







TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	84004-4224-04	3A

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISION	DESCRIPTION	STA./LOCATION
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	AN ASBESTOS CONTAINING MATERIAL (ACM) SURVEY WAS CONDUCTED ON BRIDGE NO. 84SR0540015, SR-54 OVER HATCHIE RIVER, LM 9.60. NO ACM WAS DETECTED. NO SPECIAL ACCOMMODATIONS FOR DEMOLITION AND WASTE DISPOSAL ARE ANTICIPATED FOR THIS STRUCTURE AND THE MATERIAL CAN BE DEPOSITED IN A C&D LANDFILL. (THE DECK DRAINS ARE MADE OF CAST IRON.) PRIOR TO THE DEMOLITION OR REHABILITATION OF ANY STRUCTURE (BRIDGE OR BUILDING), THE CONTRACTOR IS REQUIRED TO SUBMIT THE NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS STANDARD 10-DAY NOTICE OF DEMOLITION TO THE TENNESSEE DIVISION OF AIR POLLUTION CONTROL (STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 1, 2015) SECTIONS 107.08D AND 202.03).	DECK DRAINS

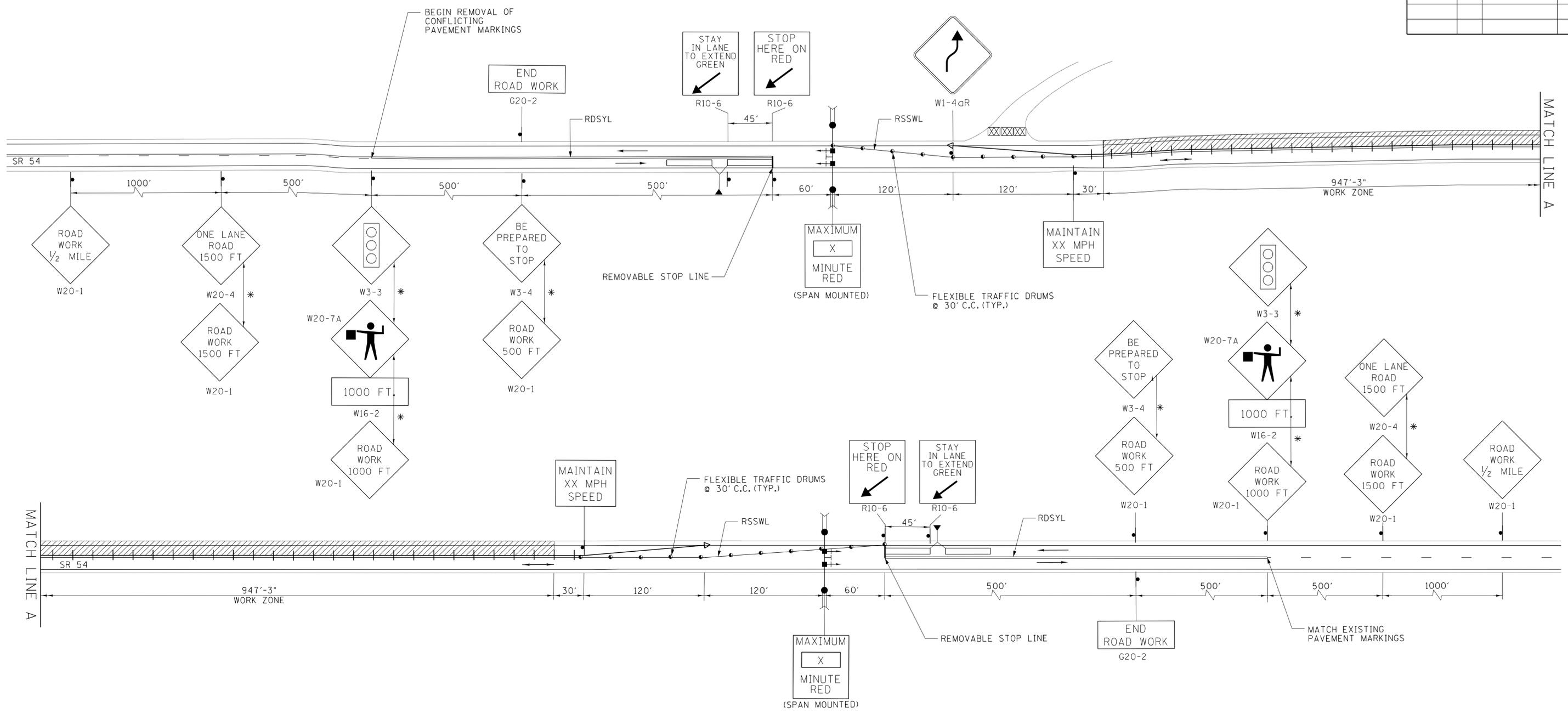
1/12/2015 2:01:22 PM  
 M:\WORKSPACE\TDOT Bridge Repair over Hatchie River Drawings\BRG\02-Final\03-Sheet 3A.dgn  
 A:\00\0017623 - TDOT - Bridge Repair over Hatchie River Drawings\BRG\02-Final\03-Sheet 3A.dgn



**UNOFFICIAL SET**  
  
 NOT FOR BIDDING

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PLANNING AND DEVELOPMENT  
  
 PROJECT COMMITMENTS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	84004-4224-04	4



**LEGEND**

- AREA UNDER CONSTRUCTION
- FLEXIBLE TRAFFIC DRUM
- REMOVABLE INTERCONNECTED PORTABLE BARRIER RAIL WITH BARRIER RAIL DELINEATORS @ 20' (TYP.)
- TRAFFIC SIGN
- DIRECTION OF TRAFFIC
- ATTENUATOR
- REMOVABLE SINGLE SOLID WHITE LINE
- REMOVABLE DOUBLE SOLID YELLOW LINE
- TYPE III BARRICADE

**PHASE I TRAFFIC CONTROL**



**UNOFFICIAL SET**  
NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING AND DEVELOPMENT

TRAFFIC CONTROL PLAN

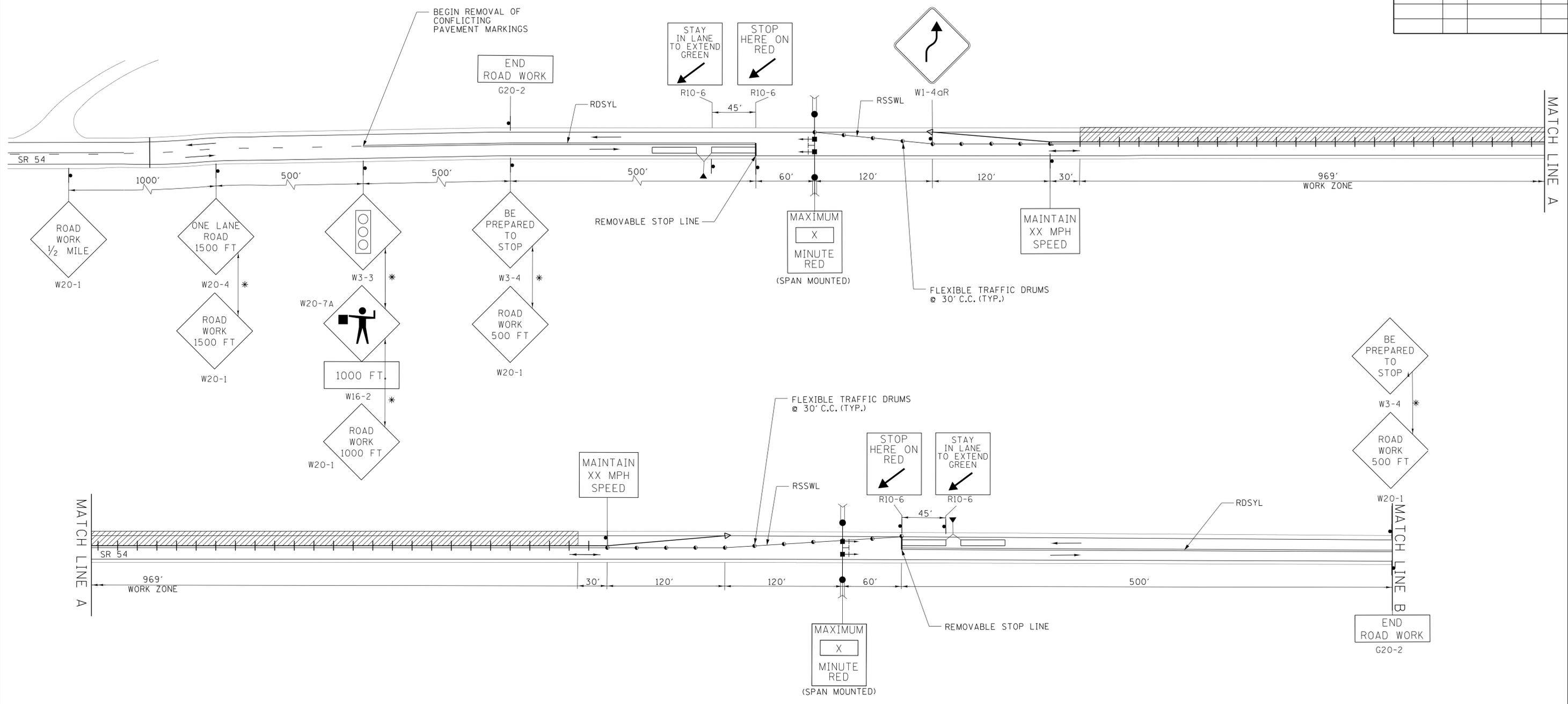
BR. NO. 84-SR54-9.60

SCALE: NONE

1/7/2015 4:36:23 PM  
 WORKSPACE: TDOT - Bridge Repair over Hatchie River - Drawings\BROA\Traffic Control\TC-1.dgn  
 \\g01\dot\itp\projects\84004\0001001623 - TDOT - Bridge Repair over Hatchie River - Drawings\BROA\Traffic Control\TC-1.dgn



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	84004-4224-04	5



**LEGEND**

- AREA UNDER CONSTRUCTION
- FLEXIBLE TRAFFIC DRUM
- REMOVABLE INTERCONNECTED PORTABLE BARRIER RAIL WITH BARRIER RAIL DELINEATORS @ 20' (TYP.)
- TRAFFIC SIGN
- DIRECTION OF TRAFFIC
- ATTENUATOR
- RSSWL REMOVABLE SINGLE SOLID WHITE LINE
- RDSYL REMOVABLE DOUBLE SOLID YELLOW LINE
- TYPE III BARRICADE



**UNOFFICIAL SET**  
NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING AND DEVELOPMENT

TRAFFIC CONTROL PLAN

BR. NO. 84-SR54-9.60

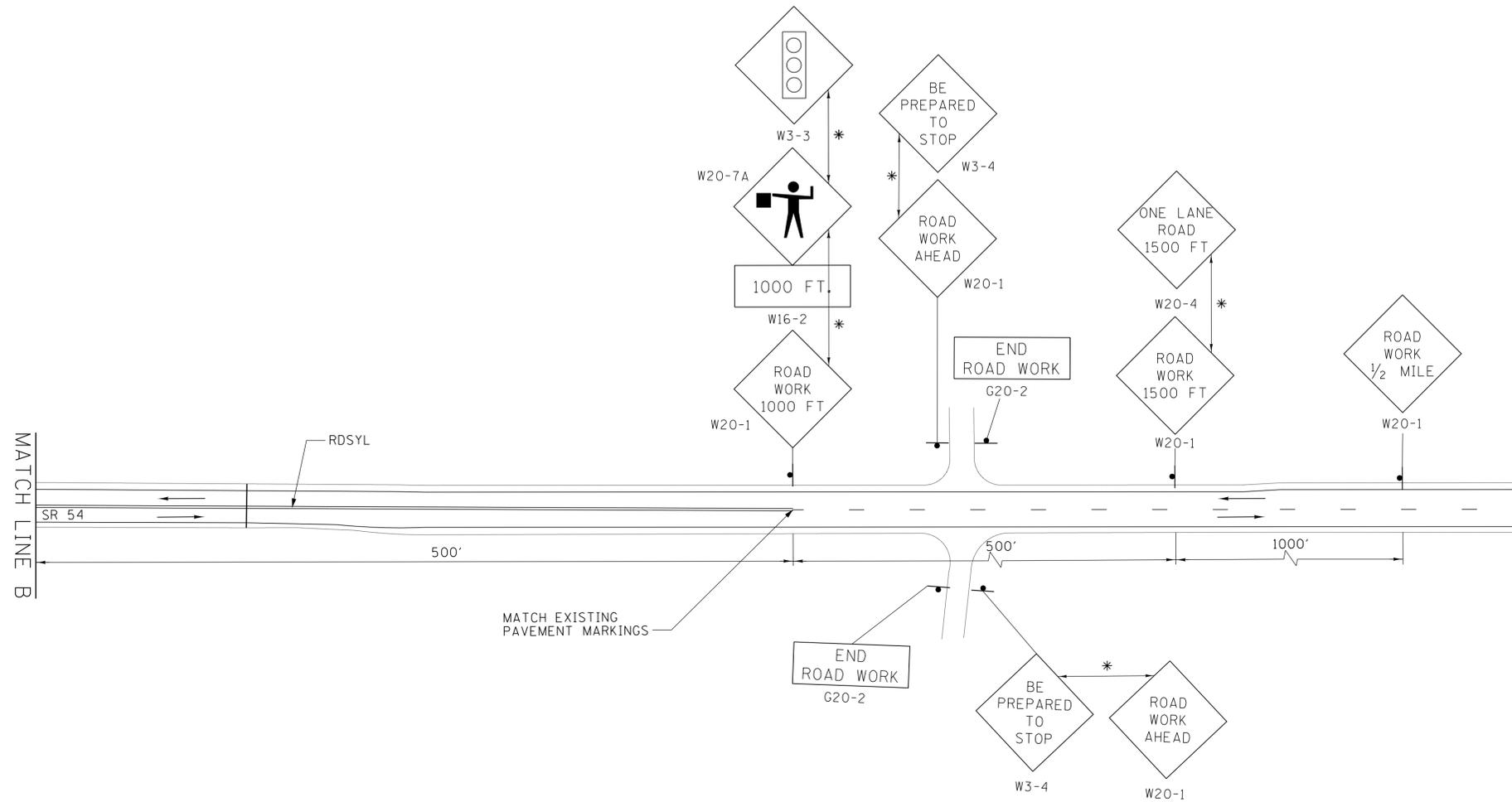
SCALE: NONE

PHASE II TRAFFIC CONTROL

1/7/2015 4:36:24 PM  
 WORKSPACE: TDOT - Bridge Repair - over Hatchie River - Drawings - BRG - Traffic Control - TC-2 - Ldgn  
 \\garver\ltp\projects\84004\001001623 - TDOT - Bridge Repair - over Hatchie River - Drawings - BRG - Traffic Control - TC-2 - Ldgn



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	84004-4224-04	6



**LEGEND**

-  AREA UNDER CONSTRUCTION
-  FLEXIBLE TRAFFIC DRUM
-  REMOVABLE INTERCONNECTED PORTABLE BARRIER RAIL WITH BARRIER RAIL DELINEATORS @ 20' (TYP.)
-  TRAFFIC SIGN
-  DIRECTION OF TRAFFIC
-  ATTENUATOR
-  RSSWL REMOVABLE SINGLE SOLID WHITE LINE
-  RDSYL REMOVABLE DOUBLE SOLID YELLOW LINE
-  TYPE III BARRICADE

**PHASE II TRAFFIC CONTROL**



**UNOFFICIAL SET**  
NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING AND DEVELOPMENT

TRAFFIC CONTROL PLAN

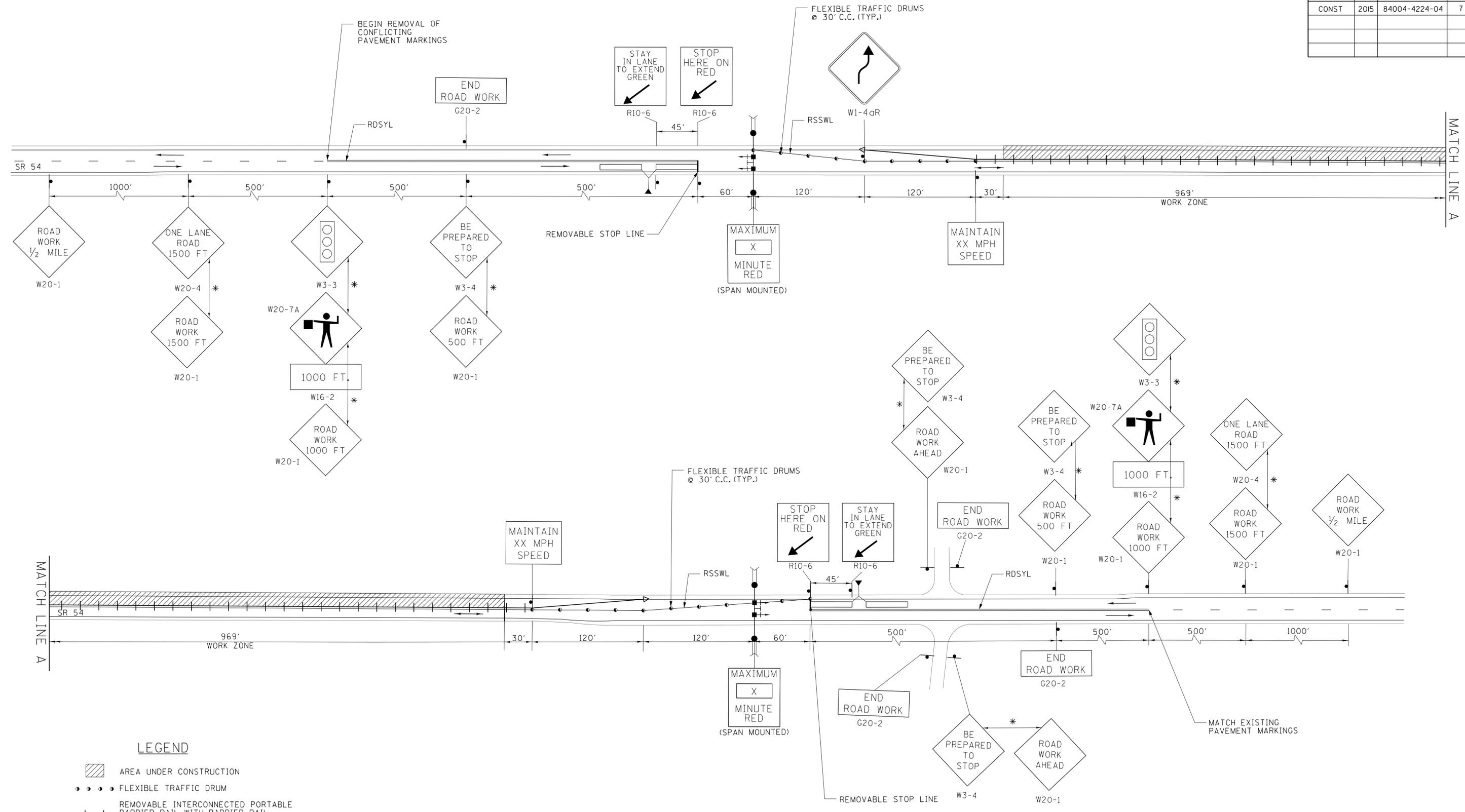
BR. NO. 84-SR54-9.60

SCALE: NONE

1/7/2015 4:36:25 PM \\GARVER\IT\Projects\84004-4224-04\Drawings\BROA\Traffic Control\TC-2-2.dgn



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	84004-4224-04	7



**LEGEND**

- AREA UNDER CONSTRUCTION
- FLEXIBLE TRAFFIC DRUM
- REMOVABLE INTERCONNECTED PORTABLE BARRIER RAIL WITH BARRIER RAIL DELINEATORS @ 20' (TYP.)
- TRAFFIC SIGN
- DIRECTION OF TRAFFIC
- ATTENUATOR
- RSSWL REMOVABLE SINGLE SOLID WHITE LINE
- RDSYL REMOVABLE DOUBLE SOLID YELLOW LINE
- TYPE III BARRICADE

**PHASE III TRAFFIC CONTROL**



**UNOFFICIAL SET**  
NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING AND DEVELOPMENT

TRAFFIC CONTROL PLAN

BR. NO. 84-SR54-9.60

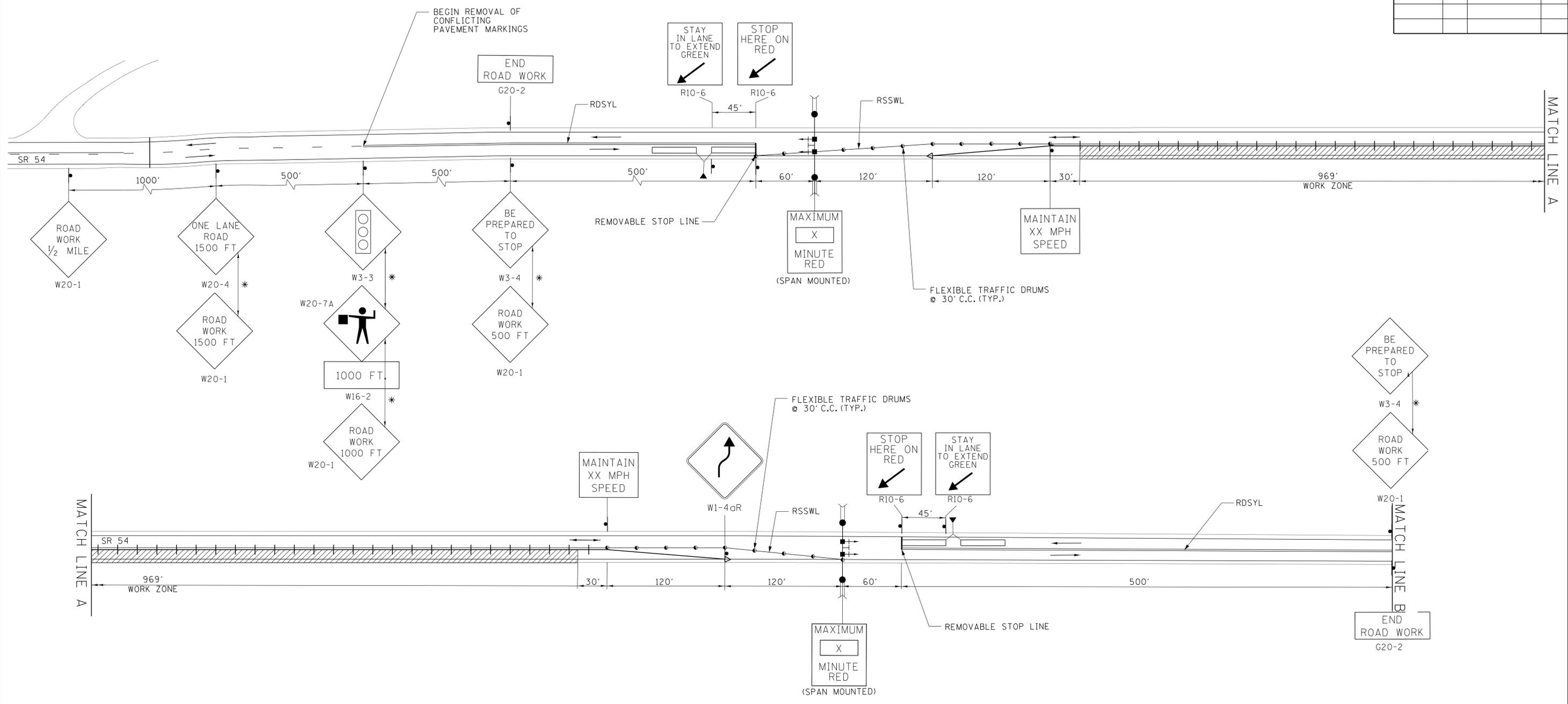
SCALE: NONE

1/7/2015 4:36:26 PM  
 WORKSPACE: TDOT - Bridge Repair over Hatchie River - Drawings - BRG - Traffic Control - TC-3 - .dgn  
 \\garver\lhp\projects\84004\001623 - TDOT - Bridge Repair over Hatchie River - Drawings - BRG - Traffic Control - TC-3 - .dgn





TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	84004-4224-04	9



**LEGEND**

- AREA UNDER CONSTRUCTION
- FLEXIBLE TRAFFIC DRUM
- REMOVABLE INTERCONNECTED PORTABLE BARRIER RAIL WITH BARRIER RAIL DELINEATORS @ 20' (TYP.)
- TRAFFIC SIGN
- DIRECTION OF TRAFFIC
- ATTENUATOR
- RSSWL REMOVABLE SINGLE SOLID WHITE LINE
- RDSYL REMOVABLE DOUBLE SOLID YELLOW LINE
- TYPE III BARRICADE

**PHASE V TRAFFIC CONTROL**



**UNOFFICIAL SET**  
NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING AND DEVELOPMENT

TRAFFIC CONTROL PLAN

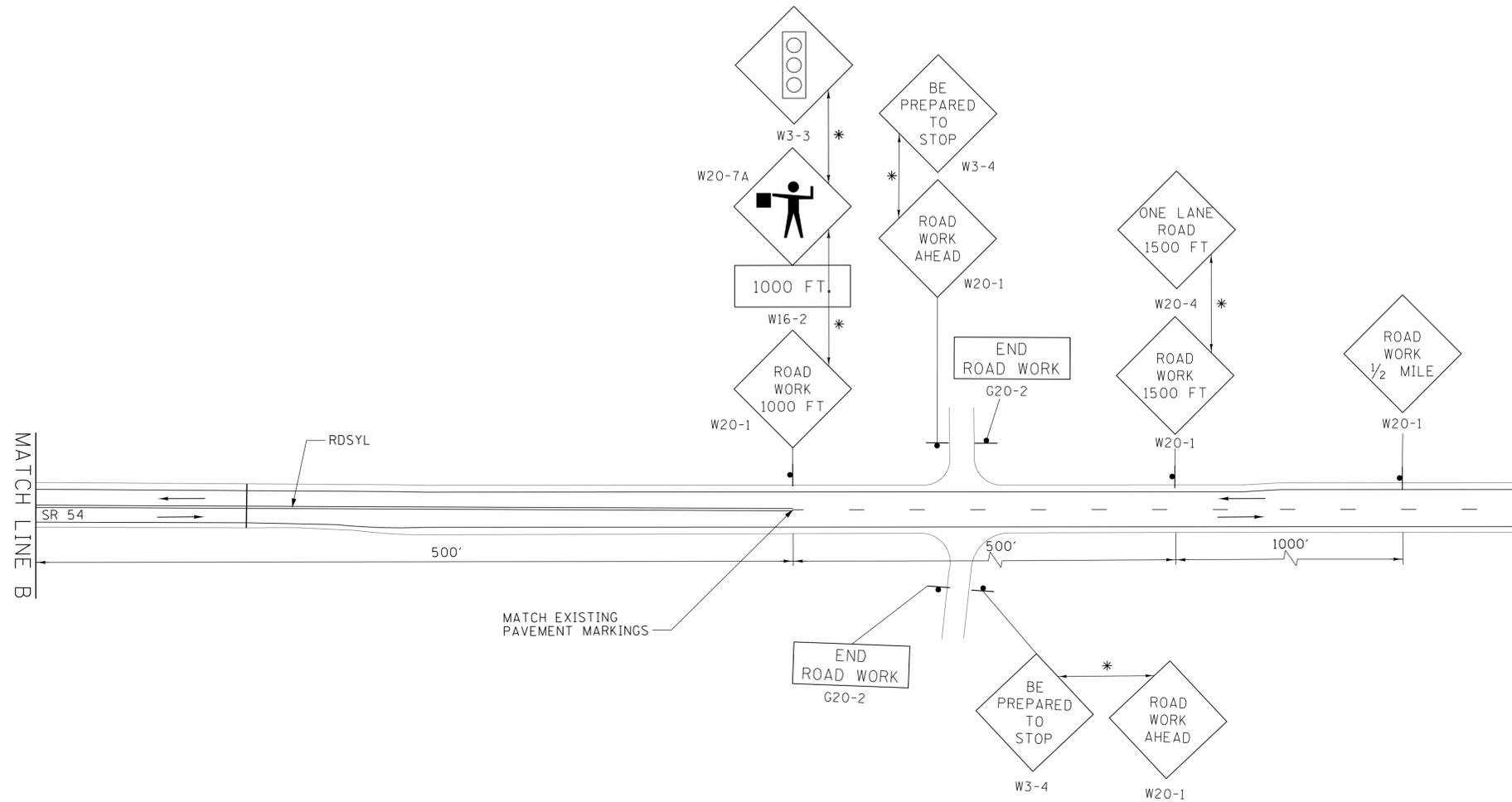
BR. NO. 84-SR54-9.60

SCALE: NONE

1/7/2015 4:36:27 PM  
 WORKSPACE: TDOT - Bridge Repair - over Hatchie River - Drawings - BRG - Traffic Control - TC-5 - rdgn  
 \\garver\ltp\projects\2015\001001623 - TDOT - Bridge Repair - over Hatchie River - Drawings - BRG - Traffic Control - TC-5 - rdgn



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	84004-4224-04	10



**LEGEND**

-  AREA UNDER CONSTRUCTION
-  FLEXIBLE TRAFFIC DRUM
-  REMOVABLE INTERCONNECTED PORTABLE BARRIER RAIL WITH BARRIER RAIL DELINEATORS @ 20' (TYP.)
-  TRAFFIC SIGN
-  DIRECTION OF TRAFFIC
-  ATTENUATOR
-  RSSWL REMOVABLE SINGLE SOLID WHITE LINE
-  RDSYL REMOVABLE DOUBLE SOLID YELLOW LINE
-  TYPE III BARRICADE

**PHASE V TRAFFIC CONTROL**



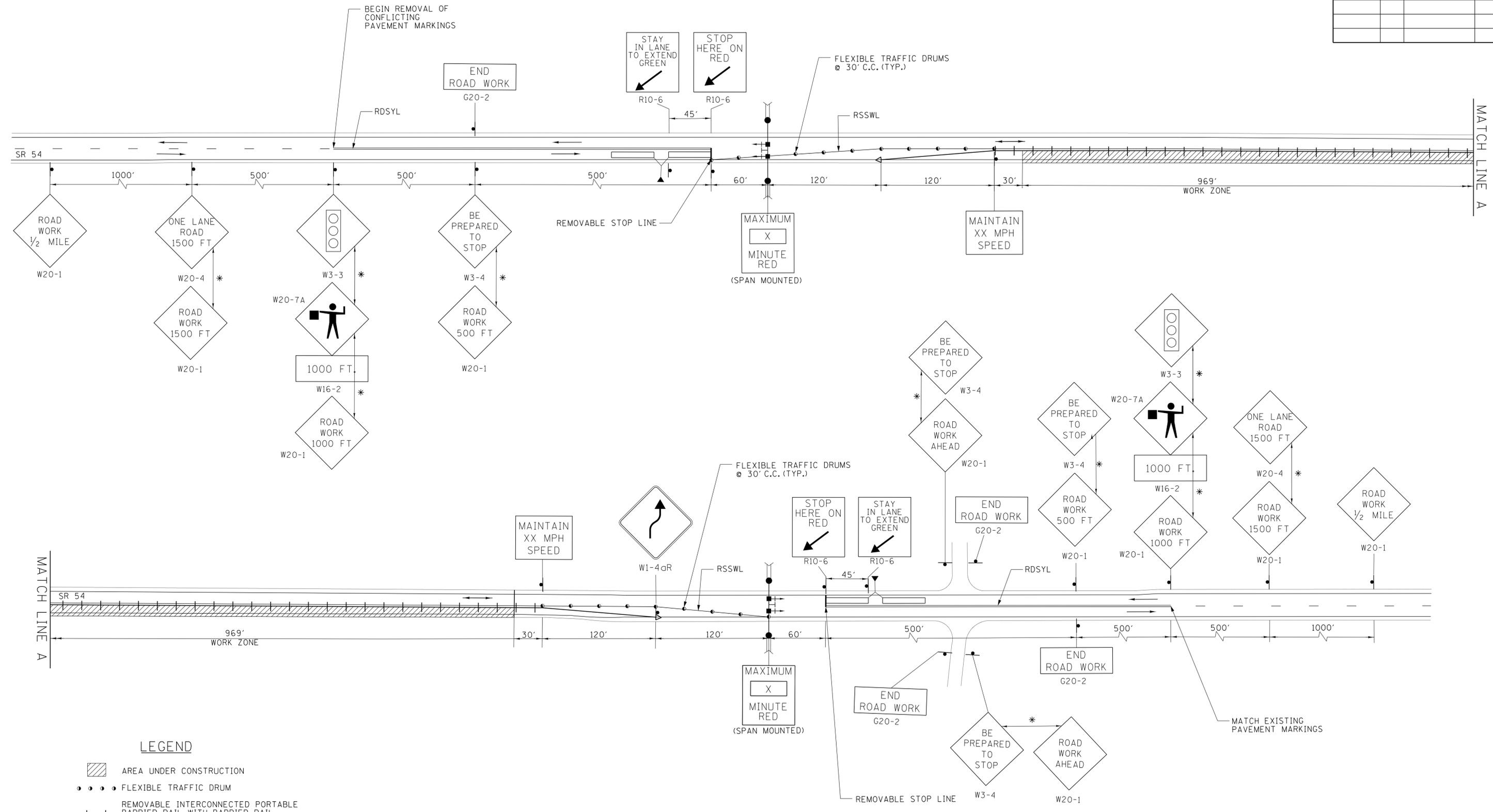
**UNOFFICIAL SET**  
 NOT FOR BIDDING

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PLANNING AND DEVELOPMENT  
  
 TRAFFIC CONTROL PLAN  
 BR. NO. 84-SR54-9.60  
  
 SCALE: NONE

1/7/2015 4:36:28 PM  
 WORKSPACE: TDOT Bridge\Projects\2015\001001623 - TDOT - Bridge Repair over Hatchie River\Drawings\BROA\Traffic Control\TC-9-2.dgn  
 LIC: bob



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	84004-4224-04	II



**LEGEND**

- AREA UNDER CONSTRUCTION
- FLEXIBLE TRAFFIC DRUM
- REMOVABLE INTERCONNECTED PORTABLE BARRIER RAIL WITH BARRIER RAIL DELINEATORS @ 20' (TYP.)
- TRAFFIC SIGN
- DIRECTION OF TRAFFIC
- ATTENUATOR
- RSSWL REMOVABLE SINGLE SOLID WHITE LINE
- RDSYL REMOVABLE DOUBLE SOLID YELLOW LINE
- TYPE III BARRICADE

**PHASE VI TRAFFIC CONTROL**

**UNOFFICIAL SET**  
NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING AND DEVELOPMENT

TRAFFIC CONTROL PLAN

BR. NO. 84-SR54-9.60

SCALE: NONE

1/7/2015 4:36:29 PM  
 WORKSPACE: TDOT - Bridge Repair over Hatchie River - Drawings - BRG - Traffic Control - TC-6-L.dgn  
 \\garver\ltp\projects\2015\001001623 - TDOT - Bridge Repair over Hatchie River - Drawings - BRG - Traffic Control - TC-6-L.dgn



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	84004-4224-04	12

### CONSTRUCTION SIGNS

DESCRIPTION	MUTCD. NO.	SIZE	SR 54						BID QUANTITY	TOTAL SQ. FT.
			PHASE I	PHASE II	PHASE III	PHASE IV	PHASE V	PHASE VI		
END ROAD WORK	G20-2	48"X24"	2	4	4	2	4	4	4	32
STOP HERE ON RED	R10-6	24"X36"	2	2	2	2	2	2	2	12
STAY IN LANE TO EXTENDED GREEN	R10-6 (MOD.)	30"X42"	2	2	2	2	2	2	2	10
REVERSE CURVE	W1-4AR	48"X48"	1	1	1	1	1	1	1	16
SIGNAL AHEAD (SYMBOL)	W3-3	48"X48"	2	2	2	2	2	2	2	32
BE PREPARED TO STOP	W3-4	48"X48"	2	4	4	2	4	4	4	64
1000 FT.	W16-2	24"X12"	2	2	2	2	2	2	2	4
ROAD WORK AHEAD	W20-1	48"X48"	-	2	2	-	2	2	2	32
ROAD WORK 500 FT.	W20-1	48"X48"	2	2	2	2	2	2	2	32
ROAD WORK 1000 FT.	W20-1	48"X48"	2	2	2	2	2	2	2	32
ROAD WORK 1500 FT.	W20-1	48"X48"	2	2	2	2	2	2	2	32
ROAD WORK 1/2 MILE	W20-1	48"X48"	2	2	2	2	2	2	2	32
ONE LANE ROAD 1500 FT.	W20-4	48"X48"	2	2	2	2	2	2	2	32
FLAGGER	W20-7A	48"X48"	2	2	2	2	2	2	2	32
MAINTAIN XX MPH SPEED	-	36"X42"	2	2	2	2	2	2	2	21
MAXIMUM X MIN. RED	-	48"X42"	2	2	2	2	2	2	2	28
		TOTAL								443

- NOTES:
- \* 1. FOR ADDITIONAL NOTES AND DETAILS, SEE STD. DWGS. T-WZ-32, T-WZ-34 AND T-WZ-35.
  - 2. SEE THIS SHEET FOR QUANTITIES.

- NOTES:
1. THE CONSTRUCTION SIGNING PLAN ON THIS SHEET IS TO SERVE AS A GUIDE ONLY. OTHER SIGNS MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION.
  2. THE TRAFFIC CONTROL PLANS DO NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."
  3. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQ. FT.

### TRAFFIC CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	SR 54						TOTAL
			PHASE I	PHASE II	PHASE III	PHASE IV	PHASE V	PHASE VI	
705-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	103	105	105	103	105	105	105
705-08.51	PORTABLE IMPACT ATTENUATOR (NCHRP 350-TL3)	EACH	2	2	2	2	2	2	2
712-01	TRAFFIC CONTROL	L.S.	0.16	0.17	0.17	0.16	0.17	0.17	1
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	1250	1270	1270	1250	1270	1270	1270
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	20	20	20	20	20	20	20
712-06	SIGNS (CONSTRUCTION)	SQ. FT.	363	443	443	363	443	443	443
712-07.03	TEMPORARY BARRICADES (TYPE III)	EACH	3	-	-	3	-	-	3
712-09.01	REMOVABLE PAVEMENT MARKING LINE	L.F.	5547	5569	5569	5547	5569	5569	33371
712-09.04	REMOVABLE PAVEMENT MARKING (STOP LINE)	L.F.	24	24	24	24	24	24	144
730-40	TEMPORARY TRAFFIC CONTROL SYSTEM	EACH	2	2	2	2	2	2	2

TRAFFIC CONTROL

UNOFFICIAL SET

NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF PLANNING AND DEVELOPMENT

TRAFFIC CONTROL PLAN

BR. NO. 84-SR54-9.60

SCALE: NONE



SCOPE OF WORK

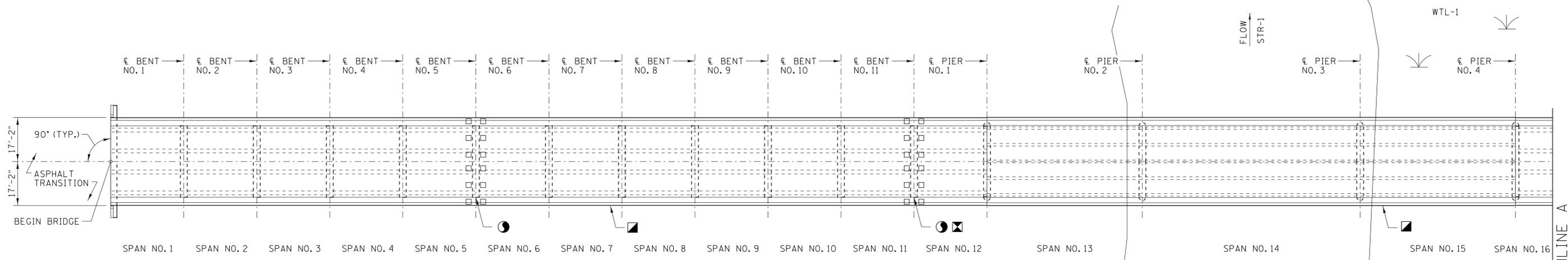
- REMOVE DETERIORATED EXTERIOR CAST-IN-PLACE CONCRETE BEAM, SLAB CANTILEVER AND FIRST INTERIOR BAY AT SELECT SPAN LOCATIONS. FINAL REPLACEMENT LOCATIONS TO BE DETERMINED IN A DETAILED INSPECTION WITH TDOT ENGINEER, FOR NOTES AND DETAILS, SEE DWG. NOS. BR-117-8 AND BR-117-9.
- PROVIDE NEW PRESTRESSED CONCRETE BOX BEAMS TO REPLACE DETERIORATED CAST-IN-PLACE CONCRETE BEAMS, FOR NOTES AND DETAILS, SEE DWG. NO. BR-117-17.
- PROVIDE NEW 8 1/2" SLAB CANTILEVER AND INTERIOR SLAB BAY AT DETERIORATED BEAM LOCATIONS, FOR NOTES AND DETAILS, SEE DWG. NOS. BR-117-8 THRU BR-117-9.
- REMOVE EXISTING DETERIORATED ASPHALT OVERLAY AT DESIGNATED BEAM REPLACEMENT AREAS, FOR NOTES AND DETAILS, SEE DWG. NOS. BR-117-8 THRU BR-117-11.
- PROVIDE NEW 3 1/4" ASPHALT OVERLAY WITH MEMBRANE SEAL AT DESIGNATED BEAM REPLACEMENT AREAS, FOR NOTES AND DETAILS, SEE DWG. NOS. BR-117-8 THRU BR-117-11 AND BR-117-26.
- REMOVE DETERIORATED BRIDGE RAIL AND CANTILEVER AT SELECT LOCATIONS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-117-12.
- PROVIDE NEW BRIDGE RAIL AND CANTILEVER TO REPLACE DETERIORATED. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-117-12 AND BR-117-13.
- REMOVE AND REPLACE DAMAGED CONCRETE BRIDGE RAIL (REPAIR TYPES B & C) AT SELECT LOCATIONS. FOR LOCATIONS, NOTES AND DETAILS, SEE DWG. NOS. BR-117-12, BR-117-13, AND BR-117-23.
- PROVIDE NEW TYPE "D" EXPANSION JOINT AT PIER NOS. 1 AND 4. DETAILS WILL INCLUDE NEW CONCRETE HEADER BEAM TO ACCOMMODATE NEW ASPHALT OVERLAY, FOR NOTES AND DETAILS, SEE DWG. NO. BR-117-15.

- PROVIDE CONCRETE BENT CAP END REPAIR AT SELECT BENT LOCATIONS, FOR NOTES AND DETAILS, SEE DWG. NOS. BR-117-18 AND BR-117-19.
- PROVIDE CONCRETE PILE REPAIR AT SELECT LOCATIONS, FOR NOTES AND DETAILS, SEE DWG. NOS. BR-117-24 AND BR-117-25.
- PROVIDE FULL AND PARTIAL DEPTH DECK REPAIR AT FIELD DESIGNATED LOCATIONS, FOR NOTES AND DETAILS, SEE DWG. NO. BR-117-25.
- PROVIDE SPALL REPAIR AT FIELD DESIGNATED LOCATIONS, FOR NOTES AND DETAILS, SEE DWG. NO. BR-117-24.
- PROVIDE NEW 100' ASPHALT PAVEMENT TRANSITION AT BOTH ENDS OF BRIDGE, FOR NOTES AND DETAILS, SEE DWG. NO. BR-117-26.
- PROVIDE TRAFFIC CONTROL FOR SR54. FOR NOTES AND DETAILS, SEE SHEET NOS. 4-12.
- PROVIDE NEW CONCRETE BENT CAP & HP12X53 STEEL PILES ON BOTH SIDES OF EXISTING BENT AT BENT NOS. 5, 11, AND 32. FOR NOTES & DETAILS, SEE DWG. NOS. BR-117-20 THRU BR-117-22.

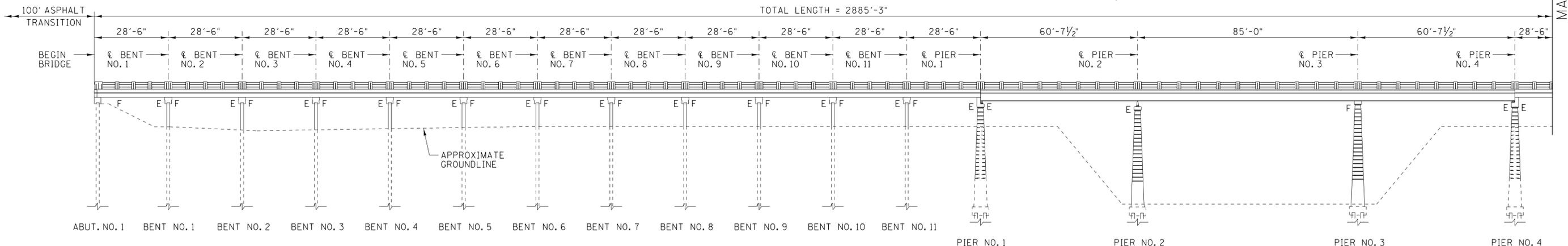
PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



**LEGEND**  
 F: DENOTES FIXED END  
 E: DENOTES EXPANSION END



PLAN  
SCALE: 1" = 20'-0"



ELEVATION  
SCALE: 1" = 20'-0"

NOTE:  
FOR LIST OF REFERENCE DRAWINGS, SEE DWG. NO. BR-117-2

LIST OF DRAWINGS

DWG. NO.	REV. DATE	DRAWING	DWG. NO.	REV. DATE	DRAWING	DWG. NO.	REV. DATE	DRAWING
BR-117-1		LAYOUT OF BRIDGE TO BE REPAIRED	BR-117-12		BRIDGE REPAIR DETAILS	BR-117-23		BRIDGE REPAIR DETAILS
BR-117-2		LAYOUT OF BRIDGE TO BE REPAIRED	BR-117-13		BRIDGE REPAIR DETAILS	BR-117-24		BRIDGE REPAIR DETAILS
BR-117-3		LAYOUT OF BRIDGE TO BE REPAIRED	BR-117-14		BRIDGE REPAIR DETAILS	BR-117-25		BRIDGE REPAIR DETAILS
BR-117-4		LAYOUT OF BRIDGE TO BE REPAIRED	BR-117-15		BRIDGE REPAIR DETAILS	BR-117-26		BRIDGE REPAIR DETAILS
BR-117-5		LAYOUT OF BRIDGE TO BE REPAIRED	BR-117-16		BRIDGE REPAIR DETAILS			
BR-117-6		ESTIMATED QUANTITIES	BR-117-17		BRIDGE REPAIR DETAILS			
BR-117-7		GENERAL NOTES	BR-117-18		BRIDGE REPAIR DETAILS			
BR-117-8		BRIDGE REPAIR DETAILS	BR-117-19		BRIDGE REPAIR DETAILS			
BR-117-9		BRIDGE REPAIR DETAILS	BR-117-20		BRIDGE REPAIR DETAILS			
BR-117-10		BRIDGE REPAIR DETAILS	BR-117-21		BRIDGE REPAIR DETAILS			
BR-117-11		BRIDGE REPAIR DETAILS	BR-117-22		BRIDGE REPAIR DETAILS			

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED

SR54 OVER HATCHIE RIVER  
BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
2015

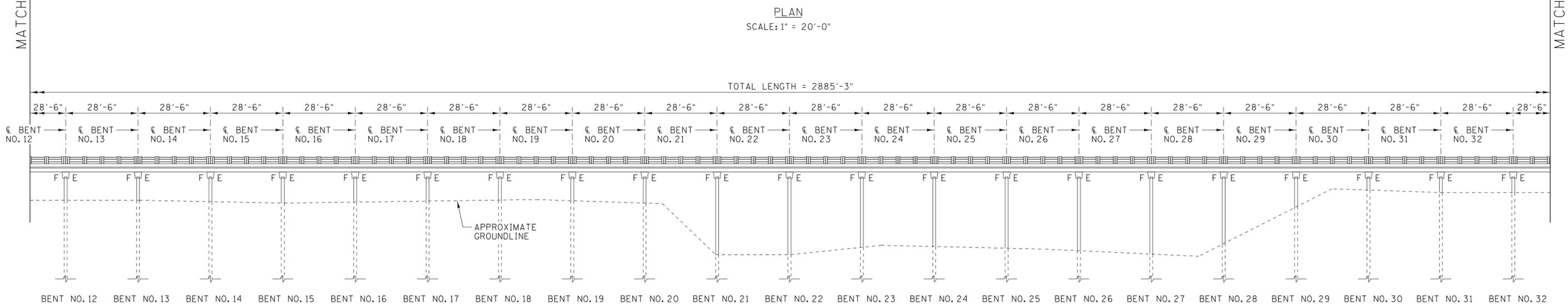
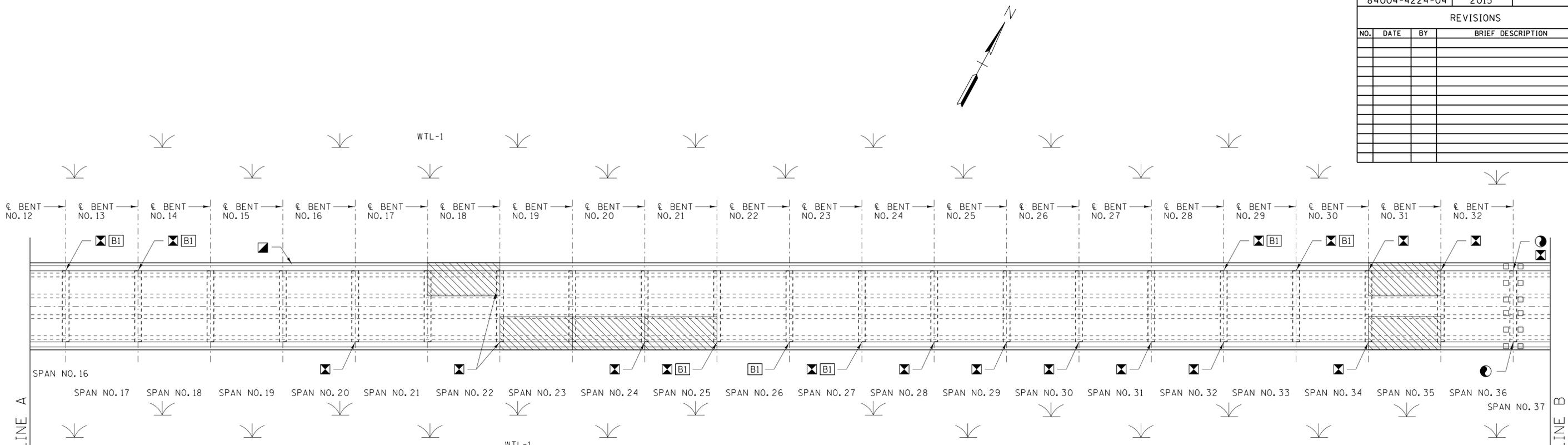
**UNOFFICIAL SET**  
NOT FOR BIDDING

LIC:0005 1/7/2015 4:36:30 PM  
 WORKSPACE: T001 Bridge Repair - over Hatchie River Drawings\BROG\02-Final\13-BR-117-1.dwg  
 C:\200\001623 - T001 - Bridge Repair - over Hatchie River Drawings\BROG\02-Final\13-BR-117-1.dwg

DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
 DRAWN BY C. W. THOMAS DATE JAN. 2014  
 SUPERVISED BY J. H. RUDELL DATE JAN. 2014  
 CHECKED BY A. J. KHAIRI DATE JAN. 2014

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



**LEGEND**  
F: DENOTES FIXED END  
E: DENOTES EXPANSION END

**LIST OF REFERENCE DRAWINGS**

DWG. NO.	DRAWING	DWG. NO.	DRAWING
BR-17-7	LAYOUT OF BRIDGE TO BE REPAIRED	E-3-16	LAYOUT OF BRIDGE
BR-17-8	ESTIMATED QUANTITIES AND GENERAL NOTES	E-2-87	STANDARD CONCRETE HANDRAIL
BR-17-9	BRIDGE REPAIR DETAILS	E-3-17	DETAILS OF BRIDGE
BR-17-10	BRIDGE REPAIR DETAILS	C-4-138	STANDARD CONCRETE BRIDGES - DECK GIRDER TYPE
BR-17-11	BRIDGE REPAIR DETAILS	E-2-66	STANDARD CONTINUOUS BRIDGE - I BEAM TYPE
BR-17-12	BRIDGE REPAIR DETAILS	C-4-114	CONCRETE ABUTMENT - PILE BENT TYPE
BR-17-13	BRIDGE REPAIR DETAILS	C-4-115	STANDARD CONCRETE PILE BENT
BR-17-14	BRIDGE REPAIR DETAILS		
BR-17-15	BRIDGE REPAIR DETAILS		
BR-17-16	BRIDGE REPAIR DETAILS		

ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED

SR54 OVER HATCHIE RIVER  
BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
2015



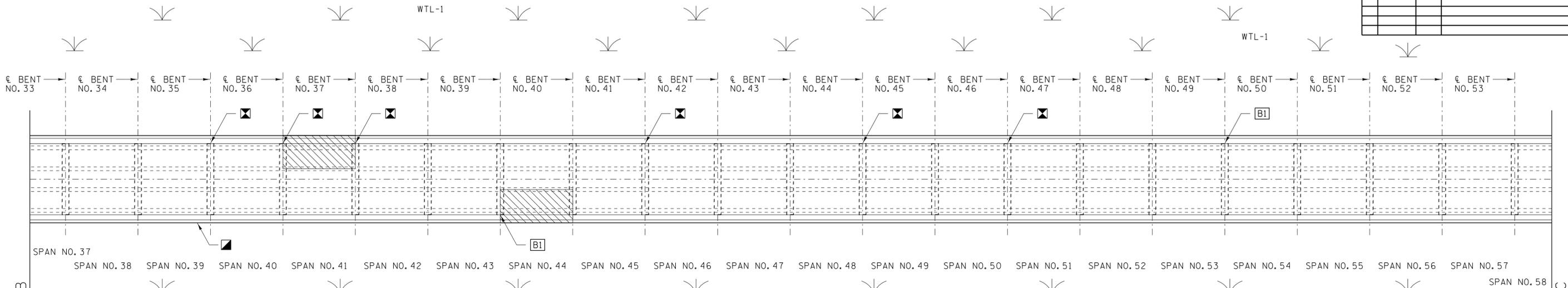
LICobos 1/7/2015 4:36:31 PM  
 WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BROG\02-Final\14-BR-17-2.dgn



DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
 DRAWN BY C. W. THOMAS DATE JAN. 2014  
 SUPERVISED BY J. H. RUDELL DATE JAN. 2014  
 CHECKED BY A. J. KHAIRI DATE JAN. 2014

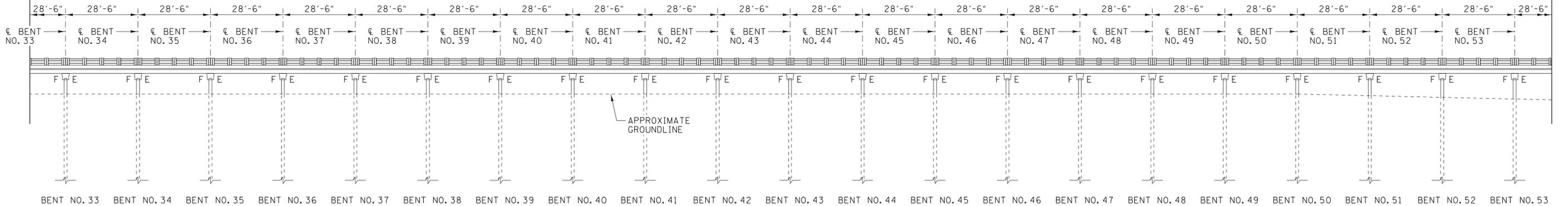
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



PLAN  
SCALE: 1" = 20'-0"

TOTAL LENGTH = 2885'-3"



ELEVATION  
SCALE: 1" = 20'-0"

**LEGEND**  
F: DENOTES FIXED END  
E: DENOTES EXPANSION END

**UNOFFICIAL SET**  
 NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED

SR54 OVER HATCHIE RIVER  
BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
2015

DESIGNED BY: J. L. HALBROOK DATE: JAN. 2014  
 DRAWN BY: C. W. THOMAS DATE: JAN. 2014  
 SUPERVISED BY: J. H. RUDDLELL DATE: JAN. 2014  
 CHECKED BY: A. J. KHAIRI DATE: JAN. 2014

TN D.O.T. ENGINEERING SUPERVISOR: M. LAWSON

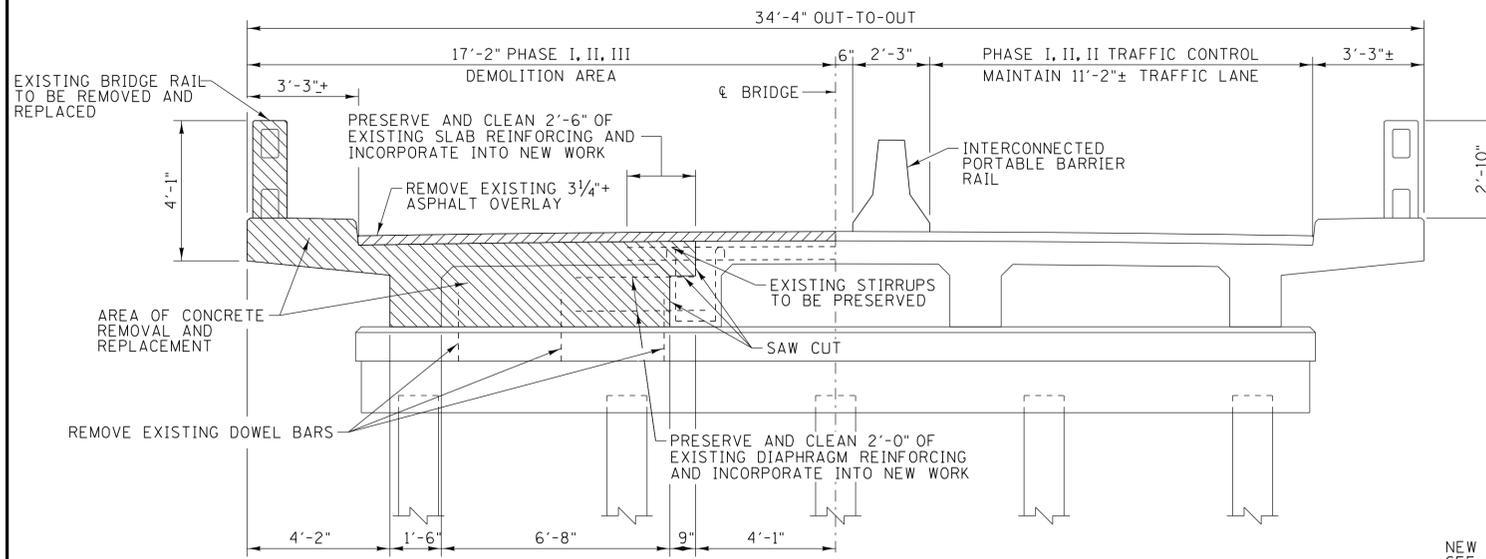
1/7/2015 4:36:31 PM  
 LIC: bob  
 WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BROG\02-Final\15-BR-117-3.dgn







PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

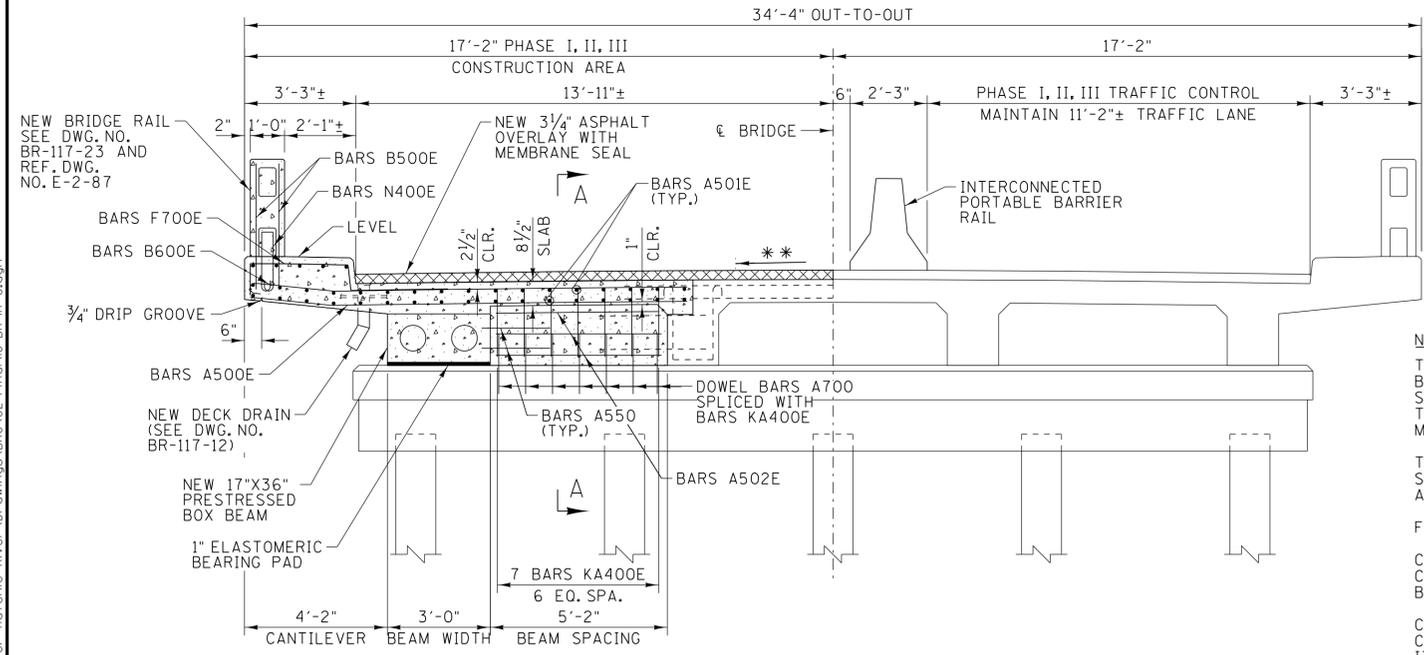


**PHASES I, II, & III DEMOLITION**  
 (TYP. SPAN NOS. 22, 35, 41, 83, & 91)  
 SCALE: 3/8" = 1'-0"

- CONCRETE AREA TO BE REMOVED
- ASPHALT AREA TO BE REMOVED

NOTE:  
 FOR SECTION A-A AND SECTION B-B,  
 SEE DWG. NO. BR-117-14.

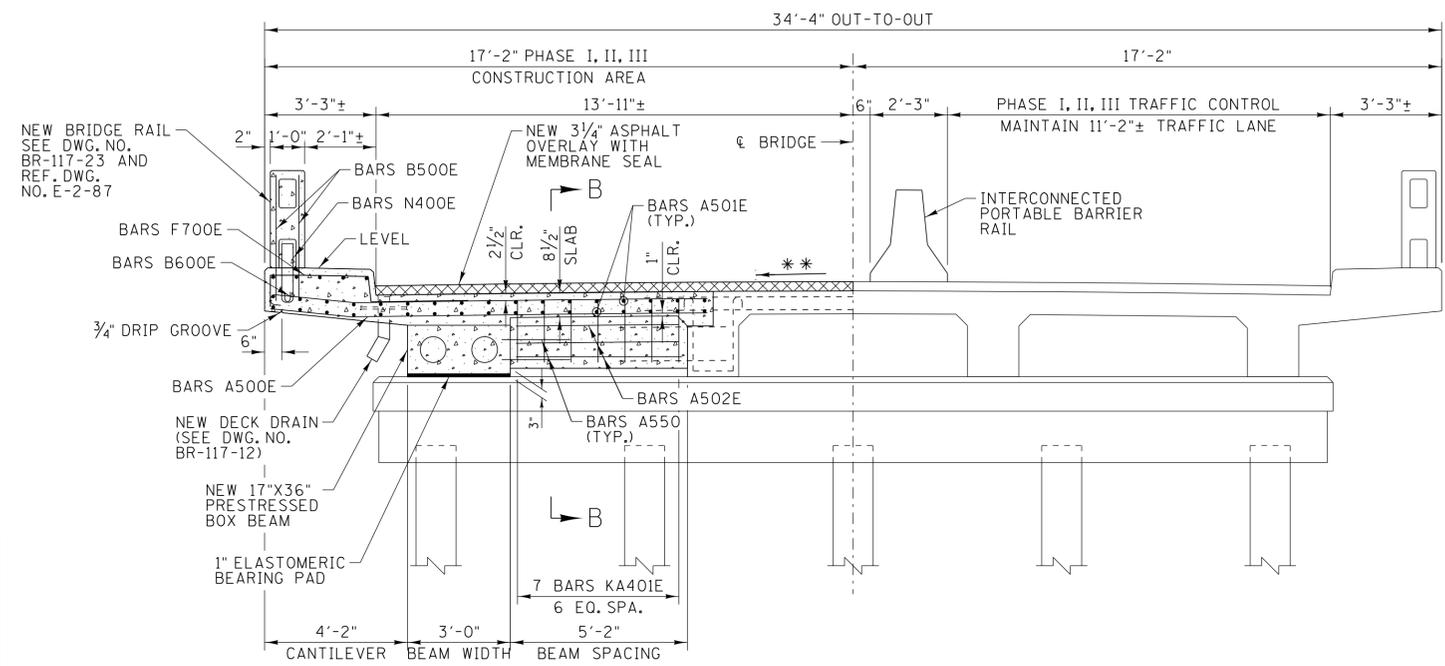
\*\*MATCH EXISTING SLOPE



**PHASES I, II, & III CONSTRUCTION**  
 TYP. FIXED DIAPHRAGM  
 (TYP. SPAN NOS. 22, 35, 41, 83, & 91)  
 SCALE: 3/8" = 1'-0"

**NOTES:**

- THE FINISHED GRADE OF THE CONCRETE ROADWAY CENTERLINE SHALL BE PARALLEL TO THE GRADE OF THE EXISTING BRIDGE. THE NEW SLAB SURFACE SHALL HAVE A CROSS SLOPE MATCHING THE EXISTING SLAB. THE LONGITUDINAL GRADE AND CROSS SLOPE SHALL BE PROFILED USING METHODS SUITABLE FOR NEW CONSTRUCTION.
- THE CONTRACTOR IS NOT ALLOWED TO POUR THE CONCRETE FOR THE SLAB UNTIL THE CONCRETE FOR THE DIAPHRAGMS HAS BEEN POURED AND HAS REACHED A COMPRESSIVE STRENGTH OF 3000 PSI.
- FOR NEW ASPHALT OVERLAY NOTES AND DETAILS, SEE DWG. NO. BR-117-26.
- COST OF NEW DECK DRAINS SHALL BE INCLUDED UNDER ITEM NO. 604-10.09, CONCRETE, C.Y. FOR LOCATIONS, SEE DWG. NOS. BR-117-8, BR-117-9, & BR-117-16. FOR DETAILS, SEE DWG. NO. BR-117-12.
- COST OF REMOVING EXISTING CANTILEVERS, BRIDGE RAIL, BEAMS, SLAB, CURB, DIAPHRAGMS, SAW CUTTING AND ALL LABOR AND ANY MISCELLANEOUS ITEMS FOR DEMOLITION AS SHOWN ON THE DETAILS SHALL BE INCLUDED IN ITEM NO. 604-10.13, CONCRETE SLAB REMOVAL, L.S. THIS ITEM SHALL ALSO INCLUDE PRESERVATION AND CLEANING OF REINFORCING TO REMAIN.
- COST OF REMOVING EXISTING ASPHALT AT REPAIR SPANS SHALL BE PAID FOR UNDER ITEM NO. 604-10.14, REMOVE EXISTING WEARING SURFACE, L.S.
- COST OF ALL REINFORCING STEEL SHALL BE PAID FOR UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.
- THE COST OF FORMING AND POURING NEW HIGH EARLY STRENGTH CONCRETE FOR SLAB, CURBS AND DIAPHRAGMS SHALL BE INCLUDED UNDER ITEM NO. 604-10.09, CONCRETE, C.Y.
- ALL COSTS ASSOCIATED WITH THE INTERCONNECTED PORTABLE BARRIER RAIL SHALL BE INCLUDED IN ITEM NO. 712-02.02, INTERCONNECTED PORTABLE BARRIER RAIL, L.F.



**PHASES I, II, & III CONSTRUCTION**  
 TYP. EXPANSION DIAPHRAGM  
 (TYP. SPAN NOS. 22, 35, 41, 83, & 91)  
 SCALE: 3/8" = 1'-0"

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR54 OVER HATCHIE RIVER  
 BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
 2015

**UNOFFICIAL SET**  
 NOT FOR BIDDING

1/7/2015 4:36:32 PM  
 WORKSPACE: T001 Bridge Repair - over Hatchie River Drawings\BRC\02-Final\B-BR-117-8.dgn  
 4:20:00 1/7/2015 T001 - Bridge Repair - over Hatchie River Drawings\BRC\02-Final\B-BR-117-8.dgn

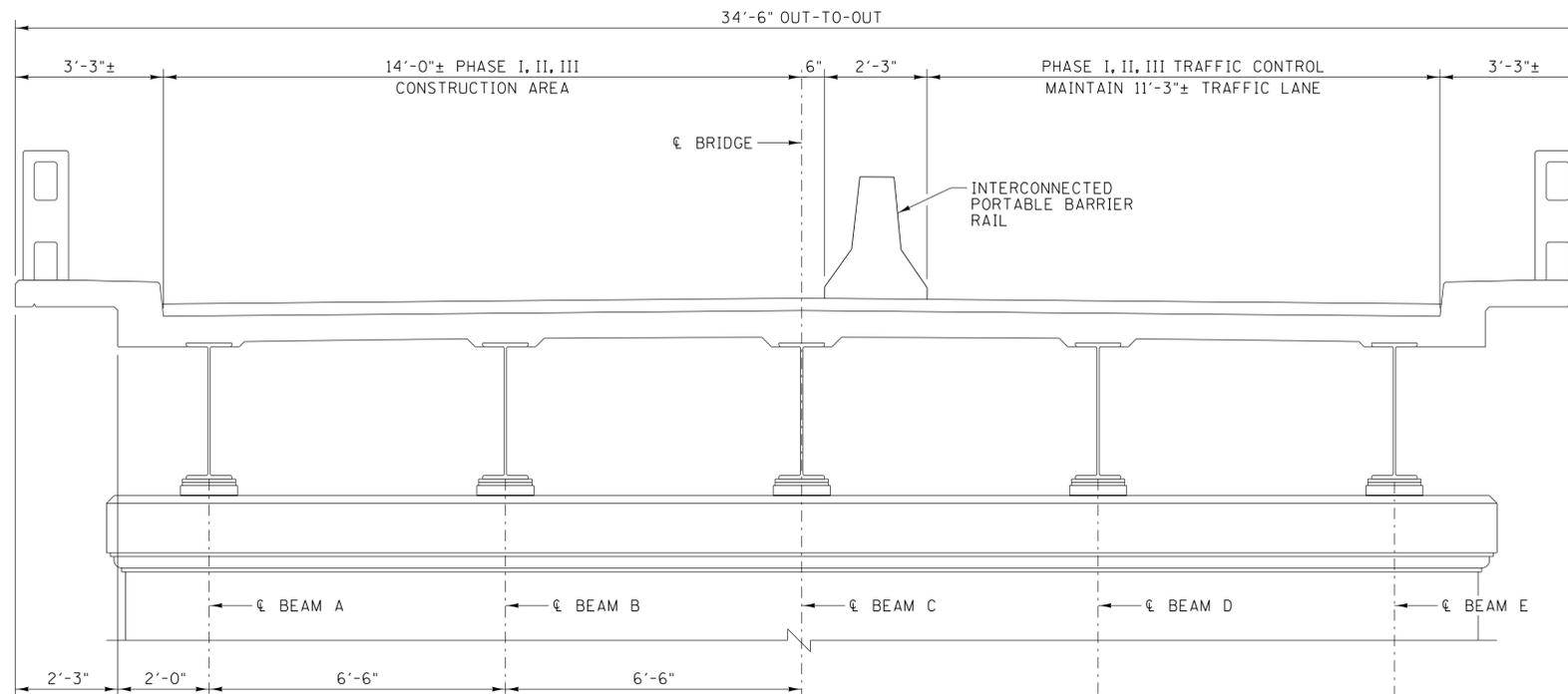


DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
 DRAWN BY C. W. THOMAS DATE JAN. 2014  
 SUPERVISED BY J. H. RUDDLELL DATE JAN. 2014  
 CHECKED BY A. J. KHAIRI DATE JAN. 2014

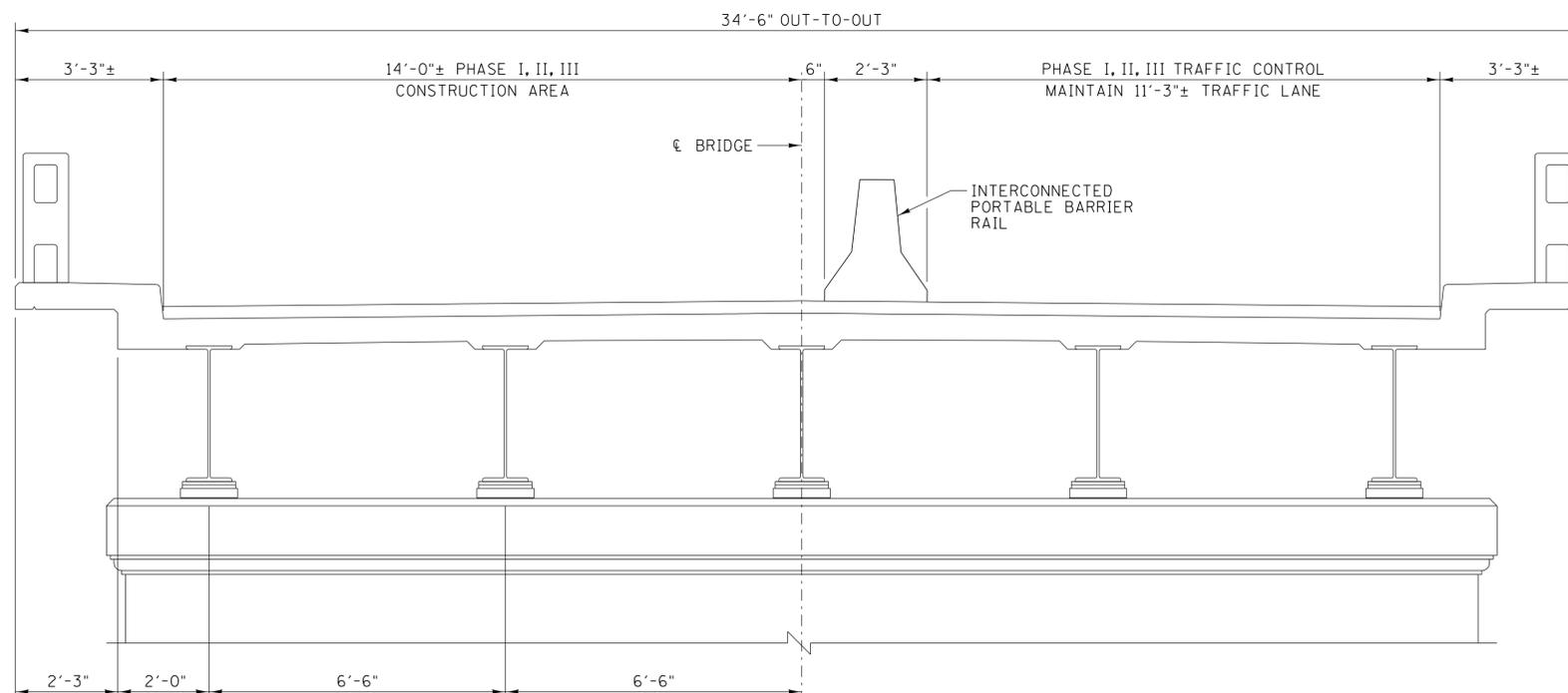
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON



PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



PHASE I, II, & III DEMOLITION  
 (SHOWN LOOKING FORWARD AT SPAN NOS. 13-15)  
 SCALE: 1/2" = 1'-0"



PHASE I, II, & III CONSTRUCTION  
 (SHOWN LOOKING FORWARD AT SPAN NOS. 13-15)  
 SCALE: 1/2" = 1'-0"

NOTES:  
 ALL COSTS ASSOCIATED WITH THE INTERCONNECTED PORTABLE BARRIER RAIL SHALL BE INCLUDED IN ITEM NO. 712-02.02, INTERCONNECTED PORTABLE BARRIER RAIL, L.F.

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR54 OVER HATCHIE RIVER  
 BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
 2015

UNOFFICIAL  
 SET  
 NOT FOR  
 BIDDING

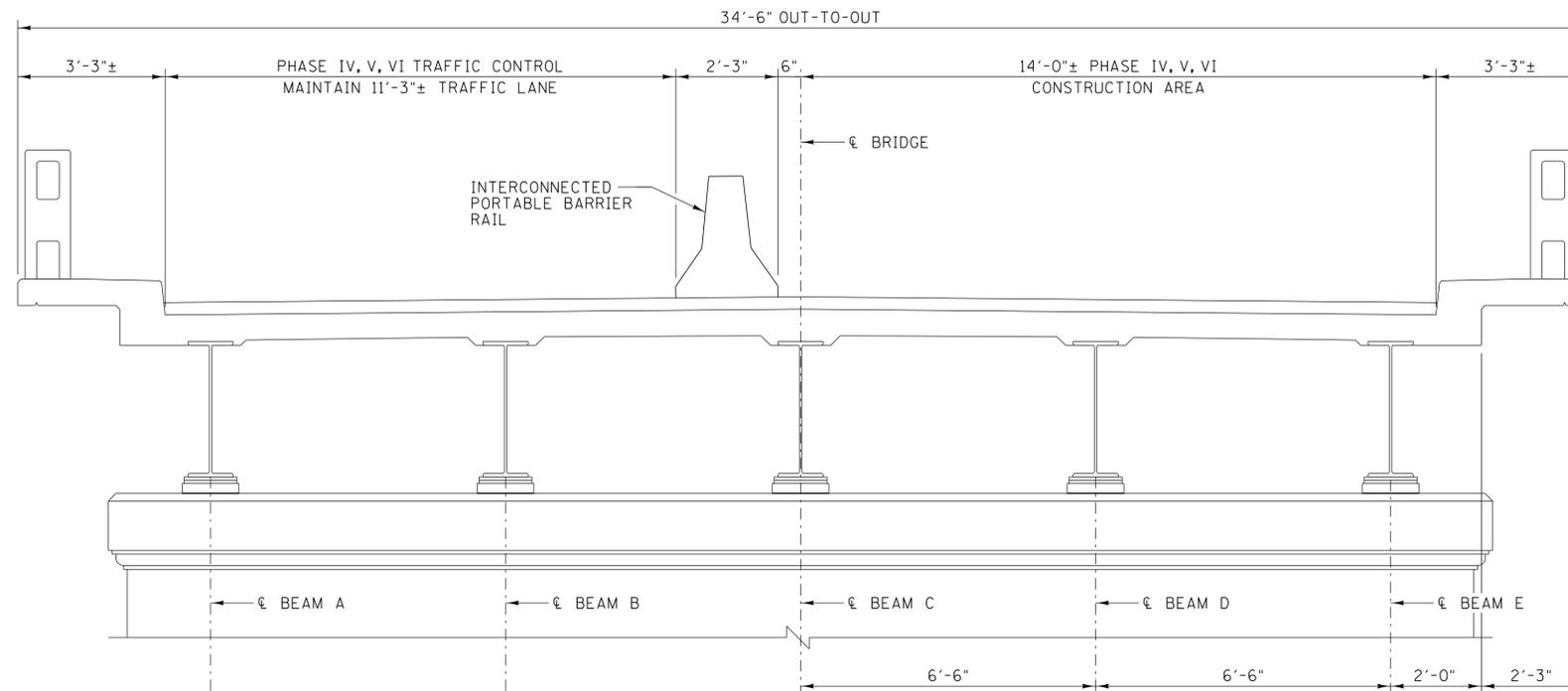
1/7/2015 4:36:33 PM  
 WORKSPACE: T:\01 Bridge Repair over Hatchie River Drawings\BRG\02-Final\20-Br-117-10.dgn  
 L:\coba\172015 1/7/2015 4:36:33 PM  
 WORKSPACE: T:\01 Bridge Repair over Hatchie River Drawings\BRG\02-Final\20-Br-117-10.dgn



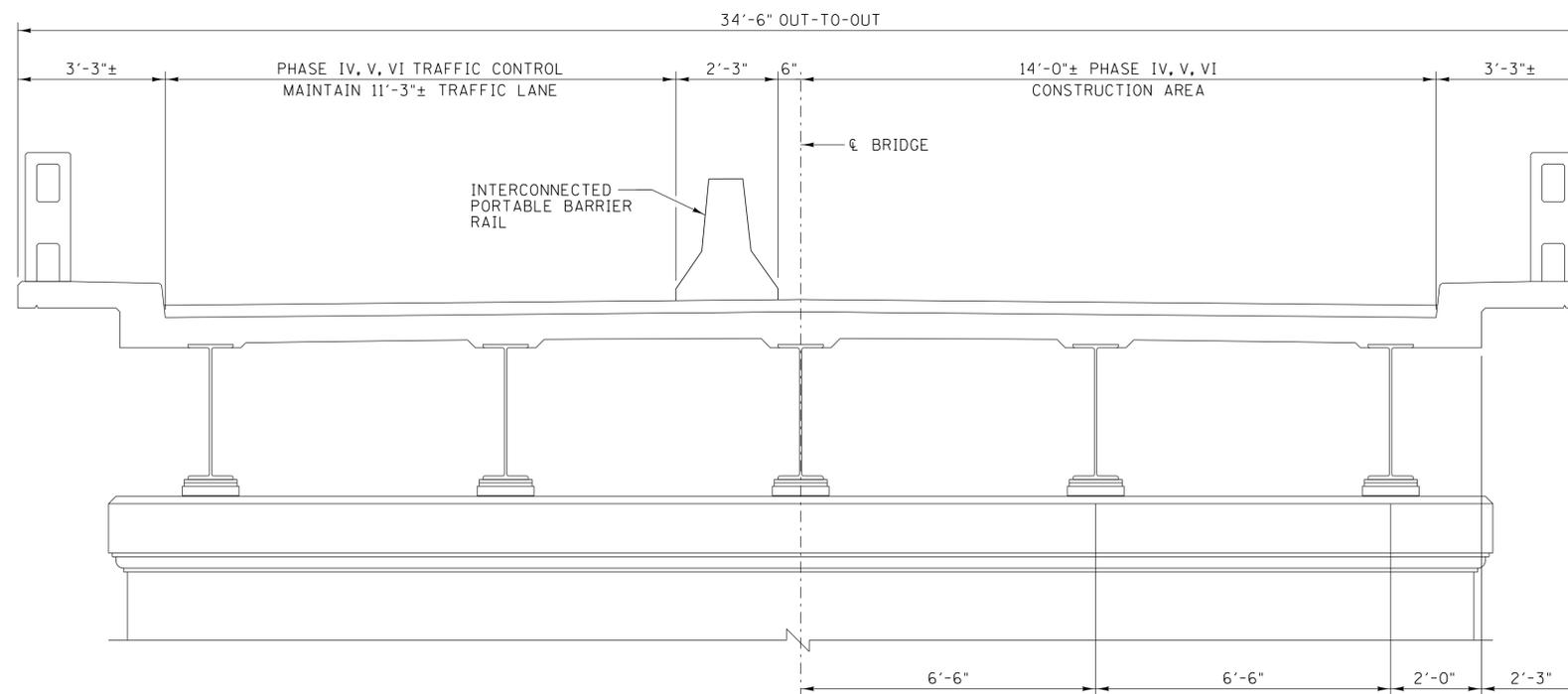
DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
 DRAWN BY C. W. THOMAS DATE JAN. 2014  
 SUPERVISED BY J. H. RUDDELL DATE JAN. 2014  
 CHECKED BY A. J. KHAIRI DATE JAN. 2014

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



PHASES IV, V, & VI DEMOLITION  
 (SHOWN LOOKING FORWARD AT PIER NO. 3)  
 (PIER NOS. 1, 2, & 4 ARE SIMILAR)  
 SCALE: 1/2" = 1'-0"



PHASES IV, V, & VI CONSTRUCTION  
 (SHOWN LOOKING FORWARD AT PIER NO. 3)  
 (PIER NOS. 1, 2, & 4 ARE SIMILAR)  
 SCALE: 1/2" = 1'-0"

NOTES:

ALL COSTS ASSOCIATED WITH THE INTERCONNECTED PORTABLE BARRIER RAIL SHALL BE INCLUDED IN ITEM NO. 712-02.02, INTERCONNECTED PORTABLE BARRIER RAIL, L.F.

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR54 OVER HATCHIE RIVER  
 BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
 2015

**UNOFFICIAL SET**  
 NOT FOR BIDDING

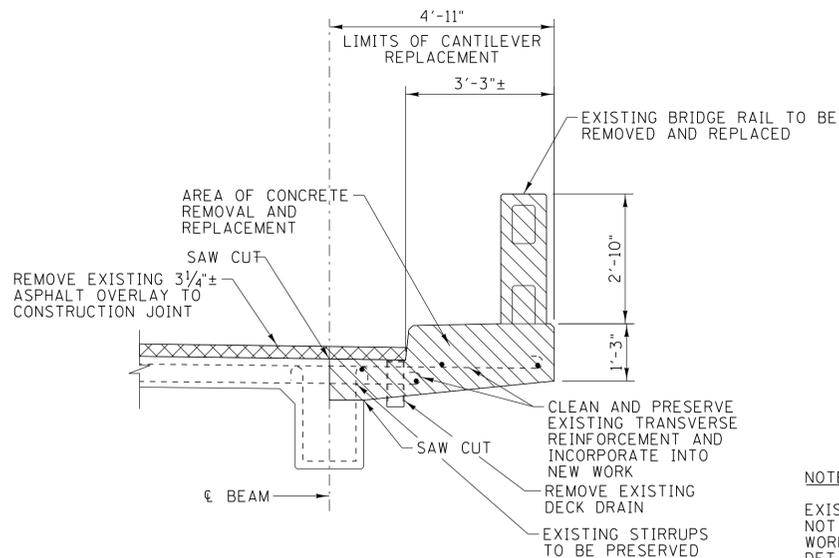
1/7/2015 4:36:33 PM  
 WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BRG\02-Final\21-BR-117-11.dgn  
 LIC:obos



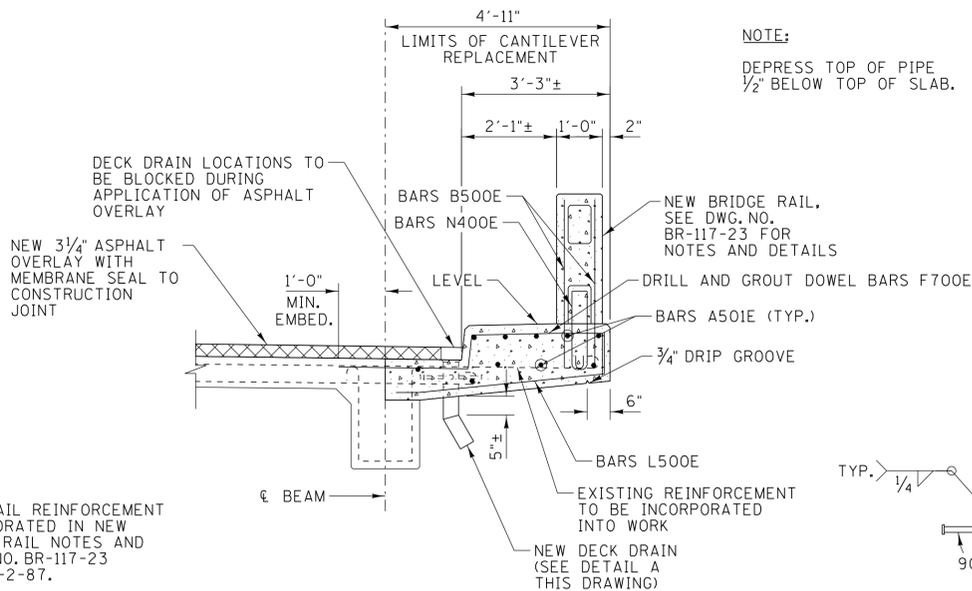
DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
 DRAWN BY C. W. THOMAS DATE JAN. 2014  
 SUPERVISED BY J. H. RUDDLELL DATE JAN. 2014  
 CHECKED BY A. J. KHAIRI DATE JAN. 2014

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

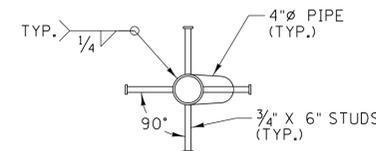
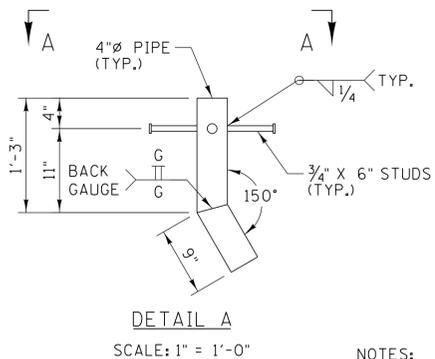
PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



**BRIDGE RAIL REPAIR - TYPE A  
DEMOLITION**  
(SHOWN FOR SOUTH CANTILEVER)  
SCALE: 1/2" = 1'-0"



**BRIDGE RAIL REPAIR - TYPE A  
CONSTRUCTION**  
(SHOWN FOR SOUTH CANTILEVER)  
SCALE: 1/2" = 1'-0"



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

**NOTE:**  
EXISTING BRIDGE RAIL REINFORCEMENT NOT TO BE INCORPORATED IN NEW WORK. FOR BRIDGE RAIL NOTES AND DETAILS, SEE DWG. NO. BR-117-23 AND REF. DWG. NO. E-2-87.

**NOTE:**  
DEPRESS TOP OF PIPE 1/2" BELOW TOP OF SLAB.

**NOTES:**

FOR BILL OF STEEL, SEE DWG. NO. BR-117-13.

ALL REINFORCEMENT FOR THE NEW STANDARD CONCRETE HANDRAIL SHALL BE PER DWG. NO. BR-117-23.

FOR NEW ASPHALT OVERLAY DETAILS AND NOTES, SEE DWG. NO. BR-117-26.

ALL COSTS ASSOCIATED WITH REMOVING CONCRETE AT BRIDGE CANTILEVERS AND BRIDGE RAIL, SAW CUTTING, PROVIDING HIGH EARLY STRENGTH CONCRETE FOR THE NEW CANTILEVERS, CURB, AND BRIDGE RAIL, AND CLEANING ALL EXISTING REINFORCING STEEL FROM EXISTING SLAB AND CANTILEVER SHALL BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

ALL COSTS ASSOCIATED WITH INSTALLATION OF NEW BRIDGE DRAINS AS INDICATED ON THIS DRAWING SHALL BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

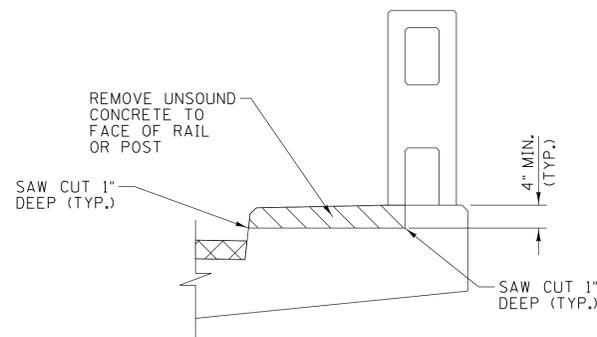
THE COST OF FORMING AND POURING NEW HIGH EARLY STRENGTH CONCRETE FOR CANTILEVER, CURB, POST, AND ANY AREA REQUIRED FOR TYPE A, B, OR C BRIDGE RAIL REPAIRS EXCLUDING THE BRIDGE RAIL FOR TYPE A REPAIRS, SHALL BE INCLUDED UNDER ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

ALL COST OF NEW REINFORCING STEEL IN THE NEW CURB, POST, CANTILEVER AND BRIDGE RAIL, EXCLUDING TYPE A BRIDGE RAIL, SHALL BE INCLUDED IN ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.

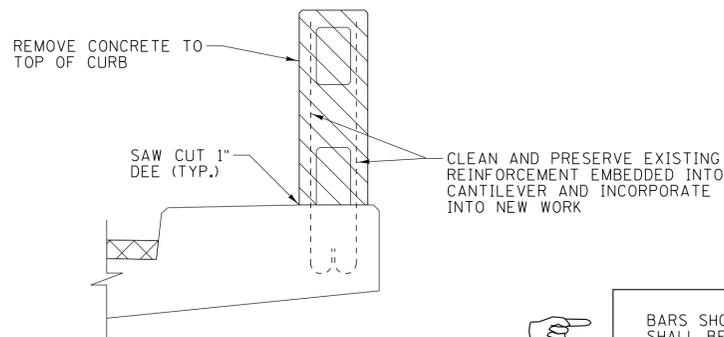
ALL COSTS ASSOCIATED WITH THE NEW CONCRETE BRIDGE RAIL FOR TYPE A REPAIRS TO BE INCLUDED UNDER ITEM NO. 620-06, CONCRETE RAILING, L.F. FOR NOTES AND DETAILS, SEE DWG. NO. BR-117-23.

**NOTE:**

FOR NEW DECK DRAIN LOCATIONS SEE DWG. NOS. BR-117-13 AND BR-117-16.

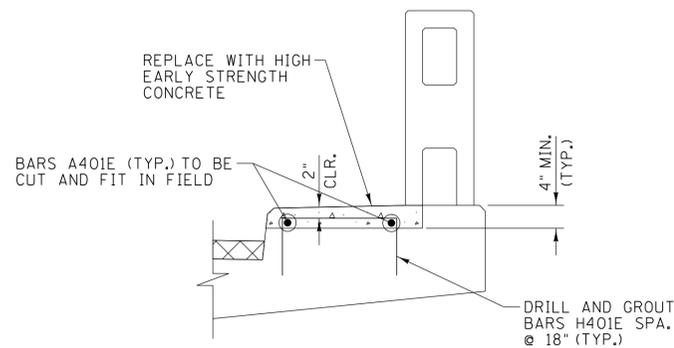


**BRIDGE RAIL REPAIR - TYPE B  
DEMOLITION**  
(SHOWN FOR SOUTH CANTILEVER)  
SCALE: 1/2" = 1'-0"

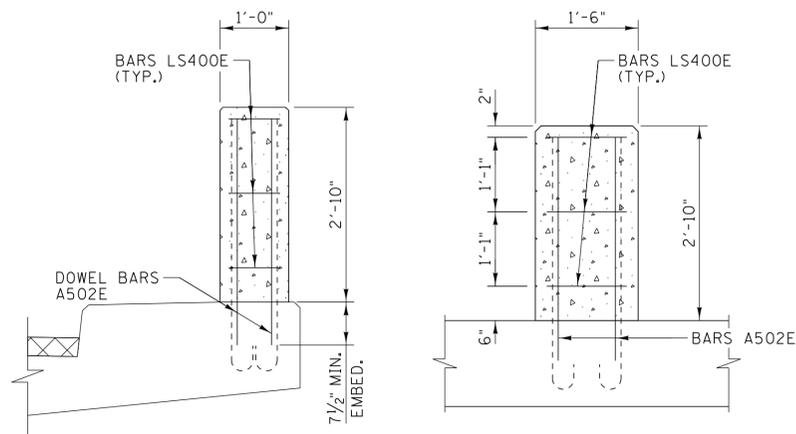


**BRIDGE RAIL REPAIR - TYPE C  
DEMOLITION**  
(SHOWN FOR SOUTH CANTILEVER)  
SCALE: 1/2" = 1'-0"

BARS SHOWN TO BE EMBEDDED INTO EXISTING CANTILEVER, SHALL BE SECURED USING HILTI HIT RES500 EPOXY ANCHOR OR APPROVED EQUAL. ALL BARS SHALL BE EMBEDDED TO DEPTH SHOWN ON DETAILS THIS SHEET AND EPOXY ANCHOR SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. HOLES FOR EMBEDDED BARS SHALL BE DRILLED 1/4" LARGER IN DIAMETER THAN THE BAR.



**BRIDGE RAIL REPAIR - TYPE B  
CONSTRUCTION**  
(SHOWN FOR SOUTH CANTILEVER)  
SCALE: 1/2" = 1'-0"



**BRIDGE RAIL REPAIR - TYPE C  
CONSTRUCTION**  
(SHOWN FOR SOUTH CANTILEVER)  
SCALE: 1/2" = 1'-0"

N: PHASE I - NORTH CANTILEVER  
S: PHASE II - SOUTH CANTILEVER

**NOTE:**

BRIDGE RAIL REPAIR LOCATIONS DESIGNATED ON THIS DRAWING, FINAL LOCATIONS TO BE DETERMINED BY T.D.O.T. ENGINEER, THE ENGINEER MAY INCREASE, DECREASE, OR ELIMINATE LENGTHS AND LOCATIONS ASSOCIATED WITH THESE REPAIRS.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

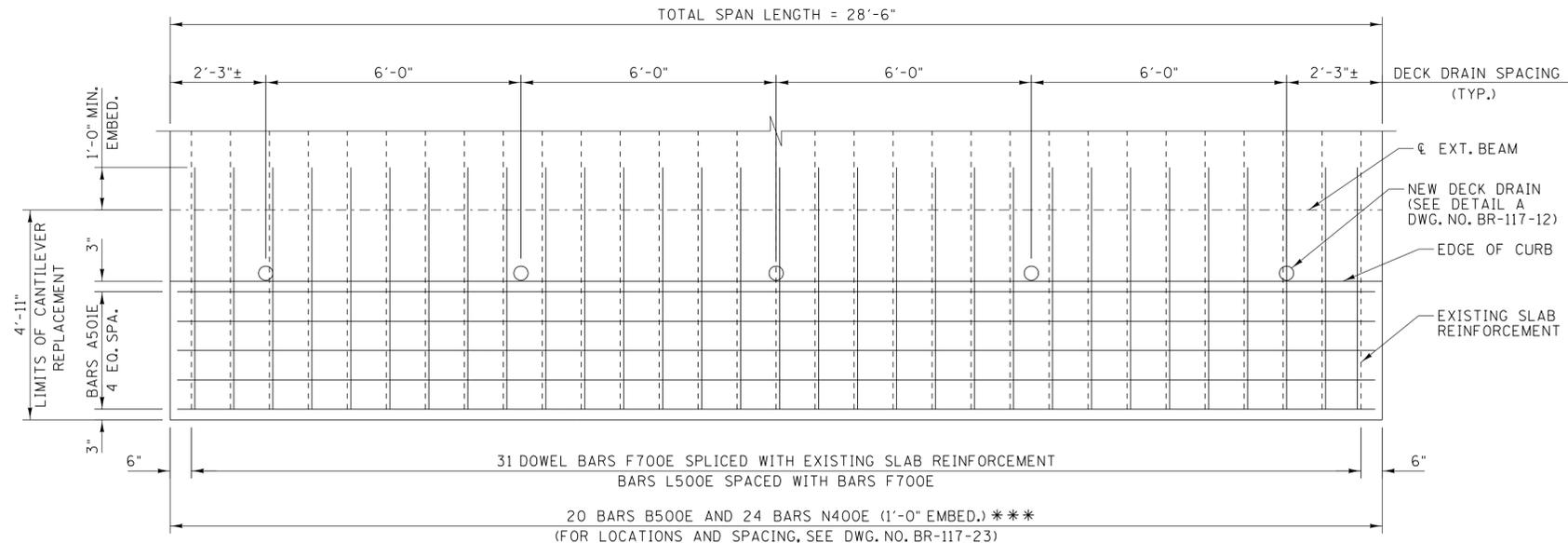
SR54 OVER HATCHIE RIVER  
BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
2015

**UNOFFICIAL  
SET**  
NOT FOR  
BIDDING



PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



\*\*\* BARS B500E EQUIVALENT TO BARS A ON REF. DWG. E-2-87  
 \*\*\* BARS N400E EQUIVALENT TO BARS C ON REF. DWG. E-2-87

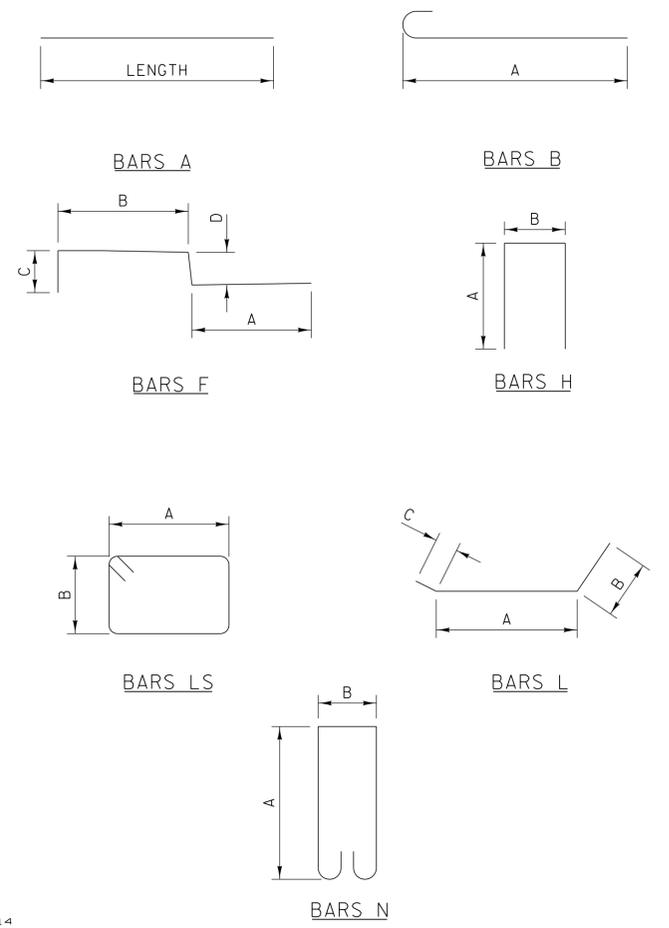
NOTES:  
 BRIDGE RAIL NOT SHOWN FOR CLARITY.  
 DECK DRAINS SHOULD BE PLACED TO ACCOMMODATE REINFORCEMENT.

BRIDGE RAIL REPAIR TYPE A  
 PLAN VIEW  
 SCALE: 1/2" = 1'-0"

BILL OF STEEL							
BRIDGE RAIL REPAIR - TYPE A*							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A501E	5	8					28'-2"
B500E	5	20	3'-8"				4'-3"
F700E	7	31	2'-10"	2'-10"	11"	8 1/2"	7'-3 1/2"
L500E	5	31	4'-0"	11"	6"		5'-5"
N400E	4	24	1'-8"	4"	11"	8 1/2"	4'-8"
BRIDGE RAIL - TYPE B**							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A401E	4	8					5'-0"
H401E	4	16	10"	1'-8"			3'-4"
BRIDGE RAIL - TYPE C**							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A502E	5	4					3'-3"
LS400E	4	2	1'-2"	9"			4'-9"

NOTES:  
 ALL BAR DIMENSIONS ARE OUT-TO-OUT.  
 ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.  
 BARS ENDING IN "E" SHALL BE EPOXY COATED.  
 \*NO. REQ'D IS FOR ONE (1) CANTILEVER REPLACEMENT, FOUR (4) REQUIRED.  
 \*\*NO. REQ'D IS FOR ALL LOCATIONS INDICATED ON DWG. NO. BR-117-12.

NOTES:  
 ALL REINFORCEMENT FOR THE NEW STANDARD CONCRETE HANDRAIL SHALL BE PER DWG. NO. BR-117-23.  
 ALL COSTS ASSOCIATED WITH REMOVING CONCRETE AT BRIDGE CANTILEVERS AND BRIDGE RAIL, SAW CUTTING, PROVIDING HIGH EARLY STRENGTH CONCRETE FOR THE NEW CANTILEVER, CURB, AND BRIDGE RAIL, AND CLEANING ALL EXISTING REINFORCING STEEL FROM EXISTING SLAB AND CANTILEVER SHALL BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.  
 ALL COSTS ASSOCIATED WITH INSTALLATION OF NEW BRIDGE DRAINS AS SHOWN ON THIS DRAWING AND DWG. NO. BR-117-12 SHALL BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.  
 THE COST OF FORMING AND POURING NEW HIGH EARLY STRENGTH CONCRETE FOR CANTILEVER, CURB, POST, AND ANY AREA REQUIRED FOR TYPE A, B, OR C BRIDGE RAIL REPAIRS EXCLUDING THE BRIDGE RAIL FOR TYPE A REPAIRS, SHALL BE INCLUDED UNDER ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.  
 ALL COST OF NEW REINFORCING STEEL IN THE NEW CURB, POST, CANTILEVER AND BRIDGE RAIL SHALL BE INCLUDED IN ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.  
 ALL COSTS ASSOCIATED WITH THE NEW CONCRETE BRIDGE RAIL FOR TYPE A REPAIRS TO BE INCLUDED UNDER ITEM NO. 620-06, CONCRETE RAILING, L.F. FOR NOTES AND DETAILS, SEE DWG. NO. BR-117-23.  
 FOR INFORMATION REGARDING REPAIR LOCATION, SEE DWG. NOS. BR-117-1 THRU BR-117-5 & BR-117-12.



STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS  
 SR54 OVER HATCHIE RIVER  
 BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
 2015

UNOFFICIAL SET  
 NOT FOR BIDDING

1/7/2015 4:36:34 PM  
 WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BRG\02-Final\23-BR-117-13.dgn  
 L:\coba\1/7/2015 4:36:34 PM  
 WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BRG\02-Final\23-BR-117-13.dgn

DESIGNED BY: J. L. HALBROOK DATE: JAN. 2014  
 DRAWN BY: J. L. HALBROOK DATE: JAN. 2014  
 SUPERVISED BY: J. H. RUDELL DATE: JAN. 2014  
 CHECKED BY: A. J. KHAIRI DATE: JAN. 2014

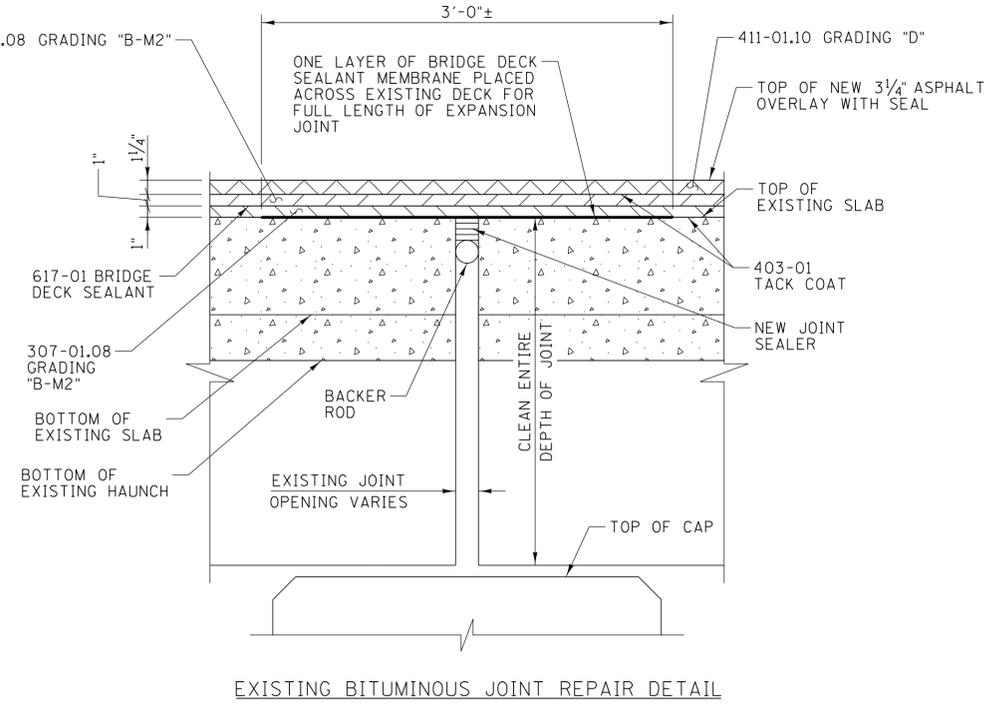
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

SPAN REPLACEMENT SCHEDULE		
SPAN NO.	NORTHSIDE	SOUTHSIDE
22	X	-
23	-	X
24	-	X
25	-	X
35	X	X
41	X	-
44	-	X
64	-	X
80	-	X
82	-	X
83	X	-
91	X	-

NOTE:  
BEAM REPLACEMENT SPAN LOCATIONS DESIGNATED ON THIS DRAWING, FINAL LOCATIONS TO BE DETERMINED BY T.D.O.T. ENGINEER.

**NOTES:**  
ENTIRE DEPTH OF JOINT SHALL BE CLEANED BY A HIGH PRESSURE WATER WASH CAPABLE OF REMOVING ALL INCOMPRESSIBLE AND FOREIGN MATERIAL.  
THE SEALER SHALL EXTEND UP AND ACROSS THE CURB OR SIDEWALK AREA TO THE OUTER EDGE OF THE BRIDGE SLAB.  
COST OF JOINT CLEANING BY HIGH PRESSURE WATER, INSTALLATION OF EXPANSION JOINT, BACKER ROD, JOINT SEALANT, LABOR, AND ANY MISCELLANEOUS MATERIALS NECESSARY TO INSTALL THE NEW EXPANSION JOINT SHALL BE PAID FOR UNDER ITEM NO. 604-10.44, EXPANSION JOINT REPAIRS, L.F. THE REPAIRS SHALL BE COMPLETED FOR THE FULL WIDTH OF THE BRIDGE AT BENT NOS. 5, 11, 18, 30, 31, 32, 78, 86 & 87 AND FOR HALF THE WIDTH AT BENT NOS. 17, 19-21, 36, 37, 39, 40, 57, 58, 59, 60, 69, 70, 75-77, & 85.



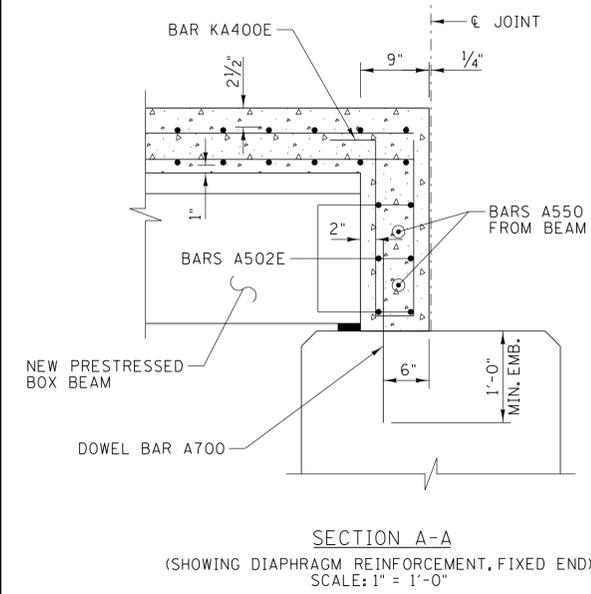
EXISTING BITUMINOUS JOINT REPAIR DETAIL  
SCALE: 1 1/2" = 1'-0"

**GENERAL NOTES:**  
**ITEM NO. 604-10.44, EXPANSION JOINT REPAIRS (L.F.):**  
JOINT SYSTEM INCLUDES FURNISHING ALL MATERIAL AND EQUIPMENT AND COMPLETE INSTALLATION AS SHOWN ON THIS DRAWING AND THE MANUFACTURER'S SPECIAL PROVISIONS. THE JOINT SEALANT SYSTEM CONSISTS OF A SURFACE PRIMER; A SELF-LEVELING OR NON-SAG SEALANT AND BACKER MATERIAL. DETAILED SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL BE SUBMITTED TO THE PROJECT ENGINEER PRIOR TO CONSTRUCTION. THE MANUFACTURER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORKMANSHIP AND PERFORMANCE OF THE INSTALLED JOINT.

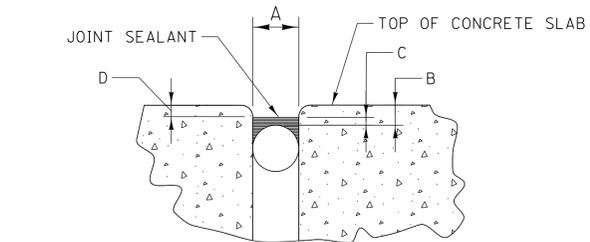
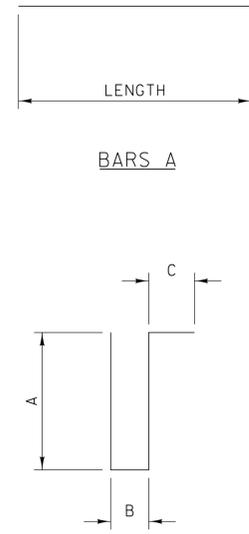
**JOINT SEALANT:**  
THE JOINT SEALANT WILL BE A POURABLE, COLD APPLIED (TWO COMPONENT) RAPID-CURING, SELF LEVELING MATERIAL WHEN INSTALLED ON GRADES LESS THAN OR EQUAL TO 3% ALONG THE CENTERLINE OF THE JOINT. JOINT SEALANTS USED IN CONJUNCTION WITH OTHER MANUFACTURER APPROVED COMPONENTS COMPRISING ANOTHER MANUFACTURER'S JOINT SEALANT SYSTEM WILL MEET THE REQUIREMENTS OF THESE SPECIFICATIONS. PRIOR TO PREPARING THE JOINT SEALANT, THE MANUFACTURER'S REPRESENTATIVE WILL BE CONSULTED TO ESTABLISH THE USABLE POT LIFE OF THE MATERIAL TO THE MIXED CONSIDERING THE AMBIENT TEMPERATURE AT THE TIME OF MIXING. WHEN MIXING HAS BEEN COMPLETED THE AGE OF THE MIXTURE WILL BE TIMED AND THE MATERIAL WILL BE DISCARDED WHEN THE MANUFACTURER'S PREDICTED POT LIFE HAS BEEN EXCEEDED. IF AT ANY POINT IN THE TIME DURING THE INSTALLATION OF JOINT SEALANT THE MANUFACTURER'S REPRESENTATIVE DETERMINES THAT THE MIXED JOINT SEALANT HAS CURED TO A POINT WHERE IT CAN NOT BE PROPERLY INSTALLED IT WILL BE DISCARDED.

**SURFACE PRIMER:**  
THE JOINT SEALANT MUST BE APPLIED TO SURFACES WITH THE USE OF A SPECIAL PRIMER FOR EACH APPLICATION. THE VERTICAL FACES OF THE JOINT RECEIVING SURFACE PRIMER ARE TO BE FREE OF DUST PARTICLES, MOISTURE, OILS AND LAITANCE AT THE TIME THE SURFACE PRIMER IS APPLIED. PER THE MANUFACTURER'S REQUIREMENT, THE SURFACE PRIMER SHALL BE FULLY CURED BEFORE THE JOINT SEALANT IS INSTALLED. THE MANUFACTURER'S APPROVAL AND INSTALLATION PROCEDURES FOR A SPECIAL PRIMER MUST BE GIVEN TO THE PROJECT ENGINEER IN WRITING BEFORE THE PRIMER IS INSTALLED.

**BACKER ROD:**  
THE BACKER ROD SHALL BE A CLOSED CELL, NON-GASSING FOAM MATERIAL CAPABLE OF WITHSTANDING ELEVATED TEMPERATURES RESULTING FROM THE REACTION OF THE TWO COMPONENT SEALANT THAT MAY OCCUR. THE MATERIAL TYPE IS TO BE APPROVED BY THE JOINT SEALANT SYSTEM MANUFACTURER AND TESTED IN ACCORDANCE WITH ASTM D545. A LETTER OF CERTIFICATION SHALL BE ISSUED TO TDOT MATERIALS AND TESTS DIVISION BY THE MANUFACTURER WITH EACH DELIVERY OF MATERIAL ON THE SITE. THE FIRST SHIPMENT SHALL INCLUDE A COPY OF THE MANUFACTURER'S QUALITY ASSURANCE PROGRAM LISTING ALL TESTING CRITERIA.



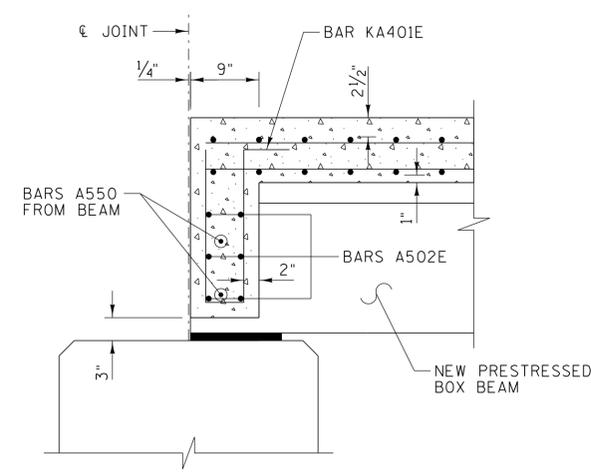
SECTION A-A  
(SHOWING DIAPHRAGM REINFORCEMENT, FIXED END)  
SCALE: 1" = 1'-0"



DETAIL "A"  
ELASTOMERIC BRIDGE JOINTS AND JOINT SYSTEMS  
(EXPANSION JOINT DIAGRAM)

A	B	C	D
JOINT OPENING AT TIME OF SEALING	MINIMUM SPACE FROM TOP OF BACKER ROD TO DRIVE SURFACE	DEPTH OF JOINT SEALANT FROM TOP OF BACKER ROD TO SURFACE OF JOINT SEALANT	MINIMUM SPACE FROM TOP OF JOINT SEALANT TO DRIVE SURFACE
UP TO 3"	1 3/8" MIN	1/2" - 5/8"	3/4" MIN
ABOVE 3"	1 3/4" MIN	5/8" - 3/4"	1" MIN

NOTE:  
THE CONTRACTOR MAY OBTAIN A LIST OF ACCEPTABLE BRANDS OF ELASTOMERIC CONCRETE FROM THE TENNESSEE D.O.T. DIVISION OF MATERIALS AND TESTS.



SECTION B-B  
(SHOWING DIAPHRAGM REINFORCEMENT, EXP. END)  
SCALE: 1" = 1'-0"

BILL OF STEEL							
DIAPHRAGM REINFORCEMENT (PER BEAM REPLACEMENT)							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A502E	5	12					4'-10"
*A550	5	4					2'-0"
A700	7	7					2'-0"
KA400E	4	7	1'-11"	5"	6"		4'-9"
KA401E	4	7	1'-8"	5"	6"		4'-3"

NOTES:  
ALL BAR DIMENSIONS ARE OUT-TO-OUT.  
ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.  
BARS ENDING IN "E" TO BE EPOXY COATED.  
\*ONE END TAPERED AND THREADED TO MATCH BOX BEAM INSERT THREAD REQUIREMENTS.  
NUMBER REQUIRED SHOWN FOR ONE (1) DIAPHRAGM REPLACEMENT LOCATION, TWENTY SIX (26) DIAPHRAGM REPLACEMENT LOCATIONS REQUIRED.

**UNOFFICIAL SET**  
NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS  
SR54 OVER HATCHIE RIVER  
BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
2015

BR-117-14

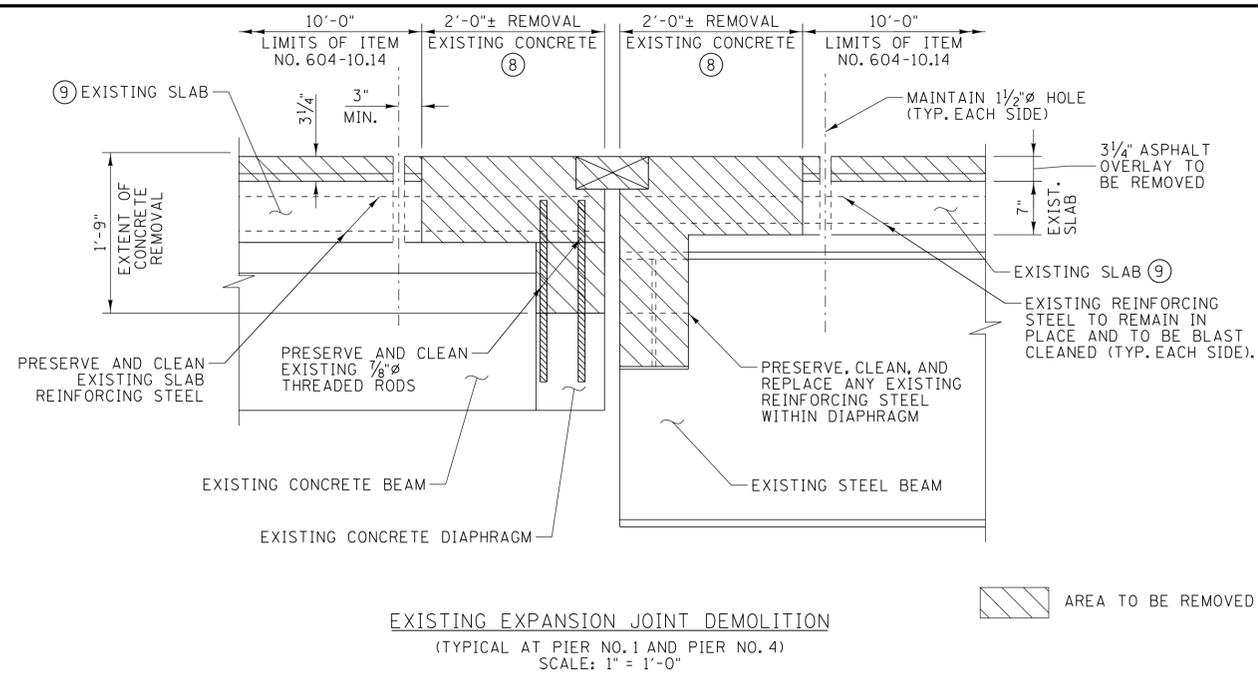
LIC0605 1/7/2015 4:36:34 PM  
WORKSPACE: T001 Bridge Repair over Hatchie River Drawings BRG02-Final\24-BR-117-14.dgn  
C:\200\001623 - T001 - Bridge Repair over Hatchie River Drawings BRG02-Final\24-BR-117-14.dgn

DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
DRAWN BY C. W. THOMAS DATE JAN. 2014  
SUPERVISED BY J. H. RUDDLELL DATE JAN. 2014  
CHECKED BY A. J. KHAIRI DATE JAN. 2014

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

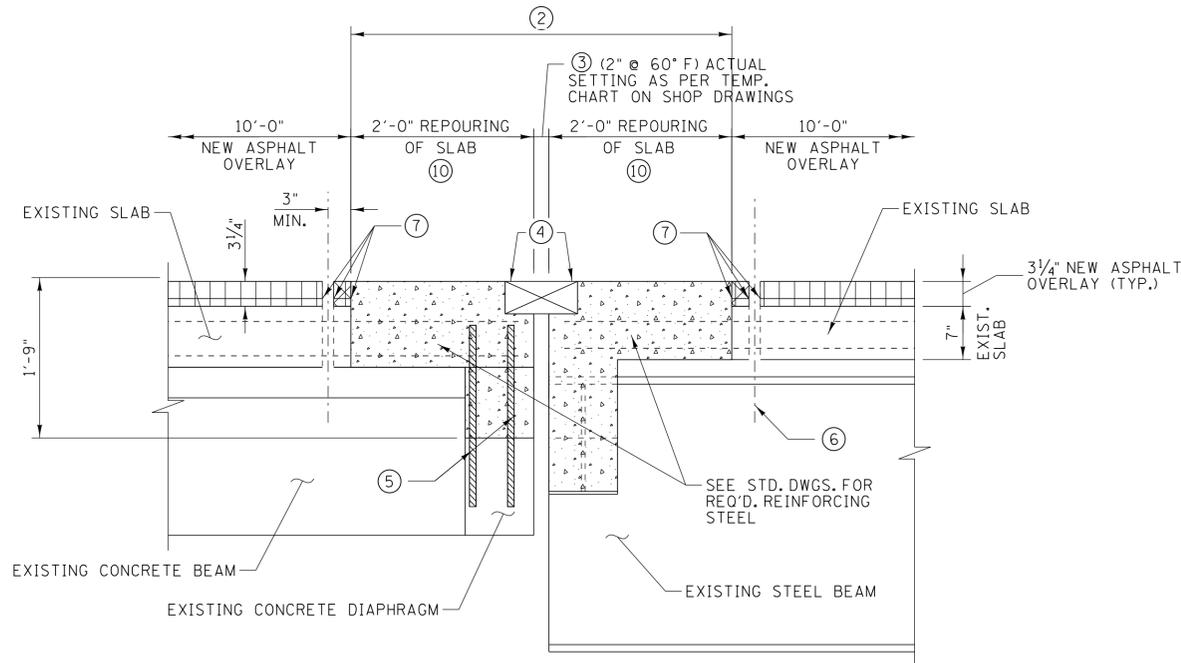
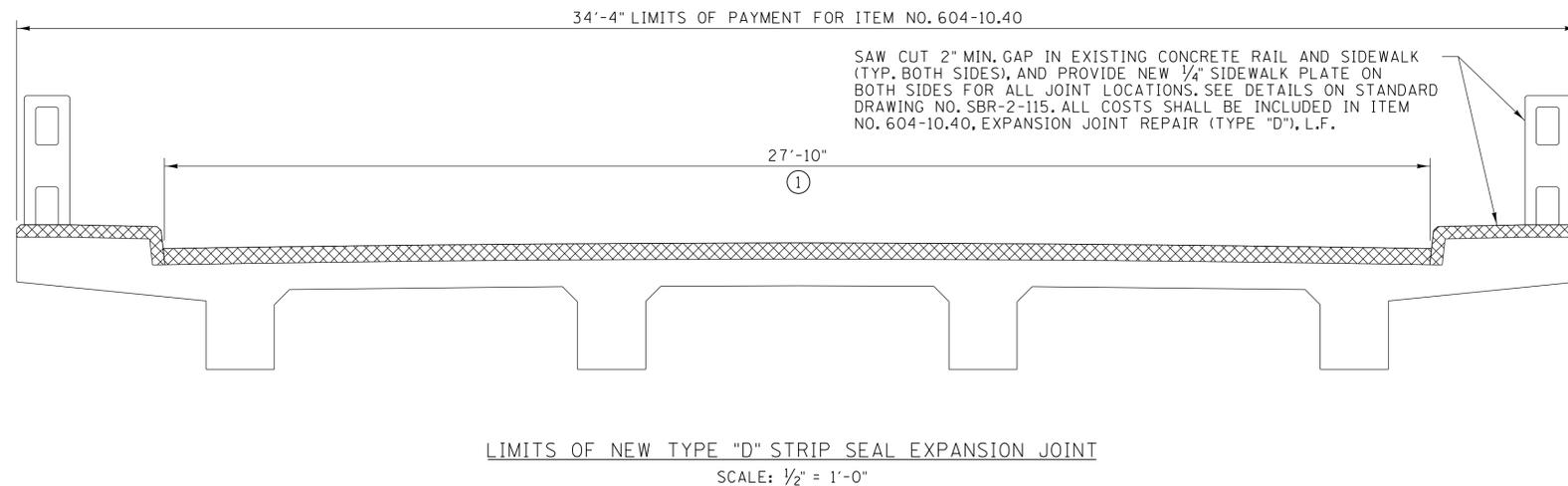


PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

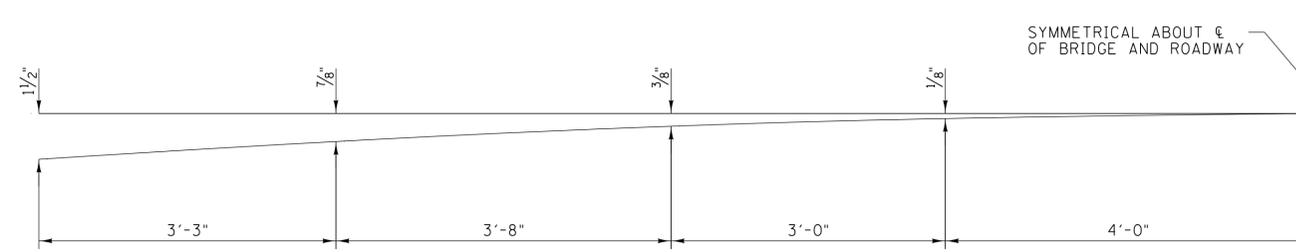


NOTES:

- ALL CONCRETE POURS SHALL BE WELL CONSOLIDATED BEHIND AND AROUND THE EXPANSION JOINT STEEL RETAINER.
- SEE EXPANSION JOINT REPLACEMENT DETAIL, TYPE "D" ON STD. DWG. NO. SBR-2-118, FOR FURTHER DETAILS AND NOTES, SEE STD. DWG. NOS. SBR-2-115, SBR-2-116, AND SPECIAL PROVISION NO. 604S.
- SET ALL EXPANSION JOINT REPLACEMENTS 2" (TWO INCHES) AT MID-TEMPERATURE OF 60° F, WITH A TOTAL MOVEMENT REQUIRED OF 4" (FOUR INCHES). ACTUAL SETTING AS PER TEMPERATURE CHART ON EXPANSION JOINT SHOP DRAWINGS.
- SEE TYPE "X" MEMBRANE RETAINER AND NOTES ON STD. DWG. NO. SBR-2-116, FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. NOS. SBR-2-115 AND SBR-2-118.
- INCORPORATE EXISTING THREADED  $\frac{7}{8}$ "  $\phi$  RODS INTO NEW LEVELING BOLT ASSEMBLIES, FOR ADDITIONAL DETAILS AND NOTES, SEE STANDARD DRAWING NOS. SBR-2-116 AND SBR-2-118.
- CONTRACTOR TO MAINTAIN EXISTING  $\frac{1}{2}$ "  $\phi$  HOLE NEAR FACE OF CURB AT LOW POINT AT EACH SIDE OF BRIDGE.
- MASTIC AS RECOMMENDED BY MANUFACTURER OF MEMBRANE, SEE STANDARD SPECIFICATIONS, ARTICLE 906.04.
- EXTREME CARE SHALL BE TAKEN WHEN REMOVING CONCRETE SLAB SO AS NOT TO DAMAGE THE EXISTING LONGITUDINAL REINFORCING STEEL. ALL EXISTING LONGITUDINAL REINFORCING STEEL SHALL BE BLAST CLEANED AND INCORPORATED WITH NEW REINFORCING STEEL. ALL WORK MUST MEET WITH FULL SATISFACTION OF THE ENGINEER.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR SUPPORTING THE PORTIONS OF THE SLAB WHICH ARE NOT TO BE REMOVED WHEN MAKING REPAIRS WHICH REQUIRE THE REMOVAL OF THE END SUPPORT OF A SLAB SPAN, DETAILS OF THE SUPPORT SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. COST OF THE SUPPORT SYSTEM TO BE INCLUDED IN ITEMS BID ON.
- CONCRETE FOR ALL EXPANSION JOINT REPAIR AREAS TO BE HIGH EARLY STRENGTH CONCRETE, F'C = 3500PSI @ 28 DAYS.
- COST OF REMOVING CONCRETE FOR THE LIMITS SHOWN, REPOURING WITH HIGH EARLY STRENGTH CONCRETE, EPOXY COATED REINFORCING STEEL, MECHANICAL THREADED CONNECTORS, COUPLER BARS, REMOVAL AND REPLACEMENT OF SIDEWALK PLATES, AND EXPANSION JOINT ASSEMBLIES SHALL BE PAID FOR UNDER ITEM NO. 604-10.40, EXPANSION JOINT REPAIR (TYPE D), L.F.
- COST OF INCIDENTALS SUCH AS WELDING, BLAST CLEANING, SAW CUTTING, DRILLING, ETC., AND MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE INSTALLATION OF THE NEW EXPANSION JOINTS AT PIER NO. 1 AND PIER NO. 4, SHALL BE INCLUDED UNDER ITEMS BID ON.



NOTE:  
FOR BAR CONNECTOR DETAIL,  
SEE DWG. NO. BR-117-22.



**UNOFFICIAL SET**  
NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR54 OVER HATCHIE RIVER  
BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
2015

BR-117-15

LIC:0005 1/7/2015 4:36:35 PM  
WORKSPACE: T:\01 Bridge Repair over Hatchie River Drawings\BRG\02-Final\25-BR-117-15.dgn  
C:\200\001623\T01 - Bridge Repair over Hatchie River Drawings\BRG\02-Final\25-BR-117-15.dgn

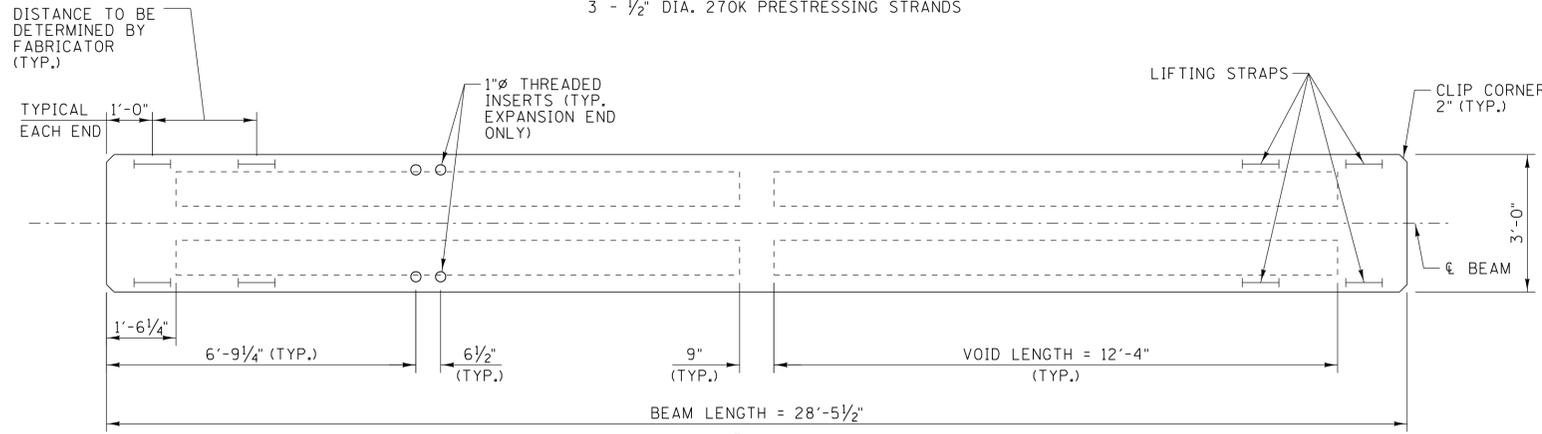


DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
DRAWN BY C. W. THOMAS DATE JAN. 2014  
SUPERVISED BY J. H. RUDDLELL DATE JAN. 2014  
CHECKED BY A. J. KHAIRI DATE JAN. 2014

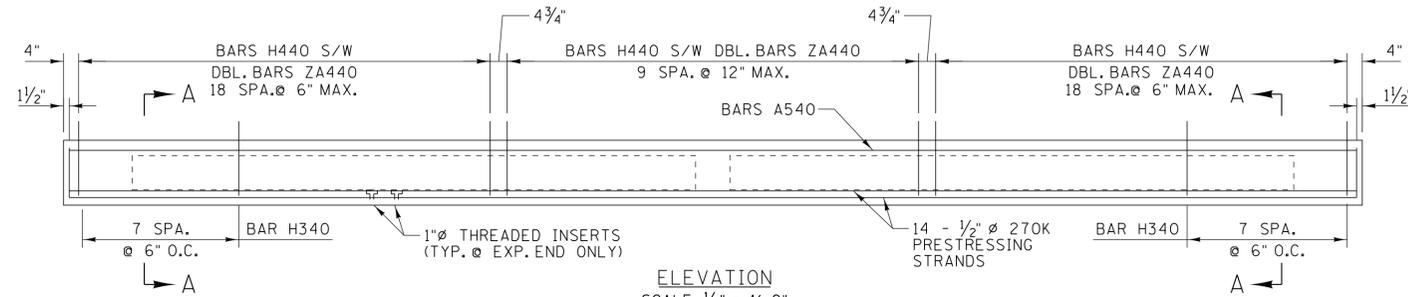
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON



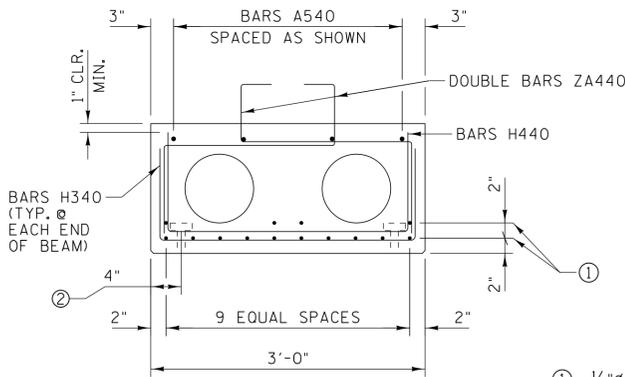
NOTE:  
TYPICAL LIFTING STRAPS TO BE  
3 - 1/2" DIA. 270K PRESTRESSING STRANDS



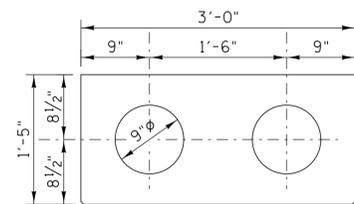
PLAN  
SCALE: 1/2" = 1'-0"



ELEVATION  
SCALE: 1/2" = 1'-0"

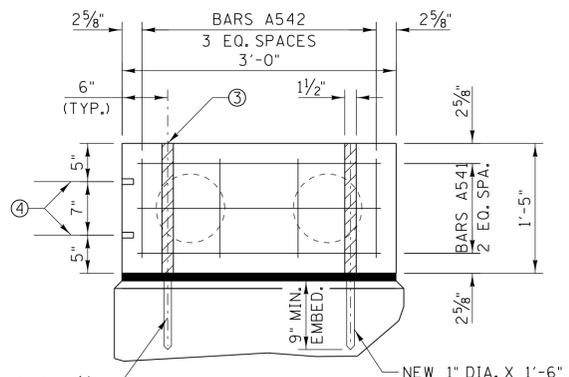


SECTION A-A  
(SHOWING PROJECTING REINFORCING STEEL)  
SCALE: 1" = 1'-0"

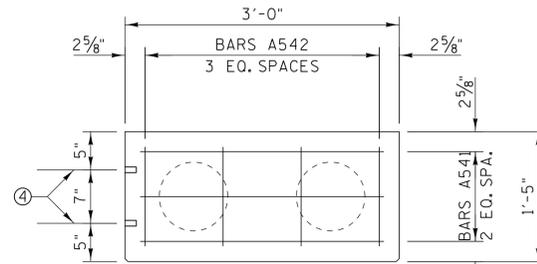


SECTION SHOWING  
PROPERTIES  
SCALE: 1" = 1'-0"

- ① 1/2" dia ASTM GRADE 270K PRESTRESSING STRANDS (14 STRANDS REQUIRED)
- ② 1" THREADED INSERTS 5600# MIN. HOHMAN NO. HJ OR EQUAL, CAST IN PLACE, 4 PER BEAM (ADJUST LOCATION TO AVOID STIRRUPS)
- ③ 1/2" dia SLOTTED HOLES FOR 1" DOWEL BARS, GROUDED BARS TO BE 1'-6" LONG, (9" EMBEDMENT AND 9" PROJECTION INTO BEAM END.)
- ④ 5/8" dia THREADED STEEL INSERTS (CAST IN PLACE) FOR THREADED BARS A550 (SEE DWG. NOS. BR-117-8 THRU BR-117-9), TYPICAL FOR INTERIOR SIDE OF EXTERIOR BEAMS AT BENTS. INSTALL PARALLEL TO BEAM ENDS (TYP.)



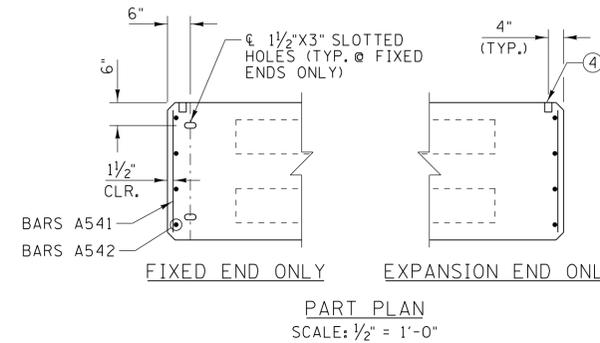
END ELEVATION  
(TYP. @ FIXED END ONLY)  
SCALE: 1" = 1'-0"



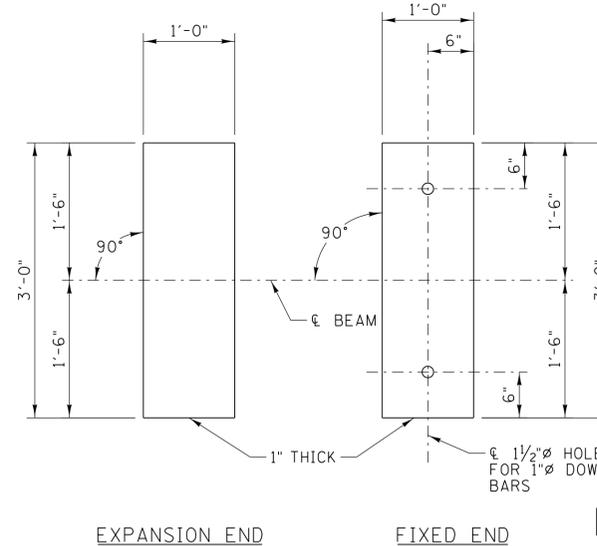
END ELEVATION  
(TYP. @ EXPANSION END ONLY)  
SCALE: 1" = 1'-0"

BILL OF STEEL				
BAR	SIZE	NO. REQ'D	A	LENGTH
A540	5	4		28'-2"
A541	5	6		2'-8"
A542	5	8		1'-1"
H340	3	16	2'-9 1/2"	4'-9 1/2"
H440	4	48	2'-7 1/2"	4'-9 1/2"
ZA440	4	96		3'-9 7/8"

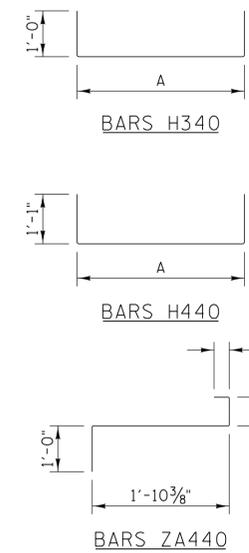
NOTE:  
"NO. REQ'D" IS FOR ONE (1) BEAM, THIRTEEN (13) BEAMS REQ'D.  
ALL DIMENSIONS ARE OUT-TO-OUT.



PART PLAN  
SCALE: 1/2" = 1'-0"



ELASTOMERIC BEARING PADS  
(DUROMETER = 70)  
SCALE: 1" = 1'-0"



NOTES:  
THE TOP OF THE BEAM SHALL BE ROUGH FLOATED, AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOP OF THE BEAM WILL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PRODUCE A ROUGH SURFACE.

MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.  
ALL PRESTRESSING STRANDS SHALL BE 1/2" DIA. ASTM GRADE 270:7 WIRE UNCOATED LOW RELAXATION PRESTRESSING STRANDS.

THE CONCRETE FOR THIS CONSTRUCTION SHALL BE A OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF 5,000 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 4,000 PSI.

AN INITIAL FORCE OF 31,000 LB. SHALL BE APPLIED TO EACH STRAND.  
PRESTRESSING STRANDS SHALL NOT BE GREATER THAN 1/2" DIAMETER.

COST OF FORMING THIRTEEN (13) NEW PRECAST BEAMS, AND ALL THE LABOR AND MATERIAL NECESSARY TO FABRICATE THE NEW BEAMS AS SHOWN ON THIS SHEET, SHALL BE PAID FOR UNDER ITEM NO. 615-02.02, PRESTRESSED CONCRETE BOX BEAM (17" X 36"), L.F.

1" DIAMETER WEEP HOLES SHALL BE PROVIDED AT THE LOW POINT OF EACH CELL, VENT HOLES SHALL BE PROVIDED IN THE TOP OF EACH CELL DURING FABRICATION TO RELIEVE GAS PRESSURES THAT OCCUR DURING CURING. THE VENT HOLES SHALL BE PLUGGED AFTER CURING IS COMPLETED.

THE SEQUENCE FOR TRANSFER OF STRESS OR CUTTING THE STRANDS SHALL BE IN ACCORDANCE WITH ARTICLE 615.14 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND SHALL BE SHOWN ON THE APPROVED SHOP DRAWINGS. AT NO TIME SHALL MORE THAN 1/6TH OF TOTAL PRESTRESSING FORCE BE ECCENTRIC ABOUT THE CENTERLINE OF THE BEAM.

COST OF REINFORCING STEEL IN THE NEW BEAMS WILL NOT BE MEASURED FOR SEPARATE PAYMENT, BUT WILL BE INCLUDED IN ITEM NO. 615-02.02, PRESTRESSED CONCRETE BOX BEAM (17" X 36"), L.F.

COST OF ELASTOMERIC PADS SHOWN ON THIS SHEET, RUBBER BONDING CEMENT, AND DOWEL BARS TO BE INCLUDED IN COST OF PRESTRESSED BEAMS.

ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION.

PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR54 OVER HATCHIE RIVER  
BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
2015

UNOFFICIAL  
SET  
NOT FOR  
BIDDING

1/7/2015 4:36:36 PM  
LIC0003  
WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BRG\02-Final\27-BR-117-17.dgn  
C:\200\001623 - T001 - Bridge Repair over Hatchie River Drawings\BRG\02-Final\27-BR-117-17.dgn



DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
DRAWN BY C. W. THOMAS DATE JAN. 2014  
SUPERVISED BY J. H. RUDELL DATE JAN. 2014  
CHECKED BY A. J. KHAIRI DATE JAN. 2014

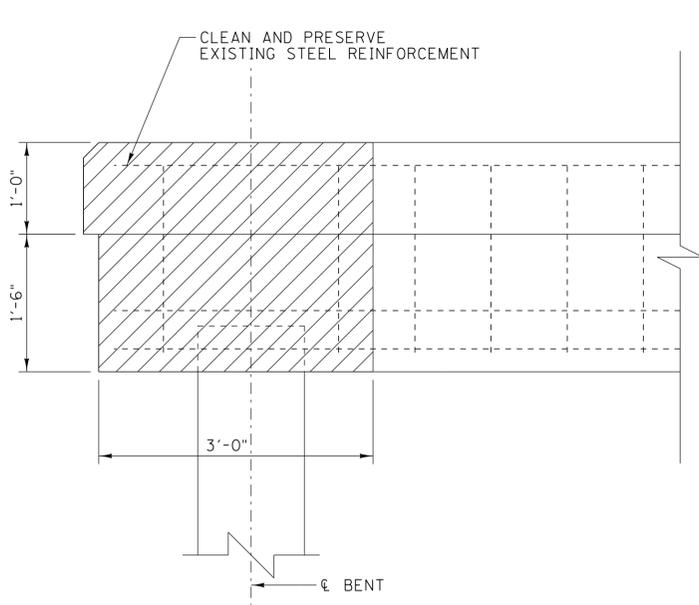
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-117-17

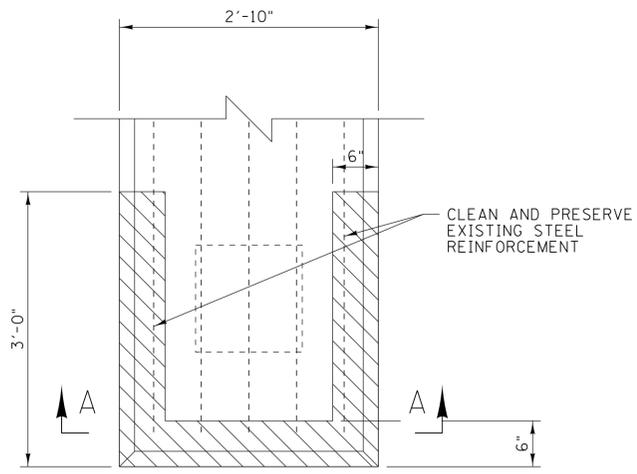
PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

BILL OF STEEL							
TYPE I BENT CAP REPAIR REINFORCEMENT							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A520	5	10					2'-0"
R521	5	8	2'-8"	2'-0"			4'-8"

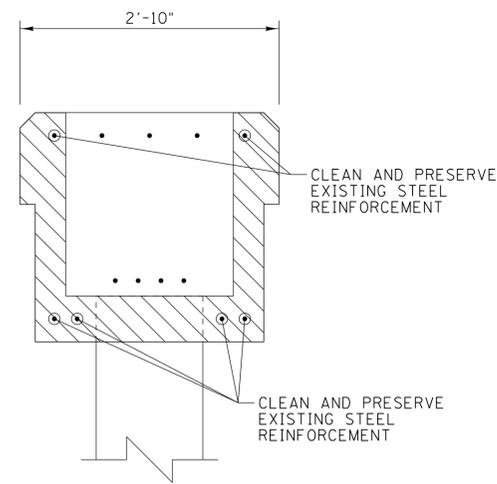
NOTES:  
 ALL BAR DIMENSIONS ARE OUT-TO-OUT.  
 ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.  
 NO. REQ'D IS FOR ONE (1) END BENT REPAIR LOCATION, FOURTEEN (14) TYPE I END BENT REPAIRS REQUIRED.



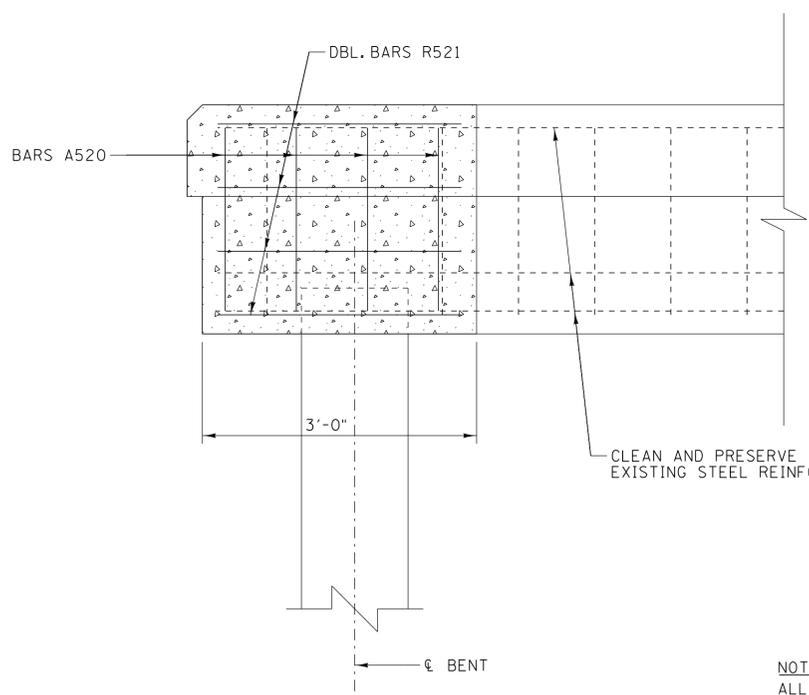
**B1** ELEVATION - TYPE I BENT CAP END REPAIR DEMOLITION  
 SCALE: 1" = 1'-0"



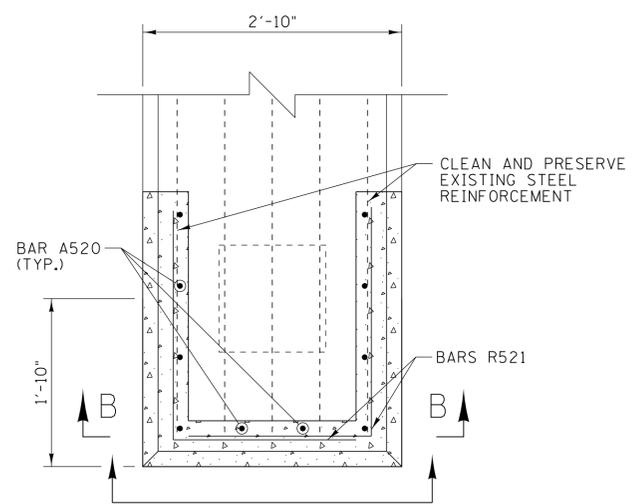
PLAN - TOP OF CAP BEAM DEMOLITION  
 SCALE: 1" = 1'-0"



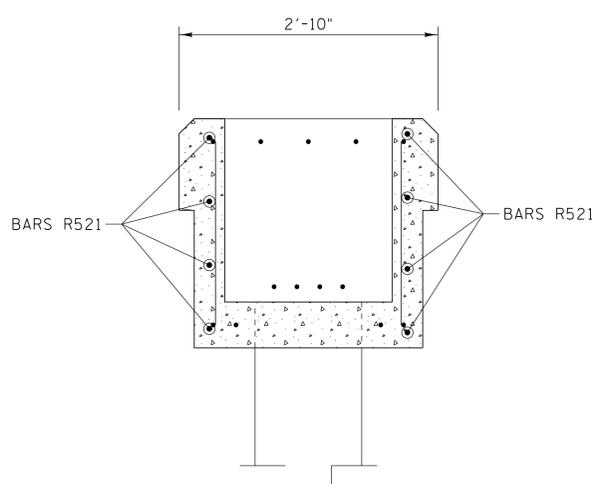
SECTION A-A  
 SCALE: 1" = 1'-0"



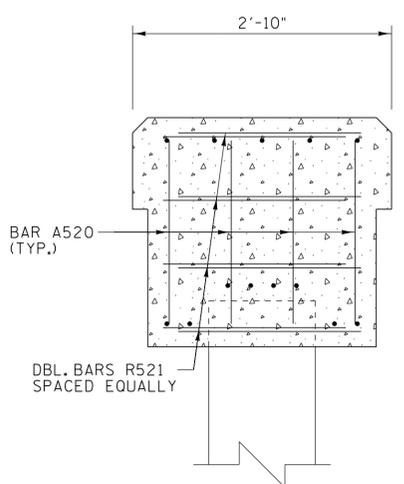
**B1** ELEVATION - TYPE I BENT CAP END REPAIR CONSTRUCTION  
 SCALE: 1" = 1'-0"



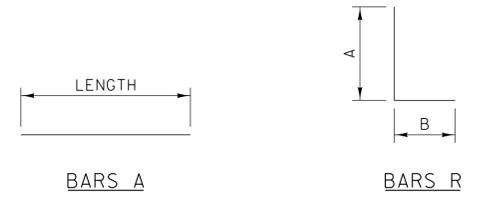
ELEVATION A-A  
 PLAN - CONSTRUCTION  
 SCALE: 1" = 1'-0"



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



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



NOTE:  
 BEAM REPLACEMENT SPAN LOCATIONS DESIGNATED ON THIS DRAWING, FINAL LOCATIONS TO BE DETERMINED BY T.D.O.T. ENGINEER.

BENT CAP END REPAIR SCHEDULE		
BENT NO.	NORTH SIDE	SOUTH SIDE
12	X	-
13	X	-
21	-	X
22	-	X
23	-	X
28	X	-
29	X	-
39	-	X
49	X	-
56	X	X
57	-	X
78	-	X
82	-	X

NOTES:  
 ALL EXISTING LONGITUDINAL REINFORCING STEEL TO REMAIN IN THE CAP IS TO BE CLEANED AND INCORPORATED WITH THE NEW REINFORCING STEEL.  
 ALL COSTS ASSOCIATED WITH THE REMOVAL OF THE EXISTING BENT CAP ENDS AND CLEANING OF REMAINING LONGITUDINAL REINFORCING TO BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.  
 COST OF FORMING AND POURING HIGH EARLY STRENGTH CONCRETE FOR BENT CAP END REPAIR TO BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.  
 COST OF REINFORCING STEEL TO BE INCLUDED IN ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), L.B.  
 NO LOADING, LIVE OR DEAD, WILL BE PERMITTED ON THE NEW BENT CAP ENDS UNTIL TEST SPECIMENS ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.  
 FOR LOCATIONS OF BENT CAP END REPAIRS SEE TABLE THIS SHEET. OTHER LOCATIONS MAY BE DESIGNATED BY ENGINEER.

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR54 OVER HATCHIE RIVER  
 BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
 2015

**UNOFFICIAL SET**  
 NOT FOR BIDDING

1/7/2015 4:36:36 PM  
 WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BRC\02-Final\28-BR-117-18.dgn  
 LIC0003001623 - T001 - Bridge Repair over Hatchie River Drawings\BRC\02-Final\28-BR-117-18.dgn

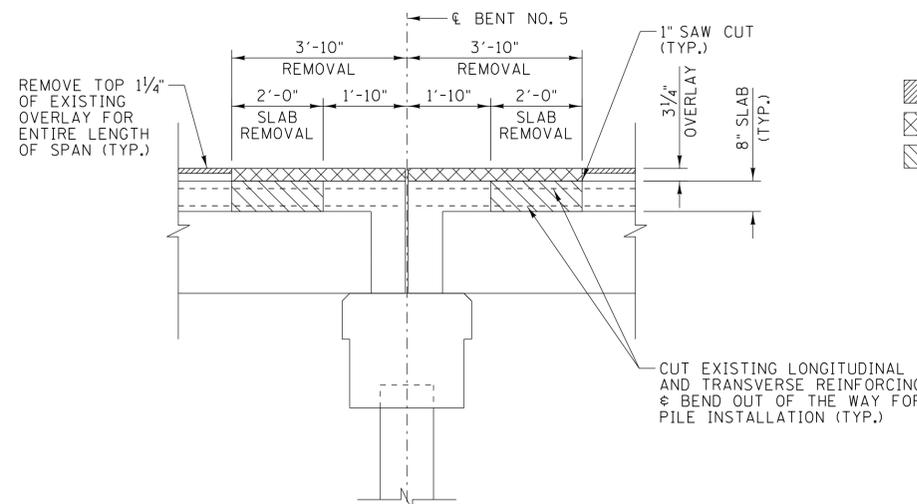


DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
 DRAWN BY C. W. THOMAS DATE JAN. 2014  
 SUPERVISED BY J. H. RUDDLELL DATE JAN. 2014  
 CHECKED BY A. J. KHAIRI DATE JAN. 2014

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

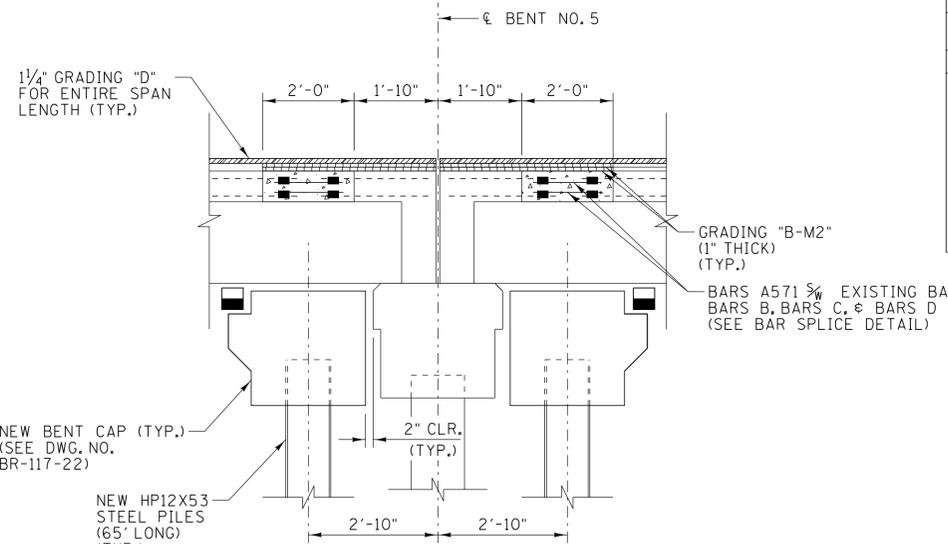
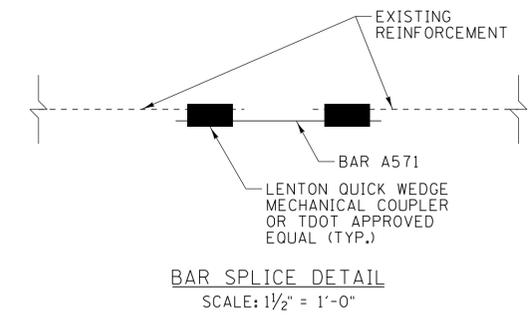


PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



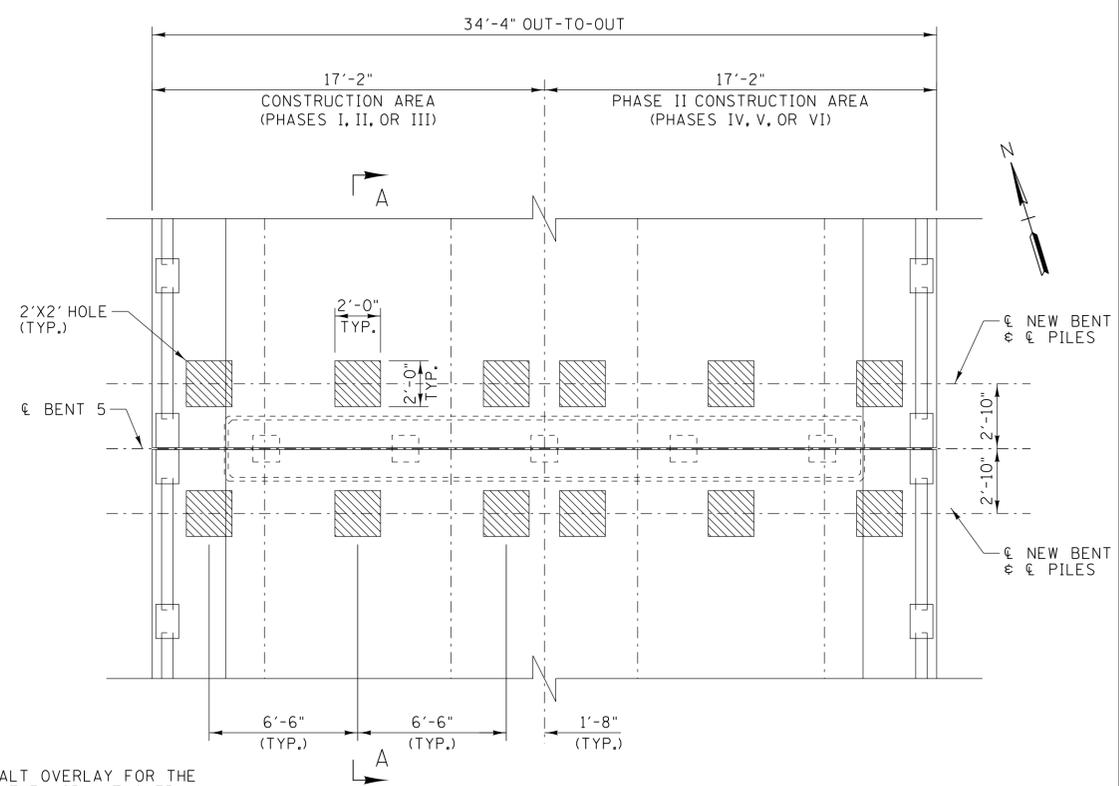
SECTION A-A - DEMOLITION  
(SHOWN FOR BENT NO. 5, BENT NOS. 11 & 32 SIMILAR)  
SCALE: 1/2" = 1'-0"

- LEGEND:
- REMOVE TOP 1/4" OF EXISTING OVERLAY FOR ENTIRE LENGTH OF SPAN
  - REMOVE EXISTING 3/4" ASPHALT OVERLAY
  - REMOVE CONCRETE AREAS (CLEAN AND PRESERVE EXISTING LONGITUDINAL AND TRANSVERSE STEEL)



SECTION A-A - CONSTRUCTION  
(SHOWN FOR BENT NO. 5, BENT NOS. 11 & 32 SIMILAR)  
SCALE: 1/2" = 1'-0"

BILL OF STEEL							
BENT CAP REINFORCEMENT, 6 REQ'D							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
* A571	5	72	A	B	C	D	1'-6"
NOTES:							
ALL BAR DIMENSIONS ARE OUT-TO-OUT.							
ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.							
"NO. REQ'D" SHOWN FOR ONE (1) BENT LOCATION, BENT CAP REINFORCEMENT REQUIRED AT SIX (6) BENT LOCATIONS.							
* TWO (2) MECHANICAL COUPLERS NEEDED FOR SPLICE.							



PLAN VIEW - DEMOLITION  
(SHOWN FOR BENT NO. 5, BENT NOS. 11 & 32 SIMILAR)  
SCALE: 1/4" = 1'-0"

REPAIR LOCATIONS	
BENT NO.	SPAN NOS.
5	5/6
11	11/12
32	36/37

- NOTES:
- COST OF REMOVING EXISTING ASPHALT OVERLAY TO BE INCLUDED IN ITEM NO. 604-10.14, REMOVAL OF EXISTING WEARING SURFACE, LS.
  - FOR NOTES AND DETAILS OF NEW ASPHALT OVERLAY, SEE DWG. NO. BR-117-26.
  - COST OF SAW CUTTING, CLEANING & PRESERVING STEEL REINFORCING, REMOVING CONCRETE, PROVIDING AND INSTALLING MECHANICAL COUPLERS, AND REPAIRING CONCRETE SLAB TO BE INCLUDED UNDER ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.
  - COST OF INSTALLING HP12X53 PILES TO BE INCLUDED UNDER ITEM NO. 606-03.03, STEEL PILES (12 INCH), L.F.
  - FOR NOTES AND DETAILS REGARDING THE NEW BENT CAPS, SEE DWG. NOS. BR-117-21 & BR-117-22.
  - FOR NOTES AND DETAILS REGARDING NEW ASPHALT OVERLAY, SEE DWG. NO. BR-117-26.
  - COST OF NEW REINFORCING STEEL AND MECHANICAL COUPLERS TO BE INCLUDED UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.
  - COST OF JACKING AND ANY INCIDENTAL TEMPORARY SUPPORTS/BRACING SHALL BE INCLUDED UNDER ITEM NO. 604-10.26, BRACING, EACH.

- SUGGESTED SEQUENCE OF CONSTRUCTION
- CLOSE HALF OF THE BRIDGE, REMOVE THE TOP 1/4" OF EXISTING ASPHALT OVERLAY FOR THE ENTIRE WIDTH AND LENGTH OF THE SPAN, REMOVE THE REMAINING 2" OF THE ASPHALT OVERLAY FOR THE ENTIRE WIDTH TO 3'-10" FROM THE REPAIR BENT LOCATION.
  - SAW CUT AND REMOVE 2'-0" X 2'-0" SECTIONS ON EITHER SIDE OF EXISTING BENT. PRESERVE THE EXISTING LONGITUDINAL AND TRANSVERSE REINFORCING, CUT IN HALF AND BEND OUT OF THE WAY FOR PILE INSTALLATION.
  - INSTALL NEW HP12X53 PILES IN CONSTRUCTION AREA (PHASES I, II, OR III).
  - INSTALL MECHANICAL BAR COUPLERS ON EXISTING REINFORCING AND RECAST SLAB PORTIONS IN CONSTRUCTION AREA.
  - INSTALL 2" OF NEW ASPHALT OVERLAY FOR THE ENTIRE WIDTH TO 3'-10" ON EITHER SIDE OF THE EXISTING BENT.
  - CLOSE THE OTHER HALF OF THE BRIDGE AND SHIFT THE TRAFFIC (PHASES IV, V, OR VI).
  - REMOVE THE TOP 1/4" OF EXISTING ASPHALT OVERLAY FOR THE ENTIRE WIDTH AND LENGTH OF THE SPAN, REMOVE THE REMAINING 2" OF THE ASPHALT OVERLAY FOR THE ENTIRE WIDTH TO 3'-10" FROM THE REPAIR BENT LOCATION.
  - SAW CUT AND REMOVE 2'-0" X 2'-0" SECTIONS ON EITHER SIDE OF EXISTING BENT. PRESERVE THE EXISTING LONGITUDINAL AND TRANSVERSE REINFORCING, CUT IN HALF AND BEND OUT OF THE WAY FOR PILE INSTALLATION.
  - INSTALL NEW HP12X53 PILES IN CONSTRUCTION AREA (PHASES IV, V, OR VI).
  - INSTALL MECHANICAL BAR COUPLERS ON EXISTING REINFORCING AND RECAST SLAB PORTIONS IN CONSTRUCTION AREA.
  - INSTALL 2" OF NEW ASPHALT OVERLAY FOR THE ENTIRE WIDTH TO 3'-10" FROM THE EXISTING BENT.
  - AFTER THE NEW BENT CAPS ARE CONSTRUCTED ON EITHER SIDE OF THE EXISTING BENT, TEMPORARILY CLOSE THE BRIDGE TO TRAFFIC AND JACK THE SPANS INTO POSITION.
  - AFTER SPANS ARE IN PLACE, INSTALL TOP 1/4" OF NEW ASPHALT OVERLAY FOR FULL WIDTH AND LENGTH OF SPAN.

UNOFFICIAL SET  
NOT FOR BIDDING

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS  
SR54 OVER HATCHIE RIVER  
BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
2015

BR-117-20

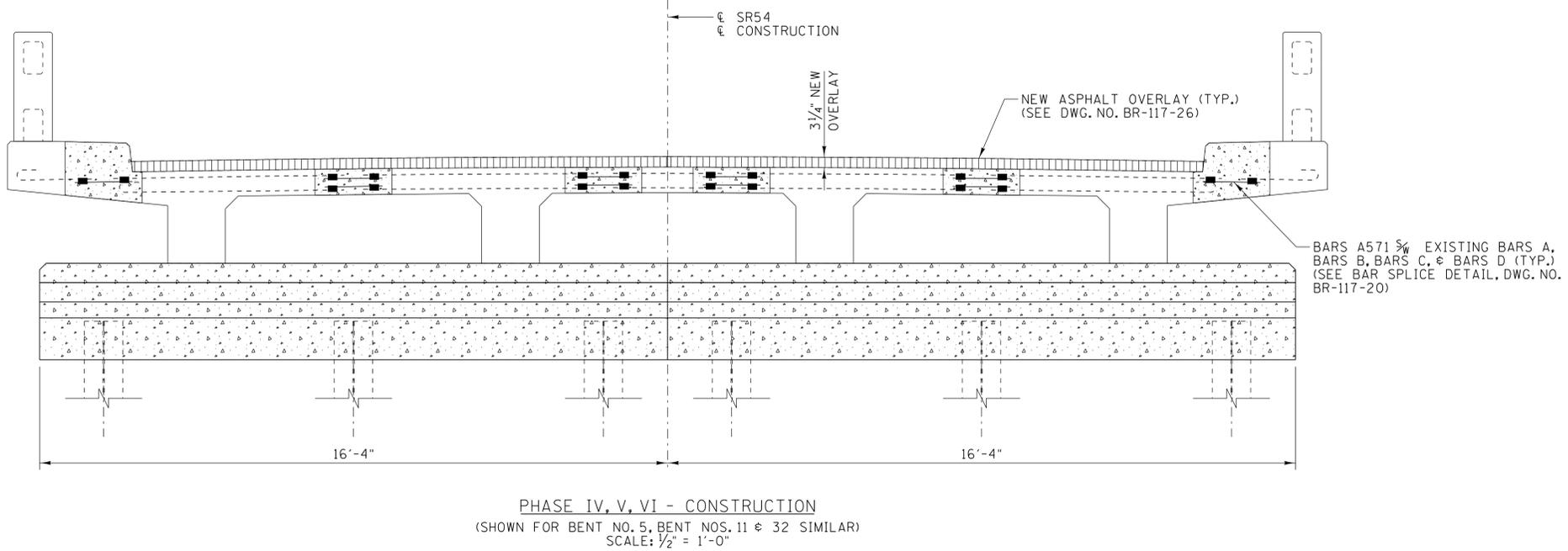
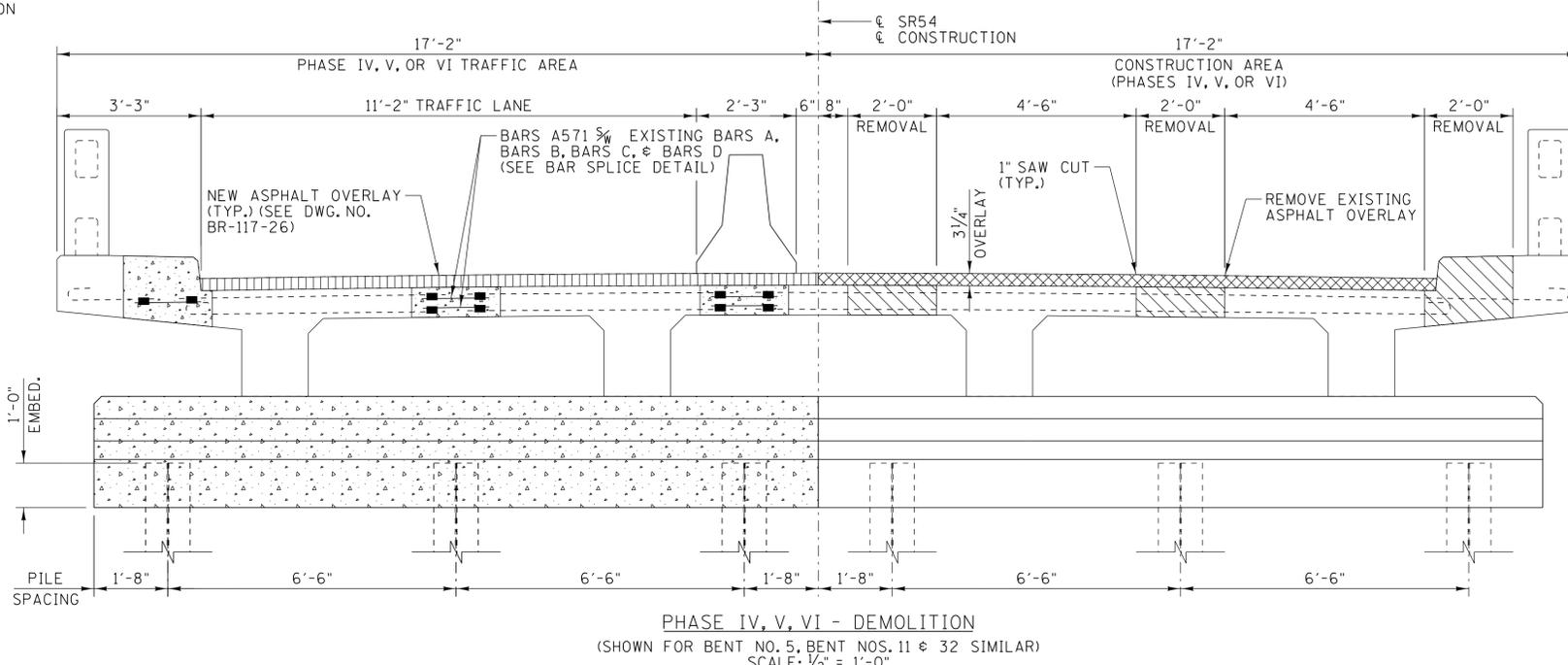
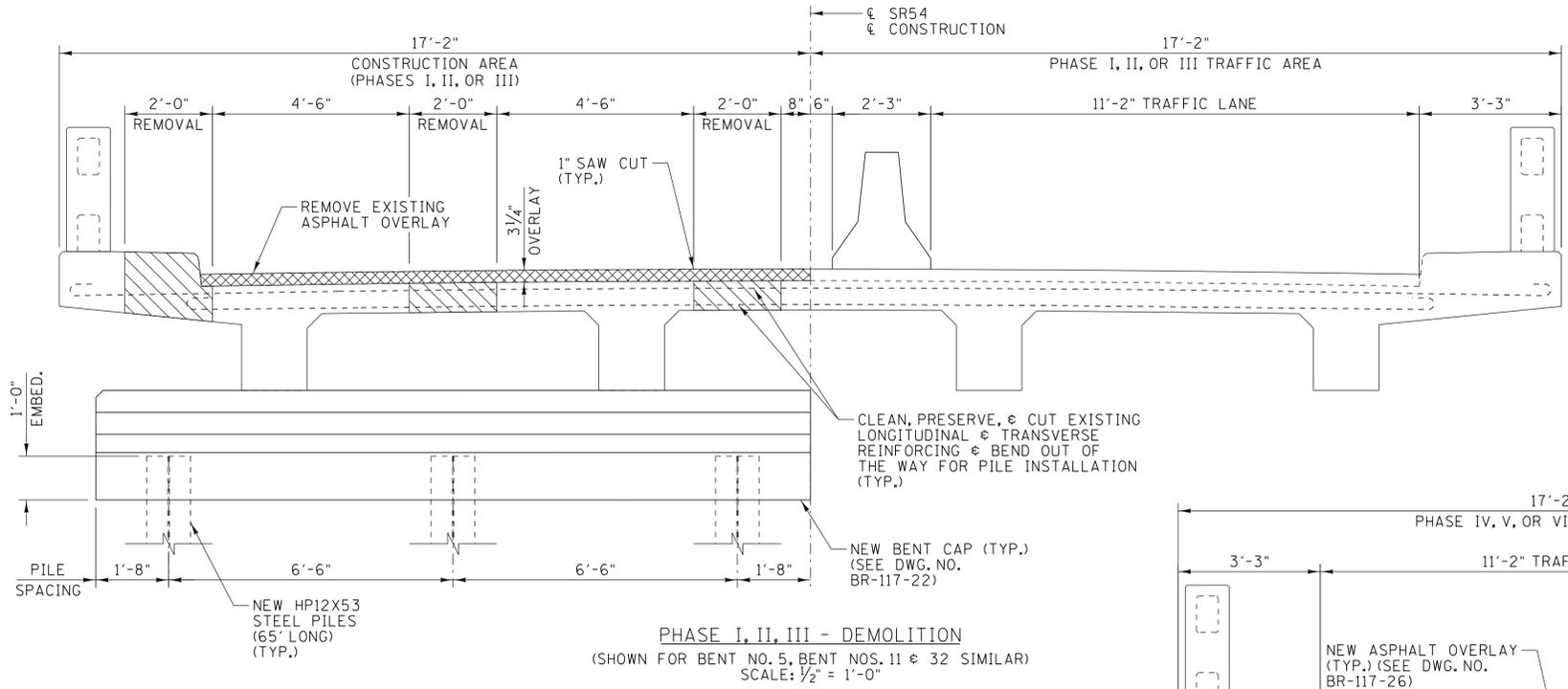
LIC0605 1/7/2015 4:36:37 PM  
WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BROG\02-Final\30-BR-117-20.dgn  
C:\200\001623 - T001 - Bridge Repair over Hatchie River Drawings\BROG\02-Final\30-BR-117-20.dgn

DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
DRAWN BY C. W. THOMAS DATE JAN. 2014  
SUPERVISED BY J. H. RUDELL DATE JAN. 2014  
CHECKED BY A. J. KHAIRI DATE JAN. 2014

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON



PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



**NOTES:**  
 COST OF REMOVING EXISTING ASPHALT OVERLAY TO BE INCLUDED IN ITEM NO. 604-10.14, REMOVAL OF EXISTING WEARING SURFACE, L.S.  
 FOR NOTES AND DETAILS OF NEW ASPHALT OVERLAY, SEE DWG. NO. BR-117-26.  
 COST OF SAW CUTTING, CLEANING & PRESERVING STEEL REINFORCING, REMOVING CONCRETE, PROVIDING AND INSTALLING MECHANICAL COUPLERS, AND REPAIRING CONCRETE SLAB TO BE INCLUDED UNDER ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.  
 COST OF HAULING AND DRIVING THE NEW HP12X53 PILES TO BE INCLUDED UNDER ITEM NO. 606-03.03, STEEL PILES (12 INCH), L.F.  
 FOR NOTES AND DETAILS REGARDING THE NEW BENT CAPS, SEE DWG. NO. BR-117-22.  
 FOR BAR SPLICE DETAIL, SEE DWG. NO. BR-117-20.  
 FOR SUGGESTED SEQUENCE OF CONSTRUCTION, SEE DWG. NO. BR-117-20.

AREA TO BE REMOVED

**UNOFFICIAL SET**  
 NOT FOR BIDDING

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR54 OVER HATCHIE RIVER  
 BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
 2015

1/7/2015 4:36:37 PM  
 WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BRG\02-Final\31-BR-117-21.dgn  
 1-2015-01-16-23 - T001 - Bridge Repair over Hatchie River Drawings\BRG\02-Final\31-BR-117-21.dgn

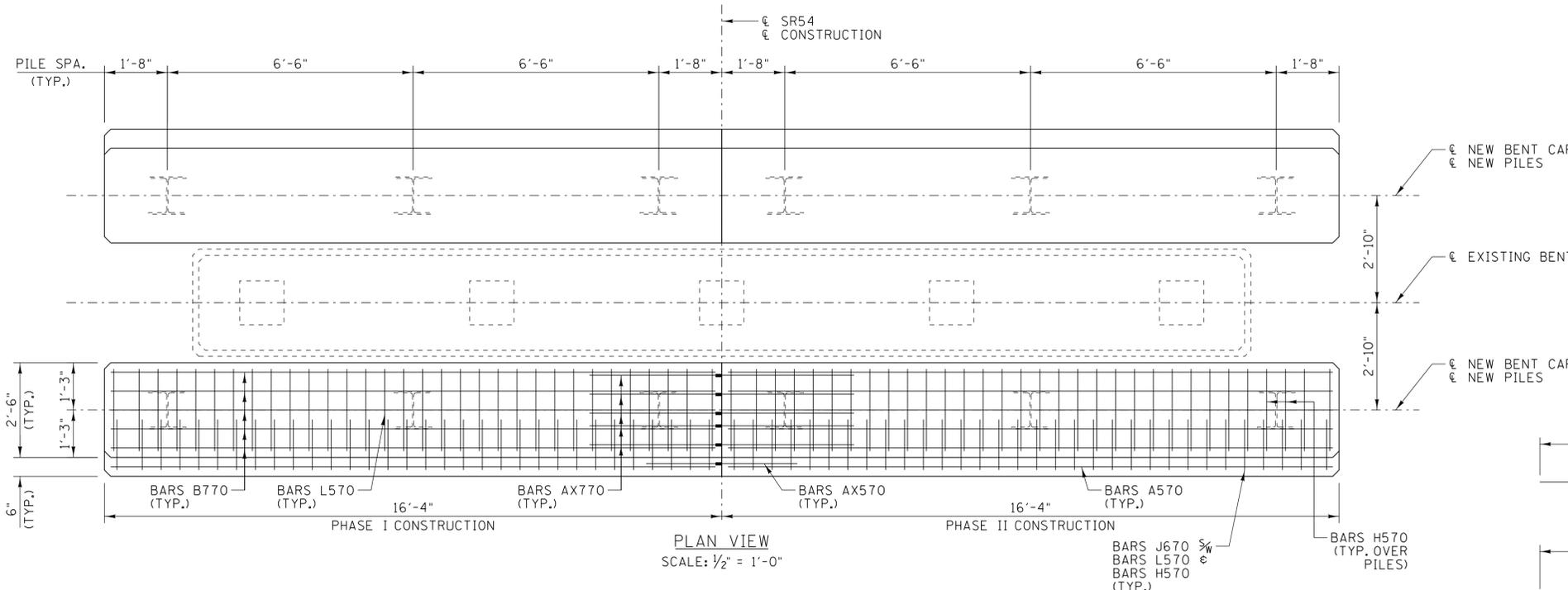
DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
 DRAWN BY C. W. THOMAS DATE JAN. 2014  
 SUPERVISED BY J. H. RUDELL DATE JAN. 2014  
 CHECKED BY A. J. KHAIRI DATE JAN. 2014

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

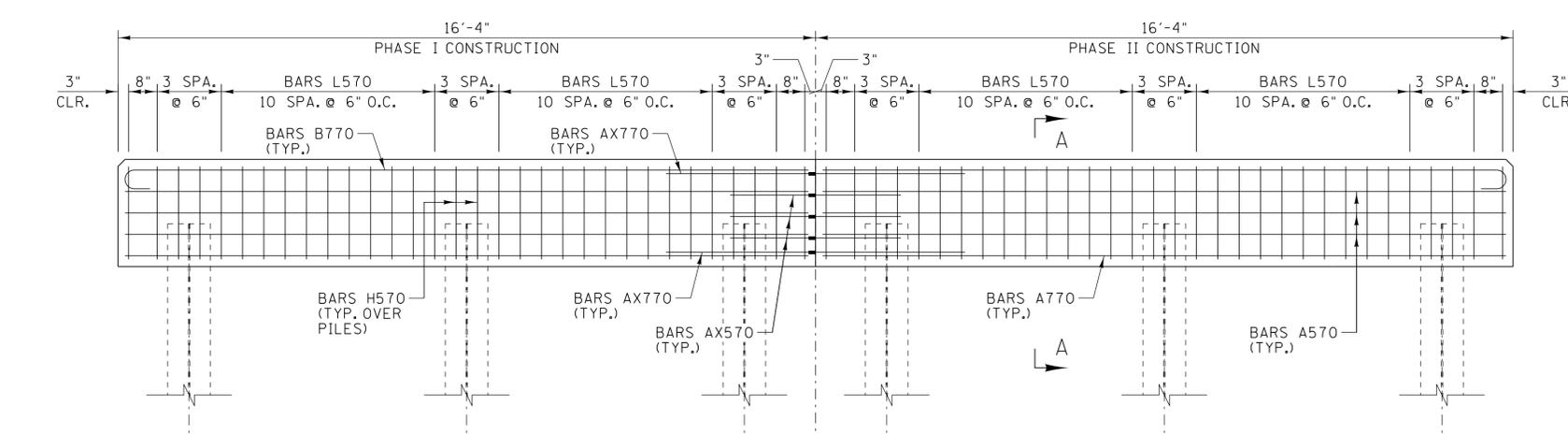
BR-117-21

PROJECT NO.	YEAR	SHEET NO.	
84004-4224-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

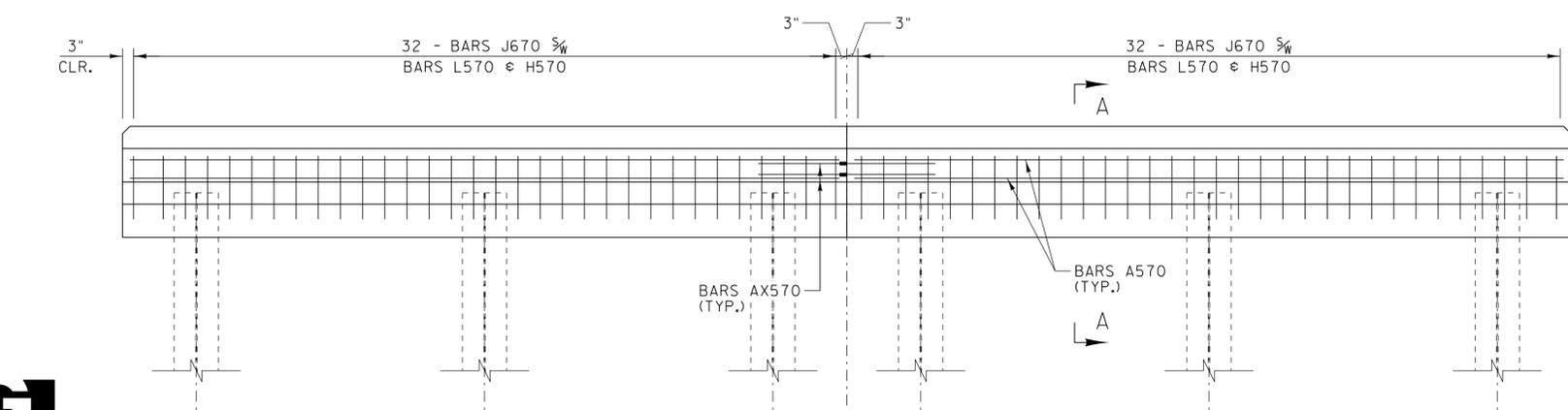
**NOTES:**  
 COST OF REINFORCING STEEL TO BE INCLUDED IN ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.  
 COST OF FORMING AND POURING HIGH EARLY STRENGTH CONCRETE FOR NEW BENT CAPS TO BE INCLUDED UNDER ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.  
 ALL COSTS ASSOCIATED WITH TRANSPORTING, DRIVING, & ANY INCIDENTAL CUTTING/SPLICING OF PILES AT NEW BENT CAPS SHALL BE INCLUDED UNDER ITEM NO. 606-03.03, STEEL PILES (12 INCH), L.F.  
 ALL PILES TO BE DRIVEN TO REFUSAL OR TO AN ULTIMATE BEARING CAPACITY OF 45 TONS. EACH PILE SHALL HAVE A LENGTH OF 65'.



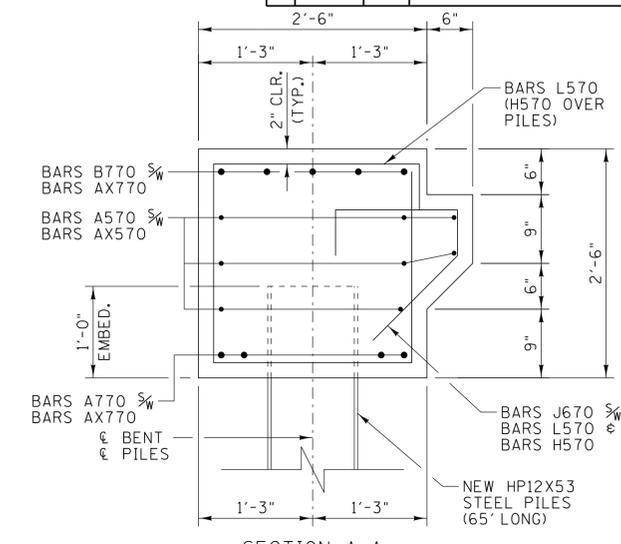
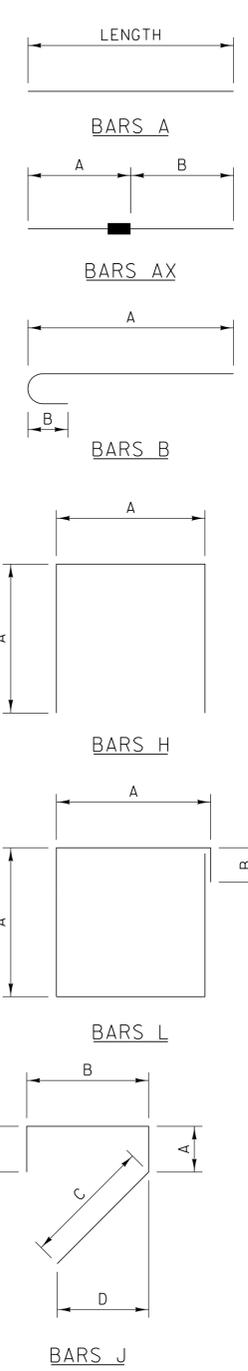
**PLAN VIEW**  
 SCALE: 1/2" = 1'-0"



**ELEVATION VIEW**  
 SCALE: 1/2" = 1'-0"



**ELEVATION VIEW**  
 (SHOWING BRACKET REINFORCEMENT)  
 SCALE: 1/2" = 1'-0"



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

BILL OF STEEL							
BENT CAP REINFORCEMENT, 6 REQ'D							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A570	5	16					16'-0"
A770	7	8					16'-0"
* AX570	5	8	2'-0"	2'-0"			4'-0"
* AX770	7	9	3'-6"	3'-6"			7'-0"
B770	7	10	16'-0"	7"			16'-10"
H570	5	12	2'-2"				6'-6"
J670	6	64	6"	1'-4"	1'-5"	1'-0"	3'-9"
L570	5	52	2'-2"	6"			9'-2"

**NOTES:**  
 ALL BAR DIMENSIONS ARE OUT-TO-OUT.  
 ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.  
 \*NO. REQ'D SHOWN FOR ONE (1) BENT LOCATION, BENT CAP REINFORCEMENT REQUIRED AT SIX (6) BENT LOCATIONS.  
 \* THREADED FOR MECHANICAL COUPLER.

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION

**UNOFFICIAL SET**  
 NOT FOR BIDDING

BRIDGE REPAIR DETAILS  
 SR54 OVER HATCHIE RIVER  
 BRIDGE NO. 84-SR54-9.60

TIPTON COUNTY  
 2015

1/7/2015 4:36:38 PM  
 WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BROG\02-Final\32-BR-117-22.dgn  
 L:\coba\172015 1/7/2015 4:36:38 PM  
 WORKSPACE: T001 Bridge Repair over Hatchie River Drawings\BROG\02-Final\32-BR-117-22.dgn



DESIGNED BY J. L. HALBROOK DATE JAN. 2014  
 DRAWN BY C. W. THOMAS DATE JAN. 2014  
 SUPERVISED BY J. H. RUDELL DATE JAN. 2014  
 CHECKED BY A. J. KHAIRI DATE JAN. 2014

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-117-22







