F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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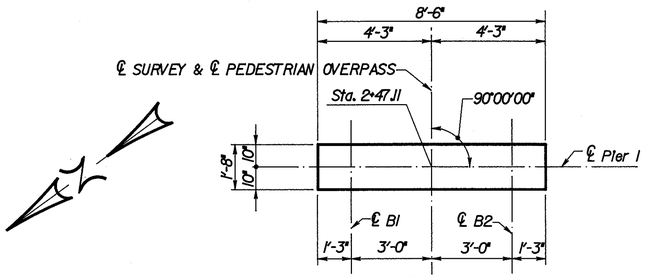
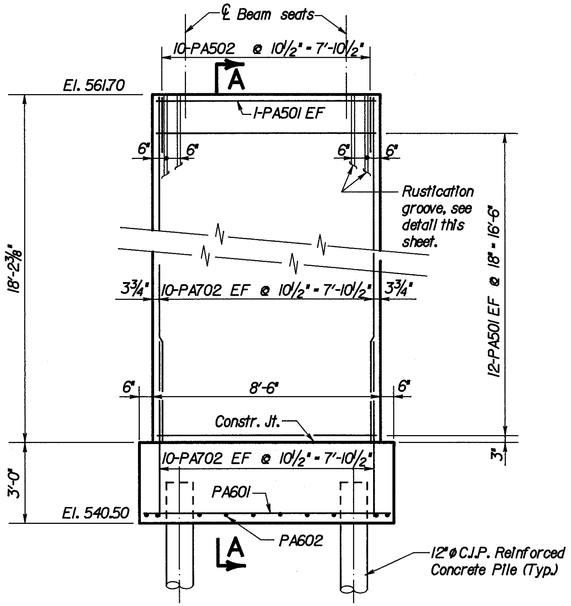
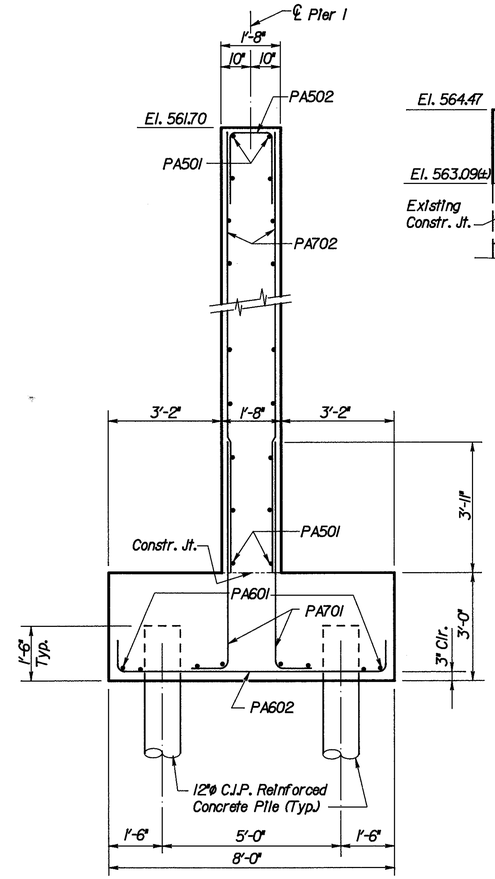
HAMILTON COUNTY
HAM-75-9.75



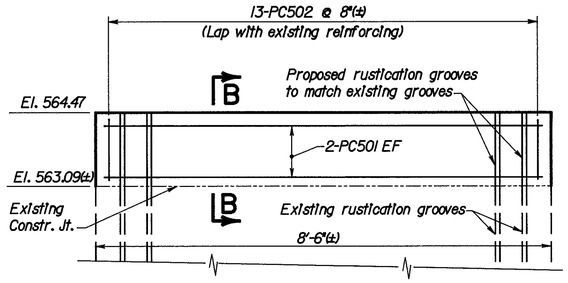
PLAN



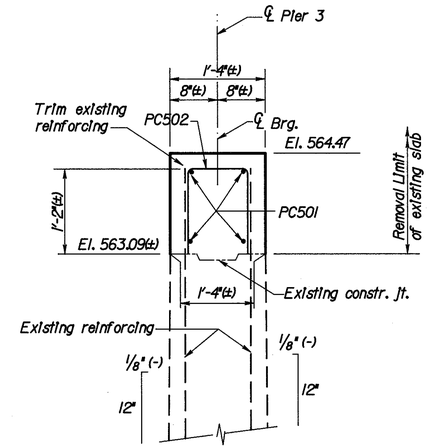
ELEVATION



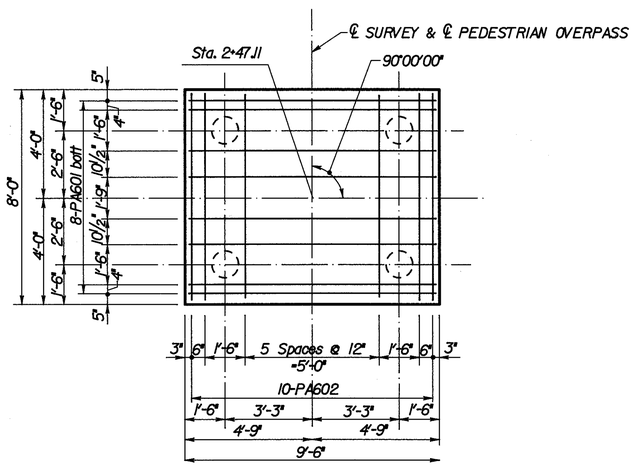
SECTION A-A



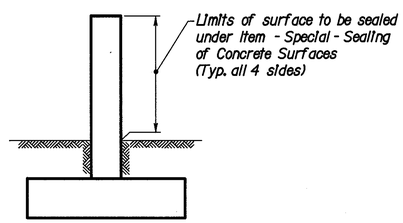
PART - ELEVATION PIER 3



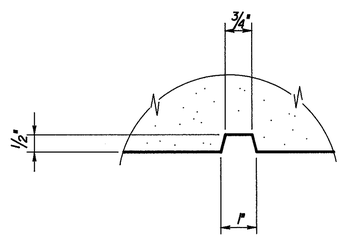
SECTION B-B



FOOTING PLAN



SEALING LIMITS (ALL PIERS)



RUSTICATION GROOVE

NOTES

1. For Reinforcing Steel List, see sheet 16/105

LEGEND

EF = Each Face

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10/105

PIERS 1 & 3
BRIDGE NO. HAM-75-0992
I-75
UNDER PEDESTRIAN OVERPASS

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DFS	MJZ	DYA	HDJ	MPH 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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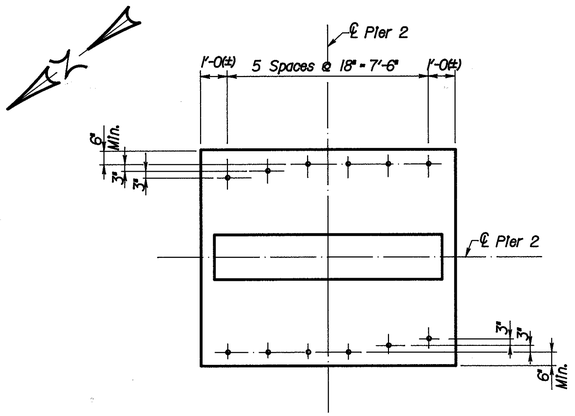
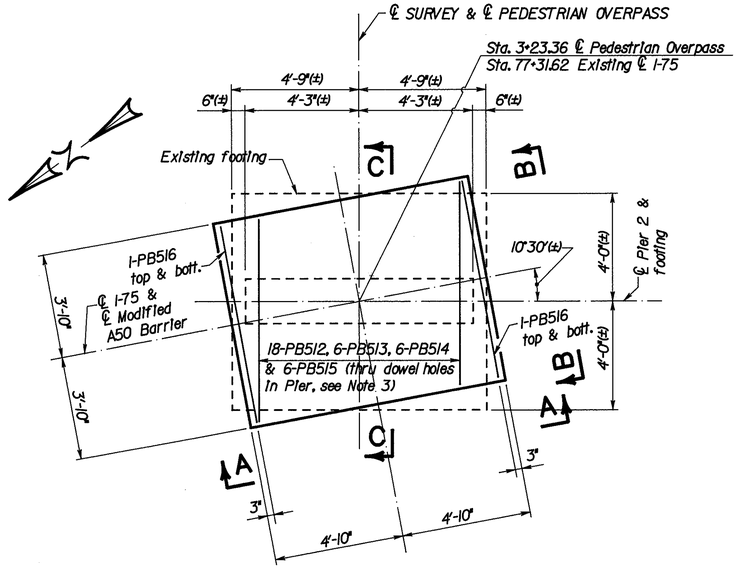
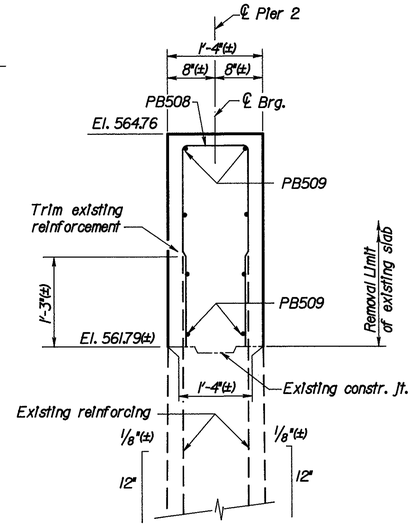
HAMILTON COUNTY
HAM-75-9.75



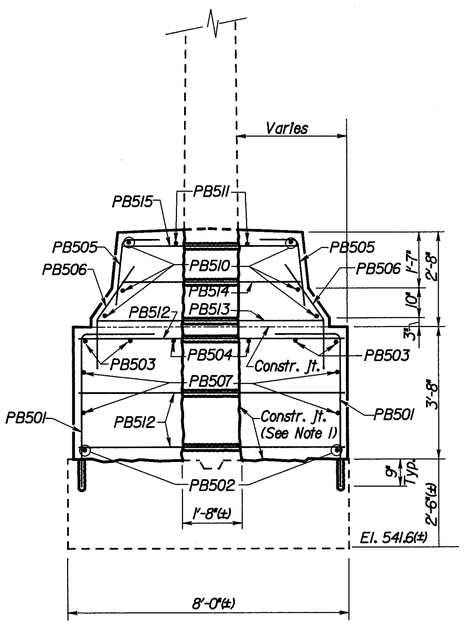
FOOTING PLAN - PIER 2
LOCATION OF DOWEL HOLES



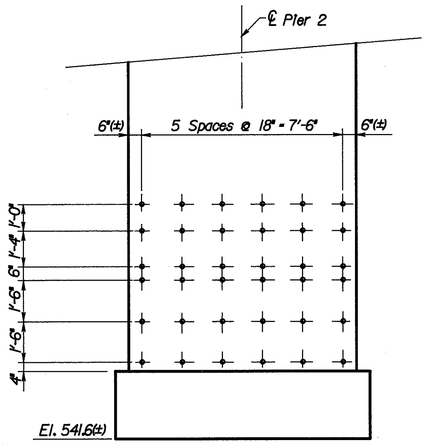
FOOTING PLAN - PIER 2



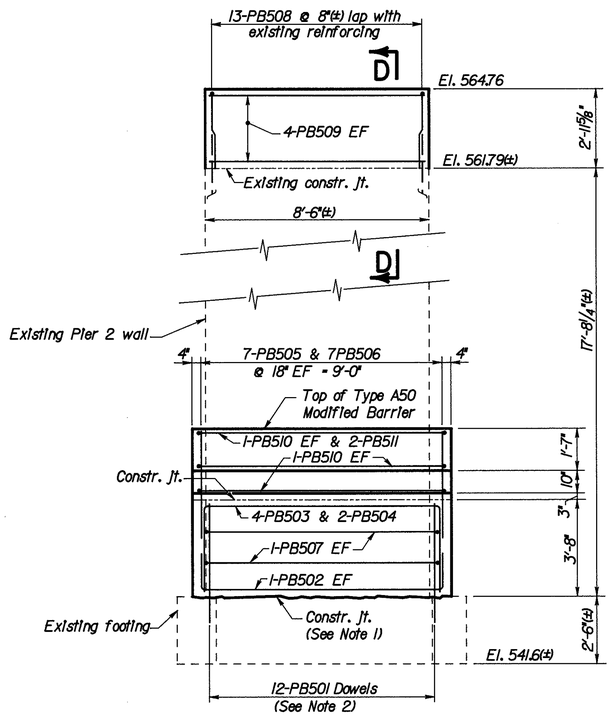
SECTION D-D



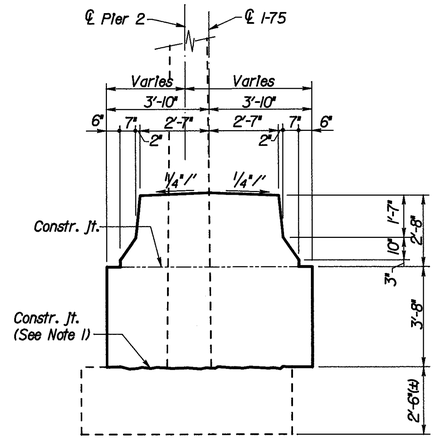
SECTION B-B



PIER ELEVATION
LOCATION OF DOWEL HOLES THROUGH PIER WALL



ELEVATION A-A



ELEVATION B-B

LEGEND

EF = Each Face

NOTES

1. Construction joints between new and existing construction shall be roughened to a full amplitude of approximately ¼". These surfaces shall be clean and free of laitance before placement of concrete. Include with Item 511, Class C concrete, pier above footings for payment.
2. PB501 dowel installation procedure and materials shall be as defined by Supplemental Specifications 852 and 705.20. Include with Item 852, Polyester/vinylester resin bonded anchors, for payment.
3. PB512 thru PB515 dowel installation procedure and materials shall be as defined in 510 of the CMS.
4. For Reinforcing Steel List, see sheet 16 /105

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PIER 2
BRIDGE NO. HAM-75-0992
I-75
UNDER PEDESTRIAN OVERPASS

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DFS	MJZ	DYA	HDJ	MPH 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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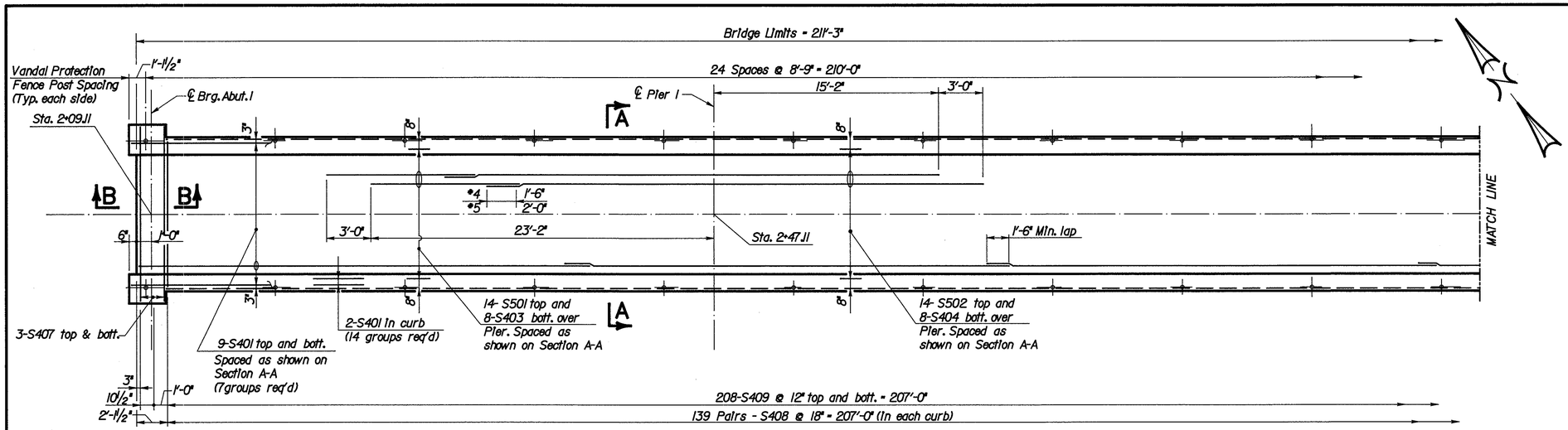
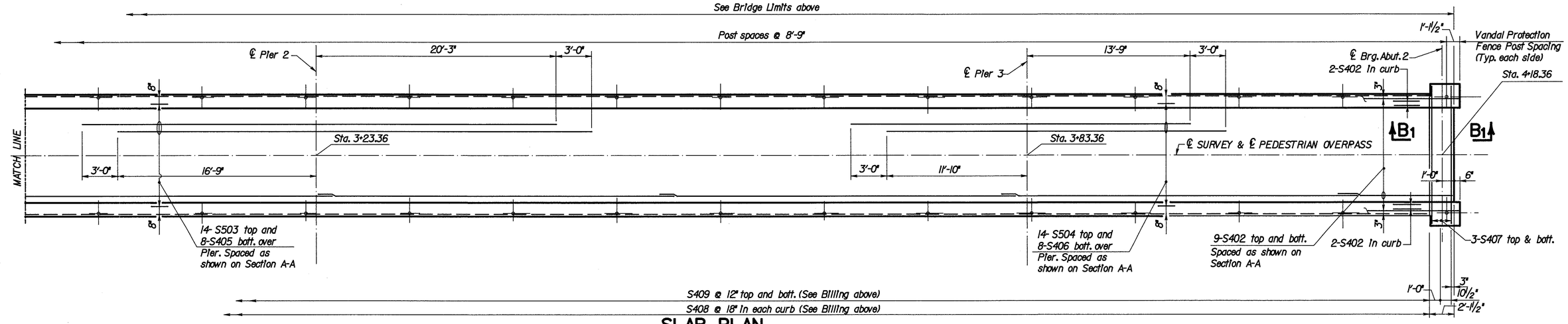
HAMILTON COUNTY
HAM-75-9.75

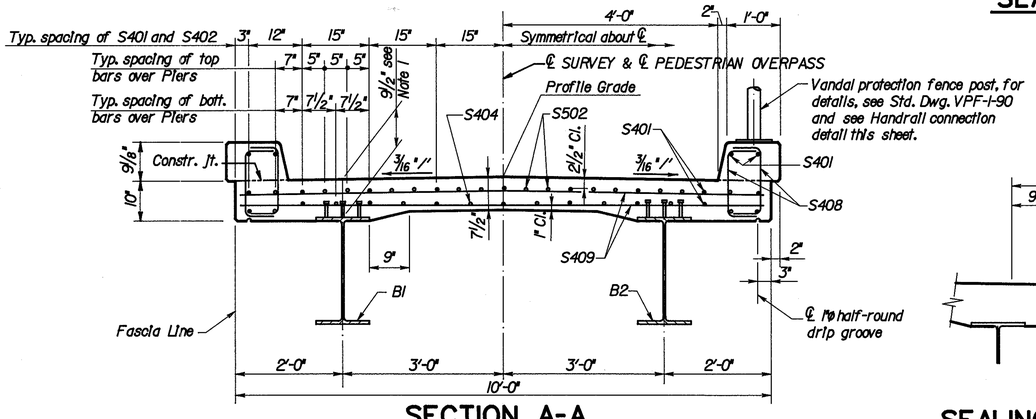




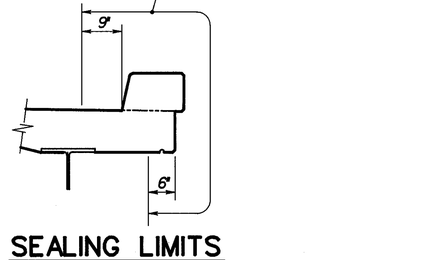
SLAB PLAN

NOTES

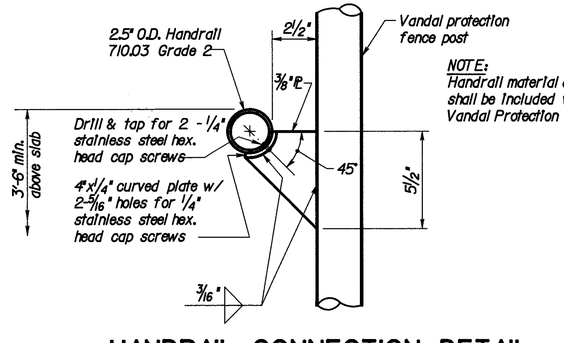
1. This is the design dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per 511.18.
2. A HAUNCH WIDTH of 9" shall be used for computing quantity of concrete. The haunch may be greater than 9" at the Contractor's option.
3. For General Notes, see sheet 8 / 105
4. For Reinforcing Steel List, see sheet 16 / 105
5. For Section B-B, B_1 - B_1 and additional End Diaphragm details, see sheet 13 / 105
6. For Tables of Screed and Finished Pavement Elevations, see sheet 15 / 105
7. For stud shear connector details, see sheet 14 / 105



SECTION A-A



SEALING LIMITS



HANDRAIL CONNECTION DETAIL

Typical at each Vandal protection fence post.

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SLAB PLAN
BRIDGE NO. HAM-75-0992
I-75
UNDER PEDESTRIAN OVERPASS

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DFS	MJZ	DYA	DFS	MPH 12/92	

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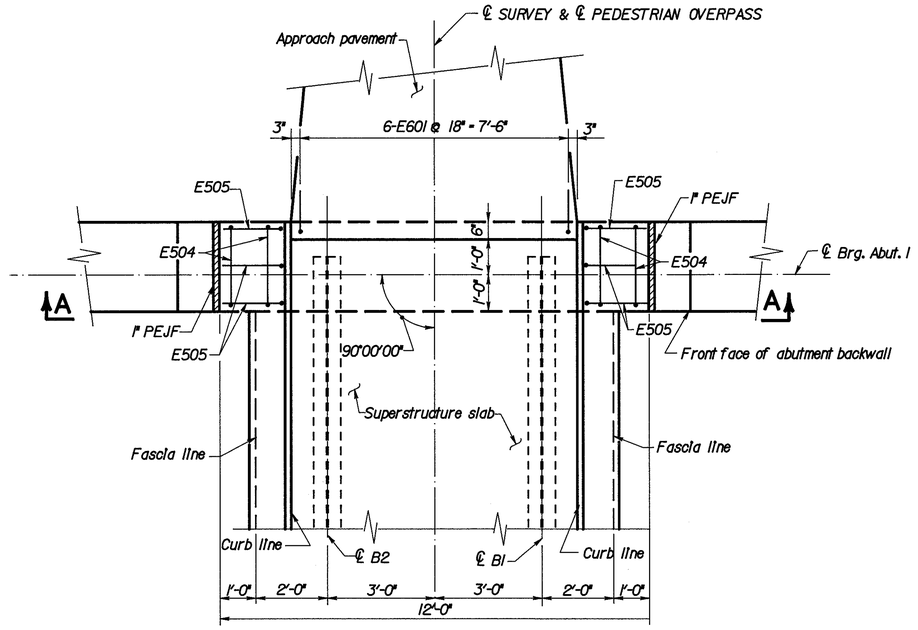
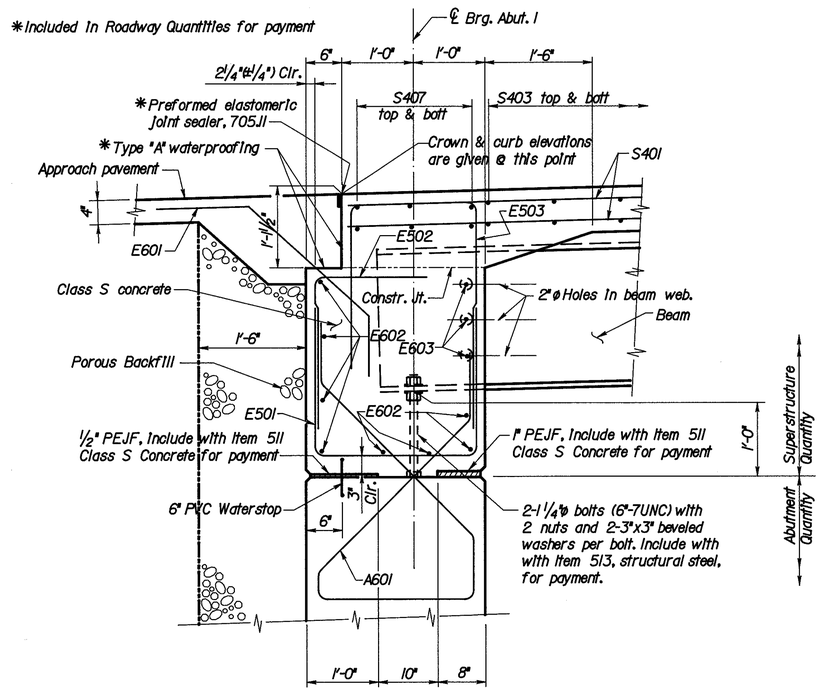
HAMILTON COUNTY
HAM-75-9.75



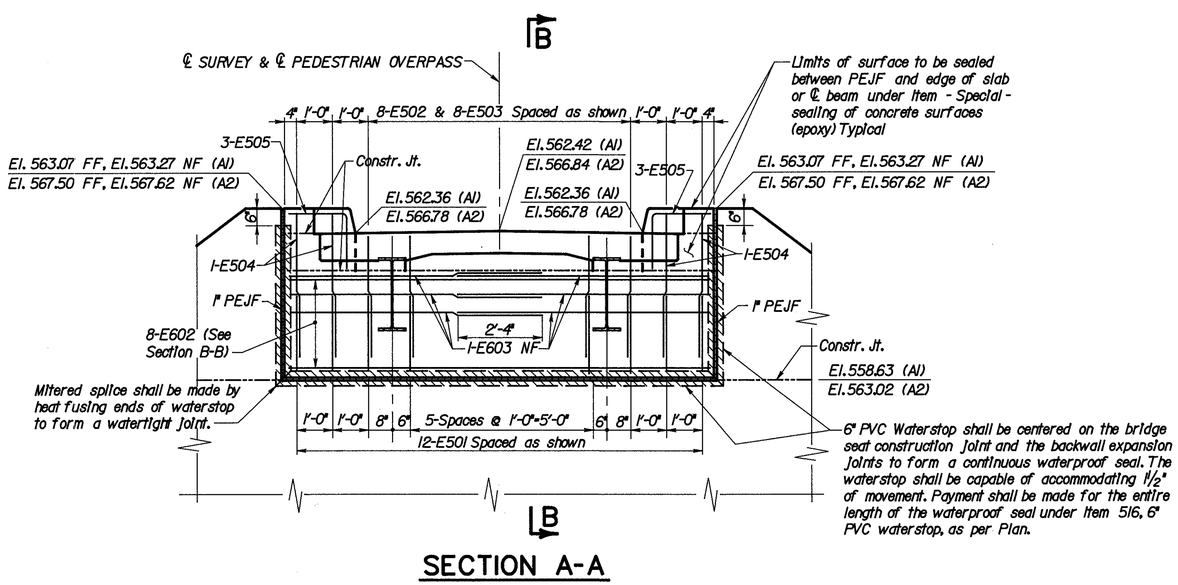
PLAN - END DIAPHRAGM AT ABUTMENT 1

(ABUTMENT 2 SIMILAR)



SECTION B-B

(SECTION B_1 - B_1 SIMILAR)



SECTION A-A

NOTES

1. For Reinforcing Steel List, see sheet 16 / 105
2. For bearing details, see sheet 14 / 105
3. For General Notes, see sheet 8 / 105
4. For additional waterstop details, see Standard Drawing ICD-1-82, sheet 4 of 5.

LEGEND

FF = Far Face
NF = Near Face
PEJF = Preformed Expansion Joint Filler
A1 = Abutment 1
A2 = Abutment 2

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END DIAPHRAGM DETAILS AT ABUTMENTS 1 AND 2
BRIDGE NO. HAM-75-0992
I-75
UNDER PEDESTRIAN OVERPASS

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DFS	MJZ	DYA	DFS	MPH 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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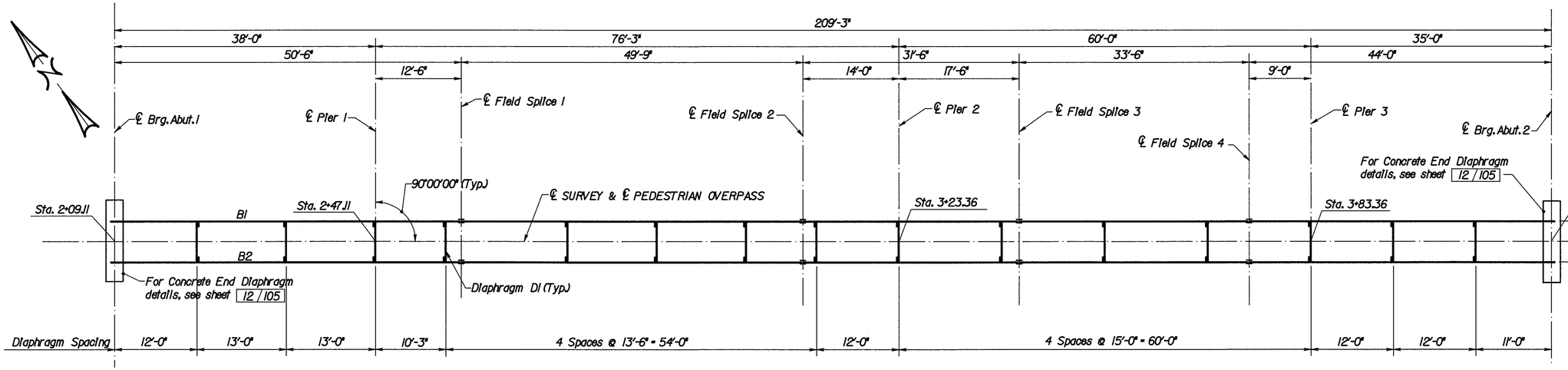
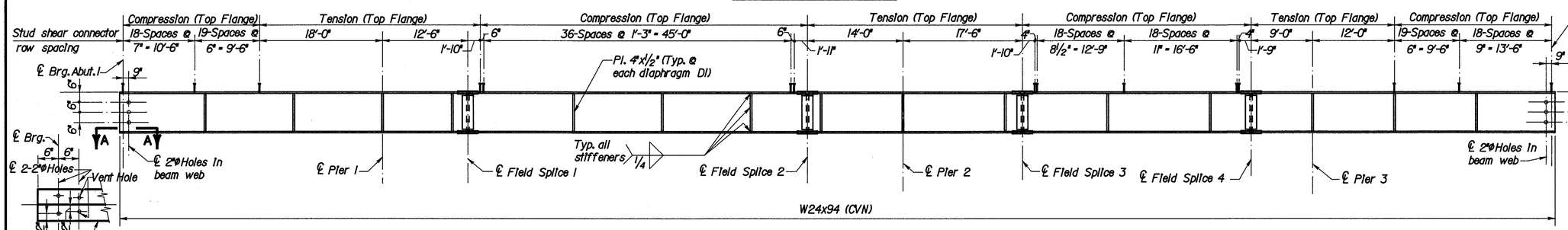
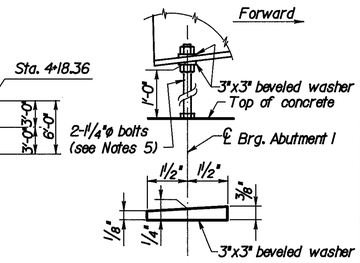
HAMILTON COUNTY
HAM-75-9.75



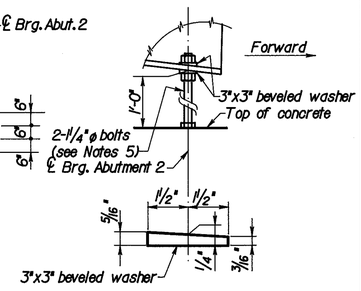
FRAMING PLAN



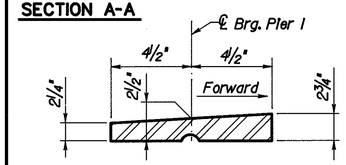
BEAM ELEVATION



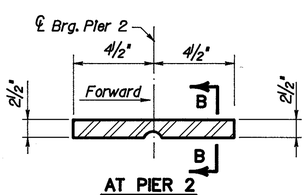
AT ABUTMENT 1



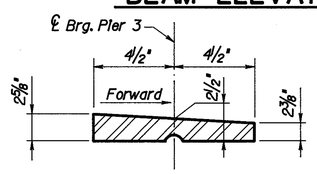
AT ABUTMENT 2



AT PIER 1



AT PIER 2

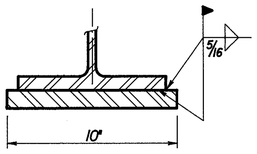


AT PIER 3

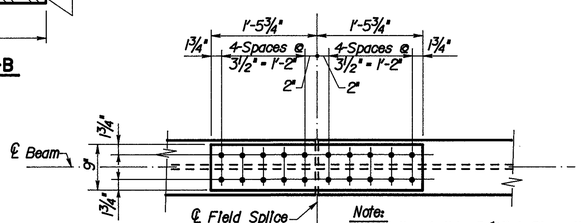
TOP LOAD PLATE DETAILS @ PIERS 1, 2 & 3

For additional details of R-75 Rocker see Std. Dwg. RB-1-55.
Include with Item 516 Bearing Device, Rocker, for payment.

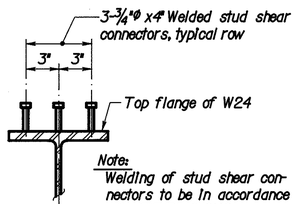
SECTION A-A



SECTION B-B

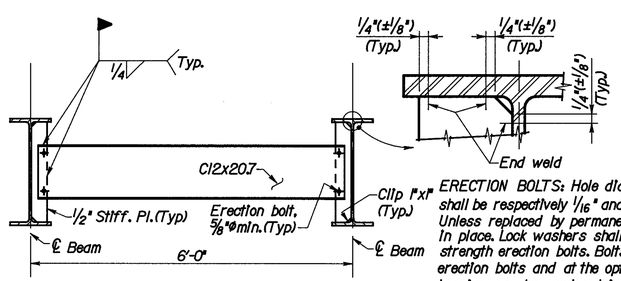


FIELD SPLICE DETAILS



Note: Welding of stud shear connectors to be in accordance with 513.171 of CMS.

STUD SHEAR CONNECTOR LAYOUT



DIAPHRAGM D1

ERECTION BOLTS: Hole diameter in the diaphragms and beam stiffeners shall be respectively 1/16" and ¼" larger than the diameter of the erection bolts. Unless replaced by permanent high strength bolts, erection bolts shall remain in place. Lock washers shall be furnished for other than fully torqued high strength erection bolts. Bolts shall be furnished as part of 513. In lieu of erection bolts and at the option of the Contractor, alternate means of temporary bracing may be used subject to the approval of the Director (501.06).

BEVELED WASHER DETAILS

NOTES

1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. For General Notes, see sheet 8 / 105
3. For Deflection and Camber diagrams, see sheet 15 / 105
4. WELDED ATTACHMENT of supports for concrete deck finishing machine may be made to areas of the beam flanges designated "Compression". Attachments shall not be made to areas designated "Tension". Fillet welds to compression flanges shall be not closer than 1" from edge of flange, be not more than 2" long, and be not smaller than the minimum size required by AASHTO.
5. Support bolts shall be 1¼"ø bolts (6"-7UNC) with 2 nuts and 2- 3"x3" beveled washers per bolt as shown. Include with Item 513, Structural Steel, for payment.

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FRAMING PLAN
BRIDGE NO. HAM-75-0992
I-75
UNDER PEDESTRIAN OVERPASS

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DFS	MJZ	DYA	DFS	MPH 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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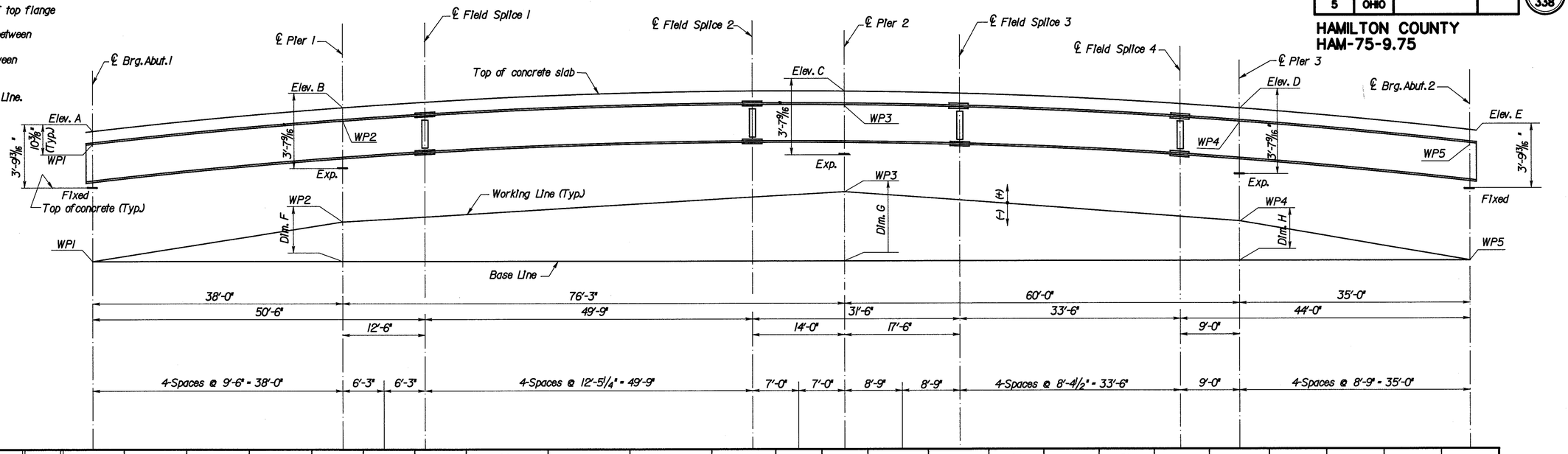
HAMILTON COUNTY
HAM-75-9.75

DEFLECTION AND CAMBER NOTES

1. Working Points (WP) are at bottom of top flange at ℄ Bearing.
2. The Working Line is a straight line between indicated Working Points.
3. The Base Line is a straight line between WP1 and WP5.
4. The tabulated deflection and camber data is measured from the Working Line.



DEFLECTION AND CAMBER

	BEAM	A1	¼	½	¾	P1	—	FS1	¼	½	¾	FS2	—	P2	—	FS3	¼	½	¾	FS4	P3	¼	½	¾	A2
Deflection due to Steel DL	B1 B2	0	0	0	0	0	-1⁄16"	-⅛"	-¼"	-5⁄16"	-¼"	-⅛"	-1⁄16"	0	0	0	-1⁄16"	-1⁄16"	-1⁄16"	0	0	0	0	0	0
Deflection due to Non-Composite Remaining DL	B1 B2	0	1⁄16"	⅛"	⅛"	0	-5⁄16"	-1¹⁄16"	-1⅜"	-1¹¹⁄16"	-1⅜"	-11⁄16"	-5⁄16"	0	1⁄16"	-1⁄16"	-¼"	-5⁄16"	-¼"	-⅛"	0	0	-1⁄16"	-1⁄16"	0
Deflection due to Composite Remaining DL	B1 B2	0	0	0	0	0	-1⁄16"	-⅛"	-¼"	-5⁄16"	-¼"	-⅛"	-1⁄16"	0	0	0	-1⁄16"	-1⁄16"	-1⁄16"	0	0	0	0	0	0
Total DL Deflection	B1 B2	0	1⁄16"	⅛"	⅛"	0	-7⁄16"	-15⁄16"	-1⅞"	-2⁵⁄16"	-1⅞"	-15⁄16"	-7⁄16"	0	1⁄16"	-1⁄16"	-⅜"	-7⁄16"	-⅜"	-⅛"	0	0	-1⁄16"	-1⁄16"	0
Camber required for DL	B1 B2	0	-1⁄16"	-⅛"	-⅛"	0	7⁄16"	15⁄16"	1⅞"	2⁵⁄16"	1⅞"	15⁄16"	7⁄16"	0	-1⁄16"	1⁄16"	⅜"	7⁄16"	⅜"	⅛"	0	0	1⁄16"	1⁄16"	0
Correction for Vertical Curve	B1 B2	0	½"	15⁄16"	13⁄16"	0	1¾"	3³⁄16"	5¹⁄16"	5¾"	5¼"	3³⁄16"	1¹⁵⁄16"	0	1¾"	2¹⁵⁄16"	3½"	3½"	2¹⁵⁄16"	1¹³⁄16"	0	⅞"	1³⁄16"	⅞"	0
Total Camber Required	B1 B2	0	7⁄16"	13⁄16"	11⁄16"	0	2³⁄16"	4⅛"	6¹⁵⁄16"	8¹⁄16"	7⅛"	4⅜"	2⅜"	0	1¹¹⁄16"	3"	3⅞"	3¹⁵⁄16"	3⁵⁄16"	1¹⁵⁄16"	0	⅞"	1¼"	15⁄16"	0

Beam	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Dim. F	Dim. G	Dim. H
B1	562.452	565.330	568.394	568.103	566.838	2'-1"	3'-6⁹⁄16"	2'-0"
B2	562.452	565.330	568.394	568.103	566.838	2'-1"	3'-6⁹⁄16"	2'-0"

FINISHED PAVEMENT ELEVATIONS

Station	West Curb Line	Profile Grade	East Curb Line
2+25	563.71	563.77	563.71
+50	565.50	565.56	565.50
+75	566.88	566.94	566.88
3+00	567.85	567.91	567.85
+25	568.40	568.46	568.40
+50	568.54	568.61	568.54
+75	568.27	568.33	568.27
4+00	567.59	567.65	567.59

SCREED ELEVATIONS

Station	North Curb Line	Profile Grade	South Curb Line	Station	North Curb Line	Profile Grade	South Curb Line
℄ Brg. Abut. 1	562.436	562.499	562.436	℄ Pier 2	568.379	568.441	568.379
¼	563.192	563.254	563.192	—	568.480	568.542	568.480
½	563.943	564.005	563.943	FS3	568.545	568.607	568.545
¾	564.654	564.716	564.654	¼	568.571	568.633	568.571
℄ Pier 1	565.315	565.377	565.315	½	568.536	568.598	568.536
—	565.742	565.804	565.742	¾	568.443	568.505	568.443
FS1	566.149	566.211	566.149	FS4	568.294	568.356	568.294
¼	566.876	566.938	566.876	℄ Pier 3	568.088	568.150	568.088
½	567.464	567.526	567.464	¼	567.847	567.909	567.847
¾	567.887	567.949	567.887	½	567.560	567.622	567.560
FS2	568.172	568.234	568.172	¾	567.217	567.279	567.217
—	568.289	568.351	568.289	℄ Brg. Abut. 2	566.823	566.885	566.823

NOTE:
Screed elevation given are at the top of concrete slab before concrete placement and have been adjusted for estimated deflection due to weight of concrete slab, curb and railing.

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15 / 105

DEFLECTION AND CAMBER
BRIDGE NO. HAM-75-0992
I-75
UNDER PEDESTRIAN OVERPASS

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DFS	MJZ	DYA	DFS	MPH 12/92	

f:\6272\0992sd.dgn Feb. 3, 1993 10:58:08

REINFORCING STEEL LIST

ABUTMENT 1

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
A401	6	9'-1"	36	12	4½"	1'-9"	2'-6½"	1'-9"	2'-6½"		4½"				
A501	18	11'-6½"	217	13	8½"	2'-8"	2'-7"	2'-8"	2'-7"		8½"				
A502	8	10'-3"	86	8			4'-2"	2'-2"	4'-2"						
A503	8	13'-11"	116	8			6'-0"	2'-2"	6'-0"						
A504	2	13'-1"	27	8			5'-7	2'-2"	5'-7						
A505	2	6'-7"	14	8			2'-4"	2'-2"	2'-4"						
A506	2	8'-9"	18	8			3'-5"	2'-2"	3'-5"						
A507	2	10'-1"	21	8			4'-1"	2'-2"	4'-1"						
A508	2	10'-5"	22	8			4'-3"	2'-2"	4'-3"						
A509	4	7'-2	30	20		9"	5'-2"	1'-3"				4'-3"	2'-10⅞"		
A510	8	22'-8"	189	Str.											
A511	4	5'-1"	21	Str.											
A512	4	4'-7"	19	Str.											
A513	4	2'-6"	10	Str.											
A601	11	10'-9"	178	22	See Bending Diagrams										
A801	8	22'-8"	484	Str.											
		TOTAL =	1488												

ABUTMENT 2

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
B401	6	9'-1"	36	12	4½"	1'-9"	2'-6½"	1'-9"	2'-6½"		4½"				
B501	18	11'-6½"	217	13	8½"	2'-8"	2'-7"	2'-8"	2'-7"		8½"				
B502	8	10'-3"	86	8			4'-2"	2'-2"	4'-2"						
B503	8	13'-11"	116	8			6'-0"	2'-2"	6'-0"						
B504	2	13'-1"	27	8			5'-7	2'-2"	5'-7						
B505	2	6'-7"	14	8			2'-4"	2'-2"	2'-4"						
B506	2	8'-9"	18	8			3'-5"	2'-2"	3'-5"						
B507	2	10'-1"	21	8			4'-1"	2'-2"	4'-1"						
B508	2	10'-5"	22	8			4'-3"	2'-2"	4'-3"						
B509	4	7'-2	30	20		9"	5'-2"	1'-3"				4'-3"	2'-10⅞"		
B510	8	22'-8"	189	Str.											
B511	4	5'-1"	21	Str.											
B512	4	4'-7"	19	Str.											
B513	4	2'-6"	10	Str.											
B601	11	10'-9"	178	22	See Bending Diagrams										
B801	8	22'-8"	484	Str.											
		TOTAL =	1488												

PIER 1

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
PA501	26	8'-2"	221	Str.											
PA502	10	4'-1"	43	8			1'-6"	1'-4"	1'-6"						
PA601	8	9'-0"	108	Str.											
PA602	10	10'-2"	153	8			1'-6"	7'-6"	1'-6"						
PA701	20	8'-0"	327	10		1'-6"	6'-8"								
PA702	20	18'-0"	736	Str.											
		TOTAL =	1588												

PIER 2

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
PB501	12	5'-7½"	NOTE 5	10		1'-6"	4'-3"								
PB502	2	12'-1"	25	8			1'-6"	9'-4"	1'-6"						
PB503	4	15'-9"	66	8			3'-4"	9'-4"	3'-4"						
PB504	2	12'-6½"	26	10		3'-4"	9'-4"								
PB505	14	3'-0"	44	9		9"	2'-3"		1"	9"				2'-4"	
PB506	14	3'-2"	46	9		1'-6"	1'-8"		1'-2¾"	10⅜"				2'-10⅜"	
PB507	4	17'-11"	75	8			4'-6"	9'-2"	4'-6"						
PB508	13	5'-11"	80	8			2'-7"	1'-0"	2'-7"						
PB509	8	8'-2"	68	Str.											
PB510	6	16'-11"	106	8			4'-0"	9'-2"	4'-0"						
PB511	2	13'-9"	29	8			2'-4"	9'-4"	2'-4"						
PB512	18	7'-5"	139	Str.											
PB513	6	6'-5"	40	Str.											
PB514	6	5'-2"	32	Str.											
PB515	6	4'-10"	30	Str.											
PB516	4	7'-4"	31	Str.											
		TOTAL =	837												

PIER 3

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
PC501	4	8'-2	34	Str.											
PC502	13	3'-1"	42	8		1'-2"	1'-0"	1'-2"							
		TOTAL =	76												

SLAB

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
S401	154	30'-0"	3086	Str.											
S402	18	12'-5"	149	Str.											
S403	8	10'-0"	53	Str.											
S404	8	32'-10"	175	Str.											
S405	8	40'-0"	214	Str.											
S406	8	28'-7"	153	Str.											
S407	12	11'-8"	94	Str.											
S408	556	2'-0"	743	8		6"	1'-3"	6"							
S409	416	9'-8"	2686	Str.											
S501	14	10'-0"	146	Str.											
S502	14	33'-4"	487	Str.											
S503	14	40'-0"	584	Str.											
S504	14	28'-7"	417	Str.											
		TOTAL =	8987												

END DIAPHRAGMS

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
E501	24	5'-11"	148	8			2'-0"	2'-2"	2'-0"						
E502	16	3'-2½"	54	10		1'-8"	1'-8"								
E503	16	6'-2"	103	8			2'-0"	1'-8"	2'-9"						
E504	8	8'-11"	74	8			3'-6"	2'-2"	3'-6"						
E505	12	3'-0"	38	10			1'-6"	1'-7½"							
E601	12	5'-1"	92	6				1'-5"	2'-3"	1'-5"		1'-0"	1'-0"	4'-3"	
E602	16	11'-8"	280	Str.											
E603	12	7'-0"	126	Str.											
		TOTAL =	915												

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5	OHIO		

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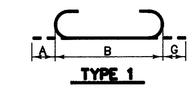
HAMILTON COUNTY
HAM-75-9.75

BENDING DIAGRAMS



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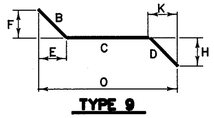

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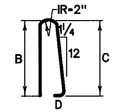

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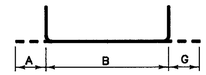

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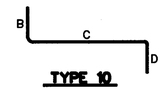

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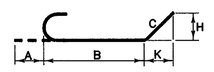

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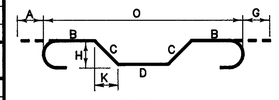

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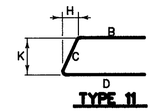

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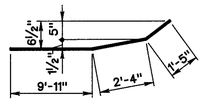

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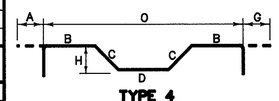

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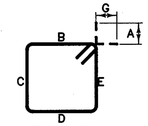

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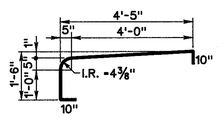

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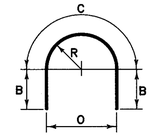

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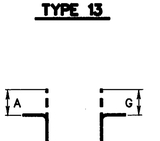

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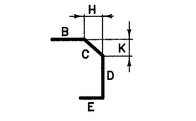

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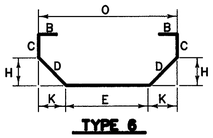

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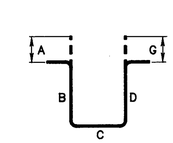

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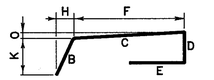

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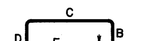

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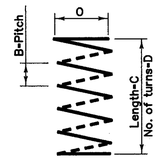

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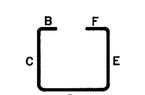

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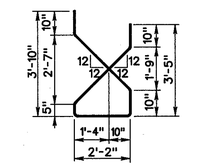

TYPE 22

NOTES

1. All reinforcing steel bars shall be epoxy coated.
2. All dimensions are out to out of bar.
3. Dimensions "A" and "G" are standard bend dimensions. Refer to Section 509.05 of the CMS.
4. Radius dimension "R" is to the outside of the bar.
5. These reinforcing bars are included with Item 852, Polyester/Vinylester resin bonded anchors, for payment.

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REINFORCING STEEL LIST

BRIDGE NO. HAM-75-0992
I-75
UNDER PEDESTRIAN OVERPASS

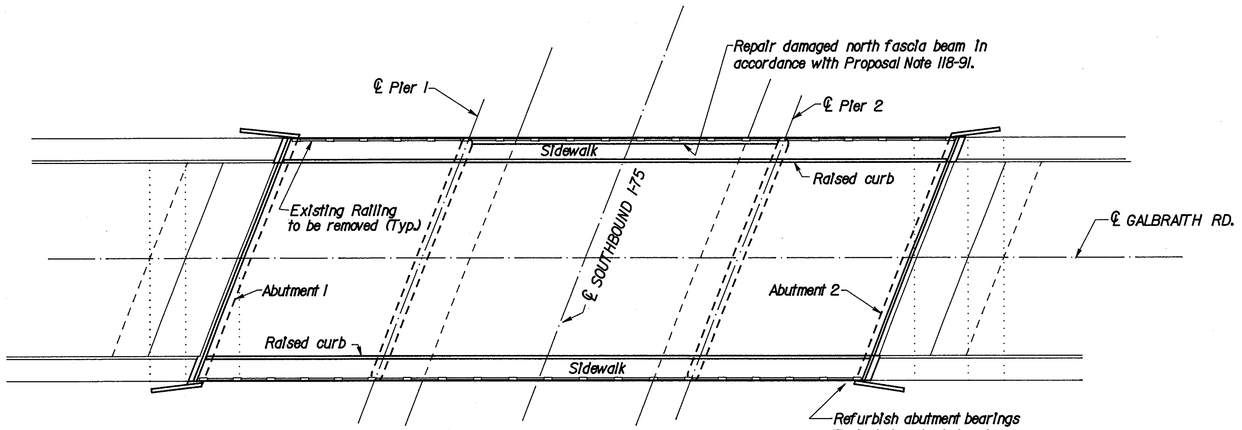
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
		DYA	DFS	MPH 12/92	

f:\6272\0992sh1.dgn Feb. 4, 1993 09:51:19

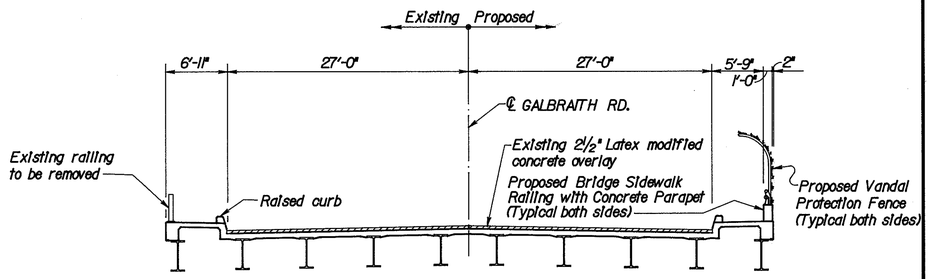
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

250
338

HAMILTON COUNTY
HAM-75-9.75



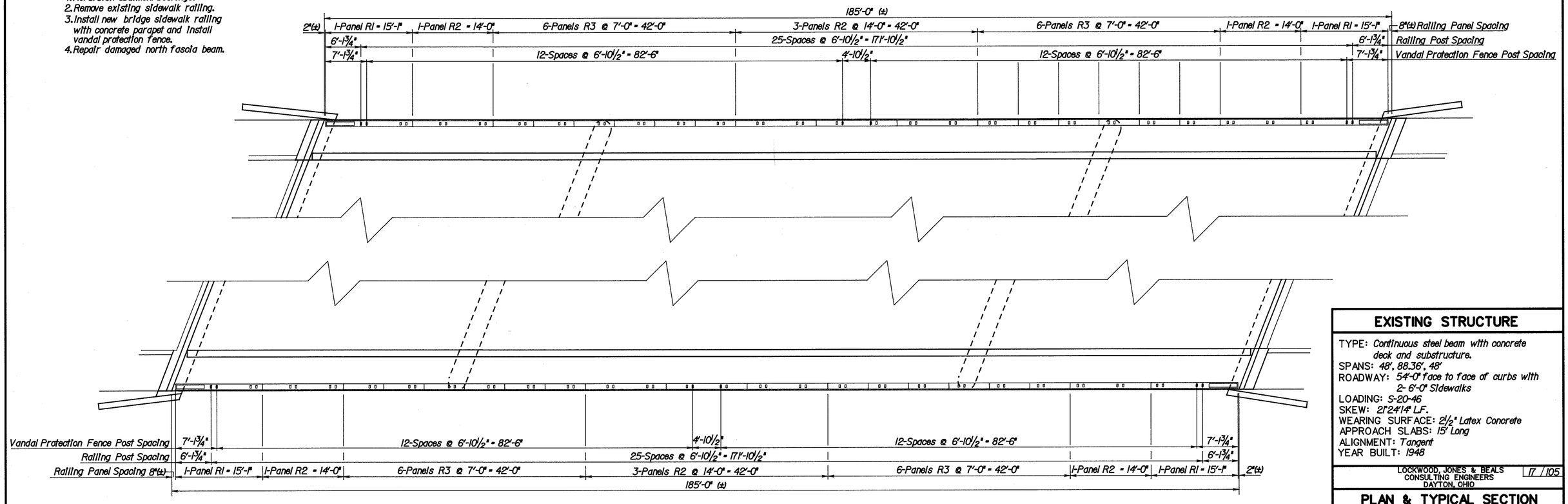
EXISTING PLAN



TYPICAL SECTION

PROPOSED WORK

1. Refurbish abutment bearings.
2. Remove existing sidewalk railing.
3. Install new bridge sidewalk railing with concrete parapet and install vandal protection fence.
4. Repair damaged north fascia beam.



PLAN

Bridge Sidewalk Railing with Concrete Parapet and Vandal Protection Fence Post Spacing

NOTES:

1. For General Notes, see Sheet 1&2/105
2. For Estimated Quantities, see Sheet 3/105
3. For Reinforcing Steel List, see Sheet 103/105

EXISTING STRUCTURE

TYPE: Continuous steel beam with concrete deck and substructure.
SPANS: 48', 88.36', 48'
ROADWAY: 54'-0" face to face of curbs with 2- 6'-0" Sidewalks
LOADING: S-20-46
SKEW: 21°24'14" LF.
WEARING SURFACE: 2½" Latex Concrete
APPROACH SLABS: 15' Long
ALIGNMENT: Tangent
YEAR BUILT: 1948

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DAYTON, OHIO

17/105

PLAN & TYPICAL SECTION BRIDGE SIDEWALK RAILING AND VANDAL PROTECTION FENCE

BRIDGE NO. HAM-75-1089L
GALBRAITH ROAD OVER I-75 S.B.

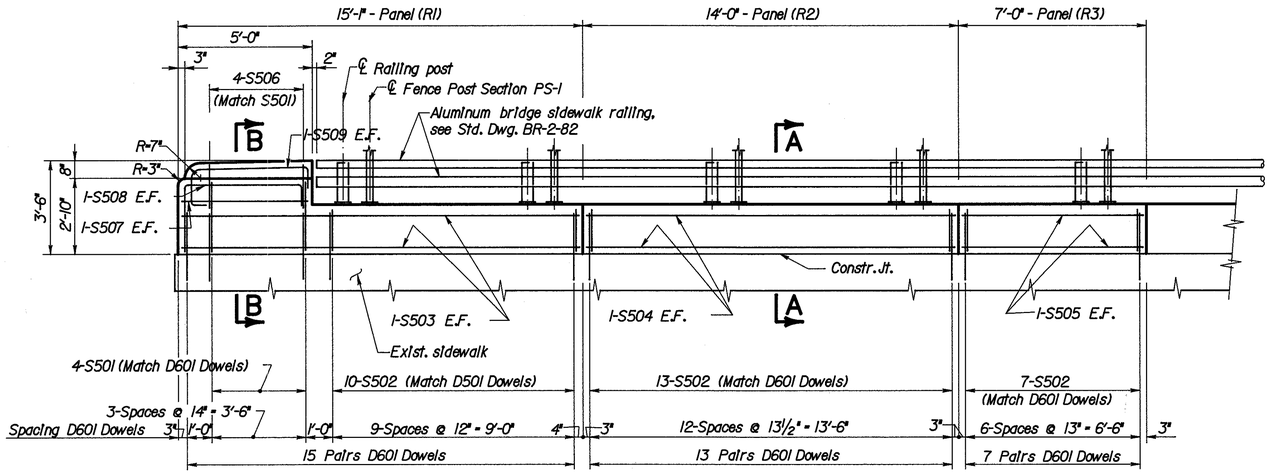
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
HDJ	MPH	DJJ	MPH	HDJ 12/92	

f:\6272\1089p1.dgn Feb. 23, 1993 10:47:00

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

251
338

HAMILTON COUNTY
HAM-75-9.75

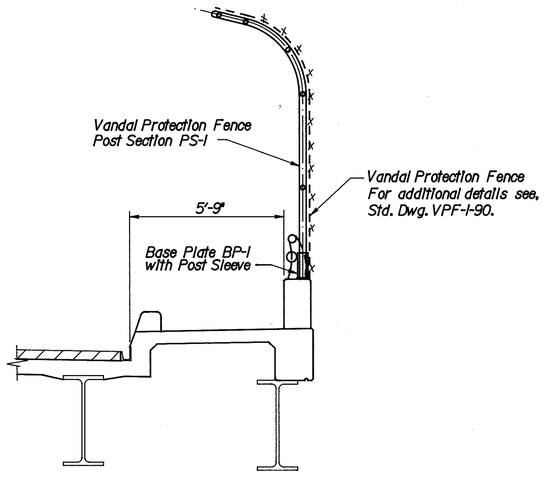


ELEVATION

RAILING PANELS

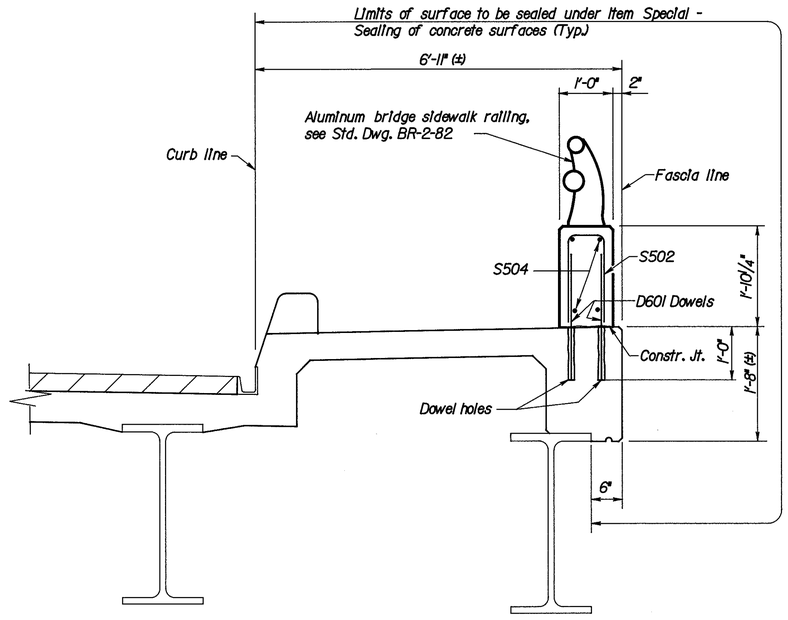
4-Railing Panels R1 Req'd
10-Railing Panels R2 Req'd
24-Railing Panels R3 Req'd

Note:
1. For additional details, see Std. Dwg. BR-2-82.
2. For Reinforcing Steel List, see Sheet 103 / 105



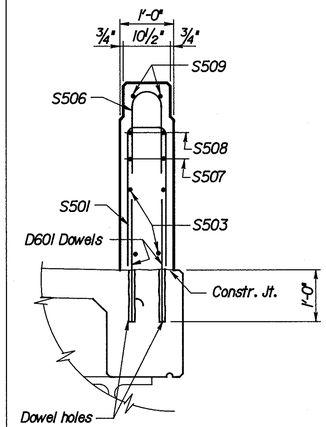
SECTION A-A

Showing Vandal Protection Fence Details



SECTION A-A

Showing Bridge Sidewalk Railing Details



SECTION B-B

NOTE:
Dowels shall be installed in accordance with SS852 and **705.20.** *The cost for drilled holes and furnishing and placing materials shall be included in the price bid for Item 517-Railing, (concrete parapet with double pipe rail), as per plan.*

LEGEND

E.F. - Each Face

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DAYTON, OHIO

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BRIDGE SIDEWALK RAILING AND VANDAL PROTECTION FENCE
BRIDGE NO. HAM-75-1089L
GALBRAITH ROAD OVER I-75 S.B.

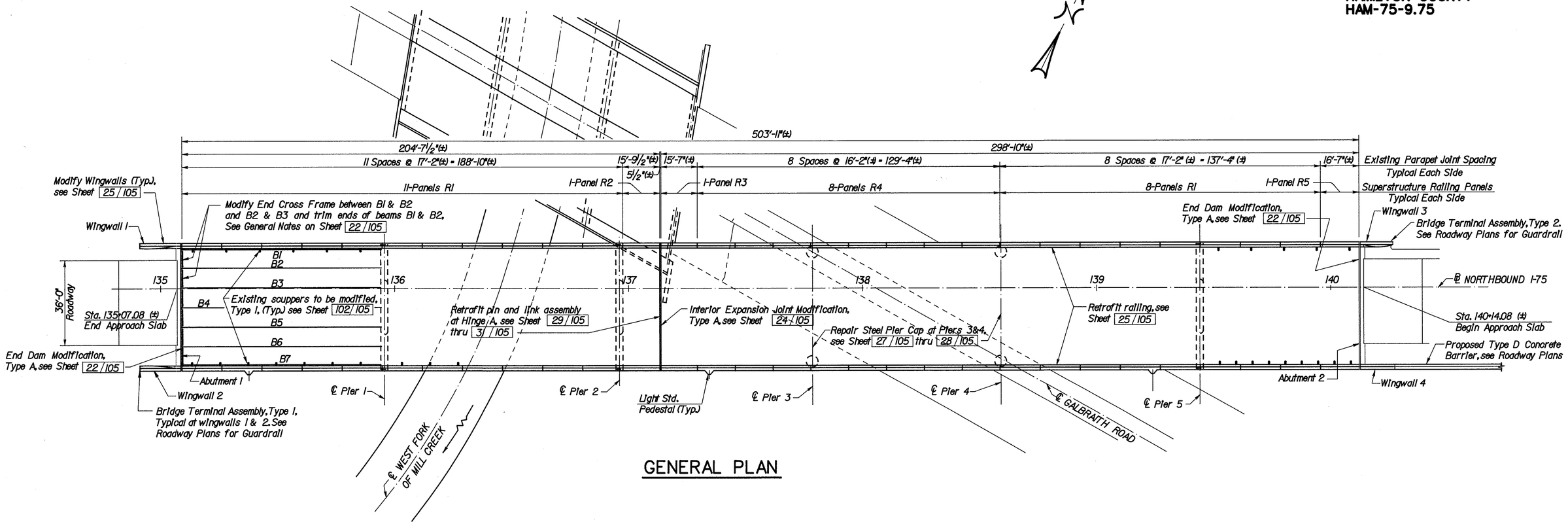
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
HDJ	MPH	DJJ	MPH	HDJ 12/92	

f:\6272\1089p2.dgn Feb. 3, 1993 14:23:53

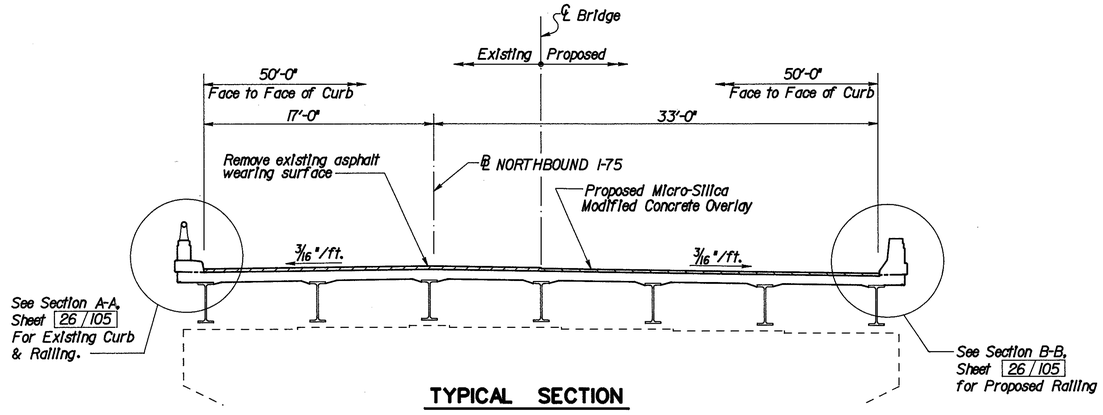
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

252
338

HAMILTON COUNTY
HAM-75-9.75



GENERAL PLAN



TYPICAL SECTION

PROPOSED WORK

1. Remove existing asphalt overlay and install new micro-silica modified concrete overlay.
2. Seal end and intermediate expansion joints with strip seals. Use End Dam Modification, Type A, at abutments and Interior Expansion Joint Modification, Type A, at interior expansion joint.
3. Retrofit existing parapets with concrete barrier railing.
4. Modify existing scuppers.
5. Retrofit pin and link assemblies.
6. Modify end cross frames and trim end of beams B1 & B2 at Abutment 1 to provide 2" min. clearance.
7. Repair steel pier box girders.

NOTES:

1. For General Notes see Sheet 1/105 thru 3/105
2. For Sections A-A and B-B, see Sheet 26/105
3. For Abutment Modification Plans and Details, see Sheet 20/105 and 21/105
4. For Wingwall Railing Details, see Sheet 25/105
5. For End Dam Modification Type A, see Sheet 22/105
6. For Interior Expansion Joint Modification, Type B, see Sheet 24/105
7. For Scupper and Deflection Joint Details see Sheet 102/105
8. For Estimated Quantities, see Sheet 4/105
9. For Reinforcing Steel List, see Sheet 103/105
10. For Steel Pier Cap Repair Details at Piers 3&4, see Sheets 27/105 and 28/105
11. For Pin and Link Assembly Retrofit at Hinge A see Sheets 29/105 thru 31/105

EXISTING STRUCTURE

TYPE: Continuous rolled steel beams and welded plate girder with reinforced concrete deck and substructure.
SPANS: 86'-0", 100'-6", 82'-6", 80'-6", 85'-0", 68'-0"
ROADWAY: 52'-0" f/f of parapets
LOAD FREQUENCY: CF = 2000 (57), adequate for A.A.S.H.O. alternate loading.
SKEW: 0°00'00"
WEARING SURFACE: Monolithic concrete with 2½" asphalt overlay.
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent

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GENERAL PLAN & TYPICAL SECTION

BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILLCREEK & GALBRAITH RD.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DJJ	HDJ	DJJ	HDJ	MPH 12/92	

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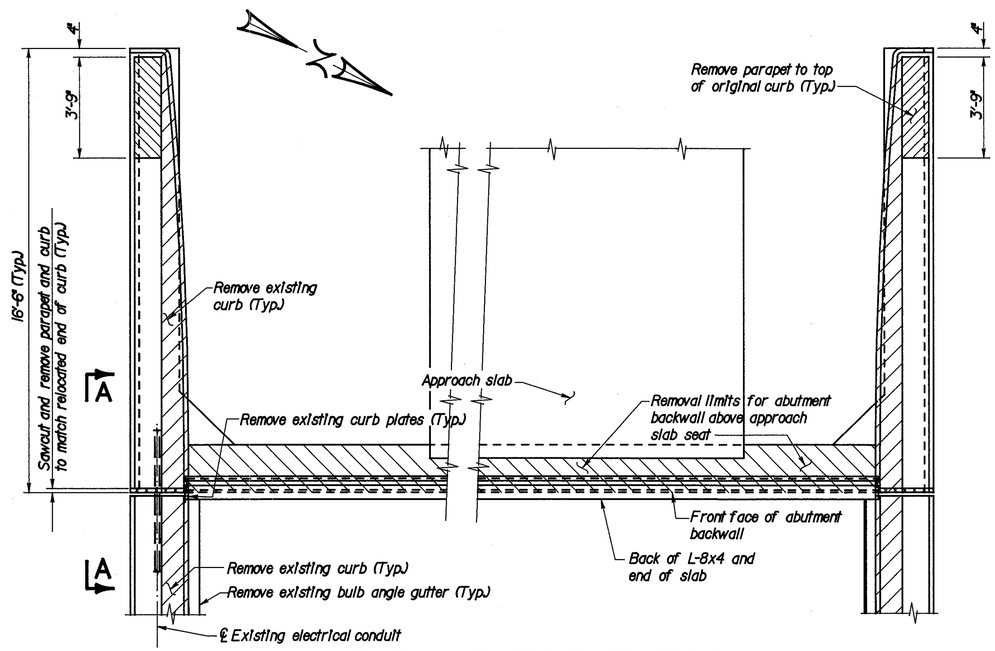
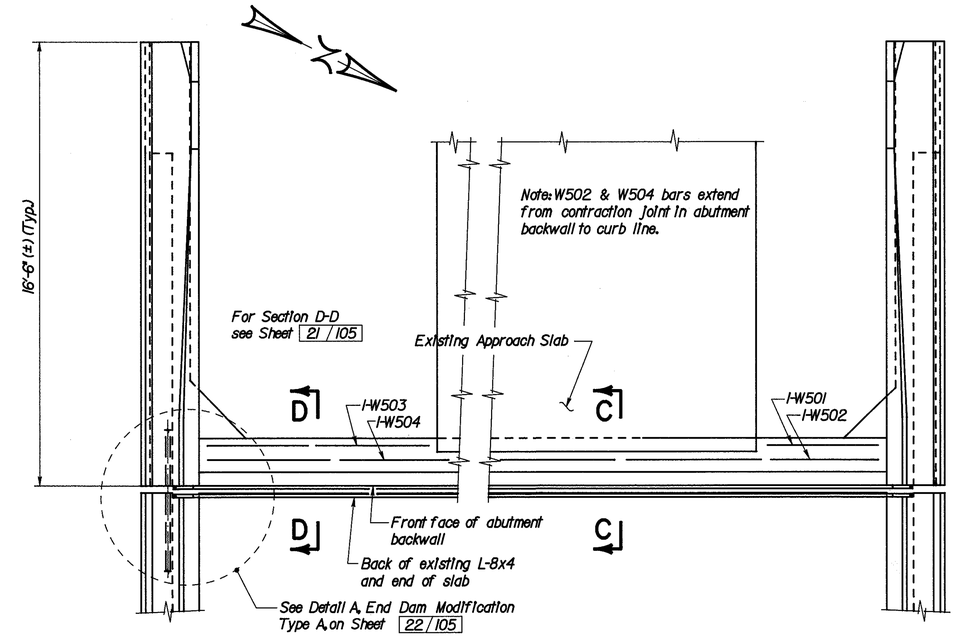
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

253
338

HAMILTON COUNTY
HAM-75-9.75



PLAN - EXISTING ABUTMENT



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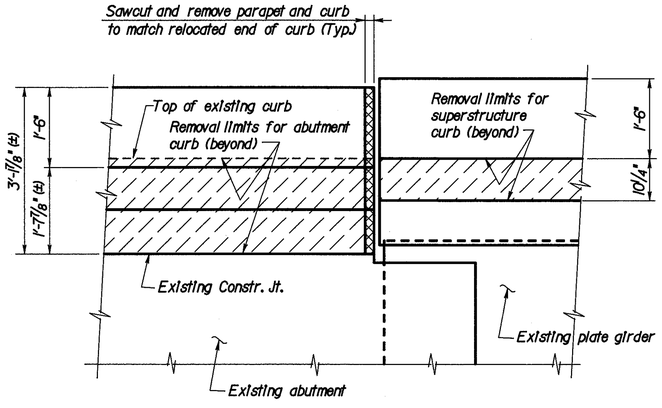
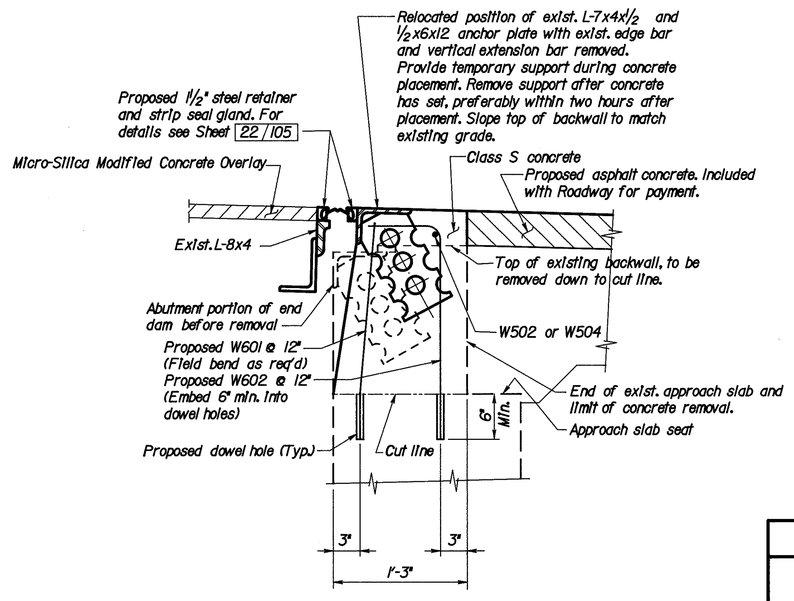


VIEW A-A



SECTION C-C

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20 / 105

ABUTMENT 1 MODIFICATIONS
PLANS AND DETAILS
BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH ROAD

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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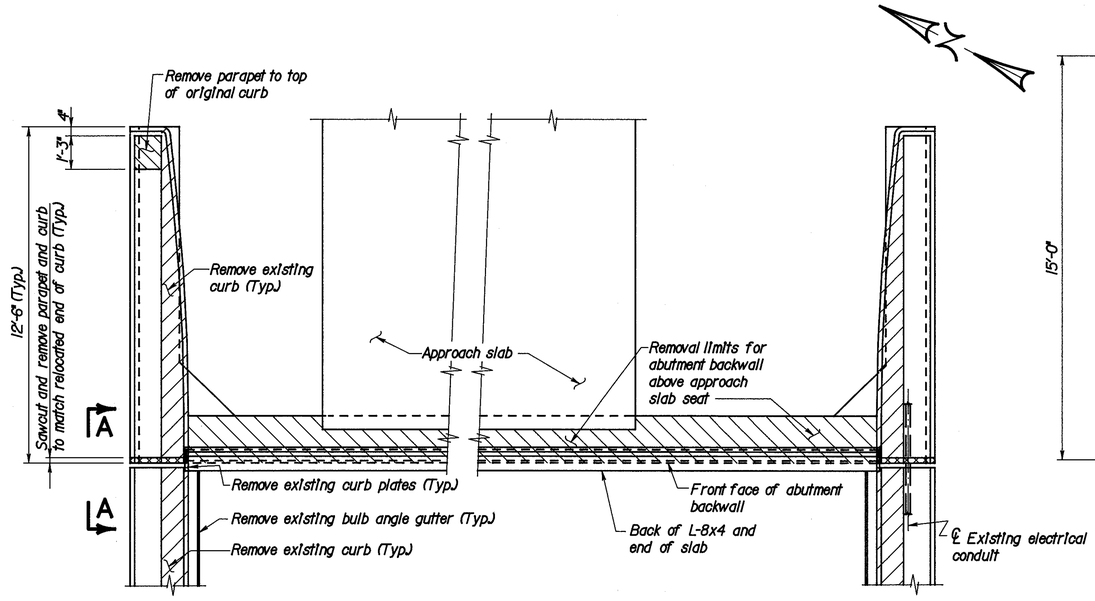
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

254
338

HAMILTON COUNTY
HAM-75-9.75



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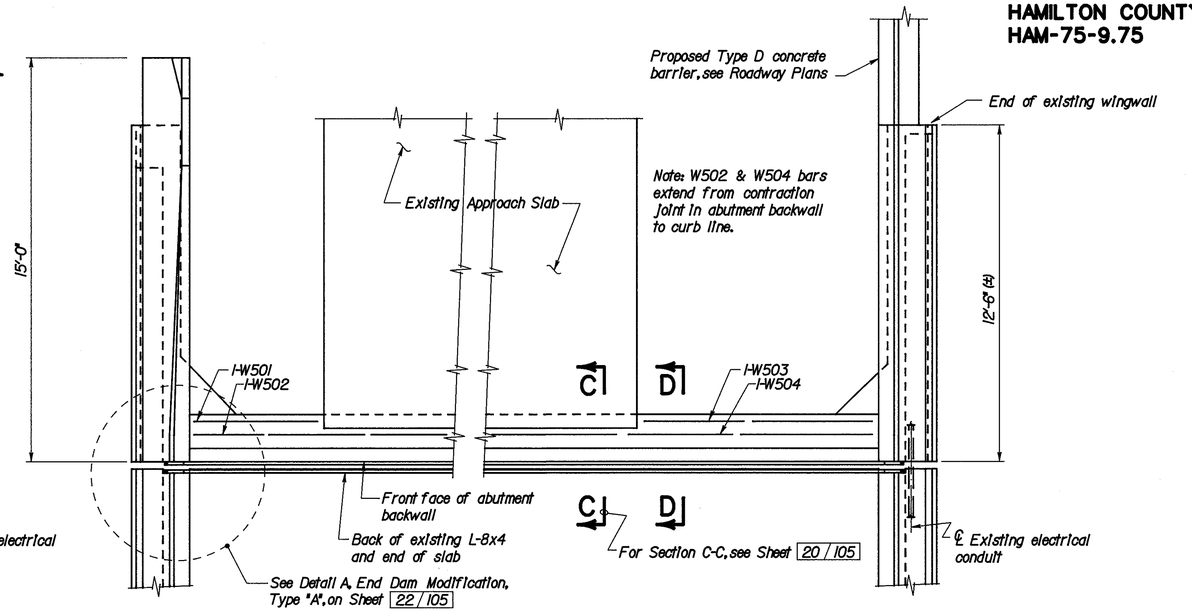

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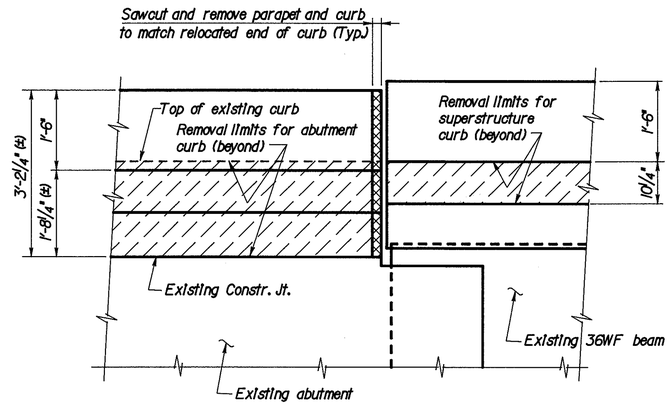
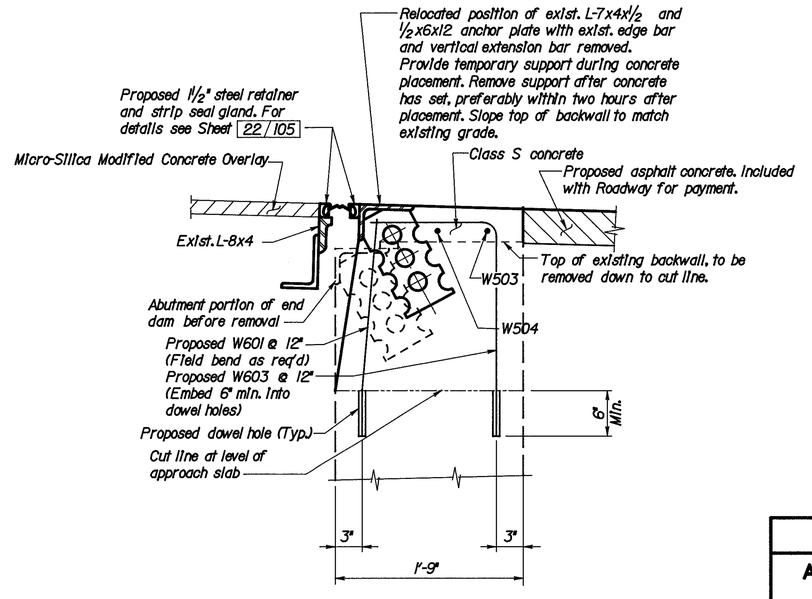


VIEW A-A



SECTION D-D

LOCKWOOD, JONES & BEALS
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ABUTMENT 2 MODIFICATIONS PLANS AND DETAILS

BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH ROAD

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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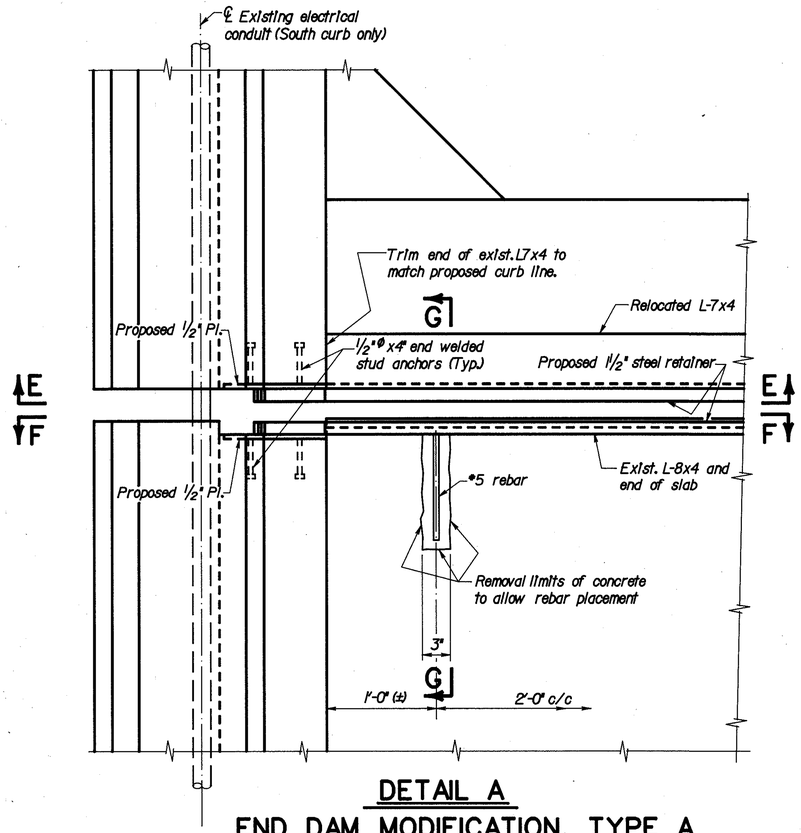
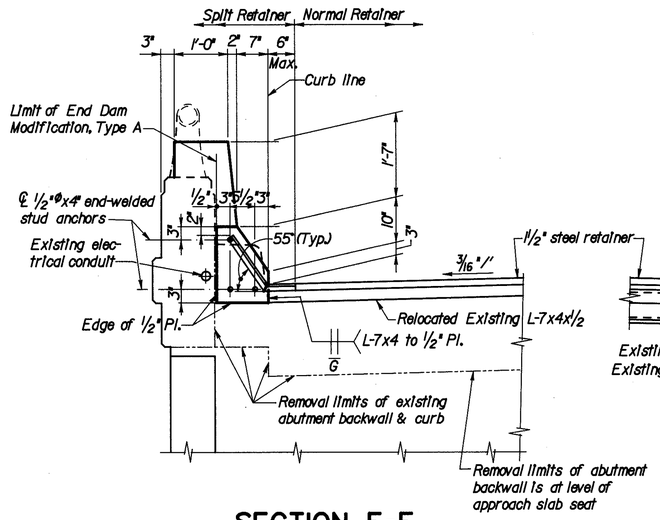
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

255
338

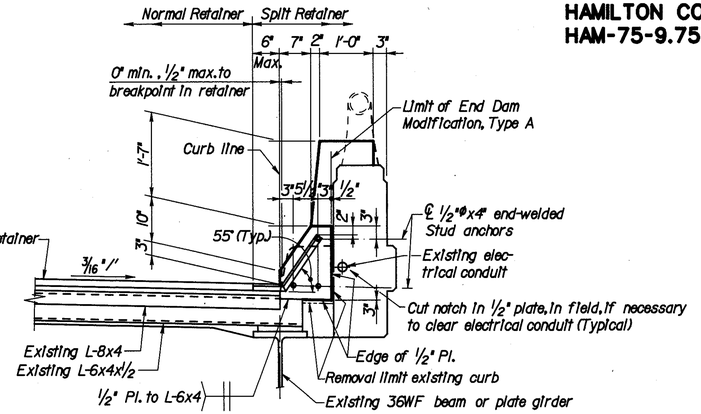
HAMILTON COUNTY
HAM-75-9.75



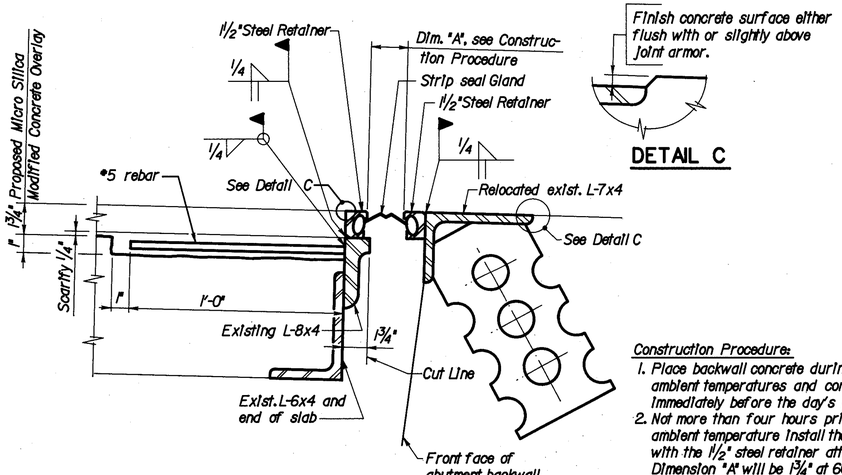
DETAIL A
END DAM MODIFICATION, TYPE A



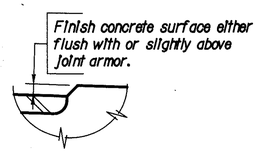
SECTION E-E



SECTION F-F



SECTION G-G



DETAIL C

Construction Procedure:

1. Place backwall concrete during stable or rising ambient temperatures and conclude placement immediately before the day's peak ambient temperature.
2. Not more than four hours prior to the day's peak ambient temperature install the backwall L-7x4x1/2 with the 1 1/2" steel retainer attached such that Dimension "A" will be 1 3/4" at 60°F. For each 10°F above 60°F the 1 3/4" dimension shall be decreased by 1/16" and for each 10°F below 60°F the 1 3/4" dimension shall be increased by 1/16".

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END DAM MODIFICATION DETAILS

BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH ROAD

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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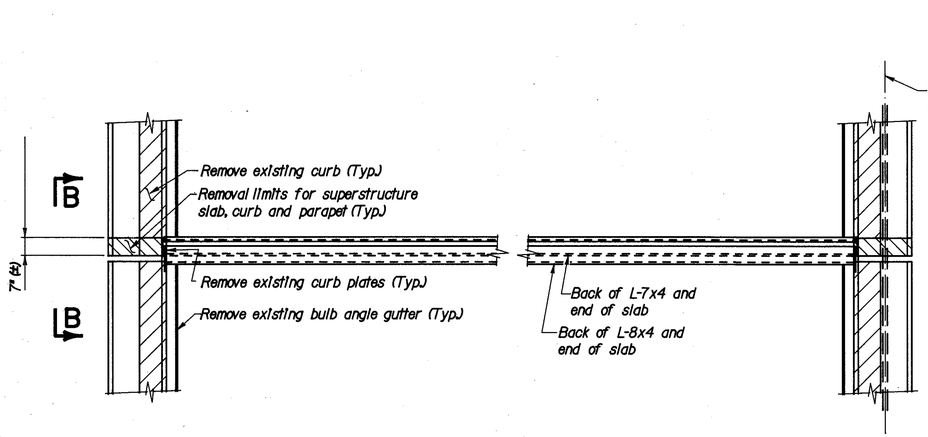
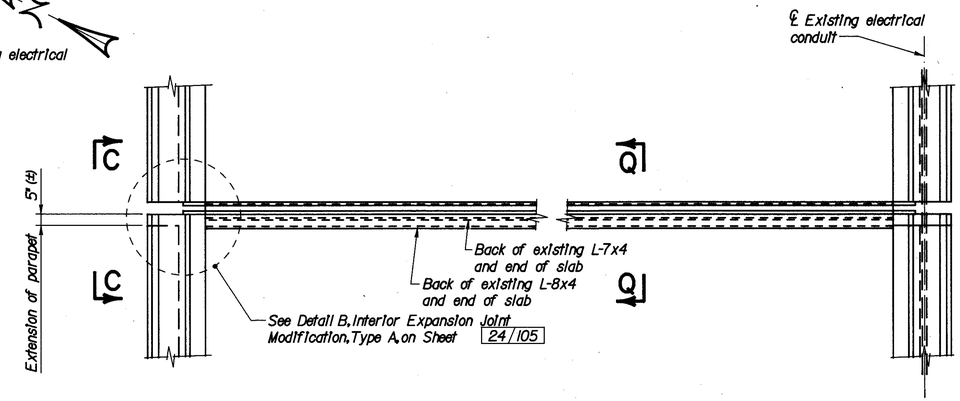
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

256
338

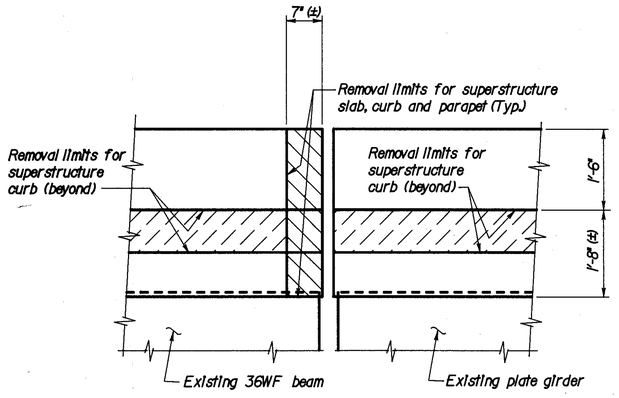
HAMILTON COUNTY
HAM-75-9.75



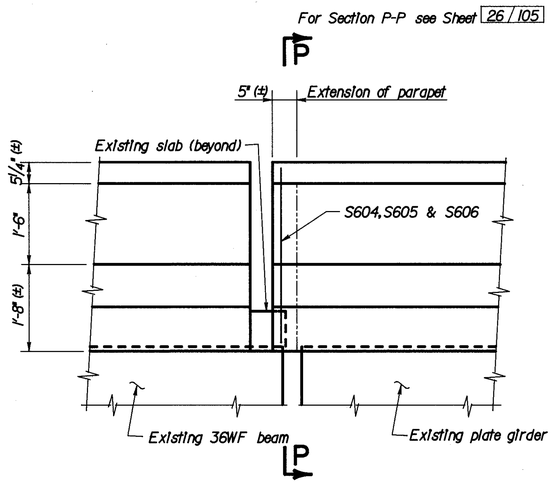
PLAN - EXISTING INTERIOR EXPANSION JOINT



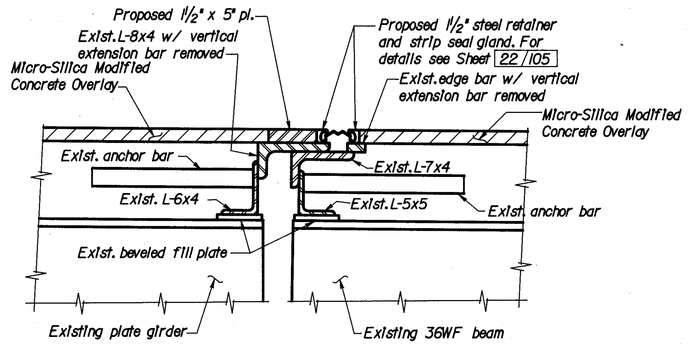
PLAN - MODIFIED INTERIOR EXPANSION JOINT



VIEW B-B



VIEW C-C



SECTION Q-Q

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23/105

INTERIOR EXPANSION JOINT MODIFICATION PLANS AND DETAILS

BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH ROAD

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	MPH	GJW	MPH	HDJ 12/92	

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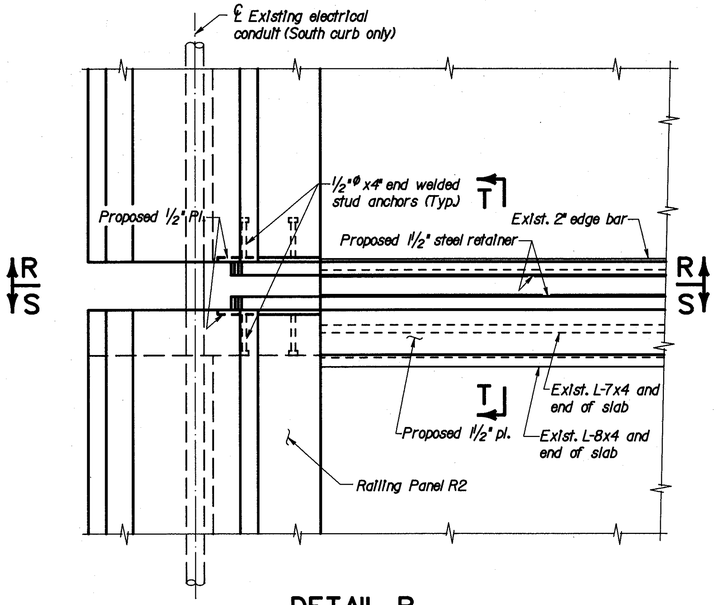
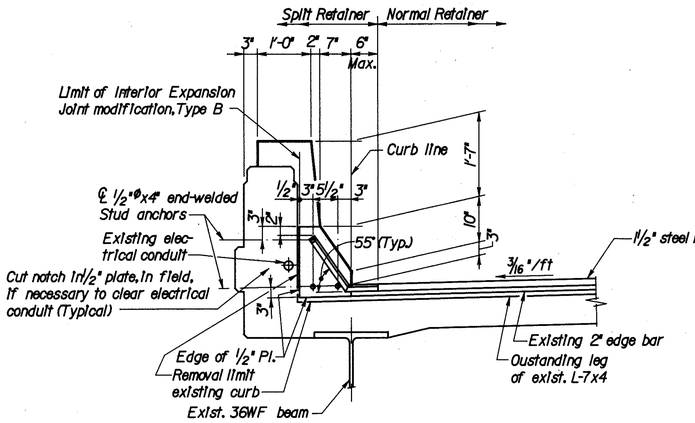
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

257
338

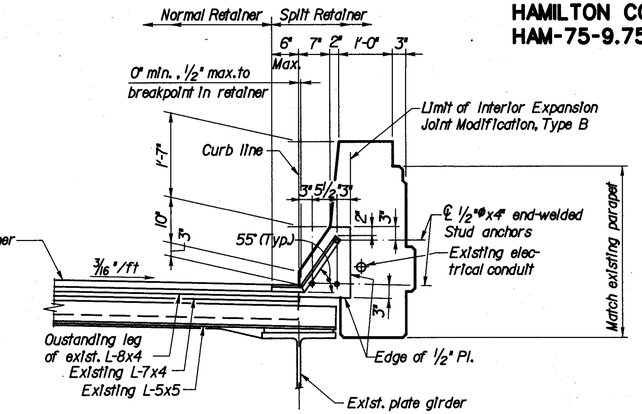
HAMILTON COUNTY
HAM-75-9.75



DETAIL B
INTERIOR EXPANSION JOINT MODIFICATION, TYPE A



SECTION R-R



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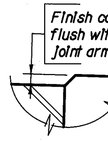
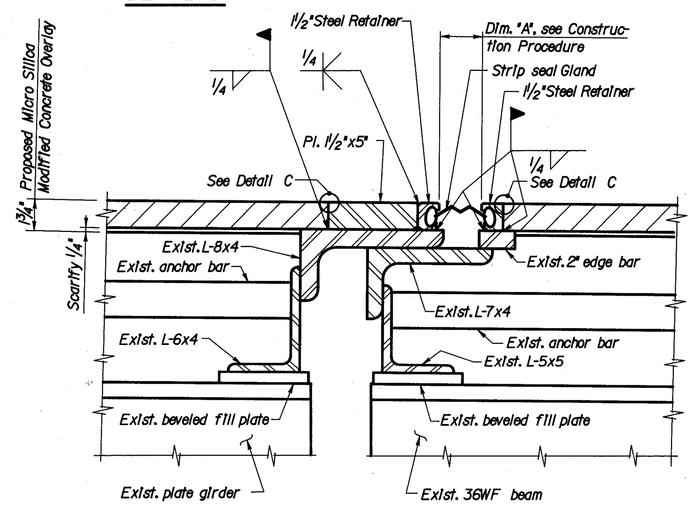


DETAIL C



SECTION T-T

CONSTRUCTION PROCEDURE:

1. Pour Railing Panel R2 during stable or rising ambient temperatures and conclude placement immediately before the day's peak ambient temperature.
2. Not more than four hours prior to the peak ambient temperature install the 1 1/2"x5" plate with the 1 1/2" steel retainer attached such that dimension "A" will be 2 1/2" at 60°F. for each 10°F. above 60°F. the 2 1/2" dimension shall be decreased by 1/4" and for each 10°F. below 60°F. the 2 1/2" dimension shall be increased by 1/4".

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INTERIOR EXPANSION JOINT MODIFICATION DETAILS
BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH ROAD

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
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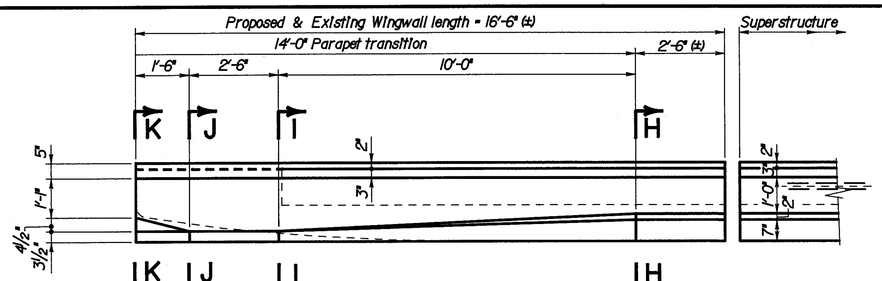
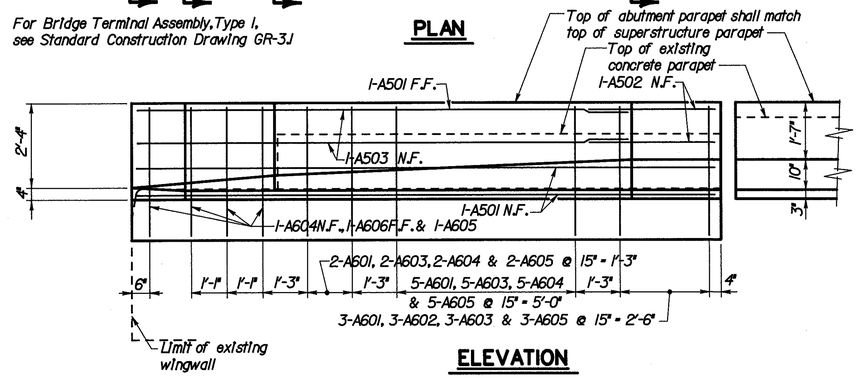


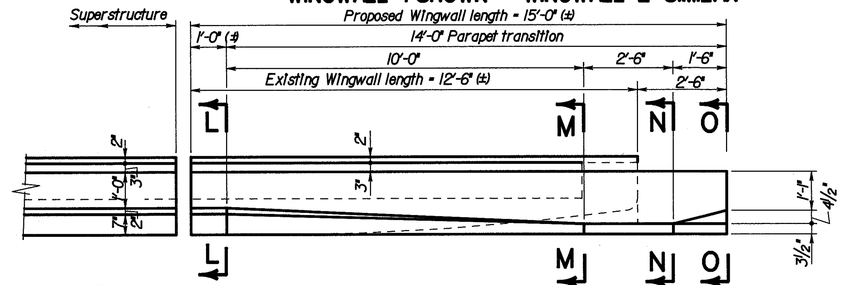
For Bridge Terminal Assembly, Type 1, see Standard Construction Drawing GR-3J

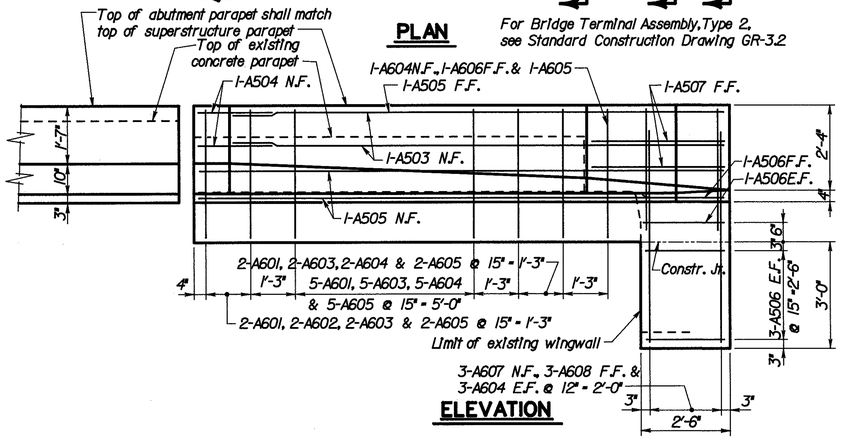


ELEVATION

RAILING DETAILS AT ABUTMENT 1

WINGWALL 1 SHOWN - WINGWALL 2 SIMILAR

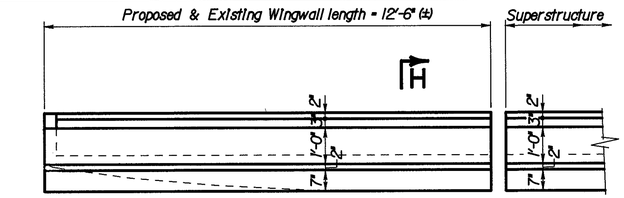




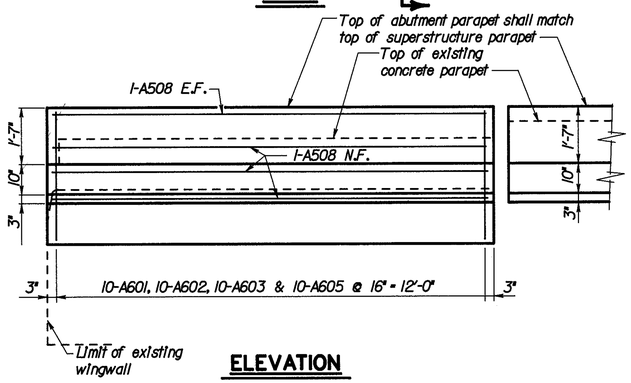
ELEVATION

RAILING DETAILS AT ABUTMENT 2

WINGWALL 3



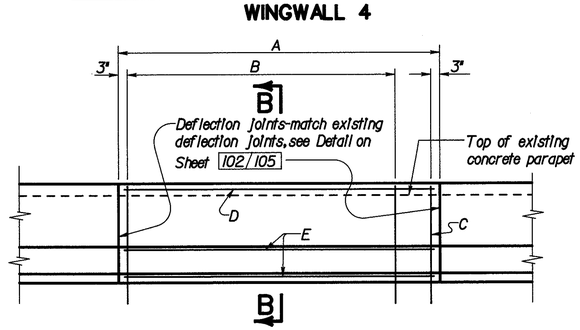
PLAN



ELEVATION

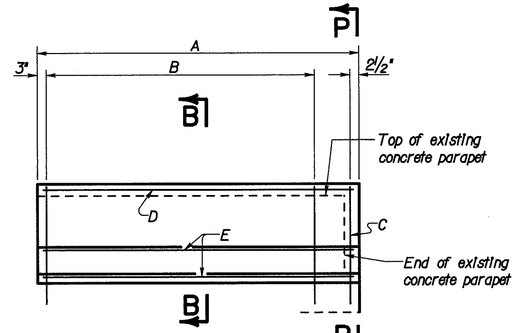
RAILING DETAILS AT ABUTMENT 2

WINGWALL 4



ELEVATION

RAILING PANELS R1, R3, R4 & R5



ELEVATION

RAILING PANEL R2

SUPERSTRUCTURE RAILING DETAILS

SUPERSTRUCTURE RAILING PANELS

PANEL MARK	NO. Req'd	A	B	C	D	E
R1	38	17'-2"	14 Each - S601, S602 & S603 @ 14½" = 15'-8½"	1 Each - S601, S602 & S603	2-S501	1-S501
R2	2	15'-9½"	12 Each - S601, S602 & S603 @ 15½" = 14'-2½"	1 Each - S604, S605 & S606	2-S502	1-S502
R3	2	15'-7"	13 Each - S601, S602 & S603 @ 14½" = 14'-6"	1 Each - S601, S602 & S603	2-S503	1-S503
R4	16	16'-2"	13 Each - S601, S602 & S603 @ 15" = 15'-0"	1 Each - S601, S602 & S603	2-S504	1-S504
R5	2	16'-7"	13 Each - S601, S602 & S603 @ 15" = 15'-0"	1 Each - S601, S602 & S603	2-S505	1-S505

NOTES

1. For Sections H-H thru P-P, see sheet 26 / 105
2. For Reinforcing Steel List, see sheet 103 / 105

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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ABUTMENT & SUPERSTRUCTURE RAILING DETAILS

BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILLCREEK & GALBRAITH RD.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	MPH	GJW	MPH	HDJ 12/92	

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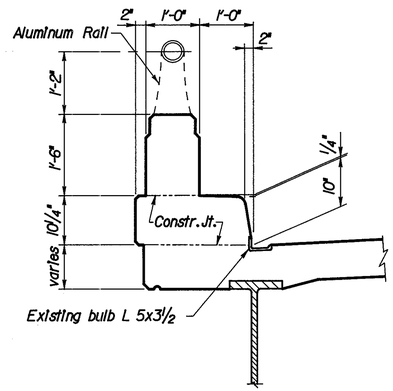
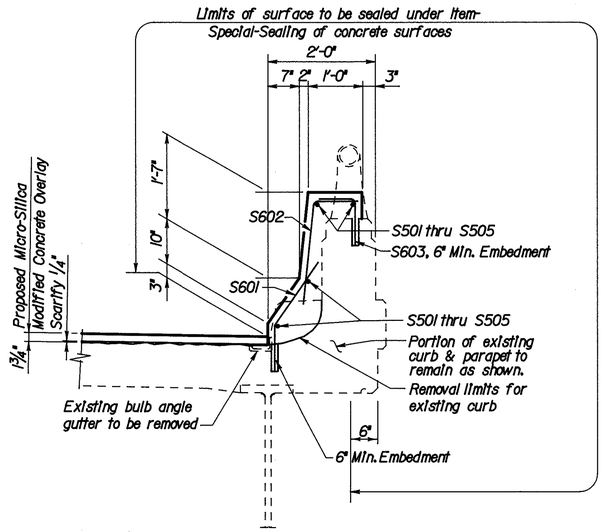
F.H.W.A. REGION	STATE	PROJECT		259 / 338
5	OHIO			

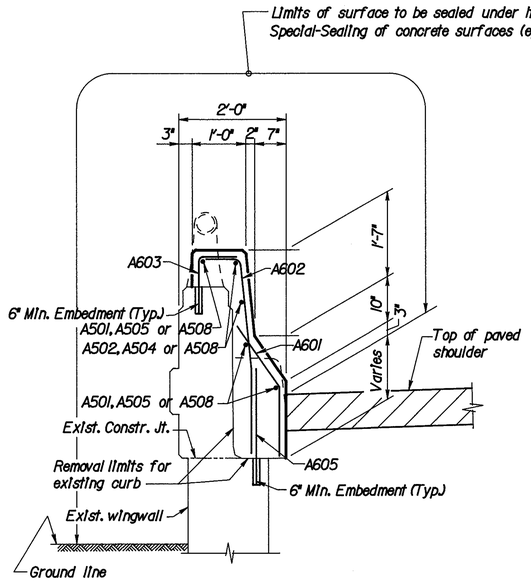
HAMILTON COUNTY
HAM-75-9.75



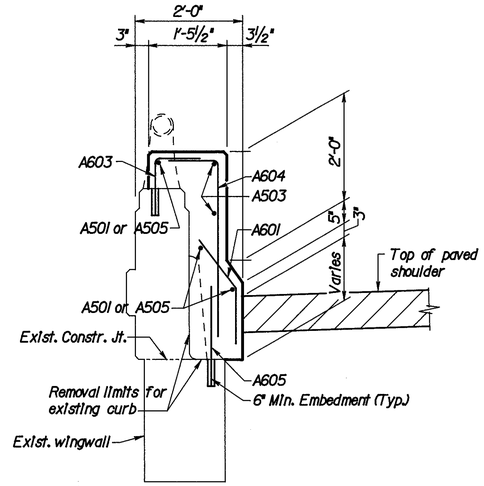
SECTION A-A
EXISTING CURB & RAILING



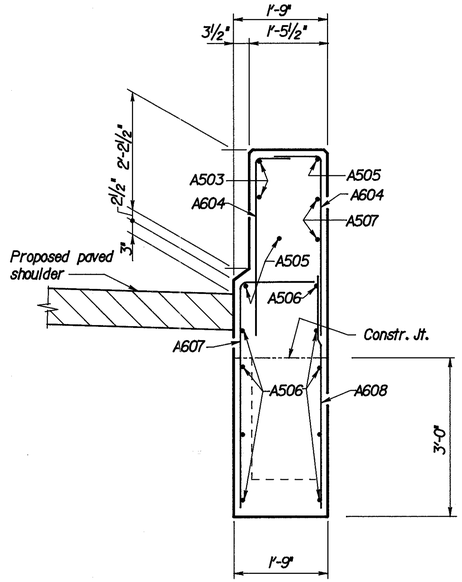
SECTION B-B
PROPOSED RAILING



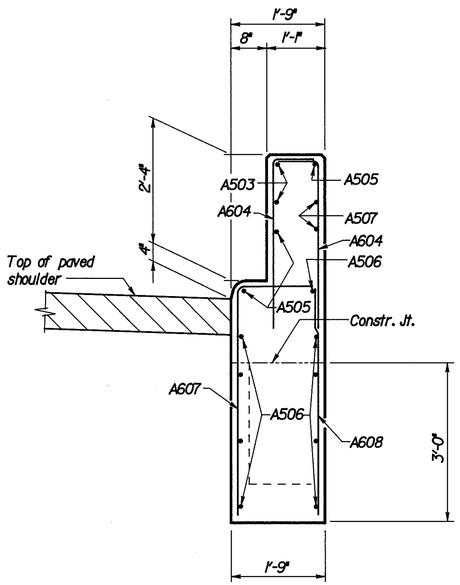
SECTION H-H
SECTION L-L Opp. Hand



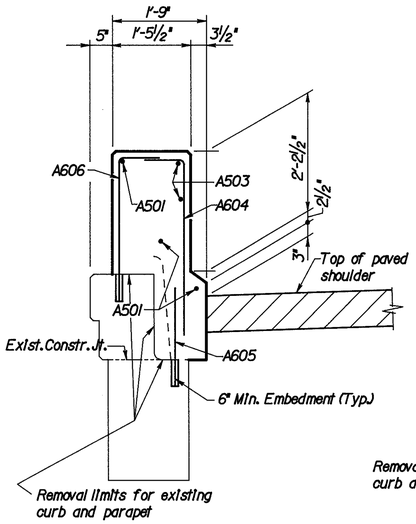
SECTION I-I
SECTION M-M Opp. Hand



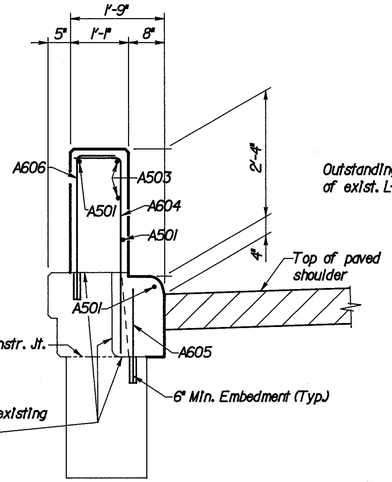
SECTION N-N



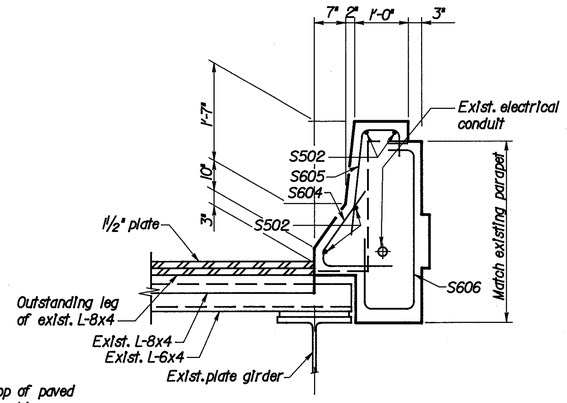
SECTION O-O



SECTION J-J



SECTION K-K



SECTION P-P

LEGEND
E.F. - Each Face
N.F. - Near Face
F.F. - Far Face

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ABUTMENT & SUPERSTRUCTURE RAILING SECTIONS
BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH ROAD

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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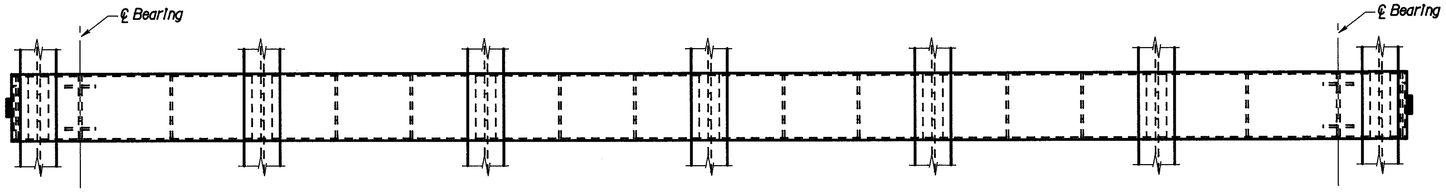
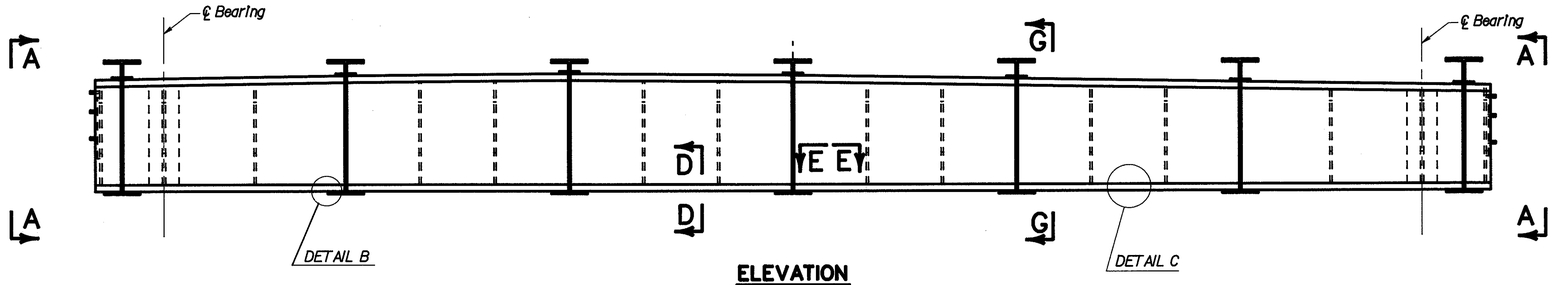
HAMILTON COUNTY
HAM-75-9.75

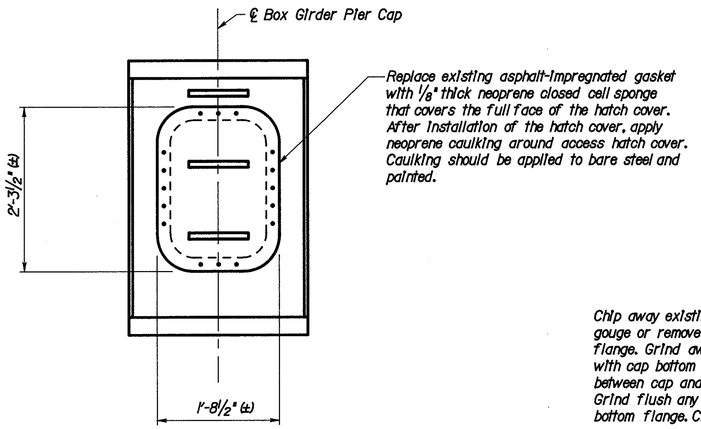


PLAN



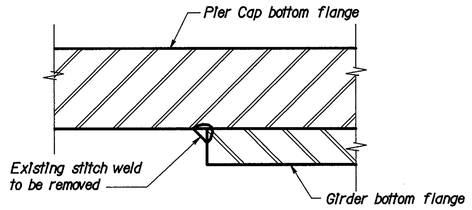
ELEVATION

PIER CAP

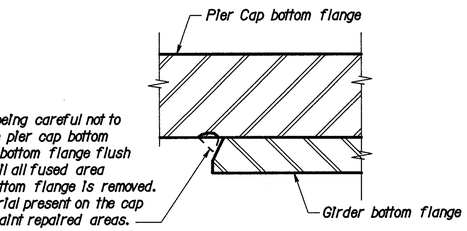


Replace existing asphalt-impregnated gasket with ⅛" thick neoprene closed cell sponge that covers the full face of the hatch cover. After installation of the hatch cover, apply neoprene caulking around access hatch cover. Caulking should be applied to bare steel and painted.

SECTION A-A



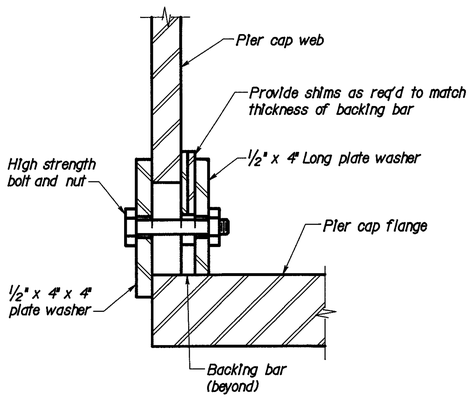
EXISTING DETAIL



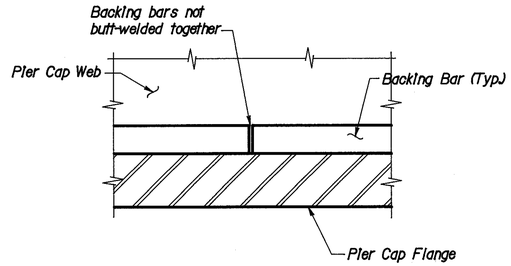
Chip away existing welds being careful not to gouge or remove any of the pier cap bottom flange. Grind away girder bottom flange flush with cap bottom flange until all fused area between cap and girder bottom flange is removed. Grind flush any weld material present on the cap bottom flange. Clean and paint repaired areas.

RETROFIT DETAIL

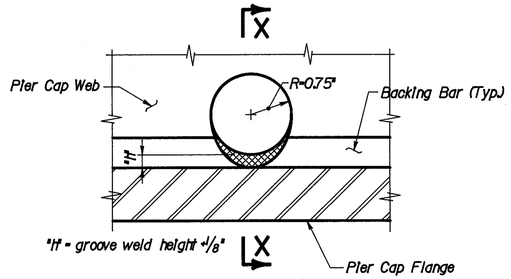
DETAIL B



SECTION X-X



EXISTING DETAIL



PROCEDURE
1. Drill 1½"ø hole through web and backing bar.
2. Remove crosshatched area by grinding. Final surfaces shall be smooth.
3. Preform magnetic particle and/or dye penetrant tests of the remaining metal in the presence of the Engineer.

RETROFIT DETAIL

DETAIL C

NOTES

1. Remove all debris, bird droppings, and nesting material from top of pier caps and bottom flange of girders.
2. Grind scratches from collision damage on bottom flange of girders in vicinity of pier caps.
3. Remove soil and debris from inside of cap at pier No. 4. Open hatches to allow moisture to evaporate.
4. For Sections D-D, E-E and G-G, see sheet 28/105

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

27/105

STEEL PIER CAP REPAIR DETAILS AT PIERS 3 & 4

BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH RD.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
B&N	B&N	MJZ	DFS	HDJ 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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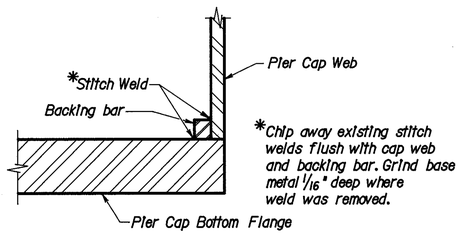
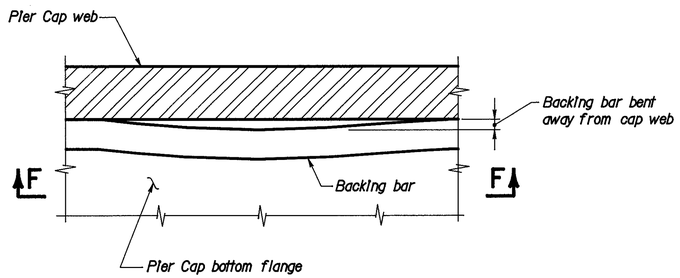
338

HAMILTON COUNTY
HAM-75-9.75

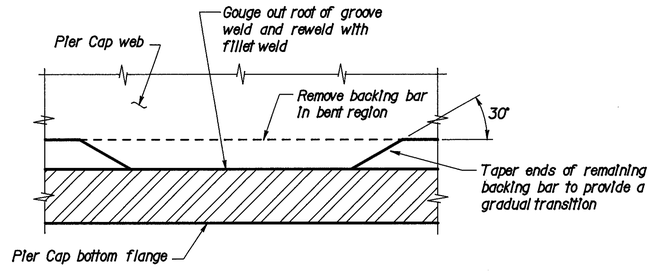


SECTION D-D



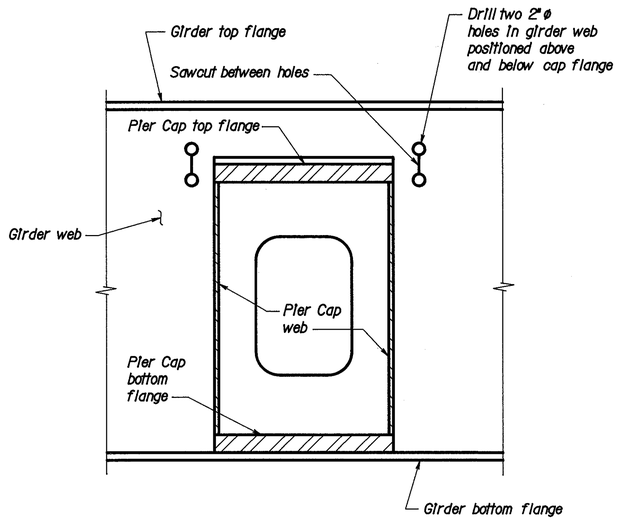
EXISTING DETAIL

SECTION E-E



RETROFIT DETAIL

SECTION F-F



SECTION G-G

TYPICAL AT ALL GIRDER TO PIER CAP CONNECTIONS

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

28/105

STEEL PIER CAP REPAIR DETAILS AT PIERS 3 & 4

BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH RD.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
B&N	B&N	MJZ	DFS	HDJ 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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HAMILTON COUNTY
HAM-75-9.75

HINGE A

PHASE I

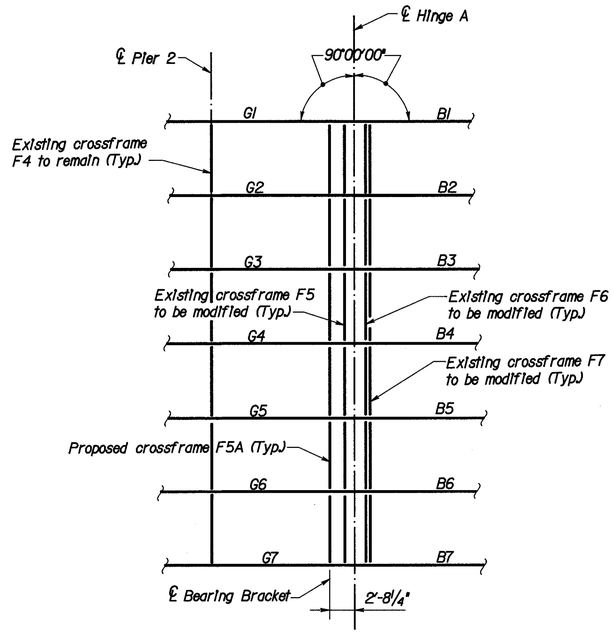
(a) Modify the existing crossframes F5 and F6 at girders G4 thru G7.
(b) Remove the exterior diagonals of existing crossframes F7 at girders G4 thru G7.
(c) Install bearing and jacking brackets at girders G4 thru G7.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G4 thru G7.
(e) Complete the modification of existing crossframes F7 at girders G4 thru G7.
(f) Install the proposed crossframes F5A between girders G4 and G7.
(g) Install jacks at girder G5.
(h) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G5.
(i) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 22k, whichever occurs first.
(j) Remove existing pins and hinge plates at girder G5.
(k) Lower the jacks and install the intermediate 6x$\frac{3}{8}$ stiffeners.
(l) Repeat steps g thru k for girders G6 and G7.

PHASE II

(a) Install jacks at girder G4.
(b) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at girder G4.
(c) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 22k, whichever occurs first.
(d) Remove existing pins and hinge plates at girder G4.
(e) Lower the jacks and install the intermediate 6x$\frac{3}{8}$ stiffeners.

PHASE III

(a) Modify the existing crossframes F5 and F6 at girders G1 thru G3.
(b) Remove the exterior diagonals of existing crossframes F7 at girders G1 thru G3.
(c) Install bearing and jacking brackets at girders G1 thru G3.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G1 thru G3.
(e) Complete the modification of existing crossframes F7 at girders G1 thru G3.
(f) Install the proposed crossframes F5A between girders G1 and G4.
(g) Install jacks at girder G1.
(h) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G1.
(i) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 22k, whichever occurs first.
(j) Remove existing pins and hinge plates at girder G1.
(k) Lower the jacks and install the intermediate 6x$\frac{3}{8}$ stiffeners.
(l) Repeat steps g thru k for girders G2 and G3.
(m) Clean and paint all bare steel surfaces (including pin holes) on Girders G1 thur G7.



KEY PLAN AT HINGE A

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

29/105

PIN & LINK ASSEMBLY RETROFIT
CONSTRUCTION PHASES AND KEY PLAN FOR HINGE A
BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH RD.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	DYA	DFS	HDJ 12/92	

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F.H.W.A. REGION	STATE	PROJECT		283 / 338
5	OHIO			

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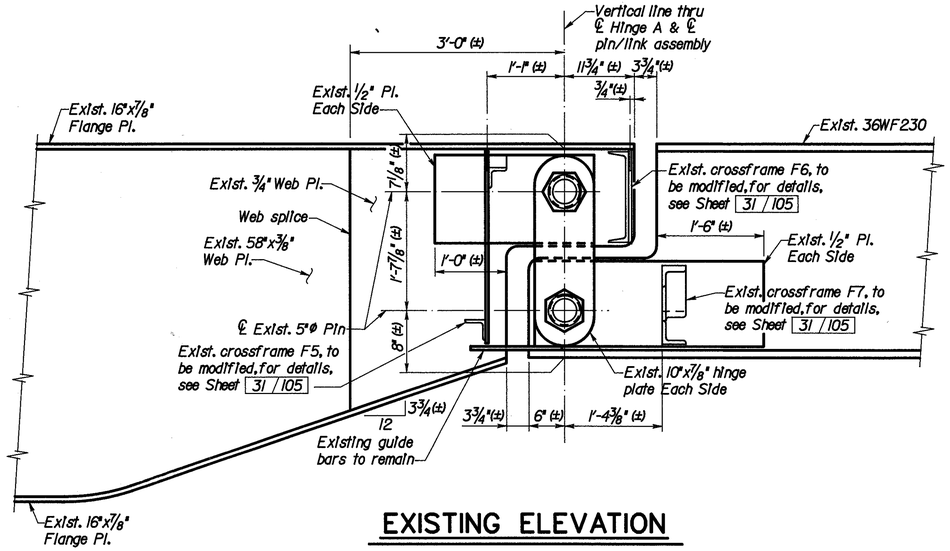
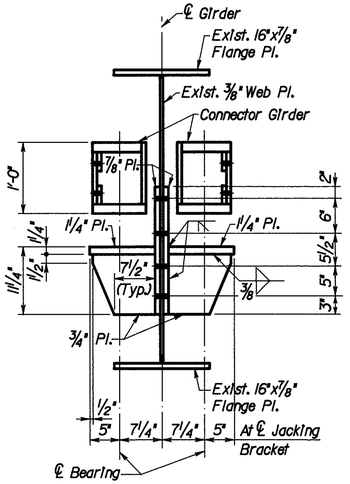
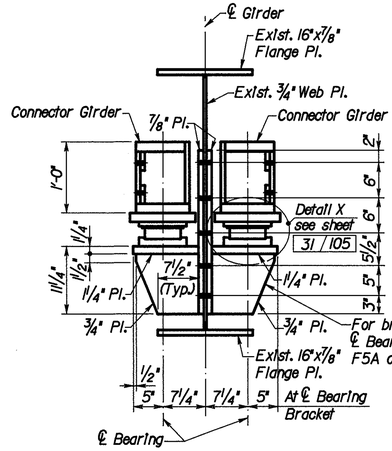
HAM-75-9.75



EXISTING ELEVATION

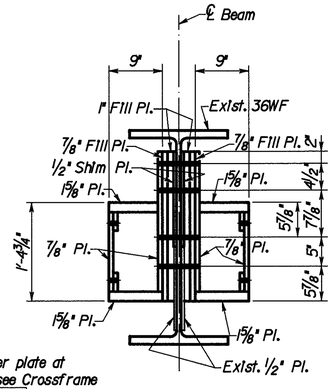


SECTION A-A

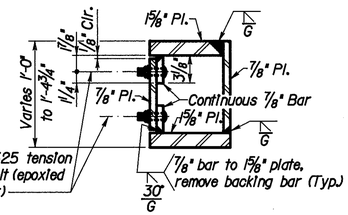


SECTION B-B

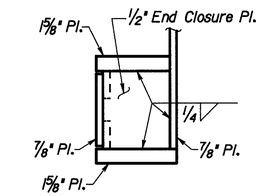
Note: Bracket welds same as shown for Section A-A



SECTION C-C



TYPICAL SECTION



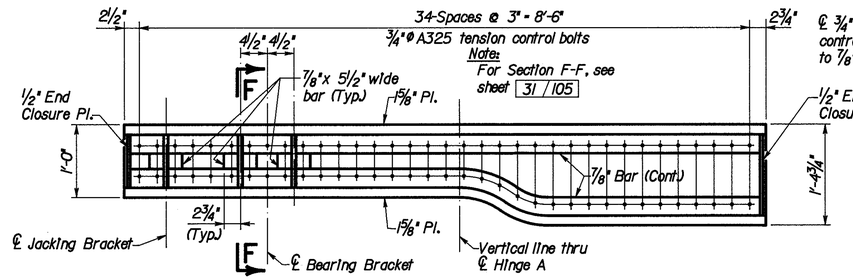
AT END CLOSURE PLATE

CONNECTOR GIRDER DETAILS

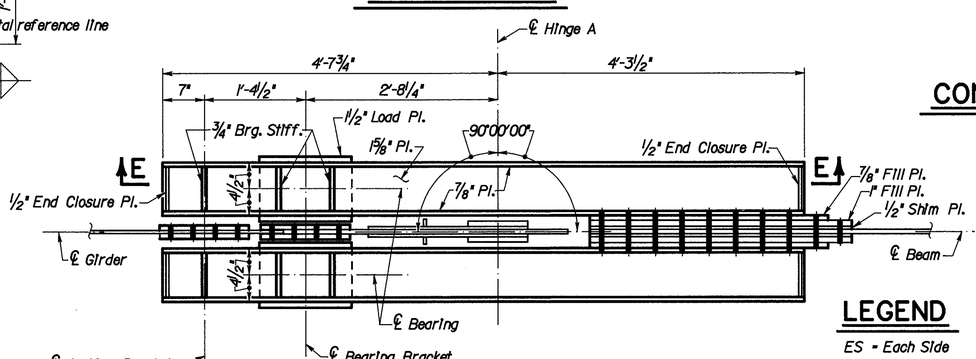
Note: All welds to be 100% ultrasonic tested.

ELEVATION

See Section E-E for web plate field bolt spacings.



SECTION E-E



SECTION D-D

LEGEND

ES - Each Side

LOCKWOOD, JONES & BEALS
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DAYTON, OHIO

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PIN & LINK ASSEMBLY RETROFIT
HINGE A
BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH RD.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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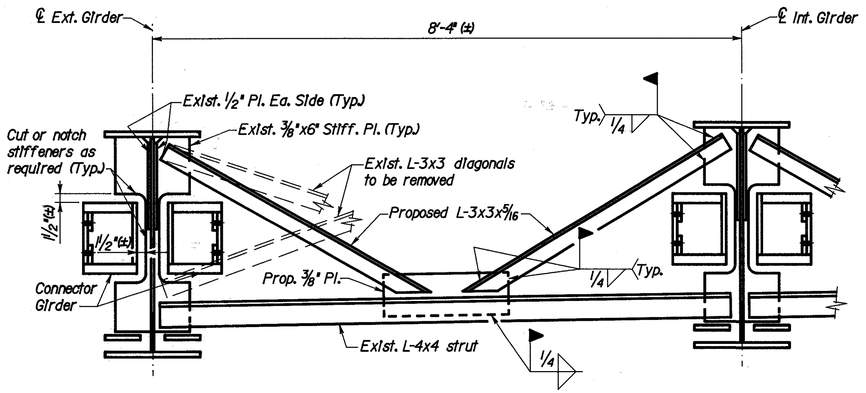
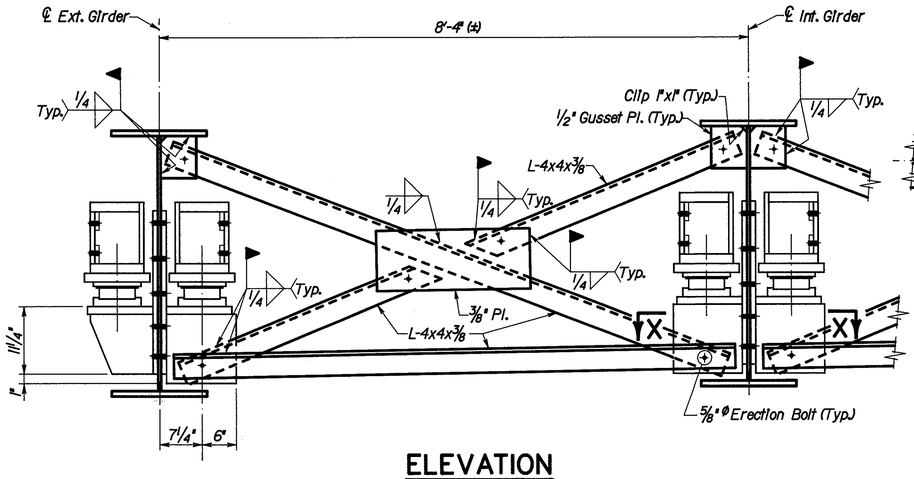


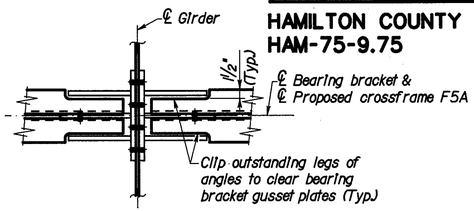
ELEVATION

CROSSFRAME F5 MODIFICATIONS



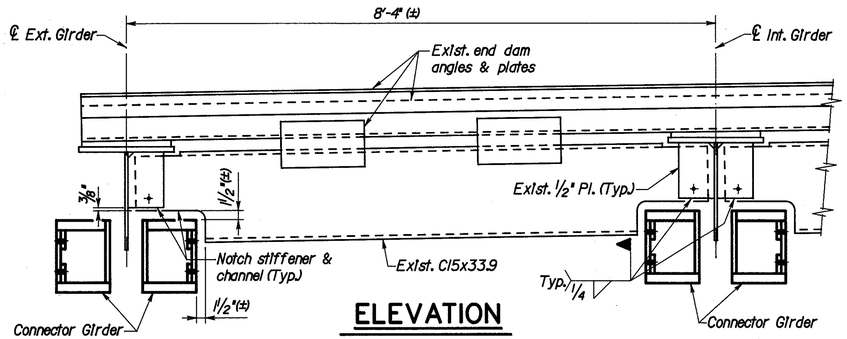
ELEVATION

PROPOSED CROSSFRAME F5A



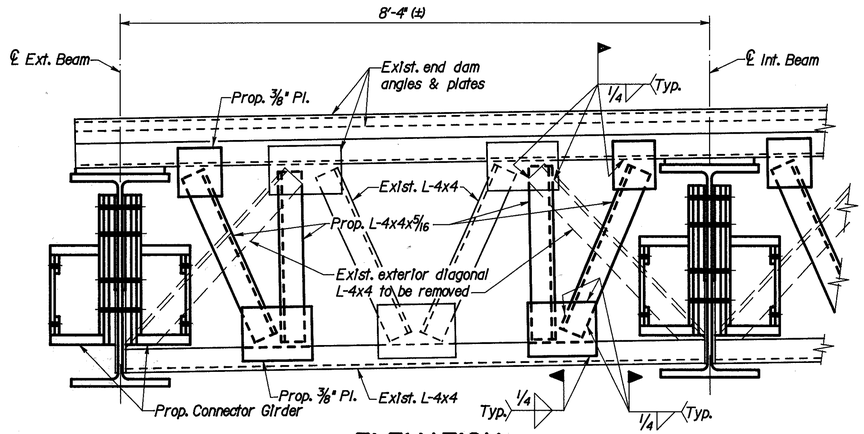
SECTION X-X

ERECTION BOLTS: Hole diameter in the crossframes and girder stiffeners shall be respectively 1/16" and 1/4" larger than the diameter of the erection bolts. Unless replaced by permanent high strength bolts, erection bolts shall remain in place. Lock washers shall be furnished for other than fully torqued high strength erection bolts. Bolts shall be furnished as part of 513.
In lieu of erection bolts and at the option of the Contractor, alternate means of temporary bracing may be used subject to the approval of the Director (501.06).



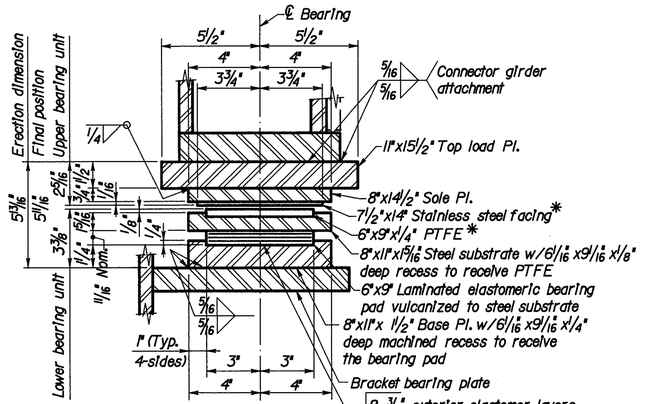
ELEVATION

CROSSFRAME F6 MODIFICATIONS



ELEVATION

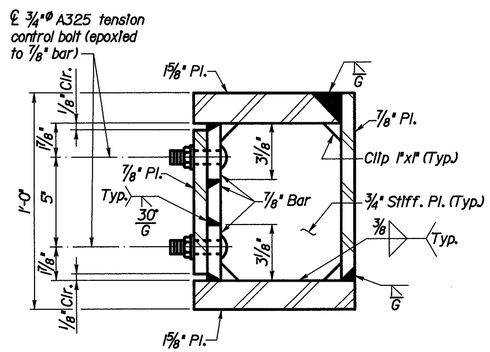
CROSSFRAME F7 MODIFICATIONS



DETAIL X

CONNECTOR GIRDER BEARING

Note:
* = Protect surfaces during shipment.
Dead Load Reaction = 220 k
Live Load Reaction = 291 k
Maximum Design Load = 511 k at each Brg. Pad



SECTION F-F

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

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PIN & LINK ASSEMBLY RETROFIT
HINGE A DETAILS
BRIDGE NO. HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH RD.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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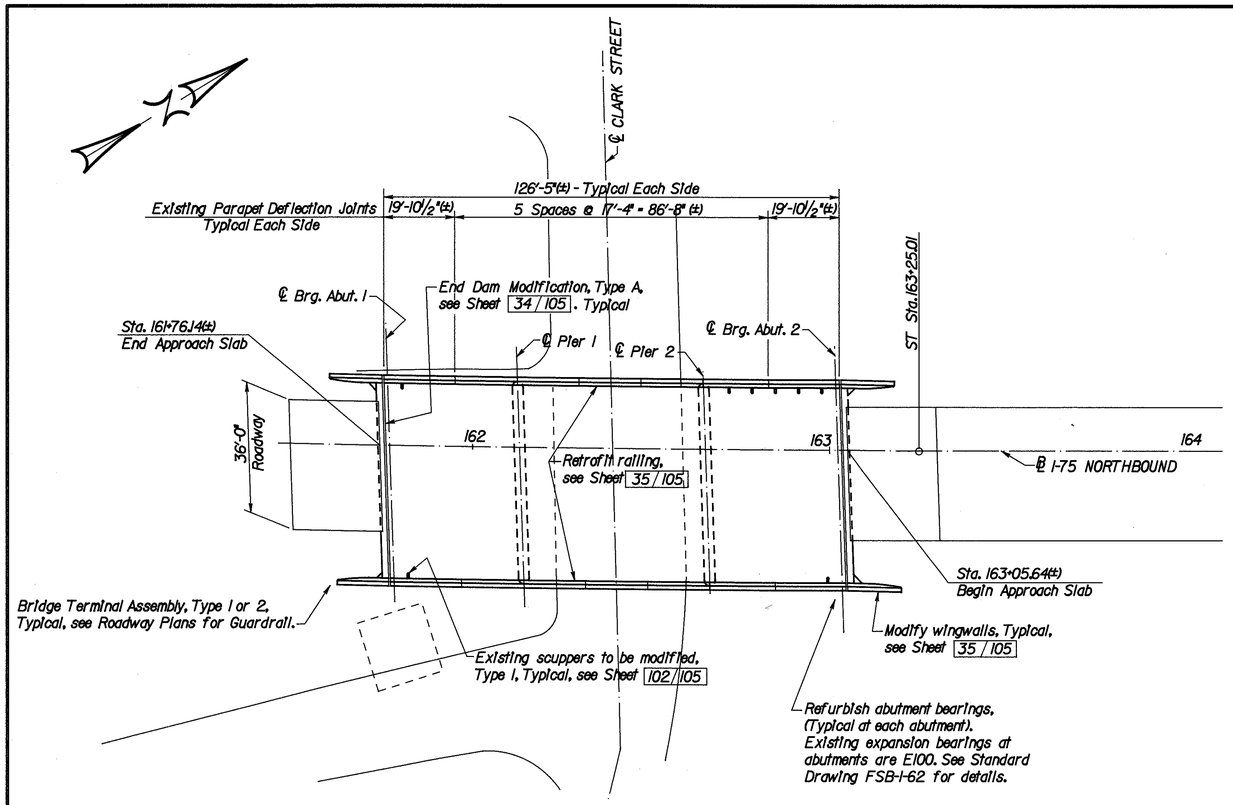
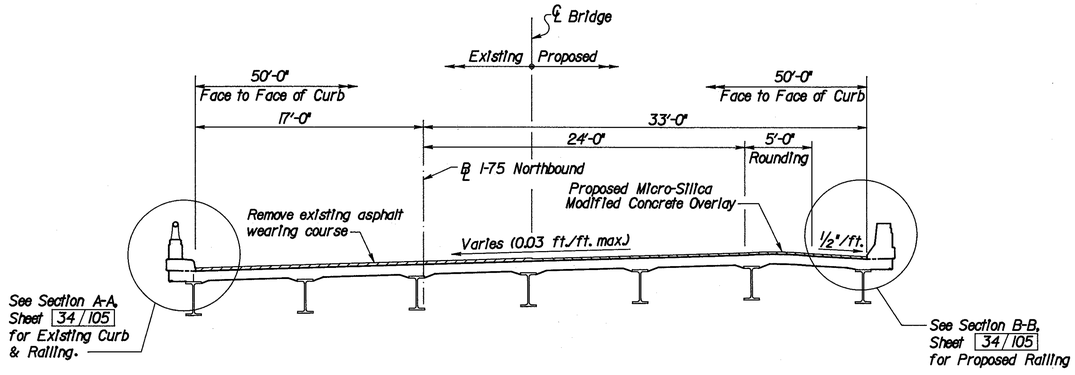


GENERAL PLAN



TYPICAL SECTION

NOTES:

1. For General Notes, see Sheet 1/105 thru 3/105
2. For Sections A-A and B-B, see Sheet 34/105
3. For Abutment Modification Plans and Details, see Sheet 33/105
4. For End Dam Modification, Type A, see Sheet 34/105
5. For Abutment & Superstructure Railing Details, see Sheet 35/105
6. For Scupper & Deflection Joint Details, see Sheet 102/105
7. For Reinforcing Steel List, see Sheet 103/105
8. For Estimated Quantities, see Sheet 4/105

F.H.W.A. REGION	STATE	PROJECT	
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HAMILTON COUNTY
HAM-75-9.75

PROPOSED WORK

1. Remove existing asphalt overlay and install new Micro-Silica Modified Concrete Overlay
2. Seal expansion joints at abutments with strip seals. Use End Dam Modification, Type A at both abutments.
3. Retrofit existing parapets with concrete barrier railing.
4. Modify existing scuppers.
5. Repair deteriorated end cross frame at north abutment.
6. Refurbish abutment bearings.

EXISTING STRUCTURE

TYPE: Continuous rolled steel beams with reinforced concrete deck and substructure.
SPANS: 36'-6", 52'-0", 36'-6
ROADWAY: 52'-0" f/f of parapets
LOAD FREQUENCY: CF = 2000 (57), adequate for AASHO alternate loading.
SKEW: 1°46'31" R.F.
WEARING SURFACE: 1" Monolithic concrete

APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Spiral: (Ls=450', Dc=2°30')
SUPERELEVATION: Varies

LOCKWOOD, JONES & BEALS
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DAYTON, OHIO
32/105

GENERAL PLAN & TYPICAL SECTION

BRIDGE NO. HAM-75-1152R
I-75 OVER CLARK STREET

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DJJ	HDJ	DJJ	HDJ	MPH 12/92	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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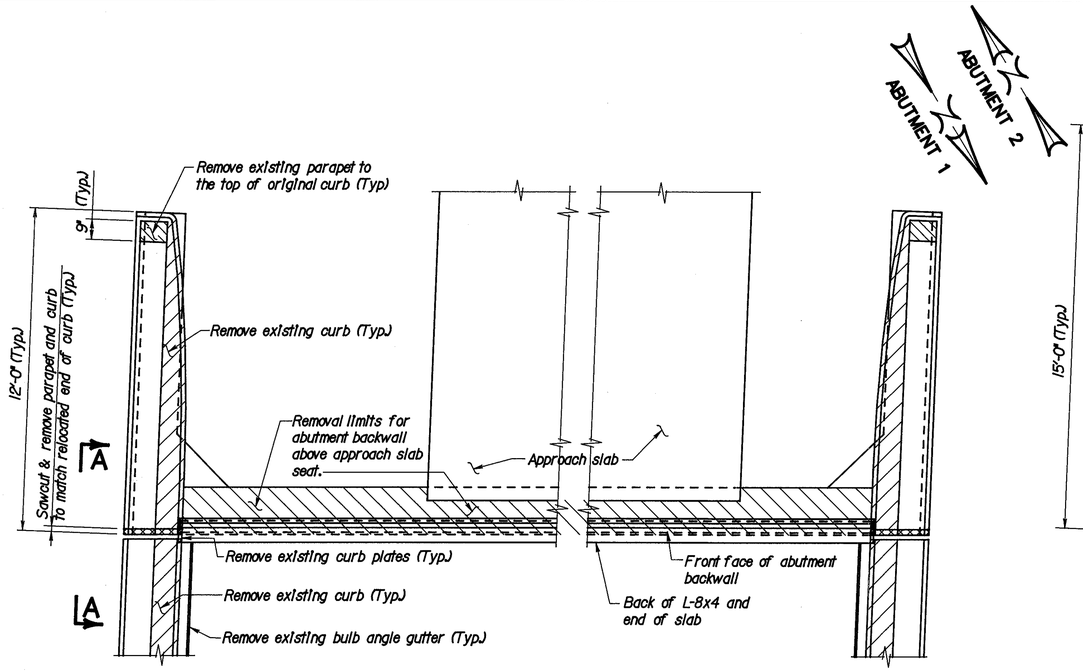
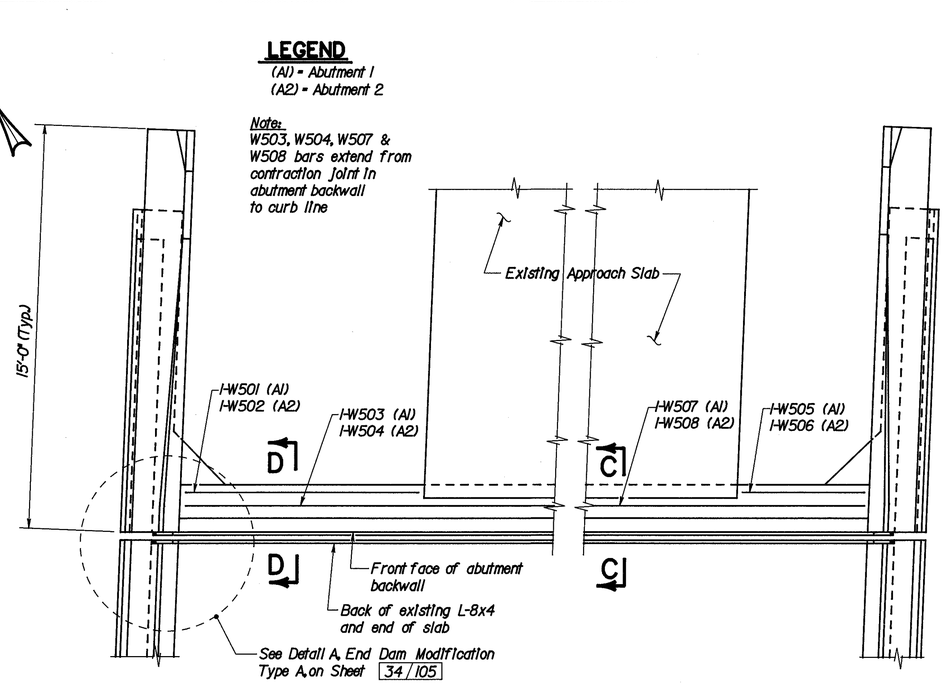
338

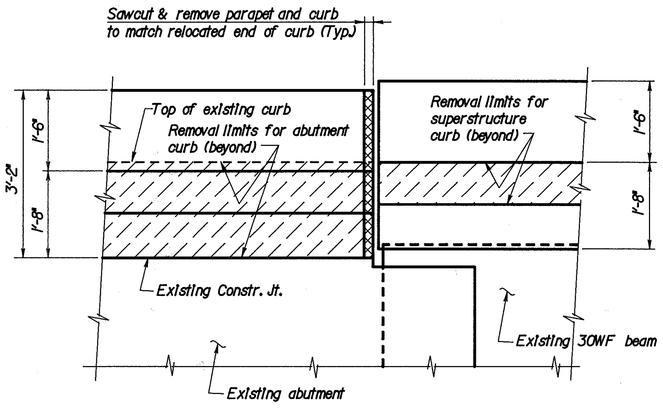
HAMILTON COUNTY
HAM-75-9.75



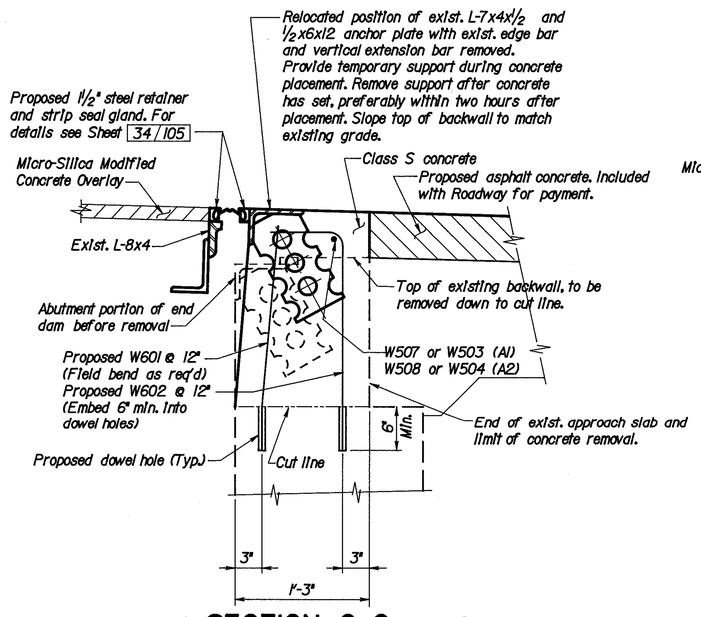
PLAN - EXISTING ABUTMENT



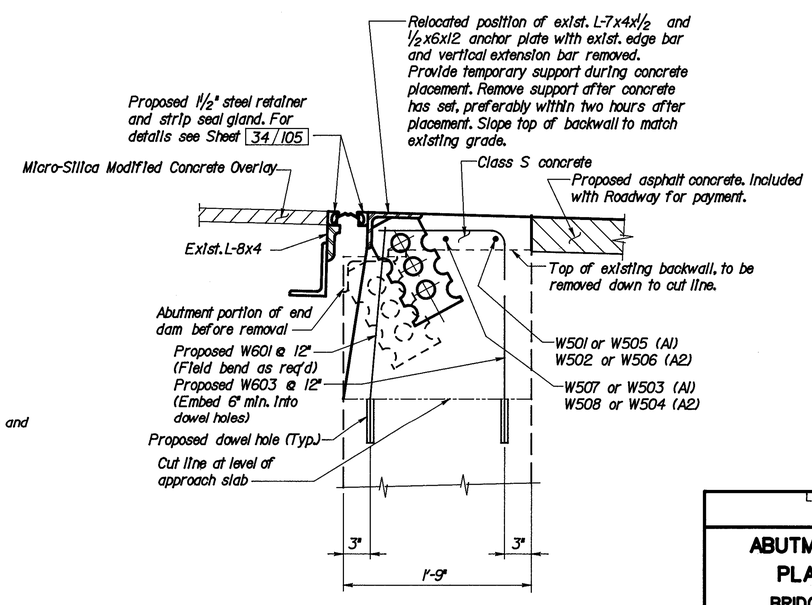
PLAN - MODIFIED ABUTMENT



VIEW A-A



SECTION C-C



SECTION D-D

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

33/105

ABUTMENT MODIFICATIONS PLANS AND DETAILS

BRIDGE NO. HAM-75-1152R

I-75 OVER CLARK STREET

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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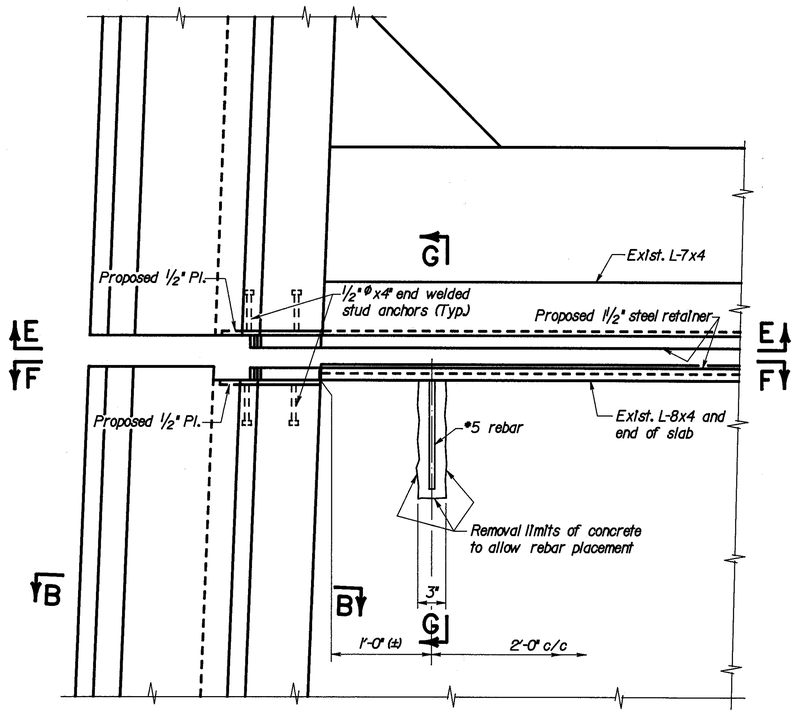
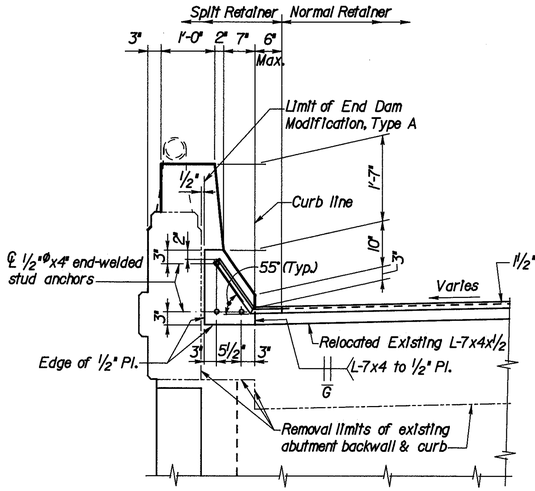
F.H.W.A. REGION	STATE	PROJECT		267 / 338
5	OHIO			

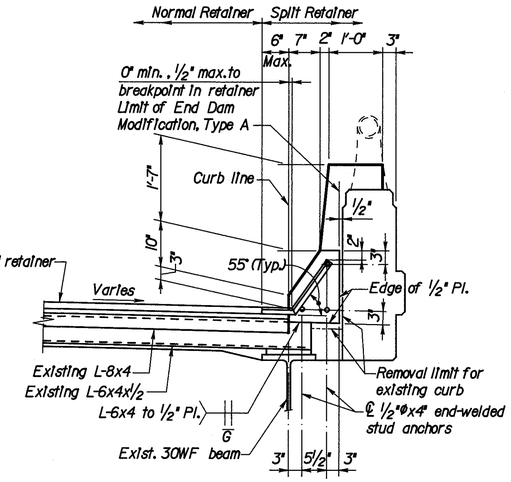
HAMILTON COUNTY
HAM-75-9.75



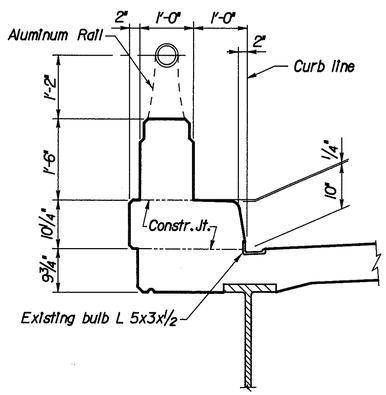
DETAIL A
END DAM MODIFICATION, TYPE A



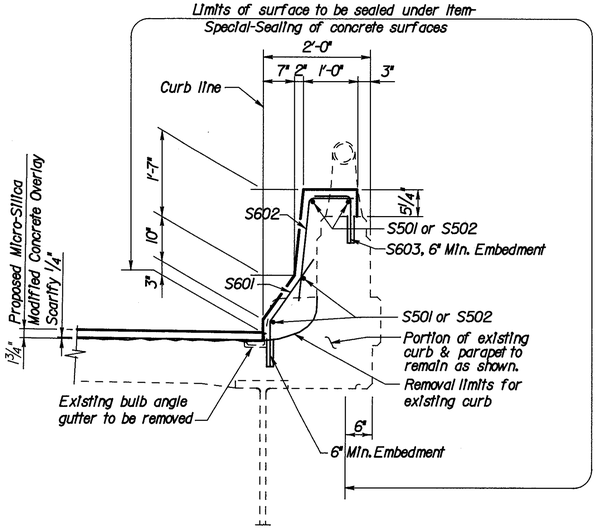
SECTION E-E



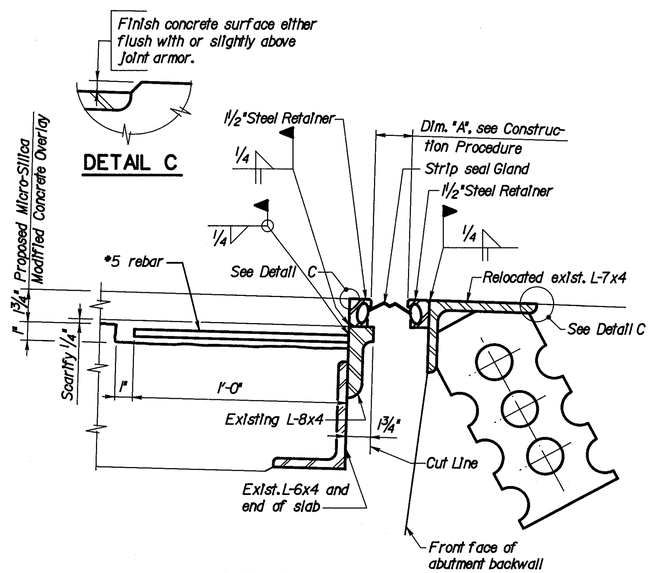
SECTION F-F



SECTION A-A
EXISTING CURB & RAILING



SECTION B-B
PROPOSED RAILING



SECTION G-G

Construction Procedure:

1. Place backwall concrete during stable or rising ambient temperatures and conclude placement immediately before the day's peak ambient temperature.
2. Not more than four hours prior to the day's peak ambient temperature install the backwall L-7x4x1/2 with the 1 1/2" steel retainer attached such that Dimension "A" will be 2" at 60°F. For each 10°F above 60°F the 2" dimension shall be decreased by 1/16" and for each 10°F below 60°F the 2" dimension shall be increased by 1/16".

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DAYTON, OHIO

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END DAM MODIFICATION DETAILS

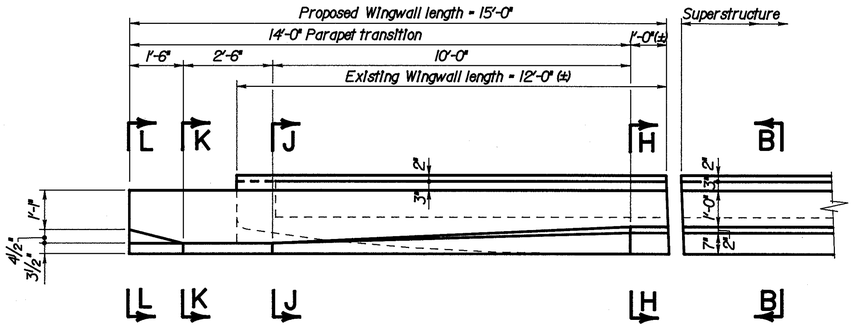
BRIDGE NO. HAM-75-1152R
I-75 OVER CLARK STREET

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

f:\6272\1152d2.dgn Feb. 19, 1993 10:57:01

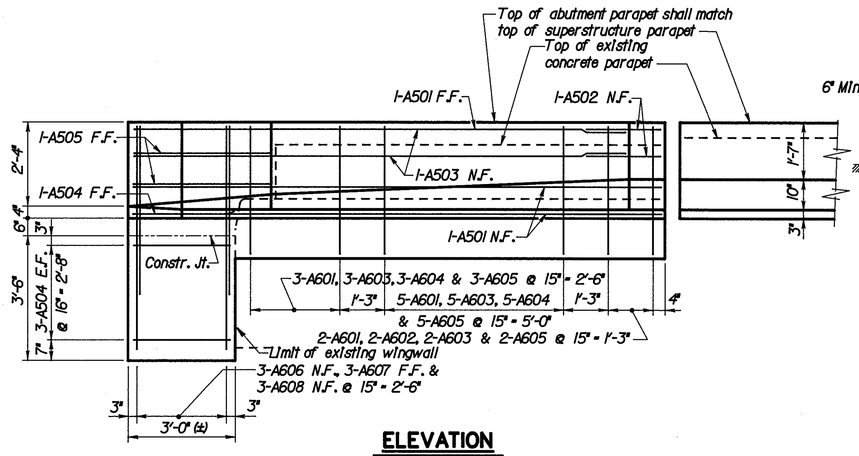
F.H.W.A. REGION	STATE	PROJECT		268 / 338
5	OHIO			

HAMILTON COUNTY
HAM-75-9.75



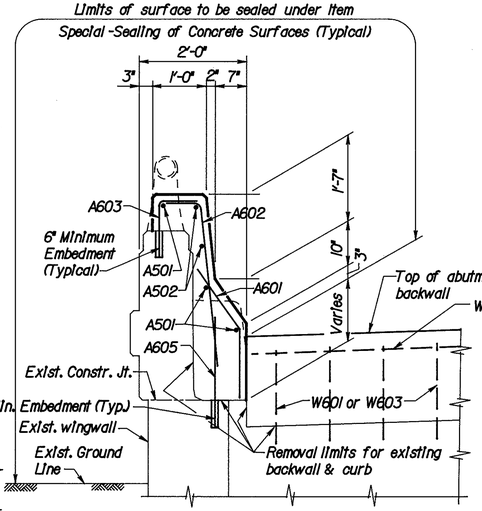
For Bridge Terminal Assembly, Type 1 or 2, see Standard Construction Drawing GR-31 or GR-32.

PLAN

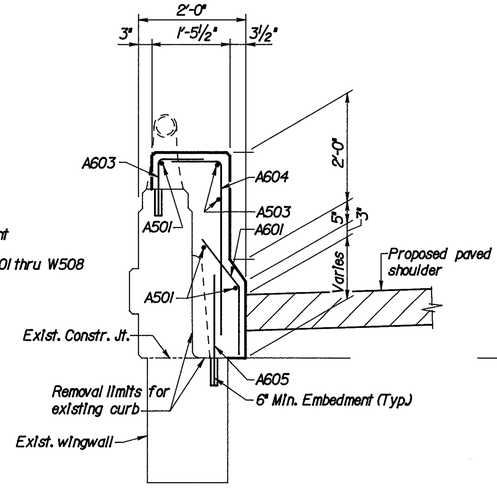


ELEVATION

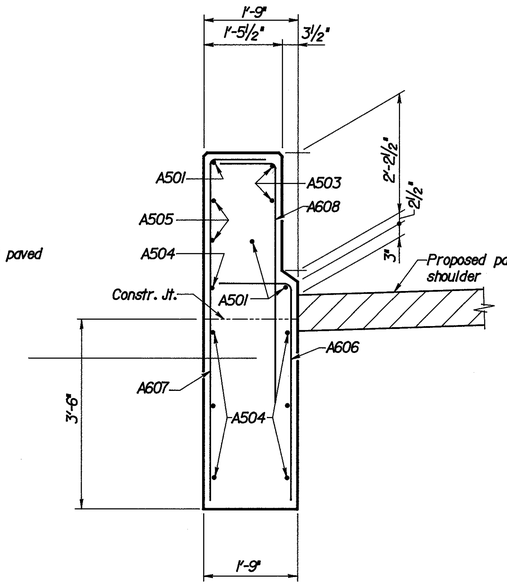
RAILING DETAILS AT ABUTMENTS



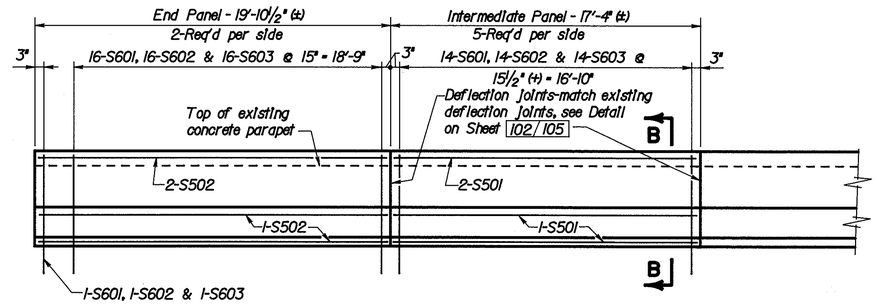
SECTION H-H



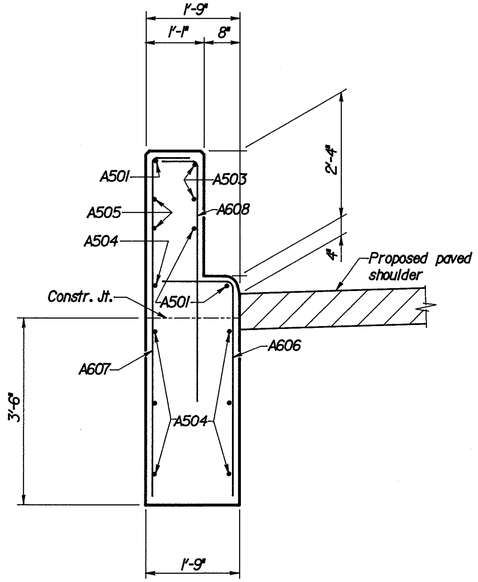
SECTION J-J



SECTION K-K



SUPERSTRUCTURE RAILING DETAILS



SECTION L-L

NOTES

1. For Section B-B, see sheet 34/105
2. For Reinforcing Steel List, see sheet 103/105

LEGEND

E.F. = Each Face
N.F. = Near Face
F.F. = Far Face

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35/105

ABUTMENT & SUPERSTRUCTURE RAILING DETAILS
BRIDGE NO. HAM-75-1152R
I-75 OVER CLARK STREET

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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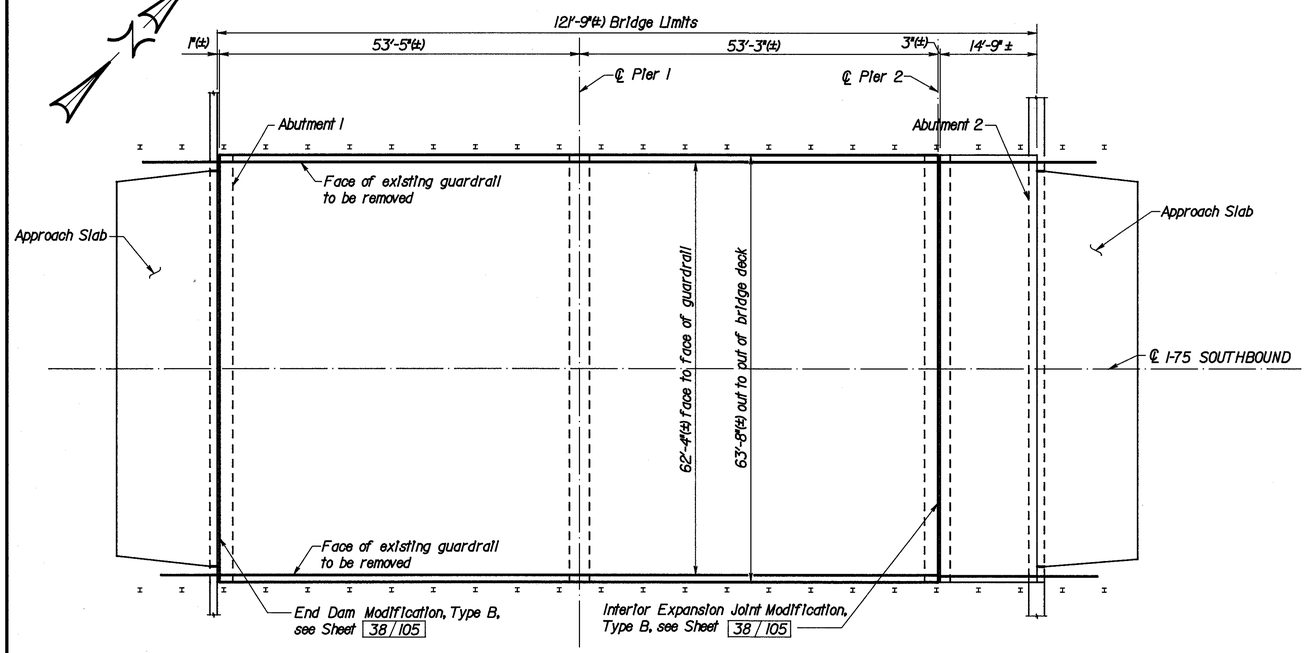
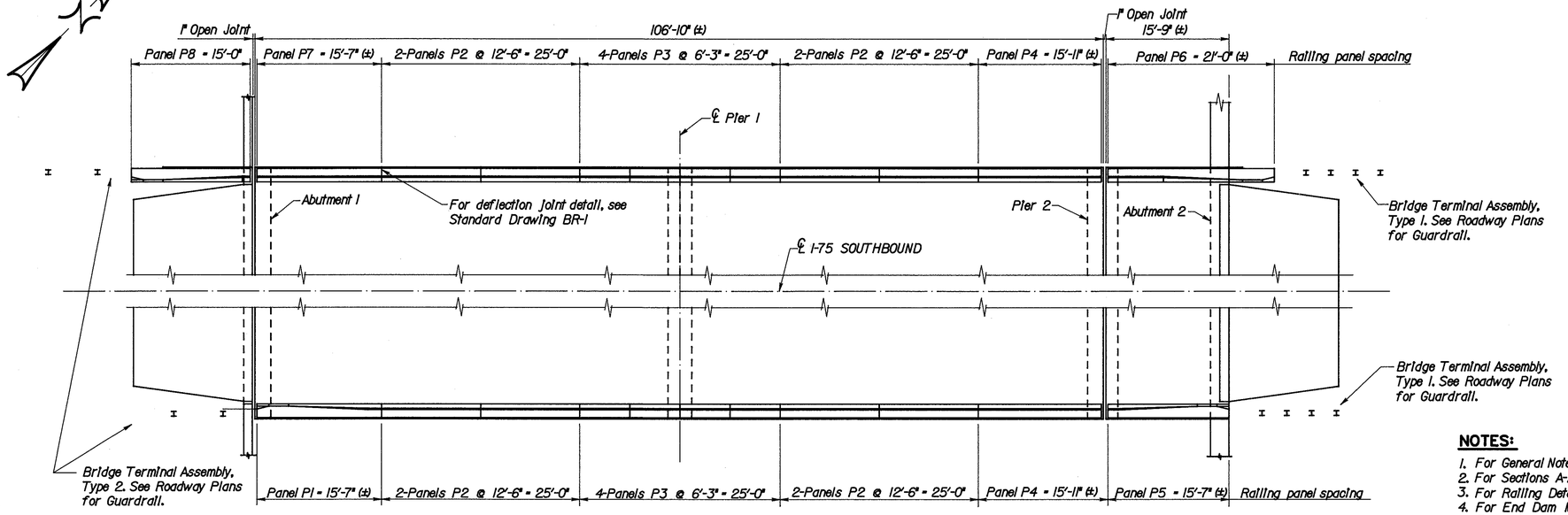
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

269
338

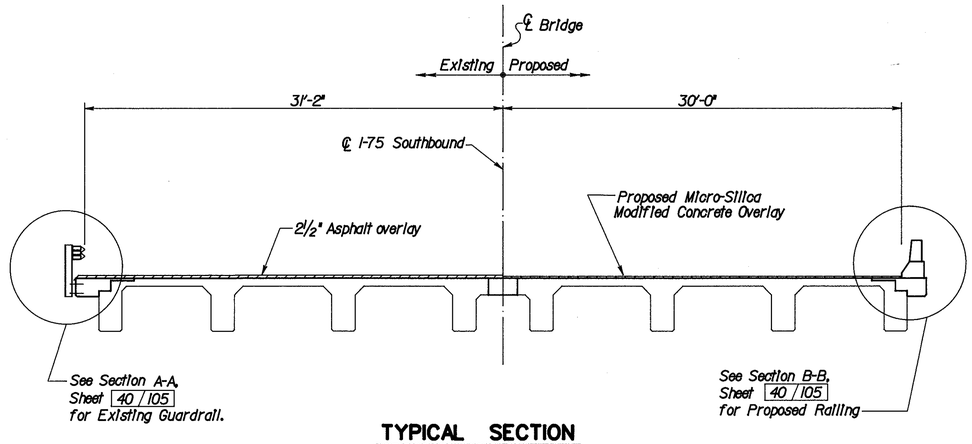
HAMILTON COUNTY
HAM-75-9.75



EXISTING PLAN



PLAN
PROPOSED RAILING PANEL LAYOUT



TYPICAL SECTION

PROPOSED WORK

1. Remove existing asphalt overlay and install new Micro-silica Modified Concrete Overlay.
2. Remove existing strip seal expansion joints and install new strip seal expansion joints. Use End Dam Modification, Type B, at Abutment 1 and Interior Expansion Joint Modification, Type b, at Pier 2.
3. Remove existing guardrail and install new concrete barrier railing.
4. Patch Pier 2 per Item 519.

EXISTING STRUCTURE

TYPE: Reinforced concrete T-beams, reinforced concrete slab and reinforced concrete substructure
SPANS: 50'-0", 50'-0", 12'-0" Clear
ROADWAY: 62'-4" face to face of guardrail
LOADING: S-20-40
SKEW: None
WEARING SURFACE: Asphalt Overlay
APPROACH SLABS: 15' long x 56' wide
ALIGNMENT: Tangent
SUPERELEVATION: None

NOTES:

1. For General Notes, see Sheet 1/105 thru 3/105
2. For Sections A-A and B-B, see Sheet 40/105
3. For Railing Details, see Sheet 39/105
4. For End Dam Modification, Type B and Interior Expansion Joint Type B, see Sheet 38/105
5. For patching details for Pier 2, see Sheet 37/105
6. For Reinforcing Steel List, see Sheet 103/105
7. For Estimated Quantities, see Sheet 3/105

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36/105

EXISTING PLAN, TYPICAL SECTION & PROPOSED PARAPET PANEL LAYOUT
BRIDGE NO. HAM-75-1160L
I-75 OVER WEST FORK MILL CREEK

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DJJ	HDJ	DJJ	HDJ	MPH 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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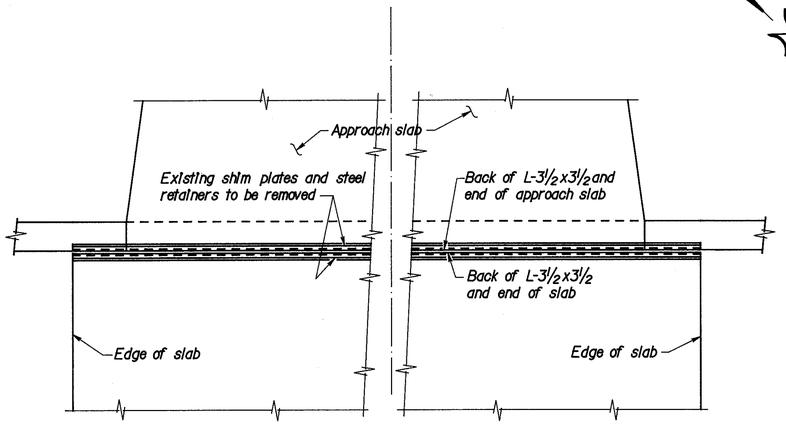
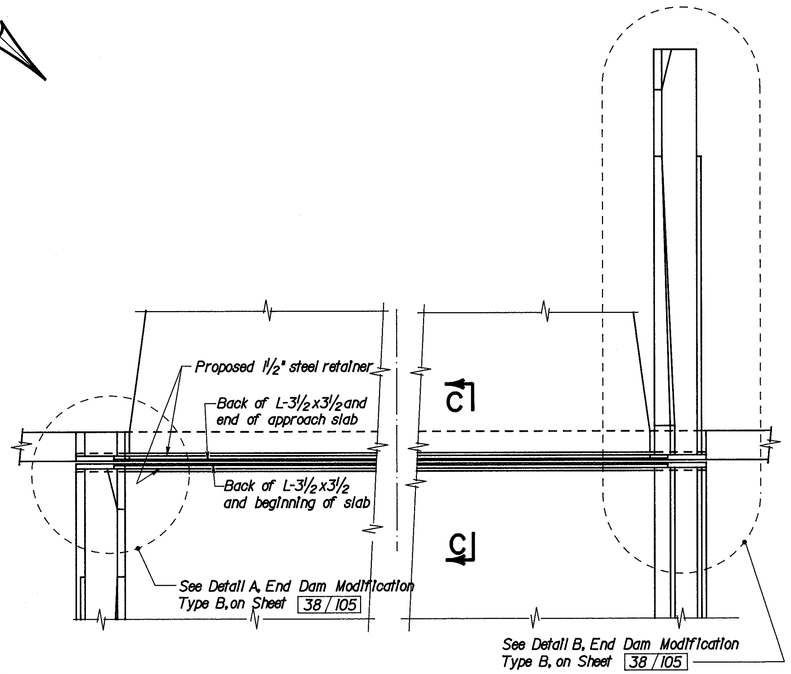
338

HAMILTON COUNTY
HAM-75-9.75

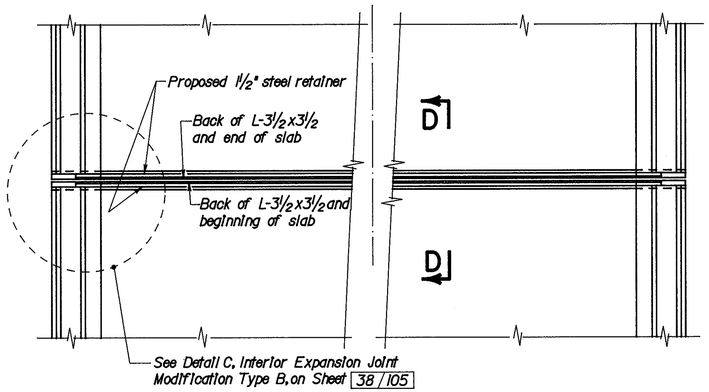


PLAN - EXISTING EXPANSION JOINT AT ABUTMENT 1

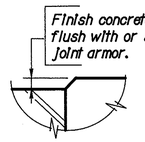
(PLAN AT PIER 2 SIMILAR)



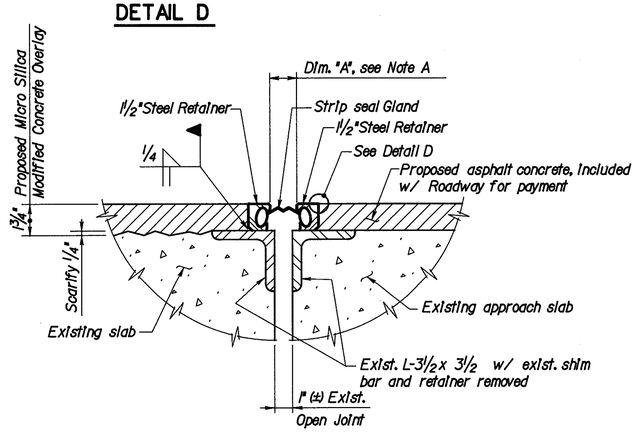
PLAN - MODIFIED EXPANSION JOINT AT ABUTMENT 1



PLAN - MODIFIED EXPANSION JOINT AT PIER 2



DETAIL D

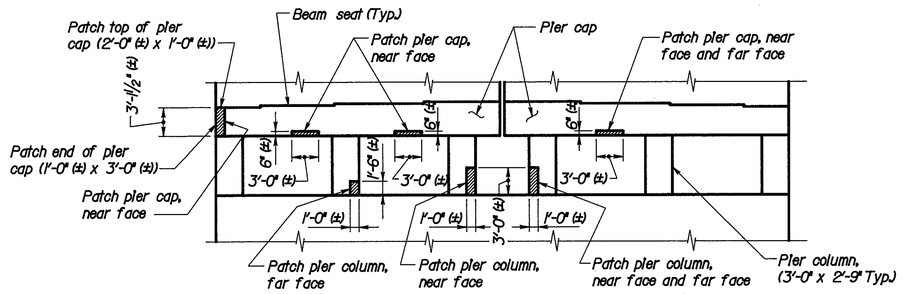


SECTION C-C

(SECTION D-D SIMILAR)

NOTE A:

Dimension "A" shall be a minimum of 2" @ 60°F. For each 10°F above 60°F the 2" dimension shall be decreased by 1/16" and for each 10°F below 60°F the 2" dimension shall be increased by 1/16".



ELEVATION - PIER 2

Looking North

PATCH DETAILS

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DAYTON, OHIO

37/105

EXPANSION JOINT MODIFICATIONS
PLANS AND SECTIONS
BRIDGE NO. HAM-75-1160L
I-75 OVER WEST FORK MILL CREEK

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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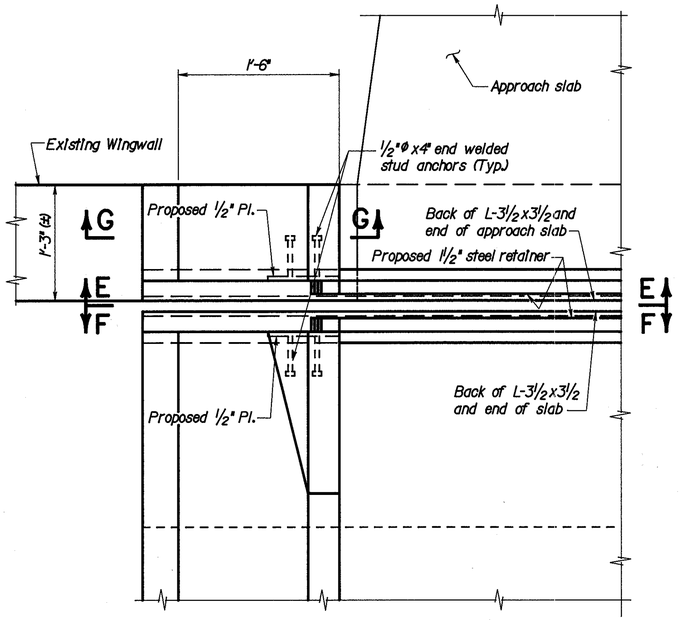
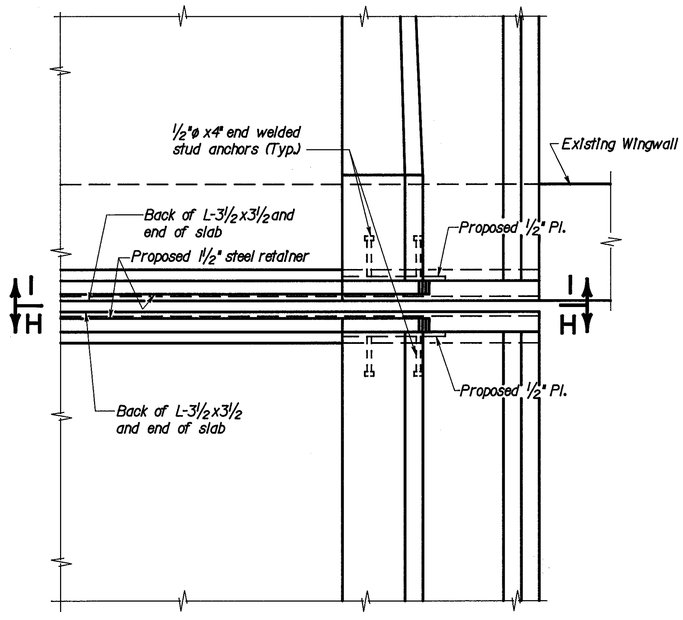
338

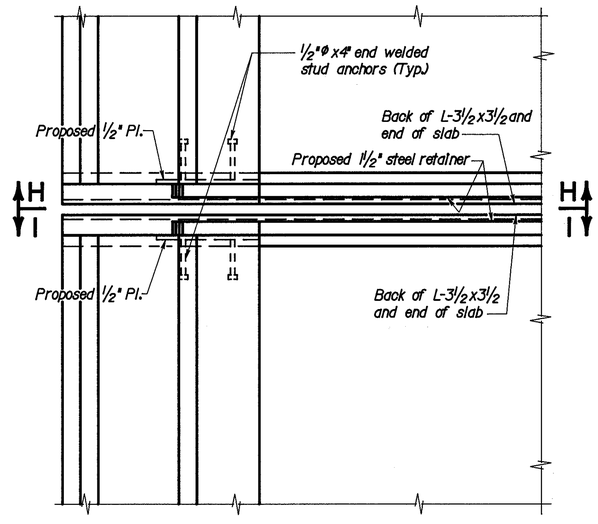
HAMILTON COUNTY
HAM-75-9.75



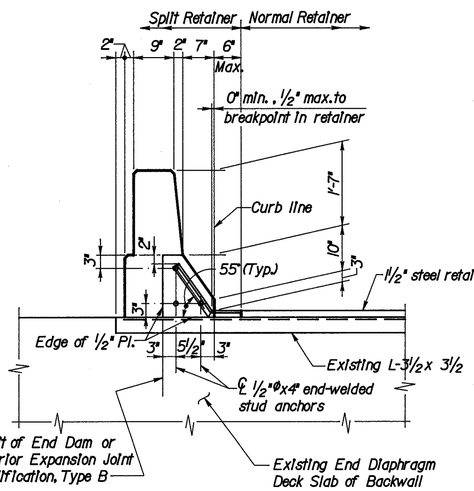
DETAIL A
END DAM MODIFICATION, TYPE B



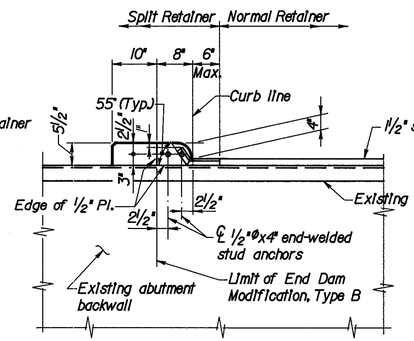
DETAIL B
END DAM MODIFICATION, TYPE B



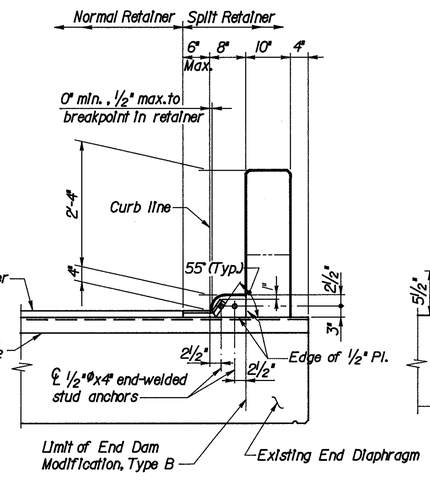
DETAIL C
INTERIOR EXPANSION JOINT MODIFICATION, TYPE B



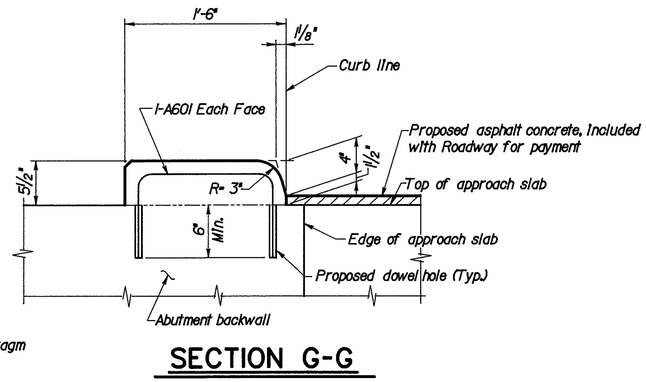
SECTION H-H
(SECTION I-I OPPOSITE HAND)



SECTION E-E



SECTION F-F



SECTION G-G

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

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EXPANSION JOINT MODIFICATION DETAILS

BRIDGE NO. HAM-75-1160L
I-75 OVER WEST FORK MILL CREEK

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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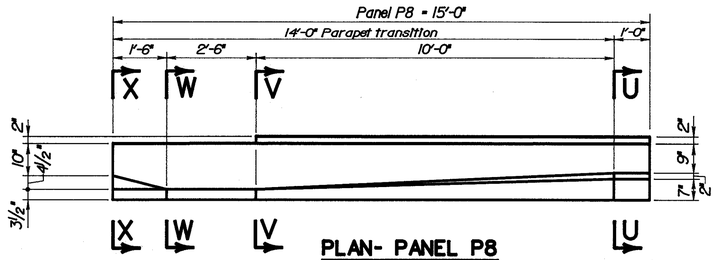
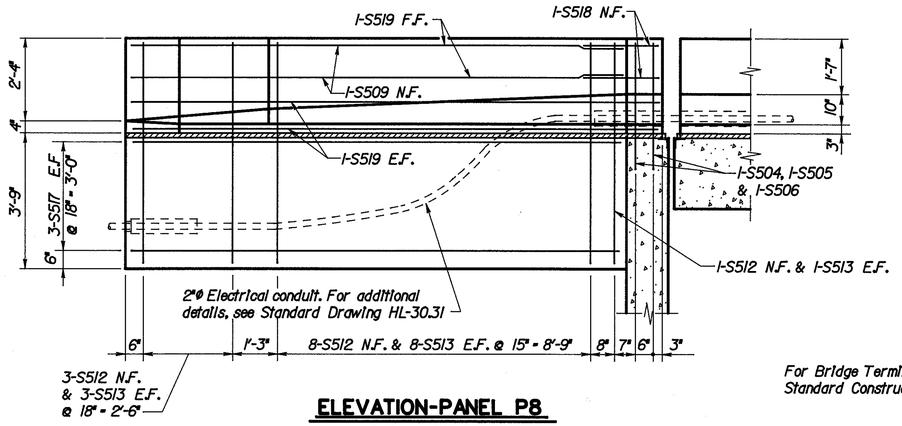
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

272
338

HAMILTON COUNTY
HAM-75-9.75

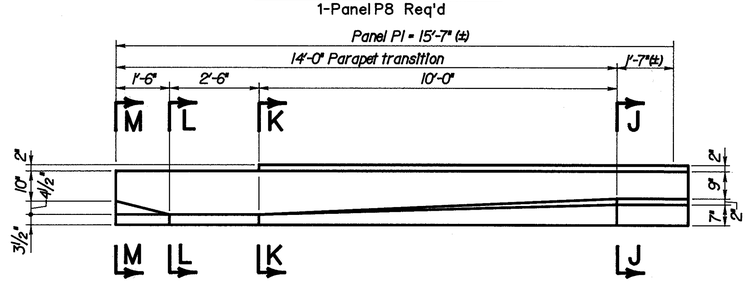


PLAN- PANEL P8

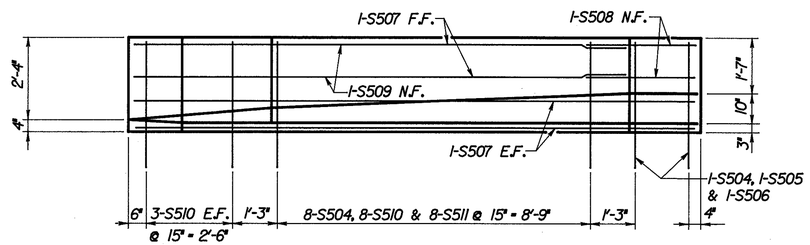


ELEVATION-PANEL P8

1-Panel P8 Req'd

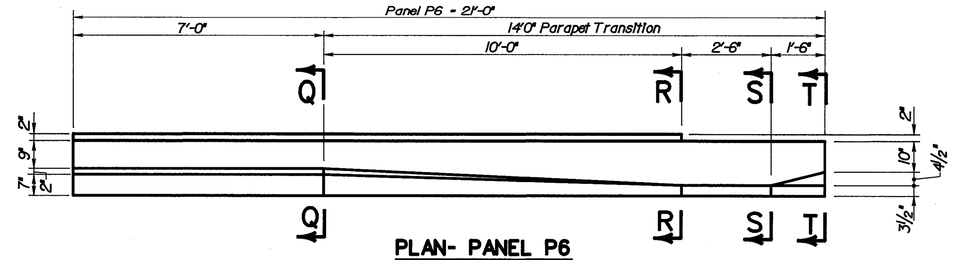


PLAN- PANEL P1 & P5

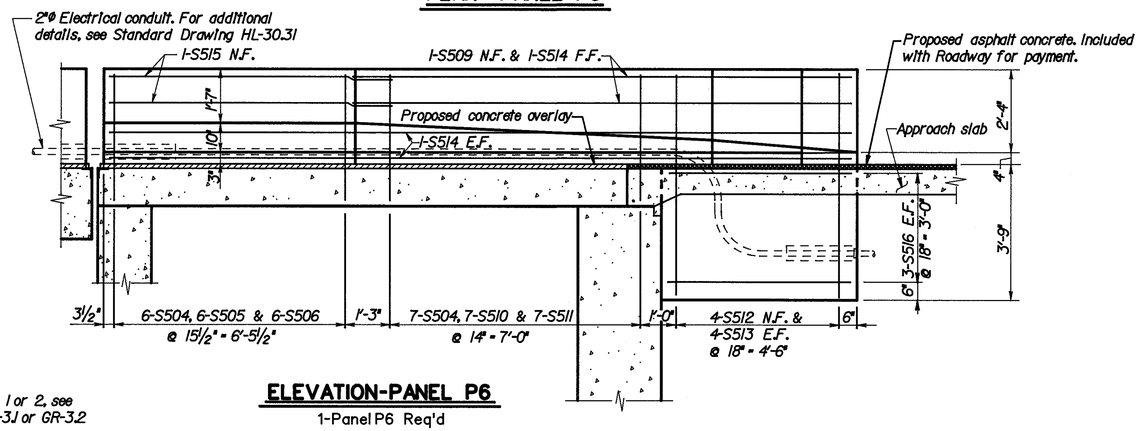


ELEVATION-PANEL P1 & P5

1-Panel P1 Req'd
1-Panel P5 Req'd



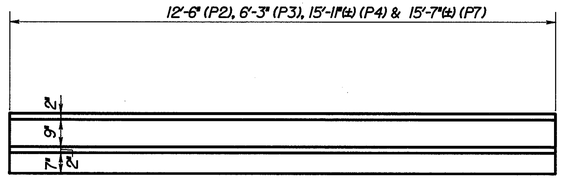
PLAN- PANEL P6



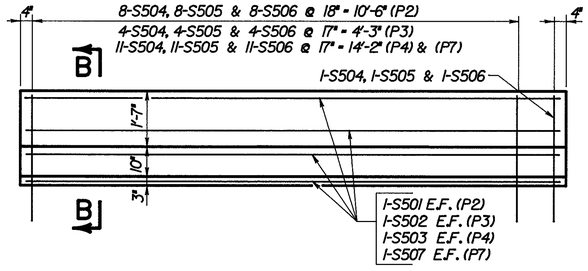
ELEVATION-PANEL P6

1-Panel P6 Req'd

For Bridge Terminal Assembly, Type 1 or 2, see Standard Construction Drawing GR-3.1 or GR-3.2



PLAN-PANEL P2, P3, P4 & P7



ELEVATION-PANEL P2, P3, P4 & P7

8-Panels P2 Req'd
8-Panels P3 Req'd
2-Panels P4 Req'd
1-Panel P7 Req'd

NOTES:

1. For Sections J-J thru M-M, see Sheet 40 / 105
2. For Sections Q-Q thru T-T, see Sheet 41 / 105
3. For Sections U-U thru X-X, see Sheet 41 / 105
4. For Reinforcing Steel List, see Sheet 103 / 105

LEGEND

E.F. = Each Face
N.F. = Near Face
F.F. = Far Face

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DAYTON, OHIO
39 / 105

RAILING PANEL DETAILS

BRIDGE NO. HAM-75-1160L
I-75 OVER WEST FORK MILL CREEK

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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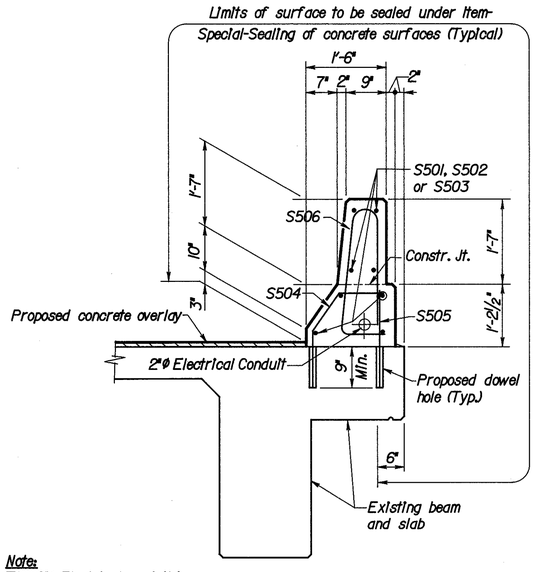
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

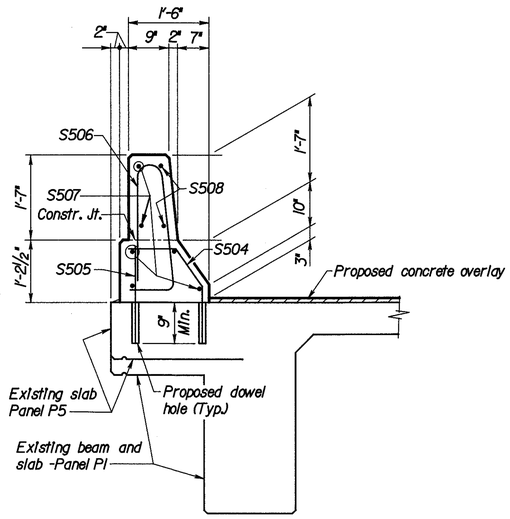
273
338

HAMILTON COUNTY
HAM-75-9.75

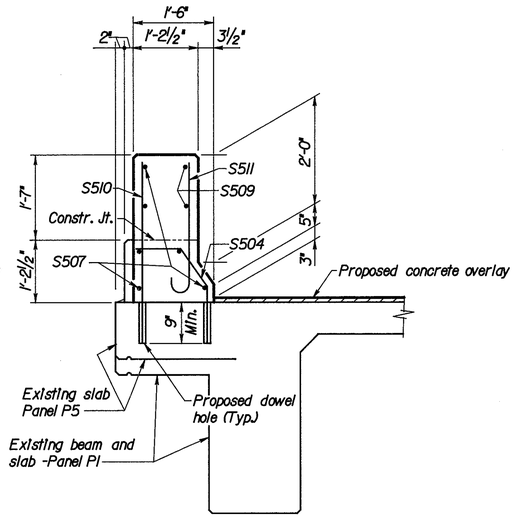


Note:
The 2"ø Electrical conduit is in the west railing only.

SECTION B-B
PROPOSED RAILING

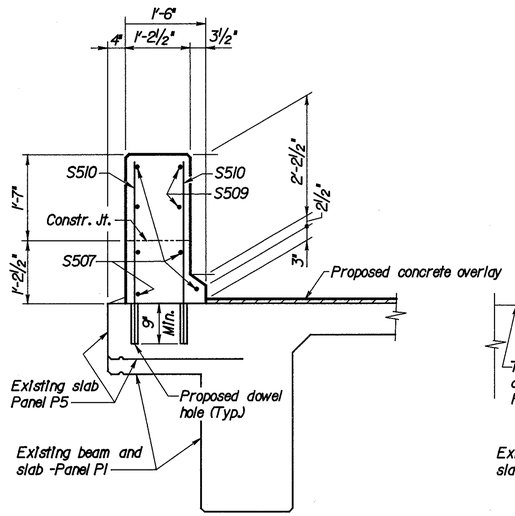


SECTION J-J

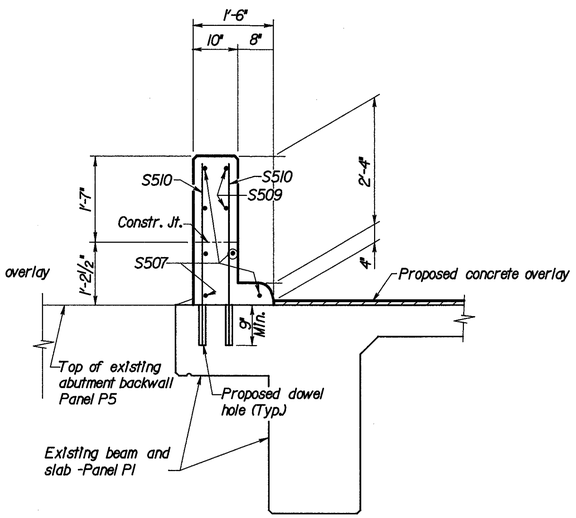


SECTION K-K

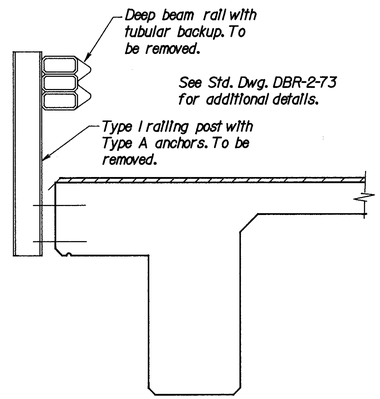
NOTE:
Dowels shall be installed in accordance with SS852 and 705.20. The cost for drilling holes and installing the dowels shall be included in the price bid for item 517-Railing (Deflector parapet type), as per plan



SECTION L-L



SECTION M-M



SECTION A-A
EXISTING RAILING

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

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RAILING PANEL
SECTIONS
BRIDGE NO. HAM-75-1160L
I-75 OVER WEST FORK MILL CREEK,

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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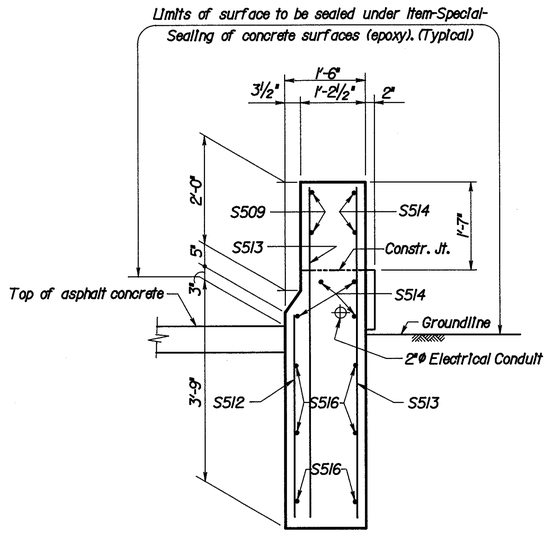
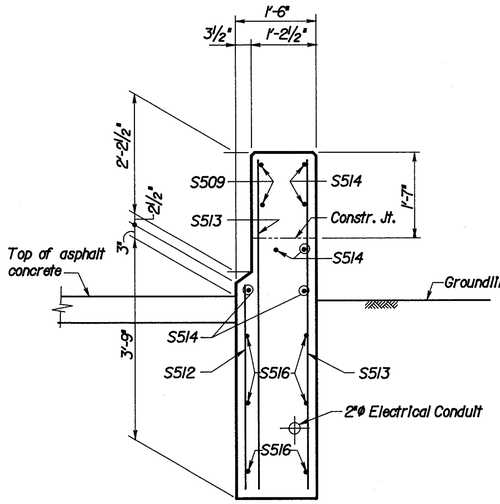
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

274
338

HAMILTON COUNTY
HAM-75-9.75



SECTION R-R



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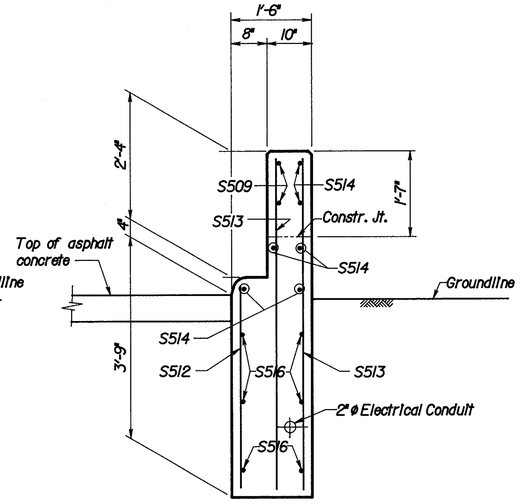
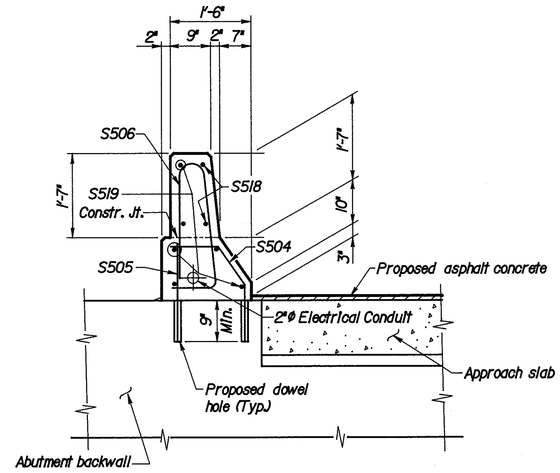
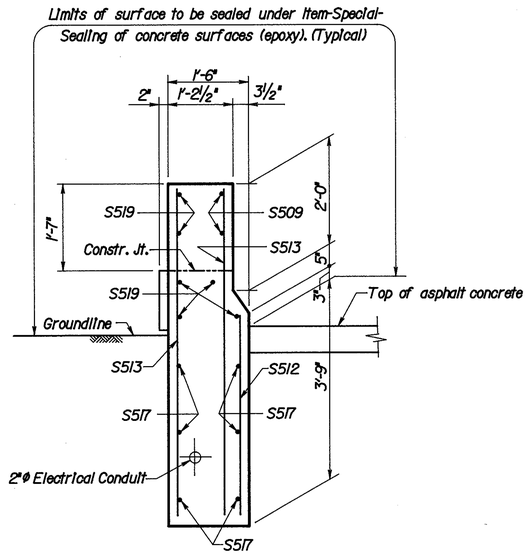


SECTION T-T



SECTION U-U



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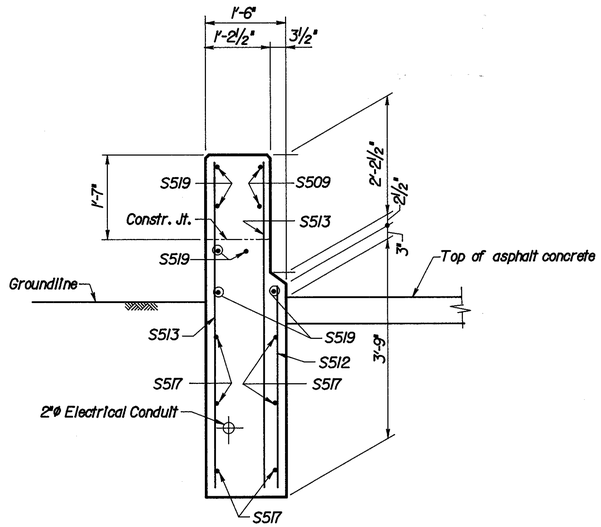

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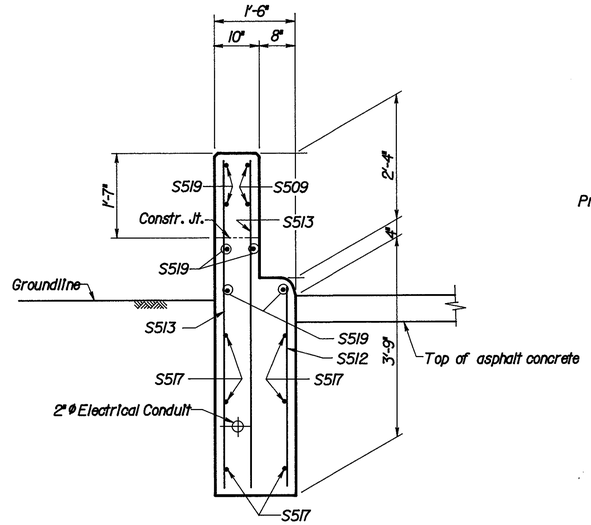
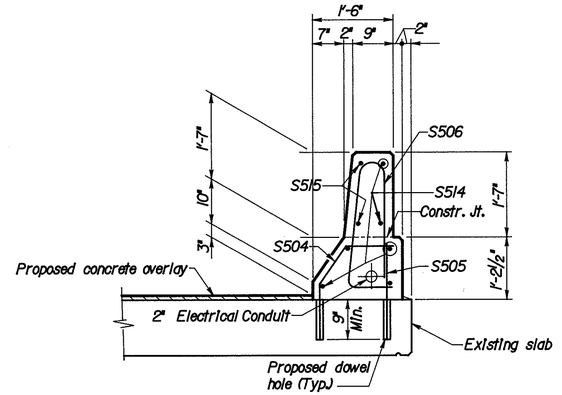


SECTION X-X



SECTION Q-Q

LOCKWOOD, JONES & BEALS
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DAYTON, OHIO

41 / 105

RAILING PANEL SECTIONS

BRIDGE NO. HAM-75-1160L
I-75 OVER WEST FORK MILL CREEK

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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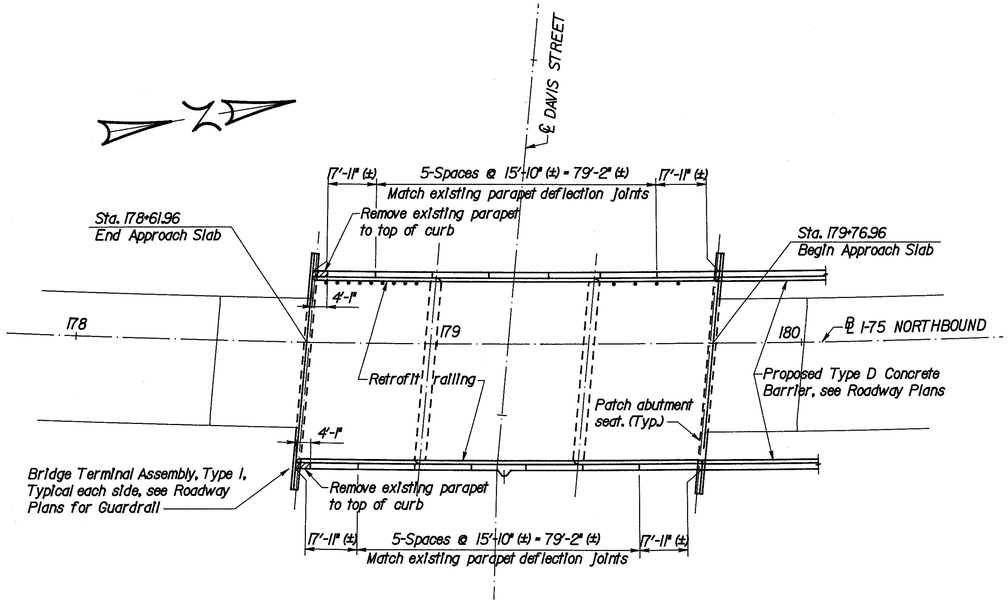
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

275
338

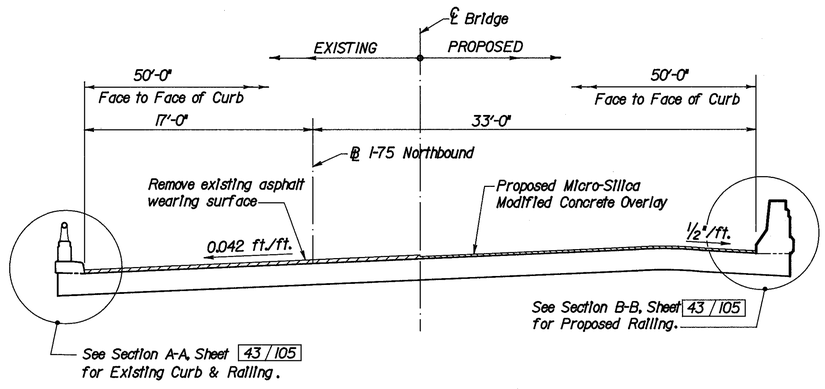
HAMILTON COUNTY
HAM-75-9.75



PLAN

NOTES:

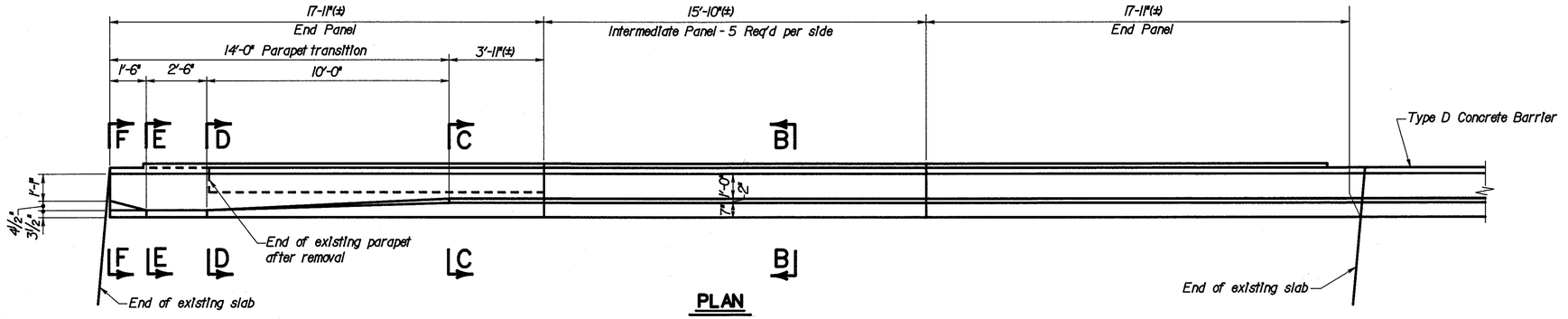
1. For General Notes, see Sheet 1 / 105 thru 3 / 105
2. For Sections A-A thru F-F, see Sheet 43 / 105
3. For Abutment Seat Patch Details, see Sheet 43 / 105
4. For Reinforcing Steel List, see Sheet 104 / 105
5. For Estimated Quantities, see Sheet 4 / 105



TYPICAL SECTION

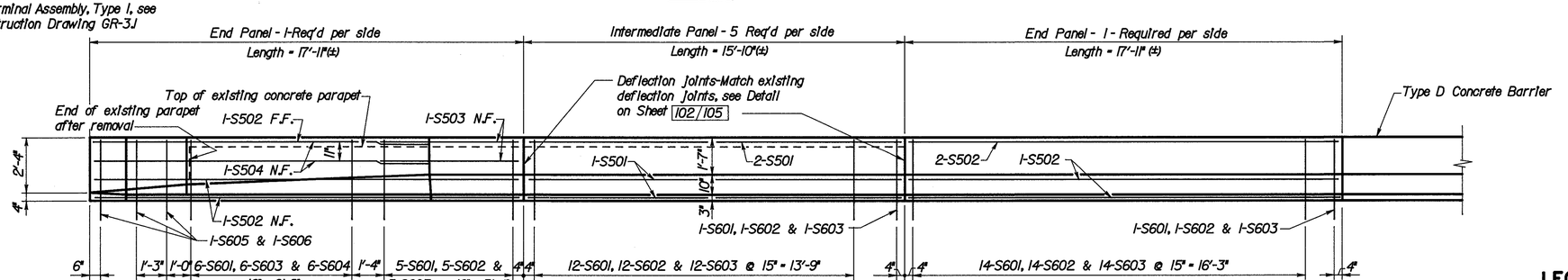
PROPOSED WORK

1. Remove existing asphalt overlay and add new Micro-Silica Modified Concrete Overlay.
2. Retrofit existing parapets with concrete barrier railing.
3. Patch abutment seats.



PLAN

For Bridge Terminal Assembly, Type I, see Standard Construction Drawing GR-3J



ELEVATION

SUPERSTRUCTURE RAILING DETAILS

LEGEND

N.F. = Near Face
F.F. = Far Face

EXISTING STRUCTURE

TYPE: Continuous reinforced concrete slab bridge, with reinforced concrete substructure.
SPANS: 35'-0", 43'-6", 35'-0
ROADWAY: 52'-0" f/f of parapets
LOAD FREQUENCY: CF = 2000 (57), adequate for AASHO alternate loading.
SKEW: 5°07'24" LF.
WEARING SURFACE: 2½" Asphalt Overlay

APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: 1°45' Curve left
SUPERELEVATION: 0.042 ft./ft.

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PLAN, TYPICAL SECTION & SUPERSTRUCTURE RAILING DETAILS
BRIDGE NO. HAM-75-1184R
I-75 OVER DAVIS STREET

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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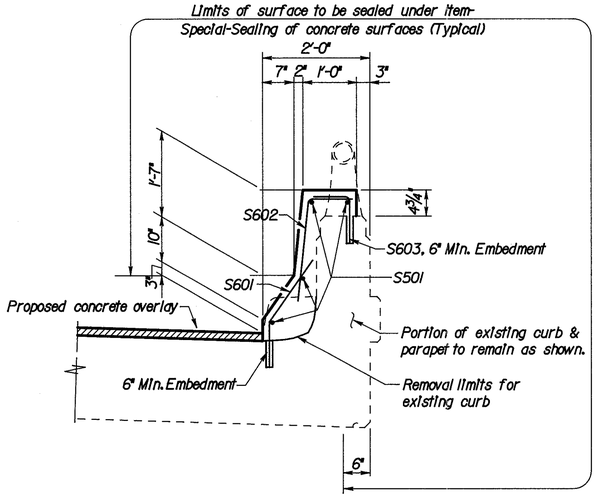
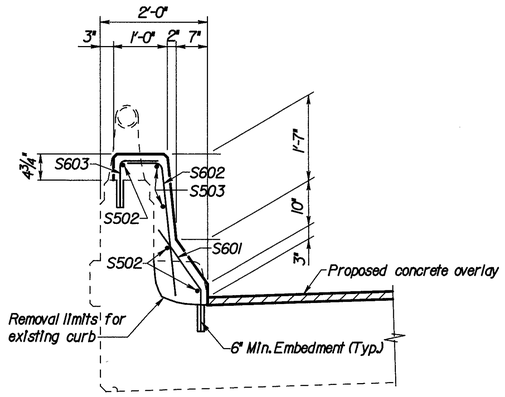
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

276
338

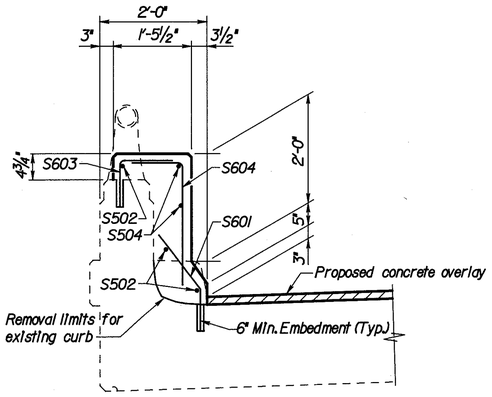
HAMILTON COUNTY
HAM-75-9.75



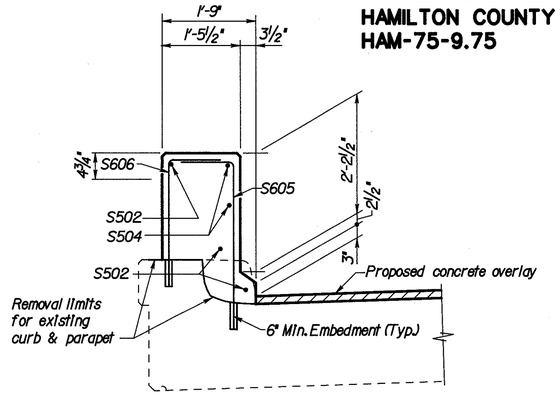
SECTION B-B
PROPOSED RAILING



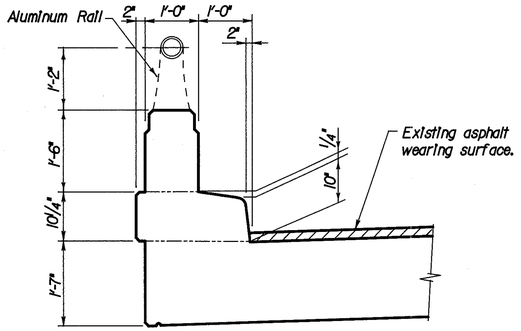
SECTION C-C



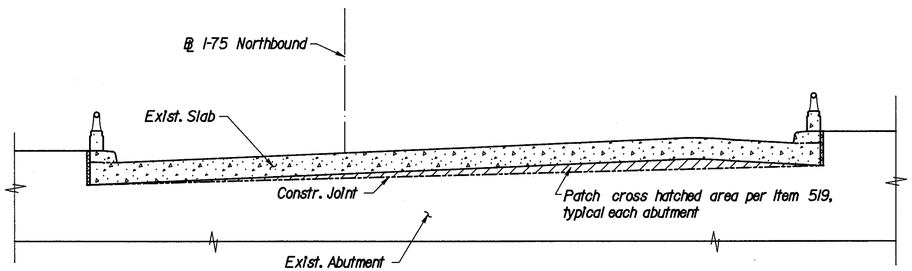
SECTION D-D



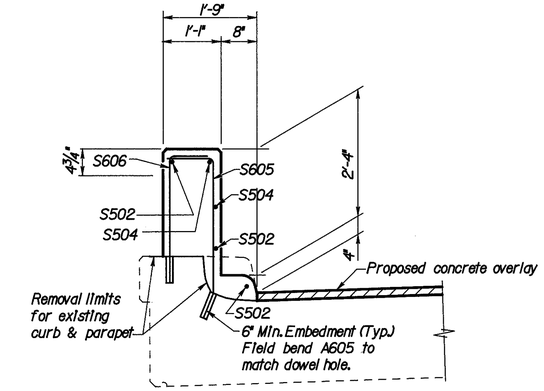
SECTION E-E



SECTION A-A
EXISTING CURB & RAILING



ABUTMENT SEAT PATCH DETAIL



SECTION F-F

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

43/105

RAILING SECTIONS
BRIDGE NO. HAM-75-1184R
I-75 OVER DAVIS STREET

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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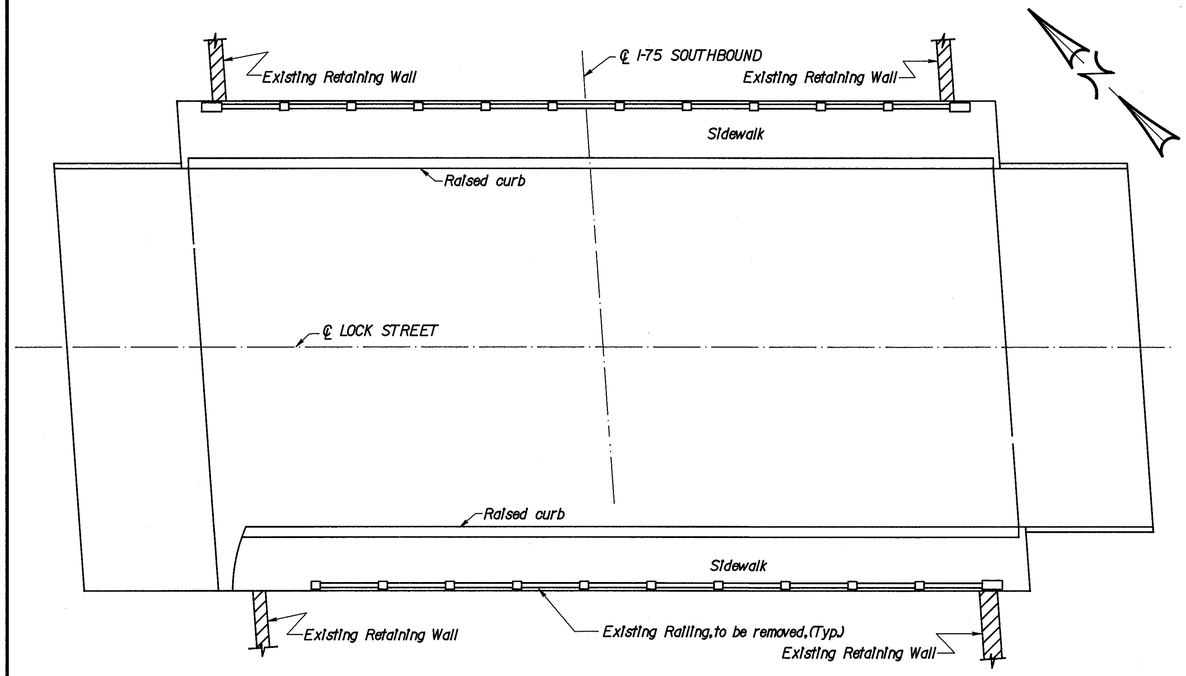
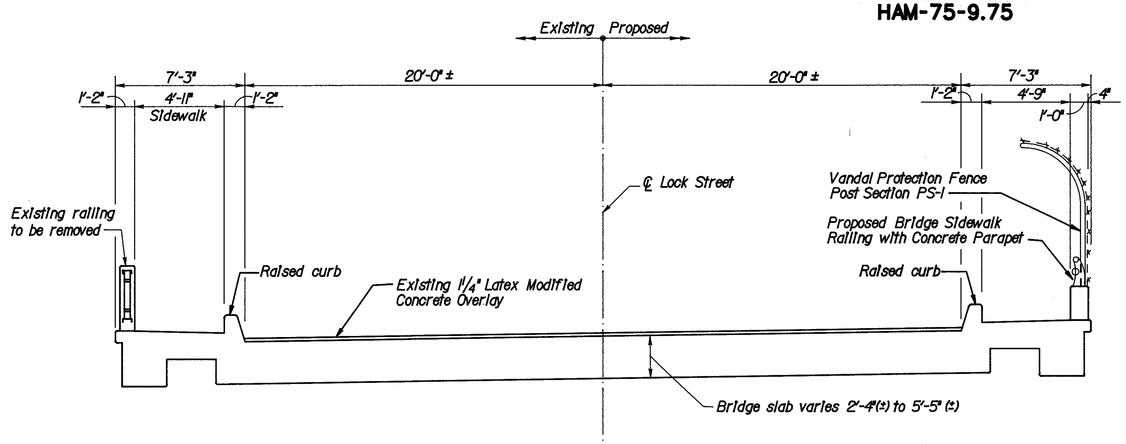
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

277
338

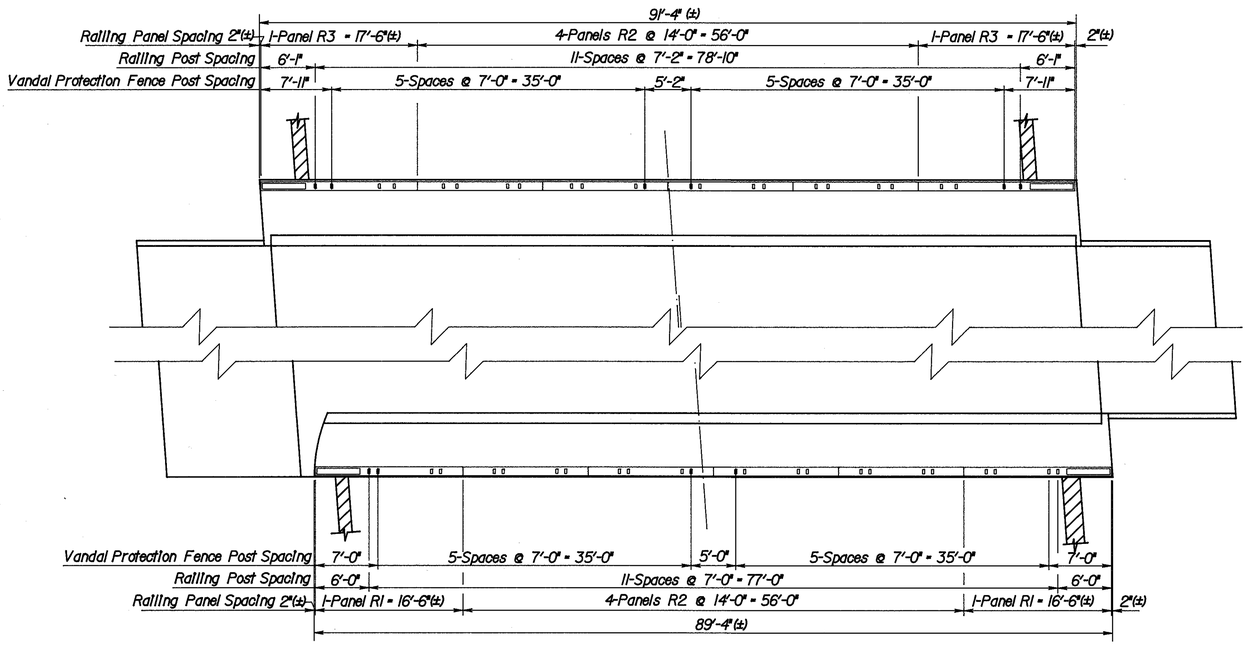
HAMILTON COUNTY
HAM-75-9.75



EXISTING PLAN



TYPICAL SECTION



PLAN

Bridge Sidewalk Railing with Concrete Parapet and Vandal Protection Fence Post Spacing

PROPOSED WORK

1. Remove existing sidewalk railing.
2. Install new bridge sidewalk railing with concrete parapet and install vandal protection fence.
3. Seal curb, sidewalk, parapet and fascia to limits shown.

NOTES

1. For General Notes, see Sheet 1 / 105 thru 3 / 105
2. For Estimated Quantities, see Sheet 3 / 105
3. For Reinforcing Steel List, see Sheet 104 / 105

EXISTING STRUCTURE

TYPE: Concrete rigid frame
SPAN: 80'-5½" Clear
ROADWAY: 40'-0" face to face of curbs with 2 - 4'-11" sidewalks.
LOADING: S-20-40
SKEW: 5°-04'-20"
WEARING SURFACE: 1¼" Latex modified concrete.
APPROACH SLABS: 15' Long.

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PLAN & TYPICAL SECTION BRIDGE SIDEWALK RAILING AND VANDAL PROTECTION FENCE

BRIDGE NO. HAM-75-1187L

LOCK STREET OVER SOUTHBOUND I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DJJ	HDJ	DJJ	HDJ	MPH 12/92	

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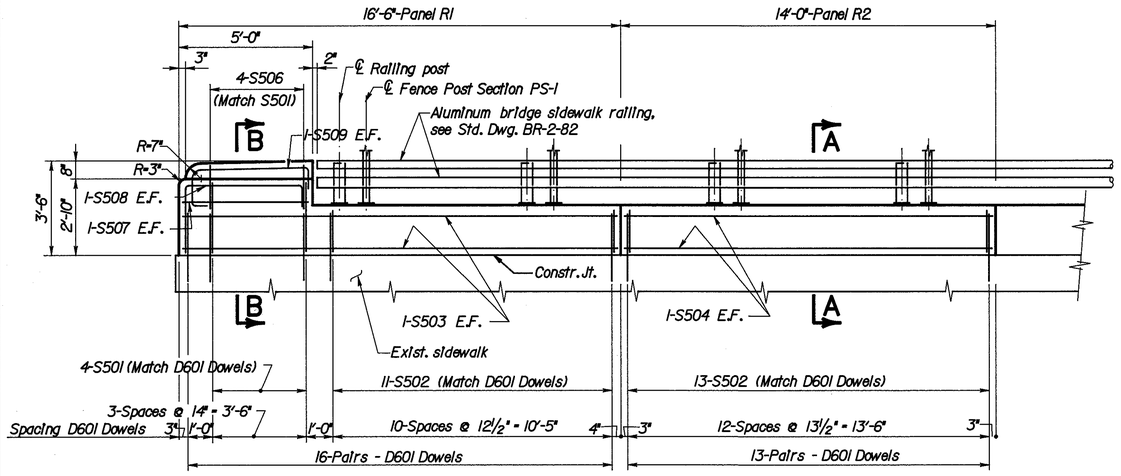
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

278
338

HAMILTON COUNTY
HAM-75-9.75

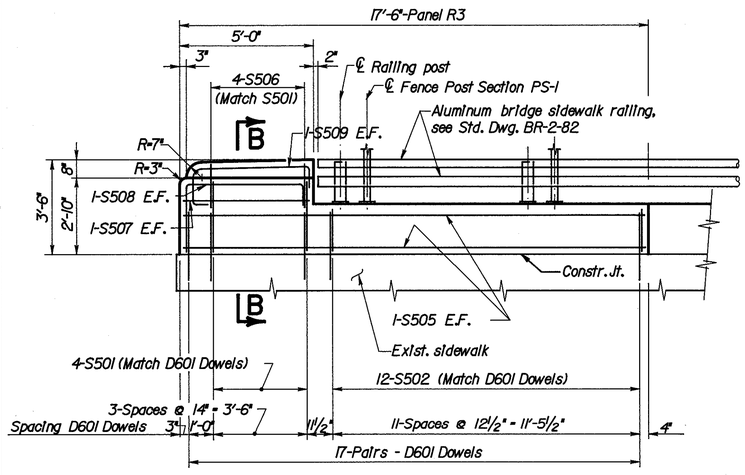


ELEVATION

RAILING PANELS

2-Railing Panels R1 Req'd
8-Railing Panels R2 Req'd

Note:
1. For additional details, see Std. Dwg. BR-2-82.
2. For Reinforcing Steel List, see Sheet 104/105



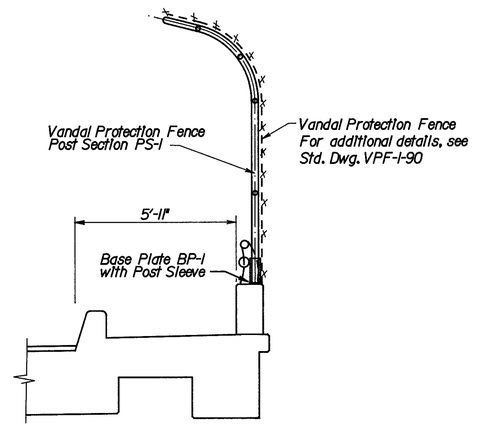
ELEVATION

RAILING PANELS

2-Railing Panels R3 Req'd

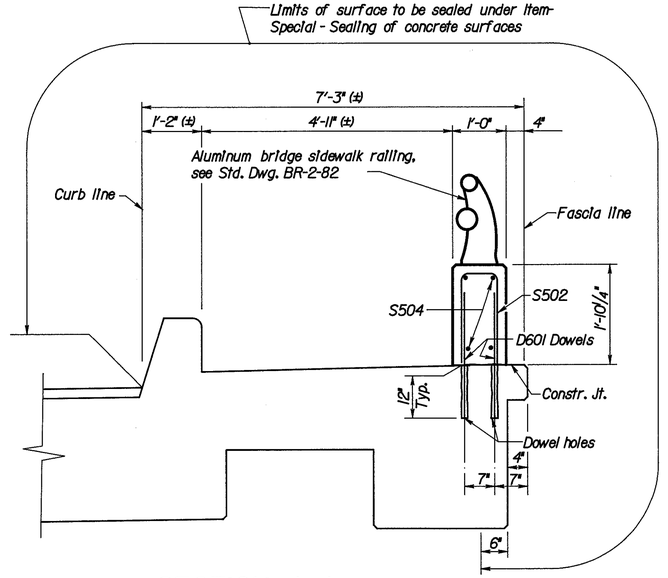
LEGEND

E.F. = Each Face



SECTION A-A

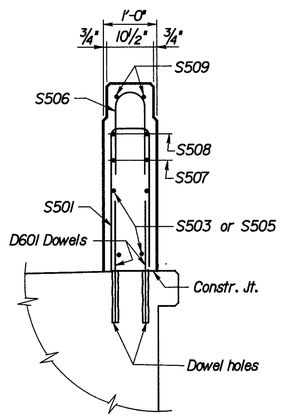
Showing Vandal Protection Fence



SECTION A-A

Showing Bridge Sidewalk Railing

NOTE:
Dowels shall be installed in accordance with SS852 and 705.20. The cost for drilled holes and furnishing and placing materials shall be included in the price bid for Item 517-Railings, (concrete parapet with double piperail), as per plan.



SECTION B-B

LOCKWOOD, JONES & BEALS
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DAYTON, OHIO
45/105

BRIDGE SIDEWALK RAILING AND VANDAL PROTECTION FENCE
BRIDGE NO. HAM-75-1187L
LOCK STREET OVER SOUTHBOUND I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DJJ	HDJ	DJJ	HDJ	MPH 12/92	

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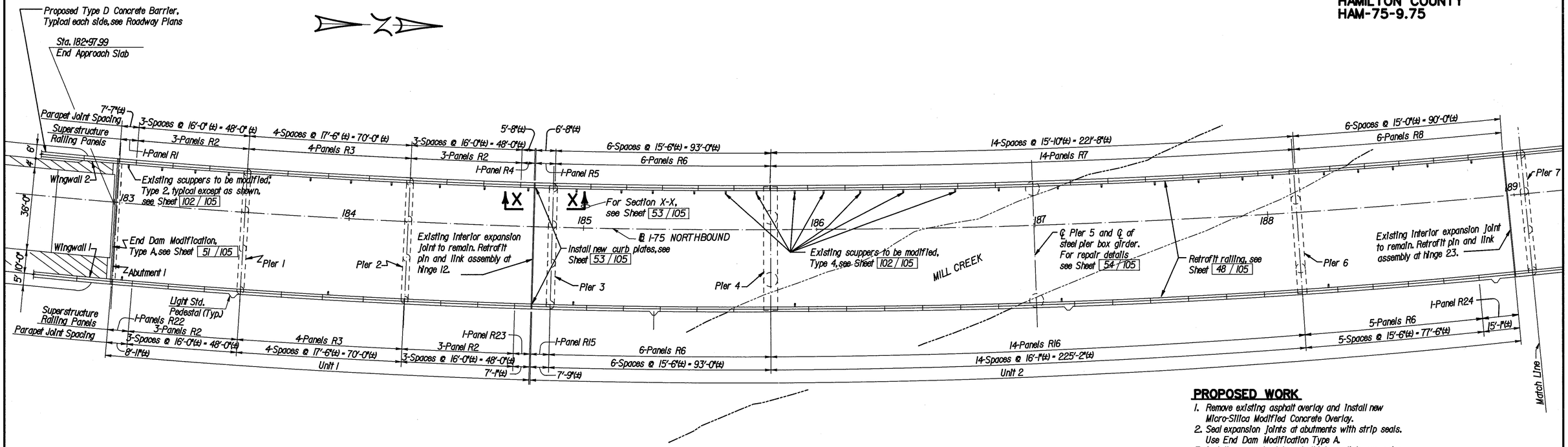
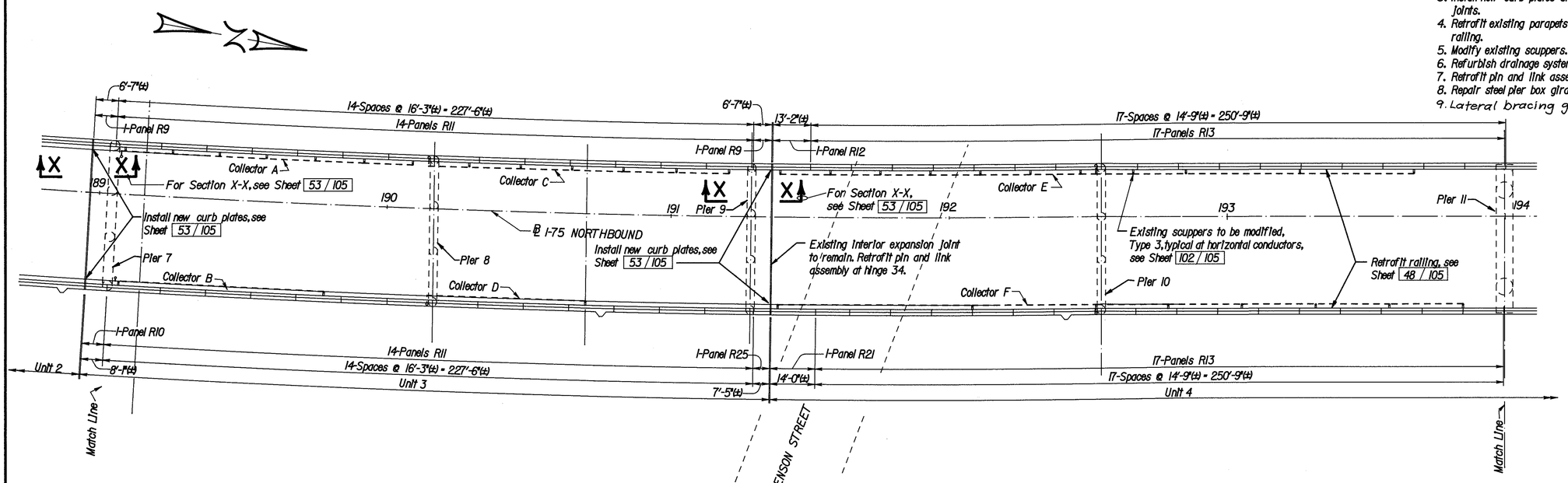
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

279
338

HAMILTON COUNTY
HAM-75-9.75





GENERAL PLAN

PROPOSED WORK

1. Remove existing asphalt overlay and install new Micro-Silica Modified Concrete Overlay.
2. Seal expansion joints at abutments with strip seals. Use End Dam Modification Type A.
3. Install new curb plates at all intermediate expansion joints.
4. Retrofit existing parapets with concrete barrier railing.
5. Modify existing scuppers.
6. Refurbish drainage system.
7. Retrofit pin and link assemblies.
8. Repair steel pier box girders.
9. Lateral bracing gusset plate retrofit.

EXISTING STRUCTURE

TYPE: Continuous rolled beam and welded plate girder with reinforced concrete deck and substructure.
SPANS: 55'-6", 70'-0", 61'-6", 93'-0", 111'-3", 111'-3", 99'-0", 113'-6", 113'-6", 126'-0", 145'-9", 156'-0", 124'-0", 120'-0", 145'-9", 156'-0", 118'-0", 89'-0", 105'-0", 129'-0", 100'-0", 70'-0"
ROADWAY: 50'-0" f/f of 1'-0" safety curbs
LOAD FREQUENCY: CF - 2000 (57), adequate for AASHTO alternate loading.
SKEW: 0°00'00"
WEARING SURFACE: 1" Monolithic concrete w/ asphalt overlay
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: 1°45' curve to left, 350'-0" spiral and tangent

LOCKWOOD, JONES & BEALS
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DAYTON, OHIO
46 / 105

GENERAL PLAN

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DJJ	HDJ	DJJ	HDJ	MPH 12/92	

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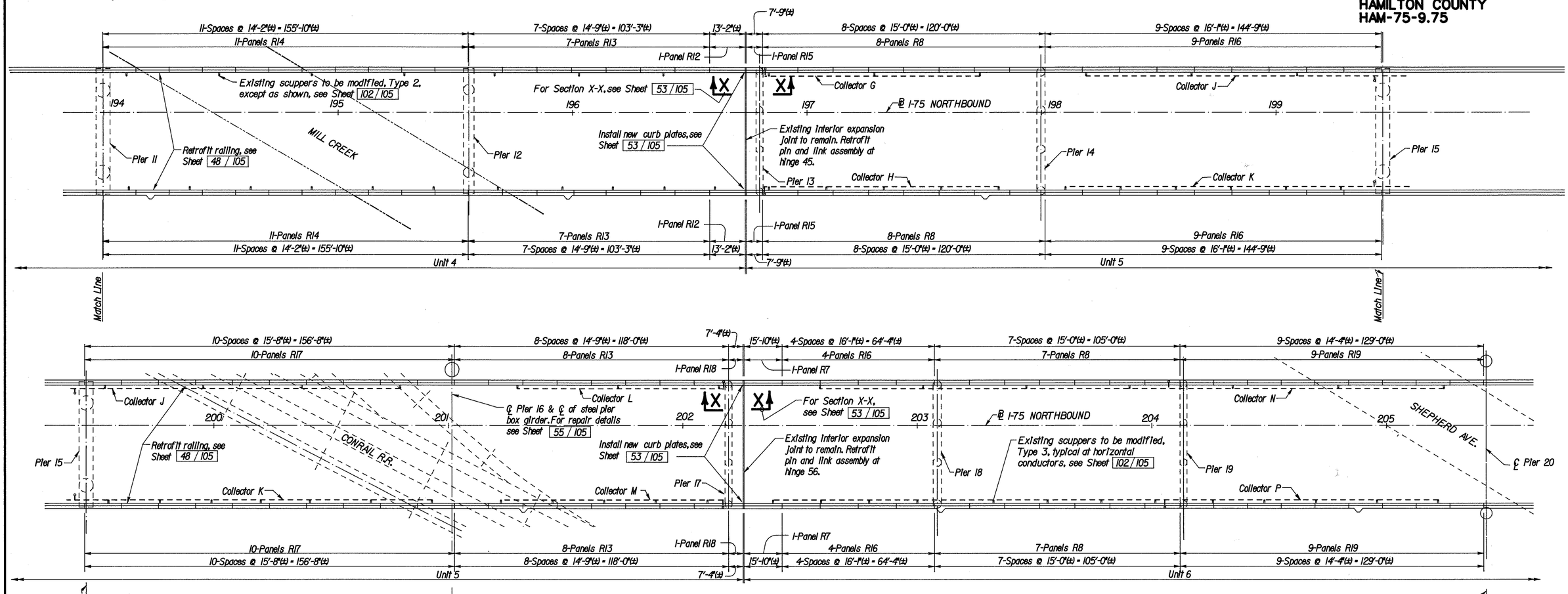
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

280 / 338

HAMILTON COUNTY
HAM-75-9.75



GENERAL PLAN

NOTES:

1. For General Notes see Sheet 1 / 105 thru 3 / 105
2. For Abutment Railing Details, see Sheet 52 / 105
3. For End Dam Modification Type A, see Sheet 51 / 105
4. For Superstructure Railing Details, see Sheet 48 / 105
5. For Interior Expansion Joint curb plate Details, see Sheet 53 / 105
6. For Abutment Modification Plans and Details, see Sheet 49 / 105 and 50 / 105
7. For Scupper and Deflection Joint Details, see Sheet 102 / 105
8. For Pier Steel Box Girder Replar Details, see Sheet 54 / 105 thru 57 / 105
9. For Pin and Link Assembly Retrofit Details, see Sheets 58 / 105 thru 66 / 105
10. For Drainage System Details, see Sheets 67 / 105 thru 73 / 105
11. For Reinforcing Steel List, see Sheet 104 / 105
12. For Estimated Quantities, see Sheet 4 / 105
13. For Gusset Plate Retrofit, See Sheet 66A-66D / 105

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

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GENERAL PLAN

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DJJ	HDJ	DJJ	HDJ	MPH 12/92	

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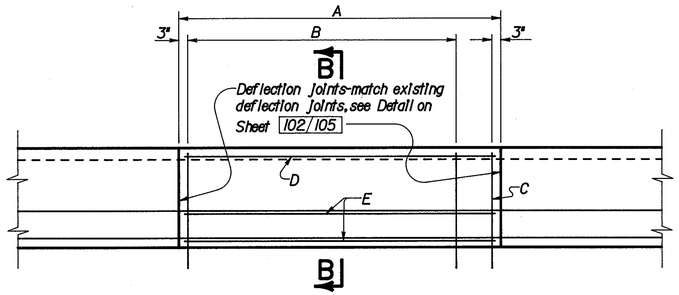
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

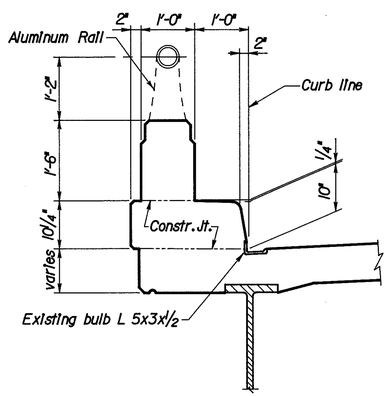
281
338

HAMILTON COUNTY
HAM-75-9.75

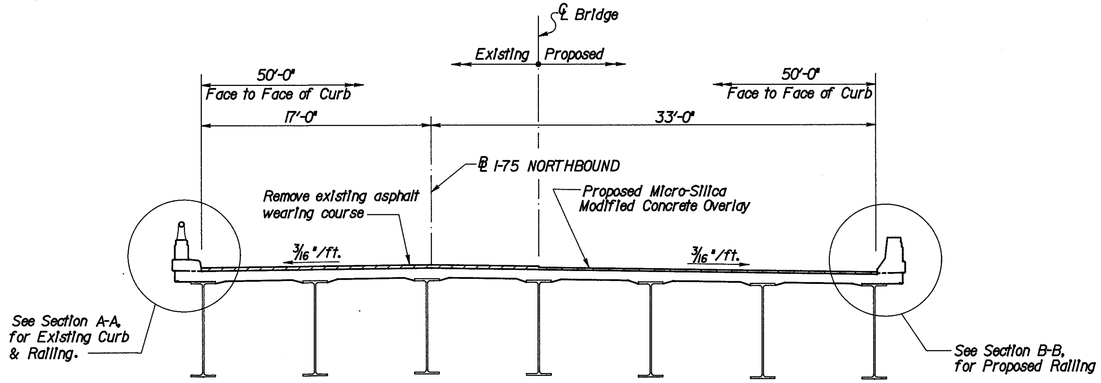


ELEVATION
SUPERSTRUCTURE RAILING PANELS

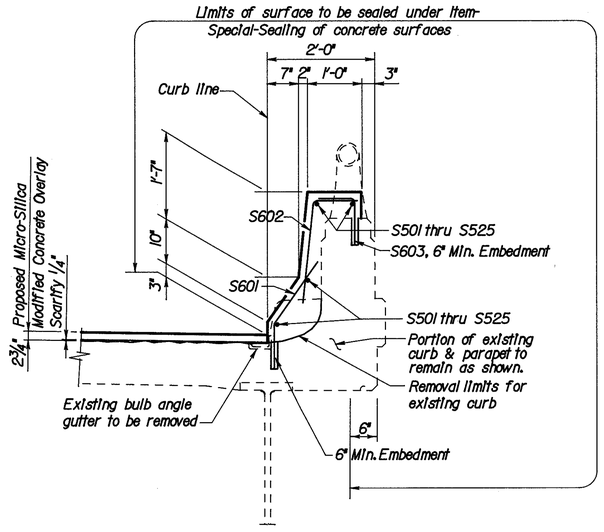
PANEL MARK	NO. Req'd	A	B	C	D	E
R1	1	7'-7"	6 Each - S601,S602 & S603 @ 14" - 5'-10"	1 Each - S601,S602 & S603	2-S501	1-S501
R2	12	16'-0"	13 Each - S601,S602 & S603 @ 14½" - 14'-6"	1 Each - S601,S602 & S603	2-S502	1-S502
R3	8	17'-6"	14 Each - S601,S602 & S603 @ 14½" - 15'-8½"	1 Each - S601,S602 & S603	2-S503	1-S503
R4	1	5'-8"	4 Each - S601,S602 & S603 @ 16" - 4'-0"	1 Each - S601,S602 & S603	2-S504	1-S504
R5	1	6'-8"	5 Each - S601,S602 & S603 @ 15" - 5'-0"	1 Each - S601,S602 & S603	2-S505	1-S505
R6	17	15'-6"	12 Each - S601,S602 & S603 @ 15" - 13'-9"	1 Each - S601,S602 & S603	2-S506	1-S506
R7	16	15'-10"	12 Each - S601,S602 & S603 @ 15½" - 14'-2½"	1 Each - S601,S602 & S603	2-S507	1-S507
R8	36	15'-0"	12 Each - S601,S602 & S603 @ 14½" - 13'-3½"	1 Each - S601,S602 & S603	2-S508	1-S508
R9	2	6'-7"	5 Each - S601,S602 & S603 @ 15" - 5'-0"	1 Each - S601,S602 & S603	2-S509	1-S509
R10	1	8'-1"	6 Each - S601,S602 & S603 @ 16" - 6'-8"	1 Each - S601,S602 & S603	2-S510	1-S510
R11	28	16'-3"	13 Each - S601,S602 & S603 @ 14½" - 14'-6"	1 Each - S601,S602 & S603	2-S511	1-S511
R12	3	13'-2"	10 Each - S601,S602 & S603 @ 16" - 12'-0"	1 Each - S601,S602 & S603	2-S512	1-S512
R13	64	14'-9"	12 Each - S601,S602 & S603 @ 14½" - 13'-3½"	1 Each - S601,S602 & S603	2-S513	1-S513
R14	22	14'-2"	12 Each - S601,S602 & S603 @ 14" - 12'-10"	1 Each - S601,S602 & S603	2-S514	1-S514
R15	3	7'-9"	6 Each - S601,S602 & S603 @ 15" - 6'-3"	1 Each - S601,S602 & S603	2-S515	1-S515
R16	40	16'-1"	13 Each - S601,S602 & S603 @ 14½" - 14'-6"	1 Each - S601,S602 & S603	2-S516	1-S516
R17	20	15'-8"	12 Each - S601,S602 & S603 @ 15½" - 14'-2½"	1 Each - S601,S602 & S603	2-S517	1-S517
R18	2	7'-4"	6 Each - S601,S602 & S603 @ 14" - 5'-10"	1 Each - S601,S602 & S603	2-S518	1-S518
R19	32	14'-4"	12 Each - S601,S602 & S603 @ 14" - 12'-10"	1 Each - S601,S602 & S603	2-S519	1-S519
R20	8	14'-3"	12 Each - S601,S602 & S603 @ 14" - 12'-10"	1 Each - S601,S602 & S603	2-S520	1-S520
R21	3	14'-0"	12 Each - S601,S602 & S603 @ 14" - 12'-10"	1 Each - S601,S602 & S603	2-S521	1-S521
R22	1	8'-11"	7 Each - S601,S602 & S603 @ 14½" - 7'-3"	1 Each - S601,S602 & S603	2-S522	1-S522
R23	1	7'-1"	6 Each - S601,S602 & S603 @ 14" - 5'-10"	1 Each - S601,S602 & S603	2-S523	1-S523
R24	1	15'-1"	12 Each - S601,S602 & S603 @ 14½" - 13'-3½"	1 Each - S601,S602 & S603	2-S524	1-S524
R25	1	7'-5"	6 Each - S601,S602 & S603 @ 14" - 5'-10"	1 Each - S601,S602 & S603	2-S525	1-S525



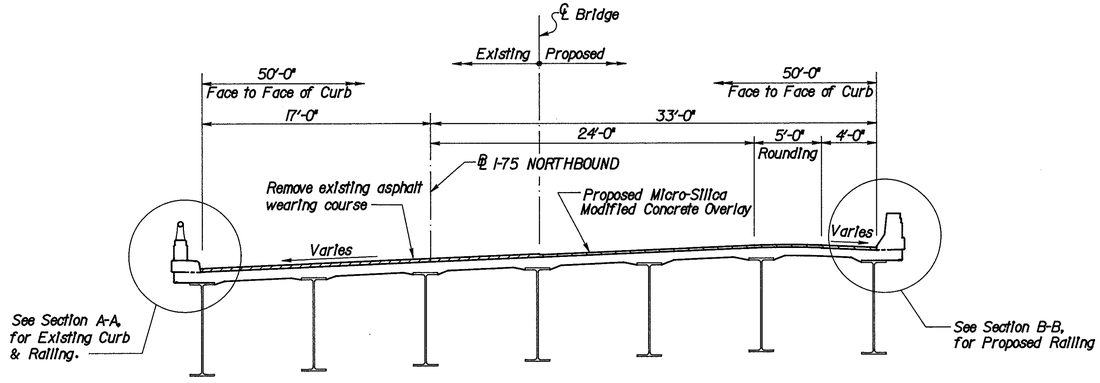
SECTION A-A
EXISTING CURB & RAILING



TYPICAL NORMAL SECTION



SECTION B-B
PROPOSED RAILING



TYPICAL SUPERELEVATED SECTION

LOCKWOOD, JONES & BEALS
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DAYTON, OHIO

48/105

TYPICAL SECTIONS & SUPER-STRUCTURE RAILING DETAILS

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DJJ	HDJ	DJJ	HDJ	MPH 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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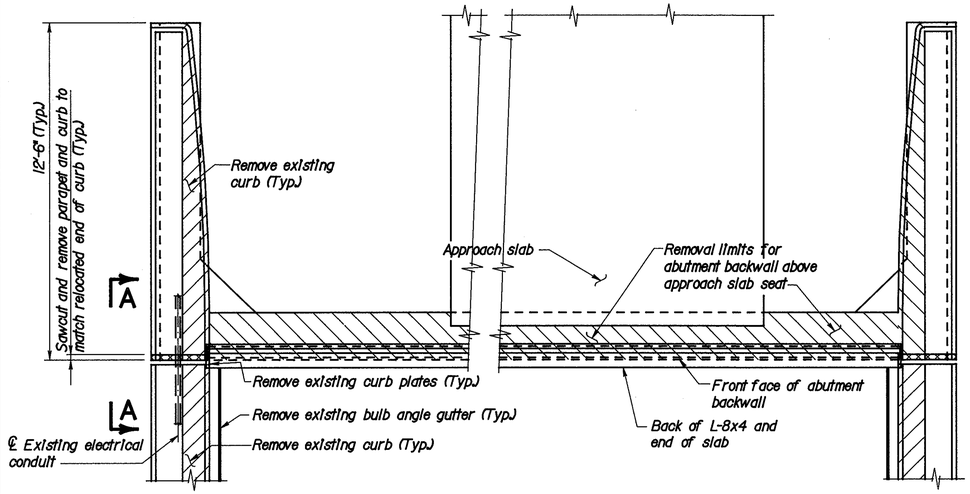
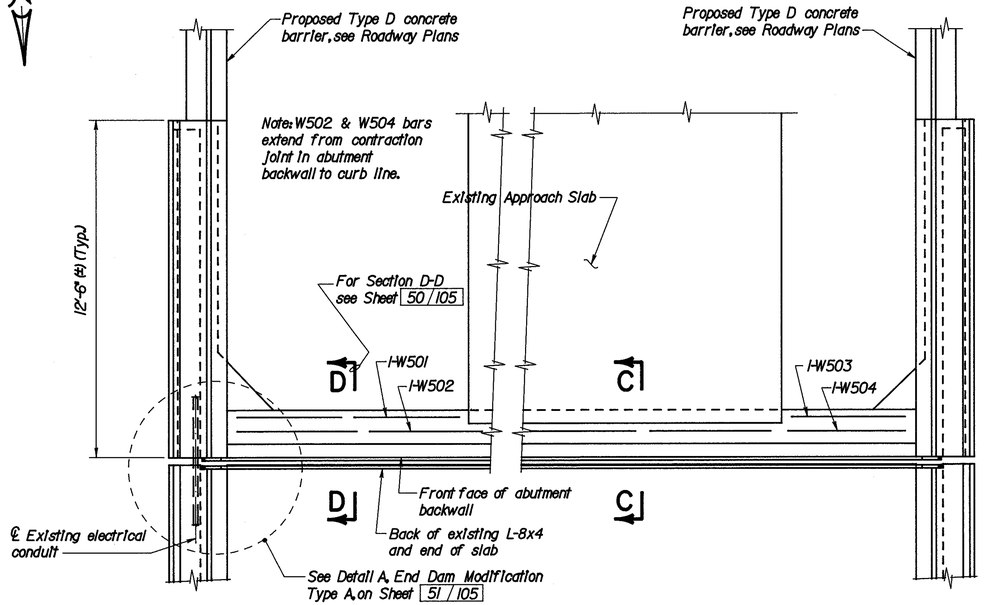
338

HAMILTON COUNTY
HAM-75-9.75



PLAN - EXISTING ABUTMENT



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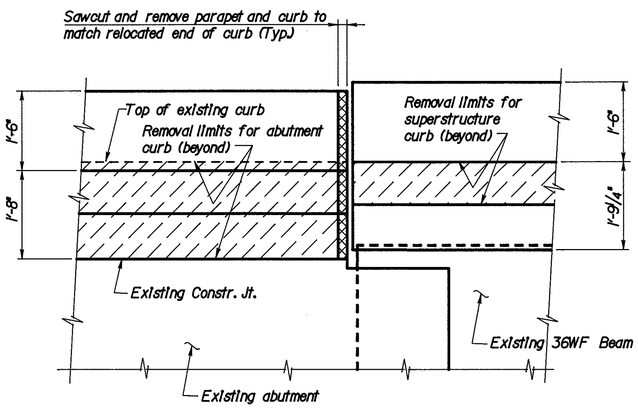
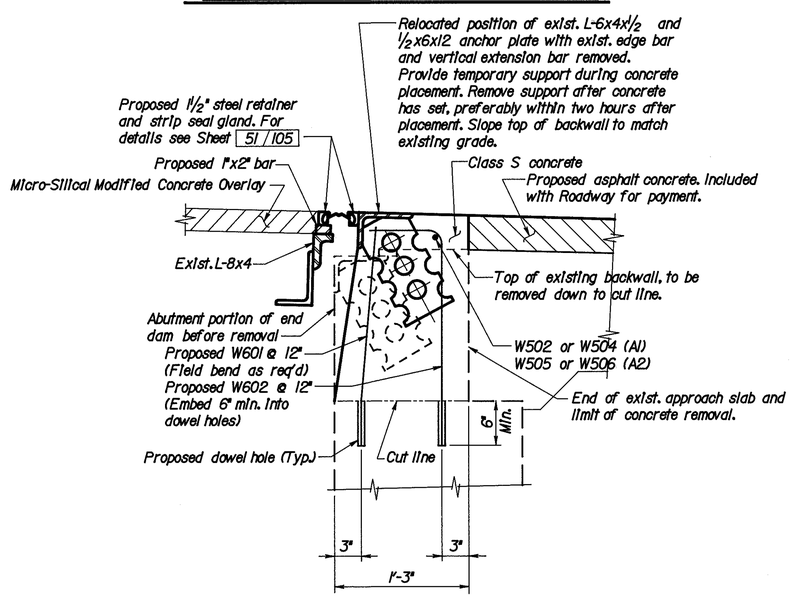


VIEW A-A



SECTION C-C

LOCKWOOD, JONES & BEALS
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DAYTON, OHIO

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ABUTMENT 1 MODIFICATIONS
PLANS AND DETAILS
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
MJZ	HDJ	MJZ	HDJ	MPH 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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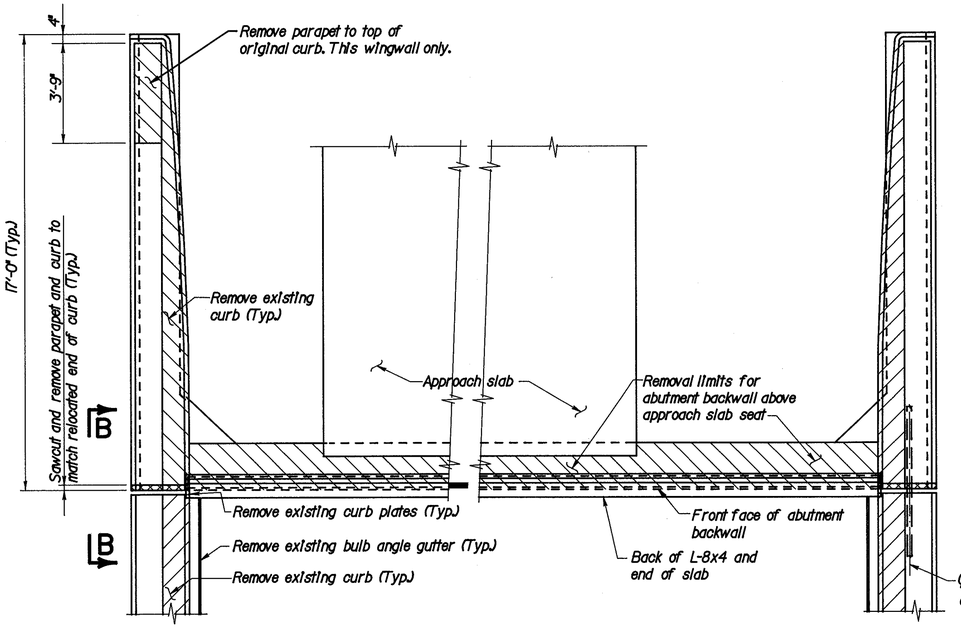
338

HAMILTON COUNTY
HAM-75-9.75



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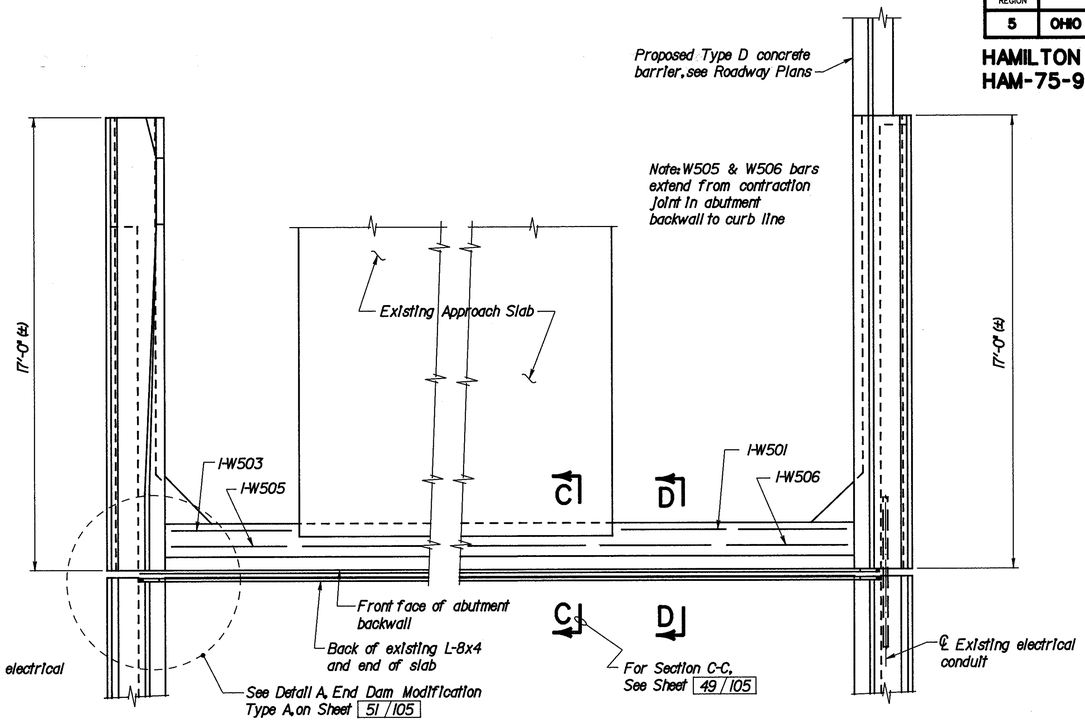
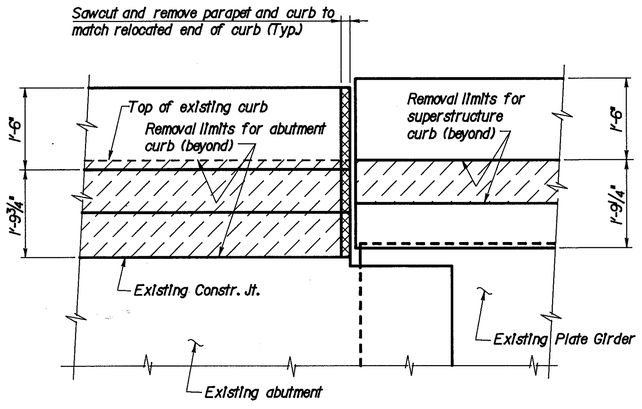
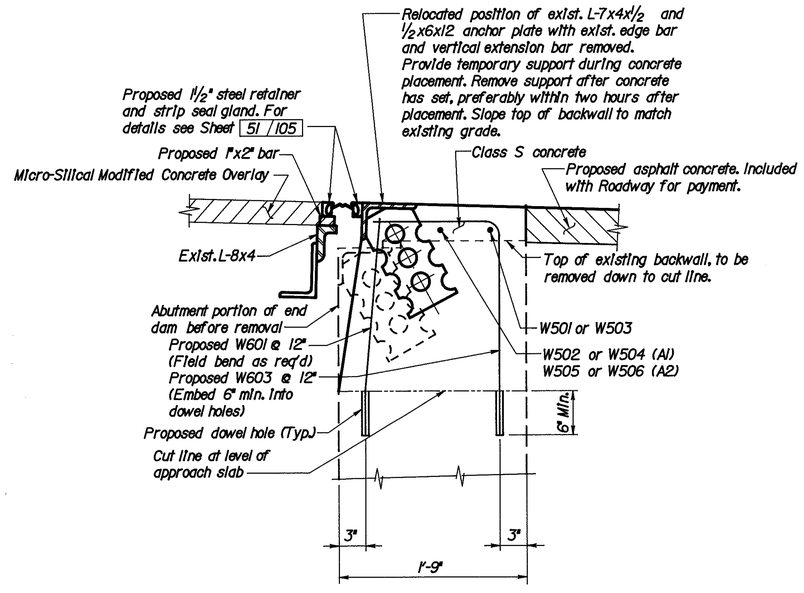


PLAN - MODIFIED ABUTMENT



VIEW B-B



SECTION D-D

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO
50/105

ABUTMENT 2 MODIFICATIONS
PLANS AND DETAILS
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
MJZ	HDJ	MJZ	HDJ	MPH 12/92	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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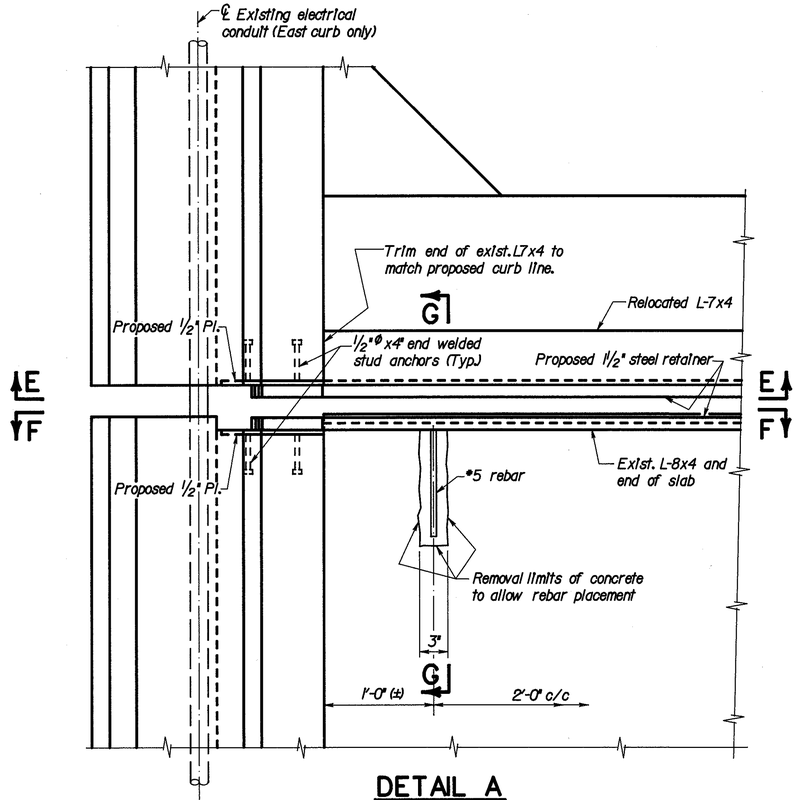
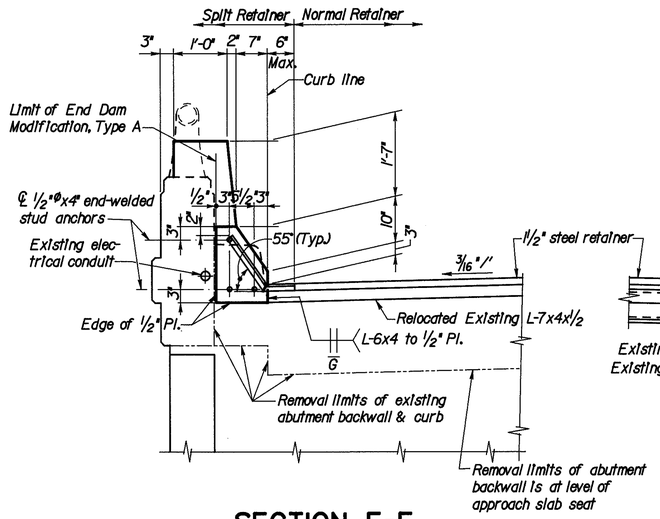
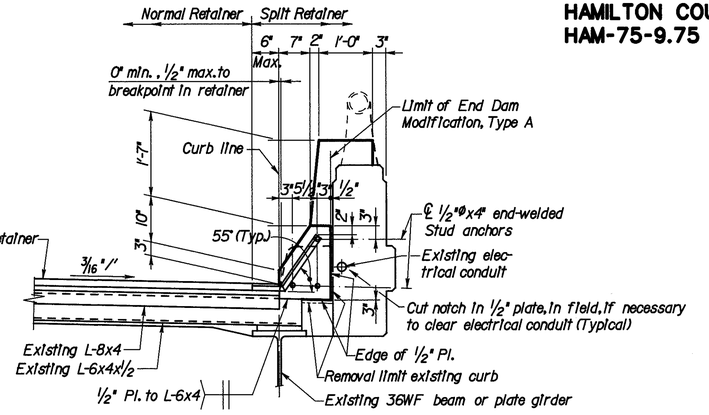
HAMILTON COUNTY
HAM-75-9.75



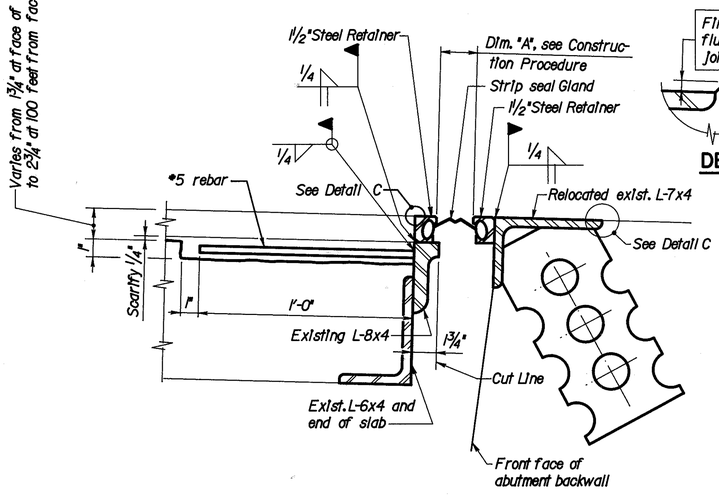
DETAIL A
END DAM MODIFICATION, TYPE A



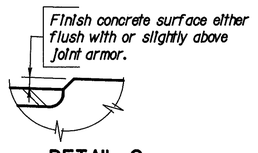
SECTION E-E



SECTION F-F



SECTION G-G



DETAIL C

Construction Procedure:

1. Place backwall concrete during stable or rising ambient temperatures and conclude placement immediately before the day's peak ambient temperature.
2. Not more than four hours prior to the day's peak ambient temperature install the backwall L-7x4x1/2 with the 1 1/2" steel retainer attached. At abutment 1, dimension "A" shall be 1 3/4" at 60° F. for each 10° F. above 60° F. the 1 3/4" dimension shall be decreased by 1/16" and for each 10° F. below 60° F. the 1 3/4" dimension shall be increased by 1/16".
   At abutment 2, dimension "A" shall be 2" at 60° F. for each 10° F. above 60° F. the 2" dimension shall be decreased by 1/4" and for each 10° F. below 60° F. the 2" dimension shall be increased by 1/4".
3. The strip seal shall have a minimum movement rating of 3 inches at abutment 1 and 4 inches at abutment 2.
4. At the time of seal gland installation, dimension "A" shall not be less than 1 1/2". If the joint opening is less, the installation shall be postponed until the temperature drops a sufficient amount to allow the 1 1/2" opening.

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END DAM MODIFICATION DETAILS

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
MJZ	HDJ	MJZ	HDJ	MPH 12/92	

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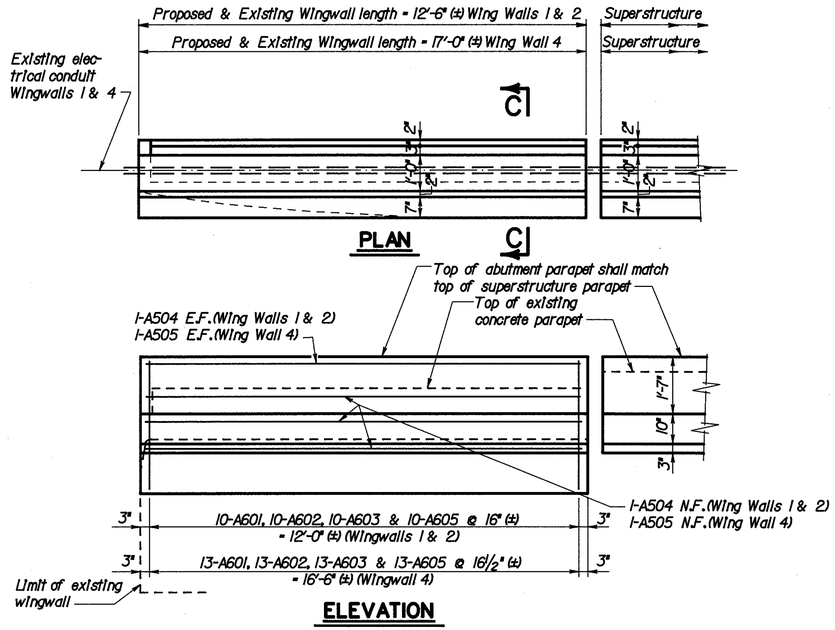
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

285
338

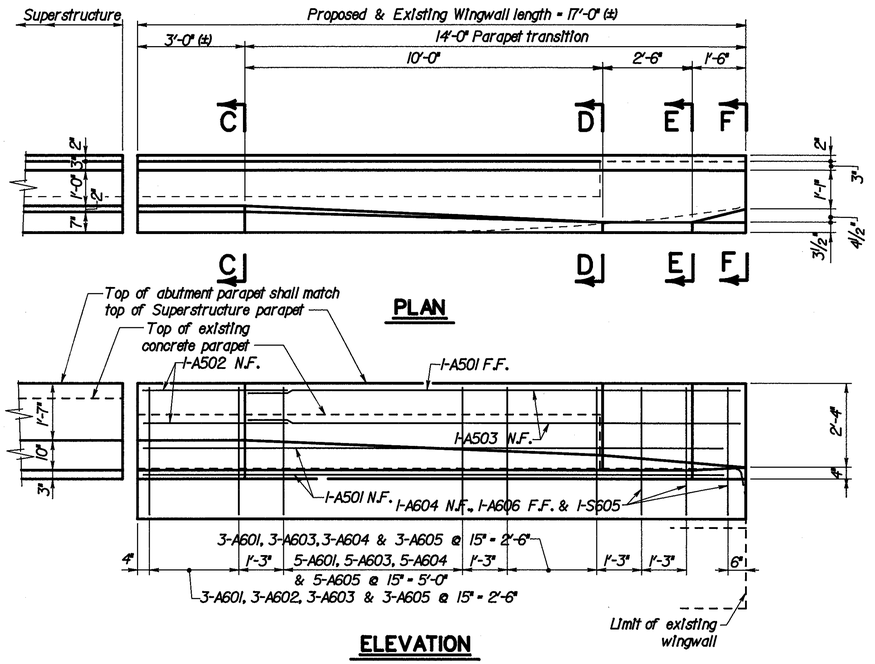
HAMILTON COUNTY
HAM-75-9.75



ELEVATION

RAILING DETAILS AT ABUTMENT 1 & 2

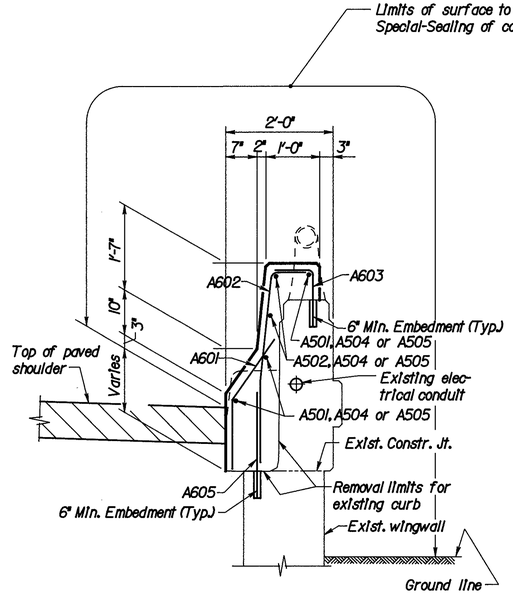
WINGWALL 2 SHOWN, WINGWALLS 1 & 4 SIMILAR



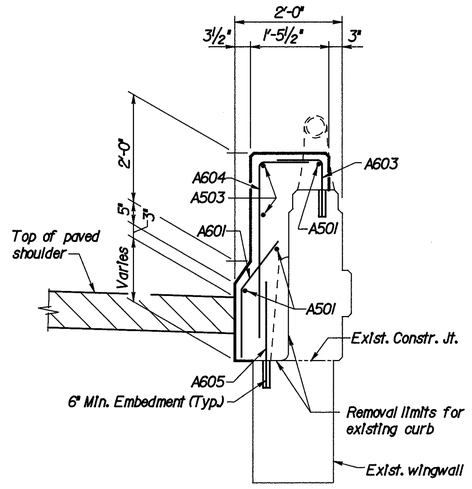
ELEVATION

RAILING DETAILS AT ABUTMENT 2

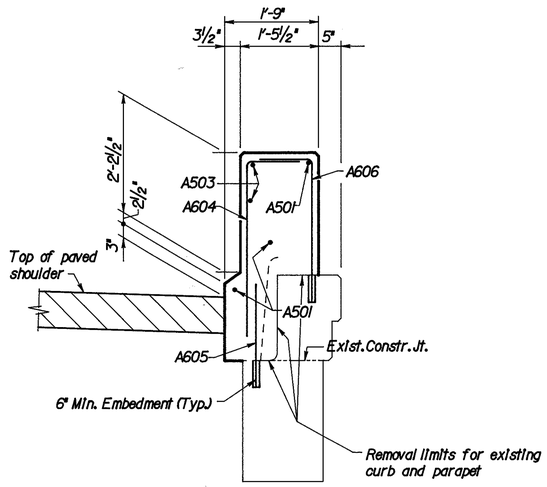
WINGWALL 3



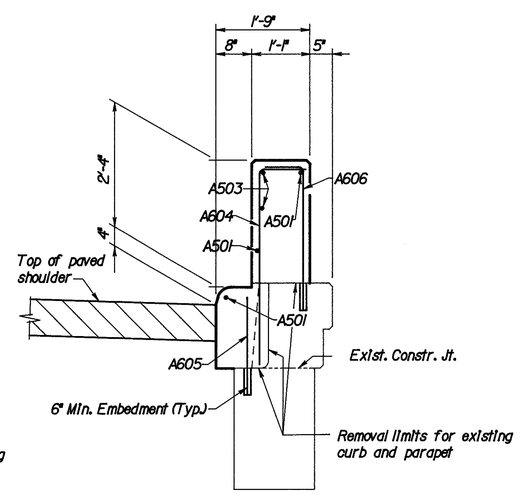
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

LEGEND

E.F. = Each Face
N.F. = Near Face
F.F. = Far Face

NOTES

1. For Reinforcing Steel List, see sheet 104/105

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ABUTMENT RAILING DETAILS

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
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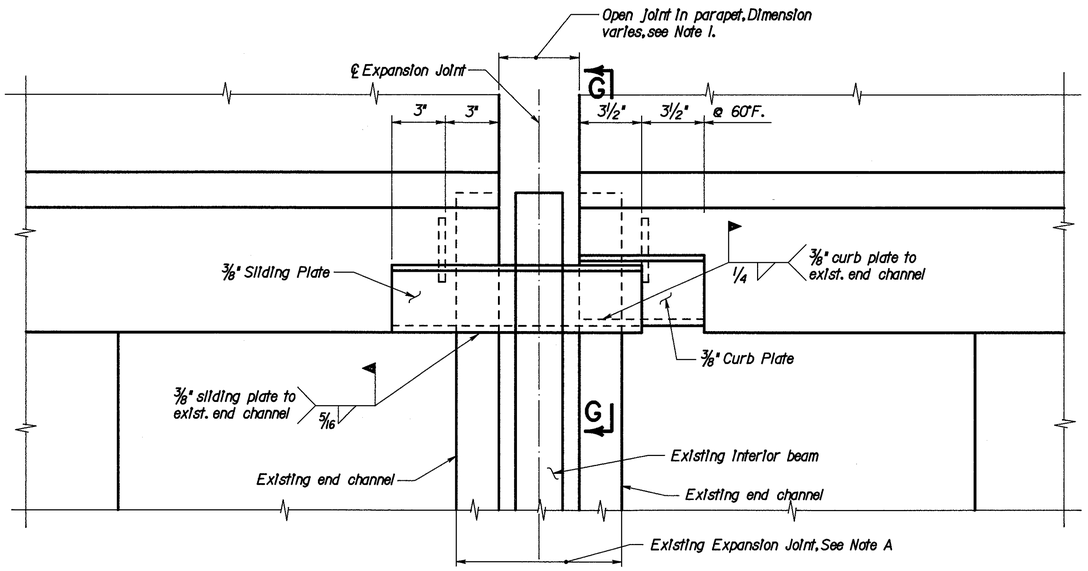
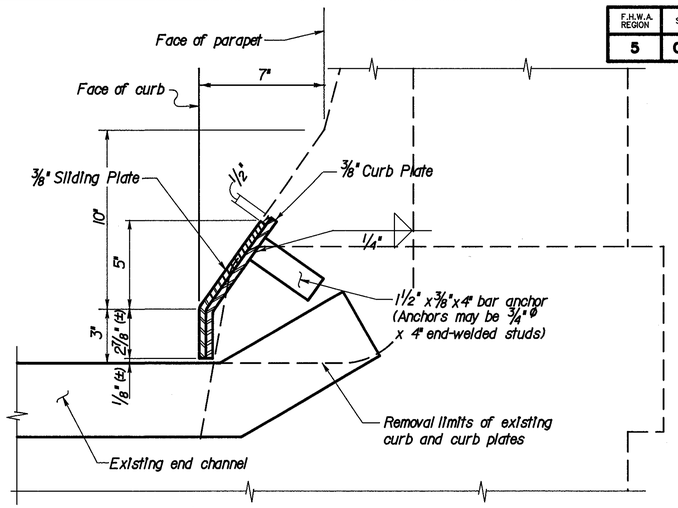
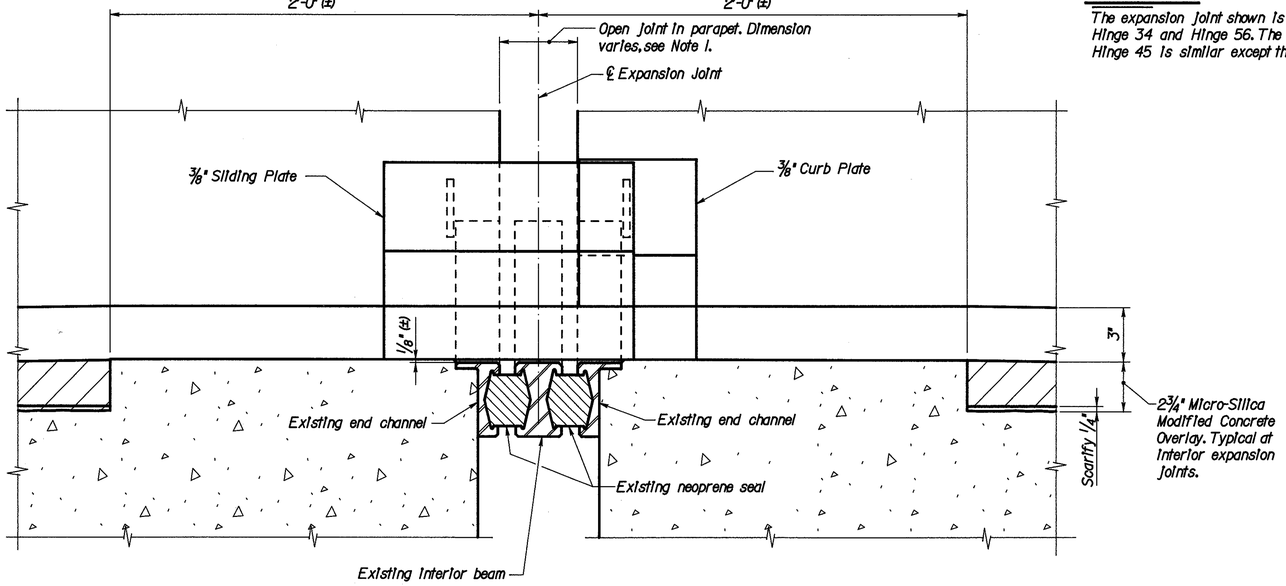


PLAN



SECTION G-G



SECTION X-X

CURB PLATE DETAILS

NOTE A

The expansion joint shown is at Hinge 12, Hinge 23, Hinge 34 and Hinge 56. The expansion joint at Hinge 45 is similar except ther are two interior beams

NOTE B

1. The curb plate details apply, each side, at all interior expansion joints. The open joint in the parapet varies at each expansion joint and the dimensions given are for 60° F. Field measure the open joint and make necessary adjustments for temperature to determine the length of the ⅜" sliding plate. In order to determine the theoretical joint opening at 60° F., the actual joint opening shall be measured and the temperature recorded. For each 10° F. above 60° F. the joint opening shall be decreased by the tabulated joint opening adjustment and for each 10° F. below 60° F. the joint opening shall be increased by the tabulated joint opening adjustment.

JOINT OPENING ADJUSTMENT PER 10° F

- @ Hinge 12 - ⅛"
- @ Hinge 25 - 5/16"
- @ Hinge 34 - 5/16"
- @ Hinge 45 - 1/16"
- @ Hinge 56 - ⅜"

2. Due to the vertical movement induced by the pin and link assembly, do not install the curb plates until after the retrofit of all the pin and link assebiles is complete and the links are disconnected in the bay adjacent to the expansion joint at which the curb plates are being installed.

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CURB PLATES AT INTERIOR EXPANSION JOINTS PLANS AND DETAILS

BRIDGE NO. HAM-75-1192R

NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	HDJ	MPH 12/92	

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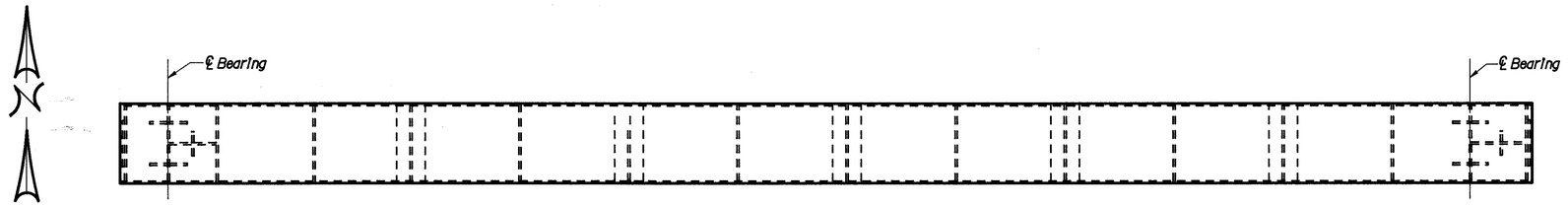
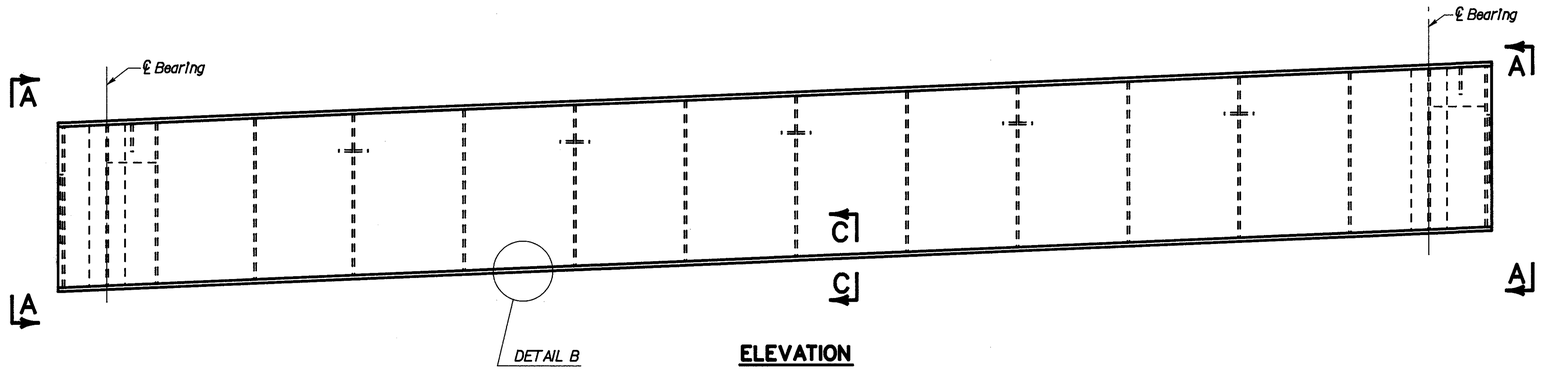
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

287
338

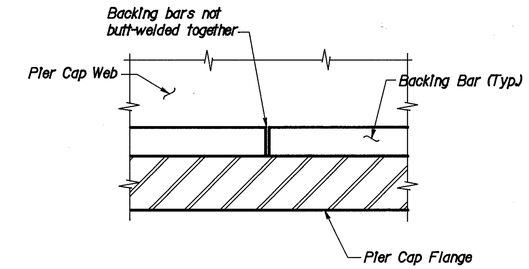
HAMILTON COUNTY
HAM-75-9.75



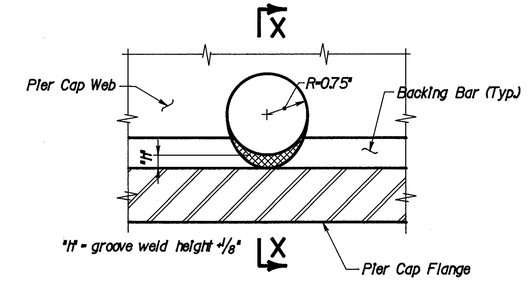
PLAN



ELEVATION
PIER CAP



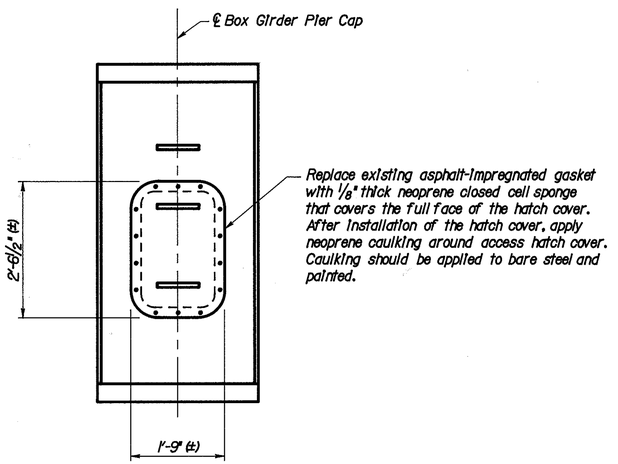
EXISTING DETAIL



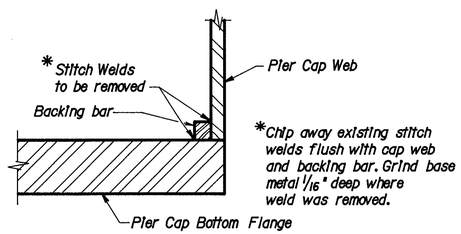
PROCEDURE
1. *Drill 1½" ø hole through web and backing bar.*
2. *Remove crosshatched area by grinding. Final surfaces shall be smooth.*
3. *Preform magnetic particle and/or dye penetrant tests of the remaining metal in the presence of the Engineer.*

RETROFIT DETAIL
DETAIL B

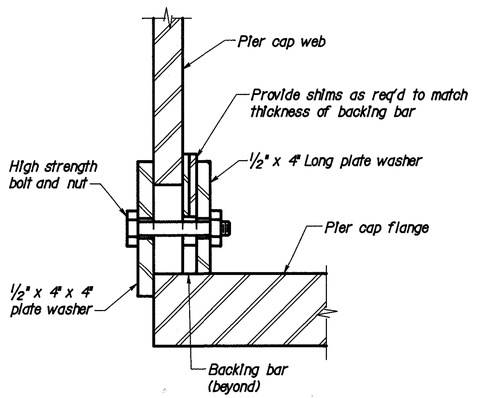
BOTTOM FLANGE SHOWN.
TOP FLANGE SIMILAR.



SECTION A-A



SECTION C-C



SECTION X-X

NOTES

1. *Clean and paint areas where paint has failed on the inside of the pier cap. Include with Item Special - Field painting of existing steel system OZEU.*

LOCKWOOD, JONES & BEALS
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STEEL PIER CAP REPAIR AT PIER 5
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVENUE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
B&N	B&N	MJZ	DFS	HDJ 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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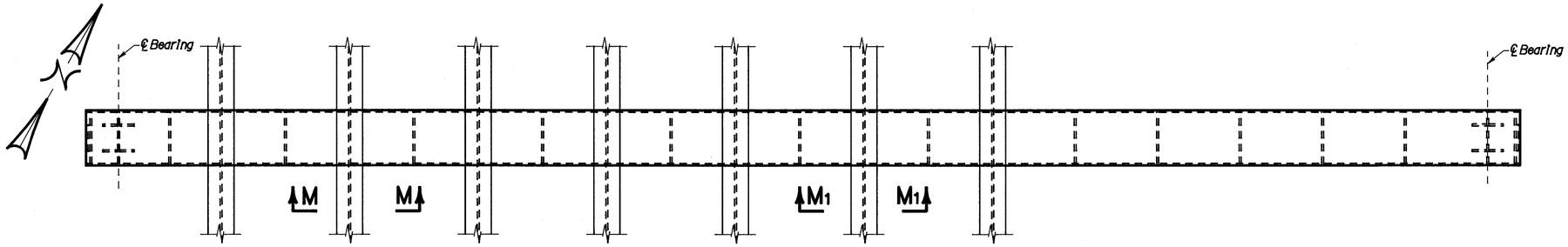
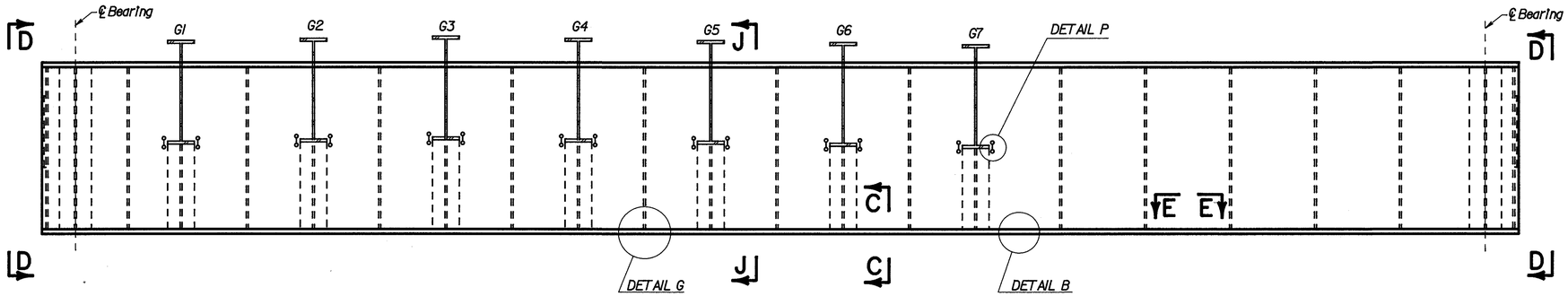
HAMILTON COUNTY
HAM-75-9.75



PLAN

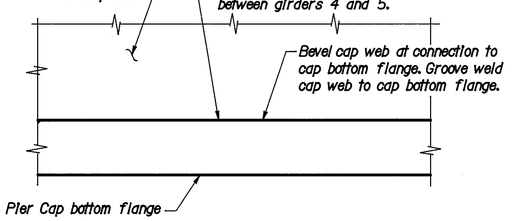


ELEVATION

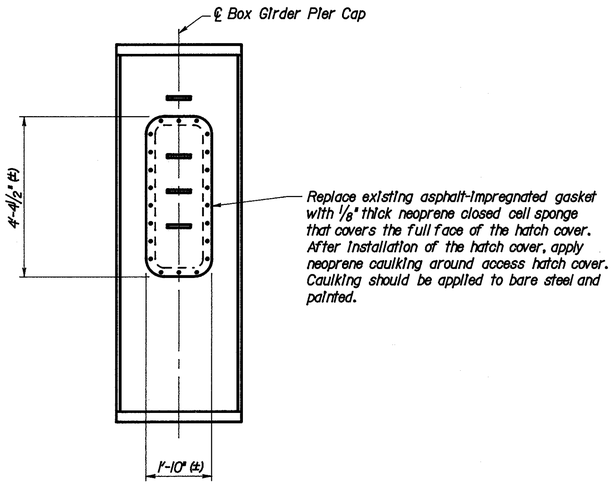
PIER CAP

NOTES

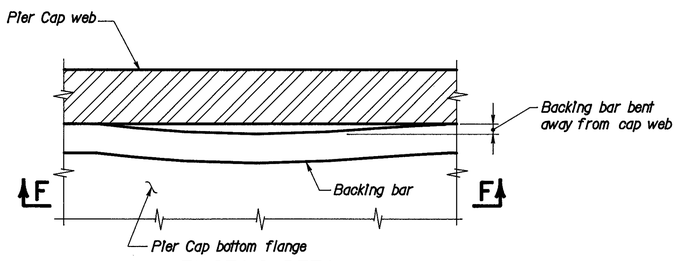
1. Clean and paint areas where paint has failed on the inside of the pier cap. Include with Item - Special - Field painting of existing steel, system OZEU.
2. For Detail B and Section C-C, see Sheet 54/105
3. For Sections J-J, M-M and M_1-M_1, see Sheet 57/105
4. For Detail P, see Sheet 57/105



DETAIL G

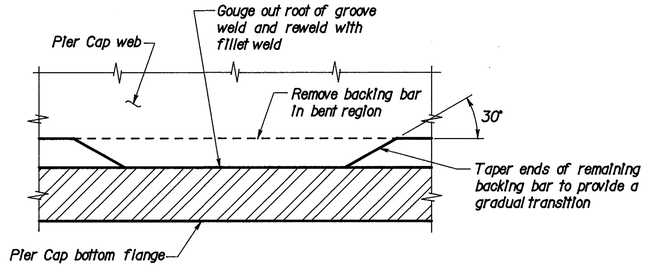


SECTION D-D



EXISTING DETAIL

SECTION E-E



RETROFIT DETAIL

SECTION F-F

LOCKWOOD, JONES & BEALS
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STEEL PIER CAP REPAIR AT PIER 16

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVENUE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
B&N	B&N	MJZ	DFS	HDJ 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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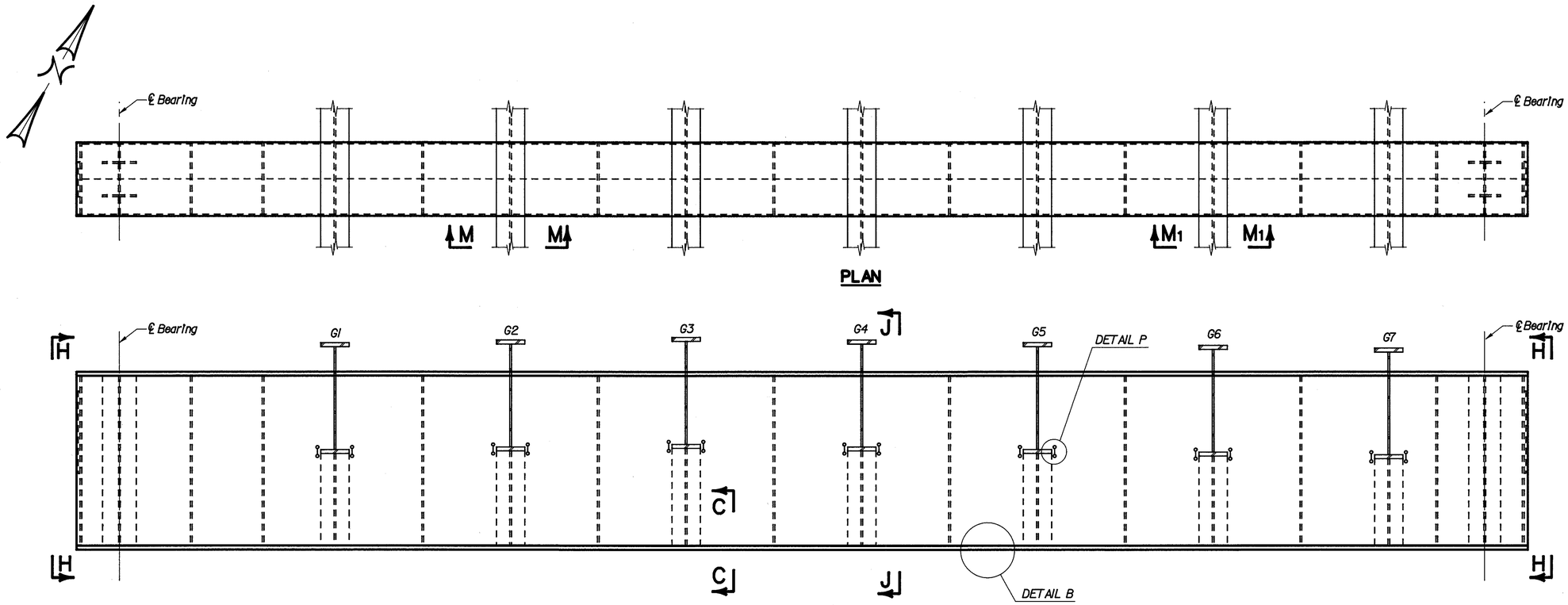
338

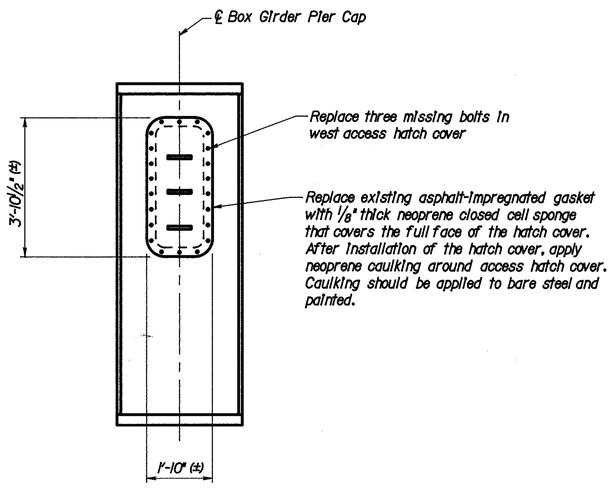
HAMILTON COUNTY
HAM-75-9.75



PLAN

ELEVATION

PIER CAP



SECTION H-H

NOTES

1. Clean and paint areas where paint has failed on the inside of the pier cap. Include with Item - Special - Field painting of existing steel, system OZEU.
2. Grind flush any nicks or gouges in the cap bottom flange resulting from minor collision damage.
3. Grind weld material flush with pier cap web on the inside of the north web plate just west of girder G4.
4. Remove broken glass from inside pier cap.
5. For Detail B and Section C-C, see Sheet 54/105
6. For Sections J-J, M-M and M1-M1, see Sheet 57/105
7. For Detail P, see Sheet 57/105

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

56/105

STEEL PIER CAP REPAIR AT PIER 20

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVENUE.

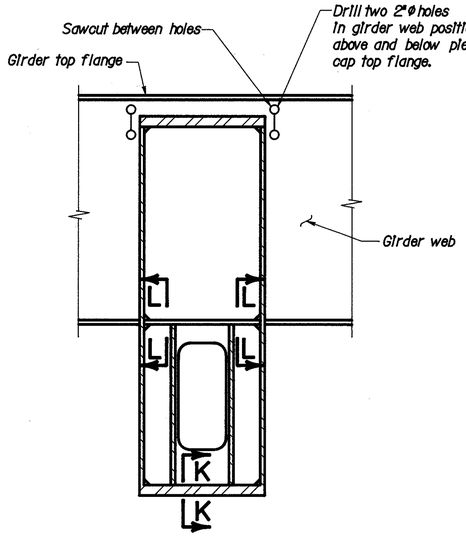
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
B&N	B&N	MJZ	DFS	HDJ 12/92	

f:\6272\1192pc3.dgn Feb. 24, 1993 13:29:07

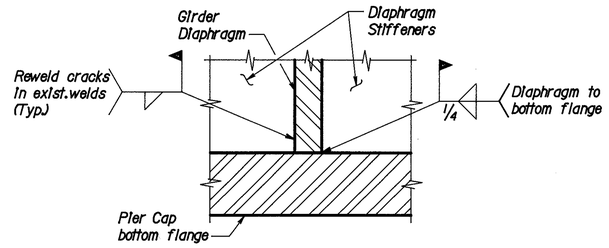
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

290
338

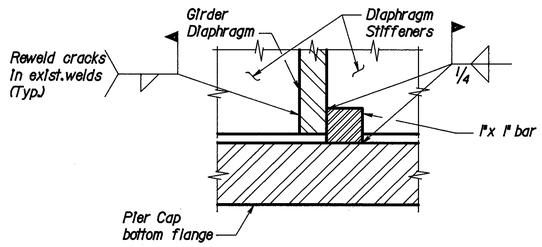
HAMILTON COUNTY
HAM-75-9.75



SECTION J-J

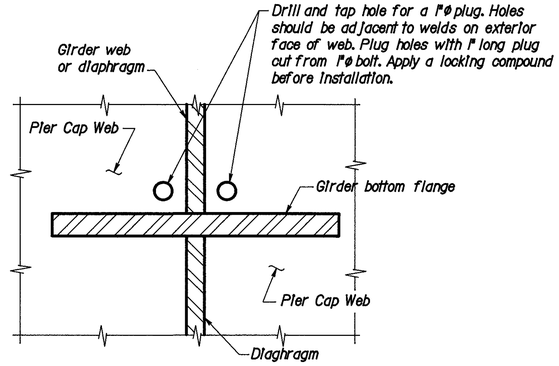


RETROFIT DETAIL WHERE DIAPHRAGM BUTTS AGAINST CAP FLANGE

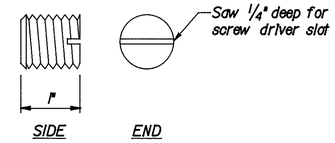


RETROFIT DETAIL WHERE DIAPHRAGM IS NOT BUTTED AGAINST CAP FLANGE

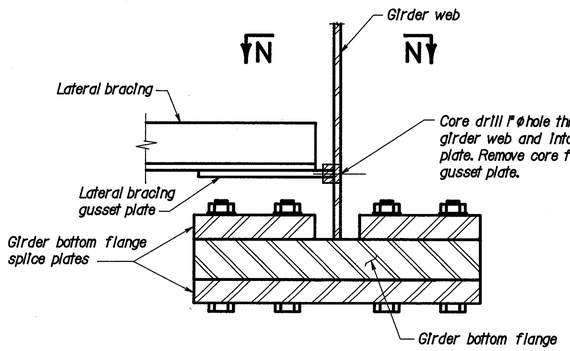
SECTION K-K



SECTION L-L

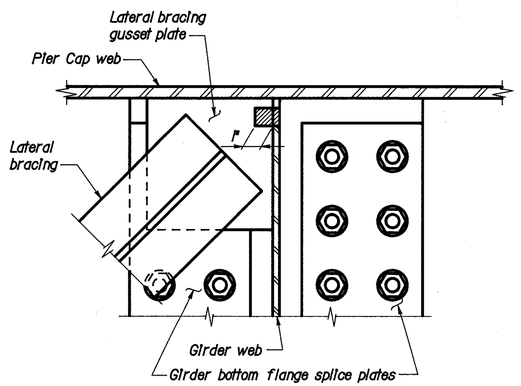


PLUGS FOR HOLES

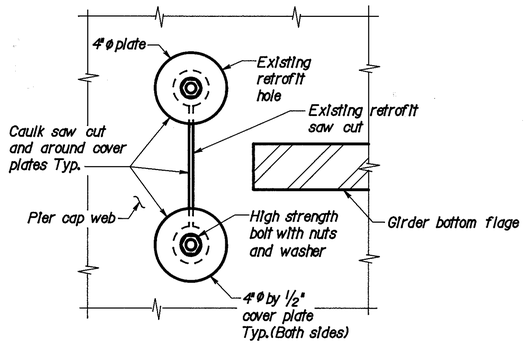


SECTION M-M

SECTION M_1-M_1 OPP. HAND



SECTION N-N



DETAIL P

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

57 / 105

STEEL PIER CAP REPAIR DETAILS

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVENUE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
B&N	B&N	MJZ	DFS	HDJ 12/92	

f:\62772\1192pc4.dgn Feb. 24, 1993 11:53:42

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

291
338

HAMILTON COUNTY
HAM-75-9.75

HINGE 12

PHASE I

(a) Modify the existing crossframes F3 and F4 at girders G4 thru G7.
(b) Remove the existing crossframes F2 and 6"x1/2" plates at girders G4 thru G7.
(c) Install bearing and jacking brackets at girders G4 thru G7.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G4 thru G7.
(e) Install the proposed crossframes F2A and F4A between girders G4 and G7.
(f) Install jacks at girder G5.
(g) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G5.
(h) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 19k, whichever occurs first.
(i) Remove existing pins and hinge plates at girder G5.
(j) Lower the jacks and install the intermediate 6x3/8 stiffeners.
(k) Repeat steps f thru j for girders G6 and G7.

PHASE II

(a) Install jacks at girder G4.
(b) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at girder G4.
(c) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 19k, whichever occurs first.
(d) Remove existing pins and hinge plates at girder G4.
(e) Lower the jacks and install the intermediate 6x3/8 stiffeners.

PHASE III

(a) Modify the existing crossframes F3 and F4 at girders G1 thru G3.
(b) Remove the existing crossframes F2 and 6"x1/2" plates at girders G1 thru G3.
(c) Install bearing and jacking brackets at girders G1 thru G3.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G1 thru G3.
(e) Install the proposed crossframes F2A and F4A between girders G1 and G4.
(f) Install jacks at girder G1.
(g) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G1.
(h) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 19k, whichever occurs first.
(i) Remove existing pins and hinge plates at girder G1.
(j) Lower the jacks and install the intermediate 6x3/8 stiffeners.
(k) Repeat steps f thru j for girders G2 and G3.

HINGE 45

PHASE I

(a) Remove the existing crossframe F16 and the 3/8" stiffener plates at girders G4 thru G7.
(b) Remove the exterior diagonals and modify the stiffeners of existing crossframes F19 at griders G4 thru G7.
(c) Install bearing and jacking brackets at girders G4 thru G7.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G4 thru G7.
(e) Complete the modification of existing crossframes F19 at girders G4 thru G7.
(f) Install the proposed crossframes F16A between girders G4 and G7.
(g) Install jacks at girder G5.
(h) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G5.
(i) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 40k, whichever occurs first.
(j) Remove existing pins and hinge plates at girder G5.
(k) Lower the jacks and install the intermediate 6x3/8 stiffeners.
(l) Repeat steps g thru k for girders G6 and G7.

PHASE II

(a) Install jacks at girder G4.
(b) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at girder G4.
(c) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 40k, whichever occurs first.
(d) Remove existing pins and hinge plates at girder G4.
(e) Lower the jacks and install the intermediate 6x3/8 stiffeners.

PHASE III

(a) Remove the existing crossframe F16 and the 3/8" stiffener plates at girders G1 thru G3.
(b) Remove the exterior diagonals and modify the stiffeners of existing crossframes F19 at griders G1 thru G3.
(c) Install bearing and jacking brackets at girders G1 thru G3.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G1 thru G3.
(e) Complete the modification of existing crossframes F19 at girders G1 thru G3.
(f) Install the proposed crossframes F16A between girders G1 and G4.
(g) Install jacks at girder G1.
(h) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G1.
(i) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 40k, whichever occurs first.
(j) Remove existing pins and hinge plates at girder G1.
(k) Lower the jacks and install the intermediate 6x3/8 stiffeners.
(l) Repeat steps g thru k for girders G2 and G3.

HINGE 23

PHASE I

(a) Modify the existing crossframes F3 and remove crossframes F8 and the 3/8" stiffener plates at girders G4 thru G7.
(b) Remove the exterior diagonals and modify the channel and stiffeners of existing crossframes F11 at girders G4 thru G7.
(c) Install bearing and jacking brackets at girders G4 thru G7.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G4 thru G7.
(e) Complete the modification of existing crossframes F11 at girders G4 thru G7.
(f) Install the proposed crossframes F8A between girders G4 and G7.
(g) Install jacks at girder G5.
(h) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G5.
(i) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 31k, whichever occurs first.
(j) Remove existing pins and hinge plates at girder G5.
(k) Lower the jacks and install the intermediate 6x3/8 stiffeners.
(l) Repeat steps g thru k for girders G6 and G7.

PHASE II

(a) Install jacks at girder G4.
(b) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at girder G4.
(c) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 31k, whichever occurs first.
(d) Remove existing pins and hinge plates at girder G4.
(e) Lower the jacks and install the intermediate 6x3/8 stiffeners.

PHASE III

(a) Modify the existing crossframes F3 and remove crossframes F8 and the 3/8" stiffener plates at girders G1 thru G3.
(b) Remove the exterior diagonals and modify the channel and stiffeners of existing crossframes F11 at girders G1 thru G3.
(c) Install bearing and jacking brackets at girders G1 thru G3.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G1 thru G3.
(e) Complete the modification of existing crossframes F11 at girders G1 thru G3.
(f) Install the proposed crossframes F8A between girders G1 and G4.
(g) Install jacks at girder G1.
(h) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G1.
(i) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 31k, whichever occurs first.
(j) Remove existing pins and hinge plates at girder G1.
(k) Lower the jacks and install the intermediate 6x3/8 stiffeners.
(l) Repeat steps g thru k for girders G2 and G3.

HINGE 56

PHASE I

(a) Remove the existing crossframes F22 and the 3/8" stiffener plates at girders G4 thru G7.
(b) Remove the exterior diagonals and modify the channel and stiffeners of existing crossframes F23 at girders G4 thru G7.
(c) Install bearing and jacking brackets at girders G4 thru G7.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G4 thru G7.
(e) Complete the modification of existing crossframes F23 at girders G4 thru G7.
(f) Install the proposed crossframes F22A between girders G4 and G7.
(g) Install jacks at girder G5.
(h) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G5.
(i) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 30k, whichever occurs first.
(j) Remove existing pins and hinge plates at girder G5.
(k) Lower the jacks and install the intermediate 6x3/8 stiffeners.
(l) Repeat steps g thru k for girders G6 and G7.

PHASE II

(a) Install jacks at girder G4.
(b) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at girder G4.
(c) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 30k, whichever occurs first.
(d) Remove existing pins and hinge plates at girder G4.
(e) Lower the jacks and install the intermediate 6x3/8 stiffeners.

PHASE III

(a) Remove the existing crossframe F22 and the 3/8" stiffener plates at girders G1 thru G3.
(b) Remove the exterior diagonals and modify the channel and stiffeners of existing crossframes F23 at girders G1 thru G3.
(c) Install bearing and jacking brackets at girders G1 thru G3.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G1 thru G3.
(e) Complete the modification of existing crossframes F23 at girders G1 thru G3.
(f) Install the proposed crossframes F22A between girders G1 and G4.
(g) Install jacks at girder G1.
(h) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G1.
(i) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 30k, whichever occurs first.
(j) Remove existing pins and hinge plates at girder G1.
(k) Lower the jacks and install the intermediate 6x3/8 stiffeners.
(l) Repeat steps g thru k for girders G2 and G3.

HINGE 34

PHASE I

(a) Modify the existing crossframes F3 and remove crossframes F8 and the 3/8" stiffener plates at girders G4 thru G7.
(b) Remove the exterior diagonals and modify the channel and stiffeners of existing crossframes F14 at girders G4 thru G7.
(c) Install bearing and jacking brackets at girders G4 thru G7.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G4 thru G7.
(e) Complete the modification of existing crossframes F14 at girders G4 thru G7.
(f) Install the proposed crossframes F8A between girders G4 and G7.
(g) Install jacks at girder G5.
(h) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G5.
(i) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 43k, whichever occurs first.
(j) Remove existing pins and hinge plates at girder G5.
(k) Lower the jacks and install the intermediate 6x3/8 stiffeners.
(l) Repeat steps g thru k for girders G6 and G7.

PHASE II

(a) Install jacks at girder G4.
(b) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at girder G4.
(c) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 43k, whichever occurs first.
(d) Remove existing pins and hinge plates at girder G4.
(e) Lower the jacks and install the intermediate 6x3/8 stiffeners.

PHASE III

(a) Modify the existing crossframes F3 and remove crossframes F8 and the 3/8" stiffener plates at girders G1 thru G3.
(b) Remove the exterior diagonals and modify the channel and stiffeners of existing crossframes F14 at girders G1 thru G3.
(c) Install bearing and jacking brackets at girders G1 thru G3.
(d) Install connector girders, including the field bolted exterior web plates for the tube sections at girders G1 thru G3.
(e) Complete the modification of existing crossframes F14 at girders G1 thru G3.
(f) Install the proposed crossframes F8A between girders G1 and G4.
(g) Install jacks at girder G1.
(h) Extend the jacks until they come in firm contact with the bottom flanges of the connector girders at G1.
(i) Increase the load in each jack simultaneously until the pins and hinge plates become disengaged or when the force in each jack is 43k, whichever occurs first.
(j) Remove existing pins and hinge plates at girder G1.
(k) Lower the jacks and install the intermediate 6x3/8 stiffeners.
(l) Repeat steps g thru k for girders G2 and G3.

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

58 / 105

PIN & LINK ASSEMBLY RETROFIT CONSTRUCTION PHASES FOR HINGES

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	DYA	DFS	HDJ 12/92	

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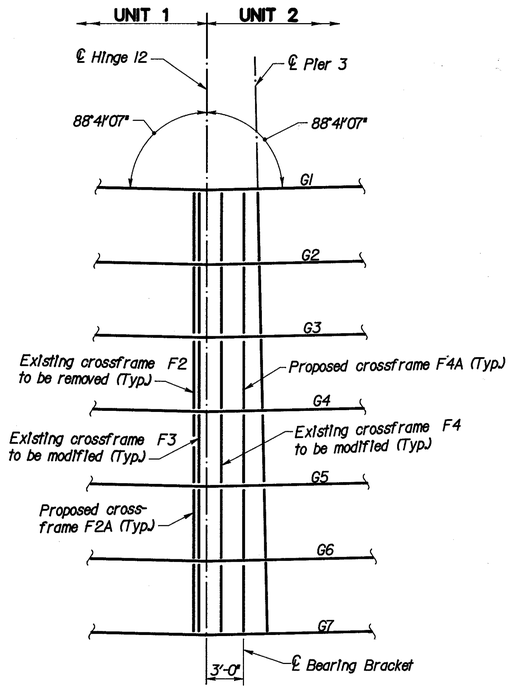
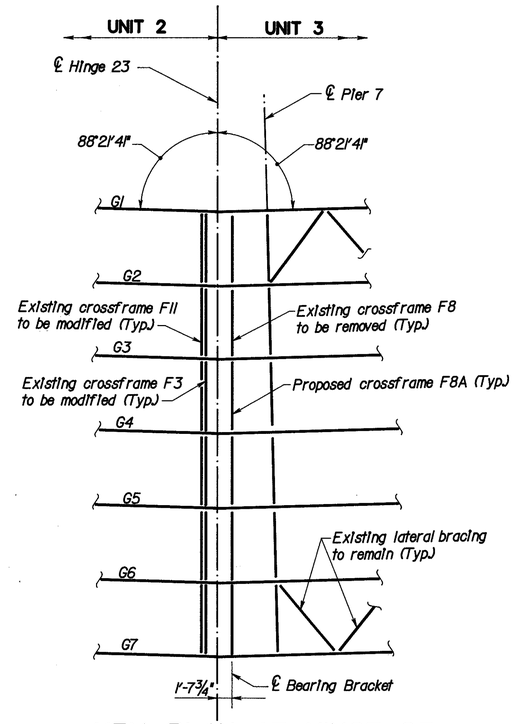
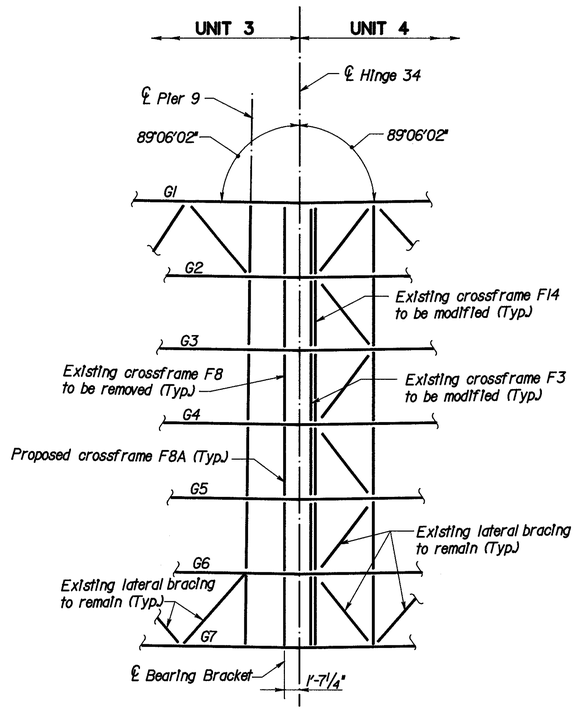


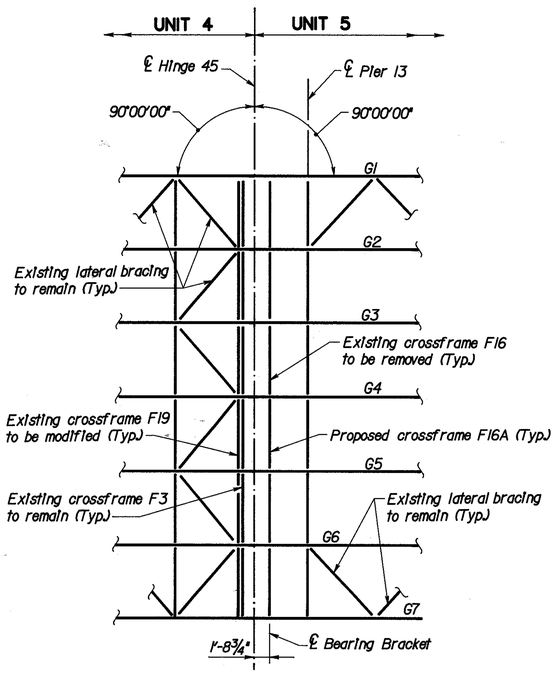
KEY PLAN AT HINGE 12



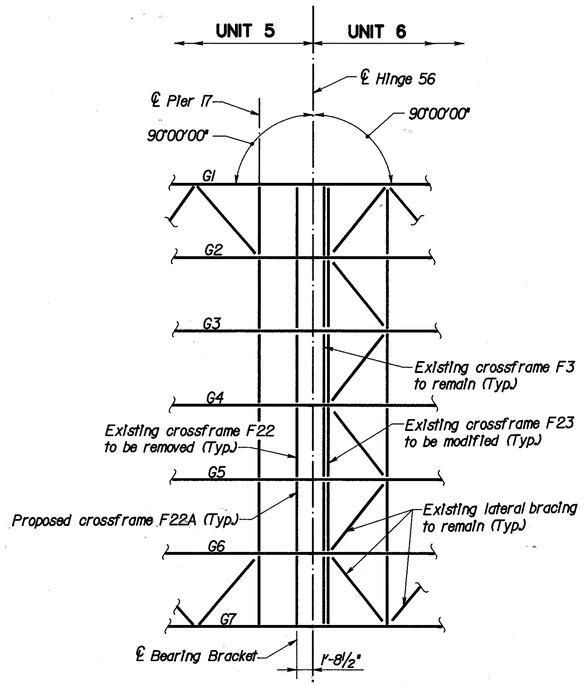
KEY PLAN AT HINGE 23



KEY PLAN AT HINGE 34



KEY PLAN AT HINGE 45



KEY PLAN AT HINGE 56

F.H.W.A. REGION	STATE	PROJECT		292 / 338
5	OHIO			

HAMILTON COUNTY
HAM-75-9.75

NOTES

1. For proposed and modified crossframe details, see Sheets 65/105 & 66/105
2. For hinge details, see Sheets 60/105 thru 64/105

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

59/105

PIN & LINK ASSEMBLY RETROFIT
KEY PLANS FOR HINGES
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

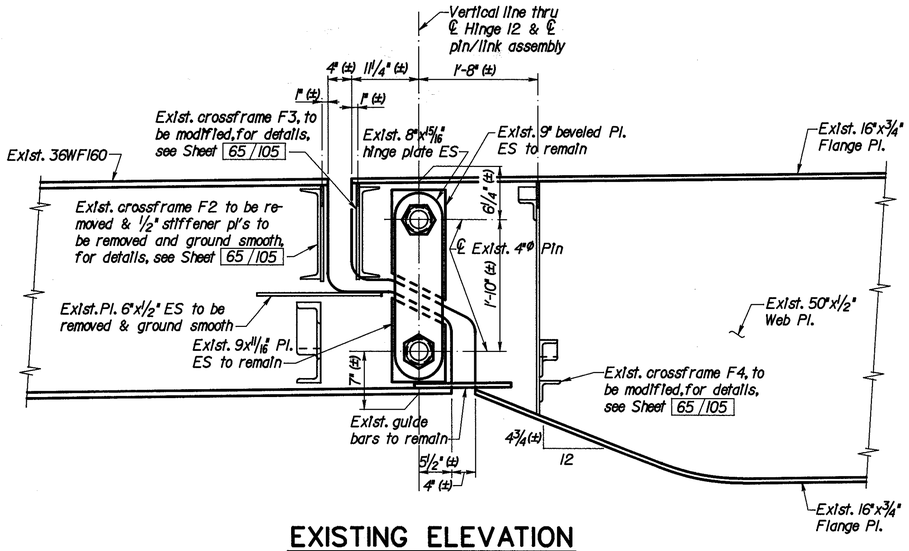
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	DYA	DFS	HDJ 12/92	

d:\1192\1192schm.dgn Feb. 23, 1993 08:38:32

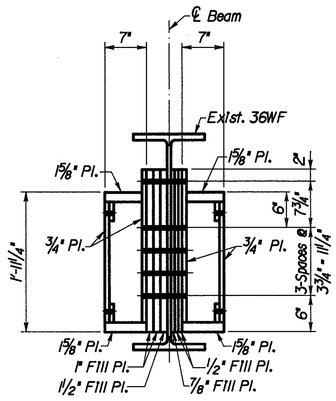
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

293
338

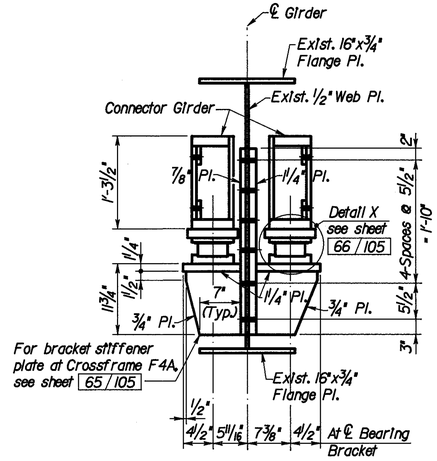
HAMILTON COUNTY
HAM-75-9.75



EXISTING ELEVATION

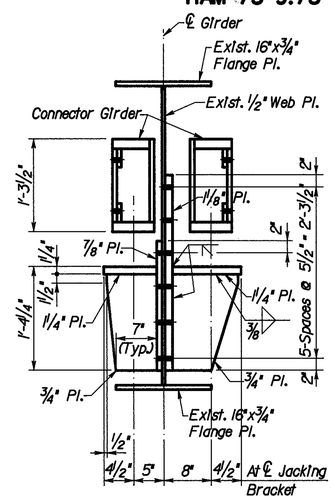


SECTION A-A



SECTION B-B

Note: Bracket welds same as shown for Section C-C

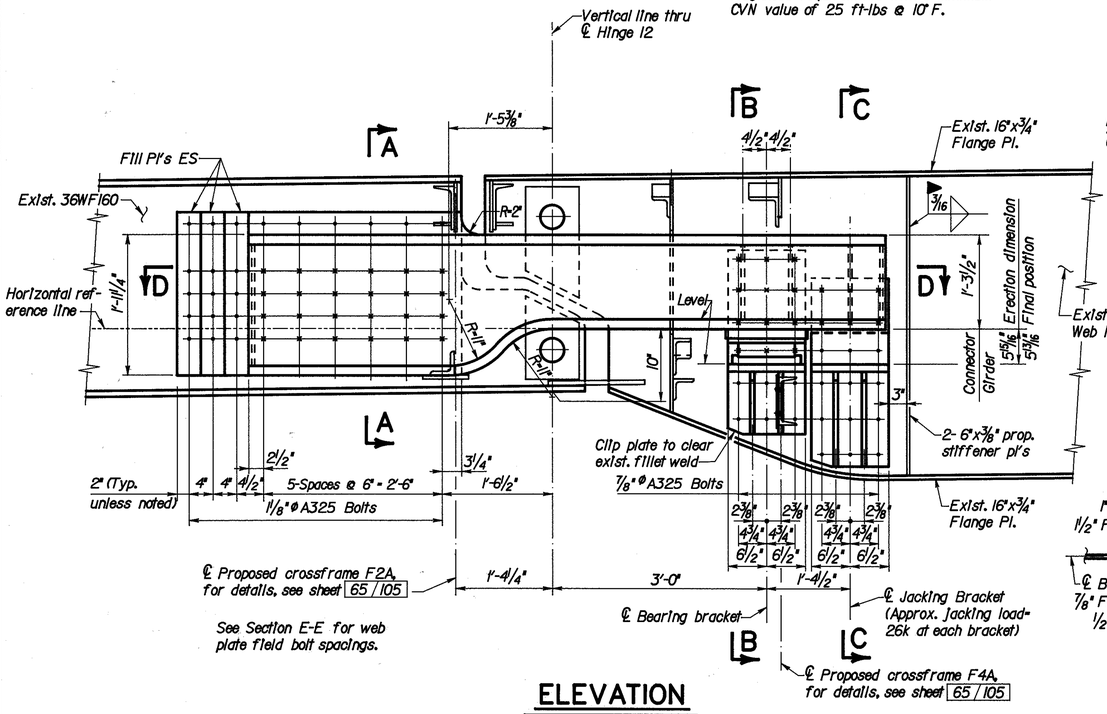


SECTION C-C

LEGEND

ES - Each Side

Note:
All new steel plates shall meet the requirements of ASTM-A36.
All steel plates for connector girders and brackets shall meet Charpy V-notch toughness requirements with a minimum CVN value of 25 ft-lbs @ 10°F.



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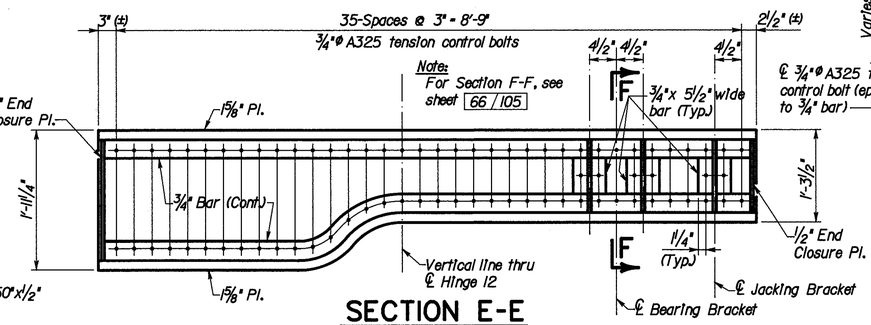
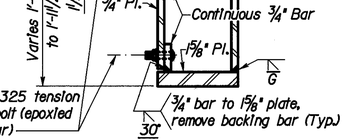
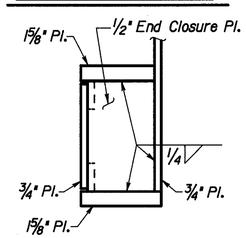


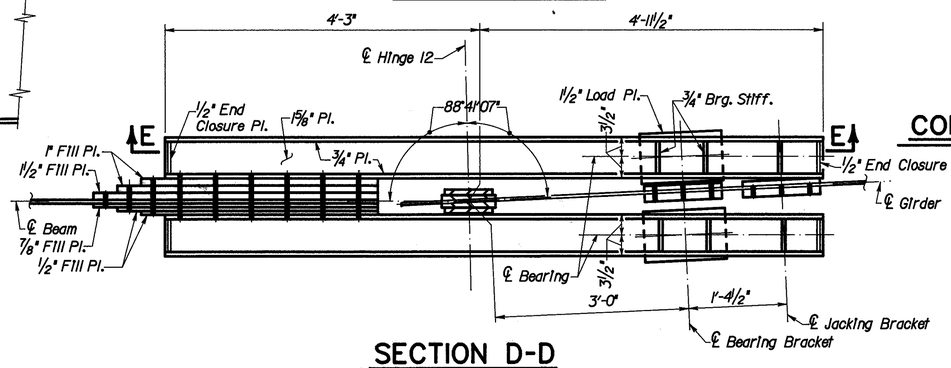
SECTION E-E



TYPICAL SECTION



AT END CLOSURE PLATE



SECTION D-D

CONNECTOR GIRDER DETAILS

Note: All welds to be 100% ultrasonic tested.

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

60/105

PIN & LINK ASSEMBLY RETROFIT
HINGE 12
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

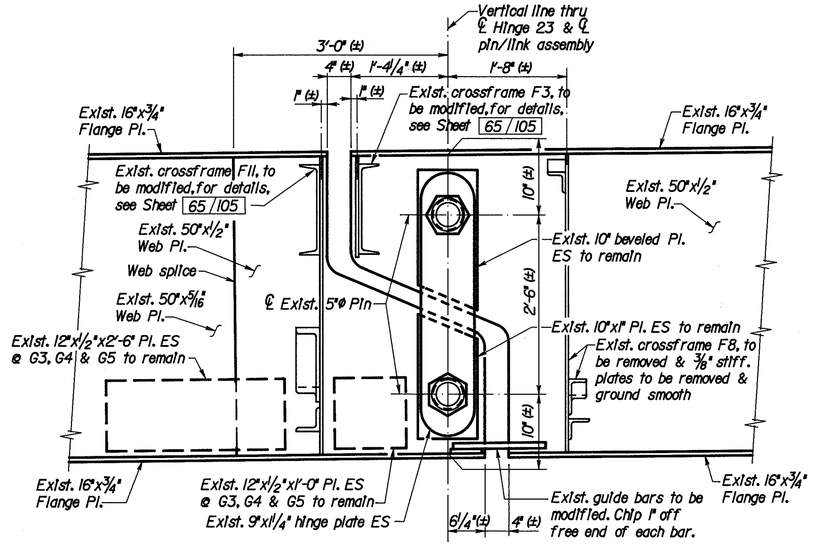
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

d:\1192\1192h1.dgn Feb. 18, 1993 09:35:38

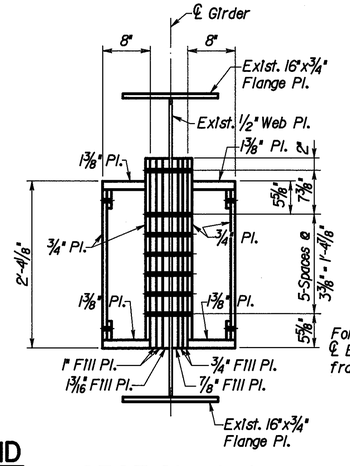
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

294
338

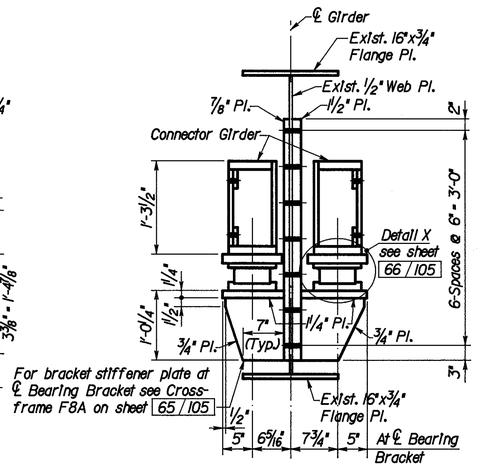
HAMILTON COUNTY
HAM-75-9.75



EXISTING ELEVATION

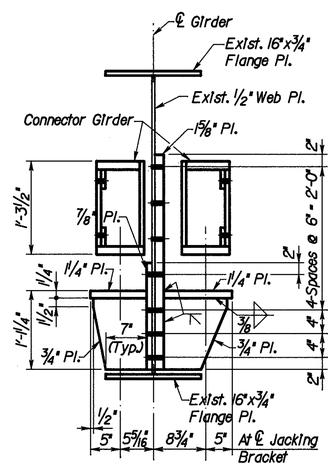


SECTION A-A



SECTION B-B

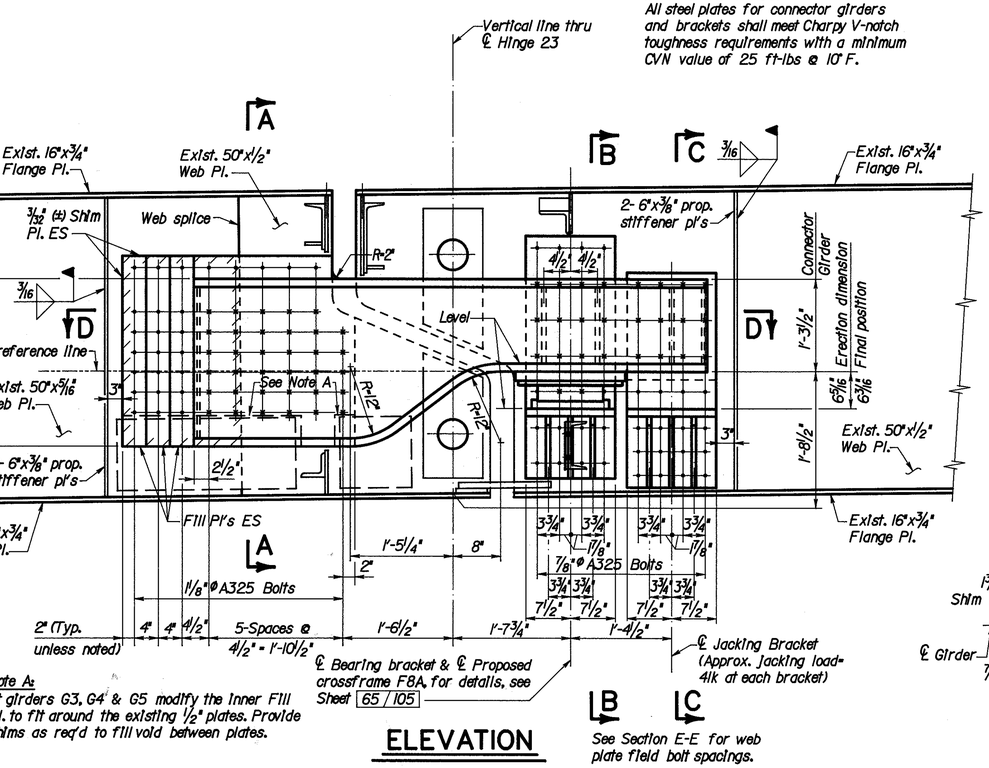
Note: Bracket welds same as shown for Section C-C



SECTION C-C

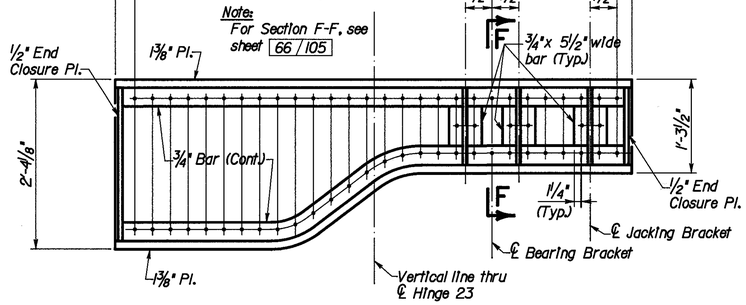
Note:
All new steel plates shall meet the requirements of ASTM-A36.
All steel plates for connector girders and brackets shall meet Charpy V-notch toughness requirements with a minimum CVN value of 25 ft-lbs @ 10° F.

LEGEND
ES = Each Side

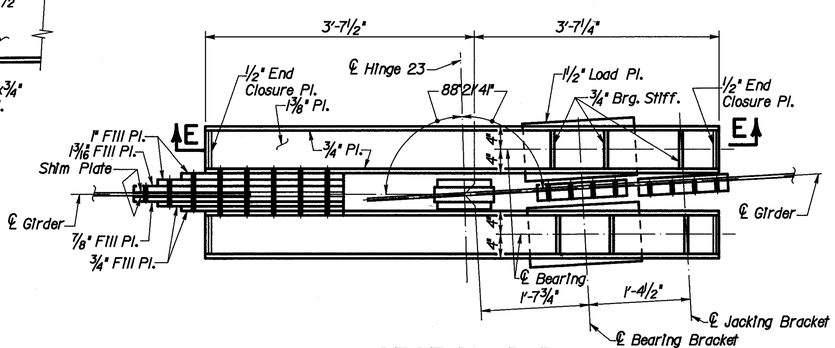


Note A:
At girders G3, G4 & G5 modify the inner Fill Pl. to fit around the existing 1/2" plates. Provide shims as req'd to fill void between plates.

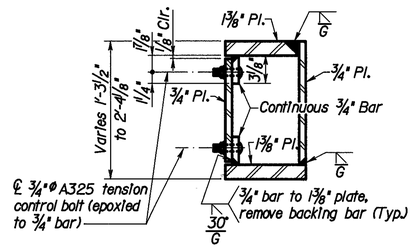
ELEVATION



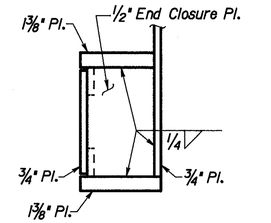
SECTION E-E



SECTION D-D



TYPICAL SECTION



AT END CLOSURE PLATE

CONNECTOR GIRDER DETAILS

Note: All welds to be 100% ultrasonic tested.

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

61/105

PIN & LINK ASSEMBLY RETROFIT
HINGE 23
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

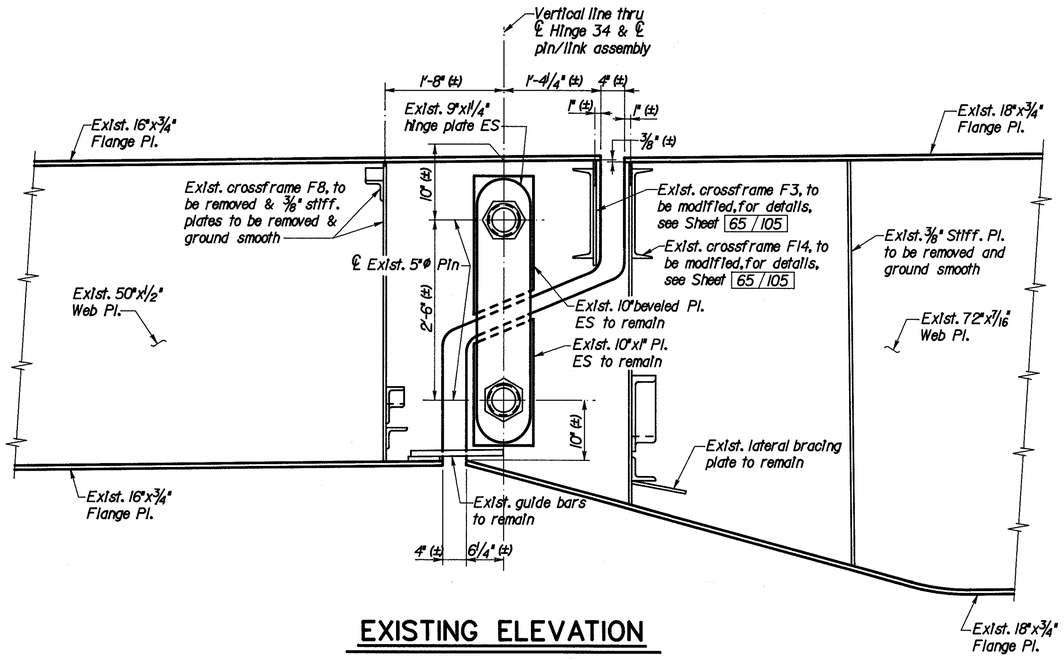
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

d:\1192\1192h2.dgn Feb. 18, 1993 09:58:59

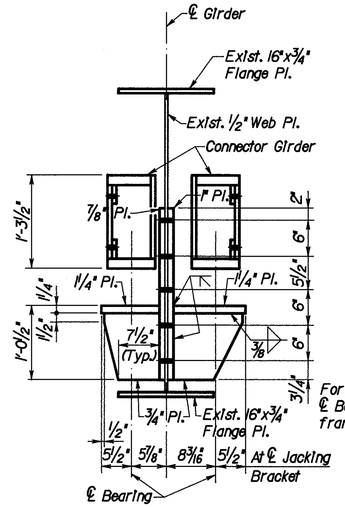
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

295
338

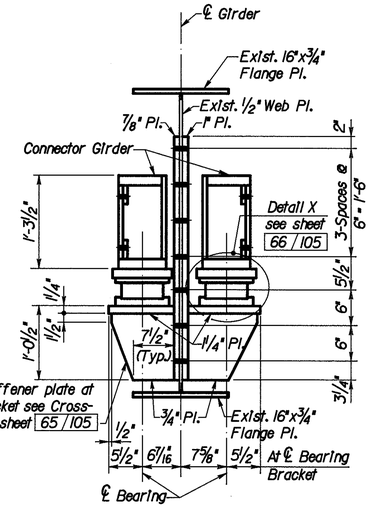
HAMILTON COUNTY
HAM-75-9.75



EXISTING ELEVATION



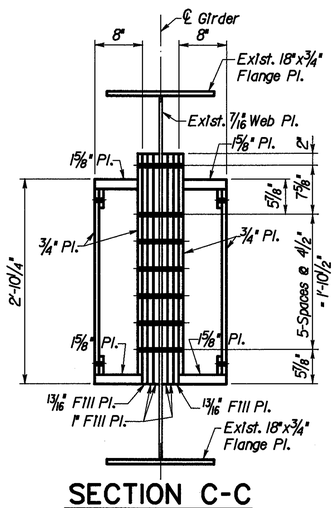
SECTION A-A



For bracket stiffener plate at ℄ Bearing Bracket see Cross-frame F8A on sheet 65 / 105

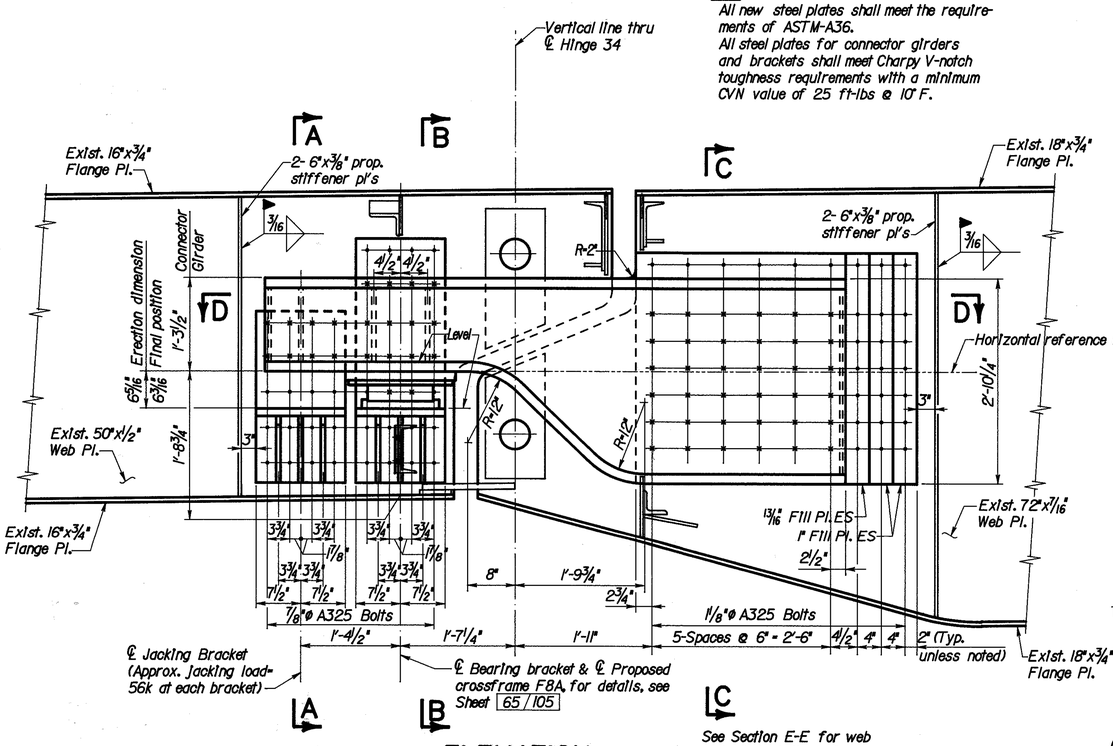
SECTION B-B

Note: Bracket welds same as shown for Section A-A



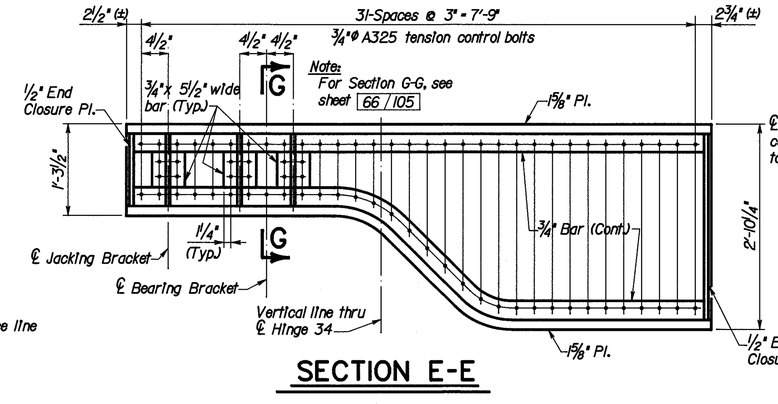
SECTION C-C

Note:
All new steel plates shall meet the requirements of ASTM-A36.
All steel plates for connector girders and brackets shall meet Charpy V-notch toughness requirements with a minimum CVN value of 25 ft-lbs @ 10°F.

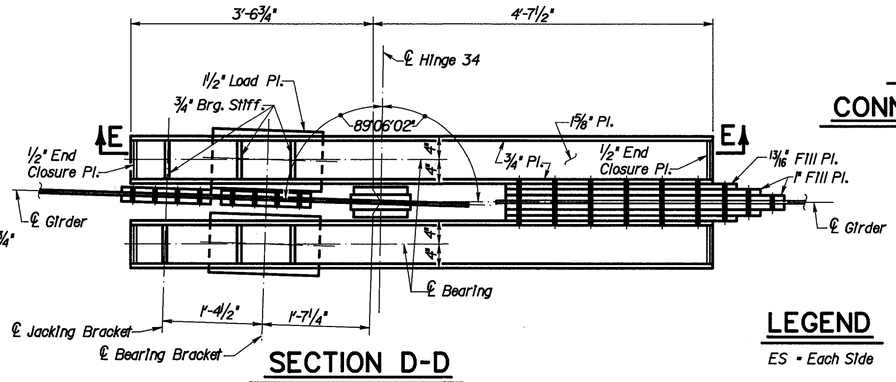


ELEVATION

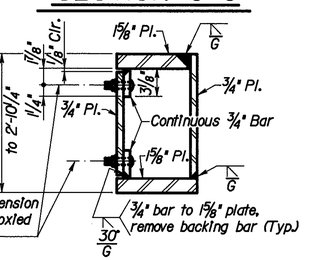
See Section E-E for web plate field bolt spacings.



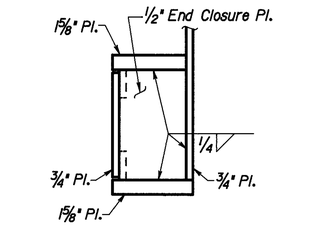
SECTION E-E



SECTION D-D



TYPICAL SECTION



AT END CLOSURE PLATE

CONNECTOR GIRDER DETAILS

Note: All welds to be 100% ultrasonic tested.

LEGEND

ES = Each Side

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

62 / 105

PIN & LINK ASSEMBLY RETROFIT
HINGE 34
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

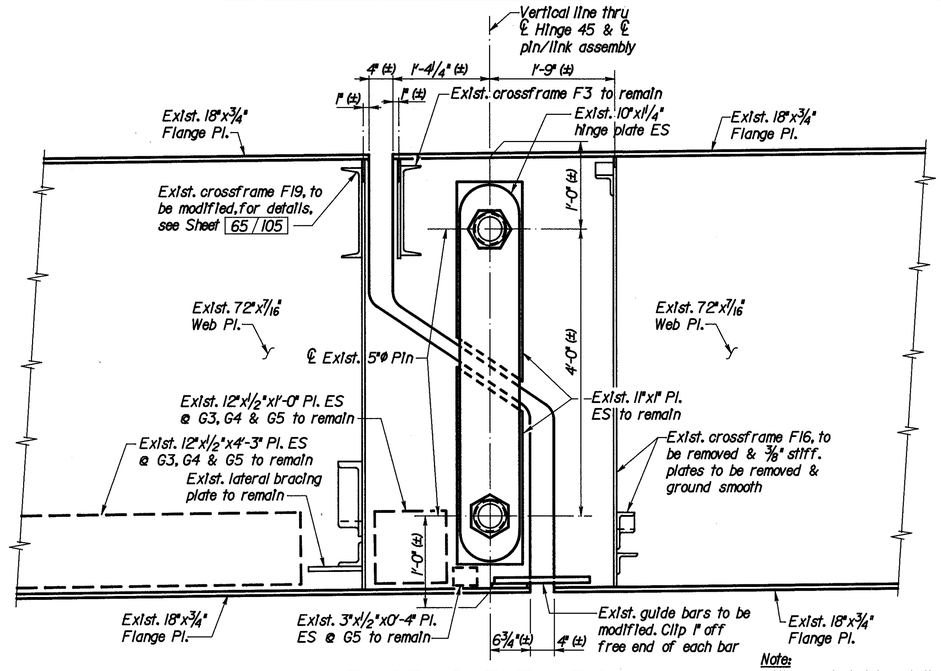
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

d:\1192\1192h3.dgn Feb. 18, 1993 10:10:28

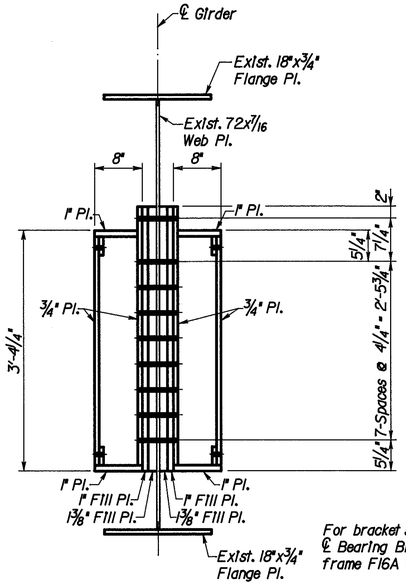
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

296
338

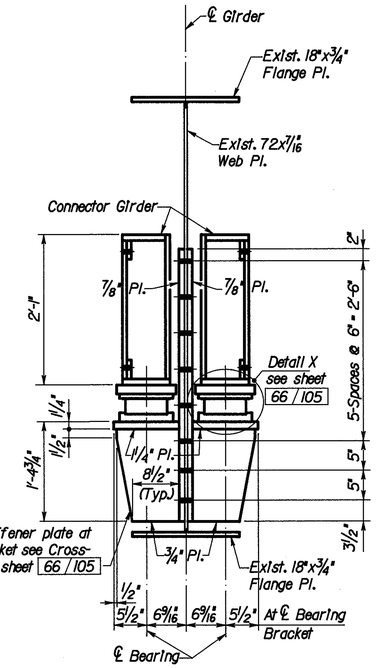
HAMILTON COUNTY
HAM-75-9.75



EXISTING ELEVATION

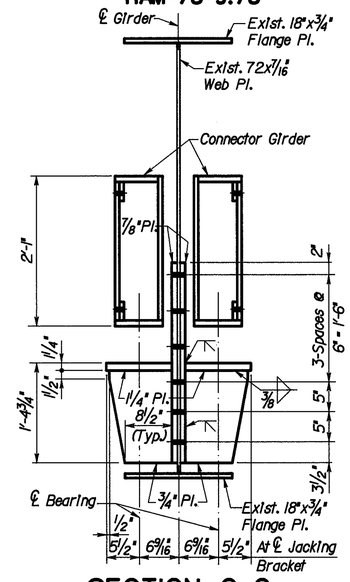


SECTION A-A

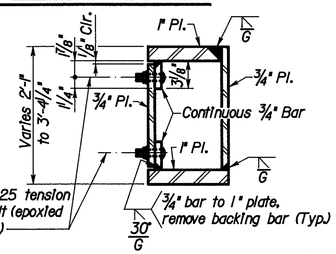


SECTION B-B

Note: Bracket welds same as shown for Section C-C

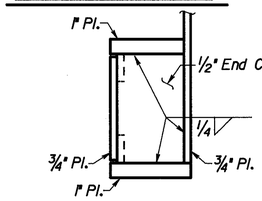


SECTION C-C



Note: All welds to be 100% ultrasonic tested.

TYPICAL SECTION

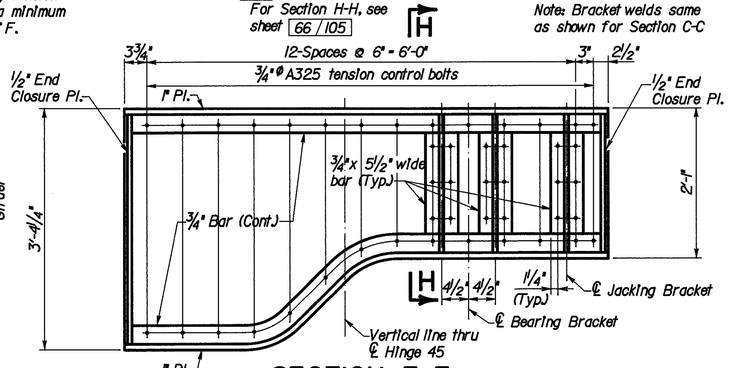


AT END CLOSURE PLATE

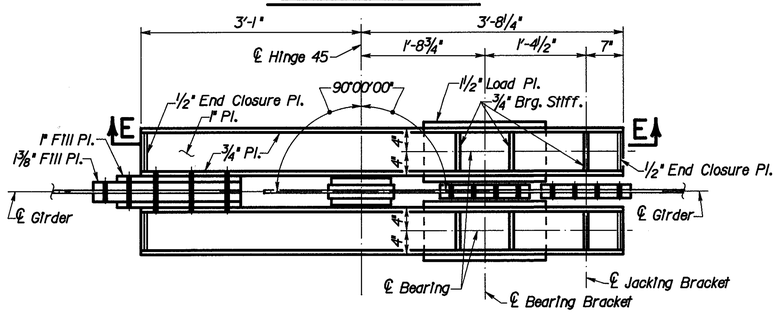
CONNECTOR GIRDER DETAILS

Note:
All new steel plates shall meet the requirements of ASTM-A36.
All steel plates for connector girders and brackets shall meet Charpy V-notch toughness requirements with a minimum CVN value of 25 ft-lbs @ 10°F.

Note:
For Section H-H, see sheet 66 / 105

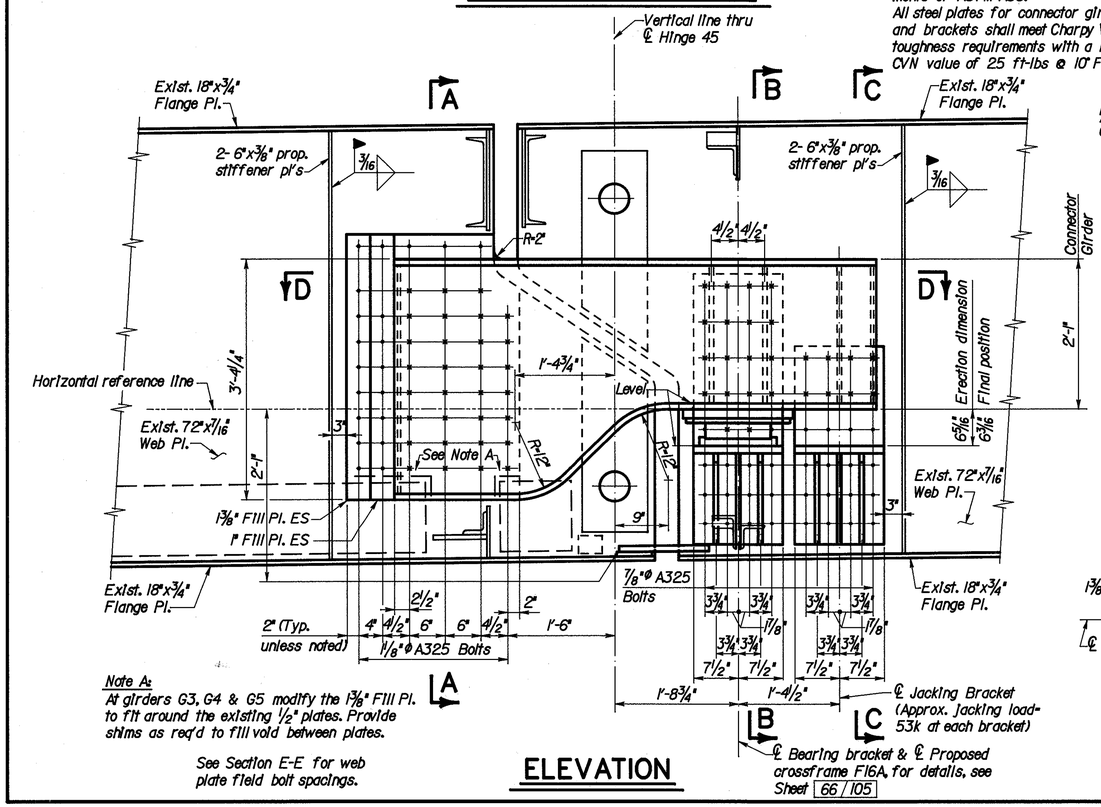


SECTION E-E



SECTION D-D

Vertical line thru ℄ Hinge 45



Note A:
At girders G3, G4 & G5 modify the 1 3/8" Fill Pl. to fit around the existing 1/2" plates. Provide shims as req'd to fill void between plates.

See Section E-E for web plate field bolt spacings.

ELEVATION

LEGEND

ES = Each Side

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

63 / 105

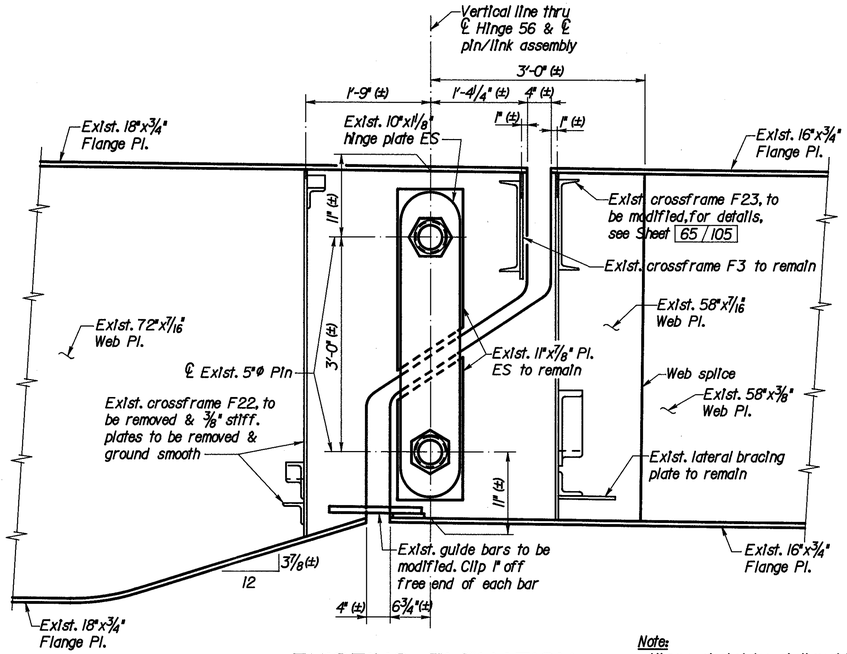
PIN & LINK ASSEMBLY RETROFIT
HINGE 45
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

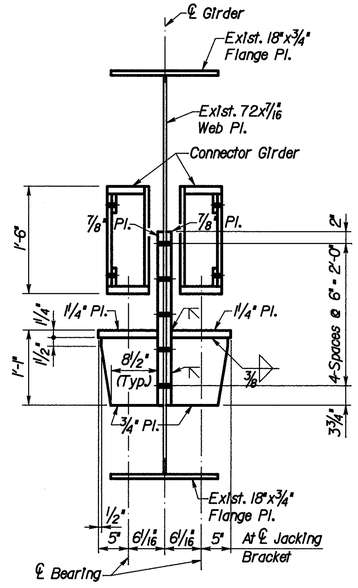
d:\1192\1192h4.dgn Feb. 18, 1993 10:18:01

F.H.W.A. REGION	STATE	PROJECT		297
5	OHIO			338

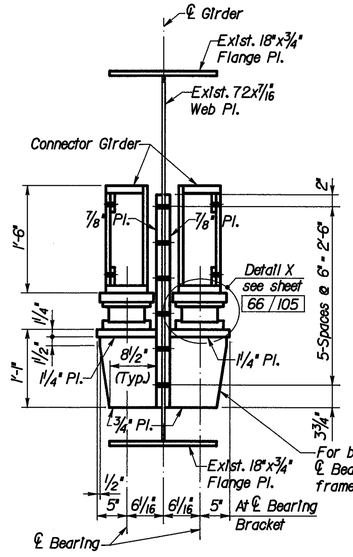
HAMILTON COUNTY
HAM-75-9.75



EXISTING ELEVATION

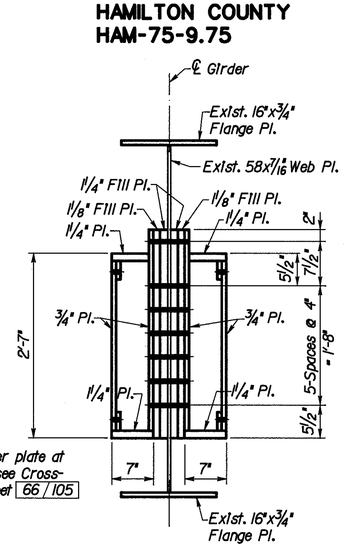


SECTION A-A



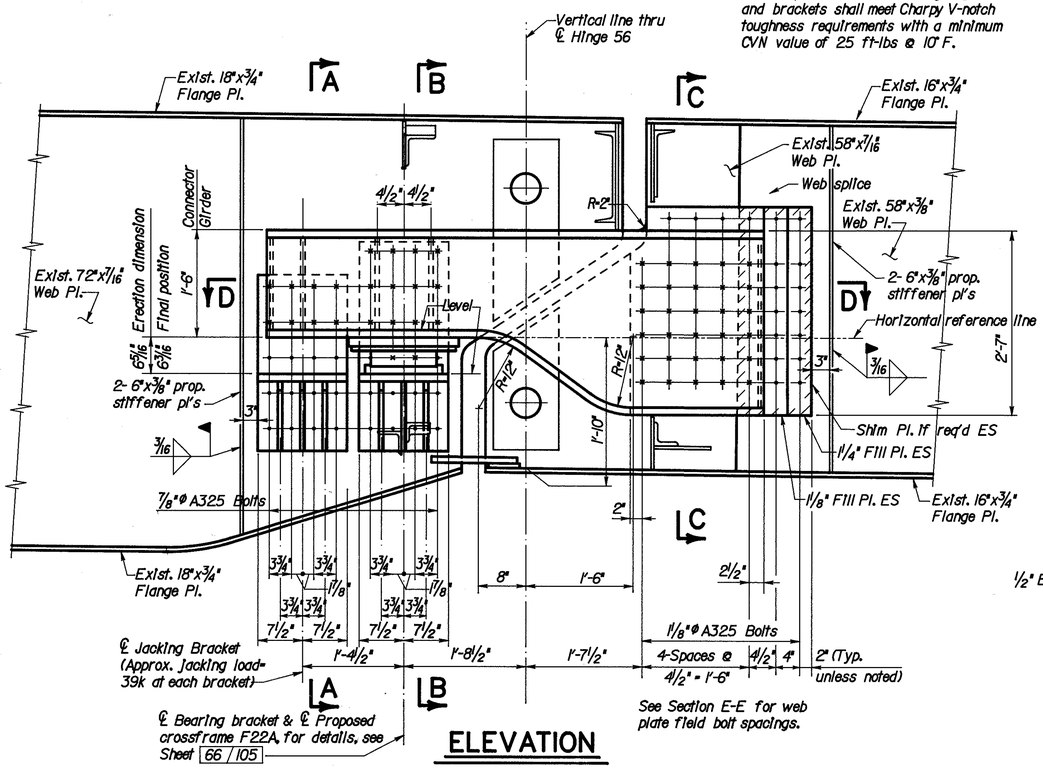
SECTION B-B

Note: Bracket welds same as shown for Section A-A



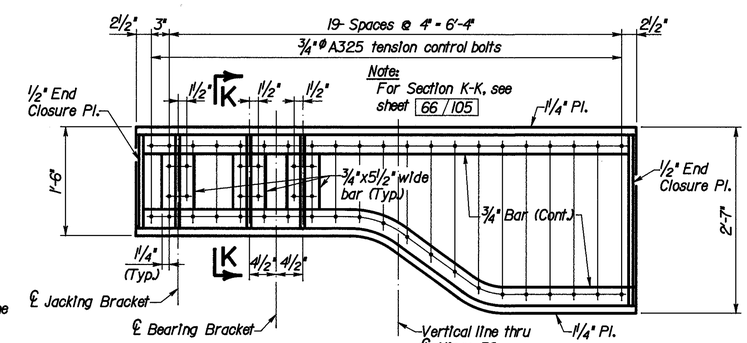
SECTION C-C

Note:
All new steel plates shall meet the requirements of ASTM-A36.
All steel plates for connector girders and brackets shall meet Charpy V-notch toughness requirements with a minimum CVN value of 25 ft-lbs @ 10°F.

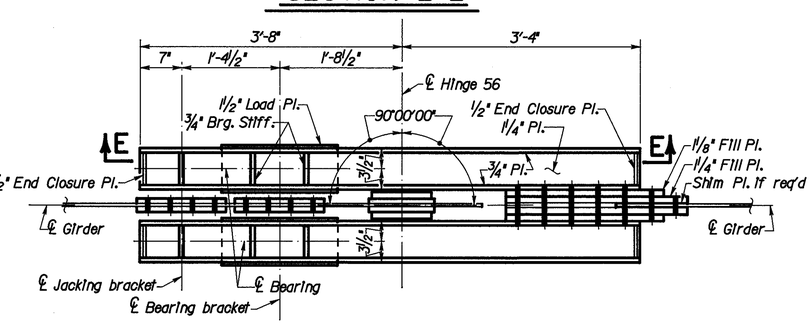


ELEVATION

See Section E-E for web plate field bolt spacings.

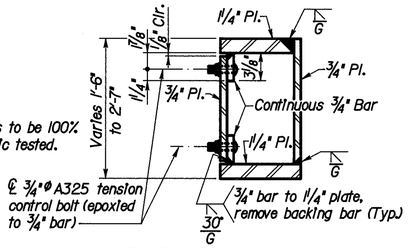


SECTION E-E

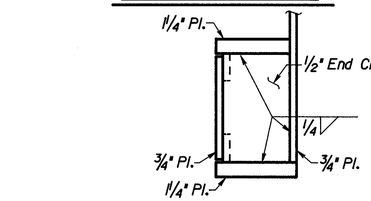


SECTION D-D

Note:
All welds to be 100% ultrasonic tested.



TYPICAL SECTION



AT END CLOSURE PLATE

CONNECTOR GIRDER DETAILS

LEGEND

ES = Each Side

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

64/105

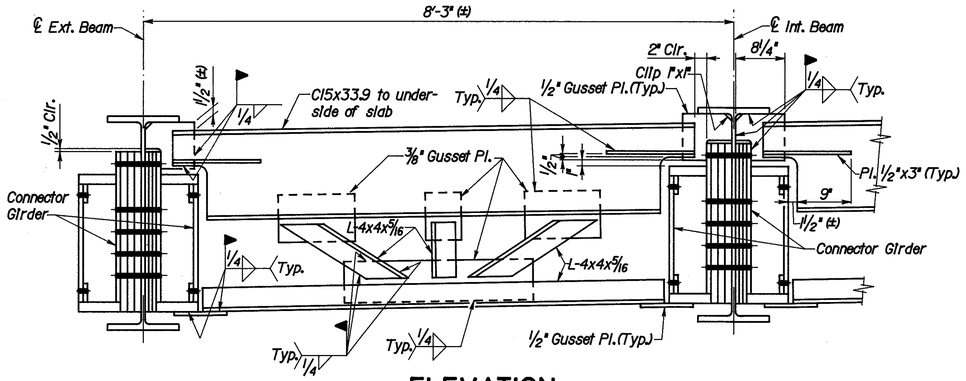
PIN & LINK ASSEMBLY RETROFIT
HINGE 56
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

d:\1192\1192h5.dgn Feb. 18, 1993 10:27:50

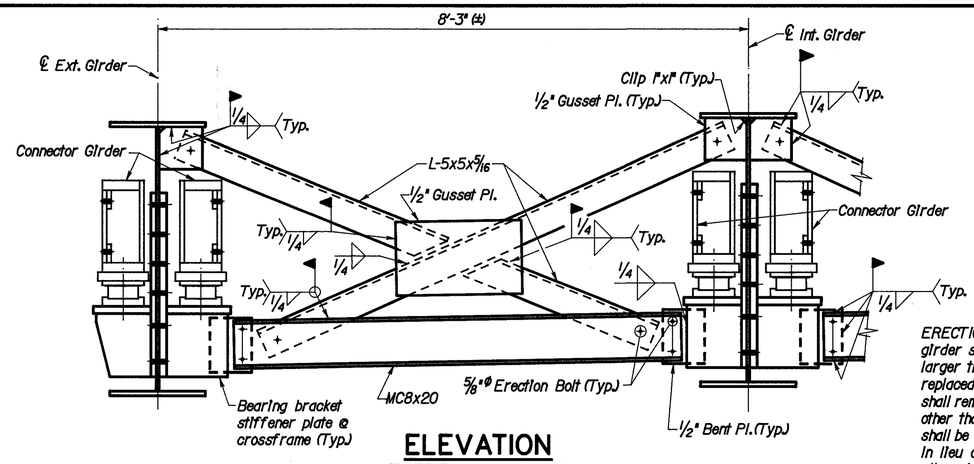
F.H.W.A. REGION	STATE	PROJECT		298 / 338
5	OHIO			

HAMILTON COUNTY
HAM-75-9.75



ELEVATION

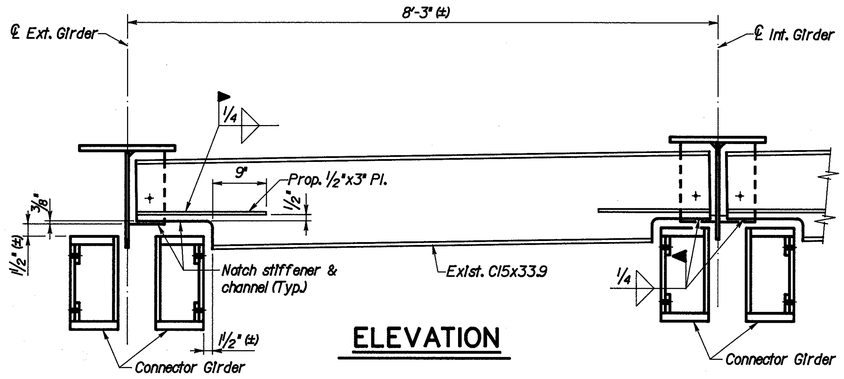
PROPOSED CROSSFRAME F2A



ELEVATION

PROPOSED CROSSFRAME F4A & F8A

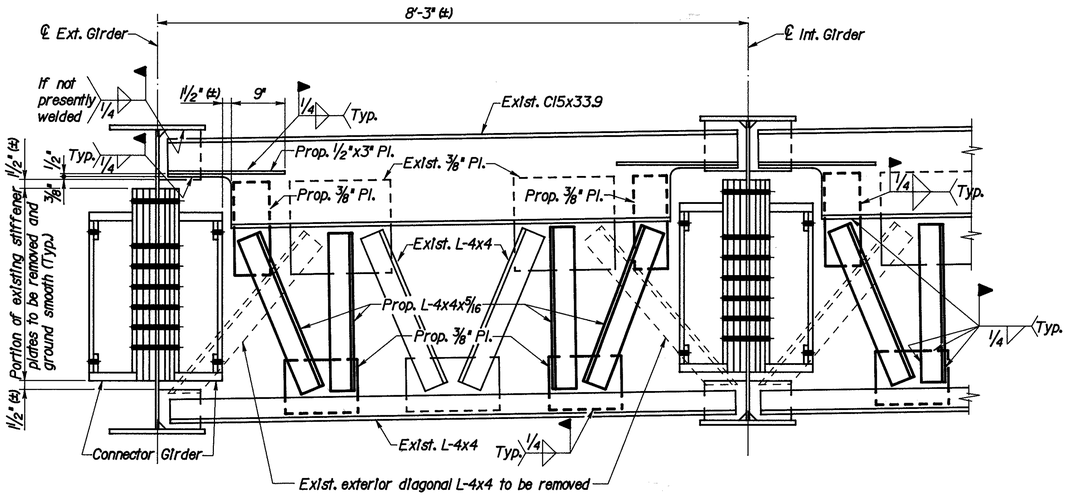
ERECTION BOLTS: Hole diameter in the crossframes and girder stiffeners shall be respectively 1/16" and 1/4" larger than the diameter of the erection bolts. Unless replaced by permanent high strength bolts, erection bolts shall remain in place. Lock washers shall be furnished for other than fully torqued high strength erection bolts. Bolts shall be furnished as part of 513.
In lieu of erection bolts and at the option of the Contractor, alternate means of temporary bracing may be used subject to the approval of the Director (501.06).



ELEVATION

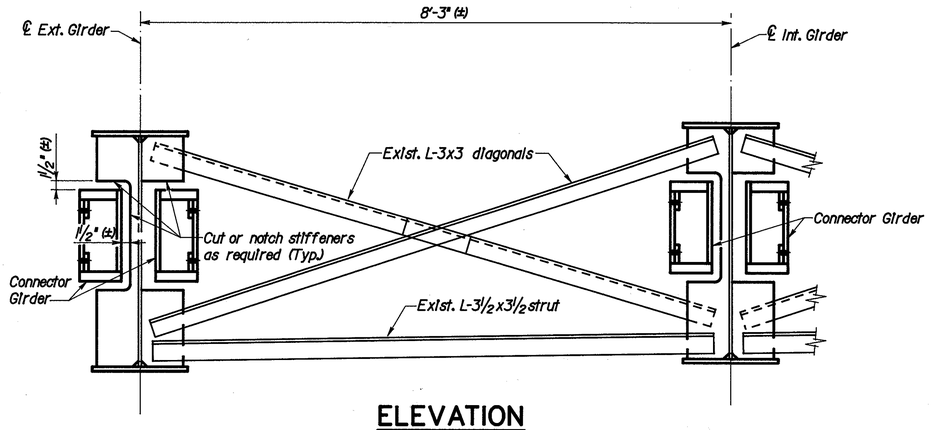
CROSSFRAME F3 MODIFICATIONS

(Typical at Hinges 12, 23 & 34)



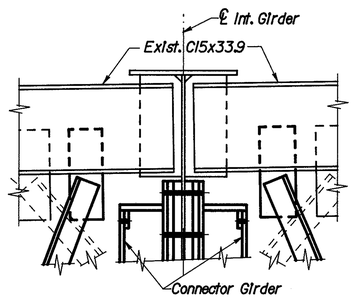
ELEVATION

CROSSFRAME F11 & F14 MODIFICATIONS



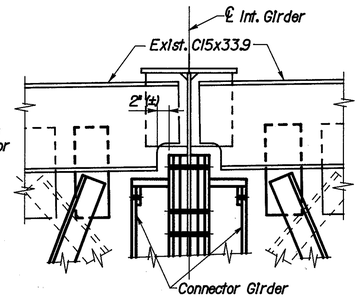
ELEVATION

CROSSFRAME F4 MODIFICATIONS



CROSSFRAME F19 MODIFICATIONS

Note:
Details for crossframes F19 & F23 are the same as shown for Crossframes F11 & F14 above, except for end treatment of C15x33.9 as shown.



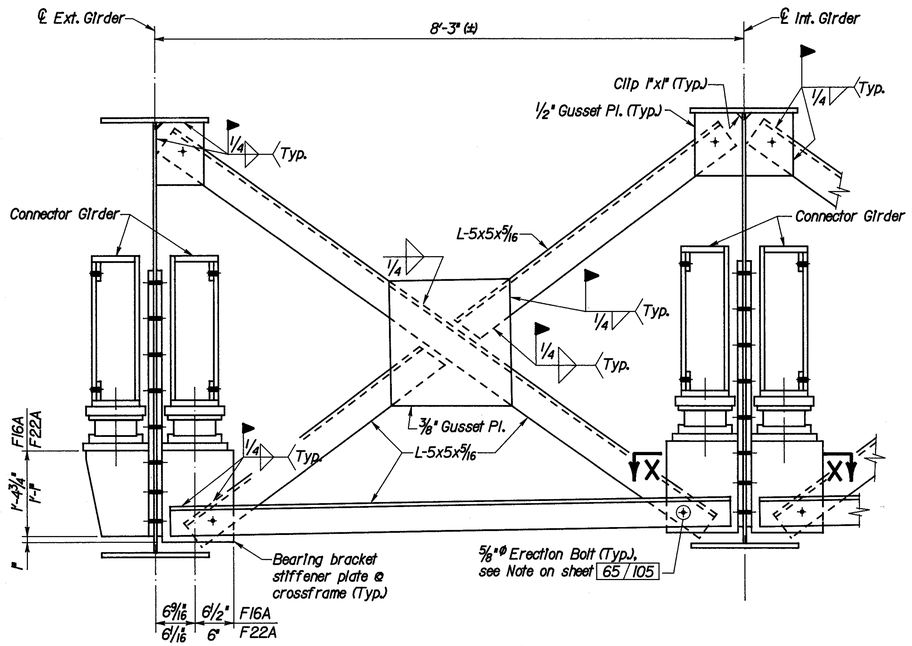
CROSSFRAME F23 MODIFICATIONS

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO
65 / 105

PIN & LINK ASSEMBLY RETROFIT
HINGE DETAILS
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

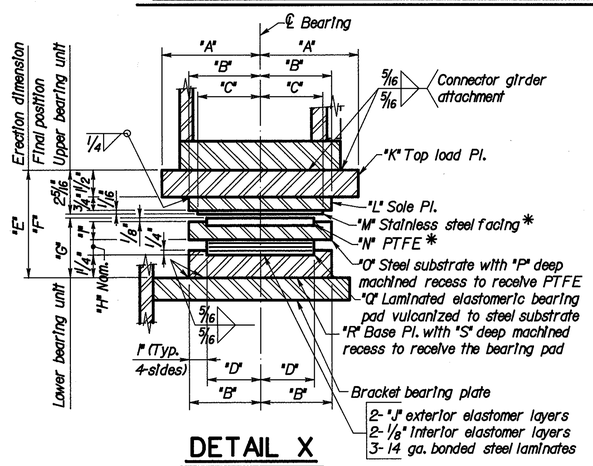
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

d:\1192\1192xf1.dgn Feb. 18, 1993 11:17:28



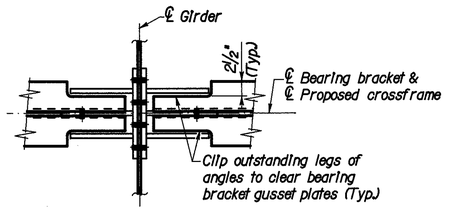
ELEVATION

PROPOSED CROSSFRAME F16A & F22A

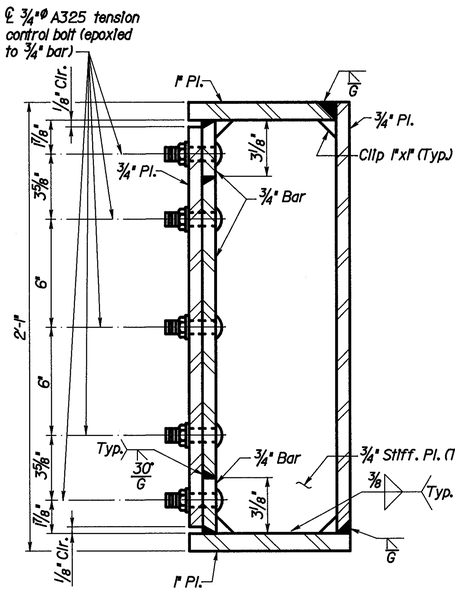


DETAIL X

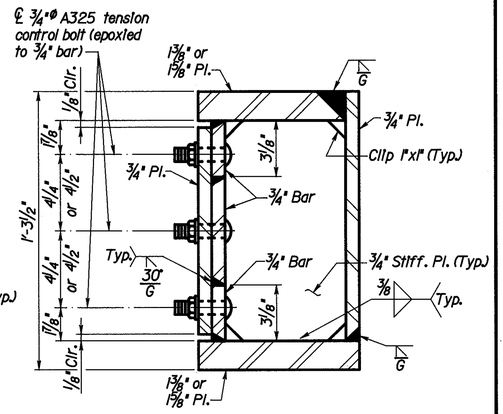
CONNECTOR GIRDER BEARING



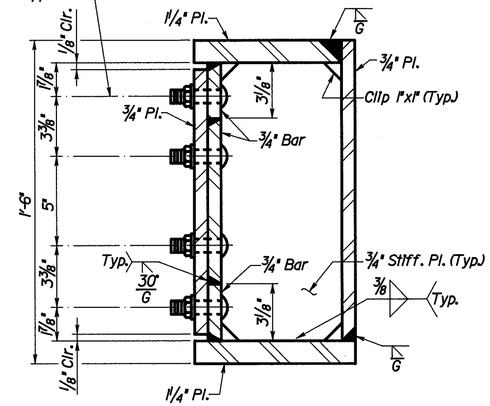
SECTION X-X



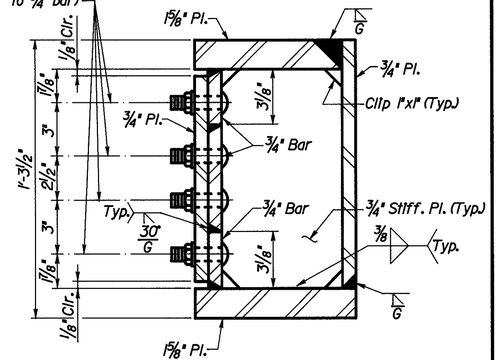
SECTION H-H



SECTION F-F



SECTION K-K



SECTION G-G

Note:
* = Protect surfaces during shipment.
Dead Load Reaction = "T"
Live Load Reaction = "U"
Maximum Design Load = "V" at each Brg. Pad

TABLE OF BEARING DATA

Hinge	Dimensions									Plate, bearing & recess dimensions							Force (Kips)		
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	"K"	"L"	"M"	"N"	"O"	"P"	"Q"	"R"	"S"	"T"	"U"	"V"
12	4 1/4"	3 1/2"	3 1/4"	2 1/2"	5 15/16"	5 5/16"	3 1/2"	11/16"	1 7/16"	3/32"	8 1/2"x13 3/4"	7"x13"	6 1/2"x12 1/2"	5"x9 1/2"x1/4"	7"x11 1/2"x1 7/16"	5 1/16"x9 9/16"x1/8"	5"x9 1/2"	7"x11 1/2"x1 1/2"	5 1/16"x9 9/16"x1/4"	19.8	31.3	51.1
23	4 15/16"	4"	3 3/4"	3"	6 5/16"	6 3/16"	3 7/8"	3/4"	1 3/4"	1/8"	9 7/8"x 18 3/4"	8"x18"	7 1/2"x 17 1/2"	6"x11"x1/4"	8"x13"x1 3/4"	6 1/16"x11 1/16"x1/8"	6"x11"	8"x13"x1 1/2"	6 1/16"x11 1/16"x1/4"	31.8	32.4	64.2
34	5"	4 1/2"	4 1/4"	3 1/2"	6 5/16"	6 3/16"	3 7/8"	3/4"	1 3/4"	1/8"	10"x18 1/2"	9"x17 1/2"	8 1/2"x17"	7"x11"x1/4"	9"x13"x1 3/4"	7 1/16"x11 1/16"x1/8"	7"x11"	9"x13"x1 1/2"	7 1/16"x11 1/16"x1/4"	43.1	31.6	74.7
45	5"	4 1/2"	4 1/4"	3 1/2"	6 5/16"	6 3/16"	3 7/8"	3/4"	1 3/4"	1/8"	10"x20 1/2"	9"x19 1/2"	8 1/2"x19"	7"x11"x1/4"	9"x13"x1 3/4"	7 1/16"x11 1/16"x1/8"	7"x11"	9"x13"x1 1/2"	7 1/16"x11 1/16"x1/4"	40.5	31.5	72.0
56	4 1/2"	4"	3 3/4"	3"	6 5/16"	6 3/16"	3 7/8"	3/4"	1 3/4"	1/8"	9"x19 1/2"	8"x18 1/2"	7 1/2"x18"	6"x11"x1/4"	8"x13"x1 3/4"	6 1/16"x11 1/16"x1/8"	6"x11"	8"x13"x1 1/2"	6 1/16"x11 1/16"x1/4"	30.0	30.0	60.0

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

299
338

HAMILTON COUNTY
HAM-75-9.75

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

66/105

PIN & LINK ASSEMBLY RETROFIT
HINGE DETAILS
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK,
BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

d:\1192\1192xf2.dgn Feb. 18, 1993 10:39:14

ITEM SPECIAL -STRUCTURE, MISC.: LATERAL BRACING GUSSET PLATE RETROFIT UPGRADE (INTERMEDIATE)

THIS WORK SHALL CONSIST OF THE FOLLOWING SEQUENCE OF OPERATIONS PERFORMED ON ONE LATERAL BRACING GUSSET PLATE.

1. DRILL THE TWO 3-INCH OR SIX 2-INCH VERTICAL HOLES THROUGH THE GUSSET PLATE REMOVING THE GUSSET PLATE TO WEB AND GUSSET PLATE TO STIFFENER FILLET WELDS AT THE LOCATIONS WITHOUT GOUGING THE WEB OR STIFFNER. SEE RETROFIT DETAILS ON THIS SHEET. IF THE BOLTS ARE FOUND TO INTERFERE WITH THE RETROFIT THE BOLTS MAY BE REMOVED PRIOR TO DRILLING AND REPLACED AFTER THE RETROFIT IS PERFORMED.

2. DRILL THE TWO 3-INCH OR SIX 2-INCH VERTICAL HOLES THROUGH THE GUSSET PLATE REMOVING THE OUTSIDE CORNERS OF THE GUSSET PLATE WITHOUT GOUGING THE WEB.

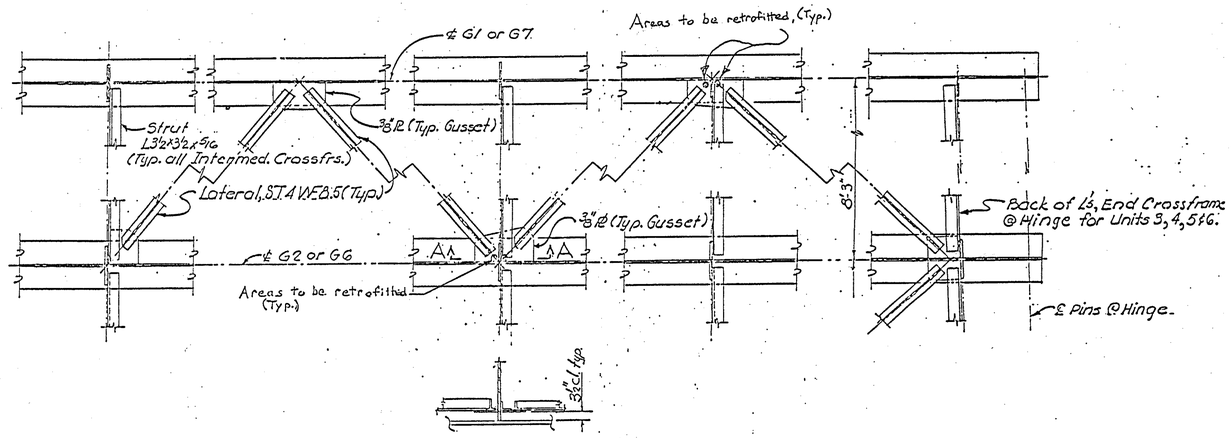
3. ANY REMAINING FILLET WELDS AND GUSSET PLATE SHALL BE GROUND SO THAT THE RESULTING SURFACES OF THE WEB AND STIFFENER ARE SMOOTH. EXTREME CARE SHALL BE TAKEN TO INSURE THE FULL THICKNESS OF THE WEB IS MAINTAINED AND NO UNDERCUT, GOUGING OR OVERGRINDING OF WEB TAKES PLACE. IF THE HOLES OF STEP 1 AND STEP 2 DID NOT TOUCH THE FACE OF THE ADJACENT SURFACE, THE HOLE SHALL BE GROUND SO THAT A 1-INCH MINIMUM RADIUS RESULTS.

THE ACCEPTED NUMBER OF RETROFITS AS DESCRIBED HEREIN WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LOCATION, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY TO CLEAN, DRILL, CUT AND GRIND THE LATERAL BRACING GUSSET RETROFIT AREA. A SINGLE LOCATION IS CONSIDERED AS SHOWN IN DETAIL I OPTION A OR B. PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	EACH	STRUCTURE, MISC.: LATERAL BRACING GUSSET PLATE RETROFIT UPGRADE (INTERMEDIATE)

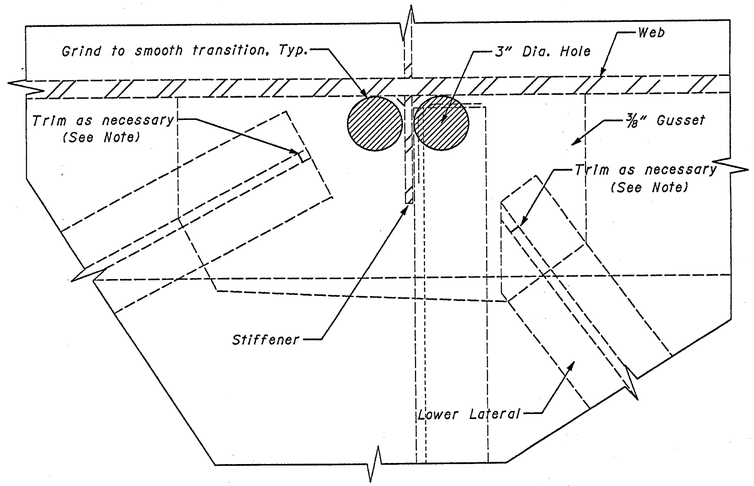
CUTTING OF VERTICAL LEGS

AT CERTAIN LOCATIONS THE LOWER LATERAL BRACING AND/OR THE HORIZONTAL MEMBER OF THE CROSSFRAME MAY HAVE A SECTION OF ITS VERTICAL LEG CUT IN ORDER TO DRILL THE HOLES AS DEEMED NECESSARY BY THE ENGINEER. IF SO THE CONTRACTOR MAY CUT THE MINIMAL AMOUNT OF THE VERTICAL LEG THAT THE ENGINEER DEEMS NECESSARY TO REMOVE. THE CONTRACTOR SHALL MAKE THE CUT LEAVING A SMOOTH ARC OR GRIND IT SMOOTH AFTER THE CUT. ANY DAMAGE DONE BY THE CONTRACTOR THRU NEGLECT OR CARELESSNESS SHALL BE REPAIRED BY HIM AT NO ADDITIONAL COST TO THE STATE OF OHIO. THE ABOVE WORK SHALL BE INCLUDED IN ITEM SPECIAL STRUCTURE MISC.: LATERAL BRACING GUSSET PLATE RETROFIT UPGRADE (INTERMEDIATE) FOR PAYMENT.

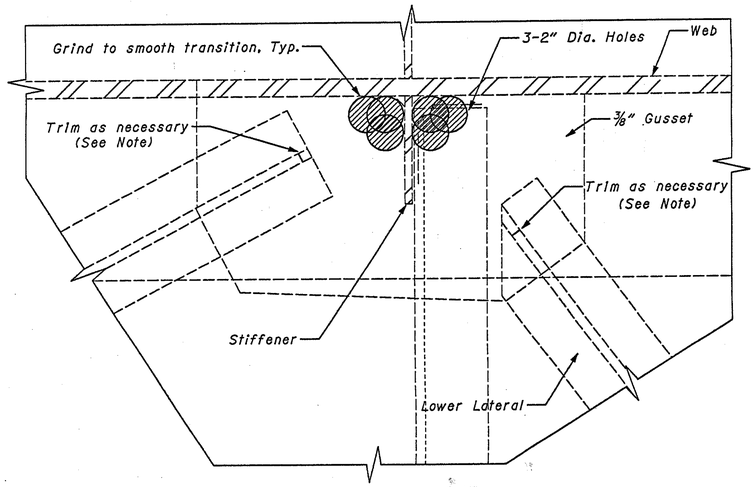


SECTION A-A

TYPICAL DETAILS - LATERAL BRACING BOTTOM FLANGE



DETAIL I OPTION A



DETAIL I OPTION B

SUB SUMMARY (Quantities carried to Sht. 5/105)

ITEM	ITEM EXTEN.	QTY	UNIT	DESCRIPTION
Special	53000400	233	Each	Structure, Misc.: Lateral Bracing Gusset Plate Retrofit Upgrade (Intermediate)

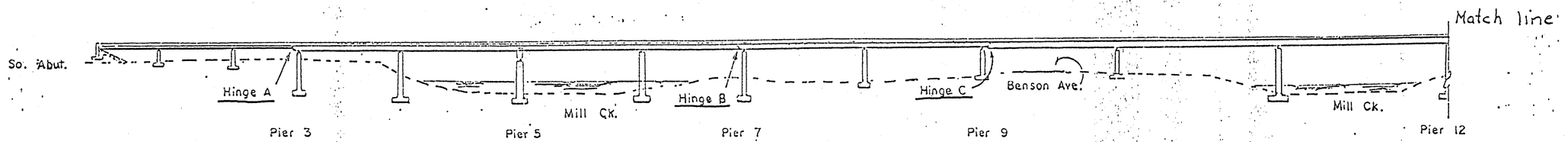
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 8 BRIDGE DEPARTMENT

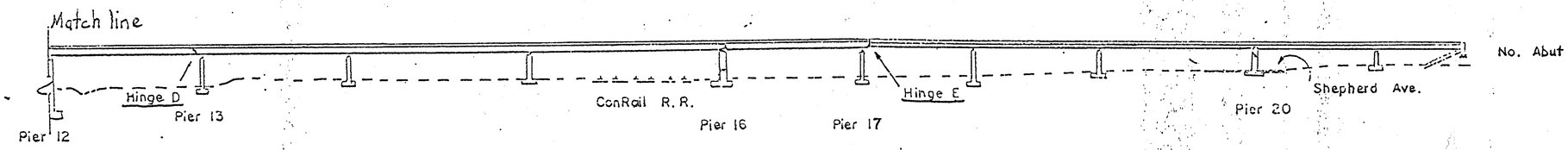
66A/105

RETROFIT DETAILS
BRIDGE NO. HAM-75-1192R
over Mill Creek, Benson St., and Shepard Ave.

DESIGNED	DRAWN	REVIEWED	CHECKED	DATE	REVISIONS
SDC	SDC	RLE	RLE		

CALC. BY:		HAM-75-9.75	OHIO	299B 338
DATE:		HAMILTON COUNTY	FHWA REGION 5	
CHKD. BY:				
DATE:				





ELEVATION

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 8 BRIDGE DEPARTMENT

66B 105

FRAMING PLAN
BRIDGE NO. HAM-75-1192R
over Benson St., Mill Creek, and Shephard Ave.

DESIGNED	DRAWN	REVIEWED	CHECKED	DATE	REVISIONS
SDC	SDC	RLE	RLE		

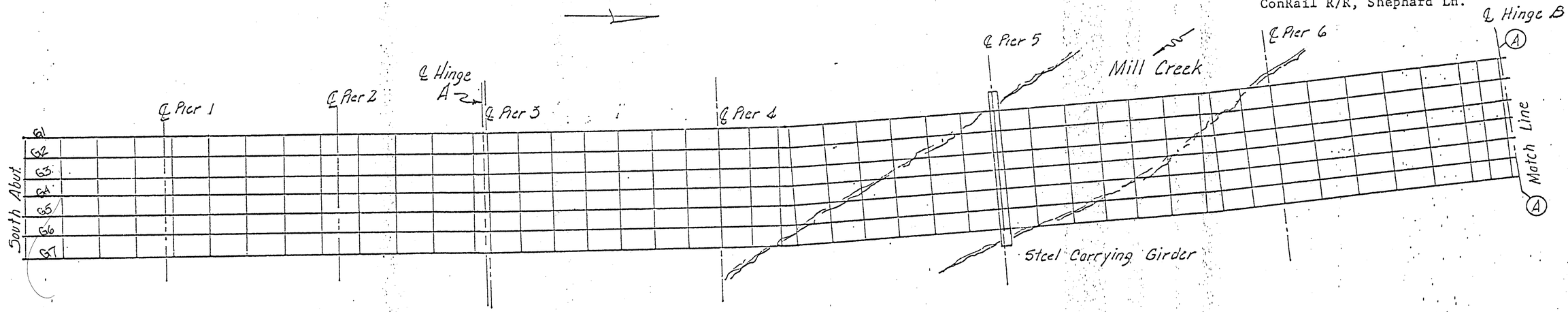
PLAN
Spans 1 thru 13

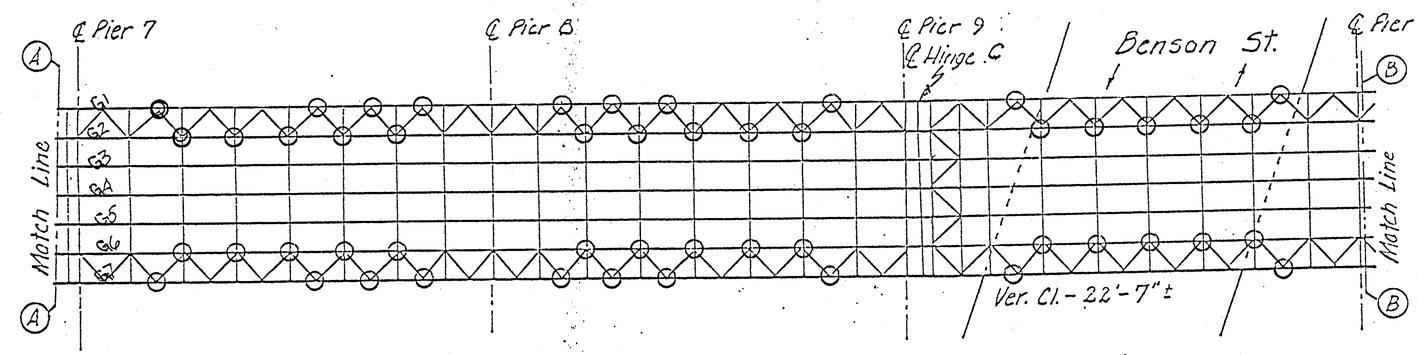
CALC. BY:		HAM-75-9.75	OHIO	299C 338
CHKD. BY:		HAMILTON COUNTY	FHWA REGION 5	
DATE:				

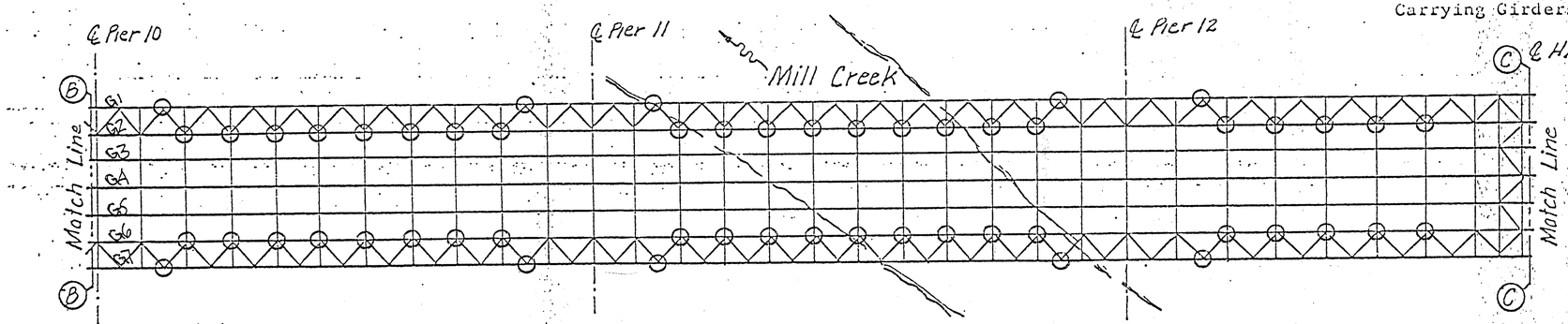
TYPE: Continuous Steel Beam
LENGTH: 2417.5' o/o +/-
WIDTH: 54.33' o/o +/-

BEAMS: See Below

CO. Hamilton
RT. IR-75
SECT. 11.78
BR. NO. HAM-75-1192R
IR-75 over Mill Ck., Benson St., ConRail R/R, Shephard Ln.







LEGEND
○ Area of Lower Lateral Retrofit Locations

BEAMS: Spans - 1 - 3 = W36x160
Spans - 4 - 9 = Pl. Gir. 50 x 5/16"
Spans - 10 - 17 = Pl. Gir. 72 x 7/16"
Spans - 18 - 22 = Pl. Gir. 58" x 3/8"

Carrying Girders at Piers: Pier 5 = Pl. 72x9/16" x 36x13/4" Box Gir.
Pier 16= Pl. 120x3/4" x 42x31/2" Box Gir.
Pier 20= Pl. 96x5/8" x 42x2¼" Box Gir.

Lower Lateral Bracing = ST 4x8.5 (Typ)

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 8 BRIDGE DEPARTMENT

66C 105

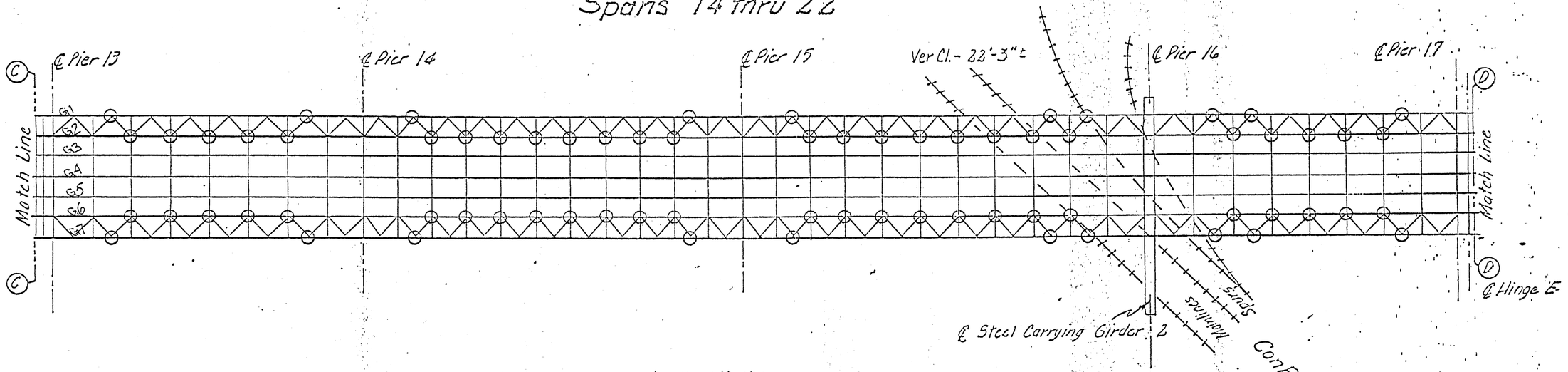
FRAMING PLAN
BRIDGE NO. HAM-75-1192R
over Benson St., Mill Creek, and, Shephard Ave.

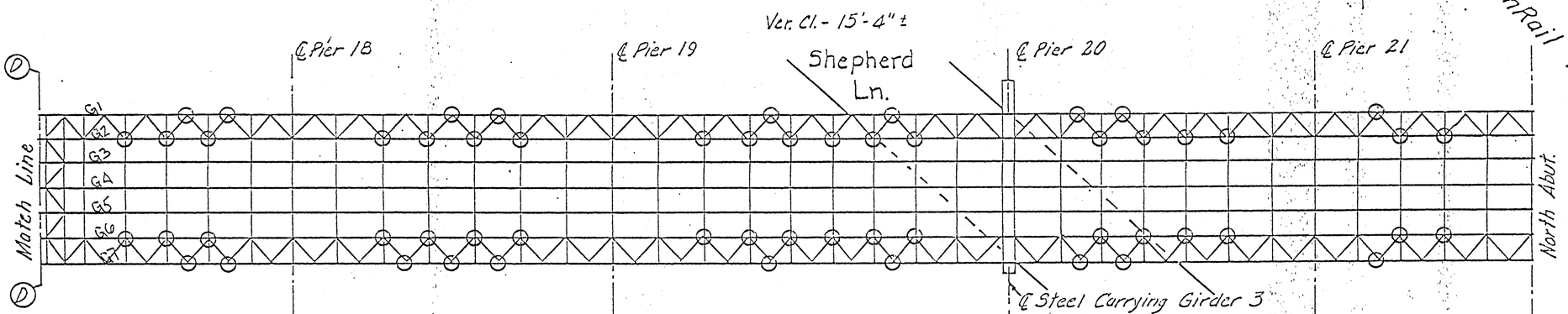
DESIGNED	DRAWN	REVIEWED	CHECKED	DATE	REVISIONS
SDC	SDC	RLE	RLE		

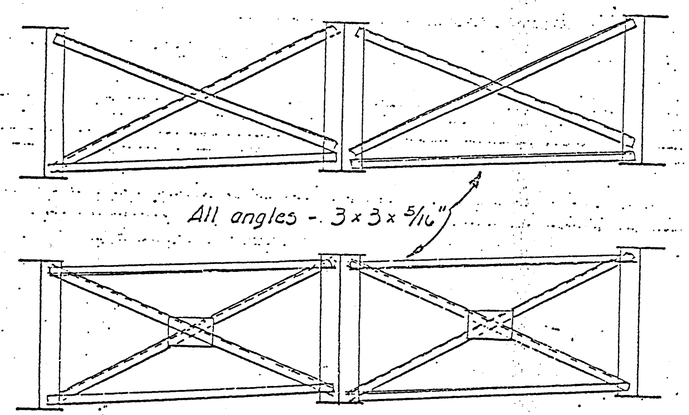
CALC. BY: DATE:	HAM-75-9.75	OHIO
CHKD. BY: DATE:	HAMILTON COUNTY	FHWA REGION 5

299D 338

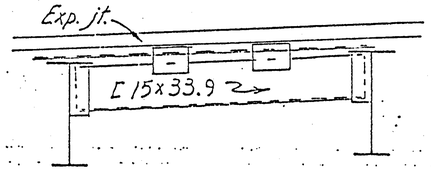
PLAN
Spans 14 thru 22

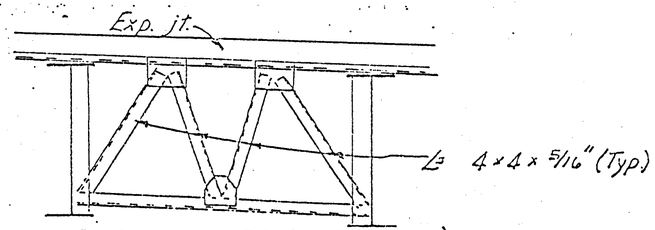






INTEMEDIATE CROSSFRAMES (Typ.)





END CROSSFRAMES (Typ.)

LEGEND
○ Area of Lower Lateral Retrofit Locations

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 8 BRIDGE DEPARTMENT

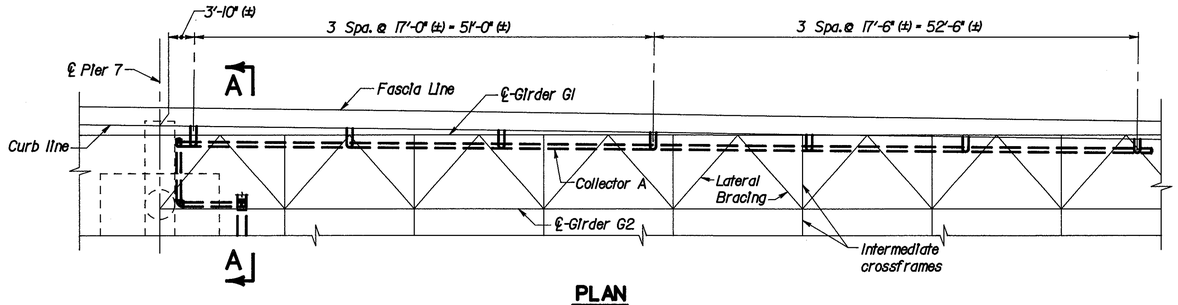
FRAMING PLAN 66D 105
BRIDGE NO. HAM-75-1192R
over Benson St., Mill Creek, and Shephard Ave.

DESIGNED	DRAWN	REVIEWED	CHECKED	DATE	REVISIONS
SDC	SDC	RLE	RLE		

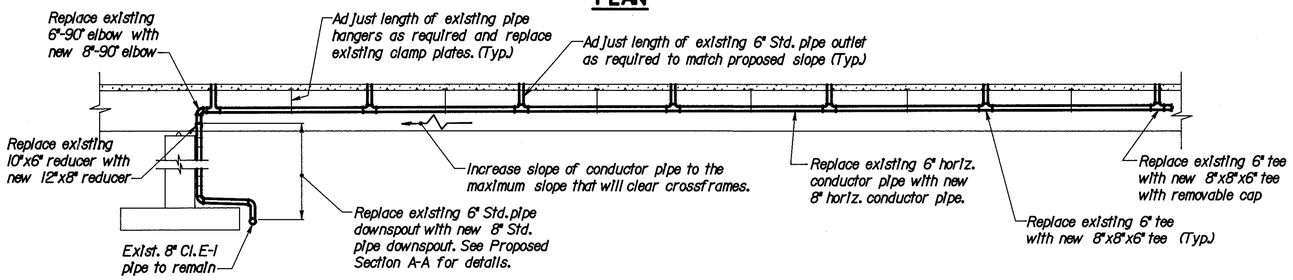
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

300
338

HAMILTON COUNTY
HAM-75-9.75

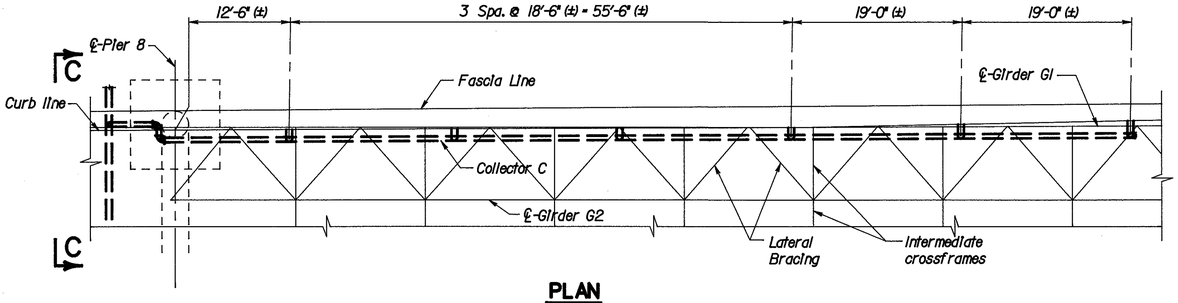


PLAN



PROFILE

COLLECTOR A



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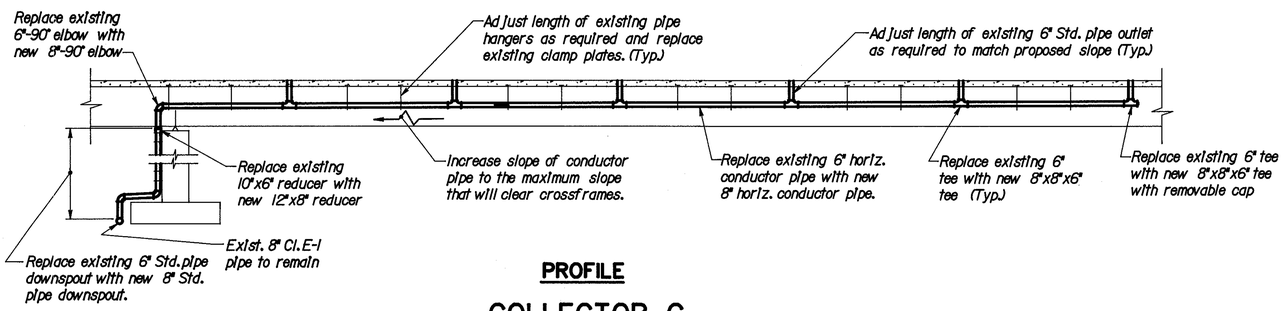
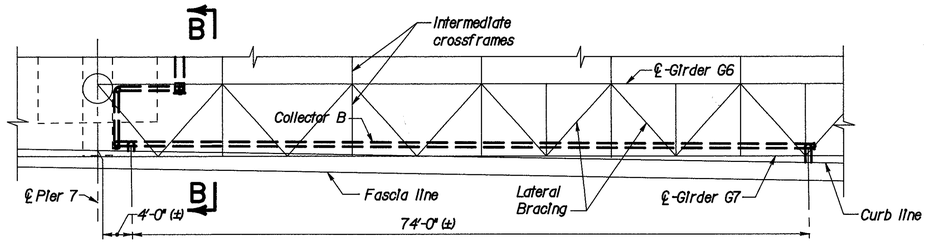


PROFILE

COLLECTOR C



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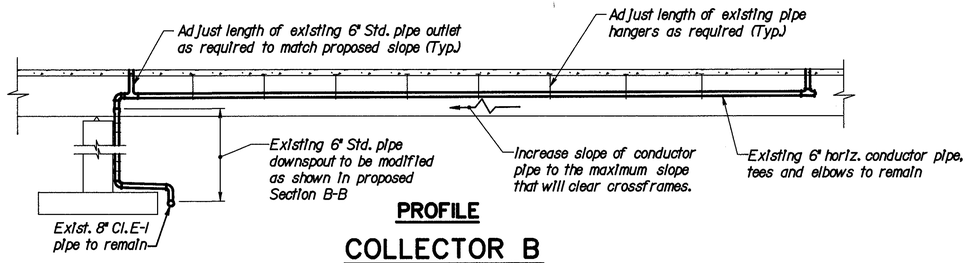
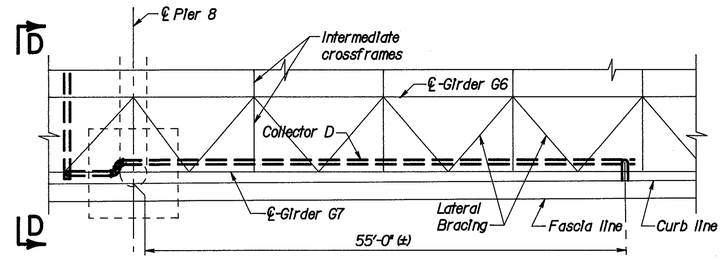
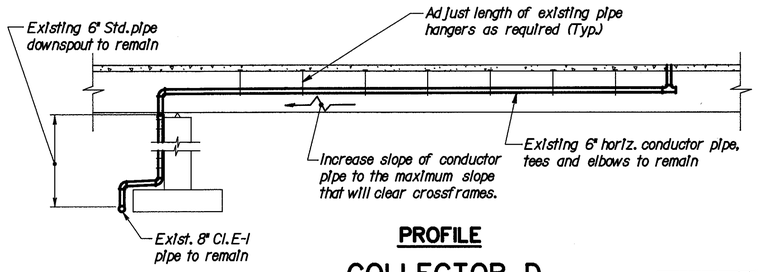


PROFILE

COLLECTOR B



PLAN



PROFILE

COLLECTOR D

NOTES

1. For Sections A-A, B-B, C-C and D-D, see Sheet 73 / 105
2. For General Notes, see Sheets 1 / 105, 2 / 105 & 3 / 105

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

67 / 105

DRAINAGE DETAILS

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
HDJ	MPH	CRB	MPH	HDJ 12/92	

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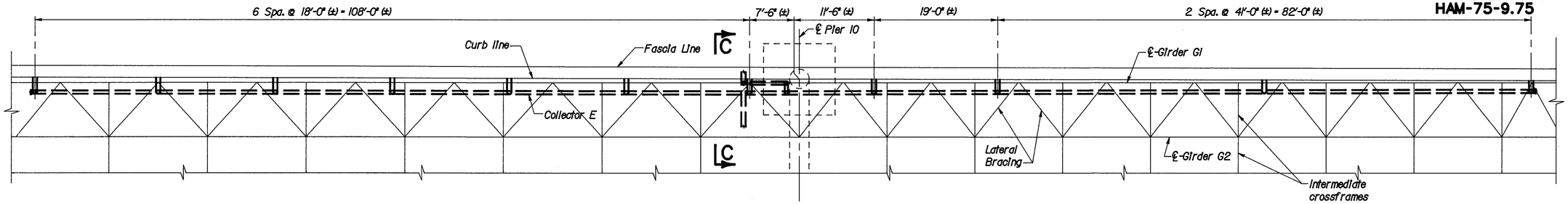
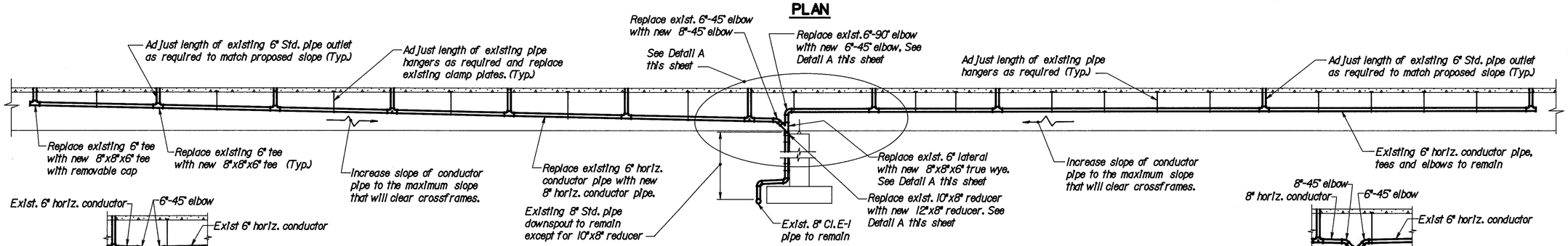
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

301
338

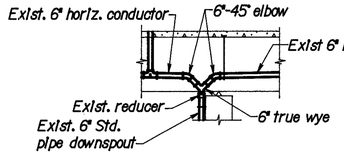
HAMILTON COUNTY
HAM-75-9.75



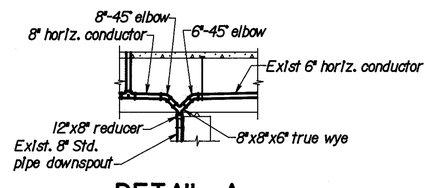
PLAN



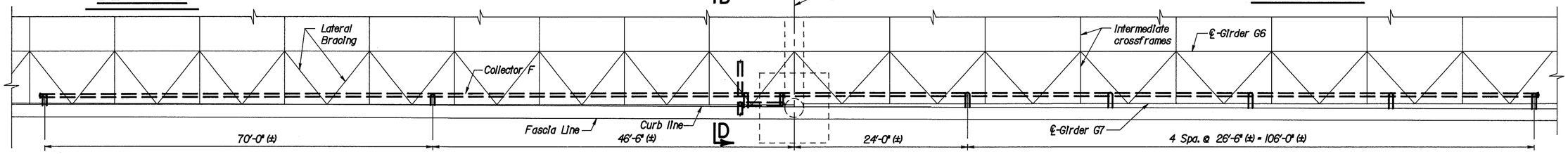
PROFILE
COLLECTOR E



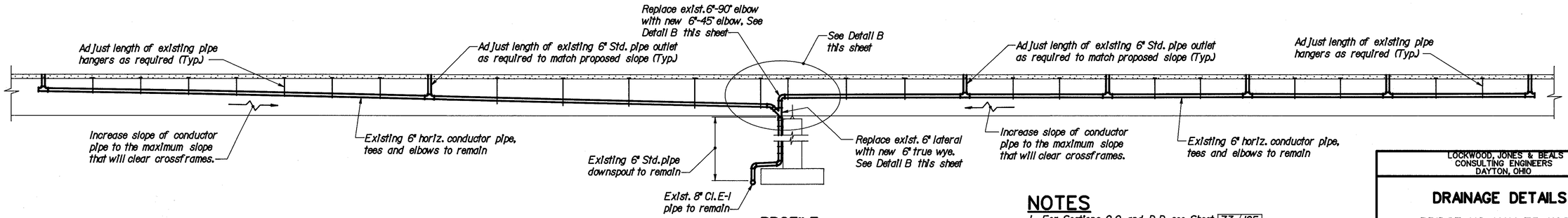
DETAIL B



DETAIL A



PLAN



PROFILE
COLLECTOR F

NOTES

1. For Sections C-C and D-D, see Sheet 73 / 105

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

68 / 105

DRAINAGE DETAILS

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHARD AVE.

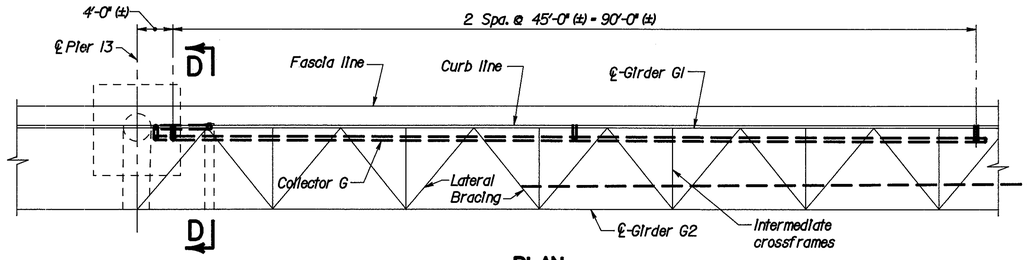
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
HDJ	MPH	CRB	MPH	HDJ 12/92	

f:\6272\1192c2.dgn Feb. 12, 1993 16:27:44

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

302
338

HAMILTON COUNTY
HAM-75-9.75



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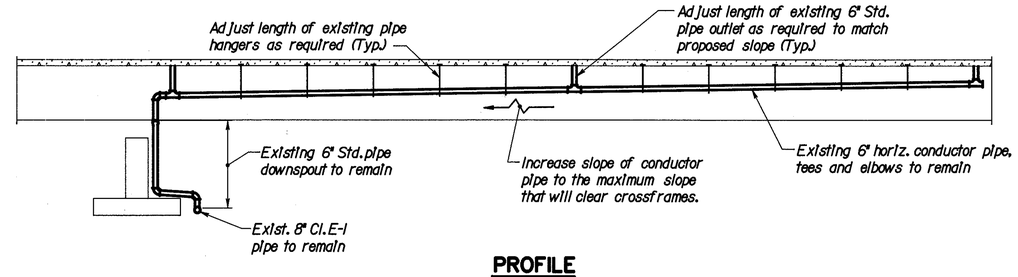
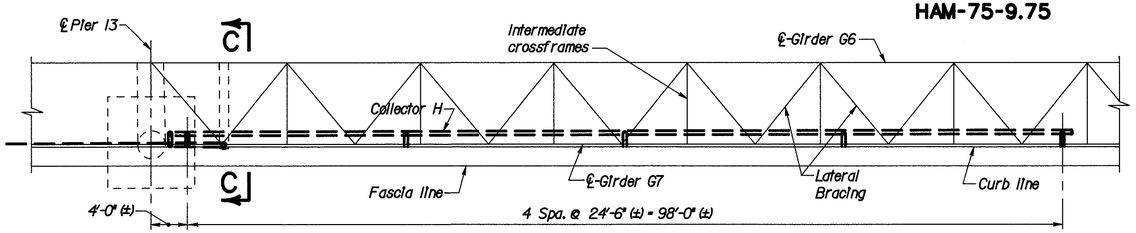


PROFILE

COLLECTOR G



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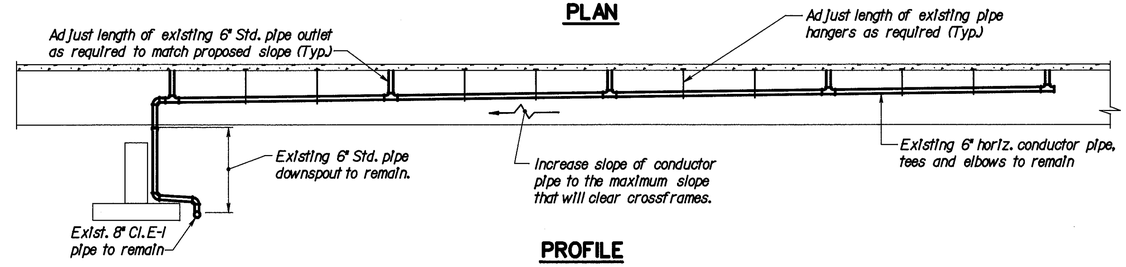
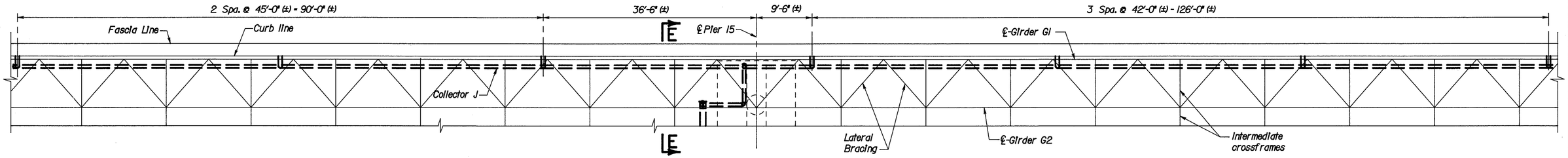


PROFILE

COLLECTOR H



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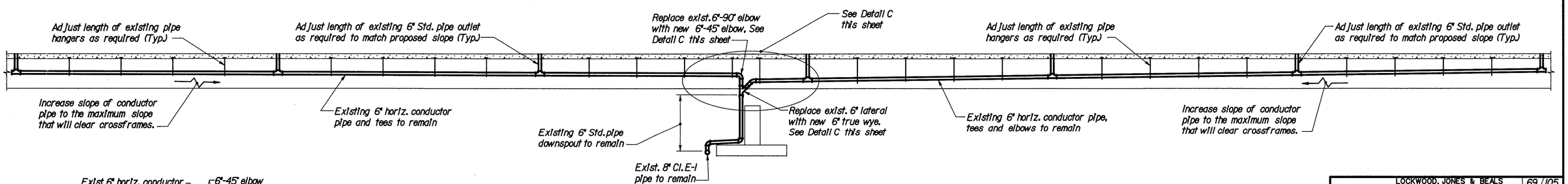
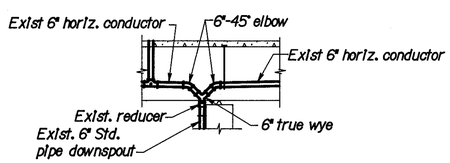


PROFILE

COLLECTOR J



DETAIL C

NOTES

1. For Sections C-C, D-D and E-E, see Sheet 73/105

LOCKWOOD, JONES & BEALS
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DRAINAGE DETAILS

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
HDJ	MPH	CRB	MPH	HDJ 12/92	

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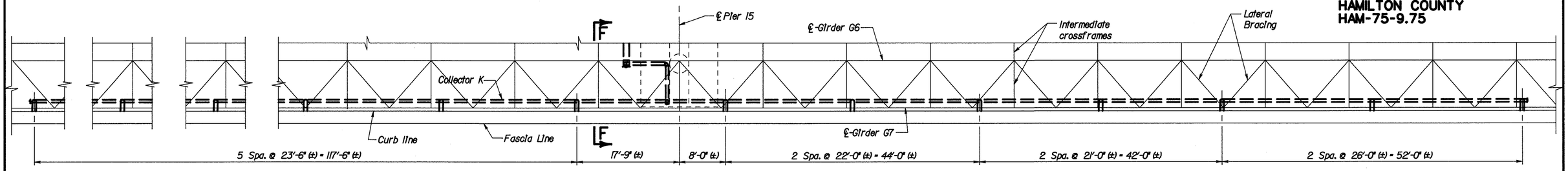
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

303
338

HAMILTON COUNTY
HAM-75-9.75



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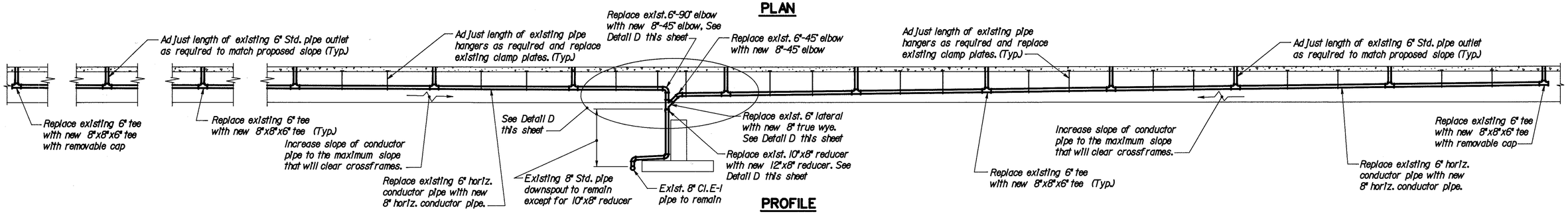
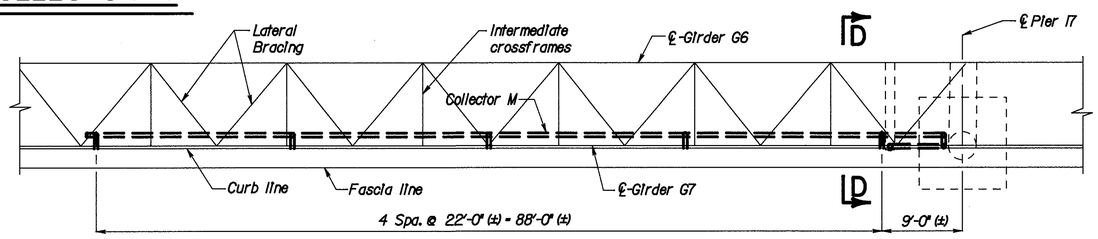


PROFILE
COLLECTOR K



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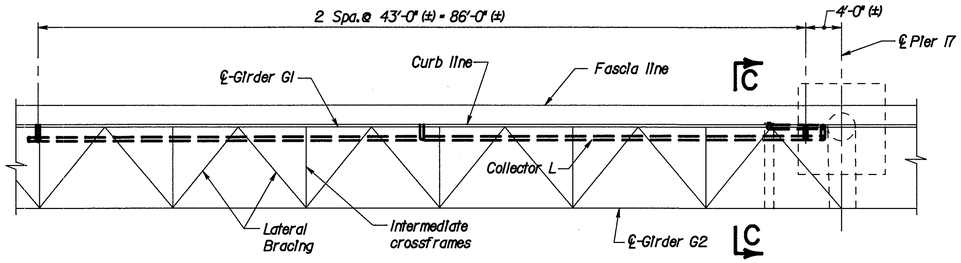

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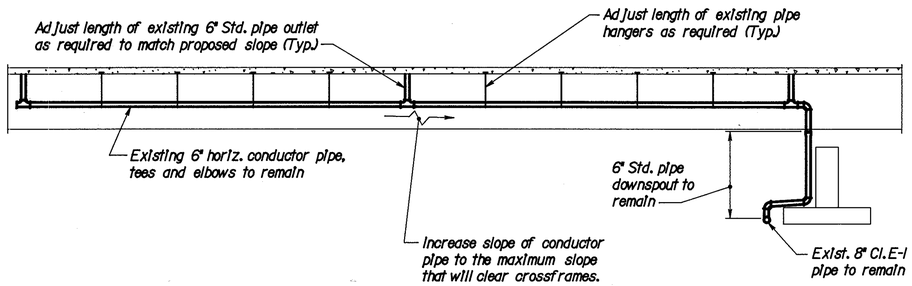
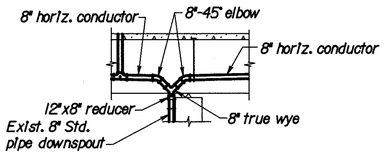
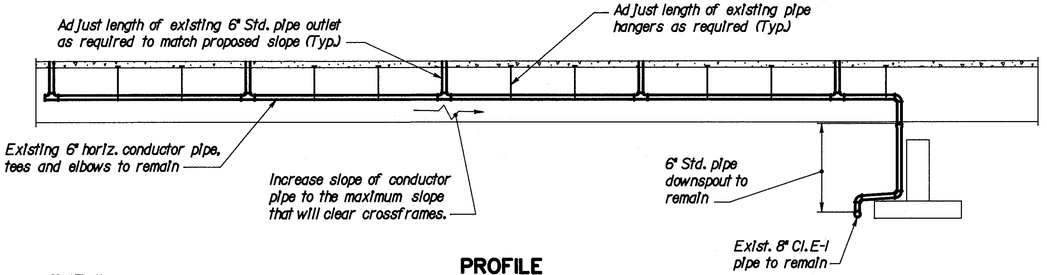


PROFILE
COLLECTOR L



DETAIL D



PROFILE
COLLECTOR M

NOTES

1. For Sections C-C, D-D and F-F, see Sheet 73/105

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DRAINAGE DETAILS

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
HDJ	MPH	CRB	MPH	HDJ 12/92	

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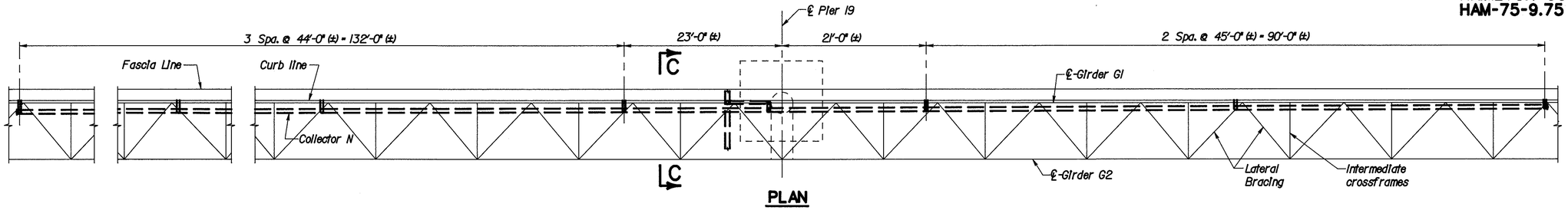
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

304
338

HAMILTON COUNTY
HAM-75-9.75



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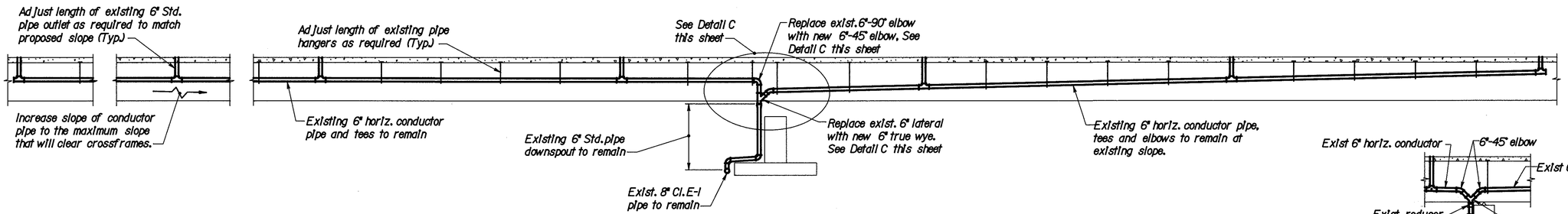
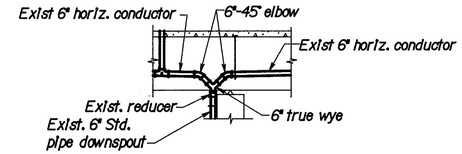


PROFILE
COLLECTOR N



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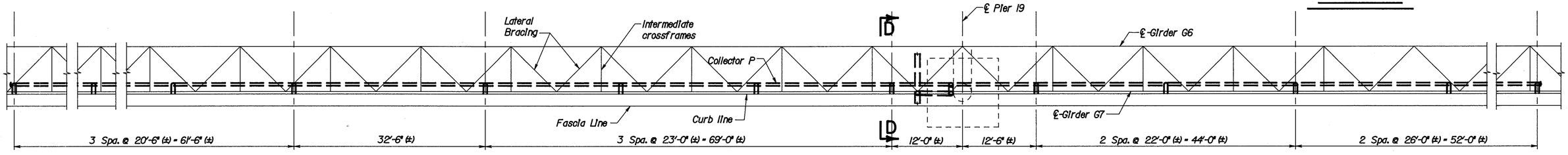

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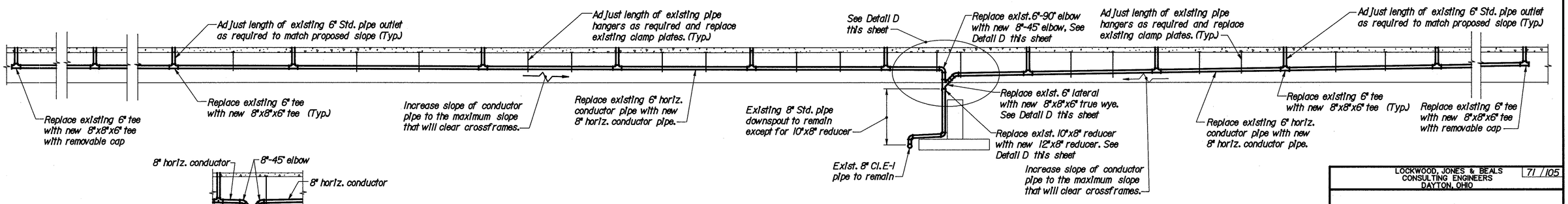

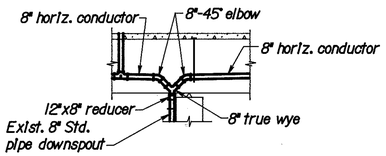

DETAIL D

PROFILE
COLLECTOR P

NOTES

1. For Sections C-C and D-D, see Sheet 73 / 105

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DRAINAGE DETAILS

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
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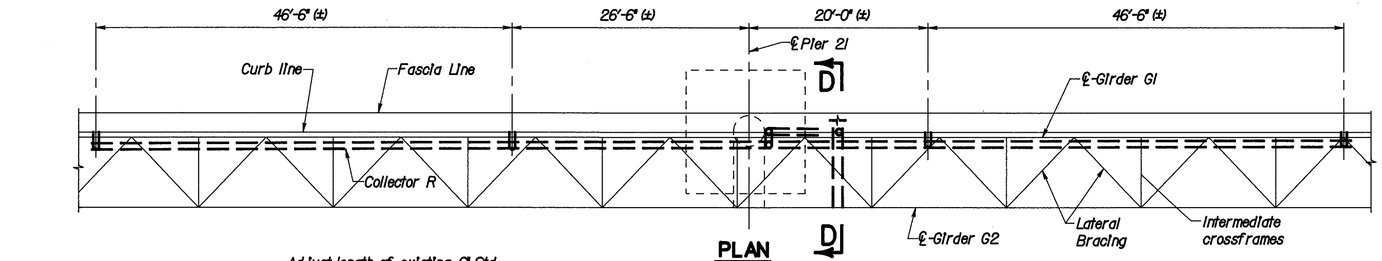
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

HAMILTON COUNTY
HAM-75-9.75



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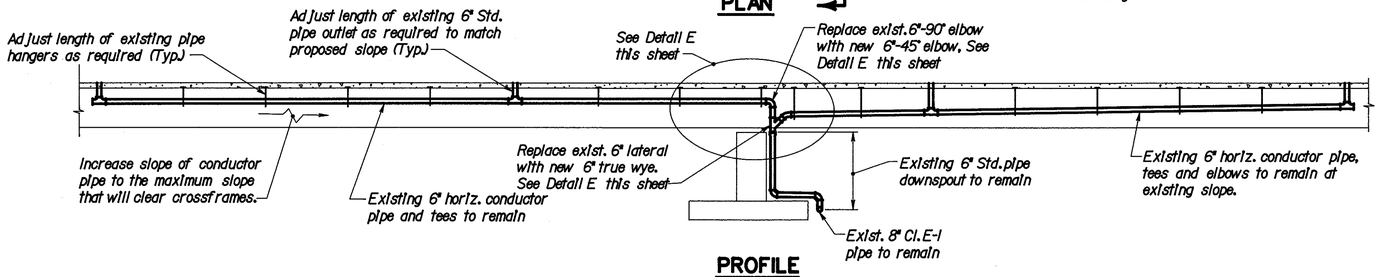
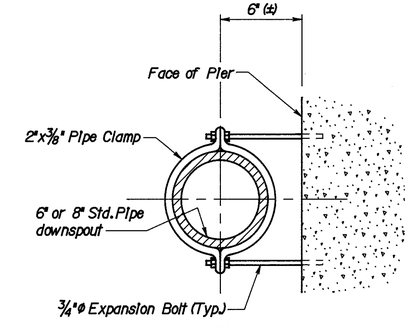


PROFILE

COLLECTOR R



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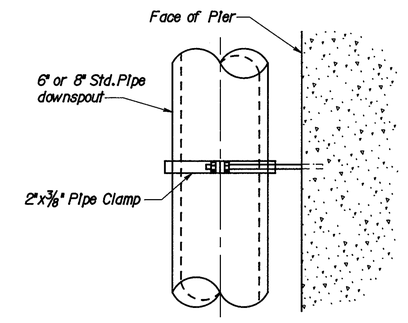
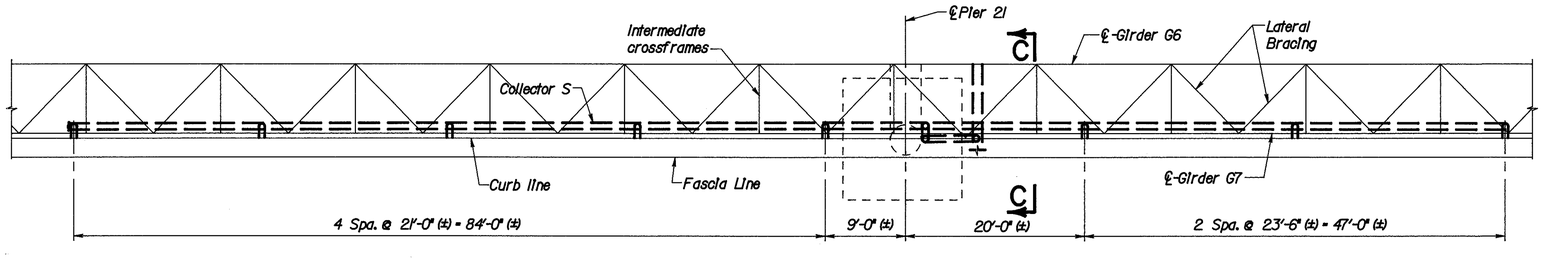


ELEVATION

TYPICAL PIPE SUPPORT



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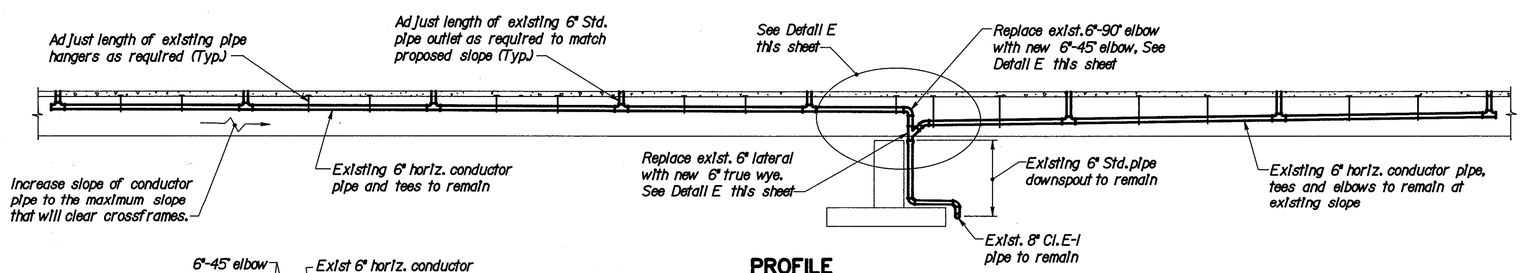
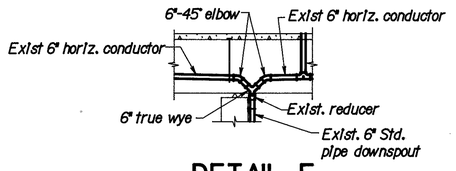


PROFILE

COLLECTOR S



DETAIL E

NOTES

1. For Sections C-C and D-D, see Sheet 73/105

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
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DRAINAGE DETAILS

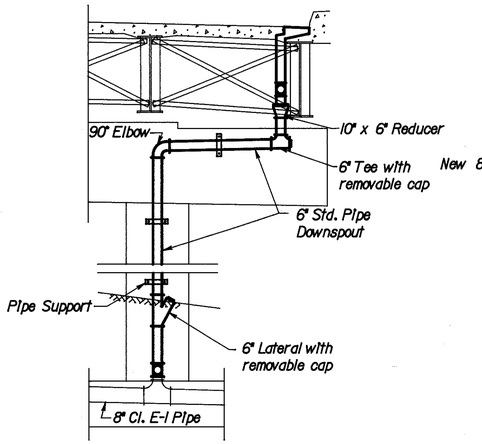
BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
HDJ	MPH	CRB	MPH	HDJ 12/92	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

306
338

HAMILTON COUNTY
HAM-75-9.75



SECTION A-A
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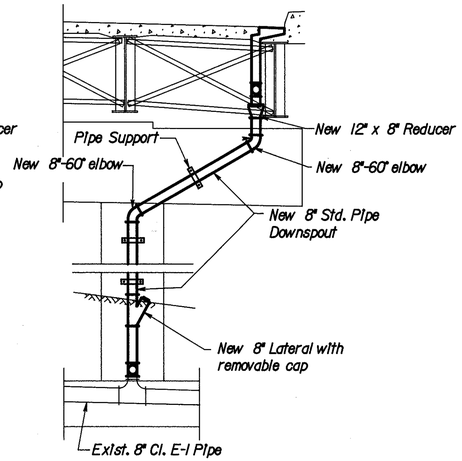
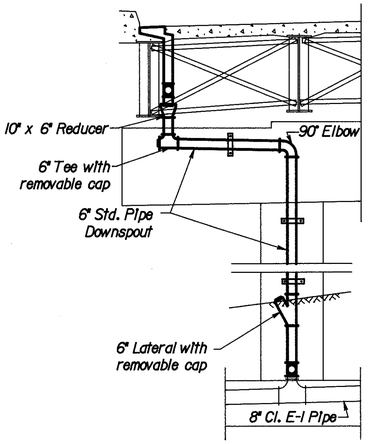


SECTION A-A
PROPOSED



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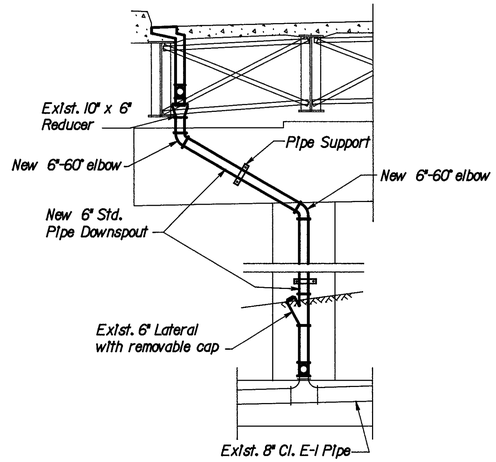

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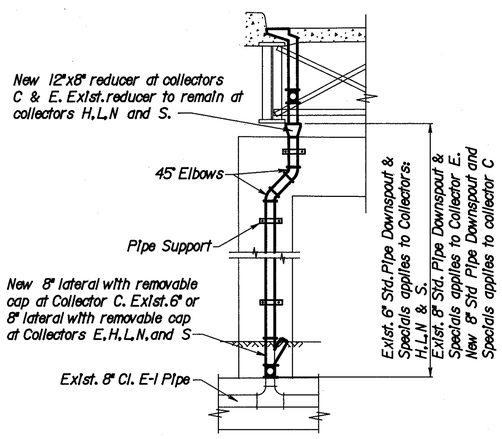
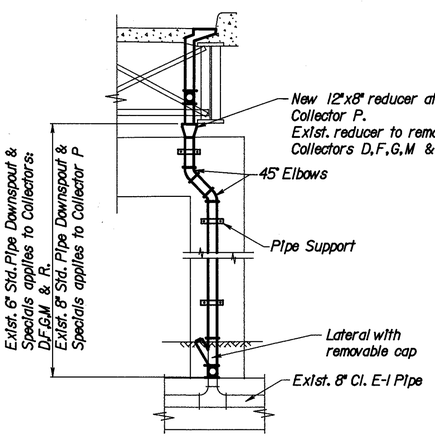
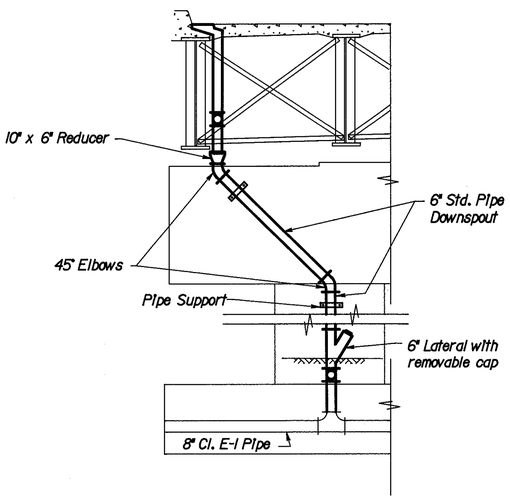
PROPOSED



SECTION C-C



SECTION D-D



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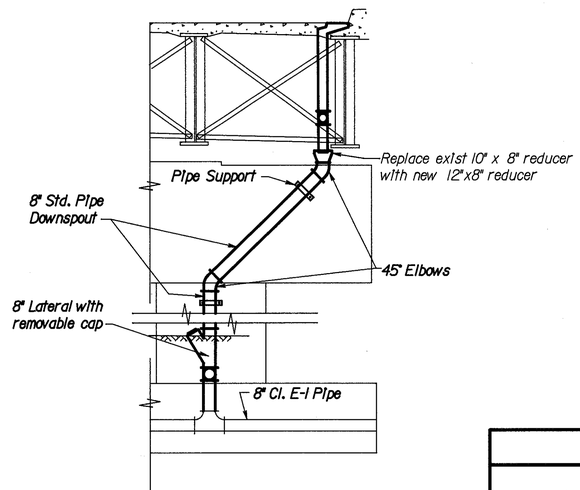

SECTION F-F

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DAYTON, OHIO

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DRAINAGE DETAILS

BRIDGE NO. HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
HDJ	MPH	CRB	MPH	HDJ 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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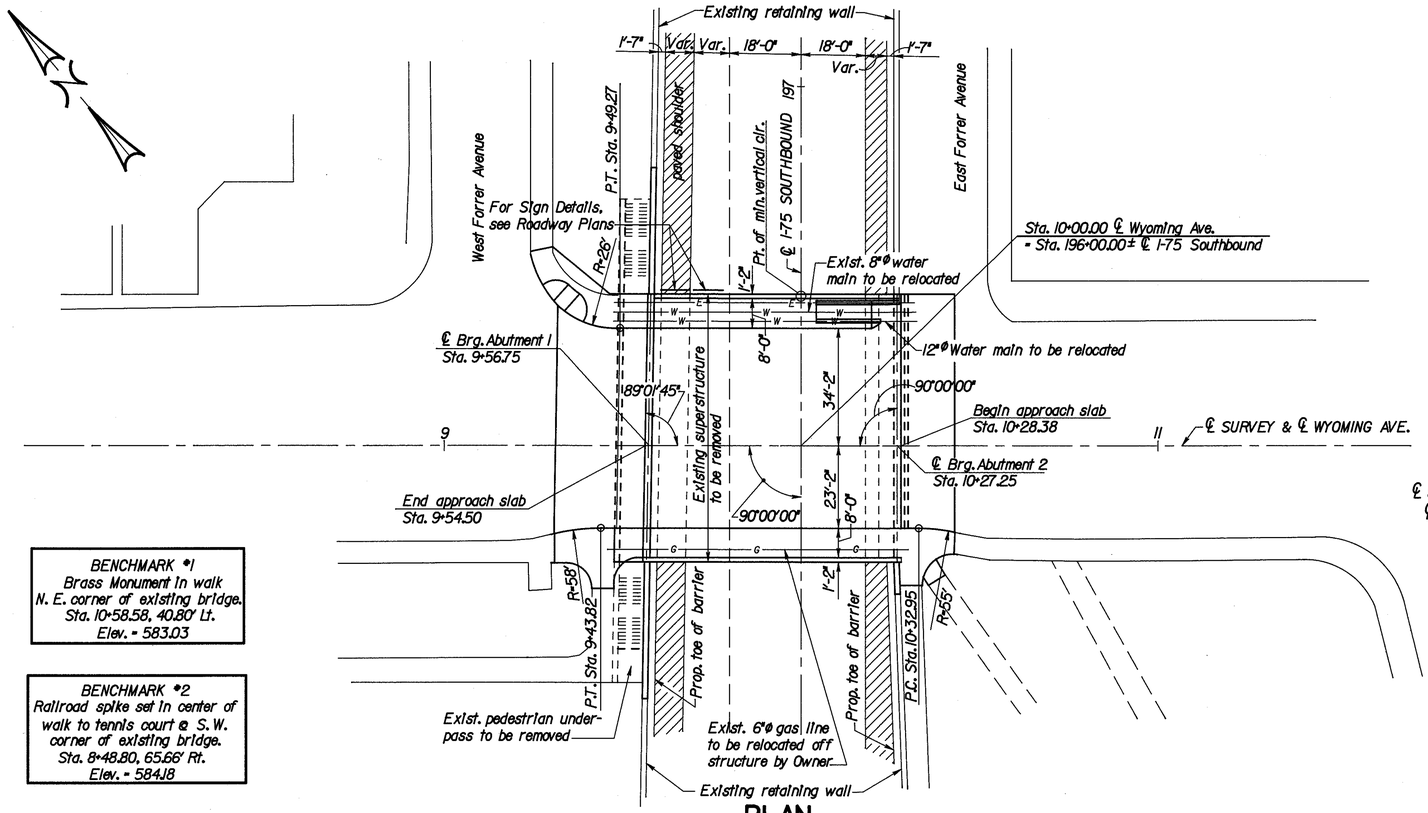
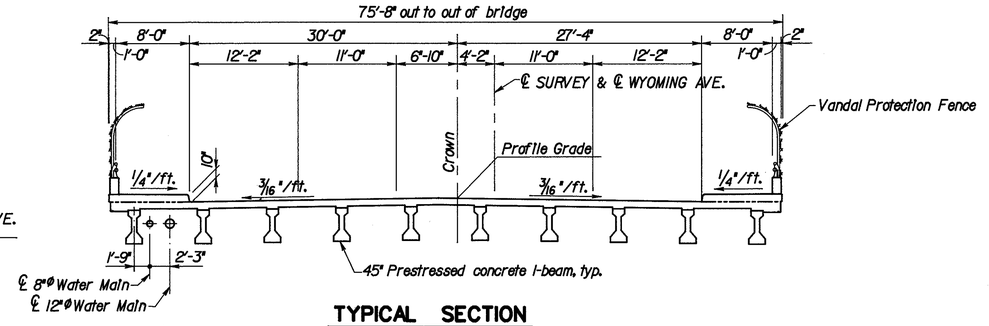
HAMILTON COUNTY
HAM-75-9.75



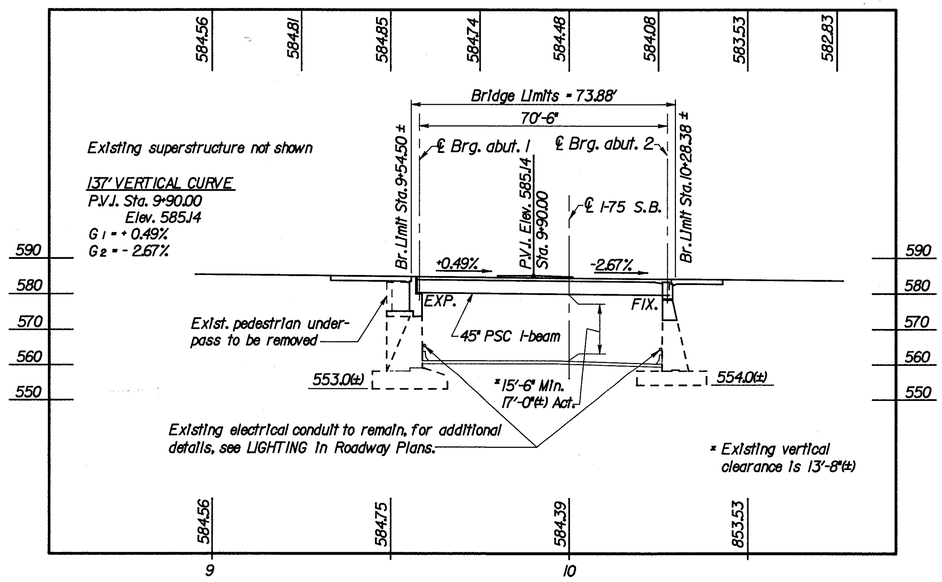
PLAN



TYPICAL SECTION

BENCHMARK #1
Brass Monument in walk
N. E. corner of existing bridge.
Sta. 10+58.58, 40.80' Lt.
Elev. = 583.03

BENCHMARK #2
Railroad spike set in center of walk to tennis court @ S.W. corner of existing bridge.
Sta. 8+48.80, 65.66' Rt.
Elev. = 584.18



PROFILE

EXISTING STRUCTURE

TYPE: Simple span reinforced concrete beam superstructure with reinforced concrete abutments.
SPAN: 69'-0" ±
ROADWAY: 56' plus two 8'-0" sidewalks
LOADING: S-20-40 & Street railway
ALIGNMENT: Tangent
SKEW: None, (0°58'15" skew at abutment 1 only)
WEARING SURFACE: Monolithic concrete
APPROACH SLABS: 15' long
DATE BUILT: 1943 (±)
CONDITION: Poor, superstructure to be replaced
STRUCTURE FILE NO. 3110680

PROPOSED STRUCTURE

TYPE: Simple span composite prestressed concrete I-beam superstructure on modified existing reinforced concrete abutments.
SPAN: 70'-6"
ROADWAY: 57'-4" face to face of curbs with 8'-0" sidewalks each side.
LOADING: HS20-44 and the alternate military loading.
ALIGNMENT: Tangent
SKEW: None, (0°58'15" skew at abutment 1 only)
WEARING SURFACE: Monolithic concrete
APPROACH SLABS: AS-1-81 (25' long at abutment 1, 15' at abutment 2) modified.

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

74/105

SITE PLAN
BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE
HAMILTON COUNTY STA. 9+54.50 TO STA. 10+28.38

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED DATE
LJB	DYA	EPA	DYA	DFS	HDJ 12/92

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F.H.W.A. REGION	STATE	PROJECT		308
5	OHIO			338

HAMILTON COUNTY
HAM-75-9.75

GENERAL NOTES

REFERENCE shall be made to the following:
Standard Drawings: AS-1-81, dated 11-27-81 VPF-1-90, revised 2-1-92
BR-2-82, dated 11-1-82
EXJ-3-82, revised 8-1-84

and to Supplemental Specifications: 836, dated 11-12-85 849, dated 12-24-85
852, dated 6-10-87 949, dated 9-26-86

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1989, the 1990 and 1991 Interim Specifications and the Ohio "Supplement" to these specifications.

DESIGN DATA: Design loading HS20-44 and the Alternate Military Loading
Concrete Class S - Compressive strength 4500 psi (Superstructure)
Concrete Class C - Compressive strength 4000 psi (Substructure).
Reinforcing Steel - ASTM A615, A616 or A617 - Grade 60
Minimum yield strength 60000 psi
Concrete for Prestressed Beams - Unit stress 2200 psi compression, 444 psi tension
Reinforcing Steel for prestressed beams - ASTM A615, A616 or A617, Grade 60
Prestressing Strand - ASTM A416 1/2"Ø seven wire, uncoated, low relaxation strand.
f's = 270000 psi
Initial Stress = 0.75 f's
Deck Protection Method: Epoxy coated reinforcing steel and sealing of concrete surfaces.

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 1".

LAMINATED ELASTOMERIC BEARINGS shall be durometer hardness grade 50 and shall conform to 711.23 of the "Construction and Material Specifications".

ITEM SPECIAL, SEALING OF CONCRETE SURFACES: A concrete sealer shall be applied to the substructure as shown on sheet 82/105, to the end diaphragm as shown on sheet 86/105 and to the concrete deck fascia, parapet and sidewalk as shown on sheet 87/105. See Proposal Note for surface preparation requirements, application rates, material requirements and application procedures.

UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic and support utilities the existing structure shall be removed as limited by ITEM 202 description below.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, shall include the superstructure, both approach slabs, portions of existing pedestrian underpass, retaining walls and abutments as defined on sheets 77/105 and 78/105. Removal of backfill material required for the removal of existing abutment backwalls and retaining walls and the subsequent placement and compaction of granular backfill material, to the level of the subgrade, shall be in accordance with 503 of the CMS, and shall be included for payment in the lump sum bid for item 202.

ITEM 511, CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN: Membrane curing per Supplemental Specification 836 will not be permitted. Concrete shall be cured by Method (a), Water Curing.

ITEM 517, RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL), AS PER PLAN: Membrane curing per Supplemental Specification 836 will not be permitted. Concrete shall be cured by Method (a), Water Curing.

ITEM 517, RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL, USING SHRINKAGE COMPENSATING CEMENT) shall conform to the pertinent sections of the Proposal Note for shrinkage compensating cement and to 517 of the CMS. Payment for railing shall conform with 517.07 of the CMS.

EXISTING STRUCTURE VERIFICATION: Details and dimensions shown on these plans pertaining to the existing structure have been obtained from plans of the existing structure and/or from field observations and measurements. Consequently they are indicative of the existing structure and the proposed work but they shall be considered tentative and approximate. The Contractor is referred to Sections 102.05 and 105.02 of the CMS. Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a prebid inspection of the existing structure by the Contractor. However all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field. Some reinforcing bars, as detailed, may require field cutting to maintain proper clearance and/or fit.

COMPRESSION SEAL for the roadway portion of expansion joint shall be furnished and installed in one continuous piece.

EXISTING REINFORCING STEEL: Where concrete is being removed and replaced, the existing reinforcing steel which is to remain shall be trimmed to provide the required clearance. Any existing reinforcing bars which are to be incorporated into the new work and which are made unusable by the Contractor's concrete removal operations shall be replaced with new steel at the Contractor's cost. Any existing reinforcing bars deemed by the Engineer to be unusable because of corrosion shall be replaced with new epoxy coated steel and shall be paid for at the unit price bid for Item 509 - Epoxy Coated Reinforcing Steel, Grade 60. 200 pounds of reinforcing steel have been provided for this purpose.

PROPOSED WORK: The major portions of this work include:
1. Removal of existing superstructure and approach slabs.
2. Removal of portions of existing substructure, metal railing and wingwalls as defined under Item 202.
3. Construction of wingwalls and abutments up to the beam seat level.
4. Erection of prestressed concrete I-beams.
5. Construction of composite deck slab.
6. Construction of abutment backwalls, sidewalks, fencing and railing on superstructure.
7. Installation of railing on wingwalls.

CONSTRUCTION JOINT PREPARATION: Saw cut the boundaries of proposed concrete removals 1 inch deep. Remove concrete to a rough surface. Where practicable, at least a 1'-0" length of protruding reinforcing steel shall be left in place. Install dowel bars as specified. Prior to concrete placement, abrasively clean joint surface and exposed reinforcement to remove loose and disintegrated concrete and loose rust. Then, the joint surface and exposed reinforcement shall be thoroughly cleaned of all dirt, dust, or other foreign materials by the use of water, air under pressure, or other method that produces results satisfactory to the Engineer. The concrete bonding surface shall be wet without free water as concrete is placed.

CONCRETE REMOVAL shall be by means of approved pneumatic hammers employing pointed and blunt chisel tools. Hydraulic hoe-ram type hammers will not be permitted. The weight of the hammer shall not be more than 35 pounds for removal within 18-inches of portions to be preserved. Outside the 18-inch limit, a hammer heavier than 35 pounds, but not to exceed 85 pounds, may be used at the approval of the Engineer. Pneumatic hammers shall not be placed in direct contact with reinforcing steel that is to be retained in the rebuilt structure.

FOUNDATION BEARING PRESSURE: The maximum bearing pressure, for both the existing and proposed structure dead plus live load, is approximately 2.6 tons /ft.^{2}.

ITEM 517-RAILING REBUILT, AS PER PLAN: The Contractor shall exercise care in removal of existing metal railing within the limits defined on Sheets 77/105 and 78/105. Adequate length of this existing metal railing shall be modified to conform to the profile of the reconstructed abutment - wingwalls, and shall be reinstalled on same as detailed on Sheets 79/105 thru 82/105. All posts and pickets shall be truly vertical. Painting shall be System OZEU, closely matching the existing paint color. Payment shall be at the contract price bid for Item 517-Railing rebuilt, as per plan - which shall include all materials, labor and incidentals necessary for installation.

NEOPRENE SHEETING: This item shall consist of furnishing and installing elasromeric sheeting behind the abutment for the purpose of drainage protection.

Sheeting shall be 3/32 inch thick general purpose, heavy duty neoprene sheet with nylon fabric reinforcement. The nylon reinforced Neoprene sheeting (NRNS) shall be "Fairprene number NN-0003" as manufactured by E.I. Dupont De Nemours and Company, Inc., "Wingprene" as manufactured by Goodyear Tire and Rubber Company, or an approved equal. The sheet shall conform to the following:

Description of Test	ASTM Method	Requirement
Thickness, Inches	D 751	.094+/-.010"
Breaking Strength, grab WXF, lbs. min.	D 751	700 x 700
Heat Aging 70 hours T 212 F., 180 bend without cracking	D 2136	No cracking of coating
Low temperature brittleness 1 hour at -40 F., bend around 1/4" mandrel	D 2136	No cracking of coating

Sheets shall be furnished in one continuous piece unless a shop fabricated splice, vulcanized (with heat and pressure) is approved by the Engineer.

Each lot of NRNS sheeting shall be tested by an independent laboratory to ensure compliance with these provisions. Two certified copies of the qualifications data indicating that the tested materials comply with these provisions shall be submitted to the testing laboratory. Sampling, if requested, shall be in accordance with CMS 106.03. The sample from each lot shall be in one piece, three feet long. Material acceptance will be based on ODOT Testing Laboratory evaluation of certified test data, Laboratory test of sampled material, or the evaluation of both certified test data and tested samples.

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

75/105

GENERAL NOTES

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA		DYA	DFS	HDJ 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

307
338

HAMILTON COUNTY
HAM-75-9.75

ESTIMATED QUANTITIES

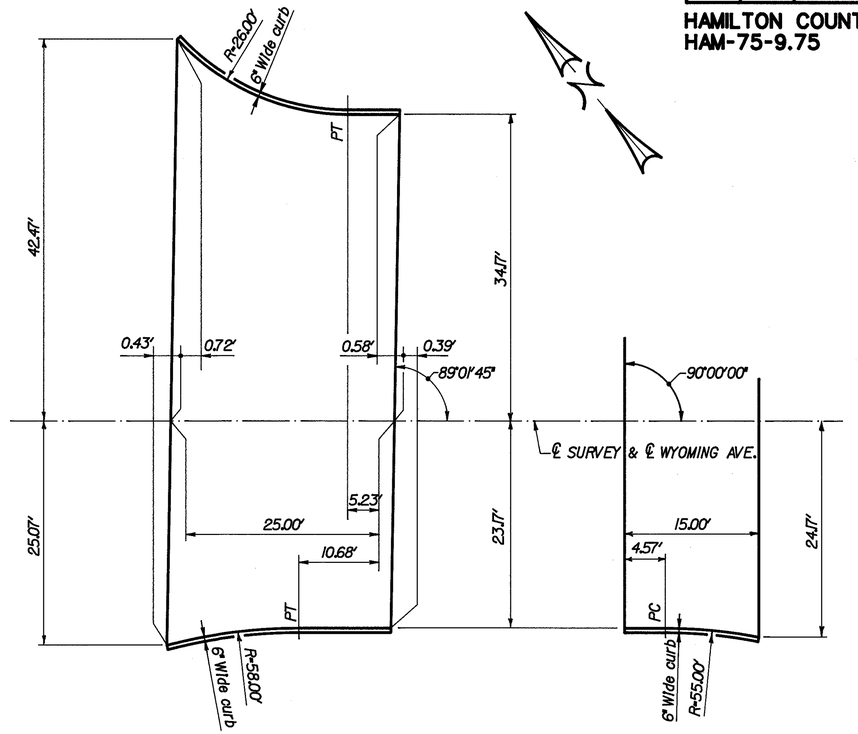
ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	SUPER-STRUCTURE	GENERAL	AS BUILT	
202	11201	Lump	Lump	Portions of structure removed, as per plan Sheet 75 / 105			Lump		
503	11100	Lump	Lump	Cofferdams, cribs and sheeting			Lump		
509	15800	62673	Lb.	Epoxy coated reinforcing steel, grade 60	16958	45515	200		
511	31501	201	Cu.Yd.	Class S concrete, superstructure, as per plan Sheet 75 / 105		201			
511	33402	45	Cu.Yd.	Class S concrete, superstructure (diaphragms for concrete I-beams)		45			
511 (Note 1)	33404	201	Cu.Yd.	*Class S concrete, superstructure (using shrinkage compensating cement)		201			
511 (Note 1)	33410	Lump	Lump	*Class S concrete, (using shrinkage compensating cement) for pre-placement testing		Lump			
511	45700	235	Cu.Yd.	Class C concrete, abutment	235				
512	44400	20	Sq.Yd.	Type B waterproofing	20				
Special	51267500	283	Sq.Yd.	*Sealing of concrete surfaces.		283			
Special	51267502	311	Sq.Yd.	*Sealing of concrete surfaces (epoxy).	308	3			
515	50000	10	Each	*45" Prestressed concrete I-beam (71' to 73' long)		10			
516	10500	75	Lin. Ft.	Structural Exp. Joint Incl. elastomeric compression seal			75		
516	13600	202	Sq.Ft.	1" Preformed expansion joint filler	202				
516	30500	35	Lin. Ft.	6" PVC Waterstop	35				
516	43100	10	Each	Elastomeric bearing with internal laminates only (neoprene) 1½"x9"x20"		10			
516	44000	10	Each	Elastomeric bearing with internal laminates and load plate (neoprene) 1½"x9"x20" with 10"x23" load plate		10			
517	71501	144	Lin. Ft.	Railing (concrete parapet with double pipe rail), as per plan Sheet 75 / 105		144			
517 (Note 2)	71510	144	Lin. Ft.	*Railing (concrete parapet with double pipe rail using shrinkage compensating cement).		144			
517	75501	104	Lin. Ft.	Railing rebuilt, as per plan Sheet 75 / 105	104				
518	21200	199	Cu.Yd.	Porous backfill with filter fabric	199				
Special	60739930	137	Lin. Ft.	Vandal protection fence, 12' curved, coated fabric		137			
852	00100	468	Each	Polyester/vinlyester resin bonded anchors	468				

Note 1: Alternate bid items:
These two items constitute one alternate bid item to Class S concrete, superstructure, as per plan.

Note 2: Alternate bid item.

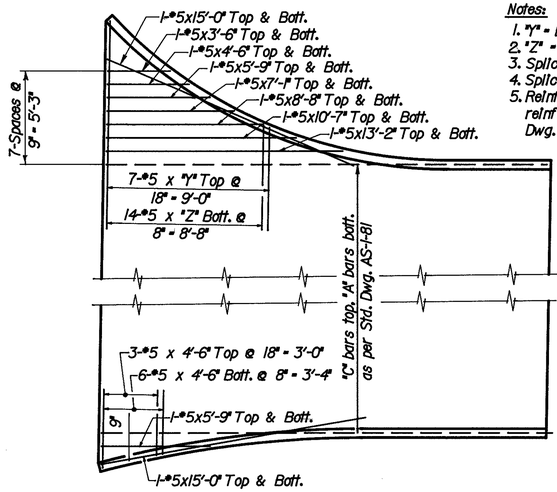
* See proposal note.

Quantities computed by: DFS 6-92
Quantities checked by: AvdB 8-92



AT ABUTMENT 1 AT ABUTMENT 2

APPROACH SLAB DIMENSIONS



Notes:
1. "Y" = Bar lengths vary 4'-6" to 10'-9", Incr. = 12½"
2. "Z" = Bar lengths vary 4'-9½" to 10'-9", Incr. = 5½"
3. Splice top reinforcement with top "B" bars of AS-1-81.
4. Splice bottom reinforcement with bottom "B" bars of AS-1-81.
5. Reinforcement shown is in addition to typical approach slab reinforcement. For typical approach slab details, see Std. Dwg. AS-1-81.

PART PLAN-ADDITIONAL REINFORCEMENT FOR APPROACH SLAB AT ABUTMENT 1

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

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ESTIMATED QUANTITIES

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA		DYA	DFS	HDJ 12/92	

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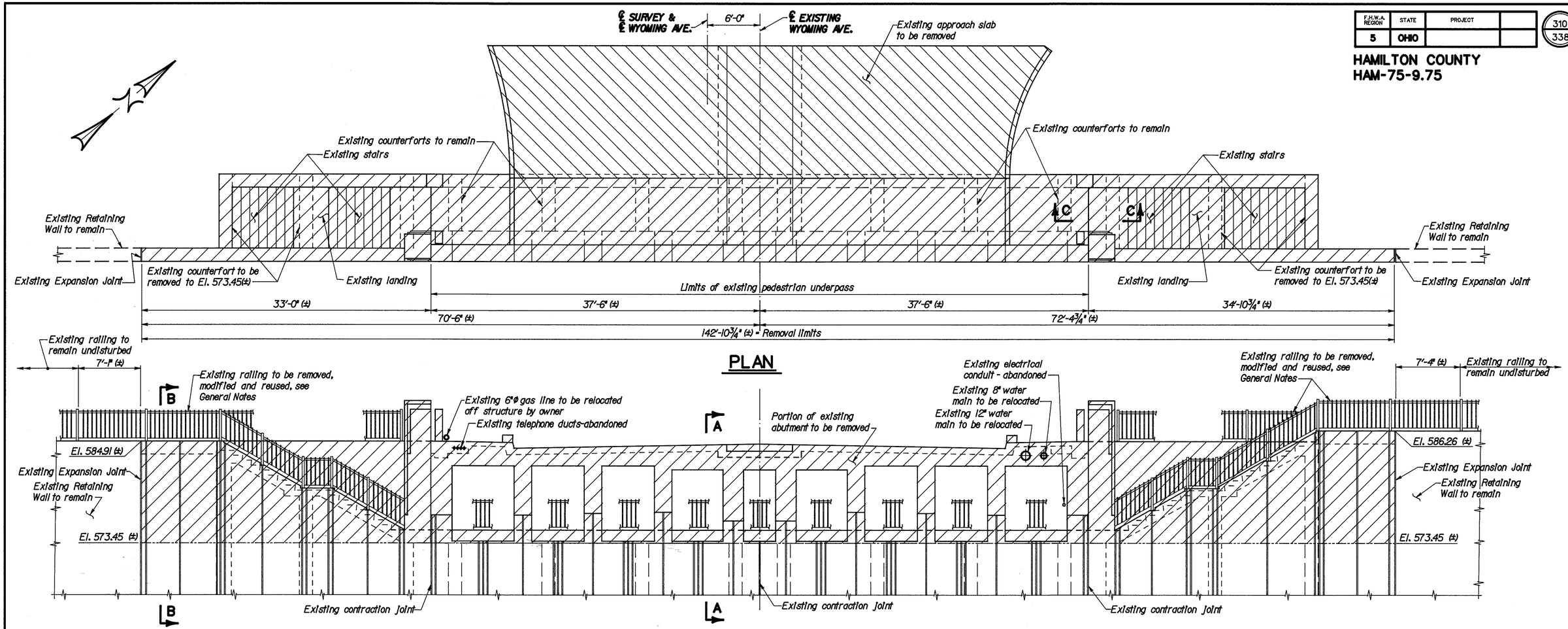
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

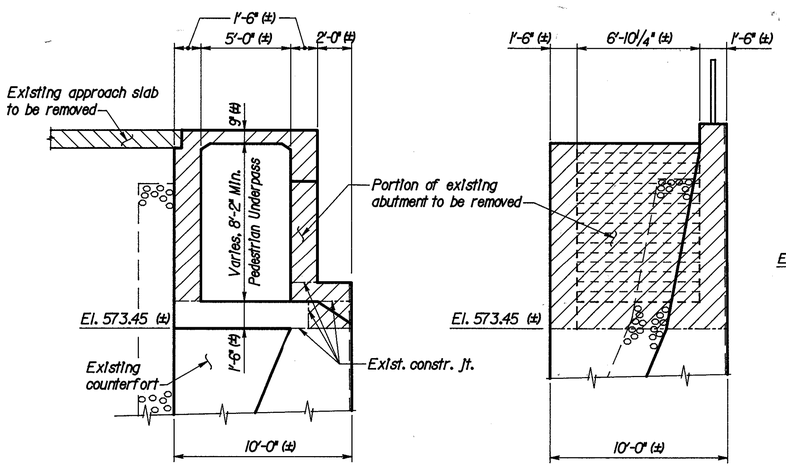
310
338

HAMILTON COUNTY
HAM-75-9.75



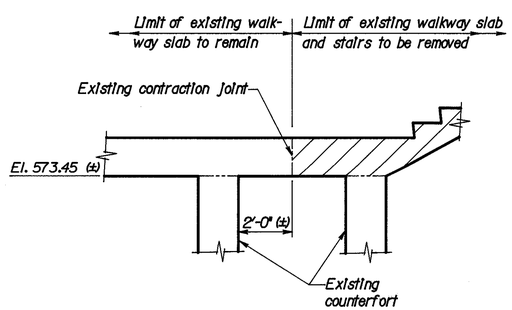
PLAN

ELEVATION



SECTION A-A

SECTION B-B



SECTION C-C

NOTES

1. For modifications at Abutment I see sheets 79 / 105 & 80 / 105
2. For General Notes see sheet 75 / 105

LOCKWOOD, JONES & BEALS
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DAYTON, OHIO
77 / 105

REMOVAL LIMITS AT EXISTING ABUTMENT 1
BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
		GJW	DFS	HDJ 12/92	

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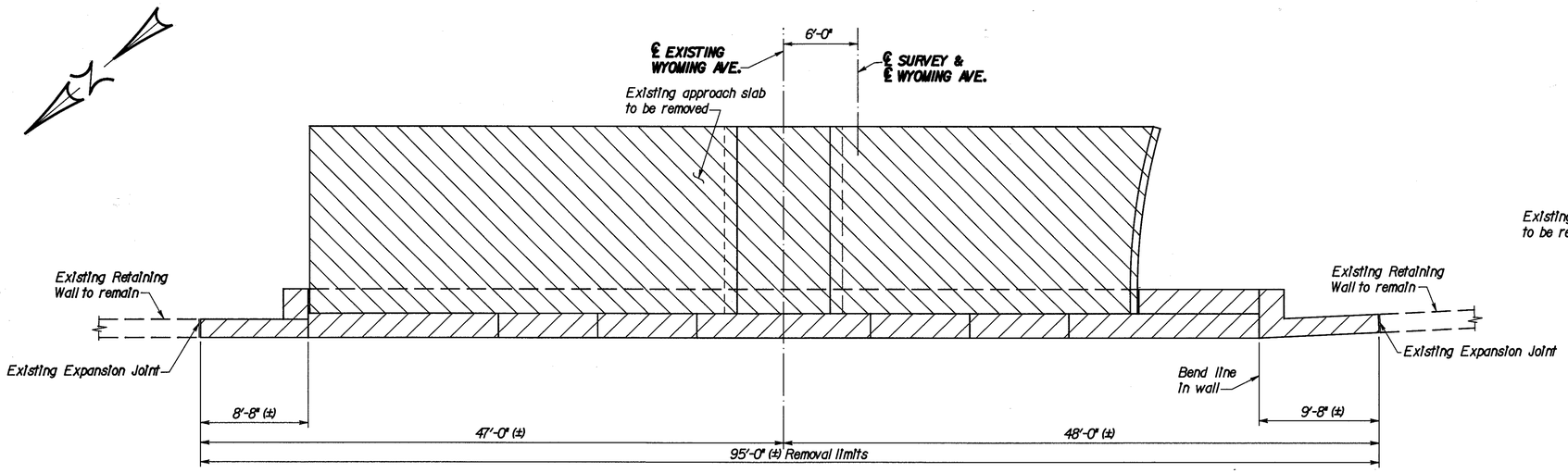
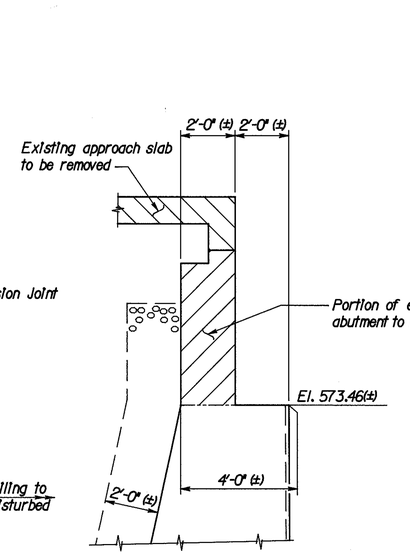
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

311
338

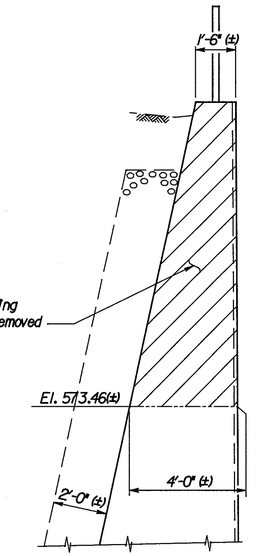
HAMILTON COUNTY
HAM-75-9.75



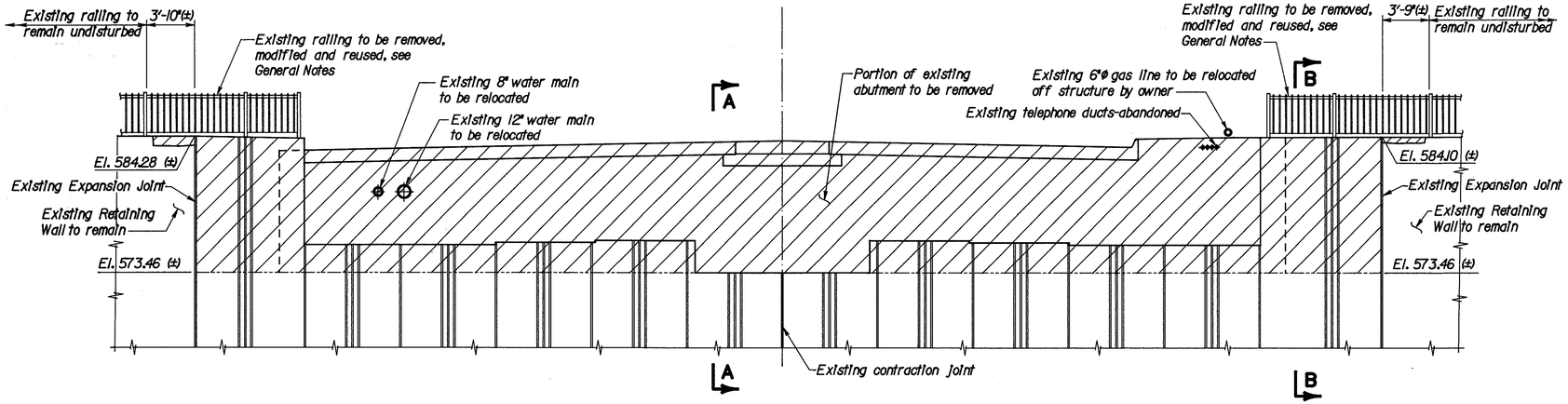
PLAN



SECTION A-A



SECTION B-B



ELEVATION

NOTES

1. For modifications at Abutment 2 see sheet 81 / 105
2. For General Notes see sheet 75 / 105

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REMOVAL LIMITS AT EXISTING ABUTMENT 2

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
		GJW	DFS	HDJ 12/92	

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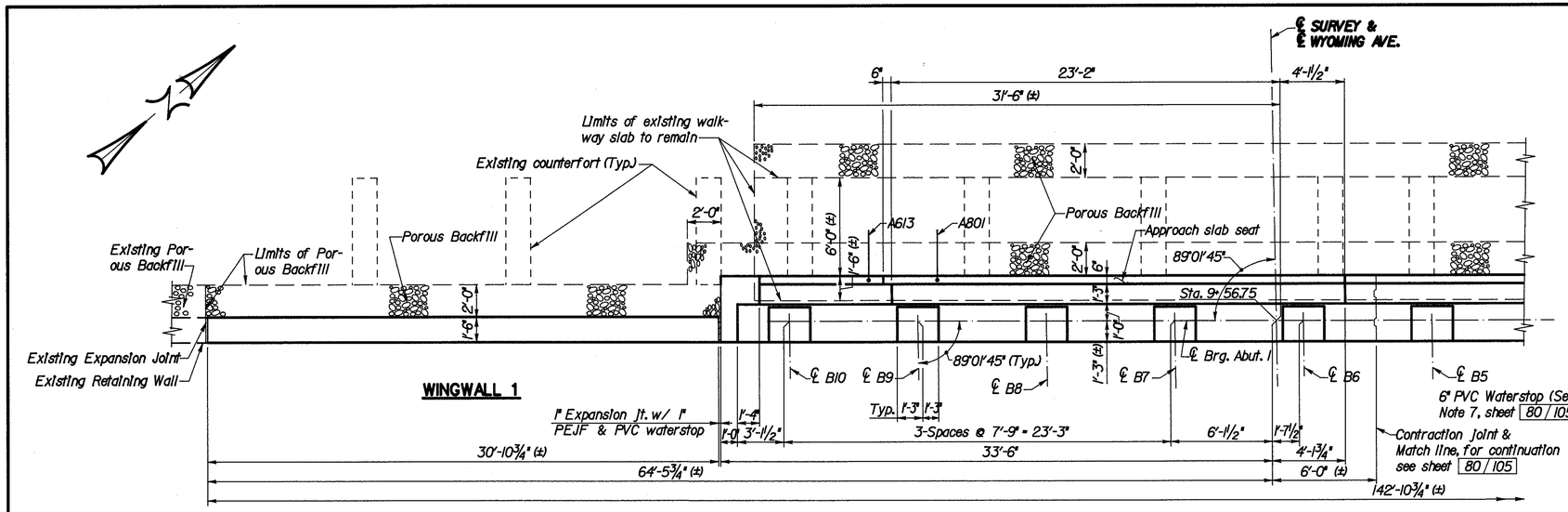
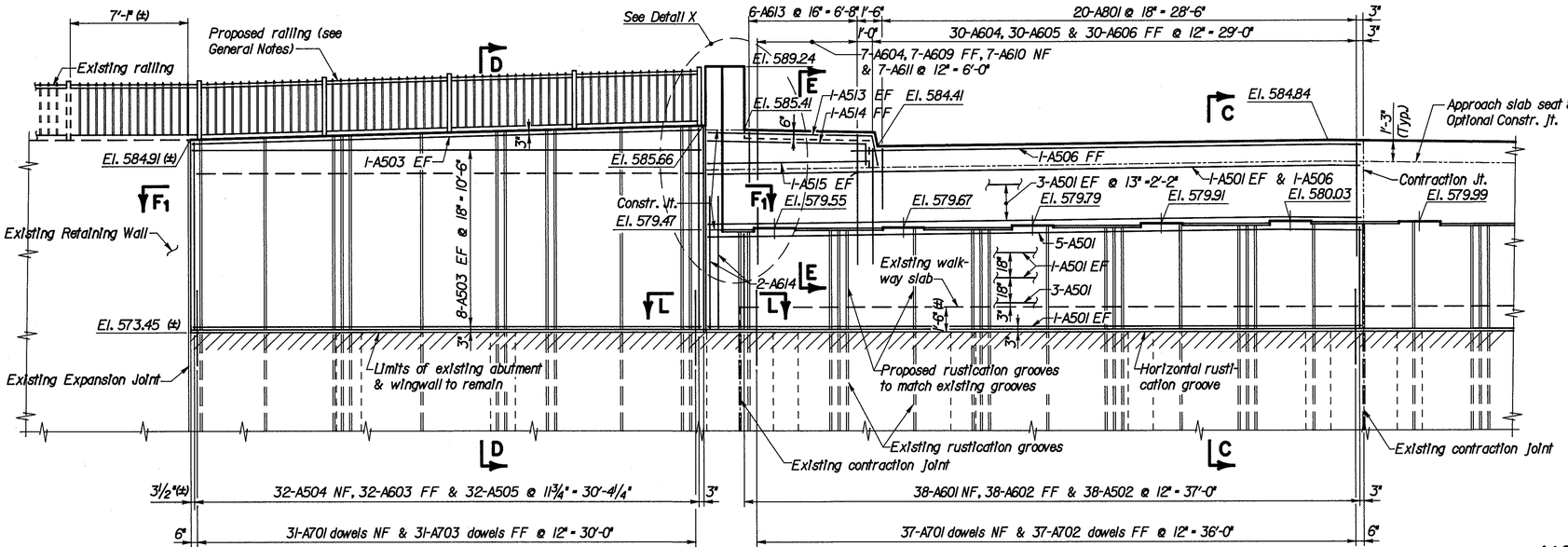
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

312
338

HAMILTON COUNTY
HAM-75-9.75



PLAN



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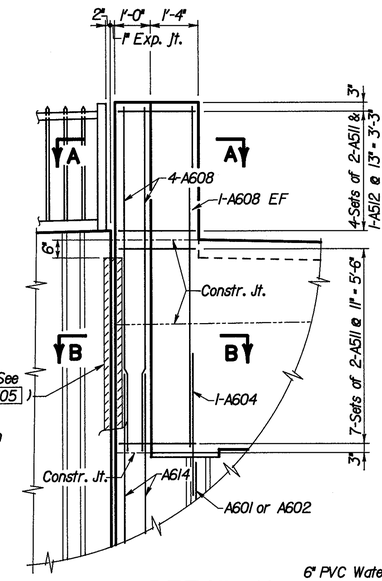
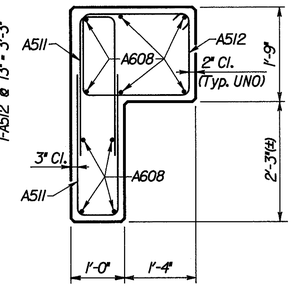
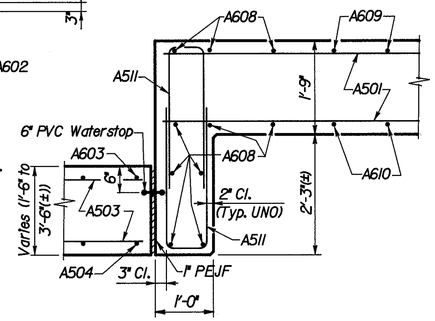


DETAIL X



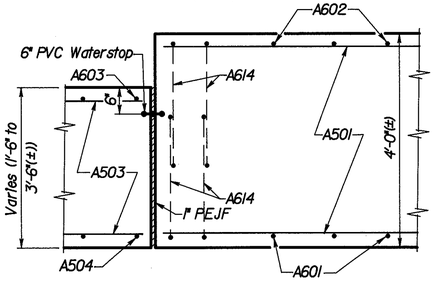
SECTION A-A

(SECTION A1- A1 SIM.)



SECTION B-B

(SECTION B1- B1 SIM.)

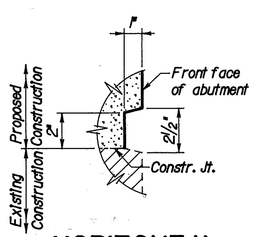


SECTION L-L

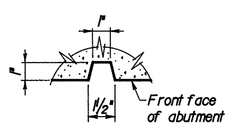
(SECTION L1- L1 SIM.)

NOTES

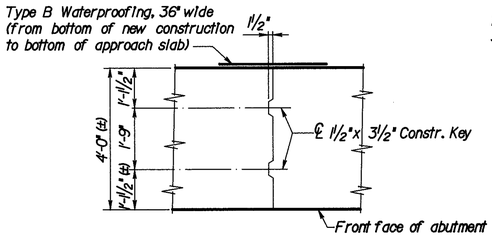
1. For Section F_1 -F_1, see sheet 80/105
2. For Sections C-C, D-D and E-E, see sheet 82/105
3. For additional notes, see sheet 80/105



HORIZONTAL RUSTICATION GROOVE



VERTICAL RUSTICATION GROOVE



CONTRACTION JOINT DETAIL

LEGEND

EF = Each Face
NF = Near Face
FF = Far Face
PEJF = Preformed Expansion Joint Filler
UNO = Unless Noted Otherwise

LOCKWOOD, JONES & BEALS CONSULTING ENGINEERS DAYTON, OHIO — 79/105

PART PLAN & ELEVATION ABUTMENT 1
BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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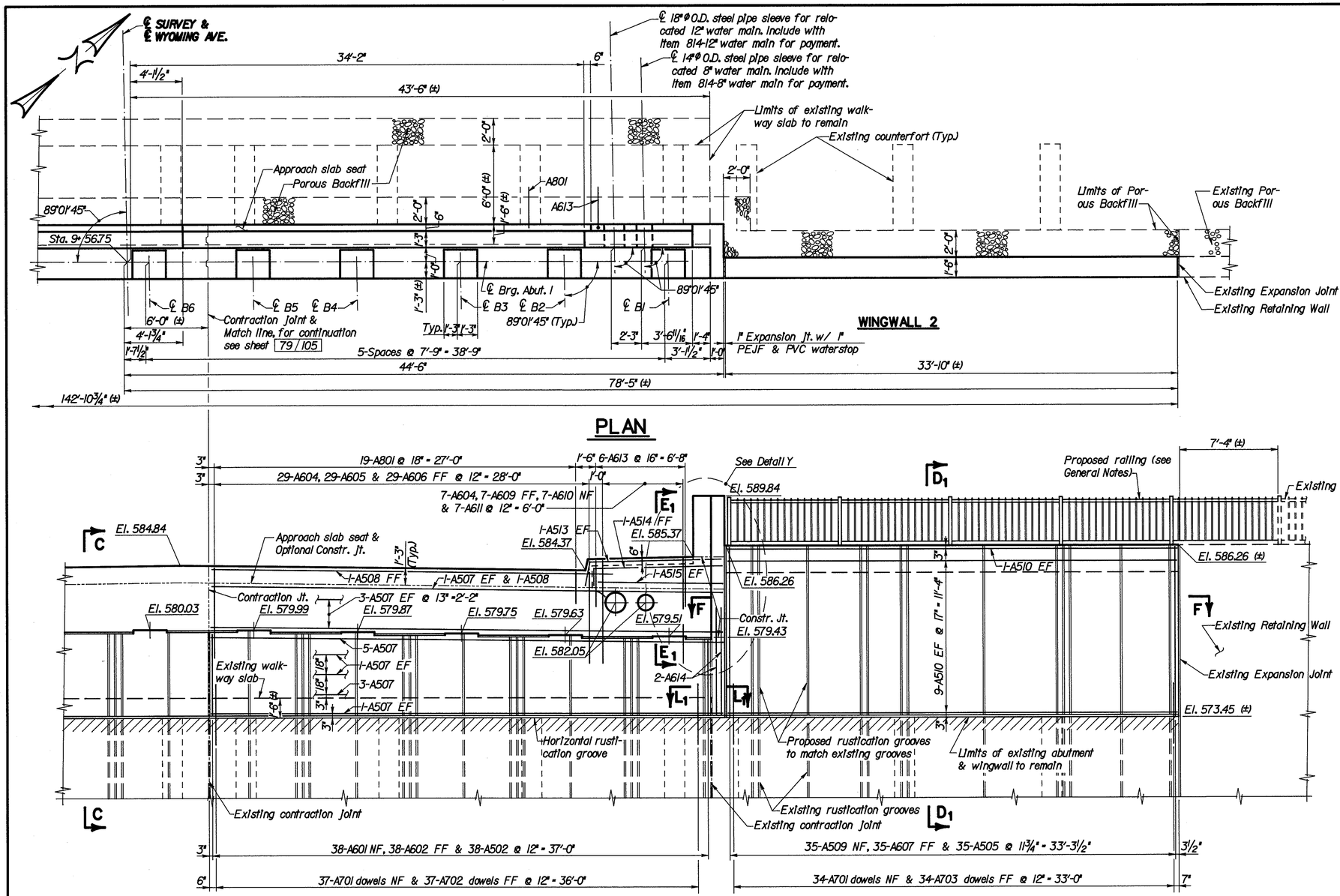
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

313
338

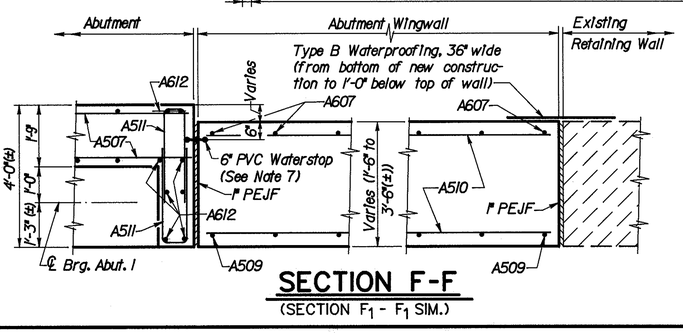
HAMILTON COUNTY
HAM-75-9.75



PLAN

ELEVATION

DETAIL Y



SECTION F-F
(SECTION F_1 - F_1 SIM.)

NOTES

1. Porous backfill shall extend upward to the plane of the subgrade within the limits of the roadway and laterally to the limits shown.
2. For Reinforcing Steel List, see sheet 89 / 105
3. For General Notes, see sheet 75 / 105
4. For Section A_1-A_1, B_1-B_1 & L_1-L_1, see sheet 79 / 105
5. For Section C-C, D_1-D_1 & E_1-E_1, see sheet 82 / 105
6. For contraction joint detail and vertical & horizontal rustication joint details, see sheet 79 / 105
7. Center a 6" PVC Waterstop on backwall expansion joint to form a continuous waterproof seal. Waterstop shall be capable of withstanding 11/2" of movement.

LEGEND

EF - Each Face
NF - Near Face
FF - Far Face
PEJF - Preformed Expansion Joint Filler

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

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PART PLAN & ELEVATION
ABUTMENT 1
BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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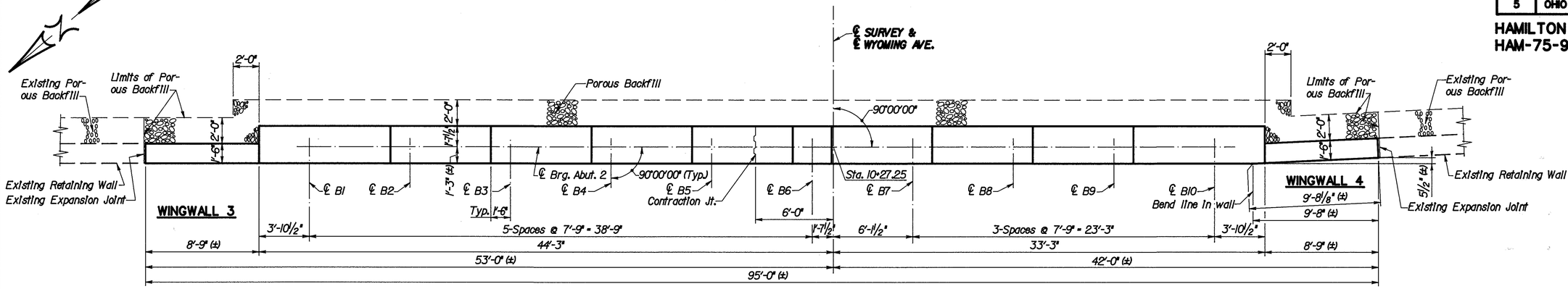
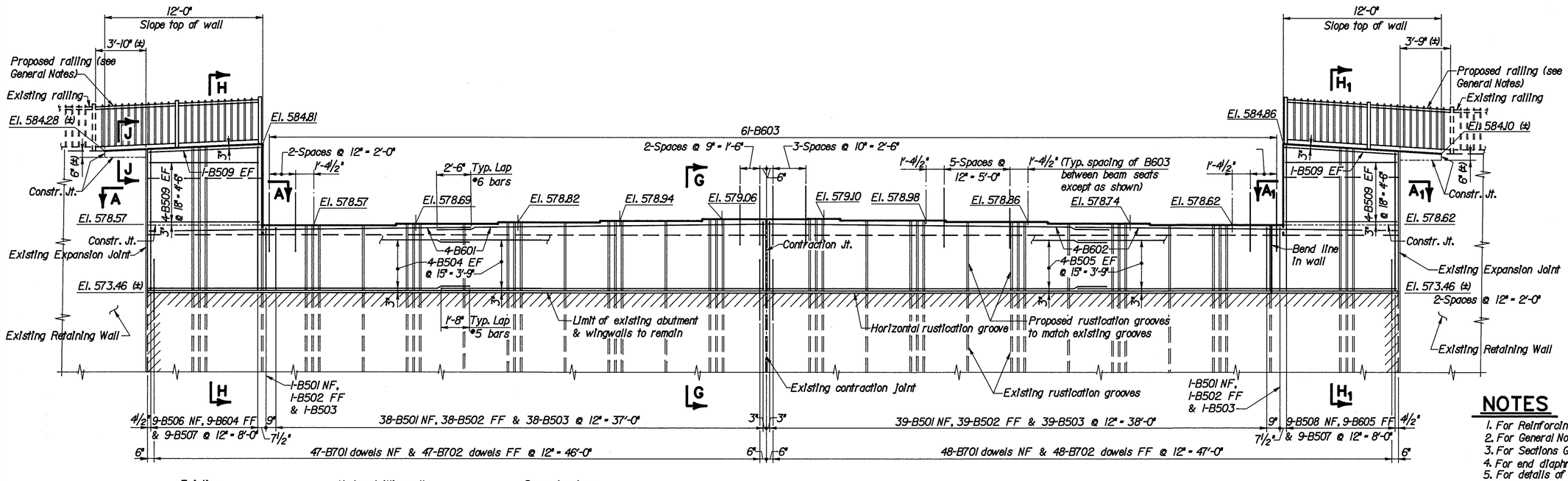
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

314
338

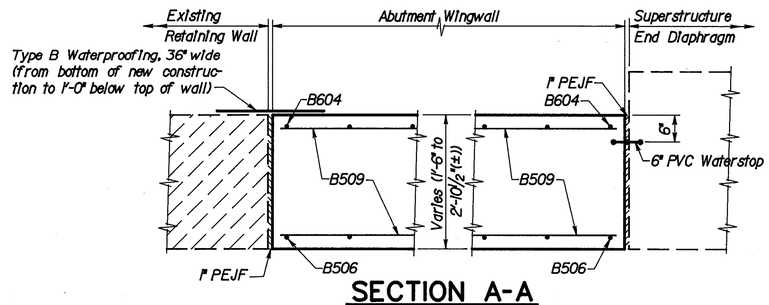
HAMILTON COUNTY
HAM-75-9.75



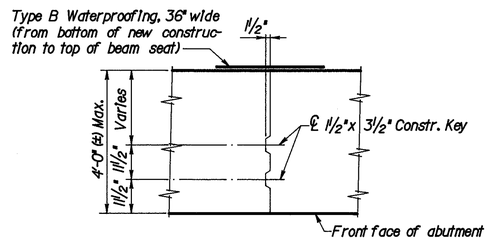
PLAN



ELEVATION



SECTION A-A
(SECTION A_1- A_1 SIM.)



CONTRACTION JOINT DETAIL

NOTES

1. For Reinforcing Steel List, see sheet 89/105
2. For General Notes, see sheet 75/105
3. For Sections G-G, H-H and J-J, see sheet 82/105
4. For end diaphragm details see sheet 86/105
5. For details of vertical and horizontal rustication grooves, see sheet 79/105
6. For additional notes, see sheet 80/105

LEGEND

EF = Each Face
NF = Near Face
FF = Far Face
PEJF = Preformed Expansion Joint Filler

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

81/105

ABUTMENT 2

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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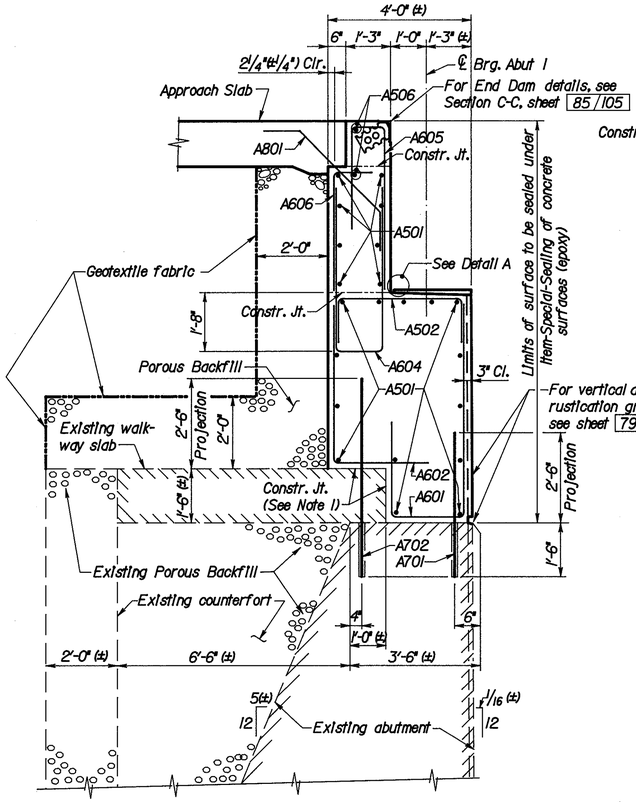
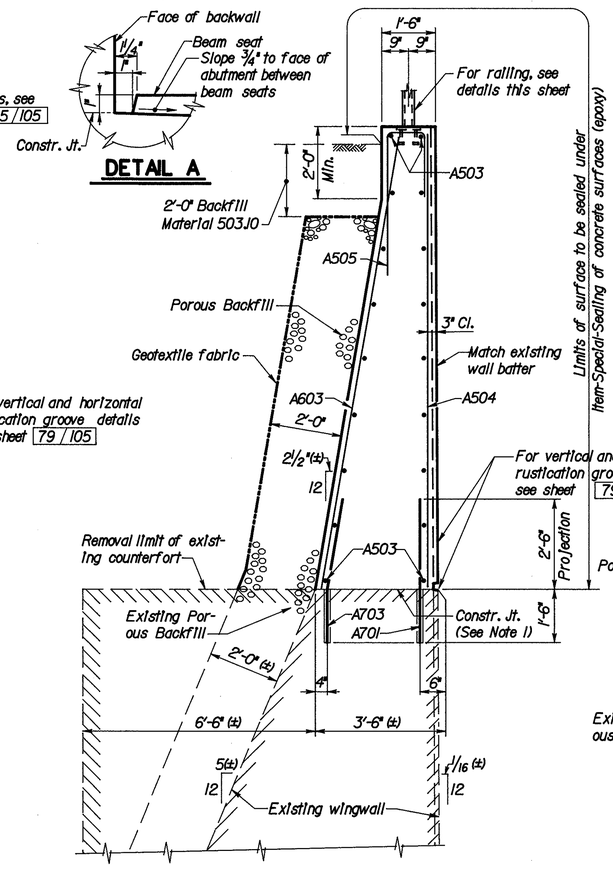
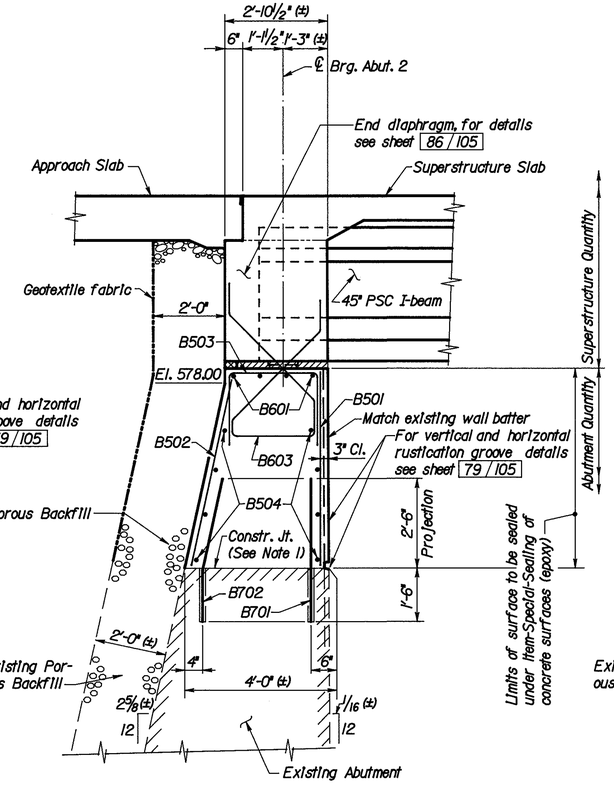
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

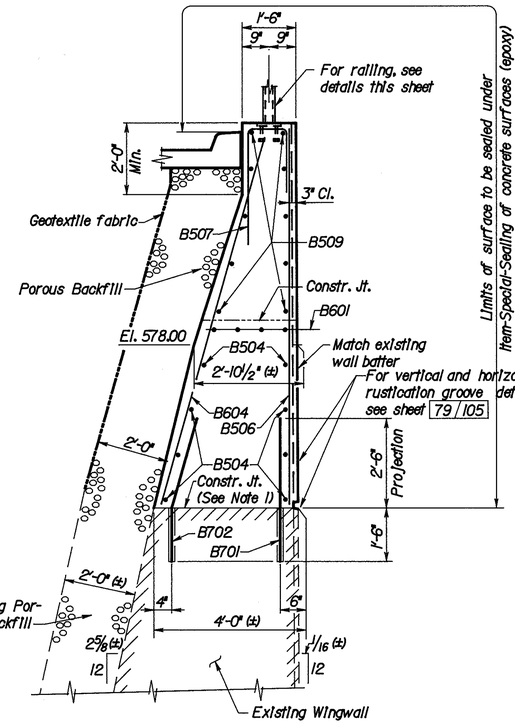
315
338

HAMILTON COUNTY
HAM-75-9.75

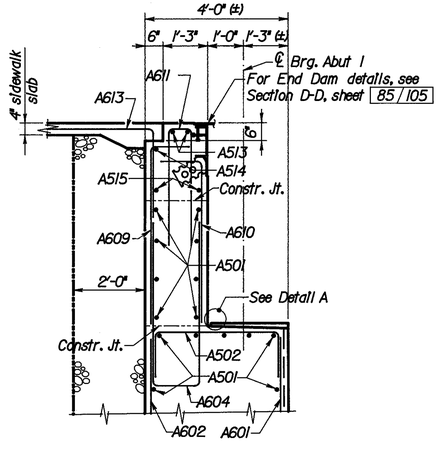






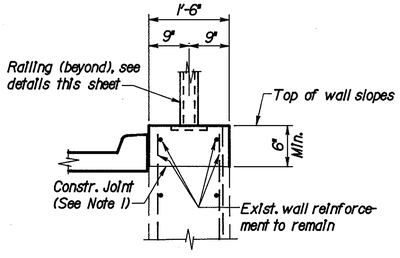


SECTION C-C



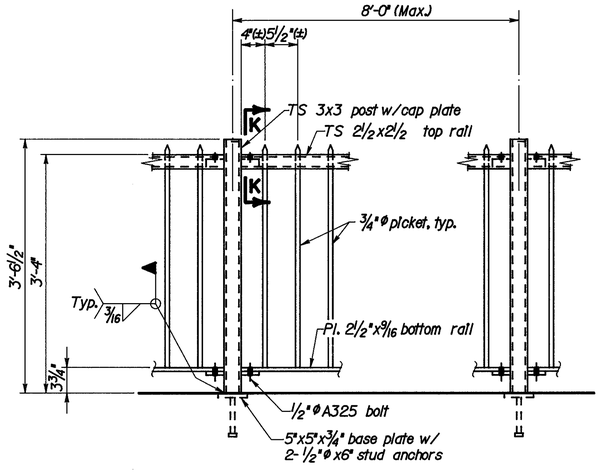
SECTION E-E
(SECTION E_1-E_1 SIMILAR)

SECTION D-D
(SECTION D_1-D_1 SIMILAR)

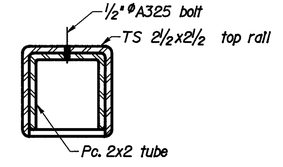


SECTION J-J

SECTION G-G



EXISTING AND RECONSTRUCTED RAILING



SECTION K-K

NOTES

1. Construction joints between new and existing construction shall be roughened to a full amplitude of approximately 1/4". These surfaces shall be clean and free of laitance before placement of concrete. Include with Item 511, Class C concrete, abutment for payment.
2. Dowel installation procedure and materials shall be as defined by Supplemental Specifications 852 and 705.20. Include with Item 852, Polyester/vinylester resin bonded anchors, for payment.

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82/105

ABUTMENT 1 & 2 DETAILS

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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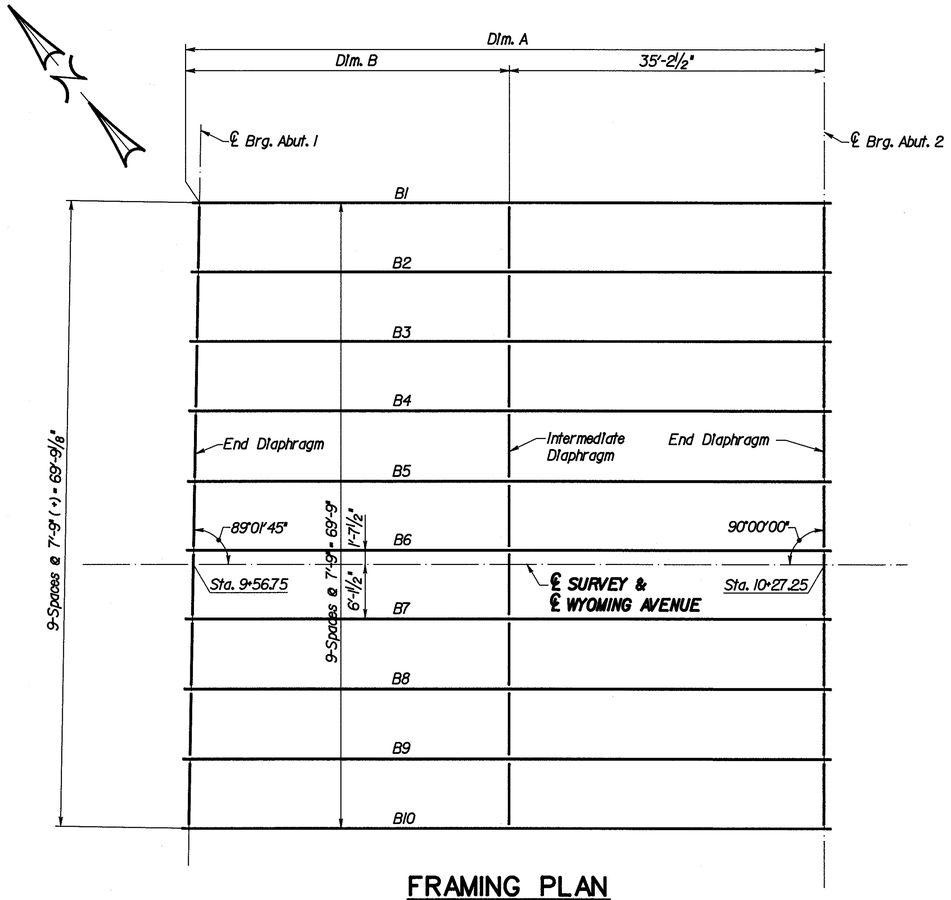
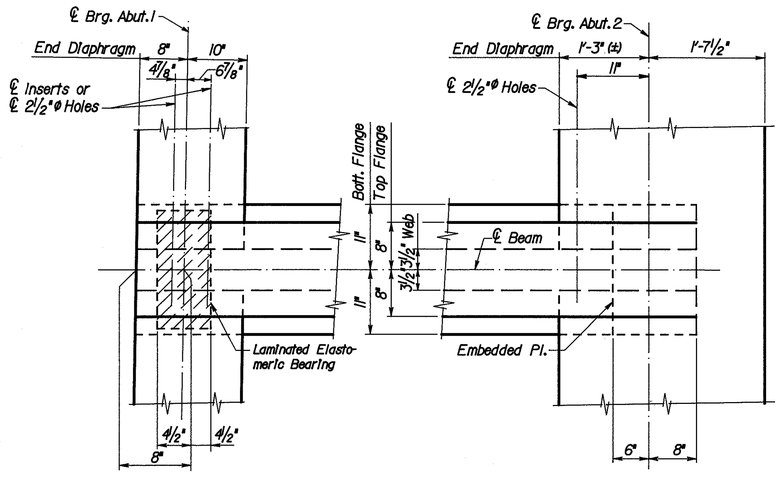
F.H.W.A. REGION	STATE	PROJECT		316 / 338
5	OHIO			

HAMILTON COUNTY
HAM-75-9.75



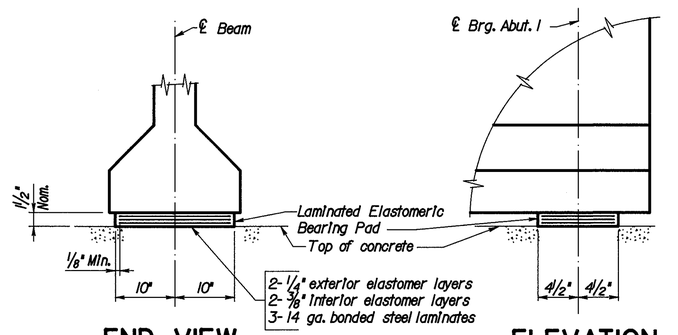
FRAMING PLAN



BEAM END DETAILS

BEAM DIMENSIONS

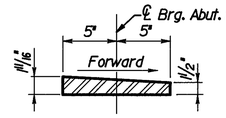
Beam	Dim. "A"	Dim. "B"
B1	69'-9¾"	34'-7¼"
B2	69'-11⅜"	34'-8⅞"
B3	70'-1"	34'-10½"
B4	70'-2½"	35'-0"
B5	70'-4⅛"	35'-1⅝"
B6	70'-5⅝"	35'-3⅛"
B7	70'-7¼"	35'-4¾"
B8	70'-8⅞"	35'-6⅜"
B9	70'-10⅜"	35'-7⅞"
B10	71'-0"	35'-9½"



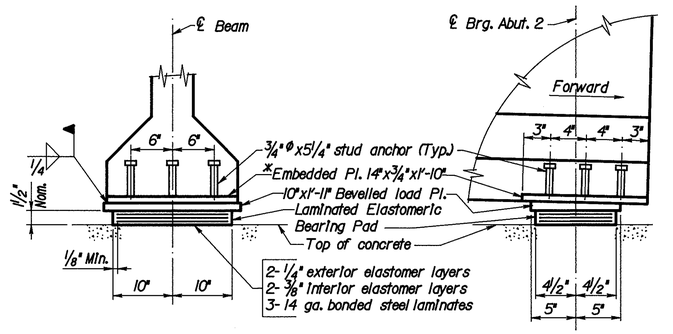
END VIEW ELEVATION

ELASTOMERIC BEARINGS AT ABUT. 1

Live Load Reaction: 44.2^{k}
Dead Load Reaction: 74.1^{k}
Maximum Design Load: 118.3^{k}



BEVELLED LOAD PLATE DETAIL



END VIEW *See Note 5 ELEVATION

ELASTOMERIC BEARINGS AT ABUT. 2

Live Load Reaction: 44.2^{k}
Dead Load Reaction: 79.6^{k}
Maximum Design Load: 123.8^{k}

LAMINATED ELASTOMERIC BEARING NOTES

1. Laminated Elastomeric Bearings shall have a durometer hardness grade 50 and shall conform to 711.23 of the CMS.
2. Load Plates: The steel load plates shall conform to the requirements of ASTM A588 and shall be bonded to the elastomer by vulcanization during the molding process. Welding of the load plate to the superstructure shall be controlled so that the plate temperature at the elastomer bonded surface shall not exceed 400° F as determined by the use of pyrometric sticks or other temerature monitoring devices.
3. Bearing Repositioning: If deck concrete is placed at an ambient temperature higher than 80° F or lower than 40° F, and the bearing shear deflection exceeds one-sixth of the bearing height at 60° F +/- 10° F; the beams shall be raised to allow the bearings to return to their undeformed shape at 60° F +/- 10° F.
4. Tolerances:

Individual elastomer layer thickness	+/- 20% of design value (Not to exceed +/- ⅛")
Plan dimensions	-0, + 1/4"
Design thickness	-0, + 1/4"
Edge cover of embedded laminates	-0, + 1/8"

5. Basis of Payment: The unit bid price shall include all materials, labor and incidentals necessary to furnish and install laminated elastomeric bearings either fixed or expansion. Payment will be at the contract price for Item 516, Each, Laminated Elastomeric Bearings with Steel Load Plates as listed under the Estimated Quantities.

NOTES

1. For General Notes, see sheet 75 / 105
2. For Diaphragm details, see sheets 85 / 105 and 86 / 105
3. For End Dam details, see sheet 85 / 105
4. For Beam Reinforcement details, see sheet 84 / 105
5. The embedded plates in I-beams shall conform to the requirements of ASTM A-588, stud anchors shall be in accordance with 513.171 of CMS, included in Item 515, 45' prestressed concrete composite I-beams for payment.

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FRAMING PLAN

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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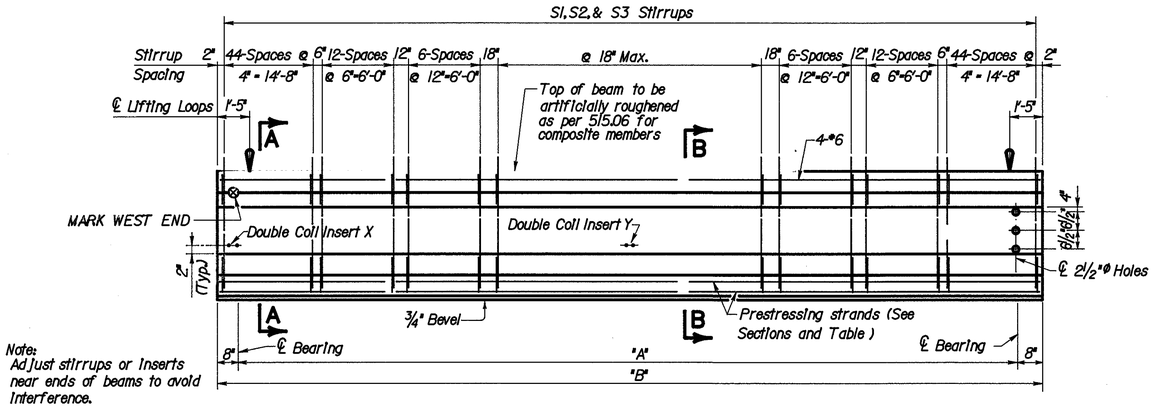
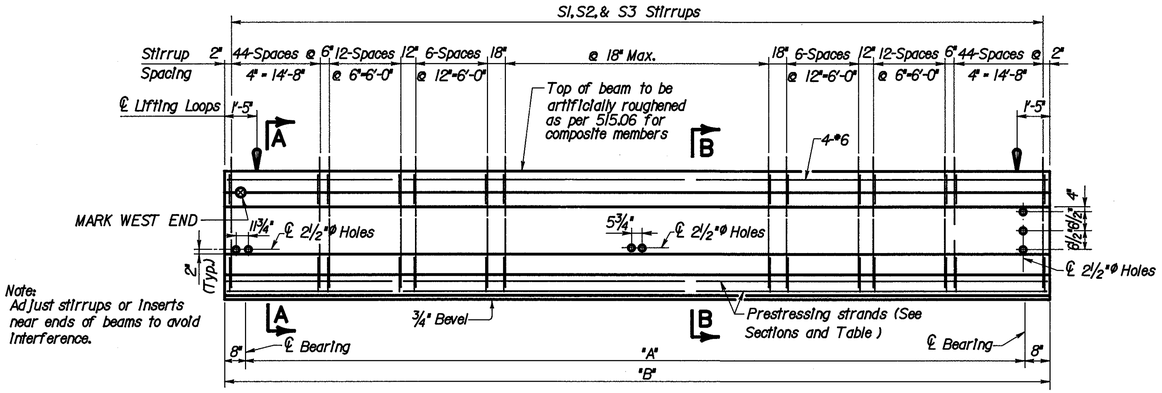


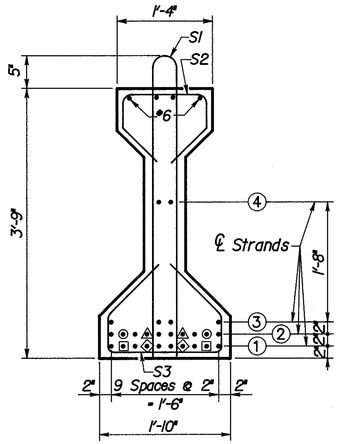
Note:
Adjust stirrups or inserts near ends of beams to avoid interference.

ELEVATION-BEAMS B1 & B10

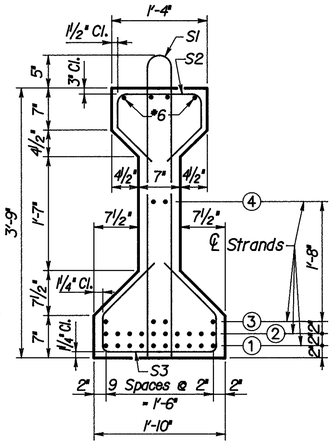


Note:
Adjust stirrups or inserts near ends of beams to avoid interference.

ELEVATION-BEAMS B2 THRU B9



SECTION A - A

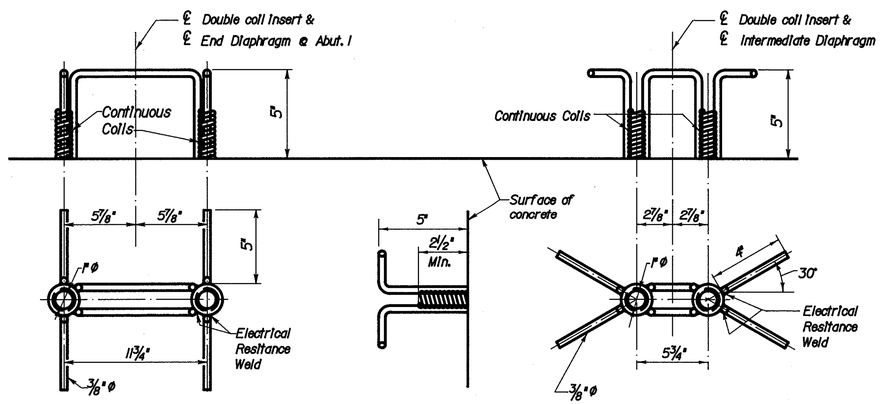


SECTION B - B

LEGEND

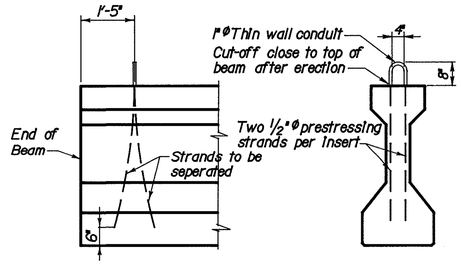
- ◉ Debond strand 2'-0" each end
- ◬ Debond strand 4'-0" each end
- ▣ Debond strand 6'-0" each end
- ◈ Debond strand 12'-0" each end

BEAM DIMENSIONS AT ℄ BEAM			
Beam	Dim. "A"	Dim. "B"	Approx. Wt. Each (LBS.)
B1	69'-9¾"	71'-1¾"	41,499
B2	69'-11⅜"	71'-3⅜"	41,578
B3	70'-1"	71'-5"	41,657
B4	70'-2½"	71'-6½"	41,730
B5	70'-4⅛"	71'-8⅛"	41,809
B6	70'-5⅝"	71'-9⅝"	41,882
B7	70'-7¼"	71'-11¼"	41,961
B8	70'-8⅞"	72'-0⅞"	42,040
B9	70'-10⅜"	72'-2⅜"	42,113
B10	71'-0"	72'-4"	42,192



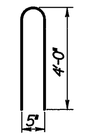
DOUBLE COIL INSERT X

DOUBLE COIL INSERT Y

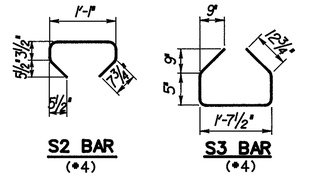


NOTE:
Lifting Inserts of the Contractors design may be used if approved by the Director. Positions of lifting Inserts may be shifted slightly where necessary to clear reinforcing steel.

BEAM LIFTING INSERT DETAILS



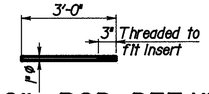
S1 BAR (•5)



S2 BAR (•4) S3 BAR (•4)

BENDING DIAGRAMS

Note:
All dimensions are out to out of bar.



COIL ROD DETAIL

Note:
Bend in field as req'd to place parallel to diaphragm. Include with Item 515 for payment.

NOTES

1. Concrete shall have a minimum compressive strength of 5500 P.S.I. at 28 days.
2. Minimum concrete compressive strength at time of release shall be 4500 P.S.I.
3. All reinforcement fully or partially encased in beams shall be included with Item 515 for payment. S1 bars shall be epoxy coated.

NUMBER OF ½"Ø-7 WIRE STRANDS IN INDICATED ROWS					
ROWS				TOTAL NO.	INITIAL PRESTRESS FORCE / STRAND (LBS)
①	②	③	④		
10	10	4	2	26	31,000

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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338

HAMILTON COUNTY
HAM-75-9.75

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DAYTON, OHIO

84/105

PRESTRESSED BEAM DETAILS

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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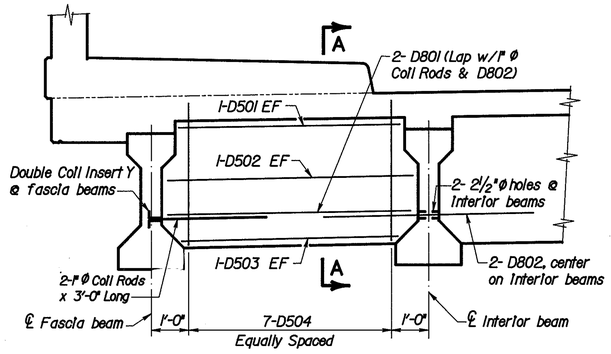
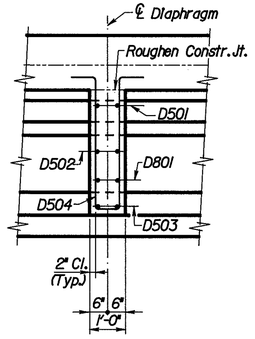
F.H.W.A. REGION	STATE	PROJECT		318
5	OHIO			338

HAMILTON COUNTY
HAM-75-9.75

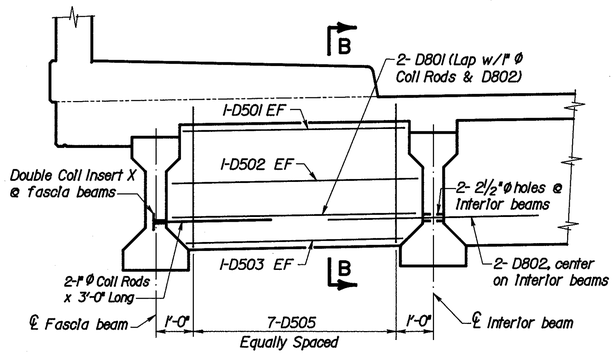


INTERMEDIATE DIAPHRAGM

(See Section G-G)

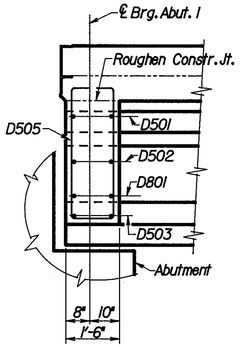


SECTION A-A

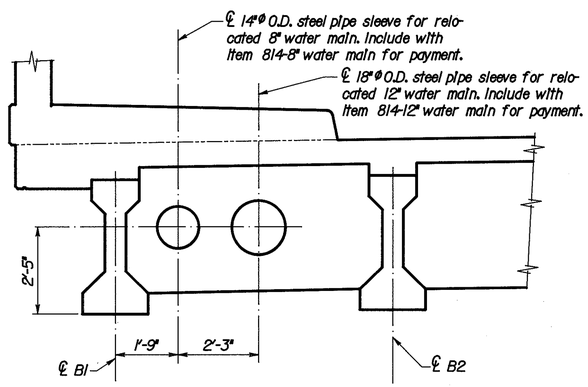


END DIAPHRAGM AT ABUTMENT 1

(See Section G-G)



SECTION B-B



SECTION G-G

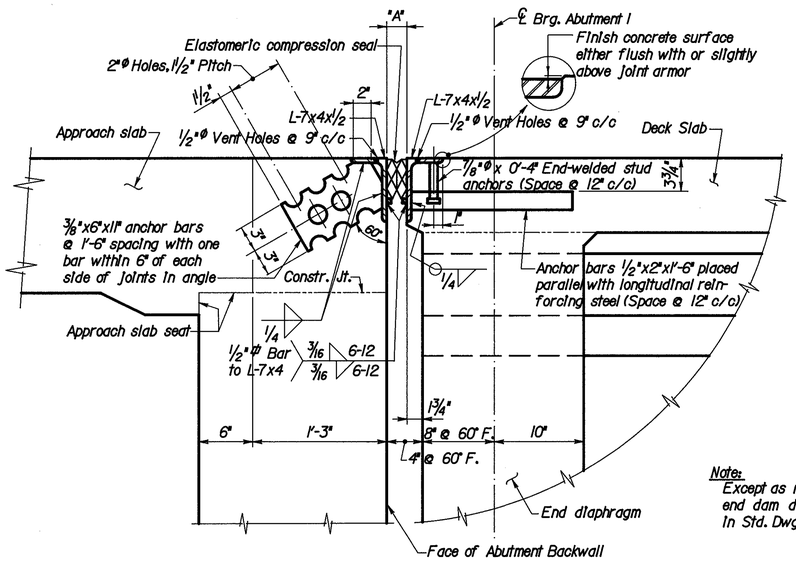
Note:
Spread D502, D504 and D505 bars as required.

LEGEND

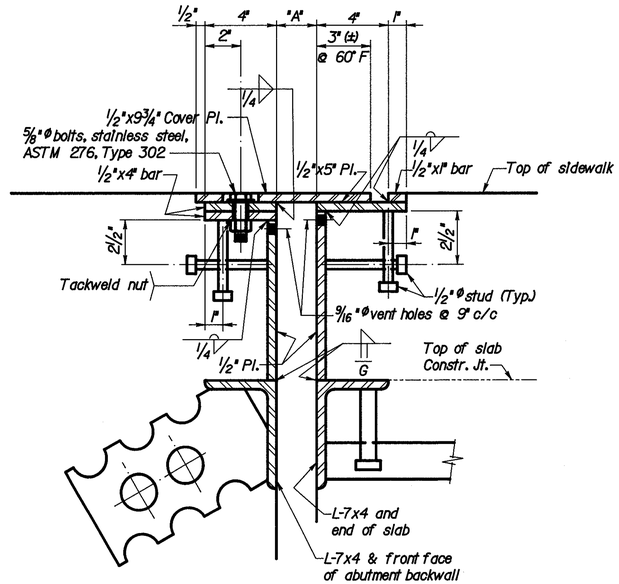
EF = Each Face

NOTES

1. For Reinforcing Steel List, see Sh. 89 / 105



SECTION C-C



SECTION D-D

Note:
Except as modified in Sections C-C & D-D, end dam details are the same as shown in Std. Dwg. EXJ-3-82.

DIMENSION "A"	
Peak Ambient Temp. °F	Dimension A
90	2 1/16"
80	2 1/8"
70	2 3/16"
60	2 1/4"
50	2 5/16"
40	2 3/8"
30	2 7/16"

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FRAMING DETAILS

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDL 12/92	

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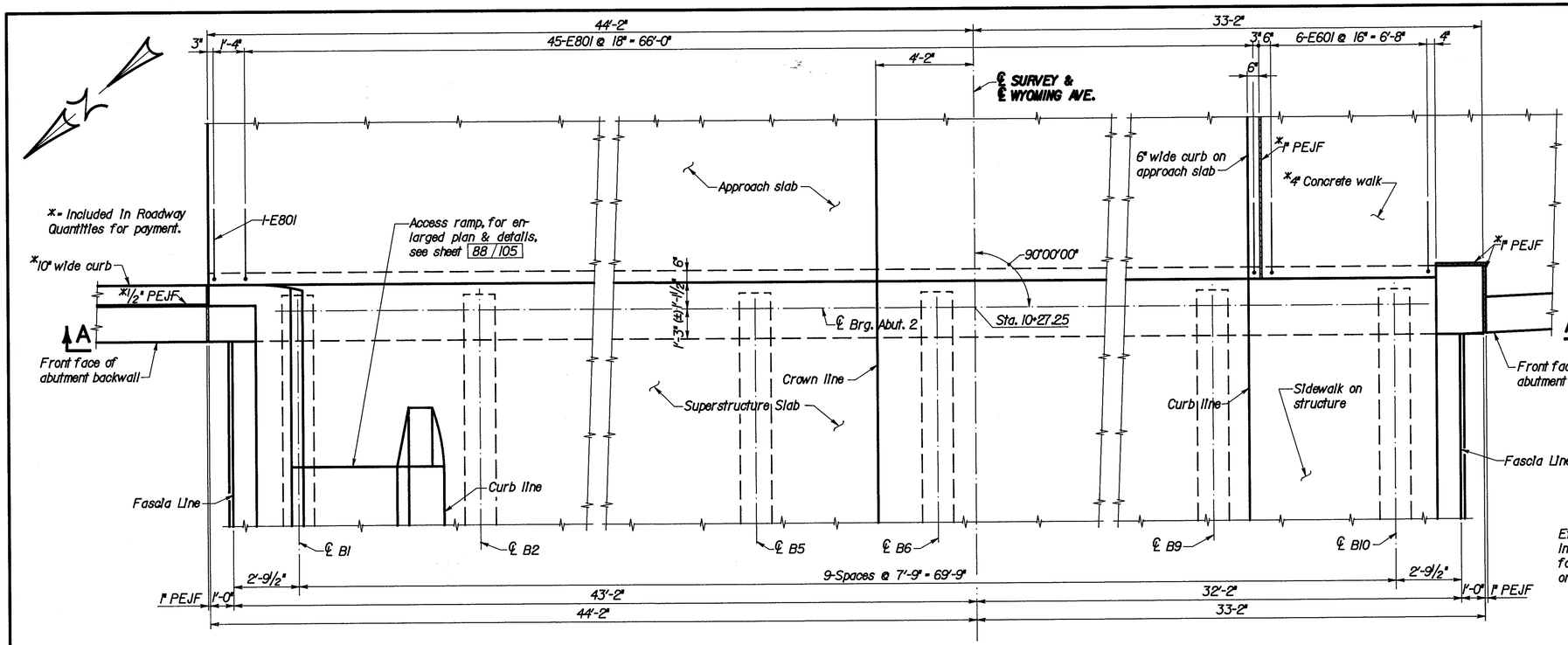
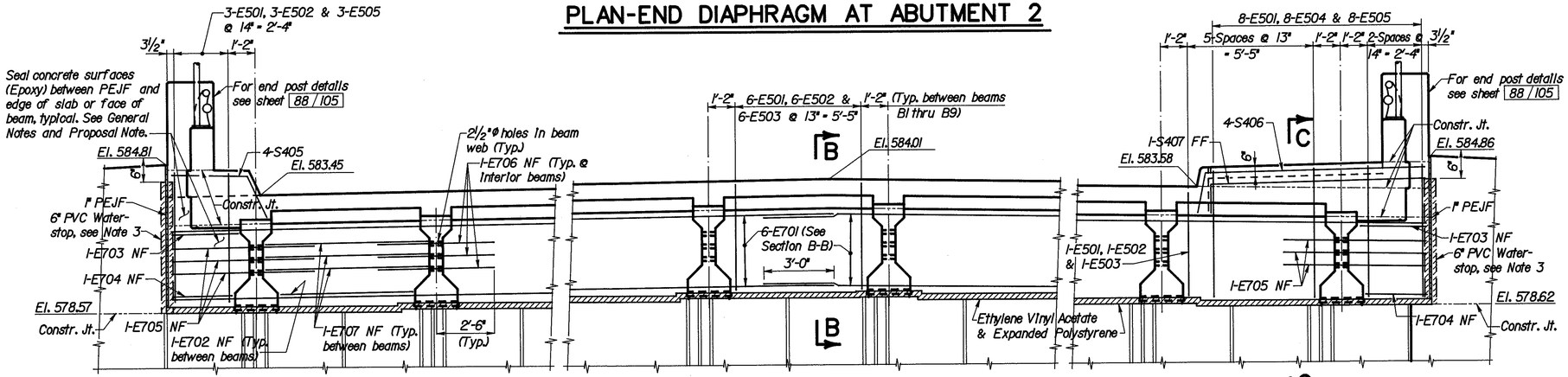
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

319
338

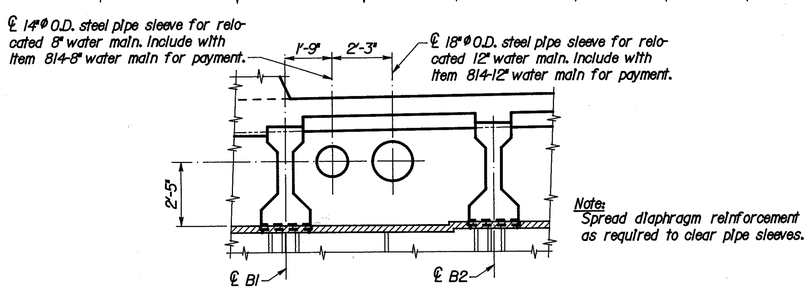
HAMILTON COUNTY
HAM-75-9.75



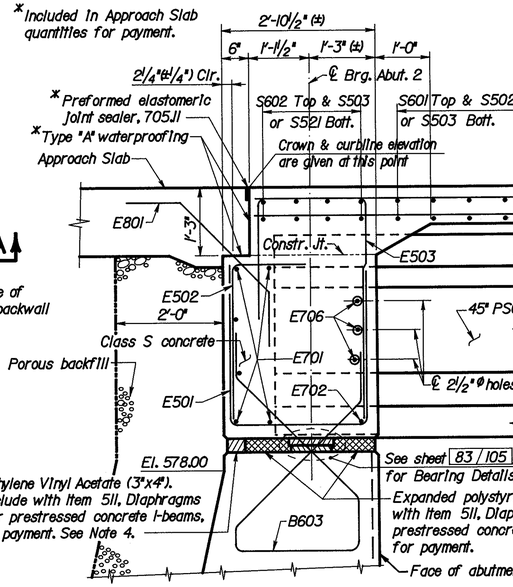
PLAN-END DIAPHRAGM AT ABUTMENT 2



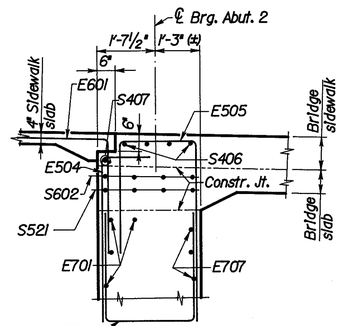
SECTION A-A



DIAPHRAGM DETAIL AT WATER MAINS



SECTION B-B



SECTION C-C

NOTES

1. For Reinforcing Steel List, see Sh. 89/105
2. For Laminated Elastomeric Bearing Pad Details, see sheet 83/105
3. Center a 6" PVC Waterstop on backwall expansion joints to form a continuous waterproof seal. Waterstop shall be capable of withstanding 1 1/2" of movement. For additional waterstop details see Std. Dwg. ICD-1-82, sheet 4 of 5.
4. Ethylene Vinyl Acetate (3"x4")
   a- Evazole 50 by Epoxy Industrials Inc.
   b- Thermal-Chem E.V.A. by Thermal-Chem Inc.
   c- Or approved equal
   Install with bonder per manufacturer's recommendations.

LEGEND

EF - Each Face
NF - Near Face
FF - Far Face
PEJF - Preformed Expansion Joint Filler

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END DIAPHRAGM DETAILS AT ABUTMENT 2

BRIDGE NO. HAM-75-1198L

I-75 SOUTHBOUND

UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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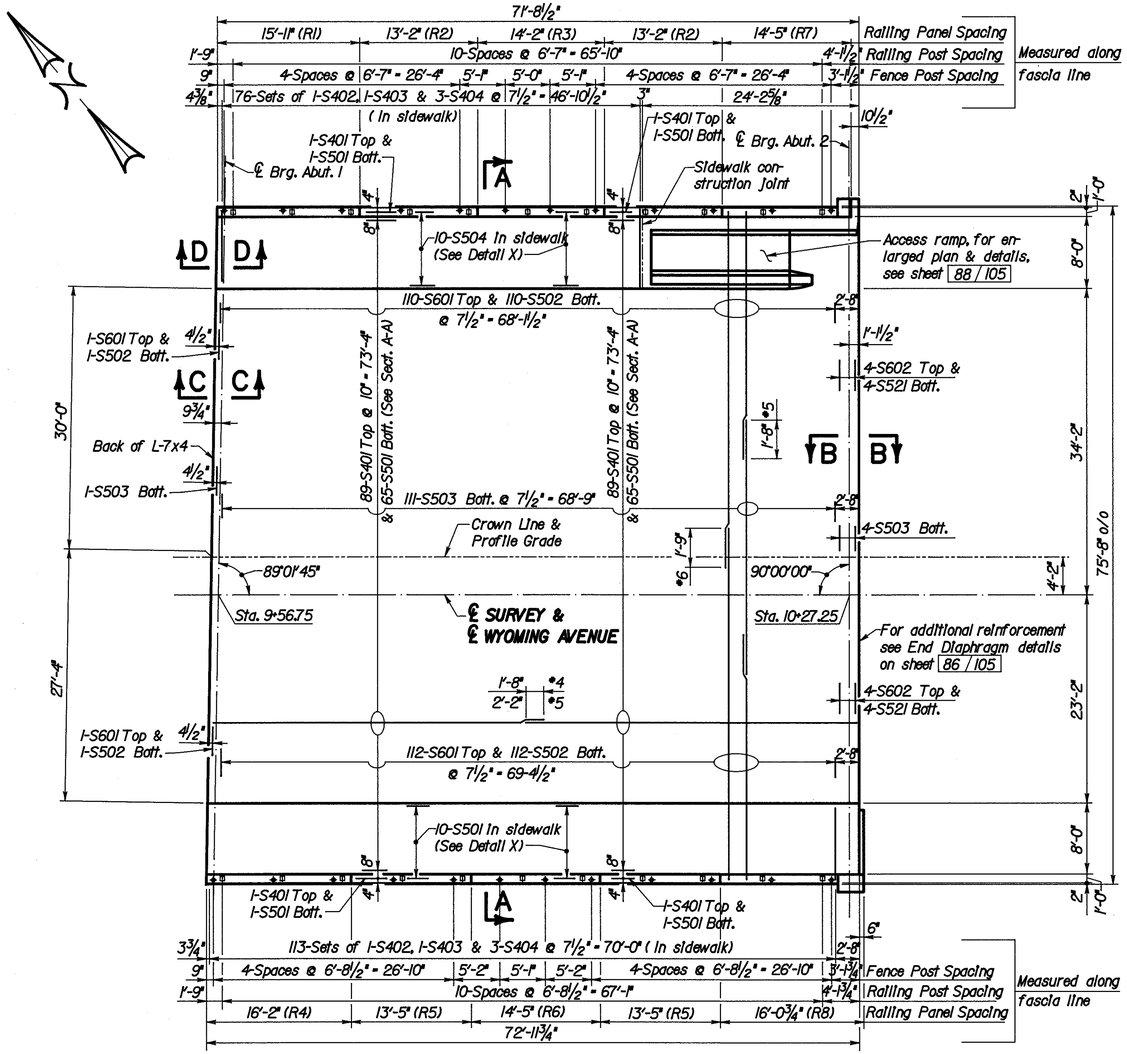
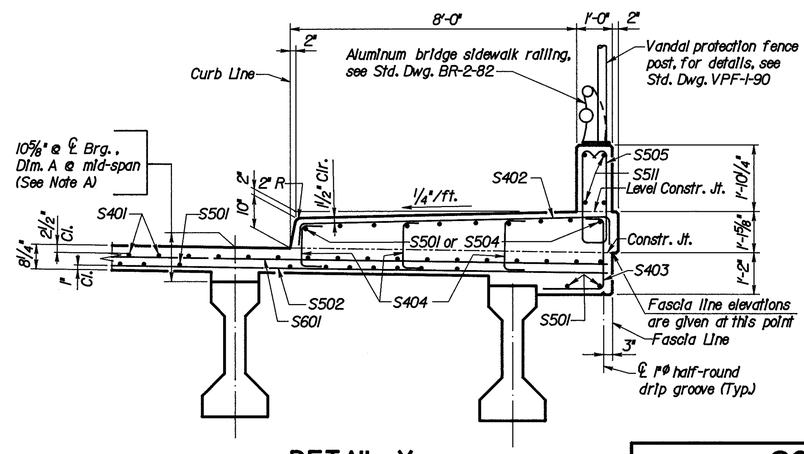
F.H.W.A. REGION	STATE	PROJECT		320 / 338
5	OHIO			

HAMILTON COUNTY
HAM-75-9.75



SLAB PLAN



DETAIL X

NOTE A:
Dim. A is a nominal dimension (See table below). The pay quantity of that portion of the deck concrete over the beams shall be based on the average of this dimension and the depth at beam bearings even though deviation from this average may occur because the top of the beam may not have the camber anticipated in the design as tabulated below. The camber of beams shall be measured in the field before the deck is placed. The actual depth at mid-span shall be Dim. A plus or minus the difference between actual and anticipated camber.

Location	Anticipated Camber Prior to Deck Placement	Anticipated Deflection Due to Deck Placement	Anticipated Final Camber	Dim. A
Mid-Span	3"	1"	2"	10¼"

FINISHED PAVEMENT ELEVATIONS

Station	North Fascia Line	Profile Grade	South Fascia Line
9+75	584.127	584.736	584.169
10+00	583.869	584.478	583.911
10+25	583.467	584.076	583.508

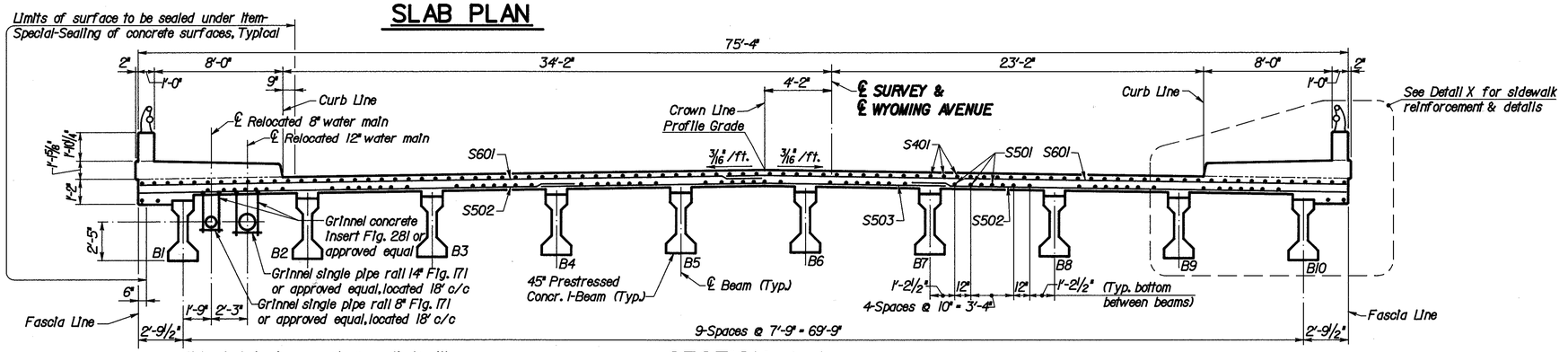
SCREED ELEVATIONS

Location	℄ Brg. Abut. 1	¼	½	¾	℄ Brg. Abut. 2
North Fascia Line	584.222	584.194	584.051	583.794	583.423
Profile Grade	584.834	584.807	584.664	584.406	584.033
South Fascia Line	584.268	584.242	584.100	583.841	583.465

Note:
Screed elevations given are at top of concrete slab before concrete placement and have been adjusted for estimated deflection due to weight of concrete slab, sidewalks & railing panels.

NOTES

1. For General Notes, see sheet 75 / 105
2. For Reinforcing Steel List, see sheet 89 / 105
3. For Section B-B, see sheet 86 / 105
4. For Section C-C & D-D, see sheet 85 / 105
5. For Railing Panel details, see sheet 88 / 105
6. Slab concrete shall not be placed until at least 48 hours after placement of diaphragm concrete.



Note: Include pipe supports respectively with item 814 water main for payment.

SECTION A-A

LOCKWOOD, JONES & BEALS
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DAYTON, OHIO

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SLAB PLAN

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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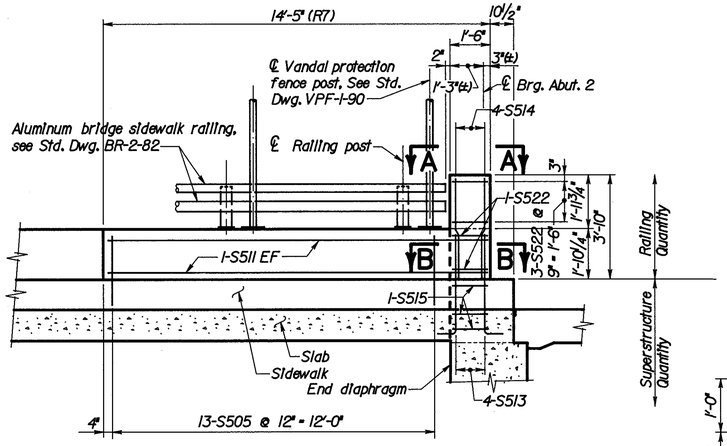
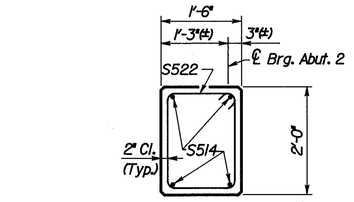
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

321
338

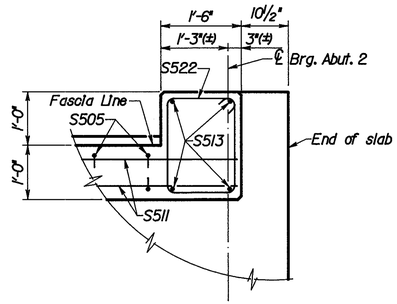
HAMILTON COUNTY
HAM-75-9.75



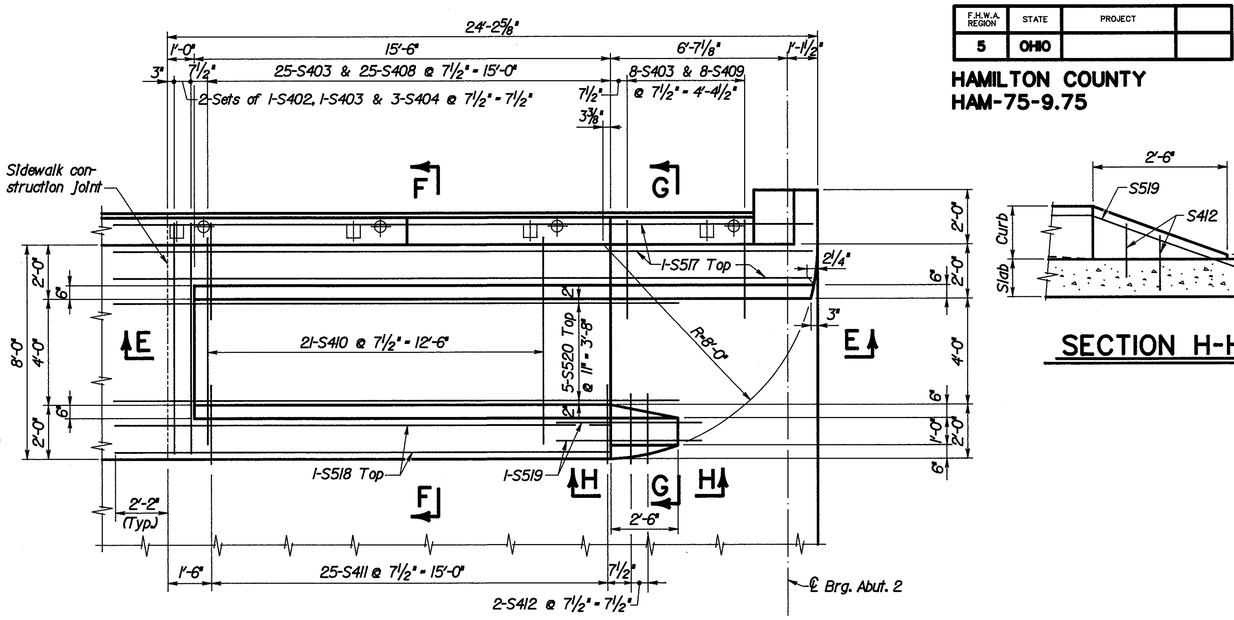
ELEVATION PANEL R7
(1-Required)



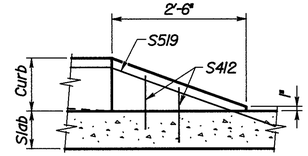
SECTION A-A



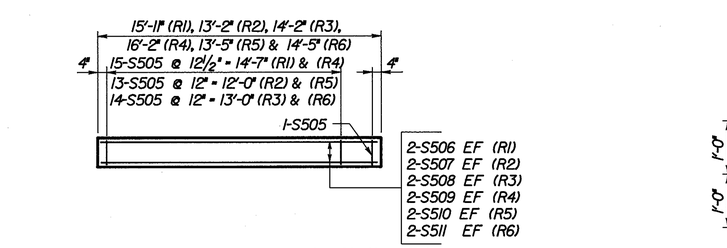
SECTION B-B



ENLARGED PLAN AT ACCESS RAMP



SECTION H-H



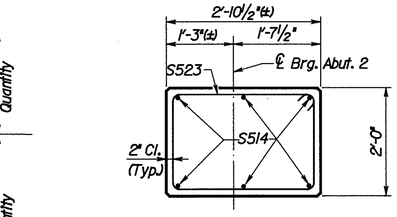
ELEVATION PANEL R8
(1-Required)

PLAN-RAILING PANELS R1 THRU R6

1 -Railing Panel R1 Req'd
2-Railing Panels R2 Req'd
1 -Railing Panel R3 Req'd
1 -Railing Panel R4 Req'd
2-Railing Panels R5 Req'd
1 -Railing Panel R6 Req'd

RAILING PANEL DETAILS

LEGEND
EF = Each Face



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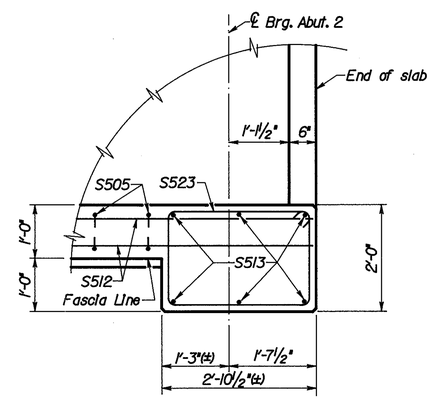

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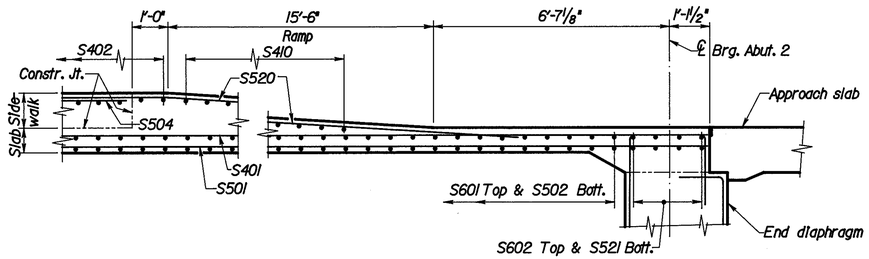

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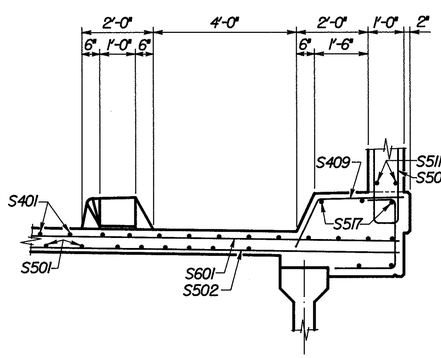
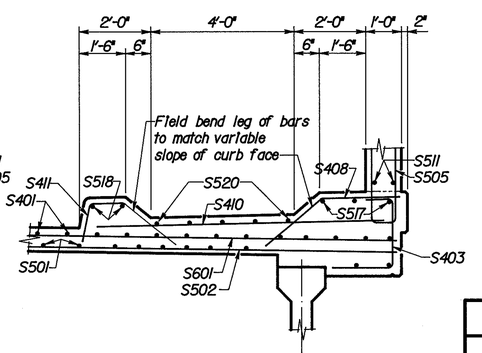


SECTION G-G



SECTION F-F

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

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SLAB DETAILS

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
EPA	DFS	GJW	DFS	HDJ 12/92	

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REINFORCING STEEL LIST

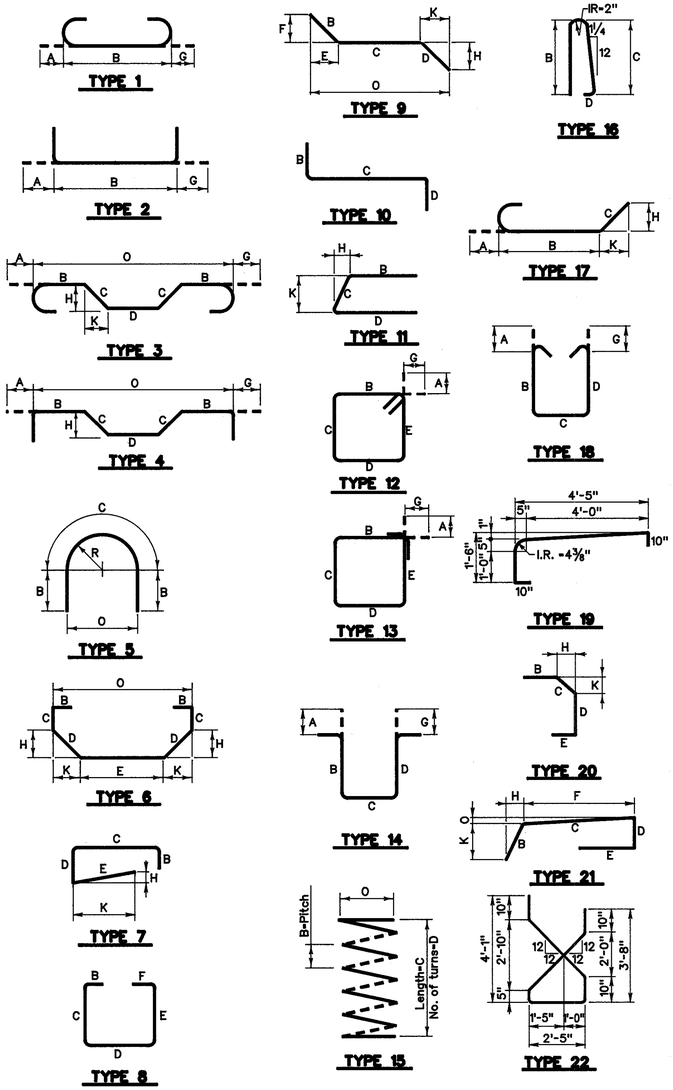
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
ABUTMENT 1															
A501	22	39'-2"	899	Str.											
A502	76	6'-4"	502	8		—	1'-6"	3'-7"	1'-6"	—					
A503	18	30'-6"	573	Str.											
A504	32	11'-3"	375	Str.											
A505	67	6'-10"	478	8		—	1'-6"	1'-1"	4'-6"	—					
A506	2	31'-0"	65	Str.											
A507	22	38'-2"	876	Str.											
A508	2	30'-0"	63	Str.											
A509	35	12'-7"	459	Str.											
A510	20	33'-6"	699	Str.											
A511	46	5'-8"	272	8		—	2'-8"	7"	2'-8"	—					
A512	9	7'-8 1/2"	72	12	8 1/2"	1'-5"	1'-11"	1'-5"	1'-11"		8 1/2"				
A513	4	11'-7"	48	9		—	9'-10"	1'-9"	—	—		1'-8 1/2"	4/8"	10'-2 1/8"	
A514	2	10'-7 1/2"	22	10		1'-3"	9'-6"	—							
A515	4	9'-6"	40	Str.											
A601	76	10'-4"	1180	8		—	3'-0"	2'-1"	5'-7"	—					
A602	76	7'-0"	799	10		3'-0"	4'-2"	—							
A603	32	11'-5"	549	Str.											
A604	76	9'-1"	1037	8		—	4'-0"	1'-5"	4'-0"	—					
A605	59	7'-10"	694	8		—	2'-8"	11"	4'-7"	—					
A606	59	4'-7"	406	10		1'-5"	3'-4"	—							
A607	35	12'-9"	670	Str.											
A608	10	9'-7"	144	Str.											
A609	14	6'-3"	131	10		1'-5"	5'-0"	—							
A610	14	5'-10"	123	10		1'-4"	4'-8"	—							
A611	14	8'-0"	168	8		—	3'-10"	8"	3'-10"	—					
A612	10	10'-2"	153	Str.											
A613	12	5'-10"	105	10		3'-0"	3'-0"	—							
A614	8	17'-8"	212	8		—	7'-10"	2'-4"	7'-10"	—					
A701	139	4'-0"	Note 6	Str.											
A702	74	5'-6"	Note 6	Str.											
A703	65	4'-1"	Note 6	9		1'-6"	2'-7"	—	1'-5 5/8"	3 1/8"			—	—	4'-0 5/8"
A801	39	6'-0"	625	6		—	—	1'-5"	3'-2"			1'-0"	1'-0"	5'-2"	
		TOTAL	12439												
ABUTMENT 2															
B501	79	4'-11"	405	Str.											
B502	79	5'-0"	412	Str.											
B503	79	5'-2"	426	8		—	1'-6"	2'-5"	1'-6"	—					
B504	16	24'-2"	403	Str.											
B505	16	24'-8"	412	Str.											
B506	9	10'-7"	99	Str.											
B507	18	6'-10"	128	8		—	2'-0"	1'-1"	4'-0"	—					
B508	9	10'-6"	99	Str.											
B509	20	8'-5"	176	Str.											
B601	8	24'-7"	295	Str.											
B602	8	25'-1"	301	Str.											
B603	61	11'-8 1/2"	1073	22	See Bending Diagrams										
B604	9	10'-10"	146	Str.											
B605	9	10'-8"	144	Str.											
B701	95	4'-0"	Note 6	Str.											
B702	95	4'-1"	Note 6	9		1'-6"	2'-7"	—	1'-5 5/8"	3 1/8"			—	—	4'-0 5/8"
		TOTAL	4519												

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
INTERMEDIATE DIAPHRAGMS & ABUTMENT 1 END DIAPHRAGMS															
D501	36	6'-1"	228	Str.											
D502	36	6'-10"	257	Str.											
D503	36	5'-10"	219	Str.											
D504	63	8'-10"	580	14	8 1/2"	3'-6"	8"	3'-6"			8 1/2"				
D505	63	8'-10"	580	8		7"	3'-6"	1'-2"	3'-6"	7"					
D801	36	6'-10"	657	Str.											
D802	32	6'-0"	513	Str.											
		TOTAL	3034												
ABUTMENT 2 END DIAPHRAGM															
E501	60	8'-3"	516	8		—	3'-0"	2'-6"	3'-0"	—					
E502	52	4'-10 1/2"	264	10		2'-0"	3'-0"	—							
E503	49	8'-6"	434	8		—	2'-6"	2'-0"	4'-3"	—					
E504	8	6'-5 1/2"	54	10		2'-0"	4'-7"	—							
E505	11	10'-2"	117	8		—	3'-4"	2'-0"	5'-1"	—					
E601	6	5'-10"	53	10		3'-0"	3'-0"	—							
E701	12	40'-0"	981	Str.											
E702	9	5'-7"	103	Str.											
E703	2	2'-9"	11	Str.											
E704	2	2'-6"	10	Str.											
E705	6	6'-2"	76	Str.											
E706	24	5'-0"	245	Str.											
E707	27	6'-10"	377	Str.											
E801	46	5'-1"	624	6		—	—	1'-5"	2'-3"			1'-0"	1'-0"	4'-3"	
		TOTAL	3865												
SLAB															
S401	182	37'-2"	4519	Str.											
S402	191	9'-10"	1255	8		—	8"	8'-8"	8"	—					
S403	224	4'-6"	673	8		—	1'-0"	1'-11"	1'-9"	—					
S404	573	3'-0"	1148	8		—	1'-0"	1'-2"	1'-0"	—					
S405	4	4'-11"	13	11		3'-2"	1'-9"	—				9"	1'-7"		
S406	4	11'-3 1/2"	30	11		9'-6"	1'-9 1/2"	—				4 1/4"	1'-9"		
S407	1	10'-2"	7	10		1'-3"	9'-0"	—							
S408	25	3'-10"	64	Str.											
S409	8	3'-10"	20	11		2'-4"	1'-6"	—				7 5/8"	1'-4 1/4"		
S410	21	8'-0"	112	Str.											
S411	25	3'-4"	56	11		2'-2"	1'-2"	—				2 3/4"	1'-1 3/4"		
S412	2	2'-4 1/4"	3	6		—	—	10 1/4"	8"			9"	5"	1'-6"	
S501	154	37'-5"	6010	Str.											
S502	224	26'-9"	6250	Str.											
S503	116	25'-0"	3025	Str.											
S504	20	24'-8"	515	Str.											
S505	144	6'-4"	951	18	5 1/2"	2'-6"	8"	2'-6"			5 1/2"				
S506	4	15'-7"	Note 5	Str.											
S507	8	12'-10"	Note 5	Str.											
S508	4	13'-10"	Note 5	Str.											
S509	4	15'-10"	Note 5	Str.											
S510	8	13'-1"	Note 5	Str.											
S511	8	14'-1"	Note 5	Str.											
S512	4	15'-8"	Note 5	Str.											
S513	10	4'-2 1/2"	44	2	8 1/2"	3'-6"					—				
S514	10	3'-8"	Note 5	Str.											
S515	3	6'-2 1/2"	19	12	5 1/2"	1'-2"	1'-8"	1'-2"	1'-8"		5 1/2"				
S516	3	8'-11 1/2"	28	12	5 1/2"	2'-6 1/2"	1'-8"	2'-6 1/2"	1'-8"		5 1/2"				
S517	3	26'-2"	82	Str.											
S518	2	18'-8"	39	Str.											
S519	2	5'-11"	12	9		2'-2"	3'-9"	—	2'-0 5/8"	8 3/8"		—	—	5'-9 5/8"	
S520	5	21'-2"	110	9		3'-2"	18'-0"	—	3'-11 5/8"	3 1/8"		—	—	21'-11 5/8"	
S521	8	27'-9"	232	Str.											
S522	5	6'-2 1/2"	Note 5	12	5 1/2"	1'-2"	1'-8"	1'-2"	1'-8"		5 1/2"				
S523	5	8'-11 1/2"	Note 5	12	5 1/2"	2'-6 1/2"	1'-8"	2'-6 1/2"	1'-8"		5 1/2"				
S601	224	38'-5"	12925	Str.											
S602	8	39'-5"	474	Str.											
		TOTAL	38616												

F.H.W.A. REGION	STATE	PROJECT		322 / 338
5	OHIO			

HAMILTON COUNTY
HAM-75-9.75

BENDING DIAGRAMS



NOTES

1. All reinforcing steel bars shall be epoxy coated.
2. All dimensions are out to out of bar.
3. Dimensions "A" and "G" are standard bend dimensions. Refer to Section 509.05 of the CMS.
4. Radius dimension "R" is to the outside of the bar.
5. These reinforcing bars are fully encased in railing panels and are included with Item 517, Railing for payment.
6. These reinforcing bars are included with Item 852, Polyester/Vinylester resin bonded anchors, for payment.

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO
89 / 105

REINFORCING STEEL LIST

BRIDGE NO. HAM-75-1198L
I-75 SOUTHBOUND
UNDER WYOMING AVENUE

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
		GJW	DFS	HDJ 12/92	

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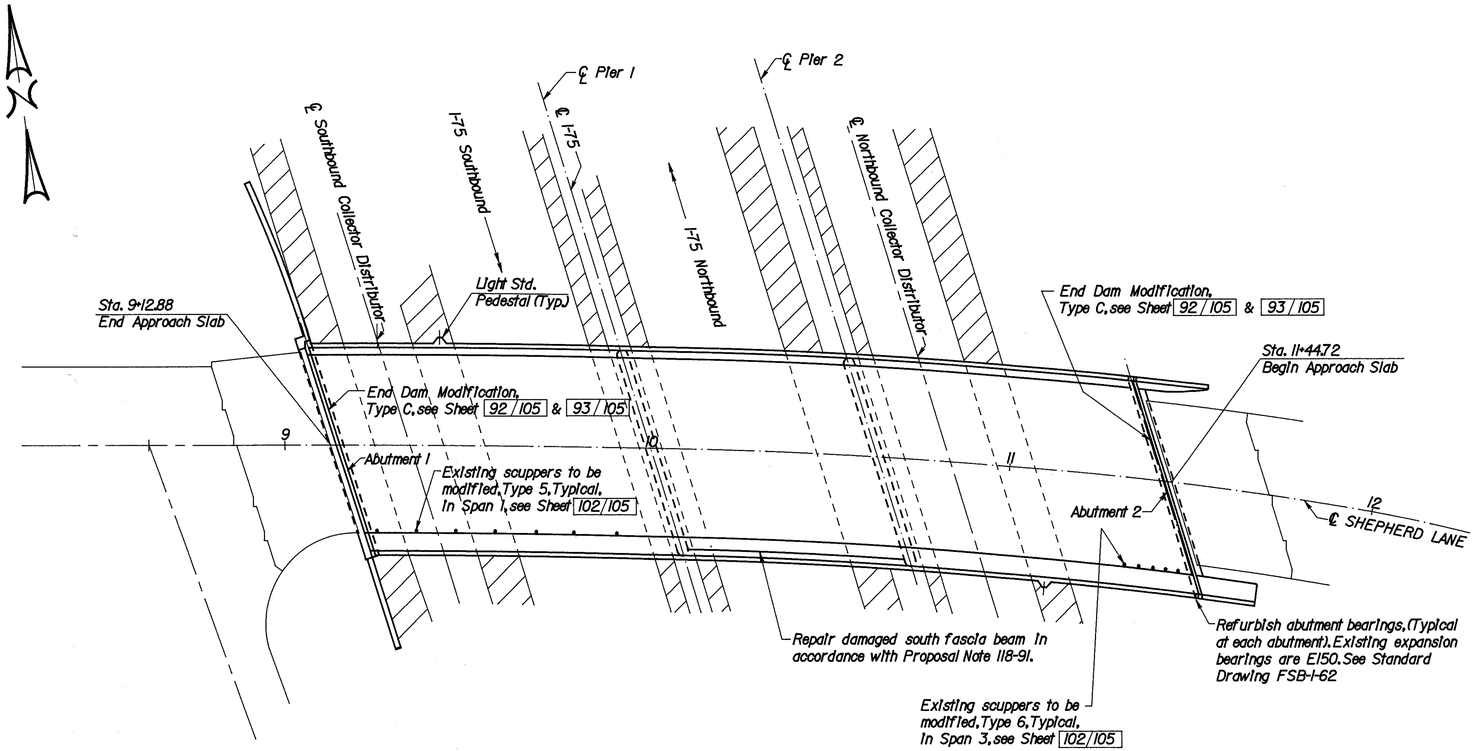
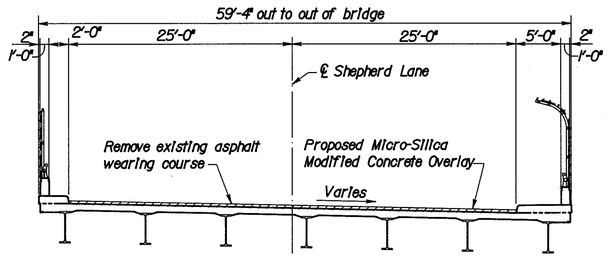
F.H.W.A. REGION	STATE	PROJECT		323
5	OHIO			338

HAMILTON COUNTY
HAM-75-9.75



GENERAL PLAN



TYPICAL SECTION

PROPOSED WORK

1. Remove existing asphalt overlay and install new Micro-Silica modified concrete overlay.
2. Seal expansion joints at abutments with strip seals, use End Dam Modification, Type C at both abutments
3. Modify existing scuppers.
4. Seal curbs, sidewalks, parapet and fascia to limits shown.
5. Refurbish abutment bearings
6. Repair damaged south fascia beam.

NOTES:

1. For General Notes see Sheet 1/105 thru 3/105
2. For Abutment Modification Plans and Details, see Sheet 91/105
3. For End Dam Modification Type C, see Sheet 92/105 & 93/105
4. For Scupper modification details, see Sheet 102/105
5. For Reinforcing Steel List, see Sheet 105/105
6. For limits of surface to be sealed, see Sheet 92/105 & 93/105
7. For Estimated Quantities, see Sheet 4/105

EXISTING STRUCTURE

TYPE: Continuous welded plate girders with reinforced concrete deck and substructure.
SPANS: 84'-9", 62'-11 11/16", 79'-3 7/16"
ROADWAY: 50'-0" face to face of curbs
LOAD FREQUENCY: CF = 2000 (57)
SKEW: Varies
WEARING SURFACE: 1" Monolithic concrete with Asphalt Overlay
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: 14° Spiral right (Ls = 350')
SUPERELEVATION: Varies

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DAYTON, OHIO
90/105

GENERAL PLAN & TYPICAL SECTION

BRIDGE NO. HAM-75-1292
SHEPHERD LANE OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DJJ	HDJ	DJJ	HDJ	MPH 12/92	

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F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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338

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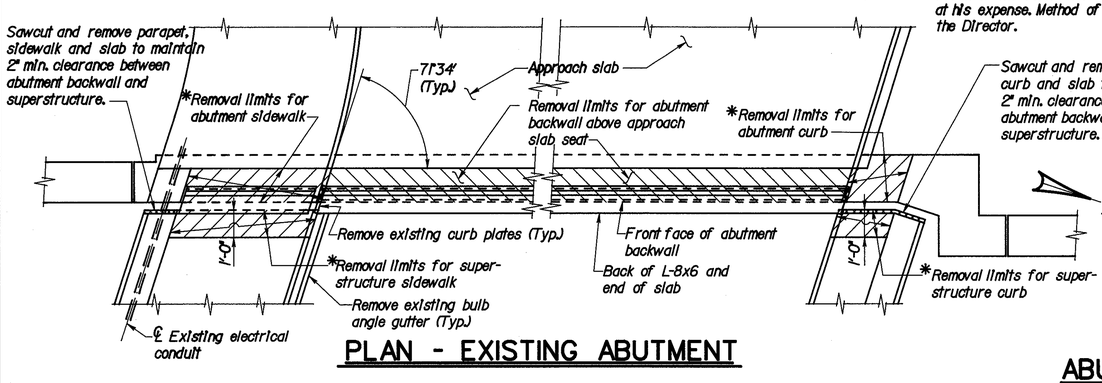
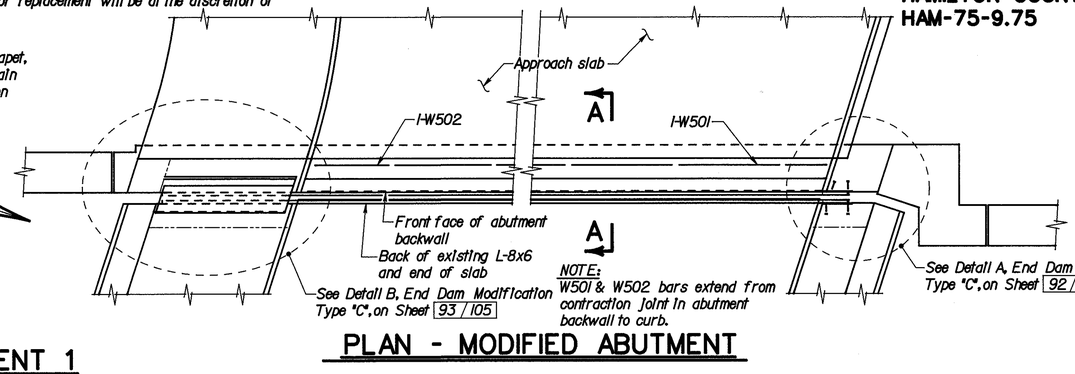
HAM-75-9.75

* Existing reinforcing steel projecting from the superstructure and abutment curbs and sidewalk shall remain. Contractor shall exercise caution to ensure that the bars are not damaged during the removal operation. Any bars damaged as a result of the Contractor's operation shall be replaced or repaired by the Contractor at his expense. Method of repair or replacement will be at the discretion of the Director.

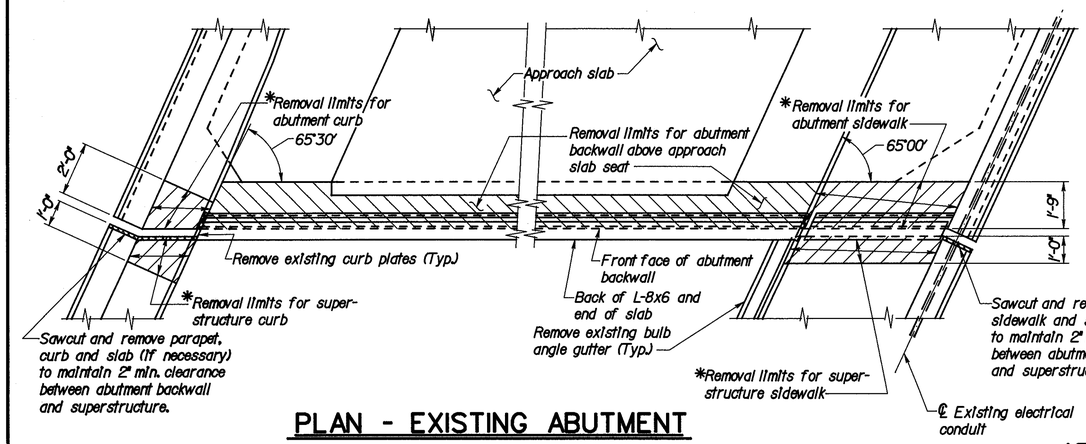


PLAN - EXISTING ABUTMENT

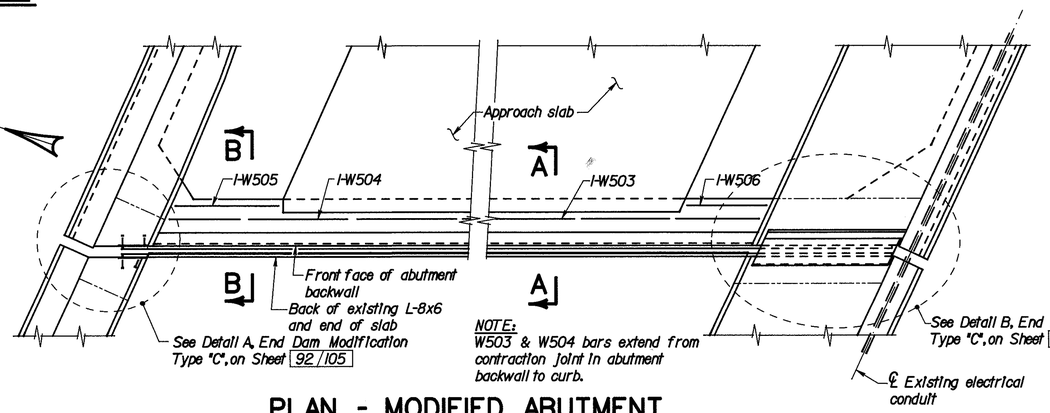


PLAN - MODIFIED ABUTMENT

ABUTMENT 1

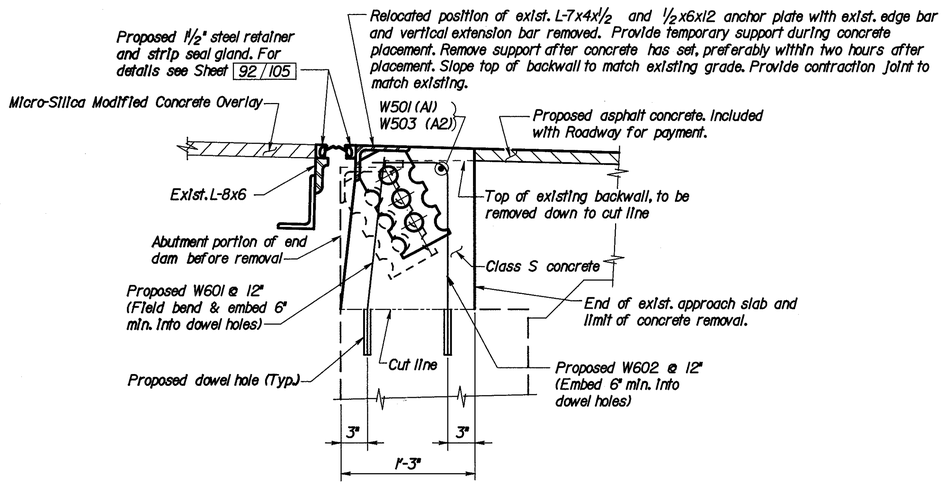


PLAN - EXISTING ABUTMENT

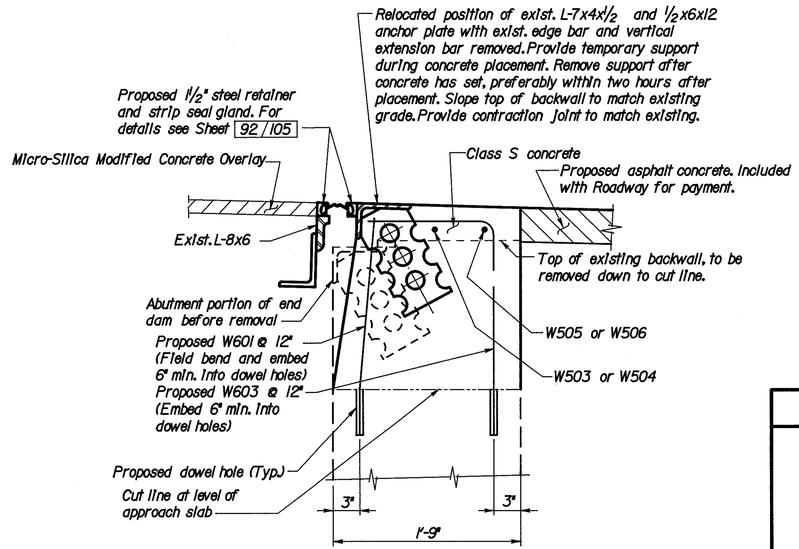


PLAN - MODIFIED ABUTMENT

ABUTMENT 2



SECTION A-A



SECTION B-B

LEGEND

A1 = Abutment 1
A2 = Abutment 2

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

91 / 105

ABUTMENT MODIFICATIONS PLANS AND DETAILS

BRIDGE NO. HAM-75-1292

SHEPHERD LANE OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	DFS	MPH 12/92	

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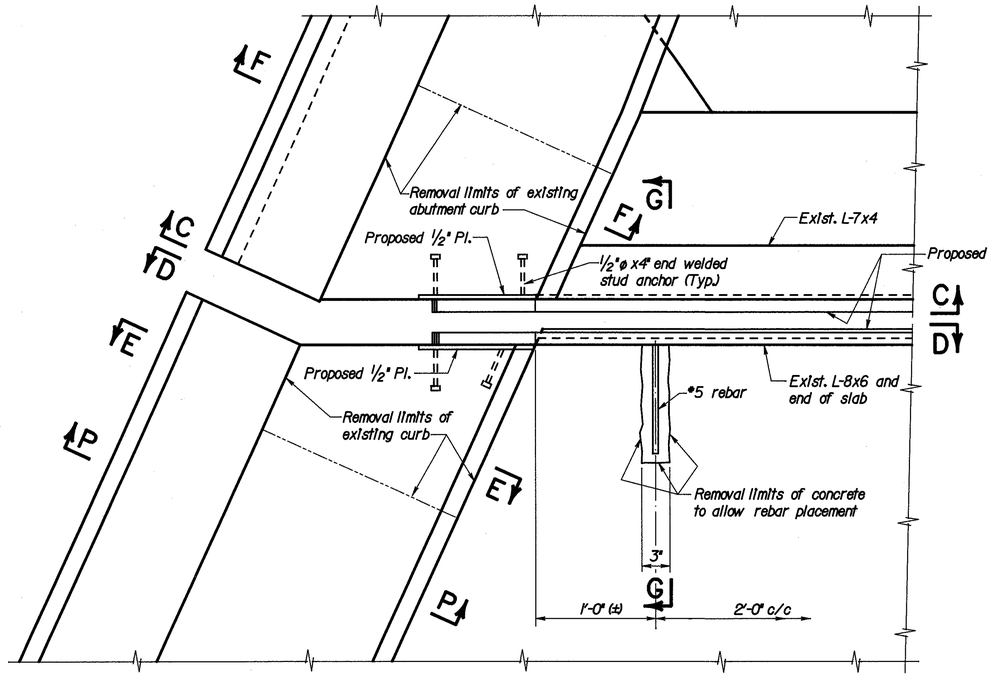
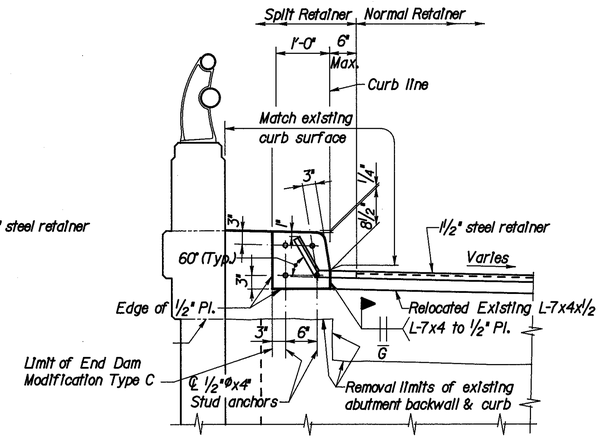
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

325
338

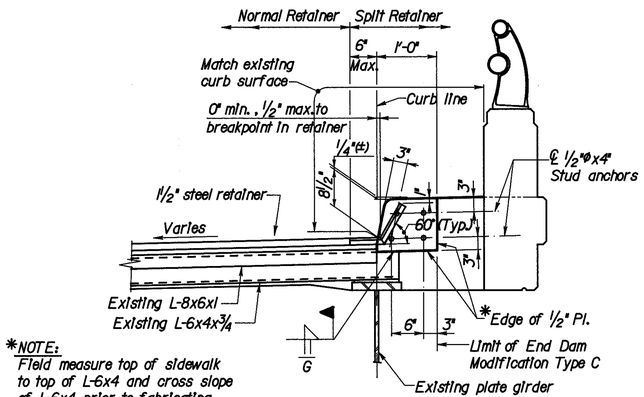
HAMILTON COUNTY
HAM-75-9.75



DETAIL A
END DAM MODIFICATION, TYPE C

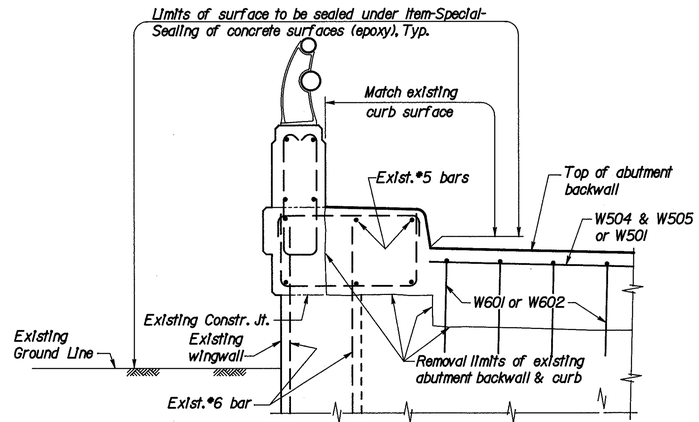


SECTION C-C

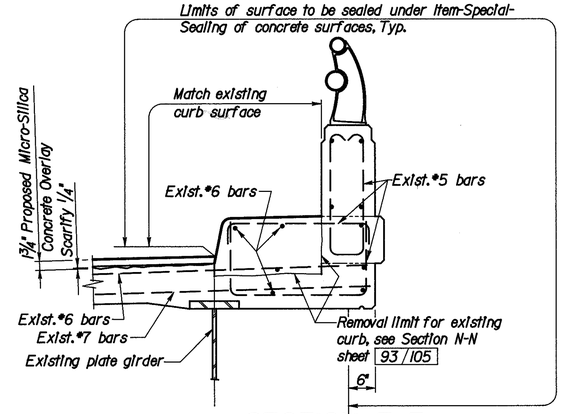


*NOTE:
Field measure top of sidewalk to top of L-6x4 and cross slope of L-6x4 prior to fabricating 1/2" Plate.

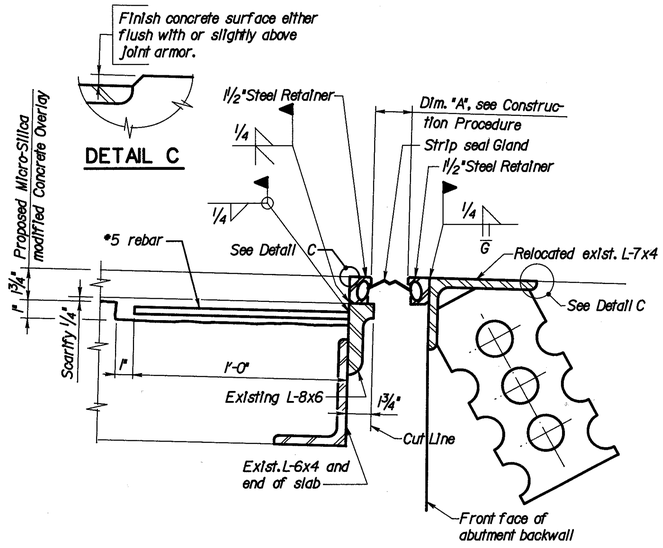
SECTION D-D



SECTION F-F

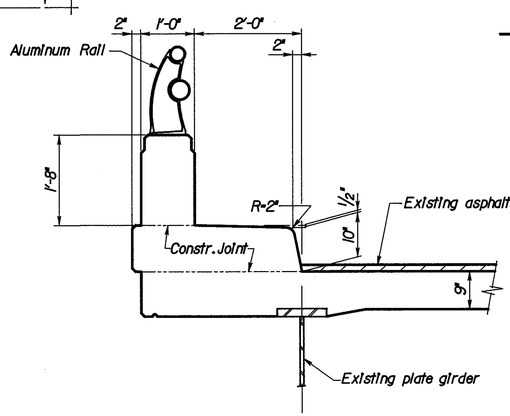


SECTION E-E



SECTION G-G

Construction Procedure:
1. Place backwall concrete during stable or rising ambient temperatures and conclude placement immediately before the day's peak ambient temperature.
2. Not more than four hours prior to the day's peak ambient temperature install the backwall L-7x4x1/2 with the 1 1/2" steel retainer attached such that Dimension "A" will be 2" at 60°F. For each 10°F above 60°F the 2" dimension shall be decreased by 1/8" and for each 10°F below 60°F the 2" dimension shall be increased by 1/8".



SECTION P-P
EXISTING CURB & RAILING

NOTES

1. For Reinforcing Steel List, see Sheet 105/105

LOCKWOOD, JONES & BEALS
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DAYTON, OHIO
92/105

END DAM MODIFICATION DETAILS AT NORTH CURB
BRIDGE NO. HAM-75-1292
SHEPHERD LANE OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	DFS	MPH 12/92	

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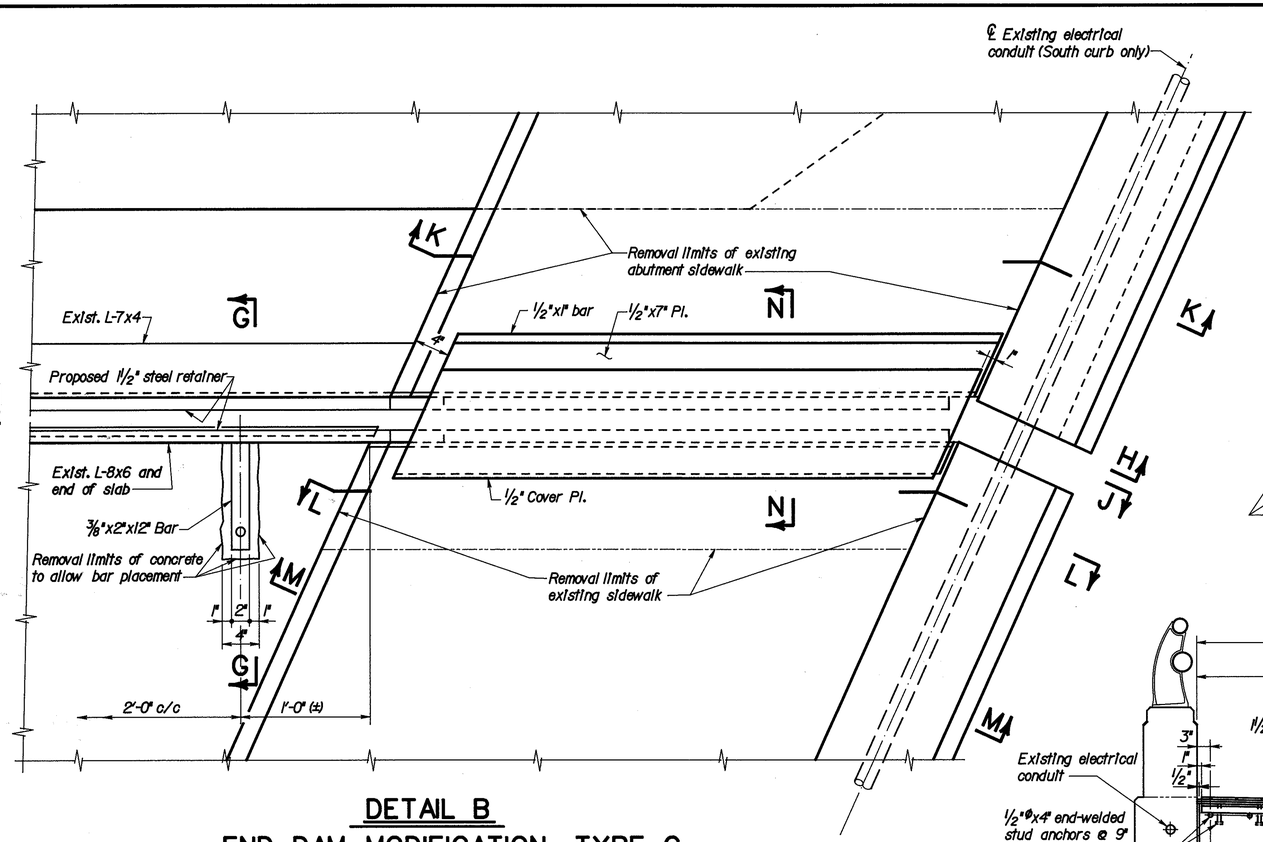
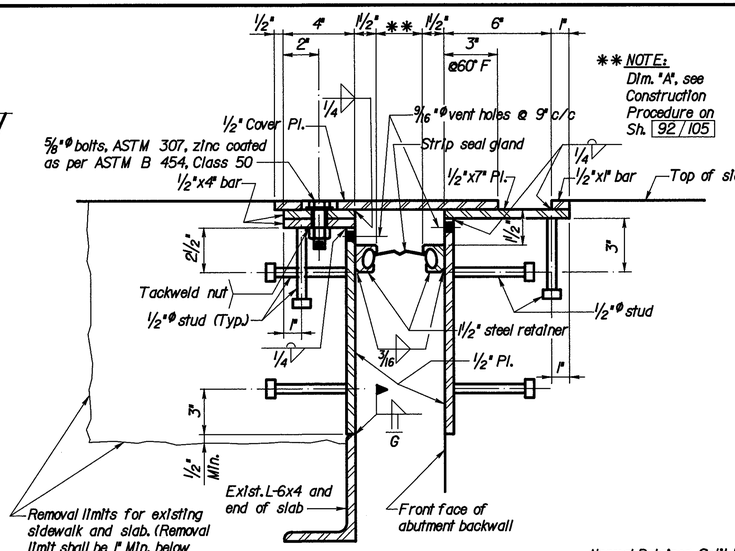
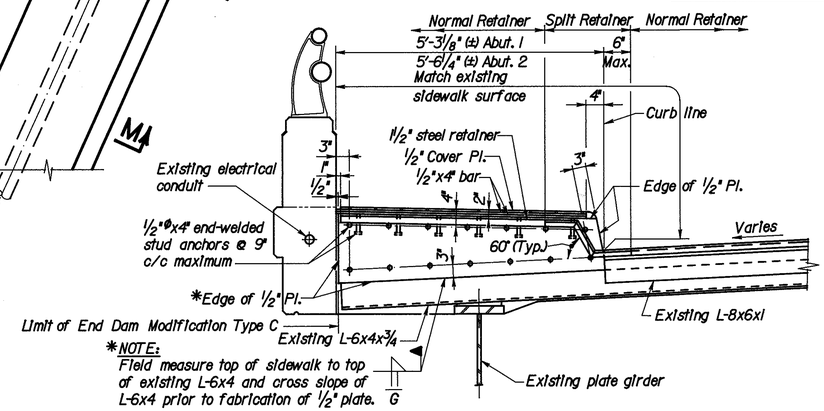
HAMILTON COUNTY
HAM-75-9.75



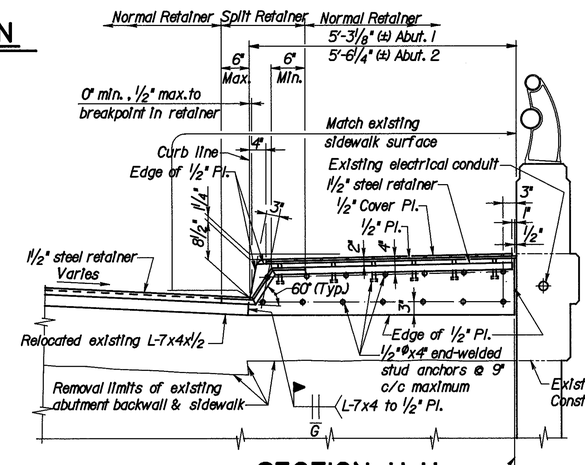
DETAIL B
END DAM MODIFICATION, TYPE C



SECTION N-N

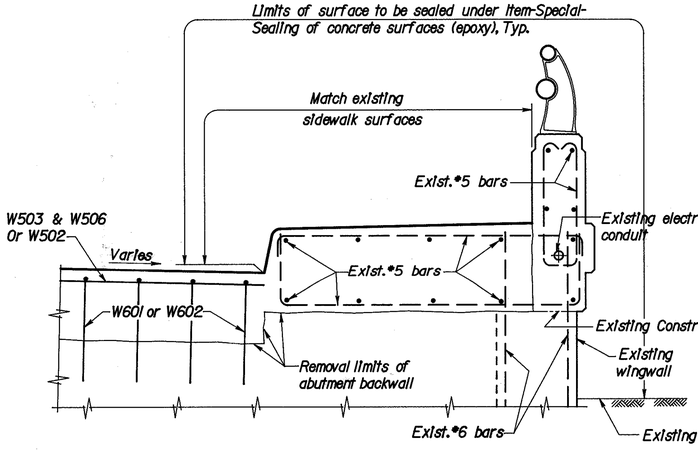


SECTION J-J

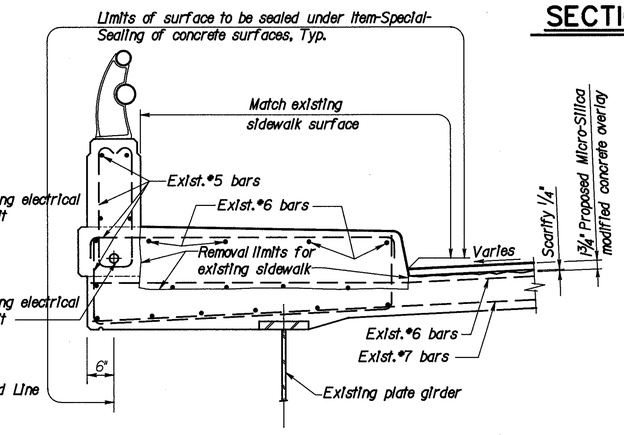


SECTION H-H

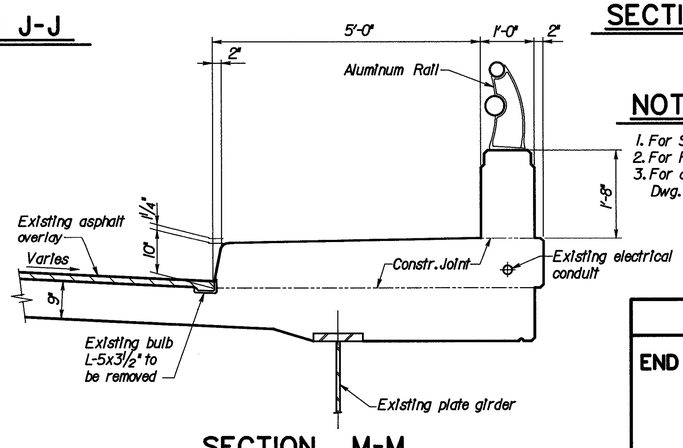
Limit of End Dam Modification Type C



SECTION K-K



SECTION L-L



SECTION M-M
EXISTING SIDEWALK & RAILING

NOTES

1. For Section G-G, see sheet 92/105
2. For Reinforcing Steel List, see sheet 105/105
3. For additional sidewalk end dam details see Std. Dwg. EXJ-4-87, sheets 3 & 4 of 5.

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93/105

END DAM MODIFICATION DETAILS AT SOUTH SIDEWALK
BRIDGE NO. HAM-75-1292
SHEPHERD LANE OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	DFS	MPH 12/92	

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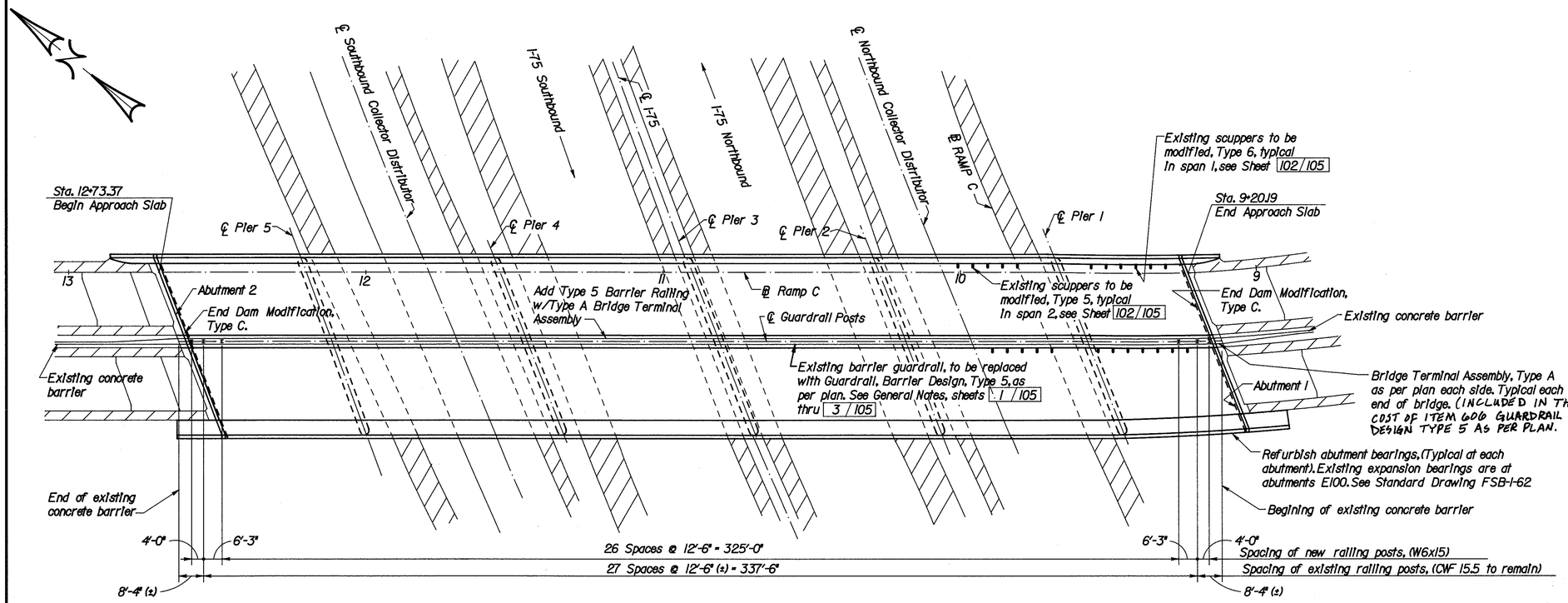
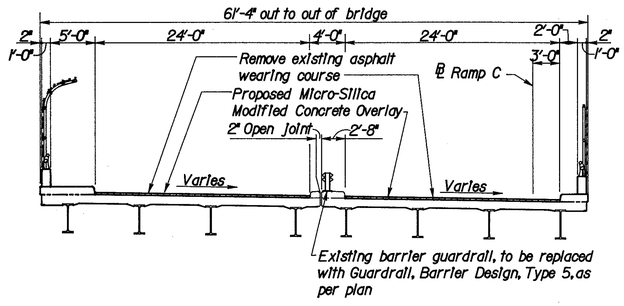
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

HAMILTON COUNTY
HAM-75-9.75



GENERAL PLAN



TYPICAL SECTION

PROPOSED WORK

1. Remove existing asphalt overlay and install new Micro-silica modified concrete overlay.
2. Seal expansion joints at abutments with strip seals, use End Dam Modification, Type C at both abutments
3. Modify existing scuppers.
4. Seal curbs, sidewalks, parapet and fascia to limits shown.
5. Refurbish abutment bearings

NOTES:

1. For General Notes see Sheet 1/105 thru 3/105
2. For Abutment Modification Plans and Details, see Sheet 95/105
3. For End Dam Modification Type C, see Sheets 96/105 thru 98/105
4. For Scupper modification details, see Sheet 102/105
5. For limits of surface to be sealed, see Sheets 96/105 thru 98/105
6. For Reinforcing Steel List, see Sheet 105/105
7. For Estimated Quantities, see Sheet 5/105

EXISTING STRUCTURE

TYPE: Continuous rolled steel beam with reinforced concrete deck and substructure.
SPANS: 42'-6", 61'-3", 63'-7, 65'-0", 65'-9", 50'-6"
ROADWAY: 52'-0" f/f of curbs including 4'-0" raised median.
LOAD FREQUENCY: CF = 400 (57)
SKEW: 21°35'00" R.F.
WEARING SURFACE: 1" Monolithic concrete with Asphalt Overlay
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Spiral (Dc=38°) and tangent.

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94/105

GENERAL PLAN & TYPICAL SECTION

BRIDGE NO. HAM-75-1338
RAMP C OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DJJ	HDJ	DJJ	HDJ	MPH 12/92	

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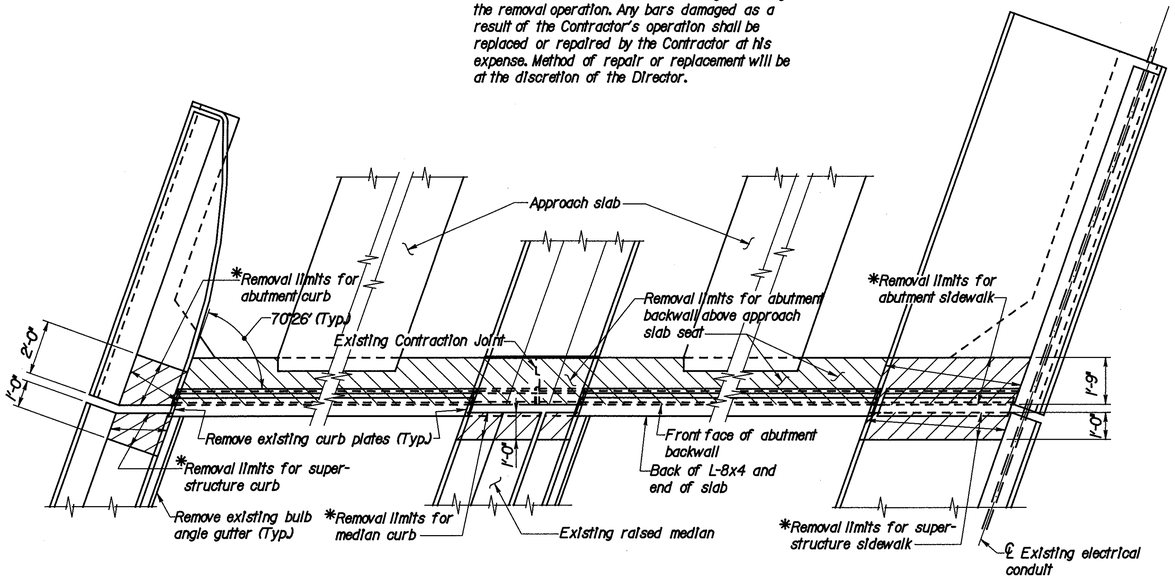
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

328
338

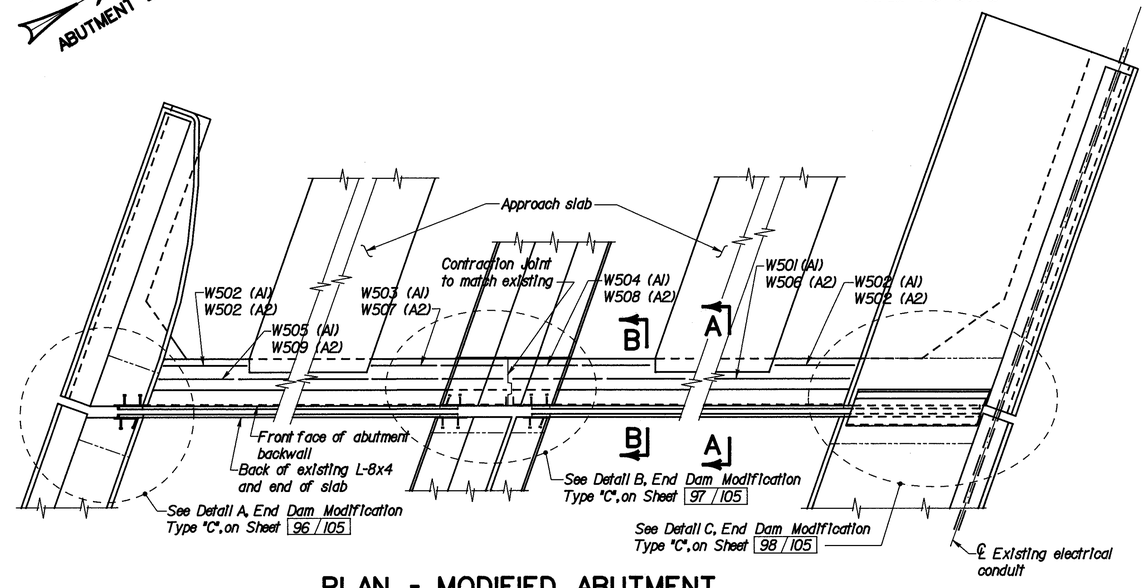
HAMILTON COUNTY
HAM-75-9.75

ABUTMENT 1
ABUTMENT 2



PLAN - EXISTING ABUTMENT

Abutment 1 shown, Abutment 2 similar

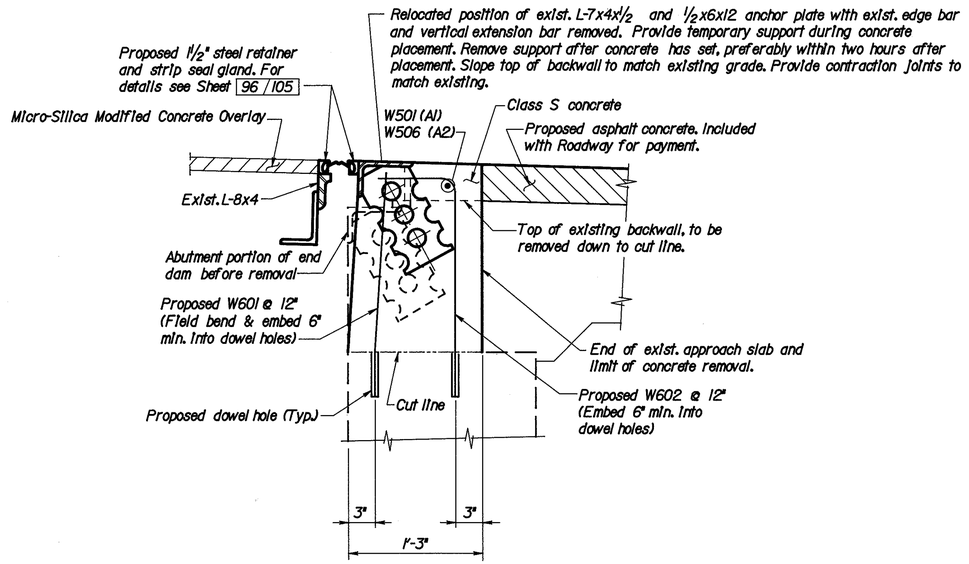


LEGEND

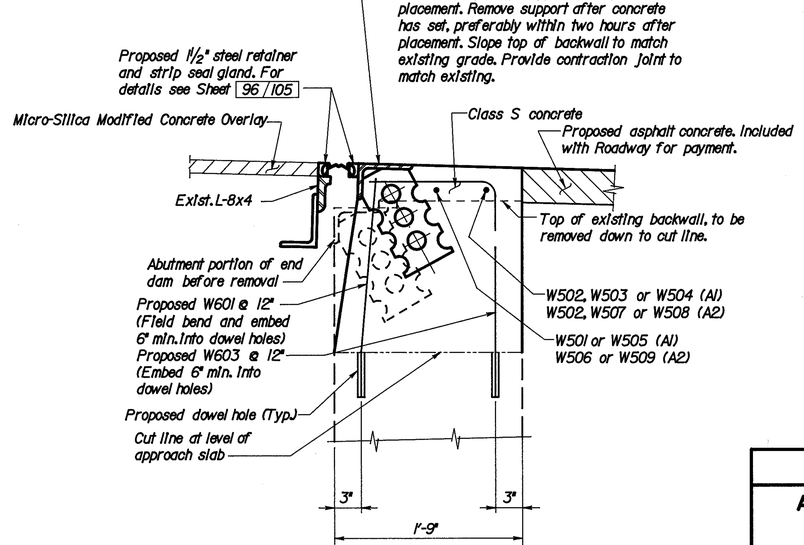
A1 = Abutment 1
A2 = Abutment 2

PLAN - MODIFIED ABUTMENT

Abutment 1 shown, Abutment 2 similar



SECTION A-A



SECTION B-B

LOCKWOOD, JONES & BEALS
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95 / 105

ABUTMENT MODIFICATIONS PLANS AND DETAILS

BRIDGE NO. HAM-75-1338

RAMP C OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	DFS	MPH 12/92	

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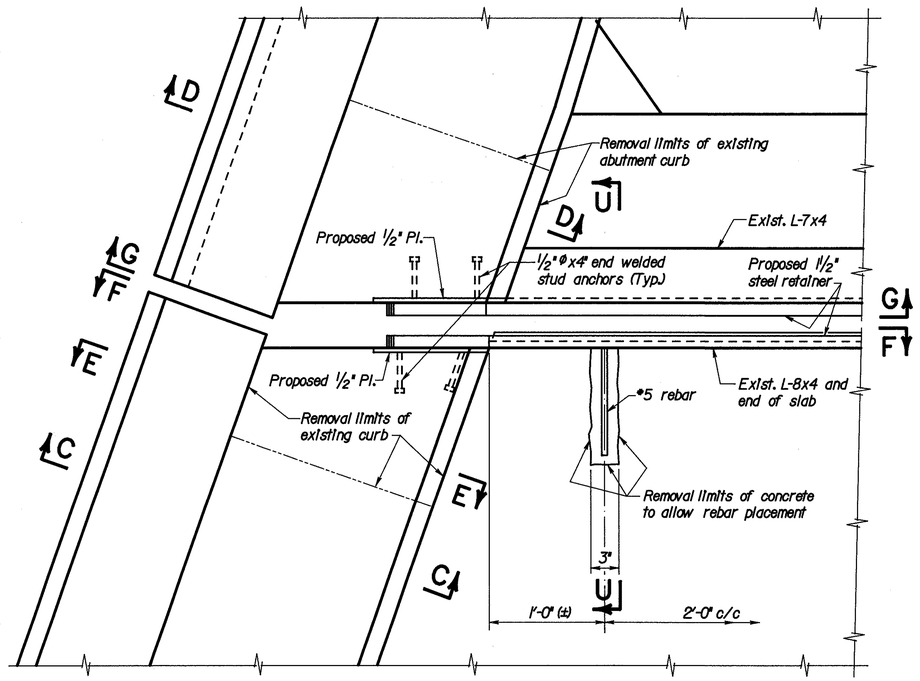
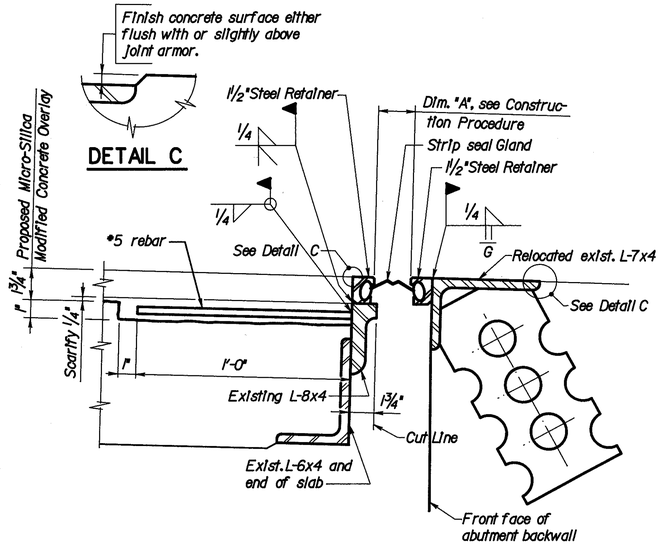
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

329
338

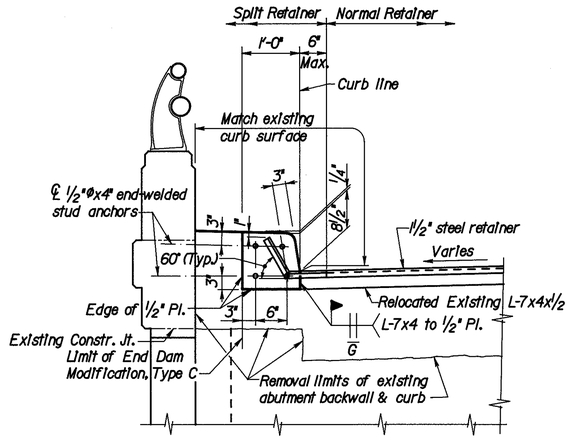
HAMILTON COUNTY
HAM-75-9.75



DETAIL A
END DAM MODIFICATION, TYPE C

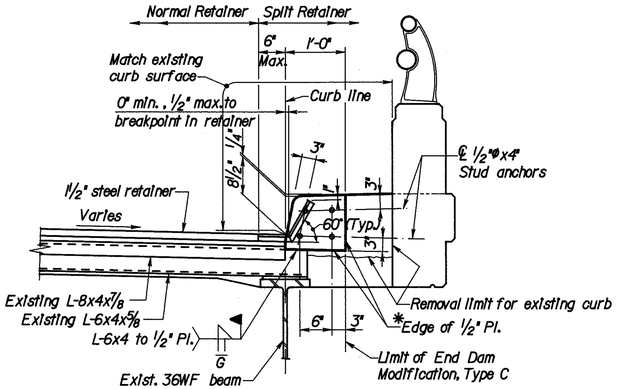


SECTION U-U

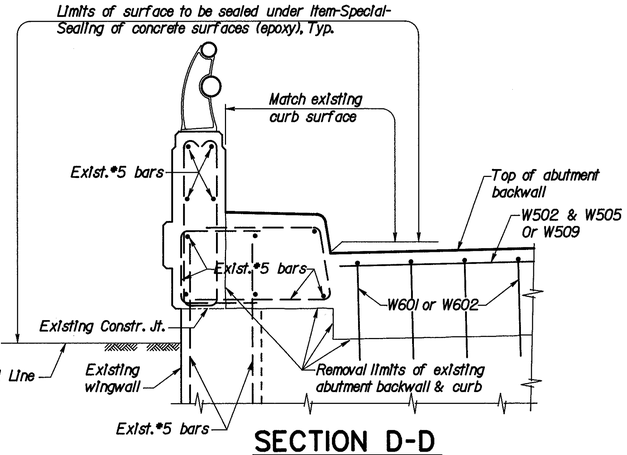


SECTION G-G

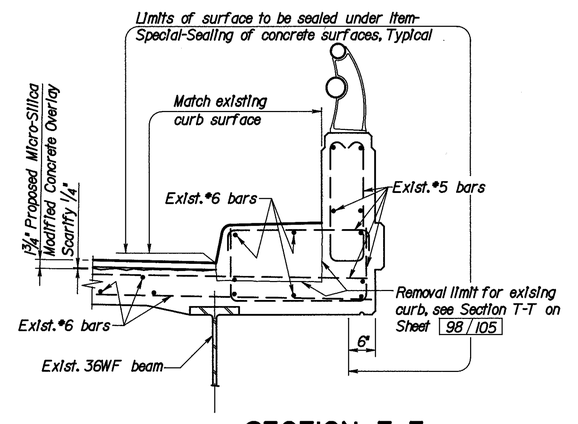
*NOTE:
Field measure top of sidewalk to top of existing L-6x4 and cross slope of L-6x4 prior to fabrication of 1/2" plate.



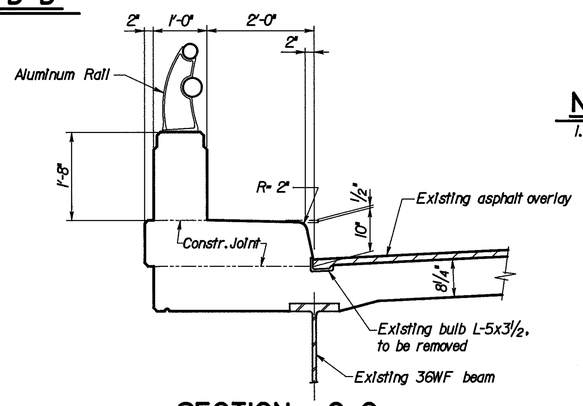
SECTION F-F



SECTION D-D



SECTION E-E



SECTION C-C
EXISTING CURB & RAILING (EAST SIDE)

Construction Procedure:
1. Place backwall concrete during stable or rising ambient temperatures and conclude placement immediately before the day's peak ambient temperature.
2. Not more than four hours prior to the day's peak ambient temperature install the backwall L-7x4x1/2 with the 1 1/2" steel retainer attached such that Dimension "A" will be 2" at 60°F. For each 10°F above 60°F the 2" dimension shall be decreased by 1/8" and for each 10°F below 60°F the 2" dimension shall be increased by 1/8".

NOTES

1. For Reinforcing Steel List, see sheet 105/105

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END DAM MODIFICATION DETAILS AT EAST CURB

BRIDGE NO. HAM-75-1338
RAMP C OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	DFS	MPH 12/92	

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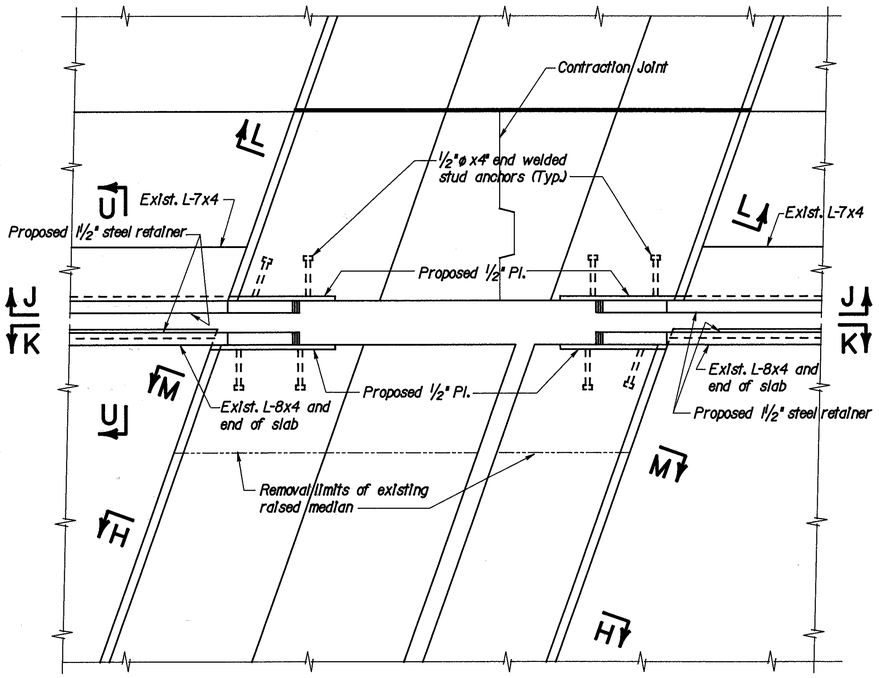
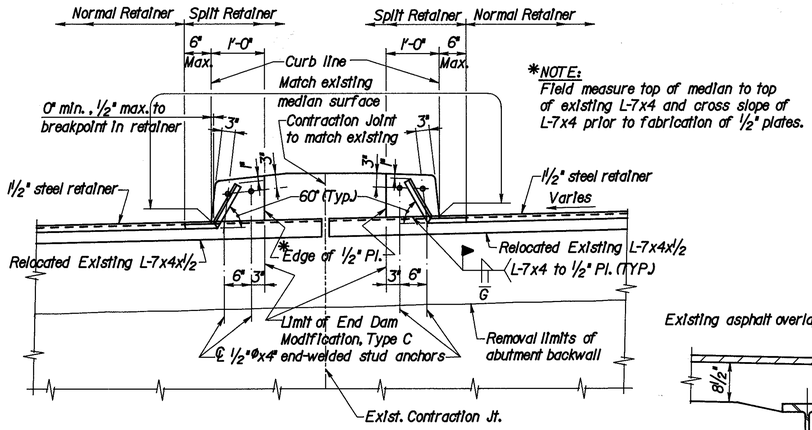
F.H.W.A. REGION	STATE	PROJECT		330 / 338
5	OHIO			

HAMILTON COUNTY
HAM-75-9.75

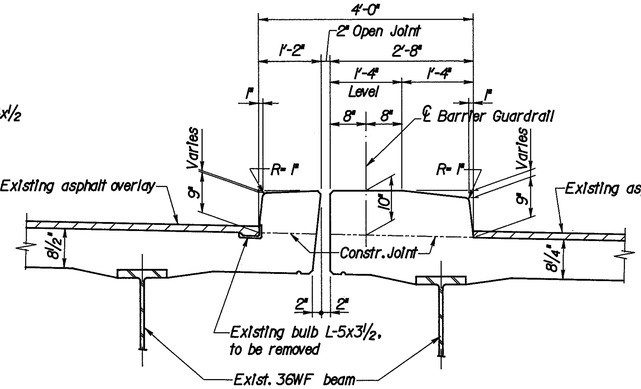


DETAIL B
END DAM MODIFICATION, TYPE C

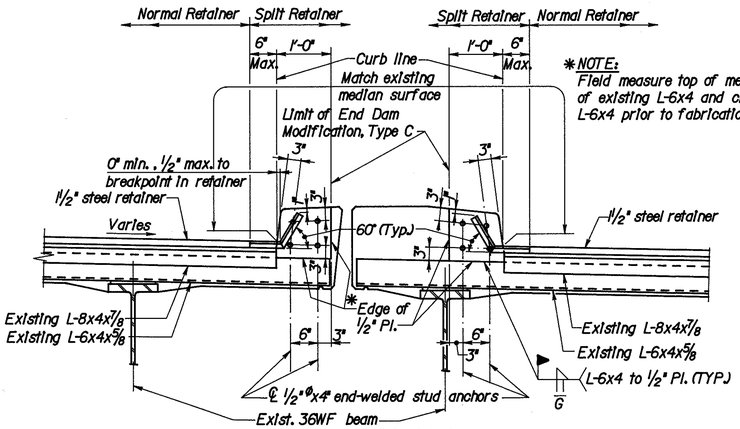


*NOTE:
Field measure top of median to top of existing L-7x4 and cross slope of L-7x4 prior to fabrication of ½" plates.

SECTION J-J

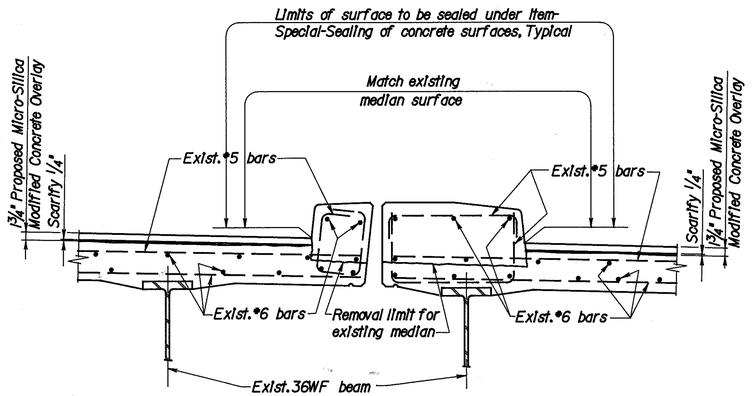


SECTION H-H
EXISTING MEDIAN CURB

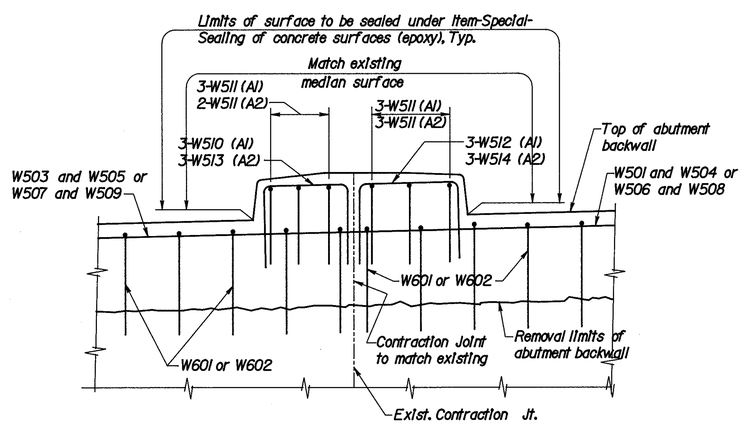


*NOTE:
Field measure top of median to top of existing L-6x4 and cross slope of L-6x4 prior to fabrication of ½" plates.

SECTION K-K



SECTION M-M



SECTION L-L

NOTES

1. For Section U-U, see sheet 96 / 105
2. For Reinforcing Steel List, see sheet 105 / 105

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97 / 105

END DAM MODIFICATION DETAILS AT MEDIAN CURB
BRIDGE NO. HAM-75-1338
RAMP C OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	DFS	MPH 12/92	

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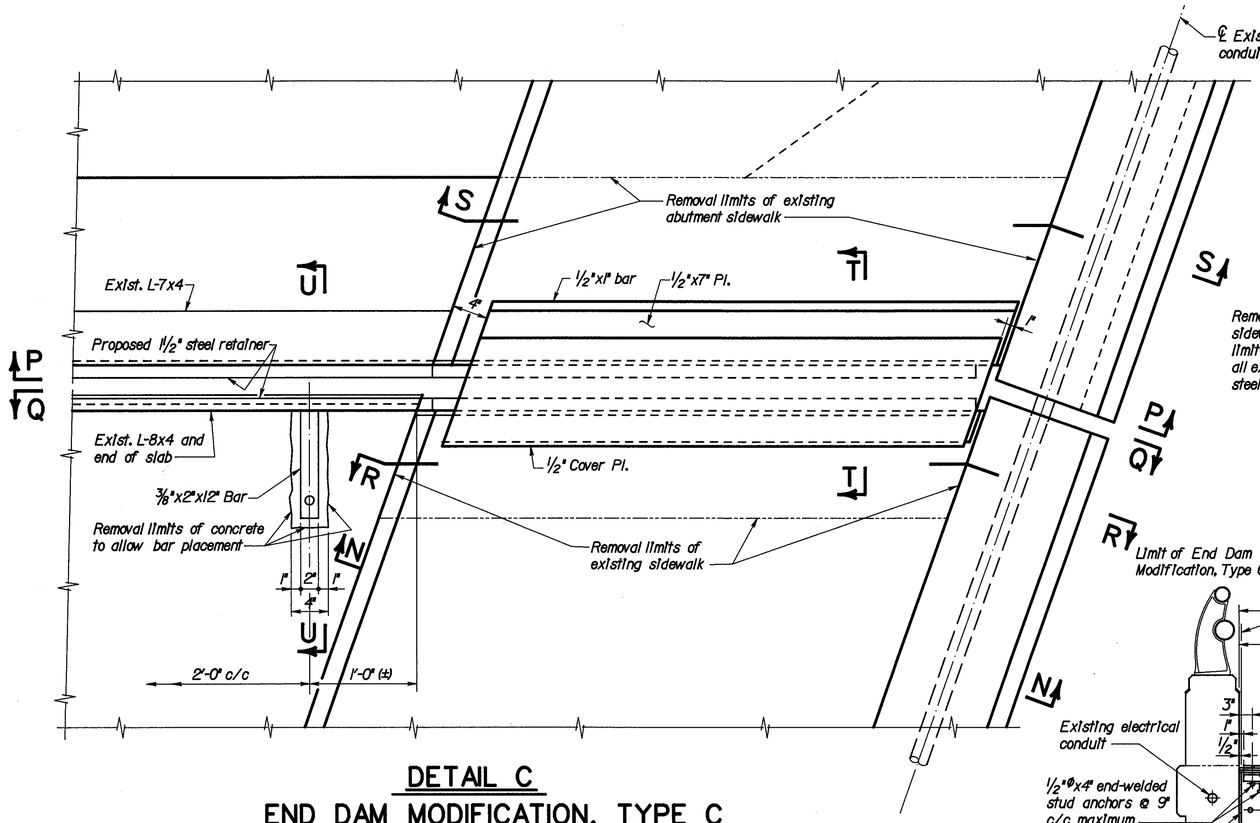
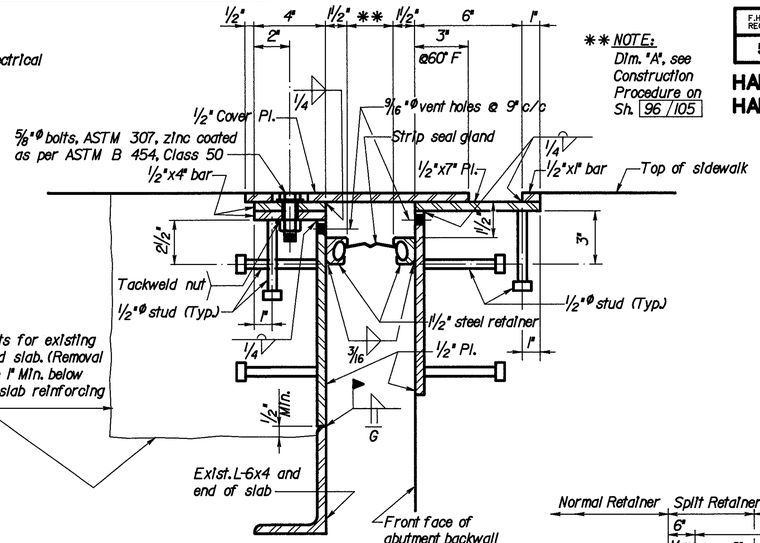
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

331
338

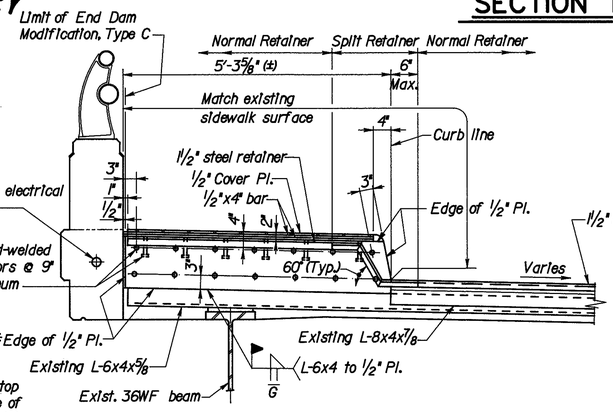
HAMILTON COUNTY
HAM-75-9.75



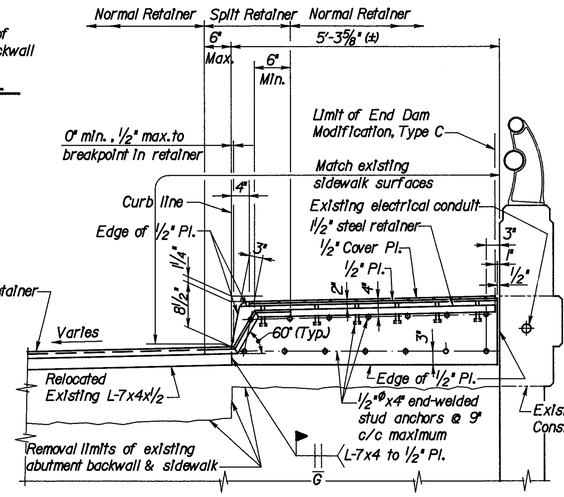
DETAIL C
END DAM MODIFICATION, TYPE C



SECTION T-T

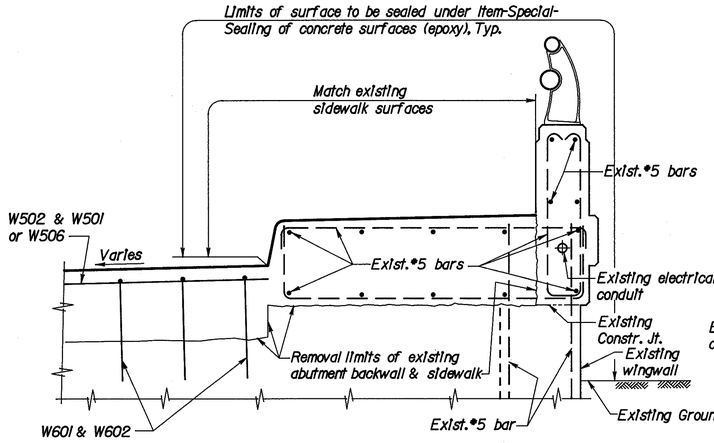


SECTION Q-Q

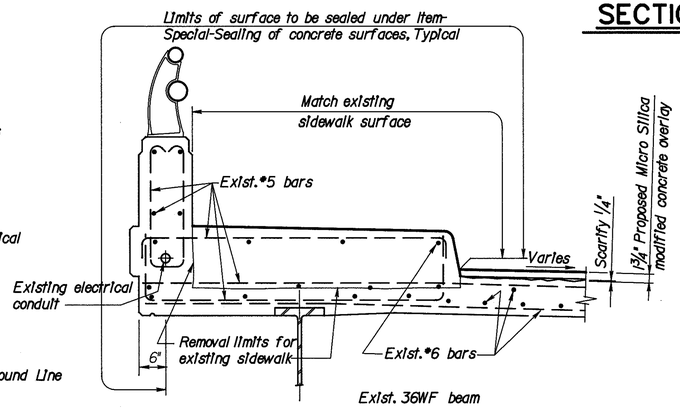


SECTION P-P

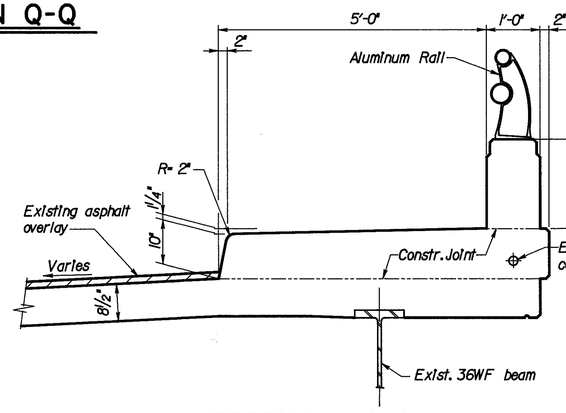
*NOTE:
Field measure top of sidewalk to top of existing L-6x4 and cross slope of L-6x4 prior to fabrication of ½" plate.



SECTION S-S



SECTION R-R



SECTION N-N
EXISTING SIDEWALK & RAILING

NOTES

1. For Section U-U, see sheet 96/105
2. For Reinforcing Steel List, see sheet 105/105
3. For additional sidewalk end dam details see Std. Dwg. EXJ-4-87, sheets 3 & 4 of 5.

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98/105

END DAM MODIFICATION DETAILS AT WEST SIDEWALK
BRIDGE NO. HAM-75-1338
RAMP C OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED	DATE	REVISED
GJW	HDJ	GJW	DFS	MPH	12/92	

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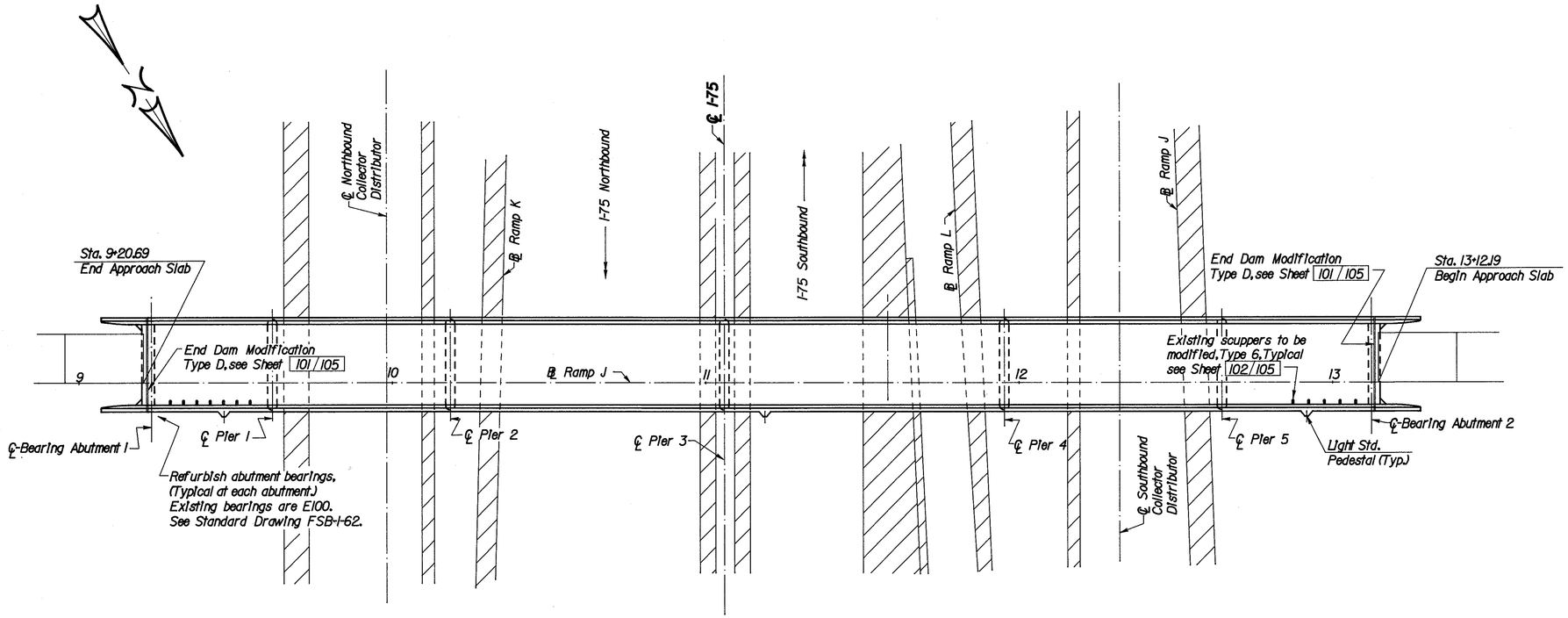
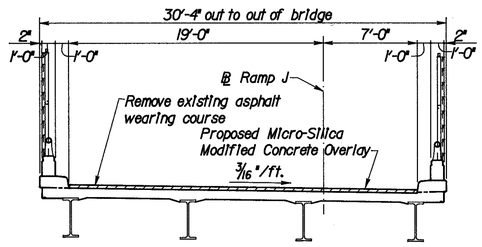
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

332
338

HAMILTON COUNTY
HAM-75-9.75



GENERAL PLAN



TYPICAL SECTION

PROPOSED WORK

1. Remove existing asphalt overlay and install new Micro-silica modified concrete overlay.
2. Seal expansion joints at abutments with strip seals. Use End Dam Modification Type D at both abutments.
3. Seal curbs, parapet and fascia to limits shown.
4. Modify existing scuppers.
5. Refurbish abutment bearings.

NOTES:

1. For General Notes see Sheet 1/105 thru 3/105
2. For Abutment Modification Plans and Details, see Sheet 100/105
3. For End Dam Modification, Type D, Details, see Sheet 101/105
4. For Scupper Modification Details, see Sheet 102/105
5. For Reinforcing Steel List, see Sheet 105/105
6. For limits of surfaces to be sealed, see Sheet 101/105
7. For Estimated Quantities, see Sheet 4/105

EXISTING STRUCTURE

TYPE: Continuous rolled steel beams with reinforced concrete deck and substructure.
SPANS: 39'-0", 56'-0", 86'-6", 88'-0", 69'-0", 48'-6"
ROADWAY: 26'-0" face to face of curbs
LOAD FREQUENCY: CF - 400 (57)
SKEW: 0°00'00"
WEARING SURFACE: 1" Monolithic concrete with Asphalt Overlay
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent

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99/105

GENERAL PLAN & TYPICAL SECTION

BRIDGE NO. HAM-75-1390
RAMP J OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
DYA	HDJ	DYA	HDJ	MPH 12/92	

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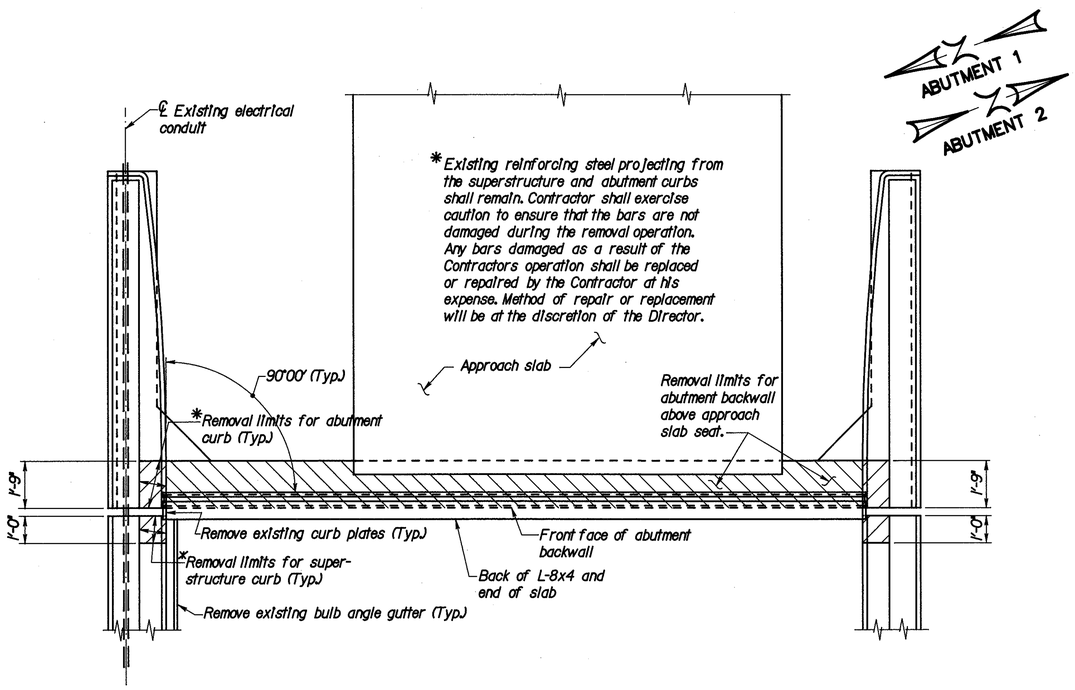
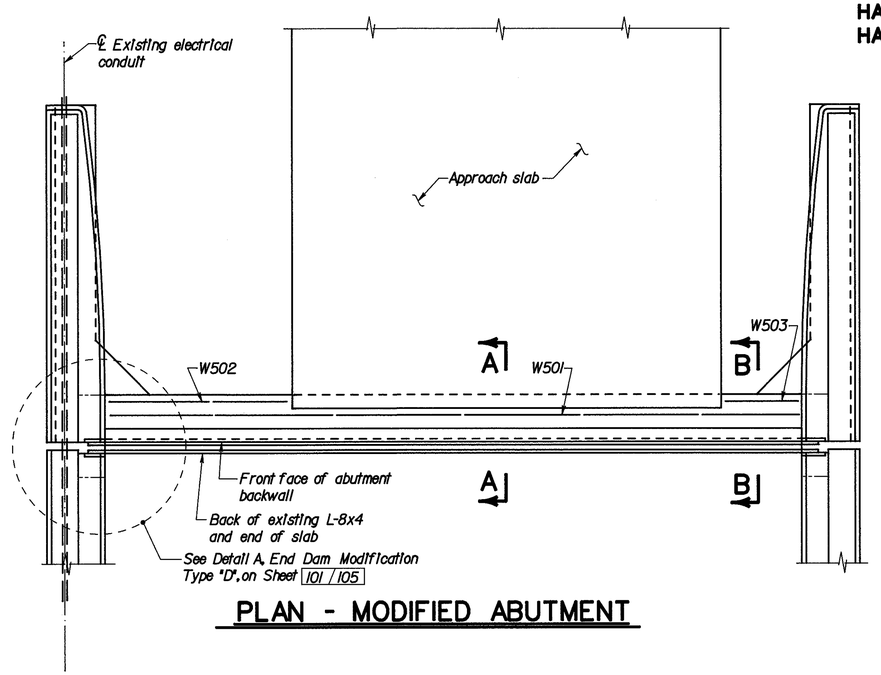
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

333
338

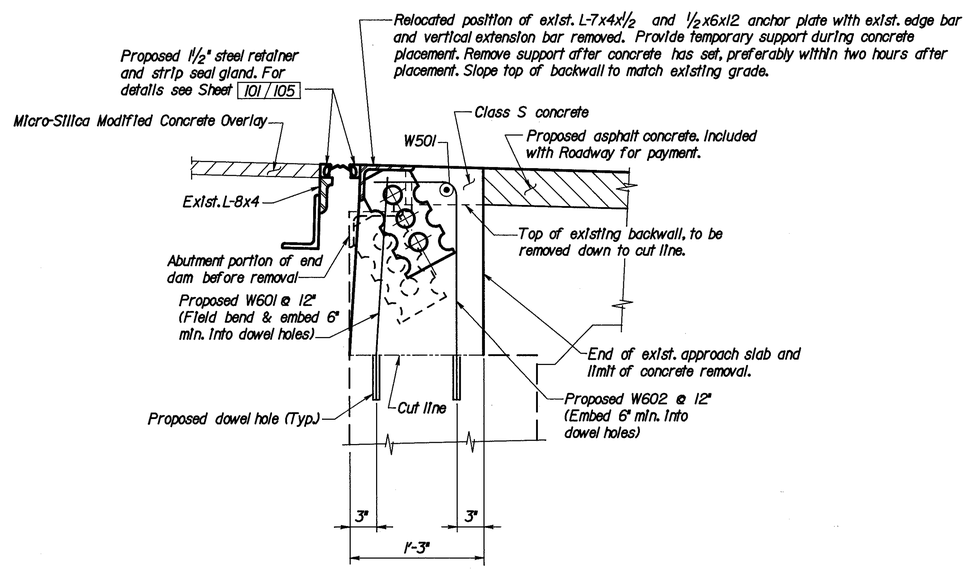
HAMILTON COUNTY
HAM-75-9.75



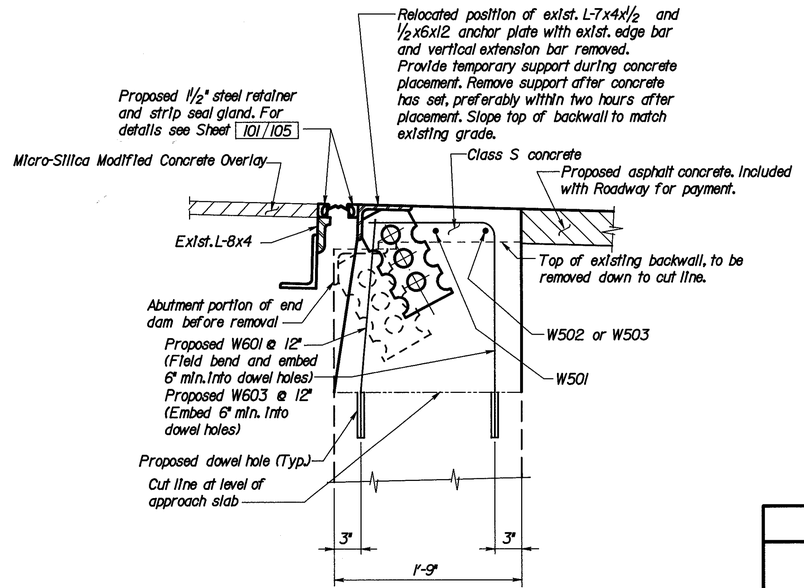
PLAN - EXISTING ABUTMENT



PLAN - MODIFIED ABUTMENT



SECTION A-A



SECTION B-B

LOCKWOOD, JONES & BEALS
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100 / 105

ABUTMENT MODIFICATIONS PLANS AND DETAILS

BRIDGE NO. HAM-75-1390

RAMP J OVER I-75

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	DFS	MPH 12/92	

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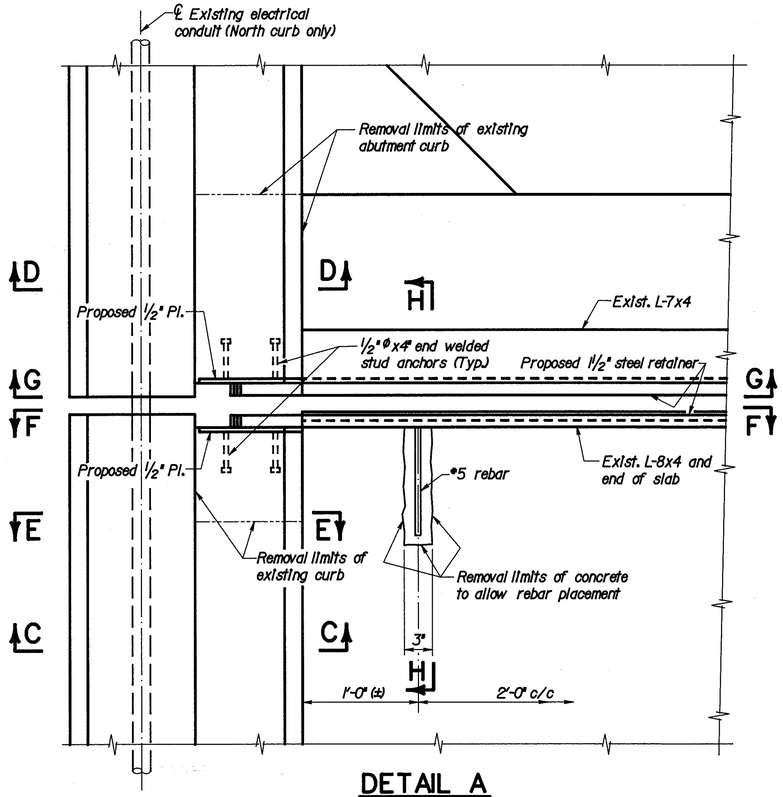
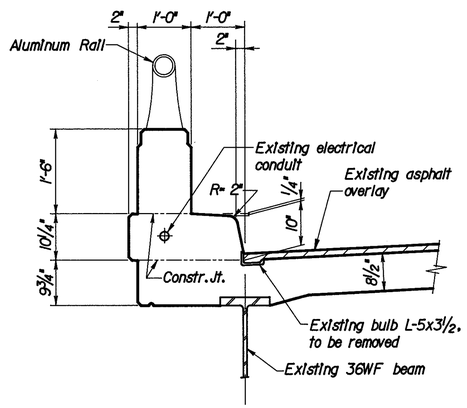
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

334
338

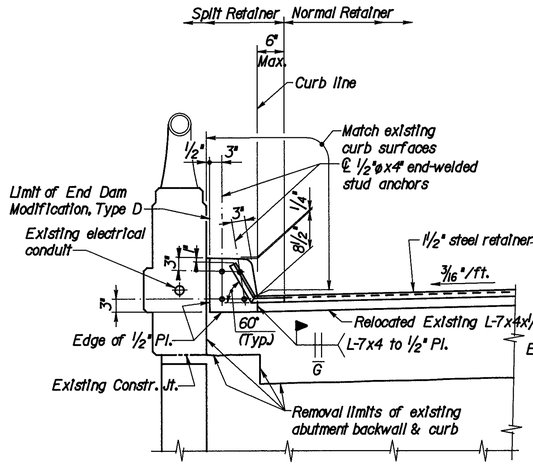
HAMILTON COUNTY
HAM-75-9.75



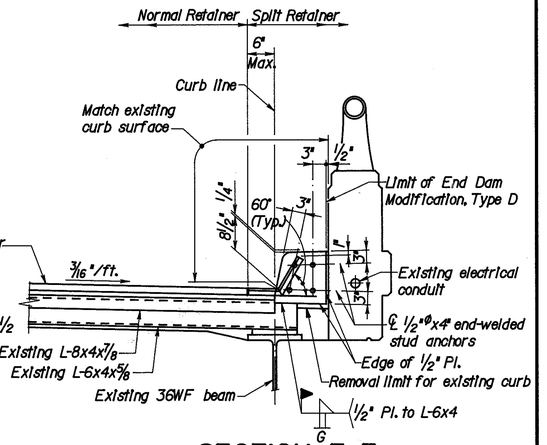
DETAIL A
END DAM MODIFICATION, TYPE D



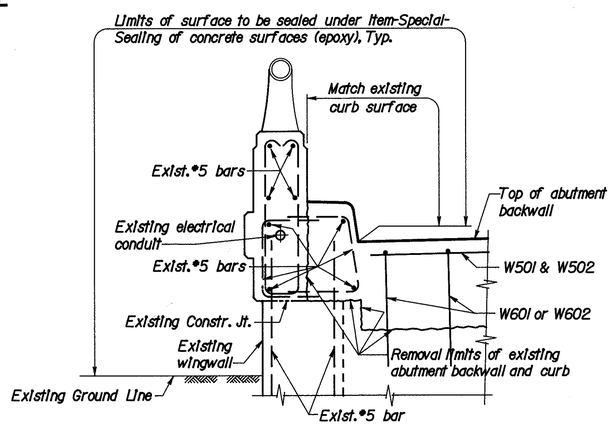
SECTION C-C
EXISTING CURB AND RAILING



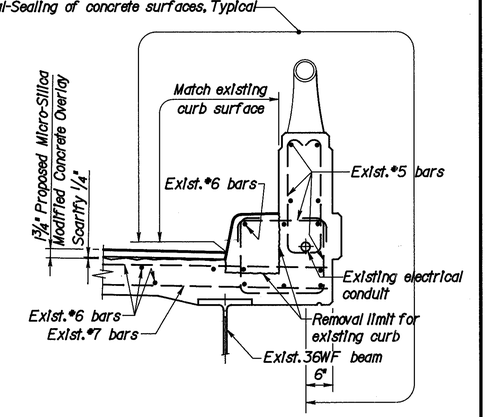
SECTION G-G



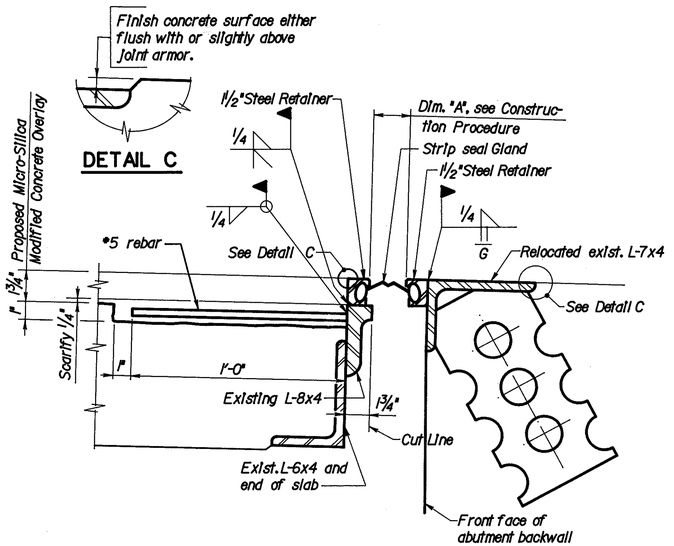
SECTION F-F



SECTION D-D



SECTION E-E



SECTION H-H

Construction Procedure:

1. Place backwall concrete during stable or rising ambient temperatures and conclude placement immediately before the day's peak ambient temperature.
2. Not more than four hours prior to the day's peak ambient temperature install the backwall L-7x4x1/2 with the 1 1/2" steel retainer attached such that Dimension "A" will be 2" at 60°F. For each 10°F above 60°F the 2" dimension shall be decreased by 1/8" and for each 10°F below 60°F the 2" dimension shall be increased by 1/8".

NOTES

1. For Reinforcing Steel List, see sheet 105/105

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

101 / 105

END DAM MODIFICATION DETAILS

BRIDGE NO. HAM-75-1390
RAMP J OVER I-75

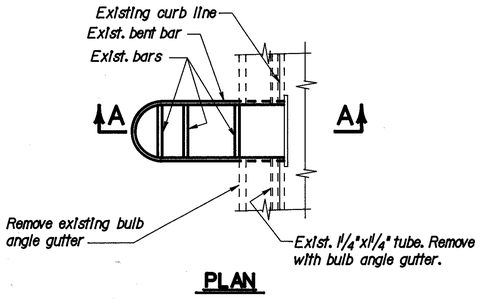
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
GJW	HDJ	GJW	DFS	MPH 12/92	

f:\6272\1390d2.dgn Feb. 17, 1993 08:46:06

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

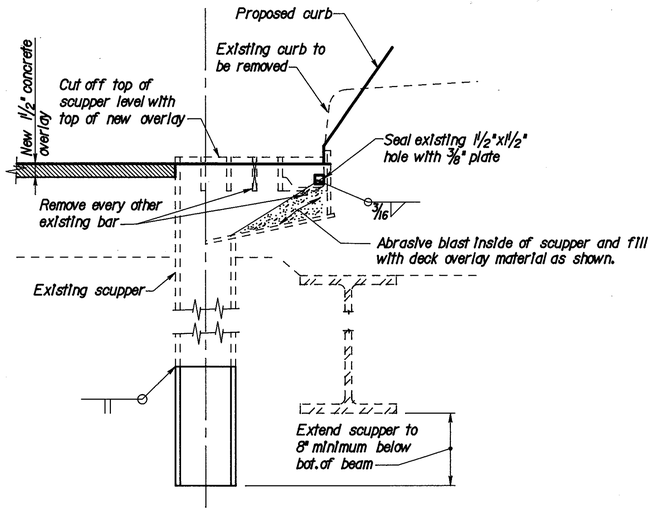
335
338

HAMILTON COUNTY
HAM-75-9.75

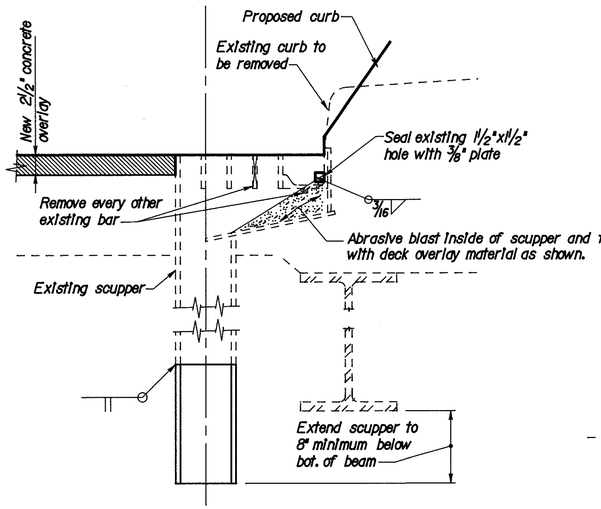


PLAN

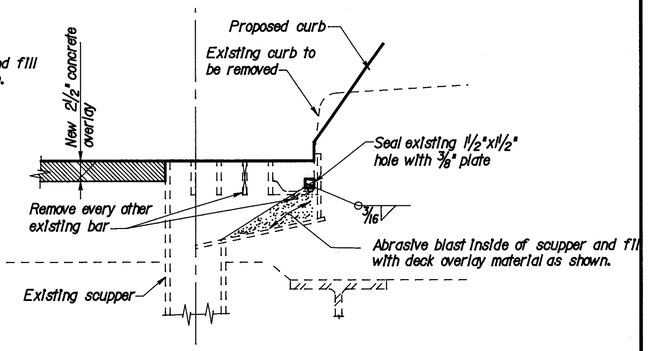
EXISTING SCUPPER TREATMENT AT BRIDGE DECK OVERLAYS



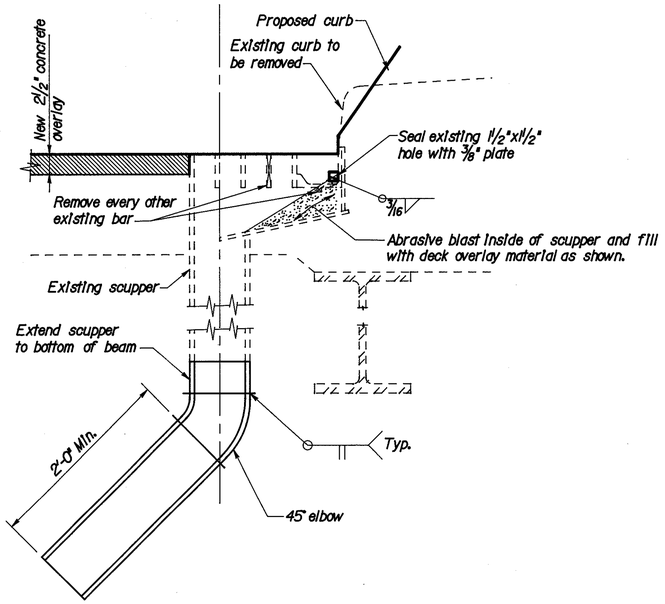
SECTION A-A TYPE 1



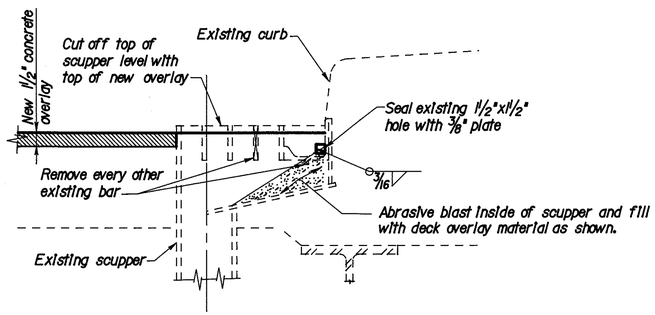
SECTION A-A TYPE 2



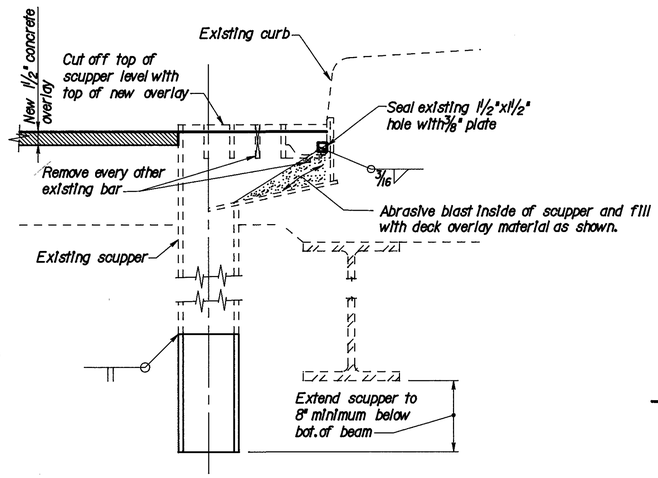
SECTION A-A TYPE 3



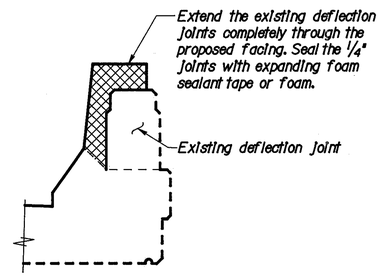
SECTION A-A TYPE 4



SECTION A-A TYPE 5



SECTION A-A TYPE 6



DEFLECTION JOINT DETAIL

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

102 / 105

MISCELLANEOUS DETAILS

HAM-75-9.75
BRIDGES

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
MJZ	HDJ	MJZ	HDJ	MPH 12/92	

f:\6272\6272misc.dgn Feb. 23, 1993 15:06:04

HAM-75-1089L
GALBRAITH ROAD OVER I-75 SOUTH BOUND

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
D601	716	2'-8"	Note 3	Str.											
S501	16	5'-9"	Note 3	4		2'-8"	8"	2'-8"							
S502	338	3'-9"	Note 3	4		1'-8"	8"	1'-8"							
S503	16	14'-9"	Note 3	Str.											
S504	40	13'-8"	Note 3	Str.											
S505	96	6'-8"	Note 3	Str.											
S506	16	3'-4 1/4"	Note 3	10		1'-3"	10 1/4"		6 1/2"						3 1/4"
S507	8	4'-8"	Note 3	Str.											
S508	8	8'-1"	Note 3	4		1'-0"	4'-8"	2'-8"							
S509	8	7'-1"	Note 3	9		See Bending Diagram									

HAM-75-1102R
NORTHBOUND I-75 OVER WEST FORK OF MILL CREEK & GALBRAITH RD.

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
W501	2	4'-8"	10	Str.											
W502	2	28'-10"	60	Str.											
W503	2	8'-8"	18	Str.											
W504	2	20'-6"	43	Str.											
W601	100	2'-1"	313	Str.											
W602	72	2'-6"	270	3		7"	2'-1"								
W603	28	3'-0"	126	3		1'-1"	2'-1"								
A501	6	16'-2"	101	Str.											
A502	4	4'-8"	19	Str.											
A503	6	13'-8"	86	12		See Bending Diagram									
A504	2	3'-2"	7	Str.											
A505	3	14'-8"	46	Str.											
A506	9	2'-2"	20	Str.											
A507	2	3'-8"	8	Str.											
A508	5	12'-2"	63	Str.											
A601	39	2'-4"	137	1			1'-1"	1'-3"					8 5/8"	1'-0 1/4"	
A602	18	3'-10"	104	1			3'-2"	8"					8"	7/8"	
A603	39	1'-5"	83	3		8"	11"								
A604	36	4'-1"	221	3		9"	3'-6"								
A605	48	2'-0"	144	Str.											
A606	9	3'-0"	41	3		8"	2'-6"								
A607	3	5'-4"	24	3		1'-4"	4'-2"								
A608	3	4'-2"	19	Str.											
S501	152	16'-10"	2669	Str.											
S502	8	15'-5 1/2"	129	Str.											
S503	8	15'-3"	127	Str.											
S504	64	15'-10"	1057	Str.											
S505	8	16'-3"	136	Str.											
S601	874	2'-0"	2625	1			9"	1'-3"					8 5/8"	1'-0 1/4"	
S602	874	2'-5"	3172	1			1'-9"	8"					8"	7/8"	
S603	874	1'-3"	1641	3		8"	9"								
S604	2	2'-4"	7	2		1'-0"	3"	1'-3"					8 5/8"	1'-0 1/4"	
S605	2	2'-11"	9	2		8"	8"	1'-9"					1'-8 1/8"	2 1/4"	
S606	2	5'-1"	15	7		1'-2"	11"	2'-10"	8"						
		Total =	13550												

HAM-75-1152R
I-75 OVER CLARK STREET

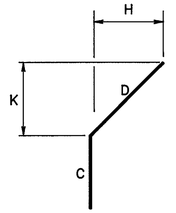
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
W501	1	8'-10"	9	Str.											
W502	1	4'-9"	5	Str.											
W503	1	26'-2"	27	Str.											
W504	1	23'-2"	24	Str.											
W505	1	4'-6 1/2"	5	Str.											
W506	1	8'-7"	9	Str.											
W507	1	23'-2"	24	Str.											
W508	1	26'-2"	27	Str.											
W601	102	1'-9"	268	Str.											
W602	74	2'-2"	241	3		7"	1'-9"								
W603	28	2'-8"	112	3		1'-1"	1'-9"								
A501	12	14'-8"	184	Str.											
A502	8	3'-2"	26	Str.											
A503	8	13'-8"	114	12		See Bending Diagram									
A504	28	2'-8"	78	Str.											
A505	8	3'-9"	31	Str.											
A601	40	2'-4"	140	1			1'-1"	1'-3"				8 5/8"	1'-0 1/4"		
A602	8	3'-10"	46	1			3'-2"	8"				8"	7/8"		
A603	40	1'-4"	80	3		8"	10"								
A604	32	3'-8"	176	3		8"	3'-2"								
A605	40	2'-0"	120	Str.											
A606	12	5'-1"	92	3		1'-3"	4'-0"								
A607	12	6'-11"	125	3		9"	6'-4"								
A608	12	5'-9"	104	3		9"	5'-2"								
S501	40	17'-0"	709	Str.											
S502	16	19'-6 1/2"	326	Str.											
S601	208	2'-0"	625	1			9"	1'-3"				8 5/8"	1'-0 1/4"		
S602	208	2'-5"	755	1			1'-9"	8"				8"	7/8"		
S603	208	1'-3"	391	3		8"	9"								
		Total =	4873												

HAM-75-1160L
I-75 OVER WEST FORK OF MILL CREEK

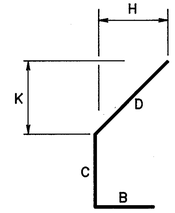
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
A601	2	2'-4"	7	4		9 1/2"	1'-1"	9 1/2"							
S501	64	12'-2"	812	Str.											
S502	64	5'-11"	395	Str.											
S503	16	15'-7"	260	Str.											
S504	183	2'-9"	525	6			1'-1"	11"	9"			6 1/4"	9"		
S505	160	1'-10"	306	Str.											
S506	160	5'-3"	876	8		See Bending Diagram									
S507	20	15'-3"	318	Str.											
S508	4	3'-9"	16	Str.											
S509	8	13'-8"	114	12		See Bending Diagram									
S510	35	3'-4 1/2"	123	Str.											
S511	23	3'-0 1/2"	73	11	7"	2'-5 1/2"									
S512	16	3'-8"	61	Str.											
S513	32	6'-1"	203	Str.											
S514	6	20'-8"	129	Str.											
S515	2	9'-2"	19	Str.											
S516	6	5'-1"	32	Str.											
S517	6	13'-8"	86	Str.											
S518	2	3'-2"	7	Str.											
S519	6	14'-8"	92	Str.											
		Total =	4454												

F.H.W.A. REGION	STATE	PROJECT		336 / 338
5	OHIO			

HAMILTON COUNTY
HAM-75-9.75



TYPE 1



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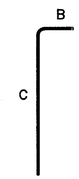

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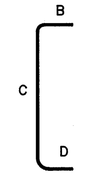
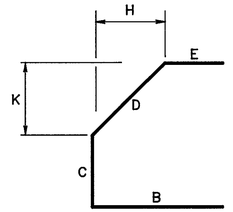


TYPE 4



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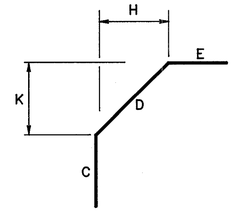
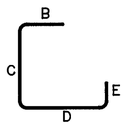
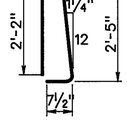


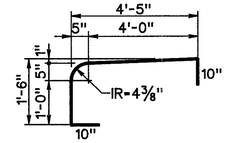
TYPE 6



TYPE 7



TYPE 8



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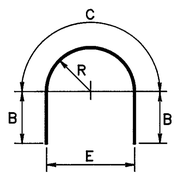

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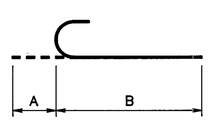
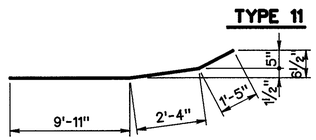




TYPE 11

TYPE 12

BAR BENDING DIAGRAMS

NOTES

1. All dimensions are out to out of bar
2. Radius dimension "R" is to the outside of the bar.
3. All reinforcing bars are included in the price bid for Item 517, Railing, (concrete parapet with double pipe rail), as per plan.

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

103/105

REINFORCING STEEL LIST

HAM-75-9.75
BRIDGES

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
MJZ	HDJ	MJZ	HDJ	MPH 12/92	

f:\6272\6272st11.dgn Feb. 18, 1993 08:15:19

HAM-75-1184R
I-75 OVER DAVIS STREET

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
S501	40	15'-6"	647	Str.											
S502	14	17'-7"	257	Str.											
S503	4	6'-1"	25	Str.											
S504	4	13'-8"	57	12	See Bending Diagram										
S601	182	2'-0"	547	1			9"	1'-3"				8⅝"	1'-0¼"		
S602	170	2'-5"	617	1			1'-9"	8"				8"	⅞"		
S603	182	1'-3"	342	3		8"	9"								
S604	12	2'-9"	50	3		8"	2'-3"								
S605	6	3'-8½"	33	3		9"	3'-11½"								
S606	6	2'-10"	26	3		9"	2'-3"								
		Total =	2601												

HAM-75-1187L
LOCK STREET OVER SOUTHBOUND I-75

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
D601	340	2'-8"	Note 3	Str.											
S501	16	5'-9"	Note 3	4		2'-8"	8"	2'-8"							
S502	150	3'-9"	Note 3	4		1'-8"	8"	1'-8"							
S503	8	16'-2"	Note 3	Str.											
S504	32	13'-8"	Note 3	Str.											
S505	8	17'-2"	Note 3	Str.											
S506	16	3'-4¼"	Note 3	10		1'-3"	10¼"		6½"						3¼"
S507	8	4'-8"	Note 3	Str.											
S508	8	8'-1"	Note 3	4		1'-0"	4'-8"	2'-8"							
S509	8	7'-1"	Note 3	9	See Bending Diagram										

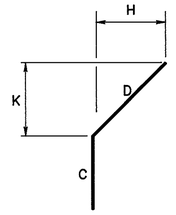
HAM-75-1192R
NORTHBOUND I-75 OVER MILL CREEK, BENSON ST., N.Y.C.R.R. & SHEPHERD AVE.

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
W501	2	8'-8"	18	Str.											
W502	1	25'-11"	27	Str.											
W503	2	4'-8"	10	Str.											
W504	1	23'-5"	24	Str.											
W505	1	26'-2"	27	Str.											
W506	1	23'-2"	24	Str.											
W601	102	1'-9"	268	Str.											
W602	74	2'-2"	241	3		7"	1'-9"								
W603	28	2'-8"	112	3		1'-1"	1'-9"								
A501	3	16'-8"	52	Str.											
A502	2	5'-2"	11	Str.											
A503	2	13'-8"	29	12	See Bending Diagram										
A504	10	12'-2"	127	Str.											
A505	5	16'-8"	87	Str.											
A601	44	2'-3"	149	1			1'-0"	1'-3"				8⅝"	1'-0¼"		
A602	36	3'-10"	207	1			3'-2"	8"				8"	⅞"		
A603	44	1'-4"	88	3		8"	10"								
A604	11	3'-8"	61	3		8"	3'-2"								
A605	14	2'-0"	42	Str.											
A606	3	3'-3"	15	3		9"	2'-8"								
S501	4	7'-3"	30	Str.											
S502	48	15'-8"	784	Str.											
S503	32	17'-2"	573	Str.											
S504	4	5'-4"	22	Str.											
S505	4	6'-4"	26	Str.											
S506	68	15'-2"	1076	Str.											
S507	64	15'-6"	1035	Str.											
S508	144	14'-8"	2203	Str.											
S509	8	6'-3"	52	Str.											
S510	4	7'-9"	32	Str.											
S511	112	15'-11"	1859	Str.											
S512	12	12'-10"	161	Str.											
S513	256	14'-5"	3849	Str.											
S514	88	13'-10"	1270	Str.											
S515	12	7'-5"	93	Str.											
S516	160	15'-9"	2628	Str.											
S517	80	15'-4"	1279	Str.											
S518	8	7'-0"	58	Str.											
S519	128	14'-0"	1869	Str.											
S520	32	13'-11"	464	Str.											
S521	12	13'-8"	171	Str.											
S522	4	8'-7"	36	Str.											
S523	4	6'-9"	28	Str.											
S524	4	14'-9"	62	Str.											
S525	4	7'-1"	30	Str.											
S601	4214	2'-0"	12659	1			9"	1'-3"				8⅝"	1'-0¼"		
S602	4214	2'-5"	15296	1			1'-9"	8"				8"	⅞"		
S603	4214	1'-3"	7912	3		8"	9"								
		Total =	57176												

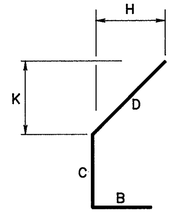
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

337
338

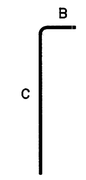
HAMILTON COUNTY
HAM-75-9.75



TYPE 1



TYPE 2



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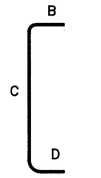

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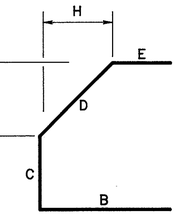

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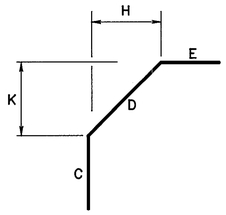
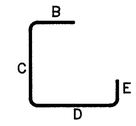
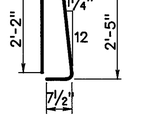


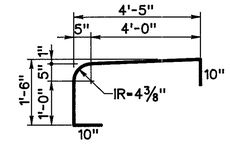
TYPE 6



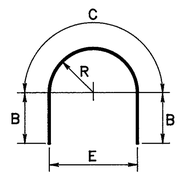
TYPE 7



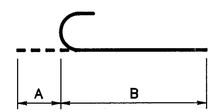
TYPE 8



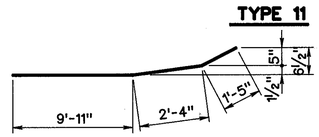
TYPE 9



TYPE 10



TYPE 11



TYPE 12

BAR BENDING DIAGRAMS

NOTES

1. All dimensions are out to out of bar
2. Radius dimension "R" is to the outside of the bar.
3. All reinforcing bars are included in the price bid for Item 517, Railing, (concrete parapet with double pipe rail), as per plan.

LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

104/105

REINFORCING STEEL LIST

HAM-75-9.75
BRIDGES

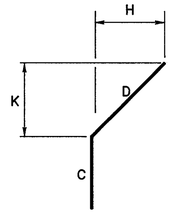
DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
MJZ	HDJ	MJZ	HDJ	MPH 12/92	

f:\6272\6272st12.dgn Feb. 18, 1993 08:31:10

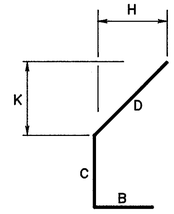
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G	H	K	O	R
HAM-75-1292 SHEPHERD LANE OVER I-75															
W501	1	26'-3"	27	Str.											
W502	1	25'-0"	26	Str.											
W503	1	24'-9"	26	Str.											
W504	1	29'-4"	31	Str.											
W505	1	3'-2"	3	Str.											
W506	1	2'-8 1/2"	3	Str.											
W601	108	1'-9 1/2"	291	Str.											
W602	101	2'-2 1/2"	335	3			7"	1'-9 1/2"							
W603	7	2'-8 1/2"	28	3			1'-1"	1'-9 1/2"							
		Total =	770												
HAM-75-1338 RAMP C OVER I-75															
W501	1	26'-9"	28	Str.											
W502	4	2'-11"	12	Str.											
W503	1	4'-9"	5	Str.											
W504	1	5'-2"	5	Str.											
W505	1	27'-6"	29	Str.											
W506	1	27'-10"	29	Str.											
W507	1	4'-3"	4	Str.											
W508	1	5'-8"	6	Str.											
W509	1	27'-6"	29	Str.											
W510	3	5'-3"	16	4		2'-0"	1'-6"	2'-0"							
W511	11	4'-10"	55	4		2'-0"	1'-1"	2'-0"							
W512	3	5'-2"	16	4		2'-0"	1'-5"	2'-0"							
W513	3	4'-9"	15	4		2'-0"	1'-0"	2'-0"							
W514	3	5'-8"	18	4		2'-0"	1'-11"	2'-0"							
W601	114	1'-11"	328	Str.											
W602	76	2'-4"	266	3			7"	1'-11"							
W603	38	2'-10"	162	3			1'-1"	1'-11"							
		Total =	1023												
HAM-75-1390 RAMP J OVER I-75															
W501	2	25'-8"	54	Str.											
W502	2	6'-8"	14	Str.											
W503	2	2'-8"	6	Str.											
W601	52	1'-11"	150	Str.											
W602	32	2'-4"	112	3			7"	1'-11"							
W603	20	2'-10"	85	3			1'-1"	1'-11"							
		Total =	421												

F.H.W.A. REGION	STATE	PROJECT		338 / 338
5	OHIO			

HAMILTON COUNTY
HAM-75-9.75

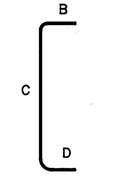


TYPE 1

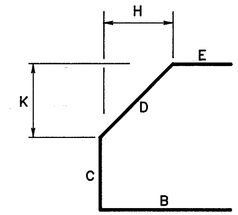


TYPE 2

TYPE 3



TYPE 4



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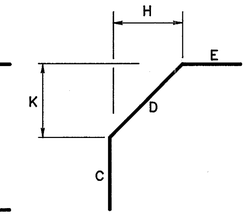
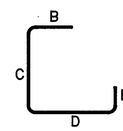
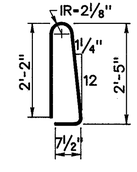


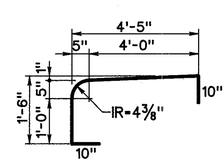
TYPE 6



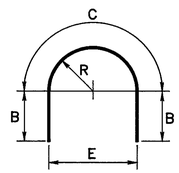
TYPE 7



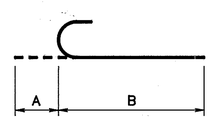
TYPE 8



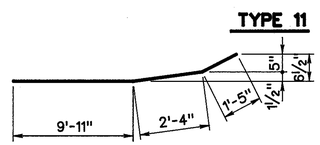
TYPE 9



TYPE 10



TYPE 11



TYPE 12

BAR BENDING DIAGRAMS

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LOCKWOOD, JONES & BEALS
CONSULTING ENGINEERS
DAYTON, OHIO

105/105

REINFORCING STEEL LIST

HAM-75-9.75
BRIDGES

DESIGNED	CHECKED	DRAWN	CHECKED	REVIEWED DATE	REVISED
MJZ	HDJ	MJZ	HDJ	MPH 12/92	

f:\6272\6272st13.dgn Feb. 17, 1993 08:26:18