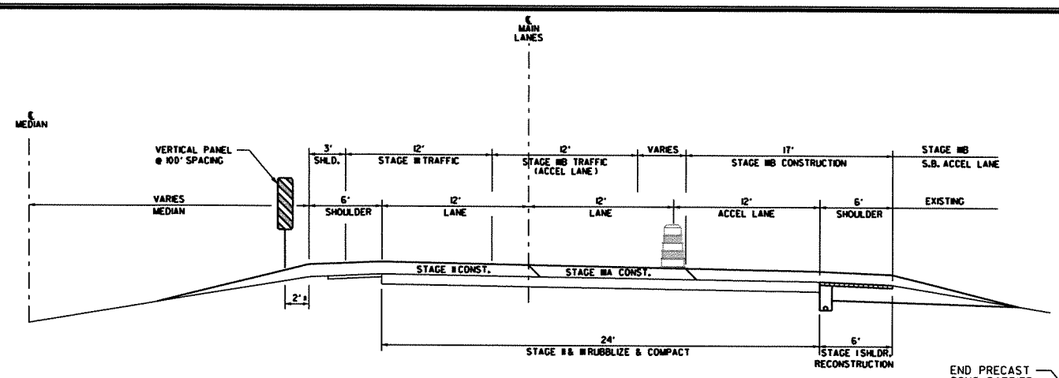
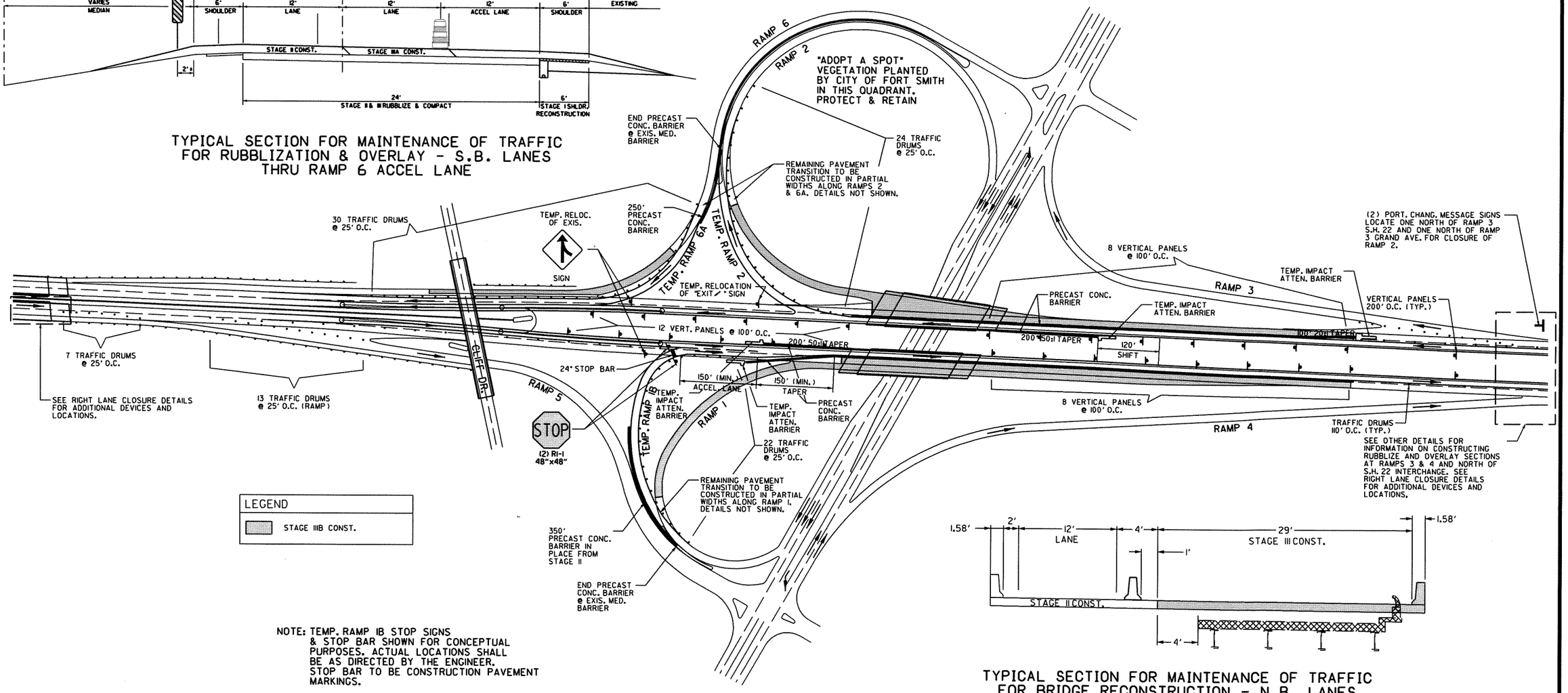
				6	ARK.			
				JOB NO.		BB0407	51	464

(2) MAINTENANCE OF TRAFFIC



TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
FOR RUBBLIZATION & OVERLAY - S.B. LANES
THRU RAMP 6 ACCEL LANE



LEGEND

STAGE IIIB CONST.

NOTE: TEMP. RAMP 1B STOP SIGNS & STOP BAR SHOWN FOR CONCEPTUAL PURPOSES. ACTUAL LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER. STOP BAR TO BE CONSTRUCTION PAVEMENT MARKINGS.

TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
FOR BRIDGE RECONSTRUCTION - N.B. LANES
(SIMILAR FOR S.B. LANES)

STAGE IIIB

REMOVAL OF PERMANENT PAVEMENT MARKINGS	160	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	795	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	1000	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	2470	LIN. FT.

STATE OF ARKANSAS
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JAMES L. BARR
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MAINTENANCE OF TRAFFIC OVERLAY OPERATIONS S.H.22 BRIDGE & APPROACHES STAGE IIIB

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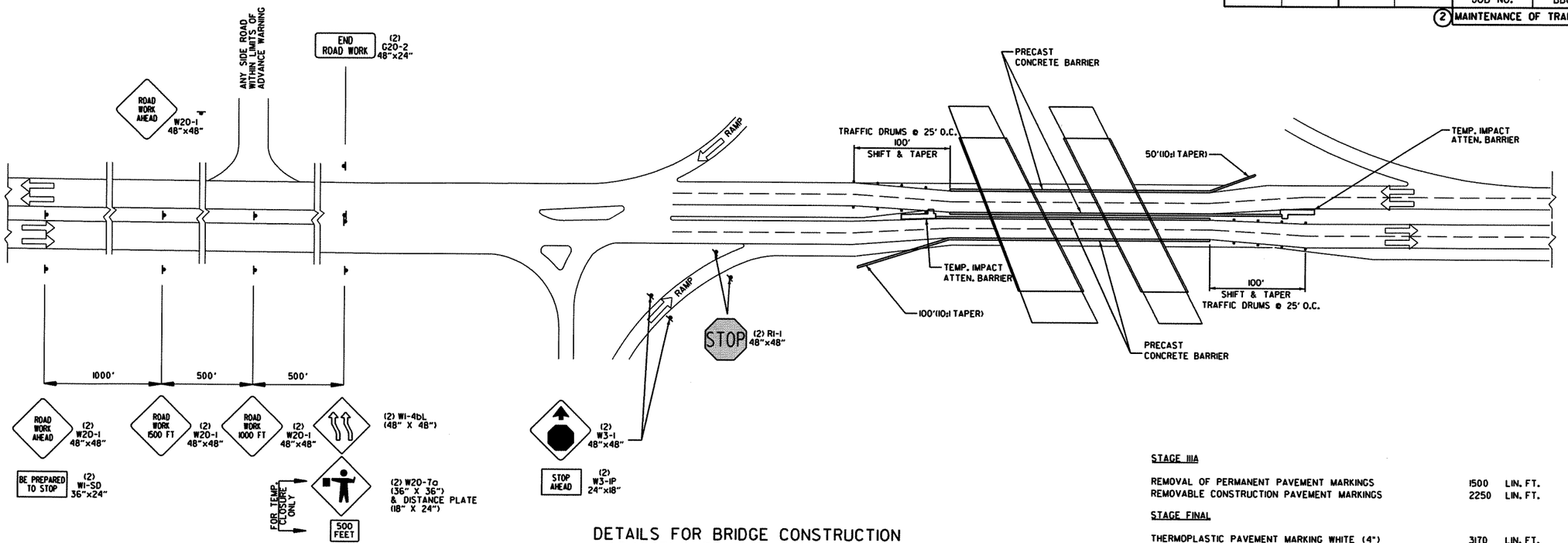
				6	ARK.			
				JOB NO.		BB0407	52	464

(2) MAINTENANCE OF TRAFFIC



SEE STD. DWG. TC-2 WHEN TEMPORARY LANE CLOSURES ARE NECESSARY DUE TO CONSTRUCTION ACTIVITY

DETAILS FOR BRIDGE CONSTRUCTION ADJACENT TO AND OVER S.H. 22

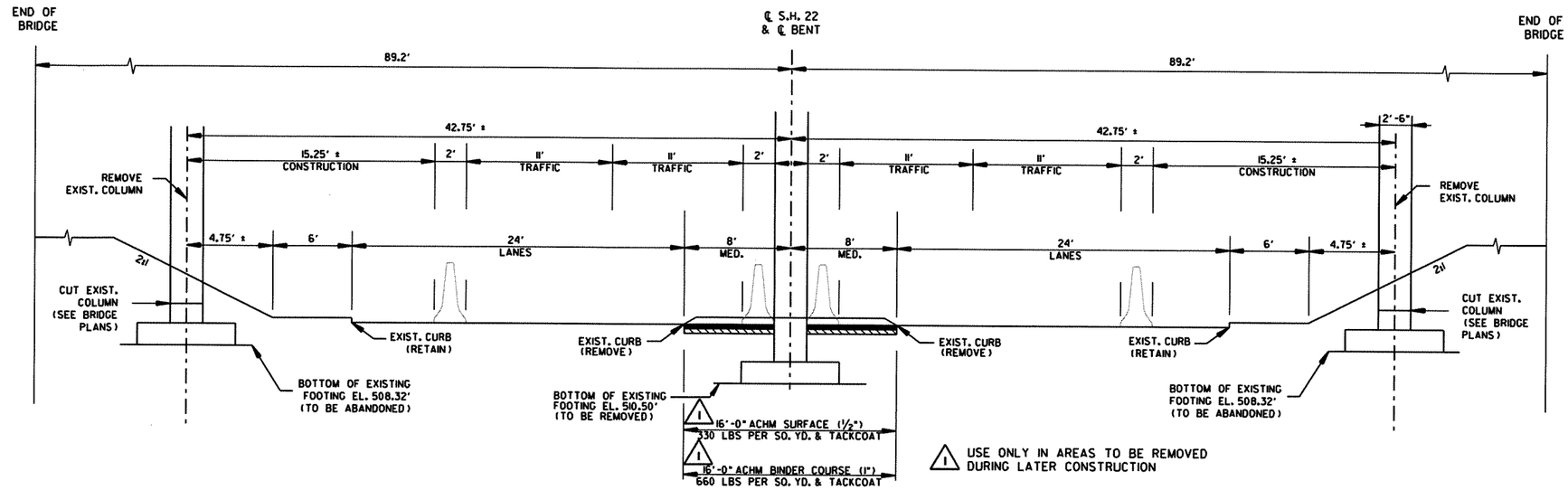
(EASTBOUND SHOWN, SIMILAR FOR WESTBOUND)

STAGE IIIA

REMOVAL OF PERMANENT PAVEMENT MARKINGS	1500	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	2250	LIN. FT.

STAGE FINAL

THERMOPLASTIC PAVEMENT MARKING WHITE (4")	3170	LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	2000	LIN. FT.



TYPICAL SECTION - OUTSIDE PIER/FOOTING CONSTRUCTION I-540 BRIDGE OVER S.H. 22

SHORING REQUIRED AS NEEDED. PAYMENT TO BE INCLUDED IN UNIT COST FOR STRUCTURAL EXCAVATION, SEE BRIDGE PLANS.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

MAINTENANCE OF TRAFFIC S.H. 22

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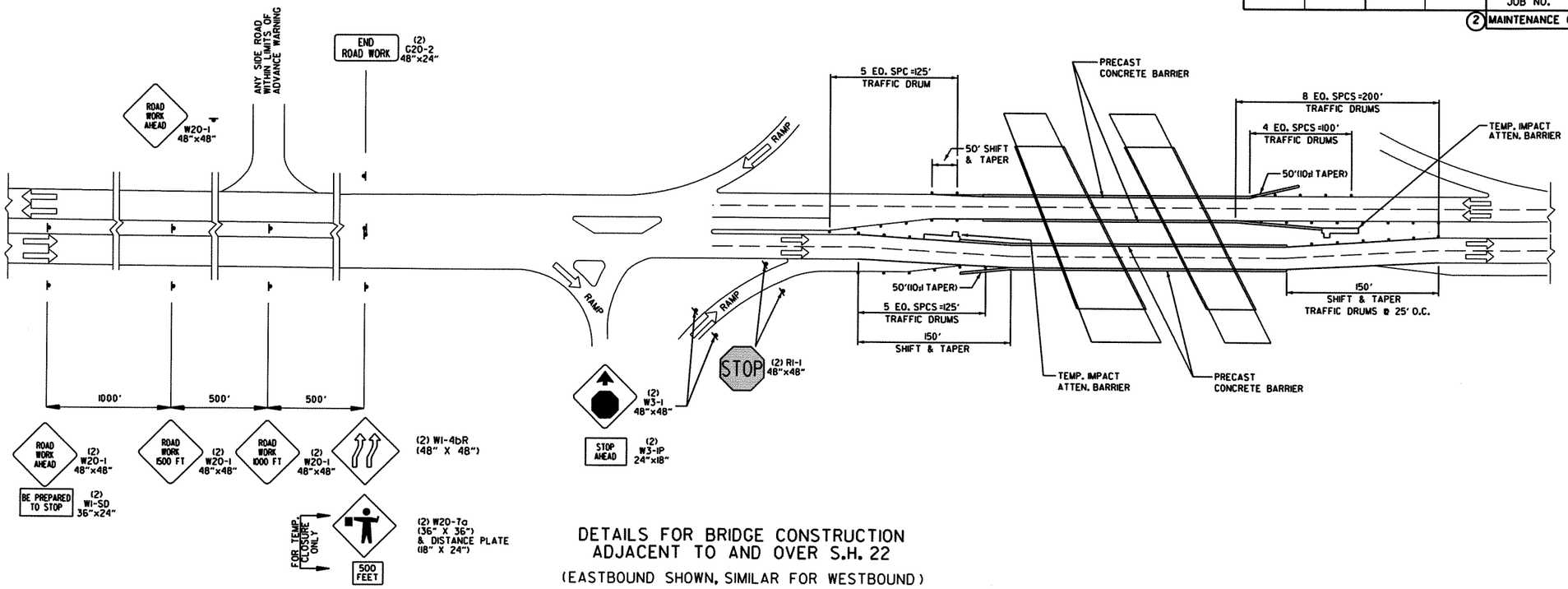
				6	ARK.			
				JOB NO.		BB0407	53	464

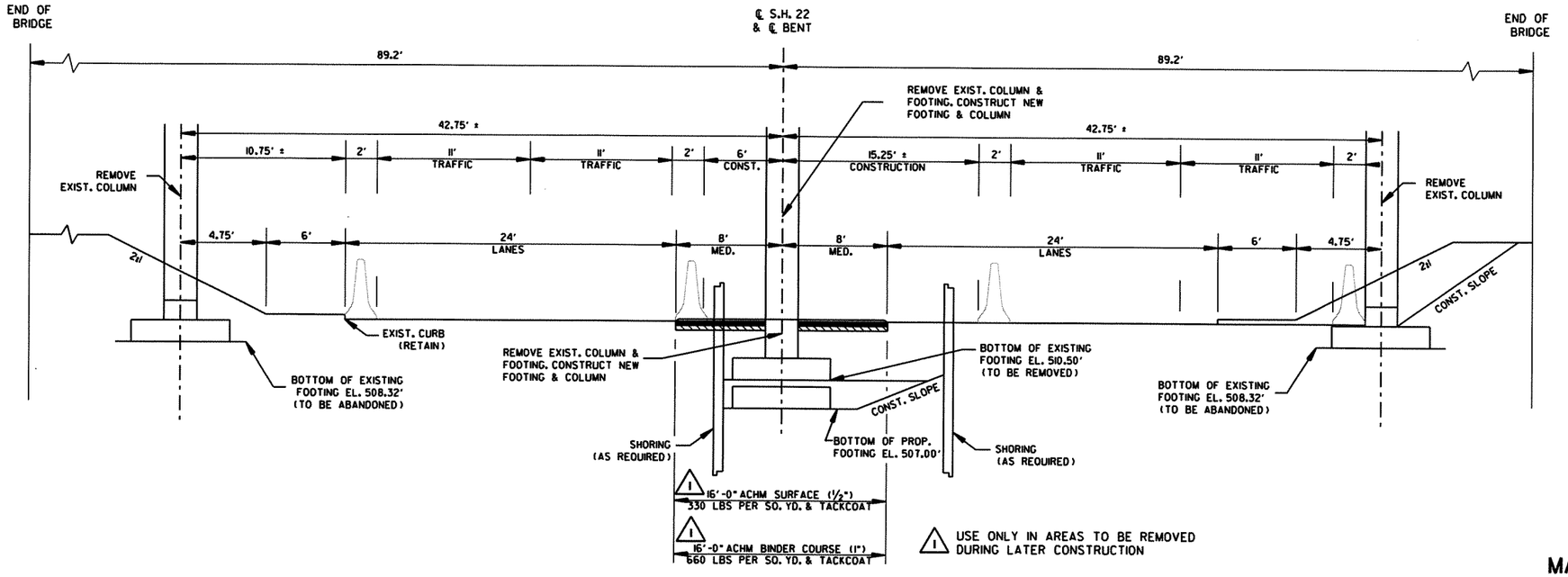
(2) MAINTENANCE OF TRAFFIC



SEE STD. DWG. TC-2 WHEN TEMPORARY LANE CLOSURES ARE NECESSARY DUE TO CONSTRUCTION ACTIVITY

DETAILS FOR BRIDGE CONSTRUCTION ADJACENT TO AND OVER S.H. 22

(EASTBOUND SHOWN, SIMILAR FOR WESTBOUND)



1 USE ONLY IN AREAS TO BE REMOVED DURING LATER CONSTRUCTION

SHORING REQUIRED AS NEEDED. PAYMENT TO BE INCLUDED IN UNIT COST FOR STRUCTURAL EXCAVATION. SEE BRIDGE PLANS.

TYPICAL SECTION - INSIDE PIER/FOOTING CONSTRUCTION I-540 BRIDGE OVER S.H. 22

STATE OF ARKANSAS JAMES L. BARR REGISTERED PROFESSIONAL ENGINEER No. 9808 8/31/12

MAINTENANCE OF TRAFFIC S.H. 22

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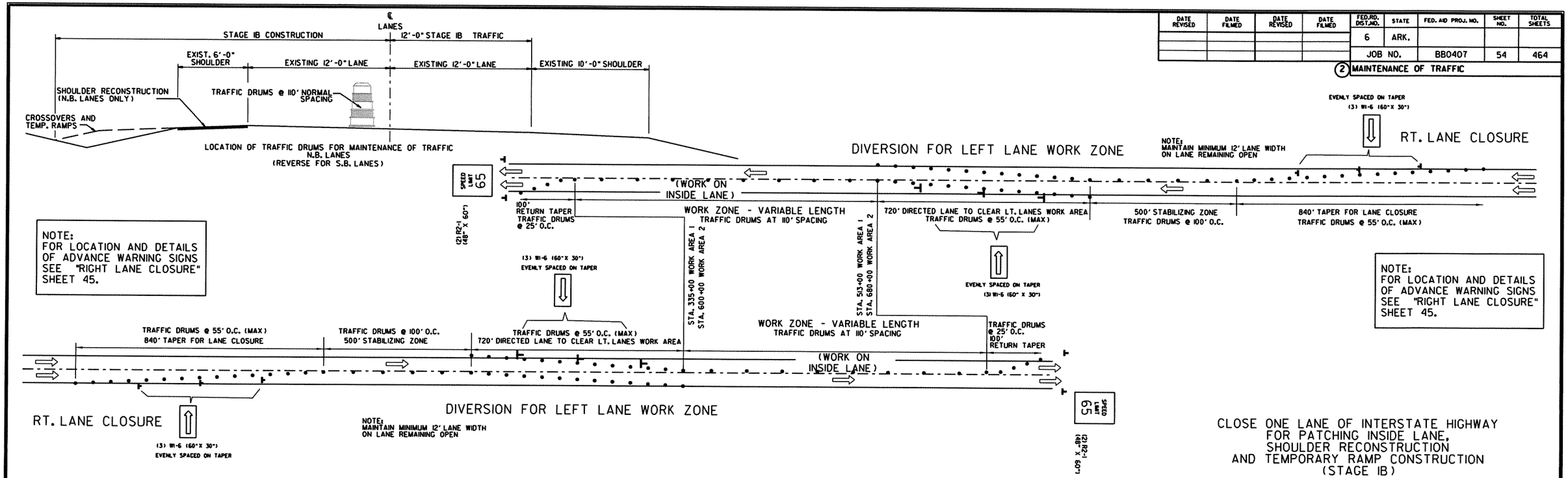
				6	ARK.			
				JOB NO.		BB0407	54	464

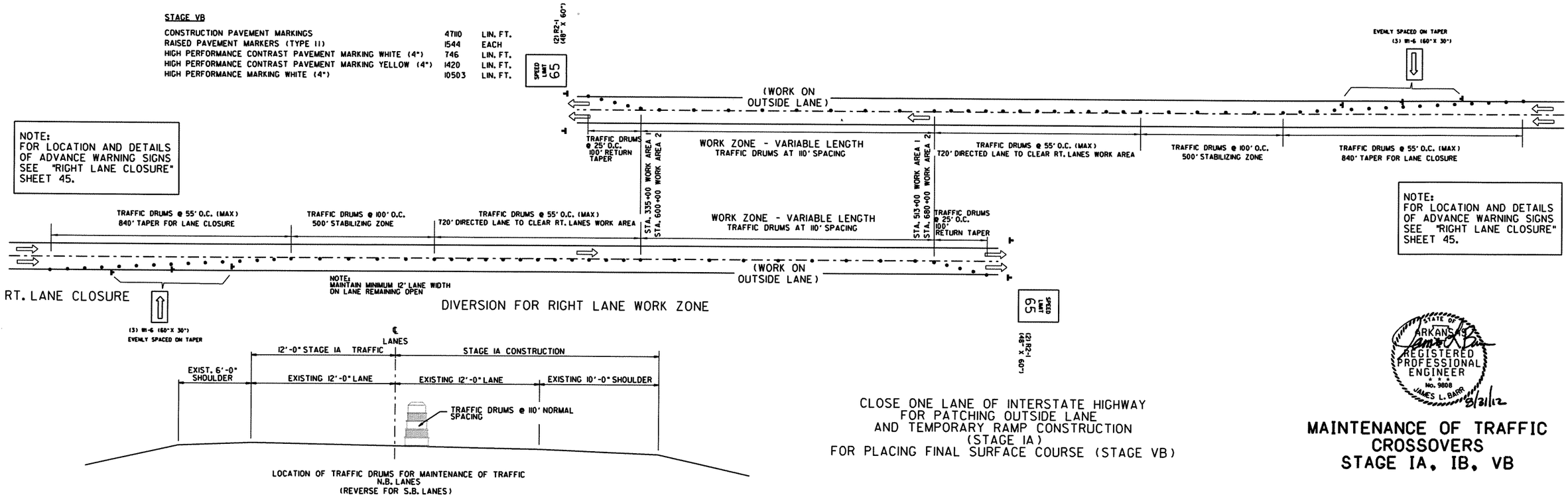
(2) MAINTENANCE OF TRAFFIC



CLOSE ONE LANE OF INTERSTATE HIGHWAY
FOR PATCHING INSIDE LANE,
SHOULDER RECONSTRUCTION
AND TEMPORARY RAMP CONSTRUCTION
(STAGE IB)

STAGE VB

CONSTRUCTION PAVEMENT MARKINGS	47110	LIN. FT.
RAISED PAVEMENT MARKERS (TYPE II)	1544	EACH
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	746	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	1420	LIN. FT.
HIGH PERFORMANCE MARKING WHITE (4")	10503	LIN. FT.



CLOSE ONE LANE OF INTERSTATE HIGHWAY
FOR PATCHING OUTSIDE LANE
AND TEMPORARY RAMP CONSTRUCTION
(STAGE IA)
FOR PLACING FINAL SURFACE COURSE (STAGE VB)

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC CROSSOVERS STAGE IA, IB, VB

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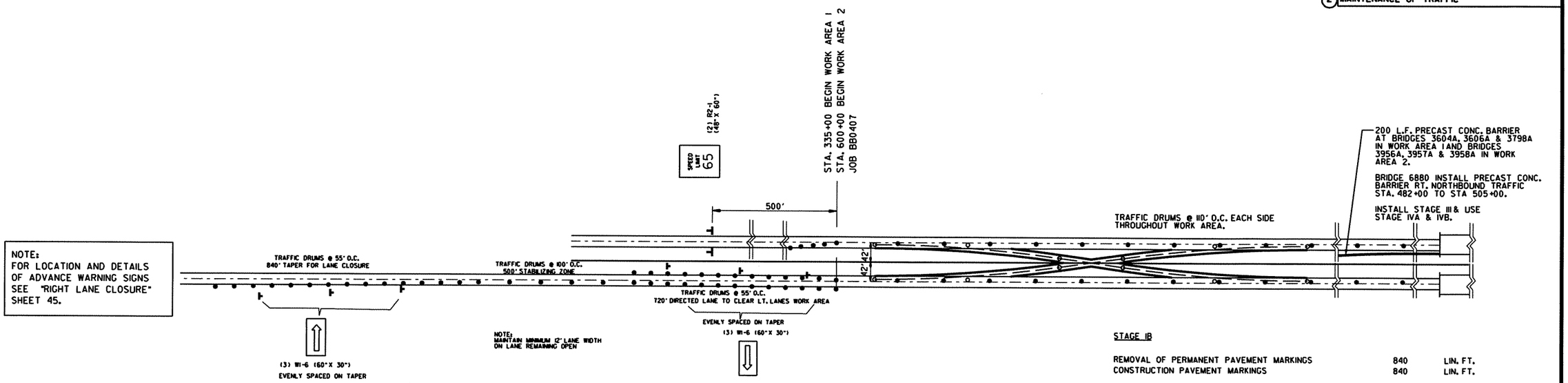
				6	ARK.			
				JOB NO.		BB0407	55	464

(2) MAINTENANCE OF TRAFFIC



SEQUENCING:

STAGE IB: REBUILD N.B.L. INSIDE SHOULDER, CONSTRUCT CROSSOVERS IN MEDIAN, INSTALL TEMPORARY PRECAST CONCRETE BARRIER WALL TO REROUTE SOUTHBOUND TRAFFIC

STAGE III: RELOCATE TEMPORARY PRECAST CONCRETE BARRIER WALL TO REROUTE NORTHBOUND TRAFFIC

STAGE VA: REMOVE CROSSOVERS AND TEMPORARY PRECAST CONCRETE BARRIER WALL AND PLACE FINAL SURFACE COURSE ON INSIDE LANES.

STAGE IB

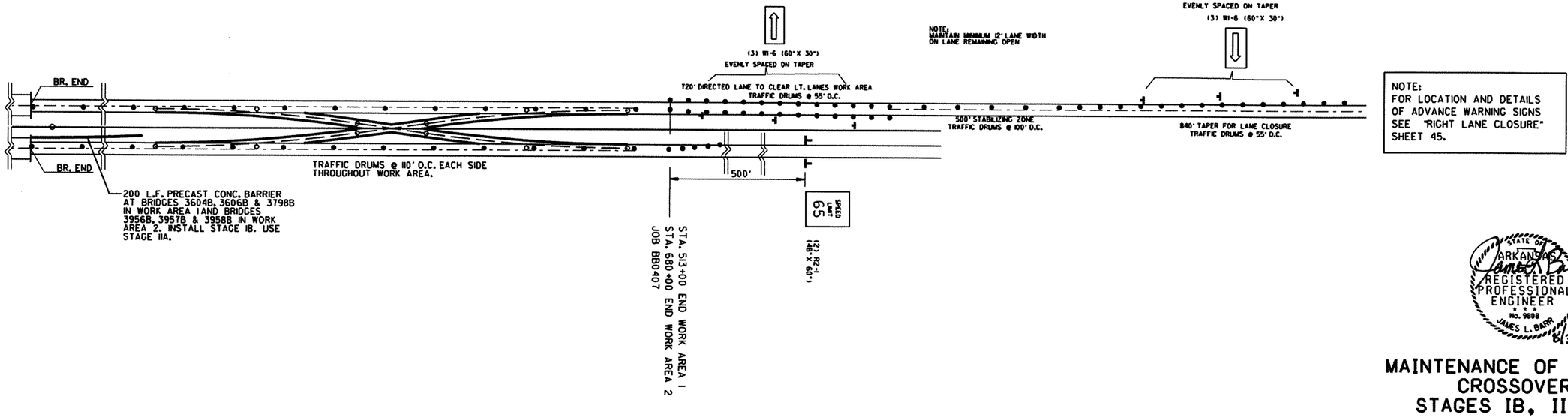
REMOVAL OF PERMANENT PAVEMENT MARKINGS	840	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	840	LIN. FT.

STAGE III

REMOVAL OF PERMANENT PAVEMENT MARKINGS	1250	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	1800	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	46924	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	1420	LIN. FT.

STAGE VA

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	3600	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	44196	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	2920	LIN. FT.



NOTE:
FOR LOCATION AND DETAILS OF ADVANCE WARNING SIGNS SEE "RIGHT LANE CLOSURE" SHEET 45.

STATE OF ARKANSAS
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MAINTENANCE OF TRAFFIC CROSSOVERS STAGES IB, III, VA

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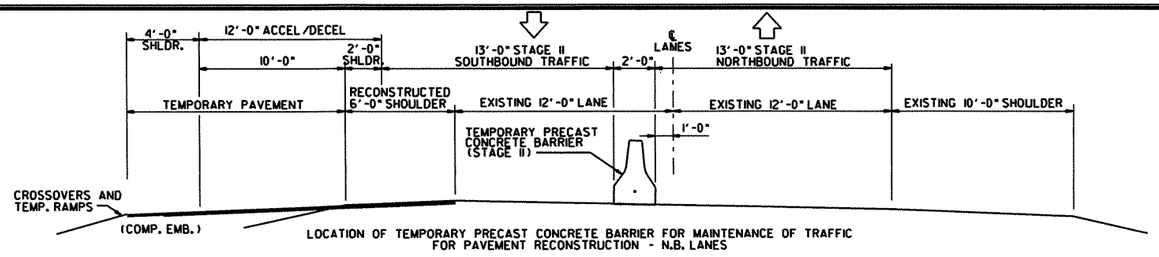
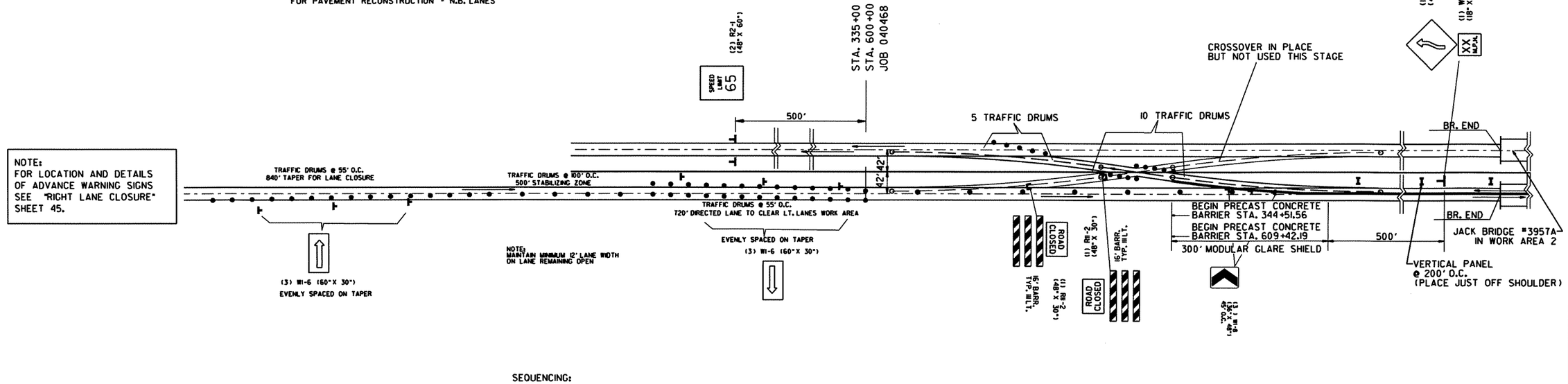
				6	ARK.			
				JOB NO.		B80407	56	464

(2) MAINTENANCE OF TRAFFIC

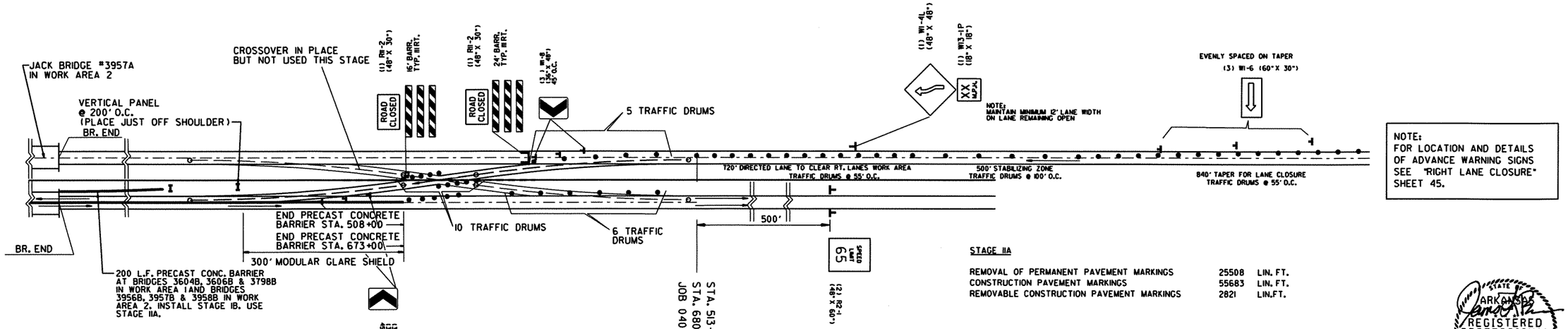


LOCATION OF TEMPORARY PRECAST CONCRETE BARRIER FOR MAINTENANCE OF TRAFFIC FOR PAVEMENT RECONSTRUCTION - N.B. LANES



SEQUENCING:

REROUTE SOUTHBOUND TRAFFIC, RECONSTRUCT AND/OR RUBBLIZE AND OVERLAY SOUTHBOUND LANES, JACK BRIDGE #3957A IN WORK AREA 2 AND CONSTRUCT BRIDGES A6878, A6879, & 6880 (S.B.L.) IN WORK AREA 1& BRIDGE A6881IN WORK AREA 2.



NOTE:
TEMPORARY IMPACT ATTENUATION BARRIER TO BE USED AT ANY EXPOSED END OF CONCRETE MEDIAN BARRIER BETWEEN THE ARKANSAS RIVER AND ARKANSAS RIVER RELIEF STRUCTURES.

STAGE IIA

REMOVAL OF PERMANENT PAVEMENT MARKINGS	25508	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	55683	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	2821	LIN.FT.

STATE OF ARKANSAS
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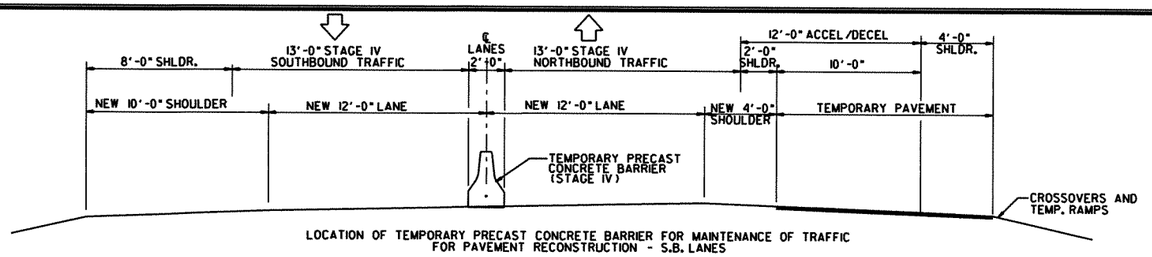
JAMES L. BARR
8/31/12

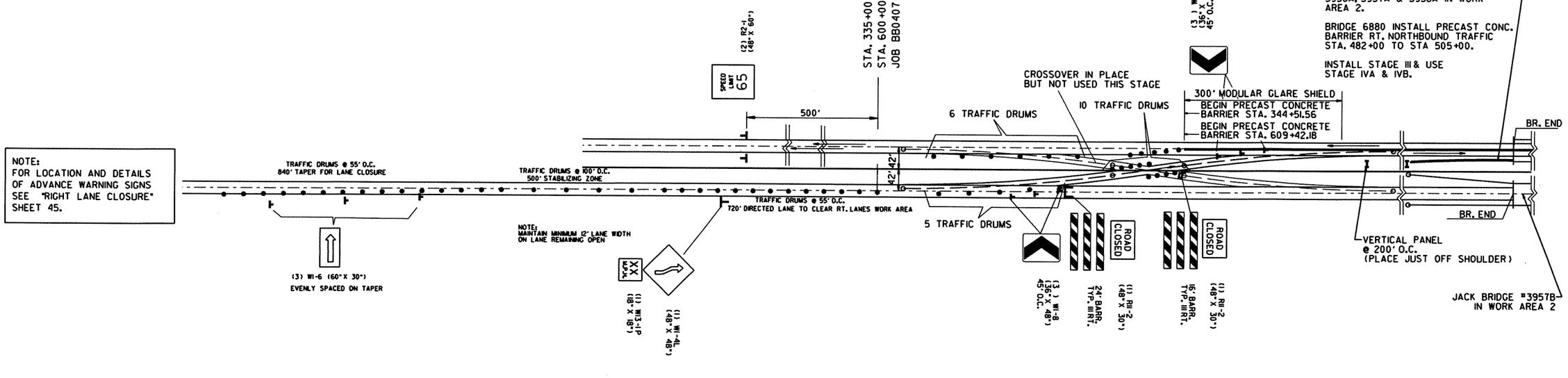
MAINTENANCE OF TRAFFIC CROSSOVERS STAGE IIA, IIB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	57	464

(2) MAINTENANCE OF TRAFFIC

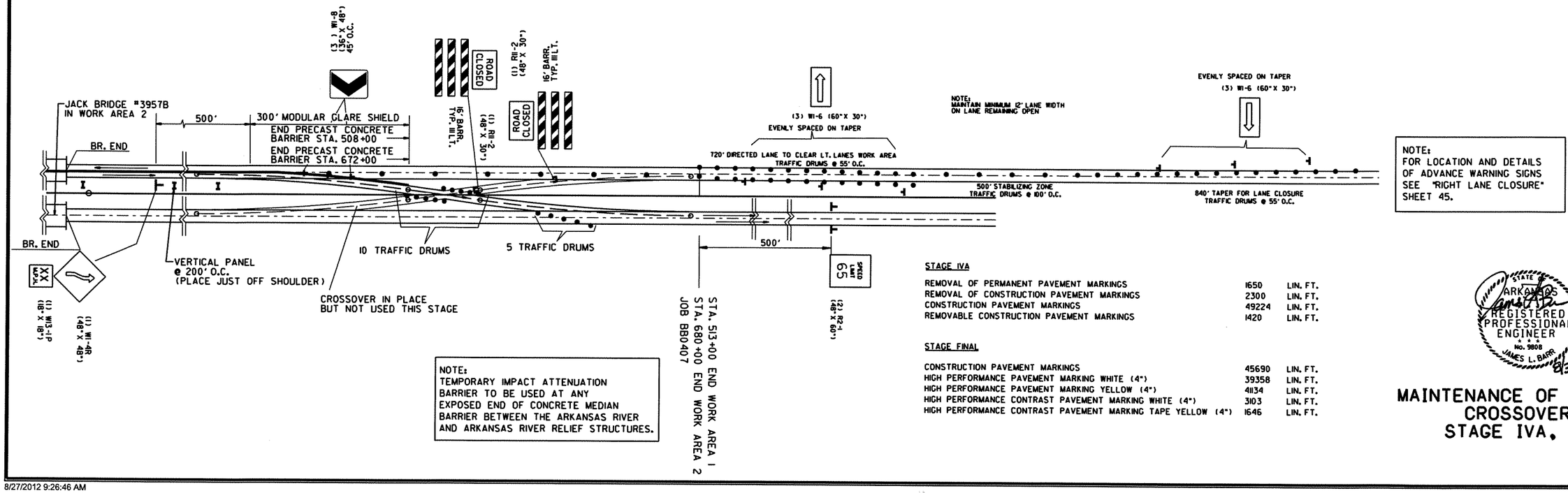


LOCATION OF TEMPORARY PRECAST CONCRETE BARRIER FOR MAINTENANCE OF TRAFFIC FOR PAVEMENT RECONSTRUCTION - S.B. LANES



SEQUENCING:

REROUTE NORTHBOUND TRAFFIC, RECONSTRUCT AND/OR RUBBLIZE AND OVERLAY NORTHBOUND LANES, JACK BRIDGE #3957B IN WORK AREA 2 AND CONSTRUCT BRIDGES B6878, B6879 & 6880 (N.B.L.) IN WORK AREA 1 AND BRIDGE B6881 IN WORK AREA 2.



NOTE:
TEMPORARY IMPACT ATTENUATION BARRIER TO BE USED AT ANY EXPOSED END OF CONCRETE MEDIAN BARRIER BETWEEN THE ARKANSAS RIVER AND ARKANSAS RIVER RELIEF STRUCTURES.

STAGE IVA

REMOVAL OF PERMANENT PAVEMENT MARKINGS	1650	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	2300	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	49224	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	1420	LIN. FT.

STAGE FINAL

CONSTRUCTION PAVEMENT MARKINGS	45690	LIN. FT.
HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")	39358	LIN. FT.
HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4")	41134	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	3103	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING TAPE YELLOW (4")	1646	LIN. FT.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

MAINTENANCE OF TRAFFIC CROSSOVERS STAGE IVA, IVB

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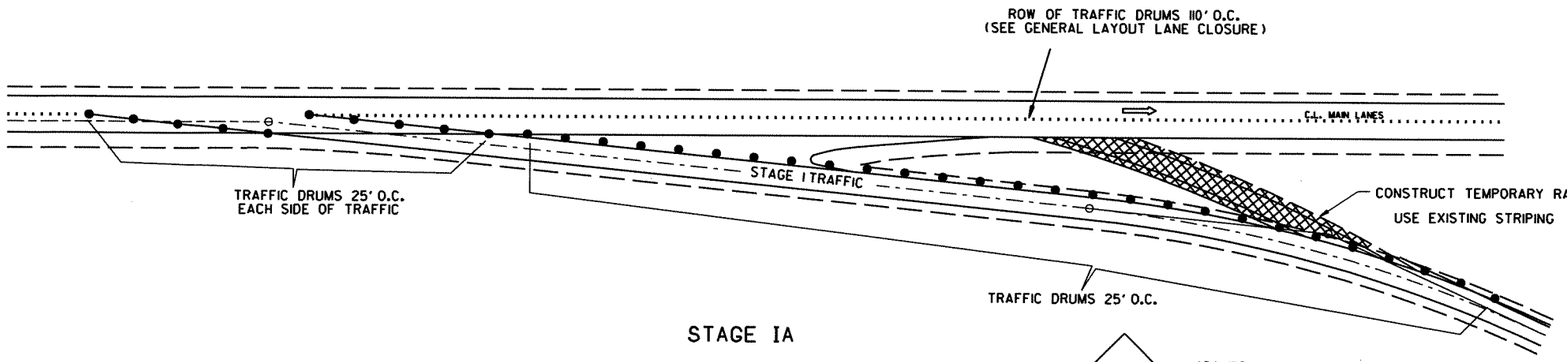
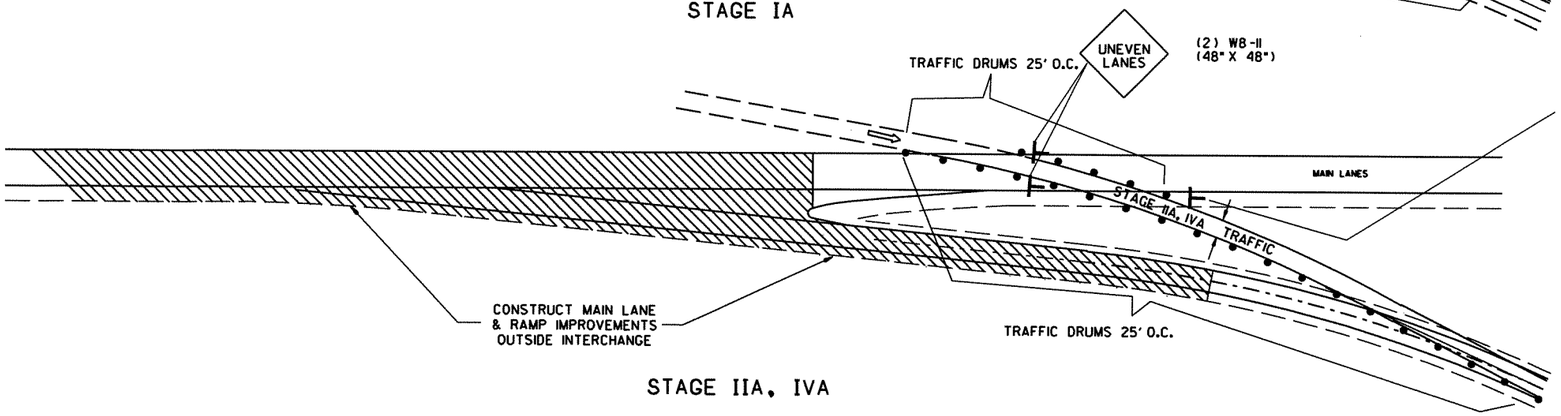
				6	ARK.			
				JOB NO.		BB0407	58	464

(2) MAINTENANCE OF TRAFFIC

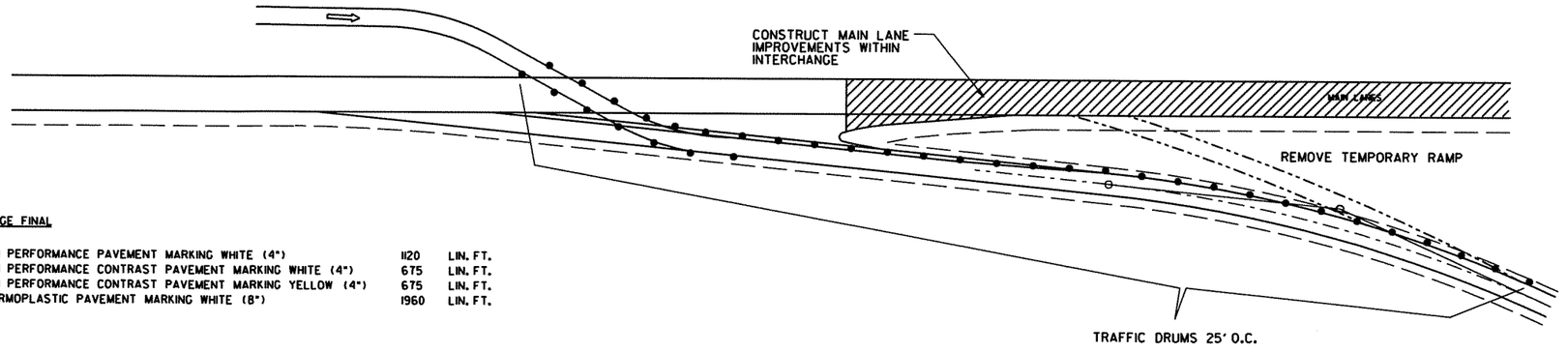


STAGE IA



STAGE IIA, IVA

TEMPORARY RELOCATION OF EXISTING SIGNS
RELOCATE "EXIT NO. ✓ "
SIGNS FOR EXITS AT INTERCHANGES
TO GORE OF TEMPORARY RAMP = 2 EACH



STAGE IIB, IVB

STAGE FINAL

HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")	1120	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	675	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	675	LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	1960	LIN. FT.

STAGE IIA

REMOVAL OF PERMANENT PAVEMENT MARKINGS	600	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	2150	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	450	LIN. FT.

STAGE IVA

REMOVAL OF PERMANENT PAVEMENT MARKINGS	250	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	3920	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	450	LIN. FT.

STAGE IIB

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	350	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	1800	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	450	LIN. FT.

STAGE IVB

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	350	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	2050	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	1000	LIN. FT.

LAYOUT OF TEMPORARY WIDENING OF EXIT RAMPS FOR
MAINTENANCE OF TRAFFIC AT INTERCHANGES
RAMPS 1& 3 GRAND AVE., RAMPS 1& 3 KELLEY HWY.

NOTE: THESE DETAILS ARE TO PROVIDE A METHOD OF MAINTAINING RAMP TRAFFIC EXITING I-540. ADJUSTMENTS MAY BE MADE TO EXPEDITE CONSTRUCTION IF APPROVED BY THE ENGINEER.

STATE OF ARKANSAS
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8/31/12

MAINTENANCE OF TRAFFIC CROSSOVERS - EXIT RAMPS

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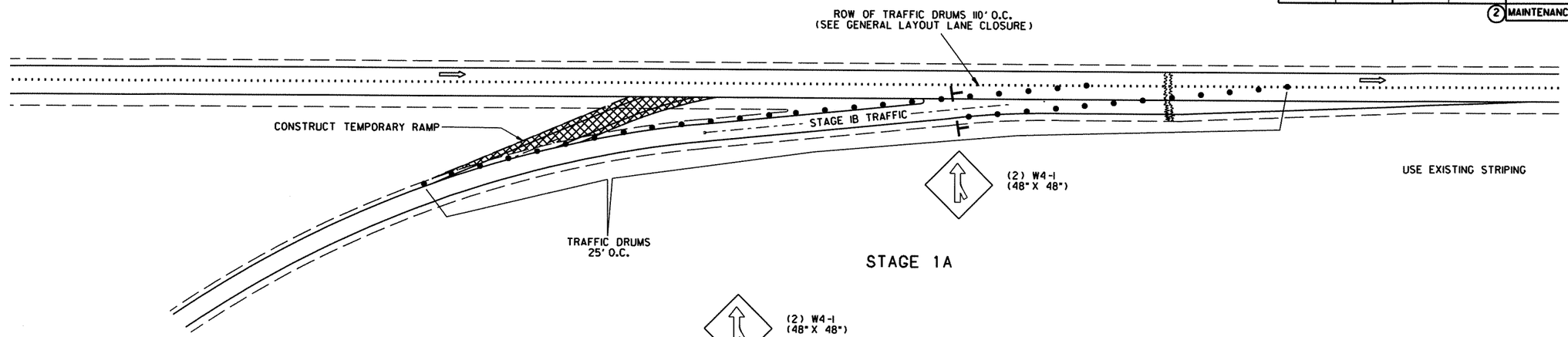
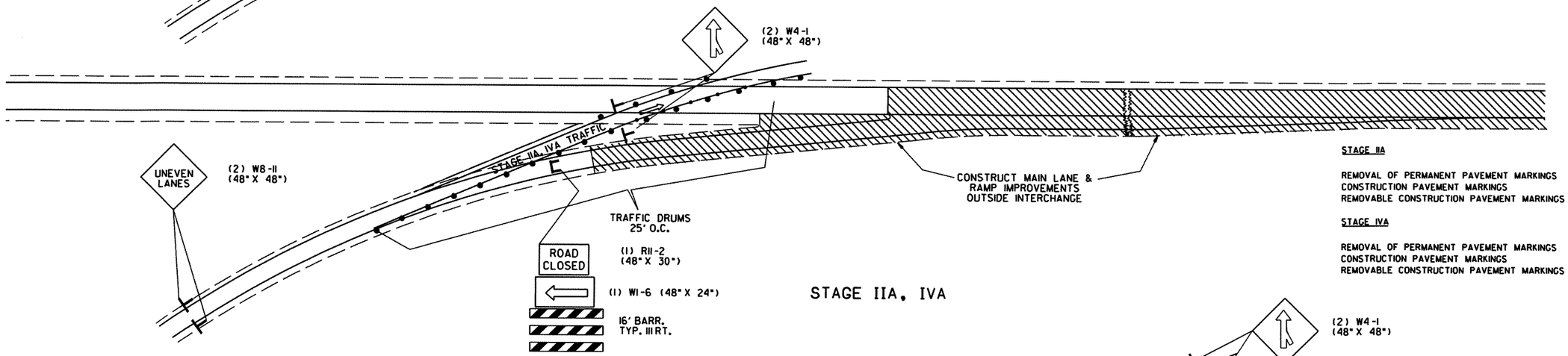
				6	ARK.			
				JOB NO.		BB0407	59	464

(2) MAINTENANCE OF TRAFFIC



STAGE 1A



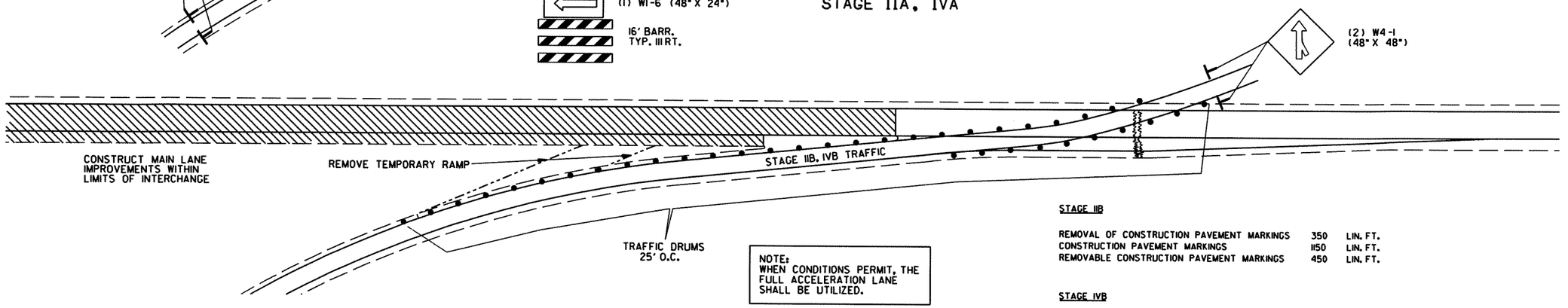
STAGE IIA, IVA

STAGE IIA

REMOVAL OF PERMANENT PAVEMENT MARKINGS	600	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	1700	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	450	LIN. FT.

STAGE IVA

REMOVAL OF PERMANENT PAVEMENT MARKINGS	325	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	3540	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	450	LIN. FT.



STAGE IIB

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	350	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	1150	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	450	LIN. FT.

STAGE IVB

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	350	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	1600	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	1000	LIN. FT.

STAGE FINAL

HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	800	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	800	LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	660	LIN. FT.

STAGE IIB, IVB

LAYOUT OF TEMPORARY WIDENING OF ENTRANCE RAMPS FOR
MAINTENANCE OF TRAFFIC AT INTERCHANGES
RAMPS 2 & 4 GRAND AVE., RAMPS 2 & 4 KELLEY HWY.

NOTE: THESE DETAILS ARE TO PROVIDE A METHOD OF MAINTAINING RAMP TRAFFIC ENTERING I-540. ADJUSTMENTS MAY BE MADE TO EXPEDITE CONSTRUCTION IF APPROVED BY THE ENGINEER.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC CROSSOVERS - ENTRANCE RAMPS

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				6	ARK.			
				JOB NO.		BB0407	60	464

(2) MAINTENANCE OF TRAFFIC

STAGE IIA

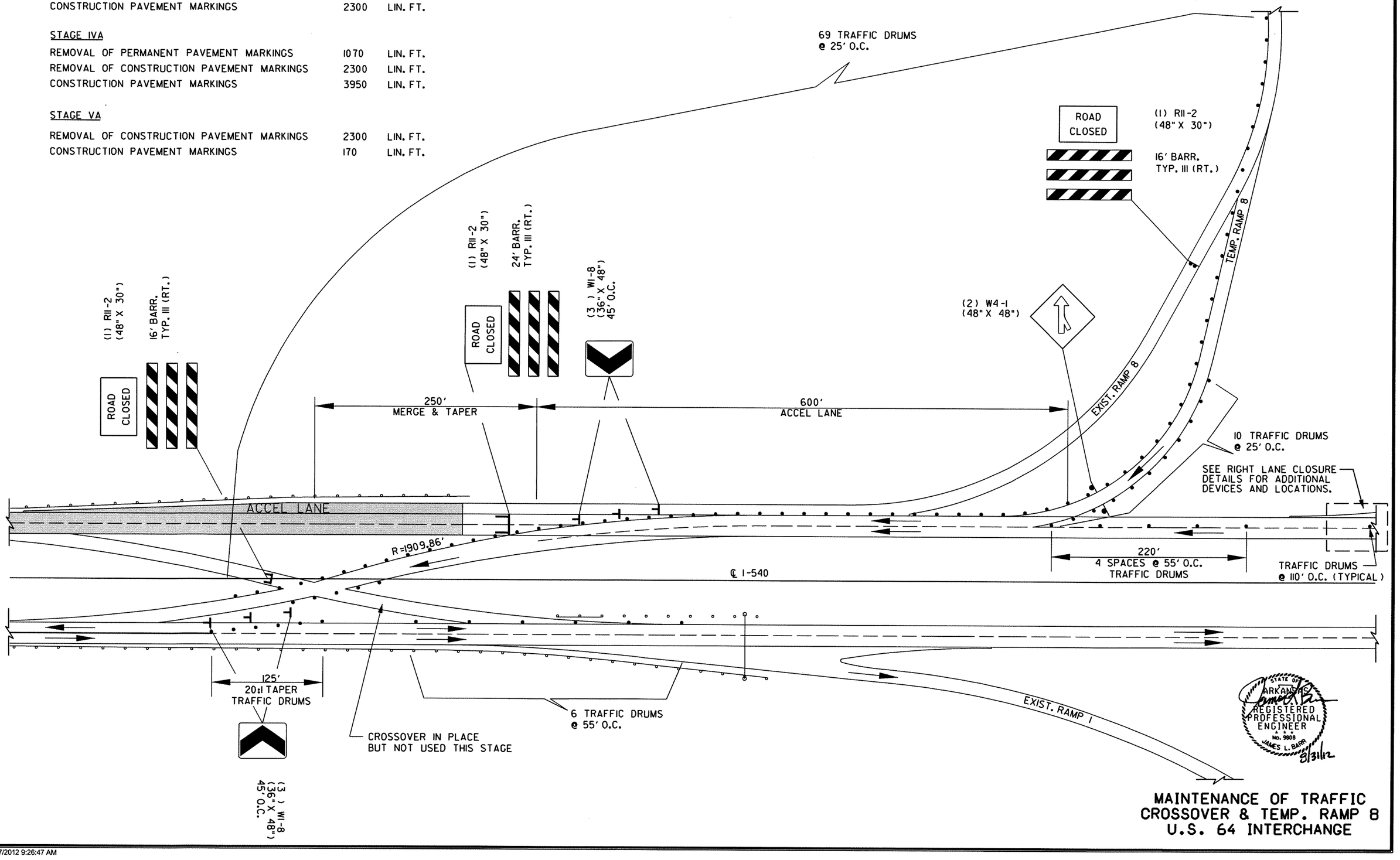
REMOVAL OF PERMANENT PAVEMENT MARKINGS	900	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	2300	LIN. FT.

STAGE IVA

REMOVAL OF PERMANENT PAVEMENT MARKINGS	1070	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	2300	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	3950	LIN. FT.

STAGE VA

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	2300	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	170	LIN. FT.



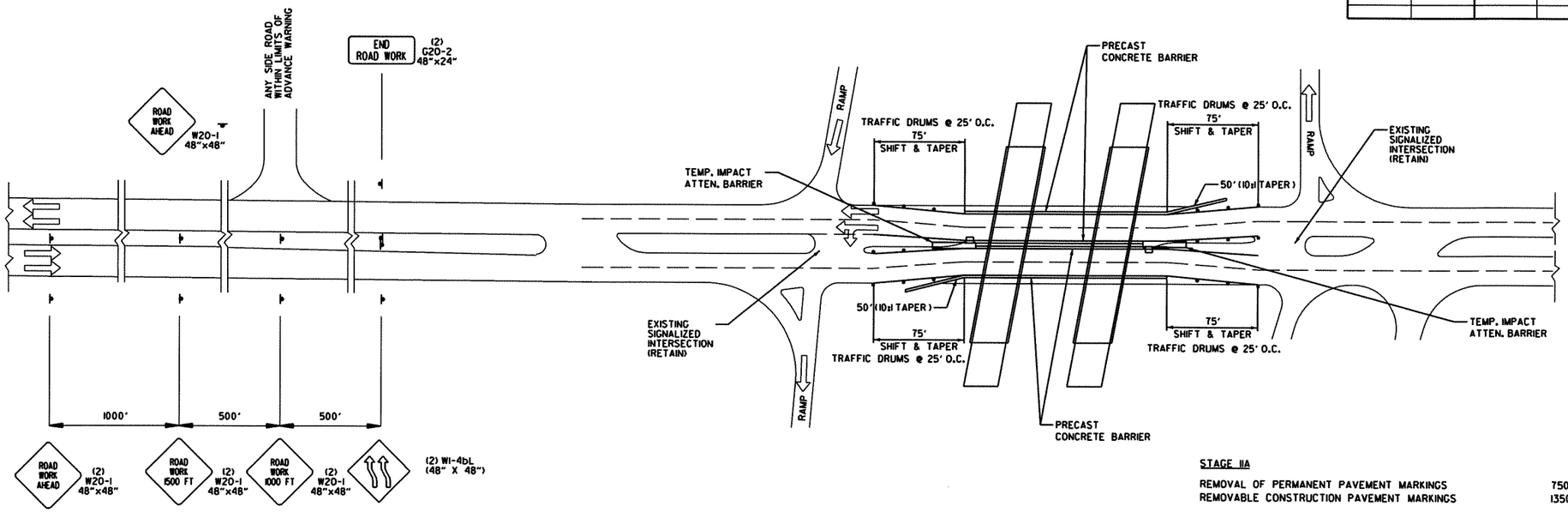
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC CROSSOVER & TEMP. RAMP 8 U.S. 64 INTERCHANGE

8/27/2012 9:26:47 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.		BB0407	61	464

(2) MAINTENANCE OF TRAFFIC



STAGE IIA

REMOVAL OF PERMANENT PAVEMENT MARKINGS	750	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	1350	LIN. FT.

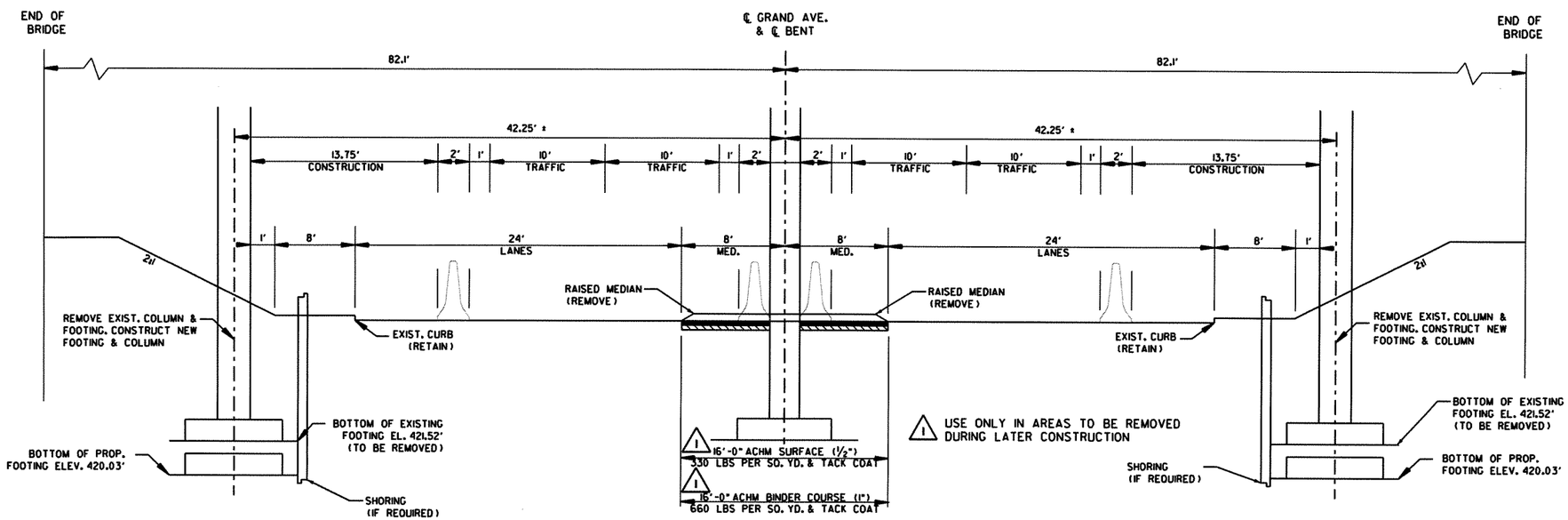
STAGE FINAL

THERMOPLASTIC PAVEMENT MARKING WHITE (4")	1900	LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	1400	LIN. FT.

DETAILS FOR BRIDGE CONSTRUCTION ADJACENT TO AND OVER GRAND AVE.

(SIGNS & DEVICES SHOWN FOR EASTBOUND APPROACH, SIMILAR SIGNS & DEVICES REQUIRED FOR WESTBOUND APPROACH)

SHORING REQUIRED AS NEEDED. PAYMENT TO BE INCLUDED IN UNIT COST FOR STRUCTURAL EXCAVATION, SEE BRIDGE PLANS.



TYPICAL SECTION - OUTSIDE PIER/FOOTING CONSTRUCTION
I-540 BRIDGE OVER GRAND AVE.

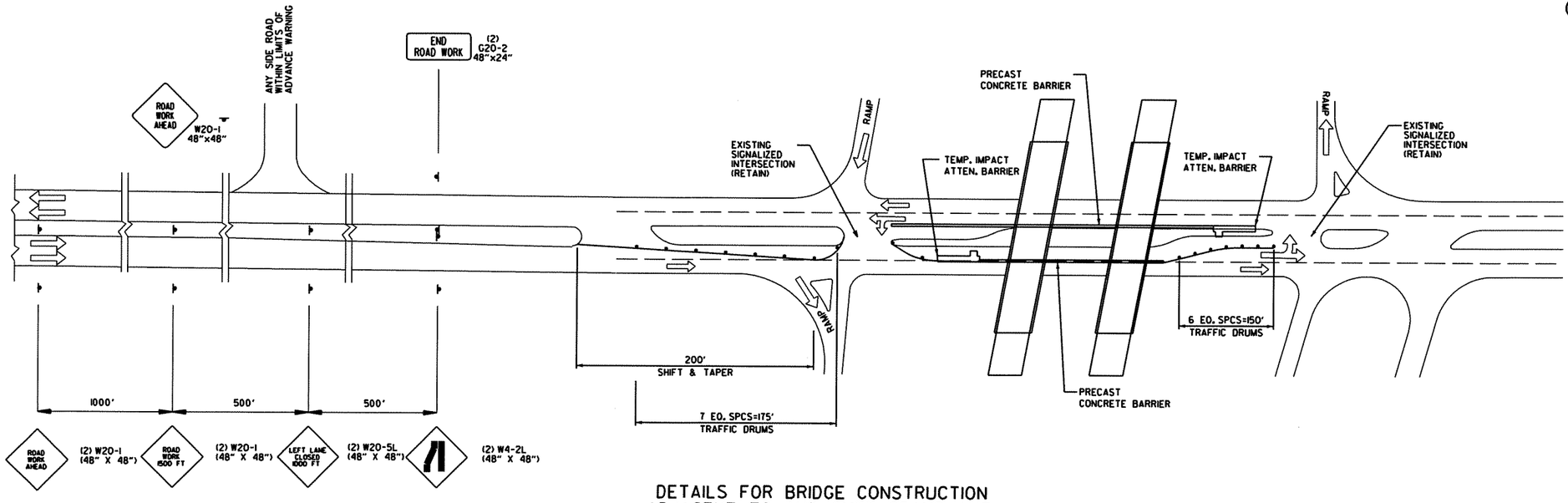
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

MAINTENANCE OF TRAFFIC GRAND AVE.

8/27/2012 9:30:40 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.		BB0407	62	464

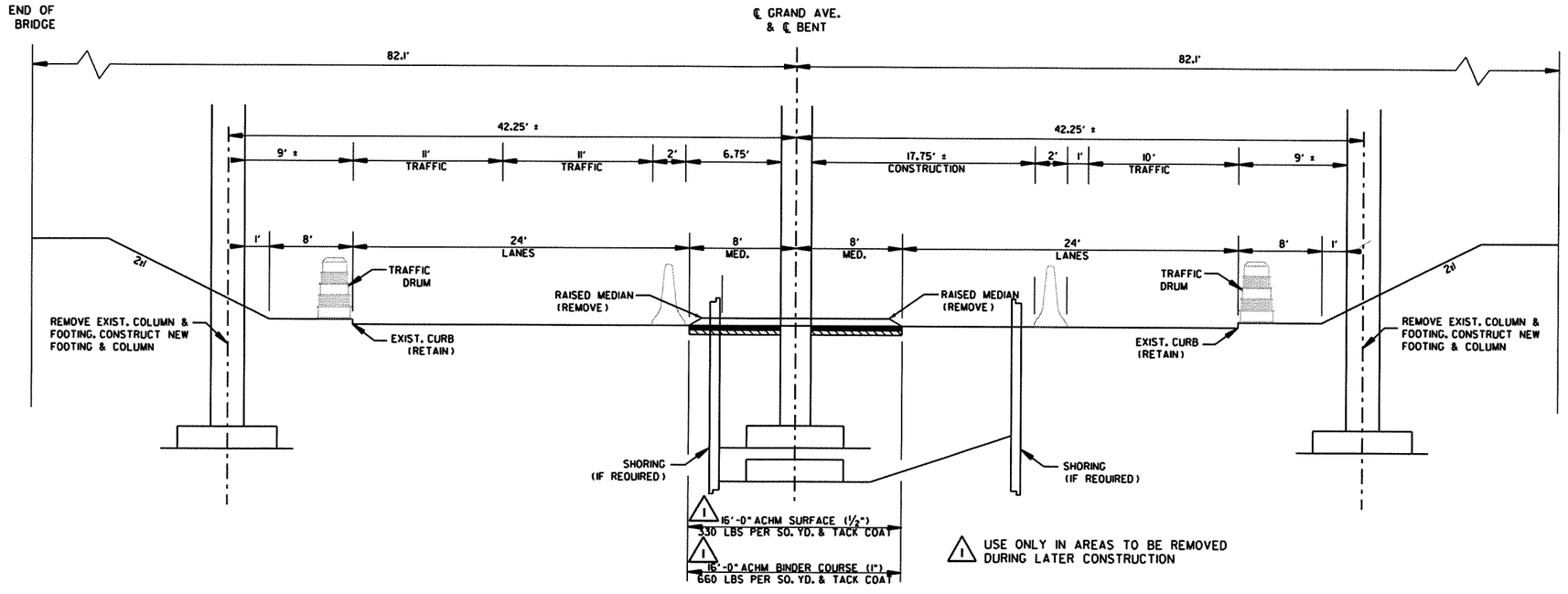
(2) MAINTENANCE OF TRAFFIC



DETAILS FOR BRIDGE CONSTRUCTION ADJACENT TO AND OVER GRAND AVE.

(SIGNS & DEVICES SHOWN FOR EASTBOUND APPROACH, SIMILAR SIGNS & DEVICES REQUIRED FOR WESTBOUND APPROACH)

SHORING REQUIRED AS NEEDED. PAYMENT TO BE INCLUDED IN UNIT COST FOR STRUCTURAL EXCAVATION, SEE BRIDGE PLANS.



TYPICAL SECTION - INSIDE PIER/FOOTING CONSTRUCTION
I-540 BRIDGE OVER GRAND AVE.

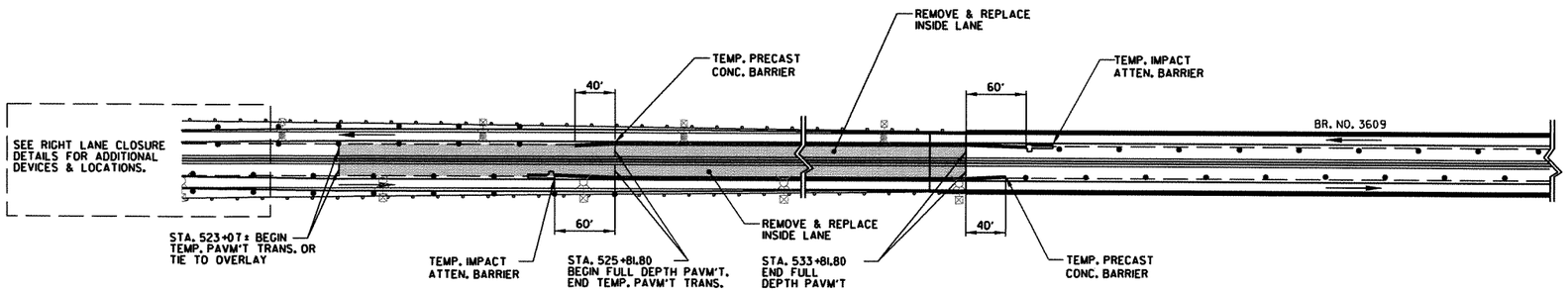
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

MAINTENANCE OF TRAFFIC GRAND AVE.

8/27/2012 9:30:40 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.		BB0407	63	464

(2) MAINTENANCE OF TRAFFIC



STAGE II

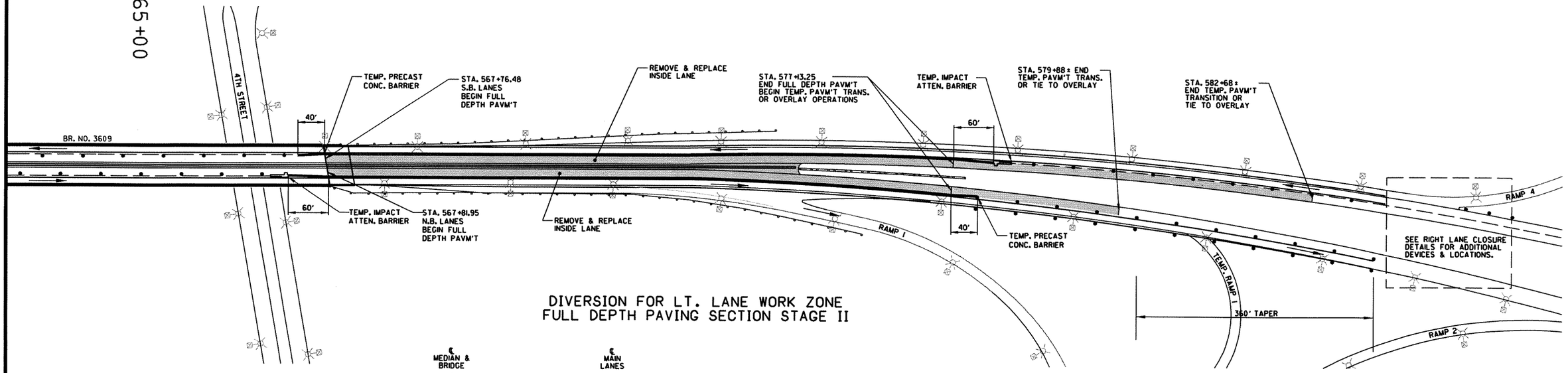
REMOVAL OF PERMANENT PAVEMENT MARKINGS	15600	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	31200	LIN. FT.

STAGE IV

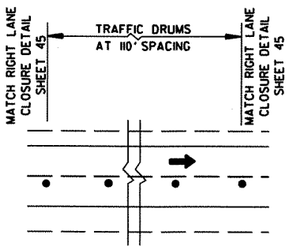
CONSTRUCTION PAVEMENT MARKINGS	31200	LIN. FT.

NOTE:
EXIT TRAFFIC FROM RAMP 4 SHOULD HANDLED AS DETAILED IN "MAINTENANCE OF TRAFFIC OVERLAY SECTIONS EXIT RAMPS" SHEETS (SHEETS 47 AND 48)

565+00

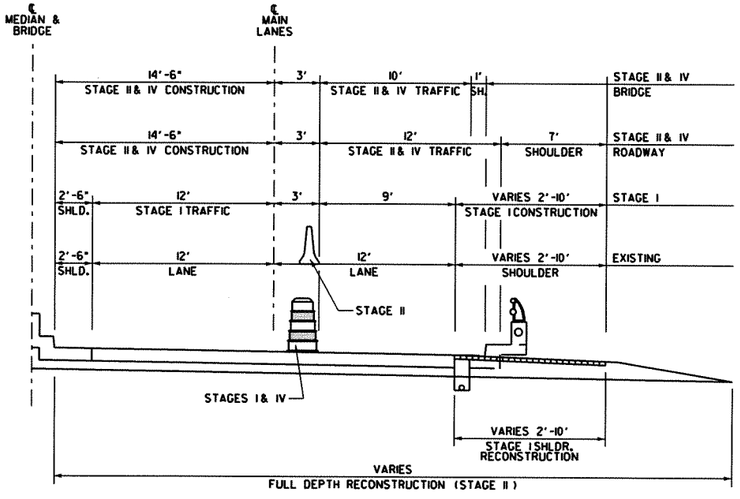


DIVERSION FOR LT. LANE WORK ZONE FULL DEPTH PAVING SECTION STAGE II



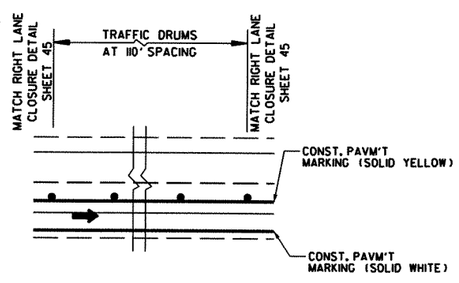
USE EXISTING STRIPES

STAGE I
CLOSE ONE LANE OF INTERSTATE HIGHWAY FOR REBUILDING OUTSIDE SHOULDER & CONSTRUCTING TEMP. RAMP 1



TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC FOR FULL DEPTH PAVEMENT - N.B. LANES (REVERSE FOR S.B. LANES)

NOTE: TRAFFIC STAGING MAY VARY IN THE VICINITY OF INTERCHANGE RAMPS. SEE SEPARATE DETAILS SHEETS



STAGE IV
CLOSE ONE LANE OF INTERSTATE HIGHWAY FOR SURFACING INSIDE LANE & SHOULDER

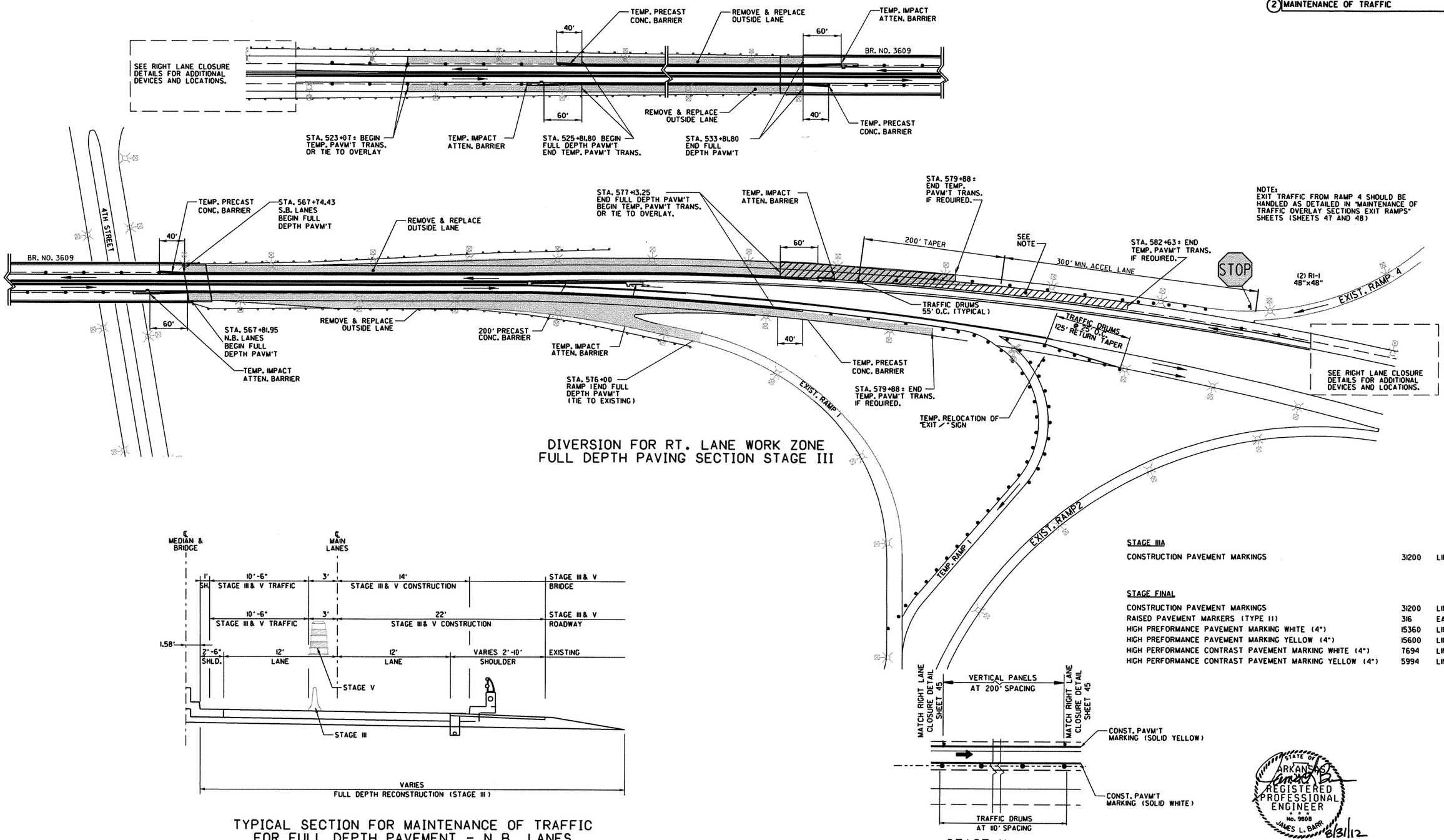
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC FULL DEPTH SECTIONS STAGES I, II, & IV

8/27/2012 9:30:41 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AND PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	64	464

(2) MAINTENANCE OF TRAFFIC



NOTE: EXIT TRAFFIC FROM RAMP 4 SHOULD BE HANDLED AS DETAILED IN "MAINTENANCE OF TRAFFIC OVERLAY SECTIONS EXIT RAMPS" SHEETS (SHEETS 47 AND 48)

DIVERSION FOR RT. LANE WORK ZONE FULL DEPTH PAVING SECTION STAGE III

TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC FOR FULL DEPTH PAVEMENT - N.B. LANES (REVERSE FOR S.B. LANES)

NOTE: TRAFFIC STAGING MAY VARY IN THE VICINITY OF INTERCHANGE RAMPS. SEE SEPARATE DETAILS SHEETS

STAGE V
CLOSE ONE LANE OF INTERSTATE HIGHWAY FOR SURFACING OUTSIDE LANE & SHOULDER & REMOVE TEMP. RAMPS 1 & 4

STAGE IIIA

CONSTRUCTION PAVEMENT MARKINGS	31200	LIN. FT.

STAGE FINAL

CONSTRUCTION PAVEMENT MARKINGS	31200	LIN. FT.
RAISED PAVEMENT MARKERS (TYPE II)	316	EACH
HIGH PREFORMANCE PAVEMENT MARKING WHITE (4")	15360	LIN. FT.
HIGH PREFORMANCE PAVEMENT MARKING YELLOW (4")	15600	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	7694	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	5994	LIN. FT.

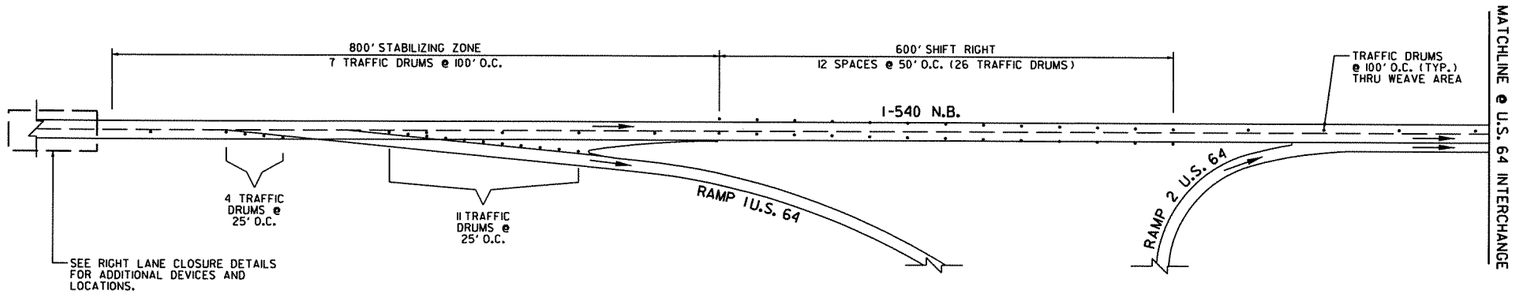
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

MAINTENANCE OF TRAFFIC FULL DEPTH SECTIONS STAGES III & V

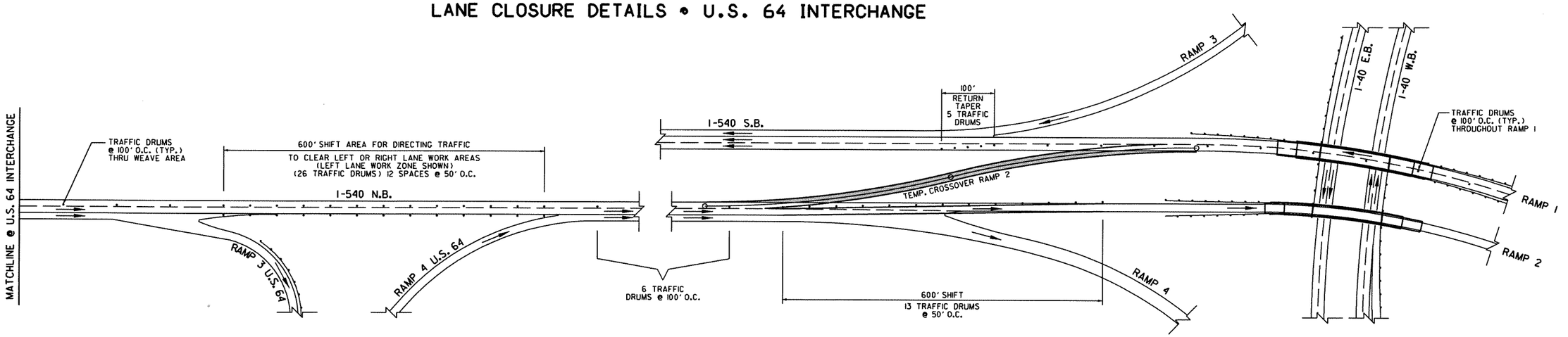
8/28/2012 1:29:22 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	65	464

(2) MAINTENANCE OF TRAFFIC



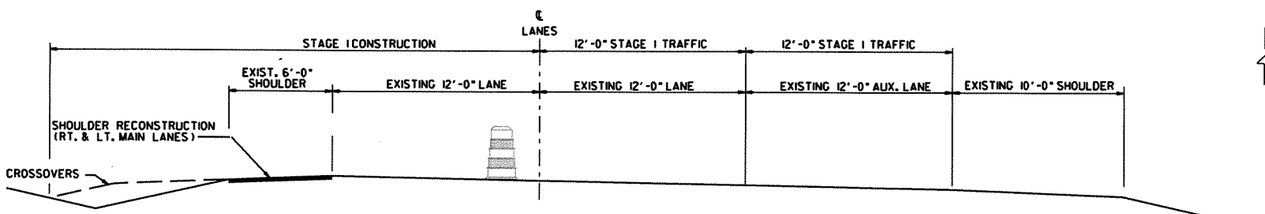
LANE CLOSURE DETAILS • U.S. 64 INTERCHANGE



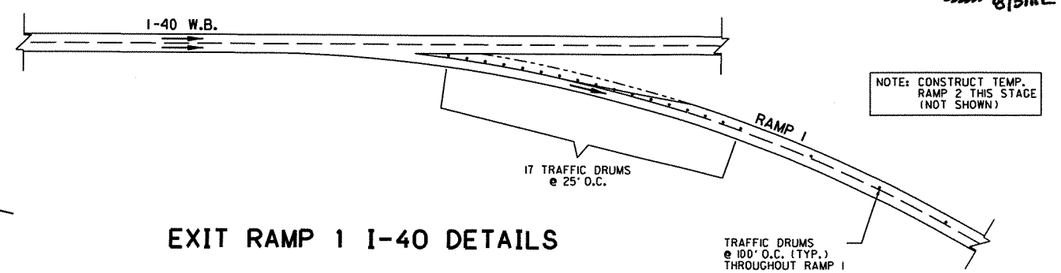
TRAFFIC DIVERSION DETAIL • U.S. 64 INTERCHANGE

WORK ZONE DETAILS FOR CROSSOVER CONSTRUCTION

NOTE: RAMP 4 RIGHT SHOULDER TO BE RECONSTRUCTED IN A SUB PHASE PRIOR TO STAGE II. DETAILS AS SHOWN ON OVERLAY MAINTENANCE OF TRAFFIC SHEET FOR OVERLAY SECTION. SEE SHEET NO. 46 (21 ADDITIONAL TRAFFIC DRUMS)



TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
CROSSOVER CONSTRUCTION RAMPS 1 & 2 I-40
(RT. MAIN LANES SHOWN, SIMILAR FOR LT.)



NOTE: CONSTRUCT TEMP. RAMP 2 THIS STAGE (NOT SHOWN)

EXIT RAMP 1 I-40 DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
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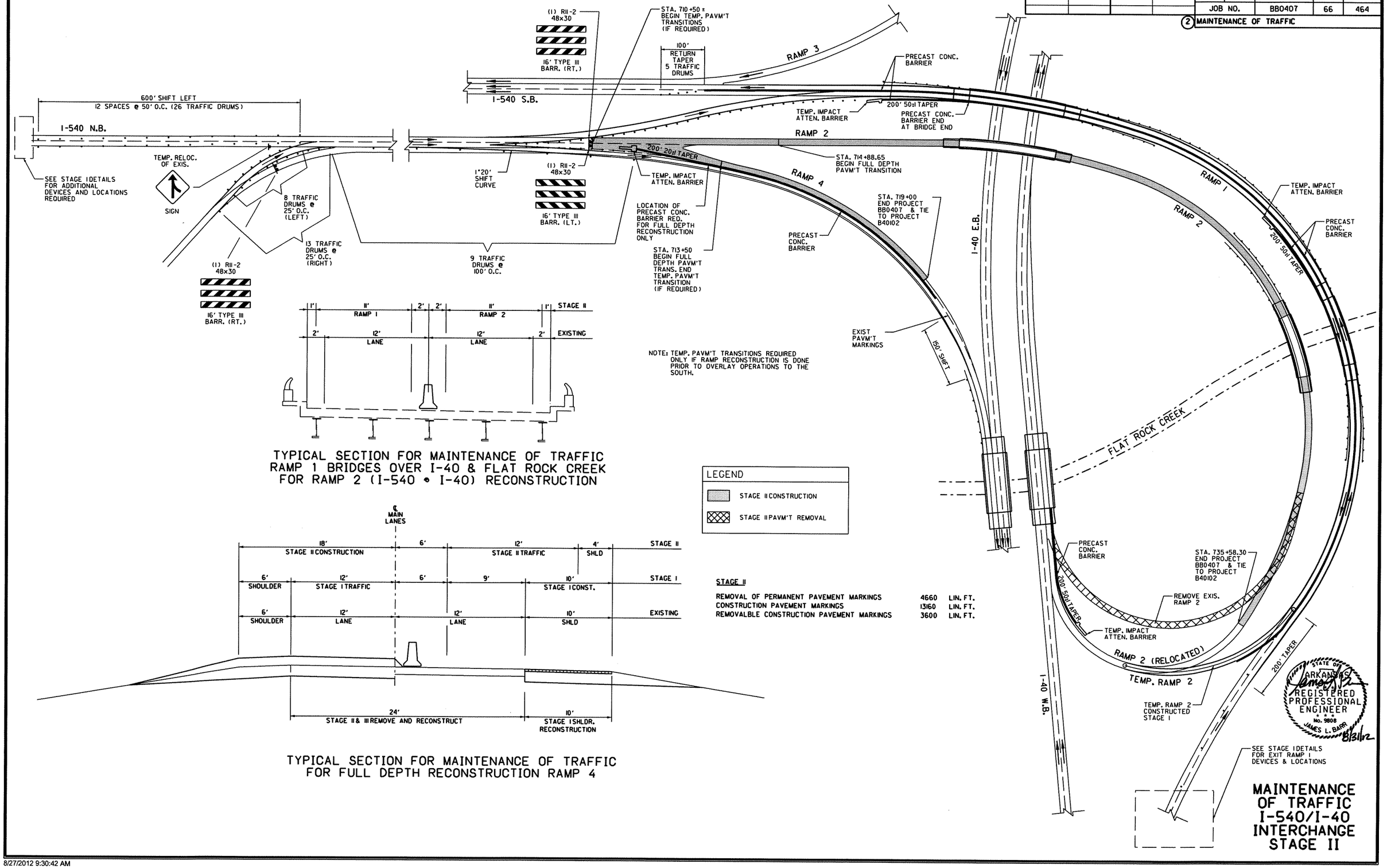
JAMES L. BAKER
8/31/12

MAINTENANCE OF TRAFFIC I-540/I-40 INTERCHANGE STAGE I

8/27/2012 9:30:42 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.		BB0407	66	464

(2) MAINTENANCE OF TRAFFIC



NOTE: TEMP. PAVM'T TRANSITIONS REQUIRED ONLY IF RAMP RECONSTRUCTION IS DONE PRIOR TO OVERLAY OPERATIONS TO THE SOUTH.

TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
RAMP 1 BRIDGES OVER I-40 & FLAT ROCK CREEK
FOR RAMP 2 (I-540 • I-40) RECONSTRUCTION

TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
FOR FULL DEPTH RECONSTRUCTION RAMP 4

LEGEND

- STAGE II CONSTRUCTION
- STAGE II PAVM'T REMOVAL

STAGE II

REMOVAL OF PERMANENT PAVEMENT MARKINGS	4660	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	13160	LIN. FT.
REMOVALBLE CONSTRUCTION PAVEMENT MARKINGS	3600	LIN. FT.

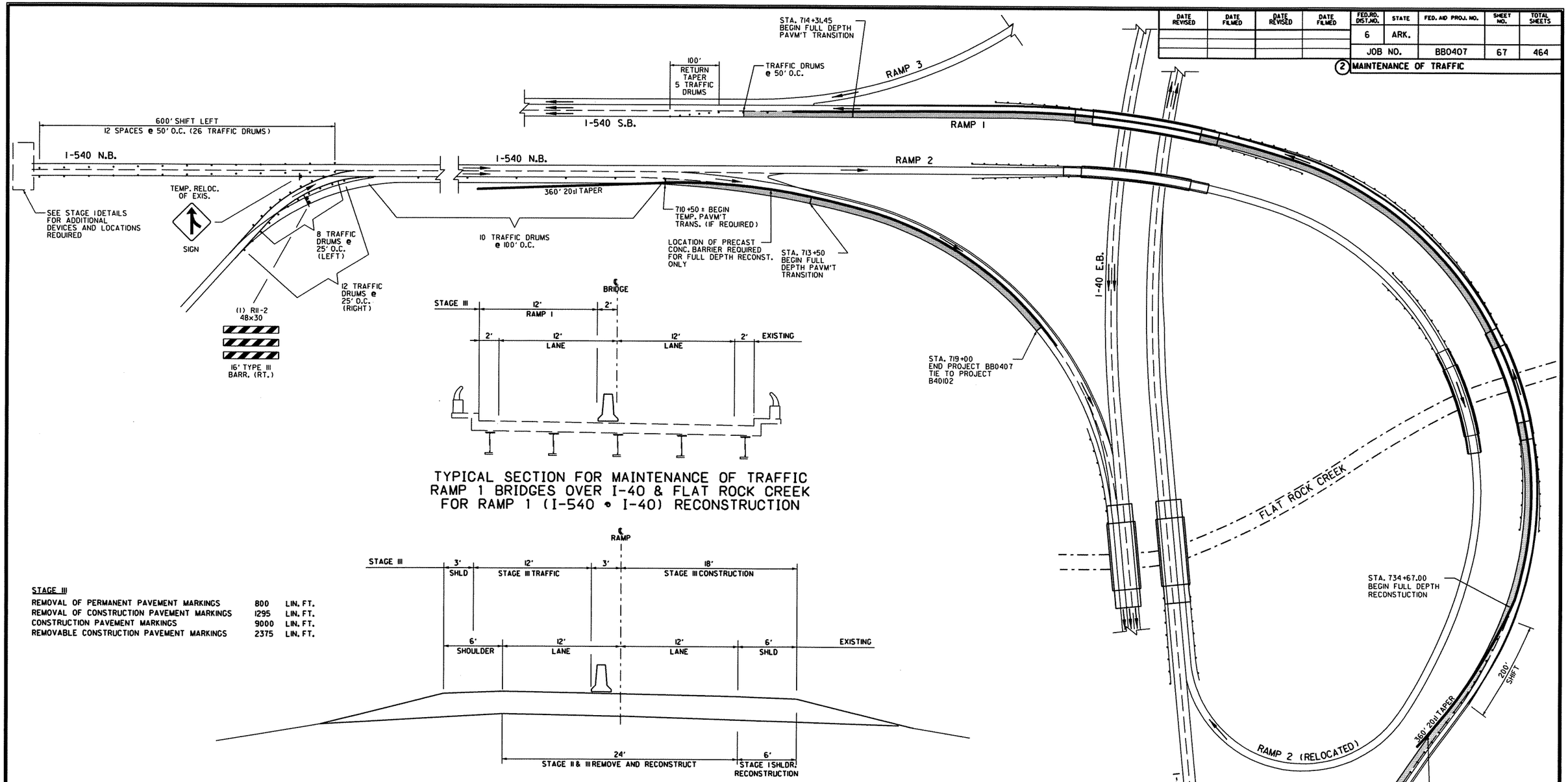
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC I-540/I-40 INTERCHANGE STAGE II

8/27/2012 9:30:42 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.		BB0407	67	464

(2) MAINTENANCE OF TRAFFIC

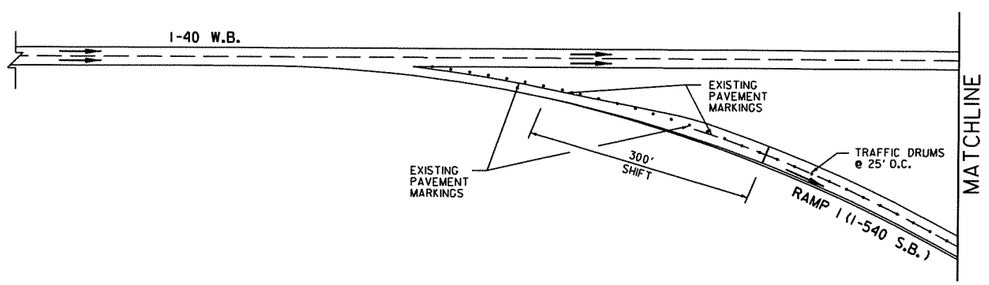


TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
RAMP 1 BRIDGES OVER I-40 & FLAT ROCK CREEK
FOR RAMP 1 (I-540 & I-40) RECONSTRUCTION

STAGE III

REMOVAL OF PERMANENT PAVEMENT MARKINGS	800	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	1295	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	9000	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	2375	LIN. FT.

TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC
FOR FULL DEPTH RECONSTRUCTION RAMP 4



STATE OF ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 9808
JAMES L. BARR
8/31/12

MAINTENANCE OF TRAFFIC
I-540/I-40 INTERCHANGE
STAGE III

8/27/2012 9:30:42 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.	BB0407		68	464

(2) MAINTENANCE OF TRAFFIC

STAGE IV

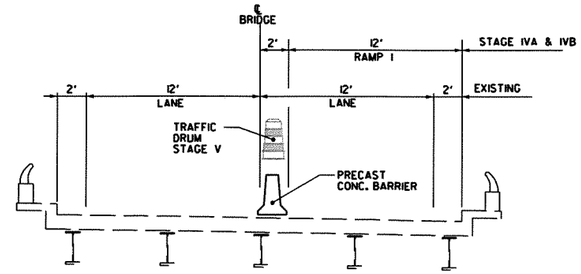
REMOVAL OF PERMANENT PAVEMENT MARKINGS	950	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	1610	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	15580	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	3140	LIN. FT.

STAGE V

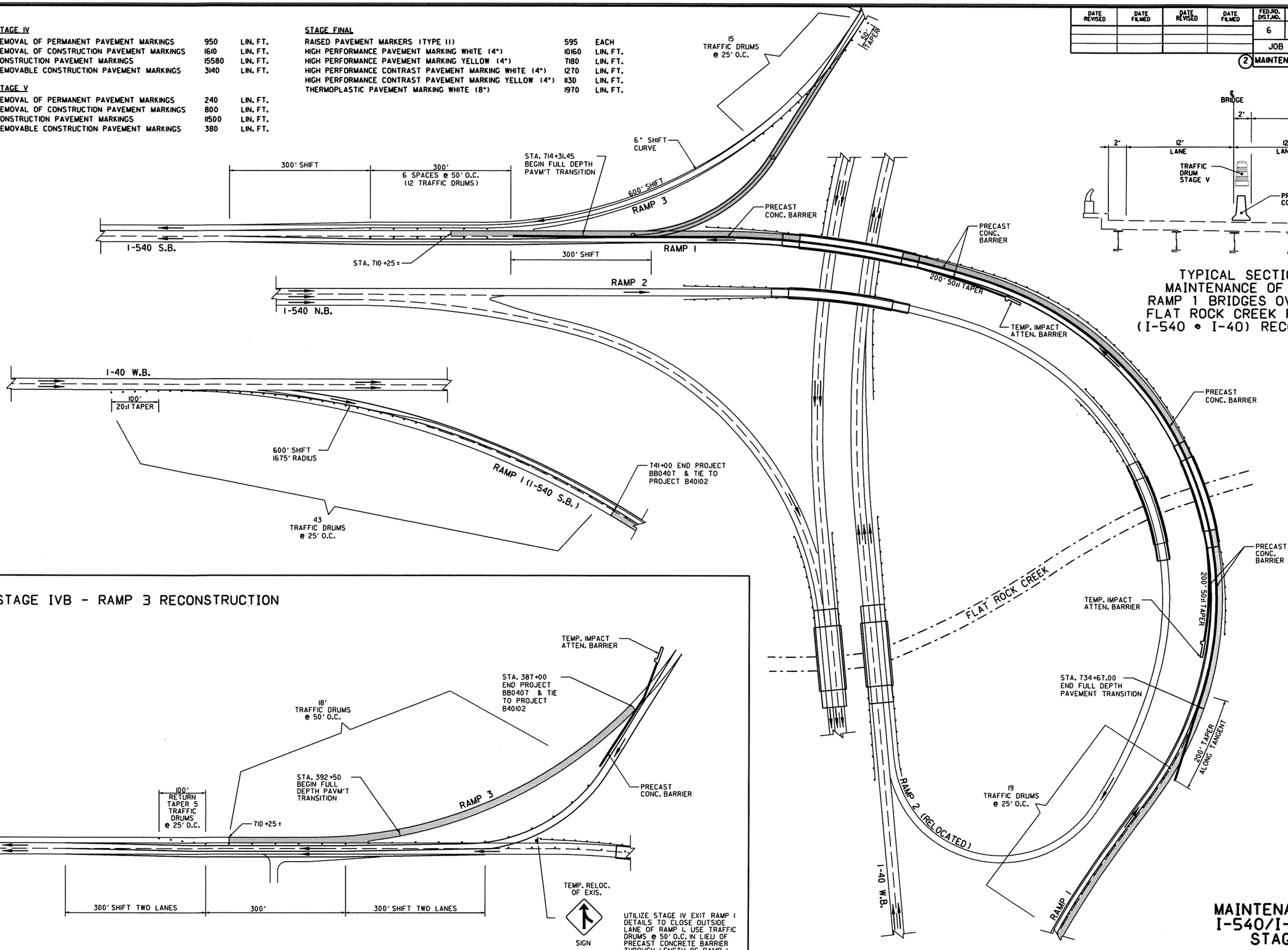
REMOVAL OF PERMANENT PAVEMENT MARKINGS	240	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	800	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	11500	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	380	LIN. FT.

STAGE FINAL

RAISED PAVEMENT MARKERS (TYPE II)	595	EACH
HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")	10160	LIN. FT.
HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4")	7180	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	1270	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	1130	LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	1970	LIN. FT.



TYPICAL SECTION FOR MAINTENANCE OF TRAFFIC RAMP 1 BRIDGES OVER I-40 & FLAT ROCK CREEK FOR RAMP 1 (I-540 & I-40) RECONSTRUCTION



STAGE IVB - RAMP 3 RECONSTRUCTION

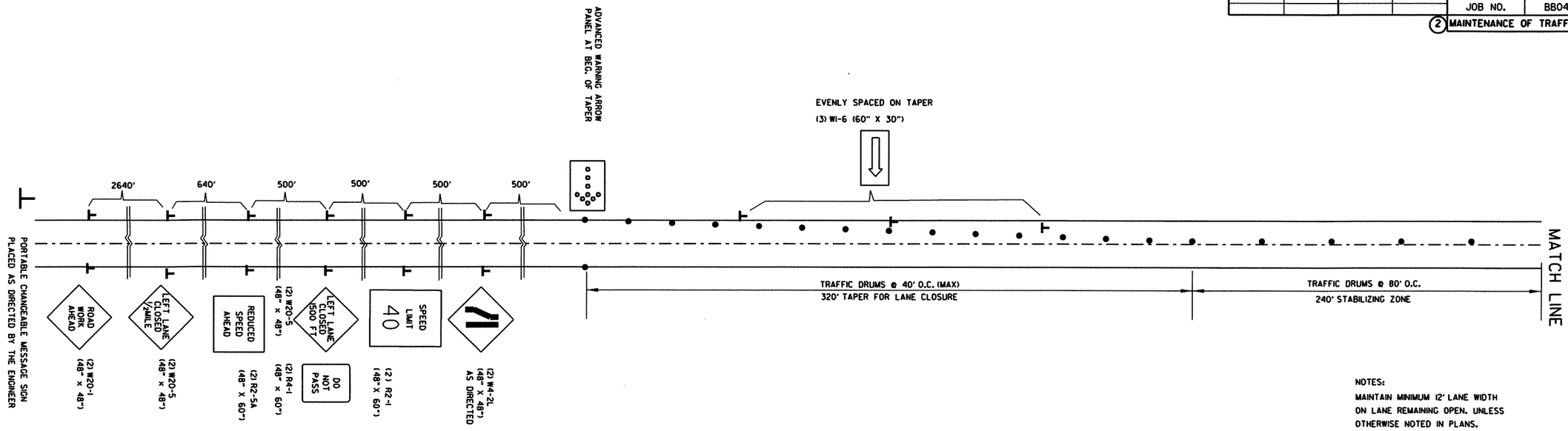
UTILIZE STAGE IV EXIT RAMP 1 DETAILS TO CLOSE OUTSIDE LANE OF RAMP 1. USE TRAFFIC DRUMS @ 50' O.C. IN LIEU OF PRECAST CONCRETE BARRIER THROUGH LENGTH OF RAMP 1.

STATE OF ARKANSAS 8/31/12 REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

MAINTENANCE OF TRAFFIC I-540/I-40 INTERCHANGE STAGE IVA & IVB

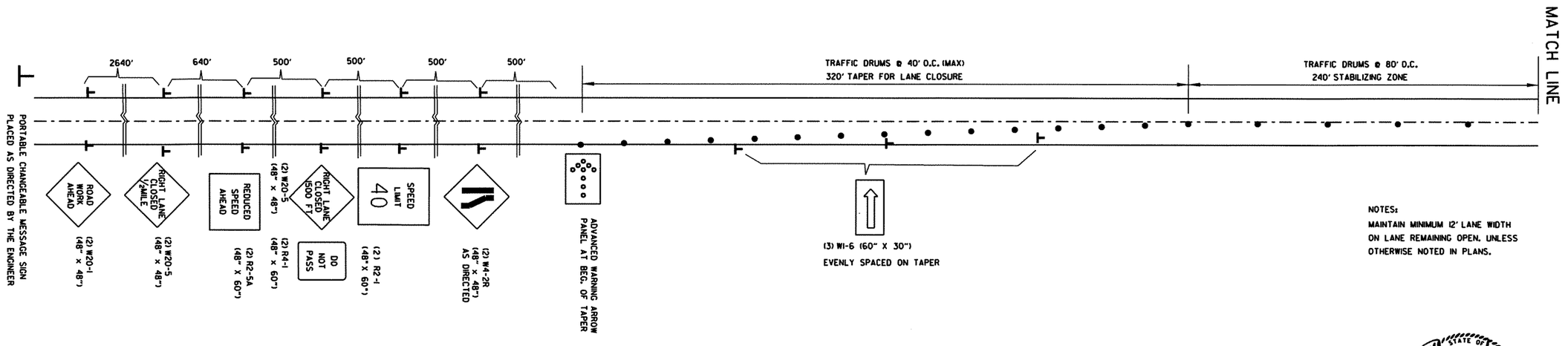
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	69	464

(2) MAINTENANCE OF TRAFFIC



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

LT. LANE CLOSURE DETAIL



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

RT. LANE CLOSURE DETAIL

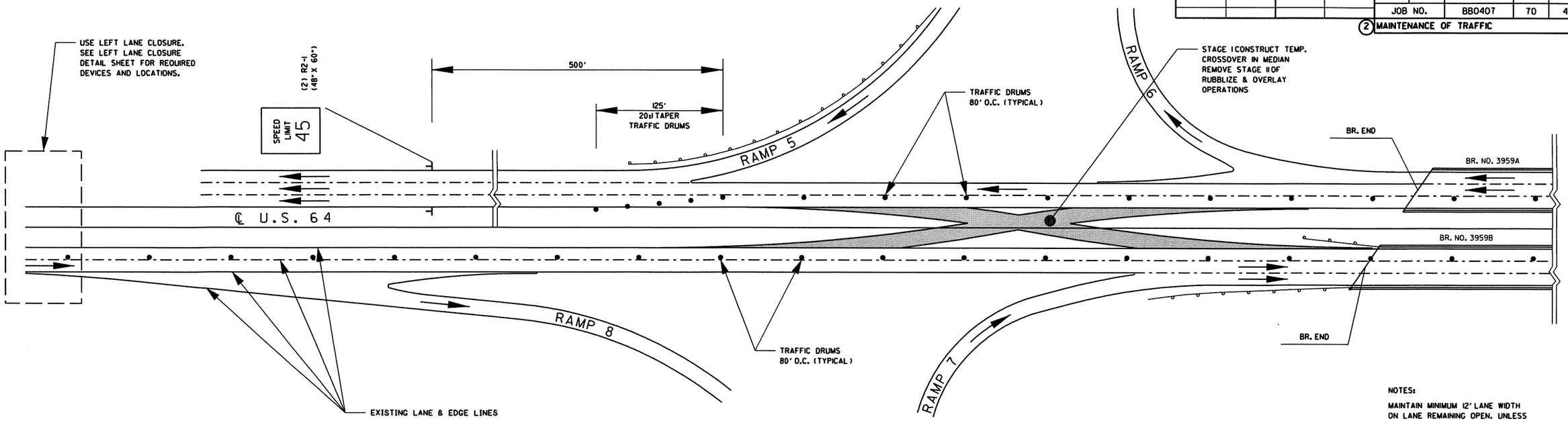
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

RIGHT & LEFT LANE CLOSURE DETAILS BRIDGE JACKING • U.S. 64

8/27/2012 9:30:43 AM

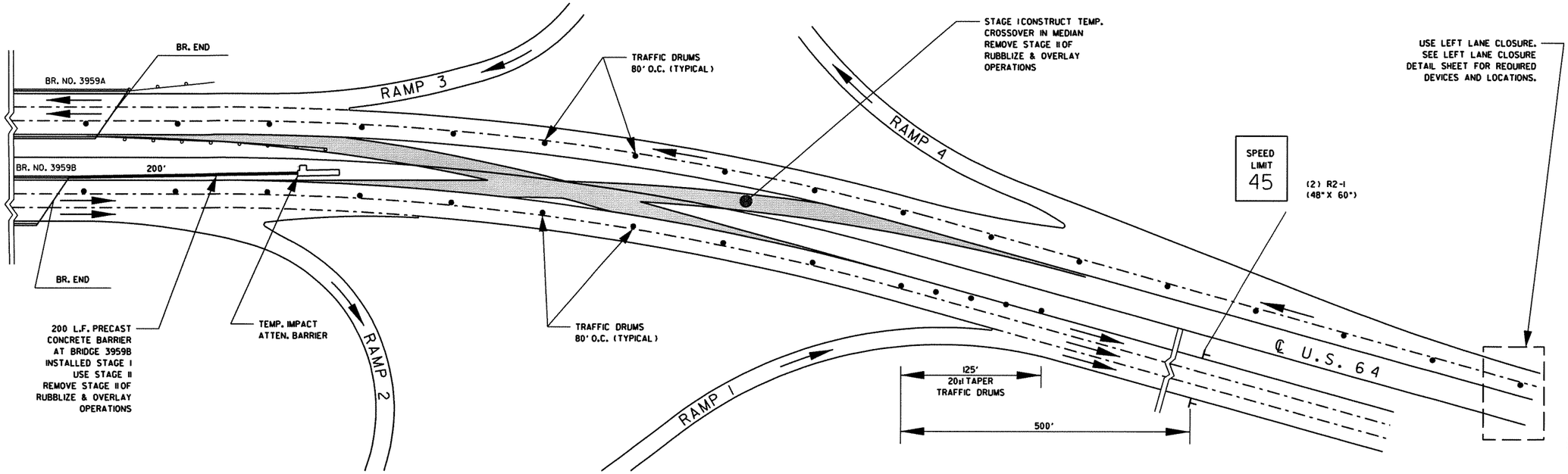
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	70	464

(2) MAINTENANCE OF TRAFFIC



NOTES:

MAINTAIN MINIMUM 12' LANE WIDTH ON LANE REMAINING OPEN. UNLESS OTHERWISE NOTED IN PLANS.



STATE OF ARKANSAS
JAMES L. BAKER
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BAKER
8/3/12

MAINTENANCE OF TRAFFIC STAGE I - U.S. 64 INTER. CROSSOVER CONSTRUCTION

8/27/2012 9:30:44 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.		BB0407	71	464

(2) MAINTENANCE OF TRAFFIC

USE LEFT LANE CLOSURE. SEE LEFT LANE CLOSURE DETAIL SHEET FOR REQUIRED DEVICES AND LOCATIONS.

(2) R2-1 (48" X 60")

SPEED LIMIT 45

500'

RAMP 5

℄ U.S. 64

RAMP 8

TRAFFIC DRUMS 80' O.C. (TYPICAL)

15 TRAFFIC DRUMS @ 25' O.C.

RAMP 6

JACK BRIDGE, CONSTRUCT OVERLAY AND TEMP. OVERLAY TRANS.

BR. END

BR. NO. 3959A

BR. NO. 3959B

CROSSOVER IN PLACE BUT NOT USED THIS STAGE

200' MODULAR GLARE SHIELD

BR. END

EXIST. GUARDRAIL

(1) R11-2 48"X30" ROAD CLOSED 16' BARRICADE TYPE III RT.

(1) R11-2 48"X30" ROAD CLOSED 16' BARRICADE TYPE III LT.

RAMP 7

STA. 10+49 ± BEGIN PRECAST CONC. BARRIER

(1) W1-8 (36"X48") 45° O.C.

NOTES:

MAINTAIN MINIMUM 12' LANE WIDTH ON LANE REMAINING OPEN. UNLESS OTHERWISE NOTED IN PLANS.

FOR LOCATION AND DETAILS OF ADVANCE WARNING SIGNS SEE "RIGHT & LEFT LANE CLOSURE DETAILS BRIDGE JACKING U.S. @ 64" SHEET NO. 69.

JACK BRIDGE, CONSTRUCT OVERLAY AND TEMP. OVERLAY TRANS.

EXIST. GUARDRAIL

BR. END

CROSSOVER IN PLACE BUT NOT USED THIS STAGE

BR. NO. 3959A

RAMP 3

(1) R11-2 48"X30" ROAD CLOSED 16' BARRICADE TYPE III RT.

10 TRAFFIC DRUMS @ 25' O.C.

(1) R11-2 48"X30" ROAD CLOSED 24" BARRICADE TYPE III RT.

(3) W1-8 (36"X48") 45° O.C.

RAMP 4

13 TRAFFIC DRUMS @ 40' O.C.

BR. NO. 3959B

200'

BR. END

200 L.F. PRECAST CONCRETE BARRIER AT BRIDGE 3959B INSTALLED STAGE I USE STAGE II

TEMP. IMPACT ATTEN. BARRIER

RAMP 2

STA. 22+50 ± END PRECAST CONC. BARRIER

300' MODULAR GLARE SHIELD

125' 20# TAPER TRAFFIC DRUMS

(3) W1-8 (36"X48") 45° O.C.

USE RIGHT LANE CLOSURE. SEE RIGHT LANE CLOSURE DETAIL SHEET FOR REQUIRED DEVICES AND LOCATIONS.

SPEED LIMIT 45

(2) R2-1 (48" X 60")

6 TRAFFIC DRUMS @ 40' O.C.

(1) W1-4L (48"X48")

(1) W13-1P (18"X18")

(1) R11-2 48"X30" ROAD CLOSED 16' BARRICADE TYPE III RT.

PORTABLE CHANGEABLE MESSAGE SIGN

RAMP 3

I-540 N.B.

150' TAPER

12 TRAFFIC DRUMS @ 25' O.C.

RAMP 1

℄ U.S. 64

500'

TRAFFIC DRUMS 80' O.C. (TYPICAL)

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

RAMP CLOSURE NOTES

① RAMPS 3 & 6 WILL BE CLOSED TO TRAFFIC FOR THE TIME REQUIRED TO CONSTRUCT ONLY THE PORTION OF STAGE II CONSTRUCTION REQUIRED TO JACK THE BRIDGE, TIE THE APPROACHES AND REESTABLISH RAMP CONNECTIONS.

② PORTABLE CHANGEABLE MESSAGE SIGNS TO BE PLACED A MINIMUM OF 48 HOURS PRIOR TO ANY CLOSURE WARNING OF THE SCHEDULED CLOSURE AND DURATION. ACTUAL LOCATIONS OF MESSAGE SIGNS TO BE AS DIRECTED BY ENGINEER.

③ SEE SPECIAL PROVISIONS, SEQUENCE OF CONSTRUCTION & MAINTENANCE OF TRAFFIC FOR ALLOWABLE CLOSURE PERIODS AND OTHER DETAILS.

STAGE II

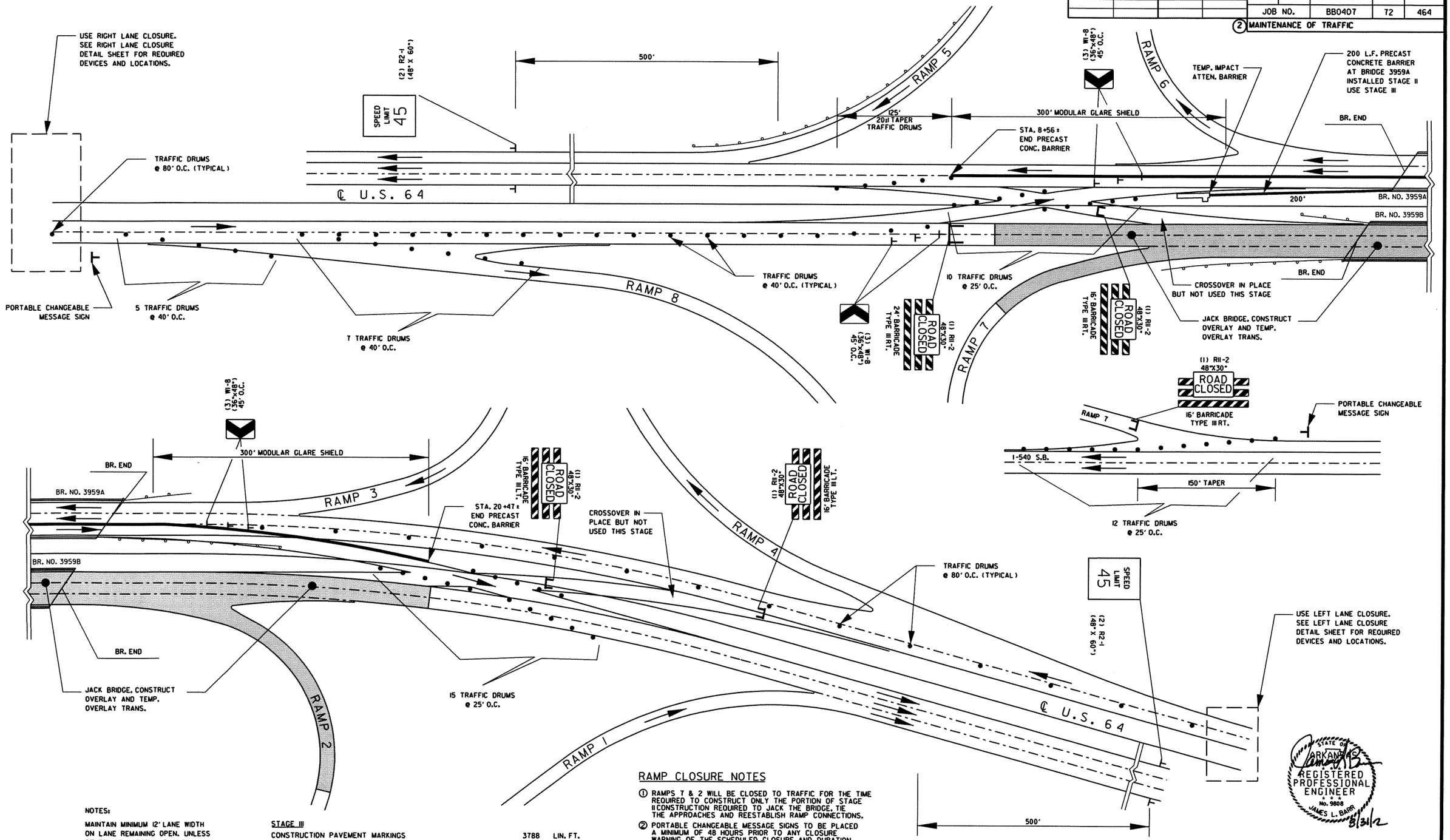
CONSTRUCTION PAVEMENT MARKINGS	2688	LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	1200	LIN. FT.

MAINTENANCE OF TRAFFIC STAGE II - U.S. 64 INTER. BRIDGE JACKING W.B. LANES

8/27/2012 9:30:44 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.		BB0407	T2	464

(2) MAINTENANCE OF TRAFFIC



NOTES:

MAINTAIN MINIMUM 12' LANE WIDTH ON LANE REMAINING OPEN. UNLESS OTHERWISE NOTED IN PLANS.

STAGE III		
CONSTRUCTION PAVEMENT MARKINGS	3788	LIN. FT.
STAGE FINAL		
THERMOPLASTIC PAVEMENT MARKING WHITE (4")	2060	LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	1530	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	876	LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	700	LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (8")	1800	LIN. FT.

RAMP CLOSURE NOTES

① RAMPS 1 & 2 WILL BE CLOSED TO TRAFFIC FOR THE TIME REQUIRED TO CONSTRUCT ONLY THE PORTION OF STAGE II CONSTRUCTION REQUIRED TO JACK THE BRIDGE, TIE THE APPROACHES AND REESTABLISH RAMP CONNECTIONS.

② PORTABLE CHANGEABLE MESSAGE SIGNS TO BE PLACED A MINIMUM OF 48 HOURS PRIOR TO ANY CLOSURE WARNING OF THE SCHEDULED CLOSURE AND DURATION. ACTUAL LOCATIONS OF MESSAGE SIGNS TO BE AS DIRECTED BY ENGINEER.

③ SEE SPECIAL PROVISIONS, SEQUENCE OF CONSTRUCTION & MAINTENANCE OF TRAFFIC FOR ALLOWABLE CLOSURE PERIODS AND OTHER DETAILS.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

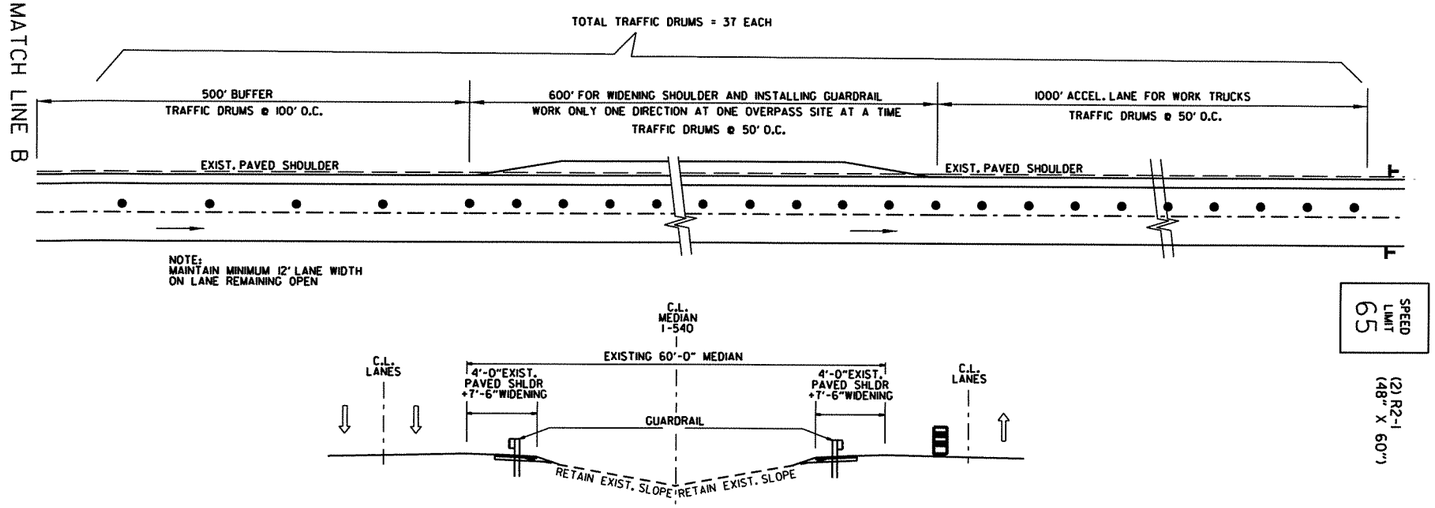
MAINTENANCE OF TRAFFIC STAGE III - U.S. 64 INTER. BRIDGE JACKING E.B. LANES

8/27/2012 9:30:45 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.		B80407	72A	464

(2) MAINTENANCE OF TRAFFIC

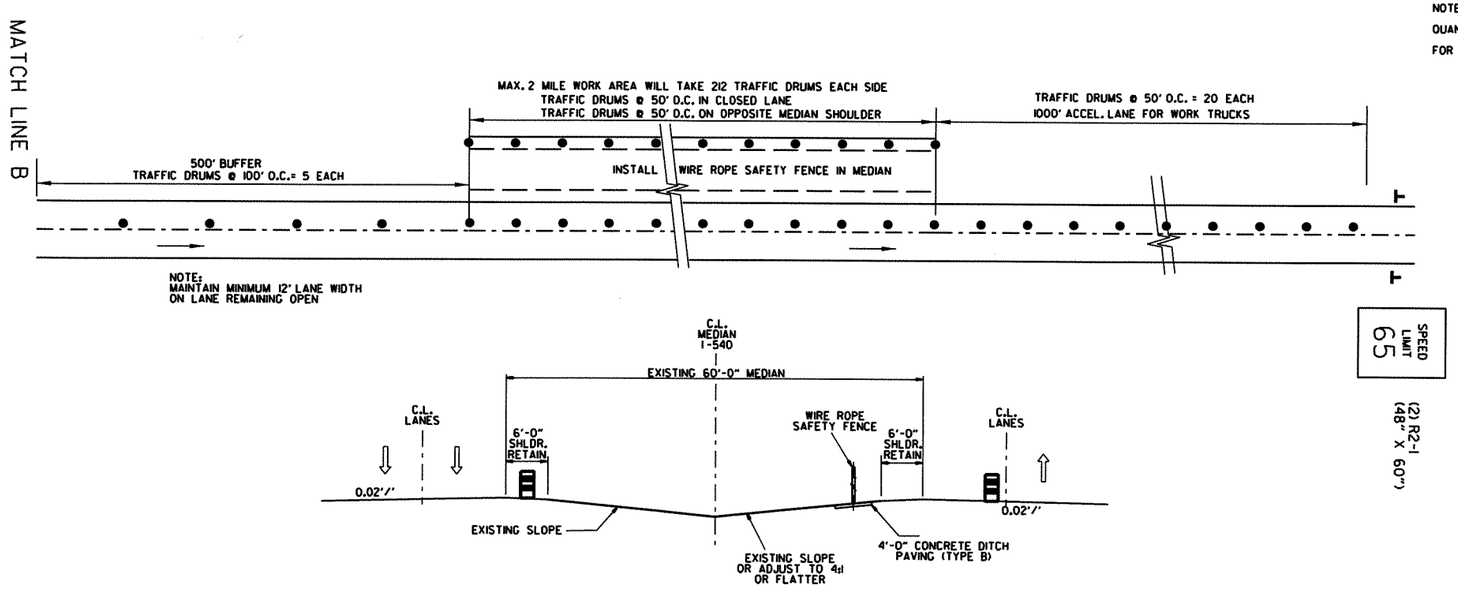
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12



MOVABLE WORK ZONE FOR GUARDRAIL INSTALLATION

ROAD WORK AHEAD
(4) W20-1 (48" X 48") ON ENTRANCE RAMPS

NOTE: REFER TO SP-MAINTENANCE OF TRAFFIC FOR LANE CLOSURE LIMITATIONS AND RESTRICTIONS. QUANTITY OF TRAFFIC DRUMS PROVIDED IN THE CONTRACT IS THE MAXIMUM NUMBER REQUIRED FOR ONE LANE CLOSURE.



MOVABLE WORK ZONE FOR WIRE ROPE SAFETY FENCE INSTALLATION

MAINTENANCE OF TRAFFIC WORK AREAS

8/27/2012 9:30:52 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.		BB0407	73	464

(2) QUANTITIES

REMOVAL & DISPOSAL OF GUARDRAIL

STATION	STATION	LOCATION	LIN. FT.
287+77.0	289+77.0	LT. OF S.B. LANES	200
7+28.6	295+10.7	RT. OF N.B. LANES & RAMP 1	150
293+32.3	295+32.3	LT. OF N.B. LANES	200
297+87.1	299+87.1	RT. OF S.B. LANES	200
298+09.7	301+09.7	LT. OF S.B. LANES	300
297+44.2	301+44.2	RT. OF N.B. LANES	400
306+75.0	309+25.0	RT. OF S.B. LANES	250
306+75.0	309+25.0	LT. OF S.B. LANES	250
333+55.0	336+05.0	RT. OF N.B. LANES	250
347+14.0	349+14.0	RT. OF N.B. LANES	200
347+23.3	349+23.3	LT. OF N.B. LANES	200
350+50.5	352+50.5	RT. OF N.B. LANES	200
350+70.4	352+70.4	RT. OF S.B. LANES	200
350+79.7	354+79.7	LT. OF S.B. LANES	400
361+16.1	363+16.1	RT. OF N.B. LANES	200
361+19.7	363+19.7	MEDIAN	200
363+56.9	365+56.9	MEDIAN	200
363+60.0	365+60.0	LT. OF S.B. LANES	200
385+71.9	389+21.9	RT. OF N.B. LANES	350
387+16.7	389+16.7	LT. OF N.B. LANES	200
385+99.7	389+24.7	LT. OF S.B. LANES	325
391+19.2	393+19.2	RT. OF S.B. LANES	200
391+14.0	396+14.0	LT. OF S.B. LANES	500
391+11.3	396+11.3	RT. OF N.B. LANES	500
420+46.7	422+46.7	RT. OF N.B. LANES	200
420+76.7	422+76.7	LT. OF N.B. LANES	200
425+42.8	427+42.8	RT. OF S.B. LANES	200
425+72.8	427+72.8	LT. OF S.B. LANES	200
456+23.3	458+23.3	RT. OF N.B. LANES	200
456+35.0	458+85.0	LT. OF N.B. LANES	250
458+59.9	460+59.9	MEDIAN	200
458+59.9	460+59.9	LT. OF S.B. LANES	200
476+40.0	482+40.0	MEDIAN	600
488+88.1	490+88.1	RT. OF N.B. LANES	200
488+61.6	491+11.6	LT. OF S.B. LANES	250
496+74.6	503+74.6	RT. OF N.B. LANES	700
496+99.9	503+99.9	LT. OF S.B. LANES	700
524+82.5	533+57.5	RT. OF N.B. LANES	875
525+06.8	533+81.8	LT. OF S.B. LANES	875
567+97.6	574+47.6	LT. OF S.B. LANES	650
567+83.3	575+83.3	RT. OF N.B. LANES	800
574+83.8	577+33.8	MEDIAN	250
575+08.8	577+33.8	MEDIAN	225
614+95.3	616+95.3	RT. OF N.B. LANES	200
615+34.6	618+34.6	MEDIAN	300
615+85.4	618+85.4	MEDIAN	300
618+09.4	620+09.4	LT. OF S.B. LANES	200
619+38.9	621+38.9	RT. OF N.B. LANES	200
619+38.9	621+38.9	LT. OF N.B. LANES	200
622+61.1	624+61.1	RT. OF S.B. LANES	200
622+61.1	624+61.1	LT. OF S.B. LANES	200
645+81.9	647+81.9	LT. OF N.B. LANES	200
646+02.2	648+02.2	RT. OF N.B. LANES	200
648+59.1	655+84.1	LT. OF S.B. LANES	725
648+81.1	650+81.1	RT. OF S.B. LANES	200
661+90.7	663+90.7	RT. OF N.B. LANES	200
661+74.5	663+74.5	LT. OF N.B. LANES	200
668+14.8	675+89.8	LT. OF S.B. LANES	775
668+31.0	670+31.0	RT. OF S.B. LANES	200
668+77.5	679+27.5	RT. OF N.B. LANES	1050
676+88.5	679+26.0	LT. OF N.B. LANES	237.5
688+70.0	692+45.0	MEDIAN	375
688+94.8	690+94.8	RT. OF N.B. LANES	200
689+56.2	693+31.2	MEDIAN	375
690+10.3	690+60.3	LT. OF S.B. LANES	50
691+05.8	693+05.8	LT. OF S.B. LANES	200
691+40.9	691+90.9	RT. OF N.B. LANES	50
704+00.0	706+25.0	RT. OF S.B. LANES	225
704+00.0	706+25.0	LT. OF S.B. LANES	225
696+50.0	699+00	LT. OF RAMP 3 U.S. 64 INTER.	250
10+85.6	12+85.6	RT. OF E.B. U.S. 64	200
12+37.9	13+12.9	LT. OF E.B. U.S. 64	75
16+87.1	18+87.1	RT. OF W.B. U.S. 64	200
17+14.4	17+89.4	LT. OF W.B. U.S. 64	75
716+81.9	718+81.9	RT. OF RAMP 2	200
716+81.9	718+81.9	LT. OF RAMP 2	200
717+21.0	719+21.0	LT. OF RAMP 1	200
721+67.5	723+67.5	RT. OF RAMP 1	200
721+67.5	729+22.0	LT. OF RAMP 1	775
725+82.0	727+82.0	RT. OF RAMP 2	200
725+82.0	727+82.0	LT. OF RAMP 2	200
731+07.4	733+07.4	RT. OF RAMP 1	200
731+07.4	733+07.4	LT. OF RAMP 1	200
TOTAL			24712.5

REMOVAL & DISPOSAL OF APPROACH SLABS & GUTTERS

STATION	STATION	LOCATION	APPR. SLABS & GUTTERS EACH	APPR. GUTTERS EACH
295+13.9	295+48.9	I-540 N.B. LANES	1	
295+57.0	295+92.0	I-540 S.B. LANES	1	
297+27.3	297+62.3	I-540 N.B. LANES	1	
297+70.5	298+05.5	I-540 S.B. LANES	1	
348+85.2	349+20.2	I-540 N.B. LANES	1	
349+04.3	349+39.3	I-540 S.B. LANES	1	
350+54.5	350+89.5	I-540 N.B. LANES	1	
350+73.5	351+08.5	I-540 S.B. LANES	1	
388+93.1	389+28.1	I-540 S.B. LANES	1	
389+08.6	389+43.6	I-540 N.B. LANES	1	
390+92.3	391+27.3	I-540 S.B. LANES	1	
391+07.8	391+42.8	I-540 N.B. LANES	1	
422+51.0	422+86.0	I-540 N.B. LANES	1	
423+48.5	423+83.5	I-540 S.B. LANES	1	
424+36.0	424+71.0	I-540 N.B. LANES	1	
425+33.5	425+68.5	I-540 S.B. LANES	1	
490+77.4	491+12.4	I-540 N.B. LANES	1	
490+77.4	491+12.4	I-540 S.B. LANES	1	
496+74.6	497+09.6	I-540 N.B. LANES	1	
496+74.6	497+09.6	I-540 S.B. LANES	1	
533+46.8	533+81.8	I-540 N.B. LANES	1	
533+46.8	533+81.8	I-540 S.B. LANES	1	
567+75.5	568+10.5	I-540 S.B. LANES	1	
567+80.9	568+15.9	I-540 N.B. LANES	1	
621+03.9	621+38.9	I-540 N.B. LANES	1	
621+03.9	621+38.9	I-540 S.B. LANES	1	
622+61.1	622+96.1	I-540 N.B. LANES	1	
622+61.1	622+96.1	I-540 S.B. LANES	1	
646+23.91	646+58.91	I-540 C.L. S.B. LANES	1	
648+23.34	648+58.34	I-540 C.L. N.B. LANES	1	
648+34.03	647+99.03	I-540 C.L. S.B. LANES	1	
649+98.45	650+33.45	I-540 C.L. N.B. LANES	1	
663+01.1	663+36.1	I-540 S.B. LANES	1	
663+71.9	664+06.9	I-540 N.B. LANES	1	
667+98.6	668+33.6	I-540 S.B. LANES	1	
668+69.4	669+04.4	I-540 N.B. LANES	1	
12+68.4	13+03.4	W.B. U.S. 64 - LT. & RT.		2
13+11.9	13+46.9	E.B. U.S. 64 - LT. & RT.		2
16+53.1	16+88.1	W.B. U.S. 64 - LT. & RT.		2
16+96.6	17+31.6	E.B. U.S. 64 - LT. & RT.		2
718+71.2	719+06.2	RAMP 2 (I-540/I-40 INTER.)	1	
718+86.0	719+21.0	RAMP 1 (I-540/I-40 INTER.)	1	
721+28.4	721+63.4	RAMP 2 (I-540/I-40 INTER.)	1	
721+43.2	721+78.2	RAMP 1 (I-540/I-40 INTER.)	1	
727+71.3	728+06.3	RAMP 2 (I-540/I-40 INTER.)	1	
728+87.0	729+22.0	RAMP 1 (I-540/I-40 INTER.)	1	
729+52.4	729+87.4	RAMP 2 (I-540/I-40 INTER.)	1	
730+83.1	731+18.1	RAMP 1 (I-540/I-40 INTER.)	1	
398+91.2	399+26.2	I-40 W.B. LANES - LT.		1
TOTALS			44	9

THE REMOVAL AND DISPOSAL OF APPROACH SLABS & GUTTERS AND REMOVAL AND DISPOSAL OF APPROACH GUTTERS SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE DROP INLETS, SPILLWAY PIPES AND SPILLWAY OUTLETS AS DIRECTED IN SECTION 202.

REMOVAL AND DISPOSAL OF HEADWALLS

STATION	LOCATION	EACH
483+00	RT. OF MAIN LANES	1
490+00	RT. & LT. OF MAIN LANES	2
502+93	RT. & LT. OF MAIN LANES	2
508+00	RT. & LT. OF MAIN LANES	2
513+00	RT. & LT. OF MAIN LANES	2
518+00	RT. & LT. OF MAIN LANES	2
523+00	RT. & LT. OF MAIN LANES	2
528+00	RT. & LT. OF MAIN LANES	2
572+70	LT. OF MAIN LANES	1
TOTAL		16

REMOVAL & DISPOSAL OF CONCRETE PARAPET WALL

STATION	STATION	LOCATION	EACH
295+09.0	295+35.0	RT. OF N.B. LANES & RAMP 1AT S.H. 22	1
295+30.6	295+56.6	LT. OF N.B. LANES	1
297+62.8	297+88.8	RT. OF S.B. LANES	1
297+85.4	298+11.4	LT. OF S.B. LANES	1
389+20.2	389+46.2	RT. OF N.B. LANES	1
389+15.0	389+41.0	LT. OF N.B. LANES	1
390+94.9	391+20.9	RT. OF S.B. LANES	1
390+89.7	391+15.7	LT. OF S.B. LANES	1
422+45.0	422+71.0	RT. OF N.B. LANES	1
422+75.0	423+01.0	LT. OF N.B. LANES	1
425+18.5	425+44.5	RT. OF S.B. LANES	1
425+48.5	425+74.5	LT. OF S.B. LANES	1
490+86.4	491+12.4	RT. OF N.B. LANES	1
496+74.6	497+00.6	LT. OF S.B. LANES	1
533+55.8	533+81.8	RT. OF N.B. LANES	1
567+73.3	567+99.3	LT. OF S.B. LANES	1
663+89.0	664+15.0	RT. OF N.B. LANES	1
663+72.0	663+98.0	LT. OF N.B. LANES	1
667+90.5	668+16.5	LT. OF S.B. LANES	1
668+06.7	668+32.7	RT. OF S.B. LANES	1
718+80.2	719+06.2	RT. & LT. OF RAMP 2 @ I-40	2
721+43.2	721+69.2	RT. & LT. OF RAMP 1@ I-40	2
727+80.3	728+06.3	RT. & LT. OF RAMP 2 @ I-40	2
730+83.1	731+09.1	RT. & LT. OF RAMP 1@ I-40	2
TOTAL			28

REMOVAL & DISPOSAL OF CONCRETE PIER PROTECTION

STATION	STATION	LOCATION	LIN. FT.
287+48.2	287+78.7	LT. OF S.B. LANES	30.5
287+71.5	287+97.5	RT. OF N.B. LANES	26.0
287+79.2	288+09.7	RT. OF N.B. LANES & RAMP 5 AT S.H. 22	30.5
363+14.4	363+44.4	RT. OF S.B. LANES	30.0
363+18.0	363+48.0	MEDIAN	30.0
363+28.6	363+58.6	MEDIAN	30.0
363+31.7	363+61.7	LT. OF S.B. LANES	30.0
458+21.6	458+51.6	RT. OF N.B. LANES	30.0
458+31.6	458+51.6	MEDIAN	20.0
458+31.6	458+61.6	MEDIAN	30.0
458+31.6	458+61.6	LT. OF S.B. LANES	30.0
616+93.6	617+23.6	RT. OF N.B. LANES	30.0
617+81.1	618+11.1	LT. OF S.B. LANES	30.0
689+62.5	690+12.0	LT. OF S.B. LANES	49.5
690+58.0	691+07.5	LT. OF S.B. LANES	49.5
690+93.1	691+42.6	RT. OF N.B. LANES	49.5
691+89.2	692+38.7	RT. OF N.B. LANES	49.5
TOTAL			575.0

REMOVAL & DISPOSAL OF CONCRETE MEDIAN BARRIER

STATION	STATION	LOCATION	LIN. FT.
293+22.0	295+70.0	LT. OF RAMP 6 (I-540/S.H.22)	248.0
2+12.0	3+90.0	LT. OF RAMP 1 (I-540/S.H. 22)	178.0
482+40.0	491+12.4	MEDIAN	872.4
496+74.6	533+81.8	MEDIAN	3707.2
567+78.2	575+00.0	MEDIAN	721.8
TOTAL			5727.4

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

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.		BB0407	74	464

(2) QUANTITIES

REMOVAL AND DISPOSAL OF CURB AND GUTTER

STATION	STATION	LOCATION	LIN. FT.
12+64.3	18+00.0	RT. OF E.B. LANES S.H. 22	535.7
10+70.0	17+85.0	S.H. 22 RAISED MEDIAN	1430.0
360+15.0	369+41.0	RT. OF N.B. LANES	926.0
2+30.0	5+55.0	GRAND AVE. RAISED MEDIAN	690.0
525+81.8	533+45.3	RT. OF N.B. LANES	763.5
525+81.8	533+45.3	LT. OF S.B. LANES	763.5
568+08.3	572+80.0	LT. OF S.B. LANES	471.7
TOTAL			5580.4

REMOVAL AND DISPOSAL OF ASPHALT ISLANDS

STATION	STATION	LOCATION	SQ. YD.
10+70.0	17+85.0	S.H. 22 RAISED MEDIAN	825.0
2+30.0	5+55.0	GRAND AVE. RAISED MEDIAN	376.0
TOTAL			1201.0

REMOVAL AND DISPOSAL OF DITCH PAVING

STATION	STATION	LOCATION	SQ. YD.
* ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER			300
TOTAL			300

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

FLOWABLE SELECT MATERIAL

	LOCATION	CU. YD.
*	ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER	500
	TOTAL	500

* ESTIMATED QUANTITY. SEE SECTION 104.03 OF STANDARD SPECIFICATIONS.

REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT

STATION	STATION	LOCATION	WIDTH	SQ. YD.
343+20.24	348+85.24	I-540 N.B. LANES	24	1506.7
350+89.46	355+30.11	I-540 N.B. LANES	24	1175.1
525+81.80	533+46.80	I-540 N.B. LANES	24	2040.0
568+15.93	577+13.25	I-540 N.B. LANES	24	2392.9
571+49.45	576+00.00	RAMP 1 (4TH STREET INTERCHANGE)	VARIES	783.4
614+03.30	621+03.93	I-540 N.B. LANES	24	1868.3
622+96.06	628+61.06	I-540 N.B. LANES	24	1506.7
343+39.26	349+04.26	I-540 S.B. LANES	24	1506.7
351+08.48	355+30.11	I-540 S.B. LANES	24	1124.3
525+81.80	533+46.80	I-540 S.B. LANES	24	2040.0
568+10.46	577+13.25	I-540 S.B. LANES	24	2407.4
569+76.51	577+13.25	RAMP 4 (4TH STREET INTERCHANGE)	VARIES	809.6
613+89.88	621+03.93	I-540 S.B. LANES	24	1904.1
622+96.06	628+61.06	I-540 S.B. LANES	24	1506.7
714+31.45	718+85.97	RAMP 1 (I-540/I-40 INTERCHANGE)	24	1212.1
721+78.19	728+87.00	RAMP 1 (I-540/I-40 INTERCHANGE)	24	1890.2
731+18.14	734+67.00	RAMP 1 (I-540/I-40 INTERCHANGE)	24	930.3
714+88.65	718+71.21	RAMP 2 (I-540/I-40 INTERCHANGE)	15	637.6
721+63.42	727+71.29	RAMP 2 (I-540/I-40 INTERCHANGE)	15	1013.1
729+87.43	735+58.30	RAMP 2 (I-540/I-40 INTERCHANGE)	15	951.5
387+00.00	392+50.00	RAMP 3 (I-540/I-40 INTERCHANGE)	15	916.7
713+50.00	719+00.00	RAMP 4 (I-540/I-40 INTERCHANGE)	24	1466.7
TOTAL				31590.1

REMOVAL & DISPOSAL OF GUARD CABLE

STATION	STATION	LOCATION	LIN. FT.
359+65.0	361+15.0	MEDIAN	150
581+81.0	582+81.0	LT. OF RAMP 3 (4TH ST. INTER.)	100
TOTAL			250

REMOVAL & DISPOSAL OF PRECAST CONCRETE BARRIER

STATION	STATION	LOCATION	LIN. FT.
398+91.2	400+40.0	LT. OF I-40 W.B. LANES	200
734+30.0	735+00.0	RT. OF RAMP 2 I-540/I-40 INT.	70
TOTAL			270

NOTE: PRECAST CONCRETE BARRIER TO BE REMOVED AND DELIVERED TO AHTD DISTRICT 4 HEADQUATERS.

CRASH CUSHION

	STATION	LOCATION	EACH
(1)	13+57.0	CENTERLINE S.H. 22	1
(1)	16+13.0	CENTERLINE S.H. 22	1
(2)	475+71.8	MEDIAN	1
(2)	578+18.2	MEDIAN	1
	TOTAL		4

(1) USE 40 MPH, NON-GATING, REDIRECTIVE CRASH CUSHION.
(2) USE 65 MPH, NON-GATING, REDIRECTIVE CRASH CUSHION.

IMPACT ATTENUATION BARRIER (TYPE A)

STATION	LOCATION	IMPACT ATTENUATION BARRIERS (TYPE A)	REMOVAL & DISPOSAL OF IMPACT ATTENUATION BARRIERS
		EACH	
287+53.3	RT. OF N.B. LANES	1	1
288+76.6	MEDIAN	1	1
307+21.8	RT. OF S.B. LANES	1	
708+47.9	LT. & RT. OF N.B. LANES	2	2
400+40.0	LT. OF I-40 W.B. LANES		1
TOTALS		5	5

LUMINAIRE POLE RELOCATION

STATION	STATION	LOCATION	EACH
287+00.0	319+00.0	LT. OF S.B. LANES	13
287+00.0	319+00.0	RT. OF N.B. LANES	13
2+58.0	16+67.0	RAMP I S.H. 22	10
0+50.0	7+81.0	RAMP 2 S.H. 22	5
0+85.0	8+50.0	RAMP 3 S.H. 22	6
11+00.0	16+00.0	RAMP 4 S.H. 22	4
366+00.0	409+50.0	LT. OF S.B. LANES	21
369+80.0	403+50.0	RT. OF N.B. LANES	17
375+00.0	380+75.0	RAMP 4 GRAND AVE.	4
375+25.0	383+75.0	RAMP IGRAND AVE.	7
393+00.0	403+50.0	RAMP 3 GRAND AVE.	7
399+50.0	414+50.0	RAMP 2 GRAND AVE.	10
437+00.0	479+30.0	LT. OF S.B. LANES	20
438+50.0	482+25.0	RT. OF N.B. LANES	21
444+50.0	454+00.0	RAMP I KELLY RD.	7
445+60.0	452+00.0	RAMP 4 KELLY RD.	5
463+00.0	469+50.0	RAMP 2 KELLY RD.	5
463+00.0	471+50.0	RAMP 3 KELLY RD.	6
523+00.0	533+00.0	LT. OF S.B. LANES	6
524+00.0	533+75.0	RT. OF N.B. LANES	6
567+75.0	599+01.0	LT. OF S.B. LANES	17
568+65.0	598+75.0	RT. OF N.B. LANES	16
575+40.0	580+81.0	RAMP 14TH STREET	4
585+00.0	58+90.0	RAMP 4 4TH STREET	3
581+50.0	587+10.0	RAMP 2 4TH STREET	4
589+00.0	593+00.0	RAMP 3 4TH STREET	3
TOTAL			240

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:35:52 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11/16/12				6	ARK.			
				JOB NO.		BB0407	75	464

(2) QUANTITIES

EARTHWORK

STATION	STATION	LOCATION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	SOIL STABLIZATION
			CUBIC YARD		TON
343+20.24	348+83.74	I-540 N.B. LANES - FULL DEPTH CONSTRUCTION	1623		
350+90.96	355+30.11	I-540 N.B. LANES - FULL DEPTH CONSTRUCTION	1208		
525+81.80	533+45.30	I-540 N.B. LANES - FULL DEPTH CONSTRUCTION	2100		
568+14.69	577+13.25	I-540 N.B. LANES - FULL DEPTH CONSTRUCTION	2588		
614+03.30	621+01.80	I-540 N.B. LANES - FULL DEPTH CONSTRUCTION	1921		
622+97.56	628+61.06	I-540 N.B. LANES - FULL DEPTH CONSTRUCTION	1550		
343+39.26	349+02.76	I-540 S.B. LANES - FULL DEPTH CONSTRUCTION	1623		
351+09.98	355+30.11	I-540 S.B. LANES - FULL DEPTH CONSTRUCTION	1155		
525+81.80	533+45.30	I-540 S.B. LANES - FULL DEPTH CONSTRUCTION	2100		
568+14.69	577+13.25	I-540 S.B. LANES - FULL DEPTH CONSTRUCTION	2588		
613+89.88	621+01.80	I-540 S.B. LANES - FULL DEPTH CONSTRUCTION	1958		
622+97.56	628+61.06	I-540 S.B. LANES - FULL DEPTH CONSTRUCTION	1550		
714+88.65	718+69.71	RAMP 2 (I-540/I-40 INT.) - FULL DEPTH CONSTRUCTION	779		
721+64.92	728+06.29	RAMP 2 (I-540/I-40 INT.) - FULL DEPTH CONSTRUCTION	1311		
729+88.93	735+58.30	RAMP 2 (I-540/I-40 INT.) - FULL DEPTH CONSTRUCTION	1164		
713+50.00	719+00.00	RAMP 4 (I-540/I-40 INT.) - FULL DEPTH CONSTRUCTION	1642		
714+31.45	718+84.47	RAMP 1 (I-540/I-40 INT.) - FULL DEPTH CONSTRUCTION	1485		
721+79.69	728+85.50	RAMP 1 (I-540/I-40 INT.) - FULL DEPTH CONSTRUCTION	2313		
731+19.64	734+67.00	RAMP 1 (I-540/I-40 INT.) - FULL DEPTH CONSTRUCTION	1139		
387+00.00	392+50.00	RAMP 3 (I-540/I-40 INT.) - FULL DEPTH CONSTRUCTION	1124		
573+50.00	576+00.00	RAMP 1 (I-540 @ 4TH ST). - FULL DEPTH CONSTRUCTION	865		
505+00.00	512+26.00	MEDIAN CROSSOVER- SOUTH OF ARKANSAS RIVER BRIDGE	436		
601+00.00	612+49.89	MEDIAN CROSSOVER - NORTH OF 4TH STREET INTERCHANGE	795	1107	
601+00.00	612+49.89	REMOVE CROSSOVER - NORTH OF 4TH STREET INTERCHANGE	1947		
708+05.72	717+41.27	MEDIAN CROSSOVER - SOUTH OF I-40 INTERCHANGE	367	585	
708+05.72	717+41.27	REMOVE CROSSOVER - SOUTH OF I-40 INTERCHANGE	951		
669+00.00	679+39.67	MEDIAN CROSSOVER - SOUTH OF U.S. 64 INTERCHANGE	855	861	
669+00.00	679+39.67	REMOVE CROSSOVER - SOUTH OF U.S. 64 INTERCHANGE	1544		
335+10.19	347+58.10	MEDIAN CROSSOVER - NORTH OF S.H. 22 INTERCHANGE	855	1353	
335+10.19	347+58.10	REMOVE CROSSOVER - NORTH OF S.H. 22 INTERCHANGE	1992		
6+03.17	13+09.53	MEDIAN CROSSOVER - ALONG U.S. 64	855	677	
6+03.17	13+09.53	REMOVE CROSSOVER - ALONG U.S. 64	862		
16+73.74	25+85.72	MEDIAN CROSSOVER - ALONG U.S. 64	855	811	
16+73.74	25+85.72	REMOVE CROSSOVER - ALONG U.S. 64	1082		
		U.S. 64 - BRIDGE JACKING TRANSITION		160	
		S.H. 22 (ROGERS AVE.) BRIDGE LENGTHEN	3461		
		GRAND AVE. BRIDGE LENGTHEN	274		
		CLAYTON BRANCH BRIDGE LENGTHEN	330		
		RELIEF BRIDGE LENGTHEN	263		
		HWY. 162 BRIDGE JACKING TRANSITION		156	
**	ENTIRE PROJECT - IF AND WHERE DIRECTED BY ENGINEER				** 1000
	ENTIRE PROJECT - CONSTRUCTION AND REMOVAL OF TEMPORARY RAMPS		56048	39538	
	ENTIRE PROJECT - WIDENING FOR GUARDRAIL			37516	
	TOTALS		107558	82764	1000

NOTE EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PAID FOR AS PLAN QUANTITIES
** QUANTITY ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

FILTER BLANKET AND DUMPED RIPRAP

STATION	STATION	LOCATION	AREA	FILTER BLANKET	DUMPED RIPRAP
			SQ. YARD		CU. YARD
*	ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER		200	200	100
	TOTALS			200	100

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

PERMANENT EROSION CONTROL

STATION	STATION	LOCATION	LIME	SEEDING	MULCH COVER	WATER	SECOND SEEDING APPLICATION
			TON	ACRE		M. GAL.	ACRE
286+91.50	720+24.66	RT. OF N.B. LANES - I-540	23.06	11.53	11.53	1176.06	11.53
286+91.50	720+24.66	LT. OF N.B. LANES - I-540	36.68	18.34	18.34	1870.68	18.34
286+91.50	720+24.66	RT. OF S.B. LANES - I-540	36.26	18.13	18.13	1849.26	18.13
286+91.50	720+24.66	LT. OF S.B. LANES - I-540	24.84	12.42	12.42	1266.84	12.42
601+00.00	612+49.89	MEDIAN CROSSOVER	2.16	1.08	1.08	110.16	1.08
708+05.72	717+41.27	MEDIAN CROSSOVER	1.48	0.74	0.74	75.48	0.74
669+00.00	679+39.67	MEDIAN CROSSOVER	2.12	1.06	1.06	108.12	1.06
335+10.19	347+58.10	MEDIAN CROSSOVER	2.46	1.23	1.23	125.46	1.23
6+03.17	13+09.53	MEDIAN CROSSOVER - U.S. 64	1.20	0.60	0.60	61.20	0.60
16+73.74	25+85.72	MEDIAN CROSSOVER - U.S. 64	1.68	0.84	0.84	85.68	0.84
2+64.00	7+10.59	TEMP. RAMP 1A - S.H. 22	1.06	0.53	0.53	54.06	0.53
2+64.00	7+39.43	TEMP. RAMP 1B - S.H. 22	0.20	0.10	0.10	10.20	0.10
295+00.00	300+40.27	TEMP. RAMP 2A - S.H. 22	0.72	0.36	0.36	36.72	0.36
290+02.06	293+15.98	TEMP. RAMP 6A - S.H. 22	0.56	0.28	0.28	28.56	0.28
372+48.02	376+05.87	TEMP. RAMP 1B - GRAND AVE.	0.74	0.37	0.37	37.74	0.37
376+94.75	380+77.13	TEMP. RAMP 4B - GRAND AVE.	1.18	0.59	0.59	60.18	0.59
383+96.19	389+23.69	TEMP. RAMP 4A - GRAND AVE.	0.98	0.49	0.49	49.98	0.49
379+84.26	385+29.64	TEMP. RAMP 1A - GRAND AVE.	1.22	0.61	0.61	62.22	0.61
396+96.07	402+44.79	TEMP. RAMP 2A - GRAND AVE.	1.20	0.60	0.60	61.20	0.60
401+66.54	408+65.23	TEMP. RAMP 3A - GRAND AVE.	0.88	0.44	0.44	44.88	0.44
404+34.18	407+71.01	TEMP. RAMP 3B - GRAND AVE.	0.72	0.36	0.36	36.72	0.36
405+03.76	409+11.53	TEMP. RAMP 2B - GRAND AVE.	1.10	0.55	0.55	56.10	0.55
442+48.01	446+05.86	TEMP. RAMP 1B - KELLEY HWY.	0.80	0.40	0.40	40.80	0.40
446+94.75	450+77.13	TEMP. RAMP 4B - KELLEY HWY.	1.20	0.60	0.60	61.20	0.60
448+45.14	455+29.27	TEMP. RAMP 1A - KELLEY HWY.	1.08	0.54	0.54	55.08	0.54
452+96.68	458+05.70	TEMP. RAMP 4A - KELLEY HWY.	0.94	0.47	0.47	47.94	0.47
461+00.00	468+63.45	TEMP. RAMP 2A - KELLEY HWY.	1.00	0.50	0.50	51.00	0.50
462+00.00	468+87.76	TEMP. RAMP 3A - KELLEY HWY.	1.32	0.66	0.66	67.32	0.66
468+00.00	472+08.79	TEMP. RAMP 2B - KELLEY HWY.	1.22	0.61	0.61	62.22	0.61
468+00.00	471+70.62	TEMP. RAMP 3B - KELLEY HWY.	0.82	0.41	0.41	41.82	0.41
583+00.00	590+11.23	TEMP. RAMP 1 - 4TH STREET	1.24	0.62	0.62	63.24	0.62
681+88.74	688+03.31	TEMP. RAMP 8 - U.S. 64	1.00	0.50	0.50	51.00	0.50
736+81.93	741+00.00	TEMP. RAMP 2 - I-40 INT.	0.74	0.37	0.37	37.74	0.37
384+94.48	391+40.00	TEMP. RAMP 3 - I-40 INT.	1.02	0.51	0.51	52.02	0.51
734+50.00	741+50.00	REMOVE PART RAMP 2 I-40	1.64	0.82	0.82	83.64	0.82
734+50.00	737+50.00	REMOVE CONN. RAMP 1/2 I-40	0.82	0.41	0.41	41.82	0.41
		ADDITIONAL FOR BRIDGE JACKING LOCATIONS	7.20	3.60	3.60	367.20	3.60
		TOTALS	164.54	82.27	82.27	8391.54	82.27

BASIS OF ESTIMATE: WATER - 102.0 M.G. PER ACRE SEEDING
LIME - 2 TON PER ACRE SEEDING

PORTLAND CEMENT CONCRETE PAVEMENT PATCHING

	LOCATION	REM. & DISP. OF CONCRETE PAVEMENT FOR PATCHING	PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (9" U.T.)
		SQ. YARD	
*	ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER - RAMPS	500	500
*	ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER - MAIN LANES	1000	1000
	TOTALS	1500	1500

* ESTIMATED QUANTITIES. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.
NOTE: NO MESH, DOWEL BARS OR TIE BARS ARE REQUIRED IN THE MAIN LANE PATCHES.
P.C.C. PAVEMENT PATCHING ON RAMPS TO USE VERY EARLY STRENGTH CONCRETE. SEE SPECIAL PROVISION, VERY EARLY STRENGTH CONCRETE.

STATE OF ARKANSAS
JAMES L. BARR
REGISTERED PROFESSIONAL ENGINEER
No. 9808
11/9/12

QUANTITIES

11/19/2012 8:50:00 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.		BB0407	76	464

(2) QUANTITIES

STRUCTURES

STATION	STATION	LOCATION	R. C. PIPE CULVERT (CLASS III)	TEMPORARY CULVERTS				DROP INLET (TYPE MO)	DROP INLET ADJUST TO GRADE	MODIFYING DROP INLETS	STEEL GRATE ASSEMBLIES ADJUST TO GRADE	STANDARD DRAWINGS
			24"	15"	18"	24"	30"					
			LIN. FT.					EACH				
16+00		RT. OF S.H. 22	8					1		1 ⚠1		FPC-9E, FPC-9M, FPC-9S, PCC-1
293+00		LT. OF S.B. LANES				50						
293+00		RT. OF RAMP 6 - I-540/S.H. 22 INTER.			65							
6+10		TEMP. RAMP 1A - I-540/S.H. 22 INTER.		100								
337+00	346+00	MEDIAN			900							
364+90		RT. OF N.B. LANES - TYPE C								1 ⚠2		SEE SH. NO. 10
367+34		RT. OF N.B. LANES - TYPE C								1 ⚠2		SEE SH. NO. 10
369+34		RT. OF N.B. LANES - TYPE C								1 ⚠2		SEE SH. NO. 10
372+50	375+50	MEDIAN			300							
397+00	398+30	LT. OF S.B. LANES - TEMP. RAMP 3A		130								
398+25	400+00	RT. OF N.B. LANES - TEMP. RAMP 2A		175								
398+50	404+50	MEDIAN				600						
406+50	408+50	MEDIAN				200						
449+00	451+25	MEDIAN			225							
451+50	452+50	RT. OF N.B. LANES - TEMP. RAMP 1A		100								
463+75	465+10	RT. OF N.B. LANES - TEMP. RAMP 2A		135								
464+25	465+75	LT. OF S.B. - TEMP RAMP 3A		150								
469+00	476+00	MEDIAN			700							
482+40		MEDIAN								1 ⚠2		FPC-9S
575+01		MEDIAN								1 ⚠2		FPC-9S
581+50		LT. OF RAMP 1 - I-540/4TH STREET INTER.				120						
583+95		TEMP. RAMP 1 - I-540/4TH STREET INTER.				50						
584+10		MEDIAN									1	
602+00	611+00	MEDIAN			900							
671+00	677+00	MEDIAN			600							
683+90		TEMP. RAMP 8 - I-540/U.S. 64 INTER.					50					
684+00		MEDIAN & RT. OF N.B. LANES									2	
705+00		MEDIAN									1	
9+50		TEMP. RAMP 3 - I-540/I-40 INTER.		100								
712+00	715+00	MEDIAN				300						
*ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER									10			
TOTALS			8	890	3690	1320	50	1	10	6	4	

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

⚠1 EXISTING DROP INLET TO BE MODIFIED TO JUNCTION BOX (TYPE ST) AS DETAILED ON STD. DWG. FPC-9S & R.C. PIPE CULVERT TO BE CONSTRUCTED FROM JUNCTION BOX TO NEW TYPE "MO" DROP INLET. (4' I.D. H= 4').

⚠2 MODIFY EXISTING INLETS FOR USE UNDER "CONCRETE BARRIER WALL PIER PROTECTION TYPE A".

⚠3 REMOVE AND REPLACE TOPS TO EXISTING DROP INLETS WITH TYPE ST AS DETAILED ON STD. DWG. FPC-9S FOR USE UNDER "CONCRETE BARRIER WALL MEDIAN TYPE SPECIAL". SEE SHEET 42 FOR ADDITIONAL INFORMATION

TEMPORARY EROSION CONTROL

LOCATION	TEMPORARY SEEDING	MULCH COVER	WATER	WATTLE DITCH CHECK (20") (E-1)	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECK (E-6)	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)	SEDIMENT REMOVAL & DISPOSAL
	ACRE		M. GAL.	LIN. FT.	BAG	CU. YARD	LIN. FT.		CU. YD.
MAIN LANES (RECONSTRUCTION)					1254	42	1421	21276	
S.H. 22 TEMPORARY RAMPS	0.79	0.79	16.12		22			745	
I-540 MEDIAN CROSSOVERS	5.00	5.00	102.00		44			3456	
GRAND AVENUE TEMPORARY RAMPS	2.24	2.24	45.70					2140	
KELLEY HWY. TEMPORARY RAMPS	1.16	1.16	23.66					1715	
4TH STREET TEMPORARY RAMPS	0.98	0.98	19.99		44			820	
U.S. 64 TEMPORARY RAMP 8	0.66	0.66	13.46		66			770	
I-40 TEMPORARY RAMPS 2 & 3	1.28	1.28	26.11		22			2270	
U.S. 64 MEDIAN CROSSOVERS FOR BRIDGE JACKING	0.96	0.96	19.58		154		24	2135	
*ENTIRE PROJECT IF AND WHERE DIRECTED BY THE ENGINEER				500	220				100
TOTALS	13.07	13.07	266.62	500	1826	42	1445	35327	100

*ESTIMATED QUANTITIES. SEE SECTION 104.3 OF THE STANDARD SPECIFICATIONS.

BASIS OF ESTIMATE: WATER - 20.4 M.G. PER ACRE TEMPORARY SEEDING

SAND BAG DITCH CHECK (E-5) = 22 BAGS/LOCATION

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
9-7-12

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.		BB0407	76A	464

(2) QUANTITIES

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	F.A.P. BM-B540(230) CONCRETE DITCH PAVING (TYPE B)		F.A.P. HSIP-540-1(82)0 CONCRETE DITCH PAVING (TYPE B)		F.A.P. BM-B540(203) SOLID SODDING		F.A.P. HSIP-540-1(82)0 SOLID SODDING		WATER
			LIN. FT.	WIDTH	SQ. YARD	WIDTH	SQ. YARD	WIDTH	SQ. YARD	WIDTH	SQ. YARD	M. GAL.
289+25.00	292+23.30	LT. OF N.B. LANES	298.30			4'-0"	132.6			4'-0"	132.6	1.67
292+23.30	295+50.00	LT. OF N.B. LANES - BEHIND GUARDRAIL	326.70			2'-0"	72.6			2'-0"	72.6	0.91
297+67.00	300+95.90	RT. OF S.B. LANES - BEHIND GUARDRAIL	328.90			2'-0"	73.1			2'-0"	73.1	0.92
300+95.90	301+06.62	RT. OF S.B. LANES - TRANSITION	10.72			3'-0"	3.6			2'-0"	2.4	0.03
301+06.62	349+30.00	RT. OF S.B. LANES	4823.38			4'-0"	2143.7			4'-0"	2143.7	27.01
350+63.00	359+19.73	LT. OF N.B. LANES	856.73			4'-0"	380.8			4'-0"	380.8	4.80
359+19.73	359+43.00	LT. OF N.B. LANES - TRANSITION	23.27			2'-0"	5.2			2'-0"	5.2	0.07
359+50.00	370+20.00	RT. OF N.B. LANES	1070.00	6'-0"	713.3			4'-0"	475.6			5.99
364+63.00	364+86.27	LT. OF N.B. LANES - TRANSITION	23.27			2'-0"	5.2			2'-0"	5.2	0.07
364+86.27	385+95.78	LT. OF N.B. LANES	2109.51			4'-0"	937.6			4'-0"	937.6	11.81
370+20.00	373+30.00	RT. OF N.B. LANES	310.00	6'-0"	206.7			4'-0"	137.8			1.74
385+95.78	386+06.50	LT. OF N.B. LANES - TRANSITION	10.72			3'-0"	3.6			2'-0"	2.4	0.03
386+06.50	389+35.30	LT. OF N.B. LANES - BEHIND GUARDRAIL	328.80			2'-0"	73.1			2'-0"	73.1	0.92
391+00.60	394+29.40	RT. OF S.B. LANES - BEHIND GUARDRAIL	328.80			2'-0"	73.1			2'-0"	73.1	0.92
394+29.40	394+40.12	RT. OF S.B. LANES - TRANSITION	10.72			3'-0"	3.6			2'-0"	2.4	0.03
394+40.12	423+65.00	RT. OF S.B. LANES	2924.88			4'-0"	1299.9			4'-0"	1299.9	16.38
424+55.00	454+23.33	LT. OF N.B. LANES	2968.33			4'-0"	1319.3			4'-0"	1319.3	16.62
454+23.33	454+46.60	LT. OF N.B. LANES - TRANSITION	23.27			2'-0"	5.2			2'-0"	5.2	0.07
459+66.00	459+89.87	LT. OF N.B. LANES - TRANSITION	23.27			2'-0"	5.2			2'-0"	5.2	0.07
459+89.87	475+80.00	LT. OF N.B. LANES	1590.13			4'-0"	706.7			4'-0"	706.7	8.90
TOTALS					920.0		7244.1		613.4		7240.5	98.96

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
9-12-12

QUANTITIES

9/12/2012 10:35:05 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.		BB0407	77	464

(2) QUANTITIES

RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT - N.B. LANES

STATION	STATION	LOCATION	LENGTH	RUBBLIZING P.C.C.		AGGREGATE BASE COURSE (CLASS 7)	REMOVAL OF EXIST. ASPH. OVERLAY
				AVG. WIDTH	SQ. YD.		
			LIN. FT.	FEET		TON	SQ. YD.
286+91.50	291+46.50	N.B. LANES - EXISTING ASPHALT TRANSITION	455.00				1213.33
289+31.50	295+06.36	N.B. LANES - R/O - TANGENT SECTION	574.86	24.0	1532.96		
297+69.79	307+90.96	N.B. LANES - R/O - TANGENT SECTION	1021.17	24.0	2723.12		
307+90.96	335+26.39	N.B. LANES - R/O - TANGENT SECTION	2735.43	24.0	7294.48		
335+26.39	338+76.39	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
338+76.39	343+20.24	N.B. LANES - R/O - SUPER.	443.85	24.0	1183.60		
355+30.11	356+46.67	N.B. LANES - R/O - TANGENT SECTION	116.56	24.0	310.83		
356+46.67	359+96.67	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
359+96.67	368+78.77	N.B. LANES - R/O - SUPER.	882.10	24.0	2352.27		
368+78.77	372+28.77	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
372+28.77	389+02.13	N.B. LANES - R/O - TANGENT SECTION	1673.36	24.0	4462.29		
391+49.32	393+16.75	N.B. LANES - R/O - SUPER. TRANS.	167.43	24.0	446.48		
393+16.75	405+76.13	N.B. LANES - R/O - SUPER.	1259.38	24.0	3358.35		
405+76.13	409+26.13	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
409+26.13	415+73.32	N.B. LANES - R/O - TANGENT SECTION	647.19	24.0	1725.84		
415+73.32	419+23.32	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
419+23.32	422+48.44	N.B. LANES - R/O - SUPER.	325.12	24.0	866.99		
424+85.32	429+38.32	N.B. LANES - R/O - SUPER.	453.00	24.0	1208.00		
429+38.32	432+88.32	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
432+88.32	465+13.72	N.B. LANES - R/O - TANGENT SECTION	3225.40	24.0	8601.07		
465+13.72	468+97.05	N.B. LANES - R/O - SUPER. TRANS.	383.33	24.0	1022.21		
468+97.05	482+40.00	N.B. LANES - R/O - SUPER.	1342.95	24.0	3581.20		
482+40.00	485+57.89	N.B. LANES - R/O - SUPER.	317.89	24.0	847.71		
485+57.89	489+41.22	N.B. LANES - R/O - SUPER. TRANS.	383.33	24.0	1022.21		
489+41.22	490+70.05	N.B. LANES - R/O - TANGENT SECTION	128.83	24.0	343.55		
497+16.96	525+83.80	N.B. LANES - R/O - TANGENT SECTION	2866.84	24.0	7644.91		
577+13.25	590+38.50	N.B. LANES - R/O - SUPER.	1325.25	24.0	3534.00		
590+38.50	593+88.50	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
593+88.50	614+03.30	N.B. LANES - R/O - TANGENT SECTION	2023.56	24.0	5396.16		
628+61.06	633+16.86	N.B. LANES - R/O - TANGENT SECTION	455.80	24.0	1215.47		
633+16.86	637+16.86	N.B. LANES - R/O - SUPER. TRANS.	400.00	24.0	1066.67		
637+16.86	647+56.02	N.B. LANES - R/O - SUPER.	1039.16	24.0	2771.09		
649+84.56	658+75.75	N.B. LANES - R/O - SUPER.	891.19	24.0	2376.51		
658+75.75	663+65.46	N.B. LANES - R/O - SUPER. TRANS.	323.06	24.0	861.49		
669+11.02	706+55.89	N.B. LANES - R/O - TANGENT SECTION	3744.87	24.0	9986.32		
294+01.04	295+03.14	N.B. LANES - R/O - ACCEL LANE	102.10	12.0	136.13		
297+54.60	300+60.80	N.B. LANES - R/O - ACCEL LANE	306.20	12.0	408.27		
300+60.80	304+37.06	N.B. LANES - R/O - ACCEL LANE TAPER	376.26	6.0	250.84		
308+33.43	315+31.61	N.B. LANES - R/O - ACCEL LANE	698.18	12.0	930.91		
315+31.61	318+31.61	N.B. LANES - R/O - ACCEL LANE TAPER	300.00	6.0	200.00		
404+73.54	411+26.90	N.B. LANES - R/O - ACCEL LANE	653.36	12.0	871.15		
411+26.90	415+03.16	N.B. LANES - R/O - ACCEL LANE TAPER	376.26	6.0	250.84		
467+76.23	474+95.82	N.B. LANES - R/O - ACCEL LANE	719.59	12.0	959.45		
474+95.82	478+02.88	N.B. LANES - R/O - ACCEL LANE TAPER	307.06	6.0	204.71		
586+99.36	594+03.26	N.B. LANES - R/O - ACCEL LANE	703.90	12.0	938.53		
594+03.26	596+94.81	N.B. LANES - R/O - ACCEL LANE TAPER	300.31	6.0	200.21		
689+40.69	695+38.68	N.B. LANES - R/O - ACCEL LANE	597.99	12.0	797.32		
702+11.98	706+55.89	N.B. LANES - R/O - ACCEL LANE	443.91	12.0	591.88		
706+55.89	714+88.65	RAMP 2 (I-540/I-40 INT.) - R/O - TAN. SECTION	832.76	15.00	1387.93		
706+55.89	710+55.89	RAMP 4 (I-540/I-40 INT.) - R/O - S.E. TRANS.	400.00	24.00	1066.67		
710+55.89	712+55.88	RAMP 4 (I-540/I-40 INT.) - R/O - SUPER.	199.99	24.00	533.31		
712+55.88	713+50.00	RAMP 4 (I-540/I-40 INT.) - R/O - S.E. TRANS.	94.12	24.00	250.99		
*ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER						250	
TOTALS					94248.23	250	1213.33

*ESTIMATED QUANTITIES. ENTIRE PROJECT IF AND WHERE DIRECTED BY ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT - S.B. LANES

STATION	STATION	LOCATION	LENGTH	RUBBLIZING P.C.C.		AGGREGATE BASE COURSE (CLASS 7)	REMOVAL OF EXIST. ASPH. OVERLAY
				AVG. WIDTH	SQ. YD.		
			LIN. FT.	FEET		TON	SQ. YD.
286+91.50	291+46.50	S.B. LANES - EXISTING ASPHALT TRANSITION	455.00				1213.33
289+31.50	295+49.47	S.B. LANES - R/O - TANGENT SECTION	617.97	24.0	1647.92		
298+2.91	307+90.96	S.B. LANES - R/O - TANGENT SECTION	978.05	24.0	2608.13		
307+90.96	335+26.39	S.B. LANES - R/O - TANGENT SECTION	2735.43	24.0	7294.48		
335+26.39	338+76.39	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
338+76.39	343+39.26	S.B. LANES - R/O - SUPER.	462.87	24.0	1234.32		
355+30.11	356+46.67	S.B. LANES - R/O - TANGENT SECTION	116.56	24.0	310.83		
356+46.67	359+96.67	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
359+96.67	368+78.77	S.B. LANES - R/O - SUPER.	882.10	24.0	2352.27		
368+78.77	372+28.77	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
372+28.77	388+86.59	S.B. LANES - R/O - TANGENT SECTION	1657.82	24.0	4420.85		
391+33.78	393+16.75	S.B. LANES - R/O - SUPER. TRANS.	182.97	24.0	487.92		
393+16.75	405+76.13	S.B. LANES - R/O - SUPER.	1259.38	24.0	3358.35		
405+76.13	409+26.13	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
409+26.13	415+73.32	S.B. LANES - R/O - TANGENT SECTION	647.19	24.0	1725.84		
415+73.32	419+23.32	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
419+23.32	423+35.03	S.B. LANES - R/O - SUPER.	411.71	24.0	1097.89		
425+68.30	429+38.32	S.B. LANES - R/O - SUPER.	370.02	24.0	986.72		
429+38.32	432+88.32	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
432+88.32	465+13.72	S.B. LANES - R/O - TANGENT SECTION	3225.40	24.0	8601.07		
465+13.72	468+97.05	S.B. LANES - R/O - SUPER. TRANS.	383.33	24.0	1022.21		
468+97.05	482+40.00	S.B. LANES - R/O - SUPER.	1342.95	24.0	3581.20		
482+40.00	485+57.89	S.B. LANES - R/O - SUPER.	317.89	24.0	847.71		
485+57.89	489+41.22	S.B. LANES - R/O - SUPER. TRANS.	383.33	24.0	1022.21		
489+41.22	490+70.05	S.B. LANES - R/O - TANGENT SECTION	128.83	24.0	343.55		
497+16.96	525+83.80	S.B. LANES - R/O - TANGENT SECTION	2866.84	24.0	7644.91		
577+13.25	590+38.50	S.B. LANES - R/O - SUPER.	1325.25	24.0	3534.00		
590+38.50	593+88.50	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33		
593+88.50	613+89.88	S.B. LANES - R/O - TANGENT SECTION	2010.14	24.0	5360.37		
628+61.06	633+16.86	S.B. LANES - R/O - TANGENT SECTION	455.80	24.0	1215.47		
633+16.86	637+16.86	S.B. LANES - R/O - SUPER. TRANS.	400.00	24.0	1066.67		
637+16.86	646+61.94	S.B. LANES - R/O - SUPER.	945.08	24.0	2520.21		
649+09.25	658+75.75	S.B. LANES - R/O - SUPER.	966.50	24.0	2577.33		
658+75.75	662+94.67	S.B. LANES - R/O - SUPER. TRANS.	252.27	24.0	672.72		
668+40.23	710+48.67	S.B. LANES - R/O - TANGENT SECTION	4208.44	24.0	11222.51		
286+91.5	290+19.11	S.B. LANES - R/O - ACCEL LANE	327.61	12.0	436.81		
366+73.61	369+68.38	S.B. LANES - R/O - ACCEL LANE TAPER	294.77	6.0	196.51		
369+68.38	376+66.55	S.B. LANES - R/O - ACCEL LANE	698.17	12.0	930.89		
436+68.37	439+68.37	S.B. LANES - R/O - ACCEL LANE TAPER	300.00	6.0	200.00		
439+68.37	446+68.49	S.B. LANES - R/O - ACCEL LANE	700.12	12.0	933.49		
569+76.51	573+19.03	S.B. LANES - R/O - ACCEL LANE TAPER	342.52	6.0	228.35		
573+19.03	579+72.86	S.B. LANES - R/O - ACCEL LANE	653.83	12.0	871.77		
670+87.26	673+87.26	S.B. LANES - R/O - ACCEL LANE TAPER	300.00	6.0	200.00		
673+87.26	680+86.42	S.B. LANES - R/O - ACCEL LANE	699.16	12.0	932.21		
701+91.31	709+37.38	S.B. LANES - R/O - ACCEL LANE	746.07	12.0	994.76		
710+48.67	714+31.45	RAMP 1 (I-540/I-40 INT. - R/O - TAN. SECTION	382.78	24.0	1020.75		
734+67.00	737+50.32	RAMP 1 (I-540/I-40 INT. - R/O - S.E. TRANS.	283.32	24.0	755.52		
737+50.32	740+18.72	RAMP 1 (I-540/I-40 INT.) - R/O - S.E. TRANS.	268.40	24.0	715.73		
740+18.72	741+00.00	RAMP 1 (I-540/I-40 INT.) - R/O - SUPER.	81.28	24.0	216.75		
738+25.0	741+00.00	RAMP 1 (I-540/I-40 INT.) - EXIST. ASPHALT TRANS.	275.00				733.33
392+50.00	393+60.75	RAMP 3 (I-540/I-40 INT.) - R/O - SUPER.	110.75	15.00	184.58		
393+60.75	709+37.38	RAMP 3 (I-540/I-40 INT.) - R/O - S.E. TRANS.	400.00	15.00	666.67		
*ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER						250	
TOTALS					94775.76	250	1946.66

*ESTIMATED QUANTITIES. ENTIRE PROJECT IF AND WHERE DIRECTED BY ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:35:53 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.		BB0407	78	464

(2) QUANTITIES

4" PIPE UNDERDRAINS

STATION	STATION	LOCATION	4" PIPE UNDERDRAINS				UNDERDRAIN VIDEO INSPECTION	UNDERDRAIN OUTLET PROTECTORS	REMOVAL & DISPOSAL OF UNDERDRAIN OUTLET PROTECTORS
			PAVEMENT EDGE DRAINS	LATERALS (NON PERFORATED)		TOTAL LENGTH			
			LIN. FT.	NO.	LIN. FT.			EACH	
286+92	294+98	RT. OF N.B. LANES - R/O	806	4	192	998	998	4	3
297+61	336+41	RT. OF N.B. LANES - R/O	3880	16	768	4648	4648	16	13
355+30	389+05	RT. OF N.B. LANES - R/O	3375	14	672	4047	4047	14	12
408+44	422+31	RT. OF N.B. LANES - R/O	1387	6	288	1675	1675	6	5
424+68	490+70	RT. OF N.B. LANES - R/O	6602	27	1296	7898	7898	27	23
497+17	525+82	RT. OF N.B. LANES - R/O	2865	12	576	3441	3441	12	10
577+13	614+03	RT. OF N.B. LANES - R/O	3699	15	720	4419	4419	15	13
628+61	633+92	RT. OF N.B. LANES - R/O	531	3	144	675	675	3	3
663+39	663+75	RT. OF N.B. LANES - R/O	36	1	48	84	84	1	1
669+21	706+56	RT. OF N.B. LANES - R/O	3735	15	720	4455	4455	15	13
336+41	343+20	LT. OF N.B. LANES - R/O	679	3	144	823	823	3	3
391+47	408+44	LT. OF N.B. LANES - R/O	1697	7	336	2033	2033	7	6
633+92	647+89	LT. OF N.B. LANES - R/O	1397	6	288	1685	1685	6	5
650+27	663+39	LT. OF N.B. LANES - R/O	1145	5	240	1385	1385	5	4
357+28	371+47	RT. OF S.B. LANES - R/O	1419	6	288	1707	1707	6	5
416+76	423+20	RT. OF S.B. LANES - R/O	644	3	144	788	788	3	3
425+54	431+85	RT. OF S.B. LANES - R/O	631	3	144	775	775	3	3
465+91	488+64	RT. OF S.B. LANES - R/O	2273	10	480	2753	2753	10	8
577+13	592+56	RT. OF S.B. LANES - R/O	1543	7	336	1879	1879	7	6
286+92	295+58	LT. OF S.B. LANES - R/O	866	4	192	1058	1058	4	3
298+22	343+39	LT. OF S.B. LANES - R/O	4517	19	912	5429	5429	19	16
355+30	357+28	LT. OF S.B. LANES - R/O	198	1	48	246	246	1	1
371+47	388+83	LT. OF S.B. LANES - R/O	1736	7	336	2072	2072	7	6
391+31	416+76	LT. OF S.B. LANES - R/O	2545	11	528	3073	3073	11	9
431+85	465+91	LT. OF S.B. LANES - R/O	3406	14	672	4078	4078	14	12
488+64	490+70	LT. OF S.B. LANES - R/O	206	1	48	254	254	1	1
497+17	525+82	LT. OF S.B. LANES - R/O	2865	12	576	3441	3441	12	10
592+56	613+90	LT. OF S.B. LANES - R/O	2143	9	432	2575	2575	9	8
628+61	646+13	LT. OF S.B. LANES - R/O	1752	8	384	2136	2136	8	7
648+68	663+03	LT. OF S.B. LANES - R/O	1268	6	288	1556	1556	6	5
668+49	709+37	LT. OF S.B. LANES - R/O	4088	17	816	4904	4904	17	14
350+87	355+30	RT. OF N.B. LANES - FULL DEPTH	443	2	96	539	539	2	2
525+82	533+45	RT. OF N.B. LANES - FULL DEPTH	763	4	192	955	955	4	3
568+20	577+13	RT. OF N.B. LANES - FULL DEPTH	893	4	192	1085	1085	4	3
614+03	621+03	RT. OF N.B. LANES - FULL DEPTH	700	3	144	844	844	3	3
622+98	628+61	RT. OF N.B. LANES - FULL DEPTH	563	3	144	707	707	3	3
343+20	348+87	LT. OF N.B. LANES - FULL DEPTH	567	3	144	711	711	3	3
571+89	577+13	RT. OF S.B. LANES - FULL DEPTH	524	3	144	668	668	3	3
343+39	349+07	LT. OF S.B. LANES - FULL DEPTH	568	3	144	712	712	3	3
351+14	355+30	LT. OF S.B. LANES - FULL DEPTH	416	2	96	512	512	2	2
525+82	533+45	LT. OF S.B. LANES - FULL DEPTH	763	4	192	955	955	4	3
568+09	571+89	LT. OF S.B. LANES - FULL DEPTH	380	2	96	476	476	2	2
613+90	621+02	LT. OF S.B. LANES - FULL DEPTH	712	3	144	856	856	3	3
622+98	628+61	LT. OF S.B. LANES - FULL DEPTH	563	3	144	707	707	3	3
713+51	714+31	LT. OF RAMP 1 - R/O	80	1	48	128	128	1	1
714+31	715+07	LT. OF RAMP 1 - FULL DEPTH	76	1	48	124	124	1	1
715+07	718+84	RT. OF RAMP 1 - FULL DEPTH	377	2	96	473	473	2	2
721+80	728+85	RT. OF RAMP 1 - FULL DEPTH	705	3	144	849	849	3	3
731+20	734+67	RT. OF RAMP 1 - FULL DEPTH	347	2	96	443	443	2	2
734+67	737+50	RT. OF RAMP 1 - R/O	283	2	96	379	379	2	2
737+50	741+00	LT. OF RAMP 1 - R/O	350	2	96	446	446	2	2
712+75	714+89	RT. OF RAMP 2 - R/O	214	1	48	262	262	1	1
714+89	718+70	RT. OF RAMP 2 - FULL DEPTH	381	2	96	477	477	2	2
721+65	727+70	RT. OF RAMP 2 - FULL DEPTH	605	3	144	749	749	3	3
729+89	735+58	RT. OF RAMP 2 - FULL DEPTH	569	3	144	713	713	3	3
709+37	392+50	LT. OF RAMP 3 - R/O	511	3	144	655	655	3	3
387+00	392+50	LT. OF RAMP 3 - FULL DEPTH	550	3	144	694	694	3	3
706+56	713+50	RT. OF RAMP 4 - R/O	694	3	144	838	838	3	3
713+50	719+00	RT. OF RAMP 4 - FULL DEPTH	550	3	144	694	694	3	3
TOTALS			78081	345	16560	94641	94641	345	301

SCARIFYING CONCRETE PAVEMENT

STATION	STATION	LOCATION	LENGTH	WIDTH	SQ. YD.
			FEET		
2+12.21	2+80.21	RAMP 1 (I-540/S.H. 22 INT. - RAMP TRANS.)	68.00	15.00	113.33
8+57.86	9+01.86	RAMP 2 (I-540/S.H. 22 INT. - RAMP TRANS.)	44.00	15.00	73.33
8+94.41	9+94.41	RAMP 3 (I-540/S.H. 22 INT. - RAMP TRANS.)	100.00	15.00	166.67
9+26.78	10+26.78	RAMP 4 (I-540/S.H. 22 INT. - RAMP TRANS.)	100.00	15.00	166.67
382+98.83	383+98.83	RAMP 1 (I-540/GRAND AVENUE INT. - RAMP TRANS.)	100.00	15.00	166.67
399+19.66	400+19.66	RAMP 2 (I-540/GRAND AVENUE INT. - RAMP TRANS.)	100.00	15.00	166.67
392+07.00	393+03.00	RAMP 3 (I-540/GRAND AVENUE INT. - RAMP TRANS.)	96.00	15.00	160.00
381+15.95	382+15.95	RAMP 4 (I-540/GRAND AVENUE INT. - RAMP TRANS.)	100.00	15.00	166.67
452+99.03	453+99.03	RAMP 1 (I-540/KELLEY HWY INT. - RAMP TRANS.)	100.00	15.00	166.67
462+28.47	463+28.47	RAMP 2 (I-540/KELLEY HWY INT. - RAMP TRANS.)	100.00	15.00	166.67
462+49.70	463+49.70	RAMP 3 (I-540/KELLEY HWY INT. - RAMP TRANS.)	100.00	15.00	166.67
451+17.87	452+17.87	RAMP 4 (I-540/KELLEY HWY INT. - RAMP TRANS.)	100.00	15.00	166.67
579+50.00	580+50.00	RAMP 1 (I-540/4TH STREET INT. - RAMP TRANS.)	100.00	15.00	166.67
581+42.65	582+42.65	RAMP 2 (I-540/4TH STREET INT. - RAMP TRANS.)	100.00	15.00	166.67
587+91.59	588+91.59	RAMP 3 (I-540/4TH STREET INT. - RAMP TRANS.)	100.00	15.00	166.67
589+22.43	590+22.43	RAMP 4 (I-540/4TH STREET INT. - RAMP TRANS.)	100.00	15.00	166.67
684+60.33	685+60.33	RAMP 1 (I-540/U.S. 64 INT. - RAMP TRANS.)	100.00	15.00	166.67
683+92.93	684+92.93	RAMP 2 (I-540/U.S. 64 INT. - RAMP TRANS.)	100.00	15.00	166.67
699+85.51	700+85.51	RAMP 3 (I-540/U.S. 64 INT. - RAMP TRANS.)	100.00	15.00	166.67
696+62.91	697+62.91	RAMP 4 (I-540/U.S. 64 INT. - RAMP TRANS.)	100.00	15.00	166.67
696+42.10	697+42.10	RAMP 5 (I-540/U.S. 64 INT. - RAMP TRANS.)	100.00	15.00	166.67
696+96.41	697+96.41	RAMP 6 (I-540/U.S. 64 INT. - RAMP TRANS.)	100.00	15.00	166.67
681+15.69	682+15.69	RAMP 7 (I-540/U.S. 64 INT. - RAMP TRANS.)	100.00	15.00	166.67
685+35.36	686+35.36	RAMP 8 (I-540/U.S. 64 INT. - RAMP TRANS.)	100.00	15.00	166.67
TOTAL					3846.73

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:35:54 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.		BB0407	79	464

(2) QUANTITIES

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	GUARDRAIL (TYPE B)	GUARDRAIL TERMINAL (TYPE 2)	TERMINAL ANCHOR POSTS (TYPE 1)	THRIE BEAM GUARDRAIL TERMINAL	* ACHM SURF. COURSE (1/2") (440 LBS./SQ. YD.)	AGG. BASE COURSE (CLASS 7)
			LIN. FT.		EACH			TONS	
287+78.1	290+46.9	LT. OF S.B. LANES	200		1		1	42.3	127.4
6+26.5	295+27.5	RT. OF N.B. LANES & RAMP 1	200		1		1	42.3	127.4
292+33.3	295+52.1	LT. OF N.B. LANES	250		1		1	73.3	188.0
297+17.9	301+36.7	RT. OF N.B. LANES	400			1	1	70.9	191.2
297+67.1	300+85.9	RT. OF S.B. LANES	250		1		1	59.8	188.0
297+91.4	301+60.2	LT. OF S.B. LANES	300		1		1	56.6	159.3
333+55.0	336+05.0	RT. OF N.B. LANES	200		1	1		40.7	137.0
346+48.3	349+17.1	RT. OF N.B. LANES	200		1		1	42.3	127.4
346+04.6	349+23.4	LT. OF N.B. LANES	250		1		1	73.3	188.0
350+51.3	352+70.1	RT. OF N.B. LANES	200			1	1	42.3	127.4
350+70.3	353+89.1	RT. OF S.B. LANES	250		1		1	73.3	188.0
350+76.6	355+45.4	LT. OF S.B. LANES	400		1		1	70.9	191.2
357+46.8	360+15.6	RT. OF N.B. LANES	200		1		1	42.3	127.4
359+53.0	364+53.0	LT. OF N.B. LANES	450		1	1		101.7	254.5
362+23.0	367+23.0	RT. OF S.B. LANES	450		1	1		101.7	254.5
363+61.1	366+29.9	LT. OF S.B. LANES	200		1		1	42.3	127.4
385+73.9	389+42.7	RT. OF N.B. LANES	350		1		1	55.3	175.2
385+75.2	389+19.0	LT. OF S.B. LANES	325			1	1	45.2	151.3
386+16.5	389+35.3	LT. OF N.B. LANES	250		1		1	59.8	188.0
390+93.2	396+62.0	LT. OF S.B. LANES	500		1		1	75.4	223.1
391+00.6	394+19.4	RT. OF S.B. LANES	250		1		1	59.8	188.0
391+16.9	396+35.7	RT. OF N.B. LANES	500			1	1	68.7	207.1
419+98.8	422+67.6	RT. OF N.B. LANES	200		1		1	42.3	127.4
419+81.2	423+00.0	LT. OF N.B. LANES	250		1		1	73.3	188.0
425+16.9	428+35.7	RT. OF S.B. LANES	250		1		1	73.3	188.0
425+48.5	428+17.3	LT. OF S.B. LANES	200		1		1	42.3	127.4
454+56.6	459+56.6	LT. OF N.B. LANES	450		1	1		101.7	254.5
455+53.4	458+22.2	RT. OF N.B. LANES	200		1		1	42.3	127.4
457+26.6	462+26.6	RT. OF S.B. LANES	450		1	1		101.7	254.5
458+61.0	461+29.8	LT. OF S.B. LANES	200		1		1	42.3	127.4
475+71.8	482+40.6	MEDIAN		600			2		
488+37.8	491+06.6	LT. OF S.B. LANES	250			1	1	73.3	188.0
488+37.8	491+06.6	RT. OF N.B. LANES	200		1		1	42.3	127.4
496+80.5	503+99.3	RT. OF N.B. LANES	700			1	1	95.6	270.9
496+80.5	504+49.3	LT. OF S.B. LANES	700		1		1	102.3	286.8
524+38.0	533+81.8	RT. OF N.B. LANES	875		1		1	125.9	342.6
524+88.0	533+81.8	LT. OF S.B. LANES	875			1	1	119.1	326.7
567+73.1	574+91.9	LT. OF S.B. LANES	650		1		1	95.6	270.9
567+83.3	576+02.1	RT. OF N.B. LANES	800			1	1	109.1	302.7
574+99.4	578+18.2	MEDIAN		250			2		
614+25.4	616+94.2	RT. OF N.B. LANES	200		1		1	42.3	127.4
615+20.1	621+38.9	LT. OF N.B. LANES	550		1		1	114.8	334.6
616+20.2	621+38.9	RT. OF S.B. LANES	500			1	1	96.5	285.8
618+10.5	621+38.9	LT. OF S.B. LANES	291				2	44.2	154.4
618+70.1	621+38.9	RT. OF N.B. LANES	200		1		1	42.3	127.4
622+61.1	625+79.9	RT. OF S.B. LANES	250		1		1	73.3	188.0
622+61.1	625+29.9	LT. OF S.B. LANES	200		1		1	42.3	127.4
644+95.0	648+13.8	LT. C.L. N.B. LANES	250		1		1	73.3	188.0
645+66.9	648+35.6	RT. C.L. N.B. LANES	200		1		1	42.3	127.4
648+23.8	656+17.6	LT. C.L. S.B. LANES	725		1		1	105.7	294.8
648+45.2	651+64.0	RT. C.L. S.B. LANES	250		1		1	73.3	188.0
659+03.9	663+89.3	LT. C.L. N.B. LANES	250		1		1	73.3	188.0
661+43.6	664+12.3	RT. OF N.B. LANES	200		1		1	42.3	127.4
668+02.4	676+46.2	LT. OF S.B. LANES	775		1		1	112.4	310.7
668+25.5	671+44.3	RT. OF S.B. LANES	250		1		1	73.3	188.0
668+87.2	679+56.0	RT. OF N.B. LANES	1050			1	1	142.7	382.4
688+24.9	690+93.7	RT. OF N.B. LANES	200		1		1	42.3	127.4
688+70.0	692+45.0	LT. OF N.B. LANES	325		1	1		78.8	195.8
689+56.2	693+31.2	RT. OF S.B. LANES	325		1	1		78.8	195.8
690+11.4	690+58.6	LT. OF S.B. LANES	10				2	6.4	22.3
691+06.9	693+75.7	LT. OF S.B. LANES	200		1		1	42.3	127.4
691+42.0	691+89.8	RT. OF N.B. LANES	10				2	6.4	22.3
696+50.0	699+00.0	LT. OF RAMP 3 I-540/U.S. 64 INT	200		1	1		40.7	137.0
10+16.8	12+85.6	RT. OF E.B. U.S. 64	200		1		1	43.3	127.4
10+44.1	13+12.9	LT. OF E.B. U.S. 64	200		1		1	63.1	163.6
16+87.1	19+55.9	RT. OF W.B. U.S. 64	200		1		1	63.1	163.6
17+14.4	19+83.2	LT. OF W.B. U.S. 64	200		1		1	42.3	127.4
716+37.4	719+06.2	RT. OF RAMP 2 (I-540/I-40 INT)	200		1		1	42.3	127.4
715+87.4	719+06.2	LT. OF RAMP 2 (I-540/I-40 INT)	250		1		1	73.3	188.0
717+02.2	719+21.0	LT. OF RAMP 1 (I-540/I-40 INT)	200			1	1	35.1	111.5
721+43.2	724+62.0	RT. OF RAMP 1 (I-540/I-40 INT)	250		1		1	73.3	188.0
721+43.2	729+22.0	LT. OF RAMP 1 (I-540/I-40 INT)	775				2	109.2	381.9
725+37.5	728+06.3	RT. OF RAMP 2 (I-540/I-40 INT)	200		1		1	42.3	127.4
724+87.5	728+06.3	LT. OF RAMP 2 (I-540/I-40 INT)	250		1		1	73.3	188.0
730+83.1	734+01.9	RT. OF RAMP 1 (I-540/I-40 INT)	250		1		1	73.3	188.0
730+83.1	733+51.9	LT. OF RAMP 1 (I-540/I-40 INT)	200		1		1	42.3	127.4
399+00.0	401+68.8	LT. OF I-40 W.B. LANES	200		1		1	42.3	127.4
TOTALS			24811	850	60	19	75	4931.1	13852.1

*BASIS OF ESTIMATE: ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG 76-22) = 6.0%
Nmax = 205

SELECTED PIPE BEDDING

	LOCATION	SELECTED PIPE BEDDING
		CU. YD.
*	ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER	50
	TOTALS	50

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

ACHM PATCHING OF EXISTING SHOULDERS

	LOCATION	TON
*	ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER	200
	TOTAL	200

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

CONCRETE BARRIER WALL

STATION	STATION	LOCATION	PIER PROTECTION TYPE A	MEDIAN TYPE A	MEDIAN TYPE SPECIAL
			LIN. FT.		
287+48.2	287+78.7	LT. OF S.B. LANES	30.5		
287+71.5	287+97.5	RT. OF N.B. LANES	26.0		
287+79.2	288+09.7	RT. OF N.B. LANES/RAMP 5	30.5		
13+57.0	16+13.0	LT. OF E.B. S.H. 22	256.0		
13+57.0	16+13.0	RT. OF W.B. S.H. 22	256.0		
360+15.0	369+41.0	RT. OF N.B. LANES	926.0		
363+28.0	363+48.0	MEDIAN	40.0		
363+31.7	363+61.7	LT. OF S.B. LANES	30.0		
458+21.6	458+51.6	RT. OF N.B. LANES	30.0		
458+31.6	458+51.6	MEDIAN	40.0		
458+31.6	458+61.6	LT. OF S.B. LANES	30.0		
616+93.6	617+23.6	RT. OF N.B. LANES	30.0		
617+81.1	618+11.1	LT. OF S.B. LANES	30.0		
689+62.5	690+12.0	LT. OF S.B. LANES	49.5		
690+58.0	691+07.5	LT. OF S.B. LANES	49.5		
690+93.1	691+42.6	RT. OF N.B. LANES	49.5		
691+89.2	692+38.7	RT. OF N.B. LANES	49.5		
2+12.0	3+90.0	LT. OF RAMP 1 S.H. 22 INT.		178.0	
293+22.0	295+70.0	LT. OF RAMP 6 S.H. 22 INT.		248.0	
482+40.0	491+06.6	MEDIAN			866.6
496+80.5	533+81.8	MEDIAN			3701.8
567+78.2	575+00.0	MEDIAN			721.8
TOTALS			1953.0	426.0	5290.2

WIRE ROPE SAFETY FENCE (WRSF)

STATION	STATION	LOCATION	WIRE ROPE SAFETY FENCE	WRSF MAINTENANCE MATERIALS
			LIN. FT.	LUMP SUM
289+25.0	295+50.0	LT. OF N.B. LANES	625.0	
297+67.0	349+30.0	RT. OF S.B. LANES	5163.0	
350+63.0	360+03.0	LT. OF N.B. LANES	940.0	
364+03.0	389+35.3	LT. OF N.B. LANES	2532.3	
391+00.6	423+65.0	RT. OF S.B. LANES	3264.4	
424+55.0	455+06.6	LT. OF N.B. LANES	3051.6	
459+06.6	475+80.0	LT. OF N.B. LANES	1673.4	
ENTIRE PROJECT				1.00
TOTALS			17249.7	1.00

NOTE: FUNDING FROM F.A.P. HSIP-540-1(82)10

FENCE

STATION	STATION	LOCATION	REMOVAL & DISPOSAL OF FENCE	WIRE FENCE (TYPE A)	16' VEHICULAR GATE
			LIN. FT.		EACH
420+10.0	422+70.0	I-540 MAIN LANES RT.	275	275	
423+00.0	424+00.0	I-540 MAIN LANES LT.	150	150	1
424+20.0	425+50.0	I-540 MAIN LANES RT.	175	175	1
425+50.0	426+60.0	I-540 MAIN LANES LT.	150	150	
489+90.0	491+00.0	I-540 MAIN LANES LT.	200	200	1
489+90.0	491+00.0	I-540 MAIN LANES RT.	200	200	1
496+75.0	498+00.0	I-540 MAIN LANES LT.	200	200	1
496+75.0	498+00.0	I-540 MAIN LANES RT.	200	200	1
661+42.4	664+20.0	I-540 MAIN LANES RT.	325	325	
667+90.0	668+20.0	I-540 MAIN LANES LT.	175	175	
668+80.0	669+10.0	I-540 MAIN LANES RT.	200	200	1
TOTALS			2250	2250	7

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.

RUMBLE STRIPS IN ASPHALT SHOULDERS

STATION	STATION	LOCATION	LIN. FT.
		I-540 SHOULDERS	
286+91.50	294+92.54	N.B. LANES - OUTSIDE SHOULDER	801.04
297+55.98	348+79.89	N.B. LANES - OUTSIDE SHOULDER	5123.91
350+87.11	389+05.28	N.B. LANES - OUTSIDE SHOULDER	3818.17
391+52.46	422+31.14	N.B. LANES - OUTSIDE SHOULDER	3078.68
424+68.02	490+70.05	N.B. LANES - OUTSIDE SHOULDER	6602.03
497+16.96	533+45.30	N.B. LANES - OUTSIDE SHOULDER	3628.34
568+20.33	621+02.43	N.B. LANES - OUTSIDE SHOULDER	5290.86
622+97.56	647+88.3	N.B. LANES - OUTSIDE SHOULDER	2490.74
650+44.97	663+72.95	N.B. LANES - OUTSIDE SHOULDER	1161.33
669+33.51	713+59.56	N.B. LANES - OUTSIDE SHOULDER	4426.05
286+91.50	295+14.07	N.B. LANES - INSIDE SHOULDER	822.57
297+77.51	348+87.14	N.B. LANES - INSIDE SHOULDER	5109.63
350+94.36	388+99.35	N.B. LANES - INSIDE SHOULDER	3804.99
391+46.54	422+63.52	N.B. LANES - INSIDE SHOULDER	3116.98
425+00.40	490+70.05	N.B. LANES - INSIDE SHOULDER	6569.65
497+16.96	533+45.30	N.B. LANES - INSIDE SHOULDER	3628.34
568+15.03	621+02.43	N.B. LANES - INSIDE SHOULDER	5296.16
622+97.56	647+88.3	N.B. LANES - INSIDE SHOULDER	2490.74
650+44.97	663+54.48	N.B. LANES - INSIDE SHOULDER	1142.86
669+15.04	713+59.56	N.B. LANES - INSIDE SHOULDER	4444.52
286+91.50	295+72.33	S.B. LANES - OUTSIDE SHOULDER	880.83
298+26.48	349+06.61	S.B. LANES - OUTSIDE SHOULDER	5080.13
351+13.83	388+83.44	S.B. LANES - OUTSIDE SHOULDER	3769.61
391+30.63	423+51.73	S.B. LANES - OUTSIDE SHOULDER	3221.10
425+85.00	490+70.05	S.B. LANES - OUTSIDE SHOULDER	6485.05
497+16.96	533+45.30	S.B. LANES - OUTSIDE SHOULDER	3628.34
568+09.05	621+02.43	S.B. LANES - OUTSIDE SHOULDER	5302.14
622+97.56	646+10.91	S.B. LANES - OUTSIDE SHOULDER	2313.35
648+70.29	662+82.11	S.B. LANES - OUTSIDE SHOULDER	1245.17
668+41.77	714+51.38	S.B. LANES - OUTSIDE SHOULDER	4609.61
286+91.50	295+41.76	S.B. LANES - INSIDE SHOULDER	850.26
298+05.19	348+99.36	S.B. LANES - INSIDE SHOULDER	5094.17
351+06.58	388+89.37	S.B. LANES - INSIDE SHOULDER	3782.79
391+36.56	423+20.10	S.B. LANES - INSIDE SHOULDER	3183.54
425+53.37	490+70.05	S.B. LANES - INSIDE SHOULDER	6516.68
497+16.96	533+45.30	S.B. LANES - INSIDE SHOULDER	3628.34
568+14.35	621+02.43	S.B. LANES - INSIDE SHOULDER	5296.84
622+97.56	646+10.91	S.B. LANES - INSIDE SHOULDER	2313.35
648+70.29	663+00.58	S.B. LANES - INSIDE SHOULDER	1263.64
668+60.24	714+51.38	S.B. LANES - INSIDE SHOULDER	4591.14
TOTAL			145903.67

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
4-7-12

QUANTITIES

9/7/2012 1:05:57 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	80	464

(2) QUANTITIES

APPROACH SLABS & GUTTERS (1 OF 2)

STATION	STATION	LOCATION	APPROACH SLABS			APPROACH GUTTERS									REINFORCING STEEL - RDWY. (GRADE 60)	AGGREGATE BASE COURSE (CLASS 7)	CONCRETE SPILLWAY (TYPE A)	TYPE N-1 DROP INLET	TYPE N-2 DROP INLET	TYPE N-3 DROP INLET	12" ZINC COAT (GALV.) CORR. STEEL PIPE CULVERT (16 GAUGE)
			STANDARD	TYPE SPECIAL		TYPE C	TYPE PT	TYPE SPECIAL													
				1	2			1	2	3	4	5	6	7							
			CUBIC YARD												LBS.	TON	EACH	EACH	EACH	EACH	LIN. FT.
295+41.76	295+78.26	RT. OF S.B. LANES						14.80							1758	49.08					
295+49.47	295+85.97	S.B. LANES		116.80											13941	405.79					
295+72.33	296+08.83	LT. OF S.B. LANES						14.00							1647	49.08					
297+68.69	298+05.19	RT. OF S.B. LANES						14.00							1647	47.62					
297+76.40	298+12.90	S.B. LANES			73.70										8873	239.57					
297+89.98	298+26.48	LT. OF S.B. LANES						14.80							1758	47.62	1			1	60
294+92.54	295+29.04	RT. OF N.B. LANES						14.80							1758	48.66					
295+06.36	295+42.86	N.B. LANES	73.73												8294	247.84					
295+14.07	295+50.57	LT. OF N.B. LANES						14.00							1647	48.66					
297+19.48	297+55.98	RT. OF N.B. LANES						14.00							1647	48.48	1			1	60
297+33.29	297+69.79	N.B. LANES	73.73												8294	246.92					
297+41.01	297+77.51	LT. OF N.B. LANES						14.80							1758	48.48					
348+99.36	349+35.86	RT. OF S.B. LANES											16.54		1910	11.49					
349+02.76	349+39.26	S.B. LANES	49.15												5556	34.07					
349+06.61	349+43.11	LT. OF S.B. LANES											27.57		3180	11.49					
350+70.08	351+06.58	RT. OF S.B. LANES											16.54		1910	11.49					
350+73.48	351+09.98	S.B. LANES	49.15												5556	34.07					
350+77.33	351+13.83	LT. OF S.B. LANES											27.57		3180	11.49	1		1		64
348+79.89	349+16.39	RT. OF N.B. LANES											27.57		3180	11.49					
348+83.74	349+20.24	N.B. LANES	49.15												5556	34.07					
348+87.14	349+23.64	LT. OF N.B. LANES											16.54		1910	11.49					
350+50.61	350+87.11	RT. OF N.B. LANES											27.57		3180	11.49	1		1		64
350+54.46	350+90.96	N.B. LANES	49.15												5556	34.07					
350+57.86	350+94.36	LT. OF N.B. LANES											16.54		1910	11.49					
388+83.44	389+19.94	LT. OF S.B. LANES				18.06									991	87.18	1	1			92
388+86.59	389+23.09	S.B. LANES	49.15												5556	187.37					
388+89.37	389+25.87	RT. OF S.B. LANES				11.52									623	55.95					
390+94.13	391+30.63	LT. OF S.B. LANES				18.06									991	84.45	1	1			72
390+97.28	391+33.78	S.B. LANES	49.15												5556	181.51					
391+00.06	391+36.56	RT. OF S.B. LANES				11.52									623	54.20					
388+99.35	389+35.85	LT. OF N.B. LANES				11.52									623	35.60					
389+02.13	389+38.63	N.B. LANES	49.15												5556	119.23					
389+05.28	389+41.78	RT. OF N.B. LANES				18.06									991	55.48	1	1			92
391+10.04	391+46.54	LT. OF N.B. LANES				11.52									623	35.60					
391+12.82	391+49.32	N.B. LANES	49.15												5556	119.23					
391+15.96	391+52.46	RT. OF N.B. LANES				18.06									991	55.48	1			1	92
423+20.10	423+56.60	RT. OF S.B. LANES				11.52									623	21.16					
423+35.03	423+71.53	S.B. LANES	49.15												5556	70.86					
423+51.73	423+88.22	LT. OF S.B. LANES				18.06									991	32.97					
425+16.88	425+53.37	RT. OF S.B. LANES				11.52									623	21.16					
425+31.80	425+68.30	S.B. LANES	49.15												5556	70.86					
425+48.51	425+85.00	LT. OF S.B. LANES				18.06									991	32.97					
422+31.14	422+67.63	RT. OF N.B. LANES				18.06									991	63.40					
422+48.44	422+84.94	N.B. LANES	49.15												5556	136.27					
422+63.52	423+00.02	LT. OF N.B. LANES				11.52									623	40.69					
424+31.51	424+68.02	RT. OF N.B. LANES				18.06									991	63.40					
424+48.82	424+85.32	N.B. LANES	49.15												5556	136.27					
424+63.89	425+00.40	LT. OF N.B. LANES				11.52									623	40.69					
490+70.05	491+06.55	RT. OF N.B. LANES							23.00						2482	28.65					
490+70.05	491+06.55	N.B. LANES	49.15												5556	62.46					
490+70.05	491+06.55	MEDIAN								22.66					2553	20.52					
490+70.05	491+06.55	S.B. LANES	49.15												5556	62.46					
490+70.05	491+06.55	LT. OF S.B. LANES							23.00						2482	28.65					
496+80.46	497+16.96	RT. OF N.B. LANES							23.00						2482	28.65					
496+80.46	497+16.96	N.B. LANES	49.15												5556	62.46					
496+80.46	497+16.96	MEDIAN								22.66					2553	20.52					
496+80.46	497+16.96	S.B. LANES	49.15												5556	62.46					
496+80.46	497+16.96	LT. OF S.B. LANES							23.00						2482	28.65					
533+45.30	533+81.80	RT. OF N.B. LANES										11.55			1170	5.89					
533+45.30	533+81.80	N.B. LANES	49.15												5556	34.07					
533+45.30	533+81.80	S.B. LANES	49.15												5556	34.07					
533+45.30	533+81.80	LT. OF S.B. LANES										11.55			1170	5.89					
567+72.55	568+09.05	LT. OF S.B. LANES											9.85		1120	5.89					
567+75.46	568+11.96	S.B. LANES	49.15												5556	34.07					
567+80.93	568+17.43	N.B. LANES	49.15												5556	34.07					
567+83.83	568+20.33	RT. OF N.B. LANES											9.85		1120	5.89					
SUB TOTALS			1130.46	116.80	73.70	236.64		115.20	92.00	45.32		23.10	196.14		217028	4123.30	8	3	2	3	596

REFER TO BRIDGE PLANS FOR DETAILS ON CONSTRUCTING APPROACH SLABS TYPE SPECIAL 1 AND 2 AND APPROACH GUTTERS TYPE SPECIAL 1 THROUGH 7.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:35:55 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.		BB0407	81	464

(2) QUANTITIES

APPROACH SLABS & GUTTERS (2 OF 2)

STATION	STATION	LOCATION	APPROACH SLABS			APPROACH GUTTERS									REINFORCING STEEL - RDWY. (GRADE 60)	AGGREGATE BASE COURSE (CLASS 7)	CONCRETE SPILLWAY (TYPE A)	TYPE N-1 DROP INLET	TYPE N-2 DROP INLET	TYPE N-3 DROP INLET	12" ZINC COAT (GALV.) CORR. STEEL PIPE CULVERT (16 GAUGE)
			STANDARD	TYPE SPECIAL 1	TYPE SPECIAL 2	TYPE C	TYPE PT	TYPE SPECIAL 1	2	3	4	5	6	7							
			CUBIC YARD												LBS.	TON	EACH	EACH	EACH	EACH	LIN. FT.
621+02.43	621+38.93	RT. OF N.B. LANES												21.28	1830	9.57					
621+02.43	621+38.93	N.B. LANES	49.15												5556	34.07					
621+02.43	621+38.93	LT. OF N.B. LANES												12.32	1060	9.57					
621+02.43	621+38.93	RT. OF S.B. LANES												12.32	1060	9.57					
621+02.43	621+38.93	S.B. LANES	49.15												5556	34.07					
621+02.43	621+38.93	LT. OF S.B. LANES												21.28	1830	9.57					
622+61.06	622+97.56	RT. OF N.B. LANES												21.28	1830	9.57					
622+61.06	622+97.56	N.B. LANES	49.15												5556	34.07					
622+61.06	622+97.56	LT. OF N.B. LANES												12.32	1060	9.57					
622+61.06	622+97.56	RT. OF S.B. LANES												12.32	1060	9.57					
622+61.06	622+97.56	S.B. LANES	49.15												5556	34.07					
622+61.06	622+97.56	LT. OF S.B. LANES												21.28	1830	9.57					
646+10.91	646+47.83	LT. OF S.B. LANES				18.06									991	101.00	1	1			48
646+10.91	646+69.55	RT. OF S.B. LANES				11.52									623	80.80					
646+10.91	646+58.91	S.B. LANES	49.15												5556	120.80					
647+88.30	648+25.19	LT. OF N.B. LANES				11.52									623	80.80	1	1			48
647+88.30	648+34.30	N.B. LANES	49.15												5556	120.80					
647+88.30	648+46.79	RT. OF N.B. LANES				18.06									991	101.00					
648+12.46	648+70.29	LT. OF S.B. LANES				18.06									991	101.00	1	1			48
648+23.34	648+70.29	S.B. LANES	49.15												5556	120.80					
648+34.13	648+70.29	RT. OF S.B. LANES				11.52									623	80.80					
649+87.42	650+44.95	LT. OF N.B. LANES				11.52									623	80.80	1	1			48
649+98.45	650+44.95	N.B. LANES	49.15												5556	120.80					
650+08.71	650+44.95	RT. OF N.B. LANES				18.06									991	101.00					
662+82.11	663+18.61	LT. OF S.B. LANES				18.06									991	48.98	1			1	24
662+91.92	663+28.42	S.B. LANES	49.15												5556	105.27					
663+00.58	663+37.08	RT. OF S.B. LANES				11.52									623	31.43					
668+05.27	668+41.77	LT. OF S.B. LANES				18.06									991	36.99	1			1	24
668+15.08	668+51.58	S.B. LANES	49.15												5556	79.51					
668+23.74	668+60.24	RT. OF S.B. LANES				11.52									623	23.74					
663+54.48	663+90.98	LT. OF N.B. LANES				11.52									623	23.54					
663+63.14	663+99.64	N.B. LANES	49.15												5556	78.83					
663+72.95	664+09.45	RT. OF N.B. LANES				18.06									991	36.68	1			1	96
668+78.54	669+15.04	LT. OF N.B. LANES				11.52									623	23.97					
668+87.20	669+23.70	N.B. LANES	49.15												5556	80.26					
668+97.01	669+33.51	RT. OF N.B. LANES				18.06									991	37.34	1			1	96
12+47.82	12+84.32	RT. OF E.B. U.S. 64											9.85		1120	5.76	1	1			30
12+77.80	13+14.30	LT. OF E.B. U.S. 64											9.85		1120	5.76					
16+34.10	16+70.60	RT. OF E.B. U.S. 64											9.85		1120	5.76	1	1			30
16+63.99	17+00.49	LT. OF E.B. U.S. 64											9.85		1120	5.76					
12+99.50	13+36.00	RT. OF W.B. U.S. 64											9.85		1120	5.76					
13+29.38	13+65.88	LT. OF W.B. U.S. 64											9.85		1120	5.76	1	1			30
16+85.69	17+22.19	RT. OF W.B. U.S. 64											9.85		1120	5.76					
17+15.57	17+52.07	LT. OF W.B. U.S. 64											9.85		1120	5.76	1	1			30
718+69.71	719+06.21	RT. OF RAMP 2 (I-540/I-40 INT)									12.24				1338	5.87					
718+69.71	719+06.21	RAMP 2 (I-540/I-40 INTER)	30.72												3502	21.29					
718+69.71	719+06.21	LT. OF RAMP 2 (I-540/I-40 INT)									12.24				1338	5.87					
721+28.42	721+64.92	RT. OF RAMP 2 (I-540/I-40 INT)									12.24				1338	5.87	1	1			66
721+28.42	721+64.92	RAMP 2 (I-540/I-40 INTER)	30.72												3502	21.29					
721+28.42	721+64.92	LT. OF RAMP 2 (I-540/I-40 INT)									12.24				1338	5.87					
727+69.79	728+06.29	RT. OF RAMP 2 (I-540/I-40 INT)										16.28			1650	11.49					
727+69.79	728+06.29	RAMP 2 (I-540/I-40 INTER)	30.72												3502	21.29					
727+69.79	728+06.29	LT. OF RAMP 2 (I-540/I-40 INT)										16.28			1650	10.79					
729+52.43	729+88.93	RT. OF RAMP 2 (I-540/I-40 INT)										16.28			1650	11.49					
729+52.43	729+88.93	RAMP 2 (I-540/I-40 INTER)	30.72												3502	21.29					
729+52.43	729+88.93	LT. OF RAMP 2 (I-540/I-40 INT)										16.28			1650	10.79					
718+84.47	719+20.97	RT. OF RAMP 1 (I-540/I-40 INT)										11.86			1190	5.17					
718+84.47	719+20.97	RAMP 1 (I-540/I-40 INTER)	49.15												5556	34.07					
718+84.47	719+20.97	LT. OF RAMP 1 (I-540/I-40 INT)										11.86			1190	5.17					
721+43.19	721+79.69	RT. OF RAMP 1 (I-540/I-40 INT)										11.86			1190	5.17	1	1			66
721+43.19	721+79.69	RAMP 1 (I-540/I-40 INTER)	49.15												5556	34.07					
721+43.19	721+79.69	LT. OF RAMP 1 (I-540/I-40 INT)										11.86			1190	5.17					
728+85.50	729+22.00	RT. OF RAMP 1 (I-540/I-40 INT)										11.86			1190	5.89					
728+85.50	729+22.00	RAMP 1 (I-540/I-40 INTER)	49.15												5556	34.07					
728+85.50	729+22.00	LT. OF RAMP 1 (I-540/I-40 INT)										11.86			1190	5.89					
730+83.14	731+19.64	RT. OF RAMP 1 (I-540/I-40 INT)										11.86			1190	5.89					
730+83.14	731+19.64	RAMP 1 (I-540/I-40 INTER)	49.15												5556	34.07					
730+83.14	731+19.64	LT. OF RAMP 1 (I-540/I-40 INT)										11.86			1190	5.89					
398+91.17	399+27.67	LT. OF W.B. I-40					20.07								1815	23.36					
SUB TOTALS			909.28			236.64	20.07				48.96	160.00	78.80	134.40	159623	2432.94	14	10		4	684
TOTALS			2039.74	116.80	73.70	473.28	20.07	115.20	92.00	45.32	48.96	183.10	274.94	134.40	376651	6556.24	22	13	2	7	1280

REFER TO BRIDGE PLANS FOR DETAILS ON CONSTRUCTING APPROACH SLABS TYPE SPECIAL 1 AND 2 AND APPROACH GUTTERS TYPE SPECIAL 1 THROUGH 7.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:35:55 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.		BB0407	82	464

(2) QUANTITIES

SCARIFYING & RECOMPACTING SHOULDERS - RAMP SHOULDER REHABILITATION

LOCATION	LENGTH	WIDTH	SQ. YD.
	FEET		
RAMP 1 (I-540/S.H. 22 INTERCHANGE) - RIGHT SHLDR	212.21	6.00	141.47
RAMP 2 (I-540/S.H. 22 INTERCHANGE) - RIGHT SHLDR	933.36	6.00	622.24
RAMP 3 (I-540/S.H. 22 INTERCHANGE) - RIGHT SHLDR	331.68	6.00	221.12
RAMP 4 (I-540/S.H. 22 INTERCHANGE) - RIGHT SHLDR	926.78	6.00	617.85
RAMP 1 (I-540/GRAND AVENUE INT.) - RIGHT SHLDR	664.09	6.00	442.73
RAMP 2 (I-540/GRAND AVENUE INT.) - RIGHT SHLDR	930.39	6.00	620.26
RAMP 3 (I-540/GRAND AVENUE INT.) - RIGHT SHLDR	198.88	6.00	132.59
RAMP 4 (I-540/GRAND AVENUE INT.) - RIGHT SHLDR	772.36	6.00	514.91
RAMP 1 (I-540/KELLEY HWY. INT.) - RIGHT SHLDR	453.88	6.00	302.59
RAMP 2 (I-540/KELLEY HWY. INT.) - RIGHT SHLDR	399.47	6.00	266.31
RAMP 3 (I-540/KELLEY HWY. INT.) - RIGHT SHLDR	419.16	6.00	279.44
RAMP 4 (I-540/KELLEY HWY. INT.) - RIGHT SHLDR	628.45	6.00	418.97
RAMP 1 (I-540/4TH STREET INT.) - RIGHT SHLDR	226.38	6.00	150.92
RAMP 2 (I-540/4TH STREET INT.) - RIGHT SHLDR	401.92	6.00	267.95
RAMP 3 (I-540/4TH STREET INT.) - RIGHT SHLDR	404.89	6.00	269.93
RAMP 4 (I-540/4TH STREET INT.) - RIGHT SHLDR	211.49	6.00	140.99
RAMP 1 (I-540/U.S. 64 INT.) - RIGHT SHLDR	1242.92	6.00	828.61
RAMP 2 (I-540/U.S. 64 INT.) - RIGHT SHLDR	557.96	6.00	371.97
RAMP 3 (I-540/U.S. 64 INT.) - RIGHT SHLDR	232.99	6.00	155.33
RAMP 4 (I-540/U.S. 64 INT.) - RIGHT SHLDR	777.45	6.00	518.30
RAMP 5 (I-540/U.S. 64 INT.) - RIGHT SHLDR	1213.40	6.00	808.93
RAMP 6 (I-540/U.S. 64 INT.) - RIGHT SHLDR	569.59	6.00	379.73
RAMP 7 (I-540/U.S. 64 INT.) - RIGHT SHLDR	232.98	6.00	155.32
RAMP 8 (I-540/U.S. 64 INT.) - RIGHT SHLDR	932.45	6.00	621.63
RAMP 1 (I-540/S.H. 22 INTERCHANGE) - LEFT SHLDR	212.21	4.00	94.32
RAMP 2 (I-540/S.H. 22 INTERCHANGE) - LEFT SHLDR	933.36	4.00	414.83
RAMP 3 (I-540/S.H. 22 INTERCHANGE) - LEFT SHLDR	331.68	4.00	147.41
RAMP 4 (I-540/S.H. 22 INTERCHANGE) - LEFT SHLDR	926.78	4.00	411.90
RAMP 1 (I-540/GRAND AVENUE INT.) - LEFT SHLDR	664.09	4.00	295.15
RAMP 2 (I-540/GRAND AVENUE INT.) - LEFT SHLDR	930.39	4.00	413.51
RAMP 3 (I-540/GRAND AVENUE INT.) - LEFT SHLDR	198.88	4.00	88.39
RAMP 4 (I-540/GRAND AVENUE INT.) - LEFT SHLDR	772.36	4.00	343.27
RAMP 1 (I-540/KELLEY HWY. INT.) - LEFT SHLDR	453.88	4.00	201.72
RAMP 2 (I-540/KELLEY HWY. INT.) - LEFT SHLDR	399.47	4.00	177.54
RAMP 3 (I-540/KELLEY HWY. INT.) - LEFT SHLDR	419.16	4.00	186.29
RAMP 4 (I-540/KELLEY HWY. INT.) - LEFT SHLDR	628.45	4.00	279.31
RAMP 1 (I-540/4TH STREET INT.) - LEFT SHLDR	226.38	4.00	100.61
RAMP 2 (I-540/4TH STREET INT.) - LEFT SHLDR	401.92	4.00	178.63
RAMP 3 (I-540/4TH STREET INT.) - LEFT SHLDR	404.89	4.00	179.95
RAMP 4 (I-540/4TH STREET INT.) - LEFT SHLDR	211.49	4.00	94.00
RAMP 1 (I-540/U.S. 64 INT.) - LEFT SHLDR	1242.92	4.00	552.41
RAMP 2 (I-540/U.S. 64 INT.) - LEFT SHLDR	557.96	4.00	247.98
RAMP 3 (I-540/U.S. 64 INT.) - LEFT SHLDR	232.99	4.00	103.55
RAMP 4 (I-540/U.S. 64 INT.) - LEFT SHLDR	777.45	4.00	345.53
RAMP 5 (I-540/U.S. 64 INT.) - LEFT SHLDR	1213.40	4.00	539.29
RAMP 6 (I-540/U.S. 64 INT.) - LEFT SHLDR	569.59	4.00	253.15
RAMP 7 (I-540/U.S. 64 INT.) - LEFT SHLDR	232.98	4.00	103.55
RAMP 8 (I-540/U.S. 64 INT.) - LEFT SHLDR	932.45	4.00	414.42
TOTAL			15416.80

JOINT REHABILITATION

LOCATION	TYPE A			TYPE B			TYPE D
	NUMBER OF JOINTS	LENGTH	TOTAL LENGTH	NUMBER OF JOINTS	LENGTH	TOTAL LENGTH	LENGTH
		FEET	LIN. FT.		FEET	LIN. FT.	LIN. FT.
RAMP 1 (I-540/S.H. 22 INTERCHANGE)	5.00	15.00	75.00	11.00	15.00	165.00	
RAMP 2 (I-540/S.H. 22 INTERCHANGE)	21.00	15.00	315.00	43.00	15.00	645.00	
RAMP 3 (I-540/S.H. 22 INTERCHANGE)	8.00	15.00	120.00	17.00	15.00	255.00	
RAMP 4 (I-540/S.H. 22 INTERCHANGE)	21.00	15.00	315.00	43.00	15.00	645.00	
RAMP 1 (I-540/GRAND AVENUE INTERCHANGE)	15.00	15.00	225.00	31.00	15.00	465.00	
RAMP 2 (I-540/GRAND AVENUE INTERCHANGE)	21.00	15.00	315.00	43.00	15.00	645.00	
RAMP 3 (I-540/GRAND AVENUE INTERCHANGE)	5.00	15.00	75.00	11.00	15.00	165.00	
RAMP 4 (I-540/GRAND AVENUE INTERCHANGE)	18.00	15.00	270.00	37.00	15.00	555.00	
RAMP 1 (I-540/KELLEY HWY. INTERCHANGE)	11.00	15.00	165.00	23.00	15.00	345.00	
RAMP 2 (I-540/KELLEY HWY. INTERCHANGE)	9.00	15.00	135.00	19.00	15.00	285.00	
RAMP 3 (I-540/KELLEY HWY. INTERCHANGE)	10.00	15.00	150.00	21.00	15.00	315.00	
RAMP 4 (I-540/KELLEY HWY. INTERCHANGE)	14.00	15.00	210.00	29.00	15.00	435.00	
RAMP 1 (I-540/4TH STREET INTERCHANGE)	6.00	24.00	144.00	13.00	15.00	195.00	
RAMP 2 (I-540/4TH STREET INTERCHANGE)	9.00	15.00	135.00	19.00	15.00	285.00	
RAMP 3 (I-540/4TH STREET INTERCHANGE)	9.00	24.00	216.00	19.00	15.00	285.00	
RAMP 4 (I-540/4TH STREET INTERCHANGE)	5.00	15.00	75.00	11.00	15.00	165.00	
RAMP 1 (I-540/U.S. 64 INTERCHANGE)	28.00	15.00	420.00	57.00	15.00	855.00	
RAMP 2 (I-540/U.S. 64 INTERCHANGE)	13.00	15.00	195.00	27.00	15.00	405.00	
RAMP 3 (I-540/U.S. 64 INTERCHANGE)	6.00	15.00	90.00	13.00	15.00	195.00	
RAMP 4 (I-540/U.S. 64 INTERCHANGE)	18.00	15.00	270.00	37.00	15.00	555.00	
RAMP 5 (I-540/U.S. 64 INTERCHANGE)	27.00	15.00	405.00	55.00	15.00	825.00	
RAMP 6 (I-540/U.S. 64 INTERCHANGE)	13.00	15.00	195.00	27.00	15.00	405.00	
RAMP 7 (I-540/U.S. 64 INTERCHANGE)	6.00	15.00	90.00	13.00	15.00	195.00	
RAMP 8 (I-540/U.S. 64 INTERCHANGE)	21.00	15.00	315.00	43.00	15.00	645.00	
*ENTIRE PROJECT - PATCHES IF AND WHERE DIRECTED BY THE ENGINEER							1000.00
TOTALS			4920.00			9930.00	1000.00

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

CONCRETE ISLAND

STATION	STATION	LOCATION	SQ. YD.
2+30.0	5+55.0	GRAND AVE. RAISED MEDIAN	376.0
TOTAL			376.0

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

STATION	STATION	LOCATION	LIN. FT.
12+64.3	18+00.0	RT. OF E.B. LANES S.H. 22	535.7
2+30.0	5+55.0	GRAND AVE. RAISED MEDIAN	690.0
TOTAL			1225.7

PORTLAND CEMENT CONCRETE BASE (12" UNIFORM THICKNESS)

STATION	STATION	LOCATION	SQ. YD.
10+70.0	17+85.0	S.H. 22 MEDIAN	825.0
TOTAL			825.0

GRAVITY RETAINING WALL

STATION	STATION	LOCATION	CLASS S CONC. - ROADWAY
			CU. YDS.
13+95.00	16+45.00	ROGERS AVE.	235.70
TOTAL			235.70

STATE OF ARKANSAS
JAMES L. BARR
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/30/2012 1:15:10 PM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	83	464

(2) QUANTITIES

SURFACING - RAMP SHOULDER REHABILITATION

LOCATION	ACHM SURFACE COURSE (½")				
	LENGTH LIN. FT.	AVG. WIDTH FEET	SQ. YD.	LBS. PER SQ. YD.	TON
RAMP 1 (I-540/S.H. 22 INTERCHANGE) - RIGHT SHLDR	212.21	6.00	141.47	220.00	15.56
RAMP 2 (I-540/S.H. 22 INTERCHANGE) - RIGHT SHLDR	933.36	6.00	622.24	220.00	68.45
RAMP 3 (I-540/S.H. 22 INTERCHANGE) - RIGHT SHLDR	331.68	6.00	221.12	220.00	24.32
RAMP 4 (I-540/S.H. 22 INTERCHANGE) - RIGHT SHLDR	926.78	6.00	617.85	220.00	67.96
RAMP 1 (I-540/GRAND AVENUE INTERCHANGE) - RIGHT SHLDR	664.09	6.00	442.73	220.00	48.70
RAMP 2 (I-540/GRAND AVENUE INTERCHANGE) - RIGHT SHLDR	930.39	6.00	620.26	220.00	68.23
RAMP 3 (I-540/GRAND AVENUE INTERCHANGE) - RIGHT SHLDR	198.88	6.00	132.59	220.00	14.58
RAMP 4 (I-540/GRAND AVENUE INTERCHANGE) - RIGHT SHLDR	772.36	6.00	514.91	220.00	56.64
RAMP 1 (I-540/KELLEY HWY. INTERCHANGE) - RIGHT SHLDR	453.88	6.00	302.59	220.00	33.28
RAMP 2 (I-540/KELLEY HWY. INTERCHANGE) - RIGHT SHLDR	399.47	6.00	266.31	220.00	29.29
RAMP 3 (I-540/KELLEY HWY. INTERCHANGE) - RIGHT SHLDR	419.16	6.00	279.44	220.00	30.74
RAMP 4 (I-540/KELLEY HWY. INTERCHANGE) - RIGHT SHLDR	628.45	6.00	418.97	220.00	46.09
RAMP 1 (I-540/4TH STREET INTERCHANGE) - RIGHT SHLDR	226.38	6.00	150.92	220.00	16.60
RAMP 2 (I-540/4TH STREET INTERCHANGE) - RIGHT SHLDR	401.92	6.00	267.95	220.00	29.47
RAMP 3 (I-540/4TH STREET INTERCHANGE) - RIGHT SHLDR	404.89	6.00	269.93	220.00	29.69
RAMP 4 (I-540/4TH STREET INTERCHANGE) - RIGHT SHLDR	211.49	6.00	140.99	220.00	15.51
RAMP 1 (I-540/U.S. 64 INTERCHANGE) - RIGHT SHLDR	1242.92	6.00	828.61	220.00	91.15
RAMP 2 (I-540/U.S. 64 INTERCHANGE) - RIGHT SHLDR	557.96	6.00	371.97	220.00	40.92
RAMP 3 (I-540/U.S. 64 INTERCHANGE) - RIGHT SHLDR	232.99	6.00	155.33	220.00	17.09
RAMP 4 (I-540/U.S. 64 INTERCHANGE) - RIGHT SHLDR	777.45	6.00	518.30	220.00	57.01
RAMP 5 (I-540/U.S. 64 INTERCHANGE) - RIGHT SHLDR	1213.40	6.00	808.93	220.00	88.98
RAMP 6 (I-540/U.S. 64 INTERCHANGE) - RIGHT SHLDR	569.59	6.00	379.73	220.00	41.77
RAMP 7 (I-540/U.S. 64 INTERCHANGE) - RIGHT SHLDR	232.98	6.00	155.32	220.00	17.09
RAMP 8 (I-540/U.S. 64 INTERCHANGE) - RIGHT SHLDR	932.45	6.00	621.63	220.00	68.38
RAMP 1 (I-540/S.H. 22 INTERCHANGE) - LEFT SHLDR	212.21	4.00	94.32	220.00	10.38
RAMP 2 (I-540/S.H. 22 INTERCHANGE) - LEFT SHLDR	933.36	4.00	414.83	220.00	45.63
RAMP 3 (I-540/S.H. 22 INTERCHANGE) - LEFT SHLDR	331.68	4.00	147.41	220.00	16.22
RAMP 4 (I-540/S.H. 22 INTERCHANGE) - LEFT SHLDR	926.78	4.00	411.90	220.00	45.31
RAMP 1 (I-540/GRAND AVENUE INTERCHANGE) - LEFT SHLDR	664.09	4.00	295.15	220.00	32.47
RAMP 2 (I-540/GRAND AVENUE INTERCHANGE) - LEFT SHLDR	930.39	4.00	413.51	220.00	45.49
RAMP 3 (I-540/GRAND AVENUE INTERCHANGE) - LEFT SHLDR	198.88	4.00	88.39	220.00	9.72
RAMP 4 (I-540/GRAND AVENUE INTERCHANGE) - LEFT SHLDR	772.36	4.00	343.27	220.00	37.76
RAMP 1 (I-540/KELLEY HWY. INTERCHANGE) - LEFT SHLDR	453.88	4.00	201.72	220.00	22.19
RAMP 2 (I-540/KELLEY HWY. INTERCHANGE) - LEFT SHLDR	399.47	4.00	177.54	220.00	19.53
RAMP 3 (I-540/KELLEY HWY. INTERCHANGE) - LEFT SHLDR	419.16	4.00	186.29	220.00	20.49
RAMP 4 (I-540/KELLEY HWY. INTERCHANGE) - LEFT SHLDR	628.45	4.00	279.31	220.00	30.72
RAMP 1 (I-540/4TH STREET INTERCHANGE) - LEFT SHLDR	226.38	4.00	100.61	220.00	11.07
RAMP 2 (I-540/4TH STREET INTERCHANGE) - LEFT SHLDR	401.92	4.00	178.63	220.00	19.65
RAMP 3 (I-540/4TH STREET INTERCHANGE) - LEFT SHLDR	404.89	4.00	179.95	220.00	19.79
RAMP 4 (I-540/4TH STREET INTERCHANGE) - LEFT SHLDR	211.49	4.00	94.00	220.00	10.34
RAMP 1 (I-540/U.S. 64 INTERCHANGE) - LEFT SHLDR	1242.92	4.00	552.41	220.00	60.77
RAMP 2 (I-540/U.S. 64 INTERCHANGE) - LEFT SHLDR	557.96	4.00	247.98	220.00	27.28
RAMP 3 (I-540/U.S. 64 INTERCHANGE) - LEFT SHLDR	232.99	4.00	103.55	220.00	11.39
RAMP 4 (I-540/U.S. 64 INTERCHANGE) - LEFT SHLDR	777.45	4.00	345.53	220.00	38.01
RAMP 5 (I-540/U.S. 64 INTERCHANGE) - LEFT SHLDR	1213.40	4.00	539.29	220.00	59.32
RAMP 6 (I-540/U.S. 64 INTERCHANGE) - LEFT SHLDR	569.59	4.00	253.15	220.00	27.85
RAMP 7 (I-540/U.S. 64 INTERCHANGE) - LEFT SHLDR	232.98	4.00	103.55	220.00	11.39
RAMP 8 (I-540/U.S. 64 INTERCHANGE) - LEFT SHLDR	932.45	4.00	414.42	220.00	45.59
TOTALS			15416.80		1695.86

BASIS OF ESTIMATE : ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG-76-22) = 6.0%
Nmax = 205

CLEANING AND FILLING JOINTS IN EXISTING CONCRETE PAVEMENT (TYPE 7)

STATION	STATION	LOCATION	TRANSVERSE JOINTS		TOTAL LENGTH
			NUMBER OF JOINTS	LENGTH	
				LIN. FT.	
2+12.21	6+48.21	RAMP 1 (I-540/S.H. 22 INT.) - RAMP TRANS.	31	15	465
5+07.86	9+01.86	RAMP 2 (I-540/S.H. 22 INT.) - RAMP TRANS.	28	15	420
4+44.41	9+94.41	RAMP 3 (I-540/S.H. 22 INT.) - RAMP TRANS.	38	15	570
9+26.78	14+76.78	RAMP 4 (I-540/S.H. 22 INT.) - RAMP TRANS.	38	15	570
378+48.83	383+98.83	RAMP 1 (I-540/GRAND AVENUE INT.) - RAMP TRANS.	38	15	570
399+19.66	404+69.66	RAMP 2 (I-540/GRAND AVENUE INT.) - RAMP TRANS.	38	15	570
392+07.00	399+18.00	RAMP 3 (I-540/GRAND AVENUE INT.) - RAMP TRANS.	49	15	735
376+65.95	382+15.95	RAMP 4 (I-540/GRAND AVENUE INT.) - RAMP TRANS.	38	15	570
448+49.03	453+99.03	RAMP 1 (I-540/KELLY HWY INT.) - RAMP TRANS.	38	15	570
462+28.47	467+78.47	RAMP 2 (I-540/KELLY HWY INT.) - RAMP TRANS.	38	15	570
462+49.70	467+99.70	RAMP 3 (I-540/KELLY HWY INT.) - RAMP TRANS.	38	15	570
446+67.87	452+17.87	RAMP 4 (I-540/KELLY HWY INT.) - RAMP TRANS.	38	15	570
576+00.00	581+50.00	RAMP 1 (I-540/4TH STREET INT.) - RAMP TRANS.	38	15	570
581+42.65	586+92.65	RAMP 2 (I-540/4TH STREET INT.) - RAMP TRANS.	38	15	570
587+91.49	593+41.44	RAMP 3 (I-540/4TH STREET INT.) - RAMP TRANS.	38	15	570
584+72.43	590+22.43	RAMP 4 (I-540/4TH STREET INT.) - RAMP TRANS.	38	15	570
680+10.33	685+60.33	RAMP 1 (I-540/U.S. 64 INT.) - RAMP TRANS.	38	15	570
683+92.93	689+42.93	RAMP 2 (I-540/U.S. 64 INT.) - RAMP TRANS.	38	15	570
695+35.51	700+85.51	RAMP 3 (I-540/U.S. 64 INT.) - RAMP TRANS.	38	15	570
696+62.91	702+12.91	RAMP 4 (I-540/U.S. 64 INT.) - RAMP TRANS.	38	15	570
696+42.10	701+92.10	RAMP 5 (I-540/U.S. 64 INT.) - RAMP TRANS.	38	15	570
692+46.41	697+96.41	RAMP 6 (I-540/U.S. 64 INT.) - RAMP TRANS.	38	15	570
681+15.69	686+65.69	RAMP 7 (I-540/U.S. 64 INT.) - RAMP TRANS.	38	15	570
680+85.36	686+35.36	RAMP 8 (I-540/U.S. 64 INT.) - RAMP TRANS.	38	15	570
** ENTIRE PROJECT - RAMPS - IF AND WHERE DIRECTED BY THE ENGINEER					15000
TOTAL					28590

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

SHAPING DITCH

LOCATION	STATION
*ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER	20
TOTAL	20

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

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON
*ENTIRE PROJECT - IF AND WHERE DIRECTED BY THE ENGINEER	200
TOTAL	200

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

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

QUANTITIES

8/27/2012 9:35:56 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.		BB0407	84	464

(2) QUANTITIES

BASE & SURFACING - N.B. MAIN LANE & RAMP SHOULDERS (1 OF 2)

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")							ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT						AGGREGATE BASE COURSE	
				*LEVELING - 110 LBS./SQ. YD.			NORMAL												0.10 GAL./SQ. YD.			0.03 GAL./SQ. YD.					
				AVG. WIDTH	SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	TOTAL TONS	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS	AVG. WIDTH	SQ. YD.	GALLONS	TOTAL GALLONS	(CLASS 1)	(CLASS 7)
			LIN. FT.	FEET			FEET					FEET				FEET				FEET			FEET			TON	
286+91.5	288+81.5	N.B. LANES OUTSIDE SH.- GRADE TRANSITION SECTION	190.00									10.46	220.82	468	54.67	10.00	211.11	440	46.44	10.00	211.11	20.46	431.93	12.96	34.07	36.80	
288+81.5	289+31.5	N.B. LANES OUTSIDE SH.- GRADE TRANSITION SECTION	50.00				10.75	59.72	385	11.50	11.50	10.46	58.11	330	9.59	10.00	55.56	440	12.22	10.00	55.56	5.56	41.96	233.11	6.99	12.55	16.26	
289+31.50	294+00.0	N.B. LANES - R/O - BUILD UP SECT. OUTSIDE SH.	468.50	12.00	624.67	34.36	11.30	588.23	1808	531.76	566.12	10.46	544.50	330	89.84	10.00	520.56	440	114.52	10.00	520.56	52.06	43.06	2241.51	67.25	119.31	540.39	
294+00.00	294+92.18	N.B. LANES - R/O - BUILD UP SECT. - 6' OUTSIDE SH.	92.18	6.00	61.45	3.38	6.30	64.53	1808	58.34	61.72	6.46	66.16	330	10.92	6.00	61.45	440	13.52	6.00	61.45	6.15	25.06	256.67	7.70	13.85	106.32	
297+55.61	303+00.0	N.B. LANES - R/O - BUILD UP SECTION - 6' OUTSIDE SH.	544.39	8.00	483.90	26.61	7.30	441.56	1925	425.00	451.61	6.46	390.75	330	64.47	6.00	362.93	440	79.84	6.00	362.93	36.29	27.06	1636.80	49.10	85.39	799.41	
303+00.00	307+90.96	N.B. LANES - BUILD UP SECTION - 10' OUTSIDE SH.	490.96	12.00	654.61	36.00	11.00	600.06	798	239.42	275.42	10.46	570.60	330	94.15	10.00	545.51	440	120.01	10.00	545.51	54.55	42.46	2316.24	69.49	124.04	309.30	
307+90.96	308+33.43	N.B. LANES - R/O - TANGENT SECTION OUTSIDE SH.	42.47	10.75	50.73	2.79	10.75	50.73	440	11.16	13.95	10.46	49.36	330	8.14	10.00	47.19	440	10.38	10.00	47.19	4.72	41.96	198.00	5.94	10.66	14.86	
308+33.43	315+31.61	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	698.18	7.11	551.56	30.34	6.75	523.64	440	115.20	145.54	6.50	504.24	330	83.20	6.00	465.45	440	102.40	6.00	465.45	46.55	26.00	2016.96	60.51	107.06	244.36	
315+31.61	318+31.61	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.TAPER	300.00	7.11	237.00	13.04	6.75	225.00	440	49.50	62.54	6.50	216.67	330	35.75	6.00	200.00	440	44.00	6.00	200.00	20.00	26.00	866.67	26.00	46.00	105.00	
318+31.61	335+26.39	N.B. LANES - R/O - TANGENT SECTION - OUTSIDE SH.	1694.78	10.75	2024.32	111.34	10.75	2024.32	440	445.35	556.69	10.46	1969.71	330	325.00	10.00	1883.09	440	414.28	10.00	1883.09	188.31	41.96	7901.44	237.04	425.35	593.17	
335+26.39	338+76.39	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	350.00	10.95	425.83	23.42	11.32	440.22	548	120.62	144.04	10.46	406.78	330	67.12	10.00	388.89	440	85.56	10.00	388.89	38.89	43.10	1676.11	50.28	89.17	280.66	
338+76.39	343+20.24	N.B. LANES - R/O - SUPER. - OUTSIDE SH.	443.85	10.95	540.02	29.70	11.32	558.26	1052	293.64	323.34	10.46	515.85	330	85.12	10.00	493.17	440	108.50	10.00	493.17	49.32	43.10	2125.55	63.77	113.09	556.83	
343+20.24	346+64.06	N.B. LANES - FULL DEPTH - SUPER. - OUTSIDE SH.	343.82				3.00	114.61	1045	59.88	59.88	2.46	93.98	330	15.51	10.00	382.02	440	84.04				18.46	705.21	21.16	21.16	274.90	498.41
346+64.06	348+80.2	N.B. LANES - FULL DEPTH - SUPER. TRANS. - OUTSIDE SH.	216.14				3.00	72.05	1045	37.65	37.65	2.46	59.08	330	9.75	10.00	240.16	440	52.84				18.46	443.33	13.30	13.30	154.80	264.10
350+87.42	355+30.11	N.B. LANES - FULL DEPTH - TANGENT SECTION - OUTSIDE SH.	442.69				3.00	147.56	1045	77.10	77.10	2.46	121.00	330	19.97	10.00	491.88	440	108.21				18.46	908.01	27.24	27.24	265.40	440.03
355+30.11	356+46.67	N.B. LANES - R/O - TANGENT SECTION - OUTSIDE SH.	116.56	10.95	141.81	7.80	10.75	139.22	440	30.63	38.43	10.46	135.47	330	22.35	10.00	129.51	440	28.49	10.00	129.51	12.95	41.96	543.43	16.30	29.25	40.80	
356+46.67	359+50.0	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	303.33	10.95	369.05	20.30	10.75	362.31	440	79.71	100.01	10.46	352.54	330	58.17	10.00	337.03	440	74.15	10.00	337.03	33.70	41.96	1414.19	42.43	76.13	80.18	
359+50.0	370+20.0	SPECIAL DETAIL PIER PROTECTION - OUTSIDE SH.	1070.00	10.00	888.89	65.39	10.00	888.89	440	261.56	326.95	10.00	888.89	330	196.17	10.00	888.89	440	261.56	8.75	1040.28	104.03	40.00	4755.56	142.67	246.70		
370+20.0	372+28.77	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	208.77	10.95	254.00	13.97	10.75	249.36	440	54.86	68.83	10.46	242.64	330	40.04	10.00	234.97	440	54.03	10.00	234.97	23.20	41.96	973.33	29.20	52.40	75.83	
372+28.77	374+71.1	N.B. LANES - R/O - TANGENT SECTION - OUTSIDE SH.	242.33	10.95	294.83	16.22	10.75	289.45	440	63.68	79.90	10.46	281.64	330	46.47	10.00	269.26	440	59.24	10.00	269.26	26.93	41.96	1129.80	33.89	60.82	84.82	
374+71.1	389+05.02	N.B. LANES - R/O - TAN. SECTION - OUTSIDE SH. - BRIDGE TRANS.	1433.92	10.95	1744.60	95.95	10.75	1712.74	1210	1036.21	1132.16	10.46	1666.53	330	274.98	10.00	1593.24	440	350.51	10.00	1593.24	159.32	41.96	6685.25	200.56	359.88	849.84	
391+52.21	393+16.75	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH. - BRIDGE TRANS.	164.54	10.95	200.19	11.01	10.75	196.53	1639	161.06	172.07	10.46	191.23	330	31.55	10.00	182.82	440	40.22	10.00	182.82	18.28	41.96	767.12	23.01	41.29	305.99	
393+16.75	404+73.54	N.B. LANES - R/O - SUPER. - OUTSIDE SH. - BRIDGE TRANS.	1156.79	12.38	1591.23	87.52	11.46	1472.98	2089	1538.53	1626.05	10.46	1344.45	330	221.83	10.00	1285.32	440	282.77	10.00	1285.32	128.53	43.38	5575.73	167.27	295.80	3894.93	
404+73.54	408+46.61	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.-BRIDGE TRANS.	373.07	7.11	294.73	16.21	6.75	279.80	1639	229.30	245.51	6.50	269.44	330	44.46	6.00	248.71	440	54.72	6.00	248.71	24.87	26.00	1077.76	32.33	57.20	154.08	
408+46.61	411+26.90	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	280.29	7.11	221.43	12.18	6.75	210.22	440	46.25	58.43	6.50	202.43	330	33.40	6.00	186.86	440	41.11	6.00	186.86	18.69	26.00	809.73	24.29	42.98	98.10	
411+26.90	411+51.41	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH. TAPER	24.51	7.11	19.36	1.06	6.75	18.38	440	4.04	5.10	6.50	17.70	330	2.92	6.00	16.34	440	3.59	6.00	16.34	1.63	26.00	70.81	2.12	3.75	8.58	
411+51.41	414+26.9	N.B. LANES - R/O - ACCEL LANE - O.S. SH. TAPER-BRIDGE TRANS.	275.49	7.11	217.64	11.97	6.75	206.62	1213	125.32	137.29	10.46	320.18	330	52.83	6.00	183.66	440	40.41	6.00	183.66	18.37	29.96	917.08	27.51	45.88	96.42	
414+26.9	419+23.32	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.- BRIDGE TRANS.	496.42	10.79	595.15	32.73	10.75	592.95	1213	359.62	392.35	10.46	576.95	330	95.20	10.00	554.58	440	121.35	10.00	554.58	55.16	41.96	2314.42	69.43	124.59	179.81	
419+23.32	422+27.81	N.B. LANES - R/O - OUTSIDE SH.- SUPER. - BRIDGE TRANS.	304.49	10.95	370.46	20.38	10.75	363.70	1213	220.58	240.96	10.46	353.89	330	58.39	10.00	338.32	440	74.43	10.00	338.32	33.83	41.96	1419.60	42.59	76.42	308.58	
424+62.86	431+70.45	N.B. LANES - R/O - OUTSIDE SH. - BRIDGE TRANS.	707.59	10.95	860.90	47.35	10.75	845.18	1213	512.60	559.95	10.46	822.38	330	135.69	10.00	786.21	440	172.97	10.00	786.21	78.62	41.96	3298.94	98.97	177.59	717.10	
431+70.45	432+88.32	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	117.87	10.95	143.41	7.89	10.75	140.79	440	30.97	38.86	10.46	136.99	330	22.60	10.00	130.97	440	28.81	10.00	130.97	13.10	41.96	549.54	16.49	29.59	42.69	
432+88.32	465+43.72	N.B. LANES - R/O - TANGENT SECTION	3225.40	10.95	3924.24	215.83	10.75	3852.56	440	847.56	1063.39	10.46	3748.63	330	618.52	10.00	3583.78	440	788.43	10.00	3583.78	358.38	41.96	15037.53	451.13	809.51	828.89	
465+43.72	467+76.23	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	262.51	11.11	324.05	17.82	10.79	314.72	440	69.24	87.06	10.46	305.09	330	50.34	10.00	294.68	440	64.17	10.00	294.68	29.17	42.04	1226.21	36.79	65.96	98.74	
467+76.23	474+95.82	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	719.59	7.11	568.48	31.27	6.75	539.69	440	118.73	150.00	6.50	519.70	330	85.75	6.00	479.73	440	105.54	6.00	479.73	47.97	26.00	2078.82	62.36	111.33	254.86	
474+95.82	478+02.88	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.TAPER	307.06	7.11	242.58	13.34	6.75	230.30	440	50.67	64.01	6.50	221.77	330	36.59	6.00	204.71	440	45.04	6.00	204.71	20.47	26.00	887.06	26.61	47.08	107.47	
478+02.88	482+40.00	N.B. LANES - R/O - SUPER. - OUTSIDE SH.	437.12	11.11	539.60	29.68	10.79	524.06	440	115.29	144.97	10.46	508.03	330	83.82	10.00	485.69	440	106.85	10.00	485.69	48.57	42.04	2041.84	64.26	109.83	34.00	
482+40.00	485+57.89	N.B. LANES - R/O - SUPER. - OUTSIDE SH. - SPEC. COND.	317.89	8.25	291.40	16.03	8.25	291.40	440	64.11	80.14	10.46	369.46	330	60.96	10.00	353.21	440	77.71	10.00	353.21	35.32	36.96	1305.47	39.16	74.48	24.72	
485+57.89	489+41.22	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH. - SPEC. COND.	383.33	8.25	351.39	19.33	8.25	351.39	440	77.31	96.64	10.46	445.51	330	73.51	10.00	425.92	440	93.70	10.00	425.92	42.59	36.96	1574.21	47.23	89.82	29.81	
489+41.22	490+70.05	N.B. LANES - R/O - TAN. SECTION - OUTSIDE SH. - SPEC. COND.	128.83	8.25	118.09	6.49	8.25	118.09	440	25.98	32.47	9.79	140.14	330	23.12	10.00	143.14	440	31.49	10.00	143.14	14.31	36.29	519.47	15.58	29.89	10.02	
490+70.05	497+16.96	N.B. LANES - R/O - TAN. SECTION - OUTSIDE SH. - SPEC. COND.	2864.84	8.25	2626.10	144.44	8.25	2626.10	440	577.74	722.18	10.46	3329.58	330	549.38	10.00	3813.16	440	700.30	10.00	3813.16	381.32	36.96	8764.94	352.95	671.27	222.82	
525+81.80	533+45.30	N.B. LANES - FULL DEPTH - TANGENT SECTION - OUTSIDE SH.	763.50				3.00	254.50	1045	132.98	132.98	2.46	208.69	330	34.43	10.00	848.33	440	186.63				18.46	1566.02	46.98	46.98	457.73	770.80
568+20.1	570+56.83	N.B. LANES - FULL DEPTH - TANGENT SECTION - OUTSIDE SH.	236.73				3.00	78.91	1045	41.23	41.23	2.46	64.71	330	10.68	10.00	263.03	440	57.87				18.46	485.56	14.57	14.57	141.92	238.99
570+56.83	574+06.83	N.B. LANES - FULL DEPTH - SUPER. TRANS. - OUTSIDE SH.	350.00				3.00	116.67	1045	60.96	60.96	2.46	95.67	330	15.79	10.00	388.89	440	85.56				18.46	717.89	21.54	21.54	185.27	363.14
574+06.83	577+43.25	N.B. LANES - FULL DEPTH - SUPER. - OUTSIDE SH.	336.42				3.00	102.14	1045	53.37	53.37	2.46	83.75	330	13.82	10.00	340.47	440	74.90				18.46	628.50	18.86	18.86	138.97	326.98
577+43.25	586+99.36	N.B. LANES - R/O - SUPER. - OUTSIDE SH.	986.11	10.95	1199.77	65.99	10.79	1182.24	440	260.09	326.08	10.46	1146.08	330	189.10	10.00	1095.68	440	241.05	10.00	1095.68	109.57	42.04	4606.23	138.19	247.76	347.98	
586+99.36	594+03.26	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	703.90	7.11	556.08	30.58	6.75	521.93	440	116.14	146.72	6.50	508.37	330	83.88	6.00	469.27	440	103.24	6.00	469.27	46.93	26.00	2033.49	61.00	107.93	246.37	
594+03.26	596+94.81	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.TAPER	300.31	7.11	237.24	13.05	6.75	225.23	440	49.55	62.60	6.50	216.89	330	35.79	6.00	200.21	440	44.05	6.00	200.21	20.02	26.00	867.56	26.03	46.05	105.11	
596+94.81	614+03.30	N.B. LANES - R/O - TANGENT SECTION - OUTSIDE SH.	1708.49	10.75	2040.70	112.24	10.75	2040.70	440	448.95	561.19	10.46	1985.65	330	327.63	10.00	1898.32	440	417.63	10.00	1898.32	189.83	41.96	7965.36	238.96	428.79	597.97	
614+03.30	621+02.43	N.B. LANES - FULL DEPTH - TANGENT SECTION - OUTSIDE SH.	699.13				3.00	233.04	1045	121.76	121.76	2.46	191.10	330	31.53	10.00	776.81	440	170.90				18.46	1433.99	43.02	43.02	491.14	694.94
622+97.56	628+61.06	N.B. LANES - FULL DEPTH - TANGENT SECTION - OUTSIDE SH.	563.50				3.00	187.83	1045	98.14	98.14	2.46	154.02	330	25.41	10.00	626.11	440	137.74				18.46	1155.80	34.67	34.67	337.82	560.12
628+61.06	633+46.86	N.B. LANES - R/O - TANGENT SECTION - OUTSIDE SH.	485.80	10.75	544.43	29.94	10.75	544.43	440	119.77	149.71	10.46	529.74	330	87.41	10.00	506.44	440	111.42	10.00	506.44	50.64	41.96	2125.04	63.75	114.39	159.53	
633+46.86	637+46.86	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	400.00	11.69	519.56	28.58	11.17	496.44	928	230.35	258.93	10.46	464.89	330	76.11	10.00	444.44	440	97.78	10.00	444.44	44.44	42.80	1902.22	57.07	101.51	472.58	
637+46.86	643+67.56	N.B. LANES - R/O - SUPER. - OUTSIDE SH.	650.70	12.63	913.15	50.22	11.58	837.23	1416	592.76	642.98	10.46	756.26	330	124.78	10.00	723.00	440	159.06	10.00	723.00	72.30	43.62	3153.73	94.61	166.91	1309.99	
643+67.56	647+67.56	N.B. LANES - R/O - SUPER. - OUTSIDE SH. - PVMT. TRANS.	400.00	12.63	561.33	30.87	11.58	514.67	2431	625.58	656.45	10.46	464.89	330	76.11	10.00	444.44	440	97.78	10.00	444.44	44.44	43.62	1938.67	58.16	102.60	163.96	
649+95.50	653+95.50	N.B. LANES - R/O - SUPER. - OUTSIDE SH. - PVMT. TRANS.	400.00	12.63	561.33	30.87	11.58	514.67	2431	625.58	656.45	10.46	464.89	330	76.11	10.00	444.44	440	97.78	10.00	444.44	44.44	43.62	1938.67	58.16	102.60	163.96	
653+95.50	658+75.75	N.B. LANES - R/O - SUPER. - OUTSIDE SH.	480.25	12.63	673.95	37.07	11.58	617.92	1416	437.49	474.56	10.46	558.16	330	92.10	10.00	533.61	440	117.39	10.00	533.61	53.36	43.62	2327.61	69.83	123.19	966.84	
658+75.75	659+66.68	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	90.93	10.75	108.61	5.97	11.58	117.00	928	54.29	60.26	10.46	105.68	330	17.44	10.00	101.03	440	22.23	10.00	101.03	10.10	43.62	440.71	13.22	23.32	107.43	
659+66.68	663+72.95	N.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.- BRIDGE TRANS.	239.62	10.75	286.21	15.74	11.17	297.40	1081	160.74	176.48	10.46	278.49	330	45.95	10.00	266.24	440	58.57	10.00	266.24	26.62	42.80	1139.53	34.19	60.81	349.24	
669+33.51	675+62.89	N.B. LANES - R/O - TAN. SECTION - OUTSIDE SH.- BRIDGE TRANS.	629.38	10.75	751.76	41.35	10.75	751.76	699	262.74	304.09	10.46	731.48	330	120.69	10.00	699.31	440	153.85	10.00	699.31	69.93	41.96	2934.31	88.03	157.96	337.00	
675+62.89	689+40.69	N.B. LANES - R/O - TANGENT SECTION - OUTSIDE SH.	1377.80	10.75	1645.71	90.51	10.75	1645.71	440	362.06	452.57	10.46	1601.31	330	264.22	10.00	1530.89	440	336.80	10.00	1530.89	153.09	41.96	6423.61	192.71	345.80	482.23	
689+40.69	695+38.68	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	597.99	6.75	448.49	24.67	6.75	448.49	440	98.67	123.34	6.50	431.88	330	71.26	6.00	398.66	440	87.71	6.00	398.66	39.87	26.00	1727.53	51.83	91.70	209.30	
695+38.68	702+14.98	N.B. LANES - R/O - TANGENT SECTION - OUTSIDE SH.	673.30	10.75	804.22	44.23	10.75	804.22	440	176.93	221.16	10.46	782.52	330	129.12	10.00	748.11	440	164.58	10.00	748.11	74.81	41.96	3139.07	94.17	168.98	235.66	
702+14.98	706+55.89	N.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	443.91	6.75	332.93	18.31	6.75	332.93	440	73.24	91.55	6.50	320.60	330	52.90	6.00	295.94	440	65.11	6.00	295.94	29.59	26.00	1282.41	38.47	68.06	155.37	
706+55.89	710+55.89	RAMP 4 (I-540 /I-40 INT.) - R/O - SUPER. TRANS - OUTSIDE SH.	400.00	6.75	300.00	16.50	6.75	300.00	440	66.00	82.50	6.50	288.89	330	47.67	6.00	266.67	440	58.67	6.00	266.67	26.67	26.00	1155.56	34.67	61.34	140.00	
710+55.89	712+55.88	RAMP 4 (I-540 /I-40 INT.) - R/O - SUPER. - OUTSIDE SH.	199.99	10.75	238.88	13.14	10.75	238.88	440	52.55	65.69	10.46	232.43	330	38.35	10.00	222.21	440	48.89	10.00	222.21	22.22	41.96	932.40	27.97	50.19	70.00	
712+55.88	713+50.00	RAMP 4 (I-540 /I-40 INT.) - R/O - SUPER. TRANS. - OUTSIDE SH.	94.12	10.75	112.42	6.18	10.75	112.42	440	24.73	30.91	10.46	109.39	330	18.05	10.00	104.58	440	23.01	10.00	104.58	10.46	41.96	438.81	13.16	23.62	32.94	
713+50.00	716+30.88	RAMP 4 (I-540 /I-40 INT.) - FULL DEPTH - SUPER. TRANS.	280.88				3.00	93.63	1045	48.92	48.92	2.46	76.77	330	12.67	10.00	312.09	440	68.66				18.46	576.12	17.28	17.28	148.69	313.06
716+30.88	719+00.00	RAMP 4 (I-540 /I-40 INT.) - FULL DEPTH - SUPER.	269.12				3.00	89.71	1045	46.87	46.87	2.46	73.56	330	12.14	10.00	299.02	440	65.78				18.46	552.00	16.56	16.56	206.80	299.95
718+50.00	714+88.65	RAMP 2 (I-540 /I-40 INT.) - R/O - TANGENT SECTION	338.65	6.75	253.99	13.97	6.75	253.99	440	55.88	69.85	6.46	243.08	330	40.11	6.00	225.77	440	49.67	6.00	225.77	22.58	25.96	976.82	29.30	54.88	118.53	
714+88.65	715+54.93	RAMP 2 (I-540 /I-40 INT.) - FULL DEPTH - TANGENT SECTION	66.28				1.00	7.36	1045	3.85	3.85	0.46	3.39	330	0.56	6.00	44.19	440	9.72				8.46	62.30	1.87	1.87	41.64	50.82
715+54.93	718+69.71	RAMP 2 (I-540 /I-40 INT.) - FULL DEPTH - SUPER. TRANS.	314.78				1.00	34.98	1045	18.28	18.28	0.46	16.09	330	2.65	6.00	209.85	440	46.17				8.46	295.89	8.88	8.88	214.79	232.47
721+64.92	727+69.79	RAMP 2 (I-540 /I-40 INT.) - FULL DEPTH - SUPER.	604.87				1.00	67.21	1045	35.12	35.12	0.46	30.92	330	5.10	6.00	403.25	440	88.72				8.46	568.58	17.06	17.06	464.71	480.85
729+88.93	735+30.00	RAMP 2 (I-540 /I-40 INT.) - FULL DEPTH - SUPER.	541.07				1.00	60.12	1045	31.41	31.41	0.46	27.65	330	4.56	6.00	360.71	440	79.36				8.46	508.61	15.26	15.26	415.70	430.13
TOTALS					36238.46	1993.12		37158.28		14764.65	16757.77		36726.76		6075.16		39652.69		8723.63		33517.27	3351.73		150695.98	4520.89	7872.62	25679.71	5964.79

BASIS OF ESTIMATE : ACHM BASE COURSE (1/2 ")-MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM BINDER COURSE (1")-MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM SURFACE COURSE (1/2")-MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG-76 -22) = 6.0%
Nmax = 205
* NOTE: LEVELING QUANTITY IS ESTIMATED. LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

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.		BB0407	85	464

(2) QUANTITIES

BASE & SURFACING - N.B. MAIN LANE & RAMP SHOULDERS (2 OF 2)

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")								ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT							AGGREGATE BASE COURSE	
				* LEVELING - 110 LBS./SQ. YD.			NORMAL				TOTAL TONS									0.10 GAL./SQ. YD.			0.03 GAL./SQ. YD.			TOTAL GALLONS	(CLASS 1)	(CLASS 7)
				AVG. WIDTH	SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON		AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS	AVG. WIDTH	SQ. YD.	GALLONS		TON	
			LIN. FT.	FEET			FEET					FEET				FEET				FEET			FEET					
286+91.50	288+81.50	N.B. LANES - GRADE TRANSITION SECTION - INSIDE SH.	190.00									4.56	96.27	468	22.53	4.00	440.00	440	96.80									
288+81.50	289+34.50	N.B. LANES - GRADE TRANSITION SECTION - INSIDE SH.	50.00	4.83	26.83	1.48	4.83	26.83	385	5.16	6.64	4.56	25.33	330	4.18	4.00	22.22	440	4.89	4.00	22.22	2.22	18.22	101.22	3.04	5.26	24.15	
289+34.50	295+44.36	N.B. LANES - GRADE TRANSITION SECTION - INSIDE SH.	582.86	5.30	343.24	18.88	5.30	343.24	1702	292.10	310.98	4.56	295.32	330	48.73	4.00	259.05	440	56.99	4.00	259.05	25.91	19.16	1240.84	37.23	63.14	762.96	
297+17.79	303+00.00	N.B. LANES - GRADE TRANSITION SECTION - INSIDE SH.	522.21	5.30	307.52	16.91	5.30	307.52	1808	278.00	294.91	4.56	264.59	330	43.66	4.00	232.09	440	51.06	4.00	232.09	23.21	19.16	1111.73	33.35	56.56	873.25	
303+00.00	307+90.96	N.B. LANES - GRADE TRANSITION SECTION - INSIDE SH.	490.96	4.83	263.48	14.49	4.83	263.48	798	105.13	119.62	4.56	248.75	330	41.04	4.00	218.20	440	48.00	4.00	218.20	21.82	18.22	993.92	29.82	54.64	581.86	
307+90.96	335+26.39	N.B. LANES - R/O - TANGENT SECTION - INSIDE SH.	2735.43	4.83	1468.01	80.74	4.83	1468.01	589	432.33	513.07	4.56	1385.95	330	228.68	4.00	1215.75	440	267.47	4.00	1215.75	121.58	18.22	5537.73	166.13	287.71	1753.11	
335+26.39	338+76.39	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	350.00	4.83	187.83	10.33	4.83	187.83	589	55.32	65.65	4.56	177.33	330	29.26	4.00	155.56	440	34.22	4.00	155.56	15.56	18.22	708.56	21.26	36.82	224.31	
338+76.39	343+20.24	N.B. LANES - R/O - SUPER. - INSIDE SH.	443.85	4.83	238.20	13.10	4.83	238.20	589	70.15	83.25	4.56	224.88	330	37.11	4.00	197.27	440	43.40	4.00	197.27	19.73	18.22	898.55	26.96	46.69	284.46	
343+20.24	346+64.06	N.B. LANES - FULL DEPTH - SUPER. - INSIDE SH.	343.82				5.00	191.01	1045	99.80	99.80	4.46	170.38	330	28.11	4.00	152.81	440	33.62				13.46	594.20	15.43	15.43	356.09	66.88
346+64.06	348+83.37	N.B. LANES - FULL DEPTH - SUPER. TRANS. - INSIDE SH.	219.31				5.00	121.84	1045	63.66	63.66	4.46	108.68	330	17.93	4.00	97.47	440	21.44				13.46	327.99	9.84	9.84	227.14	42.66
350+90.96	355+30.11	N.B. LANES - FULL DEPTH - TANGENT SECTION - INSIDE SH.	439.15				5.00	243.97	1045	127.47	127.47	4.46	217.62	330	35.91	4.00	195.18	440	42.94				13.46	656.77	19.70	19.70	454.82	85.42
355+30.11	356+46.67	N.B. LANES - R/O - TANGENT SECTION - INSIDE SH.	116.56	4.83	62.55	3.44	4.83	62.55	589	18.42	21.86	4.56	59.06	330	9.74	4.00	51.80	440	11.40	4.00	51.80	5.18	18.22	235.97	7.08	12.26	74.70	
356+46.67	359+96.67	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	350.00	5.04	196.00	10.78	5.04	196.00	698	68.40	79.18	4.51	175.39	330	28.94	4.00	155.56	440	34.22	4.00	155.56	15.56	18.59	722.94	21.69	37.25	344.63	
359+96.67	368+78.77	N.B. LANES - R/O - SUPER. - INSIDE SH.	882.10	5.26	515.54	28.35	5.26	515.54	806	207.76	236.11	4.46	437.13	330	72.13	4.00	392.04	440	86.25	4.00	392.04	39.20	18.98	1860.25	55.81	95.01	871.82	
368+78.77	372+28.77	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	350.00	5.04	196.00	10.78	5.04	196.00	698	68.40	79.18	4.51	175.39	330	28.94	4.00	155.56	440	34.22	4.00	155.56	15.56	18.59	722.94	21.69	37.25	344.63	
372+28.77	374+71	N.B. LANES - R/O - TANGENT SECTION - INSIDE SH.	242.33	4.83	130.05	7.15	4.83	130.05	589	38.30	45.45	4.56	122.78	330	20.26	4.00	107.70	440	23.69	4.00	107.70	10.77	18.22	490.58	14.72	25.49	155.31	
374+71.1	388+99.24	N.B. LANES - R/O - TAN. SECTION - INSIDE SH.- BRIDGE TRANS.	1428.14	4.83	766.44	42.15	4.83	766.44	1359	520.80	562.95	4.56	723.59	330	119.39	4.00	634.73	440	139.64	4.00	634.73	63.47	18.22	2894.19	86.74	150.21	1179.68	
391+46.43	393+16.75	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.- BRIDGE TRANS.	170.32	4.83	91.41	5.03	4.83	91.41	1336	61.06	66.09	4.56	86.30	330	14.24	4.00	75.70	440	16.65	4.00	75.70	7.57	18.22	344.80	10.34	17.91	209.83	
393+16.75	405+76.13	N.B. LANES - R/O - SUPER. - INSIDE SH.- BRIDGE TRANS.	1259.38	4.83	675.87	37.17	4.83	675.87	1336	451.48	488.65	4.56	638.09	330	105.28	4.00	559.72	440	123.14	4.00	559.72	55.97	18.22	2549.54	76.49	132.46	1524.13	
405+76.13	408+46.61	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.- BRIDGE TRANS.	270.48	4.83	145.16	7.98	4.83	145.16	1336	96.97	104.95	4.56	137.04	330	22.61	4.00	120.21	440	26.45	4.00	120.21	12.02	18.22	547.57	16.43	28.45	333.23	
408+46.61	411+54.41	N.B. LANES - R/O - TANGENT SECTION - INSIDE SH.	307.80	4.83	163.58	9.00	4.83	163.58	589	48.17	57.17	4.56	154.43	330	25.48	4.00	135.47	440	29.80	4.00	135.47	13.55	18.22	617.05	18.51	32.06	195.34	
411+54.41	415+73.32	N.B. LANES - R/O - TAN. SECTION - INSIDE SH.- BRIDGE TRANS.	421.91	4.83	226.43	12.45	4.83	226.43	1361	154.09	166.54	4.56	213.77	330	35.27	4.00	187.52	440	41.25	4.00	187.52	18.75	18.22	854.13	25.62	44.37	270.40	
415+73.32	419+23.32	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.- BRIDGE TRANS.	350.00	4.87	189.39	10.42	4.87	189.39	1451	137.40	147.82	4.56	177.33	330	29.26	4.00	155.56	440	34.22	4.00	155.56	15.56	18.30	718.67	21.35	36.91	245.23	
419+23.32	422+59.07	N.B. LANES - R/O - SUPER. - INSIDE SH. - BRIDGE TRANS.	335.75	4.90	182.80	10.05	4.90	182.80	1540	140.76	150.81	4.56	170.11	330	28.07	4.00	149.22	440	32.83	4.00	149.22	14.92	18.36	684.93	20.55	35.47	677.39	
424+94.12	429+58.32	N.B. LANES - R/O - SUPER. - INSIDE SH.- BRIDGE TRANS.	444.20	4.90	241.84	13.30	4.90	241.84	1540	186.22	199.52	4.56	225.06	330	37.13	4.00	197.42	440	43.43	4.00	197.42	19.74	18.36	906.17	27.19	46.93	896.20	
429+58.32	431+70.45	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.- BRIDGE TRANS.	232.13	4.87	125.61	6.91	4.87	125.61	1451	91.13	98.04	4.56	87.61	330	19.41	4.00	103.17	440	22.70	4.00	103.17	10.32	18.30	472.00	14.16	24.48	209.07	
431+70.45	432+88.32	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	117.87	4.87	63.78	3.51	4.87	63.78	679	21.65	25.16	4.56	59.72	330	9.85	4.00	52.39	440	11.53	4.00	52.39	5.24	18.30	239.67	7.19	12.43	106.16	
432+88.32	465+13.72	N.B. LANES - R/O - TANGENT SECTION - INSIDE SH.	3225.40	4.83	1730.96	95.20	4.83	1730.96	589	509.77	604.97	4.56	1634.20	330	269.64	4.00	1433.51	440	315.37	4.00	1433.51	143.35	18.22	6529.64	195.89	339.24	2067.12	
465+13.72	468+97.05	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	383.33	4.90	208.70	11.48	4.90	208.70	710	74.09	85.57	4.56	194.22	330	32.05	4.00	170.37	440	37.48	4.00	170.37	17.04	18.36	784.99	23.46	40.50	453.18	
468+97.05	482+40.00	N.B. LANES - R/O - SUPER. - INSIDE SH.	1342.95	4.97	741.61	40.79	4.97	741.61	830	307.77	348.56	4.56	680.43	330	112.27	4.00	596.87	440	131.31	4.00	596.87	59.69	18.50	2760.51	82.82	142.51	2314.65	
482+40.00	486+53.67	N.B. LANES - R/O - INSIDE SH. -VAR WIDTH - MED. BARRIER	413.67	7.75	356.22	19.59	7.75	356.22	1778	316.68	336.27	5.75	264.29	330	43.61	5.75	264.29	440	58.14	5.75	264.29	26.43	27.00	1241.01	37.23	63.66		
486+53.67	489+41.22	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.- MED. BARRIER	287.55	4.00	127.80	7.03	4.00	127.80	1485	94.89	101.92	2.00	63.90	330	10.54	2.00	63.90	440	14.06	2.00	63.90	6.39	12.00	383.40	11.50	17.89		
489+41.22	490+70.05	N.B. LANES - R/O - TAN. SECTION - INSIDE SH. - MED. BARRIER	128.83	4.00	57.26	3.15	4.00	57.26	1485	42.52	45.67	2.00	28.63	330	4.72	2.00	28.63	440	6.30	2.00	28.63	2.86	12.00	171.77	5.15	8.01		
497+16.96	525+83.80	N.B. LANES - R/O - TAN. SECTION - INSIDE SH. - MED. BARRIER	2866.84	4.00	1274.15	70.08	4.00	1274.15	1485	946.06	1016.14	2.00	637.08	330	105.12	2.00	637.08	440	140.16	2.00	637.08	63.71	12.00	3822.45	114.67	178.38		
525+83.80	533+45.30	N.B. LANES - FULL DEPTH - TAN. SEC. - INSIDE SH. - MED. BARRIER	761.50				2.00	169.22	1045	88.42	88.42	2.00	169.22	330	27.92	2.00	169.22	440	37.23				6.00	507.67	15.23	15.23		18.46
568+14.69	570+56.83	N.B. LANES - FULL DEPTH - TAN. SEC. - INSIDE SH.-MED. BARRIER	242.14				2.00	53.81	1045	28.12	28.12	2.00	53.81	330	8.88	2.00	53.81	440	11.84				6.00	161.43	4.84	4.84		37.67
570+56.83	573+19.33	N.B. LANES - FULL DEPTH - SUP. TRANS. INS. SH. - MED. BARRIER	262.50				2.00	58.33	1045	30.48	30.48	2.00	58.33	330	9.62	2.00	58.33	440	12.83				6.00	175.00	5.25	5.25		40.83
573+19.33	575+00.0	N.B. LANES - FULL DEPTH - VAR WIDTH - MED. BARRIER	180.67				7.05	141.52	1045	73.94	73.94	7.05	141.52	330	23.35	7.05	141.52	440	31.13				21.15	424.57	12.74	12.74		63.59
575+00.0	577+43.25	N.B. LANES - FULL DEPTH - SUPER.	243.25				5.00	188.47	1045	61.90	61.90	4.91	186.34	330	19.20	4.00	94.78	440	20.85				13.91	329.59	9.89	9.89	207.74	62.02
577+43.25	590+38.50	N.B. LANES - R/O - SUPER. - INSIDE SH.	1325.25	4.91	723.00	39.77	4.91	723.00	675	244.01	283.78	4.46	656.74	330	108.36	4.00	589.00	440	129.58	4.00	589.00	58.90	18.28	2691.73	80.75	139.65	1320.80	
590+38.50	593+88.50	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	350.00	4.87	189.39	10.42	4.87	189.39	632	59.85	70.27	4.51	175.39	330	28.94	4.00	155.56	440	34.22	4.00	155.56	15.56	18.25	709.72	21.29	36.85	286.11	
593+88.50	614+03.30	N.B. LANES - R/O - TANGENT SECTION - INSIDE SH.	2023.56	4.83	1085.98	59.73	4.83	1085.98	589	319.82	379.55	4.56	1025.27	330	169.17	4.00	899.36	440	197.86	4.00	899.36	89.94	18.22	4096.58	122.90	212.84	1296.88	
614+03.30	622+92.56	N.B. LANES - FULL DEPTH - TANGENT SECTION - INSIDE SH.	699.13				5.00	388.41	1045	202.94	202.94	4.46	346.46	330	57.17	4.00	310.72	440	68.36				13.46	1045.59	31.37	31.37	724.08	136.00
622+92.56	628+61.06	N.B. LANES - FULL DEPTH - TANGENT SECTION - INSIDE SH.	563.50				5.00	313.06	1045	163.57	163.57	4.46	279.25	330	46.08	4.00	250.44	440	55.10				13.46	842.75	25.28	25.28	583.61	109.61
628+61.06	633+16.86	N.B. LANES - R/O - TANGENT SECTION - INSIDE SH.	455.80	4.83	244.61	13.45	4.83	244.61	589	72.04	85.49	4.56	230.94	330	38.11	4.00	202.58	440	44.57	4.00	202.58	20.26	18.22	922.74	27.68	47.94	292.12	
633+16.86	637+16.86	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	400.00	4.79	212.89	11.71	4.79	212.89	514	54.71	66.42	4.51	200.44	330	33.07	4.00	177.78	440	39.11	4.00	177.78	17.78	18.09	804.00	24.12	41.90	228.54	
637+16.86	643+46.35	N.B. LANES - R/O - SUPER. - INSIDE SH.	629.49	4.75	332.23	18.27	4.75	332.23	440	73.09	91.36	4.46	314.95	330	51.47	4.00	279.77	440	61.55	4.00	279.77	27.98	17.96	1256.18	37.69	65.67	345.94	
643+46.35	647+46.35	N.B. LANES - R/O - SUPER. - INSIDE SH. - PVMT. TRANS.	400.00	4.75	211.11	11.61	4.75	211.11	798	84.23	95.84	4.46	198.22	330	32.71	4.00	177.78	440	39.11	4.00	177.78	17.78	17.96	798.22	23.95	41.73	253.72	
649+75.45	653+75.45	N.B. LANES - R/O - SUPER. - INSIDE SH. - PVMT. TRANS.	400.00	4.75	211.11	11.61	4.75	211.11	798	84.23	95.84	4.46	198.22	330	32.71	4.00	177.78	440	39.11	4.00	177.78	17.78	17.96	798.22	23.95	41.73	253.72	
653+75.45	658+75.75	N.B. LANES - R/O - SUPER. - INSIDE SH.	500.30	4.75	264.05	14.52	4.75	264.05	440	58.09	72.61	4.46	247.93	330	40.91	4.00	222.36	440	48.92	4.00	222.36	22.24	17.96	998.38	29.95	52.19	251.10	
658+75.75	659+66.68	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	90.93	4.79	48.39	2.66	4.79	48.39	515	12.46	15.12	4.51	45.57	330	7.52	4.00	40.41	440	8.89	4.00	40.41	4.04	18.09	182.77	5.48	9.52	54.96	
659+66.68	663+54.48	N.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.- BRIDGE TRANS.	221.15	4.79	117.70	6.47	4.79	117.70	668	39.31	45.78	4.51	110.82	330	18.29	4.00	98.29	440	21.62	4.00	98.29	9.83	18.09	444.51	13.33	23.16	138.48	
669+15.04	675+62.89	N.B. LANES - R/O - TAN. SECTION - INSIDE SH.- BRIDGE TRANS.	647.85	4.83	347.68	19.12	4.83	347.68	848	147.42	166.54	4.56	328.24	330	54.16	4.00	287.93	440	63.35	4.00	287.93	28.79	18.22	1341.54	39.35	68.14	469.20	
675+62.89	714+88.65	N.B. LANES - R/O - TANGENT SECTION - INSIDE SH.	3925.76	4.83	2106.82	115.88	4.83	2106.82	589	620.46	736.34	4.56	1989.05	330	328.19	4.00	1744.78	440	383.85	4.00	1744.78	174.48	18.22	7947.48	238.42	412.90	2565.98	
712+55.88	713+50.00	RAMP 4 (1-540 A-40 INT.) - R/O - SUPER. TRANS. - INSIDE SH.	94.12	5.01	52.39	2.88	5.01	52.39	858	22.48	25.36	4.46	46.64	330	7.70	4.00	41.83	440	9.20	4.00	41.83	4.18	18.48	193.26	5.80	9.98	139.21	
713+50.00	716+30.88	RAMP 4 (1-540 A-40 INT.) - FULL DEPTH - S.E. TRANS. - INSIDE SH.	280.88				5.00	156.04	1045	81.53	81.53	4.46	139.19	330	22.97	4.00	124.84	440	27.46				13.46	420.07	12.60	12.60	180.01	117.51
716+30.88	719+00.00	RAMP 4 (1-540 A-40 INT.) - FULL DEPTH - SUPER. - INSIDE SH.	269.12				5.00	149.51	1045	78.12	78.12	4.46	133.36	330	22.00	4.00	119.61	440	26.31				13.46	402.48	12.07	12.07	333.88	112.59
714+88.65	715+54.93	RAMP 2 (1-540 A-40 INT.) - FULL DEPTH - TAN. SEC. - INSIDE SH.	66.28				5.00	36.82	1045	19.24	19.24	4.46	32.85	330	5.42	4.00	29.46	440	6.48				13.46	99.13	2.97	2.97	68.65	12.89
715+54.93	718+84.74	RAMP 2 (1-540 A-40 INT.) - FULL DEPTH - S.E. TRANS. - INSIDE SH.	329.81				L00	36.65	1045	19.15	19.15	0.46	16.86	330	2.78	4.00	146.58	440	32.25				5.46	200.08	6.00	6.00	314.83	170.17
721+79.69	727+69.79	RAMP 2 (1-540 A-40 INT.) - FULL DEPTH - SUPER. - INSIDE SH.	590.10				L00	65.57	1045	34.26	34.26	0.46	30.16	330	4.98	4.00	262.27	440	57.70				5.46	357.99	10.74	10.74	510.51	439.14
729+88.93	735+30.00	RAMP 2 (1-540 A-40 INT.) - FULL DEPTH - SUPER. - INSIDE SH.	541.07				L00	60.12	1045	31.41	31.41	0.46	27.65	330	4.56	4.00	240.48	440	52.91				5.46	328.25	9.85	9.85	830.72	402.65
TOTALS					1745.61	959.82		19755.96		8937.19	9897.01		17701.07		2927.33		16716.29		3676.46		13908.21	1390.86		71264.32	2137.95	3528.81	30450.65	2018.09

BASIS OF ESTIMATE : ACHM BASE COURSE (1/2 ")-MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM BINDER COURSE (1")-MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM SURFACE COURSE (1/2")-MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG-76 -22) = 6.0%
Nmax = 205
*NOTE: LEVELING QUANTITY IS ESTIMATED. LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:35:57 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.		BB0407	86	464

(2) QUANTITIES

BASE & SURFACING - S.B. MAIN LANE & RAMP SHOULDERS (1OF 2)

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")								ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT						AGGREGATE BASE COURSE	
				*LEVELING - 110 LBS./SQ. YD.			NORMAL				TOTAL TONS									0.10 GAL./SQ. YD.			0.03 GAL./SQ. YD.			TOTAL GALLONS	(CLASS 1)	(CLASS 7)
				AVG. WIDTH	SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON		AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS	AVG. WIDTH	SQ. YD.	GALLONS		TON	
			LIN. FT.	FEET			FEET					FEET				FEET				FEET			FEET					
286+94.5	288+81.5	S.B. LANES - R/O - OUTSIDE SH. - GRADE TRANSITION SECTION	190.00									10.46	468.00	468	109.51	10.00	440.00	378	83.16	10.00	216	216	30.46	643.04	19.29	40.40	20.10	
288+81.5	289+34.5	S.B. LANES - R/O - OUTSIDE SH. - GRADE TRANSITION SECTION	50.00	10.80	60.00	3.30	10.75	59.72	385	11.50	14.80	10.46	330.00	150	24.75	10.00	440.00	378	83.16	10.00	55.56	5.56	41.21	228.94	6.87	12.43	16.26	
289+34.50	295+72.44	S.B. LANES - R/O - BUILD UP SECT. - OUTSIDE SH.	640.94	12.00	854.59	47.00	11.30	804.74	1557	626.49	673.49	10.46	744.91	330	122.91	10.00	712.16	440	156.68	10.00	712.16	71.22	41.76	2973.96	89.22	160.44	838.99	
298+26.38	303+00.00	S.B. LANES - R/O - BUILD UP SECT. - OUTSIDE SH.	473.62	12.00	631.49	34.73	11.30	594.66	1925	572.36	607.09	10.46	550.45	330	90.82	10.00	526.24	440	115.77	10.00	526.24	52.62	41.76	2197.60	65.93	118.55	476.30	
303+00.00	307+90.96	S.B. LANES - R/O - BUILD UP SECT. - OUTSIDE SH.	490.96	12.00	654.61	36.00	11.00	600.06	798	239.42	275.42	10.46	570.60	330	94.15	10.00	545.51	440	120.01	10.00	545.51	54.55	41.46	2261.69	67.85	122.40	493.74	
307+90.96	335+26.39	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.	2735.43	10.95	3328.11	183.05	10.75	3267.32	440	718.81	901.86	10.46	3179.18	330	524.56	10.00	3039.37	440	668.66	10.00	3039.37	303.94	41.21	12525.23	375.76	679.70	957.40	
335+26.39	338+76.39	S.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	350.00	10.95	425.83	23.42	10.75	418.06	440	91.97	115.39	10.46	406.78	330	67.12	10.00	388.89	440	85.56	10.00	388.89	38.89	41.21	1602.61	48.08	86.97	126.77	
338+76.39	343+39.26	S.B. LANES - R/O - SUPER. - OUTSIDE SH.	462.87	10.95	563.16	30.97	10.75	552.87	440	121.63	152.60	10.46	537.96	330	88.76	10.00	514.30	440	113.15	10.00	514.30	51.43	41.21	2119.43	63.58	115.01	173.31	
343+39.26	346+64.06	S.B. LANES - R/O - FULL DEPTH - SUPER. - OUTSIDE SH.	324.80				3.00	108.27	1045	56.57	56.57	2.46	88.78	330	14.65	10.00	360.89	440	79.40				25.46	918.82	27.56	27.56	166.48	
346+64.06	349+02.76	S.B. LANES - R/O - FULL DEPTH - SUPER. TRANS. - OUTSIDE SH.	238.70				3.00	79.57	1045	41.58	41.58	2.46	65.24	330	10.76	10.00	265.22	440	58.35				25.46	675.26	20.26	20.26	133.39	
351+09.98	355+30.11	S.B. LANES - R/O - FULL DEPTH - TAN. SEC. - OUTSIDE SH.	420.13				3.00	140.04	1045	73.17	73.17	2.46	114.84	330	18.95	10.00	466.81	440	102.70				25.46	1188.50	35.66	35.66	254.23	358.62
355+30.11	356+46.67	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.	116.56	10.95	141.81	7.80	10.75	139.22	440	30.63	38.43	10.46	135.47	330	22.35	10.00	129.51	440	28.49	10.00	129.51	12.95	41.21	533.72	16.01	28.96	40.80	250.41
356+46.67	359+96.67	S.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	350.00	11.67	453.83	24.96	11.11	432.06	844	182.33	207.29	10.46	406.78	330	67.12	10.00	388.89	440	85.56	10.00	388.89	38.89	41.57	1646.61	48.50	87.39	349.18	417.61
359+96.67	366+73.61	S.B. LANES - R/O - SUPER. - OUTSIDE SH.	676.94	12.38	931.17	54.21	11.46	861.97	1247	537.44	588.65	10.46	786.75	330	129.81	10.00	752.16	440	165.48	10.00	752.16	75.22	41.92	3153.04	94.59	169.81	813.78	
366+73.61	369+68.38	S.B. LANES - R/O - ACCEL LANE TAPER - OUTSIDE SH.	294.77	7.11	232.87	12.81	6.75	221.08	440	48.64	61.45	6.50	212.89	330	35.13	6.00	196.51	440	43.23	6.00	196.51	19.65	25.25	826.99	24.81	44.46	103.17	
369+68.38	374+44.39	S.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	476.01	7.11	376.05	20.68	6.75	357.01	440	78.54	99.22	6.50	343.79	330	56.73	6.00	317.34	440	69.81	6.00	317.34	31.73	25.25	1335.47	40.06	71.79	166.60	
374+44.39	376+65.55	S.B. LANES - R/O - ACCEL LANE - BRIDGE TRANS.	221.16	7.11	174.72	9.61	6.75	165.87	2286	189.59	199.20	6.50	159.73	330	26.36	6.00	147.44	440	32.44	6.00	147.44	14.74	25.25	620.48	18.61	33.35	77.41	
376+65.55	388+89.48	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.- BRIDGE TRANS.	1223.93	10.95	1489.11	81.90	10.75	1461.92	2468	1804.01	1885.91	10.46	1422.48	330	234.71	10.00	1359.92	440	299.18	10.00	1359.92	135.99	41.21	5604.24	168.13	304.12	2800.62	
391+30.89	393+16.75	S.B. LANES - R/O - SUPER. TRANS. - BRIDGE TRANS.	185.86	10.95	226.13	12.44	10.75	222.00	2255	250.31	262.75	10.46	216.01	330	35.64	10.00	206.51	440	45.43	10.00	206.51	20.65	41.21	851.03	25.53	46.18	383.80	
393+16.75	405+76.13	S.B. LANES - R/O - SUPER. - BRIDGE TRANS.	1259.38	10.95	1532.25	84.27	10.75	1504.26	2255	1696.05	1780.32	10.46	1463.68	330	241.51	10.00	1399.31	440	307.85	10.00	1399.31	139.93	41.21	5766.56	173.00	312.93	2885.31	
405+76.13	408+87.44	S.B. LANES - R/O - SUPER. TRANS. - BRIDGE TRANS.	311.31	10.95	378.76	20.83	10.75	371.84	284	393.03	413.86	10.46	361.81	330	59.70	10.00	345.90	440	76.10	10.00	345.90	34.59	41.21	1425.45	42.76	77.35	390.07	
408+87.44	415+73.32	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.	685.88	10.95	834.49	45.90	10.75	819.25	440	180.24	226.14	10.46	797.14	330	131.53	10.00	762.09	440	167.66	10.00	762.09	76.21	41.21	3140.57	94.22	170.43	241.66	
415+73.32	419+23.32	S.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	350.00	11.67	453.83	24.96	10.97	426.61	781	166.59	191.55	10.46	406.78	330	67.12	10.00	388.89	440	85.56	10.00	388.89	38.89	41.43	1581.17	48.34	87.23	296.45	
419+23.32	423+56.57	S.B. LANES - R/O - SUPER. - OUTSIDE SH.	433.25	12.40	596.92	32.83	11.19	538.67	1123	302.46	335.29	10.46	503.53	330	83.08	10.00	481.39	440	105.91	10.00	481.39	48.14	41.65	2004.98	60.15	108.29	588.35	
425+96.62	429+38.32	S.B. LANES - R/O - SUPER. - OUTSIDE SH.	346.70	12.40	477.68	26.27	11.19	431.06	1123	242.04	268.31	10.46	402.94	330	66.49	10.00	385.22	440	84.75	10.00	385.22	38.52	41.65	1604.45	48.13	86.65	470.82	
429+38.32	432+88.32	S.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	350.00	11.67	453.83	24.96	10.97	426.61	781	166.59	191.55	10.46	406.78	330	67.12	10.00	388.89	440	85.56	10.00	388.89	38.89	41.43	1581.17	48.34	87.23	296.45	
432+88.32	436+68.37	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.	380.05	10.95	462.39	25.43	10.75	453.95	440	99.87	125.30	10.46	441.70	330	72.88	10.00	422.28	440	92.90	10.00	422.28	42.23	41.21	1740.21	52.21	94.44	133.90	
436+68.37	439+68.37	S.B. LANES - R/O - ACCEL LANE TAPER - OUTSIDE SH.	300.00	7.11	237.00	13.04	6.75	225.00	440	49.50	62.54	6.50	216.67	330	35.75	6.00	200.00	440	44.00	6.00	200.00	20.00	25.25	841.67	25.25	45.25	105.70	
439+68.37	446+68.49	S.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	700.12	7.11	553.09	30.42	6.75	525.09	440	115.52	145.94	6.50	505.64	330	83.43	6.00	466.75	440	102.69	6.00	466.75	46.68	25.25	1964.23	58.93	105.61	246.68	
446+68.49	465+43.72	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.	1845.23	10.95	2245.03	123.48	10.75	2204.02	440	484.88	608.36	10.46	2144.57	330	353.85	10.00	2050.26	440	451.06	10.00	2050.26	205.03	41.21	8449.10	253.47	458.50	645.83	
465+43.72	468+97.05	S.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	383.33	11.74	500.03	27.50	11.14	474.48	895	210.33	238.83	10.46	445.51	330	73.51	10.00	425.92	440	93.70	10.00	425.92	42.59	41.60	1771.84	53.16	95.75	426.20	
468+97.05	482+40.0	S.B. LANES - R/O - SUPER. - OUTSIDE SH.	1342.95	12.53	1869.68	102.83	11.54	1721.96	1351	1163.18	1266.01	10.46	1560.81	330	257.53	10.00	1492.17	440	328.28	10.00	1492.17	149.22	42.00	6267.10	188.01	337.23	2503.11	
482+40.0	489+46.22	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH. - SPEC. COND.	701.22	8.25	642.79	35.35	8.25	642.79	895	287.65	323.00	10.46	814.97	330	134.47	10.00	779.13	440	171.41	10.00	743.34	74.33	38.71	3016.03	90.48	299.04	54.54	
489+46.22	490+70.05	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH. - SPEC. COND.	123.83	8.25	118.09	6.49	8.25	118.09	440	25.98	32.47	10.46	143.19	330	24.71	10.00	143.14	440	31.49	10.00	143.14	14.31	38.71	554.11	16.62	30.93	10.02	
497+16.96	525+83.80	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH. - SPEC. COND.	2866.84	8.25	2627.94	144.54	8.25	2627.94	440	578.15	722.69	10.46	3334.91	330	549.77	10.00	3385.38	440	700.78	10.00	3385.38	338.54	38.71	12330.60	369.92	688.46	222.98	
525+83.80	533+44.30	S.B. LANES - R/O - FULL DEPTH - TAN. SEC. - OUTSIDE SH.	760.50				3.00	253.83	1045	132.63	132.63	2.46	208.14	330	34.34	10.00	846.8	440	186.14				25.46	2154.20	64.63	64.63	460.79	
568+09.28	569+76.51	S.B. LANES - R/O - FULL DEPTH - TAN. SEC. - OUTSIDE SH.	167.23				3.00	55.74	1045	29.12	29.12	2.46	45.71	330	7.54	10.00	185.81	440	40.88				25.46	473.08	14.19	14.19	101.9	
569+76.51	573+19.03	S.B. LANES - R/O - FULL DEPTH - ACCEL LANE TAPER - OUTSIDE SH.	342.52				3.00	114.17	1045	59.65	59.65	2.46	93.62	330	15.45	6.00	228.35	440	50.24				17.46	664.49	19.93	19.93	174.26	756.93
573+19.03	577+13.25	S.B. LANES - R/O - FULL DEPTH - ACCEL LANE - OUTSIDE SH.	394.22				3.00	131.41	1045	68.66	68.66	2.46	107.75	330	17.78	6.00	262.81	440	57.82				17.46	764.79	22.94	22.94	200.56	166.23
577+13.25	579+72.86	S.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	259.61	7.11	205.09	11.28	6.75	194.71	440	42.84	54.12	6.50	187.50	330	30.94	6.00	173.07	17.31	38.08	6.00	173.07	17.31	25.25	728.35	21.85	39.16	91.47	213.36
579+72.86	590+38.50	S.B. LANES - R/O - SUPER. - OUTSIDE SH.	1065.64	12.00	1420.85	78.15	11.27	1334.42	989	659.87	738.02	10.46	1238.51	330	204.35	10.00	1184.04	440	260.49	10.00	1184.04	118.40	41.73	4941.02	148.23	266.63	1213.33	245.57
590+38.50	593+88.50	S.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	350.00	11.50	447.22	24.60	11.01	428.17	714	152.86	177.46	10.46	406.78	330	67.12	10.00	388.89	440	85.56	10.00	388.89	38.89	41.47	1612.72	48.38	87.27	260.79	
593+88.50	613+89.88	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.	2010.14	10.95	2445.67	134.51	10.75	2401.00	440	528.22	662.73	10.46	2336.23	330	385.48	10.00	2233.49	440	491.37	10.00	2233.49	223.35	41.21	9204.21	276.13	499.48	708.24	
613+89.88	621+02.43	S.B. LANES - R/O - FULL DEPTH - TAN. SEC. - OUTSIDE SH.	712.55				3.00	237.52	1045	124.10	124.10	2.46	194.76	330	32.14	10.00	791.72	440	174.18				25.46	2015.72	60.47	60.47	431.17	
622+97.56	628+61.06	S.B. LANES - R/O - FULL DEPTH - TAN. SEC. - OUTSIDE SH.	563.50				3.00	187.83	1045	98.14	98.14	2.46	154.02	330	25.41	10.00	626.11	440	137.74				25.46	1594.08	47.82	47.82	340.98	
628+61.06	633+16.86	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.	455.80	10.95	554.56	30.50	10.75	544.43	440	119.77	150.27	10.46	529.74	330	87.41	10.00	506.44	440	111.42	10.00	506.44	50.64	41.21	2087.06	62.61	113.25	159.53	708.27
633+16.86	637+16.86	S.B. LANES - R/O - SUPER. TRANS. - OUTSIDE SH.	400.00	10.95	486.67	26.77	10.75	477.78	451	107.74	134.51	10.46	464.89	330	76.71	10.00	444.44	440	97.78	10.00	444.44	44.44	41.21	1831.56	54.95	99.39	140.93	560.12
637+16.86	642+49.07	S.B. LANES - R/O - SUPER. - OUTSIDE SH.	532.21	10.95	647.52	35.61	10.75	635.70	462	146.85	182.46	10.46	618.55	330	102.06	10.00	591.34	440	130.09	10.00	591.34	59.13	41.21	2436.93	73.11	132.24	188.76	
642+49.07	646+49.07	S.B. LANES - R/O - SUPER. - OUTSIDE SH. - PVMT. TRANS.	400.00	10.95	486.67	26.77	10.75	477.78	691	165.07	191.84	10.46	464.89	330	76.71	10.00	444.44	440	97.78	10.00	444.44	44.44	41.21	1831.56	54.95	99.39	176.20	
648+96.18	652+96.18	S.B. LANES - R/O - SUPER. - OUTSIDE SH. - PVMT. TRANS.	400.00	10.95	486.67	26.77	10.75	477.78	691	165.07	191.84	10.46	464.89	330	76.71	10.00	444.44	440	97.78	10.00	444.44	44.44	41.21	1831.56	54.95	99.39	176.20	
652+96.18	658+75.75	S.B. LANES - R/O - SUPER. - OUTSIDE SH.- BRIDGE TRANS.	579.57	10.95	705.14	38.78	10.75	692.26	1318	456.20	494.98	10.46	673.59	330	111.14	10.00	643.97	440	141.67	10.00	643.97	64.40	41.21	2653.79	79.61	144.01	554.91	
658+75.75	662+82.11	S.B. LANES - R/O - SUPER. TRANS. - BRIDGE TRANS.	239.71	10.95	291.65	16.04	10.75	286.32	1307	187.11	203.15	10.46	278.60	330	45.97	10.00	266.34	440	58.60	10.00	266.34	26.63	41.21	1097.61	32.93	59.56	221.36	
668+41.77	670+87.26	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.- BRIDGE TRANS.	245.49	10.95	298.68	16.43	10.75	293.22	711	104.24	120.67	10.46	285.31	330	47.08	10.00	272.77	440	60.01	10.00	272.77	27.28	41.21	1124.07	33.72	61.00	98.98	
670+87.26	673+87.26	S.B. LANES - R/O - ACCEL LANE TAPER - BRIDGE TRANS.	300.00	7.11	237.00	13.04	6.75	225.00	711	79.99	93.03	6.50	216.67	330	35.75	6.00	200.00	440	44.00	6.00	200.00	20.00	25.25	841.67	25.25	45.25	111.77	
673+87.26	677+16.2	S.B. LANES - R/O - ACCEL LANE - BRIDGE TRANS.	328.94	7.11	259.86	14.29	6.75	246.71	711	87.71	102.00	6.50	237.57	330	39.20	6.00	219.29	440	48.24	6.00	219.29	21.93	25.25	922.86	27.69	49.62	176.05	
677+16.2	680+86.42	S.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	370.22	7.11	292.47	16.09	6.75	277.67	440	61.09	77.18	6.50	267.38	330	44.12	6.00	246.81	440	54.30	6.00	246.81	24.68	25.25	1038.67	31.16	55.84	130.44	
680+86.42	686+50.0	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.	563.58	10.95	685.69	37.71	10.75	673.17	440	148.10	185.81	10.46	655.01	330	108.08	10.00	626.20	440	137.76	10.00	626.20	62.62	41.21	2580.57	77.42	140.04	198.57	
686+50.0	692+50.0	S.B. LANES - R/O - ACCEL LANE - OUTSIDE SH.	600.00	7.11	474.00	26.07	6.75	450.00	440	99.00	125.07	6.50	433.33	330	71.50	6.00	400.00	440	88.00	6.00	400.00	40.00	25.25	1683.33	50.50	90.50	211.40	
692+50.0	701+94.31	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.	944.31	10.95	845.26	62.99	10.75	824.34	440	247.35	310.34	10.46	1094.01	330	180.51	10.00	1045.90	440	230.10	10.00	1045.90	104.59	41.21	4310.15	129.30	233.89	339.65	
701+94.31	714+47.75	S.B. LANES - R/O - ACCEL LANE - TO STA 392+50 RAMP 3	1256.44	7.11	992.59	54.59	6.75	942.33	440	207.31	261.90	6.50	907.43	330	149.73	6.00	837.63	440	184.28	6.00	837.63	83.76	25.25	3525.01	105.75	189.51	442.69	
712+39.00	714+31.45	S.B. LANES - R/O - TAN. SEC. - OUTSIDE SH.	192.45	10.95	234.15	12.88	10.75	229.87	440	50.57	63.45	10.46	223.67	330	36.91	10.00	213.83	440	47.04	10.00	213.83	21.38	41.21	881.21	26.44	47.82	67.81	
		RAMP SOUTH BOUND OUTSIDE SHOULDERS																											
714+31.94	718+31.94	RAMP 1 (1-540 /1-40) - FULL DEPTH- SUPER. TRANS. - OUTSIDE SH.	400.00				3.00	133.33	1045	69.66	69.66	2.46	109.33	330	18.04	10.00	444.44	440	97.78				25.46	1131.56	33.95	33.95	36.09	554.09
718+31.94	718+84.74	RAMP 1 (1-540 /1-40) - FULL DEPTH- SUPER. - OUTSIDE SH.	52.80				3.00	17.60	1045	9.20	9.20	2.46	14.43	330	2.38	10.00	58.67	440	12.91				25.46	149.37	4.48	4.48	64.89	91.58
721+79.69	725+06.93	RAMP 1 (1-540 /1-40) - FULL DEPTH- SUPER. TRANS. - OUTSIDE SH.	327.24				3.00	109.08	1045	56.99	56.99	2.46	89.45	330	14.76	10.00	363.60	440	79.99				25.46	925.73	27.77	27.77	402.14	580.31
725+06.93	728+85.50	RAMP 1 (1-540 /1-40) - FULL DEPTH- SUPER. - OUTSIDE SH.	378.57				3.00	126.19	1045	65.93	65.93	2.46	103.48	330	17.07	10.00	420.63	440	92.54				25.46	1070.93	32.13	32.13	465.22	689.00
731+91.64	734+67.0	RAMP 1 (1-540 /1-40) - FULL DEPTH- SUPER. - OUTSIDE SH.	347.36				3.00	115.79	1045	60.50	60.50	2.46	94.95	330	15.67	10.00	385.96	440	84.91				25.46	982.64	29.48	29.48	426.87	632.20
734+67.0	736+33.14	RAMP 1 (1-540 /1-40) - R/O - SUPER. - OUTSIDE SH.	166.14	10.95	202.14	11.12	11.65	215.06	1594	162.80	173.92	10.46	193.09	330	31.86	10.00	184.60	440	40.61	10.00	184.60	18.46	42.11	777.35	23.32	41.78	373.45	
736+33.14	737+50.32	RAMP 1 (1-540 /1-40) - R/O - SUPER. TRANS. - OUTSIDE SH.	117.18	10.95	142.57	7.84	10.75	139.97	1098	76.84	84.68	10.46	136.19	330	22.47	10.00	130.20	440	28.64	10.00	130.20	13.02	41.21	536.55	16.10	29.12	62.20	
737+50.32	740+48.72	RAMP 1 (1-540 /1-40) - R/O - SUPER. TRANS. - OUTSIDE SH.	298.40	10.95	326.55	17.96	10.75	320.59	683	109.48	127.44	10.46	34.94	330	54.47	10.00	298.22	440	65.61	10.00	298.22	29.82	41.21	1228.97	36.87	66.69	94.98	
740+48.72	741+00.00	RAMP 1 (1-540 /1-40) - R/O - SUPER. - OUTSIDE SH.	84.28	10.95	98.89	5.44	10.75	97.08	440	21.36	26.80	10.46	94.47	330	15.59	10.00	90.31	440	19.87	10.00	90.31	9.03	41.21	372.17	11.17	20.20	28.89	
387+00.00	392+50.00	RAMP 3 (1-540 /1-40) - FULL DEPTH- SUPER. - OUTSIDE SH.	550.00				1.00	61.11	1045	34.93	34.93	0.46	28.11	330	4.64	6.00	366.67	440	80.67				13.46	822.56	24.68	24.68	422.56	437.19
TOTALS					38094.84	2095.21		38727.02		16833.00	18928.21		38658.80		6381.33		41581.93		9120.80		3540.24	3540.11		158804.00	4764.15	8304.26	28067.72	6661.49

BASIS OF ESTIMATE : ACHM BASE COURSE (1/2 ") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76-22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76 - 22) = 5.5%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG - 76 -22) = 6.0%
Nmax = 205
* NOTE: LEVELING QUANTITY IS ESTIMATED. LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

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.		BB0407	87	464

(2) QUANTITIES

BASE & SURFACING - S.B. MAIN LANE & RAMP SHOULDERS (2 OF 2)

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")							TOTAL TONS	ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT								AGGREGATE BASE COURSE	
				*LEVELING - 110 LBS./SQ. YD.			NORMAL													0.10 GAL./SQ. YD.			0.03 GAL./SQ. YD.			TOTAL GALLONS			
				AVG. WIDTH	SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON		AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS	AVG. WIDTH	SQ. YD.	GALLONS		(CLASS 1)	(CLASS 7)
			LIN. FT.	FEET			FEET					FEET				FEET				FEET			FEET				TON	
286+9.50	290+21.95	S.B. LANES - R/O - TAN. SEC. - INSIDE SH. - BRIDGE TRANS.	330.45	4.95	181.75	10.00	4.83	177.34	28	2.48	12.48	4.46	163.76	150	12.28	4.00	146.87	378	27.76	4.00	146.87	14.69	17.29	634.83	19.04	33.73	63.23		
290+21.95	293+07.95	S.B. LANES - R/O - TAN. SEC. - INSIDE SH. - BRIDGE TRANS.	286.00	4.95	157.30	8.65	4.83	153.49	28	2.15	10.80	4.46	141.73	150	10.63	4.00	127.11	378	24.02	4.00	127.11	12.71	17.29	549.44	16.48	29.19	54.72		
293+07.95	295+45.47	S.B. LANES - R/O - TAN. SEC. - INSIDE SH. - BRIDGE TRANS.	233.52	4.95	128.44	7.06	4.83	125.32	1702	106.65	113.71	4.46	85.72	330	19.09	4.00	103.79	440	22.83	4.00	103.79	10.38	17.29	448.62	13.46	23.84	389.77		
298+04.10	307+90.96	S.B. LANES - R/O - TAN. SEC. - INSIDE SH. - BRIDGE TRANS.	986.86	4.95	542.77	29.85	4.83	529.61	440	86.51	146.36	4.46	489.04	330	80.69	4.00	438.60	440	96.49	4.00	438.60	43.86	17.29	1895.87	56.88	100.74	1235.77		
307+90.96	335+26.39	S.B. LANES - R/O - TAN. SEC. - INSIDE SH.	2735.43	4.95	1504.49	82.75	4.83	1468.01	440	322.96	405.71	4.46	1355.56	330	223.67	4.00	1215.75	440	267.47	4.00	1215.75	121.58	17.29	5255.06	157.65	279.23	1753.11		
335+26.39	338+76.39	S.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	350.00	4.95	192.50	10.59	4.88	189.78	571	54.18	64.77	4.46	173.44	330	28.62	4.00	155.56	440	34.22	4.00	155.56	15.56	17.34	674.33	20.23	35.79	297.27		
338+76.39	343+39.26	S.B. LANES - R/O - SUPER. - INSIDE SH.	462.87	4.95	254.58	14.00	4.92	253.04	703	88.94	102.94	4.46	229.38	330	37.85	4.00	205.72	440	45.26	4.00	205.72	20.57	17.38	893.85	26.82	47.39	489.83		
343+39.26	346+64.06	S.B. LANES - FULL DEPTH - SUPER. - INSIDE SH.	324.80				5.00	180.44	1045	94.28	94.28	4.46	160.96	330	26.56	4.00	144.36	440	31.76				17.46	630.11	18.90	18.90	328.54	97.92	
346+64.06	349+02.76	S.B. LANES - FULL DEPTH - SUPER. TRANS. - INSIDE SH.	238.70				5.00	132.61	1045	69.29	69.29	4.46	118.29	330	19.52	4.00	106.09	440	23.34				17.46	463.08	13.89	13.89	244.34	59.15	
351+09.98	355+30.11	S.B. LANES - FULL DEPTH - TAN. SEC. - INSIDE SH.	420.13				5.00	233.41	1045	121.96	121.96	4.46	208.20	330	34.35	4.00	186.72	440	41.08				17.46	815.05	24.45	24.45	435.12	84.72	
355+30.11	356+46.67	S.B. LANES - R/O - TAN. SEC. - INSIDE SH.	116.56	4.95	64.11	3.53	4.83	62.55	440	13.76	17.29	4.46	57.76	330	9.53	4.00	51.80	440	11.40	4.00	51.80	5.18	17.29	223.92	6.72	11.90	74.70		
356+46.67	359+96.67	S.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	350.00	4.95	192.50	10.59	4.83	187.83	440	41.32	51.91	4.46	173.44	330	28.62	4.00	155.56	440	34.22	4.00	155.56	15.56	17.29	672.39	20.17	35.73	200.14		
359+96.67	368+78.77	S.B. LANES - R/O - SUPER. - INSIDE SH.	882.10	4.95	485.16	26.68	4.83	473.39	440	104.15	130.83	4.46	437.13	330	72.13	4.00	392.04	440	86.25	4.00	392.04	39.20	17.29	1694.61	50.84	90.04	443.55		
368+78.77	374+44.39	S.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	565.62	4.95	34.09	17.11	4.83	303.55	440	66.78	83.89	4.46	280.30	330	46.25	4.00	251.39	440	55.31	4.00	251.39	25.14	17.29	1086.62	32.60	57.74	323.43		
374+44.39	388+89.48	S.B. LANES - R/O - TAN. SEC. - BRIDGE TRANS.	1445.09	4.95	794.80	43.71	4.83	775.53	2485	963.60	1007.31	4.46	716.12	330	118.16	4.00	642.26	440	141.30	4.00	642.26	64.23	17.29	2776.18	83.29	147.52	3823.71		
391+36.67	393+16.75	S.B. LANES - R/O - SUPER. TRANS. - BRIDGE TRANS.	180.08	5.10	102.05	5.61	5.04	100.84	2597	130.94	136.55	4.46	89.24	330	14.72	4.00	80.04	440	17.61	4.00	80.04	8.00	17.50	350.16	10.50	18.50	594.14		
393+16.75	405+76.13	S.B. LANES - R/O - SUPER. - BRIDGE TRANS.	1259.38	5.26	736.04	40.48	5.26	736.04	2780	1023.10	1063.58	4.46	624.09	330	102.97	4.00	559.72	440	123.14	4.00	559.72	55.97	17.72	2479.58	74.39	130.36	4978.89		
405+76.13	408+87.44	S.B. LANES - R/O - SUPER. TRANS. - BRIDGE TRANS.	311.31	5.10	176.41	9.70	5.04	174.33	2597	226.37	236.07	4.46	154.27	330	25.45	4.00	138.36	440	30.44	4.00	138.36	13.84	17.50	605.33	18.16	32.00	768.52		
408+87.44	409+26.13	S.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	38.69	5.10	21.92	1.21	5.04	21.67	623	6.75	7.96	4.46	19.17	330	3.16	4.00	17.20	440	3.78	4.00	17.20	1.72	17.50	75.23	2.26	3.98	38.10		
409+26.13	415+73.32	S.B. LANES - R/O - TAN. SEC. - INSIDE SH.	647.19	4.95	355.95	19.58	4.83	347.33	440	76.41	95.99	4.46	320.72	330	52.92	4.00	287.64	440	63.28	4.00	287.64	28.76	17.29	1243.32	37.30	66.06	414.78		
415+73.32	419+23.32	S.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	350.00	4.95	192.50	10.59	4.83	187.83	440	41.32	51.91	4.46	173.44	330	28.62	4.00	155.56	440	34.22	4.00	155.56	15.56	17.29	672.39	20.17	35.73	199.95		
419+23.32	423+25.37	S.B. LANES - R/O - SUPER. - INSIDE SH.	402.05	4.95	221.13	12.16	4.83	215.77	440	47.47	59.63	4.46	199.24	330	32.87	4.00	178.69	440	39.31	4.00	178.69	17.87	17.29	772.38	23.17	41.04	201.70		
425+60.36	429+38.32	S.B. LANES - R/O - SUPER. - INSIDE SH.	377.96	4.95	207.88	11.43	4.83	202.84	440	44.62	56.05	4.46	187.30	330	30.90	4.00	167.98	440	36.96	4.00	167.98	16.80	17.29	726.10	21.78	38.58	189.61		
429+38.32	432+88.32	S.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	350.00	4.95	192.50	10.59	4.83	187.83	440	41.32	51.91	4.46	173.44	330	28.62	4.00	155.56	440	34.22	4.00	155.56	15.56	17.29	672.39	20.17	35.73	199.95		
432+88.32	465+13.72	S.B. LANES - R/O - TAN. SEC. - INSIDE SH.	3225.40	4.95	1773.97	97.57	4.83	1730.96	440	380.81	478.38	4.46	1598.36	330	263.73	4.00	1433.51	440	315.37	4.00	1433.51	143.35	17.29	6196.35	185.89	329.24	2067.12		
465+13.72	468+97.05	S.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	383.33	4.95	210.83	11.60	4.83	205.72	440	45.26	56.86	4.46	189.96	330	31.34	4.00	170.37	440	37.48	4.00	170.37	17.04	17.29	736.42	22.09	39.13	219.17		
468+97.05	482+40.00	S.B. LANES - R/O - SUPER. - INSIDE SH.	1342.95	4.95	738.62	40.62	4.83	720.72	440	158.56	199.18	4.46	665.51	330	109.81	4.00	596.87	440	131.31	4.00	596.87	59.69	17.29	2579.96	77.40	137.09	675.07		
482+40.00	486+53.72	S.B. LANES - R/O - MED. BARRIER - VAR. WIDTH.	413.72	7.75	356.26	19.59	7.75	356.26	1778	346.72	336.31	5.75	264.32	330	43.61	5.75	264.32	440	58.15				25.00	849.22	34.48	34.48			
486+53.72	490+70.05	S.B. LANES - R/O - MED. BARRIER - CONSTANT WIDTH	416.33	4.00	185.04	10.18	4.00	185.04	1485	137.39	147.57	2.00	92.52	330	15.27	2.00	92.52	440	20.35				10.00	462.59	13.88	13.88			
497+16.96	525+83.80	S.B. LANES - R/O - TAN. SEC. - INSIDE SH. - MED. BARRIER	2866.84	4.00	1274.15	70.08	4.00	1274.15	1485	946.06	1016.14	2.00	637.08	330	105.12	2.00	637.08	440	140.16	2.00	637.08	63.71	10.00	3185.38	95.56	159.27			
525+83.80	533+45.30	S.B. LANES - FULL DEPTH - TAN. SEC. - MED. BARRIER	761.50				2.00	169.22	1045	88.42	88.42	2.00	169.22	330	27.92	2.00	169.22	440	37.23				8.00	676.89	20.31	20.31		118.46	
568+14.69	573+19.00	S.B. LANES - FULL DEPTH - TAN. SEC. - MED. BARRIER	504.31				2.00	112.07	1045	58.56	58.56	2.00	112.07	330	18.49	2.00	112.07	440	24.66				8.00	448.28	13.45	13.45		98.10	
573+19.00	575+00.0	S.B. LANES - FULL DEPTH - MED. BARRIER - VAR. WIDTH	181.00				7.05	141.78	1045	74.08	74.08	7.05	141.78	330	23.39	7.05	141.78	440	31.19				28.20	567.13	17.01	17.01		49.62	
575+00.0	577+13.25	S.B. LANES - FULL DEPTH - SUPER. - INSIDE SH.	213.25				5.00	118.47	1045	61.90	61.90	4.46	105.68	330	17.44	4.00	94.78	440	20.85				17.46	413.71	12.41	12.41	243.73	47.10	
577+13.25	590+38.50	S.B. LANES - R/O - SUPER. - INSIDE SH.	1325.25	4.95	728.89	40.09	4.83	716.22	440	156.47	196.56	4.46	656.74	330	108.36	4.00	589.00	440	129.58	4.00	589.00	58.90	17.29	2545.95	76.38	135.28	663.70		
590+38.50	593+88.50	S.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	350.00	4.95	192.50	10.59	4.83	187.83	440	41.32	51.91	4.46	173.44	330	28.62	4.00	155.56	440	34.22	4.00	155.56	15.56	17.29	672.39	20.17	35.73	199.81		
593+88.50	613+89.88	S.B. LANES - R/O - TAN. SEC. - INSIDE SH.	2001.38	4.95	1105.58	60.81	4.83	1078.78	440	237.33	298.14	4.46	996.14	330	164.36	4.00	893.40	440	196.55	4.00	893.40	89.34	17.29	3864.70	115.85	205.19	1288.28		
613+89.88	621+02.43	S.B. LANES - FULL DEPTH - TAN. SEC. - INSIDE SH.	712.55				5.00	395.86	1045	206.84	206.84	4.46	353.11	330	58.26	4.00	316.69	440	69.67				17.46	1382.35	41.47	41.47	737.98	138.61	
622+97.56	628+61.06	S.B. LANES - FULL DEPTH - TAN. SEC. - INSIDE SH.	563.50				5.00	313.06	1045	163.57	163.57	4.46	279.25	330	46.08	4.00	250.44	440	55.10				17.46	1093.19	32.80	32.80	583.61	109.61	
628+61.06	633+16.86	S.B. LANES - R/O - TAN. SEC. - INSIDE SH.	455.80	4.95	250.69	13.79	4.83	244.61	440	53.81	67.60	4.46	225.87	330	37.27	4.00	202.58	440	44.57	4.00	202.58	20.26	17.29	875.64	26.27	46.53	292.12		
633+16.86	637+16.86	S.B. LANES - R/O - SUPER. TRANS. - INSIDE SH.	400.00	4.95	220.00	12.10	4.83	214.67	440	47.23	59.33	4.46	198.22	330	32.71	4.00	177.78	440	39.11	4.00	177.78	17.78	17.29	768.44	23.05	40.83	138.10		
637+16.86	642+72.26	S.B. LANES - R/O - SUPER. - INSIDE SH.	555.40	5.49	338.79	18.63	5.01	309.17	858	132.63	154.26	4.46	275.23	330	45.41	4.00	246.84	440	54.30	4.00	246.84	24.68	17.47	1078.09	32.34	57.02	821.49		
642+72.26	646+72.26	S.B. LANES - R/O - SUPER. - INSIDE SH. - PVMT. TRANS.	400.00	5.49	244.00	13.42	5.01	222.67	2008	223.56	236.98	4.46	198.22	330	32.71	4.00	177.78	440	39.11	4.00	177.78	17.78	17.47	776.44	23.29	41.07	1349.96		
649+19.22	653+19.22	S.B. LANES - R/O - SUPER. - INSIDE SH. - PVMT. TRANS.	400.00	5.49	244.00	13.42	5.01	222.67	2008	223.56	236.98	4.46	198.22	330	32.71	4.00	177.78	440	39.11	4.00	177.78	17.78	17.47	776.44	23.29	41.07	1349.96		
653+19.22	658+75.75	S.B. LANES - R/O - SUPER. - BRIDGE TRANS.	556.53	5.49	339.48	18.67	5.01	309.80	1714	265.50	284.17	4.46	275.79	330	45.51	4.00	247.35	440	54.42	4.00	247.35	24.74	17.47	1080.29	32.41	57.15	806.34		
658+75.75	663+00.58	S.B. LANES - R/O - SUPER. TRANS. - BRIDGE TRANS.	258.18	4.95	142.00	7.81	4.83	138.56	1296	89.78	97.59	4.46	127.94	330	21.11	4.00	114.75	440	25.24	4.00	114.75	11.47	17.29	495.99	14.88	26.35	517.41		
668+60.24	677+16.20	S.B. LANES - R/O - TAN. SEC. - BRIDGE TRANS.	855.96	4.95	470.78	25.89	4.83	459.37	78	163.30	189.19	4.46	424.18	330	69.99	4.00	380.43	440	83.69	4.00	380.43	38.04	17.29	1644.39	49.33	87.37	646.65		
677+16.20	714+31.45	S.B. LANES - R/O - TAN. SEC. - INSIDE SH.	3715.25	4.95	2043.39	112.39	4.83	1993.85	440	438.65	554.04	4.46	1841.11	330	303.78	4.00	1651.22	440	363.27	4.00	1651.22	165.12	17.29	7137.41	214.12	379.24	2381.06		
		RAMPS SOUTH BOUND INSIDE SHOULDERS																											
714+31.94	718+31.94	RAMP 1 (1-540 /1-40) - FULL DEPTH - SUPER. TRANS. - INSIDE SH.	400.00				5.00	222.22	1045	116.11	116.11	4.46	198.22	330	32.71	4.00	177.78	440	39.11				17.46	776.00	23.28	23.28	339.73	84.00	
718+31.94	718+84.74	RAMP 1 (1-540 /1-40) - FULL DEPTH - SUPER. - INSIDE SH.	52.80				5.00	29.33	1045	15.32	15.32	4.46	26.17	330	4.32	4.00	23.47	440	5.16				17.46	102.43	3.07	3.07	55.85	8.91	
721+79.69	725+06.93	RAMP 1 (1-540 /1-40) - FULL DEPTH - SUPER. TRANS. - INSIDE SH.	327.24				5.00	181.80	1045	94.99	94.99	4.46	162.17	330	26.76	4.00	145.44	440	32.00				17.46	634.85	19.05	19.05	346.15	74.32	
725+06.93	728+85.50	RAMP 1 (1-540 /1-40) - FULL DEPTH - SUPER. - INSIDE SH.	378.57				5.00	210.32	1045	109.89	109.89	4.46	187.60	330	30.95	4.00	168.25	440	37.02				17.46	734.43	22.03	22.03	400.44	85.98	
731+19.64	734+67.0	RAMP 1 (1-540 /1-40) - FULL DEPTH - SUPER. - INSIDE SH.	347.36				5.00	192.98	1045	100.83	100.83	4.46	172.14	330	28.40	4.00	154.38	440	33.96				17.46	673.88	20.22	20.22	367.43	78.89	
734+67.0	736+83.14	RAMP 1 (1-540 /1-40) - R/O - SUPER. - INSIDE SH.	216.14	5.50	132.09	7.26	5.04	121.04	440	26.63	33.89	4.75	84.07	330	18.82	4.00	96.06	440	21.13	4.00	96.06	9.61	17.79	427.24	12.82	22.43	107.09		
736+83.14	737+50.32	RAMP 1 (1-540 /1-40) - R/O - SUPER. TRANS. - INSIDE SH.	67.18	5.50	41.05	2.26	5.04	37.62	564	10.51	12.87	4.75	35.46	330	5.85	4.00	29.86	440	6.57	4.00	29.86	2.99	17.79	132.79	3.98	6.97	49.57		
737+50.32	740+18.72	RAMP 1 (1-540 /1-40) - R/O - SUPER. TRANS. - INSIDE SH.	268.40	5.50	164.02	9.02	5.04	150.30	688	54.70	60.72	4.75	141.66	330	23.37	4.00	119.29	440	26.24	4.00	119.29	11.93	17.79	530.54	15.92	27.85	198.03		
740+18.72	741+00.00	RAMP 1 (1-540 /1-40) - R/O - SUPER. - INSIDE SH.	81.28	5.50	49.67	2.73	5.01	45.25	858	19.41	22.14	4.75	42.90	330	7.08	4.00	36.12	440	7.95	4.00	36.12	3.61	17.76	160.39	4.81	8.42	143.50		
387+00.00	392+50.00	RAMP 3 (1-540 /1-40) - FULL DEPTH - SUPER. - INSIDE SH.	550.00				1.00	61.11	1045	31.93	31.93	0.46	28.11	330	4.64	6.00	366.67	440	80.67				13.46	822.56	24.68	24.68	682.35	405.53	
392+50.00	394+60.75	RAMP 3 (1-540 /1-40) - R/O - SUPER. - INSIDE SH.	210.75	5.50	128.79	7.08	5.04	118.02	902	53.23	60.31	4.60	107.72	330	17.77	4.00	93.67	440	20.61	4.00	93.67	9.37	17.64	413.07	12.39	21.76	155.49		
ENTIRE PROJECT - WIDENING FOR GUARDRAIL																													
TOTALS					18390.46	1018.47		20606.88		9419.27	10160.74		18177.92		2971.85		30954.90		6801.57		13854.50	1385.49		86509.08	2595.26	3980.75	36270.06	1596.92	10376.00

BASIS OF ESTIMATE : ACHM BASE COURSE (8/2 ") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76-22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76 - 22) = 5.5%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG - 76 -22) = 6.0%
Nmax = 205
*NOTE: LEVELING QUANTITY IS ESTIMATED. LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:35:59 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.		BB0407	88	464

(2) QUANTITIES

BASE & SURFACING - RAMP TRANSITIONS (1 OF 2)

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")								ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT		
				*LEVELING - 110 LBS./SQ. YD.			NORMAL				TOTAL TONS									0.03 GAL./SQ. YD.		
				AVG. WIDTH	SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON		AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS
			LIN. FT.	FEET			FEET					FEET				FEET				FEET		
2+11.72	2+70.72	RAMP 1 (I-540/S.H. 22 INT.) - RAMP TRANS.	59.0													25.00	163.89	220	18.03	25.00	163.89	4.92
2+70.72	3+23.72	RAMP 1 (I-540/S.H. 22 INT.) - RAMP TRANS.	53.0													25.00	147.22	440	32.39	50.00	294.44	8.83
3+23.72	3+70.72	RAMP 1 (I-540/S.H. 22 INT.) - RAMP TRANS.	47.0									25.00	130.56	440	28.72	25.00	130.56	440	28.72	75.00	391.67	11.75
3+70.72	6+01.19	RAMP 1 (I-540/S.H. 22 INT.) - RAMP TRANS.	230.5	25.00	640.28	35.22	25.00	640.28	1192	381.61	416.83	25.00	640.28	330	105.65	25.00	640.28	440	140.86	150.00	3841.67	115.25
6+01.19	7+70.27	RAMP 1 (I-540/S.H. 22 INT.) - RAMP CONST. DEPTH	169.1	25.00	469.72	25.83	25.00	469.72	2054	482.40	508.23	25.00	469.72	330	77.50	25.00	469.72	440	103.34	175.00	3288.06	98.64
4+43.92	4+61.73	RAMP 2 (I-540/S.H. 22 INT.) - RAMP CONST. DEPTH	17.8	25.00	49.44	2.72	25.00	49.44	3504	86.62	89.34	25.00	49.44	330	8.16	25.00	49.44	440	10.88	250.00	494.44	14.83
4+61.73	7+65.73	RAMP 2 (I-540/S.H. 22 INT.) - RAMP TRANS.	304.0	25.00	844.44	46.44	25.00	844.44	1925	812.77	859.21	25.00	844.44	330	139.33	25.00	844.44	440	185.78	175.00	5911.11	177.33
7+65.73	7+96.73	RAMP 2 (I-540/S.H. 22 INT.) - RAMP TRANS.	31.0									25.00	86.11	440	18.94	25.00	86.11	440	18.94	75.00	258.33	7.75
7+96.73	8+40.73	RAMP 2 (I-540/S.H. 22 INT.) - RAMP TRANS.	44.0													25.00	122.22	440	26.89	50.00	244.44	7.33
8+40.73	9+01.86	RAMP 2 (I-540/S.H. 22 INT.) - RAMP TRANS.	61.1													25.00	169.72	220	18.67	25.00	169.72	5.09
4+44.41	4+94.41	RAMP 3 (I-540/S.H. 22 INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
4+94.41	6+94.41	RAMP 3 (I-540/S.H. 22 INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
6+94.41	8+94.41	RAMP 3 (I-540/S.H. 22 INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	1111.11	33.33
8+94.41	9+94.41	RAMP 3 (I-540/S.H. 22 INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
9+26.78	10+26.78	RAMP 4 (I-540/S.H. 22 INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
10+26.78	12+26.78	RAMP 4 (I-540/S.H. 22 INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	1111.11	33.33
12+26.78	14+26.78	RAMP 4 (I-540/S.H. 22 INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
14+26.78	14+76.78	RAMP 4 (I-540/S.H. 22 INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
378+48.83	378+98.83	RAMP 1 (I-540/GRAND AVE. INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
378+98.83	380+98.83	RAMP 1 (I-540/GRAND AVE. INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
380+98.83	382+98.83	RAMP 1 (I-540/GRAND AVE. INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	1111.11	33.33
382+98.83	383+98.83	RAMP 1 (I-540/GRAND AVE. INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
399+19.66	400+19.66	RAMP 2 (I-540/GRAND AVE. INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
400+19.66	402+19.66	RAMP 2 (I-540/GRAND AVE. INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	1111.11	33.33
402+19.66	404+19.66	RAMP 2 (I-540/GRAND AVE. INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
404+19.66	404+69.66	RAMP 2 (I-540/GRAND AVE. INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	15.00	83.33	385	16.04	23.68	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
392+07.00	393+03.00	RAMP 3 (I-540/GRAND AVE. INT.) - RAMP TRANS.	96.0													25.00	266.67	220	29.33	25.00	266.67	8.00
393+03.00	393+88.00	RAMP 3 (I-540/GRAND AVE. INT.) - RAMP TRANS.	85.0													25.00	236.11	440	51.94	50.00	472.22	14.17
393+88.00	394+72.00	RAMP 3 (I-540/GRAND AVE. INT.) - RAMP TRANS.	84.0									25.00	233.33	440	51.33	25.00	233.33	440	51.33	75.00	700.00	21.00
394+72.00	399+17.77	RAMP 3 (I-540/GRAND AVE. INT.) - RAMP TRANS.	445.8	25.00	1238.33	68.11	25.00	1238.33	1359	841.45	909.56	25.00	1238.33	330	204.32	25.00	1238.33	440	272.43	150.00	7430.00	222.90
399+17.77	400+80.90	RAMP 3 (I-540/GRAND AVE. INT.) - RAMP TRANS.	163.1	25.00	453.06	24.92	25.00	453.06	2462	557.72	582.64	25.00	453.06	330	74.75	25.00	453.06	440	99.67	200.00	3624.44	108.73
376+65.95	377+15.95	RAMP 4 (I-540/GRAND AVE. INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	15.00	83.33	385	16.04	23.68	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
377+15.95	379+15.95	RAMP 4 (I-540/GRAND AVE. INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
379+15.95	381+15.95	RAMP 4 (I-540/GRAND AVE. INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	1111.11	33.33
381+15.95	382+15.95	RAMP 4 (I-540/GRAND AVE. INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
448+49.03	448+99.03	RAMP 1 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
448+99.03	450+99.03	RAMP 1 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
450+99.03	452+99.03	RAMP 1 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	1111.11	33.33
452+99.03	453+99.03	RAMP 1 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
462+28.47	463+28.47	RAMP 2 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
463+28.47	465+28.47	RAMP 2 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	1111.11	33.33
465+28.47	467+28.47	RAMP 2 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
467+28.47	467+78.47	RAMP 2 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
462+49.7	463+49.7	RAMP 3 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
463+49.7	465+49.7	RAMP 3 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	1111.11	33.33
465+49.7	467+49.7	RAMP 3 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
467+49.7	467+99.7	RAMP 3 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
TOTALS					4806.39	264.36		4695.27		3355.09	3619.45		9700.87		1869.82		17473.42		3533.68		56440.06	1693.16

BASIS OF ESTIMATE : ACHM BASE COURSE (1 1/2 ") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76-22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76 - 22) = 5.5%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG - 76 -22) = 6.0%
Nmax = 205
* NOTE: LEVELING QUANTITY IS ESTIMATED. LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:35:59 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.		BB0407	89	464

(2) QUANTITIES

BASE & SURFACING - RAMP TRANSITIONS (2 OF 2)

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")							TOTAL TONS	ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT 0.03 GAL./SQ. YD.		
				*LEVELING - 110 LBS./SQ. YD.			NORMAL															
				AVG. WIDTH	SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON		AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS
			LIN. FT.	FEET			FEET					FEET				FEET				FEET		
446+67.87	447+17.87	RAMP 4 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
447+17.87	449+17.87	RAMP 4 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
449+17.87	451+17.87	RAMP 4 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
451+17.87	452+17.87	RAMP 4 (I-540/KELLEY HWY. INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
576+00.00	576+50.00	RAMP I (I-540/4TH STREET INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
576+50.00	578+50.00	RAMP I (I-540/4TH STREET INT.) - RAMP TRANS.	200.0									25.14	558.67	440	122.91	25.14	558.67	440	122.91	75.42	1676.00	50.28
578+50.00	580+50.00	RAMP I (I-540/4TH STREET INT.) - RAMP TRANS.	200.0													29.42	653.78	440	143.83	88.26	1961.33	58.84
580+50.00	581+50.00	RAMP I (I-540/4TH STREET INT.) - RAMP TRANS.	100.0													33.65	373.89	220	41.13	25.00	277.78	8.33
581+42.65	582+42.65	RAMP 2 (I-540/4TH STREET INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
582+42.65	584+42.65	RAMP 2 (I-540/4TH STREET INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
584+42.65	586+42.65	RAMP 2 (I-540/4TH STREET INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
586+42.65	586+92.65	RAMP 2 (I-540/4TH STREET INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
583+31.61	584+31.61	RAMP 3 (I-540/4TH STREET INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
584+31.61	586+31.61	RAMP 3 (I-540/4TH STREET INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
586+31.61	588+31.61	RAMP 3 (I-540/4TH STREET INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
588+31.61	588+81.61	RAMP 3 (I-540/4TH STREET INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
579+75.46	580+25.46	RAMP 4 (I-540/4TH STREET INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
580+25.46	582+25.46	RAMP 4 (I-540/4TH STREET INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
582+25.46	584+25.46	RAMP 4 (I-540/4TH STREET INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
584+25.46	585+25.46	RAMP 4 (I-540/4TH STREET INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
680+10.33	680+60.33	RAMP I (I-540/U.S. 64 INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
680+60.33	682+60.33	RAMP I (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
682+60.33	684+60.33	RAMP I (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
684+60.33	685+60.33	RAMP I (I-540/U.S. 64 INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
683+92.93	684+92.93	RAMP 2 (I-540/U.S. 64 INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
684+92.93	686+92.93	RAMP 2 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
686+92.93	688+92.93	RAMP 2 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
688+92.93	689+42.93	RAMP 2 (I-540/U.S. 64 INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
695+35.51	695+85.51	RAMP 3 (I-540/U.S. 64 INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
695+85.51	697+85.51	RAMP 3 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
697+85.51	699+85.51	RAMP 3 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
699+85.51	700+85.51	RAMP 3 (I-540/U.S. 64 INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
696+62.91	697+62.91	RAMP 4 (I-540/U.S. 64 INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
697+62.91	699+62.91	RAMP 4 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
699+62.91	701+62.91	RAMP 4 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
701+62.91	702+12.91	RAMP 4 (I-540/U.S. 64 INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
696+42.1	697+42.1	RAMP 5 (I-540/U.S. 64 INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
697+42.1	699+42.1	RAMP 5 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
699+42.1	701+42.1	RAMP 5 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
701+42.1	701+92.1	RAMP 5 (I-540/U.S. 64 INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
692+46.41	692+96.41	RAMP 6 (I-540/U.S. 64 INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
692+96.41	694+96.41	RAMP 6 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
694+96.41	696+96.41	RAMP 6 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
696+96.41	697+96.41	RAMP 6 (I-540/U.S. 64 INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
681+15.69	682+15.69	RAMP 7 (I-540/U.S. 64 INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
682+15.69	684+15.69	RAMP 7 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
684+15.69	686+15.69	RAMP 7 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
686+15.69	686+65.69	RAMP 7 (I-540/U.S. 64 INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
680+85.36	681+35.36	RAMP 8 (I-540/U.S. 64 INT.) - RAMP TRANS.	50.0	25.00	138.89	7.64	25.00	138.89	385	26.74	34.38	25.00	138.89	330	22.92	25.00	138.89	440	30.56	100.00	555.56	16.67
681+35.36	683+35.36	RAMP 8 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0									25.00	555.56	440	122.22	25.00	555.56	440	122.22	75.00	1666.67	50.00
683+35.36	685+35.36	RAMP 8 (I-540/U.S. 64 INT.) - RAMP TRANS.	200.0													25.00	555.56	440	122.22	50.00	IIII.II	33.33
685+35.36	686+35.36	RAMP 8 (I-540/U.S. 64 INT.) - RAMP TRANS.	100.0													25.00	277.78	220	30.56	25.00	277.78	8.33
TOTALS					1805.57	99.32		1805.57		347.62	446.94		9030.96		1912.51		20058.71		4005.15		47804.11	1434.08

BASIS OF ESTIMATE : ACHM BASE COURSE (1 1/2") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG-76-22) = 6.0%
Nmax = 205
*NOTE: LEVELING QUANTITY IS ESTIMATED. LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
5/31/12

QUANTITIES

8/27/2012 9:36:00 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.		BB0407	90	464

(2) QUANTITIES

BASE & SURFACING - BRIDGE JACKING & TEMPORARY TRANSITIONS

	STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")							TOTAL TONS	ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT 0.03 GAL./SQ. YD.			AGGREGATE BASE COURSE (CLASS 7)		COLD MILLING ASPHALT PAVEMENT
					*LEVELING - 110 LBS./SQ. YD.			NORMAL																		
					AVG. WIDTH	SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON		AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS	TON/STA.	TON	
				LIN. FT.	FEET			FEET					FEET				FEET				FEET					SQ. YD.
	9+03.38	10+03.38	E.B. U.S. 64 - BRIDGE JACKING TRANSITION	100.0													VARIES	444.44	220	48.89	VARIES	444.44	13.33	45.97	45.97	444.44
	10+03.38	11+03.38	E.B. U.S. 64 - BRIDGE JACKING TRANSITION	100.0													VARIES	610.34	330	100.71	VARIES	610.34	18.31	45.97	45.97	
	11+03.38	13+03.38	E.B. U.S. 64 - BRIDGE JACKING TRANSITION	200.0									VARIES	1095.93	440	241.10	VARIES	1095.93	220	120.55	VARIES	2191.86	65.76	45.97	91.93	
	16+53.07	18+53.07	E.B. U.S. 64 - BRIDGE JACKING TRANSITION	200.0									VARIES	1149.98	440	253.00	VARIES	1149.98	220	126.50	VARIES	2299.96	69.00	45.97	91.93	
	18+53.07	19+53.07	E.B. U.S. 64 - BRIDGE JACKING TRANSITION	100.0													VARIES	444.44	330	73.33	VARIES	444.44	13.33	45.97	45.97	
	19+53.07	20+53.07	E.B. U.S. 64 - BRIDGE JACKING TRANSITION	100.0													VARIES	444.44	220	48.89	VARIES	444.44	13.33	45.97	45.97	444.44
	9+46.92	10+46.92	W.B. U.S. 64 - BRIDGE JACKING TRANSITION	100.0													VARIES	444.44	220	48.89	VARIES	444.44	13.33	45.97	45.97	444.44
	10+46.92	11+46.92	W.B. U.S. 64 - BRIDGE JACKING TRANSITION	100.0													VARIES	444.44	330	73.33	VARIES	444.44	13.33	45.97	45.97	
	11+46.92	13+46.92	W.B. U.S. 64 - BRIDGE JACKING TRANSITION	200.0									VARIES	1152.71	440	253.60	VARIES	1152.71	220	126.80	VARIES	2305.42	69.16	45.97	91.93	
	16+96.61	18+96.61	W.B. U.S. 64 - BRIDGE JACKING TRANSITION	200.0									VARIES	1115.00	440	245.30	VARIES	1115.00	220	122.65	VARIES	2230.00	66.90	45.97	91.93	
	18+96.61	19+96.61	W.B. U.S. 64 - BRIDGE JACKING TRANSITION	100.0													VARIES	569.80	330	94.02	VARIES	569.80	17.09	45.97	45.97	
	19+96.61	20+96.61	W.B. U.S. 64 - BRIDGE JACKING TRANSITION	100.0													VARIES	444.44	220	48.89	VARIES	444.44	13.33	45.97	45.97	444.44
**	TEMPORARY TRANSITIONS - CROSSOVER SOUTH OF ARKANSAS RIVER			100.0				39.00	433.33	385	83.42	83.42	39.00	433.33	330	71.50	39.00	433.33	440	95.33	195.00	2166.67	65.00			
**	TEMPORARY TRANSITIONS - CROSSOVER SOUTH OF ARKANSAS RIVER			400.0									39.00	1733.33	440	381.33	39.00	1733.33	440	381.33	117.00	5200.00	156.00			
**	TEMPORARY TRANSITIONS - CROSSOVER SOUTH OF ARKANSAS RIVER			400.0													39.00	1733.33	440	381.33	78.00	3466.67	104.00			
**	TEMPORARY TRANSITIONS - CROSSOVER SOUTH OF ARKANSAS RIVER			200.0													39.00	866.67	220	95.33	39.00	866.67	26.00			
**	TEMPORARY TRANSITIONS - FULL DEPTH SECTIONS @ ARKANSAS RIVER BRIDGE			100.0				36.00	400.00	385	77.00	77.00	36.00	400.00	330	66.00	36.00	400.00	440	88.00	180.00	2000.00	60.00			
**	TEMPORARY TRANSITIONS - FULL DEPTH SECTIONS @ ARKANSAS RIVER BRIDGE			400.0									36.00	1600.00	440	352.00	36.00	1600.00	440	352.00	108.00	4800.00	144.00			
**	TEMPORARY TRANSITIONS - FULL DEPTH SECTIONS @ ARKANSAS RIVER BRIDGE			400.0													36.00	1600.00	440	352.00	72.00	3200.00	96.00			
**	TEMPORARY TRANSITIONS - FULL DEPTH SECTIONS @ ARKANSAS RIVER BRIDGE			200.0													36.00	800.00	220	88.00	36.00	800.00	24.00			
**	TEMPORARY TRANSITIONS - CROSSOVER NORTH OF ARKANSAS RIVER			100.0				40.00	444.44	385	85.55	85.55	40.00	444.44	330	73.33	40.00	444.44	440	97.78	200.00	2222.22	66.67			
**	TEMPORARY TRANSITIONS - CROSSOVER NORTH OF ARKANSAS RIVER			400.0									40.00	1777.78	440	391.11	40.00	1777.78	440	391.11	120.00	5333.33	160.00			
**	TEMPORARY TRANSITIONS - CROSSOVER NORTH OF ARKANSAS RIVER			400.0													40.00	1777.78	440	391.11	80.00	3555.56	106.67			
**	TEMPORARY TRANSITIONS - CROSSOVER NORTH OF ARKANSAS RIVER			200.0													40.00	888.89	220	97.78	40.00	888.89	26.67			
**	TEMPORARY TRANSITIONS - CROSSOVER SOUTH OF I-40 INTERCHANGE			25.0				30.00	83.33	385	16.04	16.04	30.00	83.33	330	13.75	30.00	83.33	440	18.33	150.00	416.67	12.50			
**	TEMPORARY TRANSITIONS - CROSSOVER SOUTH OF I-40 INTERCHANGE			100.0									30.00	333.33	440	73.33	30.00	333.33	440	73.33	90.00	1000.00	30.00			
**	TEMPORARY TRANSITIONS - CROSSOVER SOUTH OF I-40 INTERCHANGE			100.0													30.00	333.33	440	73.33	60.00	666.67	20.00			
**	TEMPORARY TRANSITIONS - CROSSOVER SOUTH OF I-40 INTERCHANGE			50.0													30.00	166.67	220	18.33	30.00	166.67	5.00			
**																										
**	TEMPORARY TRANSITIONS - FULL DEPTH SECTIONS @ I-40 INTERCHANGE			25.0				48.00	133.33	385	25.67	25.67	48.00	133.33	330	22.00	48.00	133.33	440	29.33	240.00	666.67	20.00			
**	TEMPORARY TRANSITIONS - FULL DEPTH SECTIONS @ I-40 INTERCHANGE			100.0									48.00	533.33	440	117.33	48.00	533.33	440	117.33	144.00	1600.00	48.00			
**	TEMPORARY TRANSITIONS - FULL DEPTH SECTIONS @ I-40 INTERCHANGE			100.0													48.00	533.33	440	117.33	96.00	1066.67	32.00			
**	TEMPORARY TRANSITIONS - FULL DEPTH SECTIONS @ I-40 INTERCHANGE			50.0													48.00	266.67	220	29.33	48.00	266.67	8.00			
	TOTALS								1494.43		287.68	287.68		11985.82		2554.68		24799.27		4321.19		53224.05	1596.71		735.48	1777.76

BASIS OF ESTIMATE : ACHM BASE COURSE (1 1/2 ") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76-22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76 - 22) = 5.5%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG - 76 -22) = 6.0%
Nmax = 205

* NOTE: LEVELING QUANTITY IS ESTIMATED. LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.
** NOTE: USE MINIMUM TRANSITION LENGTH OF 25 FEET PER INCH OF OVERLAY THICKNESS. LONGER TRANSITIONS SHALL BE USED WHERE DIRECTED BY THE ENGINEER.

TRANSITION SHALL BE REMOVED WHEN ADJOINING SEGMENT IS RESURFACED. REMOVAL SHALL BE ALONG A STRAIGHT LINE BY USE OF PAPER OR BY SAWING.
PAVEMENT FOR REMOVAL OF SURFACING TRANSITIONS SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS. THE CONTRACTOR MAY SUBSTITUTE ASPHALT MEETING THE REQUIREMENTS OF SECTION 415 FOR TEMPORARY TRANSITIONS, BUT PAYMENT SHALL BE MADE FOR ACHM SURFACE COURSE (1/2")

BASE & SURFACING - S.H. 22 & GRAND AVENUE IMPROVEMENTS

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT 0.03 GAL./SQ. YD.			COLD MILLING ASPHALT PAVEMENT
				AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS	
			LIN. FT.	FEET				FEET				FEET				FEET			SQ. YD.
10+72.00	12+64.30	S.H. 22 @ I-540 UNDERPASS	192.3									68.67	1467.25	220	161.40	68.67	1467.25	44.02	1025.60
12+64.30	18+00.00	S.H. 22 @ I-540 UNDERPASS	535.7	22.67	1349.37	440	296.86	10.00	595.22	440	130.95	68.67	4087.39	220	449.61	101.33	6031.39	180.94	2857.07
18+00.00	18+36.68	S.H. 22 @ I-540 UNDERPASS	36.7									68.67	280.02	220	30.80	68.67	280.02	8.40	195.73
2+24.41	5+76.06	GRAND AVE. @ I-540 UNDERPASS	351.7										2124.35	220	233.68		2124.35	63.73	2124.35
TOTALS					1349.37		296.86		595.22		130.95		7959.01		875.49		9903.01	297.09	6202.75

BASIS OF ESTIMATE : ACHM BASE COURSE (1 1/2 ") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76-22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76 - 22) = 5.5%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG - 76 -22) = 6.0%
Nmax = 205

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:36:00 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.		BB0407	91	464

(2) QUANTITIES

BASE & SURFACING - MAINTENANCE OF TRAFFIC

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT 0.03 GAL./SQ. YD.		
				AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS
			LIN. FT.	FEET				FEET				FEET				FEET		
335+10	347+55	MAIN LANE CROSSOVER	1245.00	30.67	4242.68	990	2100.13	26.33	3642.32	330	600.98	23.00	3181.67	330	524.98	115.00	15908.33	477.25
337+00	347+58	MAIN LANE CROSSOVER	1058.00	30.67	3605.43	990	1784.69	26.33	3095.24	330	510.71	23.00	2703.78	330	446.12	115.00	13518.89	405.57
505+00	512+26	MAIN LANE CROSSOVER	726.00	30.67	2474.05	990	1224.65	26.33	2123.95	330	350.45	23.00	1855.33	330	306.13	115.00	9276.67	278.30
505+00	512+26	MAIN LANE CROSSOVER	726.00	30.67	2474.05	990	1224.65	26.33	2123.95	330	350.45	23.00	1855.33	330	306.13	115.00	9276.67	278.30
601+00	612+50	MAIN LANE CROSSOVER	1150.00	30.67	3918.94	990	1939.88	26.33	3364.39	330	555.12	23.00	2938.89	330	484.92	115.00	14694.44	440.83
601+00	612+50	MAIN LANE CROSSOVER	1150.00	30.67	3918.94	990	1939.88	26.33	3364.39	330	555.12	23.00	2938.89	330	484.92	115.00	14694.44	440.83
669+00	678+40	MAIN LANE CROSSOVER	940.00	30.67	3203.31	990	1585.64	26.33	2750.02	330	453.75	23.00	2402.22	330	396.37	115.00	5500.04	165.00
670+00	679+40	MAIN LANE CROSSOVER	940.00	30.67	3203.31	990	1585.64	26.33	2750.02	330	453.75	23.00	2402.22	330	396.37	115.00	12011.11	360.33
708+06	717+41	MAIN LANE CROSSOVER	935.00	30.67	3186.27	990	1577.20	26.33	2735.39	330	451.34	23.00	2389.44	330	394.26	115.00	11947.22	358.42
6+03	12+46	U.S. 64 CROSSOVER	643.00	30.67	2191.20	990	1084.64	26.33	1881.13	330	310.39	23.00	1643.22	330	271.13	115.00	8216.11	246.48
6+66	13+10	U.S. 64 CROSSOVER	644.00	30.67	2194.61	990	1086.33	26.33	1884.06	330	310.87	23.00	1645.78	330	271.55	115.00	8228.89	246.87
16+78	24+05	U.S. 64 CROSSOVER	727.00	30.67	2477.45	990	1226.34	26.33	2126.88	330	350.94	23.00	1857.89	330	306.55	115.00	9289.44	278.68
17+83	25+58	U.S. 64 CROSSOVER	775.00	30.67	2641.03	990	1307.31	26.33	2267.31	330	374.11	23.00	1980.56	330	326.79	115.00	9902.78	297.08
2+64	7+39	TEMP. RAMP 1B @ I-540 /S.H. 22 INTER.	475.00					27.33	1442.42	660	476.00	23.00	1213.89	330	200.29	52.00	2744.44	82.33
5+70	7+11	TEMP. RAMP 1A @ I-540 /S.H. 22 INTER.	141.00					27.33	428.17	660	141.30	23.00	360.33	330	59.45	52.00	814.67	24.44
292+06	295+06	TEMP. ACCEL LANE @ TEMP. RAMP 1A	300.00					27.33	911.00	660	300.63	23.00	766.67	330	126.50	52.00	1733.33	52.00
289+79	292+93	TEMP. RAMP 6A @ I-540 /S.H. 22 INTER.	314.00					27.33	953.51	660	314.66	23.00	802.44	330	132.40	52.00	1814.22	54.43
295+00	300+40	TEMP. RAMP 2A @ I-540 /S.H. 22 INTER.	540.00					27.33	1639.80	660	541.13	23.00	1380.00	330	227.70	52.00	3120.00	93.60
13+90	15+80	TEMP. ASPHALT PATCHING @ I-540 /S.H. 22 INTER.	190.00					16.00	337.78	660	111.47	16.00	337.78	330	55.73	32.00	675.56	20.27
372+48	376+06	TEMP. RAMP 1B @ I-540 /GRAND AVE. INTER.	358.00					27.33	1087.13	660	358.75	23.00	914.89	330	150.96	52.00	2068.44	62.05
376+95	380+77	TEMP. RAMP 4B @ I-540 /GRAND AVE. INTER.	958.00					27.33	2909.13	660	960.01	23.00	2448.22	330	403.96	52.00	5535.11	166.05
379+84	385+30	TEMP. RAMP 1A @ I-540 /GRAND AVE. INTER.	546.00					27.33	1658.02	660	547.15	23.00	1395.33	330	230.23	52.00	3154.67	94.64
383+96	389+24	TEMP. RAMP 4A @ I-540 /GRAND AVE. INTER.	936.00					27.33	2842.32	660	937.97	23.00	2392.00	330	394.68	52.00	5408.00	162.24
396+96	402+45	TEMP. RAMP 2A @ I-540 /GRAND AVE. INTER.	549.00					27.33	1667.13	660	550.15	23.00	1403.00	330	231.50	52.00	3172.00	95.16
401+67	408+65	TEMP. RAMP 3A @ I-540 /GRAND AVE. INTER.	698.00					27.33	2119.59	660	699.46	23.00	1783.78	330	294.32	52.00	4032.89	120.99
404+34	407+71	TEMP. RAMP 3B @ I-540 /GRAND AVE. INTER.	337.00					27.33	1023.36	660	337.71	23.00	861.22	330	142.10	52.00	1947.11	58.41
405+04	409+12	TEMP. RAMP 2B @ I-540 /GRAND AVE. INTER.	408.00					27.33	1238.96	660	408.86	23.00	1042.67	330	172.04	52.00	2357.33	70.72
3+13	5+03	TEMP. ASPHALT PATCHING @ I-540 /GRAND AVE. INTER.	190.00					16.00	337.78	660	111.47	16.00	337.78	330	55.73	32.00	675.56	20.27
442+48	446+06	TEMP. RAMP 1B @ I-540 /KELLEY HWY. INTER.	358.00					27.33	1087.13	660	358.75	23.00	914.89	330	150.96	52.00	2068.44	62.05
446+95	450+77	TEMP. RAMP 4B @ I-540 /KELLEY HWY. INTER.	382.00					27.33	1160.01	660	382.80	23.00	976.22	330	161.08	52.00	2207.11	66.21
448+45	455+29	TEMP. RAMP 1A @ I-540 /KELLEY HWY. INTER.	684.00					27.33	2077.08	660	685.44	23.00	1748.00	330	288.42	52.00	3952.00	118.56
452+97	458+06	TEMP. RAMP 4A @ I-540 /KELLEY HWY. INTER.	916.00					27.33	2781.59	660	917.92	23.00	2340.89	330	386.25	52.00	5292.44	158.77
461+00	468+63	TEMP. RAMP 2A @ I-540 /KELLEY HWY. INTER.	763.00					27.33	2316.98	660	764.60	23.00	1949.89	330	321.73	52.00	4408.44	132.25
462+00	468+88	TEMP. RAMP 3A @ I-540 /KELLEY HWY. INTER.	688.00					27.33	2089.23	660	689.45	23.00	1758.22	330	290.11	52.00	3975.11	119.25
468+00	472+09	TEMP. RAMP 2B @ I-540 /KELLEY HWY. INTER.	409.00					27.33	1242.00	660	409.86	23.00	1045.22	330	172.46	52.00	2363.11	70.89
468+00	471+71	TEMP. RAMP 3B @ I-540 /KELLEY HWY. INTER.	371.00					27.33	1126.60	660	371.78	23.00	948.11	330	156.44	52.00	2143.56	64.31
580+15	587+15	TEMP. RAMP 1@ I-540 /4TH ST. INTER.	700.00					27.33	2125.67	660	701.47	23.00	1788.89	330	295.17	52.00	4044.44	121.33
681+89	688+03	TEMP. RAMP 8 @ I-540 /U.S. 64 INTER.	614.00					27.33	1864.51	660	615.29	23.00	1569.11	330	258.90	52.00	3547.56	106.43
379+73	391+98	TEMP. RAMP 3 @ I-540 /I-40 INTER.	1225.00					27.33	3719.92	660	1227.57	23.00	3130.56	330	516.54	52.00	7077.78	212.33
736+82	741+19	TEMP. RAMP 2 @ I-540 /I-40 INTER.	437.00					27.33	1327.02	660	437.92	23.00	1116.78	330	184.27	52.00	2524.89	75.75
364+73	379+00	TEMP. ACCEL LANE IN MEDIAN	1427.00					21.17	3356.62	660	1107.68	19.00	3012.56	330	497.07	41.26	6542.00	196.26
367+81	379+84	TEMP. ACCEL LANE IN MEDIAN	1203.00					21.17	2829.72	660	933.81	19.00	2539.67	330	419.05	41.26	5515.09	165.45
401+67	409+33	TEMP. ACCEL LANE IN MEDIAN	766.00					21.17	1801.80	660	594.59	19.00	1617.11	330	266.82	41.26	3511.68	105.35
402+08	417+47	TEMP. ACCEL LANE IN MEDIAN	1539.00					21.17	3620.07	660	1194.62	19.00	3249.00	330	536.09	41.26	7055.46	211.66
434+76	448+16	TEMP. ACCEL LANE IN MEDIAN	1340.00					21.17	3151.98	660	1040.15	19.00	2828.89	330	466.77	41.26	6143.16	184.29
437+80	448+45	TEMP. ACCEL LANE IN MEDIAN	1065.00					21.17	2505.12	660	826.69	19.00	2248.33	330	370.97	41.26	4882.43	146.47
468+34	480+10	TEMP. ACCEL LANE IN MEDIAN	1176.00					21.17	2766.21	660	912.85	19.00	2482.67	330	409.64	41.26	5391.31	161.74
468+68	476+59	TEMP. ACCEL LANE IN MEDIAN	791.00					21.17	1860.61	660	614.00	19.00	1669.89	330	275.53	41.26	3626.30	108.79
		ADDITIONAL FOR TEMPORARY RAMPS - M. O. T.							11610.00	660	3831.30		10800.00	330	1782.00		23220.00	696.60
TOTALS						39731.27		19666.98		111125.02		31043.24		96970.12		16000.08		29210.67	8736.28

BASIS OF ESTIMATE : ACHM BASE COURSE (11/2") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG-76-22) = 6.0%
Nmax = 205

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:36:00 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.		BB0407	92	464

BASE & SURFACING - MAIN LANE N.B. LANES

(2) QUANTITIES

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")							TOTAL TONS	ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT			AGGREGATE BASE COURSE (CLASS 7)
				* LEVELING - 110 LBS./SQ. YD.			NORMAL													0.03 GAL./SQ. YD.			
				AVG. WIDTH	SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON		AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS	
			LIN. FT.	FEET			FEET					FEET				FEET				FEET			TON
286+91.50	288+81.5	N.B. LANES - OVERLAY TRANSITION	190.00									24.0	506.67	468	118.56	24.0	506.67	440	111.47	24.0	506.67	15.20	
288+81.5	289+31.5	N.B. LANES - OVERLAY TRANSITION	50.00	24.0	133.33	7.33	24.0	133.33	385	25.67	33.00	24.0	133.33	330	22.00	24.0	133.33	440	29.33	24.0	133.33	4.00	
289+31.5	295+06.36	N.B. LANES - R/O - TANGENT SECTION	574.86	24.0	1532.96	84.31	24.0	1532.96	1507	1155.09	1239.40	24.0	1532.96	330	252.94	24.0	1532.96	440	337.25	96.0	6131.84	183.96	
297+69.79	307+90.96	N.B. LANES - R/O - TANGENT SECTION	1021.17	24.0	2723.12	149.77	24.0	2723.12	1293	1760.50	1910.27	24.0	2723.12	330	449.31	24.0	2723.12	440	599.09	96.0	10892.48	326.77	
307+90.96	335+26.39	N.B. LANES - R/O - TANGENT SECTION	2735.43	24.0	7294.48	401.20	24.0	7294.48	519	1892.92	2294.12	24.0	7294.48	330	1203.59	24.0	7294.48	440	1604.79	96.0	29177.92	875.34	
335+26.39	338+76.39	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	480	224.00	275.33	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
338+76.39	343+20.24	N.B. LANES - R/O - SUPER.	443.85	24.0	1183.60	65.10	24.0	1183.60	440	260.39	325.49	24.0	1183.60	330	195.29	24.0	1183.60	440	260.39	96.0	4734.40	142.03	
343+20.24	346+64.06	N.B. LANES - FULL DEPTH - SUPER.	343.82				24.0	916.85	1045	479.05	479.05	24.0	916.85	330	151.28	24.0	916.85	440	201.71	96.0	3667.41	110.02	320.90
346+64.06	348+83.74	N.B. LANES - FULL DEPTH - SUPER. TRANS.	219.68				24.0	585.81	1045	306.09	306.09	24.0	585.81	330	96.66	24.0	585.81	440	128.88	96.0	2343.25	70.30	205.03
350+90.96	355+30.11	N.B. LANES - FULL DEPTH - TANGENT SECTION	439.15				24.0	1171.07	1045	611.88	611.88	24.0	1171.07	330	193.23	24.0	1171.07	440	257.64	96.0	4684.27	140.53	409.87
355+30.11	356+46.67	N.B. LANES - R/O - TANGENT SECTION	116.56	24.0	310.83	17.10	24.0	310.83	519	80.66	97.76	24.0	310.83	330	51.29	24.0	310.83	440	68.38	96.0	1243.31	37.30	
356+46.67	359+96.67	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	480	224.00	275.33	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
359+96.67	368+78.77	N.B. LANES - R/O - SUPER.	882.10	24.0	2352.27	129.37	24.0	2352.27	440	517.50	646.87	24.0	2352.27	330	388.12	24.0	2352.27	440	517.50	96.0	9409.07	282.27	
368+78.77	372+28.77	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	480	224.00	275.33	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
372+28.77	374+71.1	N.B. LANES - R/O - TANGENT SECTION	242.33	24.0	646.21	35.54	24.0	646.21	519	167.69	203.23	24.0	646.21	330	106.62	24.0	646.21	440	142.17	96.0	2584.85	77.55	
374+71.1	389+02.13	N.B. LANES - R/O - TANGENT SECTION	1431.03	24.0	3816.08	209.88	24.0	3816.08	990	1888.96	2098.84	24.0	3816.08	330	629.65	24.0	3816.08	440	839.54	96.0	15264.32	457.93	
391+49.32	393+16.75	N.B. LANES - R/O - SUPER. TRANS.	167.43	24.0	446.48	24.56	24.0	446.48	1540	343.79	368.35	24.0	446.48	330	73.67	24.0	446.48	440	98.23	96.0	1785.92	53.58	
393+16.75	405+76.13	N.B. LANES - R/O - SUPER.	1259.38	24.0	3358.35	184.71	24.0	3358.35	1126	1890.75	2075.46	24.0	3358.35	330	554.13	24.0	3358.35	440	738.84	96.0	13433.39	403.00	
405+76.13	408+46.61	N.B. LANES - R/O - SUPER. TRANS.	270.48	24.0	721.28	39.67	24.0	721.28	575	207.37	247.04	24.0	721.28	330	119.01	24.0	721.28	440	158.68	96.0	2885.12	86.55	
408+46.61	409+26.13	N.B. LANES - R/O - SUPER. TRANS.	79.52	24.0	212.05	11.66	24.0	212.05	480	50.89	62.55	24.0	212.05	330	34.99	24.0	212.05	440	46.65	96.0	848.21	25.45	
409+26.13	411+51.41	N.B. LANES - R/O - TANGENT SECTION	225.28	24.0	600.75	33.04	24.0	600.75	519	155.89	188.93	24.0	600.75	330	99.12	24.0	600.75	440	132.17	96.0	2402.99	72.09	
411+51.41	415+73.32	N.B. LANES - R/O - TANGENT SECTION	421.91	24.0	1125.09	61.88	24.0	1125.09	813	457.35	519.23	24.0	1125.09	330	185.64	24.0	1125.09	440	247.52	96.0	4500.37	135.01	
415+73.32	419+23.32	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	1268	591.73	643.06	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
419+23.32	422+48.44	N.B. LANES - R/O - SUPER.	325.12	24.0	866.99	47.68	24.0	866.99	1690	732.61	780.29	24.0	866.99	330	143.05	24.0	866.99	440	190.74	96.0	3467.95	104.04	
424+85.32	429+38.32	N.B. LANES - R/O - SUPER.	453.00	24.0	1208.00	66.44	24.0	1208.00	1390	839.56	906.00	24.0	1208.00	330	199.32	24.0	1208.00	440	265.76	96.0	4832.00	144.96	
429+38.32	431+70.45	N.B. LANES - R/O - SUPER. TRANS.	232.13	24.0	619.01	34.05	24.0	619.01	756	233.99	268.04	24.0	619.01	330	102.14	24.0	619.01	440	136.18	96.0	2476.05	74.28	
431+70.45	432+88.32	N.B. LANES - R/O - SUPER. TRANS.	117.87	24.0	314.32	17.29	24.0	314.32	480	75.44	92.73	24.0	314.32	330	51.86	24.0	314.32	440	69.15	96.0	1257.28	37.72	
432+88.32	465+13.72	N.B. LANES - R/O - TANGENT SECTION	3225.40	24.0	8601.07	473.06	24.0	8601.07	519	2231.98	2705.04	24.0	8601.07	330	1419.18	24.0	8601.07	440	1892.24	96.0	34404.27	1032.13	
465+13.72	468+97.05	N.B. LANES - R/O - SUPER. TRANS.	383.33	24.0	1022.21	56.22	24.0	1022.21	480	245.33	301.55	24.0	1022.21	330	168.66	24.0	1022.21	440	224.89	96.0	4088.85	122.67	
468+97.05	482+40.00	N.B. LANES - R/O - SUPER.	1342.95	24.0	3581.20	196.97	24.0	3581.20	440	787.86	984.83	24.0	3581.20	330	590.90	24.0	3581.20	440	787.86	96.0	14324.80	429.74	
482+40.00	485+57.89	N.B. LANES - R/O - SUPER.	317.89	24.0	847.71	46.62	24.0	847.71	440	186.50	233.12	24.0	847.71	330	139.87	24.0	847.71	440	186.50	96.0	3390.83	101.72	
485+57.89	489+41.22	N.B. LANES - R/O - SUPER. TRANS.	383.33	24.0	1022.21	56.22	24.0	1022.21	480	245.33	301.55	24.0	1022.21	330	168.66	24.0	1022.21	440	224.89	96.0	4088.85	122.67	
489+41.22	490+70.05	N.B. LANES - R/O - TANGENT SECTION	128.83	24.0	343.55	18.90	24.0	343.55	519	89.15	108.05	24.0	343.55	330	56.69	24.0	343.55	440	75.58	96.0	1374.19	41.23	
497+16.96	525+81.80	N.B. LANES - R/O - TANGENT SECTION	2864.84	24.0	7639.57	420.18	24.0	7639.57	519	1982.47	2402.65	24.0	7639.57	330	1260.53	24.0	7639.57	440	1680.71	96.0	30558.29	916.75	
525+81.80	533+45.30	N.B. LANES - FULL DEPTH - TANGENT SECTION	763.50				24.0	2036.00	1045	1063.81	1063.81	24.0	2036.00	330	335.94	24.0	2036.00	440	447.92	96.0	8144.00	244.32	712.60
568+17.43	570+56.83	N.B. LANES - FULL DEPTH - TANGENT SECTION	239.40				24.0	638.40	1045	333.56	333.56	24.0	638.40	330	105.34	24.0	638.40	440	140.45	96.0	2553.60	76.61	223.44
570+56.83	574+06.83	N.B. LANES - FULL DEPTH - SUPER. TRANS.	350.00				24.0	933.33	1045	487.66	487.66	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	326.67
574+06.83	577+13.25	N.B. LANES - FULL DEPTH - SUPER.	306.42				24.0	817.12	1045	426.95	426.95	24.0	817.12	330	134.82	24.0	817.12	440	179.77	96.0	3268.48	98.05	285.99
577+13.25	590+38.50	N.B. LANES - R/O - SUPER.	1325.25	24.0	3534.00	194.37	24.0	3534.00	440	777.48	971.85	24.0	3534.00	330	583.11	24.0	3534.00	440	777.48	96.0	14136.00	424.08	
590+38.50	593+88.50	N.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	480	224.00	275.33	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
593+88.50	614+03.30	N.B. LANES - R/O - TANGENT SECTION	2023.56	24.0	5396.16	296.79	24.0	5396.16	519	1400.30	1697.09	24.0	5396.16	330	890.37	24.0	5396.16	440	1187.16	96.0	21584.64	647.54	
614+03.30	621+02.43	N.B. LANES - FULL DEPTH - TANGENT SECTION	699.13				24.0	1864.35	1045	974.12	974.12	24.0	1864.35	330	307.62	24.0	1864.35	440	410.16	96.0	7457.39	223.72	652.52
622+97.56	628+61.06	N.B. LANES - FULL DEPTH - TANGENT SECTION	563.50				24.0	1502.67	1045	785.15	785.15	24.0	1502.67	330	247.94	24.0	1502.67	440	330.59	96.0	6010.67	180.32	525.93
628+61.06	633+16.86	N.B. LANES - R/O - TANGENT SECTION	455.80	24.0	1215.47	66.85	24.0	1215.47	519	315.41	382.26	24.0	1215.47	330	200.55	24.0	1215.47	440	267.40	96.0	4861.87	145.86	
633+16.86	637+16.86	N.B. LANES - R/O - SUPER. TRANS.	400.00	24.0	1066.67	58.67	24.0	1066.67	694	370.13	428.80	24.0	1066.67	330	176.00	24.0	1066.67	440	234.67	96.0	4266.67	128.00	
637+16.86	643+56.03	N.B. LANES - R/O - SUPER.	639.17	24.0	1704.45	93.74	24.0	1704.45	868	739.73	833.47	24.0	1704.45	330	281.23	24.0	1704.45	440	374.98	96.0	6817.81	204.53	
643+56.03	647+56.02	N.B. LANES - R/O - SUPER. - BRIDGE TRANS.	399.99	24.0	1066.64	58.67	24.0	1066.64	1298	692.25	750.92	24.0	1066.64	330	176.00	24.0	1066.64	440	234.66	96.0	4266.56	128.00	
649+84.56	653+84.56	N.B. LANES - R/O - SUPER. - BRIDGE TRANS.	400.00	24.0	1066.67	58.67	24.0	1066.67	1298	692.27	750.94	24.0	1066.67	330	176.00	24.0	1066.67	440	234.67	96.0	4266.67	128.00	
653+84.56	658+75.75	N.B. LANES - R/O - SUPER.	491.19	24.0	1309.84	72.04	24.0	1309.84	868	568.47	640.51	24.0	1309.84	330	216.12	24.0	1309.84	440	288.16	96.0	5239.36	157.18	
658+75.75	659+66.68	N.B. LANES - R/O - SUPER. TRANS.	90.93	24.0	242.48	13.34	24.0	242.48	614	74.44	87.78	24.0	242.48	330	40.01	24.0	242.48	440	53.35	96.0	969.92	29.10	
659+66.68	663+63.14	N.B. LANES - R/O - SUPER. TRANS.	229.81	24.0	612.83	33.71	24.0	612.83	756	231.65	265.36	24.0	612.83	330	101.12	24.0	612.83	440	134.82	96.0	2451.31	73.54	
669+23.70	675+62.89	N.B. LANES - R/O - TANGENT SECTION	639.19	24.0	1704.51	93.75	24.0	1704.51	607	517.32	611.07	24.0	1704.51	330	281.24	24.0	1704.51	440	374.99	96.0	6818.03	204.54	
675+62.89	706+55.89	N.B. LANES - R/O - TANGENT SECTION	3093.00	24.0	8248.00	453.64	24.0	8248.00	519	2140.36	2594.00	24.0	8248.00	330	1360.92	24.0	8248.00	440	1814.56	96.0	32992.00	989.76	
711+50.00		MEDIAN CROSSING															503.30	440	110.73				249.56
EXIT RAMP TAPERS - R/O - ALL EXITS					6655.00	366.03		6655.00	440	1464.10	1830.13		6655.00	330	1098.08		6655.00	440	1464.10		26620.00	798.60	
EXIT RAMP TAPERS - FULL DEPTH - RAMP 11-540/4TH ST.								764.00	1045	399.19	399.19		764.00	330	126.06		764.00	440	168.08		764.00	22.92	267.40
EXIT RAMP TAPERS - EXCESS DUE TO BRIDGE TRANS.										632.00	632.00												
TOTALS					9102.09	5005.67		102241.69		36476.74	41482.41		102748.36		16988.43		103251.66		22715.41		406781.44	12203.46	4179.91

BASIS OF ESTIMATE : ACHM BASE COURSE (1 1/2") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG-76-22) = 6.0%
Nmax = 205
* NOTE: LEVELING QUANTITY IS ESTIMATED. LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

QUANTITIES

8/27/2012 9:36:01 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.		BB0407	93	464

(2) QUANTITIES

BASE & SURFACING - MAIN LANE S.B. LANES

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")							TOTAL TONS	ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT 0.03 GAL./SQ. YD.			AGGREGATE BASE COURSE (CLASS 7)
				* LEVELING - 110 LBS./SQ. YD.			NORMAL																
				AVG. WIDTH	SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON		AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS	TON
			LIN. FT.	FEET			FEET					FEET				FEET				FEET			
286+91.50	288+81.5	S.B. LANES - OVERLAY TRANSITION	190.00									24.0	506.67	468	118.56	24.0	506.67	440	111.47	24.0	506.67	15.20	
288+81.5	289+31.5	S.B. LANES - OVERLAY TRANSITION	50.00	24.0	133.33	7.33	24.0	133.33	385	25.67	33.00	24.0	133.33	330	22.00	24.0	133.33	440	29.33	24.0	133.33	4.00	
289+31.5	295+49.47	S.B. LANES - R/O - TANGENT SECTION	617.97	24.0	1647.92	90.64	24.0	1647.92	1571	1294.44	1385.08	24.0	1647.92	330	271.91	24.0	1647.92	440	362.54	96.0	6591.68	197.75	
298+12.91	307+90.96	S.B. LANES - R/O - TANGENT SECTION	978.05	24.0	2608.13	143.45	24.0	2608.13	1247	1626.17	1769.62	24.0	2608.13	330	430.34	24.0	2608.13	440	573.79	96.0	10432.53	312.98	
307+90.96	335+26.39	S.B. LANES - R/O - TANGENT SECTION	2735.43	24.0	7294.48	401.20	24.0	7294.48	519	1892.92	2294.12	24.0	7294.48	330	1203.59	24.0	7294.48	440	1604.79	96.0	29177.92	875.34	
335+26.39	338+76.39	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	480	224.00	275.33	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
338+76.39	343+39.26	S.B. LANES - R/O - SUPER.	462.87	24.0	1234.32	67.89	24.0	1234.32	440	271.55	339.44	24.0	1234.32	330	203.66	24.0	1234.32	440	271.55	96.0	4937.28	148.12	
343+39.26	346+64.06	S.B. LANES - FULL DEPTH - SUPER.	324.80				24.0	866.13	1045	452.55	452.55	24.0	866.13	330	142.91	24.0	866.13	440	190.55	96.0	3464.53	103.94	303.15
346+64.06	349+02.76	S.B. LANES - FULL DEPTH - SUPER. TRANS.	238.70				24.0	636.53	1045	332.59	332.59	24.0	636.53	330	105.03	24.0	636.53	440	140.04	96.0	2546.13	76.38	222.79
351+09.98	355+30.11	S.B. LANES - FULL DEPTH - TANGENT SECTION	420.13				24.0	1120.35	1045	585.38	585.38	24.0	1120.35	330	184.86	24.0	1120.35	440	246.48	96.0	4481.39	134.44	392.12
355+30.11	356+46.67	S.B. LANES - R/O - TANGENT SECTION	116.56	24.0	310.83	17.10	24.0	310.83	519	80.66	97.76	24.0	310.83	330	51.29	24.0	310.83	440	68.38	96.0	1243.31	37.30	
356+46.67	359+96.67	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	480	224.00	275.33	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
359+96.67	368+78.77	S.B. LANES - R/O - SUPER.	882.10	24.0	2352.27	129.37	24.0	2352.27	440	517.50	646.87	24.0	2352.27	330	388.12	24.0	2352.27	440	517.50	96.0	9409.07	282.27	
368+78.77	372+28.77	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	480	224.00	275.33	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
372+28.77	374+44.39	S.B. LANES - R/O - TANGENT SECTION	215.62	24.0	574.99	31.62	24.0	574.99	519	149.21	180.83	24.0	574.99	330	94.87	24.0	574.99	440	126.50	96.0	2299.95	69.00	
374+44.39	388+86.59	S.B. LANES - R/O - TANGENT SECTION	1442.20	24.0	3845.87	211.52	24.0	3845.87	1750	3365.14	3576.66	24.0	3845.87	330	634.57	24.0	3845.87	440	846.09	96.0	15383.47	461.50	
391+33.78	393+16.75	S.B. LANES - R/O - SUPER. TRANS.	182.97	24.0	487.92	26.84	24.0	487.92	2746	669.91	696.75	24.0	487.92	330	80.51	24.0	487.92	440	107.34	96.0	1951.68	58.55	
393+16.75	405+76.13	S.B. LANES - R/O - SUPER.	1259.38	24.0	3358.35	184.71	24.0	3358.35	1981	3326.45	3511.16	24.0	3358.35	330	554.13	24.0	3358.35	440	738.84	96.0	13433.39	403.00	
405+76.13	408+87.44	S.B. LANES - R/O - SUPER. TRANS.	311.31	24.0	830.16	45.66	24.0	830.16	904	375.23	420.89	24.0	830.16	330	136.98	24.0	830.16	440	182.64	96.0	3320.64	99.62	
408+87.44	409+26.13	S.B. LANES - R/O - SUPER. TRANS.	38.69	24.0	103.17	5.67	24.0	103.17	480	24.76	30.43	24.0	103.17	330	17.02	24.0	103.17	440	22.70	96.0	412.69	12.38	
409+26.13	415+73.32	S.B. LANES - R/O - TANGENT SECTION	647.19	24.0	1725.84	94.92	24.0	1725.84	519	447.86	542.78	24.0	1725.84	330	284.76	24.0	1725.84	440	379.68	96.0	6903.36	207.10	
415+73.32	419+23.32	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	480	224.00	275.33	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
419+23.32	423+35.03	S.B. LANES - R/O - SUPER.	411.71	24.0	1097.89	60.38	24.0	1097.89	440	241.54	301.92	24.0	1097.89	330	181.15	24.0	1097.89	440	241.54	96.0	4391.57	131.75	
425+68.30	429+38.32	S.B. LANES - R/O - SUPER.	370.02	24.0	986.72	54.27	24.0	986.72	440	217.08	271.35	24.0	986.72	330	162.81	24.0	986.72	440	217.08	96.0	3946.88	118.41	
429+38.32	432+88.32	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	480	224.00	275.33	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
432+88.32	465+13.72	S.B. LANES - R/O - TANGENT SECTION	3225.40	24.0	8601.07	473.06	24.0	8601.07	519	2231.98	2705.04	24.0	8601.07	330	1419.18	24.0	8601.07	440	1892.24	96.0	34404.27	1032.13	
465+13.72	468+97.05	S.B. LANES - R/O - SUPER. TRANS.	383.33	24.0	1022.21	56.22	24.0	1022.21	480	245.33	301.55	24.0	1022.21	330	168.66	24.0	1022.21	440	224.89	96.0	4088.85	122.67	
468+97.05	482+40.00	S.B. LANES - R/O - SUPER.	1342.95	24.0	3581.20	196.97	24.0	3581.20	440	787.86	984.83	24.0	3581.20	330	590.90	24.0	3581.20	440	787.86	96.0	14324.80	429.74	
482+40.00	485+57.89	S.B. LANES - R/O - SUPER.	317.89	24.0	847.71	46.62	24.0	847.71	440	186.50	233.12	24.0	847.71	330	139.87	24.0	847.71	440	186.50	96.0	3390.83	101.72	
485+57.89	489+41.22	S.B. LANES - R/O - SUPER. TRANS.	383.33	24.0	1022.21	56.22	24.0	1022.21	480	245.33	301.55	24.0	1022.21	330	168.66	24.0	1022.21	440	224.89	96.0	4088.85	122.67	
489+41.22	490+70.05	S.B. LANES - R/O - TANGENT SECTION	128.83	24.0	343.55	18.90	24.0	343.55	519	89.15	108.05	24.0	343.55	330	56.69	24.0	343.55	440	75.58	96.0	1374.19	41.23	
497+16.96	525+81.80	S.B. LANES - R/O - TANGENT SECTION	2864.84	24.0	7639.57	420.18	24.0	7639.57	519	1982.47	2402.65	24.0	7639.57	330	1260.53	24.0	7639.57	440	1680.71	96.0	30558.29	916.75	
525+81.80	533+45.30	S.B. LANES - FULL DEPTH - TANGENT SECTION	763.50				24.0	2036.00	1045	1063.81	1063.81	24.0	2036.00	330	335.94	24.0	2036.00	440	447.92	96.0	8144.00	244.32	712.60
568+11.96	570+56.83	S.B. LANES - FULL DEPTH - TANGENT SECTION	244.87				24.0	652.99	1045	341.19	341.19	24.0	652.99	330	107.74	24.0	652.99	440	143.66	96.0	2611.95	78.36	228.55
570+56.83	574+06.83	S.B. LANES - FULL DEPTH - SUPER. TRANS.	350.00				24.0	933.33	1045	487.66	487.66	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	326.67
574+06.83	577+13.25	S.B. LANES - FULL DEPTH - SUPER.	306.42				24.0	817.12	1045	426.95	426.95	24.0	817.12	330	134.82	24.0	817.12	440	179.77	96.0	3268.48	98.05	285.99
577+13.25	590+38.50	S.B. LANES - R/O - SUPER.	1325.25	24.0	3534.00	194.37	24.0	3534.00	440	777.48	971.85	24.0	3534.00	330	583.11	24.0	3534.00	440	777.48	96.0	14136.00	424.08	
590+38.50	593+88.50	S.B. LANES - R/O - SUPER. TRANS.	350.00	24.0	933.33	51.33	24.0	933.33	480	224.00	275.33	24.0	933.33	330	154.00	24.0	933.33	440	205.33	96.0	3733.33	112.00	
593+88.50	613+89.88	S.B. LANES - R/O - TANGENT SECTION	2010.14	24.0	5360.37	294.82	24.0	5360.37	519	1391.02	1685.84	24.0	5360.37	330	884.46	24.0	5360.37	440	1179.28	96.0	21441.49	643.24	
613+89.88	621+02.43	S.B. LANES - FULL DEPTH - TANGENT SECTION	712.55				24.0	1900.13	1045	992.82	992.82	24.0	1900.13	330	313.52	24.0	1900.13	440	418.03	96.0	7600.53	228.02	665.05
622+97.56	628+61.06	S.B. LANES - FULL DEPTH - TANGENT SECTION	563.50				24.0	1502.67	1045	785.15	785.15	24.0	1502.67	330	247.94	24.0	1502.67	440	330.59	96.0	6010.67	180.32	525.93
628+61.06	633+16.86	S.B. LANES - R/O - TANGENT SECTION	455.80	24.0	1215.47	66.85	24.0	1215.47	519	315.41	382.26	24.0	1215.47	330	200.55	24.0	1215.47	440	267.40	96.0	4861.87	145.86	
633+16.86	637+16.86	S.B. LANES - R/O - SUPER. TRANS.	400.00	24.0	1066.67	58.67	24.0	1066.67	694	370.13	428.80	24.0	1066.67	330	176.00	24.0	1066.67	440	234.67	96.0	4266.67	128.00	
637+16.86	642+61.94	S.B. LANES - R/O - SUPER.	545.08	24.0	1453.55	79.95	24.0	1453.55	868	630.84	710.79	24.0	1453.55	330	239.84	24.0	1453.55	440	319.78	96.0	5814.19	174.43	
642+61.94	646+61.94	S.B. LANES - R/O - SUPER. - PVMT. TRANS.	400.00	24.0	1066.67	58.67	24.0	1066.67	1298	692.27	750.94	24.0	1066.67	330	176.00	24.0	1066.67	440	234.67	96.0	4266.67	128.00	
649+09.25	653+09.25	S.B. LANES - R/O - SUPER. - PVMT. TRANS.	400.00	24.0	1066.67	58.67	24.0	1066.67	1298	692.27	750.94	24.0	1066.67	330	176.00	24.0	1066.67	440	234.67	96.0	4266.67	128.00	
653+09.25	658+75.75	S.B. LANES - R/O - SUPER.	566.50	24.0	1510.67	83.09	24.0	1510.67	868	655.63	738.72	24.0	1510.67	330	249.26	24.0	1510.67	440	332.35	96.0	6042.67	181.28	
658+75.75	662+91.92	S.B. LANES - R/O - SUPER. TRANS.	249.52	24.0	665.39	36.60	24.0	665.39	1042	346.67	383.27	24.0	665.39	330	109.79	24.0	665.39	440	146.39	96.0	2661.55	79.85	
668+51.58	677+16.20	S.B. LANES - R/O - TANGENT SECTION	864.62	24.0	2305.65	126.81	24.0	2305.65	607	699.77	826.58	24.0	2305.65	330	380.43	24.0	2305.65	440	507.24	96.0	9222.61	276.68	
677+16.20	710+48.67	S.B. LANES - R/O - TANGENT SECTION	3332.47	24.0	8886.59	488.76	24.0	8886.59	519	2306.07	2794.83	24.0	8886.59	330	1466.29	24.0	8886.59	440	1955.05	96.0	35546.35	1066.39	
TOTALS					85381.39	4695.98		95846.64		35984.37	40680.35		96353.31		15933.25		96353.31		21197.76		383493.23	11504.82	3662.85

BASIS OF ESTIMATE : ACHM BASE COURSE (1 1/2") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%

ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%

ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG-76-22) = 6.0%

Nmax = 205

* NOTE: LEVELING QUANTITY IS ESTIMATED. LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 8/31/12

QUANTITIES

8/27/2012 9:36:02 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.		BB0407	94	464

BASE & SURFACING - MAIN LANE ACCEL LANES & RAMPS

(2) QUANTITIES

STATION	STATION	LOCATION	LENGTH	ACHM BASE COURSE (1½")							TOTAL TONS	ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT 0.03 GAL./SQ. YD.			AGGREGATE BASE COURSE (CLASS 7)
				*LEVELING - 110 LBS./SQ. YD.			NORMAL																
				AVG. WIDTH	SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON		AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS	
			LIN. FT.	FEET			FEET					FEET				FEET				FEET			TON
294+01.04	295+03.14	N.B. LANES - R/O - ACCEL LANE	102.10	12.0	136.13	7.49	12.0	136.13	2303	156.75	164.24	12.0	136.13	330	22.46	12.0	136.13	440	29.95	48.0	544.53	16.34	
297+54.60	300+60.80	N.B. LANES - R/O - ACCEL LANE	306.20	12.0	408.27	22.45	12.0	408.27	2070	422.56	445.01	12.0	408.27	330	67.36	12.0	408.27	440	89.82	48.0	1633.07	48.99	
300+60.80	304+37.06	N.B. LANES - R/O - ACCEL LANE TAPER	376.26	6.0	250.84	13.80	6.0	250.84	1152	144.48	158.28	6.0	250.84	330	41.39	6.0	250.84	440	55.18	24.0	1003.36	30.10	
308+33.43	315+31.61	N.B. LANES - R/O - ACCEL LANE	698.18	12.0	930.91	51.20	12.0	930.91	440	204.80	256.00	12.0	930.91	330	153.60	12.0	930.91	440	204.80	48.0	3723.63	111.71	
315+31.61	318+31.61	N.B. LANES - R/O - ACCEL LANE TAPER	300.00	6.0	200.00	11.00	6.0	200.00	440	44.00	55.00	6.0	200.00	330	33.00	6.0	200.00	440	44.00	24.0	800.00	24.00	
404+73.54	408+46.61	N.B. LANES - R/O - ACCEL LANE	373.07	12.0	497.43	27.36	12.0	497.43	621	154.45	181.81	12.0	497.43	330	82.08	12.0	497.43	440	109.43	48.0	1989.71	59.69	
408+46.61	411+26.90	N.B. LANES - R/O - ACCEL LANE	280.29	12.0	373.72	20.55	12.0	373.72	440	82.22	102.77	12.0	373.72	330	61.66	12.0	373.72	440	82.22	48.0	1494.88	44.85	
411+26.90	411+51.41	N.B. LANES - R/O - ACCEL LANE TAPER	24.51	6.0	16.34	0.90	6.0	16.34	440	3.59	4.49	6.0	16.34	330	2.70	6.0	16.34	440	3.59	24.0	65.36	1.96	
411+51.41	415+03.16	N.B. LANES - R/O - ACCEL LANE TAPER	351.75	6.0	234.50	12.90	6.0	234.50	739	86.65	99.55	6.0	234.50	330	38.69	6.0	234.50	440	51.59	24.0	938.00	28.14	
467+76.23	474+95.82	N.B. LANES - R/O - ACCEL LANE	719.59	12.0	959.45	52.77	12.0	959.45	440	211.08	263.85	12.0	959.45	330	158.31	12.0	959.45	440	211.08	48.0	3837.81	115.13	
474+95.82	478+02.88	N.B. LANES - R/O - ACCEL LANE TAPER	307.06	6.0	204.71	11.26	6.0	204.71	440	45.04	56.30	6.0	204.71	330	33.78	6.0	204.71	440	45.04	24.0	818.83	24.56	
568+30.0	570+10.0	N.B. LANES -I-540/4TH STREET INTER.-FULL DEPTH TAPER	180.00				6.0	120.00	1045	62.70	62.70	6.0	120.00	330	19.80	6.0	120.00	440	26.40	24.0	480.00	14.40	105.00
570+10.0	574+89.26	N.B. LANES -I-540/4TH STREET INTER.-FULL DEPTH ACCEL LANE	479.26				12.0	639.01	1045	333.88	333.88	12.0	639.01	330	105.44	12.0	639.01	440	140.58	48.0	2556.05	76.68	279.57
586+99.36	594+03.26	N.B. LANES - R/O - ACCEL LANE	703.90	12.0	938.53	51.62	12.0	938.53	440	206.48	258.10	12.0	938.53	330	154.86	12.0	938.53	440	206.48	48.0	3754.13	112.62	
594+03.26	596+94.81	N.B. LANES - R/O - ACCEL LANE TAPER	300.31	6.0	200.21	11.01	6.0	200.21	440	44.05	55.06	6.0	200.21	330	33.03	6.0	200.21	440	44.05	24.0	800.83	24.02	
689+40.69	695+38.68	N.B. LANES - R/O - ACCEL LANE	597.99	12.0	797.32	43.85	12.0	797.32	440	175.41	219.26	12.0	797.32	330	131.56	12.0	797.32	440	175.41	48.0	3189.28	95.68	
702+11.98	706+55.89	N.B. LANES - R/O - ACCEL LANE	443.91	12.0	591.88	32.55	12.0	591.88	440	130.21	162.76	12.0	591.88	330	97.66	12.0	591.88	440	130.21	48.0	2367.52	71.03	
575+00.0	576+00.0	RAMP I (I-540/4TH STREET INTER.) - FULL DEPTH	100.00				15.0	166.67	1045	87.09	87.09	15.0	166.67	330	27.50	15.0	166.67	440	36.67	60.0	666.67	20.00	58.33
706+55.89	714+88.65	RAMP 2 (I-540/I-40 INTER.) - R/O - TANGENT SECTION	832.76	15.0	1387.93	76.34	15.0	1387.93	519	360.17	436.51	15.0	1387.93	330	229.01	15.0	1387.93	440	305.34	60.0	5551.73	166.55	
714+88.65	715+54.93	RAMP 2 (I-540/I-40 INTER.) - FULL DEPTH - TANGENT SECTION	66.28				15.0	110.47	1045	57.72	57.72	15.0	110.47	330	18.23	15.0	110.47	440	24.30	60.0	441.87	13.26	38.66
715+54.93	718+69.71	RAMP 2 (I-540/I-40 INTER.) - FULL DEPTH - SUPER. TRANS.	314.78				15.0	524.63	1045	274.12	274.12	15.0	524.63	330	86.56	15.0	524.63	440	115.42	60.0	2098.53	62.96	183.62
721+64.92	727+69.79	RAMP 2 (I-540/I-40 INTER.) - FULL DEPTH - SUPER.	604.87				15.0	1008.12	1045	526.74	526.74	15.0	1008.12	330	166.34	15.0	1008.12	440	221.79	60.0	4032.47	120.97	352.84
729+88.93	735+58.30	RAMP 2 (I-540/I-40 INTER.) - FULL DEPTH - SUPER.	569.37				15.0	948.95	1045	495.83	495.83	15.0	948.95	330	156.58	15.0	948.95	440	208.77	60.0	3795.80	113.87	332.13
706+55.89	710+55.89	RAMP 4 (I-540/I-40 INTER.) - R/O - SUPER. TRANS.	400.00	24.0	1066.67	58.67	24.0	1066.67	480	256.00	314.67	24.0	1066.67	330	176.00	24.0	1066.67	440	234.67	96.0	4266.67	128.00	
710+55.89	712+55.88	RAMP 4 (I-540/I-40 INTER.) - R/O - SUPER.	199.99	24.0	533.31	29.33	24.0	533.31	440	117.33	146.66	24.0	533.31	330	88.00	24.0	533.31	440	117.33	96.0	2133.23	64.00	
712+55.88	713+50.00	RAMP 4 (I-540/I-40 INTER.) - R/O - SUPER. TRANS.	94.12	24.0	250.99	13.80	24.0	250.99	480	60.24	74.04	24.0	250.99	330	41.41	24.0	250.99	440	55.22	96.0	1003.95	30.12	
713+50.00	716+30.88	RAMP 4 (I-540/I-40 INTER.) - FULL DEPTH - SUPER. TRANS.	280.88				24.0	749.01	1045	391.36	391.36	24.0	749.01	330	123.59	24.0	749.01	440	164.78	96.0	2996.05	89.88	262.15
716+30.88	719+00.00	RAMP 4 (I-540/I-40 INTER.) - FULL DEPTH - SUPER.	269.12				24.0	717.65	1045	374.97	374.97	24.0	717.65	330	118.41	24.0	717.65	440	157.88	96.0	2870.61	86.12	251.18
286+91.50	288+81.5	S.B. LANES - ACCEL LANE - OVERLAY TRANSITION	190.00									12.0	253.33	468	59.28	12.0	253.33	440	55.73	12.0	253.33	7.60	
288+81.5	289+31.5	S.B. LANES - ACCEL LANE - OVERLAY TRANSITION	50.00	12.0	66.67	3.67	12.0	66.67	385	12.83	16.50	12.0	66.67	330	11.00	12.0	66.67	440	14.67	12.0	66.67	2.00	
289+31.5	290+19.15	S.B. LANES - ACCEL LANE - OVERLAY TRANSITION	87.65	12.0	116.87	6.43	12.0	116.87	345	20.16	26.59	12.0	116.87	330	19.28	12.0	116.87	440	25.71	12.0	116.87	3.51	
366+73.61	369+68.38	S.B. LANES - R/O - ACCEL LANE TAPER	294.77	6.0	196.51	10.81	6.0	196.51	440	43.23	54.04	6.0	196.51	330	32.42	6.0	196.51	440	43.23	24.0	786.05	23.58	
369+68.38	374+44.39	S.B. LANES - R/O - ACCEL LANE	476.01	12.0	634.68	34.91	12.0	634.68	440	139.63	174.54	12.0	634.68	330	104.72	12.0	634.68	440	139.63	48.0	2538.72	76.16	
374+44.39	376+66.55	S.B. LANES - R/O - ACCEL LANE	222.16	12.0	296.21	16.29	12.0	296.21	849	125.74	142.03	12.0	296.21	330	48.87	12.0	296.21	440	65.17	48.0	1184.85	35.55	
436+68.37	439+68.37	S.B. LANES - R/O - ACCEL LANE TAPER	300.00	6.0	200.00	11.00	6.0	200.00	440	44.00	55.00	6.0	200.00	330	33.00	6.0	200.00	440	44.00	24.0	800.00	24.00	
439+68.37	446+68.49	S.B. LANES - R/O - ACCEL LANE	700.12	12.0	933.49	51.34	12.0	933.49	440	205.37	256.71	12.0	933.49	330	154.03	12.0	933.49	440	205.37	48.0	3733.97	112.02	
569+76.51	573+19.03	S.B. LANES - FULL DEPTH - ACCEL LANE TAPER	342.52				6.0	228.35	1045	119.31	119.31	6.0	228.35	330	37.68	6.0	228.35	440	50.24	24.0	913.39	27.40	79.92
573+19.03	577+13.25	S.B. LANES - FULL DEPTH - ACCEL LANE	394.22				12.0	525.63	1045	274.64	274.64	12.0	525.63	330	86.73	12.0	525.63	440	115.64	48.0	2102.51	63.08	183.97
577+13.25	584+67.43	S.B. LANES - R/O - ACCEL LANE	754.18	12.0	1005.57	55.31	12.0	1005.57	440	221.23	276.54	12.0	1005.57	330	165.92	12.0	1005.57	440	221.23	48.0	4022.29	120.67	
593+41.27	600+06.46	S.B. LANES - R/O - ACCEL LANE	665.19	12.0	886.92	48.78	12.0	886.92	440	195.12	243.90	12.0	886.92	330	146.34	12.0	886.92	440	195.12	48.0	3547.68	106.43	
600+06.46	601+86.46	S.B. LANES -R/O - ACCEL LANE TAPER	180.00	6.0	120.00	6.60	6.0	120.00	440	26.40	33.00	6.0	120.00	330	19.80	6.0	120.00	440	26.40	24.0	480.00	14.40	
670+87.26	673+87.26	S.B. LANES - R/O - ACCEL LANE TAPER	300.00	6.0	200.00	11.00	6.0	200.00	734	73.40	84.40	6.0	200.00	330	33.00	6.0	200.00	440	44.00	24.0	800.00	24.00	
673+87.26	677+16.2	S.B. LANES - R/O - ACCEL LANE	328.94	12.0	438.59	24.12	12.0	438.59	647	141.88	166.00	12.0	438.59	330	72.37	12.0	438.59	440	96.49	48.0	1754.35	52.63	
677+16.2	680+86.42	S.B. LANES - R/O - ACCEL LANE	370.22	12.0	493.63	27.15	12.0	493.63	440	108.60	135.75	12.0	493.63	330	81.45	12.0	493.63	440	108.60	48.0	1974.51	59.24	
686+62.50	692+48.53	S.B. LANES - R/O - ACCEL LANE	586.03	12.0	781.37	42.98	12.0	781.37	440	171.90	214.88	12.0	781.37	330	128.93	12.0	781.37	440	171.90	48.0	3125.49	93.76	
701+91.31	709+37.38	S.B. LANES - R/O - ACCEL LANE	746.07	12.0	994.76	54.71	12.0	994.76	440	218.85	273.56	12.0	994.76	330	164.14	12.0	994.76	440	218.85	48.0	3979.04	119.37	
710+48.67	714+31.45	RAMP I (I-540/I-40 INTER.) - R/O - TANGENT SECTION	382.78	24.0	1020.75	56.14	24.0	1020.75	519	264.88	321.02	24.0	1020.75	330	168.42	24.0	1020.75	440	224.57	96.0	4082.99	122.49	
714+31.45	714+31.94	RAMP I (I-540/I-40 INTER.) - FULL DEPTH - TANGENT SECTION	0.49				24.0	1.31	1045	0.68	0.68	24.0	1.31	330	0.22	24.0	1.31	440	0.29	96.0	5.23	0.16	0.46
714+31.94	718+31.94	RAMP I (I-540/I-40 INTER.) - FULL DEPTH - SUPER. TRANS.	400.00				24.0	1066.67	1045	557.34	557.34	24.0	1066.67	330	176.00	24.0	1066.67	440	234.67	96.0	4266.67	128.00	373.33
718+31.94	718+84.47	RAMP I (I-540/I-40 INTER.) - FULL DEPTH - SUPER.	52.53				24.0	140.08	1045	73.19	73.19	24.0	140.08	330	23.11	24.0	140.08	440	30.82	96.0	560.32	16.81	49.03
721+79.69	725+06.93	RAMP I (I-540/I-40 INTER.) - FULL DEPTH - SUPER. TRANS.	327.24				24.0	872.64	1045	455.95	455.95	24.0	872.64	330	143.99	24.0	872.64	440	191.98	96.0	3490.56	104.72	305.42
725+06.93	728+85.50	RAMP I (I-540/I-40 INTER.) - FULL DEPTH - SUPER.	378.57				24.0	1009.52	1045	527.47	527.47	24.0	1009.52	330	166.57	24.0	1009.52	440	222.09	96.0	4038.08	121.14	353.33
731+19.64	734+67.00	RAMP I (I-540/I-40 INTER.) - FULL DEPTH - SUPER.	347.36				24.0	926.29	1045	483.99	483.99	24.0	926.29	330	152.84	24.0	926.29	440	203.78	96.0	3705.17	111.16	324.20
734+67.00	735+94.43	RAMP I (I-540/I-40 INTER.) - R/O - SUPER.	127.43	24.0	339.81	18.69	24.0	339.81	440	74.76	93.45	24.0	339.81	330	56.07	24.0	339.81	440	74.76	96.0	1359.25	40.78	
735+94.43	737+50.32	RAMP I (I-540/I-40 INTER.) - R/O - SUPER. TRANS.	155.89	24.0	415.71	22.86	24.0	415.71	480	99.77	122.63	24.0	415.71	330	68.59	24.0	415.71	440	91.46	96.0	1662.83	49.88	
737+50.32	740+18.72	RAMP I (I-540/I-40 INTER.) - R/O - SUPER. TRANS.	268.40	24.0	715.73	39.37	24.0	715.73	480	171.78	211.15	24.0	715.73	330	118.10	24.0	715.73	440	157.46	96.0	2862.93	85.89	
740+18.72	741+00.00	RAMP I (I-540/I-40 INTER.) - R/O - SUPER.	81.28	24.0	216.75	11.92	24.0	216.75	440	47.69	59.61	24.0	216.75	330	35.76	24.0	216.75	440	47.69	96.0	866.99	26.01	
387+00.00	392+50.00	RAMP 3 (I-540/I-40 INTER.) - FULL DEPTH - SUPER.	550.00				15.0	916.67	1045	478.96	478.96	15.0	916.67	330	151.25	15.0	916.67	440	201.67	60.0	3666.67	110.00	320.83
392+50.00	393+60.75	RAMP 3 (I-540/I-40 INTER.) - R/O - SUPER.	110.75	15.0	184.58	10.15	15.0	184.58	440	40.61	50.76	15.0	184.58	330	30.46	15.0	184.58	440	40.61	60.0	738.33	22.15	
393+60.75	709+37.38	RAMP 3 (I-540/I-40 INTER.) - R/O - SUPER. TRANS.	400.00	15.0	666.67	36.67	15.0	666.67	480	160.00	196.67	15.0	666.67	330	110.00	15.0	666.67	440	146.67	60.0	2666.67	80.00	
TOTALS					20904.41	1149.75		31576.08		11089.28	12239.03		31829.41		5269.35		31829.41		7002.50		126006.98	3780.22	3853.97

BASIS OF ESTIMATE : ACHM BASE COURSE (1 1/2") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG-76-22) = 5.5%
ACHM SURFACE COURSE (1/2") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG-76-22) = 6.0%
Nmax = 205

* NOTE: LEVELING QUANTITY IS ESTIMATED. LEVELING IS TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.

TRANSITION SHALL BE REMOVED WHEN ADJOINING SEGMENT IS RESURFACED. REMOVAL SHALL BE ALONG A STRAIGHT LINE BY USE OF PAPER OR BY SAWING.

PAVEMENT FOR REMOVAL OF SURFACING TRANSITIONS SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS. THE CONTRACTOR MAY SUBSTITUTE

ASPHALT MEETING THE REQUIREMENTS OF SECTION 415 FOR TEMPORARY TRANSITIONS, BUT PAYMENT SHALL BE MADE FOR ACHM SURFACE COURSE (1/2")

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:36:02 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11/16/12				6	ARK.			
				JOB NO.		BB0407	95	464

(2) QUANTITIES

BASE & SURFACING - SHOULDER RECONSTRUCTION

STATION	STATION	LOCATION	LENGTH	ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (½")				TACK COAT 0.03 GAL./SQ. YD.			SCARIFYING & RECOMPACTING SHOULDERS	TRENCHING & SHOULDER PREPARATION
				AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	LBS. PER SQ. YD.	TON	AVG. WIDTH	SQ. YD.	GALLONS		
			LIN. FT.	FEET				FEET				FEET			SQ. YD.	STATION
279+96	282+98	OUTSIDE SHLDR. - N.B. LANES	302.00	10.4	348.98	330	57.58	10.0	335.56	330	55.37	10.4	348.98	10.47	335.56	
286+06	291+52	OUTSIDE SHLDR. - N.B. LANES	546.00	10.4	630.93	330	104.10	10.0	606.67	330	100.10	10.4	630.93	18.93	606.67	
297+56	302+97	OUTSIDE SHLDR. - N.B. LANES	541.00	6.4	384.71	330	63.48	6.0	360.67	330	59.51	6.4	384.71	11.54	360.67	
302+97	308+33	OUTSIDE SHLDR. - N.B. LANES	536.00	10.4	619.38	330	102.20	10.0	595.56	330	98.27	10.4	619.38	18.58	595.56	
315+32	343+20	OUTSIDE SHLDR. - N.B. LANES	2788.00					10.0	3097.78	440	681.51				3097.78	
387+85	389+05	OUTSIDE SHLDR. - N.B. LANES	120.00	10.4	138.67	330	22.88	10.0	133.33	330	22.00	10.4	138.67	4.16	133.33	
391+52	392+72	OUTSIDE SHLDR. - N.B. LANES	120.00	10.4	138.67	330	22.88	10.0	133.33	330	22.00	10.4	138.67	4.16	133.33	
421+08	422+28	OUTSIDE SHLDR. - N.B. LANES	120.00	10.4	138.67	330	22.88	10.0	133.33	330	22.00	10.4	138.67	4.16	133.33	
424+63	425+83	OUTSIDE SHLDR. - N.B. LANES	120.00	10.4	138.67	330	22.88	10.0	133.33	330	22.00	10.4	138.67	4.16	133.33	
489+50	490+70	OUTSIDE SHLDR. - N.B. LANES	120.00	10.4	138.67	330	22.88	10.0	133.33	330	22.00	10.4	138.67	4.16	133.33	
497+17	498+37	OUTSIDE SHLDR. - N.B. LANES	120.00	10.4	138.67	330	22.88	10.0	133.33	330	22.00	10.4	138.67	4.16	133.33	
508+95	533+47	OUTSIDE SHLDR. - N.B. LANES	2452.00	10.4	2833.42	330	467.51	10.0	2724.44	330	449.53	10.4	2833.42	85.00	2724.44	
568+15	572+56	OUTSIDE SHLDR. - N.B. LANES	441.00	10.4	509.60	330	84.08	10.0	490.00	330	80.85	10.4	509.60	15.29	490.00	
572+56	575+00	OUTSIDE SHLDR. - N.B. LANES -END STA. RAMP 1	244.00	6.4	173.51	330	28.63	6.0	162.67	330	26.84	6.4	173.51	5.21	162.67	
575+00	587+18	OUTSIDE SHLDR. - N.B. LANES	1218.00	10.4	1407.47	330	232.23	10.0	1353.33	330	223.30	10.4	1407.47	42.22	1353.33	
594+03	604+00	OUTSIDE SHLDR. - N.B. LANES- EQUATION	1005.76					10.0	1117.51	440	245.85				1117.51	
662+54	663+73	OUTSIDE SHLDR. - N.B. LANES	119.00	10.4	137.51	330	22.69	10.0	132.22	330	21.82	10.4	137.51	4.13	132.22	
669+34	670+40	OUTSIDE SHLDR. - N.B. LANES	106.00	10.4	122.49	330	20.21	10.0	117.78	330	19.43	10.4	122.49	3.67	117.78	
680+00	689+39	OUTSIDE SHLDR. - N.B. LANES	939.00					10.0	1043.33	440	229.53				1043.33	
695+38	702+00	OUTSIDE SHLDR. - N.B. LANES	662.00					10.0	735.56	440	161.82				735.56	
702+00	710+00	OUTSIDE SHLDR. - N.B. LANES	800.00	6.5	577.78	330	95.33	6.0	533.33	330	88.00	6.5	577.78	17.33	533.33	
710+00	721+40	OUTSIDE SHLDR. - N.B. LANES- END STA. RAMP 4	1140.00	10.4	1317.33	330	217.36	10.0	1266.67	330	209.00	10.4	1317.33	39.52	1266.67	
334+76	343+20	INSIDE SHLDR. - N.B. LANES	844.00					4.0	375.11	440	82.52				375.11	
343+20	349+23	INSIDE SHLDR. - N.B. LANES	603.00	6.5	435.50	660	143.72	6.0	402.00	330	66.33	13.0	871.00	26.13		6.0
350+57	389+43	INSIDE SHLDR. - N.B. LANES	3886.00	6.5	2806.56	660	926.16	6.0	2590.67	330	427.46	13.0	5613.11	168.39		38.9
390+92	423+02	INSIDE SHLDR. - N.B. LANES	3210.00	6.5	2318.33	660	765.05	6.0	2140.00	330	353.10	13.0	4636.67	139.10		32.1
424+49	486+54	INSIDE SHLDR. - N.B. LANES	6205.00	6.5	4481.39	660	1478.86	6.0	4136.67	330	682.55	13.0	8962.78	268.88		62.1
610+55	621+39	INSIDE SHLDR. - N.B. LANES	1084.00	6.5	782.89	660	258.35	6.0	722.67	330	119.24	13.0	1565.78	46.97		10.8
622+61	647+38	INSIDE SHLDR. - N.B. LANES	2477.00	6.5	1788.94	660	590.35	6.0	1651.33	330	272.47	13.0	3577.89	107.34		24.8
649+70	663+54	INSIDE SHLDR. - N.B. LANES - EQUATION	1217.35	6.5	879.20	660	290.14	6.0	811.57	330	133.91	13.0	1758.39	52.75		12.2
669+15	671+52	INSIDE SHLDR. - N.B. LANES	237.00	6.5	171.17	660	56.49	6.0	158.00	330	26.07	13.0	342.33	10.27		2.4
704+70	708+00	INSIDE SHLDR. - N.B. LANES	330.00	6.5	238.33	660	78.65	6.0	220.00	330	36.30	13.0	476.67	14.30		3.3
279+85	280+80	OUTSIDE SHLDR. - S.B. LANES	95.00	10.4	109.78	330	18.11	10.0	105.56	330	17.42	10.4	109.78	3.29	105.56	
280+80	291+57	OUTSIDE SHLDR. - S.B. LANES-END STA. RAMP 6	1077.00	6.4	765.87	330	126.37	6.0	718.00	330	118.47	6.4	765.87	22.98	718.00	
290+20	295+61	OUTSIDE SHLDR. - S.B. LANES	541.00	10.4	625.16	330	103.15	10.0	601.11	330	99.18	10.4	625.16	18.75	601.11	
297+85	305+53	OUTSIDE SHLDR. - S.B. LANES	768.00	10.4	887.47	330	146.43	10.0	853.33	330	140.80	10.4	887.47	26.62	853.33	
308+00	338+09	OUTSIDE SHLDR. - S.B. LANES	3009.00					10.0	3343.33	440	735.53				3343.33	
508+95	533+47	OUTSIDE SHLDR. - S.B. LANES	2452.00	10.4	2833.42	330	467.51	10.0	2724.44	330	449.53	10.4	2833.42	85.00	2724.44	
568+14	570+49	OUTSIDE SHLDR. - S.B. LANES	235.00	10.4	271.56	330	44.81	10.0	261.11	330	43.08	10.4	271.56	8.15	261.11	
570+49	579+73	OUTSIDE SHLDR. - S.B. LANES	924.00	6.4	657.07	330	108.42	6.0	616.00	330	101.64	6.4	657.07	19.71	616.00	
579+73	590+16	OUTSIDE SHLDR. - S.B. LANES	1043.00	10.4	1205.24	330	198.86	10.0	1158.89	330	191.22	10.4	1205.24	36.16	1158.89	
590+27	610+00	OUTSIDE SHLDR. - S.B. LANES - EQUATION	1981.76					10.0	2201.96	440	484.43				2201.96	
680+87	686+62	OUTSIDE SHLDR. - S.B. LANES	575.00					10.0	638.89	440	140.56				638.89	
692+50	700+90	OUTSIDE SHLDR. - S.B. LANES	840.00					10.0	933.33	440	205.33				933.33	
704+55	712+37	OUTSIDE SHLDR. - S.B. LANES	782.00	6.4	556.09	330	91.75	6.0	521.33	330	86.02	6.4	556.09	16.68	521.33	
575+00	593+39	INSIDE SHLDR. - S.B. LANES	1839.00					4.0	817.33	440	179.81				817.33	
713+55	719+21	OUTSIDE SHLDR. - S.B. RAMP 1@1-40	566.00	10.4	654.04	330	107.92	10.0	628.89	330	103.77	10.4	654.04	19.62	628.89	
721+44	729+22	OUTSIDE SHLDR. - S.B. RAMP 1@1-40	778.00	10.4	899.02	330	148.34	10.0	864.44	330	142.63	10.4	899.02	26.97	864.44	
730+83	741+00	OUTSIDE SHLDR. - S.B. RAMP 1@1-40	1017.00	10.4	1175.20	330	193.91	10.0	1130.00	330	186.45	10.4	1175.20	35.26	1130.00	
717+31	719+21	INSIDE SHLDR. - S.B. RAMP 1@1-40	190.00	4.3	90.78	330	14.98	4.0	84.44	330	13.93	4.3	90.78	2.72	84.44	
721+44	729+22	INSIDE SHLDR. - S.B. RAMP 1@1-40	778.00	4.3	371.71	330	61.33	4.0	345.78	330	57.05	4.3	371.71	11.15	345.78	
730+83	741+00	INSIDE SHLDR. - S.B. RAMP 1@1-40	1017.00	4.3	485.90	330	80.17	4.0	452.00	330	74.58	4.3	485.90	14.58	452.00	
387+00	394+61	OUTSIDE SHLDR. - S.B. RAMP 3@1-40	761.00	6.3	532.70	330	87.90	6.0	507.33	330	83.71	6.3	532.70	15.98	507.33	
TOTALS					35918.45		8220.41		48188.57		8737.82		49820.76	1494.60	35355.66	192.6

BASIS OF ESTIMATE : ACHM BASE COURSE (1½") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76 - 22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76 - 22) = 5.5%
ACHM SURFACE COURSE (½") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG - 76 - 22) = 6.0%
Nmax = 205

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
11/9/12

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11/16/12				6	ARK.			
				JOB NO.		BB0407	96	464

(2) QUANTITIES

SUMMARY OF BASE & SURFACING MATERIALS

LOCATION	AGGREGATE BASE COURSE (CLASS 1)	AGGREGATE BASE COURSE (CLASS 7)	ACHM BASE COURSE (1½")	ACHM BINDER COURSE (1")	ACHM SURFACE COURSE (½")	TACK COAT	COLD MILLING ASPHALT PAVEMENT	SCARIFYING & RECOMPACTING SHOULDERS	TRENCHING & SHOULDER PREPARATION
	TON					GALLON	SQUARE YARD		STATION
RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT		500.00							
APPROACH SLABS AND GUTTERS		6556.24							
SCARIFYING & RECOMPACTING SHOULDERS - RAMP SHOULDER REHAB.								15416.80	
SURFACING - RAMP SHOULDER REHABILITATION					1695.86				
BASE & SURFACING - N.B. MAIN LANE & RAMP SHOULDERS	56130.36	7982.88	26654.78	9002.49	12400.09	11401.43			
BASE & SURFACING - S.B. MAIN LANE & RAMP SHOULDERS	64337.78	18578.41	29088.95	9353.18	15922.37	12285.01			
BASE & SURFACING - RAMP TRANSITIONS			4066.39	3782.33	7538.83	3127.24			
BASE & SURFACING - BRIDGE JACKING & TEMPORARY TRANSITIONS		735.48	287.68	2554.68	4321.19	1596.71	1777.76		
BASE & SURFACING - S.H. 22 & GRAND AVE. IMPROVEMENTS			296.86	130.95	875.49	297.09	6202.75		
BASE & SURFACING - MAINTENANCE OF TRAFFIC			19666.98	31043.24	16000.08	8736.28			
BASE & SURFACING - MAIN LANE N.B. LANES		4179.91	41482.41	16988.43	22715.41	12203.46			
BASE & SURFACING - MAIN LANE S.B. LANES		3662.85	40680.35	15933.25	21197.76	11504.82			
BASE & SURFACING - MAIN LANE ACCEL LANES & RAMPS		3853.97	12239.03	5269.35	7002.50	3780.22			
BASE & SURFACING - SHOULDER RECONSTRUCTION				8220.41	8737.82	1494.60		35355.66	192.6
BASE & SURFACING - WIDENING FOR GUARDRAIL		13852.10			4931.10				
TOTALS	120468.14	59901.84	174463.43	102278.31	123338.50	66426.86	7980.51	50772.46	192.6

BASIS OF ESTIMATE : ACHM BASE COURSE (1½") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76 - 22) = 5.5%
ACHM BINDER COURSE (1") - MINERAL AGGREGATE = 94.5%, ASPHALT BINDER (PG - 76 - 22) = 5.5%
ACHM SURFACE COURSE (½") - MINERAL AGGREGATE = 94.0%, ASPHALT BINDER (PG - 76 - 22) = 6.0%
Nmax = 205

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
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JAMES L. BARR
11/16/12

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.		BB0407	97	464

(2) QUANTITIES

ADVANCE WARNING SIGNS & DEVICES - ENTIRE PROJECT

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STA. 286+91.50 I-540 BEGIN WORK AREA JOB BB0407	STA. 406+00 & 413+00 E.B. I-40 & STA. 380+00 W.B. I-40 END WORK AREA JOB BB0407	S.H. 22	GRAND AVENUE	RAMPS 1, 2, 3, & 4 KELLEY HWY. & 41TH STREET INTERCHANGE	RAMPS 1, 2, 3, 4, 5, 6, 7, & 8 U.S. 64 INTERCHANGE	TOTAL QUANTITY REQUIRED	TOTAL SIGNS REQUIRED (SQ. FT.)
G20-1	ROAD WORK NEXT 8.18 MILES	60"X 24"	1	1					2	20
G20-2	END ROAD WORK	48"X 24"	2	2	4	4	4	4	20	160
R1-1	STOP SIGN	48"X 48"								
R11-2	ROAD CLOSED	48"X 30"								
R1-2	YIELD	60"X60"X60"								
R2-1	SPEED LIMIT XX	48"X 60"								
R2-5A	REDUCED SPEED AHEAD	48"X 60"								
R4-1	DO NOT PASS	48"X 60"								
R55-1	FINES DOUBLE IN WORK ZONES WHEN WORKERS ARE PRESENT	36"X 60"	2	2					4	60
S-1	MERGE NOW (W/ARROW)	48"X 48"								
S-2	DISTANCE PLATE FOR FLAGGER SYMBOL	18"X24"								
W13-1P	XX MPH	18"X 18"								
W1-4L	LANE SHIFT ARROW	48"X 48"								
W1-4R	LANE SHIFT ARROW	48"X 48"								
W1-4BL	DOUBLE LANE SHIFT ARROW	48"X 48"								
W1-4BR	DOUBLE LANE SHIFT ARROW	48"X 48"								
W1-6	DIRECTIONAL ARROW	60"X 30"								
W1-8	CHEVRON	36"X 48"								
W1-SD	BE PREPARED TO STOP	36"X 24"								
W20-1	ROAD WORK XX MILE (FT) (AHEAD)	48"X 48"	6	6	24	18	4	4	62	992
W20-5	RIGHT LANE CLOSED XX MILE (FT)	48"X 48"								
W20-5L	LEFT LANE CLOSED XX MILE (FT)	48"X 48"								
W3-1	STOP AHEAD SYMBOL	48"X 48"								
W3-2	YIELD AHEAD SYMBOL W/FLAGS	48"X 48"								
W3-1P	STOP AHEAD	24"X 18"								
W4-1	MERGE RIGHT SYMBOL	48"X 48"								
W4-2L	LEFT LANE CLOSURE SYMBOL	48"X 48"								
W4-2R	RIGHT LANE CLOSURE SYMBOL	48"X 48"								
W8-11	UNEVEN LANES	48"X 48"								
W20-7A	FLAGGER SYMBOL	36"X36"								
										1232

									UNITS
	ADVANCE WARNING ARROW PANEL								
	PORTABLE CHANGEABLE MESSAGE SIGN	1EA	1EA						
	TEMPORARY RELOCATION OF EXISTING SIGNS								EACH
	TRAFFIC DRUMS								EACH
	TYPE III BARRICADE (24' RIGHT)								LIN. FT.
	TYPE III BARRICADE (16' LEFT)								LIN. FT.
	TYPE III BARRICADE (16' RIGHT)								LIN. FT.
	TEMPORARY IMPACT ATTENUATION BARRIER								EACH
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)								EACH
	FURNISHING & INSTALLING PRECAST CONCRETE BARRIER								LIN. FT.
	RELOCATING PRECAST CONCRETE BARRIER								LIN. FT.
	VERTICAL PANELS								EACH
	MODULAR GLARE SHIELD								LIN. FT.

THIS IS A HIGH VOLUME ROAD AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:36:03 AM

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				6	ARK.			
				JOB NO.		BB0407	98	464

(2) QUANTITIES

ADVANCE WARNING SIGNS & DEVICES
OPERATION #1 - RUBBLIZE AND OVERLAY -
B.O.P. TO STA. 343+20.24 R.M.L. & B.O.P. TO STA. 343+39.26 L.M.L.

SIGN NUMBER	DESCRIPTION	SIGN SIZE	RUBBLIZE AND OVERLAY							TOTAL SIGNS REQUIRED (SQ. FT.)
			STAGE I	STAGE II	STAGE IIIA	STAGE IIIB	STAGE IV	STAGE V	TOTAL QUANTITY REQUIRED	
G20-1	ROAD WORK NEXT 8.18 MILES	60"X 24"								
G20-2	END ROAD WORK	48"X 24"								
R1-1	STOP SIGN	48"X 48"		4	4	6		2	6	96
R11-2	ROAD CLOSED	48"X 30"		1	1				1	10
R1-2	YIELD	60"X60"X60"	2						2	21.7
R2-1	SPEED LIMIT XX	48"X 60"	8	8	8	8	8	8	8	160
R2-5A	REDUCED SPEED AHEAD	48"X 60"	4	4	4	4	4	4	4	80
R4-1	DO NOT PASS	48"X 60"	8	8	8	8	8	8	8	160
R55-1	FINES DOUBLE IN WORK ZONES WHEN WORKERS ARE PRESENT	36"X 60"	4	4	4	4	4	4	4	60
S-1	MERGE NOW (W/ARROW)	48"X 48"	4	4	4	4	4	4	4	64
S-2	DISTANCE PLATE FOR FLAGGER SYMBOL	18"X24"		2	2	2			2	6
W13-1P	XX MPH	18"X 18"								
W1-4L	LANE SHIFT ARROW	48"X 48"								
W1-4R	LANE SHIFT ARROW	48"X 48"								
W1-4BL	DOUBLE LANE SHIFT ARROW	48"X 48"		4	4	4			4	64
W1-4BR	DOUBLE LANE SHIFT ARROW	48"X 48"		2	2	2			2	32
W1-6	DIRECTIONAL ARROW	60"X 30"	6	12	6	6	12	6	12	150
W1-8	CHEVRON	36"X 48"								
W1-5D	BE PREPARED TO STOP	36"X 24"		4	4	4			4	24
W20-1	ROAD WORK XX MILE (FT) (AHEAD)	48"X 48"	4	4	4	4	4	4	4	64
W20-5	RIGHT LANE CLOSED XX MILE (FT)	48"X 48"	12	12	12	12	12	12	12	192
W20-5L	LEFT LANE CLOSED XX MILE (FT)	48"X 48"								
W3-1	STOP AHEAD SYMBOL	48"X 48"		4	5	5		1	5	80
W3-2	YIELD AHEAD SYMBOL W/FLAGS	48"X 48"	1						1	16
W3-1P	STOP AHEAD	24"X 18"		2	3	3		1	3	9
W4-1	MERGE RIGHT SYMBOL	48"X 48"								
W4-2L	LEFT LANE CLOSURE SYMBOL	48"X 48"								
W4-2R	RIGHT LANE CLOSURE SYMBOL	48"X 48"	4	4	4	4	4	4	4	64
W8-11	UNEVEN LANES	48"X 48"								
W20-7A	FLAGGER SYMBOL	36"X36"		2	2	2			2	18
										1370.7

								UNITS
ADVANCE WARNING ARROW PANEL	2 EA	2 EA	2 EA	2 EA	2 EA	2 EA		
PORTABLE CHANGEABLE MESSAGE SIGN	2 EA	2 EA	6 EA	4 EA	2 EA	2 EA		
TEMPORARY RELOCATION OF EXISTING SIGNS		3	1	3		1	8	EACH
TRAFFIC DRUMS	322	316	316	418	254	311	418	EACH
TYPE III BARRICADE (24' RIGHT)								LIN. FT.
TYPE III BARRICADE (16' LEFT)				16		16	16	LIN. FT.
TYPE III BARRICADE (16' RIGHT)		16	48			32	48	LIN. FT.
TEMPORARY IMPACT ATTENUATION BARRIER		5	6	6			6	EACH
TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		5	6	6			6	EACH
FURNISHING & INSTALLING PRECAST CONCRETE BARRIER		3604	2418				6022	LIN. FT.
RELOCATING PRECAST CONCRETE BARRIER			3604	4561			8165	LIN. FT.
VERTICAL PANELS		21	76	76		80	80	EACH
MODULAR GLARE SHIELD								LIN. FT.

INCLUDES SIGNS AND DEVICES FOR S.H. 22 CONSTRUCTION, 1 EXIT RAMP, & 1 ENTRANCE RAMP

CONSTRUCTION AND PERMANENT PAVEMENT MARKING
OPERATION #1 - RUBBLIZE AND OVERLAY -
B.O.P. TO STA. 343+20.24 R.M.L. & B.O.P. TO STA. 343+39.26 L.M.L.

	DESCRIPTION	UNITS	RUBBLIZE AND OVERLAY						TOTAL QUANTITY REQUIRED
			STAGE II	STAGE IIIA	STAGE IIIB	STAGE IV	STAGE VA	FINAL	
	REMOVAL OF PERMANENT PAVEMENT MARKINGS	LIN. FT.	14225	1500	160				15885
	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.		550	795	2150			3495
	CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	26800	23470	1000	27870		26380	105520
	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	2230	3290	2470	750	2500		11240
	RAISED PAVEMENT MARKERS (TYPE II)	EACH						568	568
*	HIGH PERFORMANCE PAVEMENT MARKING (WHITE 4")	LIN. FT.						15981	15981
*	HIGH PERFORMANCE PAVEMENT MARKING (YELLOW 4")	LIN. FT.						13581	13581
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	LIN. FT.						1135	1135
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	LIN. FT.						1045	1045
	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	LIN. FT.						3100	3100
	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	LIN. FT.						2000	2000
	THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")	LIN. FT.						2150	2150

QUANTITIES SHOWN INCLUDE ALL MARKINGS NECESSARY TO COMPLETE THE OPERATIONS LISTED ABOVE AND INDEPENDENT OF ANY OTHER CONSTRUCTION ACTIVITIES PERFORMED CONCURRENTLY IN THIS CONTRACT OR ADJACENT CONTRACTS. ADJUSTMENTS TO QUANTITIES NEEDED TO ACCOUNT FOR ANY OVERLAP OF OPERATIONS.

* DENOTES ALTERNATE BID ITEMS

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

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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.		BB0407	99	464

(2) QUANTITIES

ADVANCE WARNING SIGNS & DEVICES
OPERATION #2 - SOUTH CROSSOVER SECTION -
STA. 343+20.24 R.M.L. TO STA. 502+00 & STA. 343+39.26 L.M.L. TO STA. 502+00

SIGN NUMBER	DESCRIPTION	SIGN SIZE	SOUTH CROSSOVER							TOTAL QUANTITY REQUIRED	TOTAL SIGNS REQUIRED (SQ. FT.)
			STAGE IA	STAGE IB	STAGE II	STAGE III	STAGE IV	STAGE VA	STAGE VB		
G20-1	ROAD WORK NEXT 8.18 MILES	60"X 24"									
G20-2	END ROAD WORK	48"X 24"									
R1-1	STOP SIGN	48"X 48"									
R11-2	ROAD CLOSED	48"X 30"			6		6			6	60
R1-2	YIELD	60"X60"X60"									
R2-1	SPEED LIMIT XX	48"X 60"	8	8	8	8	8	8	8	8	160
R2-5A	REDUCED SPEED AHEAD	48"X 60"	4	4	4	4	4	4	4	4	80
R4-1	DO NOT PASS	48"X 60"	8	8	8	8	8	8	8	8	160
R55-1	FINES DOUBLE IN WORK ZONES WHEN WORKERS ARE PRESENT	36"X 60"	4	4	4	4	4	4	4	4	60
S-1	MERGE NOW (W/ARROW)	48"X 48"	4	4	4	4	4	4	4	4	64
S-2	DISTANCE PLATE FOR FLAGGER SYMBOL	18"X24"									
W13-1P	XX MPH	18"X 18"			2		2			2	4.5
W1-4L	LANE SHIFT ARROW	48"X 48"			1		1			1	16
W1-4R	LANE SHIFT ARROW	48"X 48"			1		1			1	16
W1-4BL	DOUBLE LANE SHIFT ARROW	48"X 48"			4	4	4			4	64
W1-4BR	DOUBLE LANE SHIFT ARROW	48"X 48"									
W1-6	DIRECTIONAL ARROW	60"X 30"	6	12	11	12	11	12	6	12	150
W1-8	CHEVRON	36"X 48"			9		9			9	108
W1-SD	BE PREPARED TO STOP	36"X 24"									
W20-1	ROAD WORK XX MILE (FT) (AHEAD)	48"X 48"	4	4	4	4	4	4	4	4	64
W20-5	RIGHT LANE CLOSED XX MILE (FT)	48"X 48"	12	12	12	12	12	12	12	12	192
W20-5L	LEFT LANE CLOSED XX MILE (FT)	48"X 48"			2	2	2			2	32
W3-1	STOP AHEAD SYMBOL	48"X 48"									
W3-2	YIELD AHEAD SYMBOL W/FLAGS	48"X 48"									
W3-1P	STOP AHEAD	24"X 18"									
W4-1	MERGE RIGHT SYMBOL	48"X 48"	8		4		4			8	128
W4-2L	LEFT LANE CLOSURE SYMBOL	48"X 48"			2	2	2			2	32
W4-2R	RIGHT LANE CLOSURE SYMBOL	48"X 48"	4	4	4	4	4	4	4	4	64
W8-11	UNEVEN LANES	48"X 48"			8		8			8	128
W20-7A	FLAGGER SYMBOL	36"X36"									
											1582.5

									UNITS
ADVANCE WARNING ARROW PANEL	2 EA	2 EA	2 EA	2 EA	2 EA	2 EA	2 EA		
PORTABLE CHANGEABLE MESSAGE SIGN	2 EA	2 EA	2 EA	2 EA	2 EA	2 EA	2 EA		
TEMPORARY RELOCATION OF EXISTING SIGNS			2		2			4	EACH
TRAFFIC DRUMS	778	430	362	477	358	430	402	778	EACH
TYPE III BARRICADE (24' RIGHT)			24		24			24	LIN. FT.
TYPE III BARRICADE (16' LEFT)			32		32			32	LIN. FT.
TYPE III BARRICADE (16' RIGHT)			48		48			48	LIN. FT.
TEMPORARY IMPACT ATTENUATION BARRIER			5	2	3			5	EACH
TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)			5	2	3			5	EACH
FURNISHING & INSTALLING PRECAST CONCRETE BARRIER			19953					19953	LIN. FT.
RELOCATING PRECAST CONCRETE BARRIER				704	17653			18357	LIN. FT.
VERTICAL PANELS			79		79			79	EACH
MODULAR GLARE SHIELD			600		600			600	LIN. FT.

INCLUDES ALL SIGNS & DEVICES REQUIRED FOR RAMPS @ GRAND AVE. & KELLY RD.

CONSTRUCTION AND PERMANENT PAVEMENT MARKING
OPERATION #2 - SOUTH CROSSOVER SECTION -
STA. 343+20.24 R.M.L. TO STA. 502+00 & STA. 343+39.26 L.M.L. TO STA. 502+00

	DESCRIPTION	UNITS	SOUTH CROSSOVER								TOTAL QUANTITY REQUIRED
			STAGE IIA	STAGE IIB	STAGE III	STAGE IVA	STAGE IVB	STAGE VA	STAGE VA	FINAL	
	REMOVAL OF PERMANENT PAVEMENT MARKINGS	LIN. FT.	20710		500	575					21785
	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.		700	1800		700	1300			4500
	CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	40550	2950	35200	42660	3650	34000	35400	33980	228390
	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	4210	900	1420	2320	2000	1420			12270
	RAISED PAVEMENT MARKERS (TYPE II)	EACH							1248		1248
*	HIGH PERFORMANCE PAVEMENT MARKING (WHITE 4")	LIN. FT.							7950	32590	40540
*	HIGH PERFORMANCE PAVEMENT MARKING (YELLOW 4")	LIN. FT.								32470	32470
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	LIN. FT.							370	2895	3265
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	LIN. FT.							1420	1475	2895
	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	LIN. FT.								1900	1900
	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	LIN. FT.								1400	1400
	THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")	LIN. FT.								3500	3500

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

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				6	ARK.			
				JOB NO.		BB0407	100	464

(2) QUANTITIES

ADVANCE WARNING SIGNS & DEVICES
OPERATION #3 - RUBBLIZE & OVERLAY AND FULL DEPTH RECONSTRUCTION - STA. 502+00 TO STA. 614+03.30 R.M.L. & STA. 502+00 TO STA. 613+89.88 L.M.L.

SIGN NUMBER	DESCRIPTION	SIGN SIZE	RUBBLIZE & OVERLAY AND FULL DEPTH RECONSTRUCTION							TOTAL QUANTITY REQUIRED	TOTAL SIGNS REQUIRED (SQ. FT.)
			STAGE I	STAGE II	STAGE III	STAGE IV	STAGE V				
G20-1	ROAD WORK NEXT 8.18 MILES	60"X 24"									
G20-2	END ROAD WORK	48"X 24"									
R1-1	STOP SIGN	48"X 48"			4		4			4	64
R11-2	ROAD CLOSED	48"X 30"			1		1			1	10
R1-2	YIELD	60"X60"X60"	2							2	21.65
R2-1	SPEED LIMIT XX	48"X 60"	8	8	8	8	8			8	160
R2-5A	REDUCED SPEED AHEAD	48"X 60"	4	4	4	4	4			4	80
R4-1	DO NOT PASS	48"X 60"	8	8	8	8	8			8	160
R55-1	FINES DOUBLE IN WORK ZONES WHEN WORKERS ARE PRESENT	36"X 60"	4	4	4	4	4			4	60
S-1	MERGE NOW (W/ARROW)	48"X 48"	4	4	4	4	4			4	64
S-2	DISTANCE PLATE FOR FLAGGER SYMBOL	18"X24"									
W13-1P	XX MPH	18"X 18"									
W1-4L	LANE SHIFT ARROW	48"X 48"									
W1-4R	LANE SHIFT ARROW	48"X 48"									
W1-4BL	DOUBLE LANE SHIFT ARROW	48"X 48"									
W1-4BR	DOUBLE LANE SHIFT ARROW	48"X 48"									
W1-6	DIRECTIONAL ARROW	60"X 30"	6	6	6	12	6			12	150
W1-8	CHEVRON	36"X 48"									
W1-SD	BE PREPARED TO STOP	36"X 24"									
W20-1	ROAD WORK XX MILE (FT) (AHEAD)	48"X 48"	4	4	4	4	4			4	64
W20-5	RIGHT LANE CLOSED XX MILE (FT)	48"X 48"	12	12	12	12	12			12	192
W20-5L	LEFT LANE CLOSED XX MILE (FT)	48"X 48"									
W3-1	STOP AHEAD SYMBOL	48"X 48"			1		1			1	16
W3-2	YIELD AHEAD SYMBOL W/FLAGS	48"X 48"	1							1	16
W3-1P	STOP AHEAD	24"X 18"									
W4-1	MERGE RIGHT SYMBOL	48"X 48"									
W4-2L	LEFT LANE CLOSURE SYMBOL	48"X 48"									
W4-2R	RIGHT LANE CLOSURE SYMBOL	48"X 48"	4	4	4	4	4			4	64
W8-11	UNEVEN LANES	48"X 48"									
W20-7A	FLAGGER SYMBOL	36"X36"									
											1121.65

									UNITS
ADVANCE WARNING ARROW PANEL	2 EA	2 EA	2 EA	2 EA	2 EA				
PORTABLE CHANGEABLE MESSAGE SIGN	2 EA	2 EA	2 EA	2 EA	2 EA				
TEMPORARY RELOCATION OF EXISTING SIGNS			1					1	EACH
TRAFFIC DRUMS	610	465	586	542	657			657	EACH
TYPE III BARRICADE (24' RIGHT)									LIN. FT.
TYPE III BARRICADE (16' LEFT)			16		16			16	LIN. FT.
TYPE III BARRICADE (16' RIGHT)			48		48			48	EACH
TEMPORARY IMPACT ATTENUATION BARRIER		4	5					5	EACH
TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		4	5					5	EACH
FURNISHING & INSTALLING PRECAST CONCRETE BARRIER		3870	400					4270	LIN. FT.
RELOCATING PRECAST CONCRETE BARRIER			3870		200			4070	LIN. FT.
VERTICAL PANELS			16		16			16	EACH
MODULAR GLARE SHIELD									LIN. FT.

CONSTRUCTION AND PERMANENT PAVEMENT MARKING
OPERATION #3 - RUBBLIZE & OVERLAY AND FULL DEPTH RECONSTRUCTION - STA. 502+00 TO STA. 614+03.30 R.M.L. & STA. 502+00 TO STA. 613+89.88 L.M.L.

	DESCRIPTION	UNITS	RUBBLIZE & OVERLAY AND FULL DEPTH RECONSTRUCTION							TOTAL QUANTITY REQUIRED
			STAGE II	STAGE IIIA	STAGE IIIB	STAGE IV	STAGE VA	STAGE VB	FINAL	
	REMOVAL OF PERMANENT PAVEMENT MARKINGS	LIN. FT.	15600	400						16000
	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.		800	600	400	200			2000
	CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	31200	35100	2400	33800		2400	33800	138700
	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.								
	RAISED PAVEMENT MARKERS (TYPE II)	EACH							632	632
*	HIGH PERFORMANCE PAVEMENT MARKING (WHITE 4")	LIN. FT.							22611	22611
*	HIGH PERFORMANCE PAVEMENT MARKING (YELLOW 4")	LIN. FT.							18270	18270
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	LIN. FT.							8494	8494
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	LIN. FT.							6794	6794
	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	LIN. FT.								
	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	LIN. FT.								
	THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")	LIN. FT.							1750	1750

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				JOB NO.		BB0407	101	464

(2) QUANTITIES

ADVANCE WARNING SIGNS & DEVICES
OPERATION #4 - NORTH CROSSOVER SECTION -
STA. 614+03.30 R.M.L. TO STA. 672+50 & STA. 613+89.88 L.M.L. TO STA. 672+50

SIGN NUMBER	DESCRIPTION	SIGN SIZE	NORTH CROSSOVER							TOTAL QUANTITY REQUIRED	TOTAL SIGNS REQUIRED (SQ. FT.)
			STAGE IA	STAGE IB	STAGE II	STAGE III	STAGE IV	STAGE VA	STAGE VB		
G20-1	ROAD WORK NEXT 8.18 MILES	60"X 24"									
G20-2	END ROAD WORK	48"X 24"									
R1-1	STOP SIGN	48"X 48"									
R11-2	ROAD CLOSED	48"X 30"	1	1	5	1	5	1	1	5	50
R1-2	YIELD	60"X60"X60"									
R2-1	SPEED LIMIT XX	48"X 60"	4	8	8	8	8	8	8	8	160
R2-5A	REDUCED SPEED AHEAD	48"X 60"	2	4	4	4	4	4	4	4	80
R4-1	DO NOT PASS	48"X 60"	4	8	8	8	8	8	8	8	160
R55-1	FINES DOUBLE IN WORK ZONES WHEN WORKERS ARE PRESENT	36"X 60"	2	4	4	4	4	4	4	4	60
S-1	MERGE NOW (W/ARROW)	48"X 48"	2	4	4	4	4	4	4	4	64
S-2	DISTANCE PLATE FOR FLAGGER SYMBOL	18"X24"									
W13-1P	XX MPH	18"X 18"			2		2			2	4.5
W1-4L	LANE SHIFT ARROW	48"X 48"			1		1			1	16
W1-4R	LANE SHIFT ARROW	48"X 48"			1		1			1	16
W1-4BL	DOUBLE LANE SHIFT ARROW	48"X 48"									
W1-4BR	DOUBLE LANE SHIFT ARROW	48"X 48"									
W1-6	DIRECTIONAL ARROW	60"X 30"	3	12	9	6	9	12	6	12	150
W1-8	CHEVRON	36"X 48"									
W1-SD	BE PREPARED TO STOP	36"X 24"									
W20-1	ROAD WORK XX MILE (FT) (AHEAD)	48"X 48"	2	4	10	4	10	4	4	10	160
W20-5	RIGHT LANE CLOSED XX MILE (FT)	48"X 48"	6	12	12	12	12	12	12	12	192
W20-5L	LEFT LANE CLOSED XX MILE (FT)	48"X 48"									
W3-1	STOP AHEAD SYMBOL	48"X 48"									
W3-2	YIELD AHEAD SYMBOL W/FLAGS	48"X 48"									
W3-1P	STOP AHEAD	24"X 18"									
W4-1	MERGE RIGHT SYMBOL	48"X 48"	2	2	2	2	2	2	2	2	32
W4-2L	LEFT LANE CLOSURE SYMBOL	48"X 48"									
W4-2R	RIGHT LANE CLOSURE SYMBOL	48"X 48"	2	4	4	4	4	4	4	4	64
W8-11	UNEVEN LANES	48"X 48"									
W20-7A	FLAGGER SYMBOL	36"X36"									
											1208.5

										UNITS
	ADVANCE WARNING ARROW PANEL	1EA	2 EA	2 EA	2 EA	2 EA	2 EA	2 EA		
	PORTABLE CHANGEABLE MESSAGE SIGN	1EA	2 EA	2 EA	2 EA	2 EA	2 EA	2 EA		
	TEMPORARY RELOCATION OF EXISTING SIGNS									EACH
	TRAFFIC DRUMS	191	329	214	303	214	329	303	329	EACH
	TYPE III BARRICADE (24' RIGHT)			24		24			24	LIN. FT.
	TYPE III BARRICADE (16' LEFT)			32		32			32	LIN. FT.
	TYPE III BARRICADE (16' RIGHT)	16	16	48	16	48	16	16	48	LIN. FT.
	TEMPORARY IMPACT ATTENUATION BARRIER									EACH
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)									EACH
	FURNISHING & INSTALLING PRECAST CONCRETE BARRIER			6958					6958	LIN. FT.
	RELOCATING PRECAST CONCRETE BARRIER					6858			6858	LIN. FT.
	VERTICAL PANELS			30		30			30	EACH
	MODULAR GLARE SHIELD			600		600			600	LIN. FT.

CONSTRUCTION AND PERMANENT PAVEMENT MARKING
OPERATION #4 - NORTH CROSSOVER SECTION -
STA. 614+03.30 R.M.L. TO STA. 672+50 & STA. 613+89.88 L.M.L. TO STA. 672+50

	DESCRIPTION	UNITS	NORTH CROSSOVER							TOTAL QUANTITY REQUIRED
			STAGE IB	STAGE IIA	STAGE III	STAGE IVA	STAGE VA	STAGE VB	FINAL	
	REMOVAL OF PERMANENT PAVEMENT MARKINGS	LIN. FT.	840	7648	750	2720				11958
	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.				4600	4600			9200
	CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	840	21283	11724	17974	10366	11710	11710	85607
	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.		861			1500			2361
	RAISED PAVEMENT MARKERS (TYPE II)	EACH						296		296
*	HIGH PERFORMANCE PAVEMENT MARKING (WHITE 4")	LIN. FT.						2516	10060	12576
*	HIGH PERFORMANCE PAVEMENT MARKING (YELLOW 4")	LIN. FT.							10060	10060
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	LIN. FT.						413	1646	2059
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	LIN. FT.							1646	1646
	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	LIN. FT.								
	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	LIN. FT.								
	THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")	LIN. FT.								

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

QUANTITIES

8/27/2012 9:36:05 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.		BB0407	102	464

(2) QUANTITIES

ADVANCE WARNING SIGNS & DEVICES
OPERATION #5 - RUBBLIZE AND OVERLAY -
STA. 672+50 TO STA. 709+55.89 R.M.L. & STA. 672+50 TO STA. 710+48.67 L.M.L.

SIGN NUMBER	DESCRIPTION	SIGN SIZE	RUBBLIZE AND OVERLAY							TOTAL QUANTITY REQUIRED	TOTAL SIGNS REQUIRED (SQ. FT.)
			STAGE I	STAGE II	STAGE III	STAGE IV	STAGE V				
G20-1	ROAD WORK NEXT 8.18 MILES	60"X 24"									
G20-2	END ROAD WORK	48"X 24"									
RI-1	STOP SIGN	48"X 48"			8		8			8	128
RII-2	ROAD CLOSED	48"X 30"									
RI-2	YIELD	60"X60"X60"	8							8	86.6
R2-1	SPEED LIMIT XX	48"X 60"	8	8	8	8	8			8	160
R2-5A	REDUCED SPEED AHEAD	48"X 60"	4	4	4	4	4			4	80
R4-1	DO NOT PASS	48"X 60"	8	8	8	8	8			8	160
R55-1	FINES DOUBLE IN WORK ZONES WHEN WORKERS ARE PRESENT	36"X 60"	4	4	4	4	4			4	60
S-1	MERGE NOW (W/ARROW)	48"X 48"	4	4	4	4	4			4	64
S-2	DISTANCE PLATE FOR FLAGGER SYMBOL	18"X24"									
WI3-IP	XX MPH	18"X 18"									
WI-4L	LANE SHIFT ARROW	48"X 48"									
WI-4R	LANE SHIFT ARROW	48"X 48"									
WI-4BL	DOUBLE LANE SHIFT ARROW	48"X 48"									
WI-4BR	DOUBLE LANE SHIFT ARROW	48"X 48"									
WI-6	DIRECTIONAL ARROW	60"X 30"	6	12	6	12	6			12	150
WI-8	CHEVRON	36"X 48"									
WI-SD	BE PREPARED TO STOP	36"X 24"									
W20-1	ROAD WORK XX MILE (FT) (AHEAD)	48"X 48"	4	4	4	4	4			4	64
W20-5	RIGHT LANE CLOSED XX MILE (FT)	48"X 48"	12	12	12	12	12			12	192
W20-5L	LEFT LANE CLOSED XX MILE (FT)	48"X 48"									
W3-1	STOP AHEAD SYMBOL	48"X 48"			4		4			4	64
W3-2	YIELD AHEAD SYMBOL W/FLAGS	48"X 48"	4							4	64
W3-IP	STOP AHEAD	24"X 18"			4		4			4	12
W4-1	MERGE RIGHT SYMBOL	48"X 48"									
W4-2L	LEFT LANE CLOSURE SYMBOL	48"X 48"									
W4-2R	RIGHT LANE CLOSURE SYMBOL	48"X 48"	4	4	4	4	4			4	64
W8-11	UNEVEN LANES	48"X 48"									
W20-7A	FLAGGER SYMBOL	36"X36"									
											1348.6

										UNITS
	ADVANCE WARNING ARROW PANEL	2 EA	2 EA	2 EA	2 EA	2 EA				
	PORTABLE CHANGEABLE MESSAGE SIGN	2 EA	2 EA	2 EA	2 EA	2 EA				
	TEMPORARY RELOCATION OF EXISTING SIGNS			4		4			8	EACH
	TRAFFIC DRUMS	601	203	557	203	557			601	EACH
	TYPE III BARRICADE (24' RIGHT)									LIN. FT.
	TYPE III BARRICADE (16' LEFT)			64		64			64	LIN. FT.
	TYPE III BARRICADE (16' RIGHT)			128		128			128	LIN. FT.
	TEMPORARY IMPACT ATTENUATION BARRIER									EACH
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)									EACH
	FURNISHING & INSTALLING PRECAST CONCRETE BARRIER									LIN. FT.
	RELOCATING PRECAST CONCRETE BARRIER									LIN. FT.
	VERTICAL PANELS			40		40			40	EACH
	MODULAR GLARE SHIELD									LIN. FT.

CONSTRUCTION AND PERMANENT PAVEMENT MARKING
OPERATION #5 - RUBBLIZE AND OVERLAY -
STA. 672+50 TO STA. 709+55.89 R.M.L. & STA. 672+50 TO STA. 710+48.67 L.M.L.

	DESCRIPTION	UNITS	RUBBLIZE AND OVERLAY							TOTAL QUANTITY REQUIRED
			STAGE IIA	STAGE IIB	STAGE III	STAGE IV	STAGE VA	STAGE VB	FINAL	
	REMOVAL OF PERMANENT PAVEMENT MARKINGS	LIN. FT.	7505	800						8305
	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.		2400	2400	800	800			6400
	CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	15010	19810	9600	15010		9600	15010	84040
	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.								
	RAISED PAVEMENT MARKERS (TYPE II)	EACH							670	670
*	HIGH PERFORMANCE PAVEMENT MARKING (WHITE 4")	LIN. FT.							14042	14042
*	HIGH PERFORMANCE PAVEMENT MARKING (YELLOW 4")	LIN. FT.							12545	12545
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	LIN. FT.								
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	LIN. FT.								
	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	LIN. FT.								
	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	LIN. FT.								
	THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")	LIN. FT.							3500	3500

QUANTITIES SHOWN INCLUDE ALL MARKINGS NECESSARY TO COMPLETE THE OPERATIONS LISTED ABOVE AND INDEPENDENT OF ANY OTHER CONSTRUCTION ACTIVITIES PERFORMED CONCURRENTLY IN THIS CONTRACT OR ADJACENT CONTRACTS. ADJUSTMENTS TO QUANTITIES NEEDED TO ACCOUNT FOR ANY OVERLAP OF OPERATIONS.

*DENOTES ALTERNATE BID ITEMS

THIS IS A HIGH VOLUME ROAD AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003.

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				6	ARK.			
				JOB NO.		BB0407	103	464

(2) QUANTITIES

ADVANCE WARNING SIGNS & DEVICES
OPERATION #6 - I-540/I-40 INTERCHANGE

SIGN NUMBER	DESCRIPTION	SIGN SIZE	I-540/I-40 INTERCHANGE							TOTAL QUANTITY REQUIRED	TOTAL SIGNS REQUIRED (SQ. FT.)
			STAGE I	STAGE II	STAGE III	STAGE IVA	STAGE IVB	STAGE VA	STAGE VB		
G20-1	ROAD WORK NEXT 8.18 MILES	60"X 24"									
G20-2	END ROAD WORK	48"X 24"									
R1-1	STOP SIGN	48"X 48"									
R11-2	ROAD CLOSED	48"X 30"		2						2	20
R1-2	YIELD	60"X60"X60"									
R2-1	SPEED LIMIT XX	48"X 60"	4	4	4	4	4	4	4	4	80
R2-5A	REDUCED SPEED AHEAD	48"X 60"	2	2	2	2	2	2	2	2	40
R4-1	DO NOT PASS	48"X 60"	4	4	4	4	4	4	4	4	80
R55-1	FINES DOUBLE IN WORK ZONES WHEN WORKERS ARE PRESENT	36"X 60"	2	2	2	2	2	2	2	2	30
S-1	MERGE NOW (W/ARROW)	48"X 48"									
S-2	DISTANCE PLATE FOR FLAGGER SYMBOL	18"X24"									
W13-1P	XX MPH	18"X 18"									
W1-4L	LANE SHIFT ARROW	48"X 48"									
W1-4R	LANE SHIFT ARROW	48"X 48"									
W1-4BL	DOUBLE LANE SHIFT ARROW	48"X 48"									
W1-4BR	DOUBLE LANE SHIFT ARROW	48"X 48"									
W1-6	DIRECTIONAL ARROW	60"X 30"	3	3	3	3	3	3	3	3	37.5
W1-8	CHEVRON	36"X 48"									
W1-SD	BE PREPARED TO STOP	36"X 24"									
W20-1	ROAD WORK XX MILE (FT) (AHEAD)	48"X 48"	2	2	2	2	2	2	2	2	32
W20-5	RIGHT LANE CLOSED XX MILE (FT)	48"X 48"	6	6	6	6	6	6	6	6	96
W20-5L	LEFT LANE CLOSED XX MILE (FT)	48"X 48"									
W3-1	STOP AHEAD SYMBOL	48"X 48"									
W3-2	YIELD AHEAD SYMBOL W/FLAGS	48"X 48"									
W3-1P	STOP AHEAD	24"X 18"									
W4-1	MERGE RIGHT SYMBOL	48"X 48"									
W4-2L	LEFT LANE CLOSURE SYMBOL	48"X 48"									
W4-2R	RIGHT LANE CLOSURE SYMBOL	48"X 48"	2	2	2	2	2	2	2	2	32
W8-11	UNEVEN LANES	48"X 48"									
W20-7A	FLAGGER SYMBOL	36"X36"									
											447.5

										UNITS
ADVANCE WARNING ARROW PANEL		IEA	IEA	IEA	IEA	IEA	IEA	IEA		
PORTABLE CHANGEABLE MESSAGE SIGN		IEA	IEA	IEA	IEA	IEA	IEA	IEA		
TEMPORARY RELOCATION OF EXISTING SIGNS						1			1	EACH
TRAFFIC DRUMS		200	143	141	89	109	176	176	200	EACH
TYPE III BARRICADE (24' RIGHT)										LIN. FT.
TYPE III BARRICADE (16' LEFT)			16						16	LIN. FT.
TYPE III BARRICADE (16' RIGHT)			16						16	LIN. FT.
TEMPORARY IMPACT ATTENUATION BARRIER			4		2	3	2	2	4	EACH
TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)			4		2	3	2	2	4	EACH
FURNISHING & INSTALLING PRECAST CONCRETE BARRIER			3950						3950	LIN. FT.
RELOCATING PRECAST CONCRETE BARRIER				3785	2750	650	400	400	7985	LIN. FT.
VERTICAL PANELS										EACH
MODULAR GLARE SHIELD										LIN. FT.

CONSTRUCTION AND PERMANENT PAVEMENT MARKING
OPERATION #6 - I-540/I-40 INTERCHANGE

	DESCRIPTION	UNITS	I-540/I-40 INTERCHANGE					TOTAL QUANTITY REQUIRED
			STAGE II	STAGE III	STAGE IV	STAGE V	FINAL	
	REMOVAL OF PERMANENT PAVEMENT MARKINGS	LIN. FT.	4660	800	950	240		6650
	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.		1295	1610	800		3705
	CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	13160	9000	15580	11500		49240
	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	3600	2375	3140	380		9495
	RAISED PAVEMENT MARKERS (TYPE II)	EACH					321	321
*	HIGH PERFORMANCE PAVEMENT MARKING (WHITE 4")	LIN. FT.					10160	10160
*	HIGH PERFORMANCE PAVEMENT MARKING (YELLOW 4")	LIN. FT.					7180	7180
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	LIN. FT.					1270	1270
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	LIN. FT.					1130	1130
	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	LIN. FT.						
	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	LIN. FT.						
	THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")	LIN. FT.					1095	1095

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				6	ARK.			
				JOB NO.		BB0407	104	464

(2) QUANTITIES

ADVANCE WARNING SIGNS & DEVICES
BRIDGE JACKING @ U.S.64

SIGN NUMBER	DESCRIPTION	SIGN SIZE	BRIDGE JACKING LOCATION - U.S. 64							TOTAL QUANTITY REQUIRED	TOTAL SIGNS REQUIRED (SQ. FT.)
			STAGE I	STAGE II	STAGE III						
G20-1	ROAD WORK NEXT 8.18 MILES	60"X 24"									
G20-2	END ROAD WORK	48"X 24"									
R1-1	STOP SIGN	48"X 48"									
R11-2	ROAD CLOSED	48"X 30"		5	5					5	50
R1-2	YIELD	60"X60"X60"									
R2-1	SPEED LIMIT XX	48"X 60"	8	8	8					8	160
R2-5A	REDUCED SPEED AHEAD	48"X 60"	4	4	4					4	80
R4-1	DO NOT PASS	48"X 60"	4	4	4					4	80
R55-1	FINES DOUBLE IN WORK ZONES WHEN WORKERS ARE PRESENT	36"X 60"									
S-1	MERGE NOW (W/ARROW)	48"X 48"									
S-2	DISTANCE PLATE FOR FLAGGER SYMBOL	18"X24"									
W13-1P	XX MPH	18"X 18"		1	1					1	2.3
W1-4L	LANE SHIFT ARROW	48"X 48"		1	1					1	16
W1-4R	LANE SHIFT ARROW	48"X 48"									
W1-4BL	DOUBLE LANE SHIFT ARROW	48"X 48"	6							6	96
W1-4BR	DOUBLE LANE SHIFT ARROW	48"X 48"									
W1-6	DIRECTIONAL ARROW	60"X 30"		6	6					6	75
W1-8	CHEVRON	36"X 48"		9	9					9	108
W1-SD	BE PREPARED TO STOP	36"X 24"									
W20-1	ROAD WORK XX MILE (FT) (AHEAD)	48"X 48"	4	4	4					4	64
W20-5	RIGHT LANE CLOSED XX MILE (FT)	48"X 48"		4	4					4	64
W20-5L	LEFT LANE CLOSED XX MILE (FT)	48"X 48"	8	4	4					8	128
W3-1	STOP AHEAD SYMBOL	48"X 48"									
W3-2	YIELD AHEAD SYMBOL W/FLAGS	48"X 48"									
W3-1P	STOP AHEAD	24"X 18"									
W4-1	MERGE RIGHT SYMBOL	48"X 48"									
W4-2L	LEFT LANE CLOSURE SYMBOL	48"X 48"	4	2	2					4	64
W4-2R	RIGHT LANE CLOSURE SYMBOL	48"X 48"		2	2					2	32
W8-11	UNEVEN LANES	48"X 48"									
W20-7A	FLAGGER SYMBOL	36"X36"									
											1019.3

										UNITS
	ADVANCE WARNING ARROW PANEL	2 EA	2 EA	2 EA						
	PORTABLE CHANGEABLE MESSAGE SIGN	2 EA	3 EA	4 EA						
	TEMPORARY RELOCATION OF EXISTING SIGNS									EACH
	TRAFFIC DRUMS	93	104	116					116	EACH
	TYPE III BARRICADE (24' RIGHT)		24	24					24	LIN. FT.
	TYPE III BARRICADE (16' LEFT)		32	32					32	LIN. FT.
	TYPE III BARRICADE (16' RIGHT)		32	32					32	LIN. FT.
	TEMPORARY IMPACT ATTENUATION BARRIER	1	1	1					1	EACH
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	1	1	1					1	EACH
	FURNISHING & INSTALLING PRECAST CONCRETE BARRIER	200	1431						1631	LIN. FT.
	RELOCATING PRECAST CONCRETE BARRIER		200	1391					1591	LIN. FT.
	VERTICAL PANELS									EACH
	MODULAR GLARE SHIELD		500	600					600	LIN. FT.

INCLUDES ALL SIGNS AND DEVICES FOR RAMPS 2, 3 & 4

CONSTRUCTION AND PERMANENT
PAVEMENT MARKING - BRIDGE JACKING @ U.S.64

	DESCRIPTION	UNITS	BRIDGE JACKING LOCATION - U.S. 64			TOTAL QUANTITY REQUIRED
			STAGE II	STAGE III	FINAL	
	REMOVAL OF PERMANENT PAVEMENT MARKINGS	LIN. FT.				
	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.				
	CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	2688	3788		6476
	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	1200			1200
*	HIGH PERFORMANCE PAVEMENT MARKING (WHITE 4")	LIN. FT.				
*	HIGH PERFORMANCE PAVEMENT MARKING (YELLOW 4")	LIN. FT.				
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	LIN. FT.			876	876
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	LIN. FT.			700	700
	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	LIN. FT.			2130	2130
	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	LIN. FT.			1530	1530
	THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")	LIN. FT.			1800	1800

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QUANTITIES

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11/1/12				6	ARK.			
11/16/12				JOB NO.		BB0407	105	464

(2) QUANTITIES

ADVANCE WARNING SIGNS & DEVICES - SUMMARY

SIGN NUMBER	DESCRIPTION	SIGN SIZE	ENTIRE PROJECT	OPERATION #1	OPERATION #2	OPERATION #3	OPERATION #4	OPERATION #5	OPERATION #6	BRIDGE JACKING	TOTAL QUANTITY REQUIRED	TOTAL SIGNS REQUIRED (SQ. FT.)
G20-1	ROAD WORK NEXT 8.18 MILES	60"X 24"	2								2	20
G20-2	END ROAD WORK	48"X 24"	20								20	160
R1-1	STOP SIGN	48"X 48"		6		4		8			18	288
R11-2	ROAD CLOSED	48"X 30"		1	6	1	5		2	5	20	200
R1-2	YIELD	60"X60"X60"		2		2		8			12	129.9
R2-1	SPEED LIMIT XX	48"X 60"		8	8	8	8	8	4	8	52	1040
R2-5A	REDUCED SPEED AHEAD	48"X 60"		4	4	4	4	4	2	4	26	520
R4-1	DO NOT PASS	48"X 60"		8	8	8	8	8	4	4	48	960
R55-1	FINES DOUBLE IN WORK ZONES WHEN WORKERS ARE PRESENT	36"X 60"	4	4	4	4	4	4	2		26	390
S-1	MERGE NOW (W/ARROW)	48"X 48"		4	4	4	4	4			20	320
S-2	DISTANCE PLATE FOR FLAGGER SYMBOL	18"X24"		2							2	6
W13-1P	XX MPH	18"X 18"			2		2			1	5	11.25
W1-4L	LANE SHIFT ARROW	48"X 48"			1		1			1	3	48
W1-4R	LANE SHIFT ARROW	48"X 48"			1		1				2	32
W1-4BL	DOUBLE LANE SHIFT ARROW	48"X 48"		4	4					6	14	224
W1-4BR	DOUBLE LANE SHIFT ARROW	48"X 48"		2							2	32
W1-6	DIRECTIONAL ARROW	60"X 30"		12	12	12	12	12	3	6	69	862.5
W1-8	CHEVRON	36"X 48"			9					9	18	216
W1-SD	BE PREPARED TO STOP	36"X 24"		4							4	24
W20-1	ROAD WORK XX MILE (FT) (AHEAD)	48"X 48"	62	4	4	4	10	4	2	4	94	1504
W20-5	RIGHT LANE CLOSED XX MILE (FT)	48"X 48"		12	12	12	12	12	6	4	70	1120
W20-5L	LEFT LANE CLOSED XX MILE (FT)	48"X 48"			2					8	10	160
W3-1	STOP AHEAD SYMBOL	48"X 48"		5		1		4			10	160
W3-2	YIELD AHEAD SYMBOL W/FLAGS	48"X 48"		1		1		4			6	96
W3-1P	STOP AHEAD	24"X 18"		3				4			7	21
W4-1	MERGE RIGHT SYMBOL	48"X 48"			8		2				10	160
W4-2L	LEFT LANE CLOSURE SYMBOL	48"X 48"			2					4	6	96
W4-2R	RIGHT LANE CLOSURE SYMBOL	48"X 48"		4	4	4	4	4	2	2	24	384
W8-11	UNEVEN LANES	48"X 48"			8						8	128
W20-7A	FLAGGER SYMBOL	36"X36"		2							2	18
												9330.65

											UNITS
ADVANCE WARNING ARROW PANEL			2 EA	2 EA	2 EA	2 EA	2 EA	1EA	2 EA	1880	DAY
PORTABLE CHANGEABLE MESSAGE SIGN		2 EA	6 EA	2 EA	2 EA	2 EA	2 EA	1EA	4 EA	960	WEEK
TEMPORARY RELOCATION OF EXISTING SIGNS			8	4	1		8	1		22	EACH
TRAFFIC DRUMS			418	778	657	329	601	200	116	3099	EACH
TYPE III BARRICADE (24' RIGHT)				24		24			24	72	LIN. FT.
TYPE III BARRICADE (16' LEFT)			16	32	16	32	64	16	32	208	LIN. FT.
TYPE III BARRICADE (16' RIGHT)			48	48	48	48	128	16	32	368	LIN. FT.
TEMPORARY IMPACT ATTENUATION BARRIER			6	5	5			4	1	21	EACH
TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)			6	5	5			4	1	21	EACH
FURNISHING & INSTALLING PRECAST CONCRETE BARRIER			6022	19953	4270	6958		3950	1631	42784	LIN. FT.
RELOCATING PRECAST CONCRETE BARRIER			8165	18357	4070	6858		7985	1591	47026	LIN. FT.
VERTICAL PANELS			80	79	16	30	40			245	EACH
MODULAR GLARE SHIELD				600		600			600	1800	LIN. FT.

THE QUANTITIES IN THE CONTRACT ARE THE MAXIMUM QUANTITIES REQUIRED FOR ALL MAIN LANE OPERATIONS AS LISTED IN THE SPECIAL PROVISION, SEQUENCE OF CONSTRUCTION AND AS TABULATED IN THE PLANS PLUS THE BRIDGE JACKING OPERATION AT U.S. 64.

THIS IS A HIGH VOLUME ROAD AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003.

CONSTRUCTION AND PERMANENT PAVEMENT MARKING - SUMMARY

	DESCRIPTION	UNITS	OPERATION #1	OPERATION #2	OPERATION #3	OPERATION #4	OPERATION #5	OPERATION #6	BRIDGE JACKING	TOTAL QUANTITY REQUIRED
	REMOVAL OF PERMANENT PAVEMENT MARKINGS	LIN. FT.	15885	21785	16000	11958	8305	6650		80583
	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	3495	4500	2000	9200	6400	3705		29300
	CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	105520	228390	138700	85607	84040	49240	6476	697973
	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	LIN. FT.	11240	12270		2361		9495	1200	36566
	RAISED PAVEMENT MARKERS (TYPE II)	EACH	568	1248	632	296	670	321		3735
*	HIGH PERFORMANCE PAVEMENT MARKING (WHITE 4")	LIN. FT.	15981	40540	22611	12576	14042	10160		115910
*	HIGH PERFORMANCE PAVEMENT MARKING (YELLOW 4")	LIN. FT.	13581	32470	18270	10060	12545	7180		94106
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")	LIN. FT.	1135	3265	8494	2059		1270	876	17099
*	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")	LIN. FT.	1045	2895	6794	1646		1130	700	14210
	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	LIN. FT.	3100	1900					2130	7130
	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	LIN. FT.	2000	1400					1530	4930
	THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")	LIN. FT.	2150	3500	1750		3500	1095	1800	13795

NOTES: THERMOPLASTIC PAVEMENT MARKINGS MAY BE SUBSTITUTED FOR INVERTED PROFILE PAVEMENT MARKINGS AT INTERSECTIONS, ISLANDS, TURNOUTS AND OTHER SIMILAR LOCATIONS AS DIRECTED BY THE ENGINEER.

* DENOTES ALTERNATE BID ITEMS

MOBILE SPEED NOTIFICATION SYSTEM

LOCATION	EACH
ENTIRE PROJECT - AS DIRECTED BY THE ENGINEER	10
TOTAL	10

MOTORIST ASSISTANCE PATROL

LOCATION	LUMP SUM
ENTIRE PROJECT - AS DIRECTED BY THE ENGINEER	1.00
TOTAL	1.00

PORTABLE CAMERA ASSEMBLY

LOCATION	EACH
ENTIRE PROJECT - AS DIRECTED BY THE ENGINEER	8
TOTAL	8

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 11/19/12

QUANTITIES

11/16/2012 9:05:00 AM

SCHEDULE OF BRIDGE QUANTITIES FOR JOB NO. BB0407

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.		BB0407	106	464

① A3957, B3957, A3959, B3959, A6877, B6877, A6878, B6878, A6879, B6879, O6880, A688I, B688I QUANTITIES 48427

BRIDGE NUMBER	CODE NUMBER	NAME PLATE	TITLE	BRIDGE	ITEM NUMBER	205	619	801	802	802	803	SS & 804	SS & 804	805	805	807	807	807	SP & 808	812	816	816	816	SP JOB BB0407	SP & 807	809	SP & 821	SP JOB BB0407	SS & 821
				ITEM / UNIT		REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO.....) LUMP SUM	7' STEEL CHAIN LINK FENCE LINEAR FOOT	UNCLASSIFIED EXCAVATION FOR STRUCTURES - BRIDGE CU. YARD	CLASS S CONCRETE - BRIDGE CU. YARD	CLASS S (AE) CONCRETE - BRIDGE CU. YARD	CLASS I PROTECTIVE SURFACE TREATMENT GALLON	REINFORCING STEEL - BRIDGE (GRADE 60) LB.	EPOXY COATED REINFORCING STEEL (GRADE 60) LB.	STEEL PILING (HP 12X53) LIN. FT.	PREBORING LIN. FT.	STRUCTURAL STEEL IN BEAM SPANS (M270, GR. 50) LB.	STRUCTURAL STEEL IN BEAM SPANS (M270, GR. 50W) LB.	PAINTING STRUCTURAL STEEL ② TON	ELASTOMERIC BEARINGS CU. INCH	BRIDGE NAME PLATE (TYPE D) EACH	FILTER BLANKET SQ. YARD	CONCRETE RIPRAP CU. YARD	DUMPED RIPRAP CU. YARD	ARMORED JOINT WITH NEOPRENE STRIP SEAL LIN. FT.	STRUCTURAL STEEL FOR MODIFICATION OF RAISED BRIDGE STRUCTURE (M270 GRADE 50W) LB.	PREFORMED JOINT SEAL LIN. FT.	MODIFICATION OF RAISED BRIDGE STRUCTURE (BR. NO.....) LUMP SUM	RAISING EXISTING STRUCTURE (BR. NO.....) LUMP SUM	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO....) LUMP SUM
B3959	X771	-----		Bridge No. A3959																					10,771	97	1	1	
				Bridge No. B3959																					10,771	97	1	1	
A3957	X771	State Highway 162		End Bents No. 1 AND 4					37.46		0.3	5,200				1,801		1											
				Bent No. 2 AND 3					7.44			700																	
				3 - 54'-0" Composite W-Beam Spans						198.00	8.8		44,770			15,959		64		1							195		1
				Totals for Bridge No. A3957					44.90	198.00	9.1	5900	44770			17760		65		1							195		1
B3957	X771	State Highway 162		End Bents No. 1 AND 4					37.46		0.3	5,200				1,801		1											
				Bent No. 2 AND 3					7.44			700																	
				3 - 54'-0" Composite W-Beam Spans						198.00	8.8		44,770			15,959		64		1							195		1
				Totals for Bridge No. B3957					44.90	198.00	9.1	5900	44770			17760		65		1							195		1
A6877	X271	State Highway 22		End Bents No. 1 AND 3					83.30		0.5	8,460		410		2,555		1.3	6,584.0			81							
				Bent No. 2				135	87.70			13,300							6,336.0										
				1 - 188'-0" Cont. W-Beam Unit						307.00	27.0		85,745			398,545		199.3		1				140					
				Bridge No. A3603 (Site No. 1)	1																								
				Totals for Bridge No. A6877	1			135	171.00	307.00	27.5	21760	85745	410		40100		200.6	12920.0	1		81		140					
B6877	X271	State Highway 22		End Bents No. 1 AND 3					69.20		0.5	7,309		273		2,095		1.0	5,120.0			74							
				Bent No. 2				135	80.30			10,621							4,928.0										
				1 - 188'-0" Cont. W-Beam Unit						269.00	23.5		56,232			385,055		192.5		1				114					
				Bridge No. B3603 (Site No. 2)	1																								
				Totals for Bridge No. B6877	1			135	149.50	269.00	24.0	17930	56232	273		387150		193.5	10048.0	1		74		114					
A6878	X271	Grand Avenue		End Bents No. 1 AND 5					54.30		0.5	5,558		306		1,555		0.8	4,382.0			91							
				Bents No. 2 , 3, and 4				479	143.20			16,132							6,254.0										
				1 - 172'-0" Cont. W-Beam Unit						208.00	18.0		43,710			106,855		53.4		1				88					
				Bridge No. A3606 (Site No. 3)	1																								
				Totals for Bridge No. A6878	1			479	197.50	208.00	18.5	21,690	43,710	306		108,410		54.2	10,636.0	1		91		88					
B6878	X271	Grand Avenue		End Bents No. 1 AND 5					53.50		0.5	5,558		306		1,555		0.8	4,382.0			91							
				Bents No. 2 , 3, and 4				404	141.40			15,912							6,254.0										
				1 - 172'-0" Cont. W-Beam Unit						208.00	18.0		43,750			106,935		53.5		1				88					
				Bridge No. B3606 (Site No. 4)	1																								
				Totals for Bridge No. B6878	1			404	194.90	208.00	18.5	21,470	43,750	306		108,490		54.3	10,636.0	1		91		88					
A6879	X071	Clayton Branch		End Bents No. 1 AND 4					61.70		0.5	7,250		616			2,195		3,994.0		1,896		1,016					
				Bents No. 2 , and 3				221	107.60			11,810		384					4,390.0										
				1 - 159'-0" Cont. W-Beam Unit						193.00	17.0		44,290				160,445			1				120					
				Bridge No. A3798 (Site No. 5)	1																								
				Totals for Bridge No. A6879	1			221	169.30	193.00	17.5	19,060	44,290	1,000			162,640		8,384.0	1	1,896		1,016	120					
B6879	X071	Clayton Branch		End Bents No. 1 AND 4					61.50		0.5	7,170		616			2,195		3,994.0		985		538					
				Bents No. 2 , and 3				252	109.70			11,830		384					4,390.0										
				1 - 159'-0" Cont. W-Beam Unit						193.00	17.0		44,290				160,325			1				120					
				Bridge No. B3798 (Site No. 6)	1																								
				Totals for Bridge No. B6879	1			252	171.20	193.00	17.5	19,000	44,290	1,000			162,520		8,384.0	1	985		538	120					
O6880	X071			End Bents No. 1 AND 7					102.10		1.0	9,430		1,024			2,880		11,160.0		196		220					
				① Bents No. 2 , 3, 4, 5 & 6				916	517.90			81,440		3,360					48,985.0										
				1 - 571'-8" Cont. W-Beam Unit						1284.00	113.5		332,960				1,560,460			1				158					
				Bridge No. 3608 (Site No. 7)	1																								
				Totals for Bridge No. O6880	1			916	620.00	1284.00	114.5	90,870	332,960	4,384			1,563,340		60,145.0	1	196		220	158					
A688I	X371	Union Pacific Railroad		End Bents No. 1 AND 6				1,750	79.90		0.5	9,870		336			1,765		5,963.0			164							
				Bents No. 2 , 3, 4, and 5				636	691.50			75,260		720					19,403.0										
				1 - 485'-0" Cont. W-Beam Unit		231				588.70	51.0		127,690				657,735			1				100					
				Bridge No. A3958 (Site No. 8)	1																								
				Totals for Bridge No. A688I	1	231	2,386	771.40	588.70	51.5	85,130	127,690	1,056			659,500			25,366.0	1		164		100					
B688I	X371	Union Pacific Railroad		End Bents No. 1 AND 6				1,750	65.20		0.5	6,410		408	90		1,765		5,963.0			154							
				Bents No. 2 , 3, 4, and 5				838	713.20			77,830		672					19,403.0										
				1 - 485'-0" Cont. W-Beam Unit		231				588.70	51.0		127,690				657,735			1				100					
				Bridge No. B3958 (Site No. 9)	1																								
				Totals for Bridge No. B688I	1	231	2,588	778.40	588.70	51.5	84,240	127,690	1,080	90		659,500			25,366.0	1		154		100					
				TOTALS FOR JOB NO. BB0407	9	462	7,516	3313.00	4235.40	359.2	392,950	995,897	9,815	90	1,040,670	3,207,500	632.6	171,885.0	11	3,077	655	1,774	1,028	21542	584	2	2	2

① Arkansas River Relief

② The color of paint shall conform to Fed. Std. 595B. Color Chip No. 26176, Gray.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER

8-11-12

BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
HWY. 22 - I-40 (F)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1 & 2

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: May 02 FILENAME: bBB0407_q1
CHECKED BY: LWM DATE: NOV 08 SCALE: NONE
DESIGNED BY: EMB DATE: May 02
BRIDGE NO. A3957, B3957, A3959, B3959, A6877, B6877, A6878, B6878, A6879, B6879, O6880, A688I, B688I DRAWING NO. 48427

$$$$$dgnspec$$$$$ $$$$$dots$$$$

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11/19/2012 8:50:01 AM

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	F.A.P. HSIP-540-1(82)0 QUANTITY	F.A.P. BIM-B540(230) QUANTITY	PROJECT TOTAL QUANTITY	UNIT
202	REMOVAL AND DISPOSAL OF APPROACH GUTTERS		9	9	EACH
202	REMOVAL AND DISPOSAL OF APPROACH SLAB AND GUTTERS		44	44	EACH
202	REMOVAL AND DISPOSAL OF ASPHALT ISLANDS		1201	1201	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT		31590	31590	SQ. YD.
SP & 202	REMOVAL AND DISPOSAL OF FENCE		2250	2250	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE MEDIAN BARRIER		5727	5727	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE PIER PROTECTION		575	575	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE PARAPET WALL		28	28	EACH
202	REMOVAL AND DISPOSAL OF CURB AND GUTTER		5580	5580	LIN. FT.
SP	REMOVAL AND DISPOSAL OF GUARDRAIL		24713	24713	LIN. FT.
202	REMOVAL AND DISPOSAL OF GUARD CABLE		250	250	LIN. FT.
202	REMOVAL AND DISPOSAL OF HEADWALLS		16	16	EACH
202	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIER		5	5	EACH
202	REMOVAL AND DISPOSAL OF UNDERDRAIN OUTLET PROTECTORS		301	301	EACH
202	REMOVAL AND DISPOSAL OF DITCH PAVING		300	300	SQ. YD.
202	REMOVAL AND DISPOSAL OF PRECAST CONCRETE BARRIER		270	270	LIN. FT.
206	FLOWABLE SELECT MATERIAL		500	500	CU. YD.
SP & 210	SOIL STABILIZATION		1000	1000	TON
210	COMPACTED EMBANKMENT		82764	82764	CU. YD.
210	UNCLASSIFIED EXCAVATION		107558	107558	CU. YD.
215	TRENCHING AND SHOULDER PREPARATION		193	193	STATION
216	SCARIFYING AND RECOMPACTING SHOULDERS		50772	50772	SQ. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 1)		120468	120468	TON
SS & 303	AGGREGATE BASE COURSE (CLASS 7)		61302	61302	TON
309	PORTLAND CEMENT CONCRETE BASE (12" UNIFORM THICKNESS)		825	825	SQ. YD.
401	TACK COAT		66427	66427	GAL.
SP, SS & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")		164868	164868	TON
SP, SS & 405	ASPHALT BINDER (PG-76-22) IN ACHM BASE COURSE (1 1/2")		9595	9595	TON
SP, SS & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")		96653	96653	TON
SP, SS & 406	ASPHALT BINDER (PG-76-22) IN ACHM BINDER COURSE (1")		5625	5625	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		123658	123658	TON
SP, SS & 407	ASPHALT BINDER (PG-64-22) IN ACHM SURFACE COURSE (1/2")		20	20	TON
SP, SS & 407	ASPHALT BINDER (PG-76-22) IN ACHM SURFACE COURSE (1/2")		7400	7400	TON
412	COLD MILLING ASPHALT PAVEMENT		7981	7981	SQ. YD.
SP, SS & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC		200	200	TON
SP & 504	APPROACH GUTTERS		1387.27	1387.27	CU. YD.
SP & 504	APPROACH SLABS		2230.24	2230.24	CU. YD.
SP, SS & 507	PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (9" UNIFORM THICKNESS)		1500	1500	SQ. YD.
507	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT FOR PATCHING		1500	1500	SQ. YD.
509	JOINT REHABILITATION (TYPE A)		4920	4920	LIN. FT.
509	JOINT REHABILITATION (TYPE B)		9930	9930	LIN. FT.
509	JOINT REHABILITATION (TYPE D)		1000	1000	LIN. FT.
512	CLEANING AND FILLING JOINTS IN EXISTING CONCRETE PAVEMENT (TYPE 7)		28590	28590	LIN. FT.
513	REMOVAL OF EXISTING ASPHALT OVERLAY		3160	3160	SQ. YD.
513	RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT		189024	189024	SQ. YD.
SP & 601	MOBILIZATION		1.00	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE		1	1	EACH
SP & 603	TRAFFIC CONTROL SUPERVISOR		1.00	1.00	LUMP SUM
603	15" TEMPORARY CULVERT		890	890	LIN. FT.
603	18" TEMPORARY CULVERT		3690	3690	LIN. FT.
603	24" TEMPORARY CULVERT		1320	1320	LIN. FT.
603	30" TEMPORARY CULVERT		50	50	LIN. FT.
SP, SS & 603	MAINTENANCE OF TRAFFIC		1.00	1.00	LUMP SUM
SP, SS & 604	ADVANCE WARNING ARROW PANEL		1880	1880	DAY
SP, SS & 604	PORTABLE CHANGEABLE MESSAGE SIGN		960	960	WEEK
SS & 604	BARRICADES		648	648	LIN. FT.
SS & 604	CONSTRUCTION PAVEMENT MARKINGS		697973	697973	LIN. FT.
SS & 604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		42784	42784	LIN. FT.
SS & 604	RELOCATING PRECAST CONCRETE BARRIER		47026	47026	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		36566	36566	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		29300	29300	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS		80583	80583	LIN. FT.
SS & 604	TRAFFIC DRUMS		3099	3099	EACH
SS & 604	SIGNS		9331	9331	SQ. FT.
SS & 604	VERTICAL PANELS		245	245	EACH
SP & 605	CONCRETE DITCH PAVING (TYPE B)	7244	920	8164	SQ. YD.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		8	8	LIN. FT.
606	12" ZINC COATED (GALVANIZED) CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)		1280	1280	LIN. FT.
606	SELECTED PIPE BEDDING		50	50	CU. YD.
609	DROP INLETS (TYPE M0)		1	1	EACH
609	DROP INLETS (TYPE N1)		13	13	EACH
609	DROP INLETS (TYPE N2)		2	2	EACH
609	DROP INLETS (TYPE N3)		7	7	EACH
610	DROP INLETS ADJUSTED TO GRADE		10	10	EACH
611	4" PIPE UNDERDRAINS		94641	94641	LIN. FT.
611	UNDERDRAIN VIDEO INSPECTION		94641	94641	LIN. FT.
611	UNDERDRAIN OUTLET PROTECTORS		345	345	EACH
614	CONCRETE SPILLWAY (TYPE A)		22	22	EACH
SS & 617	GUARDRAIL (TYPE A)		2831	2831	LIN. FT.
SS & 617	GUARDRAIL (TYPE B)		850	850	LIN. FT.
SS & 617	TERMINAL ANCHOR POSTS (TYPE 1)		39	39	EACH
SS & 617	GUARDRAIL TERMINAL (TYPE 2)		80	80	EACH
SS & 617	THRIE BEAM GUARDRAIL TERMINAL		75	75	EACH
SP & 619	WIRE FENCE (TYPE A)		2250	2250	LIN. FT.
* 619	16' STEEL GATES - ALTERNATE NO. 1		7	7	EACH
* 619	16' ALUMINUM GATES - ALTERNATE NO. 2		7	7	EACH
619	7' STEEL CHAIN LINK FENCE		462	462	LIN. FT.
620	LIME		165	165	TON
620	MULCH COVER		95.34	95.34	ACRE
620	SEEDING		82.27	82.27	ACRE
SS & 620	WATER		8757.1	8757.1	M. GAL.
621	ROCK DITCH CHECKS		42	42	CU. YD.
621	DROP INLET SILT FENCE		1445	1445	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL		100	100	CU. YD.
621	SILT FENCE		35327	35327	LIN. FT.
621	SAND BAG DITCH CHECKS		1826	1826	BAG
621	TEMPORARY SEEDING		13.07	13.07	ACRE
SP	WATTLE (20")		500	500	LIN. FT.
623	SECOND SEEDING APPLICATION		82.27	82.27	ACRE
624	SOLID SODDING	7241	613	7854	SQ. YD.
631	CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)		1953	1953	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE A)		426	426	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL)		5290	5290	LIN. FT.

**

* DENOTES ALTERNATE BID ITEMS.

SUMMARY OF QUANTITIES (1 OF 2)

DATE REVISED	DATE PLANS FILED	DATE REVISED	DATE PLANS FILED	FED.ROAD DIST.NO.
11/19/12				6

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
ARK.	BB0407	107	464

(2) SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES - CONTINUED

	ITEM NUMBER	ITEM	F.A.P. HSIP-540-1(82)0 QUANTITY	F.A.P. BIM-B540(230) QUANTITY	PROJECT TOTAL QUANTITY	UNIT
	632	CONCRETE ISLAND		376	376	SQ. YD.
	634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1'6")		1226	1226	LIN. FT.
	SP & 635	ROADWAY CONSTRUCTION CONTROL		1.00	1.00	LUMP SUM
	640	MODIFYING DROP INLETS		6	6	EACH
	642	RUMBLE STRIPS IN ASPHALT SHOULDERS		145904	145904	LIN. FT.
*	SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4") - ALTERNATE NO. 1		115910	115910	LIN. FT.
**	SP	HIGH PERFORMANCE MARKING TAPE WHITE (4") - ALTERNATE NO. 2		115910	115910	LIN. FT.
***	SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4") - ALTERNATE NO. 1		94106	94106	LIN. FT.
****	SP	HIGH PERFORMANCE MARKING TAPE YELLOW (4") - ALTERNATE NO. 2		94106	94106	LIN. FT.
*****	SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4") - ALTERNATE NO. 1		17099	17099	LIN. FT.
******	SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4") - ALTERNATE NO. 2		17099	17099	LIN. FT.
*******	SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING YELLOW (4") - ALTERNATE NO. 1		14210	14210	LIN. FT.
********	SP	HIGH PERFORMANCE CONTRAST MARKING TAPE YELLOW (4") - ALTERNATE NO. 2		14210	14210	LIN. FT.
	SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")		7130	7130	LIN. FT.
	SS & 719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")		4930	4930	LIN. FT.
	SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")		13795	13795	LIN. FT.
	721	RAISED PAVEMENT MARKERS (TYPE II)		3735	3735	EACH
	SP	STEEL OVERHEAD SIGN STRUCTURE (OH540-65-01)		1	1	EACH
	SP	STEEL OVERHEAD SIGN STRUCTURE (OH540-17-06)		1	1	EACH
	SP	STEEL OVERHEAD SIGN STRUCTURE (OH540-17-11)		1	1	EACH
	SP	STEEL OVERHEAD SIGN STRUCTURE (OH540-17-05)		1	1	EACH
	SP	STEEL OVERHEAD SIGN STRUCTURE (OH540-17-04)		1	1	EACH
	SP	STEEL OVERHEAD SIGN STRUCTURE (OH540-17-02)		1	1	EACH
	SP	STEEL OVERHEAD SIGN STRUCTURE (OH540-17-10)		1	1	EACH
	SP	STEEL OVERHEAD SIGN STRUCTURE (OH540-17-12)		1	1	EACH
	SP	STEEL OVERHEAD SIGN STRUCTURE (OH064-17-01)		1	1	EACH
	SP	STEEL OVERHEAD SIGN STRUCTURE (OH064-17-02)		1	1	EACH
	SP	STEEL CANTILEVER SIGN STRUCTURE (OC540-65-02)		1	1	EACH
	SP	STEEL CANTILEVER SIGN STRUCTURE (OC540-65-03)		1	1	EACH
	SP	STEEL CANTILEVER SIGN STRUCTURE (OC540-65-04)		1	1	EACH
	SP	STEEL BRIDGE MOUNTED SIGN STRUCTURE (BM540-17-03)		1	1	EACH
	SP	STEEL BRIDGE MOUNTED SIGN STRUCTURE (BM022-65-01)		1	1	EACH
	SS & 725	GUIDE SIGN - ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)		6995	6995	SQ. FT.
	SS & 725	GUIDE SIGN - OVERHEAD MOUNTED (DEMOUNTABLE LEGEND)		3034	3034	SQ. FT.
	SS & 726	STANDARD SIGN		1253	1253	SQ. FT.
	SS & 727	EXIT NUMBER PANEL (TYPE A)		265	265	SQ. FT.
	SS & 727	EXIT NUMBER PANEL (TYPE B)		436	436	SQ. FT.
	SS & 727	EXIT NUMBER PANEL (TYPE C)		121	121	SQ. FT.
	730	BREAKAWAY SIGN SUPPORT (TYPE G-1)		51156	51156	POUND
	SS & 731	IMPACT ATTENUATION BARRIER (TYPE A)		5	5	EACH
	SS & 732	CRASH CUSHION		4	4	EACH
	SP & 802	CLASS S CONCRETE - ROADWAY		235.70	235.70	CU. YD.
	SS & 804	REINFORCING STEEL - ROADWAY (GRADE 60)		376651	376651	LB.
	816	DUMPED RIPRAP		100	100	CU. YD.
	816	FILTER BLANKET		200	200	SQ. YD.
	SP	ACHM PATCHING OF EXISTING SHOULDERS		200	200	TON
	SP	LUMINAIRE POLE RELOCATION		240	240	EACH
	SP	MOBILE SPEED NOTIFICATION SYSTEM		10	10	EACH
	SP	MODULAR GLARE SHIELD		1800	1800	LIN. FT.
	SP	MOTORIST ASSISTANCE PATROL		1.00	1.00	LUMP SUM
	SP	PORTABLE CAMERA ASSEMBLY		8	8	EACH
	SP	SCARIFYING CONCRETE PAVEMENT		3847	3847	SQ. YD.
	SP	SHAPING DITCH		20	20	STATION
	SP	STEEL GRATE ASSEMBLIES ADJUSTED TO GRADE		4	4	EACH
	SP	TEMPORARY IMPACT ATTENUATION BARRIER		21	21	EACH
	SP	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		21	21	EACH
	SP	TEMPORARY RELOCATION OF EXISTING SIGNS		22	22	EACH
	SP	WIRE ROPE SAFETY FENCE	17250	0	17250	LIN. FT.
	SP	WIRE ROPE SAFETY FENCE MAINTENANCE MATERIALS	1.00	0	1.00	LUMP SUM

* DENOTES ALTERNATE BID ITEMS

SUMMARY OF QUANTITIES - STRUCTURES OVER 20' SPAN

ITEM NUMBER	ITEM	F.A.P. HSIP-540-1(82)0 QUANTITY	F.A.P. BIM-B540(230) QUANTITY	PROJECT TOTAL QUANTITY	UNIT
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)		1.00	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 2)		1.00	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 3)		1.00	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 4)		1.00	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 5)		1.00	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 6)		1.00	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 7)		1.00	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 8)		1.00	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 9)		1.00	1.00	LUMP SUM
636	BRIDGE CONSTRUCTION CONTROL		1.00	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES - BRIDGE		7516	7516	CU. YD.
802	CLASS S CONCRETE - BRIDGE		3313.00	3313.00	CU. YD.
802	CLASS S (AE) CONCRETE - BRIDGE		4235.40	4235.40	CU. YD.
803	CLASS I PROTECTIVE SURFACE TREATMENT		359.2	359.2	GAL.
SS & 804	REINFORCING STEEL - BRIDGE (GRADE 60)		392950	392950	LB.
SS & 804	EPOXY COATED REINFORCING STEEL - BRIDGE (GRADE 60)		995897	995897	LB.
805	PREBORING		90	90	LIN. FT.
805	STEEL PILING (HP 12X53)		9815	9815	LIN. FT.
807	STRUCTURAL STEEL IN BEAM SPANS (M270-GR50)		1040670	1040670	LB.
807	STRUCTURAL STEEL IN BEAM SPANS (M270-GR50W)		3207500	3207500	LB.
807	PAINTING STRUCTURAL STEEL		632.6	632.6	TON
SP & 807	STRUCTURAL STEEL FOR MODIFICATION OF RAISED BRIDGE STRUCTURE (M270-GR50W)		21542	21542	LB.
SP & 808	ELASTOMERIC BEARINGS		171885	171885	CU. IN.
809	PREFORMED JOINT SEAL		584	584	LIN. FT.
812	BRIDGE NAME PLATE (TYPE D)		1	1	EACH
816	FILTER BLANKET		3077	3077	SQ. YD.
816	CONCRETE RIPRAP		655	655	CU. YD.
816	DUMPED RIPRAP		1774	1774	CU. YD.
SP & 821	MODIFICATION OF RAISED BRIDGE STRUCTURE (BR. NO. A3959)		1.00	1.00	LUMP SUM
SP & 821	MODIFICATION OF RAISED BRIDGE STRUCTURE (BR. NO. B3959)		1.00	1.00	LUMP SUM
SS & 821	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BR. NO. A3957)		1.00	1.00	LUMP SUM
SS & 821	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BR. NO. B3957)		1.00	1.00	LUMP SUM
SP	ARMORED JOINT WITH NEOPRENE STRIP SEAL		1028	1028	LIN. FT.
SP	RAISING EXISTING STRUCTURE (BR. NO. A3959)		1.00	1.00	LUMP SUM
SP	RAISING EXISTING STRUCTURE (BR. NO. B3959)		1.00	1.00	LUMP SUM

REVISIONS

DATE		SHEET NO.
11/1/12	SP - PORTABLE CAMERA ASSEMBLY & REVISED QUANTITIES	3, 105, 108
11/16/12	REVISED QUANTITIES FOR SOIL STABILIZATION, TRENCHING AND SHOULDER PREPARATION, ADVANCE WARNING ARROW PANEL, AND PORTABLE CHANGEABLE MESSAGE SIGN	75, 95, 96, 105, 107, 108
11-21-12	REVISED PILING NOTE	108, 257

ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9808 JAMES L. BARR 11/9/12

SUMMARY OF QUANTITIES (2 OF 2) & REVISIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
11/1/12			
11/16/12			
11-21-12			

(2) SUMMARY OF QUANTITIES & REVISIONS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.	BB0407	108	464
JOB NO.				

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	109	464

(2) SUPERELEVATION RATES AND TRANSITION LIMITS

SUPERELEVATION RATES AND TRANSITION LIMITS

STATION	STATION	LOCATION	PAVEMENT TRANSITION SLOPE (FT. PER FT.)		
			FROM	MAX.	TO
286 + 91.50	335 + 26.39	I - 540 N.B. LANES		-0.02	
335 + 26.39	338 + 76.39	I - 540 N.B. LANES	-0.02		+0.041
338 + 76.39	346 + 64.06	I - 540 N.B. LANES		+0.041	
346 + 64.06	350 + 14.06	I - 540 N.B. LANES	+0.041		-0.02
350 + 14.06	356 + 46.67	I - 540 N.B. LANES		-0.02	
356 + 46.67	359 + 96.67	I - 540 N.B. LANES	-0.02		-0.066
359 + 96.67	368 + 78.77	I - 540 N.B. LANES		-0.066	
368 + 78.77	372 + 28.77	I - 540 N.B. LANES	-0.066		-0.02
372 + 28.77	389 + 66.75	I - 540 N.B. LANES		-0.02	
389 + 66.75	393 + 16.75	I - 540 N.B. LANES	-0.02		+0.066
393 + 16.75	405 + 76.13	I - 540 N.B. LANES		+0.066	
405 + 76.13	409 + 26.13	I - 540 N.B. LANES	+0.066		-0.02
409 + 26.13	415 + 73.32	I - 540 N.B. LANES		-0.02	
415 + 73.33	419 + 23.32	I - 540 N.B. LANES	-0.02		-0.048
419 + 23.32	429 + 38.32	I - 540 N.B. LANES		-0.048	
429 + 38.32	432 + 88.32	I - 540 N.B. LANES	-0.048		-0.02
432 + 88.32	465 + 13.72	I - 540 N.B. LANES		-0.02	
465 + 13.72	468 + 97.05	I - 540 N.B. LANES	-0.02		-0.079
468 + 97.05	485 + 57.89	I - 540 N.B. LANES		-0.079	
485 + 57.89	489 + 41.22	I - 540 N.B. LANES	-0.079		-0.02
489 + 41.22	570 + 56.83	I - 540 N.B. LANES		-0.02	
570 + 56.83	574 + 06.83	I - 540 N.B. LANES	-0.02		-0.033
574 + 06.83	590 + 38.50	I - 540 N.B. LANES		-0.033	
590 + 38.50	593 + 88.50	I - 540 N.B. LANES	-0.033		-0.02
593 + 88.50	633 + 16.86	I - 540 N.B. LANES		-0.02	
633 + 16.86	637 + 16.86	I - 540 N.B. LANES	-0.02		+0.087
637 + 16.86	658 + 75.75	I - 540 N.B. LANES		+0.087	
658 + 75.75	664 + 42.40	I - 540 N.B. LANES	+0.087		-0.02
664 + 42.40	715 + 00.00	I - 540 N.B. LANES		-0.02	
706 + 55.89	710 + 55.89	I-540 SOUTH/RAMP 4	-0.02		-0.087
710 + 55.89	712 + 55.88	RAMP 4		-0.087	
712 + 55.88	716 + 30.88	RAMP 4	-0.087		-0.10
716 + 30.88	719 + 00.00	RAMP 4		-0.10	
715 + 00.00	715 + 54.93	I-540 SOUTH/RAMP 2		-0.02	
715 + 54.93	719 + 54.93	RAMP 2	-0.02		-0.10
719 + 54.93	735 + 30.00	RAMP 2		-0.10	

SUPERELEVATION RATES AND TRANSITION LIMITS

STATION	STATION	LOCATION	PAVEMENT TRANSITION SLOPE (FT. PER FT.)		
			FROM	MAX.	TO
286 + 91.50	335 + 26.39	I - 540 S.B. LANES		-0.02	
335 + 26.39	338 + 76.39	I - 540 S.B. LANES	-0.02		-0.041
338 + 76.39	346 + 64.06	I - 540 S.B. LANES		-0.041	
346 + 64.06	350 + 14.06	I - 540 S.B. LANES	-0.041		-0.02
350 + 14.06	356 + 46.67	I - 540 S.B. LANES		-0.02	
356 + 46.67	359 + 96.67	I - 540 S.B. LANES	-0.02		+0.066
359 + 96.67	368 + 78.77	I - 540 S.B. LANES		+0.066	
368 + 78.77	372 + 28.77	I - 540 S.B. LANES	+0.066		-0.02
372 + 28.77	389 + 66.75	I - 540 S.B. LANES		-0.02	
389 + 66.75	393 + 16.75	I - 540 S.B. LANES	-0.02		-0.066
393 + 16.75	405 + 76.13	I - 540 S.B. LANES		-0.066	
405 + 76.13	409 + 26.13	I - 540 S.B. LANES	-0.066		-0.02
409 + 26.13	415 + 73.32	I - 540 S.B. LANES		-0.02	
415 + 73.33	419 + 23.32	I - 540 S.B. LANES	-0.02		+0.048
419 + 23.32	429 + 38.32	I - 540 S.B. LANES		+0.048	
429 + 38.32	432 + 88.32	I - 540 S.B. LANES	+0.048		-0.02
432 + 88.32	465 + 13.72	I - 540 S.B. LANES		-0.02	
465 + 13.72	468 + 97.05	I - 540 S.B. LANES	-0.02		+0.079
468 + 97.05	485 + 57.89	I - 540 S.B. LANES		+0.079	
485 + 57.89	489 + 41.22	I - 540 S.B. LANES	+0.079		-0.02
489 + 41.22	570 + 56.83	I - 540 S.B. LANES		-0.02	
570 + 56.83	574 + 06.83	I - 540 S.B. LANES	-0.02		+0.033
574 + 06.83	590 + 38.50	I - 540 S.B. LANES		+0.033	
590 + 38.50	593 + 88.50	I - 540 S.B. LANES	+0.033		-0.02
593 + 88.50	633 + 16.86	I - 540 S.B. LANES		-0.02	
633 + 16.86	637 + 16.86	I - 540 S.B. LANES	-0.02		-0.087
637 + 16.86	658 + 75.75	I - 540 S.B. LANES		-0.087	
658 + 75.75	664 + 42.40	I - 540 S.B. LANES	-0.087		-0.02
664 + 42.40	710 + 48.67	I - 540 S.B. LANES		-0.02	
709 + 37.38	393 + 60.75	I-540 SOUTH/RAMP 3	-0.02		-0.10
393 + 60.75	387 + 00.00	RAMP 3		-0.10	
710 + 48.67	714 + 31.94	I-540 SOUTH/RAMP 1		-0.02	
714 + 31.94	718 + 31.94	RAMP 1	-0.02		+0.087
718 + 31.94	721 + 31.93	RAMP 1		+0.087	
721 + 31.93	725 + 06.93	RAMP 1	+0.087		+0.10
725 + 06.93	735 + 94.43	RAMP 1		+0.10	
735 + 94.43	737 + 50.32	RAMP 1	+0.10		-0.02
737 + 50.32	740 + 18.72	RAMP 1	-0.02		-0.087
740 + 18.72	741 + 00.00	RAMP 1		-0.087	

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

SUPERELEVATION RATES & TRANSITION LIMITS

8/27/2012 9:36:07 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.		B80407	110	464

(2) PLAN STA. B.O.P. - 310+00

TEMPORARY RAMP CURVE DATA

	CRV 1A-1	CRV 1A-2	CRV 1B-1	CRV 1B-2	CRV 2A-1	CRV 2A-2	CRV 6A-1
PI	4+33.21	6+54.67	4+64.54	6+86.43	296+38.79	299+20.02	291+42.65
Δ	61°02'14"	80°49'41"	69°53'51"	71°58'04"	43°15'43"	66°14'22"	68°14'22"
D	20°00'00"	57°17'45"	20°00'00"	57°17'45"	16°22'13"	24°00'00"	27°36'45"
R	286.48'	100'	286.48'	100'	350'	238.73'	207.50'
T	168.88'	85.15'	200.21'	72.61'	138.79'	155.74'	140.59'

NOTE: EXISTING VERTICAL CLEARANCE UNDER BRIDGE NO. 5095 IS 19'-9" S.B. AND 19'-7" N.B. MINIMUM 16'-0" VERTICAL CLEARANCE IS REQUIRED FOR FINISHED ROADWAY.

EXISTING PAVM'T TRANS.

REMOVAL & DISPOSAL OF IMPACT ATTENUATION BARRIER
STA. 287+53.3 (RT. OF N.B. LANES) = 1 EACH
STA. 288+76.6 (MEDIAN) = 1 EACH

IMPACT ATTEN. BARRIERS (TYPE A)
STA. 287+53.3 (RT. OF N.B. LANES) = 1 EACH
STA. 288+76.6 (MEDIAN) = 1 EACH
STA. 307+21.8 (RT. OF S.B. LANES) = 1 EACH

STA. 287+56 IN PLACE
24"x102' R.C. PIPE CULV'T
LT. SIDE DRAIN
RETAIN

STA. 289+00 IN PLACE
TYPE "M" DROP INLET
4'x4'x H=3'-6"
24"x73' R.C. PIPE OUTLET
RETAIN

STA. 293+00 IN PLACE
TYPE "H" DROP INLET
24"x98' R.C. PIPE OUTLET
RETAIN & CONSTRUCT
24"x50' TEMP. CULV'T
STAGE IIIA REMOVE
STAGE VB
SEE NOTE (3)

RAMP 6
STA. 293+00 IN PLACE
18"x51' R.C. PIPE CULV'T
RETAIN & CONSTRUCT
18"x65' TEMP. CULV'T
STAGE IIIA REMOVE
STAGE VB
SEE NOTE (3)

RAMP 6
STA. 296+00 IN PLACE
TYPE "N" DROP INLET
4'x3'x H=4'-3"
18"x36' R.C. PIPE OUTLET
RETAIN

RAMP 6
STA. 299+00 IN PLACE
TYPE "N" DROP INLET
4'x3'x H=4'-6"
18"x36" R.C. PIPE OUTLET
RETAIN

RAMP 6
STA. 302+14 IN PLACE
TYPE "E" DROP INLET
5'x4'x H=3'-3"
24"x124' R.C. PIPE CULV'T
RETAIN

STA. 302+00 IN PLACE
36"x14' STACK PIPE INLET
24"x172' R.C. PIPE OUTLET
RETAIN

STA. 304+00 IN PLACE
TYPE "H" DROP INLET
6'x6'x H=4'-0" 2-OPENINGS
24"x90' R.C. PIPE OUTLET
RETAIN

REMOVAL & DISPOSAL OF ASPHALT ISLAND
STA. 10+70 TO STA. 17+85 (S.H. 22 RAISED MEDIAN) = 825 S.Y.

REMOVAL & DISPOSAL OF APPROACH SLAB & GUTTERS
STA. 295+43.9 TO STA. 295+48.9 (N.B. LANES) = 1 EACH
STA. 295+57.0 TO STA. 295+92.0 (S.B. LANES) = 1 EACH
STA. 297+27.3 TO STA. 297+62.3 (N.B. LANES) = 1 EACH
STA. 297+70.5 TO STA. 298+05.5 (S.B. LANES) = 1 EACH

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 287+77.0	TO	STA. 289+77.0 (LT. OF S.B. LANES)	= 200 L.F.
STA. 7+28.6	TO	STA. 295+10.7 (RT. OF N.B. & RAMP 1)	= 150 L.F.
STA. 293+32.3	TO	STA. 295+32.3 (LT. OF N.B. LANES)	= 200 L.F.
STA. 297+87.1	TO	STA. 299+87.1 (RT. OF S.B. LANES)	= 200 L.F.
STA. 298+09.7	TO	STA. 301+09.7 (LT. OF S.B. LANES)	= 300 L.F.
STA. 297+14.2	TO	STA. 301+14.2 (RT. OF N.B. LANES)	= 400 L.F.
STA. 306+75.0	TO	STA. 309+25.0 (RT. OF S.B. LANES)	= 250 L.F.
STA. 306+75.0	TO	STA. 309+25.0 (LT. OF S.B. LANES)	= 250 L.F.

REMOVAL & DISPOSAL OF CONCRETE PARAPET WALL
STA. 295+09.0 TO STA. 295+35.0 (RT. OF N.B. & RAMP 1) = 1 EACH
STA. 295+30.6 TO STA. 295+56.6 (LT. OF N.B. LANES) = 1 EACH
STA. 297+62.8 TO STA. 297+88.8 (RT. OF S.B. LANES) = 1 EACH
STA. 297+85.4 TO STA. 298+11.4 (LT. OF S.B. LANES) = 1 EACH

REMOVAL & DISPOSAL OF CONCRETE PIER PROTECTION
STA. 287+48.2 TO STA. 287+78.7 (LT. OF S.B. LANES) = 30.5 L.F.
STA. 287+71.5 TO STA. 287+97.5 (RT. OF N.B. LANES) = 26.0 L.F.
STA. 287+79.2 TO STA. 288+09.7 (RT. OF N.B. LANES & RAMP 5) = 30.5 L.F.

CRASH CUSHIONS
STA. 13+57 (℄ S.H. 22) = 1 EACH
STA. 16+13 (℄ S.H. 22) = 1 EACH

REVISIONS

"ADOPT A SPOT" VEGETATION PLANTED BY CITY OF FORT SMITH IN THIS QUADRANT. PROTECT & RETAIN

STA. 9+01.86 END RAMP 2 PAVM'T TRANS.

STA. 12+64.3 BEGIN PROP. CURB & GUTTER TIE TO EXIS.

STA. 9+94.41 END RAMP 3 PAVM'T TRANS.

STA. 9+26.78 END RAMP 4 PAVM'T TRANS.

STA. 2+11.72 END RAMP 1 PAVM'T TRANS.

STA. 18+00 END PROP. CURB & GUTTER TIE TO EXIS.

END WRSF STA. 295+50.00

BEGIN WRSF STA. 289+25.00

BEGIN WRSF STA. 297+67.00

TEMP. CULV'T SEE NOTE (3)

TEMP. RAMP 1A
STA. 6+10
15"x100' TEMP. CULV'T
CONST. STAGE I
REMOVE STAGE VB

RAMP 5
STA. 288+10 IN PLACE
24"x108' R.C. PIPE CULV'T
RT. SIDE DRAIN
RETAIN

STA. 289+00 IN PLACE
TYPE "N" DROP INLET
4'x4'x H=3'-6"
24"x58' R.C. PIPE OUTLET
RETAIN

RAMP 4
STA. 5+00 IN PLACE
24"x 58' R.C. PIPE CULV'T
RETAIN

STA. 305+25 IN PLACE
TYPE "H" DROP INLET
6'x6'x H=4'-0" 2-OPENINGS
24"x58' R.C. PIPE OUTLET
TYPE "R" DROP INLET
24"x 24' STUB INLET W/ JUNCTION BOX
RETAIN

STA. 307+00 IN PLACE
TYPE "H" DROP INLET
4'x4'x H=4'-0" 1-OPENING
24"x118' R.C. PIPE OUTLET
RETAIN

STA. 16+00 S.H. 22 RT.
IN PLACE TYPE "C" D.I.
MODIFY WITH 24"x8'
R.C. PIPE OUTLET TO JUNCTION
BOX (TY. ST)
CONST. TYPE "MO" D.I. (4' I.D., H=4')

EROSION CONTROL LEGEND

(E-3)	SAND BAG DITCH CHECK
(E-4)	SILT FENCE
(E-5)	DUMPED ROCK DITCH CHECK
(E)	DROP INLET SILT FENCE

REMOVAL & DISPOSAL OF CONCRETE MEDIAN BARRIER
STA. 293+22.0 TO STA. 295+70.0 (LT. OF RAMP 6) = 248 L.F.
STA. 2+12.0 TO STA. 3+90.0 (LT. OF RAMP 1) = 178 L.F.

CONCRETE BARRIER WALL (MEDIAN TYPE A)
STA. 2+12.0 TO STA. 3+90.0 (LT. OF RAMP 1) = 178 L.F.
STA. 293+22.0 TO STA. 295+70.0 (LT. OF RAMP 6) = 248 L.F.*
*INCLUDES TRANSITION AND TIE TO EXISTING MEDIAN BARRIER

LUMINAIRE POLE RELOCATION

STA. 287+00	TO	STA. 319+00 (LT. OF S.B. LANES)	= 13 EACH
STA. 287+00	TO	STA. 319+00 (RT. OF N.B. LANES)	= 13 EACH
STA. 2+58	TO	STA. 16+67 (RAMP 1 S.H. 22)	= 10 EACH
STA. 0+50	TO	STA. 7+81 (RAMP 2 S.H. 22)	= 5 EACH
STA. 0+85	TO	STA. 8+50 (RAMP 3 S.H. 22)	= 6 EACH
STA. 11+00	TO	STA. 16+00 (RAMP 4 S.H. 22)	= 4 EACH

CONCRETE COMBINATION CURB & GUTTER TYPE "A" (W=1' 6")
STA. 12+64.3 TO STA. 18+00 (RT. OF E.B. LANES S.H. 22) = 535.7 L.F.
NOTE: INCLUDES TYING TO EXISTING CURB & GUTTER

REMOVAL & DISPOSAL OF CURB & GUTTER
STA. 12+64.3 TO STA. 18+00 (RT. OF E.B. LANES S.H. 22) = 535.7 L.F.
STA. 10+70 TO STA. 17+85 (S.H. 22 RAISED MEDIAN) = 1430 L.F.

(1) STA. 295+42.86 - PROPOSED BR. END
BR. NO. B6877
190.44' TOTAL LENGTH
48' - 0" CLEAR ROADWAY
188.00' CONTINUOUS COMPOSITE W-BEAM
STA. 297+33.29 - PROPOSED BR. END
CONSTRUCT

(2) STA. 295+85.97 - PROPOSED BR. END
BR. NO. A6877
190.44' TOTAL LENGTH
48' - 0" CLEAR ROADWAY
188.00' CONTINUOUS COMPOSITE W-BEAM
STA. 297+76.41 - PROPOSED BR. END
CONSTRUCT

(3) INSTALLATION OF TEMPORARY PIPE CULVERTS SHALL INCLUDE ALL WORK NECESSARY TO ESTABLISH CONNECTION TO EXISTING PIPE CULVERTS WHERE REQUIRED. REMOVAL OF EXISTING END TREATMENT AND LENGTHS OF EXISTING PIPE OUTLETS MAY BE REQUIRED FOR CONNECTION OF TEMPORARY CULVERT AND/OR CONSTRUCTION OF TEMPORARY RAMP PAVEMENT. A MINIMUM OF 1' IS REQUIRED BETWEEN THE TOP OF AN EXISTING STRUCTURE AND THE BOTTOM OF THE PAVEMENT SECTION AS DETAILED IN THE PLANS. UPON REMOVAL OF TEMPORARY RAMP, ALL DRAINAGE STRUCTURES SHALL BE RECONSTRUCTED IN KIND AND SLOPES ARE TO BE REDRESSED, SEEDED, AND MULCHED. ALL COST FOR ESTABLISHING TEMPORARY DRAINAGE STRUCTURES AND RESTORING THE EXISTING DRAINAGE STRUCTURES TO PRECONSTRUCTION CONDITIONS WILL NOT BE PAID FOR DIRECTLY, BUT CONSIDERED SUBSIDIARY TO THE BID ITEM, "603 TEMPORARY CULVERT".

(4) RETAINING WALL STA. 13+95 TO STA. 16+45
40.42' RT. E.B. LANES S.H. 22. SEE BRIDGE PLANS.

STA. 295+48.88 - BR. END
178.46' COMPOSITE I-BEAM SPAN
BR. NO. 3603B
40' - 0" CLEAR ROADWAY
STA. 297+27.34 - BR. END
REMOVE AS EXISTING BRIDGE STRUCTURE = 1.00 LUMP SUM

STA. 295+92.00 - BR. END
178.46' COMPOSITE I-BEAM SPAN
BR. NO. 3603A
VARIABLE CLEAR ROADWAY
STA. 297+70.46 - BR. END
REMOVE AS EXISTING BRIDGE STRUCTURE = 1.00 LUMP SUM

CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)

STA. 287+48.2	TO	STA. 287+78.7 (LT. OF S.B. LANES)	= 30.5 L.F.
STA. 287+71.5	TO	STA. 287+97.5 (RT. OF N.B. LANES)	= 26.0 L.F.
STA. 287+79.2	TO	STA. 288+09.7 (RT. OF N.B. LANES & RAMP 5)	= 30.5 L.F.
*STA. 13+57.0	TO	STA. 16+13.0 (LT. OF E.B. S.H. 22)	= 256.0 L.F.
*STA. 13+57.0	TO	STA. 16+13.0 (RT. OF W.B. S.H. 22)	= 256.0 L.F.

*NOTE: INCLUDES 40' TRANSITION AT EACH END.

			GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL	TERMINAL ANCHOR POST (TYPE 1)
STA. 287+78.1	TO	STA. 290+46.9 (LT. OF S.B. LANES)	= 200 L.F.	1 EACH	1 EACH	-
STA. 6+26.5	TO	STA. 295+27.5 (RT. OF N.B. LANES & RAMP 1)	= 200 L.F.	1 EACH	1 EACH	-
STA. 292+33.3	TO	STA. 295+52.1 (LT. OF N.B. LANES)	= 250 L.F.	1 EACH	1 EACH	-
STA. 297+17.9	TO	STA. 301+36.7 (RT. OF N.B. LANES)	= 400 L.F.	-	1 EACH	1 EACH
STA. 297+67.1	TO	STA. 300+85.9 (RT. OF S.B. LANES)	= 250 L.F.	1 EACH	1 EACH	-
STA. 297+91.4	TO	STA. 301+60.2 (LT. OF S.B. LANES)	= 300 L.F.	1 EACH	1 EACH	-

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
6-12

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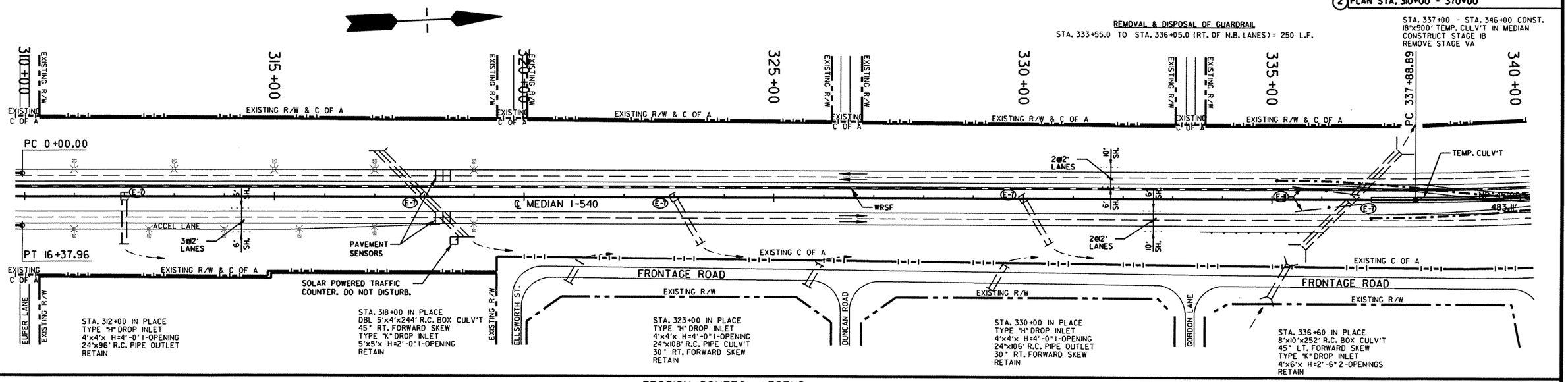
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	III	464

(2) PLAN STA. 310+00 - 370+00



EROSION CONTROL LEGEND

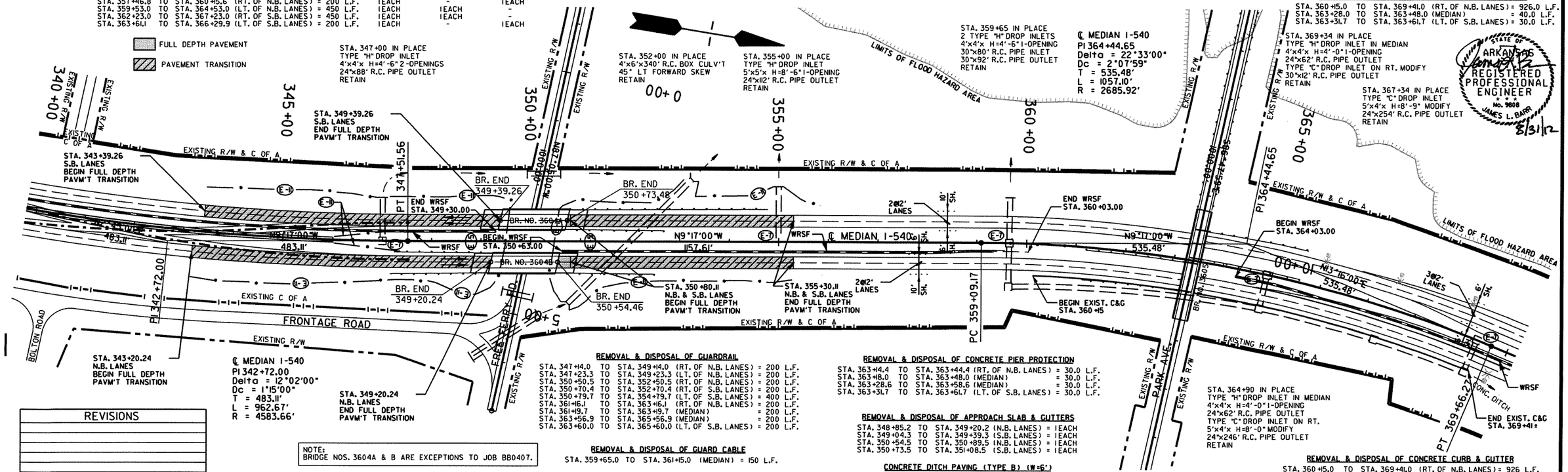
E-5	SAND BAG DITCH CHECK
E-6	SILT FENCE
E-8	DUMPED ROCK DITCH CHECK
E-9	DROP INLET SILT FENCE

NOTE: EXISTING VERTICAL CLEARANCE UNDER BRIDGE NO. 3605 IS 17'-6" S.B. MINIMUM 16'-0" VERTICAL CLEARANCE IS REQUIRED FOR FINISHED ROADWAY. ADJUST PAVING DEPTH ON SHOULDER AS NECESSARY TO OBTAIN MINIMUM VERTICAL CLEARANCE.

	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	TERMINAL ANCHOR POST (TYPE 1)	THRIE BEAM GUARDRAIL TERMINAL
STA. 333+55.0 TO STA. 336+05.0 (RT. OF N.B. LANES)	= 200 L.F.	1EACH	1EACH	-
STA. 346+48.3 TO STA. 349+17.1 (RT. OF N.B. LANES)	= 200 L.F.	1EACH	-	1EACH
STA. 346+04.6 TO STA. 349+23.4 (LT. OF N.B. LANES)	= 250 L.F.	1EACH	-	1EACH
STA. 350+51.3 TO STA. 352+70.1 (RT. OF N.B. LANES)	= 200 L.F.	-	1EACH	1EACH
STA. 350+70.3 TO STA. 353+89.1 (RT. OF S.B. LANES)	= 250 L.F.	1EACH	-	1EACH
STA. 350+76.6 TO STA. 355+45.4 (LT. OF S.B. LANES)	= 400 L.F.	1EACH	-	1EACH
STA. 357+46.8 TO STA. 360+15.6 (RT. OF N.B. LANES)	= 200 L.F.	1EACH	-	1EACH
STA. 359+53.0 TO STA. 364+53.0 (LT. OF S.B. LANES)	= 450 L.F.	1EACH	1EACH	-
STA. 362+23.0 TO STA. 367+23.0 (RT. OF S.B. LANES)	= 450 L.F.	1EACH	1EACH	-
STA. 363+61.1 TO STA. 366+29.9 (LT. OF S.B. LANES)	= 200 L.F.	1EACH	-	1EACH

FULL DEPTH PAVEMENT

PAVEMENT TRANSITION



REVISIONS

NOTE:
BRIDGE NOS. 3604A & B ARE EXCEPTIONS TO JOB BB0407.

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 347+14.0 TO STA. 349+14.0 (RT. OF N.B. LANES) = 200 L.F.
STA. 347+23.3 TO STA. 349+23.3 (LT. OF N.B. LANES) = 200 L.F.
STA. 350+50.5 TO STA. 352+60.5 (RT. OF N.B. LANES) = 200 L.F.
STA. 350+70.4 TO STA. 352+70.4 (RT. OF S.B. LANES) = 200 L.F.
STA. 350+79.7 TO STA. 354+79.7 (LT. OF S.B. LANES) = 400 L.F.
STA. 361+16.1 TO STA. 363+16.1 (RT. OF N.B. LANES) = 200 L.F.
STA. 361+19.7 TO STA. 363+19.7 (MEDIAN) = 200 L.F.
STA. 363+56.9 TO STA. 365+56.9 (MEDIAN) = 200 L.F.
STA. 363+60.0 TO STA. 365+60.0 (LT. OF S.B. LANES) = 200 L.F.

REMOVAL & DISPOSAL OF GUARD CABLE

STA. 359+65.0 TO STA. 361+15.0 (MEDIAN) = 150 L.F.

REMOVAL & DISPOSAL OF CONCRETE PIER PROTECTION

STA. 363+14.4 TO STA. 363+44.4 (RT. OF N.B. LANES) = 30.0 L.F.
STA. 363+18.0 TO STA. 363+48.0 (MEDIAN) = 30.0 L.F.
STA. 363+28.6 TO STA. 363+58.6 (MEDIAN) = 30.0 L.F.
STA. 363+31.7 TO STA. 363+61.7 (LT. OF S.B. LANES) = 30.0 L.F.

REMOVAL & DISPOSAL OF APPROACH SLAB & GUTTERS

STA. 348+85.2 TO STA. 349+20.2 (N.B. LANES) = 1EACH
STA. 349+04.3 TO STA. 349+39.3 (S.B. LANES) = 1EACH
STA. 350+54.5 TO STA. 350+89.5 (N.B. LANES) = 1EACH
STA. 350+73.5 TO STA. 351+08.5 (S.B. LANES) = 1EACH

CONCRETE DITCH PAVING (TYPE B) (W=6')

STA. 359+50.0 TO STA. 370+20.0 (RT. OF N.B. LANES) = 713.3 S.Y.

REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT

STA. 343+20.24 TO STA. 348+85.24 (N.B. LANES) = 1506.7 SQ. YD.
STA. 350+89.46 TO STA. 355+30.11 (N.B. LANES) = 1175.1 SQ. YD.
STA. 343+39.26 TO STA. 349+04.26 (S.B. LANES) = 1506.7 SQ. YD.
STA. 351+08.48 TO STA. 355+30.11 (S.B. LANES) = 1124.3 SQ. YD.

CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)

STA. 360+15.0 TO STA. 369+41.0 (RT. OF N.B. LANES) = 926.0 L.F.
STA. 363+28.0 TO STA. 363+48.0 (MEDIAN) = 40.0 L.F.
STA. 363+31.7 TO STA. 363+61.7 (LT. OF S.B. LANES) = 30.0 L.F.

REMOVAL & DISPOSAL OF CONCRETE CURB & GUTTER

STA. 360+15.0 TO STA. 369+41.0 (RT. OF N.B. LANES) = 926 L.F.

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TEMPORARY RAMP CURVE DATA

	CRV 1B-1	CRV 1B-2	CRV 1A-1	CRV 1A-2	CRV 4B-1	CRV 4B-2	CRV 4A-1	CRV 4A-2
PI	373+51.37	375+29.47	381+37.61	384+08.35	378+04.51	379+94.76	385+44.67	388+06.59
Δ	23°21'27"	17°38'56"	34°06'08"	28°23'37"	24°45'47"	19°03'16"	33°04'40"	27°22'10"
D	11°27'33"	11°27'33"	11°27'33"	11°27'33"	11°27'33"	11°27'33"	11°27'33"	11°27'33"
R	500'	500'	500'	500'	500'	500'	500'	500'
T	103.35'	77.62'	153.35'	126.49'	109.76'	83.92'	148.48'	121.75'

NOTE: GRAND AVE. FROM STA. 2+24 TO 5+76 TO BE COLD MILLED A DEPTH OF 2" AND OVERLAID WITH ACHM SURFACE COURSE (½") 200 LBS/S.Y. UPON COMPLETION OF BRIDGE RECONSTRUCTION.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		B80407	112	464

(2) PLAN STA. 370+00 - 400+00

TEMPORARY RAMP CURVE DATA

	CRV 2A-1	CRV 2A-2	CRV 3A-1	CRV 3A-2
PI	398+61.63	401+32.35	402+92.18	406+50.99
Δ	36°38'29"	26°14'13"	23°39'15"	43°03'59"
D	11°27'33"	11°27'33"	9°32'57"	9°32'57"
R	500'	500'	600'	600'
T	165.56'	116.52'	125.64'	236.75'

LUMINAIRE POLE RELOCATION

STA. 366+00 TO STA. 409+50 (LT. OF S.B. LANES) = 21 EACH
STA. 369+80 TO STA. 403+50 (RT. OF N.B. LANES) = 17 EACH
STA. 375+00 TO STA. 380+75 (RAMP 4 GRAND AVE.) = 4 EACH
STA. 375+25 TO STA. 383+75 (RAMP 1 GRAND AVE.) = 7 EACH
STA. 393+00 TO STA. 403+50 (RAMP 3 GRAND AVE.) = 7 EACH
STA. 399+50 TO STA. 414+50 (RAMP 2 GRAND AVE.) = 10 EACH

CURVE (1)
℄ RAMP 1
Delta = 5°42'30"
Dc = 3°00'00"
T = 95.22'
L = 190.28'
R = 1909.86'

CURVE (2)
℄ RAMP 2
Delta = 30°36'00"
Dc = 2°08'00"
T = 734.74'
L = 1434.38'
R = 2685.74'

CURVE (3)
℄ RAMP 4
Delta = 5°42'30"
Dc = 3°00'00"
T = 95.22'
L = 190.28'
R = 1909.86'

RAMP 4
STA. 379+00 IN PLACE
TYPE "H" DROP INLET
6'x6'x H=4'-0" 2-OPENINGS
24"x76' R.C. PIPE OUTLET
TYPE "R" DROP INLET
24"x24' STUB INLET W/ JUNCTION BOX
RETAIN

STA. 378+00 IN PLACE
TYPE "H" DROP INLET
6'x6'x H=7'-0" 2-OPENINGS
24"x110' R.C. PIPE INLET
30"x134' R.C. PIPE OUTLET
RETAIN

RAMP 4
STA. 386+00 IN PLACE
30"x104' R.C. PIPE CULV'T
45° RT. FORWARD SKEW
RETAIN

STA. 384+00 IN PLACE
TYPE "H" DROP INLET
4'x4'x H=4'-0" 1-OPENING
24"x100' R.C. PIPE OUTLET
30° RT. FORWARD SKEW
RETAIN

STA. 387+60 IN PLACE
2 TYPE "H" DROP INLETS
5'x5'x H=4'-9" 2-OPENINGS (RT.)
5'x5'x H=5'-9" 2-OPENINGS (LT.)
30"x396' R.C. PIPE CULV'T
45° RT. FORWARD SKEW
RETAIN

RAMP 3
STA. 394+00 IN PLACE
30"x70' R.C. PIPE CULV'T
RETAIN

STA. 394+00 IN PLACE
30"x116' R.C. PIPE INLET
48" STACK PIPE DROP INLET
H=17' TYPE "A" GRATE
36"x122' R.C. PIPE OUTLET
TYPE "H" DROP INLET
RETAIN

STA. 397+00 TO STA. 398+30 LT.
15"x130' TEMP. CULV'T
CONST. STAGE IA
REMOVE STAGE VB

RAMP 3
STA. 399+00 IN PLACE
TYPE "H" DROP INLET
6'x6'x H=4'0" 2-OPENINGS
24"x100' R.C. PIPE OUTLET
45° LT. FORWARD SKEW
RETAIN

STA. 382+15.95
END RAMP 4
PAVEMENT TRANSITION

STA. 392+07.00
END RAMP 3
PAVEMENT TRANSITION

STA. 383+98.83
END RAMP 1
PAVEMENT TRANSITION

STA. 373+90 IN PLACE
DBL 10'x10'x340' R.C. BOX CULV'T
45° LT. FORWARD SKEW
RETAIN

STA. 372+50 TO STA. 375+50 ℄ MEDIAN
18"x300' TEMP. CULV'T
CONST. STAGE IB
REMOVE STAGE VA

RAMP 1
STA. 380+00 IN PLACE
TYPE "H" DROP INLET
6'x6'x H=4'-0" 2-OPENINGS
24"x52' R.C. PIPE OUTLET
RETAIN

RAMP 1
STA. 389+25 IN PLACE
30"x78' R.C. PIPE CULV'T
30° RT. FORWARD SKEW
RETAIN

STA. 398+25 TO STA. 400+00 RT.
15"x175' TEMP. CULV'T
CONST. STAGE IA
REMOVE STAGE VB

STA. 399+19.66
END RAMP 2
PAVEMENT TRANSITION

℄ MEDIAN I-540
PI 399+63.99
Delta = 30°36'00"
Dc = 2°08'00"
T = 734.80'
L = 1434.40'
R = 2685.74'

EROSION CONTROL LEGEND

E-3	SAND BAG DITCH CHECK
E-4	SILT FENCE
E-6	DUMPED ROCK DITCH CHECK
E-7	DROP INLET SILT FENCE

REVISIONS

	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL	TERMINAL ANCHOR POST (TYPE 1)
STA. 385+73.9 TO STA. 389+42.7 (RT. OF N.B. LANES)	350 L.F.	1 EACH	1 EACH	-
STA. 385+75.2 TO STA. 389+19.0 (LT. OF S.B. LANES)	325 L.F.	-	1 EACH	1 EACH
STA. 386+16.5 TO STA. 389+35.3 (LT. OF N.B. LANES)	250 L.F.	1 EACH	1 EACH	-
STA. 390+93.2 TO STA. 396+62.0 (LT. OF S.B. LANES)	500 L.F.	1 EACH	1 EACH	-
STA. 391+00.6 TO STA. 394+19.4 (RT. OF S.B. LANES)	250 L.F.	1 EACH	1 EACH	-
STA. 391+16.9 TO STA. 396+35.7 (RT. OF N.B. LANES)	500 L.F.	-	1 EACH	1 EACH

(1) STA. 389+38.63 - PROPOSED BR. END
BR. NO. B6878
174.19' TOTAL LENGTH
40' - 0" CLEAR ROADWAY
172.00' CONTINUOUS COMPOSITE W-BEAM
STA. 391+12.82
CONSTRUCT

(2) STA. 389+23.09 - PROPOSED BR. END
BR. NO. A6878
174.19' TOTAL LENGTH
40' - 0" CLEAR ROADWAY
172.00' CONTINUOUS COMPOSITE W-BEAM
STA. 390+97.28
CONSTRUCT

STA. 389+43.63 - BR. END
164.29' COMPOSITE I-BEAM SPAN
BR. NO. 3606B
28' - 0" CLEAR ROADWAY
STA. 391+07.85 - BR. END
REMOVE AS EXISTING BRIDGE STRUCTURE = 1.00 LUMP SUM

STA. 389+28.09 - BR. END
164.29' COMPOSITE I-BEAM SPAN
BR. NO. 3606A
28' - 0" CLEAR ROADWAY
STA. 390+92.31 - BR. END
REMOVE AS EXISTING BRIDGE STRUCTURE = 1.00 LUMP SUM

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 385+71.9 TO STA. 389+21.9 (RT. OF N.B. LANES) = 350 L.F.
STA. 387+16.7 TO STA. 389+16.1 (LT. OF N.B. LANES) = 200 L.F.
STA. 385+99.7 TO STA. 389+24.7 (LT. OF S.B. LANES) = 325 L.F.
STA. 391+19.2 TO STA. 393+19.2 (RT. OF S.B. LANES) = 200 L.F.
STA. 391+14.0 TO STA. 396+14.0 (LT. OF S.B. LANES) = 500 L.F.
STA. 391+11.3 TO STA. 396+11.3 (RT. OF N.B. LANES) = 500 L.F.

NOTE: EXISTING CONCRETE CURB AND ASPHALT ISLAND RAISED MEDIAN OF GRAND AVENUE TO BE REMOVED FOR BRIDGE PIER CONSTRUCTION AND MAINTENANCE OF TRAFFIC (SEE SEPARATE DETAIL SHEETS). RAISED MEDIAN TO BE RECONSTRUCTED TO THE SAME LOCATION WITH CONCRETE CURB TYPE "A" AND P.C. CONCRETE PAVEMENT (6" U.T.). P.C. CONCRETE PAVEMENT (6" U.T.) SHALL INCLUDE ALL COSTS TO RECONSTRUCT THE RAISED MEDIAN TO EXISTING DIMENSIONS. ANY ADDITIONAL PAVING REQUIRED FOR MAINTENANCE OF TRAFFIC THROUGH LIMITS OF REMOVED RAISED MEDIAN WILL NOT BE PAID FOR DIRECTLY BUT CONSIDERED INCLUDED IN VARIOUS PAY ITEMS.

REMOVAL & DISPOSAL OF CONCRETE PARAPET WALL

STA. 389+20.2 TO STA. 389+46.2 (RT. OF N.B. LANES) = 1 EACH
STA. 389+15.0 TO STA. 389+41.0 (LT. OF N.B. LANES) = 1 EACH
STA. 390+94.9 TO STA. 391+20.9 (RT. OF S.B. LANES) = 1 EACH
STA. 390+89.7 TO STA. 391+15.7 (LT. OF S.B. LANES) = 1 EACH

REMOVAL & DISPOSAL OF APPROACH SLAB & GUTTERS

STA. 388+93.1 TO STA. 389+28.1 (S.B. LANES) = 1 EACH
STA. 389+08.6 TO STA. 389+43.6 (N.B. LANES) = 1 EACH
STA. 390+92.3 TO STA. 391+27.3 (S.B. LANES) = 1 EACH
STA. 391+07.8 TO STA. 391+42.8 (N.B. LANES) = 1 EACH

CONCRETE DITCH PAVING (TYPE B) (W=6')

STA. 370+20.0 TO STA. 373+30.0 (RT. OF N.B. LANES) = 206.7 S.Y.

CONCRETE ISLAND

STA. 2+30 TO STA. 5+55 (GRAND AVE. RAISED MEDIAN) = 376 S.Y.

CONCRETE COMBINATION CURB & GUTTER TYPE "A" (W=1'6")

STA. 2+30 TO STA. 5+55 (GRAND AVE. RAISED MEDIAN) = 690 L.F.

REMOVAL & DISPOSAL OF ASPHALT ISLAND

STA. 2+30 TO STA. 5+55 (GRAND AVE. RAISED MEDIAN) = 376 S.Y.

REMOVAL & DISPOSAL OF CURB & GUTTER

STA. 2+30 TO STA. 5+55 (GRAND AVE. RAISED MEDIAN) = 690 L.F.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

8/27/2012 9:36:10 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.		BB0407	113	464

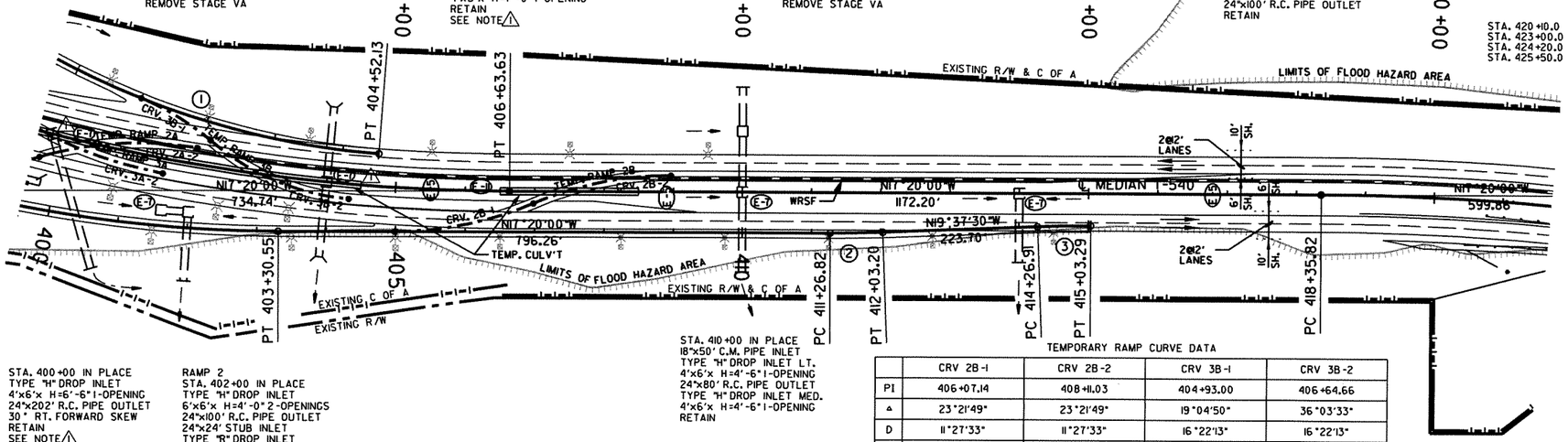
(2) PLAN STA. 400+00 - 443+00

⚠ ALL COSTS REQUIRED TO COVER & PROTECT EXISTING DROP INLETS FOR CONSTRUCTION OF TEMPORARY RAMPS AS WELL AS RESTORING TO EXISTING CONDITION FOLLOWING REMOVAL OF TEMP. RAMPS TO BE CONSIDERED INCLUDED IN UNIT COST BID FOR VARIOUS PAY ITEMS.

CURVE (1)
℄ RAMP 3
Delta = 25°45'00"
Dc = 5°00'00"
T = 261.92'
L = 514.99'
R = 1145.90'

CURVE (2)
℄ RAMP 2
Delta = 2°17'30"
Dc = 3°00'00"
T = 38.20'
L = 76.39'
R = 1909.86'

CURVE (3)
℄ RAMP 2
Delta = 2°17'30"
Dc = 3°00'00"
T = 38.20'
L = 76.39'
R = 1909.86'



STA. 400+00 IN PLACE
TYPE "H" DROP INLET
4'x6'x H=6'-6" 1-OPENING
24"x202' R.C. PIPE OUTLET
30° RT. FORWARD SKEW
RETAIN
SEE NOTE ⚠

RAMP 2
STA. 402+00 IN PLACE
TYPE "H" DROP INLET
6'x6'x H=4'-0" 2-OPENINGS
24"x100' R.C. PIPE OUTLET
24"x24' STUB INLET
TYPE "R" DROP INLET
RETAIN

STA. 410+00 IN PLACE
18"x50' C.M. PIPE INLET
TYPE "H" DROP INLET LT.
4'x6'x H=4'-6" 1-OPENING
24"x80' R.C. PIPE OUTLET
TYPE "H" DROP INLET MED.
4'x6'x H=4'-6" 1-OPENING
RETAIN

TEMPORARY RAMP CURVE DATA

	CRV 2B-1	CRV 2B-2	CRV 3B-1	CRV 3B-2
PI	406+07.14	408+11.03	404+93.00	406+64.66
Δ	23°21'49"	23°21'49"	19°04'50"	36°03'33"
D	11°27'33"	11°27'33"	16°22'13"	16°22'13"
R	500'	500'	350'	350'
T	103.38'	103.38'	58.82'	113.92'

WIRE FENCE (TYPE A)

STA. 420+10.0 TO STA. 422+70.0 (RT. OF MAIN LANES) = 275 L.F.
STA. 423+00.0 TO STA. 424+00.0 (LT. OF MAIN LANES) = 150 L.F. W/16' VEHICULAR GATE
STA. 424+20.0 TO STA. 425+50.0 (RT. OF MAIN LANES) = 175 L.F. W/16' VEHICULAR GATE
STA. 425+50.0 TO STA. 426+60.0 (LT. OF MAIN LANES) = 150 L.F.

REMOVAL AND DISPOSAL OF FENCE

STA. 420+10.0 TO STA. 422+70.0 (RT. OF MAIN LANES) = 275 L.F.
STA. 423+00.0 TO STA. 424+00.0 (LT. OF MAIN LANES) = 150 L.F.
STA. 424+20.0 TO STA. 425+50.0 (RT. OF MAIN LANES) = 175 L.F.
STA. 425+50.0 TO STA. 426+60.0 (LT. OF MAIN LANES) = 150 L.F.

℄ MEDIAN I-540
PI 424+35.68
Delta = 17°51'00"
Dc = 1°30'00"
T = 599.86'
L = 1190.00'
R = 3819.72'

FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, CLAYTON BRANCH IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAM BANK ELEVATIONS ARE 400.0 FT. MSL.

NOTE: THE GEOMETRY FOR BRIDGES 06879A&B IS BASED ON THE CENTERLINE OF LANES AND NOT THE CENTERLINE OF MEDIAN. SEE BRIDGE PLANS FOR DETAILS.

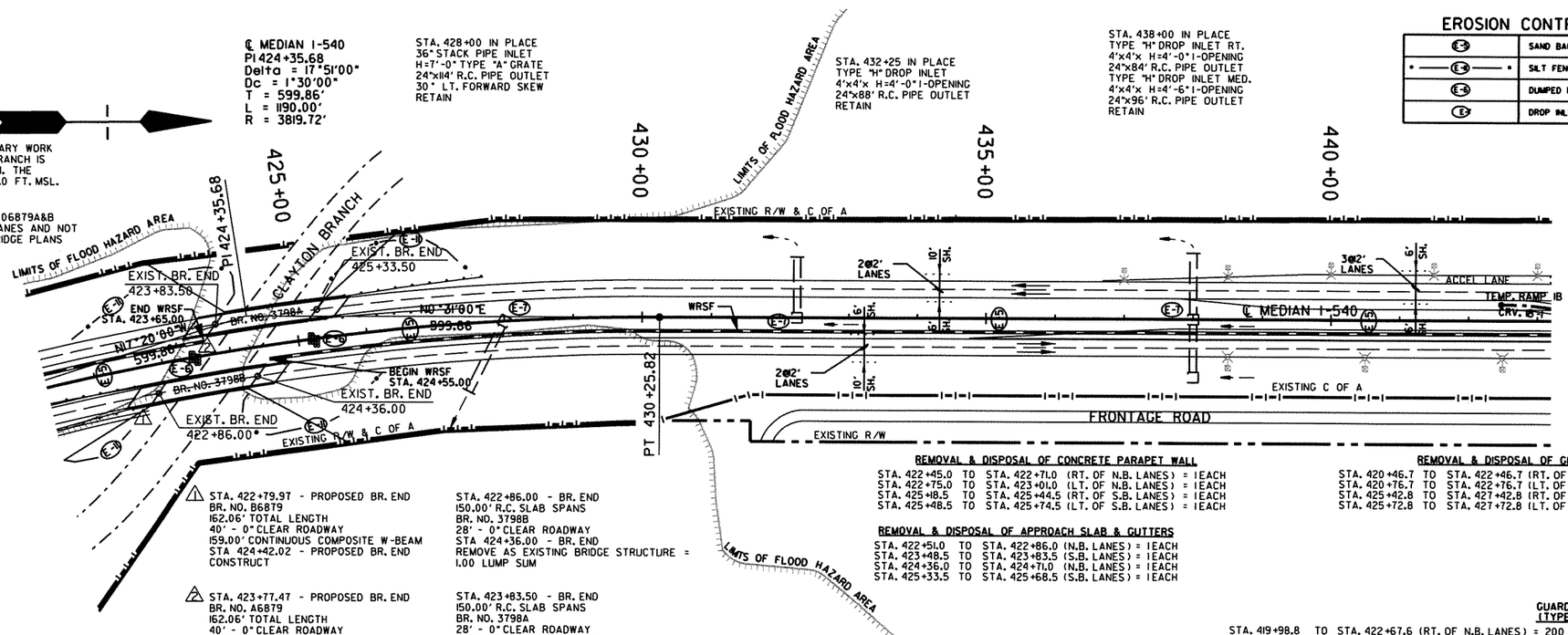
STA. 428+00 IN PLACE
36" STACK PIPE INLET
H=7'-0" TYPE "A" GRATE
24"x114' R.C. PIPE OUTLET
30° LT. FORWARD SKEW
RETAIN

STA. 432+25 IN PLACE
TYPE "H" DROP INLET
4'x4'x H=4'-0" 1-OPENING
24"x84' R.C. PIPE OUTLET
TYPE "H" DROP INLET MED.
4'x4'x H=4'-6" 1-OPENING
24"x96' R.C. PIPE OUTLET
RETAIN

STA. 438+00 IN PLACE
TYPE "H" DROP INLET RT.
4'x4'x H=4'-0" 1-OPENING
24"x84' R.C. PIPE OUTLET
TYPE "H" DROP INLET MED.
4'x4'x H=4'-6" 1-OPENING
24"x96' R.C. PIPE OUTLET
RETAIN

EROSION CONTROL LEGEND

E-3	SAND BAG DITCH CHECK
E-4	SILT FENCE
E-6	DUMPED ROCK DITCH CHECK
E-7	DROP INLET SILT FENCE



⚠ STA. 422+79.97 - PROPOSED BR. END
BR. NO. B6879
162.06' TOTAL LENGTH
40' - 0" CLEAR ROADWAY
159.00' CONTINUOUS COMPOSITE W-BEAM
STA 424+42.02 - PROPOSED BR. END
CONSTRUCT

STA. 422+86.00 - BR. END
150.00' R.C. SLAB SPANS
BR. NO. 3798B
28' - 0" CLEAR ROADWAY
STA 424+36.00 - BR. END
REMOVE AS EXISTING BRIDGE STRUCTURE = 1.00 LUMP SUM

⚠ STA. 423+77.47 - PROPOSED BR. END
BR. NO. A6879
162.06' TOTAL LENGTH
40' - 0" CLEAR ROADWAY
159.00' CONTINUOUS COMPOSITE W-BEAM
STA 425+39.52 - PROPOSED BR. END
CONSTRUCT

STA. 423+83.50 - BR. END
150.00' R.C. SLAB SPANS
BR. NO. 3798A
28' - 0" CLEAR ROADWAY
STA 425+33.50 - BR. END
REMOVE AS EXISTING BRIDGE STRUCTURE = 1.00 LUMP SUM

REMOVAL & DISPOSAL OF CONCRETE PARAPET WALL

STA. 422+45.0 TO STA. 422+71.0 (RT. OF N.B. LANES) = 1EACH
STA. 422+75.0 TO STA. 423+01.0 (LT. OF N.B. LANES) = 1EACH
STA. 425+48.5 TO STA. 425+44.5 (RT. OF S.B. LANES) = 1EACH
STA. 425+48.5 TO STA. 425+74.5 (LT. OF S.B. LANES) = 1EACH

REMOVAL & DISPOSAL OF APPROACH SLAB & GUTTERS

STA. 422+51.0 TO STA. 422+86.0 (N.B. LANES) = 1EACH
STA. 423+48.5 TO STA. 423+83.5 (S.B. LANES) = 1EACH
STA. 424+36.0 TO STA. 424+71.0 (N.B. LANES) = 1EACH
STA. 425+33.5 TO STA. 425+68.5 (S.B. LANES) = 1EACH

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 420+46.7 TO STA. 422+46.7 (RT. OF N.B. LANES) = 200 L.F.
STA. 420+76.7 TO STA. 422+76.7 (LT. OF N.B. LANES) = 200 L.F.
STA. 425+42.8 TO STA. 427+42.8 (RT. OF S.B. LANES) = 200 L.F.
STA. 425+72.8 TO STA. 427+72.8 (LT. OF S.B. LANES) = 200 L.F.

	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL
STA. 419+98.8 TO STA. 422+67.6 (RT. OF N.B. LANES)	200 L.F.	1EACH	1EACH
STA. 419+81.2 TO STA. 423+00.0 (LT. OF N.B. LANES)	250 L.F.	1EACH	1EACH
STA. 425+16.9 TO STA. 428+35.7 (RT. OF S.B. LANES)	250 L.F.	1EACH	1EACH
STA. 425+48.5 TO STA. 428+17.3 (LT. OF S.B. LANES)	200 L.F.	1EACH	1EACH

REVISIONS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

8/27/2012 9:36:10 AM

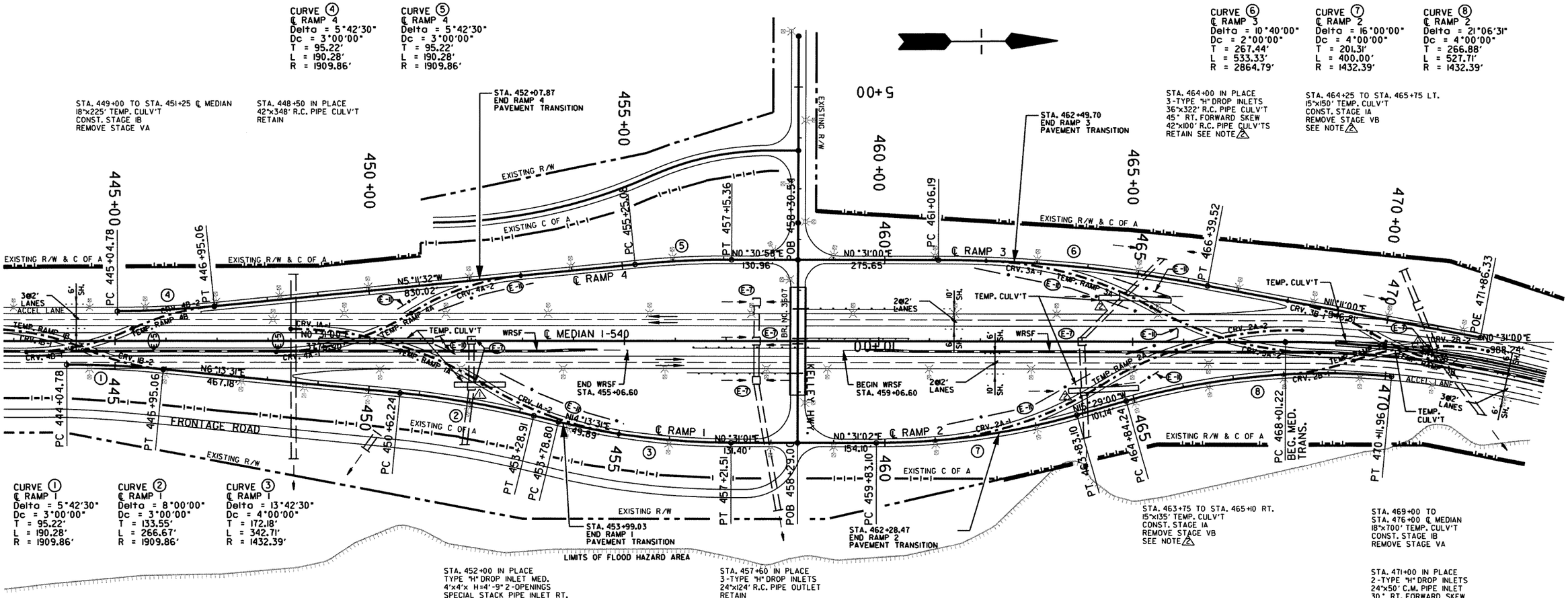
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	114	464

(2) PLAN STA. 443+00 - 473+00

TEMPORARY RAMP CURVE DATA

	CRV 1B-1	CRV 1B-2	CRV 1A-1	CRV 1A-2	CRV 4B-1	CRV 4B-2	CRV 4A-1	CRV 4A-2
PI	443+51.36	445+29.47	450+49.12	453+87.87	448+04.51	449+94.76	454+40.14	456+92.96
Δ	23°21'27"	17°38'57"	31°47'44"	22°56'05"	24°45'47"	19°03'15"	32°01'08"	26°18'36"
D	11°27'33"	11°27'33"	8°00'00"	8°00'00"	11°27'33"	11°27'33"	11°27'33"	11°27'33"
R	500'	500'	716.20'	716.20'	500'	500'	500'	500'
T	103.35'	77.62'	203.98'	145.29'	109.76'	83.91'	143.46'	116.86'

NOTE: EXISTING VERTICAL CLEARANCE UNDER BRIDGE NO. 3607 IS 17'-3" S.B. AND 17'-1" N.B. MINIMUM 16'-0" VERTICAL CLEARANCE IS REQUIRED FOR FINISHED ROADWAY.



(1) ALL COSTS REQUIRED TO COVER & PROTECT EXISTING DROP INLETS FOR CONSTRUCTION OF TEMPORARY RAMPS AS WELL AS RESTORING TO EXISTING CONDITION FOLLOWING REMOVAL OF TEMP. RAMPS TO BE CONSIDERED INCLUDED IN UNIT COST BID FOR VARIOUS PAY ITEMS.

(2) TEMP. CULV'T TO BE INSTALLED TO TRANSFER DRAINAGE TO EXISTING DROP INLET WHERE NOTED. ALL COSTS REQUIRED TO MAKE POSITIVE & SECURE CONNECTION TO EXISTING DRAINAGE SYSTEM AND RESTORING TO PRECONSTRUCTION CONDITION UPON REMOVAL OF TEMP. RAMP SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)

STA. 458+21.6 TO STA. 458+51.6 (RT. OF N.B. LANES) = 30.0 L.F.
STA. 458+31.6 TO STA. 458+51.6 (MEDIAN) = 40.0 L.F.
STA. 458+31.6 TO STA. 458+61.6 (LT. OF S.B. LANES) = 30.0 L.F.

REMOVAL & DISPOSAL OF CONCRETE PIER PROTECTION

STA. 458+21.6 TO STA. 458+51.6 (RT. OF N.B. LANES) = 30.0 L.F.
STA. 458+31.6 TO STA. 458+51.6 (MEDIAN) = 20.0 L.F.
STA. 458+31.6 TO STA. 458+61.6 (MEDIAN) = 30.0 L.F.
STA. 458+31.6 TO STA. 458+61.6 (LT. OF S.B. LANES) = 30.0 L.F.

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 456+23.3 TO STA. 458+23.3 (RT. OF N.B. LANES) = 200 L.F.
STA. 456+35.0 TO STA. 458+85.0 (LT. OF N.B. LANES) = 250 L.F.
STA. 458+59.9 TO STA. 460+59.9 (MEDIAN) = 200 L.F.
STA. 458+59.9 TO STA. 460+59.9 (LT. OF S.B. LANES) = 200 L.F.

	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	TERMINAL ANCHOR POST (TYPE 1)	THRIE BEAM GUARDRAIL TERMINAL
STA. 454+56.6 TO STA. 459+56.6 (LT. OF S.B. LANES)	= 450 L.F.	1EACH	1EACH	-
STA. 455+53.4 TO STA. 458+22.2 (RT. OF N.B. LANES)	= 200 L.F.	1EACH	-	1EACH
STA. 457+26.6 TO STA. 462+26.6 (RT. OF S.B. LANES)	= 450 L.F.	1EACH	1EACH	-
STA. 458+61.0 TO STA. 461+29.8 (LT. OF S.B. LANES)	= 200 L.F.	1EACH	-	1EACH

LUMINAIRE POLE RELOCATION

STA. 437+00 TO STA. 479+30 (LT. OF S.B. LANES) = 20 EACH
STA. 438+50 TO STA. 482+25 (RT. OF N.B. LANES) = 21 EACH
STA. 444+50 TO STA. 454+00 (RAMP 1 KELLY RD.) = 7 EACH
STA. 445+60 TO STA. 452+00 (RAMP 4 KELLEY HWY.) = 5 EACH
STA. 463+00 TO STA. 469+50 (RAMP 2 KELLEY HWY.) = 5 EACH
STA. 463+00 TO STA. 471+50 (RAMP 3 KELLEY HWY.) = 6 EACH

TEMPORARY RAMP CURVE DATA

	CRV 2A-1	CRV 2A-2	CRV 2B-1	CRV 2B-2	CRV 3A-1	CRV 3A-2	CRV 3B-1	CRV 3B-2
PI	462+75.64	466+60.15	468+71.00	470+78.19	463+73.62	467+17.69	468+89.68	470+75.26
Δ	27°33'28"	33°31'04"	16°09'47"	30°40'30"	27°15'14"	27°45'59"	20°20'10"	22°08'01"
D	8°00'00"	8°00'00"	11°27'33"	11°27'33"	8°00'00"	8°00'00"	11°27'33"	11°27'33"
R	716.20'	716.20'	500'	500'	716.20'	716.20'	500'	500'
T	175.64'	215.67'	71.00'	137.14'	173.62'	177.02'	89.68'	97.80'

EROSION CONTROL LEGEND

(E-5)	SAND BAG DITCH CHECK
• —(E-4)— •	SILT FENCE
(E-6)	DUMPED ROCK DITCH CHECK
(E-7)	DROP INLET SILT FENCE

REVISIONS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

8/27/2012 9:43:48 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.		BB0407	115	464

(2) PLAN STA. 473+00 - 533+00

(2) EXISTING CURB & GUTTER TO BE COVERED AND ABANDONED. EXISTING DROP INLETS TO BE FILLED WITH CONCRETE AND ABANDONED. EXISTING HEADWALLS TO BE REMOVED AND DAMAGED AREAS TO BE REDRESSED AND SEEDED. ALL COSTS TO BE INCLUDED IN PRICE BID FOR "REMOVAL AND DISPOSAL OF HEADWALLS" AND VARIOUS CONTRACT ITEMS. EXISTING FILL SLOPES ARE NOT TO BE DISTURBED EXCEPT WHERE REQUIRED TO REMOVE EXISTING HEADWALLS AND REDRESS SLOPES. IN FULL DEPTH RECONSTRUCTION SECTIONS, EXISTING CURB & GUTTER TO BE REMOVED.

(3) TEMP. CULV'T TO BE INSTALLED TO TRANSFER DRAINAGE TO EXISTING DROP INLET WHERE NOTED. ALL COSTS REQUIRED TO MAKE POSITIVE & SECURE CONNECTION TO EXISTING DRAINAGE SYSTEM AND RESTORING TO PRECONSTRUCTION CONDITION UPON REMOVAL OF TEMP. RAMP SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL)
STA. 482+40.0 TO STA. 491+06.6 (℄ MEDIAN) = 866.6 LIN. FT.
STA. 496+80.5 TO STA. 533+81.8 (℄ MEDIAN) = 3701.8 LIN. FT.
• INCLUDES TRANSITIONS AT BRIDGE ENDS TO MATCH EXISTING MEDIAN BARRIER.

REMOVAL & DISPOSAL OF HEADWALLS (SEE NOTE (2))
STA. 483+00 (RT. OF MAIN LANES) = 1 EACH
STA. 490+00 (LT. & RT. OF MAIN LANES) = 2 EACH
STA. 502+93 (LT. & RT. OF MAIN LANES) = 2 EACH

FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, ARKANSAS RIVER RELIEF IS CLASSIFIED AS A 5 CFS STREAM. THE STREAM BANK ELEVATIONS ARE 400.0 FT. MSL.

STA. 476+00 IN PLACE
TYPE "H" DROP INLET
36"x266' R.C. PIPE CULV'T
45° RT. FORWARD SKEW
RETAIN
SEE NOTE (3)

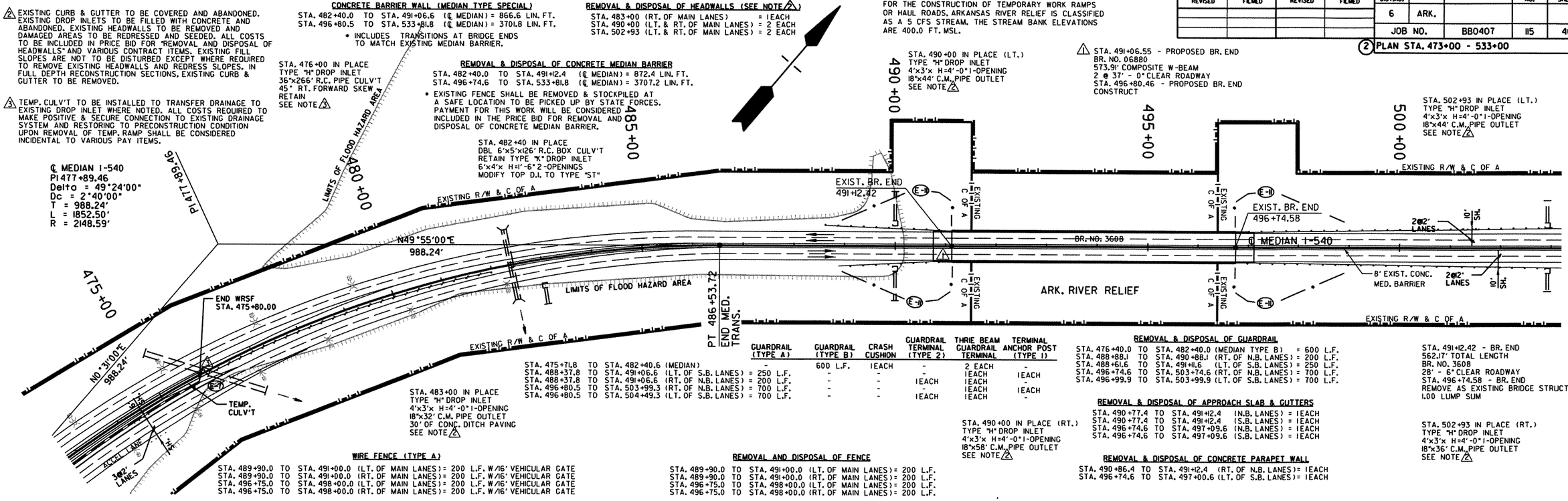
REMOVAL & DISPOSAL OF CONCRETE MEDIAN BARRIER
STA. 482+40.0 TO STA. 491+12.4 (℄ MEDIAN) = 872.4 LIN. FT.
STA. 496+74.6 TO STA. 533+81.8 (℄ MEDIAN) = 3707.2 LIN. FT.
• EXISTING FENCE SHALL BE REMOVED & STOCKPILED AT A SAFE LOCATION TO BE PICKED UP BY STATE FORCES. PAYMENT FOR THIS WORK WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR REMOVAL AND DISPOSAL OF CONCRETE MEDIAN BARRIER.

STA. 482+40 IN PLACE
DBL 6'x5'x126' R.C. BOX CULV'T
RETAIN TYPE "K" DROP INLET
6'x4'x H=1'-6" 2-OPENINGS
MODIFY TOP D.I. TO TYPE "ST"

STA. 490+00 IN PLACE (LT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x44' C.M. PIPE OUTLET
SEE NOTE (2)

(1) STA. 491+06.55 - PROPOSED BR. END
BR. NO. 06880
573.91' COMPOSITE W-BEAM
2 @ 37' - 0" CLEAR ROADWAY
STA. 496+80.46 - PROPOSED BR. END
CONSTRUCT

STA. 502+93 IN PLACE (LT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x44' C.M. PIPE OUTLET
SEE NOTE (2)



	GUARDRAIL (TYPE A)	GUARDRAIL (TYPE B)	CRASH CUSHION	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL	TERMINAL ANCHOR POST (TYPE 1)
STA. 475+71.8 TO STA. 482+40.6 (MEDIAN)		600 L.F.	1 EACH	-	2 EACH	-
STA. 488+37.8 TO STA. 491+06.6 (LT. OF S.B. LANES)	= 250 L.F.	-	-	1 EACH	1 EACH	1 EACH
STA. 488+37.8 TO STA. 491+06.6 (RT. OF N.B. LANES)	= 200 L.F.	-	-	1 EACH	1 EACH	-
STA. 496+80.5 TO STA. 503+99.3 (RT. OF N.B. LANES)	= 700 L.F.	-	-	-	1 EACH	1 EACH
STA. 496+80.5 TO STA. 504+49.3 (LT. OF S.B. LANES)	= 700 L.F.	-	-	1 EACH	1 EACH	-

REMOVAL & DISPOSAL OF GUARDRAIL
STA. 476+40.0 TO STA. 482+40.0 (MEDIAN TYPE B) = 600 L.F.
STA. 488+88.1 TO STA. 490+88.1 (RT. OF N.B. LANES) = 200 L.F.
STA. 488+61.6 TO STA. 491+11.6 (LT. OF S.B. LANES) = 250 L.F.
STA. 496+74.6 TO STA. 503+74.6 (RT. OF N.B. LANES) = 700 L.F.
STA. 496+99.9 TO STA. 503+99.9 (LT. OF S.B. LANES) = 700 L.F.

STA. 491+12.42 - BR. END
562.17' TOTAL LENGTH
BR. NO. 3608
28' - 6" CLEAR ROADWAY
STA. 496+74.58 - BR. END
REMOVE AS EXISTING BRIDGE STRUCTURE = 1.00 LUMP SUM

STA. 502+93 IN PLACE (RT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x36' C.M. PIPE OUTLET
SEE NOTE (2)

STA. 483+00 IN PLACE
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x32' C.M. PIPE OUTLET
30' OF CONC. DITCH PAVING
SEE NOTE (2)

STA. 490+00 IN PLACE (RT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x58' C.M. PIPE OUTLET
SEE NOTE (2)

REMOVAL & DISPOSAL OF APPROACH SLAB & GUTTERS
STA. 490+77.4 TO STA. 491+12.4 (N.B. LANES) = 1 EACH
STA. 490+77.4 TO STA. 491+12.4 (S.B. LANES) = 1 EACH
STA. 496+74.6 TO STA. 497+09.6 (N.B. LANES) = 1 EACH
STA. 496+74.6 TO STA. 497+09.6 (S.B. LANES) = 1 EACH

REMOVAL & DISPOSAL OF CONCRETE PARAPET WALL
STA. 490+86.4 TO STA. 491+12.4 (RT. OF N.B. LANES) = 1 EACH
STA. 496+74.6 TO STA. 497+00.6 (LT. OF S.B. LANES) = 1 EACH

WIRE FENCE (TYPE A)
STA. 489+90.0 TO STA. 491+00.0 (LT. OF MAIN LANES) = 200 L.F. W/16' VEHICULAR GATE
STA. 489+90.0 TO STA. 491+00.0 (RT. OF MAIN LANES) = 200 L.F. W/16' VEHICULAR GATE
STA. 496+75.0 TO STA. 498+00.0 (LT. OF MAIN LANES) = 200 L.F. W/16' VEHICULAR GATE
STA. 496+75.0 TO STA. 498+00.0 (RT. OF MAIN LANES) = 200 L.F. W/16' VEHICULAR GATE

REMOVAL AND DISPOSAL OF FENCE
STA. 489+90.0 TO STA. 491+00.0 (LT. OF MAIN LANES) = 200 L.F.
STA. 489+90.0 TO STA. 491+00.0 (RT. OF MAIN LANES) = 200 L.F.
STA. 496+75.0 TO STA. 498+00.0 (LT. OF MAIN LANES) = 200 L.F.
STA. 496+75.0 TO STA. 498+00.0 (RT. OF MAIN LANES) = 200 L.F.

FULL DEPTH PAVEMENT
PAVEMENT TRANSITION

REMOVAL & DISPOSAL OF CONC. CURB & GUTTER
STA. 525+81.8 TO STA. 533+45.3 (RT. OF N.B. LANES) = 763.5 LIN. FT.
STA. 525+81.8 TO STA. 533+45.3 (LT. OF S.B. LANES) = 763.5 LIN. FT.

REMOVAL & DISPOSAL OF HEADWALLS (SEE NOTE (2))
STA. 508+00 (LT. & RT. OF MAIN LANES) = 2 EACH
STA. 513+00 (LT. & RT. OF MAIN LANES) = 2 EACH
STA. 518+00 (LT. & RT. OF MAIN LANES) = 2 EACH
STA. 523+00 (LT. & RT. OF MAIN LANES) = 2 EACH
STA. 528+00 (LT. & RT. OF MAIN LANES) = 2 EACH

EROSION CONTROL LEGEND

(E-1)	SAND BAG DITCH CHECK
(E-2)	SILT FENCE
(E-3)	DUMPED ROCK DITCH CHECK
(E-4)	DROP INLET SILT FENCE

REVISIONS

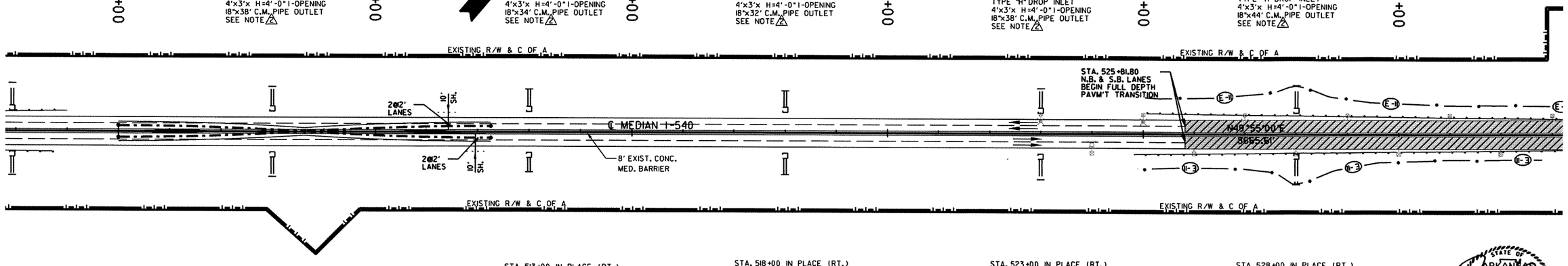
STA. 508+00 IN PLACE (LT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x38' C.M. PIPE OUTLET
SEE NOTE (2)

STA. 513+00 IN PLACE (LT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x34' C.M. PIPE OUTLET
SEE NOTE (2)

STA. 518+00 IN PLACE (LT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x32' C.M. PIPE OUTLET
SEE NOTE (2)

STA. 523+00 IN PLACE (LT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x38' C.M. PIPE OUTLET
SEE NOTE (2)

STA. 528+00 IN PLACE (LT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x44' C.M. PIPE OUTLET
SEE NOTE (2)



STA. 508+00 IN PLACE (RT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x38' C.M. PIPE OUTLET
SEE NOTE (2)

STA. 513+00 IN PLACE (RT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x28' C.M. PIPE OUTLET
SEE NOTE (2)

STA. 518+00 IN PLACE (RT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x32' C.M. PIPE OUTLET
SEE NOTE (2)

STA. 523+00 IN PLACE (RT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x40' C.M. PIPE OUTLET
SEE NOTE (2)

STA. 528+00 IN PLACE (RT.)
TYPE "H" DROP INLET
4'x3'x H=4'-0" 1-OPENING
18"x50' C.M. PIPE OUTLET
SEE NOTE (2)

STATE OF ARKANSAS
JAMES L. BARR
REGISTERED PROFESSIONAL ENGINEER
No. 9808
8/31/12

	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL	TERMINAL ANCHOR POST (TYPE 1)
STA. 524+38.0 TO STA. 533+81.8 (RT. OF N.B. LANES)	= 875 L.F.	1 EACH	1 EACH	-
STA. 524+88.0 TO STA. 533+81.8 (LT. OF S.B. LANES)	= 875 L.F.	-	1 EACH	1 EACH

REMOVAL & DISPOSAL OF GUARDRAIL
STA. 524+82.5 TO STA. 533+57.5 (RT. OF N.B. LANES) = 875 L.F.
STA. 525+06.8 TO STA. 533+81.8 (LT. OF S.B. LANES) = 875 L.F.

REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT
STA. 525+81.80 TO STA. 533+46.80 (N.B. LANES) = 2040.0 SQ. YD.
STA. 525+81.80 TO STA. 533+46.80 (S.B. LANES) = 2040.0 SQ. YD.

LUMINAIRE POLE RELOCATION
STA. 523+00 TO STA. 533+00 (LT. OF S.B. LANES) = 6 EACH
STA. 524+00 TO STA. 533+75 (RT. OF N.B. LANES) = 6 EACH

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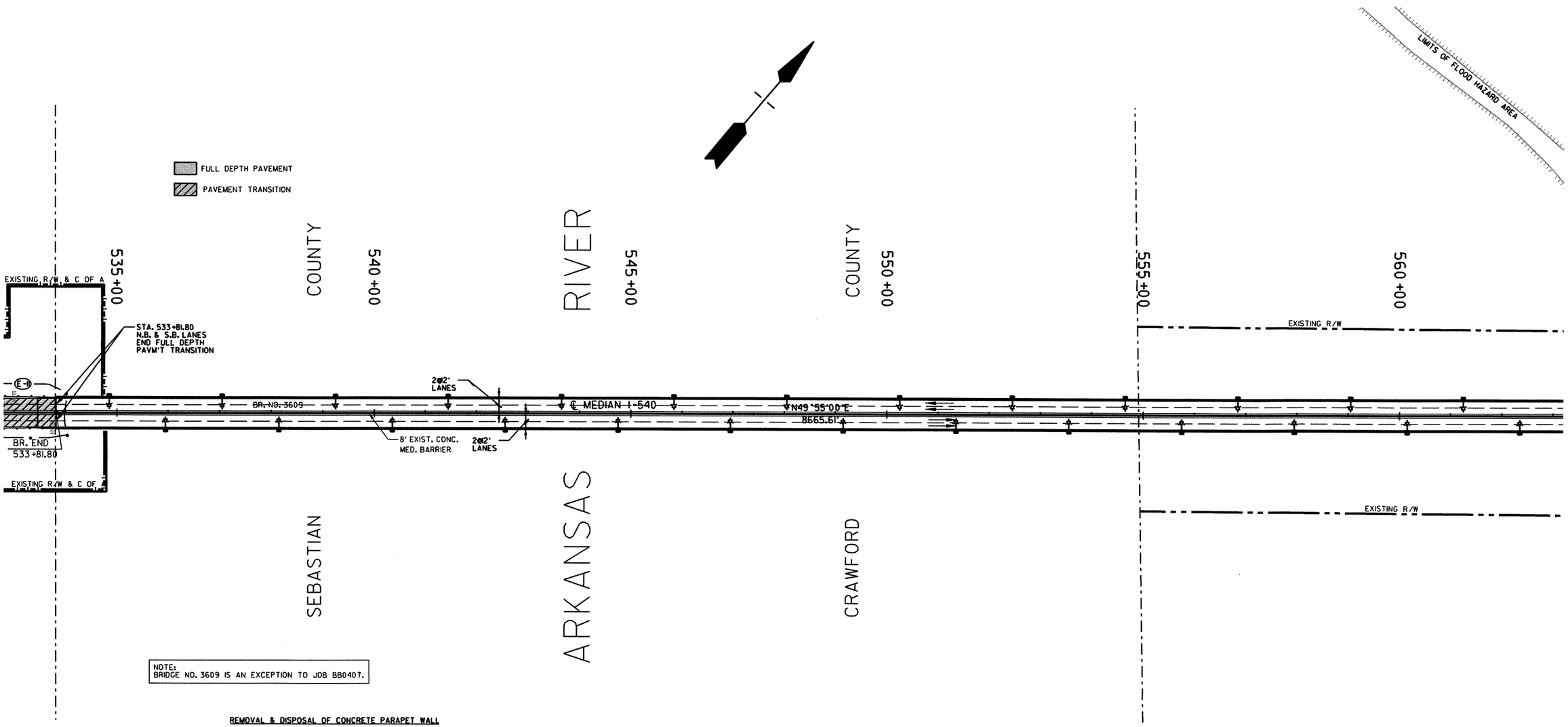
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	116	464

(2) PLAN STA. 533+00 - 563+00



NOTE:
BRIDGE NO. 3609 IS AN EXCEPTION TO JOB BB0407.

REMOVAL & DISPOSAL OF CONCRETE PARAPET WALL
STA. 533+55.8 TO STA. 533+81.8 (RT. OF N.B. LANES)= 1EACH

REMOVAL & DISPOSAL OF APPROACH SLAB & GUTTER
STA. 533+46.8 TO STA. 533+81.8 (N.B. LANES) = 1EACH
STA. 533+46.8 TO STA. 533+81.8 (S.B. LANES) = 1EACH

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

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EROSION CONTROL LEGEND

E-6	SAND BAG DITCH CHECK
E-4	SILT FENCE
E-6	DUMPED ROCK DITCH CHECK
E-7	DROP INLET SILT FENCE

REVISIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	117	464

(2) PLAN STA. 563+00 - 593+00

REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT

STA. 568+15.93 TO STA. 577+13.25 (N.B. LANES) = 2392.9 SQ. YD.
STA. 571+49.45 TO STA. 576+00.00 (RAMP 14TH ST. INT.) = 783.4 SQ. YD.
STA. 568+10.46 TO STA. 577+13.25 (S.B. LANES) = 2407.4 SQ. YD.
STA. 569+76.51 TO STA. 577+13.25 (RAMP 4 4TH ST. INT.) = 809.6 SQ. YD.

LUMINAIRE POLE RELOCATION

STA. 567+75 TO STA. 599+01 (LT. OF S.B. LANES) = 17 EACH
STA. 568+65 TO STA. 598+75 (RT. OF N.B. LANES) = 16 EACH
STA. 575+40 TO STA. 580+81 (RAMP 14TH STREET) = 4 EACH
STA. 585+00 TO STA. 589+00 (RAMP 4 4TH STREET) = 3 EACH
STA. 581+50 TO STA. 587+10 (RAMP 2 4TH STREET) = 4 EACH
STA. 589+00 TO STA. 593+00 (RAMP 3 4TH STREET) = 3 EACH

FRONTAGE RD. # 1
EXISTING R/W & C OF A
LIMITS OF FLOOD HAZARD AREA
EXISTING R/W
BR. NO. 3609
BR. END 567+78.19
2@2' LANES
3@2' LANES
8' EXIST. CONC. MED. BARRIER
STA. 568+13.25 N.B. & S.B. LANES BEGIN FULL DEPTH PAVM'T TRANSITION
STA. 572+70 IN PLACE TYPE "H" DROP INLET 4'x3'x H=4'-0"-1-OPENING 18"x68' C.M. PIPE OUTLET SEE NOTE (2)
STA. 575+01 IN PLACE TYPE "H" DROP INLET 4'x4'x H=6'-6"-1-OPENING MODIFY TOP D.I. TO TYPE "ST" 24"x88' R.C. PIPE OUTLET RETAIN
STA. 577+13.25 N.B. & S.B. LANES END FULL DEPTH PAVM'T TRANSITION
PI 582+30.23
PC 583+33.23
℄ MEDIAN I-540
N61°59'00"E 910.89'
℄ RAMP 1
℄ RAMP 2
℄ RAMP 3
℄ RAMP 4
PC 571+90.12
PC 573+18.33
PT 574+90.12
PC 575+84.19
PCC 578+96.19
PT 580+97.30
PC 577+40.73
STA. 576+00 END FULL DEPTH
STA. 579+03 IN PLACE TYPE "H" DROP INLET 4'x4'x H=5'-0"-1-OPENING 24"x72' R.C. PIPE OUTLET RETAIN
TEMP. CULV'T
TEMP RAMP 1
CRV. 14-2
CRV. 14-1
15' LANE
ACCEL LANE
6' SH.
AC

③ ℄ RAMP 1
Delta 12°00'00.0"RT.
Dc = 4°00'00"
T = 150.55'
L = 300.00'
R = 250.00'

④ ℄ RAMP 1
Delta 39°00'00.0"RT.
Dc = 12°30'00"
T = 162.32'
L = 312.00'
R = 250.00'

⑤ ℄ RAMP 1
Delta 38°47'16.2"RT.
Dc = 19°17'11"
T = 104.58'
L = 201.11'
R = 250.00'
STA. 581+50.00 END RAMP 1 PAVEMENT TRANSITION

⑥ ℄ RAMP 2
Delta 90°56'18.8"RT.
Dc = 8°45'00"
T = 655.62'
L = 1039.30'
R = 250.00'
STA. 581+42.65 END RAMP 2 PAVEMENT TRANSITION

⑦ ℄ RAMP 4
Delta 83°45'06.3"LT.
Dc = 18°00'00"
T = 285.36'
L = 465.29'
R = 300.00'
STA. 590+22.43 END RAMP 4 PAVEMENT TRANSITION
PT 590+21.68

⑧ ℄ RAMP 4
Delta 5°42'30.0"LT.
Dc = 3°00'00"
T = 95.22'
L = 190.28'
R = 300.00'
PC 586+06.80
STA. 587+91.49 END RAMP 3 PAVEMENT TRANSITION
PT 590+72.09

℄ MAIN LANES
Delta = 18°04'00"
Dc = 1°00'00"
T = 910.89'
L = 1806.67'
R = 5729.58'

TEMP RAMP 1
STA. 583+95
24'x50' TEMP. CULV'T

RAMP 1
STA. 581+50 IN PLACE
24'x70' R.C. PIPE CULV'T
RETAIN AND CONSTRUCT
24'x120' TEMP. CULV'T STAGE I
REMOVE STAGE V
SEE NOTE (1)

STA. 589+00 IN PLACE
24"x98' R.C. PIPE CULV'T
RETAIN

STA. 571+19.4 IN PLACE
TRP 10'x9'x23' R.C. BOX CULV'T
15° RT. FORWARD SKEW
RETAIN

STA. 572+00 IN PLACE TYPE "H" DROP INLET 4'x3'x H=4'-0"-1-OPENING 18"x70' C.M. PIPE OUTLET SEE NOTE (2)

STA. 575+87 IN PLACE TYPE "H" DROP INLET 4'x3'x H=4'-0"-1-OPENING 18"x22' C.M. PIPE OUTLET SEE NOTE (2)

FOURTH STREET
EXISTING R/W
LIMITS OF FLOOD HAZARD AREA
FRONTAGE RD. # 3
EXISTING R/W & C OF A
EXISTING R/W & ℄ OF A
PC 20+75.00
PT 23+42.67
PC 21+21.45
N49°55'00"E 378.78'
EXISTING R/W

FULL DEPTH PAVEMENT
PAVEMENT TRANSITION

CURVE (1) ℄ CONST. 4TH ST.
Delta = 80°18'00"
Dc = 30°00'00"
T = 154'
L = 267.67'
R = 190.99'

CURVE (2) ℄ CONST. 4TH ST.
Delta = 66°42'00"
Dc = 24°00'00"
T = 157.12'
L = 271.92'
R = 238.73'

TEMPORARY RAMP CURVE DATA

	CRV IA-1	CRV IA-2
PI	589+63.48	582+09.80
Δ	122°20'48"	40°59'27"
D	38°11'50"	38°11'50"
R	150'	150'
T	272.55'	56.09'

REMOVAL & DISPOSAL OF CONC. CURB & GUTTER

STA. 568+08.3 TO STA. 572+80.0 (LT. OF S.B. LANES) = 471.7 LIN. FT.

	GUARDRAIL (TYPE A)	GUARDRAIL (TYPE B)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL	TERMINAL ANCHOR POST (TYPE 1)	CRASH CUSHON
STA. 567+73.1 TO STA. 574+91.9 (LT. OF S.B. LANES)	= 650 L.F.	-	1EACH	1EACH	-	-
STA. 567+83.3 TO STA. 576+02.1 (RT. OF N.B. LANES)	= 800 L.F.	-	-	1EACH	1EACH	-
STA. 574+99.4 TO STA. 578+18.2 (MEDIAN)	-	= 250 L.F.	-	2 EACH	-	1EACH

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 567+97.6 TO STA. 574+47.6 (LT. OF S.B. LANES) = 650 L.F.
STA. 567+83.3 TO STA. 575+83.3 (RT. OF N.B. LANES) = 800 L.F.
STA. 574+83.8 TO STA. 577+33.8 (MEDIAN) = 250 L.F.
STA. 575+08.8 TO STA. 577+33.8 (MEDIAN) = 225 L.F.

REMOVAL & DISPOSAL OF APPROACH SLAB & GUTTERS

STA. 567+75.5 TO STA. 568+40.5 (S.B. LANES) = 1EACH
STA. 567+80.9 TO STA. 568+15.9 (N.B. LANES) = 1EACH

CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL)

STA. 567+78.2 TO STA. 575+00.0 (℄ MEDIAN) = 721.8 LIN. FT.
• INCLUDES TRANSITION AT BRIDGE END TO TIE TO EXISTING MEDIAN BARRIER

(1) INSTALLATION OF TEMPORARY PIPE CULVERTS SHALL INCLUDE ALL WORK NECESSARY TO ESTABLISH CONNECTION TO EXISTING PIPE CULVERTS WHERE REQUIRED. REMOVAL OF EXISTING END TREATMENT AND LENGTHS OF EXISTING PIPE OUTLETS MAY BE REQUIRED FOR CONNECTION OF TEMPORARY CULVERT AND/OR CONSTRUCTION OF TEMPORARY RAMP PAVEMENT. A MINIMUM OF 1' IS REQUIRED BETWEEN THE TOP OF AN EXISTING STRUCTURE AND THE BOTTOM OF THE PAVEMENT SECTION AS DETAILED IN THE PLANS. UPON REMOVAL OF TEMPORARY RAMP, ALL DRAINAGE STRUCTURES SHALL BE RECONSTRUCTED IN KIND AND SLOPES ARE TO BE REDRESSED, SEEDED, AND MULCHED. ALL COST FOR ESTABLISHING TEMPORARY DRAINAGE STRUCTURES AND RESTORING THE EXISTING DRAINAGE STRUCTURES TO PRECONSTRUCTION CONDITIONS WILL NOT BE PAID FOR DIRECTLY, BUT CONSIDERED SUBSIDIARY TO THE BID ITEM, "603 TEMPORARY CULVERT".

(2) EXISTING CURB & GUTTER TO BE REMOVED. EXISTING DROP INLETS TO BE FILLED WITH CONCRETE AND ABANDONED. EXISTING HEADWALLS TO BE REMOVED AND DAMAGED AREAS TO BE REDRESSED AND SEEDED. ALL COSTS TO BE INCLUDED IN PRICE BID FOR "REMOVAL AND DISPOSAL OF HEADWALLS" AND VARIOUS CONTRACT ITEMS. EXISTING FILL SLOPES ARE NOT TO BE DISTURBED EXCEPT WHERE REQUIRED TO REMOVE EXISTING HEADWALLS AND REDRESS SLOPES.

REMOVAL & DISPOSAL OF HEADWALLS

STA. 572+70 (LT. OF MAIN LANES) = 1EACH (SEE NOTE (2))

REMOVAL & DISPOSAL OF CONCRETE PARAPET WALL

STA. 567+73.3 TO STA. 567+99.3 (LT. OF S.B. LANES) = 1EACH

REMOVAL & DISPOSAL OF CONCRETE MEDIAN BARRIER

STA. 567+78.2 TO STA. 575+00.0 (℄ MEDIAN) = 721.8 LIN. FT.
• INCLUDES REMOVING AND SALVAGING EXISTING FENCE.

REMOVAL & DISPOSAL OF GUARD CABLE

STA. 581+81.0 TO STA. 582+81.0 (LT. OF RAMP 3) = 100 L.F.

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				6	ARK.			
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(2) PLAN STA. 593+00 - 645+00

NOTE: EXISTING VERTICAL CLEARANCE UNDER BRIDGE NO. 3977 IS 16'-10" S.B. AND 17'-1" N.B. MINIMUM 16'-0" VERTICAL CLEARANCE IS REQUIRED FOR FINISHED ROADWAY.

(9) ℄ RAMP 4
Delta 81°41'52.4"LT.
Dc = 13°00'00"
T = 381.09'
L = 628.45'
R = 300.00'

STA. 602+00 - STA. 611+00 CONST. 18'x900' TEMP. CULV'T IN MEDIAN
CONST. STAGE IB
REMOVE STAGE VA

STA. 596+21 IN PLACE
24"x96' R.C.PIPE CULV'T
RETAIN

PC 594+84.99

PT 596+75.17

595+00 600+00 605+00 610+00 615+00

EXISTING R/W & ℄ OF A

3@12' LANES

2@12' LANES

℄ MEDIAN I-540

TEMP. CULV'T

ACCEL. LANE

EQUATION: STA. 596+33.34 BK = STA. 596+44.58 AHD

STA. 613+89.88
S.B. LANES
BEGIN FULL DEPTH
PAVM'T TRANSITION

N67°59'00"E
4499.62'

STA. 614+03.30
N.B. LANES
BEGIN FULL DEPTH
PAVM'T TRANSITION

LIMITS OF FLOOD HAZARD AREA

STA. 616+00 IN PLACE
24"x118' R.C.PIPE CULV'T
30° RT. FORWARD SKEW
RETAIN

℄ 28TH ST.
Delta = 11°30'00"
Dc = 6°00'00"
T = 96.16'
L = 191.67'
R = 954.93'

PT 1+91.71

BR. NO. 3977

STA. 616+00 IN PLACE
24"x118' R.C.PIPE CULV'T
30° LT. FORWARD SKEW
RETAIN

STA. 618+20 IN PLACE
36"x118' R.C.PIPE CULV'T
30° RT. FORWARD SKEW
RETAIN

FULL DEPTH PAVEMENT

PAVEMENT TRANSITION

EROSION CONTROL LEGEND

E-6	SAND BAG DITCH CHECK
E-4	SILT FENCE
E-8	DUMPED ROCK DITCH CHECK
E-7	DROP INLET SILT FENCE

	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	TERMINAL ANCHOR POST (TYPE 1)	THRIE BEAM GUARDRAIL TERMINAL
STA. 614+25.4 TO STA. 616+94.2 (RT. OF N.B. LANES)	= 200 L.F.	1 EACH	-	1 EACH
STA. 618+10.5 TO STA. 621+38.9 (LT. OF S.B. LANES)	= 291 L.F.	-	-	2 EACH
STA. 615+20.1 TO STA. 621+38.9 (LT. OF N.B. LANES)	= 550 L.F.	1 EACH	-	1 EACH
STA. 616+20.2 TO STA. 621+38.9 (RT. OF S.B. LANES)	= 500 L.F.	-	1 EACH	1 EACH

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 614+95.3 TO STA. 616+95.3 (RT. OF N.B. LANES) = 200 L.F.
STA. 615+34.6 TO STA. 618+34.6 (MEDIAN) = 300 L.F.
STA. 615+85.4 TO STA. 618+85.4 (MEDIAN) = 300 L.F.
STA. 618+09.4 TO STA. 620+09.4 (LT. OF S.B. LANES) = 200 L.F.

REMOVAL & DISPOSAL OF CONCRETE PIER PROTECTION

STA. 616+93.6 TO STA. 617+23.6 (RT. OF N.B. LANES) = 30.0 L.F.
STA. 617+81.1 TO STA. 618+11.1 (LT. OF S.B. LANES) = 30.0 L.F.

CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)

STA. 616+93.6 TO STA. 617+23.6 (RT. OF N.B. LANES) = 30.0 L.F.
STA. 617+81.1 TO STA. 618+11.1 (LT. OF S.B. LANES) = 30.0 L.F.

REVISIONS

FLAT ROCK CREEK

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 619+38.9 TO STA. 621+38.9 (RT. OF N.B. LANES) = 200 L.F.
STA. 619+38.9 TO STA. 621+38.9 (LT. OF N.B. LANES) = 200 L.F.
STA. 622+61.1 TO STA. 624+61.1 (RT. OF S.B. LANES) = 200 L.F.
STA. 622+61.1 TO STA. 624+61.1 (LT. OF S.B. LANES) = 200 L.F.

REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT

STA. 614+03.30 TO STA. 621+03.93 (N.B. LANES) = 1868.3 SQ. YD.
STA. 622+96.06 TO STA. 628+61.06 (N.B. LANES) = 1506.7 SQ. YD.
STA. 613+89.88 TO STA. 621+03.93 (S.B. LANES) = 1904.1 SQ. YD.
STA. 622+96.06 TO STA. 628+61.06 (S.B. LANES) = 1506.7 SQ. YD.

620+00 625+00 630+00 635+00 640+00 645+00

STA. 620+89.88
S.B. LANES
END FULL DEPTH
PAVM'T TRANSITION

BR. END 621+38.93

BR. END 622+61.06

STA. 622+61.06
N.B. & S.B. LANES
BEGIN FULL DEPTH
PAVM'T TRANSITION

STA. 628+61.06
N.B. & S.B. LANES
END FULL DEPTH
PAVM'T TRANSITION

LIMITS OF FLOOD HAZARD AREA

2@12' LANES

PC 636+16.86

℄ S.B. LANES

℄ N.B. LANES

N67°59'00"E
4499.62'

℄ MEDIAN I-540

N67°59'00"E
1356.43'

BR. NO. 3956A

BR. NO. 3956B

STA. 621+03.31
N.B. LANES
END FULL DEPTH
PAVM'T TRANSITION

BR. END 621+38.93

BR. END 622+61.06

STA. 625+83 IN PLACE
24"x102' R.C.PIPE CULV'T
RETAIN

REMOVAL & DISPOSAL OF APPROACH SLAB & GUTTERS

STA. 621+03.9 TO STA. 621+38.9 (N.B. LANES) = 1 EACH
STA. 621+03.9 TO STA. 621+38.9 (S.B. LANES) = 1 EACH
STA. 622+96.1 (N.B. LANES) = 1 EACH
STA. 622+61.1 TO STA. 622+96.1 (S.B. LANES) = 1 EACH

STA. 636+00 IN PLACE
TYPE "R" DROP INLET IN MEDIAN
6'x4'x H=5'-6" 2-OPENINGS
24"x124' R.C.PIPE CULV'T
RETAIN

STA. 642+00 IN PLACE
24"x144' R.C. PIPE CULV'T
TYPE "R" DROP INLET IN MEDIAN
6'x4'x H=5'-9" 1-OPENING
RETAIN

EXISTING R/W & ℄ OF A

NOTE:
BRIDGE NOS. 3956A & B ARE EXCEPTIONS TO JOB BB0407.

	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL
STA. 618+70.1 TO STA. 621+38.9 (RT. OF N.B. LANES)	= 200 L.F.	1 EACH	1 EACH
STA. 622+61.1 TO STA. 625+79.9 (RT. OF S.B. LANES)	= 250 L.F.	1 EACH	1 EACH
STA. 622+61.1 TO STA. 625+29.9 (LT. OF S.B. LANES)	= 200 L.F.	1 EACH	1 EACH

FULL DEPTH PAVEMENT

PAVEMENT TRANSITION

STATE OF ARKANSAS
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				6	ARK.			
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(2) PLAN STA. 645+00 - 675+00

WIRE FENCE (TYPE A)

STA. 661+42.4 TO STA. 664+20.0 (RT. OF MAIN LANES)= 325 L.F.
STA. 667+90.0 TO STA. 668+20.0 (LT. OF MAIN LANES)= 175 L.F.
STA. 668+80.0 TO STA. 669+10.0 (RT. OF MAIN LANES)= 200 L.F. W/16' VEHICULAR GATE

REMOVAL AND DISPOSAL OF FENCE

STA. 661+42.4 TO STA. 664+20.0 (RT. OF MAIN LANES)= 325 L.F.
STA. 667+90.0 TO STA. 668+20.0 (LT. OF MAIN LANES)= 175 L.F.
STA. 668+80.0 TO STA. 669+10.0 (RT. OF MAIN LANES)= 200 L.F.

EROSION CONTROL LEGEND

E-S	SAND BAG DITCH CHECK
E-K	SILT FENCE
E-R	DUMPED ROCK DITCH CHECK
E-I	DROP INLET SILT FENCE

⚠1 STA. 663+99.64 - PROPOSED BR. END
BR. NO. B6881
487.56' TOTAL LENGTH
40' - 0" CLEAR ROADWAY
485' CONTINUOUS COMPOSITE W-BEAM
STA. 668+87.20 - PROPOSED BR. END
CONSTRUCT

⚠2 STA. 663+28.42 - PROPOSED BR. END
BR. NO. A6881
487.56' TOTAL LENGTH
40' - 0" CLEAR ROADWAY
485' CONTINUOUS COMPOSITE W-BEAM
STA. 668+15.08 - PROPOSED BR. END
CONSTRUCT

STA. 664+06.91 - BR. END
462.50' REGULAR COMPOSITE I-BEAM SPAN
BR. NO. 3958B
28' - 0" CLEAR ROADWAY
STA. 668+69.41 - BR. END
REMOVE AS EXISTING BRIDGE STRUCTURE = 1.00 LUMP SUM

STA. 663+36.12 - BR. END
462.50' REGULAR COMPOSITE I-BEAM SPAN
BR. NO. 3958A
28' - 0" CLEAR ROADWAY
STA. 667+98.62 - BR. END
REMOVE AS EXISTING BRIDGE STRUCTURE = 1.00 LUMP SUM

STA. 671+00 - STA. 677+00 CONST.
18"x600' TEMP. CULV'T IN MEDIAN
CONST. STAGE 1B
REMOVE STAGE VA

REVISIONS

BR. END L.M.L. 646+58.91
BR. END L.M.L. 648+23.34
BR. END R.M.L. 648+34.03
BR. END R.M.L. 649+98.45
EXIST. BR. END 663+36.12
EXIST. BR. END 664+06.91
EXIST. BR. END 667+98.62
EXIST. BR. END 668+69.41
BR. NO. 3957A
BR. NO. 3957B
BR. NO. 3958A
BR. NO. 3958B
645+00
650+00
655+00
660+00
665+00
670+00
675+00
5+00
15+00
STA. 655+05 IN PLACE
TYPE "H" DROP INLET
6'x6'x H=? 2-OPENINGS
48"x154' R.C.PIPE CULV'T
48"x206' R.C. PIPE CULV'T
30° LT. FORWARD SKEW
RETAIN
LIMITS OF FLOOD HAZARD AREA
EXISTING R/W & C OF A
EXISTING C OF A
EXISTING R/W
℄ S.B. LANES
℄ N.B. LANES
℄ MEDIAN I-540
N2°47'00"W 1356.43'
N67°59'00"E 1356.43'
N67°59'00"E 2108.89'
N67°59'00"E
P.I. 649+73.29
N2°47'00.0"W
ARK. HWY. NO. 162
UNION PAC. R.R.
FLAT ROCK CREEK
TEMP. CULV'T
ACCEL LANE
3@2 LANES
EQUATION ℄ BK 659+75.75 = AHD 661+42.40
P.I. 659+75.75

℄ MEDIAN I-540
P.I. 649+73.29
Delta = 63°16'00"
Dc = 3°00'00"
T = 1356.43'
L = 2108.89'
R = 1909.86'

℄ N.B. LANES
P.I. 649+61.43
Delta = 63°16'01" LT.
θ = 3°44'59" LT.
DC = 3°00'00"
RC = 1909.97'
LC = 2109.03'
LS = 250'

℄ S.B. LANES
P.I. 649+61.43
Delta = 63°16'01" LT.
θ = 3°44'59" LT.
DC = 3°00'00"
RC = 1909.97'
LC = 2109.03'
LS = 250'

NOTE:
BRIDGE NOS. 3957A & B AT I-540 OVER ARK. HWY. NO. 162 TO BE JACKED. SEE BRIDGE PLANS AND MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR DETAILS.

NOTE: EXISTING VERTICAL CLEARANCE UNDER BRIDGE NO. 3957A IS 14'-10" ℄ HWY. 162. MINIMUM 16'-0" VERTICAL CLEARANCE IS REQUIRED FOR FINISHED ROADWAY.

NOTE: EXISTING VERTICAL CLEARANCE UNDER BRIDGE NO. 3957B IS 14'-11" ℄ HWY. 162. MINIMUM 16'-0" VERTICAL CLEARANCE IS REQUIRED FOR FINISHED ROADWAY.

FOR THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, FLAT ROCK CREEK IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAM BANK ELEVATIONS ARE 409.0 FT. MSL.

	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL	TERMINAL ANCHOR POST (TYPE 1)
STA. 644+95.0 TO STA. 648+13.8 (LT. ℄ N.B. LANES)	= 250 L.F.	1EACH	1EACH	-
STA. 645+66.9 TO STA. 648+35.6 (RT. ℄ N.B. LANES)	= 200 L.F.	1EACH	1EACH	-
STA. 648+23.8 TO STA. 656+17.6 (LT. ℄ S.B. LANES)	= 725 L.F.	1EACH	1EACH	-
STA. 648+45.2 TO STA. 651+64.0 (RT. ℄ S.B. LANES)	= 250 L.F.	1EACH	1EACH	-
STA. 659+03.9 TO STA. 663+89.3 (LT. ℄ N.B. LANES)	= 250 L.F.	1EACH	1EACH	-
STA. 661+43.6 TO STA. 664+12.3 (RT. OF N.B. LANES)	= 200 L.F.	1EACH	1EACH	-
STA. 668+02.4 TO STA. 676+46.2 (LT. OF S.B. LANES)	= 775 L.F.	1EACH	1EACH	-
STA. 668+25.5 TO STA. 671+44.3 (RT. OF S.B. LANES)	= 250 L.F.	1EACH	1EACH	-
STA. 668+87.2 TO STA. 679+56.0 (RT. OF N.B. LANES)	= 1050 L.F.	-	1EACH	1EACH

REMOVAL & DISPOSAL OF APPROACH SLAB & GUTTERS

STA. 646+23.91 TO STA. 646+58.91 (℄ S.B. LANES) = 1EACH
STA. 648+23.34 TO STA. 648+58.34 (℄ N.B. LANES) = 1EACH
STA. 648+34.03 TO STA. 647+99.03 (℄ S.B. LANES) = 1EACH
STA. 649+98.45 TO STA. 650+33.45 (℄ N.B. LANES) = 1EACH
STA. 663+01.1 TO STA. 663+36.1 (S.B. LANES) = 1EACH
STA. 663+71.9 TO STA. 664+06.9 (N.B. LANES) = 1EACH
STA. 667+98.6 TO STA. 668+33.6 (S.B. LANES) = 1EACH
STA. 668+69.4 TO STA. 669+04.4 (N.B. LANES) = 1EACH

REMOVAL & DISPOSAL OF CONCRETE PARAPET WALL

STA. 663+89.0 TO STA. 664+15.0 (RT. OF N.B. LANES)= 1EACH
STA. 663+72.0 TO STA. 663+98.0 (LT. OF N.B. LANES)= 1EACH
STA. 667+90.5 TO STA. 668+16.5 (LT. OF S.B. LANES)= 1EACH
STA. 668+06.7 TO STA. 668+32.7 (RT. OF S.B. LANES)= 1EACH

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 645+81.9 TO STA. 647+81.9 (LT. OF N.B. LANES) = 200 L.F.
STA. 646+02.2 TO STA. 648+02.2 (RT. OF N.B. LANES) = 200 L.F.
STA. 648+59.1 TO STA. 655+84.1 (LT. OF S.B. LANES) = 725 L.F.
STA. 648+81.1 TO STA. 650+81.1 (RT. OF S.B. LANES) = 200 L.F.
STA. 661+90.7 TO STA. 663+90.7 (RT. OF N.B. LANES) = 200 L.F.
STA. 661+74.5 TO STA. 663+74.5 (LT. OF N.B. LANES) = 200 L.F.
STA. 668+14.8 TO STA. 675+89.8 (LT. OF S.B. LANES) = 775 L.F.
STA. 668+31.0 TO STA. 670+31.0 (RT. OF S.B. LANES) = 200 L.F.
STA. 668+77.5 TO STA. 679+27.5 (RT. OF N.B. LANES) = 1050 L.F.

STATE OF ARKANSAS
JAMES L. BARR
REGISTERED PROFESSIONAL ENGINEER
No. 9808
8/31/12

8/27/2012 9:46:44 AM

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	120	464

(2) PLAN STA. 675+00 - 705+00

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 676+88.5	TO	STA. 679+26.0	(LT. OF N.B. LANES) = 237.5 L.F.
STA. 688+70.0	TO	STA. 692+45.0	(MEDIAN) = 375 L.F.
STA. 688+94.8	TO	STA. 690+94.8	(RT. OF N.B. LANES) = 200 L.F.
STA. 689+56.2	TO	STA. 693+31.2	(MEDIAN) = 375 L.F.
STA. 690+10.3	TO	STA. 690+60.3	(LT. OF S.B. LANES) = 50 L.F.
STA. 691+05.8	TO	STA. 693+05.8	(LT. OF S.B. LANES) = 200 L.F.
STA. 691+40.9	TO	STA. 691+90.9	(RT. OF N.B. LANES) = 50 L.F.
STA. 704+00.0	TO	STA. 706+25.0	(LT. OF S.B. LANES) = 225 L.F.
STA. 704+00.0	TO	STA. 706+25.0	(LT. OF S.B. LANES) = 225 L.F.
STA. 696+50.0	TO	STA. 699+00.0	(LT. OF RAMP 3) = 250 L.F.
STA. 10+85.6	TO	STA. 12+85.6	(RT. OF E.B. U.S. 64) = 200 L.F.
STA. 12+37.9	TO	STA. 13+12.9	(LT. OF E.B. U.S. 64) = 75 L.F.
STA. 16+87.1	TO	STA. 18+87.1	(RT. OF W.B. U.S. 64) = 200 L.F.
STA. 17+14.4	TO	STA. 17+89.4	(LT. OF W.B. U.S. 64) = 75 L.F.

TEMPORARY RAMP CURVE DATA

	CRV 8A-1	
PI	683+78.34	
Δ	76°54'45"	
D	24°00'00"	
R	238.73'	
T	189.60'	

STA. 686+35.36
END RAMP 8
PAVEMENT TRANSITION

TEMP. RAMP 8
STA. 683+90
30'x50' TEMP. CULV'T
CONSTRUCT STAGE IA
REMOVE STAGE VA

RAMP 7
STA. 685+20 IN PLACE
24"x70' R.C.PIPE CULV'T
30° SKEW
RETAIN

STA. 677+00 IN PLACE
24"x122' R.C.PIPE CULV'T
RETAIN

RAMP 8
STA. 682+50 IN PLACE
30"x64' R.C.PIPE CULV'T
30° SKEW
RETAIN

RAMP 8
STA. 688+12 IN PLACE
6'x5'x98' R.C.BOX CULV'T
RETAIN

U.S. 64
STA. 6+07 IN PLACE
24"x179' C.M. PIPE CULV'T
5'x5' DROP INLET IN MEDIAN
RETAIN

U.S. 64
STA. 7+35 IN PLACE
6'x5'x172' R.C. BOX CULV'T
30° LT. FORWARD SKEW
6'x5'x88' R.C. BOX CULV'T LT.
90° TO ℄ U.S. 64
RETAIN

STA. 694+00 IN PLACE
24"x72' R.C.PIPE INLET
TYPE "H" DROP INLET
24"x80' R.C. PIPE OUTLET
RETAIN

REMOVAL & DISPOSAL OF CONCRETE PIER PROTECTION

STA. 689+62.5	TO	STA. 690+12.0	(LT. OF S.B. LANES) = 49.5 L.F.
STA. 690+58.0	TO	STA. 691+07.5	(LT. OF S.B. LANES) = 49.5 L.F.
STA. 690+93.1	TO	STA. 691+42.6	(RT. OF N.B. LANES) = 49.5 L.F.
STA. 691+89.2	TO	STA. 692+38.7	(RT. OF N.B. LANES) = 49.5 L.F.

CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)

STA. 689+62.5	TO	STA. 690+12.0	(LT. OF S.B. LANES) = 49.5 L.F.
STA. 690+58.0	TO	STA. 691+07.5	(LT. OF S.B. LANES) = 49.5 L.F.
STA. 690+93.1	TO	STA. 691+42.6	(RT. OF N.B. LANES) = 49.5 L.F.
STA. 691+89.2	TO	STA. 692+38.7	(RT. OF N.B. LANES) = 49.5 L.F.

REMOVAL & DISPOSAL OF APPROACH GUTTERS

STA. 12+68.4	TO	STA. 13+03.4	(W.B. U.S. 64) = 2 EACH
STA. 13+11.9	TO	STA. 13+46.9	(E.B. U.S. 64) = 2 EACH
STA. 16+53.1	TO	STA. 16+88.1	(W.B. U.S. 64) = 2 EACH
STA. 16+96.6	TO	STA. 17+31.6	(E.B. U.S. 64) = 2 EACH

RAMP 5
STA. 686+44 IN PLACE
6'x5'x88' R.C.BOX CULV'T
RETAIN

RAMP 5
STA. 699+07 IN PLACE
5'x4'x80' R.C.BOX CULV'T
30° SKEW
RETAIN

STA. 698+50 IN PLACE
5'x4'x245' R.C. BOX CULV'T
2-TYPE "T" DROP INLETS
5'x5'x H=2'-0" 2-OPENINGS
RETAIN

RAMP 6
STA. 696+00 IN PLACE
24"x74' R.C.PIPE CULV'T
RETAIN

STA. 705+00 IN PLACE
24"x76' R.C.PIPE CULV'T
STEEL GRATE ASSEMBLY IN MEDIAN
RETAIN & ADJUST SGA TO GRADE

STA. 696+42.1
END RAMP 5
PAVEMENT TRANSITION

STA. 685+15.69
END RAMP 7
PAVEMENT TRANSITION

STA. 697+96.41
END RAMP 6
PAVEMENT TRANSITION

STA. 685+60.33
END RAMP 1
PAVEMENT TRANSITION

STA. 700+85.51
END RAMP 3
PAVEMENT TRANSITION

STA. 683+92.93
END RAMP 2
PAVEMENT TRANSITION

STA. 696+62.91
END RAMP 4
PAVEMENT TRANSITION

RAMP 2
STA. 687+00 IN PLACE
36"x56' R.C.PIPE CULV'T
RETAIN

RAMP 3
STA. 700+00 IN PLACE
24"x170' R.C.PIPE CULV'T
RETAIN

RAMP 4
STA. 693+50 IN PLACE
30"x76' R.C.PIPE CULV'T
30° SKEW
RETAIN

RAMP 4
STA. 697+80 IN PLACE
5'x4'x96' R.C.BOX CULV'T
45°LT. FORWARD SKEW
RETAIN

STA. 684+00 IN PLACE
24"x72' R.C.PIPE CULV'T
STEEL GRATE ASSEMBLY MED. & RT.
RETAIN & ADJUST SGA TO GRADE

STA. 689+00 IN PLACE
24"x100' R.C.PIPE CULV'T
RETAIN

RAMP 1
STA. 686+81 IN PLACE
42"x84' R.C.PIPE CULV'T
RETAIN

RAMP 1
STA. 695+00 IN PLACE
24"x116' R.C.PIPE CULV'T
RETAIN

NOTE: EXISTING VERTICAL CLEARANCE UNDER BRIDGE NO. 3959B IS 16'-9" S.B. AND 18'-4" N.B. JACK BRIDGE TO PROVIDE MIN. 16'-0" CLEARANCE FOR FINISHED ROADWAY.

NOTE: EXISTING VERTICAL CLEARANCE UNDER BRIDGE NO. 3959A IS 16'-6" S.B. AND 16'-9" N.B. JACK BRIDGE TO PROVIDE MIN. 16'-0" CLEARANCE FOR FINISHED ROADWAY.

				GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	TERMINAL ANCHOR POST (TYPE I)	THRIE BEAM GUARDRAIL TERMINAL
STA. 688+24.9	TO	STA. 690+93.7	(RT. OF N.B. LANES)	= 200 L.F.	1 EACH	-	1 EACH
STA. 688+70.0	TO	STA. 692+45.0	(LT. OF N.B. LANES)	= 325 L.F.	1 EACH	1 EACH	-
STA. 689+56.2	TO	STA. 693+31.2	(RT. OF S.B. LANES)	= 325 L.F.	1 EACH	1 EACH	-
STA. 690+14.4	TO	STA. 690+58.6	(LT. OF S.B. LANES)	= 10 L.F.	-	-	2 EACH
STA. 691+06.9	TO	STA. 693+75.7	(LT. OF S.B. LANES)	= 200 L.F.	1 EACH	-	1 EACH
STA. 691+42.0	TO	STA. 691+89.8	(RT. OF N.B. LANES)	= 10 L.F.	-	-	2 EACH
STA. 696+50.0	TO	STA. 699+00.0	(LT. OF RAMP 3 U.S. 64)	= 200 L.F.	1 EACH	1 EACH	-
STA. 10+16.8	TO	STA. 12+85.6	(RT. OF E.B. U.S. 64)	= 200 L.F.	1 EACH	-	1 EACH
STA. 10+44.1	TO	STA. 13+12.9	(LT. OF E.B. U.S. 64)	= 200 L.F.	1 EACH	-	1 EACH
STA. 16+87.1	TO	STA. 19+55.9	(RT. OF W.B. U.S. 64)	= 200 L.F.	1 EACH	-	1 EACH
STA. 17+14.4	TO	STA. 19+83.2	(LT. OF W.B. U.S. 64)	= 200 L.F.	1 EACH	-	1 EACH

REVISIONS

EROSION CONTROL LEGEND

E-3	SAND BAG DITCH CHECK
E-4	SILT FENCE
E-6	DUMPED ROCK DITCH CHECK
E-7	DROP INLET SILT FENCE

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
5/31/12

8/27/2012 9:46:45 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.		BB0407	121	464

(2) PLAN STA. 705+00 - E.O.P.

CURVE (1) ℄ RAMP 1 Delta = 17°59'59" Dc = 3°00'00" T = 302.49' L = 599.99' R = 1909.86'

CURVE (2) ℄ RAMP 1 Delta = 108°00'01" Dc = 8°00'00" T = 985.77' L = 1350.00' R = 716.20'

CURVE (3) ℄ RAMP 1 Delta = 41°24'57" Dc = 3°00'00" T = 121.98' L = 1380.53' R = 1909.86'

CURVE (4) ℄ RAMP 2 Delta = 18°00'00" Dc = 4°03'36" T = 223.52' L = 443.36' R = 441.25'

CURVE (5) ℄ RAMP 2 Delta = 85°50'45" Dc = 9°17'54" T = 573.07' L = 523.25' R = 616.20'

CURVE (6) ℄ RAMP 2 Delta = 20°12'22" Dc = 6°00'00" T = 170.15' L = 336.77' R = 954.93'

CURVE (7) ℄ RAMP 2 Delta = 140°31'52" Dc = 24°00'00" T = 665.49' L = 585.54' R = 238.73'

CURVE (8) ℄ RAMP 3 Delta = 57°55'00" Dc = 6°00'00" T = 528.42' L = 965.28' R = 954.93'

CURVE (9) ℄ RAMP 4 Delta = 14°59'59" Dc = 3°00'00" T = 256.44' L = 498.99' R = 1909.86'

CURVE (10) ℄ RAMP 4 Delta = 69°35'01" Dc = 8°00'00" T = 497.62' L = 869.80' R = 716.20'

NOTE:
BRIDGE NOS. 3452, 3453, 3455, & 3456 ARE EXCEPTIONS TO JOB BB0407.

REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT

STA. 714+31.45 TO STA. 718+85.97 (RAMP 11-540/1-40 INTER.) = 1212.1 SQ. YD.
STA. 721+78.19 TO STA. 728+87.00 (RAMP 11-540/1-40 INTER.) = 1890.2 SQ. YD.
STA. 731+18.14 TO STA. 734+67.00 (RAMP 11-540/1-40 INTER.) = 930.3 SQ. YD.
STA. 714+88.65 TO STA. 718+71.21 (RAMP 2 1-540/1-40 INTER.) = 637.6 SQ. YD.
STA. 721+63.42 TO STA. 727+71.29 (RAMP 2 1-540/1-40 INTER.) = 1013.1 SQ. YD.
STA. 729+87.43 TO STA. 735+58.30 (RAMP 2 1-540/1-40 INTER.) = 951.5 SQ. YD.
STA. 387+00.00 TO STA. 392+50.00 (RAMP 3 1-540/1-40 INTER.) = 916.7 SQ. YD.
STA. 713+50.00 TO STA. 719+00.00 (RAMP 4 1-540/1-40 INTER.) = 1466.7 SQ. YD.

EROSION CONTROL LEGEND

E-5	SAND BAG DITCH CHECK
• E-4 •	SILT FENCE
E-5	DUMPED ROCK DITCH CHECK
E-6	DROP INLET SILT FENCE

REVISIONS

TEMP. RAMP 3
STA. 9+50
15"x100' TEMP. CULV'T
CONST. STAGE IVA
REMOVE STAGE VA

END JOB BB0407 ℄ MEDIAN
STA. 719+13.59 I-540

REMOVAL & DISPOSAL OF APPROACH GUTTERS

STA. 398+91.2 TO STA. 399+26.2 (LT. I-40 W.B. LANES) = 1 EACH

REMOVAL & DISPOSAL OF APPROACH SLAB & GUTTERS

STA. 718+71.2 TO STA. 719+06.2 (RAMP 2 1-540/1-40 INTER.) = 1 EACH
STA. 718+86.0 TO STA. 719+21.0 (RAMP 11-540/1-40 INTER.) = 1 EACH
STA. 721+28.4 TO STA. 721+63.4 (RAMP 2 1-540/1-40 INTER.) = 1 EACH
STA. 721+43.2 TO STA. 721+78.2 (RAMP 11-540/1-40 INTER.) = 1 EACH
STA. 727+71.3 TO STA. 728+06.3 (RAMP 2 1-540/1-40 INTER.) = 1 EACH
STA. 728+87.0 TO STA. 729+22.0 (RAMP 11-540/1-40 INTER.) = 1 EACH
STA. 729+52.4 TO STA. 729+87.4 (RAMP 2 1-540/1-40 INTER.) = 1 EACH
STA. 730+83.1 TO STA. 731+18.1 (RAMP 11-540/1-40 INTER.) = 1 EACH

REMOVAL & DISPOSAL OF GUARDRAIL

STA. 716+81.9 TO STA. 718+81.9 (RT. OF RAMP 2) = 200 L.F.
STA. 716+81.9 TO STA. 718+81.9 (LT. OF RAMP 2) = 200 L.F.
STA. 717+21.0 TO STA. 719+21.0 (LT. OF RAMP 1) = 200 L.F.
STA. 721+67.5 TO STA. 723+67.5 (RT. OF RAMP 1) = 200 L.F.
STA. 721+67.5 TO STA. 729+22.0 (LT. OF RAMP 1) = 775 L.F.
STA. 725+82.0 TO STA. 727+82.0 (RT. OF RAMP 2) = 200 L.F.
STA. 725+82.0 TO STA. 727+82.0 (LT. OF RAMP 2) = 200 L.F.
STA. 731+07.4 TO STA. 733+07.4 (RT. OF RAMP 1) = 200 L.F.
STA. 731+07.4 TO STA. 733+07.4 (LT. OF RAMP 1) = 200 L.F.

REMOVAL & DISPOSAL OF CONCRETE PARAPET WALL

STA. 718+80.2 TO STA. 719+06.2 (LT. & RT. OF RAMP 2) = 2 EACH
STA. 721+43.2 TO STA. 721+69.2 (LT. & RT. OF RAMP 1) = 2 EACH
STA. 727+80.3 TO STA. 728+06.3 (LT. & RT. OF RAMP 2) = 2 EACH
STA. 730+83.1 TO STA. 731+09.1 (LT. & RT. OF RAMP 1) = 2 EACH

REMOVAL & DISPOSAL OF PRECAST CONCRETE BARRIER

STA. 398+91.2 TO STA. 400+40.0 (LT. I-40 W.B. LANES) = 200 L.F.
STA. 734+30.0 TO STA. 735+00.0 (RT. OF RAMP 2) = 70 L.F.
NOTE: PRECAST CONCRETE BARRIER TO BE REMOVED AND DELIVERED TO AHTD DISTRICT 4 HEADQUARTERS.

REMOVAL & DISPOSAL OF IMPACT ATTENUATION BARRIER

STA. 708+47.9 (LT. & RT. OF N.B. LANES) = 2 EACH
STA. 400+40.0 (LT. I-40 W.B. LANES) = 1 EACH

IMPACT ATTEN. BARRIER (TYPE A)

STA. 708+47.9 (LT. & RT. OF N.B. LANES) = 2 EACH

℄ MEDIAN I-40
PI 387+80.80
Delta = 37°30'00"
Dc = 2°22'00"
T = 821.80'
L = 1584.51'
R = 2420.95'

PC 384+95.48
PI 387+80.80
PT 390+80.29
PC 715+54.93
PT 394+60.75
PC 704+54.97
PT 706+45.24
PC 709+55.89
PT 710+48.67
PC 718+54.93
PT 723+31.93
PC 732+21.53
PT 736+81.93
PC 738+18.72
PT 741+43.84
POT 400+47.76
58.50' LT. ℄ I-40
PT 723+25.68

STA. 721+43.19
℄ RAMP 1
BEGIN FULL DEPTH
BEGIN RAMP 1

STA. 729+22.00
℄ RAMP 1
END FULL DEPTH

STA. 730+83.14
℄ RAMP 1
BEGIN FULL DEPTH
PAVM'T TRANSITION

STA. 734+67.00
℄ RAMP 1
END FULL DEPTH
PAVM'T TRANSITION

END CONST.
RAMP 3
STA. 387+00
END FULL DEPTH
PAVM'T TRANSITION

STA. 392+50.00
℄ RAMP 3
BEGIN FULL DEPTH
PAVM'T TRANSITION

STA. 714+31.45
℄ RAMP 1
BEGIN FULL DEPTH
PAVM'T TRANSITION

STA. 719+06.21
℄ RAMP 2
END FULL DEPTH
PAVM'T TRANSITION

STA. 719+20.97
℄ RAMP 1
END FULL DEPTH
PAVM'T TRANSITION

STA. 721+28.42
℄ RAMP 2
BEGIN FULL DEPTH
BEGIN RAMP 2

STA. 728+06.29
℄ RAMP 2
END FULL DEPTH

STA. 729+52.43
℄ RAMP 2
BEGIN FULL DEPTH

STA. 714+88.65
℄ RAMP 2
BEGIN FULL DEPTH
PAVM'T TRANSITION

STA. 713+50.00
℄ RAMP 4
BEGIN FULL DEPTH
PAVM'T TRANSITION

END CONST.
RAMP 4
STA. 719+00
END FULL DEPTH
PAVM'T TRANSITION

END CONST.
RAMP 1
STA. 741+00

BR. END 721+43.19
BR. END 719+20.97
BR. END 719+06.21
BR. END 721+28.42
BR. END 728+06.29
BR. END 729+52.43
BR. END 730+83.14
BR. END 729+22.00

BR. NO. 03452
BR. NO. 03453
BR. NO. 03455
BR. NO. 03456

TEMP. CULV'T
TEMP. CULV'T (BY OTHERS)

RAMP 1
STA. 719+45 IN PLACE
24"x108' R.C.PIPE CULV'T
TYPE "L" HEADWALLS
RETAIN

RAMP 1
STA. 721+23 IN PLACE
24"x108' R.C.PIPE CULV'T
TYPE "L" HEADWALLS
RETAIN

RAMP 2
STA. 719+30 IN PLACE
24"x88' R.C.PIPE CULV'T
TYPE "L" HEADWALLS
RETAIN

RAMP 2
STA. 721+05 IN PLACE
24"x88' R.C.PIPE CULV'T
TYPE "L" HEADWALLS
RETAIN

RAMP 2
STA. 731+75 IN PLACE
TYPE "H" DROP INLET IN MEDIAN
4'x3'-6"x H=6'-6" 2-OPENINGS
24"x104' R.C. PIPE OUTLET
RETAIN

STA. 712+00 IN PLACE
24"x116' R.C. PIPE CULV'T
RETAIN & CONSTRUCT
24"x300' TEMP. CULV'T STAGE I
REMOVE STAGE VA
SEE NOTE (A) SHEET 110 FOR
MORE INFORMATION

RAMP 4
STA. 720+50 IN PLACE
24"x96' R.C.PIPE CULV'T
45° RT. FORWARD SKEW
RETAIN

RAMP 1
STA. 740+50 IN PLACE
48"x72' R.C. PIPE CULV'T
RETAIN

STA. 739+90 RELOC. RAMP 2
IN PLACE 15"x100' TEMP. CULV'T
(CONSTRUCTED BY OTHERS)
STAGE II REMOVE 10' FROM EACH
END FILL REMAINDER WITH GROUT
& ABANDON. ALL COST TO BE
CONSIDERED INCLUDED IN
VARIOUS PAY ITEMS.

70 L.F. IN-PLACE PRECAST
BARRIER TO BE REMOVED

STA. 735+58.30
END CONST. RAMP 2

200 L.F. IN-PLACE PRECAST
BARRIER & ATTENUATOR
TO BE REMOVED

PCC 735+58.30

PCC 732+21.53
BEGIN REMOVAL OF
EXISTING RAMP 2

JOB B40102 TEMP. OVERLAY
TRANSITION (BY OTHERS) TO BE
REMOVED THIS PROJECT.

S56°47'00"E
136.78'

RAMP 2 (RELOCATED)

FORMER RAMP 2

DITCH PAV'T

FLAT ROCK CREEK

EXISTING R/W & ℄ OF A

LIMITS OF FLOOD HAZARD AREA

ACCEL LANE

3@12' LANES

FULL DEPTH PAVEMENT
PAVEMENT TRANSITION
STAGE II PAV'M'T REMOVAL

NOTE: THE FOLLOWING M.O.T. DEVICES LEFT-IN-PLACE UNDER PROJECT B40102 SHALL BE REMOVED UNDER PROJECT BB0407. ALL COSTS TO BE CONSIDERED INCLUDED IN VARIOUS PAY ITEMS. THE DEVICES ARE AS FOLLOWS:

SIGNS = 10 SQ. FT.
TRAFFIC DRUMS = 20 EACH
PRECAST CONCRETE BARRIER = 270 LIN. FT.
TEMPORARY IMPACT ATTENUATION BARRIER = 1 EACH
TYPE III BARRICADE (24' RT) = 24 LIN. FT.

TEMPORARY RAMP CURVE DATA

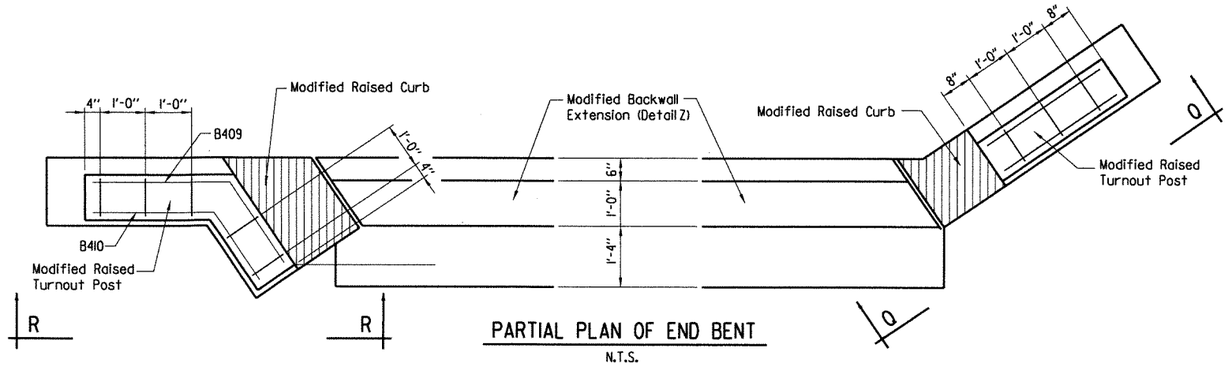
	CRV 2A-1	CRV 3A-1
PI	739+33.01	390+36.16
Δ	70°42'41"	56°57'43"
D	16°11'27"	16°00'00"
R	353.88'	358.10'
T	251.08'	194.28'

	GUARDRAIL (TYPE A)	GUARDRAIL TERMINAL (TYPE 2)	THRIE BEAM GUARDRAIL TERMINAL	TERMINAL ANCHOR POST (TYPE I)
STA. 716+37.4 TO STA. 719+06.2 (RT. OF RAMP 2)	= 200 L.F.	1 EACH	1 EACH	-
STA. 715+87.4 TO STA. 719+06.2 (LT. OF RAMP 2)	= 250 L.F.	1 EACH	1 EACH	-
STA. 717+02.2 TO STA. 719+21.0 (LT. OF RAMP 1)	= 200 L.F.	-	1 EACH	1 EACH
STA. 721+43.2 TO STA. 724+62.0 (RT. OF RAMP 1)	= 250 L.F.	1 EACH	1 EACH	-
STA. 721+43.2 TO STA. 729+22.0 (LT. OF RAMP 1)	= 775 L.F.	-	2 EACH	-
STA. 725+37.5 TO STA. 728+06.3 (RT. OF RAMP 2)	= 200 L.F.	1 EACH	1 EACH	-
STA. 724+87.5 TO STA. 728+06.3 (LT. OF RAMP 2)	= 250 L.F.	1 EACH	1 EACH	-
STA. 730+83.1 TO STA. 734+01.9 (RT. OF RAMP 1)	= 250 L.F.	1 EACH	1 EACH	-
STA. 730+83.1 TO STA. 733+51.9 (LT. OF RAMP 1)	= 200 L.F.	1 EACH	1 EACH	-
STA. 399+00.0 TO STA. 401+68.8 (LT. OF I-40 W.B. LANES)	= 200 L.F.	1 EACH	1 EACH	-

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9808
JAMES L. BARR
8/31/12

8/27/2012 9:46:46 AM

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.		BB0407	122	464
				(1) A&B3959		Remodeling Dtls.		48428

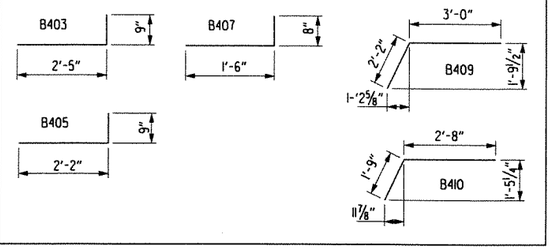


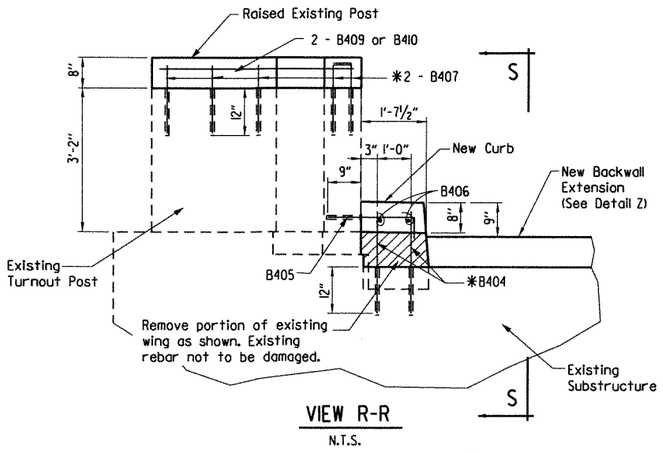
PARTIAL PLAN OF END BENT

N.T.S.

BAR LIST (ONE END BENT)

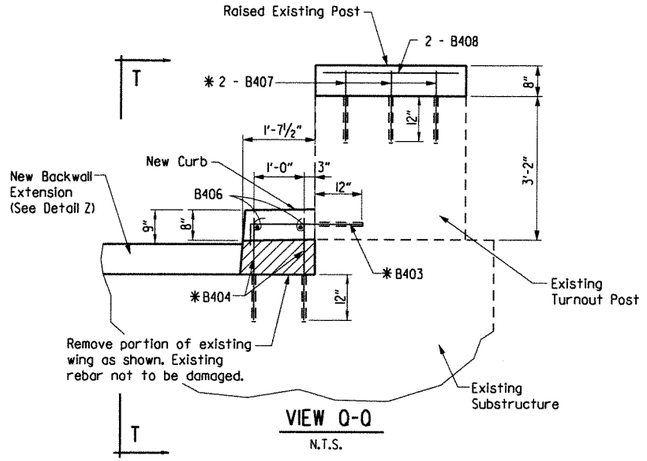
Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
B401	50	1'-6"	STR.	
B402	2	48'-0"	STR.	
B403	2	3'-1"	3"	
B404	8	2'-3"	STR.	
B405	2	2'-10"	3"	
B406	4	1'-2"	STR.	
B407	16	2'-1"	3"	
B408	2	3'-0"	STR.	
B409	1	5'-1"	3"	
B410	1	4'-4"	3"	





VIEW R-R

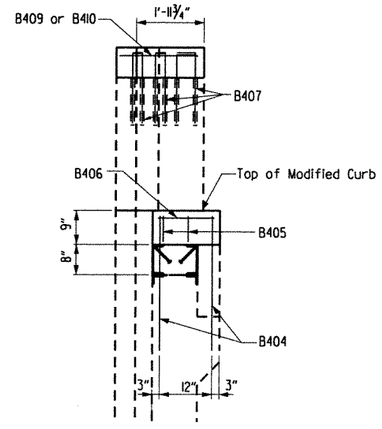
N.T.S.



VIEW Q-Q

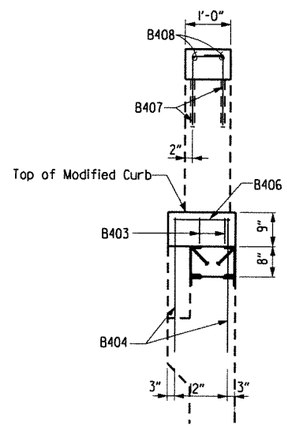
N.T.S.

* Note:
No. 4 bars shall be drilled in existing concrete to the depths shown. The grout shallbe an approved non-shrink grout listed on the QPL. Diameter of drilled holes and installation procedure shallbe as recommended by the grout manufacturer.



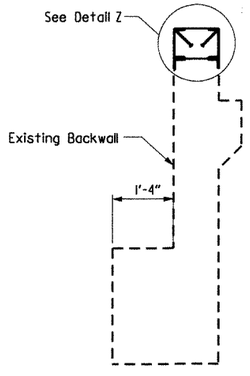
SECTION S-S

N.T.S.



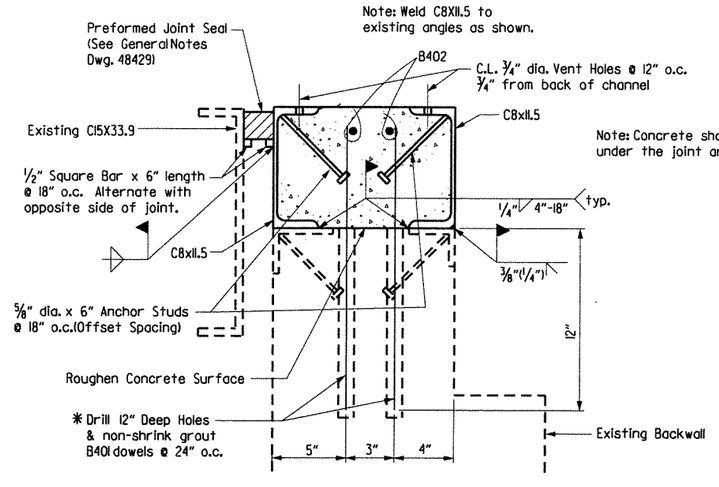
SECTION T-T

N.T.S.



TYP. EXISTING END BENT SECTION

N.T.S.



DETAIL Z

N.T.S.

Note:
For General Notes and anchor bolt details, see Dwg. No. 48429

SHEET 1 OF 2
MODIFICATION DETAILS FOR
BRIDGE NO. 03959 A & B
HWY. 22 - I-40 (F)
SEBASTIAN & CRAWFORD COUNTIES
ROUTE I-540 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11439 LARRY W. MILLER
8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: 4/02 FILENAME: bBB0407m6_m1
CHECKED BY: JLH DATE: 4/02 SCALE: N.T.S.
DESIGNED BY: BCG DATE: 4/02
BRIDGE NO. A&B3959 DRAWING NO. 48428

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$$$$dgnfile$$$$

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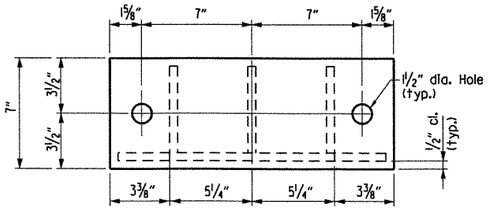
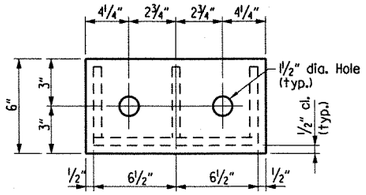
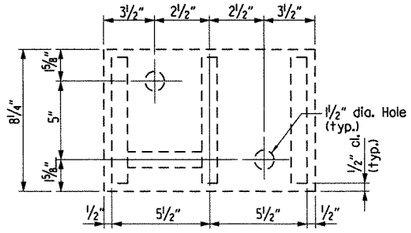
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	123	464
				①	A&B3959	Remodeling Dtls.		48429



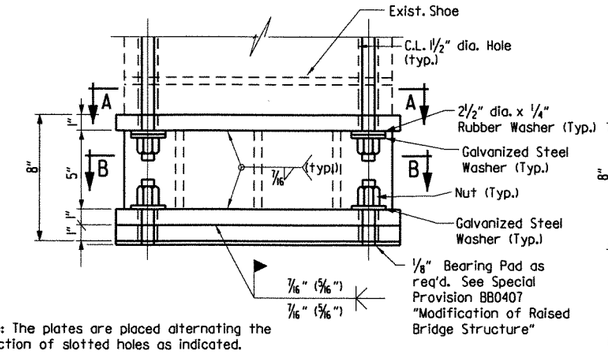
SECTION A-A



SECTION C-C

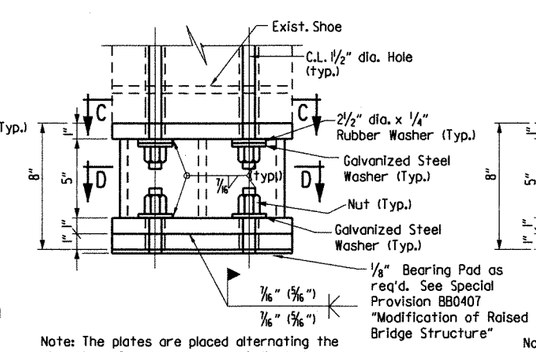


SECTION G-G



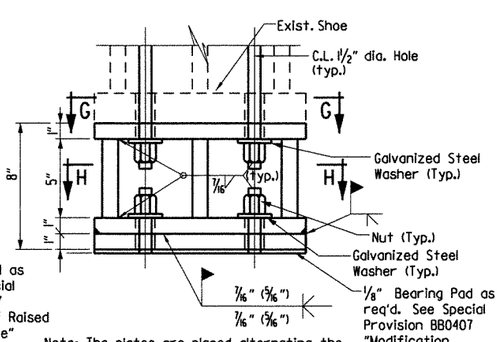
Note: The plates are placed alternating the direction of slotted holes as indicated.

ELEVATION OF BUILD-UP FOR EXP. SHOES AT BENTS 2, 3, 4 & 5



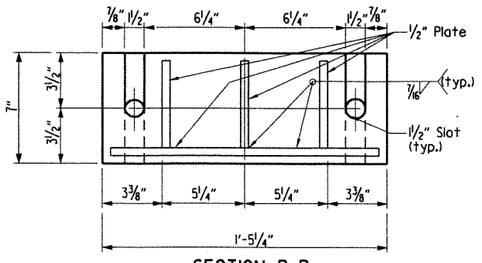
Note: The plates are placed alternating the direction of slotted holes as indicated.

ELEVATION OF BUILD-UP FOR FIXED SHOES AT BENTS 1 AND 6

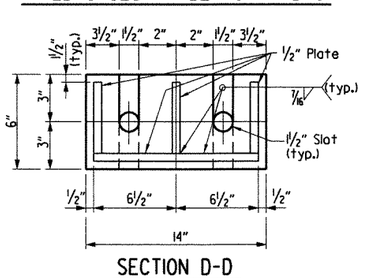


Note: The plates are placed alternating the direction of slotted holes as indicated.

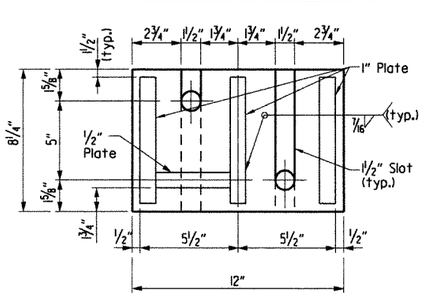
ELEVATION OF BUILD-UP FOR FIXED SHOES AT BENTS 2, 3, 4 & 5



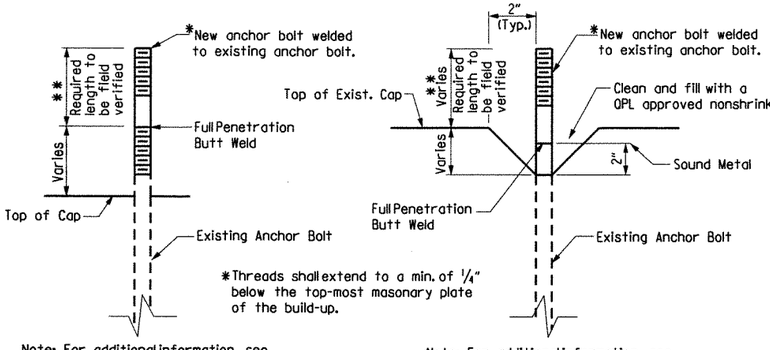
SECTION B-B



SECTION D-D



SECTION H-H



Note: For additional information, see S.P. Job BB0407 "Modification of Raised Bridge Structure".

ANCHOR BOLT DETAIL

Note: For additional information, see S.P. Job BB0407 "Modification of Raised Bridge Structure".

ALTERNATE ANCHOR BOLT DETAIL

(This detail shall be used when existing anchor bolt has broken off in the bent cap or threads are located in the bent cap.)

** Note: Bolt extensions shall begin at or below existing bolt threads

Note:
Build-up dimensions for shoes are based upon original drawings. It is the Contractor's responsibility to field verify all dimensions of the existing shoes prior to fabrication of build-ups.

Note:
If existing anchor bolts are sound and length is sufficient to fully thread the nut with new steel in place, no extension is required.

GENERAL NOTES

Governing specifications are the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2003 edition), with applicable supplemental specifications and special provisions.

All structural steel shall be AASHTO designation M270, Gr. 50W unless otherwise noted and shall be paid for at the unit price per pound bid for "Structural Steel for Modification of Raised Bridge Structure (M270, Gr. 50W)." M270, Gr. 50W steel shall not be painted. All exposed surfaces to be cleaned in accordance with subsection 807.84(e) of the Standard Specifications.

All welding to be performed by a certified welder approved by the Engineer. All welding shall conform to the current AASHTO/AWS D1.5 Welding Code.

The individual shoe plates shall be fabricated to facilitate a bevel weld between plate surfaces. The plates shall be welded in the field after they are seated.

Contractor shall provide new high strength bolts, washers, and nuts to connect existing shoes to new build ups. After bolts are installed, the threads shall be jammed to prevent loosening.

Anchor bolt extension shall be ASTM A36 and galvanized. Repair damaged galvanized surfaces in accordance with Subsection 807.88.

The Contractor shall field verify anchor bolt locations and plate dimensions prior to fabrication.

The concrete in the backwall shall be a rapid set mix design to facilitate traffic maintenance. See Sp Job BB0407 "Fast Setting Cement."

All concrete shall have a minimum 28 day compressive strength f'c = 3500 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).

The Contractor shall check the joint openings and the depths to the existing seal supports to determine the required joint sizes. This may require the ordering of low profile preform joints. The replacement seals shall be installed after the entire structure is raised to the final position. Cleaning the joint shall be as recommended by the manufacturer.

The following drawings may be used to determine jack capacities. See DWG. NOS.: A&B 3959 - 48430 - 48436. All dimensions taken from existing bridge plans.

Sheets from the existing bridge plans have been included for information purposes only. All information required to complete the work should be field verified by the Contractor.

Nuts for bearing device attachment shall only be hand tightened. Do not torque.

See Special Provisions - Job No. BB0407 "Modification of Raised Bridge Structure" for additional material and construction requirements.

Felt and steel washers on all existing anchor bolts shall be removed and discarded. New steel washers shall be used on all anchor bolts and new rubber washers shall be used where specified on the plans.

Concrete, reinforcing steel and grout will not be paid for directly but will be considered as part of the pay item "Modification of Raised Bridge Structure."

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11039 LARRY W. MILLER
8-11-12
BRIDGE ENGINEER

SHEET 2 OF 2
MODIFICATION DETAILS FOR
BRIDGE NO. 03959 A & B
HWY. 22 - I-40 (F)
SEBASTIAN & CRAWFORD COUNTIES
ROUTE I-540 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: 4/02 FILENAME: bBB0407m6_m2
CHECKED BY: JLH DATE: 4/02 SCALE: N.T.S.
DESIGNED BY: BCG DATE: 4/02

BRIDGE NO. A&B3959 DRAWING NO. 48429

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	124	464
(1)	A3959 - LAYOUT - 48430			

Note: For Right of Way Data see Roadway Plans

10" Persimmon
28" R. Oak
3" Persimmon
℄ Median I-540
Begin Bridge Sta. 13+46.92
Sta. 691+00.6 I-540 = Sta. 15+00 U.S.64
℄ Median U.S. 64-71
30" S. Gum
End Bridge Sta. 16+36.61
12" R. Oak
18" Sassafras
24" R. Oak
Guard Fence - See Roadway Plans
Type B Gutters (Typ.)
Construct toe wall
Note: Construct toe wall
Clear
Clear Roadway
℄ Main Lanes & Profile Grade
Limit of ditch paving for bridge quantities
Slope 2 ft. to 1 ft. Down
1.22 mi. to Jct. U.S. 162 (Van Buren)
Tangent Distance Over 500'
5.29 mi. to Alma
Tangent Distance = 102'
Type B Approach Slab & Gutters - See Roadway Plans
55' Crown Width
Sta. 15+00 ℄ Survey U.S.64 = Sta. 691+00.6 ℄ Survey I-540
N. 53°00' E
℄ Median U.S. 64-71
Note: For details of concrete riprap see dwg. no. 18914 Rev.
℄ Median I-540
N 2° 21' W
56'-0" Pavement
50'-0"
6'-0"
48' Finished Crown
Sta. 15+00 P.I. Elev. = 471.71
Note: Provide roadway drains at both sides of roadway approximately 12' from bridge ends and approximately 12' from ends of 71' span on 71' span only.

PLAN

Note: For beam buildups and plate thickening see Dwg. No. 13348

Note: Bent heights and grades are given at ℄ Main Lanes.

1.983 %
-1.833 %
400' Vertical Curve
Total Length of Bridge = 349' 8½"

	58'-0" Composite I-Beam Span (Modified)	80'-0" Composite I-Beam Span (Regular)	71' Composite I-Beam Span (Modified)	80'-0" Composite I-Beam Span (Regular)	58'-0" Composite I-Beam Span (Modified)	
	1'-1½"					1'-1½"
Begin Bridge	Sta. 13+46.92, Elev. = 469.56	Sta. 14+04.24, Elev. = 469.31, 4'-4½"	Sta. 14+86.24, Elev. = 469.78, 4'-4½"	Sta. 15+51.24, Elev. = 469.63, 4'-4½"	Sta. 16+37.24, Elev. 469.00, 4'-4½"	End Bridge, Sta. 16+94.41, Elev. = 468.10
	466.4	Metal (Steel or Aluminum) Bridge Railing Type A	466.8	468.9 3.68" to bar level	466.2	
	Fix	Exp	Fix	Exp	Exp	Fix
	Type B Shoes	Type A Shoes	Type A Shoes	Type A Shoes	Type A Shoes	Type B Shoes
	Elev. = 455.91	Elev. = 441.22	Elev. = 446.69	Elev. = 440.34	Elev. = 440.91	Type B Shoes Elev. = 456.20
	①	②	③	④	⑤	⑥

480 470 460 450 440 430 420

Sta. 13+60 Lt. 62'
0-8.5 Clay, gravel & layer of rock
8.5-20 Brown shale & rock
20-22 Hard blue shale
22-27 Core taken, blue shale & rock

Sta. 14+90 Lt. 62'
0-13.1 Brown clay, gravel & boulders
13.1-13.6 Thin layer of rock
13.6-22 Brown shale
22-35 Hard blue shale

Sta. 15+00 ℄
0-9 Brown sandy clay, gravel & boulders
9-10.5 Gray sandy clay few gravel N=19
10.5-12 Gray & brown clay few gravel
12-18.5 Gray & brown clay few gravel N=57
18.5-22.8 Med. hard gray shale
22.5-30 Hard blue shale.

Sta. 16+00 Lt. 56
0-10 Brown clay, gravel & boulders
10-23 Brown shale
23-24.5 Thin layer of rock sandstone
24.5-35 Hard blue shale

Sta. 16+60 ℄
0-8 Brown clay, gravel & boulders
8-20 Brown shale
20-21.5 Thin layer of rock
21.5-40 Hard blue shale

Bench Mark: Square head bolt in base power pole guy 350' Rt. Sta. 691+50 Elev. = 466.28

Soil Pressure (Calculated) = 10.260 lbs/sq. ft. (Group III)

ELEVATION

Revised Span Lengths 6-3-65 T.L.L.

GENERAL NOTES

All concrete to be poured in the dry. Exposed corners to be chamfered 3/4" unless otherwise noted.

Rock excavations shall be made to neat lines of concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

In general, all construction joints in bents or piers shall be horizontal and shall be provided with keys not less than 1½" high covering the middle third of both dimensions.

For Details of End Bents see Dwg. No. 13347
For Details of Intermediate Bents, see Dwg. No. 13348
For Details of Composite I-Beam Spans see Dwgs. No. 14990 B Rev., 13349, and 13350.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, the 1966 Supplemental Specifications thereto and the designated Special Provisions.

DESIGN SPECIFICATIONS: AASHO 1961

Live Loading: HS20 and Special Interstate Loading of 2-24,000# axles spaced 4'0" on center.

Unit Stresses:

Class A Concrete (n=15)	840 psi
Class S Concrete (n=10)	1,200 psi
Reinforcing Steel	20,000 psi
Structural Steel (A36)	20,000 psi

FOR INFORMATION ONLY

LEFT LANES

LAYOUT OF U.S. HIGHWAY 64 INTERCHANGE
ARK. RIVER BRIDGE - JCT. I-40
CRAWFORD COUNTY
INT. ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

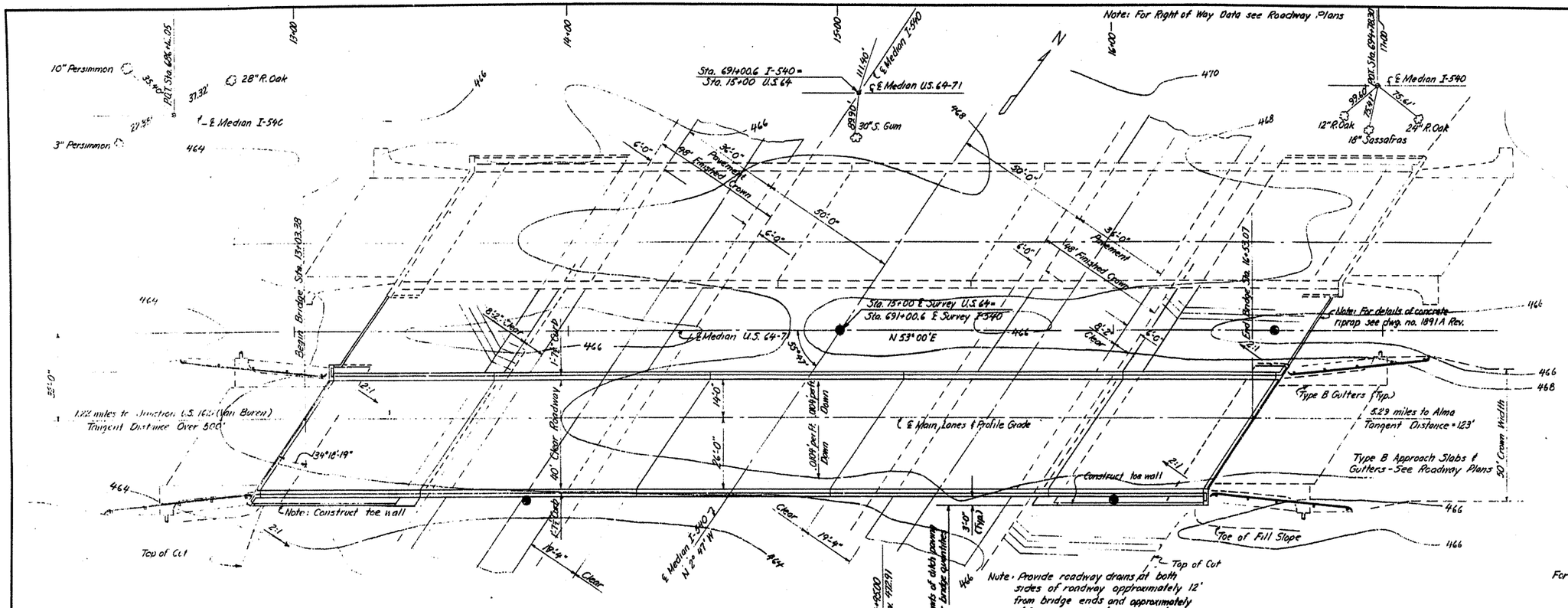
DRAWN BY: T.L.L. DATE: 11-18-64
TRACED BY: DATE:
CHECKED BY: W.D. DATE: 2-13-65
SCALE: 1" = 20'

L. P. Carlton
BRIDGE ENGINEER

BRIDGE NO. A3959 **DRAWING NO.** 48430

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	125	464
1	B3959 - LAYOUT - 48431			

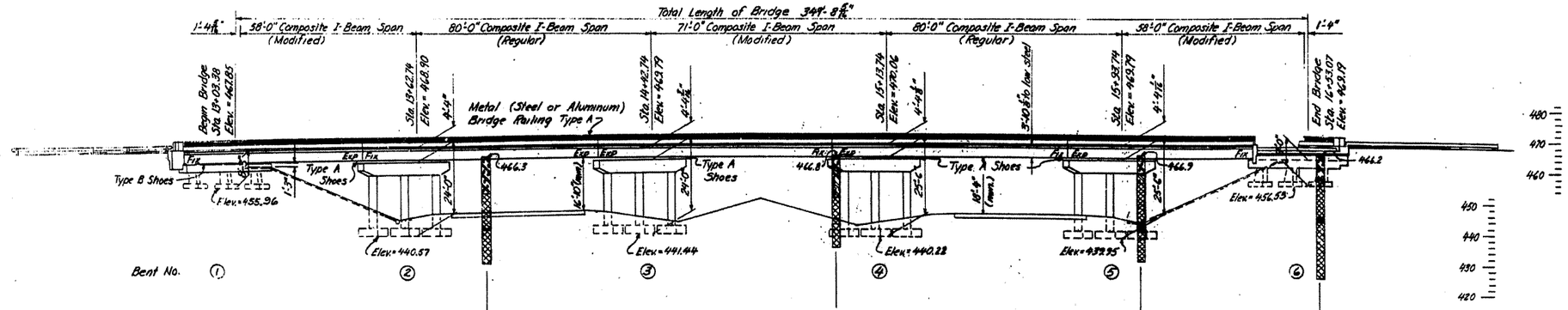
Note: For Right of Way Data see Roadway Plans



For General Notes See Dwg. No. 13345

Note: For beam buildups and plate thickening see Dwg. No. 13348

Note: Bent heights and grades are given @ ℄ main lanes.



Bench Mark: Square head bolt in base power pole guy 350' Rt. Sta. 691+90 Elev. = 466.30

Sta. 13+85' Rt. 62'
0-12.0 Brown clay gravel & boulders
12.0-23.5 Brown shale
23.5-24.0 Thin layer of rock
24.0-35.0 Hard blue shale

Sta. 15+00 ℄
0-9 Brown sandy clay gravel & boulders
9-10.5 Gray sandy clay few gravel N=19
10.5-12.0 Gray & brown clay few gravel
12.0-13.5 Gray & brown clay: few gravel N=37
13.5-22.5 Med. hard gray shale
22.5-30 Hard blue shale & rock

ELEVATION

Sta. 16+00 Rt. 62'
0-9 Brown clay gravel & boulders
9.0-23.0 Brown shale
23.0-29.5 Thin layer of rock sandstone
29.5-35.0 Hard blue shale

Sta. 16+60 ℄
0-8.0 Brown clay gravel & boulders
8.0-20.0 Brown shale
20.0-21.5 Thin layer of rock
21.5-40.0 Hard blue shale

Max. Soil Pressure (Calculated) = 10,260 lbs/sq. ft. (Group III)

Revised Span Lengths 6-3-65 T.I.L.

FOR INFORMATION ONLY

RIGHT LANES
LAYOUT OF U.S. HIGHWAY 64 INTERCHANGE
ARK. RIVER BRIDGE - JCT. I-40
CRAWFORD COUNTY
INT. ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: T.I.L. DATE: 11-18-64
TRACED BY: DATE:
CHECKED BY: R.A. DATE: 9-19-65
SCALE: 1" = 20'

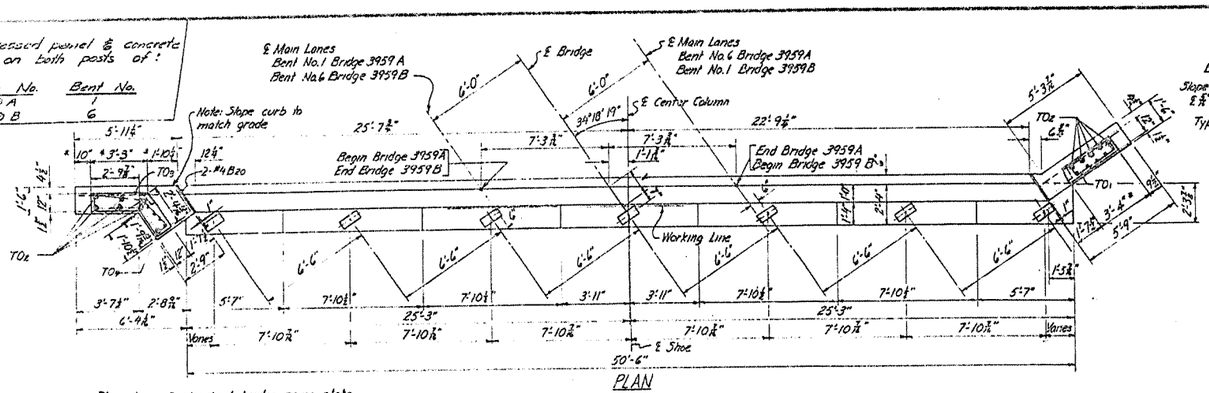
L. D. Carlson
BRIDGE ENGINEER

BRIDGE NO. B3959 **DRAWING NO.** 48431

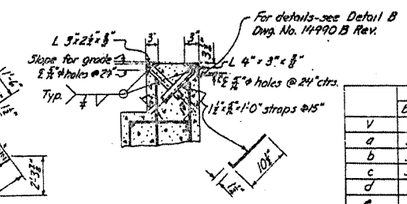
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
	JOB NO.	BB0407	126	464
①	A&B3959 - END BENTS - 48432			

* Omit recessed panel & concrete anchors on both posts of:

Bridge No.	Bent No.
3959 A	1
3959 B	6



PLAN



DETAIL A
Scale: 3"=1'

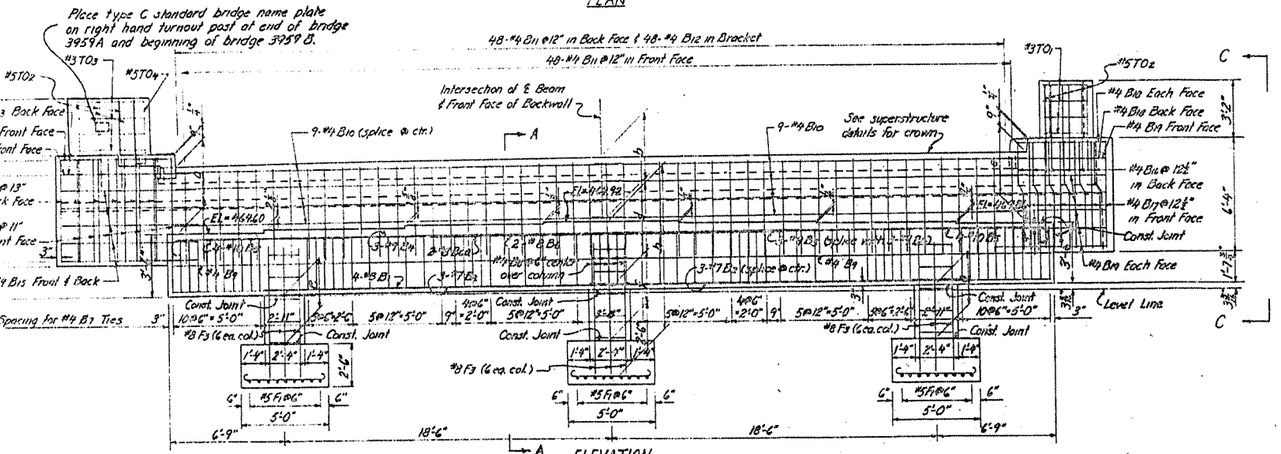
Note: See Dwg. 14990B Rev. for alternate anchor details.

	Bridge 3959A		Bridge 3959B	
	Bent 1	Bent 6	Bent 1	Bent 6
V	1'-4 7/16"	1'-4 7/16"	1'-4 7/16"	1'-4 7/16"
a	3'-8 7/16"	3'-8 7/16"	3'-8 7/16"	3'-8 7/16"
b	3'-8"	3'-8"	3'-7 7/16"	3'-8"
c	3'-8 1/2"	3'-8 1/2"	3'-8 7/16"	3'-8 7/16"
d	3'-8 1/2"	3'-8 1/16"	3'-8 1/16"	3'-8 1/16"
e	2'-8 1/16"	1'-7 7/16"	1'-7 7/8"	2'-8 1/16"
f	2'-9 7/16"	1'-10 7/16"	1'-10 7/16"	2'-9 7/16"
g	2'-11"	2'-1 7/16"	2'-1 7/16"	2'-10 7/16"
h	9'-0 7/16"	8'-1 7/16"	8'-1 7/16"	9'-0"
k	3'-0 7/16"	3'-0 7/16"	3'-0 7/16"	3'-0 7/16"
l	3'-1 7/16"	3'-1 7/16"	3'-1 5/16"	3'-1 7/16"

BAR LIST EACH BENT

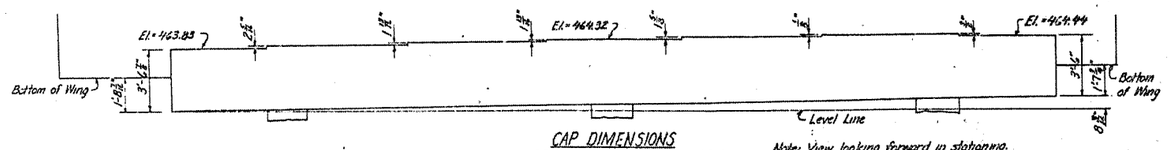
Mark	Pin Dia.	A	B	Bar Size	No. Required	Length
B1	Str.	–	–	#8 ▷	4	39'-4"
B2	Str.	–	–	7	6	26'-6"
B3	9"	36'-5"	10"	9	3	37'-8"
B4	9"	17'-8"	10"	9	3	18'-11"
B5	10"	15'-1"	11"	10	8	16'-6"
B6	Str.	–	–	8	2 ▷	15'-0"
B7	1¾"	3'-11¾"	1'-11¾"	4	64	10'-9"
B8	1¾"	3'-11¾"	1'-11¾"	4	5	8'-2"
B9	Str.	–	–	4	4	26'-8"
B10	Str.	–	–	4	18	25'-10"
B11	Str.	–	–	4	96	5'-3"
B12	1¾"	–	–	4	48	4'-11"
B13	Str.	–	–	4	2	5'-9"
B14	Str.	–	–	4	1	6'-5"
B15	Str.	–	–	4	11	8'-5"
B16	1¾"	–	–	4	12	6'-1"
B17	Str.	–	–	4	14	6'-0"
B18	Str.	–	–	4	3	5'-4"
B19	1¾"	–	–	4	11	7'-3"
B20	1¾"	1'-6"	2'-9"	4	2	5'-3"
B21	See Variable Bars					
F1	3¾"	7-0	5"	5	27	8'-3"
F2	3¾"	4'-6"	5"	5	42	5'-9"
F3	See Variable Bars					
TO1	1¾"	2'-9"	9"	3	4	7'-5"
TO2	Str.	–	–	5	3 ▷ 19	5'-0"
TO3	1¾"	–	–	3	4	11'-0"
TO4	1¾"	3'-4¾"	8"	5	1	7'-4"
Bea ▷	Str.	–	–	8 ▷	2 ▷	20'-3" ▷

VARIABLE BARS							
Br. 3959A Bent No.1 Br. 3959B Bent No.6	F3a	8"	7'-9¾"	9"	8	18	8'-11"
	Bea to Bea	1¾	Varies 1'-4¾" to 2'-4¾" by 2¾"	1'-11"	4	15 (3 ea.)	Varies 7'-6" to 9'-2" by 5"
Br. 3959A Bent No.6 Br. 3959B Bent No.1	F3b	8"	6'-10¾"	9"	8	18	8'-0"
	Bea to Bea	1¾"	Varies 1'-6¾" to 2'-2" by 2¾"	1'-11"	4	12 (3 ea.)	Varies 7'-6" to 8'-9" by 5"



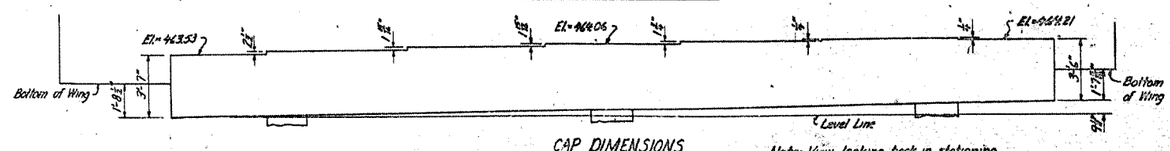
ELEVATION
BENT NO.1 BRIDGE 3959A

Note: View looking back in stationing.



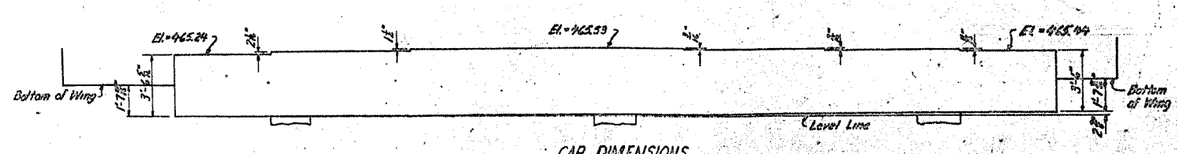
CAP DIMENSIONS
BENT NO.6 BRIDGE 3959A

Note: View looking forward in stationing.



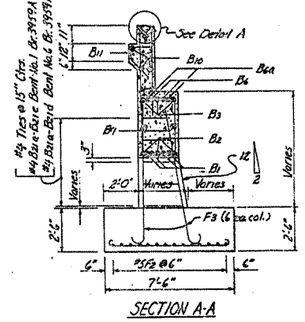
CAP DIMENSIONS
BENT NO.1 BRIDGE 3959B

Note: View looking back in stationing.

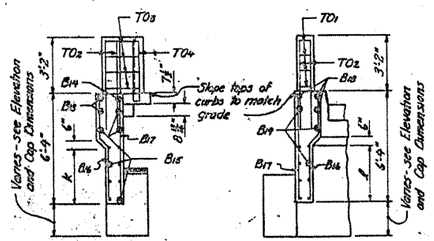


CAP DIMENSIONS
BENT NO.6 BRIDGE 3959B

Note: View looking forward in stationing.

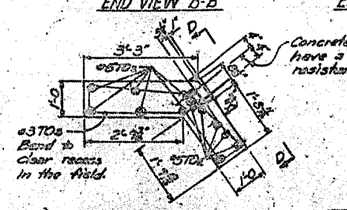


SECTION A-A

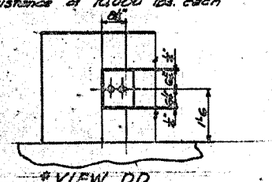


END VIEW B-B

END VIEW C-C



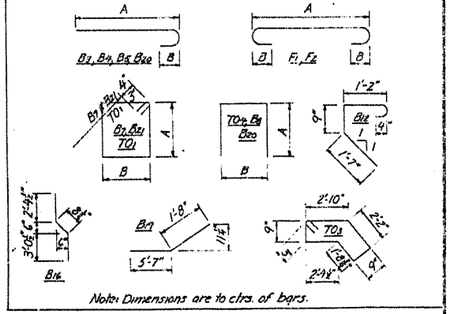
*TURNOUT POST DETAIL



*VIEW DD

Scale ½"=1'-0"

BENDING DIAGRAM



Note: Dimensions are to ctrs. of bars.

GENERAL NOTES

All concrete to be class 'S'.

Reinforcing steel to be deformed bars of intermediate or hard grade. Shop lists and bending diagrams shall be submitted and approval secured before fabrication is begun.

For additional general notes see Dwg. No. 13345

For details of superstructure see Dwgs. Nos. 14990 B Rev., 13349 and 13950.

DETAILS OF END BENTS
U.S. HIGHWAY 64 INTERCHANGE
ARK. RIVER BRIDGE - JCT. I-40
CRAWFORD COUNTY
INT. ROUTE 540 SEC. 1

▷ Revised Reinforcing Steel 1-21-66. T.H.L. Chkd. 2-3-66 LDP

* Revision: Turnout Posts & no. of TO2 bars 7045 4-7-67

FOR INFORMATION ONLY

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY THL DATE 8-2-65
TRACED BY DATE
CHECKED BY LDP DATE 9-9-65

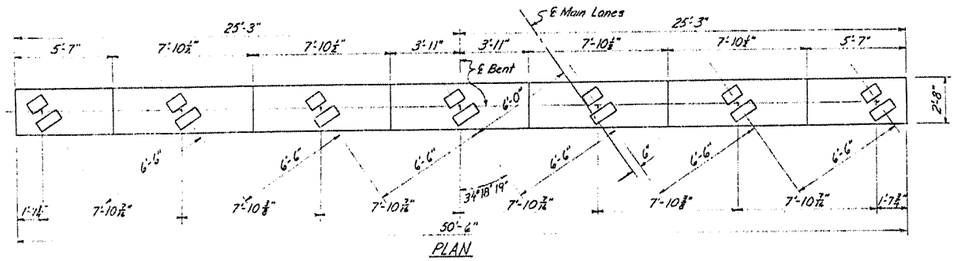
L D Pardue
ENGINEER OF BRIDGES

SCALE ½"=1' & Noted

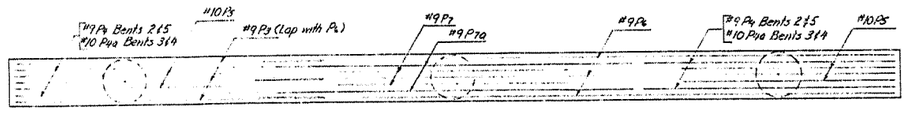
BRIDGE NO. A&B3959 DRAWING NO. 48432

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	127	464

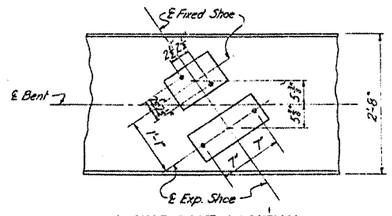
A&B3959 - INT. BENTS - 48433 (1)



PLAN



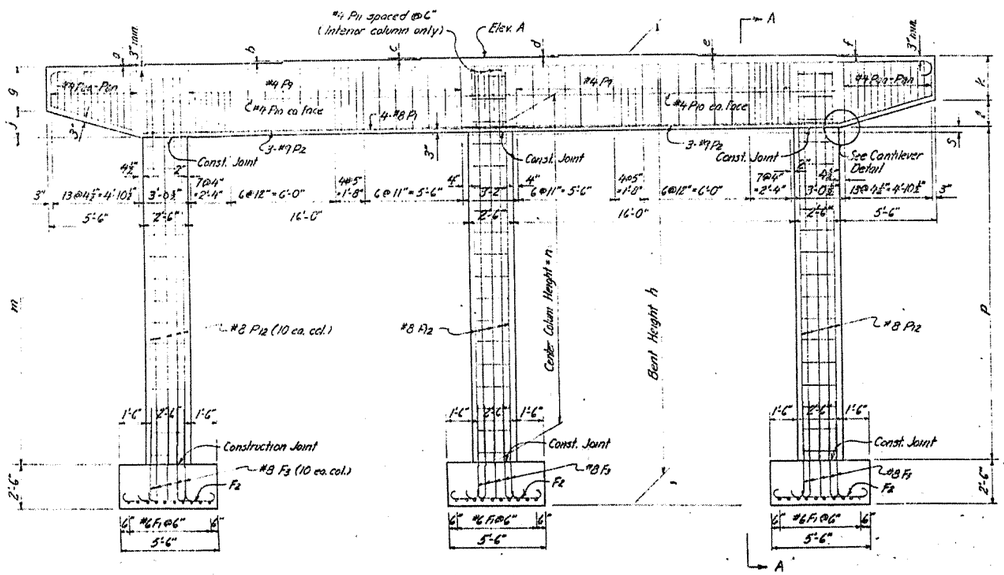
PLAN OF STEEL IN TOP OF CAP



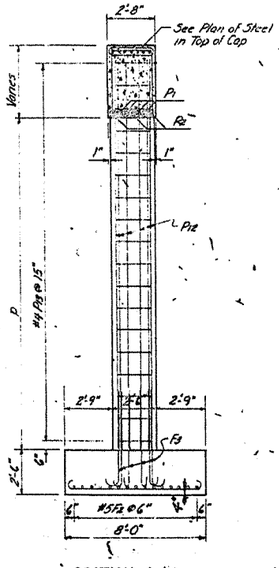
ANCHOR BOLT LOCATION
Scale ½"=1'

VARIABLE DIMENSIONS

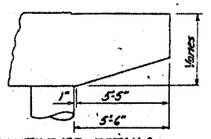
	Bridge 3959 A				Bridge 3959 B			
	Bent No.2	Bent No.3	Bent No.4	Bent No.5	Bent No.2	Bent No.3	Bent No.4	Bent No.5
Elev. A	464.956	465.389	465.258	464.597	464.498	465.353	465.459	465.486
Bent Height h	23'-9"	23'-9"	25'-0"	23'-9"	24'-0"	24'-0"	25'-6"	25'-6"
m	16'-11⅝"	16'-11⅞"	18'-11⅞"	16'-8⅞"	16'-11"	17'-0⅜"	18'-0⅛"	18'-9⅛"
n	16'-11⅝"	16'-11⅞"	18'-2⅞"	16'-11"	17'-1⅜"	17'-2⅜"	18'-0⅛"	18'-9⅛"
p	16'-11⅝"	16'-11⅞"	18'-3⅝"	17'-1⅝"	17'-1⅝"	17'-2⅜"	18'-0⅛"	18'-9⅛"
s	0	0	2⅜"	4⅞"	5⅜"	3⅜"	0	0
q	2'-7⅞"	2'-6"	2'-6⅜"	2'-6⅜"	2'-6⅜"	2'-6⅜"	2'-6"	2'-6⅜"
j	1'-6"	1'-6"	1'-5⅜"	1'-5⅜"	1'-5⅜"	1'-5⅜"	1'-6"	1'-6"
k	2'-6"	2'-6⅜"	2'-6"	2'-6"	2'-6"	2'-6"	2'-7⅜"	2'-6"
l	1'-6"	1'-6"	1'-6⅜"	1'-6⅜"	1'-6⅜"	1'-6⅜"	1'-6"	1'-6"
a	⅜"	1⅛"	1⅜"	2⅛"	2⅜"	1⅜"	1⅜"	1"
b	⅜"	⅜"	1⅛"	1⅜"	1⅛"	1⅜"	⅜"	⅜"
c	⅜"	⅜"	1⅜"	1⅛"	1⅜"	1⅜"	⅜"	⅜"
d	⅜"	2⅜"	1⅜"	1⅜"	1⅜"	1⅛"	1⅜"	1⅜"
e	1⅜"	1⅜"	⅞"	⅞"	⅞"	⅞"	⅜"	⅜"
f	1⅜"	1⅜"	1⅜"	⅞"	⅜"	1"	1⅜"	1⅜"



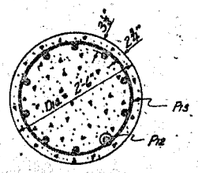
ELEVATION
Looking Forward in Stationing Bridge 3959 A
Looking Backward in Stationing Bridge 3959 B



SECTION A-A



CANTILEVER DETAILS



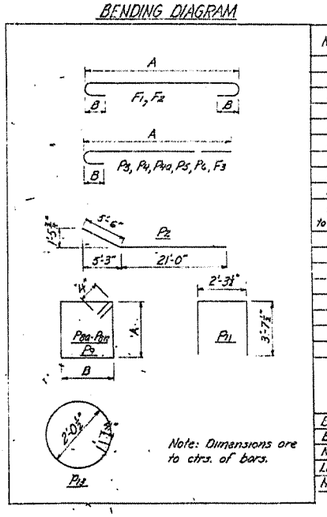
TYPICAL COLUMN SECTION
Scale 1"=1'

		End Bent No.1	Bent No.2	Bent No.3	Bent No.4	Bent No.5	End Bent No.6
		58'	80'		71'	80'	58'
Bridge 3959 A	Beam Build-Up	5⅜"	5⅜"	–	2⅜"	2⅜"	5⅜"
	Plate Thickening		⅛"	–	⅛"	⅛"	⅛"
Bridge 3959 B	Beam Build-Up	5⅜"	5⅜"	–	2⅜"	2⅜"	5⅜"
	Plate Thickening		⅛"	–	⅜"	⅜"	–

BEAM BUILD-UPS AND PLATE THICKENING

Note: Build up interior beams only. Thicken plates of both interior and exterior beams.

BENDING DIAGRAM



BAR LIST EACH BENT

Mark	Pin Dia	A	B	Bar Size	No. Required Ea Bent Bents 2 & 5	Bents 3 & 4	Length
P1	Str.	–	–	8	4	4	39'-6"
P2	9"	–	–	9	6	6	26'-6"
P3	9"	17'-8"	10"	9	3	3	18'-11"
P4	9"	14'-0"	10"	9	4	–	15'-3"
P4a	10"	14'-6¾"	11"	10	–	4	15'-11"
P5	10"	12'-3¾"	11"	10	4	4	13'-8"
P6	9"	34'-5"	10"	9	3	3	37'-8"
P7	Str.	–	–	9▷	2 ▷	2 ▷	13'-0"
P7a	Str.	–	–	9"	2'-▷	2'-▷	20'-3"-▷
P8a to P8n	13"	Varies 2'-2½" to 3'-6½" by 1½"	2'-3½"	4	2ea. (28 Total)	2ea. (28 Total)	Varies 9'-6¾" to 12'-3" by 2½"
P9	13"	3'-7½"	2'-3½"	4	48	48	12'-5"
P10	Str.	–	–	4	4	4	25'-9"
P11	13"	–	–	4	4	4	9'-6"
P12	Str.	–	–	8	30	30	See Table
P13		–	–	4	See Table		7'-1"
F1	4½"	7'-6"	6"	6	30	30	8'-11"
F2	3½"	5'-0"	5"	5	45	45	6'-3"
F3	8"	5'-4½"	9"	8	30	30	6'-6"

VARIABLE BARS

Bridge Number	3959A				3959B			
Bent Number	2	3	4	5	2	3	4	5
Mark P12	P12a	P12a	P12b	P12c	P12a	P12a	P12d	P12d
Length of P12	20'-6"	20'-6"	21'-7"	20'-3"	20'-6"	20'-6"	22'-3"	22'-3"
Number of P12	51	51	54	51	51	51	54	54

GENERAL NOTES

All concrete to be Class "S".

Reinforcing steel to be deformed bars of intermediate or hard grade steel. Shop lists and bending diagrams shall be submitted and approval secured before fabrication is begun.

For additional general notes see Dwg. No. 19345

For details of superstructure see Dwgs. Nos. 14990 B Rev. 13349, and 13350.

FOR INFORMATION ONLY

▷ Revised Reinforcing Steel 1-31-66 T.H.
C.A.B. 2-3-66 J.B.H.

DETAILS OF BENTS 2,3,4,5
U.S. HIGHWAY 64 INTERCHANGE
ARK. RIVER BRIDGE - JCT. I-40
CRAWFORD COUNTY
INT. ROUTE 540 SEC. 1

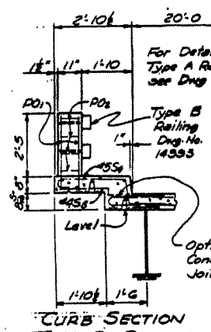
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY T.H.L. DATE 7-1-65
TRACED BY DATE
CHECKED BY DATE 9-9-65
SCALE ½"=1' & Noted

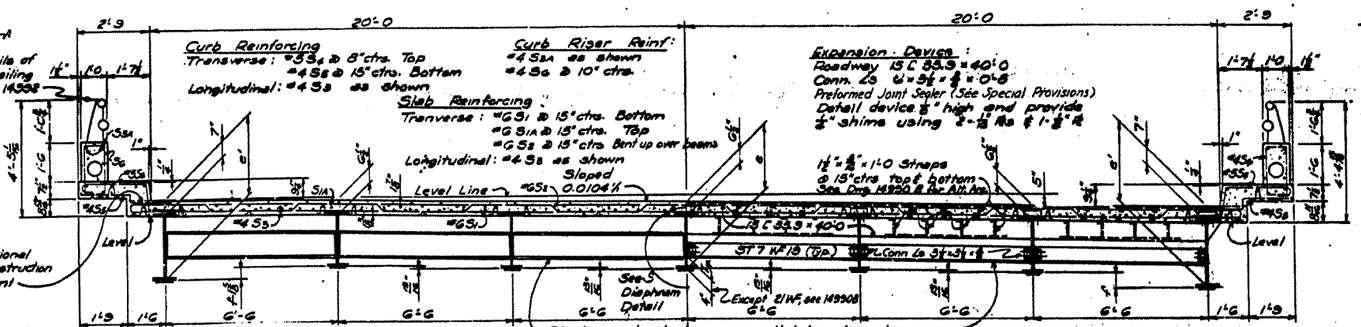
L. G. Erickson
BRIDGE ENGINEER

BRIDGE NO. A&B3959 DRAWING NO. 48433

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	128	464
A&B3959 - SPAN - 48434				



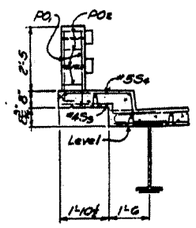
CURB SECTION
TYPE B RAILING



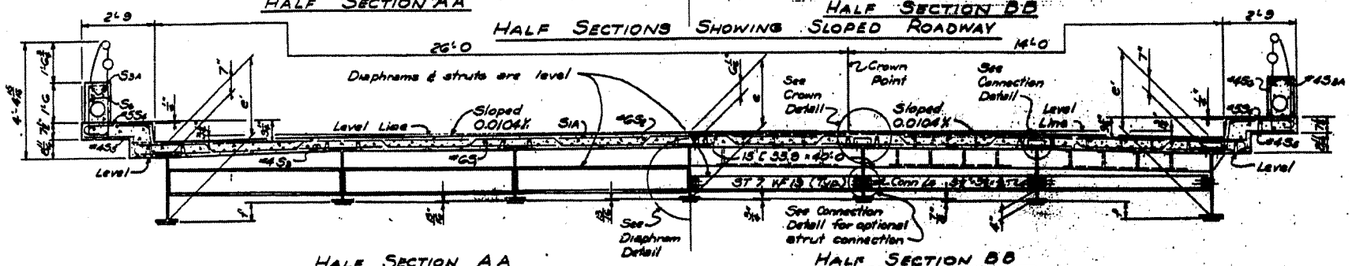
HALF SECTION AA

HALF SECTION BB

HALF SECTIONS SHOWING SLOPED ROADWAY



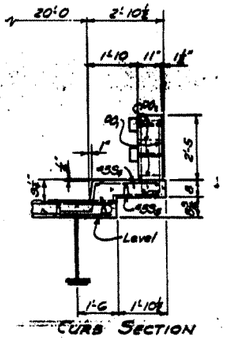
CURB SECTION
TYPE B RAILING



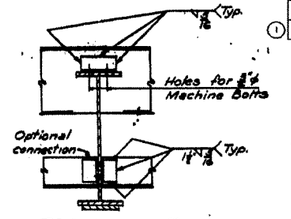
HALF SECTION AA

HALF SECTION BB

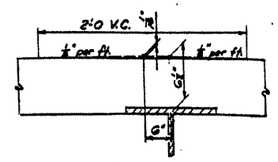
HALF SECTIONS SHOWING OFFSET CROWN



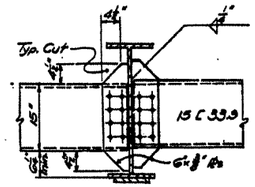
CURB SECTION
TYPE B RAILING



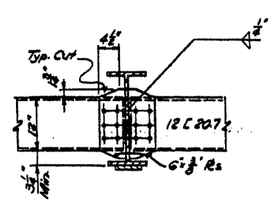
CONNECTION DETAIL



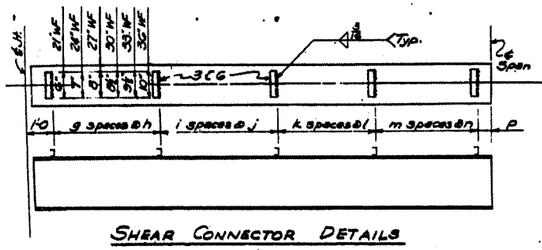
CROWN DETAIL



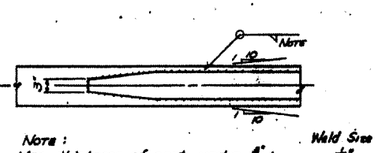
DIAPHRAM DETAIL
30"-36" WF BEAMS
Scale ¾" = 1'-0



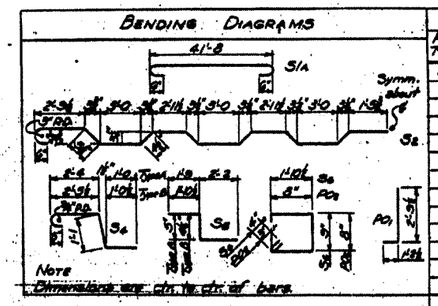
DIAPHRAM DETAIL
21"-27" WF BEAMS
Scale ¾" = 1'-0



SHEAR CONNECTOR DETAILS
No Scale



COVER PLATE DETAILS
No Scale



BAR LIST ONE SPAN

MARK RAIL TYPE A	MARK RAIL TYPE B	SIZE #	LENGTH	BAR DIA.	NUMBER REQUIRED FOR EACH SPAN 44'	58'	71'	80'
S1	S1	6	4'-8	Str.	36			
S1A	S1A	6	43'-0	3"	36			
S2	S2	6	44'-0	2½"	35			
S3	S3	4	3'-6"	Str.	–			
S4	S4	4	3'-7"	Str.	204	See Dwg. No. 13350	See Dwg. No. 13350	See Dwg. No. 13350
S5	S5	4	3'-1"+10	Str.	–			
S5A		4	3'-(1-⅛)	Str.	12			
S6		5	5'-0	1⅜"	132			
	S6	5	5'-2	1⅜"	–			
S8		4	4'-3	1⅛"	72			
	S8	4	4'-4	1⅛"	–			
S9		4	5'-10	1½"	106			
	PO1*	6	3'-11	2½"	–			
	PO2*	3	3'-1	1½"	–			

* Non Pay Items for Metal Bridge Railing, Type B

BRIDGE NO.	SPAN NO.	SPAN LENGTH	SPAN TYPE	INTERIOR BEAM SIZE	INTERIOR BEAM COVER R	INTERIOR BEAM e	INTERIOR BEAM DEAD LOAD DEFLECTION WITH JOINT	INTERIOR BEAM DEAD LOAD DEFLECTION NO JOINT	EXTERIOR BEAM SIZE	EXTERIOR BEAM COVER R	EXTERIOR BEAM e'	EXTERIOR BEAM DEAD LOAD DEFLECTION WITH JOINT	EXTERIOR BEAM DEAD LOAD DEFLECTION NO JOINT	DIAPHRAM SPACING	POST SPACING a	POST SPACING b	POST SPACING c	℄
3961	1&2	44'-0"	Reg.	24 WF 76	7"x⅞"x24'-0"	2'-5⅛"	1½"	⅞"	24 WF 76	7"x⅞"x25'-0"	2'-6⅛"	2"	1⅛"	3@19'-8"	6'-10"	6'-10"	4	1⅛"
3959A	1&5	58'-0"	Mod.	30 WF 99	9"x1"x40'-0"	2'-11⅜"	1½"	1"	36 WF 135	4"x⅞"x48'-0"	3'-5⅛"	1⅝"	1⅜"	See Dwg. No. 13350	7'-11"	7'-10"	5	1⅞"
3959B	2&4	80'-0"	Reg.	36 WF 150	10"x1½"x53'-0"	3'-5⅞"	1⅞"	1⅜"	36 WF 150	10"x1½"x51'-0"	3'-5⅞"	1⅞"	2⅛"		7'-10"	7'-8"	8	1⅞"
	3	71'-0"	Mod.	33 WF 130	10"x1⅜"x47'-0"	3'-2⅜"	1⅝"	1⅛"	36 WF 135	10"x⅞"x42'-0"	3'-5⅛"	1⅞"	1⅝"		7'-9"	7'-6"	7	2⅜"

BRIDGE NO.	VARIABLES OF SHEAR CONNECTOR SPACING g	h	i	j	k	l	m	n	p
3961	8	5"	14	6"	8	8"	5	12"	4"
3959A	11	8"	9	10"	7	12"	4	16"	10"
3959B	11	11"	10	13"	5	16"	6	21"	11"
	10	10"	11	12"	7	15"	4	18"	5"

NOTES:

This drawing to be used with drawing nos. 14990B Rev. 14992 or 14993. For General Notes see drawing no. 14990B Rev.

Stud shear connectors, grandular flux filled, solid fluxed, or equal may be used in place of the channels shown at the following ratios: 3/4" diameter stud in place of 1.82 inches of channel, 7/8" diameter stud in place of 2.52 inches of channel. The studs shall be 4" long and automatically end welded to the beam flanges in accordance with recommendations of the manufacturer. Channel sections will be used as a basis for measurement of structural steel in shear connectors.

DESIGN SPECIFICATIONS AASHO 1961

I? Live Load
M320 and Special Interstate Loading of 2-24,000 lb. axles spaced at 4'0" centers.

	Interior Beam	Exterior Beam
A. To Composite Beam	1.182 Wheels + Impact	1.156 Wheels + Impact

II.A. Dead Load (Type A Rail)

	Interior Beam	Exterior Beam
A. To WF Beam		
1. Without Construction Joint	528#/ft. #1.15(wt/ft of WF)	771#/ft. #1.15(wt/ft of WF)
2. With Construction Joint	528#/ft. #1.15(wt/ft of WF)	418#/ft. #1.15(wt/ft of WF)
B. To Composite Beam		
1. Without Construction Joint	132 #/ft.	132 #/ft.
2. With Construction Joint	212 #/ft.	212 #/ft.

II.B. Dead Load (Type B Rail)

	Interior Beam	Exterior Beam
A. To WF Beam		
1. Without Construction Joint	528#/ft. #1.15(wt/ft of WF)	804#/ft. #1.15(wt/ft of WF)
2. With Construction Joint	528#/ft. #1.15(wt/ft of WF)	418#/ft. #1.15(wt/ft of WF)
B. To Composite Beam		
1. Without Construction Joint	86 #/ft.	86 #/ft.
2. With Construction Joint	170 #/ft.	170 #/ft.

UNIT STRESSES

Class S Concrete (n=10)	1,200 psi
Structural Steel (A-36)	20,000 psi
Reinforcing Steel	20,000 psi

FOR INFORMATION ONLY

DETAILS OF STANDARD COMPOSITE I-BEAM SPANS, 40'-0" CLEAR RDWY. & 1'-7½" & 1'-6" CURB 0.0104 ft/ft SLOPE, OFFSET CROWN

INT. ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Note: This drawing is a modification of dwg. no. 15122 T.I.L. 7-21-65
*Revised e'& f for 30'& 71' Spans-T.I.L. 7-15-67.

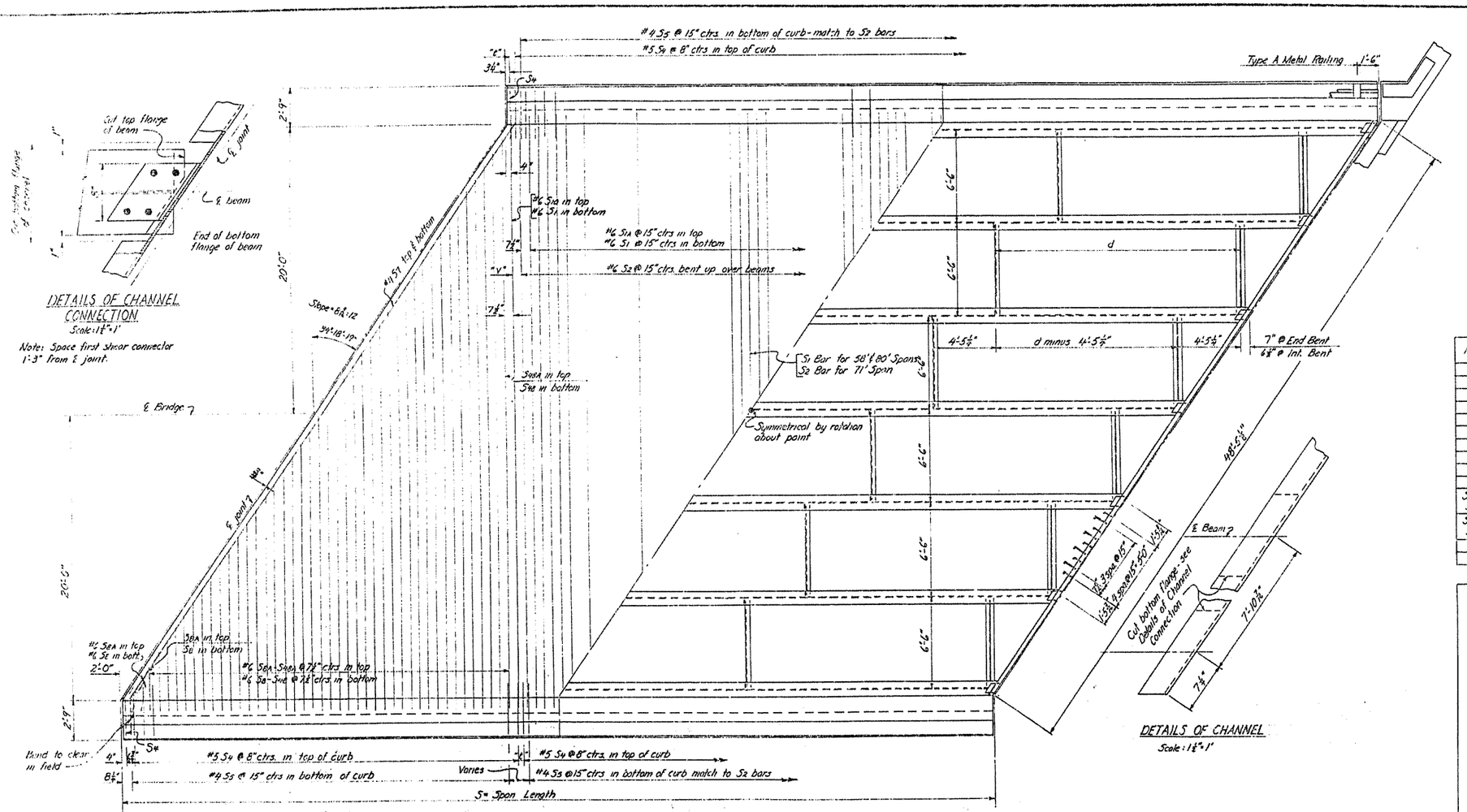
DRAWN BY: TMS DATE: 4-2-68
TRACED BY: DATE:
CHECKED BY: LPC DATE: 8-30-68
SCALE: ¾" = 1'-0 or as noted

L. P. Carlson
BRIDGE ENGINEER

BRIDGE NO. A&B3959 DRAWING NO. 48434

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	ARK.			
JOB NO.		BB0407	19	464

(1) A&B3959 - SPAN - 48435

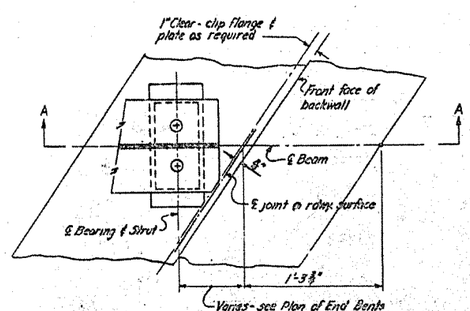


PLAN OF STEEL
Scale: 1/4"=1'

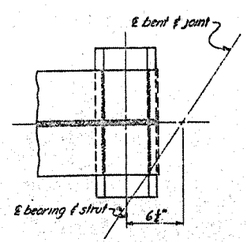
DETAILS OF CHANNEL CONNECTION
Scale: 1 1/2" = 1'

Note: Space first shear connector 1'-3" from ℄ joint.

SECTION A-A
Scale: 1/2"=1'



PLAN OF BEARINGS AT BRIDGE ENDS
Scale 1 1/2"=1'



PLAN OF BEARINGS AT INTERMEDIATE SUPPORTS
Scale 1 1/2"=1'

DETAILS OF CHANNEL
Scale: 1 1/2" = 1'

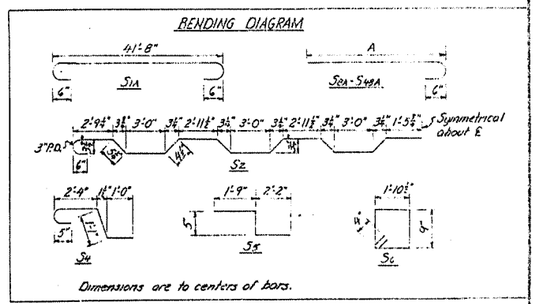
VARIABLE DIMENSIONS

Span Lengths	t	v	Struts No. of Spaces	Struts d
58'	5"	7 1/4"	3	11'-5 3/8"
71'	7"	3 1/2"	4	14'-4 3/8"
80'	5"	4 1/2"	4	18'-7 1/2"

BAR LIST EACH SPAN

Mark	"A"	Pin Dia.	Size	Length	Number Required per Span 5'-5.5"	5'-7.1"	5'-9.0"
S1	—	Str.	6	41'-8"	25	36	43
S1A	—	3"	6	43'-0"	25	36	43
S2	—	2 1/2"	6	44'-0"	34	35	42
S3	—	Str.	4	2 1/2"+7"	-	-	-
S3	—	Str.	4	2 1/2"+1'-0"	306	306	306
S3A	—	Str	4	5[3-0 1/2"+6"]	12	12	12
S4	—	1 1/2"	5	5'-0"	176	214	242
S5	—	1 1/2"	4	4'-3"	92	111	128
S6	—	1 1/2"	4	5'-10"	140	172	192
S7	—	Str.	4	25'-0"	8	8	8
S6 to S9A	—	Str.	6	Varies 3'-9" to 40'-0" by 11"	2 ea. (82)	2 ea. (82)	2 ea. (82)
S6A to S9AA	Varies 3'-9" to 40'-0" by 11"	3"	6	Varies 9'-0" to 40'-8" by 11"	2 ea. (82)	2 ea. (82)	2 ea. (82)
S8	—	Str.	6	3'-9"	4	4	4
S8A	3'-4"	3"	6	4'-0"	4	4	4

BENDING DIAGRAM



Dimensions are to centers of bars.

NOTES

For details not shown and general notes see Dwgs Nos. 149908 Rev. and 13349.

FOR INFORMATION ONLY

SUPPLEMENTAL DETAILS
FOR SUPERSTRUCTURE
U.S. HIGHWAY 64 INTERCHANGE
JCT HWY 64 - JCT I-40
CRAWFORD COUNTY
INT. ROUTE 540 SEC. 1

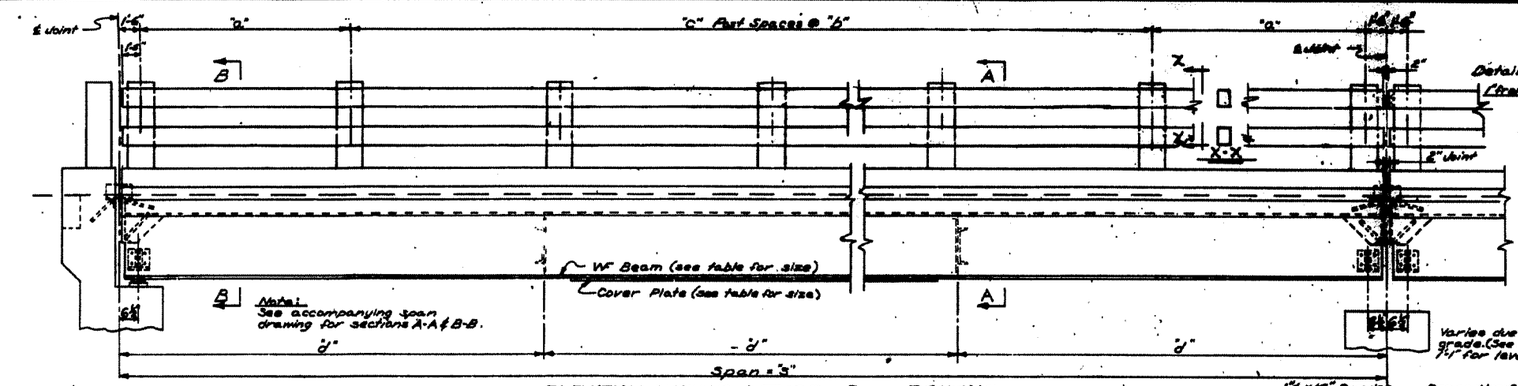
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: T.L.L. DATE: 6-15-65
TRACED BY: DATE:
CHECKED BY: J.S.D. DATE: 9-9-65
SCALE: Noted

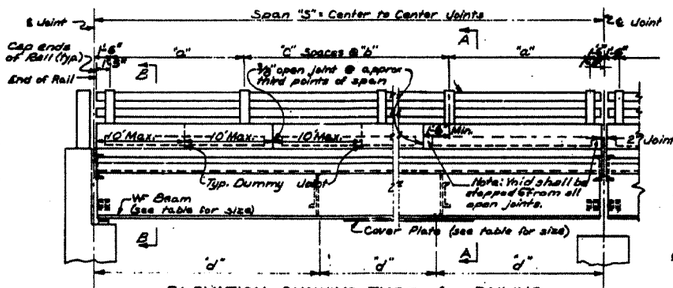
L.O. Carlson
CHIEF ENGINEER

BRIDGE NO. A&B3959 DRAWING NO. 48435

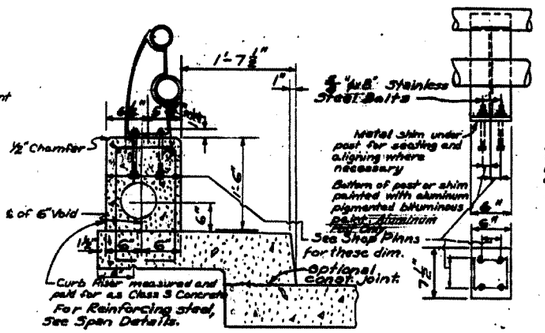
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.	BB0407		130	464
(1)	A&B3959 - SPAN - 48436			



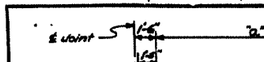
ELEVATION SHOWING TYPE B RAILING
Scale: ½" = 1'-0"



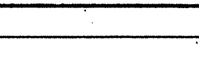
ELEVATION SHOWING TYPE A RAILING
Scale: ½" = 1'-0"



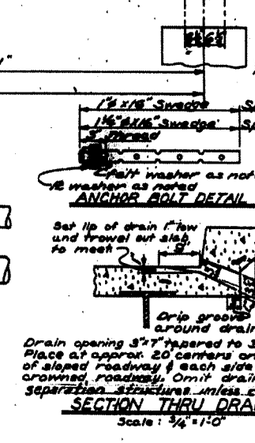
DETAILS OF TYPE A RAILING
Scale: 1" = 1'-0"



PLAN OF DUMMY JOINT



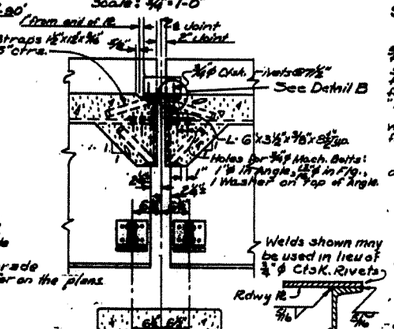
PLAN OF OPEN JOINT



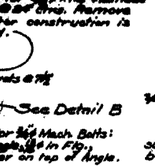
ANCHOR BOLT DETAIL

SECTION THRU DRAIN
Scale: ¾" = 1'-0"

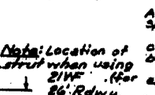
JOINT AT END BENT
Scale: ¾" = 1'-0"



JOINT AT INT. BENT
Scale: ¾" = 1'-0"



DETAIL B
Scale: 1½" = 1'-0"



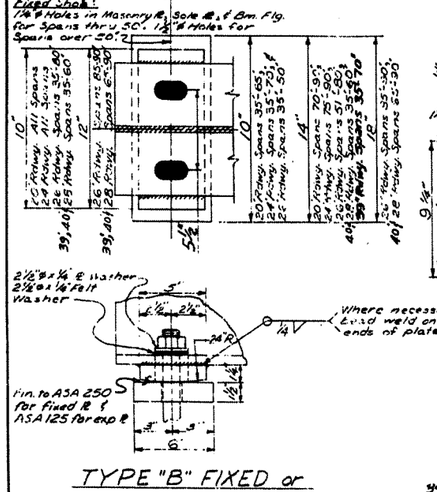
DETAIL "A" (Typical)
Scale: 1½" = 1'-0"

Flange Width & Thickness & Web Thickness to be equal to or greater than WF Beam Dim.

OPTIONAL BEAM BUILDUP
No Scale

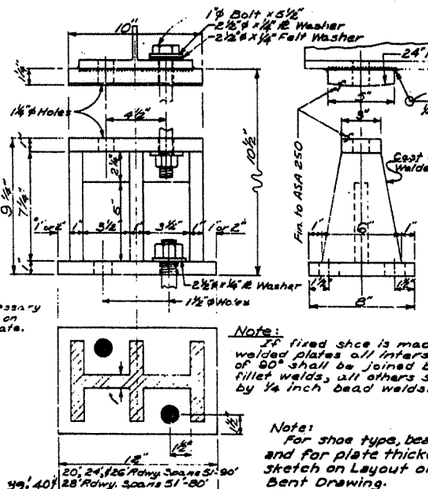
JOINT AT INT. BENT SHOWING MODIFIED AND REGULAR SPAN
Scale: ¾" = 1'-0"

CAMBER DIAGRAMS



TYPE "B" FIXED or EXPANSION SHOE

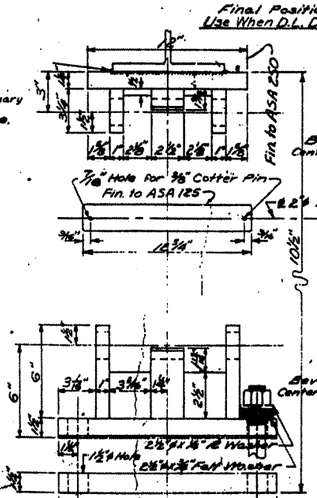
Use for end bents - all spans.
Use for int. bents - 35'-50' spans, unless otherwise shown.



TYPE "A" FIXED SHOE

Note: If fixed shoe is made from welded plates all intersecting surfaces of 90° shall be joined by ¼ inch fillet welds, all others shall be joined by ¼ inch bead welds.

Note: For shoe type, beam build-up, and for plate thickening, see sketch on Layout or Intermediate Bent Drawing.



TYPE "A" EXPANSION SHOE

REVISIONS: Specification note.
5-4-66 JEH.

Revised: Intermediate Diaphragms 10-6-65 JEH.
Revised: Spans & Slab Pouring Note 6-21-66 AJ
Revised: Bridge Railing 3-5-65 JEH

GENERAL NOTES

All concrete to be Class S. All exposed corners to be chamfered ¾" unless otherwise noted.

Field connections to be riveted or bolted with high strength bolts. Rivets: ¾" ℄, Open holes ¹³⁄₁₆" ℄ except where noted otherwise.

Structural shapes of equal or greater strength may be substituted for shapes shown, but payment will be made on the basis of shapes shown or those actually used, whichever is less.

All welded connections to be ⅜" fillet shop welds except as noted.

All welding shall conform to the American Welding Society Standard Specifications for Welded Highway and Railway Bridges, current edition.

Shop Paint: All structural steel except surfaces in contact with concrete shall be given one coat of red lead and raw linseed oil before shipment.

Field Paint: First coat - red lead tinted with lamp black. Second coat - aluminum paint.

All metal bearing and roadway expansion devices to be paid for as "Structural Steel in Beam Spans." Bearings shall be finally seated in accordance with Sec. 806.05, including grouting, of the Spec. This work and material are to be considered as subsidiary to the item "Structural Steel in Beam Spans" and will not be paid for directly.

This drawing shows general features of design only. Shop drawings shall be made in accordance with the Specifications, submitted and approval secured before fabrication is begun.

All Steel shall be ASTM A-36 unless otherwise noted.

Anchor bolts shall be galvanized to conform to ASTM Specification, Designation A 153.

Reinforcing steel to be deformed bars of intermediate or hard grade. 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 of "Reinforcing Steel."

Shop lists and bending diagrams of reinforcing steel, including wire supports, shall be submitted and approval secured before fabrication is begun.

All chamfers on concrete riser for rail are to be ½".

Shop drawings showing details of railing shall be submitted and approval secured before fabrication is begun.

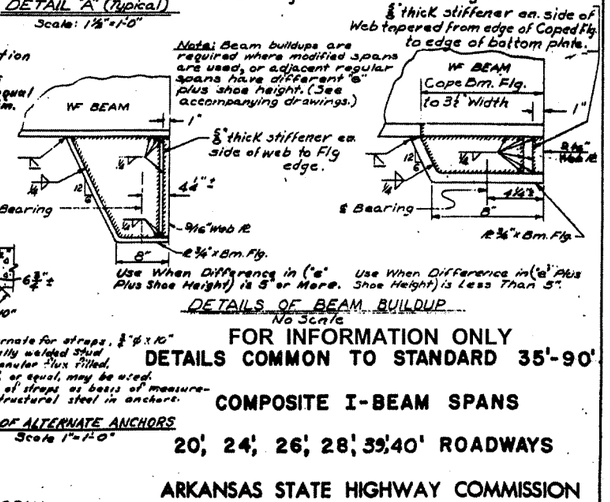
For details of Bridge Railing see Drwg. No. 14993 or 14992 as shown on Bridge Layout.

Slab Pouring Note:
Floor slabs may be poured in one continuous operation with a strike off extending over the whole span length, or may be poured in increments with the center one-third to one-fifth span length poured first. After the center section is poured not less than 72 hours shall elapse before pouring the end sections. The end sections may be poured simultaneously, and poured continuously, 48 hours shall elapse between end sections pours.

A minimum of 72 hours shall elapse between completion of the slab and the pouring of the curb section if poured separately.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications For Highway Construction, Edition of 1959, the 1966 Supplemental Specifications thereto, and designated Special Provisions.

This Drawing is a modification of Dwg No. 14990



Use When Difference in ("a" Plus Shoe Height) is 5" or More. Use When Difference in ("a" Plus Shoe Height) is Less Than 5".

DETAILS OF BEAM BUILDUP
No Scale

As an alternate for straps, ⅝" ℄ x 10" automatically welded stud anchors, granular flux filled, solid fused, or equal may be used. Use weight of straps as basis of measurement of structural steel in anchors.

DETAILS OF ALTERNATE ANCHORS
Scale 1" = 1'-0"

FOR INFORMATION ONLY
DETAILS COMMON TO STANDARD 35'-90'
COMPOSITE I-BEAM SPANS
20', 24', 26', 28', 39', 40' ROADWAYS

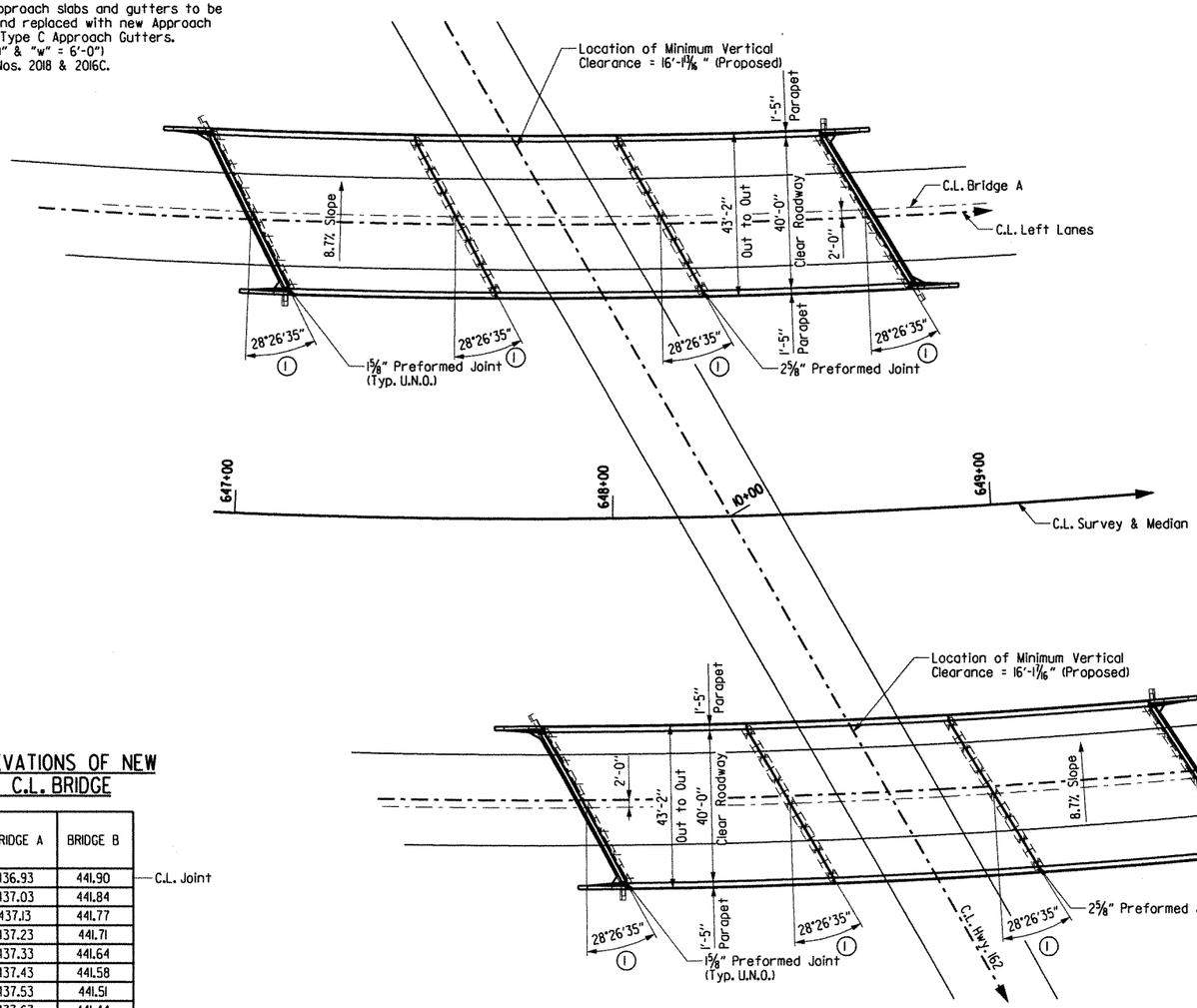
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JEH DATE: 8 Mar 62
TRACED BY: JEH DATE: 5-14-62 AM
CHECKED BY: JEH DATE: 5-17-64 AM
CHECKED BY: L.K. DATE: 3-9-62
SCALE: As Shown

BRIDGE NO. A&B3959 DRAWING NO. 48436

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.		BB0407	131	464
				(1) A&B3957		LAYOUT		48437

Note:
Existing approach slabs and gutters to be removed and replaced with new Approach Slabs and Type C Approach Gutters.
("w" = 10'-0" & "w" = 6'-0")
See Dwg. Nos. 2018 & 2016C.



LAYOUT PLAN

HORIZONTAL CURVE DATA
C.L. MEDIAN I-540

PI = 649+73.29
Delta = 63°16'00"
Dc = 3°00'00"
T = 1356.43'
L = 2108.89'
R = 1909.86'

HORIZONTAL CURVE DATA
C.L. NORTHBOUND LANES I-540

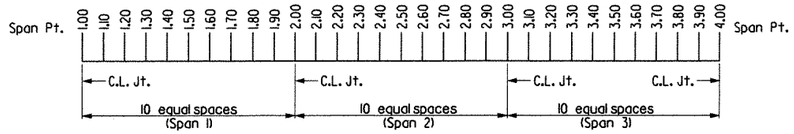
PI = 649+61.43
Delta = 63°16'01" LT.
Theta = 3°44'59" LT.
DC = 3°00'00"
RC = 1909.97'
LC = 2109.03'
LS = 250'

HORIZONTAL CURVE DATA
C.L. SOUTHBOUND LANES I-540

PI = 649+61.43
Delta = 63°16'01" LT.
Theta = 3°44'59" LT.
DC = 3°00'00"
RC = 1909.97'
LC = 2109.03'
LS = 250'

TABLE OF ELEVATIONS OF NEW DECK AT C.L. BRIDGE

SPAN NO.	POINT OF ELEVATION	BRIDGE A	BRIDGE B	
1	1.00	436.93	441.90	C.L. Joint
	1.10	437.03	441.84	
	1.20	437.13	441.77	
	1.30	437.23	441.71	
	1.40	437.33	441.64	
	1.50	437.43	441.58	
	1.60	437.53	441.51	
	1.70	437.63	441.44	
	1.80	437.72	441.38	
	1.90	437.82	441.31	
2	2.00	437.91	441.24	C.L. Joint
	2.10	438.01	441.32	
	2.20	438.10	441.40	
	2.30	438.20	441.48	
	2.40	438.29	441.56	
	2.50	438.38	441.63	
	2.60	438.47	441.71	
	2.70	438.56	441.79	
	2.80	438.65	441.86	
	2.90	438.74	441.94	
3	3.00	438.82	442.01	C.L. Joint
	3.10	438.91	442.09	
	3.20	439.00	442.16	
	3.30	439.08	442.24	
	3.40	439.17	442.31	
	3.50	439.25	442.38	
	3.60	439.33	442.45	
	3.70	439.42	442.52	
	3.80	439.50	442.60	
	3.90	439.58	442.67	
	4.00	439.66	442.74	C.L. Joint



TOP OF DECK ELEVATION POINTS @ C.L. BRIDGE

(1) Skew angles are measured from radial lines and are based on existing bridge plans. Contractor shall verify these angles and make any adjustments necessary to fit new work to the existing structure.

GENERAL NOTES

BENCH MARK: Elevations and stations are assumed to be the same as shown on the original bridge plans. The contractor shall verify the elevation shown on the original layout at the top of the deck and centerline of existing bridge to be at Sta. 435.00 at Sta. 646+58.91 (Beg. of Br. A3957).

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 on the plans, section and subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (2002 edition), with current interim specifications. (New End Bent Backwall, & Deck)

LIVE LOAD: HS20 + Alt. Military LOADING METHOD OF DESIGN: Load Factor

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 M31 or M53, Gr. 60)	fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 50)	Fy = 50,000 psi
Structural Steel (AASHTO M270, Gr. 36)	Fy = 36,000 psi

All welding to be performed by a certified welder approved by the Engineer. All welding shall conform to the current AASHTO/AWS D1.5 Welding Code.

Anchor bolt extension shall be ASTM A36 and galvanized. Repair damaged galvanized surfaces in accordance with Subsection 807.88.

Structural steel bearings shall be seated in accordance with subsection 807.66 of the Standard Construction Specifications.

Felt and steel washers on all existing anchor bolts shall be removed and discarded. New steel washers shall be used on all anchor bolts and new rubber washers shall be used where specified on the plans. Payment for new washers will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A&B3957).

All dimensions are taken from existing bridge plans. See Dwg. Nos. 48446, 48446A-G. of the existing bridge plans. The Contractor shall verify measurements of the existing bridge and make adjustments necessary to fit the new work to the existing structure. This work shall be included in the price bid for "Modification of Existing Bridge Structures (Br. No. A&B3957)".

CLASS I PROTECTIVE SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the roadway surface and to the roadway face and top of the concrete parapet rail.

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.

REMOVAL AND SALVAGE: All material removed from the existing bridges and not used in the finished structure shall become the property of the Contractor.

PROPOSED WORK: The proposed work is to provide a minimum 16'-0" vertical clearance and an 8.7% superelevation . The work generally consists of removing the end bent backwall and wings, removing the concrete deck, curb and railing, constructing new end bent backwall and wings, constructing concrete beam pedestals on all bents, modifying beam diaphragm connections, cleaning and painting existing beams and diaphragms, installing new end struts, re-furbishing existing bearings as necessary, constructing new concrete deck with parapet rail, and install new preformed joint seal.

METHOD OF WORK: After removal of the bridge deck, the contractor shall disassemble, remove, modify, and clean and apply the prime coat to the structural steel that will be used in the final structure. After the substructure has been modified as detailed in the plans, the contractor shall re-erect, re-assemble, and apply the topcoating of the paint system to the structural steel. Cleaning and painting structural steel will be paid in accordance with Section 807 "Painting Structural Steel". All applicable provisions of Section 807, as determined by the Engineer, shall be followed including Sections 807.56 and 807.61. See SP Job BB0407 "Special Safety Requirements for Bridges" for additional provisions. All work, materials, and labor required for the disassembly, removal, transport, modification, re-erection, and re-assembly of the structural steel will not be paid for directly but will be considered subsidiary to the pay item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

The contractor may submit an alternate Method of Work. The plan shall be submitted to the Engineer for informational and record purposes at least 3 weeks prior to any work being performed. The submittal shall be prepared and/or approved by a Professional Engineer registered in the state of Arkansas and shall include sufficient details and information to the Engineer's satisfaction. The Contractor will be responsible for the results obtained by the use of the alternate Method of Work. All work, materials, and labor required for the Contractor to develop and execute the plan will not be paid for directly but will be considered subsidiary to the pay item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

REMODELING DETAILS FOR BRIDGE OVER HWY. 162 HWY. 22 - I-40 CRAWFORD & SEBASTIAN COUNTIES

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12424 STEPHEN S. PUTNEY 8/11/12

BRIDGE ENGINEER

DRAWN BY: JE DATE: 10-06 FILENAME: bBB0407m7_l11.dgn
CHECKED BY: SP DATE: 09-30-09 SCALE: 1" = 20'-0"
DESIGNED BY: CB, DM DATE: 10-06

BRIDGE NO. A&B3957 DRAWING NO. 48437

$$$$date$$$$
$$$$dgnspec$$$$

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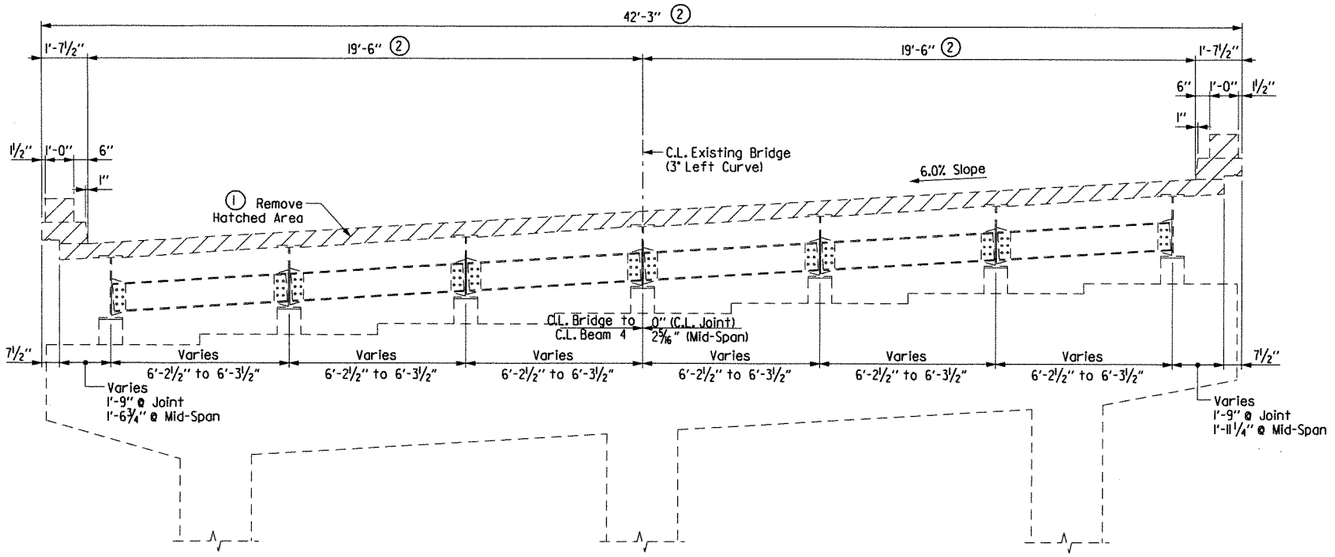
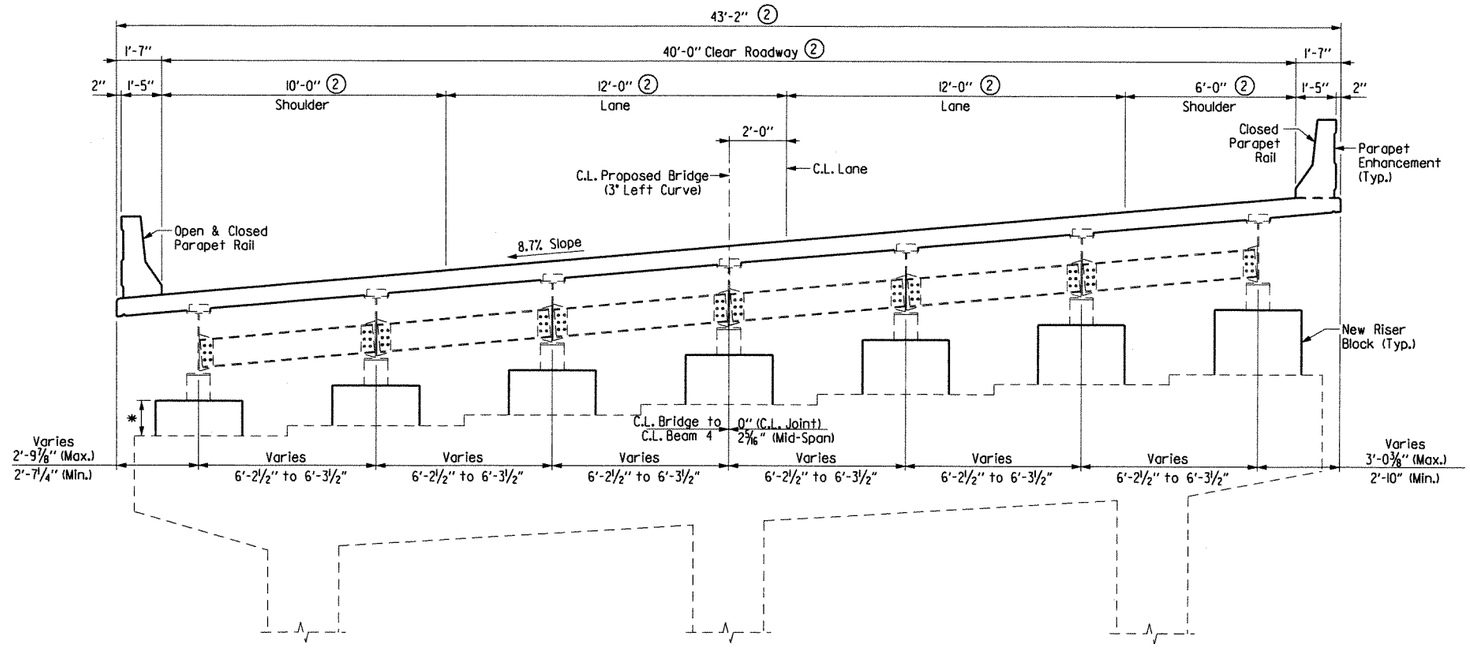
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	132	464
				① A&B3957		TYPICAL SECTION		48438



EXISTING TYPICAL SECTION

⅜" = 1'-0"
Looking Forward
(Bridge A Shown, Bridge B Similar)



PROPOSED TYPICAL SECTION

⅜" = 1'-0"
Looking Forward
(Bridge A Shown, Bridge B Similar)

① Work required to remove and dispose of the existing deck, curb, and railing will not be paid for directly but be paid for as part of the pay item "Modification of Existing Bridge Structures (Br. No. A&B3957)". See Section 821 for more information.

② Measured radial to C.L. Bridge.

* Raise the Superstructure a minimum of 15" at lowest beam to achieve a minimum 16'-0" vertical clearance. The Contractor shall verify measurements and make any necessary adjustments. This work will not be paid for directly but will be considered subsidiary to the price bid for "Modification of Existing Bridge Structures (Br. No. A&B3957)".

BRIDGE A & B
TYPICAL SECTION
I-540 BRIDGE OVER HWY. 162
CRAWFORD & SEBASTIAN COUNTIES

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 12424 — STEVEN S. PUTNEY — 8/11/12

BRIDGE ENGINEER

DRAWN BY: JE DATE: 10-06 FILENAME: bBB0407m7_l12.dgn
CHECKED BY: SP DATE: 09-30-09 SCALE: AS SHOWN
DESIGNED BY: CB, DM DATE: 10-06

BRIDGE NO. A&B3957 DRAWING NO. 48438

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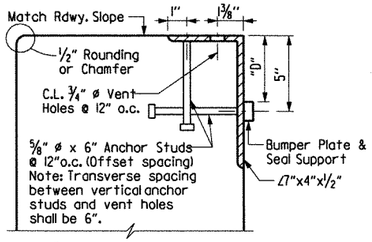
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	133	464
				(1) A&B3957		END BENT DETAILS		48439

TABLE OF VARIABLES

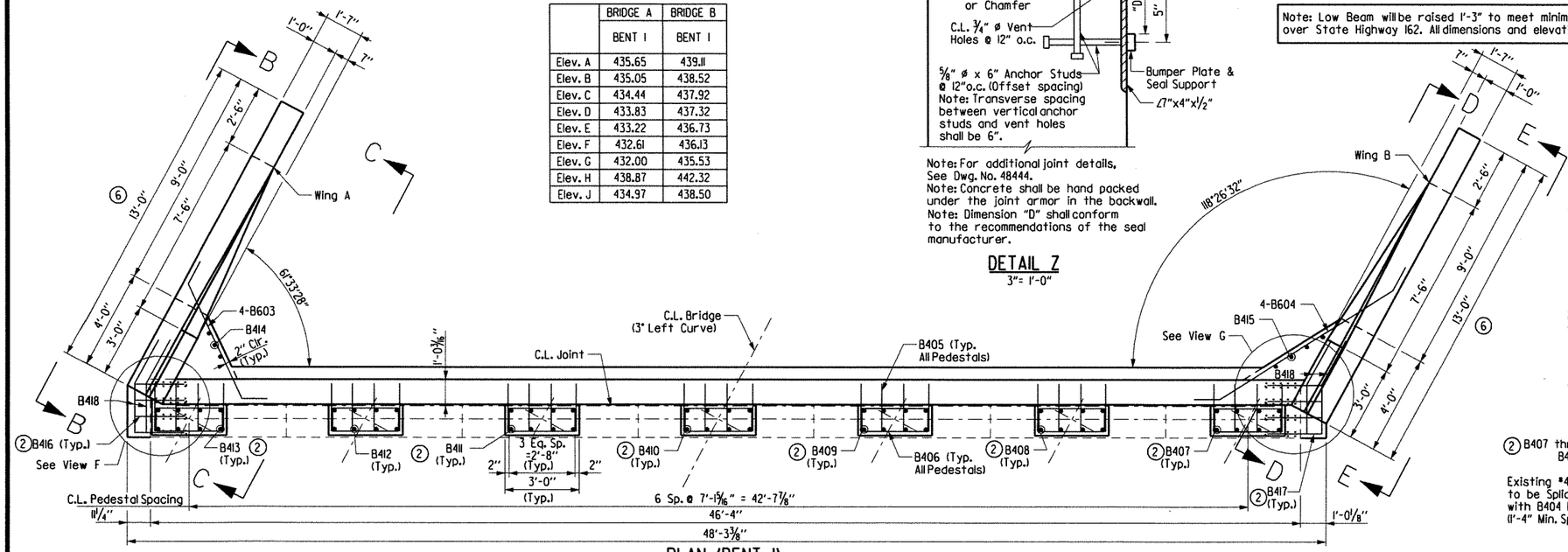
	BRIDGE A	BRIDGE B
	BENT 1	BENT 1
Elev. A	435.65	439.11
Elev. B	435.05	438.52
Elev. C	434.44	437.92
Elev. D	433.83	437.32
Elev. E	433.22	436.73
Elev. F	432.61	436.13
Elev. G	432.00	435.53
Elev. H	438.87	442.32
Elev. J	434.97	438.50



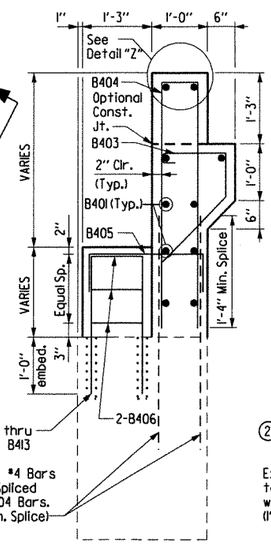
Note: For additional joint details, See Dwg. No. 48444.
Note: Concrete shall be hand packed under the joint armor in the backwall.
Note: Dimension "D" shall conform to the recommendations of the seal manufacturer.

DETAIL Z
3"= 1'-0"

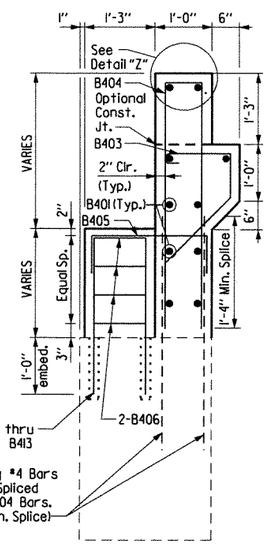
Note: Low Beam will be raised 1'-3" to meet minimum vertical clearance of 16'-0" over State Highway 162. All dimensions and elevations shall be field verified.



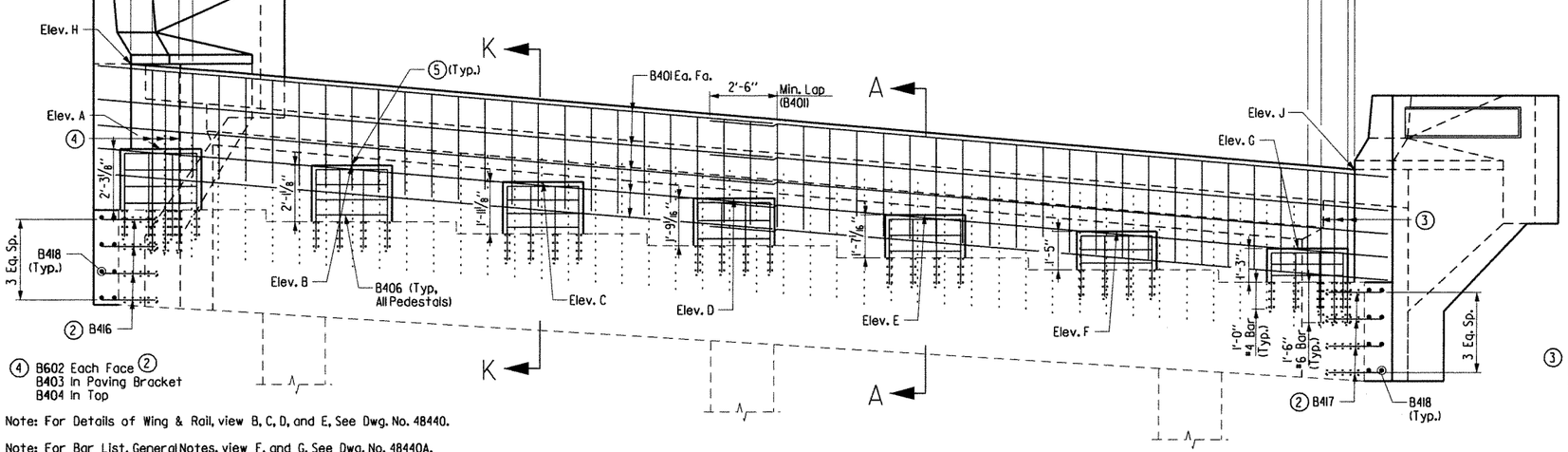
PLAN (BENT 1)
3/8" = 1'-0"
LOOKING BACK



SECTION A-A
3/4" = 1'-0"
(Beams 1-4)



SECTION K-K
3/4" = 1'-0"
(Beams 5-7)

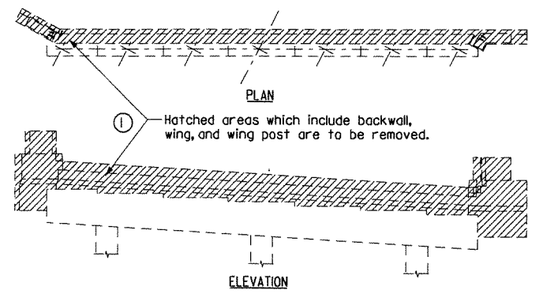


ELEVATION (BENT 1)
3/8" = 1'-0"
LOOKING BACK

(4) B602 Each Face (2)
B403 In Paving Bracket
B404 In Top

(3) B601 Each Face (2)
B403 In Paving Bracket
B404 In Top

(6) Wings shall be constructed on arcs concentric to centerline lanes.



DEMOLITION (BENT 1)
3/8" = 1'-0"
LOOKING BACK

Note: For Details of Wing & Rail, view B, C, D, and E, See Dwg. No. 48440.

Note: For Bar List, General Notes, view F, and G, See Dwg. No. 48440A.

Note: Class I Protective Surface Treatment shall be applied to the Roadway Face and Top of Transition Rail, and to the Top of the Backwall.

(1) Remove hatched portion of existing bent. Existing rebar to be cleaned and incorporated into new work. If two or more adjacent bars or two bars separated by only one bar are broken in the concrete removal or bar straightening process, replacement dowel bars shall be drilled and grouted in place as approved by the Engineer. See Section 821. This work will be paid for as part of the item "Modification of Existing Bridge Structure (Br.No. A&B3957)".

(2) No. 4 bars and No. 6 bars shall be drilled and grouted into existing concrete using a QPL approved non-shrink grout. Diameter of drilled holes and installation procedure shall be as recommended by the grout manufacturer. Drilling and grouting of dowels will be paid for as part of the item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

(5) As directed by the Engineer, disassemble, clean and re-paint the rockers to address any beginning rust in accordance with section 820, using Type I cleaning and painting. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip No. 26176. Install cleaned and painted bearings on new riser blocks. Provide new bearing pads in accordance with section 807.15. Provide new nuts and washers for all anchor bolt connections in accordance with section 807. All work & materials on existing bearings will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12674
STEPHEN S. PATRICK
BRIDGE ENGINEER

BRIDGE A & B
SHEET 1 OF 4
DETAILS OF END BENTS
HWY. 162

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CB DATE: 10-06 FILENAME: bBB0407m7_b11.dgn
CHECKED BY: SP DATE: 09-30-09 SCALE: AS SHOWN
DESIGNED BY: CB, DM DATE: 10-06

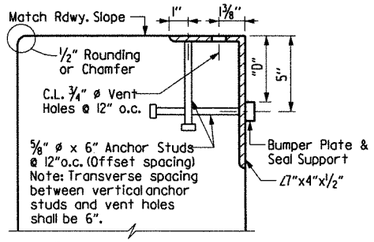
BRIDGE NO. A&B3957 DRAWING NO. 48439

$$$$dgnspec$$$$$

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.		BB0407	134	464
				(1) A&B3957		END BENT DETAILS		48439A

TABLE OF VARIABLES

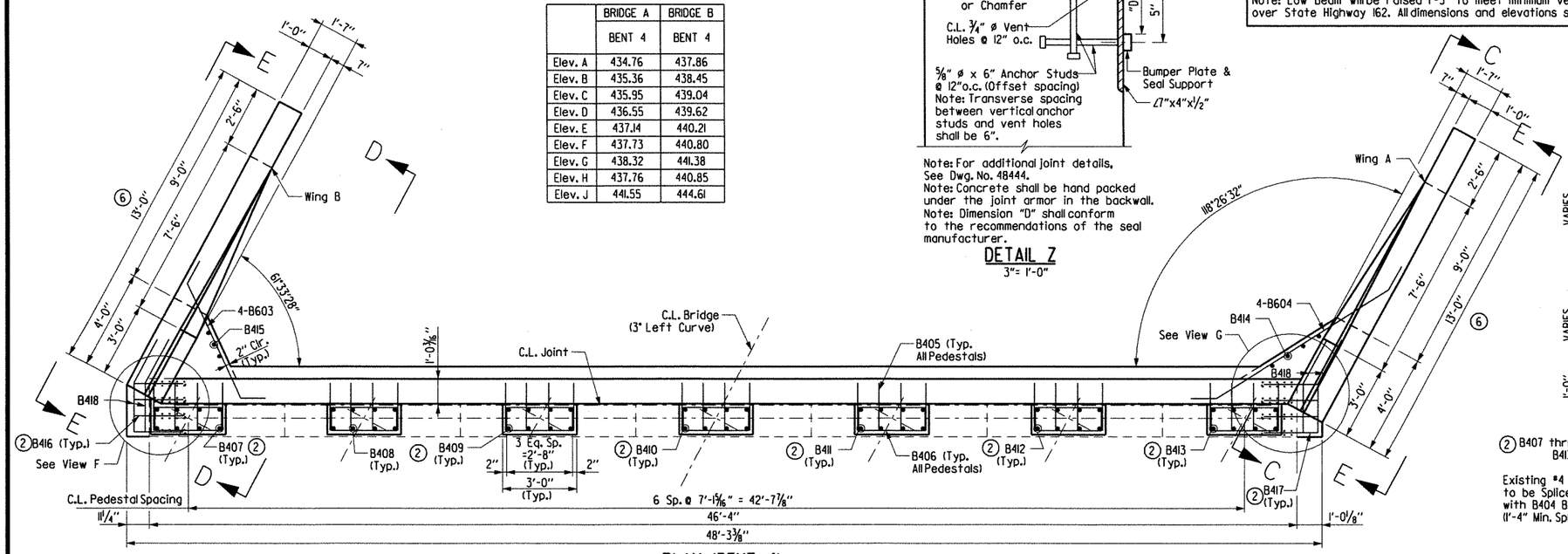
	BRIDGE A BENT 4	BRIDGE B BENT 4
Elev. A	434.76	437.86
Elev. B	435.36	438.45
Elev. C	435.95	439.04
Elev. D	436.55	439.62
Elev. E	437.14	440.21
Elev. F	437.73	440.80
Elev. G	438.32	441.38
Elev. H	437.76	440.85
Elev. J	441.55	444.61



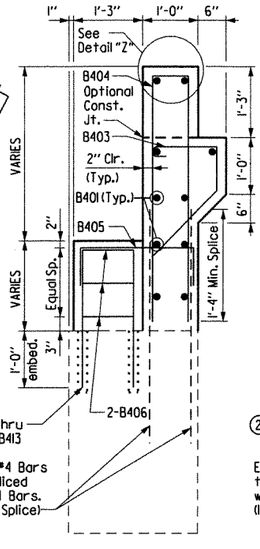
Note: For additional joint details, See Dwg. No. 48444.
Note: Concrete shall be hand packed under the joint armor in the backwall.
Note: Dimension "D" shall conform to the recommendations of the seal manufacturer.

DETAIL Z
3"= 1'-0"

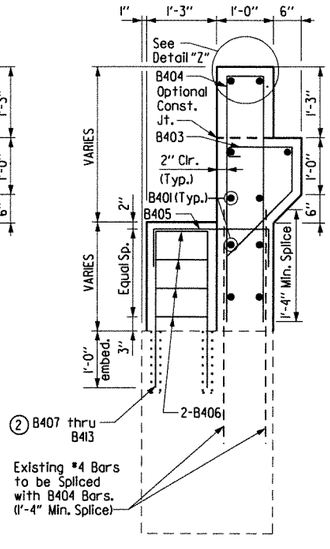
Note: Low Beam will be raised 1'-3" to meet minimum vertical clearance of 16'-0" over State Highway 162. All dimensions and elevations shall be field verified.



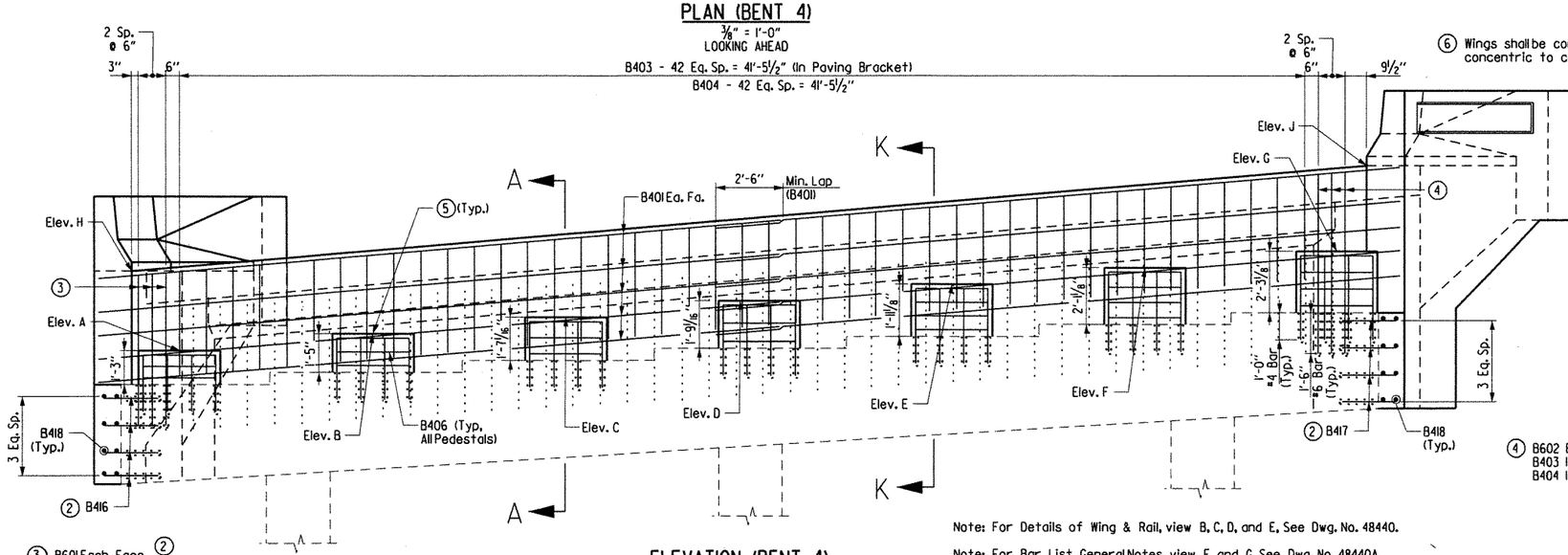
PLAN (BENT 4)
3/8" = 1'-0"
LOOKING AHEAD



SECTION A-A
3/4" = 1'-0"
(Beams 1-4)



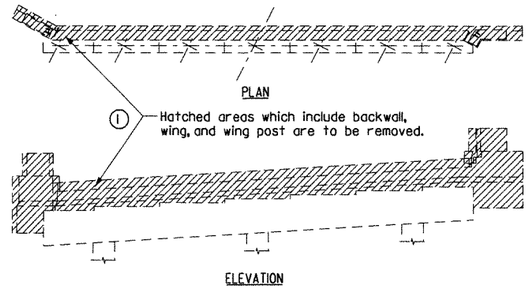
SECTION K-K
3/4" = 1'-0"
(Beams 5-7)



3 B601 Each Face 2 B403 In Paving Bracket B404 In Top

ELEVATION (BENT 4)
3/8" = 1'-0"
LOOKING AHEAD

6 Wings shall be constructed on arcs concentric to centerline lanes.



DEMOLITION (BENT 4)
3/8" = 1'-0"
LOOKING AHEAD

4 B602 Each Face 2 B403 In Paving Bracket B404 In Top

Note: For Details of Wing & Rail, view B, C, D, and E, See Dwg. No. 48440.

Note: For Bar List, General Notes, view F, and G, See Dwg. No. 48440A.

Note: Class 1 Protective Surface Treatment shall be applied to the Roadway Face and Top of Transition Rail, and to the Top of the Backwall.

(1) Remove hatched portion of existing bent. Existing rebar to be cleaned and incorporated into new work. If two or more adjacent bars or two bars separated by only one bar are broken in the concrete removal or bar straightening process, replacement dowel bars shall be drilled and grouted in place as approved by the Engineer. See Section 821. This work will be paid for as part of the item "Modification of Existing Bridge Structure (Br.No. A&B3957)".

(2) No. 4 bars and No. 6 bars shall be drilled and grouted into existing concrete using a QPL approved non-shrink grout. Diameter of drilled holes and installation procedure shall be as recommended by the grout manufacturer. Drilling and grouting of dowels will be paid for as part of the item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

(5) As directed by the Engineer, disassemble, clean and re-paint the rockers to address any beginning rust in accordance with section 820, using Type I cleaning and painting. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip No. 26176. Install cleaned and painted bearings on new riser blocks. Provide new bearing pads in accordance with section 807.15. Provide new nuts and washers for all anchor bolt connections in accordance with section 807. All work & materials on existing bearings will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12674 STEPHEN S. PUTNEY 11/12
BRIDGE ENGINEER

BRIDGE A & B
SHEET 2 OF 4
DETAILS OF END BENTS
HWY. 162

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CB DATE: 10-06
CHECKED BY: SP DATE: 09-30-09
DESIGNED BY: CB, DM DATE: 10-06
FILENAME: bBB0407m7_bl2.dgn
SCALE: AS SHOWN

BRIDGE NO. A&B3957 DRAWING NO. 48439A

$$$$dgnspec$$$$$

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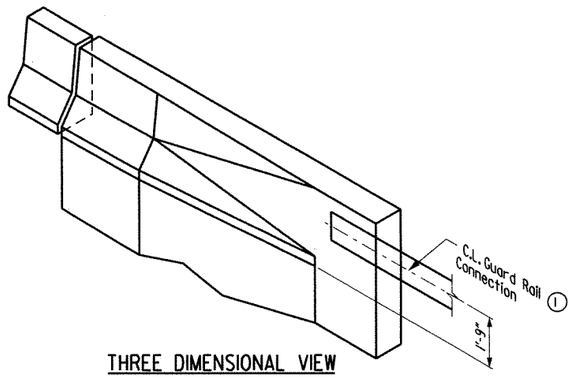
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	135	464
				(1) A&B3957		END BENT DETAILS		48440



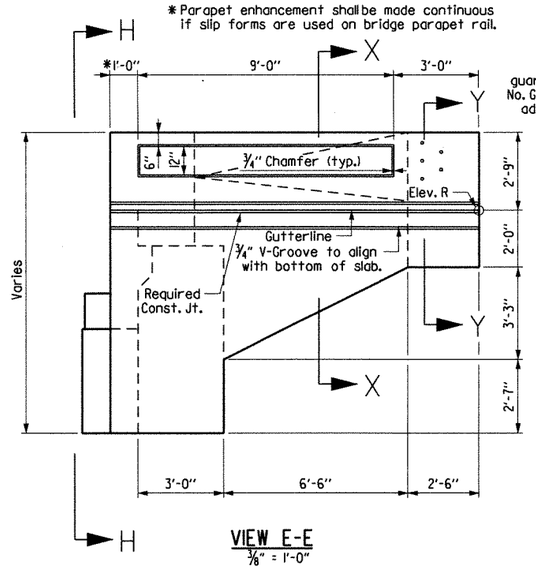
THREE DIMENSIONAL VIEW
WING RAIL & PARAPET

No Scale

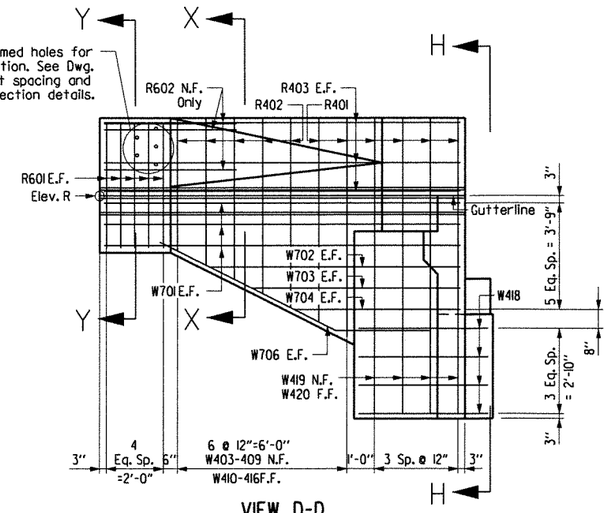
(1) Bent 4 - Bridge A and Bent 1- Bridge B only

TABLE OF VARIABLES (ELEV. "R")

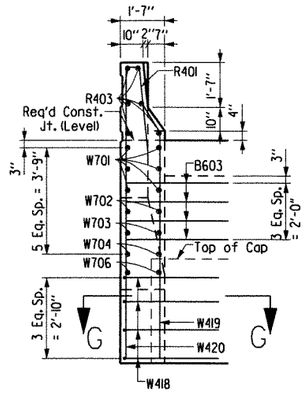
BENT NO.	WING	BRIDGE A ELEV.	BRIDGE B ELEV.
1	A	438.62	442.12
1	B	434.72	438.29
4	A	441.74	444.77
4	B	437.95	441.03



VIEW E-E
3/8" = 1'-0"

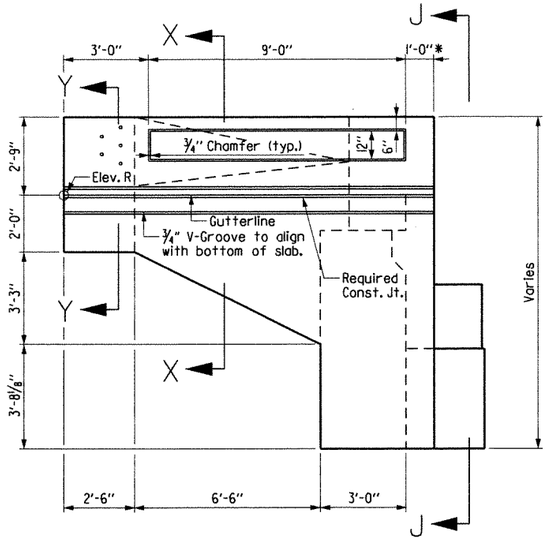


VIEW D-D
3/8" = 1'-0"

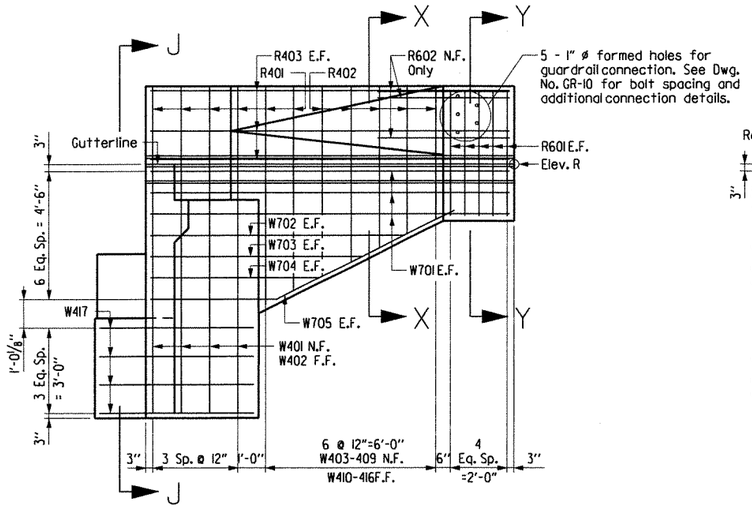


VIEW H-H
3/8" = 1'-0"

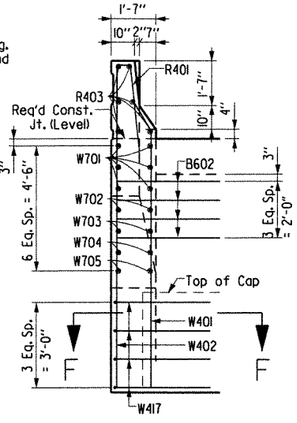
* Parapet enhancement shall be made continuous if slip forms are used on bridge parapet rail.



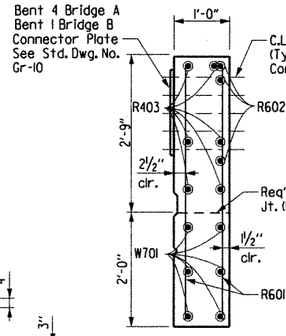
VIEW B-B
3/8" = 1'-0"



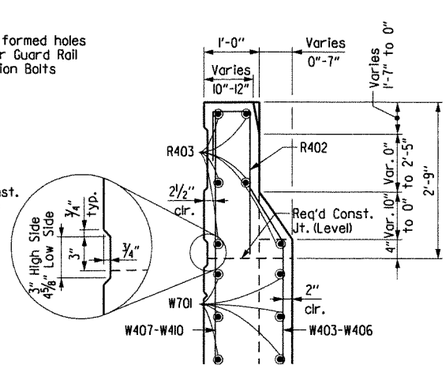
VIEW C-C
3/8" = 1'-0"



VIEW J-J
3/8" = 1'-0"



SECTION Y-Y
3/4"= 1'-0"



SECTION X-X
3/4"= 1'-0"

Note: For view F & G, See Dwg. No. 48440A.

Note: For Bar List and General Notes, See Dwg. No. 48440A.

BRIDGE A & B
SHEET 3 OF 4
DETAILS OF END BENTS
HWY. 162

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER STEPHEN S. PUTNEY 5/11/12

BRIDGE ENGINEER

DRAWN BY: CB DATE: 10-06
CHECKED BY: SP DATE: 09-30-09
DESIGNED BY: CB, DM DATE: 10-06

FILENAME: bBB0407m7_b13.dgn
SCALE: AS SHOWN

BRIDGE NO. A&B3957 DRAWING NO. 48440

$$$$dgnspec$$$$$

$$$$date$$$$

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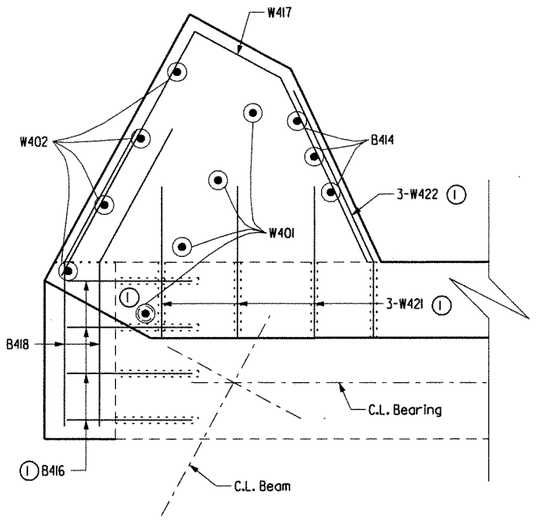
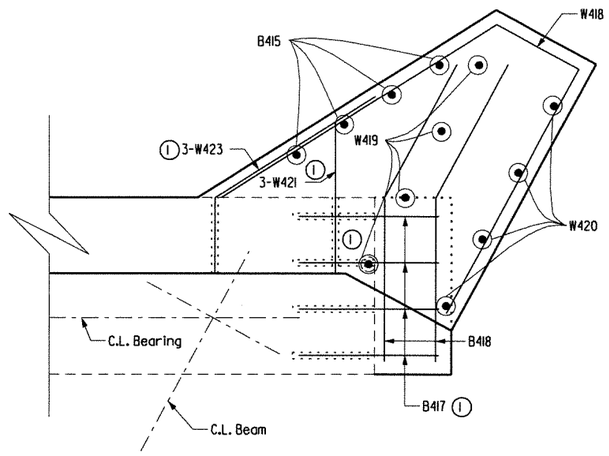
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	136	464
				(1) A&B3957		END BENT DETAILS		48440A



VIEW F-F
1" = 1'-0"



VIEW G-G
1" = 1'-0"

BAR LIST - PER BENT

MARK	NO. REQ'D	LENGTH	"A"	PIN DIA.
B401	20	25'-3"	--	Str.
B403	49	3'-10"	--	2"
B404	49	8'-2"	--	3"
B405	28	3'-2"	--	3"
B406	48	5'-5"	--	3"
B407	8	2'-1"	--	Str.
B408	8	2'-3"	--	Str.
B409	8	2'-5"	--	Str.
B410	8	2'-7"	--	Str.
B411	8	2'-9"	--	Str.
B412	8	2'-11"	--	Str.
B413	8	3'-1"	--	Str.
B414	4	7'-4"	--	Str.
B415	a	6'-3"	--	Str.
B416	b	1'-11"	--	Str.
B417	16	2'-2"	--	Str.
B418	16	4'-0"	--	3"
B601	6	5'-7"	--	Str.
B602	6	6'-7"	--	Str.
B603	4	7'-1"	--	
B604	4	10'-2"	--	4½"
				4½"
R401	12	3'-11"	--	2"
R402	10	4'-0"	--	2"
R403	12	12'-8"	--	Str.
R601	20	4'-5"	--	Str.
R602	6	5'-0"	--	Str.
W401	4	10'-2"	9'-0"	3"
W402	4	11'-4"	--	Str.
W403 to W409	2 ea.	3'-5" to 6'-5"	2'-3" to 5'-3"	3"
W410 to W416	2 ea.	4'-8" to 7'-8"	--	Str.
W417	4	7'-5"	--	2"
W418	4	9'-0"	--	2"
W419	4	9'-1"	7'-11	3"
W420	4	10'-3"	--	Str.
W421	12	2'-0"	--	Str.
W422	3	3'-6"	--	3"
W423	3	3'-6"	--	3"
W701	12	12'-8"	--	Str.
W702	4	8'-11"	--	Str.
W703	4	7'-5"	--	Str.
W704	4	5'-11"	--	Str.
W705	2	11'-5"	4'-5"	5¼"
W706	2	10'-4"	3'-4"	5¼"

BENDING DIAGRAMS
(Dimensions are out to out of Bars)

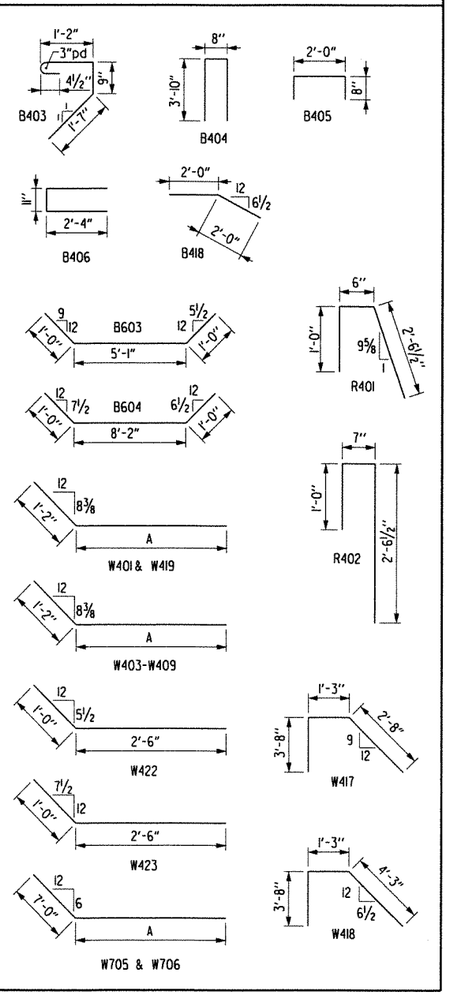


TABLE OF VARIABLES

	Bent 1	Bent 4
a	3	4
b	4	3

GENERAL NOTES FOR SUBSTRUCTURE

All concrete shall be Class "S" with a minimum 28 day compressive strength f'c = 3,500 psi. Payment will be paid for as Class "S" Concrete - Bridge. 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). Payment will be paid for as Reinforcing Steel (Grade 60) - Bridge.

Backwall shall not be poured without beams in place. Backwall above the optional construction joint shall not be poured until the slab on the end spans has been poured and the final grade has been established. See Expansion Device Installation on Dwg. No. 48445 for additional details.

Structural steel in end bents shall be AASHTO M270, Grade 50 and shall be paid for as "Structural Steel in Beam Spans (M270 Grade 50)".

For Anchor Bolt Details, see Dwg. No. 48441

For additional information, see layout.

Class I Protective Surface Treatment shall be applied to the Roadway Face and Top of Transition Rail, and to the Top of the Backwall. Payment will be paid for as Class I Protective Surface Treatment.

All exposed steel surfaces are to be cleaned and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

(1) No. 4 bars and No. 6 bars shall be drilled and grouted into existing concrete using a QPL approved non-shrink grout. Diameter of drilled holes and installation procedure shall be as recommended by the grout manufacturer. Drilling and grouting of dowels will be paid for as part of the item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12024 STEPHEN S. PURVIS 8/11/12

BRIDGE ENGINEER

BRIDGE A & B
SHEET 4 OF 4
DETAILS OF END BENTS
HWY. 162

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CB DATE: 10-06
CHECKED BY: SP DATE: 09-30-09
DESIGNED BY: CB, DM DATE: 10-06

FILENAME: bBB0407m7_b14.dgn
SCALE: AS SHOWN

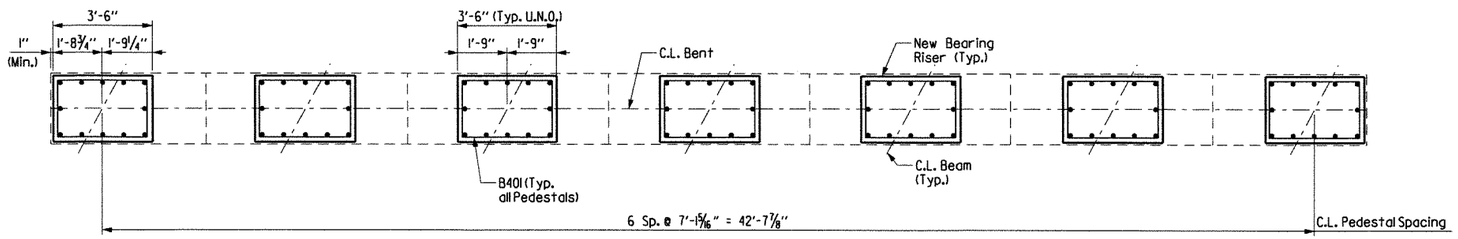
BRIDGE NO. A&B3957 DRAWING NO. 48440A

$$$$dgnspec$$$$$

$$$$date$$$$

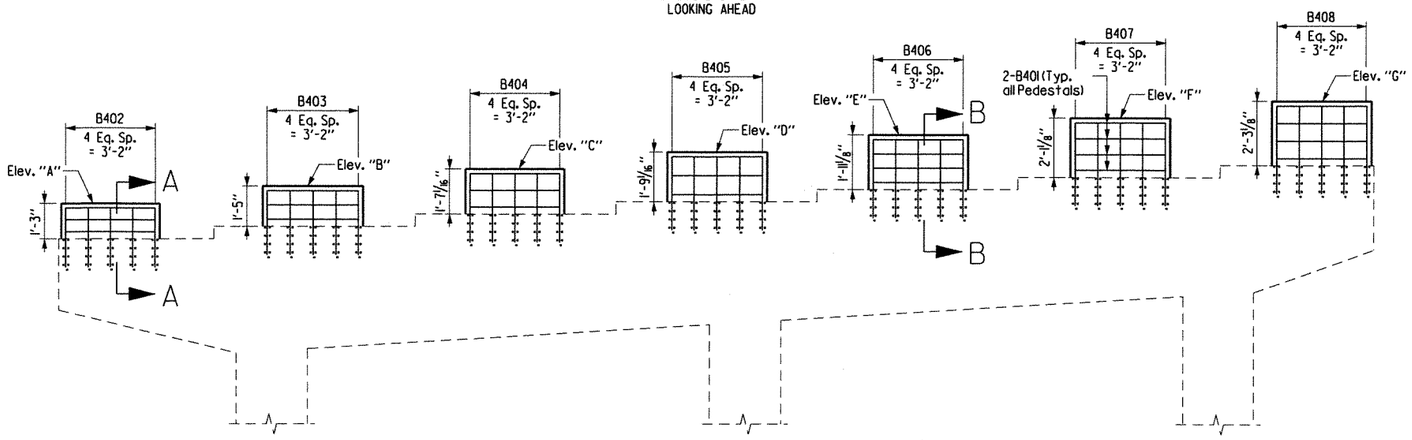
Note: Low Beam will be raised 1'-3" to meet minimum vertical clearance of 16'-0" over State Highway 162. All dimensions and elevations shall be field verified.

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.		BB0407	137	464
				① A&B3957		BENTS 2 & 3		48441



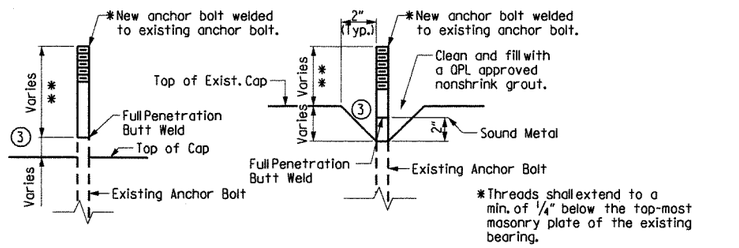
PLAN

⅜" = 1'-0"
BRIDGE A SHOWN
BRIDGE B SIMILAR
LOOKING AHEAD



ELEVATION

⅜" = 1'-0"
BRIDGE A SHOWN
BRIDGE B SIMILAR
LOOKING AHEAD



*Threads shall extend to a min. of ¼" below the top-most masonry plate of the existing bearing.

**Required length to be field verified. Bolt extensions shall begin at or below existing bolt threads.

TYPICAL **ALTERNATE**

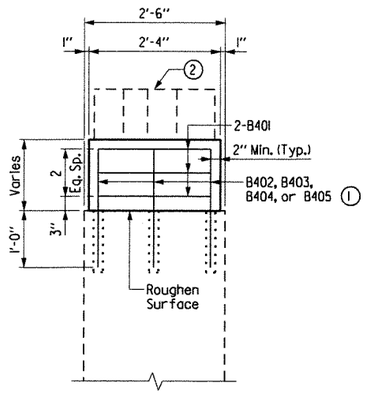
(This detail shall be used when existing anchor bolt has broken off in the bent cap or threads are located in the bent cap or as directed by the Engineer.)

ANCHOR BOLT DETAILS

Not to Scale

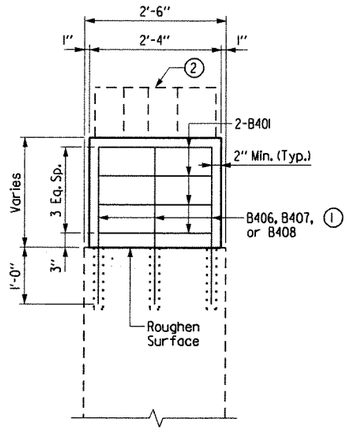
③ Cut off existing anchor bolts below bottom threads and weld new anchor bolt.

All work and materials necessary to extend the existing anchor bolts will not be paid for directly but will be considered subsidiary to the pay item "Modification of Existing Bridge Structure (Br. No. A&B3957)".



SECTION A-A

¾" = 1'-0"
(Beam Nos. 1-4)



SECTION B-B

¾" = 1'-0"
(Beam Nos. 5-7)

BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.	BENDING DIAGRAMS (DIMENSIONS ARE OUT TO OUT OF BARS)
B401	48	6'-4"	2"	2'-3" / 2'-0" / B401
B402	12	2'-1"	Str.	
B403	12	2'-3"	Str.	
B404	12	2'-5"	Str.	
B405	12	2'-7"	Str.	
B406	12	2'-9"	Str.	
B407	12	2'-11"	Str.	
B408	12	3'-1"	Str.	

GENERAL NOTES

All Concrete shall be Class "S" with a minimum 28-day compressive strength f'c = 3500 psi. Payment will be paid for as Class "S" Concrete - Bridge. 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). Payment will be paid for as Reinforcing Steel (Grade 60) - Bridge.

For additional information, see layout.

TABLE OF VARIABLES

	BRIDGE A		BRIDGE B	
	BENT 2	BENT 3	BENT 2	BENT 3
Elev. "A"	432.33	433.26	435.68	436.47
Elev. "B"	432.93	433.86	436.28	437.06
Elev. "C"	433.54	434.46	436.87	437.65
Elev. "D"	434.14	435.06	437.47	438.25
Elev. "E"	434.75	435.65	438.06	438.84
Elev. "F"	435.35	436.25	438.65	439.43
Elev. "G"	435.95	436.85	439.25	440.01

① No. 4 bars and No. 6 bars shall be drilled and grouted into existing concrete using a QPL approved non-shrink grout. Diameter of drilled holes and installation procedure shall be as recommended by the grout manufacturer. Drilling and grouting of dowels will be paid for as part of the item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

② As directed by the Engineer, disassemble, clean and re-paint the rockers to address any beginning rust in accordance with section 820, using Type I cleaning and painting. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip No. 26176. Install cleaned and painted bearings on new riser blocks. Provide new bearing pads in accordance with section 807.15. Provide new nuts and washers for all anchor bolt connections in accordance with section 807. All work & materials on existing bearings will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

BRIDGE A & B
DETAILS OF INTERMEDIATE BENTS 2 & 3
HWY. 162

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12021 STEPHEN S. PUTNEY

BRIDGE ENGINEER

DRAWN BY: DM DATE: 10-06 FILENAME: bBB0407m7_b21.dgn
CHECKED BY: SP DATE: 09-30-09 SCALE: AS SHOWN
DESIGNED BY: CB, DM DATE: 10-06

BRIDGE NO. A&B3957 DRAWING NO. 48441

$$$$dgnspec$$$$$

$$$$date$$$$

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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.		BB0407	139	464
				(1) A&B3957		SPAN DETAILS		48442

NOTES:

One Epoxy Coated #5 bar in the top and one Epoxy Coated #5 bar in the bottom may be substituted for each bar S501E. Payment will be based on the weight of bar S501E.

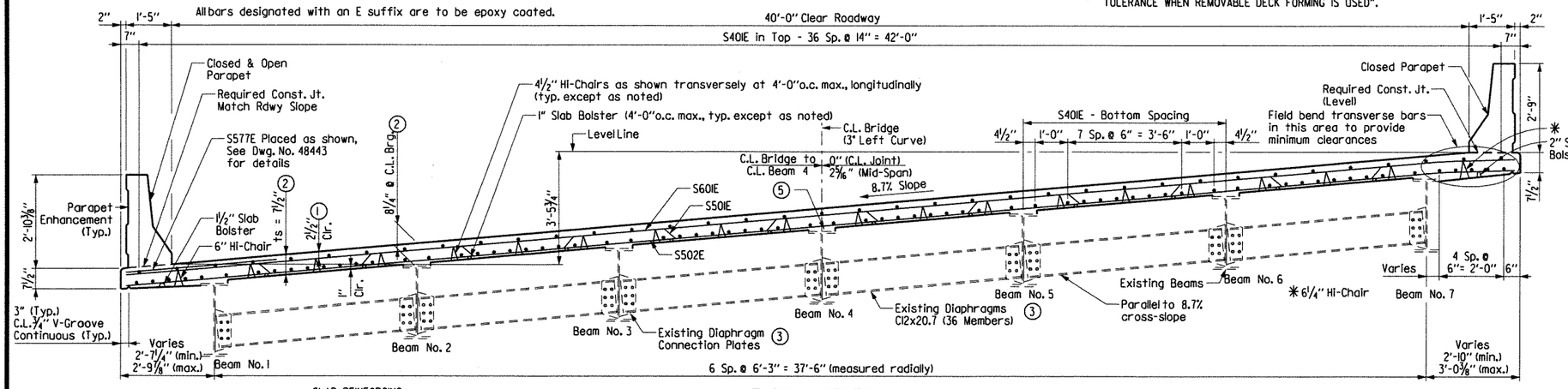
Class I Protective Surface Treatment shall be applied to the Roadway Surface and the Face and Top of Concrete Parapet Rail.

(5) After deck removal, clean existing top of beam and shear connectors. Any damaged shear connectors shall be replaced as directed by the Engineer at the contractor's expense. Payment will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A&B3957)". See Dwg. No. 48443A for details.

(1) TOLERANCE:
Minus: 1/4"
Plus: Equal to amount of slab thickening used to meet slab thickness tolerance. See Dwg. No 48443B for, "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".

(2) See Dwg. No 48443B for, "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".

All bars designated with an E suffix are to be epoxy coated.



TYPICAL SECTION

Looking Ahead
½" = 1'-0"

SLAB REINFORCING:

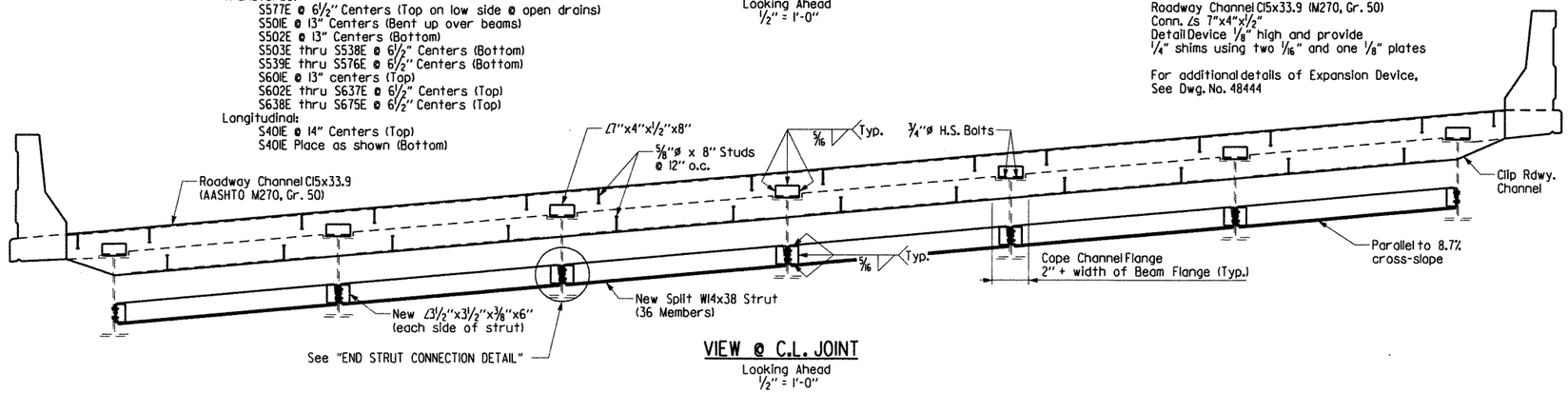
Transverse:
S577E @ 6½" Centers (Top on low side @ open drains)
S501E @ 13" Centers (Bent up over beams)
S502E @ 13" Centers (Bottom)
S503E thru S538E @ 6½" Centers (Bottom)
S539E thru S576E @ 6½" Centers (Bottom)
S601E @ 13" centers (Top)
S602E thru S637E @ 6½" Centers (Top)
S638E thru S675E @ 6½" Centers (Top)

Longitudinal:
S401E @ 14" Centers (Top)
S401E Place as shown (Bottom)

EXPANSION DEVICE:

Roadway Channel C15x33.9 (M270, Gr. 50)
Conn. ∠s 7"x4"x½"
Detail Device ⅛" high and provide ¼" shims using two 1/16" and one ⅛" plates

For additional details of Expansion Device, See Dwg. No. 48444



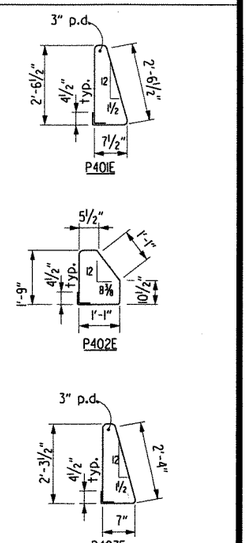
VIEW @ C.L. JOINT

Looking Ahead
½" = 1'-0"

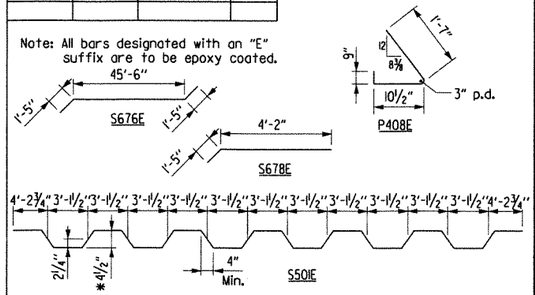
BAR LIST - PER BRIDGE

Bending Diagrams
(Dimensions are out to out of bars.)

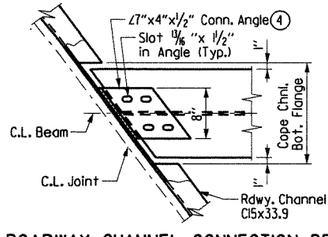
Mark	No. Req'd.	Length	Pin Dia.
S401E	642	28'-1"	Str.
S501E	87	44'-1"	3"
S502E	90	42'-10"	Str.
S503E to S538E	3 ea.	4'-10" to 40'-9"	Str.
S539E to S576E	3 ea.	4'-9" to 40'-10"	Str.
S577E	88	5'-2"	Str.
S601E	90	42'-10"	Str.
S602E to S637E	3 ea.	4'-10" to 40'-9"	Str.
S638E to S675E	3 ea.	4'-9" to 40'-10"	Str.
S676E	12	48'-4"	4½"
S677E	60	5'-6"	Str.
S678E	12	5'-6"	4½"
P401E	345	6'-4"	2"
P402E	345	5'-6"	2"
P403E	10	17'-5"	Str.
P404E	33	17'-6"	Str.
P405E	35	17'-10"	Str.
P406E	10	17'-11"	Str.
P407E	12	5'-10"	2"
P408E	12	3'-2"	2"
P601E	10	17'-6"	Str.



Note: All bars designated with an "E" suffix are to be epoxy coated.

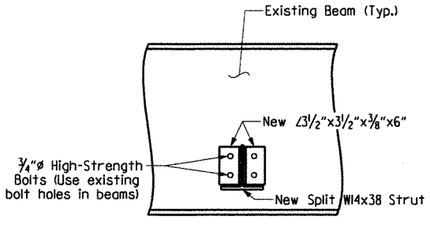


*½" Overtolerance, No Undertolerance



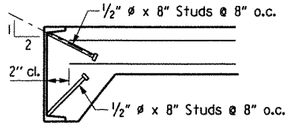
ROADWAY CHANNEL CONNECTION DETAIL

(4) Before fabrication, use field measurements of the holes in the existing beams so as to properly align the slots in the angle.



END STRUT CONNECTION DETAIL

1" = 1'-0"



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.

DETAIL OF ALTERNATE ANCHORS

No Scale

Diaphragm and strut connections shall be bolted with high-strength bolts. Unless noted otherwise, bolts shall be ¾" ø.

(3) Modify Existing Diaphragm & Existing Connection Plates in order to accommodate adjusted cross-slope. Existing diaphragms may be reused if holes are reamed to ⅞" ø in accordance with section 807 and appropriate washers for oversized holes are used or existing diaphragms may be replaced with new C12x20.7 diaphragms with properly located bolt holes. New diaphragms shall be AASHTO M270, Gr. 50. This work and material, including new diaphragms, will not be paid for directly but be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12247 STEVEN S. PLUNK
8/11/12
BRIDGE ENGINEER

BRIDGE A & B
SHEET 1 OF 6
REMODELING DETAILS OF
54'-0" COMPOSITE W-BEAM UNIT

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

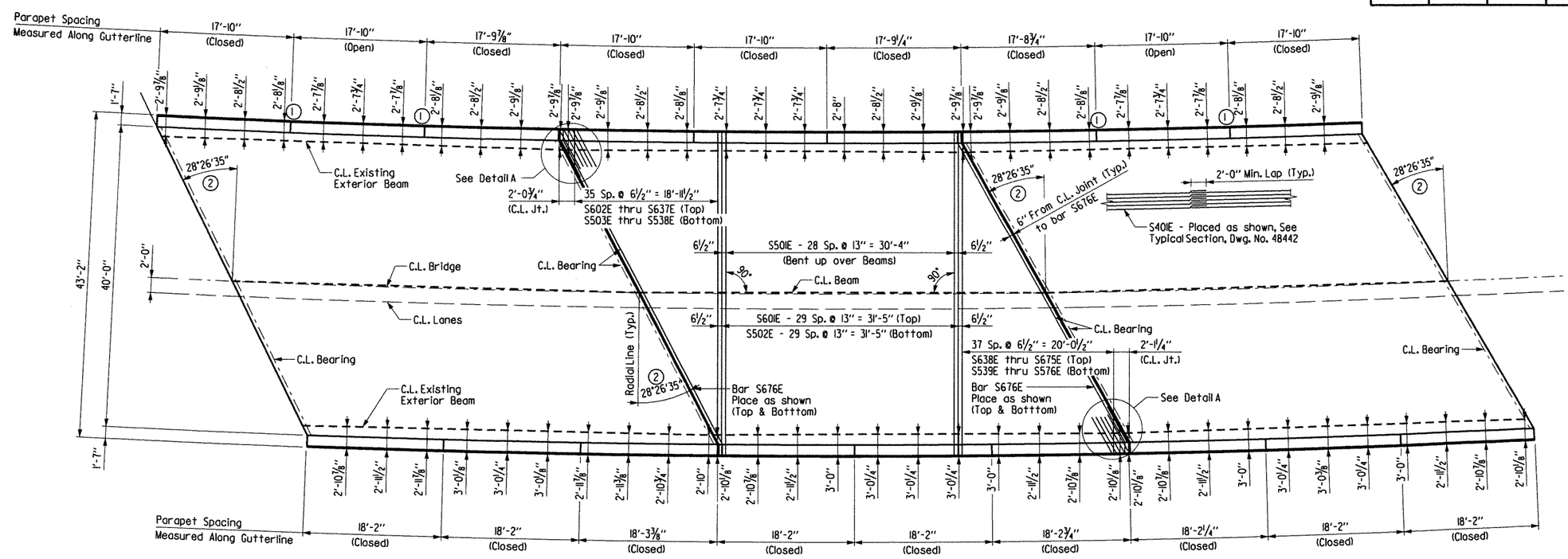
LITTLE ROCK, ARK.

DRAWN BY: JE DATE: 10-06 FILENAME: bBB0407m7_s11.dgn
CHECKED BY: SP DATE: 09-30-09 SCALE: AS SHOWN
DESIGNED BY: CB, DM DATE: 10-06

BRIDGE NO. A&B3957 DRAWING NO. 48442

$$$$dgnspec$$$$

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.		BB0407	139	464
				① A&B3957		SPAN DETAILS		48443



REINFORCING PLAN

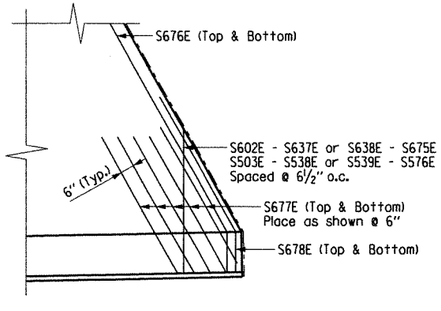
Bridge A Shown
Bridge B Similar
⅛" = 1'-0"

Note:
All transverse bars are measured at 90° to C.L. Beam @ C.L. Bridge

* Offsets are shown at tenth points measured along C.L. Beam between C.L. Bearing & C.L. Bearing

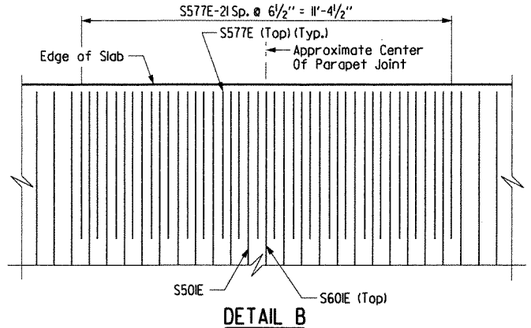
Note:
All longitudinal lines and longitudinal reinforcing steel shall be placed on curves concentric with centerline bridge.

② Skew angles based on existing bridge plans. Contractor shall verify these angles and make any adjustments necessary to fit new work to the existing structure.



DETAIL A

⅜" = 1'-0"



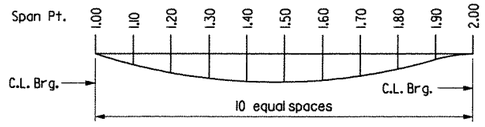
DETAIL B

No Scale

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

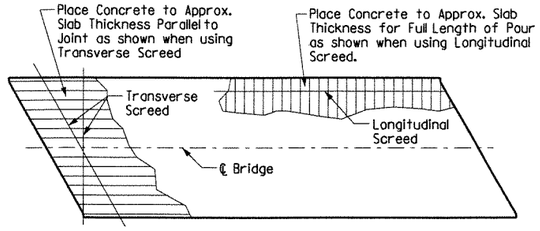
Dead Load Deflection plus vertical curve +/- ¼" tolerance. Deflections shown are off a chord from C.L. Brg. to C.L. Brg. Vertical curve corrections not included. Negative sign (-) indicates upward deflection.

POINT OF DEFLECTION	INTERIOR GIRDER		EXTERIOR GIRDER	
	Slab	Slab +Para. Rail	Slab	Slab +Para. Rail
1.00	0.00	0.00	0.00	0.00
1.10	0.34	0.36	0.30	0.33
1.20	0.64	0.69	0.56	0.61
1.30	0.86	0.92	0.76	0.82
1.40	1.00	1.07	0.88	0.95
1.50	1.05	1.12	0.92	1.00
1.60	1.00	1.07	0.88	0.95
1.70	0.86	0.92	0.76	0.82
1.80	0.64	0.69	0.56	0.61
1.90	0.34	0.36	0.30	0.33
2.00	0.00	0.00	0.00	0.00



DEAD LOAD DEFLECTION DIAGRAM

No Scale



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

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12021 STEPHEN S. PUTHOFF

BRIDGE ENGINEER

BRIDGE A & B
SHEET 2 OF 6
REMODELING DETAILS OF
54'-0" COMPOSITE W-BEAM UNIT

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

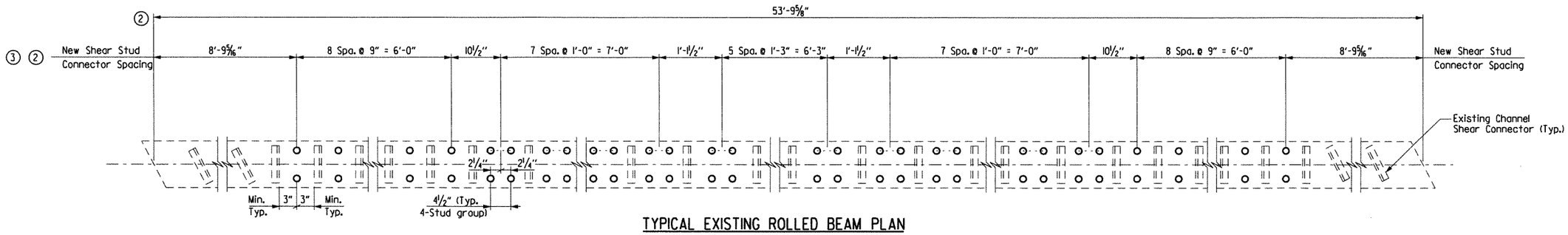
DRAWN BY: JE DATE: 10-06 FILENAME: bBB0407m7_sl2.dgn
CHECKED BY: SP DATE: 09-30-09 SCALE: AS SHOWN
DESIGNED BY: CB, DM DATE: 10-06

BRIDGE NO. A&B3957 DRAWING NO. 48443

$$$$dgnspec$$$$$

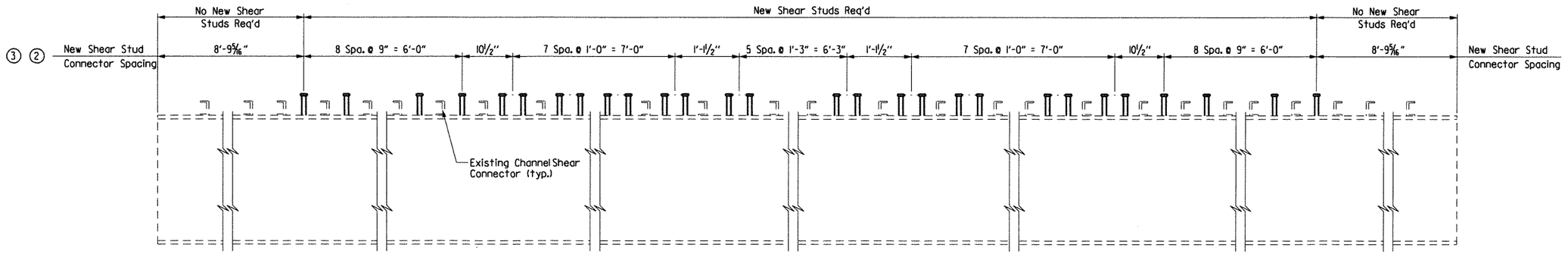
$$$$date$$$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	140	464
				(1) A&B3957		SPAN DETAILS		48443A



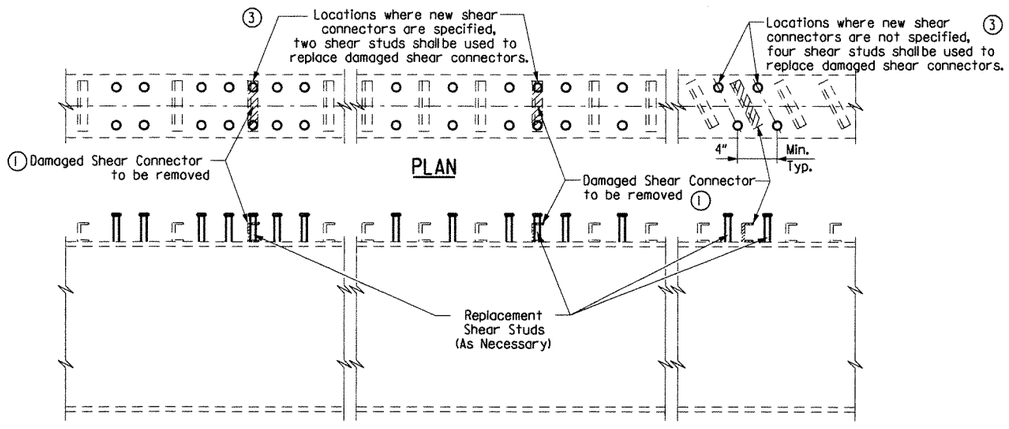
TYPICAL EXISTING ROLLED BEAM PLAN

Not to Scale



TYPICAL EXISTING ROLLED BEAM ELEVATION

Not to Scale



ELEVATION

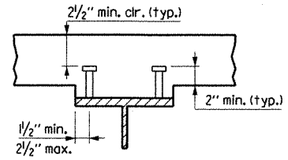
SHEAR CONNECTOR REPLACEMENT DETAIL

Not to Scale

(1) After deck removal, clean existing top of beam and shear connectors. Any damaged shear connectors shall be replaced as directed by the Engineer at the contractor's expense. Replacement shear connectors shall be 7/8" dia. x 4" long shear studs. See "SHEAR CONNECTOR REPLACEMENT DETAIL" for placement information. Payment will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

(2) All dimensions are based on existing bridge plans. Contractor shall verify these dimensions and make any adjustments necessary to fit new work to the existing structures.

(3) New shear stud lengths were determined assuming that there will be no camber rebound in the existing beams after deck removal. The contractor shall verify the beam camber before placement of new shear studs. Adjustments to all new shear stud lengths, including replacement shear studs, shall be made if the minimum 2 1/2" cover is violated. New shear studs shall be embedded a minimum of 2" into deck. This work will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A&B3957)". All new shear studs shall be paid for as "Structural Steel in Beam Spans (M270 Grade 50W)".



Stud Shear Connectors shown shall be 7/8" dia. x 4" (3) 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" dia. studs may be used in place of the 7/8" dia. studs shown, at the ratio of 1.361 - 3/4" dia. studs in place of one 7/8" dia. stud. 7/8" dia. studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

SHEAR CONNECTOR DETAIL

No Scale

STATE OF ARKANSAS STEVEN S. PUTNEY REGISTERED PROFESSIONAL ENGINEER No. 09

BRIDGE ENGINEER

BRIDGE A & B
SHEET 3 OF 6
REMODELING DETAILS OF
54'-0" COMPOSITE W-BEAM UNIT

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CB DATE: 10-06 FILENAME: bBB0407m7_sl5.dgn
CHECKED BY: SP DATE: 09-30-09 SCALE: AS SHOWN
DESIGNED BY: CB, DM DATE: 10-06

BRIDGE NO. A&B3957 DRAWING NO. 48443A

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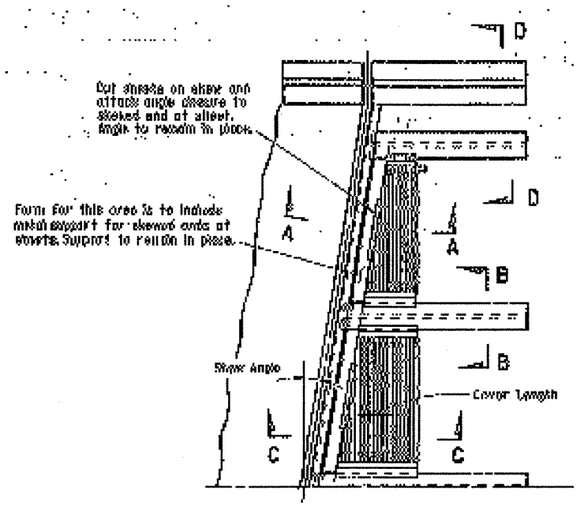
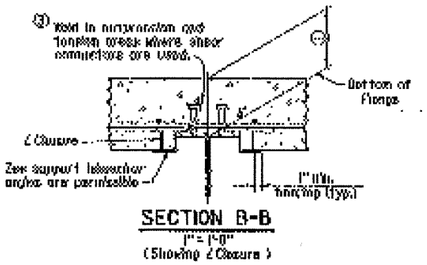
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	//	464
				(1) A&B3957				48443B



PART PLAN - SKEWED SPAN

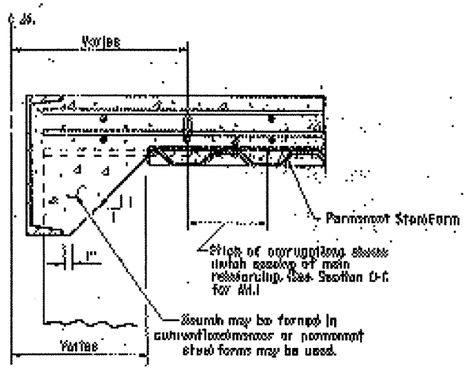
3/8" = 1'-0"



SECTION B-B

1" = 1'-0"

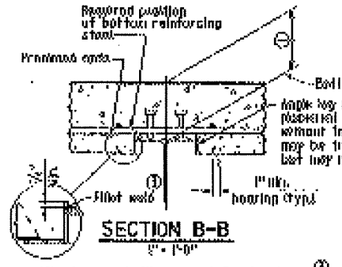
(Showing ∠ Closure)



SECTION A-A

N.T.S.

(Diagram at end of each)

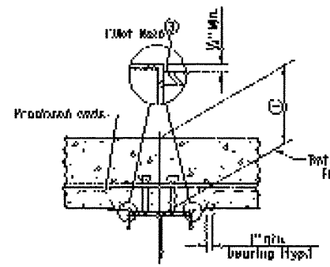


SECTION B-B

1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are used and for all compression flanges.)

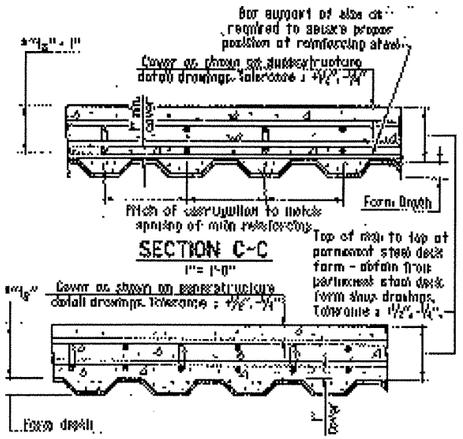
(3) Minimum weld 1/2" x 1" @ 8". More weld may be required. Minimum length per weld = 1 1/2" (typ.)



SECTION B-B

1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are used and for all compression flanges.)



SECTION C-C

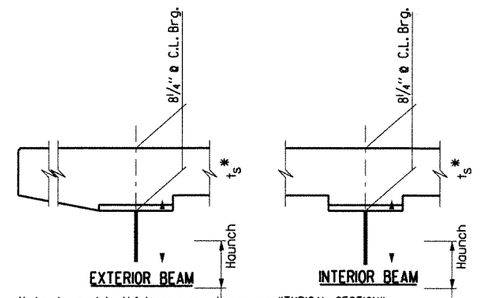
1" = 1'-0"

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.



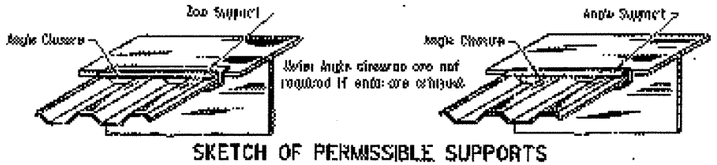
Note: t_s = slab thickness as shown on "TYPICAL SECTION".

*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.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED

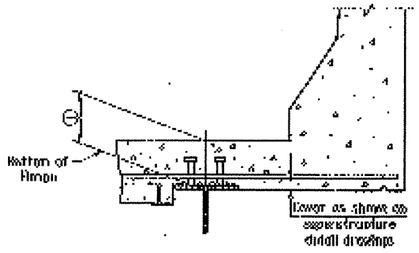
No Scale

Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance; Minimum - occurs when the top flange contacts the bottom reinforcing steel; Maximum - top flange thickness plus 1/2", measured at C.L. Bearing. No increase in concrete and structural steel quantities will be made to maintain tolerances.



SKETCH OF PERMISSIBLE SUPPORTS

N.T.S.



SECTION D-D

1" = 1'-0"

Refer Only Bottom Reinforcing is shown.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN STAY IN PLACE DECK FORMING IS USED

No Scale

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 girders, any cost for adjustments due to a change in the dead load deflection will be borne by the Contractor. Payment for slab concrete and structural steel will not be increased due to use of permanent steel deck forms.

Permanent steel deck forms shall conform to subsection 808.04 of the Standard Specifications, for this plans, including detailed calculations and manufacturer's technical brochures, shall be submitted to and approved by the Bridge Engineer before work of forming the bridge deck is started.

Haunch at form supports to the tension flange of steel girders will be permitted only in areas where shear connectors are used. Haunch welding is not allowed, the method of forming 2 to 4 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.

Mesh 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, where used, shall be spaced and placed to adequately support the bottom reinforcing mat at the required position.

High chairs shall be used to support the top mat of reinforcing at the proper position. High chairs shall be placed at intervals shown on the detail drawings.

BRIDGE A & B
SHEET 4 OF 6
REMODELING DETAILS OF
54'-0" COMPOSITE W-BEAM UNIT

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER STEPHEN S. [illegible] No. 09

BRIDGE ENGINEER

DRAWN BY: JR DATE: 09-09
CHECKED BY: SP DATE: 09-30-09
DESIGNED BY: CB DATE: 09-09

FILENAME: bBB0407m7_sl7.dgn
SCALE: AS SHOWN

BRIDGE NO. A&B3957 DRAWING NO. 48443B

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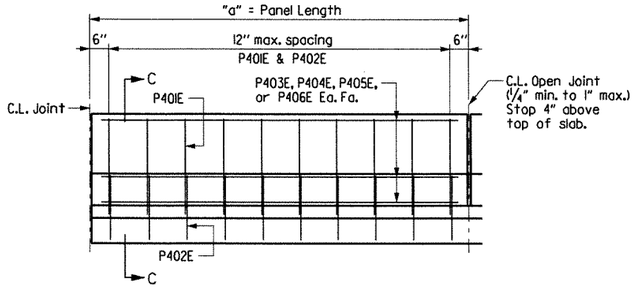
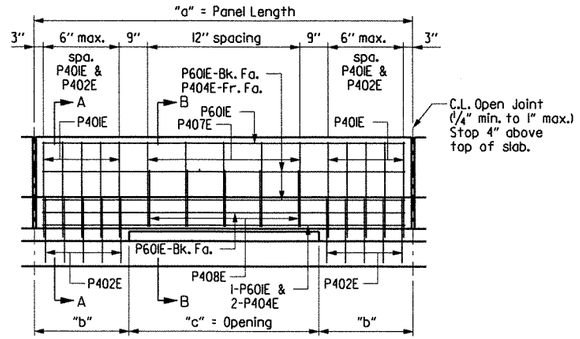
				6	ARK.			
				JOB NO.		BB0407	1/2	464
				(1) A&B3957		SPAN DETAILS		48444



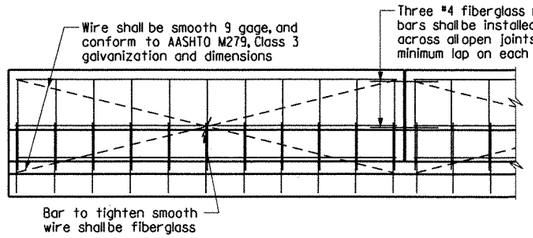
DETAILS OF CLOSED PARAPET RAIL

Scale: 1/2" = 1'-0"

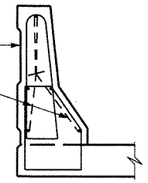


DETAILS OF OPEN PARAPET RAIL

Scale: 1/2" = 1'-0"



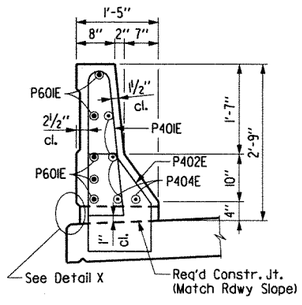
All panels shall be braced as shown to prevent racking. All open joints shall be sawed as soon as practical to a minimum width of 1/4". To control cracking before sawing all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.



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. Exposed surfaces may be given a light brush finish or a Class 3, Textured Coating Finish, in place of Class 2, Rubbed Finish.

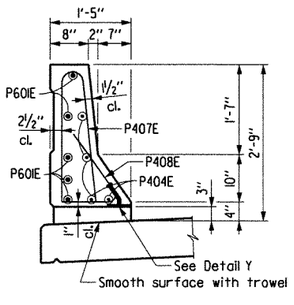
DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET RAIL

No Scale



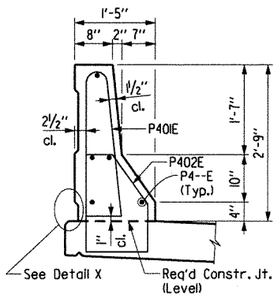
SECTION A-A

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



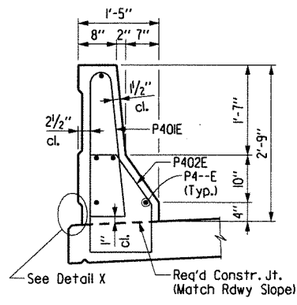
SECTION B-B

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



SECTION C-C

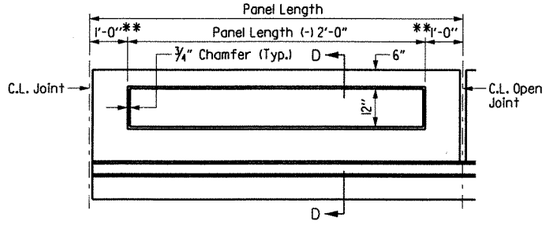
Scale: 3/4" = 1'-0"
(High Side of Bridge)



SECTION C-C

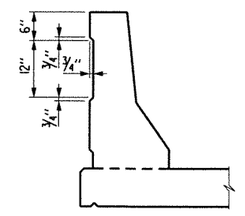
Scale: 3/4" = 1'-0"
(Low Side of Bridge)

** Panel Inset may be made continuous if slip forms are used.



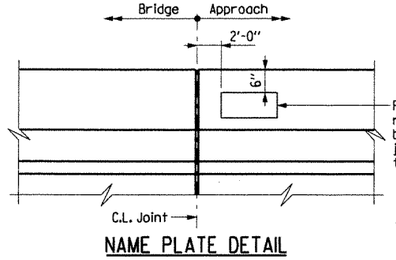
PARAPET ENHANCEMENT DETAILS

Scale: 1/2" = 1'-0"



SECTION D-D

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

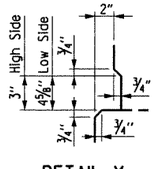


NAME PLATE DETAIL

No Scale

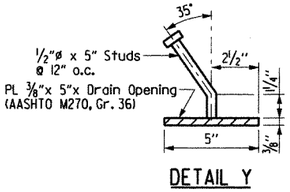
PARAPET RAIL VARIABLES

Parapet Type	"a"	"b"	"c"	Longitudinal Reinforcing
Closed	17'-8 3/4"	---	---	P403E
Closed	17'-9 1/4"	---	---	P403E
Closed	17'-9 7/8"	---	---	P404E
Closed	17'-10"	---	---	P404E
Closed	18'-2"	---	---	P405E
Closed	18'-2 1/4"	---	---	P405E
Closed	18'-2 3/4"	---	---	P406E
Closed	18'-3 3/8"	---	---	P406E
Open	17'-10"	5'-11"	6'-0"	P404E, P601E



DETAIL X

No Scale



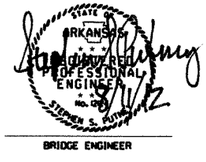
DETAIL Y

No Scale

Note:

Parapet Studs shall be 5" long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be measured and paid for as item "Structural Steel in Beam Spans (M270, Grade 50)".

The surfaces of the 3/8" Plates which will not be in contact with concrete shall be painted in accordance with Section 638, or as approved by the Engineer. Only one coat is required and shall be applied in the fabricator's shop. Painting will not be paid for directly, but will be considered subsidiary to the item "Structural Steel in Beam Spans (M270 Grade 50)".



BRIDGE ENGINEER

BRIDGE A & B
SHEET 5 OF 6
MODIFICATION DETAILS OF
54'-0" COMPOSITE W-BEAM UNIT

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

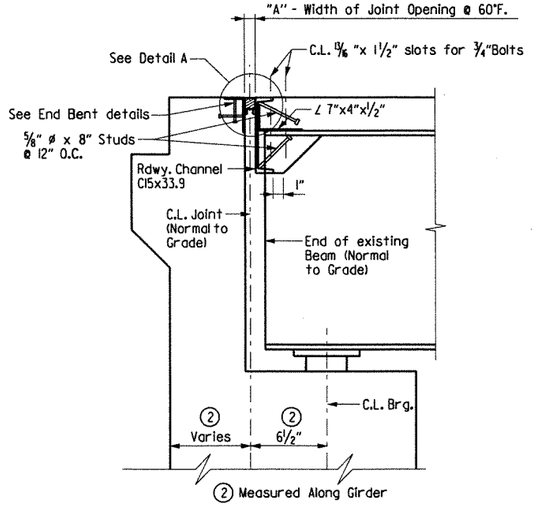
DRAWN BY: JE DATE: 10-06
CHECKED BY: SP DATE: 09-30-09
DESIGNED BY: CB, DM DATE: 10-06

FILENAME: bBB0407m7_sl3.dgn
SCALE: AS SHOWN

BRIDGE NO. A&B3957 DRAWING NO. 48444

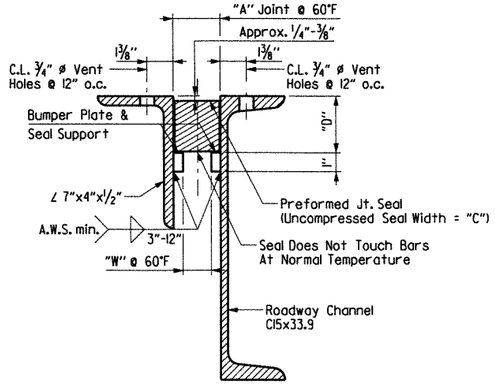
$$$$$dgnspec$$$$$

$$$$$date$$$$



SECTION THRU JOINT AT END BENTS

Note: Sections thru Joints are taken normal to C.L. Joints

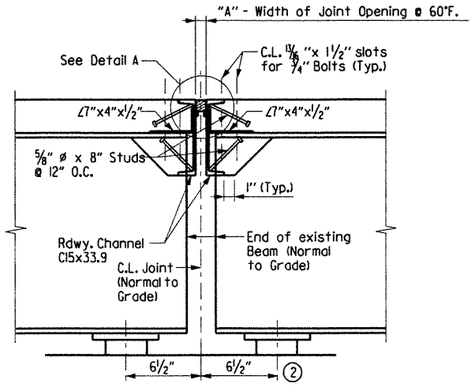


Note: Dimension "D" shall conform to the recommendations of the Seal Manufacturer as approved by the Engineer.

Note: The Seal shall be in one piece, without splices for the full length of the joint, except that lengths of 55' and longer may have a factory made splice. Splices, where required, shall be shown on the shop drawings and be placed near the high ends of the roadway. Separation of the splice during installation shall be cause for rejection of the seal.

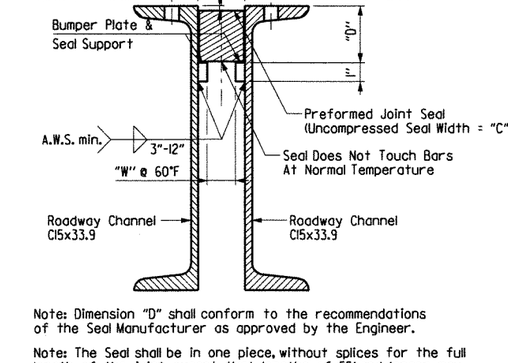
Note: Concrete shall be hand packed under the joint armor. Care shall be taken to ensure that concrete completely fills the areas below the top channel flange and the horizontal leg of the angle.

DETAIL A



SECTION THRU JOINT AT INTERMEDIATE BENTS

Note: Sections thru Joints are taken normal to C.L. Joints

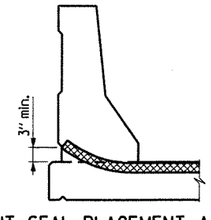


Note: Dimension "D" shall conform to the recommendations of the Seal Manufacturer as approved by the Engineer.

Note: The Seal shall be in one piece, without splices for the full length of the joint, except that lengths of 55' and longer may have a factory made splice. Splices, where required, shall be shown on the shop drawings and be placed near the high ends of the roadway. Separation of the splice during installation shall be cause for rejection of the seal.

Note: Concrete shall be hand packed under the joint armor. Care shall be taken to ensure that concrete completely fills the areas below the top channel flanges.

DETAIL A



JOINT SEAL PLACEMENT AT CURB

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

PREFORMED SEAL JOINT DATA

"A" Width Perpendicular to Joint at 24 Hour Average Temperature ** of:			"C" Uncompressed Joint Seal Width	"W" Width Between Plates @ 60°F	Bumper Plate Size
40° F	60° F	80° F			
1 11/16 "	1 5/8"	1 9/16"	2 1/2"	5/8"	1" x 1/2"
2 11/16 "	2 5/8"	2 9/16"	4"	7/8"	1" x 7/8"

**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.

The temperature limitations by the lubricant - adhesive manufacture shall be observed.

Installation is limited to 40°F min. and 80°F max. Interpolation of the table may be necessary.

SUPERSTRUCTURE 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 Standard Specifications for Highway Bridges, 2002 edition with current interim specifications (Deck).

LIVE LOADING: HS20 + Alternate Military Loading METHOD OF DESIGN: Load Factor

MATERIALS AND STRENGTHS:

Concrete: All concrete shall be Class S(AE) with minimum 28 day compressive strength f'c = 4000 psi. Payment will be paid for as "Class S(AE) Concrete - Bridge".

Reinforcing Steel: Reinforcing steel shall conform to AASHTO M31 or M53, Grade 60 (Yield Strength = 60,000 psi.). The reinforcing steel shall be paid for as "Epoxy Coated Reinforcing Steel (GRADE 60)".

Structural Steel: Structural Steel shall conform to AASHTO M270, Gr. 50 (Fy = 50,000 psi.) and AASHTO M270, Gr. 36 (Fy = 36,000 psi.) unless otherwise noted.

STRUCTURAL STEEL: All new structural steel shall be AASHTO M270, Gr. 50 unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (M270 Grade 50)". All exposed surfaces of new and existing structural steel to be cleaned in accordance with subsection 807.84(b) of the standard specifications, unless otherwise noted. Structural steel completely embedded in concrete may be AASHTO M270, Gr. 36. Proper containment methods shall be used for existing paint removed if the existing paint system contains lead based primer.

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.

Anchor bolts shall be galvanized according to subsection 807.07 and shall be Grade 55.

Diaphragms and end struts shall be bolted with new high-strength bolts. Bolts shall be 3/4" ø. Holes in existing diaphragms will be 5/8 " ø. A washer shall be supplied for use under both the nut and head of the bolt.

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.

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.

Diaphragms and end struts shall be installed as girders are re-erected. All bolts in diaphragms and end struts shall be installed and tightened in accordance with subsection 807.71 prior to pouring the concrete deck.

New and existing structural steel shall be painted as specified in subsection 807.75. The color of paint shall be Gray and shall match Fed Std. 595B, Color Chip No. 26176. The existing bearings shall be cleaned and painted in accordance with Section 820 using Section I cleaning and painting. All work & materials on existing bearings will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

REINFORCING STEEL: The reinforcing steel shall be accurately located in the forms and firmly held in place by steel wire supports sufficient in size and number 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 of "Epoxy Coated Reinforcing Steel (GRADE 60)".

CONCRETE: Concrete shall be poured in the dry and all exposed corners to be chamfered 3/4" 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. 1499I for allowable modifications and for tolerances when Permanent Steel Bridge Deck Forms are used.

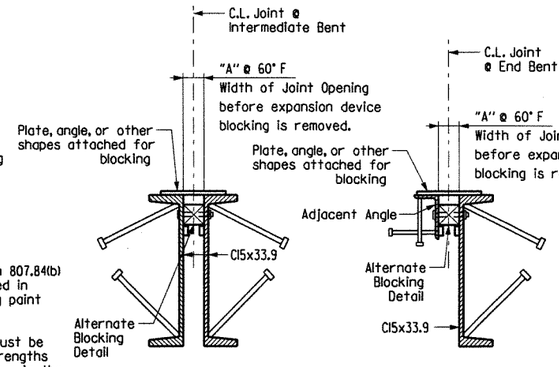
Concrete in bridge superstructure shall be placed, consolidated and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent. The use of longitudinal screed is prohibited.

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 girder. 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 sidewalk and the pouring of the parapet railing.

The concrete deck may be poured in increments with the center one-third to one-half span length poured first, after which, not less than 72 hours shall elapse before pouring the end sections. End sections may be poured simultaneously. If not poured simultaneously, 48 hours shall elapse between the end section pours. A minimum of 72 hours shall elapse between the completion of the deck and the pouring of the parapet railing.

REMOVAL OF EXISTING DECK: The existing concrete deck shall be totally removed to the top flange of the existing beams. Care shall be exercised during the removal of the existing deck to ensure that the existing shear connectors are not damaged. Any existing shear connectors damaged during the removal of the deck shall be replaced as directed by the Engineer and at the Contractor's expense. The exposed top flange of the existing beams shall be cleaned and free of laitance and protected until the new deck is placed. This work shall be considered as part of the pay item "Modification of Existing Bridge Structure (Br. No. A&B3957)".

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.		BB0407	143	464
				1 A&B3957		SPAN DETAILS		48445



DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

Note:
Each Expansion Joint device shall be blocked in the shop by the Fabricator to the dimension shown for 60°F and the blocking details shall be shown on the Shop Drawings. Blocking shall be placed within 2 feet of each end of the device and with a maximum spacing of 8 feet.

One of two different blocking systems is required depending on the type of span finishing is used.

For Transverse Strike-off:
Plate, Angle, or other shapes, attached to Channels (or Angles) for Blocking.

For Longitudinal Strike-off:
Bolt & spacer attached to Channels for Blocking.

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 placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, the opening adjusted for temperature, 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.

BRIDGE ENGINEER

BRIDGE A & B
SHEET 6 OF 6
REMODELING DETAILS OF
54'-0" COMPOSITE W-BEAM UNIT

ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JE DATE: 10-06 FILENAME: bBB0407m7_sl4.dgn
CHECKED BY: SP DATE: 09-30-09 SCALE: AS SHOWN
DESIGNED BY: CB, DM DATE: 10-06

BRIDGE NO. A&B3957 DRAWING NO. 48445

$$$$dgnspec$$$$$

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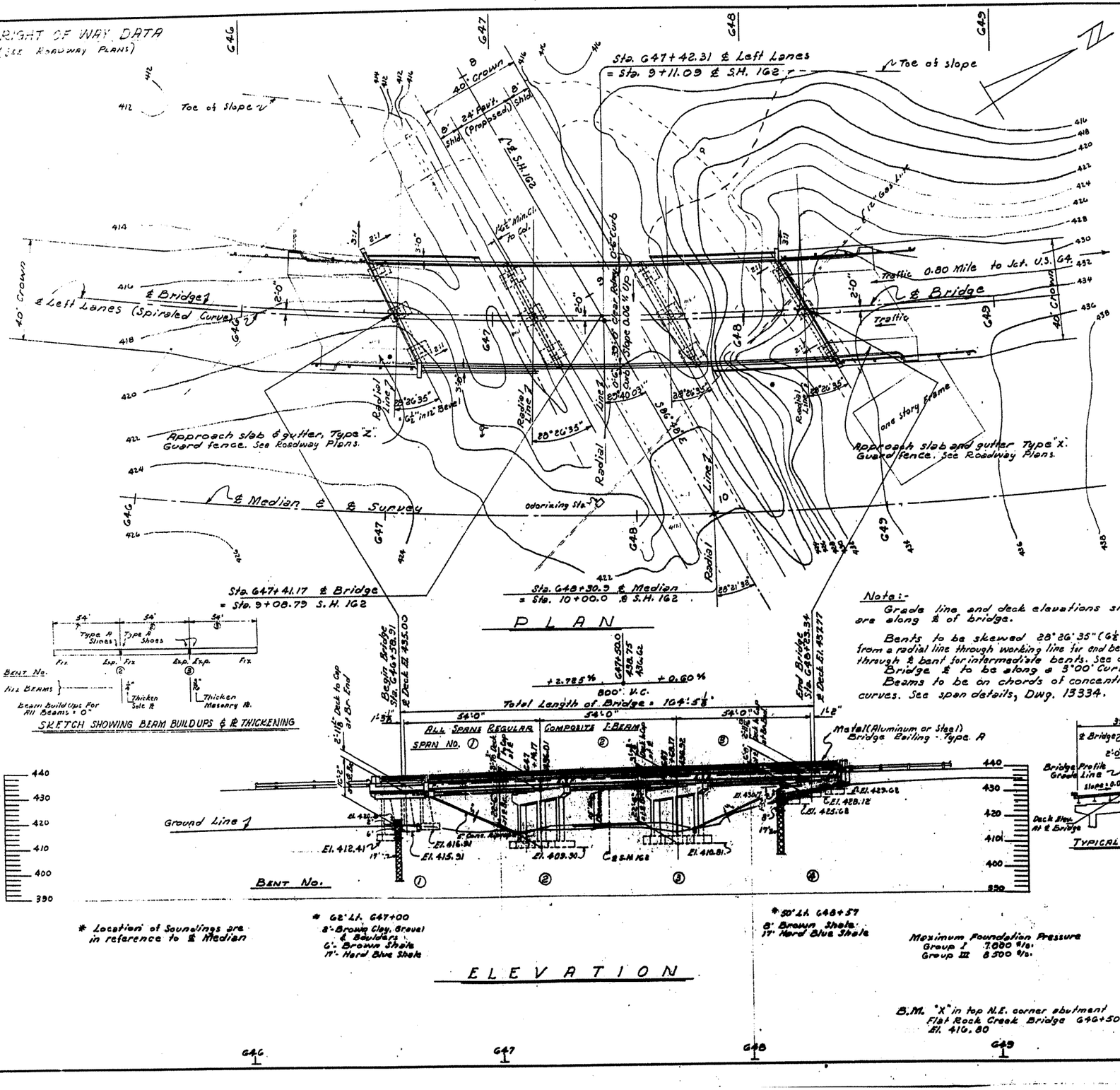
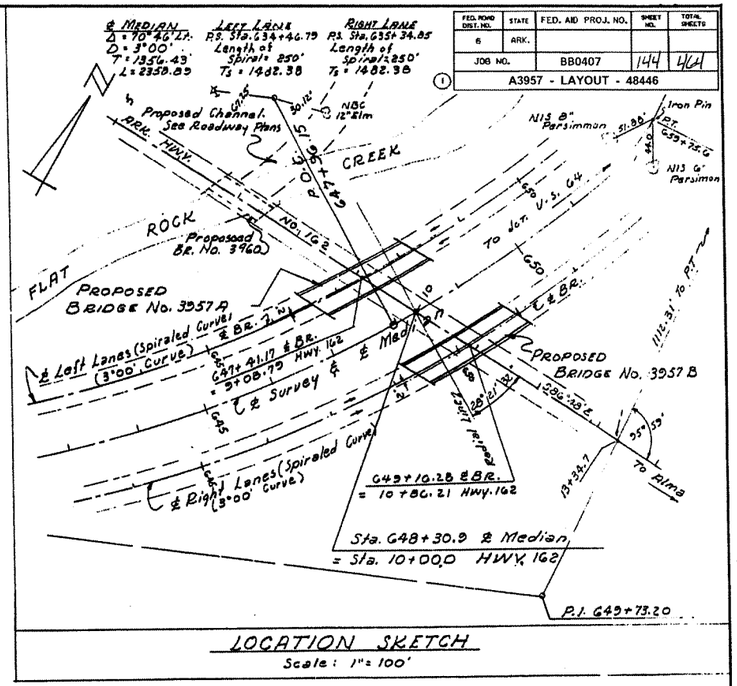
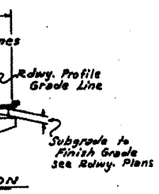
RIGHT OF WAY DATA
(SEE ROADWAY PLANS)





FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	144	464
①	A3957 - LAYOUT - 48446			



GENERAL NOTES

All concrete to be poured in the dry. Exposed corners to be chamfered 3/4" unless otherwise noted.

Rock excavations shall be made to neat lines of concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock. Excavate a minimum of 1'-0" into shale.

In general, all construction joints in bents shall be horizontal and shall be provided with keys not less than 1½" high covering the middle third of both dimensions.

For Details of End Bents see Dwg. No. 13330 and 13332
For Details of Intermediate Bents, see Dwg. No. 13331
For Details of Composite I-Beam Spans see Dwg. No. 149908 Rev., 13327 & 13334

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, the 1966 Supplemental Specifications thereto and the designated Special Provisions.

DESIGN SPECIFICATIONS AASHO 1961

Live Loading: HS20 and Special Interstate Loading of 2-24,000# axles spaced 4'-0" on center.

Unit Stresses:

Class A Concrete (n-15)	840 psi
Class S Concrete (n-10)	1,200 psi
Reinforcing Steel	20,000 psi
Structural Steel (A-36)	20,000 psi

FOR INFORMATION ONLY

LEFT LANES

LAYOUT OF HWY. 162 OVERPASS
ARKANSAS RIVER BRIDGE - JCT. I-40
CRAWFORD COUNTY

INTERSTATE ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

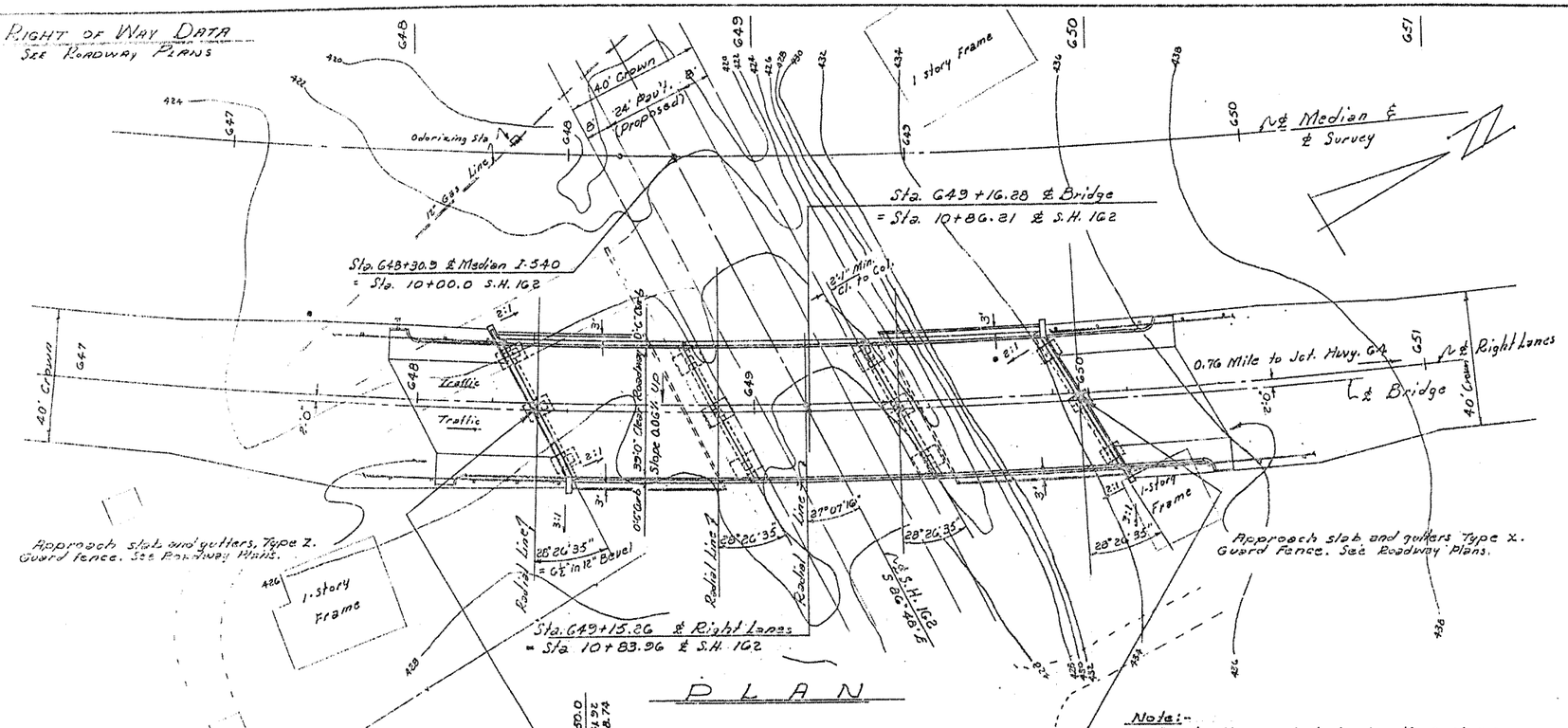
DRAWN BY: J.E.H. DATE: 12-22-64
TRACED BY: DATE:
CHECKED BY: A.L. DATE: 4-23-65
SCALE: 1" = 20'

L D Carlson
BRIDGE ENGINEER

BRIDGE NO. A3957 **DRAWING NO.** 48446

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	145	464
(1) B3957 - LAYOUT - 48446A				

RIGHT OF WAY DATA
See Roadway Plans



* 50' Rt. G47+25
1'-Brown Clay Gravel & Boulders
4'-Brown Shale
20'-Hard Blue Shale

* ℄ G48+15
2' Brown Shale
23' Hard Blue Shale

* 62' Rt. G49+25
7' Brown Shale
16' Hard Blue Shale

* Note: Location of soundings are in reference to ℄ Median

Maximum Foundation Pressure
Group I 10000 #/sf
Group III 8500 #/sf

B.M. "X" in top N.E. Corner Abutment Flat Rock Creek Bridge G46+50 El. 416.80

GENERAL NOTES

All concrete to be poured in the dry. Exposed corners to be chamfered 3/4" unless otherwise noted.

Rock excavations shall be made to neat lines of concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock. Minimum excavation into shale 1'-0".

In general, all construction joints in bents shall be horizontal and shall be provided with keys not less than 1½" high covering the middle third of both dimensions.

For Details of End Bents see Dwg. No. 13330 and 13332
For Details of Intermediate Bents, see Dwg. No. 13331
For Details of Composite I-Beam Spans see Dwg. No. 149908 Rev., 13327 & 13334

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, the 1986 Supplemental Specifications thereto and the designated Special Provisions.
For Location Sketch, see Dwg. No. 13328

DESIGN SPECIFICATIONS AASHO 1961

Live Loading: HS20 and Special Interstate Loading of 2-24,000# axles spaced 4'0" on center.

Unit Stresses:

Class A Concrete (n-15)	840 psi
Class S Concrete (n-10)	1,200 psi
Reinforcing Steel	20,000 psi
Structural Steel (A-36)	20,000 psi

FOR INFORMATION ONLY

RIGHT LANES
LAYOUT OF HWY. 162 OVERPASS
ARKANSAS RIVER BRIDGE - JCT. I-40
CRAWFORD COUNTY
INTERSTATE ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: J.E.H. DATE: 12-30-64
TRACED BY: DATE:
CHECKED BY: DATE: 9-23-65
SCALE: 1" = 20

L D Carlson
BRIDGE ENGINEER

BRIDGE NO. B3957 DRAWING NO. 48446A

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	146	464

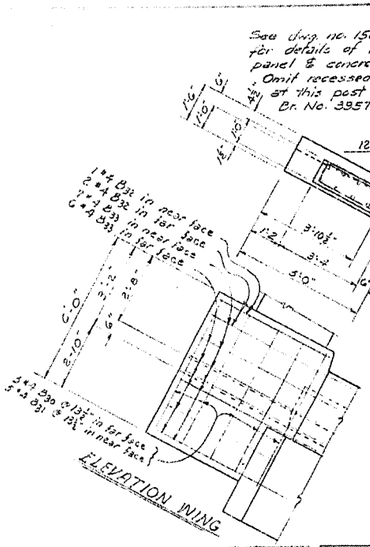
A&B3957 - END BENT - 48446B

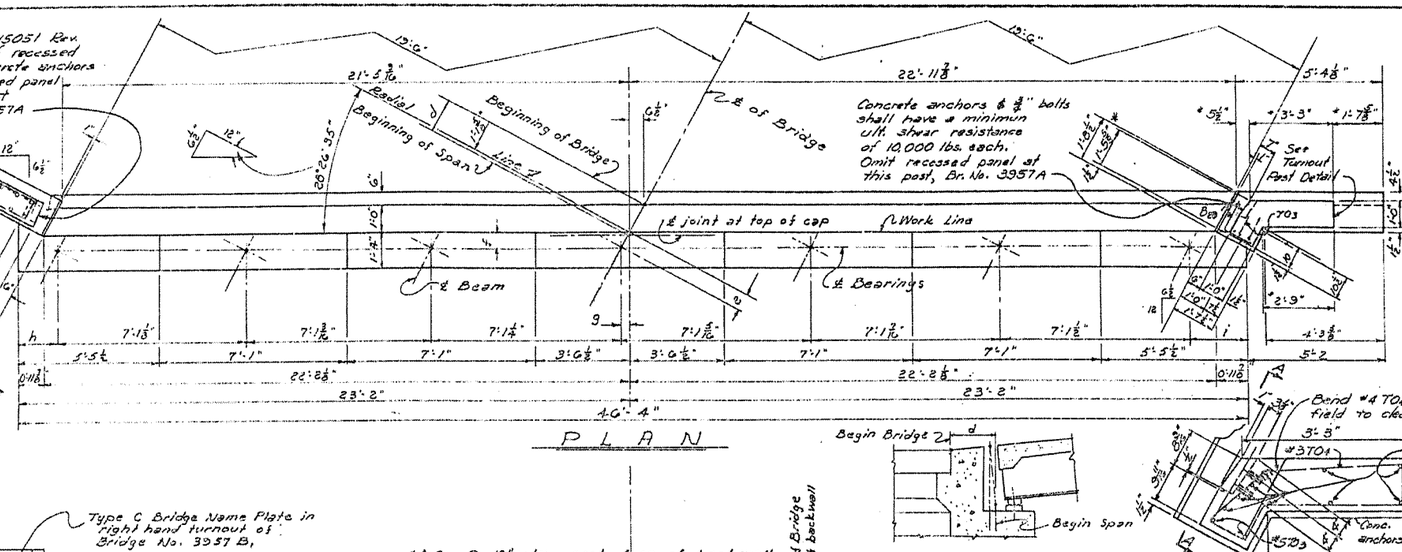
BAR LISTS - EACH BENT

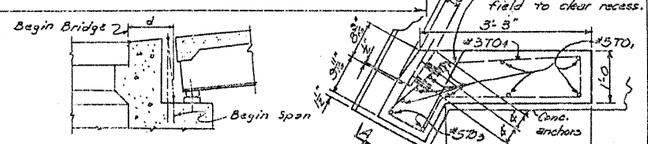
	MARK	SIZE	No.	LENGTH	A	K	P Pitch/Rad.
	F_1	#5	27	8-3	7'-0"	3"	3½
	F_2	#5	42	5-5	4'-6"	5	3⅝
	F_3	#8	18	6-7	5'-5"	9	8
1A	B_1	#8	6	15'-9"	-	-	Str.
	B_2	#8	12	13'-3"	-	-	Str.
1B	B_1	#8	6	12'-0"	-	-	Str.
	B_2	#8	12	10'-9"	-	-	Str.
1A	B_3 - B_{13}	#4	3 Each (33)	7'-3" to 11'-5"	1'-5" to 3'-0"	4"	1½"
1A	B_{14} - B_{15}	#4	1 Each (2)	11'-10" to 12'-3"	3'-8½" to 3'-11"	4"	1½"
1B	B_9 - B_{11}	#4	3 Each (27)	7'-3" to 10'-7"	1'-5" to 3'-1"	4"	1½"
	B_{12}	#4	1	11'-0"	3'-3½"	4"	1½"
	B_{16}	#7	4	24-5	-	-	Str.
	B_{17}	#7	6	19'-4"	-	-	Str.
	B_{18}	#9	6	15'-7"	4'-4"	10	9
	B_{19}	#9	6	34-6	35-3	10	9
	B_{20}	#4	4	23'-9"	-	-	Str.
	B_{21}	#4	64	10'-6	-	4	1¾

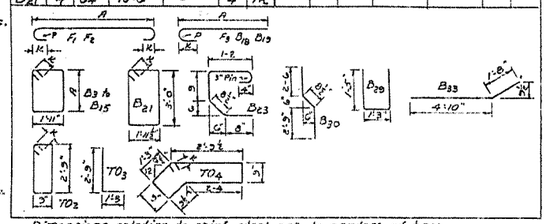
MARK	SIZE	No.	LENGTH	A	K	P Pitch/Rad.
B_{22}	#4	88	4-8	-	-	Str.
B_{23}	#4	44	3-9	-	-	1½
B_{24}	#4	9	23-0	-	-	Str.
B_{25}	#4	9	23-10	-	-	Str.
B_{26}	#4	2	5-0	-	-	Str.
B_{27}	#4	2	5-10	-	-	Str.
B_{28}	#4	14	7-0	-	-	Str.
B_{29}	#4	2	4-0	-	-	1½
B_{30}	#4	10	5-11	-	-	1½
B_{31}	#4	10	5-8	-	-	Str.
B_{32}	#4	3	4-9	-	-	Str.
B_{33}	#4	13	6-6	-	-	1¾
TO_1	#5	19	4-4	-	-	Str.
TO_2	#3	3	7-5	-	3"	1½
TO_3	#5	2	4-5	-	-	1¾
TO_4	#3	3	5'-1"	-	3	1¾

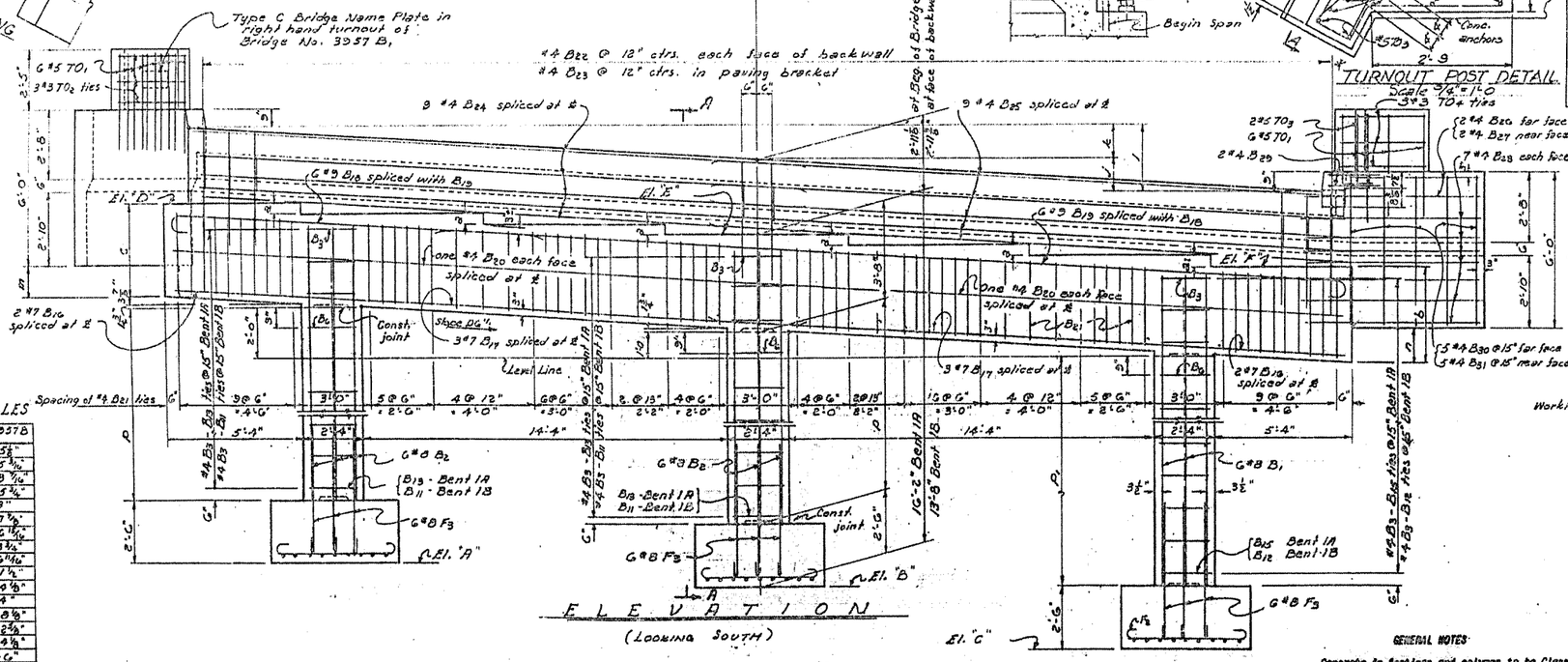
Dimensions relating to reinf. steel are to centers of bars.

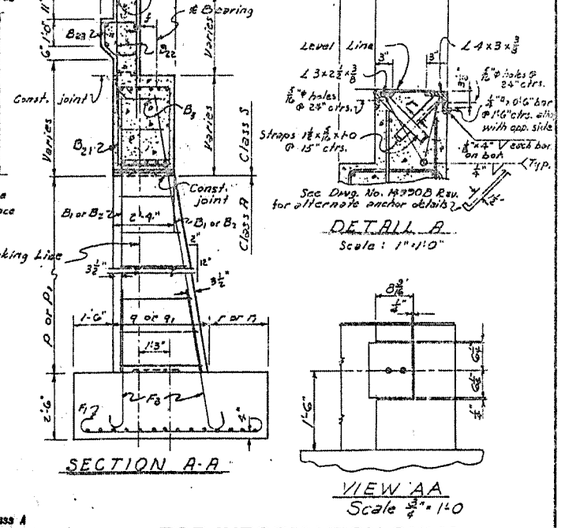












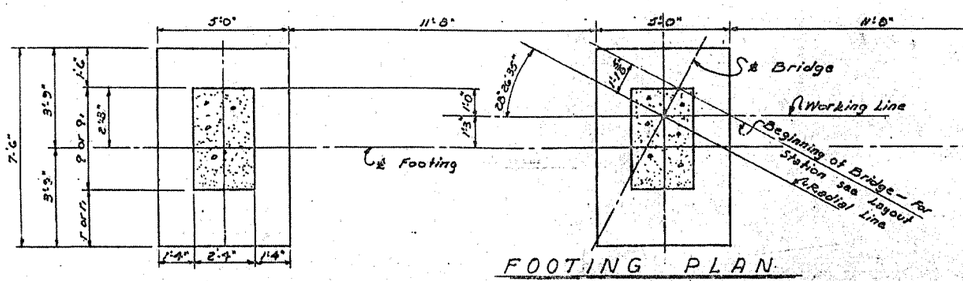


TABLE OF VARIABLES

	BR. 3957H	BR. 3957B
a	0'-5½"	0'-5½"
a_1	0'-5⅛"	0'-5⅛"
b	3'-8"	3'-8 7/16"
c	3'-6 1/16"	3'-5¾"
d	1'-3⅛"	1'-3"
e	0'-8"	0'-7⅞"
f	0'-7⅛"	0'-6 15/16"
g	0'-3 15/16"	0'-3¾"
h	1'-6⅜"	1'-6 11/16"
i	2'-1 3/16"	2'-1⅞"
j	1'-4⅛"	1'-4⅛"
k	1'-4⅜"	1'-4"
l	2'-8⅛"	2'-8⅛"
m	1'-3"	1'-2⅝"
n	1'-3⅜"	1'-4⅛"
p	10'-0"	7'-6"
p_1	12'-6"	8'-9"
q	4'-0"	3'-7"
q_1	4'-5"	3'-8"
r	2'-0"	2'-5"
r_1	1'-7"	2'-2½"
El. "A"	410.91	422.90
El. "B"	413.91	421.90
El. "C"	418.91	419.65
El. "D"	435.39	436.85
El. "E"	432.07	435.37
El. "F"	430.75	434.28

GENERAL NOTES:

Concrete in footings and columns to be Class A as shown. Concrete in remaining portion of structures to be Class S. Exposed corners to be chamfered 3/4" unless otherwise noted.

Reinforcing steel to be deformed bars of intermediate or hard grade. Bar lists and bending diagrams to be submitted and approval secured before fabrication is begun.

For additional general notes see Dwg. No. 13238 or 13520.

Revision: Turnout Posts & number of TO1 bars. Added Turnout Post Detail FHWA 4-5-67

L P Carlson
HIGHWAY ENGINEER

FOR INFORMATION ONLY

LEFT AND RIGHT LANES
DETAILS OF BENTS NO. 1
HIGHWAY 162 OVERPASS
ARKANSAS RIVER BRIDGE – JCT. I-40
CRAWFORD COUNTY
INTERSTATE ROUTE 540 SEC. 1

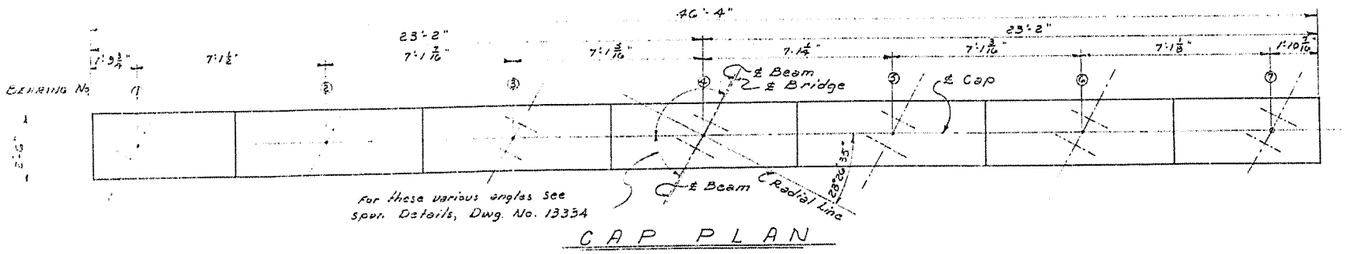
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: J.E.H. DATE: 5-24-65
TRACED BY: DATE:
CHECKED BY: A.V.L. DATE: 5-26-65
SCALE: 3/8" = 1'-0" Except as noted

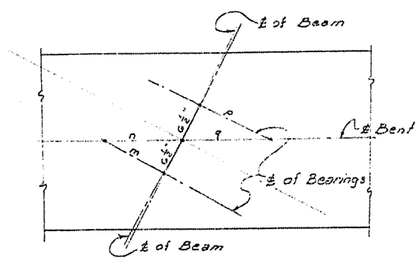
BRIDGE NO. A&B3957 DRAWING NO. 48446B

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
		JOB NO. BB0407	147	40

(1) A&B3957 - INT. BENTS - 48446C

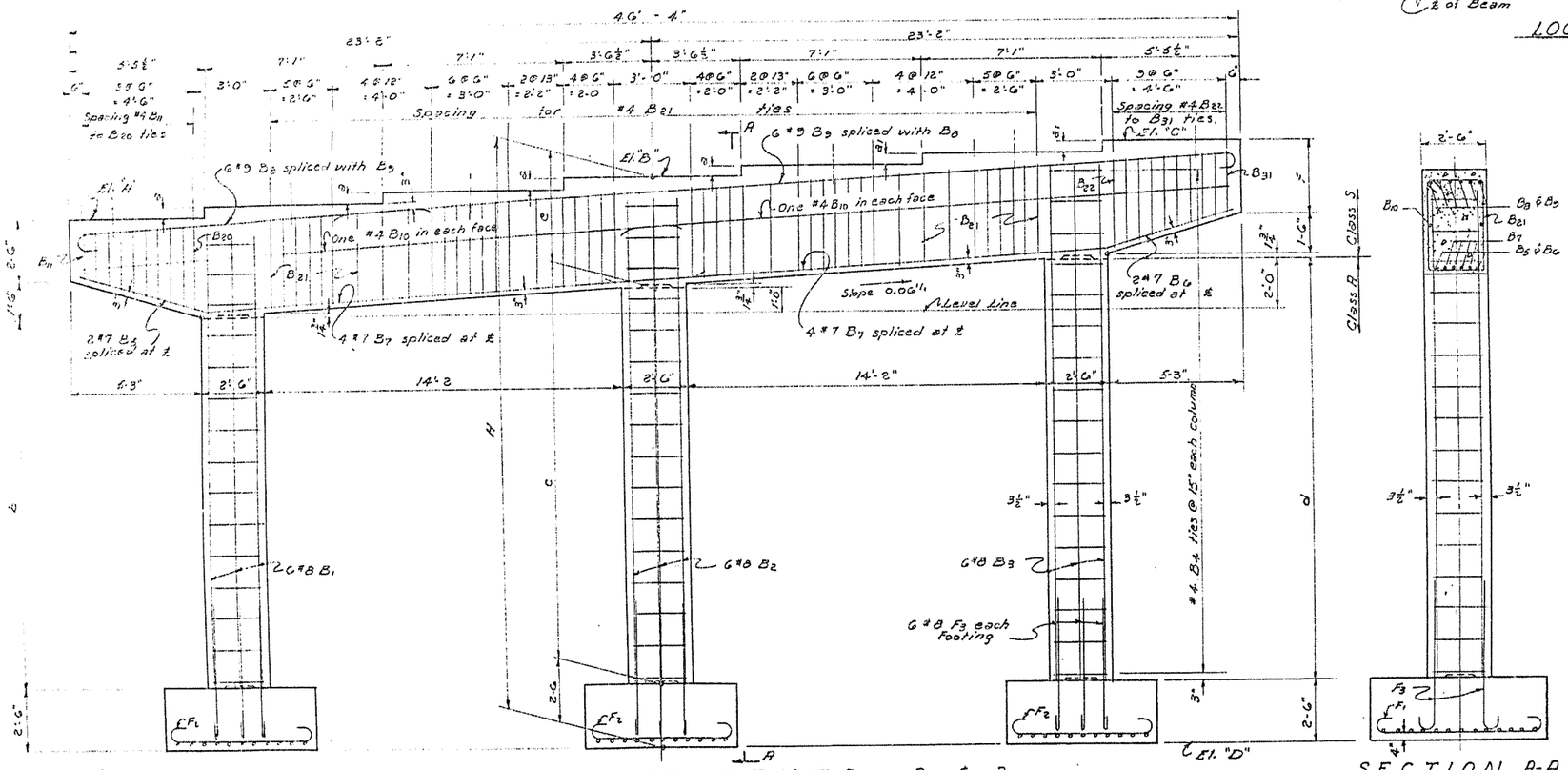


CAP PLAN



LOCATION OF BEARINGS

BEARING No.	m	n	p	q
1	0'-11 7/16"	1'-1 5/16"	1'-0 5/8"	1'-1 5/16"
2	0'-11 5/8"	1'-1 5/16"	1'-0 5/8"	1'-1 5/16"
3	0'-11 7/16"	1'-1 5/8"	1'-0 5/8"	1'-1 5/16"
4	0'-11 5/8"	1'-1 5/8"	1'-0 5/16"	1'-2"
5	0'-11 5/8"	1'-1 5/8"	1'-0 5/8"	1'-2 1/16"
6	0'-11 7/16"	1'-1 5/8"	1'-0 3/4"	1'-3 1/8"
7	0'-11 5/8"	1'-1 7/16"	1'-0 7/16"	1'-2 1/16"

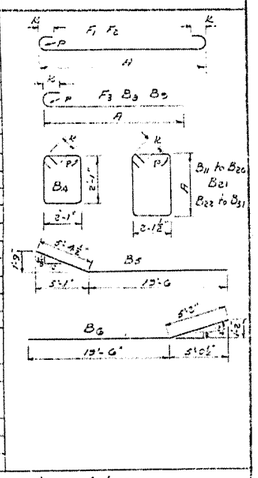


ELEVATION OF BENTS 2 & 3
(LOOKING IN DIRECTION OF STATIONING)

SECTION A-A

BAR LIST - EACH BENT

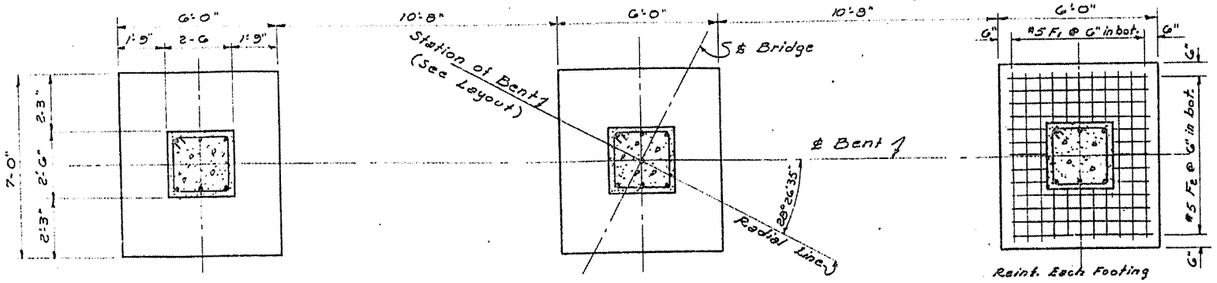
BRIDGE No.	MARK	SIZE	No.	LENGTH	A	K	P Pin. Dia.	BENDING DIAGRAM
3957 A&B	F1	#5	33	7'-9"	6'-6"	5"	3 3/4"	
	F2	#5	39	6'-8"	5'-6"	5"	3 3/4"	
	F3	#8	18	6'-7"	5'-5"	5"	8"	
3957 A	B1	#8	6	18'-3"	-	-	Str.	
	B2	#8	6	19'-6"	-	-	Str.	
	B3	#8	6	20'-6"	-	-	Str.	
	B4	#4	48	8'-11"	-	4	1½"	
3957 B	B1	#8	6	17'-0"	-	-	Str.	
	B2	#8	6	18'-3"	-	-	Str.	
	B3	#8	6	19'-3"	-	-	Str.	
	B4	#4	45	8'-11	-	-	1½"	
	B5	#7	2	34'-10"	-	-	5¼"	
	B6	#7	2	24'-8"	-	-	5¼"	
	B7	#7	8	19'-6	-	-	Str.	
	B8	#9	6	15'-9	14'-0	10	9	
	B9	#9	6	36'-11	35'-8	10	9	
	B10	#4	4	23'-9	-	-	Str.	
3957 A&B	B11 to B20	#4	One Each	8'-10" to 11'-11"	2'-0 to 3'-6½"	4"	1½"	
	B21	#4	44	12'-1	3'-7½"	4"	1½"	
	B22 to B31	#4	One Each	12'-0" to 10'-0"	3'-7" to 2'-7"	4"	1½"	



Dimensions of reinforcing steel are to centers of bars.

NOTES

Concrete in footings and columns to be Class A. Concrete in caps to be Class S. Exposed corners to be chamfered ¾" unless otherwise noted. Reinforcing steel to be deformed bars of intermediate or hard grade. Bar lists and bending diagrams to be submitted and approval secured before fabrication is begun.
For additional notes see Dwg. Nos. 13328 & 13329.



FOOTING PLAN

TABLE OF VARIABLES

	BRIDGE 3957A		BRIDGE 3957 B	
	BENT 2	BENT 3	BENT 2	BENT 3
H	22'-6"	22'-6"	21'-3"	21'-3"
a	0'-5 1/4"	0'-5 3/8"	0'-5 3/8"	0'-5 7/16"
b	14'-8 1/4"	14'-8 7/16"	13'-5 3/8"	13'-5 13/16"
c	15'-8 1/4"	15'-8 7/16"	14'-5 3/8"	14'-5 13/16"
d	16'-8 1/4"	16'-8 7/16"	15'-5 3/8"	15'-5 13/16"
e	4'-3 3/4"	4'-3 7/8"	4'-3 3/8"	4'-3 3/16"
f	2'-11 3/4"	2'-11 7/8"	2'-10 3/8"	2'-10 3/16"
a1	0'-5 1/16"	0'-5 3/8"	0'-5 7/16"	0'-5 7/16"
El. "A"	431.09	432.02	434.45	435.23
El. "B"	432.40	433.31	435.79	436.50
El. "C"	433.70	434.60	437.00	437.76
El. "D"	403.30	410.81	414.48	415.25

FOR INFORMATION ONLY

LEFT AND RIGHT LANES
DETAILS OF BENTS 2 & 3
HIGHWAY 162 OVERPASS
ARKANSAS RIVER BRIDGE - JCT. I-40
CRAWFORD COUNTY

INTERSTATE ROUTE 540 SEC. 1

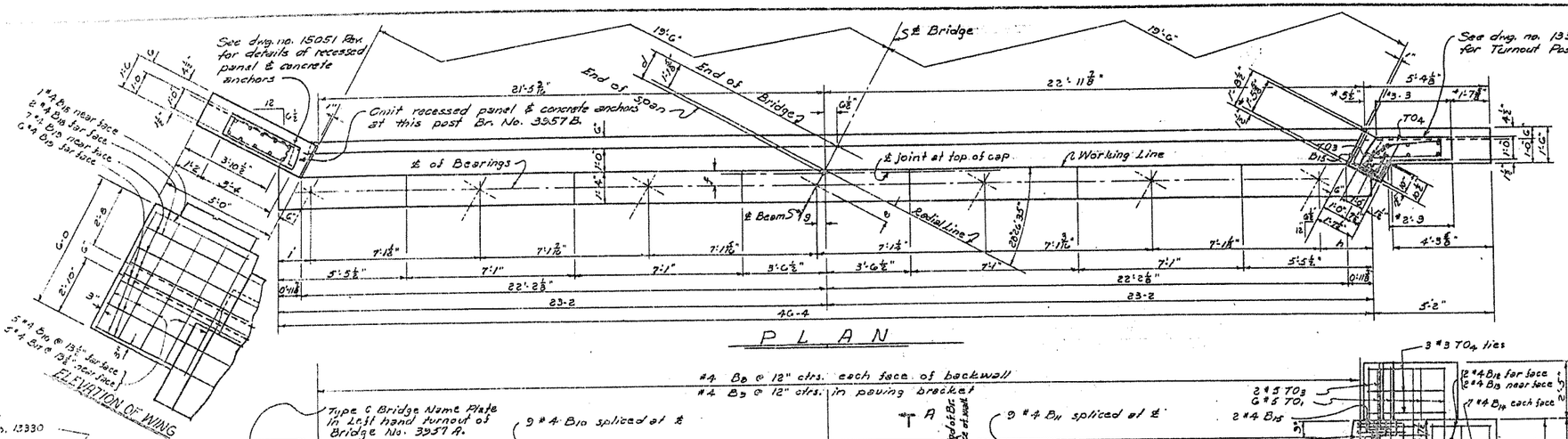
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

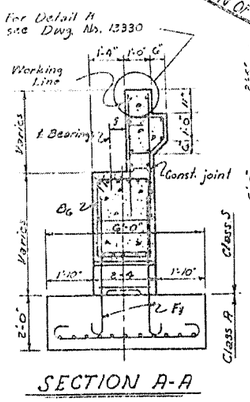
DESIGN BY: J.E.H. DATE: 5-5-65
TRACED BY: DATE:
CHECKED BY: A.L. DATE: 9-21-65
SCALE: ⅜" = 1'-0"

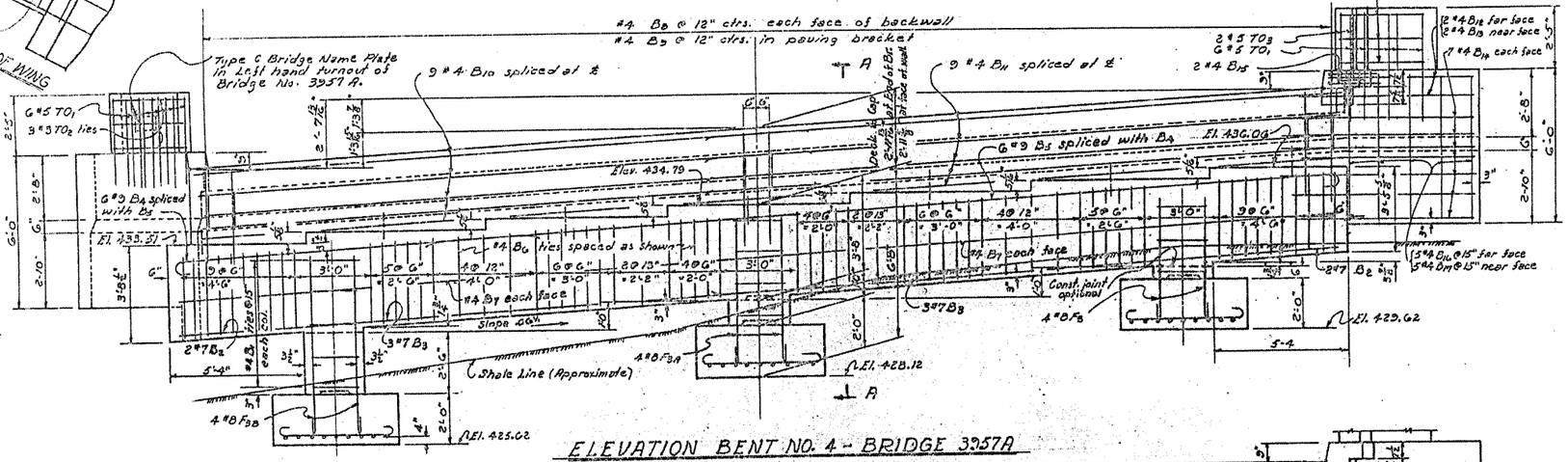
L.P. Carlson
BRIDGE ENGINEER

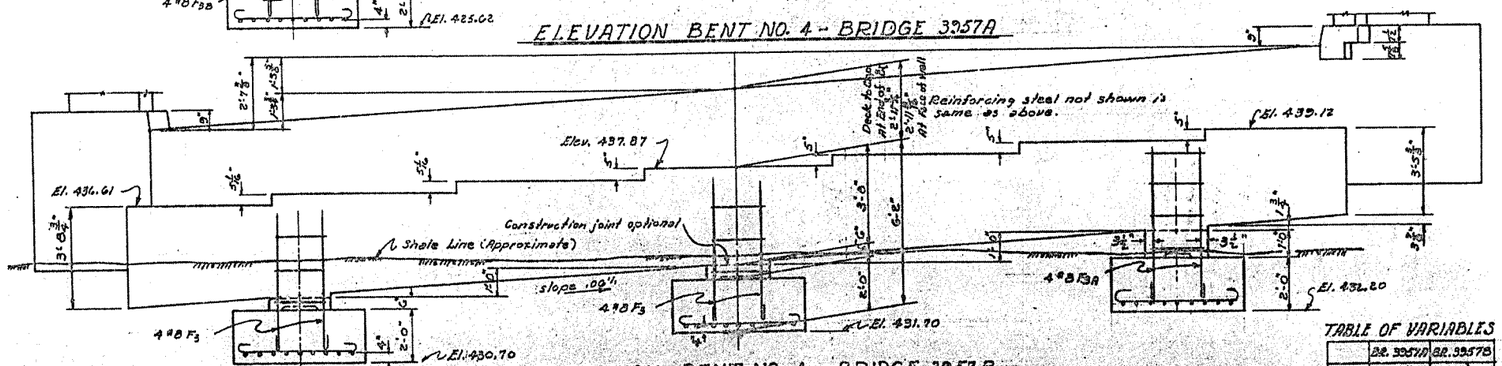
BRIDGE NO. A&B3957 DRAWING NO. 48446C

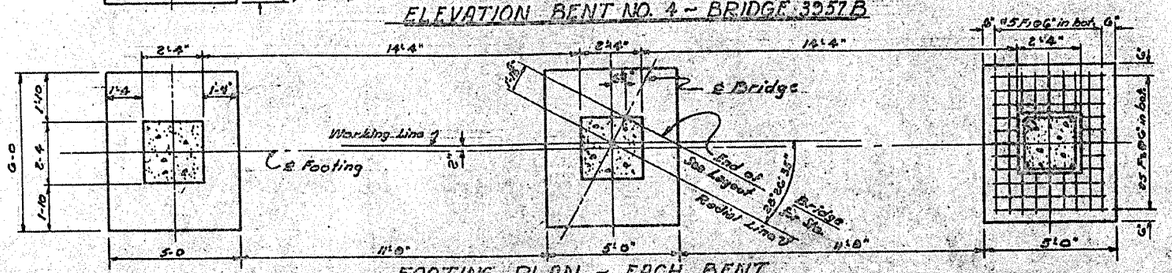
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	148	464
(1)	A&B3957 - END BENT - 48446D			











BAR LIST ~ EACH BENT

Bridge No.	Mark	Size	No.	Length	A	K	P	Bending Diagram
3957A&B	F1	#5	27	6'-9"	5'-6	5	3½"	
	F2	#5	33	5'-9	4'-6	5	3½"	
3957A	F3	#8	4	6-2	5'-0	9	8	
	F3A	#8	4	6'-11"	5'-9"	9	8	
3957B	F3B	#8	4	8-2	7'-0	9	8	
	F3	#8	8	6-2	5'-0	9	8	
	F3A	#8	4	6-8	5'-6"	9"	8"	
3957A	B1	#4	18	8-3	-	4	1½	
3957B	B1	#4	10	8-3	-	4	1½	
	B2	#7	4	24-5	-	-	Str.	
	B3	#7	6	19'4"	-	-	Str.	
	B4	#9	6	15'-7	14'-4	10"	9"	
	B5	#9	6	36'-6	35'3"	10"	9"	
	B6	#4	64	10'-6	-	4	1½	
	B7	#4	4	23-5	-	-	Str.	
	B8	#4	88	4-8	-	-	Str.	
	B9	#4	44	3-9	-	-	1½	
	B10	#4	9	23-0	-	-	Str.	
	B11	#4	9	23-10	-	-	Str.	
	B12	#4	2	5'-0	-	-	Str.	
	B13	#4	2	5'-10	-	-	Str.	
	B14	#4	14	7'-0	-	-	Str.	
	B15	#4	2	4'-0	-	-	1½	
	B16	#4	10	5'-11	-	-	1½	
	B17	#4	10	5'-8	-	-	Str.	
	TO1	#5	19"	4-4	-	-	Str.	
	TO2	#3	3	7-5	-	3"	1½	
	TO3	#5	2	4-5	-	-	1⅜	
	TO4	#3	3	5'-1"	-	-	1⅛	
	B18	#4	3	4-9	-	-	Str.	
	B19	#4	13	6-6	-	-	1½"	

Dimensions relating to reinf. steel are to centers of bars.

TABLE OF VARIABLES

	BR. 3957A	BR. 3957B
d	1'-0"	1'-0"
c	0'-6 7/16"	0'-6 7/16"
f	0'-6 7/16"	0'-6 7/16"
g	0'-3½"	0'-3½"
h	2'-1 11/16"	2'-1 11/16"
i	1'-6 7/16"	1'-6 7/16"

Revision: Turnout Posts & number of TO1 bars FHWA 4-6-67

GENERAL NOTES

Concrete in footings to be Class A as shown. Concrete in remaining portion of structures to be Class S. Exposed corners to be chamfered 3/4" unless otherwise noted.

Reinforcing steel to be deformed bars of intermediate or hard grade. Bar lists and bending diagrams to be submitted and approval secured before fabrication is begun.

For additional general notes see Dwg. No. 13328 or 13329

FOR INFORMATION ONLY

LEFT AND RIGHT LANES

DETAILS OF BENTS NO. 4
HIGHWAY 162 OVERPASS
ARKANSAS RIVER BRIDGE ~ JCT. I-40
CRAWFORD COUNTY
INTERSTATE ROUTE 540 SEC. 1

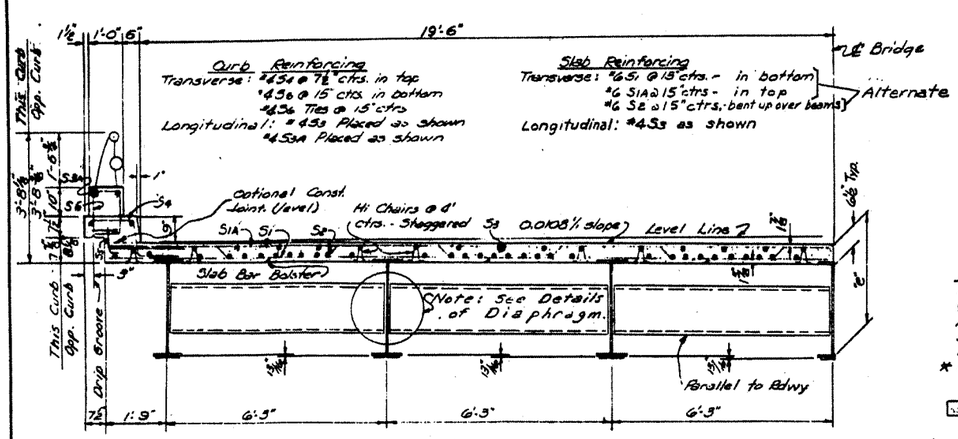
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: J.G.H. DATE: 6-14-66
TRACED BY: DATE:
CHECKED BY: A.J. DATE: 9-16-66
SCALE: 3/8" = 1'-0"

BRIDGE NO. A&B3957 DRAWING NO. 48446D

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	149	464

(1) A&B3957 - SPAN - 48446E



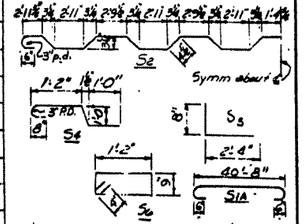
HALF SECTION A-A OF REGULAR SPAN - SLOPED RDWY.

(Regular Spans have all beams of equal depth)

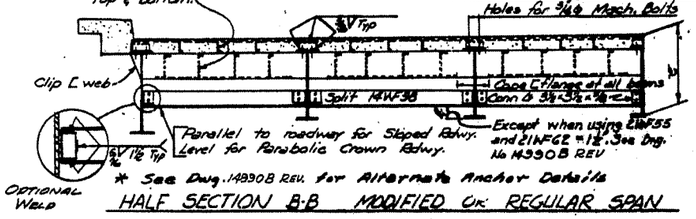
BAR LIST - ONE SPAN

Mark	Size	Length	Bar	Number Required Each Span																			
			Dia	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	55	60	65	70	75
S1	6	40'-8"	Str	28	29	30	31	32	32	33	34	35	36	36	37	38	39	40	40	44	48	52	56	60
S2	6	43'-0"	Str	27	28	29	30	31	31	32	33	34	35	35	36	37	38	39	39	43	47	51	55	59
S3	4	5-6"	Str	102																				
S3	4	5/8+7"	Str	204																				
S3	4	5/8+1'0	Str	306																				
S4	4	3'-11"	1½	112	116	118	122	124	128	132	134	138	140	144	148	150	154	156	160	176	192	208	224	240
S5	4	3'-0"	1½	56	58	60	62	62	64	66	68	70	72	72	74	76	78	78	80	88	96	104	112	120
S6	4	4'-5"	1½	88	58	60	62	64	66	66	68	70	72	74	74	76	78	80	82	90	98	106	114	122
S3A	4	5-0(6")/3	Str	12																				
S1A	6	42'-0"	3	28	29	30	31	32	32	33	34	35	36	36	37	38	39	40	40	44	48	52	56	60

BENDING DIAGRAM

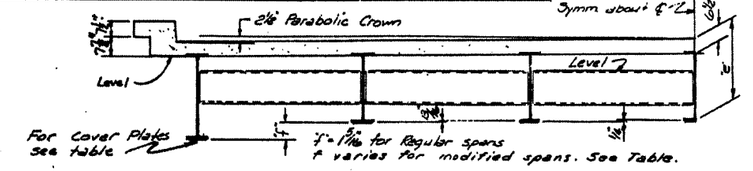


Expansion Device
Roadway L.3"@33.8" x 38'-6"
Conn. to 6"x3½"x⅜"x0'-8"
Preformed Joint Sealer - See Special Provisions
Detail device ½" high and provide ½" shims using 2-1½ lbs. @ 1-1½ R
* 1½"x⅜"x1'-0" Straps @ 15" ctrs top & bottom.

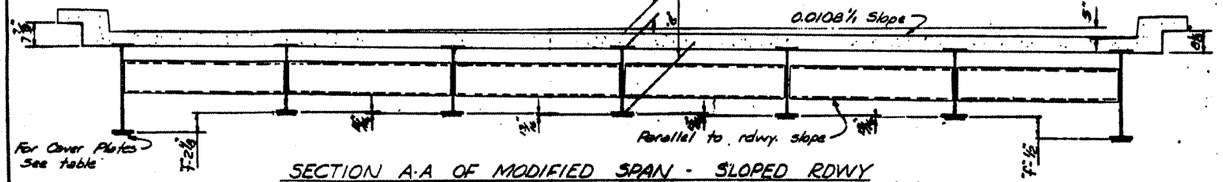


* See Dwg. 14890B REV. for Alternate Anchor Details

HALF SECTION B-B MODIFIED OR REGULAR SPAN



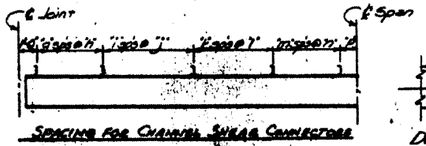
HALF SECTION A-A MODIFIED OR REGULAR SPAN PARABOLIC CROWN



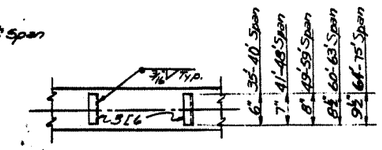
SECTION A-A OF MODIFIED SPAN - SLOPED RDWY

Interior beams are same as in regular spans. Exterior beams are the lightest section of the same nominal depth as beams for longest span shown on Bridge Layout.

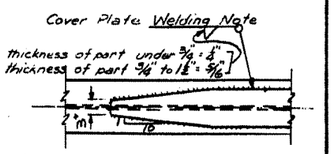
Note: f = corresponding dimension for parabolic crown Roadway.



SPACING FOR CHANNEL SHEAR CONNECTORS



DETAILS OF SHEAR CONNECTORS



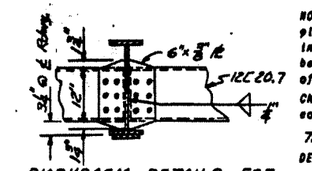
DETAILS OF COVER PLATES

No Scale

Bridge No.	SPAN			INTERIOR BEAM					EXTERIOR BEAM					DIAPHRAGM SPACING	POST SPACING			f	VARIABLES OF SHEAR CONNECTOR SPACING								
	No.	Length	Type	Beam Size	Cover Pl. Size	e	Dead Load Deflection With Constr. Joint	Dead Load Deflection Without Constr. Joint	Beam Size	Cover Pl. Size	e	Dead Load Deflection With Constr. Joint	Dead Load Deflection Without Constr. Joint		a	b	c		g	h	ℓ	j	k	l	m	n	p
3957A&B	12.3	40'	Regular	21WFG2	G 5"x⅞"x25'-0"	2'-2⅜"	3/16"	3/16"	21WFG2	5"x⅞"x25'-0"	2'-2⅜"	3/16"	¼"	20@ 20'-0"	7'-6"	7'-4"	3	—	12	4"	14	6"	9	8"	2	18"	0

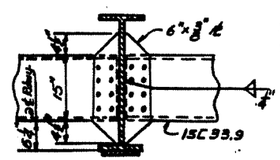
FOR SPAN DATA, BRIDGE NOS. 3957A & B

SEE SUPPLEMENTAL DETAILS DRAWING NO. 13334



DIAPHRAGM DETAILS FOR 21" thru 27" WF BEAMS

Scale: ¾" = 1'-0"



DIAPHRAGM DETAILS FOR 30" thru 36" WF BEAMS

Scale: ¾" = 1'-0"

NOTE: 'Stud shear connectors, granular flux filled, solid fluxed, or equal may be used in place of the channels shown at the following ratios: 3/4" diameter stud in place of 1.62 inches of channel, 7/8" diameter stud in place of 2.52 inches of channel. The studs shall be 4" long and automatically end welded to the beam flanges in accordance with recommendations of the manufacturer.

Channel sections will be used as basis for measurement of structural steel in shear connectors.

This drawing to be used with drawing 14990B REV.

DESIGN SPECIFICATIONS: AASHO 1961

Live Loading: HS 20 and Special Interstate Loading of 2 - 24,000# axles spaced 4'-0" ctrs.

		Interior Beam	Exterior Beam
1. DEAD LOAD			
a. To WF Beam	(without const. jt.)	508 #/ft + 1.15 (wt./ft. of WF)	518 #/ft + 1.15 (wt./ft. of WF)
	(with const. jt.)	308 #/ft + 1.15 (wt./ft. of WF)	416 #/ft + 1.15 (wt./ft. of WF)
b. To Composite Beam	(without const. jt.)	410 #/ft	110 #/ft.
	(with const. jt.)	156 #/ft	156 #/ft.
2. LIVE LOAD:	a. To ea. Composite Beam	1.136 Wheels # Impact	1.123 Wheels # Impact

UNIT STRESSES: Class 3 Concrete (n=10) 1,200 psi
Structural Steel (A-36) 20,000 psi
Reinforcing Steel 20,000 psi

This drawing is adapted from Standard Drawing 15120.

FOR INFORMATION ONLY

Revision - Changed numbers of S1 & S2 bars 12-30-64 W.E.W.
Revised 1-6-65. Added S1A, added hook to S2. F.M.H. (chkd. L.E.H.)

DETAILS OF STANDARD 35'-75' COMPOSITE I-BEAM SPANS 39'-0" CLEAR RDWY 0'-6" CURB 2% PARABOLIC CROWN OR 0.0108% SLOPE

INT. ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: V.A.S. DATE: 10-7-64
TRACED BY: DATE:
CHECKED BY: W.E.W. DATE: 10-9-64
SCALE: ½"=1'-0" unless shown

L P Carlson
BRIDGE ENGINEER

BRIDGE NO. A&B3957 DRAWING NO. 48446E

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	150	464

(1) A&B3957 - SPAN - 48446F

PLAN
Scale: 1/4" = 1'-0"

HALF SECTION A-B
Scale: 1/8" = 1'-0"

HALF SECTION B-B
Scale: 1/8" = 1'-0"

JOINT DETAILS
Scale: 1" = 1'-0"

SCHEMATIC DIAGRAM SHOWING LAYOUT OF BEAMS

BAR LIST - EACH SPAN

MARK	SIZE	NO.	LENGTH	A	K	(P/F)/(S/D)	BENDING DIAGRAM
S1	#6	27	40'-8"	-	-	Str.	
S1A	#6	27	42'-0"	40'-8	6"	3"	
S2	#6	26	43'-0	-	6"	2½"	
S3	#4	204	27'-7	-	-	Str.	
S3A	#4	12	17'-6	-	-	Str.	
S4	#4	172	3'-11	-	8"	1½"	
S5	#4	87	3'-0	-	-	1½"	
S6	#4	87	4'-3	-	4"	1½"	
S7-1 to S7-32	#6	1 Each	39'-5" to 41'-5"	38'-9" to 8'-9"	6"	3"	
S8	#6	3	3'-8	2'-6	6"	3"	
S9-1 to S9-32	#6	1 Each	38'-9" to 3'-9"	-	-	Str.	
S10	#6	3	2'-6	-	-	Str.	
S11-1 to S11-30	#6	1 Each	39'-1" to 41'-5	38'-5 to 4'-0"	6"	3"	
S12	#6	3	3'-8	3'-0	6"	3"	
S13-1 to S13-30	#6	1 Each	38'-3" to 4'-0"	-	-	Str.	
S14	#6	3	3'-0"	-	-	Str.	

Reinf. dimensions are to centers of bars.

BEAM DATA

SPAN	BEAM	COVER PLATES: INTERIOR	COVER PLATES: EXTERIOR	ε	DEAD LOAD DEFLECTION: THEN	EXT.	EXT.*
54'	27WF94	0'-8½" x 35'-0"	0'-8½" x 35'-0"	2'-0"	⅜"	½"	1⅛"

* Without curb construction joint.

DETAILS OF SHEAR CONNECTOR SPACING

BEAM	1	2	3	4	5	6	7
S/2	26'-8"	26'-3"	26'-10"	27'-0"	27'-1½"	27'-2½"	27'-3½"
"a"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1½"	1'-1½"	1'-1½"
"b"	10"	11"	12"	14"	14"	15"	16"

TABLE OF ANGLES

a_1	60° 26' 15.6"
a_2	117° 56' 28.4"
b_1	60° 32' 32.2"
b_2	117° 50' 15.8"
c_1	60° 28' 42.0"
c_2	117° 44' 06.0"
d_1	60° 44' 45.0"
d_2	117° 37' 59.0"
e_1	60° 50' 53.3"
e_2	117° 31' 54.7"
f_1	60° 56' 59.8"
f_2	117° 25' 53.2"
g_1	61° 02' 53.7"
g_2	117° 19' 54.5"

NOTES

For details not shown see Dwg. No. 13327 and 14930.B Rev.
For type of shoes required and plate thickening see Layout, Dwg. No. 13328; 13329.

FOR INFORMATION ONLY

SUPPLEMENTAL DETAILS OF 54'-0" COMP. I-BEAM SPAN
HIGHWAY 162 OVERPASS
ARKANSAS RIVER BRIDGE - JCT. I-40
CRAWFORD COUNTY
INTERSTATE ROUTE 540 SEC. 1.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

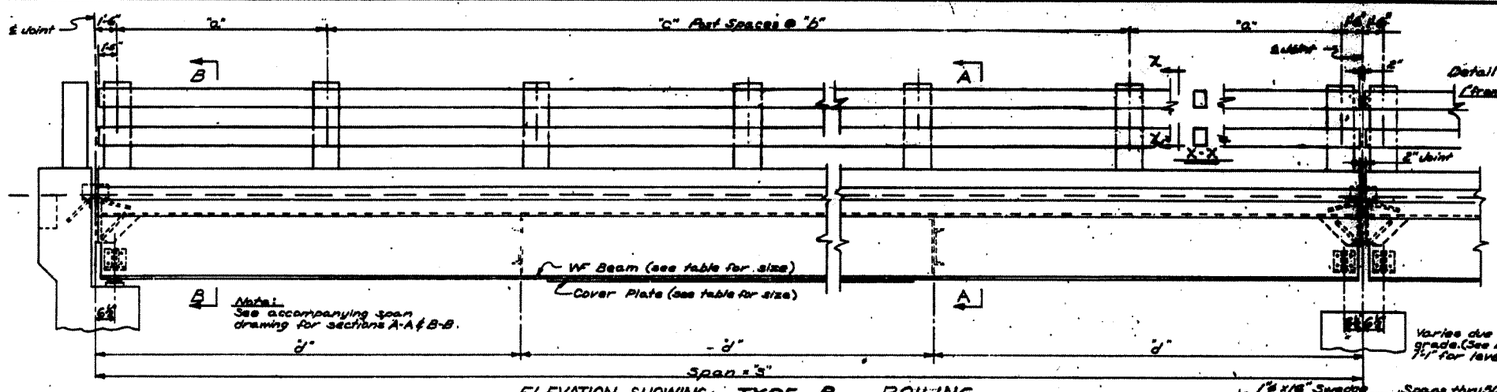
DRAWN BY: J.E.H. DATE: 4-21-65
TRACED BY: DATE:
CHECKED BY: A.L. DATE: 7-28-65
SCALE: As Noted

L. P. Carlson
BRIDGE ENGINEER

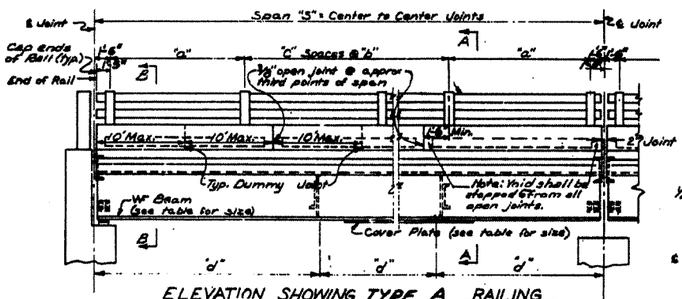
BRIDGE NO. A&B3957 DRAWING NO. 48446F

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.	BB0407		151	464

(1) A&B3957 - SPAN - 48446G

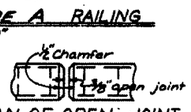


ELEVATION SHOWING TYPE B RAILING
Scale: ½" = 1'-0"

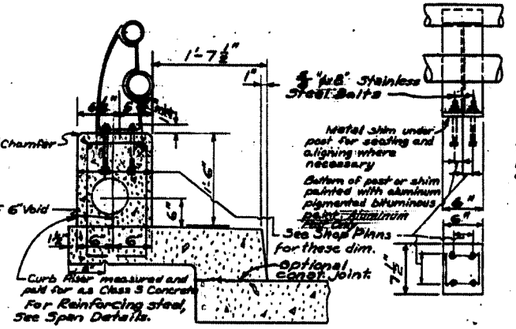


ELEVATION SHOWING TYPE A RAILING
Scale: 1½" = 1'-0"

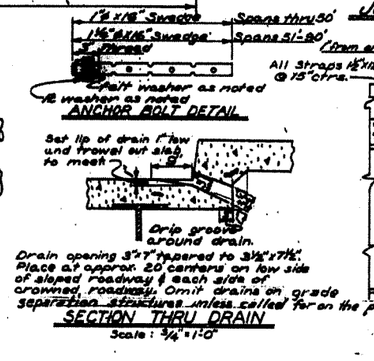
PLAN OF DUMMY JOINT



PLAN OF OPEN JOINT



DETAILS OF TYPE A RAILING
Scale: 1"=1'-0"

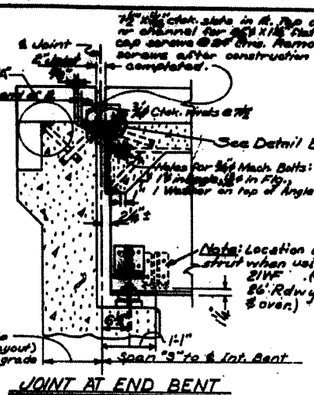


ANCHOR BOLT DETAIL

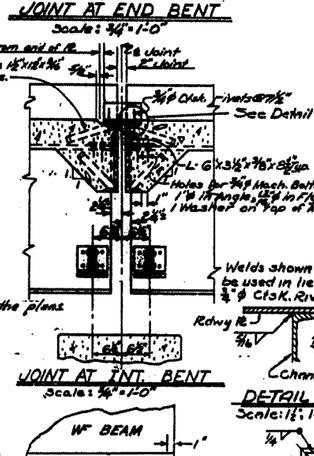
Drain opening 3"x7" tapered to 3½"x7½". Place at approx. 20' centers on low side of sloped roadway & each side of crowned roadway. Omit drains on grade separation structures unless called for on the plans.

SECTION THRU DRAIN
Scale: 3¼" = 1'-0"

CAMBER DIAGRAMS

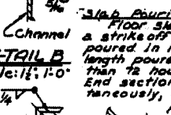


JOINT AT END BENT
Scale: ¾" = 1'-0"



JOINT AT INT. BENT
Scale: ¾" = 1'-0"

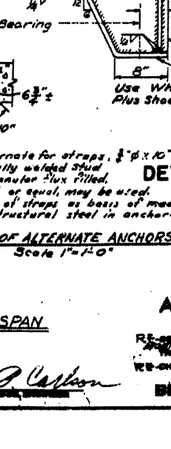
DETAIL B
Scale: 1½" = 1'-0"



DETAIL "A" (Typical)
Scale: 1½" = 1'-0"

Flange Width & Thickness & Web Thickness to be equal to or greater than WF Beam Dim.

OPTIONAL BEAM BUILDUP
No Scale

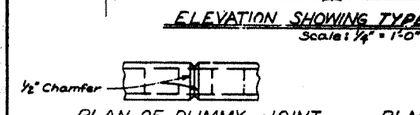


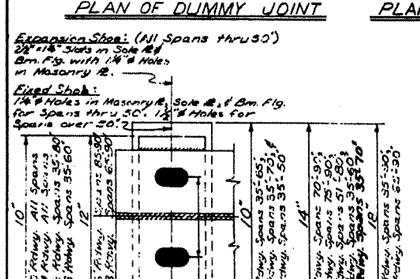
JOINT AT INT. BENT SHOWING MODIFIED AND REGULAR SPAN
Scale: ¾" = 1'-0"

Note: Beam buildups are required where modified spans are used, or adjacent regular spans have different "S" plus shoe height. (See accompanying drawings.)

Use When Difference in ("a" Plus Shoe Height) is 3" or More. Use When Difference in ("a" Plus Shoe Height) is Less Than 3".

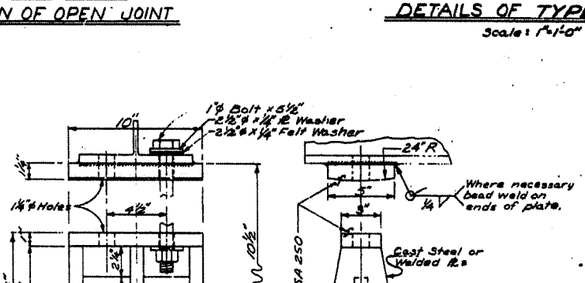
DETAILS OF BEAM BUILDUP
No Scale





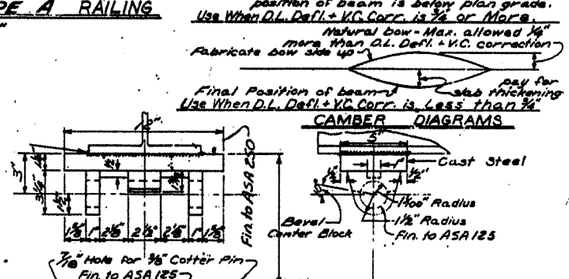
TYPE "B" FIXED or EXPANSION SHOE

. Use for end bents - all spans.
Use for int. bents - 35'-50' spans, unless otherwise shown.



TYPE "A" FIXED SHOE

Note: For shoe type, beam build-up, and for plate thickening, see sketch on Layout or Intermediate Bent Drawing.



TYPE 14" EXPANSION SHOE

REVISIONS: Specification note. 5-4-66 JEH.

Revised: Intermediate Diaphragms. 10-6-65 JEH.
Revised: Spans & Slab Pouring Note 6-21-66 AJ
Revised: Bridge Railing 3-5-65 JEH

"Slab Pouring Note": Floor slabs may be poured in one continuous operation with a strike off extending over the whole span length, or may be poured in increments with the center one-third to one-fifth span length poured first. After the center section is poured not less than 72 hours shall elapse before pouring the end sections. End sections may be poured simultaneously, if not poured simultaneously, 48 hours shall elapse between end sections pours. A minimum of 72 hours shall elapse between completion of the slab and the pouring of the curb section if poured separately.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, the 1966 Supplemental Specifications thereto, and designated Special Provisions.

This Drawing is a modification of Dwg No. 14990

As an alternate for straps, ⅝"Ø x 10" automatically welded stud anchors, granular flux filled, solid thread, or equal may be used. Use weight of straps as basis of measurement of structural steel in anchors.

DETAILS OF ALTERNATE ANCHORS
Scale 1" = 1'-0"

GENERAL NOTES

All concrete to be Class S. All exposed corners to be chamfered ¾" unless otherwise noted.

Field connections to be riveted or bolted with high strength bolts. Rivets: ¾" Ø, Open holes ⅞" Ø except where noted otherwise.

Structural shapes of equal or greater strength may be substituted for shapes shown, but payment will be made on the basis of shapes shown or those actually used, whichever is less.

All welded connections to be the "Filler Shop Weld" except as noted. All welding shall conform to the American Welding Society Standard Specifications for Welded Highway and Railway Bridges, current edition.

Shop Paint: All structural steel except surfaces in contact with concrete shall be given one coat of red lead and raw linseed oil before shipment.

Field Paint: First coat - red lead tinted with lamp black. Second coat aluminum paint.

All metal bearing and roadway expansion devices to be paid for as "Structural Steel in Beam Spans". Bearings shall be finally seated in accordance with Sec. 806.05, including alternate, of the 1960 Spec. This work and material are to be considered as subsidiary to the item "Structural Steel in Beam Spans" and will not be paid for directly.

This drawing shows general features of design only. Shop drawings shall be made in accordance with the Specifications, submitted and approval secured before fabrication is begun.

All Steel shall be ASTM A-36 unless otherwise noted.

Anchor bolts shall be galvanized to conform to ASTM Specification, Designation A 153.

Reinforcing steel to be deformed bars of intermediate or hard grade. 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 of "Reinforcing Steel."

Shop lists and bending diagrams of reinforcing steel, including wire supports, shall be submitted and approval secured before fabrication is begun.

All chamfers on concrete riser for rail are to be ½".

Shop drawings showing details of railing shall be submitted and approval secured before fabrication is begun.

For details of Bridge Railing see Dwg. No. 14933 or 14932 as shown on Bridge Layout.

FOR INFORMATION ONLY
DETAILS COMMON TO STANDARD 35'-90'
COMPOSITE I-BEAM SPANS
20', 24', 26', 28', 39', 40' ROADWAYS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

R.E. DRAWN BY: [illegible] DATE: 8 Mar 62
TRACED BY: J.H.S. DATE: 3-14-66 CHKD. BY: J.E.H. DATE: 3-17-66
DESIGNED BY: [illegible] DATE: 8 Mar 62
RE-CHECKED BY: L.K. DATE: 3-9-62
SCALE: As Shown

BRIDGE NO. A&B3957 DRAWING NO. 48446G

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.		BB0407	152	464
				(1) A6877		LAYOUT		48447

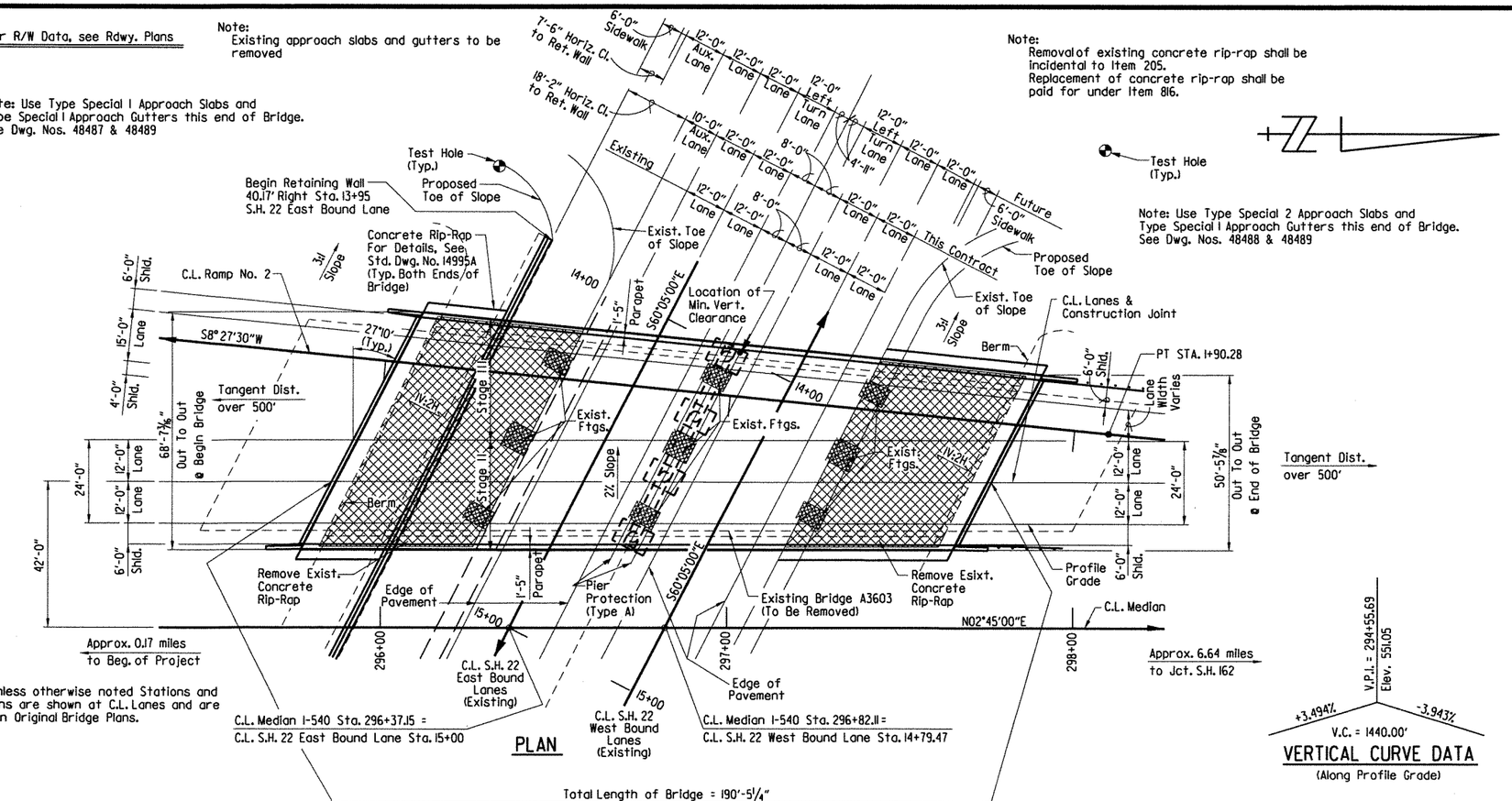
For R/W Data, see Rdwy. Plans

Note: Existing approach slabs and gutters to be removed

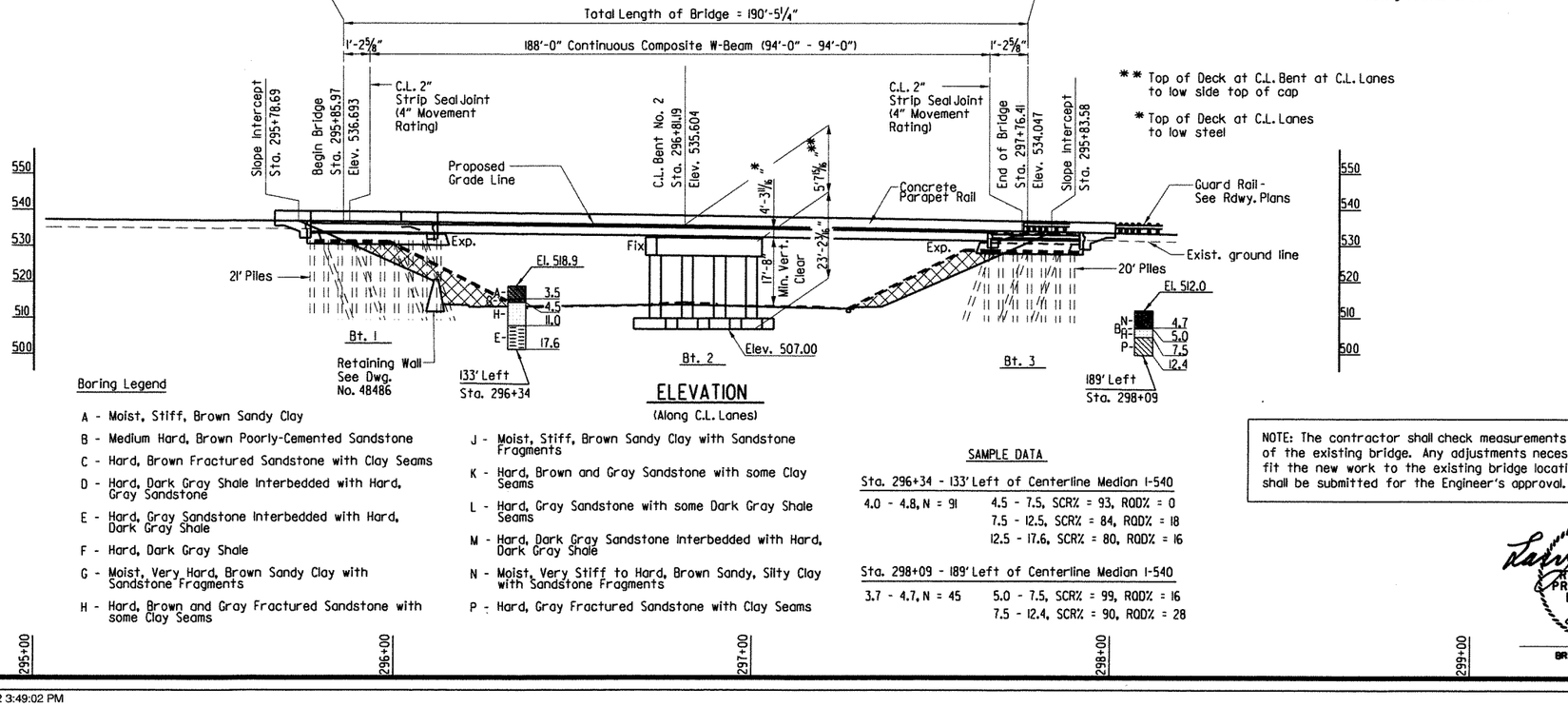
Note: Use Type Special I Approach Slabs and Type Special I Approach Gutters this end of Bridge. See Dwg. Nos. 48487 & 48489

Note: Removal of existing concrete rip-rap shall be incidental to Item 205. Replacement of concrete rip-rap shall be paid for under Item 816.

Note: Use Type Special 2 Approach Slabs and Type Special I Approach Gutters this end of Bridge. See Dwg. Nos. 48488 & 48489



Note: Unless otherwise noted Stations and Elevations are shown at C.L. Lanes and are based on Original Bridge Plans.



ELEVATION
(Along C.L. Lanes)

VERTICAL CURVE DATA
(Along Profile Grade)

Boring Legend

- A - Moist, Stiff, Brown Sandy Clay
- B - Medium Hard, Brown Poorly-Cemented Sandstone
- C - Hard, Brown Fractured Sandstone with Clay Seams
- D - Hard, Dark Gray Shale Interbedded with Hard, Gray Sandstone
- E - Hard, Gray Sandstone Interbedded with Hard, Dark Gray Shale
- F - Hard, Dark Gray Shale
- G - Moist, Very Hard, Brown Sandy Clay with Sandstone Fragments
- H - Hard, Brown and Gray Fractured Sandstone with some Clay Seams
- J - Moist, Stiff, Brown Sandy Clay with Sandstone Fragments
- K - Hard, Brown and Gray Sandstone with some Clay Seams
- L - Hard, Gray Sandstone with some Dark Gray Shale Seams
- M - Hard, Dark Gray Sandstone Interbedded with Hard, Dark Gray Shale
- N - Moist, Very Stiff to Hard, Brown Sandy, Silty Clay with Sandstone Fragments
- P - Hard, Gray Fractured Sandstone with Clay Seams

SAMPLE DATA

Sta. 296+34 - 133' Left of Centerline Median I-540

4.0 - 4.8, N = 91	4.5 - 7.5, SCR% = 93, RQD% = 0
	7.5 - 12.5, SCR% = 84, RQD% = 18
	12.5 - 17.6, SCR% = 80, RQD% = 16

Sta. 298+09 - 189' Left of Centerline Median I-540

3.7 - 4.7, N = 45	5.0 - 7.5, SCR% = 99, RQD% = 16
	7.5 - 12.4, SCR% = 90, RQD% = 28

GENERAL NOTES

BENCH MARK: Elevations and stations are assumed to be the same as shown on the original plans. The original layout shows the elevation at the top of the deck and centerline of existing bridge to be at 534.310 at Sta. 295+92.00 (Beg. of Br. A3603).

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 on the plans, section and subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (1996 edition), with current interim specifications.

LIVE LOAD: HS20 + Military Loading METHOD OF DESIGN: Load Factor
SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:
Class S(AE) Concrete (superstructure) f'c = 4,000 psi
Class S Concrete (substructure and retaining wall) f'c = 3,500 psi
Reinforcing Steel (AASHTO M31 or M53, Gr. 60) fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 50) Fy = 50,000 psi
Structural Steel (AASHTO M270, Gr. 36) Fy = 36,000 psi

BORING LOGS: Boring Logs may be obtained from the Programs and Contracts Division.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

CLASS I PROTECTIVE SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

STEEL PILING: Piling in End Bents I and 3 shall be HP12x53 and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 70 tons per pile and into the material designated as sandstone on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles in end bents to be driven after embankment to bottom of cap is in place. On all piles the contractor shall use approved steel H-Pile driving points.

FOOTINGS: Footings shall be set a minimum of 1'-6" into hard, sandstone or hard shale but shall not be at a higher elevation of the existing footing and shall have a minimum cover above top of footings of 2'. Foundations for footings shall be prepared in accordance with Section 801.04 of the Standard Specifications. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

DETAIL DRAWINGS:	DRAWING NO.
End Bents	48451-48453, 48456-48458
Intermediate Bents	48454, 48455
188'-0" Cont. Comp. W-Beam Unit	48459-48466
Steel Piling	14995A
Type Special I Approach Slab	48487
Type Special 2 Approach Slab	48488
Type Special I Approach Gutters	48489

REMOVAL AND SALVAGE: The existing bridge, shall be removed in accordance with Section 205. Excavate existing slopes as required for proposed slopes. Approximately 1100 c.y. of unclassified excavation is required. See Roadway Plans. All material from existing bridge shall become the property of the contractor.

EXISTING BRIDGE: Existing Bridge No. A3603 has variable width and is 178'-5½" long and consists of 2 composite 40'-0" and 2 composite 48'-0" simple spans supported by substructures consisting of 3 three column bents and 2 pile end bents. Plans for existing bridge will be made available to the Contractor upon request to Programs and Contracts Division. Existing Dwg. Nos. 11948, 11950 thru 11954, 11958 thru 11961, 11964.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

PAINTING: All structural steel except galvanized members and some surfaces in contact with concrete shall be painted as specified in subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

TEMPORARY SHORING: Temporary shoring may be required. Coordinate with Roadway Plans and see Special Provision Job No. BB0407 "Shoring".

NOTE: The contractor shall check measurements of the existing bridge. Any adjustments necessary to fit the new work to the existing bridge location shall be submitted for the Engineer's approval.

ARKANSAS REGISTERED PROFESSIONAL ENGINEER — LARRY E. MILLER — No. 13339
8-11-12
BRIDGE ENGINEER

LAYOUT OF BRIDGE OVER HWY. 22 (ROGERS AVENUE) (BR. A6877) S.H. 22 - I-40 (F) CRAWFORD & SEBASTIAN COUNTIES ROUTE I-540 SEC. I

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407al_111.dgn
CHECKED BY: JLH/ETH DATE: March 02 SCALE: 1" = 20'
DESIGNED BY: BCG DATE: March 02
BRIDGE NO. A6877 DRAWING NO. 48447

$$$$date$$$$
$$$$dgnspec$$$$

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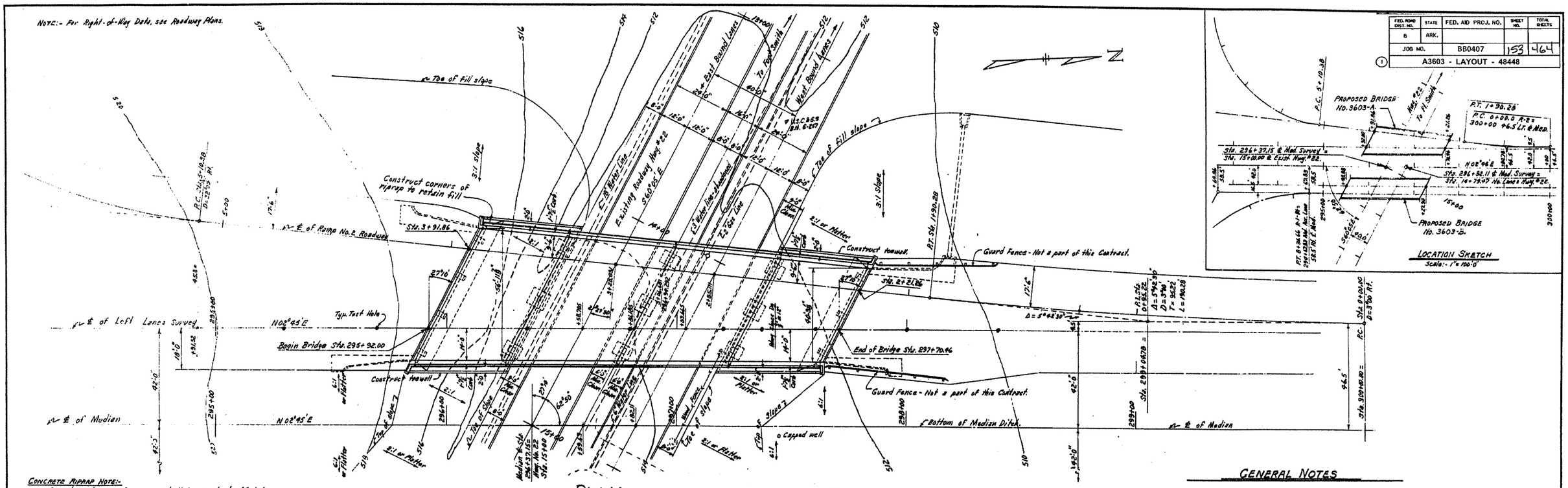
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	153	464

(1) A3603 - LAYOUT - 48448

NOTE:- For Right-of-Way Data, see Roadway Plans.



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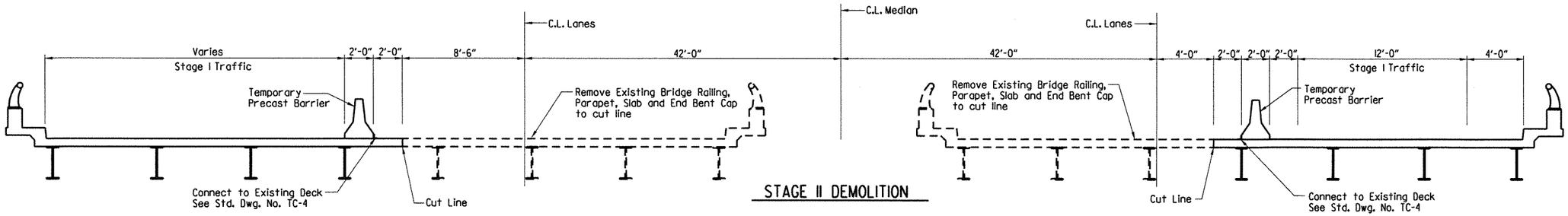
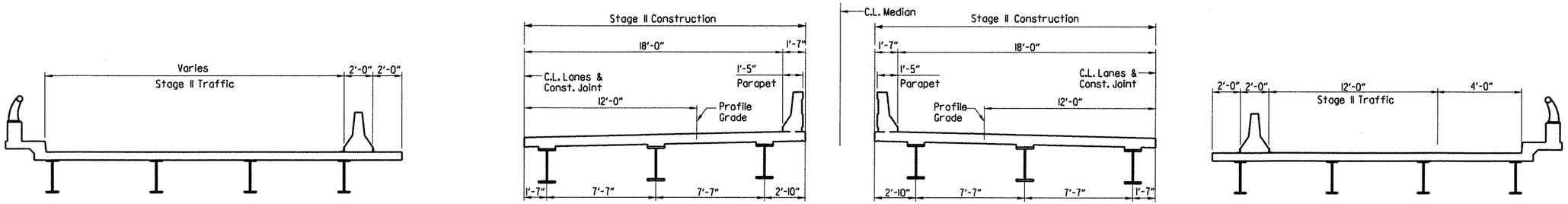
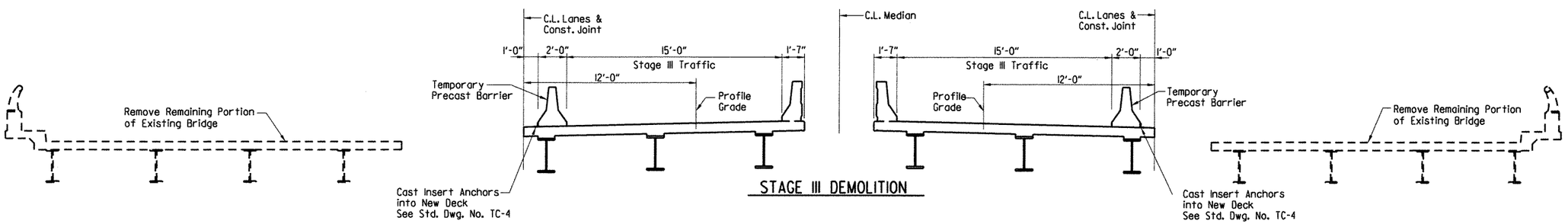
				6	ARK.			
				JOB NO.		BB0407	154	464
				(1) A6877, B6877		LAYOUT		48449



STAGE II DEMOLITION



STAGE II CONSTRUCTION



STAGE III DEMOLITION

Note:
Sections are taken looking Ahead.
See Roadway Plans for complete list of Construction Stages.

$$$$dgnspec$$$$$

$$$$date$$$$

(SHEET 1 OF 2)
DETAILS OF STAGE CONSTRUCTION
BRIDGE OVER HWY. 22 (ROGERS AVENUE)
(BR. A6877 & B6877)
S.H. 22 - I-40 (F)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11339
LARRY W. MILLER
Larry W. Miller 8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407a1_l12.dgn
CHECKED BY: EMB DATE: May 02 SCALE: As Shown
DESIGNED BY: BCG DATE: Jan 02
BRIDGE NO. A6877, B6877 DRAWING NO. 48449

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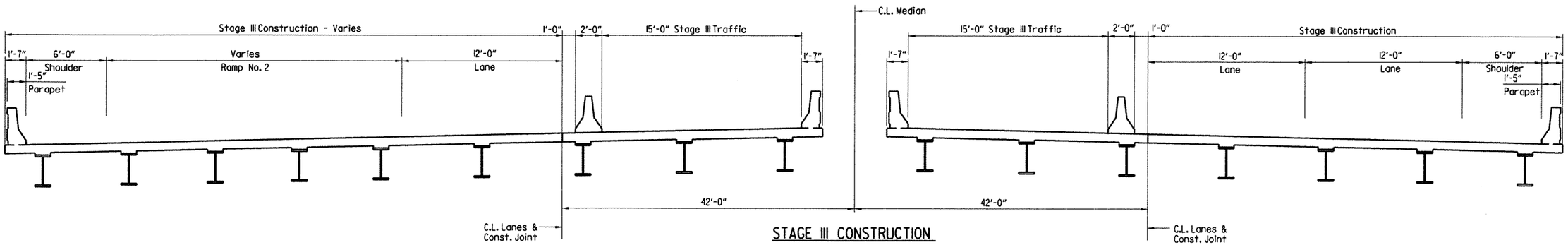
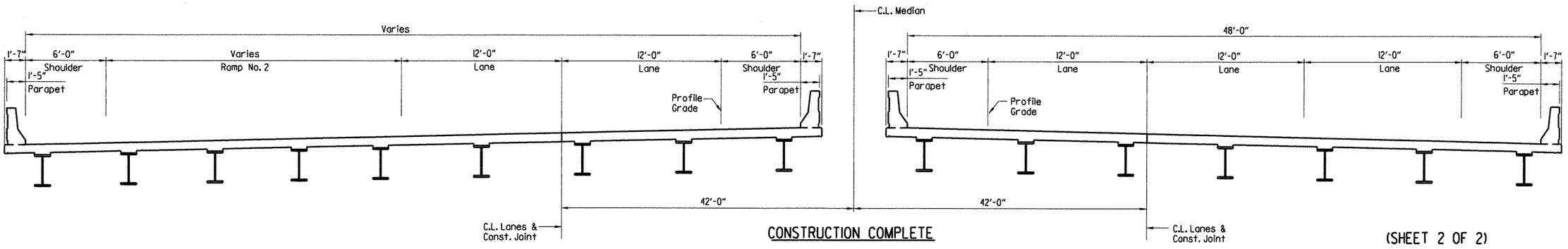
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	155	464
				① A6877, B6877		LAYOUT		48450



STAGE III CONSTRUCTION



CONSTRUCTION COMPLETE

Note:
Sections are taken looking Ahead.
See Roadway Plans for complete list of Construction Stages.

$$$$dgnspec$$$$$

$$$$date$$$$

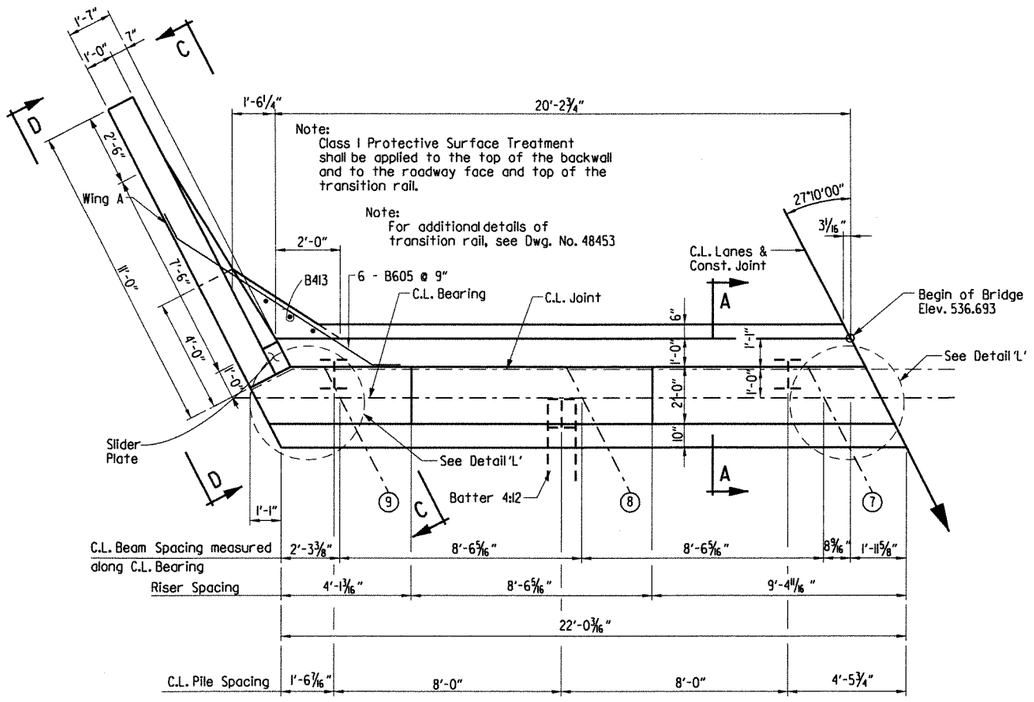
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11039
LARRY W. MILLER
Larry W. Miller 8-11-12
BRIDGE ENGINEER

(SHEET 2 OF 2)
DETAILS OF STAGE CONSTRUCTION
BRIDGE OVER HWY. 22 (ROGERS AVENUE)
(BR. A6877 & B6877)
S.H. 22 - I-40 (F)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407al_l13.dgn
CHECKED BY: EMB DATE: May 02 SCALE: 1/8" = 1'-0"
DESIGNED BY: BCG DATE: Jan 02

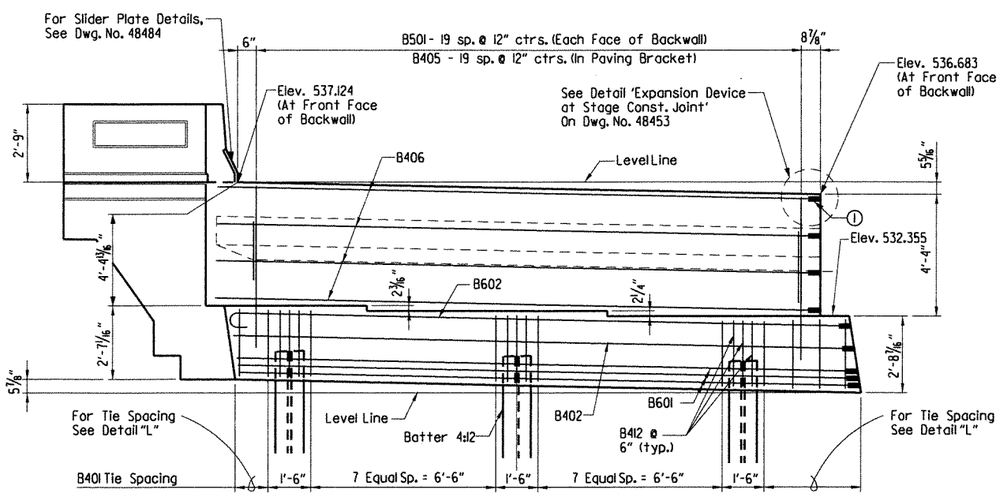
BRIDGE NO. A6877, B6877 DRAWING NO. 48450

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.		BB0407	156	464
				(1) A6877		BENT DTLS.		48451



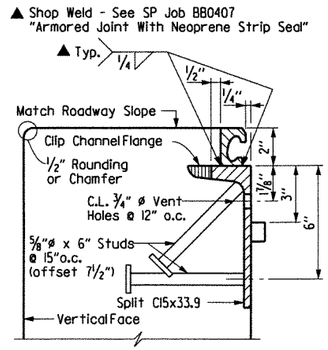
PLAN - STAGE II

⅜" = 1'-0"



ELEVATION - STAGE II

(Looking Back)
⅜" = 1'-0"

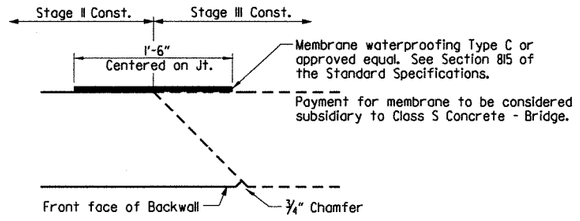


Note: Concrete shall be hand packed under the joint armor in the backwall.

For additional details, See Dwg. No. 48484.

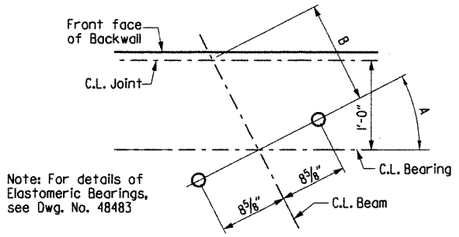
DETAIL Z

3"= 1'-0"



CONSTRUCTION JOINT DETAIL

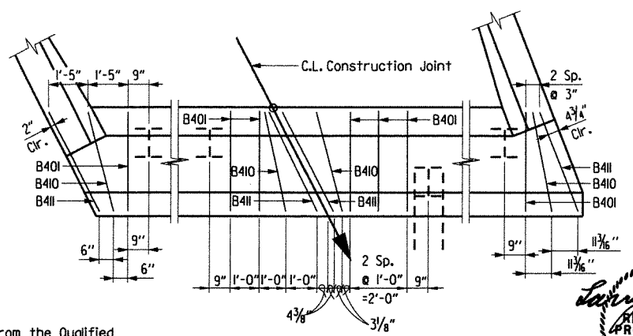
No Scale



Note: For details of Elastomeric Bearings, see Dwg. No. 48483

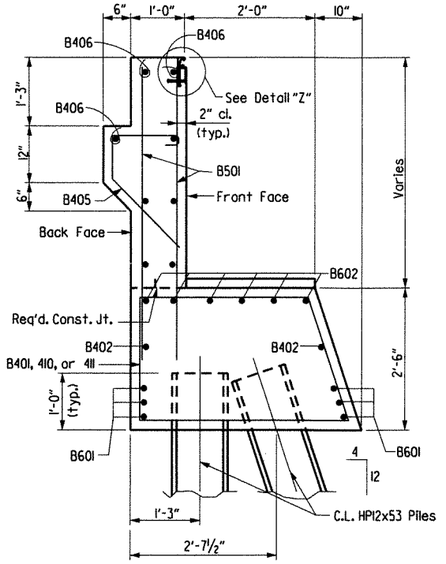
TYPICAL ANCHOR BOLT LAYOUT

No Scale



DETAIL "L"

ANCHOR BOLT LAYOUT TABLE		
Beam	A	B
1	21°29'37"	1'-0⅞₁₆"
2	22°57'33"	1'-1"
3	24°23'37"	1'-1⅛"
4	25°47'47"	1'-1¼"
5-9	27°10'	1'-1½"



SECTION A-A

¾" = 1'-0"

GENERAL NOTES:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered ¾" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Gr. 60.

End Bent backwall shall not be poured before girders are in place. Backwall to be placed after concrete span placement.

Structural steel in end bents shall be AASHTO M270, Gr. 50 and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50)".

If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

All exposed steel surfaces are to be cleaned and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

(1) Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the Item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.

STATE OF ARKANSAS
Larry Ted Miller
REGISTERED PROFESSIONAL ENGINEER
No. 11339
LARRY E. MILLER
8-11-12
BRIDGE ENGINEER

SHEET 1 OF 3
DETAILS OF BENT NO. 1
BRIDGE OVER HWY. 22 (ROGERS AVENUE)
(BR. A6877)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB/ETH DATE: May 02
DESIGNED BY: JLH DATE: April 02
FILENAME: bBB0407a1bll.dgn
SCALE: As Shown

BRIDGE NO. A6877 DRAWING NO. 48451

$$$$dgnspec$$$$$

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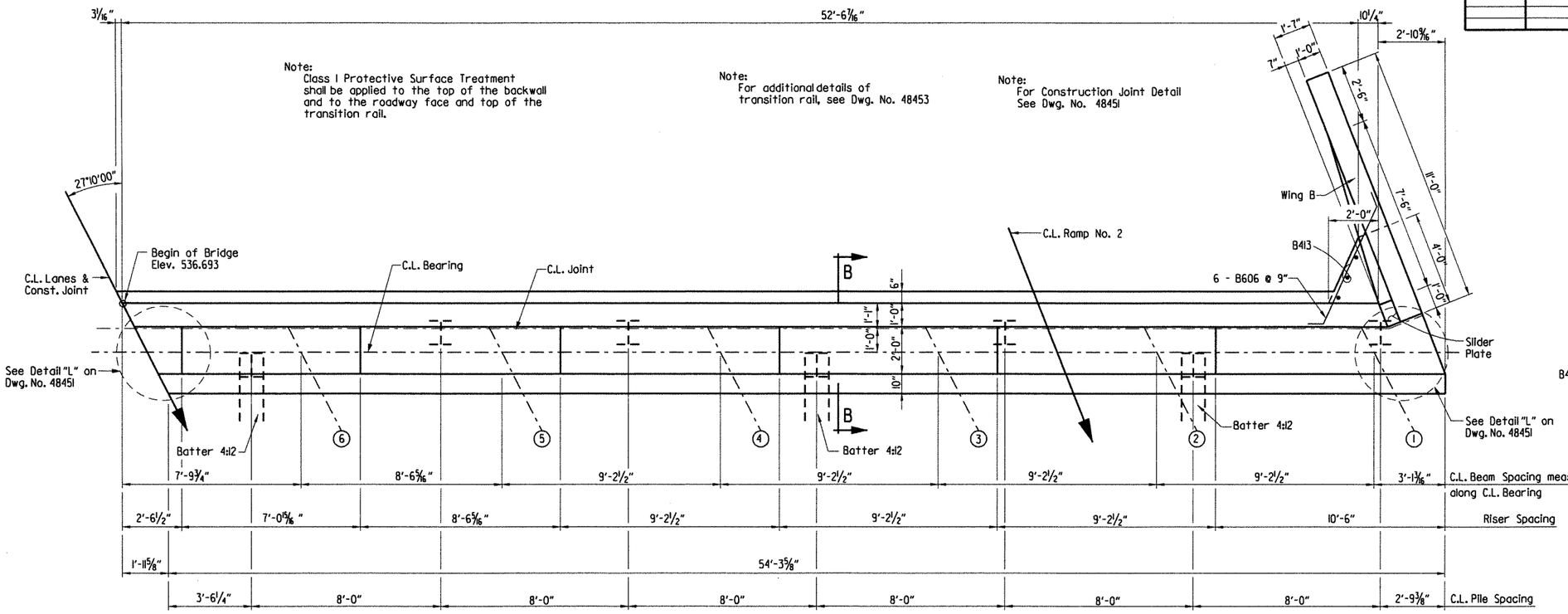
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	157	464
				(1) A6877		BENT DTLS.		48452

Note:
Class I Protective Surface Treatment shall be applied to the top of the backwall and to the roadway face and top of the transition rail.

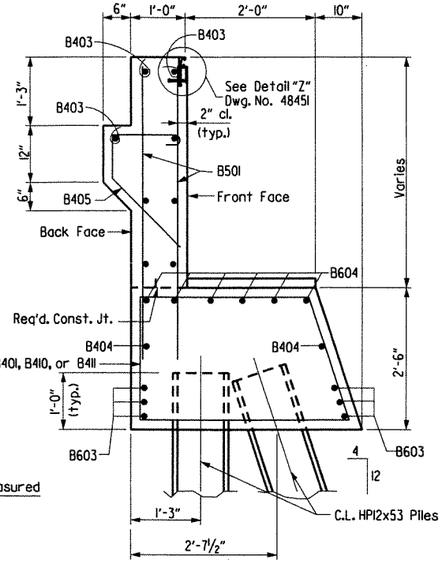
Note:
For additional details of transition rail, see Dwg. No. 48453

Note:
For Construction Joint Detail See Dwg. No. 48451



PLAN - STAGE III

3/8" = 1'-0"

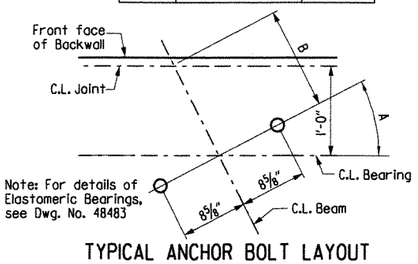


SECTION B-B

3/4" = 1'-0"

ANCHOR BOLT LAYOUT TABLE

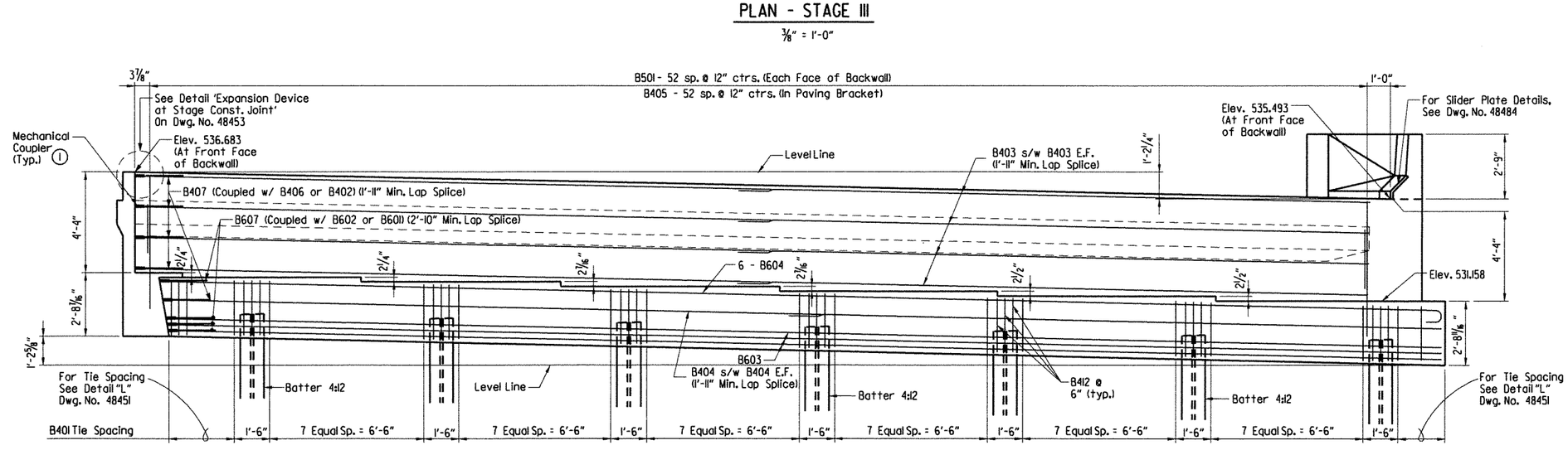
Beam	A	B
1	21°29'37"	1'-0 7/8"
2	22°57'33"	1'-1"
3	24°23'37"	1'-1 1/8"
4	25°47'47"	1'-1 1/4"
5-9	27°10'	1'-1 1/2"



Note: For details of Elastomeric Bearings, see Dwg. No. 48483

TYPICAL ANCHOR BOLT LAYOUT

No Scale



ELEVATION - STAGE III

(Looking Back)

3/8" = 1'-0"

(1) Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY E. MILLER

Larry E. Miller 8-11-12

BRIDGE ENGINEER

SHEET 2 OF 3

DETAILS OF BENT NO. 1

BRIDGE OVER HWY. 22 (ROGERS AVENUE)

(BR. A6877)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407al bl2.dgn

CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown

DESIGNED BY: JLH DATE: April 02

BRIDGE NO. A6877 DRAWING NO. 48452

$$$$date$$$$

$$$$dgnspec$$$$$

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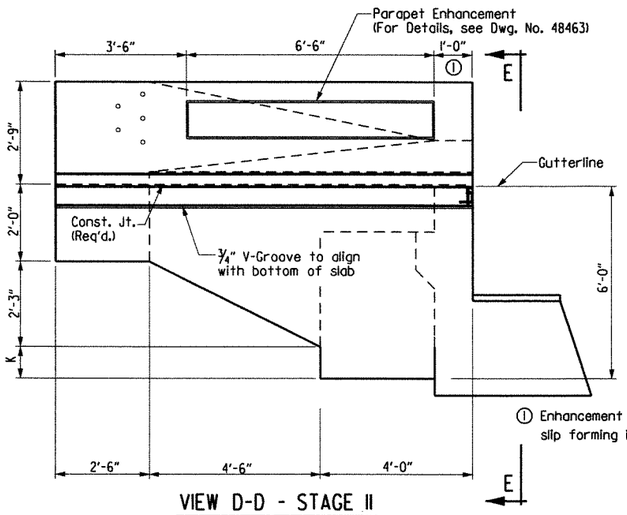
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	150	464
				① A6877		BENT DTLS.		48453

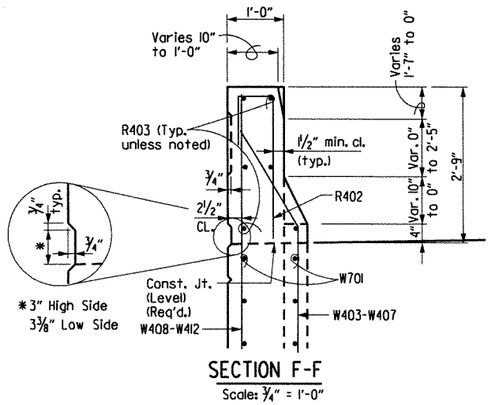


VIEW D-D - STAGE II

(Stage III Similar)

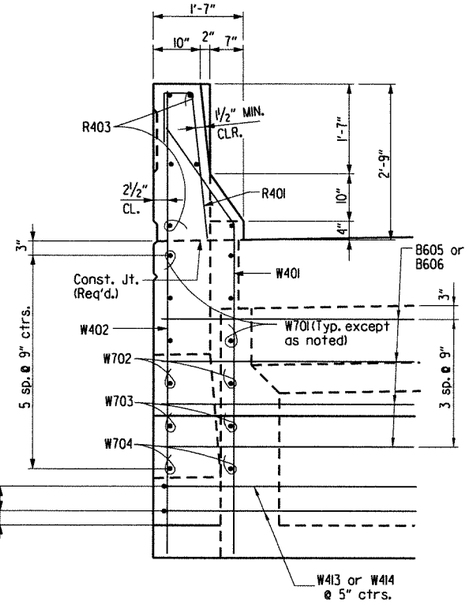
Scale: ½" = 1'-0"

① Enhancement shall be continuous if slip forming is used on bridge parapet.



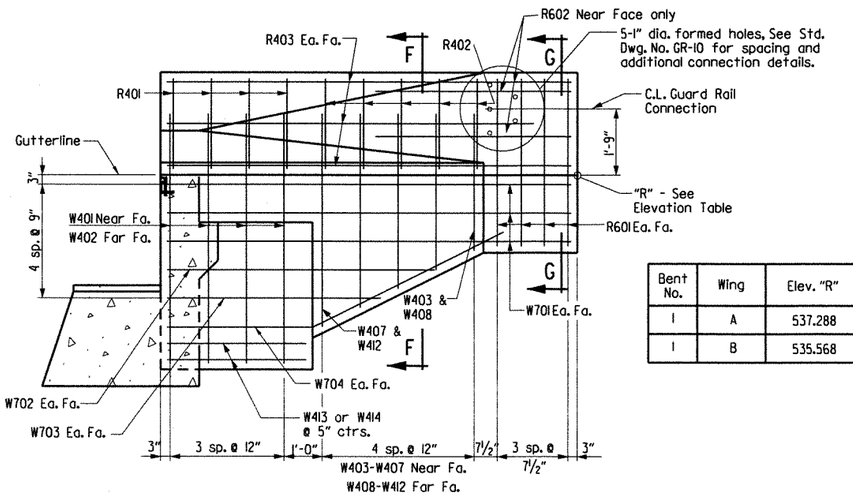
SECTION F-F

Scale: ¾" = 1'-0"



VIEW E-E

Scale: ¾" = 1'-0"

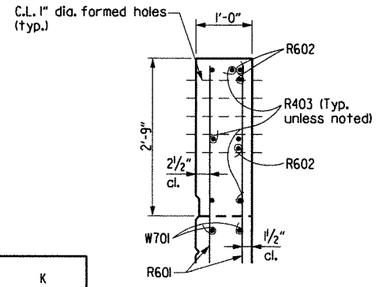


SECTION C-C - STAGE II

(Stage III Similar)

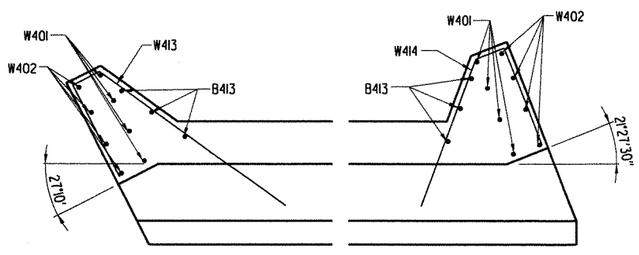
Scale: ½" = 1'-0"

Bent No.	Wing	Elev. "R"	K
1	A	537.288	1'-11"
1	B	535.568	1'-9⅝"



SECTION G-G

Scale: ¾" = 1'-0"

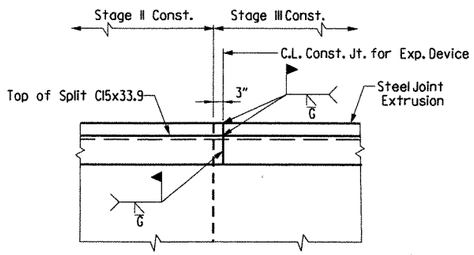


SECTION X-X

Wing A

SECTION X-X

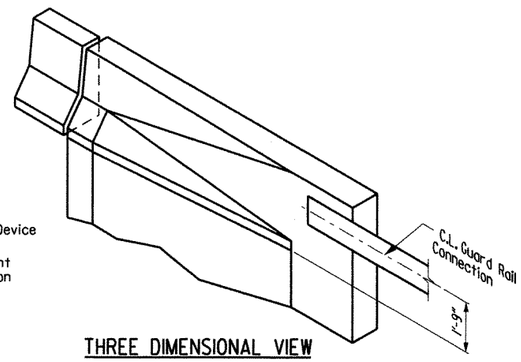
Wing B



EXPANSION DEVICE AT STAGE CONST. JOINT

No Scale

(Looking Back)



THREE DIMENSIONAL VIEW

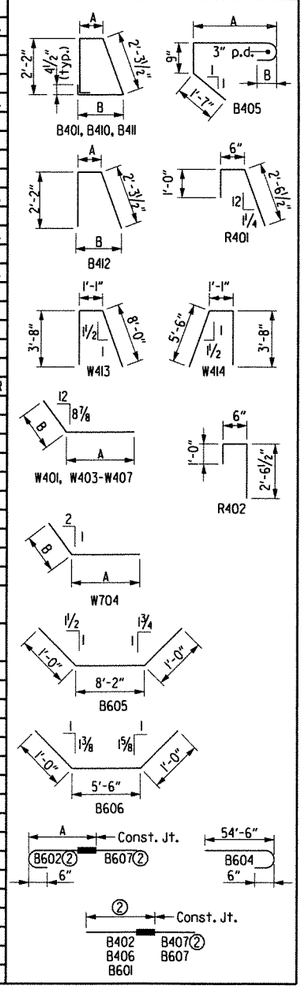
WING RAIL & PARAPET

No Scale

BAR LIST

Mark	No. Req'd.	Length	"A"	"B"	Pin Dia.
B401	73	11'-0"	2'-8"	3'-5¼"	2"
B402	2	21'-10"			STR.
B403	16	27'-7"			STR
B404	4	28'-3"			STR
B405	73	3'-11"	1'-2"	4½"	3"
B406	8	20'-0"			STR.
B407	10	2'-0"			STR
B410	4	11'-2"	2'-9⅝"	3'-6⅝"	2"
B411	4	11'-9"	3'-0⅝"	3'-10⅜"	2"
B412	27	7'-0"	2'-8"	3'-5¼"	2"
B413	6	4'-6"			STR.
B501	146	5'-9"			STR.
B601	6	21'-10"			STR.
B602	6	22'-6"	21'-10"		4½"
B603	6	54'-6"			STR
B604	6	55'-2"	54'-6"		4½"
B605	4	10'-6"			4½"
B606	4	7'-6"			4½"
B607	12	3'-7"			STR
R401	8	3'-11"			2"
R402	8	3'-11"			2"
R403	12	9'-8"			STR.
R601	16	4'-5"			STR.
R602	6	5'-0"			STR.
W401	8	7'-0"	5'-10"	1'-2"	2"
W402	8	8'-2"			STR.
W403 - W407	2 Ea.	Varies 3'-4" to 5'-4"	VARIES 2'-2" TO 4'-2"	1'-2"	2"
W408 - W412	2 Ea.	Varies 4'-5" to 6'-5"			STR.
W413	2	12'-7"			2"
W414	2	10'-1"			2"
W701	12	9'-8"			STR.
W702	4	6'-0"			STR.
W703	4	4'-6"			STR.
W704	4	8'-4"	2'-9"	5'-7"	4½"

Bending Diagrams
(Dimensions are out to out of bars.)



② Denotes: Individual lengths shall be determined by the Contractor based on the type of mechanical coupler used.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13339
LARRY E. MILLER
Larry E. Miller 8-11-12
BRIDGE ENGINEER

SHEET 3 OF 3

DETAILS OF BENT NO. 1

BRIDGE OVER HWY. 22 (ROGERS AVENUE)

(BR. A6877)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: May 02 FILENAME: bBB0407a1b13.dgn

CHECKED BY: EMB DATE: May 02 SCALE: As Shown

DESIGNED BY: JLH DATE: May 02

BRIDGE NO. A6877 DRAWING NO. 48453

$$$$date$$$$

$$$$dgnspec$$$$$

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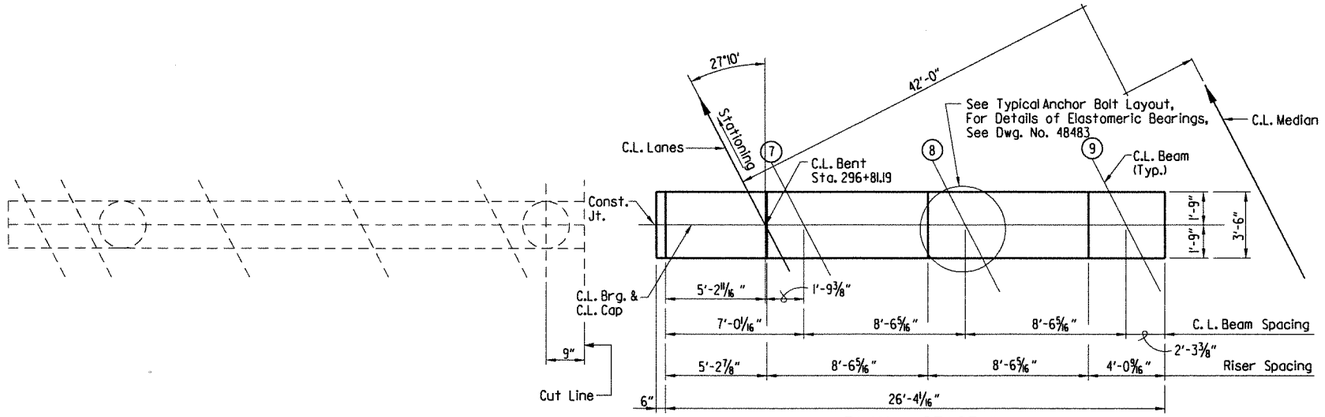
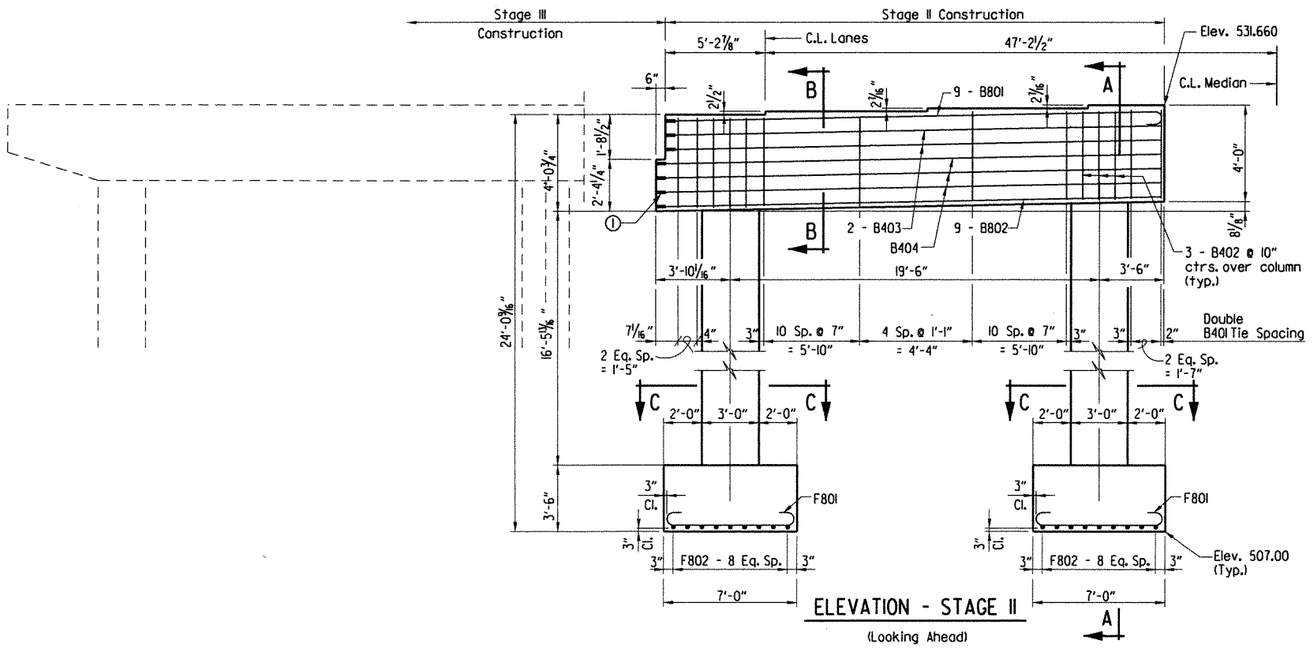
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	159	464
				(1) A6877		BENT DTLS.		48454



PLAN - STAGE II

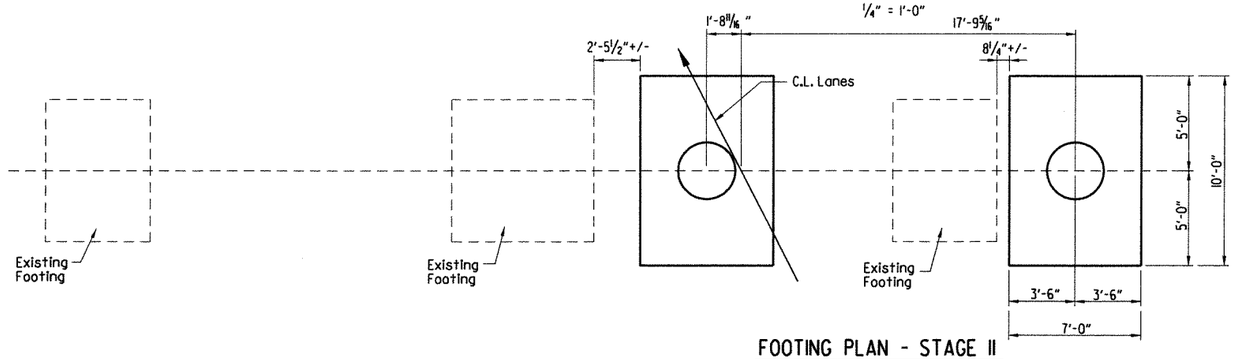
1/4" = 1'-0"



ELEVATION - STAGE II

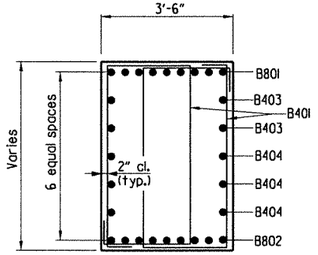
(Looking Ahead)

1/4" = 1'-0"



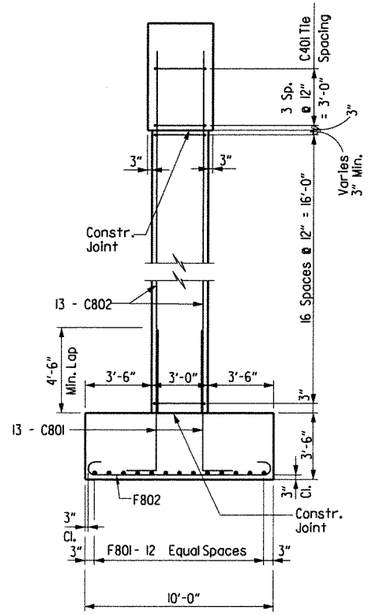
FOOTING PLAN - STAGE II

1/4" = 1'-0"



SECTION B-B

Scale: 1/2" = 1'-0"

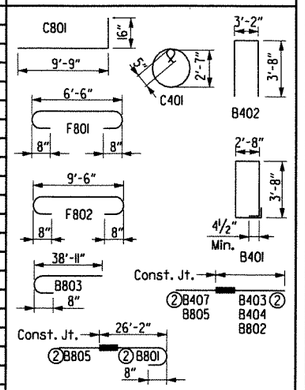


SECTION A-A

Scale: 1/4" = 1'-0"

BAR LIST (PER BENT)

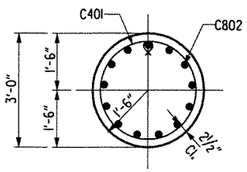
Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
B401	138	13'-0"	2"	
B402	12	10'-4"	2"	
B403	4	26'-2"	STR.	
B404	6	26'-8"	STR.	
B405	4	38'-11"	STR.	
B406	6	38'-5"	STR.	
B407	10	2'-0"	STR.	
B801	9	27'-1"	6"	
B802	9	26'-8"	STR.	
B803	9	39'-10"	6"	
B804	9	38'-5"	STR.	
B805	18	6'-4"	STR.	
C401	82	9'-3"	3"	
C801	52	11'-0"	6"	
C802	26	19'-10"	STR.	
C803	26	18'-8"	STR.	
F801	52	8'-4"	6"	
F802	36	11'-4"	6"	



② Denotes: Individual lengths shall be determined by the Contractor based on the type of mechanical coupler used.

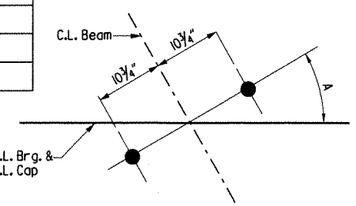
ANCHOR BOLT LAYOUT TABLE

Beam	A
1	21°29'37"
2	22°57'33"
3	24°23'37"
4	25°47'47"
5-9	27°10'



SECTION C-C

Scale: 1/2" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT

No Scale

① Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.

Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall 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.

For additional information, see Layout.

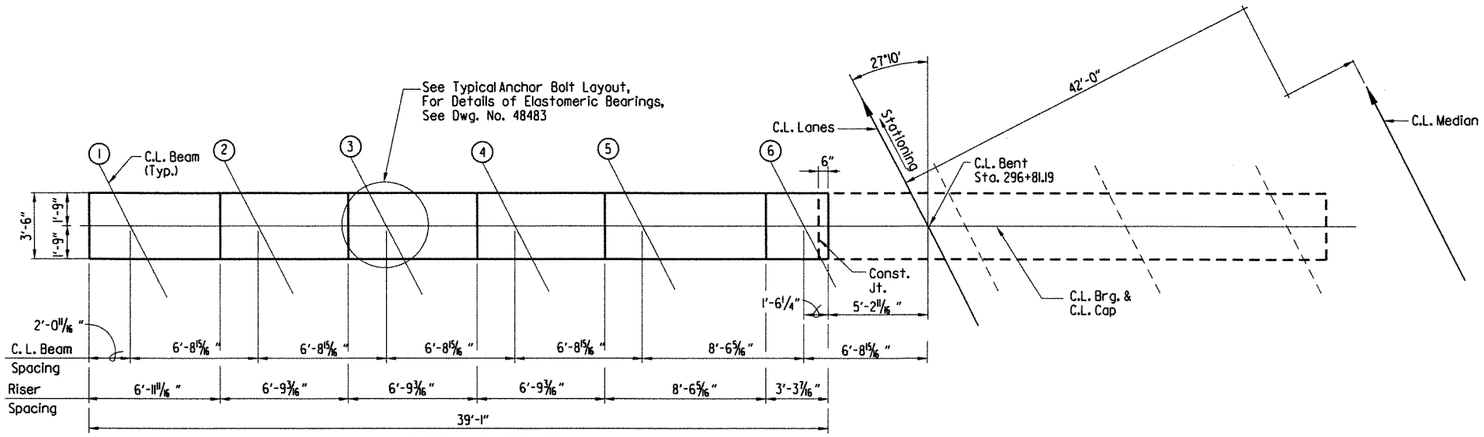
STATE OF ARKANSAS
Larry D. Miller
REGISTERED PROFESSIONAL ENGINEER
No. 11339
LARRY D. MILLER
8-11-12
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF BENT NO. 2
BRIDGE OVER HWY. 22 (ROGERS AVENUE)
(BR. A6877)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB/ETH DATE: May 02
DESIGNED BY: JLH DATE: April 02
FILENAME: bBB0407a1b21.dgn
SCALE: As Shown
BRIDGE NO. A6877 DRAWING NO. 48454

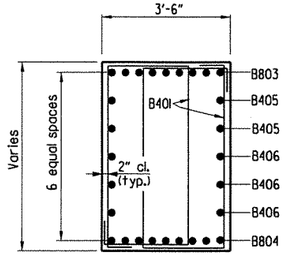
$$$$date$$$$
$$$$dgnspec$$$$$

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.		BB0407	160	464
				(1) A6877		BENT DTLS.		48455



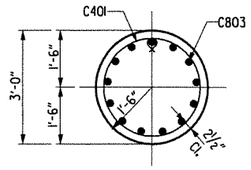
PLAN - STAGE III

¼" = 1'-0"



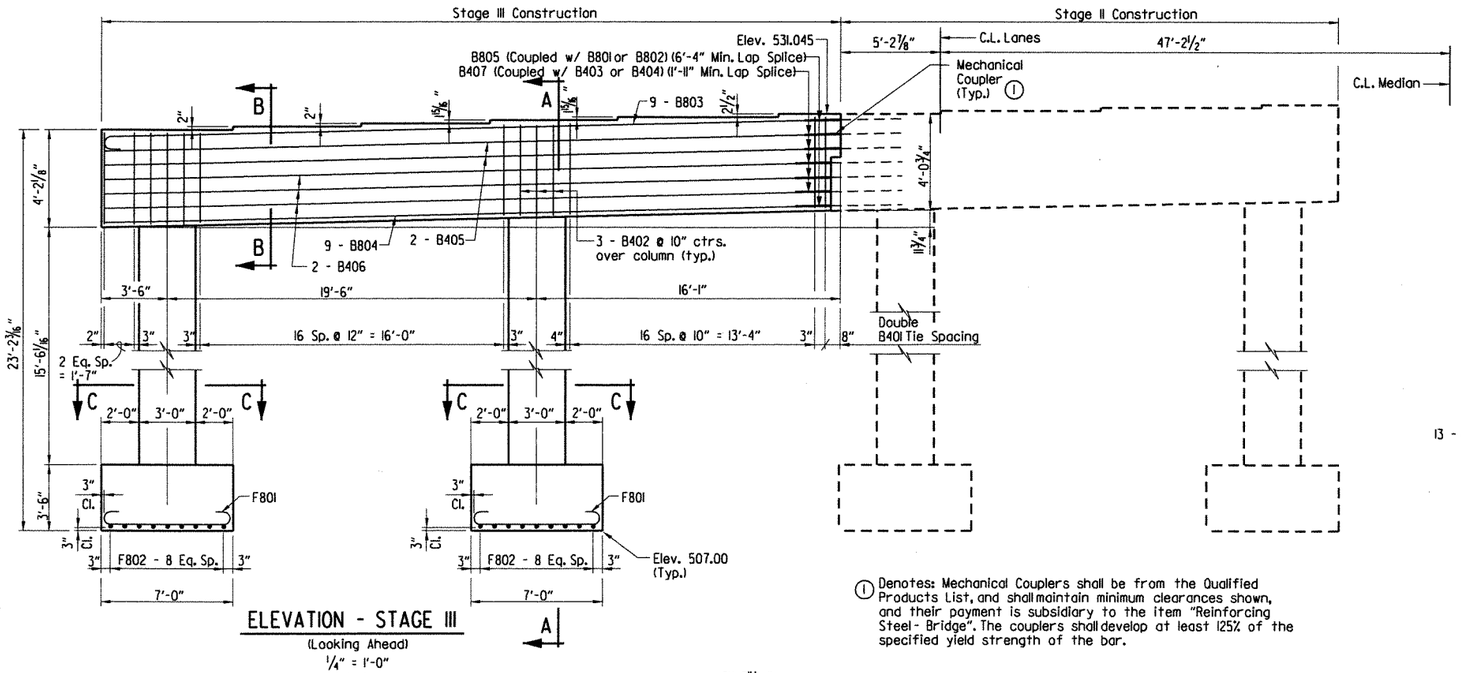
SECTION B-B

Scale: ½" = 1'-0"



SECTION C-C

Scale: ½" = 1'-0"

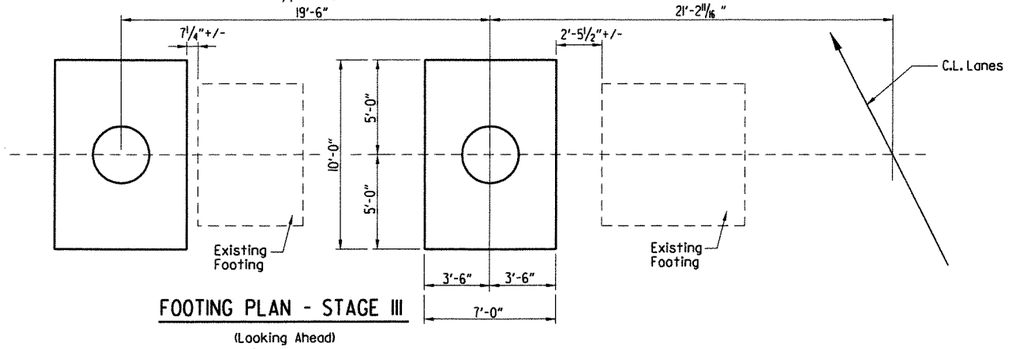


ELEVATION - STAGE III

(Looking Ahead)

¼" = 1'-0"

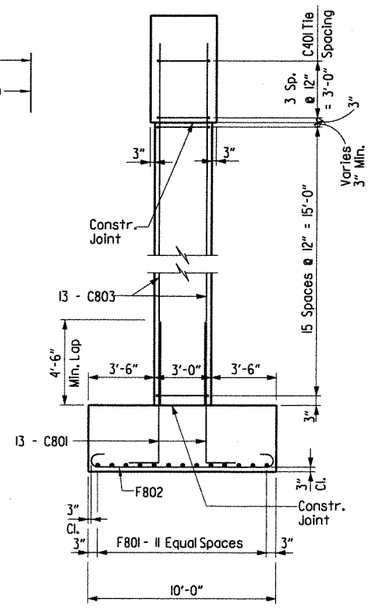
① Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.



FOOTING PLAN - STAGE III

(Looking Ahead)

¼" = 1'-0"

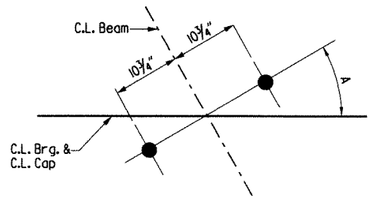


SECTION A-A

Scale: ¼" = 1'-0"

ANCHOR BOLT LAYOUT TABLE

Beam	A
1	21°29'37"
2	22°57'33"
3	24°23'37"
4	25°47'47"
5-9	27°10'



TYPICAL ANCHOR BOLT LAYOUT

No Scale

Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered ¾" 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.

For additional information, see Layout.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13539 LARRY E. MILLER

Larry E. Miller 8-11-12

BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF BENT NO. 2
BRIDGE OVER HWY. 22 (ROGERS AVENUE)
(BR. A6877)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

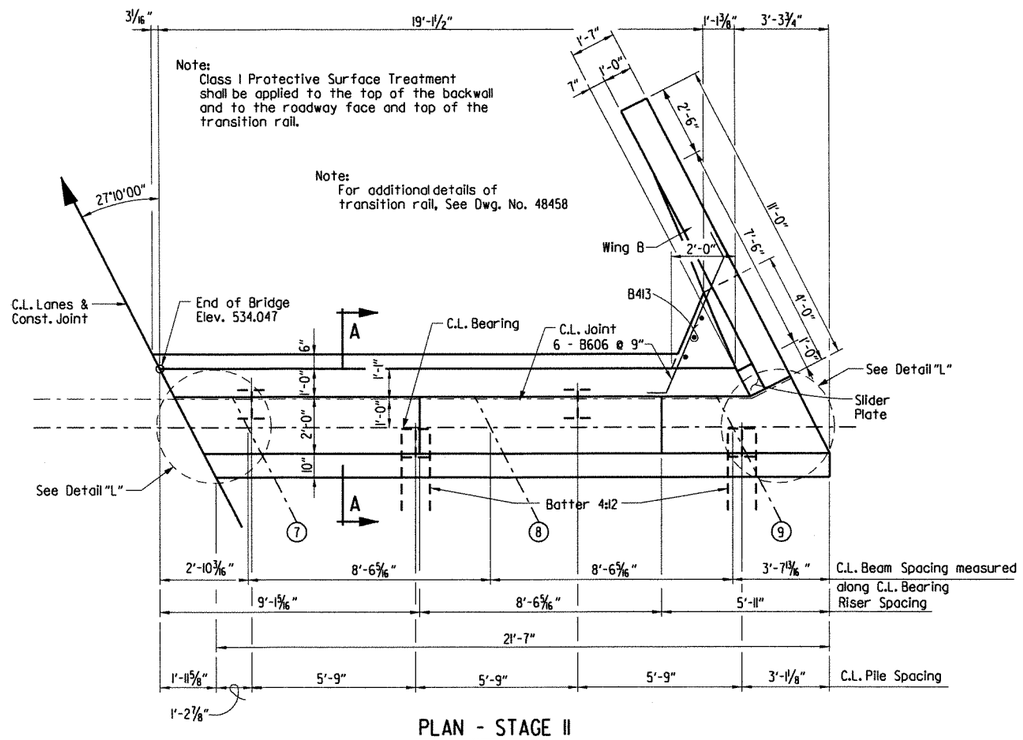
DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407a1b22.dgn
CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown
DESIGNED BY: JLH DATE: April 02

BRIDGE NO. A6877 DRAWING NO. 48455

$$$$dgnspec$$$$$

$$$$date$$$$

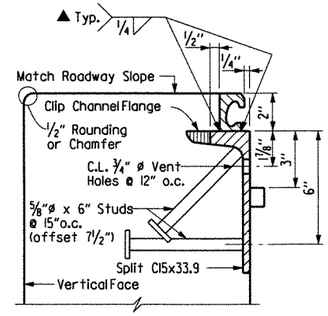
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RDWY DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	1 of 1	464
				(1) A6877		BENT DTLS.		48456



PLAN - STAGE II

3/8" = 1'-0"

▲ Shop Weld - See SP Job BB0407 "Armored Joint With Neoprene Strip Seal"

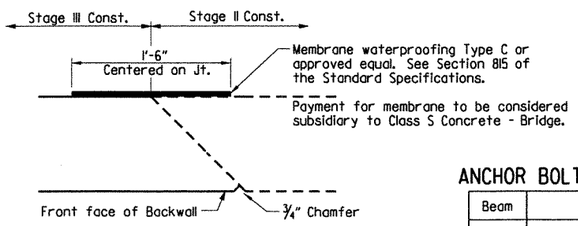


Note: Concrete shall be hand packed under the joint armor in the backwall.

For additional details, See Dwg. No. 48484.

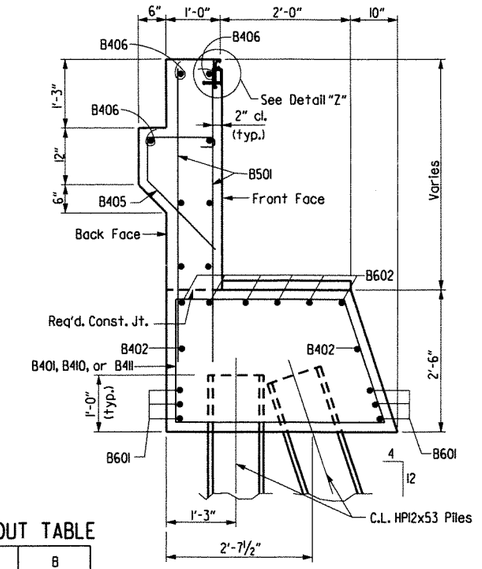
DETAIL Z

3"= 1'-0"



CONSTRUCTION JOINT DETAIL

No Scale

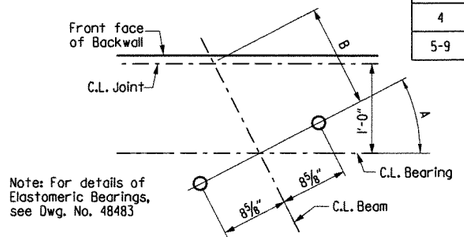


SECTION A-A

3/4" = 1'-0"

ANCHOR BOLT LAYOUT TABLE

Beam	A	B
1	21°29'37"	1'-0 7/8"
2	22°57'33"	1'-1"
3	24°23'37"	1'-1 1/8"
4	25°47'47"	1'-1 1/4"
5-9	27°10'	1'-1 1/2"



Note: For details of Elastomeric Bearings, see Dwg. No. 48483

TYPICAL ANCHOR BOLT LAYOUT

No Scale

GENERAL NOTES:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered 3/4" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Gr. 60.

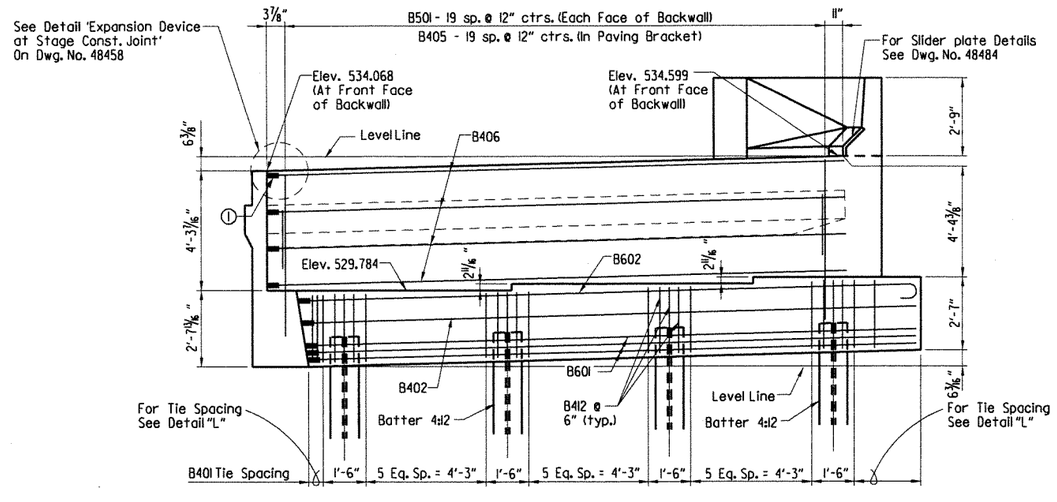
End Bent backwall shall not be poured before girders are in place. Backwall to be placed after concrete span placement.

Structural steel in end bents shall be AASHTO M270, Gr. 50 and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50)".

If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

All exposed steel surfaces are to be cleaned and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

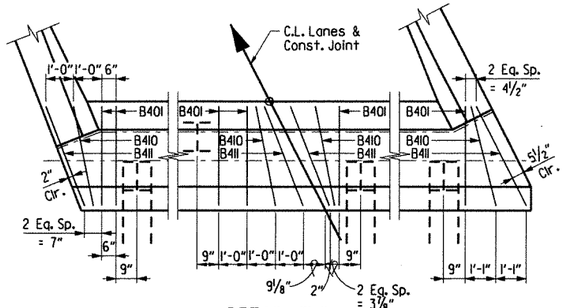


ELEVATION - STAGE II

(Looking Ahead)

3/8" = 1'-0"

(1) Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.



DETAIL "L"

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13539 LARRY E. MILLER

Larry E. Miller 8-11-12

BRIDGE ENGINEER

SHEET 1 OF 3

DETAILS OF BENT NO. 3

BRIDGE OVER HWY. 22 (ROGERS AVENUE)

(BR. A6877)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	TAR	DATE:	April 02	FILENAME:	bBB0407a1b31.dgn
CHECKED BY:	EMB/ETH	DATE:	May 02	SCALE:	As Shown
DESIGNED BY:	JLH	DATE:	April 02		

BRIDGE NO. A6877 DRAWING NO. 48456

$$$$date$$$$

$$$$dgnspec$$$$

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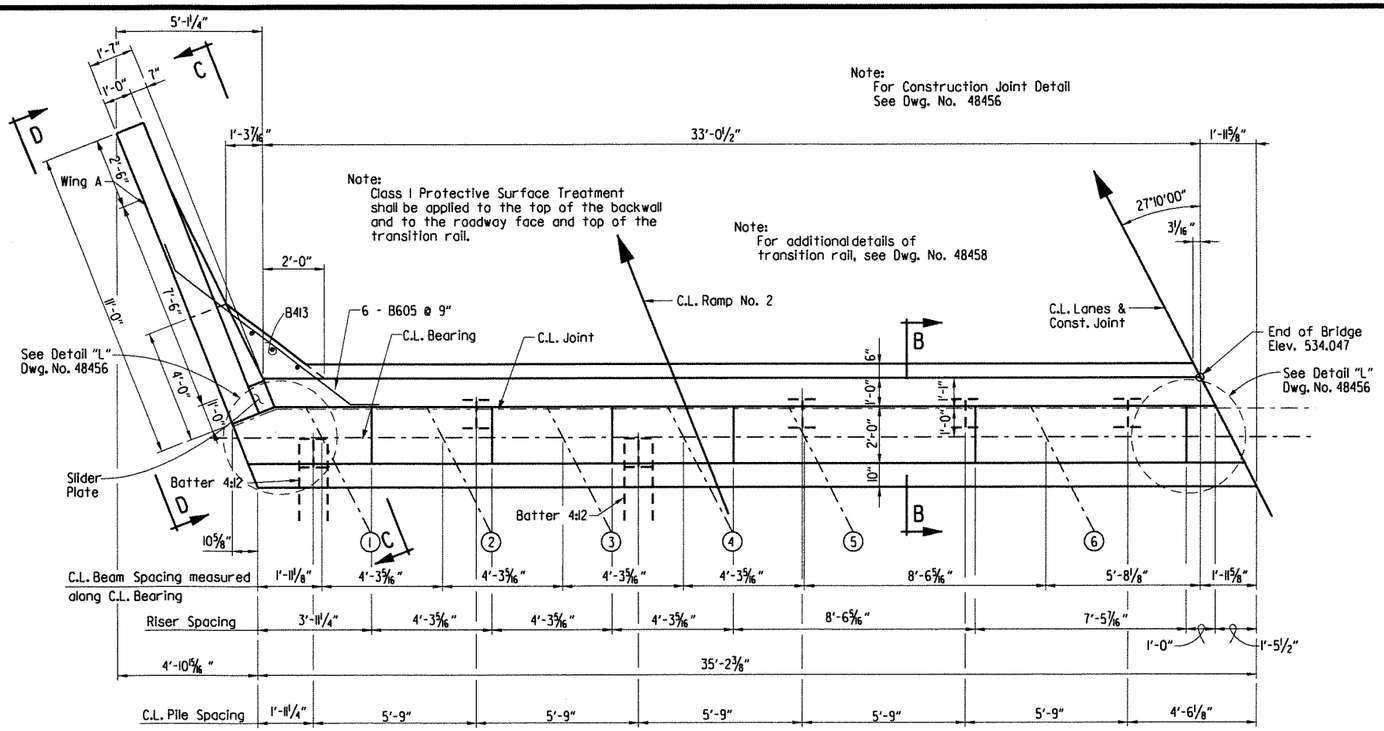
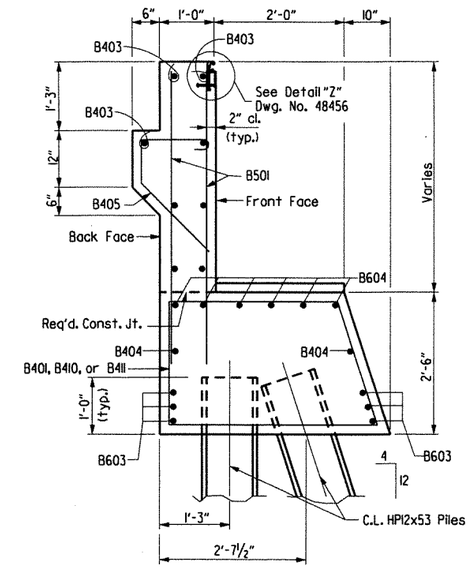
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	162	464
				(1) A6877		BENT DTLS.		48457



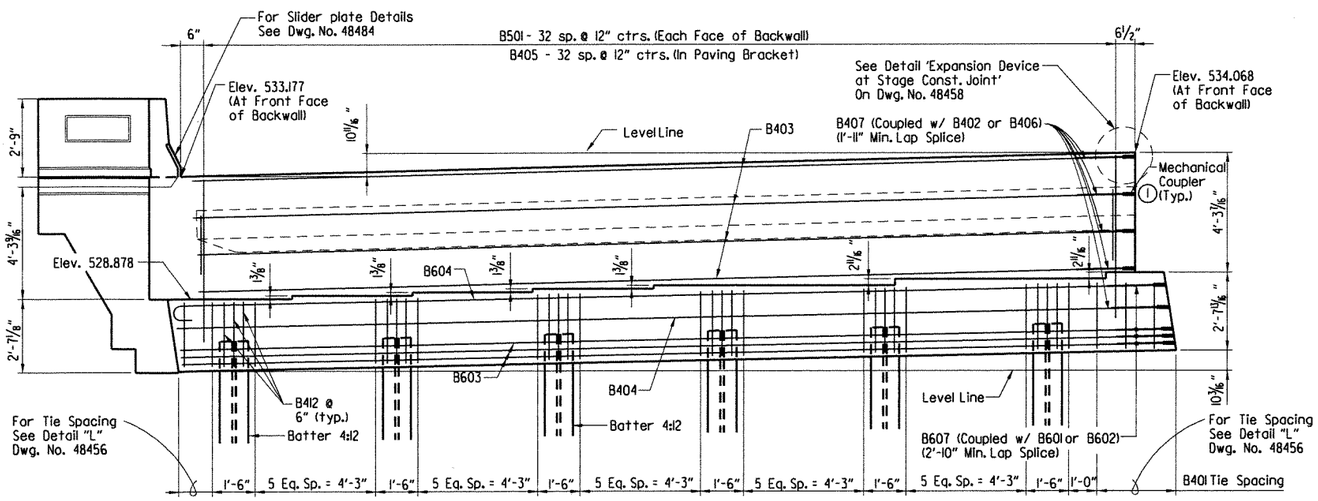
PLAN - STAGE III

3/8" = 1'-0"



SECTION B-B

3/4" = 1'-0"



ELEVATION - STAGE III

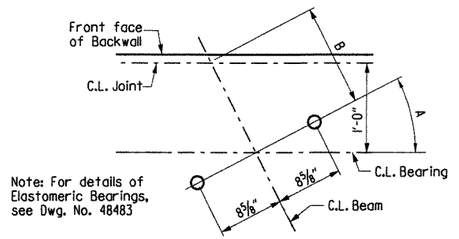
(Looking Ahead)

3/8" = 1'-0"

(1) Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.

ANCHOR BOLT LAYOUT TABLE

Beam	A	B
1	21°29'37"	1'-0 7/8"
2	22°57'33"	1'-1"
3	24°23'37"	1'-1 1/8"
4	25°47'47"	1'-1 1/4"
5-9	27°10'	1'-1 1/2"



Note: For details of Elastomeric Bearings, see Dwg. No. 48483

TYPICAL ANCHOR BOLT LAYOUT

No Scale

SHEET 2 OF 3

DETAILS OF BENT NO. 3

BRIDGE OVER HWY. 22 (ROGERS AVENUE)

(BR. A6877)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER

8-11-12

BRIDGE ENGINEER

DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407al_b32.dgn

CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown

DESIGNED BY: JLH DATE: April 02

BRIDGE NO. A6877 DRAWING NO. 48457

$$$$dgnspec$$$$$

$$$$date$$$$

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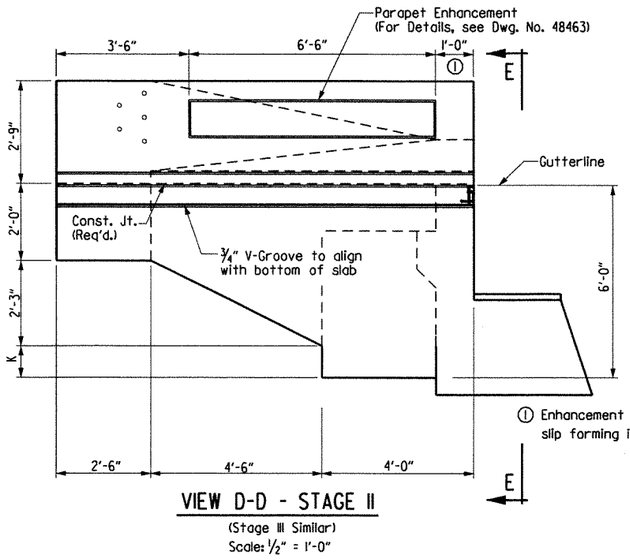
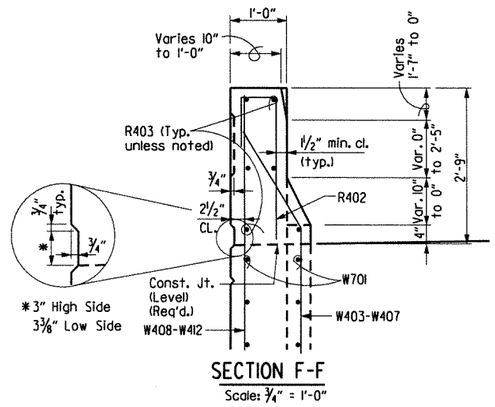
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	163	464
				① A6877		BENT DTLS.		48458



VIEW D-D - STAGE II

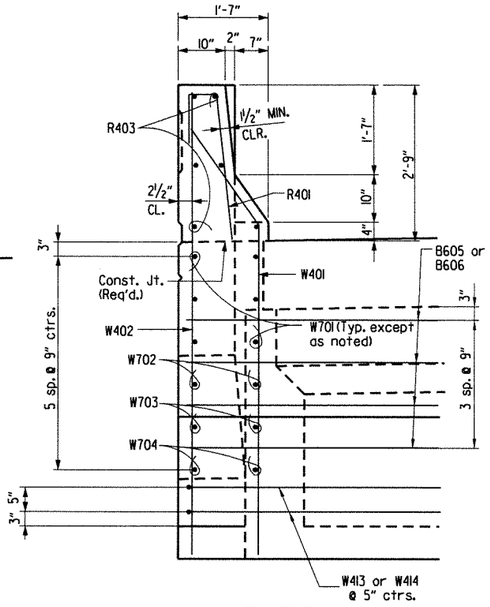
(Stage III Similar)
Scale: ½" = 1'-0"

① Enhancement shall be continuous if slip forming is used on bridge parapet.



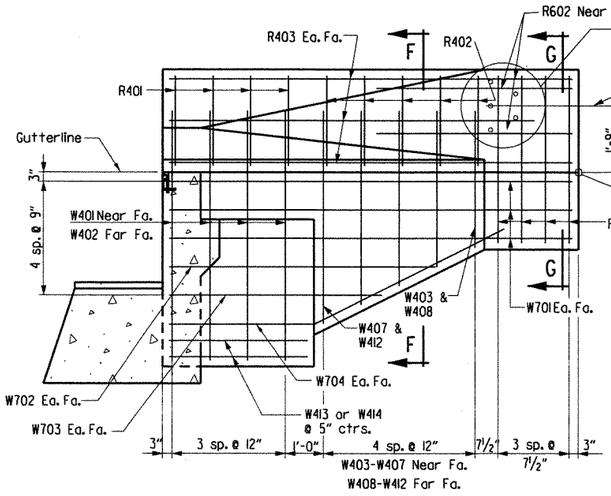
SECTION F-F

Scale: ¾" = 1'-0"



VIEW E-E

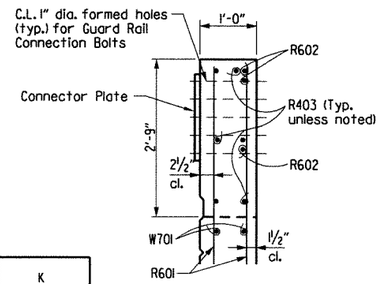
Scale: ¾" = 1'-0"



SECTION C-C - STAGE II

(Stage III Similar)
Scale: ½" = 1'-0"

Bent No.	Wing	Elev. "R"	K
3	A	532.968	1'-6½"
3	B	534.519	1'-8⅛"



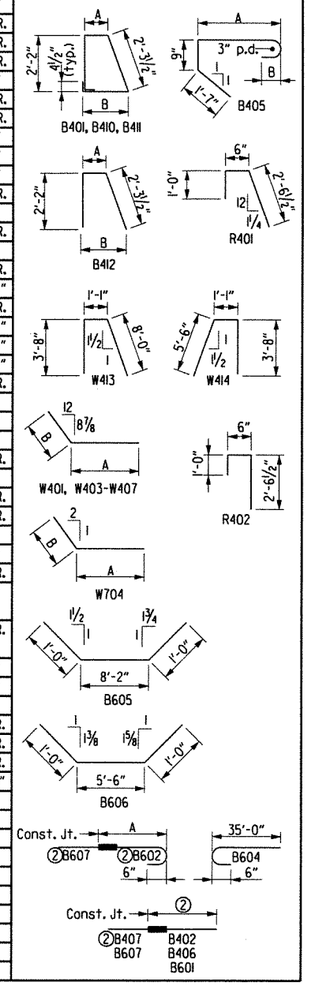
SECTION G-G

Scale: ¾" = 1'-0"

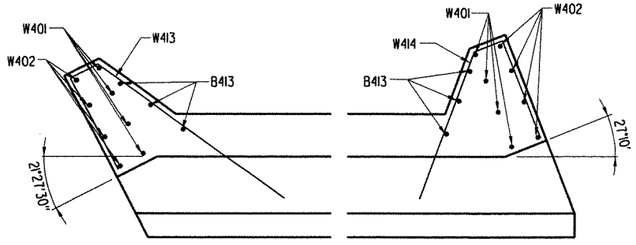
BAR LIST

Mark	No. Req'd.	Length	"A"	"B"	Pin Dia.
B401	55	11'-0"	2'-8"	3'-5¼"	2"
B402	2	21'-10"			STR.
B403	8	32'-10"			STR.
B404	2	35'-0"			STR.
B405	53	3'-11"	1'-2"	4½"	3"
B406	8	20'-0"			STR.
B407	10	2'-0"			STR.
B410	4	11'-2"	2'-9⅝"	3'-6⅝"	2"
B411	4	11'-9"	3'-0⅝"	3'-10⅜"	2"
B412	27	7'-0"	2'-8"	3'-5¼"	2"
B413	6	4'-6"			STR.
B501	106	5'-10"			STR.
B601	6	21'-10"			STR.
B602	6	22'-6"	21'-10"		4½"
B603	6	35'-0"			STR.
B604	6	35'-8"	35'-0"		4½"
B605	4	10'-6"			4½"
B606	4	7'-6"			4½"
B607	12	3'-7"			STR.
R401	8	3'-11"			2"
R402	8	3'-11"			2"
R403	12	9'-8"			STR.
R601	16	4'-5"			STR.
R602	6	5'-0"			STR.
W401	8	7'-0"	5'-10"	1'-2"	2"
W402	8	8'-2"			STR.
W403 - W407	2 Ea.	Varies 3'-4" to 5'-4"	VARIES 2'-2" TO 4'-2"	1'-2"	2"
W408 - W412	2 Ea.	Varies 4'-5" to 6'-5"			STR.
W413	2	12'-7"			2"
W414	2	10'-1"			2"
W701	12	9'-8"			STR.
W702	4	6'-0"			STR.
W703	4	4'-6"			STR.
W704	4	8'-4"	2'-9"	5'-7"	4½"

Bending Diagrams (Dimensions are out to out of bars.)



② Denotes: Individual lengths shall be determined by the Contractor based on the type of mechanical coupler used.

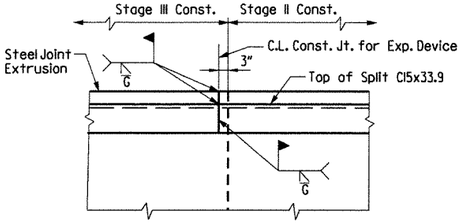


SECTION X-X

Wing A

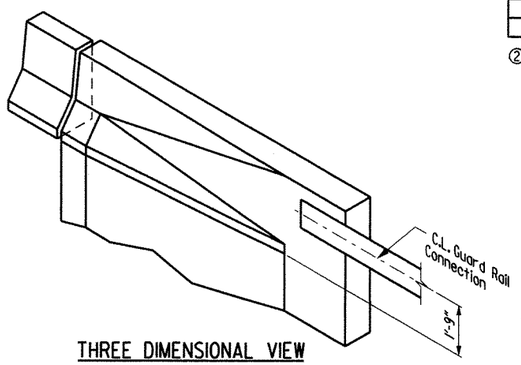
SECTION X-X

Wing B



EXPANSION DEVICE AT STAGE CONST. JOINT

No Scale
(Looking Ahead)



THREE DIMENSIONAL VIEW WING RAIL & PARAPET

No Scale

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10339 LARRY E. MILLER
8-11-12
BRIDGE ENGINEER

SHEET 3 OF 3
DETAILS OF BENT NO. 3
BRIDGE OVER HWY. 22 (ROGERS AVENUE)
(BR. A6877)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: May 02
CHECKED BY: EMB DATE: May 02
DESIGNED BY: JLH DATE: May 02
FILENAME: bBB0407a1_b33.dgn
SCALE: As Shown
BRIDGE NO. A6877
DRAWING NO. 48458

$$$$date$$$$
$$$$dgnspec$$$$$*

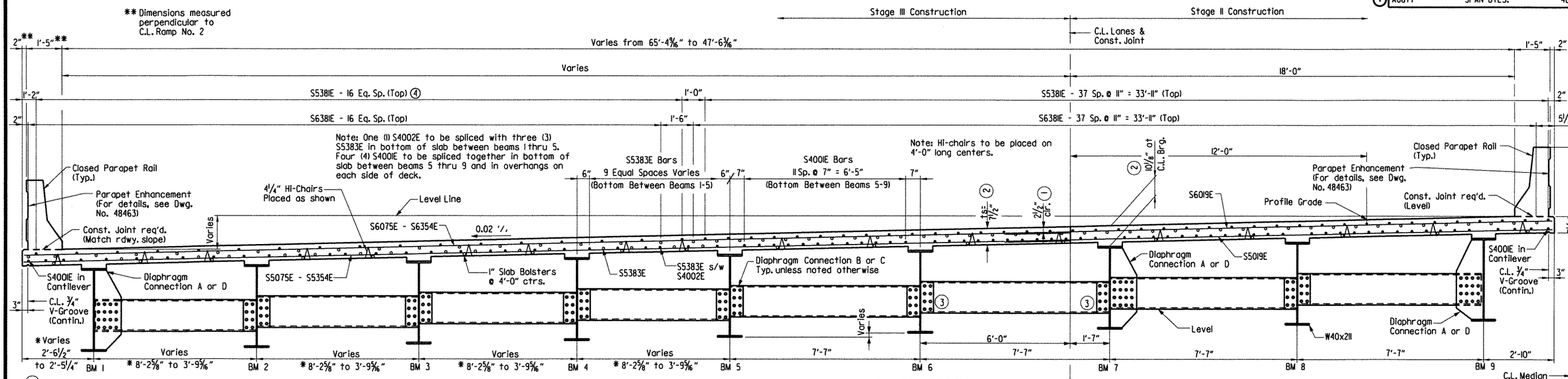
...\b040468a1_b33.dgn 8/10/2012 3:49:07 PM

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.		BB0407	164	464
				(1) A6877		SPAN DTLS.		48459

Note: Class I Protective Surface Treatment shall be applied to the roadway surface and the roadway face and top of concrete parapet rail.

** Dimensions measured perpendicular to C.L. Ramp No. 2

④ Alternate with S4003E at begin bridge. See Top Longitudinal Reinforcing Steel Plan for more info.



TYPICAL SECTION

Perpendicular to C.L. Lanes (Looking Ahead)
1/2" = 1'-0"

(1) TOLERANCE:
Minus = 1/4"
Plus = Equal to amount of slab thickening used to meet slab thickness tolerance - see "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".

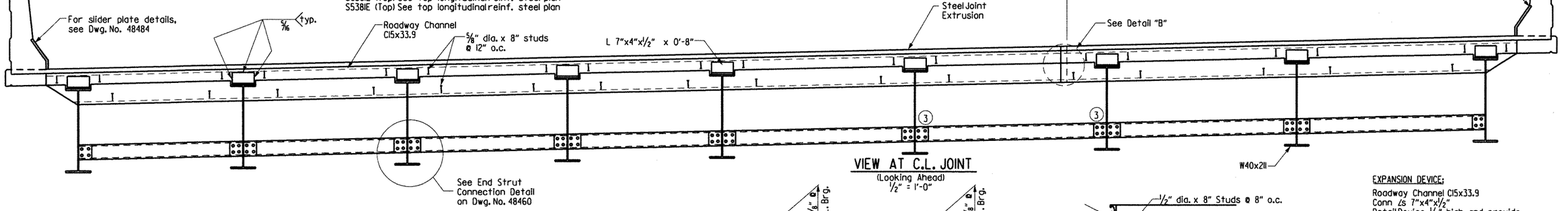
(2) See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".

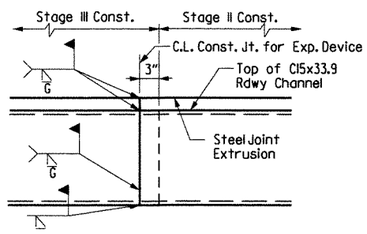
Transverse:
S5001E thru S5380E @ 7" centers (Bottom)
S6001E thru S6380E @ 7" centers (Top)
Longitudinal:
S4001E (Bottom) See typ. section for spacing
S4002E (Bottom) See typ. section for spacing
S4003E (Top) See top longitudinal reinf. steel plan
S5383E (Bottom) See bottom longitudinal reinf. steel plan
S6381E (Top) See top longitudinal reinf. steel plan
S5381E (Top) See top longitudinal reinf. steel plan

Note: See Dwg. No. 48460 for diaphragm connection details.

* Dimensions measured perpendicular to C.L. Lanes at C.L. Joint

(3) At this connection, tighten bolts after concrete deck is poured in Stage III.



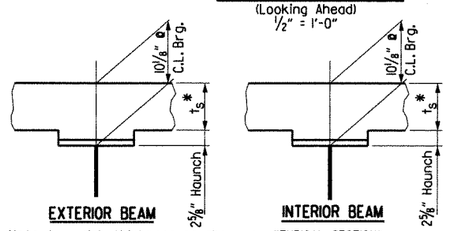


DETAIL "B" (EXPANSION DEVICE AT STAGE CONST. JOINT)

No Scale
(Looking Ahead)

VIEW AT C.L. JOINT

(Looking Ahead)
1/2" = 1'-0"



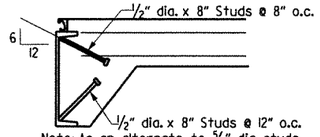
Note: ts = slab thickness as shown on "TYPICAL SECTION".
* Tolerance when removable deck forming is used is +1/2", -1/4". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED

No Scale

Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance; Minimum - occurs when the top flange contacts the bottom reinforcing steel; Maximum - top flange thickness plus 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.



Note: As an alternate to 5/8" dia. studs, 1/2" dia. x 8" studs spaced as shown may be used. Use weight of 5/8" dia. stud as basis of measurement of structural steel in anchors.

DETAIL OF ALTERNATE ANCHORS

No Scale

EXPANSION DEVICE:
Roadway Channel C15x33.9
Conn ℄s 7"x4"x1/2"
Detail Device 1/8" high and provide 1/4" shims using two 1/16" and one 1/8" plates

Note: For additional details of Neoprene Strip Seal, see Dwg. No. 48484

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11539 LARRY W. MILLER
8-11-12
BRIDGE ENGINEER

SHEET 1 OF 8
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. A6877)

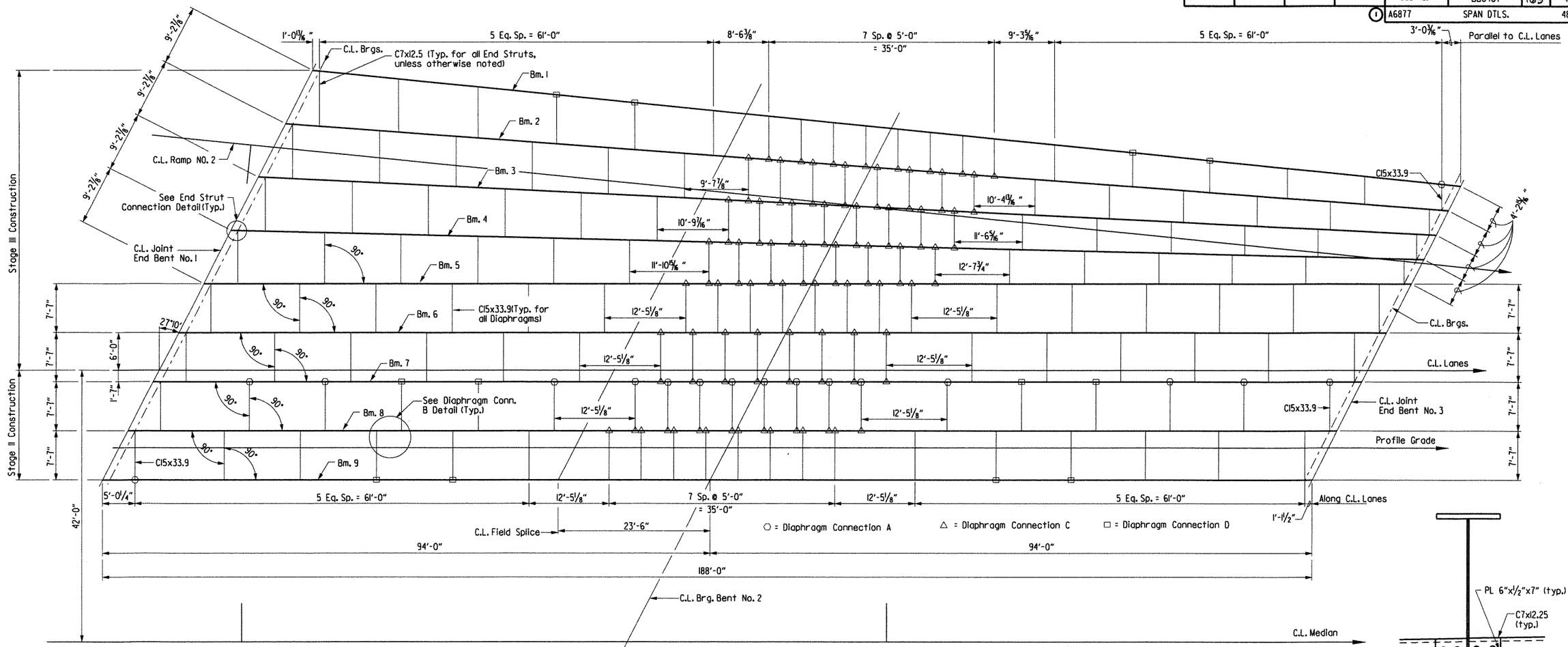
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407a1 sll.dgn
CHECKED BY: EMB DATE: April 02 SCALE: As Shown
DESIGNED BY: JLH DATE: Feb 02

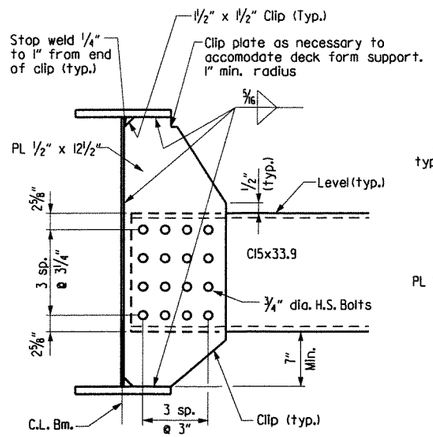
BRIDGE NO. A6877 DRAWING NO. 48459

$$$$date$$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	165	464
				(1) A6877		SPAN DTLS.		48460

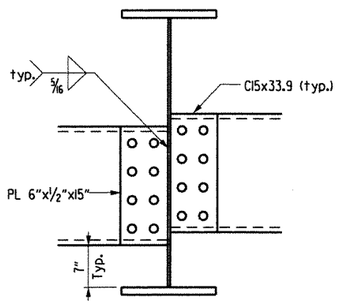


FRAMING PLAN
No Scale



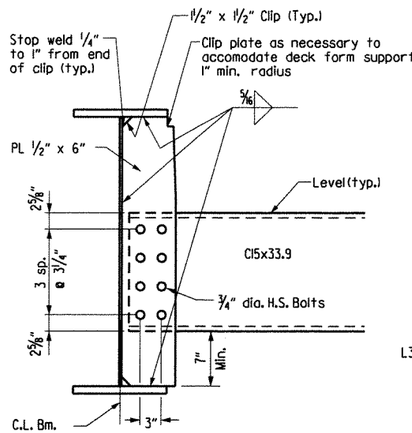
DIAPHRAGM CONNECTION A
No Scale

Typical for exterior beams. Use elsewhere as noted.

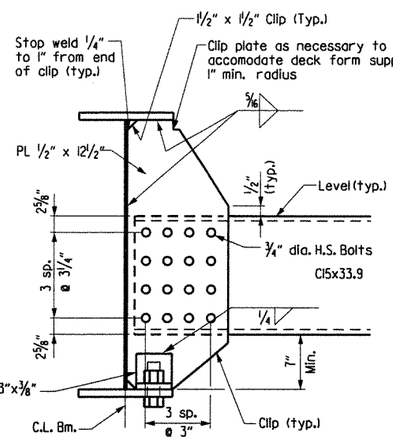


DIAPHRAGM CONNECTION B
No Scale

Note: Bolts in Diaphragm Connections shall be properly installed and tightened in accordance with subsection 807.7.1.



DIAPHRAGM CONNECTION C
No Scale



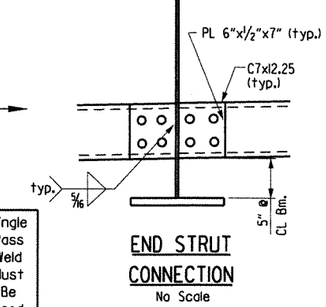
DIAPHRAGM CONNECTION D
No Scale

Note: Bolt heads to be on bottom of beam flange.

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.



END STRUT CONNECTION
No Scale

SHEET 2 OF 8
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. A6877)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

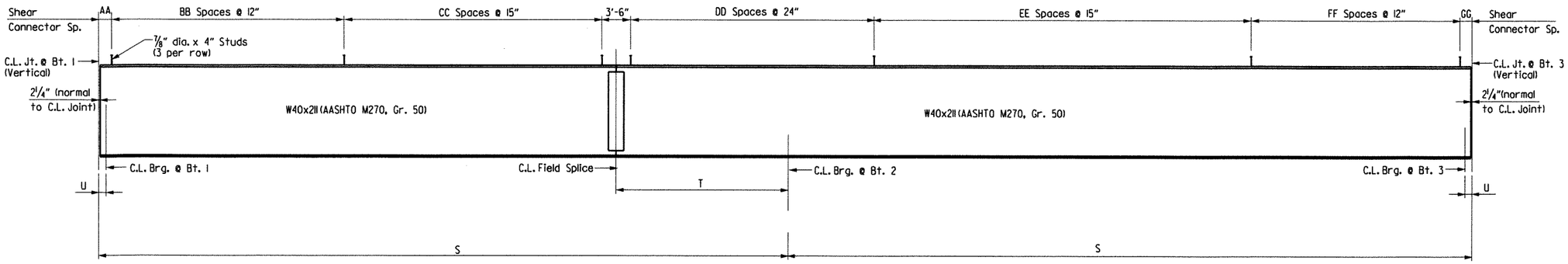
STATE OF ARKANSAS
Larry D. Miller
REGISTERED PROFESSIONAL ENGINEER
No. 13339
LARRY D. MILLER
8-11-12
BRIDGE ENGINEER

DRAWN BY:	TAR	DATE:	March 02	FILENAME:	bBB0407al sl2.dgn
CHECKED BY:	EMB	DATE:	April 02	SCALE:	As Shown
DESIGNED BY:	JLH	DATE:	Feb 02		

BRIDGE NO. A6877 DRAWING NO. 48460

$$$$date$$$$
$$$$dgnspec$$$$$

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.		BB0407	166	464
				(1) A6877		SPAN DTLS.		48461



Note: For details of Elastomeric Fixed and Expansion Bearings, see Dwg. No. 48483

TYPICAL BEAM ELEVATION

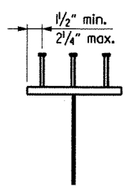
No Scale

TABLE OF STUD SPACING

Beam No.	AA (in.)	BB	CC	DD	EE	FF	GG (in.)
1	1' - 5"	13	41	20	45	13	1' - 4 1/4"
2	1' - 4 7/16"	15	40	21	43	15	1' - 0 7/16"
3	1' - 4 7/16"	17	39	21	42	17	1' - 6 7/16"
4	1' - 2"	18	39	22	41	18	1' - 1 7/8"
5	1' - 0"	19	39	22	43	17	1' - 0"
6	1' - 0"	19	39	22	43	17	1' - 0"
7	1' - 0"	19	39	22	43	17	1' - 0"
8	1' - 0"	19	39	22	43	17	1' - 0"
9	1' - 0"	19	39	22	43	17	1' - 0"

TABLE OF DIMENSION VARIABLES

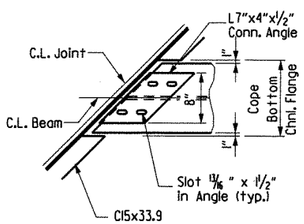
Beam No.	S	T	U
1	89'-10 5/8"	22'-5 5/8"	1'-0 5/16"
2	90'-9 5/8"	22'-8 1/2"	1'-1 1/16"
3	91'- 10"	22'-11 1/2"	1'-1 3/16"
4	92'-10 11/16"	23'-2 11/16"	1'-1 5/16"
5	94'-0"	23'-6"	1'-1 1/2"
6	94'-0"	23'-6"	1'-1 1/2"
7	94'-0"	23'-6"	1'-1 1/2"
8	94'-0"	23'-6"	1'-1 1/2"
9	94'-0"	23'-6"	1'-1 1/2"



Stud Shear Connectors shown shall be 7/8" dia. 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" dia. studs may be used in place of the 7/8" dia. stud shown, at the ratio of 1.361-3/4" dia. studs in place of one 7/8" dia. stud. 7/8" dia. studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

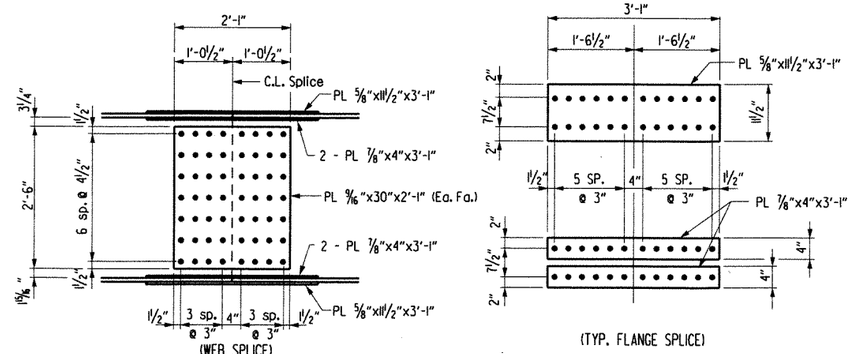
SHEAR CONNECTOR DETAIL

No Scale



ROADWAY CHANNEL CONNECTION DETAIL

No Scale



TYPICAL FIELD SPLICE DETAILS

No Scale

Note: All field splice bolts shall be 7/8" dia. H.S. bolts.
All field splice plates shall be AASHTO M270, Gr. 50 steel.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11539 LARRY E. MILLER

8-11-12

BRIDGE ENGINEER

SHEET 3 OF 8
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. A6877)
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB/ETH/JGM DATE: April 02
DESIGNED BY: JLH/EMB/GWS DATE: April 02
FILENAME: bBB0407al sl3.dgn
SCALE: As Shown

BRIDGE NO. A6877 DRAWING NO. 48461

$$$$dgnspec$$$$$

$$$$date$$$$

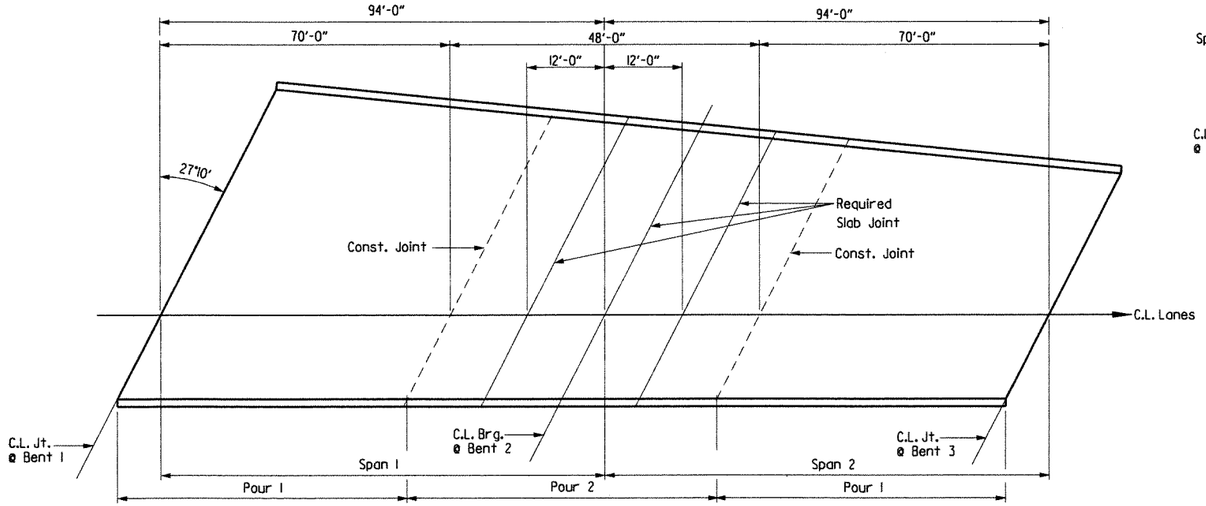
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	167	464
				(1) A6877		SPAN DTLS.		48462

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Camber for Dead Load Deflection plus vertical curve +/- 1/4" tolerance.
Deflections shown are off a chord from C.L. Brg. to C.L. Brg.
Vertical curve corrections not included. Negative sign (-) indicates upward deflection.

Tabulated values require an adjustment for cross-slope to non-parallel beams to achieve proper camber.

SPAN NO.	POINT OF DEFLECTION	Structural Steel								Structural Steel (+) Slab								Structural Steel (+) Slab (+) Para. Rail								POINT OF DEFLECTION
		Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5	Bm. 6	Bms. 7, 8	Bm. 9	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5	Bm. 6	Bms. 7, 8	Bm. 9	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5	Bm. 6	Bms. 7, 8	Bm. 9	
1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
	1.10	0.11	0.12	0.12	0.13	0.14	0.14	0.14	0.13	0.46	0.60	0.62	0.65	0.65	0.56	0.56	0.53	0.54	0.70	0.73	0.72	0.72	0.62	0.71	0.69	1.10
	1.20	0.20	0.22	0.23	0.24	0.25	0.25	0.25	0.24	0.86	1.11	1.15	1.19	1.19	1.04	1.04	0.98	1.00	1.30	1.35	1.32	1.31	1.16	1.32	1.28	1.20
	1.30	0.26	0.29	0.30	0.31	0.33	0.33	0.33	0.32	1.13	1.47	1.52	1.58	1.57	1.36	1.36	1.29	1.31	1.72	1.78	1.75	1.63	1.51	1.73	1.68	1.30
	1.40	0.29	0.32	0.33	0.35	0.36	0.36	0.36	0.35	1.25	1.64	1.70	1.76	1.74	1.50	1.50	1.42	1.45	1.92	1.99	1.94	1.92	1.67	1.91	1.85	1.40
	1.50	0.28	0.31	0.32	0.32	0.35	0.35	0.35	0.34	1.22	1.61	1.66	1.72	1.70	1.45	1.45	1.37	1.42	1.88	1.94	1.90	1.88	1.61	1.84	1.78	1.50
	1.60	0.24	0.26	0.27	0.28	0.30	0.30	0.30	0.28	1.05	1.39	1.44	1.49	1.45	1.22	1.22	1.15	1.22	1.60	1.68	1.65	1.60	1.36	1.55	1.50	1.60
	1.70	0.17	0.18	0.19	0.20	0.21	0.21	0.21	0.20	0.77	1.04	1.08	1.12	1.07	0.88	0.88	0.83	0.89	1.21	1.26	1.74	1.18	0.98	1.12	1.08	1.70
	1.80	0.09	0.10	0.11	0.11	0.12	0.12	0.12	0.11	0.45	0.63	0.65	0.67	0.62	0.48	0.48	0.45	0.52	0.73	0.76	0.74	0.69	0.53	0.61	0.59	1.80
	1.90	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.03	0.16	0.24	0.25	0.26	0.21	0.15	0.15	0.14	0.03	0.28	0.29	0.29	0.23	0.17	0.19	0.18	1.90
	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
2	2.10	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.03	0.05	0.00	0.00	0.01	0.08	0.15	0.15	0.14	0.06	0.01	0.01	0.01	0.09	0.17	0.19	0.18	2.10
	2.20	0.09	0.10	0.11	0.11	0.12	0.12	0.12	0.11	0.23	0.18	0.18	0.19	0.36	0.48	0.48	0.45	0.27	0.22	0.22	0.20	0.39	0.53	0.61	0.59	2.20
	2.30	0.17	0.18	0.19	0.20	0.21	0.21	0.21	0.20	0.47	0.42	0.43	0.45	0.72	0.88	0.88	0.83	0.55	0.51	0.52	0.48	0.79	0.98	1.12	1.08	2.30
	2.40	0.24	0.26	0.27	0.28	0.30	0.30	0.30	0.28	0.69	0.65	0.67	0.70	1.03	1.22	1.22	1.15	0.81	0.78	0.81	0.75	1.13	1.36	1.55	1.50	2.40
	2.50	0.28	0.31	0.32	0.33	0.35	0.35	0.35	0.34	0.83	0.81	0.83	0387	1.25	1.45	1.45	1.37	0.98	0.97	1.00	0.94	1.37	1.61	1.84	1.78	2.50
	2.60	0.29	0.32	0.33	0.35	0.36	0.36	0.36	0.35	0.88	0.87	0.89	0.93	1.31	1.50	1.50	1.42	1.03	1.04	1.07	1.01	1.43	1.67	1.91	1.85	2.60
	2.70	0.26	0.29	0.30	0.31	0.33	0.33	0.33	0.32	0.80	0.80	0.82	0.86	1.20	1.36	1.36	1.29	0.94	0.96	0.95	0.93	1.31	1.51	1.73	1.68	2.70
	2.80	0.20	0.22	0.23	0.24	0.25	0.25	0.25	0.24	0.61	0.62	0.64	0.66	0.92	1.04	1.04	0.98	0.72	0.74	0.71	0.71	1.01	1.16	1.32	1.28	2.80
	2.90	0.11	0.12	0.12	0.13	0.14	0.14	0.14	0.13	0.33	0.34	0.35	0.36	0.50	0.56	0.56	0.53	0.39	0.41	0.35	0.39	0.55	0.62	0.71	0.69	2.90
	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00

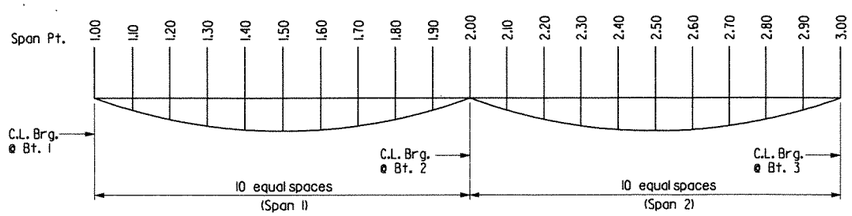


POURING SEQUENCE

No Scale

Note: Pours with the same number may be poured simutaneously or seperately. Pour (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. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. Concrete in bridge superstructure shall be consolidated for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.



DEAD LOAD DEFLECTION DIAGRAM

No Scale

SHEET 4 OF 8
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. A6877)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

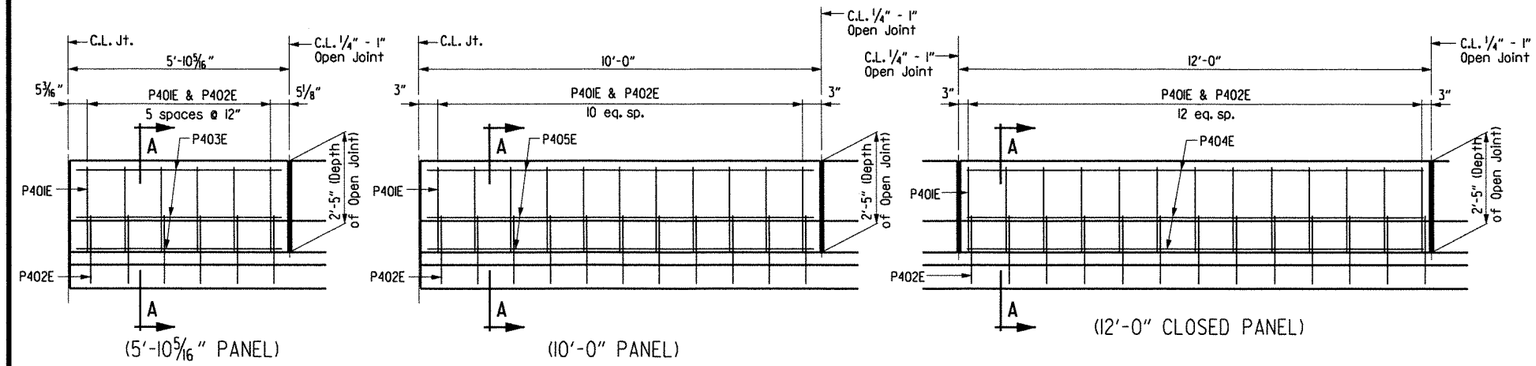
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 14339 LARRY E. MILLER
8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: May 02 FILENAME: bBB0407al sl4.dgn
CHECKED BY: JLH DATE: May 02 SCALE: N.T.S.
DESIGNED BY: EMB DATE: May 02

BRIDGE NO. A6877 DRAWING NO. 48462

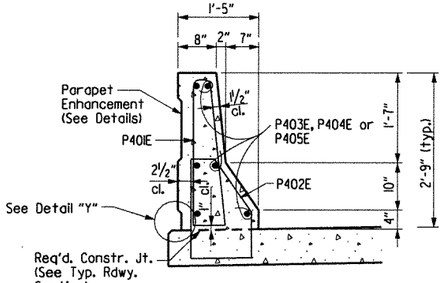
$$$$date$$$$
$$$$dgnspec$$$$$

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.		BB0407	1688	464
				(1) A6877		SPAN DTLS.		48463



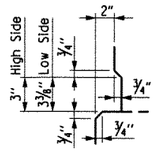
DETAILS OF CONCRETE PARAPET RAIL

No Scale



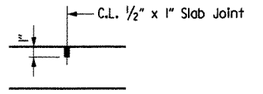
SECTION A-A

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



DETAIL "Y"

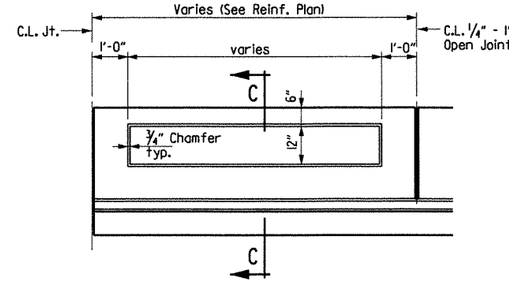
No Scale



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. 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. Slab joints shall align with parapet open joints.

SLAB JOINT DETAIL

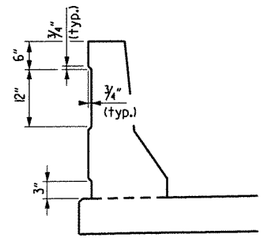
No Scale



DETAILS OF PARAPET ENHANCEMENT

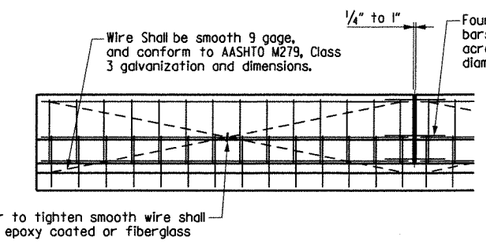
No Scale

Note: Enhancement required for concrete parapet rail only.

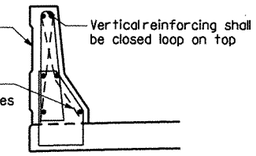


SECTION C-C

No Scale



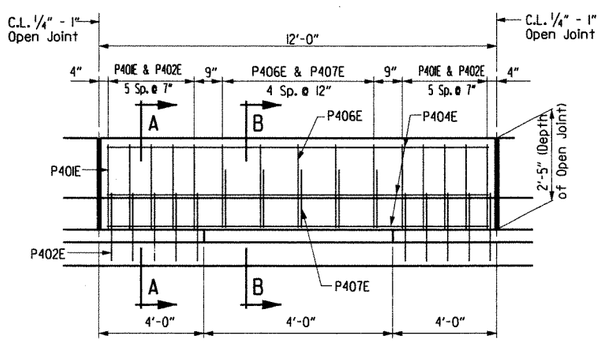
All panels shall be braced as shown to prevent racking. All open joints shall be sawed as soon as practical to a min. width of 1/4". To control cracking before sawing, all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.



The extruded parapet shall conform to the horizontal and vertical lines shown in the plans or as directed by the Engineer and shall present a smooth uniform appearance and texture. Exposed surfaces may be given a light brush finish or a Class 3 Textured Coating Finish in place of Class 2, Rubbed Finish.

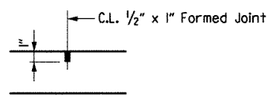
DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET

No Scale



DETAILS OF OPEN CONCRETE PARAPET RAIL

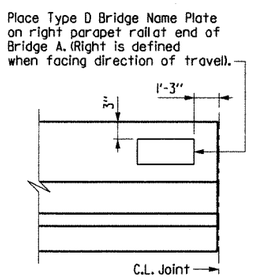
No Scale



Use 1/2" x 1" 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. This joint shall be formed. Seal must be gray or other color similar to concrete.

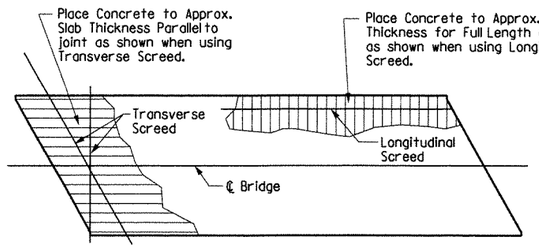
LONGITUDINAL CONSTRUCTION JOINT DETAIL

No Scale



NAME PLATE DETAIL

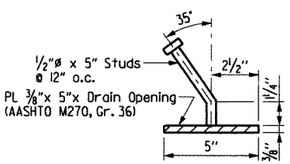
No Scale



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



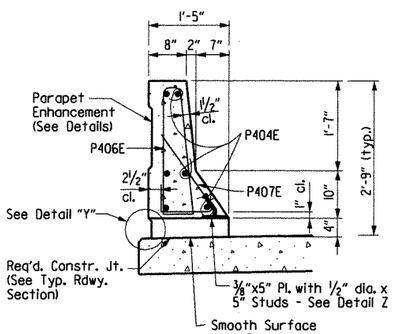
DETAIL Z

No Scale

Note:

Parapet Studs shall be 5" long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be measured and paid for as Structural Steel in Beam Spans (M270, Gr. 50W)

The surfaces of the 3/8" Plates which will not be in contact with concrete shall be painted in accordance with Section 638, or as approved by the Engineer. Only one coat is required and shall be applied in the fabricator's shop. Painting will not be paid for directly, but will be considered subsidiary to Structural Steel in Beam Spans (M270, Gr. 50)



SECTION B-B

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

SHEET 5 OF 8

DETAILS OF

188'-0" CONT. COMP. W-BEAM UNIT

(BR. A6877)

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY E. MILLER

8-11-12

BRIDGE ENGINEER

DRAWN BY: TAR DATE: April 02

CHECKED BY: EMB DATE: May 02

DESIGNED BY: BCG/JLH DATE: Feb 02

FILENAME: bBB0407al sl5.dgn

SCALE: As Shown

BRIDGE NO. A6877 DRAWING NO. 48463

$$$$date$$$

$$$$dgnspec$$$$

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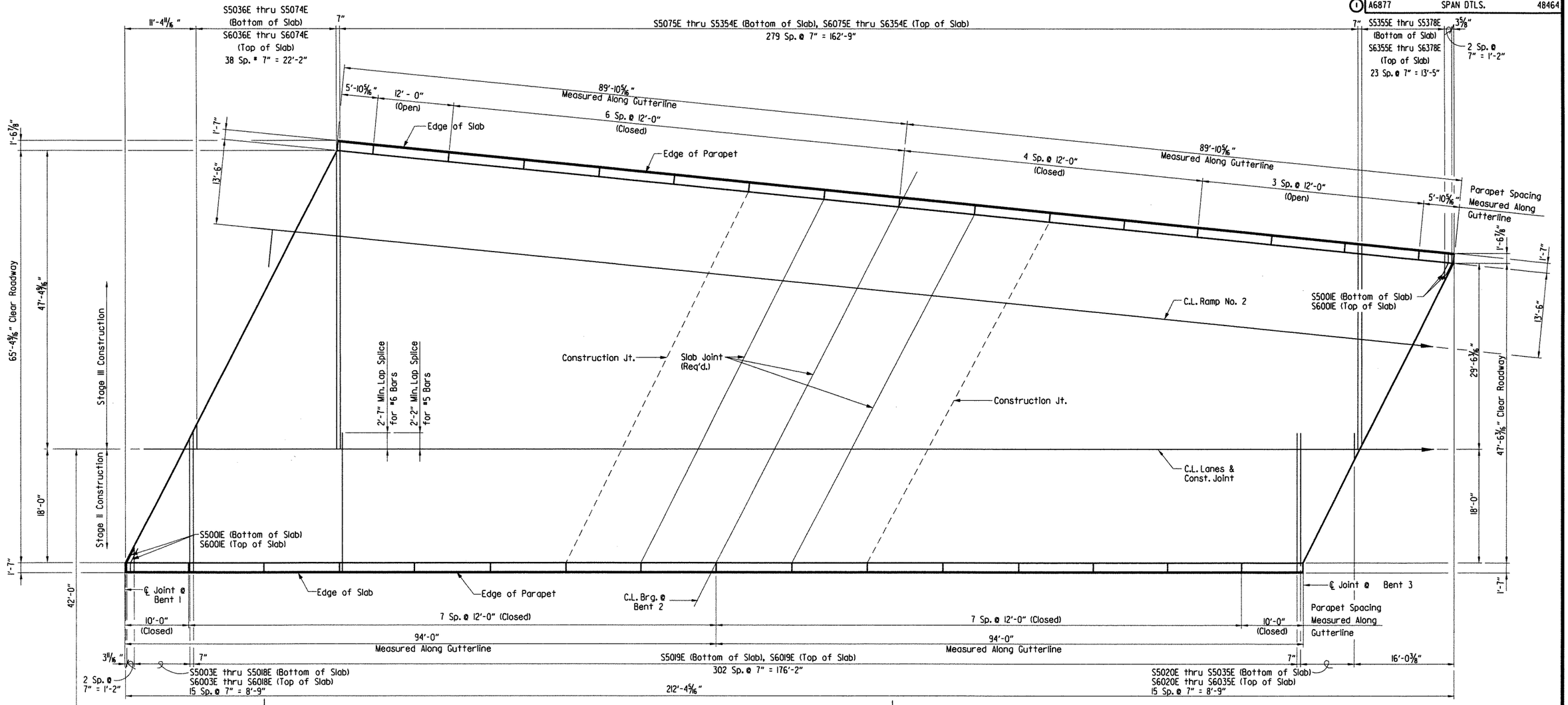
				JOB NO.		BB0407	169	464
				① A6877		SPAN DTLS.		48464



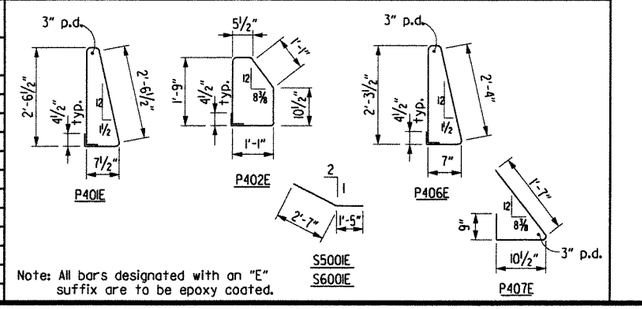
BAR LIST

Mark	No. Req'd.	Length	Pin Dia.
S4001E	280	39'-2"	STR.
S4002E	48	30'-0"	STR.
S4003E	34	33'-10"	STR.
S5001E	4	4'-0"	3 3/4"
S5002E	Not Used		
S5003E-S5018E	1Ea.	Varies 3'-11" to 21'-0"	STR.
S5019E	303	21'-7"	STR.
S5020E-S5035E	1Ea.	Varies 20'-8" to 3'-7"	STR.
S5036E-S5074E	1Ea.	Varies 3'-10" to 47'-0"	STR.
S5075E-S5354E	1Ea.	Varies 48'-9" to 32'-5"	STR.
S5355E-S5378E	1Ea.	Varies 31'-7" to 4'-1"	STR.

Mark	No. Req'd.	Length	Pin Dia.
S5379E	Not Used		
S5380E	Not Used		
S5381E	220	48'-6"	STR.
S5382E	Not Used		
S5383E	120	45'-3"	STR.
S6001E	4	4'-0"	4 1/2"
S6002E	Not Used		
S6003E-S6018E	1Ea.	Varies 3'-11" to 21'-0"	STR.
S6019E	303	22'-0"	STR.
S6020E-S6035E	1Ea.	Varies 21'-1" to 4'-0"	STR.
S6036E-S6074E	1Ea.	Varies 3'-10" to 47'-0"	STR.

Mark	No. Req'd.	Length	Pin Dia.
S6075E-S6354E	1Ea.,	Varies 48'-9" to 32'-5"	STR.
S6355E-S6378E	1Ea.	Varies 31'-7" to 4'-1"	STR.
S6379E	Not Used		
S6380E	Not Used		
S6381E	55	60'-0"	STR.
P401E	394	6'-4"	2"
P402E	394	5'-7"	2"
P403E	12	5'-6"	STR.
P404E	168	11'-8"	STR.
P405E	12	9'-8"	STR.
P406E	20	5'-10"	2"
P407E	20	3'-2"	2"

Bending Diagrams (Dimensions are out to out of bars.)



Note: All bars designated with an "E" suffix are to be epoxy coated.

TRANSVERSE REINFORCING STEEL PLAN

No Scale

C.L. Median

Note:
Slab joints shall align with parapet joints at gutterline.

SHEET 6 OF 8
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. A6877)
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 11339 — LARRY H. MILLER
Larry H. Miller 8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: April 02 FILENAME: bb40468a1 s16.dgn
CHECKED BY: EMB DATE: April 02 SCALE: As Shown
DESIGNED BY: JLH DATE: April 02
BRIDGE NO. A6877 DRAWING NO. 48464

$$$$date$$$$
$$$$dgnspec$$$$$
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				JOB NO.		BB0407	170	464
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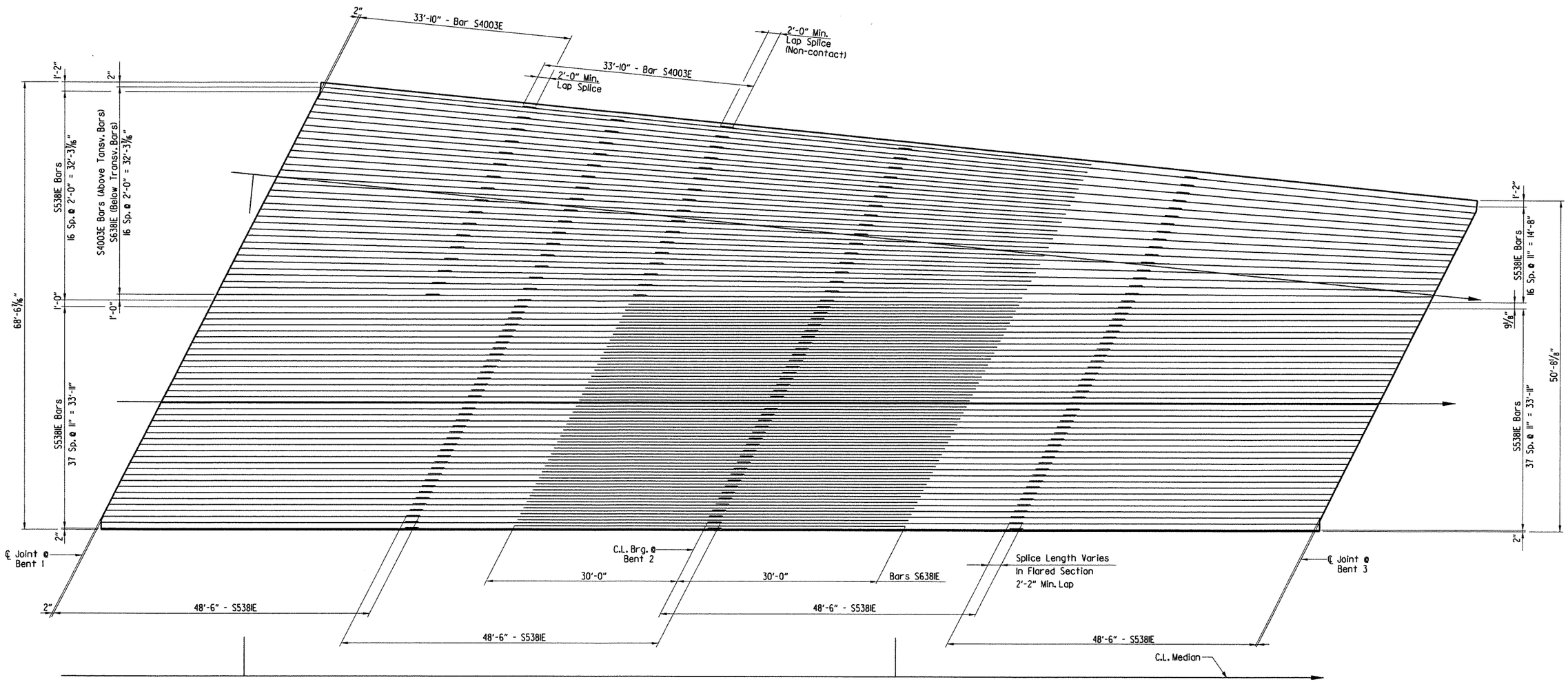

TOP LONGITUDINAL REINFORCING STEEL PLAN

No Scale

SHEET 7 OF 8
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. A6877)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10339 LARRY W. MILLER
Larry W. Miller 8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB DATE: May 02
DESIGNED BY: JLH DATE: April 02
FILENAME: bBB0407dl sl7.dgn
SCALE: As Shown

BRIDGE NO. A6877 DRAWING NO. 48465

$$$$dgnspec$$$$$

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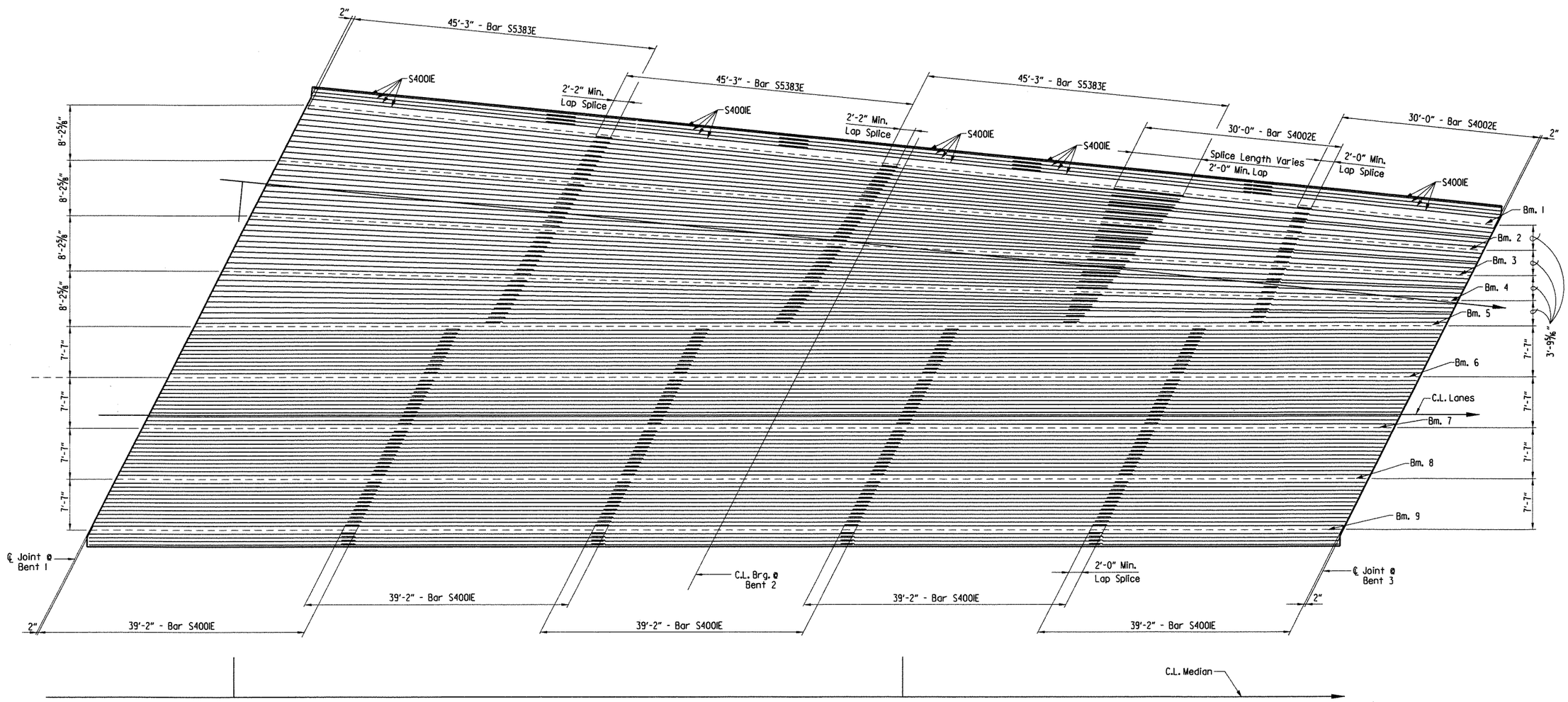
				JOB NO.		BB0407	17	464
				(1) A6877		SPAN DTLS.		48466



BOTTOM LONGITUDINAL REINFORCING STEEL PLAN

No Scale

Note:
See typical section for spacing

SHEET 8 OF 8
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. A6877)
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13339 LARRY W. MILLER
Larry W. Miller 8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB DATE: May 02
DESIGNED BY: BCG DATE: April 02
FILENAME: bBB0407al s18.dgn
SCALE: As Shown
BRIDGE NO. A6877 DRAWING NO. 48466

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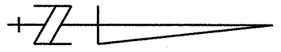
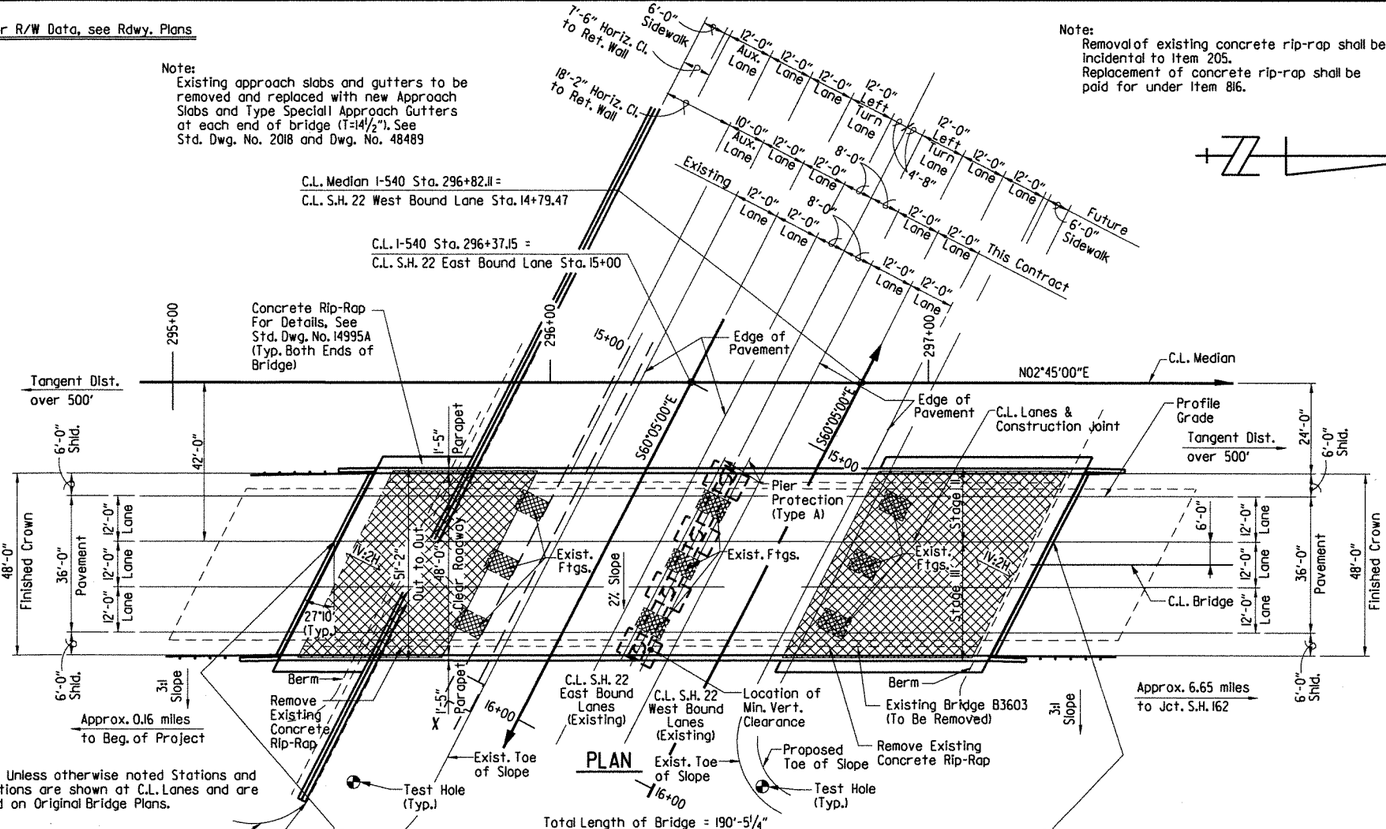
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	172	464
				(1) B6877		LAYOUT		48467

For R/W Data, see Rdwy. Plans

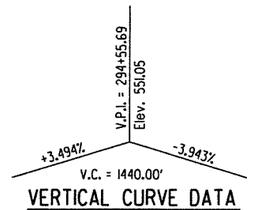
Note:
Existing approach slabs and gutters to be removed and replaced with new Approach Slabs and Type Special1 Approach Gutters at each end of bridge (T=14½"). See Std. Dwg. No. 2018 and Dwg. No. 48489

Note:
Removal of existing concrete rip-rap shall be incidental to Item 205.
Replacement of concrete rip-rap shall be paid for under Item 816.





Note: Unless otherwise noted Stations and Elevations are shown at C.L. Lanes and are based on Original Bridge Plans.



VERTICAL CURVE DATA
(Along Profile Grade)

GENERAL NOTES

BENCH MARK: Elevations and stations are assumed to be the same as shown on the original plans. The original layout shows the elevation at the top of the deck and centerline of existing bridge to be at 534.681 at Sta. 295+48.88 (Beg. of Br. B3603).

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 on the plans, section and subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (1996 edition), with current interim specifications.

LIVE LOAD: HS20 + Military Loading METHOD OF DESIGN: Load Factor
SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:
Class S(AE) Concrete (superstructure) f'c = 4,000 psi
Class S Concrete (substructure and retaining wall) f'c = 3,500 psi
Reinforcing Steel (AASHTO M31 or M53, Gr. 60) fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 50) Fy = 50,000 psi
Structural Steel (AASHTO M270, Gr. 36) Fy = 36,000 psi

BORING LOGS: Boring Logs may be obtained from the Programs and Contracts Division.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

CLASS I PROTECTIVE SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

STEEL PILING: Piling in End Bents 1 and 3 shall be HP12x53 and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 70 tons per pile and into the material designated as sandstone on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles in end bents to be driven after embankment to bottom of cap is in place. On all piles the contractor shall use approved steel H-Pile driving points.

FOOTINGS: Footings shall be set a minimum of 1'-6" into hard, sandstone but shall not be at a higher elevation of the existing footing and shall have a minimum cover above top of footings of 2'. Foundations for footings shall be prepared in accordance with Section 801.04 of the Standard Specifications. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

DETAIL DRAWINGS:	DRAWING NO.
End Bents	48469-48471, 48474-48476
Intermediate Bents	48472, 48473
188'-0" Cont. Comp. W-Beam Unit	48477-48482
Steel Piling	14995A
Approach Slab	2018
Type Special1 Approach Gutter	48489

REMOVAL AND SALVAGE: The existing bridge, shall be removed in accordance with Section 205. Excavate existing slopes as required for proposed slopes. Approximately 900 c.y. of unclassified excavation is required. See Roadway Plans. All material from existing bridge shall become the property of the contractor.

EXISTING BRIDGE: Existing Bridge No. B3603 is 45'-6" wide and 178'-5½" long and consists of 2 composite 40'-0" and 2 composite 48'-0" simple spans supported by substructures consisting of 3 three column bents and 2 pile end bents. Plans for existing bridge will be made available to the Contractor upon request to Programs and Contracts Division. Existing Dwg. Nos. 11949, 11955 thru 11957, 11962 thru 11964.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

PAINTING: All structural steel except galvanized members and some surfaces in contact with concrete shall be painted as specified in subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

TEMPORARY SHORING: Temporary shoring may be required. Coordinate with Roadway Plans and see Special Provision Job No. BB0407 "Shoring".

Boring Legend

A - Moist, Stiff, Brown Sandy Clay
B - Medium Hard, Brown Poorly-Cemented Sandstone
C - Hard, Brown Fractured Sandstone with Clay Seams
D - Hard, Dark Gray Shale Interbedded with Hard, Gray Sandstone
E - Hard, Gray Sandstone Interbedded with Hard, Dark Gray Shale
F - Hard, Dark Gray Shale
G - Moist, Very Hard, Brown Sandy Clay with Sandstone Fragments
H - Hard, Brown and Gray Fractured Sandstone with some Clay Seams
J - Moist, Stiff, Brown Sandy Clay with Sandstone Fragments
K - Hard, Brown and Gray Sandstone with some Clay Seams
L - Hard, Gray Sandstone with some Dark Gray Shale Seams
M - Hard, Dark Gray Sandstone Interbedded with Hard, Dark Gray Shale
N - Moist, Very Stiff to Hard, Brown Sandy, Silty Clay with Sandstone Fragments
P - Hard, Gray Fractured Sandstone with Clay Seams

SAMPLE DATA

Sta. 295+48 - 139' Right of Centerline Median I-540
4.5 - 7.5, SCR% = 47, RQD% = 0
7.5 - 12.5, SRC% = 92, RQD% = 16
12.5 - 17.8, SRC% = 99, RQD% = 40

Sta. 296+56 - 154' Right of Centerline Median I-540
3.5 - 6.5, SRC% = 96, RQD% = 0
6.5 - 11.5, SRC% = 99, RQD% = 22
11.5 - 16.7, SRC% = 99, RQD% = 8

NOTE: The contractor shall check measurements of the existing bridge. Any adjustments necessary to fit the new work to the existing bridge location shall be submitted for the Engineer's approval.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11539 LARRY H. MILLER
Larry H. Miller 8-11-12
BRIDGE ENGINEER

LAYOUT OF BRIDGE OVER HWY. 22 (ROGERS AVENUE) (BR. B6877) S.H. 22 - I-40 (F) CRAWFORD & SEBASTIAN COUNTIES ROUTE I-540 SEC. 1 ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

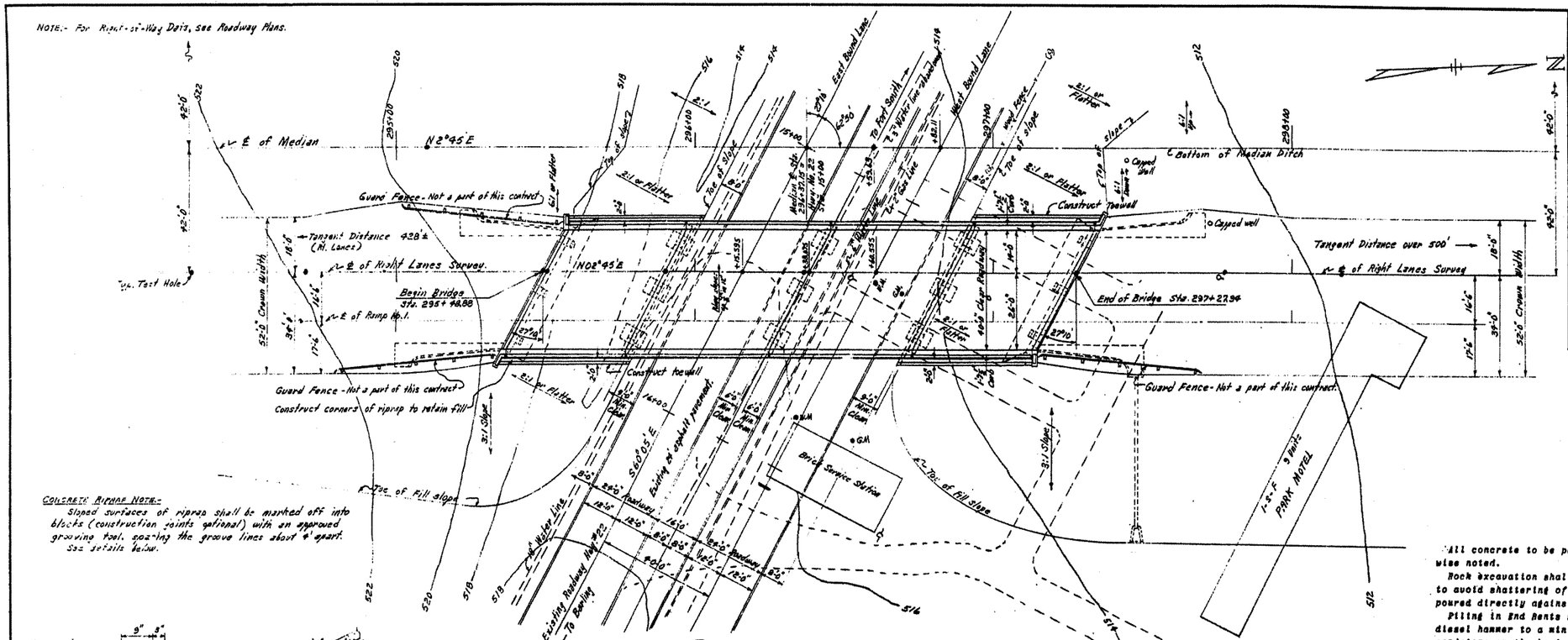
DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407bl_lll.dgn
CHECKED BY: JLH/ETH DATE: March 02 SCALE: 1" = 20'
DESIGNED BY: BCG DATE: March 02

BRIDGE NO. B6877 DRAWING NO. 48467

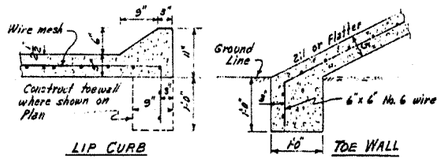
$$$$date$$$$
$$$$dgnspec$$$$$

...\b040468b1_l11.dgn 8/10/2012 3:49:11 PM

NOTE:- For Right-of-Way Data, see Roadway Plans.

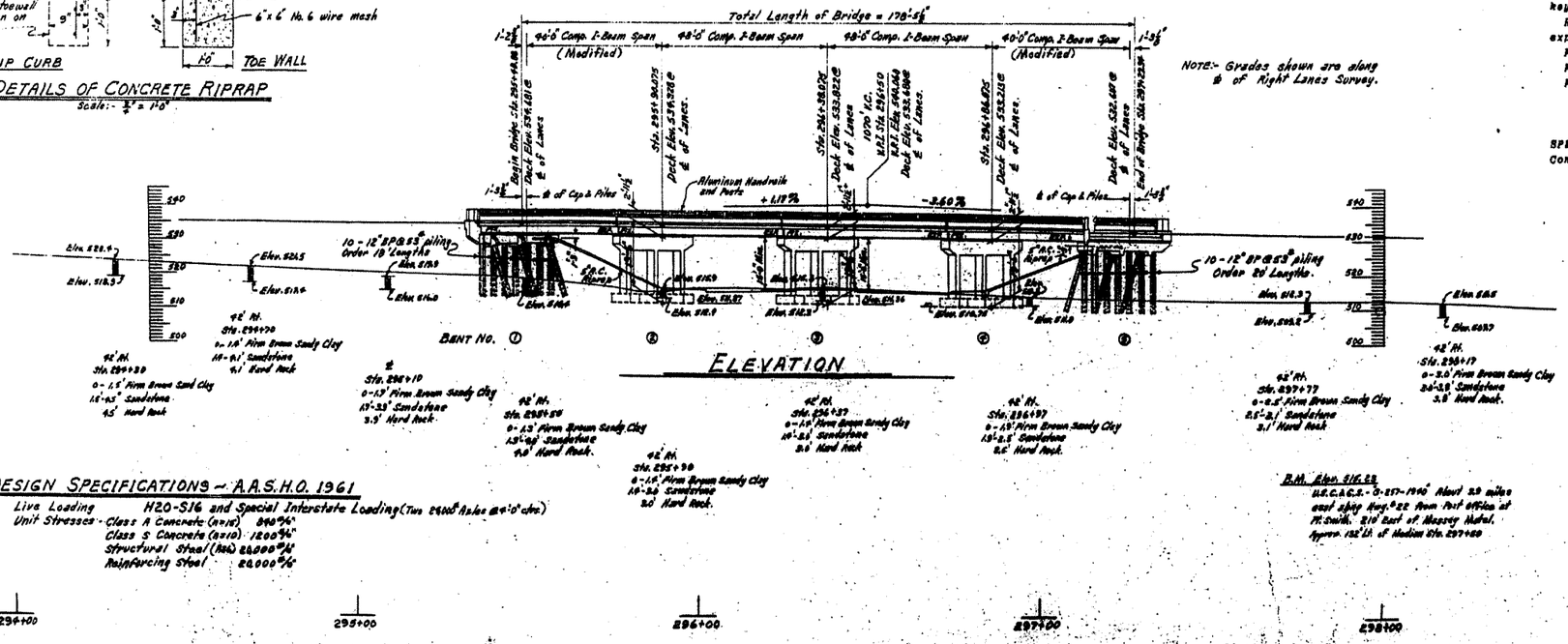


CONCRETE RIPRAP NOTE:-
Sloped surfaces of riprap shall be marked off into blocks (construction joints optional) with an approved grooving tool, spacing the groove lines about 6' apart. See details below.



DETAILS OF CONCRETE RIPRAP
Scale:- ½" = 1'-0"

PLAN

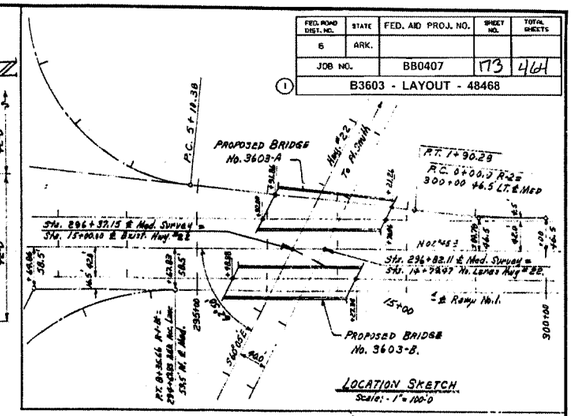


NOTE:- Grades shown are along ℄ of Right Lanes Survey.

ELEVATION

DESIGN SPECIFICATIONS - A.A.S.H.O. 1961

Live Loading H20-S16 and Special Interstate Loading (Two 24,000# Axles @ 4'-0" ctrs)
Unit Stresses - Class A Concrete (3000#) 840#/sq"
Class S Concrete (3000#) 1200#/sq"
Structural Steel (33000#) 20,000#/sq"
Reinforcing Steel 20,000#/sq"



LOCATION SKETCH
Scale:- 1" = 100'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	173	464

① B3603 - LAYOUT - 48468

GENERAL NOTES

All concrete to be poured in the dry. Exposed corners to be chamfered 3/4" unless otherwise noted.

Rock excavation shall be made to neat lines of concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

Piling in End Bents shall be 12-BP-53 and shall be driven with an approved air, steam, or diesel hammer to a minimum capacity of 36 tons per pile, and into the material designated as sandstone on the boring logs. Order lengths as shown; cut-off or build-up, if necessary, to be paid for in accordance with Standard Specifications. Piles in End Bents to be driven after embankment is in place.

In general all construction joints in bents shall be horizontal and shall be provided with keys not less than 1½" high covering the middle third of both dimensions.

Removal or adjustment of public utilities where necessary shall not be at the Contractor's expense.

For details of End Bents, see Drawing Nos. 11955 and 11957.
For details of Bent Nos. 2, 3 and 4, see Drawing No. 11956.
For details of Superstructure, see Drawing Nos. 11962, 11963, and 11964.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959 and applicable Special Provisions.

B.M. Elev. 516.68
U.S.C.&G.S. - 0-257-1946 About 2.9 miles east along Hwy. #22 from Post Office at Ft. Smith. 210' East of Massey Motel. Approx. 132' Lt. of Median Sta. 297+00

FOR INFORMATION ONLY

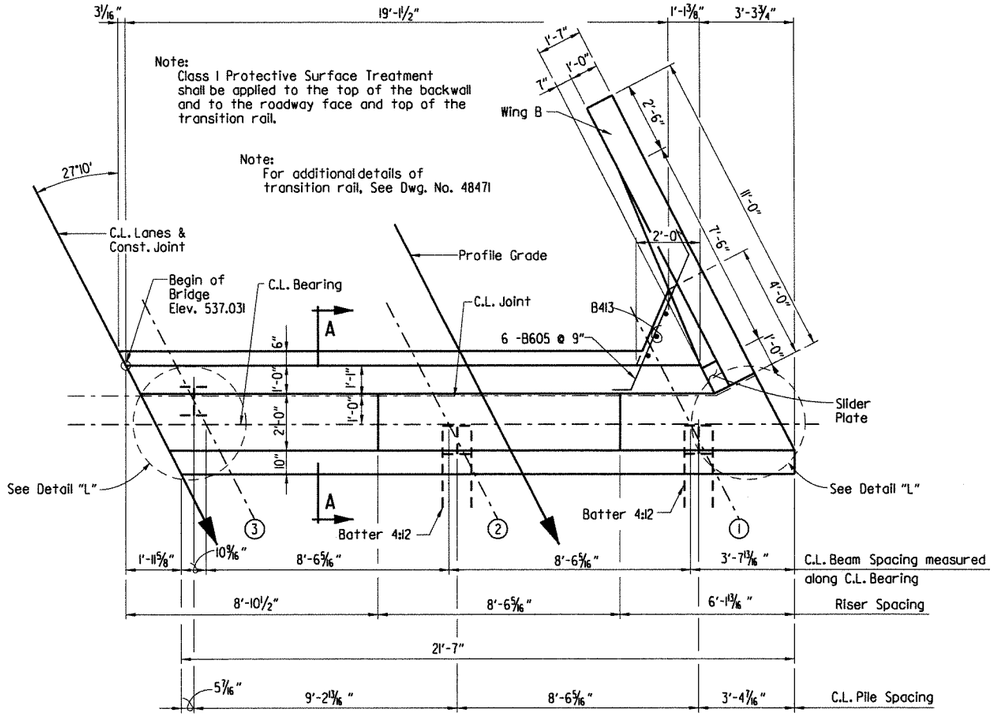
(RIGHT LANES)
LAYOUT OF
HWY. 22 INTERCHANGE
HWY. 22 - ARK. RIVER BRIDGE
SEBASTIAN COUNTY.
INTERSTATE **ROUTE** 540 **SEC.** 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: W.C.H. DATE: 1-25-61
TRACED BY: DATE:
CHECKED BY: DATE: 25-62
SCALE: 1" = 20'-0"

L. P. Cullom
BRIDGE ENGINEER

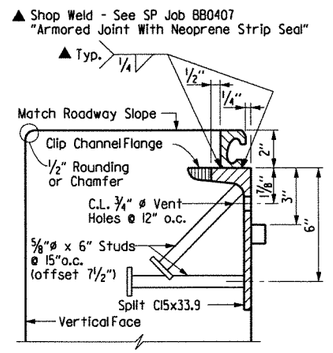
BRIDGE NO. A3603 **DRAWING NO.** 48468

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.		BB0407	174	464
				(1) B6877		BENT DTLS.		48469



PLAN - STAGE II

3/8" = 1'-0"

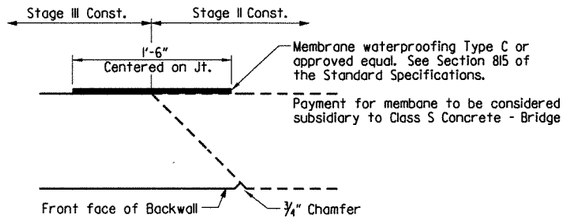


Note: Concrete shall be hand packed under the joint armor in the backwall.

For additional details, See Dwg. No. 48484.

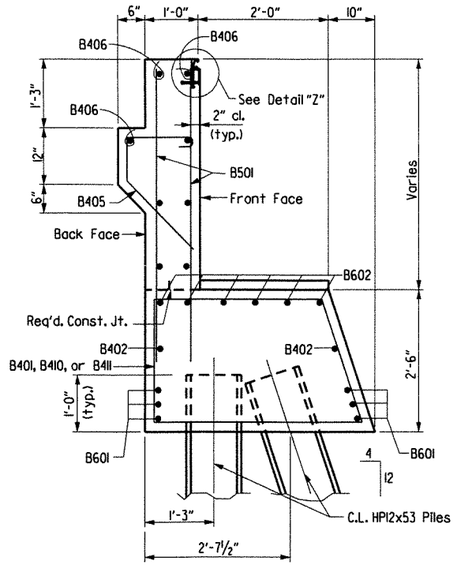
DETAIL Z

3"= 1'-0"



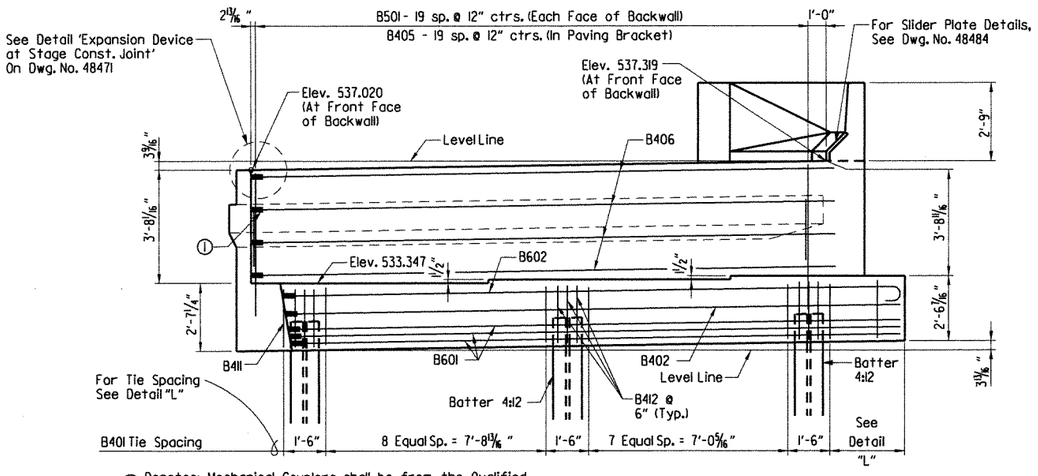
CONSTRUCTION JOINT DETAIL

No Scale



SECTION A-A

3/4" = 1'-0"

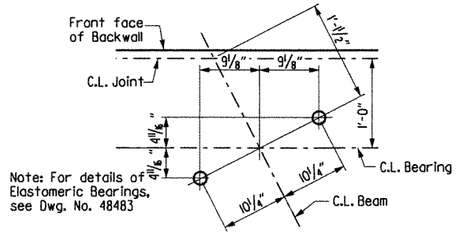


(1) Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.

ELEVATION - STAGE II

(Looking Back)

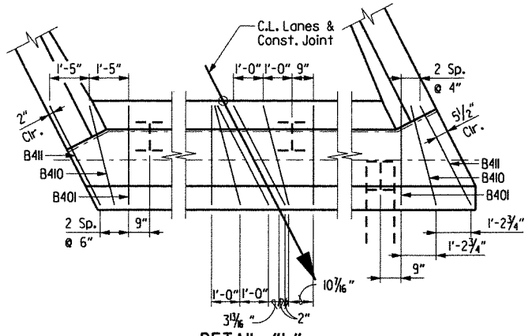
3/8" = 1'-0"



Note: For details of Elastomeric Bearings, see Dwg. No. 48483

TYPICAL ANCHOR BOLT LAYOUT

No Scale



DETAIL "L"

GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered 3/4" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Gr. 60.

End Bent backwall shall not be poured before girders are in place. Backwall to be placed after concrete span placement.

Structural steel in end bents shall be AASHTO M270, Gr. 50 and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50)".

If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

All exposed steel surfaces are to be cleaned and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10338 LARRY D. MILLER

Larry D. Miller 8-11-12

BRIDGE ENGINEER

SHEET 1 OF 3

DETAILS OF BENT NO. 1

BRIDGE OVER HWY. 22 (ROGERS AVENUE)

(BR. B6877)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02 FILENAME: b8B0407b1b11.dgn

CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown

DESIGNED BY: JLH DATE: April 02

BRIDGE NO. B6877 DRAWING NO. 48469

$$$$date$$$$

$$$$dgnspec$$$$

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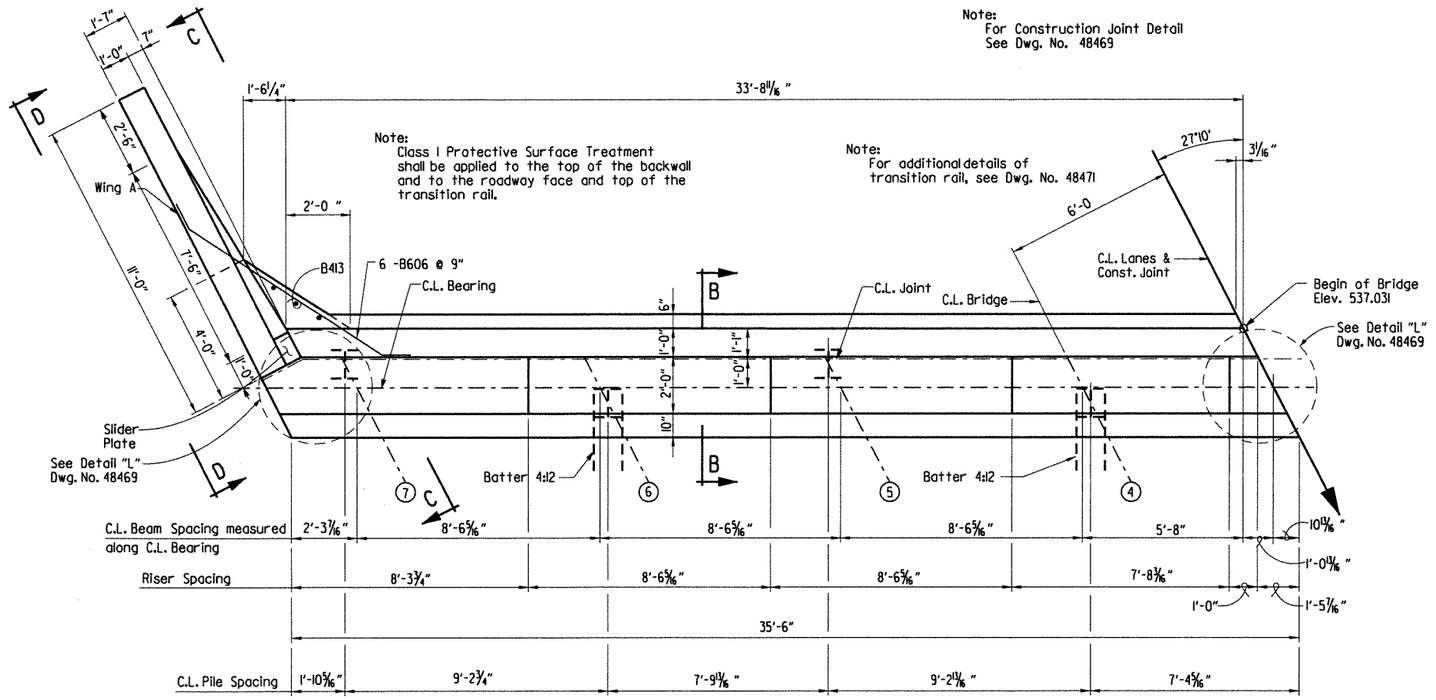
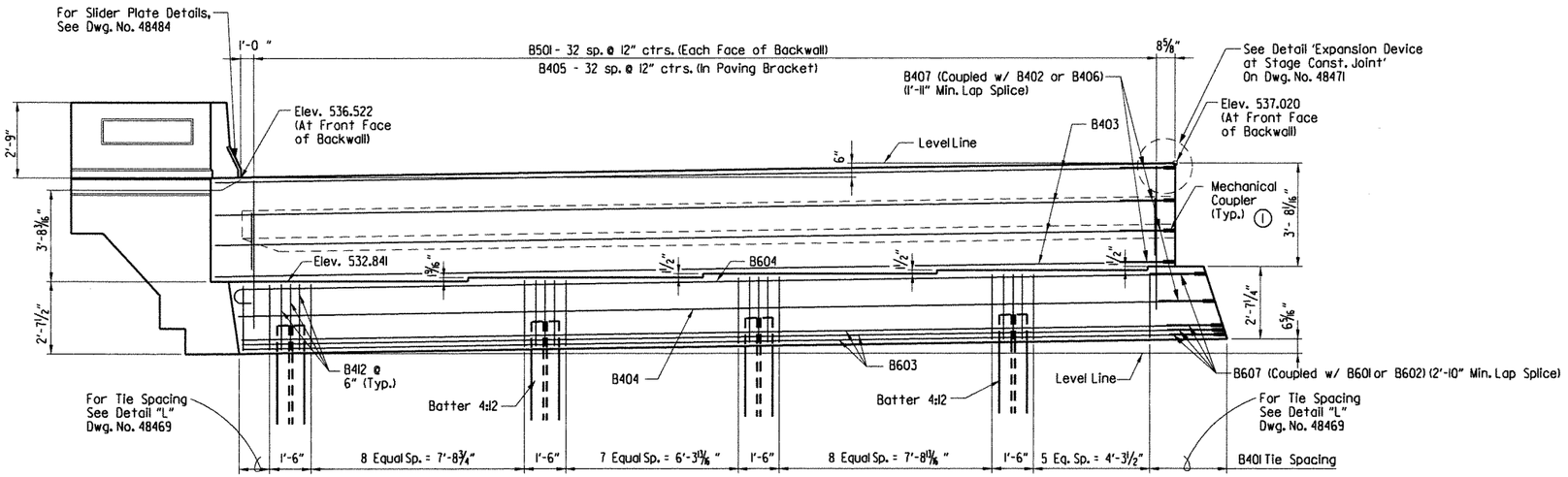
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	175	464
				(1) B6877		BENT DTLS.		48470



PLAN - STAGE III

3⁄8" = 1'-0"

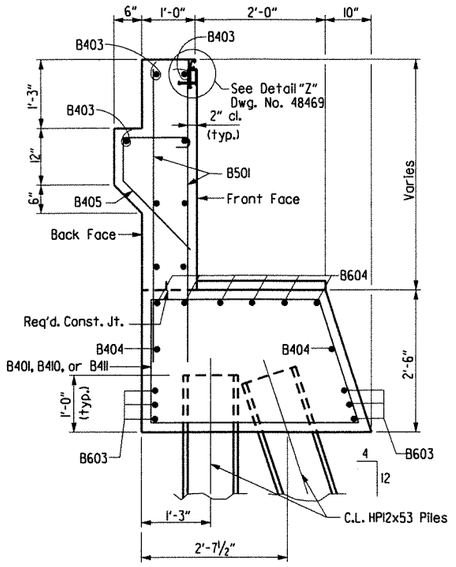


ELEVATION - STAGE III

(Looking Back)

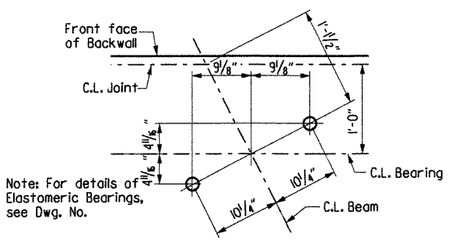
3⁄8" = 1'-0"

(1) Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.



SECTION B-B

¾" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT

No Scale

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER

Larry W. Miller 8-11-12

BRIDGE ENGINEER

SHEET 2 OF 3
DETAILS OF BENT NO. 1
BRIDGE OVER HWY. 22 (ROGERS AVENUE)
(BR. B6877)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02
CHECKED BY: EMB/ETH DATE: May 02
DESIGNED BY: BCG/JLH DATE: April 02
FILENAME: bBB0407b1 b12.dgn
SCALE: As Shown

BRIDGE NO. B6877 DRAWING NO. 48470

$$$$date$$$$

$$$$dgnspec$$$$

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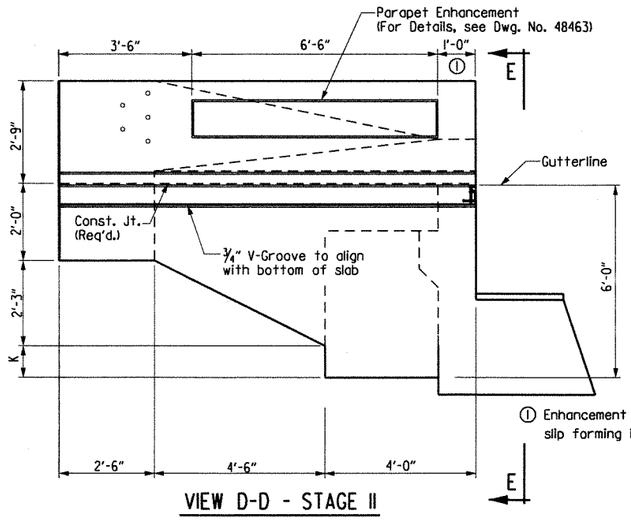
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	176	464
				① B6877		BENT DTLS.		48471

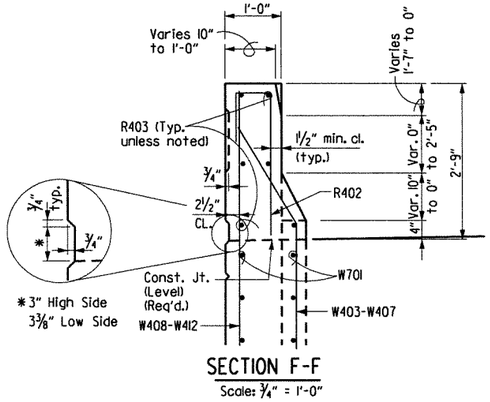


VIEW D-D - STAGE II

(Stage III Similar)

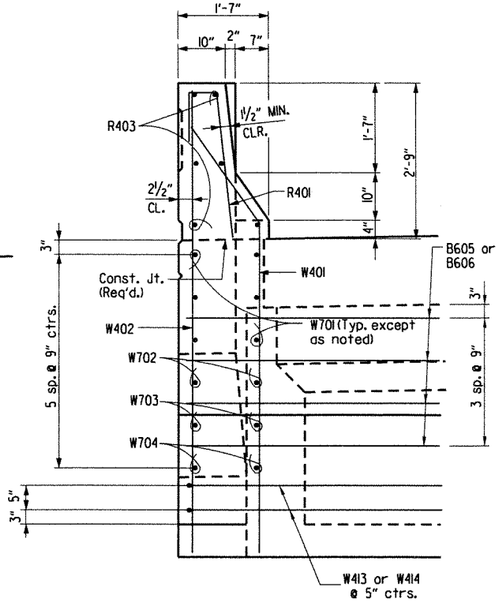
Scale: ½" = 1'-0"

① Enhancement shall be continuous if slip forming is used on bridge parapet.



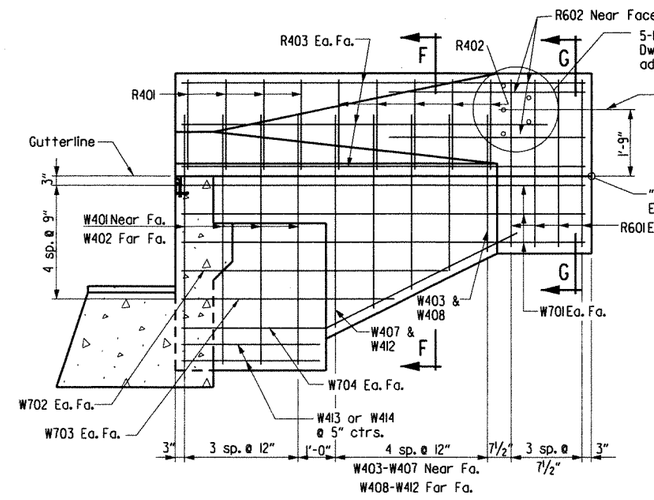
SECTION F-F

Scale: ¾" = 1'-0"



VIEW E-E

Scale: ¾" = 1'-0"

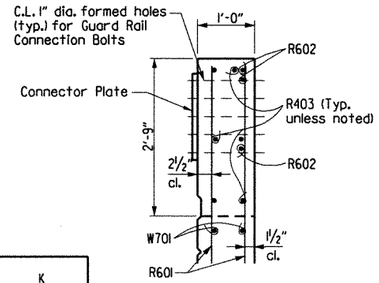


SECTION C-C - STAGE II

(Stage III Similar)

Scale: ½" = 1'-0"

Bent No.	Wing	Elev. "R"	K
1	A	536.573	1'-9⅝"
1	B	537.396	1'-9⅝"



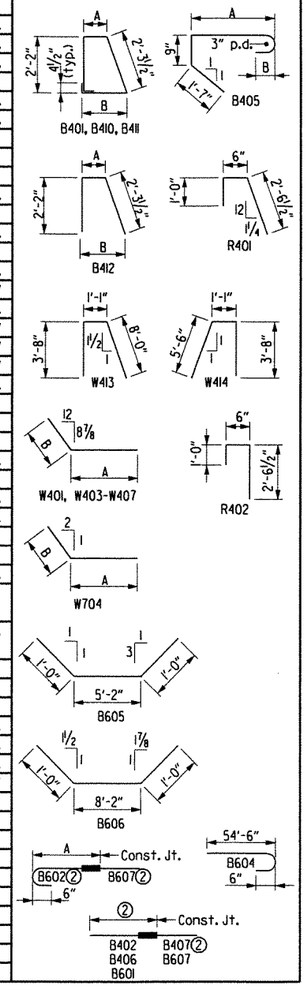
SECTION G-G

Scale: ¾" = 1'-0"

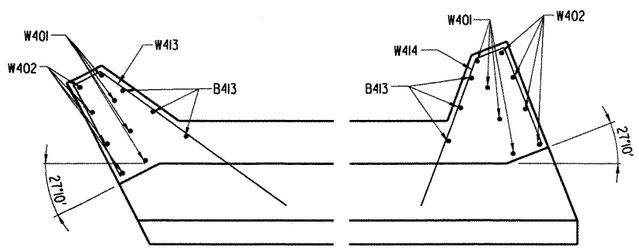
BAR LIST

Mark	No. Req'd.	Length	"A"	"B"	Pin Dia.
B401	53	11'-0"	2'-8"	3'-5¼"	2"
B402	2	21'-10"			STR.
B403	8	33'-7"			STR.
B404	2	35'-4"			STR.
B405	53	3'-11"	1'-2"	4½"	3"
B406	8	20'-2"			STR.
B407	10	2'-0"			STR.
B410	4	11'-2"	2'-9⅝"	3'-6⅝"	2"
B411	4	11'-9"	3'-0⅝"	3'-10⅜"	2"
B412	21	7'-0"	2'-8"	3'-5¼"	2"
B413	6	4'-6"			STR.
B501	106	5'-5"			STR.
B601	6	21'-10"			STR.
B602	6	22'-6"	21'-10"		4½"
B603	6	35'-4"			STR.
B604	6	36'-0"	35'-4"		4½"
B605	4	7'-2"			4½"
B606	4	10'-2"			4½"
B607	12	3'-7"			STR.
R401	8	3'-11"			2"
R402	8	3'-11"			2"
R403	12	9'-8"			STR.
R601	16	4'-5"			STR.
R602	6	5'-0"			STR.
W401	8	7'-0"	5'-10"	1'-2"	2"
W402	8	8'-2"			STR.
W403 - W407	2 Ea.	Varies 3'-4" to 5'-4"	Varies 2'-2" to 4'-2"	1'-2"	2"
W408 - W412	2 Ea.	Varies 4'-5" to 6'-5"			STR.
W413	2	12'-7"			2"
W414	2	10'-1"			2"
W701	12	9'-8"			STR.
W702	4	6'-0"			STR.
W703	4	4'-6"			STR.
W704	4	8'-4"	2'-9"	5'-7"	4½"

Bending Diagrams (Dimensions are out to out of bars.)



② Denotes: Individual lengths shall be determined by the Contractor based on the type of mechanical coupler used.

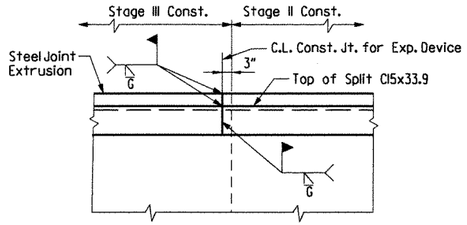


SECTION X-X

Wing A

SECTION X-X

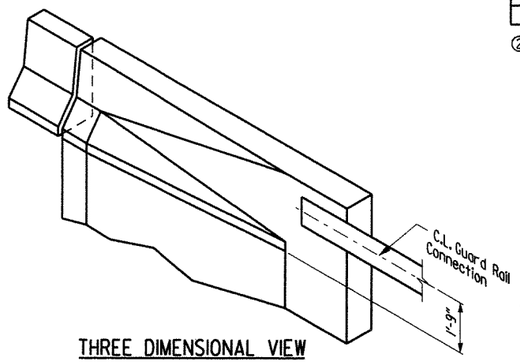
Wing B



EXPANSION DEVICE AT STAGE CONST. JOINT

No Scale

(Looking Back)



THREE DIMENSIONAL VIEW

WING RAIL & PARAPET

No Scale

STATE OF ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 11339
LARRY E. MILLER

8-14-12

BRIDGE ENGINEER

SHEET 3 OF 3

DETAILS OF BENT NO. 1

BRIDGE OVER HWY. 22 (ROGERS AVENUE)

(BR. B6877)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR	DATE: May 02	FILENAME:	bBB0407b1b13.dgn
CHECKED BY: EMB	DATE: May 02	SCALE:	As Shown
DESIGNED BY: JLH	DATE: May 02		

BRIDGE NO. B6877 DRAWING NO. 48471

$$$$dgnspec$$$$$

$$$$date$$$$

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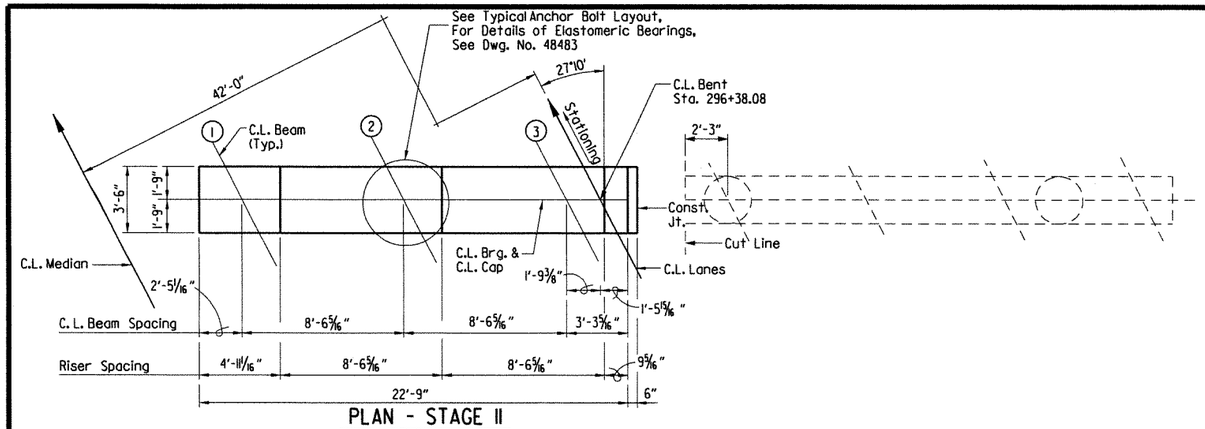
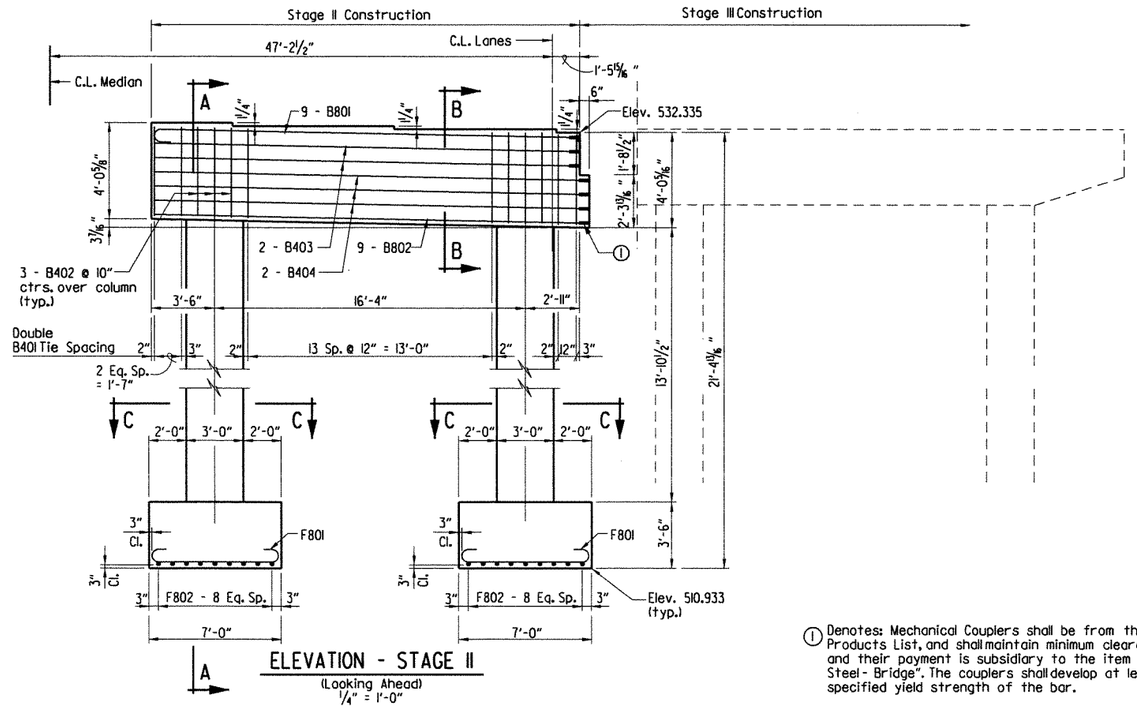
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	177	464
				(1) B6877		BENT DTLS.		48472



PLAN - STAGE II

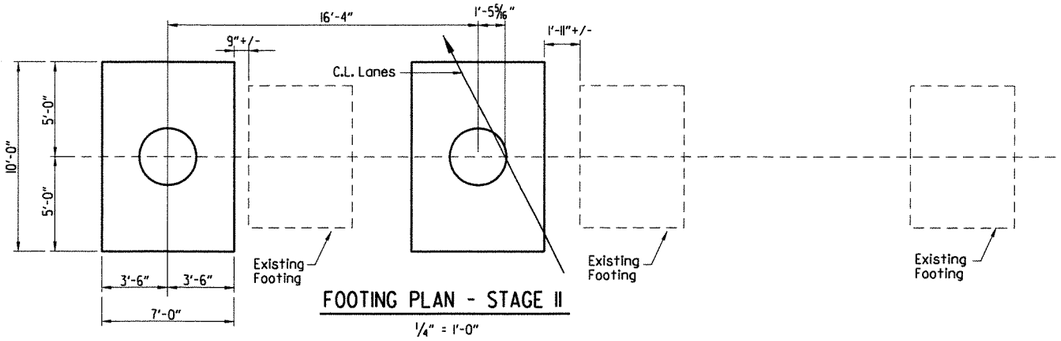
¼" = 1'-0"



ELEVATION - STAGE II

(Looking Ahead)

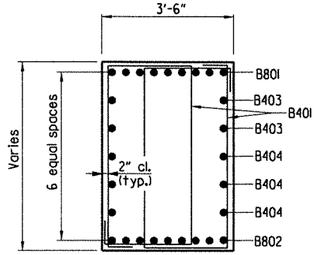
¼" = 1'-0"



FOOTING PLAN - STAGE II

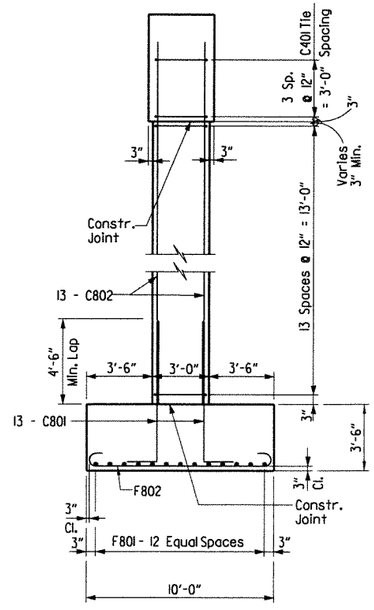
¼" = 1'-0"

(1) Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.



SECTION B-B

Scale: ½" = 1'-0"

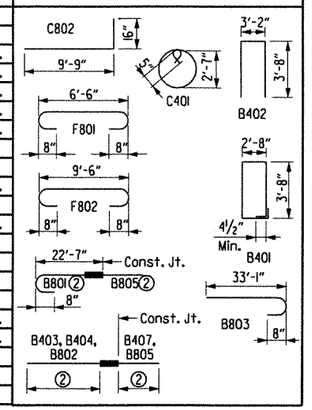


SECTION A-A

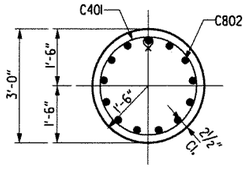
Scale: ¼" = 1'-0"

BAR LIST (PER BENT)

Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
B401	96	13'-0"	2"	
B402	12	10'-4"	2"	
B403	4	22'-7"	STR.	
B404	6	23'-1"	STR.	
B405	4	33'-1"	STR.	
B406	6	32'-7"	STR.	
B407	10	2'-0"	STR.	
B801	9	23'-3"	6"	
B802	9	23'-1"	STR.	
B803	9	34'-0"	6"	
B804	9	32'-7"	STR.	
B805	18	6'-4"	STR.	
C401	72	9'-3"	3"	
C801	52	11'-0"	6"	
C802	26	17'-6"	STR.	
C803	26	17'-4"	STR.	
F801	52	8'-4"	6"	
F802	36	11'-4"	6"	

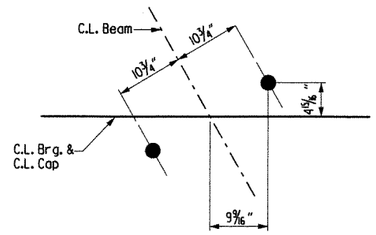


(2) Denotes: Individual lengths shall be determined by the Contractor based on the type of mechanical coupler used.



SECTION C-C

Scale: ½" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT

No Scale

Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered ¾" 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.

For additional information, see Layout.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10339 LARRY W. MILLER

8-11-12

BRIDGE ENGINEER

SHEET 1 OF 2

DETAILS OF BENT NO. 2

BRIDGE OVER HWY. 22 (ROGERS AVENUE)

(BR. B6877)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02

CHECKED BY: EMB/ETH DATE: May 02

DESIGNED BY: JLH DATE: April 02

FILENAME: bBB0407b1b21.dgn

SCALE: As Shown

BRIDGE NO. B6877 DRAWING NO. 48472

$$$$date$$$

$$$$dgnspec$$$$$

...\b040468b1_b21.dgn 8/10/2012 3:49:13 PM

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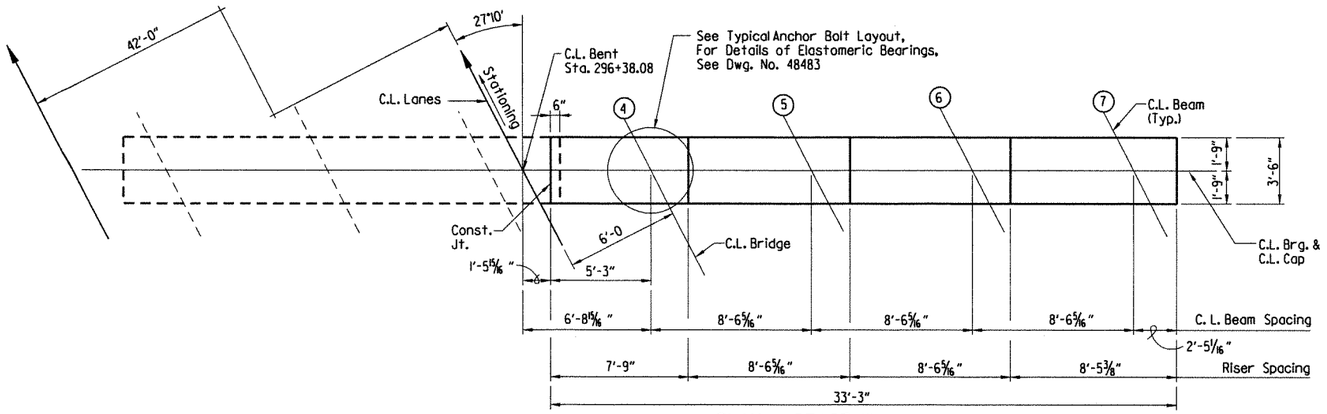
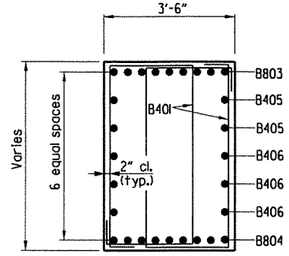
				6	ARK.			
				JOB NO.		BB0407	178	464
				(1) B6877		BENT DTLS.		48473



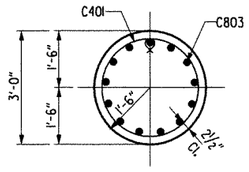
PLAN - STAGE III

1/4" = 1'-0"



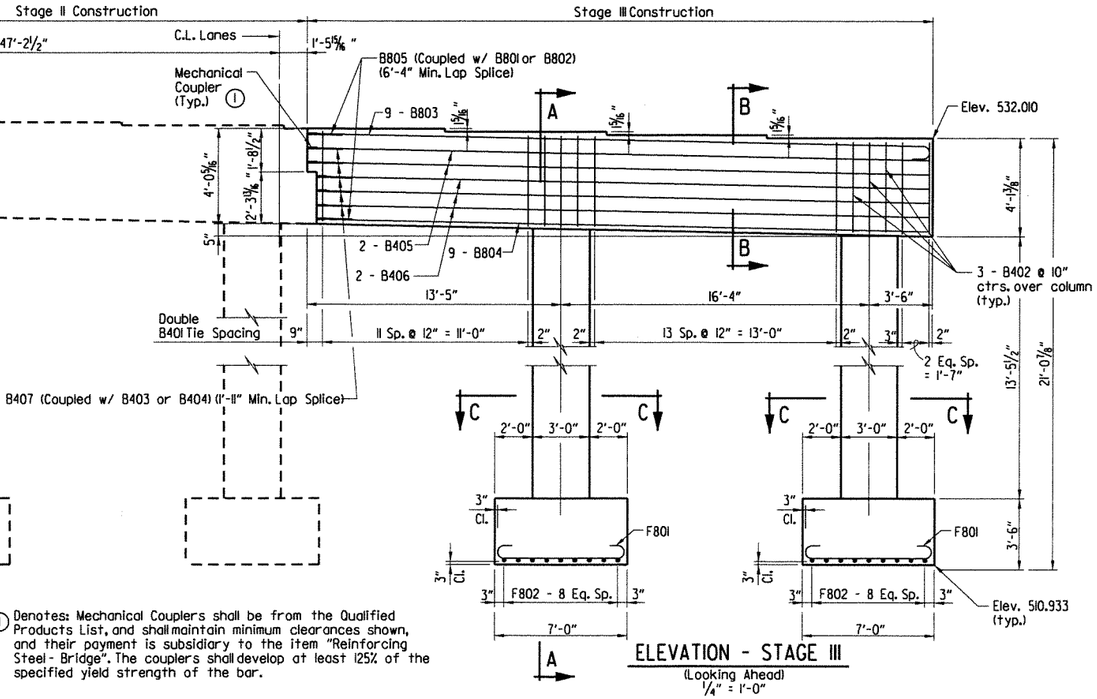
SECTION B-B

Scale: 1/2" = 1'-0"



SECTION C-C

Scale: 1/2" = 1'-0"

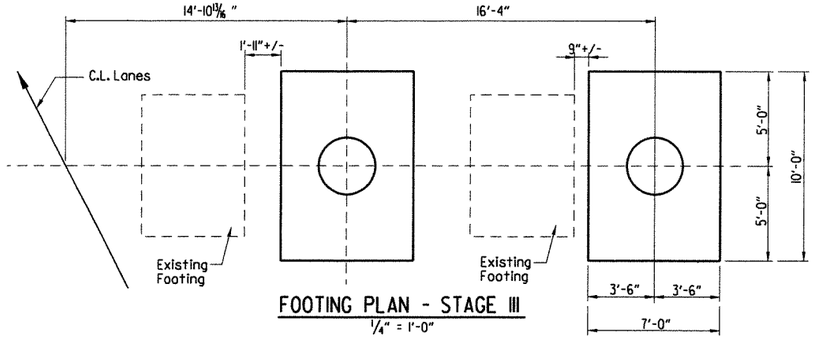


(1) Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.

ELEVATION - STAGE III

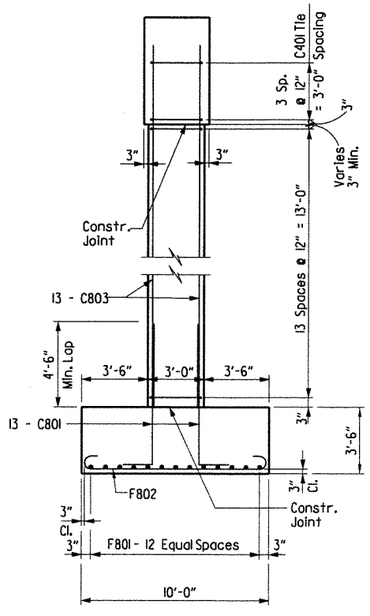
(Looking Ahead)

1/4" = 1'-0"



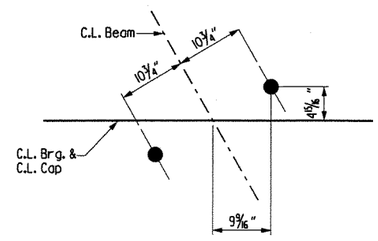
FOOTING PLAN - STAGE III

1/4" = 1'-0"



SECTION A-A

Scale: 1/4" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT

No Scale

Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall 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.

For additional information, see Layout.

STATE OF ARKANSAS
Larry W. Miller
REGISTERED PROFESSIONAL ENGINEER
No. 11339
LARRY W. MILLER
8-11-12
BRIDGE ENGINEER

SHEET 2 OF 2

DETAILS OF BENT NO. 2

BRIDGE OVER HWY. 22 (ROGERS AVENUE)

(BR. B6877)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407b1b22.dgn

CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown

DESIGNED BY: JLH DATE: April 02

BRIDGE NO. B6877 DRAWING NO. 48473

$$$$date$$$

$$$$dgnspec$$$$$

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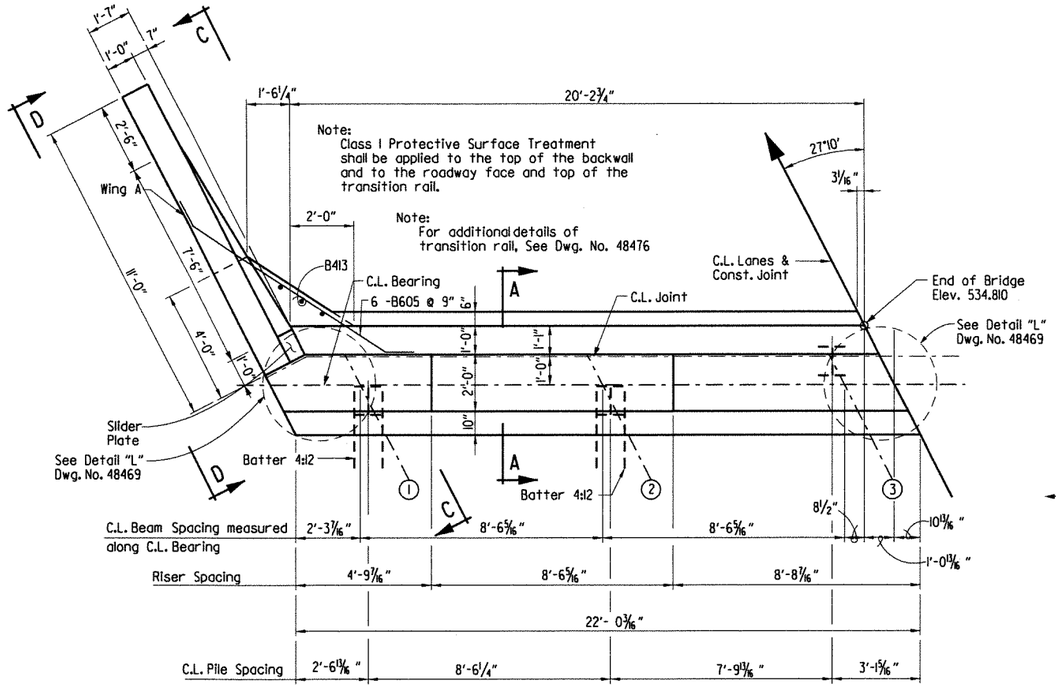
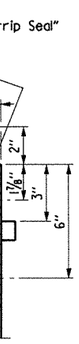
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	179	464
				(1) B6877		BENT DTLS.		48474



PLAN - STAGE II

⅜" = 1'-0"

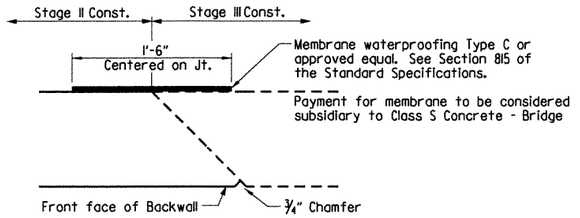


Note: Concrete shall be hand packed under the joint armor in the backwall.

For additional details, See Dwg. No. 48484.

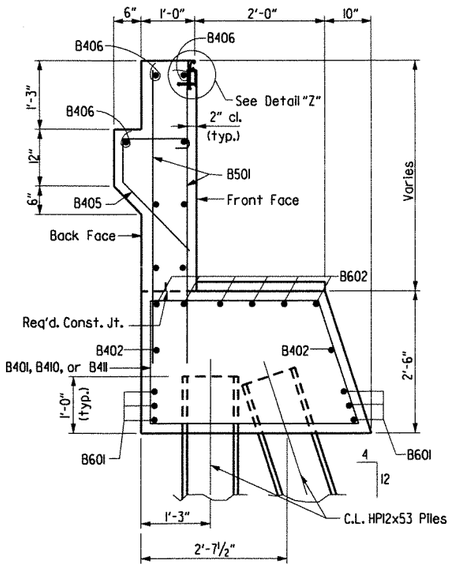
DETAIL Z

3"= 1'-0"



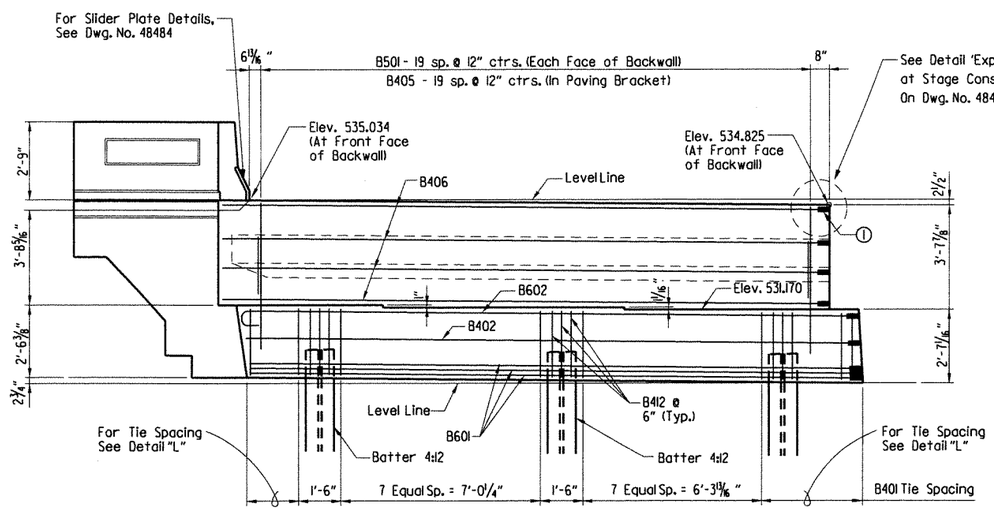
CONSTRUCTION JOINT DETAIL

No Scale



SECTION A-A

¾" = 1'-0"

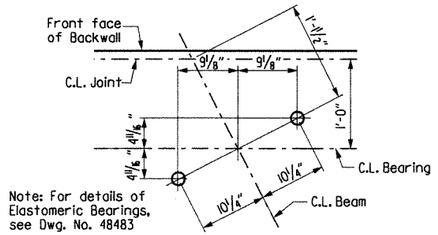


(1) Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.

ELEVATION - STAGE II

(Looking Up Station)

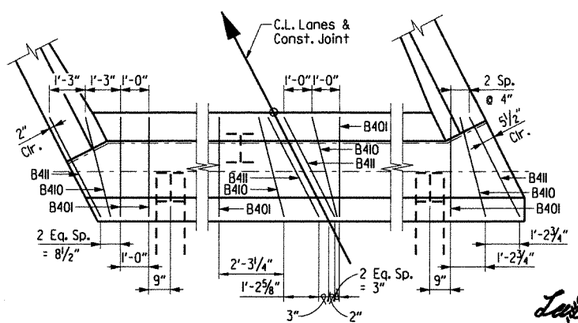
⅜" = 1'-0"



Note: For details of Elastomeric Bearings, see Dwg. No. 48483

TYPICAL ANCHOR BOLT LAYOUT

No Scale



DETAIL "L"

GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered ¾" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Gr. 60.

End Bent backwall shall not be poured before girders are in place. Backwall to be placed after concrete span placement.

Structural steel in end bents shall be AASHTO M270, Gr. 50 and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50)".

If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

All exposed steel surfaces are to be cleaned and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13339 LARRY D. MILLER

8-11-12

BRIDGE ENGINEER

SHEET 1 OF 3

DETAILS OF BENT NO. 3

BRIDGE OVER HWY. 22 (ROGERS AVENUE)

(BR. B6877)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407b1b31.dgn

CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown

DESIGNED BY: JLH DATE: April 02

BRIDGE NO. B6877 DRAWING NO. 48474

$$$$date$$$

$$$$dgnspec$$$$$

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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
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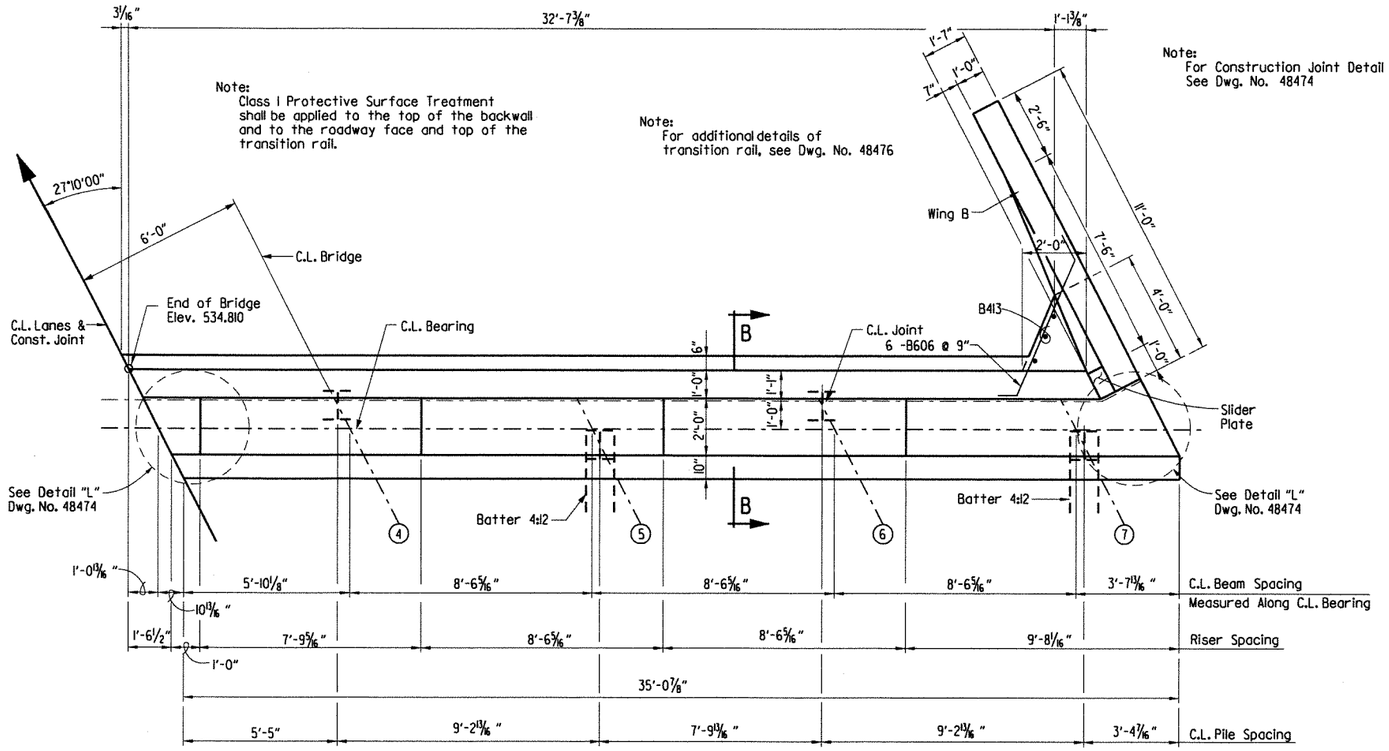
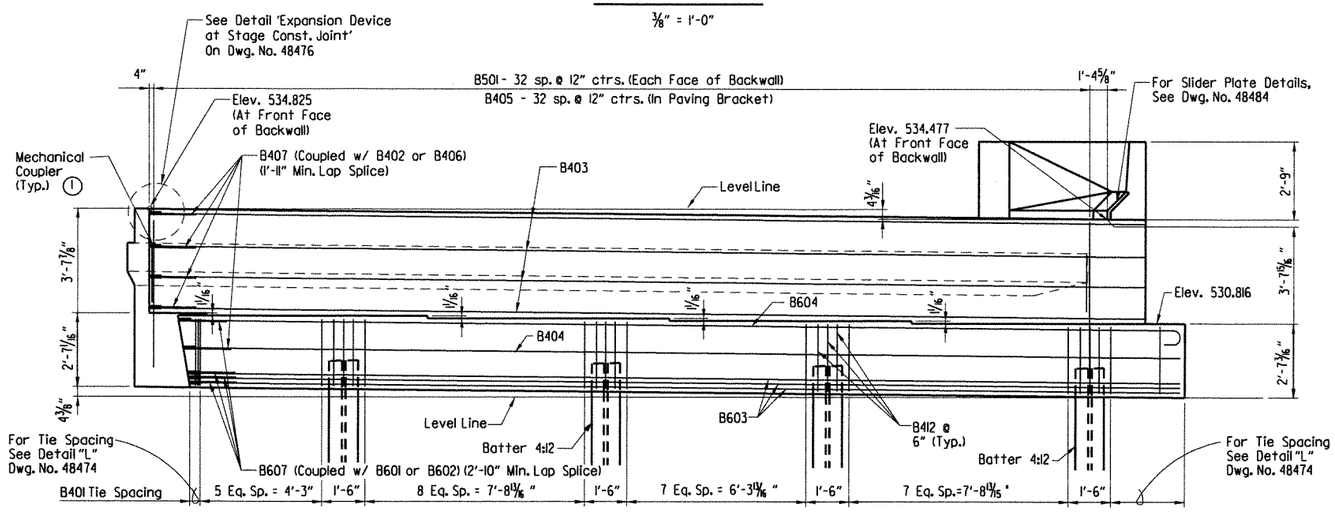
				JOB NO.		BB0407	180	464
				(1) B6877		BENT DTLS.		48475



PLAN - STAGE III

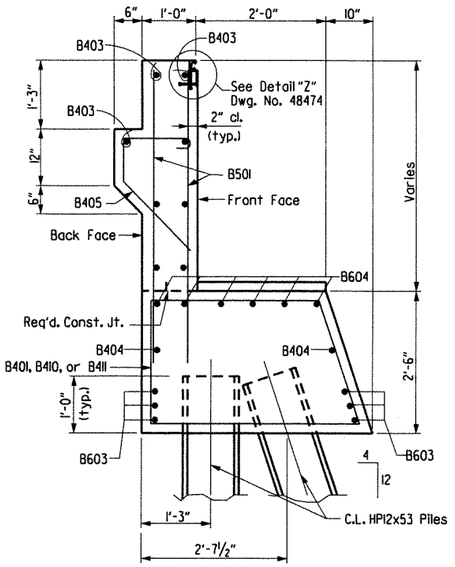
3/8" = 1'-0"



ELEVATION - STAGE III

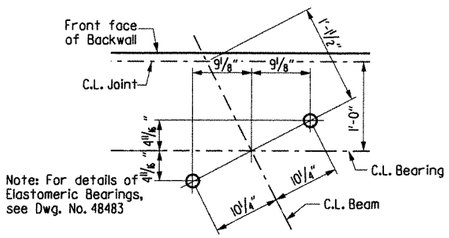
(Looking Ahead)
3/8" = 1'-0"

(1) Denotes: Mechanical Couplers shall be from the Qualified Products List, and shall maintain minimum clearances shown, and their payment is subsidiary to the item "Reinforcing Steel - Bridge". The couplers shall develop at least 125% of the specified yield strength of the bar.



SECTION B-B

3/4" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT

No Scale

SHEET 2 OF 3
DETAILS OF BENT NO. 3
BRIDGE OVER HWY. 22 (ROGERS AVENUE)
(BR. B6877)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY E. MILLER
8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB/ETH DATE: May 02
DESIGNED BY: JLH DATE: April 02
FILENAME: bBB0407b1b32.dgn
SCALE: As Shown
BRIDGE NO. B6877 DRAWING NO. 48475

$$$$date$$$

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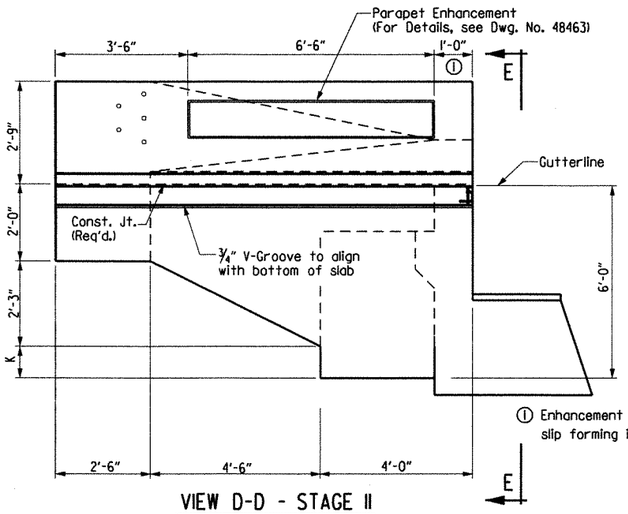
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	131	464
				① B6877		BENT DTLS.		48476

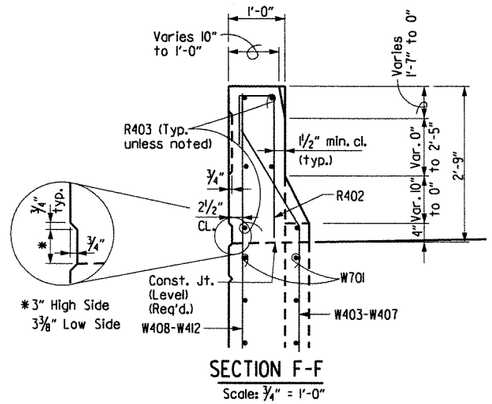


VIEW D-D - STAGE II

(Stage III Similar)

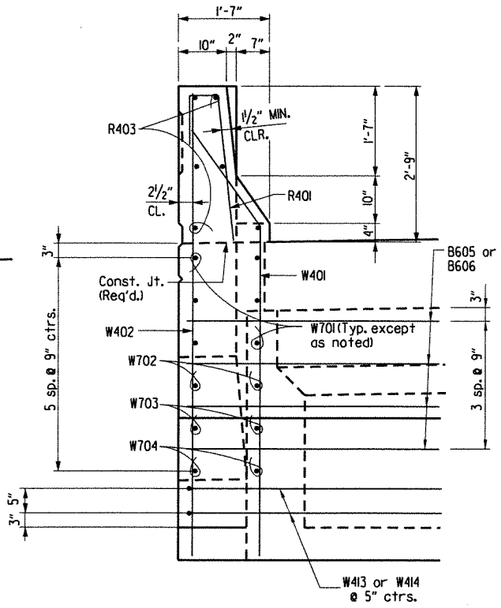
Scale: ½" = 1'-0"

① Enhancement shall be continuous if slip forming is used on bridge parapet.



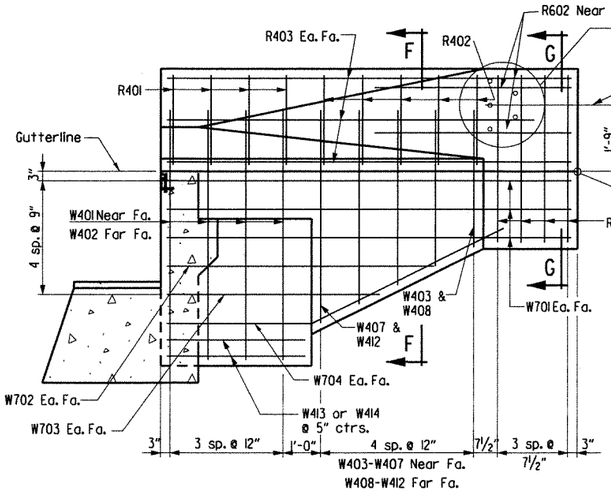
SECTION F-F

Scale: ¾" = 1'-0"



VIEW E-E

Scale: ¾" = 1'-0"

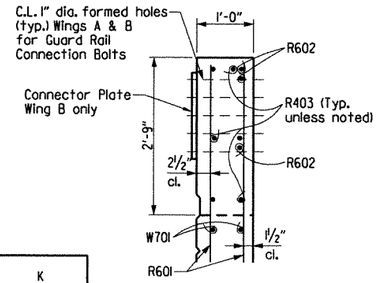


SECTION C-C - STAGE II

(Stage III Similar)

Scale: ½" = 1'-0"

Bent No.	Wing	Elev. "R"	K
3	A	534.868	1'-7 "
3	B	534.313	1'-7"



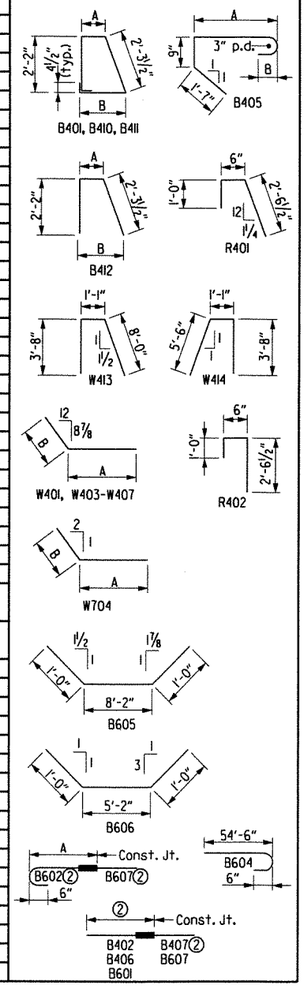
SECTION G-G

Scale: ¾" = 1'-0"

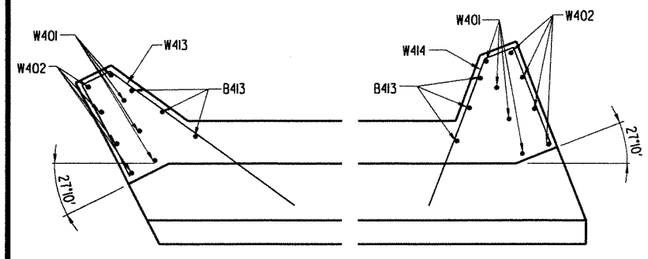
BAR LIST

Mark	No. Req'd.	Length	"A"	"B"	Pin Dia.
B401	54	11'-0"	2'-8"	3'-5¼"	2"
B402	2	21'-10"			STR.
B403	8	33'-7"			STR.
B404	2	35'-4"			STR.
B405	53	3'-11"	1'-2"	4½"	3"
B406	8	20'-0"			STR.
B407	10	2'-0"			STR.
B410	4	11'-2"	2'-9⅞"	3'-6⅝"	2"
B411	4	11'-9"	3'-0⅝"	3'-10⅜"	2"
B412	21	7'-0"	2'-8"	3'-5¼"	2"
B413	6	4'-4"			STR.
B501	106	5'-5"			STR.
B601	6	21'-10"			STR.
B602	6	22'-6"	21'-10"		4½"
B603	6	35'-4"			STR.
B604	6	36'-0"	35'-4"		4½"
B605	4	10'-2"			4½"
B606	4	7'-2"			4½"
B607	12	3'-7"			STR.
R401	8	3'-11"			2"
R402	8	3'-11"			2"
R403	12	9'-8"			STR.
R601	16	4'-5"			STR.
R602	6	5'-0"			STR.
W401	8	7'-0"	5'-10"	1'-2"	2"
W402	8	8'-2"			STR.
W403 - W407	2 Ea.	Varies 3'-4" to 5'-4"	Varies 2'-2" to 4'-2"	1'-2"	2"
W408 - W412	2 Ea.	Varies 4'-5" to 6'-5"			STR.
W413	2	12'-7"			2"
W414	2	10'-1"			2"
W701	12	9'-8"			STR.
W702	4	6'-0"			STR.
W703	4	4'-6"			STR.
W704	4	8'-4"	2'-9"	5'-7"	5¼"

Bending Diagrams
(Dimensions are out to out of bars.)



② Denotes: Individual lengths shall be determined by the Contractor based on the type of mechanical coupler used.

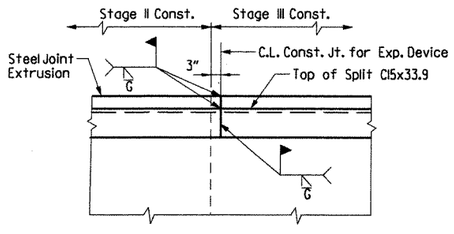


SECTION X-X

Wing A

SECTION X-X

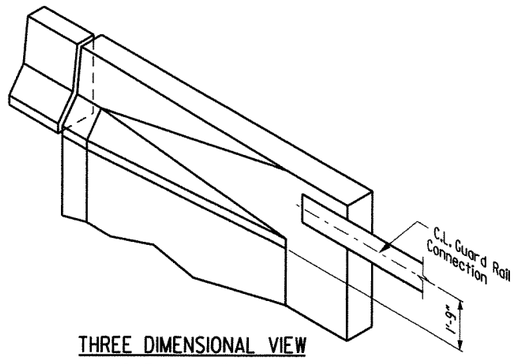
Wing B



EXPANSION DEVICE AT STAGE CONST. JOINT

No Scale

(Looking Ahead)



THREE DIMENSIONAL VIEW
WING RAIL & PARAPET

No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 14338
LARRY W. MILLER

8-11-12

BRIDGE ENGINEER

SHEET 3 OF 3

DETAILS OF BENT NO. 3

BRIDGE OVER HWY. 22 (ROGERS AVENUE)

(BR. B6877)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: May 02

CHECKED BY: EMB DATE: May 02

DESIGNED BY: JLH DATE: May 02

FILENAME: bBB0407b1b33.dgn

SCALE: As Shown

BRIDGE NO. B6877 DRAWING NO. 48476

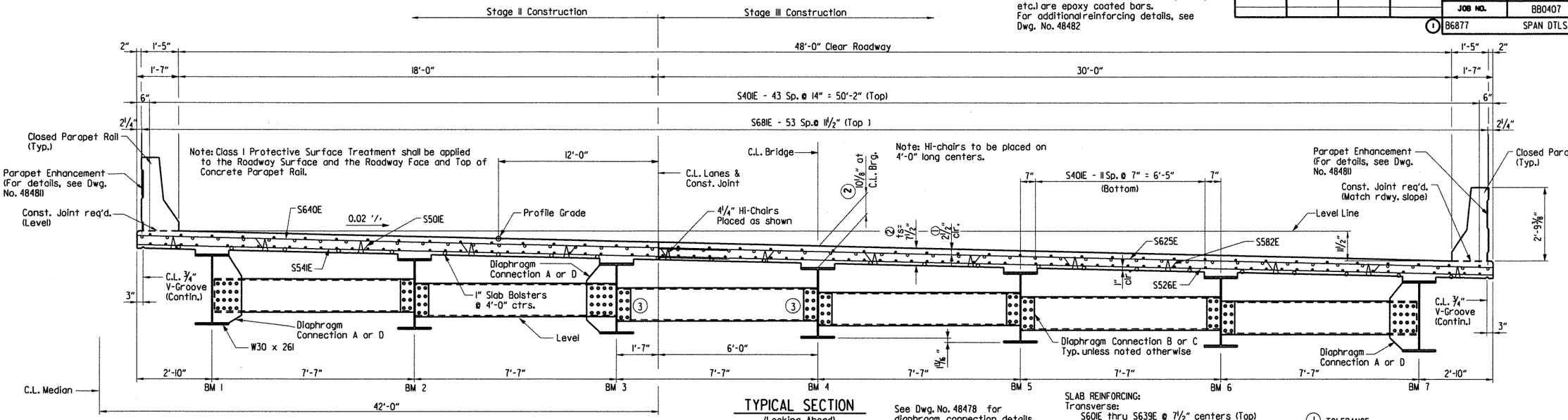
$$$$dgnspec$$$$$

$$$$date$$$$

...\b040468b1_b33.dgn 8/10/2012 3:49:15 PM

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.		BB0407	182	464
				(1) B6877		SPAN DTLS.		48477

Note: Reinf. bars with "E" suffix (S40IE, S50IE, etc.) are epoxy coated bars. For additional reinforcing details, see Dwg. No. 48482



TYPICAL SECTION

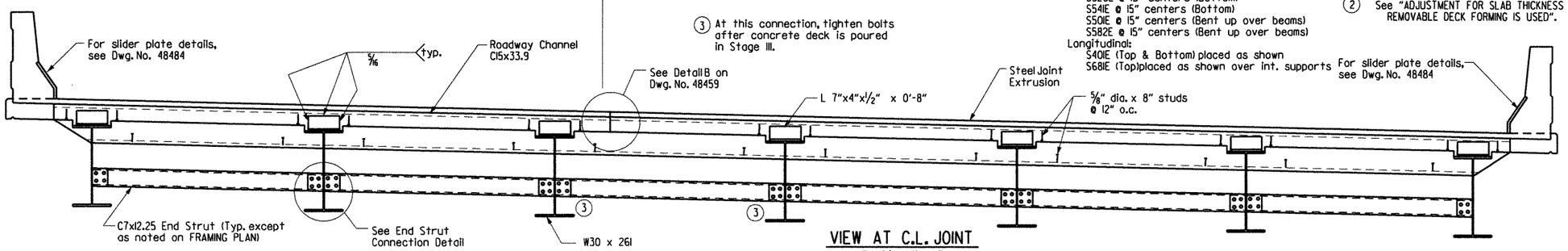
(Looking Ahead)
½" = 1'-0"

See Dwg. No. 48478 for diaphragm connection details.

SLAB REINFORCING:
Transverse:
S60IE thru S639E @ 7½" centers (Top)
S64IE thru S680E @ 7½" centers (Top)
S502E thru S540E @ 7½" centers (Bottom)
S54IE thru S58IE @ 7½" centers (Bottom)
S625E @ 15" centers (Top)
S640E @ 15" centers (Top)
S526E @ 15" centers (Bottom)
S54IE @ 15" centers (Bottom)
S50IE @ 15" centers (Bent up over beams)
S582E @ 15" centers (Bent up over beams)
Longitudinal:
S40IE (Top & Bottom) placed as shown
S68IE (Top) placed as shown over int. supports

(1) TOLERANCE:
Minus = ¼"
Plus = Equal to amount of slab thickening used to meet slab thickness tolerance - see "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".

(2) See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".



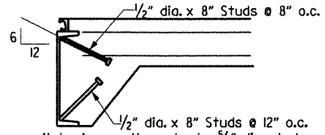
(3) At this connection, tighten bolts after concrete deck is poured in Stage III.

VIEW AT C.L. JOINT

(Looking Ahead)
½" = 1'-0"

EXPANSION DEVICE:
Roadway Channel C15x33.9
Conn Ls 7"x4"x½"
Detail Device 1⅛" high and provide ¼" shims using two 1/16" and one ⅛" plates

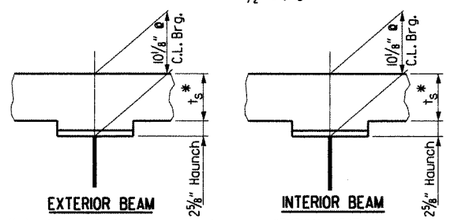
For additional details of Expansion Device, See Dwg. No. 48484



Note: As an alternate to ⅝" dia. studs, ½" dia. x 8" studs spaced as shown may be used. Use weight of ⅝" dia. stud as basis of measurement of structural steel in anchors.

DETAIL OF ALTERNATE ANCHORS

No Scale



Note: ts = slab thickness as shown on "TYPICAL SECTION".
*Tolerance when removable deck forming is used is +½", -¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED

No Scale

Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance; Minimum - occurs when the top flange contacts the bottom reinforcing steel; Maximum - top flange thickness plus ¾". 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.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER
8-11-12
BRIDGE ENGINEER

SHEET 1 OF 6
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. B6877)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407bl sll.dgn
CHECKED BY: EMB DATE: April 02 SCALE: As Shown
DESIGNED BY: JLH DATE: Feb 02
BRIDGE NO. B6877 DRAWING NO. 48477

$$$$date$$$

$$$$dgnspec$$$$$

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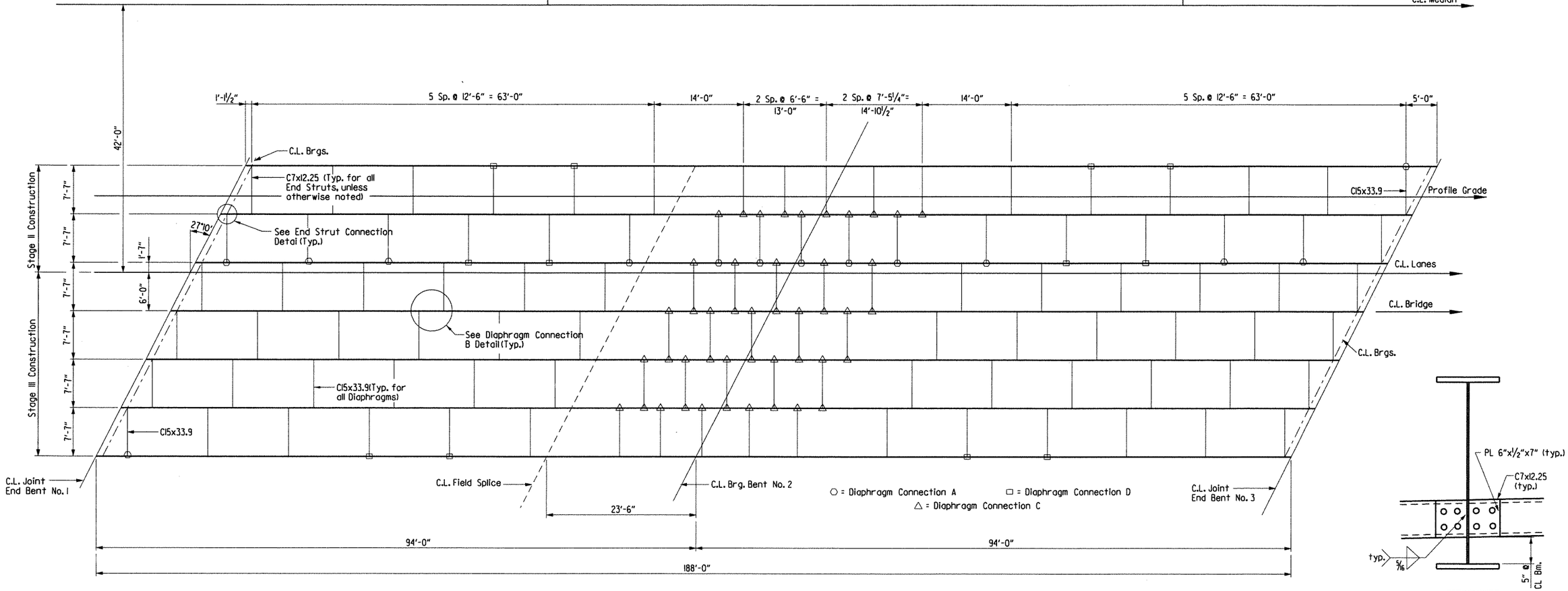
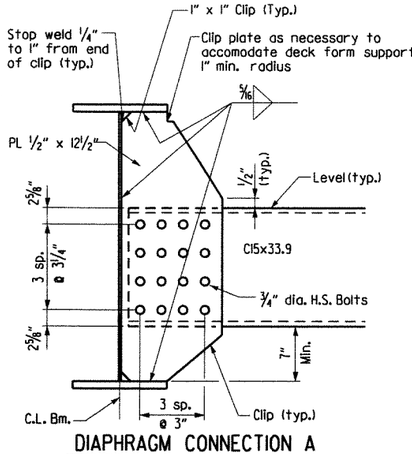
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	183	
				(1) B6877		SPAN DTLS.		48478

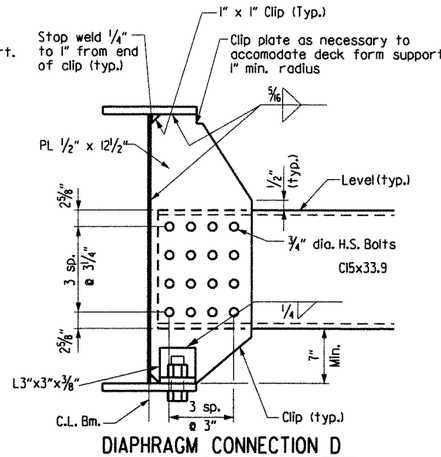


END STRUT CONNECTION
No Scale



DIAPHRAGM CONNECTION A
No Scale

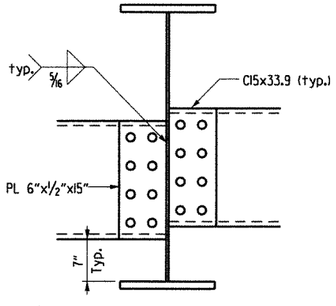
Typical for exterior beams. Use elsewhere as noted.



DIAPHRAGM CONNECTION D
No Scale

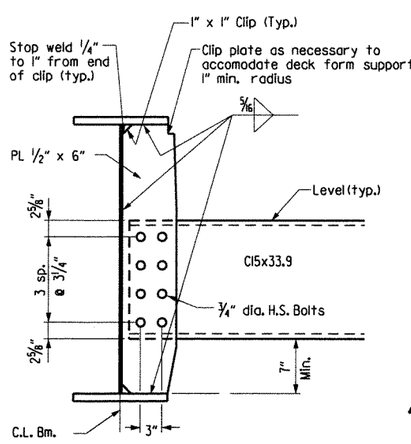
Note: Bolt heads to be on bottom of beam flange.

FRAMING PLAN
No Scale



DIAPHRAGM CONNECTION B
No Scale

Note: Bolts in Diaphragm Connections shall be properly installed and tightened in accordance with subsection 807.71.



DIAPHRAGM CONNECTION C
No Scale

TABLE FOR WELD

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To ¾" Inclusive	¼"	
Over ¾"	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.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13339 LARRY W. MILLER

Larry W. Miller 8-11-12

BRIDGE ENGINEER

SHEET 2 OF 6
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. B6877)
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407b1s12.dgn
CHECKED BY: EMB DATE: April 02 SCALE: As Shown
DESIGNED BY: JLH DATE: Feb 02
BRIDGE NO. B6877 DRAWING NO. 48478

$$$$date$$$$
$$$$dgnspec$$$$

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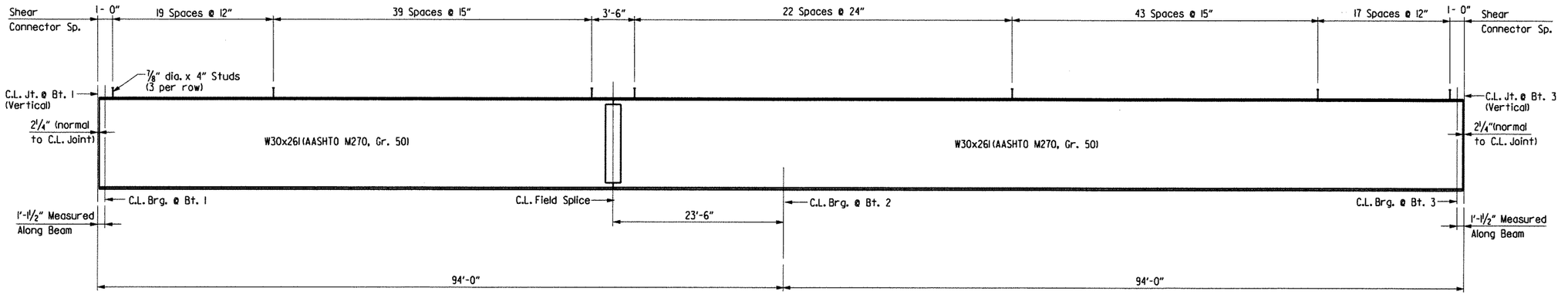
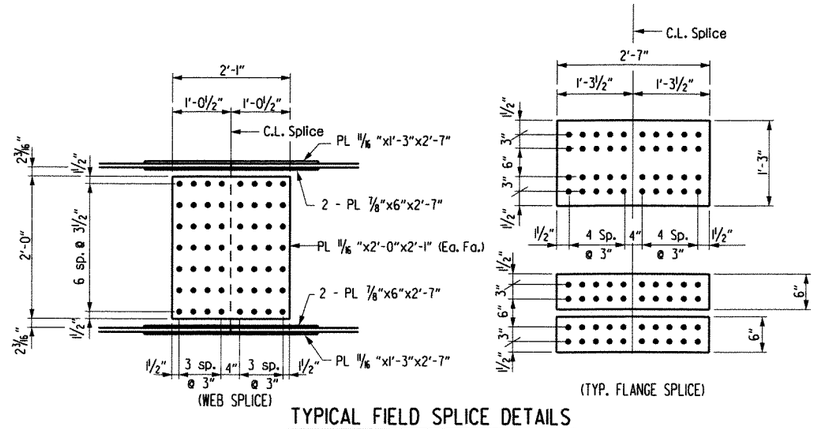
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	184	464
				(1) B6877		SPAN DTLS.		48479



Note: For details of Elastomeric Fixed and Expansion Bearings, see Dwg. No. 48483

TYPICAL BEAM ELEVATION

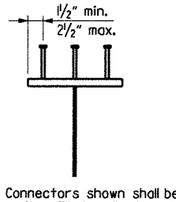
No Scale



TYPICAL FIELD SPLICE DETAILS

No Scale

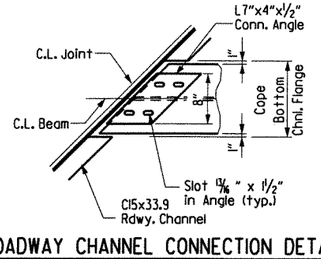
Note: All field splice bolts shall be 7/8" dia. H.S. bolts.
All field splice plates shall be AASHTO M270, Gr. 50 steel.



Stud Shear Connectors shown shall be 7/8" dia. x 4" long, granular flux filled, soild fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. 3/4" dia. studs may be used in place of the 7/8" dia. stud shown, at the ratio of 1.361-3/4" dia. studs in place of one 7/8" dia. stud. 7/8" dia. studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

SHEAR CONNECTOR DETAIL

No Scale



ROADWAY CHANNEL CONNECTION DETAIL

No Scale

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 14339 LARRY E. MILLER

8-11-12

BRIDGE ENGINEER

SHEET 3 OF 6
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. B6877)
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB/JGM DATE: April 02
DESIGNED BY: JLH/EMB/GWS DATE: April 02
FILENAME: bBB0407bl sl3.dgn
SCALE: As Shown

BRIDGE NO. B6877 DRAWING NO. 48479

$$$$date$$$

$$$$dgnspec$$$$$

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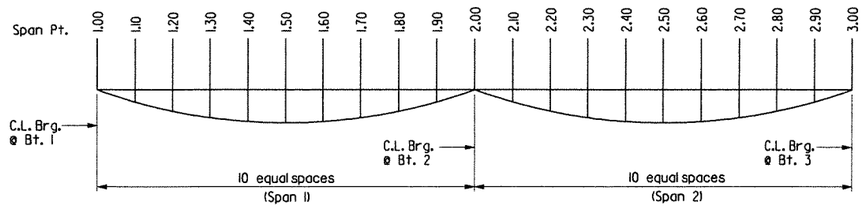
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	185	464
				(1) B6877		SPAN DTLS.		48480

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

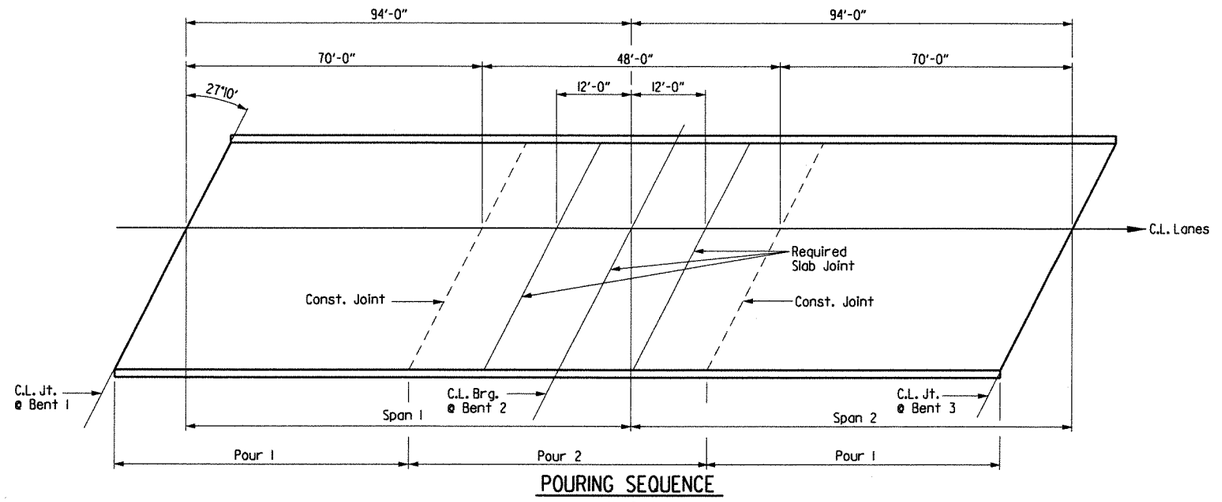
Camber for Dead Load Deflection plus vertical curve +/- 1/4" tolerance.
Deflections shown are off a chord from C.L. Brg. to C.L. Brg.
Vertical curve corrections not included. Negative sign (-) indicates upward deflection.

SPAN NO.	POINT OF DEFLECTION	Structural Steel		Structural Steel (+) Slab		Structural Steel (+) Slab (+) Para. Rail	
		Bms. 1 & 7	Bms. 2-6	Bms. 1 & 7	Bms. 2-6	Bms. 1 & 7	Bms. 2-6
1	1.00	0.00	0.00	0.00	0.00	0.00	0.00
	1.10	0.19	0.20	0.66	0.74	0.76	0.90
	1.20	0.35	0.36	1.22	1.42	1.40	1.65
	1.30	0.45	0.47	1.60	1.86	1.84	2.17
	1.40	0.50	0.52	1.76	2.05	2.02	2.39
	1.50	0.48	0.50	1.70	1.98	1.95	2.31
	1.60	0.41	0.42	1.44	1.67	1.65	1.94
	1.70	0.29	0.30	1.03	1.20	1.18	1.40
	1.80	0.16	0.17	0.57	0.66	0.65	0.77
	1.90	0.05	0.05	0.17	0.20	0.20	0.23
2	2.00	0.00	0.00	0.00	0.00	0.00	0.00
	2.10	0.05	0.05	0.17	0.20	0.20	0.23
	2.20	0.16	0.17	0.57	0.66	065	0.77
	2.30	0.29	0.30	1.03	1.20	1.18	1.40
	2.40	0.41	0.42	1.44	1.67	1.65	1.94
	2.50	0.48	0.50	1.70	1.98	1.95	2.31
	2.60	0.50	0.52	1.76	20.5	2.02	2.39
	2.70	0.45	0.47	1.60	1.86	1.84	2.17
	2.80	0.35	0.36	1.22	1.42	1.40	1.65
	2.90	0.19	0.20	0.66	0.77	0.76	0.90
	3.00	0.00	0.00	0.00	0.00	0.00	0.00



DEAD LOAD DEFLECTION DIAGRAM

No Scale



POURING SEQUENCE

No Scale

Note: Pours with the same number may be poured simutaneously or seperately. Pour (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. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. Concrete in bridge superstructure shall be consolidated for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.

$$$$dgnspec$$$$$

$$$$date$$$

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER

Larry W. Miller 8-11-12

BRIDGE ENGINEER

SHEET 4 OF 6
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. B6877)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: May 02 FILENAME: bBB0407bl sl4.dgn
CHECKED BY: JLH DATE: May 02 SCALE: N.T.S.
DESIGNED BY: EMB DATE: May 02

BRIDGE NO. B6877 DRAWING NO. 48480

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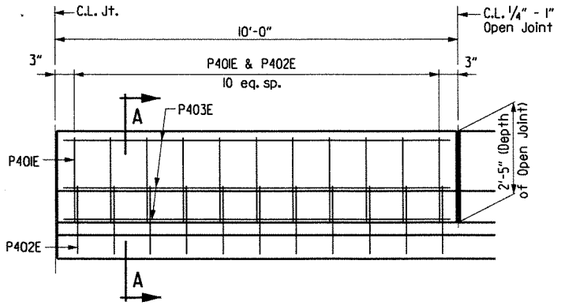
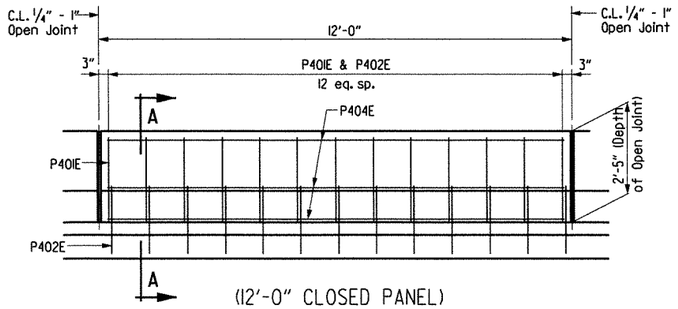
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	186	464
				① B6877		SPAN DTLS.		4848I



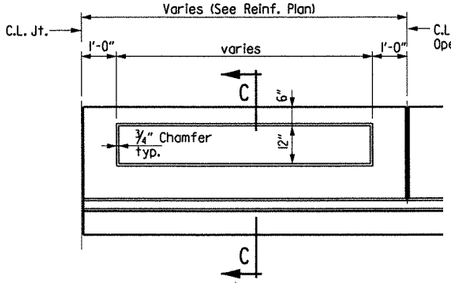
(10'-0" PANEL)



(12'-0" CLOSED PANEL)

DETAILS OF CONCRETE PARAPET RAIL

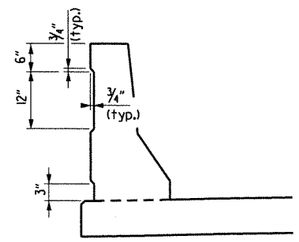
No Scale



DETAILS OF PARAPET ENHANCEMENT

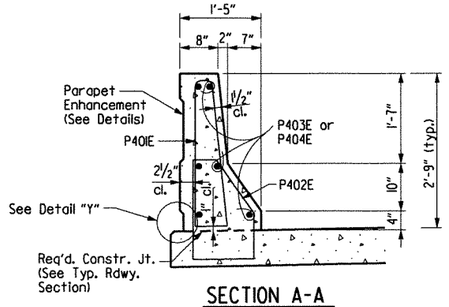
No Scale

Note: Enhancement required for concrete parapet rail only.



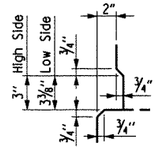
SECTION C-C

No Scale



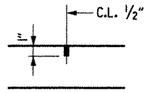
SECTION A-A

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



DETAIL "Y"

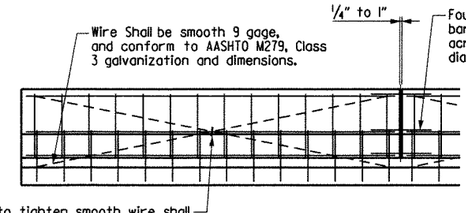
No Scale



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. 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. Slab joints shall align with parapet open joints.

SLAB JOINT DETAIL

No Scale

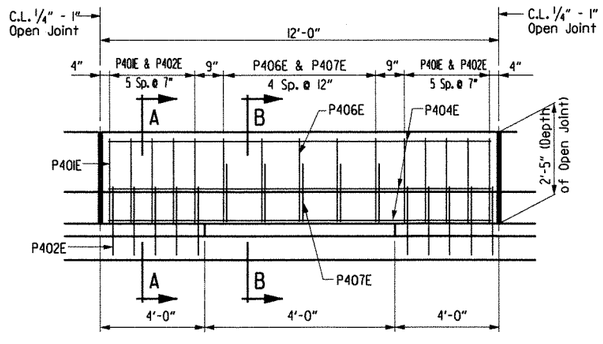


All panels shall be braced as shown to prevent racking. All open joints shall be sawed as soon as practical to a min. width of 1/4". To control cracking before sawing, all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.

The extruded parapet shall conform to the horizontal and vertical lines shown in the plans or as directed by the Engineer and shall present a smooth uniform appearance and texture. Exposed surfaces may be given a light brush finish or a Class 3 Textured Coating Finish in place of Class 2, Rubbed Finish.

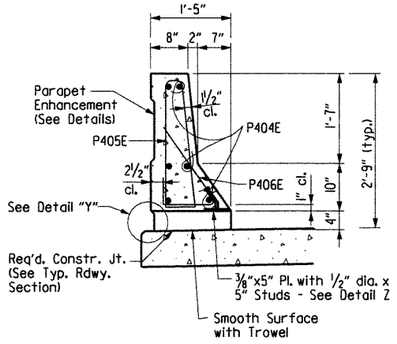
DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET

No Scale



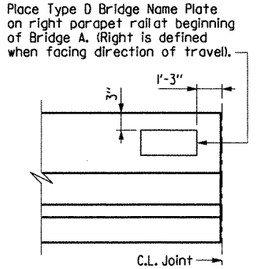
DETAILS OF OPEN CONCRETE PARAPET RAIL

No Scale



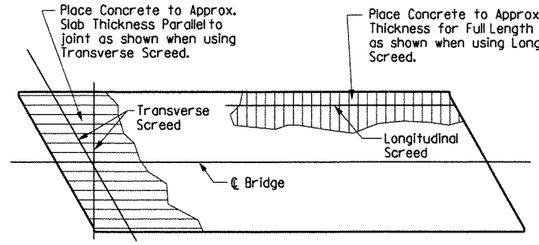
SECTION B-B

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



NAME PLATE DETAIL

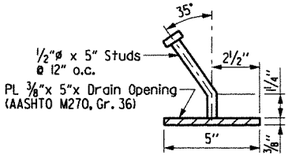
No Scale



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



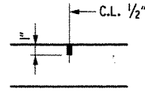
DETAIL Z

No Scale

Note:

Parapet Studs shall be 5" long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be measured and paid for as Structural Steel in Beam Spans (M270, Gr. 50W)

The surfaces of the 3/8" Plates which will not be in contact with concrete shall be painted in accordance with Section 638, or as approved by the Engineer. Only one coat is required and shall be applied in the fabricator's shop. Painting will not be paid for directly, but will be considered subsidiary to Structural Steel in Beam Spans (M270, Gr. 50)



Use 1/2" x 1" 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. This joint shall be formed. Seal must be gray or other color similar to concrete.

LONGITUDINAL CONSTRUCTION JOINT DETAIL

No Scale

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER

8-11-12

BRIDGE ENGINEER

SHEET 5 OF 6

DETAILS OF

188'-0" CONT. COMP. W-BEAM UNIT

(BR. B6877)

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	TAR	DATE:	April 02	FILENAME:	bBB0407b1 sl5.dgn
CHECKED BY:	EMB	DATE:	May 02	SCALE:	As Shown
DESIGNED BY:	BCG/JLH	DATE:	Feb 02		

BRIDGE NO. B6877 DRAWING NO. 4848I

$$$$date$$$$

$$$$dgnspec$$$$$*

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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
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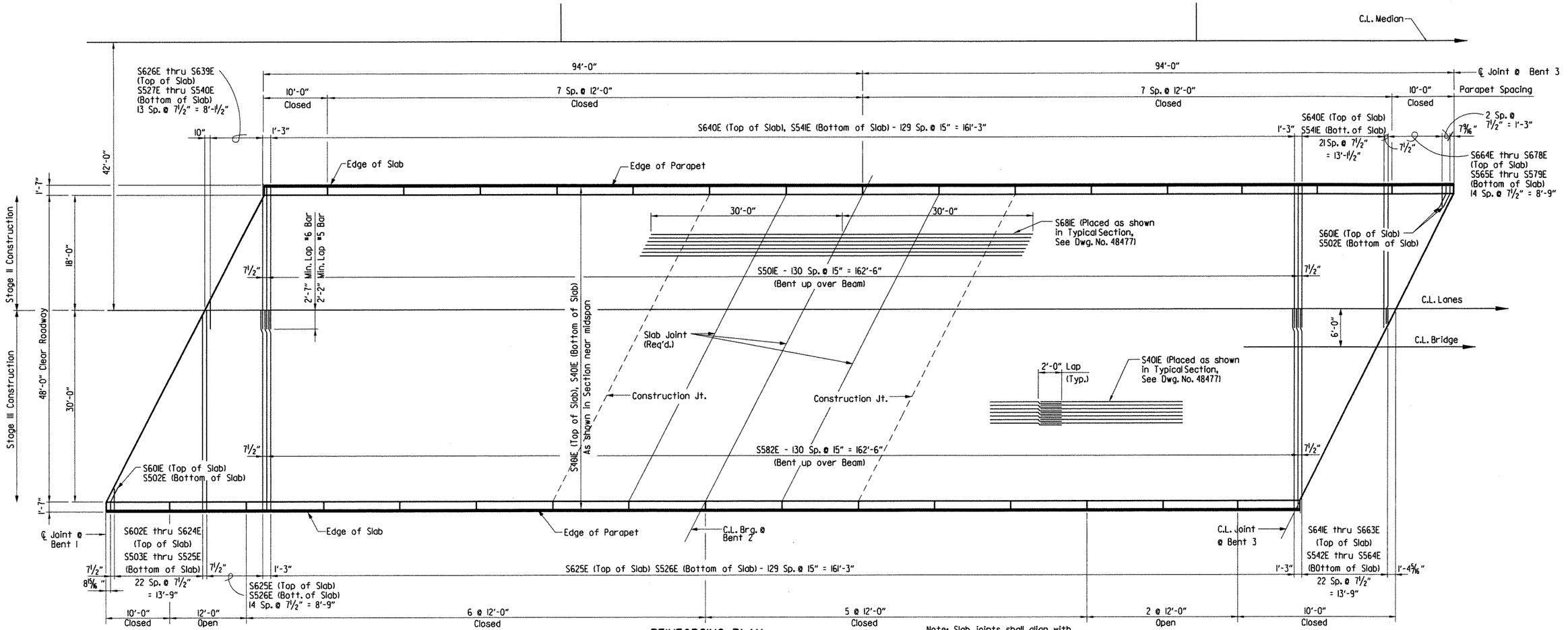
				JOB NO.		BB0407	187	464
				① B6877		SPAN DTLS.		48482



REINFORCING PLAN

No Scale

Note: Slab joints shall align with parapet joints at gutterline.

BAR LIST

Mark	No. Req'd.	Length	Pin Dia.
S40IE	620	39'-2"	STR.
S50IE	131	22'-7"	3"
S502E	3	3'-10"	3¾"
S503E-S525E	IEA.	Varies 3'-6" to 30'-6"	STR.
S526E	145	31'-5"	STR.
S527E-S540E	IEA.	Varies 3'-9" to 19'-7"	STR.
S541E	152	21'-7"	STR.
S542E-S564E	IEA.	Varies 29'-2" to 2'-4"	STR.
S565E-S579E	IEA.	Varies 21'-9" to 3'-6"	STR.
S580E	Not Used		
S58IE	Not Used		
S582E	31	32'-2"	3"
S60IE	3	3'-10"	4½"
S602E-S624E	IEA.	Varies 3'-6" to 30'-6"	STR.
S625E	145	31'-5"	STR.

Mark	No. Req'd.	Length	Pin Dia.
S626E-S639E	IEa.	Varies 4'-2" to 20'-0"	STR.
S640E	152	22'-0"	STR.
S641E-S663E	IEa.	Varies 29'-2" to 2'-4"	STR.
S664E-S678E	IEa.	Varies 21'-9" to 3'-6"	STR.
S679E	Not Used		
S680E	Not Used		
S68IE	54	60'-0"	STR.
P40IE	405	6'-4"	2"
P402E	405	5'-7"	2"
P403E	24	9'-8"	STR.
P404E	168	11'-8"	STR.
P405E	15	5'-10"	2"
P406E	15	3'-2"	2"

Bending Diagrams
(Dimensions are out to out of bars.)

Note: All bars designated with an "E" suffix are to be epoxy coated.

Notes:

For Details of Concrete Parapet Railing & Reinforcing, See Dwg. No. 48481

For Additional Details & Notes, See Dwg. No. 48477

Note: At the Contractor's option, two straight epoxy coated #5 bars may be substituted for the S501E and S582E bars. Payment for reinforcing will be based on the S501E and S582E bars.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY E. MILLER

8-11-12

BRIDGE ENGINEER

SHEET 6 OF 6
DETAILS OF
188'-0" CONT. COMP. W-BEAM UNIT
(BR. B6877)
ROUTE I-540 SEC. I

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407bl.sl6.dgn
CHECKED BY: EMB DATE: April 02 SCALE: As Shown
DESIGNED BY: JLH DATE: April 02

BRIDGE NO. B6877 DRAWING NO. 48482

$$$$date$$$

$$$$dgnspec$$$$$

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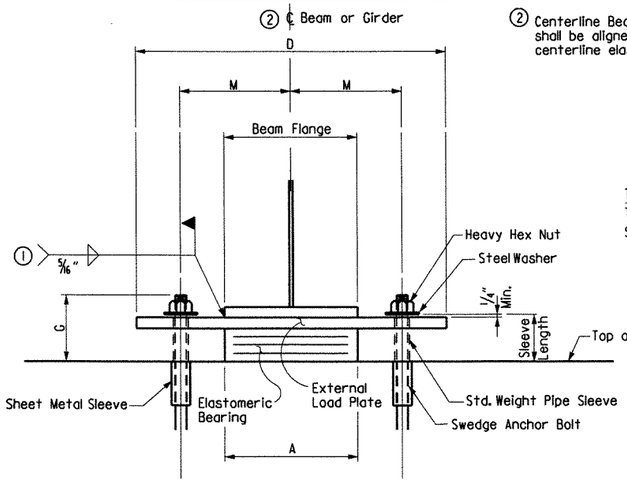
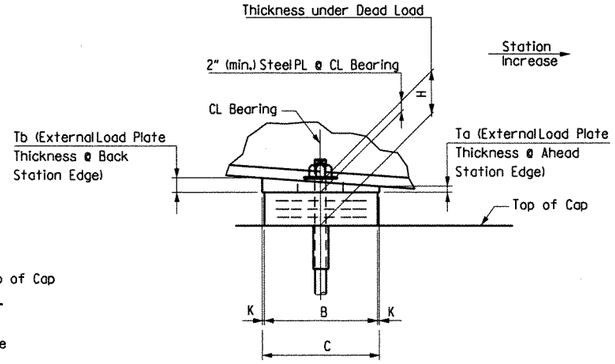
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	188	464
				① A6877, B6877		ELASTO. BRGS.		48483



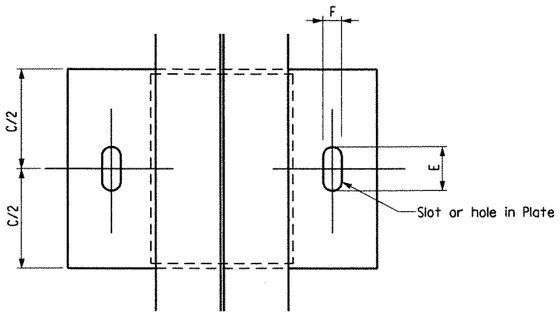
FRONT VIEW

② Centerline Beam or Girder shall be aligned with centerline elastomeric pad.

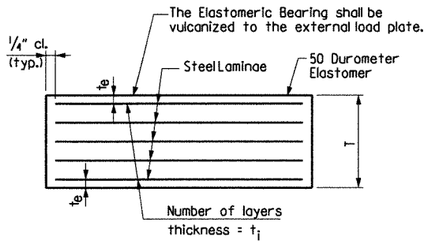


SIDE VIEW

① Care shall be taken to ensure that the external load plate is in full and complete contact with the beam or girder flange before welding begins.



PLAN VIEW

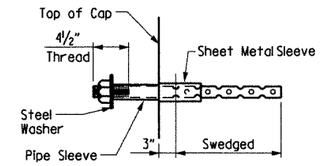


t_e = thickness of elastomer cover on top and bottom of pad

t_i = thickness of elastomer between steel laminae

N = number of elastomer layers of thickness t_i

ELASTOMERIC BEARING



ANCHOR BOLT DETAIL

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 QPL 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 subsidary to the item "Structural Steel in Beam Spans, (M 270, Gr. 50)"

GENERAL NOTES

Elastomeric Bearings shall conform to Special Provision Job BB0407 "Elastomeric Bearings" and Section 808 of the Standard Specifications and shall be paid for at the unit price bid for "Elastomeric Bearings." Long-duration testing of random lot samples specified in subsection 808.05 is not required.

External load plates 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 shall be completely fabricated (including bevel and bolt holes) and shall be cleaned before vulcanizing to the elastomeric bearing. The surface in contact with the elastomeric bearing shall be cleaned in accordance with Section 808. Other surfaces shall be blast cleaned in accordance with subsection 807.84(b) for painted steel or 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 will not be measured or paid for separately but will be considered included in the unit price bid for "Elastomeric Bearings".

Unless otherwise approved by the Engineer, welding of the external load plate at expansion bearings to the girder 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.

External load Plates shall be painted in accordance with subsection 807.75. The color of the paint shall be Gray and shall match Fed. Std. 595B, Color Chip No. 26176.

TABLE OF FABRICATOR VARIABLES

BRIDGE NO.	LOCATION: BENT NO(S).	UNIT	BEAM OR GIRDER NO.	BEARING TYPE	NO. of BEARINGS EACH BENT	• MAXIMUM DESIGN LOAD (KIPS)	ELASTOMERIC PAD: G	H	A	B	N	t_i	t_e	NO. & THICKNESS OF STEEL LAMINAE	T	EXTERNAL LOAD PLATE: C	D	E	F	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.)
A6877	1	I88'	All	Exp	9	109.3	6 1/4"	4 1/4"	12 3/4"	12 3/4"	3	7/16"	1/4"	4 @ 12 Ga.	2 1/4"	13 3/4"	22 3/4"	3 3/4"	2 1/4"	1/2"	8 5/8"	1.94"	2.07"	1 1/2" x 22"	55	1 1/2" x 4 1/2"	3" x 6"	3"
	2	I88'	All	Fix	9	173.0	8 1/2"	4 11/16"	16"	16"	4	7/16"	1/4"	5 @ 12 Ga.	2 3/4"	17"	29"	3 3/4"	3 3/4"	1/2"	11"	1.88"	2.12"	2 1/2" x 36"	55	3" x 5"	4" x 8"	4 1/2"
	3	I88'	All	Exp	9	109.3	6 1/4"	4 1/4"	12 3/4"	12 3/4"	3	7/16"	1/4"	4 @ 12 Ga.	2 1/4"	13 3/4"	22 3/4"	3 3/4"	2 1/4"	1/2"	8 5/8"	1.87"	2.13"	1 1/2" x 22"	55	1 1/2" x 4 12"	3" x 6"	3"
B6877	1	I88'	All	Exp	7	109.3	6 1/4"	4 1/4"	12 3/4"	12 3/4"	3	7/16"	1/4"	4 @ 12 Ga.	2 1/4"	13 3/4"	26"	3 3/4"	2 1/4"	1/2"	10 1/4"	1.95"	2.05"	1 1/2" x 22"	55	1 1/2" x 4 1/2"	3" x 6"	3"
	2	I88'	All	Fix	7	173.0	9"	4 11/16"	16"	16"	4	7/16"	1/4"	5 @ 12 Ga.	2 3/4"	17"	29 1/4"	3 3/4"	3 3/4"	1/2"	11 1/4"	1.90"	2.10"	2 3/4" x 39"	55	3" x 5"	5" x 7"	5"
	3	I88'	All	Exp	7	109.3	6 1/4"	4 1/4"	12 3/4"	12 3/4"	3	7/16"	1/4"	4 @ 12 Ga.	2 1/4"	13 3/4"	26"	3 3/4"	2 1/4"	1/2"	10 1/4"	1.89"	2.11"	1 1/2" x 22"	55	1 1/2" x 4 1/2"	3" x 6"	3"

•Maximum Design Load = Service Load

Tabular Data by: TAR Date: May 02

Checked by: JLH Date: May 02

Designed by: BCG Date: Jan 02

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER

8-11-12

BRIDGE ENGINEER

DETAILS OF ELASTOMERIC BEARINGS

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407mlel.dgn

CHECKED BY: EMB DATE: May 02 SCALE: N.T.S.

DESIGNED BY: BCG/JLH DATE: Jan 02

BRIDGE NO. A6877, B6877 DRAWING NO. 48483

$$$$dgnspec$$$$$

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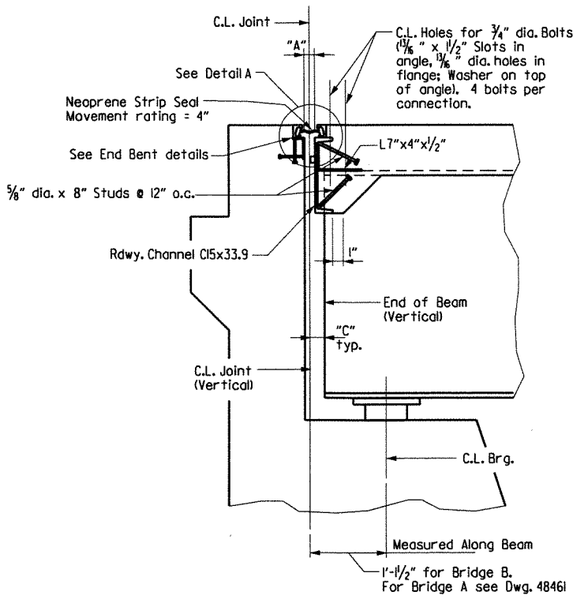
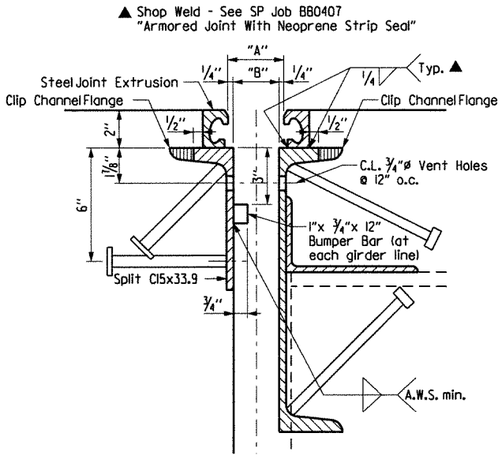
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	189	464
				(1) A6877, B6877		JOINT DETAILS		48484



SECTION THRU JOINT AT END BENTS

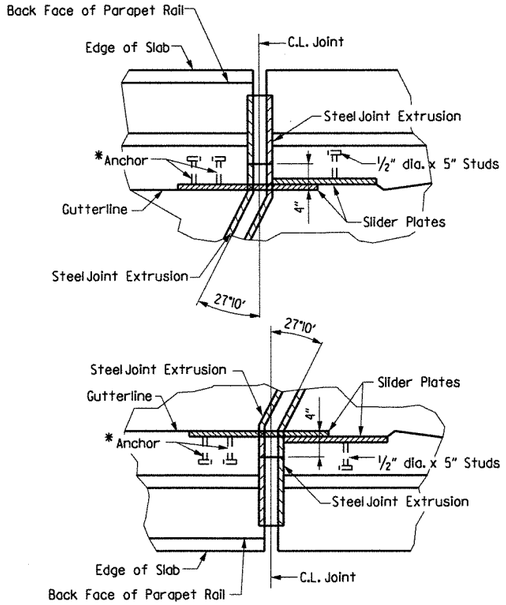
Note: Sections thru Joints are taken normal to C.L. Joints



DETAIL A

3" = 1'-0"

Note: Concrete shall be hand packed under the joint armor in the backwall and in the span.



SECTION C-C AT END BENTS

* The method of attachment of the cover slider plate assembly or similar device must be such that it may be removed in order to provide for future replacement of the neoprene seal.

Anchors will not be paid for directly but will be considered subsidiary to "STRUCTURAL STEEL IN BEAM SPANS (M 270, GRADE 50)".

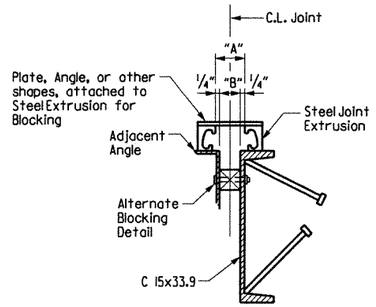
GENERAL NOTES

EXPANSION NEOPRENE STRIP SEAL: The expansion device shall provide a movement of 4" as shown in the "STRIP SEAL JOINT DATA" table. The expansion joint shall be capable of sealing the deck surface and parapet area to prevent moisture and other contaminants from descending through the joint.

Details of proposed slider plate assembly shall be submitted to and approved by the Engineer prior to the fabrication of any structural steel at the expansion device.

All structural steel shall be AASHTO M 270, Grade 50 unless otherwise noted. All steel surfaces are to be cleaned and painted in accordance section 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

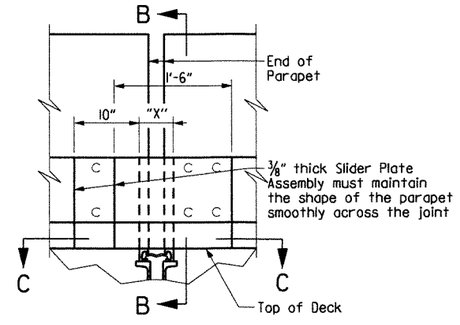
All structural steel, except for the steel extrusion for the strip seal, shall be paid for as "STRUCTURAL STEEL IN BEAM SPANS (M 270, Grade 50)". The steel extrusion and neoprene strip seal shall be paid for in accordance with Special Provision Job BB0407 "ARMORED JOINT WITH NEOPRENE STRIP SEAL".



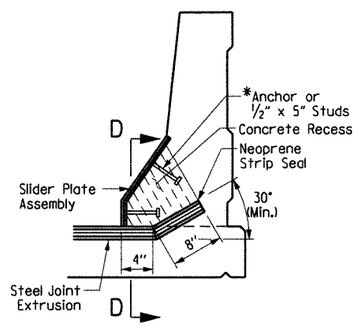
Note:
Each Expansion Joint device shall be blocked in the shop by the Fabricator to the dimension shown for 60° F and the blocking details shall be shown on the Shop Drawings. Blocking shall be placed within 2 feet of each end of the device and with a maximum spacing of 8 feet.

DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

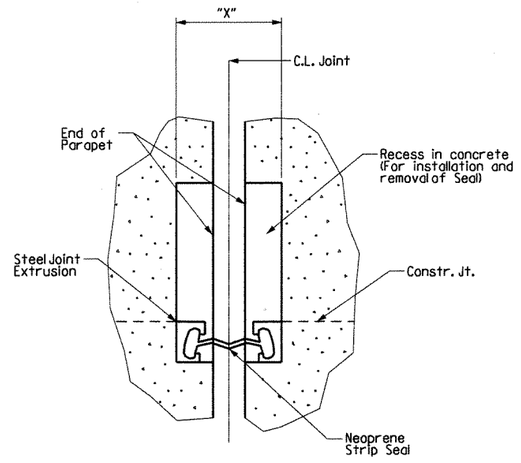
EXPANSION DEVICE INSTALLATION AT END BENTS:
The concrete span pour shall be placed before the end bent backwall concrete is placed. After beams or girders are erected the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, the opening adjusted for temperature and grade, and the backwall constructed.



DETAIL OF NEOPRENE SEAL AT GUTTERLINE



SECTION B-B



SECTION D-D

Note: Dimension "X" equals the width of opening in parapet at curb to allow for removal or repair of joint.

STRIP SEAL JOINT DATA

Bent No.(s)	Movement Rating (inch)	"A" Width Perpendicular to Joint at 24 Hour Average Temperature **of: 40° F	60° F	80° F	"B" Width Perpendicular to Joint at 24 Hour Average Temperature **of: 40° F	60° F	80° F	"C" Perpendicular to Joint at 24 Hour Average Temperature of 60° F
1 and 3	4"	2 5/8"	2 1/2"	2 3/8"	2 1/8"	2"	1 7/8"	2 1/4"

** 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.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER

Larry W. Miller 8-11-12

BRIDGE ENGINEER

DETAILS OF ARMORED JOINT WITH NEOPRENE STRIP SEAL HWY. 22 - I-40(F) CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407m1_jl.dgn
CHECKED BY: EMB DATE: May 02 SCALE: N.T.S.
DESIGNED BY: BCG DATE: Feb 02

BRIDGE NO. A6877, B6877 DRAWING NO. 48484

$$$$date$$$$

$$$$dgnspec$$$$$

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.		BB0407	190	464
				① A6877, B6877		GENERAL NOTES		48485

SUPERSTRUCTURE GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 2003 edition, with applicable special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1996 with current interim specifications.

LIVE LOADING: HS20 - 44 + Military Loading METHOD OF DESIGN: Load Factor

MATERIALS AND STRENGTHS:

Concrete: All concrete shall be Class S(AE) with minimum 28 day compressive strength f'c = 4000 psi.

Reinforcing Steel: Reinforcing steel shall conform to AASHTO M31 or M53, Grade 60 (Yield Strength = 60,000 psi.)

Structural Steel: Structural Steel shall conform to AASHTO M270, Gr. 50 (Fy = 50,000 psi.) and AASHTO M270, Gr. 36 (Fy = 36,000 psi.).

Elastomeric Bearings: For Elastomeric Bearings, see Dwg. No. 48483

STRUCTURAL STEEL:

All structural steel shall be AASHTO M270, Gr. 50 unless otherwise noted and shall be paid for as Structural Steel in Beam Spans (M270, Gr. 50). All exposed surfaces to be cleaned in accordance with subsection 807.84(b) of the standard specifications unless noted otherwise. See Dwg. No. 48483 for cleaning requirements of external load plates on elastomeric bearings. Structural steel completely embedded in concrete may be AASHTO M270, Gr. 36.

Structural steel shall be painted as specified in subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

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 acepted 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.

Longitudinal beams and all field splice plates are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Section 807.05 of the Standard Specifications. This work and material will not be paid for directly but are considered subsidary to the item "Structural Steel in Beam Spans (M270, Gr. 50)".

Flange field splice plates 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 beams shall be blocked in their true position in the shop in groups of a minimum of three sections. Beams shall be blocked with webs horizontal. See Section 807.54 (b)(2) of the Standard Specifications. The camber, length of sections, distance between bearings, and openings of joints shall be measured with the beams in their true position. This information shall become a part of the permanent records of this job. 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°F. A tolerance of plus or minus 1/4" is allowed for camber.

Anchor bolts shall be galvanized according to subsection 807.07 and shall be Grade 55.

Elastomeric Bearings shall be firmly seated in accordance with subsection 808.08 of the specifications. This work to be considered subsidiary to the item "Elastomeric Bearings" and will not be paid for directly.

Field connections to be bolted with high strength bolts. For 3/4" dia. bolts: Open holes = 13/16" unless otherwise noted. Bolt spacing = 2 1/2" unless otherwise noted. Minimum edge distance = 1 1/4" unless otherwise noted. For 7/8" dia. bolts: Open holes = 15/16" unless otherwise noted. Bolt spacing 3" unless otherwise noted. Minimum edge distance = 1 1/2" unless otherwise noted. Bolts shall be placed with heads on the outside face of the exterior beam webs and on bottom of beam flanges.

Holes for 3/4" dia. high strength bolts in diaphragms may be 15/16" dia. if a washer is supplied for use under both the nut and the head of the bolt.

Diaphragms shall be installed as beams are erected. All bolts in diaphragms and field splices shall be installed and completely tightened prior to pouring of floor slabs except as noted otherwise.

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 Section 807.26.

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.

All stud shear connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with the recommendations of the manufacturer.

REINFORCING STEEL:

The reinforcing steel shall be accurately located in the forms and firmly held in place by steel wire supports sufficient in size and number 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 of "Epoxy Coated Reinforcing Steel (Grade 60)".

CONCRETE:

Concrete shall be poured in the dry and all exposed corners to be chamfered 3/4" 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.

LOAD DISTRIBUTION TO BEAMS:

	BRIDGE A (Note: Barrier weight distributed to 3 outside beams only.)								BRIDGE B	
	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beams 7 & 8	Beam 9	Beams 1 & 7	Beams 2 - 6
Dead Load: To W-Beam	Varies 722 to 471 PLF + 1.3 (wt./ft. of W-Bm.)	Varies 938 to 448 PLF + 1.3 (wt./ft. of W-Bm.)	Varies 927 to 438 PLF + 1.3 (wt./ft. of W-Bm.)	Varies 916 to 438 PLF + 1.3 (wt./ft. of W-Bm.)	Varies 873 to 633 PLF + 1.3 (wt./ft. of W-Bm.)	738 PLF + 1.3 (wt./ft. of W-Bm.)	738 PLF + 1.3 (wt./ft. of W-Bm.)	691 PLF + 1.3 (wt./ft. of W-Bm.)	733 PLF + 1.3 (wt./ft. of W-Bm.)	837 PLF + 1.3 (wt./ft. of W-Bm.)
Dead Load: To Composite Beam	Varies 256 to 201 PLF Includes 130 to 74 PLF Future Wearing Surface	Varies 331 to 223 PLF Includes 204 to 96 PLF Future Wearing Surface	Varies 328 to 220 PLF Includes 202 to 94 PLF Future Wearing Surface	Varies 178 to 94 PLF All Future Wearing Surface	Varies 190 to 137 PLF All Future Wearing Surface	182 PLF All Future Wearing Surface	435 PLF Includes 182 PLF Future Wearing Surface	369 PLF Includes 116 PLF Future Wearing Surface	288 PLF Includes 159 PLF Future Wearing Surface	311 PLF Includes 184 PLF Future Wearing Surface
Live Load: To Each Composite Beam	Varies 0.576 to 0.816 Wheels + Impact	Varies 1.945 to 0.727 Wheels + Impact	Varies 1.527 to 0.709 Wheels + Impact	Varies 1.509 to 0.709 Wheels + Impact	Varies 1.436 to 1.036 Wheels + Impact	1.394 Wheels + Impact	1.394 Wheels + Impact	1.242 Wheels + Impact	1.242 Wheels + Impact	1.394 Wheels + Impact

$$$$dgnspec$$$$$

$$$$date$$$$

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER

Larry W. Miller 8-11-12

BRIDGE ENGINEER

GENERAL NOTES AND MISC. DETAILS
FOR CONTINUOUS COMP. W-BEAM UNITS
(BR. A6877, B6877)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407m1_sl.dgn
CHECKED BY: EMB DATE: May 02 SCALE: N.T.S.
DESIGNED BY: BCG DATE: Feb 02

BRIDGE NO. A6877, B6877 DRAWING NO. 48485

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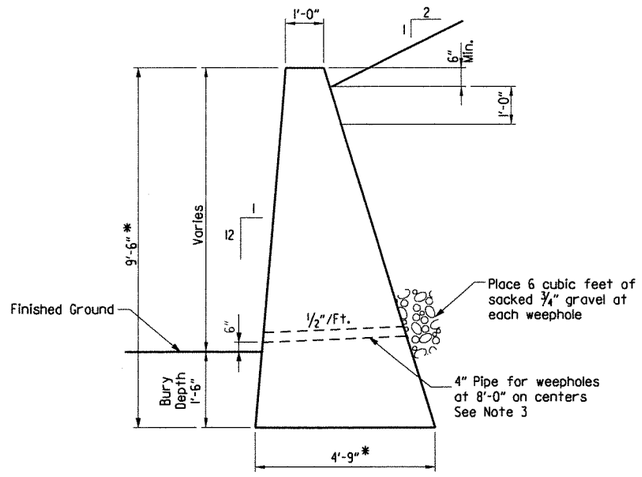
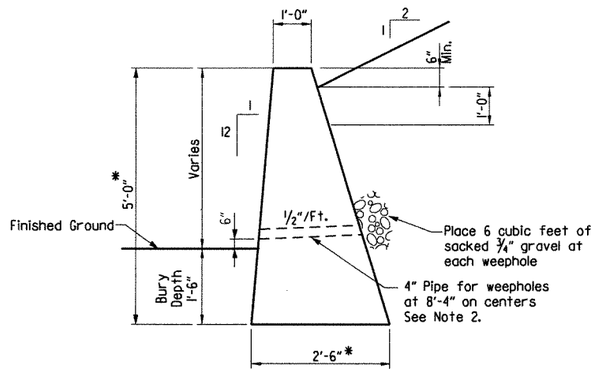
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	191	464
				(1) A6877, B6877		SPAN DTLS.		48486



SECTION A-A



VIEW B-B

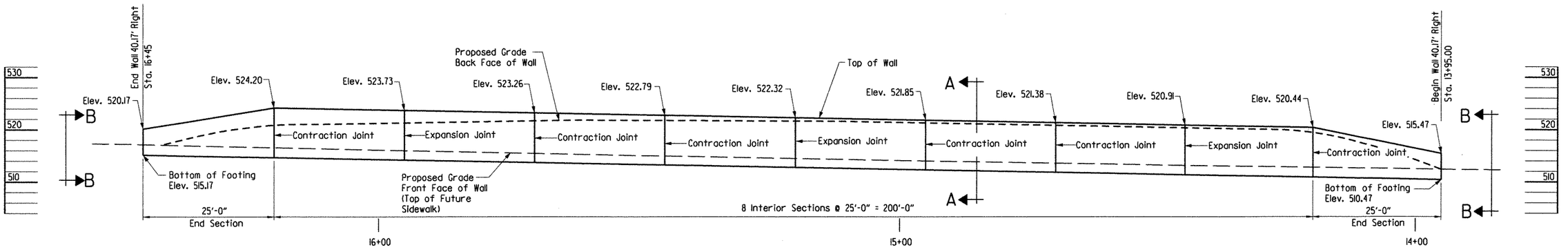
Notes:

1 Concrete - Class S f'c = 3500 psi

2 Weephole Pipe - AASHTO M304 (PVC Wall Drain Pipe) or AASHTO M252 (Corrugated HDPE - Type S)

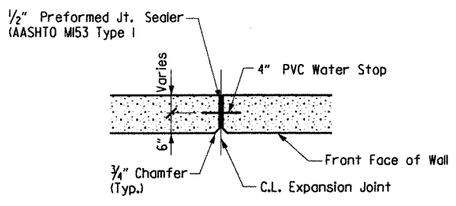
3 Payment for gravity retaining wall will be made under items, Class S Concrete - Roadway, and includes costs of contraction and expansion joints, weephole pipes, sacked gravel and structural excavation.

* May vary if bury depth changes to found base of wall on rock. Change base bottom width 1/2" for each 1" change in wall height. If rock is encountered, extend footing 6" into rock.



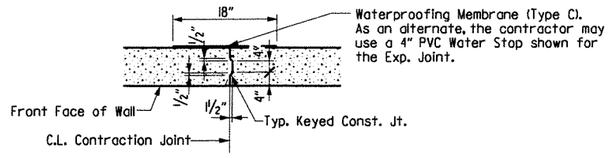
GRAVITY RETAINING WALL ELEVATION

ROGERS AVENUE (S.H. 22)



Note: The 4" Water Stop shall extend the full wall height.

TYPICAL EXPANSION JOINT DETAIL



TYPICAL CONTRACTION JOINT DETAIL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13339 LARRY W. MILLER

8-11-12

BRIDGE ENGINEER

DETAILS OF
GRAVITY RETAINING WALL
(BR. A6877, B6877)

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB DATE: April 02
DESIGNED BY: ETH DATE: March 02
FILENAME: bBB0407ml_wl.dgn
SCALE: N.T.S.

BRIDGE NO. A6877, B6877 DRAWING NO. 48486

$$$$date$$$

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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
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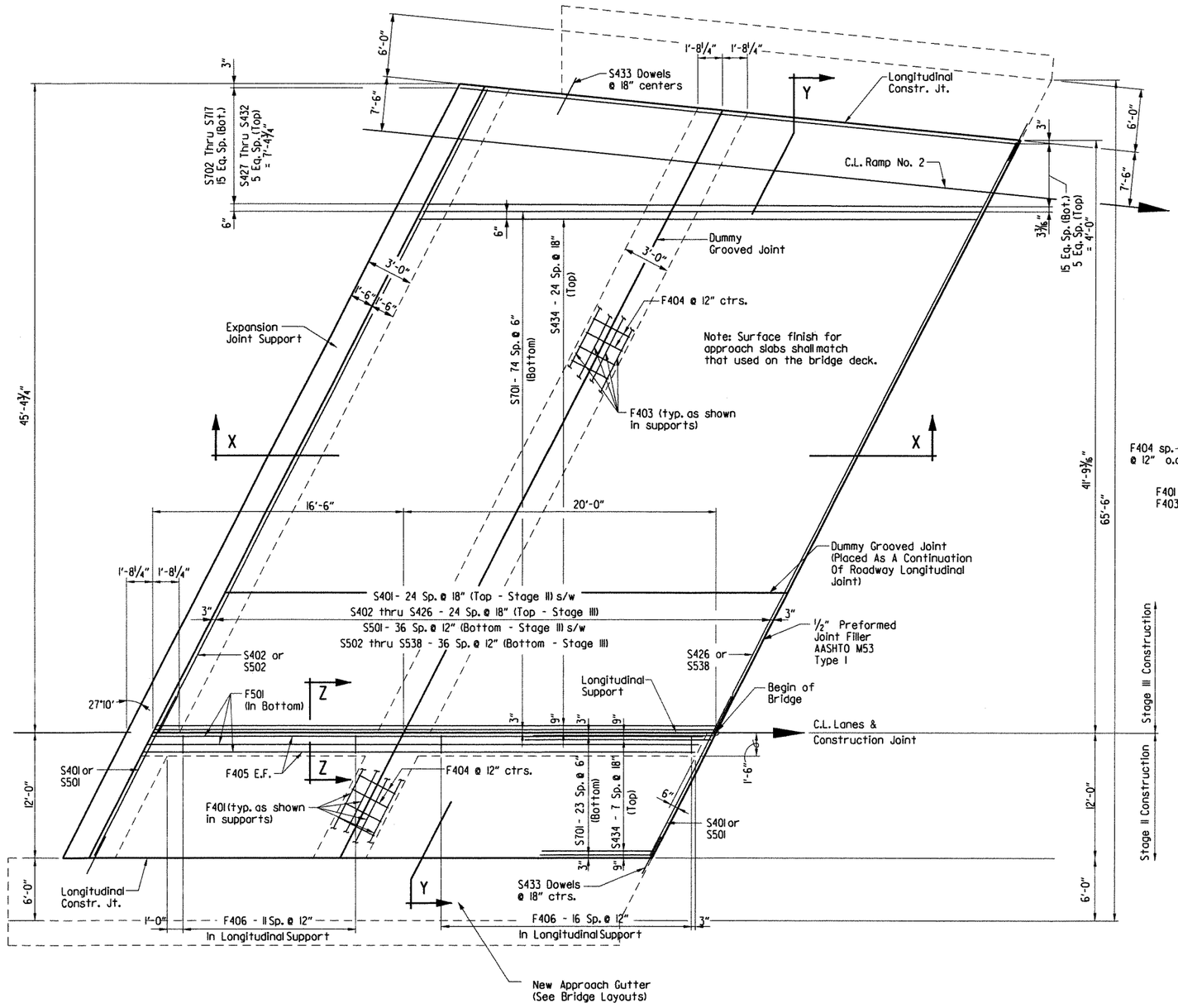
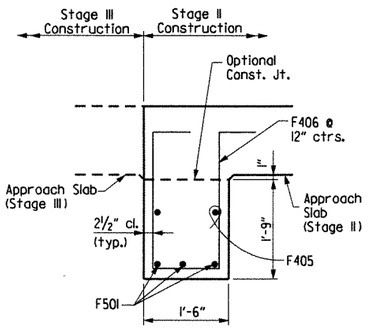
				JOB NO.		BB0407	192	464
				(1) A6877		APPR. SLAB		48487



PLAN VIEW - BEGIN BRIDGE
Scale: ¼" = 1'-0"



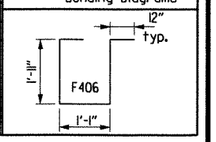
SECTION Z-Z
(DETAILS OF LONGITUDINAL SUPPORT)
Scale: ¾" = 1'-0"

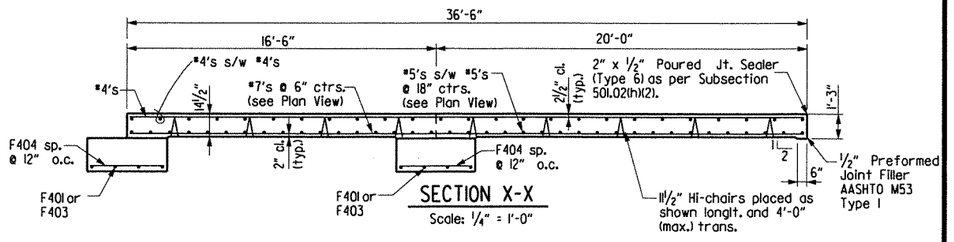
BAR LISTS (ONE APPROACH SLAB)

Mark	No. Req'd.	Length	Pin. Dia.
S401	25	15'-4"	STR.
S402-S426	1 ea.	50'-7" to 46'-9"	STR.
S427-S432	1 ea.	36'-0" to 34'-7"	STR.
S433	48	4'-0"	STR.
S434	33	36'-2"	STR.
S501	37	15'-6"	STR.
S502-S538	1 ea	50'-7" to 46'-9"	STR.
S701	99	36'-2"	STR.
S702-S717	1 ea.	36'-0" to 34'-7"	STR.

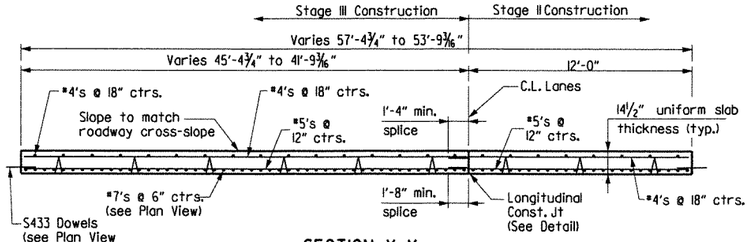
Mark	No. Req'd.	Length	Pin. Dia.
F401	8	15'-4"	STR.
F402	Not	Used	
F403	8	46'-9"	STR.
F404	132	2'-8"	STR.
F405	2	36'-2"	STR.
F406	29	6'-7"	2"
F501	3	36'-2"	STR.

Bending Diagrams





SECTION X-X
Scale: ¼" = 1'-0"



SECTION Y-Y
Scale: ¼" = 1'-0"

GENERAL NOTES FOR APPROACH SLABS

Concrete shall be Class S(AE) concrete (fc' = 4,000 psi)

Reinforcing Steel shall conform to AASHTO M31 or M53, Grade 60 (Yield strength = 60,000 p.s.i.).

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

QUANTITIES
(FOR INFORMATION ONLY)

Concrete	Reinforcing Steel
Cu. Yds.	Lbs.
116.8	13,941

Note:
For details of Expansion Joint Support, Interior Support & Longitudinal Construction Joint, See Dwg. No. 48488

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11339
LARRY W. MILLER
Larry W. Miller 8-11-12
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF
TYPE SPECIAL 1 APPROACH SLAB
(BR. A6877)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: May 02
CHECKED BY: EMB/ETH DATE: May 02
DESIGNED BY: JLH DATE: May 02
FILENAME: bBB0407al_asl.dgn
SCALE: As Shown

BRIDGE NO. A6877 DRAWING NO. 48487

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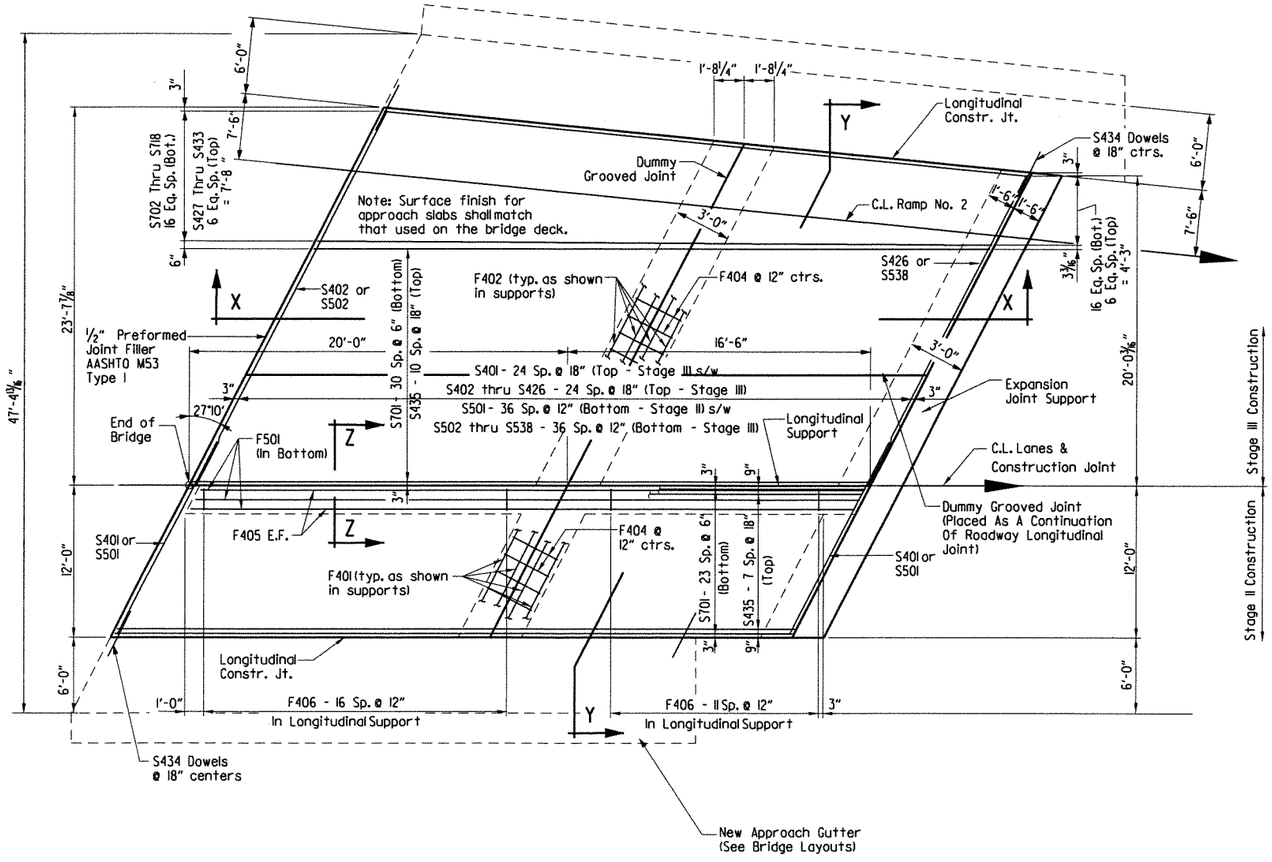
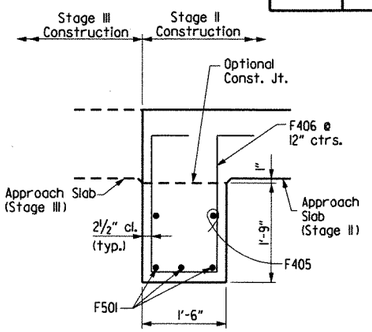
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	193	464
				(1) A6877		APPR. SLAB		48488



PLAN VIEW - END BRIDGE

Scale: ¼" = 1'-0"



SECTION Z-Z (DETAILS OF LONGITUDINAL SUPPORT)

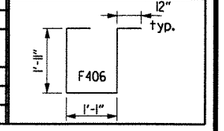
Scale: ¾" = 1'-0"

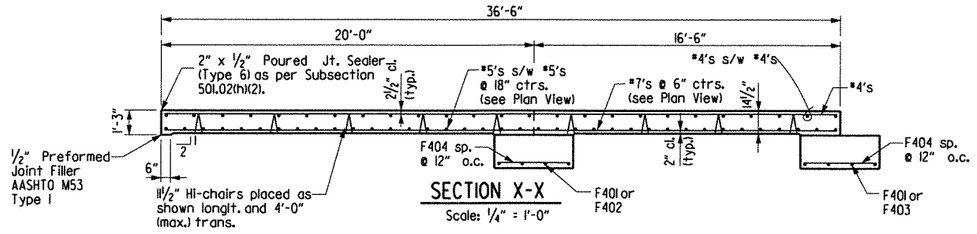
BAR LISTS (ONE APPROACH SLAB)

Mark	No. Req'd.	Length	Pin. Dia.
S401	25	15'-4"	STR.
S402-S426	1 ea.	26'-4" to 22'-7"	STR.
S427-S433	1 ea.	36'-0" to 34'-6"	STR.
S434	48	4'-0"	STR.
S435	19	36'-2"	STR.
S501	37	15'-6"	STR.
S502-S538	1 ea	26'-4" to 22'-7"	STR.
S701	55	36'-2"	STR.
S702-S718	1 ea.	36'-0" to 34'-6"	STR.

Mark	No. Req'd.	Length	Pin. Dia.
F401	8	15'-4"	STR.
F402	4	24'-1"	STR.
F403	4	22'-7"	STR.
F404	72	2'-8"	STR.
F405	2	36'-2"	STR.
F406	29	6'-7"	2"
F501	3	36'-2"	STR.

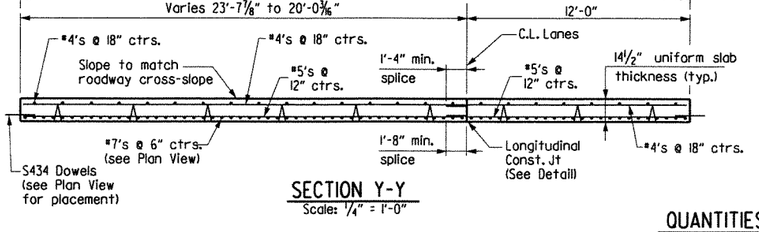
Bending Diagrams





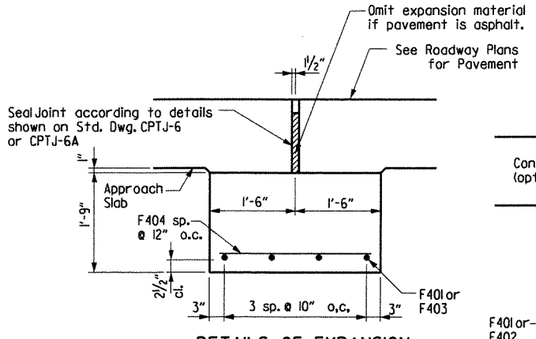
SECTION X-X

Scale: ¼" = 1'-0"



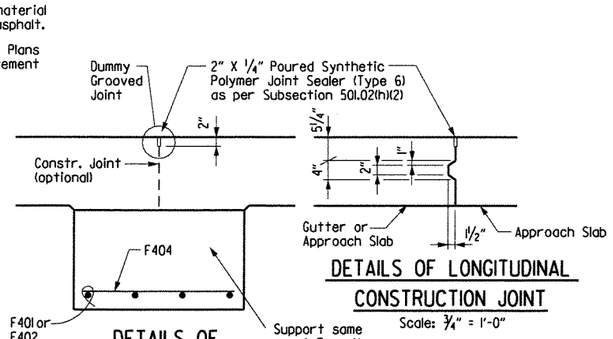
SECTION Y-Y

Scale: ¼" = 1'-0"



DETAILS OF EXPANSION JOINT SUPPORT

Scale: ¾" = 1'-0"



DETAILS OF INTERIOR SUPPORT

Scale: ¾" = 1'-0"

DETAILS OF LONGITUDINAL CONSTRUCTION JOINT

Scale: ¾" = 1'-0"

GENERAL NOTES FOR APPROACH SLABS

Concrete shall be Class S(AE) concrete (fc' = 4,000 psi)

Reinforcing Steel shall conform to AASHTO M31 or M53, Grade 60 (Yield strength = 60,000 p.s.i.).

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

QUANTITIES (FOR INFORMATION ONLY)

Concrete	Reinforcing Steel
Cu. Yds.	Lbs.
73.7	8,873

SHEET 2 OF 2

DETAILS OF

TYPE SPECIAL 2 APPROACH SLAB

(BR. A6877)

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS — LARRY E. MILLER — REGISTERED PROFESSIONAL ENGINEER — No. 11539

8-16-12

BRIDGE ENGINEER

DRAWN BY: TAR DATE: May 02 FILENAME: bBB0407al_as2.dgn

CHECKED BY: EMB DATE: May 02 SCALE: As Shown

DESIGNED BY: JLH DATE: May 02

BRIDGE NO. A6877 DRAWING NO. 48488

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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
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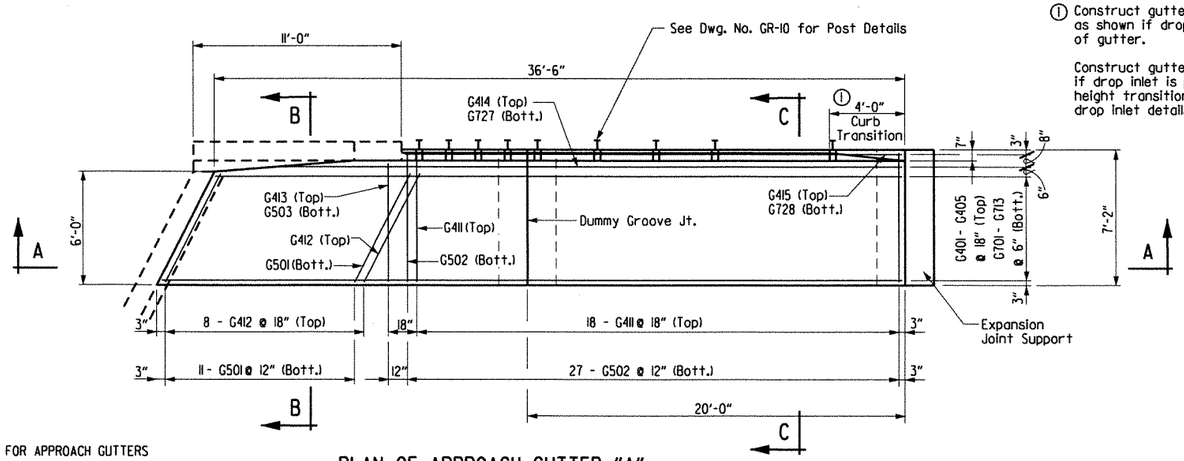
				JOB NO.		BB0407	124	464
				① A6877, B6877		APPR. GUTTER		48489



PLAN OF APPROACH GUTTER "A"

N.T.S.

① Construct gutter curb with height-transition as shown if drop inlet is not placed at end of gutter.

Construct gutter curb fullheight (no height-transition) if drop inlet is placed at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.

BAR LISTS (ONE APPROACH GUTTER "A")

Mark	No. Req'd.	Length	Pin. Dia.	Mark	No. Req'd.	Length	Pin. Dia.
G401 to G405	1ea.	39'-1" to 36'-3"	Str.	G701 to G713	1ea.	39'-1" to 36'-3"	Str.
G411	19	6'-10"	Str.	G727	1	33'-0"	Str.
G412	9	6'-5"	Str.	G728	1	26'-3"	Str.
G413	1	6'-3"	Str.				
G414	1	33'-0"	Str.	F401	8	6'-10"	Str.
G415	1	26'-3"	Str.	F402	14	2'-8"	Str.
G501	12	6'-10"	Str.				
G502	28	6'-5"	Str.				
G503	1	6'-3"	Str.				

BAR LISTS (ONE APPROACH GUTTER "B")

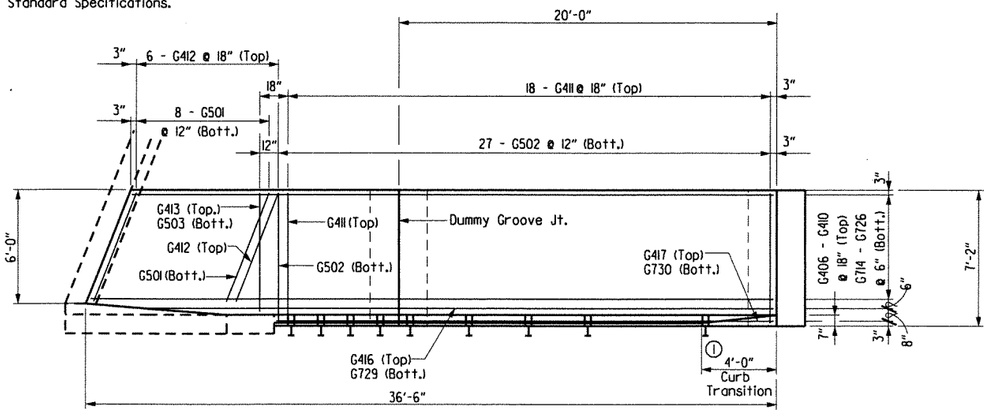
Mark	No. Req'd.	Length	Pin. Dia.	Mark	No. Req'd.	Length	Pin. Dia.
G406 to G410	1ea.	36'-0" to 33'-11"	Str.	G714 to G726	1ea.	36'-0" to 33'-11"	Str.
G411	19	6'-10"	Str.	G729	1	33'-0"	Str.
G412	7	6'-5"	Str.	G730	1	26'-3"	Str.
G413	1	6'-3"	Str.				
G416	1	33'-0"	Str.	F401	8	6'-10"	Str.
G417	1	26'-3"	Str.	F402	14	2'-8"	Str.
G501	9	6'-10"	Str.				
G502	28	6'-5"	Str.				
G503	1	6'-3"	Str.				

GENERAL NOTES FOR APPROACH GUTTERS

Concrete shall be Class S or Class S(AE)

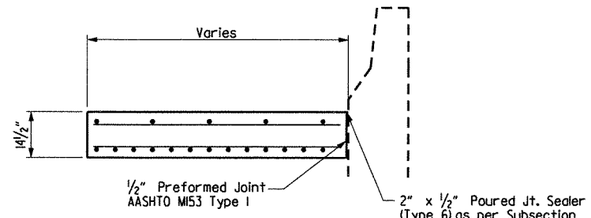
Reinforcing Steel shall conform to AASHTO M31 or M53, Grade 60 (fy = 60,000 p.s.i.).

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



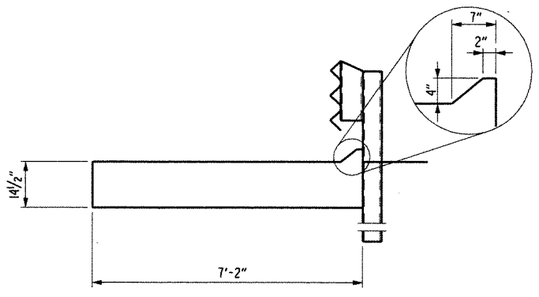
PLAN OF APPROACH GUTTER "B"

N.T.S.



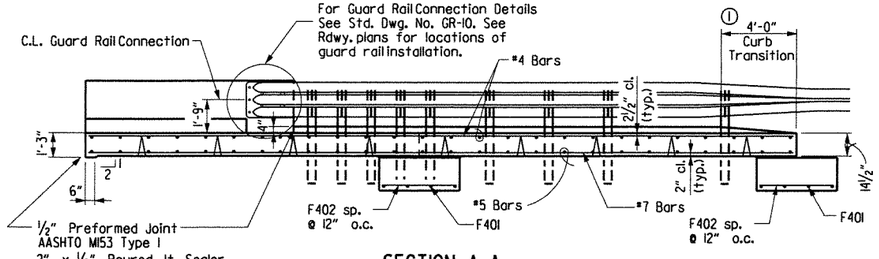
SECTION B-B

N.T.S.



SECTION C-C

N.T.S.

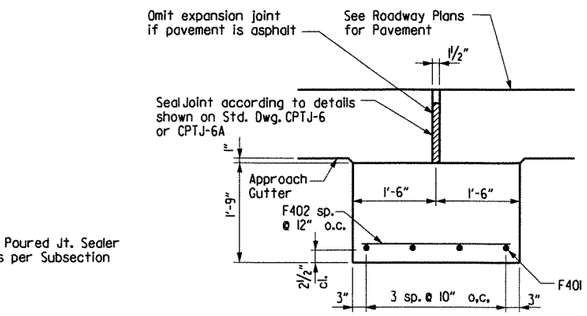


SECTION A-A

N.T.S.

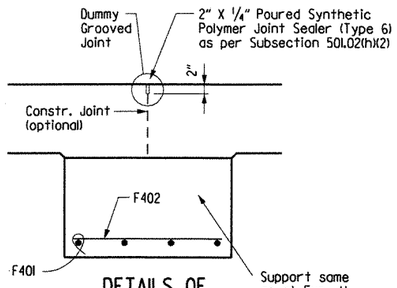
QUANTITIES (PER GUTTER)
(FOR INFORMATION ONLY)

Gutter "-"	Concrete	Reinforcing Steel
	Cu. Yds.	Lbs.
A	14.80	1758
B	14.00	1647



DETAILS OF EXPANSION JOINT SUPPORT

Scale: ¾" = 1'-0"



DETAILS OF INTERIOR SUPPORT

Scale: ¾" = 1'-0"

DETAILS OF TYPE SPECIAL I APPROACH GUTTER (BR. A6877, B6877)

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY E. MILLER

8-11-12

BRIDGE ENGINEER

DRAWN BY: TAR DATE: May 02 FILENAME: bBB0407ml gl.dgn

CHECKED BY: EMB DATE: May 02 SCALE: As Shown

DESIGNED BY: JLH DATE: May 02

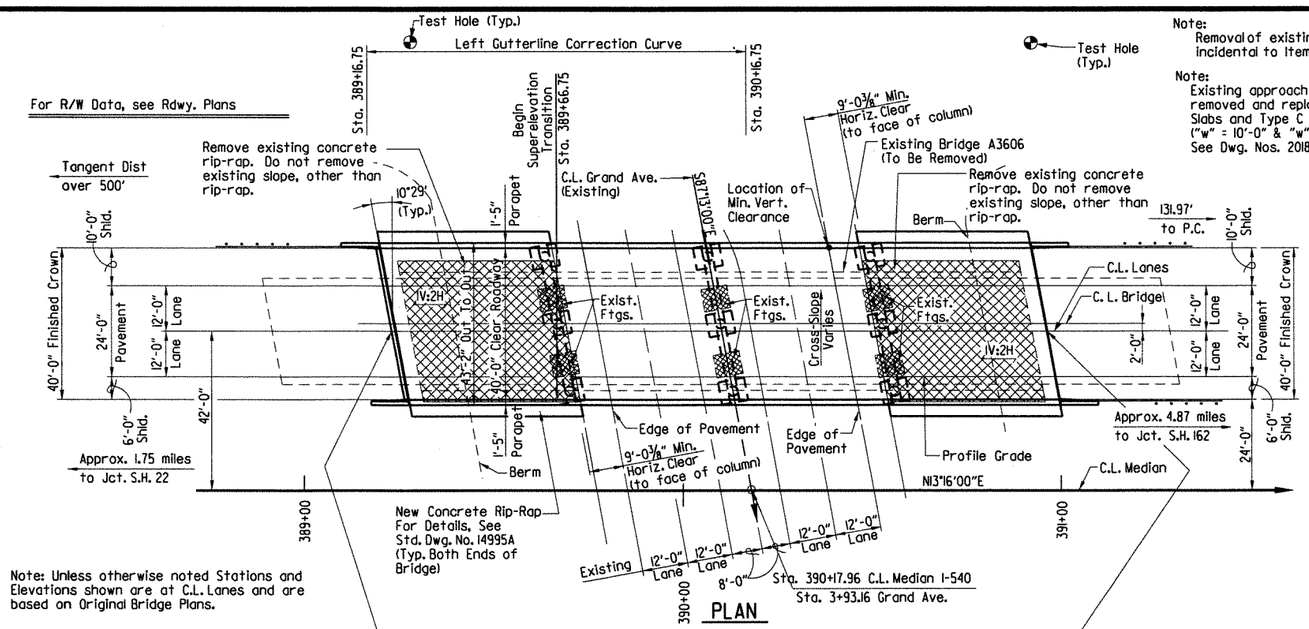
BRIDGE NO. A6877, B6877 DRAWING NO. 48489

$$$$date$$$$

$$$$dgnspec$$$$

...\01 rogers ave\b040468m1_g1.dgn 8/10/2012 3:49:22 PM

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.		BB0407	195	464
				(1) A6878		LAYOUT		48490

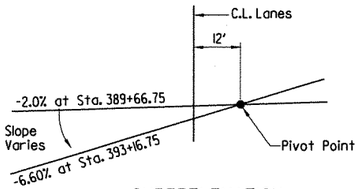


Note: Unless otherwise noted Stations and Elevations shown are at C.L. Lanes and are based on Original Bridge Plans.

Note: Removal of existing concrete rip-rap shall be incidental to Item 205.

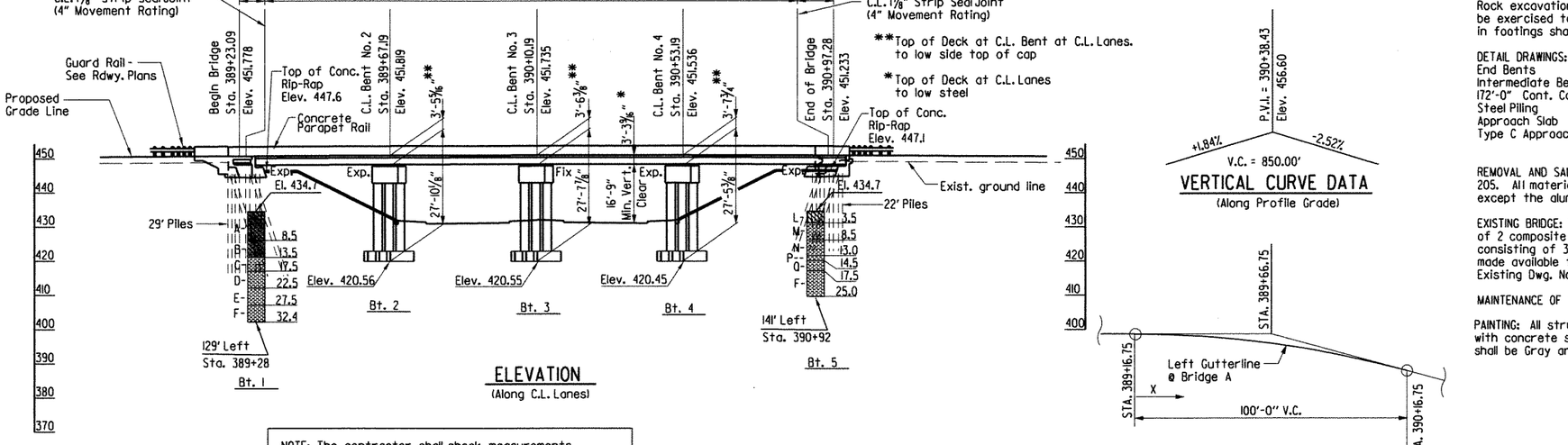
Note: Existing approach slabs and gutters to be removed and replaced with new Approach Slabs and Type C Approach Gutters. ("w" = 10'-0" & "w" = 6'-0") See Dwg. Nos. 2018 & 2016C.

Note: The existing berms shall be extended to the front face of the new end bent caps and shall provide a 1'-3" minimum clearance to the new beams. Approximately 390 cubic yards of excavation required.



SUPERELEVATION TRANSITION SKETCH

Looking Ahead

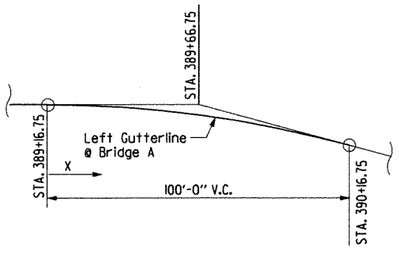


ELEVATION

(Along C.L. Lanes)

VERTICAL CURVE DATA

(Along Profile Grade)



Left is defined when facing direction of increasing station.

The left gutterline of Bridge 'A' has been smoothed with a correction equation between the stations shown. The roadway cross slope at any station is a straight line between the left and right gutterlines.

Elev. = 451.32 + 0.0028(X) - 0.00005(X^2)

X is the distance in feet along centerline lanes from beginning station shown. Elevation is at gutterline.

LEFT GUTTER CORRECTION CURVE

No Scale

NOTE: The contractor shall check measurements of the existing bridge. Any adjustments necessary to fit the new work to the existing bridge location shall be submitted for the Engineer's approval.

Boring Legend

- A - Moist, Medium Stiff to Stiff, Reddish Brown and Gray Sandy, Silty Clay with some Organic Matter
- B - Moist, Very Stiff, Gray and Brown Sandy, Silty Clay with some Sandstone Fragments
- C - Medium Hard, Brown and Gray Highly Weathered Shale
- D - Hard, Dark Gray Fractured Shale with some Weathered Shale Seams
- E - Hard, Dark Gray Shale with some Fractured Seams
- F - Hard, Dark, Gray Shale
- G - Moist, Stiff, Brown and Gray Silty Clay
- H - Soft to Medium Hard, Brown Highly Weathered Shale
- J - Medium Hard, Brown and Gray Weathered Shale
- K - Hard, Dark Gray and Brown Shale
- L - Moist, Hard, Brown and Gray Silty Clay with some Highly Weathered Shale
- M - Soft, Brown and Gray Highly Weathered Shale
- N - Medium, Hard, Brown Highly Weathered Shale
- P - Medium Hard, Gray Weathered Shale
- Q - Hard, Dark Gray Shale with some Weathered Shale Seams

SAMPLE DATA

Sta. 389+28 - 129' Left of Centerline of Median I-540

4.0 - 5.0, N = 12	19.0 - 22.5, SCR% = 44, RQD% = 0
9.0 - 10.0, N =22	22.5 - 27.5, SCR% = 72, RQD% = 30
14.0 - 14.4, N = 60	27.5 - 32.4, SCR% = 99, RQD% = 68

Sta. 390+92 - 141' Left of Centerline of Median I-540

4.0 - 5.0, N =40	14.5 - 17.5, SCR% = 54, RQD% = 0
9.0 - 10.0, N =69	17.5 - 22.5, SCR% = 99, RQD% = 90
	22.5 - 25.0, SCR% = 99, RQD% = 99

GENERAL NOTES

BENCH MARK: Elevations and stations are assumed to be the same as shown on the original plans. The original layout shows the elevation at the top of the deck and centerline of existing bridge to be at 449.28 at Sta. 389+28.09 (Beg. of Br. A3606).

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 on the plans, section and subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (1996 edition), with current interim specifications.

LIVE LOAD: HS20 + Military Loading METHOD OF DESIGN: Load Factor
SEISMIC PERFORMANCE CATEGORY: A

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 M31 or M53, Gr. 60) fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 50) Fy = 50,000 psi
Structural Steel (AASHTO M270, Gr. 36) Fy = 36,000 psi

BORING LOGS: Boring Logs may be obtained from the Programs and Contracts Division.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

CLASS I PROTECTIVE SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the roadway surface and the face and top of the concrete parapet rail.

STEEL PILING: Piling in End Bents 1 and 5 shall be HP12x53 and shall be driven with an approved air, steam or diesel hammer to a minimum safe bearing capacity of 70 tons per pile and into the material designated as medium hard, brown and gray shale on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles in end bents to be driven after embankment to bottom of cap is in place. On all piles the contractor shall use approved steel H-Pile driving points.

FOOTINGS: Footings shall be set a minimum of 1'-6" into medium hard, brown and gray shale but shall not be at a higher elevation than the existing footing and shall have a minimum cover above top of footings of 2'. Foundations for footings shall be prepared in accordance with Section 801.04 of the Standard Specifications. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

DETAIL DRAWINGS:	DRAWING NO.
End Bents	48492, 48493, 48497, 48498
Intermediate Bents	48494-48496
172'-0" Cont. Comp. W-Beam Unit	48499-48503
Steel Piling	14995A
Approach Slab	2018
Type C Approach Gutter	2016C

REMOVAL AND SALVAGE: The existing bridge shall be removed in accordance with Section 205. All material from existing bridge shall become the property of the contractor except the aluminum rail and posts which shall remain the property of the State.

EXISTING BRIDGE: Existing Bridge No. A3606 is 33'-6" wide and 164'-2 3/4" long and consists of 2 composite 38'-0" and 2 composite 43'-0" simple spans supported by substructures consisting of 3 dual column bents and 2 pile end bents. Plans for existing bridge will be made available to the Contractor upon request to Programs and Contracts Division. Existing Dwg. Nos. 11973, 11975 thru 11977.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

PAINTING: All structural steel except galvanized members and some surfaces in contact with concrete shall be painted as specified in subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11539 LARRY W. MILLER 8-11-12

BRIDGE ENGINEER

LAYOUT OF BRIDGE OVER GRAND AVENUE (BR. A6878)

HWY. 22 - I-40 (F)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407a2_lll.dgn
CHECKED BY: JLH DATE: March 02 SCALE: 1" = 20'
DESIGNED BY: BCG DATE: March 02

BRIDGE NO. A6878 DRAWING NO. 48490

$$$$date$$$

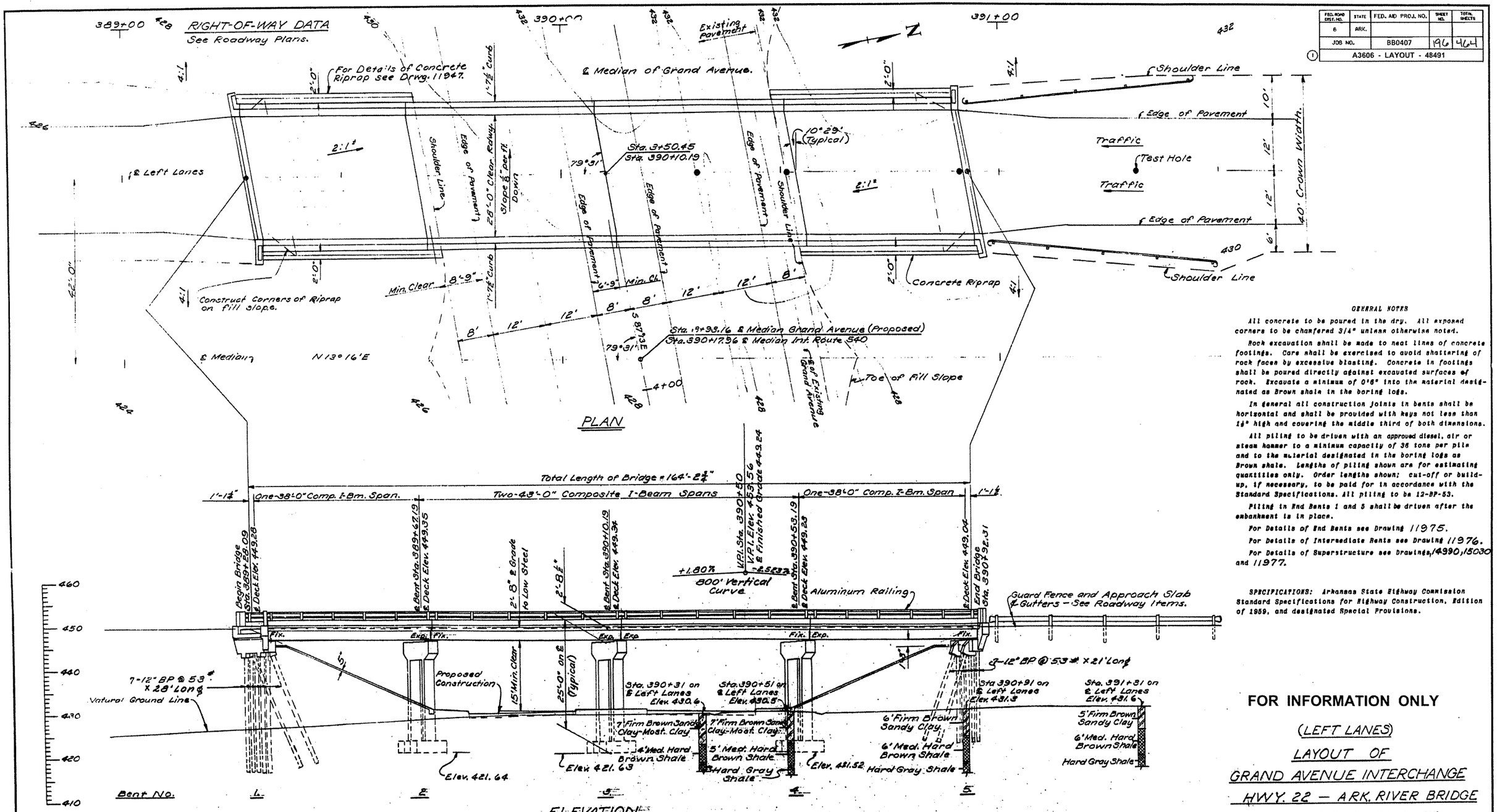
$$$$dgnspec$$$$$

...\02 grand ave\b040468a2_l11.dgn 8/10/2012 3:49:22 PM

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	196	464
① A3606 - LAYOUT - 48491				

RIGHT-OF-WAY DATA

See Roadway Plans.



ELEVATION

Maximum Foundation Pressure (Calculated) = 3.0 Tons/sq. ft. (Gp. I)

BENCH MARK:
Nail in Power Pole -200' Rt. of ℄ Median Sta. 390+50. - Elev. 421.64.

389+00 390+00 391+00

GENERAL NOTES

All concrete to be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.

Rock excavation shall be made to neat lines of concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock. Excavate a minimum of 0'6" into the material designated as Brown shale in the boring logs.

In general all construction joints in bents shall be horizontal and shall be provided with keys not less than 1½" high and covering the middle third of both dimensions.

All piling to be driven with an approved diesel, air or steam hammer to a minimum capacity of 36 tons per pile and to the material designated in the boring logs as Brown shale. Lengths of piling shown are for estimating quantities only. Order lengths shown; cut-off or build-up, if necessary, to be paid for in accordance with the Standard Specifications. All piling to be 12-BP-53.

Piling in End Bents 1 and 5 shall be driven after the embankment is in place.

For Details of End Bents see Drawing 11975.

For Details of Intermediate Bents see Drawing 11976.

For Details of Superstructure see Drawings 14390, 15030 and 11977.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, and designated Special Provisions.

DESIGN SPECIFICATIONS A.A.S.H.O. 1961
Live Loading: H20-S16 and Special Interstate Loading of two 24,000# axles spaced @ 4'0" centers.

Unit Stresses:	
Class A Concrete (fc=1500)	840 psi
Class S Concrete (fc=4000)	1,200 psi
Reinforcing Steel	20,000 psi
Structural Steel (A 36)	20,000 psi

L. O. Carlson
BRIDGE ENGINEER

FOR INFORMATION ONLY

(LEFT LANES)

LAYOUT OF

GRAND AVENUE INTERCHANGE

HWY. 22 — ARK. RIVER BRIDGE

SEBASTIAN COUNTY

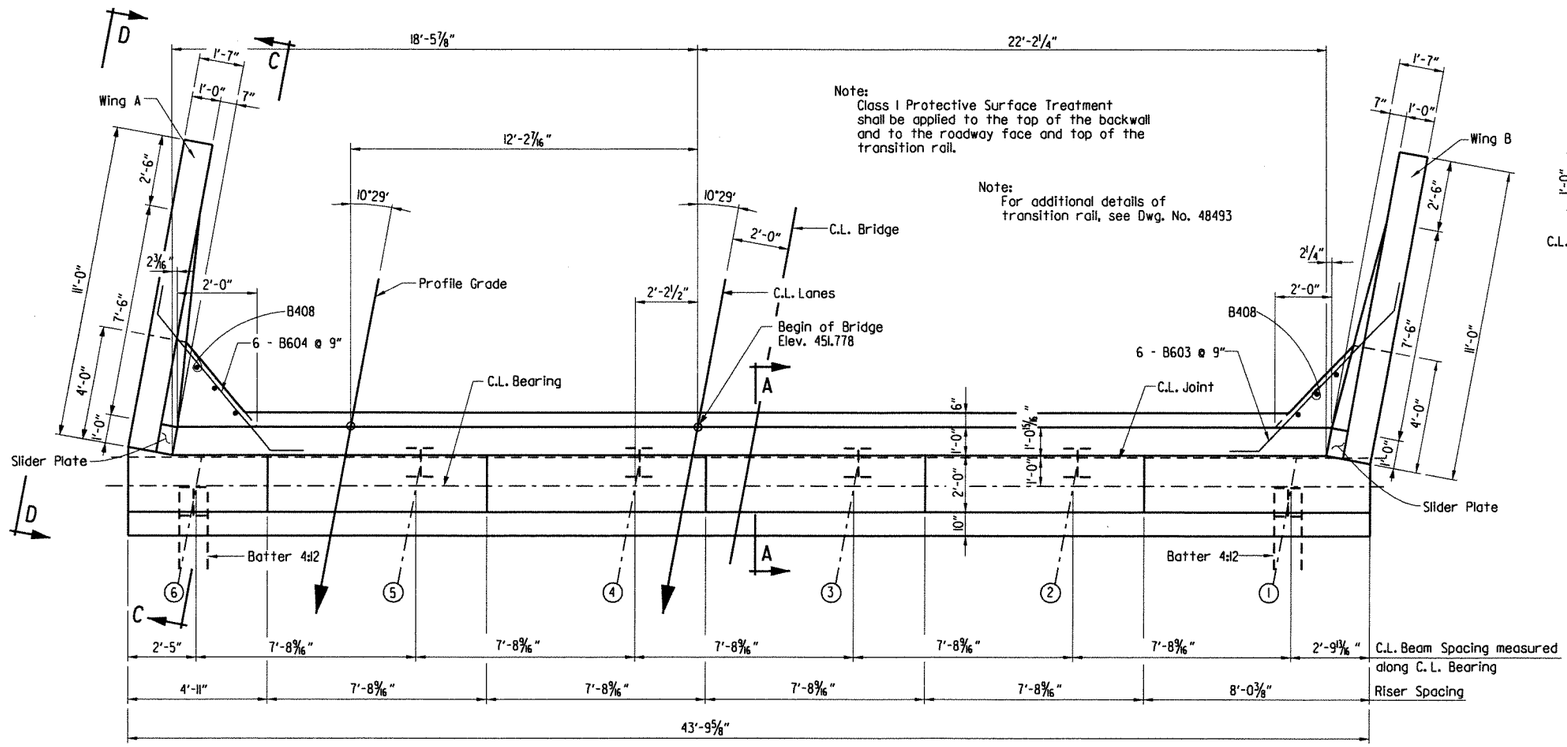
INT. ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: VP. DATE: 2-9-61
TRACED BY: DATE:
CHECKED BY: DV. DATE: 2-14-62
SCALE: 1" = 10'-0"

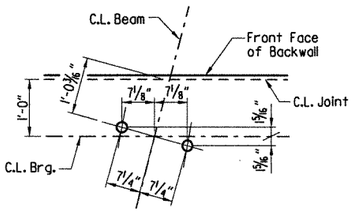
BRIDGE NO. A3606 **DRAWING NO.** 48491

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.		BB0407	197	464
				(1) A6878		BENT DTLS.		48492



PLAN

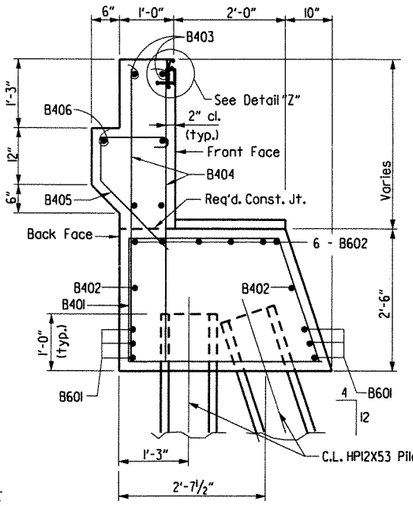
⅜" = 1'-0"



Note: For details of Elastomeric Bearings, See Dwg. No. 48517

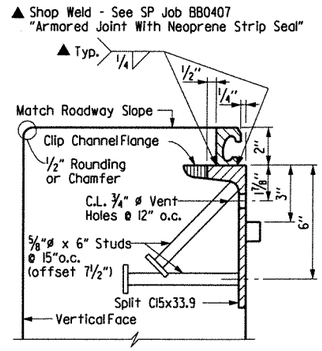
TYPICAL ANCHOR BOLT LAYOUT

No Scale



SECTION A-A

¾" = 1'-0"

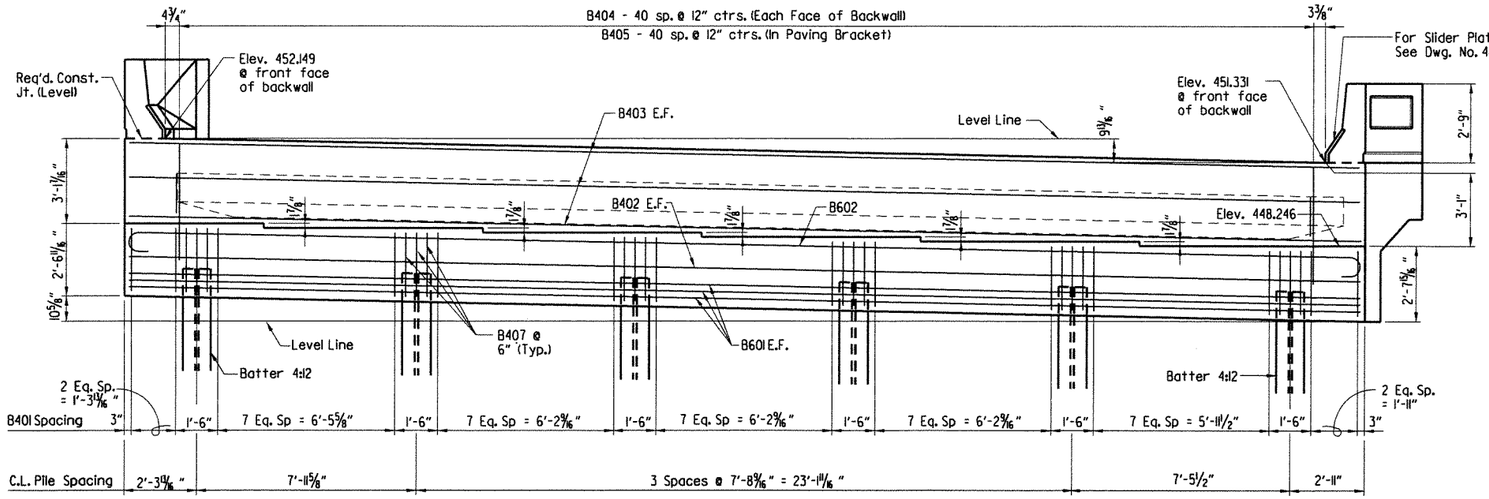


Note: Concrete shall be hand packed under the joint armor in the backwall.

For additional details, See Dwg. No. 48519.

DETAIL Z

3"= 1'-0"



ELEVATION

(Looking Back)

⅜" = 1'-0"

Note: E.F. = Each Face

GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered ¾" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Gr. 60.

End Bent backwall shall not be poured before girders are in place. Backwall to be placed after concrete span placement.

Structural steel in end bents shall be AASHTO M270, Gr. 50 and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50)".

If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

All steel surfaces are to be cleaned and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

SHEET 1 OF 2
DETAILS OF BENT NO. 1
BRIDGE OVER GRAND AVENUE
(BR. A6878)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13339 LARRY E. MILLER

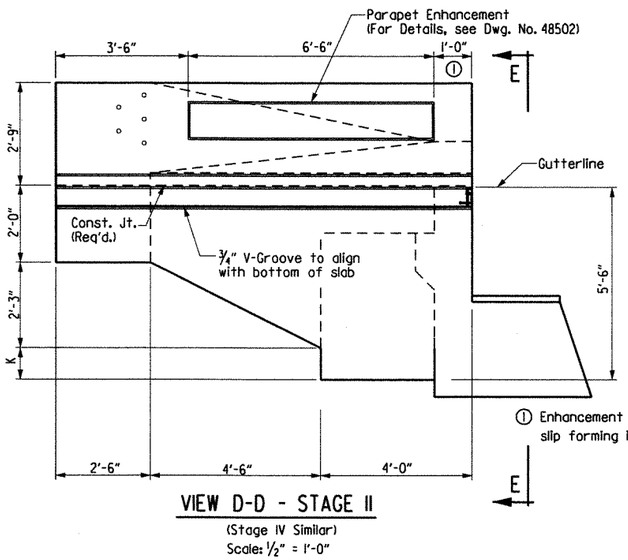
Larry E. Miller 8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: Feb 02
CHECKED BY: EMB/ETH DATE: May 02
DESIGNED BY: BCG DATE: Jan 02
FILENAME: bBB0407a2 bll.dgn
SCALE: As Shown

BRIDGE NO. A6878 DRAWING NO. 48492

$$$$date$$$$
$$$$dgnspec$$$$$

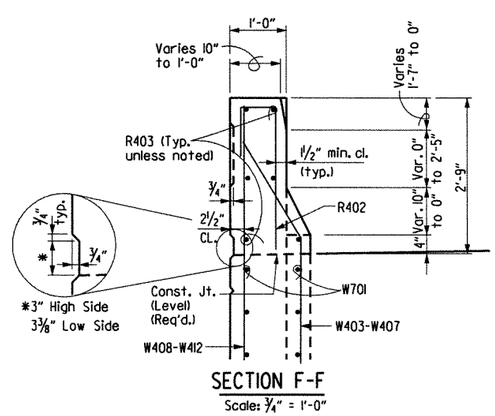
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	198	464
				① A6878		BENT DTLS.		48493



① Enhancement shall be continuous if slip forming is used on bridge parapet.

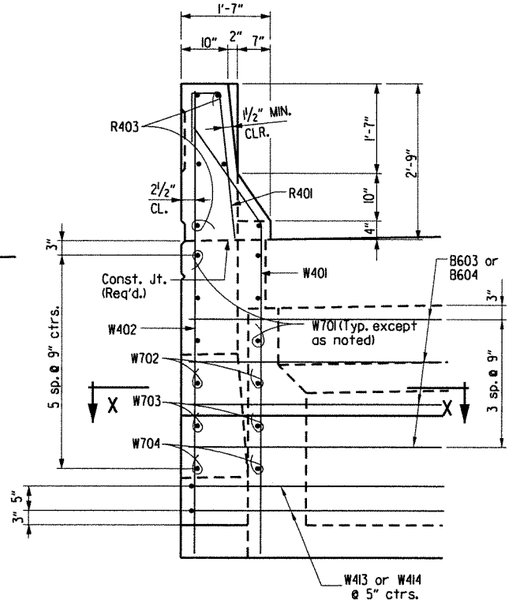
VIEW D-D - STAGE II

(Stage IV Similar)
Scale: ½" = 1'-0"



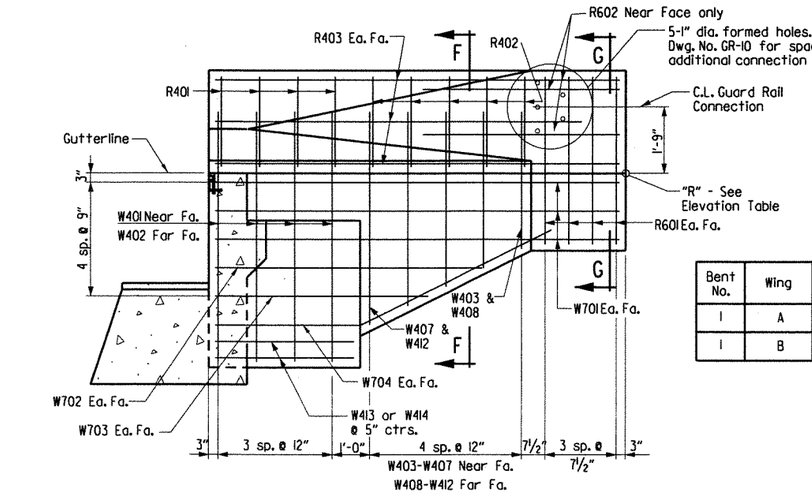
SECTION F-F

Scale: ¾" = 1'-0"



VIEW E-E

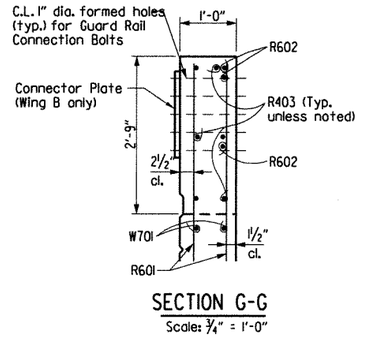
Scale: ¾" = 1'-0"



SECTION C-C - STAGE II

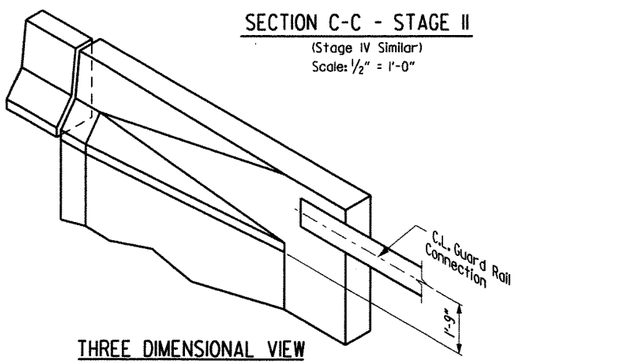
(Stage IV Similar)
Scale: ½" = 1'-0"

Bent No.	Wing	Elev. "R"	K
1	A	452.134	1'-2 13/16"
1	B	451.286	1'-2 7/16"



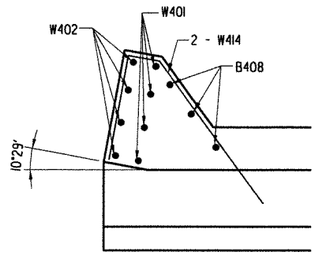
SECTION G-G

Scale: ¾" = 1'-0"



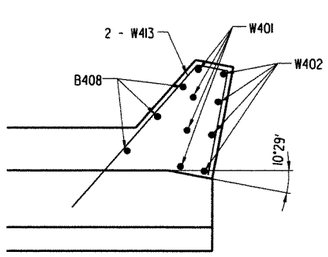
THREE DIMENSIONAL VIEW WING RAIL & PARAPET

No Scale



SECTION X-X

Wing A



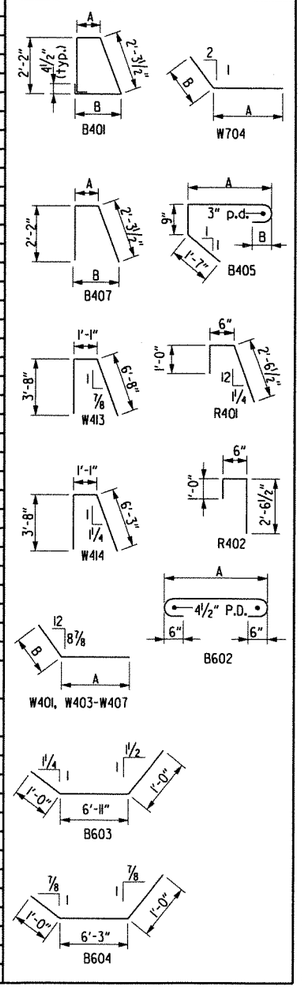
SECTION X-X

Wing B

BAR LIST

Mark	No. Req'd.	Length	"A"	"B"	Pin Dia.
B401	46	11'-0"	2'-8"	3'-6"	2"
B402	2	43'-6"			STR.
B403	5	40'-4"			STR.
B404	82	5'-2"			STR.
B405	41	3'-11"	1'-2"	4½"	3"
B406	1	40'-4"			STR.
B407	18	7'-0"	2'-8"	3'-6"	2"
B408	6	4'-0"			STR.
B601	6	43'-6"			STR.
B602	6	44'-10"	43'-6"		4½"
B603	4	8'-11"			4½"
B604	4	8'-3"			4½"
R401	8	3'-11"			2"
R402	8	3'-11"			2"
R403	12	9'-8"			STR.
R601	16	4'-5"			STR.
R602	6	5'-0"			STR.
W401	8	6'-6"	5'-4"	1'-2"	2"
W402	8	7'-8"			STR.
W403-W407	2 ea.	Varies 3'-4" to 5'-4"	Varies 2'-2" to 4'-2"	1'-2"	2"
W408-W412	2 ea.	Varies 4'-5" to 6'-5"			STR.
W413	2	11'-3"			2"
W414	2	10'-10"			2"
W701	12	9'-8"			STR.
W702	4	6'-0"			STR.
W703	4	4'-6"			STR.
W704	4	8'-4"	2'-9"	5'-7"	5¼"

Bending Diagrams (Dimensions are out to out of bars.)



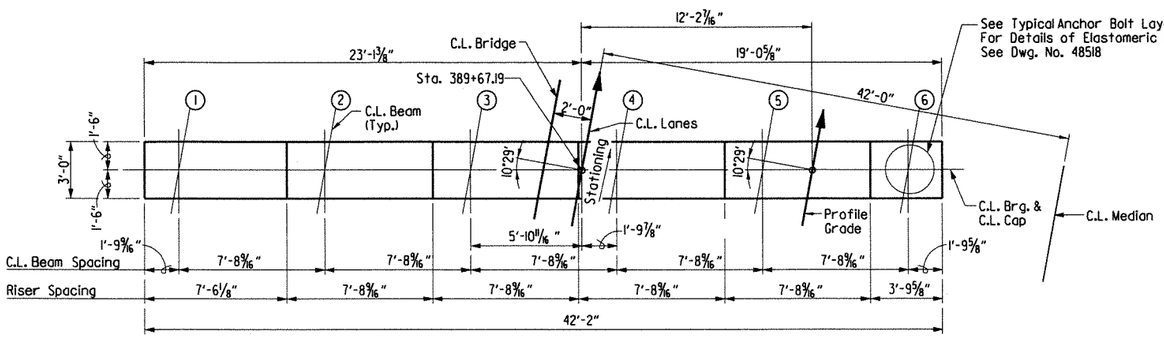
$$$$date$$$$
$$$$dgnspec$$$$$

SHEET 2 OF 2
DETAILS OF BENT NO. 1
BRIDGE OVER GRAND AVENUE
(BR. A6878)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 11339 — LARRY E. MILLER
Larry E. Miller 8-11-12
BRIDGE ENGINEER

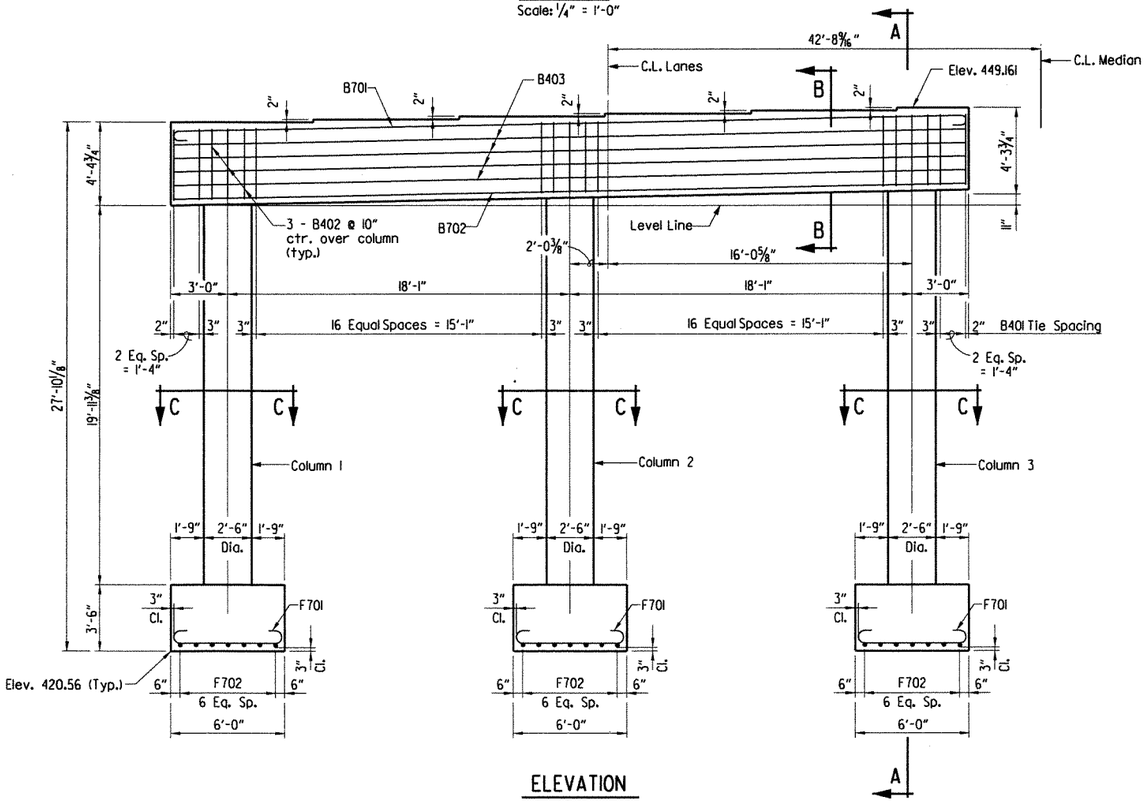
DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407a2 bl2.dgn
CHECKED BY: EMB DATE: May 02 SCALE: As Shown
DESIGNED BY: BCG DATE: Jan 02
BRIDGE NO. A6878 DRAWING NO. 48493

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.		BB0407	197	464
				(1) A6878		BENT DTLS.		48494



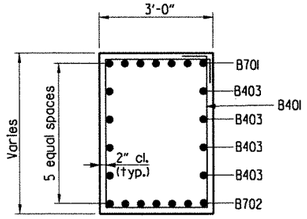
PLAN

Scale: 1/4" = 1'-0"



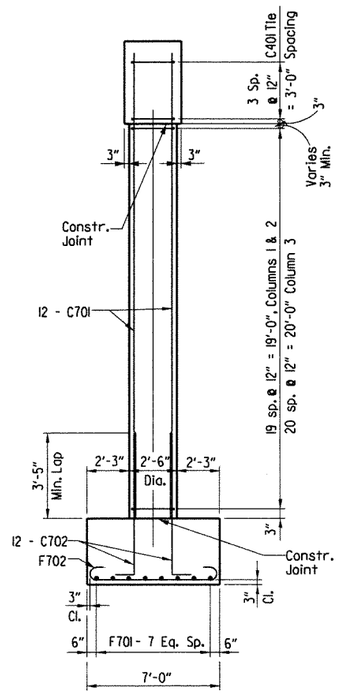
ELEVATION

Looking Ahead
Scale: 1/4" = 1'-0"



SECTION B-B

Scale: 1/2" = 1'-0"

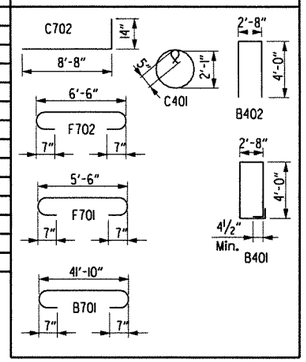


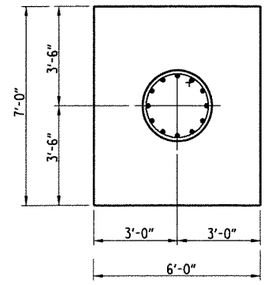
SECTION A-A

Scale: 1/4" = 1'-0"

BAR LIST

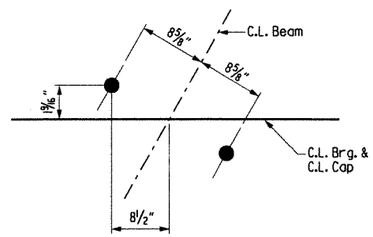
Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
B401	40	13'-8"	2"	
B402	9	10'-6"	2"	
B403	8	41'-10"	STR.	
B701	7	43'-6"	5 1/4"	
B702	7	41'-10"	STR.	
C401	73	7'-7"	3"	
C701	36	23'-5"	STR.	
C702	36	9'-8"	5 1/4"	
F701	24	7'-2"	5 1/4"	
F702	21	8'-2"	5 1/4"	





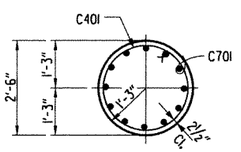
PLAN OF FOOTING

Scale: 3/8" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT

No Scale



SECTION C-C

Scale: 1/2" = 1'-0"

Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall 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.

For additional information, see Layout.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11539
LARRY W. MILLER
8-11-12
BRIDGE ENGINEER

DETAILS OF BENT NO. 2
BRIDGE OVER GRAND AVENUE
(BR. A6878)
CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407a2 b2.dgn
CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown
DESIGNED BY: BCG DATE: Jan 02

BRIDGE NO. A6878 DRAWING NO. 48494

$$$$dgnspec$$$$$

$$$$date$$$$

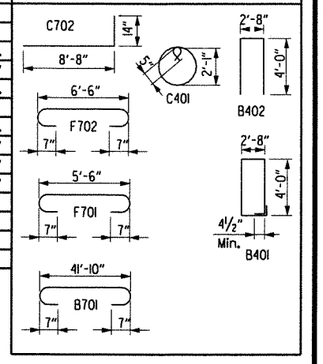
...\02 grand ave\b040468a2_b2.dgn 8/10/2012 3:49:24 PM

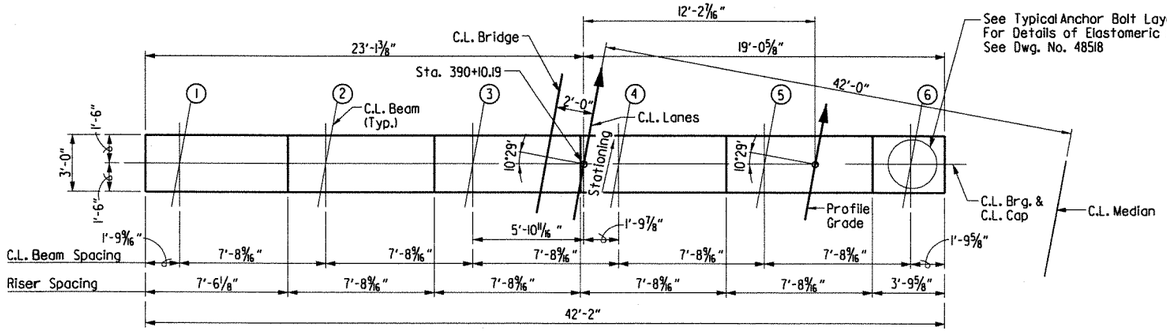
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	200	464
				(1) A6878		BENT DTLS.		48495

BAR LIST

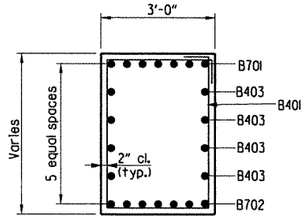
Mark	No. Req'd.	Length	Pin Dia.
B401	40	13'-8"	2"
B402	9	10'-6"	2"
B403	8	41'-10"	STR.
B701	7	43'-6"	5¼"
B702	7	41'-10"	STR.
C401	73	7'-7"	3"
C701	36	23'-5"	STR.
C702	36	9'-8"	5¼"
F701	24	7'-2"	5¼"
F702	21	8'-2"	5¼"

Bending Diagrams (Dimensions are out to out of bars.)

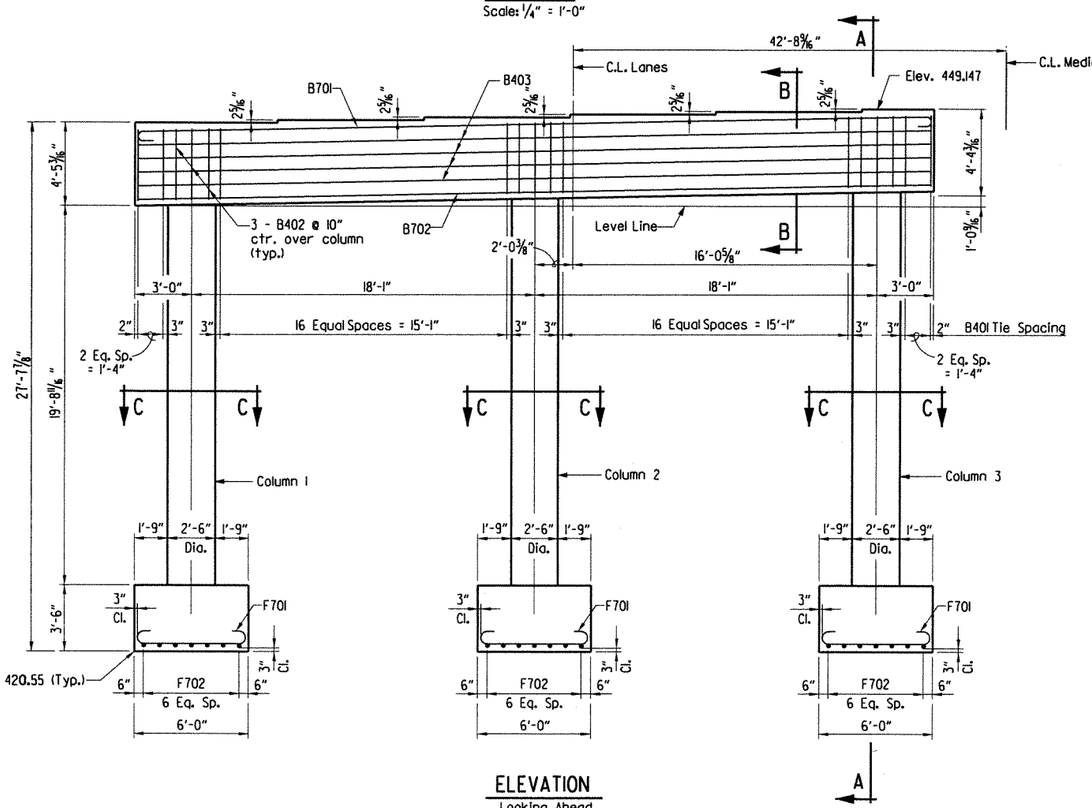




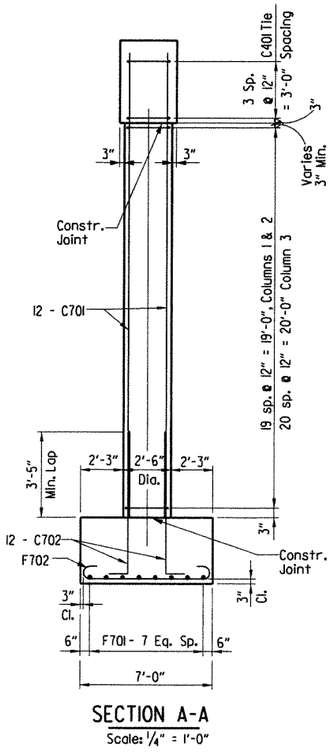
PLAN
Scale: ¼" = 1'-0"



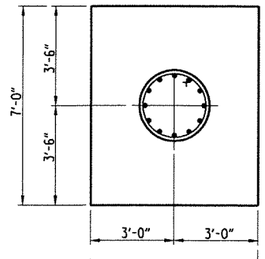
SECTION B-B
Scale: ½" = 1'-0"



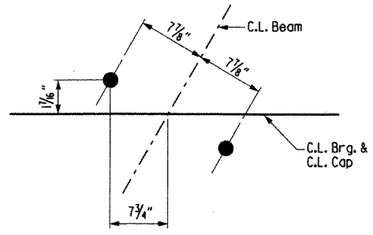
ELEVATION
Looking Ahead
Scale: ¼" = 1'-0"



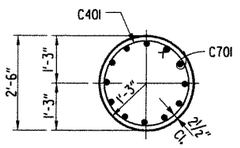
SECTION A-A
Scale: ¼" = 1'-0"



PLAN OF FOOTING
Scale: ⅜" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT
No Scale



SECTION C-C
Scale: ½" = 1'-0"

Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered ¾" 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.

For additional information, see Layout.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY E. MILLER
Larry E. Miller 8-11-12
BRIDGE ENGINEER

DETAILS OF BENT NO. 3
BRIDGE OVER GRAND AVENUE
(BR. A6878)
CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407a2 b3.dgn
CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown
DESIGNED BY: BCG DATE: Jan 02

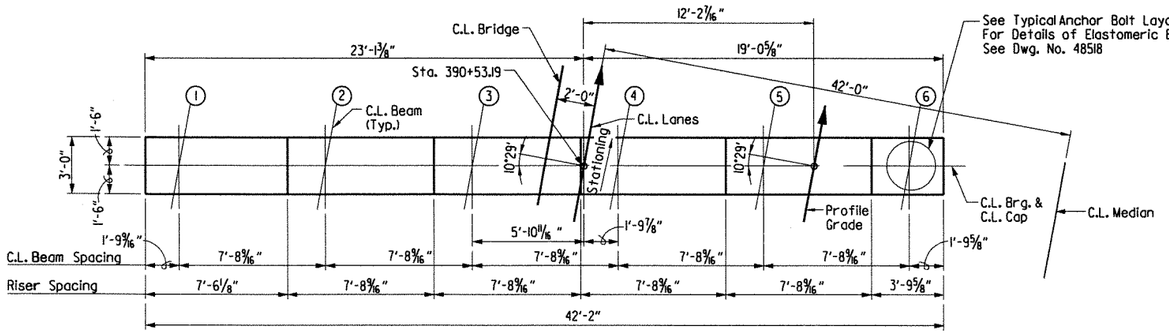
BRIDGE NO. A6878 DRAWING NO. 48495

$$$$date$$$$

$$$$dgnspec$$$$$

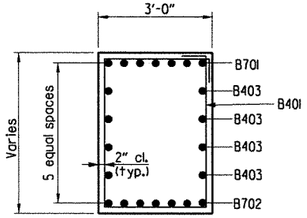
...\02 grand ave\b040468a2_b3.dgn 8/10/2012 3:49:24 PM

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.		BB0407	201	464
				(1) A6878		BENT DTLS.		48496



PLAN

Scale: 1/4" = 1'-0"

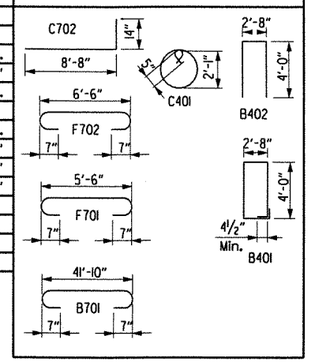


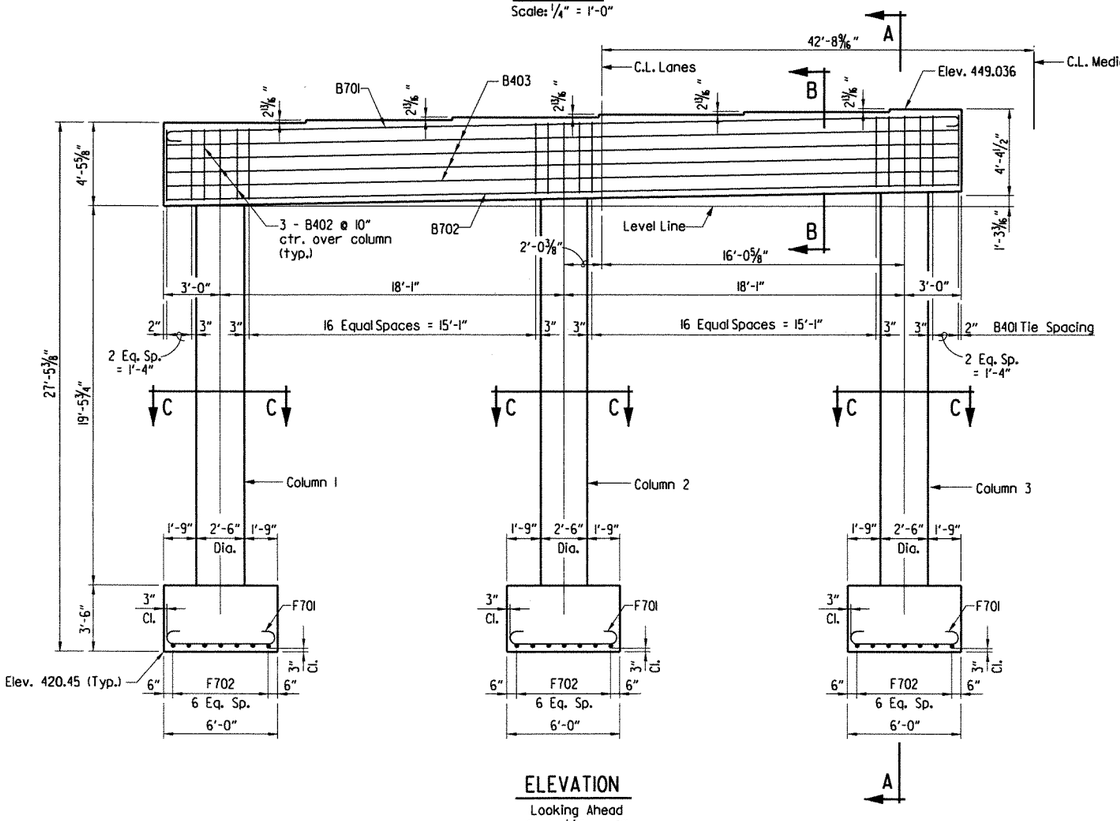
SECTION B-B

Scale: 1/2" = 1'-0"

BAR LIST

Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
B401	40	13'-8"	2"	
B402	9	10'-6"	2"	
B403	8	41'-10"	STR.	
B701	7	43'-6"	5/8"	
B702	7	41'-10"	STR.	
C401	73	7'-7"	3"	
C701	36	23'-4"	STR.	
C702	36	9'-8"	5/8"	
F701	24	7'-2"	5/8"	
F702	21	8'-2"	5/8"	

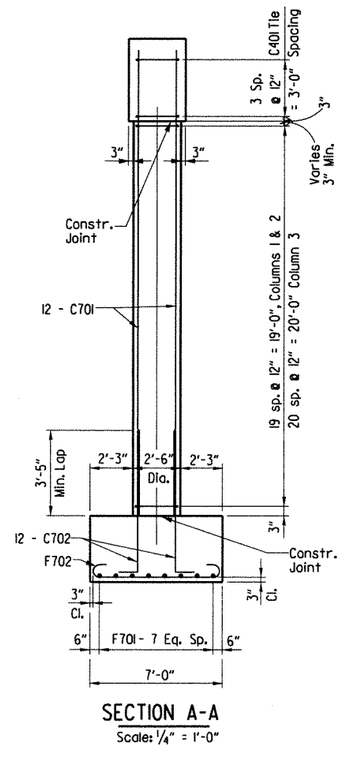




ELEVATION

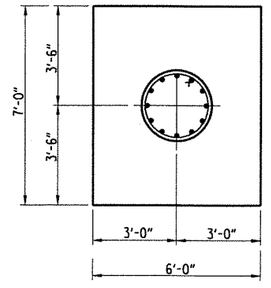
Looking Ahead

Scale: 1/4" = 1'-0"



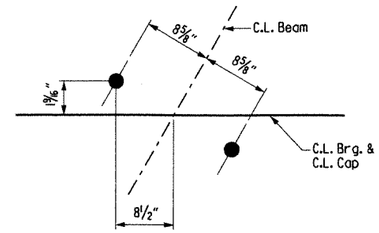
SECTION A-A

Scale: 1/4" = 1'-0"



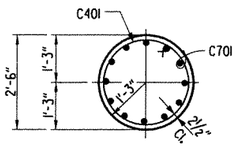
PLAN OF FOOTING

Scale: 3/8" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT

No Scale



SECTION C-C

Scale: 1/2" = 1'-0"

Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall 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.

For additional information, see Layout.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10339 LARRY W. MILLER

8-11-12

BRIDGE ENGINEER

DETAILS OF BENT NO. 4
BRIDGE OVER GRAND AVENUE
(BR. A6878)
CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR	DATE: Feb 02	FILENAME: bBB0407a2 b4.dgn
CHECKED BY: EMB/ETH	DATE: May 02	SCALE: As Shown
DESIGNED BY: BCG	DATE: Jan 02	

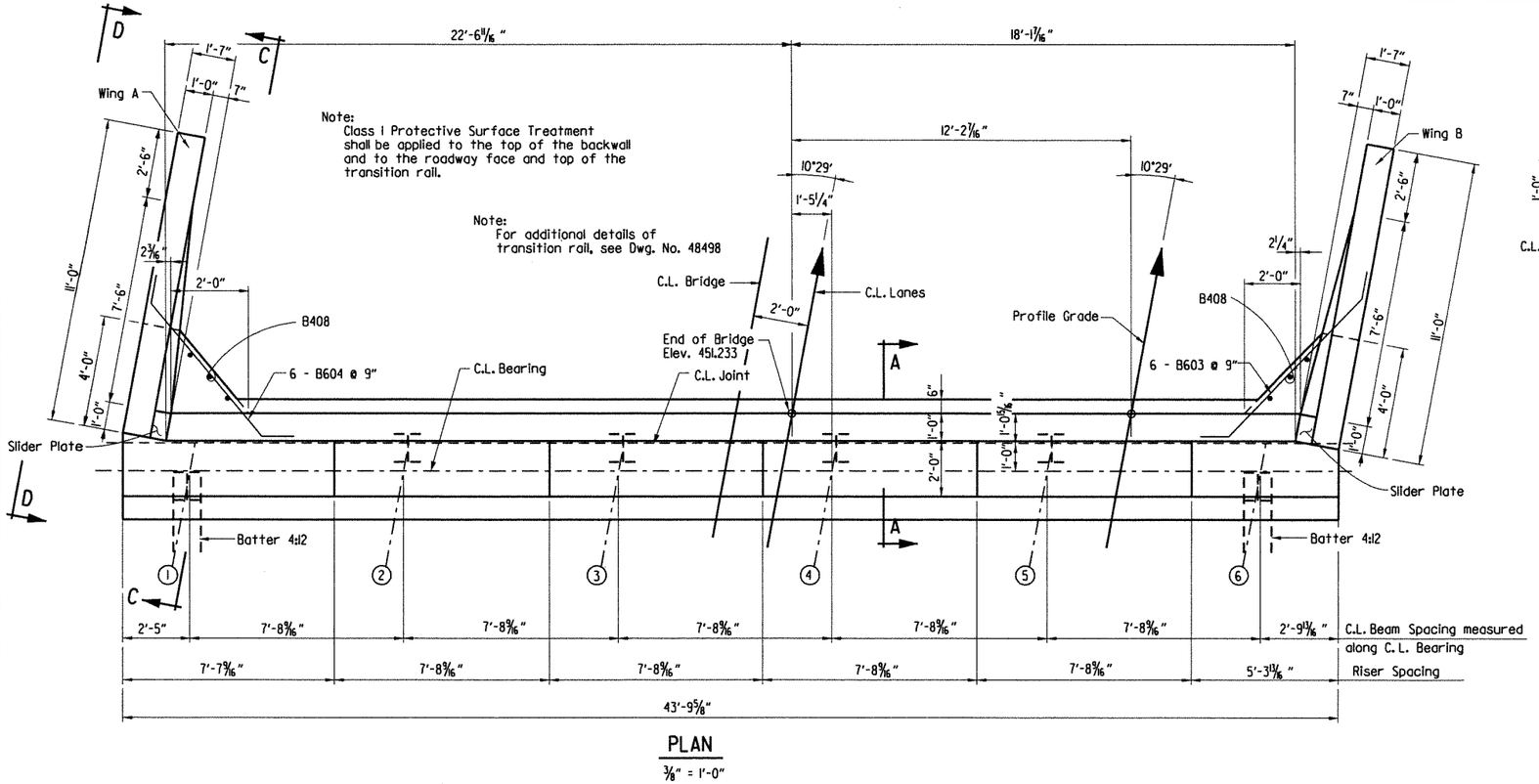
BRIDGE NO. A6878 DRAWING NO. 48496

$$$$dgnspec$$$$$

$$$$date$$$$

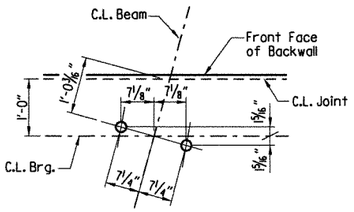
...\02 grand ave\b040468a2_b4.dgn 8/10/2012 3:49:25 PM

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.		BB0407	202	464
				(1) A6878		BENT DTLS.		48497



PLAN

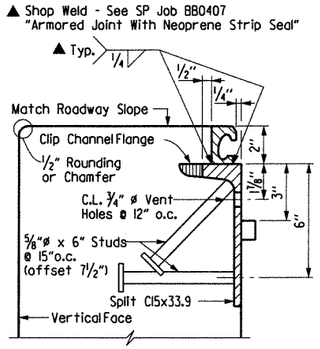
3/8" = 1'-0"



Note: For details of Elastomeric Bearings, See Dwg. No. 48518

TYPICAL ANCHOR BOLT LAYOUT

No Scale

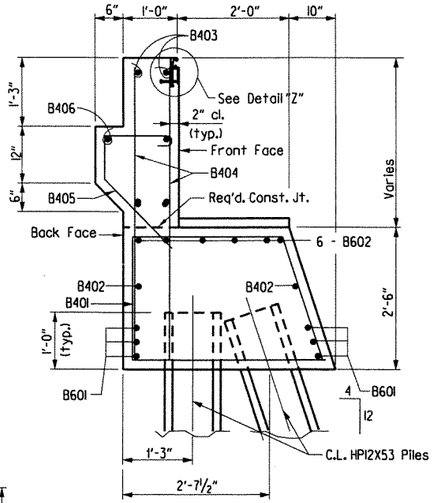


Note: Concrete shall be hand packed under the joint armor in the backwall.

For additional details, See Dwg. No. 48519.

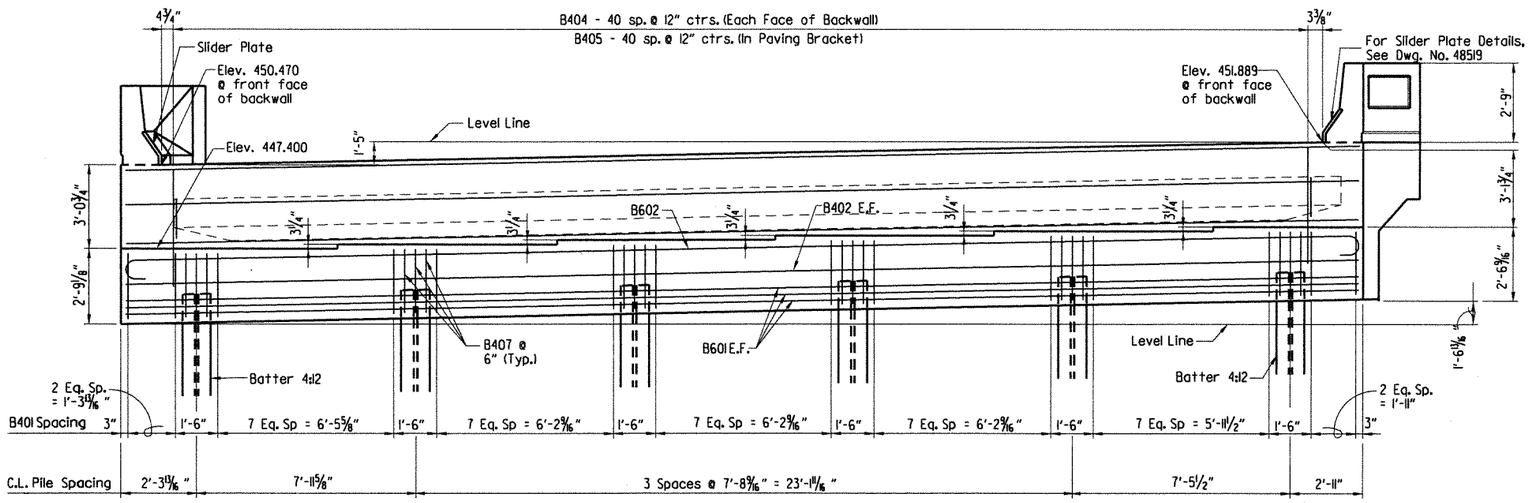
DETAIL Z

3"= 1'-0"



SECTION A-A

3/4" = 1'-0"



ELEVATION

(Looking Ahead)

3/8" = 1'-0"

GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered 3/4" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Gr. 60.

End Bent backwall shall not be poured before girders are in place. Backwall to be placed after concrete span placement.

Structural steel in end bents shall be AASHTO M270, Gr. 50 and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50)".

If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

All steel surfaces are to be cleaned and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

SHEET 1 OF 2

DETAILS OF BENT NO. 5

BRIDGE OVER GRAND AVENUE

(BR. A6878)

CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY E. MILLER

Larry E. Miller 8-11-12

BRIDGE ENGINEER

DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407a2 b51.dgn

CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown

DESIGNED BY: BCG DATE: Jan 02

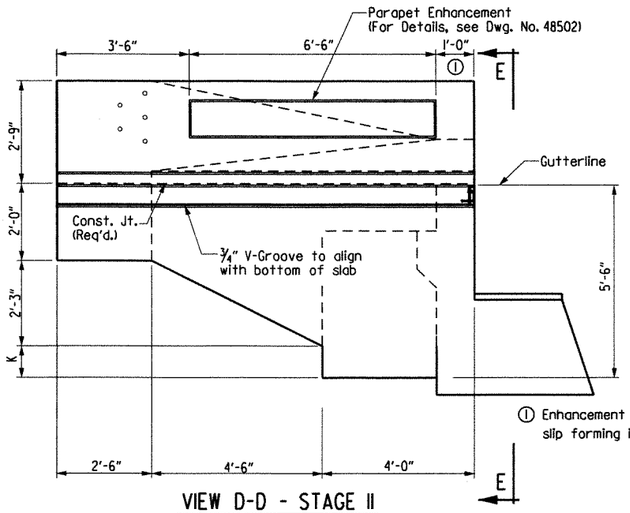
BRIDGE NO. A6878 DRAWING NO. 48497

$$$$date$$$

$$$$dgnspec$$$$$

...\02 grand ave\b040468a2_b51.dgn 8/10/2012 3:49:25 PM

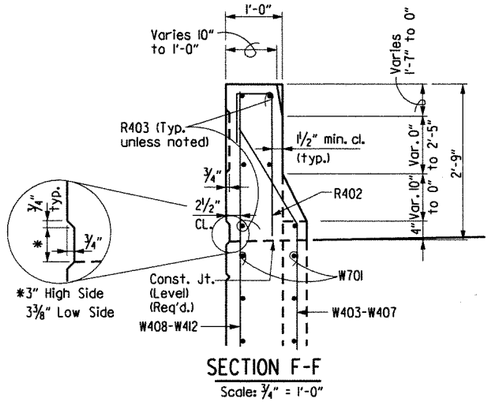
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	203	464
				① A6878		BENT DTLS.		48498



VIEW D-D - STAGE II

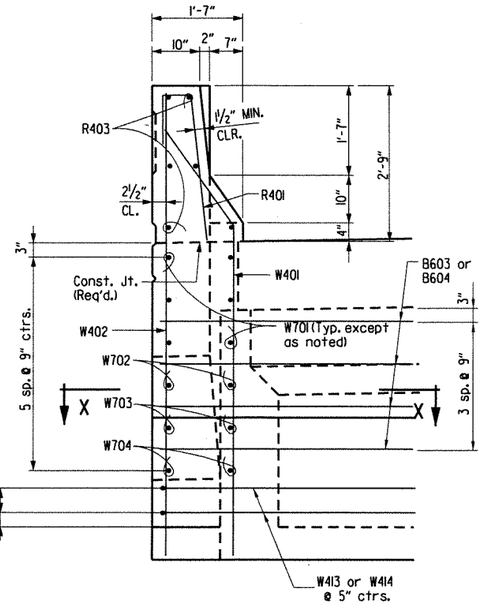
(Stage IV Similar)
Scale: ½" = 1'-0"

① Enhancement shall be continuous if slip forming is used on bridge parapet.



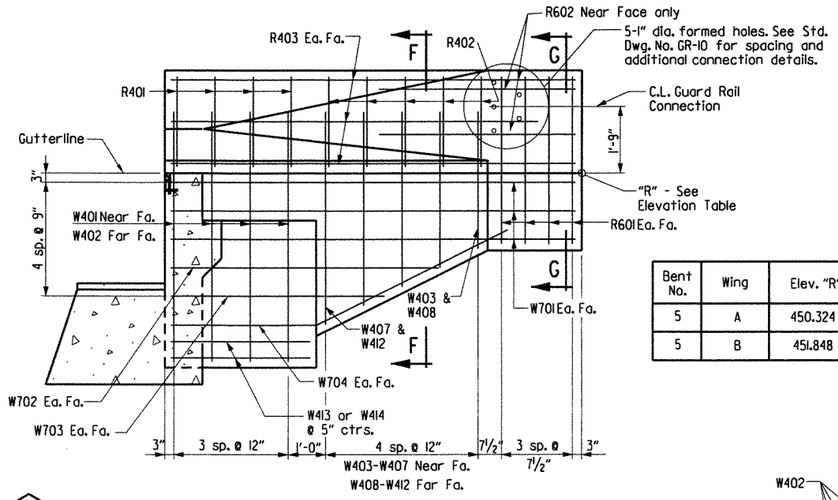
SECTION F-F

Scale: ¾" = 1'-0"



VIEW E-E

Scale: ¾" = 1'-0"



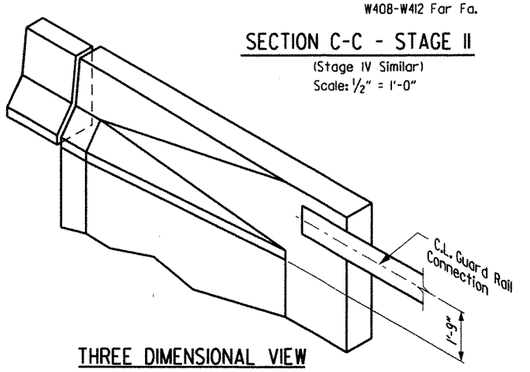
SECTION C-C - STAGE II

(Stage IV Similar)
Scale: ½" = 1'-0"

Bent No.	Wing	Elev. "R"	K
5	A	450.324	1'-1¼"
5	B	451.848	1'-2½"

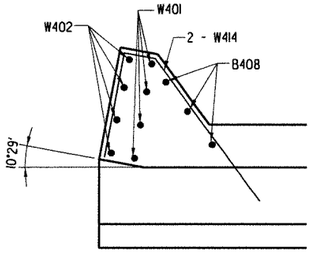
SECTION G-G

Scale: ¾" = 1'-0"



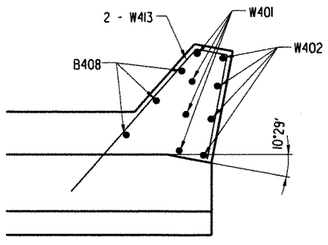
THREE DIMENSIONAL VIEW
WING RAIL & PARAPET

No Scale



SECTION X-X

Wing A



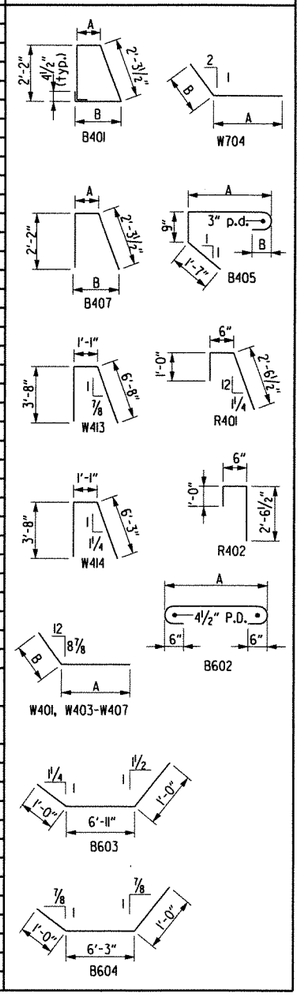
SECTION X-X

Wing B

BAR LIST

Mark	No. Req'd.	Length	"A"	"B"	Pin Dia.
B401	46	11'-0"	2'-8"	3'-6"	2"
B402	2	43'-6"			STR.
B403	5	40'-4"			STR.
B404	82	5'-2"			STR.
B405	41	3'-11"	1'-2"	4½"	3"
B406	1	40'-4"			STR.
B407	18	7'-0"	2'-8"	3'-6"	2"
B408	6	4'-0"			STR.
B601	6	43'-6"			STR.
B602	6	44'-10"	43'-6"		4½"
B603	4	8'-11"			4½"
B604	4	8'-3"			4½"
R401	8	3'-11"			2"
R402	8	3'-11"			2"
R403	12	9'-8"			STR.
R601	16	4'-5"			STR.
R602	6	5'-0"			STR.
W401	8	6'-6"	5'-4"	1'-2"	2"
W402	8	7'-8"			STR.
W403-W407	2 ea.	Varies 3'-4" to 5'-4"	Varies 2'-2" to 4'-2"	1'-2"	2"
W408-W412	2 ea.	Varies 4'-5" to 6'-5"			STR.
W413	2	11'-3"			2"
W414	2	10'-10"			2"
W701	12	9'-8"			STR.
W702	4	6'-0"			STR.
W703	4	4'-6"			STR.
W704	4	8'-4"	2'-9"	5'-7"	5¼"

Bending Diagrams (Dimensions are out to out of bars.)



SHEET 2 OF 2
DETAILS OF BENT NO. 5
BRIDGE OVER GRAND AVENUE
(BR. A6878)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

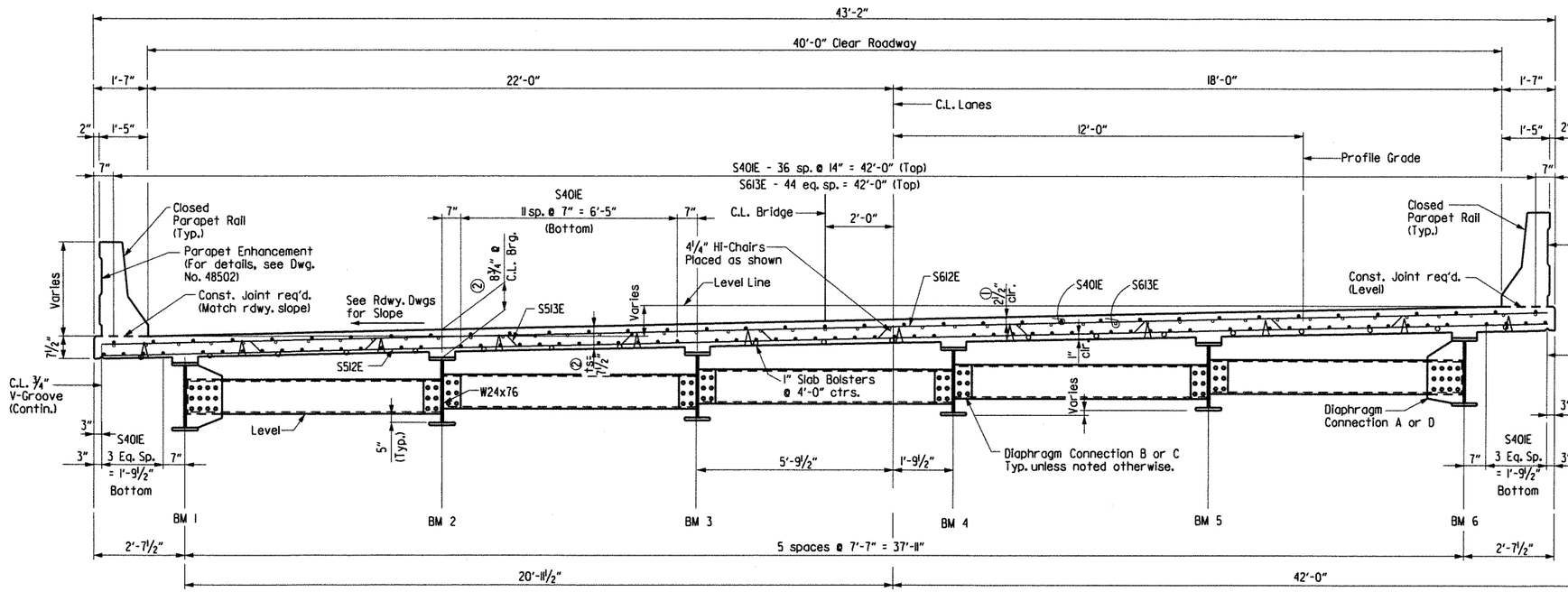
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10339 LARRY W. MILLER
8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: Feb 02
CHECKED BY: EMB DATE: May 02
DESIGNED BY: BCG DATE: Jan 02
FILENAME: bBB0407a2 b52.dgn
SCALE: As Shown

BRIDGE NO. A6878 DRAWING NO. 48498

$$$$dgnspec$$$$$

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.		BB0407	204	464
				(1) A6878		SPAN DTLS.		48499



Note: Class 1 Protective Surface Treatment shall be applied to the Roadway Surface and the Roadway Face and Top of Concrete Parapet Rail.

Note: Hi-Chairs to be placed on 4'-0" long centers.

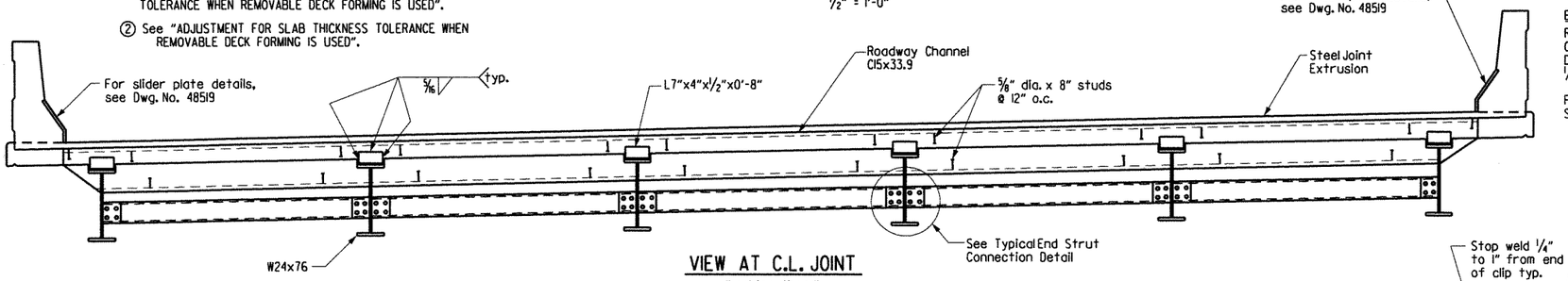
SLAB REINFORCING:
Transverse:
S60IE thru S611E @ 7½" centers (top)
S50IE thru S51IE @ 7½" centers (bottom)
S612E @ 15" centers (top directly above S512E)
S512E @ 15" centers (bottom)
S513E @ 15" centers bent up over beams
Longitudinal:
S40IE (top & bottom) placed as shown
S613E (top) placed as shown over int. supports

Note: Reinf. bars with "E" suffix (S40IE, S50IE, etc.) are epoxy coated bars. For additional reinforcing details, see Dwg. No. 48503

TOLERANCE:
(1) Minus = ¼"
Plus = Equal to amount of slab thickening used to meet slab thickness tolerance - see "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".

(2) See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".

TYPICAL SECTION
(Looking Ahead)
½" = 1'-0"

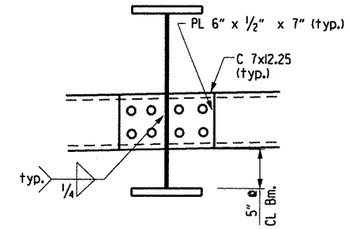


VIEW AT C.L. JOINT
(Looking Ahead)
½" = 1'-0"

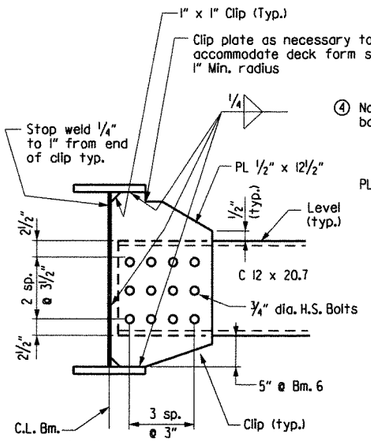
For slider plate details, see Dwg. No. 48519

EXPANSION DEVICE:
Roadway Channel C15x33.9
Conn ∠s 7"x4"x½"
Detail Device ⅛" high and provide ¼" shims using two 1/16" and one ⅛" plates

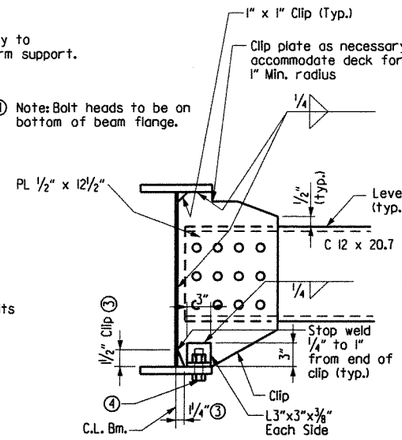
For additional details of Expansion Device, See Dwg. No. 48519



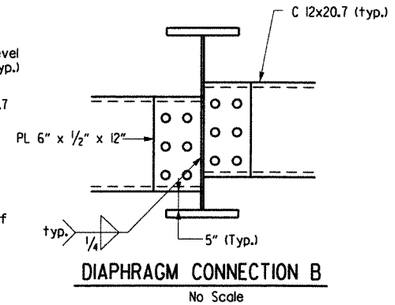
END STRUT CONNECTION
No Scale



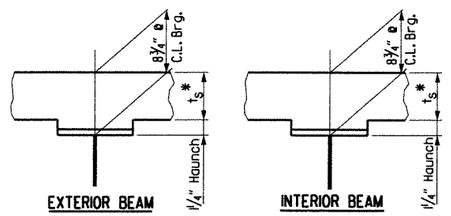
DIAPHRAGM CONNECTION A
No Scale
Typical for exterior beams. Use elsewhere as noted.



DIAPHRAGM CONNECTION D
No Scale
(3) Bottom flange only



DIAPHRAGM CONNECTION B
No Scale
Note: Bolts in Diaphragm Connections shall be properly installed and tightened in accordance with subsection 807.11.

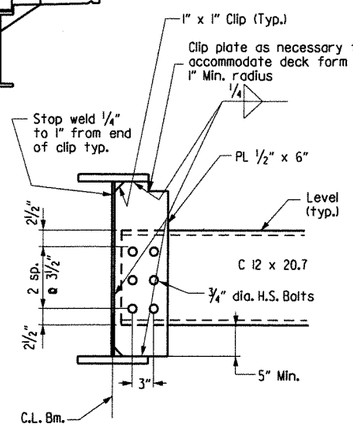


Note: ts = slab thickness as shown on "TYPICAL SECTION".
*Tolerance when removable deck forming is used is +½", -¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

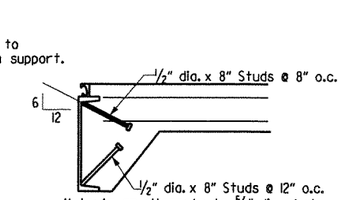
ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED
No Scale

Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance: Minimum - occurs when the top flange contacts the bottom reinforcing steel; Maximum - top flange thickness plus ¼". 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. 149911 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.



DIAPHRAGM CONNECTION C
No Scale



Note: As an alternate to ⅝" dia. studs, ½" dia. x 8" studs spaced as shown may be used. Use weight of ⅝" dia. stud as basis of measurement of structural steel in anchors.

DETAIL OF ALTERNATE ANCHORS
No Scale

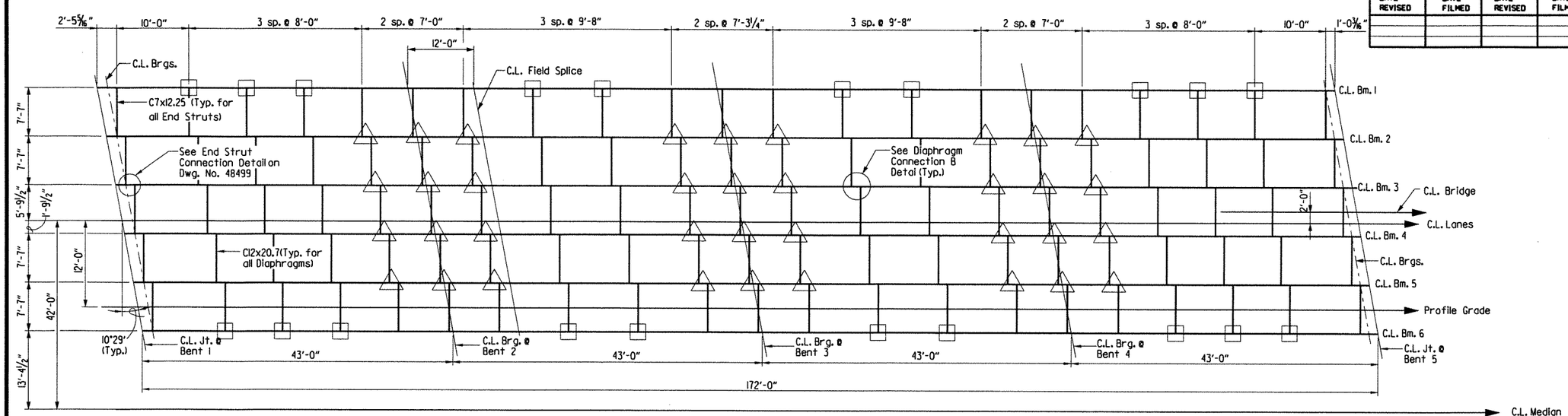
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER
Larry W. Miller 8-11-12
BRIDGE ENGINEER

SHEET 1 OF 5
DETAILS OF
172'-0" CONT. COMP. W-BEAM UNIT
(BR. A6878)
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02
CHECKED BY: EMB DATE: May 02
DESIGNED BY: BCG/JLH DATE: March 02
FILENAME: bBB0407a2 sll.dgn
SCALE: As Shown
BRIDGE NO. A6878
DRAWING NO. 48499

$$$$date$$$$
$$$$dgnspec$$$$$

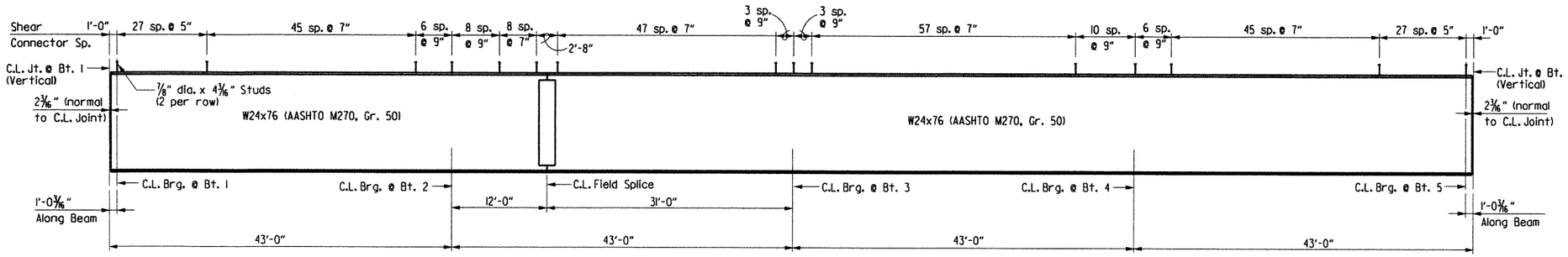
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	205	464
				(1) A6878		SPAN DTLS.		48500



FRAMING PLAN
No Scale

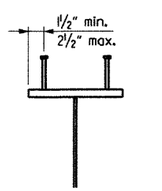
□ = Diaphragm Connection D △ = Diaphragm Connection C

For Diaphragm Connection Details, See Dwg. No. 48499.



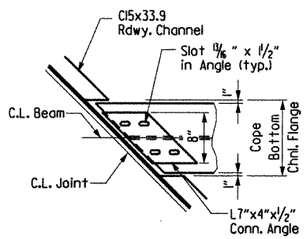
Note: For details of Elastomeric Fixed and Expansion Bearings, see Dwg. No. 48518

TYPICAL BEAM ELEVATION
No Scale

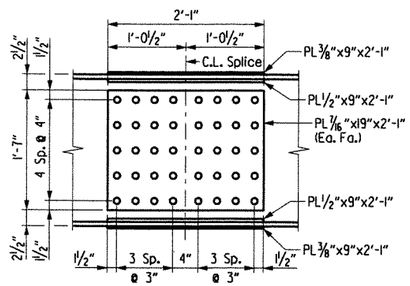


Stud Shear Connectors shown shall be 7/8" dia. x 4" long, granular flux filled, solid fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. 3/4" dia. studs may be used in place of the 7/8" dia. stud shown, at the ratio of 1.361-3/4" dia. studs in place of one 7/8" dia. stud. 7/8" dia. studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

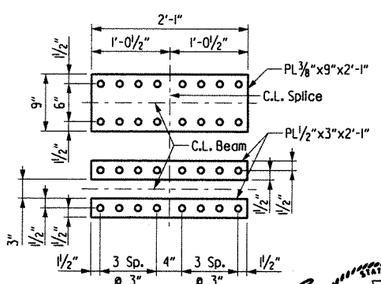
SHEAR CONNECTOR DETAIL
No Scale



ROADWAY CHANNEL CONNECTION DETAIL
No Scale



(WEB SPLICE)



(TYP. FLANGE SPLICE)

TYPICAL FIELD SPLICE DETAILS
1" = 1'-0"

Note: All field splice bolts shall be 7/8" dia. H.S. bolts.
All field splice plates shall be AASHTO M270, Gr. 50 steel.

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.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13339 LARRY R. MILLER

8-11-12

BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS OF
172'-0" CONT. COMP. W-BEAM UNIT
(BR. A6878)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02
CHECKED BY: EMB/JGM DATE: May 02
DESIGNED BY: BCG/GWS DATE: Jan 02
FILENAME: bBB0407a2 sl2.dgn
SCALE: As Shown
BRIDGE NO. A6878
DRAWING NO. 48500

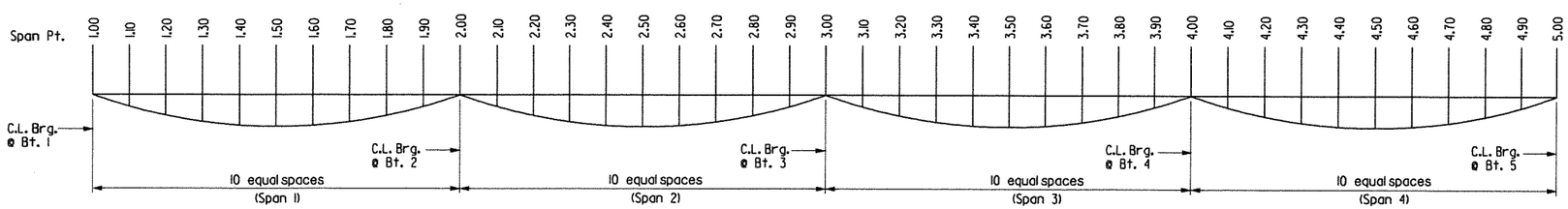
$$$$dgnspec$$$$$
$$$$date$$$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	206	464
				(1) A6878		SPAN DTLS.		48501

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Camber for Dead Load Deflection plus vertical curve +/- 1/4" tolerance.
Deflections shown are off a chord from C.L. Brg. to C.L. Brg.
Vertical curve corrections not included. Negative sign (-) indicates upward deflection.

SPAN NO.	POINT OF DEFLECTION	Structural Steel		Structural Steel (+) Slab		Structural Steel (+) Slab (+) Para. Rail	
		Bms. 1 & 6	Bms. 2-5	Bms. 1 & 6	Bms. 2-5	Bms. 1 & 6	Bms. 2-5
1	1.00	0.00	0.00	0.00	0.00	0.00	0.00
	1.10	0.02	0.02	0.17	0.19	0.19	0.21
	1.20	0.03	0.04	0.32	0.35	0.36	0.40
	1.30	0.04	0.05	0.43	0.47	0.48	0.53
	1.40	0.05	0.06	0.48	0.52	0.54	0.59
	1.50	0.05	0.06	0.47	0.52	0.53	0.59
	1.60	0.04	0.05	0.41	0.45	0.46	0.51
	1.70	0.03	0.04	0.31	0.34	0.35	0.38
	1.80	0.02	0.02	0.19	0.21	0.21	0.24
	1.90	0.01	0.01	0.07	0.08	0.08	0.09
2	2.00	0.00	0.00	0.00	0.00	0.00	0.00
	2.10	0.00	0.00	0.00	0.00	0.00	0.00
	2.20	0.01	0.01	0.04	0.04	0.04	0.04
	2.30	0.02	0.02	0.10	0.11	0.11	0.12
	2.40	0.02	0.02	0.15	0.16	0.17	0.18
	2.50	0.02	0.03	0.17	0.19	0.19	0.21
	2.60	0.02	0.03	0.17	0.18	0.19	0.20
	2.70	0.01	0.02	0.13	0.14	0.15	0.16
	2.80	0.00	0.01	0.08	0.09	0.09	0.10
	2.90	0.00	0.00	0.03	0.03	0.03	0.03
3	3.00	0.00	0.00	0.00	0.00	0.00	0.00
	3.10	0.00	0.00	0.02	0.03	0.02	0.03
	3.20	0.01	0.01	0.07	0.08	0.08	0.09
	3.30	0.01	0.01	0.13	0.14	0.15	0.16
	3.40	0.01	0.02	0.16	0.17	0.18	0.19
	3.50	0.01	0.02	0.16	0.18	0.18	0.20
	3.60	0.01	0.01	0.14	0.15	0.16	0.17
	3.70	0.01	0.01	0.09	0.10	0.10	0.11
	3.80	0.00	0.00	0.03	0.04	0.03	0.04
	3.90	0.00	0.00	-0.01	-0.01	-0.01	-0.01
4	4.00	0.00	0.00	0.00	0.00	0.00	0.00
	4.10	0.01	0.01	0.08	0.08	0.09	0.09
	4.20	0.02	0.03	0.19	0.21	0.21	0.24
	4.30	0.04	0.04	0.32	0.35	0.36	0.39
	4.40	0.05	0.05	0.42	0.46	0.47	0.52
	4.50	0.05	0.06	0.48	0.52	0.54	0.59
	4.60	0.05	0.06	0.48	0.53	0.54	0.60
	4.70	0.05	0.06	0.43	0.47	0.48	0.53
	4.80	0.04	0.04	0.33	0.36	0.37	0.41
	4.90	0.02	0.02	0.18	0.19	0.20	0.21
	5.00	0.00	0.00	0.00	0.00	0.00	0.00



DEAD LOAD DEFLECTION DIAGRAM

No Scale

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13339 LARRY E. MILLER
8-11-12
BRIDGE ENGINEER

SHEET 3 OF 5
DETAILS OF
172'-0" CONT. COMP. W-BEAM UNIT
(BR. A6878)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

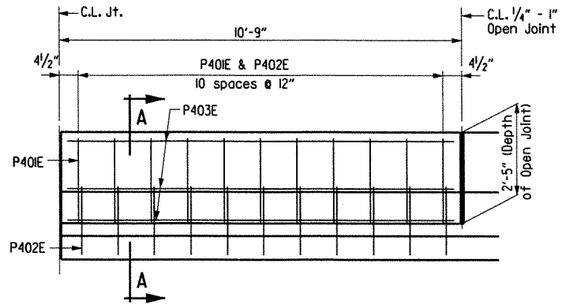
DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407a2 sl3.dgn
CHECKED BY: EMB DATE: May 02 SCALE: N.T.S.
DESIGNED BY: JLH DATE:

BRIDGE NO. A6878 DRAWING NO. 48501

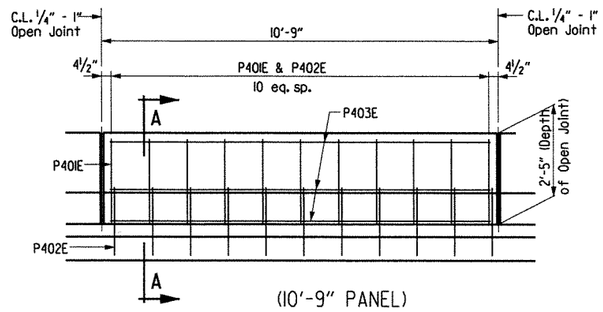
$$$$date$$$$
$$$$dgnspec$$$$

...\02 grand ave\b040468a2_s13.dgn 8/10/2012 3:49:27 PM

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.		BB0407	207	464
				(1) A6878		SPAN DTLS.		48502



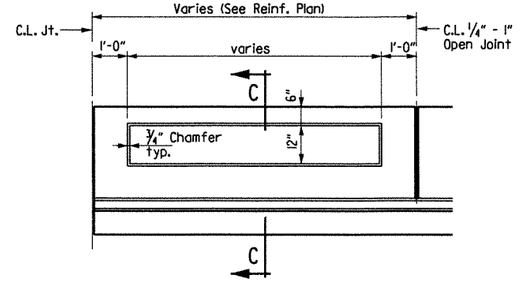
(10'-9" PANEL)



(10'-9" PANEL)

DETAILS OF CONCRETE PARAPET RAIL

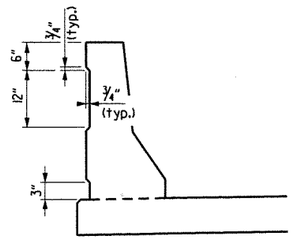
No Scale



DETAILS OF PARAPET ENHANCEMENT

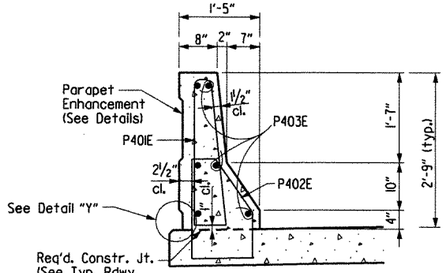
No Scale

Note: Enhancement required for concrete parapet rail only.



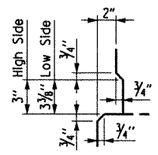
SECTION C-C

No Scale



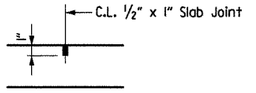
SECTION A-A

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



DETAIL Y

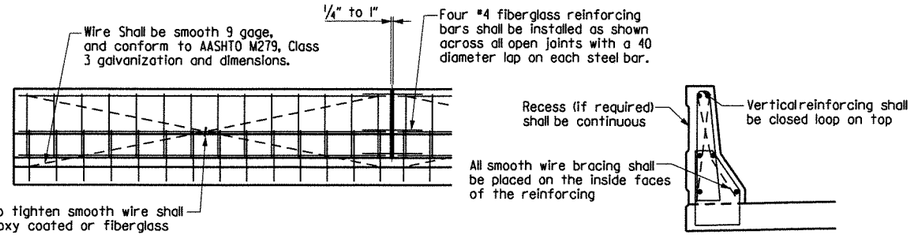
No Scale



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. 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. Slab joints shall align with parapet open joints.

SLAB JOINT DETAIL

No Scale

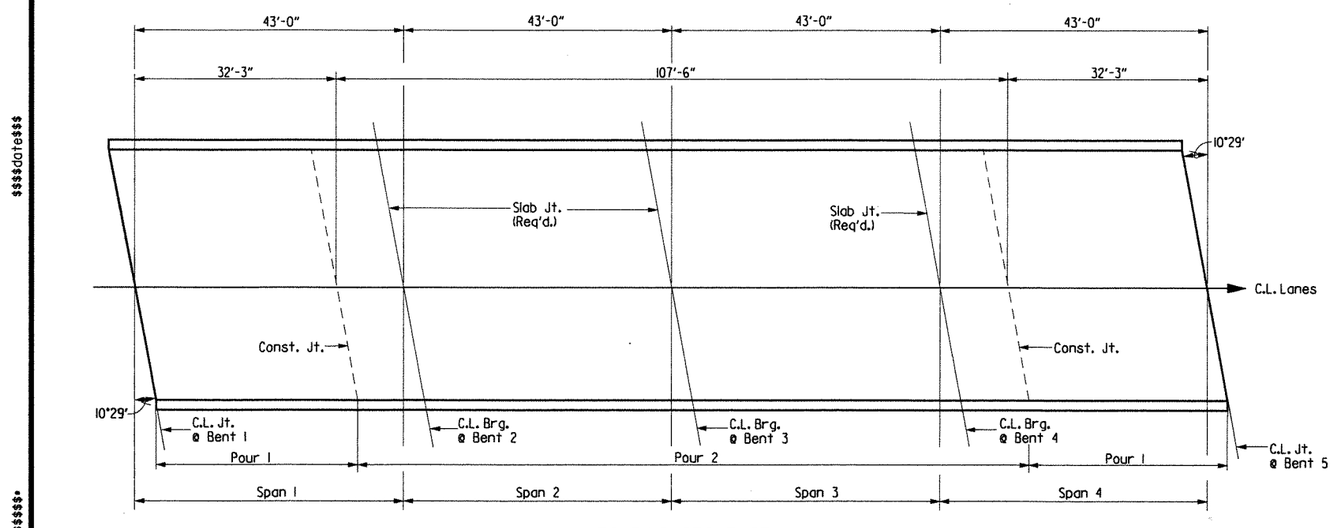


All panels shall be braced as shown to prevent racking. All open joints shall be sawed as soon as practical to a min. width of 1/4". To control cracking before sawing, all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.

The extruded parapet shall conform to the horizontal and vertical lines shown in the plans or as directed by the Engineer and shall present a smooth uniform appearance and texture. 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

No Scale



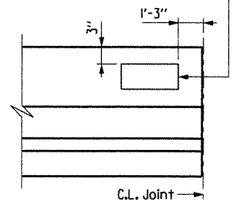
POURING SEQUENCE

No Scale

Note: Pours with the same number may be poured simutaneously or seperately. Pour (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.
Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. Concrete in bridge superstructure shall be consolidated for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

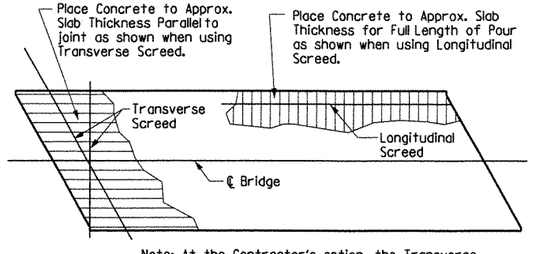
The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.

Place Type D Bridge Name Plate on right parapet rail at end of of Bridge A. (Right is defined when facing direction of travel).



NAME PLATE DETAIL

No Scale



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

SHEET 4 OF 5

DETAILS OF

172'-0" CONT. COMP. W-BEAM UNIT

(BR. A6878)

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13339 LARRY D. MILLER

8-11-12

BRIDGE ENGINEER

DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407a2 sl4.dgn

CHECKED BY: EMB DATE: May 02 SCALE: As Shown

DESIGNED BY: BCG/JLH DATE: Jan 02

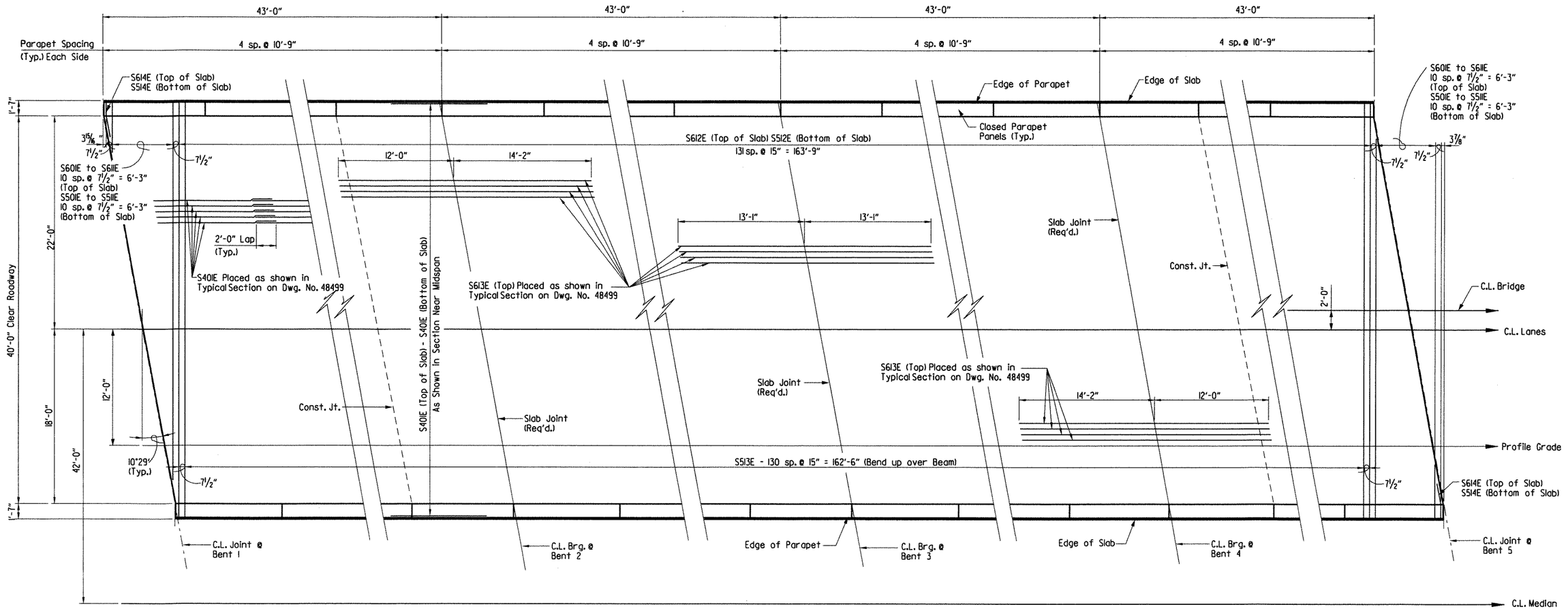
BRIDGE NO. A6878 DRAWING NO. 48502

$$$$date$$$$

$$$$dgnspec$$$$

...\02 grand ave\b040468a2_s14.dgn 8/10/2012 3:49:27 PM

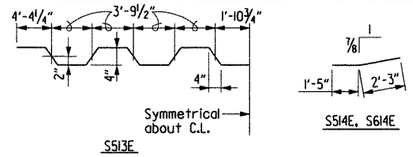
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	208	464
				(1) A6878		SPAN DTLS.		48503



BAR LIST

Mark	No. Req'd.	Length	Pin Dia.
S401E	525	35'-11"	STR.
S501E to S511E	2 ea.	5'-2 " to 39'-11"	STR.
S512E	132	42'-10"	STR.
S513E	131	43'-10"	3"
S514E	2	3'-8"	3¾"
S601E to S611E	2 ea.	5'-2" to 39'-11"	STR.
S612E	132	42'-10"	STR.
S613E	135	26'-2"	STR.
S614E	2	3'-8"	4½"
P401E	352	6'-4"	2"
P402E	352	5'-7"	2"
P403E	192	10'-4"	STR.

Bending Diagrams (Dimensions are out to out of bars.)



Note: All bars designated with an "E" suffix are to be epoxy coated.

Note: Slab Joints shall align with Parapet Joints at gutterline.

Note: At the Contractor's option, two straight epoxy coated #5 bars may be substituted for the S513E bar. Payment for reinforcing will be based on the S513E bar.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10339 LARRY W. MILLER

8-11-12

BRIDGE ENGINEER

SHEET 5 OF 5
DETAILS OF
172'-0" CONT. COMP. W-BEAM UNIT
(BR. A6878)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407a2 sl5.dgn
CHECKED BY: EMB DATE: May 02 SCALE: As Shown
DESIGNED BY: BCG DATE: Jan 02

BRIDGE NO. A6878 DRAWING NO. 48503

$$$$date$$$$
$$$$dgnspec$$$$$

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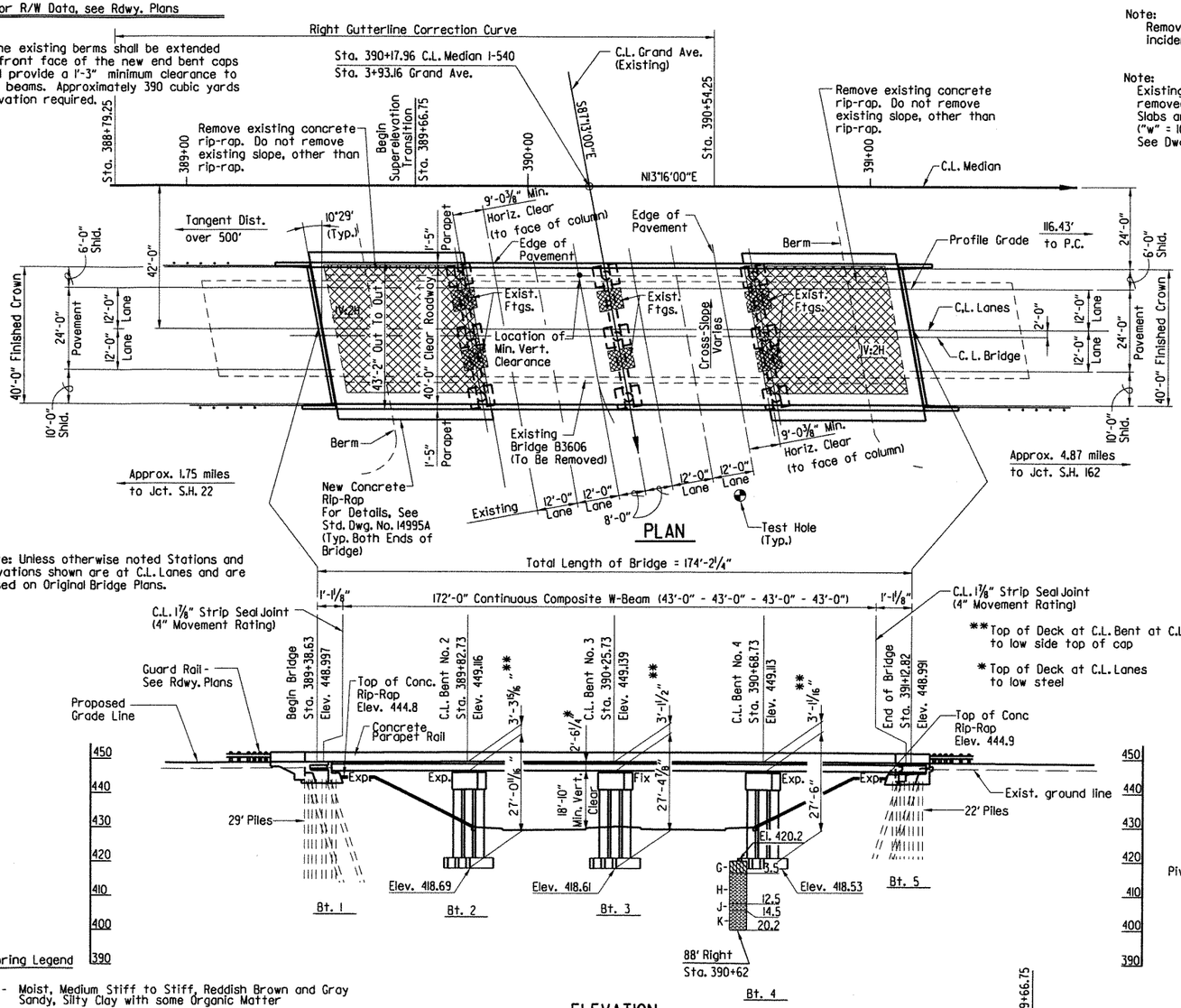
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	209	464
				(1) B6878		LAYOUT		48504

For R/W Data, see Rdwy. Plans

Note: The existing berms shall be extended to the front face of the new end bent caps and shall provide a 1'-3" minimum clearance to the new beams. Approximately 390 cubic yards of excavation required.



Note: Unless otherwise noted Stations and Elevations shown are at C.L. Lanes and are based on Original Bridge Plans.

** Top of Deck at C.L. Bent at C.L. Lanes to low side top of cap

* Top of Deck at C.L. Lanes to low steel

ELEVATION
(Along C.L. Lanes)

Boring Legend

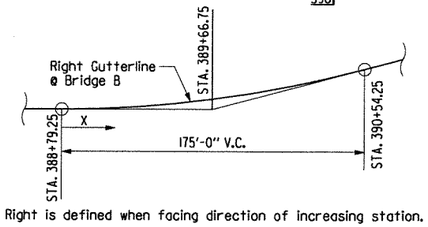
- A - Moist, Medium Stiff to Stiff, Reddish Brown and Gray Sandy, Silty Clay with some Organic Matter
- B - Moist, Very Stiff, Gray and Brown Sandy, Silty Clay with some Sandstone Fragments
- C - Medium Hard, Brown and Gray Highly Weathered Shale
- D - Hard, Dark Gray Fractured Shale with some Weathered Shale Seams
- E - Hard, Dark Gray Shale with some Fractured Seams
- F - Hard, Dark, Gray Shale
- G - Moist, Stiff, Brown and Gray Silty Clay
- H - Soft to Medium Hard, Brown Highly Weathered Shale
- J - Medium Hard, Brown and Gray Weathered Shale
- K - Hard, Dark Gray and Brown Shale
- L - Moist, Hard, Brown and Gray Silty Clay with some Highly Weathered Shale
- M - Soft, Brown and Gray Highly Weathered Shale
- N - Medium, Hard, Brown Highly Weathered Shale
- P - Medium Hard, Gray Weathered Shale
- Q - Hard, Dark Gray Shale with some Weathered Shale Seams

SAMPLE DATA

Sta. 390+62 - 88' Right of Centerline of Median I-540

9.5 - 12.5, SCR% = 84, ROD% = 0
12.5 - 17.5, SCR% = 97, ROD% = 20
17.5 - 20.2, SCR% = 99, ROD% = 67

NOTE: The contractor shall check measurements of the existing bridge. Any adjustments necessary to fit the new work to the existing bridge location shall be submitted for the Engineer's approval.



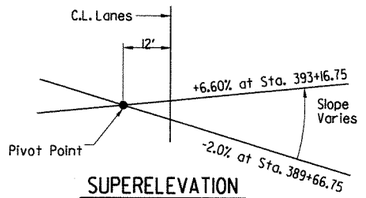
Right is defined when facing direction of increasing station.

The right gutterline of Bridge 'B' has been smoothed with a correction equation between the stations shown. The roadway cross slope at any station is a straight line between the left and right gutterlines.

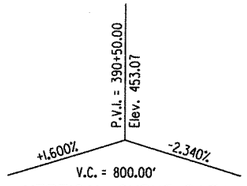
Elev. = 448.36 + 0.0047(X) - 0.0000008(X^2)

X is the distance in feet along centerline Lane from beginning station shown. Elevation is at gutterline.

RIGHT GUTTER CORRECTION CURVE
No Scale



SUPERELEVATION TRANSITION SKETCH
Looking Up Ahead



VERTICAL CURVE DATA
(Along Profile Grade)

Note:
Removal of existing concrete rip-rap shall be incidental to Item 205.

Note:
Existing approach slabs and gutters to be removed and replaced with new Approach Slabs and Type C Approach Gutters. ("w" = 10'-0" & "w" = 6'-0") See Dwg. Nos. 2018 & 2016C.

GENERAL NOTES

BENCH MARK: Elevations and stations are assumed to be the same as shown on the original plans. The original layout shows the elevation at the top of the deck and centerline of existing bridge to be at 447.43 at Sta. 389+43.63 (Beg. of Br. B3606).

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 on the plans, section and subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (1996 edition), with current interim specifications.

LIVE LOAD: HS20 + Military Loading METHOD OF DESIGN: Load Factor
SEISMIC PERFORMANCE CATEGORY: A

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 M31 or M53, Gr. 60) fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 50) Fy = 50,000 psi
Structural Steel (AASHTO M270, Gr. 36) Fy = 36,000 psi

BORING LOGS: Boring Logs may be obtained from the Programs and Contracts Division.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

CLASS I PROTECTIVE SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

STEEL PILING: Piling in End Bents 1 and 5 shall be HP12x53 and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 70 tons per pile and into the material designated as medium hard, shale on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles in end bents to be driven after embankment to bottom of cap is in place. On all piles the contractor shall use approved steel H-Pile driving points.

FOOTINGS: Footings shall be set a minimum of 1'-6" into medium hard, shale but shall not be at a higher elevation than the existing footing and shall have a minimum cover above top of footings of 2'. Foundations for footings shall be prepared in accordance with Section 801.04 of the Standard Specifications. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

DETAIL DRAWINGS:	DRAWING NO.
End Bents	48506, 48507, 48511, 48512
Intermediate Bents	48508-48510
172'-0" Cont. Comp. W-Beam Unit	48513-48517
Steel Piling	14995A
Approach Slab	2018
Type C Approach Gutter	2016C

REMOVAL AND SALVAGE: The existing bridge shall be removed in accordance with Section 205. All material from existing bridge shall become the property of the contractor.

EXISTING BRIDGE: Existing Bridge No. B3606 is 33'-6" wide and 164'-2 3/4" long and consists of 2 composite 38'-0" and 2 composite 43'-0" simple spans supported by substructures consisting of 3 dual column bents and 2 pile end bents. Plans for existing bridge will be made available to the Contractor upon request to Programs and Contracts Division. Existing Dwg. Nos. 11974 thru 11977.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

PAINTING: All structural steel except galvanized members and some surfaces in contact with concrete shall be painted as specified in subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11039 LARRY E. MILLER

Larry E. Miller 8-11-12
BRIDGE ENGINEER

LAYOUT OF BRIDGE OVER GRAND AVENUE (BR. B6878)
HWY. 22 - I-40 (F)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02 FILENAME: b8B0407b2_l11.dgn
CHECKED BY: JLH DATE: March 02 SCALE: 1" = 20'
DESIGNED BY: BCG DATE: March 02
BRIDGE NO. B6878 DRAWING NO. 48504

$$$$date$$$

$$$$dgnspec$$$$$

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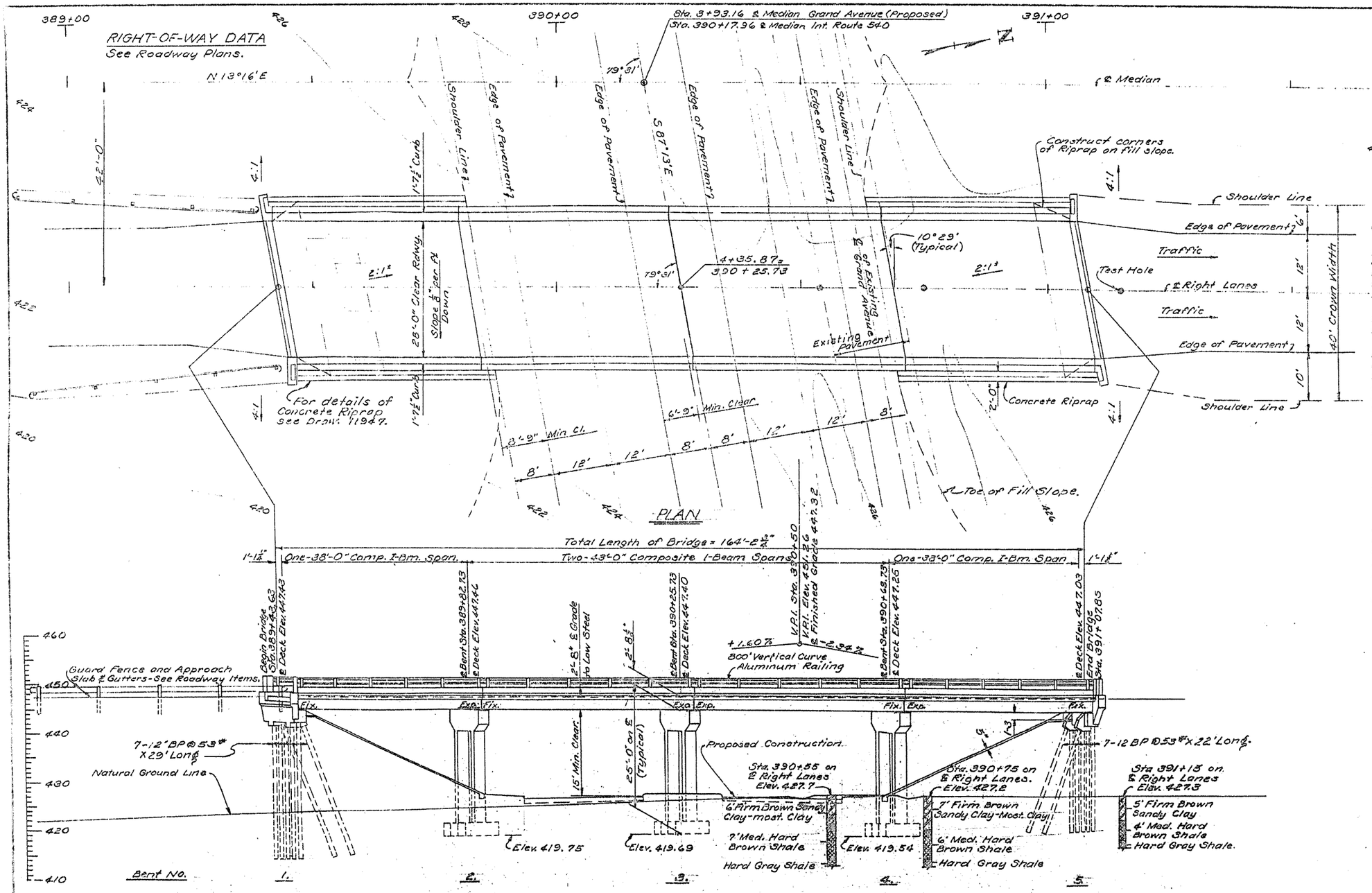
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	210	464
(1) B3606 - LAYOUT - 48505				

RIGHT-OF-WAY DATA
See Roadway Plans.



ELEVATION

Maximum Foundation Pressure (Calculated) = 3.0 tons/sq. ft. (Gp. I.)

BENCH MARK:
Nail in Power Pole - 200' Rt. of ℄ Median
Sta. 390+50 - Elev. 421.64.

389+00 389+50 390+00 390+50 391+00

GENERAL NOTES

All concrete to be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.

Rock excavation shall be made to neat lines of concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock. Excavate a minimum of 0'6" into the material designated as Brown shale in the boring logs.

In general all construction joints in bents shall be horizontal and shall be provided with keys not less than 12" high and covering the middle third of both dimensions.

All piling to be driven with an approved diesel, air or steam hammer to a minimum capacity of 36 tons per pile and to the material designated in the boring logs as Brown shale. Lengths of piling shown are for estimating quantities only. Order lengths shown; cut-off or build-up, if necessary, to be paid for in accordance with the Standard Specifications. All piling to be 12-BP-53.

Piling in End Bents 1 and 5 shall be driven after the embankment is in place.

For Details of End Bents see Drawing 11975.

For Details of Intermediate Bents see Drawing 11976.

For Details of Superstructure see Drawings 14990, 15030 and 11977.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, and designated Special Provisions.

DESIGN SPECIFICATIONS A.A.S.H.O. 1961

Live Loading : H20-S16 and Special Interstate Loading of two 24,000# axles spaced 4'0" centers.

Unit Stresses:

Class A Concrete (n=15)	840 psi
Class S Concrete (n=10)	1,200 psi
Reinforcing Steel	20,000 psi
Structural Steel (A 36)	20,000 psi

FOR INFORMATION ONLY

(RIGHT LANES)

LAYOUT OF

GRAND AVENUE INTERCHANGE

HWY. 22 - ARK. RIVER BRIDGE

SEBASTIAN COUNTY

INT. ROUTE 540 SEC. 1

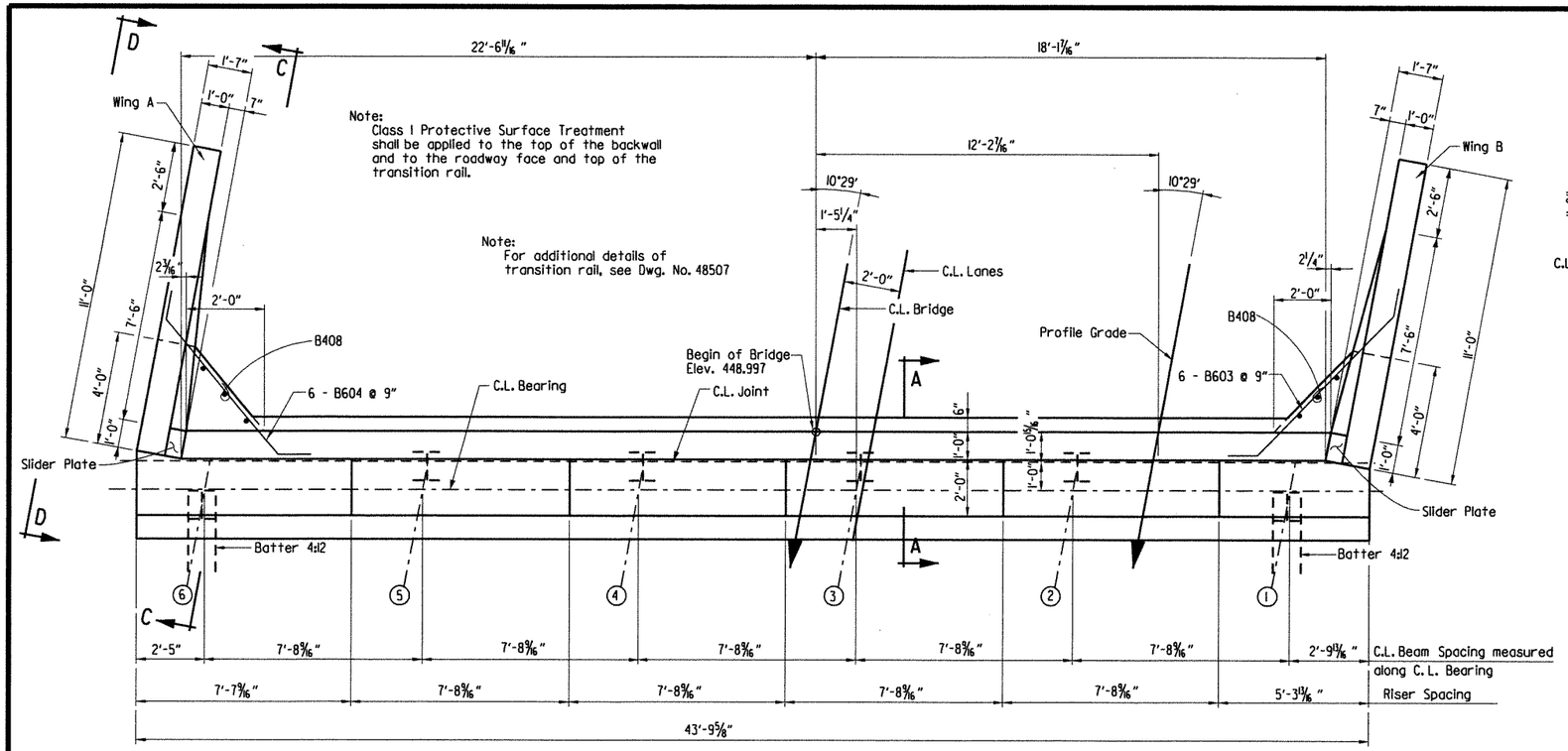
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: WP DATE: 2-9-61
TRACED BY: DATE:
CHECKED BY: DV DATE: 2-16-62
SCALE: 1"=10'-0"

L. P. Carlson
BRIDGE ENGINEER

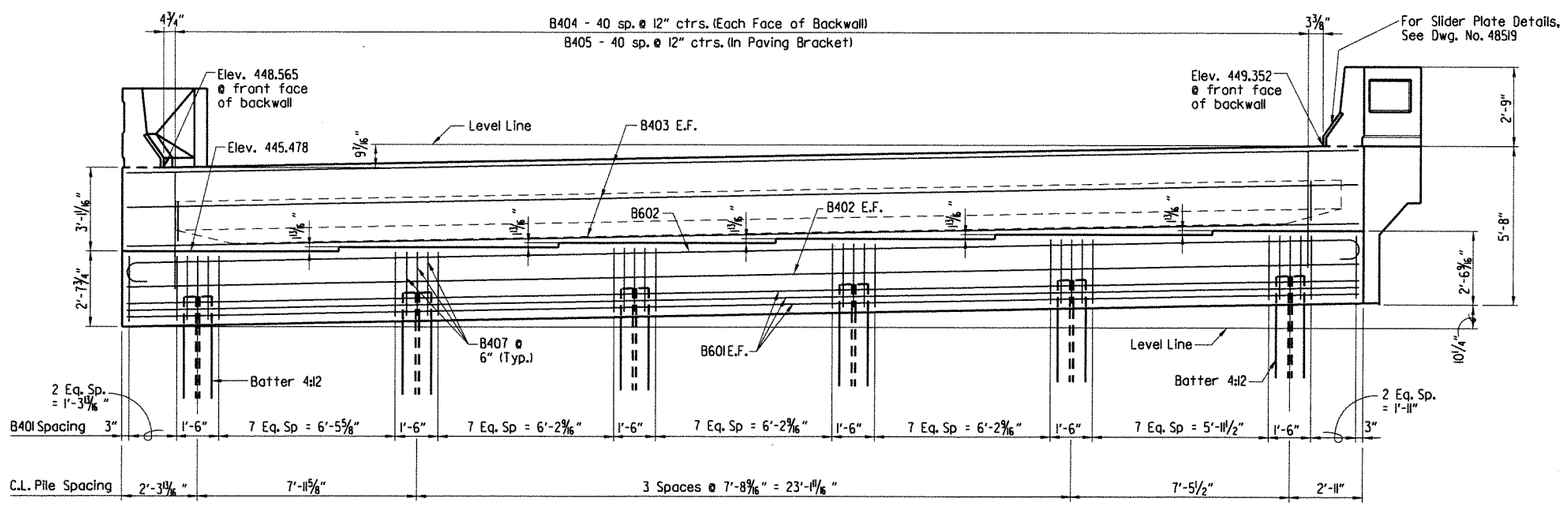
BRIDGE NO. B3606 DRAWING NO. 48505

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.		BB0407	211	464
				(1) B6878		BENT DTLS.		48506



PLAN

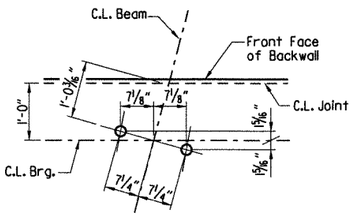
3/8" = 1'-0"



ELEVATION

(Looking Back)

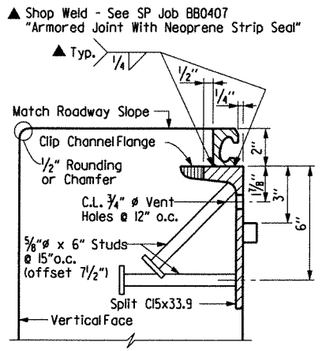
3/8" = 1'-0"



Note: For details of Elastomeric Bearings, See Dwg. No. 48518

TYPICAL ANCHOR BOLT LAYOUT

No Scale

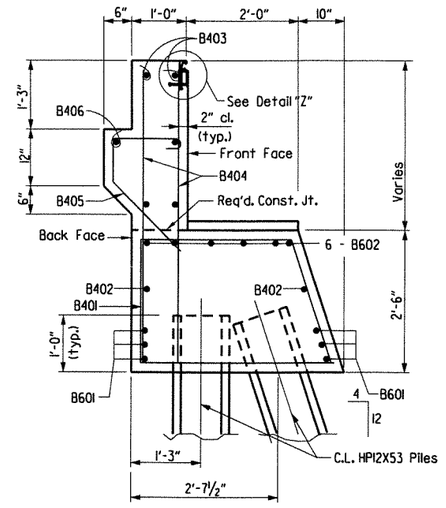


Note: Concrete shall be hand packed under the joint armor in the backwall.

For additional details, See Dwg. No. 48519.

DETAIL Z

3"= 1'-0"



SECTION A-A

3/4" = 1'-0"

GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered 3/4" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Gr. 60.

End Bent backwall shall not be poured before girders are in place. Backwall to be placed after concrete span placement.

Structural steel in end bents shall be AASHTO M270, Gr. 50 and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50)".

If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

All steel surfaces are to be cleaned and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

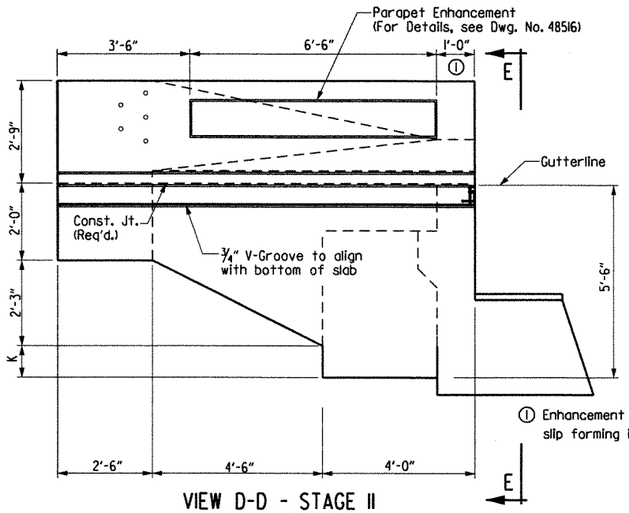
STATE OF ARKANSAS
LARRY W. MILLER
No. 11539
REGISTERED PROFESSIONAL ENGINEER
BRIDGE ENGINEER
8-11-12

SHEET 1 OF 2
DETAILS OF BENT NO. 1
BRIDGE OVER GRAND AVENUE
(BR. B6878)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: Feb 02
CHECKED BY: EMB/ETH DATE: May 02
DESIGNED BY: BCG DATE: Jan 02
FILENAME: bBB0407b2 bll.dgn
SCALE: As Shown
BRIDGE NO. B6878 DRAWING NO. 48506

$$$$date$$$$
$$$$dgnspec$$$$$

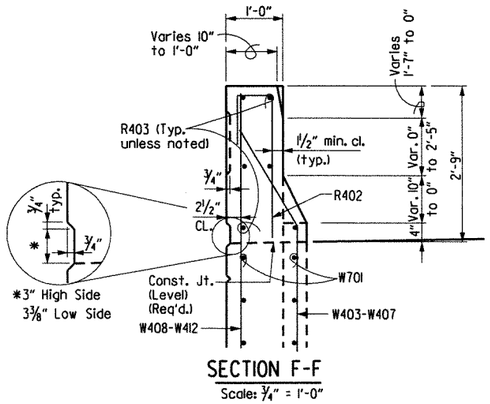
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	2/2	464
				① B6878		BENT DTLS.		48507



VIEW D-D - STAGE II

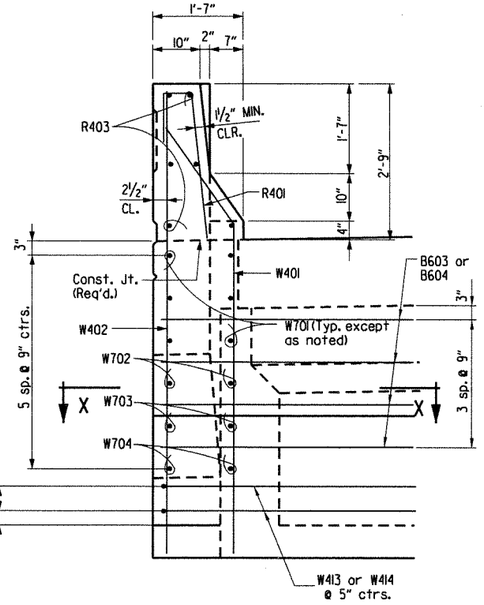
(Stage IV Similar)
Scale: ½" = 1'-0"

① Enhancement shall be continuous if slip forming is used on bridge parapet.



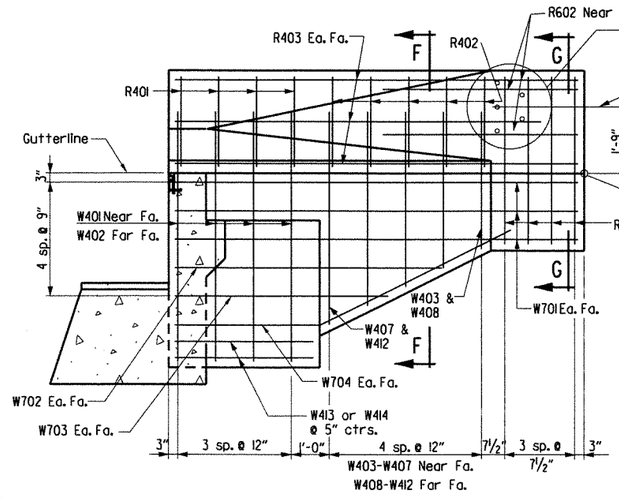
SECTION F-F

Scale: ¾" = 1'-0"



VIEW E-E

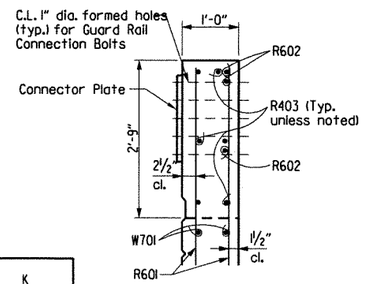
Scale: ¾" = 1'-0"



SECTION C-C - STAGE II

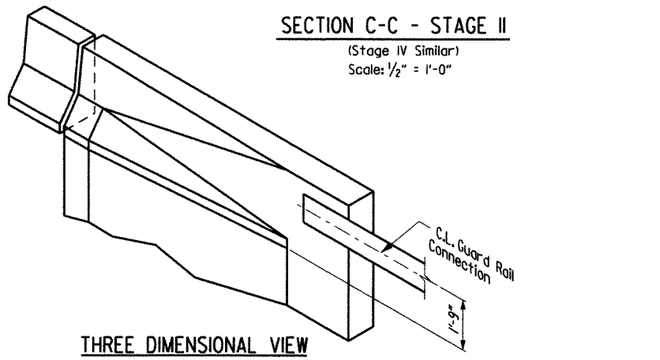
(Stage IV Similar)
Scale: ½" = 1'-0"

Bent No.	Wing	Elev. "R"	K
1	A	448.532	1'-2⅝"
1	B	449.342	1'-2⅞"



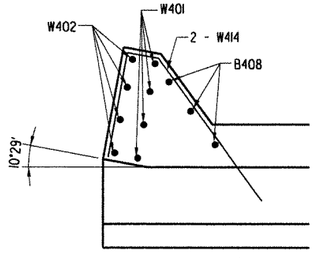
SECTION G-G

Scale: ¾" = 1'-0"



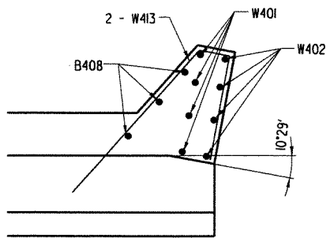
THREE DIMENSIONAL VIEW
WING RAIL & PARAPET

No Scale



SECTION X-X

Wing A



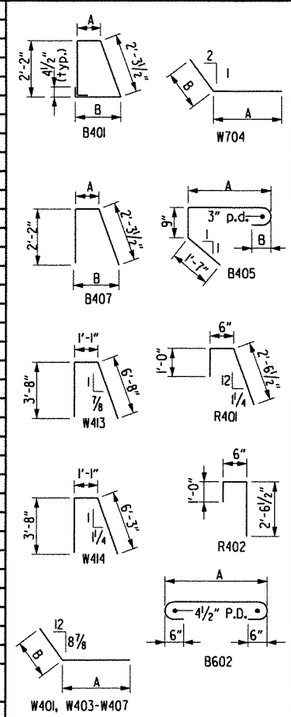
SECTION X-X

Wing B

BAR LIST

Mark	No. Req'd.	Length	"A"	"B"	Pin Dia.
B401	46	11'-0"	2'-8"	3'-6"	2"
B402	2	43'-6"			STR.
B403	5	40'-4"			STR.
B404	82	5'-2"			STR.
B405	41	3'-11"	1'-2"	4½"	3"
B406	1	40'-4"			STR.
B407	18	7'-0"	2'-8"	3'-6"	2"
B408	6	4'-0"			STR.
B601	6	43'-6"			STR.
B602	6	44'-10"	43'-6"		4½"
B603	4	8'-11"			4½"
B604	4	8'-3"			4½"
R401	8	3'-11"			2"
R402	8	3'-11"			2"
R403	12	9'-8"			STR.
R601	16	4'-5"			STR.
R602	6	5'-0"			STR.
W401	8	6'-6"	5'-4"	1'-2"	2"
W402	8	7'-8"			STR.
W403-W407	2 ea.	Varies 3'-4" to 5'-4"	Varies 2'-2" to 4'-2"	1'-2"	2"
W408-W412	2 ea.	Varies 4'-5" to 6'-5"			STR.
W413	2	11'-3"			2"
W414	2	10'-10"			2"
W701	12	9'-8"			STR.
W702	4	6'-0"			STR.
W703	4	4'-6"			STR.
W704	4	8'-4"	2'-9"	5'-7"	5¼"

Bending Diagrams
(Dimensions are out to out of bars.)



SHEET 2 OF 2
DETAILS OF BENT NO. 1
BRIDGE OVER GRAND AVENUE
(BR. B6878)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 11338 — LARRY B. MILLER

Larry B. Miller 8-11-12
BRIDGE ENGINEER

DRAWN BY:	TAR	DATE:	Feb 02	FILENAME:	bBB0407b2 b12.dgn
CHECKED BY:	EMB	DATE:	May 02	SCALE:	As Shown
DESIGNED BY:	BCG	DATE:	Jan 02		

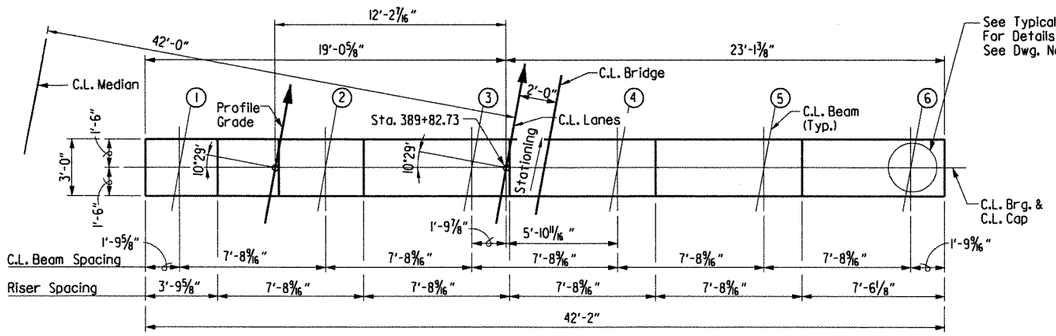
BRIDGE NO. B6878 DRAWING NO. 48507

$$$$dgnspec$$$$$

$$$$date$$$$

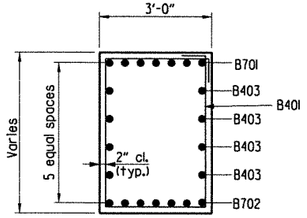
...\02 grand ave\b040468b2_b12.dgn 8/10/2012 3:49:29 PM

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.		BB0407	213	464
				(1) B6878		BENT DTLS.		48508



PLAN

Scale: 1/4" = 1'-0"



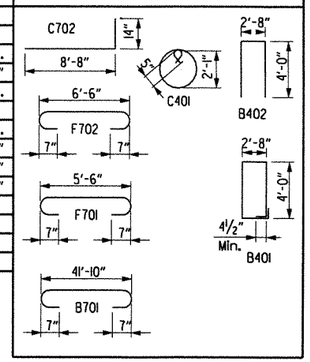
SECTION B-B

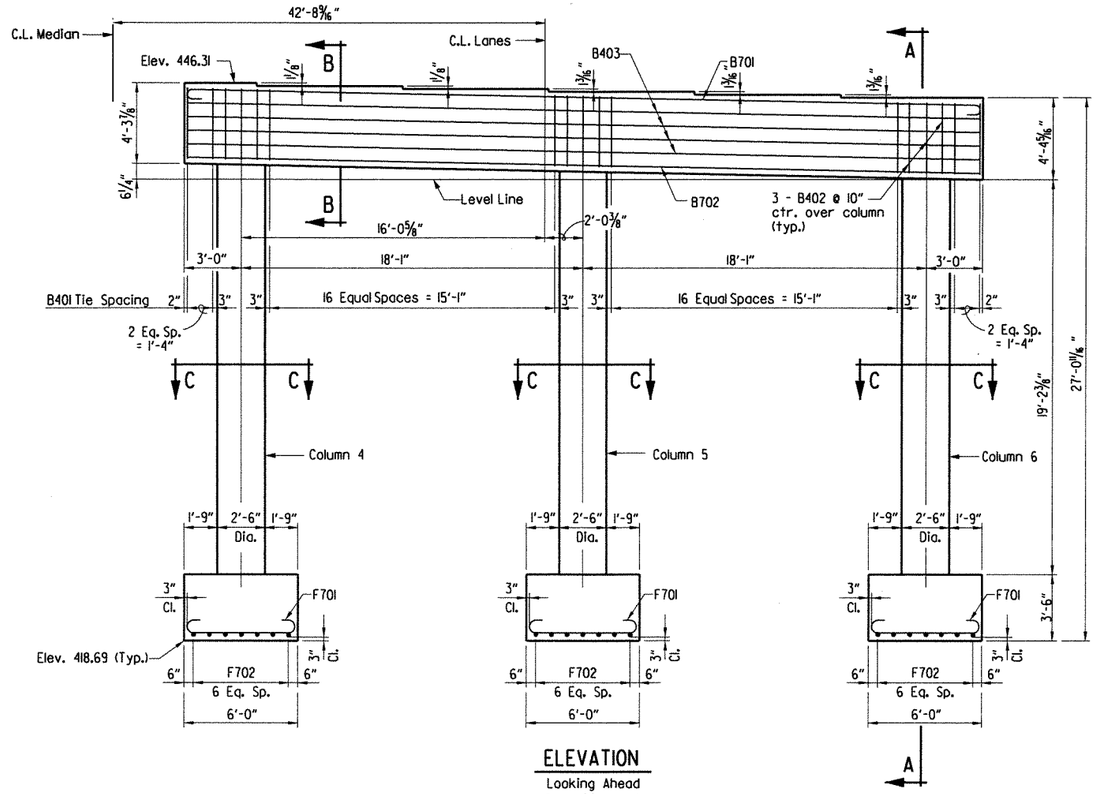
Scale: 1/2" = 1'-0"

BAR LIST

Mark	No. Req'd.	Length	Pin Dia.
B401	40	13'-8"	2"
B402	9	10'-6"	2"
B403	8	41'-10"	STR.
B701	7	43'-6"	5/4"
B702	7	41'-10"	STR.
C401	70	7'-7"	3"
C701	36	22'-5"	STR.
C702	36	9'-8"	5/4"
F701	24	7'-2"	5/4"
F702	21	8'-2"	5/4"

Bending Diagrams (Dimensions are out to out of bars.)

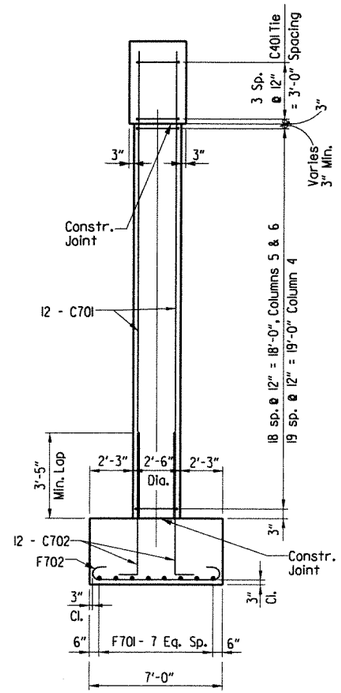




ELEVATION

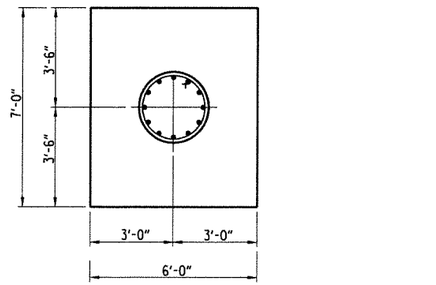
Looking Ahead

Scale: 1/4" = 1'-0"



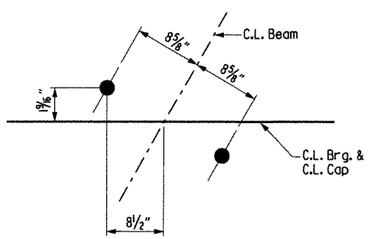
SECTION A-A

Scale: 1/4" = 1'-0"



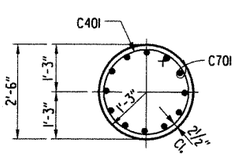
PLAN OF FOOTING

Scale: 3/8" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT

No Scale



SECTION C-C

Scale: 1/2" = 1'-0"

Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall 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.

For additional information, see Layout.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10339 LARRY E. MILLER

8-11-12

BRIDGE ENGINEER

DETAILS OF BENT NO. 2
BRIDGE OVER GRAND AVENUE
(BR. B6878)
CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407b2 b2.dgn

CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown

DESIGNED BY: BCG DATE: Jan 02

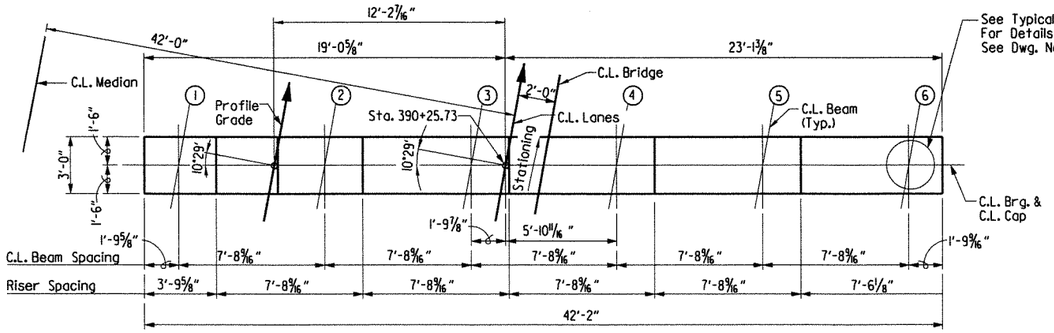
BRIDGE NO. B6878 DRAWING NO. 48508

$$$$date$$$$

$$$$dgnspec$$$$

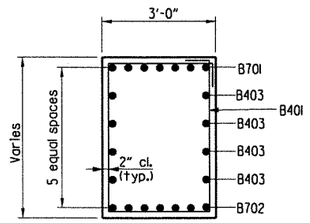
...\02 grand ave\b040468b2_b2.dgn 8/10/2012 3:49:30 PM

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.		BB0407	214	464
				1 B6878		BENT DTLS.		48509



PLAN

Scale: 1/4" = 1'-0"

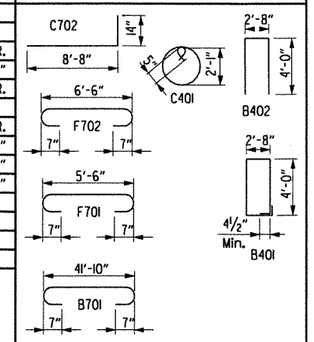


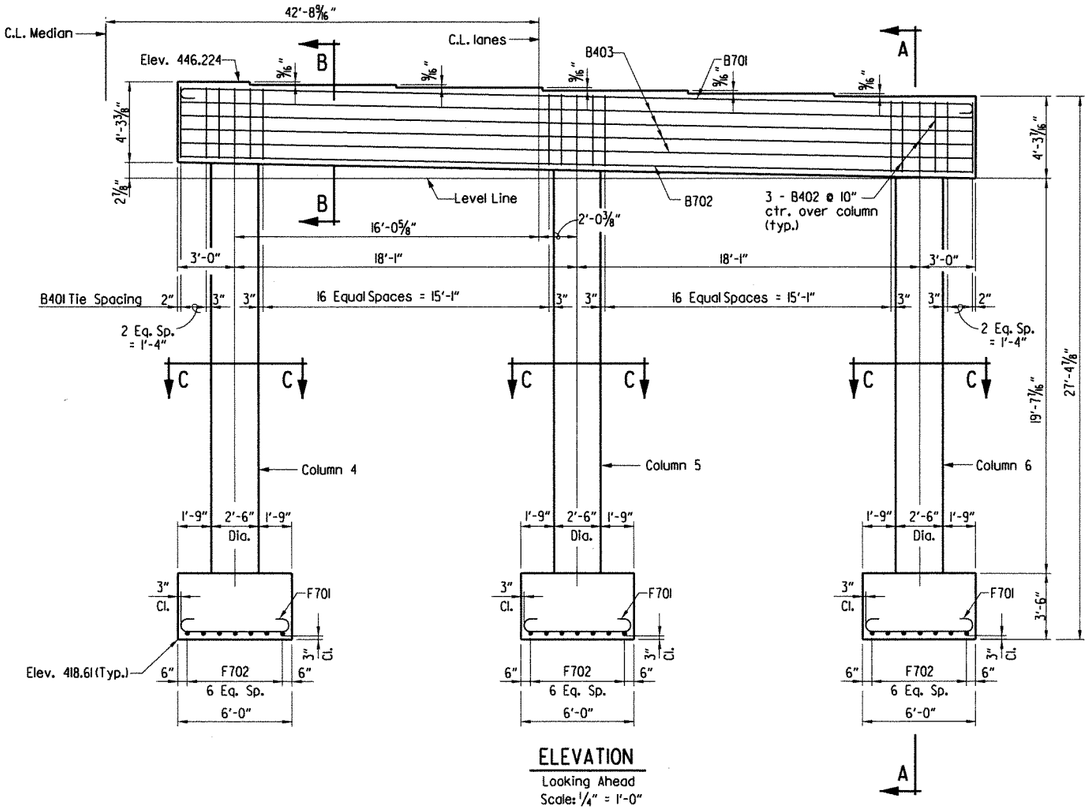
SECTION B-B

Scale: 1/2" = 1'-0"

BAR LIST

Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
B401	40	13'-8"	2"	
B402	9	10'-6"	2"	
B403	8	41'-10"	STR.	
B701	7	43'-6"	5 1/4"	
B702	7	41'-10"	STR.	
C401	73	7'-7"	3"	
C701	36	22'-6"	STR.	
C702	36	9'-8"	5 1/4"	
F701	24	7'-2"	5 1/4"	
F702	21	8'-2"	5 1/4"	

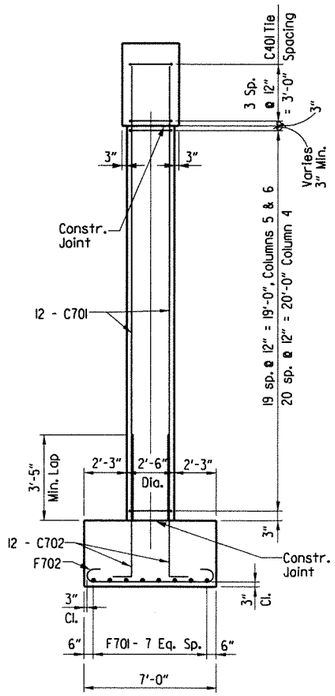




ELEVATION

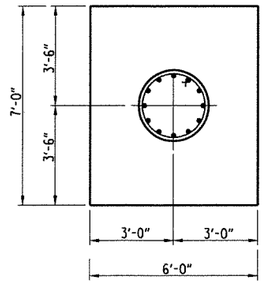
Looking Ahead

Scale: 1/4" = 1'-0"



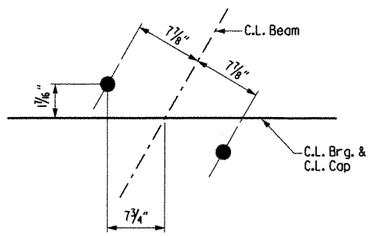
SECTION A-A

Scale: 1/4" = 1'-0"



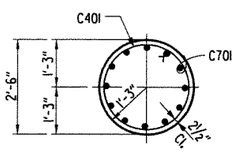
PLAN OF FOOTING

Scale: 3/8" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT

No Scale



SECTION C-C

Scale: 1/2" = 1'-0"

Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall 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, tap reinforcing bars shall be properly placed to avoid damage.

For additional information, see Layout.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER

8-11-12

BRIDGE ENGINEER

DETAILS OF BENT NO. 3
BRIDGE OVER GRAND AVENUE
(BR. B6878)
CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407b2 b3.dgn

CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown

DESIGNED BY: BCG DATE: Jan 02

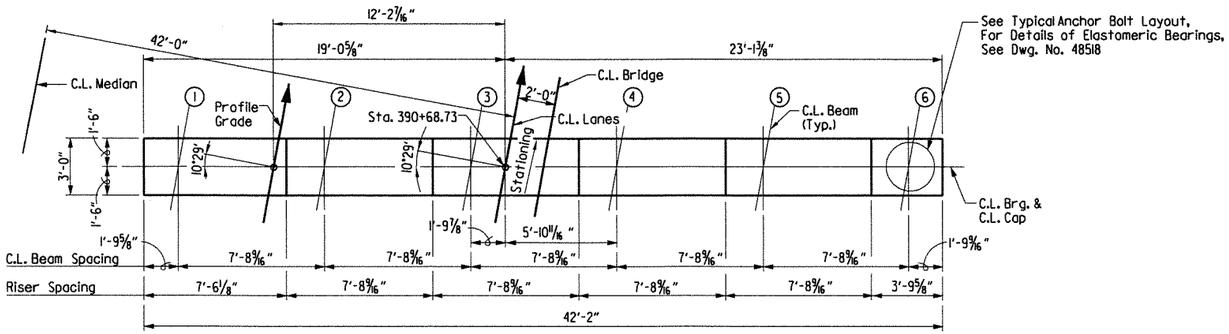
BRIDGE NO. B6878 DRAWING NO. 48509

$$$$dates$$$$

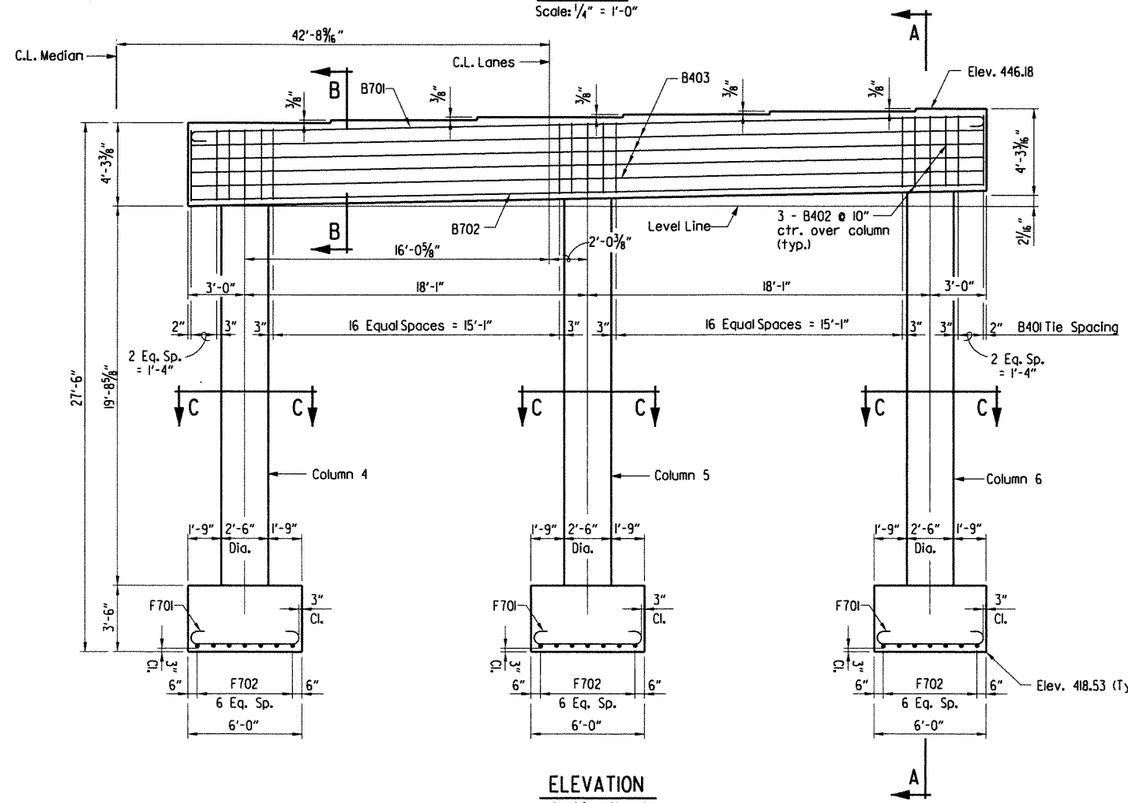
$$$$dgnspec$$$$$

...\02 grand ave\b040468b2_b3.dgn 8/10/2012 3:49:30 PM

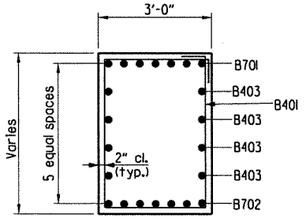
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	215	464
				(1) B6878		BENT DTLS.		48510



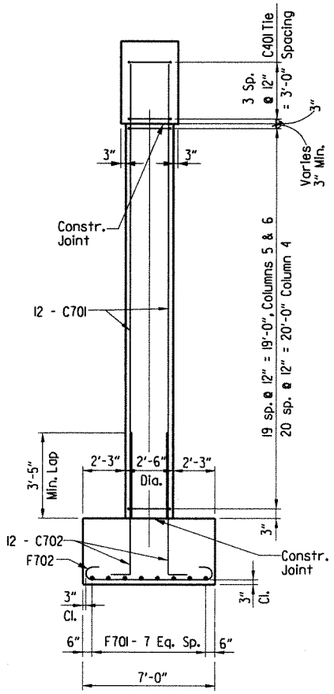
PLAN
Scale: 1/4" = 1'-0"



ELEVATION
Looking Ahead
Scale: 1/4" = 1'-0"



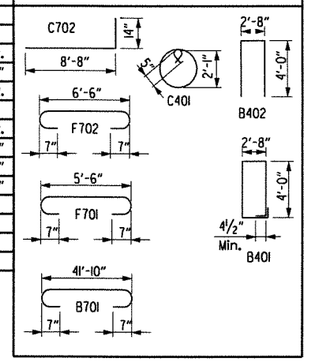
SECTION B-B
Scale: 1/2" = 1'-0"

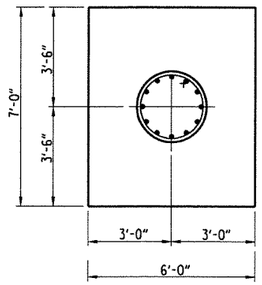


SECTION A-A
Scale: 1/4" = 1'-0"

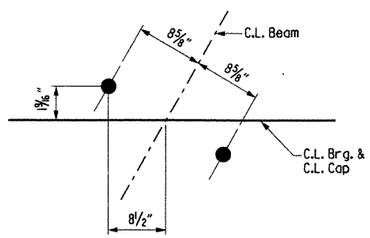
BAR LIST

Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
B401	40	13'-8"	2"	
B402	9	10'-6"	2"	
B403	8	41'-10"	STR.	
B701	7	43'-6"	5/4"	
B702	7	41'-10"	STR.	
C401	73	7'-7"	3"	
C701	36	22'-6"	STR.	
C702	36	9'-8"	5/4"	
F701	24	7'-2"	5/4"	
F702	21	8'-2"	5/4"	

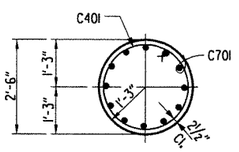




PLAN OF FOOTING
Scale: 3/8" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT
No Scale



SECTION C-C
Scale: 1/2" = 1'-0"

Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall 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.

For additional information, see Layout.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11039 LARRY E. MILLER

8-11-12

BRIDGE ENGINEER

DETAILS OF BENT NO. 4
BRIDGE OVER GRAND AVENUE
(BR. B6878)
CRAWFORD & SEBASTIAN COUNTIES

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: Feb 02 FILENAME: bBB0407b2 b4.dgn

CHECKED BY: EMB/ETH DATE: May 02 SCALE: As Shown

DESIGNED BY: BCG DATE: Jan 02

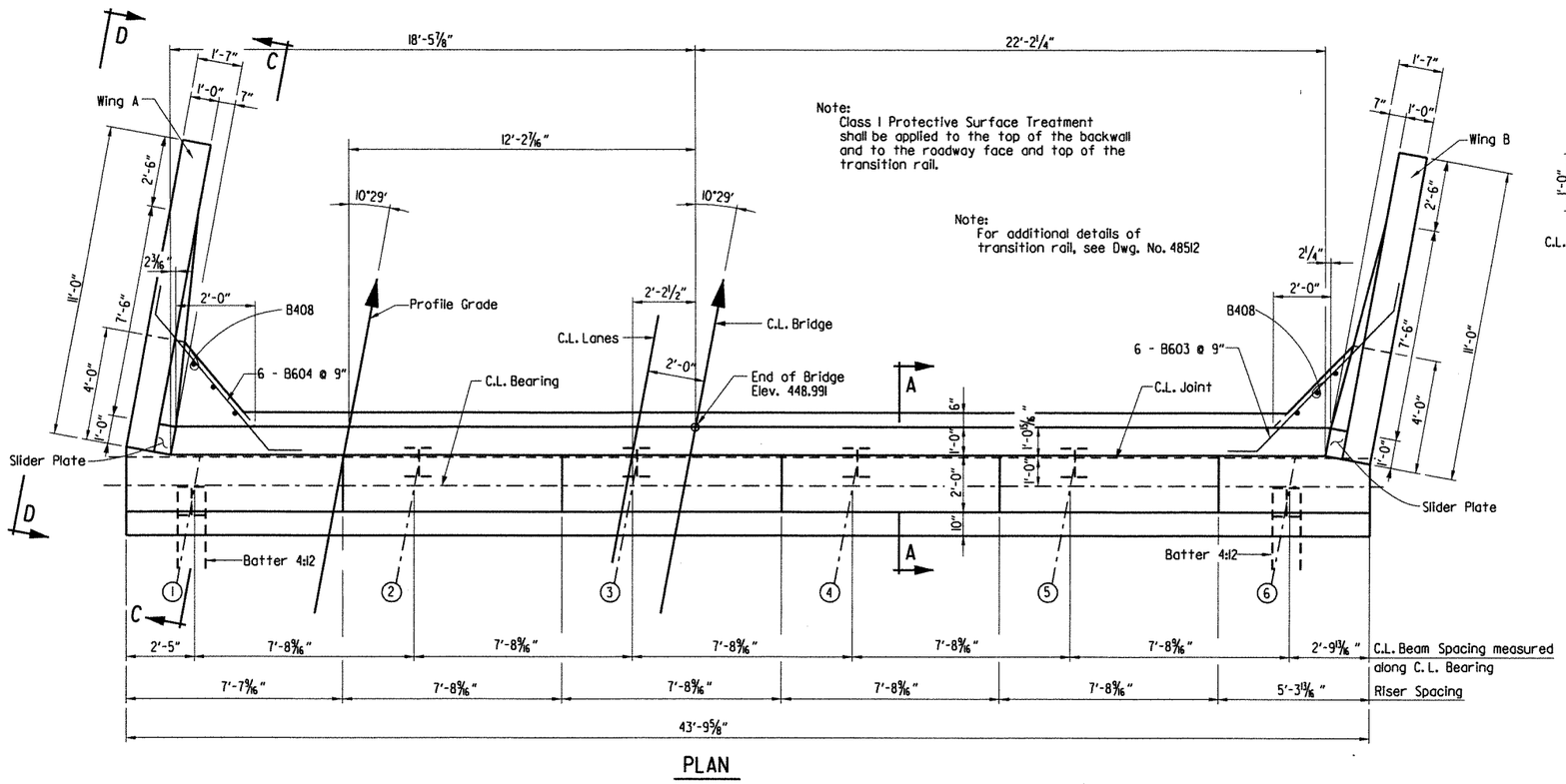
BRIDGE NO. B6878 DRAWING NO. 48510

$$$$date$$$$

$$$$dgnspec$$$$$

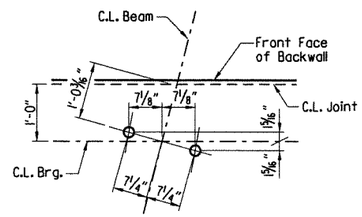
...\02 grand ave\b040468b2_b4.dgn 8/10/2012 3:49:31 PM

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.		BB0407	2/6	464
				(1) B6878		BENT DTLS.		48511



PLAN

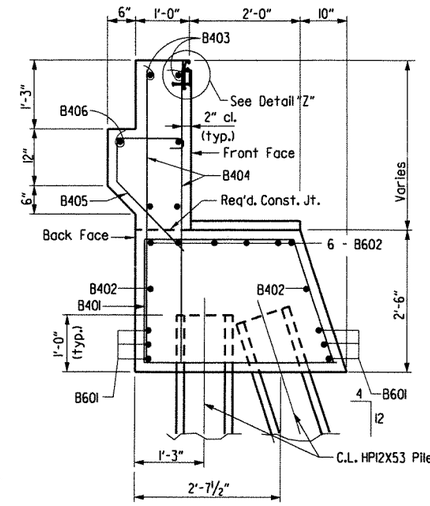
⅜" = 1'-0"



Note: For details of Elastomeric Bearings, See Dwg. No. 48517

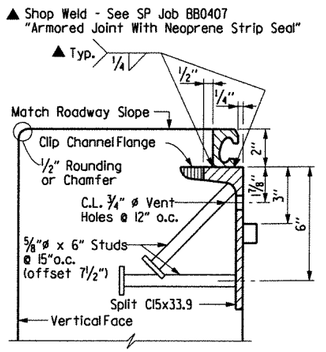
TYPICAL ANCHOR BOLT LAYOUT

No Scale



SECTION A-S

¾" = 1'-0"

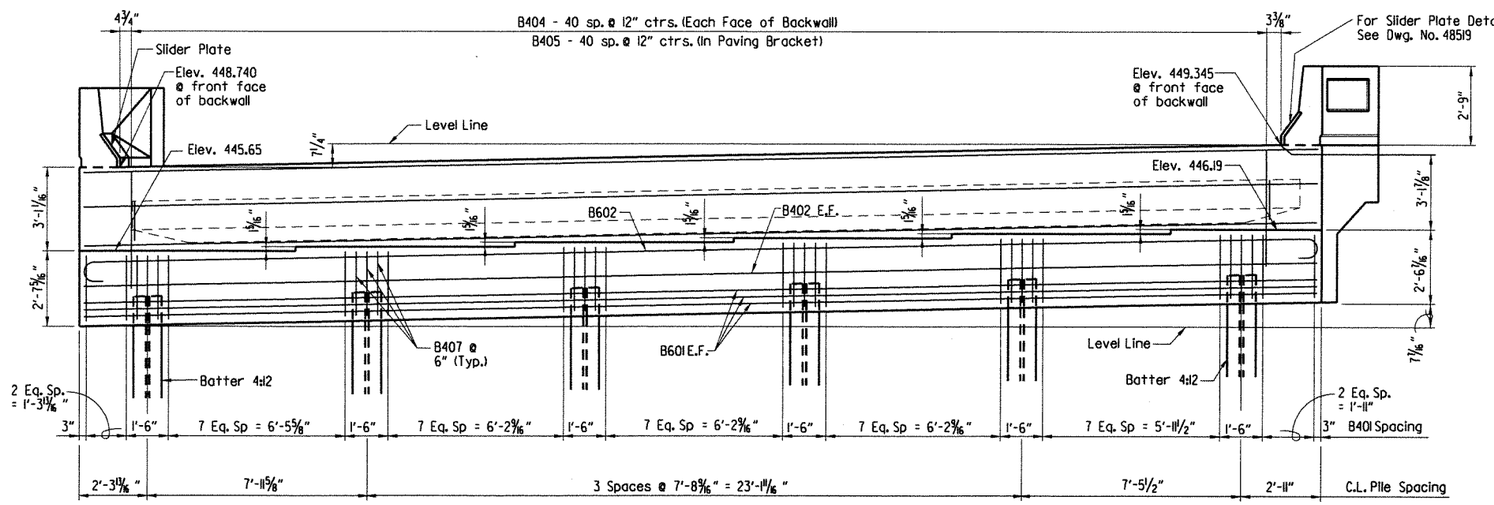


Note: Concrete shall be hand packed under the joint armor in the backwall.

For additional details, See Dwg. No. 48519.

DETAIL Z

3"= 1'-0"



ELEVATION

(Looking Ahead)

⅜" = 1'-0"

GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered ¾" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Gr. 60.

End Bent backwall shall not be poured before girders are in place. Backwall to be placed after concrete span placement.

Structural steel in end bents shall be AASHTO M270, Gr. 50 and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50)".

If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

All steel surfaces are to be cleaned and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

SHEET 1 OF 2
DETAILS OF BENT NO. 5
BRIDGE OVER GRAND AVENUE
(BR. B6878)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY E. MILLER
8-11-12
BRIDGE ENGINEER

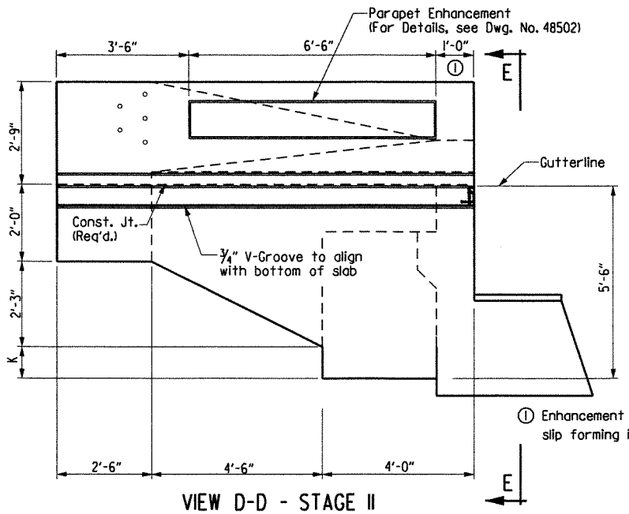
DRAWN BY: TAR DATE: Feb 02
CHECKED BY: EMB/ETH DATE: May 02
DESIGNED BY: BCG DATE: Jan 02
FILENAME: bBB0407b2 b51.dgn
SCALE: As Shown

BRIDGE NO. B6878 DRAWING NO. 48511

$$$$date$$$$
$$$$dgnspec$$$$$

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.		BB0407	217	464

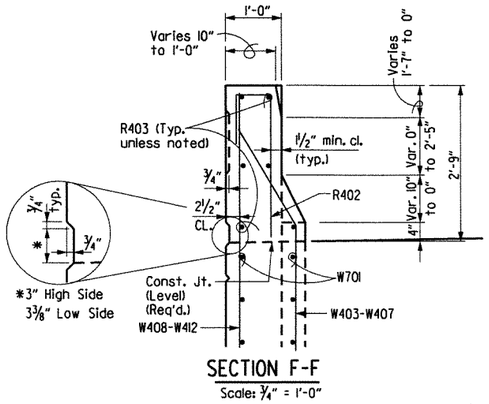
① B6878 BENT DTLS. 48512



VIEW D-D - STAGE II

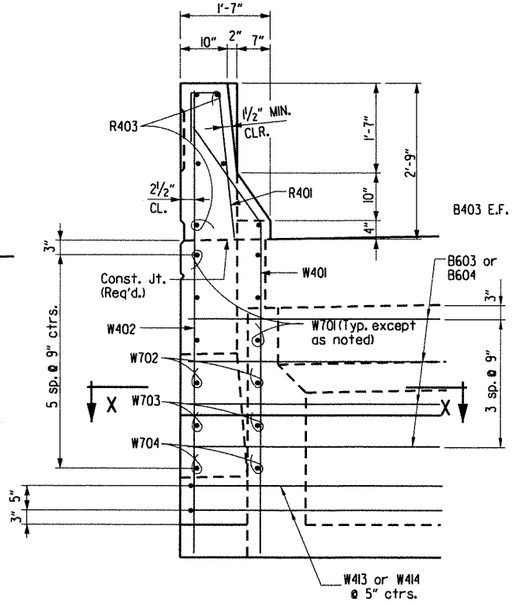
(Stage IV Similar)
Scale: ½" = 1'-0"

① Enhancement shall be continuous if slip forming is used on bridge parapet.



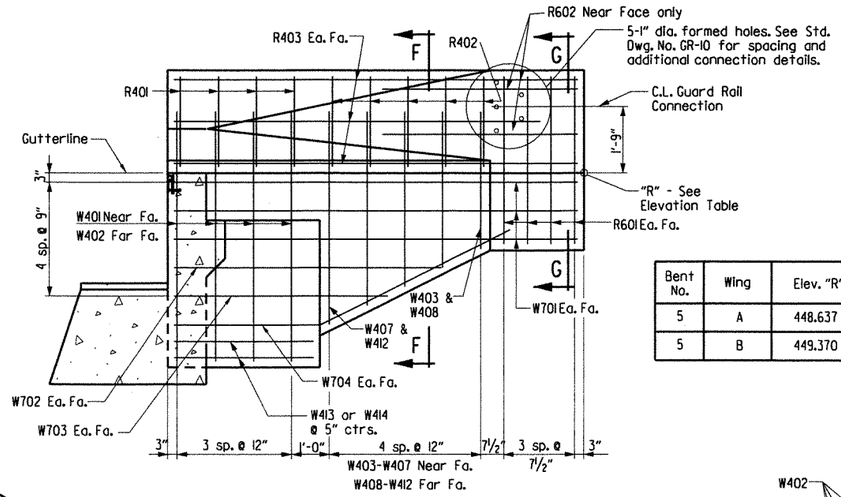
SECTION F-F

Scale: ¾" = 1'-0"



VIEW E-E

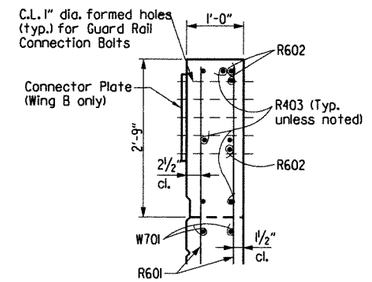
Scale: ¾" = 1'-0"



SECTION C-C - STAGE II

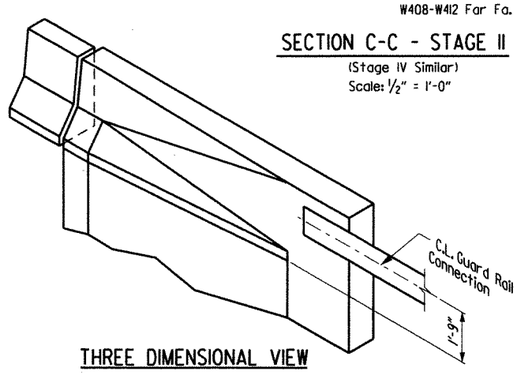
(Stage IV Similar)
Scale: ½" = 1'-0"

Bent No.	Wing	Elev. "R"	K
5	A	448.637	1'-1¾"
5	B	449.370	1'-3⅝"



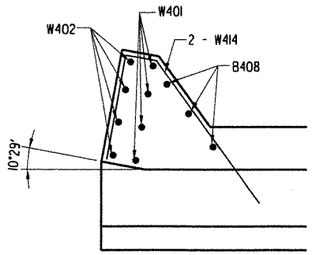
SECTION G-G

Scale: ¾" = 1'-0"



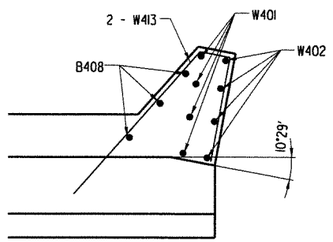
THREE DIMENSIONAL VIEW
WING RAIL & PARAPET

No Scale



SECTION X-X

Wing A



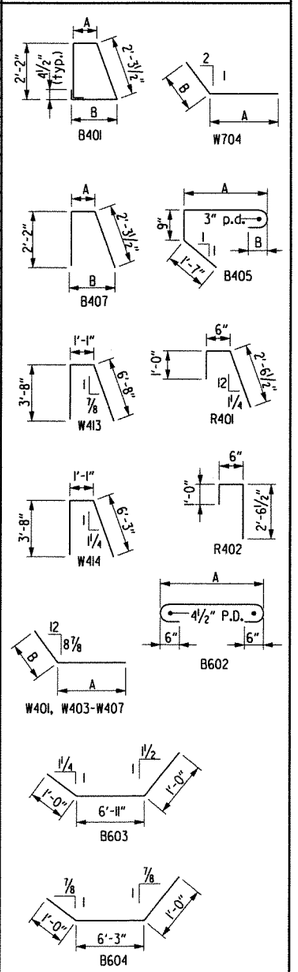
SECTION X-X

Wing B

BAR LIST

Mark	No. Req'd.	Length	"A"	"B"	Pin Dia.
B401	46	11'-0"	2'-8"	3'-6"	2"
B402	2	43'-6"			STR.
B403	5	40'-4"			STR.
B404	82	5'-2"			STR.
B405	41	3'-11"	1'-2"	4½"	3"
B406	1	40'-4"			STR.
B407	18	7'-0"	2'-8"	3'-6"	2"
B408	6	4'-0"			STR.
B601	6	43'-6"			STR.
B602	6	44'-10"	43'-6"		4½"
B603	4	8'-11"			4½"
B604	4	8'-3"			4½"
R401	8	3'-11"			2"
R402	8	3'-11"			2"
R403	12	9'-8"			STR.
R601	16	4'-5"			STR.
R602	6	5'-0"			STR.
W401	8	6'-6"	5'-4"	1'-2"	2"
W402	8	7'-8"			STR.
W403-W407	2 ea.	Varies 3'-4" to 5'-4"	Varies 2'-2" to 4'-2"	1'-2"	2"
W408-W412	2 ea.	Varies 4'-5" to 6'-5"			STR.
W413	2	11'-3"			2"
W414	2	10'-10"			2"
W701	12	9'-8"			STR.
W702	4	6'-0"			STR.
W703	4	4'-6"			STR.
W704	4	8'-4"	2'-9"	5'-7"	5¼"

Bending Diagrams (Dimensions are out to out of bars.)



SHEET 2 OF 2
DETAILS OF BENT NO. 5
BRIDGE OVER GRAND AVENUE
(BR. B6878)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER
8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: Feb 02
CHECKED BY: EMB DATE: May 02
DESIGNED BY: BCG DATE: Jan 02
FILENAME: bBB0407b2 b52.dgn
SCALE: As Shown

BRIDGE NO. B6878 DRAWING NO. 48512

$$$$dgnspec$$$$

$$$$date$$$$

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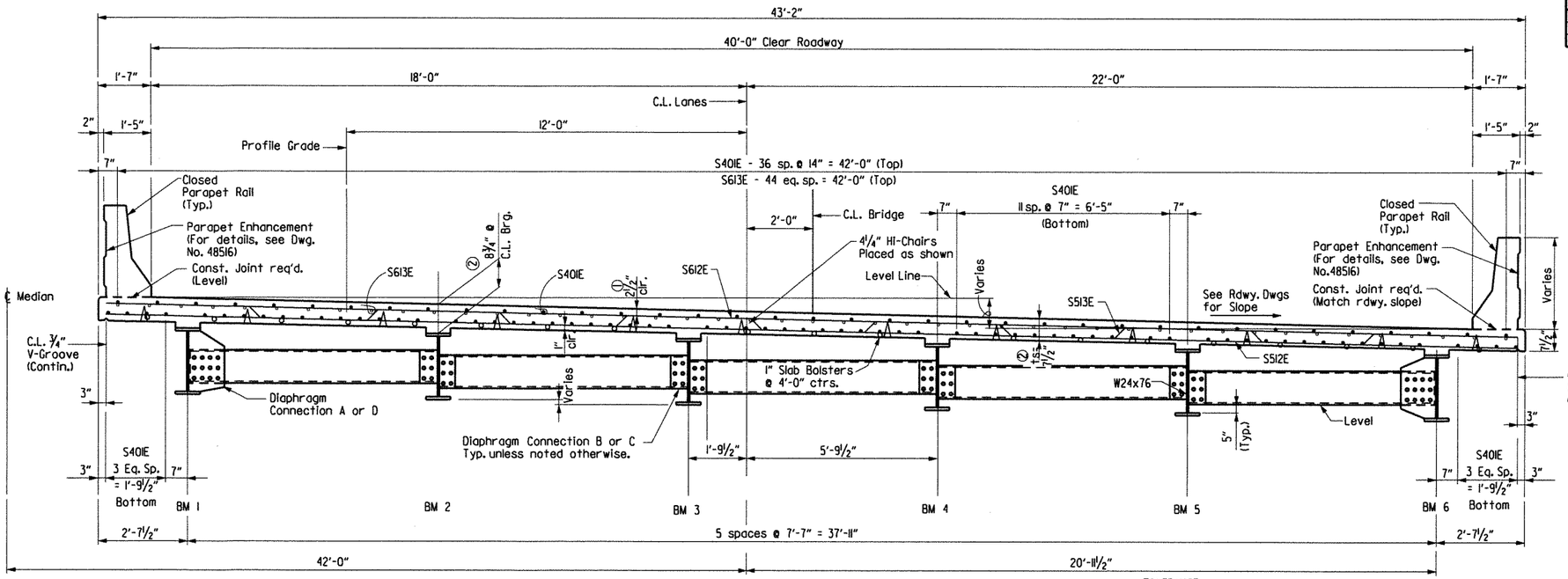
				JOB NO.		B80407	218	464
				(1) B6878		SPAN DTLS.		48513



TYPICAL SECTION

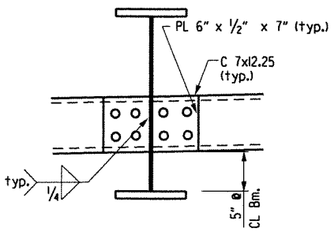
(Looking Ahead)
½" = 1'-0"

Note: Class I Protective Surface Treatment shall be applied to the Roadway Surface and the Roadway Face and Top of Concrete Parapet Rail.

Note: Hi-Chairs to be placed on 4'-0" long centers.

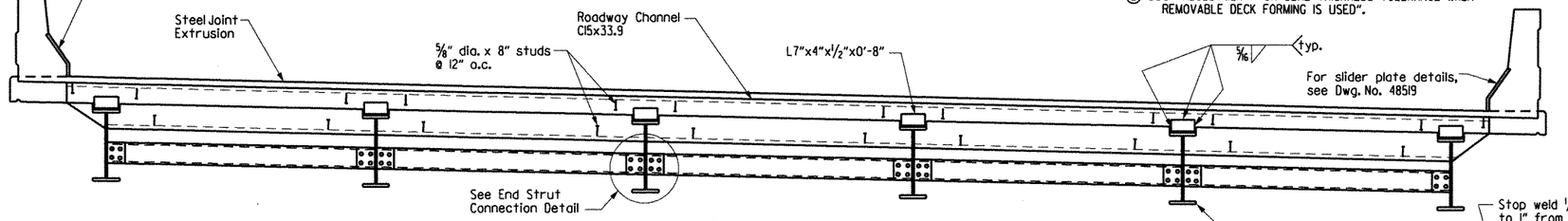
SLAB REINFORCING:
Transverse:
S601E thru S611E @ 7½" centers (top)
S501E thru S511E @ 7½" centers (bottom)
S612E @ 15" centers (top directly above S512E)
S512E @ 15" centers (bottom)
S513E @ 15" centers bent up over beams
Longitudinal:
S401E (top & bottom) placed as shown
S613E (top) placed as shown over int. supports

Note: Reinf. bars with "E" suffix (S401E, S501E, etc.) are epoxy coated bars. For additional reinforcing details, see Dwg. No. 48517



END STRUT CONNECTION

No Scale

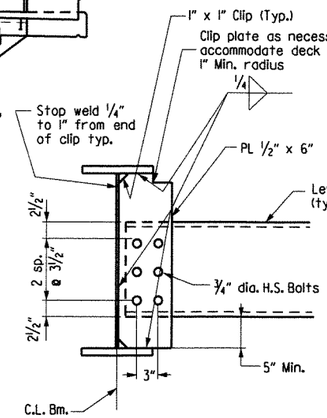


VIEW AT C.L. JOINT

(Looking Ahead)
½" = 1'-0"

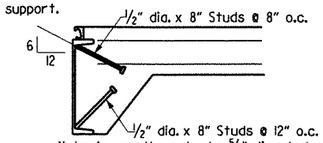
EXPANSION DEVICE:
Roadway Channel C15x33.9
Conn ∠s 7"x4"x½"
Detail Device ⅛" high and provide ¼" shims using two 1/16" and one ⅛" plates

For additional details of Expansion Device, See Dwg. No. 48519



DIAPHRAGM CONNECTION C

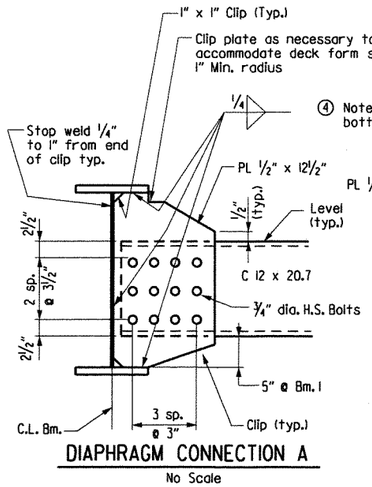
No Scale



Note: As an alternate to ⅝" dia. studs, ½" dia. x 8" studs spaced as shown may be used. Use weight of ⅝" dia. stud as basis of measurement of structural steel in anchors.

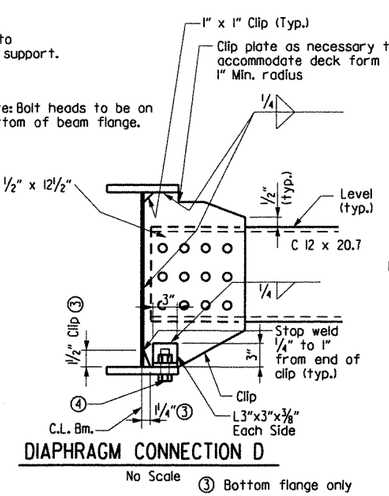
DETAIL OF ALTERNATE ANCHORS

No Scale



DIAPHRAGM CONNECTION A

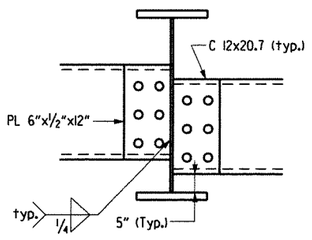
No Scale



DIAPHRAGM CONNECTION D

No Scale

③ Bottom flange only



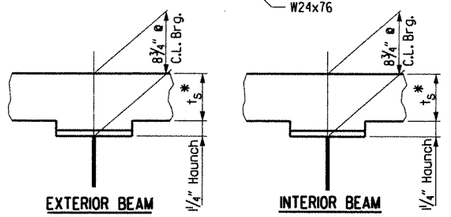
DIAPHRAGM CONNECTION B

No Scale

Note: Bolts in Diaphragm Connections shall be properly installed and tightened in accordance with subsection 807.71.

TOLERANCE:
① Minus = ¼"
Plus = Equal to amount of slab thickening used to meet slab thickness tolerance - see "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".

② See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".



Note: t s = slab thickness as shown on "TYPICAL SECTION".
*Tolerance when removable deck forming is used is +½", -¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED

No Scale

Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance; Minimum - occurs when the top flange contacts the bottom reinforcing steel; Maximum - top flange thickness plus ¼". 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. 1499 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

ARKANSAS STATE OF REGISTERED PROFESSIONAL ENGINEER No. 13339 LARRY W. MILLER
Larry W. Miller 8-11-12
BRIDGE ENGINEER

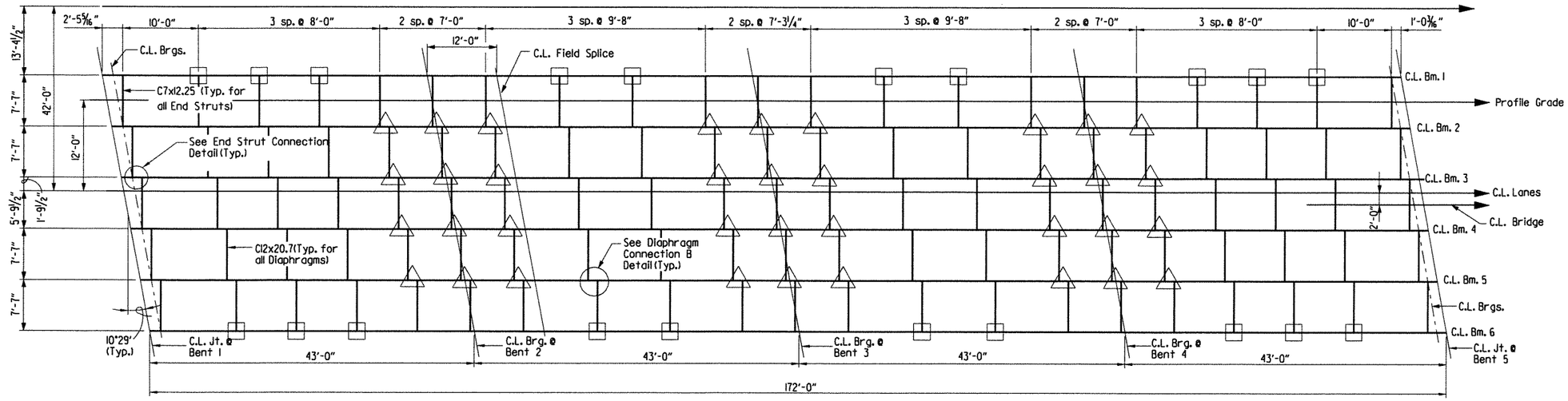
SHEET 1 OF 5
DETAILS OF
172'-0" CONT. COMP. W-BEAM UNIT
(BR. B6878)
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY:	TAR	DATE:	March 02	FILENAME:	b8B0407b2 sll.dgn
CHECKED BY:	EMB	DATE:	May 02	SCALE:	As Shown
DESIGNED BY:	BCG/JLH	DATE:	March 02		

BRIDGE NO. B6878 DRAWING NO. 48513

$$$$date$$$$
$$$$dgnspec$$$$$

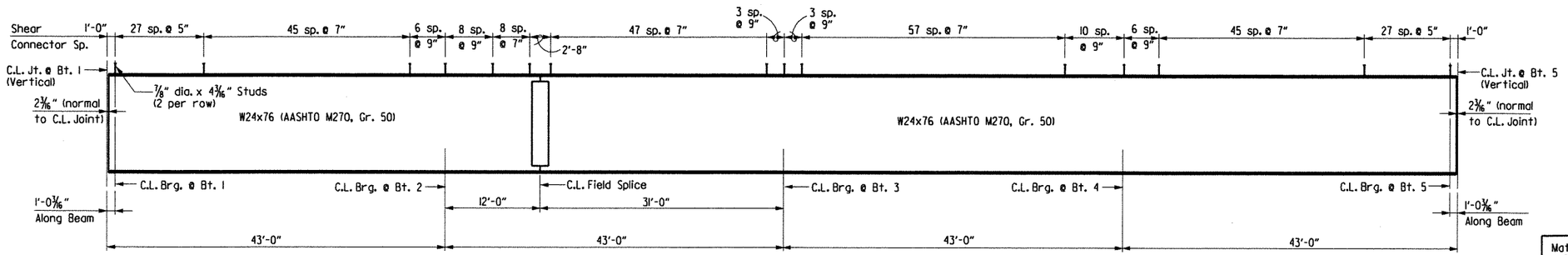
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	219	464
				(1) B6878		SPAN DTLS.		48514



For Diaphragm Connection Details, See Dwg. No. 48513.

FRAMING PLAN
No Scale

□ = Diaphragm Connection D △ = Diaphragm Connection C



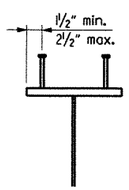
Note: For details of Elastomeric Fixed and Expansion Bearings, see Dwg. No. 48518

TYPICAL BEAM ELEVATION
No Scale

TABLE FOR WELD

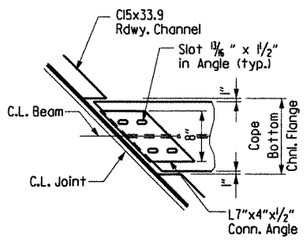
Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To ¾" Inclusive	¼"	
Over ¾"	⅝"	

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.

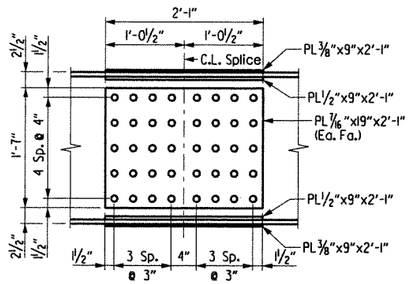


Stud Shear Connectors shown shall be ⅞" dia. x 4" long, granular flux filled, solid fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. ¾" dia. studs may be used in place of the ⅞" dia. stud shown, at the ratio of 1.361-¾" dia. studs in place of one ⅞" dia. stud. ⅞" dia. studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

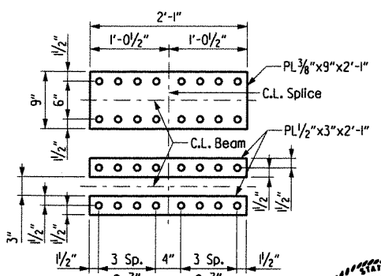
SHEAR CONNECTOR DETAIL
No Scale



ROADWAY CHANNEL CONNECTION DETAIL
No Scale



WEB SPLICE



FLANGE SPLICE

TYPICAL FIELD SPLICE DETAILS
1" = 1'-0"

Note: All field splice bolts shall be ⅞" dia. H.S. bolts.
All field splice plates shall be AASHTO M270, Gr. 50 steel.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY R. MILLER

Larry R. Miller 8-11-12

BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS OF
172'-0" CONT. COMP. W-BEAM UNIT
(BR. B6878)

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02
CHECKED BY: EMB/JGM DATE: May 02
DESIGNED BY: BCG/GWS DATE: Jan 02
FILENAME: bBB0407b2 sl2.dgn
SCALE: As Shown

BRIDGE NO. B6878 DRAWING NO. 48514

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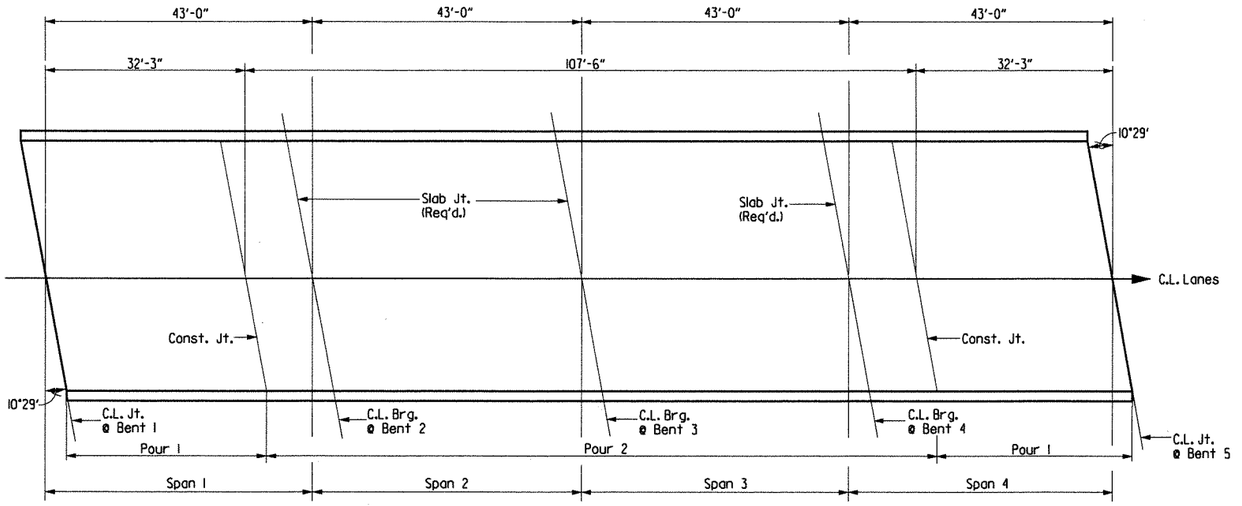
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	220	464
				① B6878		SPAN DTLS.		48515

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Camber for Dead Load Deflection plus vertical curve +/- 1/4" tolerance.
Deflections shown are off a chord from C.L. Brg. to C.L. Brg.
Vertical curve corrections not included. Negative sign (-) indicates upward deflection.

SPAN NO.	POINT OF DEFLECTION	Structural Steel		Structural Steel (+) Slab		Structural Steel (+) Slab (+) Para. Rail	
		Bms. 1 & 6	Bms. 2-5	Bms. 1 & 6	Bms. 2-5	Bms. 1 & 6	Bms. 2-5
1	1.00	0.00	0.00	0.00	0.00	0.00	0.00
	1.10	0.02	0.02	0.17	0.19	0.19	0.21
	1.20	0.03	0.04	0.32	0.35	0.36	0.40
	1.30	0.04	0.05	0.43	0.47	0.48	0.53
	1.40	0.05	0.06	0.48	0.52	0.54	0.59
	1.50	0.05	0.06	0.47	0.52	0.53	0.59
	1.60	0.04	0.05	0.41	0.45	0.46	0.51
	1.70	0.03	0.04	0.31	0.34	0.35	0.38
	1.80	0.02	0.02	0.19	0.21	0.21	0.24
	1.90	0.01	0.01	0.07	0.08	0.08	0.09
2	2.00	0.00	0.00	0.00	0.00	0.00	0.00
	2.10	0.00	0.00	0.00	0.00	0.00	0.00
	2.20	0.01	0.01	0.04	0.04	0.04	0.04
	2.30	0.02	0.02	0.10	0.11	0.11	0.12
	2.40	0.02	0.02	0.15	0.16	0.17	0.18
	2.50	0.02	0.03	0.17	0.19	0.19	0.21
	2.60	0.02	0.03	0.17	0.18	0.19	0.20
	2.70	0.01	0.02	0.13	0.14	0.15	0.16
	2.80	0.00	0.01	0.08	0.09	0.09	0.10
	2.90	0.00	0.00	0.03	0.03	0.03	0.03
3	3.00	0.00	0.00	0.00	0.00	0.00	0.00
	3.10	0.00	0.00	0.02	0.03	0.02	0.03
	3.20	0.01	0.01	0.07	0.08	0.08	0.09
	3.30	0.01	0.01	0.13	0.14	0.15	0.16
	3.40	0.01	0.02	0.16	0.17	0.18	0.19
	3.50	0.01	0.02	0.16	0.18	0.18	0.20
	3.60	0.01	0.01	0.14	0.15	0.16	0.17
	3.70	0.01	0.01	0.09	0.10	0.10	0.11
	3.80	0.00	0.00	0.03	0.04	0.03	0.04
	3.90	0.00	0.00	-0.01	-0.01	-0.01	-0.01
4	4.00	0.00	0.00	0.00	0.00	0.00	0.00
	4.10	0.01	0.01	0.08	0.08	0.09	0.09
	4.20	0.02	0.03	0.19	0.21	0.21	0.24
	4.30	0.04	0.04	0.32	0.35	0.36	0.39
	4.40	0.05	0.05	0.42	0.46	0.47	0.52
	4.50	0.05	0.06	0.48	0.52	0.54	0.59
	4.60	0.05	0.06	0.48	0.53	0.54	0.60
	4.70	0.05	0.06	0.43	0.47	0.48	0.53
	4.80	0.04	0.04	0.33	0.36	0.37	0.41
	4.90	0.02	0.02	0.18	0.19	0.20	0.21
	5.00	0.00	0.00	0.00	0.00	0.00	0.00

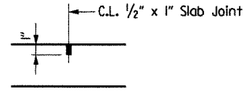


POURING SEQUENCE

No Scale

Note: Pours with the same number may be poured separately or simultaneously. Pour (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. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. Concrete in bridge superstructure shall be consolidated for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

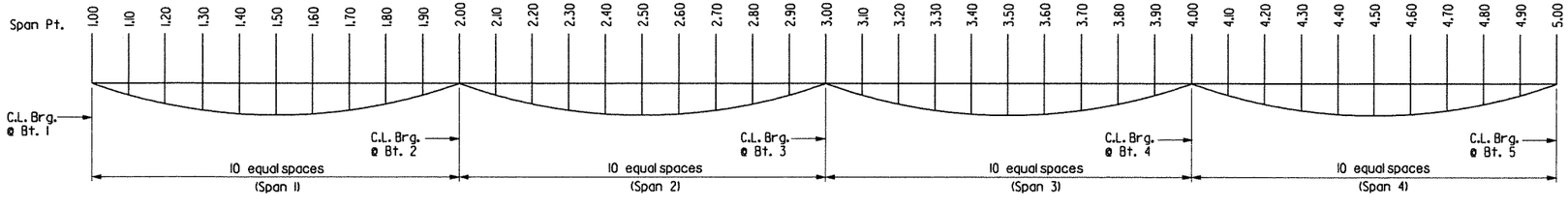
The contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.



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. 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. Slab joints shall align with parapet open joints.

SLAB JOINT DETAIL

No Scale



DEAD LOAD DEFLECTION DIAGRAM

No Scale

SHEET 3 OF 5
DETAILS OF
172'-0" CONT. COMP. W-BEAM UNIT
(BR. B6878)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11039 LARRY E. MILLER
8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB DATE: May 02
DESIGNED BY: JLH DATE: April 02
FILENAME: b8B0407b2 sl3.dgn
SCALE: N.T.S.
BRIDGE NO. B6878 DRAWING NO. 48515

$$$$date$$$$
$$$$dgnspec$$$$$*

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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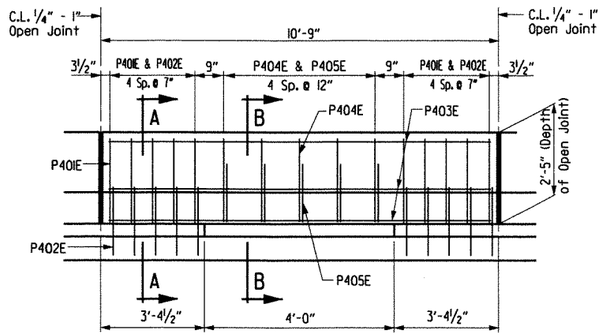
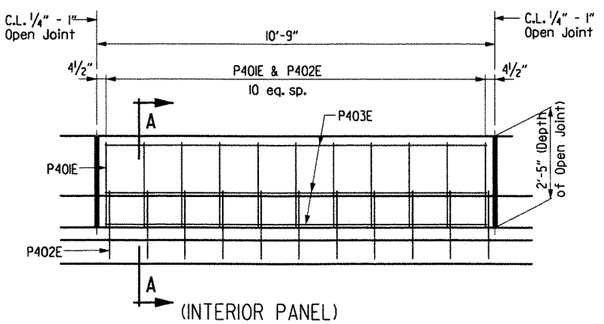
				JOB NO.		BB0407	221	464
				(1) B6878		SPAN DTLS.		48516

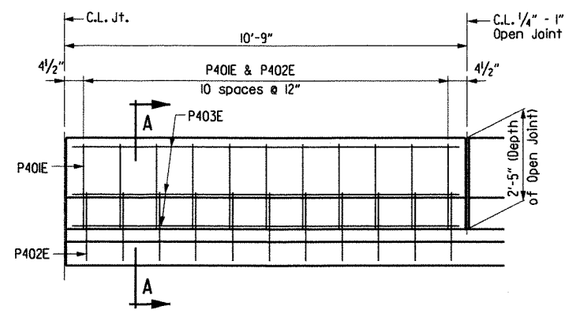


DETAILS OF OPEN CONCRETE PARAPET RAIL

No Scale



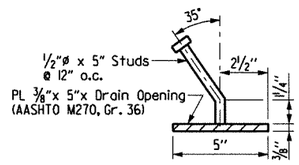
(INTERIOR PANEL)



(END PANEL)

DETAILS OF CLOSED CONCRETE PARAPET RAIL

No Scale



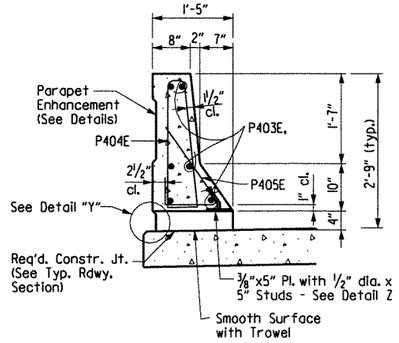
DETAIL Z

No Scale

Note:

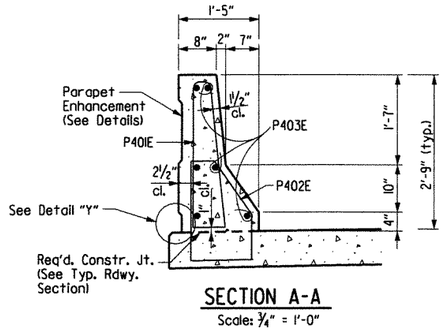
Parapet Studs shall be 5" long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be measured and paid for as Structural Steel in Beam Spans (M270, Gr. 50W)

The surfaces of the 3/8" Plates which will not be in contact with concrete shall be painted in accordance with Section 638, or as approved by the Engineer. Only one coat is required and shall be applied in the fabricator's shop. Painting will not be paid for directly, but will be considered subsidiary to Structural Steel in Beam Spans (M270, Gr. 50)



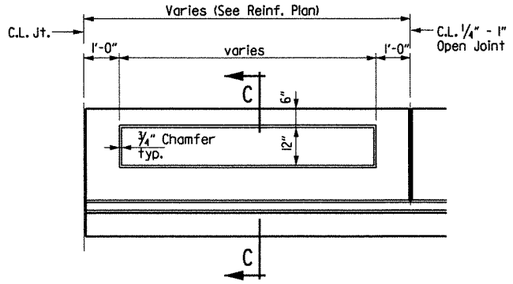
SECTION B-B

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



SECTION A-A

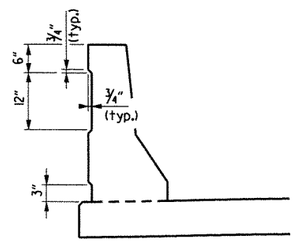
Scale: 3/4" = 1'-0"



DETAILS OF PARAPET ENHANCEMENT

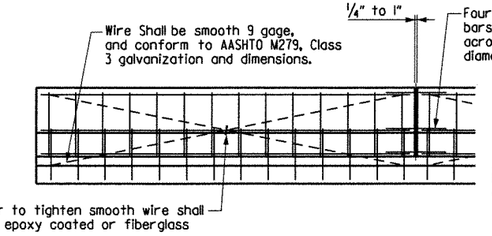
No Scale

Note: Enhancement required for concrete parapet rail only.

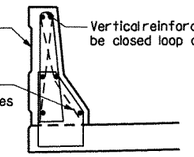


SECTION C-C

No Scale



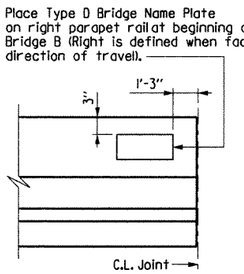
All panels shall be braced as shown to prevent racking. All open joints shall be sawed as soon as practical to a min. width of 1/4". To control cracking before sawing, all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.



The extruded parapet shall conform to the horizontal and vertical lines shown in the plans or as directed by the Engineer and shall present a smooth uniform appearance and texture. Exposed surfaces may be given a light brush finish or a Class 3 Textural Coating Finish in place of Class 2, Rubbed Finish.

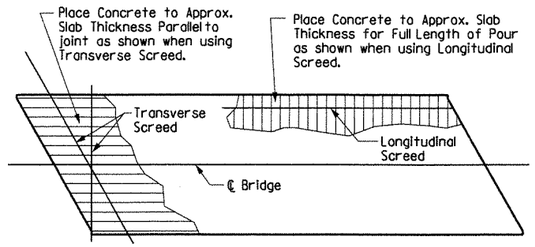
DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET

No Scale



NAME PLATE DETAIL

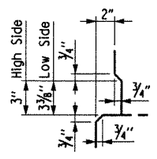
No Scale



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



DETAIL Y

No Scale

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11539 LARRY E. MILLER

8-11-12

BRIDGE ENGINEER

SHEET 4 OF 5

DETAILS OF

172'-0" CONT. COMP. W-BEAM UNIT

(BR. B6878)

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	TAR	DATE:	Feb 02	FILENAME:	bBB0407b2 sl4.dgn
CHECKED BY:	EMB	DATE:	May 02	SCALE:	As Shown
DESIGNED BY:	BCG/JLH	DATE:	Jan 02		

BRIDGE NO. B6878 DRAWING NO. 48516

$$$$date$$$

$$$$dgnspec$$$$$

...\02 grand ave\b040468b2_s14.dgn 8/10/2012 3:49:34 PM

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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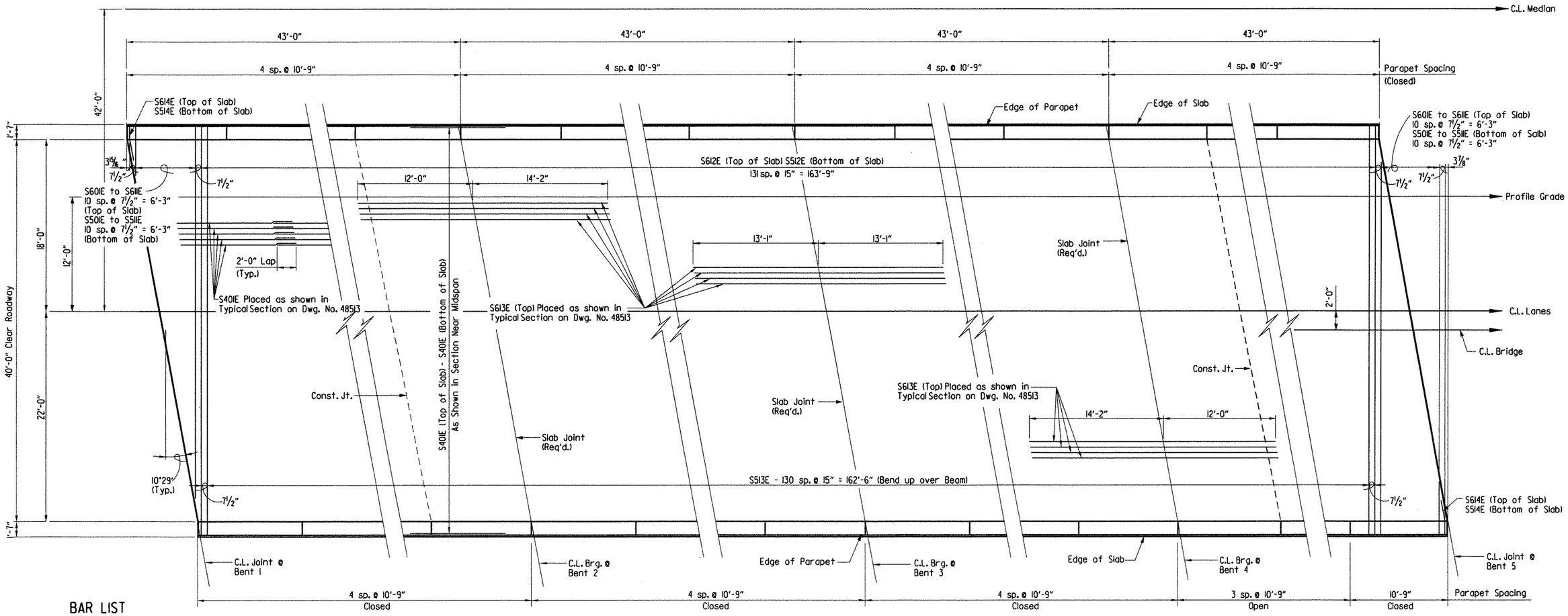
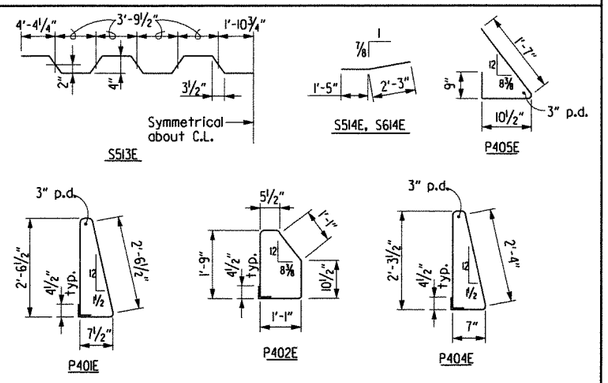
				① B6878		SPAN DTLS.		48517



BAR LIST

Mark	No. Req'd.	Length	Pin Dia.
S401E	525	35'-11"	STR.
S501E to S511E	2 ea.	5'-2" to 39'-11"	STR.
S512E	132	42'-10"	STR.
S513E	131	43'-10"	3"
S514E	2	3'-8"	3¾"
S601E to S611E	2 ea.	5'-2" to 39'-11"	STR.
S612E	132	42'-10"	STR.
S613E	135	26'-2"	STR.
S614E	2	3'-8"	4½"
P401E	349	6'-4"	2"
P402E	349	5'-7"	2"
P403E	192	10'-4"	STR.
P404E	15	5'-10"	2"
P405E	15	3'-2"	2"

Bending Diagrams (Dimensions are out to out of bars.)



Note: All bars designated with an "E" suffix are to be epoxy coated.

Note: Slab Joints shall align with Parapet Joints at gutterline.

Note: At the Contractor's option, two straight epoxy coated #5 bars may be substituted for the S513E bar. Payment for reinforcing will be based on the S513E bar.

SHEET 5 OF 5
DETAILS OF
172'-0" CONT. COMP. W-BEAM UNIT
(BR. B6878)

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 10339 — LARRY R. MILLER
8-11-12
BRIDGE ENGINEER

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407b2 sl5.dgn
CHECKED BY: EMB DATE: May 02 SCALE: As Shown
DESIGNED BY: BCG DATE: Jan 02
BRIDGE NO. B6878 DRAWING NO. 48517

$$$$dgnspec$$$$ $$$$date$$$$

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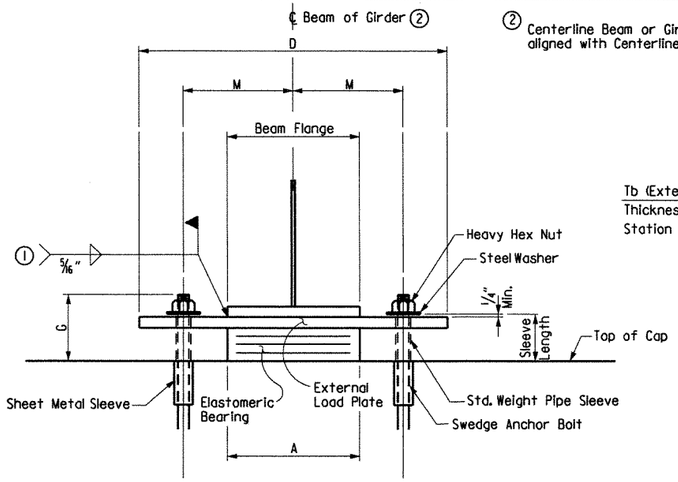
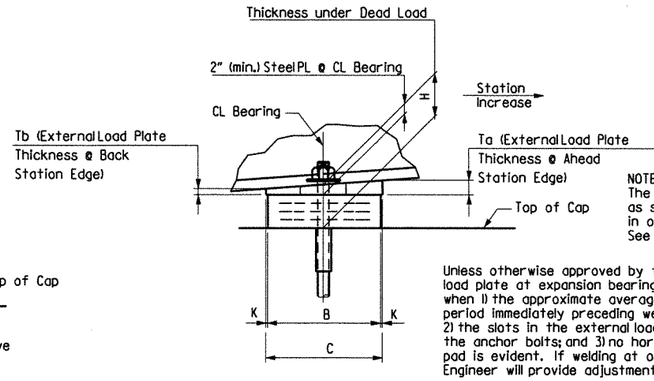
				JOB NO.		BB0407	223	464
				(1) A6878, B6878		ELASTO BRGS.		48518



FRONT VIEW

(1) Care shall be taken to ensure that the external load plate is in full and complete contact with the beam or girder flange before welding begins.

(2) Centerline Beam or Girder shall be aligned with Centerline Elastomeric Pad.



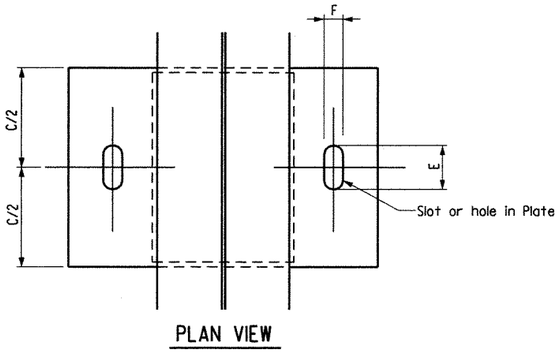
SIDE VIEW

NOTE:
The direction of bevel of the external load plate as shown is for Bent 1. Bevel for Bents 2-5 will be in opposite direction.
See "Table of Fabricator Variables" for dimensions.

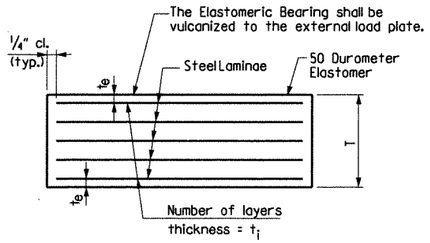
Unless otherwise approved by the Engineer, welding of the external load plate at expansion bearings to the girder will be allowed only when 1) the approximate average air temperature during the 24 hour period immediately preceding welding is between 40°F and 80°F; and 2) the slots in the external load 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.

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 QPL 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)"



PLAN VIEW

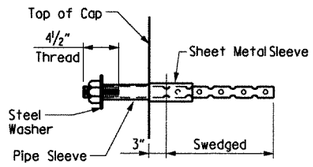


t_e = thickness of elastomer cover on top and bottom of pad

t_i = thickness of elastomer between steel laminae

N = number of elastomer layers of thickness t_i

ELASTOMERIC BEARING



ANCHOR BOLT DETAIL

GENERAL NOTES

Elastomeric Bearings shall conform to Special Provision Job BB0407 "Elastomeric Bearings" and Section 808 of the Standard Specifications and shall be paid for at the unit price bid for "Elastomeric Bearings." Long-duration testing of random lot samples specified in subsection 808.05 is not required.

External load plates 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 shall be completely fabricated (including bevel and bolt holes) and shall be cleaned before vulcanizing to the elastomeric bearing. The surface in contact with the elastomeric bearing shall be cleaned in accordance with Section 808. Other surfaces shall be blast cleaned in accordance with subsection 807.84(b) for painted steel or 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 will not be measured or paid for seperately but will be considered included in the unit price bid for "Elastomeric Bearings".

External load plates shall be painted in accordance with subsection 807.75. The color of the paint shall be gray and shall match Fed. Std. 595B, color chip No. 26176.

TABLE OF FABRICATOR VARIABLES

BRIDGE NO.	LOCATION: BENT NO(S).	UNIT	BEAM OR GIRDER NO.	BEARING TYPE	NO. of BEARINGS EACH BENT	• MAXIMUM DESIGN LOAD (KIPS)	ELASTOMERIC PAD: G	H	A	B	N	t_i	t_e	NO. & THICKNESS OF STEEL LAMINAE	T	EXTERNAL LOAD PLATE: C	D	E	F	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.)
A6878 & B6878	1	172'	ALL	EXP.	6	66.55	7 13/16"	5 5/16"	10 1/2"	10 1/2"	5	7/16"	1/4"	6 @ 12 Ga.	3 5/16"	11 1/2"	19 1/2"	3 3/8"	2"	1/2"	7 1/4"	2.01"	1.99"	1 1/4" x 20"	55	1 1/4" x 5 9/16"	3" x 6"	2 1/2"
	2	172'	ALL	EXP.	6	118.13	7"	4 1/4"	12 3/4"	12 3/4"	3	7/16"	1/4"	4 @ 12 Ga.	2 1/4"	13 3/4"	22 3/4"	2 3/4"	2 1/4"	1/2"	8 5/8"	2.00"	2.00"	1 1/2" x 22"	55	1 1/2" x 4 1/2"	3" x 8"	3"
	3	172'	ALL	FIX	6	105.90	8 1/2"	4 3/16"	11 3/4"	11 3/4"	3	7/16"	1/4"	4 @ 12 Ga..	2 1/4"	12 3/4"	25"	3 3/4"	3 3/4"	1/2"	9"	1.99"	2.01"	2 1/2" x 35"	55	3" x 5"	4" x 8"	4 1/2"
	4	172'	ALL	EXP.	6	118.13	7"	4 1/4"	12 3/4"	12 3/4"	3	7/16"	1/4"	4 @ 12 Ga.	2 1/4"	13 3/4"	22 3/4"	2 3/4"	2 1/4"	1/2"	8 5/8"	1.97"	2.03"	1 1/2" x 22"	55	1 1/2" x 4 1/2"	3" x 8"	3"
	5	172'	ALL	EXP.	6	66.55	7 13/16"	5 5/16"	10 1/2"	10 1/2"	5	7/16"	1/4"	6 @ 12 Ga.	3 5/16"	11 1/2"	19 1/2"	3 3/8"	2"	1/2"	7 1/4"	1.96"	2.04"	1 1/4" x 20"	55	1 1/4" x 5 9/16"	3" x 6"	2 1/2"

•Maximum Design Load = Service Load

Tabular Data by: TAR Date: 5/17/02

Checked by: JLH/EMB Date: 5/17/02

Designed by: BCG/JLH Date: 1/22/01

STATE OF ARKANSAS No. 11039 REGISTERED PROFESSIONAL ENGINEER LARRY D. MILLER

8-11-12

BRIDGE ENGINEER

DETAILS OF ELASTOMERIC BEARINGS

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: May 02

CHECKED BY: EMB/JLH DATE: May 02

DESIGNED BY: BCG/JLH DATE: Jan 02

FILENAME: bBB0407m2 e1.dgn

SCALE: N.T.S.

BRIDGE NO. A6878, B6878 DRAWING NO. 48518

$$$$date$$$$

$$$$dgnspec$$$$*

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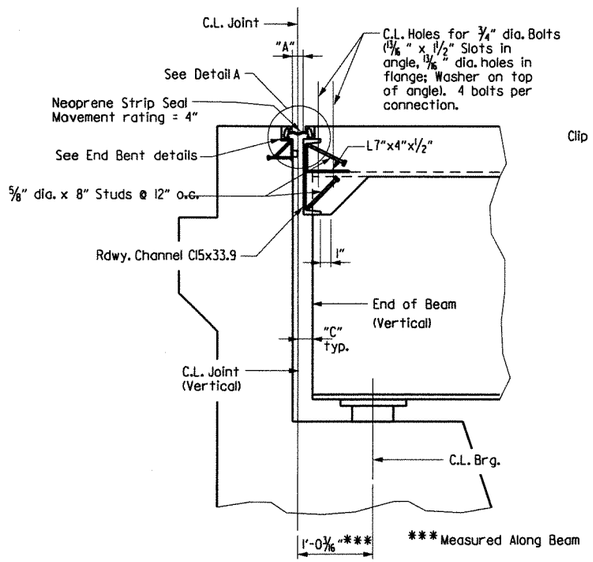
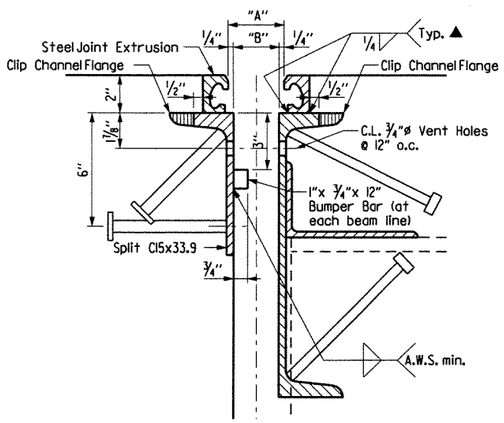
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	224	464
				(1) A6878, B6878		JOINT DETAILS		48519



SECTION THRU JOINT AT END BENTS

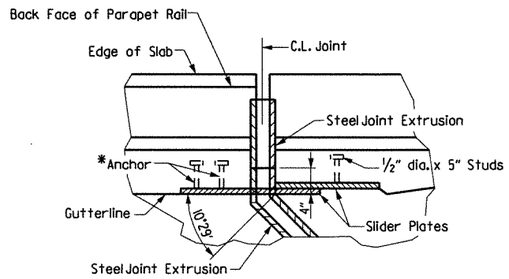
Note: Sections thru Joints are taken normal to C.L. Joints

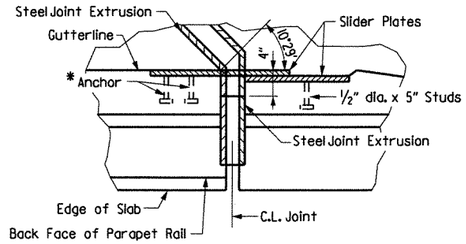


DETAIL A

3" = 1'-0"

Note: Concrete shall be hand packed under the joint armor in the backwall and in the span.





SECTION C-C AT END BENTS

* The method of attachment of the cover slider plate assembly or similar device must be such that it may be removed in order to provide for future replacement of the neoprene seal.

Anchors will not be paid for directly but will be considered subsidiary to "STRUCTURAL STEEL IN BEAM SPANS (M 270, GRADE 50)".

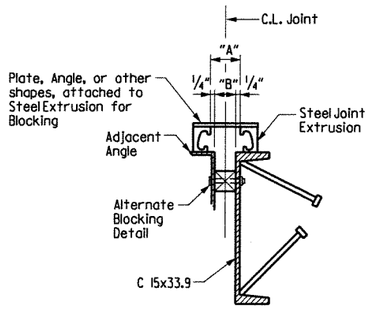
GENERAL NOTES

EXPANSION NEOPRENE STRIP SEAL: The expansion device shall provide a movement of 4" as shown in the "STRIP SEAL JOINT DATA" table. The expansion joint shall be capable of sealing the deck surface and parapet area to prevent moisture and other contaminants from descending through the joint.

Details of proposed slider plate assembly shall be submitted to and approved by the Engineer prior to the fabrication of any structural steel at the expansion device.

All structural steel shall be AASHTO M270, Grade 50 unless otherwise noted. Cleaning and painting of all exposed surfaces shall be in accordance with Section 807 and will be paid for under the item PAINTING STRUCTURAL STEEL. Structural steel completely embedded in concrete need not be painted. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

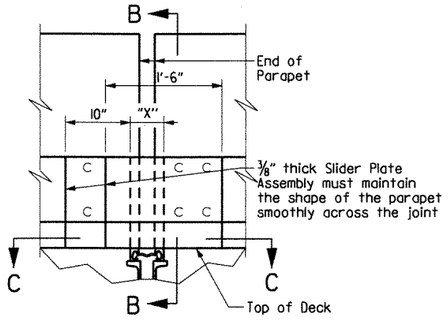
All structural steel, except for the steel extrusion for the strip seal, shall be paid for as "STRUCTURAL STEEL IN BEAM SPANS (M 270, Grade 50)". The steel extrusion and neoprene strip seal shall be paid for in accordance with Special Provision Job BB0407 "ARMORED JOINT WITH NEOPRENE STRIP SEAL".



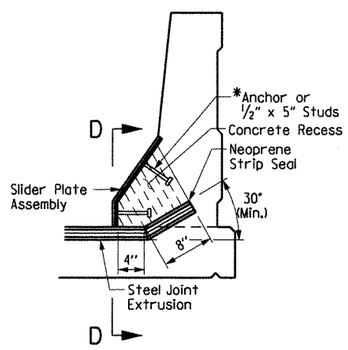
Note:
Each Expansion Joint device shall be blocked in the shop by the Fabricator to the dimension shown for 60° F and the blocking details shall be shown on the Shop Drawings. Blocking shall be placed within 2 feet of each end of the device and with a maximum spacing of 8 feet.

DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

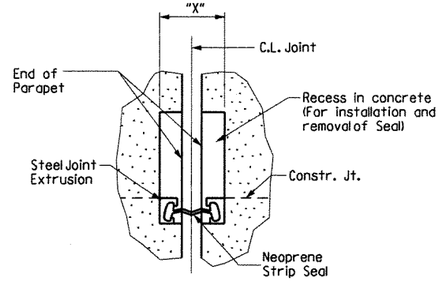
EXPANSION DEVICE INSTALLATION AT END BENTS:
The concrete span pour shall be placed before the end bent backwall concrete is placed. After beams or girders are erected the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, the opening adjusted for temperature and grade, and the backwall constructed.



DETAIL OF NEOPRENE SEAL AT GUTTERLINE



SECTION B-B



SECTION D-D

Note: Dimension "X" equals the width of opening in parapet at curb to allow for removal or repair of joint.

STRIP SEAL JOINT DATA

Bent No.(s)	Movement Rating (inch)	"A" Width Perpendicular to Joint at 24 Hour Average Temperature **of:			"B" Width Perpendicular to Joint at 24 Hour Average Temperature **of:			"C" Perpendicular to Joint at 24 Hour Average Temperature of 60° F
		40° F	60° F	80° F	40° F	60° F	80° F	
1 and 5	4"	2 1/2"	2 3/8"	2 1/4"	2"	1 1/8"	1 3/8"	2 3/16"

** 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.

STATE OF ARKANSAS
LARRY E. MILLER
No. 13339
REGISTERED PROFESSIONAL ENGINEER
8-11-12
BRIDGE ENGINEER

DETAILS OF
ARMORED JOINT WITH
NEOPRENE STRIP SEAL
HWY. 22 - I-40(F)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB DATE: May 02
DESIGNED BY: BCG DATE: Jan 02
FILENAME: bBB0407m2_j1.dgn
SCALE: N.T.S.

BRIDGE NO. A6878, B6878 DRAWING NO. 48519

$$$$date$$$$
$$$$dgnspec$$$$$*

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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.		B80407	225	464
				(1) A6878, B6878		GENERAL NOTES		48520

SUPERSTRUCTURE GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 2003 edition, with applicable special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1996 with current interim specifications.

LIVE LOADING: HS20 - 44 + Military Loading METHOD OF DESIGN: Load Factor

MATERIALS AND STRENGTHS:

Concrete: All concrete shall be Class S(AE) with minimum 28 day compressive strength f'c = 4000 psi.

Reinforcing Steel: Reinforcing steel shall conform to AASHTO M31 or M53, Grade 60 (Yield Strength = 60,000 psi.)

Structural Steel: Structural Steel shall conform to AASHTO M270, Gr. 50 (Fy = 50,000 psi.) and AASHTO M270, Gr. 36 (Fy = 36,000 psi.).

Elastomeric Bearings: For Elastomeric Bearings, see Dwg. No. 48518

STRUCTURAL STEEL:

All structural steel shall be AASHTO M270, Gr. 50 unless otherwise noted and shall be paid for as Structural Steel in Beam Spans (M270, Gr. 50). All exposed surfaces to be cleaned in accordance with subsection 807.84(b) of the standard specifications unless noted otherwise. See Dwg. No. 48518 for cleaning requirements of external load plates on elastomeric bearings. Structural steel completely embedded in concrete may be AASHTO M270, Gr. 36.

Structural steel shall be painted as specified in subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176.

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.

Longitudinal beams and all field splice plates are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Section 807.05 of the Standard Specifications. This work and material will not be paid for directly but are considered subsidary to the item "Structural Steel in Beam Spans (M270, Gr. 50)".

Flange field splice plates 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 beams shall be blocked in their true position in the shop in groups of a minimum of three sections. Beams shall be blocked with webs horizontal. See Section 807.54 (b)(2) of the Standard Specifications. The camber, length of sections, distance between bearings, and openings of joints shall be measured with the beams in their true position. This information shall become a part of the permanent records of this job. 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°F. A tolerance of plus or minus 1/4" is allowed for camber.

Anchor bolts shall be galvanized according to subsection 807.07 and shall be Grade 55.

Elastomeric Bearings shall be firmly seated in accordance with subsection 808.08 of the specifications. This work to be considered subsidiary to the item "Elastomeric Bearings" and will not be paid for directly.

Field connections to be bolted with high strength bolts. For 3/4" dia. bolts: Open holes = 15/16" unless otherwise noted. Bolt spacing = 2 1/2" unless otherwise noted. Minimum edge distance = 1 1/4" unless otherwise noted. For 7/8" dia. bolts: Open holes = 15/16" unless otherwise noted. Bolt spacing 3" unless otherwise noted. Minimum edge distance = 1 1/2" unless otherwise noted. Bolts shall be placed with heads on the outside face of the exterior beam webs and on bottom of beam flanges.

Holes for 3/4" dia. high strength bolts in diaphragms may be 15/16" dia. if a washer is supplied for use under both the nut and the head of the bolt.

Diaphragms shall be installed as beams are erected. All bolts in Diaphragms and Field Splices shall be installed and completely tightened prior to pouring of floor slabs.

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.

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.

All stud shear connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with the recommendations of the manufacturer.

REINFORCING STEEL:

The reinforcing steel shall be accurately located in the forms and firmly held in place by steel wire supports sufficient in size and number 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 of "Epoxy Coated Reinforcing Steel (Grade 60)".

CONCRETE:

Concrete shall be poured in the dry and all exposed corners to be chamfered 3/4" 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.

LOAD DISTRIBUTION TO BEAMS:

	Beam 1, 6	Beams 2-5
Dead Load:		
To W-Beam	707 PLF + 1.15(wt./ft. of W-Bm.)	834 PLF + 1.15(wt./ft. of W-Bm.)
To Composite Beam	283 PLF*	311 PLF*

*includes 182 PLF(Int.), 154 PLF(Ext.) Future Wearing Surface

Live Load:

To each Composite Beam — Int. Bm. = 1.379 wheels (+) impact
Ext. Bm. = 1.214 wheels (+) impact

GENERAL NOTES AND MISC. DETAILS
FOR CONTINUOUS COMP. W-BEAM UNITS
(BR. A6878, B6878)

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 14339 LARRY W. MILLER

Larry W. Miller 8-11-12
BRIDGE ENGINEER

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407m2 sl.dgn
CHECKED BY: EMB DATE: May 02 SCALE: N.T.S.
DESIGNED BY: BCG DATE: Jan 02

BRIDGE NO. A6878, B6878 DRAWING NO. 48520

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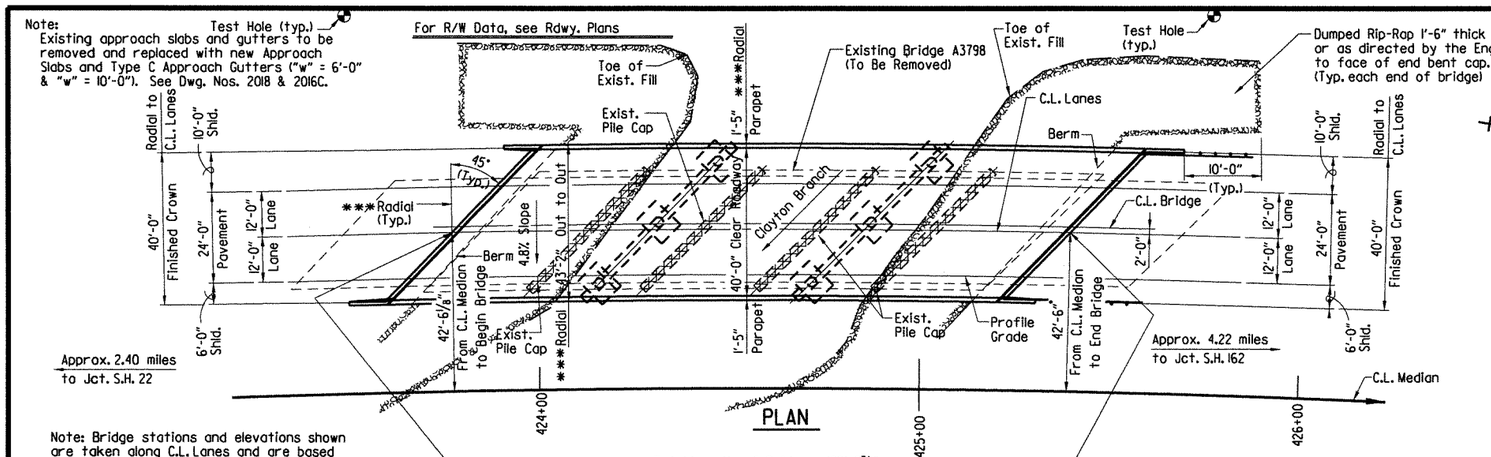
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	226	464
				(1) A6879		LAYOUT		48521

Note:
Existing approach slabs and gutters to be removed and replaced with new Approach Slabs and Type C Approach Gutters ("w" = 6'-0" & "w" = 10'-0"). See Dwg. Nos. 2018 & 2016C.



Note: Bridge stations and elevations shown are taken along C.L. Lanes and are based on Original Bridge Plans.

*** Radial to C.L. Lanes

** Top of Deck at C.L. Bent at C.L. Lanes to low side top of cap

* Top of Deck at C.L. Lanes to low steel

C.L. MEDIAN CURVE DATA	C.L. LANES CURVE DATA (Bridge A6879)
P.I. 424+35.68	P.I. 424+42.28
△ = 17°51' Rt.	△ = 17°51' Rt.
D = 1°30'	D = 1°30'
T = 599.86'	T = 599.86'
L = 1190.0'	L = 1190.00'
	P.C. 418+42.42
	P.T. 430+28.24

Station Equation:
430+30.00 Back =
430+25.82 Ahead

Boring Legend

A - Moist, Loose, Brown and Gray Gravel and Shale Fragments (Fill Material)
B - Moist, Stiff, Reddish Brown to Reddish Brown and Gray Sandy Clay
C - Moist, Stiff, Gray Silty Clay
D - Moist, Medium Stiff to Stiff, Reddish Brown Silty Clay
E - Wet, Medium Stiff, Brown to Brown and Gray Silty Clay
F - Soft, Gray Highly Weathered Shale
G - Hard, Dark Gray Shale
H - Moist, Loose, Brown Sand and Gravel (Fill Material)
J - Moist, Medium Stiff, Brown and Gray Silty Clay with Shale Fragmnets (Fill Material)
K - Moist, Stiff, Reddish Brown Sandy Clay with Gravel and Shale Fragments (Fill Material)
L - Moist, Stiff, Brown to Reddish Brown Silty Clay
M - Moist, Stiff, Brown Silty Clay
N - Wet, Soft, Brown Silty Clay
P - Medium Hard, Dark Gray Fractured Shale
Q - Hard, Dark Gray Shale with some Fractured Seams
R - Moist, Medium Stiff, Reddish Brown and Gray Sandy, Silty Clay with Sandstone Fragments (Fill Material)
S - Moist, Stiff, Gray and Brown Sandy, Silty Clay (Fill Material)
T - Moist, Stiff, Brown Sandy, Silty Clay
U - Moist, Stiff, Brown to Gray and Brown Silty Clay with Traces of Highly Weathered Shale
V - Moist, Stiff, Gray and Brown Silty Clay
W - Soft to Medium Hard, Gray Weathered Shale
X - Hard, Dark Gray Shale with Weathered Shale Seams
Y - Moist, Loose, Brown Gravel (Fill Material)
Z - Moist, Stiff, Reddish Brown Sandy Clay with Sandstone Fragments
AA - Moist, Very Stiff, Reddish Brown Sandy Clay
BB - Moist, Medium Stiff, Gray and Brown Silty Clay
CC - Wet, Medium Stiff, Brown Silty Clay
DD - Wet, Medium Stiff, Brown Silty Clay with some Highly Weathered Shale
EE - Soft to Medium Hard, Brown and Gray Highly Weathered Shale
FF - Medium Hard, Dark Gray Weathered Shale
GG - Hard, Dark Gray Fractured Shale

Note:
All bents are skewed as shown from radial lines.

SAMPLE DATA

Sta. 423+50 - 116' Left of Centerline of Median I-540

3.5 - 4.5, N = 6	23.5 - 24.5, N = 11	44.0 - 47.5, SCR% = 5, RQD% = 0
8.5 - 9.5, N = 15	28.5 - 29.5, N = 10	47.5 - 52.5, SCR% = 88, RQD% = 20
13.5 - 14.5, N = 9	33.5 - 34.5, N = 3	52.5 - 56.5, SCR% = 99, RQD% = 8
18.5 - 19.5, N = 9	38.5 - 39.5, N = 7	

Sta. 425+77 - 119' Left of Centerline of Median I-540

3.5 - 4.5, N = 9	23.5 - 24.5, N = 5	38.5 - 42.0, SCR% = 24, RQD% = 8
8.5 - 9.5, N = 16	28.5 - 29.5, N = 8	42.0 - 47.0, SCR% = 82, RQD% = 10
13.5 - 14.5, N = 14	33.5 - 34.5, N = 5	47.0 - 52.0, SCR% = 92, RQD% = 62
18.5 - 19.5, N = 12	38.5 - 38.5, N = 60	

The proposed bridge provides an equal or greater waterway opening than the existing bridge.

GENERAL NOTES

BENCH MARK: Elevations and stations are assumed to be the same as shown on the original plans. The original layout shows the elevation at the top of the deck and centerline of existing bridge to be at 414.56 at Sta. 423+83.50 (Beg. of Br. A3798).

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 on the plans, section and subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (1996 edition), with current interim specifications and AASHTO Guide Specifications for Horizontally Curved Highway Bridges (1993 Edition).

LIVE LOAD: HS20 + Military Loading METHOD OF DESIGN: Load Factor
SEISMIC PERFORMANCE CATEGORY: A

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 M31 or M53, Gr. 60) fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 50W) Fy = 50,000 psi
Structural Steel (AASHTO M270, Gr. 36) Fy = 36,000 psi

BORING LOGS: Boring Logs may be obtained from the Programs and Contracts Division.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

CLASS I PROTECTIVE SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

FOOTINGS: Footings shall not be at a higher elevation than the existing footing and shall have a minimum cover above top of footings of 2'. Foundations for footings shall be prepared in accordance with Section 801.04 of the Standard Specifications.

STEEL PILING: All piling shall be HP12x53 and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 70 tons per pile and into the material designated as shale on the boring legend. Legends shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles in end bents to be driven after embankment to bottom of cap is in place. On all piles the contractor shall use approved steel H-Pile driving points.

DETAIL DRAWINGS:

	DRAWING NO.
End Bents	48524, 48525, 48528, 48529
Intermediate Bents	48526, 48527
159'-0" Cont. Comp. W-Beam Unit	48530-48534
Steel Piling	14995A
Approach Slab	2018
Type C Approach Gutter	2016C

REMOVAL AND SALVAGE: The existing bridge including concrete riprap, shall be removed in accordance with Section 205.
All material from existing bridge shall become the property of the contractor.

EXISTING BRIDGE: Existing Bridge No. A3798 is 33'-6" wide and 150'-0" long and consists of 5 - 30' reinforced concrete slab spans supported by substructures consisting of 3 pile interior bents and 2 pile end bents. Plans for existing bridge will be made available to the Contractor upon request to Programs and Contracts Division. Existing Dwg. Nos. 12454, 12456, 12457.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

NOTE: The contractor shall check measurements of the existing bridge. Any adjustments necessary to fit the new work to the existing bridge location shall be submitted for the Engineer's approval.

LAYOUT OF BRIDGE OVER CLAYTON BRANCH (BR. A6879) HWY. 22 - I-40 (F) CRAWFORD & SEBASTIAN COUNTIES ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13391 LARRY W. MILLER
8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: March 02
CHECKED BY: JLH DATE: March 02
DESIGNED BY: BCG DATE: March 02
FILENAME: bBB0407a3 111.dgn
SCALE: 1" = 20'

BRIDGE NO. A6879 DRAWING NO. 48521

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	ARK.			
JOB NO.	BB0407		227	464
(1)	A3798 - LAYOUT - 48522			

For R/W Data - See Roadway Plans

N

CURVE DATA (Lt. Lanes)
P.T. 428+42.30
Δ = 17°29'45" Rt.
D = 1°30'
T = 599.09
L = 1188.60
P.C. 418+43.21
P.T. 430+31.81

Toe of Fill Slope

Radial Line (Typ)

45° (Typ)

540.23 to P.C. (Lt. Lanes)

28'-0" Clear Roadway

Superelevation .02 2/3 ft UP

1:1½ Curb

℄ Roadway (Lt. Lanes)
℄ Bridge

498.31' to P.T. (Lt. Lanes)

Test Holes (Typ.)

Toe of Cut Slope

6" Hickory

16" Oak

40.25

12.21'

N17°20'W
Back Tangent

Pt. Sta. 424+55.20 (Median)

℄ Ditch - ℄ Median Sta. 424+10

℄ Median

Guard Fence not under this Contract

423+50 424+00 424+50 425+00

Total Length of Bridge along ℄ = 150'-0"

5 - 30' R.C. Slab Spans

8½" 8½"

Begin Bridge Sta. 423+83.50

℄ Bent #2 Sta. 424+13.50

1-1½" ℄ Bridge to Low Concrete

℄ Bent #3 Sta. 424+43.50

℄ Bent #4 Sta. 424+73.50

℄ Bent #5 Sta. 425+08.50

End Bridge Sta. 425+33.50

Elev. ℄ Bridge 411.56

0.0% Grade

Aluminum Bridge Railing

For Type "A" Approach Slab & Gutters (Both Ends) See Roadway Plans.

420 410 400 390 380

Exp Fix Exp Fix Exp Fix Exp Fix Exp Fix Exp

1½ to 1 Batter 35' Piles

elev. 403.7

elev. 408.2

High Water 407.8

Excavate Channel as shown to elev 398.5

Water Elev. 398.5 (5-7-63)

elev. 402.0

1½:1 Batter 36' Piles

elev. 402.4

Med. Firm Dark Brown Clay

Med. Firm Light Brown Clay

Firm Brown Clay Trace of Sand

Hard Blue Shale

35' Piles 38' Piles 38' Piles 37' Piles

℄ Median Sta. 423+62 42' Lt.

℄ Median Sta. 424+26 42' Lt.

℄ Median Sta. 425+00 42' Lt.

ELEVATION
cc 10
DA 2400 acres

Bent No. 1 2 3 4 5 6

423+50 424+00 424+50 425+00 425+50

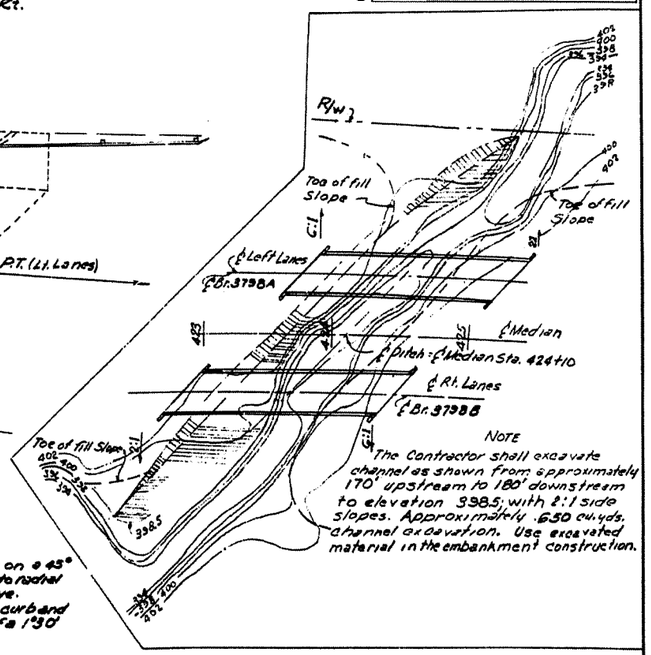
B.M. Nail in 8" Hackberry 155' Lt. Sta. 425+18, Elev. 404.57

L. P. Carlson
BRIDGE ENGINEER

For General Notes See Dwg. No. 12455

Note

Construct bents on a 45° Lt. Forward Skew to radial lines of a 1°30' Curve. Construct ℄ Bridge, curb and railing on an arc of a 1°30' curve.



Note

The Contractor shall excavate channel as shown from approximately 170' upstream to 180' downstream to elevation 398.5 with 2:1 side slopes. Approximately 650 cu. yds. channel excavation. Use excavated material in the embankment construction.

LOCATION MAP
scale 1" = 50'

FOR INFORMATION ONLY

(FIELD CHANGE NO. 4)

(LEFT LANES)

LAYOUT OF BRIDGE

CLAYTON BRANCH

JCT. HWY. 22 - ARK RIVER BRIDGE

SEBASTIAN COUNTY

INT. ROUTE 540 SEC. 1

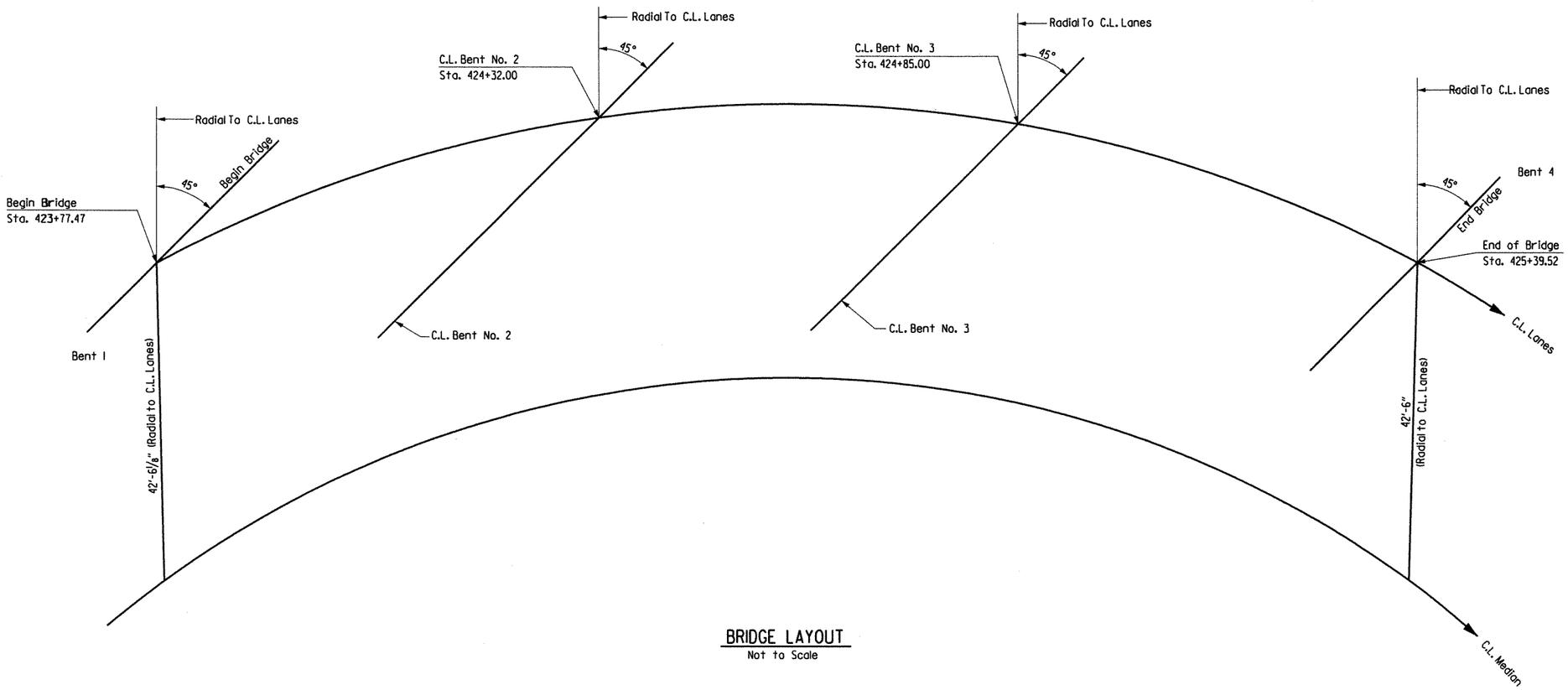
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: M.G DATE: 5-15-63
TRACED BY: DATE:
CHECKED BY: DATE: 5-30-63
SCALE: 1" = 10'

BRIDGE NO. A3798 **DRAWING NO.** 48522

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.		BB0407	228	464
(1) A6879		LAYOUT DIAGRAM		48523



BRIDGE LAYOUT
Not to Scale

C.L. MEDIAN CURVE DATA	C.L. LANES CURVE DATA (Bridge A6879)
P.I. 424+35.68	P.I. 424+42.28
△ = 17°51' Rt.	Δ = 17°51' Rt.
D = 1°30'	D = 1°30'
T = 599.86'	T = 599.86'
L = 1190.0'	L = 1190.00'
	P.C. 418+42.42
	P.T. 430+28.24

Station Equation:
430+30.00 Back =
430+25.82 Ahead

$$$$date$$$$

$$$$dgnspec$$$$$

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11039 LARRY B. MILLER

Larry B. Miller 8-11-12

BRIDGE ENGINEER

LAYOUT DIAGRAM
BRIDGE OVER CLAYTON BRANCH
(BR. A6879)

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407a3 l12.dgn

CHECKED BY: EMB/ETH DATE: April 02 SCALE: As Shown

DESIGNED BY: BCG/JLH DATE: Feb 02

BRIDGE NO. A6879 DRAWING NO. 48523

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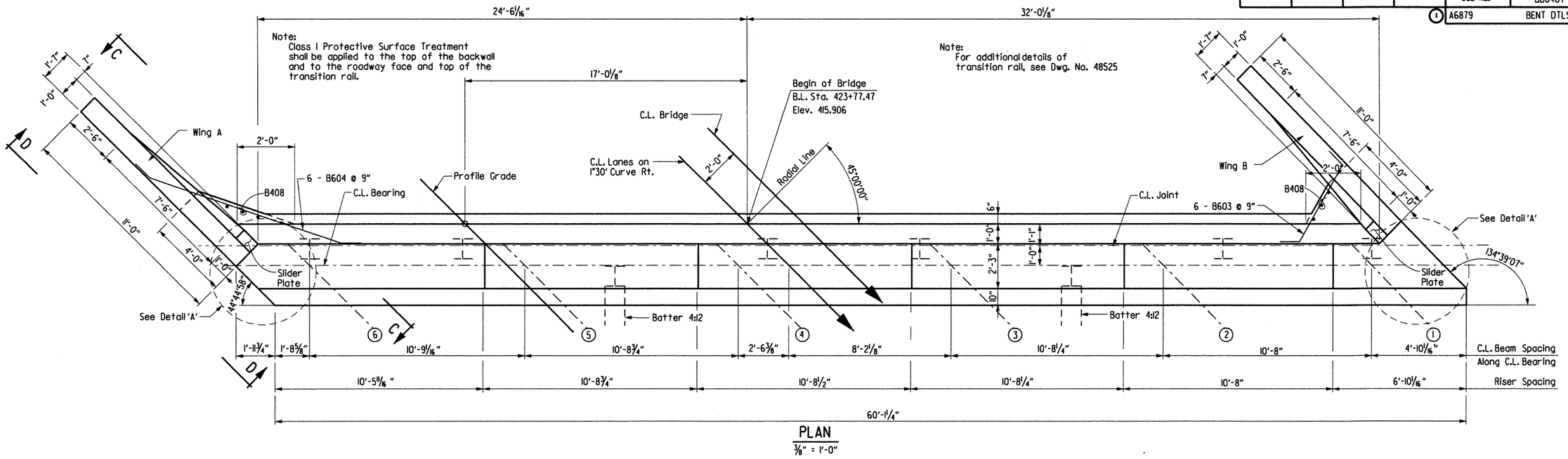
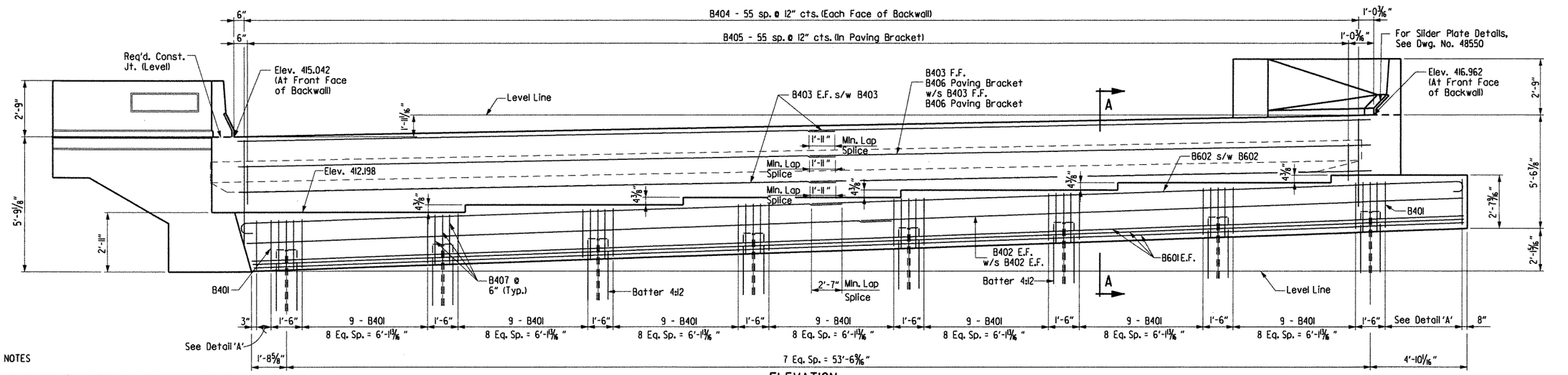
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	229	464
				① A6879		BENT DTLS.		48524



PLAN
3/8" = 1'-0"



ELEVATION
(Looking Back)
3/8" = 1'-0"

GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry.
All exposed corners shall be chamfered 3/4" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Gr. 60.

End Bent backwall shall not be poured before girders are in place. Backwall to be placed after concrete span placement.

Structural steel in end bents shall be AASHTO M270, Gr. 50W and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50W)".

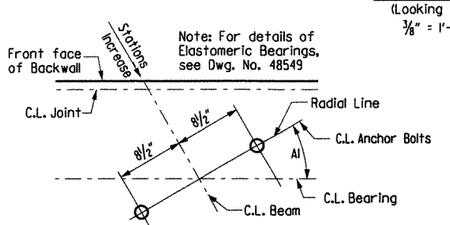
If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

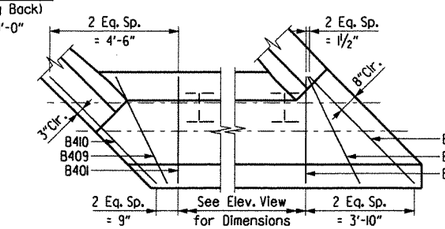
The parapet slider plates shall be cleaned in accordance with subsection 807.84(b) and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176. Cleaning and painting will not be paid for directly but will be considered subsidiary to "Structural Steel in Beam Spans (Gr. 50W)".

ANCHOR BOLT LAYOUT TABLE

Beam	Al
1	44°38'40"
2	44°45'23"
3	44°52'09"
4	44°58'57"
5	45°05'48"
6	45°12'41"



TYPICAL ANCHOR BOLT LAYOUT
No Scale



DETAIL A
3/8" = 1'-0"

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11539 LARRY E. MILLER
Larry E. Miller 8-11-12
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF BENT NO. 1
BRIDGE OVER CLAYTON BRANCH
(BR. A6879)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

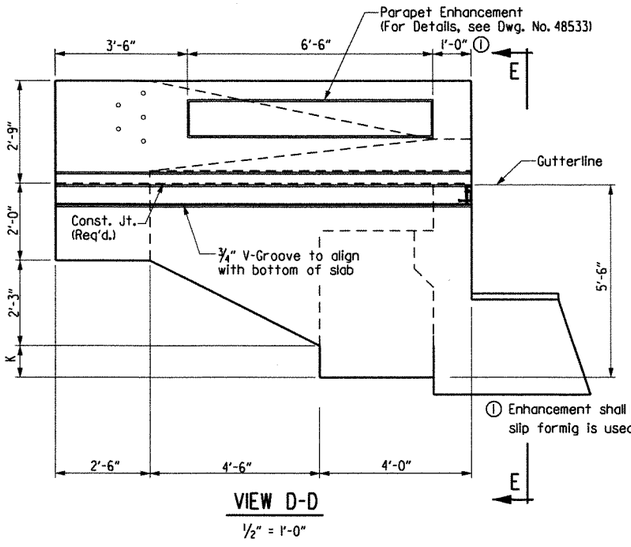
DRAWN BY:	TAR	DATE:	March 02	FILENAME:	bBB0407a3 bll.dgn
CHECKED BY:	EMB/ETH	DATE:	April 02	SCALE:	As Shown
DESIGNED BY:	BCG/JLH	DATE:	Feb 02		

BRIDGE NO. A6879 DRAWING NO. 48524

$$$$dgnspec$$$$$
$$$$date$$$$

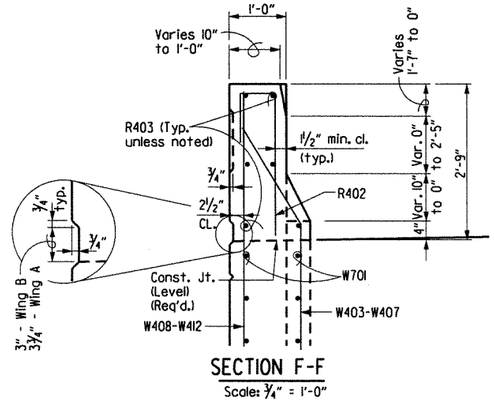
...\b040468a3_b11.dgn 8/10/2012 3:49:37 PM

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.		BB0407	230	464
				(1) A6879		BENT DTLS.		48525



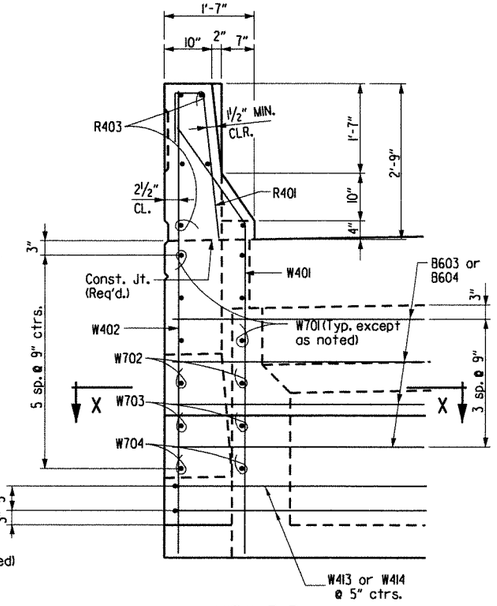
VIEW D-D

½" = 1'-0"



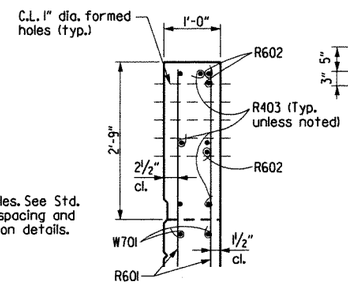
SECTION F-F

Scale: ¾" = 1'-0"



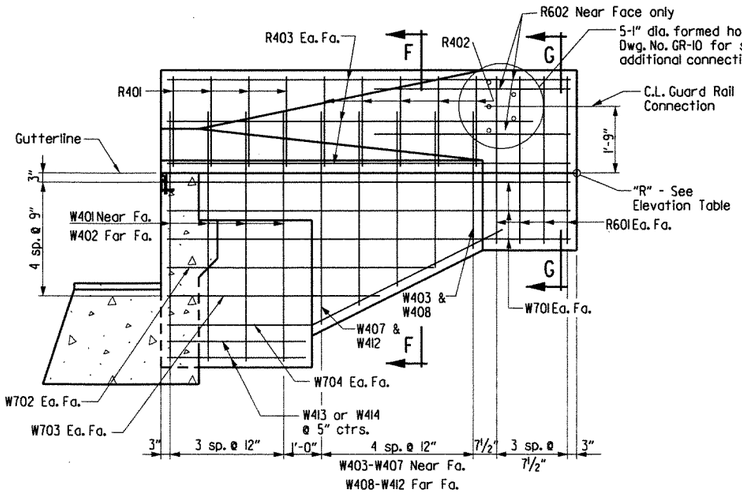
VIEW E-E

Scale: ¾" = 1'-0"



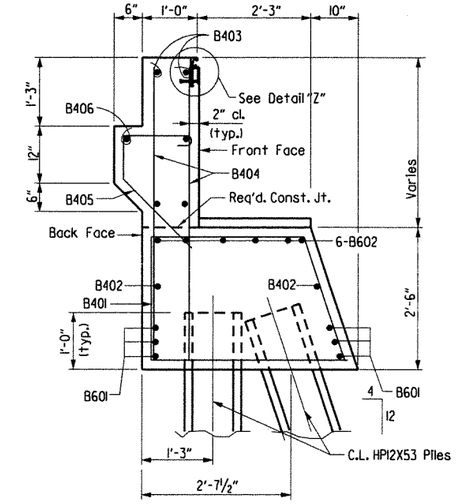
SECTION G-G

Scale: ¾" = 1'-0"



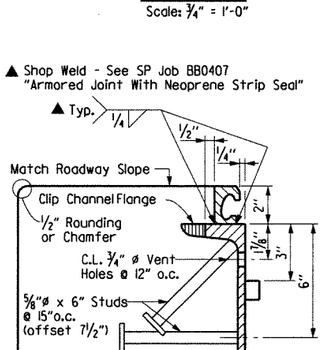
VIEW C-C

½" = 1'-0"



SECTION A-A

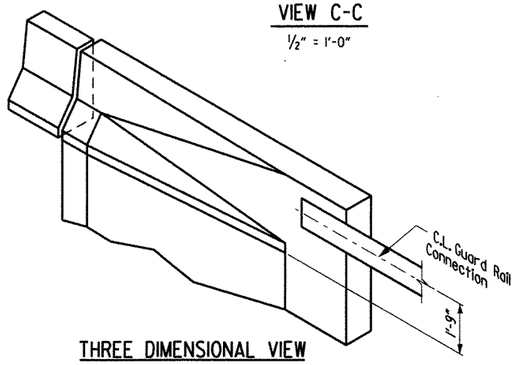
¾" = 1'-0"



▲ Shop Weld - See SP Job BB0407
"Armored Joint With Neoprene Strip Seal"

Note: Concrete shall be hand packed
under the joint armor in the backwall.

For additional details, See Dwg. No. 48550.

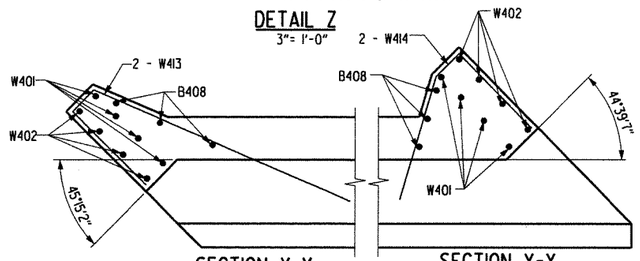


THREE DIMENSIONAL VIEW
WING RAIL & PARAPET

No Scale

DETAIL Z

3"= 1'-0"



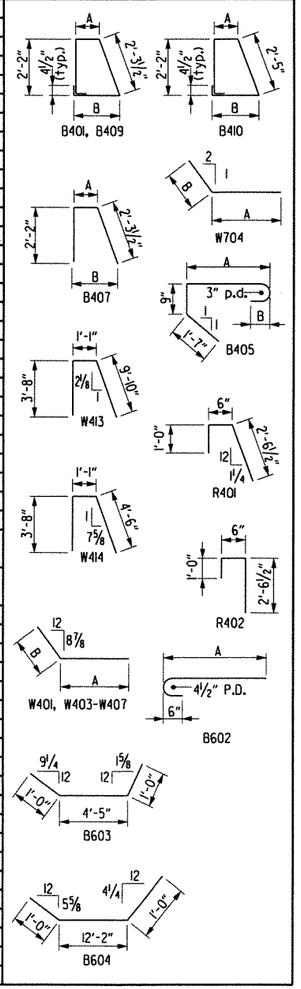
SECTION X-X
Wing A

SECTION X-X
Wing B

BAR LIST

Mark	No. Req'd.	Length	"A"	"B"	Pin Dia.
B401	65	11'-6"	2'-11"	3'-9"	2"
B402	4	30'-11"			STR.
B403	10	29'-2"			STR.
B404	112	5'-3"			STR.
B405	56	3'-11"	1'-2"	4½"	3"
B406	2	29'-2"			STR.
B407	24	7'-3"	2'-11"	3'-9"	2"
B408	6	4'-0"			STR.
B409	2	13'-3"	3'-3"	4'-2"	2"
B410	2	14'-5"	4'-2"	5'-4"	2"
B601	6	59'-9"			STR.
B602	12	31'-10"	31'-2"		4½"
B603	4	6'-5"			4½"
B604	4	12'-2"			4½"
R401	8	3'-11"			2"
R402	8	3'-11"			2"
R403	12	9'-8"			STR.
R601	16	4'-5"			STR.
R602	6	5'-0"			STR.
W401	8	6'-6"	5'-4"	1'-2"	2"
W402	8	7'-8"			STR.
W403-W407	2 ea.	Varies 3'-4" to 5'-4"	Varies 2'-2" to 4'-2"	1'-2"	2"
W408-W412	2 ea.	Varies 4'-5" to 6'-5"			STR.
W413	2	14'-5"			2"
W414	2	9'-1"			2"
W701	12	9'-8"			STR.
W702	4	6'-0"			STR.
W703	4	4'-6"			STR.
W704	4	8'-4"	2'-9"	5'-7"	5¼"

Bending Diagrams
(Dimensions are out to out of bars.)



Bent No.	Wing	Elev. "R"	K
1	A	414.998	1'-2½"
1	B	416.350	8⅝"

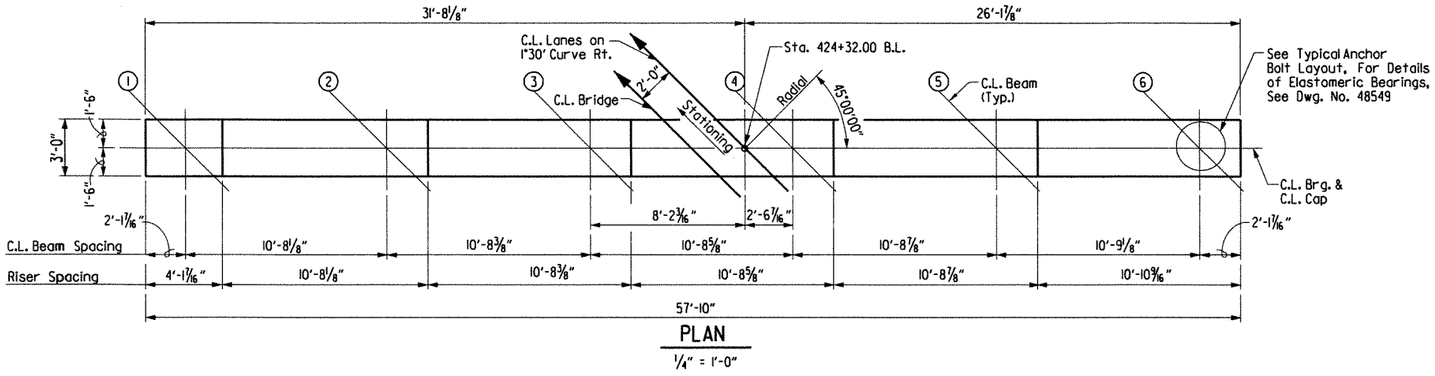
SHEET 2 OF 2
DETAILS OF BENT NO. 1
BRIDGE OVER CLAYTON BRANCH
(BR. A6879)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10339
LARRY E. MILLER
BRIDGE ENGINEER
8-11-12

DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407a3 bl2.dgn
CHECKED BY: EMB DATE: May 02 SCALE: As Shown
DESIGNED BY: BCG/JLH DATE: Feb 02
BRIDGE NO. A6879 DRAWING NO. 48525

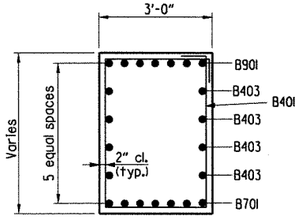
$$$$date$$$$
$$$$dgnspec$$$$$

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.		BB0407	231	464
				(1) A6879		BENT DTLS.		48526



PLAN

1/4" = 1'-0"

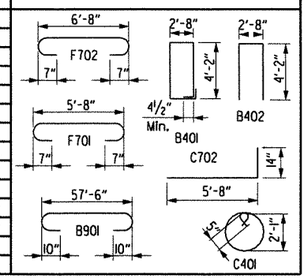


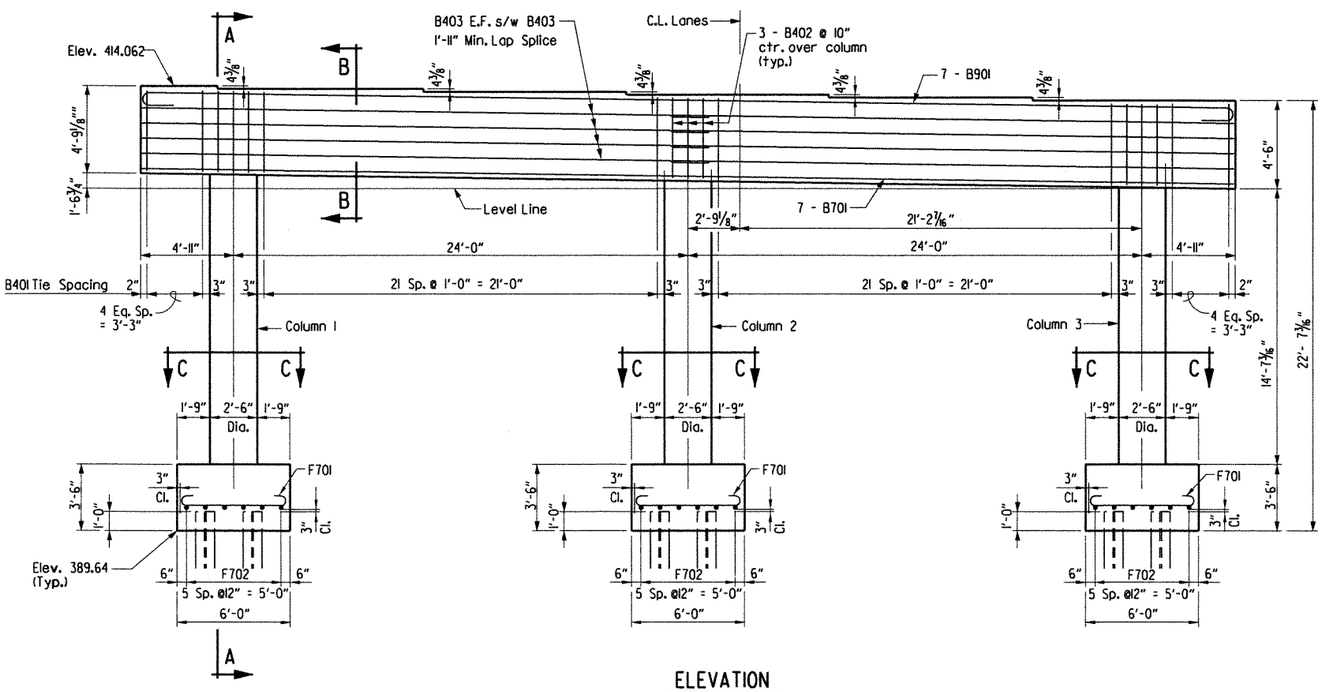
SECTION B-B

Scale: 1/2" = 1'-0"

BAR LIST

Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
B401	54	14'-0"	2"	
B402	9	10'-10"	2"	
B403	16	29'-9"	STR.	
B701	7	57'-6"	STR.	
B901	7	59'-2"	9"	
C401	58	7'-7"	3"	
C701	36	18'-9"	STR.	
C702	36	6'-8"	5 1/4"	
F701	21	7'-4"	5 1/4"	
F702	18	8'-4"	5 1/4"	

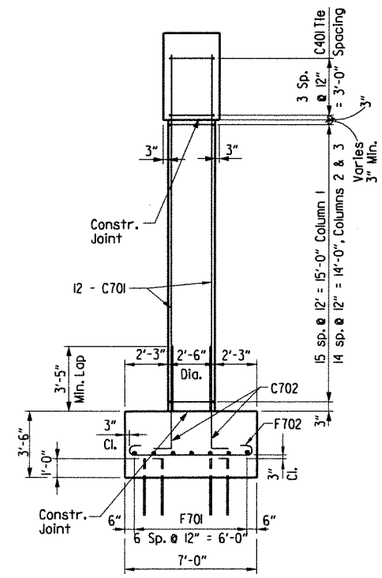




ELEVATION

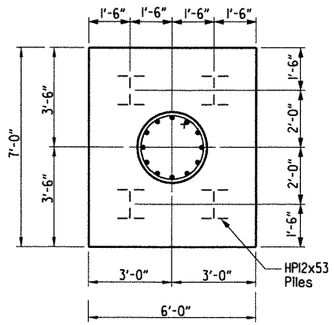
Looking Ahead

1/4" = 1'-0"



SECTION A-A

1/4" = 1'-0"

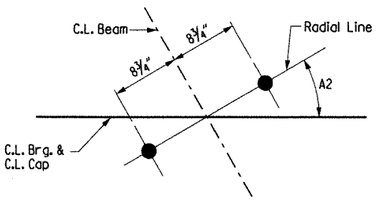


PLAN OF FOOTING

3/8" = 1'-0"

ANCHOR BOLT LAYOUT TABLE

Beam	A2
1	45°18'43"
2	45°11'59"
3	45°05'13"
4	44°58'24"
5	44°51'32"
6	44°44'39"



TYPICAL ANCHOR BOLT LAYOUT

No Scale

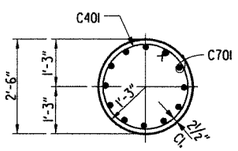
Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall 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.

For additional information, see Layout.



SECTION C-C

1/2" = 1'-0"

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11339
LARRY E. MILLER
8-11-12
BRIDGE ENGINEER

DETAILS OF BENT NO. 2
BRIDGE OVER CLAYTON BRANCH
(BR. A6879)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB/ETH DATE: May 02
DESIGNED BY: BCG/JLH DATE: Feb 02
FILENAME: bBB0407a3 b2.dgn
SCALE: As Shown

BRIDGE NO. A6879 DRAWING NO. 48526

$$$$date$$$

$$$$dgnspec$$$$$

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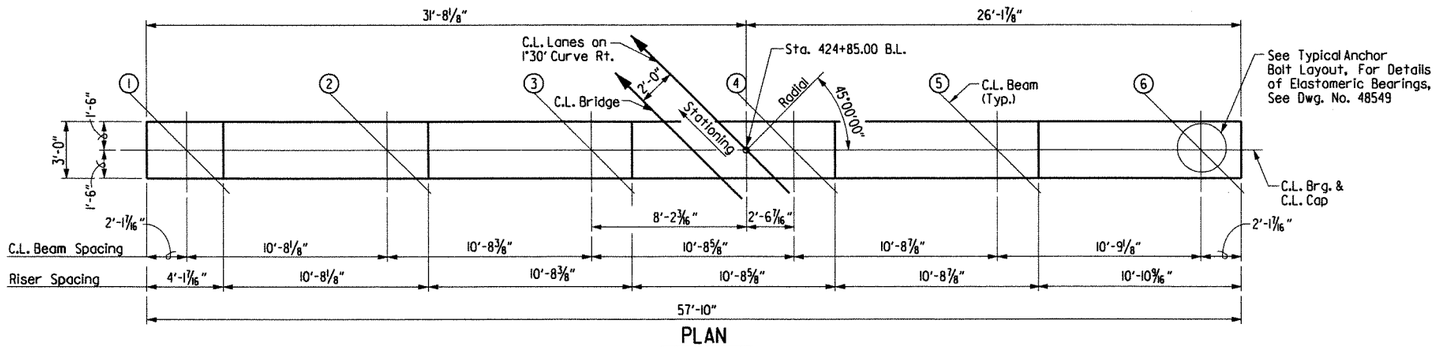
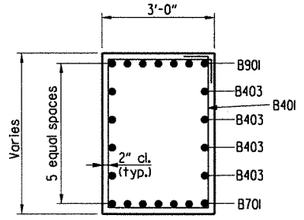
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	232	464
				(1) A6879		BENT DTLS.		48527



PLAN

¼" = 1'-0"

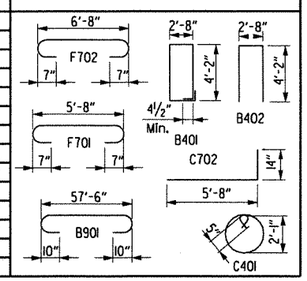


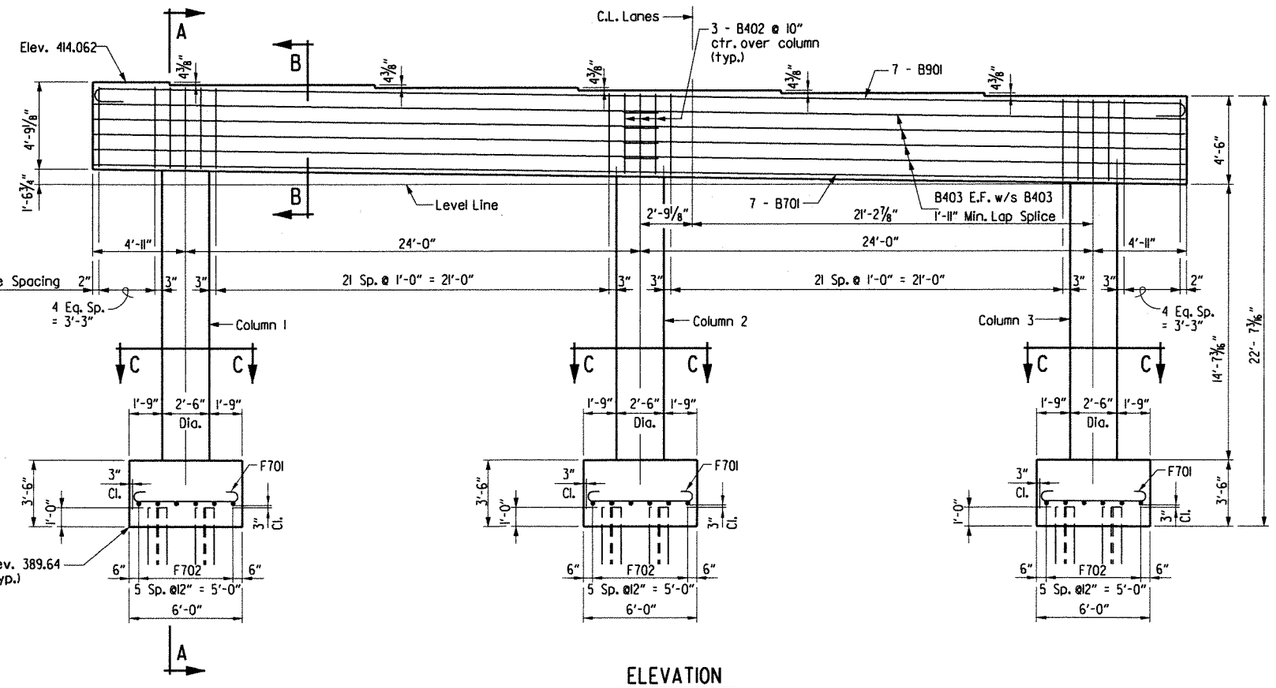
SECTION B-B

½" = 1'-0"

BAR LIST

Mark	No. Req'd.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
B401	54	14'-0"	2"	
B402	9	10'-10"	2"	
B403	16	29'-9"	STR.	
B701	7	57'-6"	STR.	
B901	7	59'-2""	9"	
C401	58	7'-7"	3"	
C701	36	18'-9"	STR.	
C702	36	6'-8"	5¼"	
F701	21	7'-4"	5¼"	
F702	18	8'-4"	5¼"	

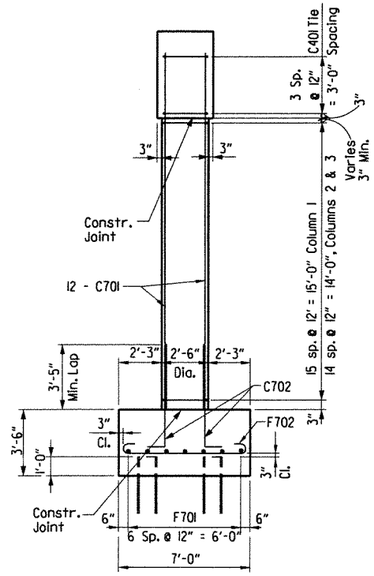




ELEVATION

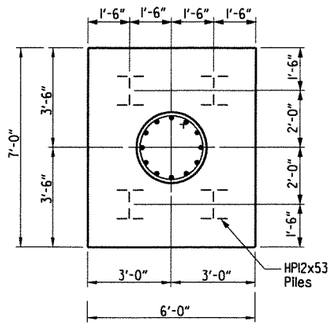
Looking Ahead

¼" = 1'-0"



SECTION A-A

¼" = 1'-0"

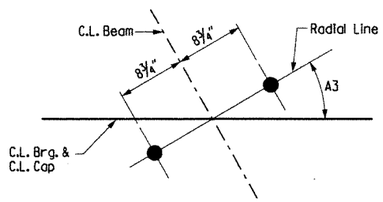


PLAN OF FOOTING

⅜" = 1'-0"

ANCHOR BOLT LAYOUT TABLE

Beam	A3
1	45°18'43"
2	45°11'59"
3	45°05'13:
4	44°58'24"
5	44°51'32"
6	44°44'39"



TYPICAL ANCHOR BOLT LAYOUT

No Scale

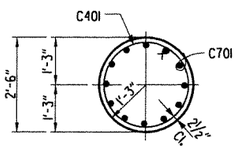
Notes:

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered ¾" 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.

For additional information, see Layout.



SECTION C-C

½" = 1'-0"

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY D. MILLER

Larry D. Miller 8-11-12

BRIDGE ENGINEER

DETAILS OF BENT NO. 3
BRIDGE OVER CLAYTON BRANCH
(BR. A6879)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02
CHECKED BY: EMB/ETH DATE: May 02
DESIGNED BY: BCG/JLH DATE: Feb 02
FILENAME: bBB0407a3 b3.dgn
SCALE: As Shown

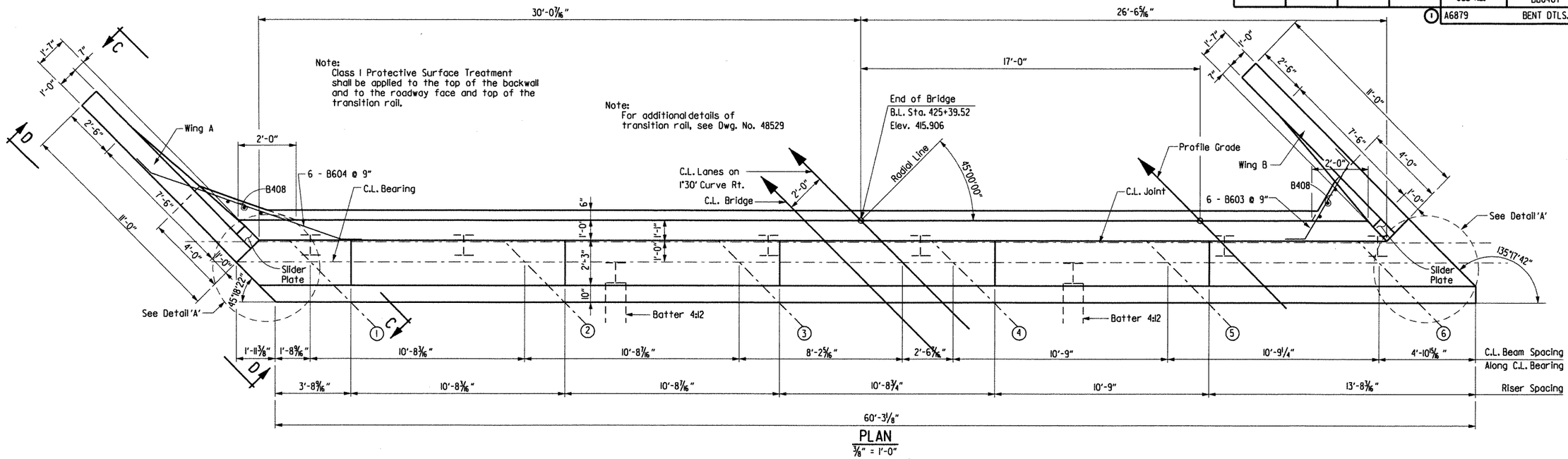
BRIDGE NO. A6879 DRAWING NO. 48527

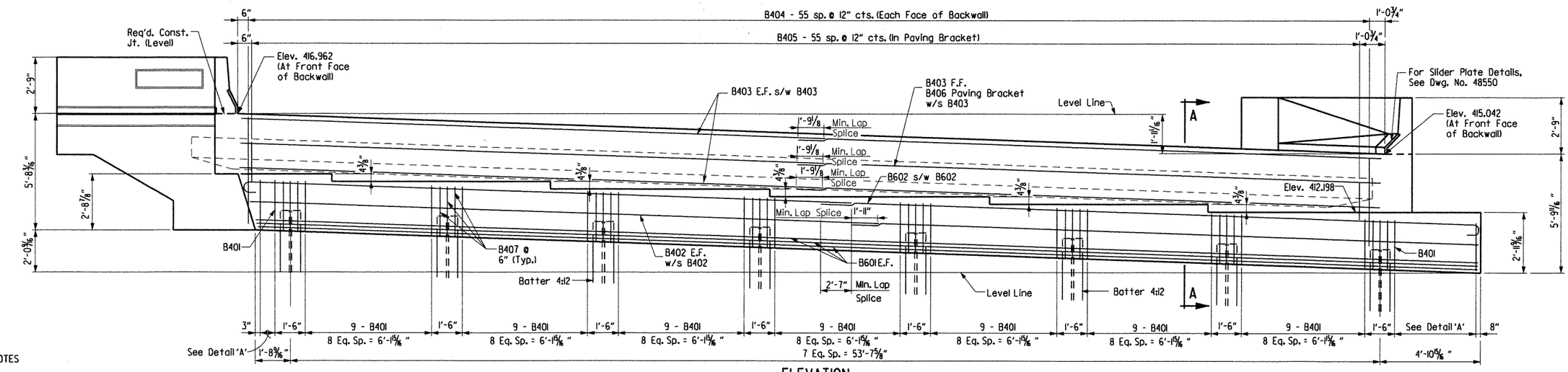
$$$$date$$$$

$$$$dgnspec$$$$$

...\b040468a3_b3.dgn 8/10/2012 3:49:38 PM

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.		BB0407	233	464
				(1) A6879		BENT DTLS.		48528





GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry.
All exposed corners shall be chamfered ¾" unless otherwise noted.

All reinforcing steel shall conform to AASHTO M31 or M53, Gr. 60.

End Bent backwall shall not be poured before girders are in place. Backwall to be placed after concrete span placement.

Structural steel in end bents shall be AASHTO M270, Gr. 50W and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50W)".

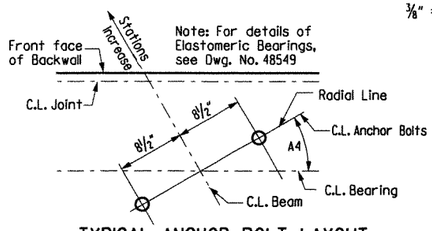
If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

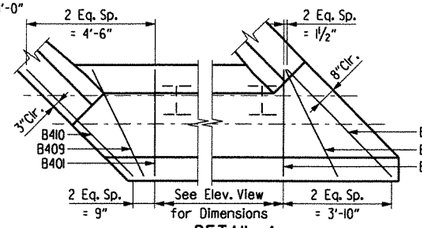
The parapet slider plates shall be cleaned in accordance with subsection 807.84(b) and painted in accordance with subsection 807.75. The color of paint shall be Gray and shall match Fed. Std. 595B, Color Chip 26176. Cleaning and painting will not be paid for directly but will be considered subsidiary to "Structural Steel in Beam Spans (Gr. 50W)".

ANCHOR BOLT LAYOUT TABLE

Beam	A4
1	44°43'54"
2	44°50'39"
3	44°57'26"
4	45°04'16"
5	45°11'08"
6	45°18'02"



TYPICAL ANCHOR BOLT LAYOUT
No Scale



DETAIL A
3/8" = 1'-0"

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 13339 LARRY E. MILLER

8-11-12

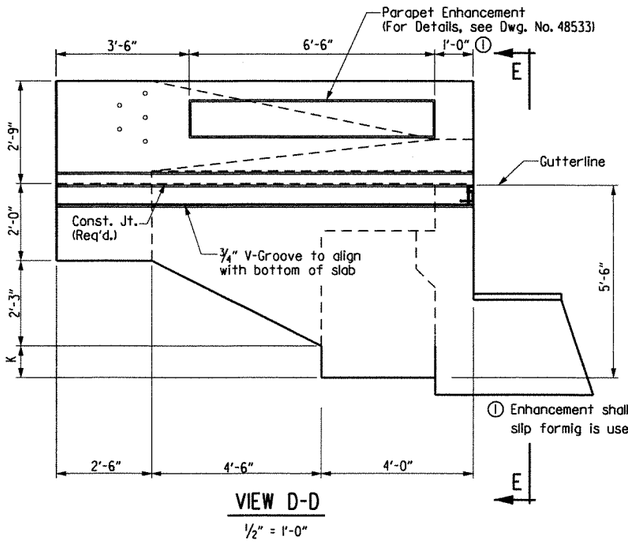
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF BENT NO. 4
BRIDGE OVER CLAYTON BRANCH
(BR. A6879)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407a3 b41.dgn
CHECKED BY: EMB/ETH DATE: April 02 SCALE: As Shown
DESIGNED BY: BCG/JLH DATE: Feb 02
BRIDGE NO. A6879 DRAWING NO. 48528

$$$$dgnspec$$$$$

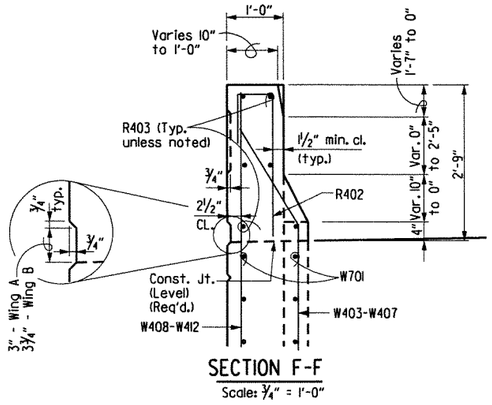
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	234	464
				① A6879		BENT DTLS.		48529



VIEW D-D

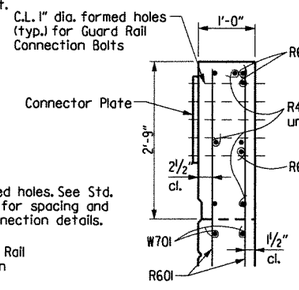
½" = 1'-0"

① Enhancement shall be continuous if slip formig is used on bridge parapet.



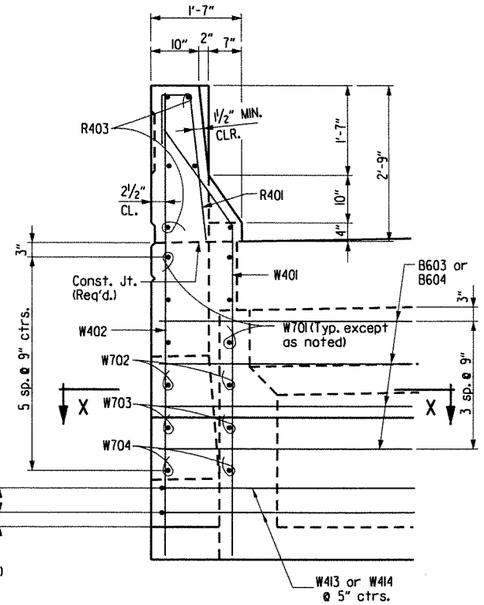
SECTION F-F

Scale: ¾" = 1'-0"



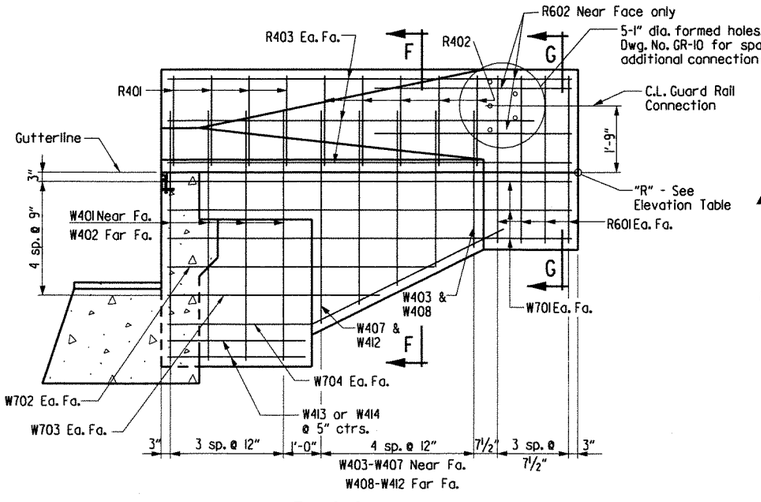
SECTION G-G

Scale: ¾" = 1'-0"



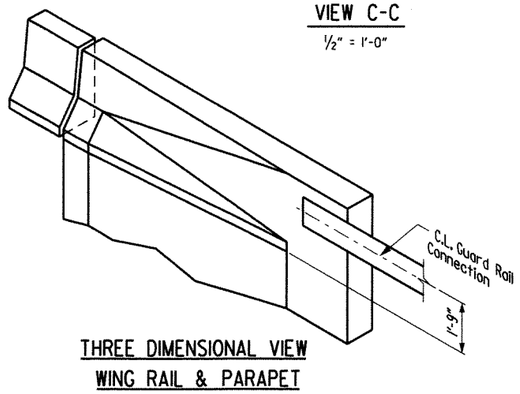
VIEW E-E

Scale: ¾" = 1'-0"



VIEW C-C

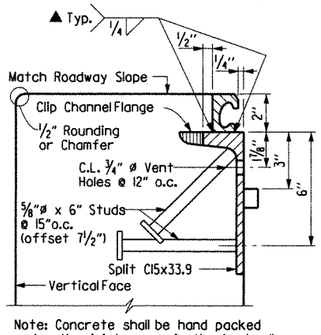
½" = 1'-0"



THREE DIMENSIONAL VIEW
WING RAIL & PARAPET

No Scale

▲ Shop Weld - See SP Job BB0407 "Armored Joint With Neoprene Strip Seal"

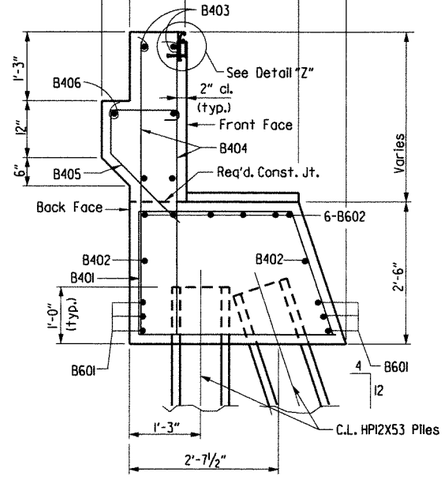


Note: Concrete shall be hand packed under the joint armor in the backwall.

For additional details, See Dwg. No. 48550.

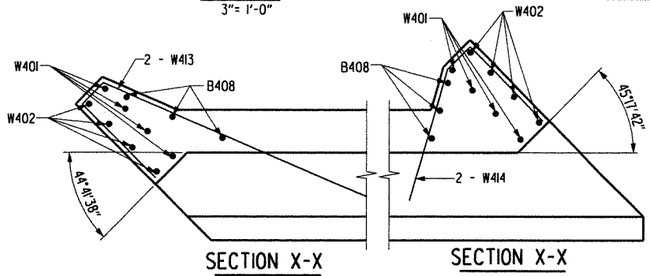
DETAIL Z

3"= 1'-0"



SECTION A-A

¾" = 1'-0"



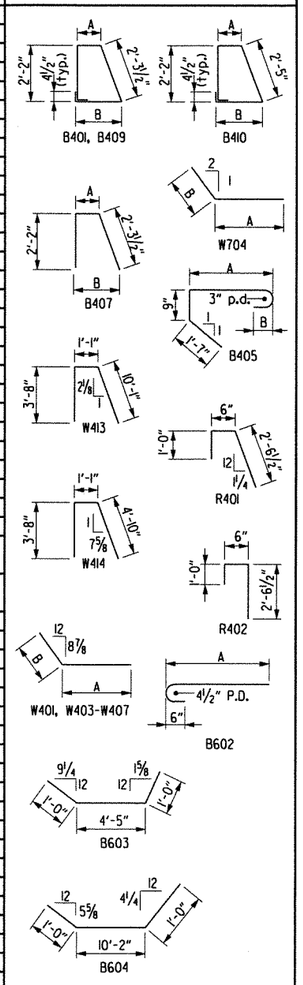
SECTION X-X
Wing A

SECTION X-X
Wing B

BAR LIST

Mark	No. Req'd.	Length	"A"	"B"	Pin Dia.
B401	65	11'-6"	2'-11"	3'-9"	2"
B402	4	31'-0"			STR.
B403	10	29'-1"			STR.
B404	112	5'-4"			STR.
B405	56	3'-11"	1'-2"	4½"	3"
B406	2	29'-1"			STR.
B407	24	7'-3"	2'-11"	3'-9"	2"
B408	6	4'-0"			STR.
B409	2	13'-3"	3'-3"	4'-2"	2"
B410	2	14'-5"	4'-2"	5'-4"	2"
B601	6	59'-11"			STR.
B602	12	31'-11"	31'-3"		4½"
B603	4	6'-5"			4½"
B604	4	12'-2"			4½"
R401	8	3'-11"			2"
R402	8	3'-11"			2"
R403	12	9'-8"			STR.
R601	16	4'-5"			STR.
R602	6	5'-0"			STR.
W401	8	6'-6"	5'-4"	1'-2"	2"
W402	8	7'-8"			STR.
W403-W407	2 ea.	Varies 3'-4" to 5'-4"	Varies 2'-2" to 4'-2"	1'-2"	2"
W408-W412	2 ea.	Varies 4'-5" to 6'-5"			STR.
W413	2	14'-8"			2"
W414	2	9'-5"			2"
W701	12	9'-8"			STR.
W702	4	6'-0"			STR.
W703	4	4'-6"			STR.
W704	4	8'-4"	2'-9"	5'-7"	5¼"

Bending Diagrams (Dimensions are out to out of bars.)



Bent No.	Wing	Elev. "R"	K
4	A	416.350	7⅝"
4	B	415.020	1'-2¾"

SHEET 2 OF 2
DETAILS OF BENT NO. 4
BRIDGE OVER CLAYTON BRANCH
(BR. A6879)
CRAWFORD & SEBASTIAN COUNTIES
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10339 LARRY W. MILLER

Larry W. Miller 8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: March 02
CHECKED BY: EMB/ETH DATE: April 02
DESIGNED BY: BCG/JLH DATE: Feb 02
FILENAME: bBB0407a3 b42.dgn
SCALE: As Shown

BRIDGE NO. A6879 DRAWING NO. 48529

$$$$date$$$

$$$$dgnspec$$$$$

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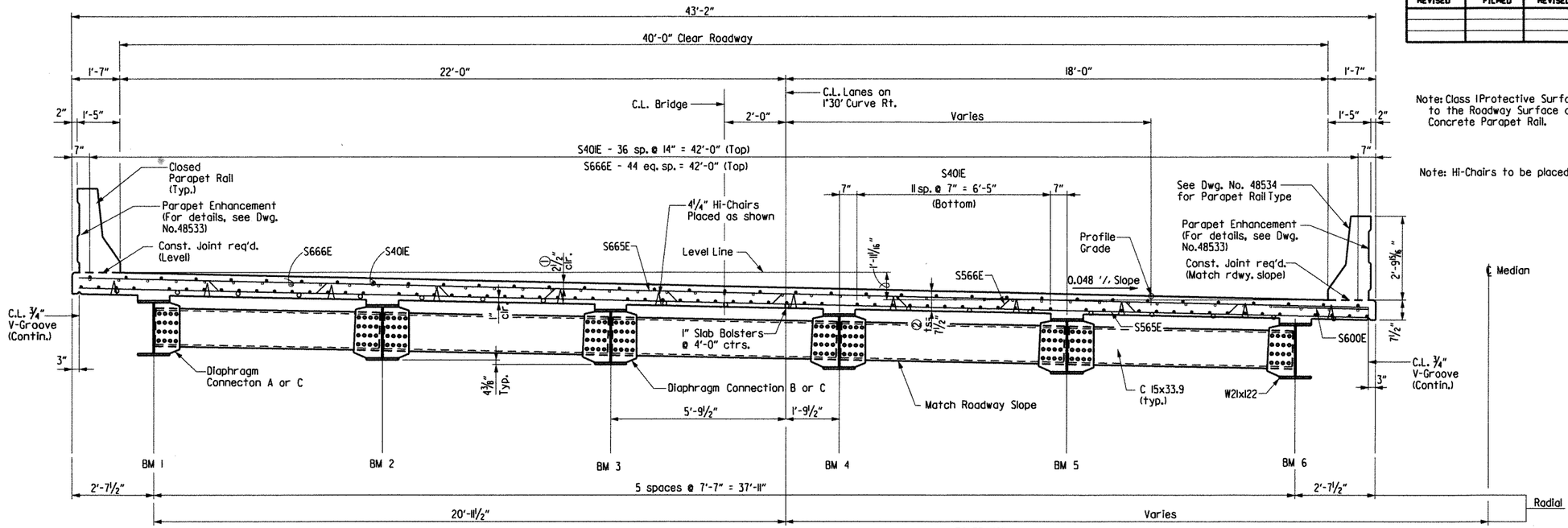
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	235	464
				① A6879		SPAN DTLS.		48530



TYPICAL SECTION

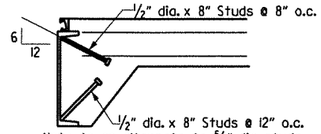
(Looking Ahead)

Note: Class 1 Protective Surface Treatment shall be applied to the Roadway Surface and the Roadway Face and Top of Concrete Parapet Rail.

Note: Hi-Chairs to be placed on 4'-0" long centers.

SLAB REINFORCING:
Transverse:
S600E @ 7½" centers (top)
S601E thru S664E @ 7½" centers (top)
S501E thru S564E @ 7½" centers (bottom)
S665E @ 15" centers (top directly above S565E)
S565E @ 15" centers (bottom)
S566E @ 15" centers bent up over beams
Longitudinal:
S40IE (top & bottom) placed as shown
S666E (top) placed as shown over int. supports

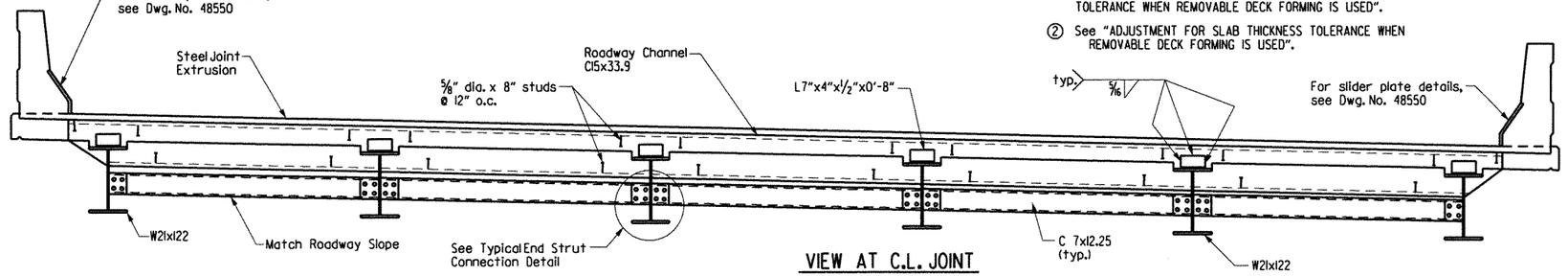
Note: Reinf. bars with "E" suffix (S40IE, S50IE, etc.) are epoxy coated bars. For additional reinforcing details, see Dwg. No. 48534



Note: As an alternate to ⅝" dia. studs, ½" dia. x 8" studs spaced as shown may be used. Use weight of ⅝" dia. stud as basis of measurement of structural steel in anchors.

DETAIL OF ALTERNATE ANCHORS

No Scale



VIEW AT C.L. JOINT

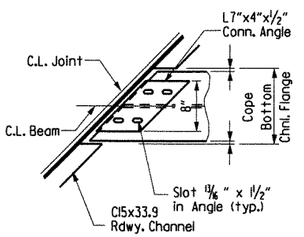
(Looking Ahead)

TOLERANCE:
① Minus = ¼"
Plus = Equal to amount of slab thickening used to meet slab thickness tolerance - see "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".

② See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED".

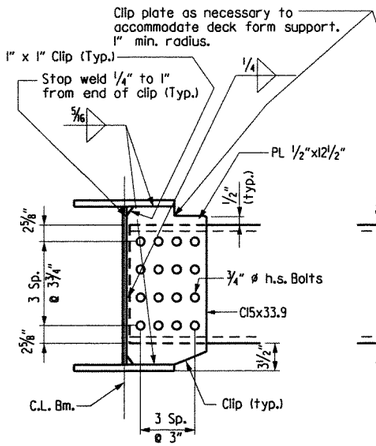
EXPANSION DEVICE:
Roadway Channel C15x33.9
Conn ∠s 7"x4"x½"
Detail Device ⅛" high and provide ¼" shims using two 1/16" and one ⅛" plates

For additional details of Expansion Device, See Dwg. No. 48550



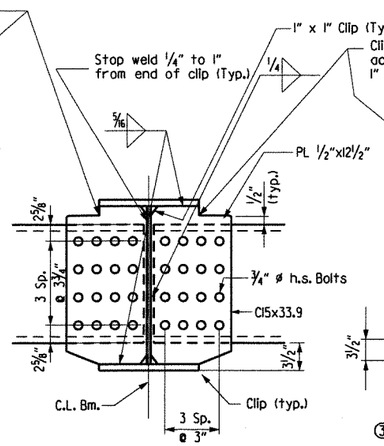
ROADWAY CHANNEL CONNECTION DETAIL

No Scale



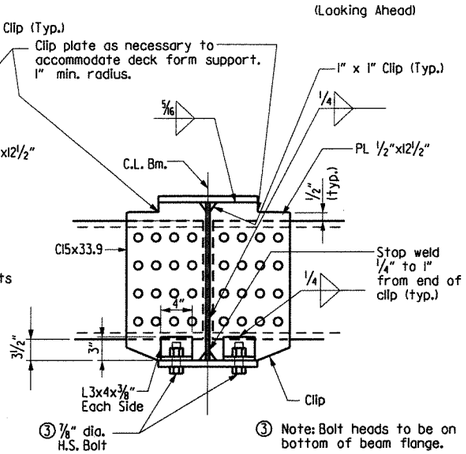
DIAPHRAGM CONNECTION A

No Scale
Typical for Exterior Beams.



DIAPHRAGM CONNECTION B

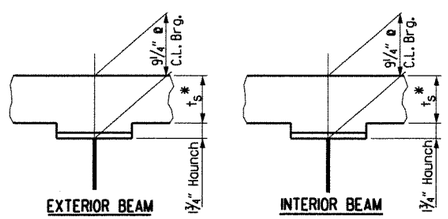
No Scale



③ Note: Bolt heads to be on bottom of beam flange.

DIAPHRAGM CONNECTION C

No Scale
Interior Girder Shown
(Exterior Similar)



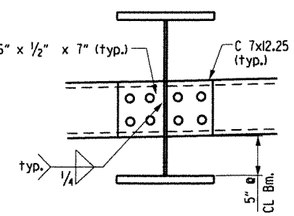
Note: ts = slab thickness as shown on "TYPICAL SECTION".
*Tolerance when removable deck forming is used is +½", -¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED

No Scale

Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance; Minimum - occurs when the top flange contacts the bottom reinforcing steel; Maximum - top flange thickness plus 1". 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.



END STRUT CONNECTION

No Scale

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY M. MILLER
8-11-12
BRIDGE ENGINEER

SHEET 1 OF 5
DETAILS OF
159'-0" CONT. COMP. W-BEAM UNIT
(BR. A6879)
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY:	TAR	DATE:	Feb 02	FILENAME:	bBB0407a3 sll.dgn
CHECKED BY:	EMB	DATE:	May 02	SCALE:	As Shown
DESIGNED BY:	BCG/JLH	DATE:	Jan 02		

BRIDGE NO. A6879 DRAWING NO. 48530

$$$$date$$$$
$$$$dgnspec$$$$$.

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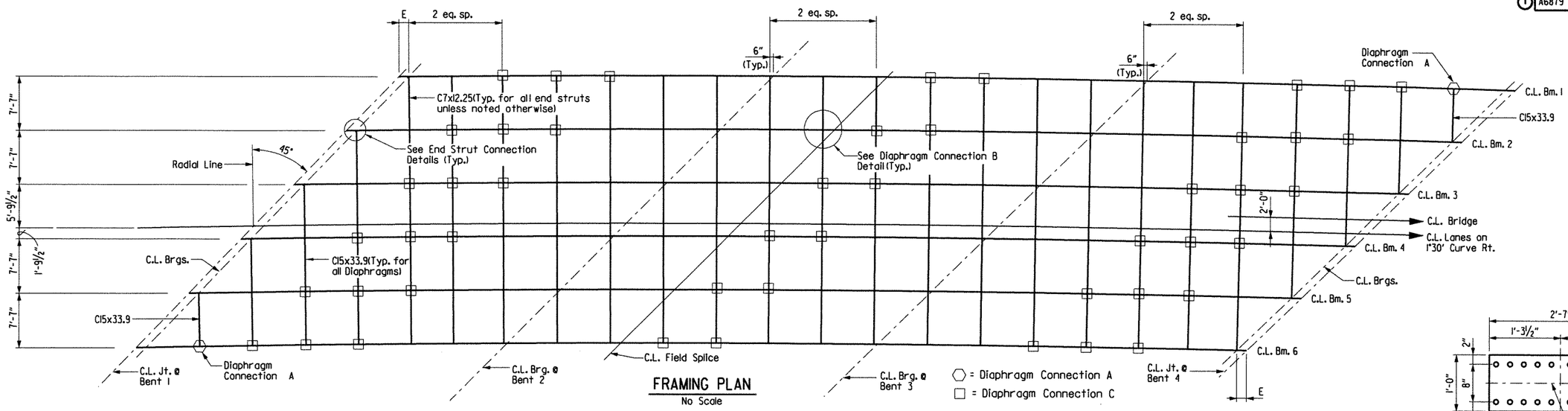
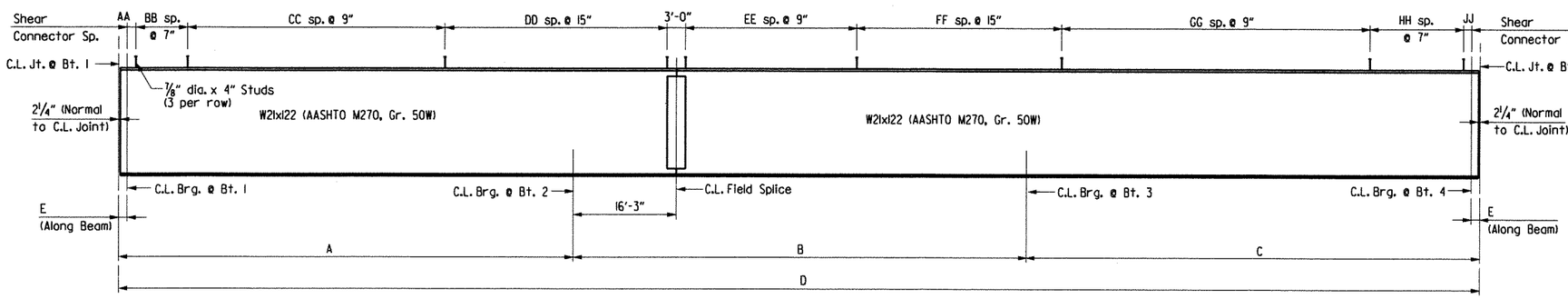
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	236	464
				① A6879		SPAN DTLS.		48531

For Diaphragm Details, See Dwg. No. 48530.



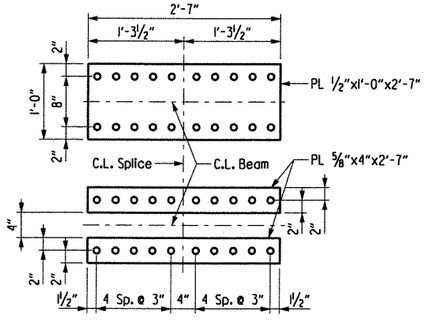
FRAMING PLAN
No Scale



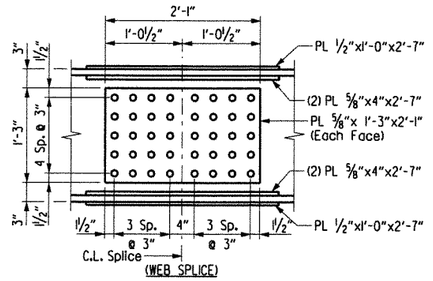
Note:
For details of Elastomeric Fixed and Expansion Bearings, see Dwg. No. 48549

Note:
Beams are concentric to 1°30' curve at C.L. Lanes and diaphragms are on radial lines.

TYPICAL BEAM ELEVATION
No Scale



(FLANGE SPLICE)



(WEB SPLICE)

TYPICAL FIELD SPLICE DETAILS
1" = 1'-0"

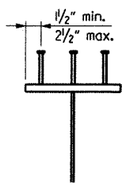
Note: All field splice bolts shall be ⅞" dia. H.S. bolts.
All field splice plates shall be AASHTO M270, Gr. 50W steel.

TABLE OF DIMENSIONS

Beam	Radius	DIMENSIONS (ALONG ARC)				
		A	B	C	D	E
1	3840'-8⅛"	53'-3¹¹/₁₆"	53'-3½"	53'-3⁹/₁₆"	159'-10¾"	1'-4⅞"
2	3833'-11⅛"	53'-2⁹/₁₆"	53'-2¼"	53'-2⅜"	159'-6¾"	1'-4⅞"
3	3825'-6⅛"	53'-1"	53'-0⁵/₁₆"	53'-0⅞"	159'-2⅝"	1'-5"
4	3817'-11⅛"	52'-11⅛"	52'-11⅛"	52'-11⅝"	158'-10⅝"	1'-5"
5	3810'-4⅛"	52'-10⅝"	52'-10⅞"	52'-10⅜"	158'-6⅝"	1'-5⅛"
6	3802'-9⅛"	52'-9"	52'-9⅜"	52'-8⅞"	158'-3⅛"	1'-5⅛"

SHEAR CONNECTOR SPACING TABLE

Beam	DIMENSIONS AND SPACES								
	AA	BB	CC	DD	EE	FF	GG	HH	JJ
1	¾"	10	49	19	29	18	50	10	1⅛"
2	1¼"	11	48	19	28	18	50	11	⅜"
3	0"	11	48	19	28	18	49	12	0"
4	1⅛"	12	47	19	28	19	47	12	¼"
5	5⁄16"	14	47	18	28	18	46	15	⅝"
6	0"	10	50	18	28	19	44	15	1⅛"



Stud Shear Connectors shown shall be ⅞" dia. 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. ¾" dia. studs may be used in place of the ⅞" dia. stud shown, at the ratio of 1.361-¾" dia. studs in place of one ⅞" dia. stud. ⅞" dia. studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

SHEAR CONNECTOR DETAIL
No Scale

TABLE FOR WELD

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To ¾" Inclusive	¼"	
Over ¾"	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.

STATE OF ARKANSAS
No. 11039
REGISTERED PROFESSIONAL ENGINEER
LARRY W. MILLER
Larry W. Miller 8-11-12
BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS OF
159'-0" CONT. COMP. W-BEAM UNIT
(BR. A6879)
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: April 02 FILENAME: bBB0407a3 sl2.dgn
CHECKED BY: EMB/JGM DATE: May 02 SCALE: As Shown
DESIGNED BY: BCG/JLH/ETH/GMS DATE: April 02
BRIDGE NO. A6879 DRAWING NO. 48531

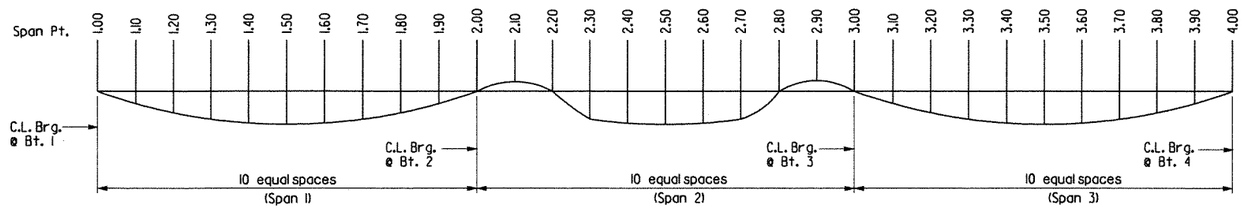
$$$$date$$$$
$$$$dgnspec$$$$

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.		BB0407	237	464
				(1) A6879		SPAN DTLS.		48532

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Camber for Dead Load Deflection plus vertical curve +/- 1/4" tolerance.
Deflections shown are along the C.L. of beam from the plane perpendicular to the web extending from C.L. Brg. to C.L. Brg.
Negative sign (-) indicates upward deflection.

SPAN NO.	POINT OF DEFLECTION	Structural Steel		Structural Steel (+) Slab		Structural Steel (+) Slab (+) Para. Rail	
		Bms. 1 & 6	Bms. 2-5	Bms. 1 & 6	Bms. 2-5	Bms. 1 & 6	Bms. 2-5
1	1.00	0.00	0.00	0.00	0.00	0.00	0.00
	1.10	0.05	0.05	0.28	0.34	0.32	0.39
	1.20	0.09	0.09	0.51	0.63	0.58	0.72
	1.30	0.11	0.12	0.68	0.84	0.78	0.96
	1.40	0.13	0.13	0.77	0.94	0.89	1.07
	1.50	0.13	0.13	0.76	0.93	0.87	1.06
	1.60	0.11	0.12	0.67	0.82	0.76	0.94
	1.70	0.09	0.09	0.52	0.63	0.59	0.72
	1.80	0.05	0.06	0.32	0.40	0.37	0.46
	1.90	0.02	0.02	0.13	0.16	0.15	0.18
	2.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2.10	-0.01	-0.01	-0.04	-0.04	-0.05	-0.05
	2.20	0.00	0.00	0.00	0.00	0.00	0.00
	2.30	0.01	0.01	0.05	0.06	0.06	0.07
	2.40	0.02	0.02	0.10	0.12	0.11	0.14
	2.50	0.02	0.02	0.112	0.14	0.14	0.16
	2.60	0.02	0.02	0.10	0.12	0.11	0.14
	2.70	0.01	0.01	0.05	0.06	0.06	0.07
	2.80	0.00	0.00	0.00	0.00	0.00	0.00
	2.90	-0.01	-0.01	-0.04	-0.04	-0.05	-0.05
	3.00	0.00	0.00	0.00	0.00	0.00	0.00
3	3.10	0.02	0.02	0.13	0.16	0.151	0.18
	3.20	0.05	0.05	0.32	0.40	0.37	0.46
	3.30	0.09	0.09	0.52	0.63	0.59	0.72
	3.40	0.11	0.12	0.67	0.82	0.76	0.94
	3.50	0.13	0.13	0.76	0.93	0.87	1.06
	3.60	0.13	0.13	0.77	0.94	0.88	1.07
	3.70	0.11	0.12	0.68	0.84	0.78	0.96
	3.80	0.09	0.09	0.51	0.63	0.58	0.72
	3.90	0.05	0.05	0.28	0.34	0.32	0.39
	4.00	0.00	0.00	0.00	0.00	0.00	0.00



DEAD LOAD DEFLECTION DIAGRAM

No Scale

$$$$dgnspec$$$$$

$$$$date$$$$

SHEET 3 OF 5
DETAILS OF
159'-0" CONT. COMP. W-BEAM UNIT
(BR. A6879)

ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 10339 LARRY E. MILLER
8-11-12
BRIDGE ENGINEER

DRAWN BY: TAR DATE: May 02
CHECKED BY: JLH DATE: May 02
DESIGNED BY: EMB DATE: May 02
FILENAME: bBB0407a3 sl3.dgn
SCALE: N.T.S.

BRIDGE NO. A6879 DRAWING NO. 48532

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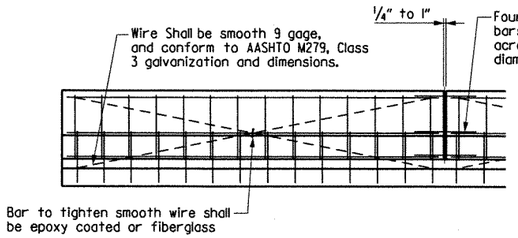
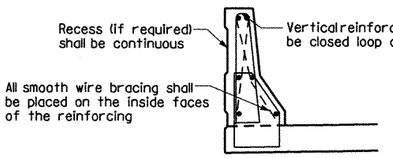
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	238	464
				(1) A6879		SPAN DTLS.		48533



All panels shall be braced as shown to prevent racking. All open joints shall be sawed as soon as practical to a min. 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.

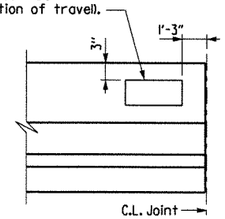


The extruded parapet shall conform to the horizontal and vertical lines shown in the plans or as directed by the Engineer and shall present a smooth uniform appearance and texture. Exposed surfaces may be given a light brush finish or a Class 3 Texture Coating Finish in place of Class 2, Rubbed Finish.

DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET

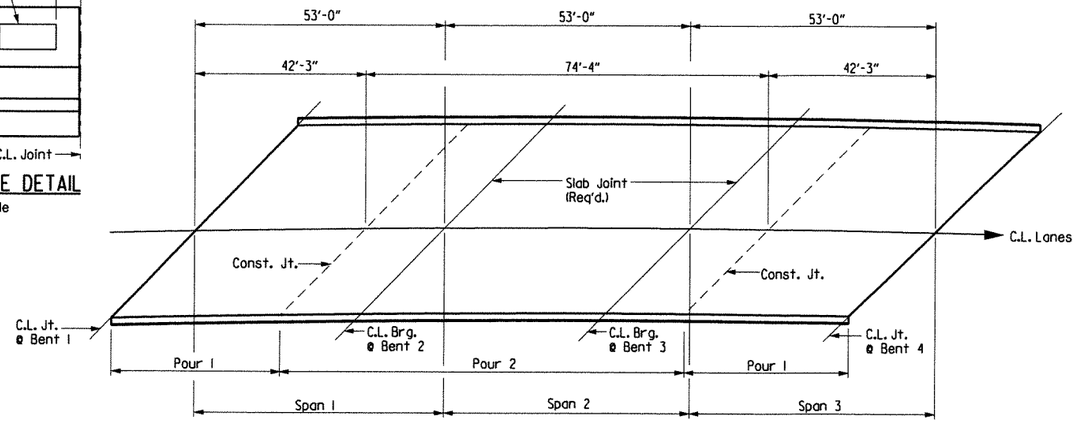
No Scale

Place Type D Bridge Name Plate on right parapet rail at end of Bridge A. (Right is defined when facing direction of travel).



NAME PLATE DETAIL

No Scale

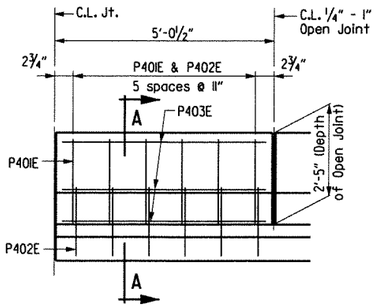


POURING SEQUENCE

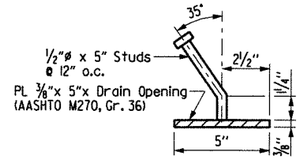
No Scale

Note: Pours with the same number may be poured separately or simultaneously. Pour (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 adjacent pour. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. Concrete in bridge superstructure shall be consolidated for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

The contractor must obtain approval from the Engineer for any deviations from the pouring sequences shown.



(5'-0 1/2" PANEL)



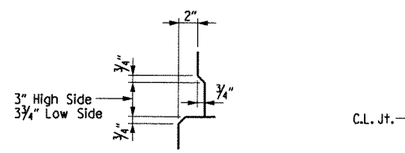
DETAIL Z

No Scale

Note:

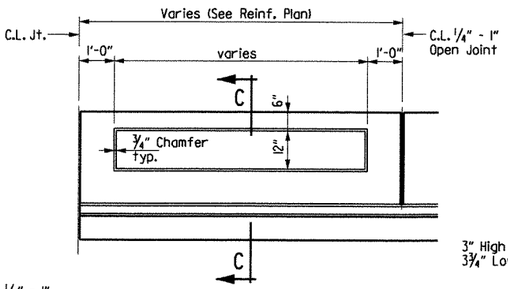
Parapet Studs shall be 5" long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be measured and paid for as Structural Steel in Beam Spans (M270, Gr. 50W)

The surfaces of the 3/8" Plates which will not be in contact with concrete shall be painted in accordance with Section 638, or as approved by the Engineer. Only one coat is required and shall be applied in the fabricator's shop. Painting will not be paid for directly, but will be considered subsidiary to Structural Steel in Beam Spans (M270, Gr. 50W)



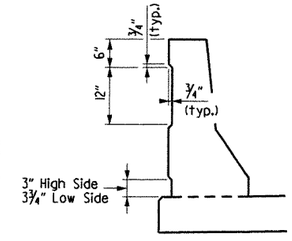
DETAIL "Y"

No Scale



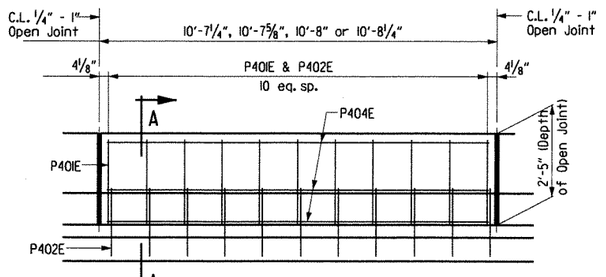
DETAILS OF PARAPET ENHANCEMENT

No Scale



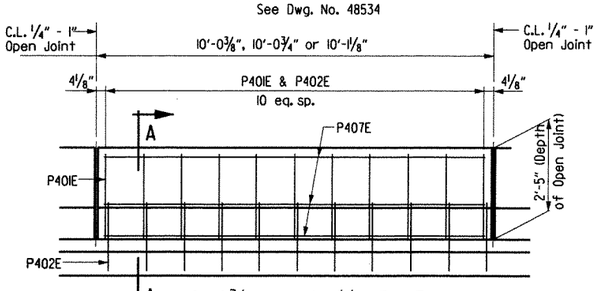
SECTION C-C

No Scale



(10'-7 1/4" to 10'-8 1/4" PANEL)

See Dwg. No. 48534

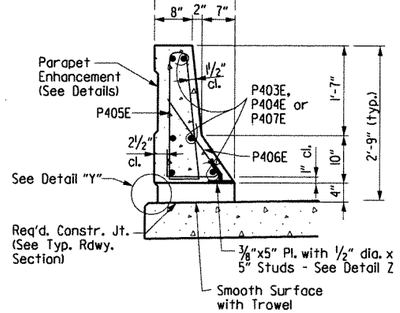


(10'-0 3/8" to 10'-1 1/8" PANEL)

See Dwg. No. 48534

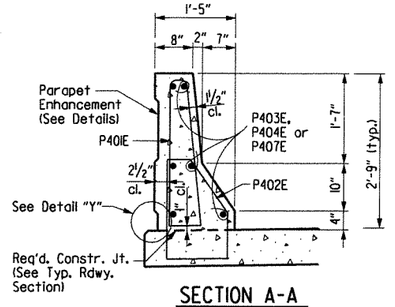
DETAILS OF CLOSED CONCRETE PARAPET RAIL

No Scale



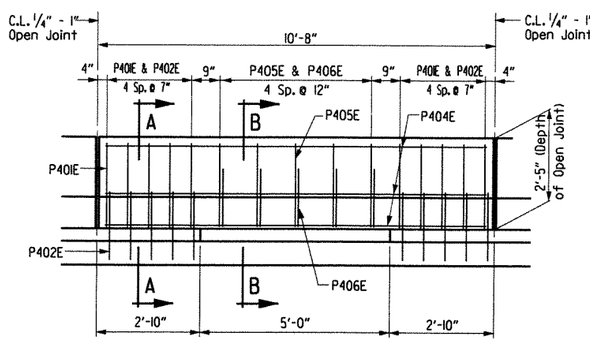
SECTION B-B

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



SECTION A-A

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



(10'-8" PANEL)

DETAILS OF OPEN CONCRETE PARAPET RAIL

No Scale

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY E. MILLER

Larry E. Miller 8-11-12

BRIDGE ENGINEER

SHEET 4 OF 5

DETAILS OF

159'-0" CONT. COMP. W-BEAM UNIT

(BR. A6879)

ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	TAR	DATE:	Jan 02	FILENAME:	bBB0407a3 sl4.dgn
CHECKED BY:	EMB	DATE:	May 02	SCALE:	As Shown
DESIGNED BY:	BCG/JLH	DATE:	Jan 02		

BRIDGE NO. A6879 DRAWING NO. 48533

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$$$$date$$$$

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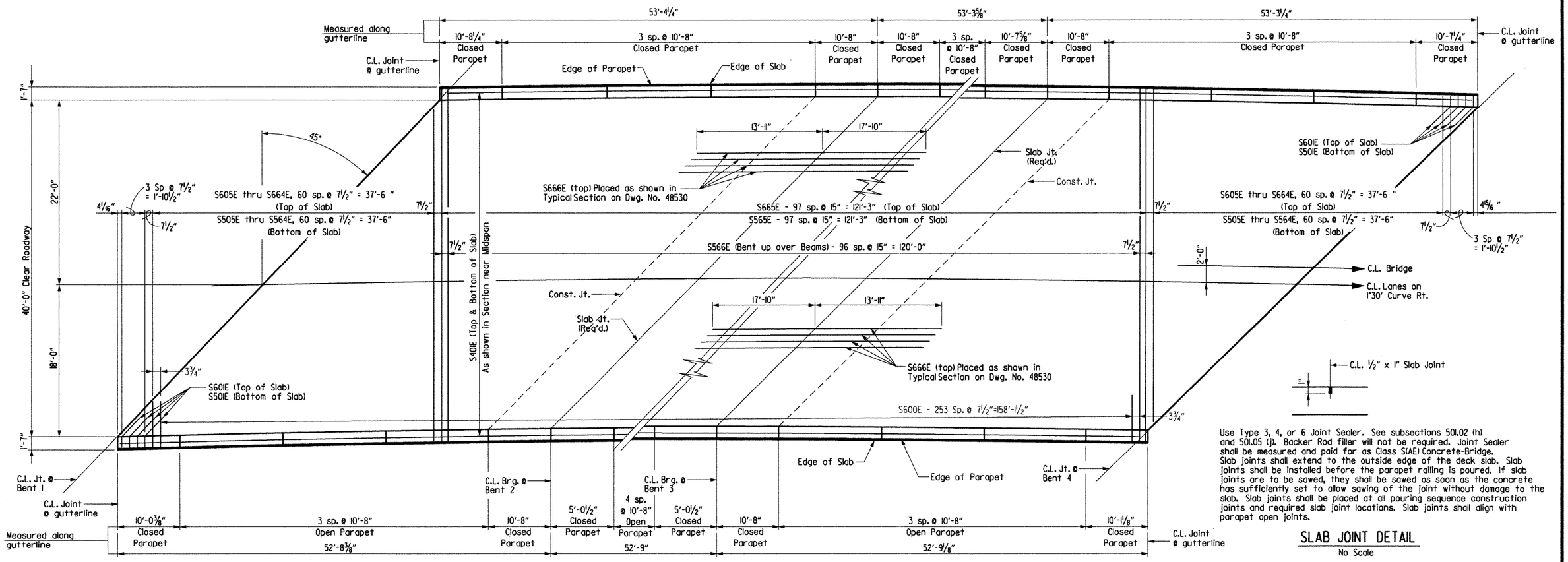
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		BB0407	239	464
				(1) A6879		SPAN DTLS.		48534



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. 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. Slab joints shall align with parapet open joints.

SLAB JOINT DETAIL

No Scale

Note: Slab Joints shall align with parapet joints at gutterline.

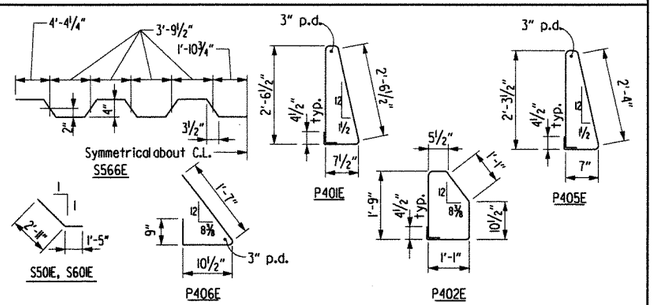
REINFORCING PLAN

No Scale

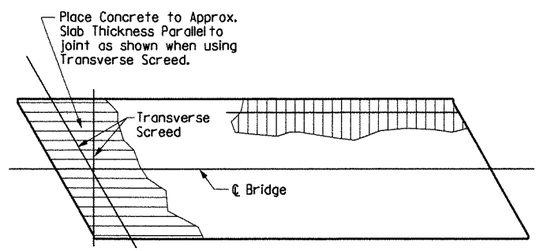
BAR LIST

Mark	No. Req'd.	Length	Pin Dia.	Mark	No. Req'd.	Length	Pin Dia.
S401E	525	33'-5"	STR.	P401E	236	6'-4"	2"
				P402E	236	5'-7"	2"
S501E	8	4'-4"	3¾"	P403E	12	4'-7"	STR.
S502E	Not Used			P404E	162	10'-2"	STR.
S503E	Not Used			P405E	95	5'-10"	2"
S504E	Not Used			P406E	95	3'-2"	2"
S505E to S564E	2 Ea.	4'-1" to 41'-9"	STR.	P407E	12	9'-6"	STR.
S565E	98	42'-10"	STR.				
S566E	97	43'-10"	3"				
S600E	254	6'-4"	STR.				
S601E	8	4'-4"	4½"				
S602E	Not Used						
S603E	Not Used						
S604E	Not Used						
S605E to S664E	2 Ea.	4'-1" to 41'-9"	STR.				
S665E	98	42'-10"	STR.				
S666E	90	31'-9"	STR.				

Bending Diagrams (Dimensions are out to out of bars.)



Note: All bars designated with an "E" suffix are to be epoxy coated.



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

Note: At the Contractor's option, two straight epoxy coated #5 bars may be substituted for the S566E bar. Payment for reinforcing will be based on the S566E bars.

Notes:

All longitudinal lines and longitudinal reinforcing steel shall be on curves concentric to C.L. Lanes.

Transverse slab reinforcing shall be placed on radial lines and are spaced along C.L. Lanes.

Parapets and outside edges of deck are concentric to C.L. Lanes.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11339 LARRY W. MILLER

Larry W. Miller 8-11-12

BRIDGE ENGINEER

SHEET 5 OF 5
DETAILS OF
159'-0" CONT. COMP. W-BEAM UNIT
(BR. A6879)
ROUTE I-540 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: Jan 02
CHECKED BY: EMB DATE: May 02
DESIGNED BY: BCG/JLH DATE: Jan 02
FILENAME: bBB0407a3 si5.dgn
SCALE: As Shown
BRIDGE NO. A6879 DRAWING NO. 48534

$$$$date$$$$
$$$$dgnspec$$$$$

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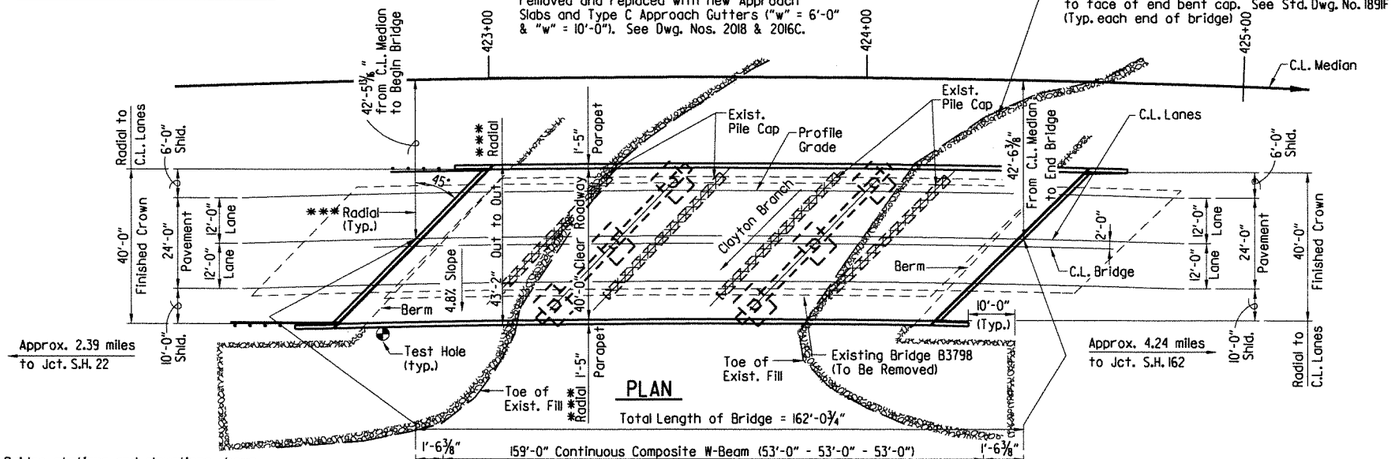
				6	ARK.			
				JOB NO.		BB0407	240	464
				(1) B6879		LAYOUT		48535

For R/W Data, see Rdwy. Plans

Note: Existing approach slabs and gutters to be removed and replaced with new Approach Slabs and Type C Approach Gutters ("w" = 6'-0" & "w" = 10'-0"). See Dwg. Nos. 2018 & 2016C.

Dumped Rip-Rap 1'-6" thick with filter fabric placed as shown or as directed by the Engineer. Top of riprap shall extend to face of end bent cap. See Std. Dwg. No. 1891F for details. (Typ. each end of bridge)



C.L. MEDIAN CURVE DATA	C.L. LANES CURVE DATA (Bridge B6879)
P.I. 424+35.68	P.I. 424+29.09
△ = 17°51' Rt.	△ = 17°51' Rt.
D = 1°30'	D = 1°30'
T = 599.86'	T = 599.86'
L = 1190.0'	L = 1190.00'
	P.C. 418+29.22
	P.T. 430+32.40

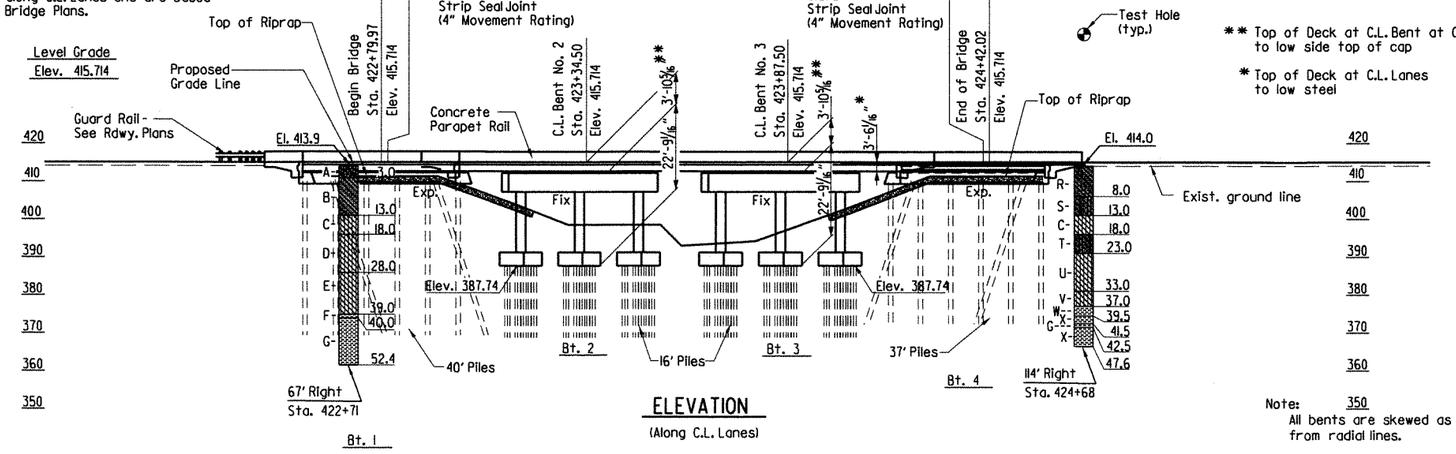
Station Equation:
430+19.22 Back =
430+32.40 Ahead

Note: Bridge stations and elevations shown are taken along C.L. Lanes and are based on Original Bridge Plans.

*** Radial to C.L. Lanes

** Top of Deck at C.L. Bent at C.L. Lanes to low side top of cap

* Top of Deck at C.L. Lanes to low steel



ELEVATION
(Along C.L. Lanes)

Note: All bents are skewed as shown from radial lines.

Boring Legend

A - Moist, Loose, Brown and Gray Gravel and Shale Fragments (Fill Material)

B - Moist, Stiff, Reddish Brown to Reddish Brown and Gray Sandy Clay

C - Moist, Stiff, Gray Silty Clay

D - Moist, Medium Stiff to Stiff, Reddish Brown Silty Clay

E - Wet, Medium Stiff, Brown to Brown and Gray Silty Clay

F - Soft, Gray Highly Weathered Shale

G - Hard, Dark Gray Shale

H - Moist, Loose, Brown Sand and Gravel (Fill Material)

J - Moist, Medium Stiff, Brown and Gray Silty Clay with Shale Fragmnets (Fill Material)

K - Moist, Stiff, Reddish Brown Sandy Clay with Gravel and Shale Fragments (Fill Material)

L - Moist, Stiff, Brown to Reddish Brown Silty Clay

M - Moist, Stiff, Brown Silty Clay

N - Wet, Soft, Brown Silty Clay

P - Medium Hard, Dark Gray Fractured Shale

Q - Hard, Dark Gray Shale with some Fractured Seams

R - Moist, Medium Stiff, Reddish Brown and Gray Sandy, Silty Clay with Sandstone Fragments (Fill Material)

S - Moist, Stiff, Gray and Brown Sandy, Silty Clay (Fill Material)

T - Moist, Stiff, Brown Sandy, Silty Clay

U - Moist, Stiff, Brown to Gray and Brown Silty Clay with Traces of Highly Weathered Shale

V - Moist, Stiff, Gray and Brown Silty Clay

W - Soft to Medium Hard, Gray Weathered Shale

X - Hard, Dark Gray Shale with Weathered Shale Seams

Y - Moist, Loose, Brown Gravel (Fill Material)

Z - Moist, Stiff, Reddish Brown Sandy Clay with Sandstone Fragments

AA - Moist, Very Stiff, Reddish Brown Sandy Clay

BB - Moist, Medium Stiff, Gray and Brown Silty Clay

CC - Wet, Medium Stiff, Brown Silty Clay

DD - Wet, Medium Stiff, Brown Silty Clay with some Highly Weathered Shale

EE - Soft to Medium Hard, Brown and Gray Highly Weathered Shale

FF - Medium Hard, Dark Gray Weathered Shale

GG - Hard, Dark Gray Fractured Shale

SAMPLE DATA

Sta. 422+71 - 67' Right of Centerline of Median I-540

3.5 - 4.5, N = 12	23.5 - 24.5, N = 10	44.0 - 47.5, SCR% = 94, RQD% = 44
8.5 - 9.5, N =10	28.5 - 29.5, N = 6	47.5 - 52.4, SCR% = 99, RQD% = 84
13.5 - 14.5, N = 11	33.5 - 34.5, N = 5	
18.5 - 19.5, N = 8	38.5 - 39.5, N = 10	

Sta. 424+68 - 114' Right of Centerline of Median I-540

3.5 - 4.5, N = 6	23.5 - 24.5, N = 14	39.5 - 42.5, SCR% = 99, RQD% = 0
8.5 - 9.5, N = 9	28.5 - 29.5, N = 15	42.5 - 47.6, SCR% = 99, RQD% = 50
13.5 - 14.5, N = 11	33.5 - 34.5, N = 13	
18.5 - 19.5, N = 10		

The proposed bridge provides an equal or greater waterway opening than the existing bridge.

GENERAL NOTES

BENCH MARK: Elevations and stations are assumed to be the same as shown on the original plans. The original layout shows the elevation at the top of the deck and centerline of existing bridge to be at 414.02 at Sta. 422+86.00 (Beg. of Br. B3798).

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 on the plans, section and subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (1996 edition), with current interim specifications and AASHTO Guide Specifications for Horizontally Curved Highway Bridges (1993 Edition).

LIVE LOAD: HS20 + Military Loading METHOD OF DESIGN: Load Factor
SEISMIC PERFORMANCE CATEGORY: A

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 M31 or M53, Gr. 60) fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 50W) Fy = 50,000 psi
Structural Steel (AASHTO M270, Gr. 36) Fy = 36,000 psi

BORING LOGS: Boring Logs may be obtained from the Programs and Contracts Division.

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.

CLASS I PROTECTIVE SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

FOOTINGS: Footings shall not be at a higher elevation than the existing footing and shall have a minimum cover above top of footings of 2'. Foundations for footings shall be prepared in accordance with Section 801.04 of the Standard Specifications.

STEEL PILING: All piling shall be HP12x53 and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 70 tons per pile and into the material designated as shale on the boring legend. Legends shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles in end bents to be driven after embankment to bottom of cap is in place. On all piles the contractor shall use approved steel H-Pile driving points.

DETAIL DRAWINGS:	DRAWING NO.
End Bents	48538, 48539, 48542, 48543
Intermediate Bents	48540, 48541
159'-0" Cont. Comp. W-Beam Unit	48544-48548
Steel Piling	14995A
Approach Slab	2018
Type C Approach Gutter	2016C

REMOVAL AND SALVAGE: The existing bridge including concrete riprap, shall be removed in accordance with Section 205.
All material from existing bridge shall become the property of the contractor.

EXISTING BRIDGE: Existing Bridge No. A3798 is 33'-6" wide and 150'-0" long and consists of 5 - 30' reinforced concrete slab spans supported by substructures consisting of 3 pile interior bents and 2 pile end bents. Plans for existing bridge will be made available to the Contractor upon request to Programs and Contracts Division. Existing Dwg. Nos. 12454, 12456, 12457.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

NOTE: The contractor shall check measurements of the existing bridge. Any adjustments necessary to fit the new work to the existing bridge location shall be submitted for the Engineer's approval.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11539 LARRY W. MILLER
Larry W. Miller 8-11-12
BRIDGE ENGINEER

LAYOUT OF BRIDGE OVER CLAYTON BRANCH (BR. B6879) HWY. 22 - I-40 (F) CRAWFORD & SEBASTIAN COUNTIES ROUTE I-540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TAR DATE: March 02 FILENAME: bBB0407b3 111.dgn
CHECKED BY: JLH DATE: March 02 SCALE: 1" = 20'
DESIGNED BY: BCG DATE: March 02

BRIDGE NO. B6879 DRAWING NO. 48535

$$$$dgnspec$$$$$

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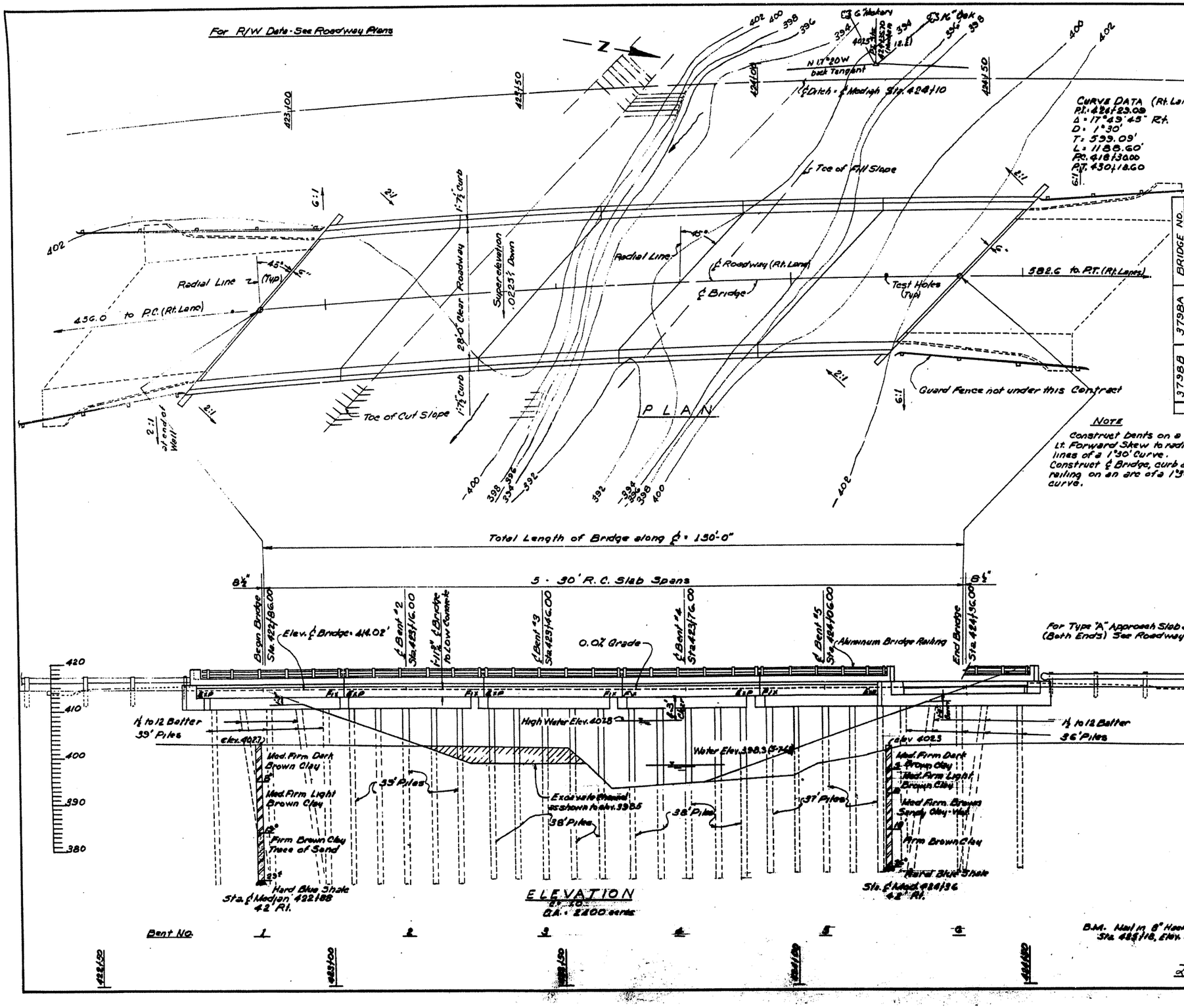
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		BB0407	241	464
(1)	B3798 - LAYOUT - 48536			

For R/W Data - See Roadway Plans



NOTE

Construct bents on a 45° Lt. Forward Skew to radial lines of a 1°30' Curve. Construct ℄ Bridge, curb and railing on an arc of a 1°30' curve.

(FIELD CHANGE NO. 4)

SCHEDULE OF BRIDGE QUANTITIES

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	ITEM NO.	801	SP#802	803	804	SP#805	812
			ITEM	Unclassified Excavation For Structures	Class S Concrete	Reinforcing Steel	Steel Bearing Piling (12BP53)	Aluminum Bridge Railing	Bridge Name Plates
			UNIT OF BRIDGE Unit	Cu. Yd.	Cu. Yd.	Lbs.	Lin. Ft.	Lin. Ft.	Plate
3798A	X020	CLAYTON BRANCH	Bents No. 1&6	42	21.50	3980	375		1
			Bents No. 2,3&5		38.40	7845	760		
			5-30' R.C. Slab Spans		306.70	56,645		296.7	
			Totals-Bridge No. 3798A	42	366.60	68,470	1135	296.7	1
3798B			Bents No. 1&6	42	21.50	3980	375		1
			Bents No. 2,3&5		38.40	7845	760		
			5-30' R.C. Slab Spans		306.70	56,645		296.7	
			Totals-Bridge No. 3798B	42	366.60	68,470	1135	296.7	1
Totals-Field Change No. 4				84	733.20	136,940	2270	593.4	2

GENERAL NOTES

All concrete to be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.

All piling shall be 12-BP-53 and shall be driven with an approved air, steam or diesel hammer to a minimum bearing capacity of 40 tons per pile and to a minimum penetration of 20 feet below the ground line and to the material designated as shale on the boring logs. Lengths of piling shown are assumed for estimating quantities only. Order lengths shown; cut-off or build-up, if necessary, to be paid for in accordance with the Standard Specifications.

Piles in End Bents shall be driven after the embankment is in place.

For Details of Bents see Drawing No. 12456

For Details of 30' R.C. Slab Span 45° skew, 1° 30' curve, see Drawing No. 12457

For Location Map see Drawing No. 12454

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, and designated Special Provisions.

B.M. Nail in 8" Hackberry 1.9' Lt. Sta. 423+18, Elev. 404.57

L. D. Carlson
BRIDGE ENGINEER

DESIGN SPECIFICATIONS: AASHO 1961

Live Loading:	H20-S16 and Special Interstate Loading of 2 - 24,000# axles 4'0" on centers	
Unit Stresses:	Class S Concrete (n=10)	1,200 psi
	Reinforcing Steel	20,000 psi

FOR INFORMATION ONLY

(FIELD CHANGE NO. 4)

(RIGHT LANES)

LAYOUT OF BRIDGE

CLAYTON BRANCH

JCT. HWY. 22 - ARK. RIVER BRIDGE

SEBASTIAN COUNTY

INT. ROUTE 540 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY M.G. DATE 5-15-63
TRACED BY DATE
CHECKED BY DATE 5-30-63
SCALE 1"=10'

BRIDGE NO. B3798 DRAWING NO. 48536