STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.		YEAR	2020	SHEET NO	1
FED AID PROJ NO					
STATE PROJ NO	79005-4177-04				
BRIDGE I.D. NO	79I00550057				

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	05-20-20	JLH	REVISED INDEX OF SHEETS AND LIST OF DRAWINGS.
2	09-08-20	MAS	REVISED INDEX OF SHEETS AND LIST OF DRAWINGS.
3	10-08-20	MAS	REVISED INDEX OF SHEETS AND LIST OF DRAWINGS.
4	11-03-20	MAS	REVISED INDEX OF SHEETS AND LIST OF DRAWINGS.
5	12-09-20	MAS	REVISED INDEX OF SHEETS AND LIST OF DRAWINGS.

Index of Sheets

SHEET NO.	REVISION	SHEET NAME
STRUCTURE-SIGN1 - STRUCTURE-SIGN6	12-09-20	SIGNATURE SHEET
1	12-09-20	TITLE SHEET
2	12-09-20	ESTIMATED QUANTITIES
3-4		GENERAL NOTES
5		PROJECT COMMITMENTS
6-24	10-08-20	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	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS

TRAFFIC CONTROL

DWG. NO.	REVISION	DESCRIPTION
T-M-1	06-28-19	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	06-28-19	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-WZ-FAB1		FLASHING YELLOW ARROW BOARD
T-WZ-PBR1		INTERCONNECTED PORTABLE BARRIER RAIL
T-WZ-PBR2		DETAILS FOR FLEXIBLE DELINEATORS
T-PBR-1	03-16-17	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	03-16-17	DETAILS FOR FLEXIBLE DELINEATORS
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-11	03-15-17	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-12	03-15-17	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-13	03-15-17	TWO-OUTSIDE LANE CLOSURE ON FREEWAY OR EXPRESSWAY
T-WZ-14	03-15-17	TWO-OUTSIDE LANE CLOSURE ON INTERSTATES AND EXPRESSWAYS (PORTABLE BARRIER RAIL)
T-WZ-16	06-28-19	LANE SHIFT FOR DIVIDED HIGHWAYS AND FREEWAYS

EROSION PREVENTION AND SEDIMENT CONTROL

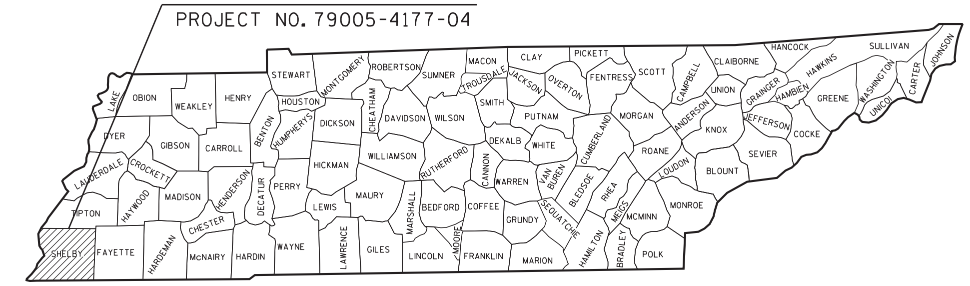
DWG. NO.	REVISION	DESCRIPTION
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS

LIST OF STANDARD DRAWINGS

DWG. NO.	REVISION	DESCRIPTION
STD-9-1	10-07-08	REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS
STD-14-2	11-01-10	STANDARD DETAILS AND INTERMEDIATE DIAPHRAGM DETAILS FOR I-BEAMS

SHELBY COUNTY

SHELBY COUNTY
PROJECT NO. 79005-4177-04

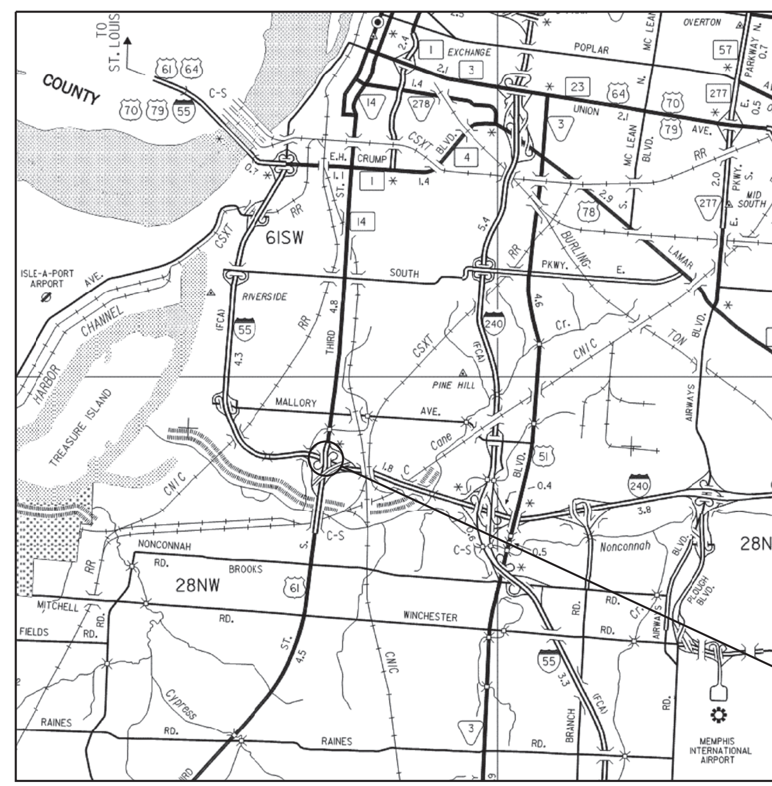


BRIDGE NO. 79-SR014-07.46 OVER I-55
BRIDGE I.D. NO. 79I00550057

BRIDGE REPAIR

STATE ROUTE 14   F.A.H.S. NO.

SCALE: NTS



PROJECT NO. 79005-4177-04
STATE ROUTE 14 - L.M. 07.46

PROJECT LENGTH
0.00 MILE

LIST OF DRAWINGS

DWG. NO.	REV.	DRAWING
BR-130-172		LAYOUT OF BRIDGE TO BE REPAIRED
BR-130-173	12-09-20	ESTIMATED QUANTITIES
BR-130-174		GENERAL NOTES
BR-130-174A		GENERAL NOTES
BR-130-175		BRIDGE REPAIR DETAILS
BR-130-176		BRIDGE REPAIR DETAILS
BR-130-177		BRIDGE REPAIR DETAILS
BR-130-178		BRIDGE REPAIR DETAILS
BR-130-179		BRIDGE REPAIR DETAILS
BR-130-180		BRIDGE REPAIR DETAILS
BR-130-180A		BRIDGE REPAIR DETAILS
BR-130-181		BRIDGE REPAIR DETAILS
BR-130-182		BRIDGE REPAIR DETAILS
BR-130-183		BRIDGE REPAIR DETAILS
BR-130-184		BRIDGE REPAIR DETAILS
BR-130-185	11-03-20	BRIDGE REPAIR DETAILS
BR-130-186		BRIDGE REPAIR DETAILS
BR-130-187		BRIDGE REPAIR DETAILS
BR-130-187A		BRIDGE REPAIR DETAILS

LIST OF REFERENCE DRAWINGS ⦶

REVISION	DRAWING
K-30-10 THRU K-30-18	ORIGINAL PLANS (1962)
BR-8-21 THRU BR-8-23B	BRIDGE REPAIR PLANS (1993)
BR-22-85 THRU BR-22-89	BRIDGE REPAIR PLANS (1996)
BR-89-53 BR-89-62 THRU BR-89-71	BRIDGE REPAIR PLANS (2008)
BR-115-47 THRU BR-115-51	BRIDGE REPAIR PLANS (2014)
H-5-110	STANDARD CONCRETE HANDRAIL (1960)

⦶ ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

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

DATE

APPROVED: Clay Bright
CLAY BRIGHT, COMMISSIONER

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 JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT REPAIR OFFICE PROJECT MANAGER MIKE LAWSON

DESIGNED BY GARVER, LLC

DESIGNER A. J. KHAIRI   CHECKED BY J. H. RUDDELL

PE NO. 79005-4177-04   PIN. NO. 118595.01

AMJAD S. KHAIRI REGISTERED ENGINEER No. 106 STATE OF TENNESSEE 12/09/2020

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

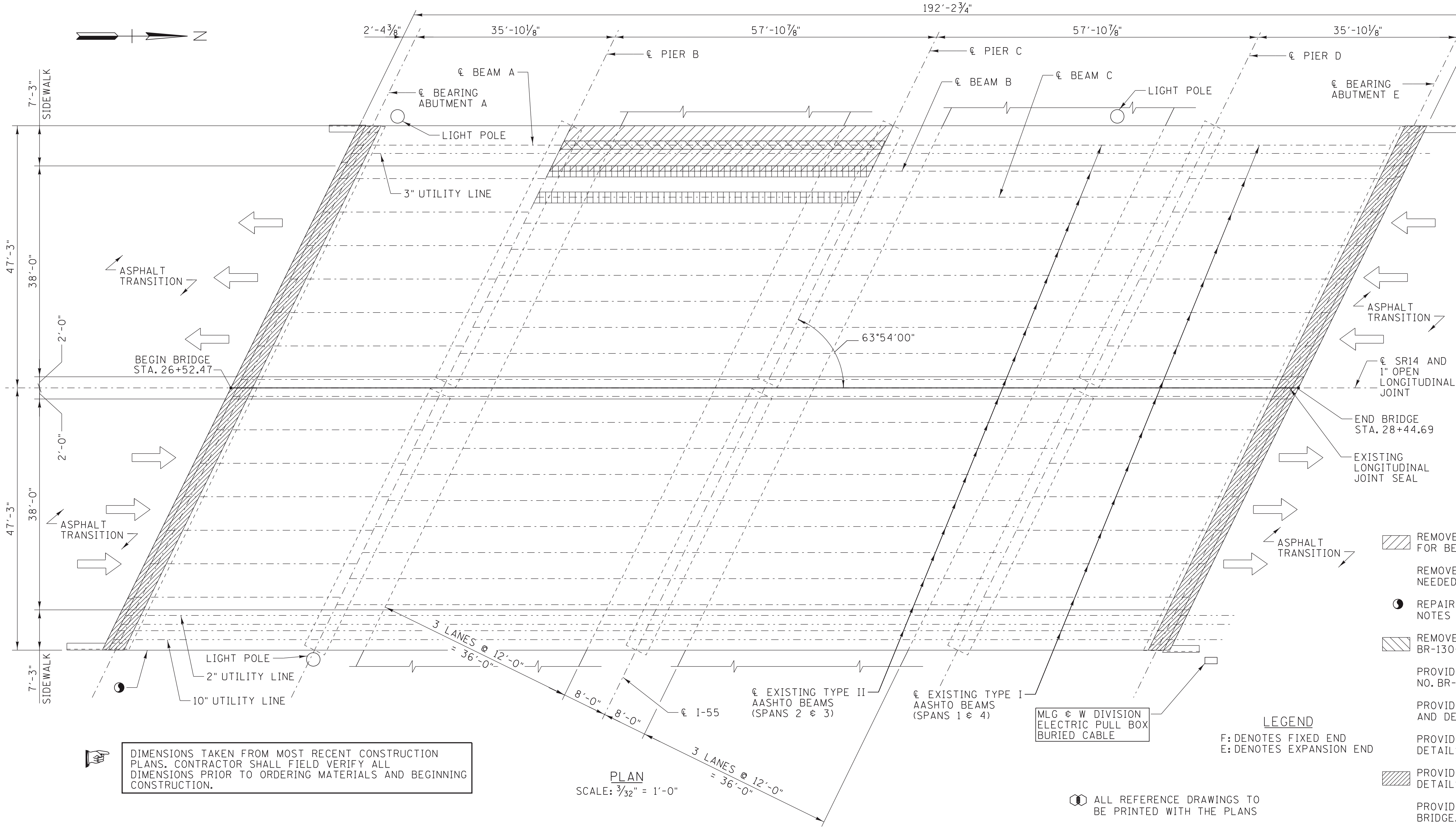
DIVISION ADMINISTRATOR   DATE

MASpradlin 12/9/2020 2:40:38 PM
WORKSPACE: TDOT Bridge
L:\2018\18T405 - TDOT- Shelby County- SR14 over I-55\Drawings\BRG\09 - Revision 5\01-118595-01-Construction-001.dgn

PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



DIMENSIONS TAKEN FROM MOST RECENT CONSTRUCTION PLANS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

PLAN
SCALE: 3/32" = 1'-0"

ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

LIST OF REFERENCE DRAWINGS

REVISION	DRAWING
K-30-10 THRU K-30-18	ORIGINAL PLANS (1962)
BR-8-21 THRU BR-8-23B	BRIDGE REPAIR PLANS (1993)
BR-22-85 THRU BR-22-89	BRIDGE REPAIR PLANS (1996)
BR-89-53 THRU BR-89-71	BRIDGE REPAIR PLANS (2008)
BR-115-47 THRU BR-115-51	BRIDGE REPAIR PLANS (2014)
H-5-110	STD. CONCRETE HANDRAIL (1960)

LIST OF DRAWINGS

DWG. NO.	DRAWING
BR-130-172	LAYOUT OF BRIDGE TO BE REPAIRED
BR-130-173	ESTIMATED QUANTITIES
BR-130-174	GENERAL NOTES
BR-130-174A	GENERAL NOTES
BR-130-175	BRIDGE REPAIR DETAILS
BR-130-176	BRIDGE REPAIR DETAILS
BR-130-177	BRIDGE REPAIR DETAILS
BR-130-178	BRIDGE REPAIR DETAILS
BR-130-179	BRIDGE REPAIR DETAILS
BR-130-180	BRIDGE REPAIR DETAILS
BR-130-180A	BRIDGE REPAIR DETAILS
BR-130-181	BRIDGE REPAIR DETAILS
BR-130-182	BRIDGE REPAIR DETAILS
BR-130-183	BRIDGE REPAIR DETAILS
BR-130-184	BRIDGE REPAIR DETAILS
BR-130-185	BRIDGE REPAIR DETAILS
BR-130-186	BRIDGE REPAIR DETAILS
BR-130-187	BRIDGE REPAIR DETAILS
BR-130-187A	BRIDGE REPAIR DETAILS

SCOPE OF WORK

REMOVE HANDRAIL AND PORTION OF DECK CANTILEVER IN SPAN 2 TO ALLOW FOR BEAM REMOVAL. FOR NOTES AND DETAILS, SEE DWG. NO. BR-130-179.

REMOVE EXISTING LATERAL RESTRAINERS. MODIFY SEISMIC RESTRAINERS AS NEEDED. FOR NOTES AND DETAILS, SEE DWG. NO. BR-130-186.

REPAIR DAMAGED HANDRAIL AT ABUTMENT A, EAST SIDE END OF BRIDGE. FOR NOTES AND DETAILS, SEE DWG. NO. BR-130-184.

REMOVE BEAM A OF SPAN 2. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-130-172 AND BR-130-179.

PROVIDE NEW BEARINGS FOR NEW BEAM. FOR NOTES AND DETAILS, SEE DWG. NO. BR-130-182.

PROVIDE NEW AASHTO TYPE II PRESTRESSED BEAM FOR SPAN 2. FOR NOTES AND DETAILS, SEE DWG. NO. BR-130-180.

PROVIDE NEW DECK CANTILEVER AND HANDRAIL FOR SPAN 2. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-130-179 AND BR-130-187.

PROVIDE NEW EXPANSION JOINT AT EACH END OF BRIDGE. FOR NOTES AND DETAILS, SEE DWG. NO. BR-130-183.

PROVIDE CONCRETE SEAL FOR FULL LENGTH OF SIDEWALK FOR BOTH SIDES OF BRIDGE. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-130-175 AND BR-130-177.

PROVIDE FIFTY FOOT (50') ASPHALT TRANSITION AT EACH END OF BRIDGE. FOR NOTES AND DETAILS, SEE DWG. NO. BR-130-185.

REMOVE AND REPLACE DIAPHRAGMS AT SPAN 2, WEST SIDE. FOR NOTES AND DETAILS, SEE DWG. NO. BR-130-181.

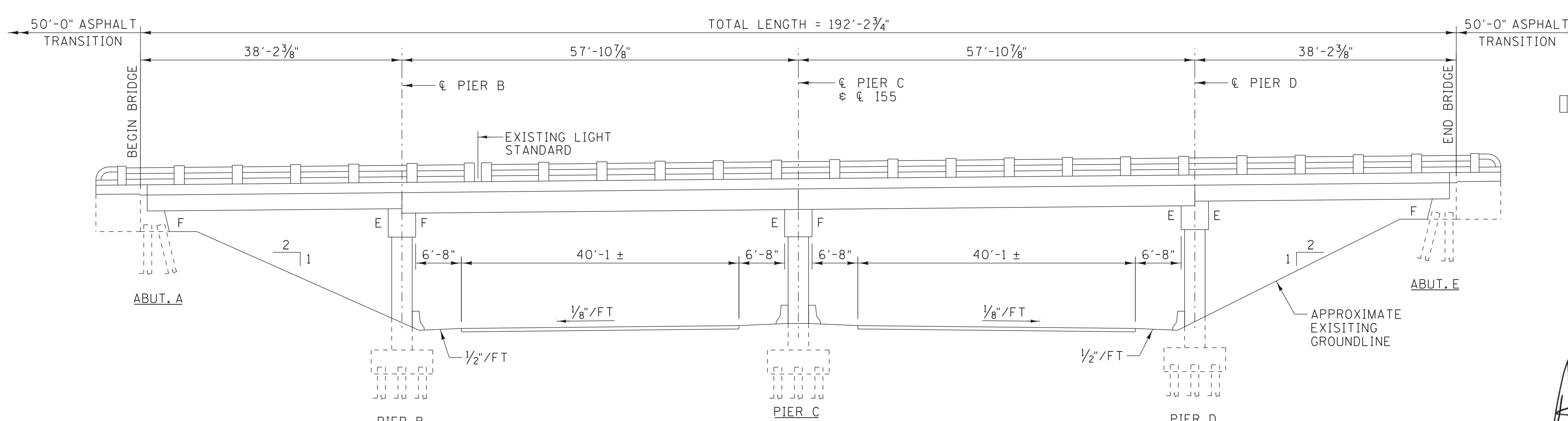
PROVIDE BEAM SPALL REPAIR FOR BEAMS B AND C OF SPAN 2. FOR NOTES AND DETAILS, SEE DWG. NO. BR-130-180A.

PROVIDE FIBER WRAP AT BEAMS A, B, AND C OF SPAN 2. FOR NOTES AND DETAILS SEE DWG. NO. BR-130-180A.

PROVIDE TRAFFIC CONTROL FOR SOUTHBOUND TRAFFIC AS SHOWN ON SHEET NOS. 6-24.

LEGEND
F: DENOTES FIXED END
E: DENOTES EXPANSION END

ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS



ELEVATION
SCALE: 3/32" = 1'-0"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

AMJAD S. KHAIRI REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 106621 STATE OF TENNESSEE 04/10/2020

SHELBY COUNTY
2020

GARVER

DESIGNED BY	R. A. KHAIRI	DATE	MAY 2020
DRAWN BY	R. A. KHAIRI	DATE	MAY 2020
SUPERVISED BY	J. H. RUDDELL	DATE	MAY 2020
CHECKED BY	W. M. MCENTIRE	DATE	MAY 2020

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

BR-130-172

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WORKSPACE: TDOT Bridge
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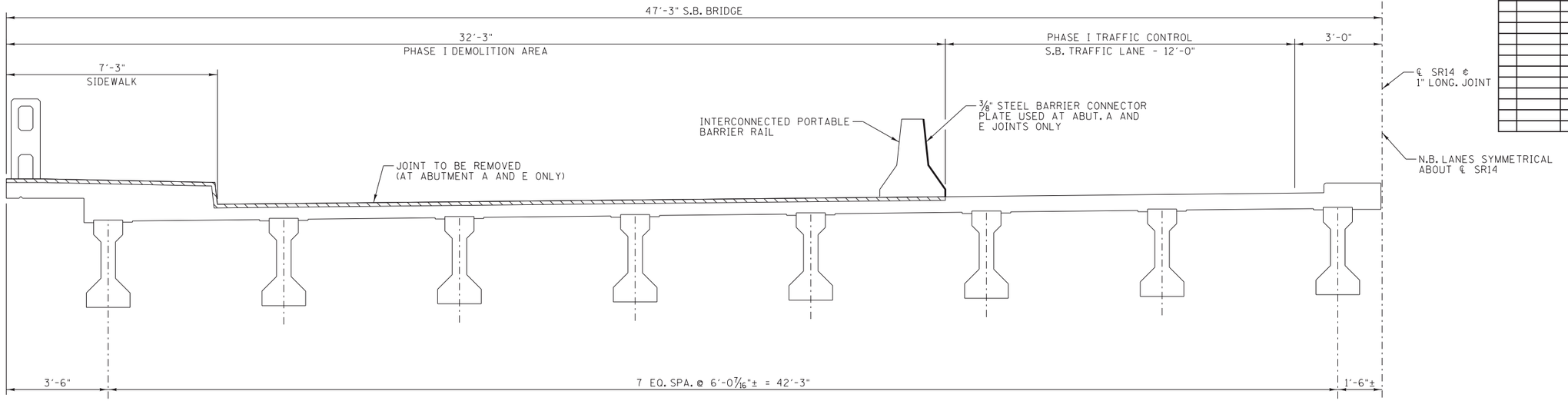
PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

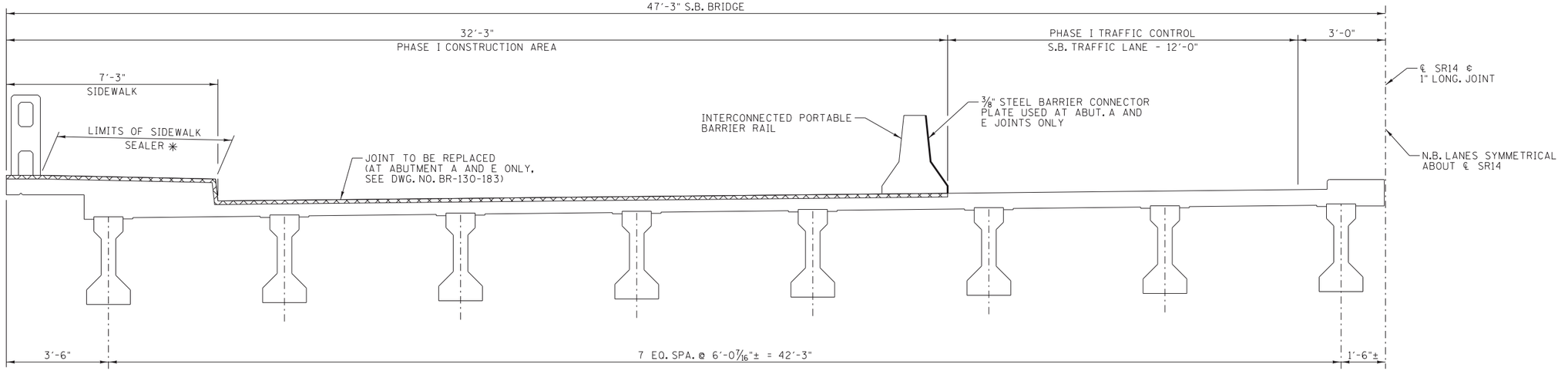
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PHASE I - DEMOLITION

(SPAN NOS. 1 & 4)
(S.B. BRIDGE SHOWN, N.B. BRIDGE SYMMETRICAL
ABOUT ℄ LONGITUDINAL JOINT)
SCALE: ½" = 1′-0"



✳ SIDEWALK SEALER NOTES:

SAND BLAST OR WATER BLAST EXISTING SIDEWALK TO PROVIDE CLEAN AND ROUGHENED SURFACE BEFORE APPLYING SIDEWALK COATING.

THE SIDEWALK SEAL COATING SHALL BE FROM THE TDOT QUALIFIED PRODUCTS LIST (QPL 23). THE CONTRACTOR MUST STRICTLY CONFORM WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS DURING INSTALLATION.

ALL WORK SHALL MEET THE FULL APPROVAL OF THE TDOT ENGINEER.

ALL COSTS ASSOCIATED WITH SAND OR WATER BLAST CLEANING, FURNISHING COATING MATERIALS, LABOR, AND ANY NECESSARY MATERIALS TO SEAL EXISTING SIDEWALKS SHALL BE INCLUDED IN ITEM NO. 604-10.43, PENETRATING WATER REPELLENT CONCRETE SEAL, S.Y.

PHASE I - CONSTRUCTION

(SPAN NOS. 1 & 4)
(S.B. BRIDGE SHOWN, N.B. BRIDGE SYMMETRICAL
ABOUT ℄ LONGITUDINAL JOINT)
SCALE: ½" = 1′-0"

GARVER

DESIGNED BY	J. L. HALBROOK	DATE	MAY 2020
DRAWN BY	J. L. HALBROOK	DATE	MAY 2020
SUPERVISED BY	J. H. RUDDELL	DATE	MAY 2020
CHECKED BY	W. M. MCENTIRE	DATE	MAY 2020

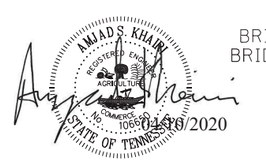
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

SHELBY COUNTY
2020

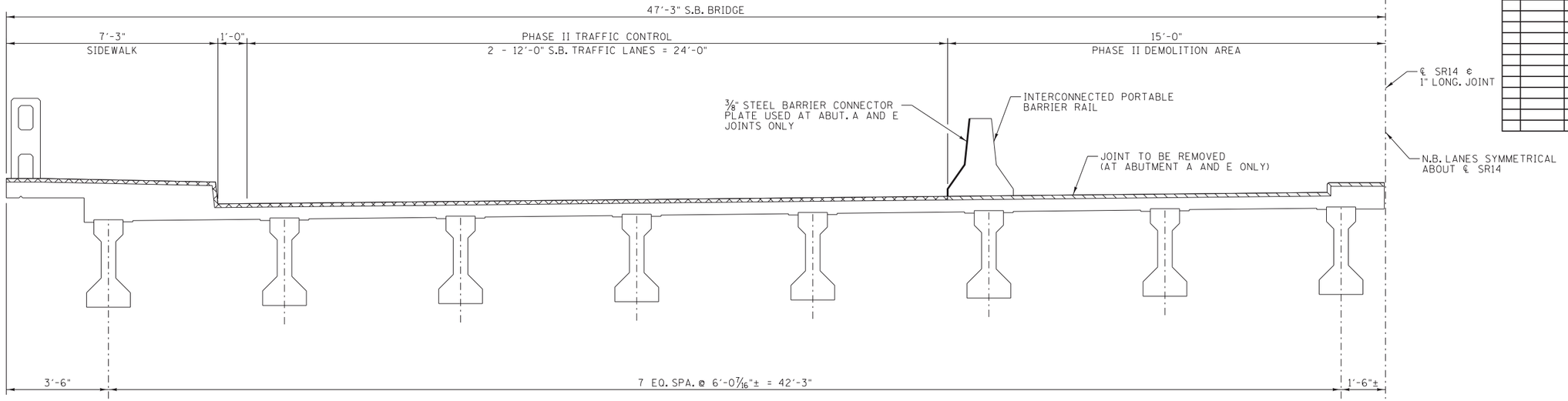


BR-130-175

PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

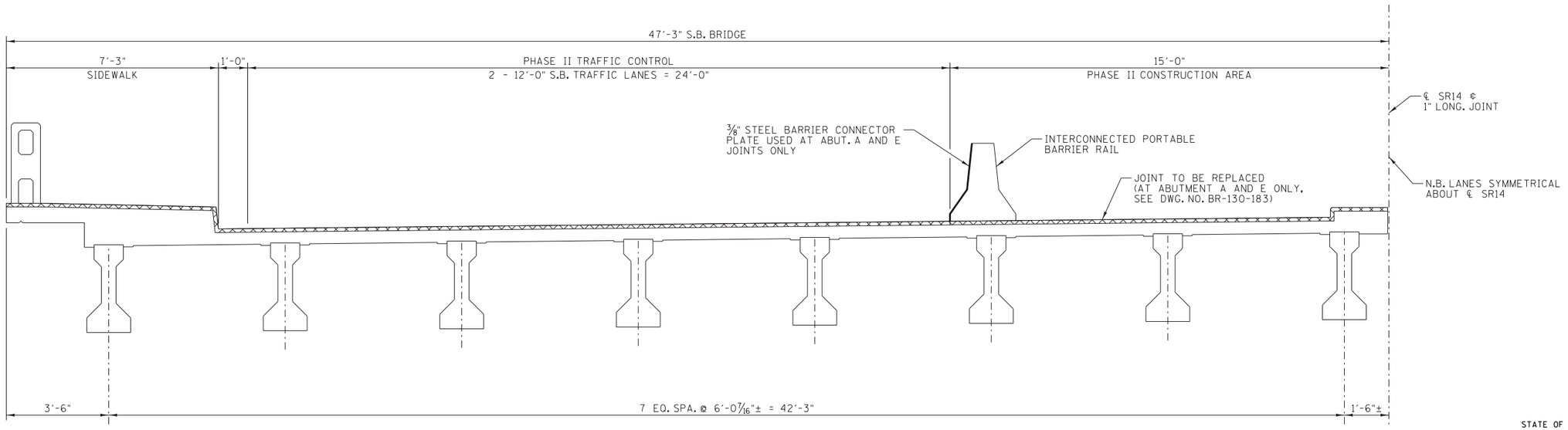
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PHASE II - DEMOLITION

(SPAN NOS. 1 & 4)
(S.B. BRIDGE SHOWN, N.B. BRIDGE SYMMETRICAL ABOUT ℄ LONGITUDINAL JOINT)
SCALE: 1/2" = 1'-0"



PHASE II - CONSTRUCTION

(SPAN NOS. 1 & 4)
(S.B. BRIDGE SHOWN, N.B. BRIDGE SYMMETRICAL ABOUT ℄ LONGITUDINAL JOINT)
SCALE: 1/2" = 1'-0"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

SHELBY COUNTY
2020

GARVER

DESIGNED BY J. L. HALBROOK DATE MAY 2020
DRAWN BY J. L. HALBROOK DATE MAY 2020
SUPERVISED BY J. H. RUDDELL DATE MAY 2020
CHECKED BY W. M. MCENTIRE DATE MAY 2020

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

AMJAD S. KHAIR — REGISTERED ENGINEER — AGRICULTURE — No. 106609 — STATE OF TENNESSEE — 04/16/2020

BR-130-176

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WORKSPACE: TDOT Bridge
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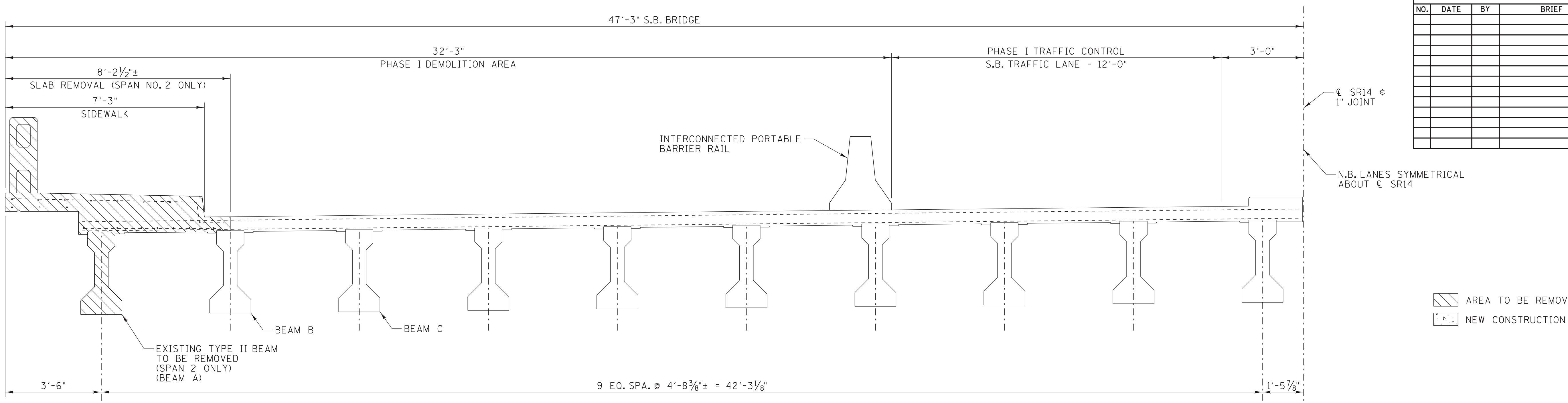
PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

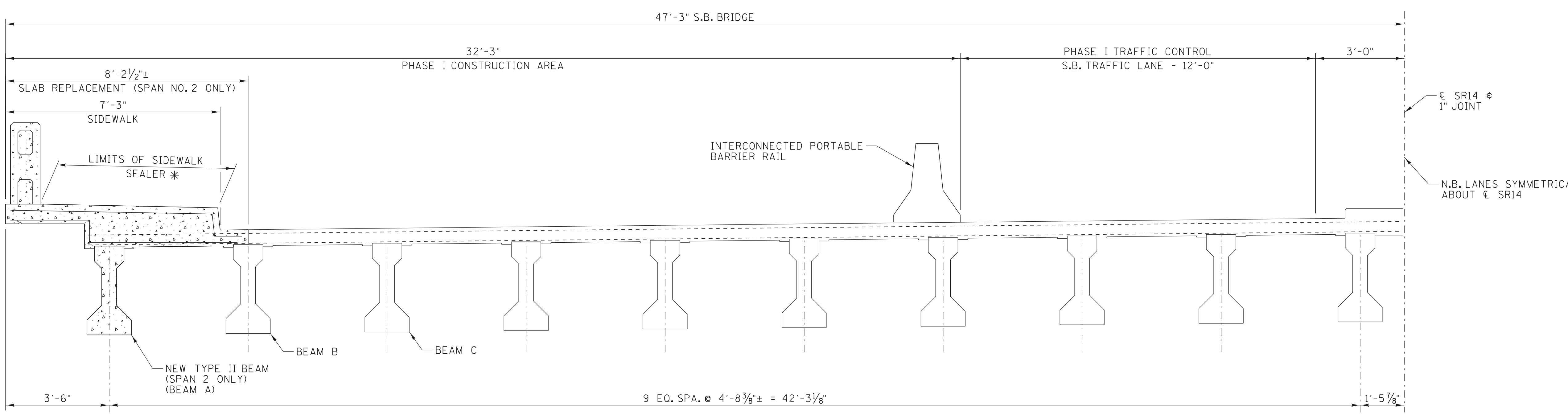
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PHASE I - DEMOLITION

(SPAN NOS. 2 & 3)
(S.B. BRIDGE SHOWN, N.B. BRIDGE SYMM. ABOUT ℄ LONGITUDINAL JOINT)
SCALE: ½" = 1'-0"



✱ SIDEWALK SEALER NOTES:

SAND BLAST OR WATER BLAST EXISTING SIDEWALK TO PROVIDE CLEAN AND ROUGHENED SURFACE BEFORE APPLYING SIDEWALK COATING.

THE SIDEWALK SEAL COATING SHALL BE FROM THE TDOT QUALIFIED PRODUCTS LIST (QPL 23). THE CONTRACTOR MUST STRICTLY CONFORM WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS DURING INSTALLATION.

ALL WORK SHALL MEET THE FULL APPROVAL OF THE TDOT ENGINEER.

ALL COSTS ASSOCIATED WITH SAND OR WATER BLAST CLEANING, FURNISHING COATING MATERIALS, LABOR, AND ANY NECESSARY MATERIALS TO SEAL EXISTING SIDEWALKS SHALL BE INCLUDED IN ITEM NO. 604-10.43, PENETRATING WATER REPELLENT CONCRETE SEAL, S.Y.

PHASE I - CONSTRUCTION

(SPAN NOS. 2 & 3)
(S.B. BRIDGE SHOWN, N.B. BRIDGE SYMM. ABOUT ℄ LONGITUDINAL JOINT)
SCALE: ½" = 1'-0"

NOTE:

BEAMS A, B, AND C SHALL RECIEVE SPALL REPAIRS AND FIRBER WRAPPING. SEE DETAILS ON DWG. NOS. BR-130-180A AND BR-130-187A.

GARVER

DESIGNED BY J. L. HALBROOK DATE MAY 2020
DRAWN BY J. L. HALBROOK DATE MAY 2020
SUPERVISED BY J. H. RUDDELL DATE MAY 2020
CHECKED BY W. M. MCENTIRE DATE MAY 2020

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

AMJAD S. KHAIRI — REGISTERED ENGINEER — NO. 106633 — STATE OF TENNESSEE — 04/10/2020

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

SHELBY COUNTY
2020

BR-130-177

PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

REVISIONS

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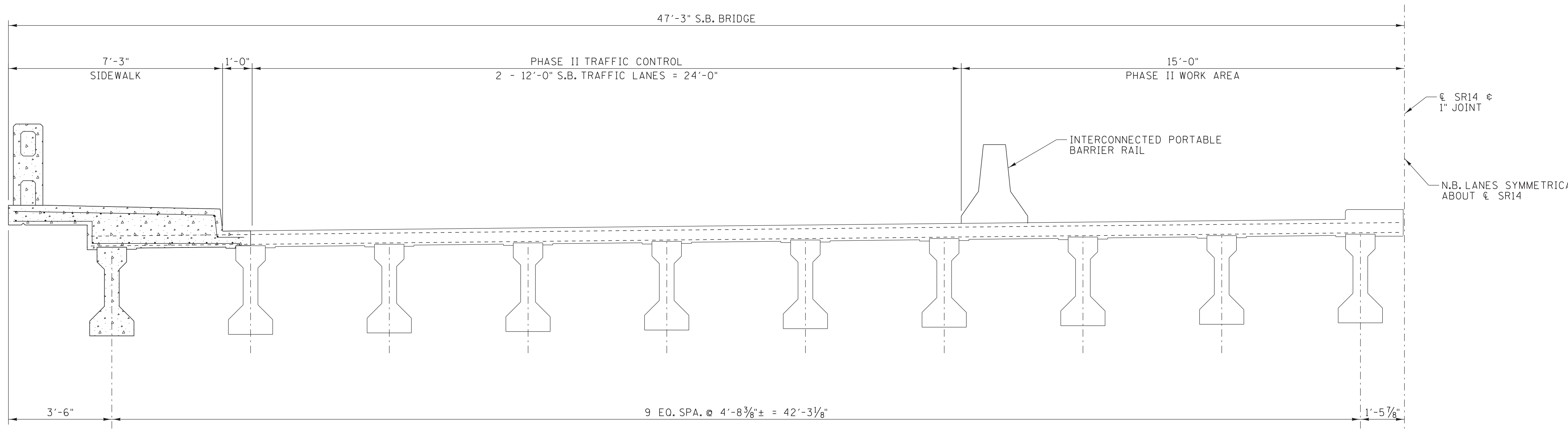

PHASE II

(SPAN NOS. 2 & 3)
(S.B. BRIDGE SHOWN, N.B. BRIDGE SYMM. ABOUT ℄ LONGITUDINAL JOINT)
SCALE: ½" = 1'-0"

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WORKSPACE: TDOT Bridge
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GARVER

DESIGNED BY J. L. HALBROOK DATE MAY 2020
DRAWN BY J. L. HALBROOK DATE MAY 2020
SUPERVISED BY J. H. RUDDELL DATE MAY 2020
CHECKED BY W. M. MCENTIRE DATE MAY 2020

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

AMJAD S. KHAIR — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — NO. 106650 — STATE OF TENNESSEE
04/10/2020

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

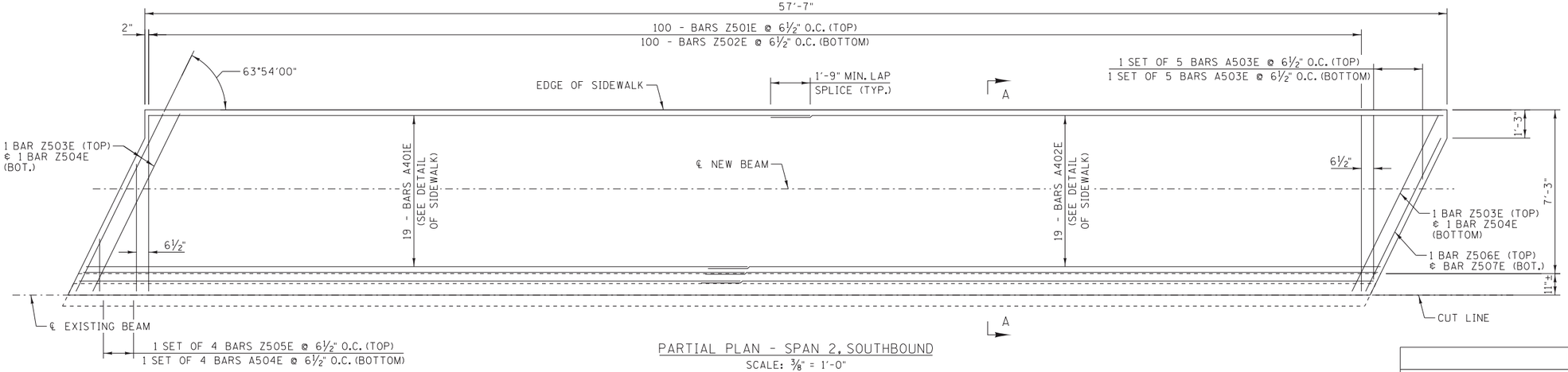
SHELBY COUNTY
2020

BR-130-178

PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PARTIAL PLAN - SPAN 2, SOUTHBOUND

SCALE: ⅜" = 1'-0"

BILL OF STEEL

DECK CANTILEVER PORTION (2 REQ'D)

BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A401E	4	20					30'-0"
A402E	4	20					29'-0"
SERIES A503E	5	2	LENGTH VARIES FROM 7'-3" TO 2'-10" IN INCREMENTS OF 1'-1" (5 REQ'D)				
SERIES A504E	5	1	LENGTH VARIES FROM 5'-8" TO 2'-4" IN INCREMENTS OF 1'-1" (4 REQ'D)				
Z501E	5	100	6'-11"	11"	1½"	9"	8'-7"
Z502E	5	100	2'-8"	5'-2"		9"	8'-7"
Z503E	5	2	7'-8"	1'-0"	1½"	9"	9'-5"
Z504E	5	2	3'-0"	5'-9"		9"	9'-6"
SERIES Z505E	5	1	4'-9" TO ◊ 1'-5"	11"		9"	6'-5" TO 3'-1"
Z506E	5	1	6'-8"	1'-10"	1½"	9"	8'-5"
Z507E	5	1	1'-10"	5'-9"		9"	8'-4"

NOTES:

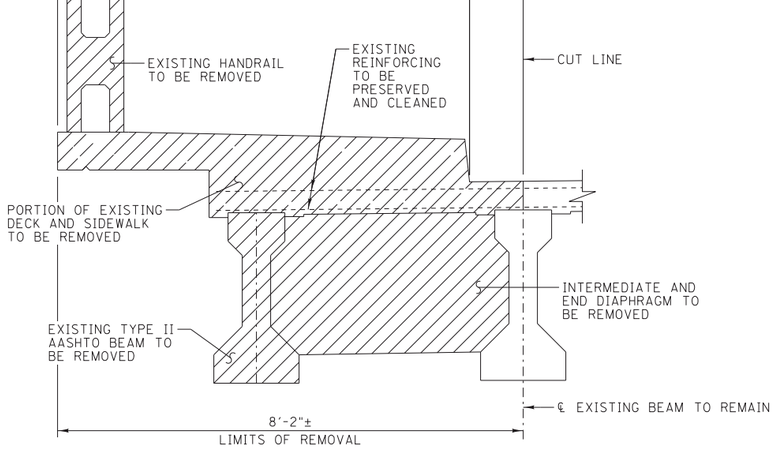
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

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

NUMBER OF BARS REQUIRED IS SHOWN FOR ONE (1) DECK CANTILEVER, ONE (1) DECK CANTILEVER REQUIRED.

BARS ENDING IN "E" TO BE EPOXY COATED.

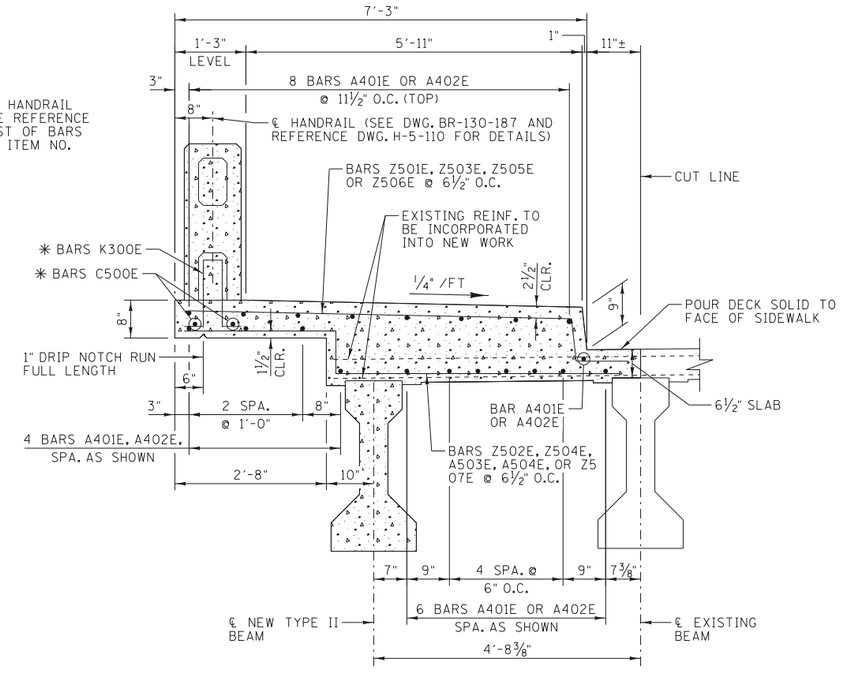
◊ INCREMENTS OF 1'-1". (5 REQ'D)



SECTION A-A DEMOLITION

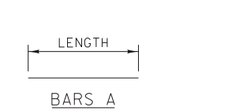
SCALE: ¾" = 1'-0"

✳ FOR DETAILS OF HANDRAIL REINFORCING SEE REFERENCE DWG. H-5-110. COST OF BARS INCLUDED UNDER ITEM NO. 604-10.18

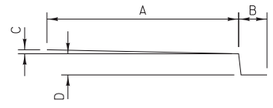


SECTION A-A CONSTRUCTION

SCALE: ¾" = 1'-0"



BARS A



BARS Z501E - Z507E

NOTES:

COST OF REMOVING EXISTING BEAM, SIDEWALK, PARAPET, POTION OF DECK AND DIAPHRAGMS TO BE PAID FOR UNDER ITEM NO. 604-10.13, CONCRETE REMOVAL, L.S.

COST OF NEW CONCRETE FOR DECK AND SIDEWALK TO BE PAID FOR UNDER ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

COST OF NEW REINFORCEMENT IN DECK AND SIDEWALK TO BE PAID FOR UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.

FOR PRESTRESSED CONCRETE BEAM CONSTRUCTION NOTES AND DETAILS, SEE DWG. NO. BR-130-180.

FOR LOCATION OF SLAB, CANTILEVER AND HANDRAIL CONSTRUCTION, SEE DWG. NO. BR-130-172.

THE COST OF FORMING, NEW CONCRETE, EPOXY COATED REINFORCING, LABOR AND ALL MISCELLANEOUS MATERIAL REQUIRED TO PLACE A NEW HANDRAIL WITHIN LIMITS SHOWN AND IN ACCORDANCE WITH REFERENCE DWG. H-5-110, TO BE INCLUDED UNDER ITEM NO. 604-10.22, CONCRETE PARAPET REPAIR, L.F.

NOTES:

WHEN POURING THE SIDEWALK PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR THE RAIL. THE RAIL SHALL NOT BE POURED UNTIL THE SIDEWALK IS POURED AND CURED.

MINIMUM LAP SPLICE LENGTH UNLESS NOTED OTHERWISE: #4 BAR = 1'-9"

FOR DETAILS OF HANDRAIL, SEE DWG. NO. BR-130-187.

☞ DIMENSIONS TAKEN FROM MOST RECENT CONSTRUCTION PLANS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

GARVER

DESIGNED BY	M. A. SPRADLIN	DATE	MAY 2020
DRAWN BY	C. W. THOMAS	DATE	MAY 2020
SUPERVISED BY	J. H. RUDDELL	DATE	MAY 2020
CHECKED BY	W. M. MCENTIRE	DATE	MAY 2020

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79100550057

SHELBY COUNTY
2020

AMJAD S. KHAIRI — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — No. 106611 — STATE OF TENNESSEE — 04/28/2020

BR-130-179

MASpradlin 4/10/2020 I36:50 PM
WORKSPACE: TDOT Bridge
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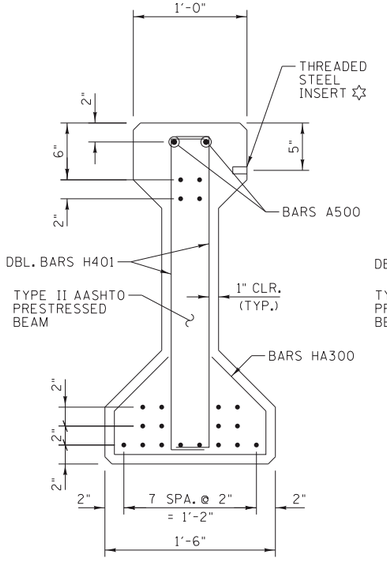
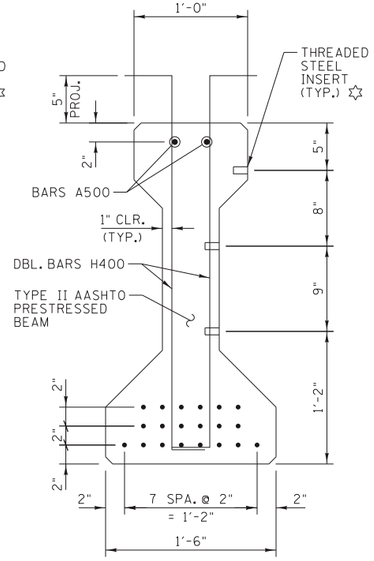


SECTION A-A

(SHOWING NON-PROJECTING BARS & SHOWING PRESTRESSING STRANDS)
SCALE: 1½" = 1'-0"



SECTION B-B

(SHOWING PROJECTING BARS & SHOWING PRESTRESSING STRANDS)
SCALE: 1½" = 1'-0"

NOTES:

SEE STD-14-2 FOR I-BEAM STANDARD DETAILS, NOTES AND REINFORCING.

ALL BEAMS ARE AASHTO - PCI STANDARD TYPE II.

THE TOP OF BEAM IS TO BE ROUGH FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOP OF BEAM SHALL 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.

THE PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF BEAM AND A PROTECTIVE COATING PLACED ON THE END OF BEAM.

ALL PRESTRESSING STRANDS SHALL BE ½" DIA. ASTM GRADE 270K, 7 WIRE UNCOATED LOW RELAXATION PRESTRESSING STRANDS.

AN INITIAL FORCE OF 31,003 LB. SHALL BE APPLIED TO EACH STRAND. PRESTRESSING STRANDS SHALL NOT BE GREATER THAN NOMINAL ½" DIAMETER.

THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 6,000 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 5,000 PSI.

THE SEQUENCE FOR TRANSFER OF STRESS OR THE CUTTING OF 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 THE 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. 615-01.02, PRESTRESSED CONCRETE I-BEAM (TYPE II), L.F.

COST OF FORMING ONE (1) NEW PRECAST BEAM AND ALL THE LABOR AND MATERIAL NECESSARY TO FABRICATE THE NEW BEAM AS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM NO. 615-01.02, PRESTRESSED CONCRETE I-BEAM (TYPE II), L.F.

FOR ELASTOMERIC BEARING PAD AND BEARING NOTES AND DETAILS, SEE DWG. NO. BR-130-182.

FOR LOCATION OF NEW PRESTRESSED TYPE II AASHTO BEAM, SEE DWG. NO. BR-130-172.

PRESTRESSED BEAM DESIGN DATA - PER BEAM

✳ LIVE LOAD DISTRIBUTION FACTOR FOR MOMENT: 0.643
✳ LIVE LOAD DISTRIBUTION FACTOR FOR SHEAR: 0.695
COMPOSITE DEAD LOAD: DC 876 LB/FT
COMPOSITE SLAB DESIGN STREGTH: F'C = 3,500 PSI

NOTE: DOWNWARD DEFLECTION UNDER TOTAL DL IS NOT ALLOWED.

✳ DISTRIBUTION FACTORS ARE FOR ONE LANE.

BILL OF STEEL

BEAM REINFORCEMENT

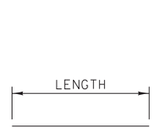
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A500	5	2					57'-8"
HA300	3	34	1'-4"	4½"	5⅝"	8"	3'-5"
H400	4	118	3'-3"	8"	5"		4'-4"
H401	4	20	2'-7"	8"	5"		3'-8"

NOTES:

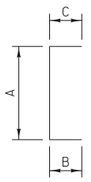
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

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

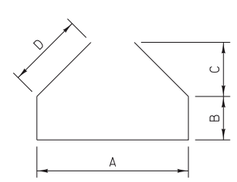
NUMBER OF BARS REQUIRED IS SHOWN FOR ONE (1) BEAM, ONE (1) BEAM REQUIRED.



BARS A



BARS H



BARS HA

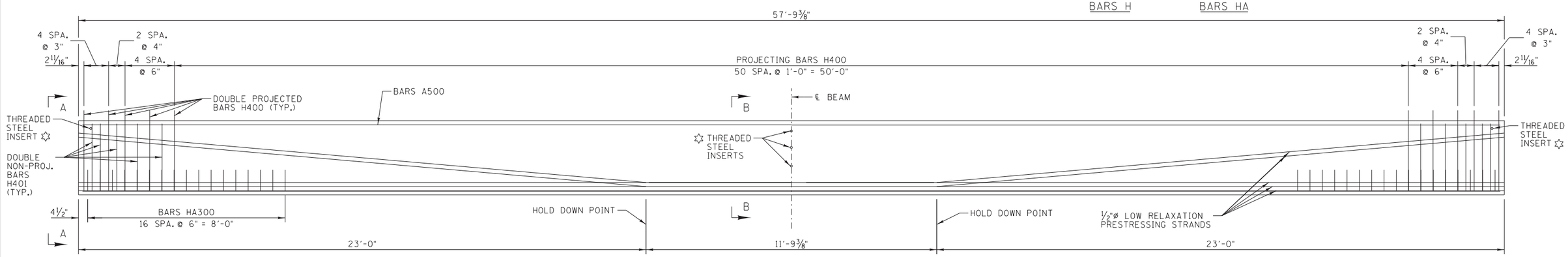
NOTE:

FOR LOCATION AND DETAILS OF 1 ¼" TRANSVERSE ANCHOR ROD FOR SEISMIC RESTRAINT SEE DWG. NO. BR-130-186.

PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

REVISIONS

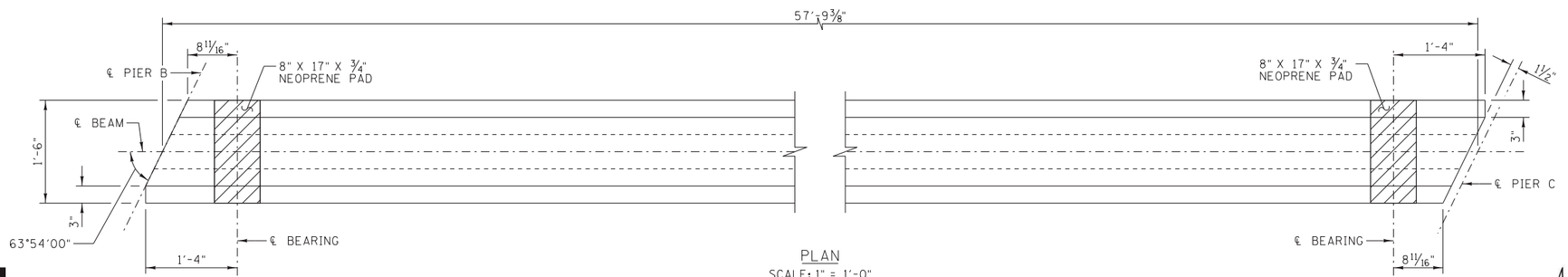
NO.	DATE	BY	BRIEF DESCRIPTION



☆ FOR NOTES AND DETAILS ON THREADED STEEL INSERTS FOR DIAPHGRAMS, SEE DWG. NO. BR-130-181.

ELEVATION

(SHOWING STIRRUP BAR ARRANGEMENT)
SCALE: ½" = 1'-0"



PLAN

SCALE: 1" = 1'-0"

DIMENSIONS TAKEN FROM MOST RECENT CONSTRUCTION PLANS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

SHELBY COUNTY
2020

AMJAD S. KHAIR — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — No. 106014 — STATE OF TENNESSEE — 4/10/2020

BR-130-180

GARVER

DESIGNED BY M. A. SPRADLIN DATE MAY 2020
DRAWN BY C. W. THOMAS DATE MAY 2020
SUPERVISED BY J. H. RUDDELL DATE MAY 2020
CHECKED BY W. M. MCENTIRE DATE MAY 2020

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

MASpradlin 4/10/2020 1:36:55 PM
WORKSPACE: TDOT Bridge
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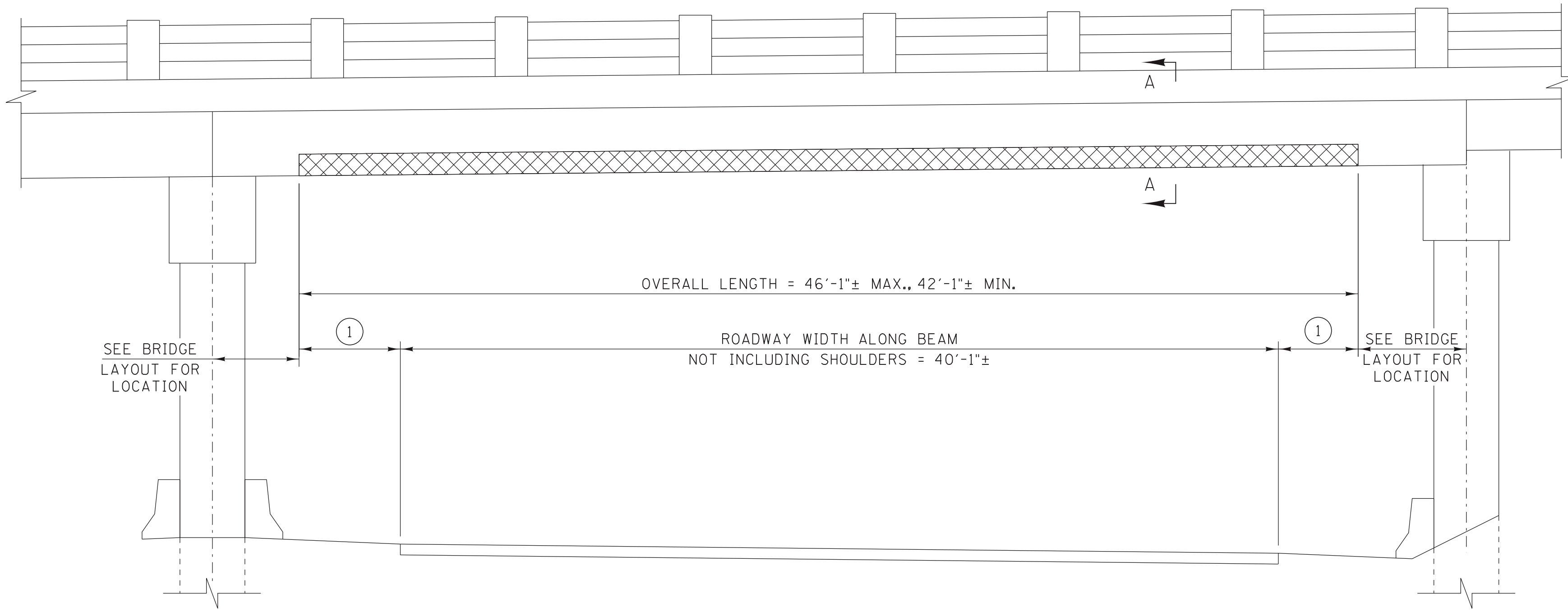
PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



SPAN 2 WEST SIDE ELEVATION

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

(1) 1'-0" MIN., 3'-0" MAX.

REQ'D. FIBER REINF. EPOXY WRAP PROPERTIES		
UNIDIRECTIONAL FABRIC PROPERTIES	REQUIREMENT	ASTM TEST METHOD
ULTIMATE TENSILE STRENGTH IN PRIMARY FIBER DIRECTION (MIN.)	120,000 PSI	D3039
TENSILE MODULUS BASED ON CROSS SECTIONAL AREA OF PRIMARY FIBERS (MIN.)	11.1×10^6 PSI	D3039
EPOXY PROPERTIES	REQUIREMENT	ASTM TEST METHOD
TENSILE STRENGTH	8,000 - 10,500 PSI	D-638
TENSILE MODULUS	400,000 - 461,000 PSI	D-638

NEW FIBER WRAP AREA

AREA OF SPALLED CONCRRETE TO BE REMOVED

NOTES:

EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING SPALLED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED EXISTING REINFORCING STEEL SHALL RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. ALL EXISTING REINFORCEMENT SHALL REMAIN IN PLACE. ALL WORK MUST MEET THE FULL APPROVAL OF THE ENGINEER.

COST OF SAW CUTTING, REMOVING SPALLED CONCRETE, CLEANING EXISTING REINFORCING STEEL, HIGH EARLY STRENGTH CONCRETE, LABOR AND ANY MISCELLANEOUS MATERIAL NECESSARY TO COMPLETE REPAIRS AS SHOWN IN THIS DETAIL SHALL BE INCLUDED IN THE ITEM NO. 604-10.05, CONCRETE (SPALL REPAIR), S.F. AND ITEM NO. 604-10.54, CONCRETE REPAIRS (SPALL REPAIRS), S.F.

NEW FIBER REINFORCED WRAP SHALL BE A UNIDIRECTIONAL CARBON FIBER WRAP MEETING THE REQUIRED MATERIAL PROPERTIES SHOWN ON THIS DWG. PRIOR TO APPLICATION OF FIBER REINFORCED WRAP, CONCRETE SURFACE SHALL BE PREPARED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. FIBER WRAP SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

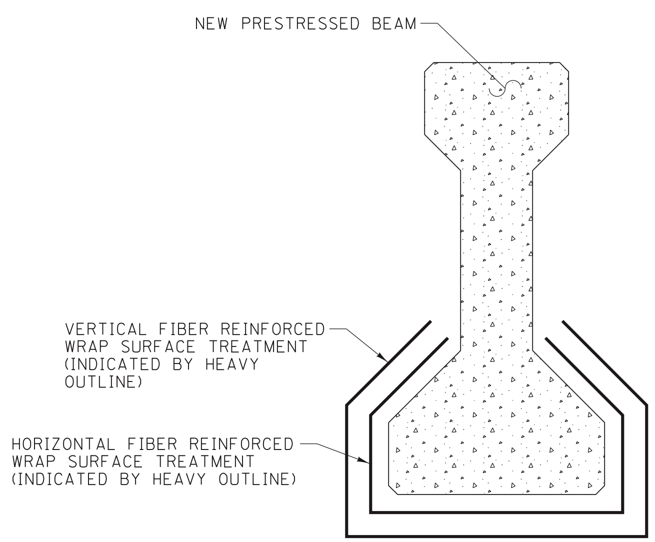
ALL COSTS OF LABOR, MATERIALS AND INCIDENTALS NECESSARY TO PLACE CARBON FIBER EPOXY WRAP AS SHOWN ON DETAILS THIS DRAWING SHALL BE PAID FOR UNDER ITEM NO. 604-10.83, COMPOSITE FIBER ENCASEMENT, S.F.

FIBER REINFORCED WRAP SHALL EXTEND VERTICALLY A MIN. OF 2½" AND HORIZONTALLY A MIN. OF 1'-0" PAST REPAIR AREA.

REMOVE ALL DETERIORATED CONCRETE TO A MIN. DEPTH OF 4" AND A MIN. ¾" BEHIND THE EXISTING REINFORCING STEEL FOR REPAIR.

FOR ADDITIONAL DETAILS AND NOTES REGARDING SPALL REPAIR, SEE DWG. NO. BR-130-187A.

* SPALL DAMAGE AREA TO BE DETERMINED IN THE FIELD BY THE ENGINEER.



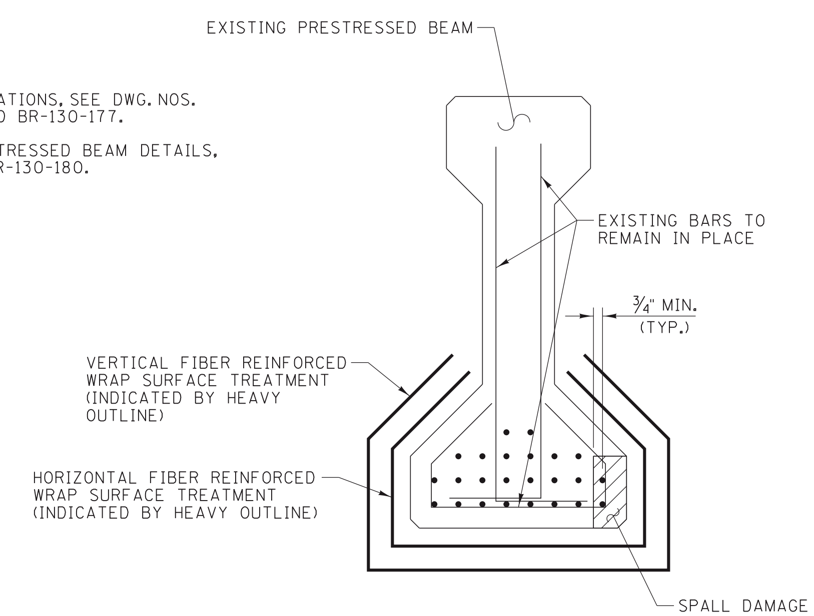
SECTION A-A - BEAM A

SCALE: 1½" = 1'-0"

NOTES:

FOR BEAM LOCATIONS, SEE DWG. NOS. BR-130-172 AND BR-130-177.

FOR NEW PRESTRESSED BEAM DETAILS, SEE DWG. NO. BR-130-180.



SECTION A-A - BEAMS B & C

SCALE: 1½" = 1'-0"

STATE OF TENNESSEE

DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55

BRIDGE NO. 79-SR14-07.46

BRIDGE ID NO. 79I00550057

SHELBY COUNTY

2020

AMJAD S. KHAIR — STATE OF TENNESSEE — 04/10/2020

GARVER

DESIGNED BY	M. A. SPRADLIN	DATE	MAY 2020
DRAWN BY	C. W. THOMAS	DATE	MAY 2020
SUPERVISED BY	J. H. RUDDELL	DATE	MAY 2020
CHECKED BY	W. M. MCENTIRE	DATE	MAY 2020

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

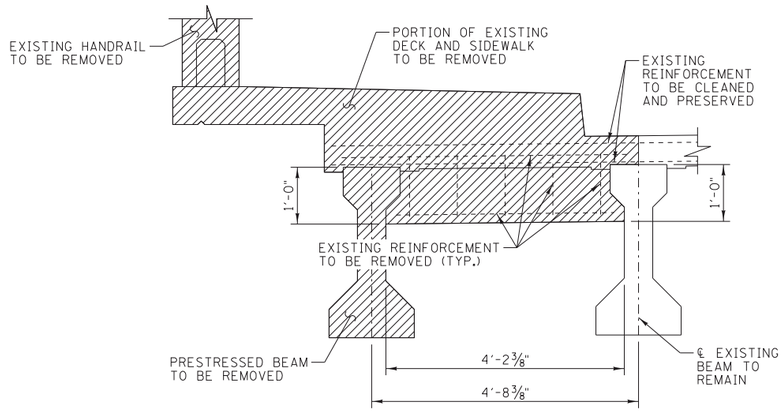
BR-130-180A

MASpradlin 4/10/2020 1:36:56 PM
WORKSPACE: TDOT Bridge
L:\2018\18017405 - TDOT- Shelby County- SR14 over I-55\Drawings\BRG\03 - Certified\02-18595-01-Structures-BR-130-180A.dgn

PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

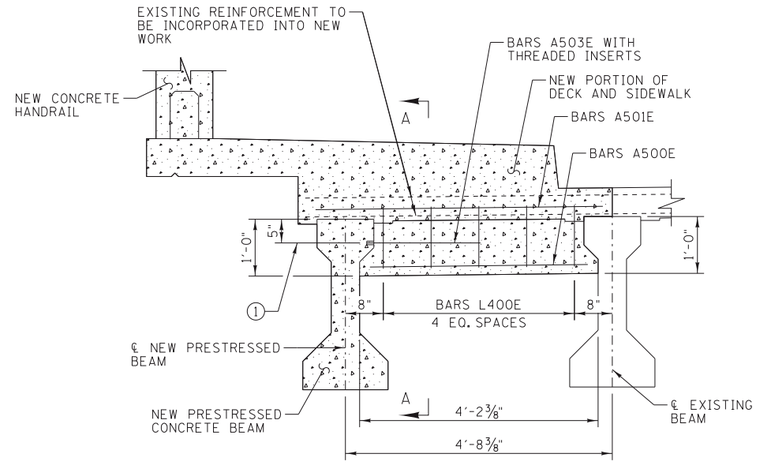
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



END DIAPHRAGM REMOVAL

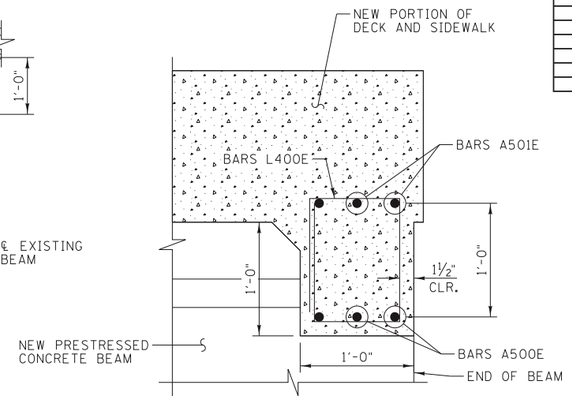
SCALE: ¾" = 1'-0"



① ℄ ⅝"ø THREADED STEEL INSERTS (CAST IN PLACE) FOR THREADED BARS A503. TYPICAL FOR INTERIOR SIDE ON NEW PRESTRESSED CONCRETE BEAM IN SPAN 2 WEST SIDE. INSTALL PARALLEL TO BEAM ENDS (TYP.)

END DIAPHRAGM CONSTRUCTION

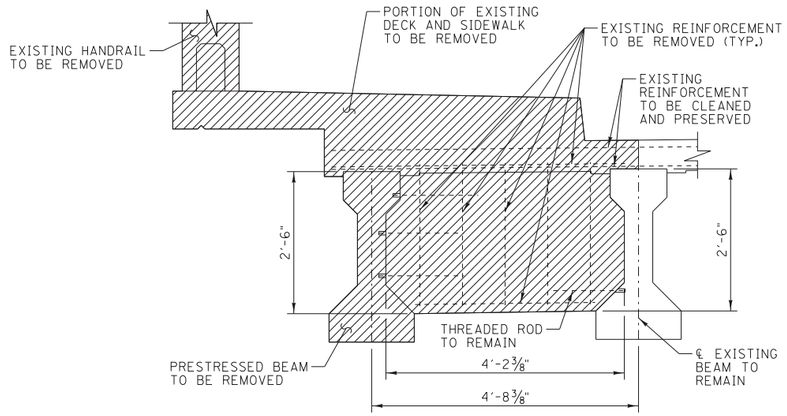
SCALE: ¾" = 1'-0"



SECTION A-A

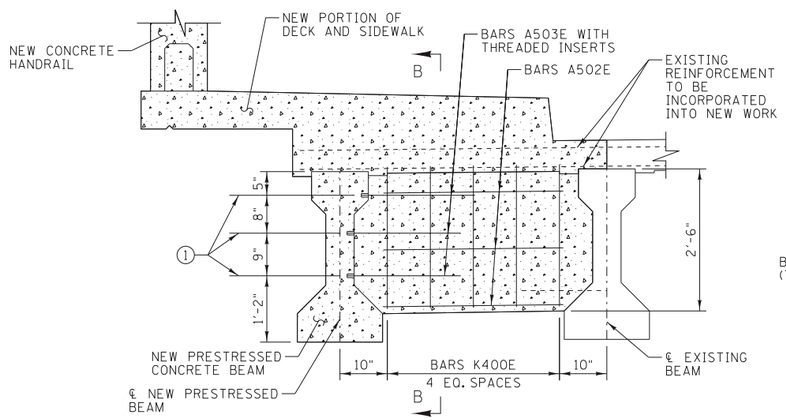
(SIMILAR AT BOTH ENDS OF BEAM)

SCALE: 1½" = 1'-0"



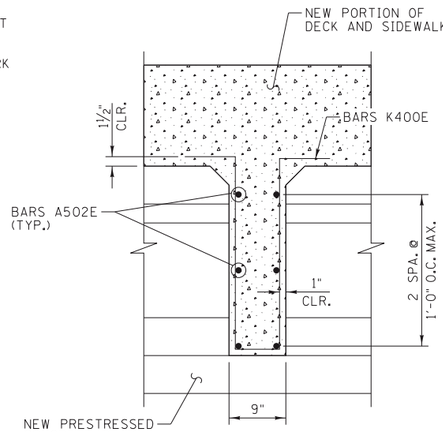
INTERMEDIATE DIAPHRAGM REMOVAL

SCALE: ¾" = 1'-0"



INTERMEDIATE DIAPHRAGM CONSTRUCTION

SCALE: ¾" = 1'-0"



SECTION B-B

SCALE: 1" = 1'-0"

SPAN 2 WEST BAY CONSTRUCTION

NOTES:

COST OF REMOVING BEAM, SIDEWALK, PARAPET, PORTION OF DECK, AND DIAPHRAGMS TO BE PAID FOR UNDER ITEM NO. 604-10.13, CONCRETE REMOVAL, L.S.

COST OF NEW CONCRETE FOR DIAPHRAGM TO BE PAID FOR UNDER ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

COST OF NEW REINFORCEMENT IN DIAPHRAGM TO BE PAID FOR UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.

FOR PARAPET CONSTRUCTION NOTES AND DETAILS, SEE DWG. NO. BR-130-187.

FOR DECK AND SIDEWALK CONSTRUCTION NOTES AND DETAILS, SEE DWG. NO. BR-130-179.

FOR PRESTRESSED CONCRETE BEAM CONSTRUCTION NOTES AND DETAILS, SEE DWG. NO. BR-130-180.

FOR LOCATION OF DIAPHRAGM CONSTRUCTION, SEE DWG. NO. BR-130-172.

BILL OF STEEL

DIAPHRAGM (2 END DIAPHRAGMS, 1 INTERMEDIATE DIAPHRAGM)

	BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
	A500E	5	6					3'-10"
	A501E	5	6					5'-0"
	A502E	5	6					3'-2"
*	A503E	5	5					2'-0"
	K400E	4	5	7"	2'-7"	8"		7'-1"
	L400E	4	10	1'-0"	9"	1'-1"		4'-7"

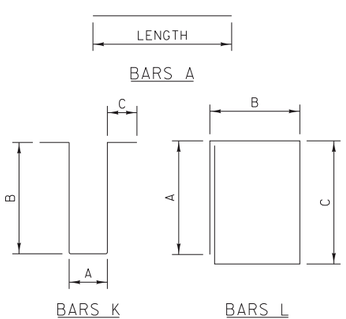
NOTES:

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.

* THREADED BAR FOR MECHANICAL COUPLER.



DIMENSIONS TAKEN FROM MOST RECENT CONSTRUCTION PLANS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

STATE OF TENNESSEE

DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

SHELBY COUNTY
2020

GARVER

DESIGNED BY M. A. SPRADLIN DATE MAY 2020
DRAWN BY C. W. THOMAS DATE MAY 2020
SUPERVISED BY J. H. RUDDELL DATE MAY 2020
CHECKED BY W. M. MCENTIRE DATE MAY 2020

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

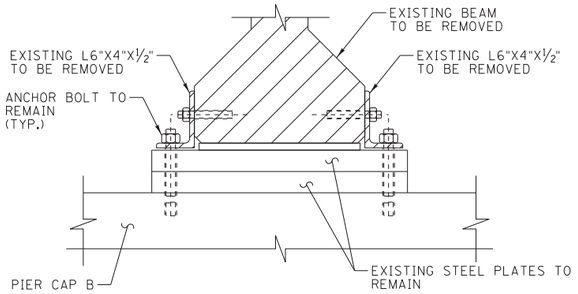
MASpradlin 4/10/2020 1:37:00 PM
WORKSPACE: TDOT Bridge
L:\2018\18017405 - TDOT- Shelby County- SR14 over I-55\Drawings\BRG\03 - Certified\02-118595-01-Structures-BR-130-181.dgn

BR-130-181

PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

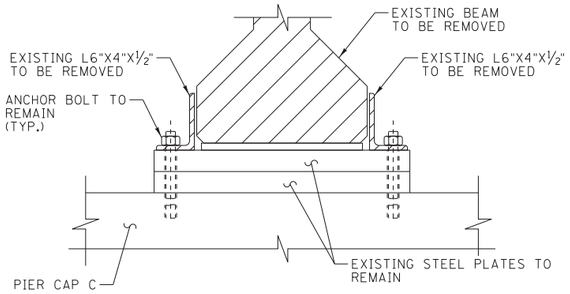
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



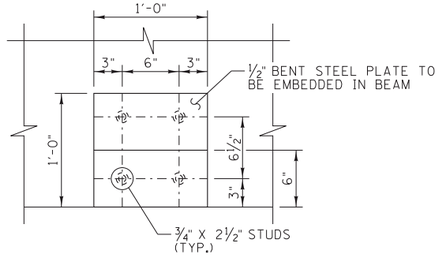
FIXED END REMOVAL

SCALE: 1½" = 1'-0"



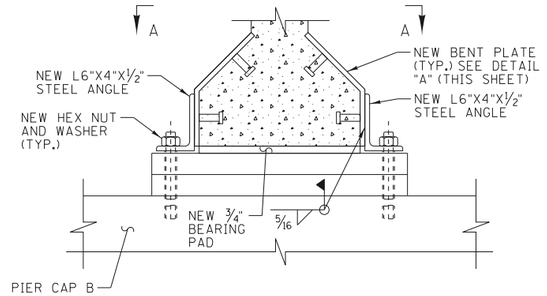
EXPANSION END REMOVAL

SCALE: 1½" = 1'-0"



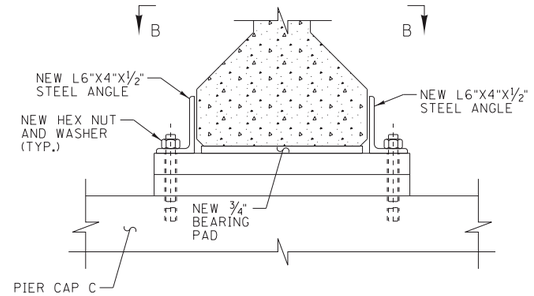
SECTION C-C

SCALE: 1½" = 1'-0"



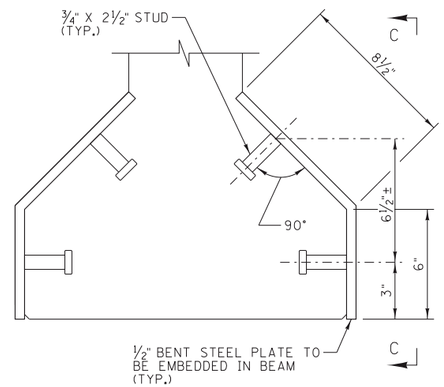
FIXED END CONSTRUCTION

SCALE: 1½" = 1'-0"



EXPANSION END CONSTRUCTION

SCALE: 1½" = 1'-0"



DETAIL "A"

SCALE: 3" = 1'-0"

NOTES:

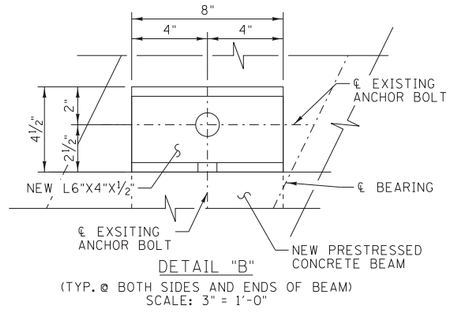
COST OF REMOVING STEEL ANGLES TO BE PAID FOR UNDER ITEM NO. 604-10.13, CONCRETE SLAB REMOVAL, L.S.

COST OF NEW STEEL ANGLES, NEW NUTS AND WASHERS, AND NEW BEARING PAD TO BE PAID FOR UNDER ITEM NO. 615-01.02, PRESTRESSED CONCRETE I-BEAM (TYPE II), L.F.

FOR PRESTRESSED BEAM NOTES AND DETAILS, SEE DWG. NO. BR-130-180.

FOR BEAM AND BEARING REMOVAL LOCATIONS, SEE DWG. NO. BR-130-172.

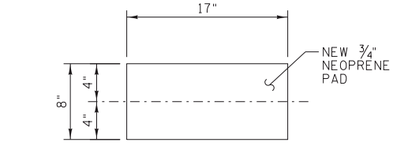
FOR NOTES ON PAINTING OF NEW STRUCTURAL STEEL, SEE DWG. NO. BR-130-174A.



DETAIL "B"

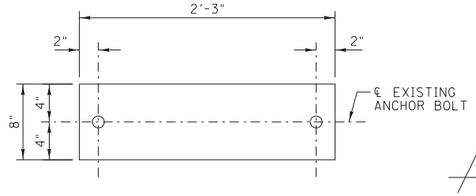
(TYP. @ BOTH SIDES AND ENDS OF BEAM)

SCALE: 3" = 1'-0"



BEARING PAD DETAILS

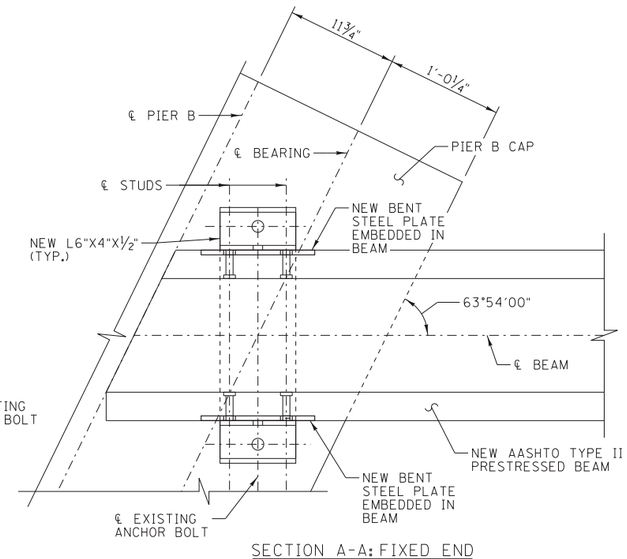
SCALE: 1½" = 1'-0"



STEEL PLATE DETAILS

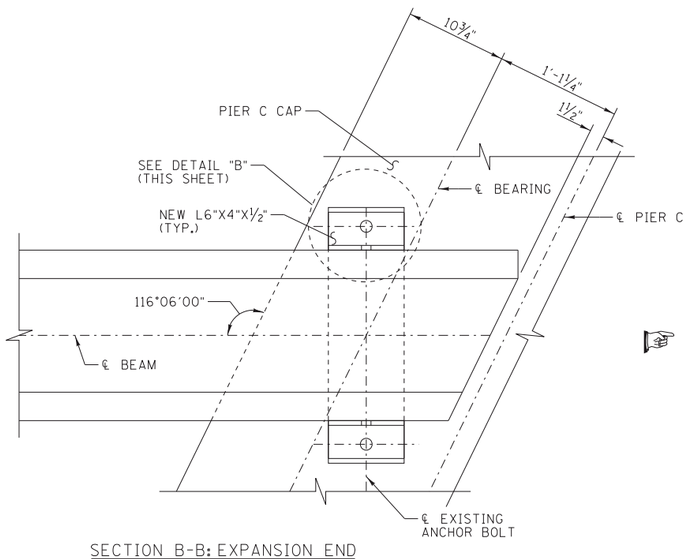
(EXISTING STEEL PLATE, FOR INFORMATION ONLY)

SCALE: 1½" = 1'-0"



SECTION A-A: FIXED END

SCALE: 1½" = 1'-0"



SECTION B-B: EXPANSION END

SCALE: 1½" = 1'-0"

DIMENSIONS TAKEN FROM MOST RECENT CONSTRUCTION PLANS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

BEARING DETAILS AT NEW PRESTRESSED CONCRETE BEAM

(SPAN 2 WEST SIDE)

STATE OF TENNESSEE

DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79100550057

SHELBY COUNTY
2020

GARVER

DESIGNED BY	M. A. SPRADLIN	DATE MAY 2020
DRAWN BY	C. W. THOMAS	DATE MAY 2020
SUPERVISED BY	J. H. RUDDELL	DATE MAY 2020
CHECKED BY	W. M. MCENTIRE	DATE MAY 2020

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

AMJAD S. KHAIRI — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — No. 106611 — STATE OF TENNESSEE — 04/16/2020

BR-130-182

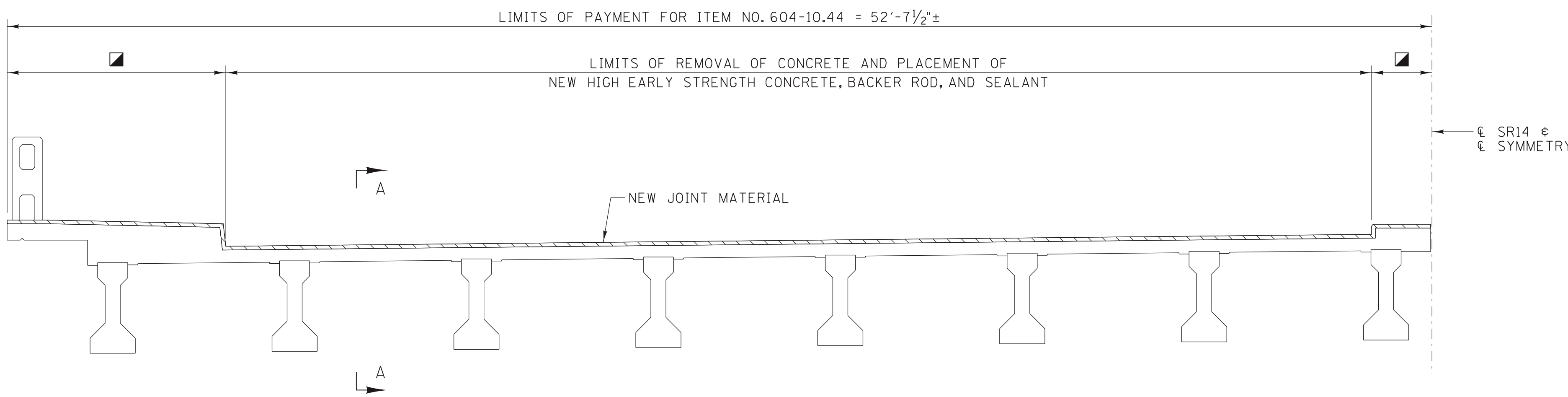
MASpradlin 4/10/2020 1:37:07 PM
WORKSPACE: TDOT Bridge
L:\2018\18017405 - TDOT- Shelby County- SR14 over I-55\Drawings\BRG\03 - Certified\02-118595-01-Structures-BR-130-182.dgn

PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

REVISIONS

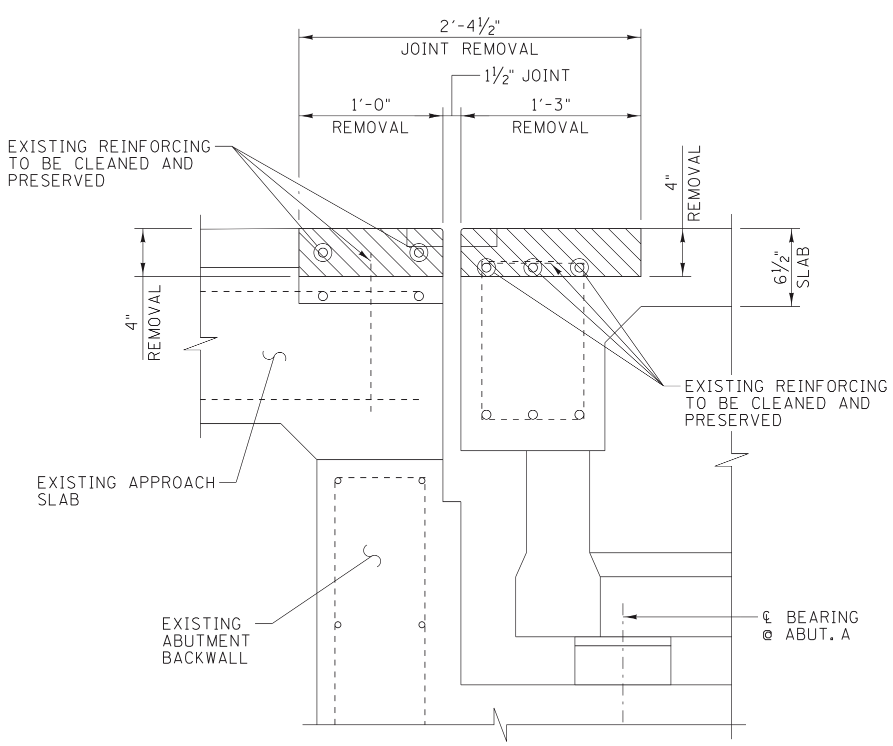
NO.	DATE	BY	BRIEF DESCRIPTION

◪ THE CONTRACTOR SHALL REMOVE THE FULL DEPTH OF EXISTING JOINT MATERIAL IN THESE AREAS AND INSTALL NEW JOINT SEALANT AND BACKER ROD AS SHOWN IN "DETAIL A" THIS DWG. ALL COSTS TO BE INCLUDED UNDER ITEM NO. 604-10.44.



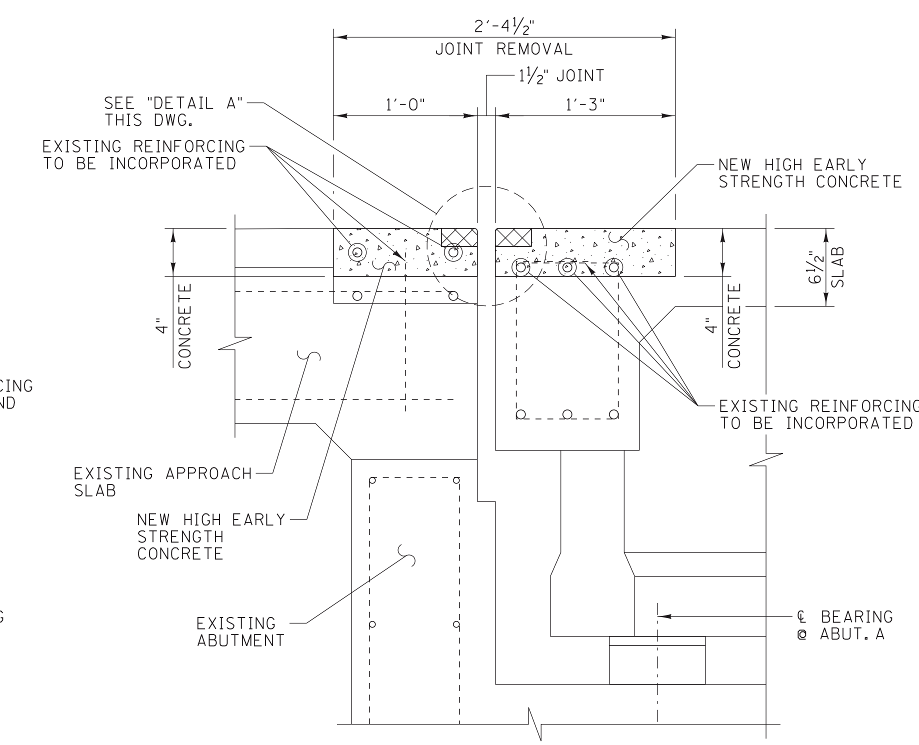
TYPICAL SECTION: ABUTMENT A

(ABUTMENT E SIMILAR)
(LOOKING NORTH, SHOWN ALONG JOINT)
SCALE: ⅜" = 1'-0"



SECTION A-A: DEMOLITION

(SHOWN AT ABUTMENT A, ABUTMENT E SIMILAR)
SCALE: 1½" = 1'-0"



SECTION A-A: CONSTRUCTION

(SHOWN AT ABUTMENT A, ABUTMENT E SIMILAR)
SCALE: 1½" = 1'-0"

GENERAL NOTES:

ITEM NO. 604-10.44, EXPANSION JOINT REPAIRS (L.F.):

JOINT SYSTEM INCLUDES FURNISHING ALL MATERIAL AND EQUIPMENT AND COMPLETE INSTALLATION AS SHOWN ON THIS DRAWING AND THE MANUFACTURER'S SPECIAL PROVISIONS. THE JOINT SEALANT SYSTEM CONSISTS OF A SURFACE PRIMER; A SELF-LEVELING OR NON-SAG SEALANT AND BACKER MATERIAL. DETAILED SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL BE SUBMITTED TO THE PROJECT ENGINEER PRIOR TO CONSTRUCTION. THE MANUFACTURER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORKMANSHIP AND PERFORMANCE OF THE INSTALLED JOINT.

JOINT SEALANT:

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

SURFACE PRIMER:

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

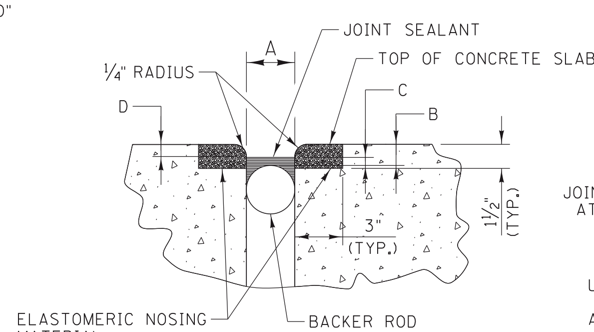
BACKER ROD:

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

☞ DIMENSIONS TAKEN FROM MOST RECENT CONSTRUCTION PLANS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

NOTE:

FOR LOCATION AND NOTES OF NEW ELASTOMERIC BRIDGE JOINTS AND JOINT SYSTEMS, SEE DWG. NOS. BR-130-175 AND BR-130-176.



A	B	C	D
JOINT OPENING AT TIME OF SEALING	MINIMUM SPACE FROM TOP OF BACKER ROD TO DRIVE SURFACE	DEPTH OF JOINT SEALANT FROM TOP OF BACKER ROD TO SURFACE OF JOINT SEALANT	MINIMUM SPACE FROM TOP OF JOINT SEALANT TO DRIVE SURFACE
UP TO 3"	1⅜" MIN	½" -⅝"	¾" MIN
ABOVE 3"	1¾" MIN	⅝" -¾"	1" MIN

DETAIL A

ELASTOMERIC BRIDGE JOINTS AND JOINT SYSTEMS

(EXPANSION JOINT DIAGRAM)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

AMJAD S. KHAIR, REGISTERED ENGINEER, AGRICULTURE COMMERCE, No. 106630, STATE OF TENNESSEE
04/10/2020

SHELBY COUNTY
2020

GARVER

DESIGNED BY	J. L. HALBROOK	DATE	MAY 2020
DRAWN BY	C. W. THOMAS	DATE	MAY 2020
SUPERVISED BY	J. H. RUDDELL	DATE	MAY 2020
CHECKED BY	W. M. MCENTIRE	DATE	MAY 2020

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

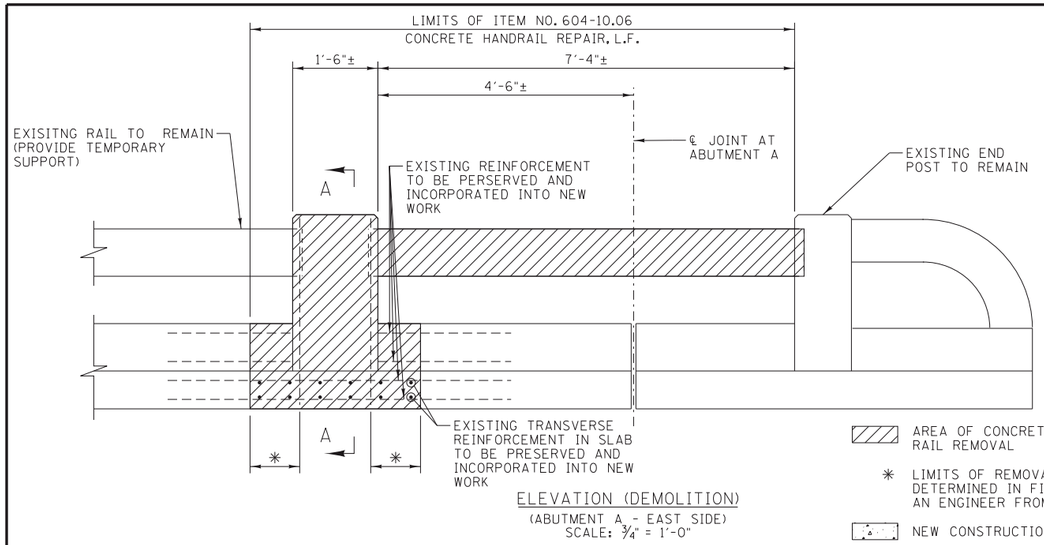
BR-130-183

MASpradlin 4/10/2020 1:37:10 PM
WORKSPACE: TDOT Bridge
L:\2018\18017405 - TDOT- Shelby County- SR14 over I-55\Drawings\BRG\03 - Certified\02-118595-01-Structures-BR-130-183.dgn

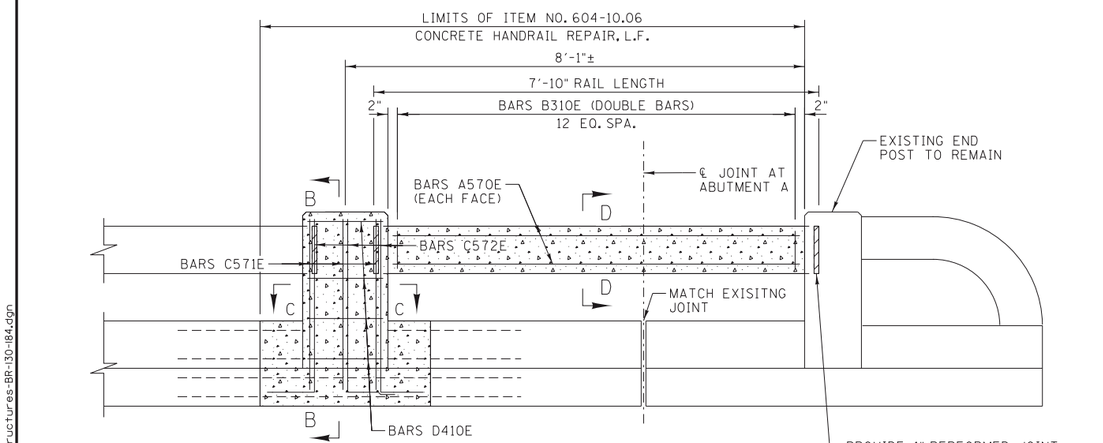
PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



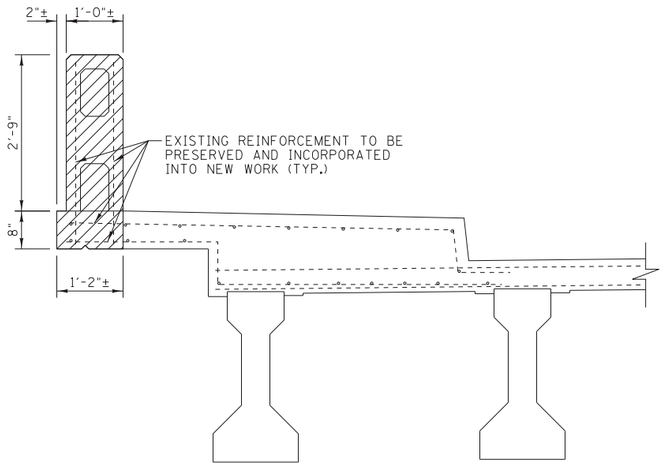
ELEVATION (DEMOLITION)
(ABUTMENT A - EAST SIDE)
SCALE: ¾" = 1'-0"



ELEVATION (CONSTRUCTION)
(ABUTMENT A - EAST SIDE)
SCALE: ¾" = 1'-0"

NOTES;
EXISTING REINFORCING STEEL IN POSTS NOT SHOWN FOR CLARITY.

ALL EXPOSED CORNERS TO BE CHAMFERED ¾". (TYP.)



SECTION A-A
SCALE: ¾" = 1'-0"

BILL OF STEEL

RAIL REINFORCEMENT

BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A570E	5	4					7'-6"
B310E	3	26					1'-3"
C571E	5	3	2'-10"	10"			3'-8"
C572E	5	3	3'-1"	10"			3'-11"
D410E	4	4					4'-8"

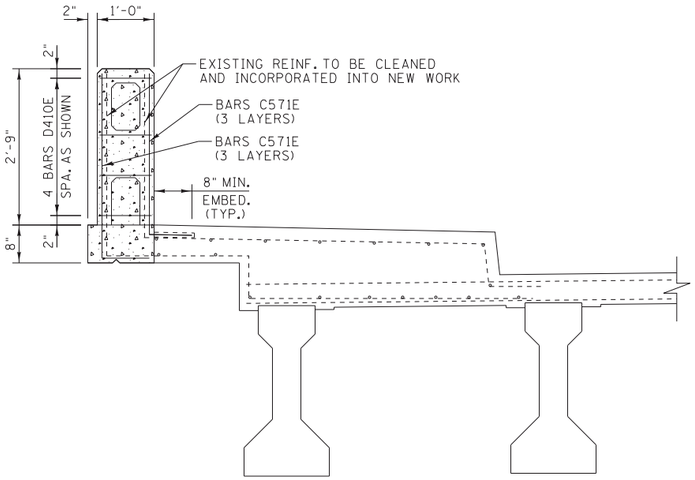
NOTES;

ALL BAR DIMENSIONS ARE OUT-TO-OUT.

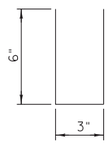
ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.

BARS ENDING IN "E" TO BE EPOXY COATED.

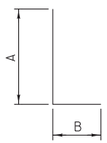
NUMBER OF BARS IS FOR RAIL REPAIR LOCATION AT ABUTMENT A (EAST SIDE).



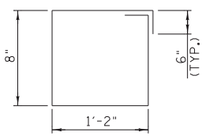
SECTION B-B
SCALE: ¾" = 1'-0"



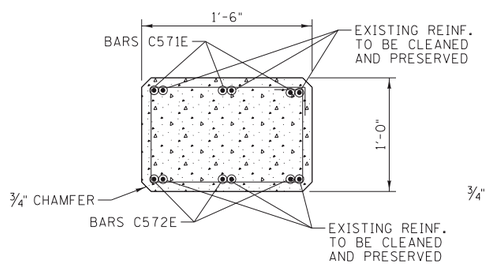
BARS B310E



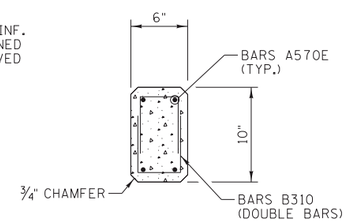
BARS C571E AND C572E



BARS D410E



SECTION C-C
SCALE: 1½" = 1'-0"



SECTION D-D
SCALE: 1½" = 1'-0"

NOTES;
ALL COSTS ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE CONCRETE HANDRAIL AND POST REPAIR SHALL BE INCLUDED IN THE COST FOR ITEM NO. 604-10.06, CONCRETE HANDRAIL REPAIR, LF. THIS ITEM WILL INCLUDE THE COST OF HIGH EARLY STRENGTH CONCRETE, REINFORCING STEEL, FORMING, REMOVING DAMAGED RAIL, ROOFING FELT, PERFORMED JOINT MATERIAL, LABOR AND ANY NECESSARY MATERIALS.

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

FOR NOTES ON GROUTED BARS, SEE DWG. NO. BR-130-174.

RAIL REPAIR DETAILS
(ABUTMENT A - EAST SIDE)

DIMENSIONS TAKEN FROM MOST RECENT CONSTRUCTION PLANS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

SHELBY COUNTY
2020

GARVER

DESIGNED BY R. A. KHAIRI DATE MAY 2020
DRAWN BY R. A. KHAIRI DATE MAY 2020
SUPERVISED BY J. H. RUDDELL DATE MAY 2020
CHECKED BY W. M. MCENTIRE DATE MAY 2020

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

AMJAD S. KHAIRI — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — No. 106600 — STATE OF TENNESSEE — 04/30/2020

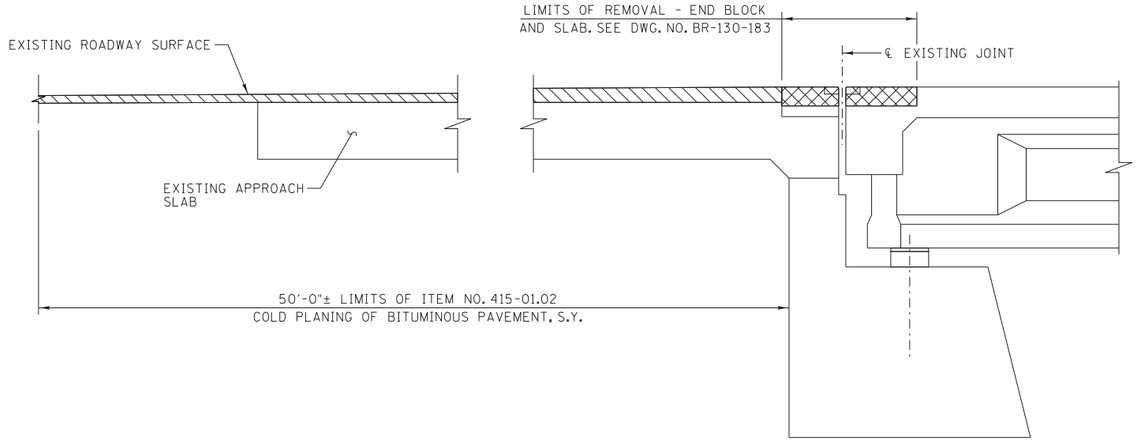
BR-130-184

MASpradlin 4/10/2020 1:37:05 PM
WORKSPACE: TDOT Bridge
L:\2018\18017405 - TDOT- Shelby County- SR14 over I-55\Drawings\BRG\03 - Certified\02-118595-01-Structures-BR-130-184.dgn

PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
4	11-03-20	MAS	STEP 2: ASPHALT APPROACH PAVEMENT TRANSITION BEHIND BARRICADE DETAIL REVISED.



STEP 1: ASPHALT REMOVAL BEHIND BARRICADE
(SHOWN AT ABUTMENT A, ABUTMENT E SIMILAR)

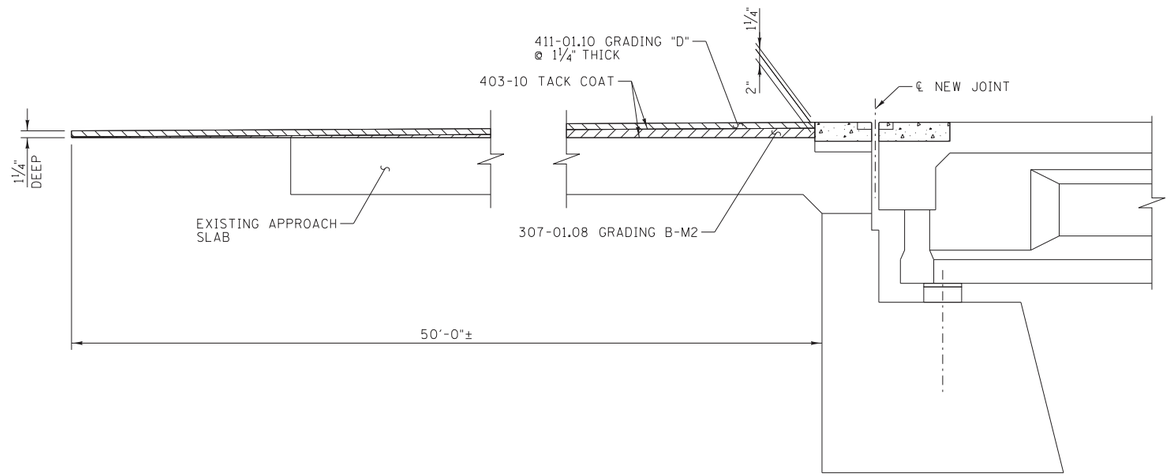
NOTES:

SEE SECTION 403 AND 411 OF THE TENNESSEE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.

FOR DETAILS OF NEW EXPANSION JOINT, SEE DWG. NO. BR-130-183.

FOR LOCATIONS OF ASPHALT TRANSITION, SEE DWG. NO. BR-130-172.

DIMENSIONS TAKEN FROM MOST RECENT CONSTRUCTION PLANS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.



4 STEP 2: ASPHALT APPROACH PAVEMENT TRANSITION BEHIND BARRICADE
(SHOWN AT ABUTMENT A, ABUTMENT E SIMILAR)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

SHELBY COUNTY
2020

AMJAD S. KHAIRI — REGISTERED ENGINEER — AGRICULTURE — No. 106635 — STATE OF TENNESSEE — 11/03/2020

GARVER

DESIGNED BY M. A. SPRADLIN DATE MAY 2020
DRAWN BY C. W. THOMAS DATE MAY 2020
SUPERVISED BY J. H. RUDDELL DATE MAY 2020
CHECKED BY W. M. MCENTIRE DATE MAY 2020

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

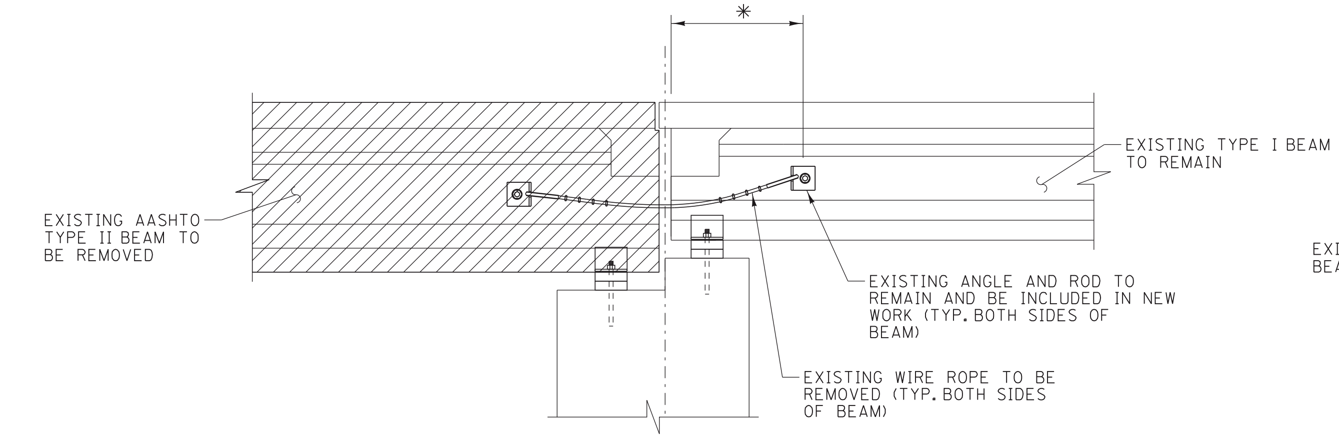
BR-130-185

MASpradlin 11/3/2020 2:49:10 PM
WORKSPACE: TDOT Bridge
L:\2018\18017405 - TDOT- Shelby County- SR14 over I-55\Drawings\BRG\08 - Revision 4\02-118595-01-Structures-BR-130-185.dgn

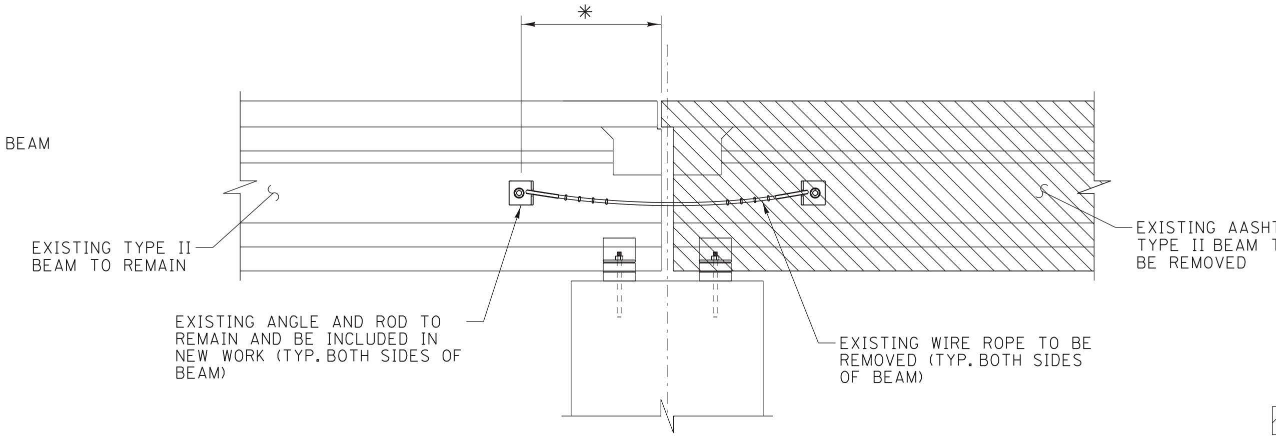
PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



SEISMIC RESTRAINT DEMOLITION
(EXTERIOR BEAM @ PIER B - TYPE I TO TYPE II CONNECTION)
SCALE: 1/2" = 1'-0"



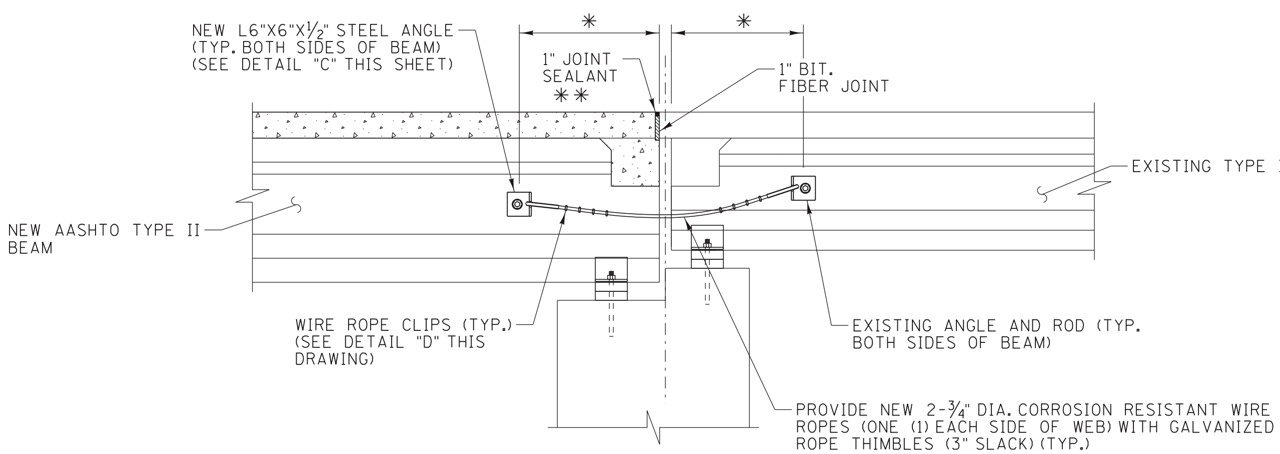
SEISMIC RESTRAINT DEMOLITION
(EXTERIOR BEAM @ PIER C - TYPE II TO TYPE II CONNECTION)
SCALE: 1/2" = 1'-0"

AREA OF CONCRETE AND BEAM TO BE REMOVED

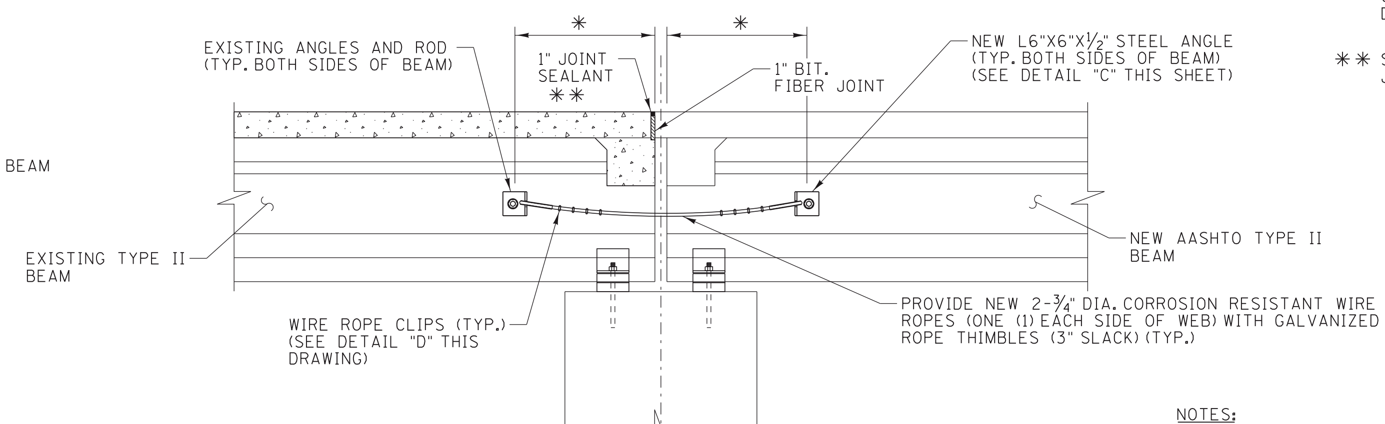
AREA OF NEW CONSTRUCTION

* CONTRACTOR TO VERIFY DISTANCE ON EXISTING BEAM AND MATCH DIMENSION ON NEW BEAM.

** SEE DWG. BR-130-183 FOR JOINT SEALANT NOTES.



SEISMIC RESTRAINT CONSTRUCTION
(EXTERIOR BEAM @ PIER B - TYPE I TO TYPE II CONNECTION)
SCALE: 1/2" = 1'-0"



SEISMIC RESTRAINT CONSTRUCTION
(EXTERIOR BEAM @ PIER C - TYPE II TO TYPE II CONNECTION)
SCALE: 1/2" = 1'-0"

NOTES:

ONE ASSEMBLY WILL CONSIST OF 2 WIRE ROPES WITH THEIR THIMBLES AND CLIPS, 2 ANGLES (DETAIL "C") AND 1 - 1 1/4"Ø ROD.

INSTALLATION AT EXTERIOR I-BEAM (ON WEST SIDE) WILL REQUIRE A 1" HOLE DRILLED THROUGH THE WEB OF NEW I-BEAM. THIS WILL BE REQUIRED AT 2 LOCATIONS ON NEW PRESTRESSED BEAM. COST TO BE INCLUDED IN ITEMS BID ON.

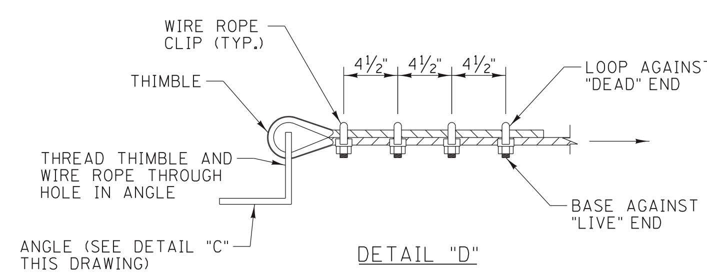
PROVIDE 3/4" DIA. CORROSION RESISTANT STEEL ROPES AS SHOWN ON THIS SHEET. (FOUR (4) LOCATIONS TOTAL)

ALL COSTS ASSOCIATED WITH INSTALLING 3/4"Ø 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 RODS SHALL MEET ASTM A193-B7. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.

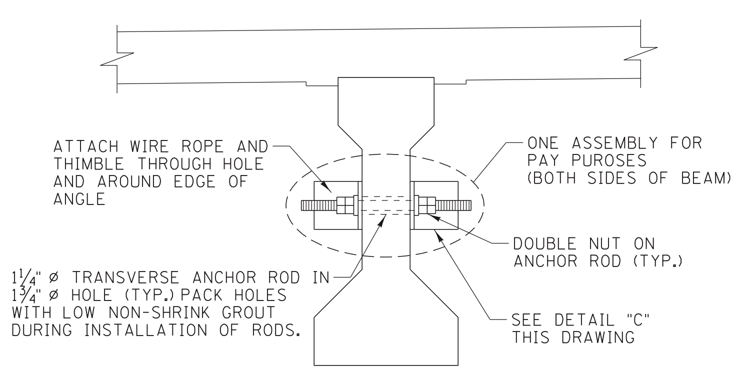
FOR DETAILS AND LOCATION OF NEW PRESTRESSED TYPE II AASHTO BEAM, SEE DWG. NOS. BR-130-172 AND BR-130-180.

ALL COST OF LABOR, MATERIALS AND EQUIPMENT TO INSTALL THE NEW BITUMINOUS JOINT MATERIAL AT SIDEWALK JOINTS SHALL BE INCLUDED IN ITEMS BID ON.

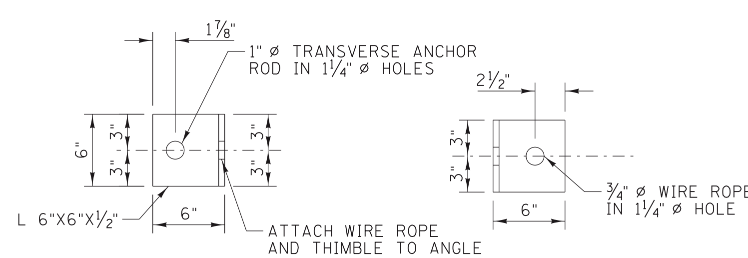


DETAIL "D"
TYPICAL 3/4"Ø WIRE ROPE INSTALLATION
SCALE: 1 1/2" = 1'-0"

DIMENSIONS TAKEN FROM MOST RECENT CONSTRUCTION PLANS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.



TYPICAL PRESTRESSED AASHTO I-BEAMS
(SHOWING LOCATIONS OF DETAIL "C")



DETAIL "C"
(STEEL ANGLE, FOUR (4) REQUIRED)
SCALE: 1 1/2" = 1'-0"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

SHELBY COUNTY
2020

AMJAD S. KHAIRI REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 106 STATE OF TENNESSEE 04/10/2020

GARVER

DESIGNED BY	R. A. KHAIRI	DATE	MAY 2020
DRAWN BY	R. A. KHAIRI	DATE	MAY 2020
SUPERVISED BY	J. H. RUDDELL	DATE	MAY 2020
CHECKED BY	W. M. MCENTIRE	DATE	MAY 2020

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

BR-130-186

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WORKSPACE: TDOT Bridge
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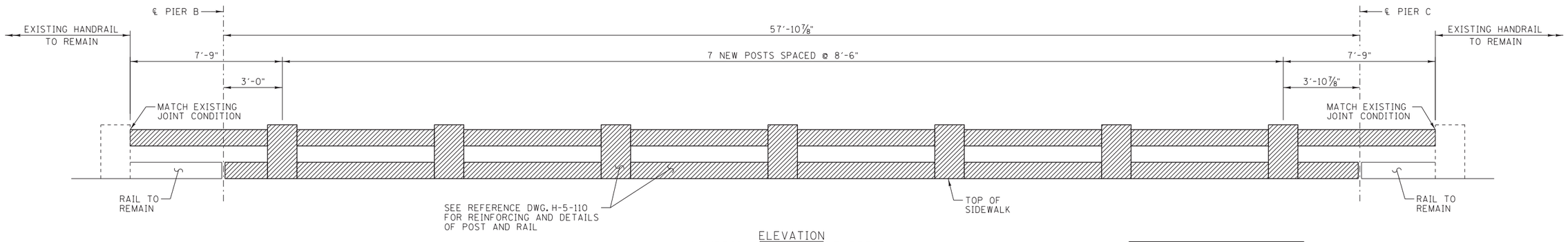
PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



ELEVATION
HANDRAIL REPLACEMENT DETAIL
(REQUIRED AT SPAN 2, SOUTHBOUND BRIDGE ONLY)
SCALE: ⅜" = 1'-0"

NOTES:

CONCRETE FOR RAIL SHALL BE HIGH EARLY STRENGTH.

THE COST OF FORMING, NEW CONCRETE, EPOXY COATED REINFORCING, LABOR AND ALL MISCELLANEOUS MATERIAL REQUIRED TO PLACE A NEW RAIL WITHIN LIMITS SHOWN AND IN ACCORDANCE WITH REFERENCE DWG. H-5-110, TO BE INCLUDED UNDER ITEM NO. 604-10.22, CONCRETE PARAPET REPAIR, L.F.

▨ DENOTES RAIL/POST TO BE REMOVED AND REPLACED.

FOR LOCATION OF NEW HANDRAIL, SEE DWG. NO. BR-130-172.

NOTE:
ALL REINFORCING IN POST AND RAIL TO BE EPOXY COATED.

DIMENSIONS TAKEN FROM MOST RECENT CONSTRUCTION PLANS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79I00550057

SHELBY COUNTY
2020

AMJAD S. KHAIR
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 106
STATE OF TENNESSEE
04/10/2020

GARVER

DESIGNED BY M. A. SPRADLIN DATE MAY 2020
DRAWN BY C. W. THOMAS DATE MAY 2020
SUPERVISED BY J. H. RUDDELL DATE MAY 2020
CHECKED BY W. M. MCENTIRE DATE MAY 2020

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

BR-130-187

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WORKSPACE: TDOT Bridge
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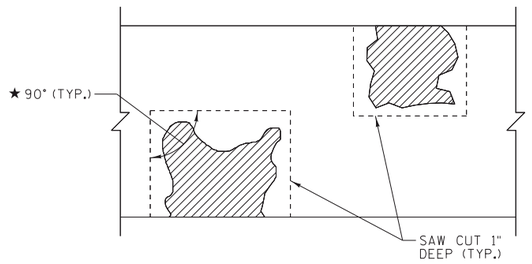
PROJECT NO.	YEAR	SHEET NO.
79005-4177-04	2020	

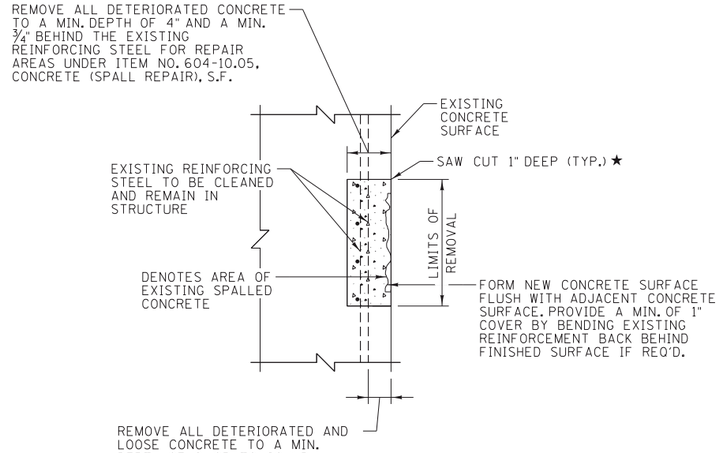
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

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, 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.

☞ 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.

GARVER

DESIGNED BY M. A. SPRADLIN DATE MAY 2020
DRAWN BY M. A. SPRADLIN DATE MAY 2020
SUPERVISED BY J. H. RUDDELL DATE MAY 2020
CHECKED BY W. M. MCENTIRE DATE MAY 2020

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I55
BRIDGE NO. 79-SR14-07.46
BRIDGE ID NO. 79100550057

SHELBY COUNTY
2020

AMJAD S. KHAIR
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 106
STATE OF TENNESSEE
04/10/2020

BR-130-187A

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WORKSPACE: TDOT Bridge
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TENN.	YEAR	SHEET NO
	2014	1
FED AID PROJ NO		
STATE PROJ NO	79005-4167-04	

Index of Sheets

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

TRAFFIC CONTROL APPURTENANCES

DWG. NO.	REVISION	DESCRIPTION
T-FAB-1	5-27-97	FLASHING YELLOW ARROW BOARD
T-PBR-1	6-30-09	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	11-1-11	DETAILS OF VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-WZ-11	3-13-09	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-12	3-13-09	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-14	3-13-09	TWO OUTSIDE LANE CLOSURE ON INTERSTATES AND EXPRESSWAYS

EROSION PREVENTION AND SEDIMENT CONTROL

DWG. NO.	REVISION	DESCRIPTION
EC-STR-3C	8-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3E	4-01-08	SILT FENCE FABRIC JOINING DETAILS

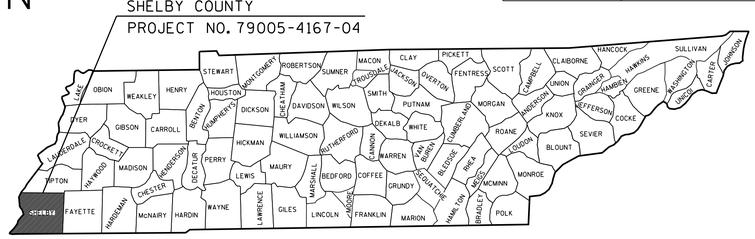
LIST OF STANDARD DRAWINGS

DWG. NO.	REVISION	DESCRIPTION
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" - 1991
STD-11-1	8-13-02	BRIDGE RAILING CONCRETE PARAPET WITH STRUCTURAL TUBING - 1980

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

SHELBY COUNTY

SHELBY COUNTY
PROJECT NO. 79005-4167-04

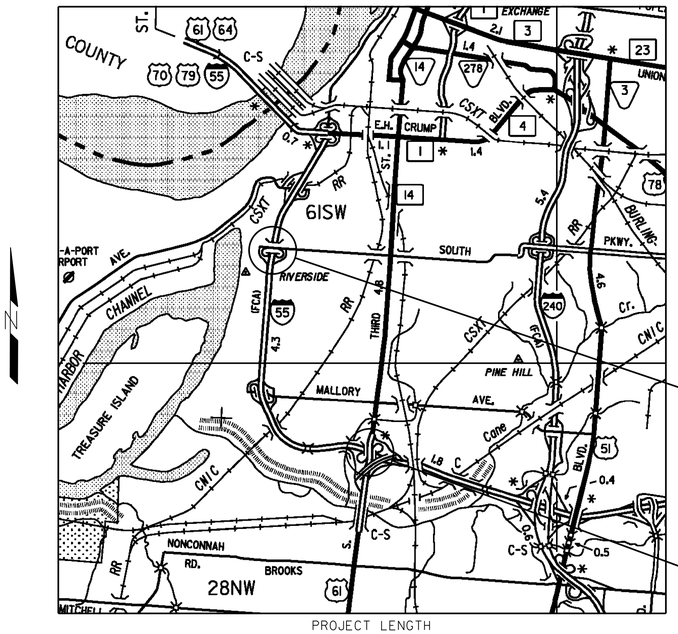


BRIDGE NOS. 79-SR14-7.46 OVER INTERSTATE 55
AND 79-02807-0.00 SOUTH PARKWAY WEST OVER INTERSTATE 55

BRIDGE REPAIR

STATE ROUTE 14 AND SOUTH PARKWAY WEST F.A.H.S. NO.

SCALE: NTS



PROJECT LENGTH
0.00 MILE

PROJECT NO. 79005-4167-04
SOUTH PARKWAY WEST

PROJECT NO. 79005-4167-04
SR14 - L.M. 7.46 L.M. 0.00

LIST OF DRAWINGS

DWG. NO.	DRAWING
BR-115-47	LAYOUT OF BRIDGE TO BE REPAIRED (7.46)
BR-115-48	LAYOUT OF BRIDGE TO BE REPAIRED (0.00)
BR-115-49	ESTIMATED QUANTITIES
BR-115-50	GENERAL NOTES
BR-115-51	BRIDGE REPAIR DETAILS
BR-115-52	BRIDGE REPAIR DETAILS
BR-115-53	BRIDGE REPAIR DETAILS
BR-115-54	BRIDGE REPAIR DETAILS
BR-115-55	BRIDGE REPAIR DETAILS
BR-115-56	BRIDGE REPAIR DETAILS
BR-115-57	BRIDGE REPAIR DETAILS
BR-115-58	BRIDGE REPAIR DETAILS

LIST OF REFERENCE DRAWINGS

DWG. NO.	DRAWING	
K-30-10 THRU K-30-18	ORIGINAL BRIDGE PLANS	BR# 7.46
BR-22-82 THRU BR-22-89	BRIDGE REPAIR PLANS	BR# 7.46
BR-89-53, BR-89-62 THRU BR-89-71	BRIDGE REPAIR PLANS	BR# 7.46
K-36-15 THRU K-36-23	ORIGINAL BRIDGE PLANS	BR# 0.00
BR-5-53 THRU BR-5-59	BRIDGE REPAIR PLANS	BR# 0.00
BR-52-10-Z THRU BR-52-29-Z	BRIDGE REPAIR PLANS	BR# 0.00

ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

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

DATE

APPROVED:
JOHN SCHROER, COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

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 CHECKED BY J. H. RUDDELL
PE NO. 79005-4167-04 PIN. NO. 118595.00

AMJAD S. KHAIRI REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 106650 STATE OF TENNESSEE

BRIDGE REPAIR QUANTITIES

	ITEM	DESCRIPTION	UNIT	0.00	7.46	TOTAL
(1)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	800	-	800
	307-01.01	ACS MIX (PG 64-22) (BPMB-HM) GRADING A	TON	95	-	95
	307-01.08	ACS MIX (PG 64-22) (BPMB-HM) GRADING B-M2	TON	35	-	35
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	1	-	1
	411-01.10	ACS MIX (PG64-22) GRADING D	TON	50	-	50
	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	600	-	600
(2)	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTURE)	S.Y.	370	-	370
(17)(16)	604-10.05	CONCRETE	S.F.	40	-	40
(18)(16)	604-10.14	REMOVE EXISTING WEARING SURFACE	LS	1	-	1
(4)	604-10.18	REINFORCING STEEL (REPAIRS)	LB.	16,380	-	16,380
(16)(5)	604-10.26	BRACING	EACH	-	2	2
(6)	604-10.41	EXPANSION JOINT REPAIRS (TYPE "E")	L.F.	210	-	210
(16)(7)	604-10.42	CONCRETE REPAIRS	C.F.	2750	4	2754
(17)(8)	604-10.54	CONCRETE REPAIRS	S.F.	40	-	40
(16)(9)	604-10.62	EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE)	L.F.	100	-	100
(16)(10)	604-10.69	PRESTRESSED STRAND SPLICE	EACH	-	8	8
(11)	620-05	CONCRETE PARAPET WITH STRUCTURAL TUBING	L.F.	370	-	370
(12)	705-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	112	44	156
(13)	705-08.51	PORTABLE IMPACT ATTENUATOR (NCHRP 350 TL-3)	EACH	8	2	10
	712-01	TRAFFIC CONTROL	LS	0.5	0.5	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	2520	780	3300
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	206	85	291
(14)	712-06	SIGNS (CONSTRUCTION)	S.F.	1520	418	1938
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	340	100	440
	712-08.03	ARROW BOARD (TYPE C)	EACH	8	3	11
	712-09.01	REMOVABLE PAVEMENT MARKING LINE	L.F.	3010	-	3010
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	8	2	10
	716-12.01	ENHANCED FLATLINE THERMO PVMT MARKING (4IN LINE)	L.M.	0.5	-	0.5
	717-01	MOBILIZATION	LS	0.5	0.5	1
(16)(15)	801-03	WATER (SEEDING & SODDING)	M.G.	9	-	9
(15)	803-01	SODDING (NEW SOD)	S.Y.	900	-	900

PROJECT NO.	YEAR	SHEET NO.
79005-4167-04	2014	2

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

(1) INCLUDES THE COST OF ALL LABOR AND MATERIALS FOR FURNISHING AND INSTALLING THE TEMPORARY FILTER BARRIER/SILT FENCE WHERE LOCATED BY THE ENGINEER, AND REMOVAL UPON PROJECT COMPLETION. SEE STD. DWGS. EC-STR-3C AND EC-STR-3E. THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM. SEE SUBSECTION 209.07 OF THE SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.

(2) INCLUDES ALL COSTS TO APPLY TEXTURE FINISH TO BOTH PARAPETS AND END POSTS OF BOTH BRIDGES. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-56.

(3) INCLUDES ALL COSTS ASSOCIATED WITH SPALL REPAIRS USING HIGH EARLY STRENGTH CONCRETE AT FIELD DESIGNATED LOCATIONS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-56.

(4) INCLUDES ALL COSTS ASSOCIATED WITH PRESERVING AND CLEANING THE EXISTING REINFORCING STEEL AS WELL AS THE PLACEMENT OF NEW REINFORCING STEEL IN THE NEW CONCRETE FILLER BLOCKS AND NEW END DIAPHRAGMS AT BOTH ABUTMENTS FOR BRIDGE NO. 79-02807-0.00. THIS ITEM WILL ALSO INCLUDE ALL COSTS ASSOCIATED WITH THE EPOXY ANCHORING SYSTEM USED FOR DOWEL BARS. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-57 AND BR-115-58.

(5) INCLUDES ALL COSTS OF LABOR, MATERIALS AND EQUIPMENT TO PROVIDE BRACING TO SUPPORTS FOR DAMAGED GIRDER AT BRIDGE NO. 79-SR14-7.46. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-52.

(6) INCLUDES COST OF ALL LABOR, MATERIALS AND EQUIPMENT TO INSTALL NEW EXPANSION JOINT ASSEMBLIES AT BOTH ABUTMENTS. TYPICAL AT BRIDGE NO. 79-02807-0.00. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-57 AND BR-115-58, STD. DWG. NOS. SBR-2-115, SBR-2-116, AND SBR-2-119.

(7) INCLUDES ALL COSTS OF ASSOCIATED WITH REMOVING DAMAGED CONCRETE AT PRESTRESSED BEAM LOCATIONS AT BRIDGE NO. 79-SR14-7.46 AND FORMING AND REPOURING REPAIR AREAS BACK TO ORIGINAL BEAM LINES. THIS ITEM ALSO INCLUDES ALL COSTS OF LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS REQUIRED TO REMOVE CONCRETE FILLER BLOCKS AND END DIAPHRAGMS, AS WELL WELL AS TO FORM AND POUR NEW HIGH EARLY STRENGTH CONCRETE FOR THE NEW CONCRETE FILLER BLOCKS AND END DIAPHRAGMS FOR BOTH ABUTMENTS AT BRIDGE NO. 79-02807-0.00. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-52, BR-115-57, AND BR-115-58.

(8) INCLUDES ALL COSTS ASSOCIATED WITH SPALL REPAIRS USING POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL AT FIELD DESIGNATED LOCATIONS AT BRIDGE NO. 79-02807-0.00. THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-56.

(9) INCLUDES ALL COSTS OF ASSOCIATED WITH PROVIDING EPOXY INJECTION AT FIELD DESIGNATED LOCATIONS, FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-56.

(10) INCLUDES ALL COSTS ASSOCIATED WITH REPAIRING DAMAGED PRESTRESSED STRANDS AT BRIDGE NO. 79-SR14-7.46. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-52.

(11) INCLUDES ALL COSTS OF LABOR, MATERIAL, AND EQUIPMENT TO REMOVE EXISTING PARAPETS AND END POSTS AND PROVIDE NEW STD-11-1 PARAPETS AND END POSTS. THIS WILL INCLUDE ALL COST OF HIGH EARLY STRENGTH CONCRETE, REINFORCING STEEL, PARAPET REMOVAL, CLEANING EXPOSED STEEL, DRILLING AND EPOXY ANCHORING NEW STEEL. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-55.

(12) INCLUDES ALL COSTS FOR FURNISHING AND INSTALLING PORTABLE DELINEATORS MOUNTED ON THE PORTABLE BARRIER RAIL. FOR NOTES AND DETAILS, SEE STD. DWG. NO. T-WZ-14. FOR LOCATIONS, SEE TRAFFIC CONTROL SHEET NOS. 4-17.

(13) THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD BE A QUAD-GUARD, A REACT 350 OR A TRACC. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS LISTED ON THE MANUFACTURER'S BILL OF MATERIALS. SHOP DRAWINGS OF THE PORTABLE ENERGY TERMINALS MUST BE SUBMITTED TO AND APPROVED BY THE DIVISION OF STRUCTURES PRIOR TO INSTALLATION. THE CONTRACTOR SHALL BE PAID FOR A MAXIMUM OF TEN (10) ENERGY ABSORBING TERMINALS, NCHRP 350, TL 3 WHICH SHALL BE RELOCATED AS NECESSARY.

(14) INCLUDES ALL COSTS ASSOCIATED WITH THE INSTALLATION AND MAINTENANCE OF NEW SIGN PANELS, SHEETING AND SUPPORTS.

(15) INCLUDES ALL COSTS OF ALL LABOR AND MATERIALS FOR FURNISHING AND INSTALLING THE LISTED ITEMS WHERE LOCATED BY THE ENGINEER, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM.

(16) THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM.

(17) INCLUDES ALL COSTS FOR THE INSTALLATION OF SNOWPLOWABLE MARKERS. SNOWPLOWABLE MARKERS WILL BE INSTALLED IN ALL AREAS RECEIVING NEW ASPHALT OVERLAY AT THE MIDDLE LANE LINE. FOR NOTES AND DETAILS, SEE STANDARD DRAWINGS TM-5 AND TM-6.

(18) INCLUDES ALL COSTS ASSOCIATED WITH THE REMOVAL OF THE EXISTING WEARING SURFACE LOCATED AT BOTH ABUTMENTS FOR BRIDGE NO. 79-02807-0.00. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-115-57 AND BR-115-58.

0.00

7.46

GARVER

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

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

AMJAD S. KHAIRI REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 106850 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED QUANTITIES

SOUTH PARKWAY WEST
OVER INTERSTATE 55
BRIDGE NO. 79-02807-0.00
SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2014

BR-115-49

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WORKSPACE: TDOT Bridge
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SPECIAL NOTES

1. SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (MARCH 1, 2006 EDITION).
2. DESIGN SPECIFICATIONS: AASHTO 2002 EDITION WITH ADDENDA.
3. REINFORCING STEEL: SEE THE STANDARD SPECIFICATIONS.
4. SHOP DRAWINGS: SHOP DRAWINGS SHALL BE SUBMITTED TO THE BRIDGE REPAIR OFFICE OF THE DIVISION OF STRUCTURES.
5. HIGH EARLY STRENGTH CONCRETE: THE MIX TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS CLASS "A", EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS, THE WATER-TO-CEMENT RATIO SHALL BE A MAXIMUM OF 0.40. NO FLY ASH REPLACEMENT WILL BE PERMITTED AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 PSI. THE HIGH EARLY STRENGTH CONCRETE SHALL ATTAIN A COMPRESSIVE STRENGTH OF 3000 PSI BEFORE LOADING.
6. CONCRETE CURING: ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.
7. NON-PAY ITEMS: ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEMS WILL BE PAID FOR. COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE FOR THE PAY ITEMS.
8. DEMOLITION: THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED. SPECIFICALLY, THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM) OR OTHER SIMILARLY HEAVY EQUIPMENT FOR CONCRETE REMOVAL. PNEUMATIC HAMMERS MAY BE USED TO REMOVE UNSOUND CONCRETE. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE SO LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.
9. ROADSIDE BANKS/SLOPES USED BY THE CONTRACTOR FOR WORK ACCESS, PARKING, SHOULDER WIDENING, AND ANY OTHER PURPOSES THAT ARE DISTURBED BY HIS OPERATIONS SHALL BE REPAIRED BY REMOVING ADDED FILL AND ASPHALT, REGRADING, RESEEDING, MULCHING OR WHATEVER OTHER MEANS ARE NECESSARY TO RESTORE THE BANKS/SLOPES TO THE ORIGINAL CONDITION. ALL RESTORATION WORK SHALL MEET THE FULL SATISFACTION OF THE ENGINEER. COST OF ALL RESTORATION WORK SHALL BE INCLUDED IN ITEMS BID ON.
10. GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED ½" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND THE BAR DRIVEN TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND THE BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.
11. GROUT: GROUT SHALL BE A PORTLAND CEMENT TYPE I IN ACCORDANCE WITH STANDARD SPECIFICATION 918.21-GROUT.
12. CONCRETE FOR PARAPETS: TO BE CLASS "A" CONCRETE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

GRADING

ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

PAVEMENT - RESURFACING

THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

CONST. WORK ZONE TRAFFIC CONTROL

ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE (1) WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COST OF REMOVAL, COVERING AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQUARE FOOT.

A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS FLAGGER SIGNS, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK. THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

THE CONTRACTOR WILL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC, UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO BE PARKED WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE CHANNELIZING DEVICES ARE TO BE IN PLACE BEFORE BEING OPENED TO TRAFFIC.

GUARDRAIL

THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETELY IN PLACE.

THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

UTILITY NOTES

THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106, WILL BE REQUIRED.

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL OWNER OF HIS PLAN OF OPERATION IN THE AREA OF UTILITIES. PRIOR TO COMMENCING THE WORK, THE CONTRACTOR SHALL CONTACT OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA65-31-106.

UNLESS OTHERWISE NOTIFIED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WERE CONSTRUCTION STAKES, LINES AND GRADES ARE A CONTRACT ITEM, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SLOPE STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK, AND AT ANY LOCATION OF THE PROJECT DIRECTED BY THE ENGINEER.

MISCELLANEOUS

NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

PROJECT NO.	YEAR	SHEET NO.
79005-4167-04	2014	3

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

PAVEMENT MARKINGS

FINAL PAVEMENT MARKING

PERMANENT PAVEMENT LINE MARKINGS SHALL BE FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.01, ENHANCED FLATLINE THERMO PAVEMENT MARKING (4" LINE), L.M.

SPECIAL NOTE CONCERNING CURING OF NEW CONCRETE PARAPET

THE CONTRACTOR SHALL CURE ALL NEW PARAPETS AS FOLLOWS: IMMEDIATELY AFTER PLACEMENT OF NEW PARAPET, PRE-SOAKED WET BURLAP SHALL BE PLACED OVER THE NEW PARAPET. THIS WOULD BE DONE AS SOON AS THE NEW PARAPET WILL HOLD THE WEIGHT OF THE WET BURLAP AFTER THE SLIP FORM HAS PASSED. A SOAKER HOSE WILL THEN BE PLACED ON TOP OF THE NEW PARAPET AND PLASTIC BE PLACED OVER THE SOAKER HOSE AND BURLAP. THE NEW PARAPETS WILL BE CONTINUOUSLY WET CURED FOR APPROXIMATELY 24 HRS.

0.00

7.46

GARVER

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

TN D.O.T. ENGINEERING SUPERVISOR _____

AMJAD S. KHAIRI REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 106850 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SOUTH PARKWAY WEST
OVER INTERSTATE 55
BRIDGE NO. 79-02807-0.00
SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2014

BR-115-50

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	79005-4167-04	3A

PROJECT COMMITMENTS

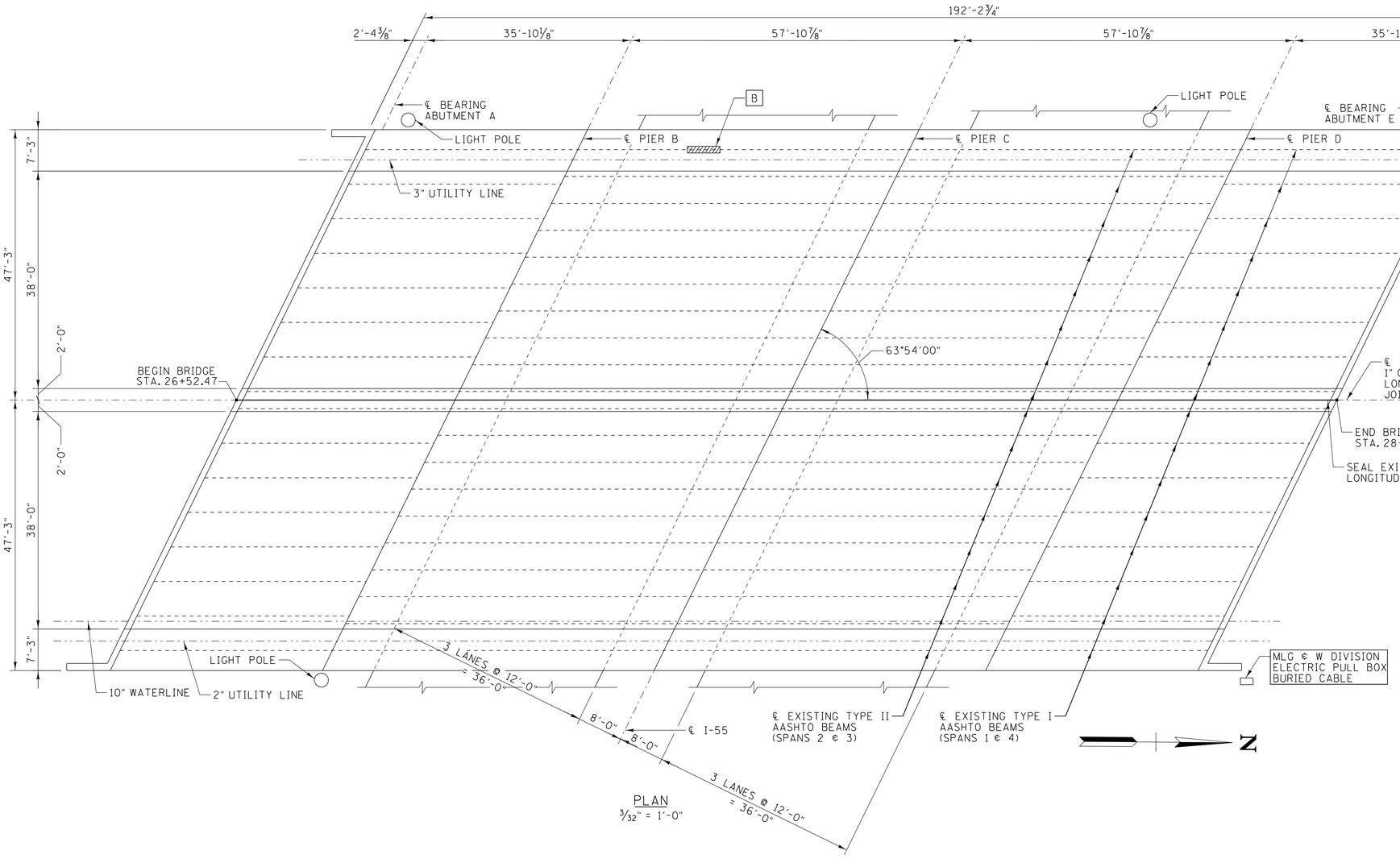
COMMITMENT ID	SOURCE DIVISION	DESCRIPTION	STA./LOCATION
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	1. TO MINIMIZE THE RISK TO CONSTRUCTION WORKERS, TDOT IS COMMITTED TO THE REMOVAL OF ASBESTOS CONTAINING MATERIALS (ACM) FROM BRIDGES THAT ARE BEING DEMOLISHED, REHABILITATED OR REPAIRED. 2. BRIDGE NO. 79I00550057, SR-14 BRIDGE OVER I-55, L.M. 7.46, 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. 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. 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.	DECK DRAINS

GARVER

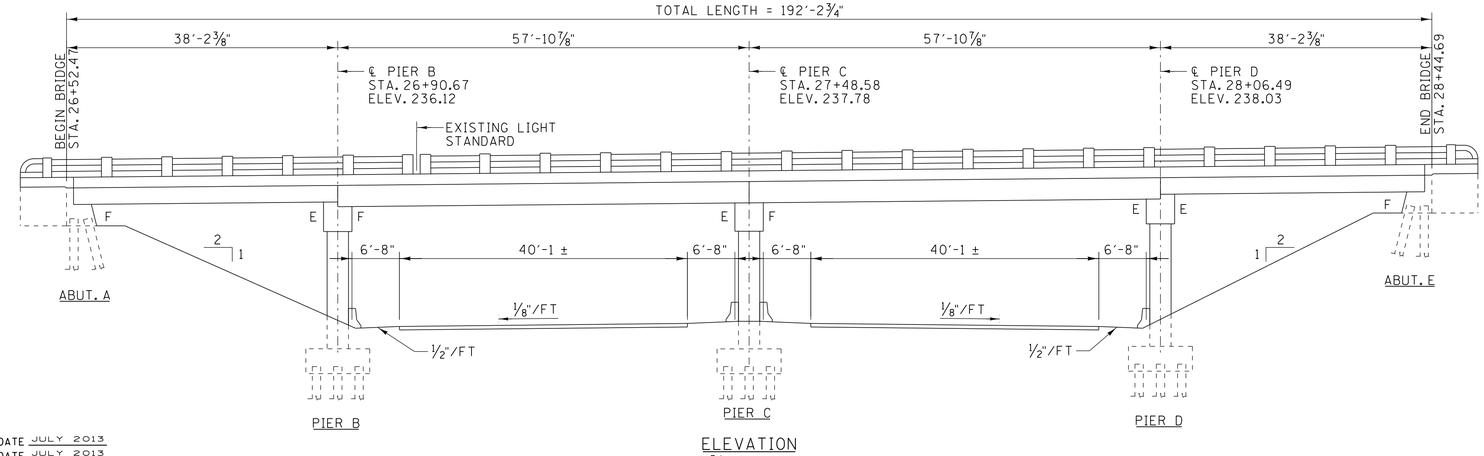
AMJAD S. KHAIRI
REGISTERED ENGINEER
AGRICULTURE
NO. 106650
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

PROJECT COMMITMENTS



PLAN
3/32" = 1'-0"



ELEVATION
3/32" = 1'-0"

PROJECT NO.	YEAR	SHEET NO.
79005-4167-04	2014	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SCOPE OF WORK

B PROVIDE BEAM REPAIR TO DAMAGED EXTERIOR BEAM WITH CUT STRANDS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-52.

PROVIDE BRACING TO SUPPORT DAMAGED BEAM DURING REPAIR OPERATIONS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-115-52.

PROVIDE TRAFFIC CONTROL FOR SOUTHBOUND TRAFFIC AS SHOWN ON SHEET NOS. 4-8.

LIST OF DRAWINGS

DWG. NO.	DRAWING
BR-115-47	LAYOUT OF BRIDGE TO BE REPAIRED (7.46)
BR-115-49	ESTIMATED QUANTITIES
BR-115-50	GENERAL NOTES
BR-115-51	BRIDGE REPAIR DETAILS
BR-115-52	BRIDGE REPAIR DETAILS

LIST OF REFERENCE DRAWINGS

DWG. NO.	DRAWING	
K-30-10 THRU K-30-18	ORIGINAL BRIDGE PLANS	BR# 7.46
BR-22-82 THRU BR-22-89	BRIDGE REPAIR PLANS	BR# 7.46
BR-89-53, BR-89-62 THRU BR-89-71	BRIDGE REPAIR PLANS	BR# 7.46

ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

7.46

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2014

AMJAD S. KHAIRI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 106850
STATE OF TENNESSEE

GARVER

DESIGNED BY L. I. COBOS DATE JULY 2013
DRAWN BY K. T. BRESHEARS DATE JULY 2013
SUPERVISED BY J.H. RUDDELL DATE JULY 2013
CHECKED BY A. J. KHAIRI DATE JULY 2013

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

BR-115-47

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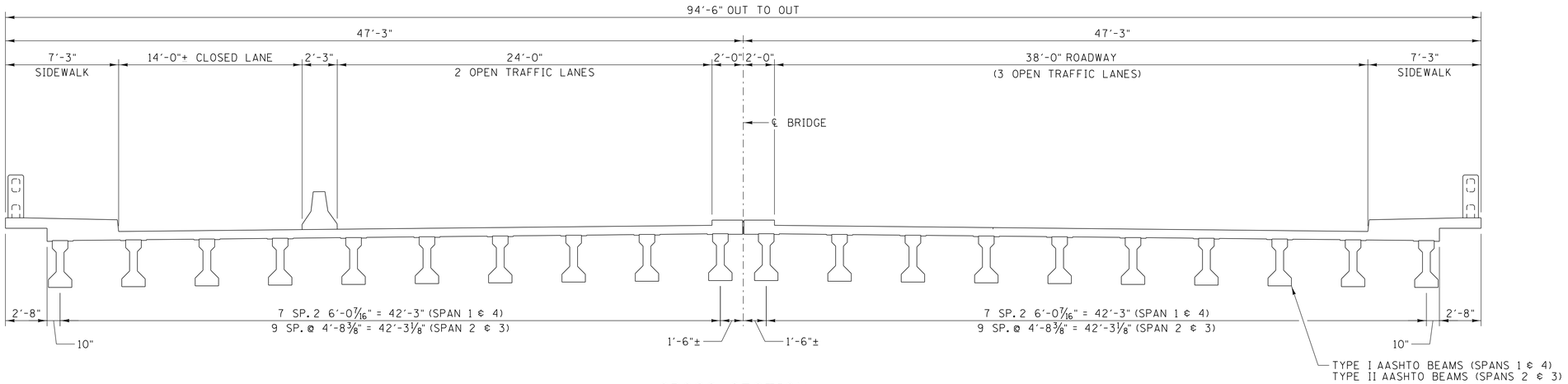
PROJECT NO.	YEAR	SHEET NO.
79005-4167-04	2014	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



CROSS SECTION
SCALE: 1/4" = 1'-0'

7.46

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIRS DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2014

BR-115-51

GARVER

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

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

AMJAD S. KHAIRI
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AGRICULTURE
COMMERCE
NO. 106850
STATE OF TENNESSEE

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PROJECT NO.	YEAR	SHEET NO.
79005-4167-04	2014	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

CONSTRUCTION PROCEDURE FOR REPAIRING DAMAGED PRESTRESSED BEAMS

1. PROVIDE TRAFFIC CONTROL SO AS TO CLOSE THE OUTSIDE LANE AS SHOWN ON DWG. NO. BR-115-51, ALSO SEE TRAFFIC CONTROL SHEET NOS. 4 THRU 8 FOR ADDITIONAL TRAFFIC CONTROL PLANS.
2. SAW CUT CONCRETE ½" TO OBTAIN SQUARE AREAS AND REMOVE PORTIONS OF THE PRESTRESSED BEAM AS SHOWN IN THESE PLANS TO INSURE THAT SOUND CONCRETE IS REACHED IN ALL AREAS.
3. ASSEMBLE SPLICE, LOCATING SPLICE SLEEVES AND STRAND GRIPS TO ALLOW SEATING OF THE STRAND GRIPS AND SUFFICIENT THREAD LENGTHS IN THE SPLICE SLEEVES.
4. TORQUE LUBRICATED SPLICE SLEEVE TO APPROXIMATELY 21,700 POUNDS. THE STRAND GRIPS MUST BE PREVENTED FROM ROTATION DURING TORQUING. SEE SINGLE STRAND SPLICE DETAIL ON THIS DWG. A TOTAL OF EIGHT (8) STRANDS ARE TO BE SPLICED; AT ONE (1) LOCATION. FOR LOCATION OF STRANDS TO BE REPAIRED, SEE DWG. NO. BR-115-47.
5. FORM AND POUR REPAIR AREA SHOWN ON THIS DWG. TO ORIGINAL BEAM LINES USING FC = 5000 PSI CONCRETE. AGGREGATE USED SHALL BE SIZE NO. 6 MAXIMUM. EXPOSED REINFORCEMENT BARS AND STRANDS SHALL BE CLEANED AS NEEDED.
6. THE ESTIMATED QUANTITIES REQUIRED FOR THIS PROJECT INCLUDE EIGHT (8) SPLICE ASSEMBLIES. APPROX. 50 L.F. OF 7/16" DIAMETER STRANDS AND 4 C.F. OF CONCRETE.

ESTIMATED QUANTITY

	ITEM	DESCRIPTION	UNIT	QUANTITY
①	604-10.42	CONCRETE REPAIRS	C.F.	4
②	604-10.69	PRESTRESSING STRAND SPLICE	EACH	8

① INCLUDES COST OF ALL LABOR, MATERIAL AND EQUIPMENT TO REMOVE DAMAGED CONCRETE, POURING 4 C.F. OF NEW CONCRETE AT ONE LOCATION AS SHOWN ON DWG. NO. BR-115-47. THE EXACT LOCATIONS TO BE DETERMINED ON SITE BY TDOT ENGINEER. THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM.

② INCLUDES ALL COSTS TO REPAIR DAMAGED PRESTRESSED STRANDS AT ONE LOCATION. EIGHT (8) SPLICE ASSEMBLIES AND APPROX. 50 L.F. OF 7/16" DIAMETER STRAND. THE EXACT LOCATION TO BE DETERMINED ON SITE BY TDOT ENGINEER. THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM.

GENERAL NOTES FOR EMERGENCY REPAIRS OF PRESTRESSED BEAM

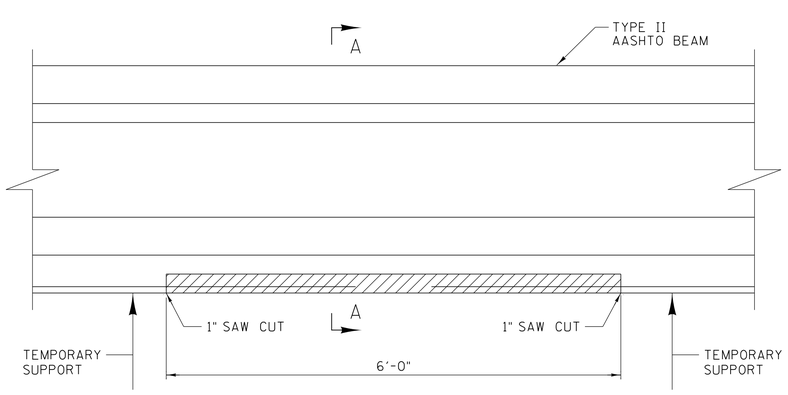
1. THE BEAM REPAIR SHALL TAKE PLACE ON WEEKENDS ONLY.
2. TRAFFIC CONTROL SHALL BE AS SHOWN ON SHEET NOS. 4-8 OF THE TRAFFIC CONTROL PLANS.
3. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. STRAND SPLICE ASSEMBLIES SHALL BE INSTALLED AND TORQUED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND DETAILS ON THIS DWG. THE STRAND SPLICE ASSEMBLY SHALL BE A CABLE SPLICE APPROVED BY TENNESSEE DEPARTMENT OF TRANSPORTATION.
5. ASTM GRADE 270K, 7/16" DIAMETER 7 WIRE LOW RELAXATION STRANDS ARE TO BE USED FOR SPLICING EXISTING STRANDS. CONTRACTOR SHALL VERIFY THE SIZE OF EXISTING STRANDS PRIOR TO ORDERING. THE SIZE OF THE NEW STRANDS SHALL MATCH THE FIELD STRANDS.
6. CONCRETE WITH A COMPRESSIVE STRENGTH OF 5000 PSI SHALL BE USED TO REPAIR THE BEAM AS DETAILED ON THIS DWG. MAXIMUM SIZE OF AGGREGATE USED SHALL BE NO. 6. THE FORMS MAY BE STRIPPED AFTER THE CONCRETE HAS ATTAINED A COMPRESSIVE STRENGTH OF NOT LESS THAN 2500 PSI. A ½" SAW CUT SHALL BE REQUIRED AROUND ALL AREAS TO HAVE CONCRETE PLACED.
7. APPROVAL OF MATERIALS: NO FABRICATION SHALL BE STARTED UNTIL THE MATERIALS INVOLVED HAVE BEEN APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS.
8. NO RESTRICTIONS OF VERTICAL CLEARANCES WILL BE ALLOWED OVER I-40 AND/OR SAM COOPER BLVD. ON ANY TRAFFIC LANES.
9. PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 35 POUND CLASS SHALL NOT BE USED TO REMOVE EXISTING CONCRETE. CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM AROUND STRANDS AND REBAR IN THE BEAM.
10. SPECIAL CARE SHALL BE TAKEN SO AS TO NOT DAMAGE ANY EXISTING STRANDS OR REBAR DURING CONCRETE REMOVAL. IF DAMAGE OCCURS, THE ENGINEER SHALL INSPECT THE DAMAGE AND IF DETERMINED THAT THE CONTRACTOR'S OPERATION CAUSED THE DAMAGE, THE CONTRACTOR SHALL REPLACE OR REPAIR THE DAMAGED MEMBER AT NO ADDITIONAL COST.

SPECIAL NOTES REGARDING TEMPORARY SUPPORTS:

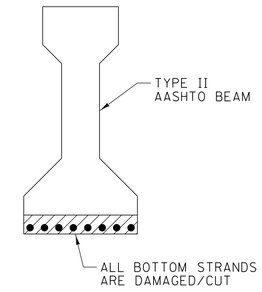
TWO TEMPORARY SUPPORTS WILL BE REQUIRED AT BEAM REPAIR LOCATIONS. TEMPORARY SUPPORTS SHALL BE CAPABLE OF SUPPORTING FULL LOADS (DEAD AND LIVE).

THE CONTRACTOR SHALL SUBMIT DETAILED WORKING DRAWINGS TO THE ENGINEER WHICH SHOW THE TEMPORARY SUPPORT SYSTEM. BY REVIEWING THESE DRAWINGS, THE ENGINEER SHALL ASSUME NO LIABILITY UPON HIMSELF OR THE STATE OF TENNESSEE, NOR SHALL THIS RELIEVE THE CONTRACTOR FOR THE SUFFICIENCY OF THE SUPPORT SYSTEM. THE TEMPORARY SUPPORT DRAWINGS SHALL INCLUDE SIZES, DIMENSIONS AND MATERIAL SPECIFICATIONS FOR ALL MEMBERS USED. THESE DRAWINGS SHALL BE REVIEWED BY THE ENGINEER BEFORE ANY TEMPORARY SUPPORT WORK IS STARTED.

COST OF TEMPORARY SUPPORT SHALL BE INCLUDED IN ITEM NO. 604-10.26, BRACING, EACH.



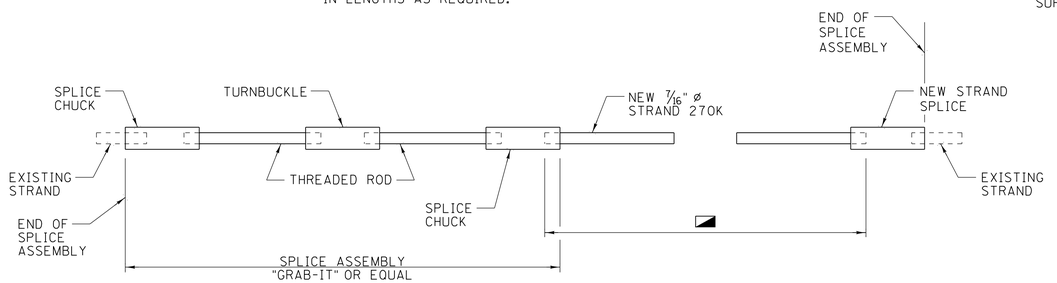
BEAM ELEVATION



SECTION A-A

● ONE (1) SPLICE ASSEMBLY REQUIRED PER STRAND TO BE SPLICED. FOR NUMBER OF SPLICE ASSEMBLIES, SEE THIS DRAWING.

◪ ALL NEW STRANDS SHALL BE FIELD CUT IN LENGTHS AS REQUIRED.



● STRAND SPLICE ASSEMBLY

7.46

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIRS DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2014

AMJAD S. KHAIRI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 106850
STATE OF TENNESSEE

GARVER

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

TN D.O.T. ENGINEERING SUPERVISOR _____

BR-115-52

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REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	10/23/08	AJK	ADDED REVISION DATES
2	10/27/08	AJK	ADDED REVISION DATES

TENN.	YEAR	SHEET NO.
	2008	1
FED AID PROJ NO		
STATE PROJ NO	79946-4287-04	

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

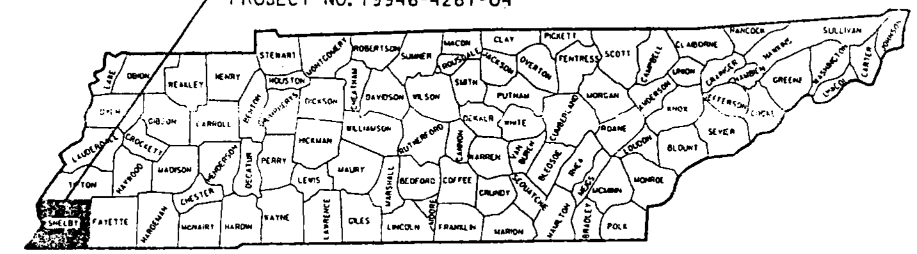
SHELBY COUNTY

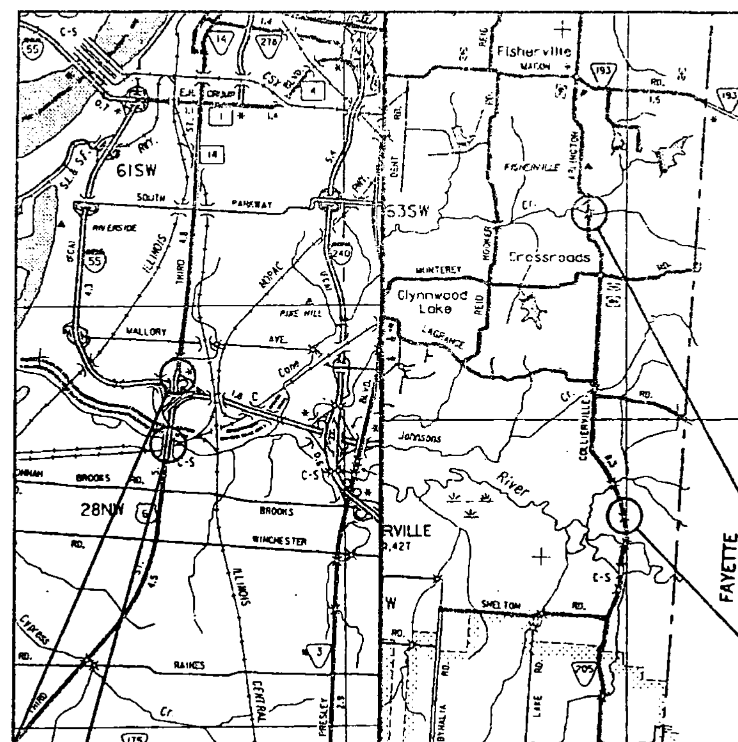
BRIDGE NO. 79-SR14-7.13L OVER I.C.R.R. AND NONCONNAH CREEK.
BRIDGE NO. 79-SR14-7.46 OVER I-55.
BRIDGE NO. 79-SR205-3.12 OVER OVERFLOW AND
BRIDGE NO. 79-SR205-6.60 OVER MARY'S CREEK

BRIDGE REPAIR

STATE ROUTES 14 & 205 F.A.H.S. NO. N/A

SHELBY COUNTY
PROJECT NO. 79946-4287-04





PROJECT NO. 79946-4287-04
SR14 - L.M. 7.46

PROJECT NO. 79946-4287-04
SR14 - L.M. 7.13L

PROJECT NO. 79946-4287-04
SR205 - L.M. 6.60

PROJECT NO. 79946-4287-04
SR205 - L.M. 3.12

PROJECT LENGTH 0.00 MILE

Index of Sheets

SHEET NO.	REVISION	SHEET NAME
1		TITLE SHEET
2-3		ESTIMATED QUANTITIES
4		GENERAL NOTES
5-16		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	6-30-05	W-BEAM AND THRIE 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-13A		BARRIER RAIL MOUNTING POST FOR PLASTIC BLOCK-OUTS WITH HORIZONTAL ADJUSTMENT HOLES
S-GR-14	9-5-98	W-BEAM BARRIER FASTENING HARDWARE AND BRIDGE APPROACH DELINEATORS
S-GR-15	6-30-05	W-BEAM BARRIER TERMINAL ELEMENT DETAILS
S-GR-18	5-27-01	GUARDRAIL TERMINAL (TYPE IN-LINE) AND SHOULDER LINE DETAIL
S-GR-23	5-27-01	GUARDRAIL ATTACHMENTS TO STRUCTURES AND PROTECTIVE GUARDRAIL AT BRIDGE ENDS DETAIL
S-GR-24	5-27-01	MINIMUM INSTALLATION LENGTH FOR PROTECTIVE GUARDRAIL AT BRIDGE ENDS
* S-GR-43		TANGENTIAL GUARDRAIL TERMINAL ANCHOR (TYPE 38) POST LAYOUT AND ERECTION DETAILS
* S-GR-44		TANGENTIAL GUARDRAIL TERMINAL ANCHOR (TYPE 38) (2 TUBE) GUARDRAIL ELEMENT POST AND ASSEMBLY DETAILS

TRAFFIC CONTROL APPURTENANCES

DWG. NO.	REVISION	DESCRIPTION
T-M-1	4-15-04	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-FAB-1	5-27-97	FLASHING YELLOW ARROW BOARD
T-PBR-1	2-22-04	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2		DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-WZ-11	10-06-06	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-12	10-06-06	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-32	9-01-05	TRAFFIC CONTROL PLAN SIGNAL LAYOUT FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-34	9-01-05	TRAFFIC CONTROL PLAN GENERAL NOTES FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-35	7-29-03	TRAFFIC CONTROL PLAN PAY ITEM AND SIGN DETAILS FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE

EROSION CONTROL AND LANDSCAPING

DWG. NO.	REVISION	DESCRIPTION
EC-STR-1	3-15-04	PAY ITEMS, GENERAL NOTES AND TEMPORARY DEWATERING STRUCTURE
* EC-STR-3C	4-15-06	TEMPORARY SILT FENCE WITH BACKING
EC-STR-3E	4-15-06	EROSION CONTROL FABRIC JOINING DETAILS

LIST OF STANDARD DRAWINGS

DWG. NO.	REVISION	DESCRIPTION
SBR-2-124	1-4-96	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST, 1988.
SBR-2-125	11-5-01	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST, 1989.
SBR-2-126	1-4-96	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST, 1988.

* TO BE PRINTED WITH PLANS

LIST OF STANDARD DRAWINGS (CONT.)

DWG. NO.	REVISION	DESCRIPTION
SBR-2-138	11-05-01	SHOWING DETAILS OF ATTACHING NEW GUARDRAIL AT EXISTING BRIDGE END AND ALONG EXISTING BRIDGE RAIL, 1992
STD-1-1	7-31-00	BRIDGE RAILING CONCRETE PARAPET, 1990
STD-1-2	1-5-01	STEEL SLIDER PLATE ASSEMBLIES FOR CONCRETE PARAPET AND BRIDGE DECK DRAIN DETAILS, 1993
STD-2-2		VERTICAL PANEL DETAILS
STD-5-1	10-25-93	STANDARD PILE DETAILS
STD-14-3	7-31-00	STANDARD DETAILS FOR PRESTRESSED BOX BEAMS, 1995

LIST OF DRAWINGS

DWG. NO.	REVISION DATE 1 2	DRAWING
BR-89-52	10-27-08	LAYOUT OF BRIDGE TO BE REPAIRED (7.13L)
BR-89-53	10-27-08	LAYOUT OF BRIDGE TO BE REPAIRED (7.46)
BR-89-54	10-27-08	LAYOUT OF BRIDGE TO BE REPAIRED (3.12)
BR-89-55	10-27-08	LAYOUT OF BRIDGE TO BE REPAIRED (6.60)
BR-89-56	10-27-08	ESTIMATED QUANTITIES
BR-89-57	10-27-08	ESTIMATED QUANTITIES
BR-89-58	10-23-08	GENERAL NOTES
BR-89-59		BRIDGE REPAIR DETAILS
BR-89-60		BRIDGE REPAIR DETAILS
BR-89-61		BRIDGE REPAIR DETAILS
BR-89-62		BRIDGE REPAIR DETAILS
BR-89-63		BRIDGE REPAIR DETAILS
BR-89-64		BRIDGE REPAIR DETAILS
BR-89-65		BRIDGE REPAIR DETAILS
BR-89-66		BRIDGE REPAIR DETAILS
BR-89-67		BRIDGE REPAIR DETAILS
BR-89-68	10-23-08	BRIDGE REPAIR DETAILS
BR-89-69		BRIDGE REPAIR DETAILS
BR-89-70		BRIDGE REPAIR DETAILS
BR-89-71		BRIDGE REPAIR DETAILS
BR-89-72		BRIDGE REPAIR DETAILS
BR-89-73		BRIDGE REPAIR DETAILS
BR-89-74	10-23-08	BRIDGE REPAIR DETAILS
BR-89-75		BRIDGE REPAIR DETAILS
BR-89-75A		BRIDGE REPAIR DETAILS
BR-89-76		BRIDGE REPAIR DETAILS
BR-89-77		BRIDGE REPAIR DETAILS
BR-89-78		BRIDGE REPAIR DETAILS
BR-89-79		BRIDGE REPAIR DETAILS
BR-89-80		BRIDGE REPAIR DETAILS
BR-89-81		BRIDGE REPAIR DETAILS
BR-89-82	10-28-08	BRIDGE REPAIR DETAILS
BR-89-83		BRIDGE REPAIR DETAILS
BR-89-84		BRIDGE REPAIR DETAILS
BR-89-85		BRIDGE REPAIR DETAILS
BR-89-86		BRIDGE REPAIR DETAILS
BR-89-87		BRIDGE REPAIR DETAILS
BR-89-88		BRIDGE REPAIR DETAILS
BR-89-89		BRIDGE REPAIR DETAILS
BR-89-90		BRIDGE REPAIR DETAILS
BR-89-91		BRIDGE REPAIR DETAILS
BR-89-92		BRIDGE REPAIR DETAILS

LIST OF REFERENCE DRAWINGS ⊕

DWG. NO.	DRAWING	
A-4-49	RIVETED HIGH TRUSS BRIDGE	BR. NO. 79-SR14-7.13L
A-4-50	RIVETED HIGH TRUSS BRIDGE	
A-4-55	RIVETED HIGH TRUSS BRIDGE	
A-4-121	STANDARD CONCRETE ABUTMENT	
A-4-124	CONCRETE GIRDER BRIDGE	
A-4-125	CONCRETE BRIDGE	
A-5-127	LAYOUT OF BRIDGE	
A-5-128	HANDRAIL & FLARED SPANS	
A-5-129	ABUTMENT NO. 1	
A-5-130	BENT NOS. 1 & 2	
A-5-131	CONCRETE BENTS	
A-5-132	BENT NOS. 10, 11, 12 & 14	
A-5-133	BENT NO. 13	
A-5-134	DETAILS OF PIERS	
A-5-135	EXPANSION DETAILS	
K-30-10	BRIDGE LAYOUT	BR. NO. 79-SR14-7.46
K-30-11	ABUTMENTS A & E	
K-30-12	PIERS B & D	
K-30-13	PIER C	
K-30-14	PRESTRESSED BEAM SPANS 1 & 4	
K-30-15	PRESTRESSED BEAM SPANS 2 & 3	
K-30-16	SUPERSTRUCTURE SLAB SPANS 1 & 4	
K-30-17	SUPERSTRUCTURE SLAB SPANS 2 & 3	
K-30-18	HANDRAIL, LIGHTING & SLAB DETAILS	
BR-22-82	LAYOUT OF BRIDGE	
BR-22-83	ESTIMATED QUANTITIES	
BR-22-84	GENERAL NOTES	
BR-22-85	CONSTRUCTION SEQUENCE	
BR-22-86	SUPERSTRUCTURE REPAIR DETAILS	
BR-22-87	PRESTRESSED BEAM REPAIR DETAILS	
BR-22-88	BEARING/RISER REPAIR DETAILS	
BR-22-89	MISCELLANEOUS REPAIR DETAILS	

⊕ ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

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

DESIGNER GARVER ENGINEERS CHECKED BY A. S. KHAIRI

PE NO. 106650

APPROVED: [signature] CHIEF ENGINEER

DATE

APPROVED: [signature] COMMISSIONER

RECEIVED
DEC 1 2008

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

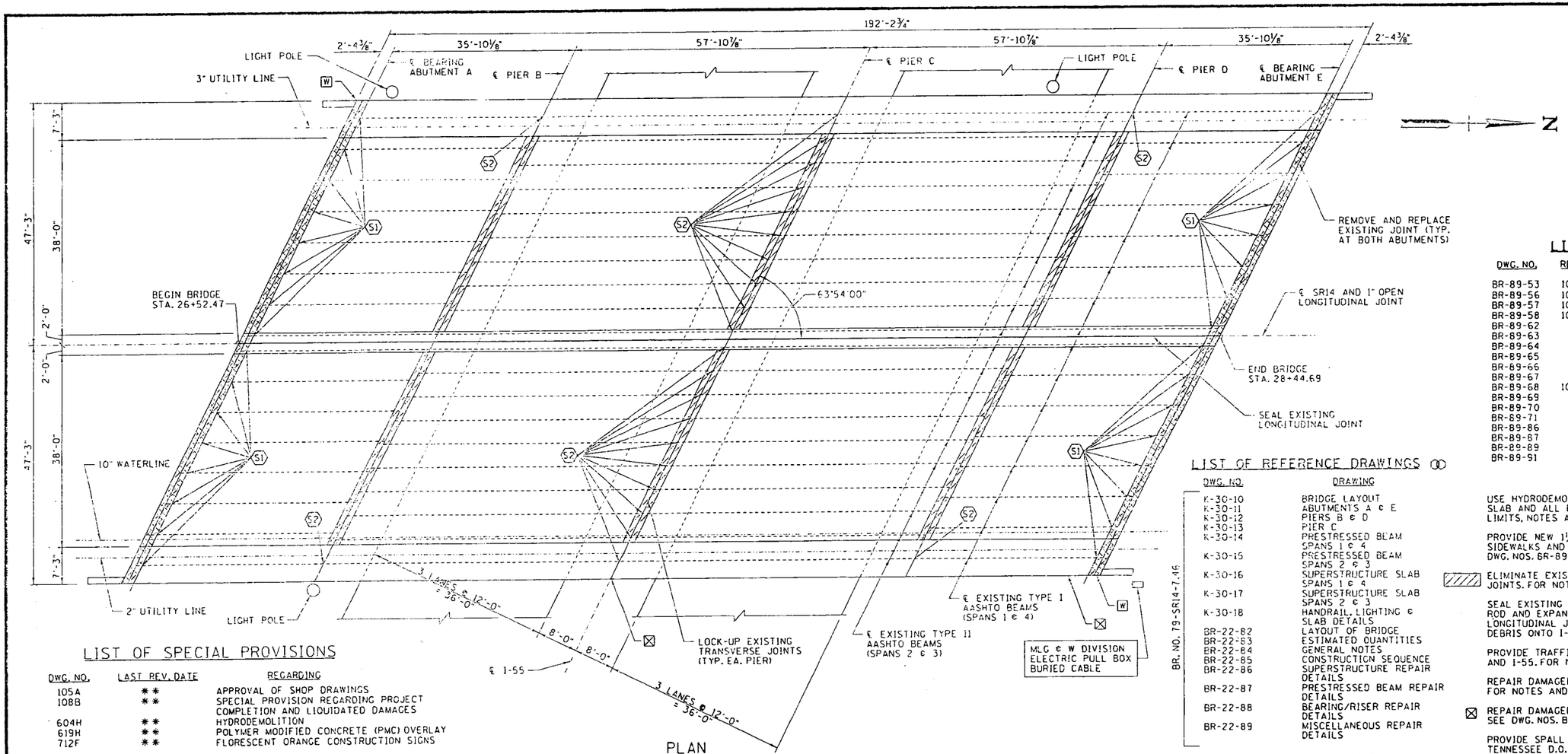
APPROVED:

DIVISION ADMINISTRATOR DATE

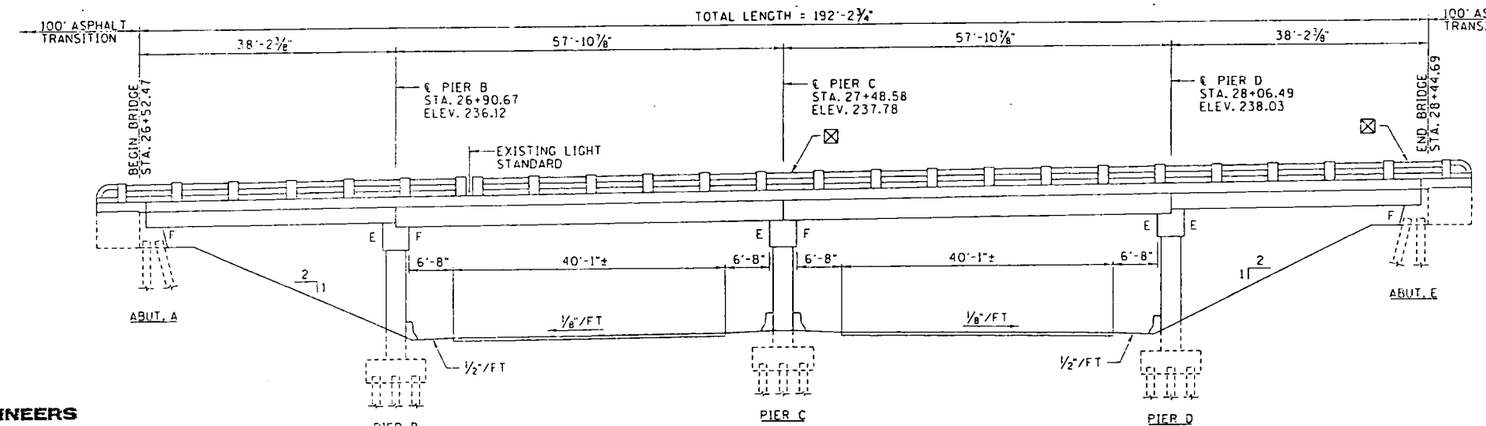
PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10/23/08	AJR	ADDED REVISION DATES
2	10/27/08	AJR	ADDED REVISION DATES



PLAN
SCALE: 3/32" = 1'-0"



ELEVATION
SCALE: 3/32" = 1'-0"

LIST OF SPECIAL PROVISIONS

DWG. NO.	LAST REV. DATE	REGARDING
105A	**	APPROVAL OF SHOP DRAWINGS
108B	**	SPECIAL PROVISION REGARDING PROJECT COMPLETION AND LIQUIDATED DAMAGES
604H	**	HYDRODEMOLITION
619H	**	POLYMER MODIFIED CONCRETE (PMC) OVERLAY
712F	**	FLORESCENT ORANGE CONSTRUCTION SIGNS

** DENOTES CURRENT REVISION DATE AS PER CONTRACT DOCUMENTS

LIST OF REFERENCE DRAWINGS (RD)

DWG. NO.	DRAWING
K-30-10	BRIDGE LAYOUT
K-30-11	ABUTMENTS A & E
K-30-12	PIERS B & D
K-30-13	PIER C
K-30-14	PRESTRESSED BEAM SPANS 1 & 4
K-30-15	PRESTRESSED BEAM SPANS 2 & 3
K-30-16	SUPERSTRUCTURE SLAB SPANS 1 & 4
K-30-17	SUPERSTRUCTURE SLAB SPANS 2 & 3
K-30-18	HANDRAIL, LIGHTING & SLAB DETAILS
BR-22-82	LAYOUT OF BRIDGE
BR-22-83	ESTIMATED QUANTITIES
BR-22-84	GENERAL NOTES
BR-22-85	CONSTRUCTION SEQUENCE
BR-22-86	SUPERSTRUCTURE REPAIR DETAILS
BR-22-87	PRESTRESSED BEAM REPAIR DETAILS
BR-22-88	BEARING/RISER REPAIR DETAILS
BR-22-89	MISCELLANEOUS REPAIR DETAILS

(RD) ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

LIST OF DRAWINGS

DWG. NO.	REV. DATE ⚠1 ⚠2	DRAWING
BR-89-53	10-27-08	LAYOUT OF BRIDGE TO BE REPAIRED (7.46)
BR-89-56	10-27-08	ESTIMATED QUANTITIES
BR-89-57	10-27-08	ESTIMATED QUANTITIES
BR-89-58	10-27-08	GENERAL NOTES
BR-89-62		BRIDGE REPAIR DETAILS
BR-89-63		BRIDGE REPAIR DETAILS
BR-89-64		BRIDGE REPAIR DETAILS
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BR-89-66		BRIDGE REPAIR DETAILS
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BR-89-68	10-23-08	BRIDGE REPAIR DETAILS
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BR-89-71		BRIDGE REPAIR DETAILS
BR-89-86		BRIDGE REPAIR DETAILS
BR-89-87		BRIDGE REPAIR DETAILS
BR-89-89		BRIDGE REPAIR DETAILS
BR-89-91		BRIDGE REPAIR DETAILS

SCOPE OF WORK

USE HYDRODEMOLITION TO REMOVE THE TOP 1¼" OF EXISTING SLAB AND ALL PARTIAL DEPTH DETERIORATED CONCRETE. FOR LIMITS, NOTES AND DETAILS, SEE DWG. NOS. BR-89-62 THRU BR-89-64.

PROVIDE NEW 1¼" PMC OVERLAY TO THE BRIDGE EXCLUDING SIDEWALKS AND MEDIAN. FOR LIMITS, NOTES AND DETAILS, SEE DWG. NOS. BR-89-62 THRU BR-89-64.

ELIMINATE EXISTING TRANSVERSE JOINTS BY LOCKING UP THE JOINTS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-66.

SEAL EXISTING LONGITUDINAL JOINT BY PROVIDING NEW BACKER ROD AND EXPANSION MATERIAL. PROVIDE FALSE WORK UNDER THE LONGITUDINAL JOINT DURING OPERATIONS TO PREVENT FALLING DEBRIS ONTO I-55. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-67.

PROVIDE TRAFFIC CONTROL FOR BOTH STATE ROUTE 14 AND I-55. FOR NOTES AND DETAILS, SEE SHEET NOS. 8-15.

REPAIR DAMAGED PRESTRESSED CONCRETE I BEAMS OVER I-55. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-68.

⊠ REPAIR DAMAGED BRIDGE RAIL. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-69 AND BR-69-70.

PROVIDE SPALL REPAIR WHERE NEEDED. THE ENGINEER FROM TENNESSEE D.O.T. SHALL LOCATE SPALL REPAIR AREAS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-89.

[W] REPAIR DAMAGED WINGWALL AT DESIGNATED LOCATIONS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-71.

REMOVE AND REPLACE EXISTING JOINT AT BOTH ABUTMENTS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-65.

(S1) (S2) PROVIDE LONGITUDINAL SEISMIC RESTRAINTS AT ABUTMENTS A AND E, BENT C, AND EXTERIOR BEAMS OF BENTS B AND D. REMOVE EXISTING SEISMIC RODS AT EXTERIOR BEAMS OF BENTS B AND D ONLY. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-86 AND BR-89-87.

PROVIDE 100' ASPHALT TRANSITION AT EACH END OF BRIDGE. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-91.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2008

GARVER ENGINEERS

DESIGNED BY	S. E. HARPER	DATE OCTOBER 2007
DRAWN BY	C. W. THOMAS	DATE OCTOBER 2007
SUPERVISED BY	J. M. RUDDELL	DATE OCTOBER 2007
CHECKED BY	A. J. KHAIRI	DATE OCTOBER 2007

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

cw thomas 10/21/2008 2:29:53 PM
WORKSPACE: TDOT
I:\2006\06095500 - TDOT (Shelby County)\Drawings\FINAL 2008\79-SR14-7.46.dgn

BR-89-53

PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	2

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10/23/08	AJK	ADDED ITEM NOS. 604-10.06, 604-10.52 & 713-16.01
			REVISED QUANTITY FOR ITEM NOS. 712-05.01
			& 415-01.02
2	10/27/08	AJK	DELETED ITEM NO. 604-10.90

BRIDGE REPAIR QUANTITIES

NOTES	ITEM	DESCRIPTION	UNIT	7.13L	7.46	3.12	6.60	TOTAL	REV.
44 (1)	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	-	-	200	200	400	
44 (2)	209-08.01	TEMPORARY FILTER BARRIER	L.F.	200	400	400	400	1400	
44 (3)	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	-	-	20	20	40	
44 (3)	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	-	-	-	12	12	
44 (3)	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	-	-	-	75	75	
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	-	-	-	1	1	
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	-	1	1	1	3	
	411-01.10	ASPHALT MIX (PG64-22) GRADING "D"	TON	-	130	95	135	295	
	411-01.11	ASPHALT MIX (PG64-22) GRADING "E"	TON	-	-	80	-	80	
(4)	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	-	1700	640	750	3090	⚠1
(6)	602-10.02	PORTAL REPAIRS	LS	1	-	-	-	1	
44 (5)	602-10.06	STRUCTURAL STEEL	LB.	-	-	9800	-	9800	
44 (7)	602-10.26	STRUCTURAL STEEL STRINGER REPAIRS	EACH	-	-	21	-	21	
(8)	602-10.50	STRUCTURAL STEEL (REPAIR)	EACH	-	-	-	12	12	
(13)	603-01	PAINT STEEL STRUCTURES	LS	0.5	-	0.5	-	1	
(9)	603-02.20	SPOT PAINTING EXISTING STEEL STRUCTURES	S.F.	-	-	1000	-	1000	
(10)	604-03.60	BRIDGE JOINT SEISMIC MODIFICATION (DESCRIPTION)	EACH	-	56	-	12	68	
(11)	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	S.Y.	-	-	-	170	170	
(12)	604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	S.Y.	-	1550	-	190	1740	
44 (14)	604-10.05	CONCRETE	S.F.	-	20	20	20	60	
(15)	604-10.06	CONCRETE HANDRAIL REPAIR	L.F.	-	22	25	-	47	
⚠1 (45)	604-10.08	CONCRETE	L.S.	-	1	-	-	1	
(16)	604-10.09	CONCRETE	C.Y.	-	-	-	60	60	
(17)	604-10.13	CONCRETE SLAB REMOVAL	LS	-	-	-	1	1	
(18)	604-10.14	REMOVE EXISTING WEARING SURFACE	LS	-	-	0.80	0.20	1	
(19)	604-10.18	REINFORCING STEEL (REPAIRS)	LB.	-	8200	-	23,100	31,300	
(20)	604-10.20	HYDRODEMOLITION	S.Y.	-	1550	-	-	1550	
44 (21)	604-10.26	BRACING	EACH	4	-	21	-	25	
44 (22)	604-10.30	BRIDGE DECK REPAIRS (FULL DEPTH OF SLAB)	S.Y.	-	-	35	-	35	
44 (23)	604-10.42	CONCRETE REPAIRS	C.F.	-	640	-	-	640	
(24)	604-10.44	EXPANSION JOINT REPAIRS	L.F.	-	404	64	-	468	
(25)	604-10.50	BRIDGE DECK REPAIRS (PARTIAL DEPTH OF SLAB)	S.Y.	-	-	125	-	125	
⚠1 (46)	604-10.52	PRESTRESSED BEAM REPAIR	L.S.	-	1	-	-	1	
44 (26)	604-10.54	CONCRETE REPAIRS	S.F.	-	20	20	20	60	
(27)	604-10.67	CONCRETE REPAIRS	L.F.	-	1708	-	-	1708	
⚠2 (28)									
(29)	615-02.02	PRESTRESSED CONCRETE BOX BEAM (17" X 36")	L.F.	-	-	-	318	318	
(30)	617-01	BRIDGE DECK SEALANT	S.Y.	-	-	700	-	700	
(31)	617-02	BRIDGE DECK CRACK SEALING	L.F.	-	1323	-	-	1323	
(32)	617-05	SEALANT	GAL.	-	14	-	-	14	
(33)	619-01	BRIDGE DECK OVERLAY (P.M.C.)	S.Y.	-	1550	-	-	1550	
(34)	620-03	CONCRETE PARAPET (STD-1-1)	L.F.	-	-	-	147	147	
(35)	705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	-	-	108	108	216	
(36)	705-04.07	TANGENT ENERGY ABSORBING TERMINAL (NCHRP 350 TL3)	EACH	-	-	4	4	8	
(37)	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP 350 TL-3	EACH	1	2	2	2	7	
(38)	705-10.33	GUARDRAIL ATTACHMENT TO CONCRETE BRIDGE RAIL	L.F.	-	-	440	-	440	
44 (39)	709-05.08	MACHINED RIPRAP (CLASS B)	TON	-	-	-	60	60	
	712-01	TRAFFIC CONTROL	LS	0.2	0.5	0.2	0.1	1	
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	525	1194	420	225	2364	
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	29	205	18	18	270	
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	14	48	-	-	62	
	712-05.03	WARNING LIGHTS (TYPE C)	EACH	26	103	14	14	157	
(40)	712-06	SIGNS (CONSTRUCTION)	S.F.	336	1772	305	305	2718	
(41)	712-06.01	VERTICAL PANELS	S.F.	32	32	28	28	120	
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	-	80	-	-	80	
	712-08.03	FLASHING ARROW BOARD (TYPE C)	EACH	1	8	-	-	9	
	712-09.01	REMOVABLE PAVEMENT MARKING LINE	L.F.	2920	6900	5650	5310	20780	⚠1
	712-09.04	REMOVABLE PAVEMENT MARKING LINE (STOP LINE)	L.F.	-	-	24	24	48	
⚠1	713-16.01	CHANGEABLE MESSAGE SIGN	EACH	-	2	-	-	2	
	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	-	0.50	0.25	0.25	1.00	
	717-01	MOBILIZATION	LS	0.25	0.25	0.25	0.25	1.0	
(42) ALT.	730-40	TEMPORARY TRAFFIC SIGNAL SYSTEM	EACH	-	-	1	1	2	
(42) ALT.	730-50	TEMPORARY TRAFFIC SIGNAL SYSTEM (RADIO CONTROLLED)	EACH	-	-	1	1	2	
44 (43)	801-03	WATER (SEEDING & SODDING)	M.G.	-	2	5	5	12	
44 (43)	803-01	SODDING (NEW SOD)	S.Y.	-	1000	2300	2300	5600	

(1) INCLUDES THE COST OF ALL LABOR AND MATERIALS FOR FURNISHING, HAULING, PLACING AND COMPACTING BORROW MATERIAL AT BRIDGE NOS. 79-SR205-3.12 AND 79-SR205-6.60 ON THE EXISTING ROADWAY SIDE SLOPES AS NECESSARY TO ACCOMMODATE THE APPROACH GUARDRAIL AND ROADWAY WIDENING, AS REQUIRED BY THE ENGINEER, IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 203. COST WILL INCLUDE 3" THICKNESS OF TOPSOIL ON NEW FILL AREAS. THE ENGINEER MAY INCREASE, DECREASE, OR ELIMINATE THE QUANTITY FOR THIS ITEM. ⚠1

(2) INCLUDES THE COST OF ALL LABOR AND MATERIALS FOR FURNISHING AND INSTALLING THE TEMPORARY SILT FENCE WHERE LOCATED BY THE ENGINEER, AND REMOVAL UPON PROJECT COMPLETION. SEE STD. DWGS. EC-STR-3C AND EC-STR-3E. THE ENGINEER MAY INCREASE, DECREASE FOR ELIMINATE THE QUANTITY FOR THIS ITEM. SEE SUBSECTION 209.07 OF THE SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.

(3) INCLUDES COST OF LABOR AND MATERIALS TO PLACE LISTED MATERIAL FOR ROADWAY WIDENING OR OTHER PURPOSES AS DIRECTED BY ENGINEER IN THE FIELD. THE QUANTITY MAY BE INCREASED, DECREASED, OR ELIMINATED BY THE ENGINEER.

(4) INCLUDES ALL COSTS ASSOCIATED WITH COLD PLANING EXISTING ASPHALT PAVEMENT ON THE BRIDGE APPROACHES AT BRIDGE NOS. 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60. FOR DETAILS, SEE DWG. NO. BR-89-91 AND BR-89-92.

(5) INCLUDES THE COST OF LABOR AND MATERIALS FOR REMOVING DESIGNATED EXISTING DIAPHRAGMS, INSTALLING WEB SHEAR PLATES, DIAPHRAGMS, CONNECTION ANGLES, HIGH STRENGTH BOLTS, NUTS AND WASHERS AS DESIGNATED AT BRIDGE NO. 79-SR205-3.12. FOR LOCATIONS, SEE DWG. NO. BR-89-54. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-75 AND BR-89-75A.

(6) INCLUDES THE COST OF REMOVING PORTION OF EXISTING PORTAL MEMBERS AT BRIDGE NO. 79-SR14-7.13L AND INSTALLING NEW MEMBERS. FOR LOCATIONS, SEE DWG. NO. BR-89-52. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-60. (4 LOCATIONS TOTAL)

(7) INCLUDES THE COST OF LABOR AND MATERIAL TO REMOVE AND REPLACE DESIGNATED BEAM ENDS AND PROVIDE NEW BEARING ASSEMBLIES AT BRIDGE NO. 79-SR205-3.12. FOR LOCATIONS, SEE DWG. NO. BR-89-54. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-74.

(8) INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY TO PROVIDE STRUCTURAL STEEL LATERAL SEISMIC RESTRAINTS AT BOTH ABUTMENTS AND BOTH BENTS OF BRIDGE NO. 79-SR205-6.60, INCLUDING ANGLES, PLATES, ANCHOR BOLTS, WELDING AND GALVANIZING. FOR LOCATIONS, SEE DWG. NO. BR-89-55. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-86 AND BR-89-88.

(9) INCLUDES ALL COSTS ASSOCIATED WITH CLEANING AND PAINTING ALL EXISTING BEAM ENDS (FLANGES AND WEB), ACCESSIBLE SURFACES OF EXISTING DIAPHRAGMS TO REMAIN AND ALL EXISTING BEARINGS TO REMAIN AT BRIDGE NO. 79-SR205-3.12. FOR LOCATIONS, SEE DWG. NO. BR-89-54. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-58 AND BR-89-74 THRU BR-89-75A.

(10) INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY TO PROVIDE CORROSION RESISTANT WIRE ROPES FOR ALL BEAMS AT BOTH ABUTMENTS OF BRIDGE NO. 79-SR205-6.60 AND AT DESIGNATED LOCATIONS AT BRIDGE NO. 79-SR14-7.46, INCLUDING 1" DIA. ANCHOR BOLTS, ANGLES, AND GALVANIZED ROPE THIMBLES. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-86 AND BR-89-87. FOR LOCATIONS, SEE DWG. NOS. BR-89-53 AND BR-89-55.

(11) INCLUDES ALL COSTS TO APPLY TEXTURE FINISH TO BRIDGE NO. 79-SR205-6.60 AS SHOWN ON DETAIL ON DWG. NO. BR-89-89.

(12) INCLUDES COST TO PERFORM BRIDGE DECK GROOVING WITHIN 1'-0" OF THE TOE OF THE CURB FOR FULL LENGTH OF BRIDGE NOS. 79-SR14-7.46 AND 79-SR205-6.60. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-64, BR-89-80 AND BR-89-81.

(13) INCLUDES ALL COSTS ASSOCIATED WITH PAINTING NEW STRUCTURAL STEEL INCLUDING NEW BEAM ENDS, NEW WEB SHEAR PLATES, NEW DIAPHRAGMS, CONNECTION ANGLES AND BEARING ASSEMBLIES AT BRIDGE NO. 79-SR205-3.12. THIS ITEM ALSO INCLUDES COST TO PAINT NEW PORTAL MEMBERS AT BRIDGE NO. 79-SR14-7.13L. FOR LOCATIONS, SEE DWG. NOS. BR-89-52 AND BR-89-54. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-58, BR-89-61 AND BR-89-74 THRU BR-89-75A.

(14) INCLUDES ALL COSTS ASSOCIATED WITH SPALL REPAIRS USING HIGH EARLY STRENGTH CONCRETE AT FIELD DESIGNATED LOCATIONS AT BRIDGE NOS. 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-89.

(15) INCLUDES THE COST OF LABOR AND MATERIALS FOR REPAIRING CONCRETE HANDRAIL AT BRIDGE NOS. 79-SR14-7.46 AND 79-SR205-3.12. FOR LOCATIONS, SEE DWG. NOS. BR-89-53 AND BR-89-54. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-69, BR-89-70, BR-89-77, AND BR-89-78.

(16) INCLUDES COST OF ALL LABOR AND MATERIALS FOR FORMING AND PLACING HIGH EARLY STRENGTH CONCRETE IN THE NEW SLAB, CANTILEVERS, ABUTMENT BACKWALL, AND DIAPHRAGMS AT BRIDGE NO. 79-SR205-6.60. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-80 THRU BR-89-84.

(17) INCLUDES THE COST OF ALL LABOR AND MATERIALS FOR REMOVING EXISTING CANTILEVER, EXISTING SLAB, BEAMS, BRIDGERAIL AND DIAPHRAGMS AT BRIDGE NO. 79-SR205-6.60. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-80 AND BR-89-81.

(18) INCLUDES ALL COSTS FOR REMOVING EXISTING ASPHALT SURFACE FROM BRIDGE END TO BRIDGE END AT BRIDGE NOS. 79-SR205-3.12 AND 79-SR205-6.60. FOR NOTES, DETAILS AND APPROXIMATE DEPTHS, SEE DWG. NOS. BR-89-72, BR-89-73, BR-89-80 AND BR-89-81.

(19) INCLUDES COST OF ALL REINFORCING STEEL REQUIRED TO COMPLETE REPAIRS AS SHOWN ON THESE PLANS WITH THE EXCEPTION OF THE REINFORCING STEEL REQUIRED FOR THE CONCRETE HANDRAIL REPAIR AT BRIDGE NO. 79-SR14-7.46, EXPANSION JOINTS AND CONCRETE HANDRAIL REPAIR AT BRIDGE NO. 79-SR205-3.12, AND CONCRETE BRIDGERAIL, END POSTS AND PRESTRESSED BEAMS AT BRIDGE NO. 79-SR205-6.60.

(20) INCLUDES ALL COSTS TO HYDRODEMOLITION THE BRIDGE DECK 1¼" MINIMUM AND REMOVE ALL PARTIAL DEPTH DETERIORATED CONCRETE AT BRIDGE NO. 79-SR14-7.46. ROTORMILLING THE DECK PRIOR TO HYDRODEMOLITION IS ALLOWED. SEE DWG. NO. BR-89-64 FOR NOTES AND DETAILS.

(21) INCLUDES THE COST OF LABOR, MATERIALS, AND EQUIPMENT TO SUPPORT DESIGNATED BEAM ENDS DURING REMOVAL AND REPLACEMENT OF BEAM ENDS AT BRIDGE NO. 79-SR205-3.12. THIS ITEM ALSO INCLUDES ALL COSTS ASSOCIATED WITH PROVIDING BRACING DURING PORTAL REPAIRS AT BRIDGE NO. 79-SR14-7.13L. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-60 AND BR-89-74.

(22) INCLUDES ALL COSTS TO PERFORM FULL DEPTH REPAIRS AT BRIDGE NO. 79-SR205-3.12. SEE DWG. NO. BR-89-90 FOR DETAILS.

(23) INCLUDES ALL COSTS OF LABOR AND MATERIAL TO LOCK-UP ALL TRANSVERSE PIER JOINTS AND REPAIR DESIGNATED ABUTMENT WINGWALLS AT BRIDGE NO. 79-SR14-7.46. SEE DWG. NOS. BR-89-66 AND BR-89-71 FOR DETAILS.

(24) INCLUDES ALL COSTS ASSOCIATED WITH INSTALLING NEW EXPANSION JOINTS AT BOTH ABUTMENTS OF BRIDGE NOS. 79-SR14-7.46 AND 79-SR205-3.12 AND REPAIRING LONGITUDINAL JOINT AT BRIDGE NO. 79-SR14-7.46 AS SHOWN ON DETAILS ON DWG. NOS. BR-89-65, BR-89-67 AND BR-89-76.

* FOR NOTES 25 THRU 44 SEE DWG. NO. BR-89-57.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED QUANTITIES

BRIDGE NOS. 79-SR14-7.13L, 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60

SHELBY COUNTY
2008

GARVER ENGINEERS

DESIGNED BY A. J. KHAIRI DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

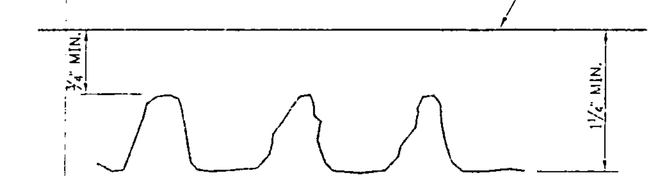
BR-89-56

PROJECT NO.	YEAR	SHEET NO.
79946-4267-04	2008	3

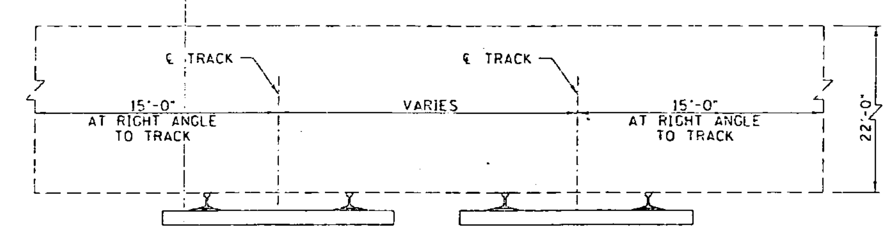
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10/23/08	AJK	ADDED NOTES 45 AND 46
2	10/27/08	AJK	DELETED NOTE 28

Marker	Note
	(25) INCLUDES ALL COSTS TO PERFORM PARTIAL DEPTH CONCRETE REPAIRS AT BRIDGE NO. 79-SR205-3.12. SEE DECK REPAIR NOTES ON DWG. NO. BR-89-90.
	(26) INCLUDES ALL COSTS ASSOCIATED WITH SPALL REPAIRS USING POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL AT FIELD DESIGNATED LOCATIONS AT BRIDGE NOS. 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60. THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-89.
	(27) INCLUDES ALL COST ASSOCIATED WITH SAW CUTTING 1" DEEP 1'-0" FROM THE FACES OF EXISTING SIDEWALKS AND MEDIAN AND ALONG ABUTMENTS AND PORTABLE BARRIER RAIL AT BRIDGE NO. 79-SR14-7.46. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-62 AND BR-89-63.
△2	(28)
	(29) INCLUDES COST OF FORMING, FABRICATING AND INSTALLING EIGHTEEN (18) NEW 17"X36" PRESTRESSED CONCRETE BOX BEAMS AT BRIDGE NO. 79-SR205-6.60, INCLUDING REINFORCING STEEL, STRANDS, PLAIN ELASTOMERIC BEARING PADS, DOWEL BARS, LIFTING STRANDS, INSERTS, AND THREADED BARS. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-80, BR-89-81 AND BR-89-85.
	(30) INCLUDES THE COST OF LABOR AND MATERIALS FOR PLACING BRIDGE DECK SEALANT BETWEEN GUTTERLINES FROM BRIDGE END TO BRIDGE END AT BRIDGE NO. 79-SR205-3.12. ITEM ALSO INCLUDES PLACEMENT OF 3'-0" WIDE SEALANT MEMBRANE, BACKER ROD, AND JOINT SEALANT ACROSS DECK JOINTS AT ALL PIERS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-90.
	(31) INCLUDES ALL COSTS FOR INSTALLING DECK SEALER (HMWM) AT ALL JOINTS AT BRIDGE NO. 79-SR14-7.46 IN THE POLYMER MODIFIED CONCRETE DECK OVERLAY, INCLUDING DECK SURFACE PREPARATION, CLEANING, LABOR, AND ALL MISCELLANEOUS MATERIALS REQUIRED TO SEAL THE JOINTS ALONG THE EDGE OF EXISTING SIDEWALKS, MEDIAN, ABUTMENTS AND TRAFFIC PHASES ACCORDING TO MANUFACTURER'S SPECIFICATIONS. THIS ITEM DOES NOT INCLUDE THE COST FOR FURNISHING THE DECK SEALER (HMWM). SEE SPECIAL PROVISION 604CR.
	(32) INCLUDES ALL COSTS FOR FURNISHING THE SEALER MATERIAL (HMWM = HIGH MOLECULAR WEIGHT METHACRYLATE) FOR SEALING OVERLAY AT JOINTS AT THE FACES OF PARAPETS, PORTABLE BARRIER RAIL AND EXPANSION JOINTS AT BRIDGE NO. 79-SR14-7.46.
	(33) INCLUDES ALL COSTS ASSOCIATED WITH PLACING AND FINISHING OF THE NEW POLYMER MODIFIED CONCRETE (PMC) OVERLAY AT BRIDGE NO. 79-SR14-7.46. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-64 AND TENN D.O.T. STANDARD SPECIFICATION AND SPECIAL PROVISION 619A.
	(34) INCLUDES COST OF ALL LABOR AND MATERIALS FOR CONSTRUCTING NEW STANDARD CONCRETE PARAPET, END POSTS, AND DECK DRAINS AT BRIDGE NO. 79-SR205-6.60. FOR DETAILS AND NOTES, SEE STD. DWGS. STD-1-1, STD-1-2, SBR-2-125 AND SBR-2-126 AND DWG. NOS. BR-89-80 AND BR-89-81.
	(35) INCLUDES COST OF INSTALLING NEW GUARDRAIL COMPONENTS TO MATCH THE CURVATURE CALLED FOR ON DRAWING NOS. BR-89-54 AND BR-89-55, OR THE STD. S-GR SERIES DRAWINGS, AS APPLICABLE.
	(36) INCLUDES ALL COSTS TO FURNISH AND INSTALL THE GUARDRAIL END TERMINALS THAT MEET THE NCHRP CRASH CRITERIA. TERMINAL-ET-2000-LET AND THE SEQUENTIAL KINKING TERMINAL-SKT. FOR LOCATIONS, SEE DWG. NOS. BR-89-54 AND BR-89-55.
	(37) THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD BE A QUAD-GUARD, A REACT 350 OR A TRACC. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS LISTED ON THE MANUFACTURER'S BILL OF MATERIALS. SHOP DRAWINGS OF THE PORTABLE ENERGY TERMINALS MUST BE SUBMITTED TO AND APPROVED BY THE DIVISION OF STRUCTURES PRIOR TO INSTALLATION. THE CONTRACTOR SHALL BE PAID FOR A MAXIMUM OF SEVEN (7) ENERGY ABSORBING TERMINALS, NCHRP 350, TL 3 WHICH SHALL BE RELOCATED AS NECESSARY.
	(38) INCLUDES THE COST OF LABOR AND MATERIAL FOR ATTACHING W-BEAM GUARDRAIL TO BOTH BRIDGE RAILS AT BRIDGE NO. 79-SR205-3.12. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-72, BR-89-73 AND BR-89-79.
	(39) INCLUDES THE COST OF LABOR AND MATERIAL TO PROVIDE CLASS B RIPRAP AT ABUTMENT NO. 1 AND ABUTMENT NO. 2 OF BRIDGE NO. 79-SR205-6.60 AS DIRECTED BY THE ENGINEER. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-61.
	(40) INCLUDES ALL COSTS ASSOCIATED WITH THE INSTALLATION AND MAINTENANCE OF SIGN PANELS, SHEETING AND SUPPORTS. SEE SPECIAL PROVISION NO. 712F.
	(41) INCLUDES ALL COSTS FOR FURNISHING AND INSTALLING VERTICAL PANELS MOUNTED ON THE INTERCONNECTED PORTABLE CONCRETE BARRIER RAIL. FOR NOTES AND DETAILS, SEE STD. DWG. NO. T-PBR-2. FOR LOCATIONS, SEE TRAFFIC CONTROL SHEETS.
	(42) INTERNATIONAL TRAFFIC SYSTEM INC., LAKELAND, FLORIDA. OPB 1000 RF SERIES (SPAN WIRE MOUNTED). ONE MICROWAVE DETECTION AND ONE LOOP DETECTION ARE REQUIRED EACH APPROACH.
	(43) INCLUDES ALL COSTS OF ALL LABOR AND MATERIALS FOR FURNISHING AND INSTALLING THE LISTED ITEMS WHERE LOCATED BY THE ENGINEER, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM.
	(44) THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM.
△1	(45) INCLUDES COST OF ALL LABOR, MATERIALS, EQUIPMENTS TO REPAIR DAMAGED PRESTRESSED BEAMS. THIS ITEM WILL INCLUDE COSTS TO REMOVE DETERIORATED CONCRETE, SAW CUTTING, CLEAN EXISTING EXPOSED REINFORCEMENT, FORMING, POURING USING HIGH STRENGTH EARLY CONCRETE AND FORM REMOVAL OF ALL DAMAGED AREAS DUE TO THE RECENT TRUCK IMPACT. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-68. (20 C.F. OF HIGH EARLY STRENGTH CONCRETE)
△1	(46) INCLUDES COST OF ALL LABOR, MATERIALS, EQUIPMENTS TO REPAIR DAMAGED PRESTRESSED BEAMS. THIS ITEM WILL INCLUDE COSTS TO REMOVE DETERIORATED CONCRETE, SAW CUTTING, CLEAN EXISTING EXPOSED REINFORCEMENT, FORMING, POURING USING HIGH STRENGTH EARLY CONCRETE AND FORM REMOVAL OF ALL DAMAGED AREAS PRIOR TO THE RECENT TRUCK IMPACT. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-68. (12 C.F. OF HIGH EARLY STRENGTH CONCRETE)



DETAIL SHOWING DEPTH OF REMOVAL BY HYDRODEMOLITION



RAILROAD CONSTRUCTION CLEARANCE DIAGRAM

SCALE: NONE

☞ SPECIAL NOTE FOR RAILROAD CROSSING: THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD TRACKS, BALLAST AND PROPERTIES FROM ANY DAMAGE. THE WORK SHALL BE DONE IN ACCORDANCE WITH REGULATIONS STIPULATED BY THE I.C. RAILROAD SO AS TO MAINTAIN CLEARANCE AND NOT INTERRUPT TRAFFIC.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED QUANTITIES

BRIDGE NOS. 79-SR14-7.13L, 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60

SHELBY COUNTY
2008

GARVER ENGINEERS

Role	Name	Date
DESIGNED BY	A. J. KHAIRI	OCTOBER 2007
DRAWN BY	C. W. THOMAS	OCTOBER 2007
SUPERVISED BY	J. H. RUDDELL	OCTOBER 2007
CHECKED BY	A. J. KHAIRI	OCTOBER 2007

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

BR-89-57

PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	4

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10/23/08	A.JK	REVISED NOTE

SPECIAL NOTES

(1) SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (MARCH 1, 2006 EDITION).

(2) DESIGN SPECIFICATIONS: AASHTO 2002 EDITION WITH ADDENDA.

(3) REINFORCING STEEL: SEE THE STANDARD SPECIFICATIONS.

(4) SHOP DRAWINGS: SHALL BE SUBMITTED ACCORDING TO SPECIAL PROVISION NO. 105A. SHOP DRAWINGS SHALL BE SUBMITTED TO THE BRIDGE REPAIR OFFICE OF THE DIVISION OF STRUCTURES.

(5) BOLTS: SHALL BE HIGH TENSILE STRENGTH BOLTS (ASTM A325). RODS AND U-BOLTS SHALL BE ASTM A193-B7, UNLESS OTHERWISE NOTED. SIZE TO BE AS NOTED ON PLANS. NUTS SHALL CONFORM TO ASTM A193-B7, SECTION 2 REFERENCE DOCUMENT. SEE AASHTO SPECIFICATIONS; ARTICLE 11.5.6, DIVISION II. EXISTING CONTACT SURFACES SHALL BE CLEANED TO SSPC-10 SPECIFICATIONS PRIOR TO ATTACHMENT OF NEW MEMBERS.

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

(7) HIGH EARLY STRENGTH CONCRETE: THE MIX TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS CLASS "A", EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS, THE WATER-TO-CEMENT RATIO SHALL BE A MAXIMUM OF 0.40. NO FLY ASH REPLACEMENT WILL BE PERMITTED AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 PSI. THE HIGH EARLY STRENGTH CONCRETE SHALL ATTAIN A COMPRESSIVE STRENGTH OF 3000 PSI BEFORE LOADING.

(8) CONCRETE CURING: ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.

(9) NON-PAY ITEMS: ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEMS WILL BE PAID FOR. COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE FOR THE PAY ITEMS.

(10) DEMOLITION: THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED. SPECIFICALLY, THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM) OR OTHER SIMILARLY HEAVY EQUIPMENT FOR CONCRETE REMOVAL. PNEUMATIC HAMMERS MAY BE USED TO REMOVE UNSOUND CONCRETE. FOR PARTIAL DEPTH OF CONCRETE SLAB REMOVAL AND ANY WORK OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 60 POUND CLASS. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE SO LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.

(11) ROADSIDE BANKS/SLOPES USED BY THE CONTRACTOR FOR WORK ACCESS, PARKING, SHOULDER WIDENING, AND ANY OTHER PURPOSES THAT ARE DISTURBED BY HIS OPERATIONS SHALL BE REPAIRED BY REMOVING ADDED FILL AND ASPHALT, REGRADING, RESEEDING, MULCHING OR WHATEVER OTHER MEANS ARE NECESSARY TO RESTORE THE BANKS/SLOPES TO THE ORIGINAL CONDITION. ALL RESTORATION WORK SHALL MEET THE FULL SATISFACTION OF THE ENGINEER. COST OF ALL RESTORATION WORK SHALL BE INCLUDED IN ITEMS BID ON.

(12) STRUCTURAL STEEL: SHALL CONFORM TO AASHTO M270 GRADE 36 (ASTM A709 GRADE 36) UNLESS OTHERWISE NOTED ON THE PLANS.

(13) MECHANICAL BAR SPLICERS: MUST BE ON THE APPROVED LIST MAINTAINED BY THE DIVISION OF MATERIALS AND TESTS. THE BAR SPLICER SHALL MEET AASHTO STANDARD SPECIFICATIONS FOR MECHANICAL CONNECTION. WHEN EPOXY COATING IS REQUIRED, THE EXPOSED THREADS SHALL BE REPAIRED AFTER SPLICING ACCORDING TO THE STANDARD SPECIFICATIONS, SECTION 907. THE COST OF FURNISHING THE BAR SPLICERS, (AND EPOXY COATING WHEN REQUIRED) INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATION, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS BID ON.

(14) CONCRETE FOR PARAPETS: TO BE CLASS "A" CONCRETE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

(15) GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED ½" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND THE BAR DRIVEN TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND THE BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.

(16) GROUT: GROUT SHALL BE A PORTLAND CEMENT TYPE IN ACCORDANCE WITH STANDARD SPECIFICATION 918.21-GROUT.

(17) WIRE ROPE: WIRE ROPES SHALL BE AS SPECIFIED IN AASHTO DESIGNATION M277-81 (1990). CLIPS SHALL CUMULATIVELY DEVELOP 125% OF YIELD STRENGTH OF WIRE ROPE AND BE VERIFIED BY T.D.O.T. MATERIALS AND TESTS DIVISION. A MINIMUM OF FOUR (4) CLIPS MUST BE USED AT EACH CONNECTION END OF ¾" ø WIRE ROPE. ¾" ø WIRE ROPE SHALL HAVE A STRENGTH OF 26 TONS. ALL WIRE ROPES SHALL BE CLASS A ZINC COATED.

GRADING

ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

PAVEMENT - RESURFACING

THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

GALVANIZING OF NEW STEEL

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

CONST. WORK ZONE TRAFFIC CONTROL

ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE (1) WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COST OF REMOVAL, COVERING AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), S.F.

A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS FLAGGER SIGNS, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

THE CONTRACTOR WILL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC, UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO BE PARKED WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE CHANNELIZING DEVICES ARE TO BE IN PLACE BEFORE BEING OPENED TO TRAFFIC.

GUARDRAIL

THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETELY IN PLACE.

THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

UTILITY NOTES

THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106, WILL BE REQUIRED.

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL OWNER OF HIS PLAN OF OPERATION IN THE AREA OF UTILITIES. PRIOR TO COMMENCING THE WORK, THE CONTRACTOR SHALL CONTACT OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA65-31-106.

UNLESS OTHERWISE NOTIFIED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WERE CONSTRUCTION STAKES, LINES AND GRADES ARE A CONTRACT ITEM, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SLOPE STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK, AND AT ANY LOCATION OF THE PROJECT DIRECTED BY THE ENGINEER.

NOTES:
THE CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO ENSURE THAT NO DEBRIS IS DROPPED INTO THE STREAM. THIS SHALL BE ACCOMPLISHED BY THE USE OF BASKETS, NETTING, WRAPPING, WORK PLATFORM, OR OTHER SIMILARLY EFFECTIVE MEANS. ANY DEBRIS WHICH IS ALLOWED TO DROP ON THE BANKS BELOW THE BRIDGE SHALL NOT BE ALLOWED TO ENTER THE STREAM AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. COST OF REMOVING AND DISPOSING OF DEBRIS SHALL BE INCLUDED IN ITEMS BID ON.

THE CONTRACTOR SHALL NOT DISTURB ANY PORTION OF THE STREAMS AND WETLAND AREAS AT LOG MILES 3.12 AND 6.60 OF SR205.

⚠ THE CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO ENSURE THAT WETLANDS "W-1", "W-2", "W-3", "W-4", "W-5", "W-6" AND "W-7" AND STREAMS "S-1", "S-2" AND "S-3" AT OVERFLOW BRIDGE AND MARY'S CREEK BRIDGE WILL NOT BE PERMANENTLY DISTURBED. THE ENTIRE AREA UNDER BOTH BRIDGES SHALL NOT BE DISTURBED. SEE DWG. NOS. BR-89-54 AND BR-89-55 FOR DETAILS.

NOTE:
ALL STRUCTURAL STEEL FOR SEISMIC RESTRAINERS INCLUDING LATERAL RESTRAINERS, EXCEPT FOR CORROSION RESISTANT WIRE ROPE AND THIMBLES, SHALL BE FABRICATED BY AN AISC SIMPLE STEEL BRIDGE CERTIFIED SHOP.

7.13L	3.12
7.46	6.60

PAVEMENT MARKINGS

FINAL PAVEMENT MARKING

PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), LIN. MI.

SPECIAL NOTE CONCERNING CURING OF NEW CONCRETE PARAPET

THE CONTRACTOR SHALL CURE ALL NEW PARAPETS AS FOLLOWS; IMMEDIATELY AFTER PLACEMENT OF NEW PARAPET, PRE-SOAKED WET BURLAP SHALL BE PLACED OVER THE NEW PARAPET. THIS WOULD BE DONE AS SOON AS THE NEW PARAPET WILL HOLD THE WEIGHT OF THE WET BURLAP AFTER THE SLIP FORM HAS PASSED. A SOAKER HOSE WILL THEN BE PLACED ON TOP OF THE NEW PARAPET AND PLASTIC BE PLACED OVER THE SOAKER HOSE AND BURLAP. THE NEW PARAPETS WILL BE CONTINUOUSLY WET CURED FOR APPROXIMATELY 24 HRS.

MISCELLANEOUS

NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

WORKER PROTECTION

OUR MAINTENANCE RECORDS INDICATE THAT STRUCTURAL STEEL AT BRIDGE NOS. 79-SR14-7.13L AND 79-SR205-3.12 WERE ORIGINALLY PAINTED WITH MATERIALS CONTAINING LEAD AND/OR CHROMATES AND THE CONTRACTOR SHALL BE REQUIRED TO PROCEED ACCORDINGLY TO TAKE ALL MANDATORY SAFEGUARDS PRESCRIBED BY THE STATE AND FEDERAL LAW FOR BOTH THE WORKER'S PROTECTION AND HAZARDOUS MATERIALS DISPOSAL.

PAINTING OF STEEL STRUCTURES (BRIDGE NOS. 79-SR14-7.13L AND 79-SR205-3.12)

ALL EXISTING DIAPHRAGMS TO REMAIN, EXISTING BEARINGS TO REMAIN AND EXISTING BEAM ENDS (WEB AND FLANGES) AT BRIDGE NO. 79-SR205-3.12, AND EXISTING DESIGNATED REPAIR AREAS TO REPAIR EXISTING PORTALS AT BRIDGE NO. 79-SR14-7.13L SHALL BE CLEANED IN ACCORDANCE WITH SECTION 603.13, REPAINTING OF EXISTING STEEL STRUCTURE, TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

CLEANING OF STEEL MAY BE DONE WITH A VACUUM-SHROUDED DEVICE CAPABLE OF CONTAINING ALL WASTE MATERIAL ELIMINATING THE TOTAL CONTAINMENT REQUIREMENT.

PAINTING NEW STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH SECTION 603.06, SCHEDULE OF PAINTING, SYSTEM A, OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. COLOR OF TOP COAT SHALL COMPLY WITH FEDERAL STANDARD NO. 595A, 24110 BRIGHT GREEN.

COST OF PAINTING NEW BEAM ENDS (FLANGES AND WEB), NEW BEARINGS, NEW DIAPHRAGMS, NEW WEB SHEAR PLATES AND NEW CONNECTION ANGLES AT BRIDGENO. 79-SR205-3.12 AND THE NEW STEEL PLATES AT BRIDGE NO. 79-SR14-7.13L SHALL BEINCLUDED IN THE PRICE BID FOR ITEM NO. 603-01, PAINT STEEL STRUCTURE, L.S.

PAINTING EXISTING STRUCTURAL STEEL COMPONENTS TO REMAIN SHALL BE IN ACCORDANCE WITH SECTION 603.06, SCHEDULE OF PAINTING, SYSTEM B, OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. COLOR OF TOP COAT SHALL COMPLY WITH FEDERAL STANDARD NO. 595A, 24110 BRIGHT GREEN.

COST OF CLEANING AND PAINTING EXISTING BEAM ENDS (FLANGES AND WEB), NEW AND EXISTING BEARINGS TO REMAIN, AND EXISTING DIAPHRAGMS AT BRIDGE NO. 79-SR205-3.12 SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 603-02.20, SPOT PAINTING EXISTING STEEL STRUCTURES, S.F.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

BRIDGE NOS. 79-SR14-7.13L, 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60

SHELBY COUNTY
2008

BR-89-58

GARVER ENGINEERS

DESIGNED BY A. J. KHAIRI DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

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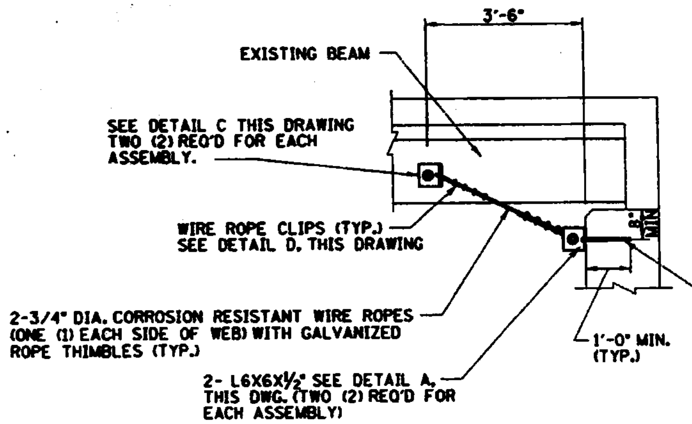
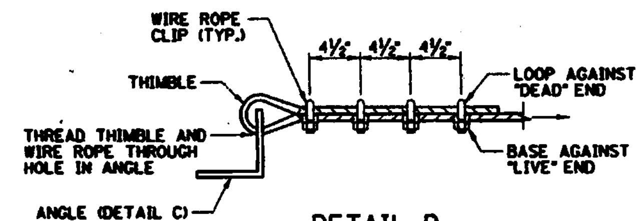


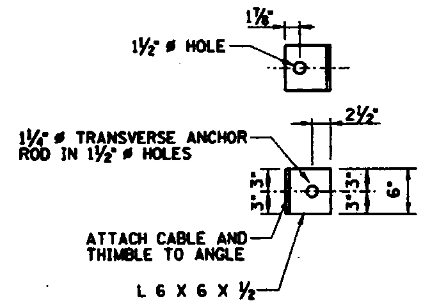
SEISMIC RESTRAINT AT EXISTING BEAMS

SCALE: ½" = 1'-0"



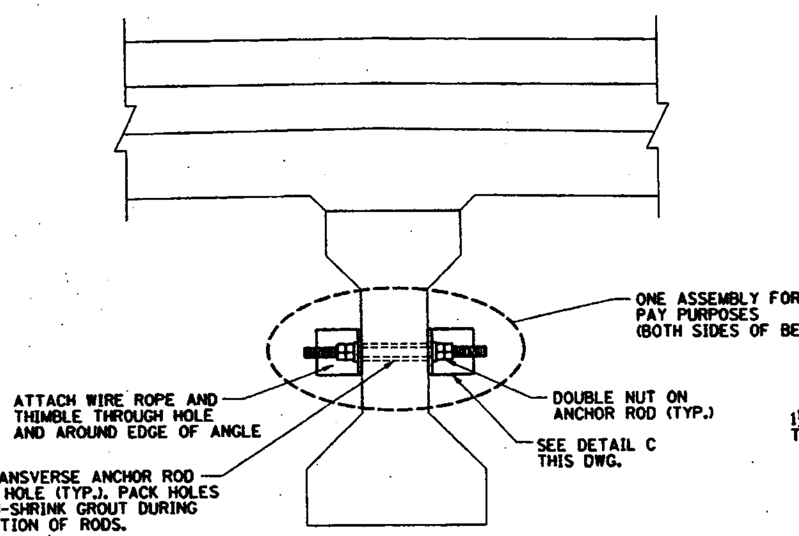
DETAIL D

TYPICAL ¾"ø WIRE ROPE INSTALLATION
SCALE: 1½" = 1'-0"



DETAIL C

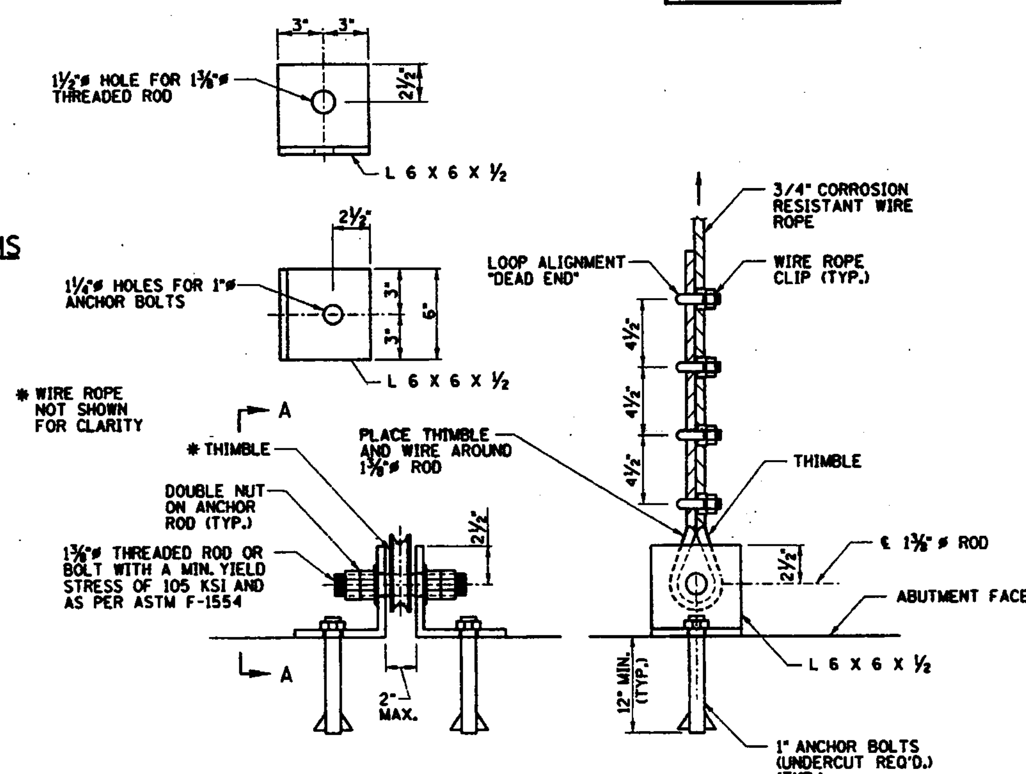
SCALE: 1" = 1'-0"



TYPICAL EXISTING PRESTRESSED AASHTO I-BEAMS

(SHOWING LOCATIONS OF DETAIL C)

7.46 (32 TOTAL)



SECTION A-A

DETAIL A

NOTE:
ONE ASSEMBLY WILL CONSIST OF 2 WIRE ROPES WITH THEIR THIMBLES AND CLIPS, 2 ANGLES (DETAIL C), 4 ANGLES (DETAIL A), 4 ANCHOR BOLTS, 1 1¼"ø ROD AND 2 1⅜"ø RODS.

NOTES:

PROVIDE ¾" DIA. CORROSION RESISTANT STEEL ROPES AS SHOWN ON DWG. NO. BR-89-53. (THIRTY-TWO (32) LOCATIONS TOTAL)

ALL COSTS ASSOCIATED WITH INSTALLING ¾" 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.

(S1) LONGITUDINAL SEISMIC RESTRAINTS

THIRTY-TWO (32) TOTAL

GARVER ENGINEERS

DESIGNED BY	S.F. HARPER	DATE	OCTOBER 2007
DRAWN BY	C.W. THOMAS	DATE	OCTOBER 2007
SUPERVISED BY	J. H. RUDDELL	DATE	OCTOBER 2007
CHECKED BY	A. J. KHAIRI	DATE	OCTOBER 2007

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

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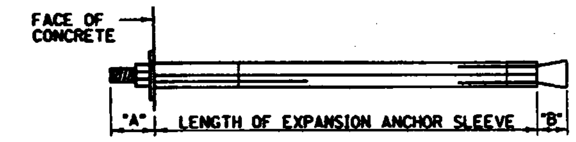
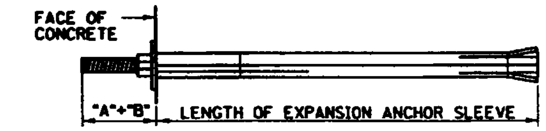


INITIAL POSITION



SET POSITION

PROCEDURE FOR INSTALLATION OF ANCHOR BOLTS

(1" DIAMETER DRILLCO MAXI-BOLT OR WILLIAMS BOLTS) (UNDERCUTTING REQUIRED)

1. 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.
2. HOLES SHALL BE DRILLED WITH A CARBIDE PERCUSSION DRILL BIT, A "REBAR EATER" BIT OR A DIAMOND CORE BIT.
3. THE DRILL BIT DIAMETER AND HOLE DEPTHS SHALL CONFORM TO MANUFACTURER'S SPECIFICATIONS.
4. IF AN ANCHOR MUST BE RELOCATED AND A NEW HOLE DRILLED, THE OLD HOLE SHALL BE REPAIRED WITH A NON SHRINKAGE PACK GROUT.
5. UNDERCUT IN PRIMARY HOLE SHALL BE AS SPECIFIED BY THE MANUFACTURER OF THE UNDERCUTTING TOOL.
6. CLEAN THE HOLE OF CONCRETE DUST AND DEBRIS USING OIL FREE COMPRESSED AIR OR BY VACUUMING. PLACE BEARING SLEEVE FLUSH WITH THE CONCRETE SURFACE.
7. 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.
8. 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.
9. 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.
10. INSTALLATION PROCEDURES REQUIRED BY THE ANCHOR MANUFACTURER IN ADDITION TO THE INSTRUCTIONS LISTED ABOVE SHALL BE FOLLOWED.
11. BENT PLATES SHALL BE ASTM A709 (GRADE 36) MATERIAL GALVANIZED TO ASTM A123 STANDARD.
12. POSITION OF PLATE OR ANGLE OF BEAM:

ABUTMENTS: 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.

PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

7.46

6.60

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46
SR205 OVER MARY'S CREEK
BRIDGE NO. 79-SR205-6.60

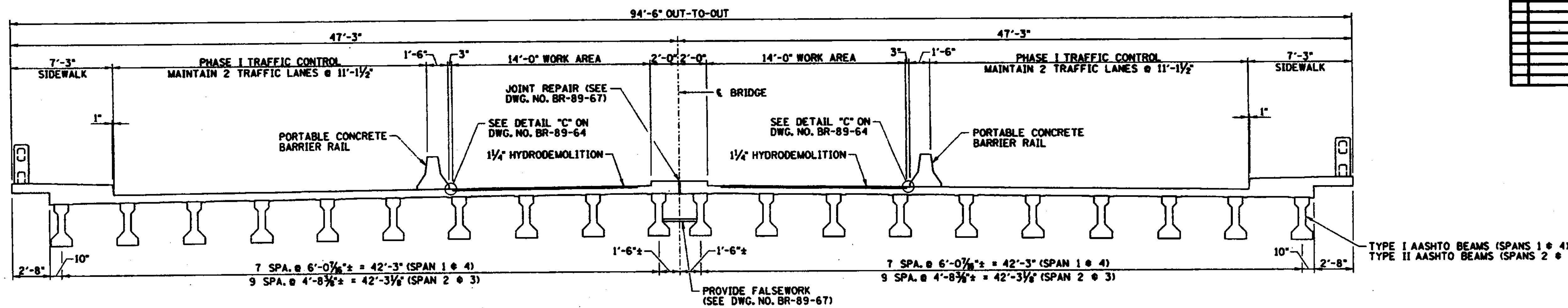
SHELBY COUNTY
2008

BR-89-86

PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

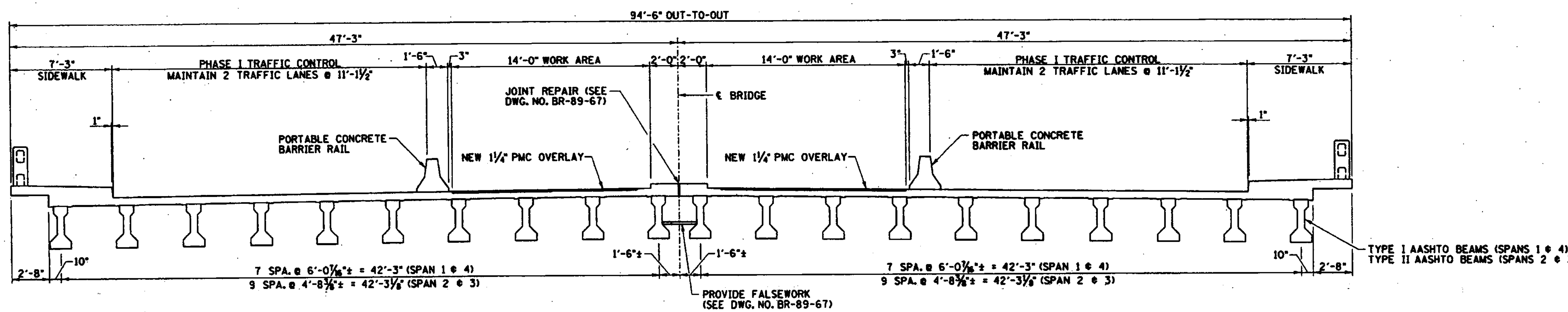
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PHASE I DEMOLITION

SCALE: ¼" = 1'-0"



PHASE I CONSTRUCTION

SCALE: ¼" = 1'-0"

7.46

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2008

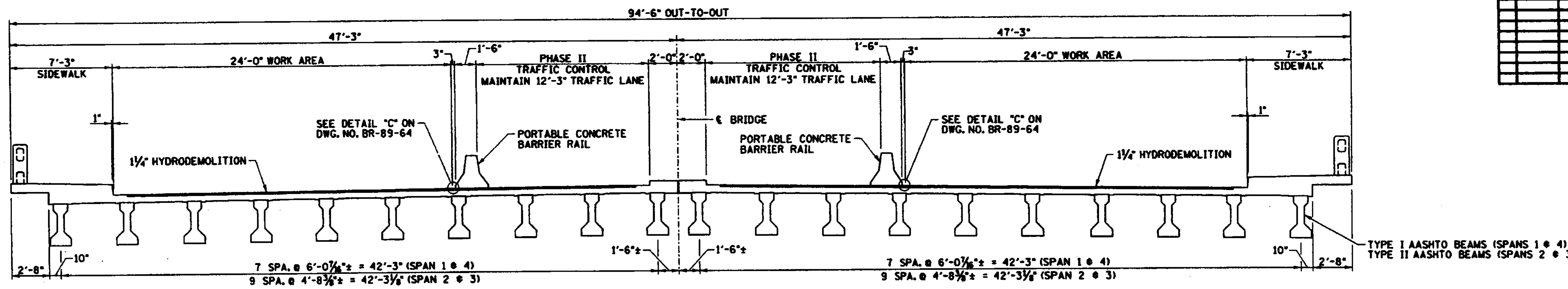
GARVER ENGINEERS

DESIGNED BY S. F. HARPER DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

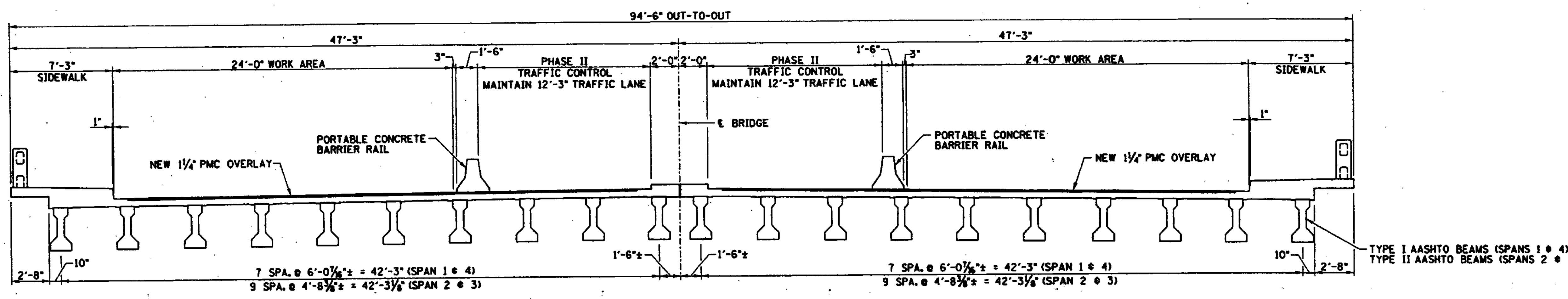
PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PHASE II DEMOLITION
SCALE: ¼" = 1'-0"



PHASE II CONSTRUCTION
SCALE: ¼" = 1'-0"

GARVER ENGINEERS

DESIGNED BY S. F. HARPER DATE OCTOBER 2007
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CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

7.46

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

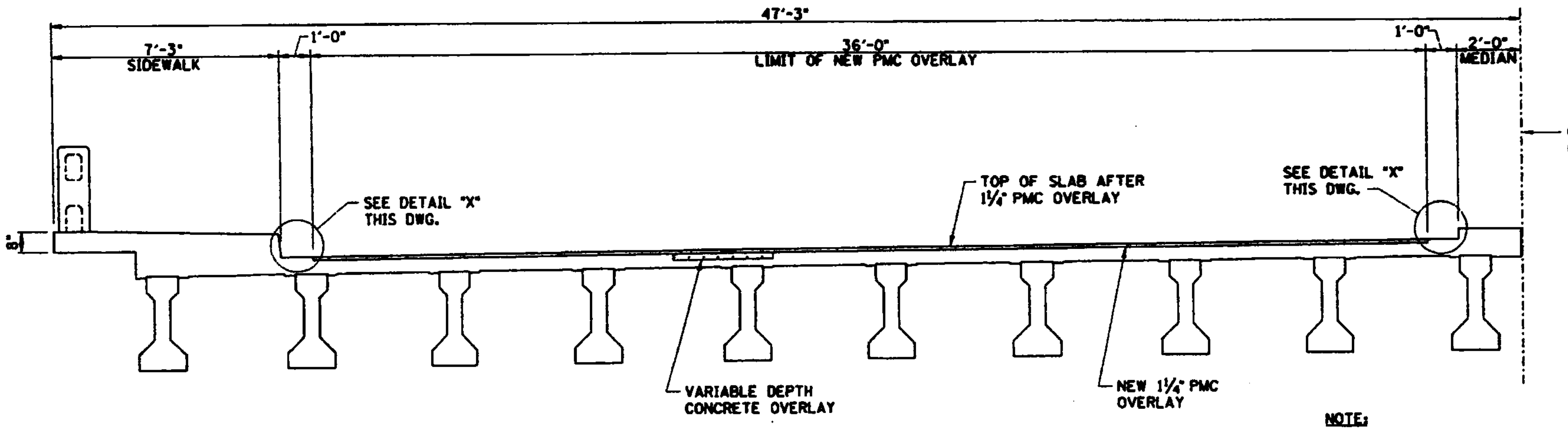
SHELBY COUNTY
2008

BR-89-63

PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



DETAIL SHOWING LIMITS OF PMC OVERLAY

SCALE: ½" = 1'-0"

NOTE:
REPAIR DETAILS ARE SYMMETRICAL ABOUT ℄ BRIDGE.

NOTES:

THE CONTRACTOR SHALL DIVERT WATER FROM THE HYDRODEMOLITION INTO SEDIMENT CONTAINERS. WATER SHALL THEN BE RELEASED INTO THE STORM DRAINS.

THE CONTRACTOR SHALL CLEAN OUT ANY STORM DRAINS PRIOR TO DIVERTING WATER FROM THE HYDRO INTO THESE DRAINS.

SPECIAL NOTE CONCERNING USE OF HYDRODEMOLITION FOR SCARIFYING DECK 1¼", PARTIAL DEPTH CONCRETE REMOVAL AND NEW CONCRETE.

(THIS IS A GENERAL DESCRIPTION OF WORK REQUIRED AND PAYMENT FOR THAT WORK. SEE SPECIAL PROVISION 604H FOR EXACT LIMITS OF WORK AND PAYMENT CONCERNING HYDRODEMOLITION AND NEW PMC OVERLAY.)

A DESIGNATED DECK AREA ON THE BRIDGE SHALL RECEIVE HYDRODEMOLITION AS DESCRIBED BELOW. THE AREA OF THE DECK SHALL RECEIVE HYDRODEMOLITION TO A 1¼" MINIMUM DEPTH AND HAVE PARTIAL DEPTH DETERIORATED CONCRETE REMOVED USING HYDRODEMOLITION. PARTIAL DEPTH AREAS WILL NOT BE MARKED ON THE DECK BUT WILL BE REMOVED AS THE HYDRODEMOLITION COMES IN CONTACT WITH PARTIAL DEPTH DETERIORATED CONCRETE WHILE SCARIFYING. THESE AREAS SHALL BE PAID FOR UNDER ITEM NO. 604-10.20, HYDRODEMOLITION, S.Y.

THE NEW POLYMER MODIFIED CONCRETE PLACED IN AREAS AS PARTIAL DEPTH REMOVAL UP TO 1¼" BELOW THE ORIGINAL BRIDGE DECK ELEVATION SHALL BE PAID FOR UNDER ITEM NO. 619-01.10, POLYMER MODIFIED CONCRETE (VARIABLE DEPTH), C.Y., SEE SPECIAL PROVISION 619A, AND WILL BE PLACED AT THE SAME TIME AS THE NEW 1¼" PMC OVERLAY. THE NEW 1¼" PMC OVERLAY WHICH INCLUDES THE PMC ABOVE 1¼" BELOW ORIGINAL BRIDGE DECK ELEVATION SHALL BE PAID FOR UNDER ITEM NO. 619-01, BRIDGE DECK OVERLAY (PMC), S.Y.

ROTOMILLING OF THE CONCRETE DECK WILL BE ALLOWED PRIOR TO HYDRODEMOLITION TO A DEPTH THAT IT DOES NOT COME INTO CONTACT WITH EXISTING REINFORCEMENT. ADJUST MILLING DEPTH AS REQUIRED.

A 5000 PSI PRESSURE WASH OF THE BRIDGE SURFACE AFTER HYDRODEMOLITION AND VACUUMING SHALL BE DONE PRIOR TO PLACEMENT OF THE NEW PMC OVERLAY TO ENSURE A DECK FREE OF ANY LOOSE MATERIAL. THE BRIDGE DECK SURFACE SHALL MEET WITH THE APPROVAL OF THE ENGINEER.

☞ THE CONTRACTOR SHALL USE TYPE 3 CEMENT IN THE MIX FOR THE POLYMER MODIFIED CONCRETE OVERLAY (PMC OVERLAY).

DENOTES LIMITS OF NEW 1¼" PMC OVERLAY. TO BE PAID FOR UNDER ITEM NO. 619-01, BRIDGE DECK OVERLAY (PMC), S.Y.

DENOTES AREAS OF PMC PLACED UP TO 1¼" BELOW EXISTING BRIDGE ELEVATION TO BE PAID FOR UNDER ITEM NO. 619-01.10 POLYMER MODIFIED CONCRETE (VARIABLE DEPTH), C.Y.

☞ TWO WATER VACUUMS SHALL BE PRESENT AT THE CONSTRUCTION SITE DURING LATEX POURING OPERATION

NOTES:

ALL COSTS ASSOCIATED WITH 1" SAW CUT ALONG THE FACE OF EXISTING PARAPETS, PORTABLE BARRIER RAIL, AND EXPANSION JOINT HEADERS SHALL BE INCLUDED UNDER ITEM NO. 604-10.67 CONCRETE REPAIRS, L.F.

ALL COSTS ASSOCIATED WITH 1" REMOVAL BY CHIPPING HAMMER ALONG THE FACE OF EXISTING PARAPETS, PORTABLE BARRIER RAIL, AND EXPANSION JOINT HEADERS SHALL BE INCLUDED UNDER ITEM NO. 604-10.20, HYDRODEMOLITION, S.Y.

LATEX MODIFIED CONCRETE CURING PROCEDURES

COVER THE OVERLAY PROMPTLY WITH A SINGLE LAYER OF WET BURLAP. NEW BURLAP, EVEN WHEN PRESOAKED, CAN DRY OUT QUICKLY AND SHOULD BE AVOIDED OR PRESOAKED FOR SEVERAL DAYS. IT MAY REQUIRE THE BURLAP TO BE WET, LET DRY OUT, AND THIS PROCEDURE REPEATED SEVERAL TIME TO ALLOW TOTAL ABSORPTION. USE WHITE VISQUEEN (PLASTIC) TO COVER THE WET BURLAP DURING THE OVERLAY IN HOT WEATHER.

PLACE THE WET BURLAP ON THE OVERLAY AS SOON AS POSSIBLE. CONSISTENTLY SPRAY A MIST OF WATER OVER THE BURLAP BEFORE IT IS COVERED WITH WHITE VISQUEEN (PLASTIC). HOWEVER, SPRAYING THE BURLAP WITH WATER BEFORE COVERING WITH WHITE VISQUEEN (PLASTIC) SHOULD NOT BE EXCESSIVE TO THE POINT THE WATER IS DAMAGING THE FRESH OVERLAY SURFACE.

THE WHITE VISQUEEN (PLASTIC) SHOULD BE PULLED, PLACED AND KEPT WITHIN TEN TO THIRTY FEET OF THE FRONT COVER OF BURLAP. THESE DISTANCES SHOULD BE ADJUSTED BASED ON THE WEATHER CONDITIONS AT THE TIME OF PLACEMENT. SECURE THE PLASTIC SO IT WILL NOT BLOW OFF THE BURLAP DURING THE WET CURE. THE LESS NUMBER OF SEAMS IN THE PLASTIC IS BEST SUITED AND EASIER TO SECURE.

SECURE THE PLASTIC BY USING THE RAILS, ROLLING OVER THE EDGES OF WET BURLAP ONTO THE PLASTIC, LAYING FOLDED WET BURLAP TRANSVERSELY ACROSS THE DECK OR BY KEEPING WATER ON THE SURFACE OF THE PLASTIC. SEAL THE PLASTIC TO AVOID THE WIND FROM PUFFING UP THE PLASTIC DURING THE WET CURE. EXERCISE CAUTION WHEN WETTING DOWN THE SURFACE OF THE PLASTIC SO AS NOT TO ALLOW THE WATER TO RUN INTO THE OVERLAY BEING PLACED.

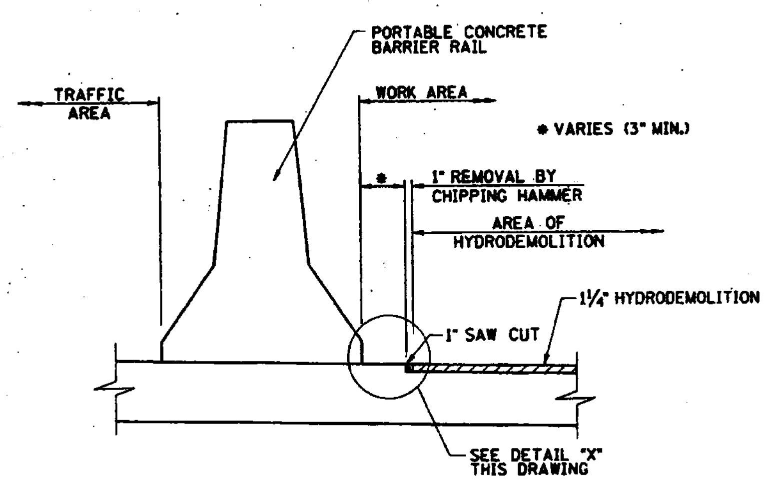
SOAKER HOSES SHALL BE PLACED UNDER THE PLASTIC. THIS SHALL BE DONE WHEN THE OVERLAY HAS SET LONG ENOUGH TO SUPPORT THE WEIGHT OF THE SOAKER HOSES AND AFTER THE OVERLAY PLACEMENT IS COMPLETED. USING THE COOLEST WATER POSSIBLE WILL GREATLY ENHANCE ALL THE PROCEDURES IN HOT WEATHER.

A RANDOM SAMPLE OF THE LATEX SHOULD BE TAKEN OFF EACH CONCRETE MOBILE SUPPLIER TO BE TAKEN TO THE DOT DEPARTMENT OF MATERIALS AND TESTING FOR EVALUATION. THE RANDOM SAMPLE WILL BE APPROXIMATELY ONE (1) QUART.

AN ENGINEER FROM THE OFFICE OF BRIDGE INSPECTION AND REPAIR SHALL BE PRESENT FOR THE INITIAL CALIBRATION OF THE CONCRETE MOBILE.

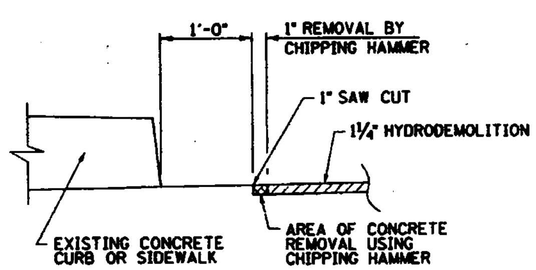
THE ENGINEER SHALL CHECK AND MEASURE THE VOLUME OF THE LATEX, CEMENT, AGGREGATE, AND WATER OF THE CONCRETE BEFORE AND AFTER AS AN APPROXIMATE CHECK OF THE CALIBRATION OF THE CONCRETE MOBILE MIXER.

THE CONTRACTOR SHALL PLACE PLASTIC COVER OVER THE DECK AREA AFTER THE DECK HAS RECEIVED HYDRODEMOLITION AND THE DECK AREA HAS BEEN CLEANED. THE PLASTIC SHALL REMAIN IN PLACE AND THE DECK SHALL NOT BE UNCOVERED UNTIL IMMEDIATELY PRIOR TO PLACING THE PMC. THE PLASTIC SHALL BE REMOVED AHEAD OF THE MOBILE MIXER AS IT ADVANCES ALONG THE LENGTH OF THE BRIDGE. SPECIAL CARE SHALL BE EXERCISED TO ENSURE THAT THE PLASTIC REMAINS IN PLACE IN ANY AREA WHERE CONSTRUCTION EQUIPMENT, INCLUDING CONCRETE TRUCKS, IS TRAVELING OR PARKED.

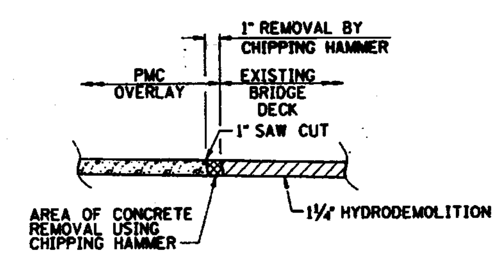


DETAIL "C"

(SHOWING CONCRETE REMOVAL BEFORE POURING NEW PMC OVERLAY. TYPICAL AT EACH PHASE OF TRAFFIC CONTROL)

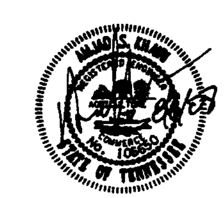


DETAIL "X"



DETAIL "E"

7.46



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2008

GARVER ENGINEERS

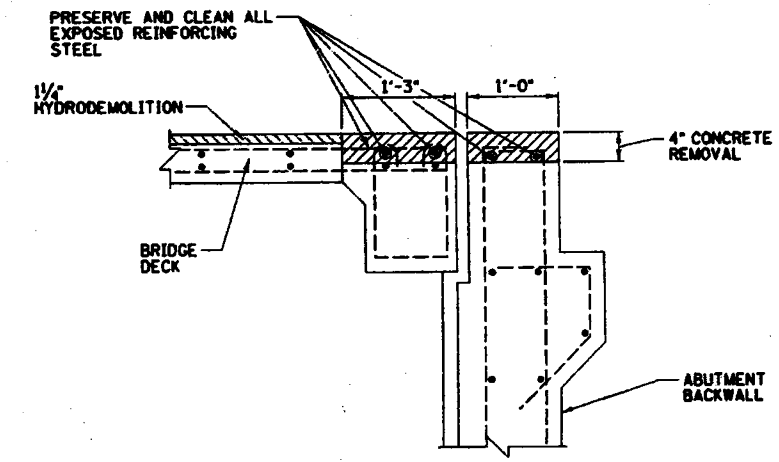
DESIGNED BY	S. F. HARPER	DATE	OCTOBER 2007
DRAWN BY	C. W. THOMAS	DATE	OCTOBER 2007
SUPERVISED BY	J. H. RUDDELL	DATE	OCTOBER 2007
CHECKED BY	A. J. KHAIRI	DATE	OCTOBER 2007

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

BR-89-64

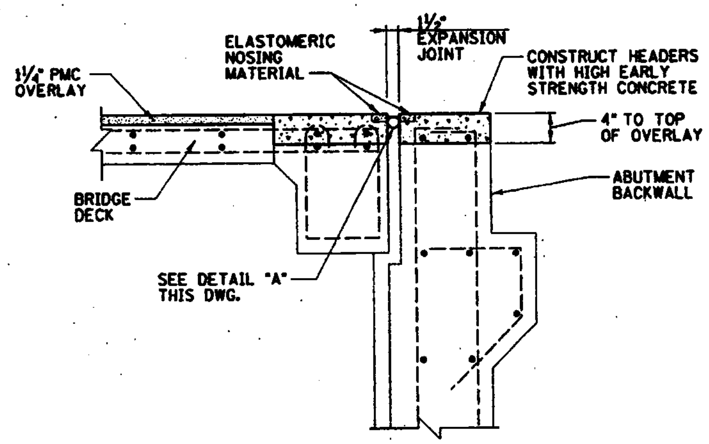
PROJECT NO.	YEAR	SHEET NO.
[illegible]-04	2008	

REVISIONS



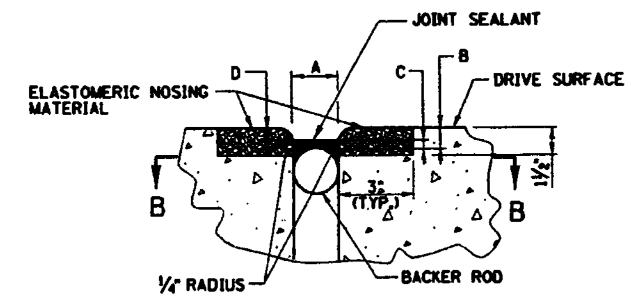
ELEVATION (REMOVAL)

SCALE: 1" = 1'-0"



ELEVATION (CONSTRUCTION)

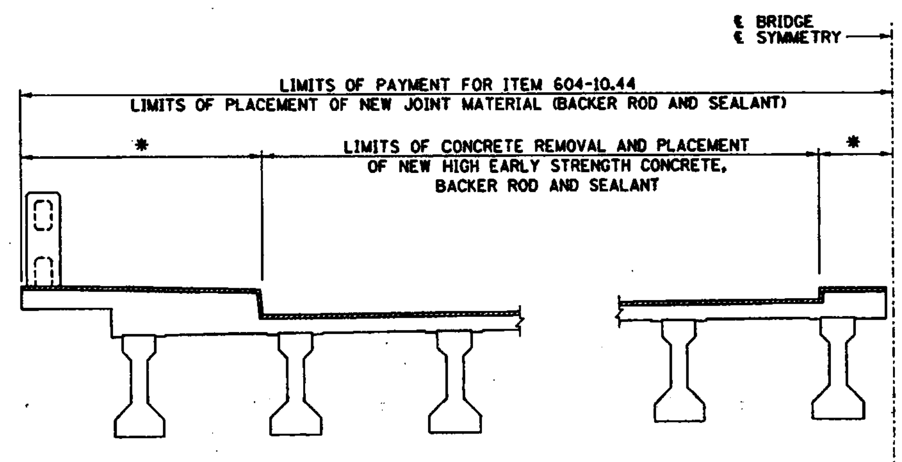
SCALE: 1" = 1'-0"



DETAIL "A"

(EXPANSION JOINT DIAGRAM)

A JOINT OPENING AT TIME OF SEALING	B MINIMUM SPACE FROM TOP OF BACKER ROD TO DRIVE SURFACE	C DEPTH OF JT. SEALANT FROM TOP OF BACKER ROD TO SURFACE OF JT. SEALANT	D MINIMUM SPACE FROM TOP OF JT. SEALANT TO DRIVE SURFACE
UP TO 3"	1⅜" MIN	½" -⅝"	¾" MIN
ABOVE 3"	1¾" MIN	⅝" -¾"	1" MIN



JOINT DETAIL

(SHOWING LIMIT OF JOINT MATERIAL AT SIDEWALKS)

* THE CONTRACTOR SHALL REMOVE THE FULL DEPTH OF EXISTING JOINT MATERIAL IN THESE AREAS AND INSTALL NEW JOINT SEALANT, AND BACKER ROD AS SHOWN ON DETAILS THIS DWG. ALL COSTS TO BE INCLUDED UNDER ITEM NO. 604-10.44.

NOTES:

THE DEPTH OF THE JOINT POURED SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. FOR PROPER INSTALLATION THE PAVEMENT AND AIR TEMPERATURE SHALL BE 40° F AND RISING AND MUST NOT FALL BELOW 40°F PRIOR TO COMPLETE CURE OF THE SEALANT.

THE SEALANT THICKNESS PLACED SHALL BE CHECKED PRIOR TO CURING, AT A MINIMUM OF THREE LOCATIONS ACROSS A TWELVE FOOT LENGTH OF JOINT TO ASSURE PROPER THICKNESS.

SEE THIS DWG. FOR NOTES REGARDING NEW EXPANSION JOINT.

NOTE:

COST OF INSTALLING NEW EXPANSION JOINT AT BOTH ABUTMENTS, SAW CUTTING, BACKER ROD, JOINT SEALER, CONCRETE REMOVAL, NEW HIGH EARLY STRENGTH CONCRETE, CLEANING ALL EXPOSED REINFORCING STEEL, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO INSTALL. THE NEW EXPANSION JOINT TO BE INCLUDED UNDER ITEM NO. 604-10.44, EXPANSION JOINT REPAIRS, L.F.

EXPANSION JOINT DETAILS

ABUTMENTS A & E

GENERAL NOTES:

ITEM NO. 604-10.44, EXPANSION JOINT REPAIR (L.F.):

JOINT SYSTEM INCLUDES FURNISHING ALL MATERIAL AND EQUIPMENT AND COMPLETE INSTALLATION AS SHOWN ON THIS DRAWING AND THE MANUFACTURER'S SPECIAL PROVISIONS. THE JOINT SEALANT SYSTEM CONSISTS OF A SURFACE PRIMER; A SELF-LEVELING OR NON-SAG SEALANT AND BACKER MATERIAL. DETAILED SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL BE SUBMITTED TO THE PROJECT ENGINEER PRIOR TO CONSTRUCTION. THE MANUFACTURER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORKMANSHIP AND PERFORMANCE OF THE INSTALLED JOINT.

JOINT SEALANT:

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

SURFACE PRIMER:

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

BACKER ROD:

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

HIGH EARLY STRENGTH CONCRETE

SEE NOTE REGARDING HIGH EARLY STRENGTH CONCRETE ON DWG. NO. BR-89-66.

7.46

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2008

GARVER ENGINEERS

DESIGNED BY S. F. HARPER DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY A. H. KHAIRI DATE OCTOBER 2007
CHECKED BY J. H. RUDDELL DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

BILL OF STEEL

TRANSVERSE JOINT BAR LIST

BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A530E	5	80					4'-2"
● A602E	6	48					4'-4"
A610E	6	24					15'-3"
A611E	6	24					26'-4"
D520E	5	80					5'-4"

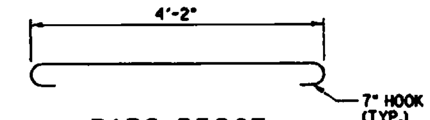
NOTES:
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

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

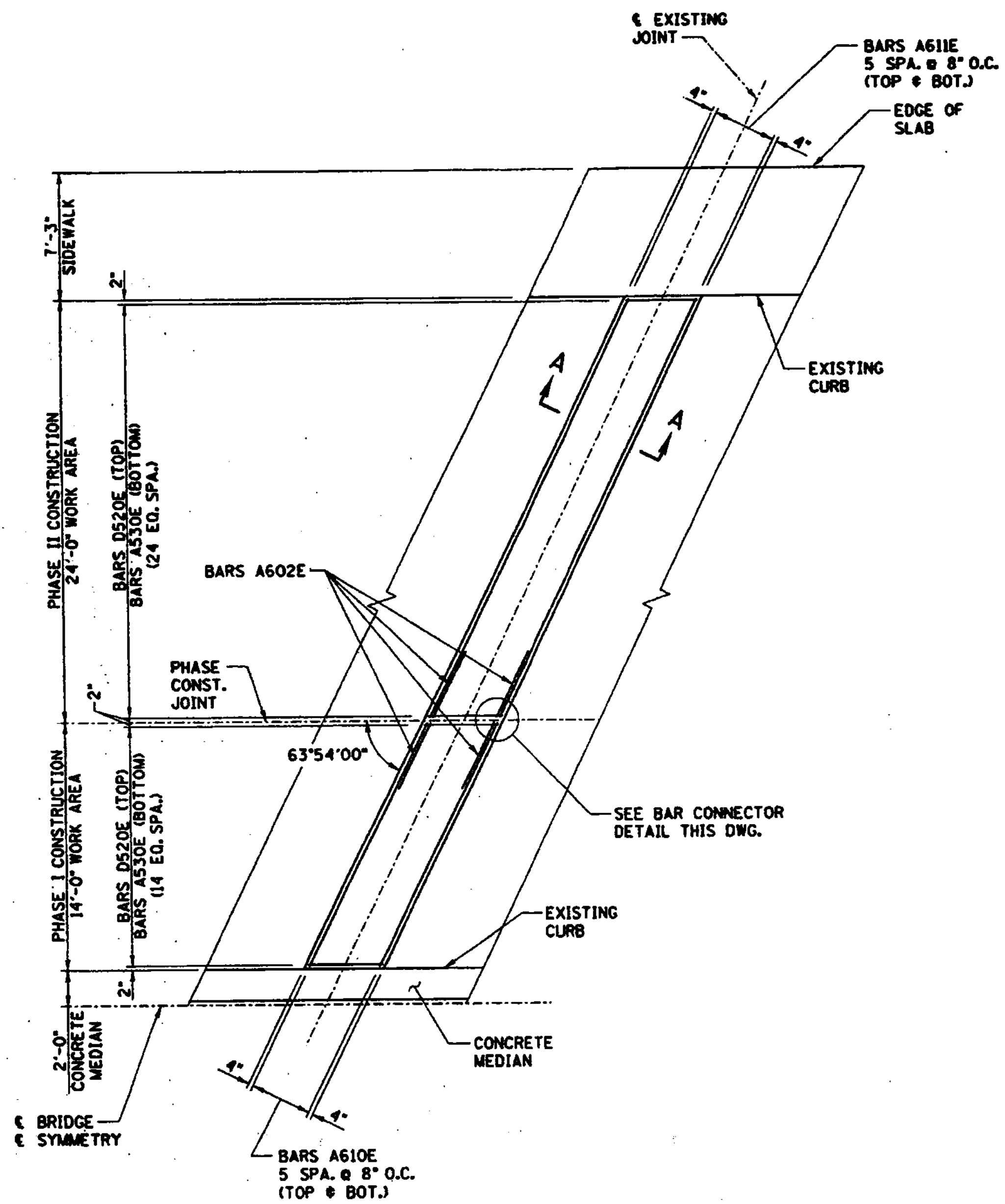
BARS ENDING IN "E" TO BE EPOXY COATED.

NUMBER OF BARS IS FOR ONE JOINT (THREE TOTAL REQ'D).

● THREADED FOR MECHANICAL COUPLER.

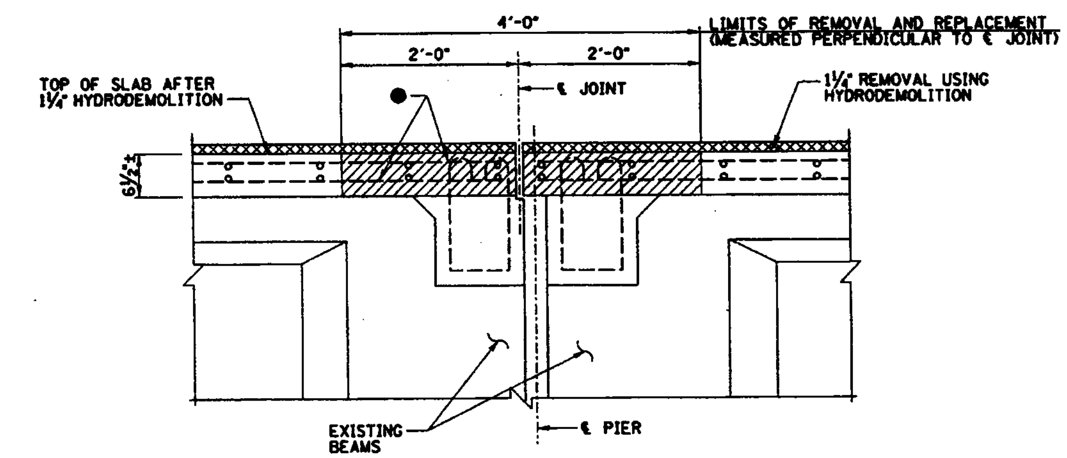


BARS D520E



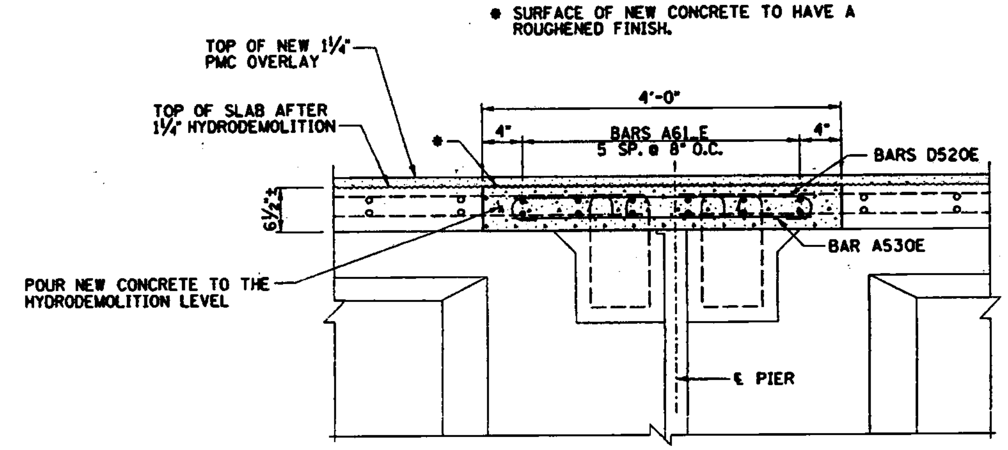
PLAN
SCALE: 1" = 5'-0"

● NOTE:
CONTRACTOR SHALL TAKE EXTREME CARE WHEN REMOVING CONCRETE FROM THE LIMITS SHOWN SO AS NOT TO DAMAGE EXISTING REINFORCING STEEL. ALL EXPOSED STEEL TO BE CLEANED AND INCORPORATED INTO NEW WORK.

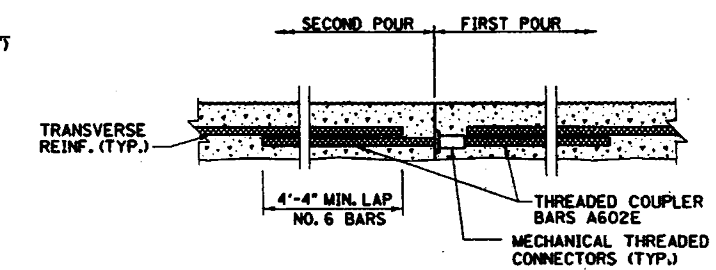


SECTION A-A (DEMOLITION)
SCALE: 1" = 1'-0"

● SURFACE OF NEW CONCRETE TO HAVE A ROUGHENED FINISH.



SECTION A-A (CONSTRUCTION)
SCALE: 1" = 1'-0"



BAR CONNECTOR DETAIL
N.T.S.

SHOWING TRANSVERSE REINFORCING STEEL SPLICING WITH MECHANICAL THREADED CONNECTORS.

COST OF MECHANICAL THREADED CONNECTORS TO BE INCLUDED UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.

NOTES:
CONCRETE TO BE HIGH EARLY STRENGTH CONCRETE. CONCRETE CAN BE LOADED (PLACEMENT OF PMC OVERLAY) AFTER A COMPRESSIVE STRENGTH OF 3000 PSI HAS BEEN OBTAINED.

COST OF SAW CUTTING, CONCRETE REMOVAL, CLEANING OF EXISTING REINFORCING STEEL, NEW HIGH EARLY STRENGTH CONCRETE, FORMING, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE JOINT REPAIR AT PIERS B, C AND D AS SHOWN ON THIS DRAWING SHALL BE INCLUDED UNDER ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

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

TRANSVERSE JOINT DETAILS
PIERS B, C AND D

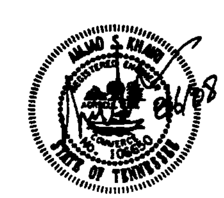
7.46

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2008



GARVER ENGINEERS

DESIGNED BY S. P. HARPER DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

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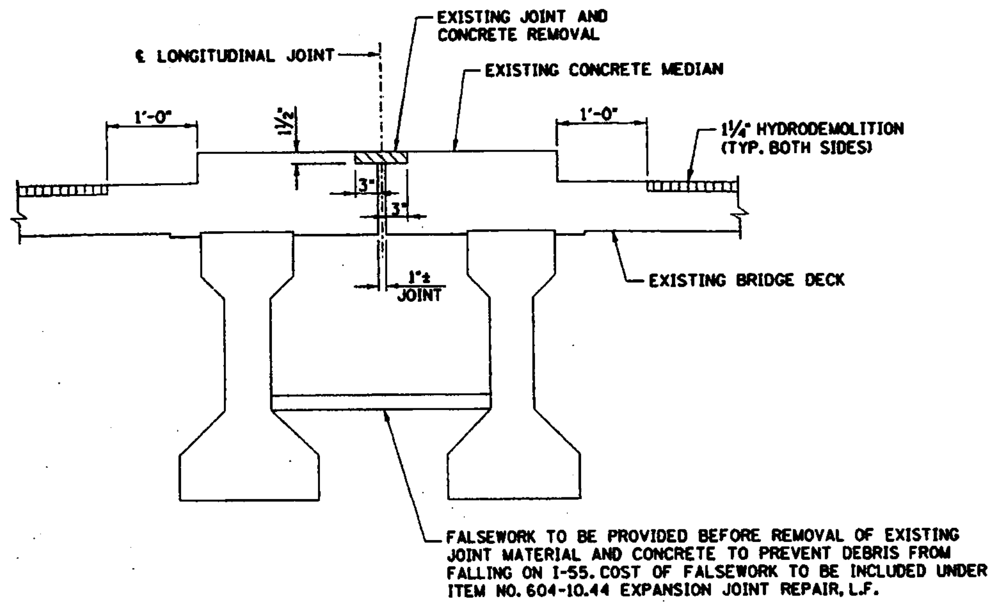
BR-89-66

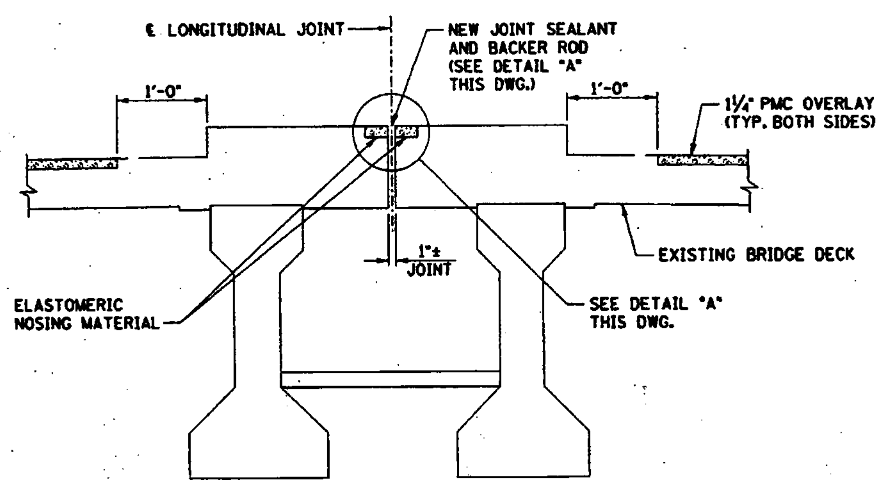
PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



SECTION (REMOVAL)

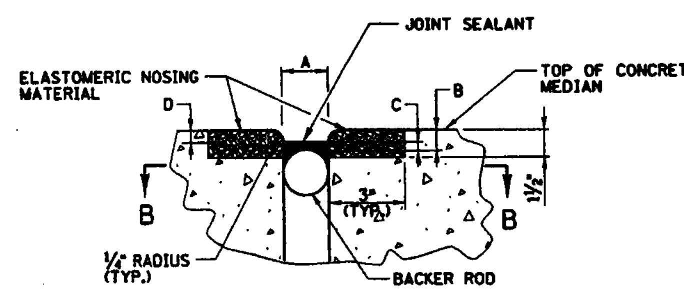


SECTION (CONSTRUCTION)

NOTES CONCERNING FALSEWORK:

1. FALSEWORK SHALL BE REQUIRED IF THE CONTRACTOR ELECTS TO REMOVE THE CONCRETE DURING THE WEEKDAYS WHERE NO LANE CLOSURES WILL BE ALLOWED ON INTERSTATE 55. IF THE CONTRACTOR REMOVES THE CONCRETE DURING WEEKEND LANE CLOSURES NO FALSEWORK SHALL BE REQUIRED. THE CONTRACTOR CAN REMOVE THE CONCRETE IN SPANS 1 AND 4 ANYTIME.

2. THE CONTRACTOR SHALL FURNISH STRUCTURAL DESIGN AND PLAN OF PROPOSED FALSEWORK TO THE BRIDGE INSPECTION AND REPAIR OFFICE FOR REVIEW. THE FALSEWORK SHALL BE DESIGNED TO PREVENT ALL DEBRIS FROM FALLING ON THE UNDERNEATH ROADWAY.



DETAIL "A"

ELASTOMERIC BRIDGE JOINTS AND JOINT SYSTEMS

(EXPANSION JOINT DIAGRAM)

A JOINT OPENING AT TIME OF SEALING	B MINIMUM SPACE FROM TOP OF BACKER ROD TO DRIVE SURFACE	C DEPTH OF JOINT SEALANT FROM TOP OF BACKER ROD TO SURFACE OF JOINT SEALANT	D MINIMUM SPACE FROM TOP OF JOINT SEALANT TO DRIVE SURFACE
UP TO 3"	1⅜" MIN	½"-⅝"	¾" MIN
ABOVE 3"	1¾" MIN	⅝"-¾"	1" MIN

NOTE:

COST OF INSTALLING NEW LONGITUDINAL JOINT, SAW CUTTING, BACKER ROD, JOINT SEALER, NOSING MATERIAL, CONCRETE REMOVAL, AND EXISTING JOINT MATERIAL REMOVAL TO BE INCLUDED UNDER ITEM NO. 604-10.44 EXPANSION JOINT REPAIRS, L.F.

GENERAL NOTES:

ITEM NO. 604-10.44, EXPANSION JOINT REPAIRS (L.F.):

JOINT SYSTEM INCLUDES FURNISHING ALL MATERIAL AND EQUIPMENT AND COMPLETE INSTALLATION AS SHOWN ON THIS DRAWING AND THE MANUFACTURER'S SPECIAL PROVISIONS. THE JOINT SEALANT SYSTEM CONSISTS OF A SURFACE PRIMER; A SELF-LEVELING OR NON-SAG SEALANT AND BACKER MATERIAL. DETAILED SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL BE SUBMITTED TO THE PROJECT ENGINEER PRIOR TO CONSTRUCTION. THE MANUFACTURER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORKMANSHIP AND PERFORMANCE OF THE INSTALLED JOINT.

JOINT SEALANT:

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

SURFACE PRIMER:

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

BACKER ROD:

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7.46

LONGITUDINAL JOINT DETAILS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2008

GARVER ENGINEERS

DESIGNED BY S. F. HARPER DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-89-67

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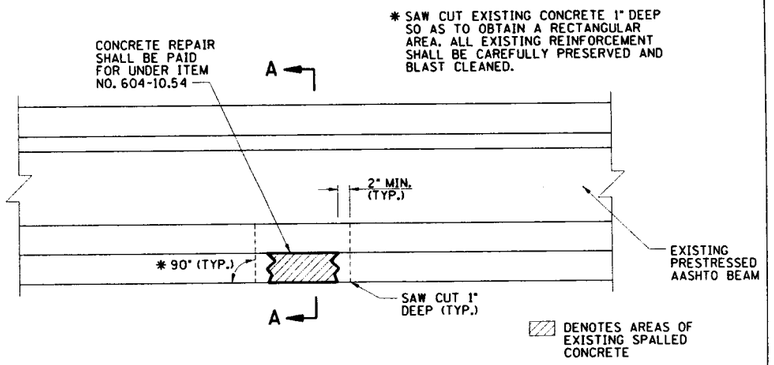
WORKSPACE: TDOT
- TDOT (Shelby County)\Drawings\FINAL 2008\7.46

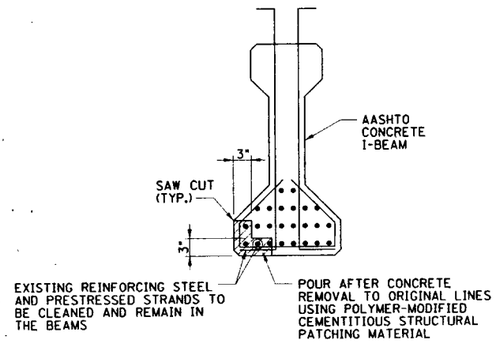
PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10/23/08	AJK	REVISED DETAIL, ADDED BEAM REPAIR DETAILS & NOTES



⚠ AASHTO BEAM ELEVATION



SECTION A-A

⚠ NOTE:
AN ENGINEER FROM T.D.O.T. BRIDGE INSPECTION AND REPAIR OFFICE SHALL DETERMINE ACTUAL LIMITS AND LOCATIONS OF REMOVAL. CONTRACTOR SHALL TAKE EXTREME CARE WHEN REMOVING EXISTING CONCRETE SO AS NOT TO DAMAGE THE EXISTING PRESTRESSED STRANDS. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE FULL SATISFACTION OF THE ENGINEER.

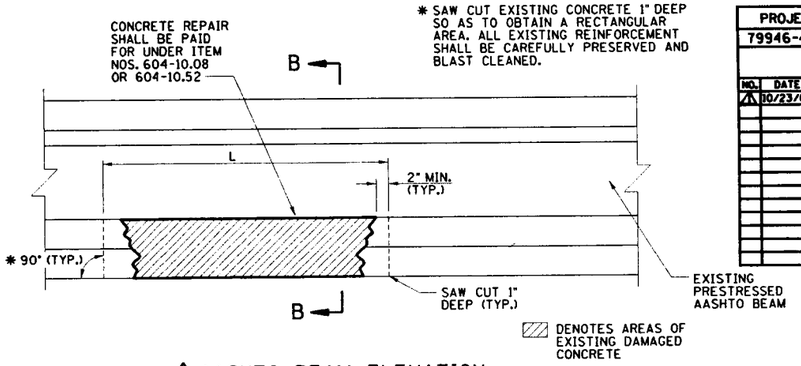
NOTES FOR ITEM NO. 604-10.54:

THE COST OF SAW CUTTING, REMOVING SPALLED OR CRACKED CONCRETE CLEANING EXPOSED REINFORCING STEEL, CLEANING EXISTING PRESTRESSED STRANDS, 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.

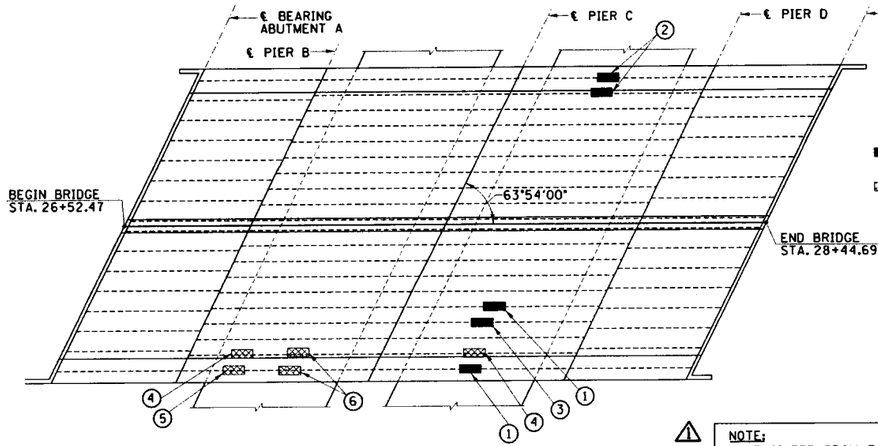
PATCHING MATERIAL SHALL BE A POLYMER-MODIFIED CEMENTITIOUS STRUCTURAL PATCHING VERTICAL AND OVERHEAD MATERIAL. SEE T.D.O.T. QUALIFIED PRODUCTS LIST 13, SPEC. CATEGORY J, SUBLIST F FOR ACCEPTABLE PATCHING MATERIALS.

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

AASHTO PRESTRESSED I-BEAM REPAIR



⚠ AASHTO BEAM ELEVATION



LEGEND:

- LOCATIONS OF BEAM REPAIR DUE TO LAST TRUCK IMPACT
- LOCATION OF BEAM REPAIR PRIOR TO LAST TRUCK IMPACT

○	* L
①	3'
②	4'
③	7'
④	4'
⑤	3'
⑥	6'

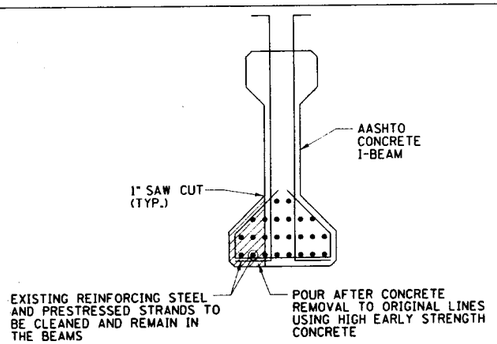
* EXACT LIMITS TO BE DETERMINED ON SITE BY THE ENGINEER.

⚠ FRAMING PLAN SHOWING BEAM REPAIR LOCATIONS

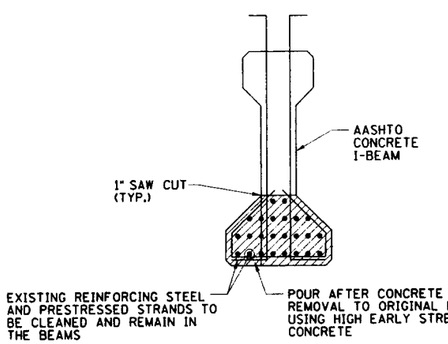
⚠ NOTE:
AN ENGINEER FROM T.D.O.T. BRIDGE INSPECTION AND REPAIR OFFICE SHALL DETERMINE ACTUAL LIMITS OF REMOVAL. CONTRACTOR SHALL TAKE EXTREME CARE WHEN REMOVING EXISTING CONCRETE SO AS NOT TO DAMAGE THE EXISTING PRESTRESSED STRANDS. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE FULL SATISFACTION OF THE ENGINEER. ADDITIONAL LOCATIONS MAY BE ADDED AS DIRECTED BY TDOT ENGINEERS.

⚠ NOTES:

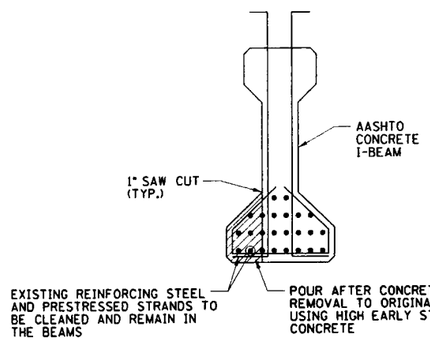
- COST OF REPAIRING EXISTING BEAM DAMAGE DUE TO RECENT TRUCK INPACT WILL BE PAID FOR UNDER ITEM NO. 604-10.08, PRESTRESSED BEAM REPAIR, L.S. (20 C.F. OF HIGH EARLY STRENGTH CONCRETE). THIS ITEM WILL INCLUDE THE COST OF ALL LABOR, MATERIALS, EQUIPMENT, HIGH STRENGTH EARLY CONCRETE, FORMING, SAW CUTTING, CONCRETE REMOVAL AND FORM REMOVAL. ALL WORK MUST MEET THE FULL APPROVAL OF THE ENGINEER.
- COST OF REPAIRING EXISTING BEAM DAMAGE PRIOR TO RECENT TRUCK IMPACT WILL BE 604-10.52, CONCRETE, L.S. (12 C.F. OF HIGH STRENGTH CONCRETE). THIS ITEM WILL INCLUDE THE COST OF ALL LABOR, MATERIALS, EQUIPMENT, HIGH STRENGTH EARLY CONCRETE, FORMING, SAW CUTTING, CONCRETE REMOVAL AND FORM REMOVAL. ALL WORK MUST MEET THE FULL APPROVAL OF THE ENGINEER.



⚠ SECTION B-B ▨
④ ⑤ ℄ ⑥



⚠ SECTION B-B ▬
③



⚠ SECTION B-B ▬
① ℄ ②

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2008

7.46

BR-89-68

GARVER ENGINEERS

DESIGNED BY	S. F. HARPER	DATE	OCTOBER 2007
DRAWN BY	C. W. THOMAS	DATE	OCTOBER 2007
SUPERVISED BY	J. H. RUDDELL	DATE	OCTOBER 2007
CHECKED BY	A. J. KHAIRI	DATE	OCTOBER 2007

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

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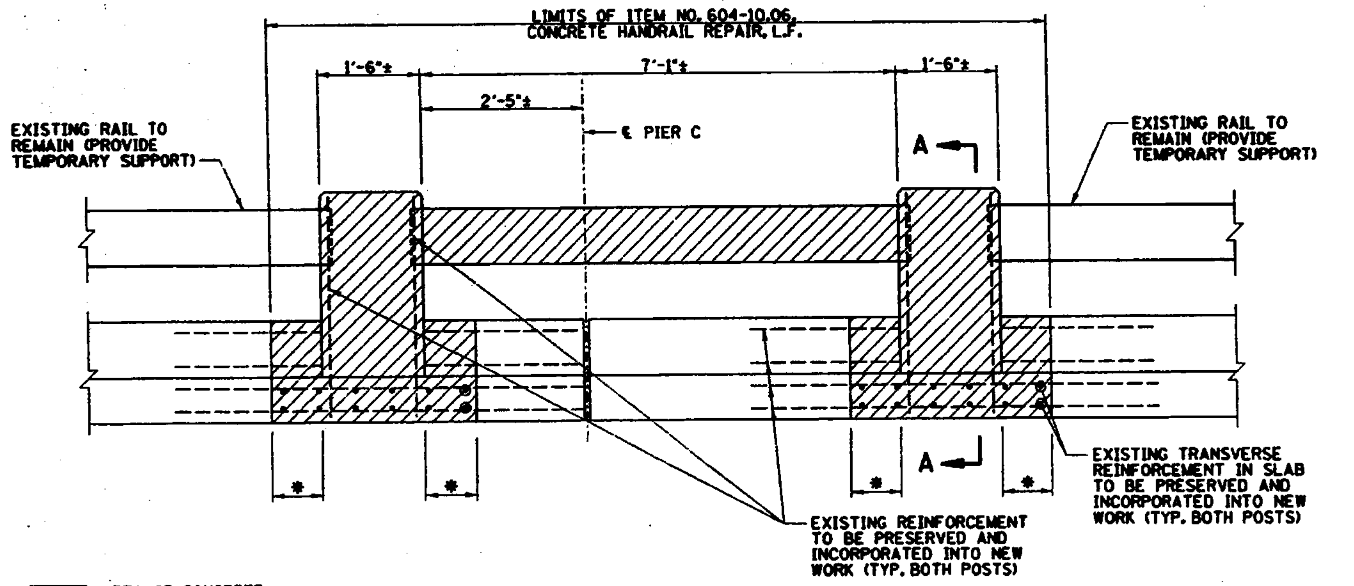
PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

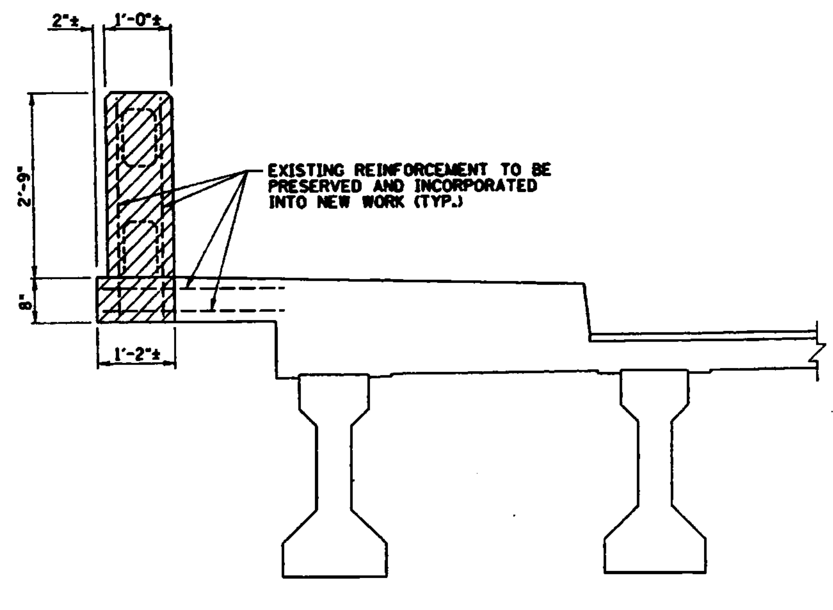


AREA OF CONCRETE RAIL REMOVAL

* LIMITS OF REMOVAL TO BE DETERMINED IN FIELD BY AN ENGINEER FROM T.D.O.T.

ELEVATION (DEMOLITION)

(℄ PIER C - EAST SIDE)
SCALE: 3/8" = 1'-0"



SECTION A-A

SCALE: 3/8" = 1'-0"

BILL OF STEEL							
RAIL REINFORCEMENT							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A580E	5	4					7'-3"
B310E	3	24					1'-3"
C561E	5	6	2'-10"	10"			3'-8"
C562E	5	6	3'-1"	10"			3'-11"
D410E	4	8					4'-8"

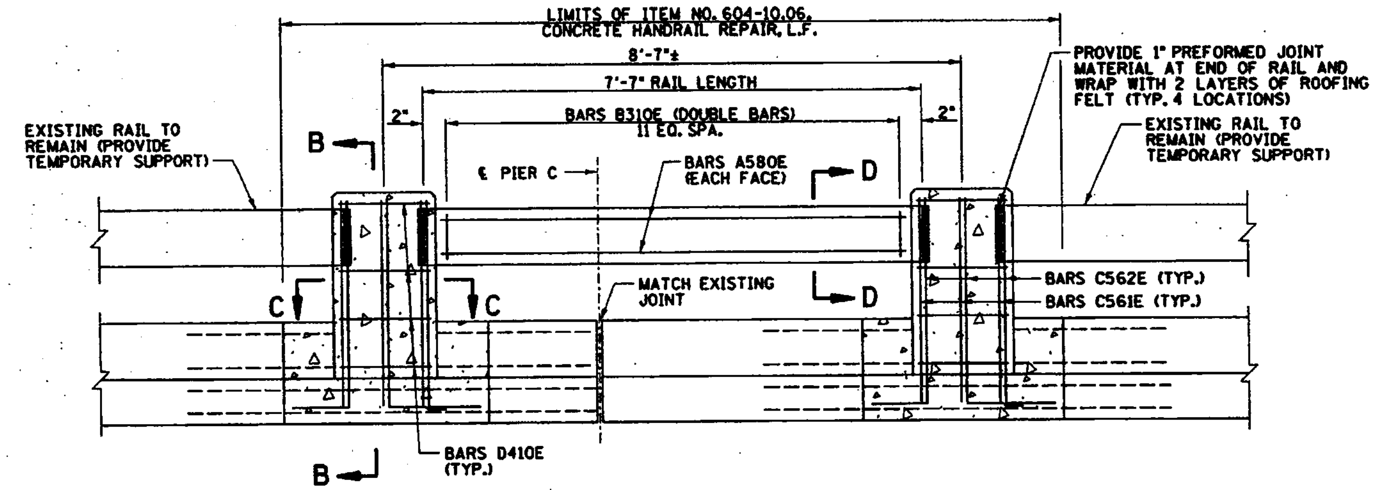
NOTES:

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.

NUMBER OF BARS IS FOR RAIL REPAIR LOCATION AT ℄ PIER C (EAST SIDE).



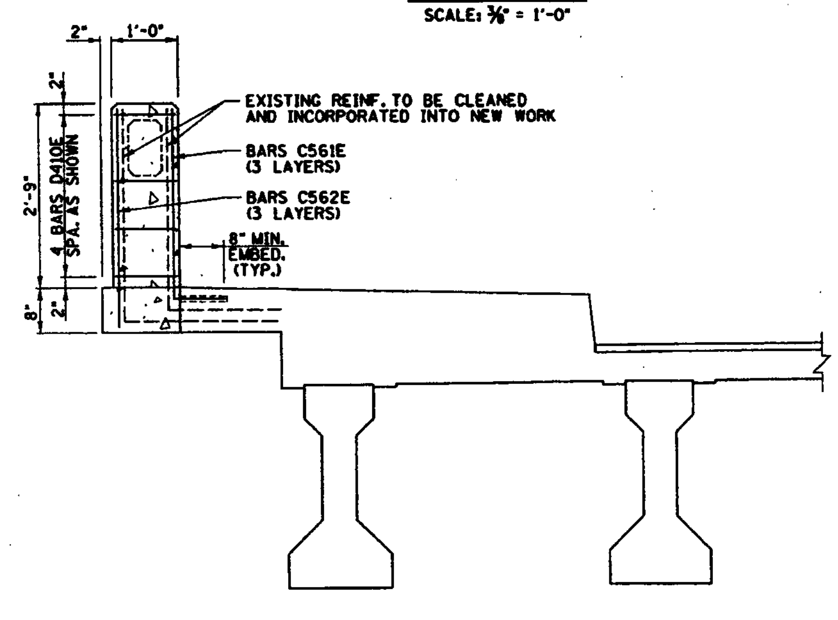
ELEVATION (CONSTRUCTION)

(℄ PIER C - EAST SIDE)
SCALE: 3/8" = 1'-0"

NOTES:

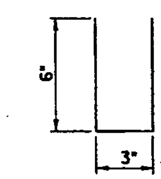
EXISTING REINFORCING STEEL IN POSTS NOT SHOWN FOR CLARITY.

ALL EXPOSED CORNERS TO BE CHAMFERED 3/4". (TYP.)

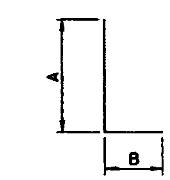


SECTION B-B

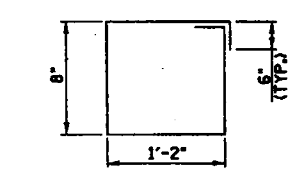
SCALE: 3/8" = 1'-0"



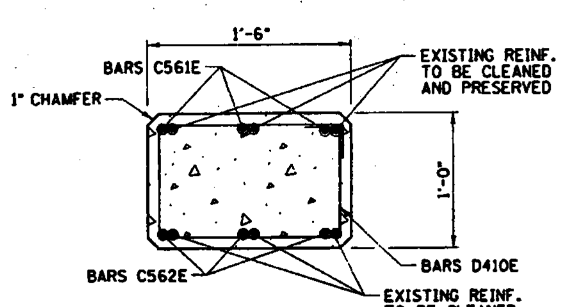
BARS B310E



BARS C561E AND C562E

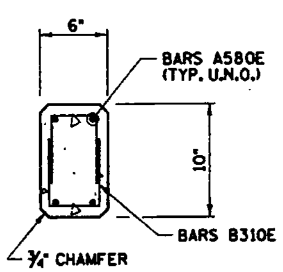


BARS D410E



SECTION C-C

SCALE: 1½" = 1'-0"



SECTION D-D

SCALE: 1½" = 1'-0"

NOTES:

ALL COSTS ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE CONCRETE HANDRAIL AND POST REPAIR SHALL BE INCLUDED IN THE COST FOR ITEM NO. 604-10.06, CONCRETE HANDRAIL REPAIR, L.F. THIS ITEM WILL INCLUDE THE COST OF HIGH EARLY STRENGTH CONCRETE, REINFORCING STEEL, FORMING, REMOVING DAMAGED RAIL, TAR PAPER, LABOR AND ANY NECESSARY MATERIALS.

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

FOR NOTES ON GROUTED BARS, SEE DWG. NO. BR-89-58.

RAIL REPAIR DETAILS

(℄ PIER C - EAST SIDE)

7.46

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

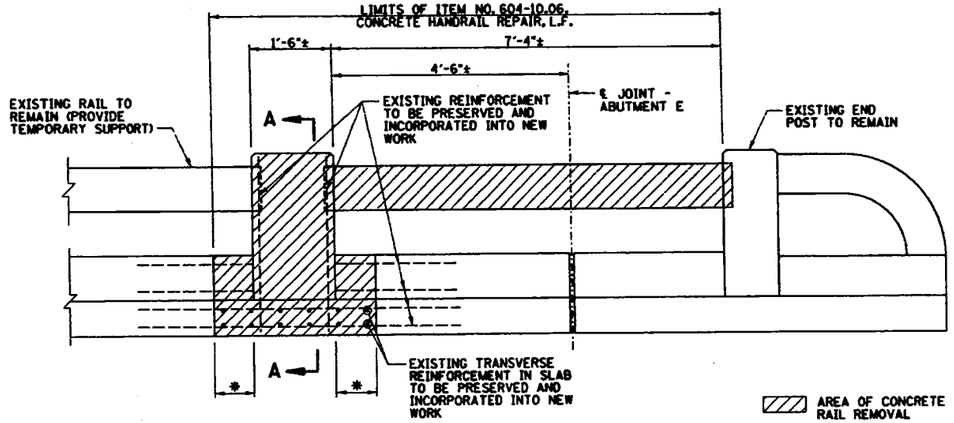
SHELBY COUNTY
2008

GARVER ENGINEERS

DESIGNED BY S. F. HARPER DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-89-69

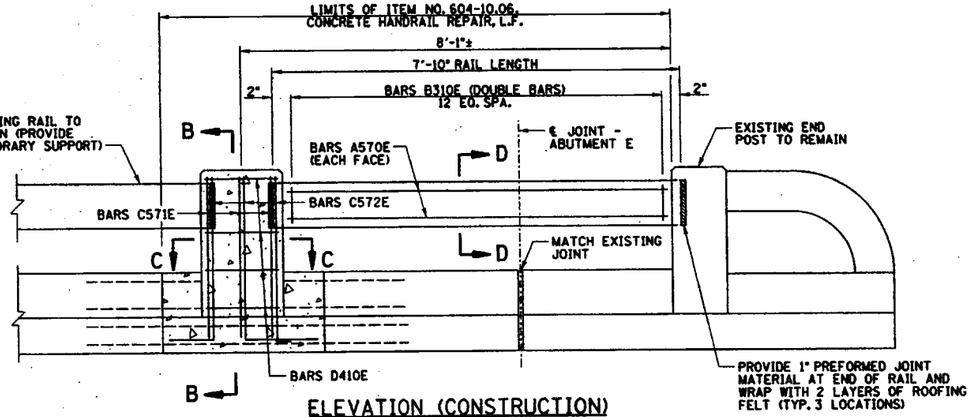
8/6/2008 1:32:51 PM



ELEVATION (DEMOLITION)
(ABUTMENT E - EAST SIDE)
SCALE: ⅜" = 1'-0"

▨ AREA OF CONCRETE RAIL REMOVAL

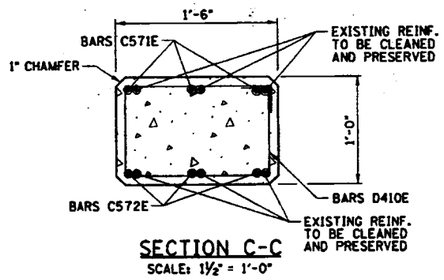
* LIMITS OF REMOVAL TO BE DETERMINED IN FIELD BY AN ENGINEER FROM T.D.O.T.



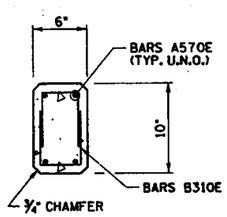
ELEVATION (CONSTRUCTION)
(ABUTMENT E - EAST SIDE)
SCALE: ⅜" = 1'-0"

NOTES:
EXISTING REINFORCING STEEL IN POSTS NOT SHOWN FOR CLARITY.

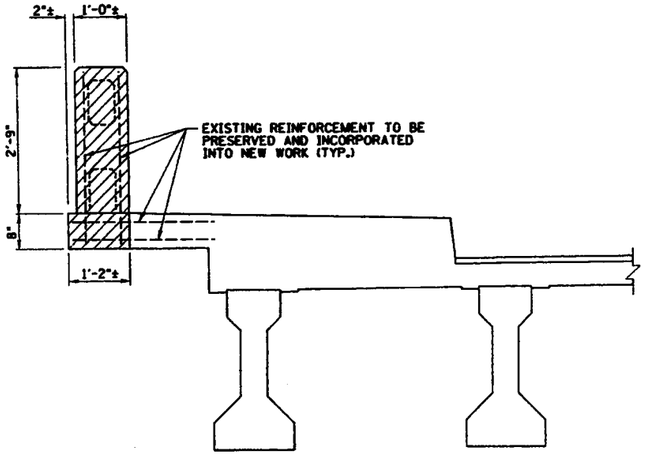
ALL EXPOSED CORNERS TO BE CHAMFERED ¾". (TYP.)



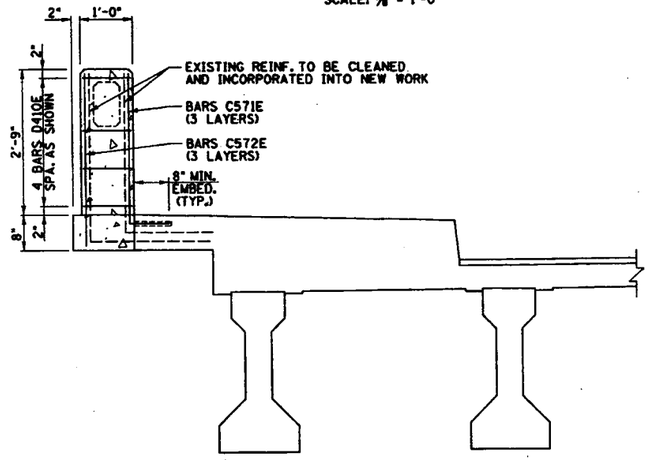
SECTION C-C
SCALE: 1½" = 1'-0"



SECTION D-D
SCALE: 1½" = 1'-0"



SECTION A-A
SCALE: ⅜" = 1'-0"



SECTION B-B
SCALE: ⅜" = 1'-0"

NOTES:
ALL COSTS ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE CONCRETE HANDRAIL AND POST REPAIR SHALL BE INCLUDED IN THE COST FOR ITEM NO. 604-10.06, CONCRETE HANDRAIL REPAIR, LF. THIS ITEM WILL INCLUDE THE COST OF HIGH EARLY STRENGTH CONCRETE, REINFORCING STEEL, FORMING, REMOVING DAMAGED RAIL, TAR PAPER, LABOR AND ANY NECESSARY MATERIALS.

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

FOR NOTES ON GROUTED BARS, SEE DWG. NO. BR-89-58.

RAIL REPAIR DETAILS
(ABUTMENT E - EAST SIDE)

PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

BILL OF STEEL

RAIL REINFORCEMENT

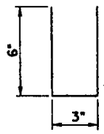
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A570E	5	4	2'-10"	10"			7'-6"
B310E	3	13					1'-3"
C571E	5	3	2'-10"	10"			3'-8"
C572E	5	3	3'-1"	10"			3'-11"
D410E	4	4					4'-8"

NOTES:
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

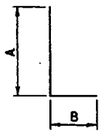
ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO FABRICATION.

BARS ENDING IN "E" TO BE EPOXY COATED.

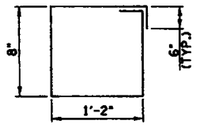
NUMBER OF BARS IS FOR RAIL REPAIR LOCATION AT ABUTMENT E (EAST SIDE).



BARS B310E



BARS C571E AND C572E



BARS D410E

7.46

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2008

BR-89-70

GARVER ENGINEERS

DESIGNED BY S. F. HARPER DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

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...TDOT (Shelby County)\Drawings\FINAL 2008\7.46-rail.dgn

PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

BILL OF STEEL

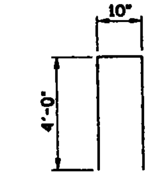
WINGWALL REINFORCEMENT							
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A550	5	3					1'-7"
A551	5	2					2'-0"
A552	5	2					2'-4"
A553	5	1					2'-9"
A554	5	1					2'-11"
A555	5	1					3'-1"
A556	5	8					1'-11"
B520	5	3					8'-10"
F521	5	1	3'-0"	3'-8"			9'-5"
E522	5	1					11'-7"
F523	5	1	3'-3"	4'-0"			10'-0"

NOTES:

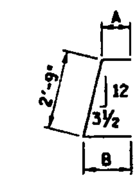
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

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

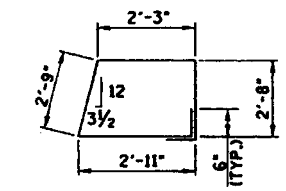
NUMBER OF BARS IS FOR ONE WINGWALL (TWO REQ'D.).



BAR B520



BARS F521 AND F523



BARS E522

NOTES:

WHEN REMOVING EXISTING DETERIORATED CONCRETE, CARE SHALL BE TAKEN SO AS NOT TO DAMAGE ANY EXISTING REINFORCING STEEL IN THE WINGWALL AND ABUTMENT CAP. ALL EXISTING REINFORCEMENT SHALL BE PRESERVED. ANY DAMAGE TO EXISTING SLOPE PAVING CAUSED DURING CONSTRUCTION TO BE REPAIRED BY CONTRACTOR AT NO ADDITIONAL COST TO TDOT.

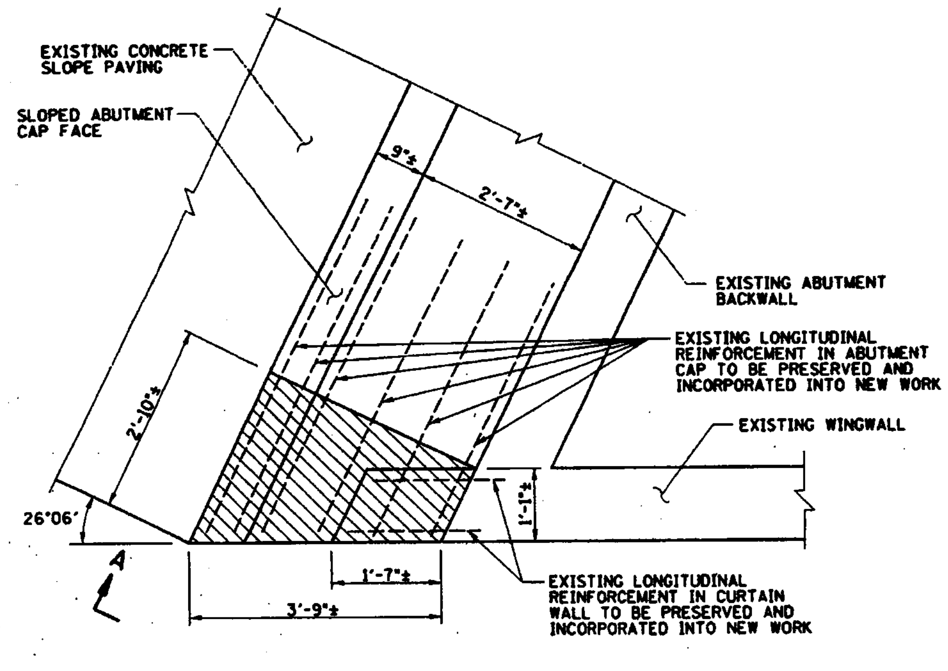
ALL EXPOSED EXISTING REINFORCING STEEL TO REMAIN IS TO BE CLEANED AND INCORPORATED WITH NEW REINFORCING STEEL.

COST OF REMOVING EXISTING DETERIORATED CONCRETE, FORMING, HIGH EARLY STRENGTH CONCRETE, AND ALL MATERIALS AND LABOR NECESSARY FOR REPAIRS AS SHOWN IN THESE DETAILS TO BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

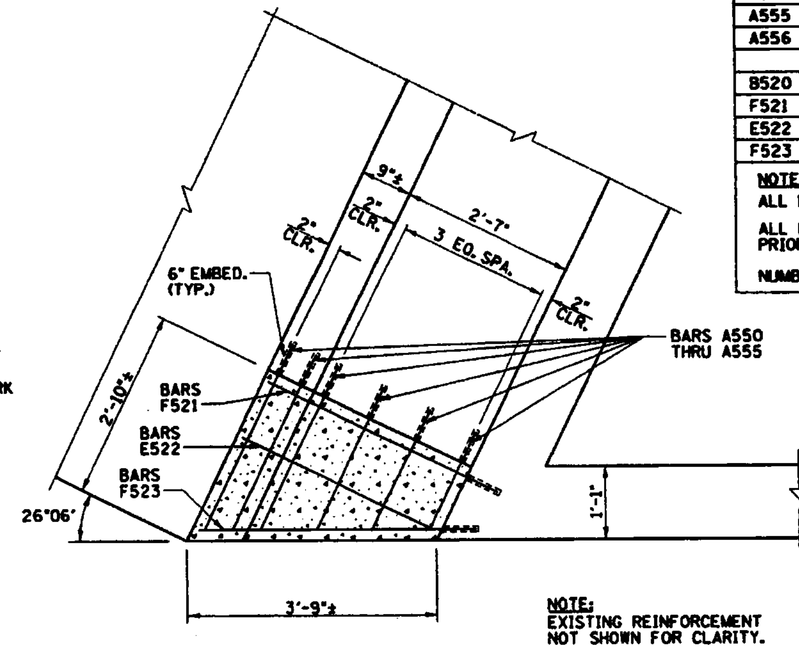
COST OF REINFORCING STEEL TO BE INCLUDED IN ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LBS.

ITEM NO. 604-10.42 SHALL BE BID SUCH THAT THIS ITEM MAY BE INCREASED, DECREASED OR ELIMINATED BY THE ENGINEER. ALL WORK MUST MEET THE FULL APPROVAL OF THE ENGINEER.

FOR NOTES ON GROUTED BARS, SEE DWG. NO. BR-89-58.

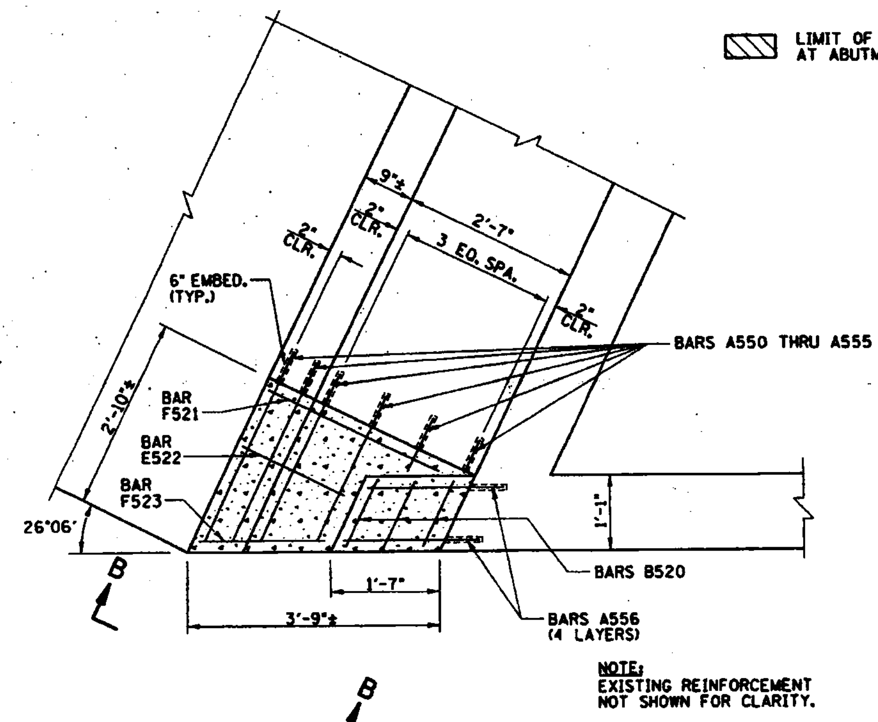


PLAN (DEMOLITION)
SCALE: ⅜" = 1'-0"

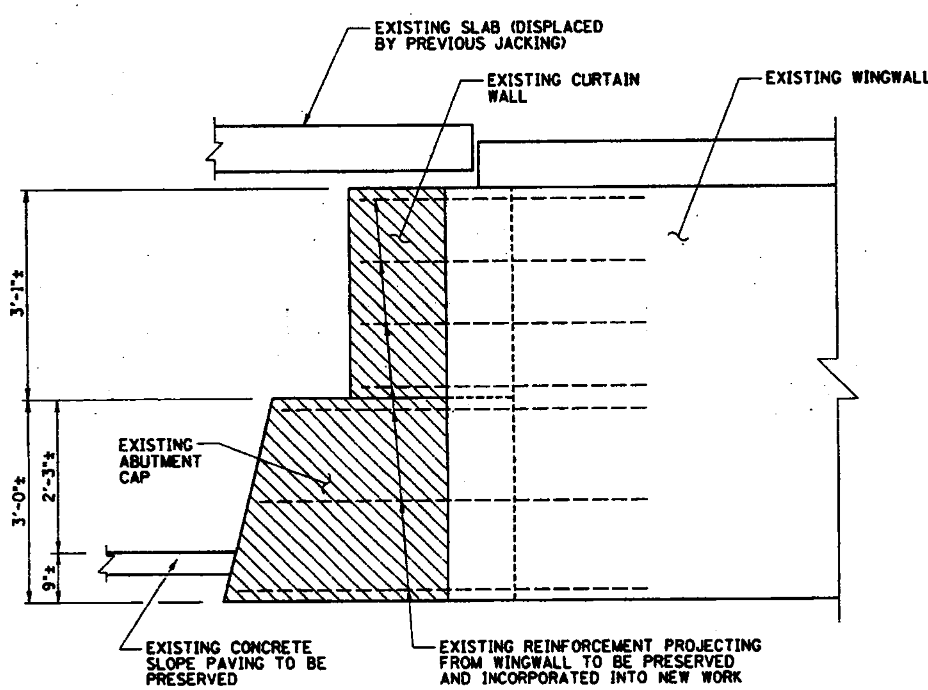


PLAN (CONSTRUCTION)
(SHOWING ABUTMENT CAP REINFORCEMENT)
SCALE: ⅜" = 1'-0"

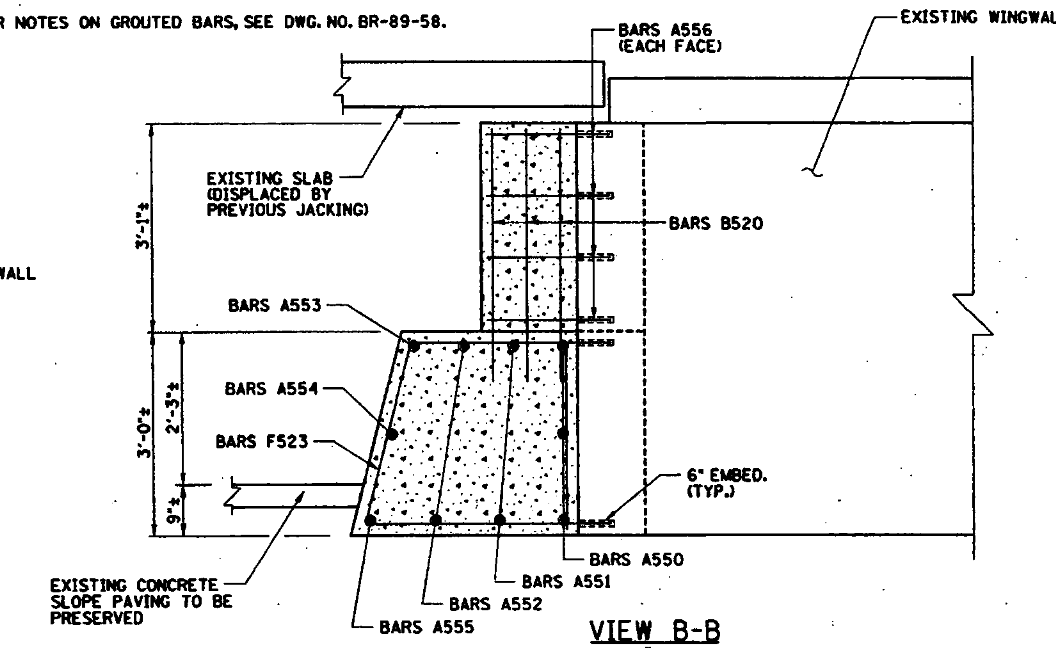
LIMIT OF CONCRETE REMOVAL AT ABUTMENT WINGWALL



PLAN (CONSTRUCTION)
(SHOWING CURTAIN WALL REINFORCEMENT)
SCALE: ⅜" = 1'-0"



VIEW A-A
SCALE: ⅜" = 1'-0"



VIEW B-B
SCALE: ⅜" = 1'-0"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

7.46

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46

SHELBY COUNTY
2008

GARVER ENGINEERS

DESIGNED BY S. F. HARPER	DATE OCTOBER 2007	
DRAWN BY C. W. THOMAS	DATE OCTOBER 2007	
SUPERVISED BY J. H. RUDDELL	DATE OCTOBER 2007	
CHECKED BY A. J. KHAIRI	DATE OCTOBER 2007	TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

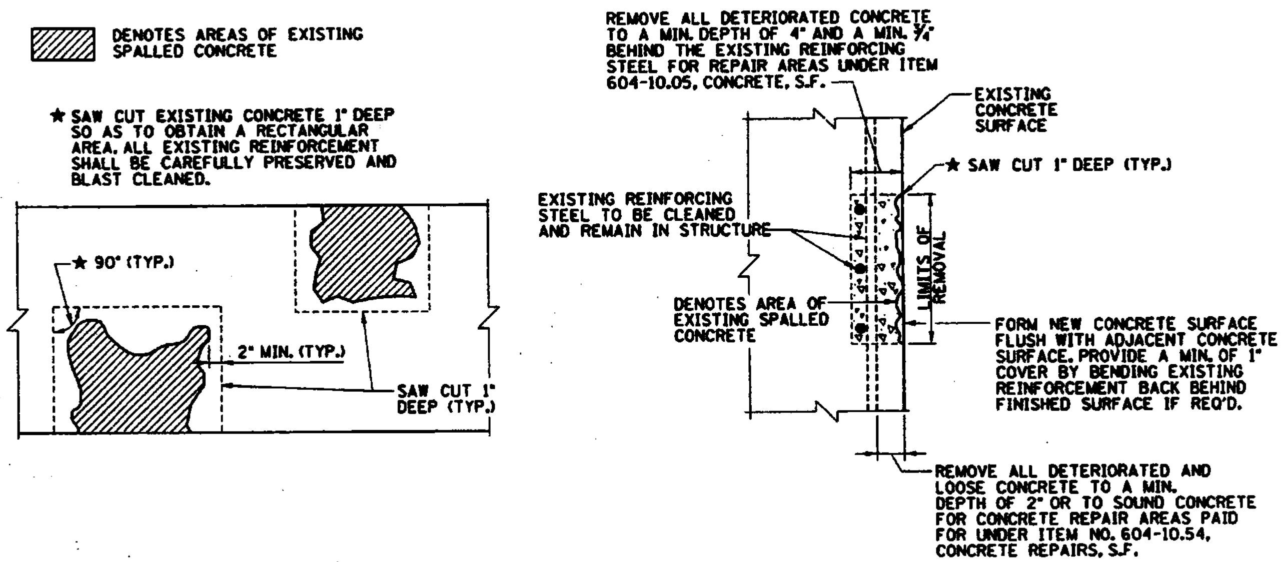
8/6/2008 4:32:07 PM

BR-89-71

PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



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, SPEC. CATEGORY J, SUBLIST F 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.

☞ 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.

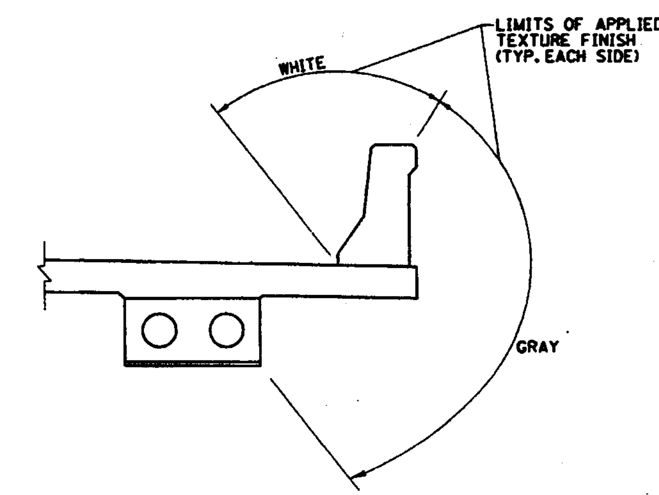
CONCRETE SHALL BE HIGH EARLY STRENGTH CONCRETE, F'C = 3500 PSI AT 28 DAY STRENGTH.

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

7.46

3.12

6.60



APPLIED TEXTURE FINISH

SCALE: ½" = 1'-0"

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 COLOR SHALL BE EITHER MOUNTAIN GRAY, FEDERAL SPECIFICATIONS 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.

6.60

GARVER ENGINEERS

DESIGNED BY S. F. HARPER DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46
SR205 OVER OVERFLOW
BRIDGE NO. 79-SR205-3.12
SR205 OVER MARY'S CREEK
BRIDGE NO. 79-SR205-6.60

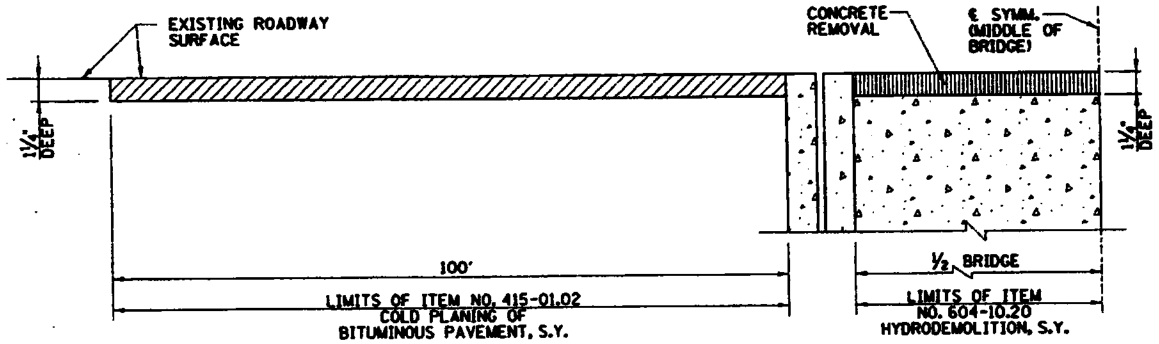
SHELBY COUNTY
2008

BR-89-89

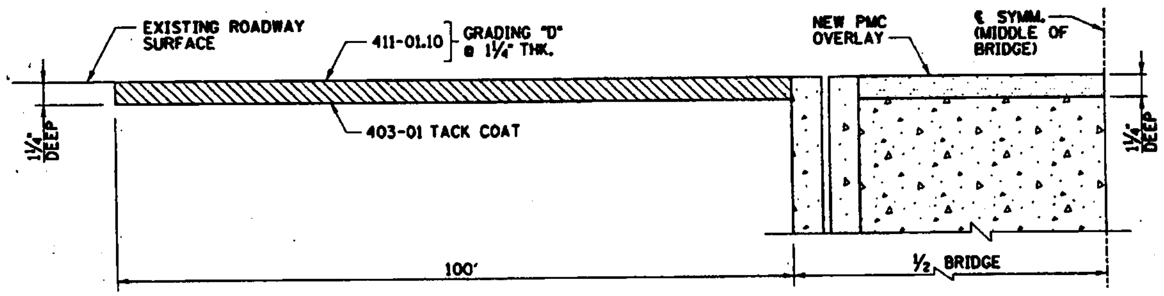
PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

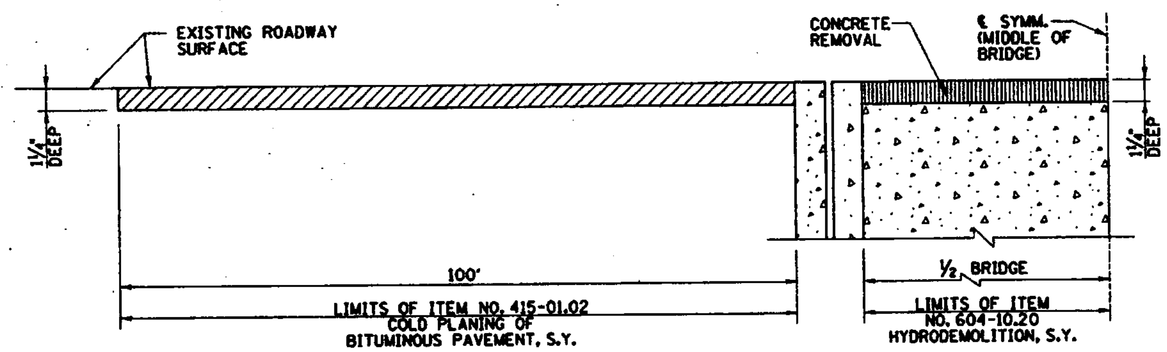
NO.	DATE	BY	BRIEF DESCRIPTION



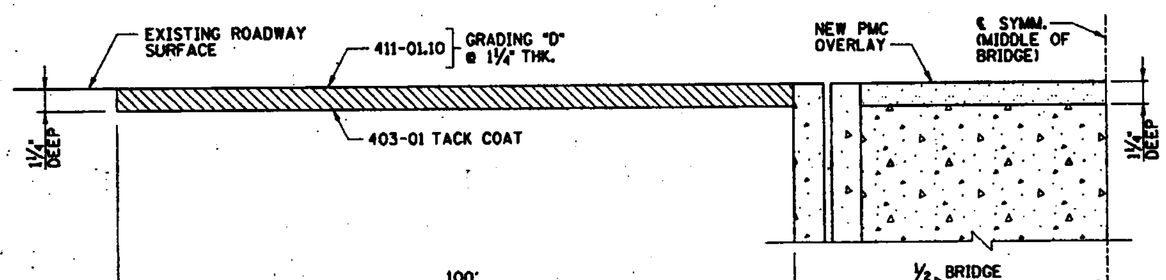
STEP 1: ASPHALT REMOVAL AND HYDRODEMOLITION BEHIND BARRICADE (PHASE I)



STEP 2: SURFACE COURSE APPLICATION AND PMC OVERLAY BEHIND BARRICADE (PHASE I)



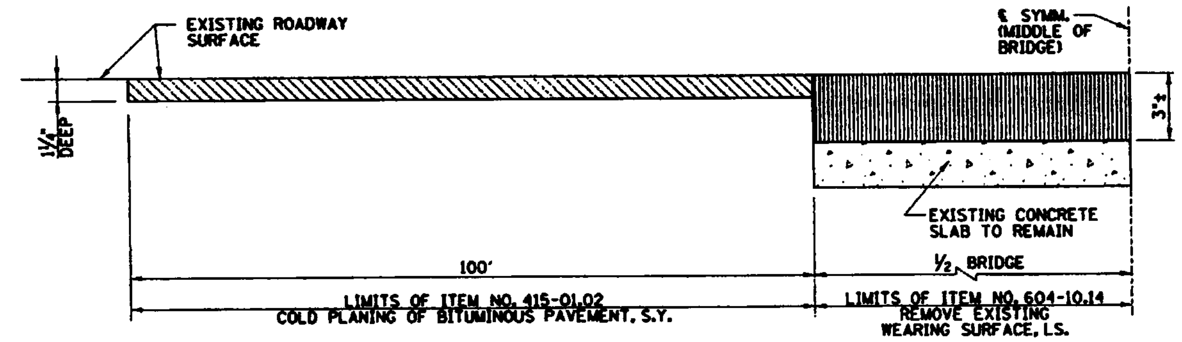
STEP 3: ASPHALT REMOVAL AND HYDRODEMOLITION BEHIND BARRICADE (PHASE II)



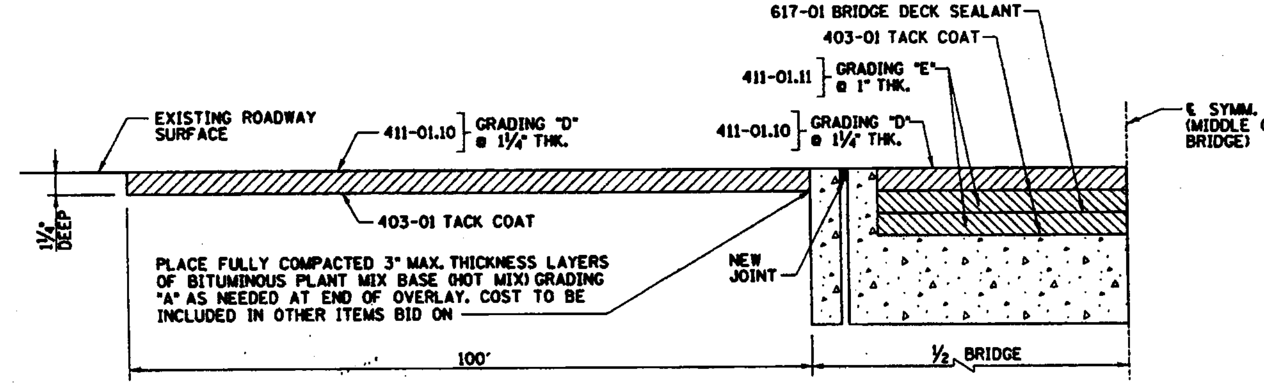
STEP 4: SURFACE COURSE APPLICATION AND PMC OVERLAY BEHIND BARRICADE (PHASE II)

ASPHALT PAVING DETAILS
SCALE: N.T.S.

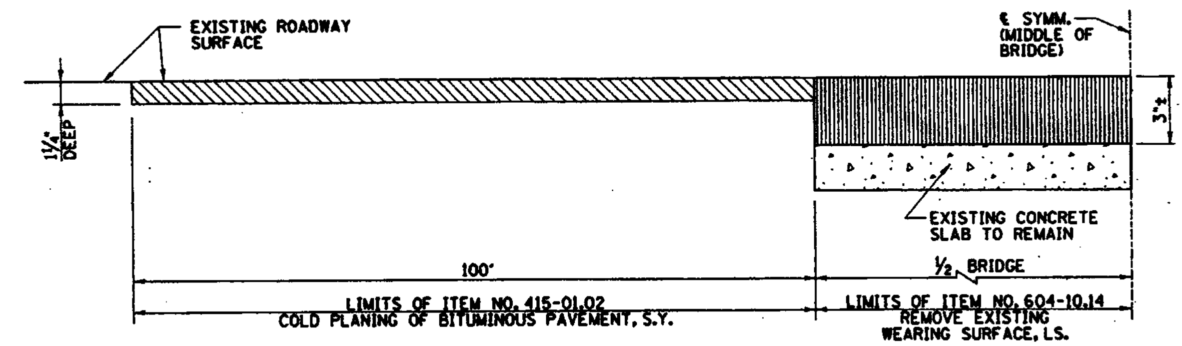
7.46



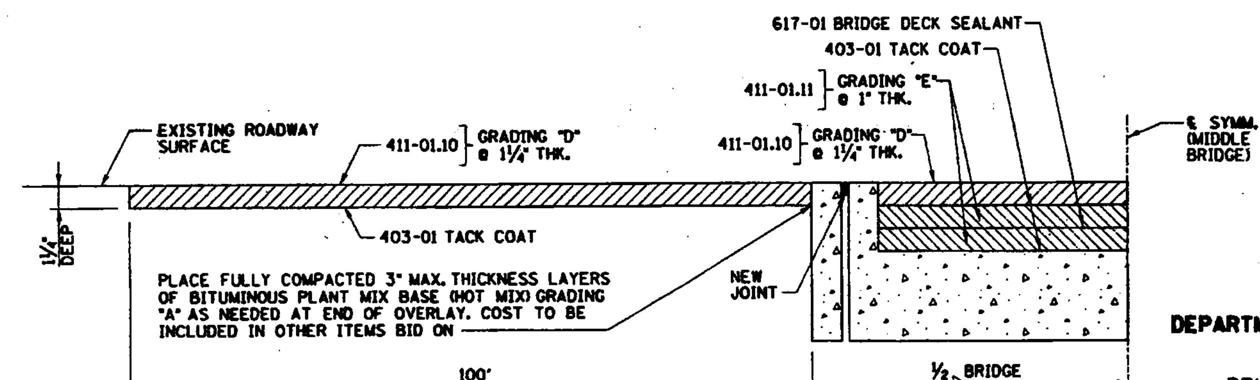
STEP 1: ASPHALT REMOVAL BEHIND BARRICADE (PHASE I)



STEP 2: SURFACE COURSE APPLICATION BEHIND BARRICADE (PHASE I)



STEP 3: ASPHALT REMOVAL BEHIND BARRICADE (PHASE II)



STEP 4: SURFACE COURSE APPLICATION BEHIND BARRICADE (PHASE II)

ASPHALT PAVING DETAILS
SCALE: N.T.S.

3.12

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER INTERSTATE 55
BRIDGE NO. 79-SR14-7.46
SR205 OVER OVERFLOW
BRIDGE NO. 79-SR205-3.12

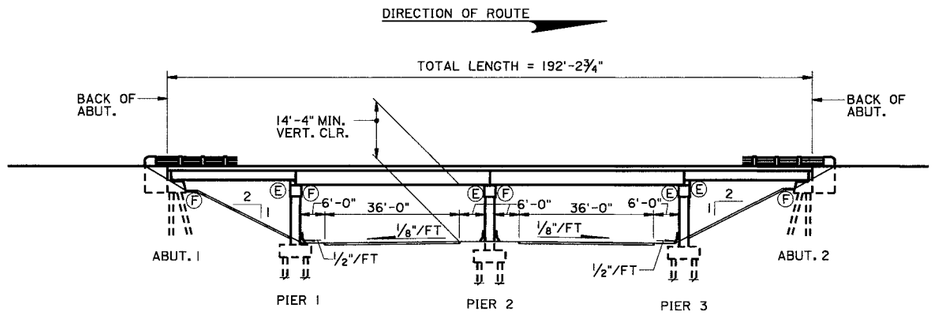
SHELBY COUNTY
2008

GARVER ENGINEERS

DESIGNED BY S. F. HARPER DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

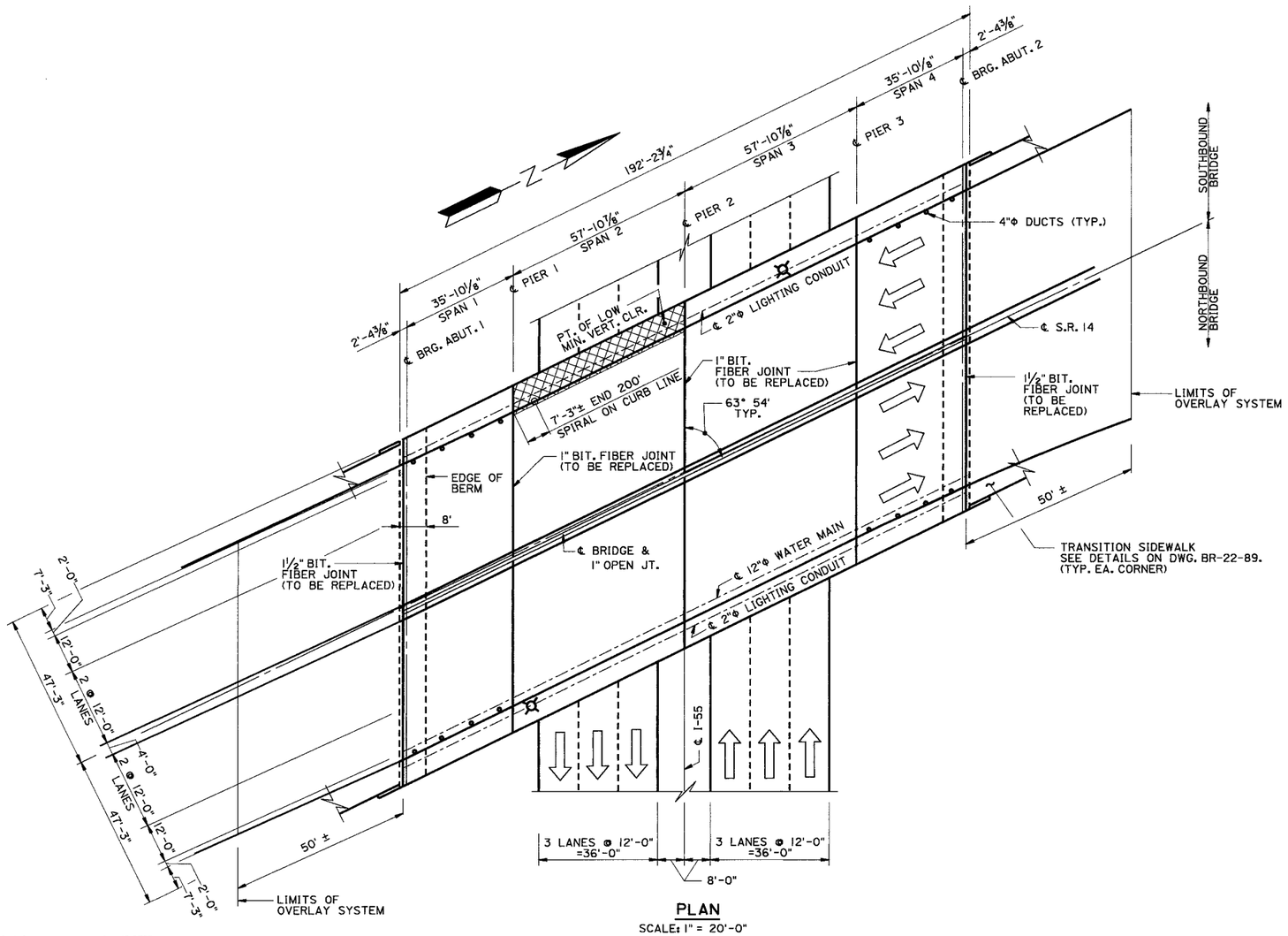
8/6/2008 1:20:45 PM

BR-89-91



ELEVATION

SCALE: 1" = 20'-0"



PLAN

SCALE: 1" = 20'-0"

DE LEUW, CATHER
MEMPHIS, TENNESSEE

DESIGNED BY	S.F. FIELD	DATE 10-95
DRAWN BY	T.L. DAWSON	DATE 10-95
SUPERVISED BY	C.H. BRYANT	DATE 10-95
CHECKED BY	T.L. DAWSON	DATE 10-95

DGN FILE NAME = 0306165

LEGEND:

- Ⓔ DENOTES EXPANSION END
- Ⓕ DENOTES FIXED END
- DENOTES EXISTING LIGHTING STANDARD
- DENOTES PORTION OF STRUCTURE TO BE REMOVED AND REPLACED.

PROJECT NO.	YEAR	SHEET NO.
79023-4217-04	1995	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

GENERAL SCOPE OF WORK

PROVIDE TRAFFIC CONTROL. SEE SHEETS 4 THRU 12.

REMOVE PORTION OF RAIL, SIDEWALK AND DECK AS DETAILED ON DWG. BR-22-86 & BR-22-85 AND REMOVE BEAM A SPAN 2. THIS SHALL BE DONE IN PHASES.

JACK THE BRIDGE & PLACE STEEL SHIM PLATES AT THE LOCATIONS BELOW:
1) AT PIERS 1 & 3.
2) AT ABUTMENTS 1 & 2.
3) AT PIER 2.
FOR SEQUENCE OF JACKING SEE CONSTRUCTION SEQUENCE ON DWG. BR-22-85.
SEE JACKING NOTES ON DWG. BR-22-84.

RAISE THE APPROACH CONCRETE AND ABUTMENT BACKWALLS IN ACCORDANCE WITH DETAILS ON DWG. BR-22-89.

TRANSITION SIDEWALK AT EACH BRIDGE CORNER IN ACCORDANCE WITH DETAILS ON DWG. BR-22-89.

PLACE NEW BEAM IN SPAN 2, FABRICATED IN ACCORDANCE WITH DETAILS ON DWG. BR-22-87.

PLACE NEW SLAB, SIDEWALK AND RAIL AS DETAILED ON DWG. BR-22-86. THIS SHALL BE DONE IN PHASES.

REPAIR THE SURFACE OF BEAM B AS DETAILED ON DWG. BR-22-87.

CLEAN AND SEAL ALL TRANSVERSE JOINTS AS SHOWN ON DWG. BR-22-89.

PLACE DECK SEALANT SYSTEM AND TRANSITION APPROACHES AS DETAILED ON DWG. BR-22-84.

CLEAN ALL DECK DRAINS.

LIST OF BRIDGE DRAWINGS

DWG. NO.	DATE OF LAST REV.	TITLE
BR-22-82		LAYOUT OF BRIDGE
BR-22-83		ESTIMATED QUANTITIES
BR-22-84		GENERAL NOTES
BR-22-85		CONSTRUCTION SEQUENCE
BR-22-86		SUPERSTRUCTURE REPAIR DETAILS
BR-22-87		PRESTRESSED BEAM REPAIR DETAILS
BR-22-88		BEARING/RISER REPAIR DETAILS
BR-22-89		MISCELLANEOUS REPAIR DETAILS

LIST OF STANDARD DRAWINGS

DWG. NO.	DATE OF LAST REV.	TITLE
STD-9-1	12-19-94	STANDARD REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS
STD-14-2		STANDARD DETAILS AND INTERMEDIATE DIAPHRAGM DETAILS FOR I-BEAM - 1995

LIST OF REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)

DWG. NO.	DATE OF LAST REV.	TITLE
K-30-10	10-25-63	BRIDGE LAYOUT
K-30-11	10-25-63	ABUTMENTS A & E
K-30-12		PIERS B & D
K-30-13		PIER C
K-30-14		PRESTRESSED BEAMS SPAN 1 & 4
K-30-15		PRESTRESSED BEAMS SPAN 2 & 3
K-30-16	10-25-63	SUPERSTRUCTURE SLAB SPANS 1 & 4
K-30-17	10-25-63	SUPERSTRUCTURE SLAB SPANS 2 & 3
K-30-18	10-25-63	HANDRAIL, LIGHTING AND SLAB DETAILS
H-5-110		STANDARD CONCRETE HANDRAIL - 1960

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

TANYA L. DAWSON REGISTERED ENGINEER No. 22501 STATE OF TENNESSEE
12 DEC. 95

BRIDGE REPAIR DETAILS
LAYOUT OF BRIDGE

S.R. 14 OVER INTERSTATE 55
BRIDGE ID. NO. 79-14-7.44

SHELBY COUNTY
1995

ESTIMATED QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	TOTAL
(1)	602-10.11	BEARING DEVICE	EA	144
(3)	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTURE)	SY	105
(4)	604-10.02	CONCRETE REPAIRS	CY	22
(2)	604-10.03	CONCRETE DECK SEALANT	LS	1
(5)	604-10.07	CONCRETE REMOVAL	LS	1
(12)	604-10.09	CONCRETE	CY	12
(6)	604-10.14	REMOVE EXISTING WEARING SURFACE	LS	1
(7)	604-10.18	REINFORCING STEEL (REPAIRS)	LBS	2925
(8)	604-10.22	CONCRETE PARAPET REPAIR	LF	58
(11)	604-10.24	JACKING CONCRETE SPANS	LS	1
(9)	615-01.02	PRESTRESSED CONCRETE I-BEAM (TYPE II)	LF	58
(10)	617-01	BRIDGE DECK SEALANT	SY	175

ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL
203-03	BORROW EXCAVATION (UNCLASSIFIED)	CY	100
209-08.01	TEMPORARY FILTER BARRIER	LF	500
303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	570
307-03.09	BITUMINOUS PLANT MIX BASE (HOT MIX) GRADING A	TON	27
402-01	BITUMINOUS MATERIAL (PC)	TON	1
402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	1
403-01	BITUMINOUS MATERIAL (TC)	TON	1
(13) 411-01.01	MINERAL AGGREGATE (ACS) GRADING D	TON	30
(13) 411-01.02	ASPHALT CEMENT (ACS) GRADING D	TON	2
415-01.02	COLD PLANING BITUMINOUS PAVEMENT	SY	890
415-02.02	SALVAGE VALUE OF COLD PLANINGS	SY	890
712-01	TRAFFIC CONTROL	LS	1
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	LF	925
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EA	260
712-05.01	WARNING LIGHTS (TYPE A)	EA	12
712-05.03	WARNING LIGHTS (TYPE C)	EA	104
712-06	SIGNS (CONSTRUCTION)	SF	867
712-06.01	VERTICAL PANELS	SF	52 **
712-08.03	ARROW BOARD (TYPE C)	EA	8
712-09.01	REMOVABLE PAVEMENT MARKING (LINE)	LF	39770*
712-07.03	TEMPORARY BARRICADES (TYPE III)	LF	70
(14) 716-02.01	PLASTIC PAVEMENT MARKING (LINE)	LIN. MI.	0.5
(15) 716-05.01	PAINTED PAVEMENT MARKING (LINE)	LIN. MI.	0.6
717-01	MOBILIZATION	LS	1
801-01	SEEDING (WITH MULCH)	UNIT	2

* 26480 LF OF WHITE AND 13290 LF OF YELLOW MARKINGS ARE REQUIRED.

** 13 VP-1R & 13 VP-1L ARE REQUIRED.

QUANTITY NOTES

(1) INCLUDES THE COST OF ALL LABOR AND MATERIALS REQUIRED TO PLACE AND PAINT THE STEEL PLATES, ANGLES, & NEOPRENE PADS AT EACH BEARING AS DETAILED ON DWG. BR-22-88. (APPROX. 37100 LBS OF STEEL REQUIRED.)

(2) INCLUDES THE COST OF ALL LABOR AND MATERIALS REQUIRED TO PLACE THE AQURON 7000 SEALANT SYSTEM ACROSS BRIDGE DECK, SIDWALK AND APPROACHES AS SHOWN ON DWG. BR-22-84. (APPROX. 2910 S.Y.)

(3) INCLUDES THE COST OF ALL LABOR AND MATERIALS REQURIED TO APPLY TEXTURE FINISH IN ALL DESIGNATED AREAS AS SHOWN ON DWG. BR-22-84.

(4) INCLUDES THE COST OF ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT THE NEW CONCRETE SLAB AND DIAPHRAGMS AS SHOWN ON DWG. BR-22-86.

(5) INCLUDES THE COST OF ALL LABOR AND MATERIALS NECESSARY TO REMOVE AND DISPOSE OF PORTIONS OF THE SLAB, DIAPHRAGMS, BEAM, EXISTING BRIDGE RAIL, AND SIDEWALK AS SHOWN ON DWG. BR-22-85 & BR-22-86.

(6) INCLUDES THE COST OF ALL LABOR AND MATERIALS NECESSARY TO REMOVE EXISTING WEARING SURFACE WITHIN LIMITS OF THE BRIDGE DECK. (APPROX. 1623 S.Y)

(7) INCLUDES THE COST OF ALL REINFORCING STEEL REQUIRED IN THE NEW SLAB, SIDEWALK AND DIAPHRAGMS AS SHOWN ON DWG. BR-22-86 & BR-22-89. ALL REINFORCING STEEL TO BE EPOXY COATED.

(8) INCLUDES THE COST OF ALL CONCRETE, EPOXY REINFORCING STEEL, LABOR AND MATERIALS NECESSARY TO PLACE PORTIONS OF THE BRIDGE RAIL AS SHOWN ON DWG. BR-22-89.

(9) INCLUDES THE COST OF ALL LABOR AND MATERIALS REQUIRED TO FABRICATE AND PLACE THE NEW PRESTRESSED BEAM AS DETAILED ON DWG. BR-22-87.

(10) INCLUDES THE COST OF ALL LABOR AND MATERIALS REQUIRED TO PLACE BRIDGE DECK SEALANT ACROSS THE TRANSVERSE JOINTS OF ABUTMENTS 1 & 2 AND PIERS 1, 2 & 3 (INCLUDING BRIDGE DECK AND SIDEWALKS) AS SHOWN IN DETAIL ON DWG. BR-22-89.

(11) INCLUDES THE COST OF ALL LABOR AND MATERIALS REQUIRED TO JACK BOTH THE NORTHBOUND AND SOUTHBOUND BRIDGES ON S.R. 14 AS CALLED FOR IN NOTES ON DWG. BR-22-84.

(12) INCLUDES THE COST OF ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT THE NEW CONCRETE SIDEWALKS, TO RAISE THE APPROACH SLABS AND THE ABUTMENTS BACKWALLS AS DETAILED ON DWG. BR-22-89.

(13) INCLUDES 10 TONS OF 411-01.01 AND 1 TONS OF 411-01.02 FOR REPAVING IF REQUIRED DURING CONSTRUCTION.

(14) THERMOPLASTIC ONLY. REQUIRED FOR FINAL MARKINGS ON I-55.

(15) REQUIRED FOR FINAL MARKINGS ON S.R. 14.

TRAFFIC CONTROL NOTES

1. ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED IF THE SIGN FACE IS FULLY COVERED.

2. IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FEET.

3. A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS FLAGGER SIGNS, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

4. TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

5. USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK, THE ENGINEER SHALL APPROVE ALTERNATE LOCATIONS.

6. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC, UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO BE PARKED WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK, THE ENGINEER SHALL APPROVE ALTERNATE LOCATIONS.

PROJECT NO.	YEAR	SHEET NO.
79023-4217-04	1995	2

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

DE LEUV, CATHER
MEMPHIS, TENNESSEE

DESIGNED BY T.L. DAWSON DATE 10-95
DRAWN BY D. RANDALL DATE 10-95
SUPERVISED BY C.H. BRYANT DATE 10-95
CHECKED BY S.F. FIELD DATE 10-95

DGN. FILE NAME = 0306173

TANYA L. DAWSON
REGISTERED ENGINEER
No. 23331
STATE OF TENNESSEE

14 Nov. 95

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
ESTIMATED QUANTITIES

S.R. 14 OVER INTERSTATE 55
BRIDGE ID. NO. 79-14-7.44

SHELBY COUNTY
1996

BR-22-83

GENERAL NOTES

1. SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (MARCH 1, 1995 EDITION).
2. DESIGN SPECIFICATIONS: AASHTO 1992 EDITION WITH ADDENDA.
3. LOADING: AS CONSTRUCTED - HS20-44
   AS DESIGNED - HS20-44
4. CONCRETE TO BE CLASS "A" CONCRETE, f'c = 3000 p.s.i. UNLESS NOTED OTHERWISE. IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
5. BRIDGE DECK CONCRETE TO BE HIGH EARLY STRENGTH CONCRETE: THE MIX TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, CLASS "A", EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS., THE WATER CEMENT RATIO SHALL BE A MAXIMUM OF 0.40, NO FLY ASH REPLACEMENT WILL BE PERMITTED, AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 p.s.i. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 p.s.i. MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF TEN(10) DAYS.
6. CONCRETE CURING: ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.
7. FALSEWORK OVER TRAFFIC: SEE STANDARD SPECIFICATION 604.06.
8. SPECIAL NOTE TO CONTRACTOR: NO CONCRETE OR OTHER DEBRIS SHALL BE ALLOWED TO DROP ONTO THE UNDERNEATH ROADWAY WHEN MAKING REPAIRS TO THE EXISTING SLAB, OR WHEN REMOVING AND REPOURING THE CONCRETE SLAB.
9. REINFORCING STEEL: SEE THE STANDARD SPECIFICATIONS.
10. GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED ⅛" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND THE BAR ROTATED (NOT DRIVEN) TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND THE BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.
11. SHOP DRAWINGS: SHALL BE SUBMITTED ACCORDING TO SPECIAL PROVISION NO. 105A, EXCEPT SHOP DRAWINGS SHALL BE SUBMITTED TO THE HEADQUARTERS BRIDGE INSPECTION AND REPAIR OFFICE IN LIEU OF THE DIVISION OF STRUCTURES.
12. NON-PAY ITEMS: ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEMS WILL BE PAID FOR. COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE BID FOR PAY ITEMS.
13. REQUIREMENTS AND RESTRICTIONS FOR PHASED CONSTRUCTION: SEE DWG. BR-22-84 FOR DETAILS.
14. DISPOSAL OF MATERIALS:
    ALL MATERIALS NOT USED IN THE COMPLETED STRUCTURE NOR TO BE FURNISHED TO THE DOT SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE TEMPORARY STEEL BEAM LOCATED ON TOP OF THE SIDEWALK AND SHALL STOCK PILE IT FOR PICK UP BY THE T.D.O.T
15. STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270 GRADE 36 (ASTM A709 GRADE 36) UNLESS NOTED OTHERWISE.
16. PAINT: SYSTEM A - INORGANIC ZINC - URETHANE FINISH TOP COAT. COLOR OF THE URETHANE FINISH COAT SHALL COMPLY WITH FEDERAL STANDARD 595A, 24110, BRIGHT GREEN. AN INTERMEDIATE TIE COAT SHALL BE USED. SEE TENNESSEE STANDARD SPECIFICATION 603.
17. APPROVAL OF MATERIALS: NO FABRICATION SHALL BE STARTED UNTIL THE MATERIALS INVOLVED HAVE BEEN APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS.
18. IDENTITY OF MAIN MATERIALS: SEE SPECIAL PROVISION 602.
19. DEMOLITION: THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED SPECIFICALLY. THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM) OR OTHER SIMILARLY HEAVY EQUIPMENT FOR CONCRETE REMOVAL. PNEUMATIC HAMMERS MAY BE USED TO REMOVED UNSOUND CONCRETE. FOR FULL DEPTH OF CONCRETE SLAB REMOVAL EXCEPT OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 90 POUND CLASS. FOR PARTIAL DEPTH OF CONCRETE SLAB REMOVAL AND ANY WORK OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 60 POUND CLASS. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE SO LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.
20. EROSION CONTROL SHALL BE PROVIDED AS REQUIRED. THE COST SHALL BE INCLUDED UNDER ITEM NO. 209-08.01, TEMPORARY FILTER BARRIER, L.F. LOCATION SHALL BE DESIGNATED BY THE ENGINEER.

UTILITIES NOTE

THE LOCATIONS OF UTILITIES SHOWN WITHIN PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED.

UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND THE UTILITY OWNERS WILL BE REQUIRED TO CO-OPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT.

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING THE UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING ALL AFFECTED UTILITIES PRIOR TO SUBMITTING HIS BID IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE WORK FOR THE PROJECT. SOME UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS, WHILE SOME WORK MAY BE REQUIRED "AROUND" UTILITY FACILITIES THAT WILL REMAIN IN PLACE. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR WILL RECEIVE NO ADDITIONAL COMPENSATION FOR ANY DELAYS OR INCONVENIENCE CAUSED BY THE UTILITY ADJUSTMENTS.

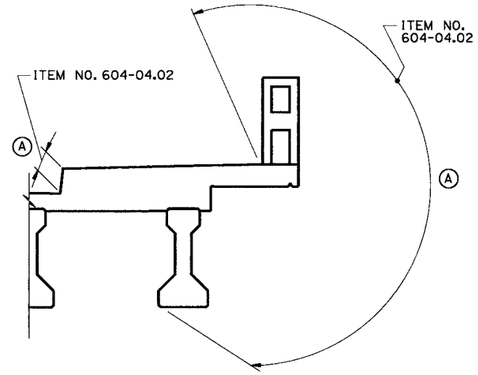
THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING THE WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.

SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC. AT 1-800-351-1111.

SPECIAL PROVISIONS

SPECIAL PROVISION NUMBER	LATEST REVISION DATE	REGARDING
105A	**	APPROVAL OF SHOP DRAWINGS
~~602~~	**	~~STEEL STRUCTURES~~
~~712B~~	**	~~TRAFFIC CONTROL SUPERVISOR~~

** DENOTES CURRENT REVISION DATE AS PER CONTRACT DOCUMENTS



STRUCTURE FINISHING SKETCH
(LEFT SIDE - SPAN 2 ONLY)

(A) ITEM NO. 604-04.02 - TO BE MOUNTAIN GREY NO. 36440.

NOTE: FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATION. AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. THE COLOR OF THE FINISH SHALL BE MOUNTIAN GREY. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. PAYMENT FOR THE APPLIED TEXTURE FINISH SHALL BE UNDER ITEM 604-04.02, APPLIED TEXTURE FINISH (EXISTING STRUCTURE), S.Y.

PROJECT NO.	YEAR	SHEET NO.
79023-4217-04	1998	3

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

JACKING REQUIREMENTS:

EACH SPAN SHALL BE JACKED TO THE HEIGHT SPECIFIED ON DWG. BR-22-85 AND BR-22-88 NEW BEARINGS AND STEEL RISERS INSTALLED. THE BEAMS SHALL BE JACKED IN THE FOLLOWING SEQUENCE:

1. AT ABUTMENTS 1 & 2.
2. AT PIERS 1 & 3. THE BEAMS OF BOTH SPANS SHALL BE JACKED SIMULTANEOUSLY.
3. AT PIER 2. BOTH SPANS SHALL BE JACKED SIMULTANEOUSLY.

EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE THE EXISTING SEISMIC RESTRAINERS. ANY DAMAGE OCCURING TO THE SEISMIC RESTAINERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE FULL SATISFACTION OF THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE EQUIPMENT CAPABLE OF SUSTAINING THE SPAN WEIGHTS SHOWN ON THIS SHEET. BEFORE ANY JACKING IS BEGUN, THE CONTRACTOR SHALL SUBMIT DETAILS AND CALCULATIONS OF HIS PROPOSED JACKING SCHEME. THESE DETAILS AND CALCULATIONS SHALL INCLUDE BEAM, COLUMN AND ANY OTHER SUPPORT SIZES AND PROPERTIES PERTINENT TO THE ADEQUACY OF THE JACKING SYSTEM AND SHALL BE PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TENNESSEE. THE CONTRACT LUMP SUM PRICE PAID FOR JACKING CONCRETE SPANS SHALL INCLUDE FULL COMPENSATION FOR ALL LABOR AND MATERIALS REQUIRED TO JACK THE SPANS AND LOWER THE SPANS BACK ONTO THE NEW BEARINGS AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.

THE COST OF ALL LABOR, SUPPORT MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 604-10.24, JACKING CONCRETE SPANS, LS.

NOTE:

AN ENGINEER FROM THE TENNESSEE DEPARTMENT OF TRANSPORTATION INSPECTION & REPAIR OFFICE SHALL BE PRESENT WHEN JACKING OPERATIONS ARE TAKING PLACE.

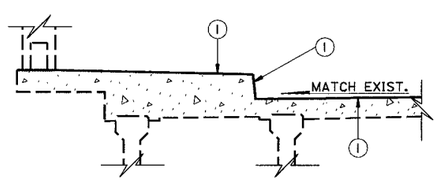
SPECIAL NOTE TO CONTRACTOR CONCERNING JACKING OF THE NORTHBOUND BRIDGE:

FIVE DAYS PRIOR TO THE START OF THE JACKING PROCEDURES ON THE NORTHBOUND BRIDGE THE CONTRACTOR SHALL CONTACT CHEUK LO OF MEMPHIS LIGHT GAS AND WATER (MLG&W) AT (901)528-4720. A REPRESENTATIVE OF MLG&W SHALL BE PRESENT DURING EACH JACKING PHASE OF THE NORTHBOUND BRIDGE.

TABLE OF REACTIONS PER BEAM

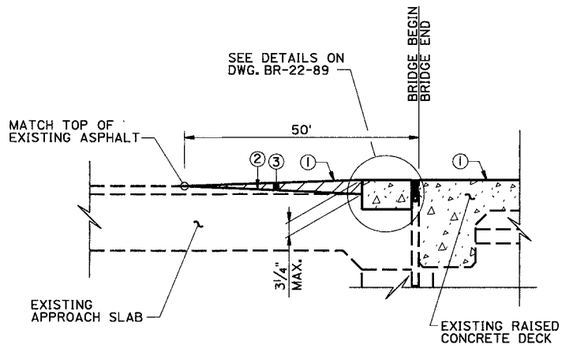
LOAD	SPAN 2 OR SPAN 3 (KIP/BM)	SPAN 1 OR SPAN 4 (KIP/BM)
DEAD LOAD	27	20
**LIVE LOAD	20	12
TOTAL	47	32

** LIVE LOAD BASED ON 100 LBS./S.F. FOR CONSTRUCTION LOADING.



BRIDGE DECK SEALANT SYSTEM

(1) THE SEALANT SYSTEM FOR THE BRIDGE DECK, SIDEWALK AND APPROACHES SHALL BE AN AQURON 7000 SYSTEM, OBTAINABLE FROM CONSTRUCTION MATERIAL SPECIALTIES AT (305) 344-0447. ITEM 604-10.03.



NOTE: THE COST OF BRIDGE DECK SEALANT, ALL LABOR AND MATERIALS REQUIRED TO PLACE BRIDGE DECK SEALANT SHALL BE PAID FOR UNDER ITEM NO. 604-10.03, CONCRETE DECK SEALANT, SY.

NOTE: PAINTED PAVEMENT MARKING (LINE) SHALL BE ACCORDING TO STANDARD SPECIFICATIONS SECTION 716.06 AND SHALL BE PLACED TO THE SATISFACTION OF THE ENGINEER. COST SHALL BE INCLUDED IN THE COST OF ITEM NO. 716-05.01.

PAVEMENT TRANSITION DETAIL

PROPOSED PAVEMENT SCHEDULE

(2)	TACK COAT	
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (T.C.) AT 0.02 GAL/S.Y.
(3)	SURFACING 1¼" + THICK (APPROX. 132 LBS./S.Y.)	
	411-01.01	MINERAL AGGREGATE FOR ASPHALTIC CONCRETE SURFACE (A.C.S.) GRADING "D"
	411-01.02	ASPHALT CEMENT FOR ASPHALTIC CONCRETE SURFACE (A.C.S.) GRADING "D"

INDICATES EXISTING ASPHALT APPROACH PAVEMENT TO BE MILLED. COST TO BE INCLUDED UNDER ITEM NO. 415-01.02.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
GENERAL NOTES

S. R. 14 OVER INTERSTATE 55

BR. ID. NO. 79-14-7.44
SHELBY COUNTY
1998

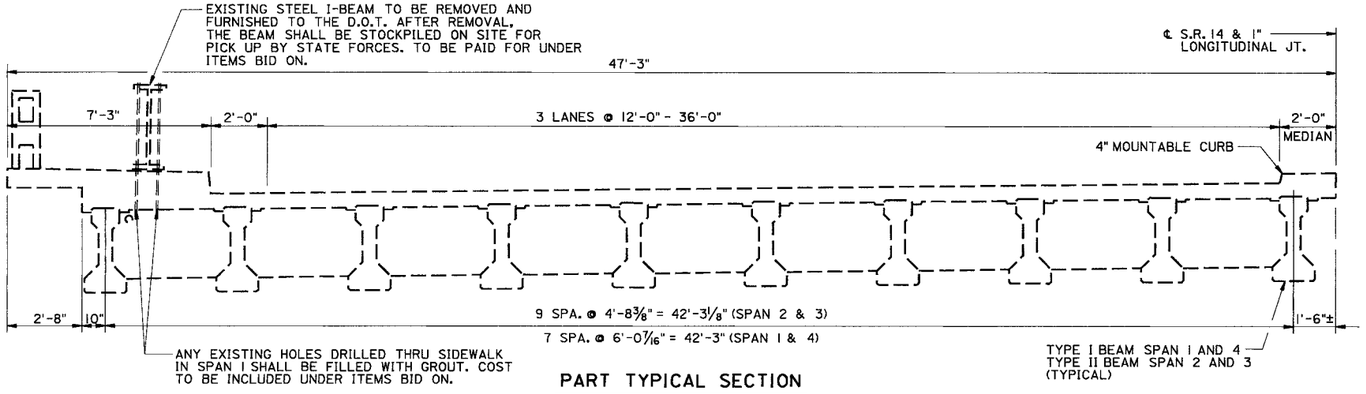
TANYA L. DAWSON REGISTERED ENGINEER No. 23201 STATE OF TENNESSEE
12 DEC. 95

DE LEUW, CATHER
MEMPHIS, TENNESSEE

DESIGNED BY	T.L. DAWSON	DATE 10-95
DRAWN BY	D. RANDALL	DATE 10-95
SUPERVISED BY	C.H. BRYANT	DATE 10-95
CHECKED BY	S.F. FIELD	DATE 10-95

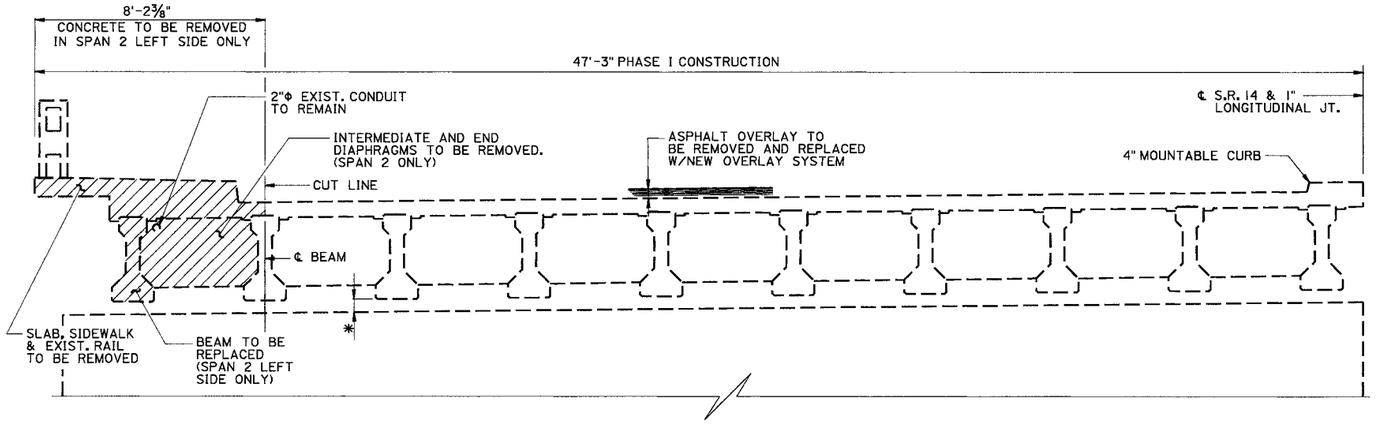
DGN FILE NAME = 0306172

BR-22-84



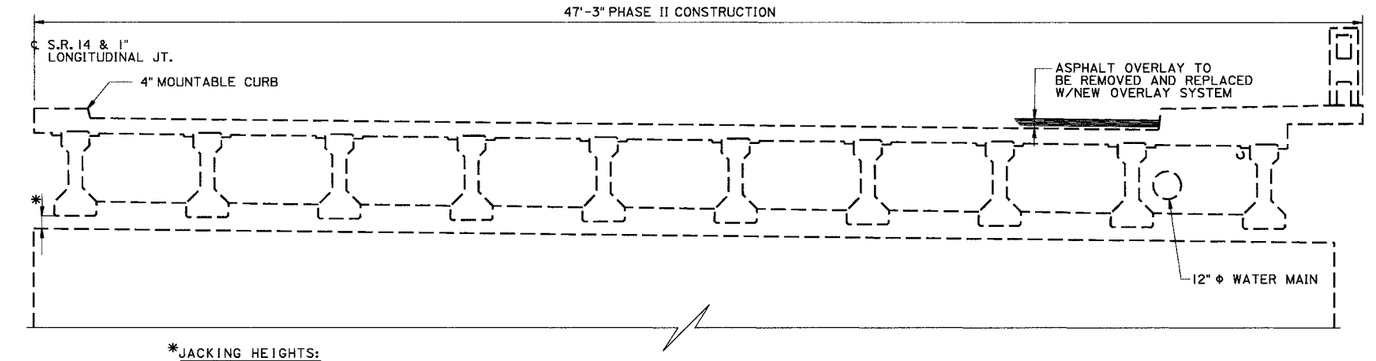
PART TYPICAL SECTION

(LEFT BRIDGE SHOWN)
(RIGHT BRIDGE SIMILAR)



PHASE I CONSTRUCTION

(LEFT BRIDGE SHOWN)
(RIGHT BRIDGE OPEN TO TRAFFIC.
SEE PHASE I TRAFFIC ON SHEET 11)



*JACKING HEIGHTS:

AT ABUTMENT	1 & 2	- 3"
AT PIERS	1 & 3	- 4"
AT PIER	2	- 4½"

PHASE II CONSTRUCTION

(RIGHT BRIDGE SHOWN)
(LEFT BRIDGE OPEN TO TRAFFIC.
SEE PHASE II TRAFFIC ON SHEET 11)

LEGEND:

- DENOTES EXISTING STRUCTURE
- DENOTES PROPOSED STRUCTURE
- DENOTES STRUCTURE TO BE REMOVED

CONSTRUCTION SEQUENCE:

SOUTHBOUND BRIDGE CLOSED FOR CONSTRUCTION:

NOTE: THE RAMP FROM SOUTHBOUND S.R. 14 ONTO SOUTHBOUND I-55 SHALL BE CLOSED FOR THE DURATION OF STEPS 1 THRU 8 BELOW.

STEP 1 - PHASE IA
TRAFFIC CONTROL SET-UP: (SEE SHEETS 4A & 5)
NO TRAFFIC CONTROL WILL BE REQUIRED FOR I-55 NORTHBOUND.
SOUTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC BUT SHALL BE SHIFTED ONTO THE OUTSIDE SHOULDER AND RAMP LANE.
CONSTRUCTION TO BE DONE:
1) REMOVE EXISTING ASPHALT OVERLAY FROM THE SOUTHBOUND BRIDGE AND APPROACHES.
2) REMOVE PORTIONS OF RAIL, SLAB, DIAPHRAGM, SIDEWALK AND THE EXTERIOR BEAM IN SPAN 2 WITHIN LIMITS CORRESPONDING TO PHASE IA AS SHOWN ON SHEET 5.

STEP 2 - PHASE IB
TRAFFIC CONTROL SET-UP: (SEE SHEETS 4A & 6)
SAME AS IA EXCEPT THAT SOUTHBOUND I-55 SHALL BE TAPERED INTO ONE LANE AND SHIFTED ONTO THE OUTSIDE SHOULDER.
CONSTRUCTION TO BE DONE:
1) REMOVE PORTIONS OF RAIL, SLAB, DIAPHRAGM, SIDEWALK AND THE EXTERIOR BEAM IN SPAN 2 WITHIN LIMITS CORRESPONDING TO PHASE IB AS SHOWN ON SHEET 6.

STEP 3 - PHASE IC
TRAFFIC CONTROL SET-UP: (SEE SHEET 4B & 7)
THE RAMP TO NORTHBOUND I-55 FROM NORTHBOUND S.R. 14 SHALL BE CLOSED.
NORTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC WITH THE RAMP LANE CLOSED.
SOUTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC BUT SHALL BE SHIFTED ONTO THE INSIDE SHOULDER AND ADJACENT LANE.
CONSTRUCTION TO BE DONE:
1) REMOVE PORTIONS OF RAIL, SLAB, DIAPHRAGM, SIDEWALK AND THE EXTERIOR BEAM IN SPAN 2 WITHIN LIMITS CORRESPONDING TO PHASE IC AS SHOWN ON SHEET 7.
2) JACK ABUTMENTS 1 & 2 AND PLACE NEW RISER/ BEARINGS UNDER ALL BEAMS.
3) JACK PIERS 1 & 3 AND PLACE NEW RISER/ BEARINGS UNDER ALL BEAMS.

STEP 4 - PHASE ID
TRAFFIC CONTROL SET-UP: (SEE SHEETS 4B & 5)
THE RAMP TO NORTHBOUND I-55 FROM NORTHBOUND S.R. 14 SHALL BE CLOSED.
NORTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC BUT SHALL BE SHIFTED ONTO THE RAMP LANE AND THE MIDDLE LANE.
SOUTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC BUT SHALL BE SHIFTED ONTO THE OUTSIDE SHOULDER AND RAMP LANE.
CONSTRUCTION TO BE DONE:
1) JACK PIER 2 AND PLACE NEW RISER/ BEARINGS UNDER ALL BEAMS.

STEP 5 - PHASE IE
TRAFFIC CONTROL SET-UP: (SEE SHEETS 4A & 8)
NO TRAFFIC CONTROL WILL BE REQUIRED FOR NORTHBOUND I-55.
SOUTHBOUND I-55 SHALL BE CLOSED.
CONSTRUCTION TO BE DONE:
1) PLACE NEW BEAM IN SPAN 2.

STEP 6 - PHASE IF
TRAFFIC CONTROL SET-UP: (SEE SHEETS 4A & 5)
NO TRAFFIC CONTROL WILL BE REQUIRED FOR I-55 NORTHBOUND.
SOUTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC BUT SHALL BE SHIFTED ONTO THE OUTSIDE SHOULDER AND RAMP LANE.
CONSTRUCTION TO BE DONE:
2) PLACE THE PORTION OF RAIL, SLAB, DIAPHRAGM AND SIDEWALK I SPAN 2 WITHIN LIMITS CORRESPONDING TO PHASE IF AS SHOWN ON SHEET 5.

STEP 7 - PHASE IG
TRAFFIC CONTROL SET-UP: (SEE SHEETS 4A & 6)
SAME AS PHASE IF EXCEPT THAT SOUTHBOUND I-55 SHALL BE TAPERED INTO ONE LANE AND SHIFTED ONTO THE OUTSIDE SHOULDER.
CONSTRUCTION TO BE DONE:
1) PLACE THE PORTION OF RAIL, SLAB, DIAPHRAGM AND SIDEWALK IN SPAN 2 WITHIN LIMITS CORRESPONDING TO PHASE IF AS SHOWN ON SHEET 6

STEP 8 - PHASE IH
TRAFFIC CONTROL SET-UP: (SEE SHEET 4A & 7)
NO TRAFFIC CONTROL WILL BE REQUIRED FOR I-55 NORTHBOUND.
SOUTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC BUT SHALL BE SHIFTED ONTO THE INSIDE SHOULDER AND ADJACENT LANE.
CONSTRUCTION TO BE DONE:
1) PLACE THE PORTION OF RAIL, SLAB, DIAPHRAGM AND SIDEWALK IN SPAN 2 WITHIN LIMITS CORRESPONDING TO PHASE IH AS SHOWN ON SHEET 7.
2) PLACE NEW SIDEWALK TRANSITION AT THE TWO CORNERS OF THE SOUTHBOUND BRIDGE.
3) PLACE A NEW AQURON 7000 SEALANT SYSTEM ACROSS BRIDGE AND APPROACHES OF SOUTHBOUND BRIDGE.

NORTHBOUND BRIDGE CLOSED FOR CONSTRUCTION:

NOTE: THE RAMP FROM SOUTHBOUND S.R. 14 ONTO SOUTHBOUND I-55 AND THE RAMP FROM NORTHBOUND S.R. 14 ONTO NORTHBOUND I-55 SHALL BE CLOSED FOR THE DURATION OF STEPS 1 & 2 BELOW.

STEP 1 - PHASE IIA
TRAFFIC CONTROL SET-UP: (SEE SHEETS 9 & 10)
NORTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC WITH THE RAMP LANE CLOSED.
SOUTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC BUT SHALL BE SHIFTED ONTO THE RAMP LANE AND ADJACENT LANE.
CONSTRUCTION TO BE DONE:
1) REMOVE EXISTING ASPHALT OVERLAY FROM THE NORTHBOUND BRIDGE AND APPROACHES.
2) JACK ABUTMENTS 1 & 2 AND PLACE NEW RISER/ BEARINGS UNDER ALL BEAMS.
3) JACK PIERS 1 & 3 AND PLACE NEW RISER/ BEARINGS UNDER ALL BEAMS.

STEP 2 - PHASE IIB
TRAFFIC CONTROL SET-UP: (SEE SHEETS 9 & 11)
NORTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC BUT SHALL BE SHIFTED ONTO THE RAMP LANE AND THE MIDDLE LANE.
SOUTHBOUND I-55 SHALL REMAIN OPEN TO TWO LANES OF TRAFFIC BUT SHALL BE SHIFTED ONTO THE RAMP LANE AND ADJACENT LANE.
CONSTRUCTION TO BE DONE:
1) JACK PIER 2 AND PLACE NEW RISER/ BEARINGS UNDER ALL BEAMS.
2) PLACE NEW SIDEWALK TRANSITION AT EACH THE TWO CORNERS OF NORTHBOUND BRIDGE.
3) PLACE A NEW AQURON 7000 SEALANT SYSTEM ACROSS BRIDGE AND APPROACHES OF SOUTHBOUND BRIDGE.

NOTE: THE COST OF REMOVING EXISTING ASPHALT FROM THE BRIDGE IN PHASES SHALL BE INCLUDED UNDER ITEM NO. 604-10.14, REMOVE EXISTING WEARING SURFACE, LS.

PROJECT NO.	YEAR	SHEET NO.
79023-4217-04	1996	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
CONSTRUCTION SEQUENCE

S.R. 14 OVER INTERSTATE 55
BRIDGE ID. NO. 79-14-7.44

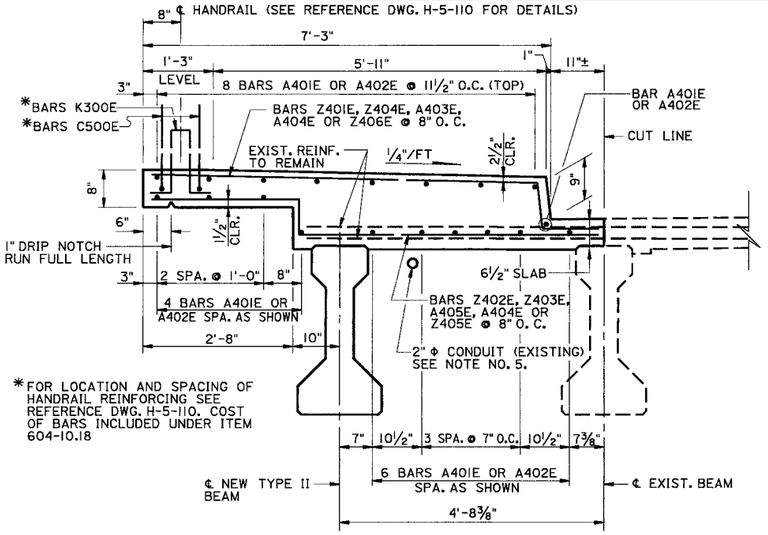
SHELBY COUNTY
1996

DE LEUW, CATHER
MEMPHIS, TENNESSEE

DESIGNED BY	T.L. DAWSON	DATE 10-95
DRAWN BY	D. RANDALL	DATE 10-95
SUPERVISED BY	C.H. BRYANT	DATE 10-95
CHECKED BY	S.F. FIELD	DATE 10-95

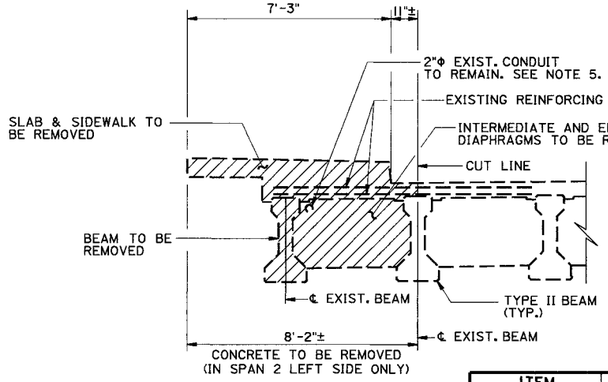
DGN FILE NAME = 0306166

BR-22-85



DETAIL OF SIDEWALK

(SPAN 2 WEST SIDE ONLY)



REMOVAL SKETCH

LEGEND:

- DENOTES EXISTING STRUCTURE
- DENOTES PROPOSED STRUCTURE
- DENOTES STRUCTURE TO BE REMOVED

NOTE TO CONTRACTOR:

THE SUPERSTUCTURE SHALL BE REMOVED IN PHASES CORRESPONDING TO PHASE IA, PHASE IB, AND PHASE IC ON SHEET NOS. 5, 6 & 7. THE CONTRACTOR SHALL SUPPORT THE REMAINING SUPERSTRUCTURE AND PROTECT THE TRAVELED ROADWAY. (APPROX. WEIGHT OF SUPERSTRUCTURE TO BE REMOVED = 1500 LBS/LIN. FT). THE CONTRACTOR SHALL SUBMIT CALCULATIONS AND DETAILS FOR THE SUPPORT SYSTEM TO THE ENGINEER PRIOR TO REMOVAL OF SLAB.

PROJECT NO.	YEAR	SHEET NO.
79023-4217-04	1996	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
604-10.02	CONCRETE REPAIRS	C.Y.	19
604-10.07	CONCRETE REMOVAL	L.S.	1
604-10.18	REINFORCING STEEL (REPAIRS)	LBS.	2103

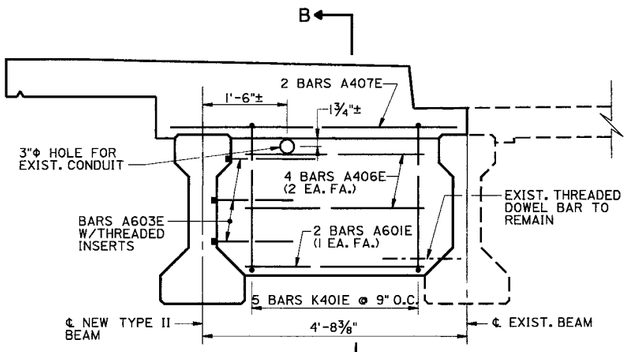
NOTE: THE COST OF ALL NEW CONCRETE, BLAST CLEANING OF EXISTING REINFORCING STEEL, FORMS, GROUT, DRILLING AND ALL OTHER MATERIALS NECESSARY FOR REPAIR OF SLAB, DIAPHRAGMS AND SIDEWALK AS SHOWN IN DETAILS THIS SHEET SHALL BE INCLUDED UNDER ITEM NO. 604-10.02, CONCRETE SLAB REPAIR, C.Y.

NOTE: THE COST OF REMOVING PORTIONS OF RAIL, SLAB, DIAPHRAGMS AND BEAM IN SPAN 2 SHALL BE INCLUDED UNDER ITEM 604-10.07, CONCRETE REMOVAL, L.S.

NOTE: THE COST OF NEW EPOXY COATED REINFORCING STEEL, LABOR, AND ANY MATERIALS NECESSARY FOR PLACING REINF. STEEL IN SLAB, DIAPHRAGMS AND SIDEWALK SHALL BE INCLUDED UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.

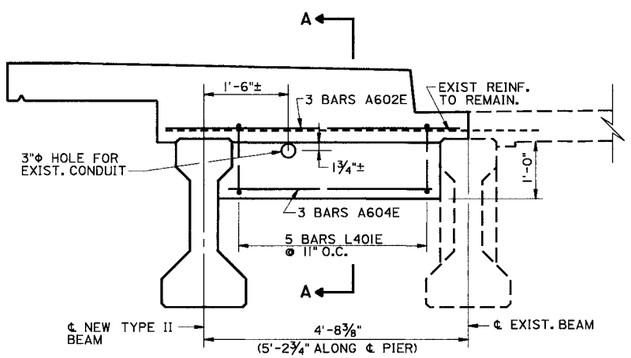
NOTES:

1. WHEN POURING THE SIDEWALK PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR THE RAIL. THE RAIL SHALL NOT BE POURED UNTIL THE SIDEWALK IS POURED AND CURED.
2. EXTREME CARE SHALL BE TAKEN WHEN REMOVING EXISTING CONCRETE SO AS NOT TO DAMAGE EXISTING REINFORCING. ANY TRANSVERSE REINFORCING NOT HAVING A MINIMUM OF 24 INCHES OF EMBEDMENT INTO THE NEW SLAB SHALL BE REPLACED WITH A NO. 5 DOWEL AT THE CONTRACTOR'S EXPENSE. SEE GENERAL NOTE NO. 10 ON SHEET NO. 3.
3. MINIMUM LAP SPLICE LENGTH UNLESS NOTED OTHERWISE: #4 BAR - 1'-8"
   #6 BAR - 2'-9"
   #5 BAR - 2'-2"
4. FOR DETAILS OF RAIL SEE DWG. BR-22-89.
5. THE CONTRACTOR SHALL PROTECT THE 2" ϕ LIGHTING CONDUIT DURING SLAB AND BEAM REMOVAL/REPLACEMENT. ANY DAMAGE TO CONDUIT AND/OR WIRING SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. CONCRETE FOR NEW SLAB, DIAPHRAGMS & SIDEWALK TO BE HIGH EARLY STRENGTH, CLASS "A". SEE NOTE 5 ON DWG. BR-22-84.



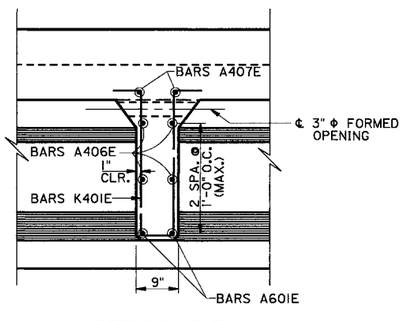
DETAIL OF INTERMEDIATE DIAPHRAGM AND SIDEWALK

(SPAN 2 WEST SIDE ONLY)

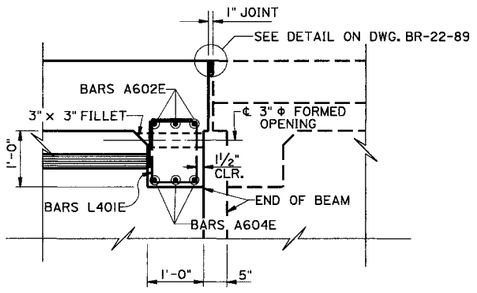


DETAIL OF END DIAPHRAGM AND SIDEWALK

(SPAN 2 WEST SIDE ONLY)



SECTION B-B



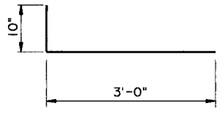
SECTION A-A

3'-10"	A604E (6 BARS REQ'D.)
2'-9"	A603E (3 BARS REQ'D.)
5'-9"	A602E (6 BARS REQ'D.)
3'-2"	A601E (2 BARS REQ'D.)
5'-2"	A407E (2 BARS REQ'D.)
3'-6"	A406E (4 BARS REQ'D.)
3'-10" AVG.	A405E (VARIES FROM 5'-2" TO 2'-6" IN INCR. OF 1'-4") (1 SET OF 3 BARS)
7'-6"	A404E (2 BARS REQ'D.)
4'-11" AVG.	A403E (VARIES FROM 6'-3" TO 3'-7" IN INCR. OF 1'-4") (3 BARS REQ'D.)
29'-0"	A402E (19 BARS REQ'D.)
30'-0"	A401E (19 BARS REQ'D.)

BARS A

BARS K401E

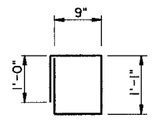
(5 BARS REQ'D.)



BARS C500E

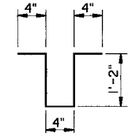
(28 BARS REQ'D.)

(SEE DWG. BR-22-89 FOR PLACEMENT)



BARS L401E

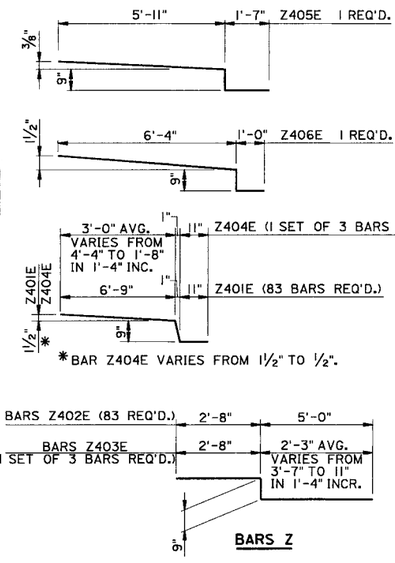
(10 BARS REQ'D.)



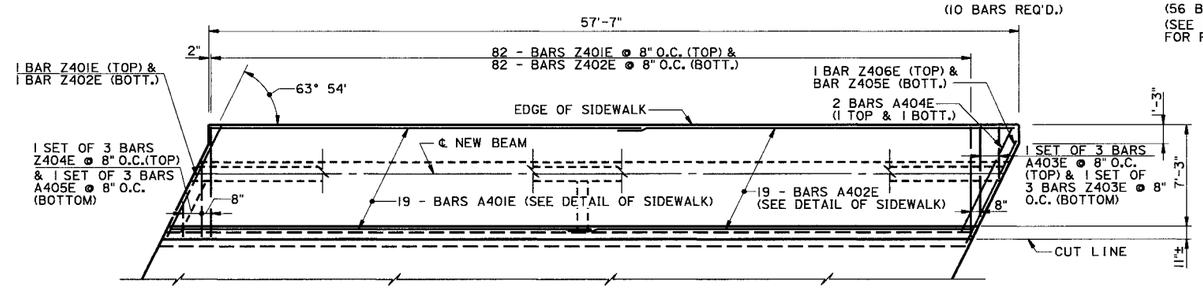
BARS K300E

(56 BARS REQ'D.)

(SEE DWG. BR-22-89 FOR PLACEMENT)



BARS Z



PARTIAL PLAN SPAN 2

(LEFT SIDE ONLY)

STATE OF TENNESSEE

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
SUPERSTRUCTURE REPAIR DETAILS

S.R. 14 OVER INTERSTATE 55
BRIDGE ID. NO. 79-14-7.44

SHELBY COUNTY
1996

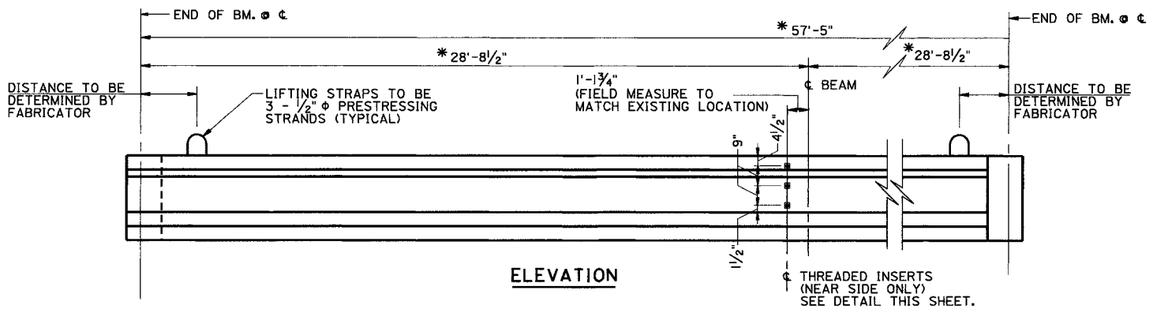
TANYA L. DAWSON — STATE OF TENNESSEE — 25 OCT. 95

DE LEUW, CATHER
MEMPHIS, TENNESSEE

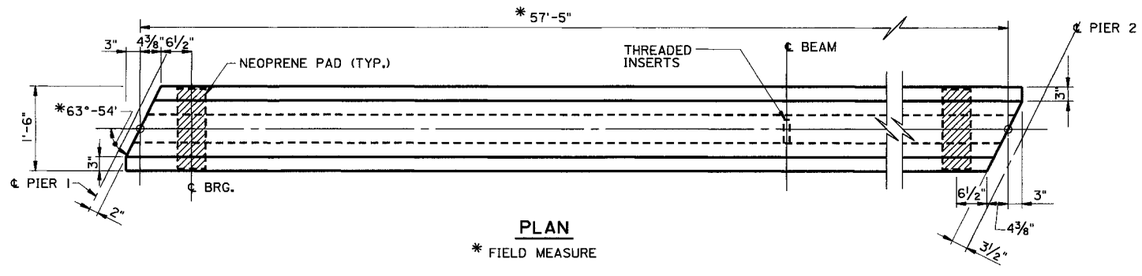
DESIGNED BY	T.L. DAWSON	DATE 10-95
DRAWN BY	R.C. HANDY	DATE 10-95
SUPERVISED BY	C.H. BRYANT	DATE 10-95
CHECKED BY	S.F. FIELD	DATE 10-95

DGN FILE NAME = 030870

BR-22-86

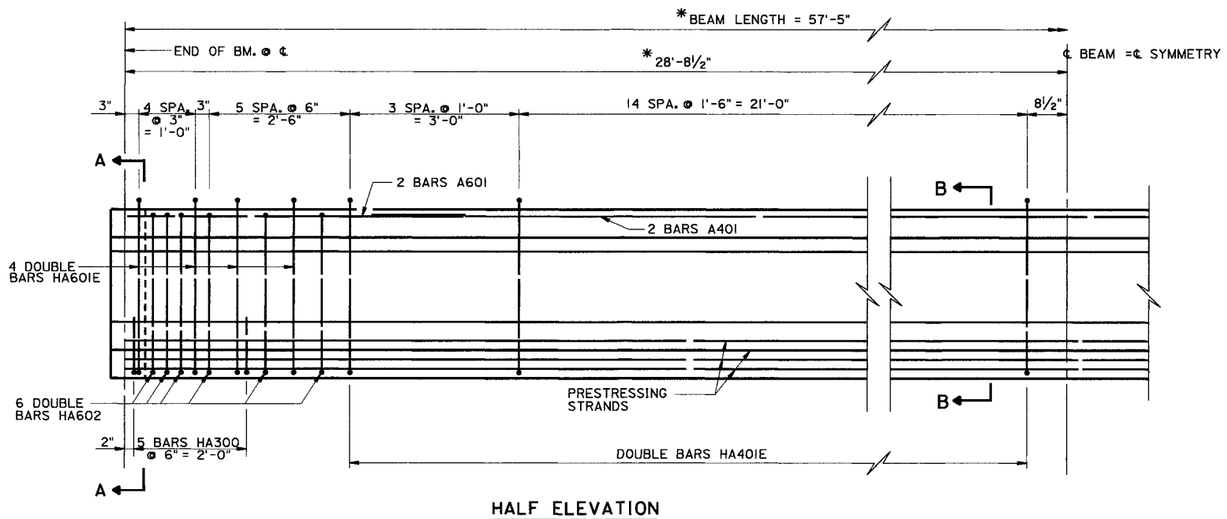


ELEVATION



PLAN

* FIELD MEASURE



HALF ELEVATION

(SHOWING STIRRUP BAR ARRANGEMENT)
N.T.S.

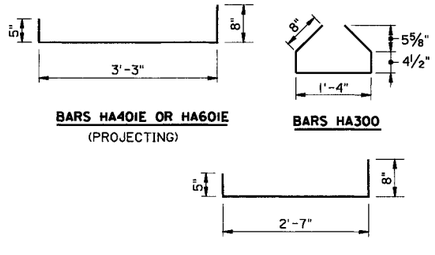
BILL OF STEEL (PER BEAM)

BAR	SIZE	NO. REQ'D.	LENGTH	SHAPE
A401	4	2	48'-4"	——
A601	6	4	6'-0"	——
HA300	3	10	3'-5"	⌓
HA401E	4	72	4'-4"	⌊⌋
HA601E	6	16	4'-4"	⌊⌋
HA602	6	24	3'-8"	⌊⌋

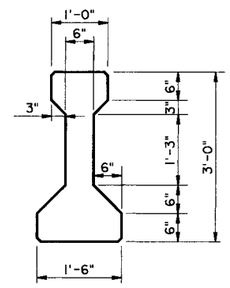
DE LEUW, CATHER
MEMPHIS, TENNESSEE

DESIGNED BY T.L. DAWSON DATE 10-95
DRAWN BY R.C. HANDY DATE 10-95
SUPERVISED BY C.H. BRYANT DATE 10-95
CHECKED BY S.F. FIELD DATE 10-95

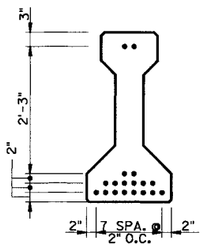
DGN FILE NAME=0306165



BAR BEND DIAGRAMS

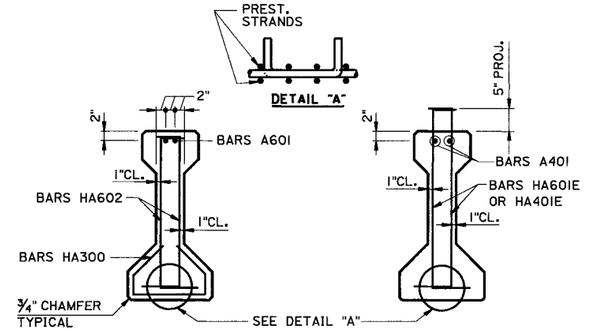


AASHTO TYPE II BEAM



STRAND PATTERN

18 - ½" Φ 270 KSI LOW-RELAXATION STRANDS.

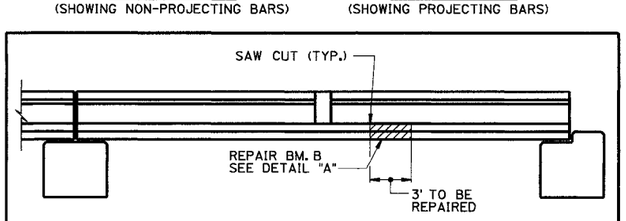


SECTION A-A

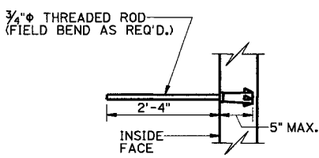
(SHOWING NON-PROJECTING BARS)

SECTION B-B

(SHOWING PROJECTING BARS)



BEAM SURFACE REPAIR



INSERT ASSEMBLY DTL.

PROJECT NO.	YEAR	SHEET NO.
79023-4217-04	1996	

REVISIONS

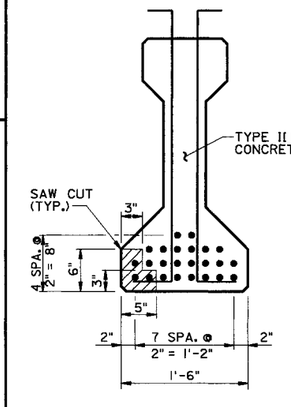
NO.	DATE	BY	BRIEF DESCRIPTION

NOTES:

1. THE TOP OF BEAM IS TO BE ROUGH FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOP OF BEAM SHALL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PRODUCE A ROUGH SURFACE.
2. MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. ALL PRESTRESSING STRANDS SHALL BE ½" Φ ASTM GRADE 270K, 7 WIRE UNCOATED STRESS RELIEVED LOW RELAXATION PRESTRESSING STRANDS.
4. AN INITIAL FORCE OF 31003 LBS. SHALL BE APPLIED TO EACH STRAND.
5. BEAM IS AASHTO - PCI STANDARD TYPE II.
6. THE PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF BEAM AND A PROTECTIVE COATING PLACED ON THE END OF BEAM.
7. INSERTS FOR DIAPHRAGM ARE TO BE DOUBLE THREADED TYPE (CAST-IN-PLACE). ¾" Φ THREADED RODS FOR INSERTS ARE TO PROVIDE A 2'-0" SPLICE WITH DIAPHRAGM REINFORCEMENT.
8. THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 6,000 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 5,000 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.
9. THE SEQUENCE FOR TRANSFER OF STRESS OR THE CUTTING OF 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 1/6 TH OF THE TOTAL PRESTRESSING FORCE BE ECCENTRIC ABOUT THE CENTERLINE OF THE BEAM.
10. PRESTRESSING STRANDS SHALL NOT BE GREATER THAN NOMINAL ½" DIAMETER.
11. FOR ELASTOMERIC BEARING PAD DETAILS SEE DRAWING BR-22-88.
12. SEE STANDARD DWG. STD-14-2 FOR TEMPORARY ERECTION DIAPHRAGM NOTES & DETAIL.

ESTIMATED QUANTITIES (PER BEAM)

LOCATION	NO. OF BEAMS REQ'D.	CONCRETE (C.Y.)	REINFORCING STEEL (LB.)	PRESTR. STEEL (LB.)
SPAN 2	1	5.4	558	542



DETAIL "A"

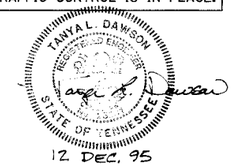
NOTE: AN ENGINEER FROM T.D.O.T. BRIDGE INSPECTION & REPAIR OFFICE SHALL DETERMINED ACTUAL LIMITS OF REMOVAL. CONTRACTOR SHALL TAKE EXTREME CARE WHEN REMOVING EXISTING CONCRETE SO AS NOT TO DAMAGE THE EXISTING PRESTRESSED STRANDS. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE FULL SATISFACTION OF THE ENGINEER.

NOTE: THE COST OF SAW CUTTING, REMOVING SPALLED CONCRETE, FORMING, NEW CEMENTITOUS POLYMER MODIFIED CONCRETE, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS OF PRESTRESSED CONCRETE BEAMS TO BE INCLUDED UNDER ITEMS BID ON.

NOTE: THESE REPAIRS SHALL BE PERFORMED WHILE PHASE IC OF THE TRAFFIC CONTROL IS IN PLACE.

CONSTRUCTION PROCEDURE FOR REPAIRING DAMAGED PRESTRESSED BEAMS

1. SAW CUT AND REMOVE PORTIONS OF THE PRESTRESSED BEAMS AS SHOWN IN THESE PLANS TO INSURE THAT SOUND CONCRETE IS REACHED IN ALL AREAS.
2. WET REPAIR AREAS WITH WATER AND APPLY TWO (2) COMPONENT BONDING COMPOUND TO ALL CONCRETE SURFACES, PRESTRESSING STRANDS, AND REINFORCING STEEL. BONDING COMPOUND SHALL CONSIST OF THE TWO (2) COMPONENT, CEMENTITIOUS POLYMER MODIFIED CONCRETE (SIKATOP III OR EQUAL).
3. FORM AND POUR REPAIR AREA WITH CEMENTITIOUS POLYMER MODIFIED CONCRETE (SIKATOP III OR EQUAL) TO ORIGINAL BEAM LINES. THE SIKATOP III IS PREPACKAGED IN A ONE-HALF (½) CUBIC FOOT KIT, TWO (2) COMPONENT SYSTEM. ADD TO EACH KIT THREE AND ONE-HALF (3½) GALLONS OF PEA GRAVEL AND WATER AS PER MANUFACTURERS RECOMMENDATIONS.



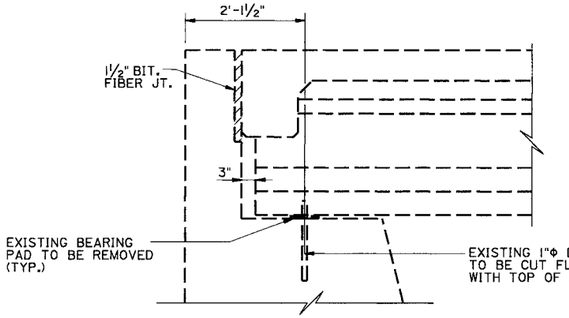
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
PRESTRESSED BEAM REPAIR DETAILS

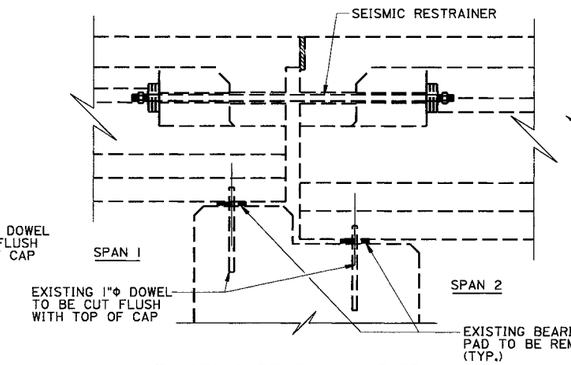
S.R. 14 OVER INTERSTATE 55
BRIDGE I.D. NO. 79-14-7.44

SHELBY COUNTY
1996

BR-22-87

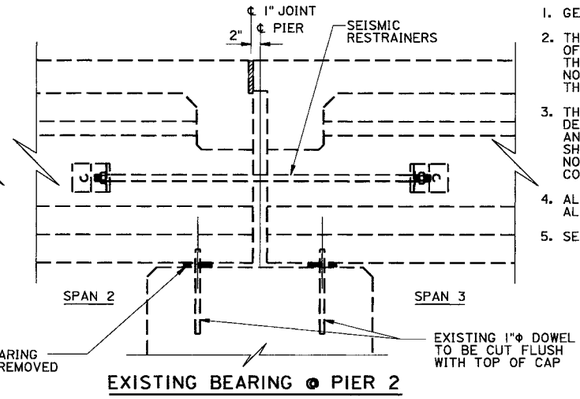


EXISTING BEARING @ ABUTMENTS



EXISTING BEARING @ PIER 1

(PIER 3 SIMILAR)



EXISTING BEARING @ PIER 2

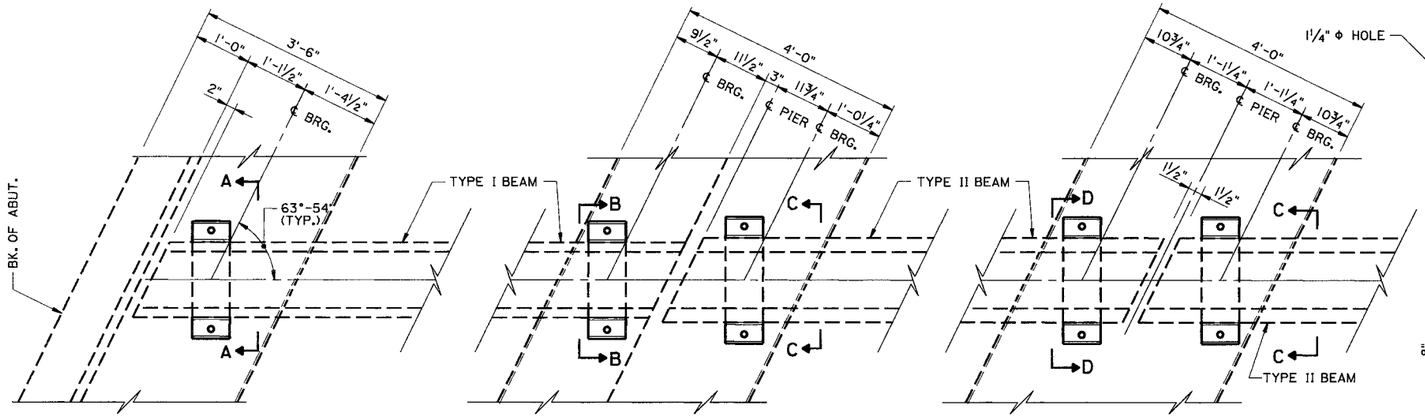
NOTE:

1. GENERAL NOTES 10 &15 THRU 18 APPLY TO THIS SHEET.
2. THE CONTRACTOR SHALL DETERMINE THE REQUIRED THICKNESS OF STEEL PLATES TO OBTAIN PROPER BEAM ELEVATIONS. THE THICKNESS SHOWN SHALL BE USED FOR BIDDING. NO MORE THAN 3 PLATES SHALL BE USED TO ATTAIN REQ'D. THICKNESS.
3. THE STEEL PLATES SHALL BE PAINTED IN THE SHOP BEFORE DELIVERY. AFTER INSTALLATION OF THE BEARING DEVICES ANY DAMAGED OR DEFECTIVE PAINT OR RUSTED AREAS SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH NOTE 16 ON DWG. BR-22-84. COST OF PAINTING TO BE INCLUDED IN ITEM NO. 602-10.11.
4. ALL ANCHOR BOLTS IN BENT CAPS TO BE EMBEDDED A MIN. OF 9". ALL EXPANSION ANCHORS IN BEAMS TO BE EMBEDDED A MIN. OF 4¾".
5. SEE DWG. BR-22-84 FOR JACKING LOADS AND NOTES.

PROJECT NO.	YEAR	SHEET NO.
79023-4217-04	1996	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



ABUT. 1

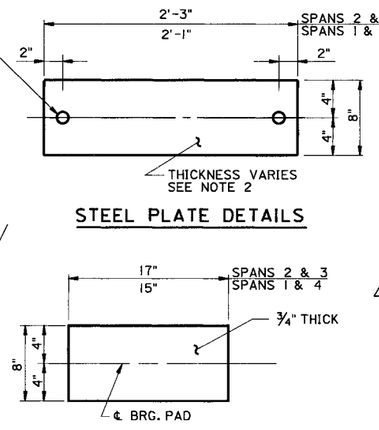
(ABUT. 2 SIMILAR)

PIER 1

(PIER 3 SIMILAR)

PIER 2

PLAN VIEW OF BEARINGS

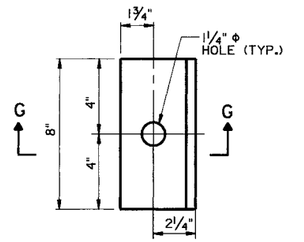


STEEL PLATE DETAILS

PLAN

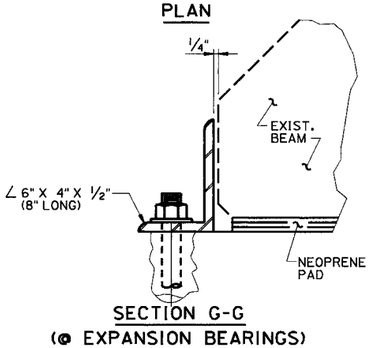
BEARING PAD DETAIL

(BEARING PADS TO BE 70 DUROMETER)



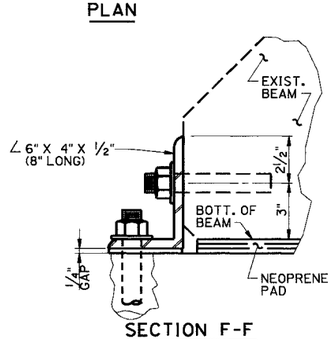
PLAN

PLAN



SECTION G-G

(@ EXPANSION BEARINGS)



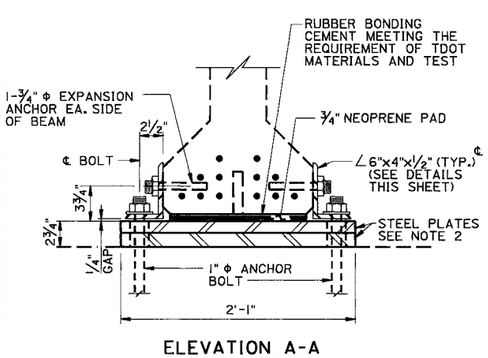
SECTION F-F

(@ FIXED BEARINGS)

KEEPER ANGLE DETAILS

KEEPER ANGLES REQ'D ON BOTH SIDES OF BEAMS.

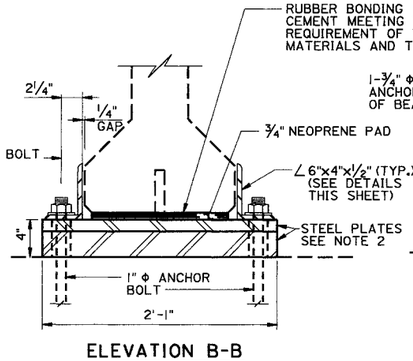
COST OF KEEPER ANGLES AND THEIR INSTALLATION SHALL BE INCLUDED UNDER ITEM NO. 602-10.11, BEARING DEVICE, EACH



ELEVATION A-A

FIXED BEARING AT ABUTS. 1 & 2

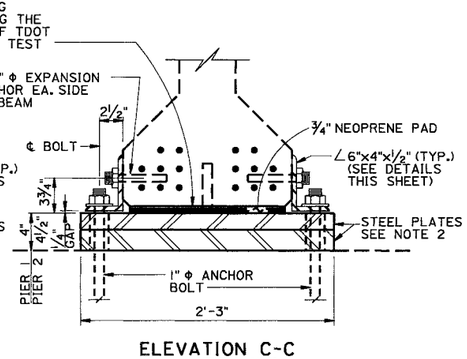
(REQUIRD AT 16 LOCATIONS AT ABUT. 1)
(REQUIRED AT 16 LOCATIONS AT ABUT. 2)



ELEVATION B-B

EXPANSION BEARING @ PIERS 1 & 3

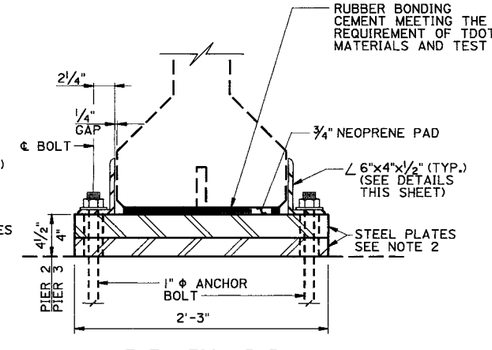
(REQUIRED AT 16 LOCATIONS AT PIER 1, SPAN 1)
(REQUIRED AT 16 LOCATIONS AT PIER 3, SPAN 4)



ELEVATION C-C

FIXED BEARING AT PIERS 1 & 2

(REQUIRED AT 20 LOCATIONS AT PIER 1, SPAN 2)
(REQUIRED AT 20 LOCATIONS AT PIER 2, SPAN 3)



ELEVATION D-D

EXPANSION BEARING @ PIERS 2 & 3

(REQUIRED AT 20 LOCATIONS AT PIER 2, SPAN 2)
(REQUIRED AT 20 LOCATIONS AT PIER 3, SPAN 3)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
BEARING/RISER REPAIR DETAILS

S.R. 14 OVER INTERSTATE 55
BRIDGE ID. NO. 79-14-7.44

SHELBY COUNTY
1996

NOTE:

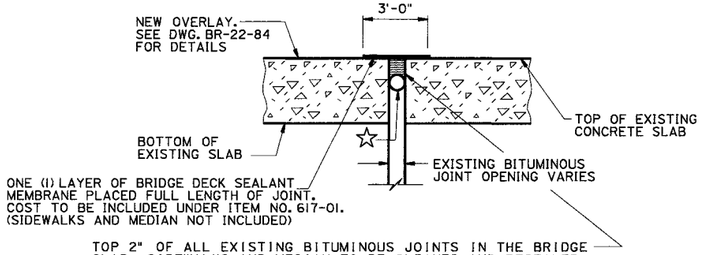
THE COST OF EXISTING BEARING DEVICE REMOVAL, NEW BEARING PADS, CEMENT GROUT, STEEL PLATES AND ANGLES, DRILLING AND GROUTING, WELDING AND PAINTING SHALL BE INCLUDED UNDER ITEM 602-10.11, BEARING DEVICE, EA.

DE LEUW, CATHER
MEMPHIS, TENNESSEE

DESIGNED BY	T.L. DAWSON	DATE 10-95
DRAWN BY	T. MALONE/D. RANDALL	DATE 10-95
SUPERVISED BY	C.H. BRYANT	DATE 10-95
CHECKED BY	M.E. MCGUIRE	DATE 10-95

DGN FILE NAME = 0306168

BR-22-88

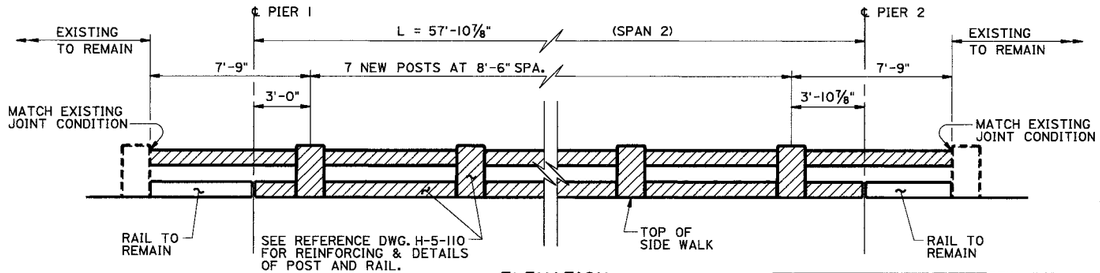


TOP 2" OF ALL EXISTING BITUMINOUS JOINTS IN THE BRIDGE SLAB, SIDEWALKS AND MEDIAN TO BE CLEANED AND RESEALED WITH NEW JOINT SEALER.
JOINT SEALER SHALL BE TYPE II HOT-POURED ELASTIC TYPE CONCRETE JOINT SEALER. SEE STANDARD SPECIFICATIONS SECTION 905.05, JOINT SEALERS. COST OF JOINT CLEANING AND SEALING TO BE INCLUDED UNDER ITEM NO. 617-01 (BRIDGE DECK SEALANT). THE SEALER SHALL EXTEND UP AND ACROSS THE CURB TO THE OUTER EDGE OF THE BRIDGE SLAB.

EXISTING BITUMINOUS JOINT REPAIR DETAIL

(REQUIRED AT ALL TRANSVERSE JOINTS & ABUTMENTS)

☆ NOTE: THE MOVEMENT GAP SHALL BE CAULKED WITH A BACKER ROD OF SUITABLE DIAMETER. THE ROD SHALL BE PLACED AT A DEPTH TO ENSURE THE CORRECT WIDTH/DEPTH RATIO OF THE EXISTING BRIDGE JOINT SYSTEM. BACKER ROD AND CAULK SHALL BE AS PER JOINT MANUFACTURER.



ELEVATION
RAIL REPLACEMENT DETAIL

(REQUIRED IN SPAN 2, LEFT BRIDGE ONLY)

NOTE: ALL REINFORCING IN POST AND RAIL TO BE EPOXY COATED

THE COST OF FORMING, NEW CONCRETE, EPOXY COATED REINFORCING, LABOR AND ALL MISCELLANEOUS MATERIAL REQUIRED TO PLACE A NEW RAIL WITHIN LIMITS SHOWN AND IN ACCORDANCE WITH REFERENCE DWG. H-5-110, TO BE INCLUDED UNDER ITEM NO. 604-10.22, CONCRETE PARAPET REPAIR, L.F.

DENOTES RAIL/POST TO BE REMOVED AND REPLACED.

NOTE: BARS C500E & K500E AS SHOWN ON THE SUPERSTRUCTURE REPAIR DETAIL SHEET SHALL BE INCLUDED UNDER ITEM 604-10.18.

NOTE: CONCRETE FOR RAIL TO BE CLASS "A" f'c = 3000 psi.

LEGEND:

- DENOTES CONCRETE TO BE REMOVED FULL WIDTH OF BRIDGE DECK
- DENOTES ASPHALT REMOVAL
- DENOTES EXISTING STRUCTURE
- DENOTES PROPOSED STRUCTURE

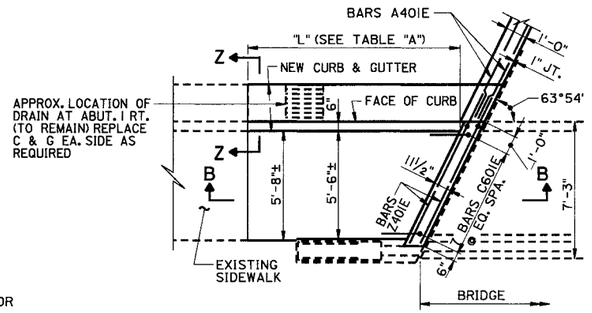
NOTE:

CONCRETE FOR SIDEWALK & APPROACHES AS SHOWN TO BE CLASS "A" f'c = 3000 psi.

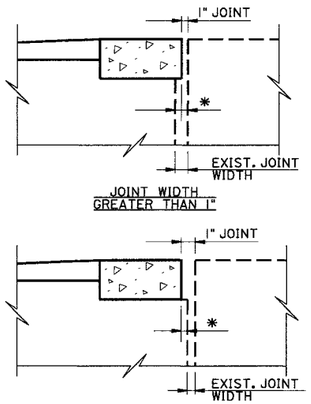
PROJECT NO.	YEAR	SHEET NO.
	1996	

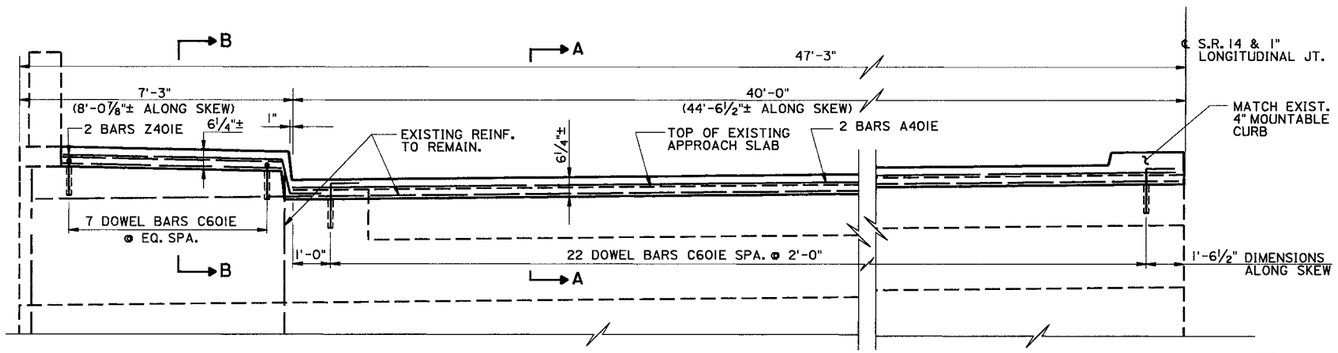
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PLAN OF SIDEWALK

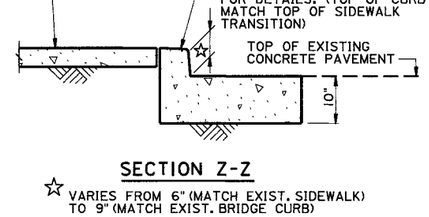




* ADJUST LIP AS REQUIRED TO PROVIDE A 1" JOINT FULL WIDTH OF BRIDGE DECK AND SIDEWALK. THE EXISTING JOINT VARIES FROM ¼" TO 4½".

PART TYPICAL SECTION

(ABUTMENT 1 - LEFT BRIDGE SHOWN)
(OTHER ABUTMENTS SIMILAR)



SECTION Z-Z

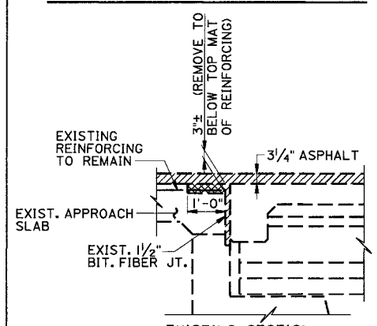
☆ VARIES FROM 6" (MATCH EXIST. SIDEWALK) TO 9" (MATCH EXIST. BRIDGE CURB)

TABLE "A"

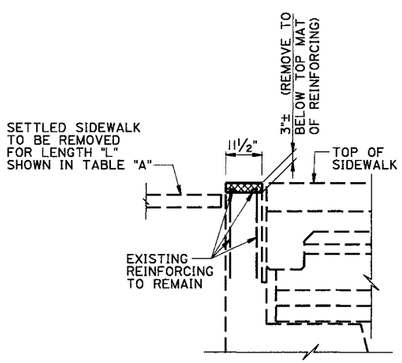
LOCATION	"L" (FT) △
ABUT. 1 LEFT	11'-0"
ABUT. 1 RIGHT	11'-3"
ABUT. 2 LEFT	8'-6"
ABUT. 2 RIGHT	16'-5"

△ LENGTHS ARE APPROXIMATE AND MAY INCREASE OR DECREASE AS DIRECTED BY THE ENGINEER.

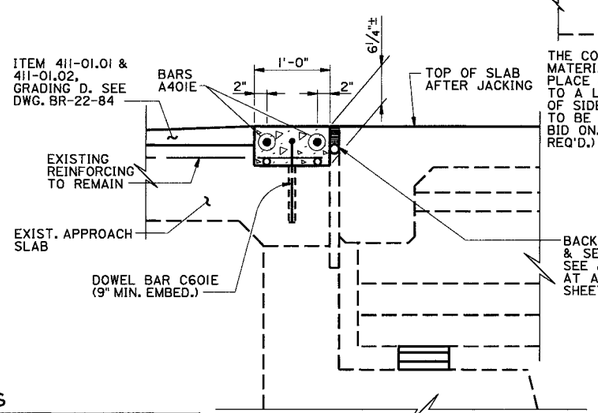
JOINT DETAILS AT ABUTMENTS



EXISTING SECTION
(ABUTMENT BACKWALL AT APPROACH SLAB)

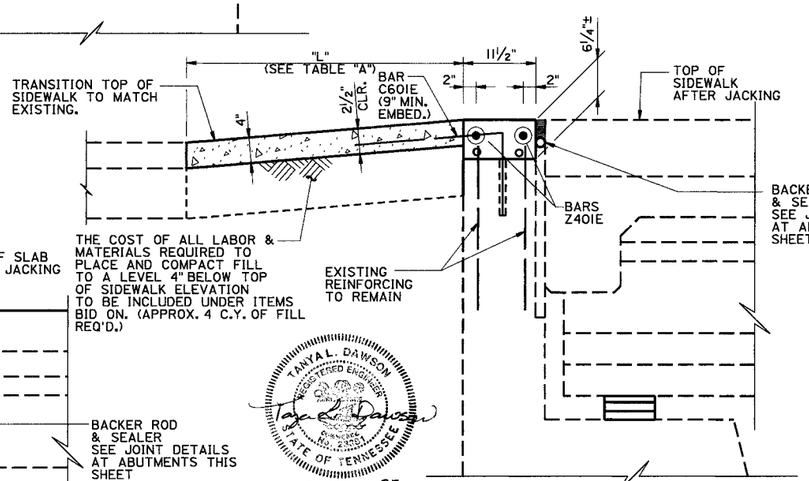


EXISTING SECTION
(ABUTMENT BACKWALL AT SIDEWALK)



SECTION A-A

(APPROACH SLAB REPAIR DETAIL)

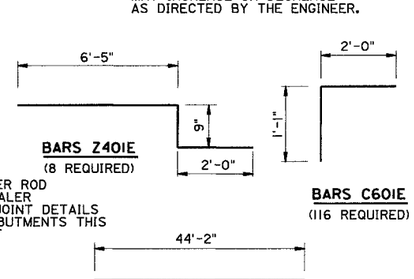


TANYA L. DAWSON REGISTERED ENGINEER STATE OF TENNESSEE
12 DEC. 95

SECTION B-B

SIDEWALK REPAIR DETAILS

(TYP. EA. BRIDGE CORNER)



BAR BENDS

REMOVAL SKETCHES

(REQUIRED AT ABUT. 1 & 2)

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
604-10.09	CONCRETE	CY	12
604-10.18	REINFORCING STEEL (REPAIRS)	LBS	822

NOTE: THE COST OF NEW CONCRETE, FORMING, LABOR & MATERIALS REQUIRED TO PLACE NEW SIDEWALK, CURB AND GUTTER, AND APPROACH CONCRETE PAVEMENT WITHIN LIMITS SHOWN SHALL BE INCLUDED UNDER ITEM NO. 604-10.09, CONCRETE, C.Y..

NOTE: THE COST OF REINFORCING BARS SHALL BE INCLUDED UNDER ITEM 604-10.18 , REINFORCING STEEL (REPAIRS), LBS..

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
MISCELLANEOUS REPAIR DETAILS

S. R. 14 OVER INTERSTATE 55
BR. ID. NO. 79-14-7.44

SHELBY COUNTY
1998

BR-22-89

DE LEUW, CATHER
MEMPHIS, TENNESSEE

DESIGNED BY	T.L. DAWSON	DATE 10-95
DRAWN BY	D. RANDALL	DATE 10-95
SUPERVISED BY	C.H. BRYANT	DATE 10-95
CHECKED BY	S.F. FIELD/J.R. PEGG	DATE 10-95

DGN FILE NAME = 030617I

DESIGN DIVISION 21 FILE

DEC 93 LEFT

Index of Sheets

SHEET NO.	TITLE
1	TITLE SHEET
2 (BR-8-18)	ESTIMATED QUANTITIES
3 (BR-8-19)	GENERAL NOTES
4	TRAFFIC CONTROL PLAN - SHEET 1 OF 7
5	TRAFFIC CONTROL PLAN - SHEET 2 OF 7
6	TRAFFIC CONTROL PLAN - SHEET 3 OF 7
7	TRAFFIC CONTROL PLAN - SHEET 4 OF 7
8	TRAFFIC CONTROL PLAN - SHEET 5 OF 7
9	TRAFFIC CONTROL PLAN - SHEET 6 OF 7
10	TRAFFIC CONTROL PLAN - SHEET 7 OF 7

LIST OF STANDARD DRAWINGS

DWG. NO.	DATE OF LAST REV.	TITLE
T-FAB-1	5-30-91	FLASHING ARROW BOARD
T-M-1	10-26-92	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	10-26-92	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-5	10-26-92	MARKING DETAILS FOR EXPRESSWAYS AND FREEWAYS
T-M-6	12-18-92	MARKING DETAILS FOR EXPRESSWAY AND FREEWAY INTERCHANGES
T-M-7	12-18-92	GORE MARKING DETAILS FOR EXPRESSWAY AND FREEWAY INTERCHANGES
T-PBR-1	1-19-92	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2		DETAIL FOR VERTICAL PANELS
STD-9-1	9-01-91	STANDARD REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS

⚠1 INDEX OF SHEETS CONT'D.

SHEET NO.	TITLE
5A	TRAFFIC CONTROL - SR 14 PHASE II
6A	TRAFFIC CONTROL - SR 14 PHASE III
7A	TRAFFIC CONTROL - I-55 PHASE II & III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

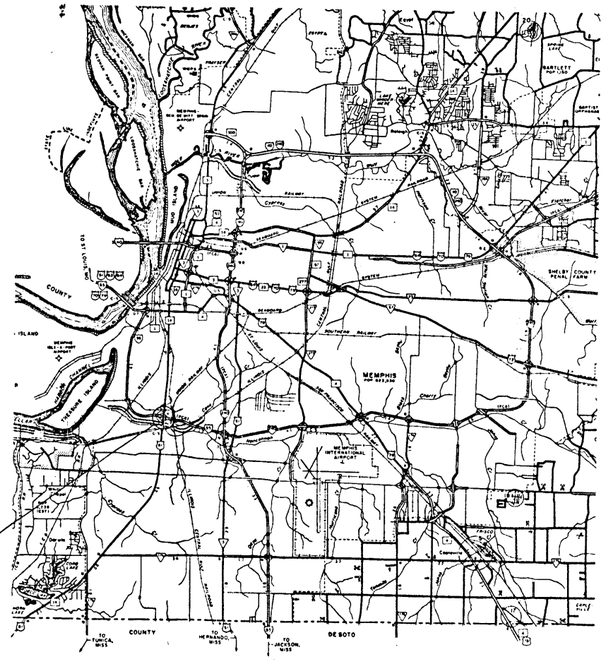
TENN.	YEAR	SHEET NO
	1993	1
FED AID PROJ NO		
STATE PROJ NO	79022 - 4220-04	

REV. 3-18-94
⚠1 ADDED SHEETS 5A, 6A, 7A, AND 10A

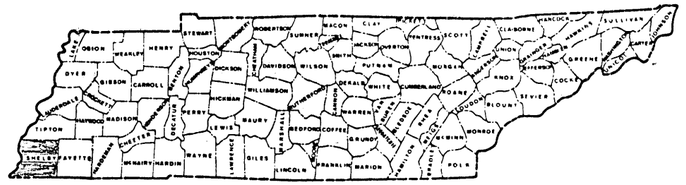
SHELBY COUNTY

S.R. 14 OVER INTERSTATE 55

STATE HIGHWAY NO. **F.A.H.S. NO.** N/A



PROJECT NO. 79002-4220-04
BRIDGE ID. NO. 79-14-7.44



NO EQUATIONS
NO EXCLUSIONS

LIST OF BRIDGE DRAWINGS

DWG. NO.	TITLE
BR-8-17	LAYOUT OF BRIDGE
BR-8-20	CONSTRUCTION SEQUENCE
BR-8-21	SUPERSTRUCTURE REPAIR DETAILS SHEET 1 OF 2
BR-8-22	SUPERSTRUCTURE REPAIR DETAILS SHEET 2 OF 2
BR-8-23	BEAM REPAIR DETAILS
BR-8-23A	SEISMIC RETROFIT DETAILS - PIERS
BR-8-23B	MISCELLANEOUS REPAIR DETAILS

LIST OF REFERENCE DRAWINGS
(TO BE PRINTED WITH PLANS)

DWG. NO.	DATE OF LAST REV.	TITLE
K-30-11	10-25-63	ABUTMENTS A & E
K-30-12		PIERS B & D
K-30-13		PIER C
K-30-14		PRESTRESSED BEAMS SPAN 1 & 4
K-30-15		PRESTRESSED BEAMS SPAN 2 & 3
K-30-16	10-25-63	SUPERSTRUCTURE SLAB SPANS 1 & 4
K-30-17	10-25-63	SUPERSTRUCTURE SLAB SPANS 2 & 3
K-30-18	10-25-63	HANDRAIL, LIGHTING AND SLAB DETAILS
H-5-110		STANDARD CONCRETE HANDRAIL - 1960

APPROVED Paul L. Morrison
DIRECTOR, DESIGN DIVISION

DATE

APPROVED
COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR DATE

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, 1981 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

DOT DES. ENG. S.V. _____

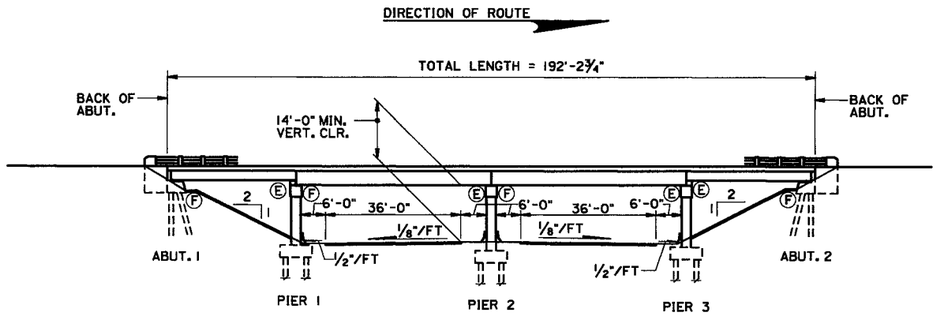
DESIGNED BY HARLAND BARTHOLOMEW & ASSOCIATES, INC.

DESIGNER C.H. BRYANT CHECKED BY T.L. DAWSON

P.E. NO. _____

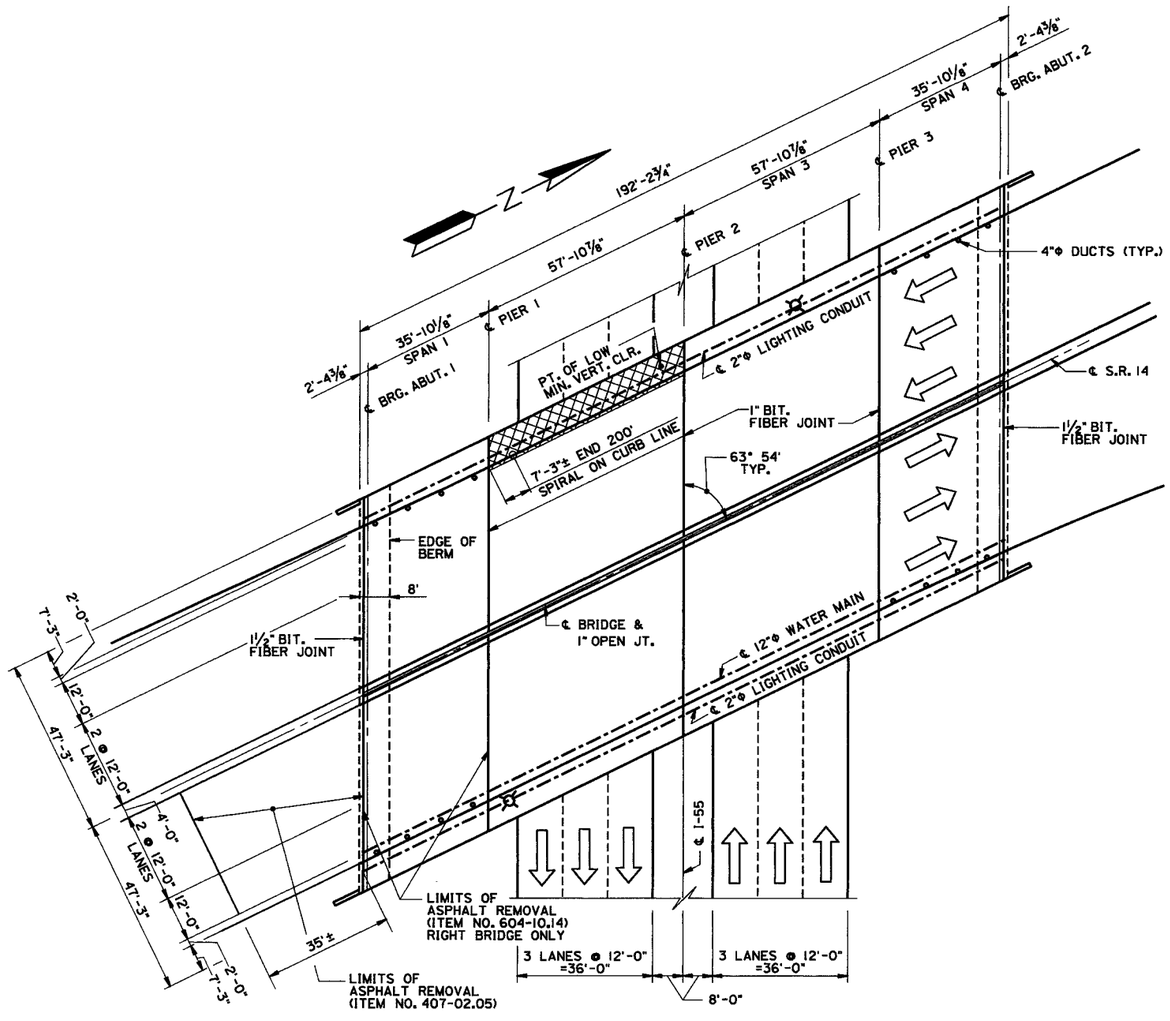
CHARLES H. BRYANT REGISTERED ENGINEER NO. 5079 STATE OF TENNESSEE
13 Sep 93

BRUNING 44-142 61177-1



ELEVATION

SCALE: 1" = 20'-0"



PLAN

SCALE: 1" = 20'-0"

HARLAND BARTHOLOMEW & ASSOCIATES, INC.
MEMPHIS, TENNESSEE

DESIGNED BY	T.L. DAWSON	DATE	4-93
DRAWN BY	T.L. DAWSON	DATE	4-93
SUPERVISED BY	C.H. BRYANT	DATE	4-93
CHECKED BY	J.R. PEGG	DATE	4-93

DGN FILE NAME = 6104155

LEGEND:

- Ⓔ DENOTES EXPANSION END
- Ⓕ DENOTES FIXED END
- DENOTES EXISTING LIGHTING STANDARD
- DENOTES PORTION OF STRUCTURE TO BE REMOVED AND REPLACED.

PROJECT NO.	YEAR	SHEET NO.
79022-4220-04	1993	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

GENERAL SCOPE OF WORK

PROVIDE TRAFFIC CONTROL. SEE SHEETS 4 THRU 10.

REMOVE AND REPLACE PORTION OF DECK AND SIDEWALK SLAB AS SHOWN ON DWG. BR-8-21.

REMOVE BEAM 1 SPAN 2 AND REPLACE WITH ARMORED PRESTRESSED BEAM AS SHOWN ON DWG. BR-8-23.

REPLACE LEFT BRIDGE RAIL, SPAN 2 AS SHOWN ON DWG. BR-8-22.

PLACE SEISMIC RESTRAINERS AT PIERS AS SHOWN ON DWG. BR-8-23A.

PATCH EXISTING BEAMS AS SHOWN ON DWG. BR-8-22.

PLACE STEEL ARMOR ON EXISTING BEAM AS SHOWN ON DWG. BR-8-22.

PERFORM PARTIAL DEPTH DECK REPAIRS. SEE DETAIL ON DWG. BR-8-23B.

CLEAN AND SEAL ALL TRANSVERSE JOINTS AS SHOWN ON DWG. BR-8-23B.

PLACE DECK SEALANT SYSTEM AS SHOWN ON DWG. BR-8-19.

CLEAN ALL DECK DRAINS.

LIST OF BRIDGE DRAWINGS

DWG. NO.	DATE OF LAST REV.	TITLE
BR-8-17		LAYOUT OF BRIDGE
BR-8-18		ESTIMATED QUANTITIES
BR-8-19		GENERAL NOTES
BR-8-20		CONSTRUCTION SEQUENCE
BR-8-21		SUPERSTRUCTURE REPAIR DETAILS SHEET 1 OF 2
BR-8-22		SUPERSTRUCTURE REPAIR DETAILS SHEET 2 OF 2
BR-8-23		BEAM REPAIR DETAILS
BR-8-23A		SEISMIC RETROFIT DETAILS
BR-8-23B		MISCELLANEOUS REPAIR DETAILS

LIST OF STANDARD DRAWINGS

DWG. NO.	DATE OF LAST REV.	TITLE
STD-9-1	9-01-91	STANDARD REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS

LIST OF REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)

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K-30-17	10-25-63	SUPERSTRUCTURE SLAB SPANS 2 & 3
K-30-18	10-25-63	HANDRAIL, LIGHTING AND SLAB DETAILS
H-5-110		STANDARD CONCRETE HANDRAIL - 1960

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
LAYOUT OF BRIDGE

S.R. 14 OVER INTERSTATE 55
BRIDGE ID. NO. 79-14-7.44

SHELBY COUNTY
1993

CHARLES H. BRYANT
REGISTERED ENGINEER
STATE OF TENNESSEE

13 Sep 93

BR-8-17

ESTIMATED QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	TOTAL
(11)	602-10.06	STRUCTURAL STEEL	LBS	1140
(12)	604-03.21	BRIDGE JOINT SEISMIC MODIFICATION	EA	28
(10)	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTURE)	SY	90
(1)	604-10.02	CONCRETE REPAIRS	CY	19
(2)	604-10.14	REMOVE EXISTING WEARING SURFACE	LS	1
(3)	604-10.18	REINFORCING STEEL (REPAIRS)	LBS	2102
(4)	604-10.22	CONCRETE PARAPET REPAIR	LF	58
(9)(5)	604-10.50	BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB)	SY	170
(9)(6)	604-10.54	CONCRETE REPAIRS (BEAMS)	SF	70
(7)	615-01.02	PRESTRESSED CONCRETE I-BEAM (TYPE II)	LF	58
(13)	604-10.81	CONCRETE REPAIRS	EA	48
(8)	617-01	BRIDGE DECK SEALANT	SY	1660

QUANTITY NOTES

(1) INCLUDES THE COST OF ALL LABOR AND MATERIALS NECESSARY TO REMOVE AND DISPOSE OF PORTIONS OF THE SLAB, DIAPHRAGMS, EXISTING BRIDGE RAIL, AND SIDEWALK AS SHOWN ON DWG. NO. BR-8-21, AND THE COST OF ALL CONCRETE, LABOR AND MATERIALS NECESSARY TO CONSTRUCT NEW CONCRETE SLAB, DIAPHRAGMS, AND SIDEWALK AS SHOWN ON DWG. NO. BR-8-21.

(2) INCLUDES ALL LABOR AND MATERIALS NECESSARY TO REMOVE EXISTING WEARING SURFACE WITHIN LIMITS SHOWN ON DWG. BR-8-17. (APPROX. 6 CY TO BE REMOVED)

(3) INCLUDES ALL REINFORCING STEEL REQUIRED IN THE NEW SLAB, SIDEWALK AND DIAPHRAGMS AS SHOWN ON DWG. NO. BR-8-21. ALL REINFORCING STEEL TO BE EPOXY COATED.

(4) INCLUDES THE COST OF ALL CONCRETE, EPOXY REINFORCING STEEL, LABOR AND MATERIALS NECESSARY TO PLACE PORTIONS OF THE BRIDGE RAIL AS SHOWN ON DWG. NO. BR-8-23B.

(5) INCLUDES ALL LABOR AND MATERIALS REQUIRED TO REPAIR CONCRETE DECK AS SHOWN IN DETAIL ON DWG. NO. BR-8-23B.

(6) INCLUDES ALL LABOR AND MATERIALS REQUIRED TO PLACE POLYMODIFIED CONCRETE OVER EXPOSED PRESTRESSING STRANDS AS SHOWN IN DETAIL ON DWG. NO. BR-8-22.

(7) INCLUDES THE COST OF ALL LABOR AND MATERIALS NECESSARY TO REMOVE AND DISPOSE OF ONE EXISTING CONCRETE BEAM (TYPE II) AND BEARING PADS AND TO PLACE NEW BEARING PADS AND ARMORED PRESTRESSED CONCRETE I-BEAM (TYPE II).

(8) INCLUDES ALL LABOR AND MATERIALS REQUIRED TO PLACE A NEW SEALANT SYSTEM FOR THE FULL WIDTH AND LENGTH OF BRIDGE AS SHOWN IN DETAILS ON DWG. NO. BR-8-19 AND TO CLEAN AND SEAL JOINTS AT PIERS 1 THRU 3 AS SHOWN ON DWG. NO. BR-8-23B.

(9) THIS ITEM SHALL BE BID WITH THE CONTINGENCY THAT THE QUANTITY MAY INCREASE OR DECREASE AS DIRECTED BY THE ENGINEER.

(10) INCLUDES THE COST OF ALL MATERIALS AND LABOR NECESSARY TO APPLY TEXTURE FINISH IN ALL DESIGNATED AREAS AS SHOWN ON DWG. BR-8-19.

(11) INCLUDES THE COST OF ALL LABOR AND MATERIAL REQUIRED TO INSTALL ARMOR PLATES ON BEAM A SPAN 3 AS DETAILED ON DWG. BR-8-23.

(12) INCLUDES THE COST OF ALL LABOR AND MATERIALS REQUIRED TO INSTALL SEISMIC RESTRAINERS, TYPE "A", AT PIER 2 AS DETAILED ON DWG. BR-8-23A.

(13) INCLUDES THE COST OF ALL LABOR AND MATERIALS REQUIRED TO INSTALL SEISMIC RESTRAINERS, TYPE "B", AT PIERS 1 & 3 AS DETAILED ON DWG. BR-8-23A.

PROJECT NO.	YEAR	SHEET NO.
79022-4220-04	1993	2

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL
403-01	BITUMINOUS MATERIAL (TC)	TON	1
(9) 407-02.05	COLD PLANING BITUMINOUS PAVEMENT	SY	180
(9) 407-02.08	SALVAGE VALUE OF COLD PLANINGS	SY	180
411-01.01	MINERAL AGGREGATE(ACS) GRADING "D"	TON	330
411-01.02	ASPHALT CEMENT(ACS) GRADING "D"	TON	21
411-02.01	MINERAL AGGREGATE (ACS) GRADING "E"	TON	224
411-02.02	ASPHALTIC CEMENT (ACS) GRADING "E"	TON	14
712-01	TRAFFIC CONTROL	LS	1
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	LF	260
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EA	108
712-05.01	WARNING LIGHTS (TYPE A)	EA	9
712-05.03	WARNING LIGHTS (TYPE C)	EA	108
712-06	SIGNS (CONSTRUCTION)	SF	753
712-06.01	VERTICAL PANELS	SF	6
712-08.03	ARROW BOARD (TYPE C)	EA	7
712-09.01	REMOVABLE PAVEMENT MARKING (LINE)	LF	13800 *
712-07.03	TEMPORARY BARRICADES (TYPE III)	LF	60
716-05.01	PAINTED PAVEMENT MARKING (LINE)	LIN.MI.	0.8
717-01	MOBILIZATION	LS	1

* 8830 LF OF WHITE AND 4970 LF OF YELLOW MARKINGS ARE REQUIRED.

TRAFFIC CONTROL NOTES

1. ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED IF THE SIGN FACE IS FULLY COVERED.

2. IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FEET.

3. A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS FLAGGER SIGNS, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

4. TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

5. USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK, THE ENGINEER SHALL APPROVE ALTERNATE LOCATIONS.

6. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC, UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO BE PARKED WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK, THE ENGINEER SHALL APPROVE ALTERNATE LOCATIONS.

HARLAND BARTHOLOMEW & ASSOCIATES, INC.
MEMPHIS, TENNESSEE

DESIGNED BY J.R. PEGG DATE 4-93
DRAWN BY J.R. PEGG DATE 4-93
SUPERVISED BY C.H. BRYANT DATE 4-93
CHECKED BY T.L. DAWSON DATE 4-93

DGN FILE NAME = 6104154

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
ESTIMATED QUANTITIES

S.R. 14 OVER INTERSTATE 55

BRIDGE ID. NO. 79-14-7.44
SHELBY COUNTY
1993

GENERAL NOTES

1. SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (MARCH 1981 EDITION).
2. DESIGN SPECIFICATIONS: AASHTO 1989 EDITION WITH ADDENDA.
3. LOADING: HS20-44.
4. SHOP DRAWINGS: SHALL BE SUBMITTED ACCORDING TO SPECIAL PROVISION NO 105A, EXCEPT SHOP DRAWINGS SHALL BE SUBMITTED TO THE HEADQUARTERS BRIDGE INSPECTION AND REPAIR OFFICE IN LIEU OF THE DIVISION OF STRUCTURES.
5. FALSEWORK OVER TRAFFIC: SEE SPECIAL PROVISION 604, REGARDING CONCRETE STRUCTURES, REVISIONS TO SECTION 604.06.
6. CONCRETE TO BE CLASS "A", f'c=3000 p.s.i. IN ACCORDANCE WITH SPECIAL PROVISION 604CX EXCEPT AS NOTED OTHERWISE.
7. BRIDGE DECK CONCRETE TO BE HIGH EARLY STRENGTH CONCRETE: THE MIX TO MEET THE REQUIREMENTS OF SPECIAL PROVISION NO. 604CX, CLASS "A", EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS., THE WATER CEMENT RATIO SHALL BE A MAXIMUM OF 0.40, NO FLY ASH REPLACEMENT WILL BE PERMITTED, AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 p.s.i. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3000 p.s.i. MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF TEN(10) DAYS.
8. SPECIAL NOTE: TO IMPROVE THE FLOWABILITY OF THE CONCRETE, THE CONTRACTOR MAY USE ADMIXTURES, (SUPERPLASTICIZERS) IN ACCORDANCE WITH SPECIAL PROVISION NO. 604CX. CONCRETE ADMIXTURES (SUPERPLASTICIZERS) USED SHALL BE APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION MATERIALS AND TEST DIVISION PRIOR TO USE. COARSE AGGREGATE FOR THE CONCRETE USED IN THE REPAIR AREAS SHALL BE SIZE 67 STONE.
9. CONCRETE CURING: ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO SPECIAL PROVISION NO. 604.
10. REINFORCING STEEL: TO BE ASTM A615 GRADE 60. STANDARD CRSI HOOK DETAILS APPLY UNLESS OTHERWISE NOTED ON THE BILL OF STEEL. SPACING DIMENSIONS ARE CENTER TO CENTER AND COVER DIMENSIONS ARE CLEAR DISTANCE UNLESS OTHERWISE NOTED. PLACING TOLERANCES ARE ± 1/2" FOR SPACING AND -⅛" OR +⅜" FOR COVER. ALL REINFORCING STEEL TO BE EPOXY COATED UNLESS OTHERWISE NOTED. ALL DRILLED IN DOWEL BARS TO BE UNCOATED BLACK STEEL. SEE SPECIAL PROVISION NO. 907A.
11. GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED 1/2" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND DRIVEN TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED 1/4" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.
12. STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270 GRADE 36 (ASTM A709 GRADE 36) UNLESS OTHERWISE NOTED.
13. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND SKEW ANGLES PRIOR TO FABRICATION OF BRIDGE COMPONENTS.
14. WELDING: ANSI/AASHTO/AWS D1.5-88 BRIDGE WELDING CODE AND SPECIAL PROVISION NO. 602.
15. PAINT: SYSTEM B - INORGANIC ZINC - URETHANE FINISH GREY TOP COAT. SEE TENNESSEE STANDARD SPECIFICATION 603.05(b) AND SPECIAL PROVISION 603A.
16. APPROVAL OF MATERIALS: NO FABRICATION SHALL BE STARTED UNTIL THE MATERIALS INVOLVED HAVE BEEN APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION MATERIALS AND TESTS.
17. IDENTITY OF MAIN MATERIALS: SEE SPECIAL PROVISION NO. 602.
18. NON-PAY ITEMS: ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEMS WILL BE PAID FOR. COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE BID FOR PAY ITEMS.
19. REQUIREMENTS AND RESTRICTIONS FOR PHASED CONSTRUCTION: FOUR 12 FOOT TRAFFIC LANES SHALL BE MAINTAINED ON S.R. 14 AT ALL TIMES. SEE SHEETS 4 THRU 6 FOR DETAILS. SEE SHEETS 7 THRU 10 FOR DETAILS OF I-55 CLOSURE.
20. DISPOSAL OF MATERIALS: ALL MATERIALS NOT USED IN THE COMPLETED STRUCTURE NOR TO BE FURNISHED TO THE DOT SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR.
21. SPECIAL NOTE TO CONTRACTOR: NO CONCRETE OR OTHER DEBRIS SHALL BE ALLOWED TO DROP UPON THE UNDERNEATH ROADWAY WHEN MAKING REPAIRS TO THE EXISTING CONCRETE SLAB, OR WHEN REMOVING AND REPOURING THE CONCRETE SLAB.

UTILITIES NOTE

THE LOCATIONS OF UTILITIES SHOWN WITHIN PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED.

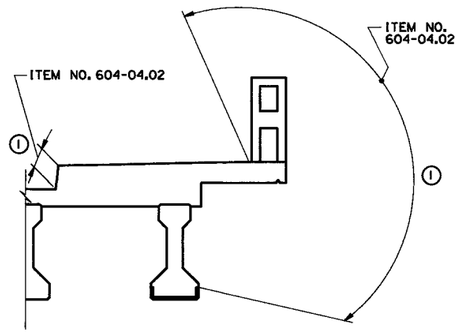
UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND THE UTILITY OWNERS WILL BE REQUIRED TO CO-OPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT.

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING THE UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING ALL AFFECTED UTILITIES PRIOR TO SUBMITTING HIS BID IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE WORK FOR THE PROJECT. SOME UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS, WHILE SOME WORK MAY BE REQUIRED "AROUND" UTILITY FACILITIES THAT WILL REMAIN IN PLACE. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR WILL RECEIVE NO ADDITIONAL COMPENSATION FOR ANY DELAYS OR INCONVENIENCE CAUSED BY THE UTILITY ADJUSTMENTS.

THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING THE WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR UTILITY ON THE GROUND. IN THIS NOTIFICATION SHALL BE GIVEN AT LEAST THE THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.

SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC. AT 1-800-351-1111.



STRUCTURE FINISHING SKETCH

(LEFT SIDE - SPAN 2 ONLY)

① ITEM NO. 604-04.02 - TO BE MOUNTAIN GREY NO. 36440.

PROJECT NO.	YEAR	SHEET NO.
79022-4220-04	1993	3

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SPECIAL PROVISIONS

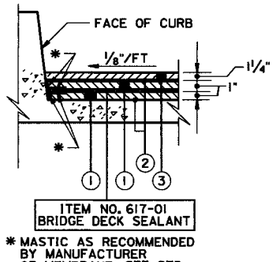
SPECIAL PROVISION NUMBER	LATEST REVISION DATE	LIST OF SPECIAL PROVISIONS
100	**	REGARDING REVISIONS AND ADDITIONS TO STANDARD SPECIFICATIONS
105A	**	REGARDING APPROVAL OF SHOP DRAWINGS
602	**	REGARDING SECTION 602 STEEL STRUCTURES
603A	**	REGARDING PAINTING
604	**	REGARDING CONCRETE STRUCTURES
604CX	**	REGARDING CONTRACTOR- MIX DESIGN AND TESTING STRUCTURAL CONCRETE
615	**	REGARDING PRECAST-PRESTESSED CONCRETE BRIDGE MEMBERS
712	**	REGARDING TEMPORARY TRAFFIC CONTROL
712A	**	REGARDING FLEXIBLE DRUMS (CHANNELIZING)
907A	**	REGARDING EPOXY COATED REINFORCING STEEL

** DENOTES CURRENT REVISION DATE AS PER CONTRACT DOCUMENTS

NOTE: FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATION. AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. THE COLOR OF THE FINISH SHALL BE MOUNTIAN GREY. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. PAYMENT FOR THE APPLIED TEXTURE FINISH SHALL BE UNDER ITEM 604-04.02, APPLIED TEXTURE FINISH (EXISTING STRUCTURE), S.Y.

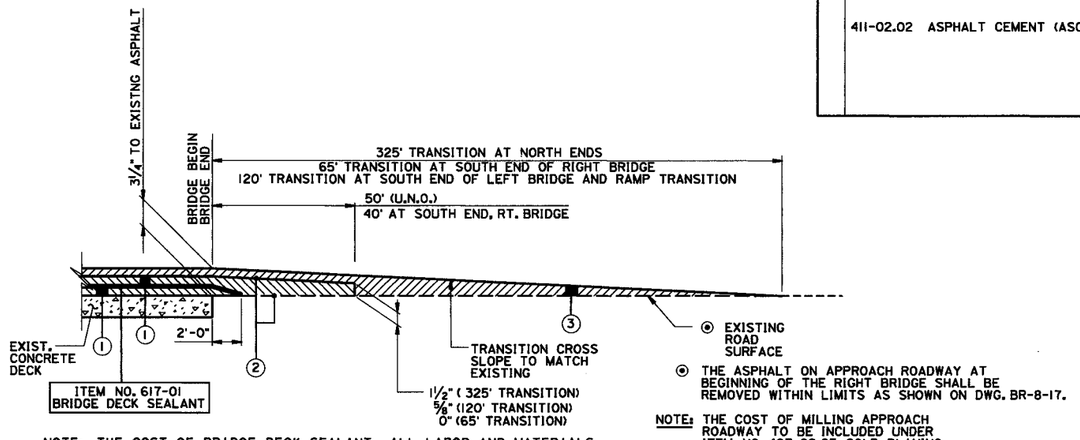
PROPOSED PAVEMENT SCHEDULE

①	SURFACING 1" + THICK (APPROX. 107 LBS./S.Y.) 411-02.01 MINERAL AGGREGATE (ASC) GRADING E 411-02.02 ASPHALT CEMENT (ASC) GRADING E	②	TACK COAT 403-01 BITUMINOUS MATERIAL FOR TACK COAT (T.C.) AT 0.02 GAL/S.Y.
		③	SURFACING 1¼" + THICK (APPROX. 132 LBS./S.Y.) 411-01.01 MINERAL AGGREGATE FOR ASPHALTIC CONCRETE SURFACE (A.C.S.) GRADING "D" 411-01.02 ASPHALT CEMENT FOR ASPHALTIC CONCRETE SURFACE (A.C.S.) GRADING "D"



* MASTIC AS RECOMMENDED BY MANUFACTURER OF MEMBRANE. SEE STD. SPECIFICATION ARTICLE 906.04

BRIDGE DECK SEALANT SYSTEM



NOTE: THE COST OF BRIDGE DECK SEALANT, ALL LABOR AND MATERIALS REQUIRED TO PLACE BRIDGE DECK SEALANT SHALL BE PAID FOR UNDER ITEM NO. 617-01, BRIDGE DECK SEALANT, S.Y.

NOTE: PAINTED PAVEMENT MARKING (LINE) SHALL BE ACCORDING TO STANDARD SPECIFICATIONS SECTION 716.06 AND SHALL BE PLACED TO THE SATISFACTION OF THE ENGINEER. COST SHALL BE INCLUDED IN THE COST OF ITEM NO. 716-05.01.

PAVEMENT TRANSITION DETAIL

⊙ THE ASPHALT ON APPROACH ROADWAY AT BEGINNING OF THE RIGHT BRIDGE SHALL BE REMOVED WITHIN LIMITS AS SHOWN ON DWG. BR-8-17.

NOTE: THE COST OF MILLING APPROACH ROADWAY TO BE INCLUDED UNDER ITEM NO. 407-02.05, COLD PLANING BITUMINOUS PAVEMENT, SY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
GENERAL NOTES

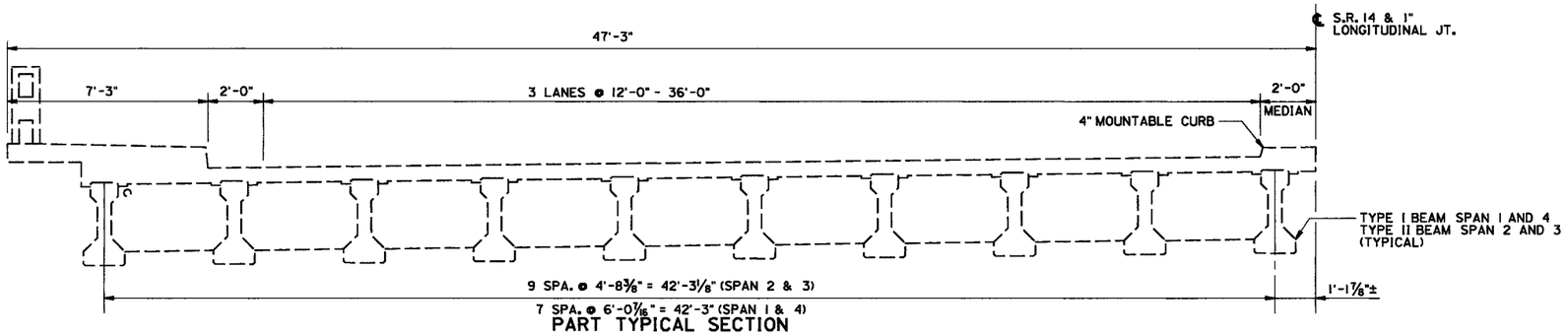
S. R. 14 OVER INTERSTATE 55

BR. ID. NO. 79-14-7.44
SHELBY COUNTY
1993

HARLAND BARTHOLOMEW & ASSOCIATES, INC.
MEMPHIS, TENNESSEE

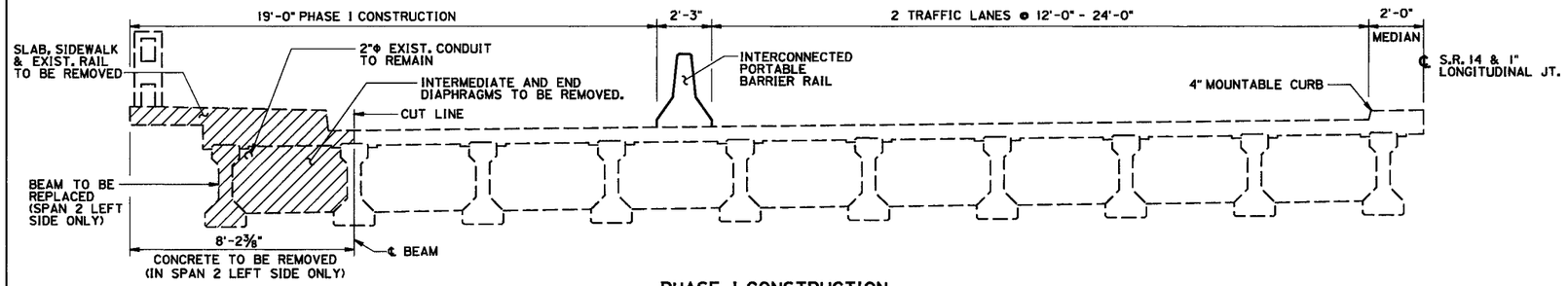
DESIGNED BY T.L. DAWSON DATE 4-93
DRAWN BY D. RANDALL DATE 4-93
SUPERVISED BY C.H. BRYANT DATE 4-93
CHECKED BY M.E. McGUIRE DATE 4-93

DGN FILE NAME = 6104157



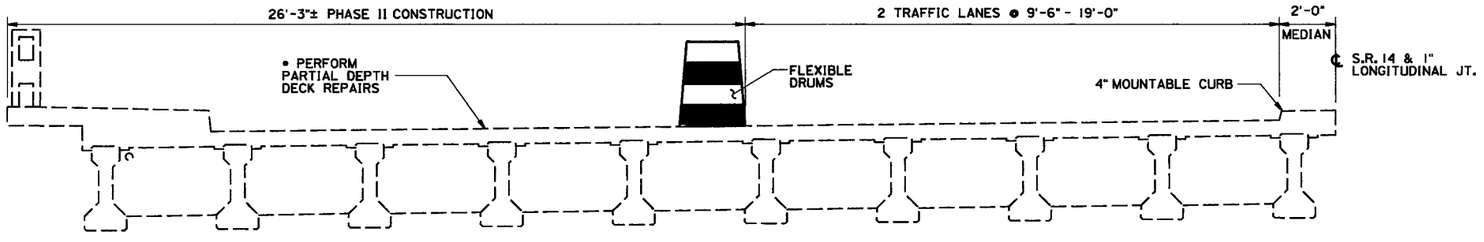
PART TYPICAL SECTION

(LEFT BRIDGE SHOWN)
(RIGHT BRIDGE SIMILAR)



PHASE I CONSTRUCTION

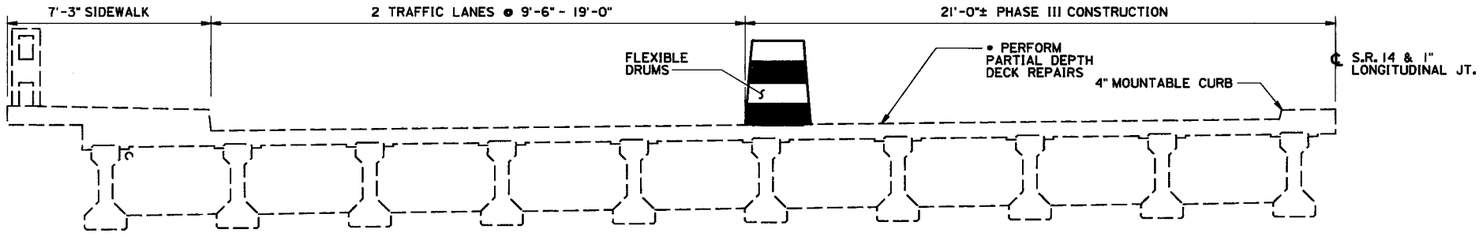
(LEFT BRIDGE ONLY)



• REMOVE ASPHALT OVERLAY, SPAN 1 RIGHT BRIDGE

PHASE II CONSTRUCTION

(LEFT BRIDGE SHOWN)
(RIGHT BRIDGE SIMILAR)



PHASE III CONSTRUCTION

(LEFT BRIDGE SHOWN)
(RIGHT BRIDGE SIMILAR)

• REMOVE ASPHALT OVERLAY, SPAN 1 RIGHT BRIDGE

LEGEND:

- ——— DENOTES EXISTING STRUCTURE
- ——— DENOTES PROPOSED STRUCTURE
- ▨ DENOTES STRUCTURE TO BE REMOVED

PROJECT NO.	YEAR	SHEET NO.
79022-4220-04	1993	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

NOTES:

1. SEE SHEETS 4 THRU 10 FOR CONSTRUCTION SIGNING FOR EACH PHASE OF CONSTRUCTION.
2. PHASE I: (S.R. 14)
   TWO LANES OF SOUTHBOUND TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION IN PHASE 1. NORTHBOUND TRAFFIC WILL REMAIN UNINTERRUPTED DURING THIS PHASE.

   REMOVE RAILS, SLAB, DIAPHRAGMS, SIDEWALK AND EXTERIOR BEAM IN SPAN 2 OF LEFT BRIDGE, IN PHASES CORRESPONDING TO PHASE 1A AND PHASE 1B ON SHEET NO. 7.

   PLACE SEISMIC RESTRAINER BARS AT PIER 1, 2 & 3 DURING THE CORRESPONDING PHASE.

   PLACE NEW BEAM, PROVIDING TRAFFIC CONTROL AS SHOWN IN PHASE 1C AND THE VICINITY MAP ON SHEET NO. 7.

   PLACE NEW SLAB, DIAPHRAGMS AND SIDEWALK IN PHASES CORRESPONDING TO PHASE 1A AND PHASE 1B ON SHEET NO. 7.

   PLACE NEW RAIL AS DETAILED ON DWG. BR-8-23B.
3. PHASE II & III: (S.R. 14)
   TWO LANES OF NORTHBOUND AND SOUTHBOUND TRAFFIC WILL BE MAINTAINED IN EACH PHASE.

   REMOVE EXISTING ASPHALT (IN SPAN 1 ON RIGHT BRIDGE ONLY) AND PERFORM PARTIAL DEPTH SLAB REPAIRS.
4. THE NEW MEMBRANE SEALANT SYSTEM SHALL BE APPLIED IN ACCORDANCE WITH DETAILS AS SHOWN ON DWG. BR-8-23B.
5. SEE DWG. BR-8-23B FOR PARTIAL DEPTH SLAB REPAIR DETAILS.

NOTE: REPAIR OF THE SURFACE OF BEAMS AT LOCATIONS SHOWN ON DWG. BR-8-22 AND PLACEMENT OF ARMOR ON BEAM A OF SPAN 3 SHALL BE DONE IN SEQUENCE AS ALLOWED BY EACH LANE CLOSURE.

NOTE: THE COST OF REMOVING EXISTING ASPHALT FROM SPAN 1 RIGHT BRIDGE SHALL BE INCLUDED UNDER ITEM NO. 604-10.14, REMOVE EXISTING WEARING SURFACE, LS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
CONSTRUCTION SEQUENCE

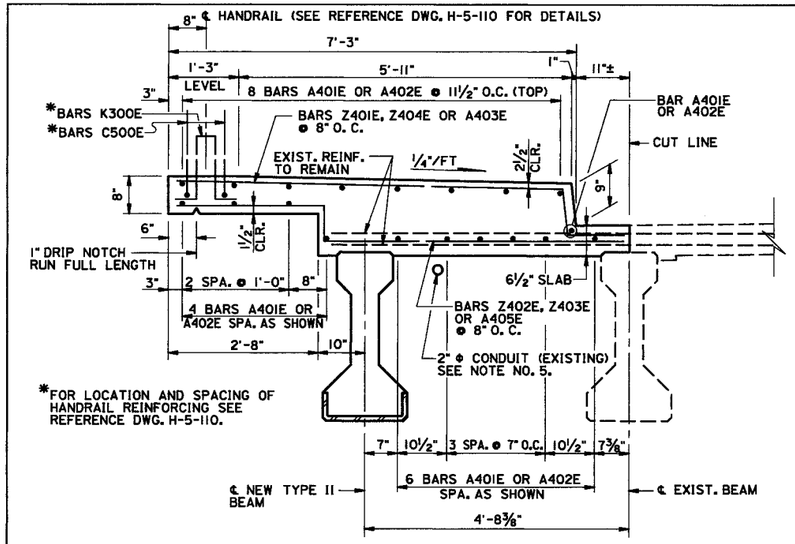
S.R. 14 OVER INTERSTATE 55
BRIDGE ID. NO. 79-14-7.44

SHELBY COUNTY
1993

HARLAND BARTHOLOMEW & ASSOCIATES, INC.
MEMPHIS, TENNESSEE

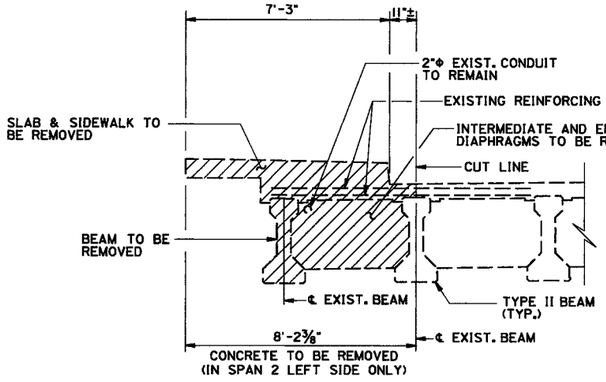
DESIGNED BY J.E. CAMERON DATE 4-93
DRAWN BY J.E. CAMERON DATE 4-93
SUPERVISED BY C.H. BRYANT DATE 4-93
CHECKED BY T.L. DAWSON DATE 4-93

DGN FILE NAME = 610453



DETAIL OF SIDEWALK

(SPAN 2 WEST SIDE ONLY)



REMOVAL SKETCH

LEGEND:

- DENOTES EXISTING STRUCTURE
- DENOTES PROPOSED STRUCTURE
- DENOTES STRUCTURE TO BE REMOVED

NOTE TO CONTRACTOR:

THE SUPERSTUCTURE SHALL BE REMOVED IN PHASES CORRESPONDING TO PHASE IA AND PHASE IB ON SHEET NO. 7. THE CONTRACTOR SHALL SUPPORT THE REMAINING SUPERSTRUCTURE AND PROTECT THE TRAVELED ROADWAY. (APPROX. WEIGHT OF SUPERSTRUCTURE TO BE REMOVED = 1500 LBS./LIN. FT). THE CONTRACTOR SHALL SUBMIT CALCULATIONS AND DETAILS FOR THE SUPPORT SYSTEM TO THE ENGINEER PRIOR TO REMOVAL OF SLAB.

PROJECT NO.	YEAR	SHEET NO.
79022-4220-04	1993	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

NOTES:

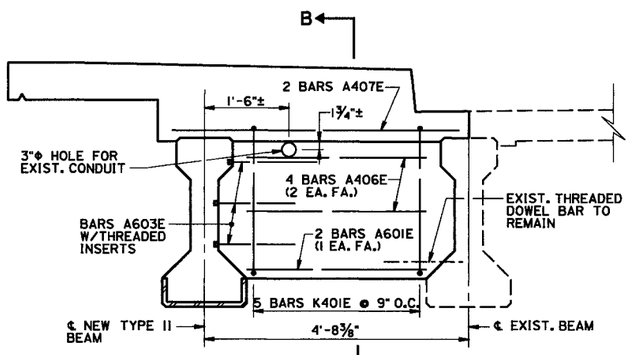
1. WHEN POURING THE SIDEWALK PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR THE RAIL. THE RAIL SHALL NOT BE POURED UNTIL THE SIDEWALK IS POURED AND CURED.
2. EXTREME CARE SHALL BE TAKEN WHEN REMOVING EXISTING CONCRETE SO AS NOT TO DAMAGE EXISTING REINFORCING. ANY TRANSVERSE REINFORCING NOT HAVING A MINIMUM OF 24 INCHES OF EMBEDMENT INTO THE NEW SLAB SHALL BE REPLACED WITH A NO. 5 DOWEL AT THE CONTRACTOR'S EXPENSE. SEE GENERAL NOTE NO. 10 ON SHEET NO. 3.
3. MINIMUM LAP SPLICE LENGTH UNLESS NOTED OTHERWISE: #4 BAR - 1'-8" #6 BAR - 2'-9" #5 BAR - 2'-2"
4. FOR DETAILS OF RAIL SEE DWG. BR-8-23B.
5. THE CONTRACTOR SHALL PROTECT THE 2" ϕ LIGHTING CONDUIT DURING SLAB AND BEAM REMOVAL/REPLACEMENT ANY DAMAGE TO CONDUIT AND/OR WIRING SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
604-10.02	CONCRETE REPAIRS	C.Y.	19
604-10.18	REINFORCING STEEL (REPAIRS)	LBS.	2102

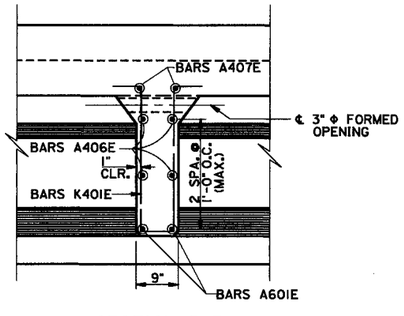
NOTE: THE COST OF ALL NEW CONCRETE, REMOVING EXISTING CONCRETE SLAB & DIAPHRAMS, BLASTCLEANING OF EXISTING REINFORCING STEEL, FORMS, GROUT, DRILLING AND ALL OTHER MATERIALS NECESSARY FOR REPAIR OF SLAB, DIAPHRAMS AND SIDEWALK AS SHOWN IN DETAILS THIS SHEET SHALL BE INCLUDED UNDER ITEM NO. 604-10.02, CONCRETE SLAB REPAIR, C.Y.

NOTE: THE COST OF NEW EPOXY COATED REINFORCING STEEL, LABOR, AND ANY MATERIALS NECESSARY FOR PLACING REINF. STEEL IN SLAB, DIAPHRAMS AND SIDEWALK SHALL BE INCLUDED UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LB.

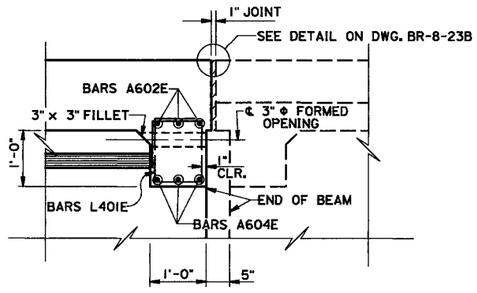


DETAIL OF INTERMEDIATE DIAPHRAGM AND SIDEWALK

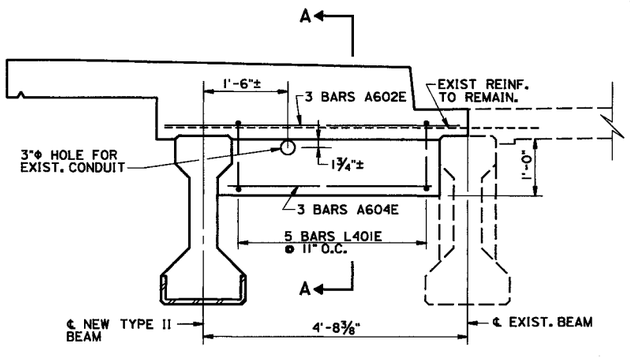
(SPAN 2 WEST SIDE ONLY)



SECTION B-B



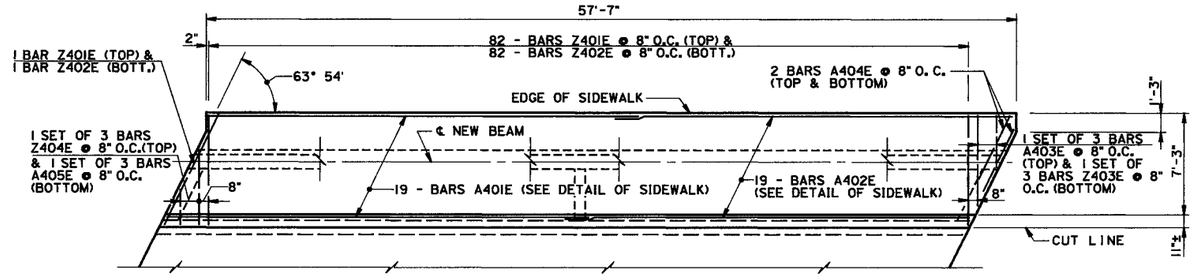
SECTION A-A



DETAIL OF END DIAPHRAGM AND SIDEWALK

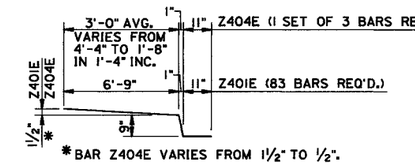
(SPAN 2 WEST SIDE ONLY)

BARS A	
3'-10"	A604E (6 BARS REQ'D.)
2'-9"	A603E (3 BARS REQ'D.)
5'-9"	A602E (6 BARS REQ'D.)
3'-2"	A601E (2 BARS REQ'D.)
5'-2"	A407E (2 BARS REQ'D.)
3'-6"	A406E (4 BARS REQ'D.)
3'-10" AVG.	A405E (VARIES FROM 5'-2" TO 2'-6" IN INCR. OF 1'-4") (1 SET OF 3 BARS)
7'-6"	A404E (4 BARS REQ'D.)
5'-1" AVG.	A403E (VARIES FROM 6'-3" TO 3'-7" IN INCR. OF 1'-4") (3 BARS REQ'D.)
29'-0"	A402E (19 BARS REQ'D.)
30'-0"	A401E (19 BARS REQ'D.)

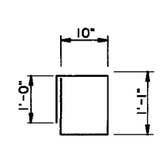


PARTIAL PLAN SPAN 2

(LEFT SIDE ONLY)

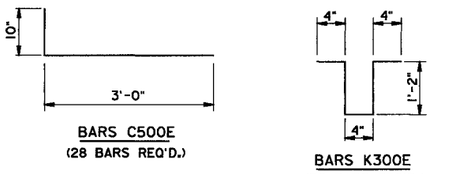


*BAR Z404E VARIES FROM 1½" TO ½".



BARS K401E
(5 BARS REQ'D.)

BARS L401E
(10 BARS REQ'D.)



BARS Z

BARS C500E
(28 BARS REQ'D.)

BARS K300E
(56 BARS REQ'D.)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
SUPERSTRUCTURE REPAIR DETAILS
SHEET 1 OF 2
S.R. 14 OVER INTERSTATE 55
BRIDGE ID. NO. 79-14-7.44

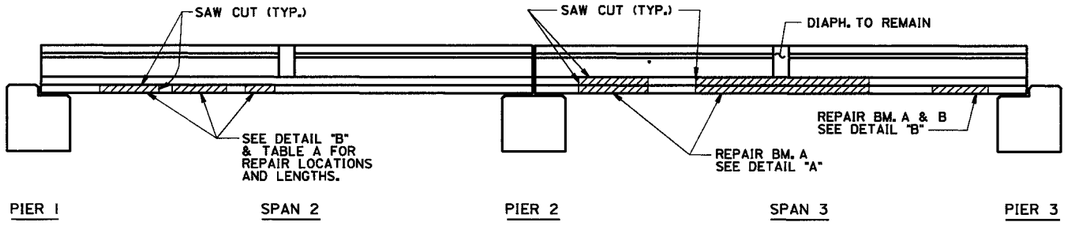
SHELBY COUNTY
1993

HARLAND BARTHOLOMEW & ASSOCIATES, INC.
MEMPHIS, TENNESSEE

DESIGNED BY	J.R. PEGG	DATE 4-93
DRAWN BY	R.C. HANDY	DATE 4-93
SUPERVISED BY	C.H. BRYANT	DATE 4-93
CHECKED BY	M.E. McGUIRE	DATE 4-93

DGN FILE NAME = 610451

BR-8-21

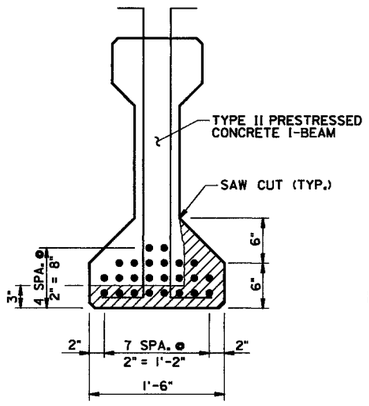


CONSTRUCTION PROCEDURE FOR REPAIRING DAMAGED PRESTRESSED BEAMS

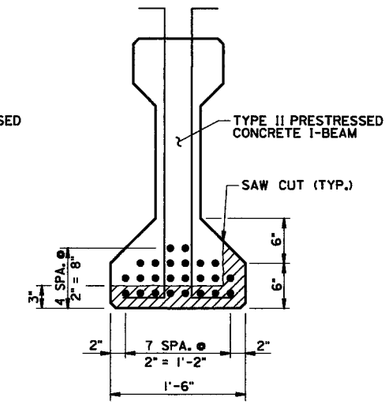
1. SAW CUT AND REMOVE PORTIONS OF THE PRESTRESSED BEAMS AS SHOWN IN THESE PLANS TO INSURE THAT SOUND CONCRETE IS REACHED IN ALL AREAS.
2. WET REPAIR AREAS WITH WATER AND APPLY TWO (2) COMPONENT BONDING COMPOUND TO ALL CONCRETE SURFACES, PRESTRESSING STRANDS, AND REINFORCING STEEL. BONDING COMPOUND SHALL CONSIST OF THE TWO (2) COMPONENT, CEMENTITIOUS POLYMER MODIFIED CONCRETE (SIKATOP III OR EQUAL).
3. FORM AND POUR REPAIR AREA WITH CEMENTITIOUS POLYMER MODIFIED CONCRETE (SIKATOP III OR EQUAL) TO ORIGINAL BEAM LINES. THE SIKATOP III IS PREPACKAGED IN A ONE-HALF (1/2) CUBIC FOOT KIT, TWO (2) COMPONENT SYSTEM. ADD TO EACH KIT THREE AND ONE-HALF (3 1/2) GALLONS OF PEA GRAVEL AND WATER AS PER MANUFACTURERS RECOMMENDATIONS.

BEAM SURFACE REPAIR

NOTE: CONTRACTOR SHALL TAKE EXTREME CARE WHEN REMOVING EXISTING CONCRETE SO AS NOT TO DAMAGE THE EXISTING PRESTRESSED STRANDS. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE FULL SATISFACTION OF THE ENGINEER.



DETAIL "A"



DETAIL "B"

TABLE A

BEAM REPAIR LOCATIONS

LOCATION	ⓐ BEAM	S.F.	LENGTH L (FT.)
SPAN 2	B	5	2.5'
SPAN 2	D	2	1'
SPAN 2	E	2	1'
SPAN 2	Q	3	1.5'
SPAN 2	R	3	1.5'
SPAN 2	T	6	3'
SPAN 3	A	39	18'
SPAN 3	B	10	5'
TOTAL		70	

L = TOTAL LENGTH OF ALL DAMAGED AREAS PER BEAM.

ⓐ BEAMS ARE LETTERED FROM LEFT TO RIGHT LOOKING IN DIRECTION OF ROUTE.

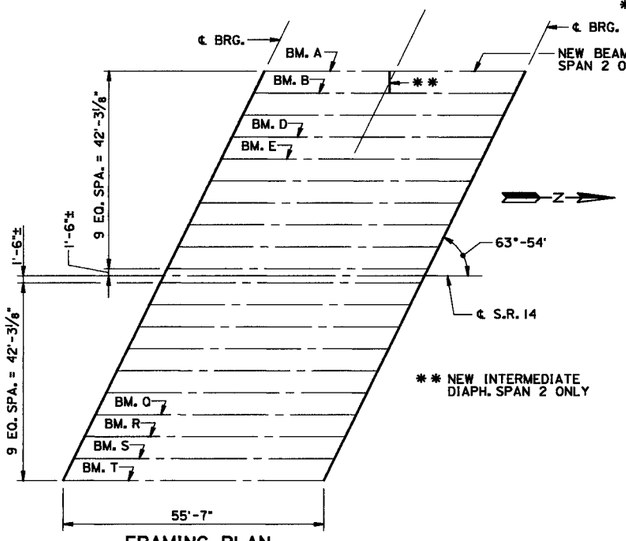
NOTE: THE COST OF SAW CUTTING, REMOVING SPALLED CONCRETE, FORMING, NEW CEMENTITOUS POLYMER MODIFIED CONCRETE, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS OF PRESTRESSED CONCRETE BEAMS TO BE INCLUDED UNDER ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F. THE ENGINEER SHALL DESIGNATE AREAS OF REPAIRS FOR THIS ITEM NO.

SPECIAL NOTE TO CONTRACTOR: PRESTRESSED CONCRETE I-BEAM REPAIRS SHOWN THIS SHEET ARE APPROXIMATE AREAS AND LENGTHS ONLY, AND MAY BE INCREASED OR DECREASED AS DIRECTED BY THE ENGINEER. ADDITIONAL BEAMS WITHIN THE BRIDGE MAY BE DESIGNATED TO RECEIVE SIMILAR TYPE REPAIRS. ALL AREAS OF PRESTRESSED BEAM REPAIR SHALL BE DESIGNATED BY THE ENGINEER FROM THE OFFICE OF INSPECTION AND REPAIR. ANY ADDITIONAL AREAS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM NO. 604-10.54 CONCRETE REPAIRS, S.F.

PROJECT NO.	YEAR	SHEET NO.
79022-4220-04	1993	

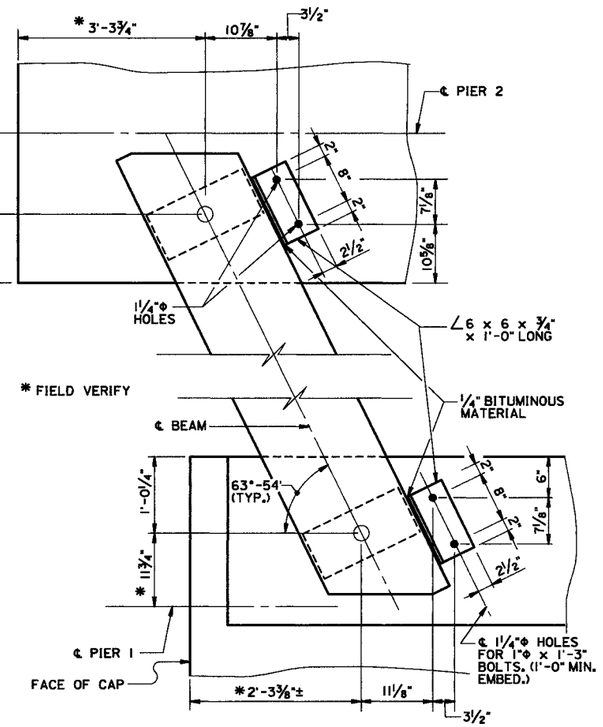
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



** NEW INTERMEDIATE DIAPH. SPAN 2 ONLY

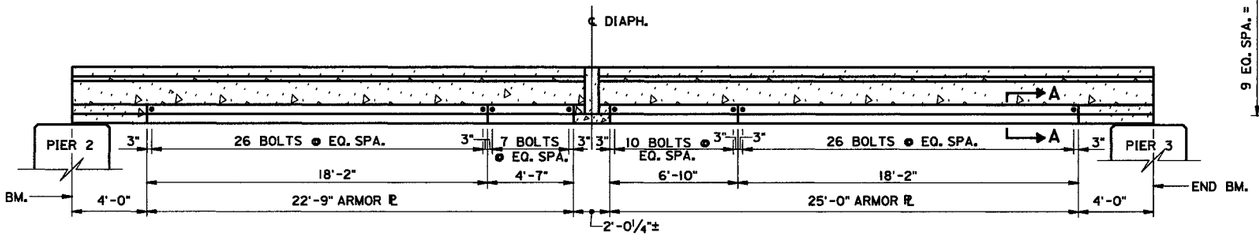
FRAMING PLAN
(SPAN 2 & 3)



PLAN VIEW

KEEPER ANGLE DETAILS

THE COST OF FURNISHING, PAINTING & INSTALLING 2 KEEPER ANGLES & BIT. MAT'L. AS SHOWN SHALL BE INCLUDED IN THE COST OF ITEM NO. 615-01.02, PRESTRESSED CONCRETE I-BEAM (TYPE II), LF.



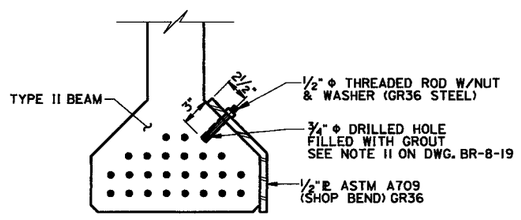
ELEVATION - BEAM "A" SPAN 3

NOTE: CONTRACTOR TO FIELD VERIFY ALL SPLICE LOCATIONS & LENGTHS PRIOR TO FABRICTION OF ARMOR ℄'S.

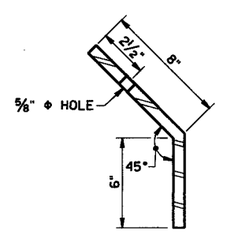
NOTE: THE COST OF ALL STEEL, BOLTS, DRILLING, GROUTING, WELDING, PAINT, LABOR AND MISCELLANEOUS MATERIALS REQUIRED TO ARMOR THE BEAM IN PHASES AS SHOWN SHALL BE INCLUDED UNDER ITEM NO. 602-10.06, STRUCTURAL STEEL, LBS.

NOTE: STEEL SHALL BE PAINTED IN ACCORDANCE WITH NOTE 15 ON DWG. BR-8-19.

NOTE: THE SURFACE OF BEAM A SPAN 3 SHALL BE REPAIRED AS SHOWN THIS SHEET PRIOR TO PLACING ARMOR PLATE ON THE BEAM. THE POLYER MODIFIED CONCRETE SHALL SET FOR THREE DAYS MIN. PRIOR TO PLACING ARMOR PLATE.



SECTION A-A
BEAM A, SPAN 3



ARMOR PLATE DETAIL

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
SUPERSTRUCTURE REPAIR DETAILS
SHEET 2 OF 2
S. R. 14 OVER INTERSTATE 55

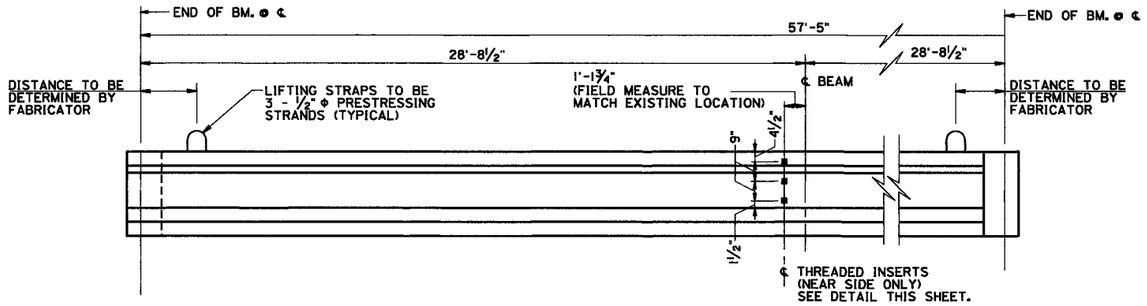
BR. ID. NO. 79-14-7.44
SHELBY COUNTY
1993

HARLAND BARTHOLOMEW & ASSOCIATES, INC.
MEMPHIS, TENNESSEE

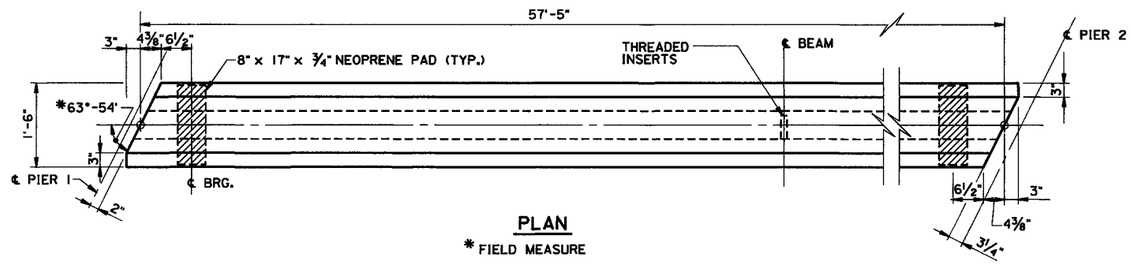
DESIGNED BY T.L. DAWSON DATE 9-93
DRAWN BY D. RANDALL DATE 9-93
SUPERVISED BY C.H. BRYANT DATE 9-93
CHECKED BY M.E. McGUIRE DATE 9-93

DGN FILE NAME = 610458

BR-8-22

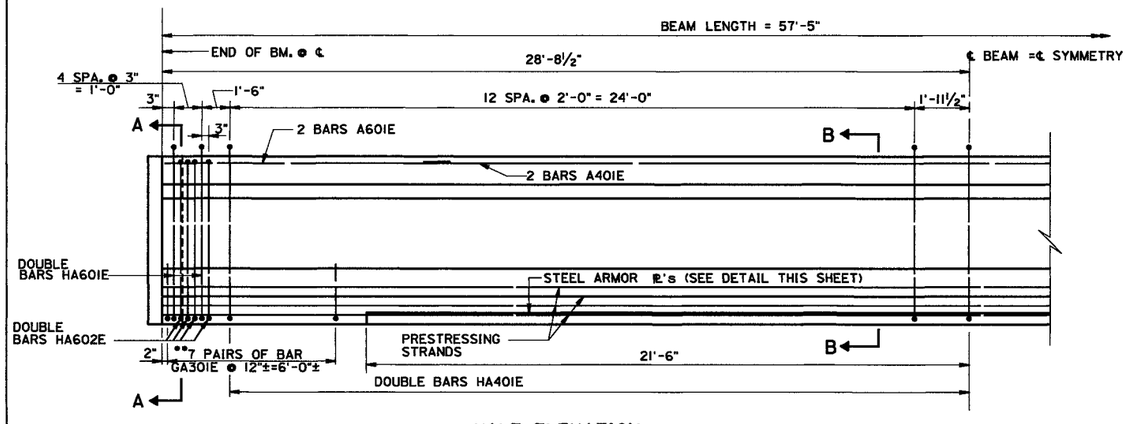


ELEVATION



PLAN

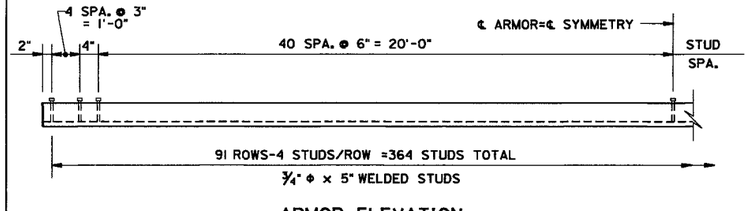
* FIELD MEASURE



•• BARS GA30IE MAY BE SPACED WITH "HA" BARS @ 12"± TO FACILITATE PLACEMENT.

HALF ELEVATION

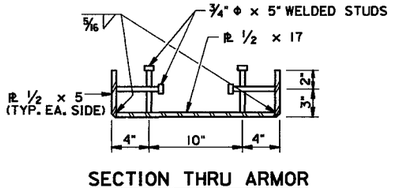
(SHOWING STIRRUP BAR ARRANGEMENT)
N.T.S.



ARMOR ELEVATION

NOTE: STEEL FOR SHEAR CONNECTORS SHALL CONFORM TO ASTM A108.

NOTE: THE COST OF PAINTING STRUCTURAL STEEL SHALL BE INCLUDED UNDER ITEM NO. 615-01.02. SEE NOTE 14 ON DWG. BR-8-19.



SECTION THRU ARMOR

ESTIMATED QUANTITIES (PER BEAM)

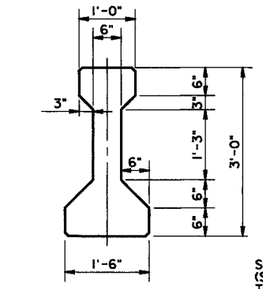
LOCATION	NO. OF BEAMS REQ'D.	CONCRETE (C.Y.)	REINFORCING STEEL (LB.)	PRESTR. STEEL (LB.)
SPAN 2	1	5.4	424	542

NOTE: COST OF ELASTOMERIC PADS, RUBBER BONDING CEMENT, 4-1" Φ ANCHOR BOLTS, DRILLING GROUTING, KEEPER ANGLES, NUTS, WASHERS, WELDING, ¾" Φ STUDS AND STEEL PLATES (2345 LBS. REQ'D.) TO BE INCLUDED IN THE COST OF ITEM NO. 615-01.02, PRESTRESSED CONCRETE I-BEAM (TYPE II). LF.

HARLAND BARTHOLOMEW & ASSOCIATES, INC.
MEMPHIS, TENNESSEE

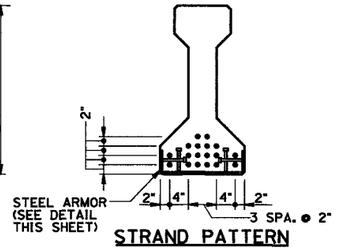
DESIGNED BY T.L. DAWSON DATE 4-93
DRAWN BY R.C. HANDY DATE 4-93
SUPERVISED BY C.H. BRYANT DATE 4-93
CHECKED BY M.E. McGUIRE DATE 4-93

DGN FILE NAME=6104156



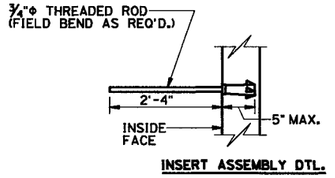
AASHTO TYPE II BEAM

(STEEL ARMOR NOT SHOWN FOR CLARITY)



STRAND PATTERN

18 - ½" Φ 270 KSI LOW-RELAXATION STRANDS.

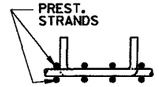


INSERT ASSEMBLY DTL.

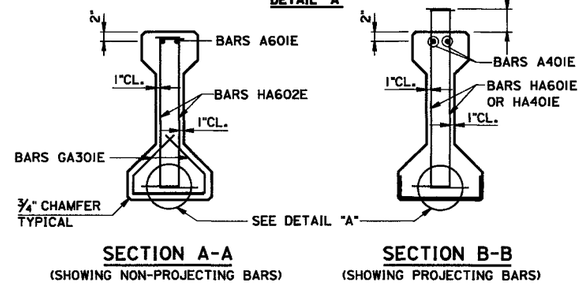
PROJECT NO.	YEAR	SHEET NO.
79022-4220-04	1993	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



DETAIL "A"



SECTION A-A

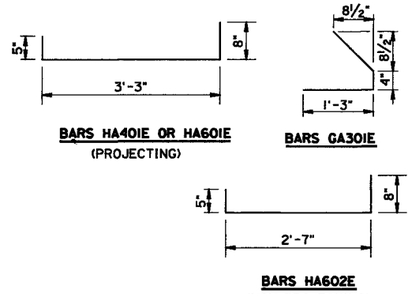
(SHOWING NON-PROJECTING BARS)

SECTION B-B

(SHOWING PROJECTING BARS)

BILL OF STEEL (PER BEAM)

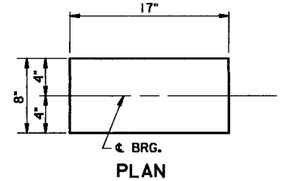
BAR	SIZE	NO. REQ'D.	LENGTH	SHAPE
A40IE	4	2	48'-4"	——
A60IE	6	4	6'-0"	——
GA30IE	3	28	2'-7"	⟍
HA40IE	4	54	4'-4"	⌊⌋
HA60IE	6	8	4'-4"	⌊⌋
HA602E	6	16	3'-8"	⌊⌋



BAR BEND DIAGRAMS

NOTES:

1. THE TOP OF BEAM IS TO BE ROUGH FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOP OF BEAM SHALL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PRODUCE A ROUGH SURFACE.
2. MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. ALL PRESTRESSING STRANDS SHALL BE ½" Φ ASTM GRADE 270K, 7 WIRE UNCOATED STRESS RELIEVED LOW RELAXATION PRESTRESSING STRANDS.
4. AN INITIAL FORCE OF 31003 LBS. SHALL BE APPLIED TO EACH STRAND.
5. BEAM IS AASHTO - PCI STANDARD TYPE II.
6. THE PRESTRESSING STRANDS TO BE CUT FLUSH WITH END OF BEAM AND A PROTECTIVE COATING PLACED ON THE END OF BEAM.
7. INSERTS FOR DIAPHRAGM ARE TO BE DOUBLE THREADED TYPE (CAST-IN-PLACE). ¾" Φ THREADED RODS FOR INSERTS ARE TO PROVIDE A 2'-0" SPLICE WITH DIAPHRAGM REINFORCEMENT.
8. THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 6,000 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 4,500 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.
9. THE SEQUENCE FOR TRANSFER OF STRESS OR THE CUTTING OF 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 1/6 TH OF THE TOTAL PRESTRESSING FORCE BE ECCENTRIC ABOUT THE CENTERLINE OF THE BEAM.
10. PRESTRESSING STRANDS SHALL NOT BE GREATER THAN NOMINAL ½" DIAMETER.
11. FOR ELASTOMERIC BEARING PAD DETAILS SEE THIS DRAWING. ALL NEOPRENE PADS TO BE 70 DUROMETER.
12. SEE DWG. BR-8-22 FOR PLACEMENT OF KEEPER ANGLES.
13. SEE GENERAL NOTES 12 THRU 17 ON DWG. BR-8-19 REGARDING STRUCTURAL STEEL.



PLAN

BEARING PAD DETAIL

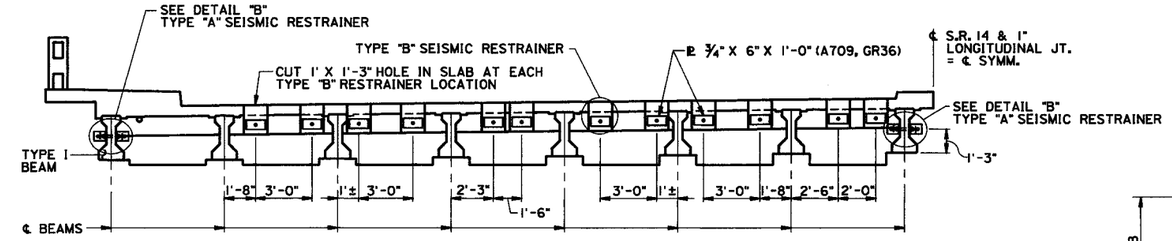
(2 REQ'D.)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
BEAM REPAIR DETAILS

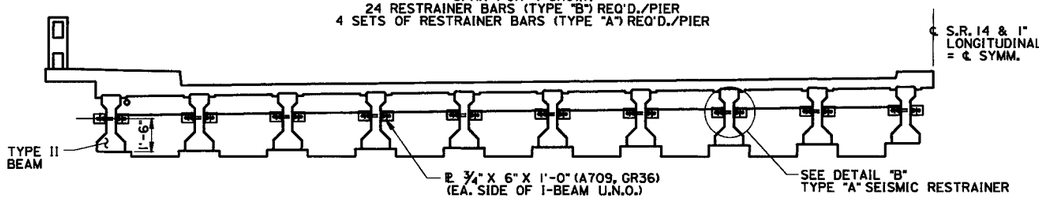
S.R. 14 OVER INTERSTATE 55
BRIDGE I.D. NO. 79-14-7.44

SHELBY COUNTY
1993



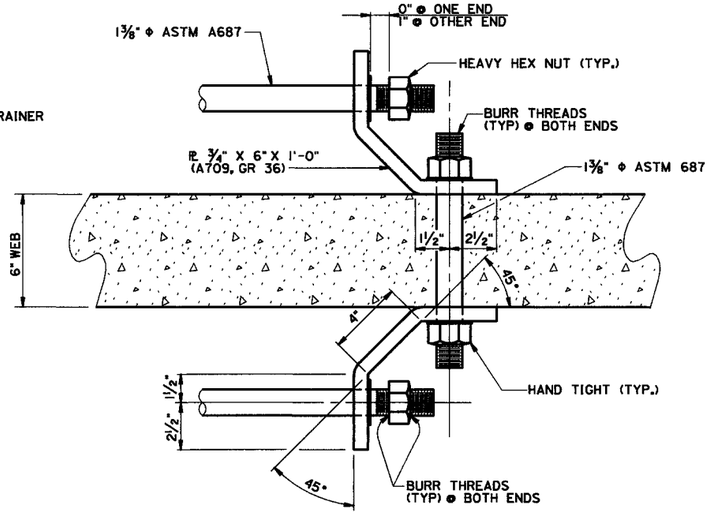
PART TYPICAL SECTION @ PIERS 1 OR 3

SPAN 1 OR 4 SHOWN
24 RESTRAINER BARS (TYPE "B") REQ'D./PIER
4 SETS OF RESTRAINER BARS (TYPE "A") REQ'D./PIER



PART TYPICAL SECTION @ PIER 2

20 SETS OF RESTRAINER BARS (TYPE "A") REQUIRED @ PIER 2



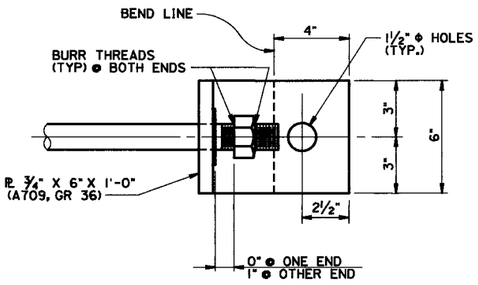
PLAN VIEW @ FITTING

(TYPE "A" SEISMIC RESTRAINER)

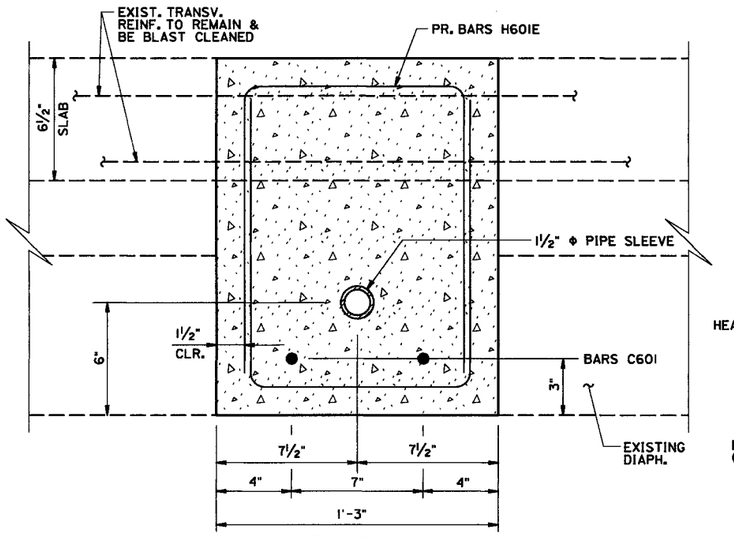
PROJECT NO.	YEAR	SHEET NO.
79022-4220-04	1993	

REVISIONS

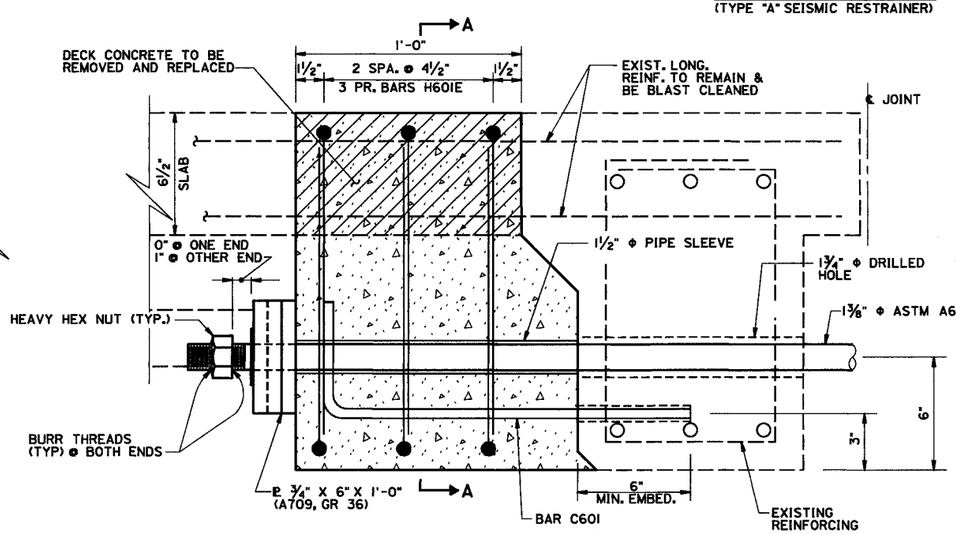
NO.	DATE	BY	BRIEF DESCRIPTION



DETAIL "A"



SECTION A-A



DETAIL "C"

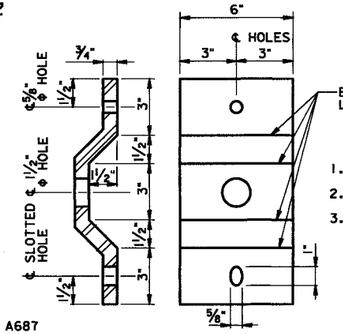
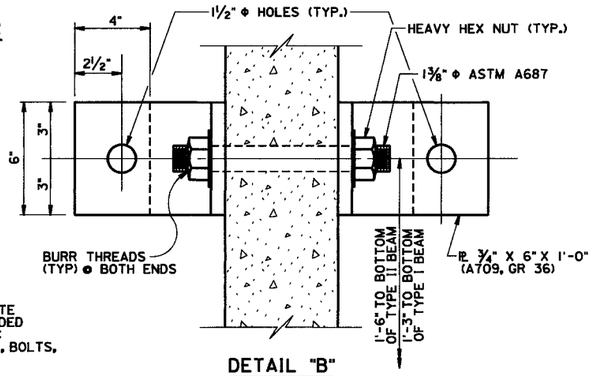
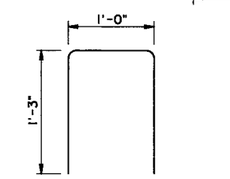


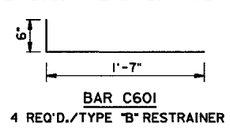
PLATE DIMENSIONS FOR TYPE "B" RESTRAINER



DETAIL "B"

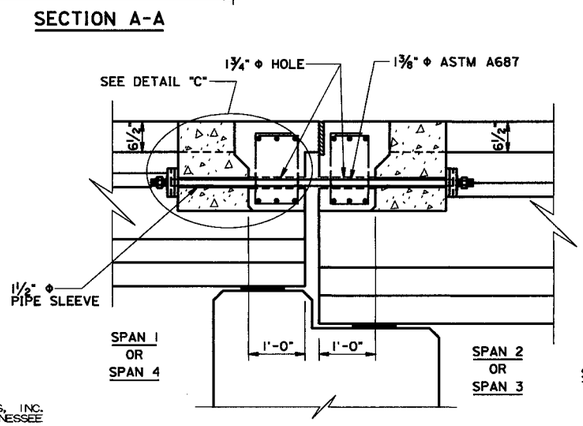


BAR H60IE
12 REQ'D./TYPE "B" RESTRAINER



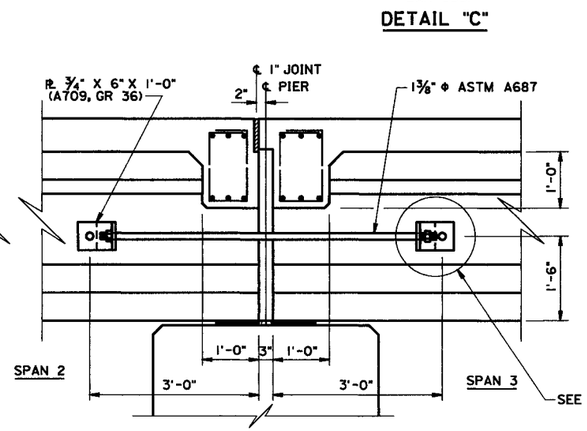
BAR C60I
4 REQ'D./TYPE "B" RESTRAINER

BAR BENDS



END DIAPHRAGM @ PIER 1

(PIER 3 OPPOSITE HAND)



END DIAPHRAGM @ PIER 2

NOTES:

1. USE STANDARD WASHERS (1½" I.D., 2¾" O.D.) ASTM F436.
2. BOLTS, NUTS AND WASHERS GALVANIZED TO ASTM 153 CLASS "C".
3. PLATE GALVANIZED TO ASTM 153 CLASS B-3.

NOTE: THE COST OF ALL LABOR AND MATERIALS REQUIRED FOR COMPLETE INSTALLATION OF SEISMIC RESTRAINER, TYPE "A" IS TO BE INCLUDED IN THE PRICE BID FOR ITEM NO. 604-03.21, BRIDGE JOINT SEISMIC MODIFICATION, EACH. A PAIR OF BARS AND ACCOMPANYING PLATES, BOLTS, NUTS AND WASHERS IS CONSIDERED ONE UNIT.

NOTE: ALL STEEL IN SEISMIC RESTRAINERS SHALL BE PAINTED IN ACCORDANCE WITH NOTE 15 ON DWG-BR-8-19. COST TO BE INCLUDED UNDER ITEM NO. 604-03.21 & 604-10.81.

NOTE: THE COST OF REMOVING PORTIONS OF EXISTING SLAB, NEW CONCRETE, BLASTCLEANING, REINFORCING, PIPE SLEEVES, DRILLING, GROUT, PLATES, NUTS, BOLTS, RESTRAINER BAR, LABOR, AND ALL MISCELLANEOUS MATERIAL REQUIRED TO PLACE A TYPE "B" SEISMIC RESTRAINER AS DETAILED THIS SHEET SHALL BE INCLUDED UNDER ITEM NO. 604-10.81, CONCRETE REPAIRS, EACH. TWO DIAPHRAGM BUILDUPS, ONE EACH SIDE OF THE JOINT, WITH ACCOMPANING PLATES, BOLTS, ETC., SHALL BE CONSIDERED ONE UNIT. (APPROX. 4.4 CF OF CONCRETE & 76# OF REINFORCING STEEL REQ'D./TYPE "B" RESTRAINER)

NOTE: DECK & DIAPHRAGM CONCRETE TO BE HIGH EARLY STRENGTH CONCRETE.

NOTE: STEEL PLATES SHALL BE USED TO COVER ALL HOLES IN DECK UNTIL CONCRETE HAS COMPLETELY CURED AND THE ASHPALT IS IN PLACE. THE COST OF STEEL PLATES SHALL BE INCLUDED UNDER ITEM BID FOR TYPE "B" SEISMIC RESTRAINER.

HARLAND BARTHOLOMEW & ASSOCIATES, INC.
MEMPHIS, TENNESSEE

DESIGNED BY T.L. DAWSON DATE 9-93
DRAWN BY D. RANDALL DATE 9-93
SUPERVISED BY C.H. BRYANT DATE 9-93
CHECKED BY M.E. McGUIRE DATE 9-93

DGN FILE NAME = 6104160

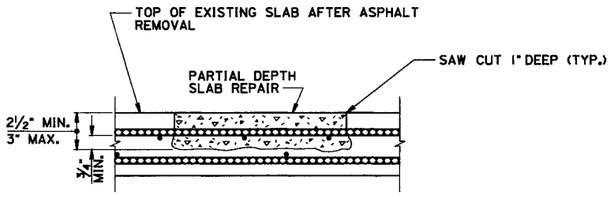
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
SEISMIC RETROFIT DETAILS
PIERS

S.R. 14 OVER INTERSTATE 55

BRIDGE ID. NO. 79-SR14-7.44
SHELBY COUNTY
1993

BR-8-23A



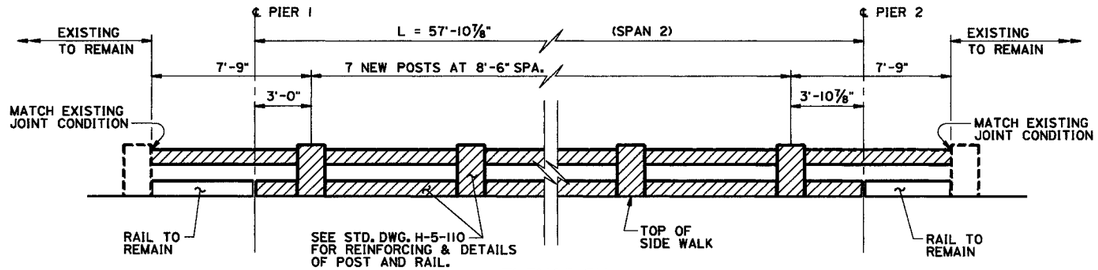
SKETCH SHOWING DECK REPAIR

REMOVE CONCRETE IN ALL DELAMINATED AREAS TO A DEPTH OF ¾" BELOW THE TOP BAR OF THE TOP MAT OF REINFORCING STEEL. ALL REINFORCING STEEL IN AREAS OF DECK REPAIR SHALL BE BLAST CLEANED. AREAS OF CONCRETE REMOVAL SHALL BE DESIGNATED BY PERSONNEL FROM THE HEADQUARTERS, BRIDGE INSPECTION AND REPAIR OFFICE. DECK REPAIR WILL BE PAID FOR UNDER ITEM NO. 604-10.50, BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB), S.Y.

POWER DRIVEN HAND TOOLS USED FOR REMOVAL OF UNSOUND CONCRETE IN MAKING PARTIAL DEPTH REPAIRS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS: 1) PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 35 LB. CLASS SHALL NOT BE USED; 2) CHIPPING HAMMERS OF THE 15 LB. CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.

ITEM 604-10.50 SHALL BE BID WITH THE CONTINGENCY THAT THIS ITEM MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

AREAS TO BE REPAIRED SHALL BE POURED WITH HIGH EARLY STRENGTH, 3500 p.s.i. CONCRETE. COARSE AGGREGATE FOR THE CONCRETE USED IN PARTIAL DEPTH SLAB REPAIRS SHALL BE SIZE 67 STONE. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIRED AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3000 p.s.i. MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF TEN (10) DAYS. AN APPROVED EPOXY BONDING AGENT SHALL BE USED BETWEEN THE OLD CONCRETE AND THE NEW CONCRETE POURS.



ELEVATION

RAIL REPLACEMENT DETAIL

(REQUIRED IN SPAN 2, LEFT BRIDGE ONLY)

NOTE: ALL REINFORCING IN POST AND RAIL TO BE EPOXY COATED

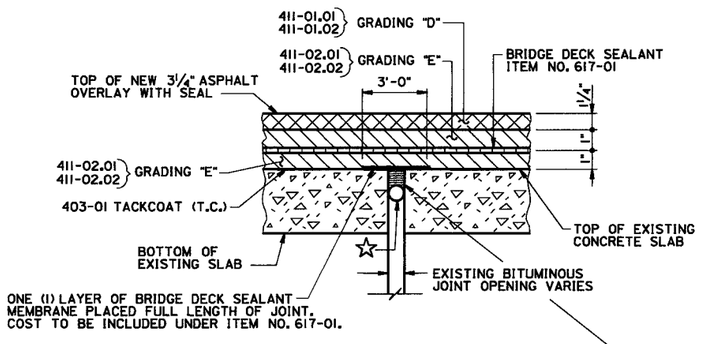
THE COST OF FORMING, NEW CONCRETE, EPOXY COATED REINFORCING, LABOR AND ALL MISCELLANEOUS MATERIAL REQUIRED TO PLACE A NEW RAIL WITHIN LIMITS SHOWN AND IN ACCORDANCE WITH REFERENCE DWG. H-5-110, TO BE INCLUDED UNDER ITEM NO. 604-10.22, CONCRETE PARAPET REPAIR, L.F.

▨ DENOTES RAIL/POST TO BE REMOVED AND REPLACED.

PROJECT NO.	YEAR	SHEET NO.
79022-4220-04	1993	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



TOP 2" OF ALL EXISTING BITUMINOUS JOINTS IN THE BRIDGE SLAB TO BE CLEANED AND RESEALED WITH NEW JOINT SEALER. JOINT SEALER SHALL BE TYPE II HOT-POURED ELASTIC TYPE CONCRETE JOINT SEALER. SEE STANDARD SPECIFICATIONS SECTION 905.05, JOINT SEALERS. COST OF JOINT CLEANING AND SEALING TO BE INCLUDED UNDER ITEM NO. 617-01 (BRIDGE DECK SEALANT). THE SEALER SHALL EXTEND UP AND ACROSS THE CURB TO THE OUTER EDGE OF THE BRIDGE SLAB.

EXISTING BITUMINOUS JOINT REPAIR DETAIL

(REQUIRED AT ALL TRANSVERSE JOINTS)

☆ NOTE: THE MOVEMENT GAP SHALL BE CAULKED WITH A BACKER ROD OF SUITABLE DIAMETER. THE ROD SHALL BE PLACED AT A DEPTH TO ENSURE THE CORRECT WIDTH/DEPTH RATIO OF THE EXISTING BRIDGE JOINT SYSTEM. BACKER ROD AND CAULK SHALL BE AS PER JOINT MANUFACTURER.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
MISCELLANEOUS REPAIR DETAILS

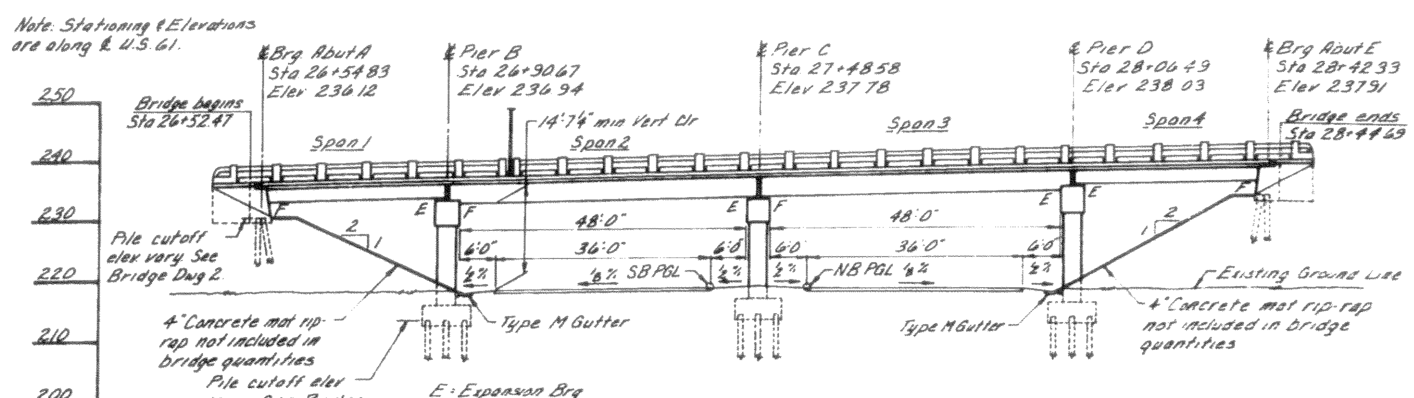
S. R. 14 OVER INTERSTATE 55

BR. ID. NO. 79-14-7.44
SHELBY COUNTY
1993

HARLAND BARTHOLOMEW & ASSOCIATES, INC.
MEMPHIS, TENNESSEE

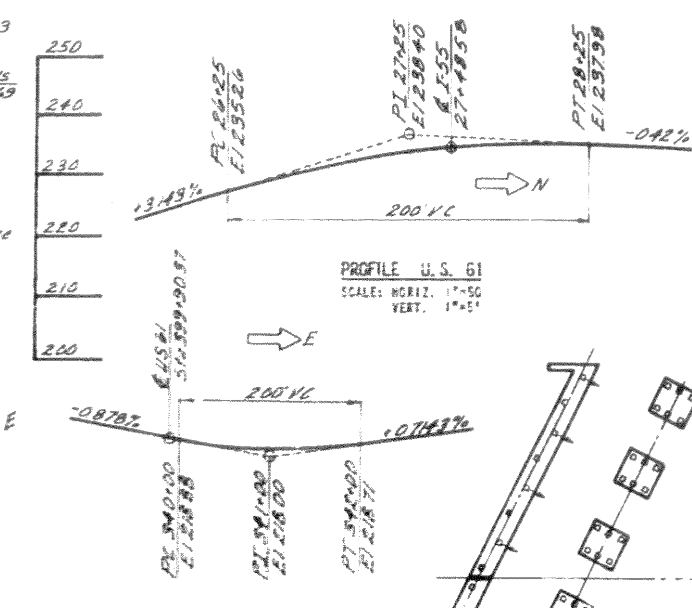
DESIGNED BY T.L. DAWSON DATE 9-93
DRAWN BY D. RANDALL DATE 9-93
SUPERVISED BY C.H. BRYANT DATE 9-93
CHECKED BY M.E. McGUIRE DATE 9-93

DGN FILE NAME = 610462



ELEVATION

SCALE: 1"=15'

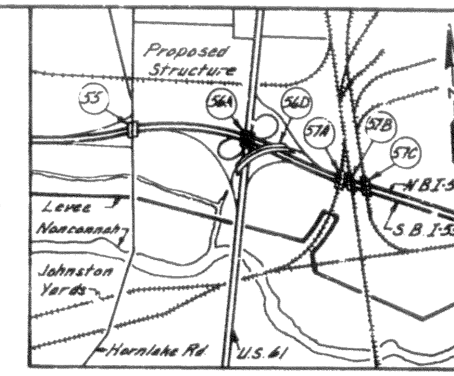


PROFILE U.S. 61

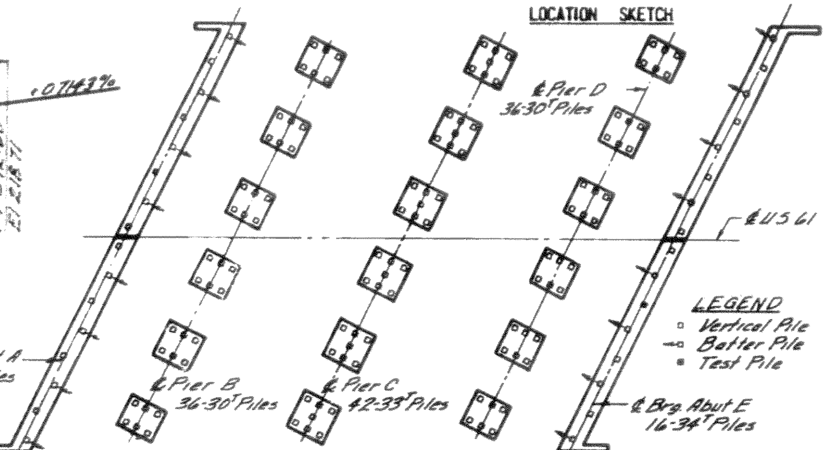
SCALE: HORIZ. 1"=50' VERT. 1"=5'

PROFILE I-55

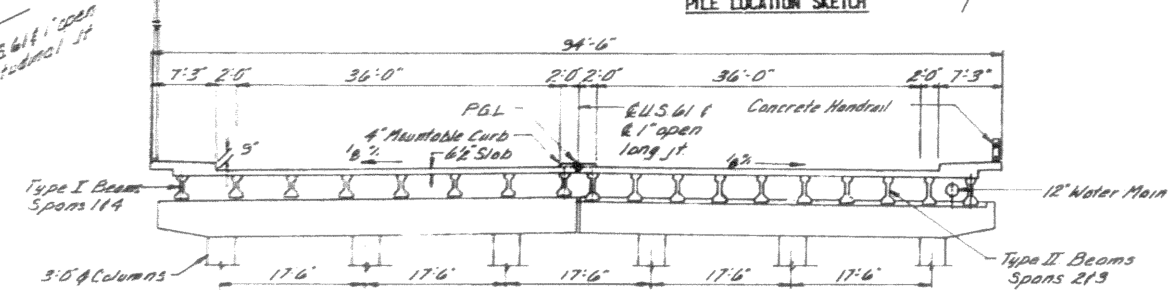
SCALE: HORIZ. 1"=100' VERT. 1"=5'



LOCATION SKETCH

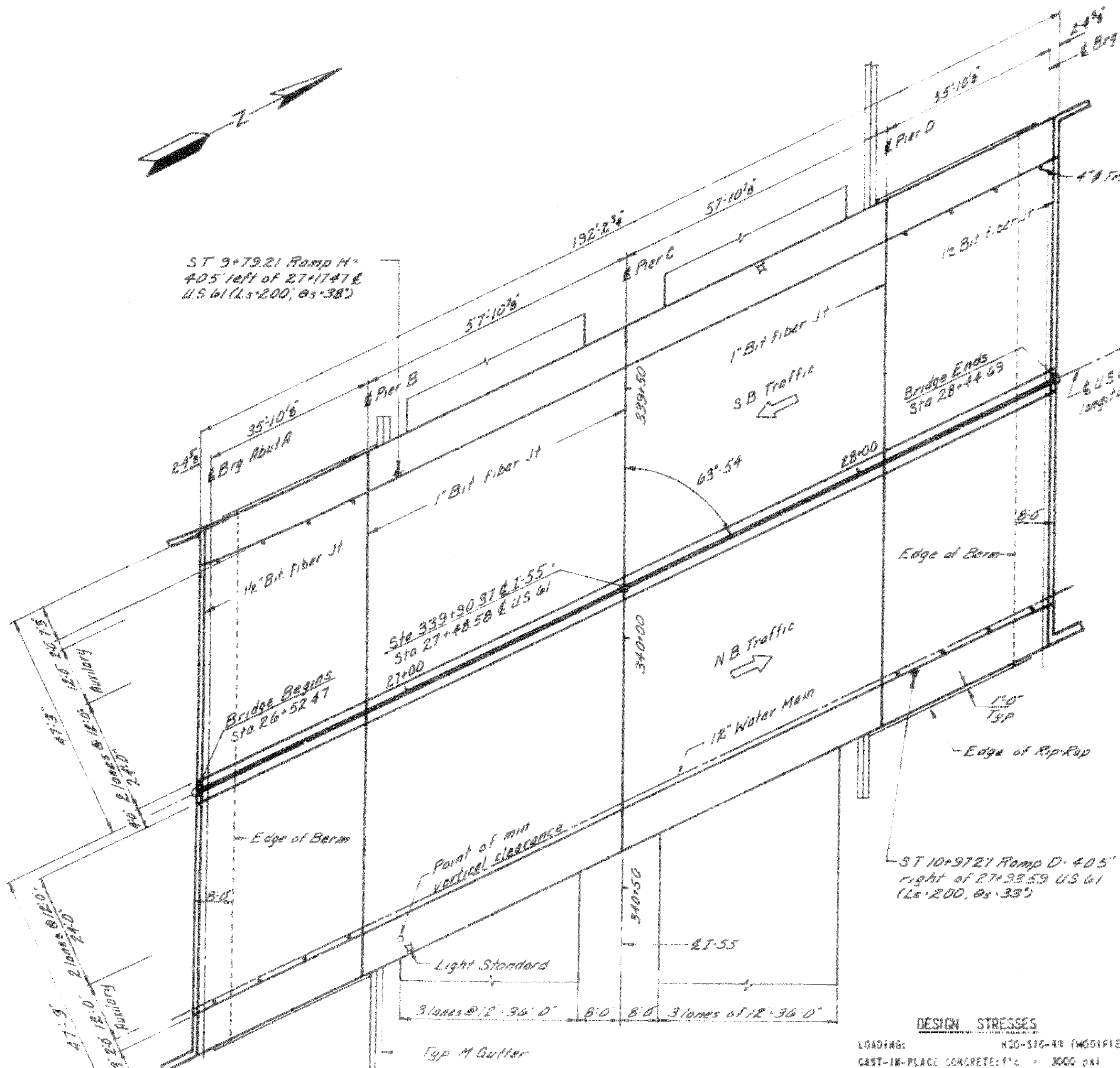


PILE LOCATION SKETCH



TYPICAL CROSS SECTION

SCALE: 1"=10'



PLAN

SCALE: 1"=15'

JOB NO. 429-C

DESIGN STRESSES

LOADING:	H20-S16-44 (MODIFIED)
CAST-IN-PLACE CONCRETE:	f'c = 3000 psi
	fc = 1200 psi
	n = 10
REINFORCING STEEL:	fs = 20,000 psi

SUMMARY OF ESTIMATED QUANTITIES

ITEM		DRY EXCAVATION (BRIDGES) ①	CLASS A CONCRETE ②	STEEL BAR REINFORCEMENT ③	PRESTRESSED CONCRETE BEAMS TYPE I ④	PRESTRESSED CONCRETE BEAMS TYPE II ④	PRECAST CONCRETE TEST PILES	PRECAST CONCRETE PILING SIZE I	LIGHTING SYSTEM ⑤	CONCRETE HANDRAIL
UNIT		CU.YDS.	CU.YDS.	LBS.	EACH	EACH	LIN.FT.	LIN.FT.	LUMP SUM	LIN.FT.
SUPERSTRUCTURE	SPAN 1		94.7	23,650	16(35'-6)					
	SPAN 2		141.1	29,540		20(56'-7)				
	SPAN 3		141.9	29,540		20(56'-7)				
	SPAN 4		94.6	23,650	16(35'-6)					
SUBSTRUCTURE	ABUTMENT A		56.3	5,120						
	PIER B	167	138.2	15,480						
	PIER C	184	142.1	15,060						
	PIER D	167	139.1	15,730						
	ABUTMENT E		56.1	5,120						
TOTAL		518	1004.1	162,890	32	40	240	3500	1	410

① ALL EXCAVATION SHALL BE CONSIDERED DRY EXCAVATION (BRIDGES)

② ALL BRIDGE JOINT MATERIALS AND TRANSITE DRAINS SHALL BE CONSIDERED INCIDENTAL TO CLASS A CONCRETE FOR PAYMENT.

③ STEEL BAR REINFORCEMENT QUANTITIES INCLUDE 464 LBS. OF W.W.F.

④ PAYMENT FOR ALL BEARINGS, THREADED DOWELS, AND ALL ITEMS CAST INTO THE BEAMS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR FURNISH AND PLACE PRESTRESSED BEAMS, TYPE I OR II. REQUIRED FOR BEARINGS FOR THIS STRUCTURE ARE 48 SQ.FT. OF 1/2" THICK AND 80 SQ.FT. OF 3/4" THICK NEOPRENE PAD.

⑤ THE CONTRACTOR SHALL FURNISH AND INSTALL LIGHT STANDARDS, CONDUITS, CONDULETS, HANGERS, PULLBOXES, GROUNDING WIRE AND AUXILIARY EQUIPMENT.

GENERAL NOTES

1. SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS
2. CAST-IN-PLACE CONCRETE SHALL BE CLASS A. SEE SPECIFICATIONS.
3. REINFORCING STEEL: SEE SPECIFICATIONS. INTERMEDIATE OR HARD GRADE SHALL BE USED. ALL DIMENSIONS ARE TO THE CENTER OF BARS UNLESS OTHERWISE INDICATED. ALL BARS SHALL HAVE A MINIMUM COVER OF 3 INCHES IN FOOTINGS, 2 INCHES IN OTHER SUBSTRUCTURE COMPONENTS, AND 1 INCH IN SLABS, EXCEPT AS OTHERWISE NOTED.
4. NOTES ON DETAILING REINFORCING STEEL: STANDARD ABBREVIATIONS USED THROUGHOUT.
   FF - FAR FACE; NF - NEAR FACE; EF - EACH FACE
   EXAMPLE: 8-#5Ha3 @ 12
   8 - NUMBER OF BARS; #5 - BAR SIZE
   Ha - POSITION AND LOCATION; 12 - SPACING
   H - HORIZONTAL; a - LOCATION IN ABUTMENT A
   3 - THIRD BAR IN SERIES.
5. FORMS & FINISH: SEE SPECIFICATIONS.
6. FILL: ALL FILL SHALL BE PLACED AND COMPACTED BEFORE PILES ARE DRIVEN.
7. PILES SHALL BE PRECAST OR PRESTRESSED CONCRETE AS SHOWN ON TENNESSEE STANDARD DWG. H-S-111. MINIMUM BEARING CAPACITIES SHALL BE AS SHOWN ON THE PLANS.
8. PRESTRESSED CONCRETE PILES: SEE SPECIAL PROVISIONS.
9. TEST PILES: BEFORE ANY PILES ARE ORDERED TEST PILES SHALL BE DRIVEN IN THE LOCATION AS SHOWN ON THESE PLANS. FROM THE RESULTS ALL PILES SHALL BE ORDERED OF SUCH LENGTHS AS TO PROVIDE THE MINIMUM BEARING CAPACITIES SHOWN. TEST PILES SHALL BE DRIVEN IN FINAL LOCATIONS IN FOOTINGS.
10. BEARING ELEVATIONS ARE GIVEN TO THE BOTTOM OF THE NEOPRENE BEARING PADS AT LOCATIONS ON THE PIERS AND ABUTMENTS. THESE ELEVATIONS MAY BE OBTAINED BY STEPPING THE PIER CAP OR ABUTMENT, OR BY OTHER APPROVED METHODS.
11. NEOPRENE BEARING PADS: SEE SPECIAL PROVISIONS.
12. PRESTRESSED BEAM CONCRETE: SEE SPECIFICATIONS.
13. PRESTRESSED BEAM REINFORCEMENT: SEE SPECIFICATIONS.
14. BRIDGE JOINT SEALER: CLASS A OR B. SEE SPECIAL PROVISIONS
15. UTILITIES: IT IS INTENDED THAT THE COST OF THE WATER LINE AND ALL INCIDENTAL MATERIAL AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF THIS UTILITY SHALL BE BORNE BY OTHERS AND SHALL NOT BE PAID FOR AS A PART OF THIS CONTRACT.

    THE CONTRACTOR SHALL CO-OPERATE WITH OTHERS IN THE INSTALLATION OF THIS UTILITY WITH NO ADDITIONAL COMPENSATION ALLOWED THE CONTRACTOR AS A RESULT.

LIST OF DRAWINGS	DWG. NO.
BRIDGE LAYOUT	1
ABUTMENTS A & E	2
PIERS B & D	3
PIER C	4
PRESTRESSED BEAMS SPANS 1 & 4	5
PRESTRESSED BEAMS SPANS 2 & 3	6
SUPERSTRUCTURE SLAB SPANS 1 & 4	7
SUPERSTRUCTURE SLAB SPANS 2 & 3	8
HANDRAIL, LIGHTING, & SLAB DETAILS	9
STD. HANDRAIL DETAILS, TENN. STD H-S-110	SHT. 189 OF 216
STD. PILE DETAILS, TENN. STD. H-S-111	SHT. 188 OF 216

2-36' ROADWAYS WITH 4' MEDIAN & 6'-0" SIDEWALKS.

BRIDGE NO. 56A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
INTERSTATE HIGHWAY SYSTEM
MEMPHIS AND SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES
AND
CLARK, DAILY AND DIETZ

U. S. 61 OVER I-55
BRIDGE LAYOUT

DATE	DESIGNED BY	DRAWN BY	CHECKED BY	IN CHARGE	SCALE
Nov 1962	RLK	LAL	RLK	MFT	As noted

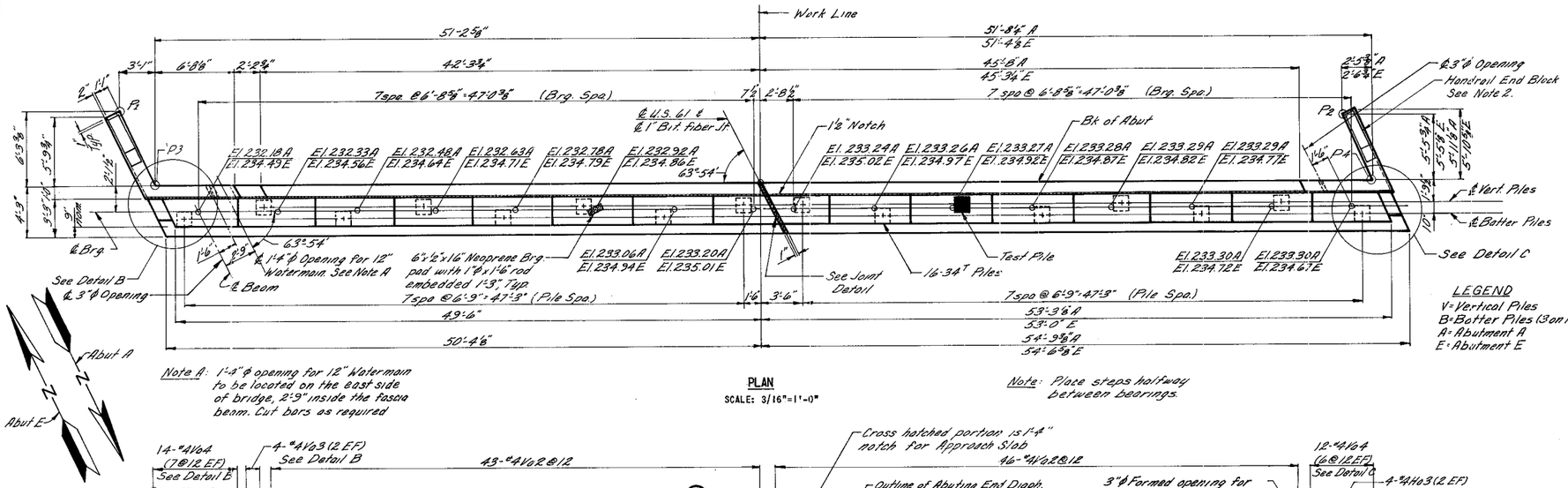
K-30-10

CAMPBELL BLUE PRINT CO.

PUB. ROADS REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	I-55-1(19)6	1963	87	216
REVISION 10-2,7-63					
REVISION					

NOTES

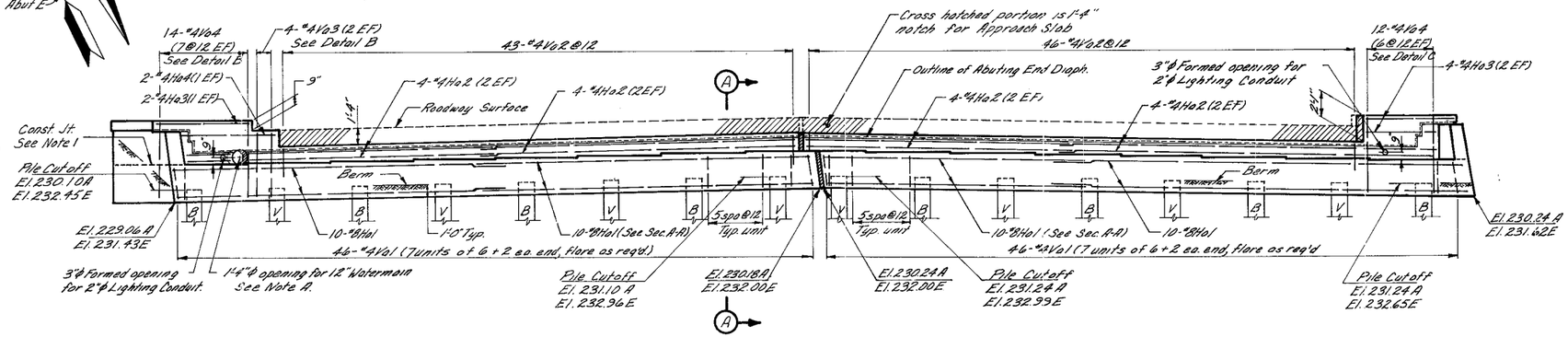
1. THE CONCRETE ABOVE THE CONSTRUCTION JOINT SHALL BE POURED AFTER THE SUPERSTRUCTURE SLAB HAS BEEN FINISHED SO THAT THE TOP OF THE ABUTMENT MAY BE FINISHED TO THE PROPER GRADE AND ELEVATION.
2. CLASS A CONCRETE AND STEEL BAR REINFORCEMENT QUANTITIES FOR HANDRAIL END BLOCKS ARE INCLUDED IN THE HANDRAIL QUANTITIES ON BRIDGE DWG. 9.



PLAN
SCALE: 3/16"=1'-0"

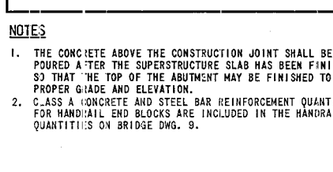
Note A: 1'-4" Ø opening for 12" Watermain to be located on the east side of bridge, 2'-9" inside the fascia beam. Cut bars as required

Note: Place steps halfway between bearings.



ELEVATION
SCALE: 3/16"=1'-0"

Note: Pile cutoff elevations vary. Interpolate linearly between given elevations.



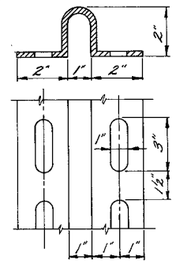
JOINT DETAIL

LEGEND
V=Vertical Piles
B=Batter Piles (3 on 12)
A=Abutment A
E=Abutment E

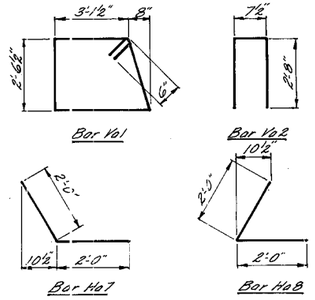
Note: Copper retainer shall be 24 oz. cold rolled annealed copper with perforated flanges. Splices if necessary shall be soldered or brazed. The cost of the copper retainer shall be included in the unit price bid for Class A Concrete.

BILL OF MATERIAL (ONE ABUTMENT)

BAR	SIZE	NO.	LENGTH	SHAPE	LOCATION
Ha1	#8	40	27'-3"	——	Seat
Ha2	#4	16	26'-7"	—•—	Parapet
Ha3	#4	10	6'-10"	—•—	Ppt. & W. Wall
Ha4	#4	10	9'-3"	——	Ppt. & W. Wall
Ha5	#4	12	10'-9"	——	Wingwalls
Ha6	#4	8	8'-9"	—•—	Wingwalls
Ha7	#4	24	4'-0"	⌞	Wingwalls
Ha8	#4	24	4'-0"	L	Wingwalls
Ha9	#4	12	9'-9"	——	Wingwalls
Va1	#4	92	13'-1"	⧄	Seat
Va2	#4	89	6'-0"	⊓	Parapet
Va3	#4	16	5'-9"	I	Ppt. & W. Wall
Va4	#4	58	6'-4"	I	Ppt. & W. Wall

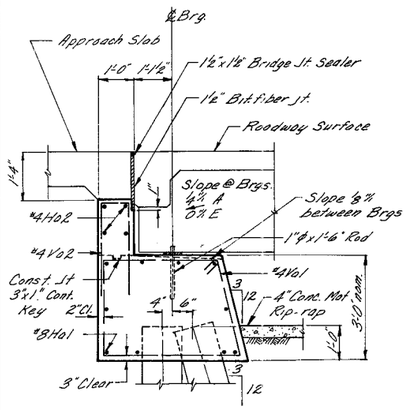


COPPER RETAINER DETAIL

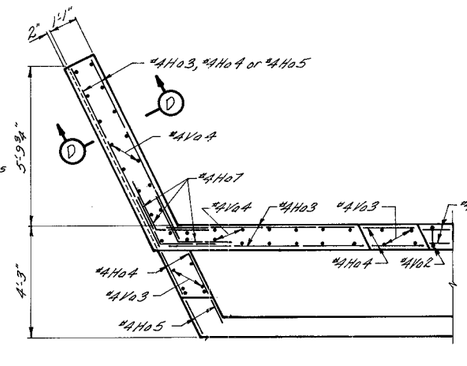


ESTIMATED QUANTITIES

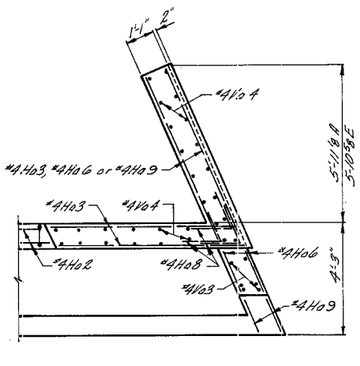
ITEM	UNIT	QUANTITY ABUT. A	QUANTITY ABUT. E
STEEL BAR REINFORCEMENT	LBS.	5120	5120
CLASS A CONCRETE	CU. YDS.	56.3	56.1



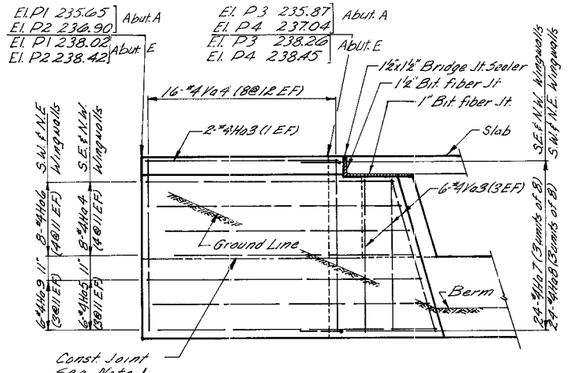
SECTION A-A
SCALE: 1/2"=1'-0"



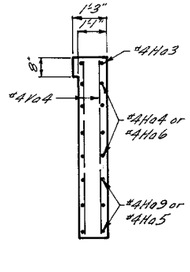
DETAIL B
SCALE: 3/8"=1'-0"



DETAIL C
SCALE: 3/8"=1'-0"



TYPICAL WINGWALL ELEVATION
SCALE: 3/8"=1'-0"



SECTION D-D
SCALE: 3/8"=1'-0"

BRIDGE NO. 56A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
INTERSTATE HIGHWAY SYSTEM
MEMPHIS AND SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES
AND
CLARK, DAILY AND DIETZ

U.S. 61 OVER I-55

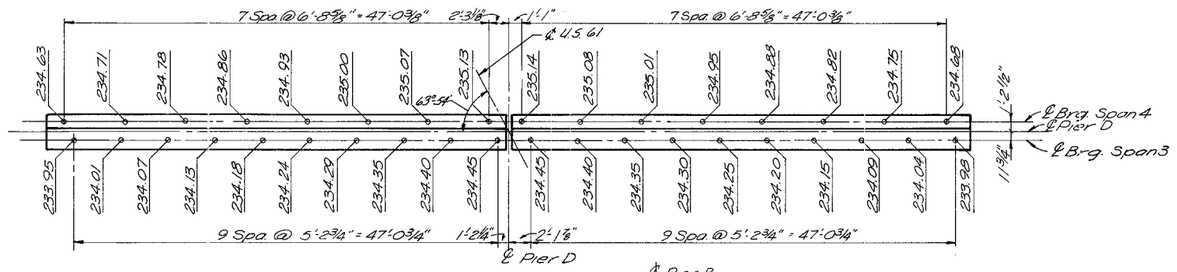
ABUTMENTS A & E

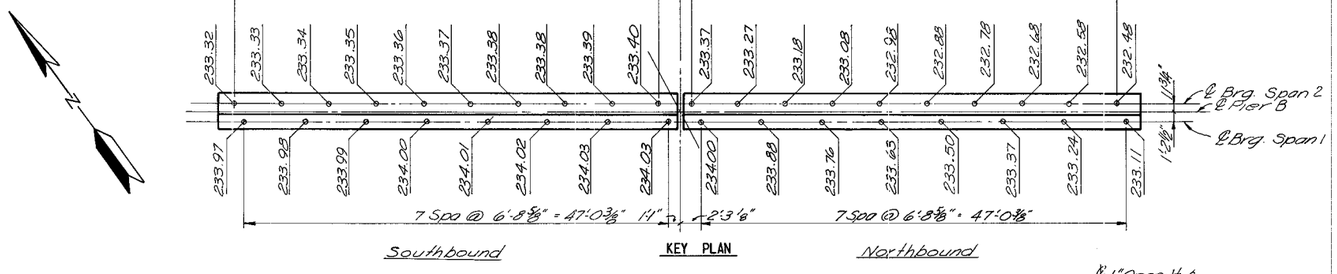
DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	IN CHARGE:	SCALE:
Nov. 1962	WAK	LAL	YNG	MFT	As noted

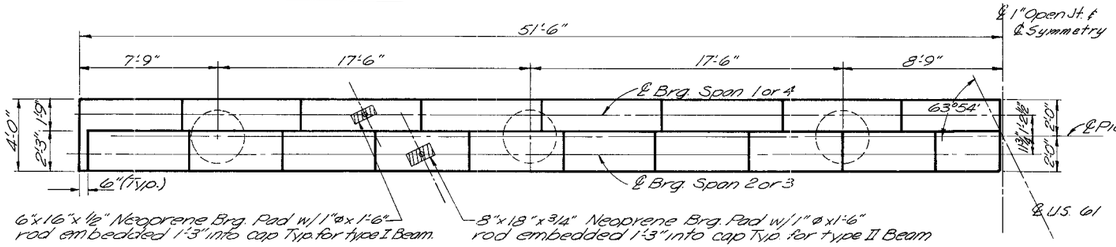
K-30-11

JOB NO. 4292

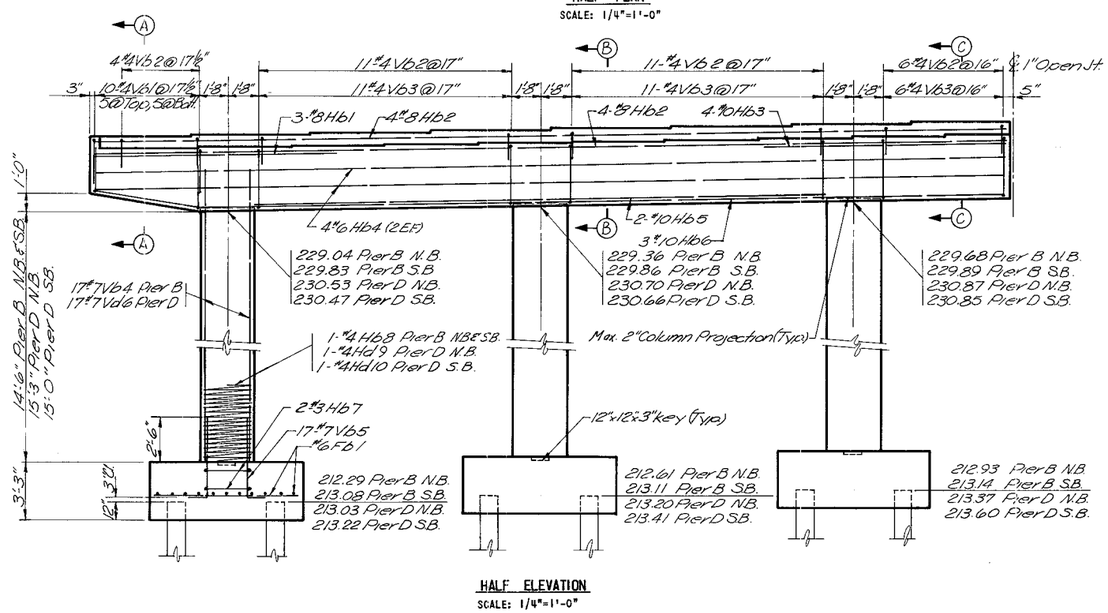
PUB. ROADS REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	I-55-1(19)6	1963	88	216
REVISION					
REVISION					



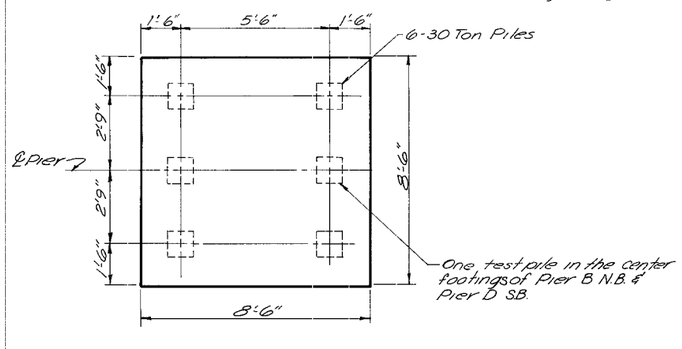




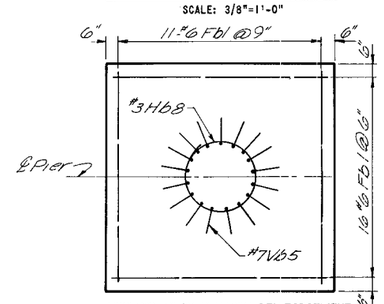
HALF PLAN
SCALE: 1/4"=1'-0"



HALF ELEVATION
SCALE: 1/4"=1'-0"

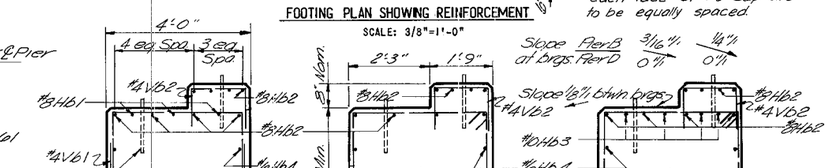


FOOTING PLAN SHOWING DIMENSIONS
SCALE: 3/8"=1'-0"



FOOTING PLAN SHOWING REINFORCEMENT
SCALE: 3/8"=1'-0"

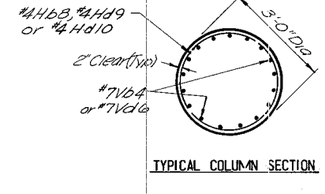
Note: All horizontal bars in each face of the cap are to be equally spaced.



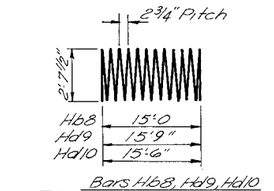
SECTION A-A
SCALE: 1/2"=1'-0"

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

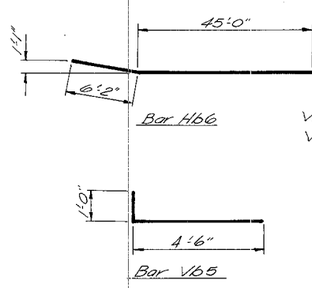
SECTION C-C
SCALE: 1/2"=1'-0"

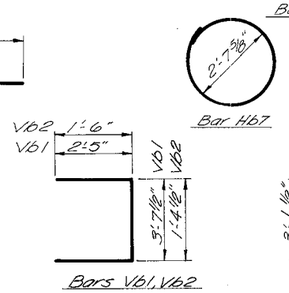


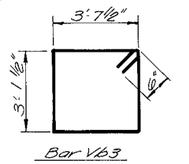
TYPICAL COLUMN SECTION



Bars Hb8, Hd9, Hd10







NOTES

1. SPIRAL REINFORCEMENT: IN LIEU OF #4 BAR SPIRALS AS SHOWN, THE CONTRACTOR MAY SUBSTITUTE COLD DRAWN STEEL WIRE, ASTM A-82-61T, WITH NO ADJUSTMENT IN QUANTITIES OR UNIT PRICE FOR STEEL BAR REINFORCEMENT. THE WIRE SHALL BE A.S. & W GAGE 0000 AT 2 1/2" PITCH.
   ALL SPIRALS SHALL HAVE 1 1/2 EXTRA TURNS AT EACH END.
   SPLICES SHALL BE MADE EITHER BY WELDING OR LAPPING 1 1/2 TURNS.

BILL OF STEEL

BAR	SIZE	NUMBER PIER B	NUMBER PIER D	LENGTH	SHAPE	LOCATION
Vb1	#4	20	20	8'-6"	⊓	Cap
Vb2	#4	64	64	4'-5"	⊓	"
Vb3	#4	56	56	14'-6"	⊓	"
Vb4	#7	102		17'-0"	|	Column
Vb5	#7	102	102	5'-6"	L	Footing
Vb6	#7		102	17'-9"	|	Column
Hb1	#8	6	6	13'-6"	—	Cap
Hb2	#8	16	16	51'-0"	—	"
Hb3	#10	8	8	14'-6"	—	"
Hb4	#6	8	8	51'-0"	—	"
Hb5	#10	4	4	32'-0"	—	"
Hb6	#10	6	6	51'-2"	—	"
Hb7	#3	12	12	9'-0"	O	Column
Hb8	#4	6		572'-0"	Spiral	"
Hd9	#4		3	600'-0"	Spiral	"
Hd10	#4		3	591'-0"	Spiral	"
Fb1	#6	162	162	8'-0"	—	Footing

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY PIER B	QUANTITY PIER D
CLASS A CONCRETE	CU. YDS.	138.2	130.1
STEEL BAR REINFORCEMENT	LBS.	15,480	15,730

BRIDGE NO. 56A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
INTERSTATE HIGHWAY SYSTEM
MEMPHIS AND SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES
AND
CLARK, DAILY AND DIETZ

U.S. 61 OVER I-55

PIERS B & D

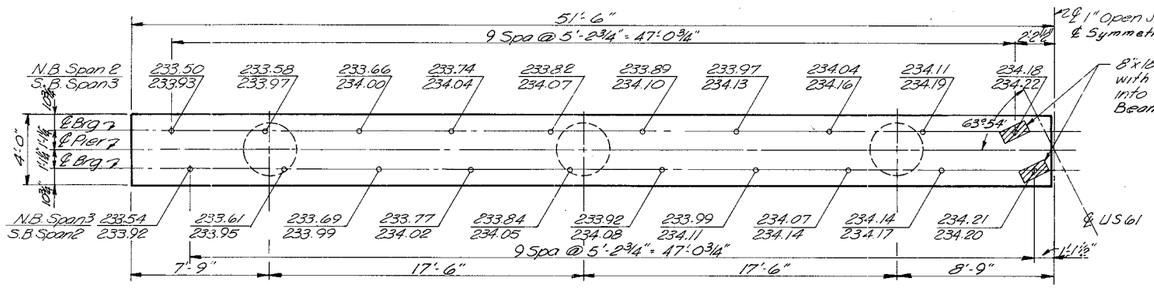
DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	IN CHARGE:	SCALE:
Nov. 1962	YNB	AJB	RLK	MFT	As noted

K-30-12

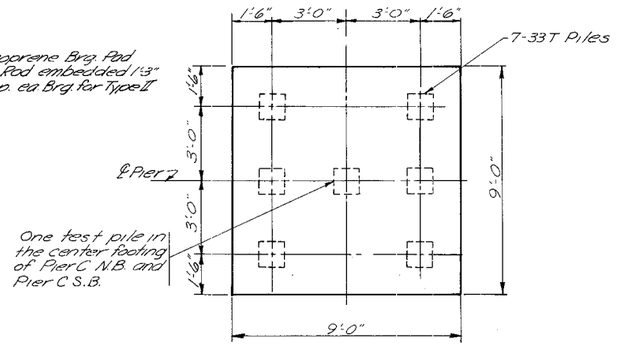
MISSISSIPPI RIVER

JOB NO. 429C

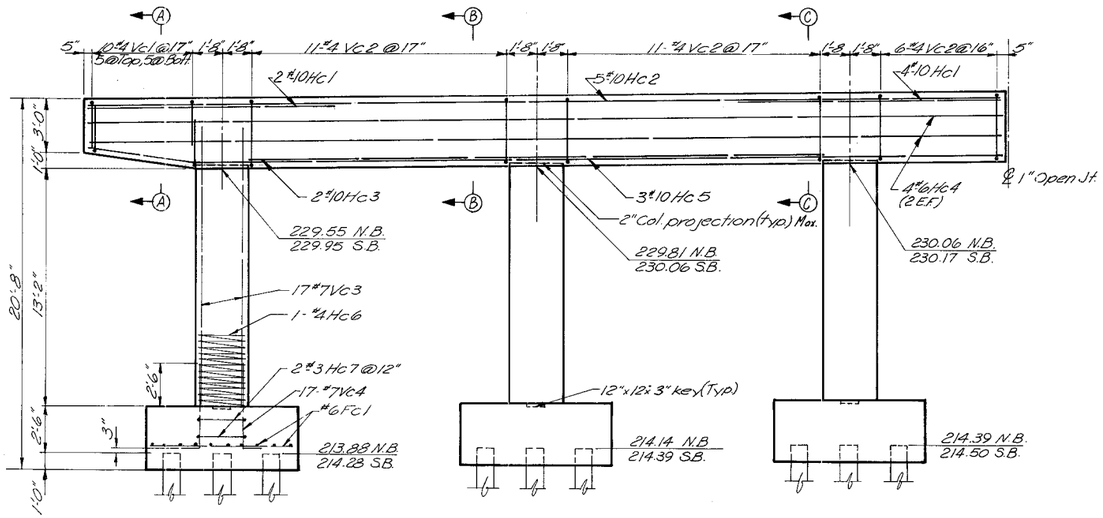
PUB ROADS REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	I-55-1(19)G	1963	89	216
REVISION					
REVISION					



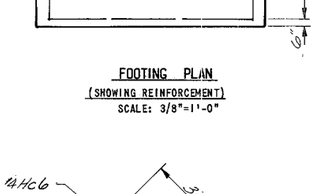
HALF PLAN
SCALE: 1/4"=1'-0"



FOOTING PLAN
(SHOWING DIMENSIONS)
SCALE: 3/8"=1'-0"



HALF ELEVATION
SCALE: 1/4"=1'-0"



FOOTING PLAN
(SHOWING REINFORCEMENT)
SCALE: 3/8"=1'-0"

BILL OF STEEL (HALF PIER)

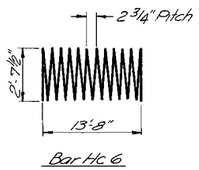
BAR	SIZE	NO.	LENGTH	SHAPE	LOCATION
Vc1	#4	10	8'-6"	⊓	Cap
Vc2	#4	28	15'-6"	⊓	Cap
Vc3	#7	51	15'-6"	|	Column
Vc4	#7	51	5'-9"	L	Footing
Hc1	#10	6	14'-0"	—	Cap
Hc2	#10	5	51'-0"	—	"
Hc3	#10	2	32'-0"	—	"
Hc4	#6	4	51'-0"	—	"
Hc5	#10	3	51'-2"	⌒	"
Hc6	#4	3	524'-0"	Spiral	Column
Hc7	#3	6	9'-0"	○	Column
Fc1	#6	84	8'-6"	—	Footing

NOTES

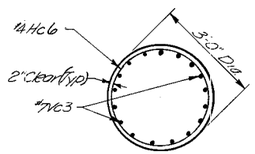
1. SPIRAL REINFORCEMENT: IN LIEU OF #4 BAR SPIRALS AS SHOWN, THE CONTRACTOR MAY SUBSTITUTE COLD DRAWN STEEL WIRE, ASTM A-82-61T, WITH NO ADJUSTMENT IN QUANTITY OR UNIT PRICE FOR STEEL BAR REINFORCEMENT. THE WIRE SHALL BE A.S. & W. GAGE 0000 AT 2 1/2" PITCH. ALL SPIRALS SHALL HAVE 1 1/2 EXTRA TURNS AT EACH END. SPLICES SHALL BE MADE EITHER BY WELDING OR LAPPING 1 1/2 TURNS.

ESTIMATED QUANTITIES

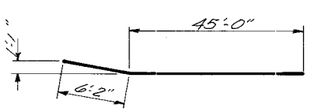
ITEM	UNIT	QUANTITY
CLASS A CONCRETE	CU. YDS.	142.1
STEEL BAR REINFORCEMENT	LBS.	15,060



Bar Hc 6

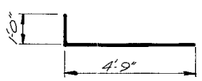


TYPICAL COLUMN

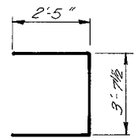


Bar Hc 5

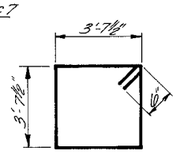
Bar Hc 7



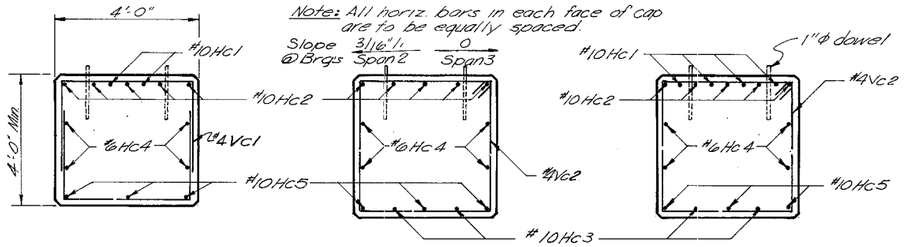
Bar Vc 4



Bar Vc 1



Bar Vc 2



SECTION A-A
SCALE: 1/2"=1'-0"

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

SECTION C-C
SCALE: 1/2"=1'-0"

BRIDGE NO. 56A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
INTERSTATE HIGHWAY SYSTEM
MEMPHIS AND SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES
AND
CLARK, DAILY AND DIETZ

U.S. 61 OVER I-55
PIER C

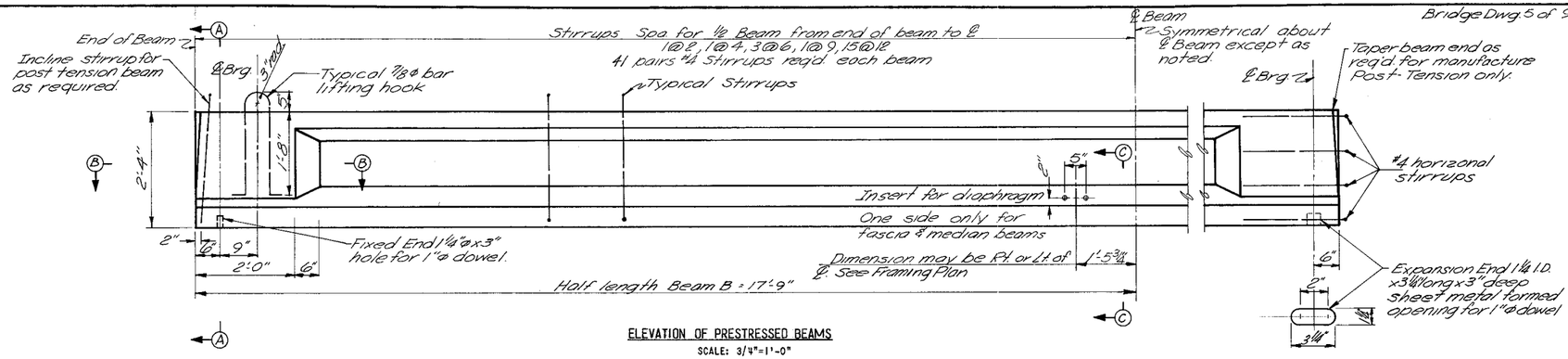
DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	IN CHARGE:	SCALE:
Nov. 1962	YNG	AJB	RLK	MFT	As noted

K-30-13

PUB. ROADS REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	I-55-1(19)6	1963	90	216
REVISION					
REVISION					

TABLE OF ROADWAY ELEVATIONS

		℄ SOUTH BEARING	℄ BEAM	℄ NORTH BEARING
SPAN 1 SOUTHBOUND	FASCIA BM.	236.18	236.54	236.84
		236.17	236.54	236.86
		236.17	236.55	236.87
		236.16	236.55	236.88
		236.15	236.55	236.89
		236.14	236.55	236.90
		236.13	236.54	236.90
	MEDIAN BM.	236.12	236.54	236.91
SPAN 1 NORTHBOUND	MEDIAN BM.	236.08	236.51	236.88
		235.94	236.37	236.76
		235.80	236.24	236.63
		235.65	236.11	236.51
		235.51	235.97	236.38
		235.36	235.83	236.25
		235.21	235.69	236.12
	FASCIA BM.	235.06	235.55	235.99
SPAN 4 SOUTHBOUND	FASCIA BM.	237.51	237.43	237.36
		237.58	237.51	237.44
		237.66	237.58	237.51
		237.73	237.66	237.59
		237.80	237.73	237.66
		237.87	237.81	237.74
		237.94	237.86	237.81
	MEDIAN BM.	238.01	237.96	237.89
SPAN 4 NORTHBOUND	MEDIAN BM.	238.01	237.97	237.89
		237.95	237.92	237.84
		237.89	237.86	237.79
		237.82	237.81	237.74
		237.75	237.75	237.69
		237.69	237.69	237.64
		237.62	237.63	237.59
	FASCIA BM.	237.55	237.57	237.54

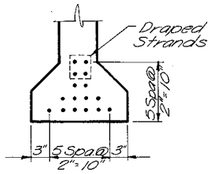


ELEVATION OF PRESTRESSED BEAMS

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

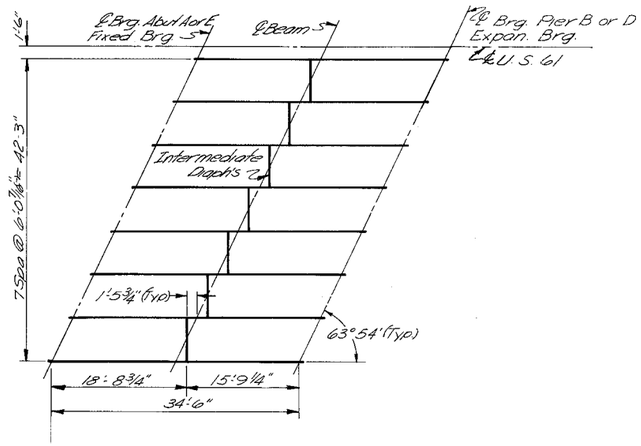
NOTES

1. ALL PRESTRESSING STRANDS ARE TO BE 7/16" ϕ 7-WIRE, UNCOATED, STRESS-RELIEVED, PRESTRESSED CONCRETE STRANDS. HOWEVER, THE CONTRACTOR MAY SUBSTITUTE 1/2" ϕ STRANDS PROVIDED THE ECCENTRICITY AND TOTAL INITIAL FORCE REMAIN THE SAME.
2. AN INITIAL FORCE OF 18,900 LBS. SHALL BE APPLIED TO EA. 7/16" ϕ STRAND IN ALL BEAMS.
3. TOP OF BEAM SHALL BE ROUGHLY FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET THE TOP OF THE BEAM SHALL BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND TO PRODUCE A ROUGH FINISH.
4. ALL BEARING PADS, THREADED DIAPHRAGM DOWELS, AND ALL ITEMS CAST INTO THE BEAMS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR "FURNISH AND PLACE PRESTRESSED BEAMS, TYPE I.
5. ALL BEAMS ARE AASHO - PCI STANDARD TYPE I.



SECTION C-C

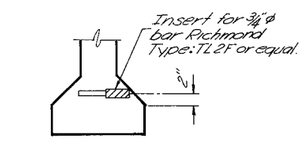
SCALE: 1"=1'-0"



FRAMING PLAN HALF SPAN

SPANS 1 & 4

SCALE: 1"=10'-0"



TYPICAL INSERT DETAIL FOR INTERMEDIATE DIAPHRAGM

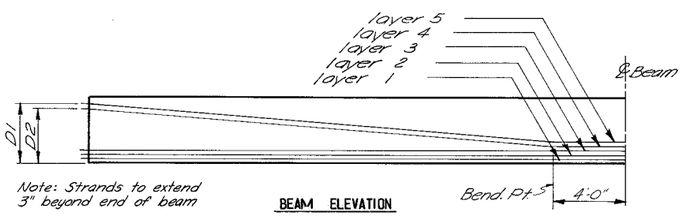
SCALE: 1"=1'-0"

ESTIMATED QUANTITIES ONE BEAM

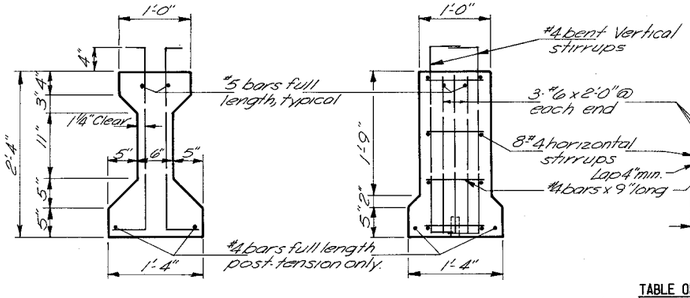
ITEM	UNIT	QUANTITY
PRECAST CONCRETE	CU. YDS.	2.6
MILD REINFORCING STEEL	LBS.	320
PRESTRESSING STEEL 7/16" DIA. STRANDS	LIN. FT.	576

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
PRESTRESSED CONCRETE BEAM TYPE I, LENGTH 35'-6"	EACH	32



BEAM ELEVATION



TYPICAL SECTION

SCALE: 1"=1'-0"

SECTION A-A

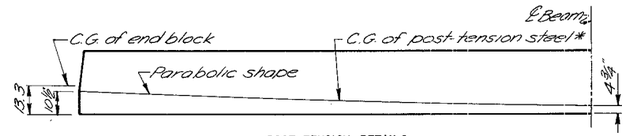
SCALE: 1"=1'-0"

SECTION B-B

TABLE OF BENDING MOMENTS AND SHEARS

LOADING	BENDING MOM. FT.-KIPS. 2'	7'	13'	@ ℄	SHEAR @ BRG. KIPS.
DEAD LOAD BM.	9	28	40	43	5.1
S.D.L. (1)	17	52	77	84	10.6
S.D.L. (2)	4	13	19	20	2.5
LIVE LOAD + IMPACT	61	191	244	252	37.5

Note: Distances measured from ℄ Brg.
(1) Superimposed Dead Load: includes diaphragms and slab.
(2) Superimposed Dead Load: includes future wearing surface and handrail.



POST TENSION DETAILS

Post-Tension Beam Data

* The C.G. of the Post-tension steel may vary from the position shown above. The C.G. must approximate a parabola and all required design stress conditions must be satisfied. See Specifications.

Initial Prestress Force = 291,000 lbs.
Final Prestress Force = 236,000 lbs.

PRETENSION BEAM DATA

NO STRANDS IN LAYER* 1	2	3	4	5			TOTAL NO. 7/16" ϕ STRANDS	PRESTRESS FORCE ** LBS.	DIMENSIONS D1	D2			NO. BEAMS REQ'D.
6	4	2	0	2			16	302,000	31	29			32

* Straight — Draped

** Total Initial Prestress Force.

BRIDGE NO. 56A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
INTERSTATE HIGHWAY SYSTEM
MEMPHIS AND SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES AND CLARK, DAILY AND DIETZ

U.S. 61 OVER I-55

PRESTRESSED BEAMS SPANS 1 & 4

DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	IN CHARGE:	SCALE:
Nov., 1962	RLK	AJB	JJP	MFT	As noted

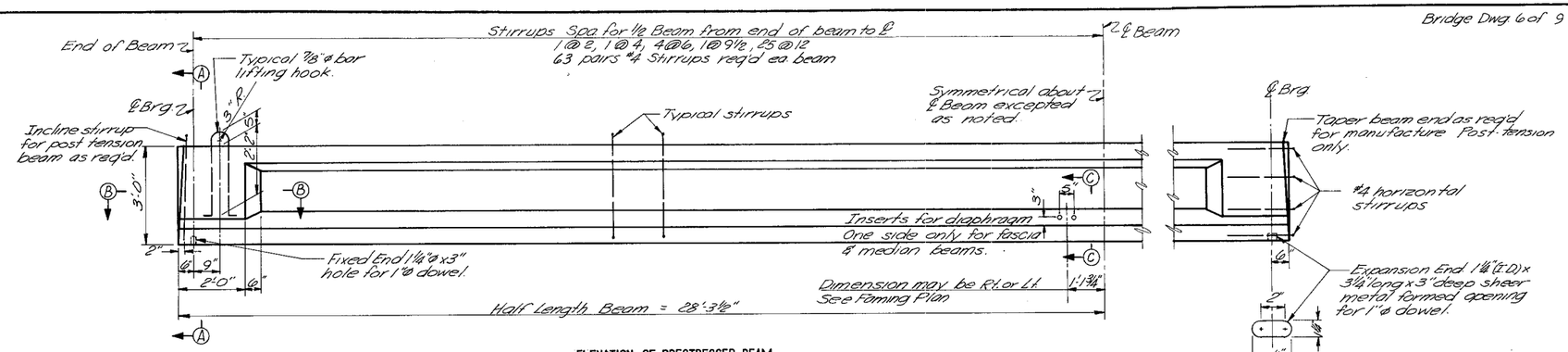
JOB NO. 4220

K-30-14

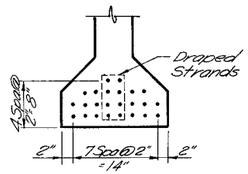
PUB. ROADS REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	I-55-1(19)C	1963	91	216
REVISION					
REVISION					

TABLE OF ROADWAY ELEVATIONS

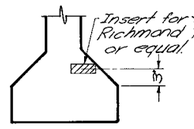
		℄ SOUTH BRG.	℄ BEAM	℄ NORTH BRG.
SPAN 2 SOUTHBOUND	FASCIA BM.	236.88	237.25	237.48
		236.89	237.27	237.51
		236.90	237.29	237.55
		236.91	237.32	237.58
		236.92	237.34	237.61
		236.93	237.36	237.64
		236.94	237.38	237.68
		236.95	237.39	237.70
		236.95	237.41	237.73
	MEDIAM BM.	236.96	237.43	237.76
SPAN 2 NORTHBOUND	MEDIAN BM.	236.93	237.41	237.75
		236.83	237.32	237.67
		236.74	237.24	237.60
		236.64	237.15	237.53
		236.54	237.07	237.45
		236.45	236.98	237.38
		236.35	236.86	237.30
		236.25	236.80	237.22
		236.15	236.71	237.15
	FASCIA BM.	236.04	236.62	237.06
SPAN 3 SOUTHBOUND	FASCIA BM.	237.49	237.57	237.52
		237.53	237.62	237.58
		237.56	237.67	237.63
		237.60	237.71	237.69
		237.63	237.76	237.75
		237.66	237.80	237.80
		237.69	237.84	237.86
		237.73	237.89	237.91
		237.75	237.93	237.96
	MEDIAN BM.	237.78	237.97	238.01
SPAN 3 NORTHBOUND	MEDIAN BM.	237.77	237.96	238.01
		237.70	237.90	237.96
		237.63	237.84	237.92
		237.55	237.78	237.87
		237.48	237.72	237.82
		237.41	237.65	237.76
		237.33	237.59	237.71
		237.25	237.52	237.65
		237.18	237.46	237.60
	FASCIA BM.	237.10	237.39	237.55



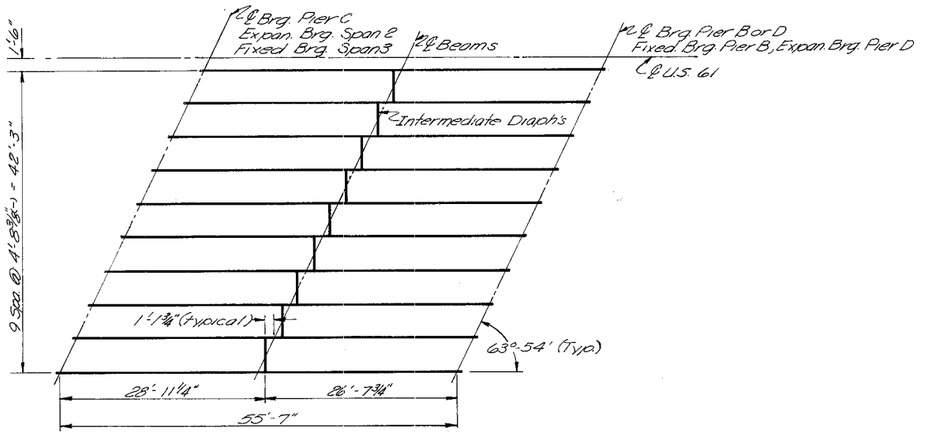
ELEVATION OF PRESTRESSED BEAM
SCALE 1/2"=1'-0"



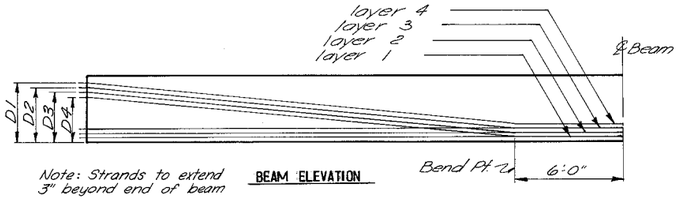
SECTION C-C
SCALE 1"=1'-0"



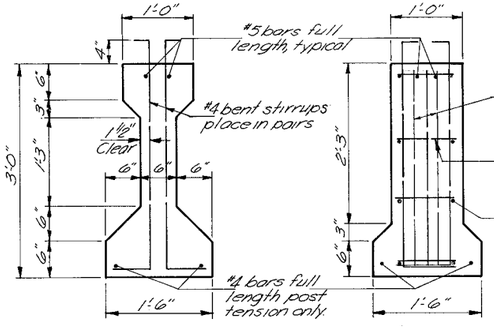
TYPICAL INSERT DETAIL FOR INTERMEDIATE DIAPHRAGM
SCALE 1"=1'-0"



FRAMING PLAN HALF SPAN
(SPANS 2 & 3)
SCALE 1"=10'-0"

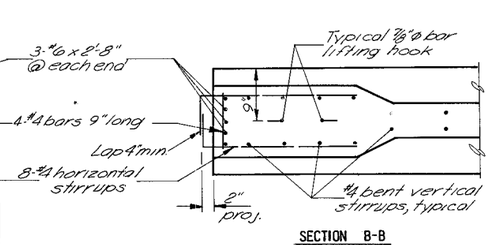


BEAM ELEVATION



TYPICAL SECTION
SCALE 1"=1'-0"

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



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

TABLE OF BENDING MOMENTS AND SHEARS

LOADING	BENDING MOM. (FT-KIPS) 2'	12'	22'	@ ℄	SHEAR AT BRG KIPS
DEAD LOAD BM.	20	101	143	149	10.9
S D.L. (1)	22	108	155	165	12.3
S.D.L. (2)	6	28	40	42	3.1
LIVE LOAD & IMPACT	60	287	392	398	32.6

Note: Distances measured from ℄ Brg.
(1) Superimposed Dead Load: includes diaphragm and slab.
(2) Superimposed Dead Load: includes future wearing surface and handrail.

NOTES

1. ALL PRESTRESSING STRANDS ARE TO BE 7/16" ø 7-WIRE, UNCOATED, STRESS-RELIEVED, PRESTRESSED CONCRETE STRANDS. HOWEVER, THE CONTRACTOR MAY SUBSTITUTE 1/2" ø STRANDS PROVIDED THE ECCENTRICITY AND TOTAL INITIAL FORCE REMAIN THE SAME.
2. AN INITIAL FORCE OF 18,900 LBS. SHALL BE APPLIED TO EA. 7/16" ø STRAND IN ALL BEAMS.
3. TOP OF BEAM SHALL BE ROUGHLY FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET THE TOP OF THE BEAM SHALL BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND TO PRODUCE A ROUGH FINISH.
4. ALL BEARING PADS, THREADED DIAPHRAGM DOWELS, AND ALL ITEMS CAST INTO THE BEAMS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR "FURNISH AND PLACE PRESTRESSED BEAMS, TYPE II.
5. ALL BEAMS ARE AASHO - PCI STANDARD TYPE II.

ESTIMATED QUANTITIES (ONE BEAM)

ITEM	UNIT	QUANTITY
PRECAST CONCRETE	CU.YDS.	5.5
MILD REINFORCING STEEL	LBS.	540
PRESTRESS STEEL 7/16" DIA. STRANDS	LIN.FT.	1370

BILL OF MATERIAL

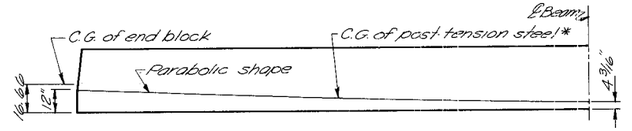
ITEM	UNIT	QUANTITY
PRESTRESSED CONCRETE BEAMS TYPE II LENGTH 56'-7"	EACH	40

PRETENSION BEAM DATA

NO. STRANDS IN LAYER* 1	2	3	4	TOTAL NO. 7/16" ø STRANDS	PRESTRESS ** FORCE LBS.	DIMENSIONS D1	D2	D3	D4	NO BEAMS REQ'D
0/2	6/2	4/2	0/2	24	454,000	31	29	27	25	40

* Straight — Draped

** Total Initial Prestress Force



POST TENSION DETAILS

Post Tension Beam Data

*The C.G. of the Post-tension steel may vary from the position shown above. The C.G. must approximate a parabola and all rquired design stress conditions must be satisfied. See Specifications.

Initial Prestress Force = 438,000 lbs.
Final Prestress Force = 355,000 lbs.

BRIDGE NO. 56A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
INTERSTATE HIGHWAY SYSTEM
MEMPHIS AND SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES AND CLARK, DAILY AND DIETZ

U.S. 61 OVER I-55
PRESTRESSED BEAMS SPANS 2 & 3

DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	IN CHARGE:	SCALE:
Nov. 1962	RLK	AJB	JJP	MFT	As noted

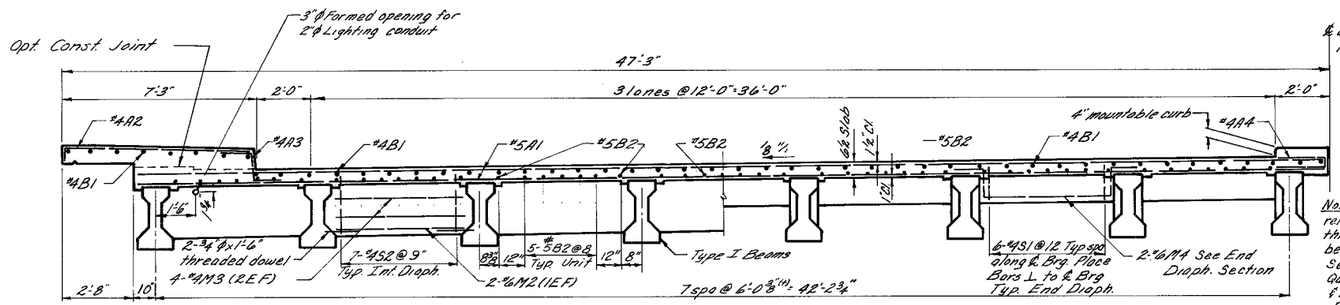
K-30-15

JOB NO. 429C

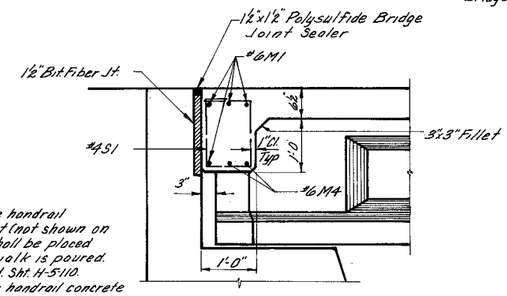
PUB. ROADS REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	I-55-1(19)3	1965	92	216
REVISION 10-25-63					
REVISION					

NOTES

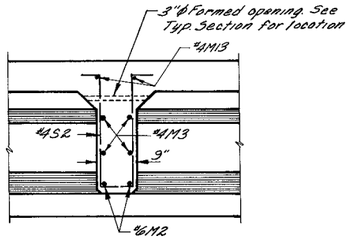
1. SEE CAMBER AND FILLET NOTES ON BRIDGE DWG. 8.
2. SEE BRIDGE DWG. 9 FOR LOCATION OF DRAINS, HANDRAIL AND SLAB & WATER PIPE HANGER DETAILS.



Note: Concrete handrail reinforcement (not shown on this sheet) shall be placed before sidewalk is poured. See Tenn. Std. Sht. H-5110. Quantities for handrail concrete & reinforcement are shown on Bridge Dwg. 9.



END DIAPHRAGM SECTION @ ABUTMENTS
SCALE: 3/4"=1'-0"

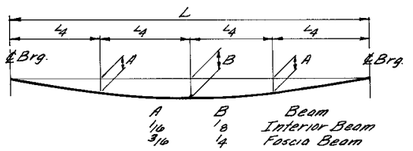


SECTION TYP. INTERMEDIATE DIAPHRAGM
SCALE: 3/4"=1'-0"

* This dimension varies @ the northeast and southwest corners of the bridge due to spirals. See Plan of Slab with Ramp Spirals on this sheet.

MID SPAN

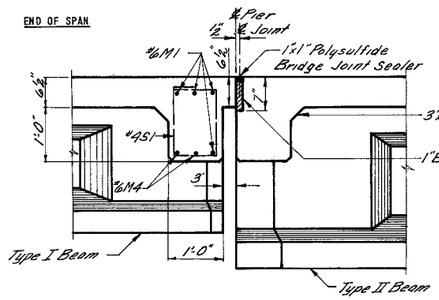
TYPICAL SECTION
SCALE: 3/8"=1'-0"



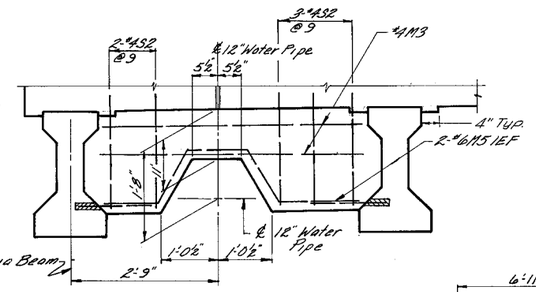
A	B	Beam
1/16	0	Interior Beam
3/16	¼	Fascia Beam

DEAD LOAD DEFLECTION DIAGRAM
(DEAD LOAD INCLUDES WEIGHT OF SLAB & DIAPHRAGMS)

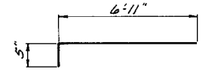
END OF SPAN



END DIAPHRAGM SECTION @ PIER B OR D
SCALE: 3/4"=1'-0"



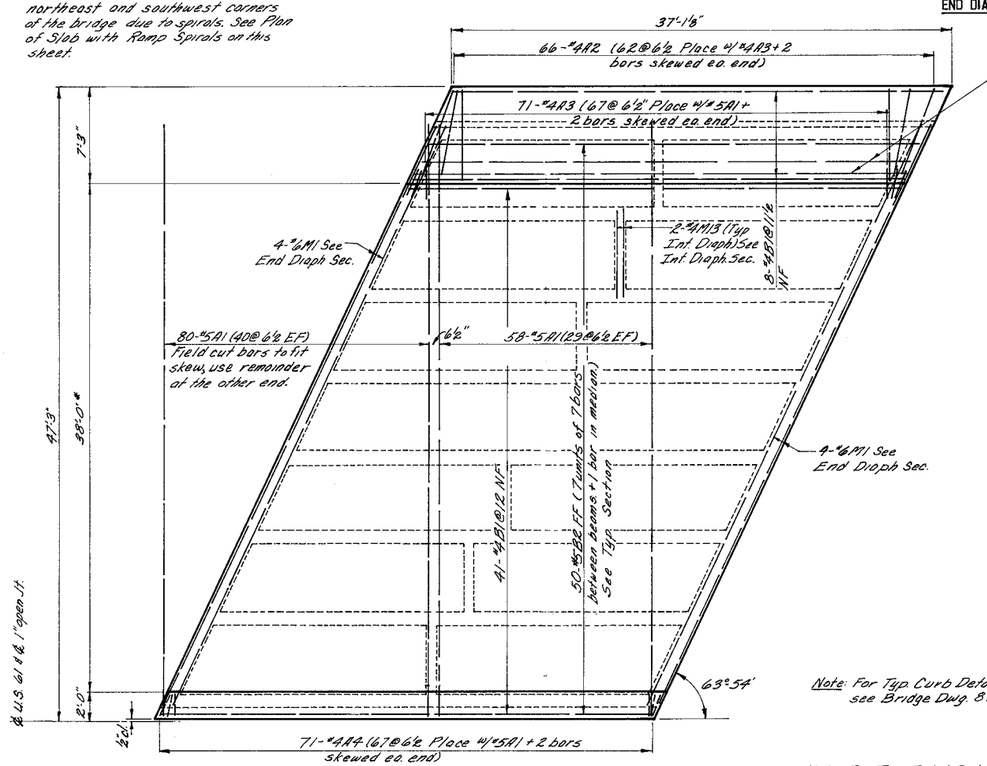
EAST INTERMEDIATE DIAPHRAGM
(SHOWING WATERMAIN OPENING)
SCALE: 3/4"=1'-0"



Bar A2

BILL OF MATERIAL (1 SPAN)

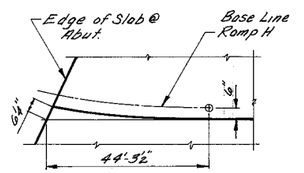
BAR	SIZE	NO.	LENGTH	SHAPE	LOCATION
A1	#5	276	44'-3"	——	Slab
A2	#4	132	7'-4"	⌐	Sidewalk
A3	#4	142	3'-0"	⌐	Curb
A4	#4	142	4'-4"	═	Median
B1	#4	100	36'-8"	——	Slab
B2	#5	100	36'-8"	——	Slab
M1	#6	16	47'-10"	——	End Diaph.
M2	#6	26	4'-8"	——	Int. Diaph.
M3	#4	56	4'-8"	——	Int. Diaph.
M4	#6	56	9'-1"	⊔	End Diaph.
M5	#6	2	6'-0"	∩	Int. Diaph.
M13	#4	28	6'-6"	——	Int. Diaph.
S1	#4	168	4'-1"	⊓	End Diaph.
S2	#4	96	5'-3"	⊔	Int. Diaph.
3"x3"x 10/10 WWF			220 sq. ft.		Conc. Cap

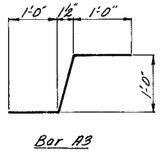


PLAN HALF SPAN
SCALE: 3/16"=1'-0"

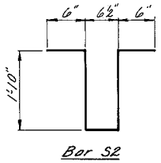
Note: For Typ. Curb Detail see Bridge Dwg. 8.

Note: For Typ. Fillet Detail see Bridge Dwg. 8.

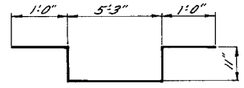




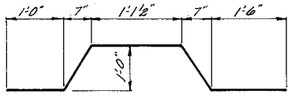
Bar A3



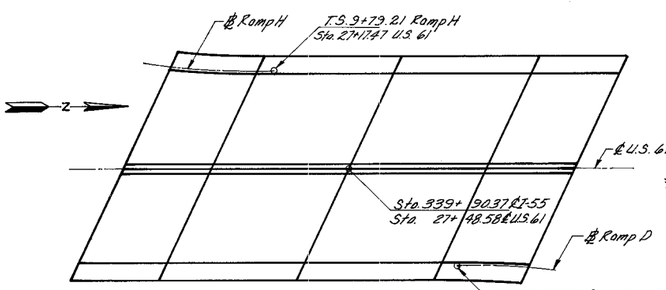
Bar S2



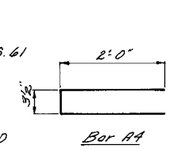
Bar M4



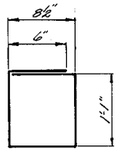
Bar M5



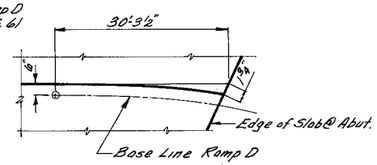
PLAN OF SLAB WITH RAMP SPIRALS



Bar A4



Bar S1



ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY SPAN 1	QUANTITY SPAN 4
CLASS A CONCRETE	CU. YDS.	94.7	94.6
STEEL BAR REINFORCEMENT	LBS.	23,650	23,650

* Includes 90 lbs. of 3"x3"x 10/10 WWF each span

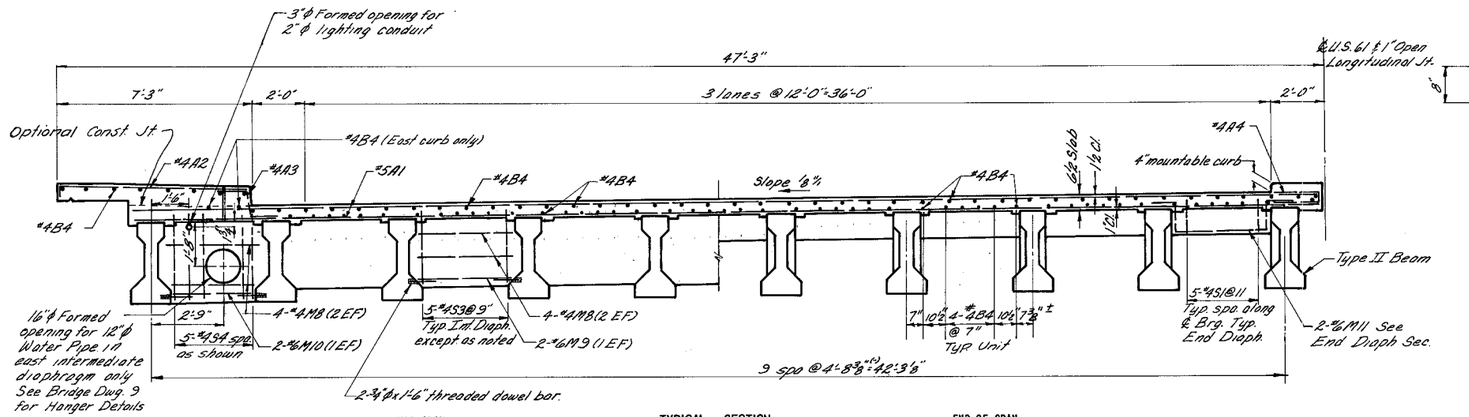
BRIDGE NO. 56A
STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
INTERSTATE HIGHWAY SYSTEM
MEMPHIS AND SHELBY COUNTY
HARLAND BARTHOLOMEW AND ASSOCIATES AND CLARK, DAILY AND DIETZ

U. S. 61 OVER I-55
SUPERSTRUCTURE SLAB SPANS 1 & 4

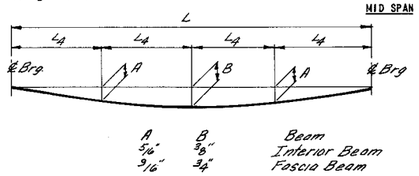
DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	IN CHARGE	SCALE:
Nov. 1962	ALK	LAL	YNG	MFT	As noted

K-30-16

PUB. ROADS REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	I-55-1(19)G	1963	93	216
REVISION 10-25-63					
REVISION					



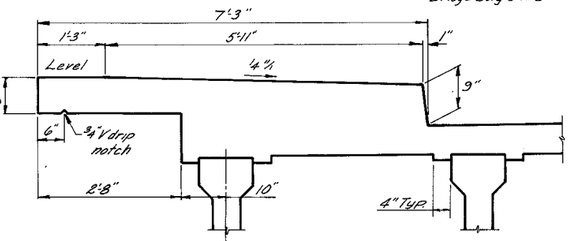
TYPICAL SECTION
SCALE: 3/8"=1'-0"



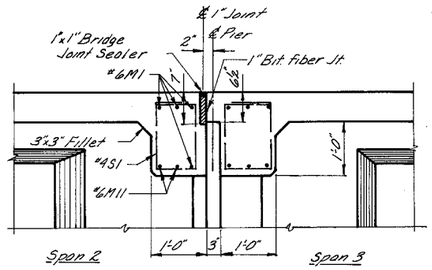
MID SPAN — END OF SPAN

A	B	
5/16"	3/8"	Beam
9/16"	3/4"	Interior Beam Fascia Beam

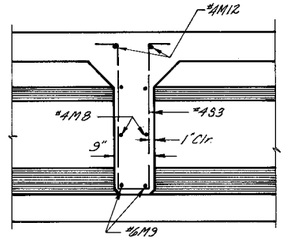
Note: Concrete handrail reinforcement (not shown on this sheet) shall be placed before sidewalk is poured. See Tenn. Std. Sht. H-5-110. Quantities for handrail concrete & reinforcement are shown on Bridge Dwg. 9.



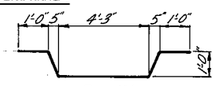
TYPICAL CURB SECTION
SCALE: 3/4"=1'-0"



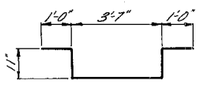
END DIAPHRAGM SECTION @ PIER C
SCALE: 3/4"=1'-0"



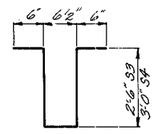
SECTION TYPICAL INTERMEDIATE DIAPHRAGM
SCALE: 3/4"=1'-0"



Bar M6



Bar M11



Bars S3 \ S4

NOTES

1. SEE BRIDGE DWG. 9 FOR HANDRAIL, LIGHTING & SLAB DETAILS.

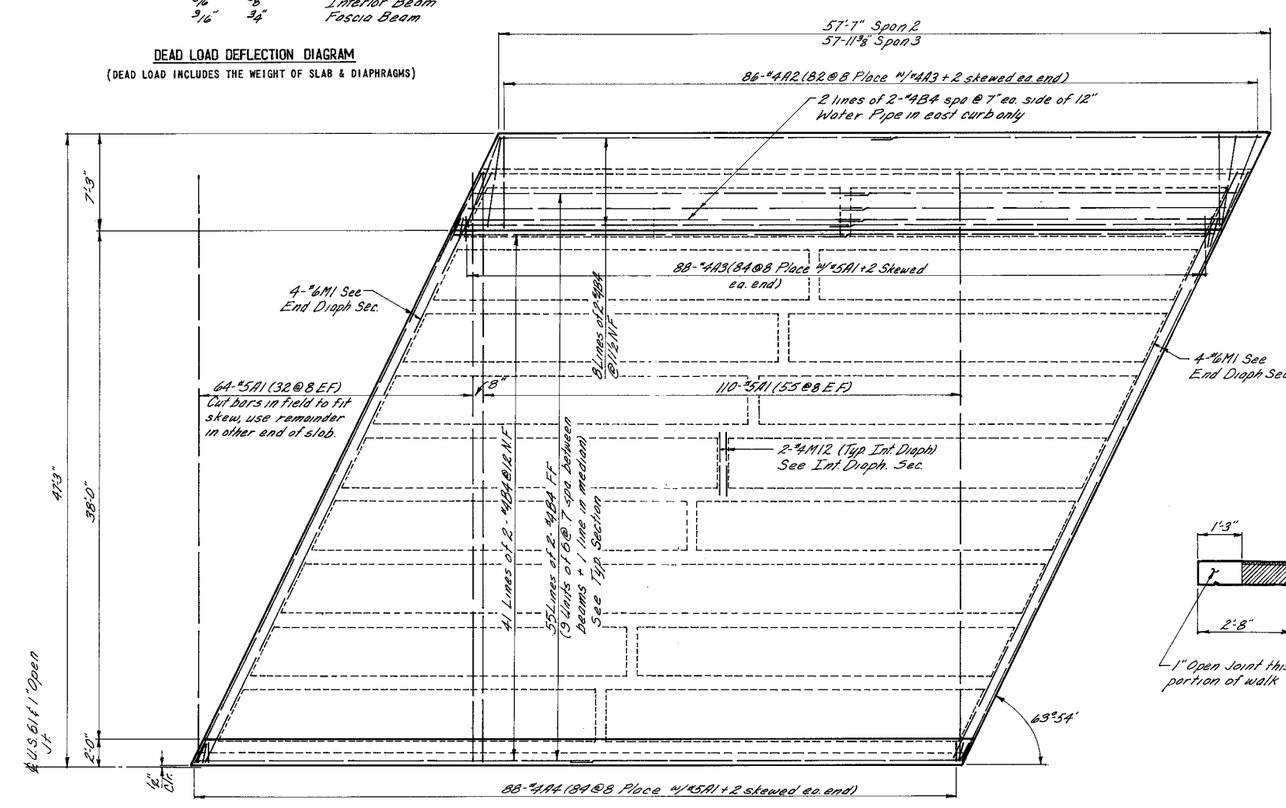
CAMBER AND FILLET NOTES

THE FOLLOWING PROCEDURE SHALL BE USED IN FORMING THE SLAB FILLET:

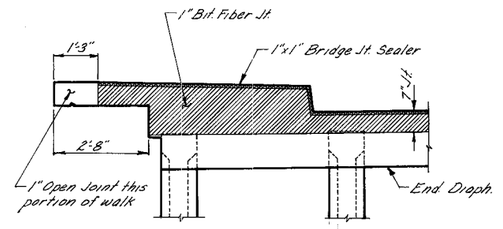
1. AFTER THE BEAMS ARE IN PLACE, THE CONTRACTOR SHALL FIELD MEASURE ELEVATIONS AT THE ENDS AND CENTER POINT OF EACH BEAM.
2. THIS FIELD ELEVATION SUBTRACTED FROM THE FINISHED ROADWAY ELEVATION (SEE BRIDGE DWGS. 5 & 6) PLUS THE DEAD LOAD DEFLECTION OF THE SLAB MINUS SLAB THICKNESS WILL EQUAL THE REQUIRED FILLET THICKNESS ABOVE THE BEAM.

BILL OF MATERIAL (1 SPAN)

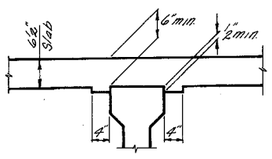
BAR	SIZE	NO.	LENGTH	SHAPE	LOCATION
A1	#5	348	44'-3"	——	Slab
A2	#4	172	7'-4"	⌐	Sidewalk
A3	#4	176	3'-0"	⌐‾	Curb
A4	#4	176	4'-4"	▭	Median
B4	#4	420	29'-6"	——	Slab
M1	#6	16	4'-7-10"	——	End Diaph.
M6	#4	3	8'-5"	⌐‾⌐	Slab Thkng
M7	#4	5	4'-0"	——	Slab Thkng
M8	#4	72	3'-6"	——	Int. Diaph.
M9	#6	34	3'-6"	——	Int. Diaph.
M10	#6	2	3'-0"	——	Int. Diaph.
M11	#6	72	7'-5"	⌐‾⌐	End Diaph.
M12	#4	36	5'-0"	——	Int. Diaph.
S1	#4	180	4'-1"	□	End Diaph.
S3	#4	85	7'-7"	⌐‾⌐	Int. Diaph.
S4	#4	5	6'-7"	⌐‾⌐	Int. Diaph.
3x3x1/10			345 sq. ft.		Concrete Cap



PLAN HALF SPAN
SCALE: 3/16"=1'-0"



JOINT DETAIL @ PIER
SCALE: 1/2"=1'-0"



FILLET DETAIL
SCALE: 3/4"=1'-0"

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY SPAN 2	QUANTITY SPAN 3
CLASS A CONCRETE	CU. YDS.	141.1	141.9
STEEL BAR REINFORCEMENT	LBS.	29,540	29,540

Includes 142 lbs of 3x3x1/10 WNF each span

BRIDGE NO. 56A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
INTERSTATE HIGHWAY SYSTEM
MEMPHIS AND SHELBY COUNTY

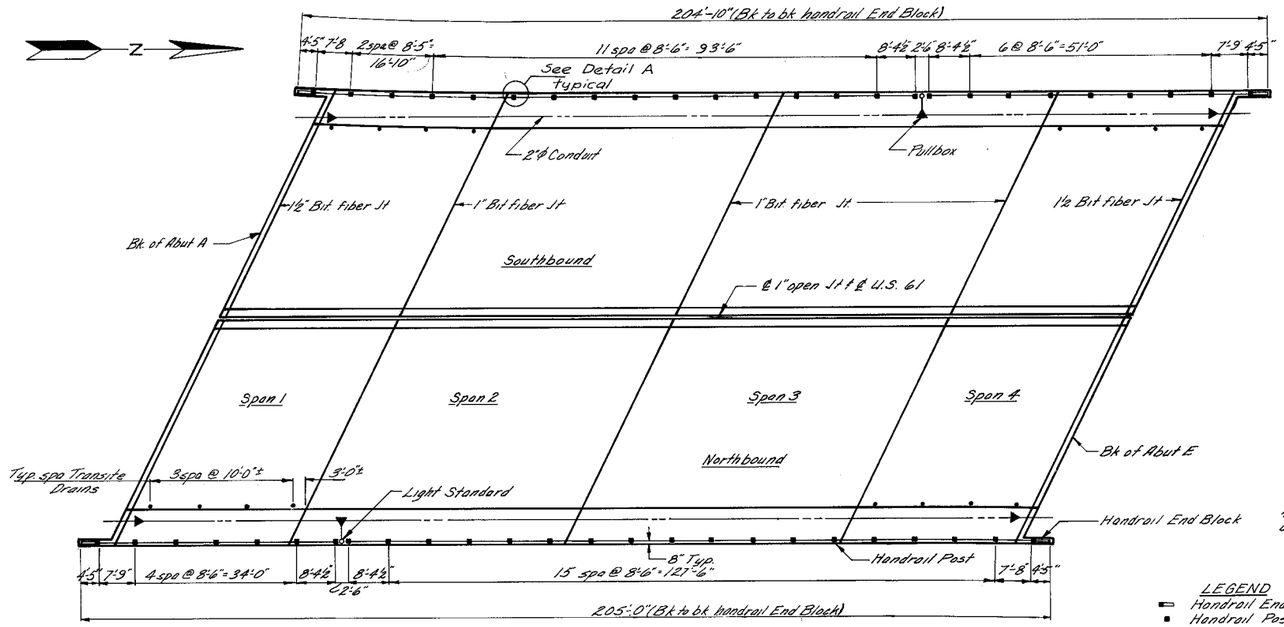
HARLAND BARTHOLOMEW AND ASSOCIATES
AND
CLARK, DAILY AND DIETZ

U.S. 61 OVER I-55
SUPERSTRUCTURE SLAB SPANS 2 & 3

DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	IN CHARGE:	SCALE:
Nov 1962	RLK	LRL	YNG	MFT	As noted

K-30-17

PUB. ROADS REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	I-55-1(19)6	1963	94	216
REVISION 10-25-63					
REVISION					

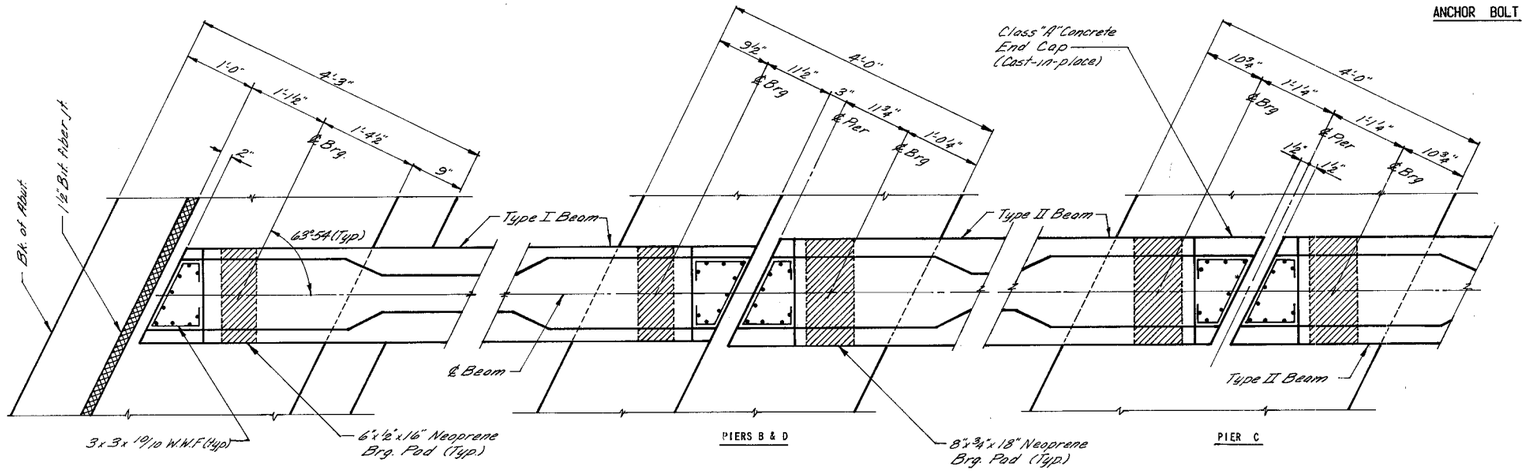


PLAN
SCALE: 1"=15'

Note: Provide 3"ø Formed openings in intermediate diaphragms for the 2"ø electrical conduit. Provide 3"ø Formed openings in abutment (See Bridge 2 for location) Extend conduit 3" in back of Abutments & Cap

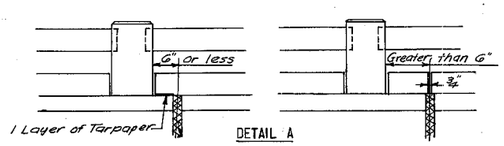
Note: Provide 2"ø Flexible conduit across expansion joints of Piers and Abutments.

LEGEND
- Handrail End Block
- Handrail Post
- Light Standard
- Pullbox
- 2"ø Conduit
- Transite Drains



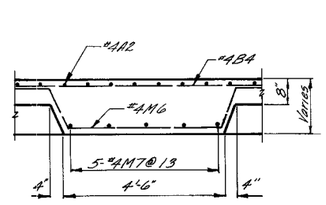
Note: Fasten the 3"x3"x10/10 W.W.F. securely to the splayed ends of the prestressed strands and hardware projecting 3" min. beyond beam ends. The end cap shall be placed monolithically with the end diaph. and slab or a horiz. const. jt may be provided at the bottom of the end diaph.

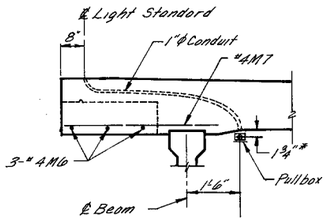
BEARING DETAILS
SCALE: 1"=1'-0"



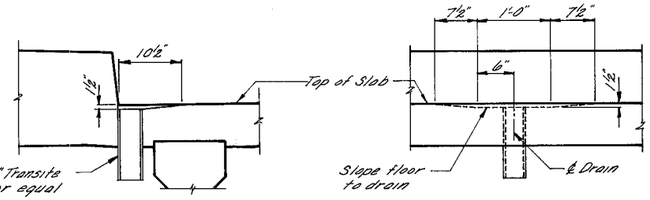
DETAIL A

*Note: 1¾" dimension based on use of Appleton 1-screw clamp & back to support conduit. (Graybar Cat. 17255 & 27155)

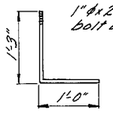




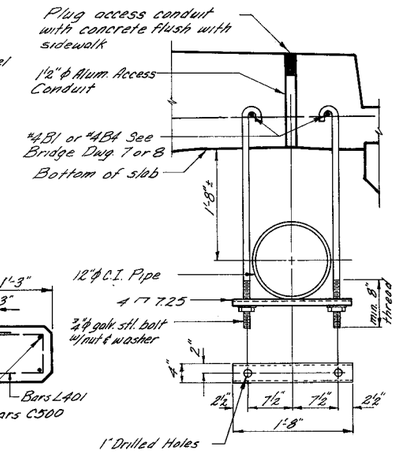
SLAB THICKENING DETAILS FOR LIGHT STANDARDS
SCALE: 1/2"=1'-0"



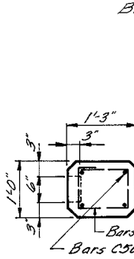
TRANSITE DRAIN DETAILS
SCALE: 1"=1'-0"

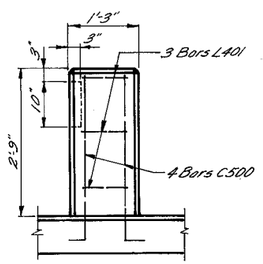


ANCHOR BOLT



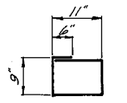
HANGER DETAILS
(MAX. SPA. OF HANGERS 10')



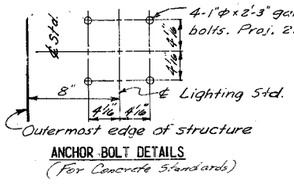


1"-3" X 1'-0" POST DETAILS
(4 REQUIRED)

QUANTITIES: 21.6 LBS. STEEL
PER POST: 0.12 CU.YDS. CONCRETE



Bar L401



ANCHOR BOLT DETAILS
(For Concrete Standards)

NOTES

1. HANDRAIL: POSTS ADJACENT TO LIGHT STANDARDS SHALL BE 1'-3"X1'-0" AS DETAILED ON THIS DRAWING. OPEN JOINTS SHALL SHALL BE PROVIDED IN THE BOTTOM RAIL TO MATCH JOINTS IN THE SLAB. REINFORCING SHALL BE CUT AS REQUIRED. ALL OTHER DETAILS SHALL BE IN ACCORDANCE WITH TENNESSEE DEPT. OF HIGHWAYS & PUBLIC WORKS STD. DWG. H-S-110.
2. PULLBOXES SHALL BE THOMAS & BETTS FLANGED CAST IRON JUNCTION BOXES, SIZE 8"X8"X6", CAT. NO. 10904, OR EQUAL. THEY SHALL BE MADE WATERTIGHT WITH COVER GASKET AND EVER-DUR HEX. HEAD CAP SCREWS. BOXES SHALL BE DRILLED AND TAPPED FOR CONDUIT SIZES CALLED OUT ON THE PLANS.
3. CONDUIT SHALL BE GALVANIZED RIGID STEEL, SIZES AS SHOWN. CONDUIT SHALL BE SECURED TO THE STRUCTURE WITH SUCH MATERIALS AS TO PREVENT BI-METTALLIC ACTION. CONNECTIONS TO PULLBOXES SHALL BE REINFORCED WITH BUSHING AND LOCKNUT. HANGERS AND SPACING SHALL BE APPROVED BY THE ENGINEER.
4. GROUNDING: THE 1" CONDUIT FROM EACH PULLBOX UP TO THE LOCATION OF THE BASE OF THE LIGHTING STANDARD SHALL BE EXTENDED 3" ABOVE THE SIDEWALK, AND TERMINATED WITH A GROUNDING BUSHING. THE GROUNDING BUSHING SHALL BE CONNECTED TO THE GROUNDING NUT FURNISHED WITH THE LIGHTING STANDARD WITH PROPER LENGTH OF 6 GAGE BARE COPPER WIRE.
5. CONDULETS: THE CONTRACTOR SHALL FURNISH CONDULETS AS REQUIRED TO FACILITATE THE WIRING.
6. LIGHT STANDARDS SHALL PROVIDE A 35' NOMINAL MOUNTING HEIGHT OF THE LUMINAIRE ABOVE THE PAVEMENT WITH A 10'-0" BRACKET SPREAD. THEY SHALL BE AMERICAN CONCRETE CORPORATION CATALOG NO. 810-P326-AK10 OR AN APPROVED EQUAL. AS AN ALTERNATE, STEEL LIGHT STANDARD (KERRIGAN CAT. NO. AP-3460002) OR ALUMINUM LIGHT STANDARD (KERRIGAN CAT. NO. AP-3450002) OR AN APPROVED EUQAL MAY BE USED. ALL BRACKETS SHALL HAVE 2" SLIP FITTER AND THE POLES SHALL HAVE A HANDHOLE LOCATED RADIALLY BELOW THE BRACKET.

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
LIGHTING STANDARDS	EACH	2
PULLBOXES	EACH	6
2" ø CONDUIT	LIN.FT.	370
1" ø CONDUIT	LIN.FT.	12
2" FLEXIBLE CONDUIT	LIN.FT.	45

THE CONTRACTOR SHALL FURNISH AND INSTALL IN ADDITION TO THE ABOVE BILL OF MATERIALS, SUCH INCIDENTAL ITEMS AS GROUNDING WIRE, CONDUIT CAPS, CONDUIT HANGERS, ETC. WITH NO INCREASE IN COMPENSATION ABOVE THE CONTRACT LUMP SUM BID FOR FURNISH AND INSTALL LIGHT STANDARDS, CONDUIT, PULLBOXES AND AUXILIARY EQUIPMENT. SEE THE SPECIAL PROVISIONS.

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY
* CONCRETE HANDRAIL	LIN.FT.	410
LIGHTING SYSTEM	LUMP SUM	1

*QUANTITY INCLUDES 18.4 CU.YDS. OF CONCRETE AND 3290 LBS. OF STEEL

BRIDGE NO. 56A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
INTERSTATE HIGHWAY SYSTEM
MEMPHIS AND SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES
AND
CLARK, DAILY AND DIETZ

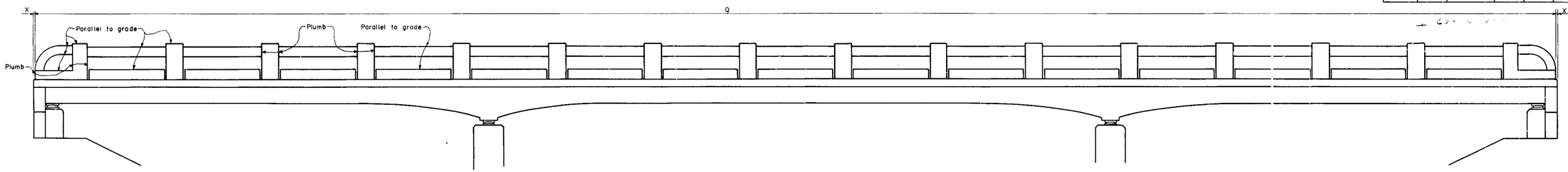
U.S. 61 OVER I-55
HANDRAIL, LIGHTING & SLAB DETAILS

DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	IN CHARGE:	SCALE:
Nov. 1962	RLK	LAL	RLK	MFT	As noted

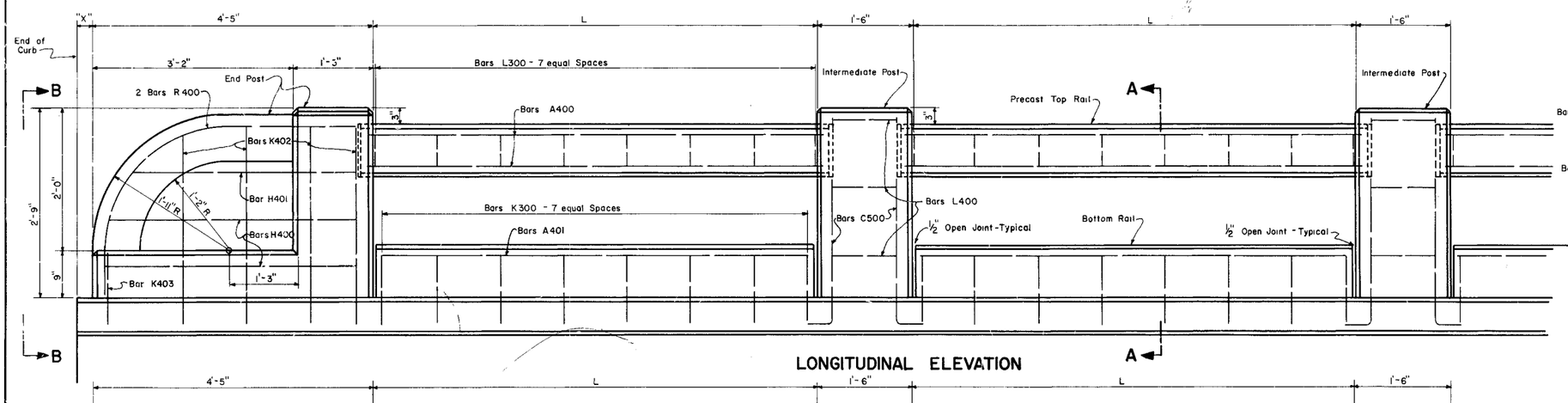
JOB NO. 4230

K-30-18

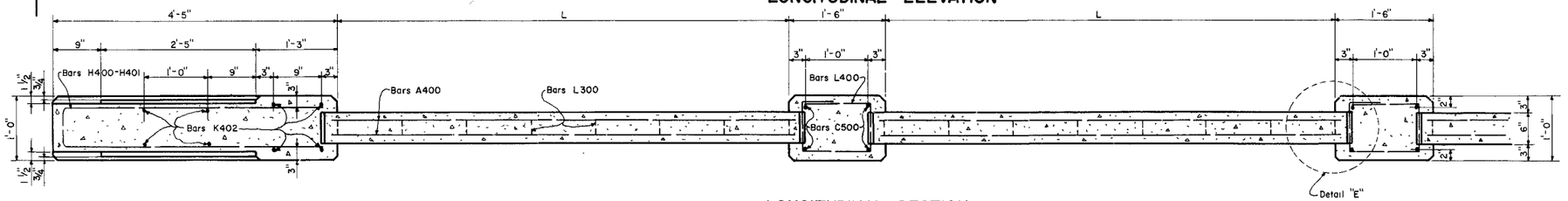
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		



TYPICAL ELEVATION



LONGITUDINAL ELEVATION



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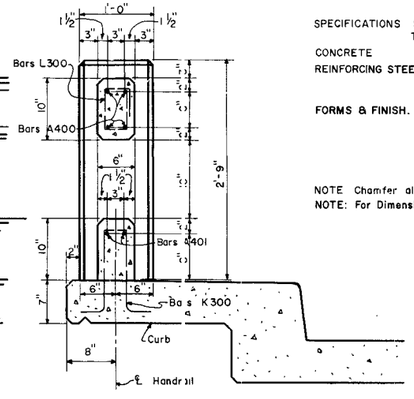
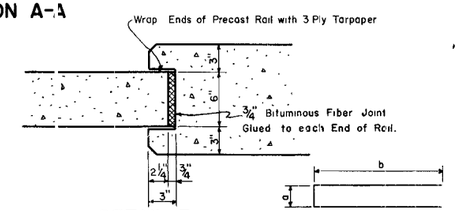
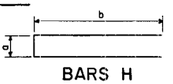


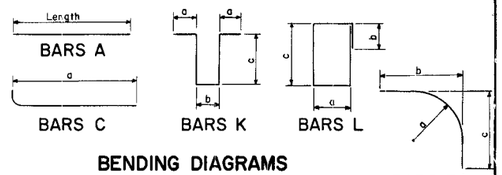
SECTION A-A



DETAIL E



BARS H



BENDING DIAGRAMS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

GENERAL NOTES

SPECIFICATIONS Standard Road & Bridge Specifications of the Tennessee Department of Highways.

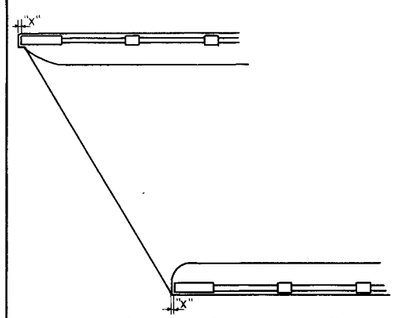
CONCRETE To be Class "A".

REINFORCING STEEL. See Specifications. To be intermediate or hard grade with Standard Hook Details as recommended by C R S I.

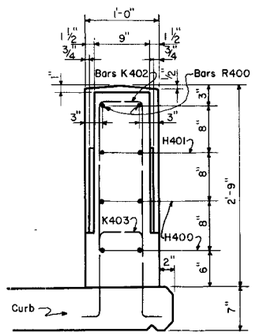
FORMS & FINISH. See Specifications

NOTE Chamfer all edges on Handrail Posts and Rails ½".

NOTE: For Dimensions X, Q, & L See Bridge Layout Sheet.



HANDRAIL ON SKEWED DECK



ELEV. B-B

END POST-LIST OF MATERIALS-EACH

Bar	Size	No Req'd	Bending Dimensions a	b	c	d	Length	Quantities Steel Lbs.	Conc. Cu. Yd.
H400	4	2	0'-6"	4'-0"			8'-6"	45.0	0.37
H401	4	1	0'-6"	3'-7"			7'-8"		
K402	4	4	0'-3"	0'-7"	2'-11"		6'-11"		
K403	4	1	0'-3"	0'-7"	1'-2"		3'-5"		
R400	4	2	1'-9"	4'-0"	2'-6"		5'-9"		

INTERMEDIATE POST LIST OF MATERIALS-EACH

Bar	Size	No Req'd	Bending Dimensions a	b	c	d	Length	Quantities Steel Lbs.	Conc. Cu. Yd.
C500	5	4	3'-0"				3'-4"	22.6	0.15
L400	4	3	0'-9"	0'-6"	1'-2"		4'-4"		

TOP RAIL-LIST OF MATERIALS-EACH

L	Bar	Size	No Req'd	Bending Dimensions a	b	c	d	Length	Quantities Steel Lbs.	Conc. Cu. Yd.
6'-0" to 6'-1"	A400	4	4					6'-2"	23.6	0.10
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-1" to 6'-2"	A400	4	4					6'-3"	23.8	0.10
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-2" to 6'-3"	A400	4	4					6'-4"	24.1	0.10
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-3" to 6'-4"	A400	4	4					6'-5"	24.3	0.10
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-4" to 6'-5"	A400	4	4					6'-6"	24.5	0.10
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-5" to 6'-6"	A400	4	4					6'-7"	24.7	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-6" to 6'-7"	A400	4	4					6'-8"	25.0	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-7" to 6'-8"	A400	4	4					6'-9"	25.2	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-8" to 6'-9"	A400	4	4					6'-10"	25.4	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-9" to 6'-10"	A400	4	4					6'-11"	25.6	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-10" to 6'-11"	A400	4	4					7'-0"	25.9	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		
6'-11" to 7'-0"	A400	4	4					7'-1"	26.1	0.11
	L300	3	8	0'-4"	0'-6"	0'-7"		2'-4"		

BOTTOM RAIL-LIST OF MATERIALS-EACH

L	Bar	Size	No Req'd	Bending Dimensions a	b	c	d	Length	Quantities Steel Lbs.	Conc. Cu. Yd.
6'-0" to 6'-1"	A401	4	2					5'-8"	17.7	0.09
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-1" to 6'-2"	A401	4	2					5'-9"	17.8	0.09
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-2" to 6'-3"	A401	4	2					5'-10"	17.9	0.09
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-3" to 6'-4"	A401	4	2					5'-11"	18.1	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-4" to 6'-5"	A401	4	2					6'-0"	18.2	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-5" to 6'-6"	A401	4	2					6'-1"	18.3	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-6" to 6'-7"	A401	4	2					6'-2"	18.4	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-7" to 6'-8"	A401	4	2					6'-3"	18.5	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-8" to 6'-9"	A401	4	2					6'-4"	18.6	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-9" to 6'-10"	A401	4	2					6'-5"	18.7	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-10" to 6'-11"	A401	4	2					6'-6"	18.8	0.10
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		
6'-11" to 7'-0"	A401	4	2					6'-7"	19.0	0.11
	K300	3	8	0'-4"	0'-4"	1'-2"		3'-4"		

Wrap Ends of Precast Rail with 3 Ply Tarpaper

DESIGNED BY ..... DATE .....
DRAWN BY J.L. Parkes DATE .....
RETRACED BY R. Reagan DATE 4-4-63
CHECKED BY ..... DATE .....

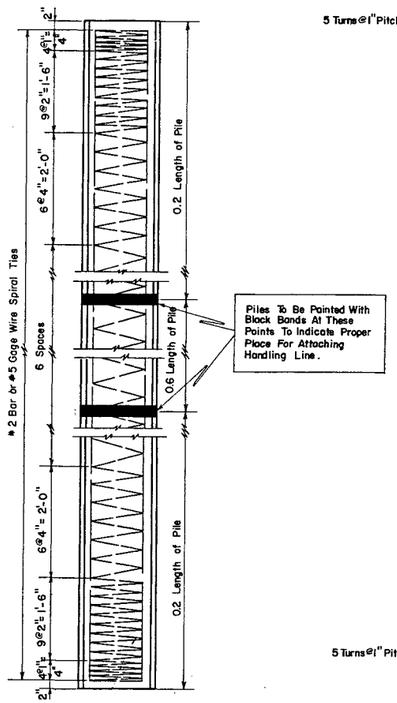
Revised: 1- June - 1962
Revised: 8- September - 1960

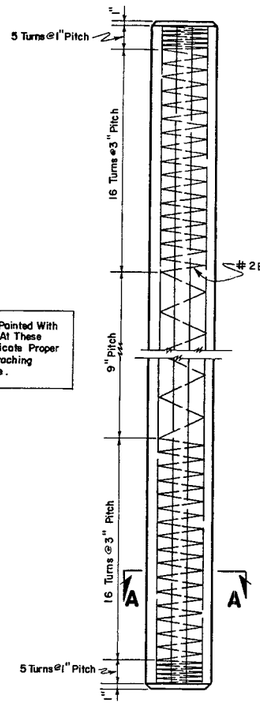
CORRECT Thad Greene
BRIDGE ENGINEER
APPROVED Cecil Paige
STATE HIGHWAY ENGINEER

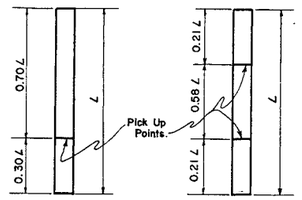
STANDARD CONCRETE HANDRAIL 1960

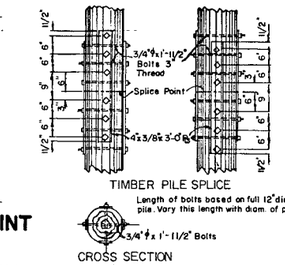
H-5-110

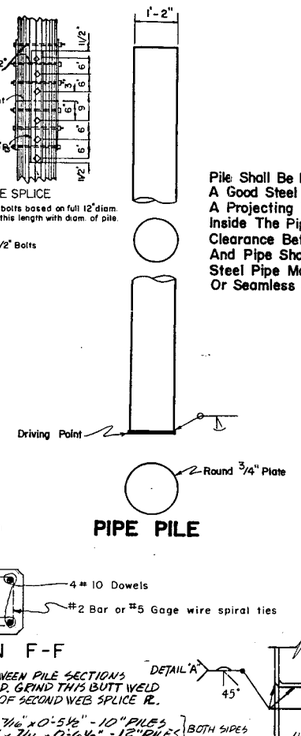
2 Copies

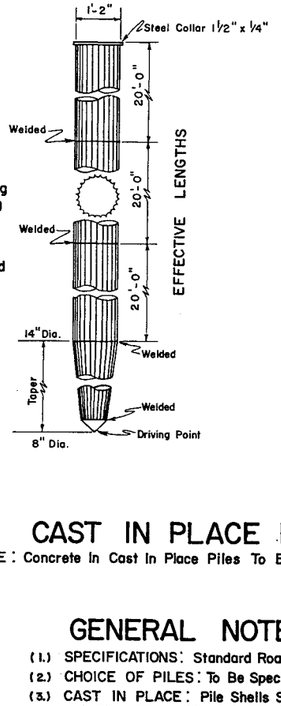


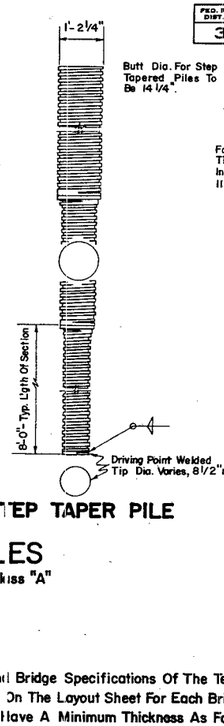


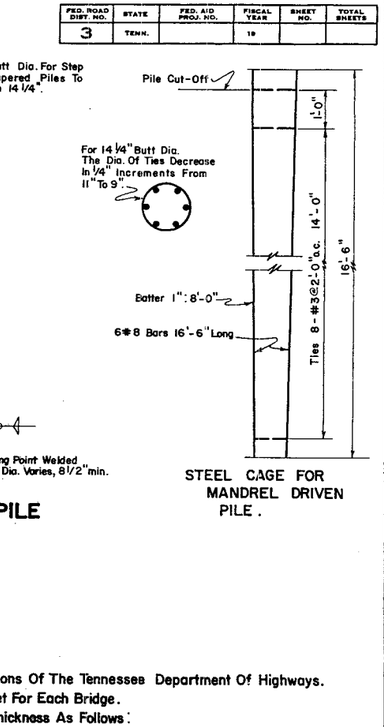


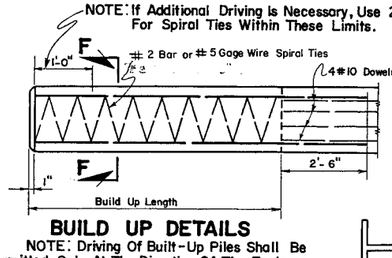












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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		

Piles To Be Pointed With Black Bands At These Points To Indicate Proper Place For Attaching Handling Line.

PRECAST CONCRETE PILE

For Lengths Up To 40' **For Lengths From 41' To 50'** **For Lengths From 51' To 60'**

NOTE: If It Becomes Necessary To Use Size 2 Piles The Contractor Will Be Allowed An Increase In The Size 1 Bid Of 25 %.

Length Of Of Pile	Longitudinal Reinforcing	Weight Of Steel Per Ft.	Weight Of Pile Per Ft.
Up To 35'	4 #7 Bars	9.6 #	205.3 #
36' To 40'	4 #8 Bars	12.2 #	205.3 #
41' To 45'	4 #9 Bars	15.1 #	265.3 #
46' To 50'	4# 10 Bars	18.8 #	265.3 #
51' To 55'	8# 9 Bars	28.9 #	265.3 #
56' To 60'	8# 10 Bars	36.2 #	265.3 #

NOTE: In Handling The Piles, They Shall Be Supported At The Points Indicated. Piles To Be Picked Up By Pulling On Both Lines Uniformly. End Of Pile Not To Touch Ground Unless Piles Inclined 1:2 Or Steeper.

PRESTRESSED CONCRETE PILE

SECTION A-A ALTERNATE SECTION A-A

* NOTE: End reinforcement required at tip end and driving end for all piles with circular strand patterns.

** NOTE: Subject to the approval of the Engineer of Structures, alternate strand sizes and arrangements of equivalent total force may be substituted.

SINGLE POINT PICK-UP DOUBLE POINT PICK-UP

NOTES: (1.) Maximum Length Single Pick Up Point - 60'-0"
(2.) Maximum Length Double Pick Up Point - 85'-0"
(3.) Piles To Be Marked At These Points To Indicate Proper Place For Attaching Handling Lines.
(4.) For Greater Lengths Three Point Pick-up Is Required.

TIMBER PILE SPLICE

Length of bolts based on full 12" diam. pile. Vary this length with diam. of pile.

CROSS SECTION

NOTE: If Additional Driving Is Necessary, Use 2" Pitch For Spiral Ties Within These Limits.

BUILD UP DETAILS

NOTE: Driving Of Built-Up Piles Shall Be Permitted Only At The Direction Of The Engineer.

STEEL PILES

Pile Shall Be Driven With A Good Steel Head Having A Projecting Ring Fitting Inside The Pipe. Clearance Between Ring And Pipe Should Be ¼". Steel Pipe May Be Welded Or Seamless Steel.

PIPE PILE

STEP TAPER PILE

STEEL CAGE FOR MANDREL DRIVEN PILE.

CAST IN PLACE PILES

NOTE: Concrete In Cast In Place Piles To Be Class "A"

DETAIL OF PILE SPLICE

GENERAL NOTES

(1.) SPECIFICATIONS: Standard Road And Bridge Specifications Of The Tennessee Department Of Highways.

(2.) CHOICE OF PILES: To Be Specified On The Layout Sheet For Each Bridge.

(3.) CAST IN PLACE: Pile Shells Shall Have A Minimum Thickness As Follows:
1. Piles Driven Without Mandrel - 7 Gage.
2. Piles Driven With Mandrel Shall Be Of Sufficient Strength And Thickness To Hold Its Original Form And Show No Sign Of Distortion After The Core Has Been Withdrawn.
3. Steel Pipe Shall Be Welded Or Seamless Steel Conforming To ASTM Designation A-252 Grade 2 Welded And Seamless Steel Pipe Piles.
Steel Cage For All Mandrel Driven Piles Will Be Required.

The Contractor Shall Maintain On The Job At All Time Prior To And During The Filling Of The Shells, A Light Suitable For Their Inspection. Improperly Driven, Broken Or Otherwise Defective Shells Shall Be Removed And Replaced Or Otherwise Corrected To The Satisfaction Of The Engineer By Removal And Replacement Or The Driving Of An Additional Pile At No Extra Cost.

(4.) PRESTRESSED CONCRETE PILES: 1. Concrete Shall Have A Minimum 28 Day Strength Of 5000 PSI With A Release Strength Of 3500 PSI For 3/8"⌀ Strands.
2. Spiral Ties Shall Be Tied To Corner Strands At Intervals Adequate To Prevent Excessive Movement During Vibration. They May Be Manufactured From Stock Meeting Any Grade Of Reinforcing Steel Or Hard Drawn Wire.

(5.) PILE POINTS: All Cast In Place Piles Shall Be Equipped With A Steel Driving Point. Driving Points Shall Be Mill Welded To The Pile Shell. Driving Points May Be Either Structural Steel, Forged Steel Or Cast Steel. Steel Piles Shall Have A Square Cut End Only. No Driving Point Is Required Unless Shown On The Bridge Plans.

(6.) SPLICES: Splice Details For Cast In Place Piles Shall Be Made In Accordance With The Manufacturers Recommendations, Subject To The Approval Of The Engineer. Splice Details For Steel And Prestressed Concrete Piles Shall Be In Accordance With The Details Shown On This Sheet.

(7.) DRIVING FORMULA: Piles Shall Be Driven To A Minimum Capacity As Specified On The Layout Sheet As Determined By The Driving Formulas Stipulated In The Specifications.

(8.) MILL TEST REPORTS: Notarized Mill Test Reports Will Be Required For All Steel Piles And Cast In Place Pile Shells.

(9) WELDING SPECIFICATIONS: AWS for Bridges.

(10) STRUCTURAL STEEL: Structural Steel conforming to ASTM A-7 or ASTM A-36-62T will be acceptable.

NOTE: When "H" Is 10' Or More Bracing For Bents Is Required.

HALF BENT HALF ABUTMENT

CASE I

STEEL FOR PRECAST CONCRETE

NOTE: Wrap Pile With American Welded Fabric 2"x 2" No. 10 Wire. Cost of Wire Fabric to be included in Unit Price Bid for Class "A" Concrete

SECTION X-X

DETAIL "A"

Welds Typical For All End Joints And Intersections.

HALF BENT HALF ABUTMENT

CASE II

PRECAST CONCRETE FOR STEEL

TYPICAL DETAILS

When The Substitution Of Steel For Precast Concrete Piles Or Precast Concrete For Steel Piles Is Permitted The Details Will Be As Shown Above. The Substitution Does Not Permit Changing The Number Of Piles In Either Case. Should The Contractor, When Permitted, Elect To Make The Substitution Of Case I, The Cost Of Encasing Blocks At Ground Lines And Bracing If Required Shall Be Included In The Price Per Lin. Ft. Of Piles.

Pile	2 PLs	4 ∠s
10"	6"x 1/2"	3½" x 3½" x 1/2"
12"	7"x 1/2"	4"x 4"x 1/2"
14"	8"x 1/2"	5"x 5"x 1/2"

DETAIL OF PILE DRIVING POINT

NOTE Cost of driving point to be included in the unit price bid for steel piles

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

STANDARD PILE DETAILS

VOID

CORRECT Fred Green
BRIDGE ENGINEER

APPROVED C. W. Long
STATE HIGHWAY ENGINEER

H-5-111

DESIGNED BY		DATE
DRAWN BY	J.W. SOUTHERLAND	DATE 5-27-60
RETRACED BY	JOE B. CANTRELL JR.	DATE 2-6-62
CHECKED BY		DATE

REV. - FEB. 6, 1962
REV. - MAR. 1, 1961 BATTER ON PRESTRESSED PILE
REV. - DEC. 8, 1960
REV. - OCT. 27, 1960
REV. - SEPT. 27, 1960 DELETE PILE SUBSTITUTIONS
REV. - JULY 25, 1960
REV. - DEC. 14, 1964 SPIRAL TIES
REV. - JAN. 22, 1964 COST OF WIRE FABRIC
REV. - FEB. 24, 1966 TIMBER PILE SPLICE, DETAIL OF PILE DRIVING POINT
REV. - NOV. 27, 1973 ADDED ALT. SECTION A-A
REV. - NOV. 12, 1982 DETAIL OF PILE SPLICE

4/2 SEE Std.-5-1 & 5-2