

**INDEX
DETAILS**

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**DECK RECONSTRUCTION AND OVERLAY
FOR**

2

BRIDGE FILE	CROSSING	Q. STATION	SECTION	TOWNSHIP	RANGE	COUNTY
I-465-126-5273A	Under SR 37A Allisonville Rd.	925+21.59	21	17N	4E	Marion
I-465-127-5255A	Over White River	833+45.0	17	17N	4E	Marion
I-465-127-5274A	Over Carmel Creek	865+25.5	17	17N	4E	Marion
I-465-127-5275A	Under North River Road	50+00	17	17N	4E	Marion
I-465-128-5276A	Over SR 431 Keystone Ave.	815+30.9	18	17N	4E	Marion

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- Material Notes
- Construction Procedure for Placing Bridge Deck Overlay
- Data Sheet & Construction Procedure - I-465-126-5273A
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- Section at End Bent - I-465-126-5273A
- Joint Installation at Curbs - I-465-126-5273A
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- Approach Detail (Reinforcing detail) & Bar Bending Diagram - I-465-127-5255A
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- Shear Connector Details - I-465-127-5274A

BRIDGE CONTRACT: B-12985

STATE OF INDIANA
INDIANA STATE HIGHWAY COMMISSION

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PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

NOTE: NO ADDITIONAL R/W REQ'D. FOR THIS PROJECT

PROJECT No. I-FRI-465-4 (218)126

DESIGN BY 1-15-81
SENIOR DESIGNER

RECOMMENDED FOR APPROVAL 1-16-81
ASST. ENGINEER OF BRIDGE DESIGN

RECOMMENDED FOR APPROVAL 1-28-81
ENGINEER OF BRIDGE DESIGN

APPROVED 1-30-81
CHIEF HIGHWAY ENGINEER

FEDERAL HIGHWAY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION

APPROVED

DIVISION ADMINISTRATOR

REVISIONS

DATE	SHEET
2-2-81	76A

INDIANA STATE HIGHWAY COMMISSION
STANDARD SPECIFICATIONS DATED 1978
TO BE USED WITH THESE PLANS

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- Bill of Materials - I-465-127-5274A
- Plan View of R.C. Bridge Approach - I-465-127-5274A
- Bill of Materials - I-465-127-5274A
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- Beam Repair Diagram - I-465-127-5275A
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- Longitudinal Section - I-465-128-5276A
- Pavement Offsets - I-465-128-5276A
- End Post Removal Limits - I-465-128-5276A
- Section at Curb - I-465-128-5276A
- Approach Detail (Railing Installation) - I-465-128-5276A
- Tooth Joint Removal Limits - I-465-128-5276A
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- Bill of Materials - I-465-128-5276A
- Beam Repair Details - I-465-128-5276A
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- Typical Half Approach Section
- Expansion Joint Type BS Details
- Section at End Bent
- BS Joint at Curb
- Expansion Joint Class S-S Details and Notes
- Section at Roadway Drain
- Roadway Drain Extension Detail
- Estimate of Quantities
- Estimate of Quantities
- Traffic Maintenance Details (Plan Sheets)

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Bridge	Road	Description	Purpose	FHWA Approval	A-Adopted R-Revised
83.	BR 1	Aluminum Bridge Railing	Bridge Railing		R-11-3-80
84.	BR 2	Aluminum Bridge Railing Detail	Bridge Railing	5-10-79	R-12-3-78
85.	C 1	Standard Miscellaneous Detail	Reinforcing Bar Notes, Bar Bending	6-13-77	R-6-1-77
86.	C 3	Standard Miscellaneous Detail	Type IA Joint, Constr. Joint Type 'A'		R-11-15-78
87.	D	Casting Details Roadway Drain	Roadway Drain	3-8-76	R-1-9-76
88.	D 1	Adjusting Frame Details for Roadway Drains	Adjusting Frame		R-7-1-77
89.	S 1	Miscellaneous Details	'B' Borrow	1-17-72	R-8-2-71
90.	B	Standard Pavement Joints	Terminal Joint	5-18-77	R-3-1-77
91.	MA	Miscellaneous Standard Details	R.C. Bridge Approach, Monument	9-29-71	R-1-4-71
92.	M3	Miscellaneous Standard Details	Paved Side Ditch	12-16-80	A-Oct. 1980
93.	MB1	Miscellaneous Standard Details	Concrete Gutter Turnout	2-8-66	A-July 1965
94.	MB2	Miscellaneous Standard Details	Riprap	6-14-74	R-1-2-74
95.	ME	Miscellaneous Standard Details	Curbs		
96.	GR2	Guard Rail, Class B _s , F _s	Guard Rail	10-24-80	R-8-1-80
97.	GR3	Guard Rail, Class B _A , B _{ST} , C _A , C _{ST} , E _A , E _{ST} , F _A , F _{ST}	Guard Rail	10-24-80	R-8-1-80
98.	GR4	Guard Rail, Class C _A , C _{ST}	Guard Rail	5-17-79	R-2-1-79
99.	GR5	Aluminum Guard Rail Details	Guard Rail	12-6-76	R-9-1-76
100.	GR6	Steel Tube Guard Rail Details	Guard Rail	11-2-78	R-8-1-78
101.	GR7	Guard Rail Pier Connection Details	Guard Rail	10-24-80	R-8-1-80

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INDEX STANDARD DRAWINGS (CONT.)

Bridge	Road	Description	Purpose	FHWA Approval	A-Adopted R-Revised
102.	GR8	Steel Beam Guard Rail Class D _s	Guard Rail	3-25-80	R-1-2-80
103.	GR9	Aluminum Beam Guard Rail Class D _A	Guard Rail	5-17-79	R-2-1-79
104.	GR10	Guard Rail, Buried End	Guard Rail	6-6-80	R-4-1-80
105.	GR10A	Guard Rail Breakaway Cable Terminal	Guard Rail	5-10-79	R-4-1-79
106.	CB2	Temporary Concrete Barrier	Temporary Concrete Barrier	3-1-79	R-2-1-79
107.	Sh. 1 Det.	Standard Detour Signs	Traffic Maintenance	6-10-80	R-5-1-80
108.	Sh. 1B Det.	Standard Detour Signs	Traffic Maintenance	11-20-80	R-10-1-80
109.	Sh. 2A Det.	Standard Detour Signs	Traffic Maintenance	11-15-79	R-8-1-79
110.	Sh. 3 Det.	Standard Detour Signs	Traffic Maintenance	10-20-80	R-9-1-80
111.	Sh. 3A Det.	Standard Detour Signs	Traffic Maintenance	5-18-77	R-4-1-77
112.	Sh. 4 Det.	Standard Detour Signs	Traffic Maintenance	5-18-77	R-4-1-77
113.	Sh. 5A Det.	Standard Detour Signs	Traffic Maintenance	10-20-80	R-9-1-80
114.	Sheet 9	Traffic Sign Details	Traffic Maintenance		R-4-1-79

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GENERAL NOTES

- Standards under dates as listed in the index on Sheet No. 5 & 6 to be used on this project.
- All guard rail removal will become property of the contractor.
- Unless otherwise specified, the contractor shall have the option of using either Hot Asphaltic Concrete (HAC) or Hot Asphaltic Emulsion (HAE) on all bituminous items.
- All bituminous material required for this contract to be paid for as "Bituminous Mixture for Approaches", unless noted.
- Tack coat to be paid for as "Bituminous Material for Tack Coat" in square yards.
- Plans for these structures are on file in the central office and are available upon request.
- Where new work is to be fitted to old work, the contractor shall check all dimensions and conditions in the field and report any errors or discrepancies to the Engineer and assume responsibility for their correctness and the fit of new parts to the old.
- The handchipping and cleaning of deteriorated deck areas shall be as directed by the Engineer. It is the intent of these plans that all such deteriorated concrete be removed and should there be any doubts as to the quality of the concrete, removal shall continue until PERFECTLY SOUND CONCRETE is exposed. All existing non-full depth patches shall be removed.
- Concrete in patches for deteriorated concrete areas of slab to be Modified Portland Cement Concrete or Special Class "A" Concrete. See the Special Provisions.
- All quantities shown on the plans are based on the 1-3/4" Modified Portland Cement Concrete Overlay. See the special provisions for necessary adjustment if 2-1/2" Dense Portland Cement Concrete Overlay is used.
- See the Special Provisions for composition of concrete in overlay dams.
- Seal all joints and cracks in the approach pavement with a hot poured joint sealer before placing the bituminous wedge. The cost of sealing to be included in the cost of other items.
- Care must be taken so as not to damage existing 2" diameter steel conduits in the copings during the construction.

CONSTRUCTION PROCEDURE FOR PLACING
BRIDGE DECK OVERLAY

- Scarify the bridge floor to a depth of 1/4 inch. Scarify additional areas of bridge floor an additional 1/4 inch as directed by the Engineer.
- Remove scarifying dust.
- Remove all existing non-full depth deck patches and all deteriorated concrete below the level of scarification and remove concrete around reinforcing and along curbs inaccessible to scarifying equipment by handchipping and cleaning in accordance with the Special Provisions.
- Reconstruct all full depth portions of the slab and other members as required for the installation of Class S-S Expansion Joints.
- Construct overlay dams.
- Blast and clean all removal and scarified areas.
- Place the bridge deck patching and bridge deck overlay as shown on the plans and in accordance with the special provisions.
- Install BS expansion joints.

GENERAL NOTES (cont.)

- All removal equipment used for partial concrete removals of bridge structures shall be hand held. Pneumatic hammers, 30 lbs. maximum weight shall be used for all removal areas to be patched and all areas within 24 inches of full depth removal lines. Pneumatic hammers up to 90 lbs. maximum weight may be used for all other removals outside these limits. Deck areas that are to be removed full depth shall be completely separated from adjacent concrete before hammers heavier than 30 lbs. may be used.
- See Guard Rail Revision sheets for orientation of structures.
- See sheets 72 thru 77 for Estimate of Quantities.
- See sheets 78 thru 82 for Traffic Maintenance Details.

MATERIAL NOTES

BRIDGE DECK OVERLAY

1-3/4" Modified Portland Cement Concrete Overlay OR
2-1/2" Dense Portland Cement Concrete Overlay

* BITUMINOUS WEDGE & LEVELING

110 lbs/sy Bituminous Surface Type 11B over
Variable depth Bituminous Binder or Base

PAVEMENT RELIEF JOINT

110 #/sy Bituminous Surface Type 11B over
1870 #/sy Bituminous base.

TERMINAL JOINT RECONSTRUCTION

220 lbs/sy Bituminous Binder

BITUMINOUS WIDENING

990 #/sy Bituminous Base Type 5D

* The maximum depth of bituminous surface Type 11B shall not exceed 1 1/2". All locations where total wedge thickness will exceed 1 1/2", a bituminous binder or base shall be placed as a first course to within one inch of the finished grade.

I-465-126-5273A
I-465 Under Allisonville Road

STRUCTURE DATA:

Type: Composite Continuous Steel Beam
Spans: 93'-0, 93'-0
Skew: 19° 04' 18" Rt.
O-O Bridge Floor: 190' 2-3/4"
Clear Roadway: Northbound: 34'-9 1/2"
Southbound: 46'-9 1/2"
O-C Coping: 87'-0
Curb Width: 3" Outside curbs
Median: 2'-5 (Includes Railing)
Deck Area: Northbound: 735.4 syds
Southbound: 989.0 syds
Expansion Joint: Existing: Bent #1 open Proposed: BS 11
Bent #3 open BS 11
Longitudinal Joint between structures: Existing: Open Proposed: BS 8*
ADT (1980): Southbound: 36'-0 R.C. Pavement
Approach: Northbound: 24'-0 R.C. Pavement

CONSTRUCTION PROCEDURE:

Place concrete overlay according to sheet #10.

Clean and seal the roadway face and top of the curbs and walks, face of the deck copings, underside of the deck from copings to the drip bead and top of the overlay dam on approaches.

Construct pavement relief joints.

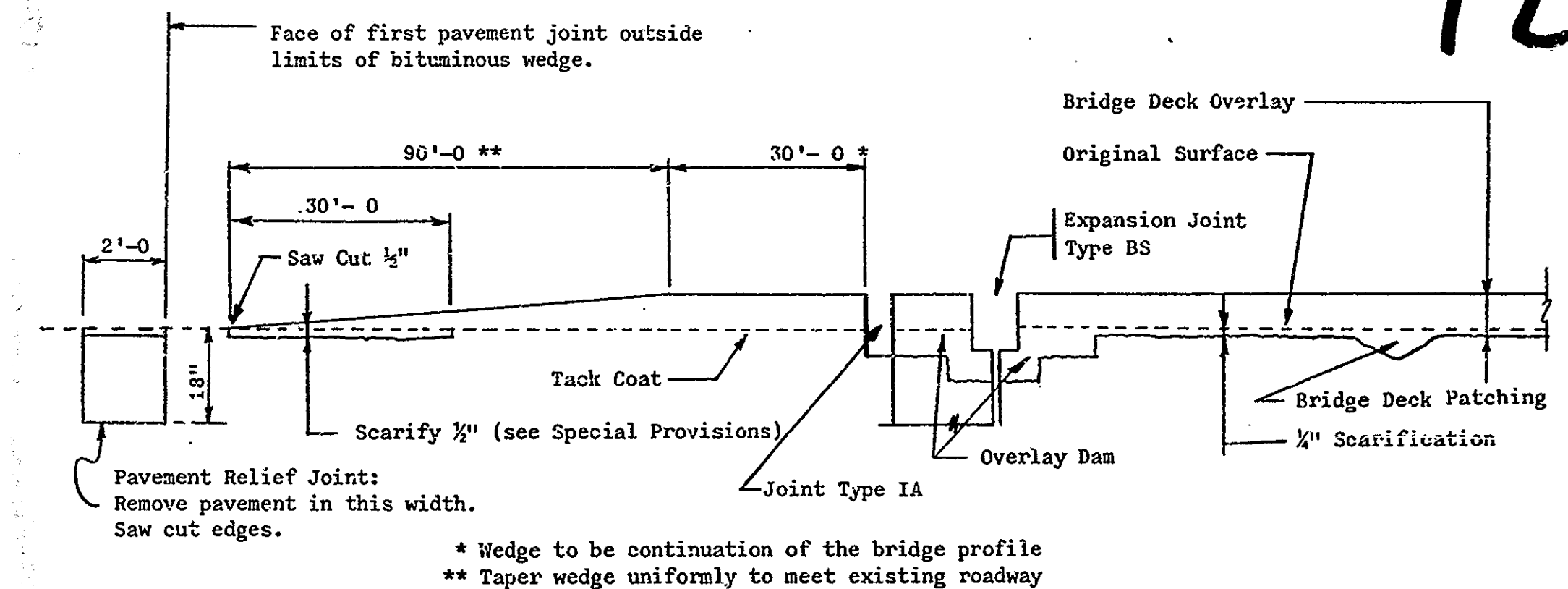
Construct bituminous wedges.

Construct "Curb Turnout, Type 'A'" at incoming ends of the structure according to Road Standard Sheet GR 4.

* Edges of the Expansion Joint to be saw cut using a multiple bladed saw. See also sheet 61.

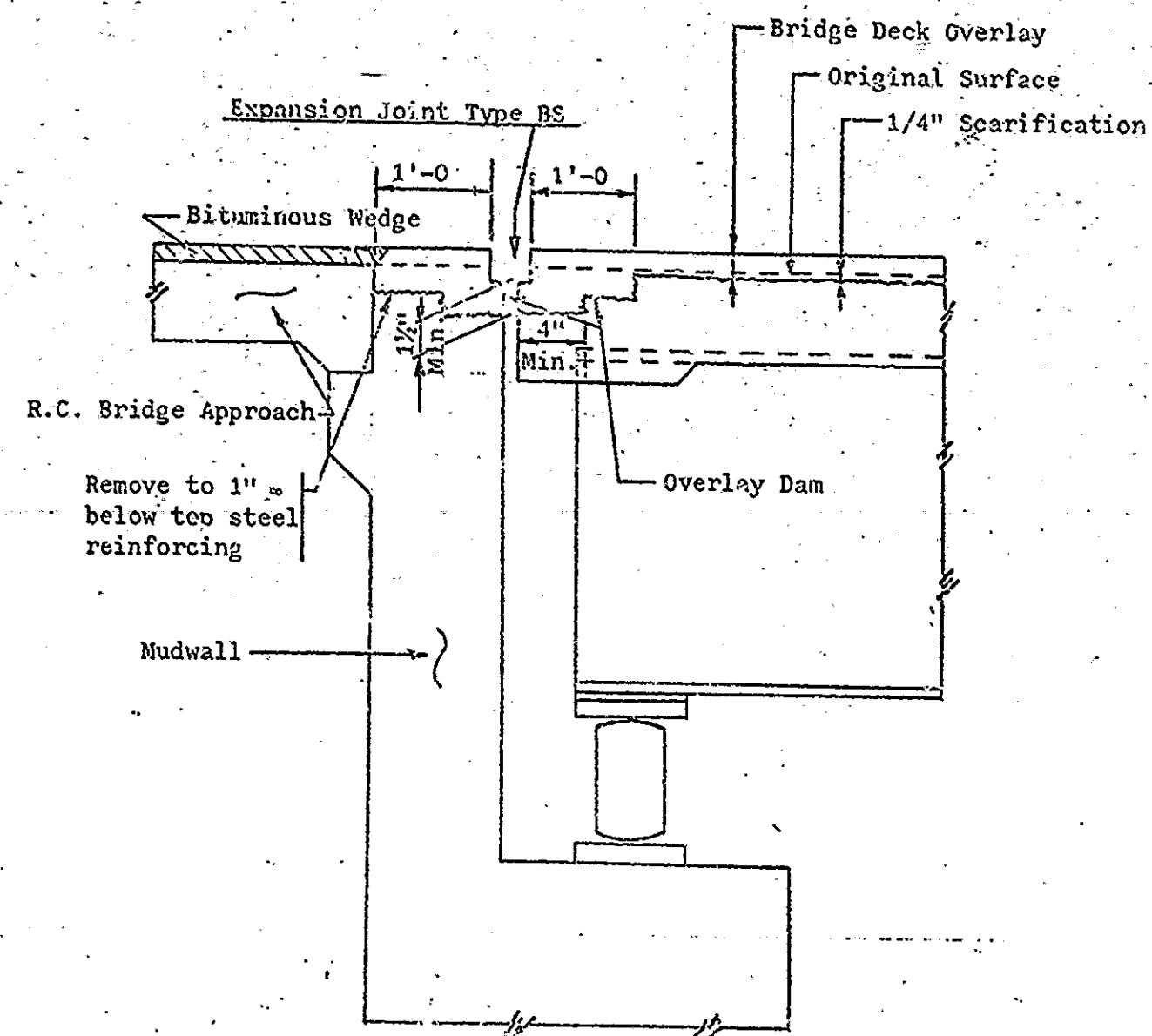
NOTES:

See sheet 12 for longitudinal section
See sheet 61 for expansion joint details



LONGITUDINAL SECTION

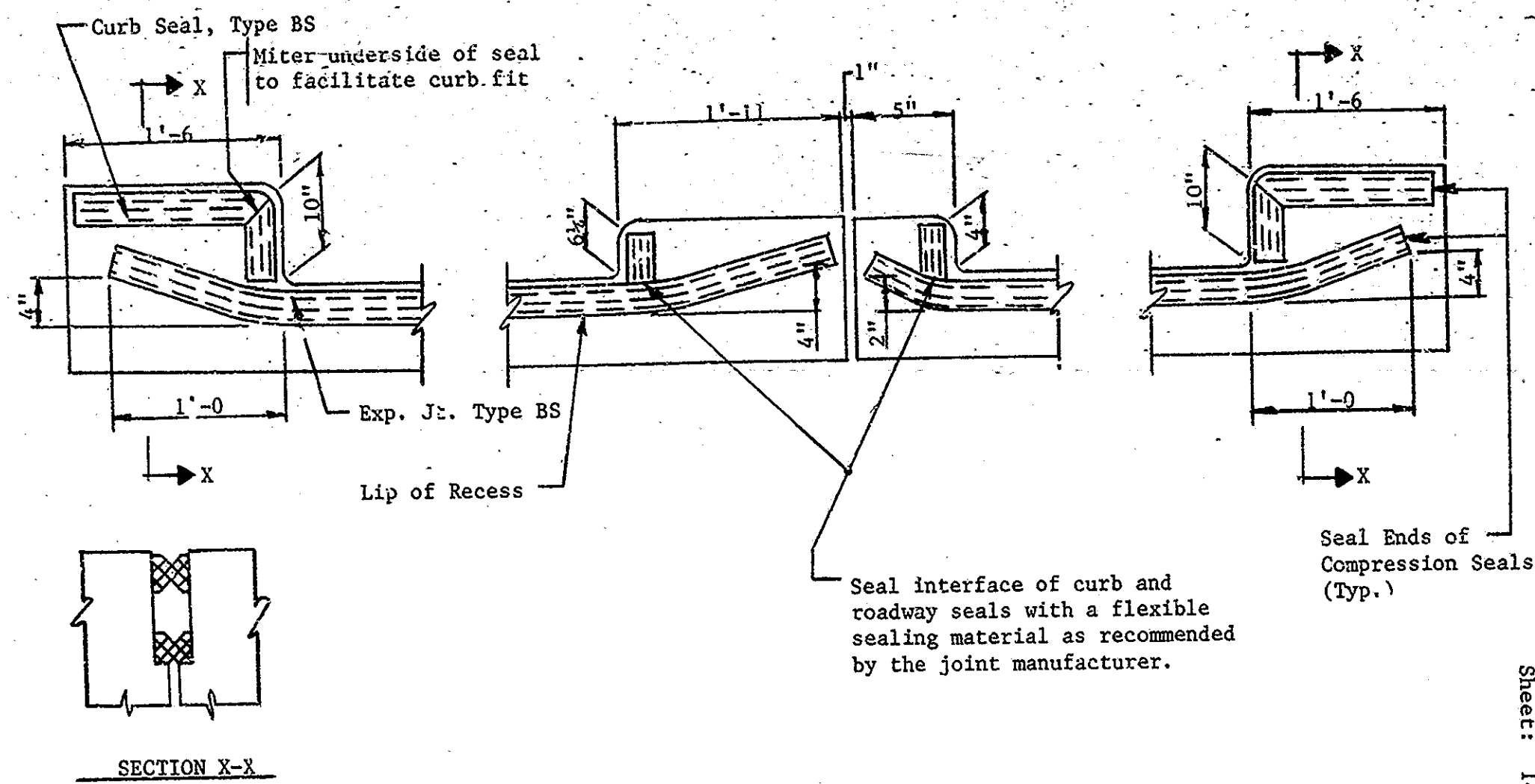
I-465-126-5273A



SECTION AT END BENT

I-465-126-5273A

13



JOINT INSTALLATION AT CURBS

I-465-126-5273A

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15

STRUCTURE DATA:

Type:	Twin Continuous Steel Girder (6 spans)	
Spans:	88'-0", 4 @ 111'-0", 88'-0"	
Skew:	0°	
O-O Bridge Floor:	624'-5"	
Clear Roadway:	44'-6"	
O-O Coping:	48'-6"	
Curb Width:	9"	
Deck Area:	3087.4 syds/Bridge: 6174.8 syds Total	
Expansion Joints:	Existing: Bent #1 - Tooth Expansion	Proposed: Class S-S
	Bent #7 - Tooth Expansion	Class S-S
ADT (1980):	49,800 V.P.D.	
Approach:	36'-0" R.C. Pavement	

CONSTRUCTION PROCEDURE:

Place concrete overlay according to sheet #10.

Clean and seal the roadway face and top of the curbs and walks, face of the deck copings and underside of the deck from copings to the drip bead.

Remove top 2" of existing bituminous material from the terminal joints. Clean out the joint and place new bituminous material.

Construct bituminous wedges.

Mudjack all approaches.

Remove existing wingwalls and extend bridge railing to connect with approach guard rail according to details on sheets 18 thru 26.

Update Guard according to sheet #32.

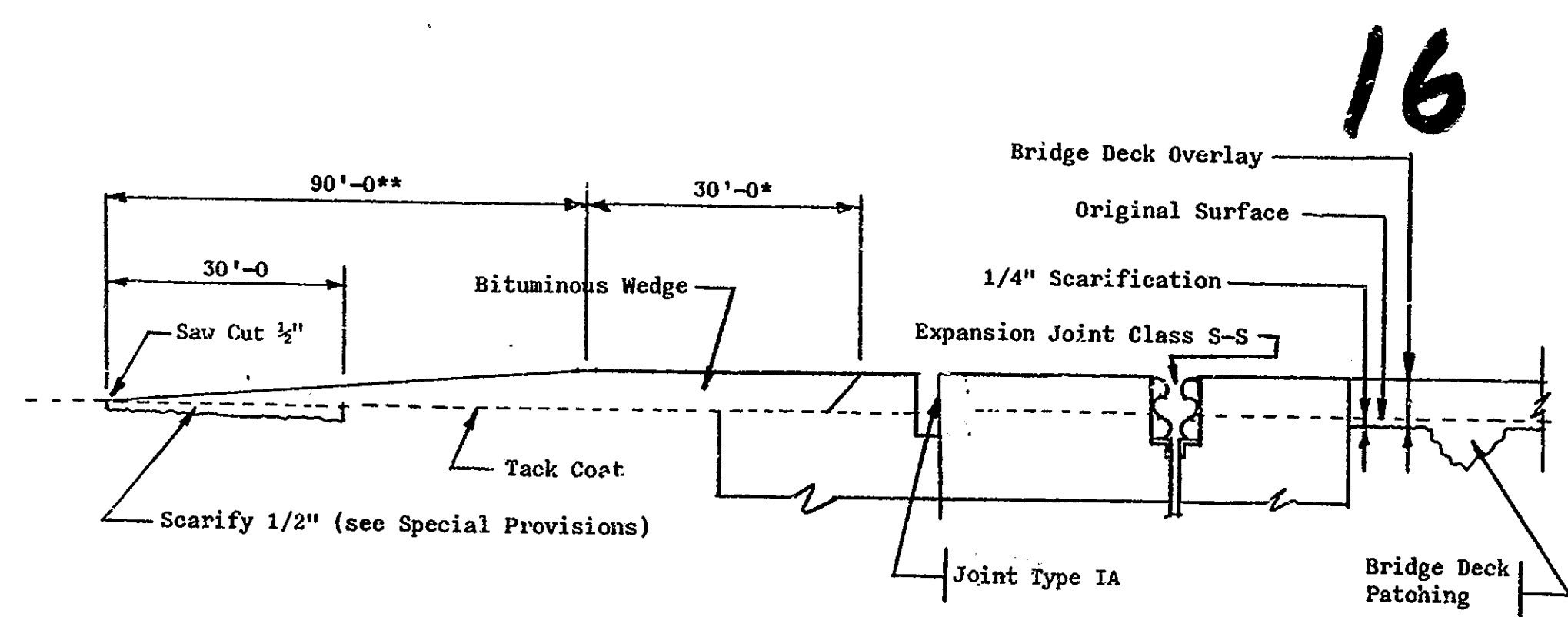
Fill eroded area of spill slopes with revetment riprap as directed by engineer. Estimated quantity: 60 tons.

Adjust casting to grade on approaches.

NOTES:

- See sheet 16 for longitudinal section
- See sheet 70 for section at roadway drains
- See sheet 17 for pavement offsets
- See sheet 65-69 for Expansion Joint Class S-S details
- See sheet 27 for removal at bent #1 and #7
- See sheet 28 for reconstruction at bent #1 and #7
- See sheet 29 for plan details at bent #1 and #7
- See sheet 22, 26, 31 for Bill of Materials
- See sheet 60 for Approach Section

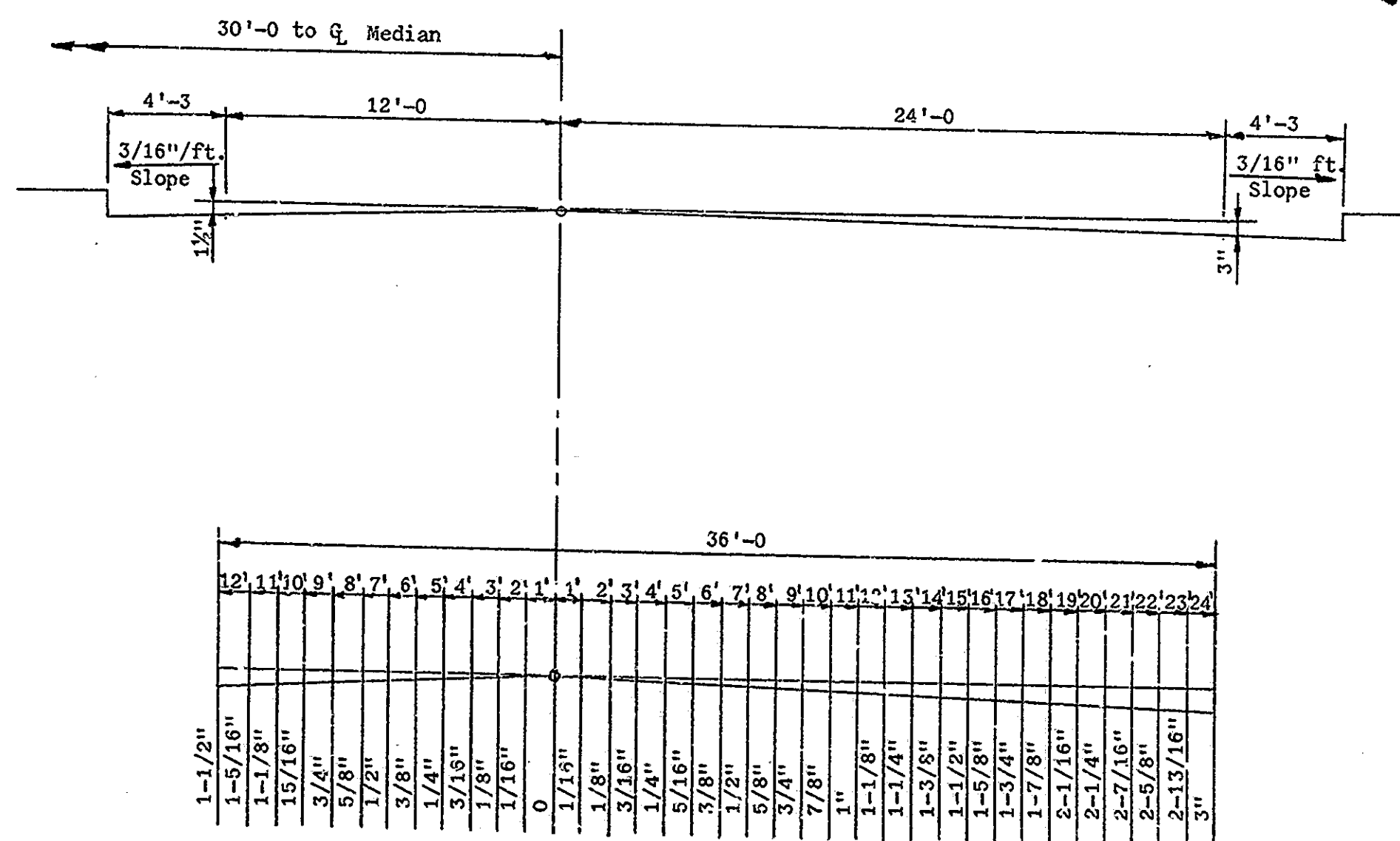
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LONGITUDINAL SECTION

I-465-127-5255A

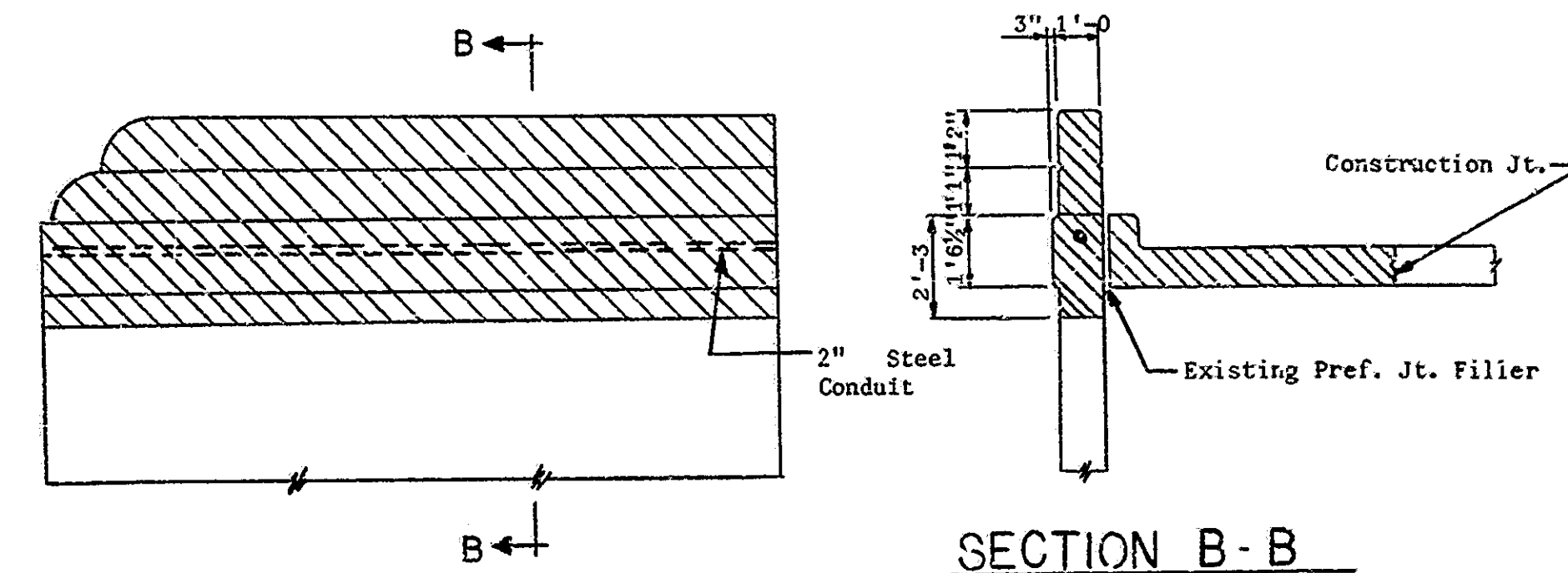
16



PAVEMENT OFFSETS

I-465-127-5255A

17



WING ELEVATION

SECTION B-B
SHOWING LIMITS OF REMOVAL

I-465-127-5255A

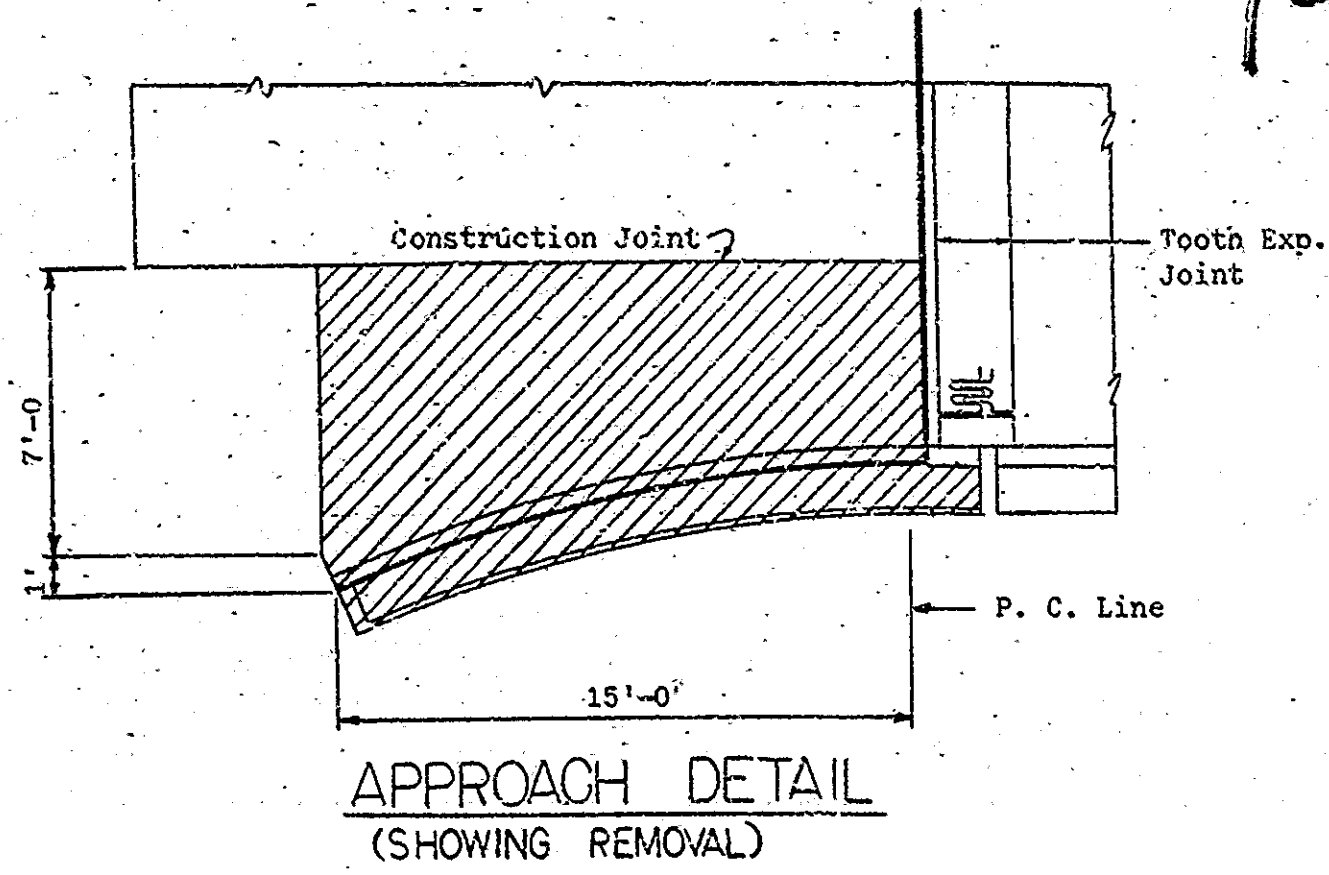
NOTE: Existing 2" Steel Conduit in the removal area to be cleaned and kept in place.

18

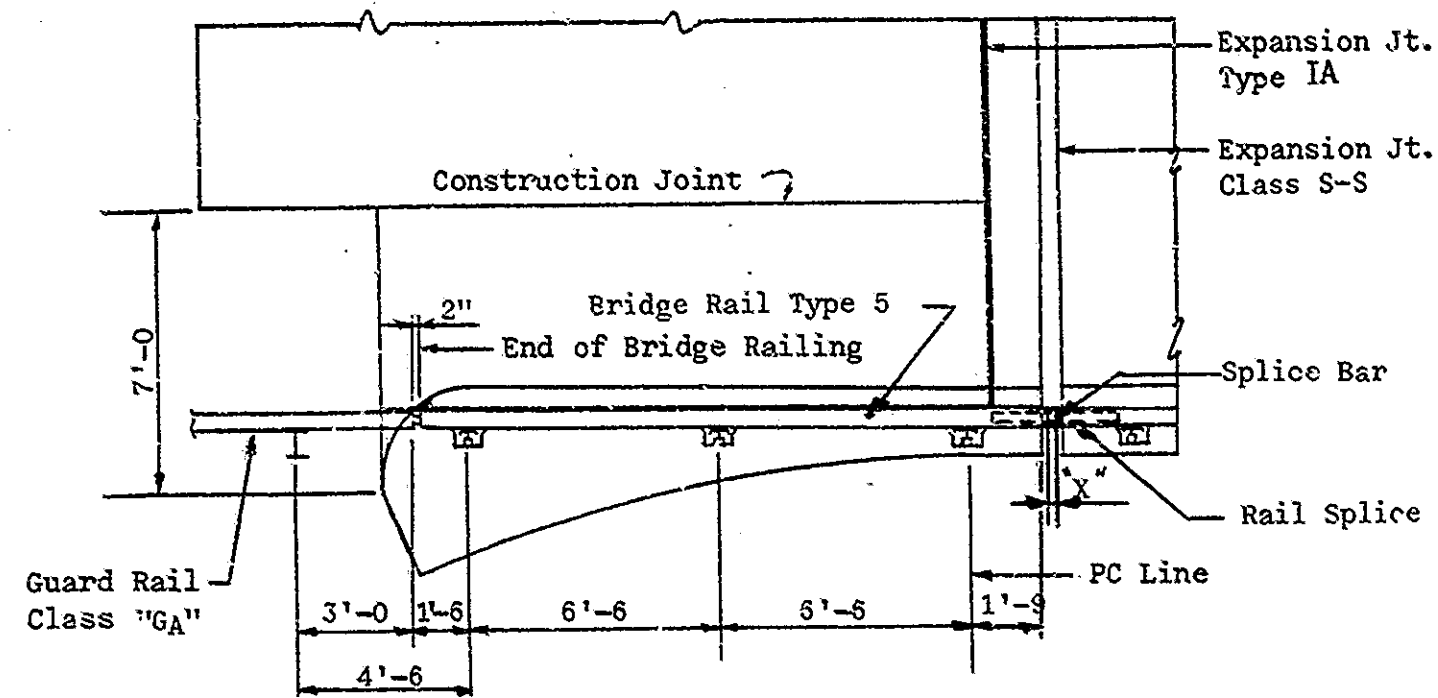
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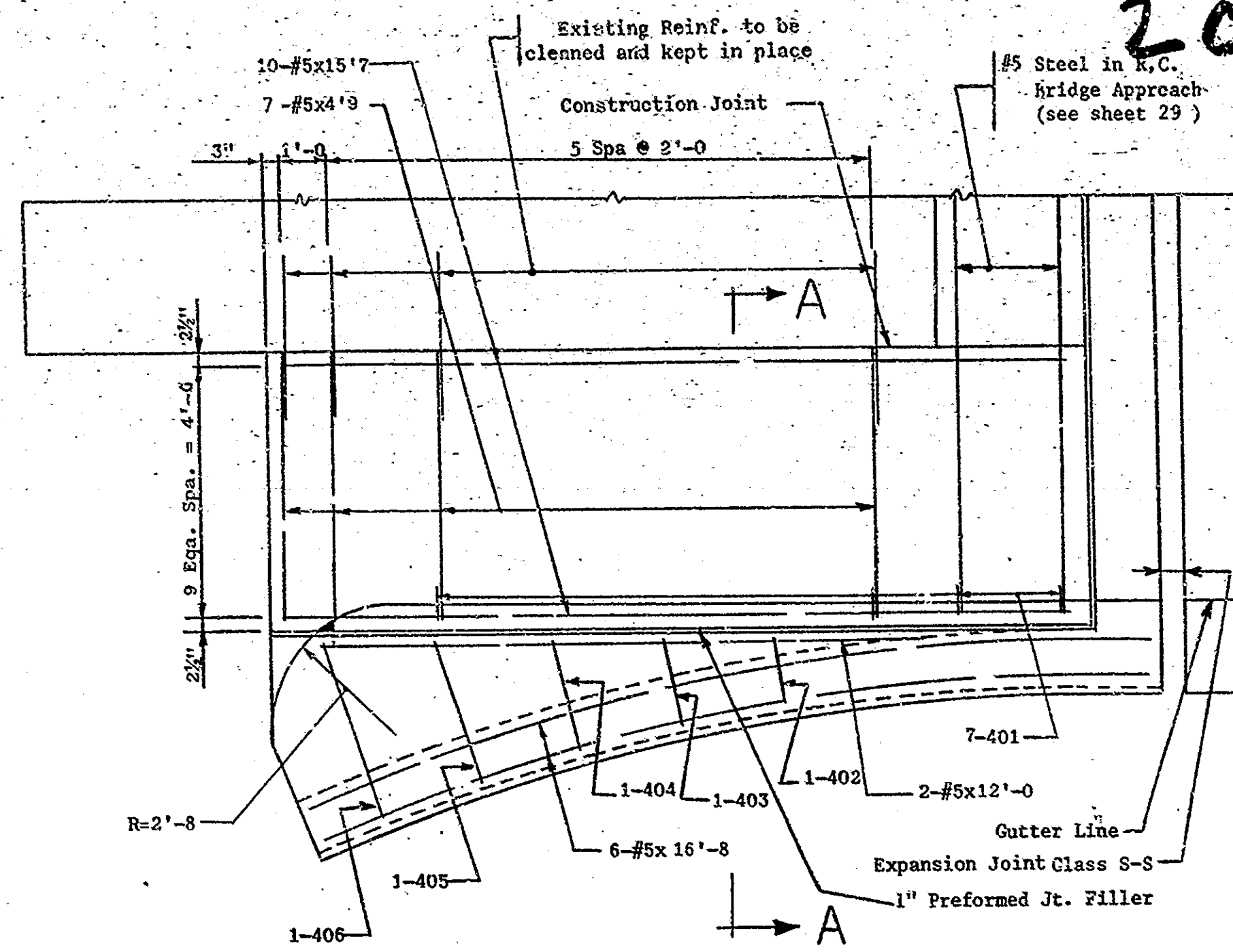
APPROACH DETAIL
(SHOWING REMOVAL)



APPROACH DETAIL
(SHOWING RAILING INSTALLATION)

I-465-127-5255A
At Entrance Ends

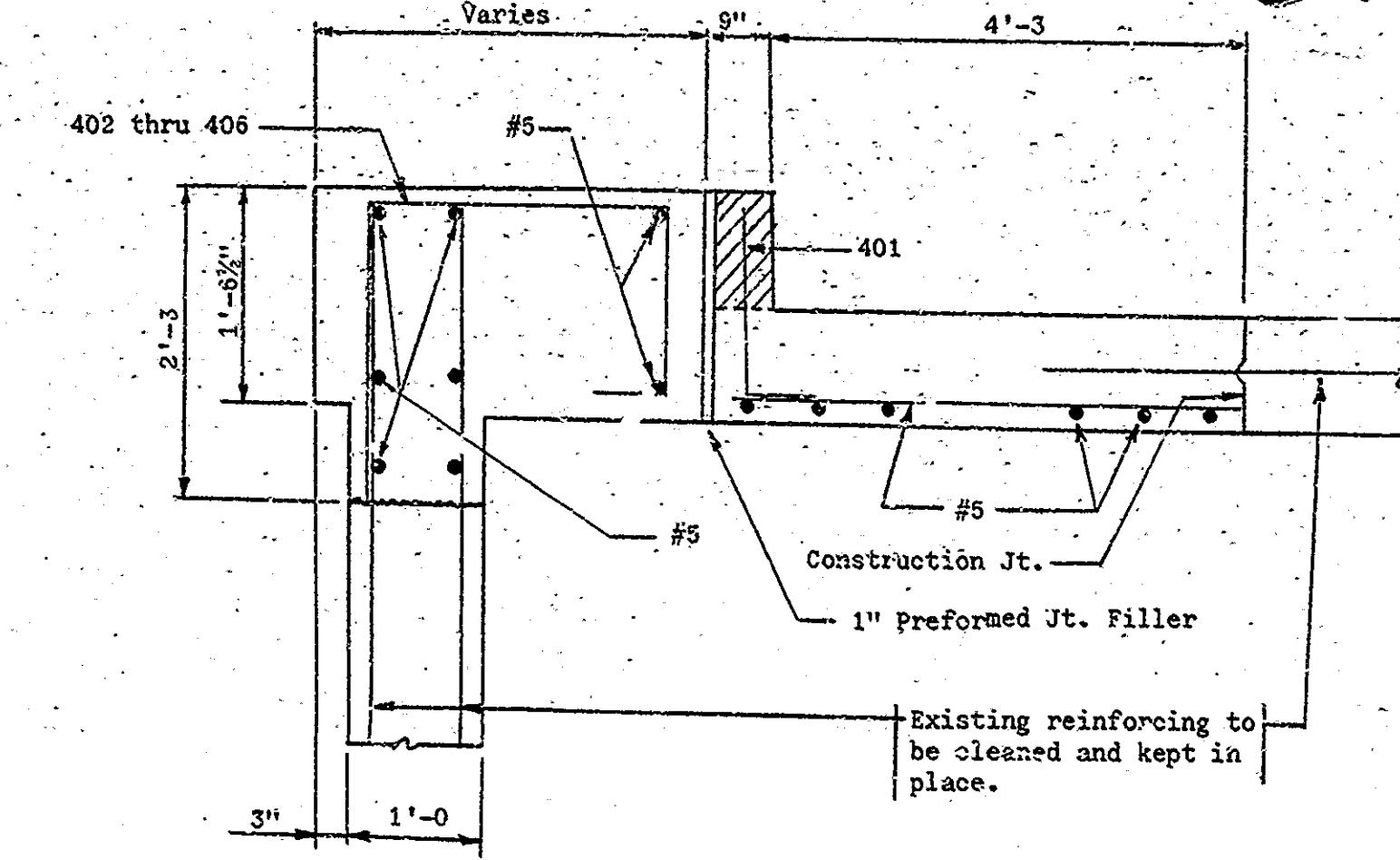
Dimension "X" to be 1" larger than the floor expansion joint opening at the ends of structure.



See sheet 21 for Section A - A / Bar Bending Diagram
See sheet 22 for Bill of Materials

APPROACH DETAIL
(SHOWING REINFORCING)

At Entrance Ends
I-465-127-5255A



Note: Hatched portion to be paid as "Integral Concrete Curb".

SECTION A-A

At Entrance Ends

Mark	Dimension B	Length
402	1'-2"	5'-1"
403	1'-6"	5'-5"
404	2'-0"	5'-11"
405	2'-8"	6'-7"
406	3'-4"	7'-3"

401 x 1'-10" 402 thru 406

BAR BENDING DIAGRAM

I-465-127-5255A

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BILL OF MATERIALS

ONE WING
At Entrance Ends
I-465-127-5255A

REINFORCING STEEL			
Mark or Size	Number	Length	Weight
5	10	15'-7"	
5	7	4'-9"	
5	6	16'-8"	
5	2	12'-0"	
Total #5 326 lb.			
401	7	1'-10"	
402	1	5'-1"	
403	1	5'-5"	
404	1	5'-11"	
405	1	6'-7"	
406	1	7'-3"	
Total #4 30 lb.			
Total Reinforcing Steel 356 lb.			

CONCRETE	
Concrete Class "A" in Substructure	2.8 cyds.
Integral Concrete Curb	.34 cyds.
Concrete Pavment Reinforced (10")	8.9 sys.
MISCELLANEOUS	
Railing Type 5	16.5 lft.

For 4 Wings:

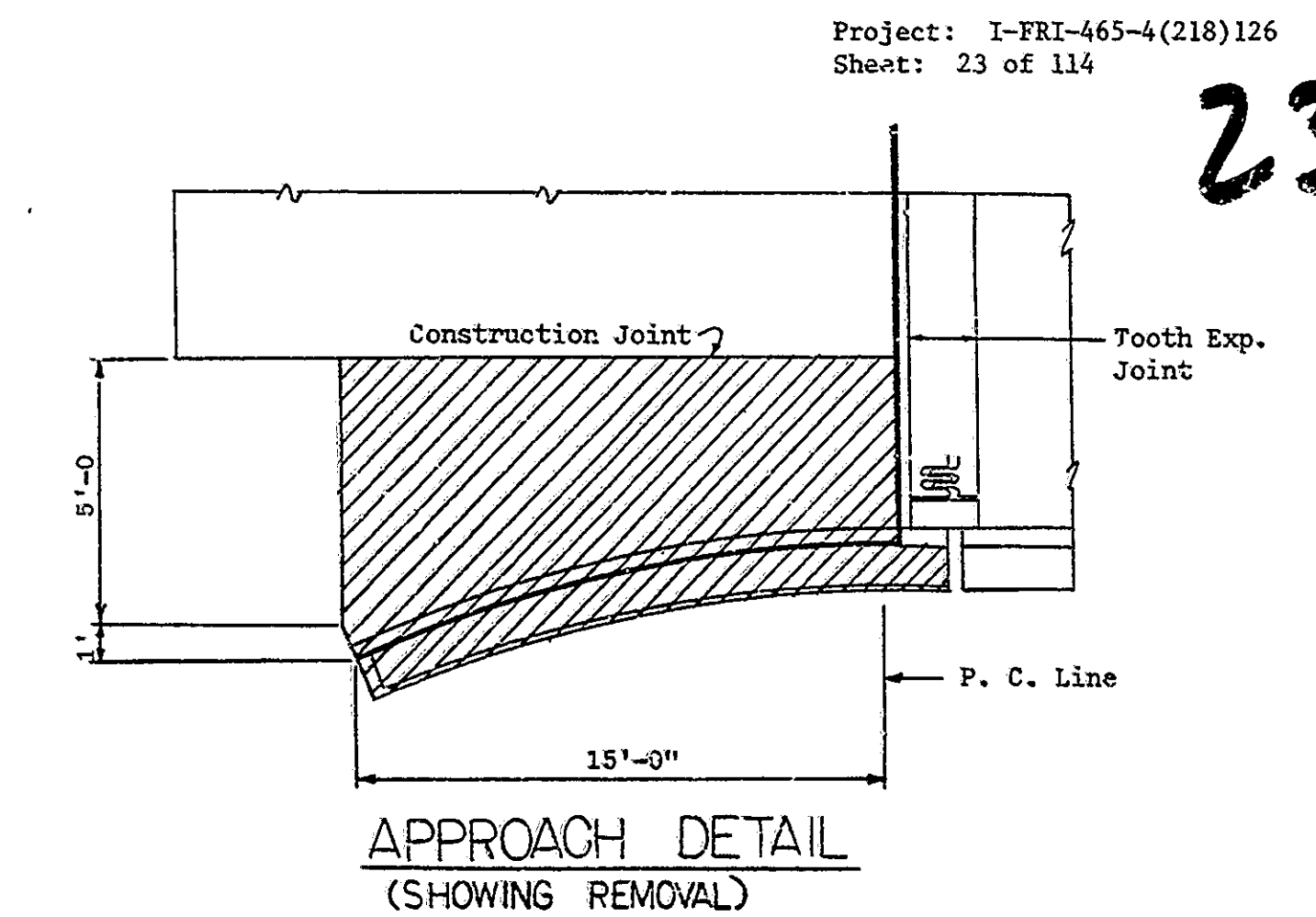
Reinforcing Steel 1424 lbs.

Concrete Class "A" in Substructure 11.2 cys.

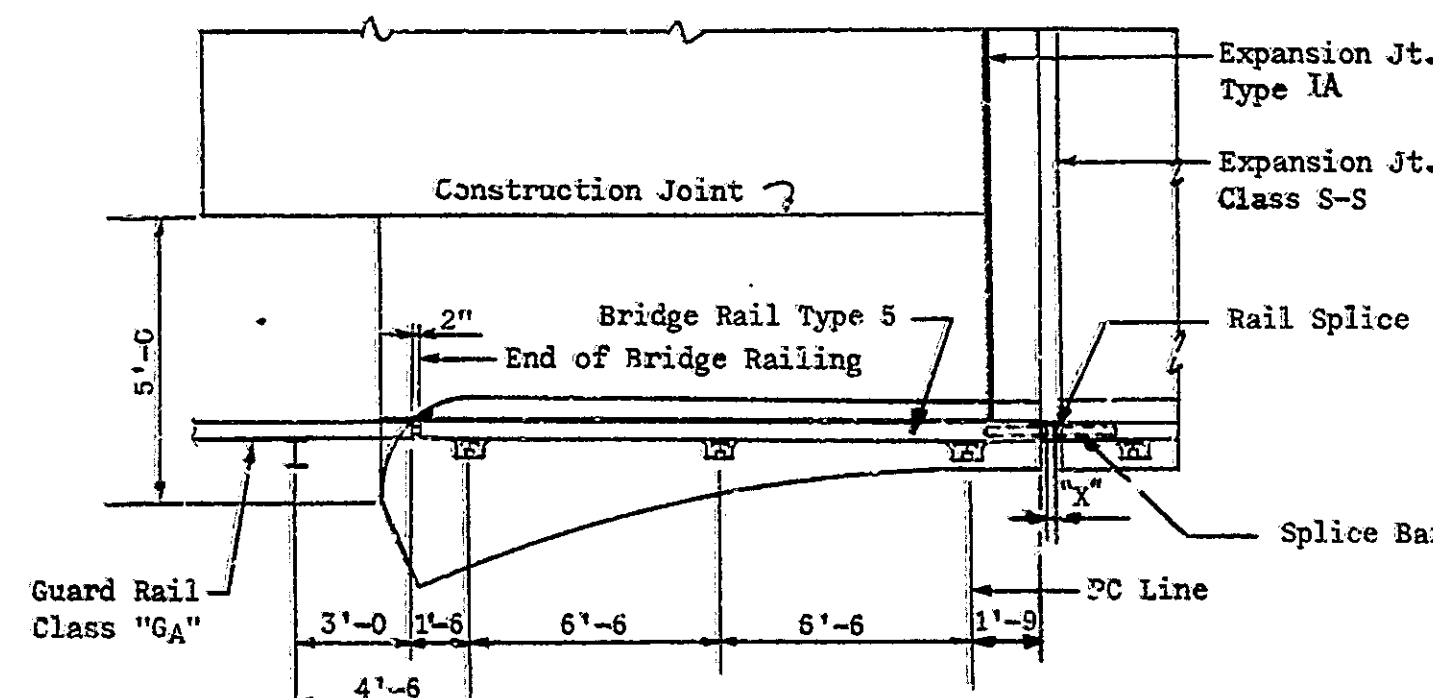
Integral Concrete Curb 1.4 cyds.

Railing Type 5 66.0 lft.

Concrete Pmt. Reinf. (10") 36 sys.
Removal of Pmt. 41 sys.

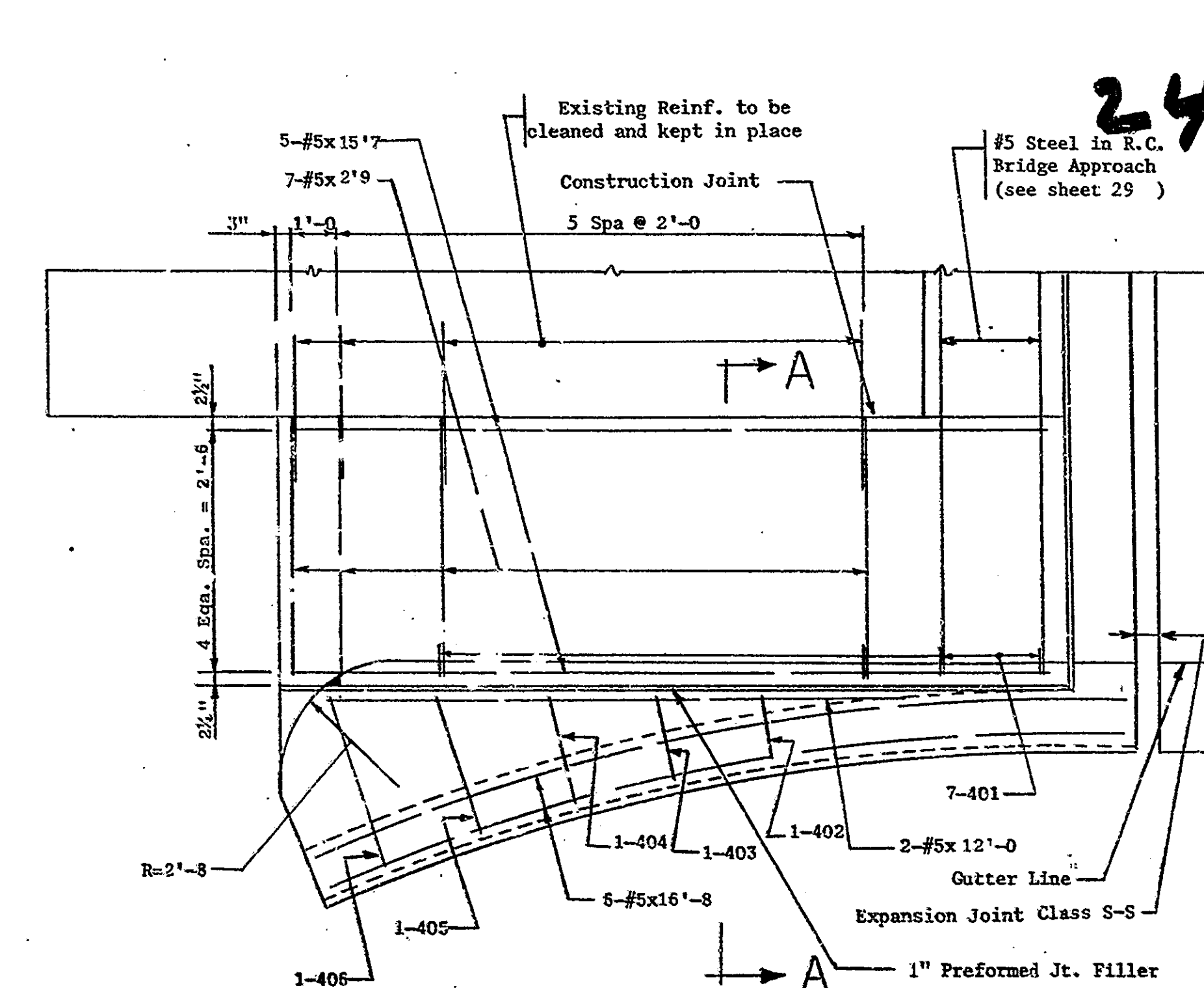


APPROACH DETAIL
(SHOWING REMOVAL)



APPROACH DETAIL
(SHOWING RAILING INSTALLATION)

Dimension "X" to be 1" larger than the floor expansion joint opening at the ends of structure.



See sheet 25 for Section A - A / Bar Bending Diagram
See sheet 26 for Bill of Materials

APPROACH DETAIL
(SHOWING REINFORCING)

At Exit Ends
I-465-127-5255A

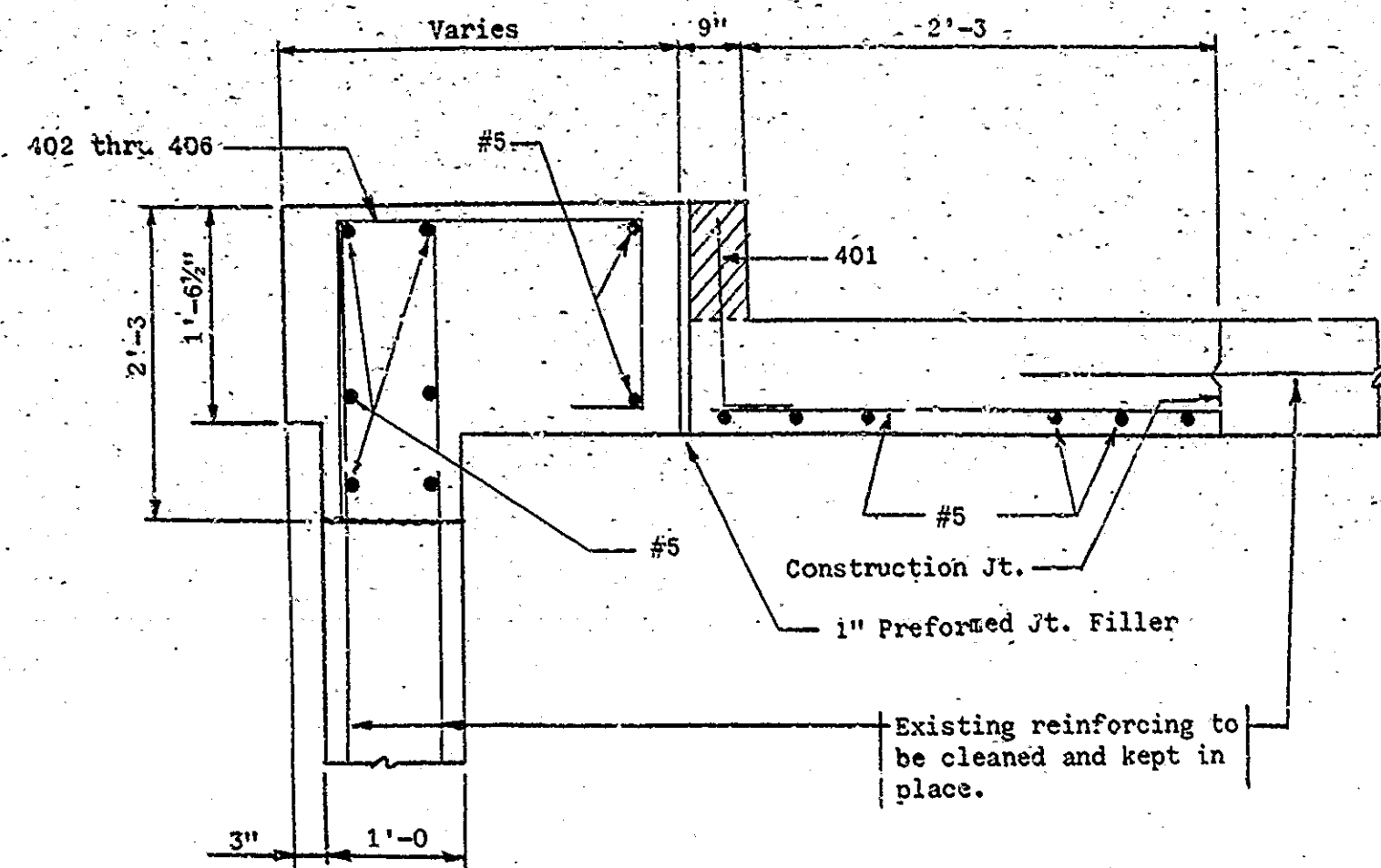
BILL OF MATERIALS

ONE WING
At Exit Ends
I-465-127-5255A

REINFORCING STEEL			
Mark or Size	Number	Length	Weight
5	5	15'-7"	
5	7	2'-9"	
5	2	12'-0"	
5	6	16'-8"	
Total #5 227 lb.			
401	7	1'-10"	
402	1	5'-1"	
403	1	5'-5"	
404	1	5'-11"	
405	1	6'-7"	
406	1	7'-3"	
Total #4 30 lb.			
Total Reinforcing Steel 257 lb.			

CONCRETE	
Concrete Class "A" in Substructure	2.8 cyds.
Concrete Pavement Reinf. (10")	5.4 sys.
Integral Concrete Curb	.34 cyds.
MISCELLANEOUS	
Railing Type 5	16.5 lft.

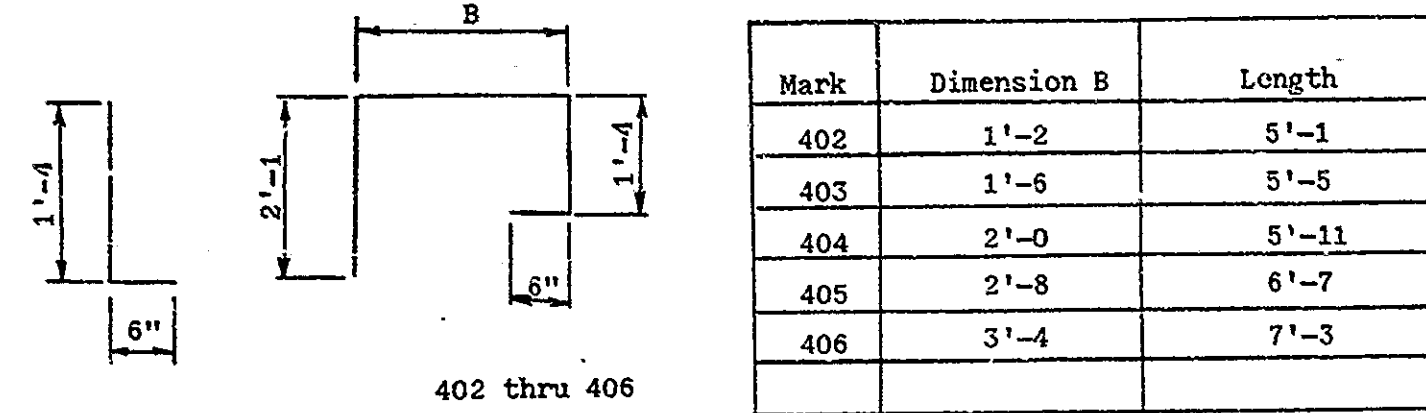
For 4 Wings:
Reinforcing Steel 1028 lbs.
Concrete Class "A" in Substructure 11.2 cys.
Integral Concrete Curb 1.4 cyds.
Railing Type 5 66.0 lft.
Concrete Pavement Reinforced (10")
Removal of Pavement 27 sys. 22 sys.



Note: Hatched portion to be paid as "Integral Concrete Curb".

SECTION A-A

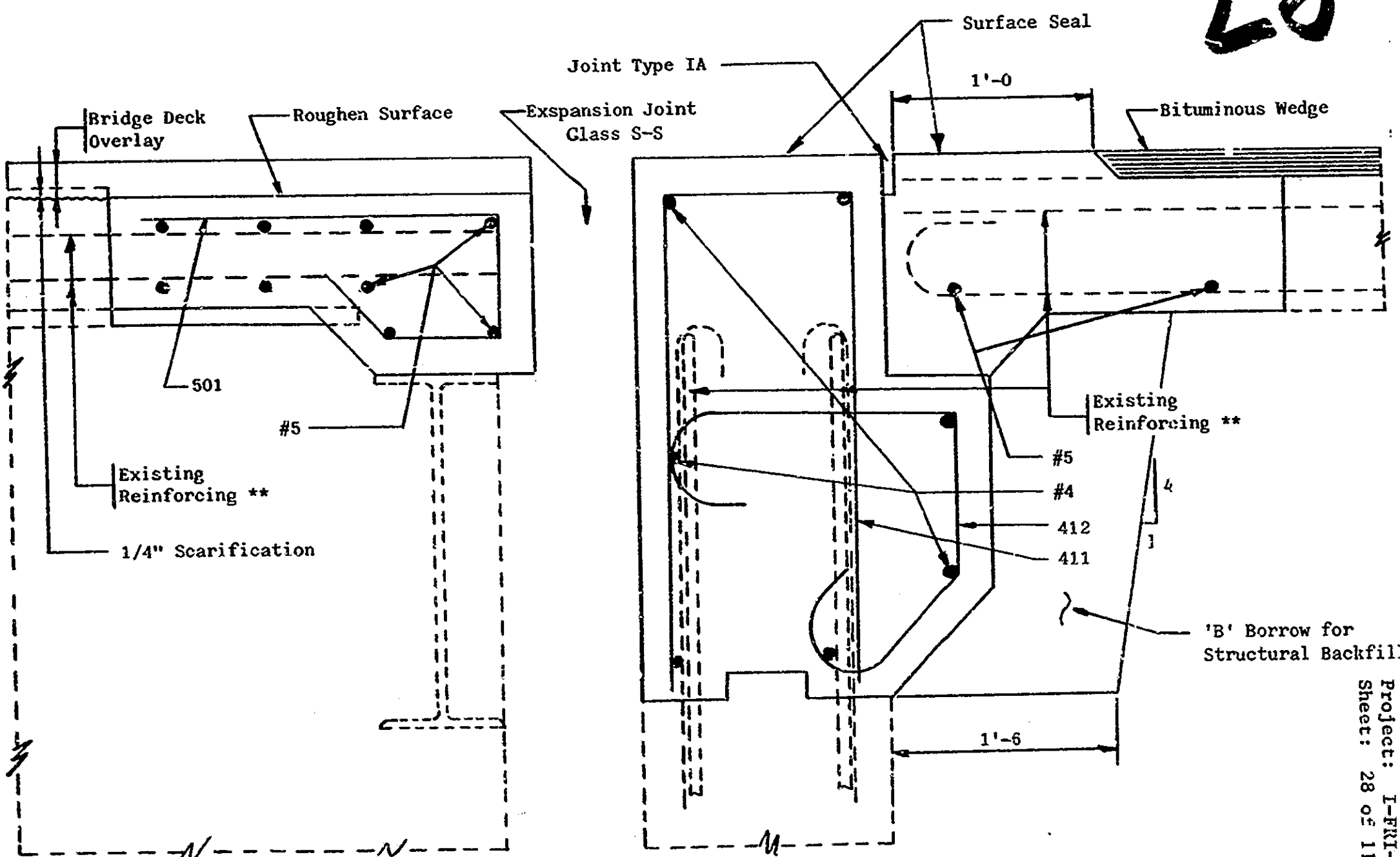
At Exit Ends



BAR BENDING DIAGRAM

I-465-127-5255A

401 x 1'-10"

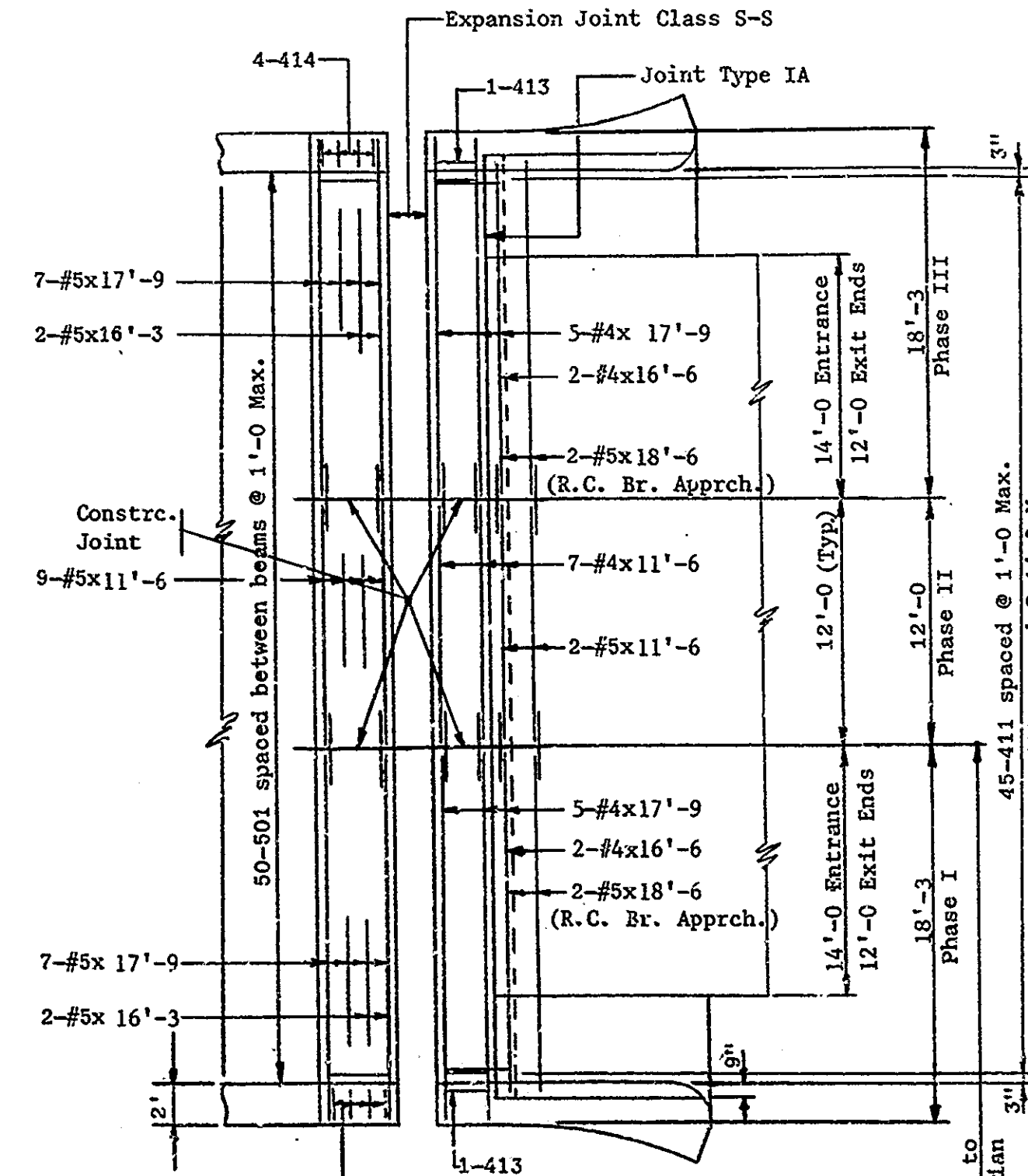


** To be stripped, cleaned and left in place.

SECTION AT END BENT

(SHOWING RECONSTRUCTION)

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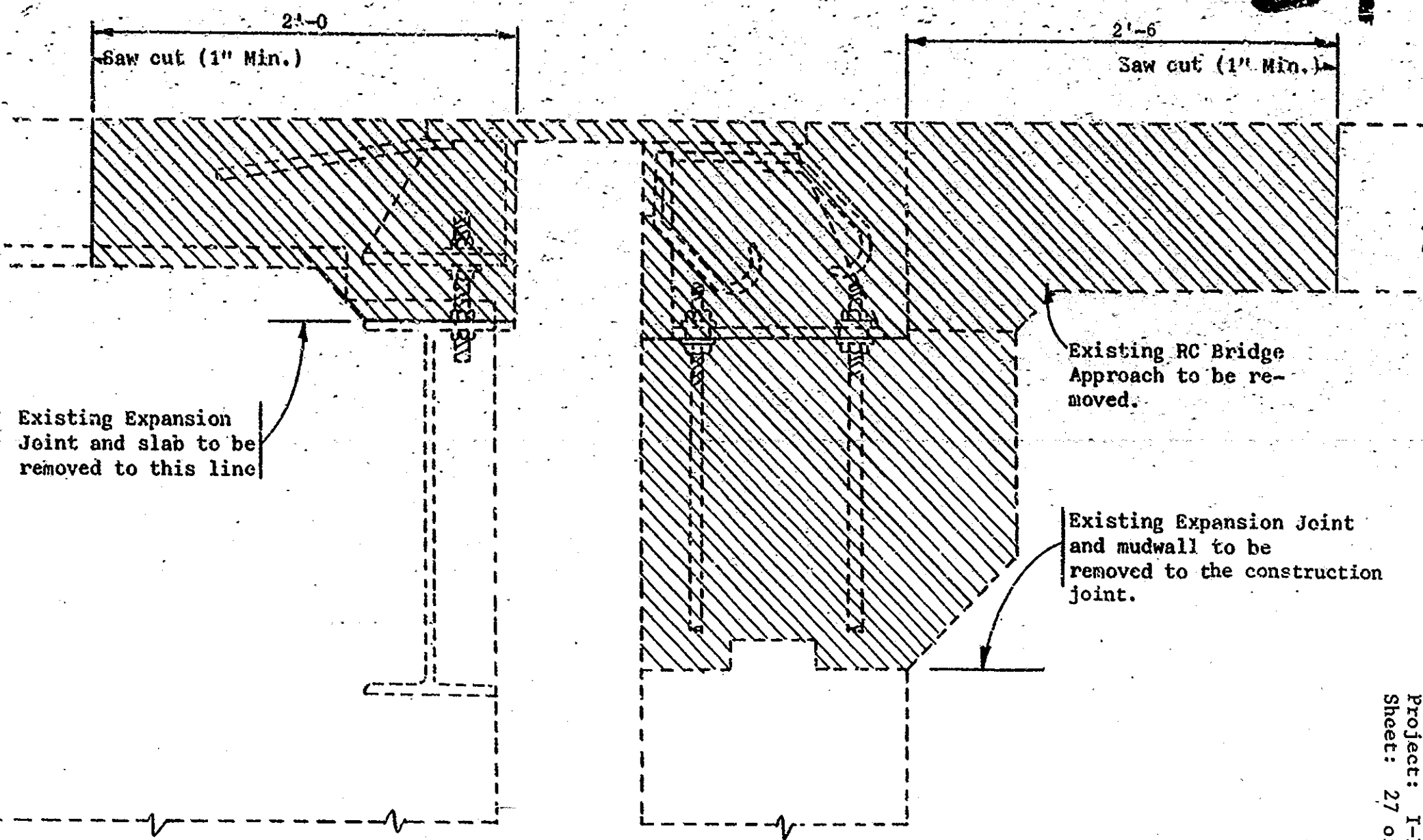


NOTE: Existing Transverse Steel to be cut and cleaned to provide for a 2'-0" min. lap.

For Corner Details see sheet 30.

PLAN VIEW

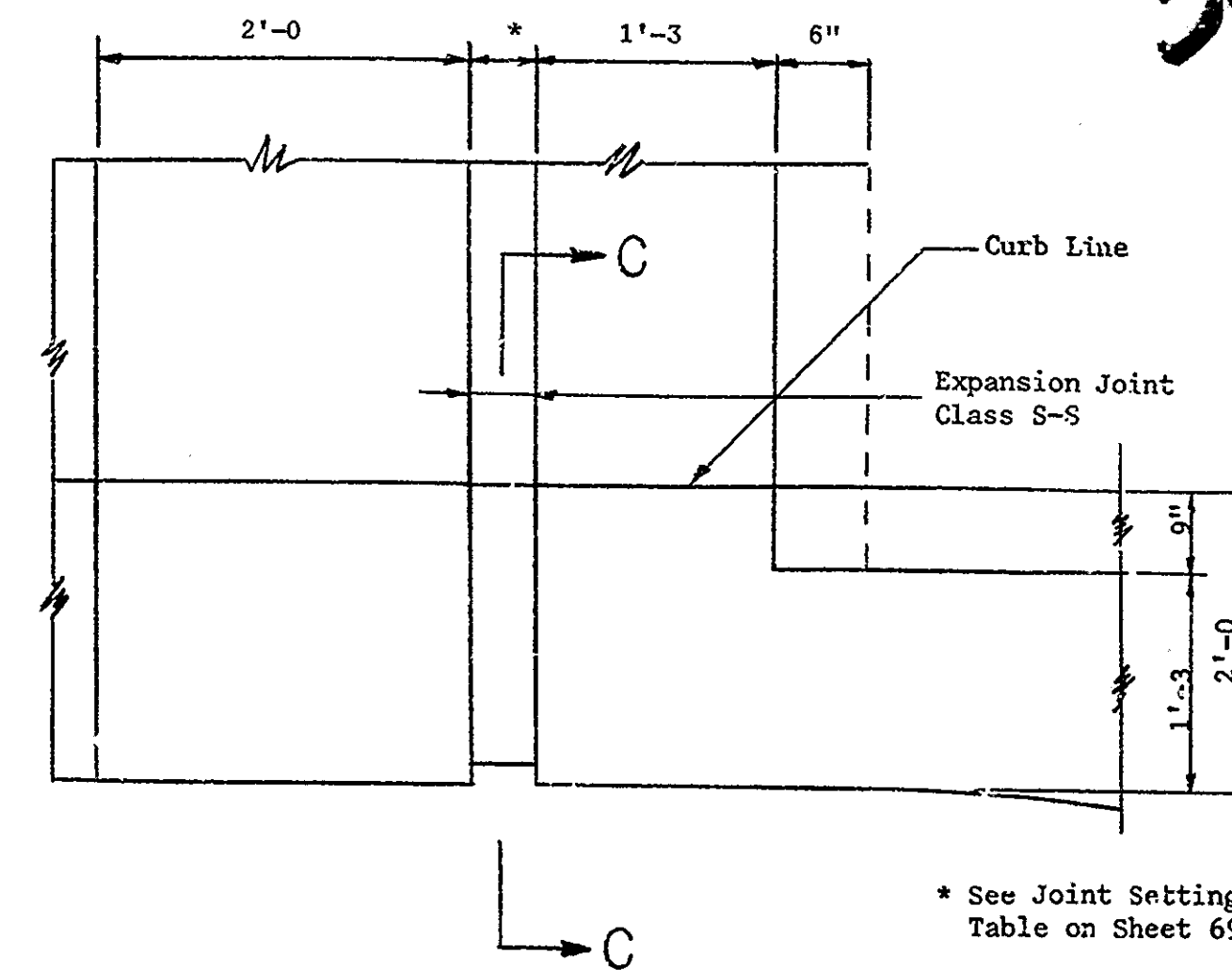
NOTE: Existing Longitudinal



SECTION AT EXISTING TOOTH EXPANSION JOINT
(SHOWING LIMITS OF REMOVAL)

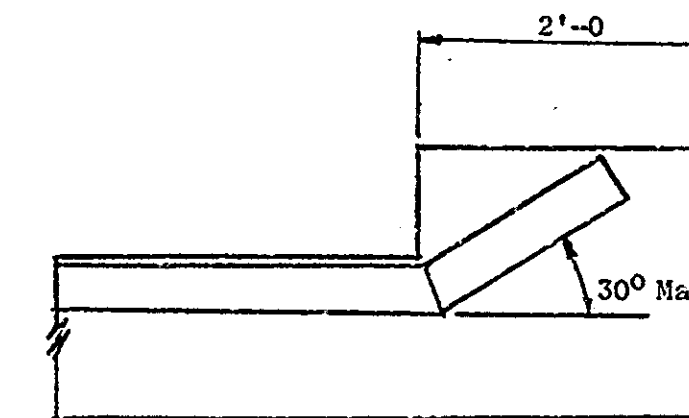
I-465-127-5255A

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* See Joint Setting Table on Sheet 69.

CORNER DETAIL ALL BENTS



SECTION C-C

Note: Existing railing post to be removed and reset

25

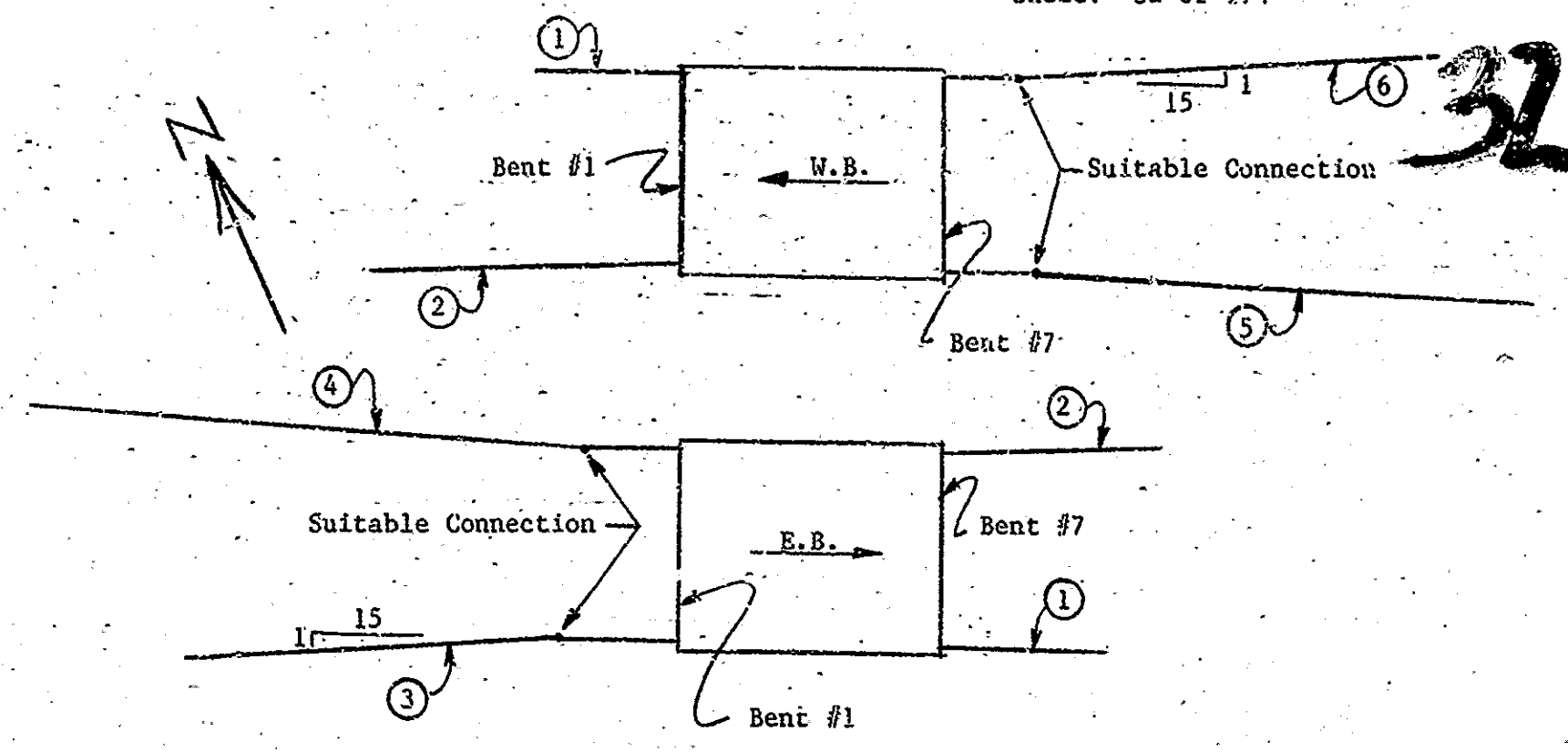
26

27

28

29

30



GUARD RAIL REVISION
I-465-127-5255A
Over White River

1. Install 28' of G.R. Class 'GA'
2. Install 52' of G.R. Class 'GA'
3. Remove 28' of Steel Beam G.R., Install 28' of G.R. Class 'GA', Reset 72' of Steel Beam G.R. and attach to G.R. Class 'GA' with Suitable Connection, Remove 40' of G.R. Buried End, Install G.R. End Treatment
4. Install 28' of G.R. Class 'GA' at Structure, Remove 40' of G.R. Buried End, Reset 163' of Existing Steel Beam G.R. and attach to G.R. Class 'GA' with a Suitable Connection, Install 178' of G.R. Class 'Ds', Install G.R. End Treatment
5. Install 28' of G.R. Class 'GA' at structure, Install 10 Posts and Brackets Type 'D' to replace damaged posts, Remove 40' of G.R. Buried End, Reset 206' of Existing Steel Beam G.R. and attach to G.R. Class 'GA' with a Suitable Connection, Install 135' of G.R. Class 'Ds', Install G.R. End Treatment
6. Remove 60' of Steel Beam G.R., Install 28' of G.R. Class 'GA', Reset 40' of Steel Beam G.R. and attach to G.R. Class 'GA' with Suitable Connection, Install 32' of G.R. Class 'Ds', Remove 40' of G.R. Buried End, Install G.R. End Treatment

SUMMARY:

Removal of G.R.	248 lft.
Reset G.R.	481 lft.
G.R. Type 'D'	345 lft.
G.R. Type 'C'	272 lft.
G.R. End Treatment	4 each
G.R. Post and Bracket Type 'D'	10 each

I-465-127-5274A
I-465 Over Carmel Creek

STRUCTURE DATA:

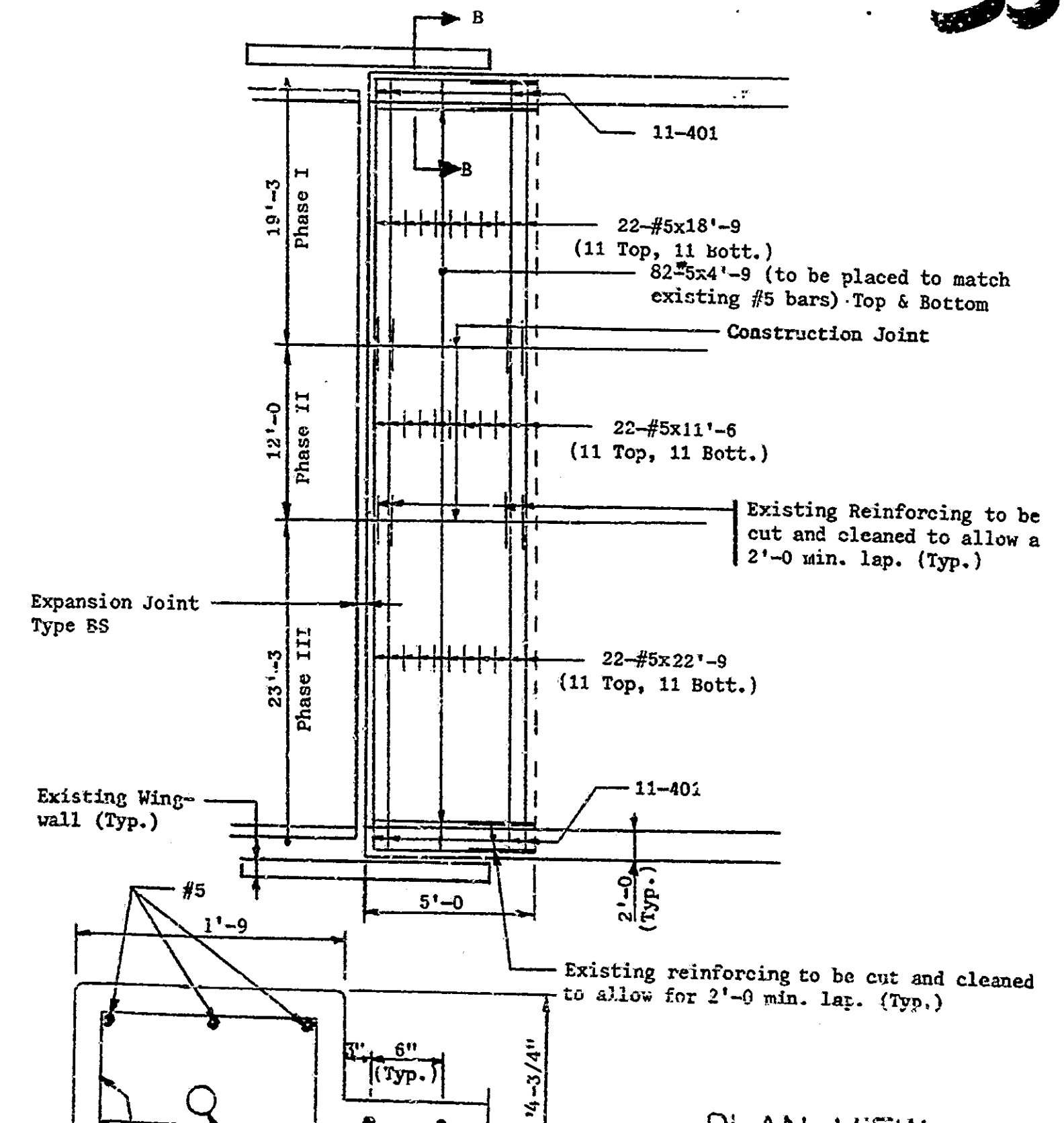
Type:	Twin Continuous Steel Beam (3 spans)	
Spans:	35'-0, 44'-0, 35'-0.	
Skew:	0°	
O-O Bridge Floor:	116'-7"	
Clear Roadway:	51'-0"	
O-O Coping:	54'-6"	
Curb Width:	6"	
Deck Area:	660.6 sys/Bridge	1321.2 sys. Total
Expansion Joints:	Existing: Bent #1 & #4	Proposed: Bent #1 Type BS 6 Bent #4 Type BS 11
ADT (1980):	49,800 V.P.D.	
Approach:	36'-0 R.C. Pavement	

CONSTRUCTION PROCEDURE:

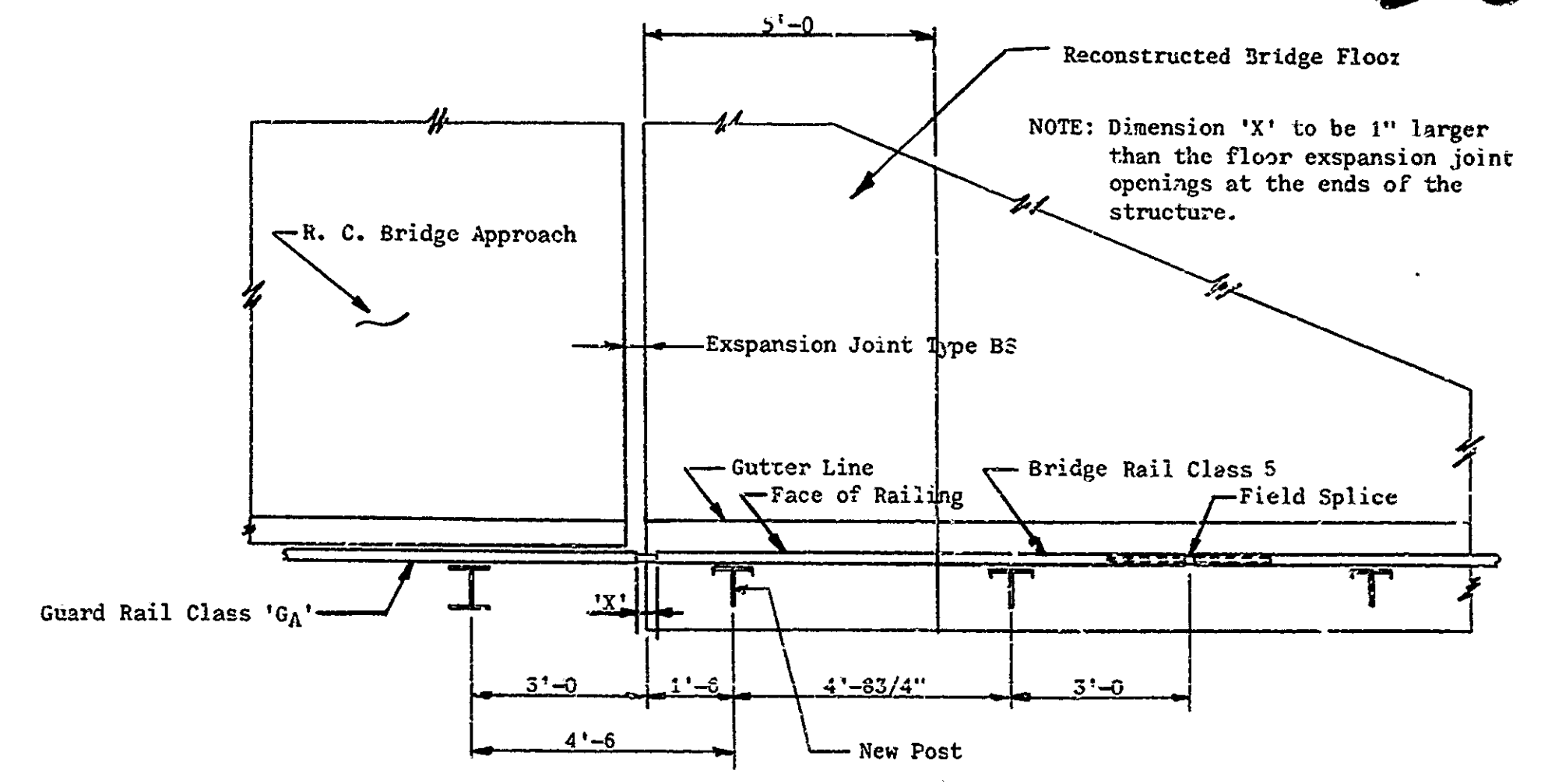
- Place concrete overlay according to sheet #10.
- Clean and seal the roadway face and top of the curbs and walks, face of the deck copings, underside of the deck from copings to the drip bead and top of the overlay dam on approaches.
- Remove top 2" of existing bituminous material from the terminal joints. Clean out the joint and place new bituminous material.
- Construct bituminous wedges.
- Update Guard Rail according to sheet #42.
- Fill eroded areas of spill slopes with revetment riprap as directed by the engineer. (Estimated quantity: 60 tons)
- Remove and reconstruct 5'-0 long sections of the bridge deck, full width, at both ends of both structures according to sheets 35 thru 39.
- Mudjack west end of W.B. structure and east end of E.B. structure.
- Construct "Curb Turnout, Type 'A'" at southeast corner of the westbound structure according to Road Standard GR 4.
- Remove and replace 5' of the R.C. Bridge Approaches and provide integral concrete curbs with the new approaches at the entrance ends of both bridges. See sheets 40 & 41.
- Extend Roadway drains according to sheet #71.
- Adjust casting to Grade on approaches.

NOTES:

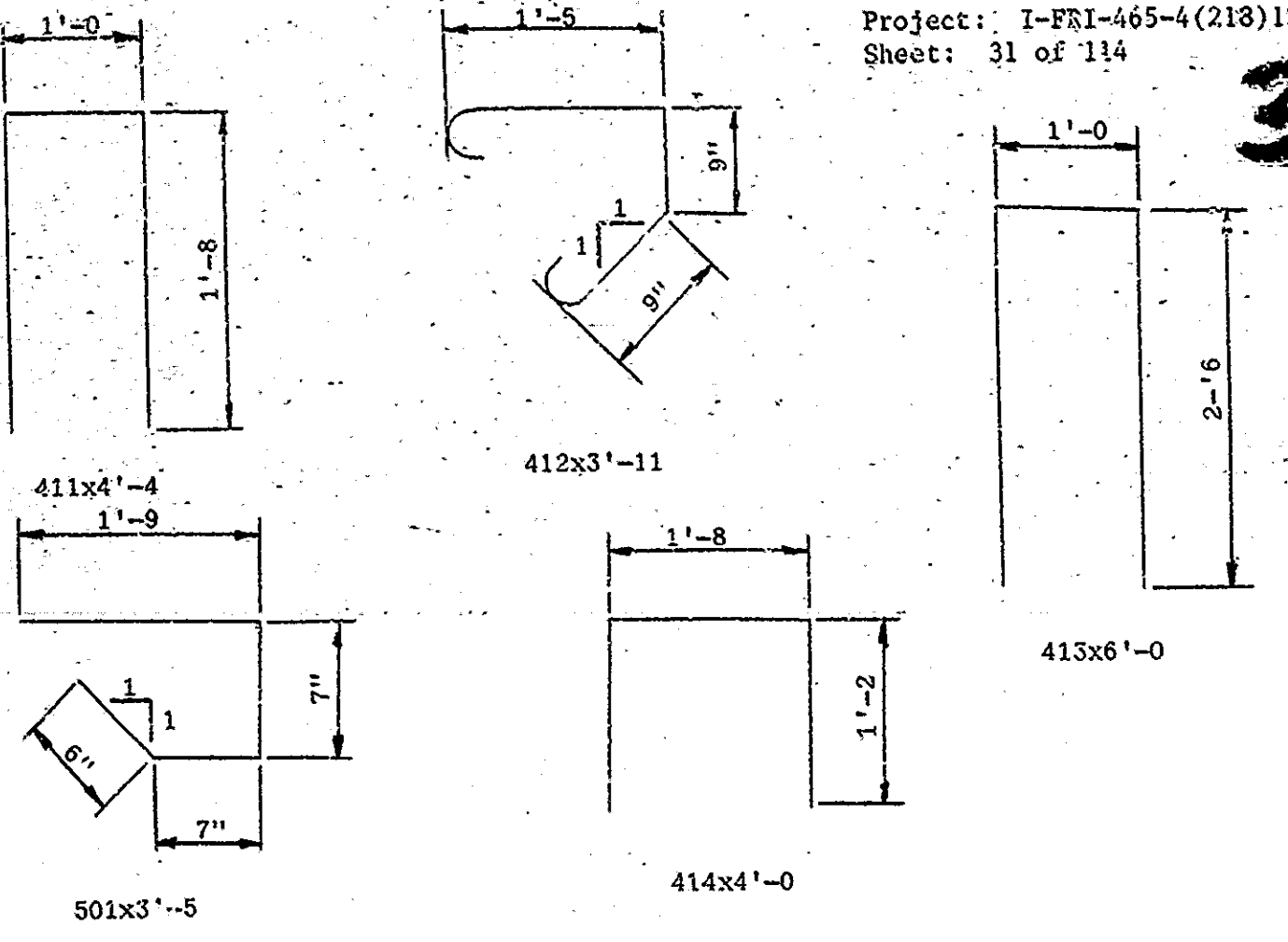
- See sheet 34 for longitudinal section
- See sheet 61 for expansion joint details
- See sheet 37 for section at end bents
- See sheet 70 for section at roadway drains
- See sheet 63 & 64 for joint installation at curb
- See sheet 71 for section at roadway drain pipe extension
- See sheet 39 & 41 for Bill of Materials
- See sheet 60 for Approach Section



PLAN VIEW



APPROACH DETAIL
(SHOWING RAILING INSTALLATION)
I-465-127-5274A

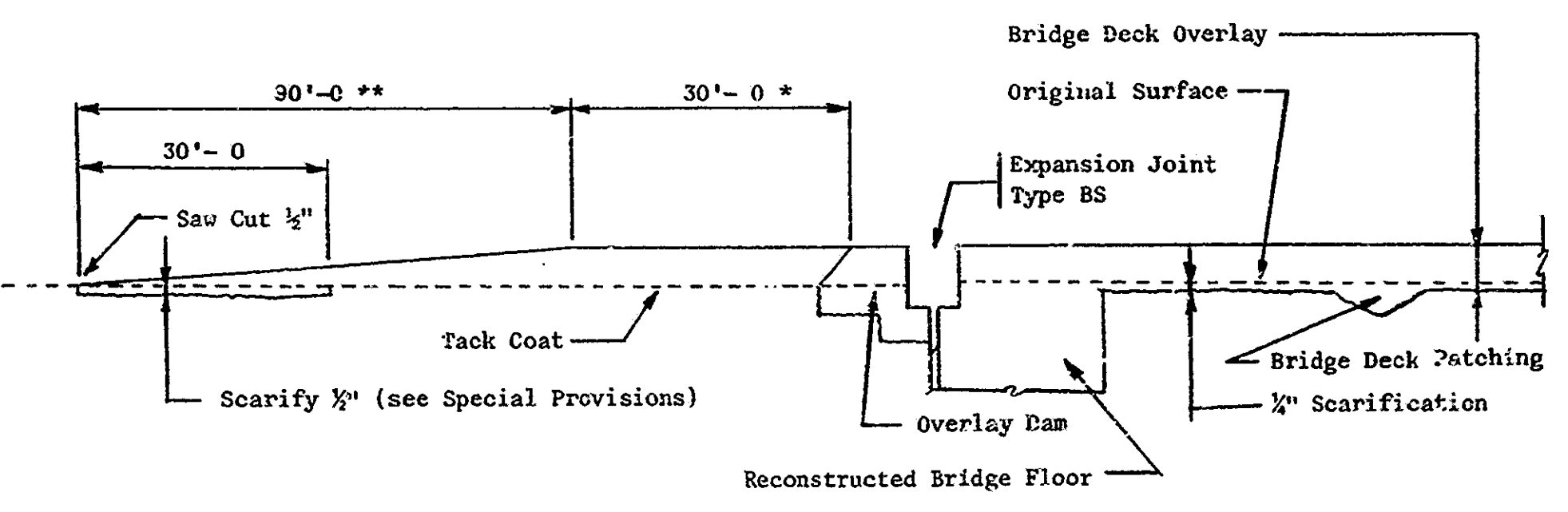


BAR BENDING DIAGRAMS

Bent 1 and 7
BILL OF MATERIALS
I-465-127-5255A

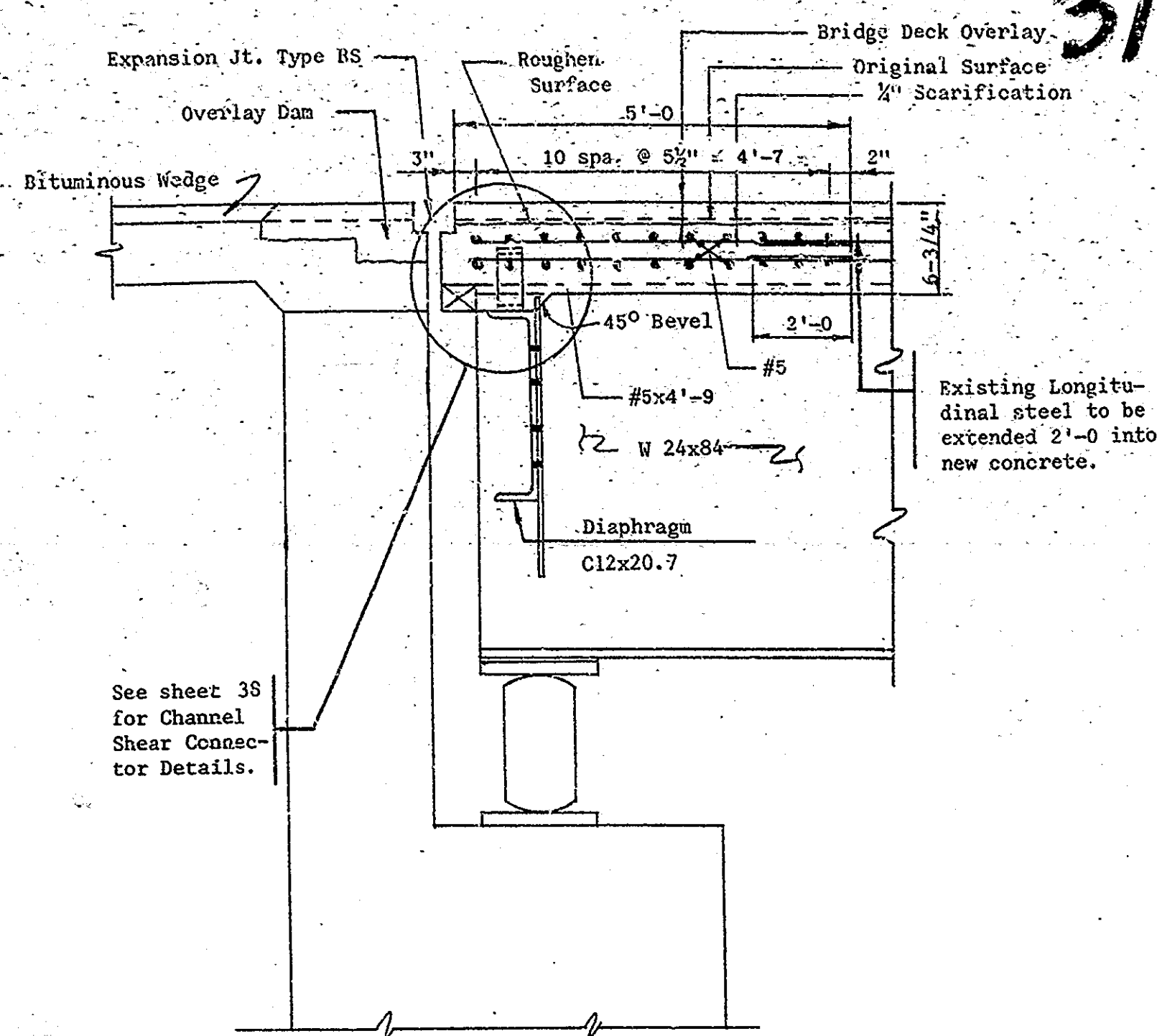
REINFORCING STEEL			
Mark or Size	Number	Length	Weight
501	200	3'-5"	
#5	16	18'-6"	
#5	56	17'-9"	
#5	16	16'-3"	
#5	44	11'-6"	
Total #5			2857 lb.
411	180	4'-4"	
412	180	3'-11"	
413	8	6'-0"	
414	32	4'-0"	
#4	40	17'-9"	
#4	16	16'-6"	
#4	28	11'-6"	
Total #4			1975 lb.
Total Reinforcing			4832 lb.

CONCRETE	
Concrete Class 'A' in Superstructure	
Bent 1	19.5 cys.
Bent 7	19.5 cys.
Total	39.0 cys.
Concrete Pgmt. Reinf. (10")	42 sys.
MISCELLANEOUS	
Expansion Joint Class S-S	194 lf.
Removal of Pavement	42 sys.



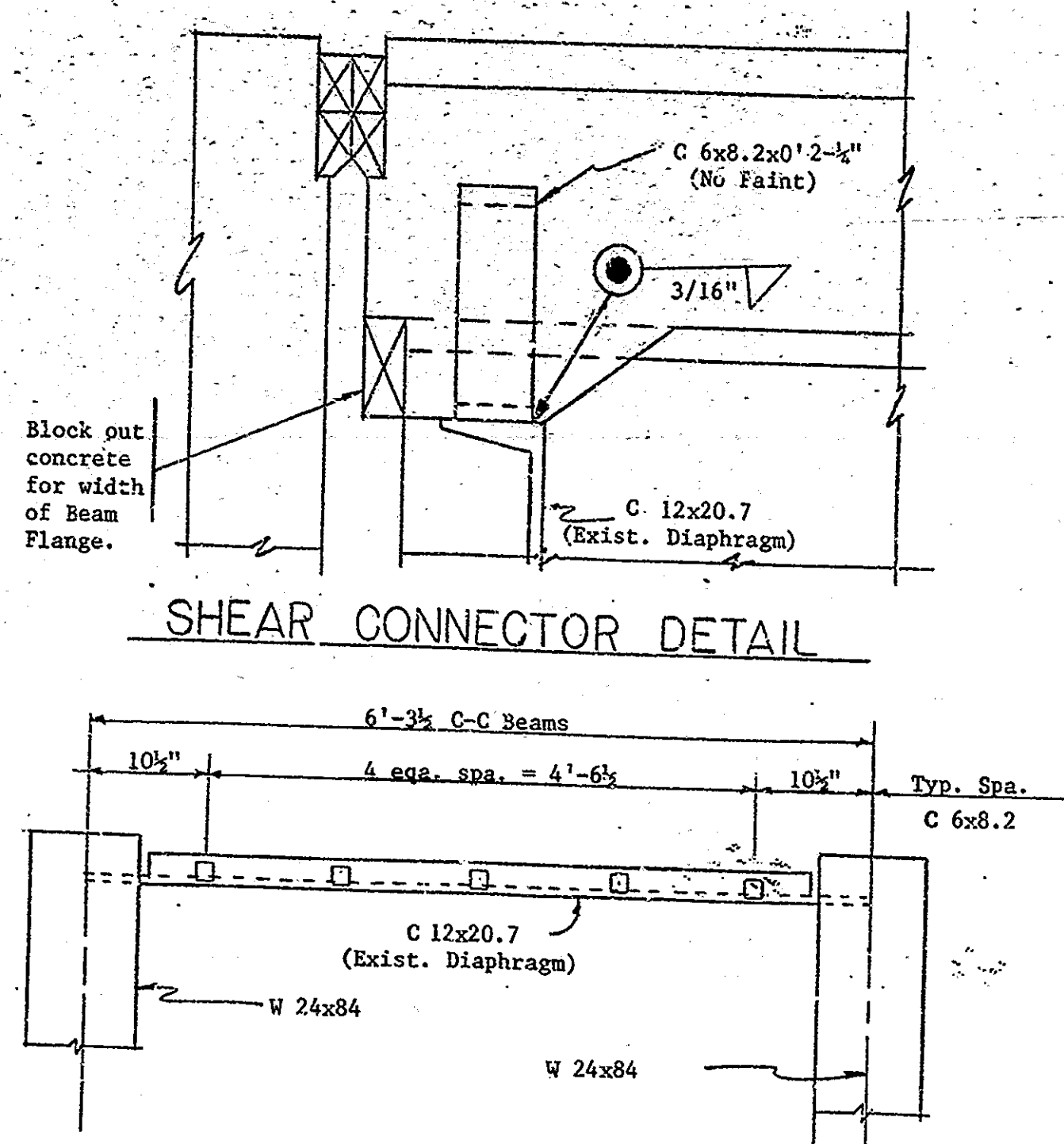
LONGITUDINAL SECTION

I-465-127-5274A



SECTION AT END BENT

I-465-127-5274A

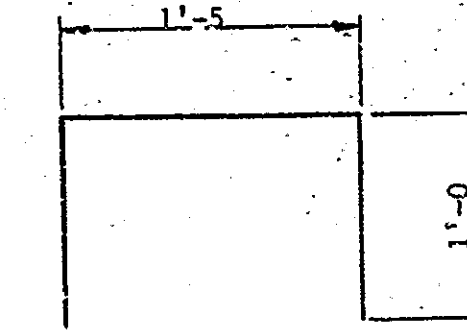


SHEAR CONNECTOR DETAIL

SHEAR CONNECTOR SPACING

To be paid for as "Channel Shear Connectors", Each. (Includes all materials, field welding and necessary equipment).

I-465-127-5274A

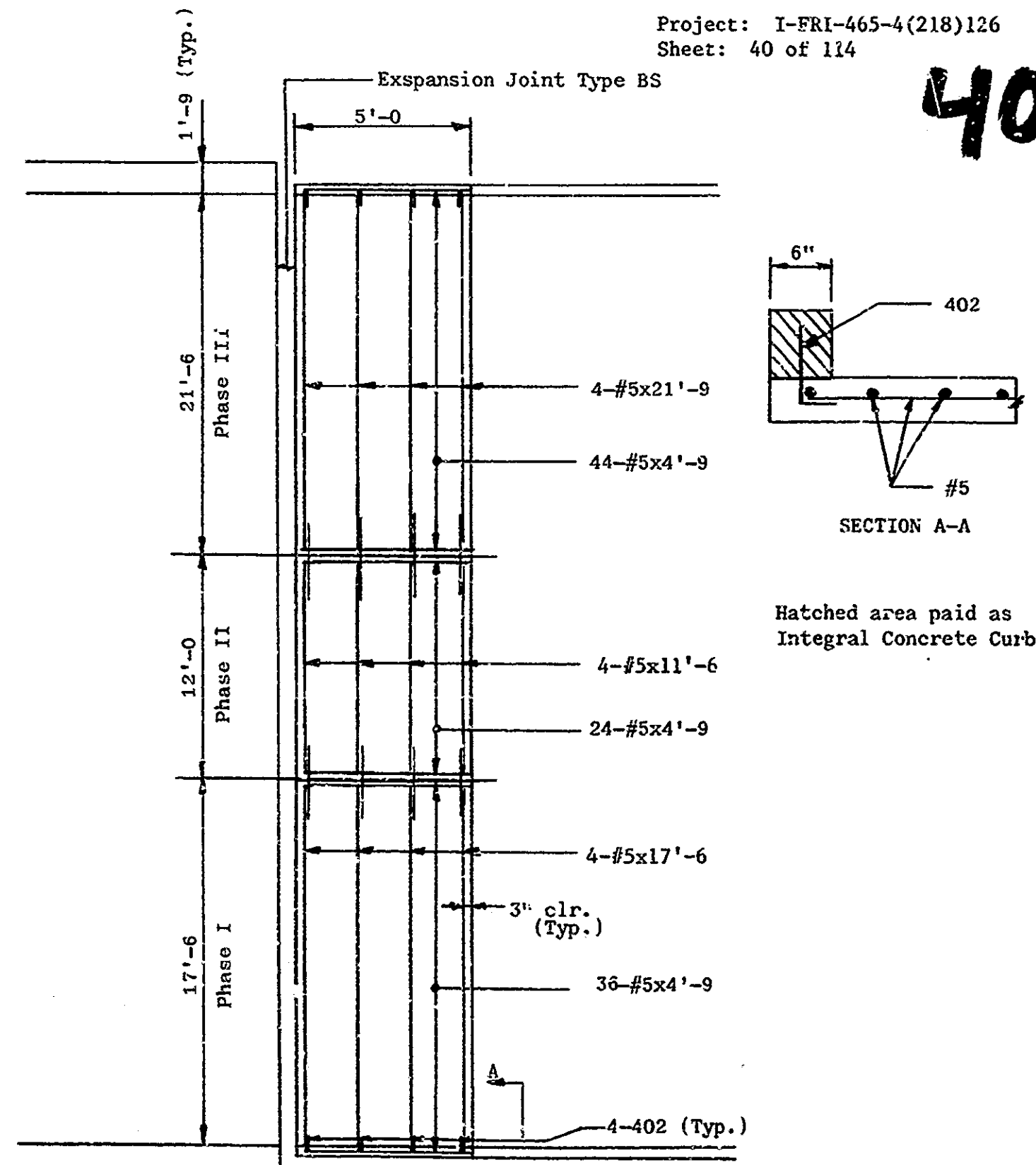


BAR BENDING DIAGRAMS

BILL OF MATERIALS

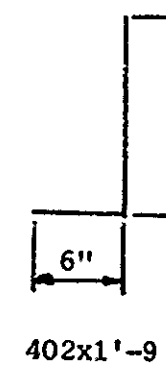
I-465-127-5274A

REINFORCING STEEL				CONCRETE	
Mark or Size	Number	Length	Weight	Class 'A' in Superstructure cys/each bent	6.31 cys.
#5	88	22'-9"			
#5	88	18'-9"			
#5	88	11'-6"			
#5	328	4'-9"			
Total #5			6490 lbs.	Total Class 'A' Concrete	25.3 cys.
MISCELLANEOUS					
401	88	3'-5"		Channel Shear Connectors	160 each
Total #4			201 lbs.	Railing Type 5	74 lft.
Total Reinforcing Steel			6691 lbs.	Concrete Pmnt. Reinf. 10"	58 sys.
				Removal of Pavement	58 sys.



PLAN VIEW

NOTE: Remove 5'-0" of R.C. Bridge Approach. Leave a minimum of 1'-6" of the #5 longitudinal bars extending from the existing concrete.



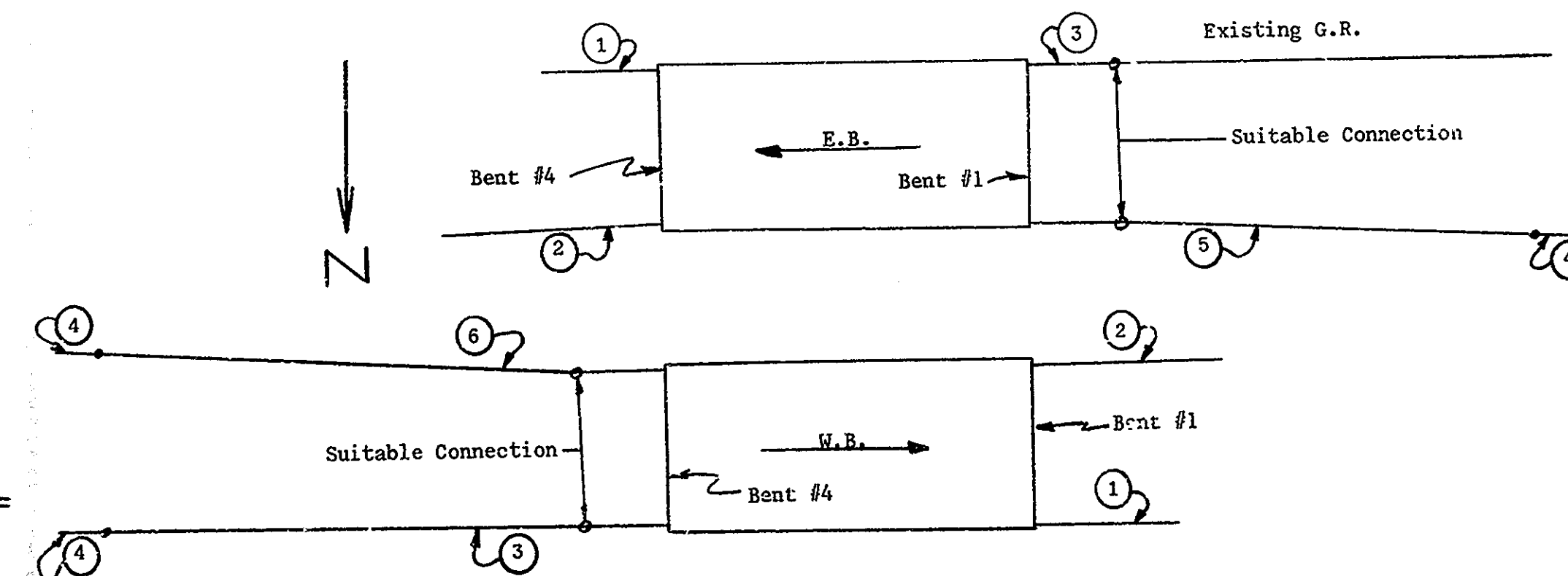
BAR BENDING DIAGRAMS

BILL OF MATERIALS (R.C. Bridge Approach Repair)

I-465-127-5274A

REINFORCING STEEL				CONCRETE	
Mark or Size	Number	Length	Weight		
#5	8	21'-9"		Concrete Pmnt. Reinf. (10")	58 sys.
#5	8	17'-6"			
#5	8	11'-6"		Removal of Pavement	58 sys.
#5	218	4'-9"		Integral Concrete Curb	.3 cys.
Total #5			1454 lb.		
402	16	1'-9"		MISCELLANEOUS	

GUARD RAIL REVISION
I-465-127-5274A
Over Carmel Creek



- NOTES:
1. Install 28' of G.R. Class 'G_A'
 2. Install 52' of G.R. Class 'G_A'
 3. Remove 28' of Steel Beam G.R. Install 28' of G.R. Class 'G_A' and connect to existing Steel Beam G.R. with a Suitable Connection.
 4. Remove 40' of G.R. Buried End, Install G.R. End Treatment.
 5. Install 28' of G.R. Class 'G_A' at structure, Reset 163' of Existing Steel Beam G.R., Install 178' of G.R. Class 'G_A'.
 6. Install 28' of G.R. Class 'G_A' at structure,

SUMMARY

Removal of G.R.	214 lft.
Reset G.R.	288 lft.
G.R. Type 'D'	394 lft.
G.R. Type 'G'	272 lft.
G.R. End Treatment	3 each

I-465-127-5275A
I-465 Under North River Road

Project: I-FRI-465-4(218)126
Sheet: 43 of 114

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STRUCTURE DATA:

Type: Continuous Steel Beam Bridge
Spans: 49'-0", 62'-3", 68'-3", 40'-0"
Skew: 17° 33' 40" Rt.
O-O Bridge Floor: 219'-4-5/8"
Clear Roadway: 25'-6"
O-O Coping: 29'-6"
Curb Width: 9"
Deck Area: 221.6 sqds.
Expansion Joints: Existing: Bent 1 and 5, Preformed
Proposed: Bent 1 and 5, BS 11
ADT (1980): 88 V.P.D. Approach: 22'-0" Bituminous Pmnt.

CONSTRUCTION PROCEDURE:

Place concrete overlay according to sheet 10.

Clean and seal the roadway face and top of the curbs and walks, face of the deck copings, underside of the deck from copings to the drip bead, all exposed faces of wings or concrete end posts and top of the overlay dam on approaches.

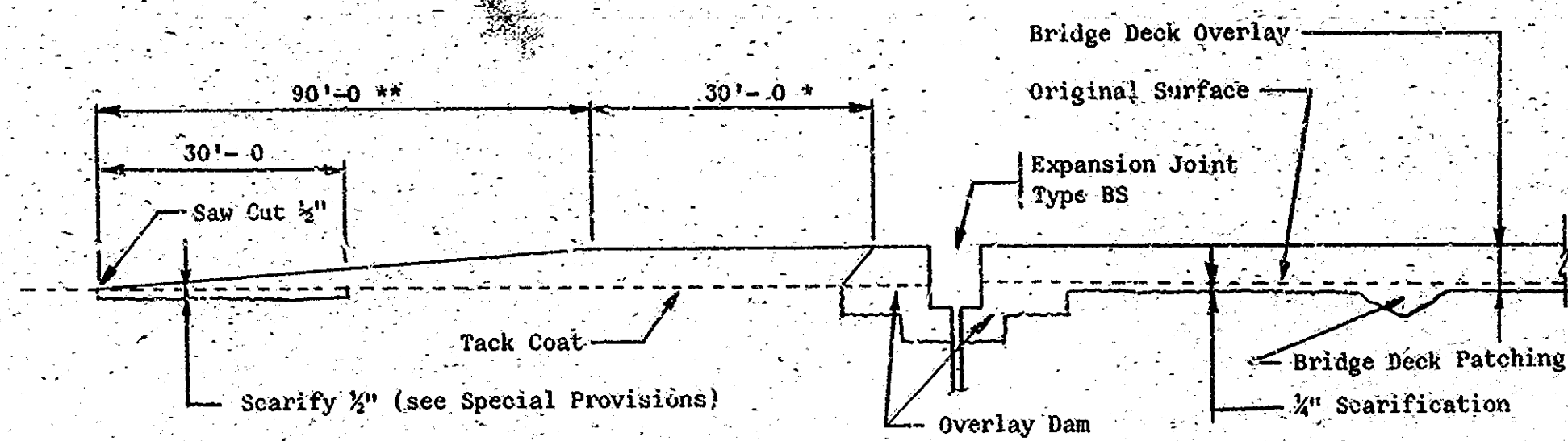
Construct bituminous wedges.

Update Guard Rail according to sheet 46.

Repair Bridge Beams according to sheet 45.

NOTES:

- See sheet 44 for longitudinal section.
- See sheet 61 for Expansion Joint Type BS Detail.
- See sheet 62 for section at end bents.
- See sheet 64 for joint installation at curbs.

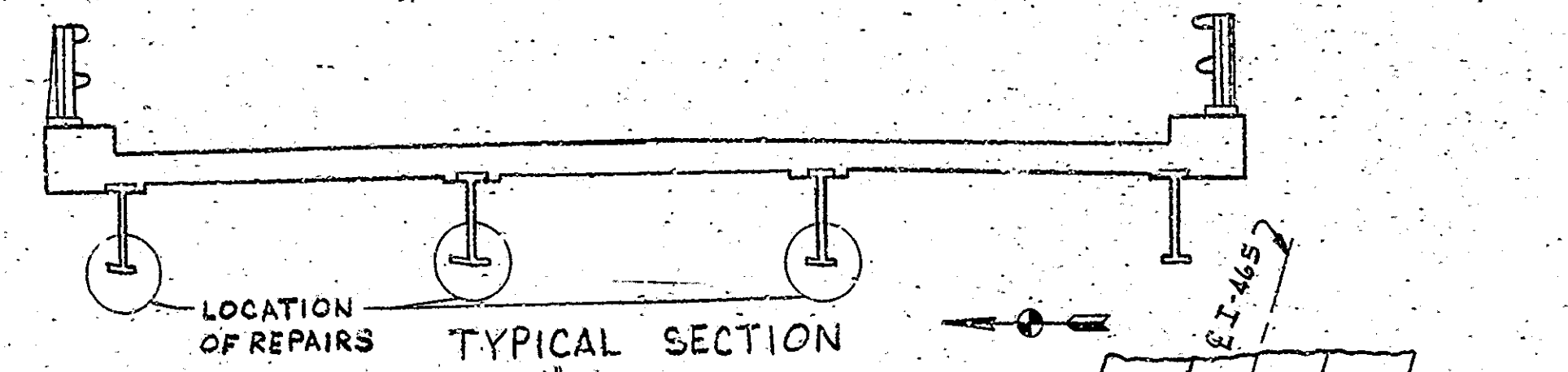


* Wedge to be continuation of the bridge profile
** Taper wedge uniformly to meet existing roadway

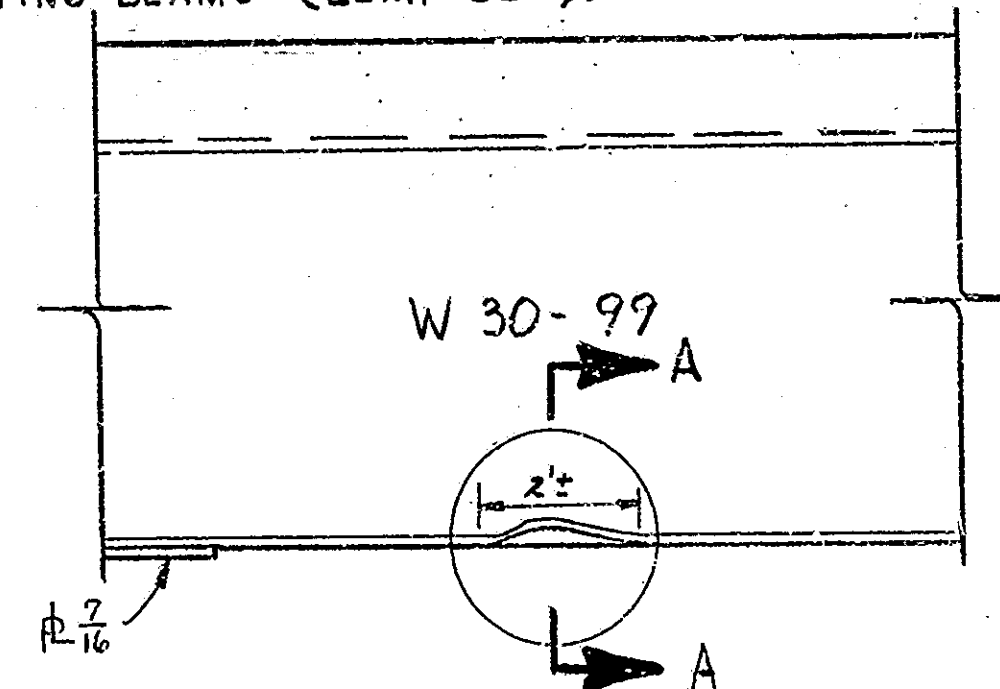
LONGITUDINAL SECTION

I-465-127-5275A

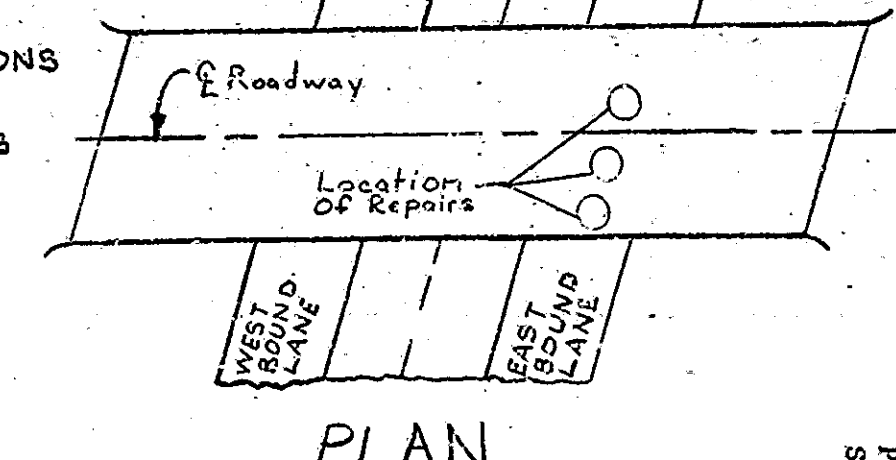
44



Note: FIELD STRAIGHTENING WILL BE DONE UNDER THE PROVISIONS OF ARTICLE 711.11 AND 711.58 OF THE SPECIFICATIONS. THE COST OF THIS WORK WILL BE PAID FOR AS "STRAIGHTENING EXISTING BEAMS" (LUMP SUM).



DRN 2 REN 2-15-80
WF 2-15-80



Project: I-FRI-465-4(218)126
Sheet: 45 of 114

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I-465-128-5276A
I-465 Over SR 431

Project: I-FRI-465-4(218)126
Sheet: 47 of 114

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STRUCTURE DATA:

Type: Twin Continuous Steel Beam Bridges
Spans: 38'-6", 64'-6", 64'-6", 34'-6"
Skew: 20° 47' Lt.
O-O Bridge Floor: 204'-5/8"
Clear Roadway: 50'-6"
O-O Coping: 54'-6"
Curb Width: 9"
Deck Area: 1145.0 sqs/Structure, 2290 sqs Total
Expansion Joints: Existing: Bent #1 Tooth, Bent #5 Preformed
Proposed: Bent #1 Class S-S, Bent #5 BS 8
ADT (1980): 49,800 V.P.D.
Approach: 36'-0" R.C. Pmnt.

CONSTRUCTION PROCEDURE:

Place concrete overlay according to sheet #10.

Clean and seal the roadway face and top of the curbs and walks, face of the deck copings, underside of the deck from copings to drip bead and top of the overlay dam on approaches.

Remove top 2" of existing bituminous material from the terminal joints. Clean out the joint and place new bituminous material.

Construct bituminous wedges.

Repair the damaged steel beam on the north side of the W.B. structure according to details on sheet #57.

Construct "Curb Turnout, Type 'L'" at the northwest corner of the E.B. structure according to Road Standard GR 4.

Update guard rail according to sheets 58 & 59.

Remove existing concrete end posts and extend the bridge rail to connect with the approach guard rail according to details on sheets 50, 51 & 52.

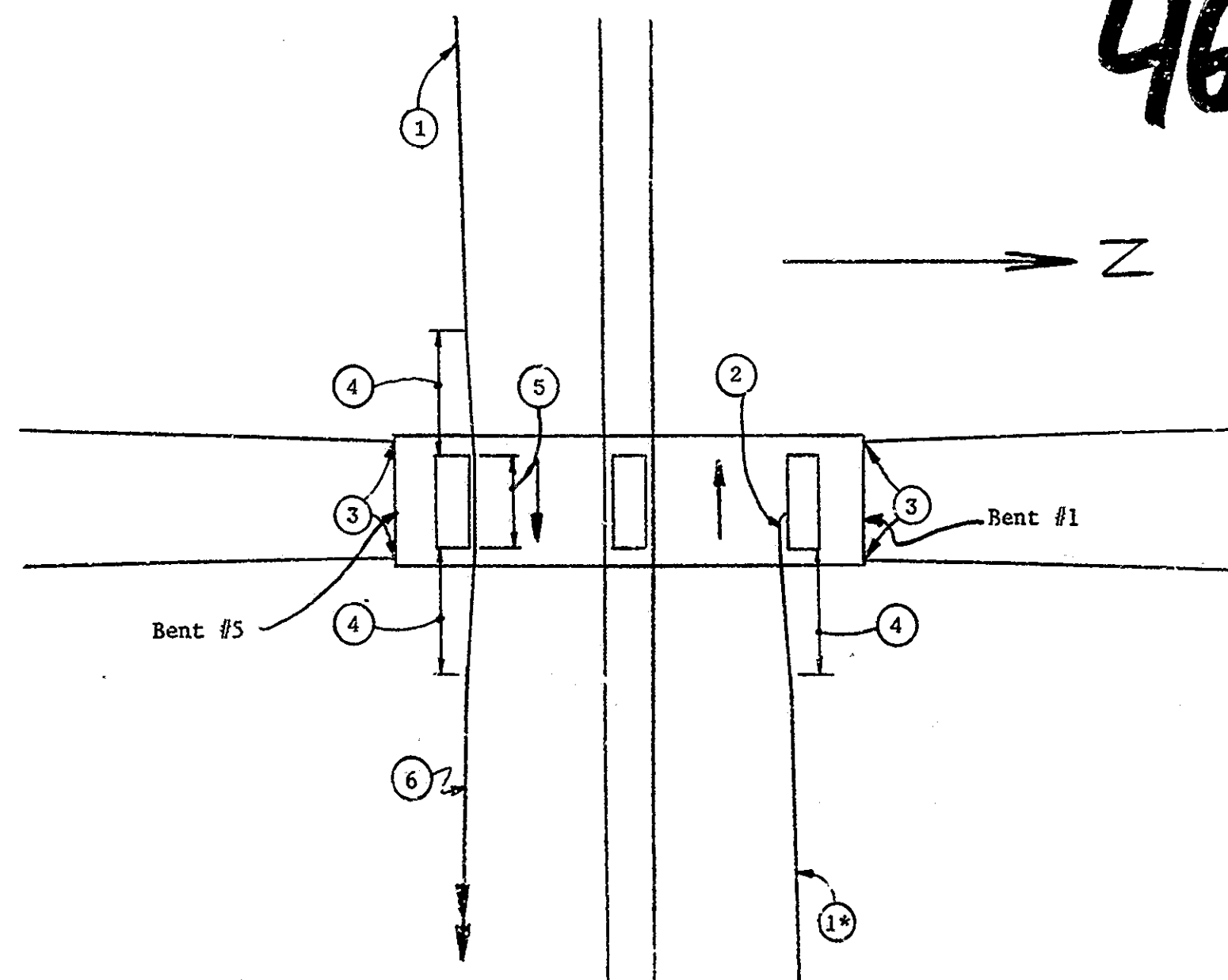
Adjust Casting to Grade on approaches.

NOTES:

- See sheet 48 for longitudinal section
- See sheet 61 for expansion joint details at Bent 5
- See sheet 62 for section at Bent 5
- See sheet 70 for section at roadway drains
- See sheet 63 & 64 for BS joint installation at curbs
- See sheet 49 for pavement offsets.
- See sheet 65-69 for expansion joint details at Bent 1
- See sheet 53 for tooth joint removal
- See sheet 54 for reconstruction at Bent 1
- See sheet 55 for plan details at Bent 1
- See sheet 56 for Bill of Materials

Project: I-FRI-465-4(218)126
Sheet: 46 of 114

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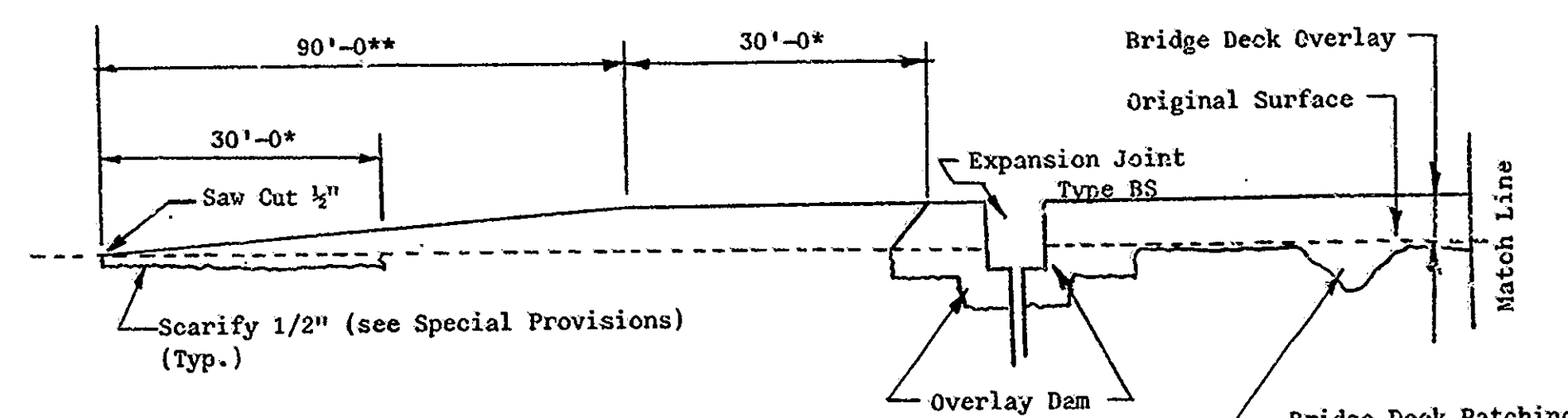
GUARD RAIL REVISION

I-465-127-5275A
North River Road

- Remove 40 ft. of G.R. Buried End and install G.R. End Treatment.
- (Remove and replace 19 ft. of Damaged Guard Rail Class 'Es') Install 12.5 ft. of Guard Rail Class 'Es' (Terminal End Pier Connection) according to Road Standard GR 7.
- Connect existing guard rail to the concrete wing-wall with bolted thru connection in accordance with Road Standard GR 8. Add second rail section as shown on the standard to provide "Double Rail Section" at the structure. Add 3 Posts and Brackets Class 'Bs'

SUMMARY:

Removal of G.R.	149 ft.
Reset G.R.	125 ft.
G.R. Type 'E'	97 ft.
G.R. End Treatment	2 each



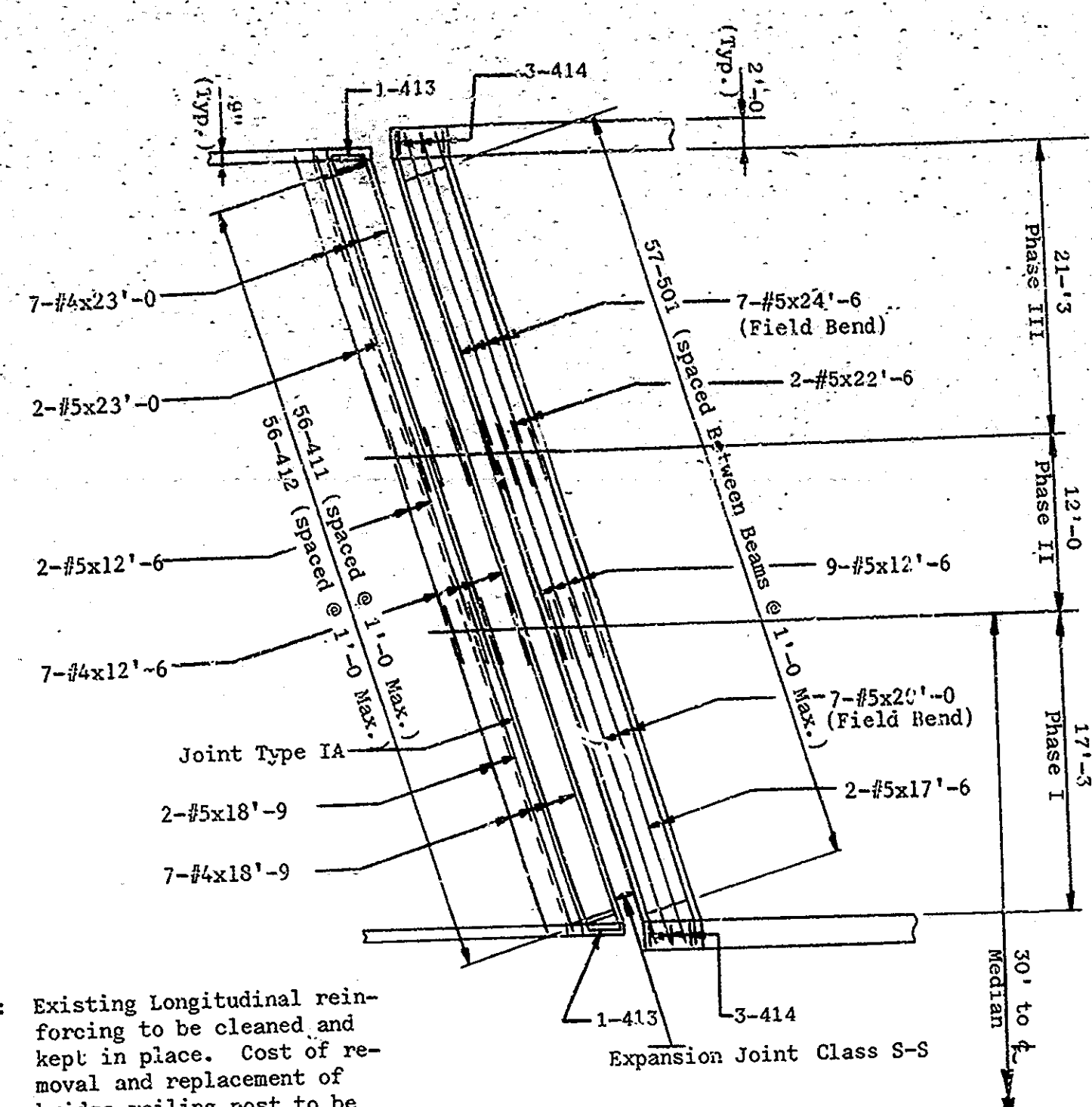
* Wedge to be continuation of the bridge profile
** Taper wedge uniformly to meet existing roadway

LONGITUDINAL SECTION

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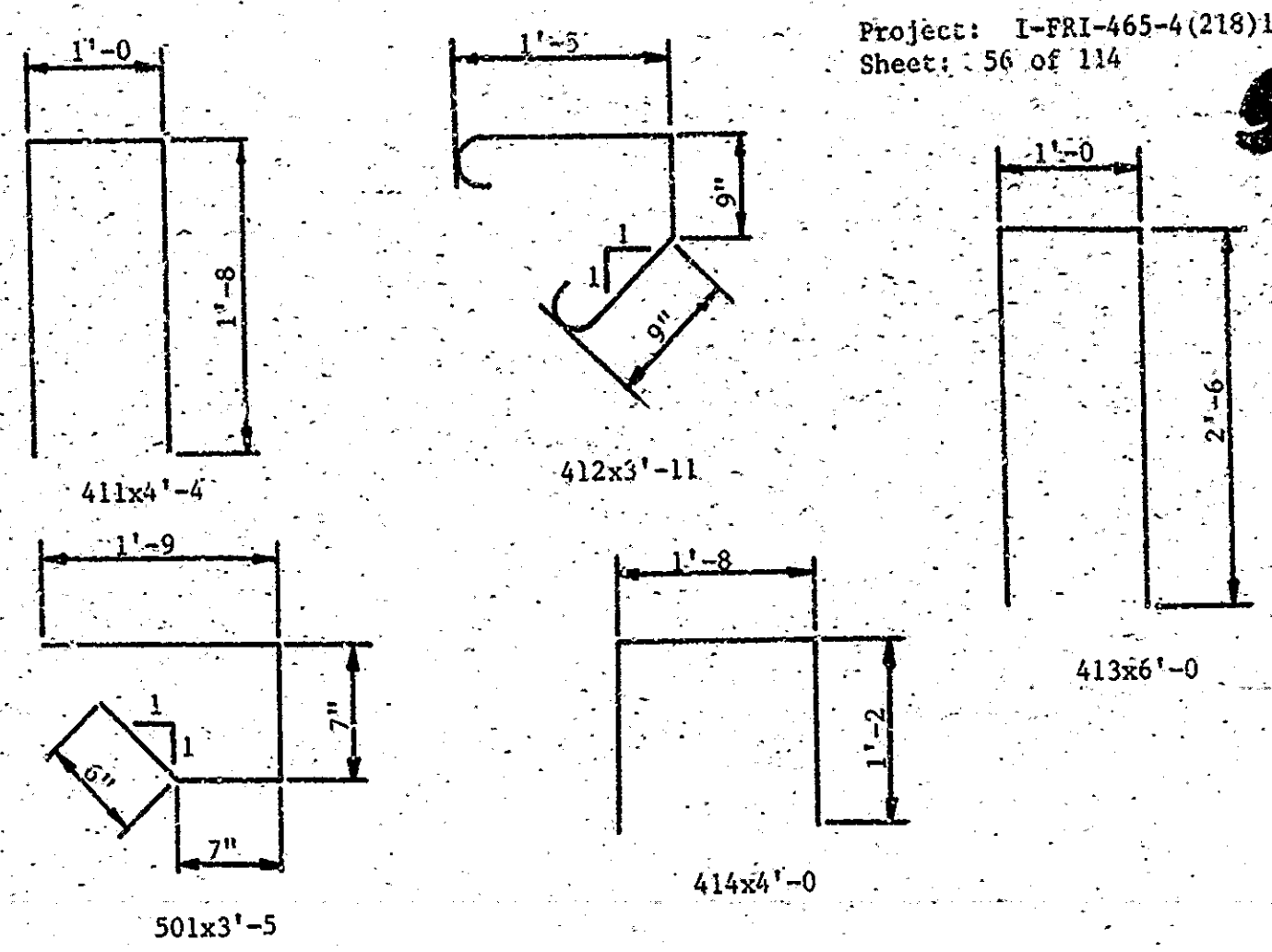
Project: I-FRI-465-4(218)126
Sheet: 48 of 114



NOTE: Existing Longitudinal reinforcing to be cleaned and kept in place. Cost of removal and replacement of bridge railing post to be included in cost of other items.

PLAN VIEW

Bent #1
I-465-128-5276A



BAR BENDING DIAGRAMS

BILL OF MATERIALS

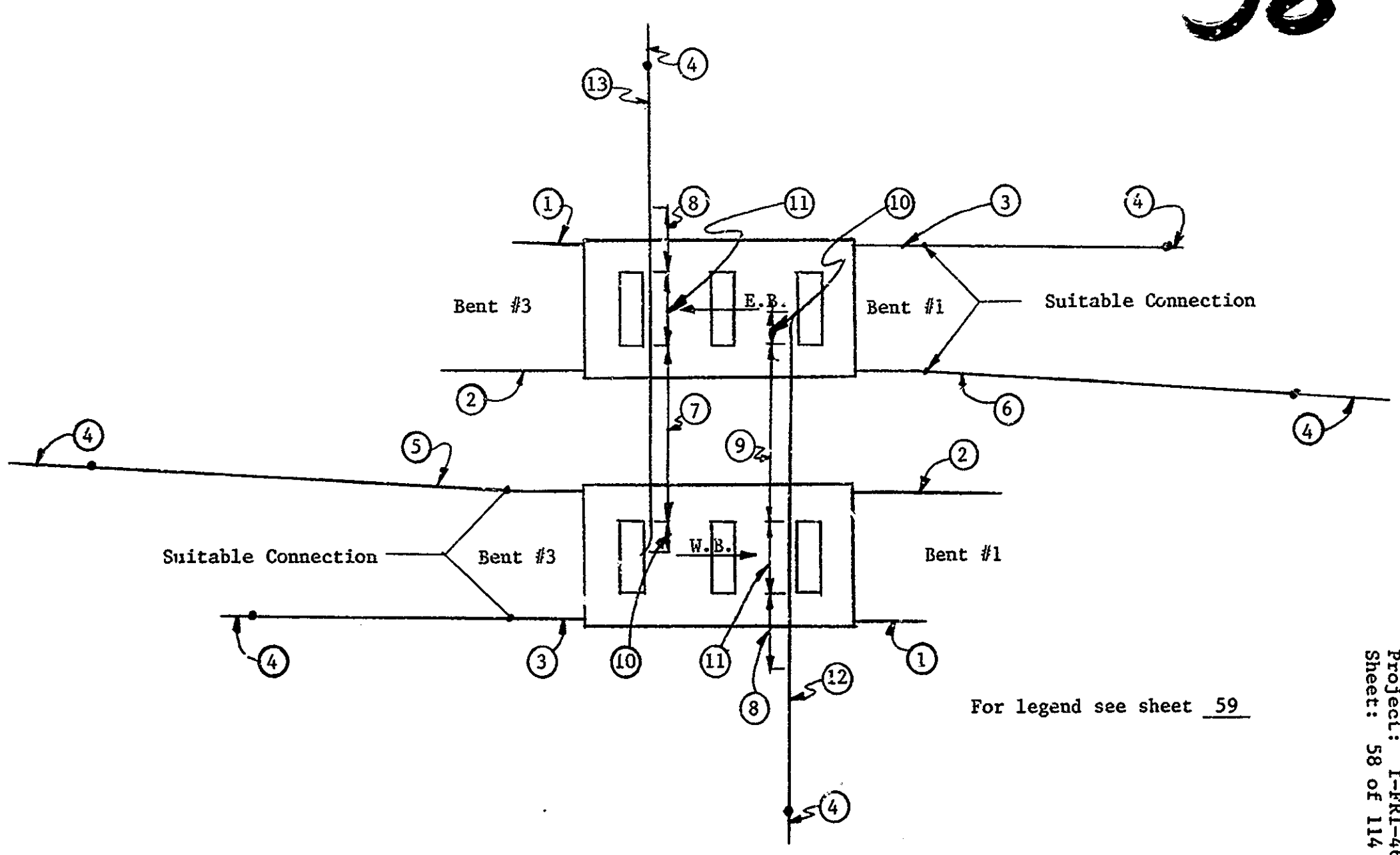
I-465-128-5276A

REINFORCING STEEL			
Mark or Size	Number	Length	Weight
501	114	3'-5	
#5	14	24'-6	
#5	4	23'-0	
#5	4	22'-6	
#5	14	20'-0	
#5	4	18'-9	
#5	22	12'-6	
#5	4	17'-6	
Total #5			1684 lb.
411	112	4'-4	
412	112	3'-11	
413	4	6'-0	
414	28	4'-0	
#4	14	23'-0	
#4	14	12'-6	
#4	14	18'-9	
Total #4			1214 lb.
Total Reinforcing Steel			2896 lb.

CONCRETE	
Concrete Class 'A' in Superstructure	10.5 cys
Concrete Pavement Reinforced (10")	21.4 sys
MISCELLANEOUS	
Expansion Joint Class S-S	116 lft
Expansion Joint Type BS8	116 lft
Bridge Rail Type 5	74 lft
Removal of Pavement	21.4 sys

Project: I-FRI-465-4(218)126
Sheet: 55 of 114

Project: I-FRI-465-4(218)126
Sheet: 59 of 114



GUARD RAIL REVISION

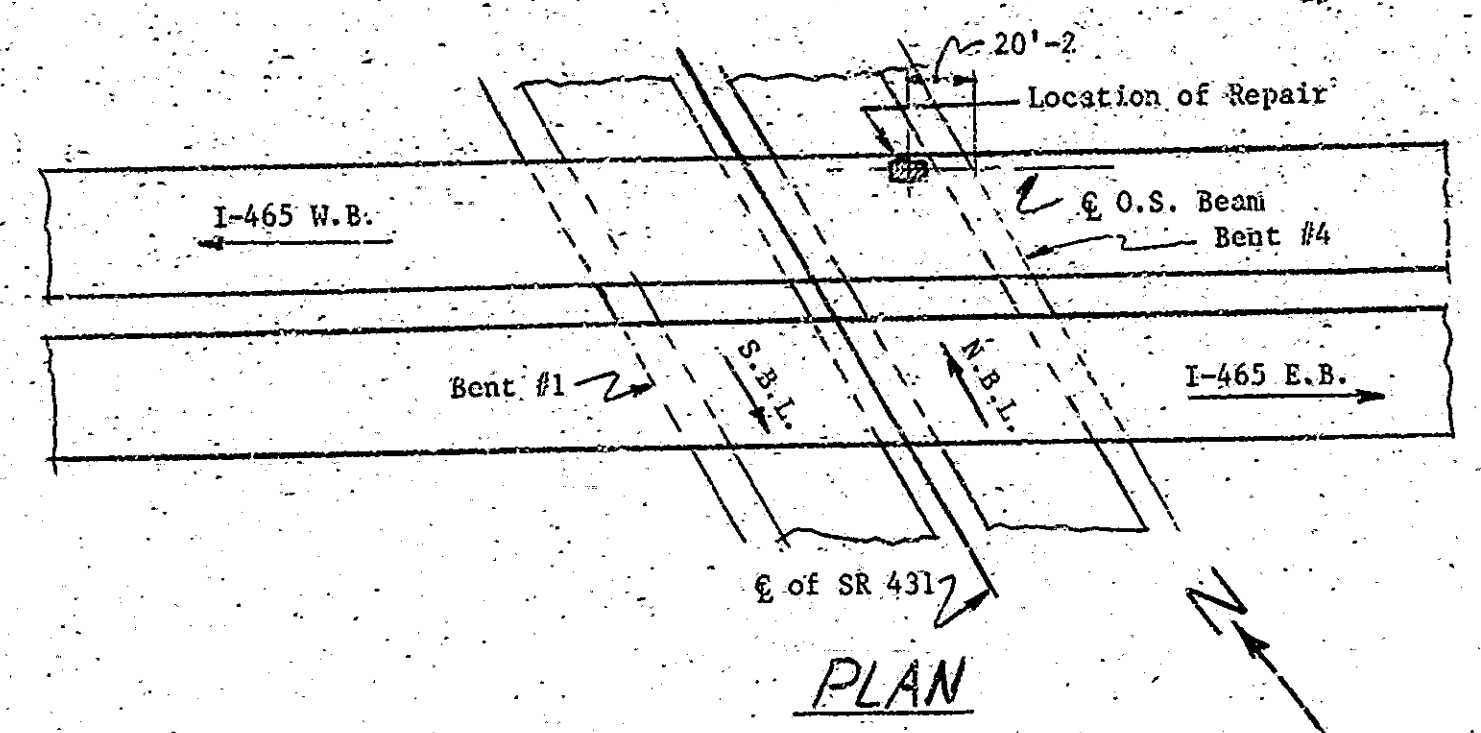
I-465-128-5276A
Over Keystone Avenue

Project: I-FRI-465-4(218)126
Sheet: 58 of 114

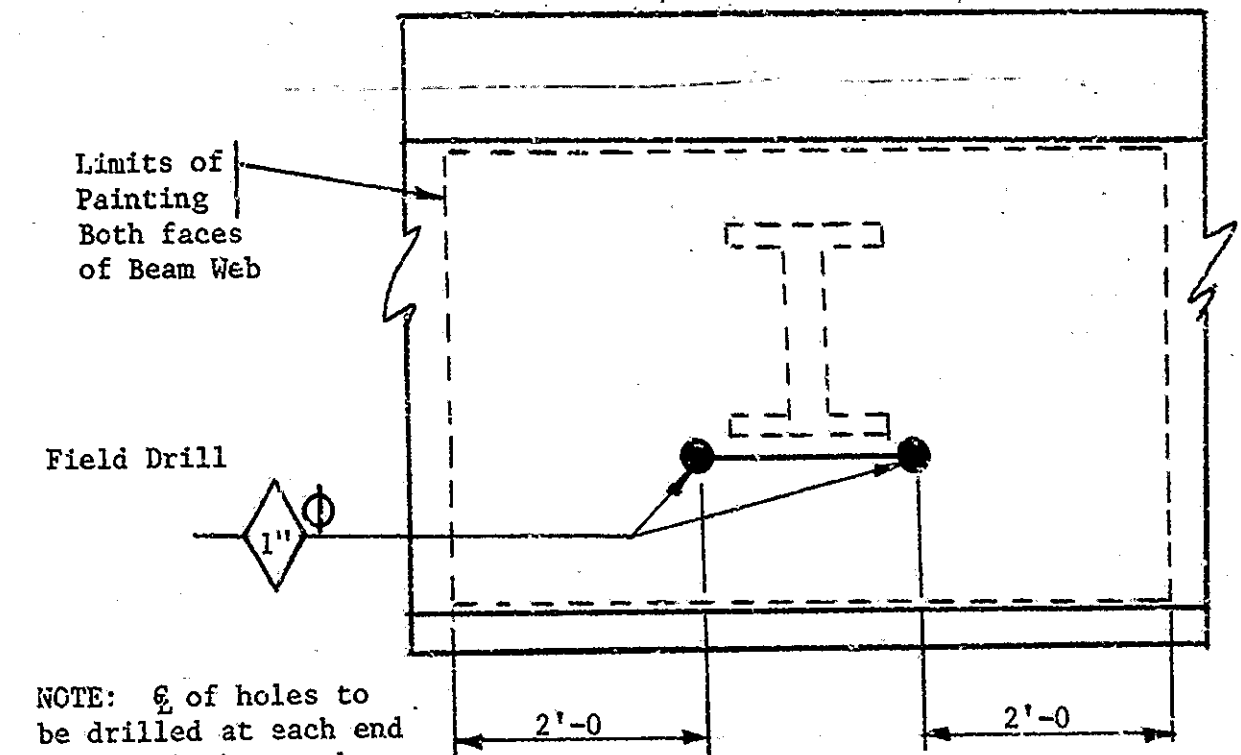
NOTES:

1. Install 28' of G.R. Class 'G_A'
2. Install 52' of G.R. Class 'G_A'
3. Remove 28' of Steel Beam G.R. Install 28' of G.R. Class 'G_A' at structure and connect to existing G.R. with Suitable Connection
4. Remove 40' of G.R. Buried End, Install G.R. End Treatment
5. Install 28' of G.R. Class 'G_A' at structure. Reset 163' of Existing G.R. and attach to G.R. Class 'G_A' with a Suitable Connection. Install 178' of G.R. Class 'D_S'
6. Install 26' of G.R. Class 'G_A' at structure. Remove 25 lft. of damaged guard rail. Reset 138' of Existing G.R. and attach to G.R. Class 'G_A' with a Suitable Connection. Install 203' of G.R. Class 'D_S'
7. Reset 27 lft. of Guard Rail Class 'E_S' (Includes installation of 5 additional Guard Rail Posts and Brackets and 12'-6 Rail length for Double Rail Section)
8. Reset 25 lft. of Guard Rail Class 'E_S' (Includes installation of 4 additional Guard Rail Posts and Brackets and 12'-6 Rail length for Double Rail Section)
9. Remove 27 lft. of Guard Rail. Install 27 lft. of Guard Rail Class 'E_S' according to Road Standard GR 7.
10. Install 12.5 lft. of Guard Rail Class 'E_S' (Terminal End Pier Connection) according to Road Standard GR 7.
11. Install 51 lft. of Guard Rail Class 'E_S' according to Road Standard GR 7 (Includes removal of existing pier connection)
12. Remove 12.5 lft. of damaged Guard Rail. Install 12.5 lft. of Guard Rail Class 'E_S'
13. Remove 25 lft. of damaged Guard Rail. Install 25 lft. of Guard Rail Class 'E_S'

SUMMARY:



PLAN



DETAIL

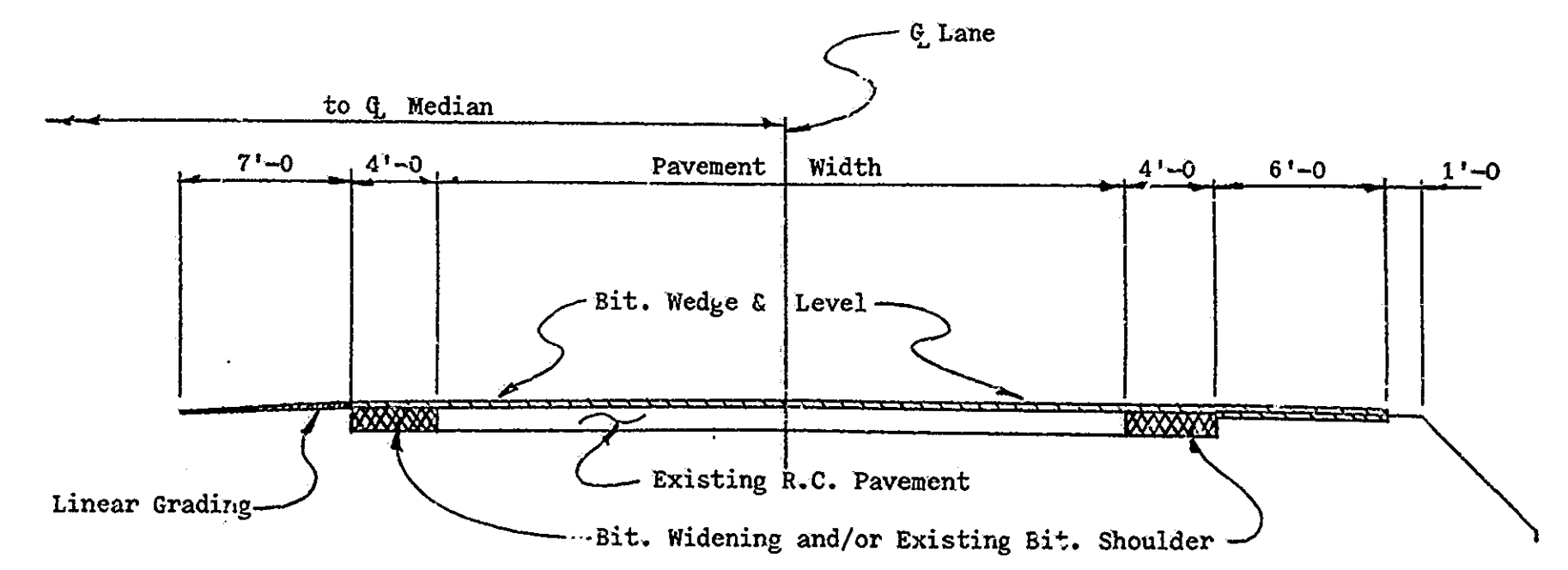
NOTE: ϕ of holes to be drilled at each end of tear in beam web. Beam not to be straightened.

NOTE: All paint shall be in accordance with "Painting Structural Steel".
Special Provisions: First Field Paint: Zinc Silicate paint
Second Field Paint: Vinyl Finish Coat

BEAM REPAIR DETAILS

I-465-128-5276A

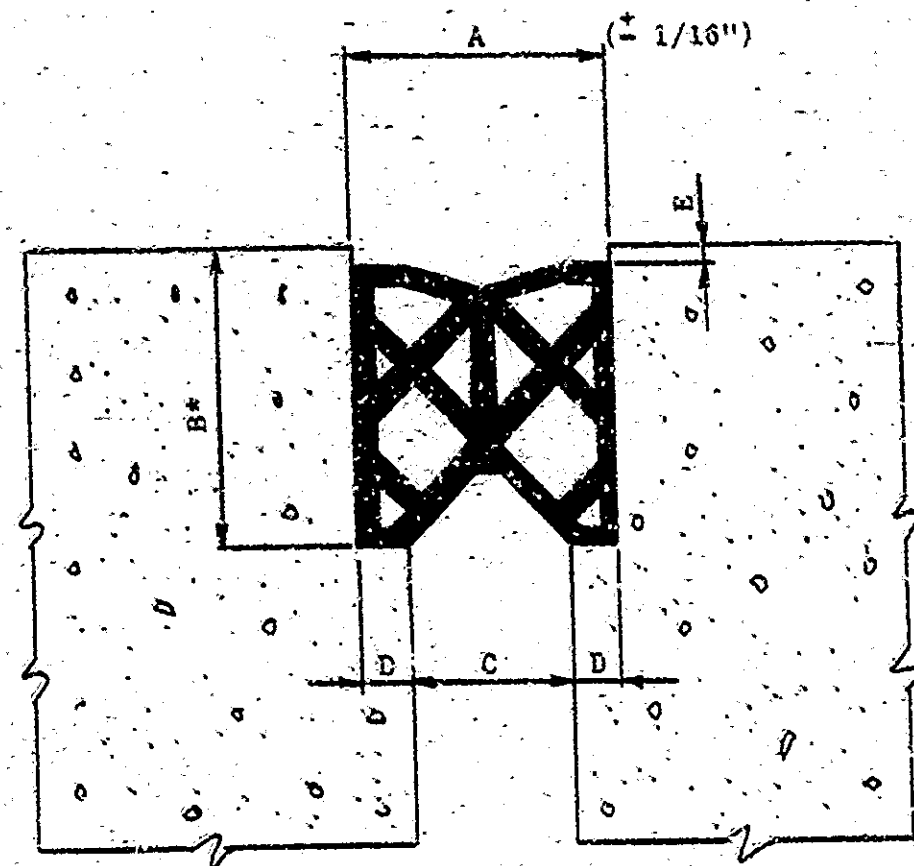
NOTE: Field Drilling 1" holes and painting to be paid for as "Beam Repair" Lump Sum.



TYP. HALF APPROACH SECTION

NOTE: The cost of stripping and borrow for Linear Grading shall be included in the cost of other items in the Contract.

Project: I-FRI-465-4(218)126
Sheet: 60 of 114



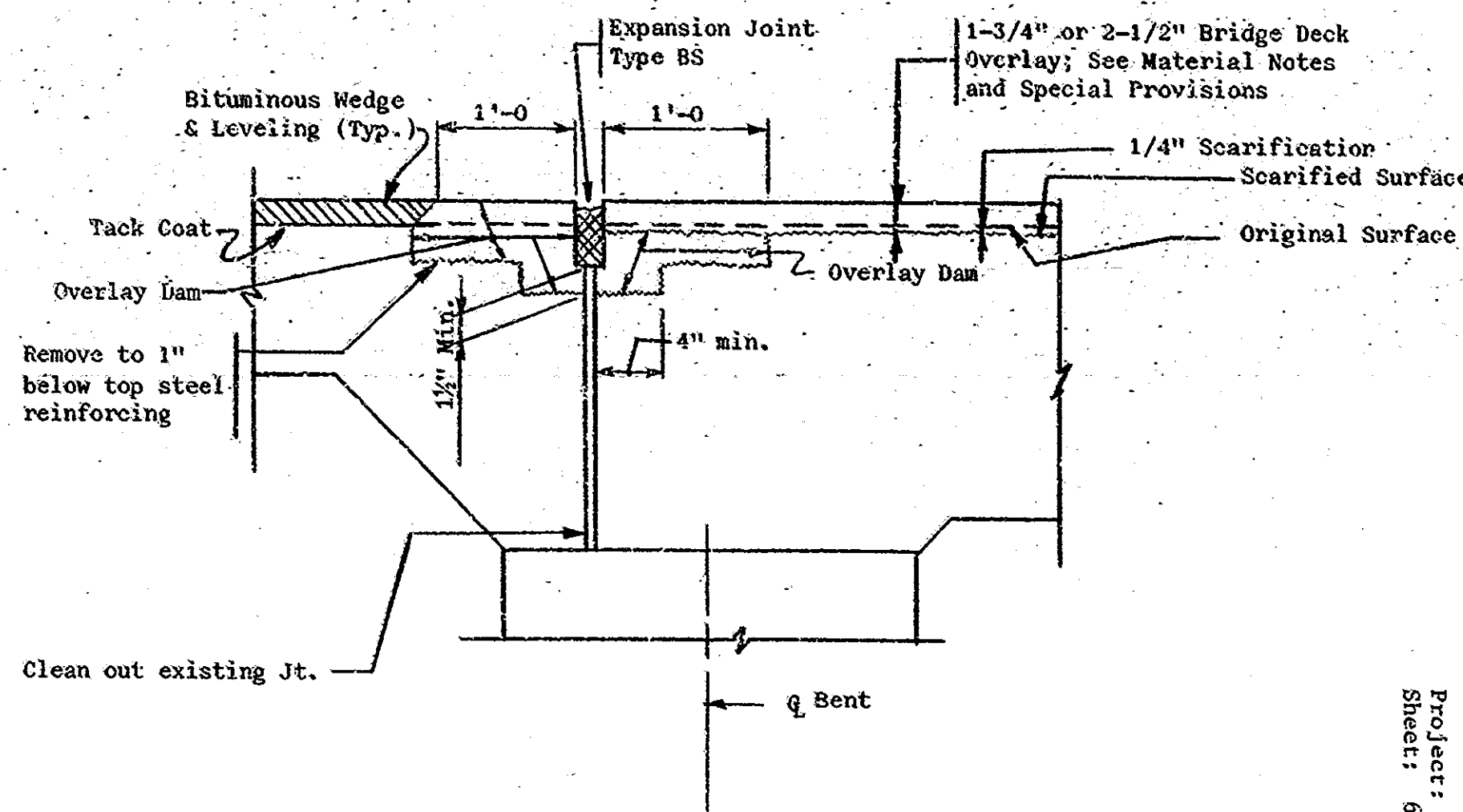
61

* To be determined in the field, see the Special Provisions.

Bridge Seal	A	B	C	D	E
BS 2	1"	*	0"	1/2"	1/2"
BS 6	1-5/8"	*	7/8" ±	3/8"	1/2"
BS 8	2"	*	1-1/4" ±	3/8"	1/2"
BS 9	2-5/8"	*	1-5/8" ±	1/2"	3/4"
BS 11	3-1/8"	*	2-1/8" ±	1/2"	3/4"
BS 8	2"	*	1" ±	1/2"	1/2"

EXPANSION JOINT TYPE BS

** Dimension at longitudinal 1" open joint only.
Saw out edges of the expansion joint using multiple bladed saw. (I-465-126-5273A only)

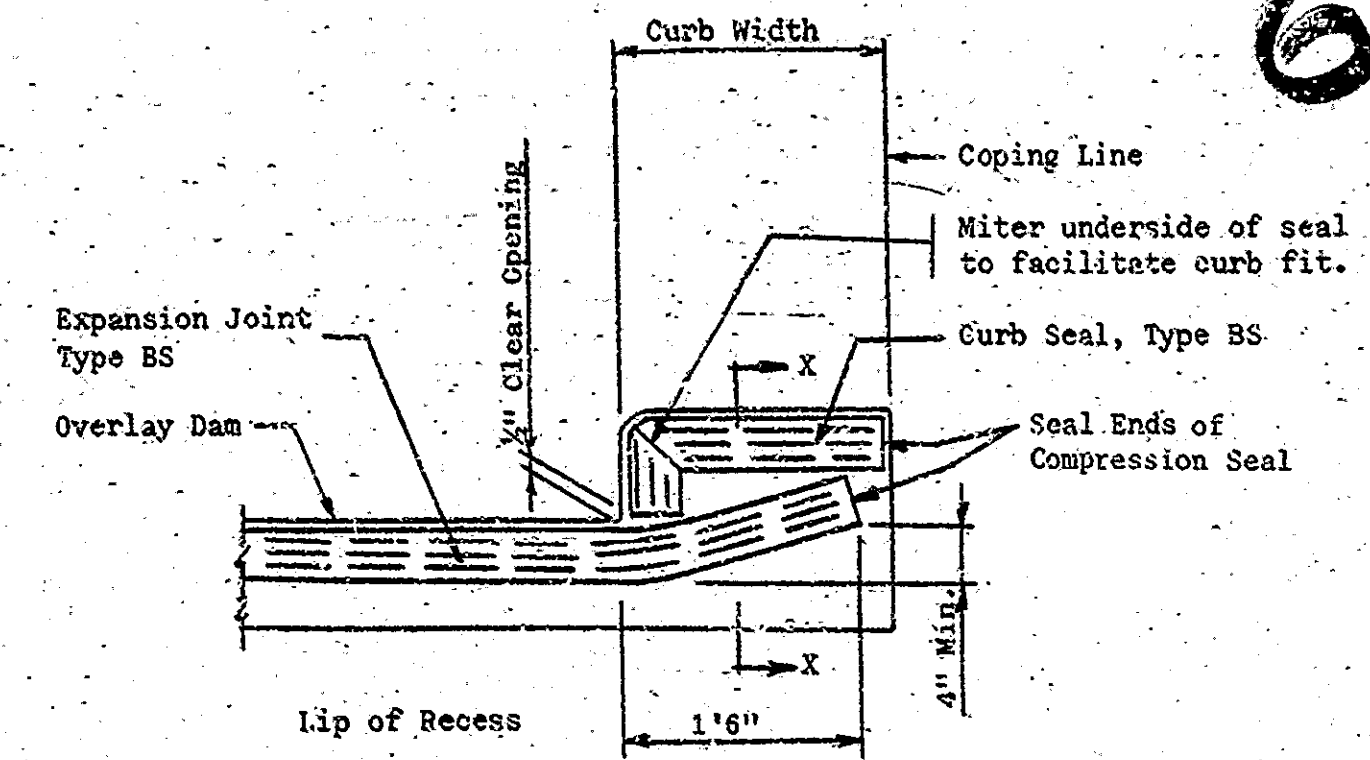


SECTION AT END BENT

I-465-127-5275A
I-465-128-5276A (Bent #5)

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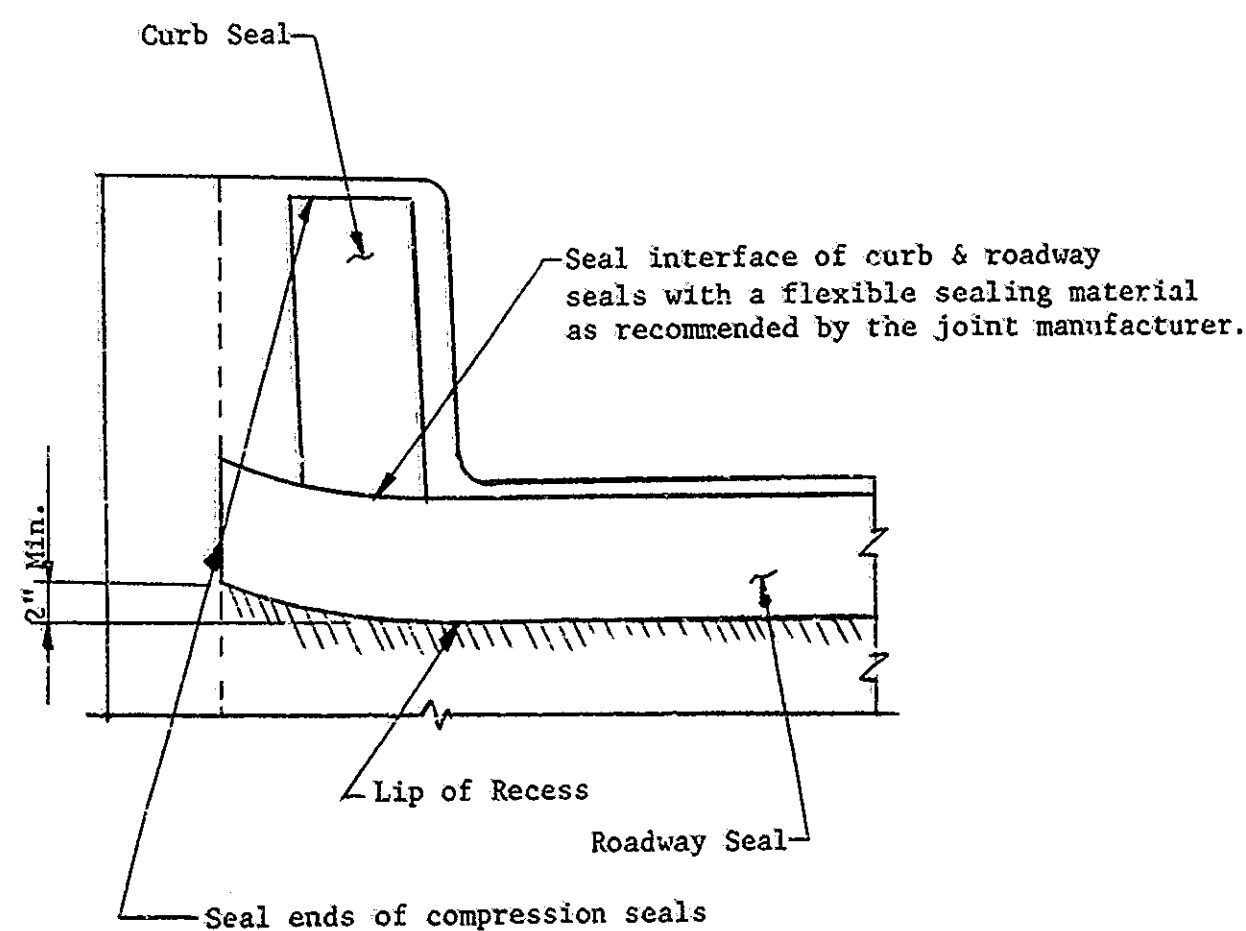


SECTION "X-X"

BS JOINT INSTALLATION AT CURBS

I-465-127-5255A
I-465-127-5274A
I-465-128-5276A

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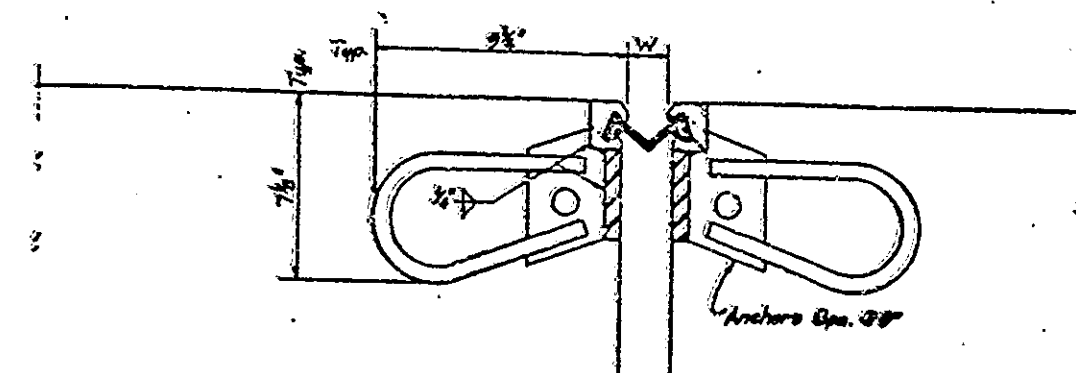


TYPICAL BS JOINT INSTALLATION AT CURB

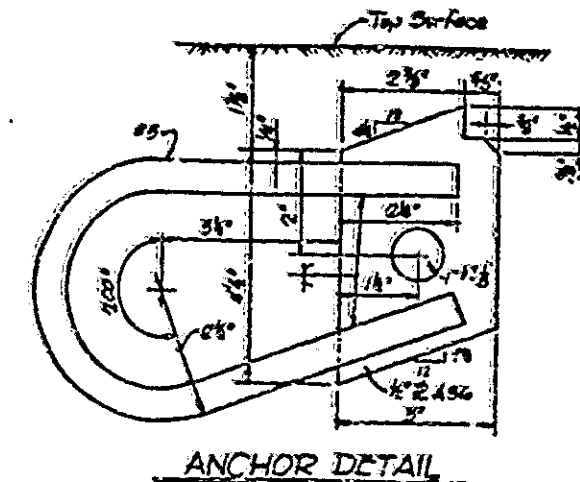
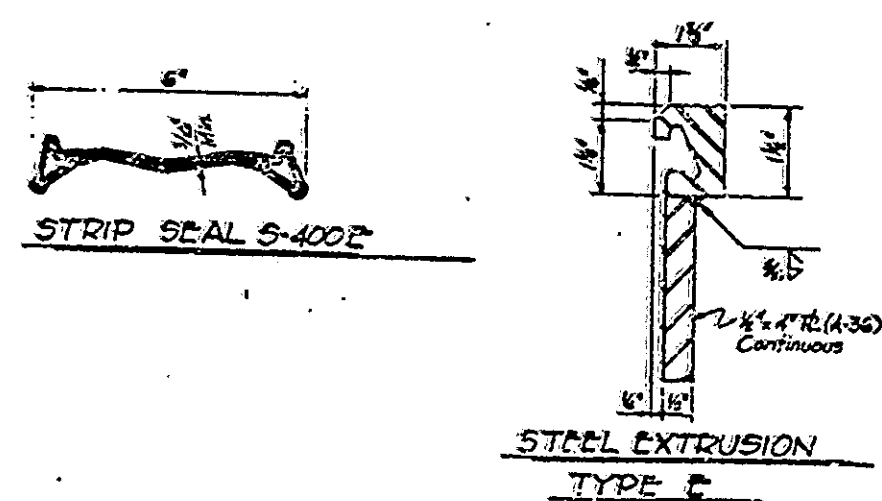
I-465-127-5255A
I-465-127-5274A
I-465-127-5275A
I-465-128-5276A

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EXPANSION JOINT CLASS S - S Sheet 1



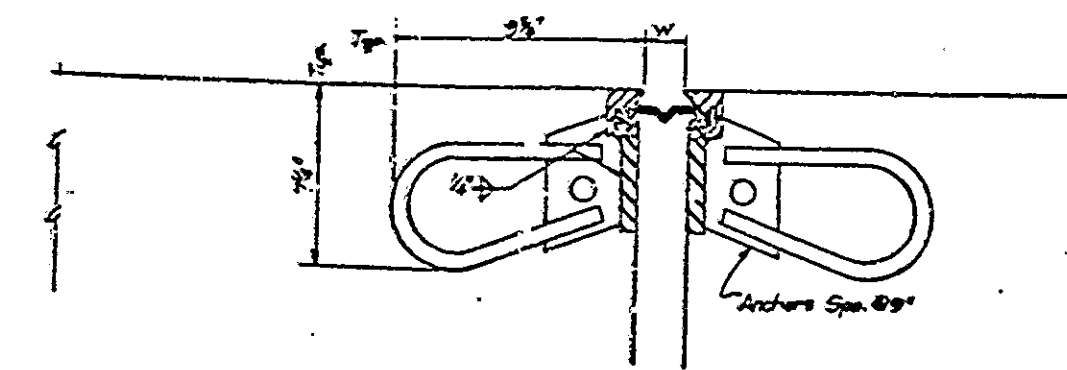
TYPICAL SECTION



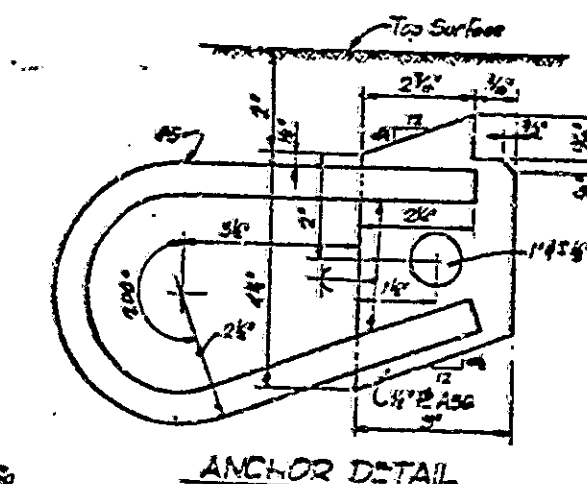
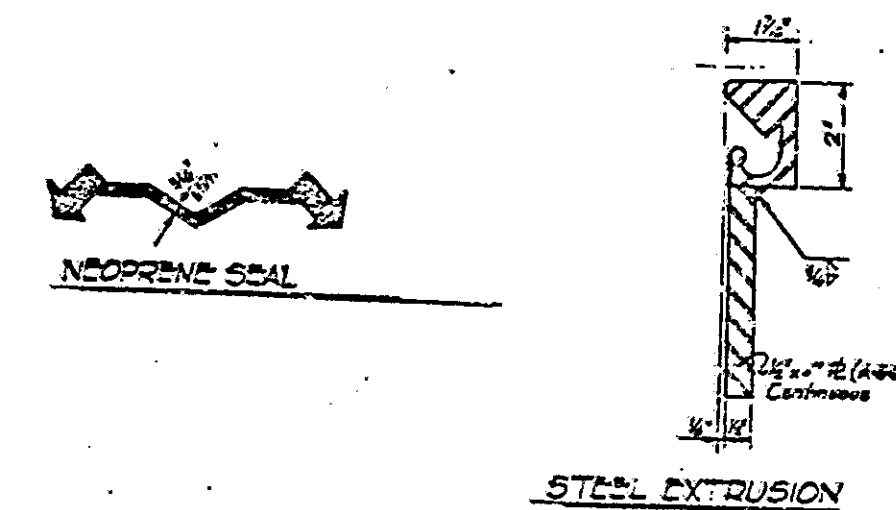
JOINT WABO S-400E

66

EXPANSION JOINT CLASS S-S Sheet 2

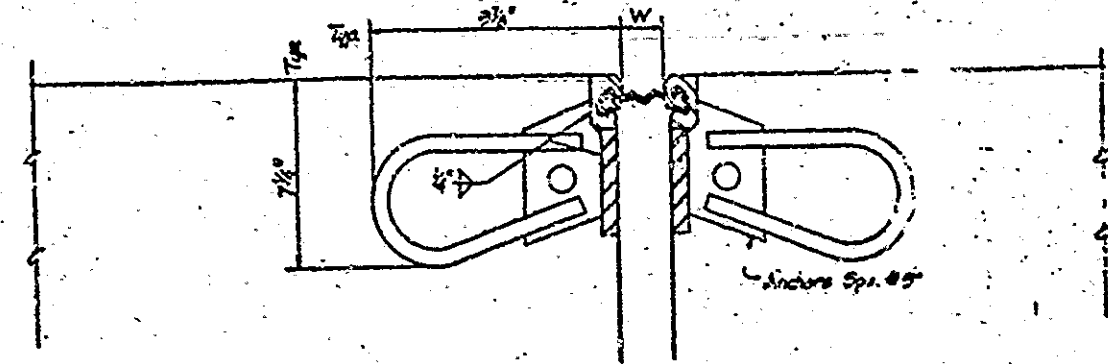


TYPICAL SECTION

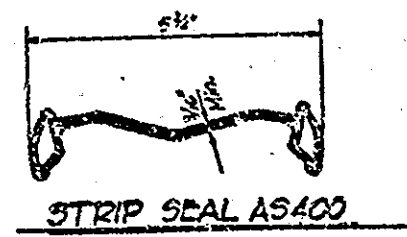


JOINT DELASTIFLEX

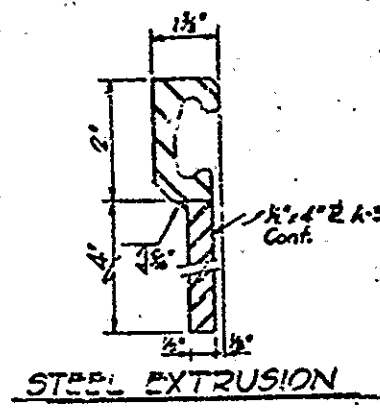
EXPANSION JOINT CLASS S-S Sheet 3



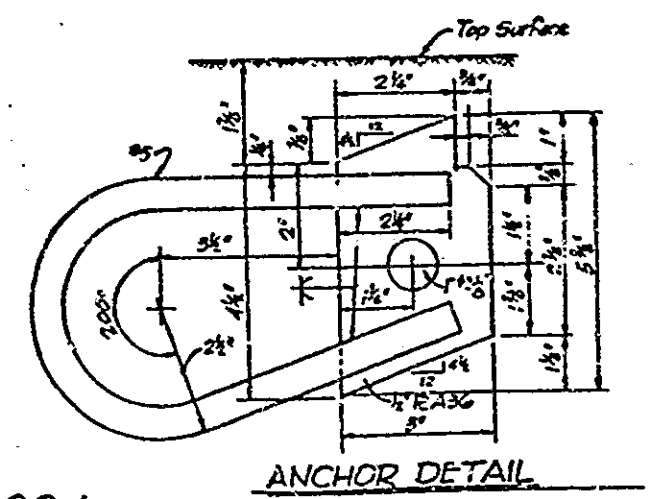
TYPICAL SECTION



STRIP SEAL AS400

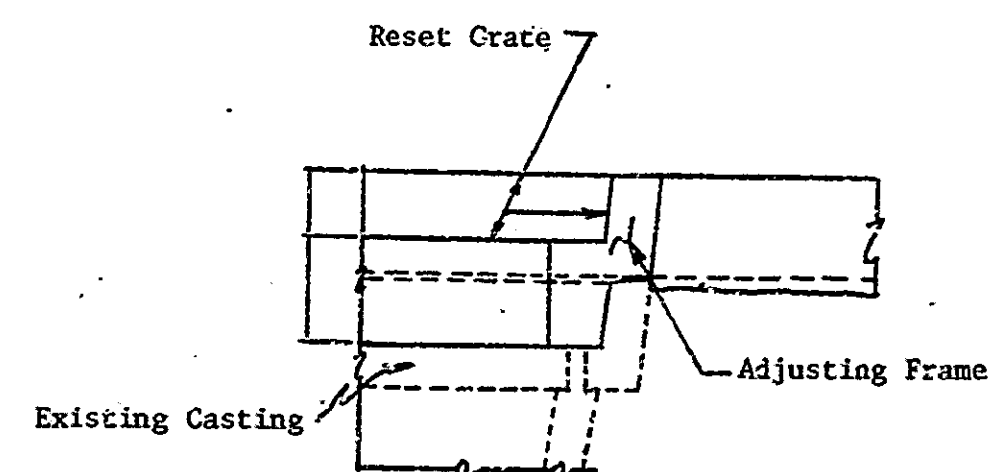
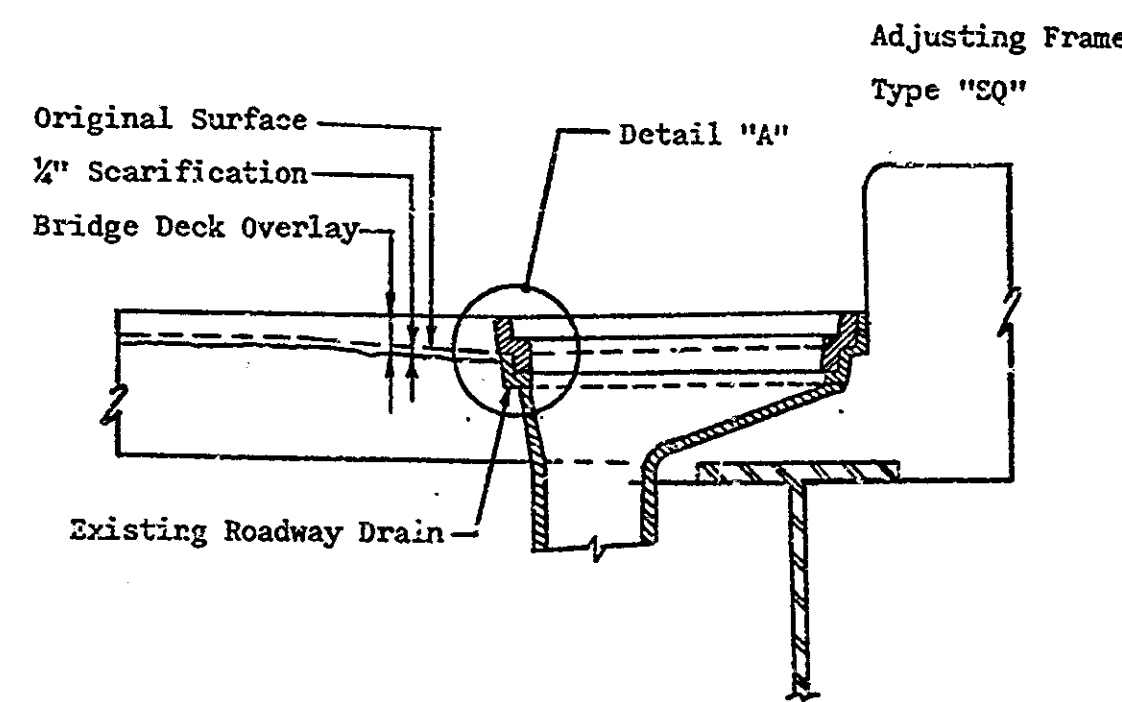


STEEL EXTRUSION TYPE A



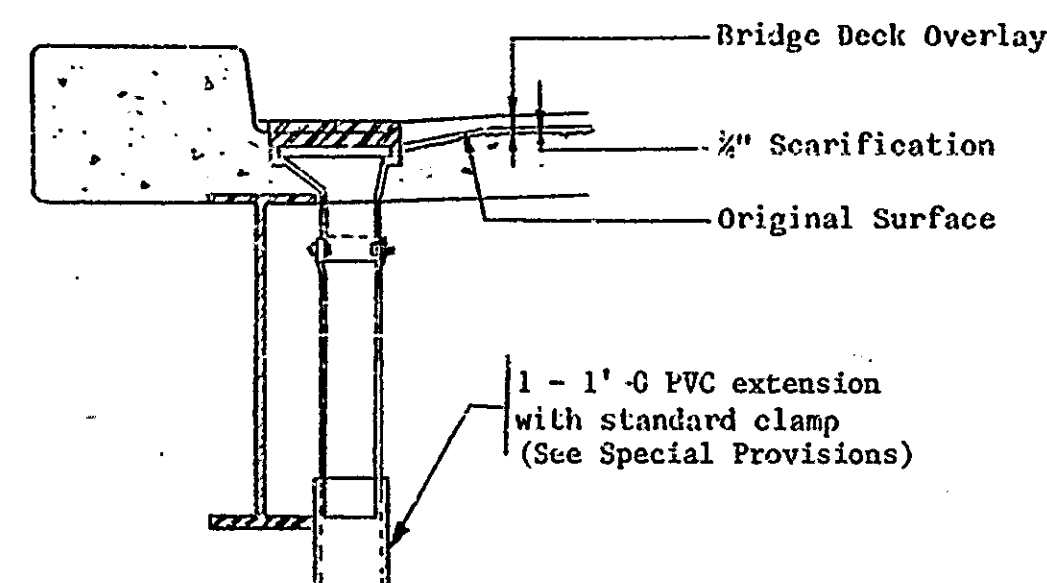
JOINT ACMA AS 400 A

ANCHOR DETAIL



DETAIL A

ROADWAY DRAIN EXTENSION DETAIL



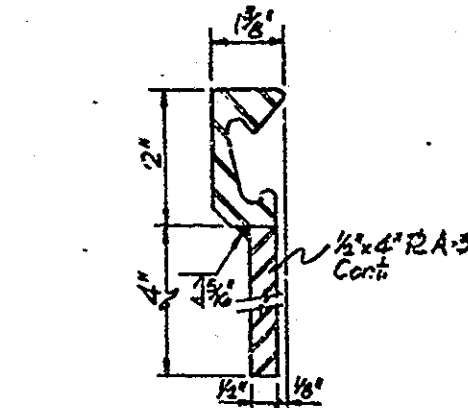
1 - 1' - 0" PVC extension with standard clamp (See Special Provisions)

ANCHOR DETAIL

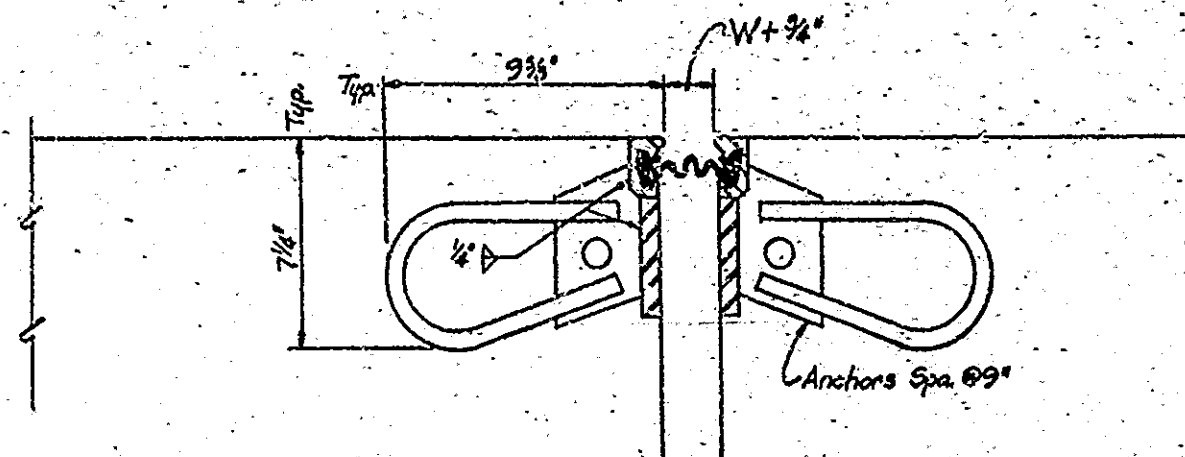
GENERAL TIRE GS-400

STEEL EXTRUSION

NEOPRENE SEAL



TYPICAL SECTION



EXPANSION JOINT CLASS S-S Sheet 4

EXPANSION JOINT CLASS S-S Sheet 5

NOTES:

- See the Special Provisions for properties of materials.
- The cost of extrusions, elastomeric seal elements, sealants, adhesive, cement grout, anchor system and installation of joint shall be included in the cost of expansion joint.
- The profile of the joint is to conform to the roadway cross section.
- The seal element shall be moulded and furnished in a continuous length equal to that required for the joint.
- At changes in direction (at curbs, median barriers, etc.) the sections of joint are to be cut to the bevel required to produce the same cross section on each piece being joined. The anchor assembly is to be shop fabricated and delivered to the job site as a complete continuous unit for joint lengths up to 44 feet. Joints above lengths of 44 feet or joints used with stage construction shall be field welded with ends to be shop prepared.
- All work, both shop and field, shall be in accordance with 711.03.
- All exposed structural steel surfaces will be painted in accordance with ISHC Standard Specifications.
- The Contractor shall submit 3 copies of shop drawings for all joints involving curbs or other special features.

STRUCTURE	EXPANSION LENGTH
I-465-127-5255A	300' - 400'
I-465-128-5276A	100' - 200'

Ambient Temperature	JOINT SETTING TABLE		
	DIMENSION "W" *		
	Expansion Length		
	100'-200'	200'-300'	300'-400'
120°	2-1/8"	1-5/16"	1/2"
100°	2-7/16"	1-3/4"	1-1/8"
80°	2-11/16"	2-3/16"	1-11/16"
60°	3"	2-5/8"	2-1/4"
40°	3-5/16"	3-1/16"	2-13/16"
20°	3-9/16"	3-1/2"	3-3/8"
0°	3-7/8"	3-15/16"	4"

* For "General Tire - GS 400" Joint the opening will be W+3/4"

ESTIMATE OF QUANTITIES - 1

CODE#	ITEM	UNIT	FUND-ING	5273A	5255A	5274A	5275A	5276A	TOTAL
51845	BRIDGE DECK SURFACE	SYS.							
51842	BRIDGE DECK OVERLAY	SYS.	A	1724	6175	1321	622	2290	12,132
51843	BRIDGE DECK PATCHING	SFT.	B	1550	8340	2380	390	4120	16,780
51833	CONCRETE SCARIFYING *	SYS.	B	2525	7135	2168	769	3250	15,847
51840	ADDITIONAL CONCRETE SCARIFYING	SYS.	B	345	1235	242	124	458	2,446
51837	BLASTING AND CLEANING	SYS.	B	1724	6175	1321	622	2290	12,132
51838	FINISHING AND CURING	SYS.	A	1724	6175	1321	622	2290	12,132
51874	OVERLAY DAMS	SFT.	A	345		408	107	216	1,076
51826	SURFACE SEAL	SFT.	B	2470	12,850	2290	2200	4020	23,830
	FULL DEPTH PATCHING	SFT.	B						20***
51881	EXPANSION JOINT TYPE BS 2	LFT.	A						109
51885	EXPANSION JOINT TYPE BS 6	LFT.	A			109			109
51887	EXPANSION JOINT TYPE BS 8	LFT.	A	191				116	307
51888	EXPANSION JOINT TYPE BS 9	LFT.	A						
51890	EXPANSION JOINT TYPE BS 11	LFT.	A	188		109	62		359
51925	EXPANSION JOINT CLASS S-S	LFT.	A		194			116	310
	*Includes Approach Scarif-			900	960	960	147	960	3,827

ESTIMATE OF QUANTITIES - 2

73

CODE#	ITEM	UNIT	FUND-ING	5273A	5255A	5274A	5275A	5276A	TOTAL
	RESHAPING SPILL SLOPES	LS.							
51375	REVTMENT RIPRAP, 18"	TONS	C		60	60			120
51365	SLOPEWALL	SYS.							
9721C	PLASTIC FILTER CLOTH	SYS.							
	REMOVAL OF PAVED SIDE DITCH	LFT.							
	PAVED SIDE DITCH TYPE	LFT.							
	PAVED SIDE DITCH TYPE	LFT.							
5136A	REMOVAL OF SLOPEWALL	SYS.							
	SPECIAL CONCRETE	CYS.							
	'B' BORROW STRUCTURE BACKFILL	CYS.	A		15			8	23
5130A	CONCRETE PAVEMENT REINFORCED (10")	SYS.	A		100	58		22	180
5230	REMOVAL OF PAVEMENT	SYS.	A		110	58		22	190
5247J	BITUMINOUS MIXTURE FOR APPROACHES **	TON	A	390	767	773	35	771	2,736
97273	BITUMINOUS BASE #50	TON	A						
5245J	BITUMINOUS MATERIAL FOR TACK COAT	SYS.	A	2,032	2,440	1,920	590	280	7,262
5100I	CONCRETE CLASS 'A' IN SUPERSTRUCTURE	CYS.	A		39.0	25.3		10.5	74.8
	**See sheet 74 for Quantity Breakdown								

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ESTIMATE OF QUANTITIES - 3

74

CODE#	ITEM	UNIT	FUND-ING	5273A	5255A	5274A	5275A	5276A	TOTAL	
51005	CONCRETE CLASS 'A' IN SUBSTRUCTURE	CYS.	A		22.4				22.4	
51030	REINFORCING STEEL	LBS.	A		7,284	8,164		2,896	18,344	
51875	SPECIAL CLASS 'A' CONCRETE	SFT.	B						50**	
51870	REPOINTING MASONRY IN STRUCTURES	SFT.								
	CURR TURNOUT TYPE 'A'	EACH	A	2		1		1	4	
	INTEGRAL CONCRETE CURB	CYS.	A		2.8	.3			3.1	
	STRAIGHTENING EXISTING BEAMS (5275A)	LSUM					1		1	
52831	DRILLED HOLES FOR MUD-JACKING	EACH	B		8	4			12	
52830	MATERIAL FOR MUDJACKING	CYS.	B		16	8			24	
	CHANNEL SHEAR CONNECTOR	EACH	A			160			160	
	**Bituminous Mixture for Approaches - Quantity Breakdown									
	Bituminous Wedge	TON	A	123	147	154	35	152	611	
	Pavement Relief Joint	TON	A	27					27	
	Terminal Joint Reconstr.	TON	A		8	7		7	22	
	Bituminous Widening	TON	A	240	612	612		612	2,078	
	Total	TON		390	767	773	35	771	2,736	
	**Undistributed Quantity									

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ESTIMATE OF QUANTITIES - 4

75

CODE#	ITEM	UNIT	FUND-ING	5273A	5255A	5274A	5275A	5276A	TOTAL
52535	REMOVAL OF GUARD RAIL	LFT.	A		248	214	149	386	997
52505	GUARD RAIL TYPE 'B'	LFT.							
52510	GUARD RAIL TYPE 'C'	LFT.							
52515	GUARD RAIL TYPE 'D'	LFT.	A		345	394		381	1,120
52520	GUARD RAIL TYPE 'E'	LFT.	A				97	194	291
52525	GUARD RAIL TYPE 'F'	LFT.							
52530	GUARD RAIL TYPE 'G'	LFT.	A		272	272		272	816
06035	RESET GUARD RAIL	LFT.	A		481	288	125	378	1,272
	GUARD RAIL END TREATMENT	EACH	A		4	3	2	6	15
	GUARD RAIL POST AND BRACKET TYPE 'D'	EACH	A		10				10
	GUARD RAIL POST AND BRACKET TYPE 'E'	EACH							
51134	REMOVAL OF PRESENT RAILING	LFT.	A		132	74		74	280
	RAILING TYPE 5	LFT.	A						
	RAILING TYPE	LFT.							
	ALUMINUM TYPE '5' POST	EACH							
	SPECIAL BRIDGE RAILING CONNECTION	EACH							

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ESTIMATE OF QUANTITIES - 5

76

CODE#	ITEM	UNIT	FUND-ING	5273A	5255A	5274A	5275A	5276A	TOTAL
5264C	MAINTAINING TRAFFIC	LS.	A						1
5234C	CONSTRUCTION SIGN TYPE 'A'	EACH	A	23	14	4	10	14	65
5234E	CONSTRUCTION SIGN TYPE 'B'	EACH	A	4	2		4	2	12
5235C	STANDARD BARRICADES TYPE III	EACH	A				2		2
	TEMPORARY STOP SIGN TYPE R-1 A	EACH	A						
	TEMPORARY YIELD SIGN TYPE R-301	EACH	A						
5236E	TEMPORARY PAVEMENT MARKING TAPE	LFT.							
	TEMPORARY CONCRETE BARRIER	LFT.	A	1,290	1,890	876		1,054	5,110
0671I	REMOVAL OF LINE - SOLID, YELLOW, 4"	LFT.	A		900	900		900	2,700
0671I	REMOVAL OF LINE - SOLID, WHITE, 4"	LFT.	A	1,640	2,650	1,640		1,810	7,740
0671I	REMOVAL OF LINE - SKIP, WHITE, 4"	LFT.	A	170	2,345	955		2,030	5,500
0671I	LINE, SOLID, YELLOW 4"	LFT.	A		2,650	1,640	920	1,810	7,020
0671I	LINE, SOLID, WHITE 4"	LFT.	A	1,640	2,650	1,640	920	1,810	8,660
0671I	LINE, SKIP, WHITE 4"	LFT.	A	110	2,000	820		905	3,835
	TEMPORARY IMPACT ATTENUATION DEVICE	EACH	A		2	2		2	6

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ESTIMATE OF QUANTITIES - 5A

76A

CODE	ITEM	UNIT	FUND-ING	5273A	5255A	5274A	5275A	5276A	TOTAL	
	FURNISHING, APPLICATION & REMOVAL OF SPECIAL TEMPORARY PAVEMENT MARKING	LFT.	A	3900	18,310	14,230		9020	45,460	
	FURNISHING, APPLICATION & REMOVAL OF SPECIAL TEMPORARY PAVEMENT MARKING	EACH	A	7	4			8	19	
	RE-APPLICATION AND REMOVAL OF SPECIAL TEMPORARY PAVEMENT MARKING	LFT.								
	RE-APPLICATION AND REMOVAL OF SPECIAL TEMPORARY PAVEMENT MARKING	EACH								
	Rev. 2-2-81 Temp. Pmnt. Marking									

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ESTIMATE OF QUANTITIES - 6

77

CODE#	ITEM	UNIT	FUND-ING	5273A	5255A	5274A	5275A	5276A	TOTAL	
44000	CASTING ADJUSTED TO GRADE	EACH	A		2	4			10	
51110	CAST IRON GRATES, BASINS AND FITTINGS	LBS.	A	696	8,352	1,044			10,092	
	EXTENSION OF C.I. DRAINS	EACH	B			12			12	
51092	STEEL PIPE CONDUIT 2"	LFT.								
	BEAM REPAIR (5276A)	LSUM	C					1	1	
51328	REMOVAL OF PRESENT STRUCTURE (PORTIONS) (5255A)	LSUM	A	1					1	
51328	REMOVAL OF PRESENT STRUCTURE (PORTIONS) (5276A)	LSUM	A		1				1	
51328	REMOVAL OF PRESENT STRUCTURE (PORTIONS) (5274A)	LSUM	A			1			1	
	FUNDING CCDE									
	A - 90% Federal									
	B - 75% Federal									
	C - All State Funds									

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