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1		TITLE SHEET
2		ESTIMATED QUANTITIES
3-3A		GENERAL NOTES
3B		PROJECT COMMITMENTS
4-7		TRAFFIC CONTROL PLANS

STANDARD ROADWAY AND STRUCTURE DRAWINGS

ROADWAY DESIGN STANDARDS

DWG. NO.	REVISION	DESCRIPTION
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	9-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS

SAFETY APPURTENANCES AND FENCE

DWG. NO.	REVISION	DESCRIPTION
S-GR-11	11-26-07	W-BEAM AND THREE BEAM BARRIER RAIL AND RUB RAIL ALTERNATES
S-GR-12	5-27-03	W-BEAM BARRIER POST DETAILS AND SPECIFICATIONS
S-GR-13	5-27-03	BARRIER RAIL MOUNTING POST BLOCK-OUTS WITH VERTICAL ADJUSTMENT HOLES
S-GR-14	4-17-12	W-BEAM BARRIER FASTENING HARDWARE AND BRIDGE APPROACH DELINEATORS
S-GR-15	6-30-05	W-BEAM BARRIER TERMINAL ELEMENT DETAILS
S-GR-18	5-15-08	GUARDRAIL TERMINAL (TYPE-IN-LINE) AND SHOULDER LINE DETAIL
S-GR-23	9-11-02	GUARDRAIL ATTACHMENTS TO STRUCTURES AND PROTECTIVE GUARDRAIL AT BRIDGE END DETAILS
S-GR-24	5-15-08	GUARDRAIL END TERMINALS AT BRIDGE ENDS

TRAFFIC CONTROL APPURTENANCES

DWG. NO.	REVISION	DESCRIPTION
T-FAB-1	5-27-97	FLASHING YELLOW ARROW BOARD
T-M-1	11-1-11	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS

EROSION PREVENTION AND SEDIMENT CONTROL

DWG. NO.	REVISION	DESCRIPTION
EC-STR-3C	4-1-08	SILT FENCE WITH WIRE BACKING
EC-STR-3E	4-1-08	SILT FENCE FABRIC JOINING DETAILS

LIST OF STANDARD DRAWINGS

DWG. NO.	REVISION	DESCRIPTION
STD-1-ISS	6-01-11	BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET
STD-1-2SS		STEEL SLIDER PLATE ASSEMBLIES FOR SINGLE SLOPE CONCRETE AND BRIDGE DECK DRAIN DETAILS - 2007
STD-3-1	11-01-10	STRIP SEAL EXPANSION JOINT
STD-3-2	11-01-10	STRIP SEAL EXPANSION JOINT
STD-11-2	7-13-07	STANDARD CONCRETE CLASSIC RAIL
STD-14-3	10-15-08	STANDARD DETAILS FOR PRESTRESSED BOX BEAMS
SBR-2-115	1-04-96	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT REPLACEMENT CONSTRUCTION TYPES "A" THRU "J" - 1991
SBR-2-116	1-04-96	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT REPLACEMENT TYPES "A" THRU "J" - 1991
SBR-2-119	5-30-96	STRIP SEAL EXPANSION JOINTS - REPLACEMENT CONSTRUCTION DETAILS TYPE "E" AND "F" - 1991
SBR-2-138	11-05-01	STANDARD SHOWING DETAILS FOR ATTACHING NEW GUARDRAIL AT EXISTING BRIDGE END AND ALONG EXISTING BRIDGE RAIL - 1992
SBR-2-140	11-05-01	STANDARD SHOWING DETAILS FOR ATTACHING NEW GUARDRAIL ALONG EXISTING BRIDGE RAILS - 1992

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

T.D.O.T. MANAGER MIKE LAWSON
 DESIGNED BY GARVER, LLC
 DESIGNER A. J. KHAIRI
 PE NO. 23945-4272-04

CHECKED BY J. H. RUDELL
 PIN. NO. 117421.00

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING

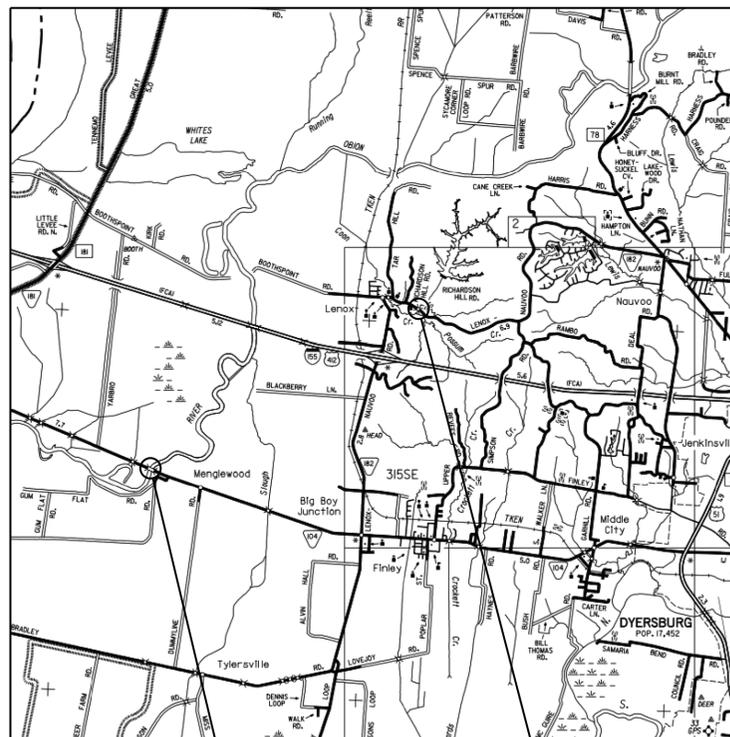
DYER COUNTY

BRIDGE NOS. 23-SR104-6.89 OVER OBION RIVER
AND 23-SR182-4.34 OVER COON CREEK

BRIDGE REPAIR

STATE ROUTES 104 & 182 F.A.H.S. NO.

SCALE: 1" = 1 MILE



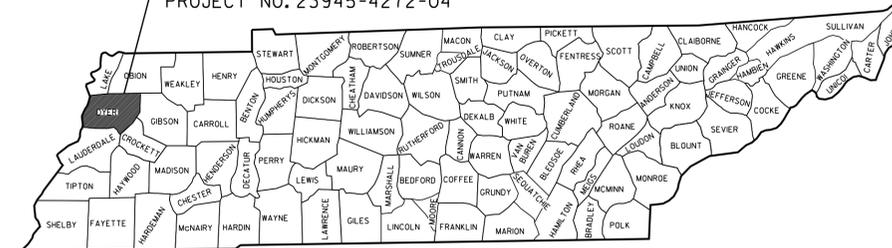
PROJECT LENGTH
0.00 MILE

PROJECT NO. 23945-4272-04
SR104 - L.M. 6.89

PROJECT NO. 23945-4272-04
SR182 - L.M. 4.34

TENN.	YEAR	SHEET NO.
	2014	1
FED AID PROJ NO.		
STATE PROJ NO.	23945-4272-04	

DYER COUNTY
PROJECT NO. 23945-4272-04



LIST OF DRAWINGS

DWG. NO.	DRAWING
BR-115-118	LAYOUT OF BRIDGE TO BE REPAIRED (4.34)
BR-115-119	LAYOUT OF BRIDGE TO BE REPAIRED (6.89)
BR-115-120	ESTIMATED QUANTITIES
BR-115-121	GENERAL NOTES
BR-115-121A	GENERAL NOTES
BR-115-122	BRIDGE REPAIR DETAILS
BR-115-123	BRIDGE REPAIR DETAILS
BR-115-124	BRIDGE REPAIR DETAILS
BR-115-125	BRIDGE REPAIR DETAILS
BR-115-126	BRIDGE REPAIR DETAILS
BR-115-127	BRIDGE REPAIR DETAILS
BR-115-128	BRIDGE REPAIR DETAILS
BR-115-129	BRIDGE REPAIR DETAILS
BR-115-130	BRIDGE REPAIR DETAILS
BR-115-131	BRIDGE REPAIR DETAILS
BR-115-132	BRIDGE REPAIR DETAILS
BR-115-133	BRIDGE REPAIR DETAILS
BR-115-134	BRIDGE REPAIR DETAILS
BR-115-135	BRIDGE REPAIR DETAILS
BR-115-136	BRIDGE REPAIR DETAILS
BR-115-137	BRIDGE REPAIR DETAILS
BR-115-138	BRIDGE REPAIR DETAILS
BR-115-139	BRIDGE REPAIR DETAILS
BR-115-140	BRIDGE REPAIR DETAILS
BR-115-141	BRIDGE REPAIR DETAILS
BR-115-142	BRIDGE REPAIR DETAILS
BR-115-143	BRIDGE REPAIR DETAILS
BR-115-144	BRIDGE REPAIR DETAILS
BR-115-145	BRIDGE REPAIR DETAILS
BR-115-146	BRIDGE REPAIR DETAILS
BR-115-147	BRIDGE REPAIR DETAILS
BR-115-148	BRIDGE REPAIR DETAILS

LIST OF REFERENCE DRAWINGS

DWG. NO.	DRAWING
BR-6-36	LAYOUT OF BRIDGE
BR-6-37	ESTIMATED QUANTITIES
BR-6-38	ESTIMATED QUANTITIES NOTES
BR-6-39	GENERAL NOTES SHEET 1 OF 2
BR-6-40	GENERAL NOTES SHEET 2 OF 2
BR-6-41	SEQUENCE OF CONSTRUCTION
BR-6-42	SUPERSTRUCTURE REPAIR DETAILS SHEET 1 OF 2
BR-6-43	SUPERSTRUCTURE REPAIR DETAILS SHEET 2 OF 2
BR-6-44	ABUTMENT REPAIR DETAILS
BR-6-45	SUBSTRUCTURE REPAIR DETAILS
C-8-35	LAYOUT OF BRIDGE
C-8-36	DETAILS OF BRIDGE
C-8-37	PIER NOS. 1-4
C-4-53	STANDARD CONCRETE BRIDGES
C-4-54	STANDARD CONCRETE BRIDGES
C-4-56	STANDARD CONCRETE HANDRAIL
C-4-145	STANDARD CONCRETE ABUTMENTS
C-4-146	STANDARD CONCRETE BENTS
C-4-147	STANDARD CONCRETE ABUTMENTS
C-4-148	STANDARD CONCRETE BENTS
C-4-149	STANDARD CONCRETE BRIDGE
C-4-150	HIGH TRUSS BRIDGE
K-34-110	SUPERSTRUCTURE DETAILS
K-34-111	VARIABLE PRESTRESSED BEAM DETAILS SECTIONS, STRAND LOCATIONS & QUANTITIES
K-34-112	ABUTMENT DETAILS
K-34-113	BENTS NO. 1 & 2
K-34-114	BILL OF STEEL
K-15-59	STANDARD CONCRETE HANDRAIL - 1962

ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

APPROVED: Paul D. Degges
PAUL D. DEGGES, CHIEF ENGINEER

DATE _____

APPROVED: John Schroer
JOHN SCHROER, COMMISSIONER

UNOFFICIAL SET
NOT FOR BIDDING

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
DIVISION ADMINISTRATOR DATE _____



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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	23001-4172-04	3B

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISION	DESCRIPTION	STA./LOCATION
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	<p>1. TO MINIMIZE THE RISK TO CONSTRUCTION WORKERS, TDOT IS COMMITTED TO THE REMOVAL OF ASBESTOS CONTAINING MATERIALS (ACM) FROM BRIDGES THAT ARE BEING DEMOLISHED, REHABILITATED OR REPAIRED.</p> <p>2. BRIDGE NO. 23S82030017, SR-182 BRIDGE OVER COON CREEK, L.M. 4.34, HAS ACM IN THE DECK DRAINS. IF THIS MATERIAL IS DISTURBED DURING REPAIR ACTIVITIES, ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS CONTAINING MATERIALS. ACM ABATEMENT SHOULD BE COMPLETED PRIOR TO ANY DEMOLITION ACTIVITIES.</p> <p>3. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.</p> <p>4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT OR DEMOLITION.</p>	DECK DRAINS

UNOFFICIAL SET

 NOT FOR BIDDING



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

PROJECT COMMITMENTS

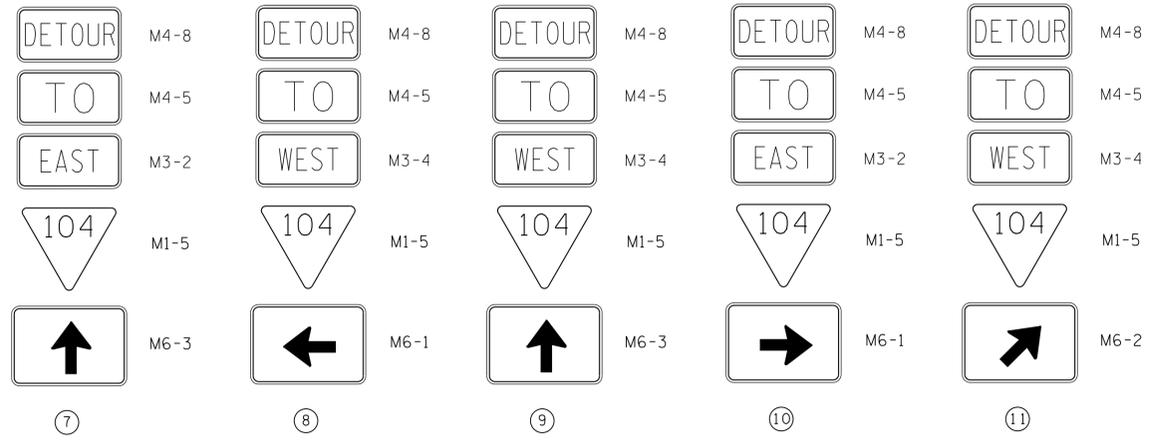
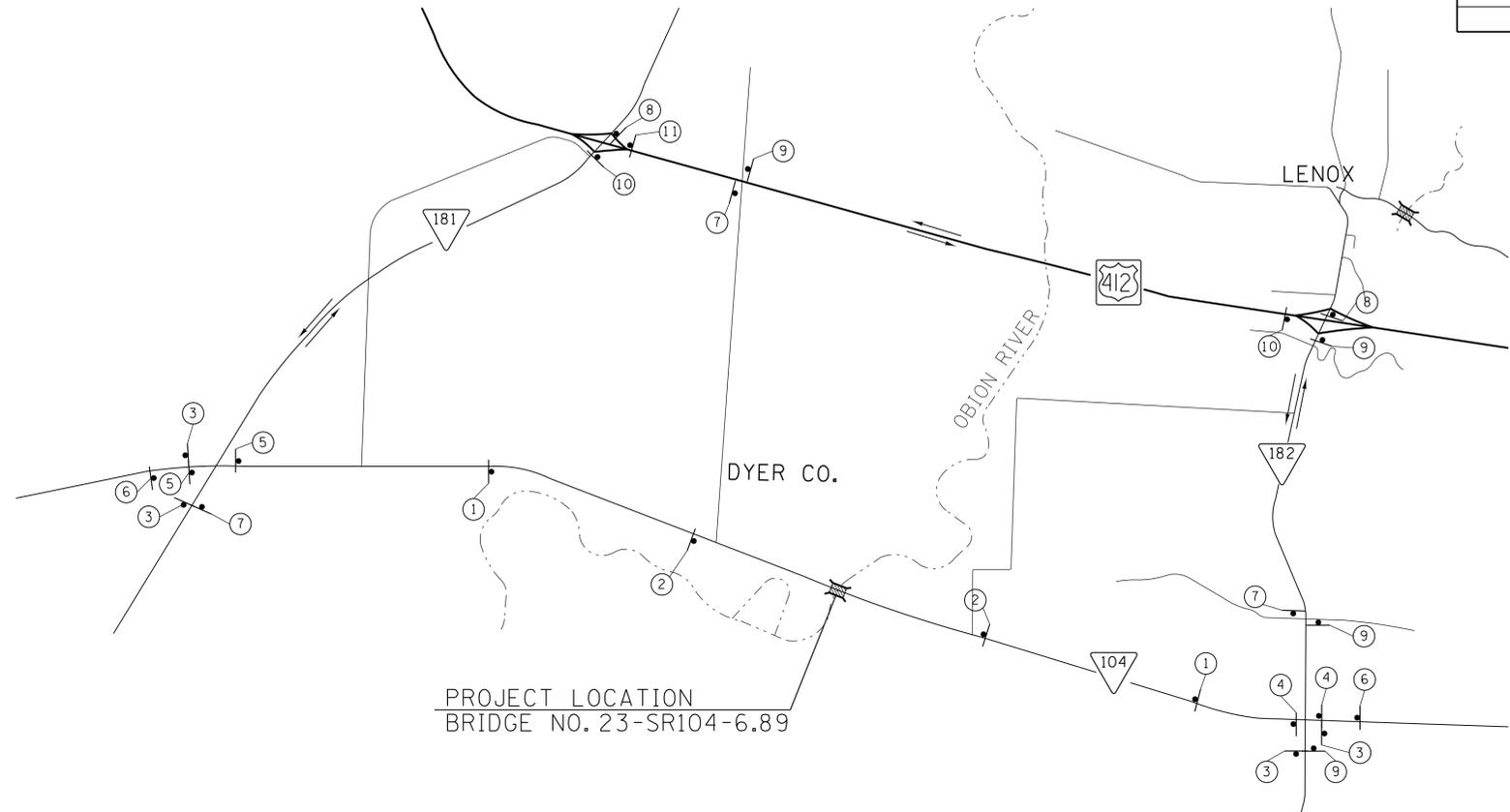
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	23945-4272-04	4

TRAFFIC CONTROL SPECIAL NOTES

- NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROADS, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES, COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION; THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO, (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) CITY SCHOOL SUPERINTENDENT AND (5) UNITED STATES POSTAL SERVICE.
- ALL TEMPORARY CONSTRUCTION, DETOUR, WARNING AND REGULATORY SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD). THIS TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE M.U.T.C.D.
- THE CONTRACTOR SHALL PERIODICALLY INSPECT THE DETOUR ROUTE AS DIRECTED BY THE ENGINEER TO ASSURE ALL APPROPRIATE SIGNS ARE IN PLACE.



TRAFFIC CONTROL (BRIDGE CLOSURE)-PHASE A

NOTE: FOR DETAILS OF BRIDGE CLOSURE SEE SHEET 5.

UNOFFICIAL SET
NOT FOR BIDDING



- LEGEND**
- U.S. HIGHWAY
 - STATE ROUTE
 - SIGN
 - DETOUR SIGN DESIGNATION



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

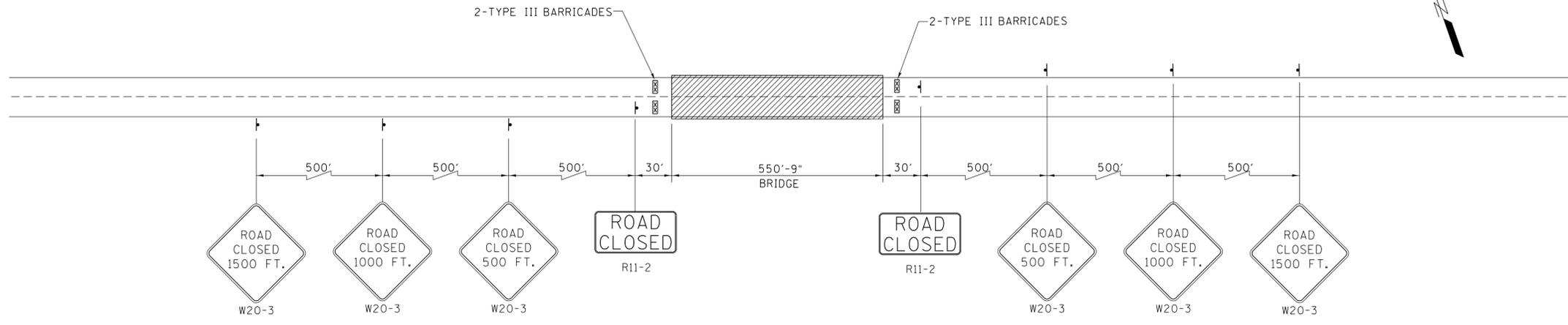
TRAFFIC CONTROL PLAN
BRIDGE NO. 23-SR104-6.89

SCALE: NONE

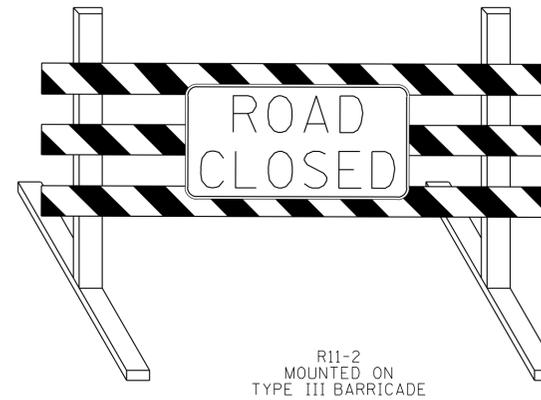
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	23945-4272-04	5



CONSTRUCTION SIGNS (PHASE A)				
DESCRIPTION	MUTCD	SIZE	NO. REQ'D.	AREA (S.F.)
STATE ROUTE	M1-5	30 X 24	12	60.00
EAST	M3-2	24 X 12	5	10.00
WEST	M3-4	24 X 12	7	14.00
TO	M4-5	24 X 12	12	24.00
DETOUR	M4-8	24 X 12	12	24.00
END DETOUR	M4-8A	24 X 18	4	12.00
DETOUR	M4-10L	48 X 18	2	12.00
DETOUR	M4-10R	48 X 18	2	12.00
ARROW	M6-1	21 X 15	4	8.75
ARROW	M6-2	21 X 15	1	2.19
ARROW	M6-3	21 X 15	7	15.31
ROAD CLOSED	R11-2	48 X 30	2	20.00
ROAD CLOSED X MILES AHEAD LOCAL TRAFFIC ONLY	R11-3A	60 X 30	4	50.00
ROAD CLOSED 500 FT.	W20-3	48 X 48	2	32.00
ROAD CLOSED 1000 FT.	W20-3	48 X 48	2	32.00
ROAD CLOSED 1500 FT.	W20-3	48 X 48	2	32.00
SPECIAL 1	-	60 X 30	6	75.00
TOTAL				435.25



LEGEND

- AREA UNDER CONSTRUCTION
- TRAFFIC SIGN
- TYPE III BARRICADE

UNOFFICIAL SET

NOT FOR BIDDING

TRAFFIC CONTROL QUANTITIES			
ITEM NUMBER	DESCRIPTION	UNIT EACH	QUANT.
712-01	TRAFFIC CONTROL	L.S.	0.5
712-06	SIGNS (CONSTRUCTION)	S.F.	436
712-07.03	TEMPORARY BARRICADE (TYPE III)	L.F.	40

NOTE:
FOR DETAILS OF DETOUR, SEE SHEET 4.

TRAFFIC CONTROL (BRIDGE CLOSURE)-PHASE A



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

TRAFFIC CONTROL PLAN

BRIDGE NO. 23-SR104-6.89

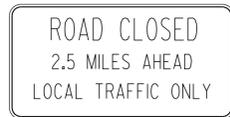
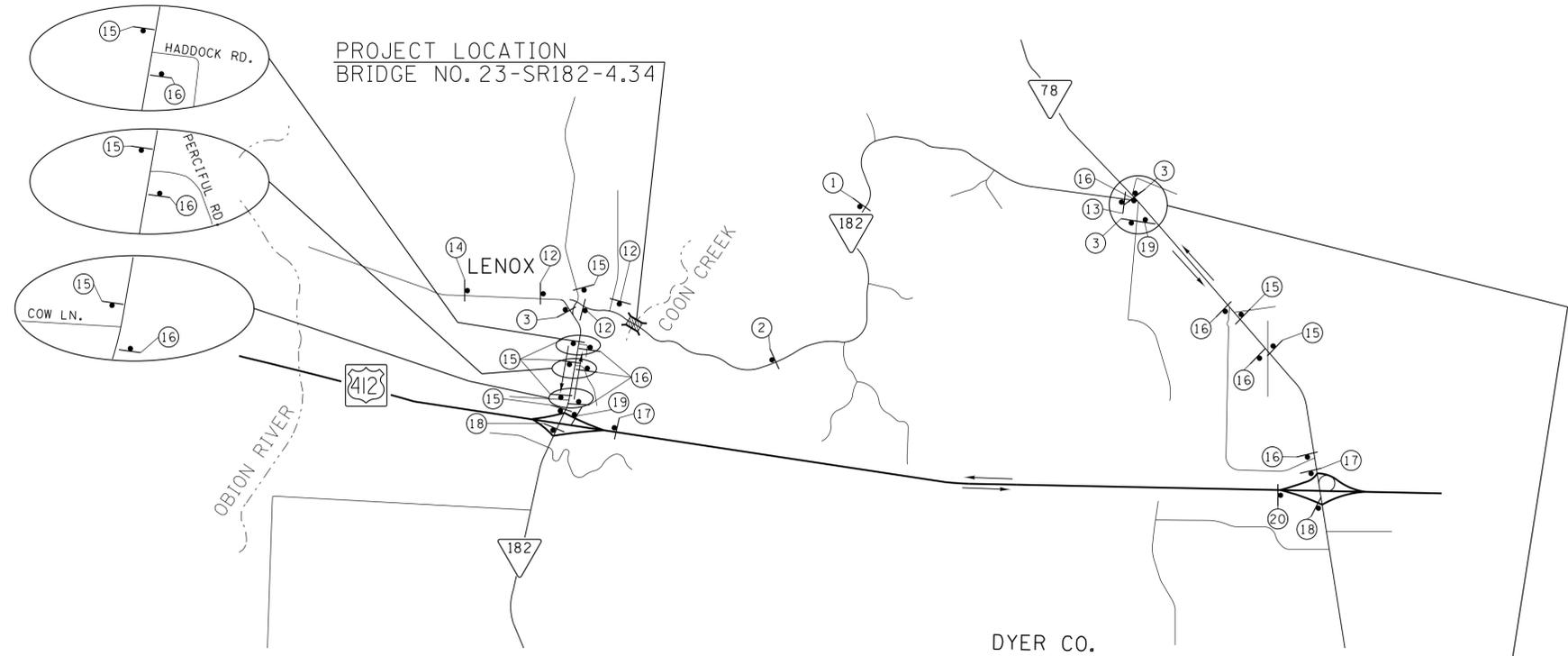
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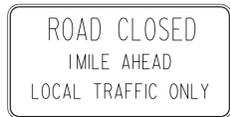
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	23945-4272-04	6

TRAFFIC CONTROL SPECIAL NOTES

- NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROADS, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES, COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION; THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO, (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) CITY SCHOOL SUPERINTENDENT AND (5) UNITED STATES POSTAL SERVICE.
- ALL TEMPORARY CONSTRUCTION, DETOUR, WARNING AND REGULATORY SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD). THIS TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE M.U.T.C.D.
- THE CONTRACTOR SHALL PERIODICALLY INSPECT THE DETOUR ROUTE AS DIRECTED BY THE ENGINEER TO ASSURE ALL APPROPRIATE SIGNS ARE IN PLACE.



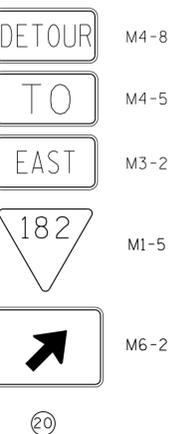
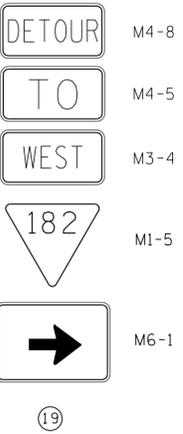
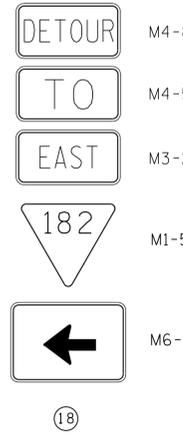
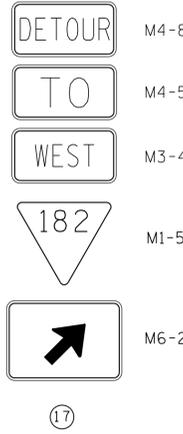
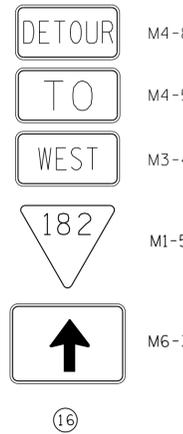
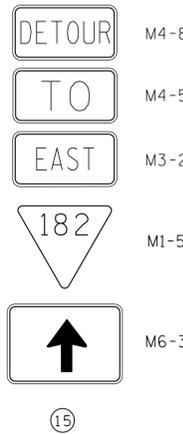
① R11-3A (60" X 30")



② R11-3A (60" X 30")



③ M4-8A (24" X 18")



NOTE:
FOR DETAILS OF BRIDGE CLOSURE
SEE SHEET 9.



- LEGEND**
- ⑤ U.S. HIGHWAY
 - 88 STATE ROUTE
 - SIGN
 - ⊕ DETOUR SIGN DESIGNATION

UNOFFICIAL SET
NOT FOR BIDDING



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

TRAFFIC CONTROL PLAN

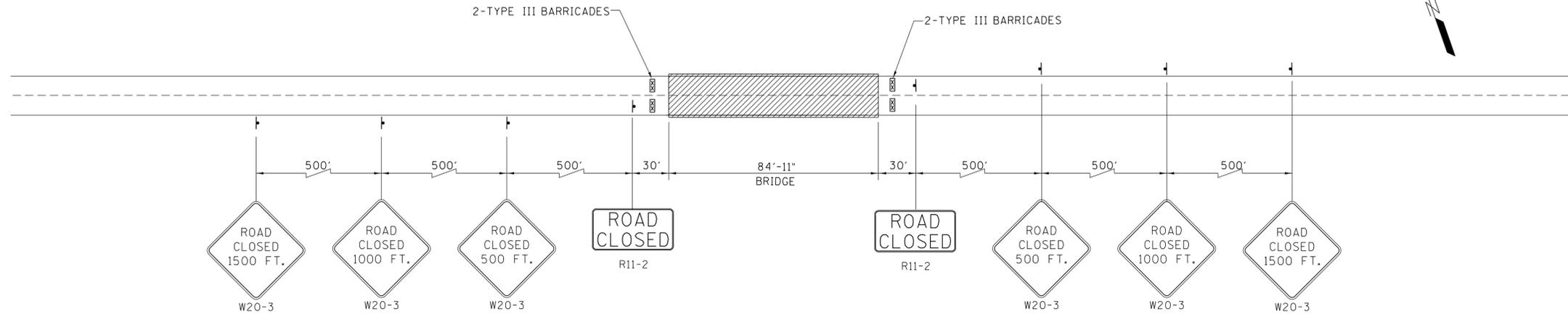
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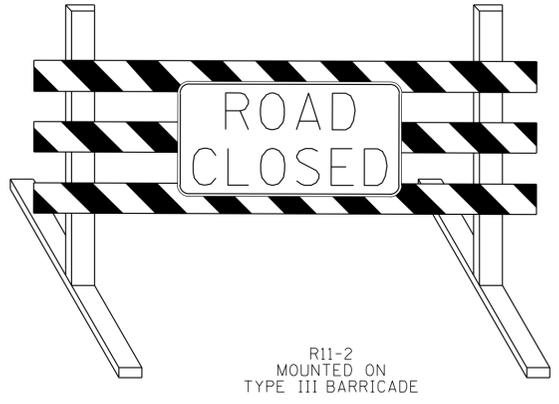


TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	23945-4272-04	7



CONSTRUCTION SIGNS				
DESCRIPTION	MUTCD	SIZE	NO. REQ'D.	AREA (S.F.)
STATE ROUTE	M1-5	30 X 24	21	105.00
EAST	M3-2	24 X 12	10	20.00
WEST	M3-4	24 X 12	11	22.00
TO	M4-5	24 X 12	21	42.00
DETOUR	M4-8	24 X 12	21	42.00
END DETOUR	M4-8A	24 X 18	3	9.00
DETOUR	M4-10L	48 X 18	1	6.00
DETOUR	M4-10R	48 X 18	3	18.00
ARROW	M6-1	21 X 15	4	8.75
ARROW	M6-2	21 X 15	3	6.56
ARROW	M6-3	21 X 15	14	30.63
ROAD CLOSED	R11-2	48 X 30	2	20.00
ROAD CLOSED X MILES AHEAD LOCAL TRAFFIC ONLY	R11-3A	60 X 30	2	25.00
ROAD CLOSED 500 FT.	W20-3	48 X 48	2	32.00
ROAD CLOSED 1000 FT.	W20-3	48 X 48	2	32.00
ROAD CLOSED 1500 FT.	W20-3	48 X 48	2	32.00
SPECIAL 1	-	60 X 30	5	62.50
TOTAL				513.44

TRAFFIC CONTROL QUANTITIES			
ITEM NUMBER	DESCRIPTION	UNIT EACH	QUANT.
712-01	TRAFFIC CONTROL	L.S.	0.5
712-06	SIGNS (CONSTRUCTION)	S.F.	514
712-07.03	TEMPORARY BARRICADE (TYPE III)	L.F.	40



- LEGEND**
- AREA UNDER CONSTRUCTION
 - TRAFFIC SIGN
 - TYPE III BARRICADE

UNOFFICIAL SET
NOT FOR BIDDING



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

TRAFFIC CONTROL PLAN

BRIDGE NO. 23-SR182-4.34

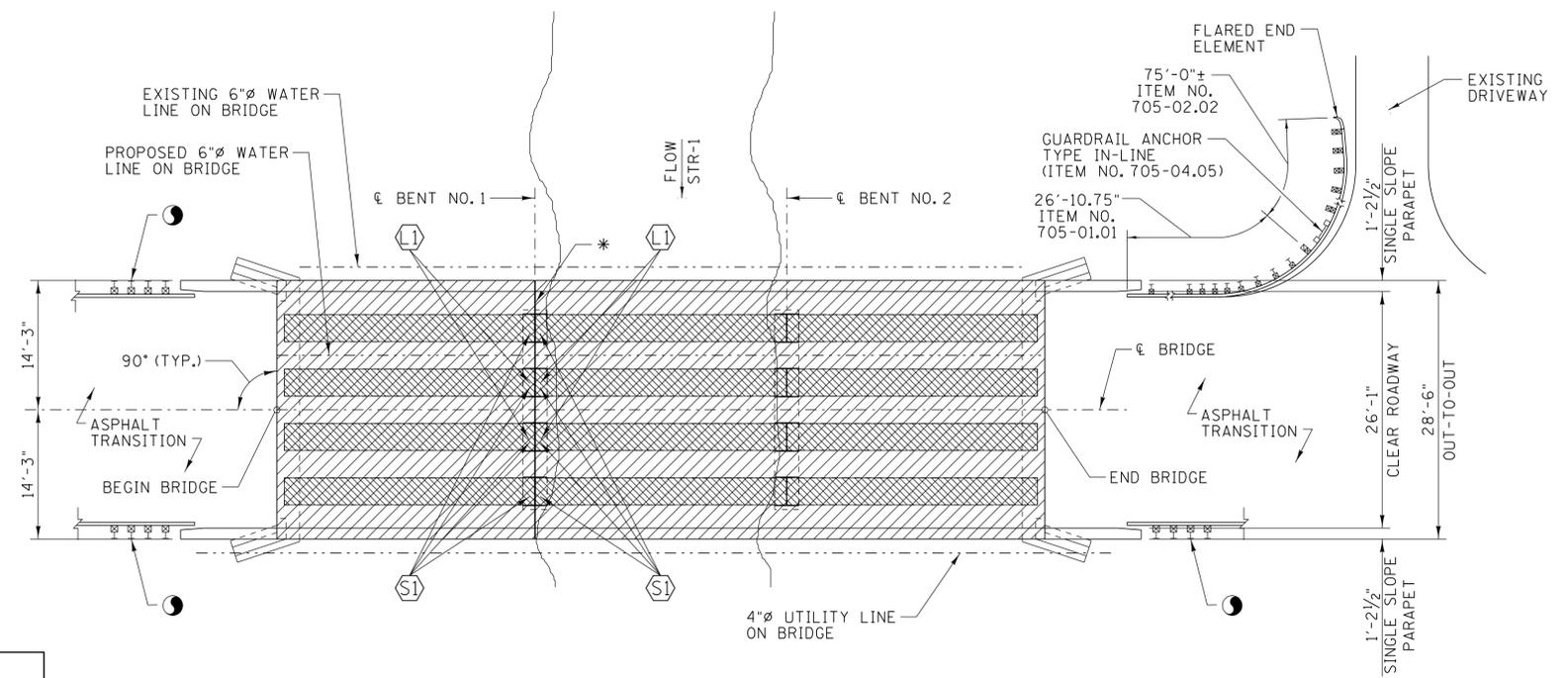
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NOTE:
FOR DETAILS OF DETOUR, SEE SHEET 6.

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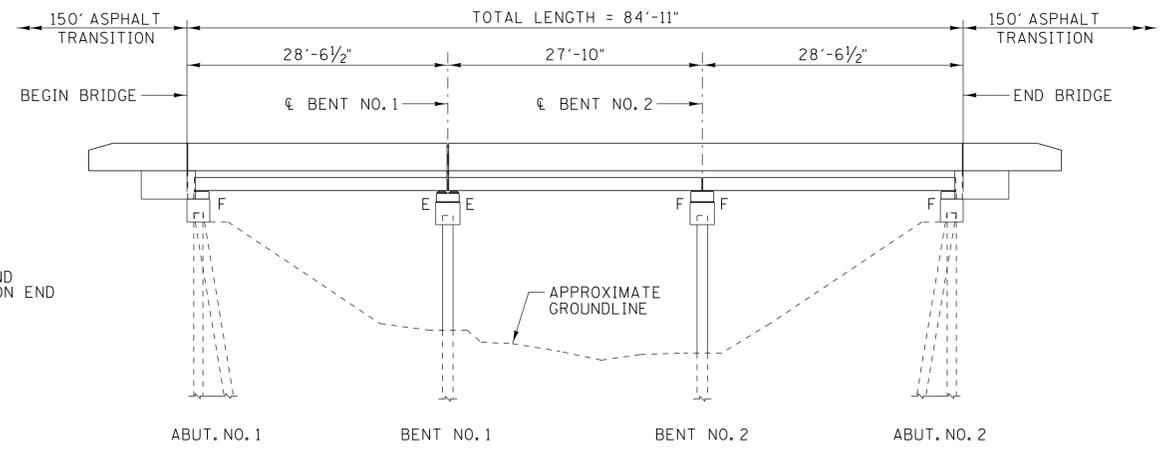


PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



DIMENSIONS TAKEN FROM ORIGINAL CONSTRUCTION PLANS AND INSPECTION REPORTS. IN ADDITION ORIGINAL LAYOUT DWG. NO. K-34-109 IS NOT AVAILABLE. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.

PLAN
SCALE: 1" = 10'-0"



LEGEND
F: DENOTES FIXED END
E: DENOTES EXPANSION END

ELEVATION
SCALE: 1" = 10'-0"

LIST OF REFERENCE DRAWINGS

DWG. NO.	DRAWING
K-34-110	SUPERSTRUCTURE DETAILS
K-34-111	VARIABLE PRESTRESSED BEAM DETAILS, SECTIONS STRAND LOCATIONS AND QUANTITIES
K-34-112	ABUTMENT DETAILS
K-34-113	BENTS NO. 1 AND 2
K-34-114	BILL OF STEEL
K-15-59	STANDARD CONCRETE HANDRAIL

ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

LIST OF DRAWINGS

DWG. NO.	DRAWING
BR-115-118	LAYOUT OF BRIDGE TO BE REPAIRED (4.34)
BR-115-120	ESTIMATED QUANTITIES
BR-115-121	GENERAL NOTES
BR-115-121A	GENERAL NOTES
BR-115-122	BRIDGE REPAIR DETAILS
BR-115-123	BRIDGE REPAIR DETAILS
BR-115-124	BRIDGE REPAIR DETAILS
BR-115-125	BRIDGE REPAIR DETAILS
BR-115-126	BRIDGE REPAIR DETAILS
BR-115-127	BRIDGE REPAIR DETAILS
BR-115-128	BRIDGE REPAIR DETAILS
BR-115-129	BRIDGE REPAIR DETAILS
BR-115-130	BRIDGE REPAIR DETAILS
BR-115-131	BRIDGE REPAIR DETAILS
BR-115-132	BRIDGE REPAIR DETAILS
BR-115-133	BRIDGE REPAIR DETAILS
BR-115-134	BRIDGE REPAIR DETAILS
BR-115-135	BRIDGE REPAIR DETAILS
BR-115-144	BRIDGE REPAIR DETAILS
BR-115-146	BRIDGE REPAIR DETAILS

SCOPE OF WORK

REMOVE DETERIORATED 4" ASPHALT OVERLAY. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-122 AND BR-115-124.

REMOVE EXISTING DETERIORATED CONCRETE DECK, CURB, BRIDGE RAIL AND AASHTO I-BEAMS. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-122 AND BR-115-124.

PROVIDE NEW 8 1/2" REINFORCED CONCRETE DECK. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-122 THRU BR-115-124 AND BR-115-129.

PROVIDE NEW 17"x36" PRESTRESSED CONCRETE BOX BEAMS AND CONCRETE RISER BLOCKS FOR ALL THREE SPANS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-130.

PROVIDE NEW INTEGRAL BACKWALL AT BOTH ABUTMENTS AND CONCRETE DIAPHRAGMS AT BOTH BENTS. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-127 AND BR-115-128.

PROVIDE NEW STD-1-1SS SINGLE SLOPE PARAPETS AND CONCRETE END POSTS AT ALL FOUR CORNERS OF BRIDGE. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-132.

PROVIDE NEW W-BEAM GUARDRAIL AND GUARDRAIL END TERMINALS AS SHOWN ON DETAILS THIS DWG.

PROVIDE NEW STRIP SEAL EXPANSION JOINT AT BENT NO. 1. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-125.

PROVIDE NEW ELASTOMERIC BEARING ASSEMBLIES AT BENT NO. 1. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-133.

PROVIDE LATERAL SEISMIC RESTRAINTS AT BENT NO. 1. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-135.

PROVIDE LONGITUDINAL SEISMIC RESTRAINTS FOR ALL BEAMS AT BENT NO. 1. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-146.

PROVIDE SEISMIC CONNECTION BETWEEN EXISTING CONCRETE PILES AND BENT CAPS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-134.

TEXTURE COAT NEW PARAPETS AND SLAB CANTILEVERS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-144.

PROVIDE 150' ASPHALT APPROACH PAVEMENT TRANSITION AT BOTH ENDS OF BRIDGE. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-131.

PROVIDE TEMPORARY SUPPORT FOR EXISTING 6" DIA. WATER LINE. RE-INSTALL WATER LINE ON NEW CONCRETE DECK OVERHANG IN THE FINAL CONDITION. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-122 THRU BR-115-124

PROVIDE SPALL REPAIR AT FIELD DESIGNATED LOCATIONS.

PROVIDE TRAFFIC CONTROL FOR SUPERSTRUCTURE REPLACEMENT BY CLOSING THE BRIDGE AND DETOURING TRAFFIC.

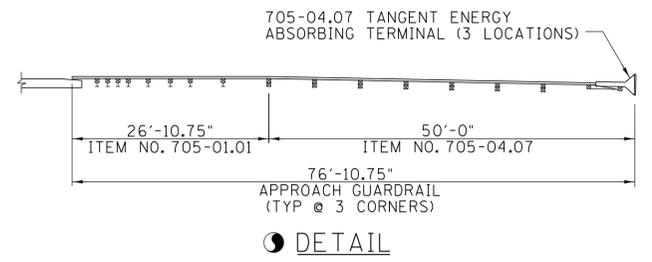
4.34

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED

SR182 OVER COON CREEK
BRIDGE NO. 23-SR182-4.34

DYER COUNTY
2014



DETAIL

UNOFFICIAL SET
NOT FOR BIDDING



3/12/2014 9:09:55 AM
 WORKSPACE: T001 Bridge Repair over Obion River & Drawings\BRG\Final\04 - BR-115-118.dgn
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DESIGNED BY S. F. HARPER DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
 SUPERVISED BY J. H. RUDELL DATE AUGUST 2013
 CHECKED BY A. J. KHAIRI DATE AUGUST 2013
 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

SCOPE OF WORK

REMOVE EXISTING DETERIORATED CONCRETE SLAB, CAST-IN-PLACE BEAMS, AND BRIDGE RAIL IN SPAN NOS. 1 AND 2. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-137 AND BR-115-138.

PROVIDE NEW 8 1/2" REINFORCED CONCRETE DECK IN SPAN NOS. 1 AND 2. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-143.

PROVIDE NEW 17"x36" PRESTRESSED CONCRETE BOX BEAMS AND CONCRETE RISER BLOCKS FOR SPAN NOS. 1 AND 2. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-140.

PROVIDE NEW INTEGRAL BACKWALL AT ABUTMENT NO. 1 AND CONCRETE DIAPHRAGMS AT BENTS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-138.

PROVIDE NEW CONCRETE BRIDGE RAIL IN SPAN NOS. 1 AND 2. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-137 AND BR-115-138.

PROVIDE NEW CONCRETE END BLOCK WITH STRIP SEAL EXPANSION JOINT AND HP12X53 STEEL PILES AT ABUTMENT NO. 1. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-142.

SEAL SIDEWALK FOR ENTIRE LENGTH OF BRIDGE (TYP. BOTH SIDES). FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-135 AND BR-115-145.

PROVIDE LATERAL SEISMIC RESTRAINTS FOR ALL BENTS AND ABUTMENTS AT APPROACH SPANS. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-135 AND BR-115-145.

PROVIDE LONGITUDINAL SEISMIC RESTRAINTS AT ALL SPANS. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-146 THRU BR-115-148.

PROVIDE EPOXY INJECTION CRACK REPAIR AT FIELD DESIGNATED LOCATIONS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-144.

REMOVE AND REPLACE DAMAGED GUARDRAIL END TERMINAL AT ALL CORNERS OF BRIDGE.

PROVIDE SPALL REPAIR AT FIELD DESIGNATED LOCATIONS. USE OVERHEAD PATCHING MATERIAL FOR SLAB UNDERSIDE SPALLING. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-144.

CLEAR DRIFT DEBRIS FROM UPSTREAM NOSE OF BOTH RIVER PIERS.

CLEAR DEBRIS AND CLEAN ALL EXISTING STRIP SEAL EXPANSION JOINTS FOR ENTIRE BRIDGE.

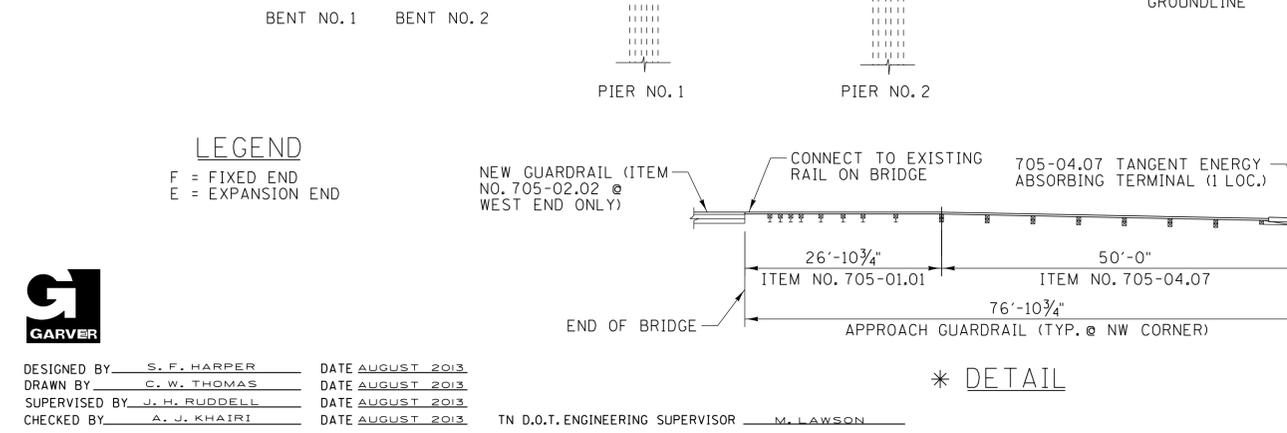
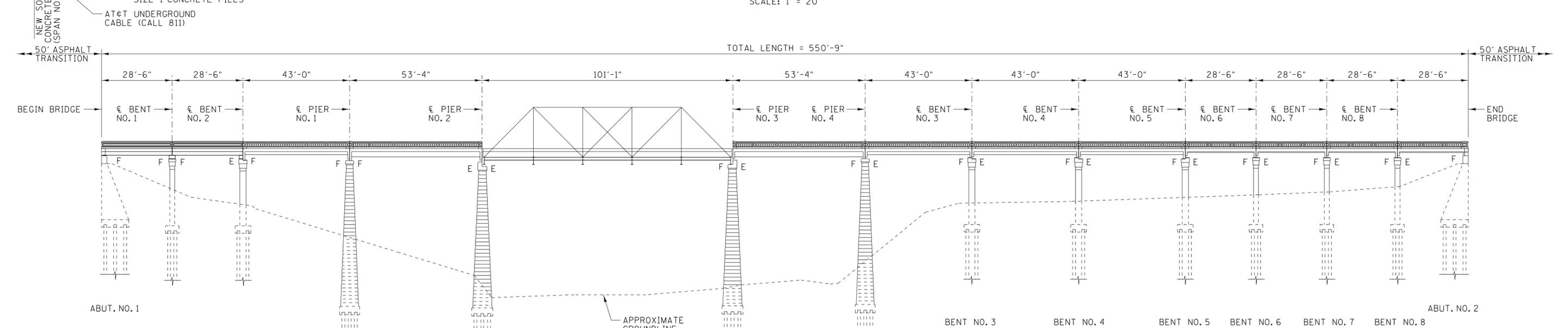
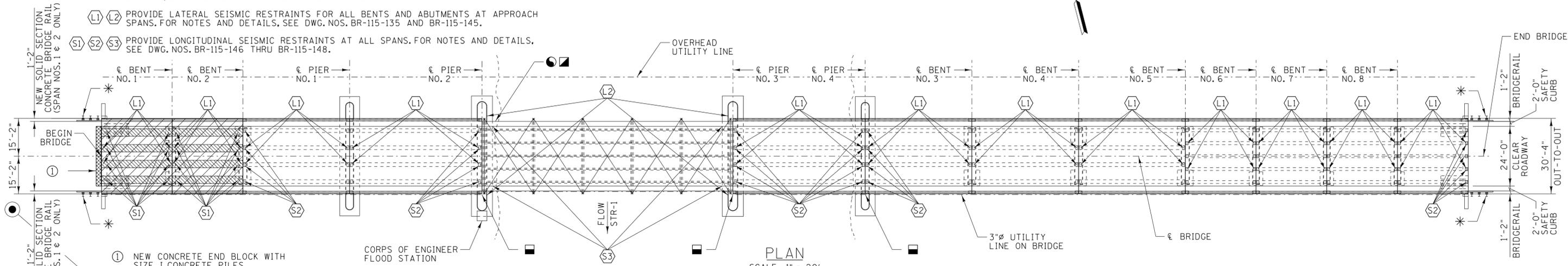
PROVIDE 50' ASPHALT TRANSITION AT BEGIN BRIDGE. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-143.

PROVIDE TRAFFIC CONTROL FOR ALL WORK BY CLOSING THE BRIDGE AND DETOURING TRAFFIC.

HEAT STRAIGHTEN DAMAGED TRUSS CHORD. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-141.

REMOVE AND REPLACE DAMAGED STEEL LATTICE HANDRAIL. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-141.

PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



LIST OF DRAWINGS

DWG. NO.	DRAWING
BR-115-119	LAYOUT OF BRIDGE TO BE REPAIRED (6.89)
BR-115-120	ESTIMATED QUANTITIES
BR-115-121	GENERAL NOTES
BR-115-121A	GENERAL NOTES
BR-115-135	BRIDGE REPAIR DETAILS
BR-115-136	BRIDGE REPAIR DETAILS
BR-115-137	BRIDGE REPAIR DETAILS
BR-115-138	BRIDGE REPAIR DETAILS
BR-115-139	BRIDGE REPAIR DETAILS
BR-115-140	BRIDGE REPAIR DETAILS
BR-115-141	BRIDGE REPAIR DETAILS
BR-115-142	BRIDGE REPAIR DETAILS
BR-115-143	BRIDGE REPAIR DETAILS
BR-115-144	BRIDGE REPAIR DETAILS
BR-115-145	BRIDGE REPAIR DETAILS
BR-115-146	BRIDGE REPAIR DETAILS
BR-115-147	BRIDGE REPAIR DETAILS
BR-115-148	BRIDGE REPAIR DETAILS

LEGEND
 F = FIXED END
 E = EXPANSION END

ELEVATION
 SCALE: 1" = 20'

UNOFFICIAL SET
 NOT FOR BIDDING

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED

SR104 OVER OBION RIVER
 BRIDGE NO. 23-SR104-6.89

DYER COUNTY
 2014

AMJAD S. KHAIRI
 REGISTERED ENGINEER
 AGRICULTURE
 COMMERCIAL NO. 100050
 STATE OF TENNESSEE

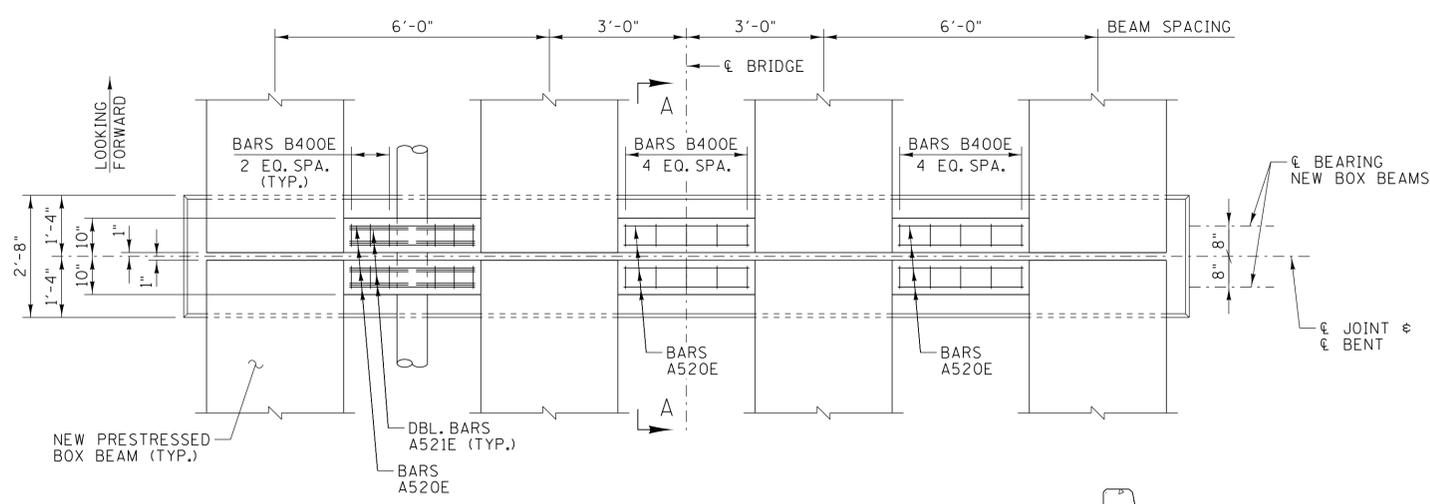
DESIGNED BY S. F. HARPER DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
 SUPERVISED BY J. H. RUDDELL DATE AUGUST 2013
 CHECKED BY A. J. KHAIRI DATE AUGUST 2013

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

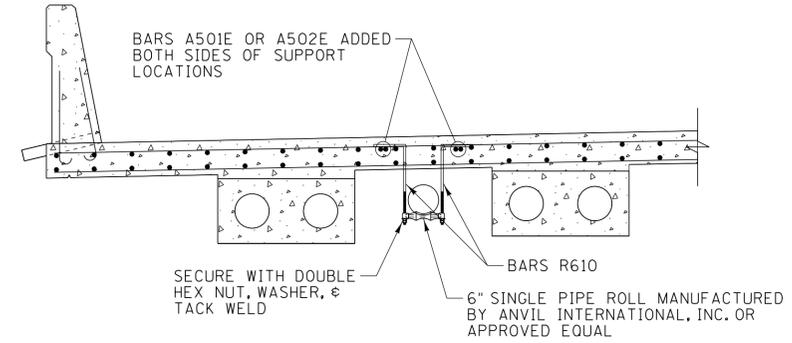
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PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



PLAN AT BENT NO. 1 - SHOWING CONSTRUCTION
SCALE: 1/2" = 1'-0"

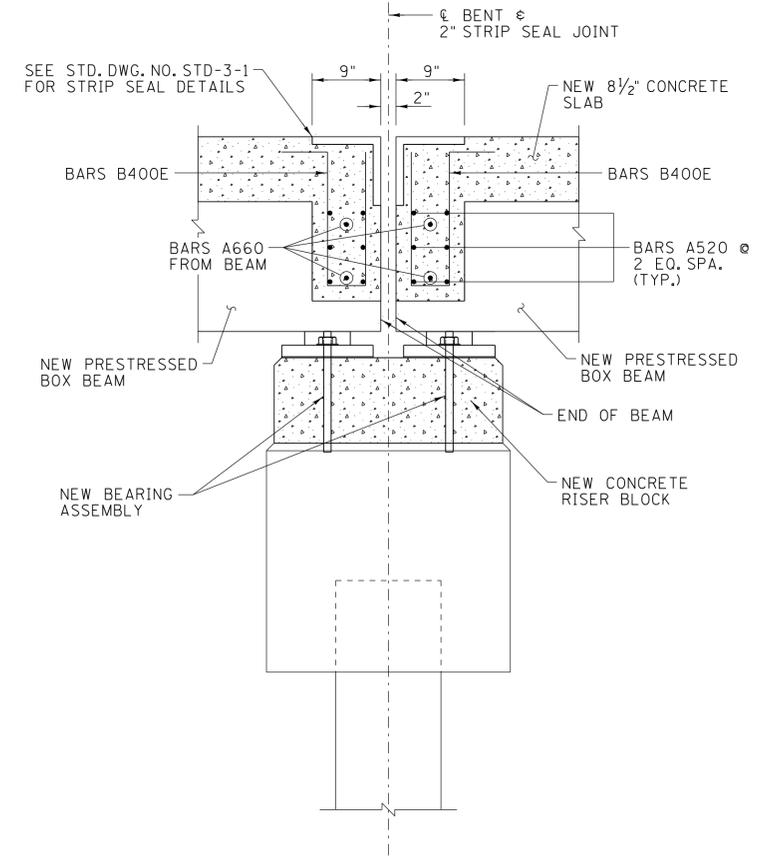
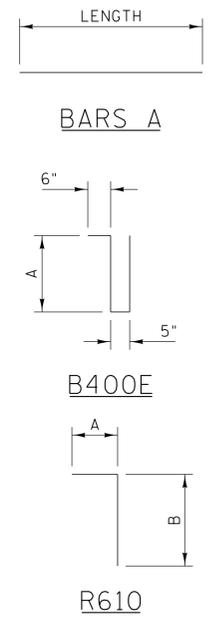


WATERLINE SUPPORT DETAIL - 9 REQ'D
(3 SUPPORTS PER SPAN, EQ. SPACING)
SCALE: 1/2" = 1'-0"

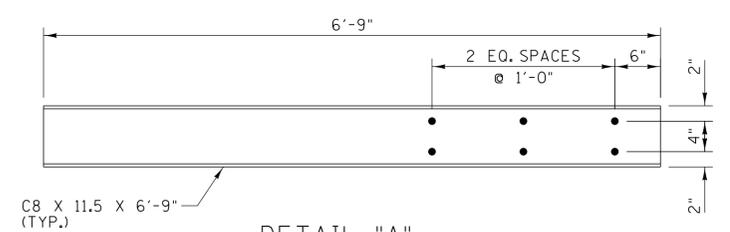
BILL OF STEEL							
DIAPHRAGM REINFORCEMENT - BENT NO. 1							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A520E	5	36					2'-8"
A521E	5	8					1'-7"
*A660	5	24					2'-0"
B400E	4	32	1'-8"				4'-3"
WATER LINE SUPPORT REINFORCEMENT							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
**R610	6	18	1'-0"	2'-0"			3'-0"

NOTES:
 ALL BAR DIMENSIONS ARE OUT-TO-OUT.
 BARS ENDING IN "E" SHALL BE EPOXY COATED.
 ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.
 NUMBER OF BARS IS FOR BENT NO. 1 ONLY.
 * THREADED FOR MECH. COUPLER
 ** BAR SHALL BE 3/4" THREADED ROD.

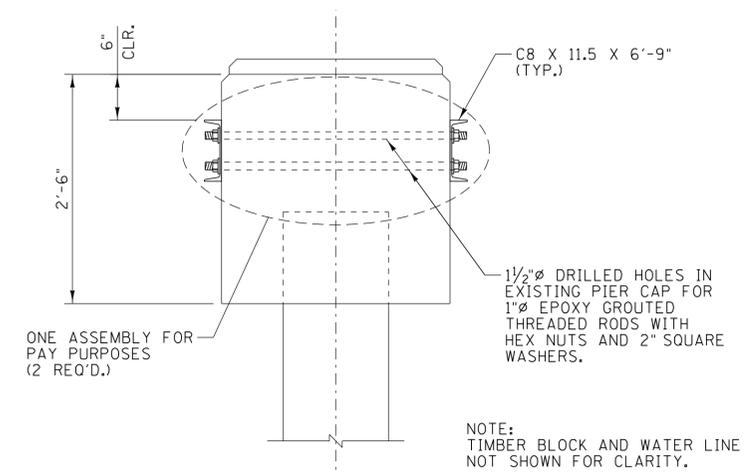
NOTES:
 FOR DETAILS OF BEARING ASSEMBLIES, SEE DWG. NO. BR-115-133.
 FOR STRIP SEAL JOINT DETAILS, SEE STD. DWG. NOS. STD-3-1, STD-3-2 AND BR-115-125.
 FOR RISER BLOCK DETAILS, SEE DWG. NO. BR-115-126.
 COST OF TEMPORARY SUPPORT SYSTEM FOR EXISTING 6"Ø WATER LINE UTILITY SHALL BE INCLUDED IN ITEM NO. 604-10.26, BRACING, EACH. FOR ADDITIONAL NOTES, SEE DWG. NO. BR-115-122.
 ALL COSTS TO RELOCATE THE 6"Ø WATER LINE SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED IN OTHER ITEMS OF WORK. THE CONTRACTOR SHALL COORDINATE ALL UTILITY WORK WITH LOCAL UTILITY COMPANIES.



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



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



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

(SHOWING TEMPORARY WATER LINE SUPPORT AT BENT LOC.)

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4.34

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR182 OVER COON CREEK
BRIDGE NO. 23-SR182-4.34

DYER COUNTY
2014

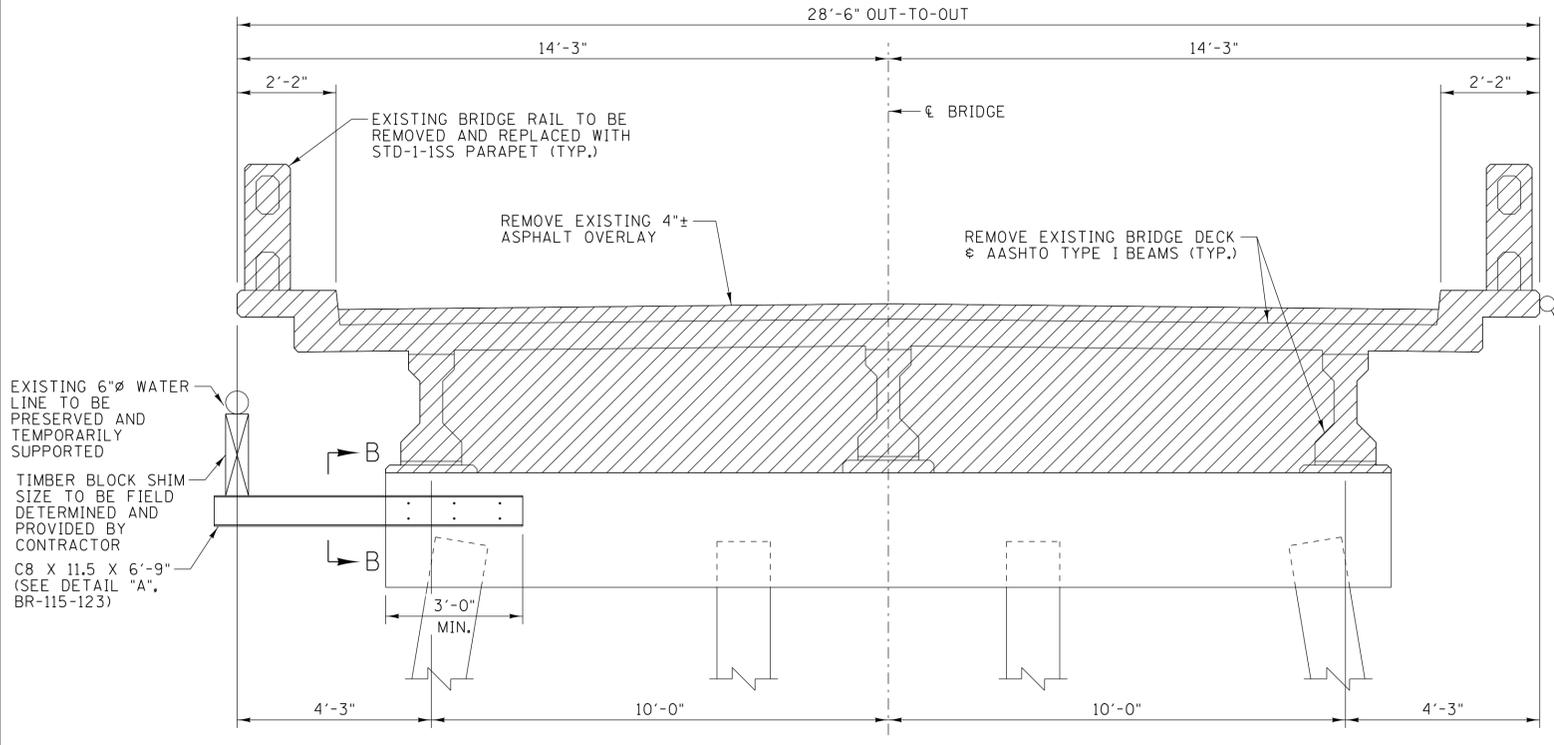


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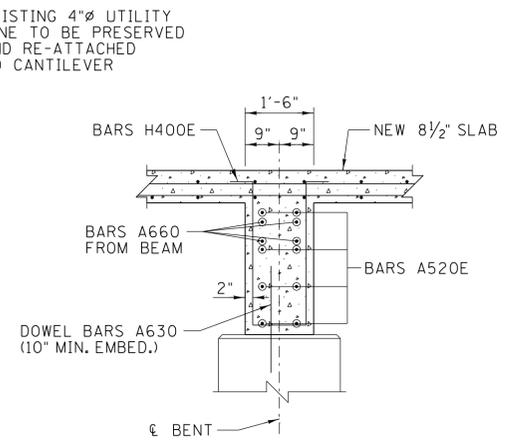
DESIGNED BY S. F. HARPER DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
 SUPERVISED BY J. H. RUDDLELL DATE AUGUST 2013
 CHECKED BY A. J. KHAIRI DATE AUGUST 2013
 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



TYPICAL SECTION - DEMOLITION
(LOOKING FORWARD AT BENT NO. 2)
SCALE: 1/2" = 1'-0"

NOTE:
FOR SECTION B-B, SEE
DWG. NO. BR-115-123



SECTION A-A
SCALE: 1/2" = 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 OF 0.02 FT/FT. THE LONGITUDINAL GRADE AND CROSS SLOPE SHALL BE PROFILED USING METHODS SUITABLE FOR NEW CONSTRUCTION.

COST OF EPOXY COATED REINFORCING STEEL SHALL BE PAID FOR UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.

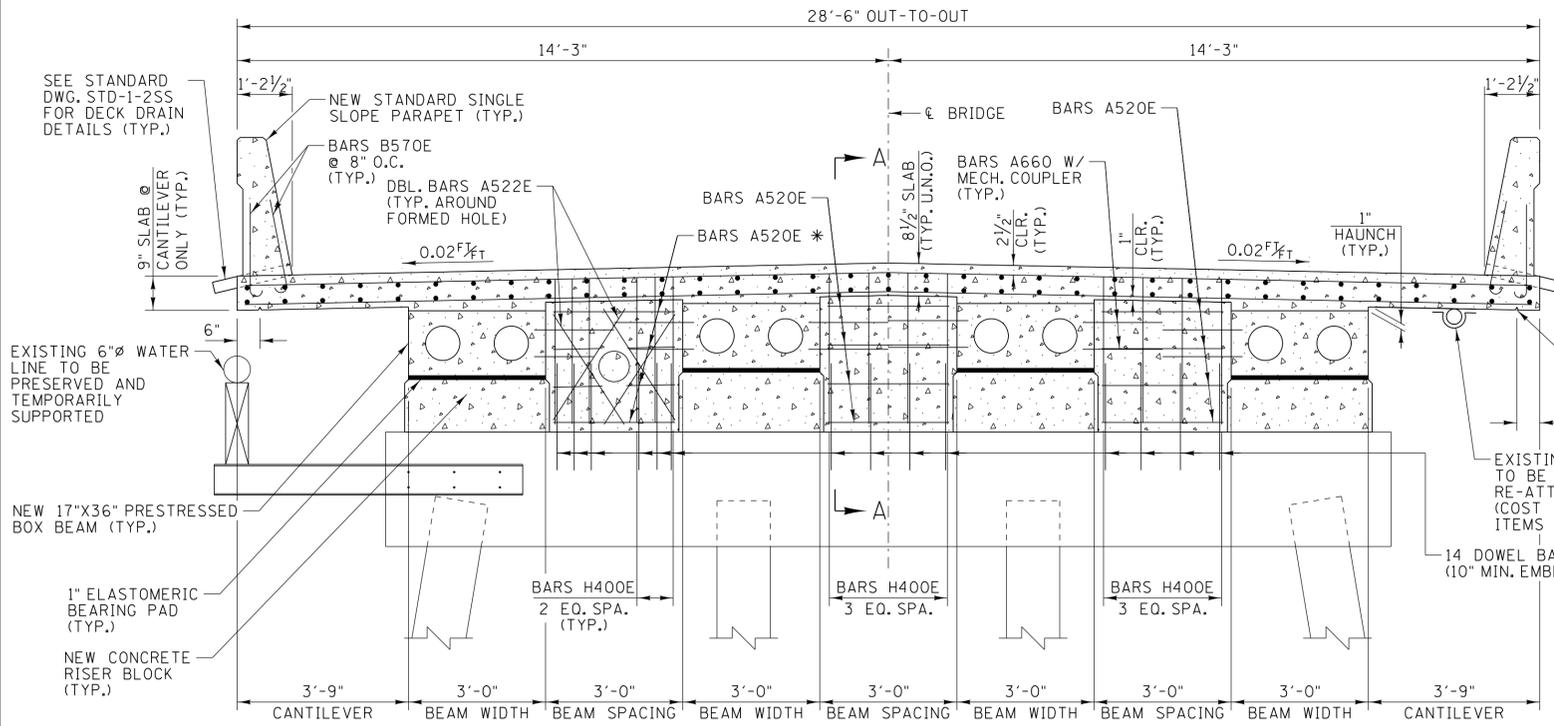
THE CONTRACTOR IS NOT ALLOWED TO POUR THE CONCRETE FOR THE SLAB UNTIL THE CONCRETE FOR THE DIAPHRAGMS HAS BEEN POURED AND HAS REACHED A COMPRESSIVE STRENGTH OF 3000 PSI.

THE COST OF FORMING AND POURING NEW HIGH EARLY STRENGTH CONCRETE FOR SLAB AND DIAPHRAGMS SHALL BE INCLUDED UNDER ITEM NO. 604-10.09, CONCRETE, C.Y.

COST OF REMOVING EXISTING CANTILEVERS, BRIDGE RAIL, BEAMS, SLAB, 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, LS.

ASPHALT REMOVAL FROM BRIDGE END TO BRIDGE END SHALL BE PAID FOR UNDER ITEM NO. 604-10.14, REMOVE EXISTING WEARING SURFACE, LS.

FOR NOTES REGARDING TEMPORARY SUPPORTS FOR THE 6"Ø WATER LINE, SEE DWG. NOS. BR-115-122 AND BR-115-123.

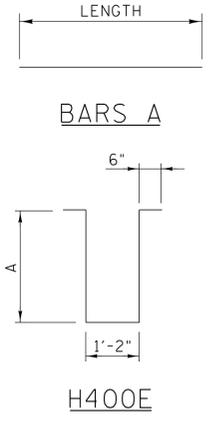


TYPICAL SECTION - CONSTRUCTION
(LOOKING FORWARD AT BENT NO. 2)
SCALE: 1/2" = 1'-0"

* BARS MAY BE CUT IN FIELD TO FIT

BILL OF STEEL							
DIAPHRAGM REINFORCEMENT - BENT NO. 2							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A520E	5	24					2'-8"
A522E	5	8					2'-10"
A630	6	12					2'-4"
**A660	6	24					2'-0"
H400E	4	12	3'-2"				8'-6"

NOTES:
ALL BAR DIMENSIONS ARE OUT-TO-OUT.
BARS ENDING IN "E" SHALL BE EPOXY COATED.
ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.
NUMBER OF BARS IS FOR BENT NO. 2 ONLY.
**THREADED FOR MECH. COUPLER



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NOT FOR BIDDING

4.34

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR182 OVER COON CREEK
BRIDGE NO. 23-SR182-4.34

DYER COUNTY
2014



3/12/2014 9:09:53 AM
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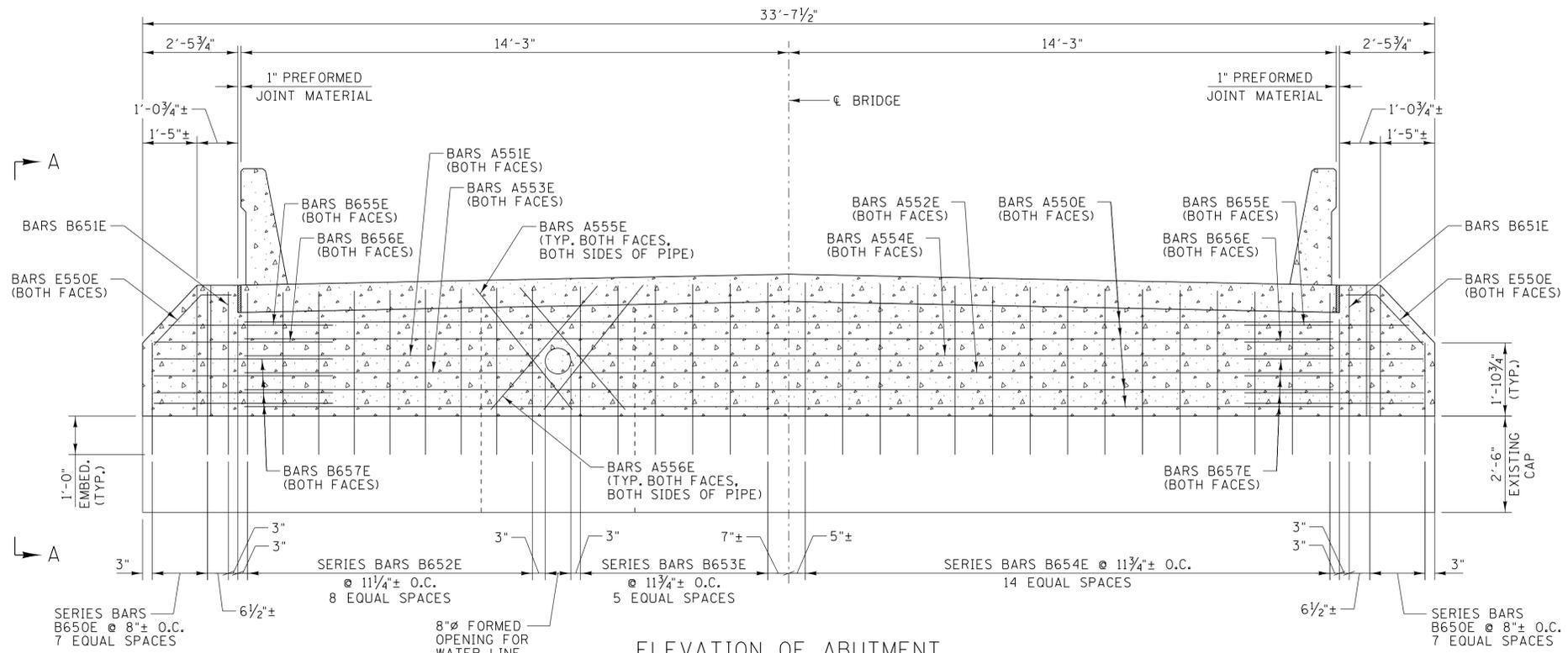


DESIGNED BY S. F. HARPER DATE AUGUST 2013
DRAWN BY C. W. THOMAS DATE AUGUST 2013
SUPERVISED BY J. H. RUDDLELL DATE AUGUST 2013
CHECKED BY A. J. KHAIRI DATE AUGUST 2013

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

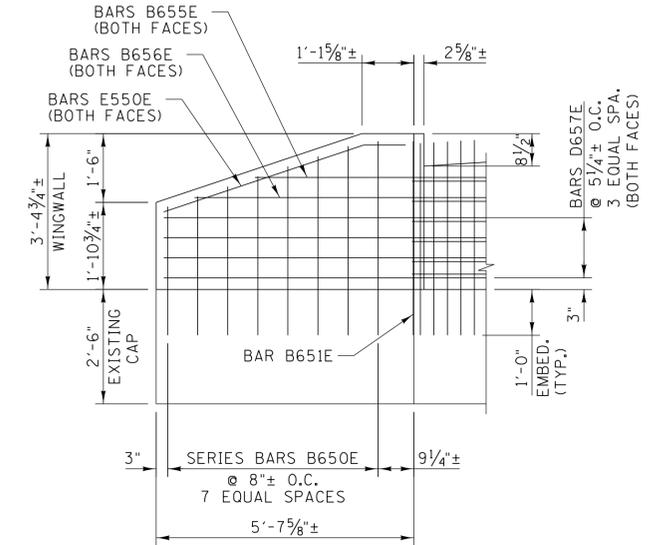
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PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



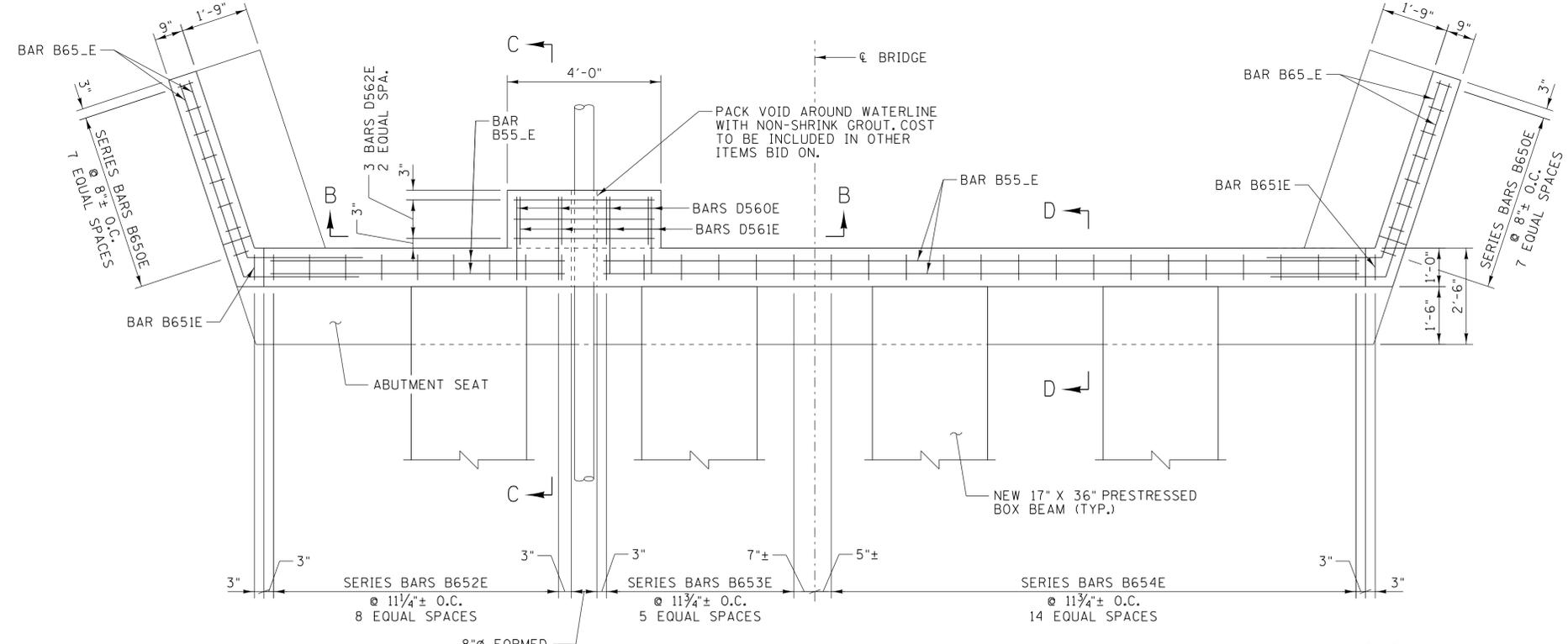
ELEVATION OF ABUTMENT
 (SHOWING BACKWALL AND WINGWALL REINFORCEMENT)
 (SHOWN LOOKING FORWARD AT ABUT. NO. 2, ABUT. NO. 1 SIMILAR)
 SCALE: 1/2" = 1'-0"

NOTE:
 SLAB AND PARAPET REINFORCEMENT AND BEAMS NOT SHOWN FOR CLARITY. SEE DWG. NO. BR-115-129 FOR SLAB REINFORCEMENT.



SECTION A-A
 (SHOWING WINGWALL REINFORCEMENT)
 (SHOWN PERPENDICULAR TO WINGWALL, TYP. ALL WINGWALLS)
 SCALE: 1/2" = 1'-0"

NOTES:
 ALL COSTS ASSOCIATED WITH CONSTRUCTING THE NEW BACKWALL OF ABUTMENT NOS. 1 & 2 USING HIGH EARLY STRENGTH CONCRETE SHALL BE INCLUDED IN ITEM NO. 604-10.09, CONCRETE, C.Y.
 COST OF EPOXY COATED REINFORCING STEEL SHALL BE INCLUDED IN ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LBS.
 NO LOADING, DEAD OR LIVE, WILL BE PERMITTED ON NEW ABUTMENT BACKWALL UNTIL TEST SPECIMENS ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
 FOR NOTES ON GROUTED BARS, SEE DWG. NO. BR-115-121.
 ABUTMENT BACKWALLS TO BE POURED MONOLITHICALLY WITH THE NEW SLAB.
 ALL WORK MUST MEET THE FULL APPROVAL OF THE ENGINEER.



PLAN OF ABUTMENT
 (SHOWING BACKWALL AND WINGWALL REINFORCEMENT)
 (SHOWN LOOKING FORWARD AT ABUT. NO. 2, ABUT. NO. 1 SIMILAR)
 SCALE: 1/2" = 1'-0"

UNOFFICIAL SET
 NOT FOR BIDDING

4.34

NOTES:
 SLAB NOT SHOWN FOR CLARITY.
 FOR SECTIONS B-B, C-C, AND D-D, SEE DWG. NO. BR-115-128.
 FOR WINGWALL DEMOLITION DETAILS, SEE DWG. NO. BR-115-128.
 FOR BILL OF STEEL, SEE DWG. NO. BR-115-128.



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

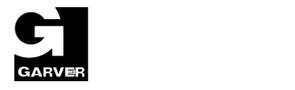
BRIDGE REPAIR DETAILS

SR182 OVER COON CREEK
 BRIDGE NO. 23-SR182-4.34

DYER COUNTY
 2014

BR-115-127

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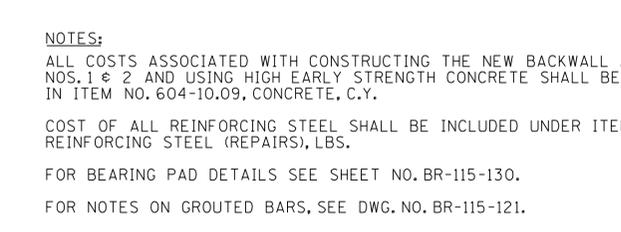
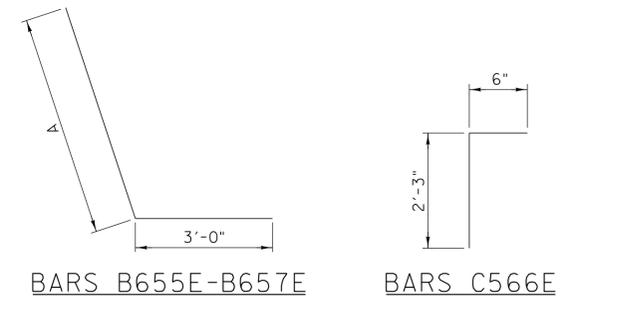
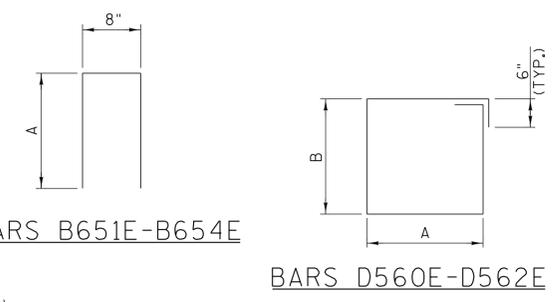
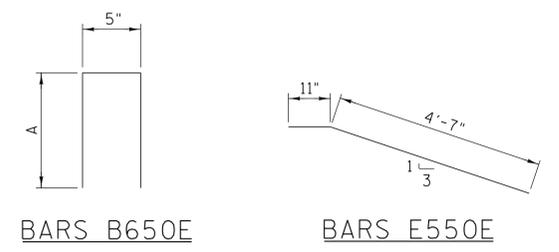
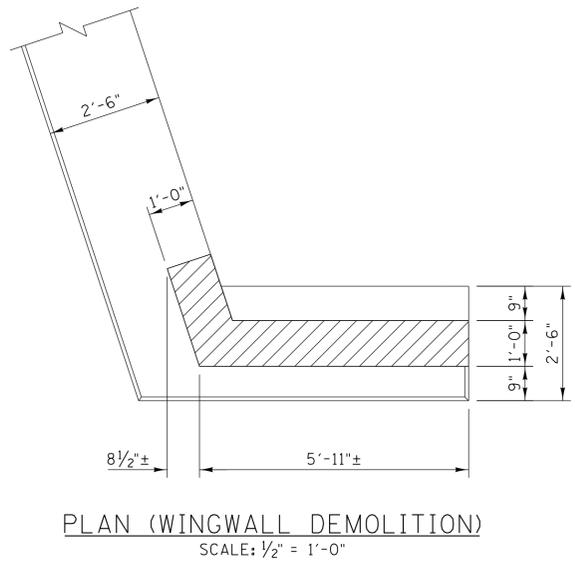
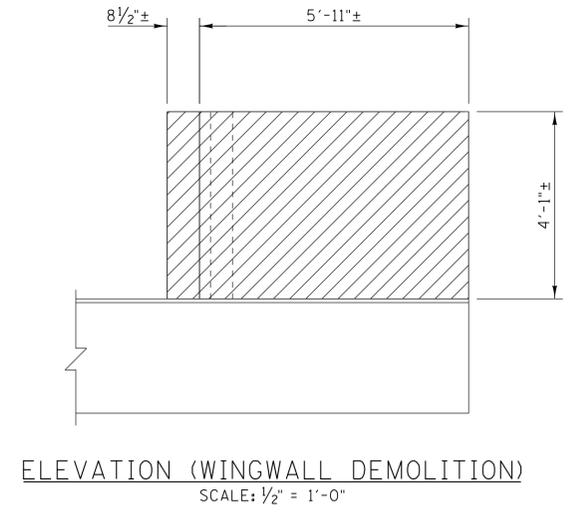


DESIGNED BY S. F. HARPER DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
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 CHECKED BY A. J. KHAIRI DATE AUGUST 2013
 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

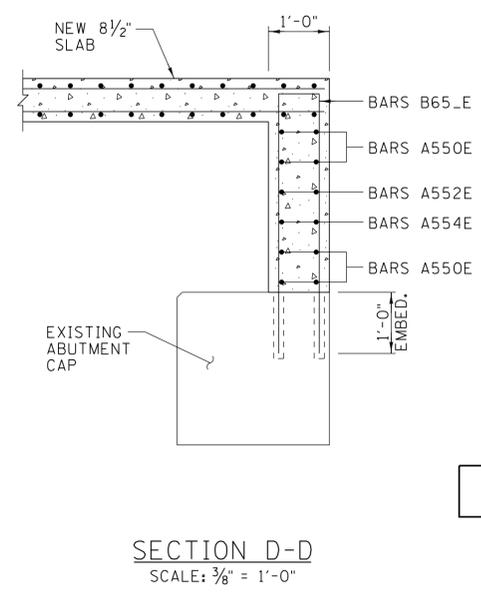
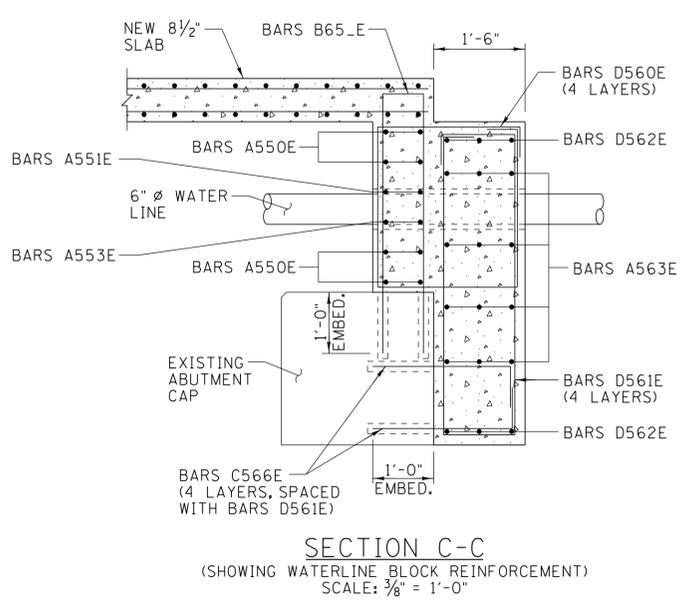
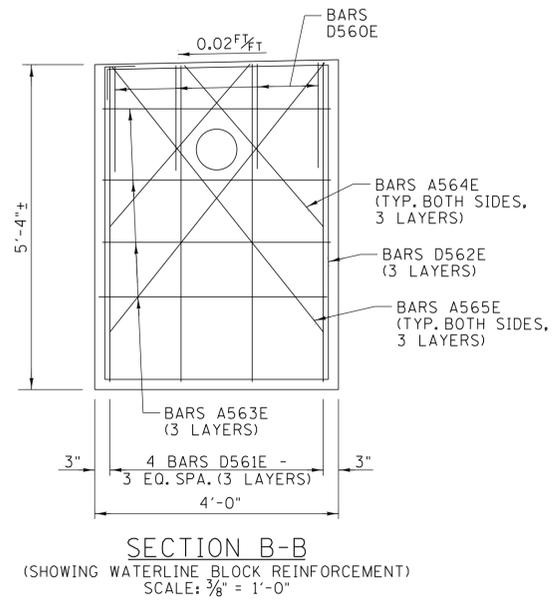
PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

BILL OF STEEL							
ABUTMENT REINFORCEMENT							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
E550E	5	4					5'-6"
A550E	5	8					28'-4"
A551E	5	2					7'-8"
A552E	5	2					19'-8"
A553E	5	2					7'-9"
A554E	5	2					19'-9"
A555E	5	4					4'-1"
A556E	5	4					4'-2"
D560E	5	4	2'-0"	2'-4"			9'-8"
D561E	5	4	1'-2"	5'-0"			13'-4"
D562E	5	3	3'-8"	5'-1"			18'-6"
A563E	5	12					3'-8"
A564E	5	6					3'-6"
A565E	5	6					5'-7"
C566E	5	8					2'-9"
A515E	5	6					3'-11"
C516E	5	8					2'-9"
SERIES B650E	6	2	2'-10" TO 4'-3"	LENGTH VARIES FROM 6'-1" TO 8'-11" IN INCREMENTS OF 5/4" (8 REQUIRED)			60'-11"
B651E	6	2	4'-3"				9'-2"
SERIES B652E	6	1	4'-2" TO 4'-4"	LENGTH VARIES FROM 9'-0" TO 9'-4" IN INCREMENTS OF 1/2" (9 REQUIRED)			82'-6"
SERIES B653E	6	1	4'-4" TO 4'-6"	LENGTH VARIES FROM 9'-4" TO 9'-8" IN INCREMENTS OF 1/2" (6 REQUIRED)			56'-8"
SERIES B654E	6	1	4'-2" TO 4'-6"	LENGTH VARIES FROM 9'-0" TO 9'-8" IN INCREMENTS OF 1/2" (15 REQUIRED)			140'-0"
B655E	6	4	3'-3"				6'-3"
B656E	6	4	4'-7"				7'-7"
B657E	6	16	5'-3"				8'-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.
 NUMBER OF BARS IS FOR ONE ABUTMENT (TWO REQUIRED).



NOTES:
 ALL COSTS ASSOCIATED WITH CONSTRUCTING THE NEW BACKWALL AT ABUTMENT NOS. 1 & 2 AND USING HIGH EARLY STRENGTH CONCRETE SHALL BE INCLUDED IN ITEM NO. 604-10.09, CONCRETE, C.Y.
 COST OF ALL REINFORCING STEEL SHALL BE INCLUDED UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LBS.
 FOR BEARING PAD DETAILS SEE SHEET NO. BR-115-130.
 FOR NOTES ON GROUTED BARS, SEE DWG. NO. BR-115-121.



4.34



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS
 SR182 OVER COON CREEK
 BRIDGE NO. 23-SR182-4.34

DYER COUNTY
 2014

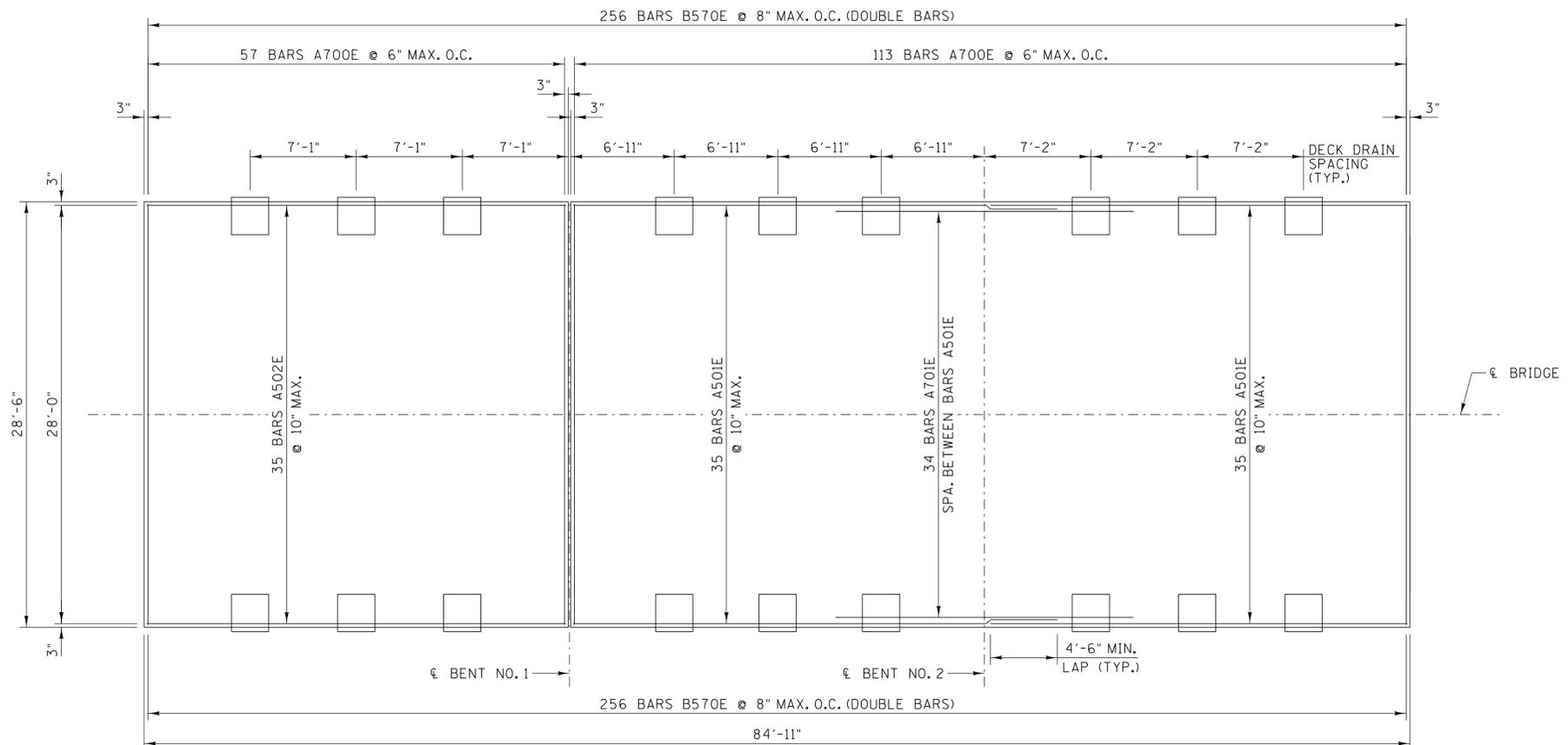
BR-115-128

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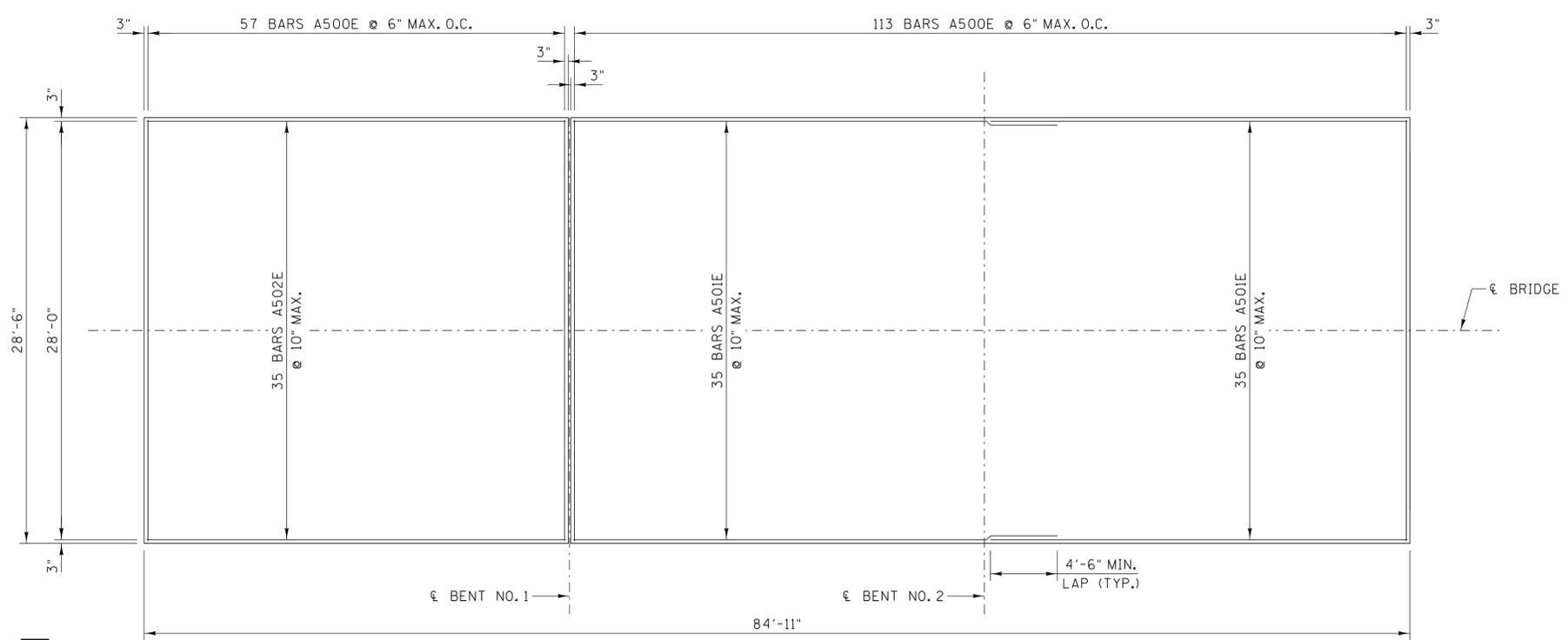


DESIGNED BY S. F. HARPER DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
 SUPERVISED BY J. H. RUDDELL DATE AUGUST 2013
 CHECKED BY A. J. KHAIRI DATE AUGUST 2013
 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



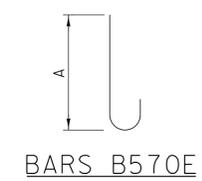
SLAB PLAN
(TOP MAT OF REINFORCING STEEL)
SCALE: 3/16" = 1'-0"



SLAB PLAN
(BOTTOM MAT OF REINFORCING STEEL)
SCALE: 3/16" = 1'-0"

BILL OF STEEL							
SLAB REINFORCEMENT							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A500E	5	170					28'-2"
A501E	5	148					30'-0"
A502E	5	74					28'-1"
A700E	7	170					28'-2"
A701E	7	34					20'-0"
B570E	5	512	2'-1"				2'-8"

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.



UNOFFICIAL SET
NOT FOR BIDDING

4.34

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR182 OVER COON CREEK
BRIDGE NO. 23-SR182-4.34

DYER COUNTY
2014



JLHdbrook 3/12/2014 9:09:55 AM
WORKSPACE: T001 Bridge Repair over Obion River & Drawings\BRC\Final\3 - BR-115-29.dgn
C:\200\300166 - T001 - Bridge Repair

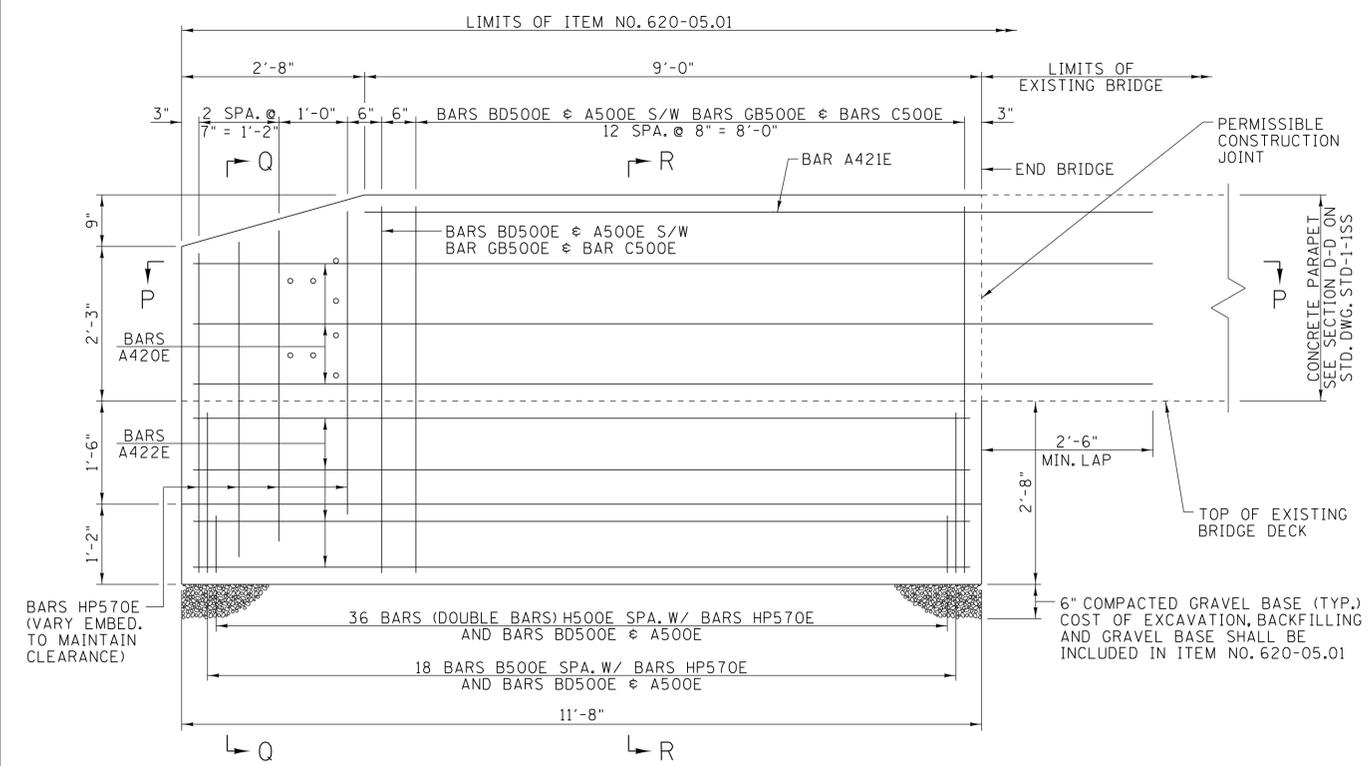
GARVER
DESIGNED BY S. F. HARPER
DRAWN BY C. W. THOMAS
SUPERVISED BY J. H. RUDELL
CHECKED BY A. J. KHAIRI

DATE AUGUST 2013
DATE AUGUST 2013
DATE AUGUST 2013
DATE AUGUST 2013
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

NOTE:
CONTRACTOR SHALL BACKFILL WITH MATERIAL ACCEPTABLE TO THE ENGINEER.

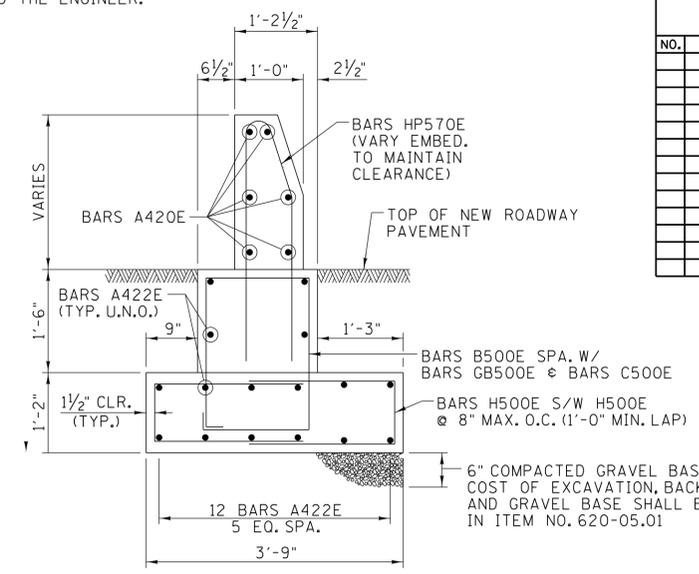
ABUTMENT NO.	WING WALL	"A"
1	NORTH	18'19"50"
1	SOUTH	18'19"50"
2	NORTH	18'19"50"
2	SOUTH	18'19"50"



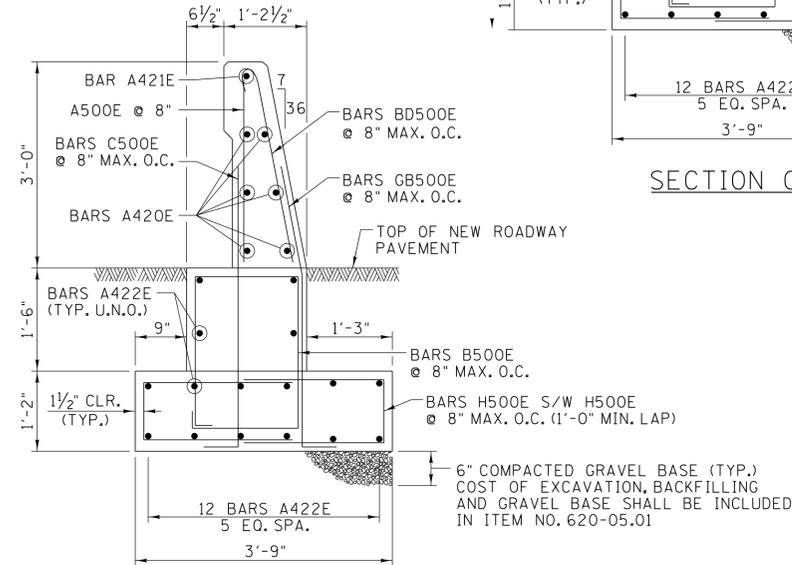
NOTE:
FOR ADDITIONAL NOTES AND DETAILS, SEE STD. DWG. STD-1-ISS.

ELEVATION SHOWING REINFORCING STEEL
(NORTH WING OF ABUTMENT NO. 1 SHOWN, OTHERS SIMILAR.)

NOTE:
FOR NOTES AND DETAILS REGARDING GUARDRAIL CONNECTION, SEE STD. DWG. STD-1-ISS.



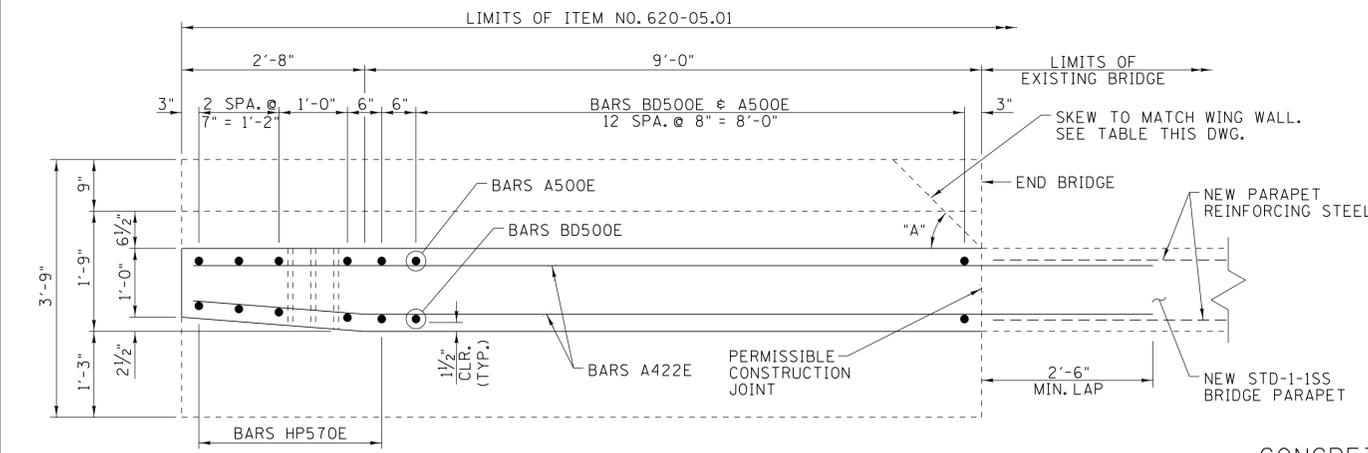
SECTION Q-Q



SECTION R-R

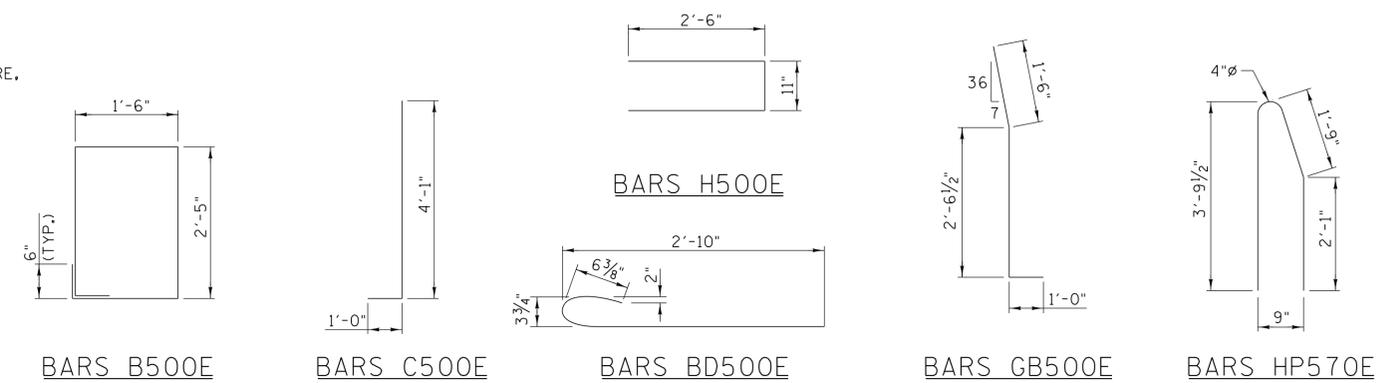
BILL OF STEEL							
CONCRETE END POST							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A420E	4	6					14'-0"
A421E	4	1					11'-6"
A422E	4	16					11'-4"
A500E	5	14					2'-8"
B500E	5	18					8'-10"
BD500E	5	14					3'-9"
C500E	5	14					5'-1"
GB500E	5	14					5'-0 1/2"
H500E	5	36					5'-11"
HP570E	5	4					7'-10 1/2"

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.
NUMBER OF BARS IS FOR 1 (ONE) END POST. FOUR (4) REQUIRED.



SECTION P-P

CONCRETE END POST DETAILS



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NOT FOR BIDDING

4.34

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR182 OVER COON CREEK
BRIDGE NO. 23-SR182-4.34

DYER COUNTY
2014

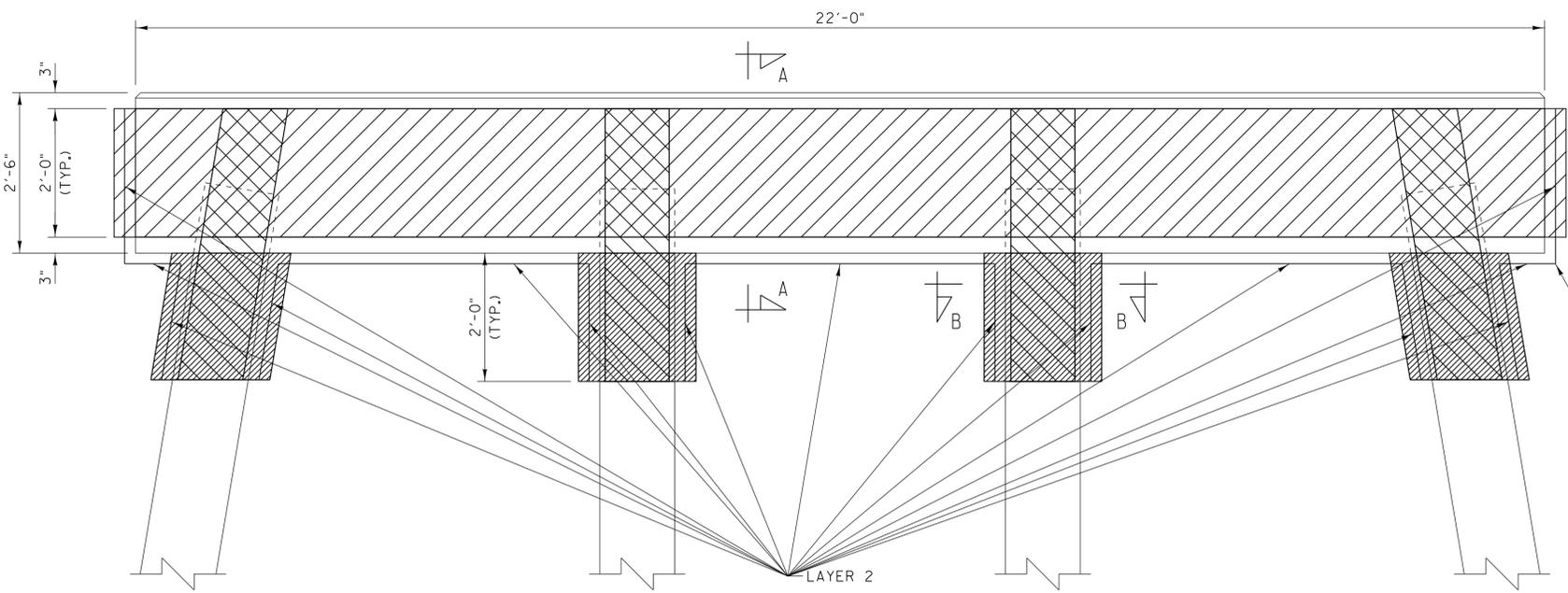


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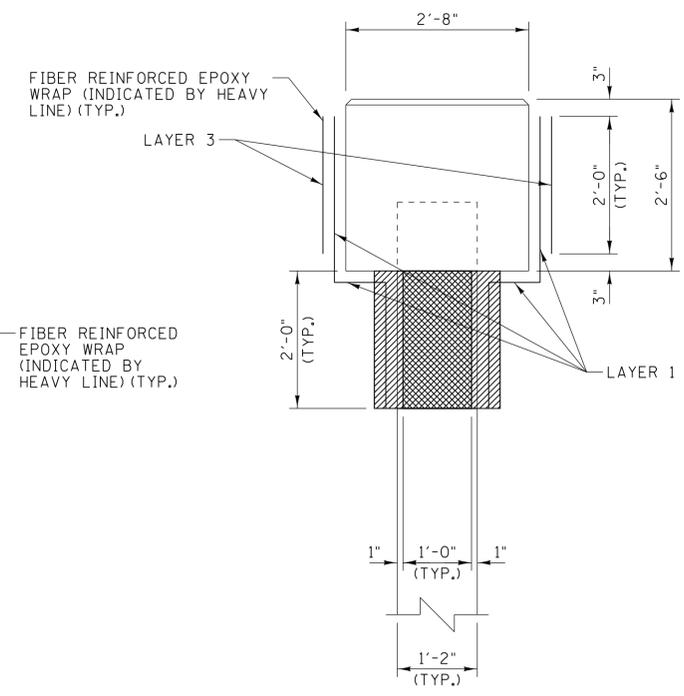


DESIGNED BY S. F. HARPER DATE AUGUST 2013
DRAWN BY C. W. THOMAS DATE AUGUST 2013
SUPERVISED BY J. H. RUDDELL DATE AUGUST 2013
CHECKED BY A. J. KHAIRI DATE AUGUST 2013
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

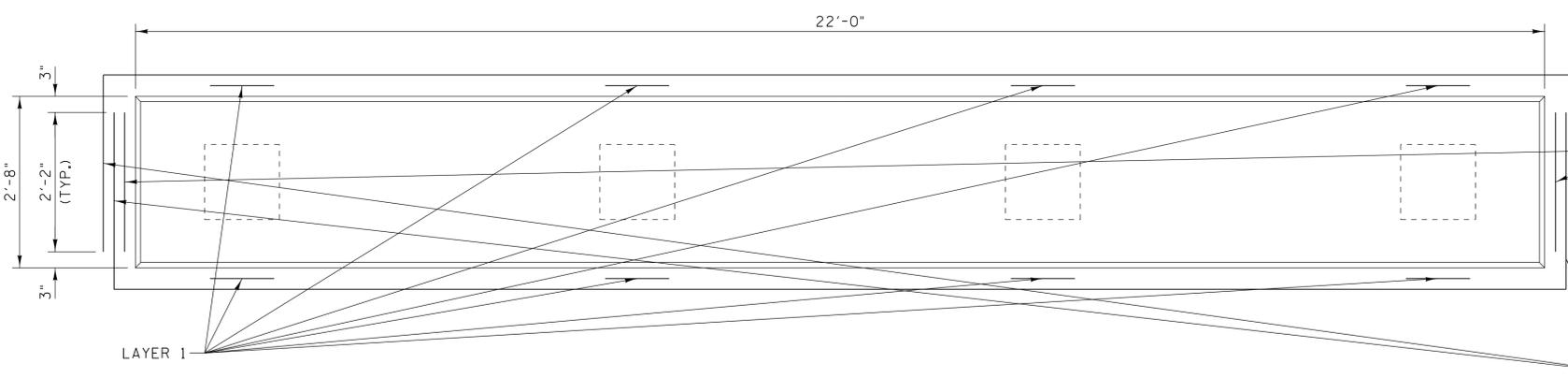
PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



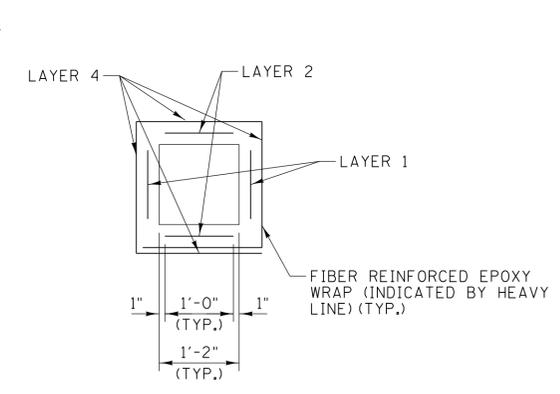
ELEVATION
(LOOKING FORWARD AT BENT NO. 1)
(BENT NO. 2 SIMILAR)
SCALE: 3/4" = 1'-0"



SECTION A-A
SCALE: 3/4" = 1'-0"



PLAN
SCALE: 3/4" = 1'-0"



SECTION B-B
SCALE: 3/4" = 1'-0"

REQ'D. FIBER REINF. EPOXY WRAP PROPERTIES		
FABRIC PROPERTIES	REQUIREMENT	ASTM TEST METHOD
ULTIMATE TENSILE STRENGTH IN PRIMARY FIBER DIRECTION (MIN.)	500,000 PSI	D3039
TENSILE MODULUS BASED ON CROSS SECTIONAL AREA OF PRIMARY FIBERS (MIN.)	3 X 10 ⁶ PSI	D3039
EPOXY PROPERTIES	REQUIREMENT	ASTM TEST METHOD
TENSILE STRENGTH	10,000 PSI	D-638
TENSILE MODULUS	450,000 PSI	D-638

COST OF ALL LABOR, MATERIALS, AND EQUIPMENTS TO PROVIDE FIBER WRAP SHALL BE INCLUDED UNDER ITEM NO. 604-10.83, COMPOSITE FIBER ENCASEMENT, S.F.

LEGEND

- LAYER 1 - VERTICAL FIBER REINFORCED EPOXY WRAP ON BENT CAP AND PILES
- LAYER 2 - TRANSVERSE FIBER REINFORCED EPOXY WRAP ON BENT CAP AND PILES
- LAYER 3 - HORIZONTAL FIBER REINFORCED EPOXY WRAP ON BENT CAP
- LAYER 4 - FIBER REINFORCED EPOXY WRAP AROUND PILES

UNOFFICIAL SET
NOT FOR BIDDING

4.34

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR182 OVER COON CREEK
BRIDGE NO. 23-SR182-4.34

DYER COUNTY
2014

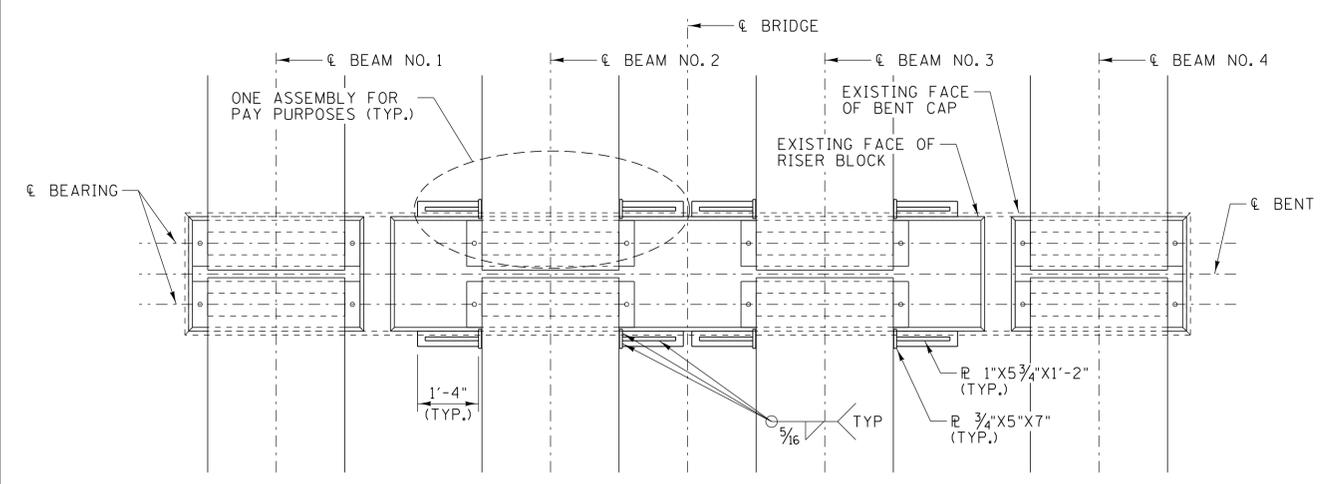


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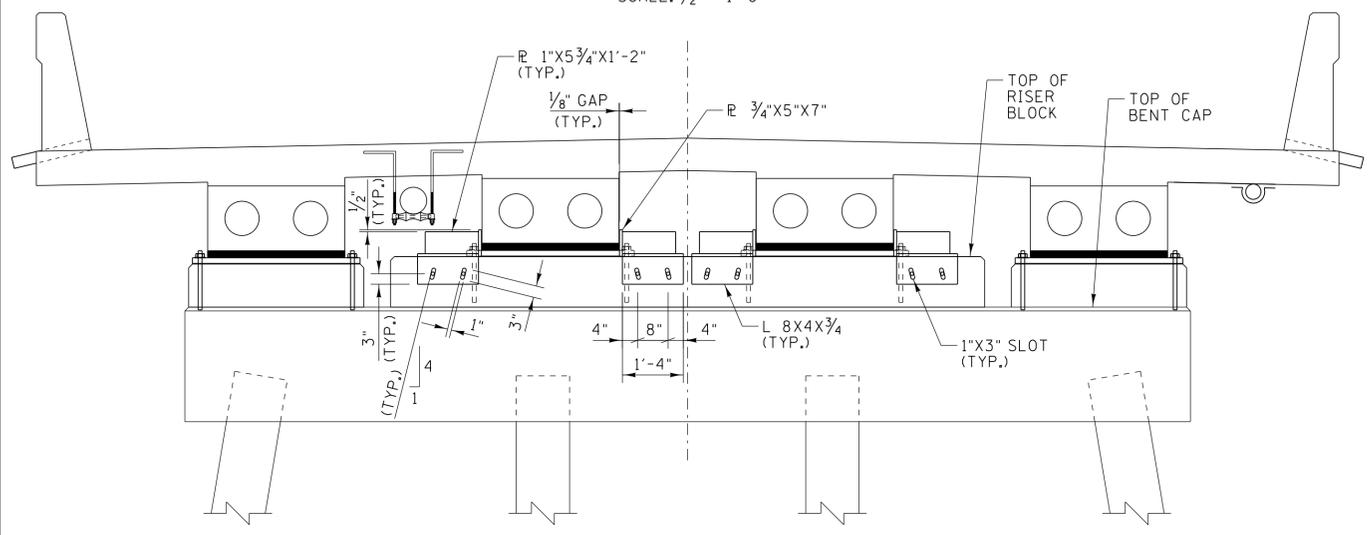


DESIGNED BY S. F. HARPER DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
 SUPERVISED BY J. H. RUDDELL DATE AUGUST 2013
 CHECKED BY A. J. KHAIRI DATE AUGUST 2013 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

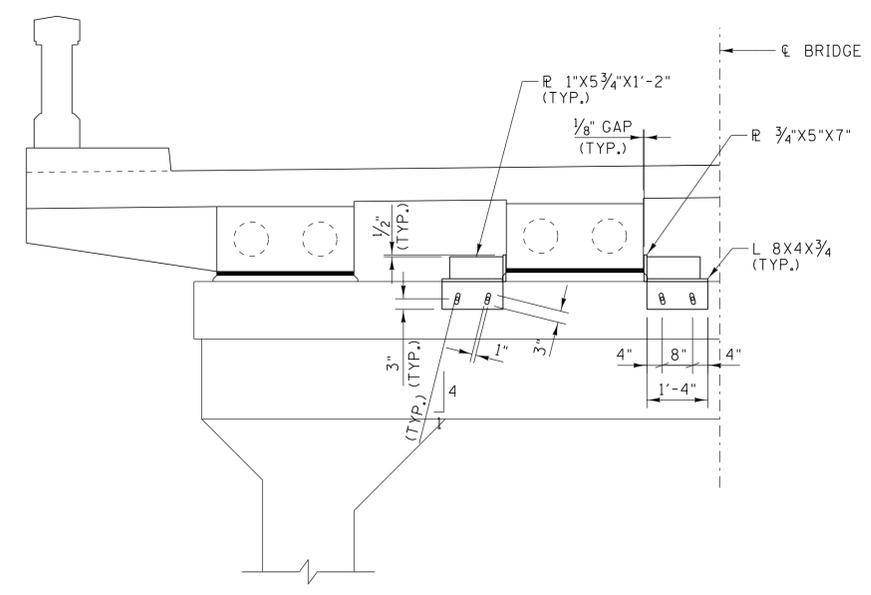
PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



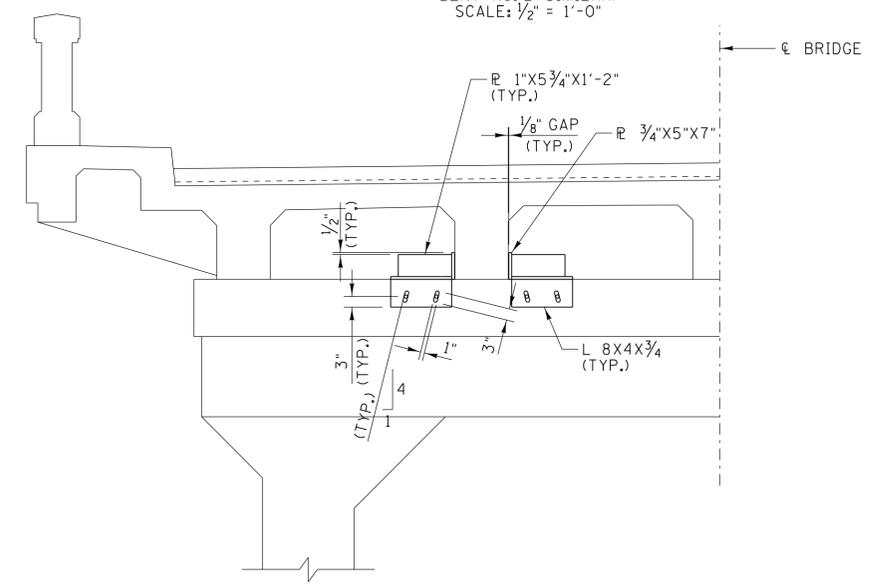
PLAN VIEW SHOWING LATERAL SEISMIC RESTRAINTS AT BENT NO. 1
(SHOWN FOR BRIDGE NO. 23-SR182-4.34, 23-SR-104-6.89 IS SIMILAR)
SCALE: 1/2" = 1'-0"



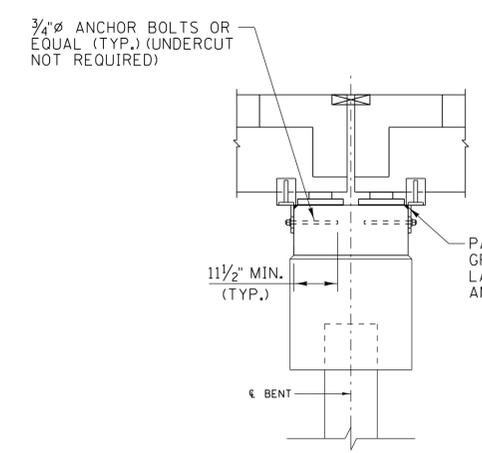
TYPICAL SECTION AT BENT NO. 1
(BRIDGE NO. 23-SR182-4.34)
SCALE: 1/2" = 1'-0"



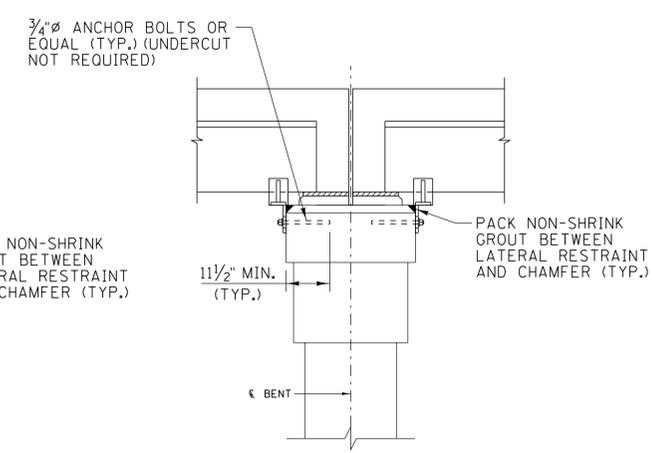
TYPICAL HALF SECTION
(SHOWN FOR BENT NO. 1 @ 23-SR104-6.89, BENT NO. 2 SIMILAR)
SCALE: 1/2" = 1'-0"



TYPICAL HALF SECTION
(SHOWN FOR SPAN NOS. 10 THRU 13 @ 23-SR104-6.89, SPAN NOS. 3, 4, 6 THRU 9 ARE SIMILAR)
SCALE: 1/2" = 1'-0"



L1 LATERAL SEISMIC RESTRAINTS
(SHOWN FOR BRIDGE NO. 23-SR182-4.34)
SCALE: 1/2" = 1'-0"



L1 LATERAL SEISMIC RESTRAINTS
(SHOWN FOR BRIDGE NO. 23-SR104-6.89)
SCALE: 1/2" = 1'-0"

* ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.

NOTE:
FOR BEAM LOCATIONS, SEE DWG. NOS. BR-115-118 AND BR-115-119.

NOTES:
PROVIDE LATERAL SEISMIC RESTRAINT ASSEMBLIES FOR BRIDGE NO. 23-SR182-4.34 AS DESIGNATED ON DWG. NO. BR-115-118.

PROVIDE LATERAL SEISMIC RESTRAINT ASSEMBLIES FOR BRIDGE NO. 23-SR104-6.89 AS DESIGNATED ON DWG. NO. BR-115-119.

FOR PROCEDURES REGARDING THE INSTALLATION OF DRILLCO MAXI-BOLTS OR EQUAL, SEE MANUFACTURER'S WRITTEN INSTRUCTIONS, DWG. NO. BR-115-146.

ALL STRUCTURAL STEEL PLATE AND SHAPES SHALL MEET ASTM A36. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.

THE COST OF ALL LABOR AND MATERIALS REQUIRED FOR COMPLETE INSTALLATION OF EACH LATERAL SEISMIC RESTRAINT ASSEMBLY AS SHOWN ON DETAILS THIS DWG., IS TO BE INCLUDED IN THE PRICE BID FOR ITEM NO. 602-10.50, STRUCTURAL STEEL (REPAIRS), EACH.

4.34 (4 REQ'D.)

6.89 (48 REQ'D.)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR104 OVER OBION RIVER
BRIDGE NO. 23-SR104-6.89
SR182 OVER COON CREEK
BRIDGE NO. 23-SR182-4.34

DYER COUNTY
2014

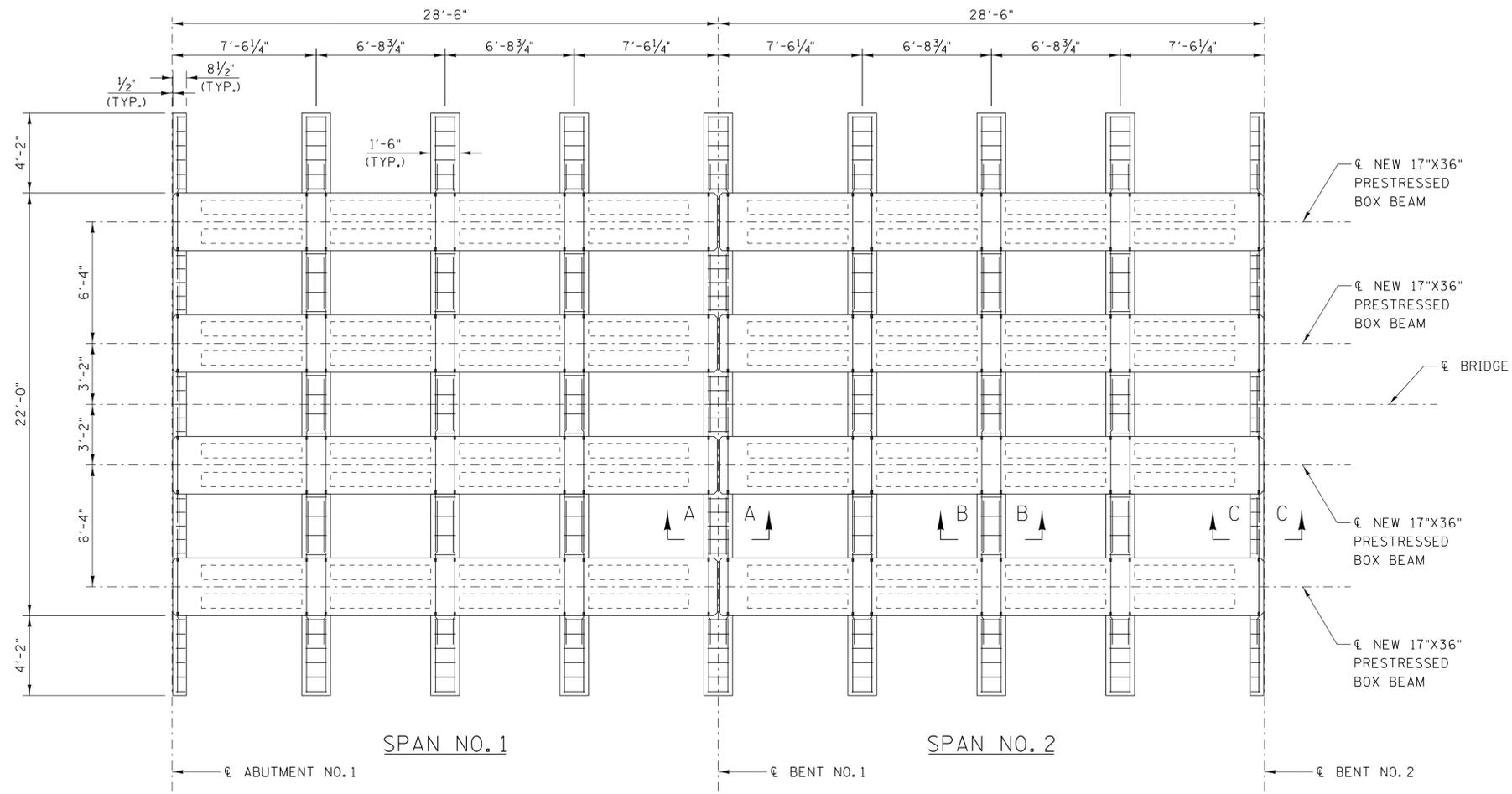


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DESIGNED BY S. F. HARPER DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
 SUPERVISED BY J. H. RUDDELL DATE AUGUST 2013
 CHECKED BY A. J. KHAIRI DATE AUGUST 2013
 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



NOTES:
 COST OF ALL REINFORCING STEEL SHALL BE PAID FOR UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.
 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.
 THE COST OF FORMING AND POURING NEW HIGH EARLY STRENGTH CONCRETE FOR SLAB AND DIAPHRAGMS SHALL BE INCLUDED UNDER ITEM NO. 604-10.09, CONCRETE, C.Y.

ALL DIMENSIONS TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

NOTE:
 FOR SECTIONS A-A, B-B, AND C-C, SEE DWG. NO. BR-115-138.

PLAN VIEW
 (SHOWING NEW FRAMING PLAN FOR SPANS 1 & 2)
 SCALE: 1/4" = 1'-0"

UNOFFICIAL SET
 NOT FOR BIDDING

6.89

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR104 OVER OBION RIVER
 BRIDGE NO. 23-SR104-6.89



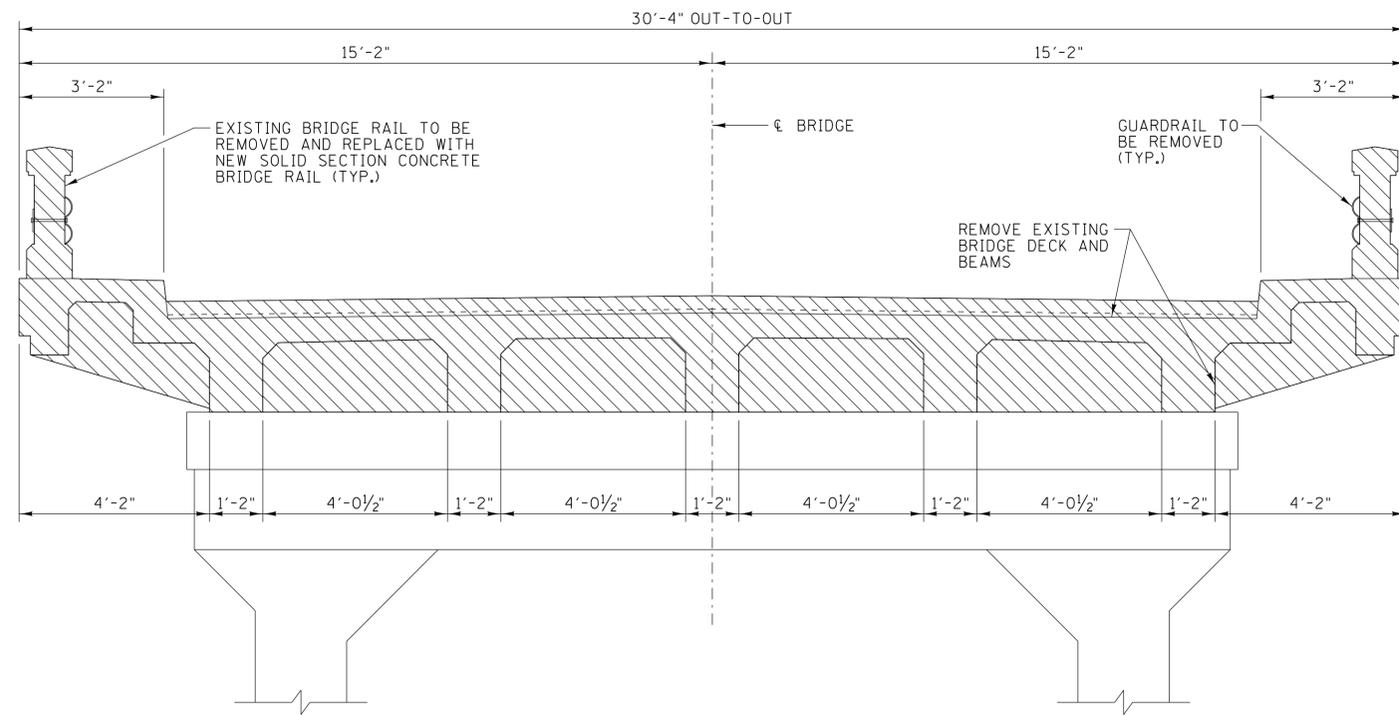
DYER COUNTY
 2014

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 C:\200\00166 - T001 - Bridge Repair



DESIGNED BY L. I. COBOS DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
 SUPERVISED BY J. H. RUDELL DATE AUGUST 2013
 CHECKED BY A. J. KHAIRI DATE AUGUST 2013
 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



TYPICAL SECTION - DEMOLITION
 (TYP. FOR SPAN NOS. 1 & 2 ONLY)
 SCALE: 1/2" = 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.

COST OF ALL REINFORCING STEEL SHALL BE PAID FOR UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.

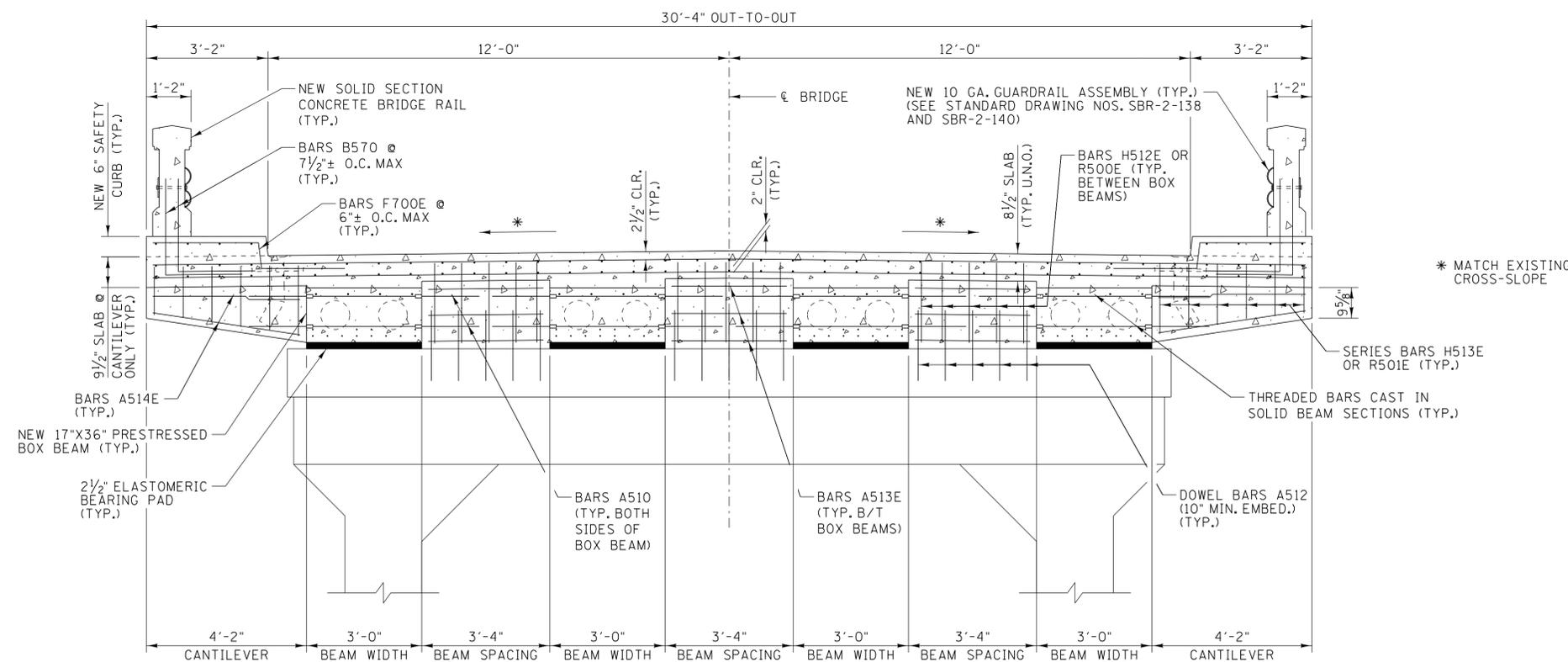
THE CONTRACTOR IS NOT ALLOWED TO POUR THE CONCRETE FOR THE SLAB UNTIL THE CONCRETE FOR THE DIAPHRAGMS HAS BEEN POURED AND HAS REACHED A COMPRESSIVE STRENGTH OF 3000 PSI.

THE COST OF FORMING AND POURING NEW HIGH EARLY STRENGTH CONCRETE FOR SLAB, SIDEWALK, AND DIAPHRAGMS SHALL BE INCLUDED UNDER ITEM NO. 604-10.09, CONCRETE, C.Y.

COST OF REMOVING EXISTING CANTILEVERS, BRIDGE RAIL, GUARDRAIL, BEAMS, SLAB, SAFETY RAIL, 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.

COST OF LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO FORM AND POUR NEW BRIDGE RAIL TO BE INCLUDED UNDER ITEM NO. 620-06, CONCRETE RAILING, L.F.

ALL COSTS OF MATERIALS AND LABOR NECESSARY TO ATTACH THE NEW GUARDRAIL TO THE NEW BRIDGE RAIL SHALL BE INCLUDED UNDER ITEM NO. 705-10.33, GUARDRAIL ATTACHMENT TO CONCRETE BRIDGERAIL, L.F. FOR ADDITIONAL NOTES AND DETAILS, SEE STANDARD DWG. NOS. SBR-2-138 AND SBR-2-140.



TYPICAL SECTION - CONSTRUCTION
 (SHOWN FOR BENT NO. 1, BENT NO. 2 SIMILAR)
 SCALE: 1/2" = 1'-0"

UNOFFICIAL SET
 NOT FOR BIDDING

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR104 OVER OBION RIVER
 BRIDGE NO. 23-SR104-6.89

DYER COUNTY
 2014



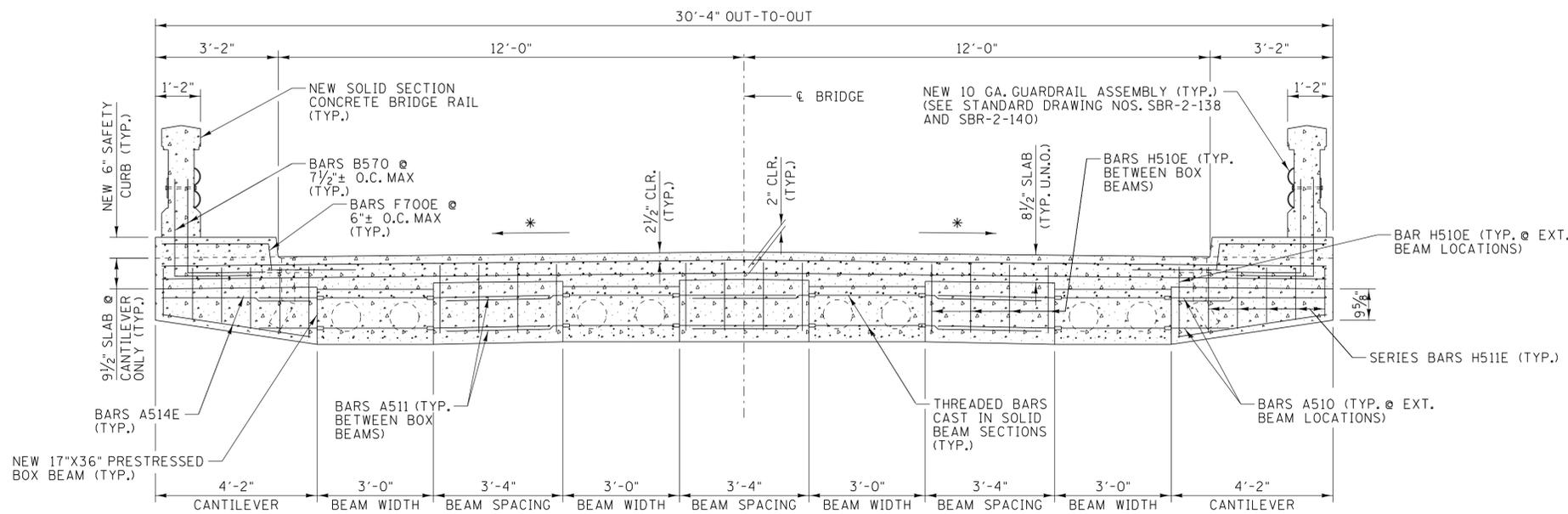
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 C:\200\00166 - T001 - Bridge Repair



DESIGNED BY L. I. COBOS DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
 SUPERVISED BY J. H. RUDELL DATE AUGUST 2013
 CHECKED BY A. J. KHAIRI DATE AUGUST 2013

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

PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



* MATCH EXISTING CROSS-SLOPE

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.

COST OF ALL REINFORCING STEEL SHALL BE PAID FOR UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.

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.

THE COST OF FORMING AND POURING NEW HIGH EARLY STRENGTH CONCRETE FOR SLAB, SIDEWALKS, AND DIAPHRAGMS SHALL BE INCLUDED UNDER ITEM NO. 604-10.09, CONCRETE, C.Y.

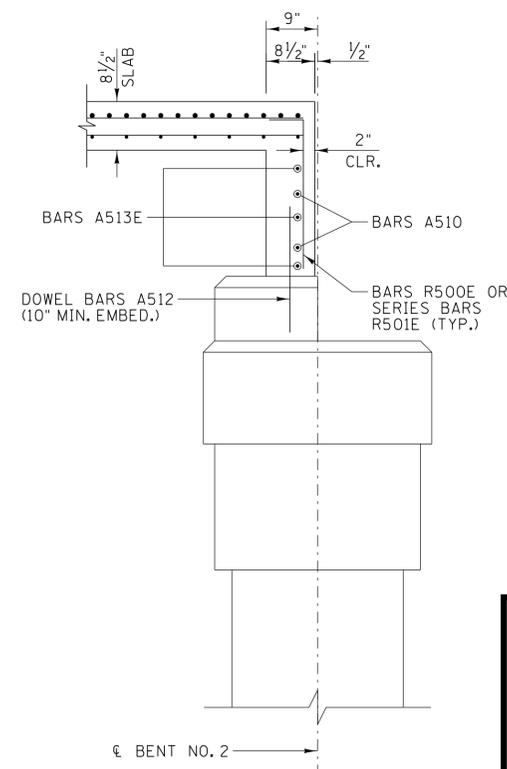
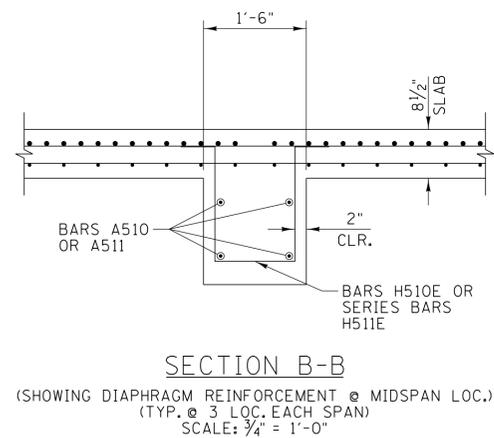
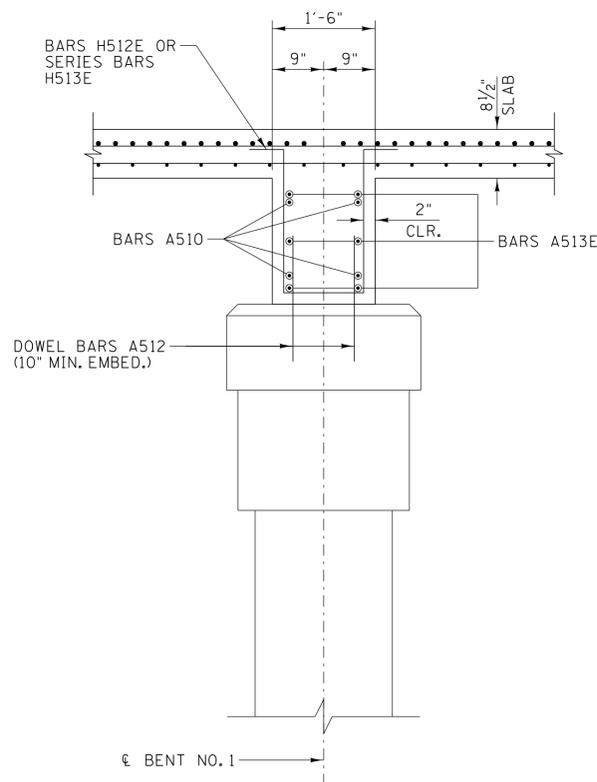
COST OF REMOVING EXISTING CANTILEVERS, BRIDGE RAIL, BEAMS, SLAB, SAFETY RAIL, DIAPHRAGMS, SAW CUTTING AND ALL LABOR AND ANY MISCELLANEOUS ITEMS FOR DEMOLITION AS SHOWN ON THE DETAILS SHALL BE INCLUDED IN ITEM NO. 604-10.13, CONCRETE SLAB REMOVAL, LS.

ALL COSTS OF MATERIALS AND LABOR NECESSARY TO ATTACH THE NEW GUARDRAIL TO THE NEW BRIDGE RAIL SHALL BE INCLUDED UNDER ITEM NO. 705-10.33, GUARDRAIL ATTACHMENT TO CONCRETE BRIDGERAIL, L.F. FOR ADDITIONAL NOTES AND DETAILS, SEE STANDARD DWG. NOS. SBR-2-138 AND SBR-2-140.

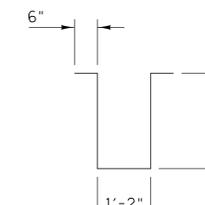
NOTE:
FOR SECTION LOCATIONS, SEE DWG. NO. BR-115-136.

TYPICAL SECTION - CONSTRUCTION

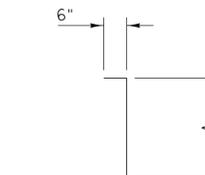
(TYP. @ 3 LOC. PER SPAN FOR SPAN NOS. 1 & 2 ONLY)
SCALE: 1/2" = 1'-0"



BARS A



BARS H



BARS R

BILL OF STEEL							
DIAPHRAGM REINFORCEMENT							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
**A510	5	112					1'-6"
**A511	5	144					3'-0"
A512	5	60					1'-10"
A513E	5	36					3'-0"
A514E	5	64					3'-10"
H510E	5	84	1'-9"				5'-8"
SERIES H511E	5	12	LENGTH VARIES FROM 4'-7" TO 5'-3" IN INCREMENTS OF 2"± (5 REQ'D.)				24'-7"
H512E	5	15	2'-1"				6'-4"
SERIES H513E	5	2	LENGTH VARIES FROM 4'-8" TO 5'-10" IN INCREMENTS OF 2"± (6 REQ'D.)				31'-2"
R500E	5	30	2'-1"				2'-7"
SERIES R501E	5	4	LENGTH VARIES FROM 1'-9" TO 2'-4" IN INCREMENTS OF 1/2"± (6 REQ'D.)				12'-1"

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.
** THREADED FOR MECH. COUPLER

UNOFFICIAL SET
NOT FOR BIDDING



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR104 OVER OBION RIVER
BRIDGE NO. 23-SR104-6.89

DYER COUNTY
2014



PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

NOTES:

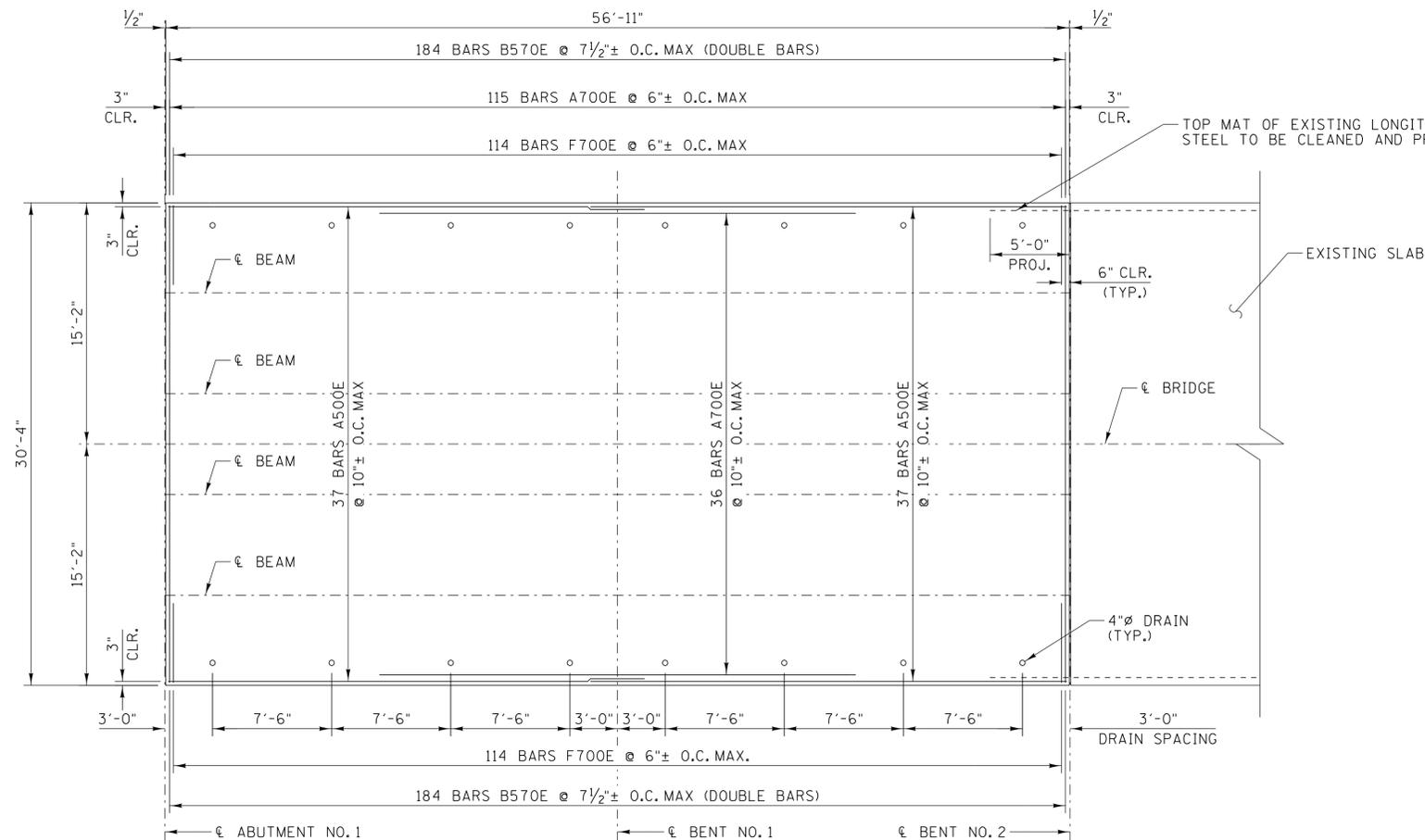
COST OF REINFORCING STEEL AND ALL COSTS ASSOCIATED WITH THE CLEANING AND PRESERVING OF EXISTING REINFORCING STEEL AND INCORPORATING INTO NEW SLAB SHALL BE PAID FOR UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.

COST OF DECK DRAIN ASSEMBLIES TO BE INCLUDED IN ITEM NO. 604-10.09, CONCRETE, C.Y.

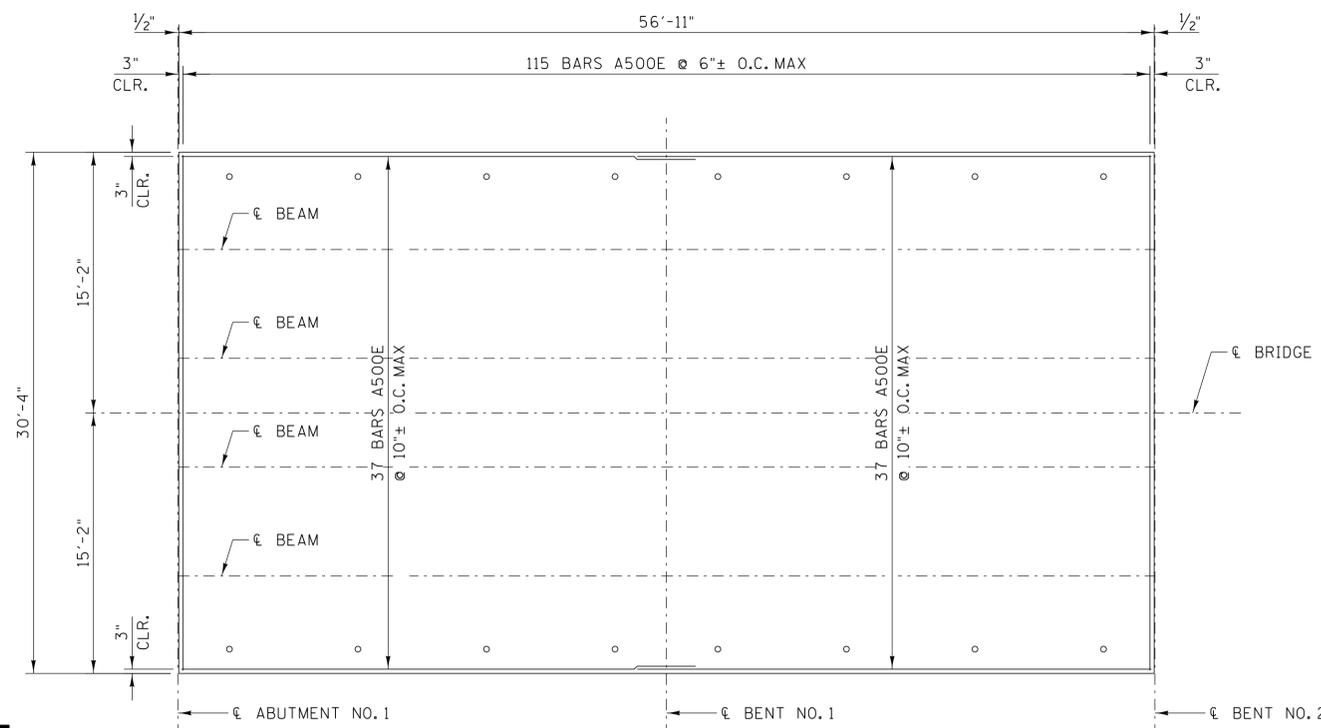
STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270 GRADE 36 (ASTM A709 GRADE 36).

WELDING SHALL BE IN ACCORDANCE WITH ANSI/AASHTO/AWS D1.5-88 BRIDGE WELDING CODE AND THE STANDARD SPECIFICATIONS.

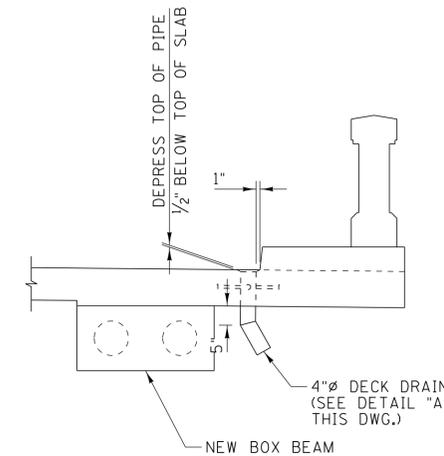
ALL NEW STRUCTURAL STEEL SHALL BE GALVANIZED TO ASTM A123 STANDARDS.



SLAB PLAN (SPANS 1 & 2)
(TOP MAT OF REINFORCING STEEL)
SCALE: 3/16" = 1'-0"



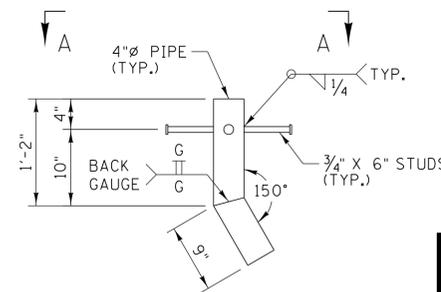
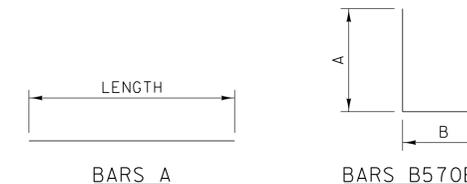
SLAB PLAN (SPANS 1 & 2)
(BOTTOM MAT OF REINFORCING STEEL)
SCALE: 3/16" = 1'-0"



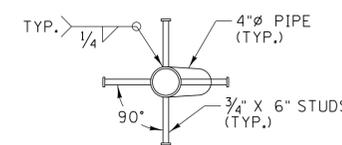
SECTION AT DECK DRAIN
(TYP. FOR SPAN NOS. 1 & 2 ONLY)
SCALE: 1/2" = 1'-0"

BILL OF STEEL							
SLAB REINFORCEMENT							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A500E	5	263					30'-0"
A700E	7	151					30'-0"
B570E	5	368	2'-6"	2'-0"			4'-6"
F700E	7	228	2'-9"	8"	2'-2"	5'-0"	5'-7"

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.



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



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

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6.89

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR104 OVER OBION RIVER
BRIDGE NO. 23-SR104-6.89

DYER COUNTY
2014

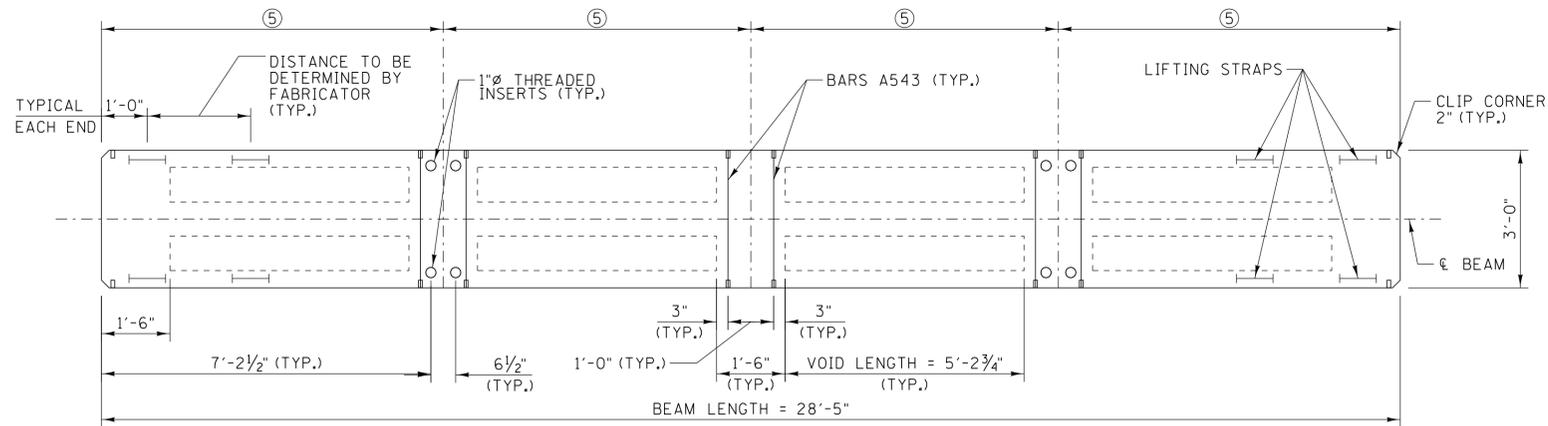


JLHdb-rook 3/12/2014 9:06:00 AM
WORKSPACE: T001 Bridge & Drawings.BRG.Finch\23- BR-115-139.dgn
C:\200\00166 - T001 - Bridge Repair over Obion River & Drawings.BRG.Finch\23- BR-115-139.dgn

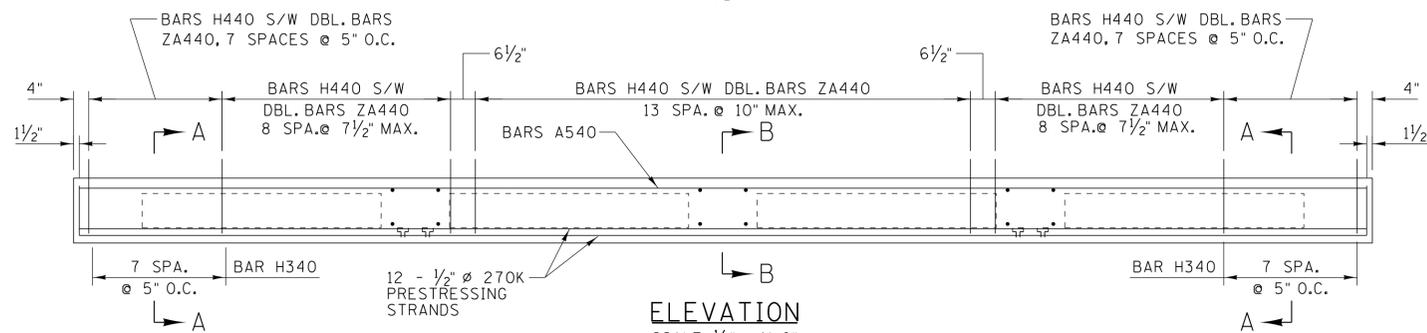


DESIGNED BY S. F. HARPER DATE AUGUST 2013
DRAWN BY C. W. THOMAS DATE AUGUST 2013
SUPERVISED BY J. H. RUDELL DATE AUGUST 2013
CHECKED BY A. J. KHAIRI DATE AUGUST 2013
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

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

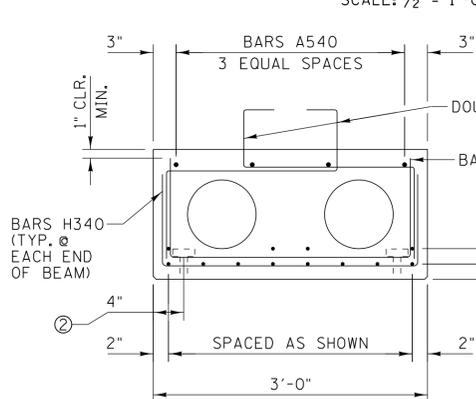


PLAN
SCALE: 1/2" = 1'-0"

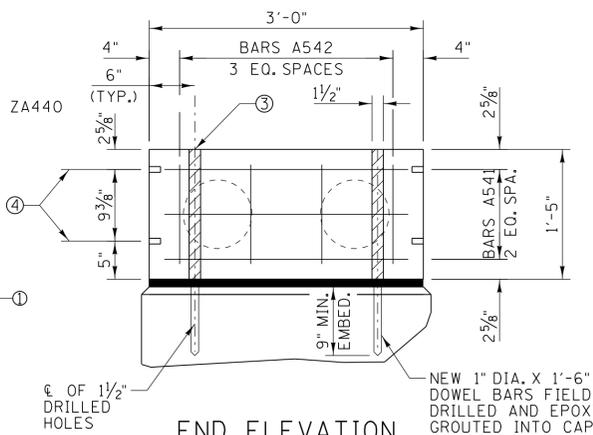


ELEVATION
SCALE: 1/2" = 1'-0"

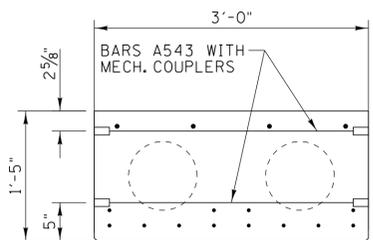
- ① 1/2" dia ASTM GRADE 270K PRESTRESSING STRANDS (12 STRANDS REQUIRED)
- ② 1" THREADED INSERTS 5600# MIN. HOHMAN NO. HJ OR EQUAL, CAST IN PLACE, 8 PER BEAM (ADJUST LOCATION TO AVOID STIRRIPS)
- ③ 1/2" dia OF 1 1/2" SLOTTED HOLES FOR 1" DOWEL BARS. GROUDED BARS TO BE 1'-6" LONG. (9" EMBEDMENT AND 9" PROJECTION INTO BEAM END.)
- ④ 3/4" dia THREADED STEEL INSERTS (CAST IN PLACE) FOR THREADED BARS A510 OR A511. TYPICAL FOR INTERIOR SIDE OF EXTERIOR BEAMS AT BENTS, BOTH SIDES OF INTERIOR BEAMS AT BENTS, AND BOTH SIDES OF BEAMS AT ABUTMENTS. INSTALL PARALLEL TO BEAM ENDS (TYP.)
- ⑤ SEE DWG. NO. BR-115-137 FOR SPACING.



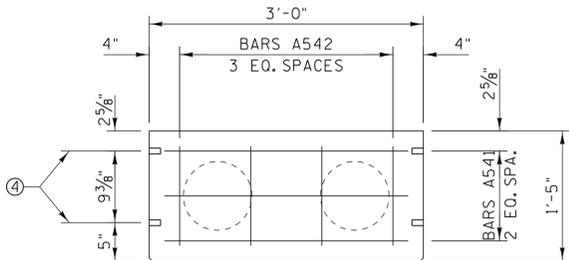
SECTION A-A
(SHOWING PROJECTING REINFORCING STEEL)
SCALE: 1" = 1'-0"



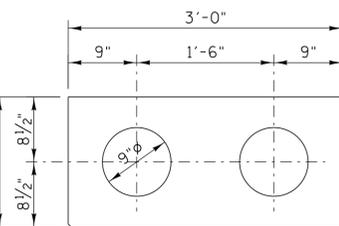
END ELEVATION
(TYP. @ FIXED END ONLY)
SCALE: 1" = 1'-0"



SECTION B-B
(SHOWING TRANSVERSE REINFORCEMENT WITH MECH. COUPLERS)
SCALE: 1" = 1'-0"



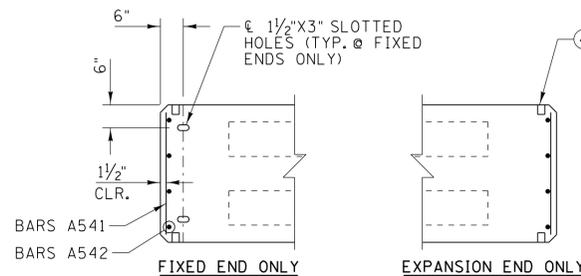
END ELEVATION
(TYP. @ EXPANSION END ONLY)
SCALE: 1" = 1'-0"



SECTION SHOWING PROPERTIES
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"
*A543	5	6		3'-0"
H340	3	16	2'-9 1/2"	4'-9 1/2"
H440	4	46	2'-7 1/2"	4'-9 1/2"
ZA440	4	92		3'-9 3/8"

NOTE:
"NO. REQ'D" IS FOR ONE BEAM. EIGHT (8) BEAMS REQ'D.
ALL DIMENSIONS ARE OUT-TO-OUT.
* MECH. COUPLERS NEEDED AT BOTH ENDS OF BAR.



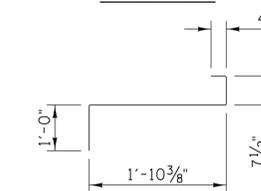
PART PLAN
SCALE: 1/2" = 1'-0"



BARS H340



BARS H440



BARS ZA440

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 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.

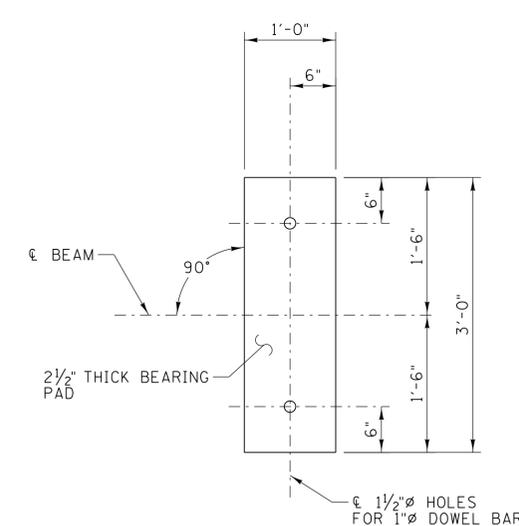
COST OF FORMING EIGHT (8) NEW PRECAST BEAMS, AND ALL THE LABOR AND MATERIAL NECESSARY TO FABRICATE THE NEW BEAMS AS SHOWN ON THIS SHEET, SHALL BE PAID FOR UNDER ITEM NO. 615-02.02, PRESTRESSED CONCRETE BOX BEAM (17" X 36"), L.F.

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.



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

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NOT FOR BIDDING

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23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

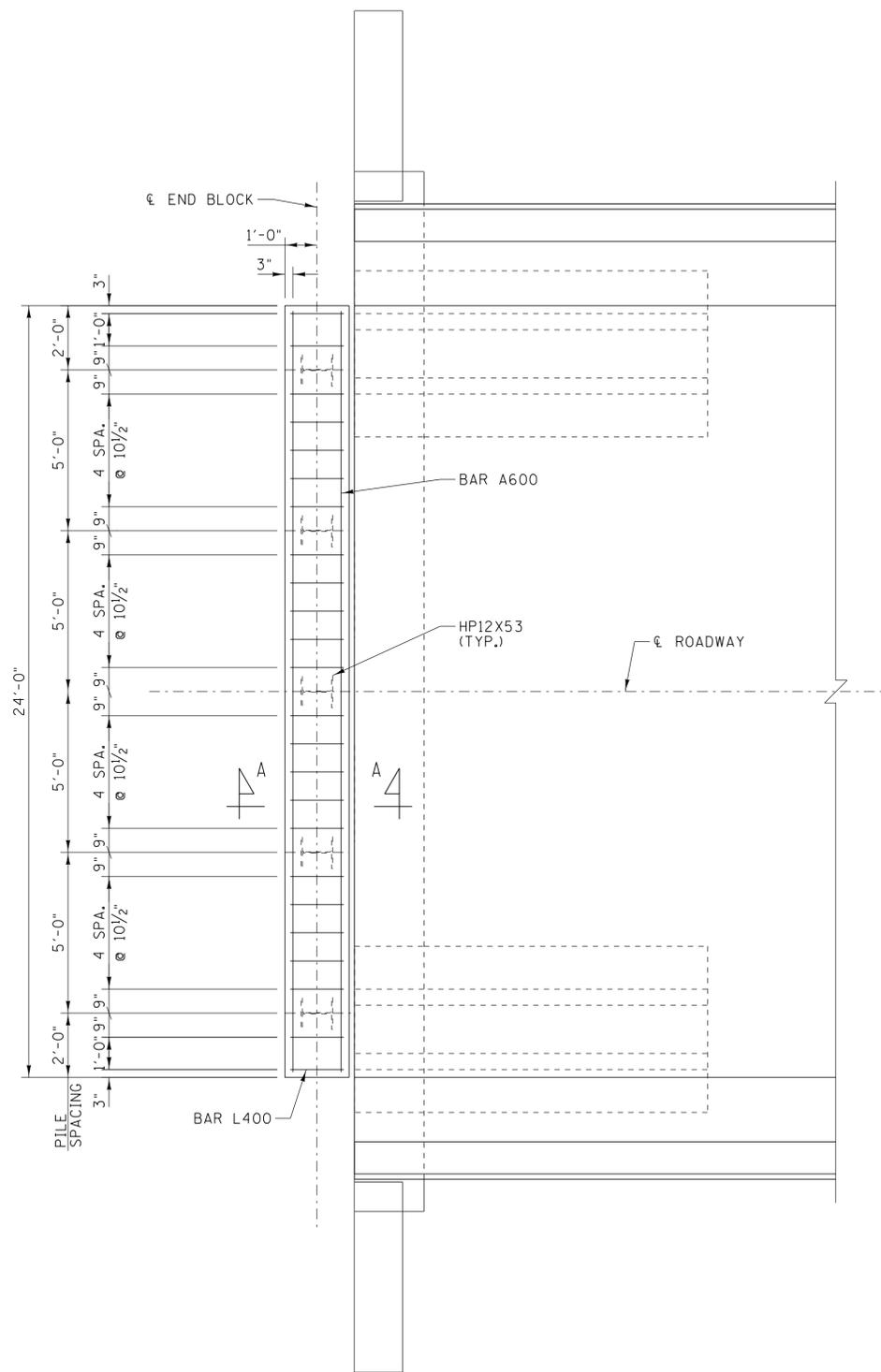
BRIDGE REPAIR DETAILS

SR104 OVER OBION RIVER
BRIDGE NO. 23-SR104-6.89

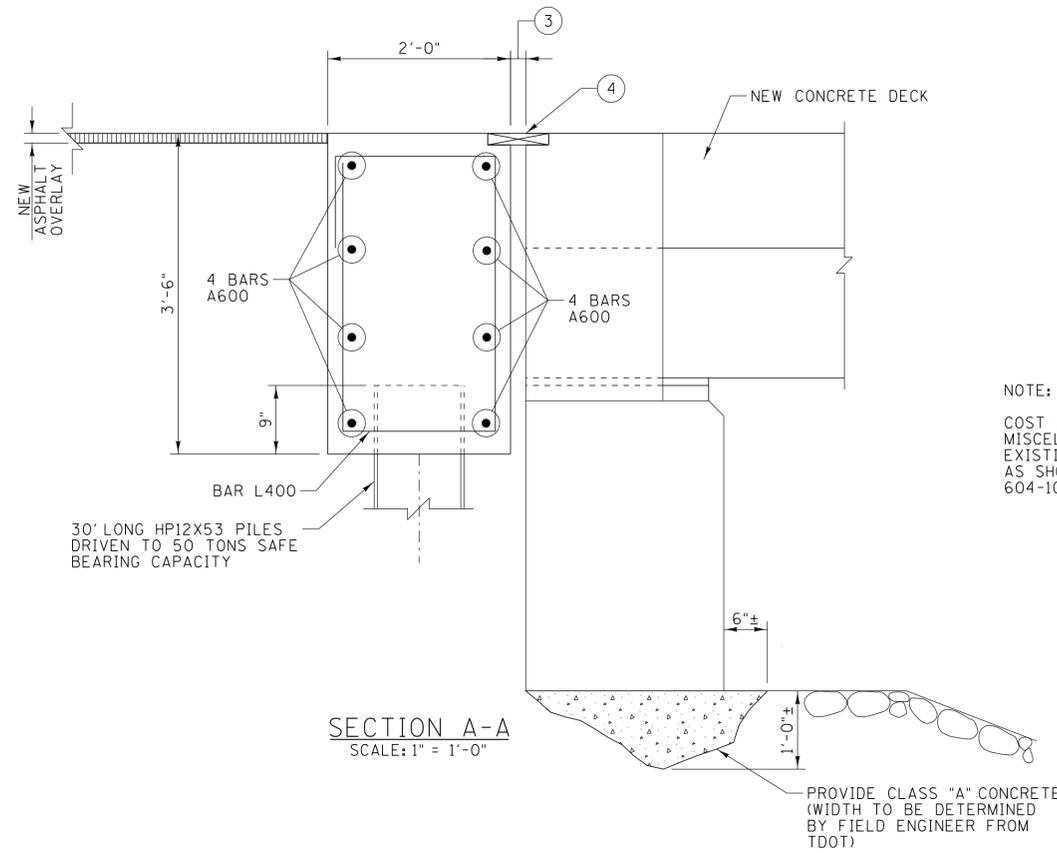
DYER COUNTY
2014



PROJECT NO.	YEAR	SHEET NO.	
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REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



PLAN VIEW - ABUTMENT NO. 1
SCALE: 3/8" = 1'-0"

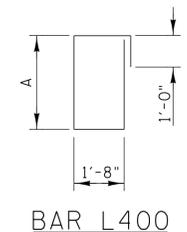


SECTION A-A
SCALE: 1" = 1'-0"

NOTE:
COST OF CLASS "A" CONCRETE, LABOR, AND MISCELLANEOUS MATERIAL NECESSARY TO FILL EXISTING VOIDS UNDERNEATH ABUTMENT CAPS AS SHOWN SHALL BE INCLUDED UNDER ITEM NO. 604-10.90, CLASS "A" CONCRETE REPAIRS, C.Y.

BILL OF STEEL							
CONCRETE END BLOCK							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS				LENGTH
			A	B	C	D	
A600	6	8					23'-8"
L400	4	24	3'-0"				10'-4"

NOTES:
ALL BAR DIMENSIONS ARE OUT-TO-OUT.
NUMBER OF BARS IS FOR ONE END BLOCK (ONE REQUIRED).
ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.



- NOTES:
- ALL CONCRETE POURS SHALL BE WELL CONSOLIDATED BEHIND AND AROUND THE EXPANSION JOINT STEEL RETAINER.
 - SEE EXPANSION JOINT REPLACEMENT DETAIL, TYPE "F" ON STANDARD DRAWING NO. SBR-2-119. FOR FURTHER DETAILS AND NOTES, SEE STANDARD DRAWING NOS. SBR-2-115 AND SBR-2-116.
 - 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 WITH ELASTOMERIC SEAL AND NOTES ON STANDARD DRAWING NO. SBR-2-116. FOR ADDITIONAL DETAILS AND NOTES, SEE STANDARD DRAWING NOS. SBR-2-115 AND SBR-2-119.
 - FOR LEVELING BOLT ASSEMBLIES NOT SHOWN, SEE DETAILS ON STANDARD DRAWING NOS. SBR-2-116, AND SBR-2-119.
 - CONCRETE FOR ALL EXPANSION JOINT REPAIR AREAS TO BE HIGH EARLY STRENGTH CONCRETE WITH A COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS .
 - COST OF POURING WITH HIGH EARLY STRENGTH CONCRETE, REINFORCING STEEL AND PROVIDING NEW EXPANSION JOINT ASSEMBLIES SHALL BE PAID FOR UNDER ITEM NO. 604-10.45, EXPANSION JOINT REPAIR (TYPE "F"), L.F.
 - COST OF INCIDENTALS SUCH AS WELDING, CLEANING, DRILLING, ETC. AND MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE INSTALLATION OF THE NEW EXPANSION JOINT SHALL BE INCLUDED UNDER ITEMS BID ON.
 - ALL COSTS ASSOCIATED WITH DRIVING HP12X53 PILES AT CONCRETE END BLOCK SHALL BE INCLUDED UNDER ITEM NO. 606-03.03, STEEL PILES (12 INCH), L.F. THIS ITEM ALSO INCLUDES COSTS ASSOCIATED WITH TRANSPORTING THE PILES.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR104 OVER OBION RIVER
BRIDGE NO. 23-SR104-6.89

DYER COUNTY
2014



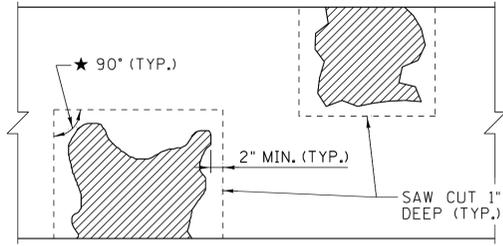
JLHdb-rook 3/12/2014 9:16:01AM
WORKSPACE: T001 - Bridge Repair - over - Obion River - & Drawings - BR-115-142.dgn



DESIGNED BY S. F. HARPER DATE AUGUST 2013
DRAWN BY C. W. THOMAS DATE AUGUST 2013
SUPERVISED BY J. H. RUDELL DATE AUGUST 2013
CHECKED BY A. J. KHAIRI DATE AUGUST 2013
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

██████ DENOTES AREAS OF EXISTING SPALLED CONCRETE

★ SAW CUT EXISTING CONCRETE 1" DEEP SO AS TO OBTAIN A RECTANGULAR AREA. ALL EXISTING REINFORCEMENT SHALL BE CAREFULLY PRESERVED AND BLAST CLEANED.



SPALL SURFACE REPAIR DETAILS

NOTES FOR ITEM NO. 604-10.54;

THE COST OF SAW CUTTING, REMOVING SPALLED OR CRACKED CONCRETE, CLEANING EXPOSED REINFORCING STEEL, PATCHING MATERIAL, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN SHALL BE INCLUDED IN ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F.

PATCHING MATERIAL SHALL BE A POLYMER-MODIFIED CEMENTITIOUS STRUCTURAL PATCHING VERTICAL AND OVERHEAD MATERIAL. SEE T.D.O.T. QUALIFIED PRODUCTS LIST 13, SECTION B.6, FOR ACCEPTABLE PATCHING MATERIALS.

AFTER CONCRETE REMOVAL OF THE 2" DEPTH HAS TAKEN PLACE, THE ENGINEER SHALL HAVE THE OPTION TO REMOVE ADDITIONAL CONCRETE DEPTH AND SHALL DESIGNATE THIS AREA TO BE REPAIRED AND PAID FOR UNDER ITEM NO. 604-10.05 INSTEAD OF UNDER ITEM NO. 604-10.54.

ITEM NO. 604-10.54 SHALL BE BID SUCH THAT THIS ITEM MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

REMOVE ALL DETERIORATED CONCRETE TO A MIN. DEPTH OF 4" AND A MIN. 3/4" BEHIND THE EXISTING REINFORCING STEEL FOR REPAIR AREAS UNDER ITEM NO. 604-10.05, CONCRETE, S.F.

EXISTING REINFORCING STEEL TO BE CLEANED AND REMAIN IN STRUCTURE

DENOTES AREA OF EXISTING SPALLED CONCRETE

EXISTING CONCRETE SURFACE

★ SAW CUT 1" DEEP (TYP.)

FORM NEW CONCRETE SURFACE FLUSH WITH ADJACENT CONCRETE SURFACE. PROVIDE A MIN. OF 1" COVER BY BENDING EXISTING REINFORCEMENT BACK BEHIND FINISHED SURFACE IF REQ'D.

REMOVE ALL DETERIORATED AND LOOSE CONCRETE TO A MIN. DEPTH OF 2" OR TO SOUND CONCRETE FOR CONCRETE REPAIR AREAS PAID FOR UNDER ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F.

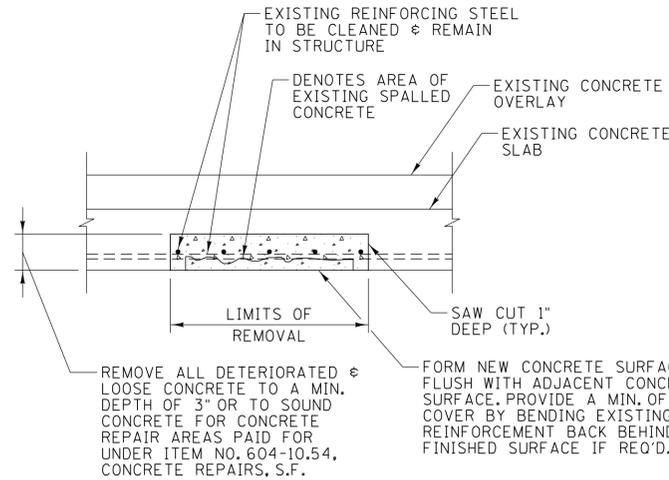
ALL AREAS TO BE REPAIRED ARE TO BE MARKED BY THE ENGINEER FROM THE BRIDGE INSPECTION AND REPAIR OFFICE.

NOTES FOR ITEM NO. 604-10.05;

COST OF CUTTING, REMOVING SPALLED OR CRACKED CONCRETE, CLEANING EXPOSED REINFORCING STEEL, CONCRETE, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN SHALL BE INCLUDED IN ITEM NO. 604-10.05, CONCRETE S.F.

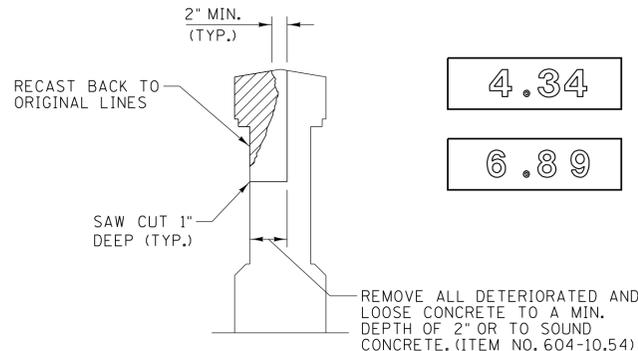
CONCRETE SHALL BE HIGH EARLY STRENGTH CONCRETE, F'C = 3500 PSI AT 28 DAY STRENGTH.

ITEM NO. 604-10.05 SHALL BE BID SUCH THAT THIS ITEM MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.



SLAB OVERHEAD SPALL REPAIR (BRIDGE NO. 6.89)

(OVERHEAD PATCHING MATERIAL SHALL BE FROM TDOT QUALIFIED PRODUCT LIST. ALL COSTS ASSOCIATED WITH SLAB OVERHEAD REPAIR TO BE INCLUDED UNDER ITEM NO. 604-10.54.)



PARAPET SPALL REPAIR (BRIDGE NO. 6.89)

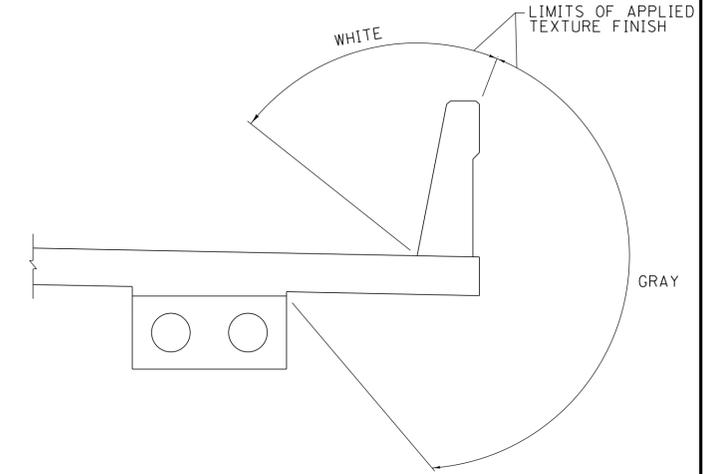
COST OF PARAPET SPALL REPAIR TO BE INCLUDED UNDER ITEM NOS. 604-10.05 AND 604-10.54

4.34

6.89

6.89

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APPLIED TEXTURE FINISH
SCALE: NTS

NOTES:
THE CONTRACTOR SHALL CLEAN ALL SURFACES TO RECEIVE APPLIED TEXTURE COATING. ALL CLEANING SHALL BE SATISFACTORY TO THE ENGINEER PRIOR TO APPLYING THE TEXTURE COATING.
THE APPLIED TEXTURE FINISH SHALL BE EITHER MOUNTAIN GRAY, FEDERAL SPECIFICATION NO. 36440, FEDERAL COLOR STANDARD 595A, OR WHITE, FEDERAL SPECIFICATION NO. 37886. A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. A LIST OF APPROVED TEXTURE COATINGS MAY BE OBTAINED FROM THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS.
COSTS ASSOCIATED WITH CLEANING, FURNISHING, AND APPLYING TEXTURE COATING AND ALL LABOR AND NECESSARY MATERIALS SHALL BE INCLUDED IN ITEM NO. 604-04.02, APPLIED TEXTURE FINISH (EXISTING STRUCTURES), S.Y.
THE NEW END POSTS SHALL RECEIVE APPLIED TEXTURE FINISH.

UNOFFICIAL SET
NOT FOR BIDDING

4.34

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

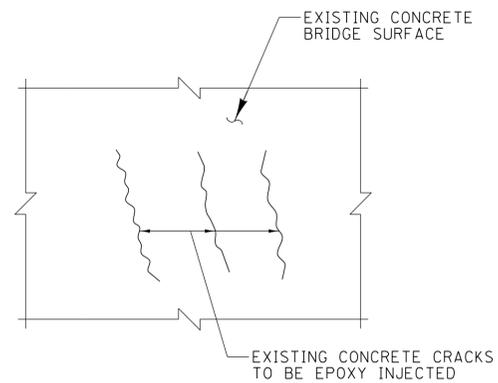
BRIDGE REPAIR DETAILS

SR104 OVER OBION RIVER
BRIDGE NO. 23-SR104-6.89
SR182 OVER COON CREEK
BRIDGE NO. 23-SR182-4.34



DYER COUNTY
2014

BR-115-144



EPOXY INJECTION REPAIR

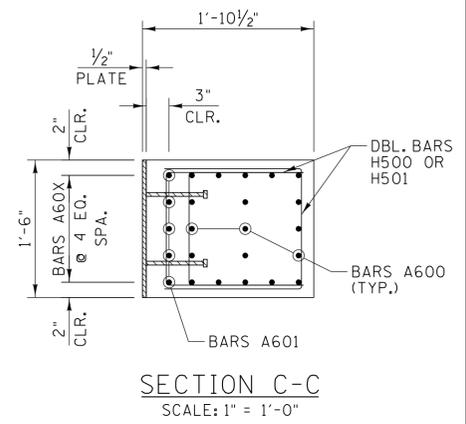
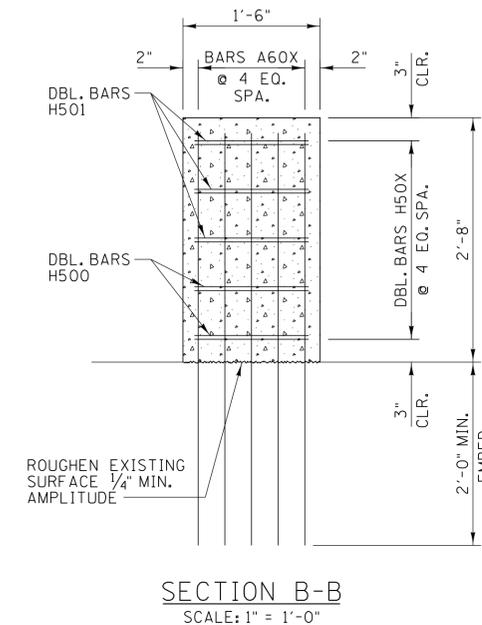
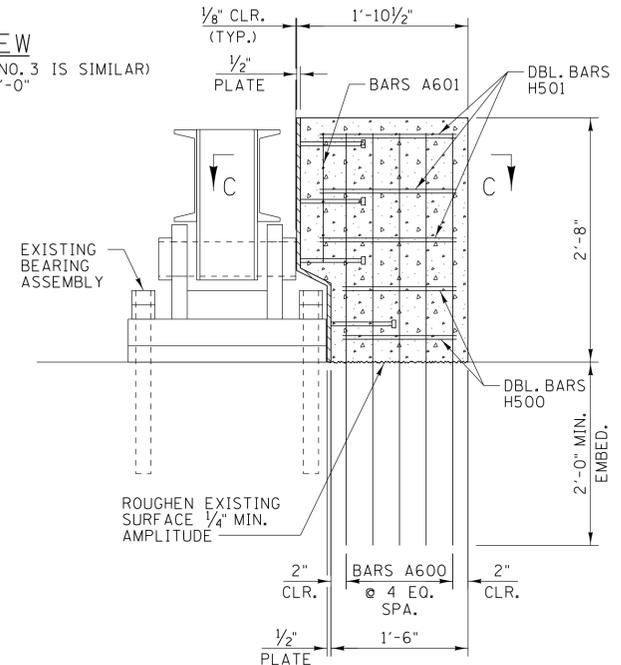
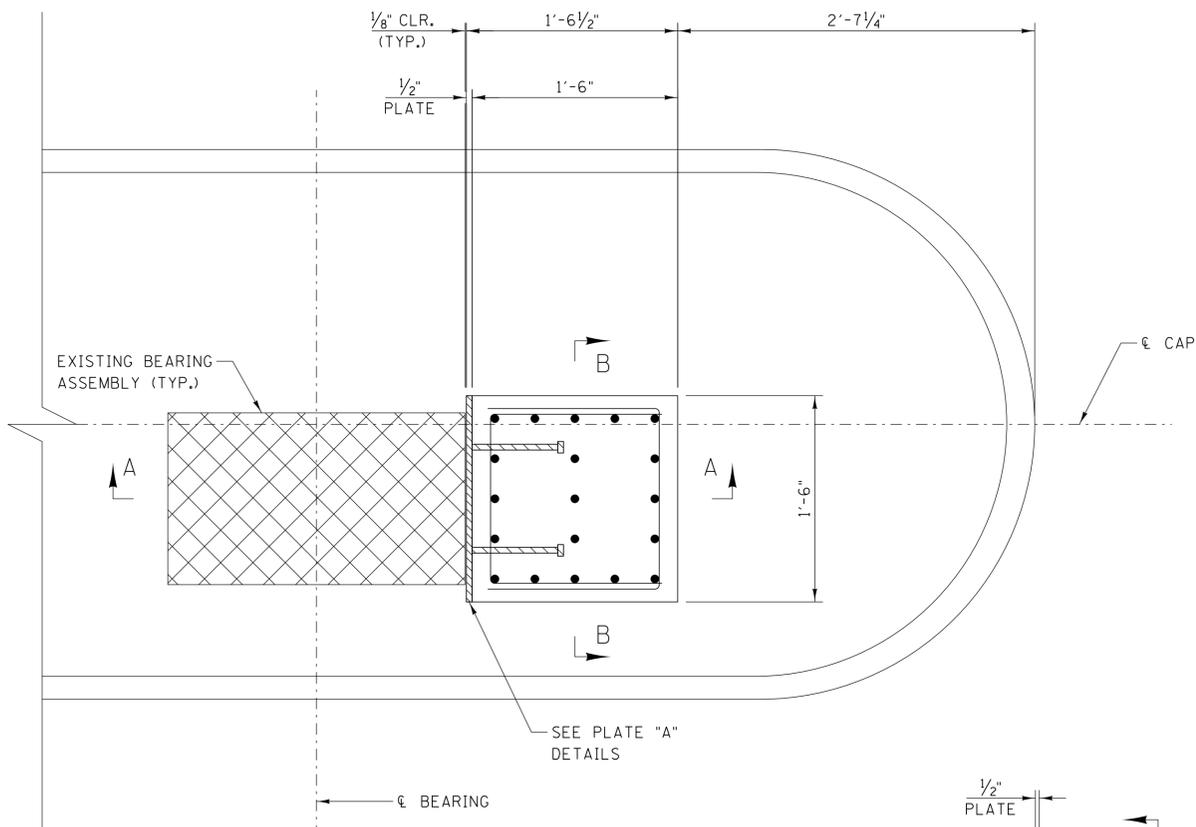
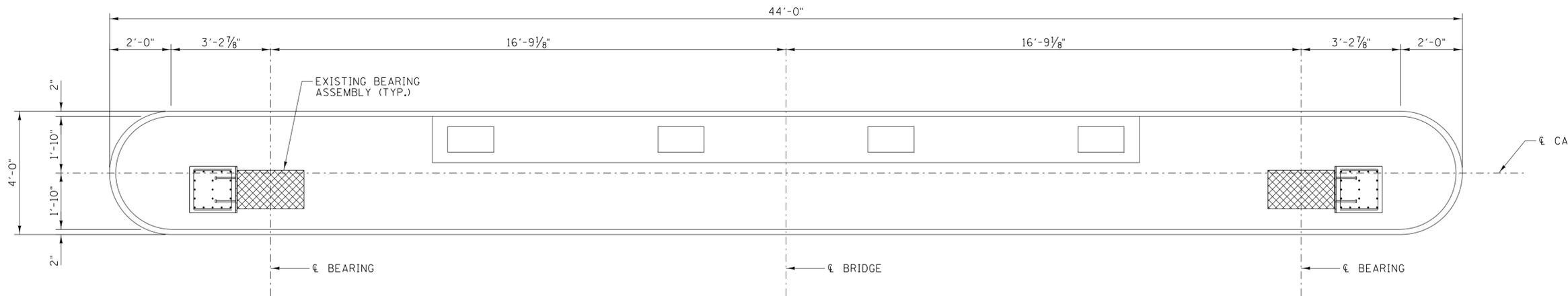
NOTES:
ALL CRACKS SMALLER THAN 1/4" SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE. ALL CRACKS 1/4" OR LARGER SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE OF THE GEL TYPE.
EXTREME CAUTION SHALL BE TAKEN WHEN SELECTING A PRESSURE NECESSARY TO COMPLETE THE EPOXY INJECTION CRACK REPAIR SO AS NOT TO DAMAGE THE STRUCTURE BY CAUSING ADDITIONAL CRACKING. IF ADDITIONAL DAMAGE OCCURS, THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY. ALL EPOXY INJECTION WORK SHALL MEET THE FULL APPROVAL OF THE ENGINEER.
ALL EPOXY INJECTION CONTRACTORS AND/OR SUBCONTRACTORS SHALL BE APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS.
AFTER EPOXY INJECTION IS COMPLETE, ALL INJECTION PORTS SHALL BE REMOVED AND ALL EXCESS SEALING MATERIAL AND EPOXY SHALL BE REMOVED FLUSH WITH THE SURROUNDING CONCRETE SURFACES.
THE ENGINEER FROM THE STRUCTURES DIVISION, BRIDGE INSPECTION AND REPAIR WILL DESIGNATE EXACT CRACK LOCATIONS TO RECEIVE EPOXY INJECTION.
THE ENGINEER SHALL COLLECT RANDOM SAMPLES OF THE EPOXY RESIN FOR EVALUATION BY THE MATERIALS AND TEST DEPARTMENT, DEPARTMENT OF TRANSPORTATION, FOR VERIFICATION OF THE STRENGTH AND QUALITY OF THE MATERIAL.
IF THE CRACKS ARE NOT FULLY SEALED OR THE STRENGTH REQUIREMENTS ARE NOT MET, THEN REDUCTION IN PAYMENT DETERMINED BY THE ENGINEER WILL BE MADE TO THE CONTRACTORS BID PRICE OF ITEM NO. 604-10.62, EPOXY INJECTION REPAIRS (COMPLETE AND IN PLACE), L.F.
THE ENGINEER FROM THE STRUCTURES DIVISION, BRIDGE INSPECTION AND REPAIR OFFICE SHALL DESIGNATE FOUR (4) RANDOM LOCATIONS WHERE THE CRACKS HAVE BEEN EPOXY INJECTED FOR THE CONTRACTOR TO CORE. THE ONE (1) INCH DIAMETER CORES WILL BE IMMEDIATELY TURNED OVER TO THE ENGINEER FOR INSPECTION AND TO VERIFY FULL SEALING OF THE CRACKS. COST OF CORING AND FILLING CORE HOLES WITH AN APPROVED GROUT SHALL BE INCLUDED IN ITEM NO. 604-10.62, EPOXY INJECTION REPAIRS (COMPLETE AND IN PLACE), L.F.
COST OF ALL LABOR AND MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE EPOXY INJECTION REPAIRS TO EXISTING CONCRETE CRACKS SHALL BE INCLUDED UNDER ITEM NO. 604-10.62, EPOXY INJECTION REPAIRS (COMPLETE AND IN PLACE), L.F. ITEM NO. 604-10.62 SHALL BE BID SUCH THAT THIS ITEM MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

JLHabr00k 3/12/2014 9:00:02 AM
WORKSPACE: TDOT Bridge Repair over Obion River & Drawings BRG\Final\28-BR-115-144.dgn
L:\2010\00116 - TDOT - Bridge Repair



DESIGNED BY S. F. HARPER DATE AUGUST 2013
DRAWN BY C. W. THOMAS DATE AUGUST 2013
SUPERVISED BY J. H. RUDDLELL DATE AUGUST 2013
CHECKED BY A. J. KHAIRI DATE AUGUST 2013
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

BARS SHOWN TO BE EMBEDDED INTO EXISTING CAP SHALL BE SECURED USING EPOXY GROUT. ALL BARS SHALL BE EMBEDDED TO DEPTH SHOWN ON DETAILS THIS SHEET AND EPOXY GROUT 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.

6.89

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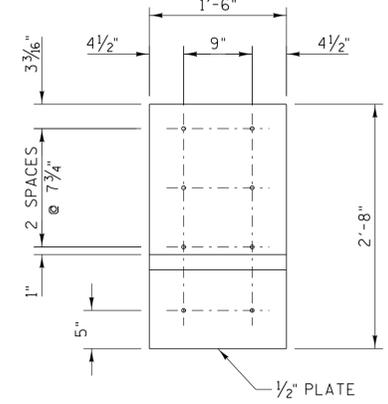
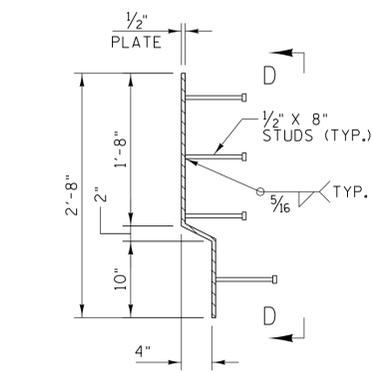
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

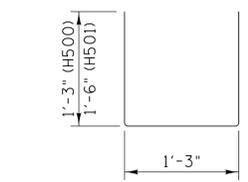
SR104 OVER OBION RIVER
BRIDGE NO. 23-SR104-6.89

DYER COUNTY
2014

BR-115-145



BARS A600 AND A601
(A600 - 76 TOTAL REQ'D.
A601 - 20 TOTAL REQ'D.)



BARS H500 AND H501
(H500 - 16 TOTAL REQ'D.
H501 - 24 TOTAL REQ'D.)

NOTES:

COST OF ROUGHENING EXISTING SURFACE, DRILLING, FORMING, PLATES, STUDS, WELDING, CONCRETE, LABOR, AND ANY MISCELLANEOUS MATERIALS TO CONSTRUCT THE LATERAL SEISMIC RESTRAINTS AS SHOWN IN DETAILS THIS SHEET, SHALL BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

ALL STRUCTURAL STEEL PLATES SHALL BE 50 KSI STEEL AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.

ALL COSTS ASSOCIATED WITH THE REMOVAL, STORAGE, AND REINSTALLATION OF ACCESS LADDERS ON PIER NOS. 2 OR 3 SHALL BE INCLUDED UNDER ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

COST OF ALL REINFORCING STEEL TO BE INCLUDED UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB. THIS ITEM NUMBER WILL ALSO BE USED TO PAY FOR ALL COSTS ASSOCIATED WITH THE EPOXY ANCHOR SYSTEM USED FOR DOWEL BARS.

PLATE "A" DETAILS (SHOWING SIDE VIEW OF PLATE) SCALE: 1" = 1'-0"

FIELD VERIFY DIMENSIONS PRIOR TO FABRICATION

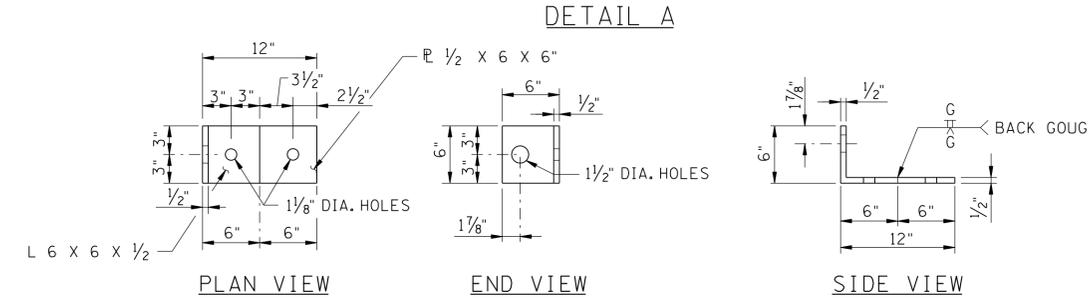
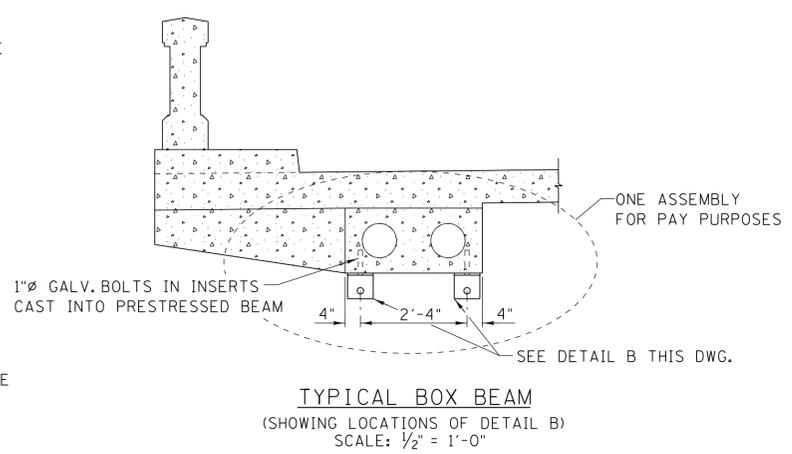
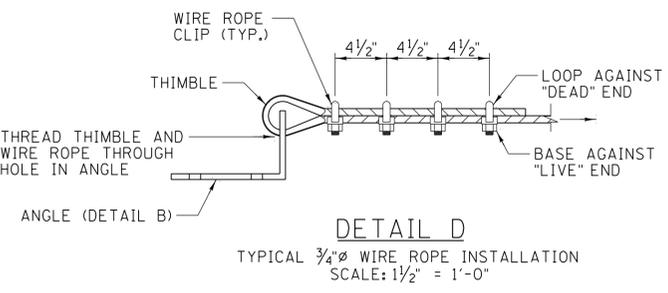
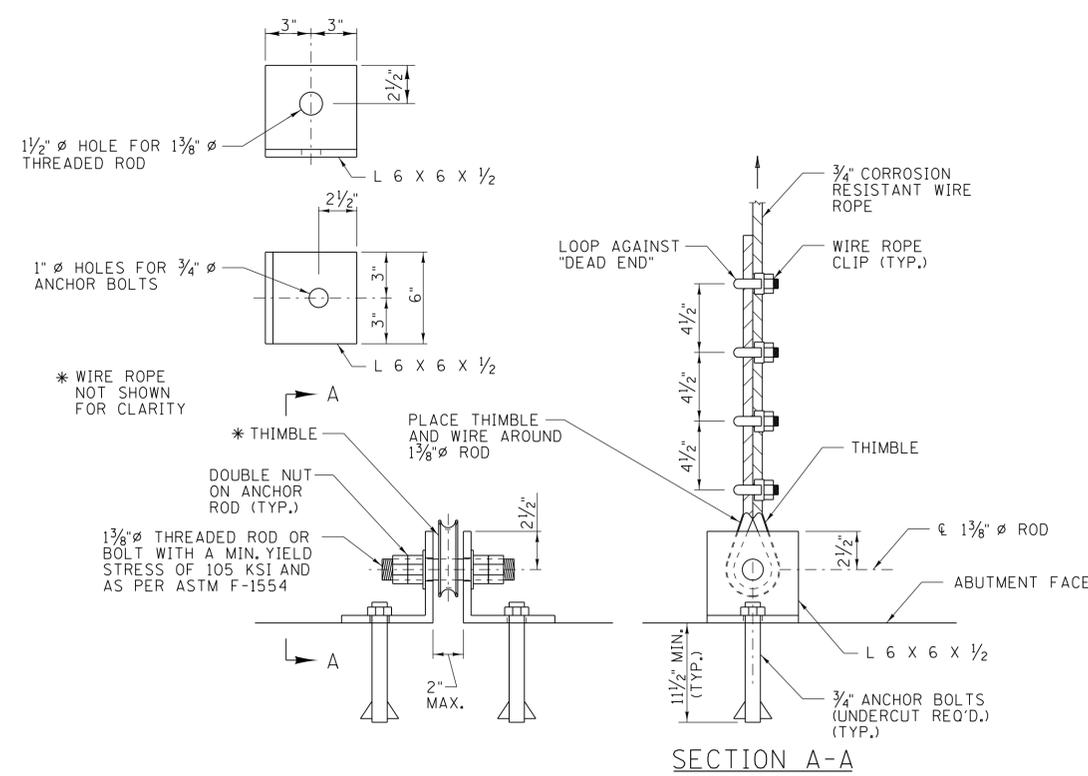
(L2) LATERAL SEISMIC RESTRAINTS (4 REQ'D)

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 T001 - Bridge Repair over Obion River & Drawings\BRC\Final\29-BR-115-145.dgn



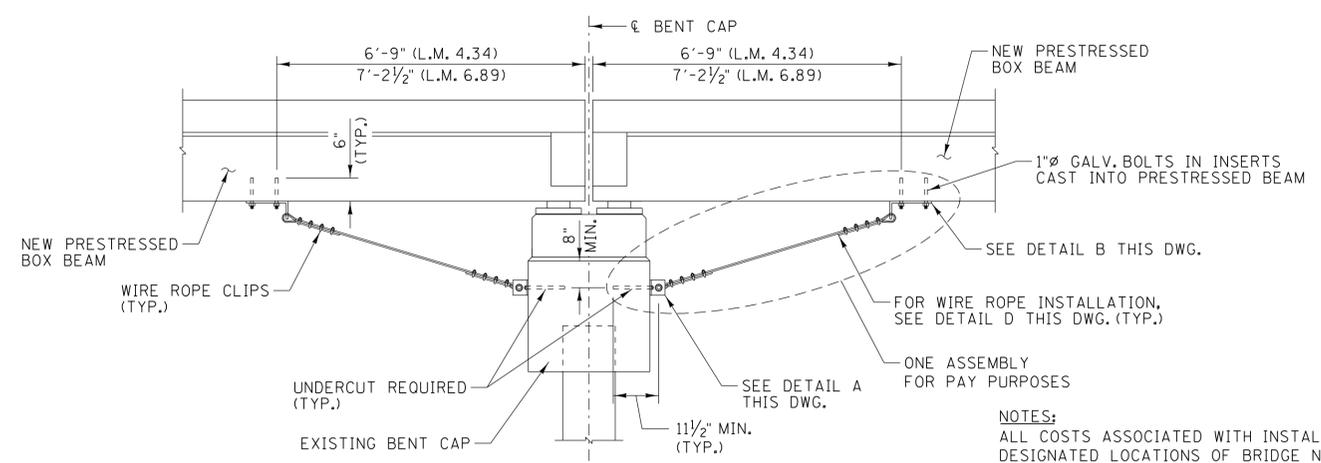
DESIGNED BY L. I. COBOS DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
 SUPERVISED BY J. H. RUDELL DATE AUGUST 2013
 CHECKED BY A. J. KHAIRI DATE AUGUST 2013
 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



NOTE:
ONE ASSEMBLY CONSISTS OF TWO (2) WIRE ROPES,
TWO (2) ANGLES (DETAIL A), TWO (2) ANGLES AND
TWO (2) PLATES (DETAIL B), AND ASSOCIATED HARDWARE.

DETAIL B
SCALE: 1/2" = 1'-0"

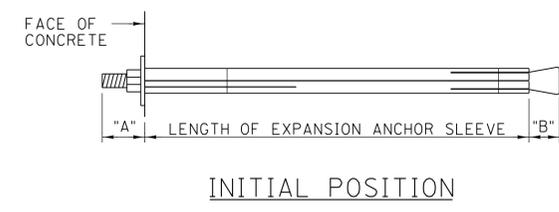


SEISMIC RESTRAINT AT NEW PRESTRESSED BOX BEAM
(SHOWN AT BRIDGE 23-SR182-4.34, SIMILAR AT BRIDGE 23-SR104-6.89)
SCALE: 1/2" = 1'-0"

NOTES:
ALL COSTS ASSOCIATED WITH INSTALLING 3/4" DIA. CORROSION RESISTANT STEEL ROPES AT DESIGNATED LOCATIONS OF BRIDGE NOS. 4.34 AND 6.89 SHALL BE INCLUDED UNDER ITEM NO. 604-03.60, BRIDGE JOINT SEISMIC MODIFICATION, EACH.
AS SHOWN ON DETAILS THIS DWG. SHALL BE PAID FOR UNDER ITEM NO. 604-03.60, BRIDGE JOINT SEISMIC MODIFICATION, EACH. (24 REQ'D.) FOR LOCATIONS SEE DWG. NOS. BR-115-118 THRU BR-115-119.
ALL STRUCTURAL STEEL PLATES AND SHAPES SHALL MEET ASTM A36. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.

4.34 (8 TOTAL)

6.89 (16 TOTAL)



PROCEDURE FOR INSTALLATION OF ANCHOR BOLTS
(3/4" DIAMETER DRILLCO MAXI-BOLT OR WILLIAMS BOLTS) (UNDERCUTTING REQUIRED)

- LOCATE PLACEMENT OF EXISTING REBAR IN VICINITY OF ANCHORS WITH A REBAR LOCATING DEVICE AND MAKE NECESSARY CORRECTIONS IN LOCATIONS OF ANCHORS ON CONCRETE. ANCHOR LOCATION MAY VARY PLUS OR MINUS THREE (3) INCHES IN ANY DIRECTION BUT THE HOLE SHALL BE DRILLED WITHIN SIX (6) DEGREES OF PERPENDICULAR TO THE NOMINAL CONCRETE SURFACE. CUTTING OF REBAR WILL BE ALLOWED.
- HOLES SHALL BE DRILLED WITH A CARBIDE PERCUSSION DRILL BIT, A "REBAR EATER" BIT OR A DIAMOND CORE BIT.
- THE DRILL BIT DIAMETER AND HOLE DEPTHS SHALL CONFORM TO MANUFACTURER'S SPECIFICATIONS.
- IF AN ANCHOR MUST BE RELOCATED AND A NEW HOLE DRILLED, THE OLD HOLE SHALL BE REPAIRED WITH A NON SHRINKAGE PACK GROUT.
- UNDERCUT IN PRIMARY HOLE SHALL BE AS SPECIFIED BY THE MANUFACTURER OF THE UNDERCUTTING TOOL.
- CLEAN THE HOLE OF CONCRETE DUST AND DEBRIS USING OIL FREE COMPRESSED AIR OR BY VACUUMING. PLACE BEARING SLEEVE FLUSH WITH THE CONCRETE SURFACE.
- THE EXPANSION SLEEVE IS TO EXPAND INTO THE UNDERCUT CREATED BY THE UNDERCUTTING TOOL, THEREFORE THE ANCHOR TUBE MUST TERMINATE AT THE BASE OF THE UNDERCUT SECTION.
- TO SET THE ANCHOR, IT IS NECESSARY TO DRAW THE CONICAL NUT OF THE STUD BOLT INTO THE ANCHOR SLEEVE. AFTER THE ASSEMBLY IS INSERTED INTO THE DRILLED HOLE, THE ANCHOR WILL BE CONSIDERED SET WHEN THE DIMENSION "A" (SEE ANCHOR SETTING DETAILS) HAS INCREASED BY AN AMOUNT EQUAL TO DIMENSION "B". AFTER THE STEEL PLATES ARE IN PLACE, TIGHTEN AS MUCH AS POSSIBLE AND THEN TIGHTEN A SECOND NUT AGAINST THE FIRST TO ENSURE NO LOOSENING TAKES PLACE.
- BECAUSE OF CLOSE TOLERANCE BETWEEN CONICAL NUT O.D. AND HOLE I.D. IT MAY BE NECESSARY TO LIGHTLY HAMMER THE ANCHOR INTO THE HOLE. IF HAMMERING IS NECESSARY, STEPS SHALL BE EMPLOYED WHICH WILL PREVENT DAMAGE TO THE STUD BOLT THREADS.
- INSTALLATION PROCEDURES REQUIRED BY THE ANCHOR MANUFACTURER IN ADDITION TO THE INSTRUCTIONS LISTED ABOVE SHALL BE FOLLOWED.
- BENT PLATES SHALL BE ASTM A709 (GRADE 36) MATERIAL GALVANIZED TO ASTM A123 STANDARD.
- POSITION OF PLATE OR ANGLE OF BEAM:
ABUTMENTS AND PIERS: THE PLATE OR ANGLE SHALL BE POSITIONED ON THE BEAM WITH CABLE IN THE FULL EXTENDED POSITION AND THE ANCHOR BOLT LOCATIONS MARKED THROUGH THE PLATE OR ANGLE ANCHOR HOLES.

4.34 6.89

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS
SR104 OVER OBION RIVER
BRIDGE NO. 23-SR104-6.89
SR182 OVER COON CREEK
BRIDGE NO. 23-SR182-4.34

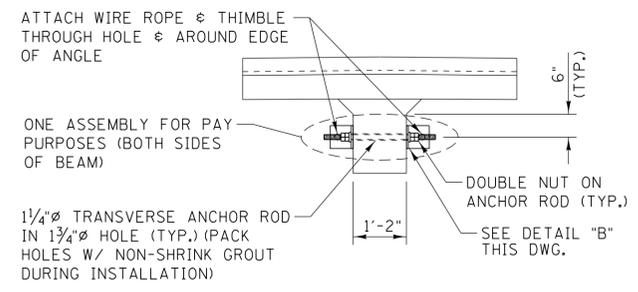
DYER COUNTY
2014

LONGITUDINAL SEISMIC RESTRAINTS
(24 REQ'D.)

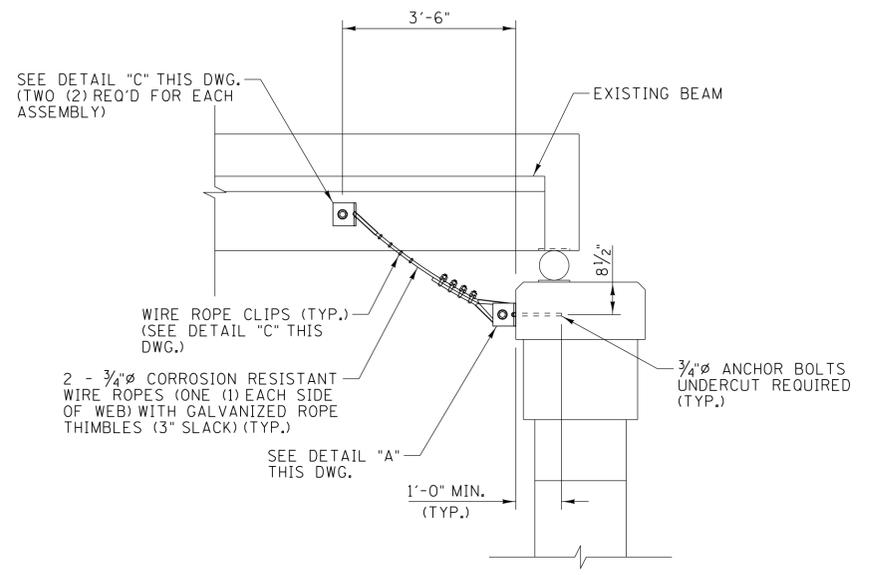
DESIGNED BY S. F. HARPER DATE AUGUST 2013
DRAWN BY C. W. THOMAS DATE AUGUST 2013
SUPERVISED BY J. H. RUDDLELL DATE AUGUST 2013
CHECKED BY A. J. KHAIRI DATE AUGUST 2013
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

JLH:brock 3/12/2014 9:06:03 AM
WORKSPACE: T001 Bridge - Bridge Repair over Obion River & Drawings BRG\Final\30-BR-115-146.dgn
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PROJECT NO.	YEAR	SHEET NO.	
23945-4272-04	2014		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



TYPICAL EXISTING BEAM
(SHOWING LOCATIONS OF DETAIL "C")
SCALE: 1/2" = 1'-0"



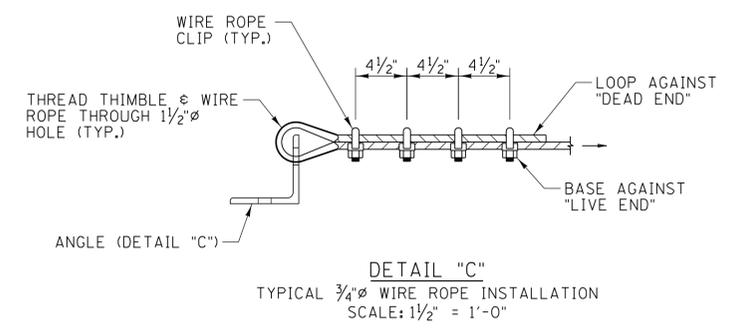
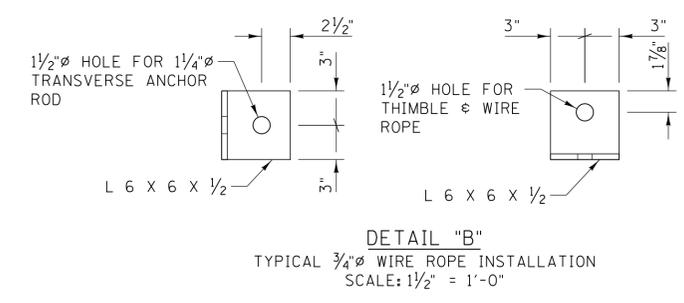
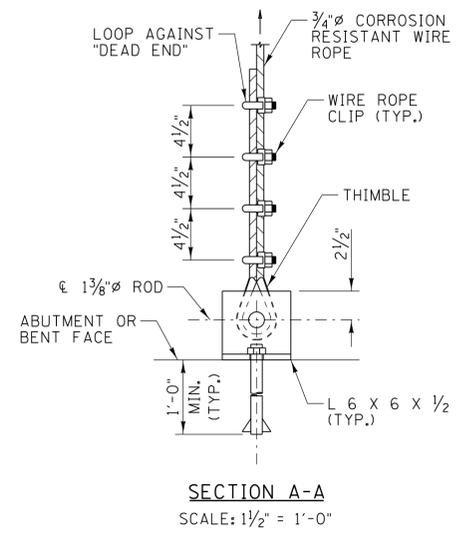
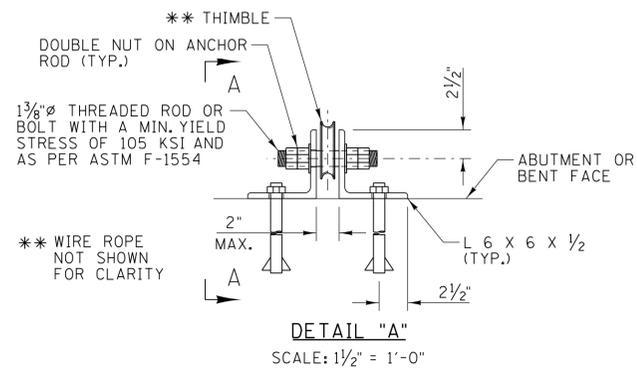
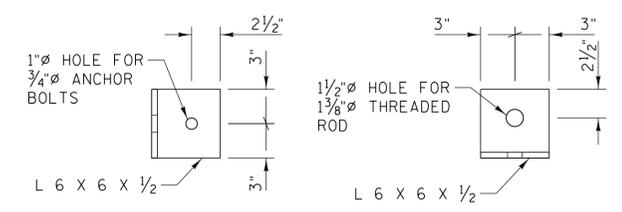
SEISMIC RESTRAINT AT EXISTING BEAMS
(SHOWN AT BENT, SIMILAR AT PIERS AND ABUTMENTS)
SCALE: 1/2" = 1'-0"

NOTE:
ONE ASSEMBLY WILL CONSIST OF 2 WIRE ROPES WITH THEIR THIMBLES AND CLIPS, 2 ANGLES (DETAIL C), 4 ANGLES (DETAIL A), 2 SHIM PLATES (DETAIL E), 4 ANCHOR BOLTS, 1 1/4" ROD AND 2 1 3/8" RODS.

NOTES:
PROVIDE 3/4" DIA. CORROSION RESISTANT STEEL AS SHOWN ON THIS DWG. (25 LOCATIONS TOTAL)

ALL COSTS ASSOCIATED WITH INSTALLING 3/4" DIA. CORROSION RESISTANT STEEL ROPES SHALL BE PAID FOR UNDER ITEM NO. 604-03.60, BRIDGE JOINT SEISMIC MODIFICATION, EACH.

ALL STRUCTURAL STEEL ANGLES SHALL MEET ASTM A36, AND U-BOLTS AND RODS SHALL MEET ASTM A193-B7. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.



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6.89

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS
SR182 OVER COON CREEK
BRIDGE NO. 23-SR182-4.34



DYER COUNTY
2014

S2 LONGITUDINAL SEISMIC RESTRAINTS
(25 REQ'D)

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 L:\ZD\0001616 - TDOT - Bridge Repair over Obion River & Drawings\BRO\Final\31 - BR-115-147.dgn



DESIGNED BY S. F. HARPER DATE AUGUST 2013
 DRAWN BY C. W. THOMAS DATE AUGUST 2013
 SUPERVISED BY J. H. RUDDELL DATE AUGUST 2013
 CHECKED BY A. J. KHAIRI DATE AUGUST 2013
 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-115-147

