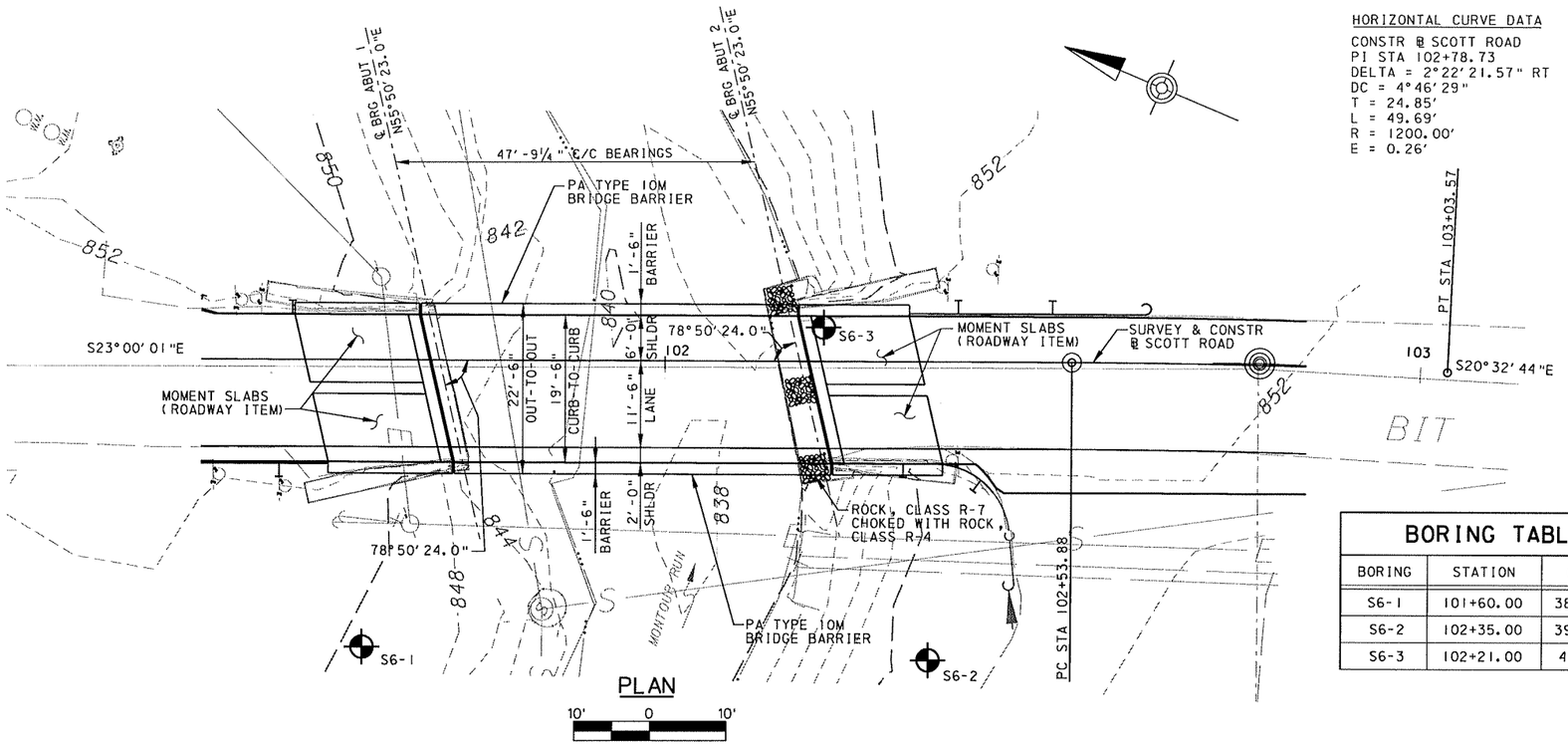


PLAN

10' 0 10'

HORIZONTAL CURVE DATA

CONSTR ℄ SCOTT ROAD
PI STA 102+78.73
DELTA = 2°22'21.57" RT
DC = 4°46'29"
T = 24.85'
L = 49.69'
R = 1200.00'
E = 0.26'

LEGEND

- CORE BORING
- WATER LEVEL
- E — EXISTING ELECTRIC LINE
- S — EXISTING SEWER LINE
- W — EXISTING WATER LINE

INDEX OF DRAWINGS

SHEET NO.	TITLE
1	GENERAL PLAN AND ELEVATION
2	QUANTITIES, RATINGS, & TYP SECTION
3	GENERAL NOTES
4	PARTIAL SUBSTRUCTURE DEMOLITION
5	CONSTRUCTION STAGES
6	ABUTMENT 1 PLAN AND ELEVATION
7	ABUTMENT 2 PLAN AND ELEVATION
8	ABUTMENT DETAILS
9	ABUTMENT DETAILS
10	SUBSTRUCTURE REINFORCEMENT BAR SCHEDULE
11	FRAMING PLAN
12	BEAM ELEVATION & DETAILS
13	BEAM DIAPHRAGMS
14	BEARING DETAILS
15	DECK PAVING PLAN
16	DECK SECTION
17	DECK DETAILS
18	DECK ELEVATIONS
19	SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE
20	CONCRETE/MASONRY STONE REPAIR DETAILS

BORING TABLE

BORING	STATION	OFFSET
S6-1	101+60.00	38.00' RT
S6-2	102+35.00	39.50' RT
S6-3	102+21.00	4.50' LT

NOTES:

1. FOR QUANTITIES, TYPICAL SECTION & RATING TABLES, SEE SHEET 2.
2. FOR GENERAL NOTES, SEE SHEET 3.
3. FOR BEAM MOMENTS AND SHEARS PROPERTIES, SEE SHEET 5.

SUPPLEMENTAL DRAWINGS

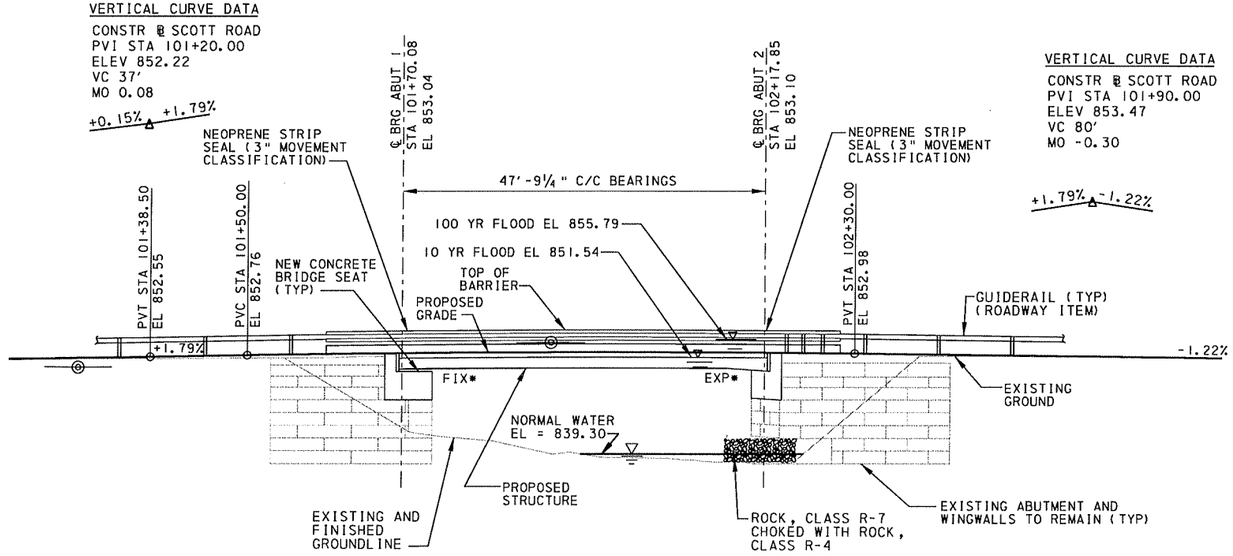
DESCRIPTION	DWG. NO.	RECM'D DATE
THRIE-BEAM TO PA TYPE 10M BRIDGE BARRIER TRANSITION CONNECTION	BC-708M	10-26-10
PA TYPE 10M BRIDGE BARRIER MISC. DETAILS	BC-709M	10-26-10
ANCHOR SYSTEMS	BC-734M	10-26-10
WALL CONSTRUCTION & EXPANSION JOINT DETAILS	BC-735M	10-26-10
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	10-26-10
CONCRETE DECK SLAB DETAILS	BC-752M	10-26-10
STEEL GIRDER DETAILS	BC-753M	10-26-10
STEEL DIAPHRAGMS FOR STEEL BEAM/ GIRDER STRUCTURES (STRAIGHT GIRDERS ONLY)	BC-754M	10-26-10
BEARINGS	BC-755M	10-26-10
NEOPRENE STRIP SEAL DAM FOR PRESTRESSED CONCRETE & STEEL I-BEAM BRIDGES	BC-767M	10-26-10
REINFORCED CONCRETE REPAIR	BC-783M	10-26-10
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	10-26-10
GENERAL NOTES AND LEGENDS FOR SOIL / ROCK DESCRIPTION	BC-795M	10-26-10
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	06-01-10
BACKFILL AT STRUCTURES	RC-12M	06-01-10
GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS	RC-50M	06-01-10

VERTICAL CURVE DATA

CONSTR ℄ SCOTT ROAD
PVI STA 101+20.00
ELEV 852.22
VC 37'
MO 0.08

VERTICAL CURVE DATA

CONSTR ℄ SCOTT ROAD
PVI STA 101+90.00
ELEV 853.47
VC 80'
MO -0.30



✳ LAMINATED NEOPRENE BEARING

ELEVATION

10' 0 10'

HYDRAULIC DATA

MONTOUR RUN - 10 YR FLOOD

WATER SURFACE EL = 851.54
Q = 4470 CFS
V = 7.51 FPS

MONTOUR RUN - 100 YR FLOOD

WATER SURFACE EL = 855.79
Q = 8580 CFS
V = 3.91 FPS

FLOOD OF RECORD - UNKNOWN
WATER SURFACE ELEVATION UNKNOWN
DRAINAGE AREA 25.9 SQ. MILES

STRUCTURE PLANS
BPAA NO. 02-2828

MPMS NO. 79896

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

APPROVED _____ 20
FOR STRUCTURAL ADEQUACY ONLY

DISTRICT BRIDGE ENGINEER

REVISIONS

County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF MONTOUR RUN BRIDGE NO. 6

SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN

I-SP COMP P/S CONC SPR BOX BM BRIDGE
GENERAL PLAN & ELEVATION
COUNTY PROJECT MT06-0608

DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE: 1"=10'	SHEET 1 OF 20	

DES: MJP | DWG: DRG | CKD: MJP

USER:SMAGILL | PLOT DATE: 5/10/2012 10:02:08 AM
PATH: D:\179\CON00441\0\000000000112258\13.00_CAD\13.01_Bridge\13.01.05_Final_Files
FILE: MT06-GENPLN01.dgn | MODEL: (Default)

ALTERNATE STRUCTURE ITEMS

ITEM NO	ITEM	UNIT	TOTAL
8130-0001	BRIDGE STRUCTURE, AS DESIGNED, BPAA NO. 02-2828	LS	LUMP SUM
8000-0001	PRESTRESSED CONCRETE BRIDGE STRUCTURE	LS	LUMP SUM
8100-0001	STEEL BRIDGE STRUCTURE	LS	LUMP SUM

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO	ITEM	UNIT	ABUT 1	ABUT 2	SUPER	TOTAL
8130-0001	BRIDGE STRUCTURE, AS DESIGNED, BPAA NO. 02-2828 Δ	LS	---	---	---	LS
(1)	CLASS 3 EXCAVATION	CY	19	38	---	57
(1)	MEMBRANE WATERPROOFING SYSTEMS INSTALLED ON OTHER SURFACES	SY	10	10	---	20
(1)	CLASS AAAP CEMENT CONCRETE (2)	CY	---	---	23	23
(1)	CLASS AA CEMENT CONCRETE (3)(4)	CY	14	14	6	34
(1)	SELECTED BORROW EXCAVATION, STRUCTURE BACKFILL	CY	19	19	---	38
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE)	SY	---	---	140	108
(1)	NEOPRENE STRIP SEAL DAM (3" MOVEMENT)	LF	---	---	44	44
(1)	FABRICATED STRUCTURAL STEEL (5)	LB	---	---	32,825	32,825
(1)	5" STEEL GRID DECK Δ	SF	---	---	1122	1122
(1)	LAMINATED NEOPRENE BEARING PAD	EA	---	---	11	11
(1)	SHEAR CONNECTORS	EA	---	---	480	480
(1)	BRIDGE PAINT INSPECTION KIT Δ	EA	---	---	1	1
(1)	PA TYPE 10M BRIDGE BARRIER	LF	---	---	108	108
(1)	CLASS H.E.S. CEMENT CONCRETE Δ	CY	---	---	4	4
AND						
1002-0053	REINFORCEMENT BARS, EPOXY COATED (6)	LB	1508	1611	1283	4402
1003-0008	DOWEL HOLES, 18" DEPTH	EA	8	8	---	16
1017-0000	PRESSURE MORTAR POINTING	LF	7	77	---	84
1018-0050	REMOVAL OF PORTION OF EXISTING BRIDGE Δ	LS	---	---	---	LS
1091-0331	EPOXY INJECTION CRACK SEAL, (8)	LF	5	5	---	10
1091-0335	EPOXY INJECTION CRACK SEAL (7)	DOLLAR	---	---	2000	2000
9100-9001	REPAIR DETERIORATED CONCRETE/MASONRY STONE (8) Δ	CF	22	18	---	40
9036-0001	BRIDGE IDENTIFICATION PLAQUES Δ	LS	---	---	---	LS
0850-0032	ROCK CLASS R-4	CY	---	5	---	5
0850-0035	ROCK CLASS R-7	CY	---	5	---	5

Δ INDICATES SPECIAL PROVISION

(1) ITEMS IN BRIDGE STRUCTURE LUMP SUM ITEM 8130-0001 - GIVEN FOR INFORMATION ONLY.

(2) INCLUDES CLASS AAAP CONCRETE IN GRID DECK SLAB.

(3) INCLUDES CLASS AA CONCRETE IN ABUTMENT BACKWALLS, AND CHEEKWALLS ABOVE HORIZONTAL CONSTRUCTION JOINT NEAR BRIDGE SEAT.

(4) INCLUDES CLASS AA CONCRETE IN CURBS AND BARRIERS.

(5) FABRICATED STRUCTURE STEEL INCLUDES:
AASHTO M270 GRADE 50 (AASTM A709 GRADE 50) 32,700 LBS
AASTM F1554, GRADE 55 (ANCHOR BOLTS) 125 LBS

(6) FOR AS DESIGNED STRUCTURE, INCLUDED IN BRIDGE ITEMS. FOR ALTERNATE DESIGNS, INCLUDED IN BRIDGE STRUCTURE LUMP SUM BID ITEM.

(7) CRACK REPAIR TO THE NEW DECK, AS DIRECTED BY THE DEPARTMENT.

(8) APPROXIMATE QUANTITY

LOAD RATINGS

SPAN 1 (BEAMS B2, B3, B4)		W18 X 119 ROLLED SECTION					
		H20	HS20	ML-80	PHL-93	P-82	TK527
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	0.358	0.358	0.358	0.358	---	0.358
	LOCATION	.5L	0.45L	.5L	.5L	---	0.45L
	LIMIT STATE	STR-I	STR-I	STR-I	STR-I	---	STR-I
	RATING FACTOR	3.25M	2.34M	1.89M	1.67M	---	2.01M
OPERATING RATING (OR)	DISTRIBUTION FACTOR	0.358	0.358	0.358	0.358	0.358	0.358
	LOCATION	.5L	0.45L	.5L	.5L	0.5L	0.45L
	LIMIT STATE	STR-II	STR-II	STR-II	STR-IIA	STR-II	STR-II
	RATING FACTOR	4.21M	3.03M	2.46M	2.49M	1.83M	2.61M

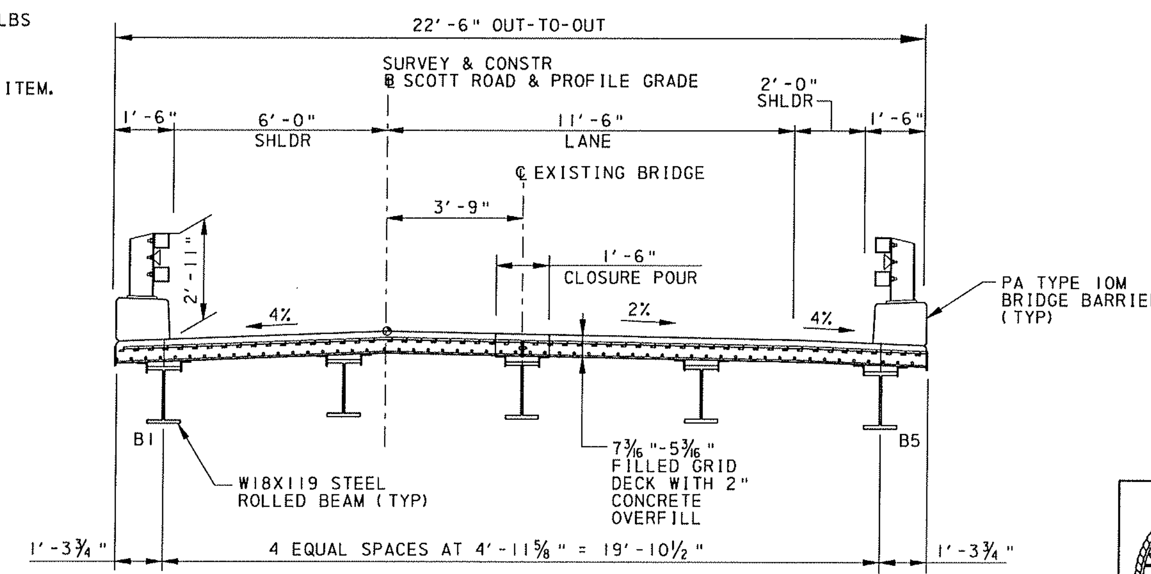
LOAD RATINGS (GOVERNS)

SPAN 1 (BEAMS B1, B5)		W18 X 119 ROLLED SECTION					
		H20	HS20	ML-80	PHL-93	P-82	TK527
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	0.469	0.469	0.469	0.469	---	0.469
	LOCATION	.5L	.45L	.5L	.5L	---	0.45L
	LIMIT STATE	STR-I	STR-I	STR-I	STR-I	---	STR-I
	RATING FACTOR	2.41M	1.73M	1.41M	1.24M	---	1.49M
OPERATING RATING (OR)	DISTRIBUTION FACTOR	0.469	0.469	0.469	0.469	0.469	0.469
	LOCATION	.5L	.45L	.5L	.5L	0.5L	.45L
	LIMIT STATE	STR-II	STR-II	STR-II	SERV-IIA	STR-II	STR-II
	RATING FACTOR	3.13M	2.25M	1.82M	1.96M	1.36M	1.93M

RATING NOTES:

1. ADTT = 65 (2010) INITIAL
   ADTT = 65 (2030) DESIGN
2. CRITICAL MEMBER - EXTERIOR BEAM
   MAXIMUM FACTORED POSITIVE FLEXURAL RESISTANCE = 1403 k-ft
   LOCATION = .5L
   MAXIMUM FACTORED SHEAR RESISTANCE = 320.1 k
   LOCATION = ABUT 1
3. DESIGN AND RATINGS ARE IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD USING PENNDOT DM-4 DISTRIBUTION FACTORS.
4. GIVEN DISTRIBUTION FACTOR IS THE VEHICULAR LIVE LOAD DISTRIBUTION FACTOR USED TO PRODUCE THE GIVEN RATING.
5. ALL RATINGS ARE BASED ON THE INCLUSION OF FUTURE WEARING SURFACE.

SYMBOL DESIGNATION FOR RATING FACTORS:
M = MOMENT RATING FACTOR CONTROLS.
V = SHEAR RATING FACTOR CONTROLS.
C = COMBINED SHEAR/FLEXURE INTERACTION RATING FACTOR CONTROLS.
ML - PENNSYLVANIA MAXIMUM LEGAL LOAD (ML = 80).
P-82 = PENNSYLVANIA PERMIT LOAD.
TK-527 = PENNSYLVANIA HEAVY DUMP TRUCK LOAD.



TYPICAL CROSS SECTION

NO SCALE

NOTE:

1. FOR GENERAL NOTES, SEE SHEET 3.

County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REVISIONS

REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
QUANTITIES, RATINGS, & TYP SECTION
COUNTY PROJECT MT06-0608

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK J. PAVLICK ENGINEER No. PE-036776-E

DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 2 OF 20	

DES: DAS | DWG: DRG | CKD: MJP

GENERAL NOTES:

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2004 AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, SEPTEMBER 2007, INCLUDING LASTEST REVISIONS.

DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.

LIVE LOAD DISTRIBUTION TO BEAMS IS BASED UPON DM-4 DISTRIBUTION FACTORS.

DESIGN LOADINGS

DESIGN LIVE LOADS:

PHL-93 OR P-82 (204 KIP PERMIT LOAD).

FATIGUE DESIGN IS BASED ON ADTT 65 (2030).

DEAD LOADS:

INCLUDES SURFACE AREA DENSITY OF 0.030 KSF FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

SEISMIC FORCES WERE CONSIDERED FOR ACCELERATION COEFFICIENT OF 0.05 FOR THIS STRUCTURE.

GENERAL

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408, 2011, CHANGE NO.2, ANSI/AASHTO/AWS D1.5-2008 BRIDGE WELDING CODE (USE ANSI/AASHTO/AWS D1.1-2008 FOR WELDING NOT COVERED IN ANSI/AASHTO/AWS D1.5-2008), AND CONTRACT SPECIAL PROVISIONS.

VERFIY ALL DIMENSIONS AND GEOMETRY OF THE EXISTING STRUCTURE IN THE FIELD AS NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION.

USE CARE WHEN REMOVING PORTIONS OF EXISTING BRIDGE SO AS NOT TO DAMAGE REMAINING PARTS OF THE STRUCTURE. REPLACE ALL PARTS OF THE STRUCTURE WHICH ARE DESIGNATED TO REMAIN AND ARE DAMAGED DURING THE REMOVAL OPERATIONS AT NO COST TO THE DEPARTMENT (SEE SPECIAL PROVISION ITEM 1018-0050 "REMOVAL OF PORTION OF EXISTING BRIDGE" SPECIAL PROVISION FOR FURTHER DETAILS.

SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES F.

NOTIFY THE REGIONAL HEADQUARTERS OF THE FISH COMMISSION PRIOR TO CONSTRUCTION AND COOPERATE WITH THE FISH COMMISSION DURING CONSTRUCTION.

SOUTHWEST REGION
236 LAKE ROAD
SOMERSET, PA 15501
PHONE: 814-445-8974

ALL DIMENSIONS ARE HORIZONTAL, EXCEPT AS NOTED.

REFER TO EROSION AND SEDIMENT POLLUTION CONTROL PLANS FOR STREAM RESTRICTIONS.

CONCRETE NOTES

PROVIDE 2 INCH CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

USE CLASS AAAP CEMENT CONCRETE IN THE DECK SLAB.

USE CLASS AA CEMENT CONCRETE IN THE CONCRETE CURBS, BARRIERS, ABUTMENT BACKWALLS, CHEEKWALLS AND PRECAST ABUTMENT CAPS.

THE CONTRACTOR MAY SUBSTITUTE A HIGHER STRENGTH CLASSIFICATION OF CONCRETE FOR CLASS AA CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT.

CHAMFER EXPOSED CONCRETE EDGES 1 INCH BY 1 INCH, EXCEPT AS NOTED.

CLEAN AND ROUGHEN TOP OF CONCRETE DECK WHICH LIES DIRECTLY BENEATH THE BARRIER PRIOR TO POURING THE BARRIER CONCRETE TO ENSURE ADEQUATE SHEAR TRANSFER.

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM-A615, A996 OR A706. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A996 OR A616 REINFORCEMENT BARS IN BRIDGE PIERS, ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

USE EPOXY-COATED REINFORCEMENT BARS UNLESS NOTED OTHERWISE.

GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROVIDE A MINIMUM REINFORCING BAR LAP AND EMBEDMENT LENGTH OF 30 BAR DIAMETERS OR IN ACCORDANCE WITH AASHTO AS MODIFIED BY DM-4, WHICHEVER IS GREATER. EPOXY-COATED BARS REQUIRE MODIFICATIONS IN ACCORDANCE WITH THE EPOXY-COATED BAR FACTORS FOUND IN AASHTO.

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CONCRETE NOTES (CONTINUED)

APPLY EPOXY BONDING COMPOUND TO ALL INTERFACES BETWEEN NEW AND EXISTING CONCRETE JUST PRIOR TO PLACING NEW CONCRETE. BLAST CLEAN EXISTING CONCRETE THOROUGHLY PRIOR TO PLACING EPOXY. COST OF THE CLEANING AND EPOXY IS INCIDENTAL TO THE CLASS OF CONCRETE FOR WHICH IT IS APPLIED.

PLACE CONCRETE BEARING PEDESTALS MONOLITHICALLY WITH THE ABUTMENTS. PROVIDE SHOP DRAWINGS DEPICTING ANY CHANGES IN THE BEARING PEDESTALS AND BEARING PEDESTAL ELEVATIONS AS REQUIRED FOR CONFORMITY WITH THE BEARINGS SUPPLIED.

PREPARE BEARING AREAS IN ACCORDANCE WITH PUBLICATION 408, SECTION 1001.3(K)8.

APPLY TWO COATS PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AS PER PUBLICATION 408/2011, SECTION 1019,TO THE EXPOSED CONCRETE TO THE DECK SLAB, BARRIERS, EXCEPT BACKSIDE OF FASCIA BARRIER.

APPLY PROTECTIVE COATING FOR NEW REINFORCED CONCRETE SURFACES (PENETRATING SEALER) TO THE FRONT FACE OF ABUTMENTS.

APPLY PROTECTIVE COATING FOR NEW REINFORCED CONCRETE SURFACES (PENETRATING SEALER, REINFORCED CONCRETE SUBSTRUCTURE SURFACE) TO AREAS OF ABUTMENT REPAIRS.

ALL EXISITNG CONCRETE REMOVED FROM THE STRUCTURE WILL BE DISPOSED OF, OFF SITE, TO THE SATISFACTION OF THE ENGINEER.

REPAIR ANY AREAS OF CONCRETE DAMAGED BEYOND THE REMOVAL LIMITS AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

EXERCISE CARE WHEN REMOVING CONCRETE AND PROVIDE SHIELDING TO PREVENT DEBRIS FROM FALLING INTO THE CREEK BELOW.

STRUCTURAL STEEL NOTES

PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270 GRADE 50 (ASTM A709 GRADE 50) EXCEPT WHERE NOTED OTHERWISE.

USE STEEL GRID REINFORCED CONCRETE BRIDGE DECK WITH STEEL BARS AND SHAPES CONFORMING TO AASHTO M270 GRADE 50 (ASTM A709 GRADE 50).

THE CONTRACTOR IS RESPONSIBLE FOR SAFELY AND ADEQUATELY SUPPORTING ALL STEEL MEMBERS DURING THEIR SHIPPING AND HANDLING AND ERECTION, INCLUDING DURING SLAB PLACEMENT SUCH THAT ALLOWABLE STRESSES, IN ACCORDANCE WITH AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES, ARE NOT EXCEEDED. STABILITY OF COMPLETE BEAMS IS TO BE MAINTAINED BY THE CONTRACTOR DURING ERECTION, UNTIL ALL GIRDERS AND DIAPHRAGMS ARE IN-PLACE AND ALL BOLTS ARE PROPERLY INSTALLED. ERECTION LOADS INCLUDING SELF-WEIGHT OF THE STEEL MEMBERS, WIND LOADING AND CONSTRUCTION LIVE LOAD EFFECTS ARE TO BE EVALUATED BY THE CONTRACTOR FOR STABILITY, STRESSES AND DEFLECTIONS ON THE STEEL MEMBERS DURING ANY STAGE OF ERECTION.

DO NOT USE FORM SUPPORT SYSTEMS WHICH WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.

UNLESS OTHERWISE NOTED, FILLET WELDS ARE TO BE MINIMUM SIZES AS DEFINED IN THE FOLLOWING TABLE.

MIN SIZE OF FILLET WELDS (1)

BASE METAL THICKNESS OF THICKER PART JOINED (IN.)	MINIMUM SIZE (IN.)
$T \leq 3/4$"	1/4"
$T > 3/4$"	5/16"

1. SINGLE PASS WELDS MUST BE USED

PROVIDE WELDED STUD SHEAR CONNECTORS MANUFACTURED FROM STEEL CONFORMING TO ASTM A108.

PROVIDE MECHANICALLY GALVANIZED 7/8" DIAMETER FASTENERS CONFORMING TO ASTM A325, TYPE 1, HIGH STRENGTH BOLTS EXCEPT WHERE NOTED OTHERWISE.

EXCLUDE BOLT THREADS FROM SHEAR PLANES, UNLESS NOTED. WHERE FEASABLE, PLACE BOLTS SO THAT THE THREADED ENDS WILL BE PROTECTED FROM THE WEATHER.

PROVIDE A CLASS A SLIP COEFFICIENT FOR THE CONTACT AREA OF ALL BOLTED PARTS.

ALL STEEL IN MAIN LOAD CARRYING MEMBERS SUBJECT TO TENSILE STRESS AS DESIGNATED ON THE PLANS (CVN) REQUIRES CHARPY V-NOTCH TESTING. PROVIDE STEEL CONFORMING TO THE SUPPLEMENTAL IMPACT PROPERTIES FOR ZONE 2 PER PUBLICATION 408, SECTION 1105.02(a)4.

WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.

HOT DIP OR MECHANICALLY GALVANIZE ALL ANCHOR BOLTS, NUTS & WASHERS IN ACCORDANCE WITH SECTION 1105.02(d) OF PUB 408.

PAINT ALL STRUCTURAL STEEL IN ACCORDANCE WITH PUBLICATION 408, SECTION 1060 AND THE CURRENT SUPPLEMENTS. PAINT TO BE ACCEPTED BY THE ENGINEER UPON SUBMISSION OF THE PAINT CHIP. PROVIDE PAINT CHIPS TO THE DEPARTMENT AND OBTAIN APPROVAL PRIOR TO APPLICATION.

STRUCTURAL STEEL NOTES (CONTINUED)

SET ANCHOR BOLTS IN 3" DIAMETER PREFORMED HOLES WITH 1'-6" MINIMUM EMBEDMENT. DO NOT DRILL UNLESS SPECIFICALLY INDICATED ON PLANS. FILL THE PREFORMED HOLES WITH NON-SHRINK GROUT. GROUT STRENGTH MUST EQUAL OR EXCEED 4 ksi. WORK TO INSTALL THE ANCHOR BOLTS. THE ANCHOR BOLTS AND NON-SHRINK GROUT ARE INCIDENTAL TO CLASS AAA CEMENT CONCRETE.

MAKE TACK WELDS WITH THE SAME TYPE OF ELECTRODE, AND INCORPORATE IN THE FINAL WELD. NO OTHER TACK WELDING WILL BE PERMITTED.

DO NOT WELD WHEN SURFACES TO BE WELDED ARE MOIST OR EXPOSED TO RAIN, SNOW, OR WIND, OR WHEN WELDERS ARE EXPOSED TO INCLEMENT CONDITIONS THAT WILL ADVERSELY AFFECT THE QUALITY OF THE WORK.

DO NOT WELD OR BURN WHEN THE TEMPERATURE IS BELOW 0 DEGREES F. PREHEAT AND MAINTAIN THE TEMPERATURE OF THE METAL TO AT LEAST 70 DEGREES F WHEN THE TEMPERATURE OF THE METAL IS BETWEEN 0 DEGREES F AND 30 DEGREES F DURING WELDING OR BURNING. EXTEND THE AREA TO BE HEATED 3 INCHES BEYOND THE WELD IN ALL DIRECTIONS.

REMOVE BY APPLICATION OF HEAT ANY MOISTURE PRESENT AT POINT OF WELD. PROVIDE WINDBREAKS FOR PROTECTION FROM DIRECT WIND.

PRIOR TO PLACING THE WELD, THOROUGHLY CLEAN ALL PORTIONS OF NEW SURFACES TO RECEIVE WELDS OF ALL FOREIGN MATTER, INCLUDING PAINT FILM, FOR A DISTANCE OF 2 INCHES FROM EACH SIDE OF THE OUTSIDE LINES OF THE WELD.

CONCRETE AND MASONRY STONE REPAIRS:

THE DEPARTMENT DOES NOT GUARANTEE THE LOCATION OR QUANTITY OF ANY CRACKED OR SPALLED AREAS OF CONCRETE AND MASONARY STONE AS SHOWN AND/OR REFERRED TO ON THE DRAWINGS, NOR DOES THE DEPARTMENT GUARANTEE THAT ALL DEFECTS ARE AS SHOWN. THE QUANTITIES SHOWN ARE FOR THE CONTRACTOR'S GUIDANCE ONLY AND SHOULD NOT BE HELD AS BINDING IN ANY WAY.

REPAIR ANY AREAS OF CONCRETE/MASONRY DAMAGED BEYOND THE REMOVAL LIMITS AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

AREAS OF REPAIR AS SHOWN AND NOTED ON THE DRAWINGS INDICATE THE APPROXIMATE SCOPE OF THE REPAIR WORK TO BE DONE.

THE ENGINEER WILL DETERMINE QUANTITIES FOR BASIS OF PAYMENT FOR THE VARIOUS REPAIR ITEMS FOR MEASUREMENT OF THE VOLUMES, AREAS, OR LENGTHS DEPENDING ON THE SPECIFIED METHOD OF MEASUREMENT OF THE RESPECTIVE ITEM AFTER THE AREAS ARE PREPARED. THE CONTRACTOR IS TO CHECK AND VERIFY QUANTITIES BEFORE REPAIRS ARE MADE.

THE ENGINEER RESERVES THE RIGHT TO CHANGE THE NATURE AND LIMITS OF WORK TO ASSURE A SATISFACTORY REPAIR.

UTILITY NOTES

COORDINATE, LOCATE AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408, 2011, SECTION 105.06 AND 107.12.

EXISTING BRIDGE NOTES

IT IS ASSUMED THE EXISTING BRIDGE RAILING CONTAIN LEAD PAINT AND OTHER TOXIC METALS. NO TEST DATA IS AVAILABLE FOR THE EXISTING PAINT SYSTEM. THE REMOVAL OF THE BRIDGE RAILING WILL BE IN ACCORDANCE WITH ITEM 1018-0050 REMOVAL OF PORTION OF EXISTING BRIDGE.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
MARK J. PAVLICK
NO. PE-036776-E

REVISIONS

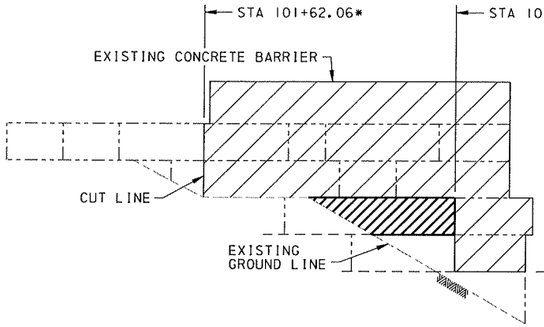
County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

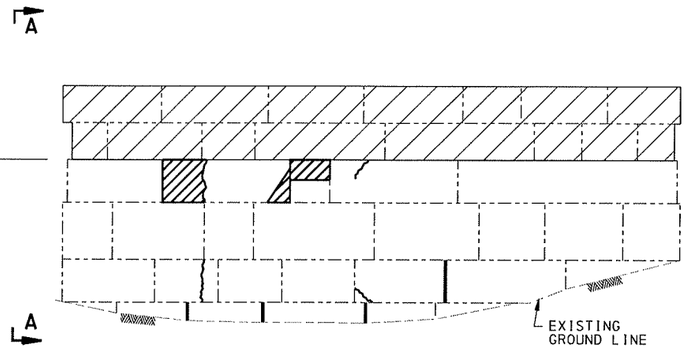
REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
GENERAL NOTES
COUNTY PROJECT MT06-0608

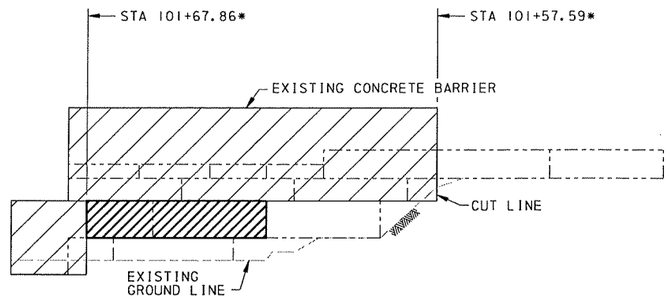
DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 3 OF 20	

DES: MJP | DWG: DRG | CKD: MJP

USER: SMAGILL | PLOT DATE: 5/10/2012 10:11:29 AM
PATH: 01179\CONO0441\0000000001\12258\13.00_CAD\13.01_Bridge\13.01.05_Final_Files
FILE: MT06-GENNOTES01.dgn | MODEL: Default







VIEW A-A

0 16" 32" 5.33'

3/8" = 1'-0"

VIEW B-B

0 16" 32" 5.33'

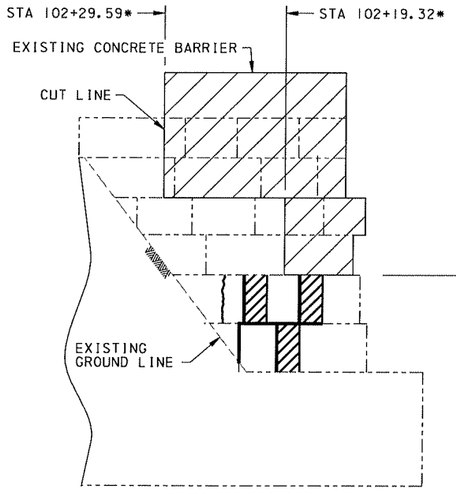
3/8" = 1'-0"

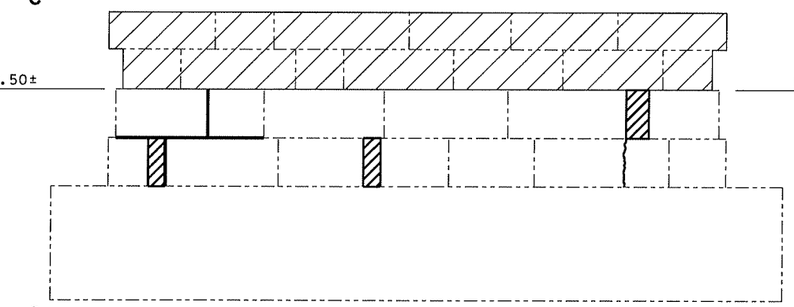
ABUTMENT 1 ELEVATION

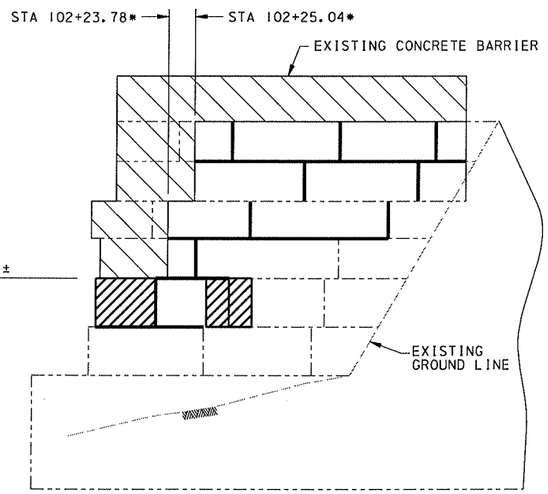
(LOOKING BACK ON STATION)

0 16" 32" 5.33'

3/8" = 1'-0"







VIEW C-C

0 16" 32" 5.33'

3/8" = 1'-0"

ABUTMENT 2 ELEVATION

(LOOKING AHEAD ON STATION)

0 16" 32" 5.33'

3/8" = 1'-0"

VIEW D-D

0 16" 32" 5.33'

3/8" = 1'-0"

NOTE:

1. FOR GENERAL NOTES, SEE SHEET 3.

* CONTRACTOR TO FIELD VERIFY

LEGEND:

- PARTIAL ABUTMENT/WINGWALL REMOVAL
- ABUTMENT EXISTING STONE MASONRY CONCRETE REPAIR
- ABUTMENT CRACK REPAIR
- TO BE REPOINTED

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK J. PAVLICK ENGINEER NO. PE-036776-E

REVISIONS

County of Allegheny

Pittsburgh, Pennsylvania

DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF MONTOUR RUN BRIDGE NO. 6

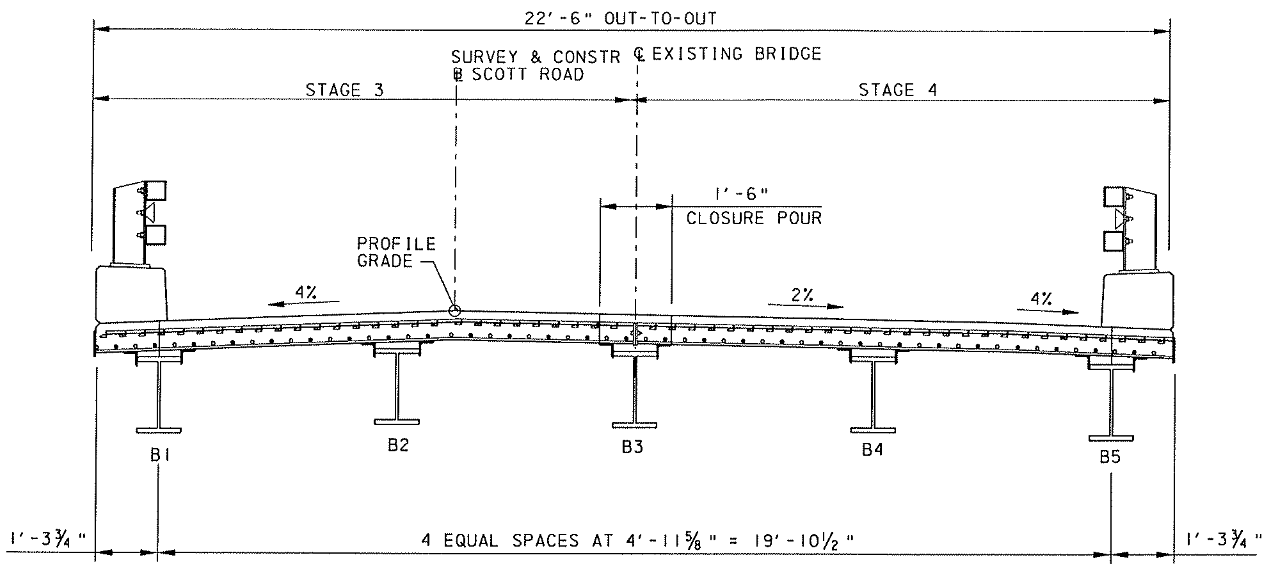
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN

1-SP COMP P/S CONC SPR BOX BM BRIDGE
PARTIAL SUBSTRUCTURE DEMOLITION
COUNTY PROJECT MT06-0608

DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 4 OF 20	

DES: JAS | DWG: DRG | CKD: MJP

USER: SMAGILL
PLOT DATE: 5/10/2012 10:12:02 AM
PATH: 011797\CON00441\0\0000000011225B\13.00.CAD\13.01.Bridge\13.01.05_Final_E.Files
FILE: MT06-PARTSUBDEM001.dgn
MODEL: Default



TYPICAL SECTION

NO SCALE

CONSTRUCTION STAGES

STAGE 1: AFTER REMOVAL OF PORTIONS OF THE MASONRY STONE ABUTMENTS AS SHOWN ON SHEET 4, PREPARE THE REMAINING SECTIONS OF THE MASONRY STONE ABUTMENTS FOR PRECAST ABUTMENT CAPS. INSTALL THE PRECAST ABUTMENT CAPS PER THE DETAILS AND TO THE ABUTMENT SEAT ELEVATIONS AS DEFINED ON SHEETS 6 AND 7.

STAGE 2: SET BEAM 3 IN POSITION AND ANCHOR THE BEAM TO THE ABUTMENT CAPS.

STAGE 3: INSTALL THE LEFT PORTION OF THE BRIDGE WHICH CONTAINS BEAMS B1 AND B2, THE PRECAST OVERFILLED GRID DECK, THE STEEL DIAPHRAGMS BETWEEN BEAMS B1 AND B2 AND THE PRECAST CONCRETE PORTION OF THE PA TYPE 10M BARRIER.

STAGE 4: INSTALL THE RIGHT PORTION OF THE BRIDGE WHICH CONTAINS BEAMS B4 AND B5, THE PRECAST OVERFILLED GRID DECK, THE STEEL DIAPHRAGMS BETWEEN BEAMS B4 AND B5 AND THE PRECAST CONCRETE PORTION OF THE PA TYPE 10M BARRIER.

STAGE 5:
A. INSTALL THE STEEL DIAPHRAGMS BETWEEN BEAMS B2 AND B3; AND BEAMS B3 AND B4.
B. WELD THE BRIDGE SIDE EXTRUSIONS AT THE ABUTMENTS.
C. BOLT TOGETHER THE TRIM BARS OVER BEAM B3.
D. WELD BEAM B3 SHEAR CONNECTORS IN PLACE.
E. INSTALL THE BRIDGE BARRIER RAILING.

STAGE 6:
A. SET THE BACKWALL EXTRUSIONS AND POUR THE TOP OF THE BACKWALLS USING CLASS AAA RAPID SETTING CONCRETE.
B. POUR THE CLOSURE POUR OVER BEAM B3 USING CLASS H.E.S. CEMENT CONCRETE. THE BRIDGE MAY BE OPEN TO TRAFFIC 6 HOURS AFTER THE LAST CLASS AAA H.E.S. CONCRETE CLOSURE POUR HAS BEEN MADE.
C. POUR ABUTMENT CHEEKWALLS.
D. INSTALL THE ABUTMENT STRIP SEALS.

UNFACTORED MAXIMUM MOMENTS AND SHEARS - FASCIA BEAMS

SPAN LENGTH (ft) - 47.77	MOMENT		SHEAR		
LOADING	MAXIMUM MOMENT (kip-ft)	LOCATION (ft)	MAXIMUM SHEAR (kips)	LOCATION (ft)	REACTION @ C.L. BRG. (kips)
NON-COMPOSITE DEAD LOAD	150.8	23.89	12.63	0.00	12.63
COMPOSITE DEAD LOAD (INCLUDING FUTURE WEARING SURFACE)	76.2	23.89	6.37	0.00	6.37
PEDESTRIAN LIVE LOAD	0.00	0.00	0.00	0.00	0.00
PHL-93 LIVE LOAD PLUS IMPACT	512.7	23.89	46.93	0.00	46.93
P-82 LIVE LOAD PLUS IMPACT	604.9	23.89	63.84	0.00	63.84

UNFACTORED MAXIMUM MOMENTS AND SHEARS - INTERIOR BEAMS

SPAN LENGTH (ft) - 47.77	MOMENT		SHEAR		
LOADING	MAXIMUM MOMENT (kip-ft)	LOCATION (ft)	MAXIMUM SHEAR (kips)	LOCATION (ft)	REACTION @ C.L. BRG. (kips)
NON-COMPOSITE DEAD LOAD	191.4	23.89	16.03	0.00	16.03
COMPOSITE DEAD LOAD (INCLUDING FUTURE WEARING SURFACE)	76.2	23.89	6.37	0.00	6.37 *
PEDESTRIAN LIVE LOAD	0.00	0.00	0.00	0.00	0.00
PHL-93 LIVE LOAD PLUS IMPACT	391.1	23.89	56.38	0.00	56.38
P-82 LIVE LOAD PLUS IMPACT	461.5	23.89	76.69	0.00	76.69

NOTES:

UNFACTORED MAXIMUM MOMENTS, SHEARS, AND REACTIONS INCLUDE THE APPROPRIATE APPLIED DISTRIBUTION FACTOR TO MAXIMIZE THE GIVEN VALUES. REACTIONS DO NOT INCLUDE ALLOWANCES FOR END DIAPHRAGMS, END BLOCK OR THE PROJECTION OF THE BEAM PAST THE CENTERLINE OF BEARING.

* COMPOSITE DEAD LOAD (INCLUDING FWS) IS LESS FOR BEAM B3.

STEEL ROLLED BEAM SECTION PROPERTIES @ CENTERLINE SPAN STEEL BEAM W18x119, GRADE 50 -- FASICA BEAMS

COMPOSITE, N = 24, POSITIVE FLEXURE	
MOMENT OF INERTIA, IX, in**4	3772
NEUTRAL AXIS TO BOTTOM OF BEAM, in	12.89
SECTION MODULUS AT TOP OF BEAM, in**3	621
SECTION MODULUS AT BOTTOM OF BEAM, in**3	293
COMPOSITE, N = 8, POSITIVE FLEXURE	
MOMENT OF INERTIA, IX, in**4	5338
NEUTRAL AXIS TO BOTTOM OF BEAM, in	16.16
SECTION MODULUS AT TOP OF BEAM, in**3	1901
SECTION MODULUS AT BOTTOM OF BEAM, in**3	330

STEEL ROLLED BEAM SECTION PROPERTIES @ CENTERLINE SPAN STEEL BEAM W18x119, GRADE 50 -- INTERIOR BEAMS

COMPOSITE, N = 24, POSITIVE FLEXURE	
MOMENT OF INERTIA, IX, in**4	4108
NEUTRAL AXIS TO BOTTOM OF BEAM, in	13.61
SECTION MODULUS AT TOP OF BEAM, in**3	766
SECTION MODULUS AT BOTTOM OF BEAM, in**3	302
COMPOSITE, N = 8, POSITIVE FLEXURE	
MOMENT OF INERTIA, IX, in**4	5765
NEUTRAL AXIS TO BOTTOM OF BEAM, in	17.01
SECTION MODULUS AT TOP OF BEAM, in**3	2946
SECTION MODULUS AT BOTTOM OF BEAM, in**3	339

STEEL ROLLED BEAM SECTION PROPERTIES @ CENTERLINE SPAN STEEL BEAM W18x119, GRADE 50

NON-COMPOSITE, POSITIVE FLEXURE	
MOMENT OF INERTIA, IX, in**4	2190
MOMENT OF INERTIA, (COMPR. FLG.), IYC, in**4	126
MOMENT OF INERTIA, IY, in**4	253
NEUTRAL AXIS TO TOP OF BEAM, in	9.48
NEUTRAL AXIS TO BOTTOM OF BEAM, in	9.48
SECTION MODULUS AT TOP OF BEAM, in**3	231
SECTION MODULUS AT BOTTOM OF BEAM, in**3	231
RADIUS OF GYRATION OF BEAM, in	2.69

NOTES:

1. FOR GENERAL NOTES, SEE SHEET 3.
2. THE CONTRACTOR MUST SUBMIT A SUPERSTRUCTURE ERECTION PROCEDURE AND PROVIDE CALCULATIONS TO VERIFY NO DAMAGE WILL OCCUR DURING THE TRANSPORTATION AND ERECTION OF THE STEEL ROLLED SECTIONS OR THE DECK. SUBMIT THE PROCEDURE THREE WEEKS PRIOR TO ERECTION AND APPROVAL MUST BE GIVEN PRIOR TO CONSTRUCTION. PROVIDE CRANES WITH A MINIMUM CAPACITY OF 150% OF THE LIFTED LOAD.
3. FOR RATINGS, SEE SHEET 2.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK J. PAVLICK ENGINEER No. PE-036776-E

REVISIONS

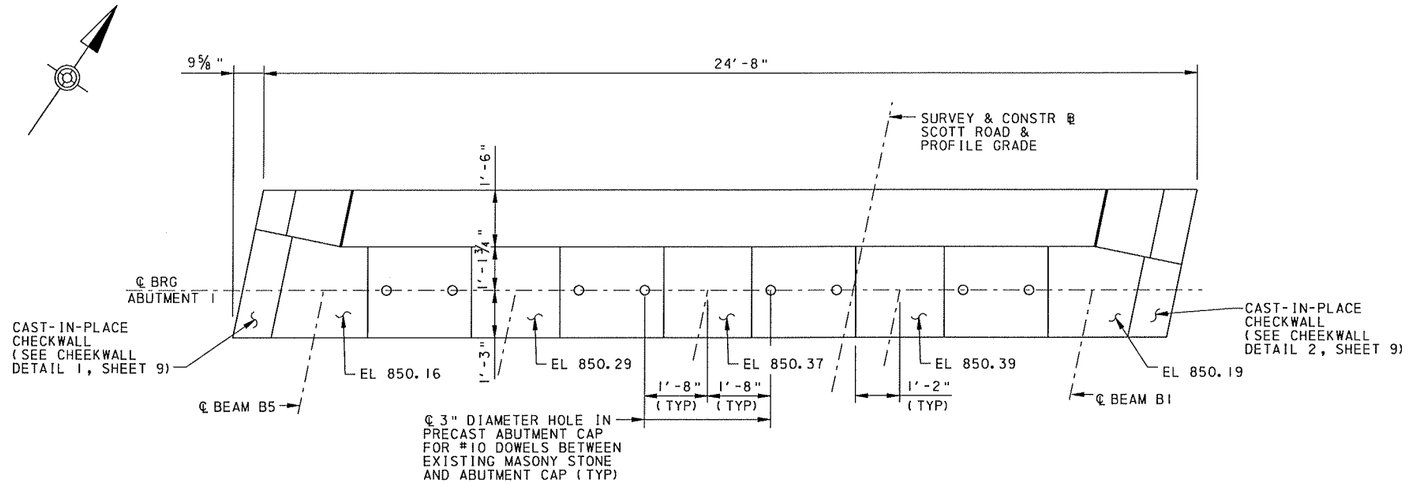
County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97 OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE CONSTRUCTION STAGES
COUNTY PROJECT MT06-0608

DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 5 OF 20	

DES: DAS | DWG: DRG | CKD: MJP

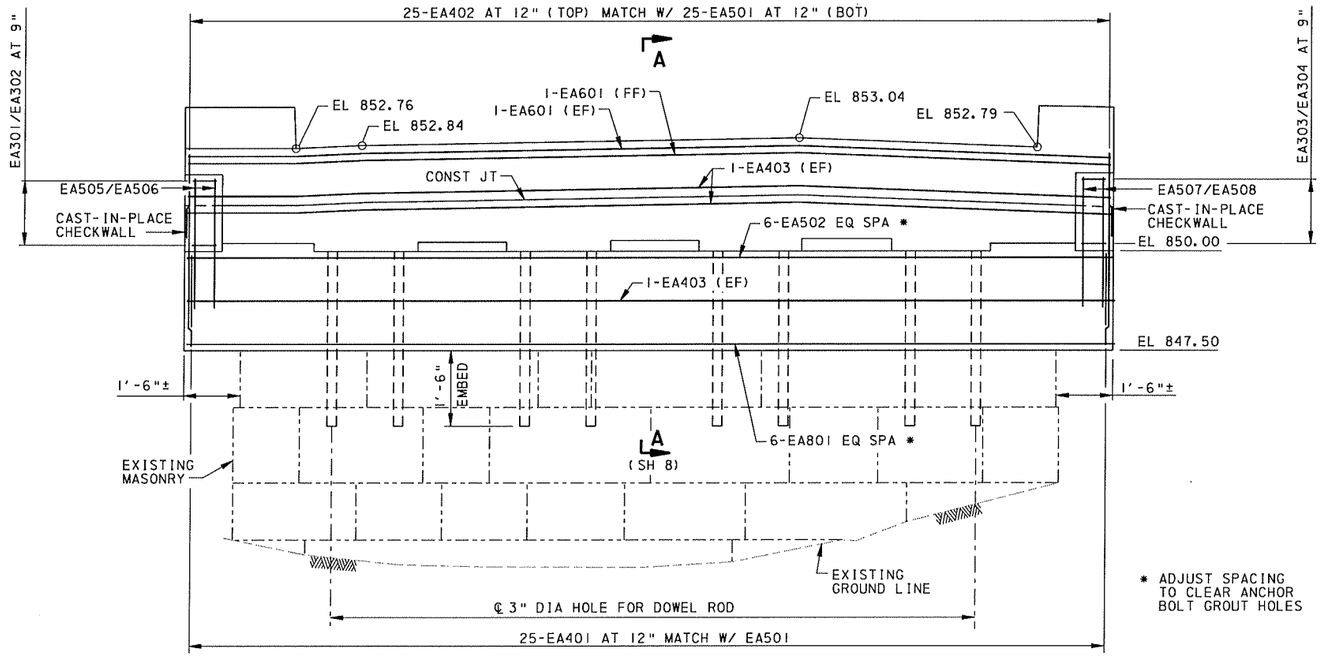
USER: SMAGILL | PLOT DATE: 5/10/2012 10:12:36 AM
PATH: 01179\CON00441\0\000000000112258\13_00_CAD\13_01_Bridge\13_01_05_Final_Files
FILE: MT06-CONSTSTAG01.dgn | MODEL: Default



PLAN

0 1' 2' 4'

½" = 1'-0"



* ADJUST SPACING TO CLEAR ANCHOR BOLT GROUT HOLES

ELEVATION

0 1' 2' 4'

½" = 1'-0"

PROCEDURE TO SET PRECAST ABUTMENT CAP

1. PRIOR TO FABRICATION OF THE PRECAST ABUTMENT CAP, FIELD VERIFY THE ELEVATION. THE TOP OF MASONRY STONE TO REMAIN. PROBE FOR THE TOPS OF THE EXISTING MASONRY STONE TO VERIFY THE PRECAST ABUTMENT CAPS WILL COMPLETELY BEAR ON THE MASONRY STONE TO REMAIN.
2. SET BOTTOM OF ABUTMENT CAP 1" ABOVE THE TOP OF EXISTING MASONRY STONE ELEVATION.
3. DRILL 1'-6" DEEP 3" DIAMETER HOLES IN EXISTING MASONRY STONE AT THE LOCATIONS SHOWN IN THE PLANS.
4. REMOVE THE PRECAST ABUTMENT CAP TO SET NEOPRENE SPONGE GASKETS AND CONCRETE SHIMS.
5. SET 1½" THICK CLOSED CELL NEOPRENE SPONGE GASKET AROUND THE PERIMETER OF THE MASONRY STONE WHERE THE PRECAST ABUTMENT CAP WILL SET. PLACE 1½" THICK CLOSED CELL NEOPRENE SPONGE "DONUT" AROUND THE 3" DIAMETER DOWEL HOLES IN THE EXISTING MASONRY STONE.
6. PROVIDE A MINIMUM OF FOUR FIBER REINFORCED CONCRETE SHIMS ON THE EXISTING MASONRY STONE AND SET THE PRECAST ABUTMENT CAP TO THE PROPER ELEVATION . ADJUST AS REQUIRED.
7. SET AND GROUT IN DOWEL RODS. USE NON-SHRINK HIGH EARLY STRENGTH GROUT.
8. PRESSURE GROUT BETWEEN THE EXISTING MASONRY STONE AND THE PRECAST ABUTMENT CAP WITH NON-SHRINK HIGH EARLY STRENGTH GROUT. PROVIDE PORTS AND PLACE GROUT IN A MANNER TO ENSURE THERE WILL BE NO VOIDS IN THE GROUT PAD.

THE CONTRACTOR MUST SUBMIT A PRECAST ABUTMENT CAP INSTALLATION PROCEDURE 3 WEEKS PRIOR TO INSTALLATION. THE PROCEDURE MUST BE APPROVED PRIOR TO CONSTRUCTION.

NOTES:

1. FOR GENERAL NOTES, SEE SHEET 3.
2. NON-SHRINK HIGH EARLY STRENGTH GROUT, CLOSED CELL NEOPRENE SPONGES AND THE PROVISIONS OF SPECIAL PROVISION SECTION 1106 ARE INCIDENTAL TO CLASS AA CEMENT CONCRETE.
3. WORK THIS SHEET WITH SHEETS 7 THROUGH 9.
4. FOR THE SUBSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 10.

USER: SMAGILL
PLOT DATE: 5/10/2012 10:13:21 AM
PATH: O:\1797\CONGO4411\0\0000000011225B\13.00_CAD\13.01_Br-Ldgn\13.01.05_Final_Files
FILE: MT06-ABUTIPLNELE01.dgn
MODEL: Default

DES: MJP | DWG: DRG | CKD: MJP

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK J. PAVLICK ENGINEER NO. PE-036776-E

REVISIONS

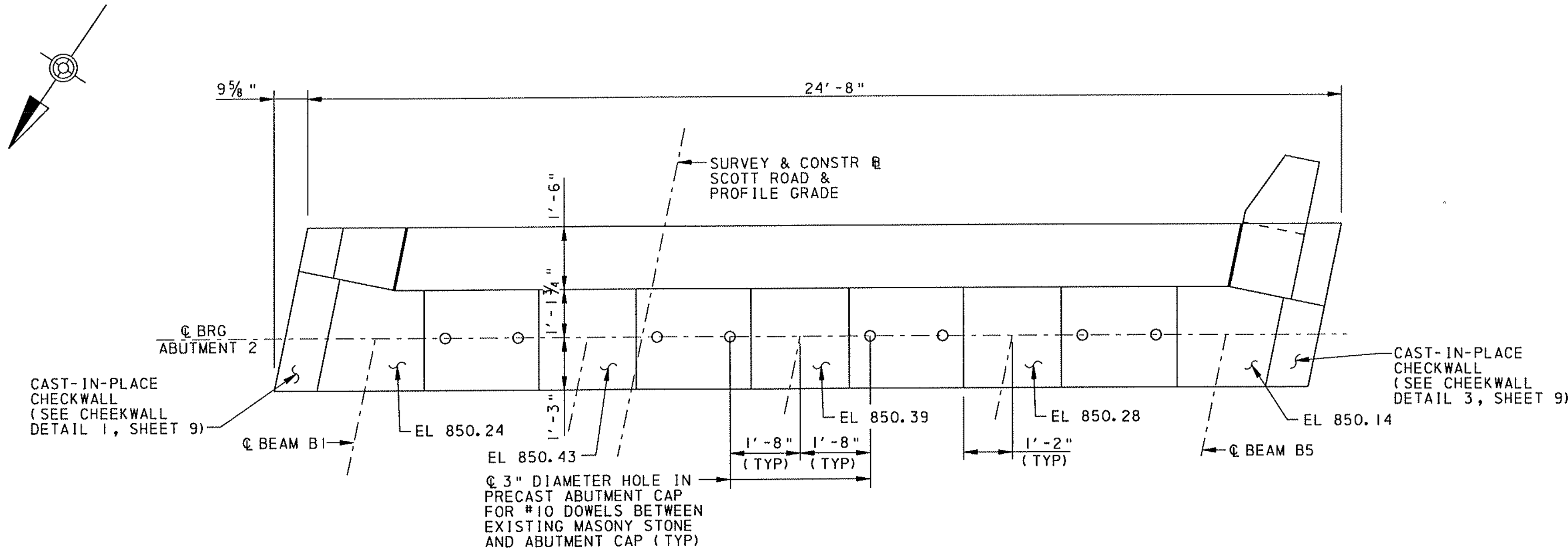
County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF MONTOUR RUN BRIDGE NO. 6

SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN

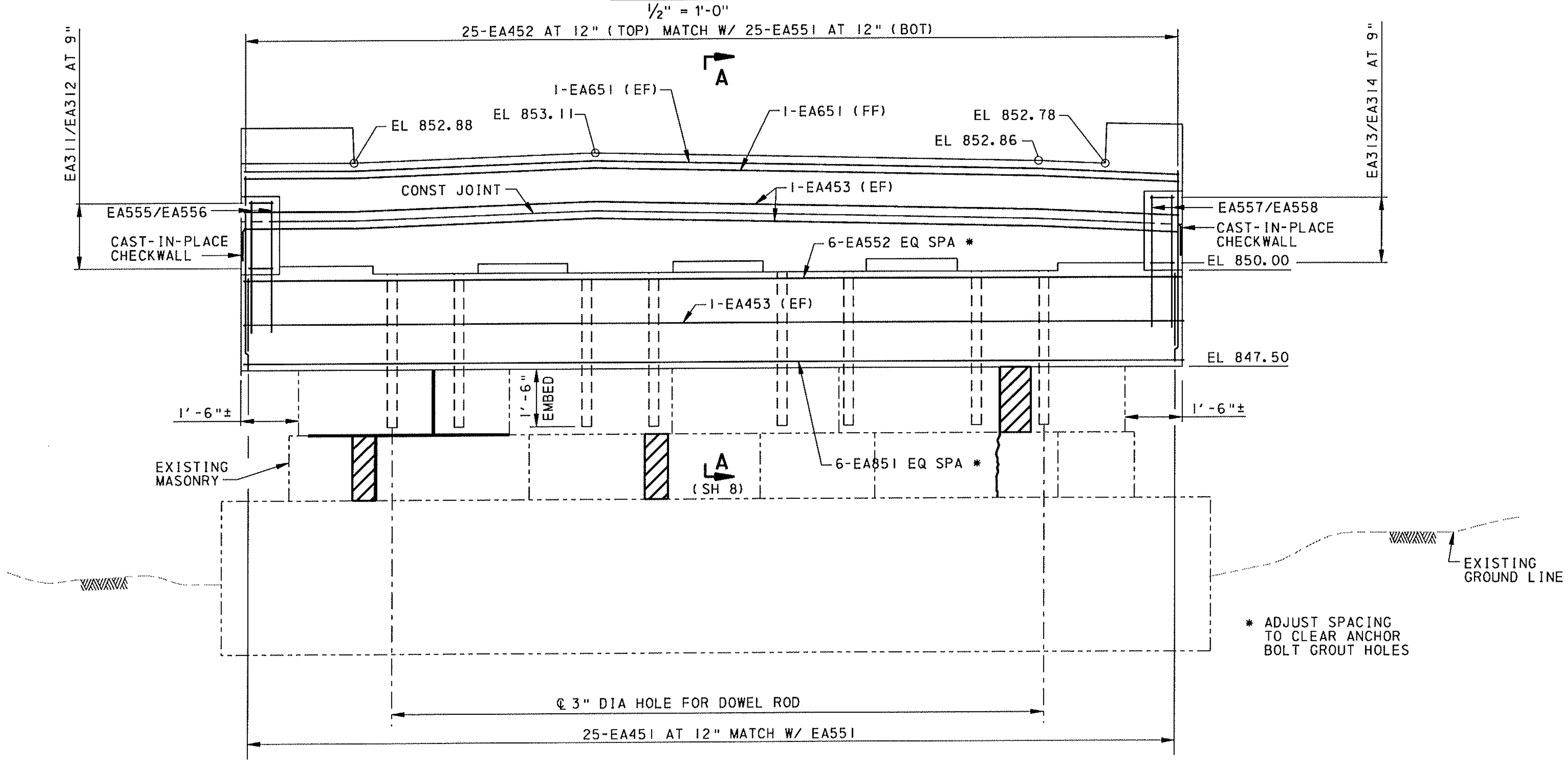
I-SP COMP P/S CONC SPR BOX BM BRIDGE
ABUTMENT 1 PLAN AND ELEVATION
COUNTY PROJECT MT06-0608

DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 6 OF 20	



PLAN

0 1' 2' 4'
½" = 1'-0"



* ADJUST SPACING TO CLEAR ANCHOR BOLT GROUT HOLES

ELEVATION

0 1' 2' 4'
½" = 1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE SHEET 3.
2. FOR NOTES, SEE SHEET 6.
3. FOR PROCEDURE TO SET PRECAST ABUTMENT CAP, SEE SHEET 6.
4. WORK THIS SHEET WITH SHEETS 6, 8, AND 9.
5. FOR THE SUBSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 10.

REVISIONS

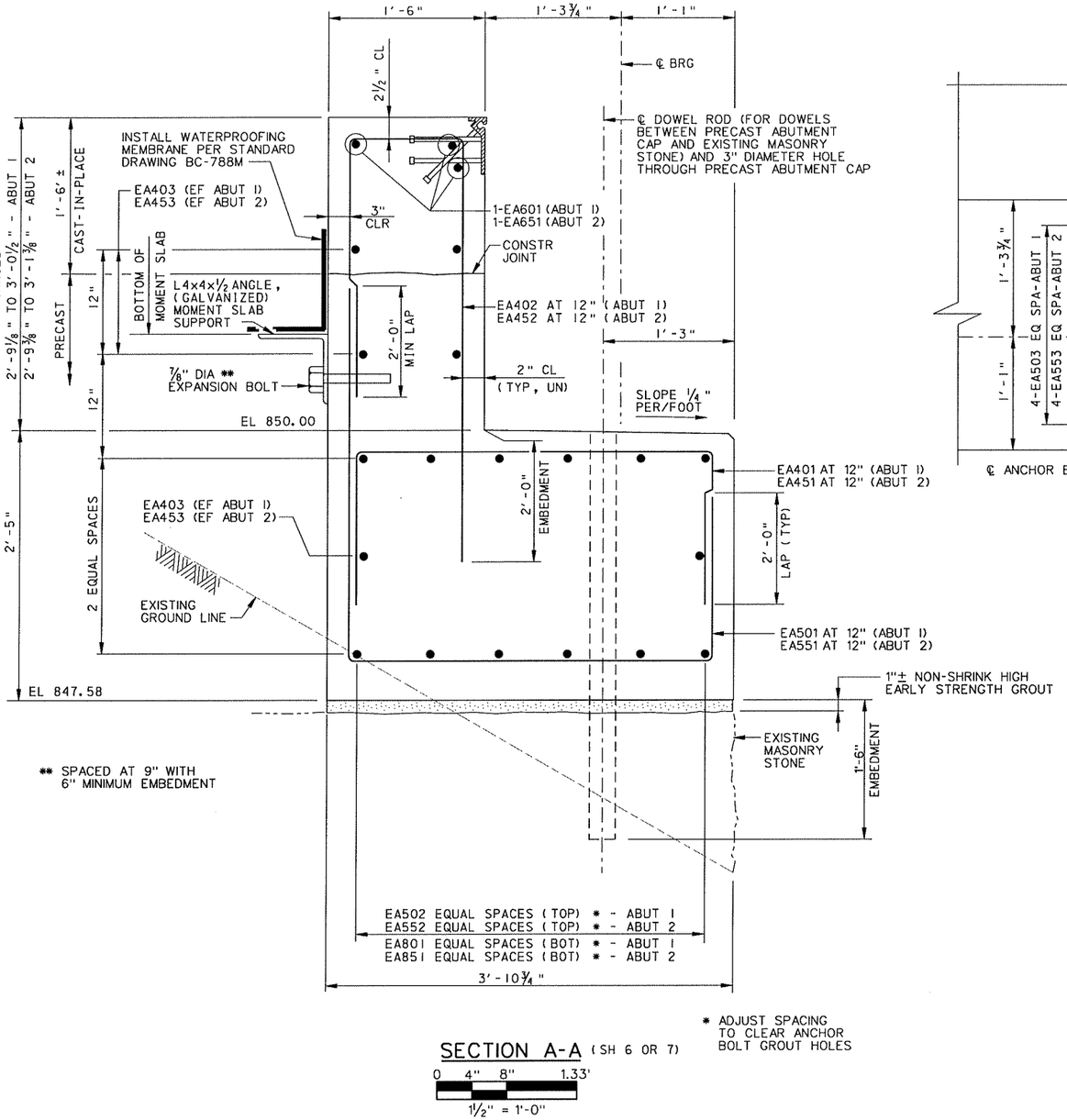
MARK J. PAVLICK
REGISTERED PROFESSIONAL ENGINEER
PE-036776-E

County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
ABUTMENT 2 PLAN AND ELEVATION
COUNTY PROJECT MT06-0608

DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 7 OF 20	

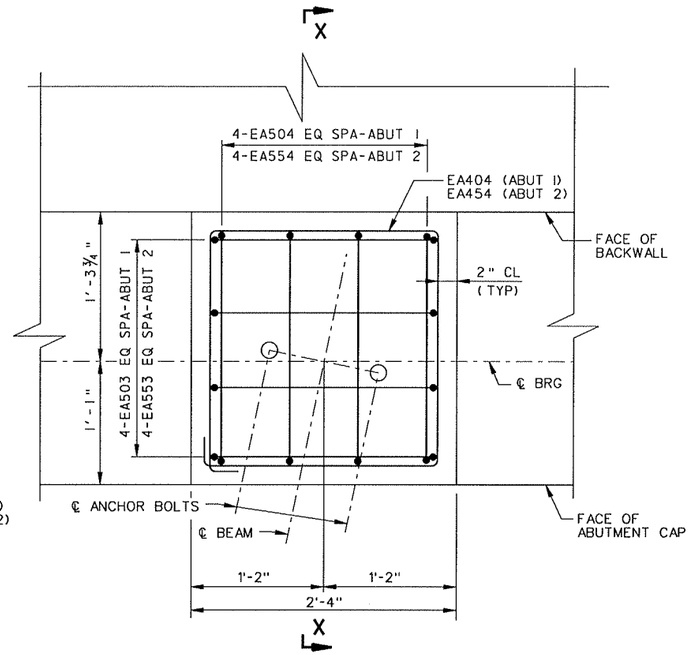
DES: MJP	DWG: DRG	CKD: MJP



SECTION A-A (SH 6 OR 7)

0 4" 8" 1.33'

1½" = 1'-0"

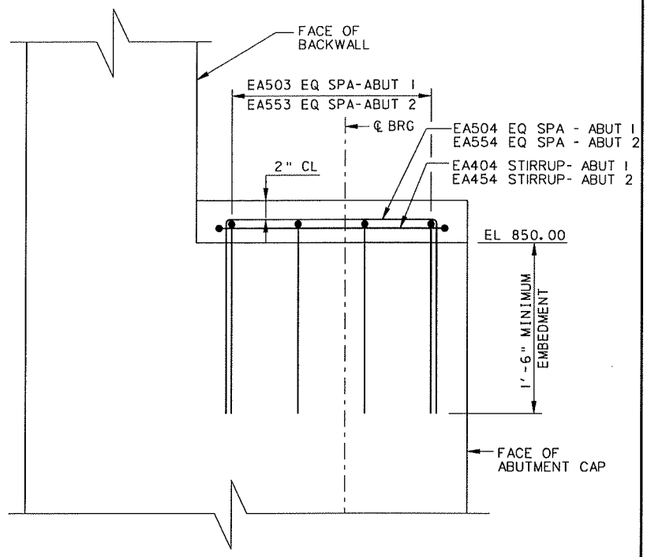


PEDESTAL PLAN

(BEAMS B2, B3 AND B4)

0 4" 8" 1.33'

1½" = 1'-0"



SECTION X-X

0 4" 8" 1.33'

1½" = 1'-0"

NOTE:

1. FOR GENERAL NOTES, SEE SHEET 3.
2. WORK THIS SHEET WITH SHEETS 6, 7 AND 9.
3. FOR SUBSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 10.

USER: SWAGILL
PLOT DATE: 5/10/2012 10:14:17 AM
PATH: 01\1797\CONGO441\01\0000000001\2258\13.00_CAD\13.01_Br-Idgs\13.01_05_Final_Files
F.FILE: MT06-ABTDET01.dgn
MODEL: Default

DES: MJP | DWG: DRG | CKD: MJP

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK J. PAVLICK ENGINEER NO. PE-036776-E

REVISIONS

County of Allegheny

Pittsburgh, Pennsylvania

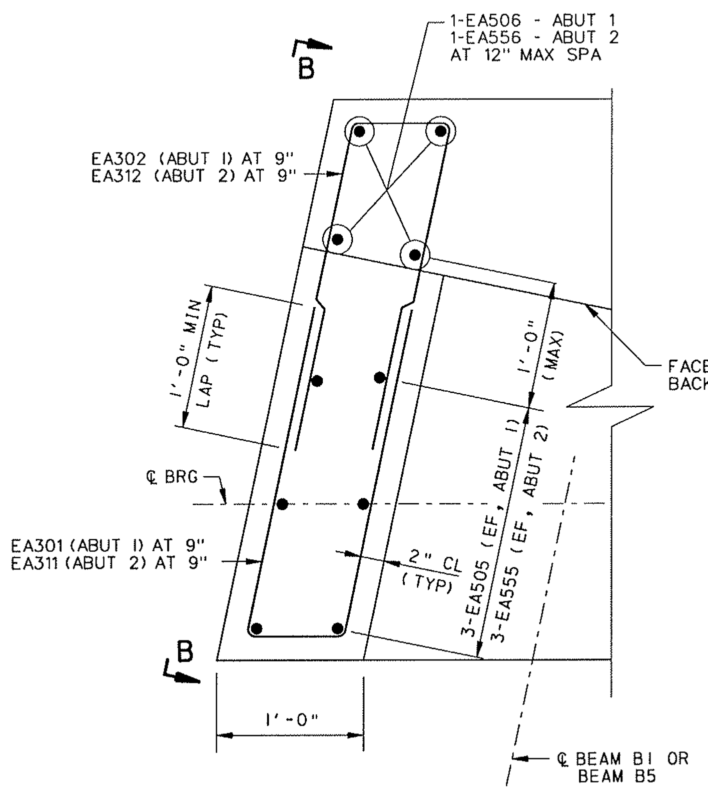
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF MONTOUR RUN BRIDGE NO. 6

SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN

I-SP COMP P/S CONC SPR BOX BM BRIDGE
ABUTMENT DETAILS
COUNTY PROJECT MT06-0608

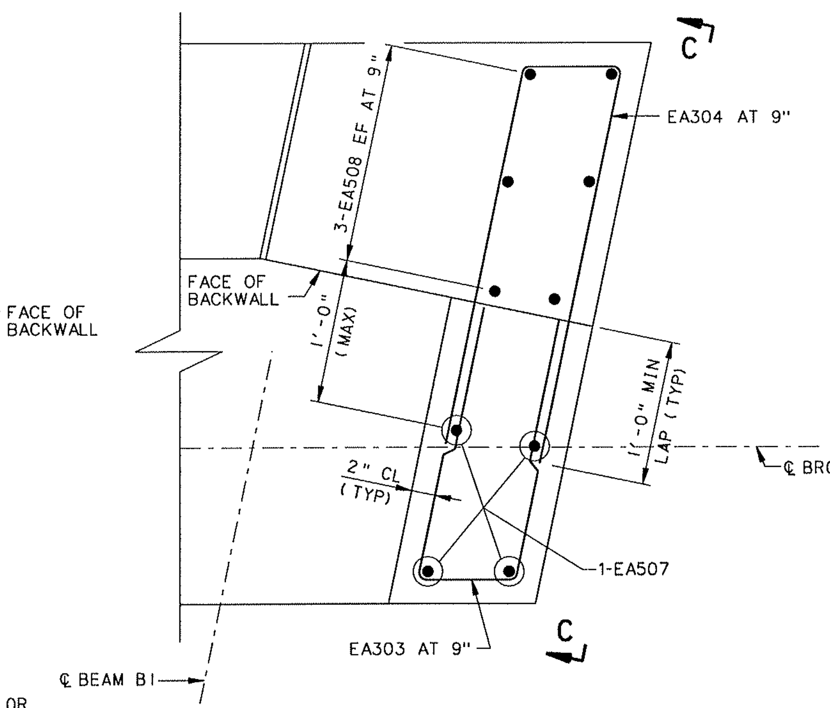
DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 8 OF 20	



CHEEKWALL DETAIL 1

0 4" 8" 1.33'

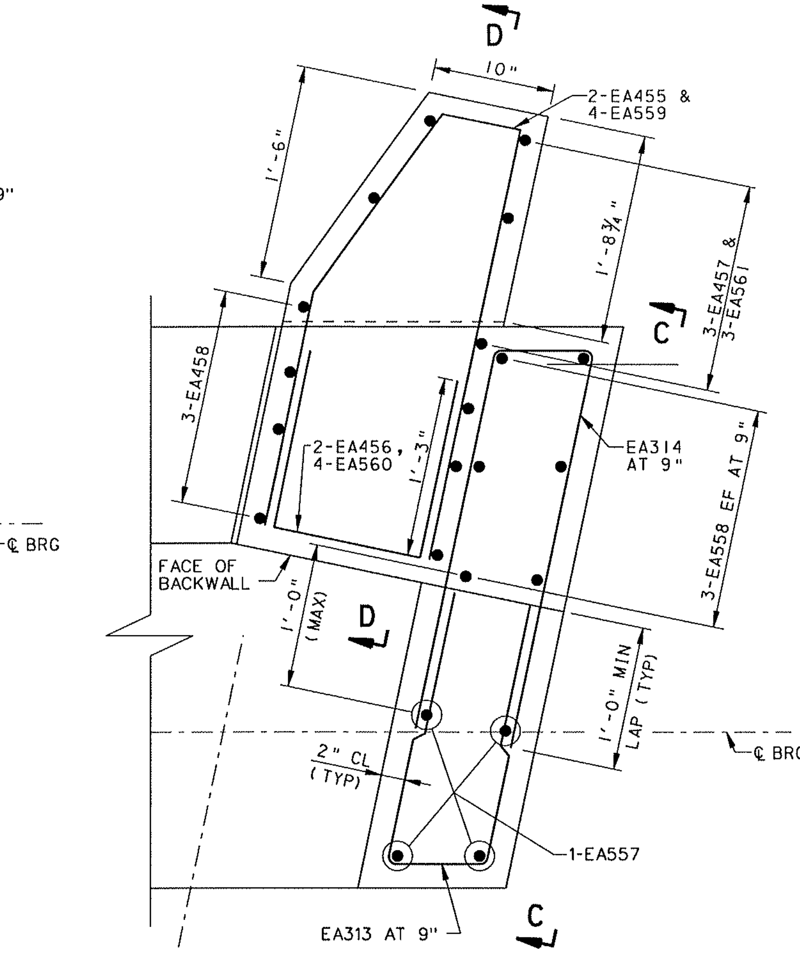
1/2" = 1'-0"



CHEEKWALL DETAIL 2

0 4" 8" 1.33'

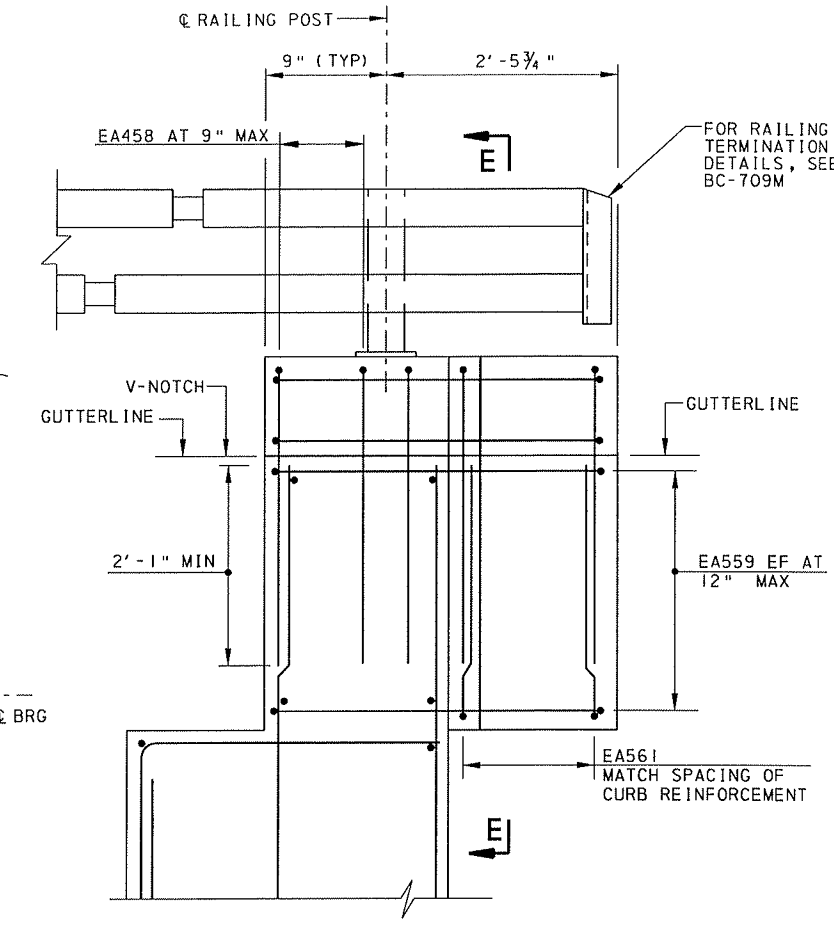
1/2" = 1'-0"



CHEEKWALL DETAIL 3

0 4" 8" 1.33'

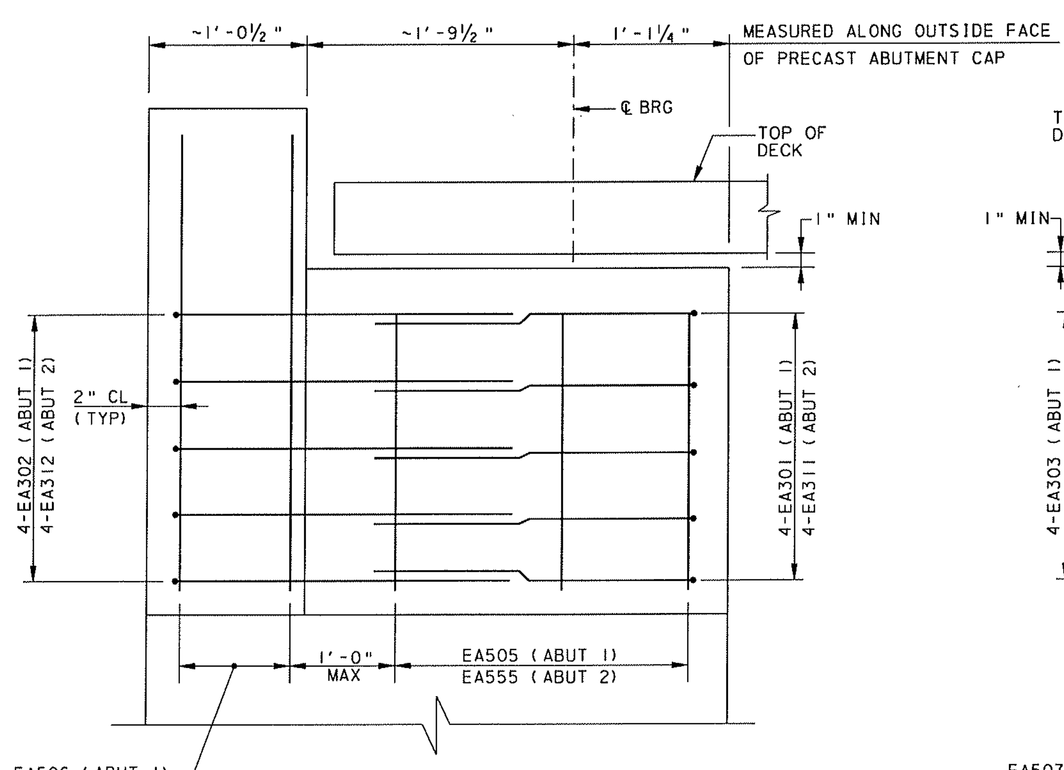
1/2" = 1'-0"



SECTION D-D

0 6" 1' 2'

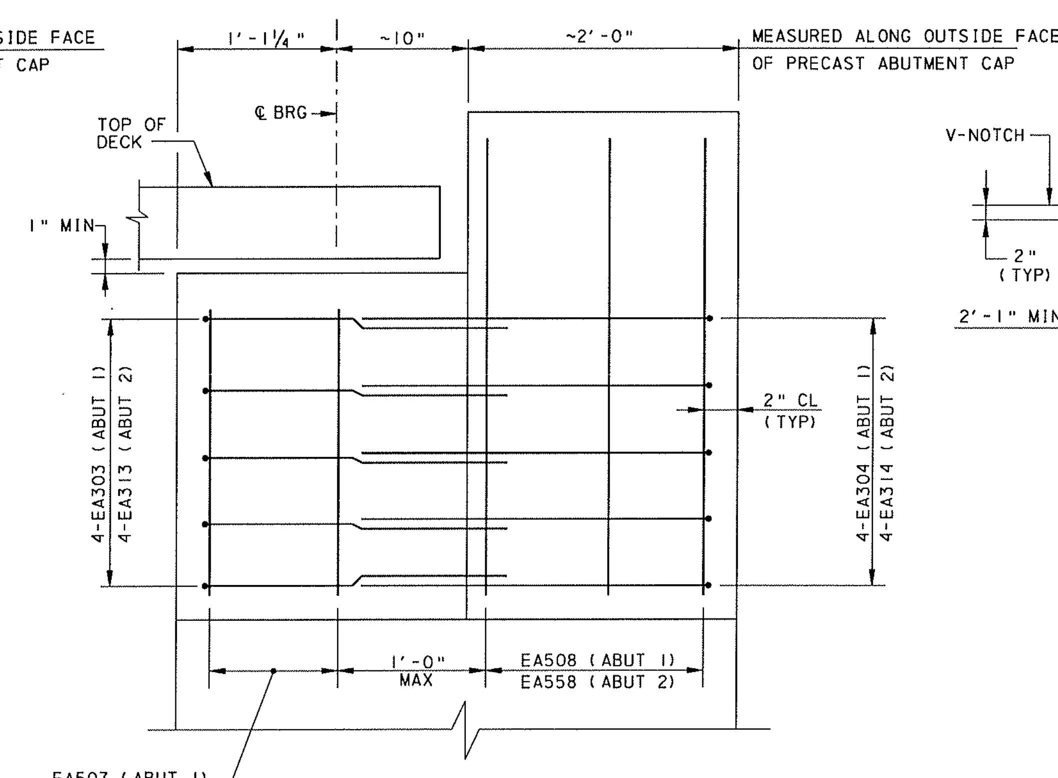
1" = 1'-0"



SECTION B-B

0 4" 8" 1.33'

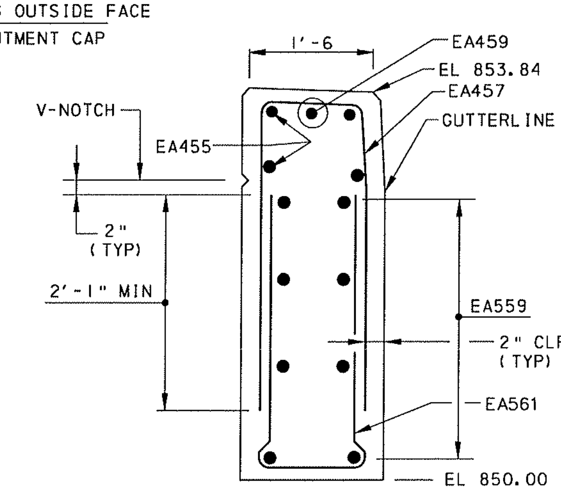
1/2" = 1'-0"



SECTION C-C

0 4" 8" 1.33'

1/2" = 1'-0"



SECTION E-E

0 6" 1' 2'

1" = 1'-0"

NOTE:

1. FOR GENERAL NOTES, SEE SHEET 3.
2. WORK THIS SHEET WITH SHEETS 6 THROUGH 8.
3. FOR SUBSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 10.

REVISIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARK J. PAVLICK
ENGINEER
No. PE-036776-E

County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6

SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN

1-SP COMP P/S CONC SPR BOX BM BRIDGE
ABUTMENT DETAILS
COUNTY PROJECT MT06-0608

DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 9 OF 20	

USER: SMAGILL
PLOT DATE: 5/10/2012 10:14:47 AM
PATH: 01179\CON00441\10\00000000\12258\13.00_CAD\13.01_Bridge\13.01.05_Final_Files
FILE: MT06-ABTDET02.dgn
MODEL: Default

DES: MJP	DWG: DRG	CKD: MJP

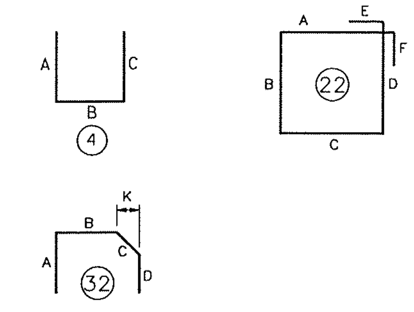
REINFORCEMENT BAR SCHEDULE

ABUTMENT 1

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EA301	3	5'-4	4	ST												BEND IN FIELD
EA302	3	5'-4	4	ST												BEND IN FIELD
EA303	3	4'-6	4	ST												BEND IN FIELD
EA304	3	6'-0	4	ST												BEND IN FIELD
EA401	4	7'-5	25	4	2'-0	3'-5	2'-0									
EA402	4	9'-3	25	4	3'-4	1'-1	4'-10									
EA403	4	24'-3	6	ST												
EA404	4	8'-10	3	22	2'-0	2'-0½	2'-0	2'-0½	4½"							
EA501	5	9'-2	25	4	2'-0	3'-5	3'-9									
EA502	5	24'-3	6	ST												
EA503	5	5'-7	12	4	1'-10	1'-11	1'-10									
EA504	5	5'-7½	12	4	1'-10	1'-11½	1'-10									
EA505	5	1'-8	6	ST												
EA506	5	3'-6	4	ST												
EA507	5	1'-8	4	ST												
EA508	5	3'-6	6	ST												
EA601	6	24'-3	3	ST												
EA801	8	24'-3	6	ST												

ABUTMENT 2

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EA311	3	5'-4	4	ST												BEND IN FIELD
EA312	3	5'-4	4	ST												BEND IN FIELD
EA313	3	4'-6	4	ST												BEND IN FIELD
EA314	3	6'-0	4	ST												BEND IN FIELD
EA451	4	7'-5	25	4	2'-0	3'-5	2'-0									
EA452	4	9'-3	25	4	3'-4	1'-1	4'-10									
EA453	4	24'-3	6	ST												
EA454	4	8'-10	3	22	2'-0	2'-0½	2'-0	2'-0½	4½"							
EA455	4	5'-10	2	32	2'-8	5"	1'-5	1'-4						6"		
EA456	4	3'-7	2	4	1'-3	1'-1	1'-3									
EA457	4	VARIES 6'-6 TO 7'-2	3	4	3'-0	VARIES 6" TO 1'-2	3'-0									VARY "B" BY 4"
EA458	4	8'-2	3	4	3'-6	1'-2	3'-6									
EA459	4	2'-11	1	ST												
EA551	5	9'-2	25	4	2'-0	3'-5	3'-9									
EA552	5	24'-3	6	ST												
EA553	5	5'-7	12	4	1'-10	1'-11	1'-10									
EA554	5	5'-7½	12	4	1'-10	1'-11½	1'-10									
EA555	5	1'-10	6	ST												
EA556	5	3'-7	4	ST												
EA557	5	1'-9	4	ST												
EA558	5	3'-6	6	ST												
EA559	5	5'-10	4	32	2'-8	5"	1'-5	1'-4						6"		
EA560	5	3'-7	4	4	1'-3	1'-1	1'-3									
EA561	5	VARIES 5'-4 TO 6'-0	3	4	2'-5	VARIES 6" TO 1'-2	2'-5									VARY "B" BY 4"
EA601	6	24'-3	3	ST												
EA801	8	24'-3	6	ST												

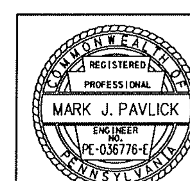


REINFORCEMENT BARS NOTES :

1. "X" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
3. FIGURES IN CIRCLES ARE BAR TYPES.
4. "E" INDICATES EPOXY COATED BARS.
5. FOR ALL BARS TYPES SHOWN, DIMENSIONS A-H AND LENGTH ARE MEASURED ALONG OUTSIDE OF BAR. R IS MEASURED ALONG INSIDE OF BAR.

NOTES:

1. FOR GENERAL PLAN & ELEVATION, SEE SHEET 1.



REVISIONS

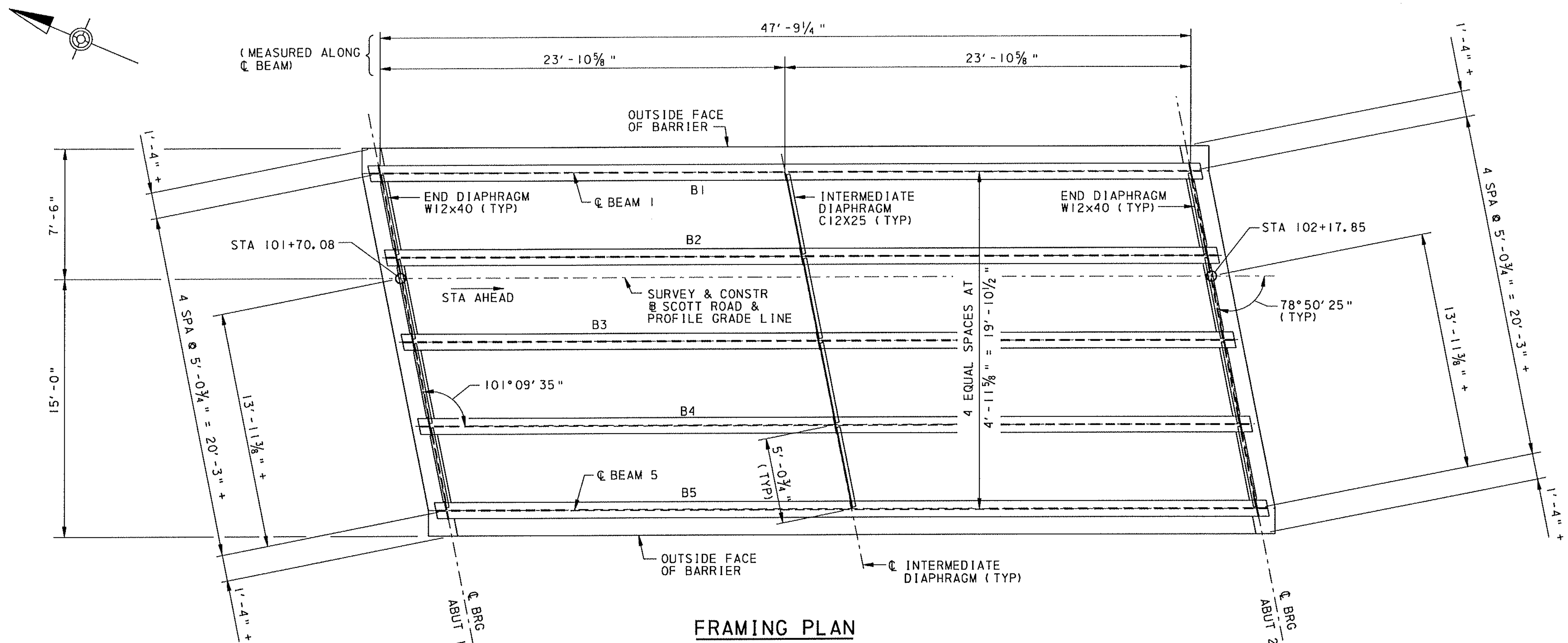
County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
SUBSTRUCTURE REINFORCEMENT BAR SCHEDULE
COUNTY PROJECT MT06-0608

DR. BY: DMW	TR. BY: DMW	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 10 OF 20	

DES: MJP | DWG: DMW | CKD: MJP

USER: SMAGILL
PATH: 01179\CON0044110\000000001122581\3.00_CAD\13.01_Bridge\13.01.05_Final_Files
FILE: MT06-SUBREINFSCH01.dgn
PLOT DATE: 5/10/2012 10:15:16 AM
MODEL: Default



FRAMING PLAN

0 2' 4' 8'

¼" = 1'-0"

NOTE:

1. FOR GENERAL NOTES, SEE SHEET 3.
2. FOR NOTES SEE SHEET 13.
3. WORK THIS SHEET WITH SHEETS, 12 AND 13.

County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REVISIONS

REHABILITATION OF MONTOUR RUN BRIDGE NO. 6

SCOTT ROAD STA 101+93.97 OVER MONTOUR RUN

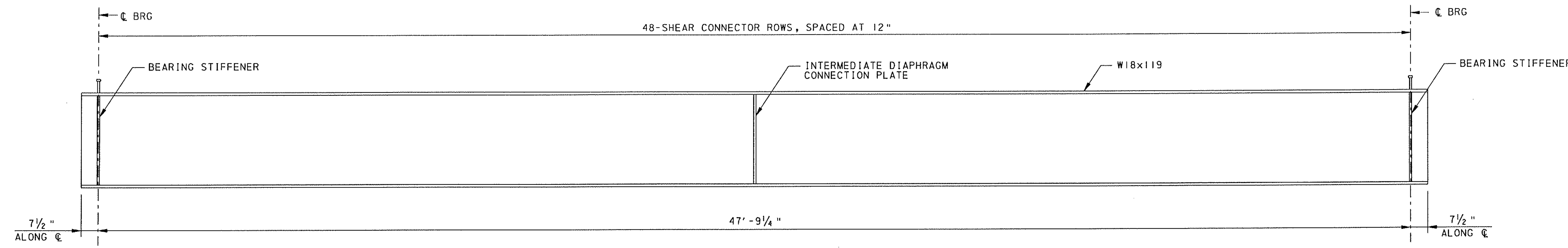
1-SP COMP P/S CONC SPR BOX BM BRIDGE
FRAMING PLAN
COUNTY PROJECT MT06-0608

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER MARK J. PAVLICK PE-036776-E

DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 11 OF 20	

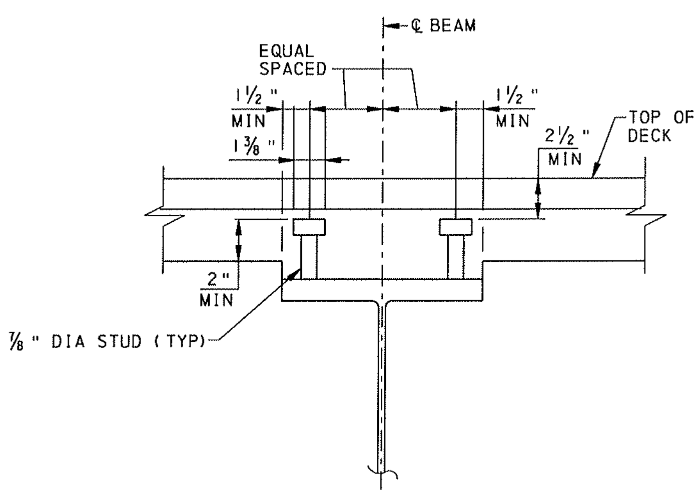
DES: DAS | DWG: DRG | CKD: MJP

USER: SMAGILL PLOT DATE: 5/10/2012 10:15:43 AM
PATH: 011797\CON004411\0\000000000112258\13_00_CAD\13_01_Bridge\13_01_05_Final_Files
FILE: MT06-FRMPLN01.dgn MODEL: Default



BEAM ELEVATION

NO SCALE

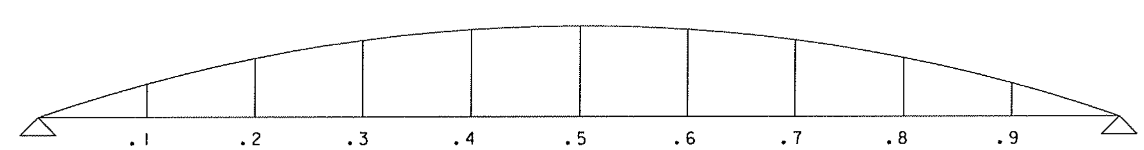


SHEAR CONNECTOR DETAIL

NO SCALE

CAMBER TABLE (INCHES)										
BEAM NO.	DEFLECTIONS	.1	.2	.3	.4	.5	.6	.7	.8	.9
1	STEEL WEIGHT	0.07	0.13	0.18	0.21	0.22	0.21	0.18	0.13	0.07
	DECK WEIGHT	0.24	0.45	0.61	0.72	0.75	0.72	0.61	0.45	0.24
	SUPERIMP. DEAD LOAD	0.09	0.17	0.23	0.27	0.29	0.27	0.23	0.17	0.09
	VERTICAL CURVE	0.46	0.82	1.08	1.24	1.29	1.24	1.08	0.82	0.47
	TOTAL	0.86	1.57	2.10	2.44	2.55	2.44	2.10	1.57	0.87
2	STEEL WEIGHT	0.07	0.13	0.18	0.21	0.22	0.21	0.18	0.13	0.07
	DECK WEIGHT	0.32	0.61	0.83	0.97	1.02	0.97	0.83	0.61	0.32
	SUPERIMP. DEAD LOAD	0.08	0.15	0.21	0.25	0.26	0.25	0.21	0.15	0.08
	VERTICAL CURVE	0.46	0.82	1.08	1.24	1.29	1.24	1.08	0.82	0.46
	TOTAL	0.93	1.71	2.30	2.67	2.79	2.67	2.30	1.71	0.93
3	STEEL WEIGHT	0.07	0.13	0.18	0.21	0.22	0.21	0.18	0.13	0.07
	DECK WEIGHT	0.32	0.61	0.83	0.97	1.02	0.97	0.83	0.61	0.32
	SUPERIMP. DEAD LOAD	0.03	0.07	0.09	0.11	0.12	0.11	0.09	0.07	0.03
	VERTICAL CURVE	0.47	0.82	1.08	1.24	1.29	1.24	1.08	0.82	0.47
	TOTAL	0.89	1.63	2.08	2.53	2.65	2.53	2.08	1.63	0.89
4	STEEL WEIGHT	0.07	0.13	0.18	0.21	0.22	0.21	0.18	0.13	0.07
	DECK WEIGHT	0.32	0.61	0.83	0.97	1.02	0.97	0.83	0.61	0.32
	SUPERIMP. DEAD LOAD	0.08	0.15	0.21	0.25	0.26	0.25	0.21	0.15	0.08
	VERTICAL CURVE	0.47	0.82	1.08	1.24	1.29	1.24	1.08	0.82	0.47
	TOTAL	0.93	1.71	2.30	2.67	2.79	2.67	2.30	1.71	0.93
5	STEEL WEIGHT	0.07	0.13	0.18	0.21	0.22	0.21	0.18	0.13	0.07
	DECK WEIGHT	0.24	0.45	0.61	0.72	0.75	0.72	0.61	0.45	0.24
	SUPERIMP. DEAD LOAD	0.09	0.17	0.23	0.27	0.29	0.27	0.23	0.17	0.09
	VERTICAL CURVE	0.46	0.82	1.08	1.24	1.29	1.24	1.08	0.82	0.46
	TOTAL	0.86	1.57	2.10	2.44	2.55	2.44	2.10	1.57	0.86

NOTE: SUPERIMPOSED DEAD LOAD INCLUDES FUTURE WEARING SURFACE.



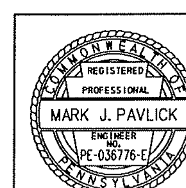
CAMBER DIAGRAM

NOTE:

1. FOR GENERAL NOTES, SEE SHEET 3.
2. FOR FRAMING PLAN, SEE SHEET 11.
3. WORK THIS SHEET WITH SHEETS 11 AND 13.

County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REVISIONS

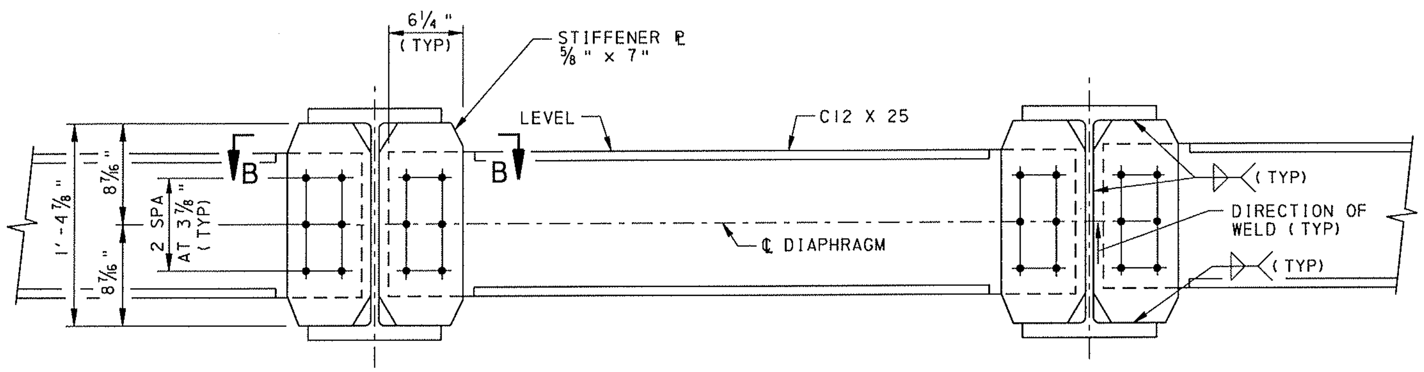


REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
BEAM ELEVATION & DETAILS
COUNTY PROJECT MT06-0608

DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 12 OF 20	

DES: MJP | DWG: DRG | CKD: SWE

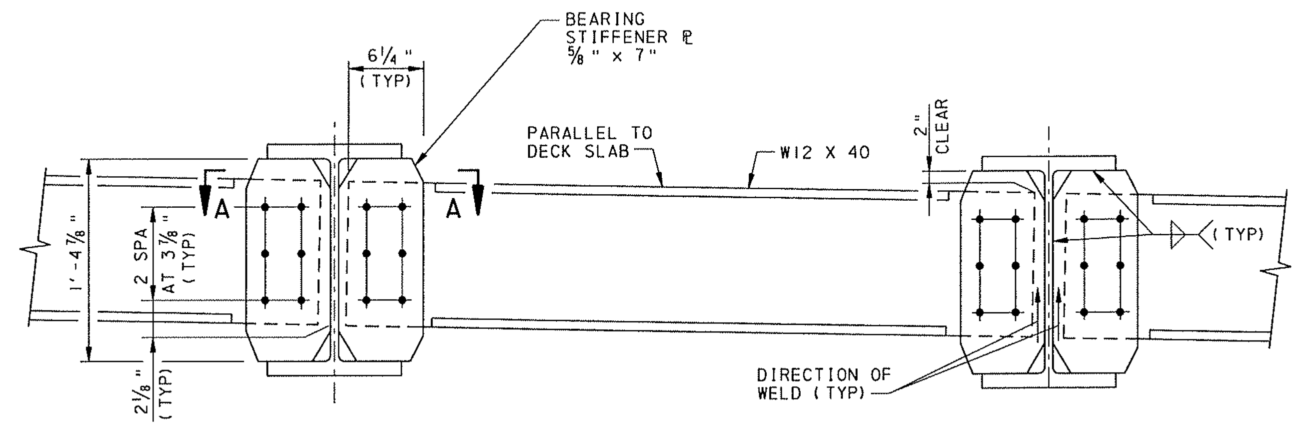
USER: SMAGILL
PATH: O:\1797\CON00441\0\000000001122558\13.00_CAD\13.01_Bridge\13.01.05_Final_Files
FILE: MT06-BEAMELEV01.dgn
PLOT DATE: 5/10/2012 10:16:11 AM
MODEL: Default



TYPICAL INTERMEDIATE DIAPHRAGM

0 4" 8" 1.33'
1½" = 1'-0"

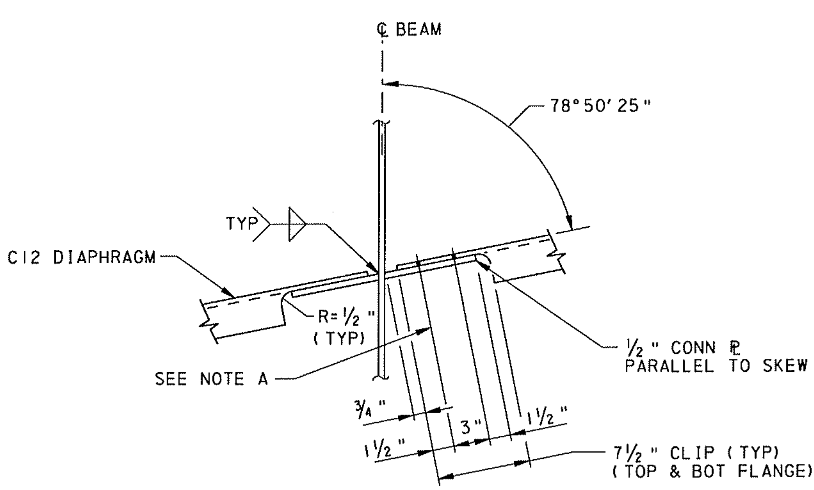
NOTE:
AT INTERMEDIATE DIAPHRAGM LOCATIONS, STIFFENER PLATES ARE NOT REQUIRED ON THE FASCIA SIDE OF BEAMS B1 AND B5.



TYPICAL END DIAPHRAGM

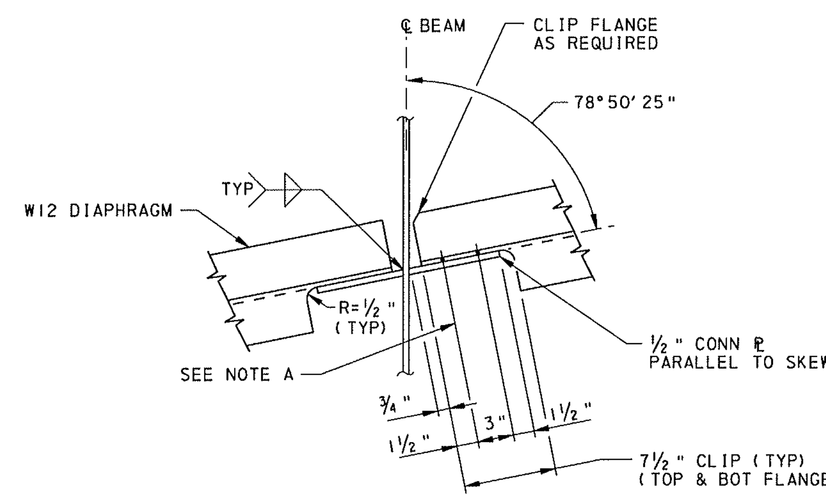
0 4" 8" 1.33'
1½" = 1'-0"

NOTE:
DO NOT PROVIDE DIAPHRAGM CONNECTION BOLT HOLES IN BEARING STIFFENERS OF FASCIA SIDES OF BEAMS B1 AND B5.



SECTION B-B

0 4" 8" 1.33'
1½" = 1'-0"



SECTION A-A

0 4" 8" 1.33'
1½" = 1'-0"

NOTE A:
1¹⁄₁₆" DIAMETER HOLE IN STIFFENERS, ¹⁵⁄₁₆" DIA DIAMETER HOLE IN C12 FOR ⅞" DIAMETER ASTM A325 BOLTS, USE BOLTS HAVING UNTHREADED SHANK OF SIFFICIENT LENGTH TO NOT ALLOW ANY THREADS TO EXIT IN THE PLANE BETWEEN THE TWO CONNECTION PARTS (SHEAR PLANE).

NOTES:
1. FOR GENERAL NOTES, SEE SHEET 3.
2. SEE BC-753M FOR THE BEARING STIFFENER AND CONNECTION PLATE INSTALLATION DETAILS.
3. SEE BC-754M FOR DIAPHRAGM DETAILS NOT SHOWN.
4. 1¹⁄₁₆" DIA HOLES IN CONNECTION PLATES; ¹⁵⁄₁₆" DIA HOLES IN CONNECTION MEMBER, FOR ⅞" DIA ASTM A325 BOLTS. OVERSIZE HOLES IN CONNECTION PLATE IS OPTIONAL. STANDARD SIZE HOLE IS PERMITTED. THE CONNECTION PLATE EDGE DISTANCE MAYBE REDUCED TO 1½".
5. USE ⅞" DIA ASTM DESIGNATION A325 BOLTS HAVING AN UNTHREADED SHANK OF SUFFICIENT LENGTH TO NOT ALLOW ANY THREADS TO EXIST IN THE PLANE BETWEEN THE TWO CONNECTED PARTS (SHEAR PLANE).
6. WORK THIS SHEET WITH SHEETS 11 AND 12.

County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REVISIONS

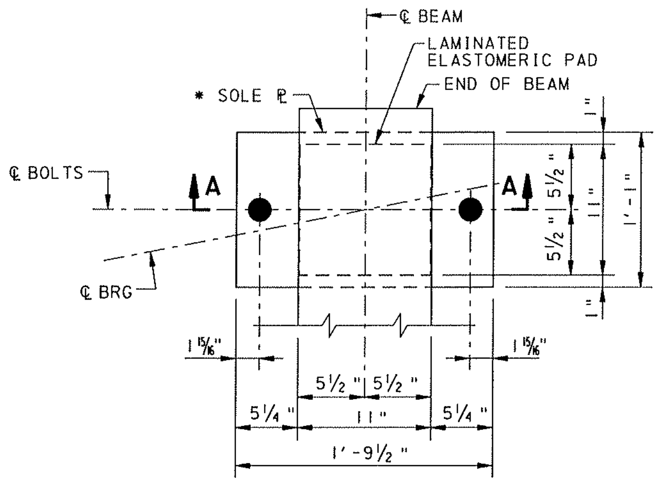
REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
BEAM DIAPHRAGMS
COUNTY PROJECT MT06-0608

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARK J. PAVLICK
ENGINEER
NO. PE-036776-E

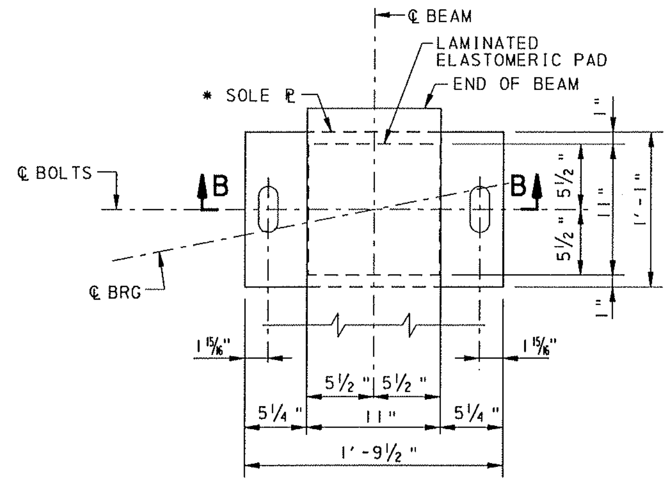
DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 13 OF 20	

DES: MJP | DWG: DRG | CKD: MJP

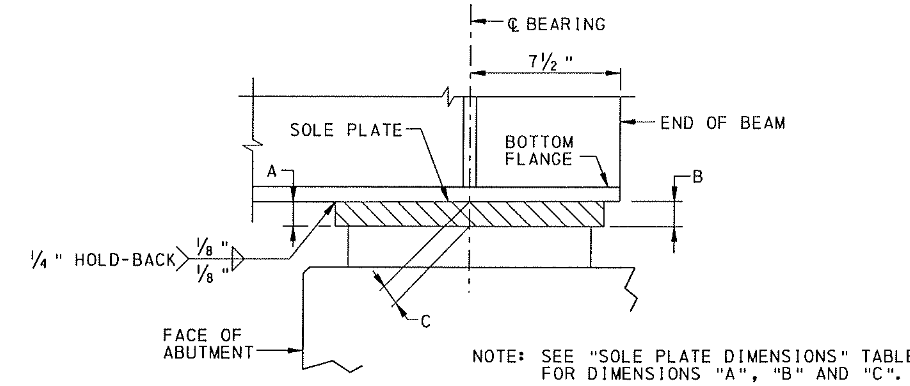
USER: SMAGILL
PATH: O11791\CON\0044110\000000000112258\13.00_CAD\13.01_Bridge\13.01.05_Final_Files
FILE: MT06-BEAMDIAPH01.dgn
PLOT DATE: 5/10/2012 10:16:39 AM
MODEL: Default



PLAN
NO SCALE



PLAN
NO SCALE



NOTE: SEE "SOLE PLATE DIMENSIONS" TABLE FOR DIMENSIONS "A", "B" AND "C".

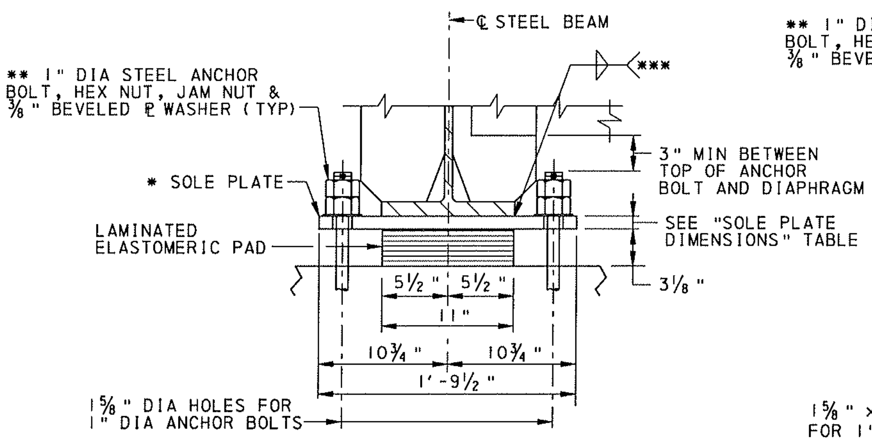
SOLE PLATE DETAIL
NO SCALE

SOLE PLATE DIMENSIONS (INCHES)						
BEAM NO.	ABUTMENT 1			ABUTMENT 2		
	A	C	B	A	C	B
1	1.12	1.06	1.00	1.07	1.03	1.00
2	1.11	1.06	1.00	1.07	1.04	1.00
3	1.11	1.05	1.00	1.08	1.04	1.00
4	1.10	1.05	1.00	1.08	1.04	1.00
5	1.10	1.05	1.00	1.09	1.04	1.00

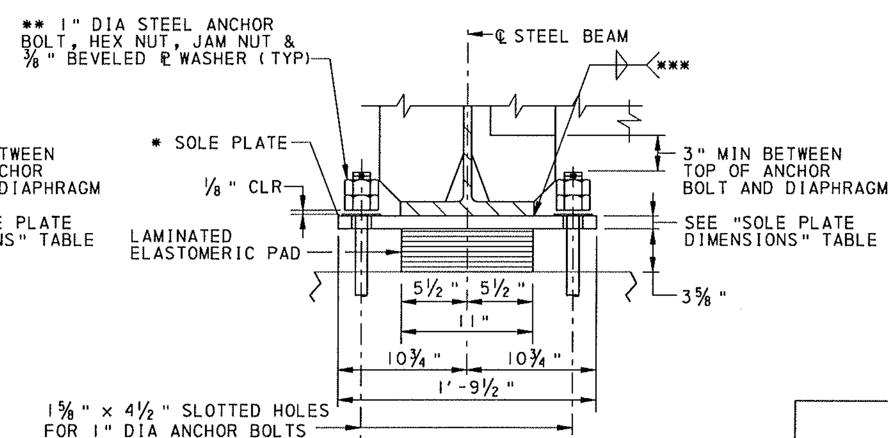
NOTE:
THE "C" DISTANCE IS THE CALCULATED VALUE AT THE CENTERLINE OF BEARING USED FOR THE DETERMINATION OF THE BEARING SEAT ELEVATION.
THE VALUE OF THE THICKER EDGE IS ROUNDED TO THE NEAREST 0.01 OF AN INCH.

DESIGN CRITERIA:

1. EXPANSION LENGTH = 47'-9¼"
2. TEMPERATURE RANGE FOR BEARING DESIGN = 100 F DEGREES
3. TEMPERATURE RANGE FOR SUBSTRUCTURE DESIGN = 78 F DEGREES
4. LL ROTATION ABOUT TRANSVERSE AXIS OF PAD = 0.00308 RADIANS
5. LL ROTATION ABOUT LONGITUDINAL AXIS OF PAD = 0.00000 RADIANS
6. CONSTRUCTION TOLERANCE ABOUT TRANSVERSE AXIS OF PAD = 0.00300 RADIANS
7. CONSTRUCTION TOLERANCE ABOUT LONGITUDINAL AXIS OF PAD = 0.00000 RADIANS
8. DL1 ROTATION MOVEMENT = 0.136"
9. DL2 ROTATION MOVEMENT = 0.056"
10. LL ROTATION MOVEMENT = 0.109"
11. MAXIMUM DL REACTION = 30 kip
12. MINIMUM DL REACTION = 17 kip
13. MAXIMUM LL REACTION (W/O IMPACT) = 45 kip
14. MINIMUM LL REACTION (W/O IMPACT) = 19 kip



FIXED BEARING - SECTION A-A
NO SCALE



EXPANSION BEARING - SECTION B-B
NO SCALE

NOTES:

* (a) PROVIDE FLATNESS TOLERANCE IN ACCORDANCE WITH PUB. 408, SECTION 1105.03(p).
  (b) PROVIDE SOLE PLATE IN ACCORDANCE WITH DM-4, D14.7.6.3.8P.

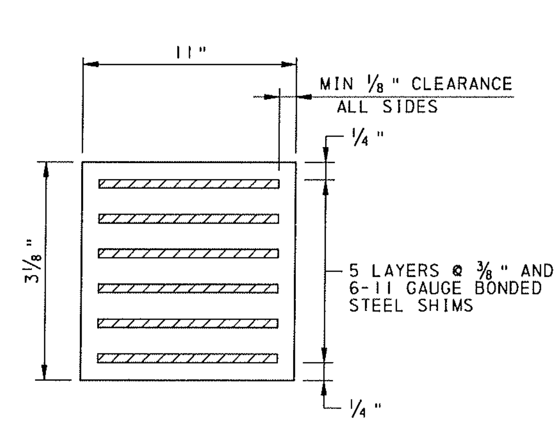
** DRAW NUT FINGER TIGHT AND BACK OFF 1/4 TURN AND PEEN BOLT THREADS AT FACE OF NUTS

*** PROVIDE MINIMUM SIZE WELD IN ACCORDANCE WITH AASHTO/AWS CODE UNLESS LARGER WELD IS REQUIRED BY DESIGN.

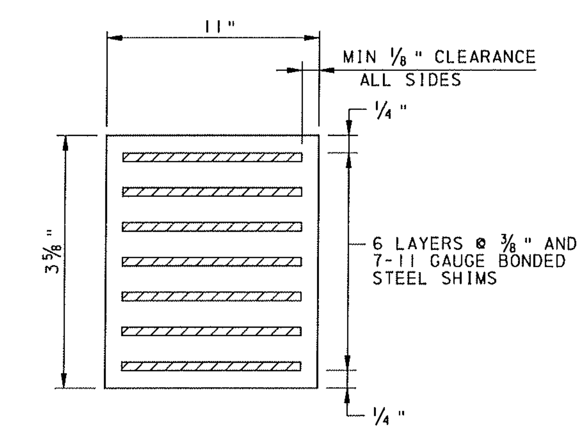
ELASTOMERIC BEARING PADS				
LOCATION	BEARING TYPE	ITEM DESCRIPTION	SIZE (T x L x W)	NUMBER REQUIRED
ABUT 1	FIXED	LAMINATED PADS	3⅛" x 11" x 11"	5
ABUT 2	EXPANSION	LAMINATED PADS	3⅝" x 11" x 11"	5
		TEST LAMINATED PADS	3⅝" x 11" x 11"	1

NOTES:

1. FOR GENERAL NOTES, SEE SHEET 3.
2. PROVIDE PLATE WASHERS OF SUFFICIENT SIZE TO COVER THE ROUND HOLE OR SLOT FOR EXTREMES OF MOVEMENT OF THE BEARINGS. WASHERS MAY BE CLIPPED IF REQUIRED.
3. MARK THICKER END OF BEVELED SOLE PLATES TO IDENTIFY THICKER END IN THE FIELD.
4. PROVIDE A ROUGH TEXTURE TO CONCRETE BEARING SURFACES. DO NOT APPLY EPOXY COATING TO THR BEAREING SURFACE WITHIN 2" OF THE BEARING PAD AND SPONGE LOCATION.
5. FILL ANCHOR BOLT SOLE PLATE HOLES WITH NON-HARDING CAULK COMPOUND AT FIXED BEARINGS ONLY.
6. TERMINATE WELDS ½" SHORT OF EDGE AT EACH END OF EACH WELD.



ELASTOMERIC BEARING PAD SECTION
ABUTMENT 1
NO SCALE



ELASTOMERIC BEARING PAD SECTION
ABUTMENT 2
NO SCALE

ELASTOMERIC BEARING PADS NOTES:

1. ELASTOMERIC BEARINGS DESIGNED AND MANUFACTURED IN ACCORDANCE WITH STANDARD DRAWING BC-755M DO NOT REQUIRED SHOP DRAWINGS.
2. MANUFACTURE ALL BEARINGS IN ACCORDANCE WITH THE COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PLANS AND SPECIFICATIONS (PUB. 408 SECTION 1113.02.
3. ALL BEARING PADS ARE TO BE MOLDED TO DESIGN DIMENSIONS. CUTTING TO SIZE AFTER FABRICATION IS PROHIBITED.
4. HOLES ARE NOT PERMITTED IN ELASTOMERIC BEARINGS.
5. PROVIDE NEOPRENE 50 ± 5 DUROMETER.
6. VULCANIZE PATCH PIN GROOVES.
7. PROVIDE MINIMUM LOW-TEMPERATURE NEOPRENE GRADE 3.
8. INSTALL BEAMS AND BEARINGS TO ENSURE FULL CONTACT WITH BEARING SUFACES. IF FULL CONTACT IS NOT ACHIEVED AFTER THE DECK IS PLACED, FIELD ADJUSTMENTS OR MODIFICATIONS WILL BE MADE BY THE CONTRACTOR TO ENSURE FULL CONTACT.
9. SMOOTH CUT AND DEBURR METAL SHIMS.
10. GRIT BLAST AND DEGREASE METAL SHIMS.
11. PROVIDE INTERNAL SHIMS AS PER ASTM A36/A36M GRADE 36.
12. BEARING PADS WILL BE SAMPLED FOR TESTING ACCORDING TO PTM #312.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARK J. PAVLICK
ENGINEER
PE-036776-E

REVISIONS

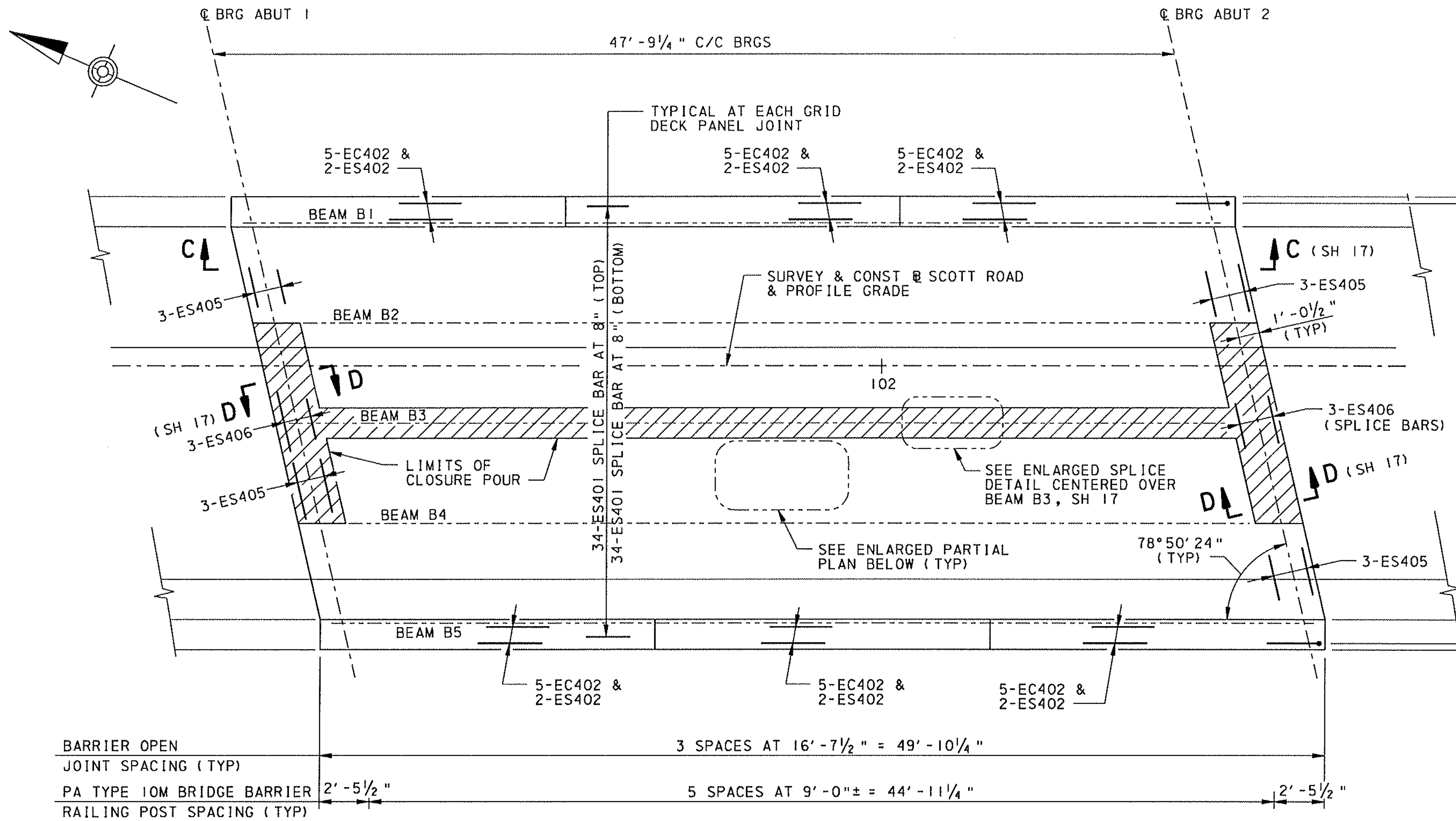
County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
BEARING DETAILS
COUNTY PROJECT MT06-0608

DR. BY: DRG	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 14 OF 20	

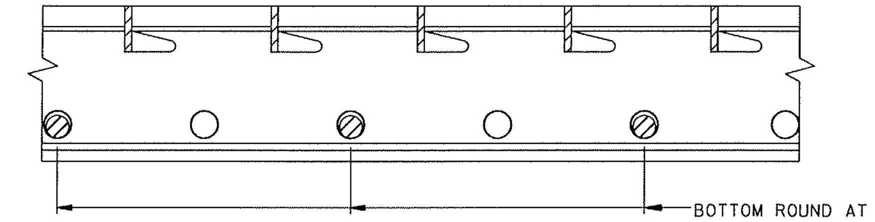
DES: DAS | DWG: DRG | CKD: MJP

USER: SMAGILL | PLOT DATE: 5/10/2012 10:17:10 AM
PATH: O:\179\CON0044110\000000000112258\13.00_CAD\13.01_Bridge\13.01.05_Final_Files
FILE: MT06-BRGDET01.dgn | MODEL: Default



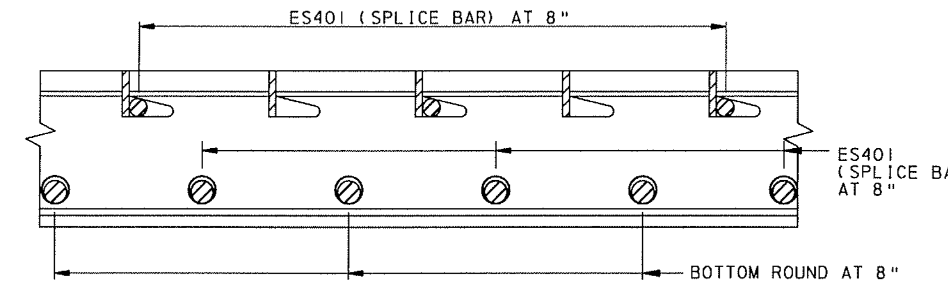
PLAN

0 2' 4' 8'
¼"=1'-0"



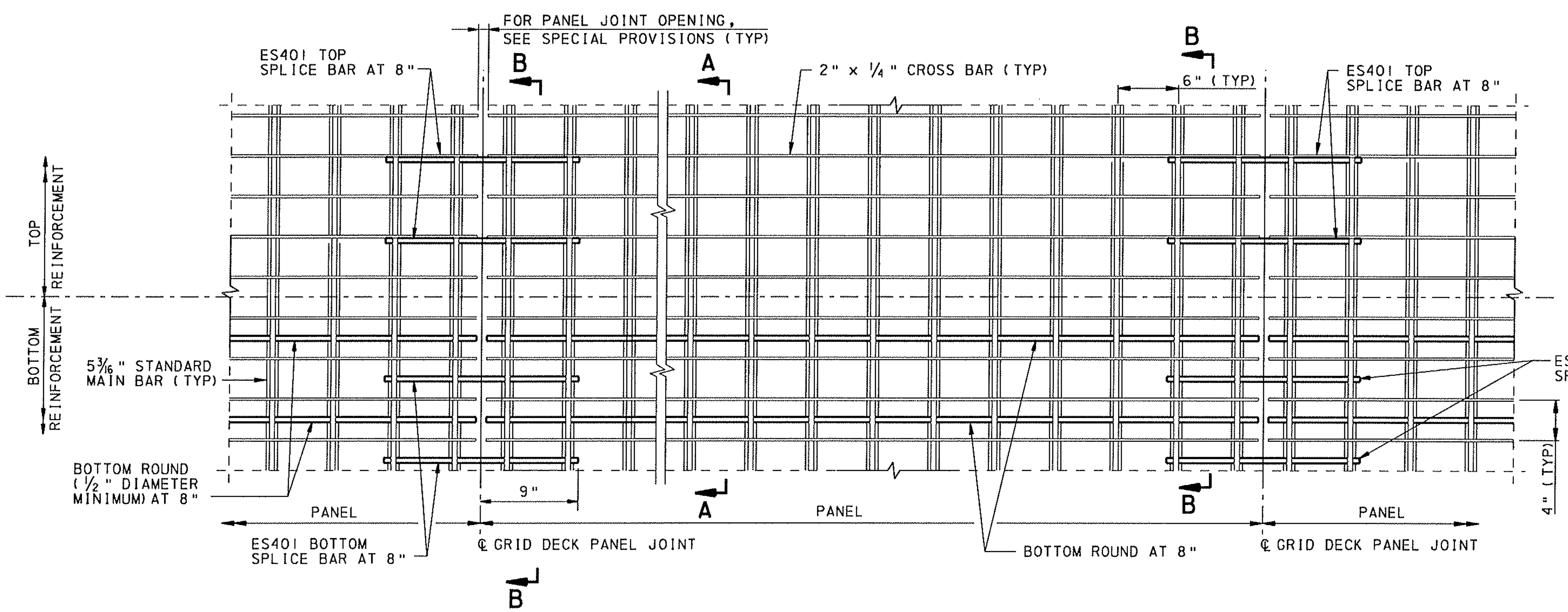
SECTION A-A

RIB IN MAIN RAIL NOT SHOWN FOR CLARITY.
NO SCALE



SECTION B-B

RIB IN MAIN RAIL NOT SHOWN FOR CLARITY.
NO SCALE



ENLARGED PARTIAL PLAN

NO SCALE

NOTE:

1. FOR GENERAL NOTES, SEE SHEET 3.
2. FOR GRID DECK NOTES, SEE SHEET 16.
3. WORK THIS SHEET WITH SHEETS 16, 17 AND 19.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
MARK J. PAVLICK
PE-036776-E

REVISIONS

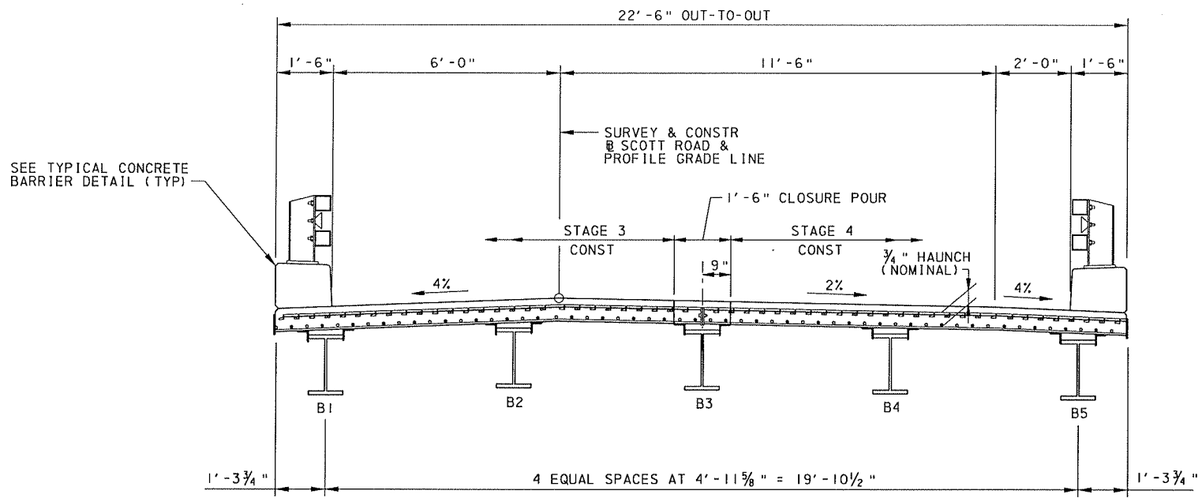
County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
DECK PAVING PLAN
COUNTY PROJECT MT06-0608

DR. BY: MJP	TR. BY: SWM	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 15 OF 20	

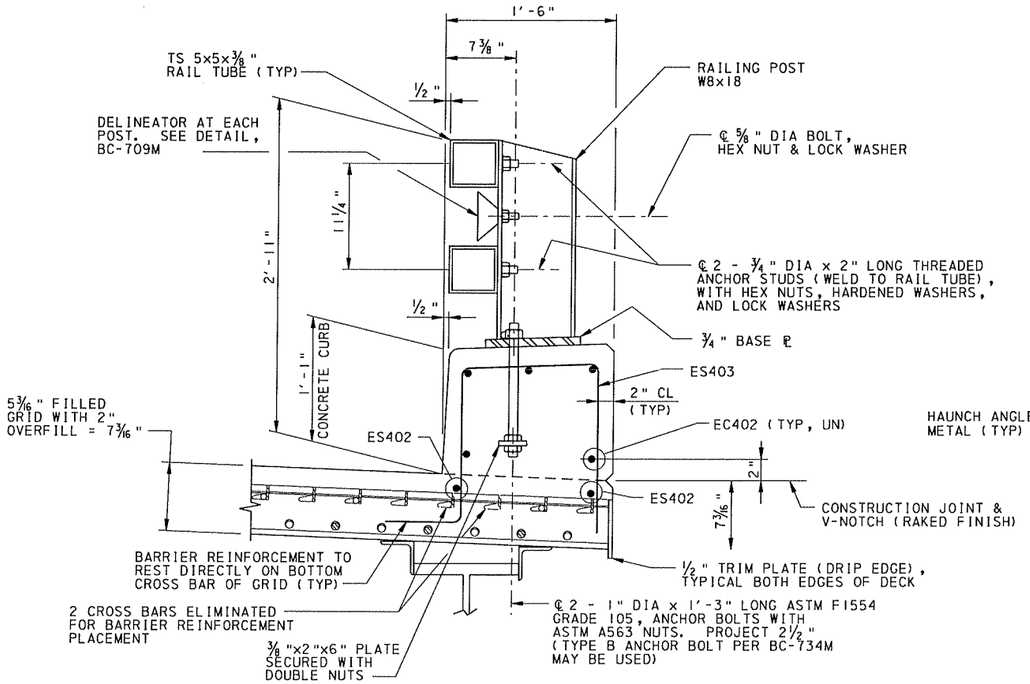
DES: MJP | DWG: SWM | CKD: MJP

USER: SMAGILL
PLOT DATE: 5/10/2012 10:17:40 AM
PATH: 01.1797\COND04110\00000000112258\13.00_CAD\13.01_Bridge\13.01.05_Final_Files
FILE: MT06-DECKPLAN01.dgn
MODEL: Default



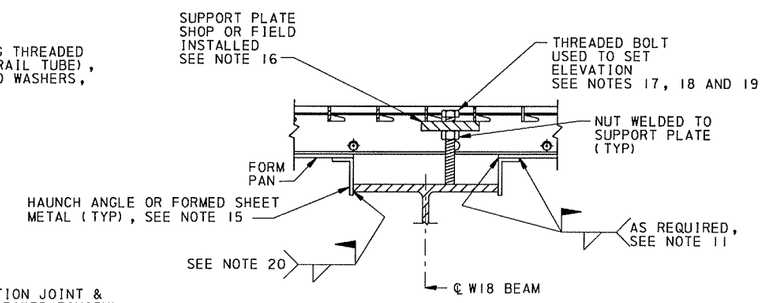
TYPICAL SECTION

(LOOKING AHEAD ON STATION)
NO SCALE



TYPICAL CONCRETE BARRIER DETAIL

NO SCALE



THREADED BOLT HAUNCH DETAIL

NO SCALE

GRID DECK NOTES:

1. FOR GENERAL NOTES, SEE SHEET 3.
2. WORK THIS SHEET WITH SHEETS 15, 17 AND 19.
3. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 19.
4. ALL REINFORCEMENT BAR SPACINGS SHOWN ARE MAXIMUM SPACINGS.
5. FOR DECK ELEVATIONS, SEE SHEET 18.
6. PROVIDE MAIN BARS AND CROSS BARS CONFORMING TO AASHTO M270 GRADE 50 (ASTM A709 GRADE 50). PROVIDE GALVANIZED COATING FOR ALL GRID DECK MEMBERS.
7. FOR CONSTRUCTION STAGES, SEE SHEET 5.
8. SET PA TYPE 10M BARRIER RAIL TO AVOID OPEN JOINTS AS SHOWN ON SH 15.
9. LOCATE AND WELD SHEAR STUDS IN FIELD TO MISS ALL GRID DECK BARS, EXCEPT A MAXIMUM OF TWO LONGITUDINAL BOTTOM BARS (BOTTOM ROUNDS OR ES401) MAY BE OMITTED OVER EACH BEAM. FOR TYPICAL BEAM SHEAR CONNECTOR DETAIL, SEE SHEET 17.
10. MODIFICATIONS TO A SPECIFIC MANUFACTURER'S GRID SYSTEM MAY BE REQUIRED TO MEET THE REQUIREMENTS OF THE DESIGN. IN THIS CASE, THE MANUFACTURER MUST PROVIDE A DESIGN ACCORDING TO AASHTO. SUBMIT MODIFIED DESIGNS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA FOR APPROVAL.
11. WHEN GRID REINFORCED DECKS ARE TO BE WELDED TO SUPPORT ANGLES, USE A MINIMUM ¼" x 3" FILLET WELD AT EACH GRID MAIN RAIL INTERSECTION.
12. ALTERNATE DECK ELEVATION/HAUNCH FORMING METHODS MAY BE SUBMITTED BY THE CONTRACTOR FOR ENGINEER'S APPROVAL.
13. GRID SUPPORT MECHANISM MAY BE TACK WELDED.
14. SPLICE BARS MAY BE INSERTED EITHER THROUGH SLOT IN GRID I-BEAM THROUGH WHICH CROSS BARS ARE PLACED, OR THROUGH A SEPARATE PUNCHED SLOT.
15. SUITABILITY OF HAUNCH ANGLE DEPENDS ON LIVE LOAD PLACED ON GRID PRIOR TO FILLING THE CONCRETE. MANUFACTURER IS TO PROVIDE HAUNCH ANGLE DESIGN.
16. SUPPORT PLATE TO BE SHOP OR FIELD INSTALLED UNDER CROSS BARS AS SHOWN IN THREADED BOLT HAUNCH DETAIL, OR UNDER MAIN GRID BARS WHERE APPLICABLE.
17. TACK WELDING THREADED BOLT TO SUPPORT IS PERMITTED TO ENABLE LEVELING OF PANEL.
18. ANY CONSTRUCTION LOADS PLACED ON THE GRID BEFORE CONCRETE IS POURED, AS WELL AS WEIGHT OF THE WET CONCRETE, MUST BE ACCOUNTED FOR IN THE DESIGN AND SPACING OF THE SUPPORT ASSEMBLY.
19. THREADED BOLT USED TO SET ELEVATION TO BE UNCOATED A307M STEEL.
20. HAUNCH ANGLE MAY BE WELDED TO THE BEAM.
21. HEADED SHEAR STUDS NOT SHOWN IN ELEVATION DETAILS FOR CLARITY.
22. OMIT CONCRETE FORM PAN OVER SUPPORT MEMBERS.
23. SUBMIT GRID DECK PANEL SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. CONSIDER DECK APPURTENANCES WHEN LAYING OUT GRID DECK PANEL SIZES.
24. FOR PA TYPE 10M BARRIER DETAILS, SEE BC-709M.
25. CLEAN AND ROUGHEN TOP OF CONCRETE DECK WHICH LIES DIRECTLY BENEATH THE BARRIER PRIOR TO POURING THE BARRIER CONCRETE TO ENSURE ADEQUATE SHEAR TRANSFER.

USER: SMAGILL | PLOT DATE: 5/10/2012 10:18:08 AM
PATH: 01179\CON00441\D\0000000001T2258\13.00_CAD\13.01_Br-Idge\13.01.05_Final_Files
FILE: MT06-DECKSECTION.dgn | MODEL: Default

DES: MJP | DWG: SWM | CKD: MJP

REVISIONS

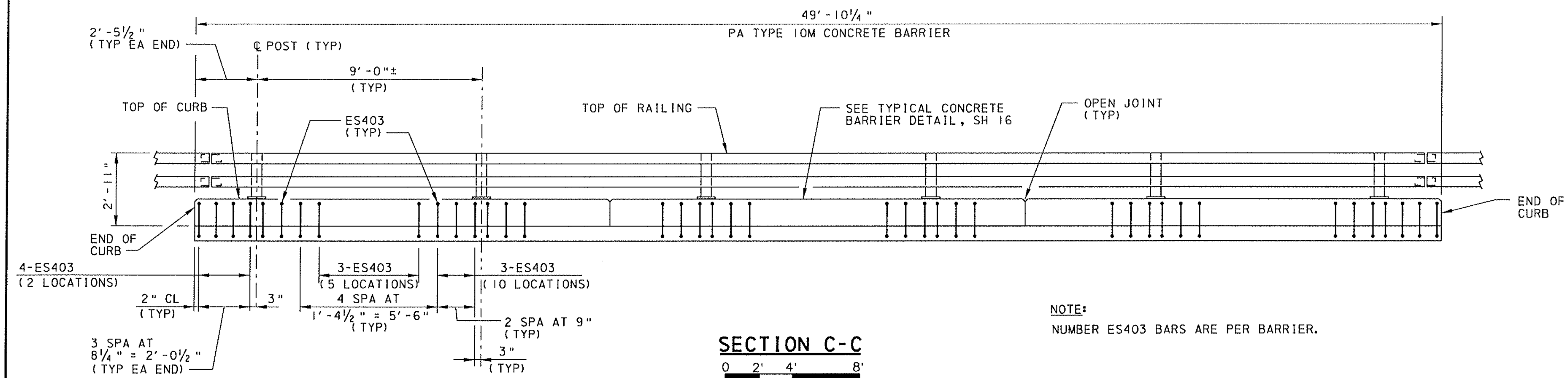
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — MARK J. PAVLICK — ENGINEER INC. PE-036776-E

County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF MONTOUR RUN BRIDGE NO. 6

SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
DECK SECTION
COUNTY PROJECT MT06-0608

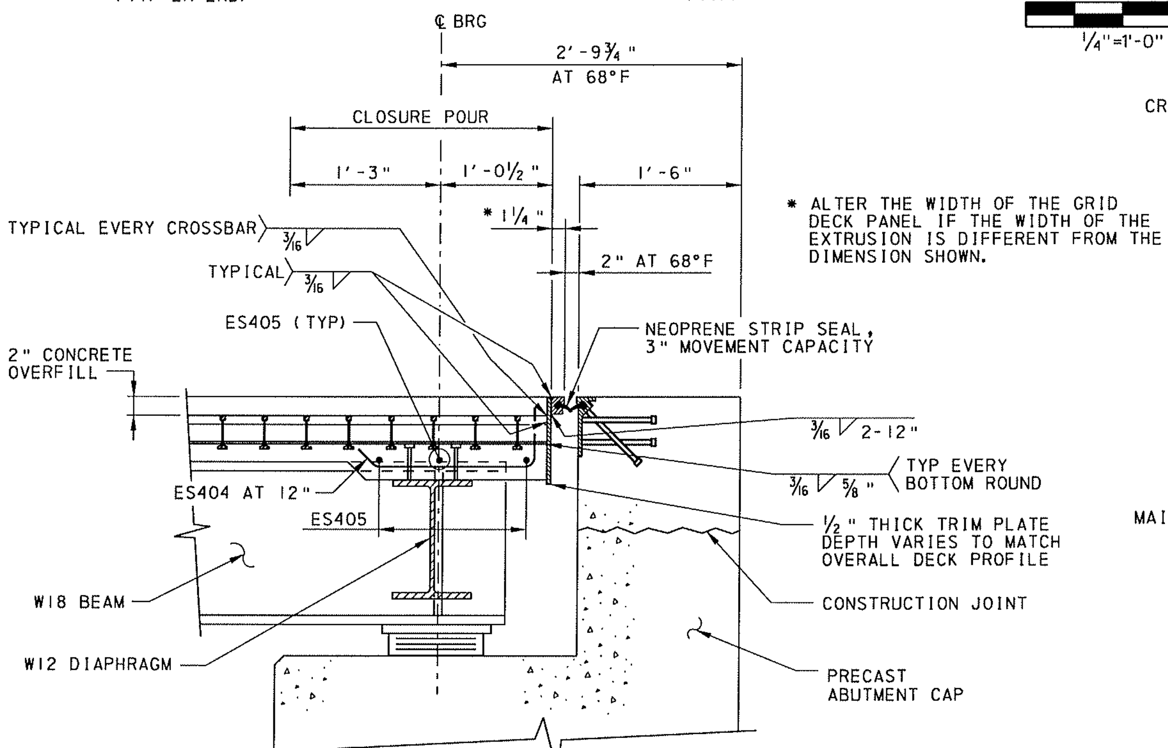
DR. BY: MJP	TR. BY: SWM	CH. BY: MJP	SHEET 16 OF 20	26111
DATE: 05/10/12	SCALE:			



SECTION C-C

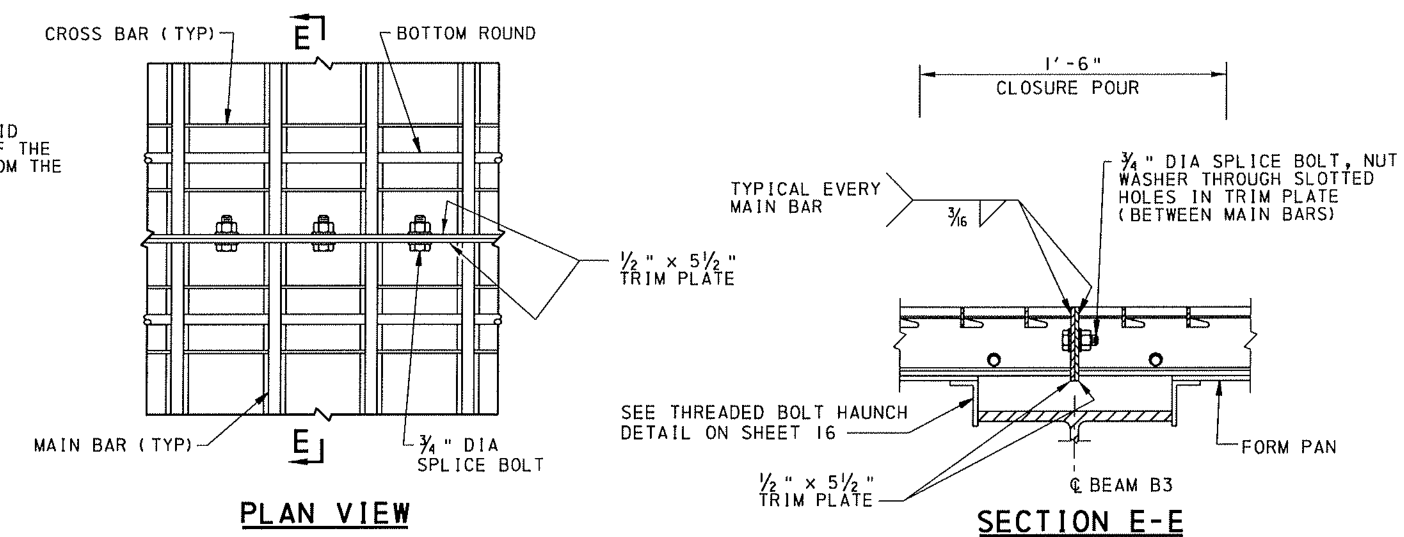
0 2' 4' 8'
¼"=1'-0"

NOTE:
NUMBER ES403 BARS ARE PER BARRIER.



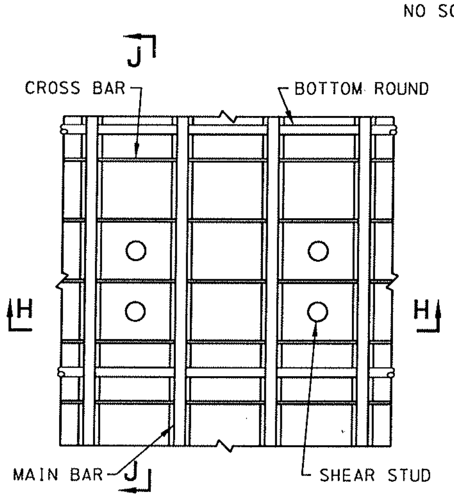
* ALTER THE WIDTH OF THE GRID DECK PANEL IF THE WIDTH OF THE EXTRUSION IS DIFFERENT FROM THE DIMENSION SHOWN.

SECTION D-D
NO SCALE

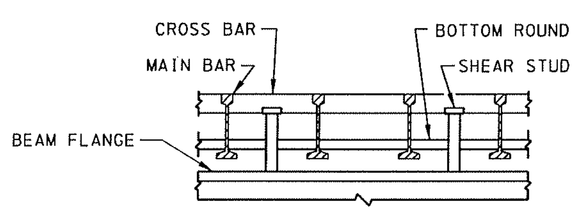


ENLARGED SPLICE DETAIL (CENTERED OVER BEAM B3)
NO SCALE

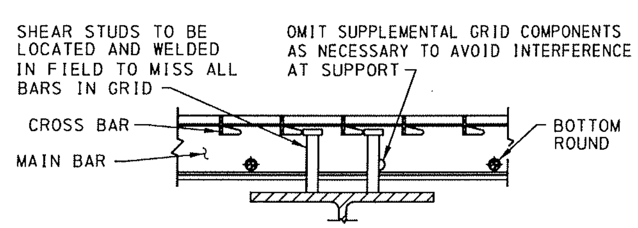
NOTE:
1. FOR GENERAL NOTES, SEE SHEET 3.
2. FOR GRID DECK NOTES, SEE SHEET 16.
3. WORK THIS SHEET WITH SHEETS 15, 16 AND 19.



SHEAR STUD PLAN VIEW
NO SCALE



SECTION H-H
NO SCALE



SECTION J-J
NO SCALE

REVISIONS

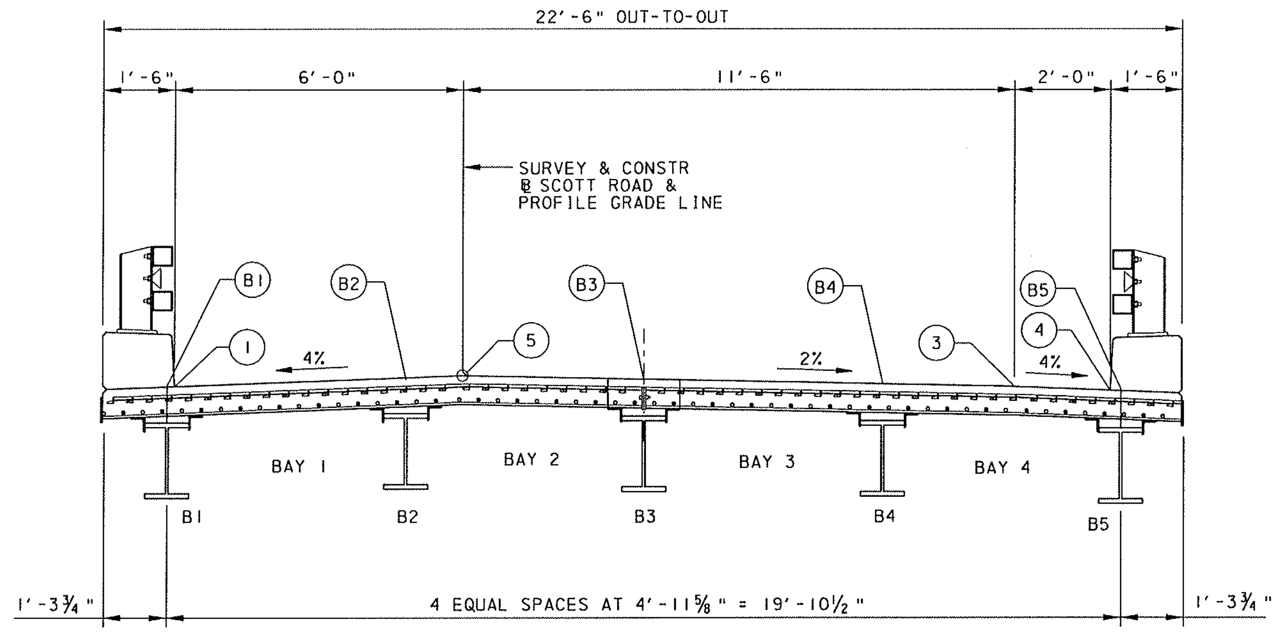
County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
DECK DETAILS
COUNTY PROJECT MT06-0608

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK J. PAVLICK ENGINEER NO. PE-036776-E

DR. BY: MJP	TR. BY: SWM	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 17 OF 20	

DES: MJP | DWG: SWM | CKD: MJP



TYPICAL SECTION

(LOOKING AHEAD ON STATION)
NO SCALE

TABLE OF DECK ELEVATIONS AT 10TH POINTS ALONG CENTERLINE OF BEAM

LOCATION	BEAM NUMBER				
	(B1)	(B2)	(B3)	(B4)	(B5)
℄ BRG ABUT 1	852.79	852.99	852.97	852.88	852.75
4.78	852.83	853.03	853.01	852.92	852.79
9.55	852.87	853.07	853.05	852.96	852.83
14.33	852.90	853.10	853.08	852.98	852.85
19.11	852.92	853.12	853.09	853.00	852.86
23.89	852.94	853.13	853.10	853.01	852.87
28.66	852.94	853.13	853.10	853.00	852.87
33.44	852.94	853.13	853.10	852.99	852.86
38.22	852.92	853.11	853.08	852.98	852.84
42.99	852.90	853.09	853.06	852.95	852.81
℄ BRG ABUT 2	852.87	853.06	853.02	852.91	852.77

DECK ELEVATIONS ARE GIVEN AT THE CENTERLINE OF EACH BEAM.
LOCATIONS GIVEN ARE THE DISTANCE (FT) ALONG THE CENTERLINE OF EACH BEAM TO EACH 10TH POINT AS MEASURED FROM THE CENTERLINE OF BEARING AT ABUTMENT 1.

ELEVATION TABLE TOP OF SLAB ELEVATION

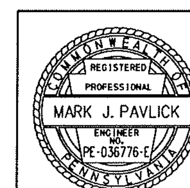
STATION	PT. (1)	PT. (5)	PT. (3)	PT. (4)
101+68.92	852.79	——	——	——
101+70.00	852.80	——	——	——
101+70.08	852.80	853.04	——	——
101+72.35	852.82	853.06	852.83	——
101+72.75	852.82	853.06	852.83	852.75
101+80.00	852.88	853.12	852.89	852.81
101+90.00	852.93	853.17	852.94	852.86
102+00.00	852.94	853.18	852.95	852.87
102+10.00	852.91	853.15	852.92	852.84
102+16.67	852.87	853.11	852.88	852.80
102+17.85	——	853.10	852.87	852.79
102+20.00	——	——	852.86	852.78
102+20.12	——	——	852.85	852.77
102+20.52	——	——	——	852.77

ELEVATIONS GIVEN AT THE FIRST AND LAST STATIONS LISTED FOR EACH POINT ARE LOCATED AT THE CENTERLINE OF BEARING.

NOTE:

1. FOR GENERAL NOTES, SEE SHEET 3.

REVISIONS



County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
DECK ELEVATIONS
COUNTY PROJECT MT06-0608

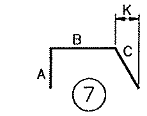
DR. BY: MJP	TR. BY: SWM	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 18 OF 20	

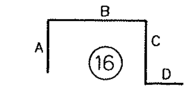
DES: DAS | DWG: DRG | CKD: MJP

USER: SMAGILL | PLOT DATE: 5/10/2012 10:18:59 AM
PATH: 01179\CON00441\0\00000000\11225B\13.00_CAD\13.01_Bridge\13.01.05_Final_Files
FILE: MT06-DECKELEV01.dgn | MODEL: Default

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
EC402	4	16'-2	30	ST												
ES401	4	1'-6	340	ST												
ES402	4	16'-2	12	ST												
ES403	4	4'-8½	106	16	1'-5	1'-0½	1'-3	1'-0						1 7/16"		
ES404	4	2'-0	44	7	6"	1'-4	2"									
ES405	4	10'-0	12	ST												
ES406	4	4'-2	6	ST												





REINFORCEMENT BARS NOTES :

1. "X" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE STANDARD HOOKS ARE TO BE USED.
2. FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
3. FIGURES IN CIRCLES ARE BAR TYPES.
4. "E" INDICATES EPOXY COATED BARS.
5. FOR ALL BARS TYPES SHOWN, DIMENSIONS A-H AND LENGTH ARE MEASURED ALONG OUTSIDE OF BAR. R IS MEASURED ALONG INSIDE OF BAR.

NOTES:

1. FOR GENERAL PLAN & ELEVATION, SEE SHEET 1.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MARK J. PAVLICK ENGINEER NO. PE-036776-E

REVISIONS

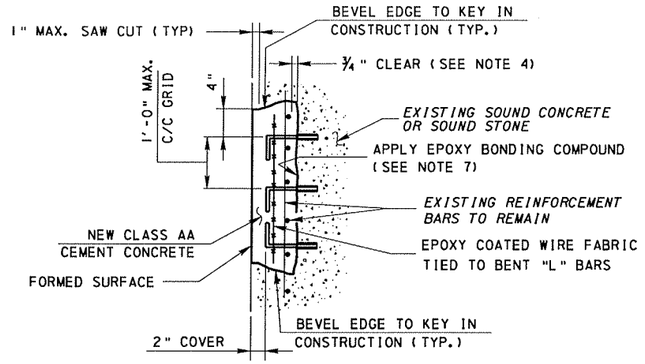
County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
1-SP COMP P/S CONC SPR BOX BM BRIDGE
SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE
COUNTY PROJECT MT06-0608

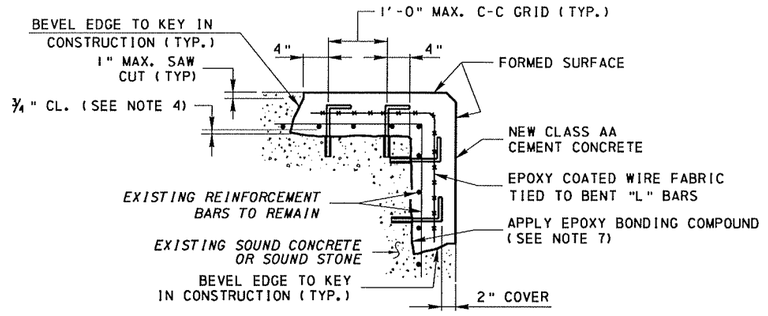
DR. BY: DMW	TR. BY: DMW	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 19 OF 20	

USER: SMAGILL | PLOT DATE: 5/10/2012 10:19:23 AM
PATH: 01797\CON0044110\00000000112258\13.00_CAD\13.01_Bridge\13.01.05_Final_Files
FILE: MT06-SUPREINFSCH01.dgn | MODEL: Default

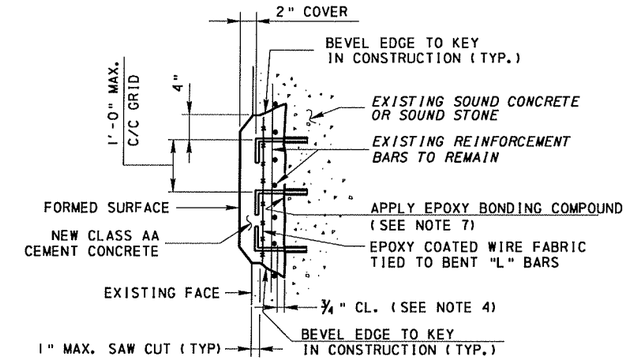
DES: MJP | DWG: DMW | CKD: MJP



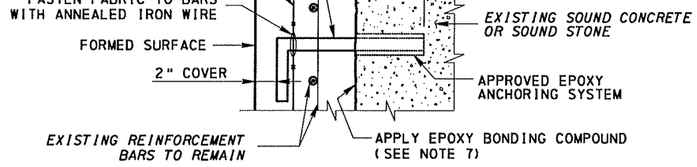
TYPICAL REPAIR DETAIL
NOT TO SCALE



TYPICAL CORNER REPAIR DETAIL
NOT TO SCALE



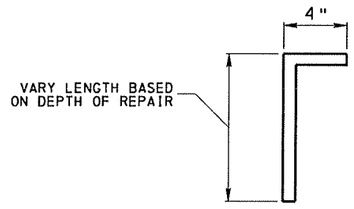
REPAIR FOR LESS THAN 2" COVER
(AS DIRECTED BY THE DEPARTMENT REPRESENTATIVE)
NOT TO SCALE



TYPICAL "L" BAR DETAIL
NOT TO SCALE

ITEM 9100-9001 - REPAIR DETERIORATED CONCRETE/MASONRY STONE (FOR INFORMATION ONLY)	
(THIS ITEM INCLUDES PAYMENT FOR THE FOLLOWING MATERIALS AND THEIR INSTALLATIONS)	
CLASS AA CEMENT CONCRETE	SECTION 704 EXCEPT USE NO. 8 COARSE AGGREGATE
FORMS	SECTION 1001.2(h)
EPOXY ANCHORING SYSTEM	BULLETIN 15 & MANUFACTURERS RECOMMENDATIONS
WELDED WIRE FABRIC (EPOXY COATED OR GALVANIZED)	ASTM A-185 3X3-11X11 (11 GAUGE) [OR EQUIVALENT STEEL AREA (IN.²) PER SQUARE FOOT WITH A MAX. GRID SPACING OF 3"]
ANNEALED IRON WIRE	ASTM-A684
EPOXY BONDING COMPOUND	ASTM C881 TYPE II, GRADE 2
REINFORCEMENT BARS	SECTION 709.1
DOWEL HOLES	SECTION 1003, DIAMETER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION

NOTE: ANY ADDITIONAL REINFORCING STEEL WILL BE CONSIDERED INCIDENTAL TO ITEM 9100-9001.



BENT "L" BAR DETAIL
NOT TO SCALE

CONSTRUCTION PROCEDURE

1. PROVIDE SATISFACTORY PROTECTIVE SHIELDING BELOW ALL REPAIR AREAS. PROTECTIVE SHIELDING IS INCIDENTAL TO ITEM 9100-9001.
2. THE DEPARTMENT REPRESENTATIVE WILL DETERMINE THE EXTENT OF THE REPAIR AREAS.
3. OUTLINE THE EDGE OF THE DESIGNATED REPAIR AREAS WITH A 1" MAXIMUM DEPTH SAWCUT.
4. WITHIN THE OUTLINED REPAIR AREAS, REMOVE THE DETERIORATED CONCRETE/STONE TO A DEPTH OF ¾" BEHIND THE REINFORCEMENT BARS TO SOUND CONCRETE/STONE. ALLOW UNCOVERED OR EXPOSED REINFORCEMENT BARS TO HAVE A ¾" CLEARANCE ALL AROUND. IF CONCRETE/STONE IS UNSOUND AT A DEPTH OF ¾" BEHIND THE REINFORCEMENT BARS, DO NOT REMOVE ANY ADDITIONAL CONCRETE/STONE WITHOUT THE APPROVAL OF THE ENGINEER. SQUARE-OUT/BEVEL THE EDGE OF THE REPAIR AREAS TO KEY IN CONSTRUCTION. USE HAND TOOLS FOR REMOVING DETERIORATED CONCRETE/STONE. USE PNEUMATIC HAMMERS, IF REQUIRED, NOT EXCEEDING AN IMPACT RATING OF 25 FOOT POUNDS. IF DETERIORATED CONCRETE/STONE EXTENDS BEYOND THE INITIALLY OUTLINED REPAIR AREA, ENLARGE AREA AS DIRECTED BY THE ENGINEER.
5. AFTER THE REMOVAL OPERATIONS ARE COMPLETE, CLEAN ALL REMAINING DEBRIS AND LOOSE MATERIALS FROM THE REPAIR AREAS BY SANDBLASTING. SANDBLAST EXPOSED REINFORCEMENT BARS TO CLEAN WHITE METAL. EPOXY COAT THE EXPOSED REINFORCEMENT BARS. SPLICE ANY DAMAGED OR HEAVILY CORRODED REINFORCEMENT BARS IN ACCORDANCE WITH STANDARD DRAWING BC-736M. IF ENOUGH SPLICE LENGTH IS NOT AVAILABLE, DRILL NEW DOWEL HOLES AND PLACE DOWEL BARS AS DIRECTED. WHEN IN STONE DRILL NEW HOLES AND PLACE DOWELS AS DIRECTED.
6. PLACE EPOXY COATED NO. 4 BENT "L" REINFORCEMENT BARS IN A 1'-0" CENTER-TO-CENTER MAXIMUM SPACED GRID. ANCHOR INTO SOUND CONCRETE/STONE WITH EPOXY ANCHORING SYSTEM. ATTACH WELDED WIRE FABRIC TO THE BENT "L" REINFORCEMENT BARS WITH ANNEALED IRON WIRE AT A MAXIMUM SPACING OF 1'-0" IN EACH DIRECTION.
7. SET FORMS TO PROVIDE MINIMUM CONCRETE COVER AS REQUIRED. MAINTAIN ALL CHAMFERS. AIR-BLAST ALL REPAIR AREAS WITH OIL-FREE COMPRESSED AIR TO PROTECT AGAINST ANY CONTAMINANT DETRIMENTAL TO THE BOND OF THE NEW CONCRETE. APPLY EPOXY BONDING COMPOUND TO THE REPAIR AREA. WHILE THE EPOXY BONDING COMPOUND IS STILL TACKY, PLACE CLASS AA CEMENT CONCRETE WITH NUMBER 8 COARSE AGGREGATE. DO NOT PLACE CONCRETE IF THE COMPOUND IS NO LONGER TACKY OR IF THE COMPOUND HAS HARDENED. RECOAT ANY COMPOUND THAT IS NO LONGER TACKY. WIRE BRUSH OR SANDBLAST ANY COMPOUND THAT HAS HARDENED AND RECOAT REPAIR AREA.
8. PROVIDE A MINIMUM COVER OF 2" ON REINFORCEMENT BARS. IF ENOUGH CONCRETE COVER ON THE EXISTING REINFORCEMENT BARS IS NOT AVAILABLE, HAUNCH THE REPAIR OUTWARD.
9. REPAIR ANY CONCRETE/STONE DAMAGED DURING THE OPERATIONS TO THE SATISFACTION OF THE DEPARTMENT REPRESENTATIVE AT NO ADDITIONAL COST.

NOTES:

USE A PACHOMETER TO LOCATE EXISTING REINFORCEMENT WHEN DRILLING DOWEL HOLES TO AVOID DRILLING THRU EXISTING BARS.

NOTES:

1. FOR GENERAL PLAN & ELEVATION, SEE SHEET 1.
2. GOVERNING RATINGS ARE PROVIDED ON SHEET 2.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARK J. PAVLICK
ENGINEER NO. PE-036776-E

REVISIONS

County of Allegheny
Pittsburgh, Pennsylvania
DEPARTMENT OF PUBLIC WORKS

REHABILITATION OF
MONTOUR RUN BRIDGE NO. 6
SCOTT ROAD STA 101+93.97
OVER MONTOUR RUN
I-SP COMP P/S CONC SPR BOX BM BRIDGE
CONCRETE/MASONRY STONE REPAIR DETAILS
COUNTY PROJECT MT06-0608

DR. BY: MJP	TR. BY: DRG	CH. BY: MJP	26111
DATE: 05/10/12	SCALE:	SHEET 20 OF 20	

DES: MJP | DWG: DRG | CKD: MJP

USER:SMAGILL | PLOT DATE: 5/10/2012 10:19:50 AM
PATH: 01179\CON00441\DV00000000112258\13.00_CAD\13.01_DGN\Sheet13.01.05_Final_Files
FILE: MT06-DETERCONCDET01.dgn | MODEL: Default