

MICROFILMED
SEP 18 1992

DESIGN DESIGNATION

Current ADT (1988) = 8,500
 Design Year ADT (2008) = 11,900
 DHV (Design Hour Volume) = 1,020
 D (Directional Distribution) = 50%
 T (B & C Trucks) = 22%
 V (Design Speed) = 55 MPH*
 Legal Speed = 55 MPH

Location Functional Classification
 MED-42-(1.89-3.06) Major Collector
 MED-42-(3.06-6.91) Minor Arterial
 MED-224-(10.45-15.97) Minor Arterial

*Design Exceptions noted on Sheet 2

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MED-42-1.89
MED-224-10.45

HARRISVILLE, WESTFIELD TOWNSHIPS
MEDINA COUNTY

MED-42-189 OHIO
 MED-224-10.45 FHWA REGION 5
 RS-440(11) F-51(70) FEDERAL PROJECT

1/189

All references to Item 846 appearing throughout this plan shall be considered to read Item 446.

LIMITED ACCESS

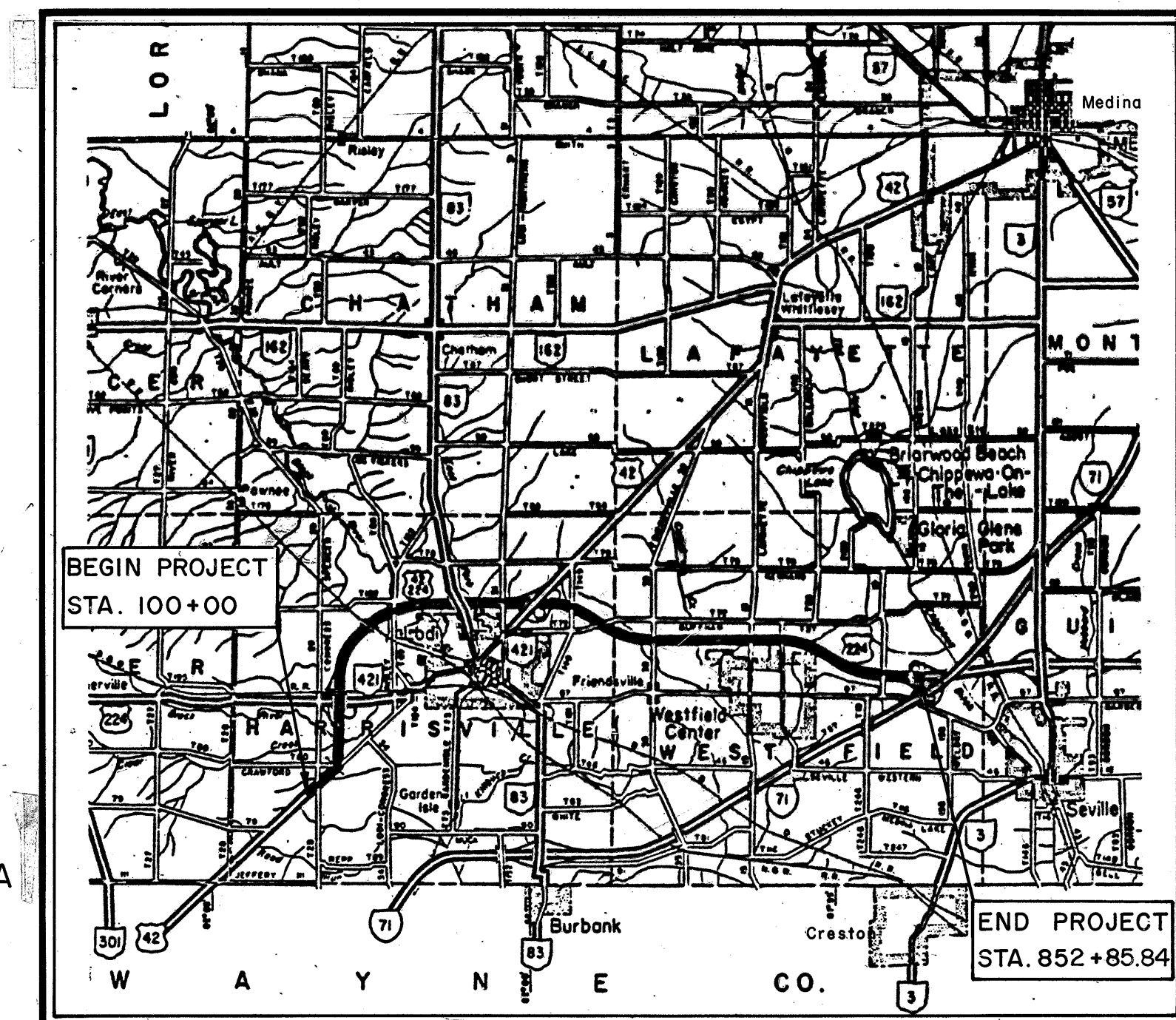
This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the director in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

CONVENTIONAL SIGNS

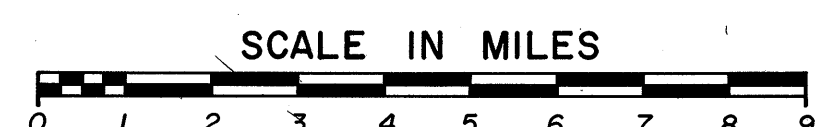
County Line --- Limited Access (only) LA
 Township Line --- Right of Way (only) RW
 Section Line --- Limited Access & Right of Way LA & RW
 Corporation Line --- Existing Right of Way
 Fence Line (existing) x (proposed) x
 Center Line 352 (proposed) 353
 Trees (to be removed) X
 Utility Poles: Telephone φ, Power φ, Light φ
 Railroad --- or ---
 Guardrail (existing) o (proposed) o

INDEX OF SHEETS

TITLE SHEET	1	PLAN & PROFILES - C.R. 19	49-51
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LOCATION MAP



LINE DATA

	RS-440(11)	F-51(70)	Total
Begin Project	Sta. 100+00.00	Sta. 161+36.58	Sta. 100+00.00
End Project	Sta. 161+36.58	Sta. 852+85.84	Sta. 852+85.84
Deduct For Sta. Equations		19,666.76	19,666.76
Length Of Project	6136.58 L.F. or 1.162 Mi.	44,482.50 L.F. or 9.372 Mi.	55,619.08 L.F. or 10.534 Mi.
ADD FOR APPROACHES:			
Sta. 97+56 To Sta. 100+00	244.00		244.00
Sta. 852+85.44 To Sta. 854+49.93		164.09	164.09
Sta. 25+00 To Sta. 33+44.95 US224		844.95	844.95
Sta. 33+44.95 To Sta. 37+00 SR421		355.05	355.05
Sta. 15+25 To Sta. 17+45.29 SR421		220.29	220.29
Sta. 17+45.29 To Sta. 32+50 US 42		1504.71	1504.71
Sta. 4+95 To Sta. 9+90 S.R. 83		495.00	495.00
Length Of Work	6380.58 L.F. or 1.208 Mi.	53,066.59 L.F. or 10.051 Mi.	59,447.17 L.F. or 11.259 Mi.

Portion to be improved _____
 State & Federal Routes _____
 Other Roads _____

SCALES*

Plan _____
 Profile: Horizontal _____, Vertical _____
 Cross Section: Horizontal _____, Vertical _____
 *Scales shown are for U.S. 224 only. See sheet 50 for scales used at C.R. 19.

UNDERGROUND UTILITIES
 TWO WORKING DAYS
 BEFORE YOU DIG
 CALL 800-362-2764 (TOLL FREE)
 OHIO UTILITIES PROTECTION SERVICE
 NON MEMBERS
 MUST BE CALLED DIRECTLY

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	
BP-5	10-1-87	GR-1	1-11-85	MC-6	1-30-84	AS-1-81	11-27-81	TC-81.10	±20-84	801	5-4-88
MC-1	6-13-69	GR-2B	2-5-82	MC-9	1-30-84	DBR-2-73	4-10-73	TC-81.20	1-20-84	802	6-26-78
MT-97.10	4-29-88	GR-3	1-21-85	MC-10	5-1-76	BR-1	5-29-79	TC-82.10	8-29-84	803	6-26-78
BP-1	6-1-85	GR-4	2-5-82	HL-50.11	5-1-87	CB-5	11-10-83	TC-83.10	1-20-84	804	5-31-88
BP-2	1-11-85	GR-4A	1-30-84	I-2	12-18-84	TC-52.10	4-3-79	TC-83.20	1-20-84	805	5-31-88
BP-3	12-6-76	GR-5	2-5-82	LA-1	6-1-79	TC-52.20	4-3-79	TC-84.20	1-20-84	845	5-31-88
BP-4	10-1-87	GR-6	2-5-82	SD-1-69	6-12-69	TC-41.20	3-26-79	TC-85.20	1-20-84	941	5-28-87
BP-11	1-30-84	GR-6A	2-5-82	TC-35.10	8-29-84	TC-42.10	8-19-77	HL-30.11	5-1-87	921	12-4-72
F-2	5-1-76	HW-4A	4-1-80	TC-71.10	4-9-79	TC-42.20	3-26-79	HL-30.21	5-1-87	923	1-10-64
F-3	5-1-76	HW-4B	4-1-80	TC-72.20	2-26-82	MC-9A	1-11-85	HL-30.22	5-1-87	947	10-17-83
BP-7	10-1-87	HW-D	6-1-85	TC-41.50	3-26-79	MC-11	8-1-78	HL-10.13	5-1-87	953	8-21-80
F-5	5-1-76	MC-4	7-26-76	MT-99.10	11-14-86	TC-21.20	1-20-84	HL-20.11	5-1-87	849	12-24-55
F-6	5-1-76	MC-5	6-12-75	MT-99.20	11-14-86	TC-41.41	8-2-79	HL-60.11	5-1-87	949	9-26-86

Plan Prepared By:
ENGINEERING ASSOCIATES LTD.
 Consulting Engineers
 Wooster, Ohio

Project: MED-42-1.89 MED-224-10.45
 Date of Letting: 19____, Contract No. _____

Approved: Harry W. Pinn
 Date: 6/28/88 District Deputy Director of Transportation

Approved: B. D. Handman
 Date: 10/19/88 Engineer, Bureau of Bridges and Structural Design

Approved: Richard J. Still
 Date: 12/19/88 Chief Engineer, Planning and Design

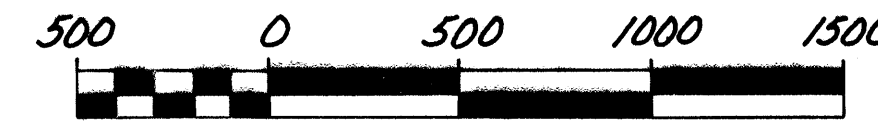
Approved: Samuel B. Hurst
 Date: 12/19/88 Director, Department of Transportation

DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
 DIVISION ADMINISTRATOR DATE

MICROFILMED
SEP 18 1982

SCHEMATIC



CALC. BY	MED-42-189	OHIO	2
DATE		FHWA REGION 5	189
CHKD. BY	MED-224-10.45		
DATE			

P.I. Sta. 361+98.91
Dc = 1°28'
Superelevation = 0.048'
Exceeds Design Speed

P.I. Sta. 404+75.33
Dc = 1°28'
Superelevation = 0.048'
Exceeds Design Speed

P.I. Sta. 112+02.52
Ls = 400'
Dc = 3°00'
Superelevation = 0.083'
Exceeds Design Speed

LOCATION
MED-42/224 from 0.32 miles south of the US 224 and US 42 interchange to 0.52 miles east of C.R. 19

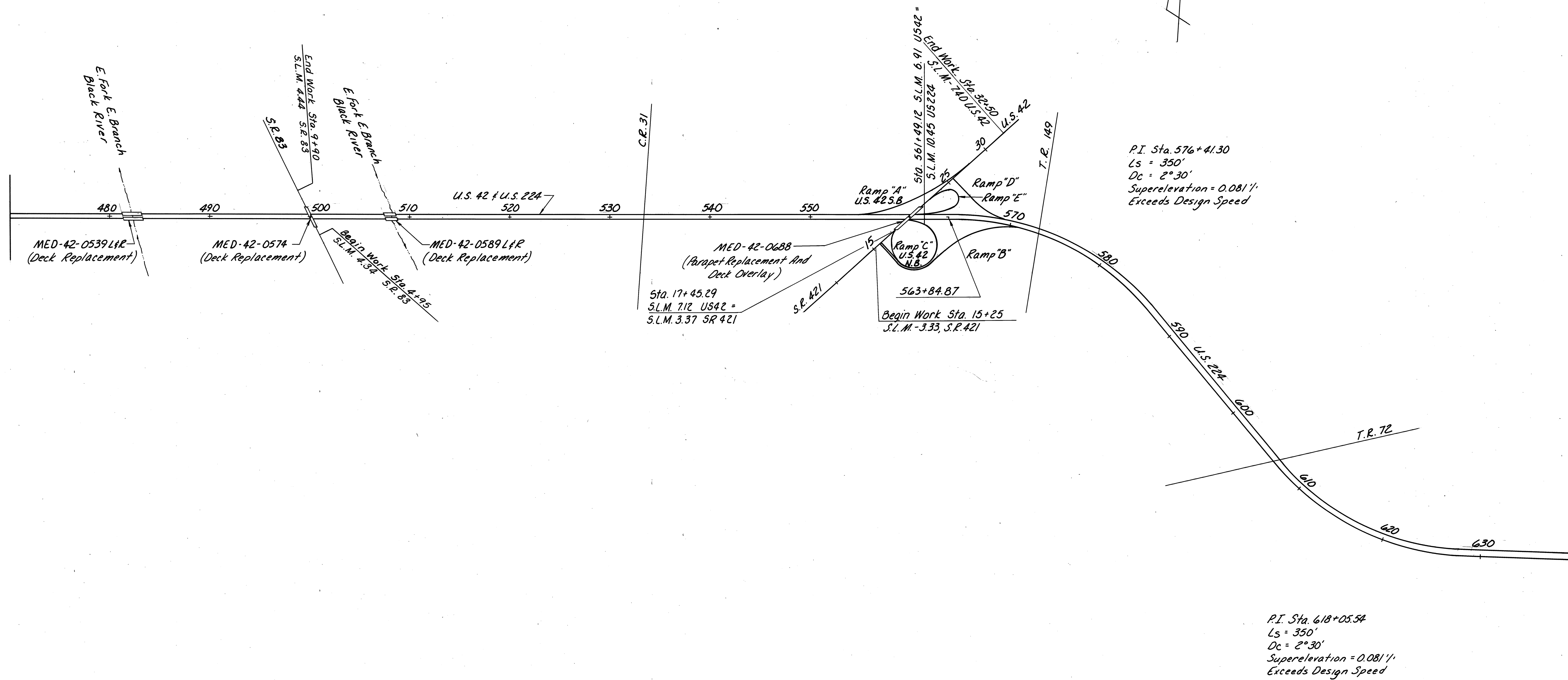
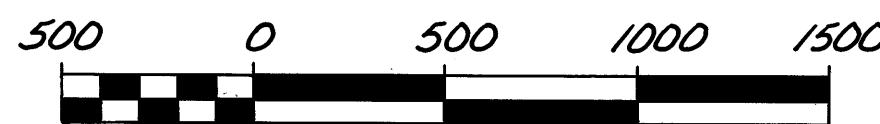
DESIGN EXCEPTIONS (Approved 10/19/87)

ITEM	PROPOSED	REQUIRED
Shoulder	12' With guardrail	15' With guardrail
	10' Without guardrail	
S.R. 83 over Mainline Roadway	Graded Shoulder	5' To 6'
	Bridge Width	32'
	Vertical Clearance	15'
		8'
		40'
		16.5'

P.V.I. Station	Type Of Vertical Curve	Length	A	K	Remarks
104+00	Crest	200'	0.48%	417	Exceeds Design Speed
116+00	Sag	400'	1.84%	217	Exceeds Design Speed
127+10	Sag	200'	0.16%	1250	Exceeds Design Speed
143+80	Sag	400'	1.82%	220	Exceeds Design Speed
330+00	Crest	800'	2.42%	331	Exceeds Design Speed
340+00	Sag	200'	0.44%	455	Exceeds Design Speed
378+26.40	Crest	800'	2.84%	282	Exceeds Design Speed
398+65.50	Sag	500'	3.00%	167	Exceeds Design Speed
417+60	Sag	300'	1.20%	250	Exceeds Design Speed
465+25	Crest	400'	1.20%	333	Exceeds Design Speed
480+50	Sag	500'	2.32%	216	Exceeds Design Speed
499+00	Crest	800'	1.72%	465	Exceeds Design Speed
506+00	Sag	500'	2.40%	208	Exceeds Design Speed
540+00	Crest	200'	0.90%	222	Exceeds Design Speed
559+00	Sag	200'	0.48%	417	Exceeds Design Speed
568+00	Crest	600'	1.58%	380	Exceeds Design Speed
584+00	Crest	400'	0.72%	556	Exceeds Design Speed
610+00	Crest	1000'	1.88%	532	Exceeds Design Speed
629+40	Crest	200'	0.40%	500	Exceeds Design Speed
639+00	Sag	400'	1.68%	238	Exceeds Design Speed
653+00	Crest	600'	1.12%	536	Exceeds Design Speed
668+00	Crest	600'	1.56%	385	Exceeds Design Speed
680+26	Sag	900'	4.00%	150	Exceeds Design Speed
711+00	Crest	600'	1.44%	417	Exceeds Design Speed
730+00	Crest	200'	0.56%	357	Exceeds Design Speed
754+38	Crest	1200'	4.00%	300	Exceeds Design Speed
778+00	Sag	600'	2.88%	208	Exceeds Design Speed
797+67	Crest	800'	2.88%	278	Exceeds Design Speed
831+75 WB	Sag	400'	2.46%	163	Exceeds Design Speed
832+00 EB	Sag	400'	0.29%	690	Exceeds Design Speed
846+22	Sag	200'	0.29%	690	Exceeds Design Speed
S.R. 42-21+50	Crest	900'	4.55%	198	Exceeds Design Speed

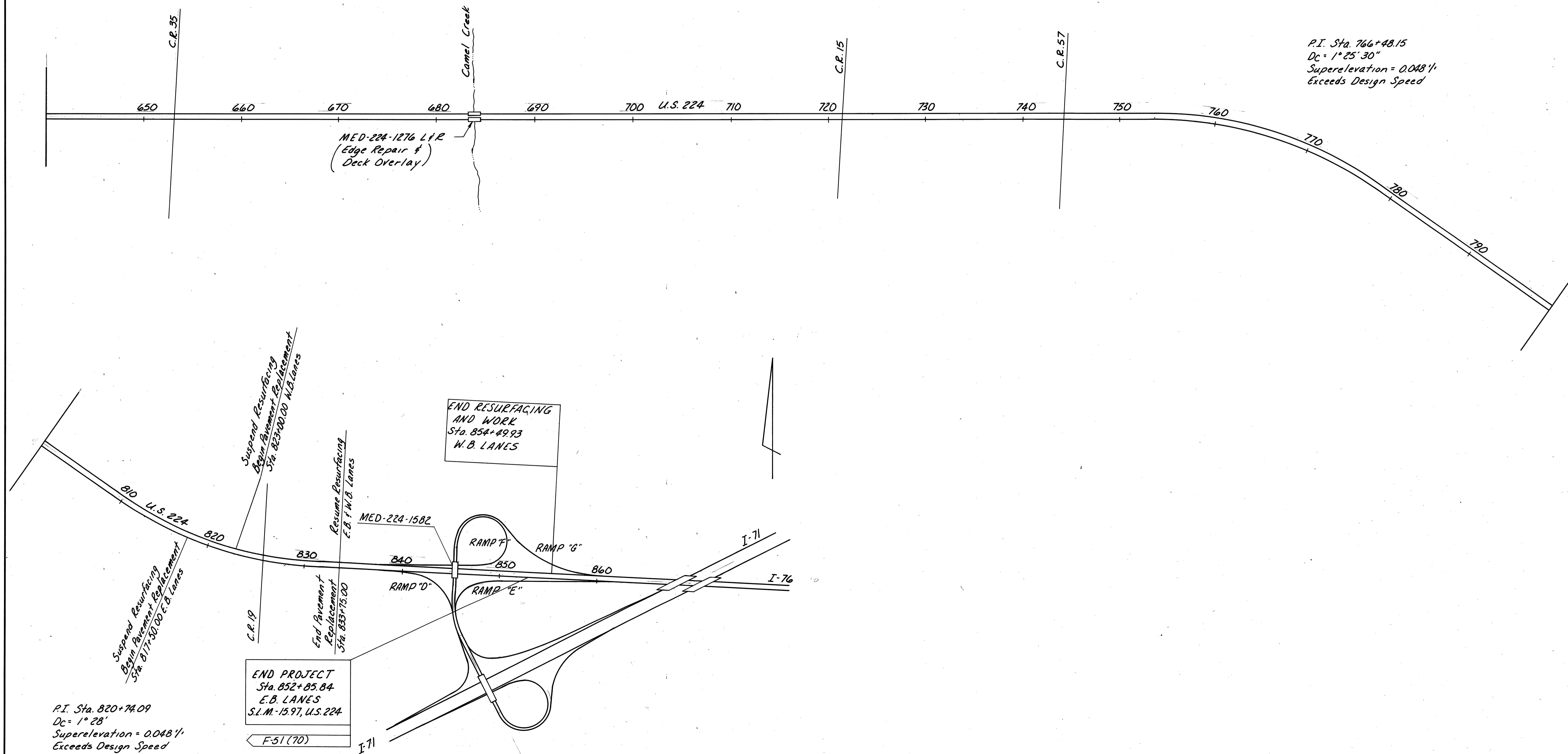
NOTE: See Sheets 32-42 for stations of work on side road intersections.

SCHEMATIC



NOTE: See Sheets 32-42 for stations of work on side road intersections.

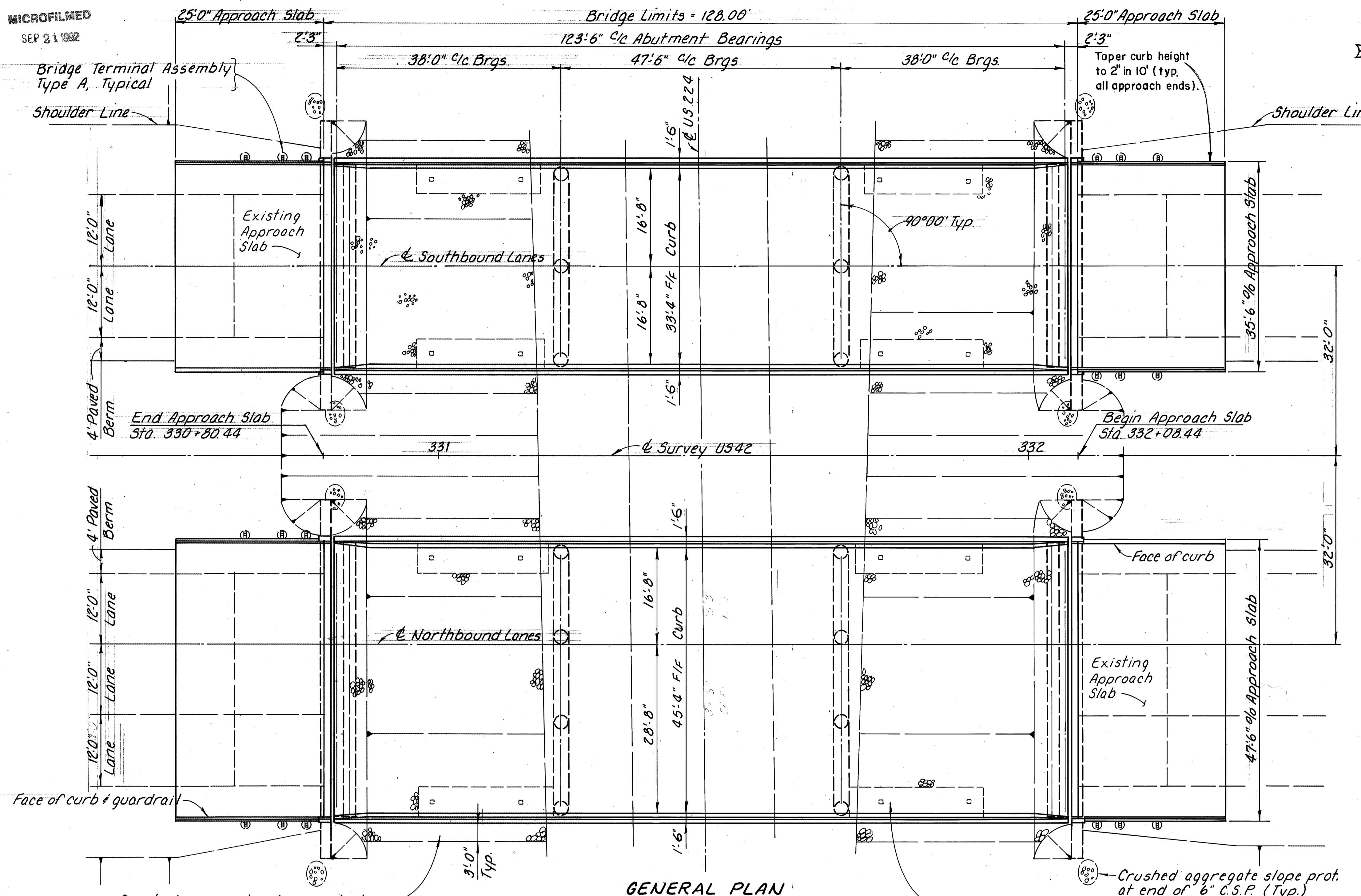
SCHEMATIC



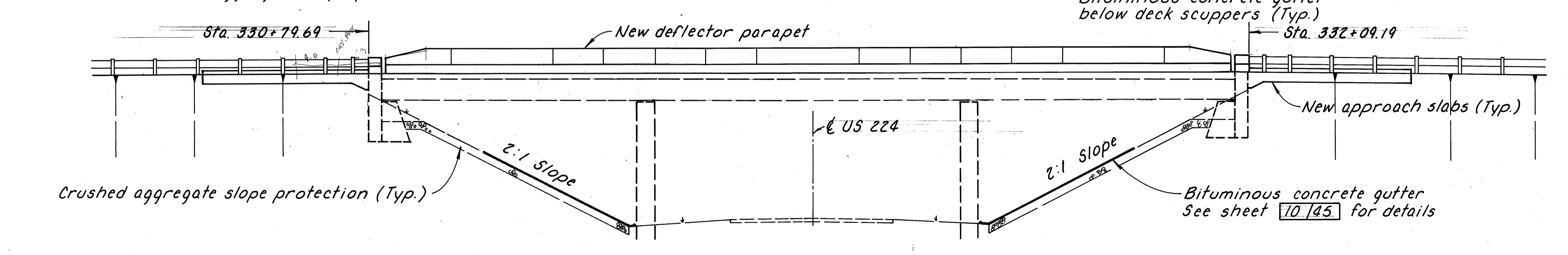
SCHEMATIC PLAN

MICROFILMED
SEP 21 1982

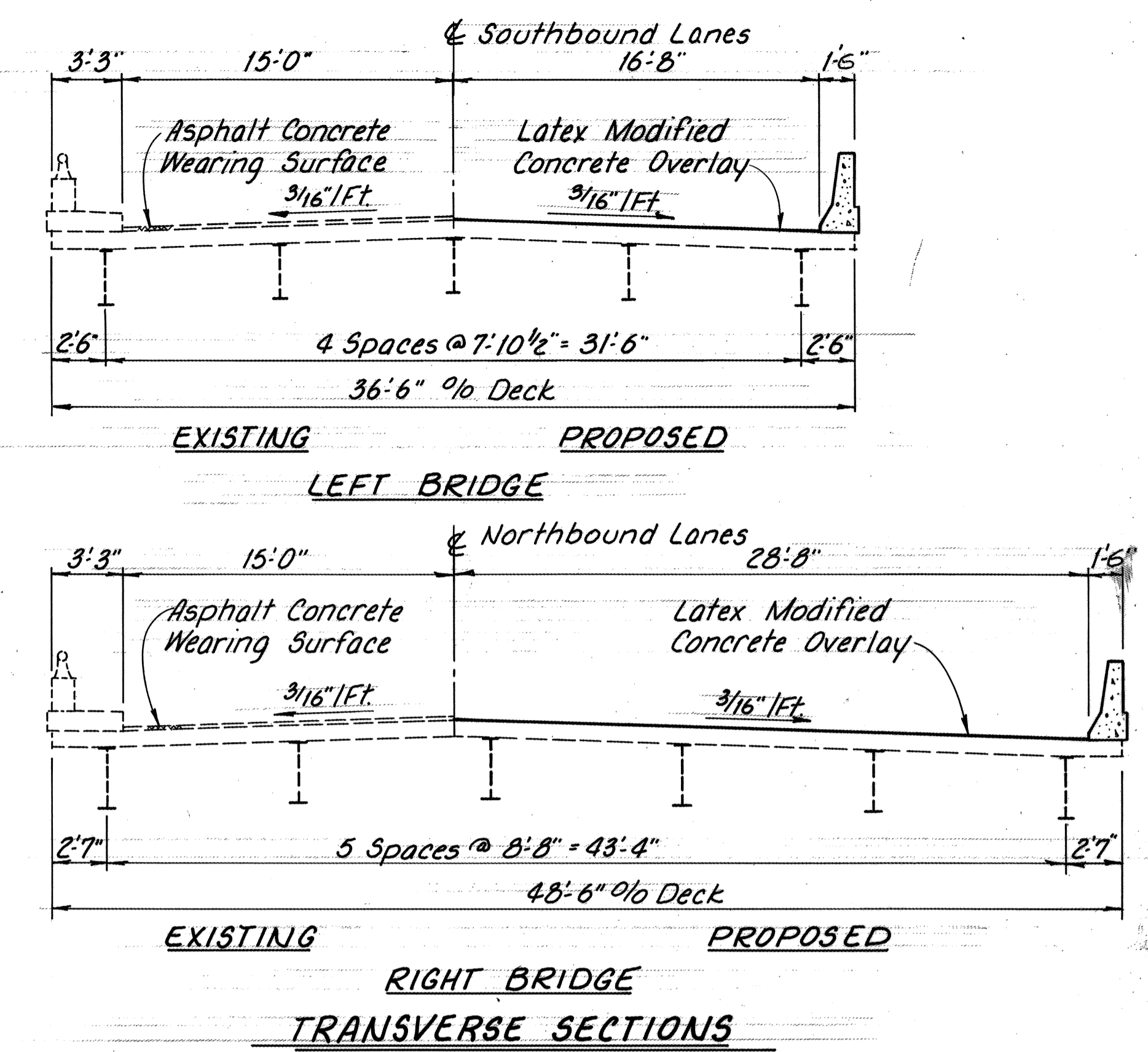
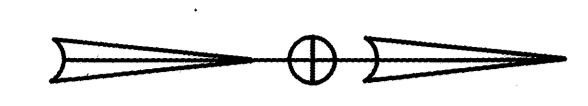
OHIO
FHWA REGION
97
189



GENERAL PLAN



GENERAL ELEVATION



TRANSVERSE SECTIONS

MED-42-0310 L/R REHABILITATION SUMMARY

- Remove and dispose of existing concrete safety curbs, parapets, bulb angles, bridge railing and abutment backwalls. See Roadway plans for removal of approach slabs.
- Trim the ends of the beams to restore adequate expansion capacity. Move and repair the end crossframes and replace expansion joint armor.
- Construct new deflector parapets using Class 5 Concrete, as per plan.
- Modify existing scuppers to remain in service, and provide an asphalt gutter on the slope below the scupper outlets, as per plan.
- Repair the bridge deck and place a wearing surface overlay on the deck using Latex Modified Concrete.
- Reconstruct the abutment backwalls.
- Seal the deck expansion joints with strip seals.
- Seal the surfaces of the new deflector parapets as shown in the plan details.
- Provide slope protection under the bridge, as directed by the Engineer.

See sheet 138 for removal details for sign on the west side of MED-42-0310L

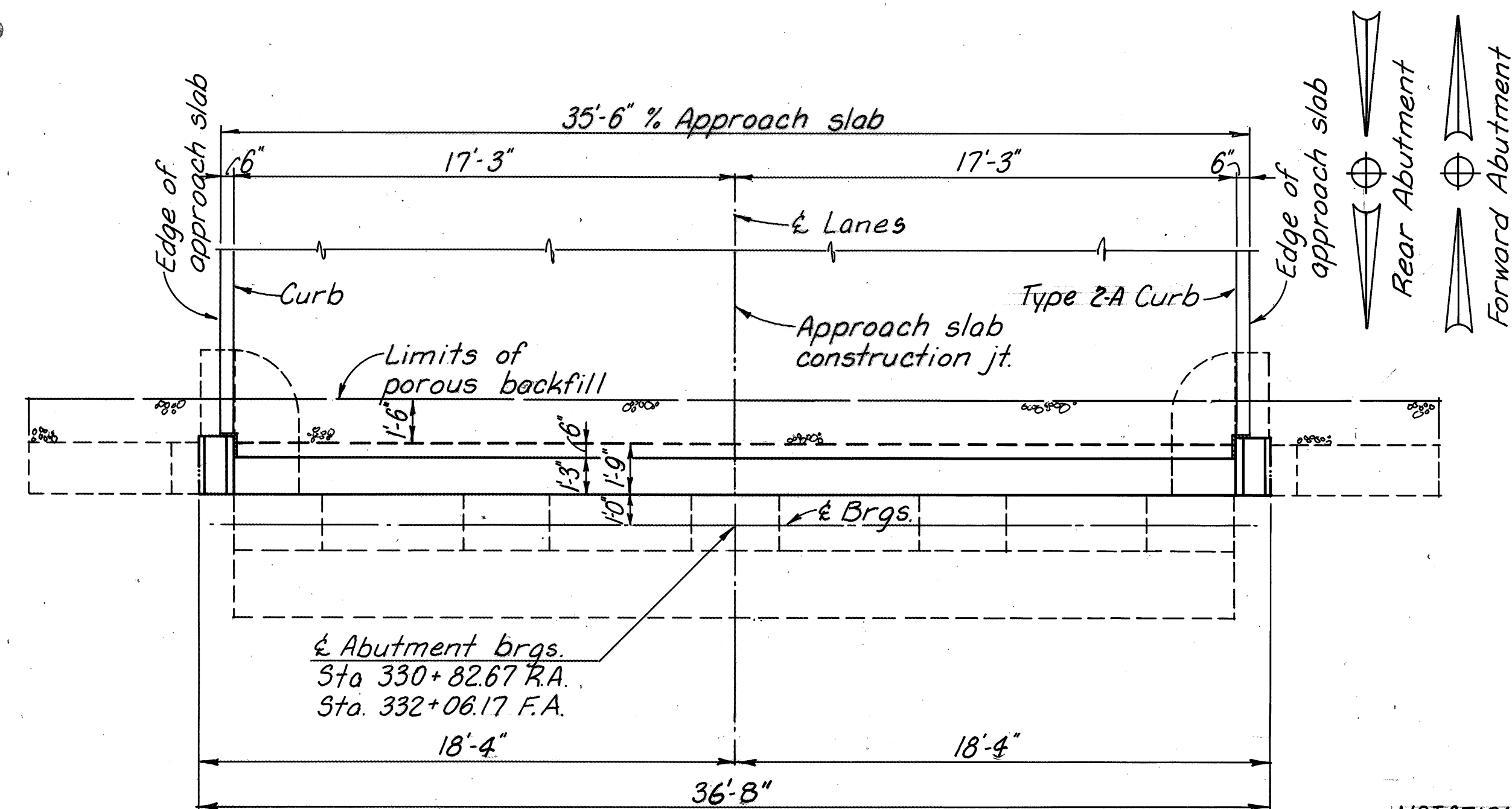
15/45

ENGINEERING ASSOCIATES LTD.
CONSULTING ENGINEERS
700 WINKLER DR. WOOSTER, OHIO

GENERAL PLAN AND REHAB SUMMARY
MED-42-0310 L/R OVER US 224

STA. 330+80.44 TO 332+08.44

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DWS	PLD	PLD	AFS	DBC	3/20/87	
		SLM				

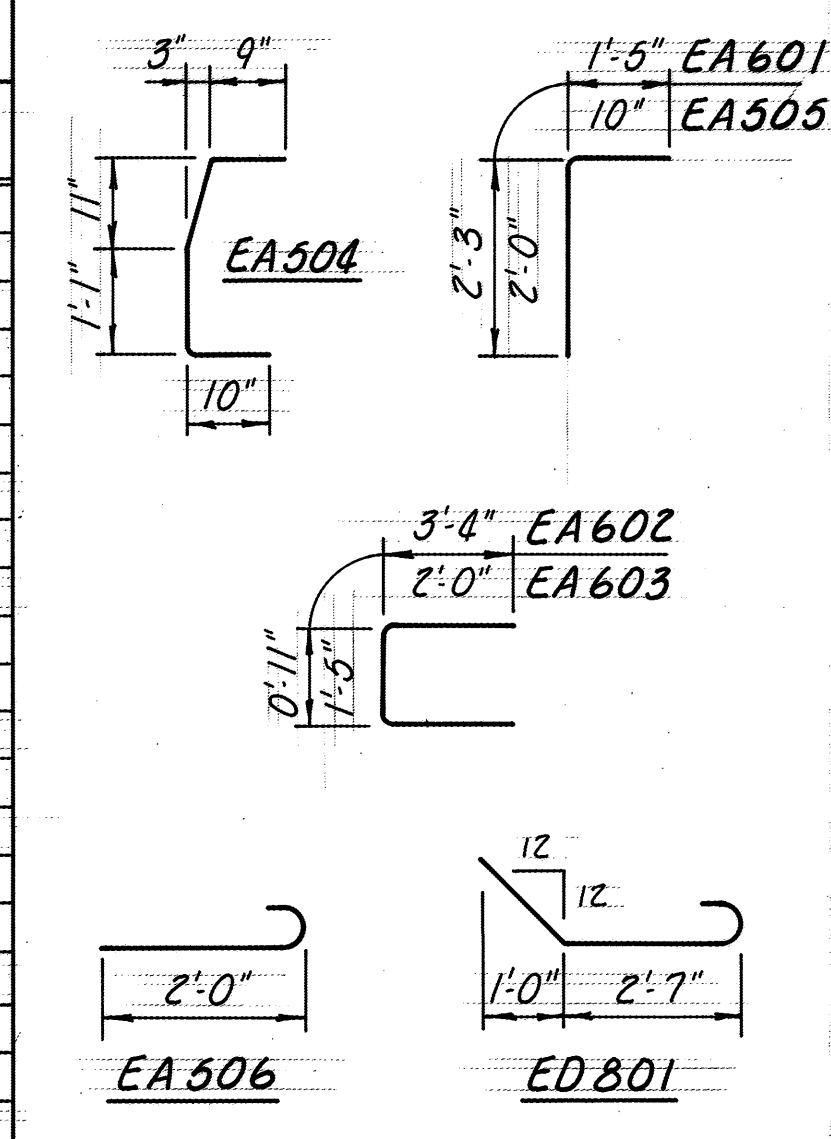


ABUTMENT PLAN - LEFT STRUCTURE

NOTATION

- FF - Front Face
- R.F. - Rear Face
- E.F. - Each Face
- R.A. - Rear Abutment
- F.A. - Forward Abutment

MARK	NUMBER					LENGTH	TYPE	WEIGHT
	L. REAR	R. REAR	L. FWD.	R. FWD.	TOTAL			
EA501	14	7	14	7	42	18'-3"	Str.	799
EA502	-	7	-	7	14	13'-9"	Str.	201
EA503	-	7	-	7	14	16'-3"	Str.	237
EA504	6	6	6	6	24	3'-3"	Bt.	81
EA505	6	6	6	6	24	2'-9"	Bt.	69
EA506	6	6	6	6	24	2'-7"	Bt.	65
EA507	6	6	6	6	24	2'-0"	Str.	50
EA508	24	24	24	24	96	1'-8"	Str.	167
EA601	36	49	36	49	170	3'-6"	Bt.	894
EA602	36	49	36	49	170	7'-3"	Bt.	1851
EA603	2	2	2	2	8	7'-9"	Bt.	94
ED801	24	32	24	32	112	4'-11"	Bt.	1470
TOTAL								5978



ABUTMENT NOTES

DRAINAGE: Porous backfill, 1.5 ft. thick, enclosed in filter fabric shall extend up to the plane of the subgrade and laterally to the ends of the wingwalls. Maintain a minimum of 6 in. of cover over the filter fabric (See Section B-B)

The porous backfill shall be drained by 6" perforated C.S.P. extending straight out into the side slopes, terminating near the surface as shown. Where drainage thru the side slopes is either impossible or impractical, the C.S.P. shall extend beyond the wingwall, then be redirected (Labeled "Alt outlet" in the plans) into the front slope, terminating in crushed aggregate as shown for the side slopes or the spill thru slope protection in front of the abutments where possible.

BACKWALL CONCRETE: In addition to the provisions of 511.08, backwall concrete above the optional construction joint at the approach slab seat shall not be placed until after the deck concrete has been placed. The steel expansion joint shall serve as a template for the top of the backwall.

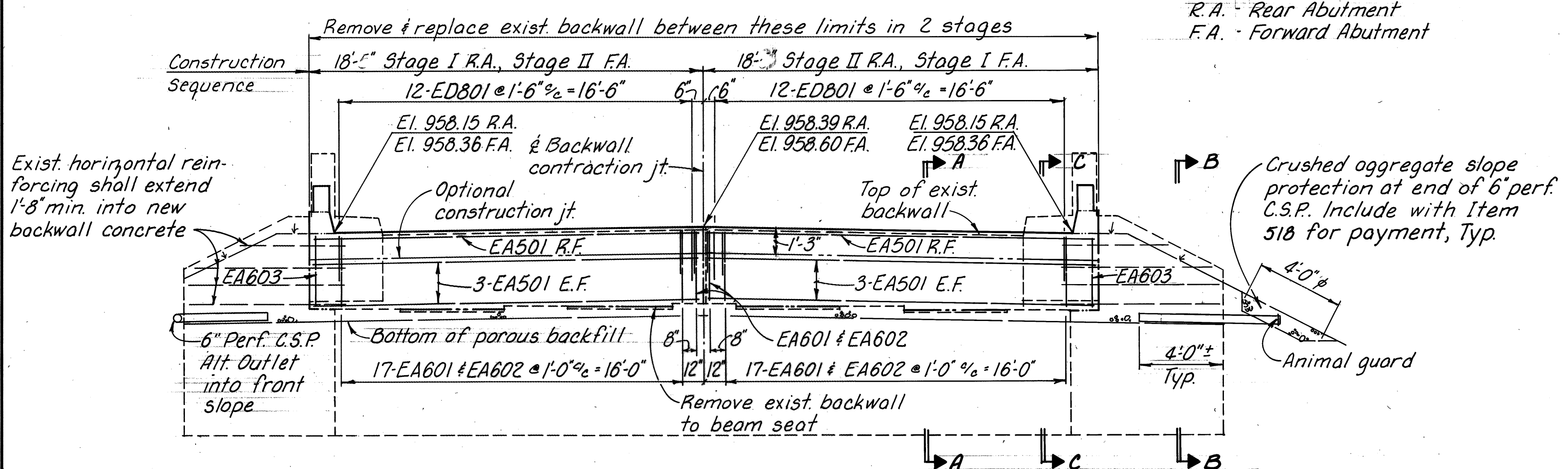
CONTRACTION JOINT AND WATERSTOP DETAILS: See sheet 10/45.

END DAM DETAILS: See sheet 7/45.

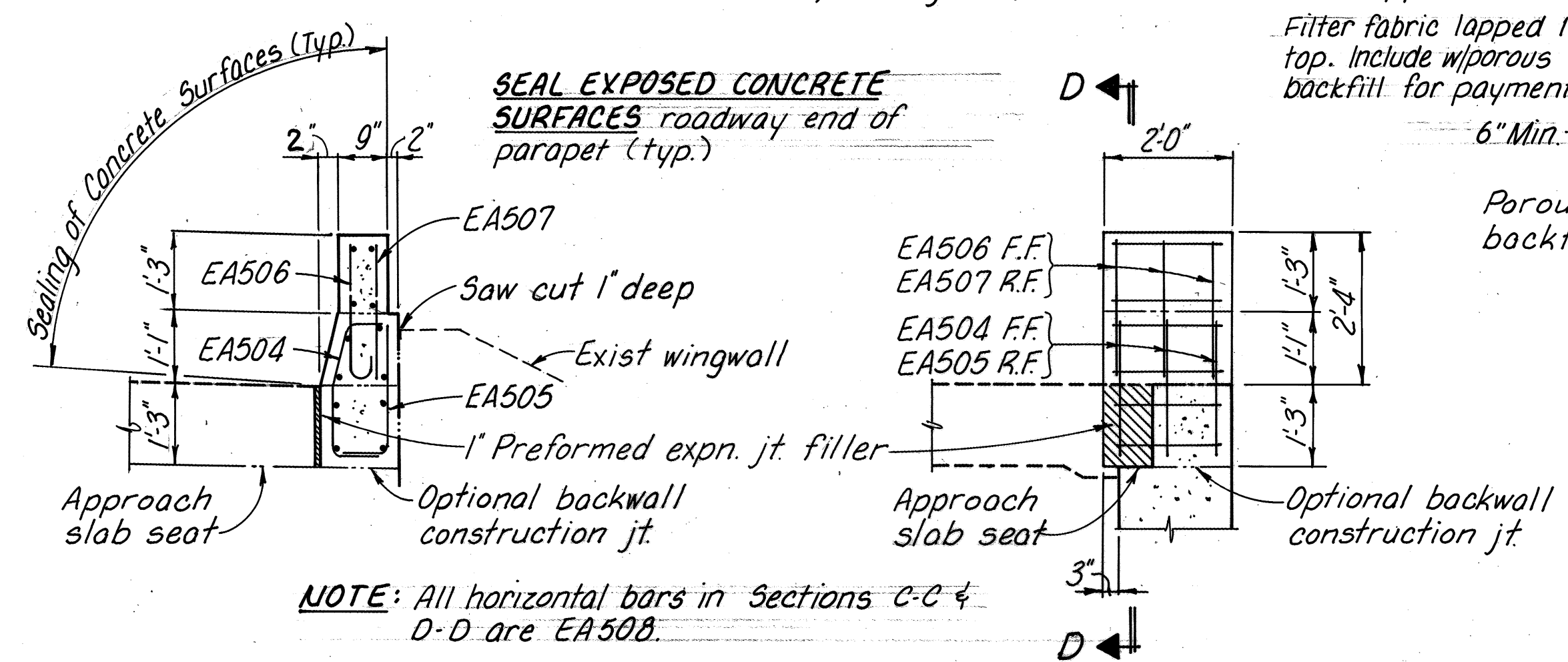
CRUSHED AGGREGATE SLOPE PROTECTION:
Slope protection @ Ea. Abut. Lt. Structure = 184 Sq. Yds.
Slope protection @ Ea. Abut. Rt. Structure = 236 Sq. Yds.

ABUTMENTS / RIGHT STRUCTURE: See sheet 17/45.

BRIDGE GENERAL NOTES: See sheets 1/45 thru 5/45 and 20/45.

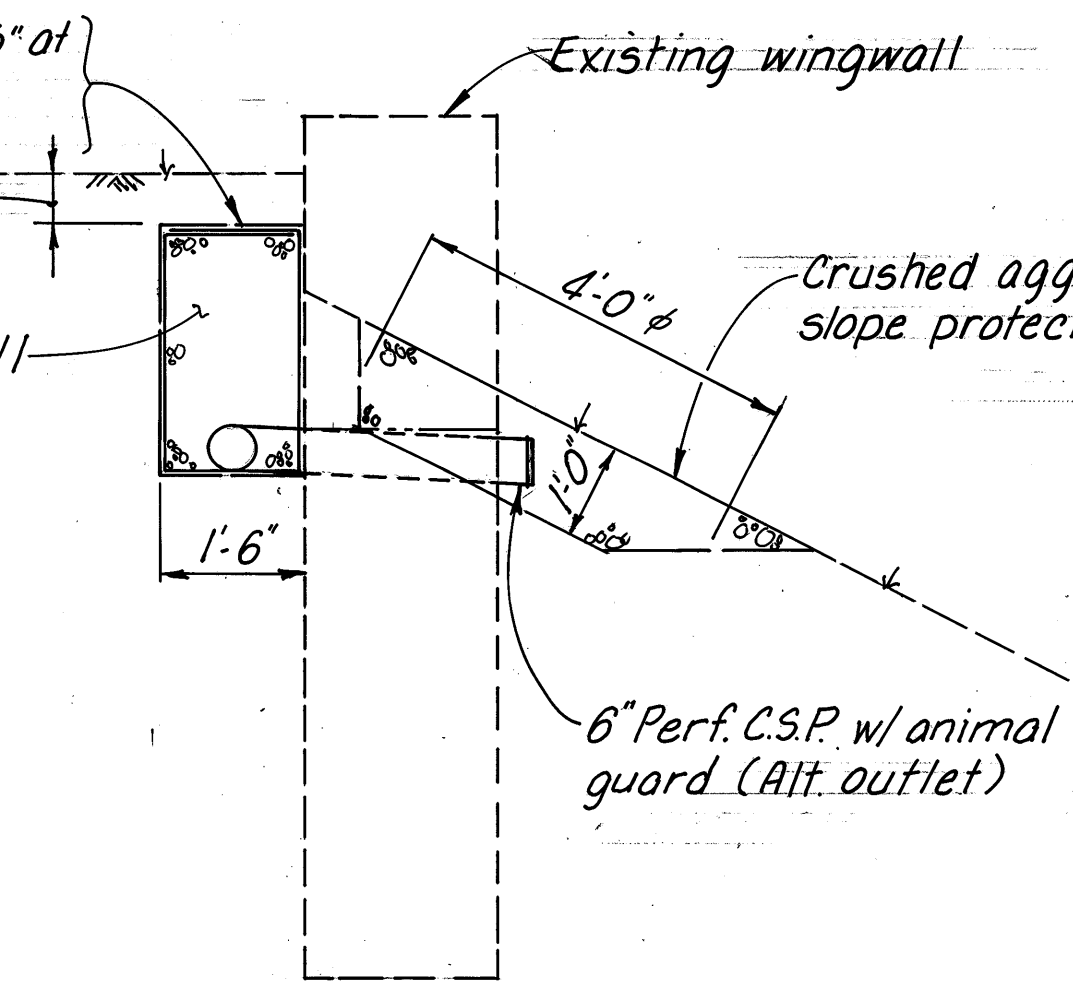


ABUTMENT ELEVATION - LEFT STRUCTURE



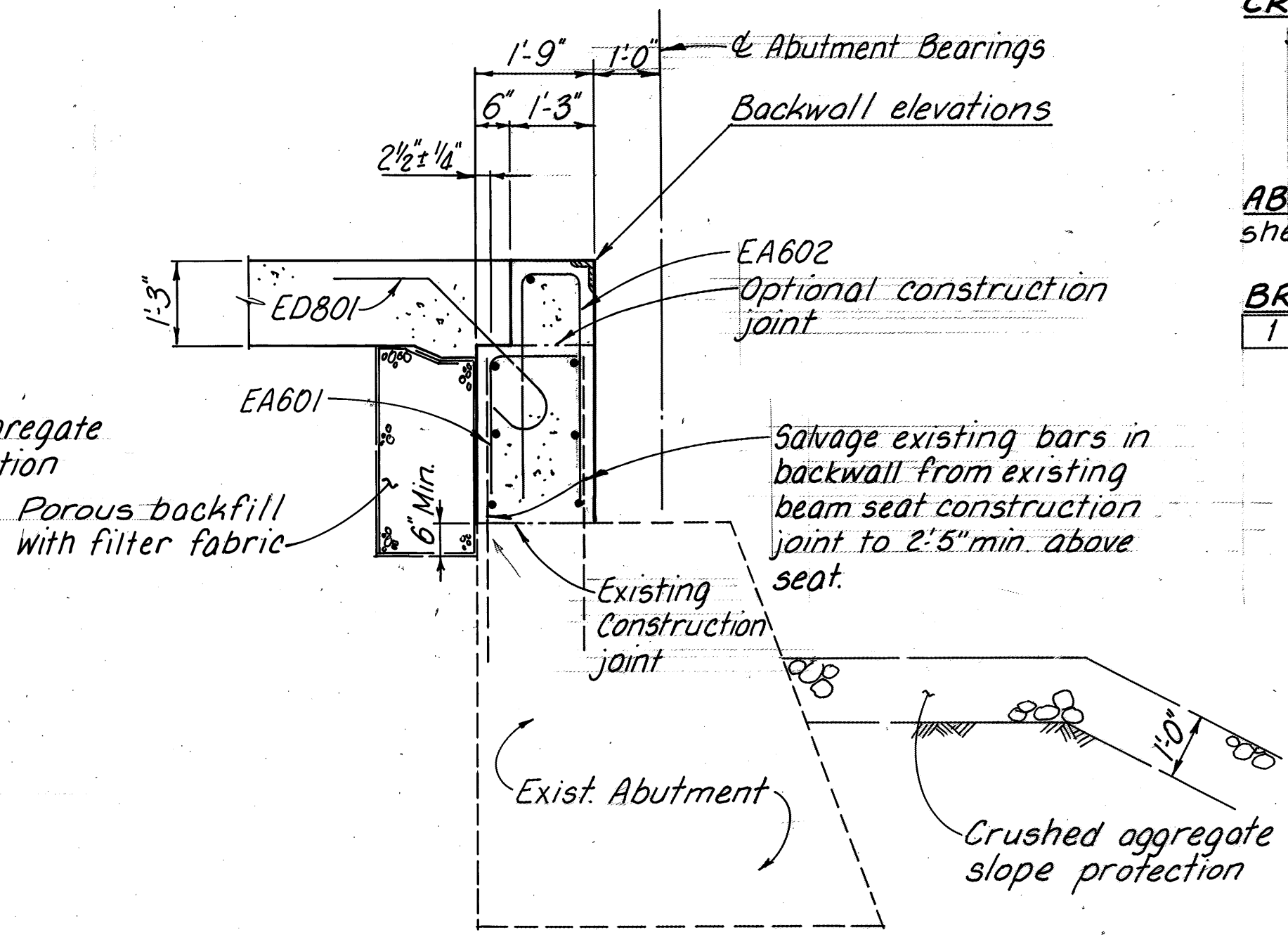
SECTION D-D

SECTION C-C



SECTION B-B

Right Structure with Alt. Outlet drawn



SECTION A-A

All bars normal to the Section are EA501

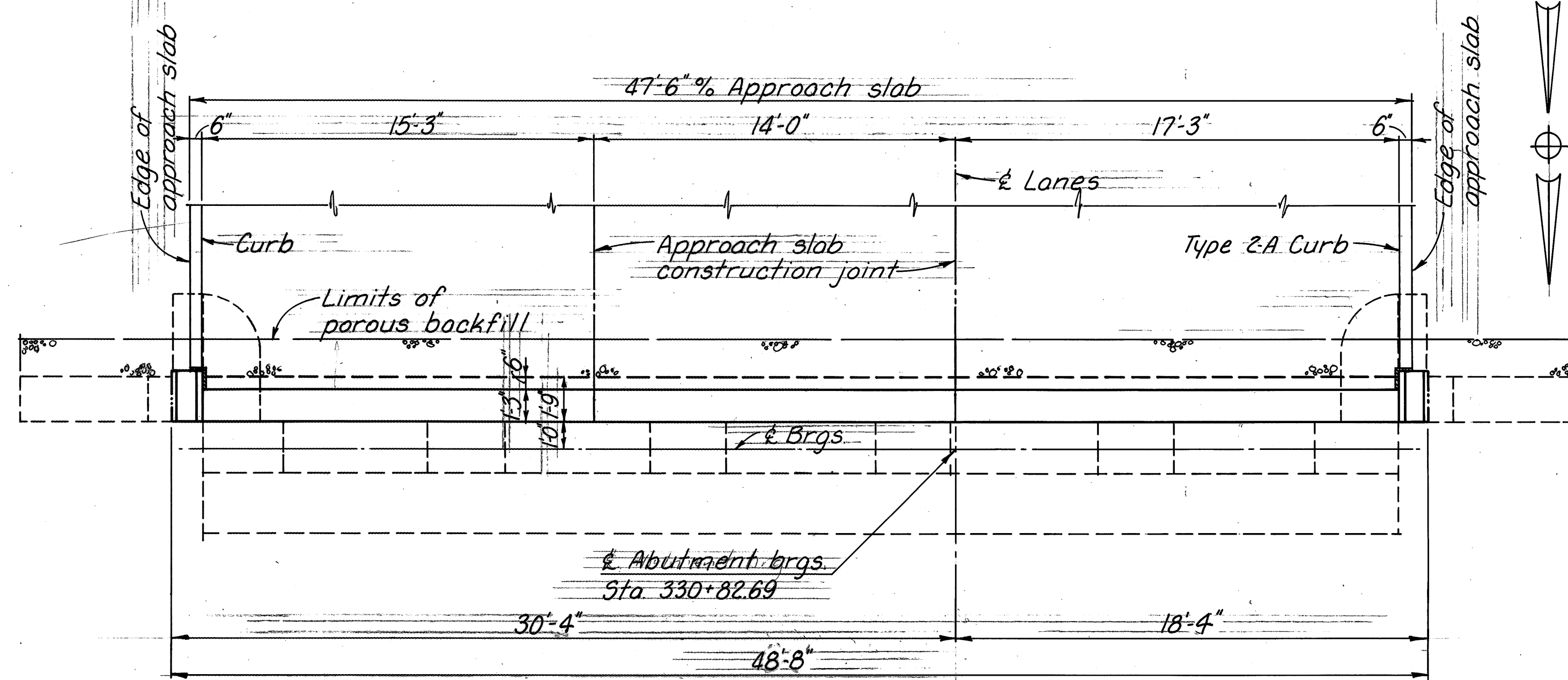
16/45

ENGINEERING ASSOCIATES LTD.
CONSULTING ENGINEERS
700 WINKLER DR. WOOSTER, OHIO

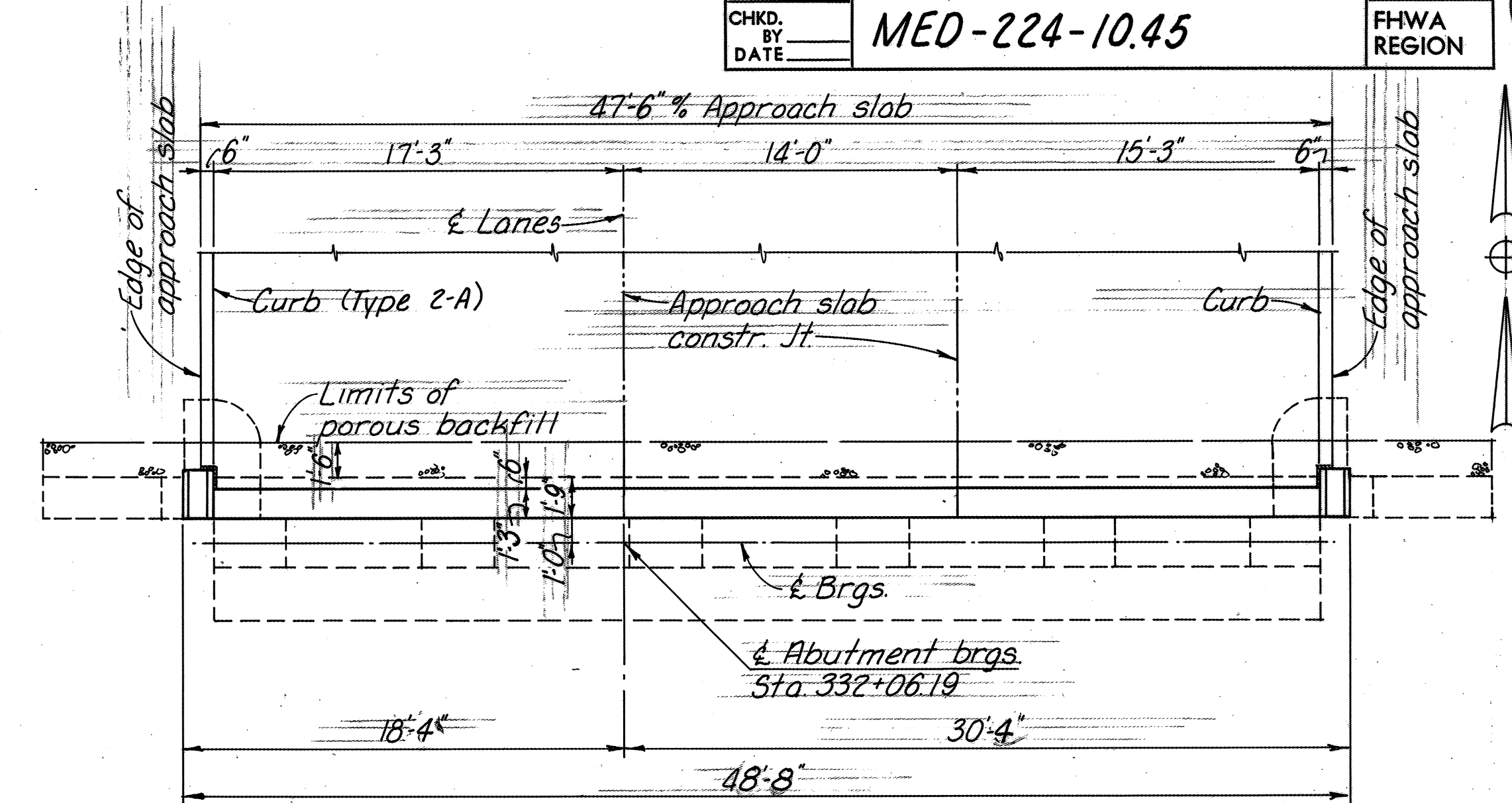
**ABUTMENT REPAIR DETAILS,
NOTES AND
REINFORCING STEEL SCHEDULES**

MED-42-0310 L/R
OVER US 224

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DWS	RLE	RLE	AFS	DBC	3/20/87	

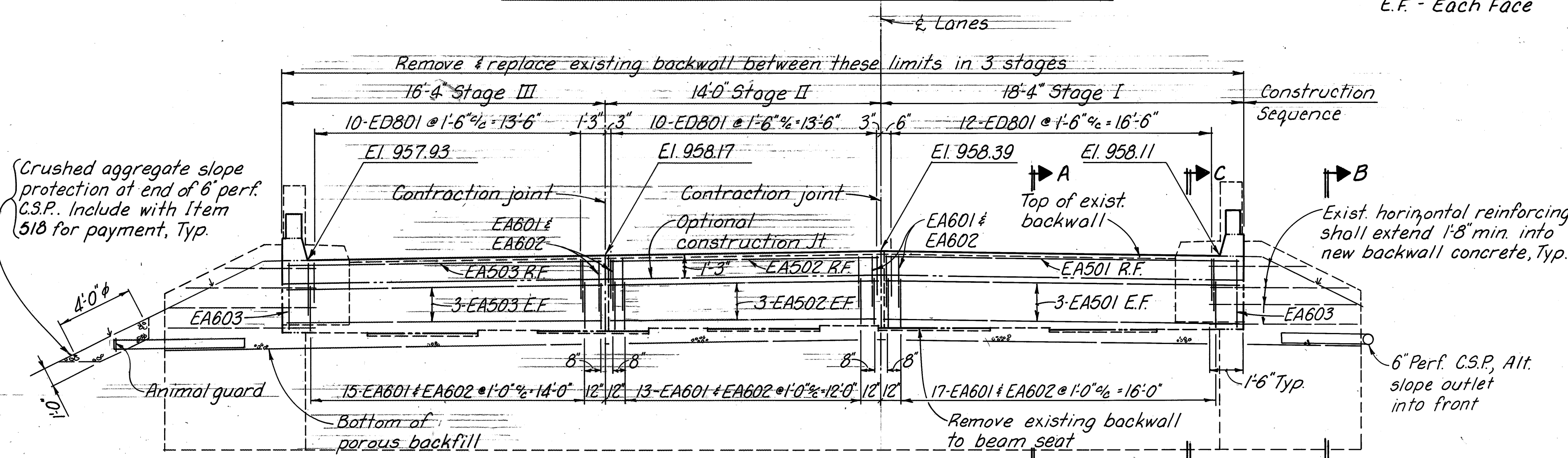


PLAN - RIGHT STRUCTURE - REAR ABUTMENT

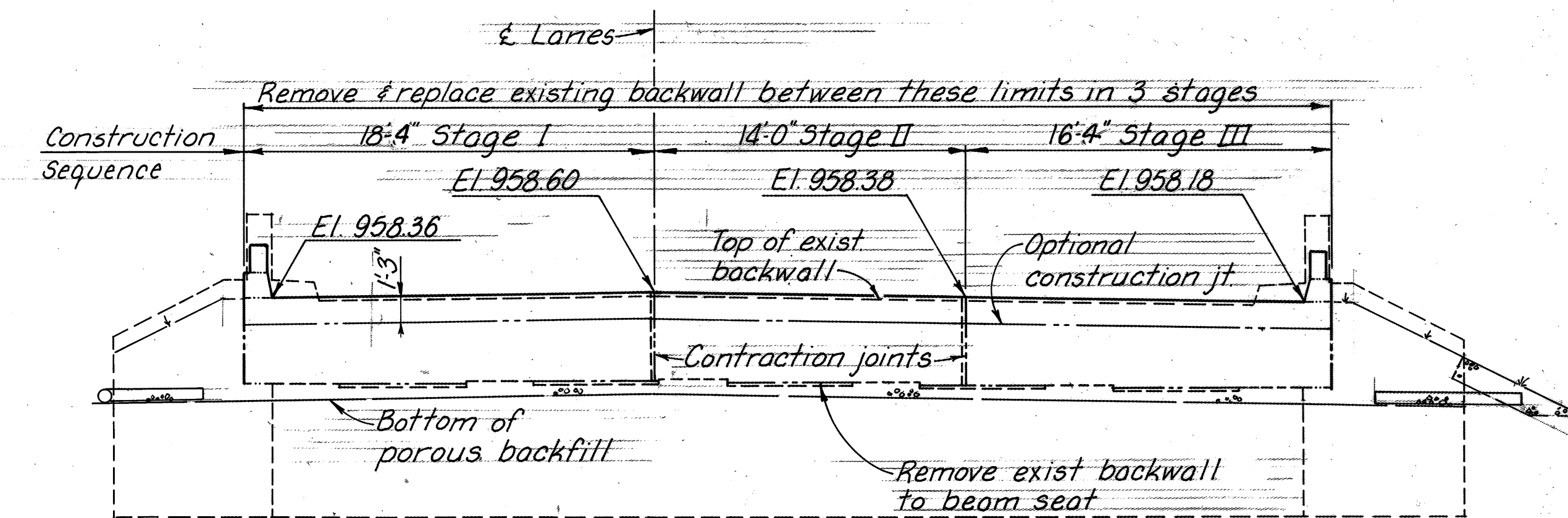


PLAN - RIGHT STRUCTURE - FORWARD ABUTMENT

NOTATION:
R.F. - Rear Face
E.F. - Each Face



ELEVATION - RIGHT STRUCTURE - REAR ABUTMENT



ELEVATION - RIGHT STRUCTURE - FORWARD ABUTMENT

Reinforcing steel for Forward Abutment is same as for Rear Abutment except opposite hand.

ABUTMENT NOTES

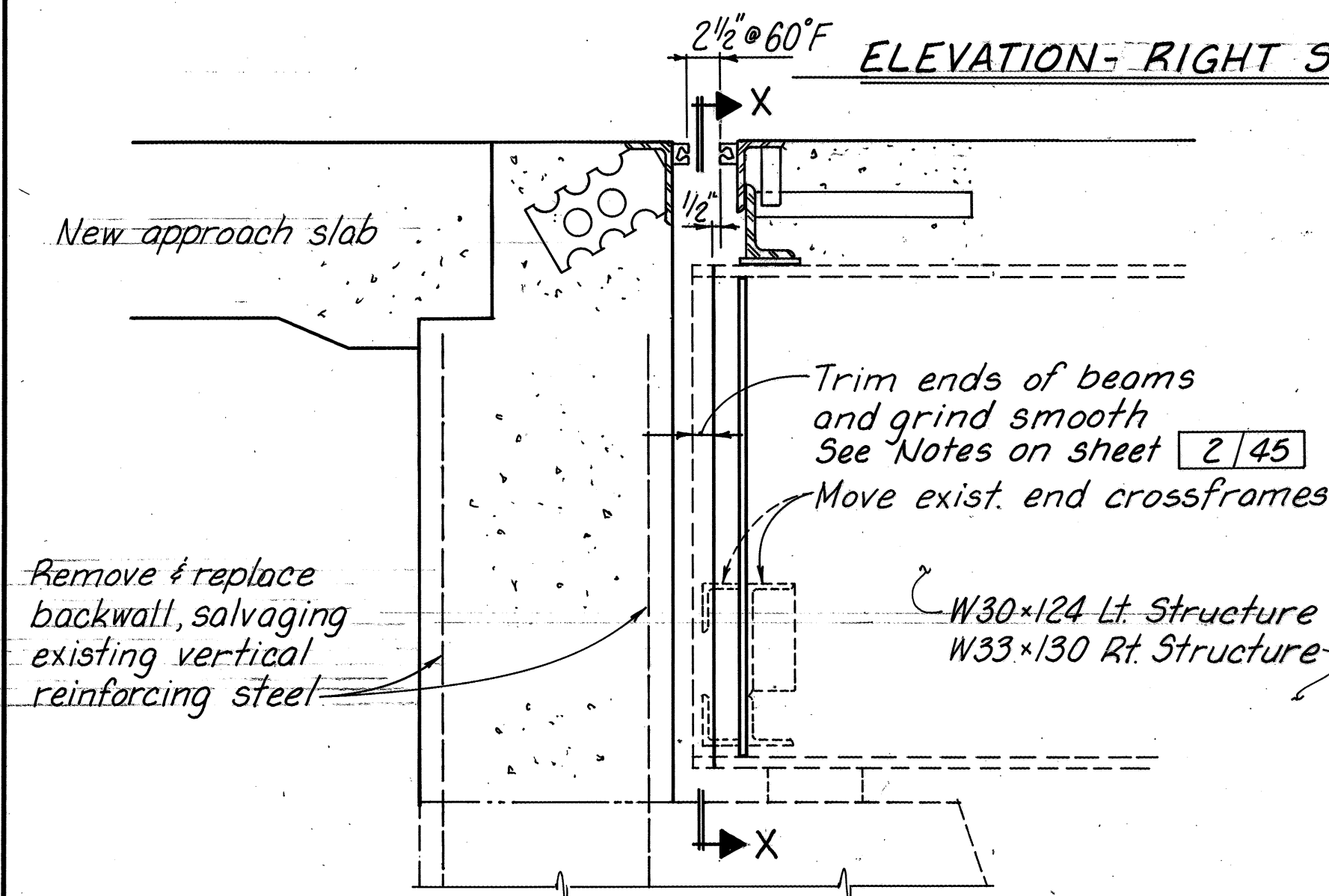
SECTIONS A-A, B-B & C-C: See sheet 16/45.

ABUTMENTS / LEFT STRUCTURE: See sheet 16/45.

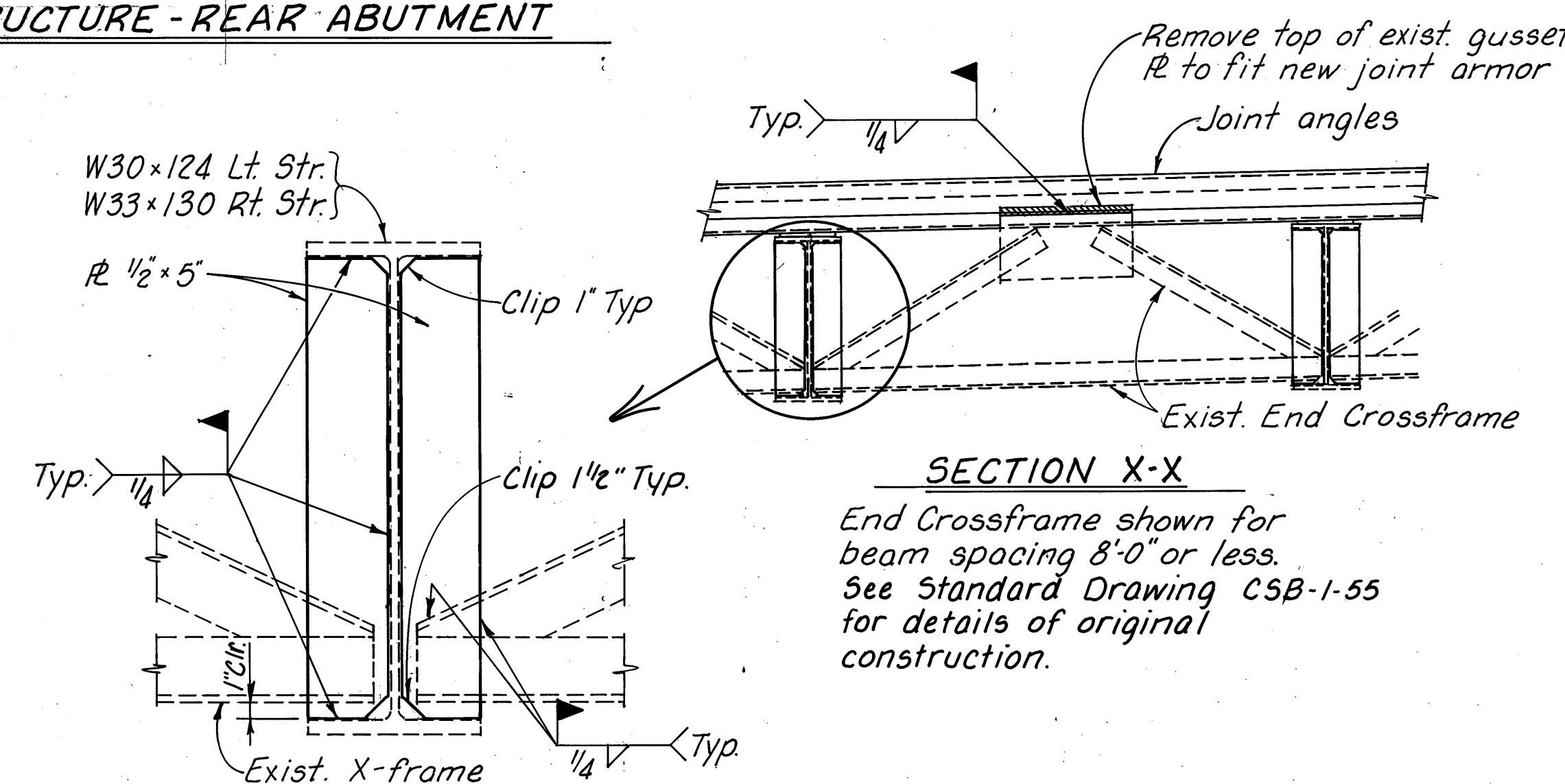
ABUTMENT REINFORCING STEEL SCHEDULE: See sheet 16/45.

ADDITIONAL ABUTMENT NOTES: See sheet 16/45.

See notes 4-7 on sheet 26/45 for additional repairing and moving end crossframe notes.



TRIM BEAMS AND MOVE END CROSSFRAMES



SECTION X-X

End Crossframe shown for beam spacing 8'-0" or less. See Standard Drawing CSB-1-55 for details of original construction.

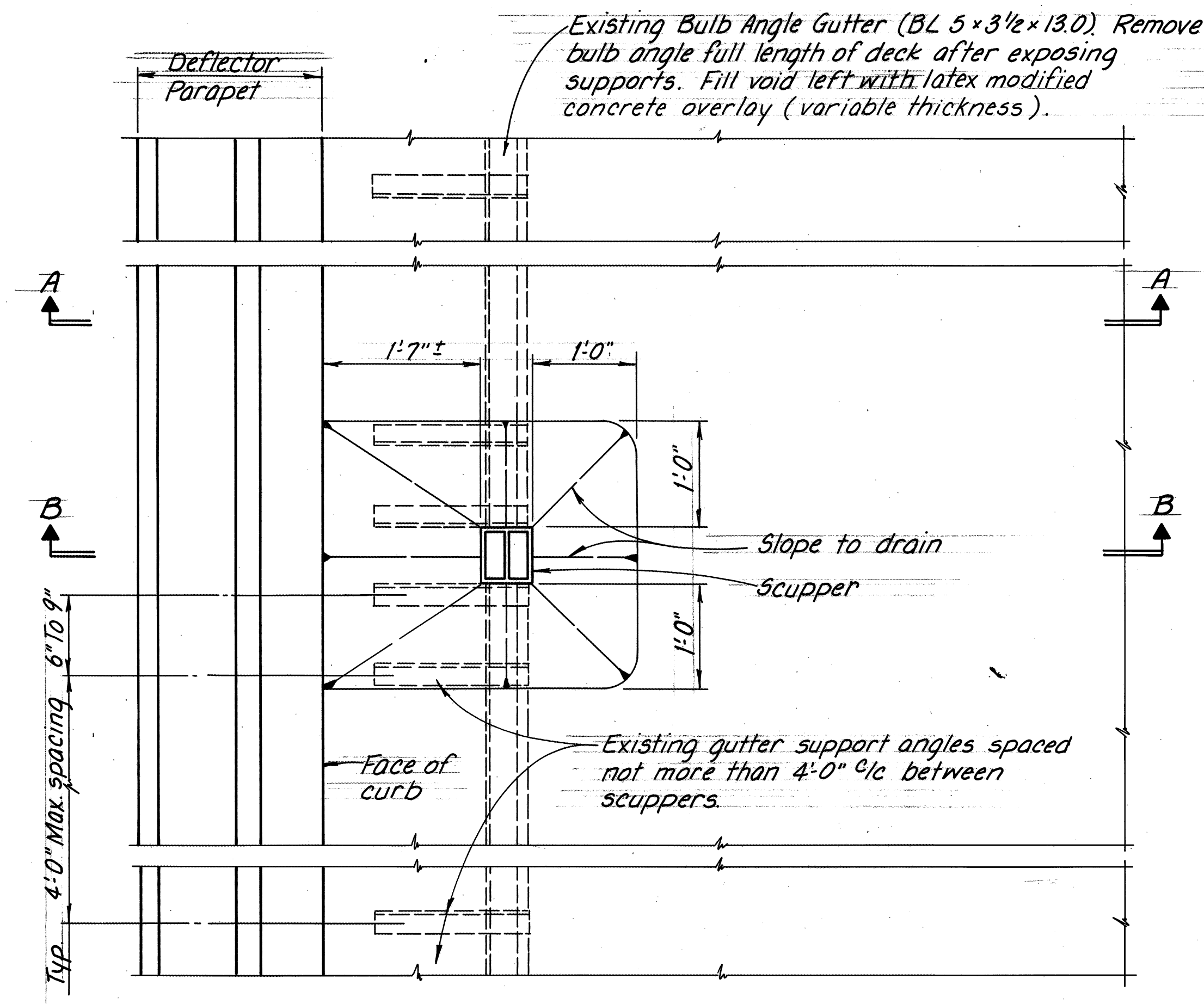
17/45

ENGINEERING ASSOCIATES LTD.
CONSULTING ENGINEERS
700 WINKLER DR. WOOSTER, OHIO

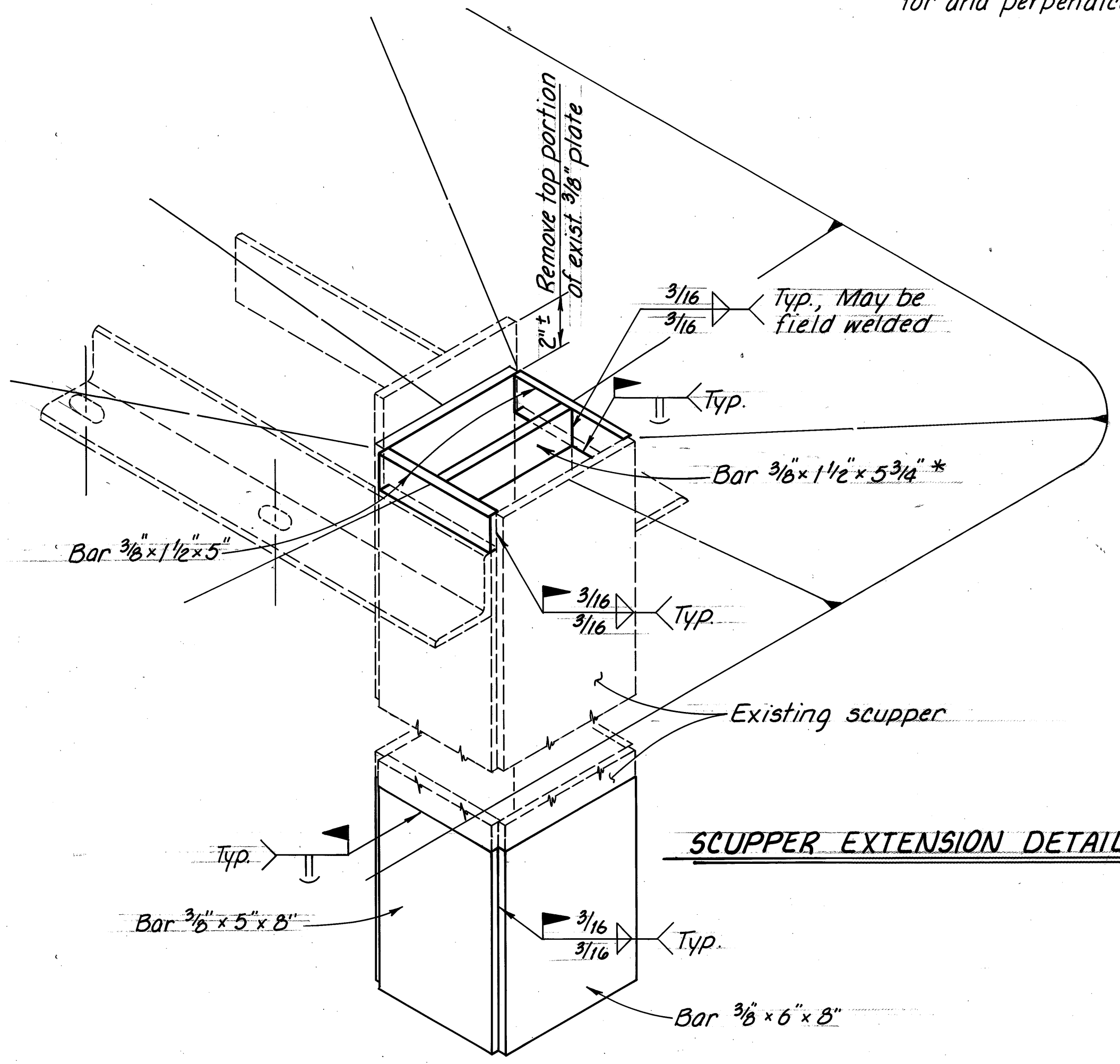
ABUTMENT / SUPERSTRUCTURE REPAIRS AND MODIFICATION

MED-42-0310 L/R
OVER US 224

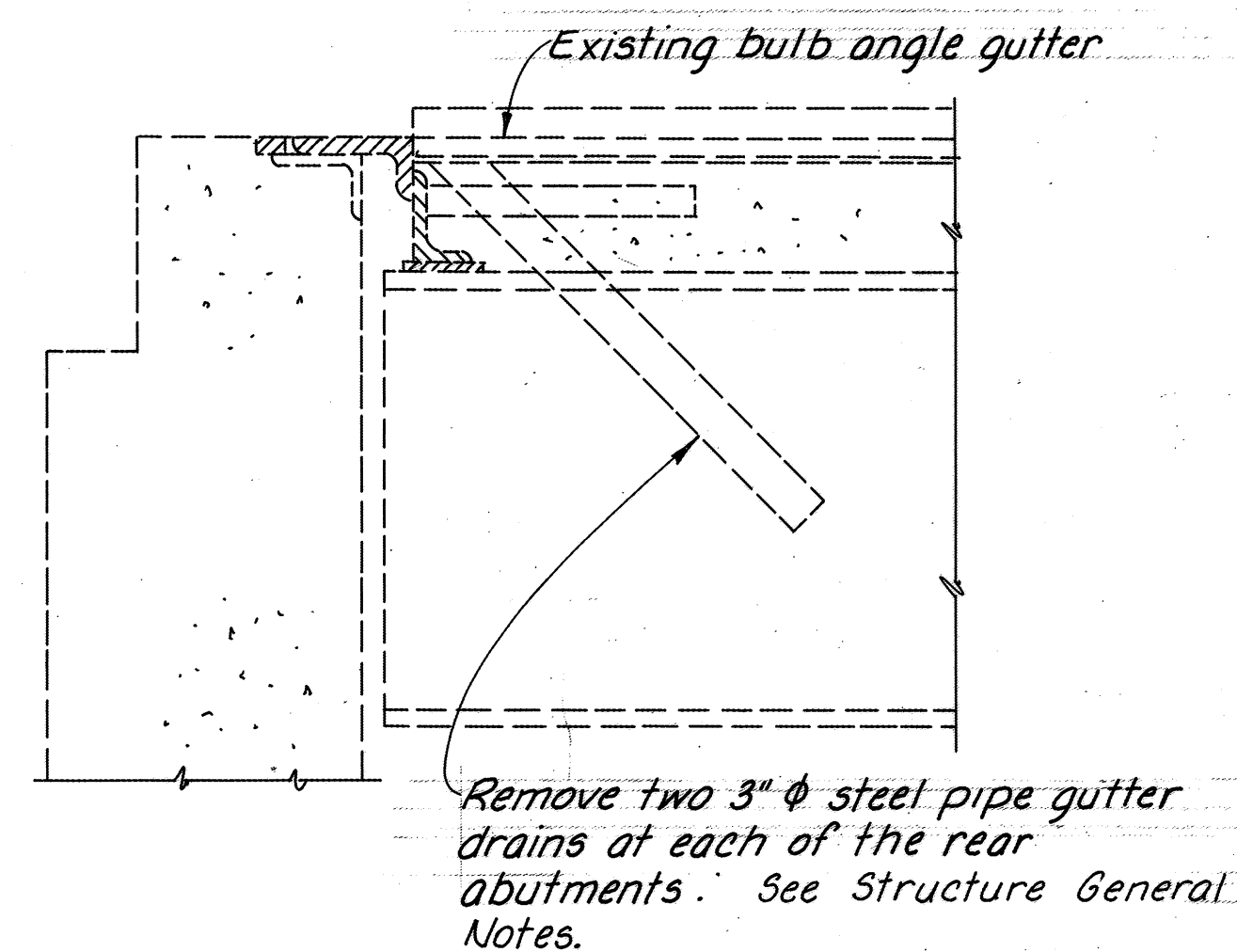
DESIGNED	DWS	DRAWN	RLE	TRACED	RLE	CHECKED	AF5	REVIEWED	DBC	DATE	3/20/87	REVISED	
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PLAN VIEW



SCUPPER EXTENSION DETAILS

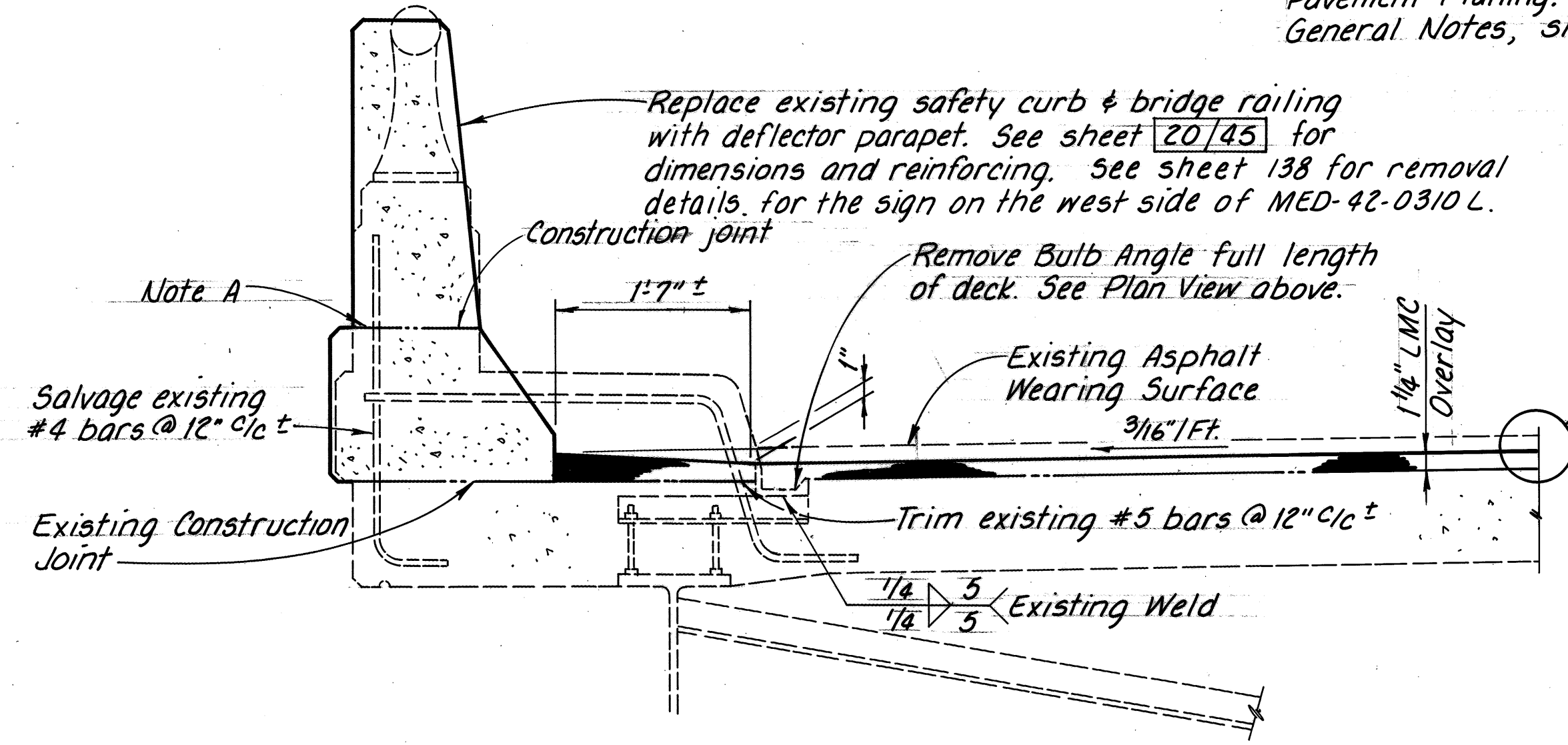


3" Ø GUTTER DRAIN REMOVAL

See sheet 7/45 for expansion joint details.

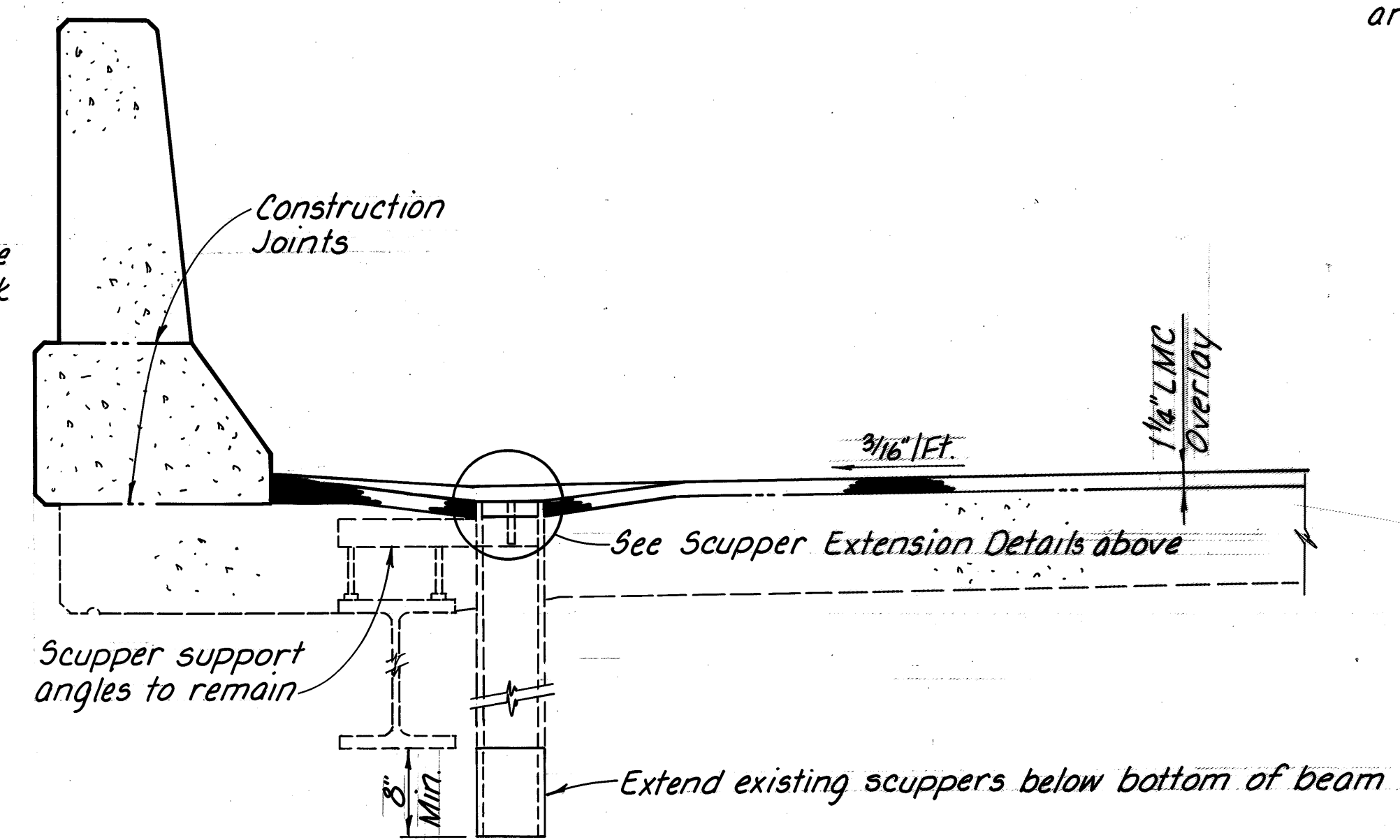
Note A: Cut bars off as necessary to clear deflection joints by 2" min. See sheet 20/45

Existing Asphalt Concrete Wearing Surface to be removed per Item Special, Asphalt Pavement Planing. See Structure General Notes, sheet 1/45



SECTION A-A

For Sealing of Concrete Surfaces see sheet 11A/45

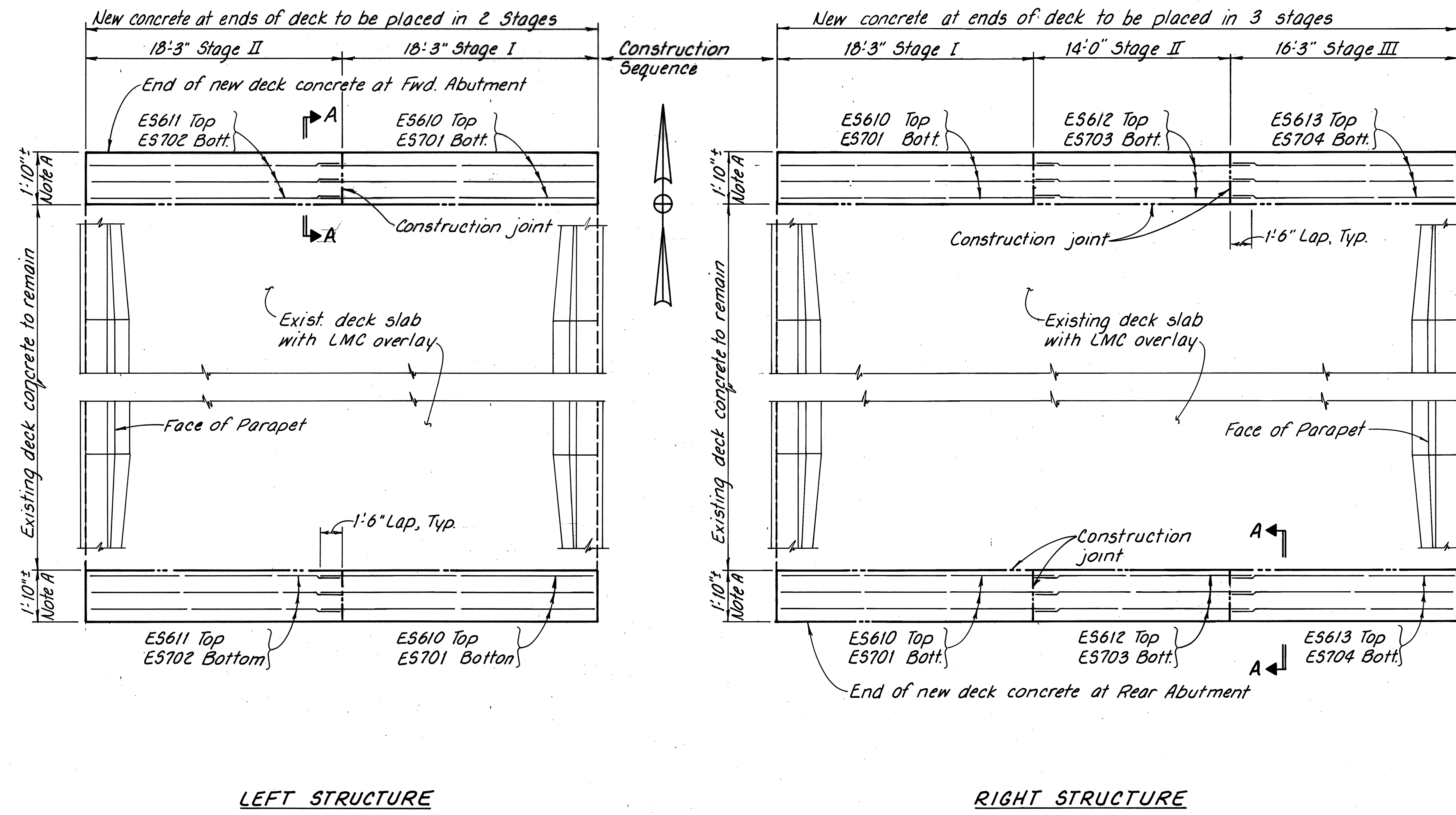


SECTION B-B

NOTES

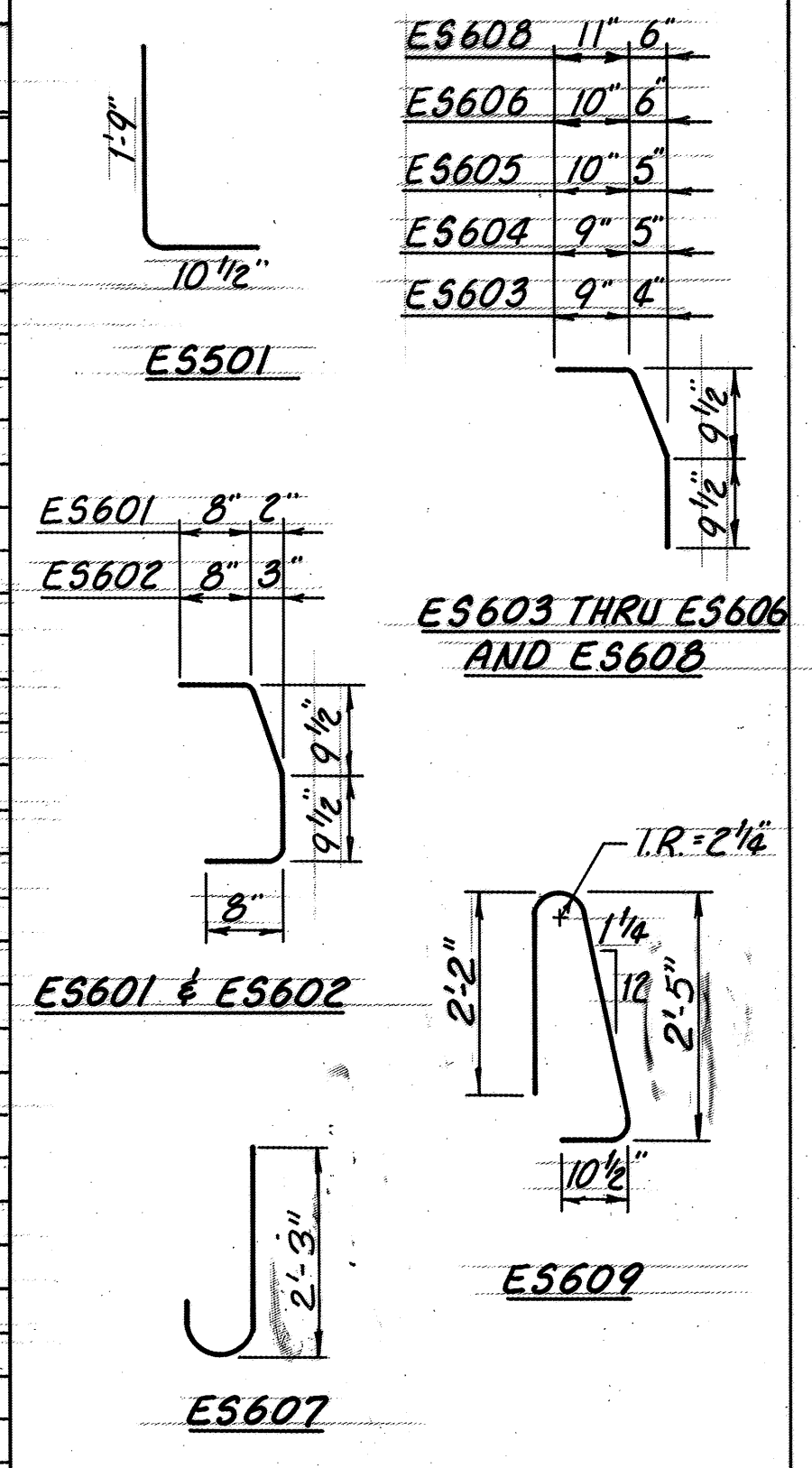
SCUPPER STRUCTURAL STEEL shall conform to ASTM-A36.
GENERAL NOTES: See sheets 1/45 through 5/45 and 20/45.

ENGINEERING ASSOCIATES LTD. CONSULTING ENGINEERS 700 WINKLER DR. WOOSTER, OHIO						
SUPERSTRUCTURE REMOVAL AND DRAINAGE DETAILS						
MED-42-0310 L/R OVER US 224						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DBC	DBC	PLD	AFS	DWS	3/23/87	



PART PLANS-DECK SLAB

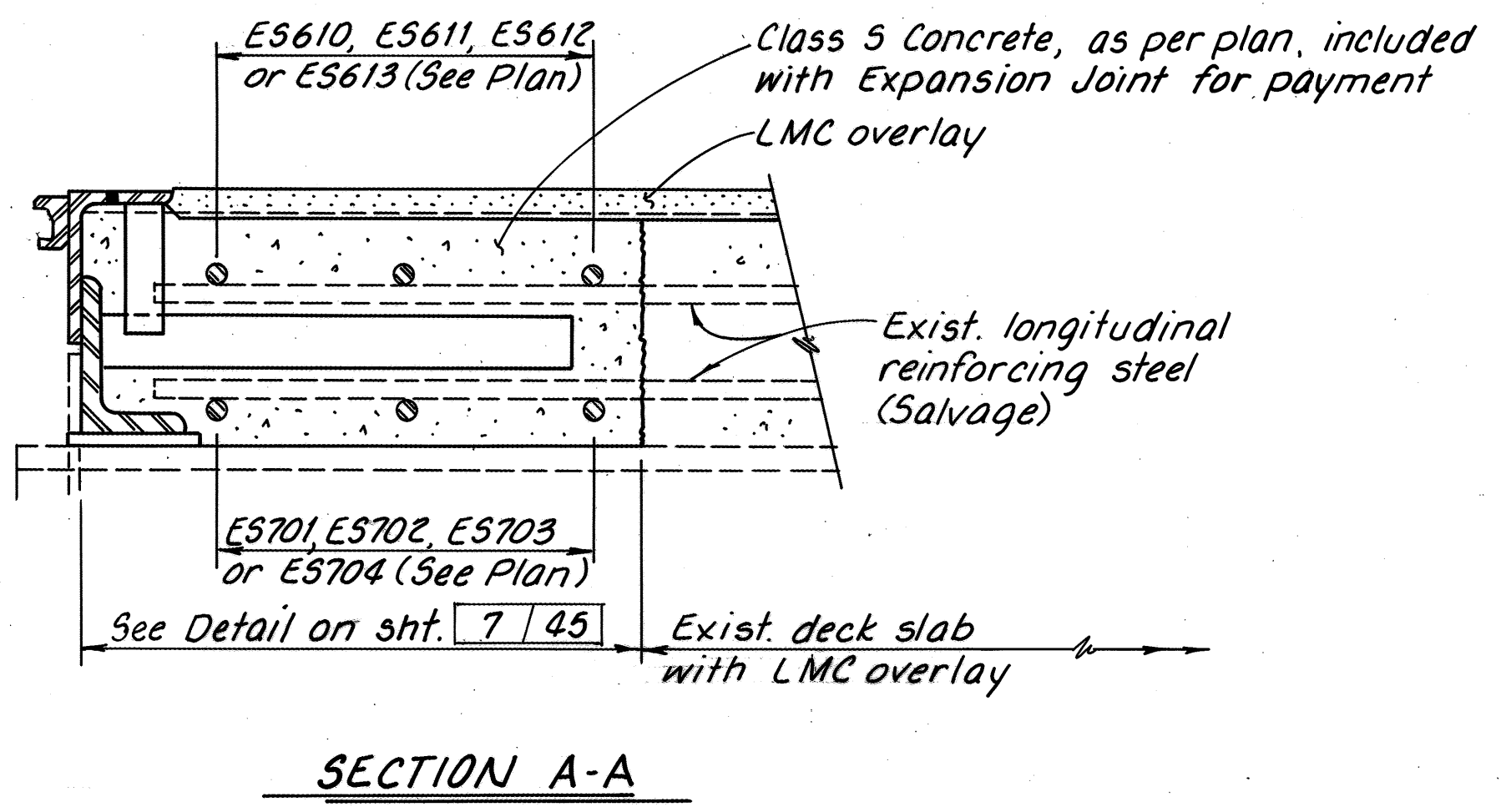
SUPERSTRUCTURE REINFORCING STEEL						
MARK	NUMBER			LENGTH	TYPE	WEIGHT
	LT. STR.	RT. STR.	TOTAL			
ES501	8	8	16	2'-6"	Bt.	42
ES502	24	24	48	2'-3"	Str.	113
ES503	40	40	80	26'-3"	Str.	2190
ES504	4	4	8	19'-0"	Str.	159
ES505	24	24	48	9'-3"	Str.*	463
ES506	36	36	72	14'-6"	Str.	1089
ES507	96	96	192	7'-0"	Str.	1042
ES601	4	4	8	2'-7"	Bt.	31
ES602	4	4	8	2'-7"	Bt.	31
ES603	4	4	8	2'-3"	Bt.	27
ES604	4	4	8	2'-3"	Bt.	27
ES605	4	4	8	2'-4"	Bt.	28
ES606	4	4	8	2'-5"	Bt.	29
ES607	24	24	48	2'-11"	Bt.	210
ES608	226	226	452	2'-6"	Bt.	1697
ES609	226	226	452	5'-7"	Bt.	2632
ES610	6	6	12	19'-7"	Str.	353
ES611	6	-	6	18'-1"	Str.	163
ES612	-	6	6	15'-6"	Str.	140
ES613	-	6	6	17'-7"	Str.	158
ES701	6	6	12	19'-7"	Str.	480
ES702	6	-	6	18'-1"	Str.	221
ES703	-	6	6	15'-6"	Str.	190
ES704	-	6	6	17'-7"	Str.	216
TOTAL						11,731



* Bend in field where necessary

SUPERSTRUCTURE NOTES

- STRUCTURAL STEEL MODIFICATIONS: See sheet 17/45 for details of trimming of existing beam ends and the repair and moving of cross-frames at the abutments.
- DECK EXPANSION JOINT DETAILS: See sheet 7/45.
- SUPERSTRUCTURE PARAPET DETAILS: See sheet 20/45.
- BRIDGE GENERAL NOTES: See sheet 1/45 through 5/45 and 20/45.



19/45

ENGINEERING ASSOCIATES LTD.
CONSULTING ENGINEERS
700 WINKLER DR. WOOSTER, OHIO

SUPERSTRUCTURE DETAILS AND REINFORCING STEEL SCHEDULE
MED 42-0310 L/R
OVER US224

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DBC	RLE	PLD	AFS	DWS	3/23/87	

