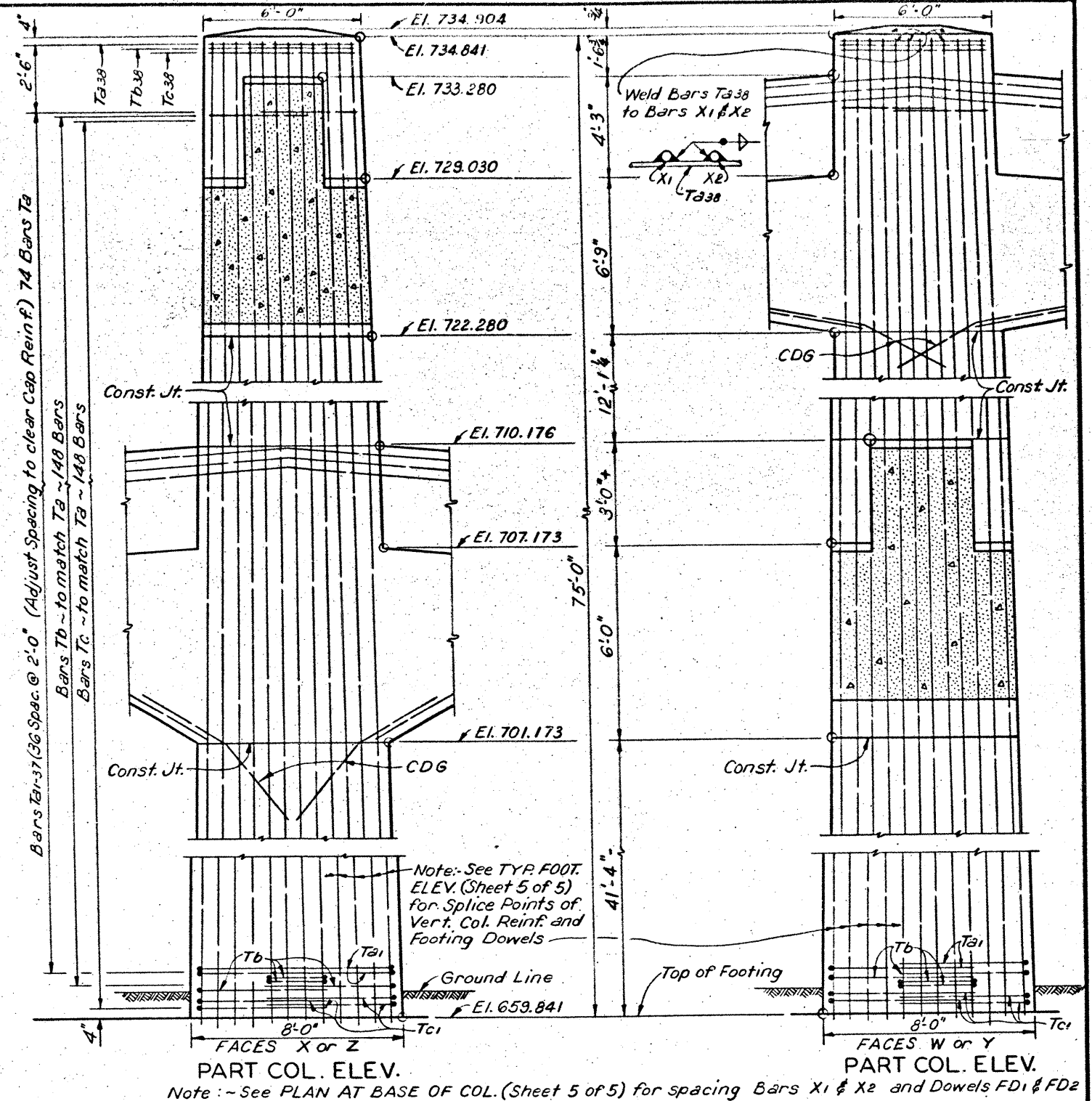
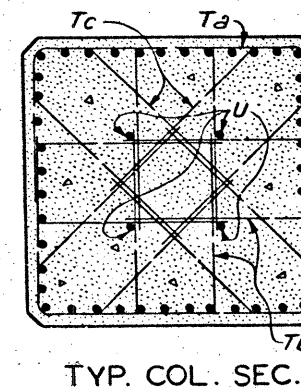


- ① Footing
- ② Column ~ El. 659.841 to El. 701.173
- ③ Caps E, F & portion of Col. between E & F ~ El. 701.173 to El. 710.176
- ④ Column ~ El. 710.176 to El. 722.280
- ⑤ Caps G, H & portion of Col. between G & H ~ El. 722.280 to El. 734.904

CONCRETE PLACING SEQUENCE



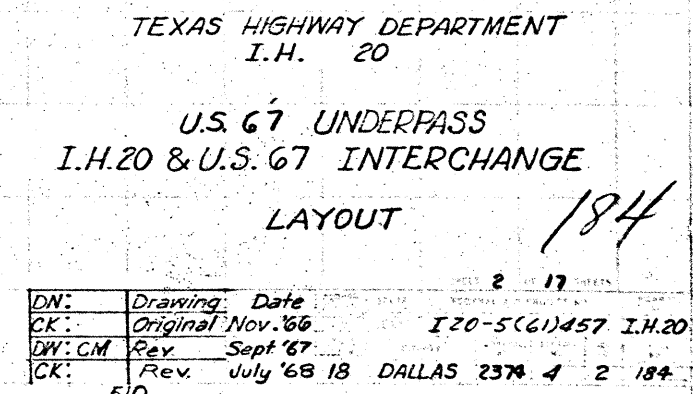
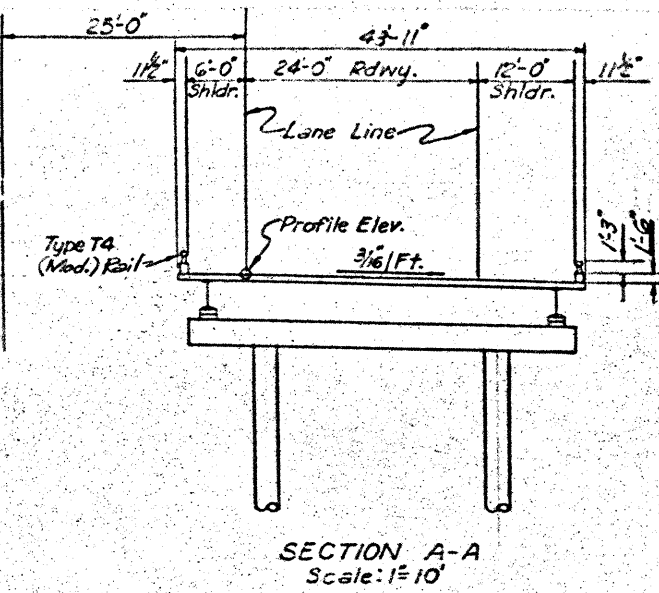
SHEET 1 OF 5 SHEETS

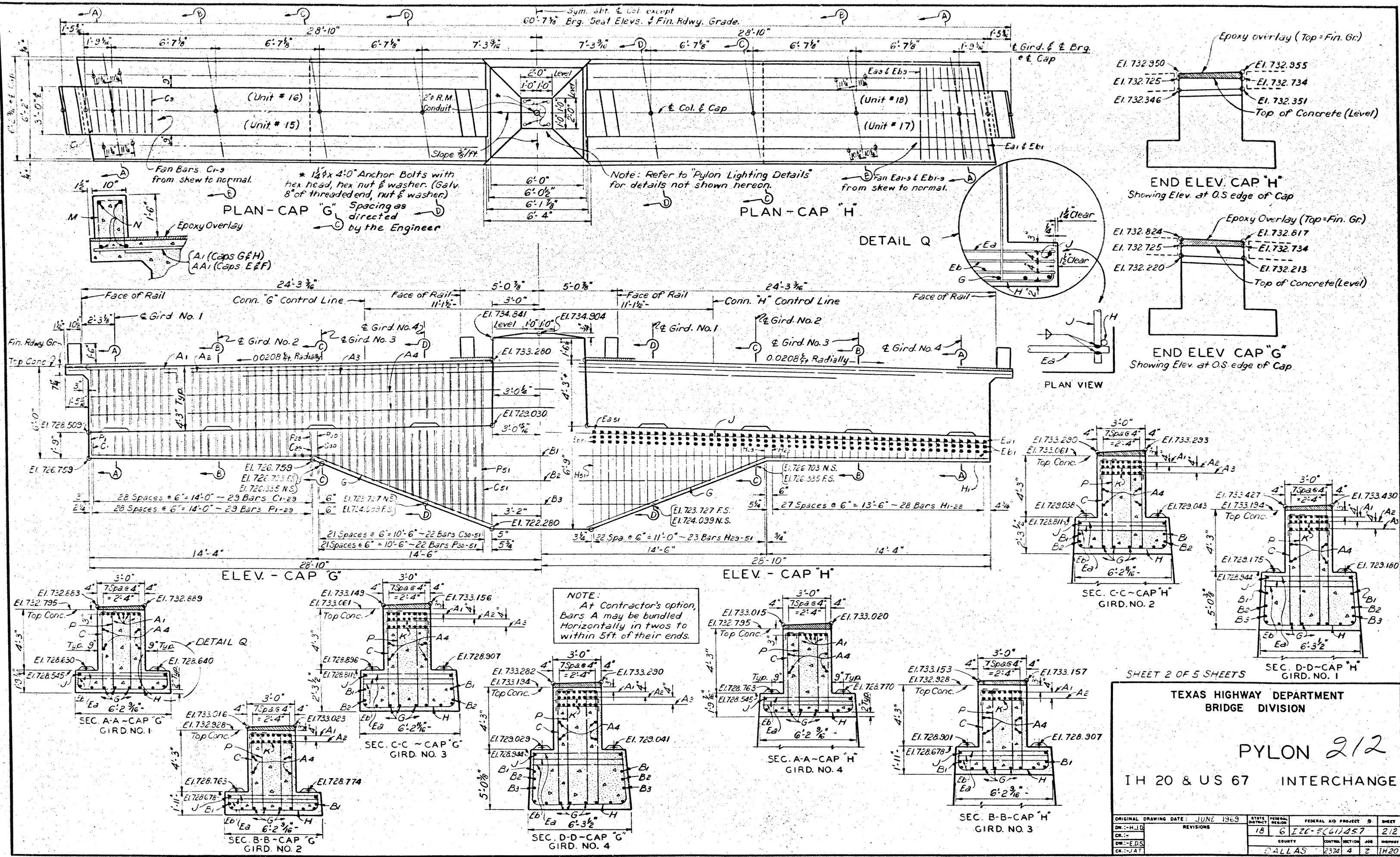
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

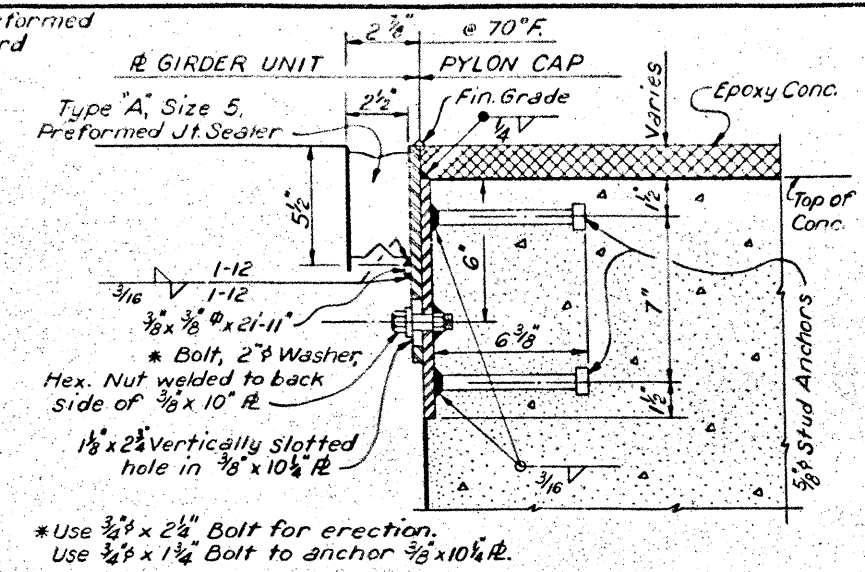
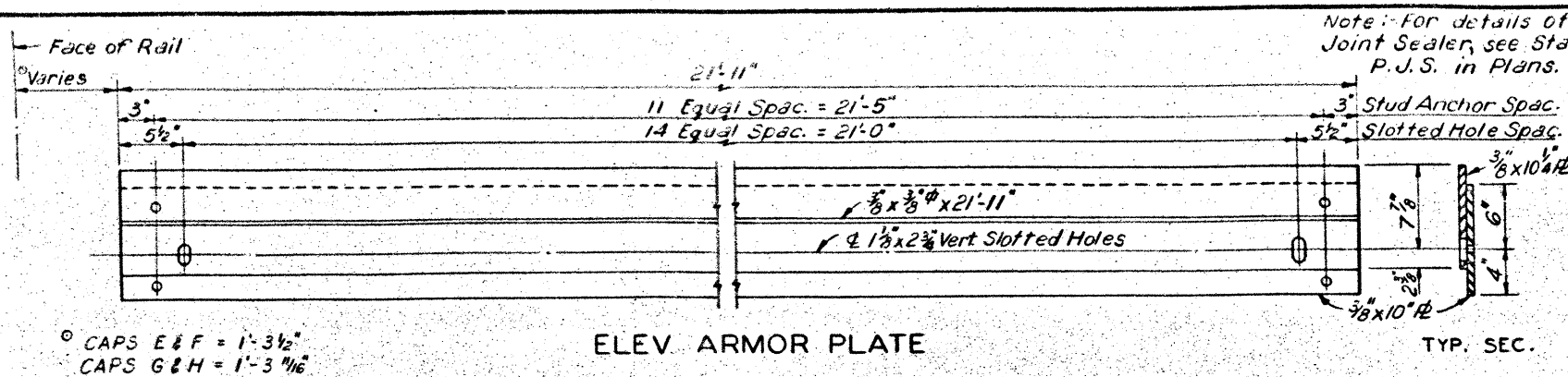
PYLON 211

I.H. 20 & U.S. 67 INTERCHANGE

ORIGINAL DRAWING DATE: JUNE 1969	REVISIONS	DISTRICT	FEDERAL AID PROJECT	SHEET
DM: HJD	18	6	I 30-5(61)457	211
CK: -		COUNTY	CONTROL SECTION	JOB
DM: FDS		DALLAS	2374	2
CK: JAT				I.H. 20







SPLICE NOTE :-

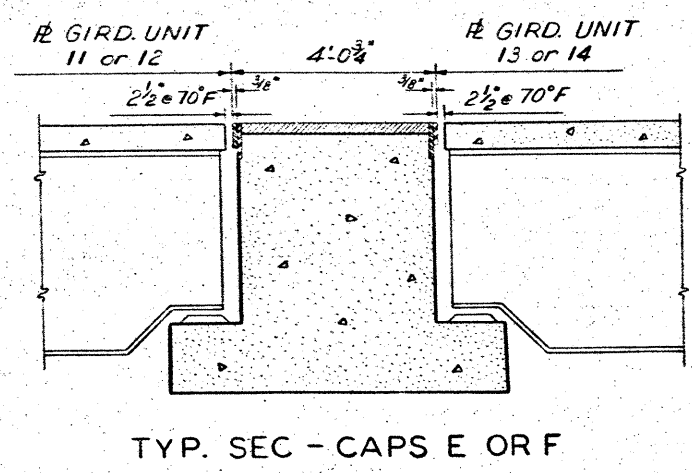
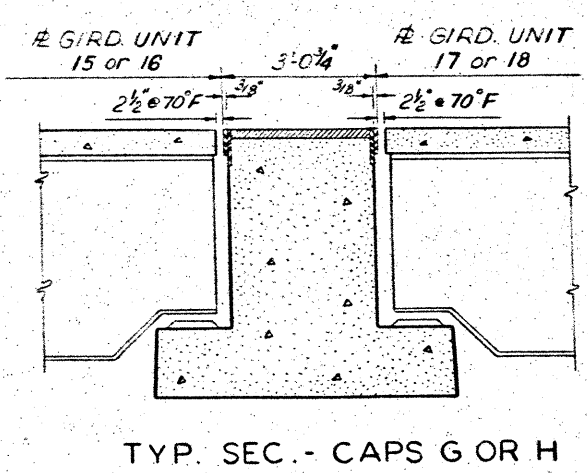
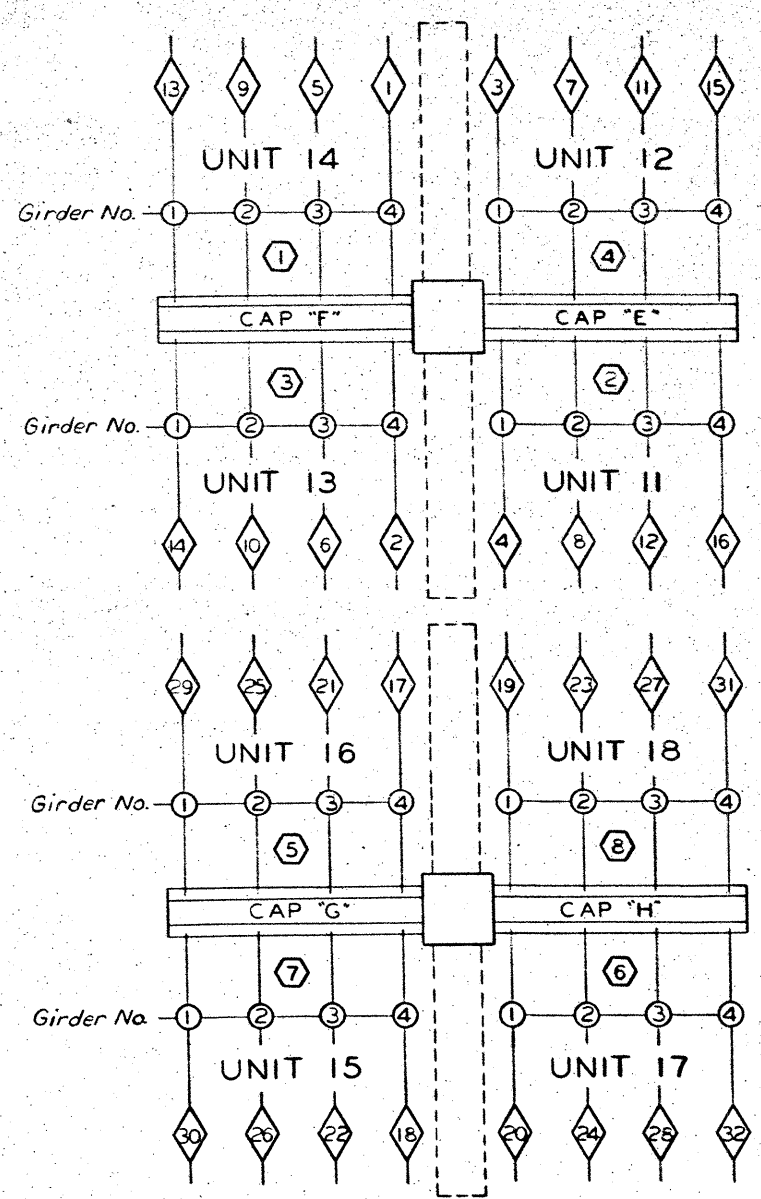
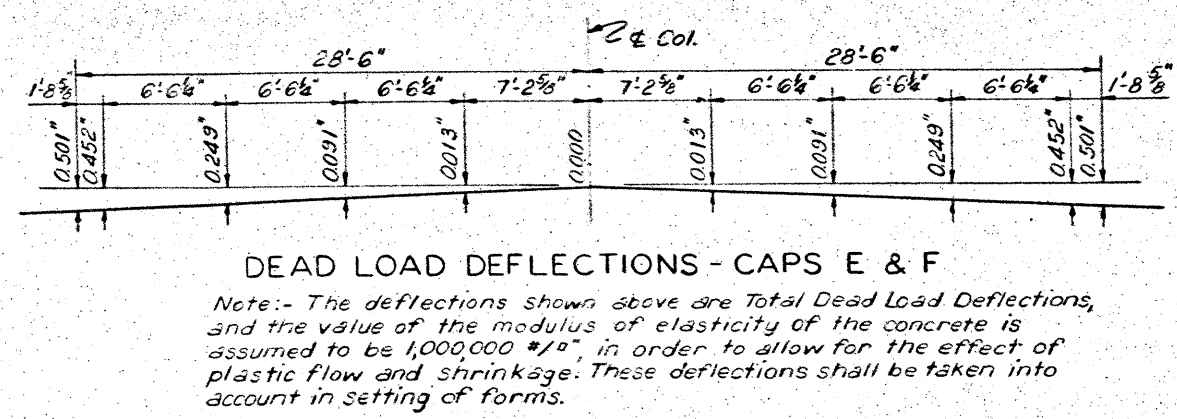
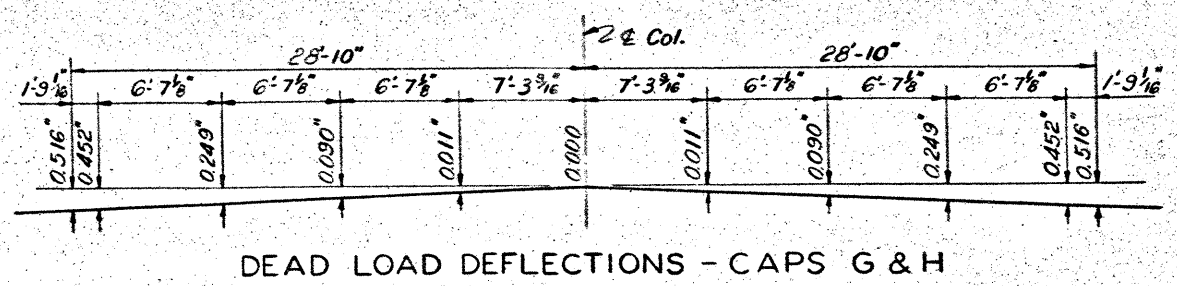
No. 14 Bars FD1 & X1 and FD2 & X2 may be spliced by full butt welding in accordance with Item 448 (Structural Welding) or by the Cadweld process. All splices shall develop 50,000 psi which is 125% of the required yield strength of reinforcing steel. At the Contractor's option, Bars FD1 & X1 and FD2 & X2 may be furnished in one continuous length.

If full butt welds are used the chemistry of the reinforcing steel shall not exceed the following:

Carbon .55
Manganese 1.30

If Cadweld process is used, reinforcing bars shall be shear cut at splice ends.

Three test specimens shall be prepared at the job site and shipped to Material & Test Laboratory, Texas Highway Department, Austin, for testing. Test specimens must comply with specifications prior to making any splices in the structure. If any one test specimen fails to meet specification, two additional test specimens shall be furnished for testing purposes. Splices in the structure shall be made in conformity with test specimens. Welded splices will be radiographed by the Texas Highway Department at no expense to the Contractor. No direct payment will be made for splices but such cost shall be incidental to bid item 'Reinforcing Steel'.



GENERAL NOTES -

All concrete to be Class C. Design: $f_c = 1440$ psi.

Concrete is to be placed in accordance with sequence as shown on plans. Any deviation from this sequence will be considered providing a detailed plan is submitted through the Engineer and approved by the Bridge Division.

In order to minimize dead load stresses in Pylon during construction, the Structural Steel is to be erected in accordance with the erection sequence as shown on plans. Any deviation from this sequence will be considered providing a detailed plan is submitted through the Engineer and approved by the Bridge Division.

Loading HS 20-44
Drilled Shaft Load = 190 Tons per Shaft.

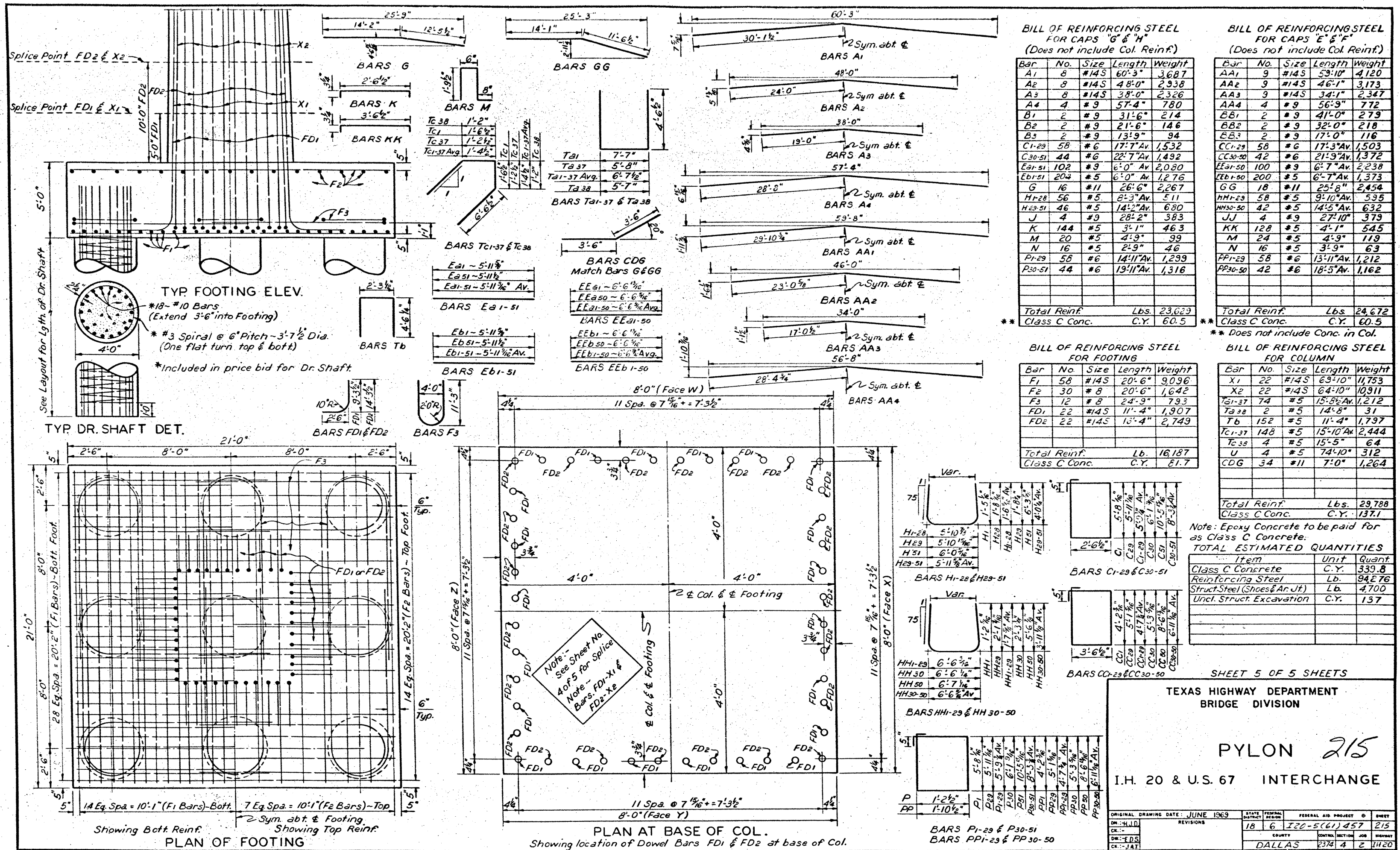
SHEET 4 OF 5 SHEETS

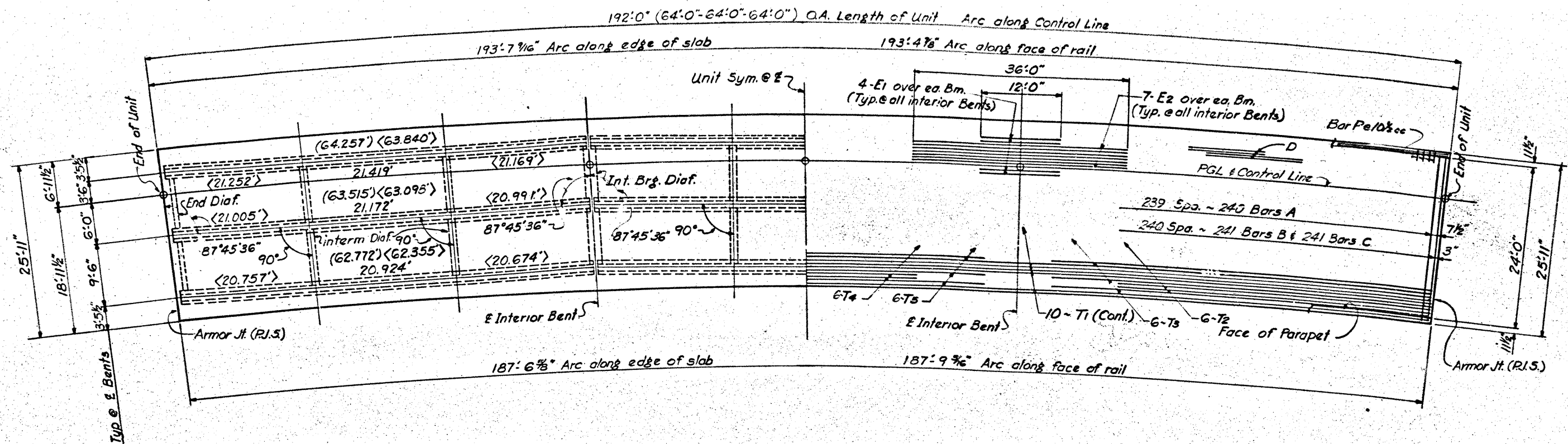
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

PYLON 214

I H 20 & U S 67 INTERCHANGE

ORIGINAL DRAWING DATE: JUNE-1969	STATE DISTRICT: 18	FEDERAL REGION: 6	FEDERAL AID PROJECT: I 20-5(61)457	SHEET: 214
DN: HJD	REVISIONS:	COUNTY: DALLAS	CONTRACT SECTION: 2374	JOB: 4
CK: -				ROADWAY: I H 20
DW: EDS				
CK: JAT				

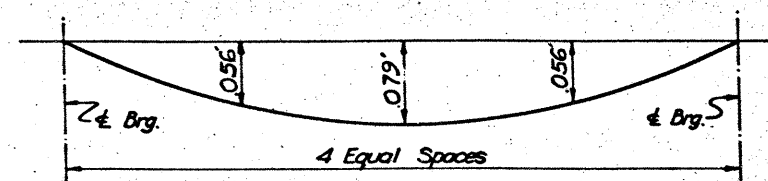




SHOWING FRAMING

SHOWING SLAB

PLAN



Note: The above deflections are due to cast-in-place concrete and rail only and shall be taken into account in the setting of slab forms.

DEAD LOAD DEFLECTION DIAGRAM

- Bars A, B, & C shall be placed radially. Nominal spacing is 9 1/2" measured along centerline of structure.
- Bar lengths include one 20 Dia. lap (1'-0" Min.) for each 60'-0" section of bar required to make up overall bar. No extra payment will be made for additional laps made in Bars D & T if the Contractor elects to splice bars at closer intervals.

ESTIMATED QUANTITIES		
Class "C" Concrete	C.Y.	154.7
Reinforcing Steel	Lb.	33,649
Prestressed Concrete Beams (Type C)	L.F.	567.88

BILL OF REINFORCING STL.				
Bar	No.	Size	Length	Weight
A	240	#5	26'-4"	6592
B	241	#4	24'-11"	4011
C	241	#5	25'-8"	6452
D	26	#5	*193'-7 1/8"	5250
E1	24	#8	12'-0"	769
E2	42	#8	36'-0"	4037
dK1	80	#5	8'-1"	674
dK2	8	#5	7'-5"	62
P	436	#5	4'-9"	2160
dL	2	#8	20'-7"	110
dN	8	#8	20'-0"	427
dR	64	#4	5'-1"	217
dS1	36	#4	4'-11"	118
dS2	108	#4	5'-0"	361
T1	10	#4	*193'-4 1/8"	1291
T2	12	#4	47'-2"	378
T3	12	#4	59'-2"	474
T4	6	#4	30'-3"	121
T5	6	#4	54'-3"	217

Total Wt. Lb. 33,649

GENERAL NOTES:

Design: HS 20 Loading in accordance with AASHTO 1965 and Interim Specifications and complies with PPM 20.4 Sec. 4c.

All cast-in-place concrete shall be Class C. Design: $f_c = 1200$ psi. Concrete shall be placed by the continuous placement method.

Dimensions to reinforcing steel are to centers of bars except where otherwise shown.

All dimensions given thus () are measured from ends of beams as cast. Dimensions given thus () are measured from centerline of Bent Cap.

For details, notes and bars not shown herein, see "Continuous Prestressed Concrete Beam Span Details".

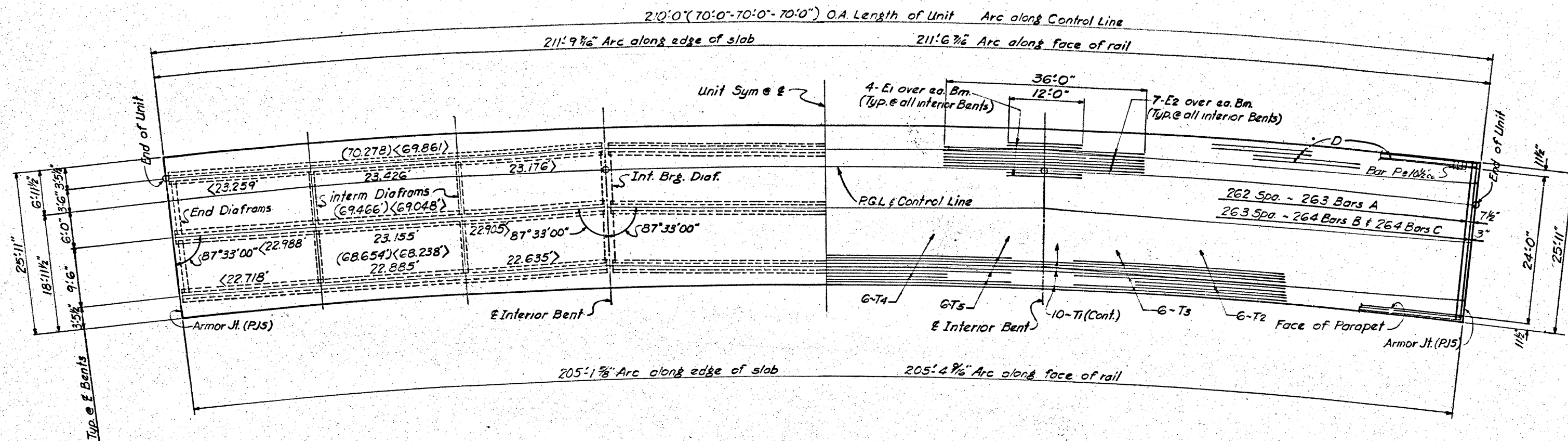
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

UNIT NO. 1
(FOR CONNECTION E&F)

192'-0" (64-64-64)

I. H. 20 - U.S. 67 INTERCHANGE

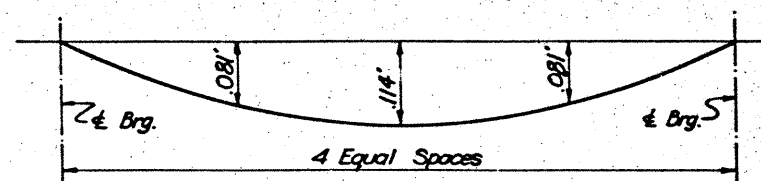
ORIGINAL DRAWING DATE	MAR. 69	STATE	FEDERAL	FEDERAL AID PROJECT	SHEET
DN: HJD	REVISIONS	18	6	I 20-5(61)457	216
CR: BCG		COUNTY	CONTROL SECTION	JOB	MARKING
DW: CR		DALLAS	2374	4	2 I.H. 20
CK: HBS					



SHOWING FRAMING

SHOWING SLAB

PLAN



Note: The above deflections are due to cast-in-place concrete and rail only and shall be taken into account in the setting of slab forms.

DEAD LOAD DEFLECTION DIAGRAM

• Bars A, B, & C shall be placed radially. Nominal spacing is 9 1/2" measured along centerline of structure.

• Bar lengths include one 20 Dia. lap (1'-0" Min.) for each 60'-0" section of bar required to make up overall bar. No extra payment will be made for additional laps made in Bars D & T if the Contractor elects to splice bars at closer intervals.

ESTIMATED QUANTITIES		
Class "C" Concrete	C.Y.	1681
Reinforcing Steel	Lb	36,315
Prestressed Concrete Beams (Type C)	L.F.	621.44

BILL OF REINFORCING STL.				
Bar	No.	Size	Length	Weight
A	263	#5	26'-4"	7224
B	264	#4	24'-11"	4394
C	264	#5	25'-8"	7067
D	26	#5	211'-6 1/2"	5735
E1	24	#8	12'-0"	769
E2	42	#8	36'-0"	4037
dK1	80	#5	8'-1"	674
dK2	8	#5	7'-5"	62
P	477	#5	4'-9"	2363
dL	2	#8	20'-7"	110
dN	8	#8	20'-0"	427
dR	64	#4	5'-1"	217
dS1	36	#4	4'-11"	118
dS2	108	#4	5'-0"	361
T1	10	#4	211'-3"	1411
T2	12	#4	53'-2"	426
T3	12	#4	66'-2"	530
T4	6	#4	36'-3"	145
T5	6	#4	61'-3"	245

Total Wt. Lb. 36,315

GENERAL NOTES:
Design: HS 20 Loading in accordance with AASHTO 1965 and Interim Specifications and complies with DPM 20.4 Sec. 4c.

All cast-in-place concrete shall be Class C. Design: $f_c = 1200$ psi. Concrete shall be placed by the continuous placement method.

Dimensions to reinforcing steel are to centers of bars except where otherwise shown.

All dimensions given thus () are measured from ends of beams as cast. Dimensions given thus () are measured from centerline of Bent Cap.

For details, notes and bars not shown hereon, see "Continuous Prestressed Concrete Beam Span Details".

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

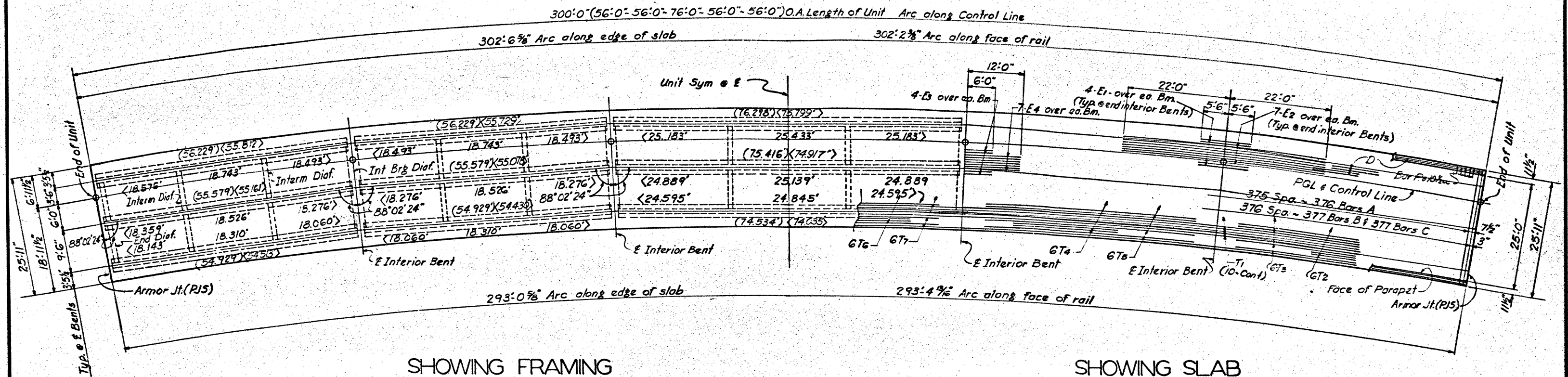
UNIT NO. 2

(FOR CONNECTION E)

210'-0" (70-70-70)

I. H. 20 - U.S. 67 INTERCHANGE

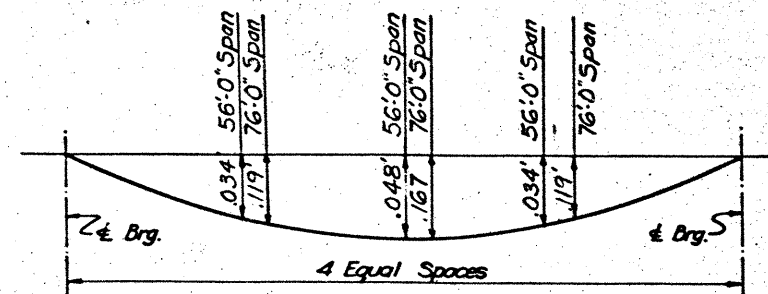
ORIGINAL DRAWING DATE: MAR 69	STATE DISTRICT: 18	FEDERAL AID PROJECT: 6	REVISIONS: 1
DR: HJD	CR: BCG	DR: CR	CR: HBS
COUNTY: DALLAS	SECTION: 374	JOB: 4	INCHES: 2
DATE: 1/1/70	DATE: 1/1/70	DATE: 1/1/70	DATE: 1/1/70



SHOWING FRAMING

SHOWING SLAB

PLAN



Note: The above deflections are due to cast-in-place concrete and rail only and shall be taken into account in the setting of slab forms.

DEAD LOAD DEFLECTION DIAGRAM

* Bars A, B, & C shall be placed radially. Nominal spacing is $9\frac{1}{2}$ " measured along centerline of structure.

* Bar lengths include one 20 Dia. lap (1'-0" Min.) for each 60'-0" section of bar required to make up overall bar. No extra payment will be made for additional laps made in Bars D & T if the Contractor elects to splice bars at closer intervals.

ESTIMATED QUANTITIES		
Class "C" Concrete	C.Y.	243.5
Reinforcing Steel	Lb	54,343
Prestressed Concrete Beams (Type C)	L.F.	886.38

BILL OF REINFORCING STL.				
Bar	No.	Size	Length	Weight
A	376	#5	26'-4"	10,327
B	377	#4	24'-11"	6,275
C	377	#5	25'-8"	10,092
D	26	#5	30'-11 1/2"	8,187
E1	24	#8	11'-0"	705
E2	42	#8	44'-0"	4,934
dK1	128	#5	8'-1"	1,079
dK2	16	#5	7'-5"	124
P	682	#5	4'-9"	3,379
dL	4	#8	20'-7"	220
dN	12	#8	20'-0"	641
dR	128	#4	5'-1"	435
dS1	36	#4	4'-11"	118
dS2	180	#4	5'-0"	601
T1	10	#4	30'-1'-7"	2,015
T2	12	#4	35'-1"	281
T3	12	#4	51'-7"	413
T4	12	#4	24'-3"	194
T5	12	#4	46'-9"	375
T6	6	#4	54'-4"	218
T7	6	#4	67'-4"	270
E3	24	#8	12'-0"	769
E4	42	#8	24'-0"	2,601
Total Wt.			Lb.	54,343

GENERAL NOTES:

Design: HS 20 Loading in accordance with AASHTO 1965 and Interim Specifications and complies with PPM 20.4 Sec. 4c.

All cast-in-place concrete shall be Class C. Design: $f_c = 1200$ psi. Concrete shall be placed by the continuous placement method.

Dimensions to reinforcing steel are to centers of bars except where otherwise shown.

All dimensions given thus () are measured from ends of beams as cast. Dimensions given thus () are measured from centerline of Bent Cap.

For details, notes and bars not shown hereon, see "Continuous Prestressed Concrete Beam Span Details".

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

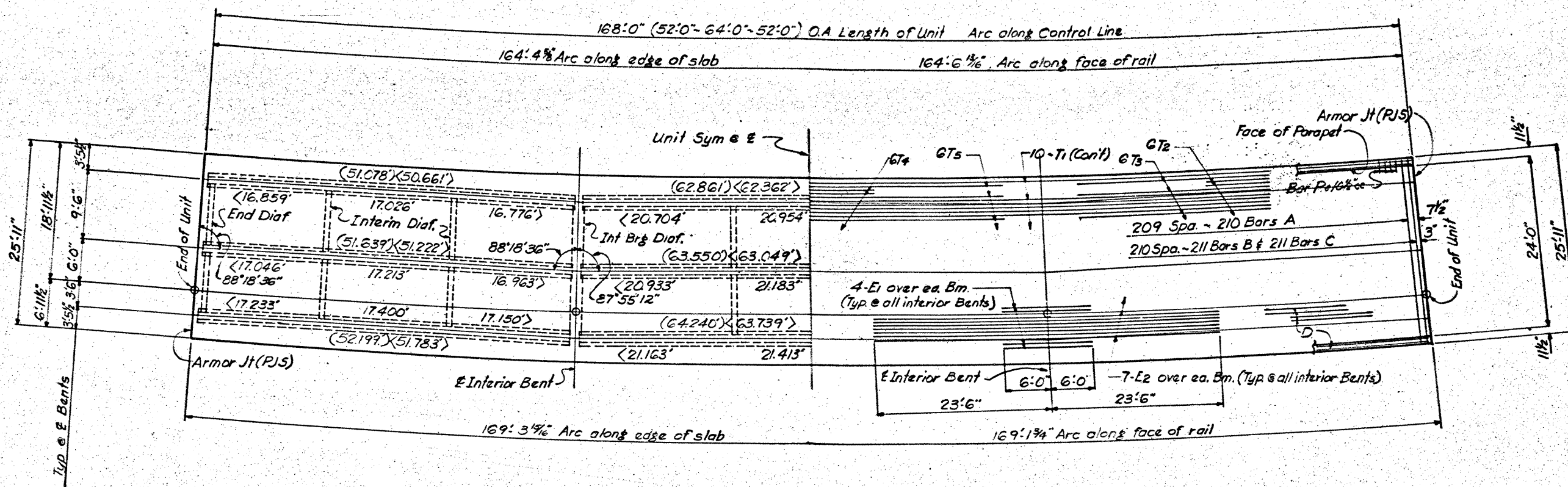
UNIT NO. 3

(FOR CONNECTION E&F)

300'-0" (56-56-76-56-56)

I. H. 20 - U.S. 67 INTERCHANGE

ORIGINAL DRAWING DATE MAR 69	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
18	6	120-5(61)457	218	
REVISIONS	COUNTY	SECTION	JOB	REMARK
	DALLAS	2374	4	2
DATE	1/1/20			



SHOWING FRAMING

SHOWING SLAB

PLAN

GENERAL NOTES:

Design: HS 20 Loading in accordance with AASHTO 1965 and Interim Specifications and complies with PPM 20.4 Sec. 4c.

All cast-in-place concrete shall be Class C. Design: $f_c = 1200$ psi. Concrete shall be placed by the continuous placement method.

Dimensions to reinforcing steel are to centers of bars except where otherwise shown.

All dimensions given thus () are measured from ends of beams as cast. Dimensions given thus () are measured from centerline of Bent Cap.

For details, notes and bars not shown hereon, see "Continuous Prestressed Concrete Beam Span Details".

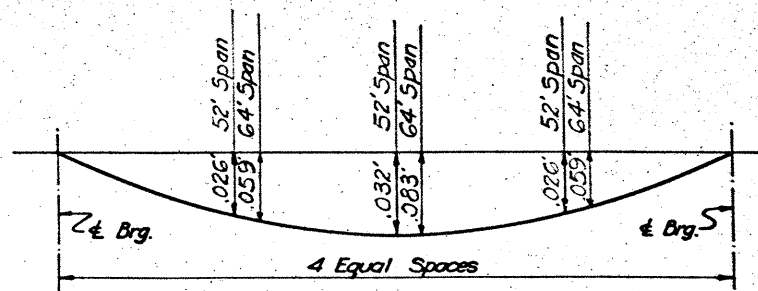
Bar	No.	Size	Length	Weight
A	210	#5	26'-4"	5768
B	211	#4	24'-11"	3512
C	211	#5	25'-8"	5649
D	26	#5	168'-9 1/2"	4576
E1	24	#8	12'-0"	769
E2	42	#8	47'-0"	5271
dK1	80	#5	8'-1"	674
dK2	8	#5	7'-5"	62
P	382	#5	4'-9"	1893
dL	2	#8	20'-7"	110
dN	8	#8	20'-0"	427
dR	64	#4	5'-1"	217
dS1	36	#4	4'-11"	118
dS2	108	#4	5'-0"	361
T1	10	#4	168'-7"	1126
T2	12	#4	29'-7"	237
T3	12	#4	47'-1"	377
T4	6	#4	19'-3"	77
T5	6	#4	54'-5"	217

* Bars A, B, & C shall be placed radially. Nominal spacing is 9 1/2" measured along centerline of structure.

* Bar lengths include one 20 Dia. lap (1'-0" Min.) for each 60'-0" section of bar required to make up overall bar. No extra payment will be made for additional laps made in Bars D & T if the Contractor elects to splice bars at closer intervals.

ESTIMATED QUANTITIES		
Class "C" Concrete	C.Y.	136.8
Reinforcing Steel	Lb	31,441
Prestressed Concrete Beams (Type C)	L.F.	496.48

Total Wt. Lb. 31,441



Note: The above deflections are due to cast-in-place concrete and rail only and shall be taken into account in the setting of slab forms.

DEAD LOAD DEFLECTION DIAGRAM

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

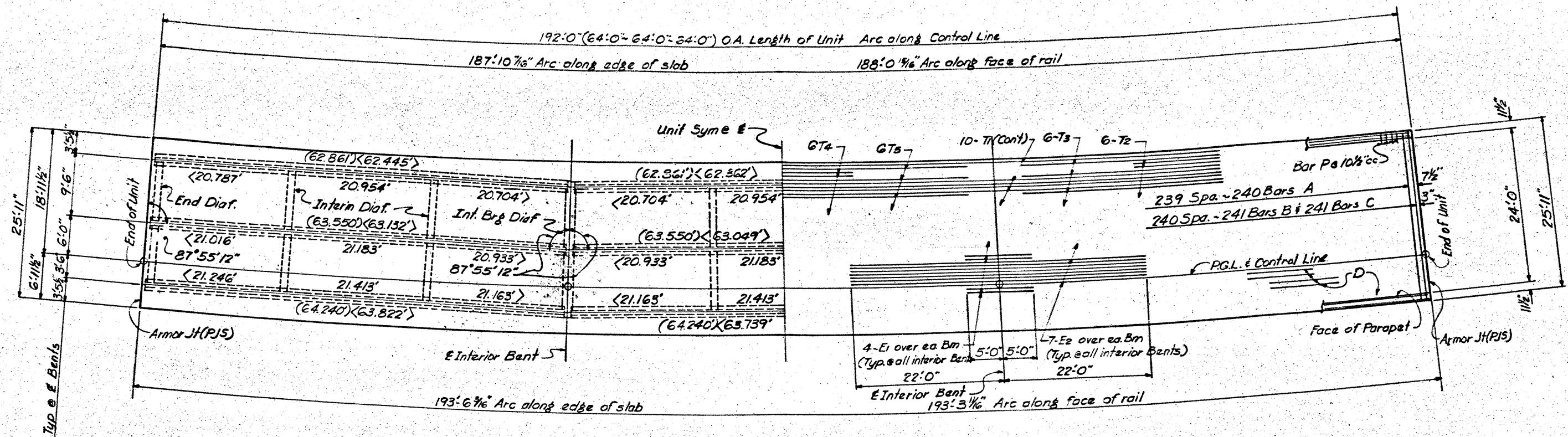
UNIT NO. 4

(FOR CONNECTION G)

168'-0" (52-64-52)

I. H. 20 - U.S. 67 INTERCHANGE

ORIGINAL DRAWING DATE	MAR 69	STATE	FEDERAL	FEDERAL AID PROJECT	SHEET
DN: HJD	REVISIONS	18	6	I 20-5(61) 457	219
CR: BCG					
DW: CR					
CR: HBS					
		COUNTY	SECTION	JOB	REMARKS
		DALLAS	374	4	2



SHOWING FRAMING

SHOWING SLAB

PLAN

GENERAL NOTES:
Design: HS 20 Loading in accordance with AASHTO 1965 and Interim Specifications and complies with PPM 20.4 Sec. 4c.

All cast-in-place concrete shall be Class C. Design: $f_c = 1200$ psi. Concrete shall be placed by the continuous placement method. Dimensions to reinforcing steel are to centers of bars except where otherwise shown.

All dimensions given thus () are measured from ends of beams as cast. Dimensions given thus () are measured from centerline of Bent Cap.

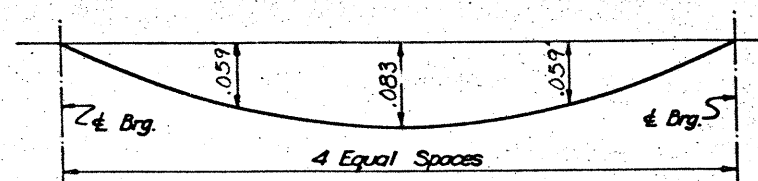
For details, notes and bars not shown herein, see "Continuous Prestressed Concrete Beam Span Details."

Bar	No.	Size	Length	Weight
A	240	#5	26'-4"	6592
B	241	#4	24'-11"	4011
C	241	#5	25'-8"	6452
D	26	#5	193'-8"	5252
E1	24	#9	10'-0"	816
E2	42	#9	44'-0"	6283
dK1	80	#5	8'-1"	674
dK2	8	#5	7'-5"	62
P	436	#5	4'-9"	2160
dL	2	#8	20'-7"	110
dN	8	#8	20'-0"	427
dR	64	#4	5'-1"	217
dS1	36	#4	4'-11"	118
dS2	108	#4	5'-0"	361
T1	10	#4	193'-5"	1292
T2	12	#4	43'-1"	345
T3	12	#4	60'-1"	482
T4	6	#4	22'-3"	89
T5	6	#4	56'-3"	225
Total Wt.				Lb. 35968

* Bars A, B, & C shall be placed radially. Nominal spacing is $9\frac{1}{2}$ " measured along centerline of structure.

* Bar lengths include one 20 Dia. lap (1'-0" Min.) for each 60'-0" section of bar required to make up overall bar. No extra payment will be made for additional laps made in Bars D & T if the Contractor elects to splice bars at closer intervals.

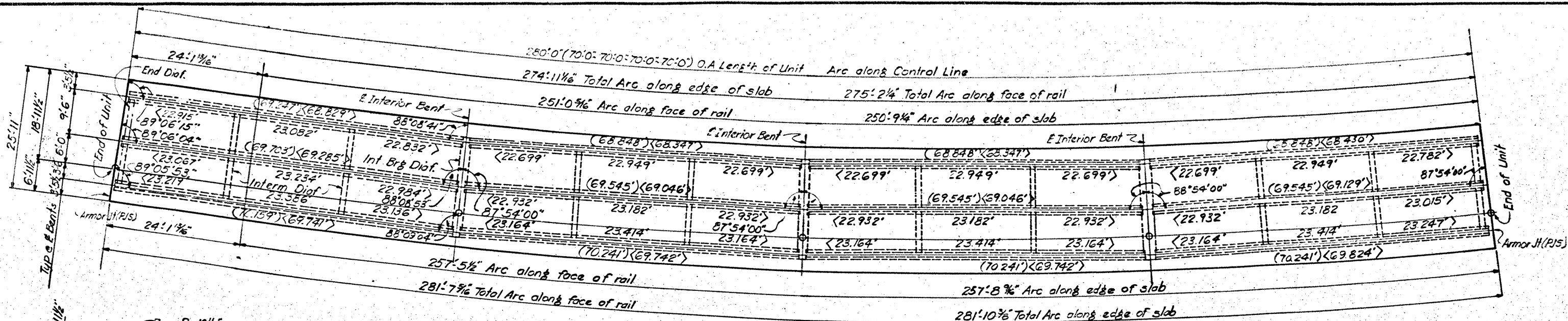
ESTIMATED QUANTITIES		
Class "C" Concrete	C.Y.	154.7
Reinforcing Steel	Lb.	35968
Prestressed Concrete Beams (Type C)	L.F.	567.95



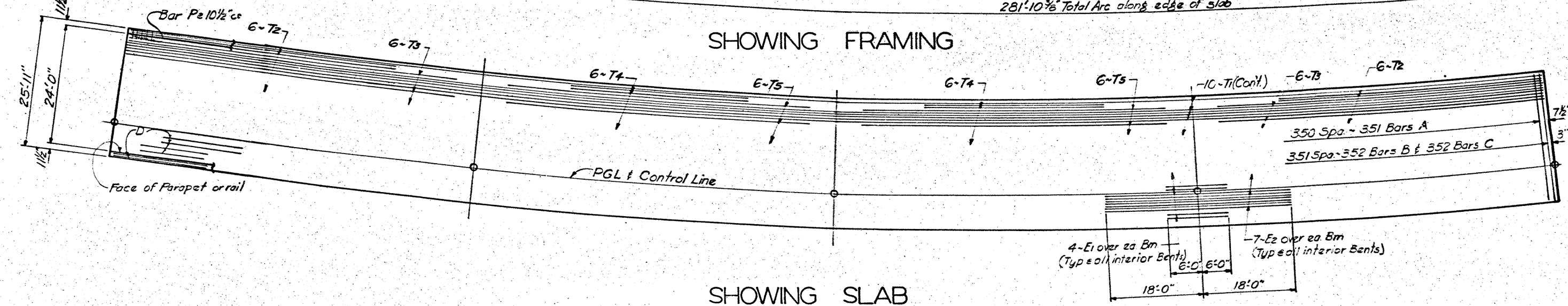
Note: The above deflections are due to cast-in-place concrete and rail only and shall be taken into account in the setting of slab forms.

DEAD LOAD DEFLECTION DIAGRAM

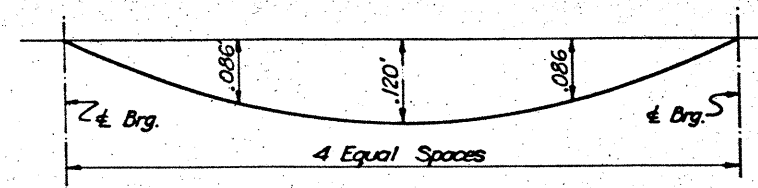
TEXAS HIGHWAY DEPARTMENT BRIDGE DIVISION			
UNIT NO. 5 (FOR CONNECTION G)			
192'-0" (64-64-64)			
I. H. 20 - U.S. 67 INTERCHANGE			
ORIGINAL DRAWING DATE	MAR 69	STATE	FEDERAL AID PROJECT
DESIGNER	HJD	COUNTY	DALLAS
CHECKED	BCG	SECTION	4
DATE	18	JOB	2
REVISIONS	6	DATE	11/20
BY	CR	REVISION	220
DATE	11/20	REVISION	220



SHOWING FRAMING



SHOWING SLAB



Note: The above deflections are due to cast-in-place concrete and rail only and shall be taken into account in the setting of slab forms.

DEAD LOAD DEFLECTION DIAGRAM

- Bars A, B, & C shall be placed radially. Nominal spacing is 3/4" measured along centerline of structure.
- Bar lengths include one 20 Dia. lap (1'-0" Min.) for each 60'-0" section of bar required to make up overall bar. No extra payment will be made for additional laps made in Bars D & T if the Contractor elects to splice bars at closer intervals.

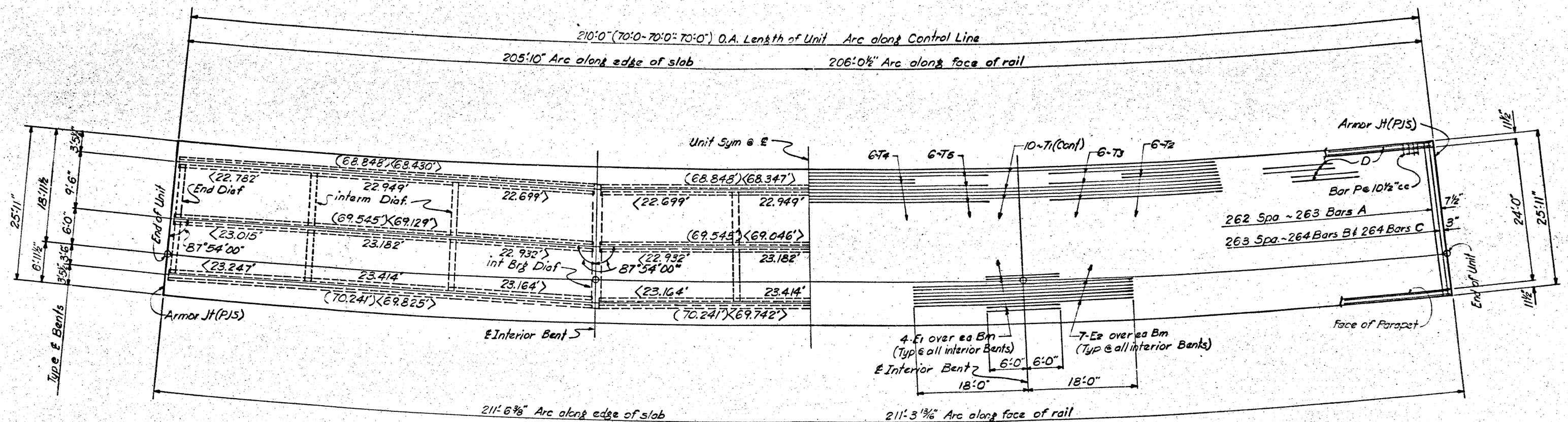
ESTIMATED QUANTITIES		
Class "C" Concrete	CY.	224.8
Reinforcing Steel	Lb.	49170
Prestressed Concrete Beams (Type C)	L.F.	629.26

BILL OF REINFORCING STL.				
Bar	No.	Size	Length	Weight
A	351	#5	26'-4"	9640
B	352	#4	24'-11"	5859
C	352	#5	25'-8"	9423
D	26	#5	*282'-6 1/2"	7661
E1	36	#8	12'-0"	1153
E2	63	#8	36'-0"	6056
dK1	104	#5	8'-1"	877
dK2	12	#5	7'-5"	93
P	638	#5	4'-9"	3161
dL	3	#8	20'-7"	165
dN	10	#8	20'-0"	534
dR	96	#4	5'-1"	326
dS1	36	#4	4'-11"	118
dS2	144	#4	5'-0"	481
T1	10	#4	*282'-2 1/2"	1885
T2	12	#4	53'-1"	426
T3	12	#4	*66'-1"	530
T4	12	#4	36'-3"	291
T5	12	#4	*61'-3"	491

Total Wt. Lb. 49170

GENERAL NOTES:
 Design: HS 20 Loading in accordance with AASHTO 1965 and Interim Specifications and complies with DPM 20.4 Sec. 4c.
 All cast-in-place concrete shall be Class C. Design: $f_c = 200$ psi. Concrete shall be placed by the continuous placement method.
 Dimensions to reinforcing steel are to centers of bars except where otherwise shown.
 All dimensions given thus () are measured from ends of beams as cast. Dimensions given thus () are measured from centerline of Bent Cap.
 For details, notes and bars not shown hereon, see "Continuous Prestressed Concrete Beam Span Details".

TEXAS HIGHWAY DEPARTMENT BRIDGE DIVISION			
UNIT NO. 6 (FOR CONNECTION G)			
280'-0" (70-70-70-70) 221			
I. H. 20 - U.S. 67 INTERCHANGE			
ORIGINAL DRAWING DATE: APR 69	STATE: TEXAS	FEDERAL AID PROJECT: 120-5(61) 457	SHEET: 221
DESIGNER: HJD	CHECKER: BCG	COUNTY: DALLAS	SECTION: 374
DRAWN: CR	CHECKED: HBS	JOB: 4	DATE: 1/1/20



SHOWING FRAMING

SHOWING SLAB

PLAN

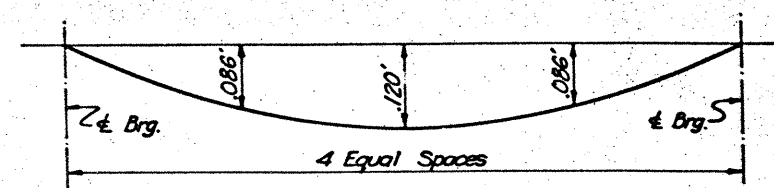
GENERAL NOTES:
Design: HS 20 Loading in accordance with AASHTO 1965
and Interim Specifications and complies with DPM 20.4 Sec.4c.

All cast-in-place concrete shall be Class C. Design: $f_c = 1200$ psi.
Concrete shall be placed by the continuous placement method.

Dimensions to reinforcing steel are to centers of
bars except where otherwise shown.

All dimensions given thus () are measured from ends of
beams as cast. Dimensions given thus () are measured from
centerline of Bent Cap.

For details, notes and bars not shown hereon, see "Continu-
ous Prestressed Concrete Beam Span Details".



Note: The above deflections are due to cast-in-place concrete and rail
only and shall be taken into account in the setting of slab forms.

DEAD LOAD DEFLECTION DIAGRAM

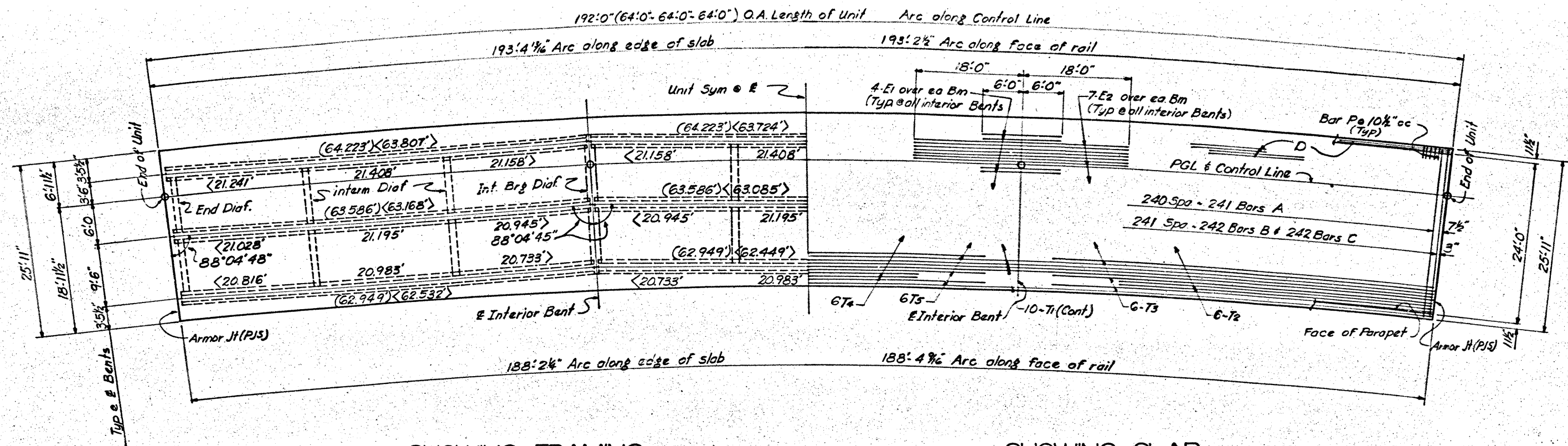
- * Bars A, B, & C shall be placed radially. Nominal
spacing is $9\frac{1}{2}$ " measured along centerline of structure.
- * Bar lengths include one 20 Dia. lap (1'-0" Min.) for
each 60'-0" section of bar required to make up overall
bar. No extra payment will be made for additional
laps made in Bars D & T if the Contractor elects to
splice bars at closer intervals.

BILL OF REINFORCING STL.				
Bar	No.	Size	Length	Weight
A	263	#5	26'-4"	7223
B	264	#4	24'-11"	4394
C	264	#5	25'-8"	7067
D	26	#5	211'-8"	5740
E1	24	#8	12'-0"	769
E2	42	#8	36'-0"	4037
dK1	80	#5	8'-1"	674
dK2	8	#5	7'-5"	62
P	478	#5	4'-9"	2368
dL	2	#8	20'-7"	110
dN	8	#8	20'-0"	427
dR	6'-4"	#4	5'-1"	217
dS1	36	#4	4'-11"	118
dS2	108	#4	5'-0"	361
T1	10	#4	211'-5"	1412
T2	12	#4	53'-1"	426
T3	12	#4	66'-1"	530
T4	6	#4	36'-3"	145
T5	6	#4	61'-3"	245

ESTIMATED QUANTITIES		
Class "C" Concrete	C.Y.	168.3
Reinforcing Steel	Lb	36,325
Prestressed Concrete Beams (Type C)	L.F.	621.90

Total Wt.	Lb.	36,325
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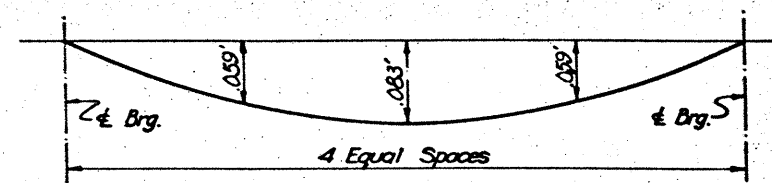
TEXAS HIGHWAY DEPARTMENT BRIDGE DIVISION			
UNIT NO. 7 (FOR CONNECTION G)			
210'-0" (70-70-70)			
I. H. 20 - U.S. 67 INTERCHANGE			
222			
ORIGINAL DRAWING DATE: APR 69	STATE: TEXAS	FEDERAL AID PROJECT:	SHEET: 222
REVISIONS:	18	6	I 20-5(41) 457
DR: HJD	CR: BCG	COUNTY: DALLAS	SECTION: 4
DR: CR	CR: HBS	JOB: I.H. 20	ROADWAY: 2



SHOWING FRAMING

SHOWING SLAB

PLAN



Note: The above deflections are due to cast-in-place concrete and rail only and shall be taken into account in the setting of slab forms.

DEAD LOAD DEFLECTION DIAGRAM

* Bars A, B, & C shall be placed radially. Nominal spacing is 9 1/2" measured along centerline of structure.

* Bar lengths include one 20 Dia. lap (1'-0" Min.) for each 60'-0" section of bar required to make up overall bar. No extra payment will be made for additional laps made in Bars D & T if the Contractor elects to splice bars at closer intervals.

ESTIMATED QUANTITIES		
Class "C" Concrete	C.Y.	154.8
Reinforcing Steel	Lb	33,808
Prestressed Concrete Beams (Type C)	L.F.	568.27

BILL OF REINFORCING STL.				
Bar	No.	Size	Length	Weight
A	241	#5	26'-4"	6619
B	242	#4	24'-11"	4028
C	242	#5	25'-8"	6478
D	26	#5	193'-10"	5256
E1	24	#8	12'-0"	769
E2	42	#8	36'-0"	4037
dK1	80	#5	8'-1"	674
dK2	8	#5	7'-5"	62
P	438	#5	4'-9"	2170
dL	2	#8	20'-7"	110
dN	8	#8	20'-0"	427
dR	64	#4	5'-1"	217
dS1	36	#4	4'-11"	118
dS2	108	#4	5'-0"	361
T1	10	#4	193'-7"	1293
T2	12	#4	47'-1"	377
T3	12	#4	59'-1"	474
T4	6	#4	30'-3"	121
T5	6	#4	54'-3"	217
Total Wt.				Lb. 33,808

GENERAL NOTES:

Design: HS 20 Loading in accordance with AASHTO 1965 and Interim Specifications and complies with DPM 20.4 Sec. 4c.

All cast-in-place concrete shall be Class C. Design: $f_c = 1200$ psi. Concrete shall be placed by the continuous placement method.

Dimensions to reinforcing steel are to centers of bars except where otherwise shown.

All dimensions given thus () are measured from ends of beams as cast. Dimensions given thus () are measured from centerline of Bent Cap.

For details, notes and bars not shown hereon, see "Continuous Prestressed Concrete Beam Span Details".

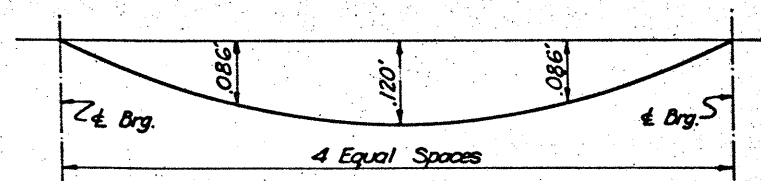
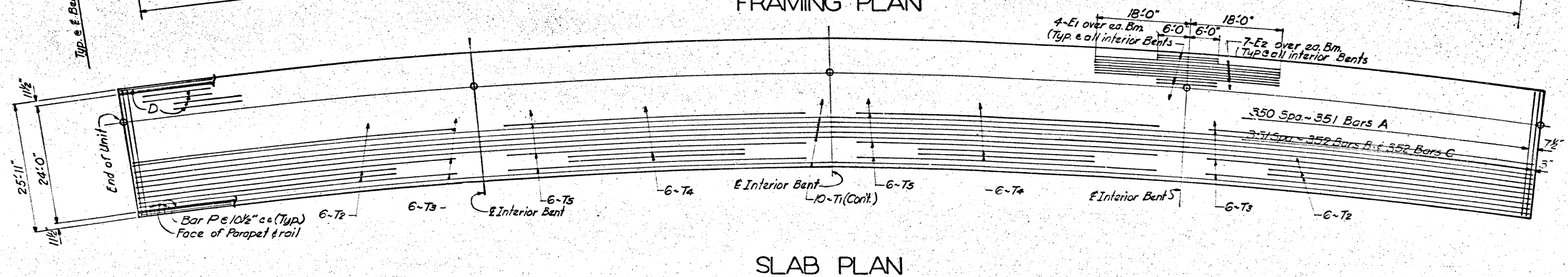
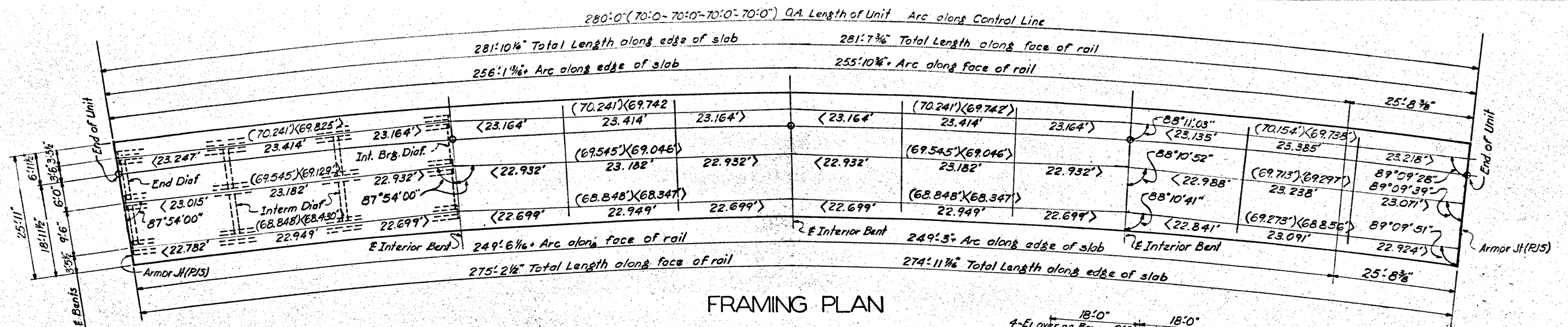
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

UNIT NO. 8
(FOR CONNECTION H)

192'-0" (64-64-64)

I. H. 20 - U.S. 67 INTERCHANGE

ORIGINAL DRAWING DATE	APR 69	STATE PROJECT	FEDERAL AID PROJECT	SHEET
DR: HJD	REVISIONS	18	6	223
CR: BCB		COUNTY	SECTION	JOB
DR: CR		DALLAS	274	4
CR: HBS				2



Note: The above deflections are due to cast-in-place concrete and rail only and shall be taken into account in the setting of slab forms.

GENERAL NOTES :
Design : HS 20 Loading in accordance with AASHTO 1965
and Interim Specifications and complies with DPM 20.4 Sec.4c.

All cast-in-place concrete shall be Class C. Design: $f_c = 1200$ psi. Concrete shall be placed by the continuous placement method.

Dimensions to reinforcing steel are to centers of bars except where otherwise shown.

All dimensions given thus { } are measured from ends of beams as cast. Dimensions given thus () are measured from centerline of Bent Cap.

For details, notes and bars not shown hereon, see "Continuous Prestressed Concrete Beam Span Details."

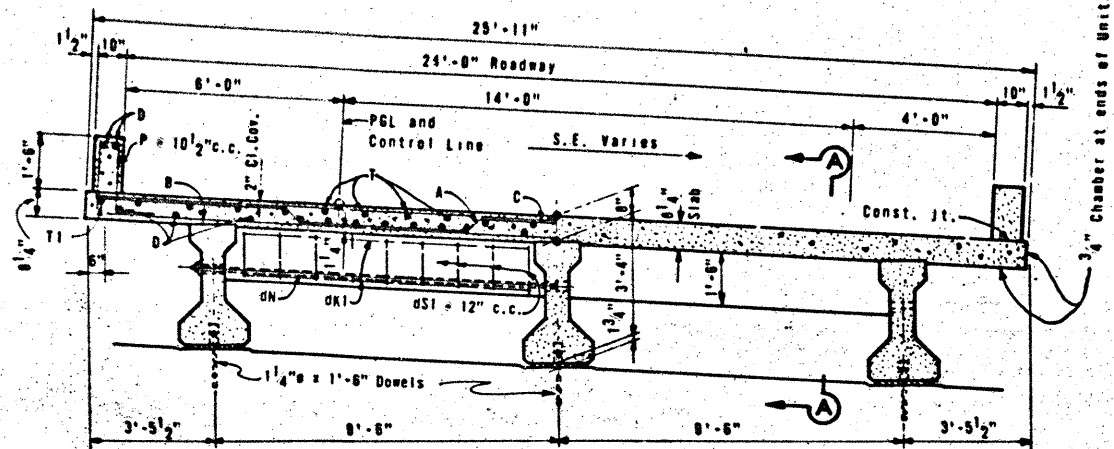
BILL OF REINFORCING STL				
Bar	No.	Size	Length	Weight
A	351	#5	26'-4"	9640
B	352	#4	24'-11"	5859
C	352	#5	25'-8"	9423
D	26	#5	*28'-6 1/2"	7661
E1	36	*#8	12'-0"	1153
E2	63	*#8	36'-0"	6056
dK1	104	#5	8'-1"	877
dK2	12	#5	7'-5"	93
P	638	*#5	4'-9"	3161
dL	3	*#8	20'-7"	165
dN	10	#8	20'-0"	534
dR	96	#4	5'-1"	326
dS1	36	#4	4'-11"	118
dS2	144	#4	5'-0"	481
T1	10	#4	*28'-2 1/2"	1885
T2	12	#4	53'-1"	426
T3	12	#4	*66'-1"	530
T4	12	#4	36'-3"	291
T5	12	#4	*61'-3"	491

- Bars A, B, & C shall be placed radially. Nominal spacing is $9\frac{1}{2}$ " measured along centerline of structure.

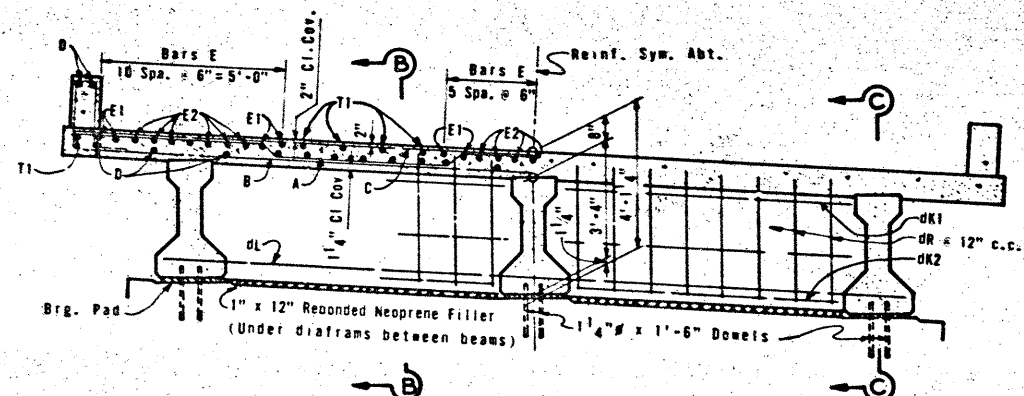
* Bar lengths include one 20 Dia. lap (1'-0" Min.) for each 60'-0" section of bar required to make up overall bar. No extra payment will be made for additional laps made in Bars D & T if the Contractor elects to splice bars at closer intervals.

ESTIMATED QUANTITIES	
Class "C" Concrete	C.Y. 224.6
Reinforcing Steel	Lb 49,170
Prestressed Concrete Beams (Type C)	L.F. 829.5

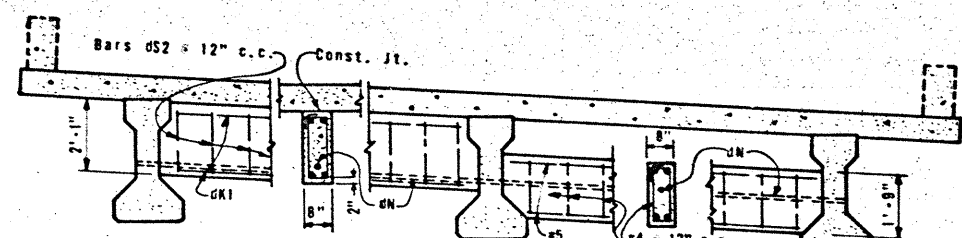
ORIGINAL DRAWING DATE: APR 69		STATE		FEDERAL		FEDERAL AID PROJECT		SHEET	
REVISED		DIST		PROJECT					
DN - HJD		18		6		I 20-5(61) 157		224	
CR - DC6									
DW - CR									
CR - HRS									
		COUNTRY		CONTROL		SECTION		JOB	
		DAI / AS		B374		4		2	
								THURDAY	



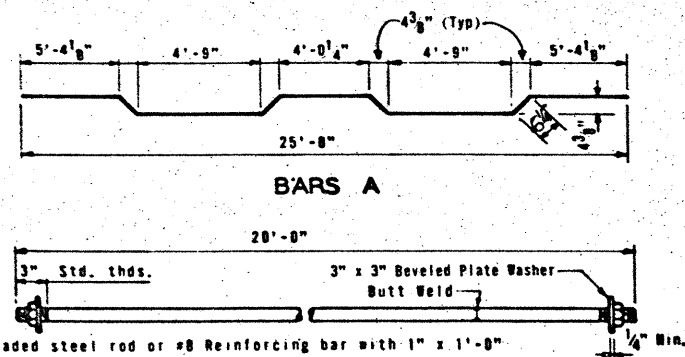
RADIAL SECTION AT END BEARINGS



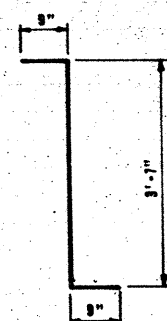
RADIAL SECTION AT INTERIOR BEARINGS



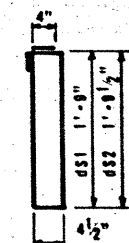
OPTION NO. 1 OPTION NO. 2
NOTE: Quantities are based on Option No. 1. Contractor shall notify fabricator of which option he intends to use.
RADIAL SECTION AT INTERMEDIATE DIAFRAMS



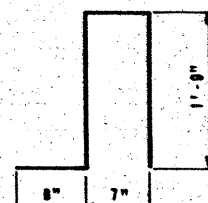
BARS dN



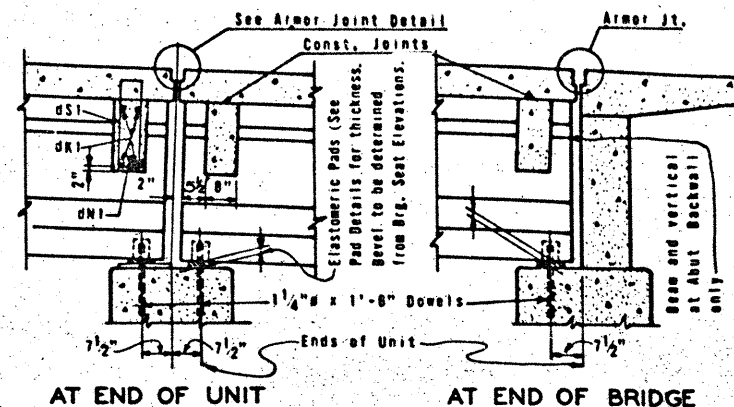
BARS dR



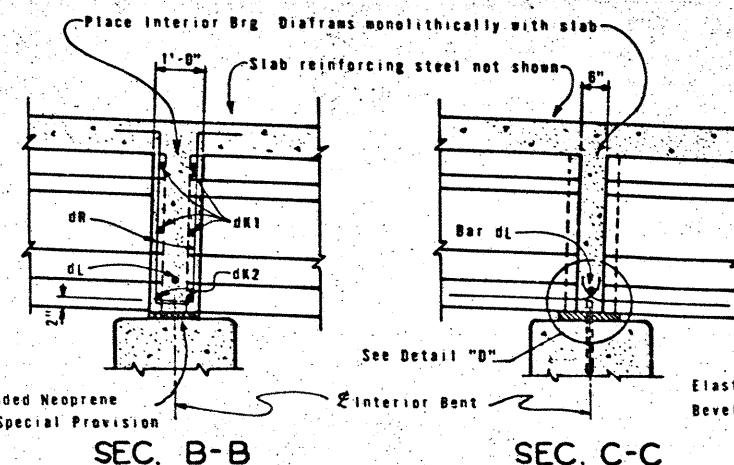
BARS dS



BARS P



SECTIONS A-A

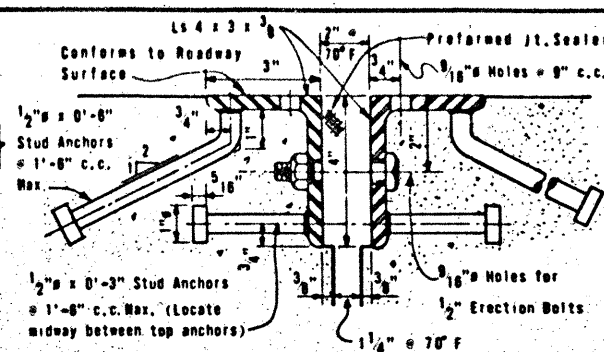


SEC. B-B

SEC. C-C

3/4" drip bead around drain
4" x 10" drains to be located as directed by the Engineer
Bend reinf. steel to clear drain 1"

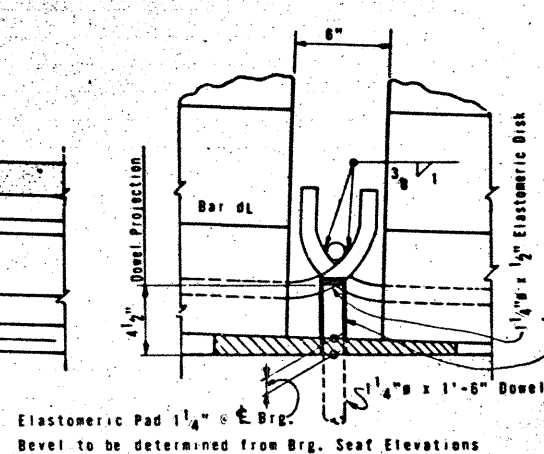
DRAIN DETAIL



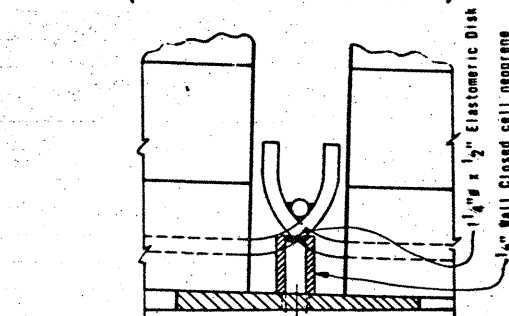
SECTION THRU ARMOR JOINT

Weight of one Complete Armor Joint 428 Lb.

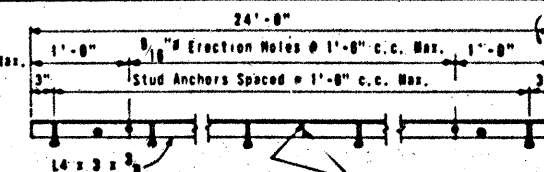
NOTE: At the contractor's option, armor angles may be supported from end diaphragms by means of welding short bars or struts from angle to bars dS1.



DETAIL 'D'
(AT FIXED INTERIOR BENT)



DETAIL 'D'
(AT EXP. INTERIOR BENT)



ELEVATION ARMOR ANGLES

NOTE: Erection bolts shall be cut off flush with angles promptly after concrete in the latter of the two placements has taken initial set.

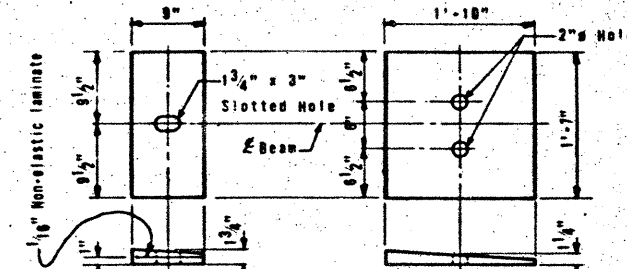
Stud Anchors shall be electric-arc and welded to the angles with complete fusion.

Armor Joints to be provided where shown on Bridge Layout.

Max. shipping length = 12'-0"

JOINT DETAILS

NOTE: Angles shall be bolted together for shipment.



FOR END BRGS.
(60 DUROMETER)

FOR INTERIOR BRGS.
(70 DUROMETER)

BEARINGS FOR CONTINUOUS UNITS

GENERAL NOTES:

Design: HS20 Loading in accordance with AASHTO 1965 Standard Specifications and complies with PPM 20.4 Sec. 4c.

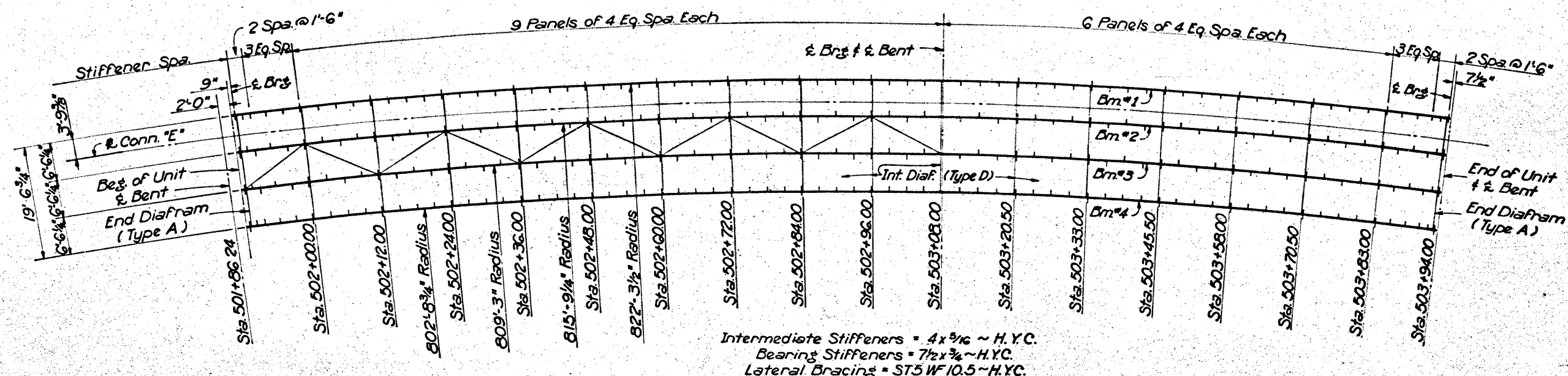
All cast-in-place concrete shall be Class C. Design: $f_c = 1200$ p.s.i. No concrete shall be placed in the bridge slab until intermediate and end diaphragms are in place, the diaphragm concrete has reached a minimum flexural strength of 300 p.s.i. and the nuts of bars dN have subsequently been firmly tightened.

Interior bearing diaphragms shall be placed monolithically with slab.

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

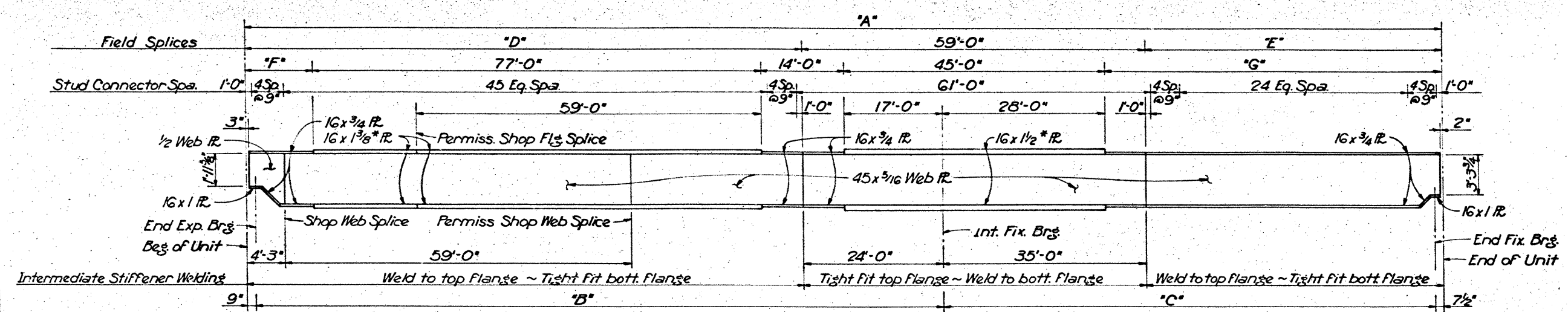
PRESTRESSED CONCRETE
BEAM SPAN DETAILS
FOR CONNECTIONS E.F.G.H. 226
IH20 US67 INTERCHANGE

ORIGINAL	DRAWING DATE	APR 69	STATE	FEDERAL AND PROJECT	SHEET
CH	HJD	REVISIONS	18	6	226
CR	CR		DALLAS	234	2
CR	RNS				



Intermediate Stiffeners = 4 x 5/16 ~ H.Y.C.
 Bearing Stiffeners = 7 1/2 x 3/4 ~ H.Y.C.
 Lateral Bracing = ST5 WF10.5 ~ H.Y.C.

FRAMING PLAN



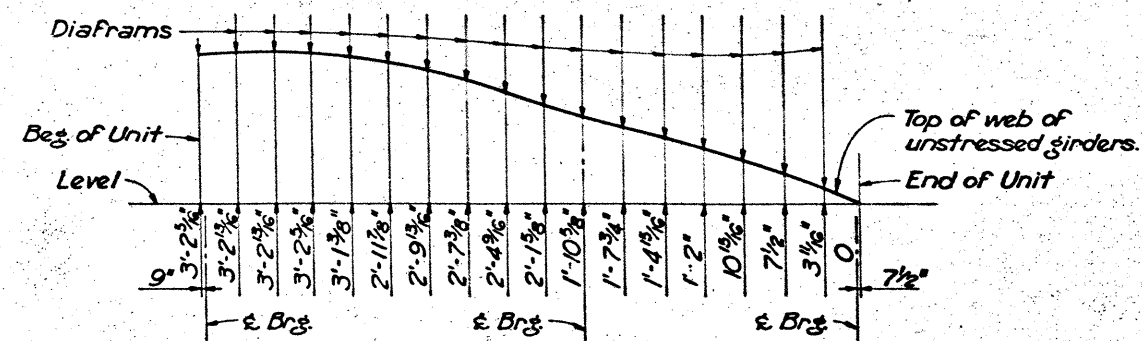
*(HS 46)

BEAM ELEVATION

Note: All dimensions shown are developed lengths along & Beam.

TABLE OF VARIABLES				
	Bm.#1	Bm.#2	Bm.#3	Bm.#4
A	206'-8 5/8"	205'-0 3/4"	203'-4 5/8"	201'-9 1/2"
B	119'-6 7/8"	118'-7 1/4"	117'-7 3/16"	116'-7 1/2"
C	85'-9 1/4"	85'-1"	84'-4 1/8"	83'-8 5/8"
D	96'-3 1/8"	95'-7 1/4"	94'-4 3/16"	93'-4 5/16"
E	51'-4 3/4"	50'-8 1/2"	50'-0 3/8"	49'-4 1/8"
F	12'-3 3/8"	11'-4 1/4"	10'-4 3/16"	9'-4 5/16"
G	55'-4 3/4"	57'-6 1/2"	57'-0 3/8"	56'-4 1/8"

Note: All structural steel shall be High Yield Carbon unless otherwise noted.



VERTICAL CAMBER DIAGRAM

Note: Web may be cut on straight lines between ordinates or to a smooth curve at the fabricator's option.

HS20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

UNIT #12

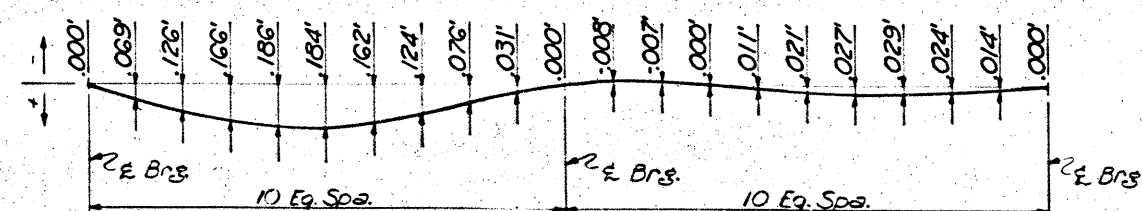
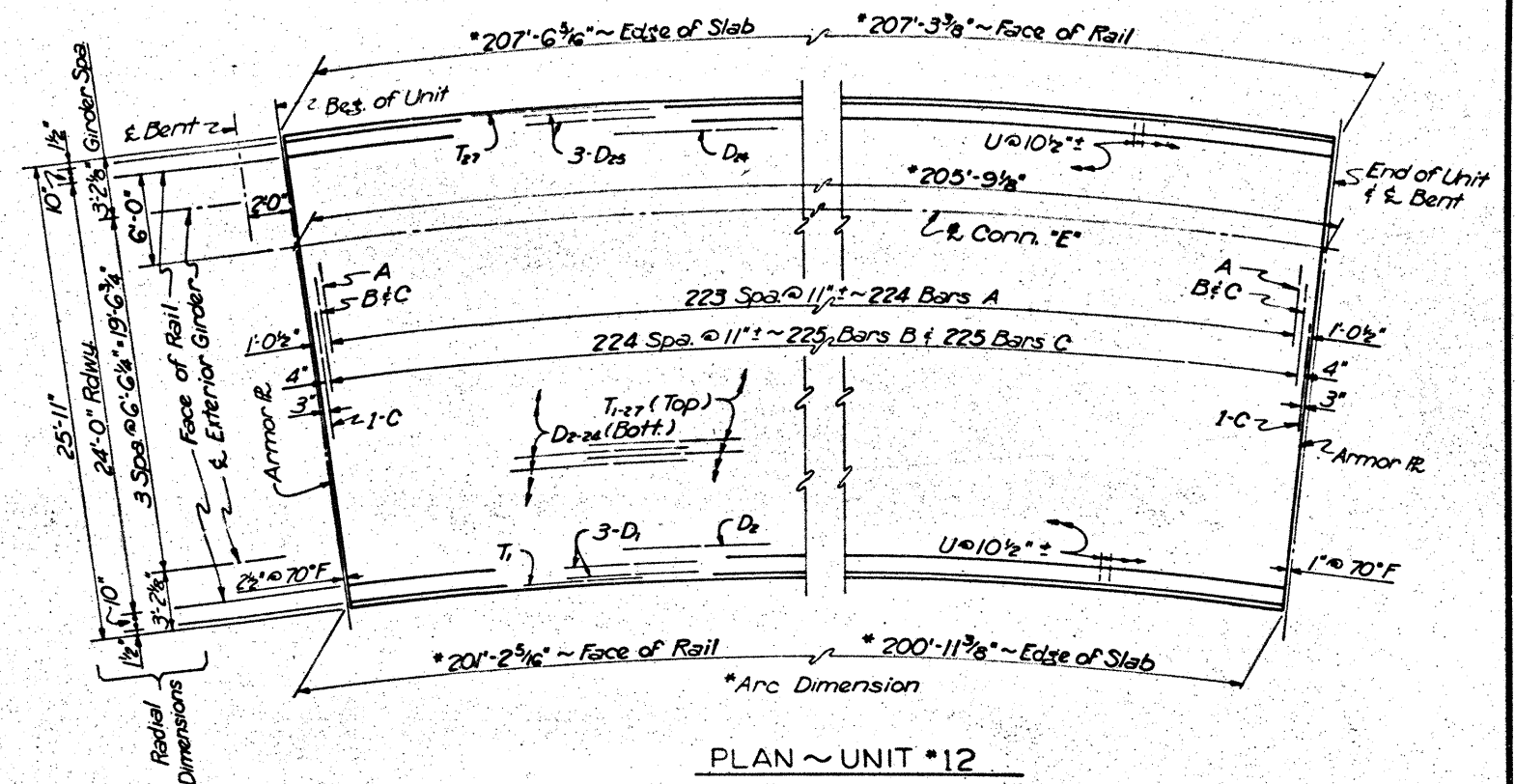
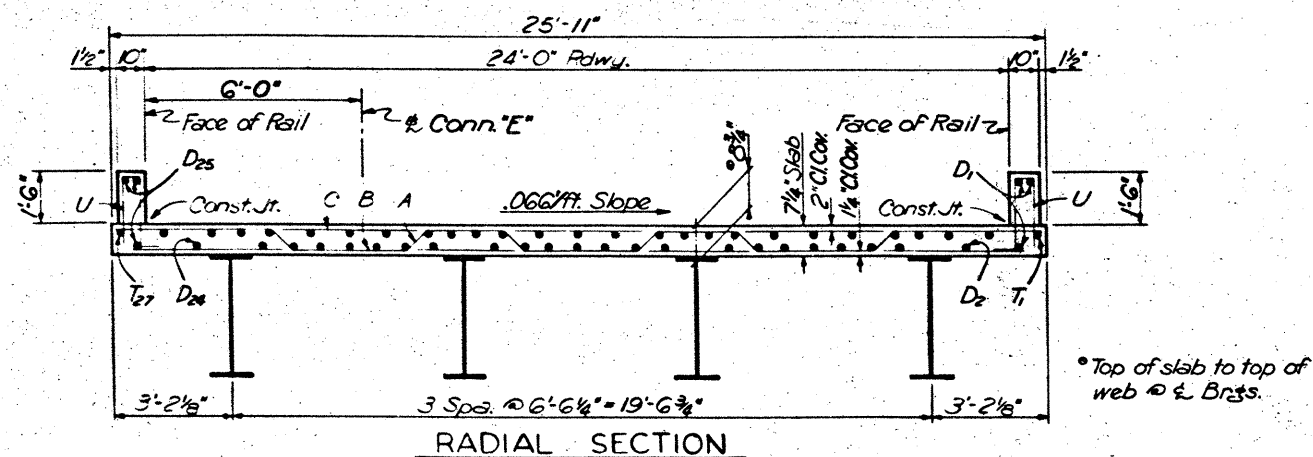
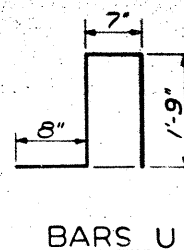
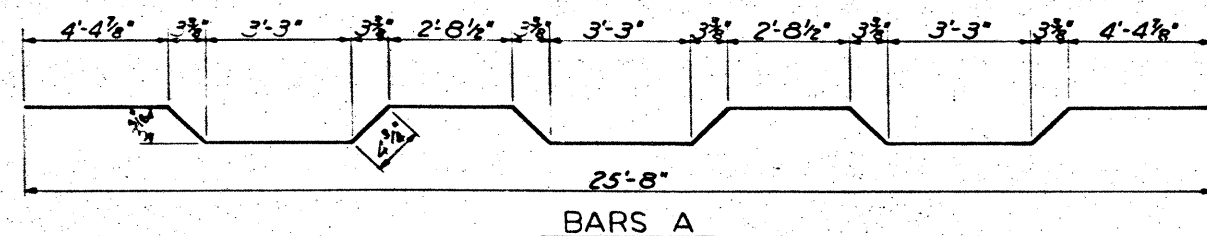
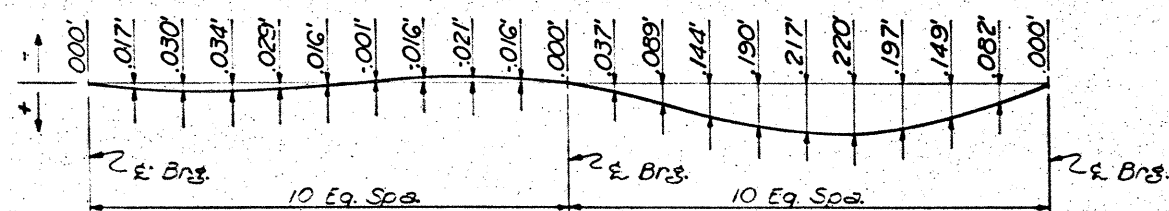
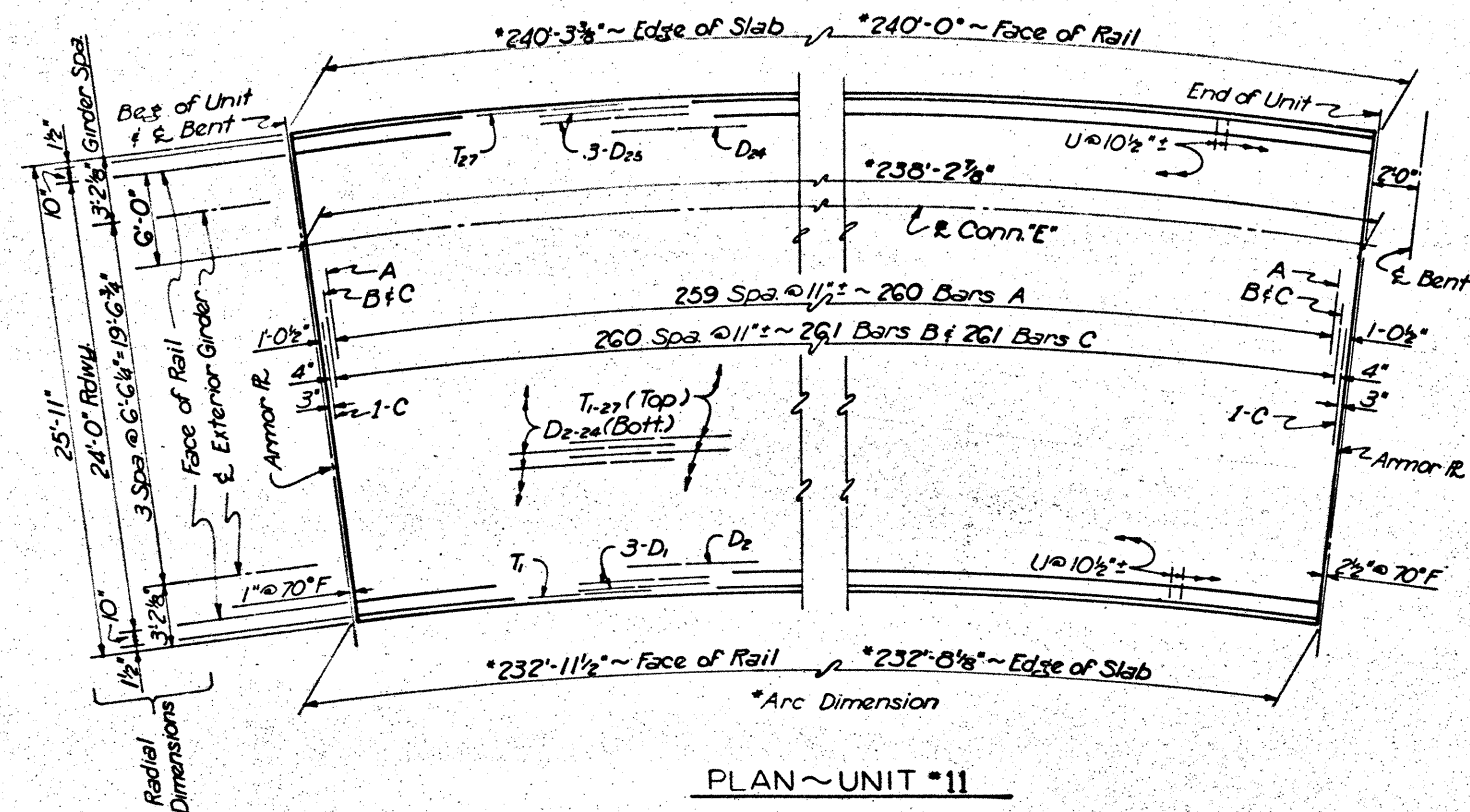
(FOR CONNECTION E)

205'-9 1/8" (119'-9 1/8" ~ 86'-0")

IH20-US67 INTERCHANGE

Sheet 2 of 3

ORIGINAL DRAWING DATE: March 1969	STATE: TEXAS	FEDERAL AID PROJECT: 0	SHEET: 230
DESIGNED BY: LEC	REVISIONS: 16	COUNTY: DALLAS	SECTION: 2374
CHECKED BY: RDS			
DRAWN BY: DRC			
CHECKED BY: LEC			



GENERAL NOTES:

Designed according to A.A.S.H.O. 1965 Standard Specifications and Interim Specifications thereto, and complies with P.P.M. 20-4, Sec. 4c.

Chamfer all exposed corners $\frac{3}{4}$ " unless otherwise noted.
Concrete shall be placed by continuous placement.

The girders shall be fabricated to produce either arcs or chords of circles between diaphragms. These circles shall be to the radii shown on the framing plan. A detailed fabrication procedure shall be submitted to the Bridge Division for approval.

See Plate Girder Details sheet for details not shown.
See Bearing Details Sheet for Bearing Assembly.
All diaphragms and ϵ Bents are radial lines.

HS20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

UNIT *11 & UNIT*12
(FOR CONNECTION E)

IH20-US67 INTERCHANGE

Sheet 3 of 3

[illegible]

ORIGINAL DRAWING DATE: <u>April - 1969</u>		STATE FEDERAL:		FEDERAL AIR PRO-JECT		SHEET	
DN: <u>1EC</u>		REVISONS		18 6		I 20-5(6)1457	
CK: <u>RDS</u>						231	
CK: <u>DRC</u>				COUNTY		CONTROL SECTION	
CK: <u></u>				Dallasis		2374 4 2 1H 20	

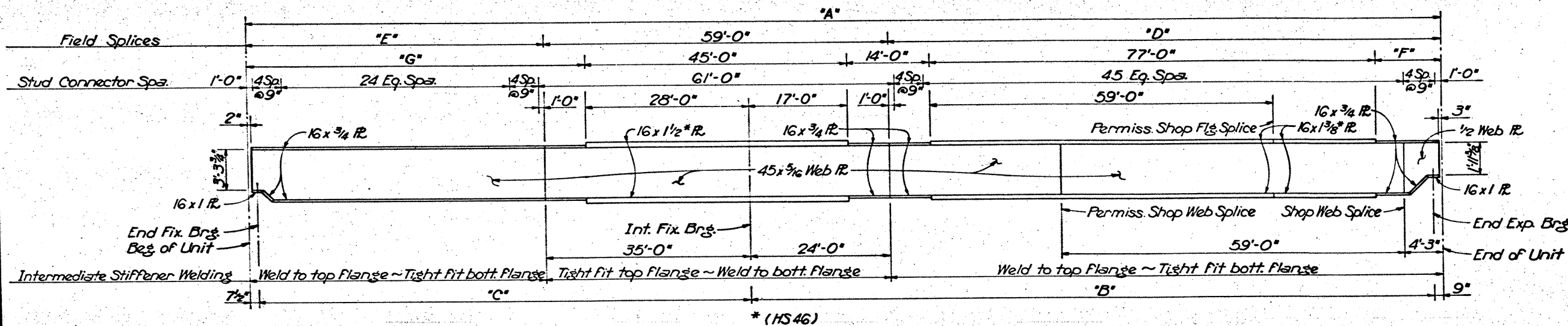
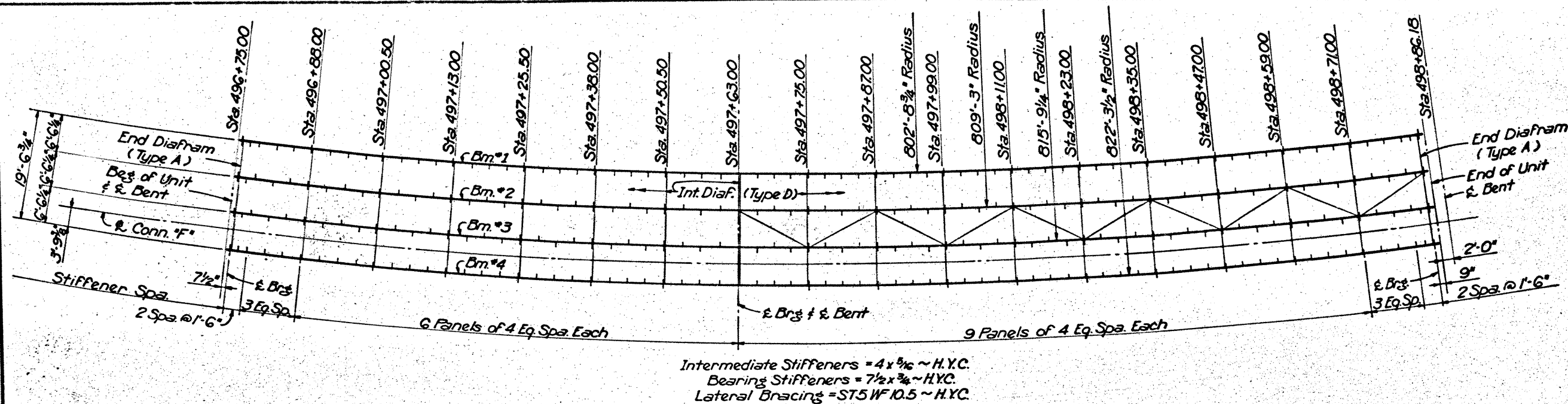
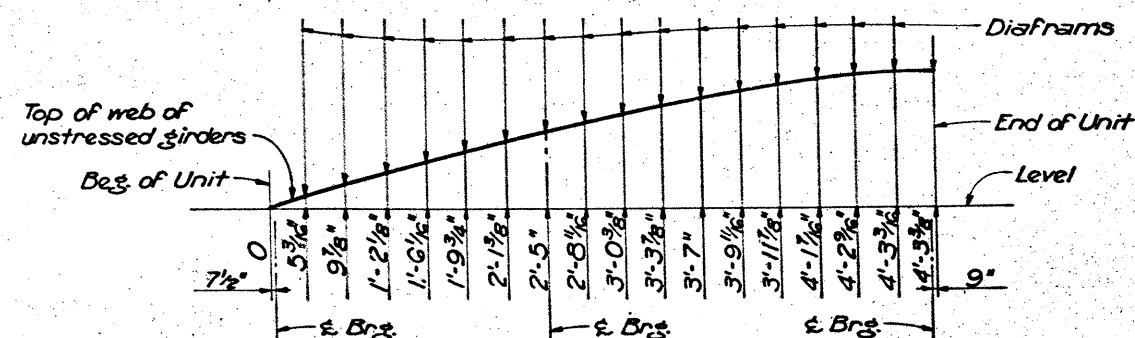


TABLE OF VARIABLES				
	Bm. #1	Bm. #2	Bm. #3	Bm. #4
"A"	205'-1 5/16"	206'-9 1/2"	208'-5 1/8"	210'-1 7/8"
"B"	116'-0 1/16"	119'-0 1/16"	120'-0 1/4"	121'-0"
"C"	85'-8 1/8"	86'-4 3/8"	87'-0 5/8"	87'-9 3/8"
"D"	94'-9 1/16"	95'-9 1/8"	96'-9 1/4"	97'-9"
"E"	51'-3 5/8"	52'-0 1/8"	52'-8 1/8"	53'-4 1/8"
"F"	10'-9 1/16"	11'-9 1/16"	12'-9 1/4"	13'-9"
"G"	58'-3 5/8"	59'-0 1/8"	59'-8 1/8"	60'-4 1/8"



Note: Web may be cut on straight lines between ordinates or to a smooth curve at the fabricator's option.

Note: All structural steel shall be High Yield Carbon unless otherwise noted.

HS20 LOADING

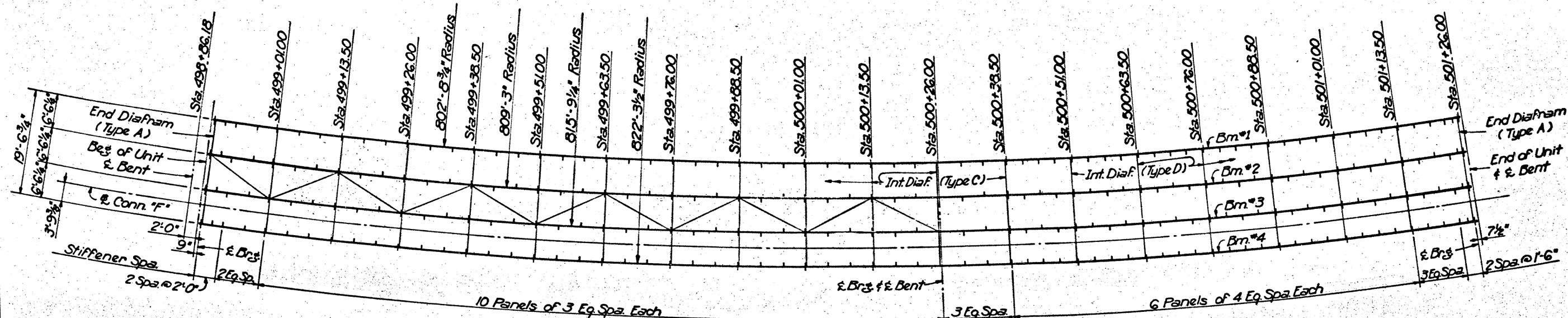
TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION

UNIT #13
 (FOR CONNECTION F)
 209'-2 3/16" (88'-0" ~ 121'-2 3/16")

IH20-US67 INTERCHANGE

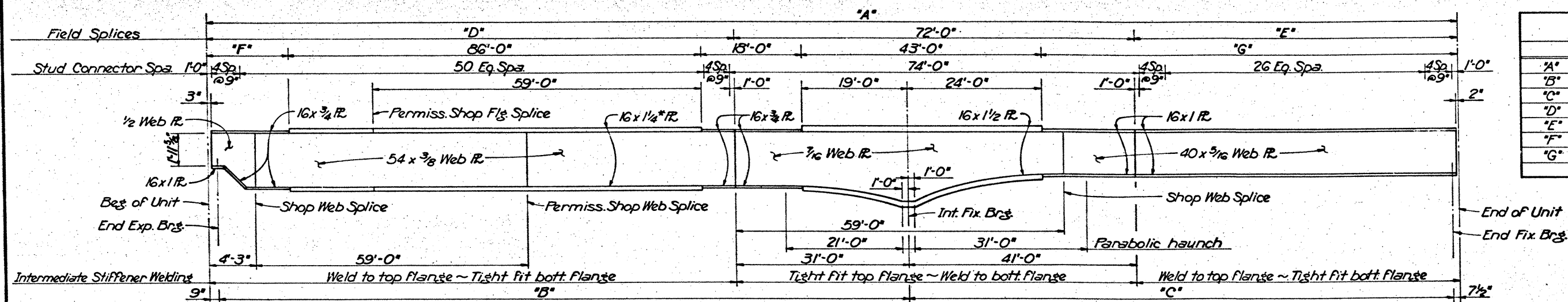
Sheet 1 of 3

ORIGINAL DRAWING DATE: March-1969	STATE: TEXAS	FEDERAL AID PROJECT: 18 6 I 20-55611457	SHEET: 232
REVISIONS:	COUNTY: Dallas	CONTRACT: 2374	SECTION: 4
DESIGNED BY: LEC	CHECKED BY: RDS	APPROVED BY: DRG	DATE: 2/78



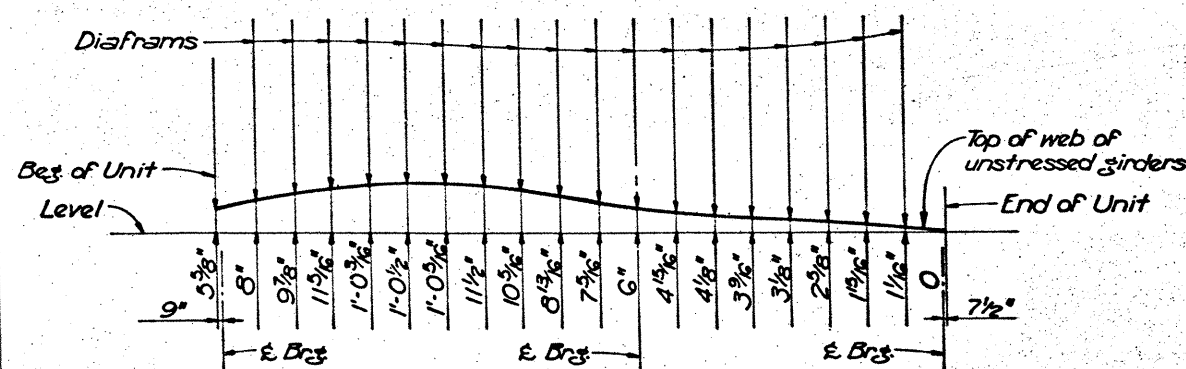
Intermediate Stiffeners = $4\frac{1}{2} \times \frac{3}{16}$ ~ H.Y.C.
 End Bearing Stiffeners = $7\frac{1}{2} \times \frac{3}{4}$ ~ H.Y.C.
 Interior Bearing Stiffeners = $7\frac{1}{2} \times 1$ ~ H.Y.C.
 Lateral Bracing = ST5 WF 10.5 ~ H.Y.C.

FRAMING PLAN



BEAM ELEVATION

Note: All dimensions shown are developed lengths along ϵ Beam.



VERTICAL CAMBER DIAGRAM

Note: Web may be cut on straight lines between ordinates or to a smooth curve at the Fabricator's option.

TABLE OF VARIABLES				
	Bm. #1	Bm. #2	Bm. #3	Bm. #4
A*	233'-2 $\frac{3}{8}$ "	235'-1 $\frac{3}{8}$ "	237'-0 $\frac{3}{8}$ "	238'-11 $\frac{1}{8}$ "
B*	134'-4 $\frac{1}{2}$ "	135'-5 $\frac{1}{8}$ "	136'-7 $\frac{3}{8}$ "	137'-8 $\frac{3}{8}$ "
C*	97'-5 $\frac{3}{8}$ "	98'-2 $\frac{3}{8}$ "	99'-0 $\frac{1}{2}$ "	99'-10 $\frac{1}{8}$ "
D*	104'-1 $\frac{1}{2}$ "	105'-2 $\frac{3}{8}$ "	106'-4 $\frac{3}{8}$ "	107'-5 $\frac{3}{8}$ "
E*	57'-0 $\frac{7}{8}$ "	57'-10 $\frac{7}{8}$ "	58'-8"	59'-5 $\frac{3}{8}$ "
F*	12'-1 $\frac{1}{2}$ "	13'-2 $\frac{1}{8}$ "	14'-4 $\frac{3}{8}$ "	15'-5 $\frac{3}{8}$ "
G*	74'-0 $\frac{7}{8}$ "	74'-10 $\frac{1}{8}$ "	75'-8"	76'-5 $\frac{3}{8}$ "

Note: See Unit #11 for Web Cutting Diagram.
 All structural steel shall be High Yield Carbon unless otherwise noted.

HS20 LOADING

TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION

UNIT #14

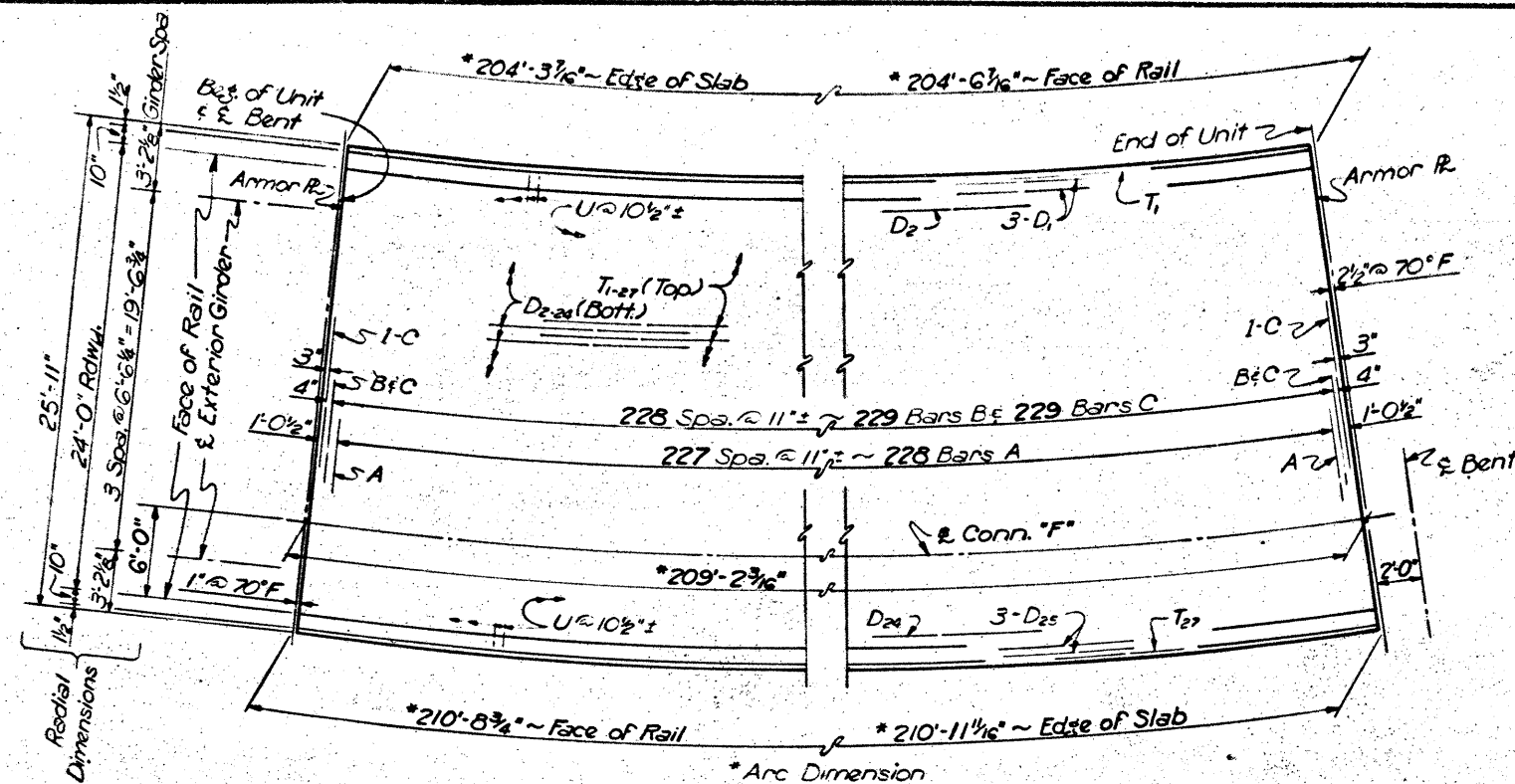
(FOR CONNECTION F)

237'-9 $\frac{13}{16}$ " (137'-9 $\frac{13}{16}$ " ~ 100'-0")

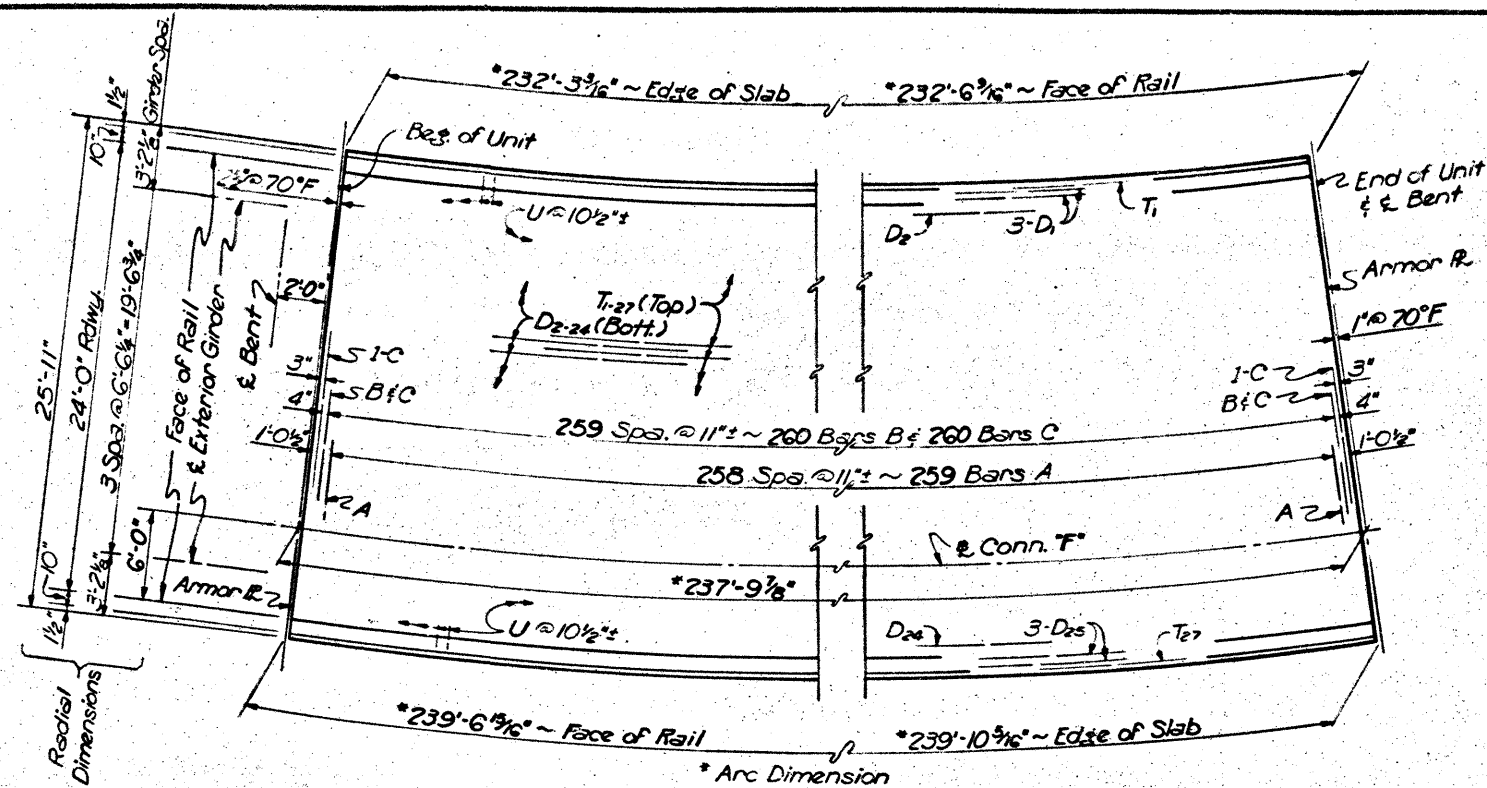
IH20-US67 INTERCHANGE

Sheet 2 of 3

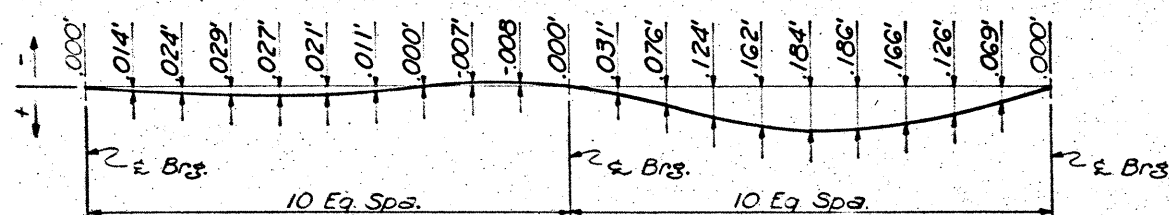
ORIGINAL DRAWING DATE: April ~ 1969	STATE DISTRICT REGION	FEDERAL AID PROJECT	SHEET
DN: LEC	18	6	233
CK: RDS	18	6	233
DE: DRG	18	6	233
CK: LEC	18	6	233



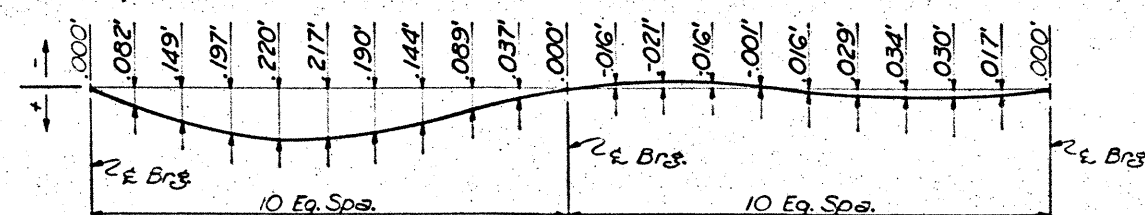
PLAN ~ UNIT #13



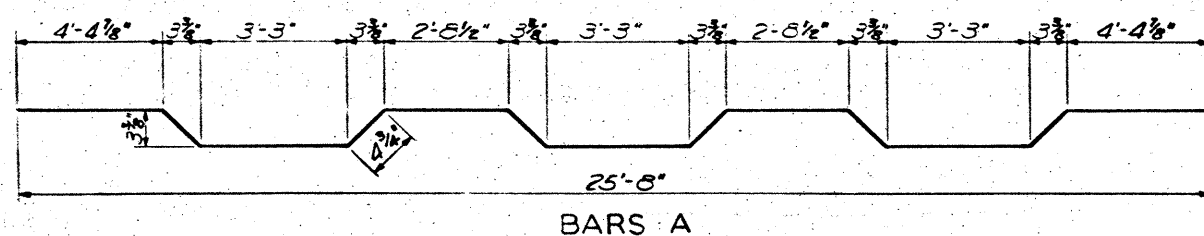
PLAN ~ UNIT #14



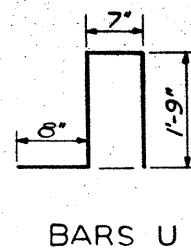
DEAD LOAD DEFLECTION DIAGRAM ~ UNIT #13
(Due to Concrete and Rail only.)



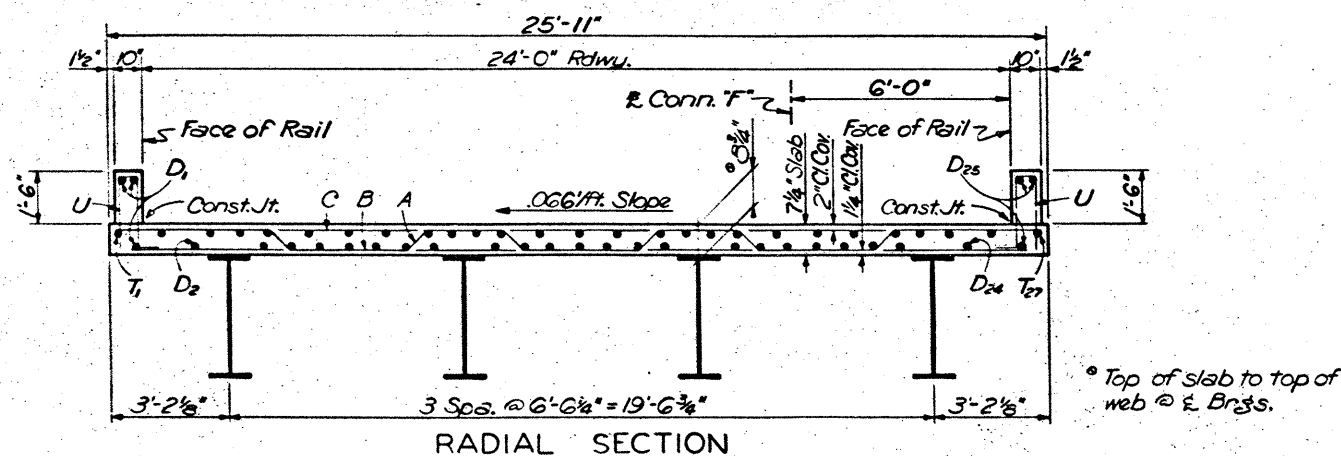
DEAD LOAD DEFLECTION DIAGRAM ~ UNIT #14
(Due to Concrete and Rail only.)



BARS A



BARS U



RADIAL SECTION

GENERAL NOTES:
Designed according to A.A.S.H.O. 1965 Standard Specifications and Interim Specifications thereto, and complies with P.P.M. 20-4, Sec. 4c.
Chamfer all exposed corners $\frac{3}{4}$ " unless otherwise noted.
Concrete shall be placed by continuous placement.

The girders shall be fabricated to produce either arcs or chords of circles between diaphragms. These circles shall be to the radii shown on the framing plan. A detailed fabrication procedure shall be submitted to the Bridge Division for approval.
See Plate Girder Details sheet for details not shown.
See Bearing Details Sheet for Bearing Assembly.
All diaphragms & E Bents are radial lines.

*Length includes 3-20 Dia. laps (1'-0" Min.).
*Length includes 4-20 Dia. laps (1'-0" Min.).

UNIT #13					UNIT #14				
Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight
A	228	#5	26'-4"	6,262	A	259	#5	26'-4"	7,114
B	229	#4	24'-11"	3,812	B	260	#4	24'-11"	4,328
C	231	#5	25'-8"	6,184	C	262	#5	25'-8"	7,014
D ₁	3	#5	206'-11"	648	D ₁	3	#5	236'-0"	739
D ₂₋₂₄	23	#5	210'-3" Av.	5,044	D ₂₋₂₄	23	#5	239'-10" Av.	5,753
D ₂₅	3	#5	213'-7"	668	D ₂₅	3	#5	243'-8"	762
T ₁₋₂₇	27	#4	210'-0" Av.	3,788	T ₁₋₂₇	27	#4	239'-6" Av.	4,320
U	475	#5	4'-9"	2,353	U	540	#5	4'-9"	2,675
Reinf. Steel Lb. 28,759					Reinf. Steel Lb. 32,705				
Class "C" Conc. CY 139.6					Class "C" Conc. CY 158.8				
Str. SH. (Shoe & Armor Jt.) Lb. 1,020					Str. SH. (Shoe & Armor Jt.) Lb. 1,020				
Str. SH. (H.Y.C.) Lb. 91,600					Str. SH. (H.Y.C.) Lb. 157,000				
Str. SH. (HS46) Lb. 75,500					Str. SH. (HS46) Lb. 46,800				

HS20 LOADING
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
UNIT #13 & UNIT #14
(FOR CONNECTION F)

IH20-US67 INTERCHANGE
Sheet 3 of 3

ORIGINAL DRAWING DATE: April ~ 1969	STATE: TEXAS	FEDERAL AID PROJECT: 234	SHEET: 3
DESIGNED BY: LEC	REVISIONS:	COUNTY: Dallas	DATE: 2/20/70
CHECKED BY: RDS		SECTION: 234	
DRAWN BY: DFG			
CHECKED BY: LEC			

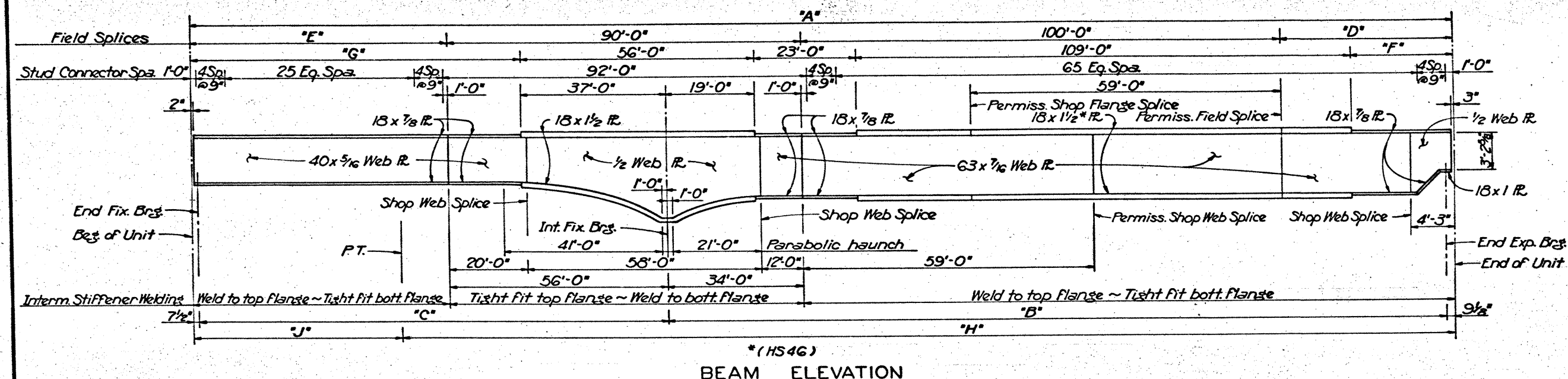
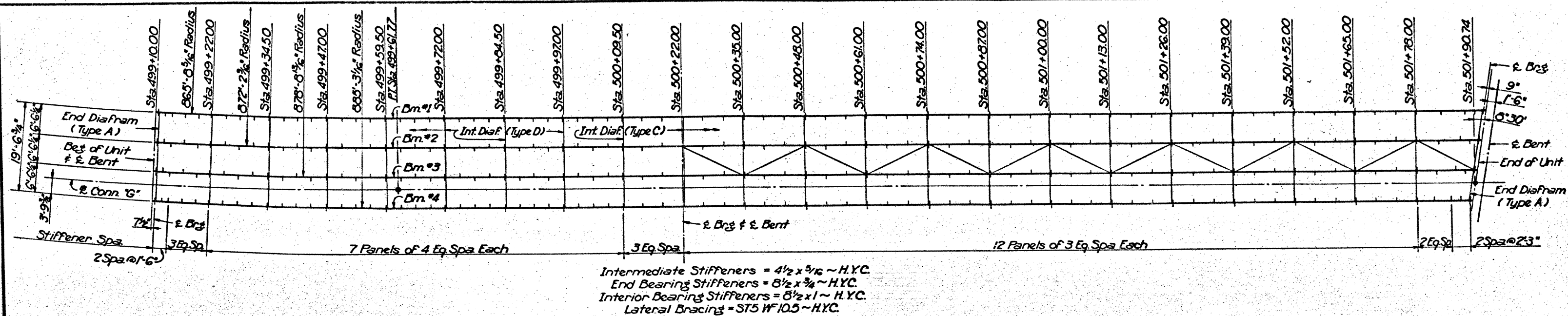
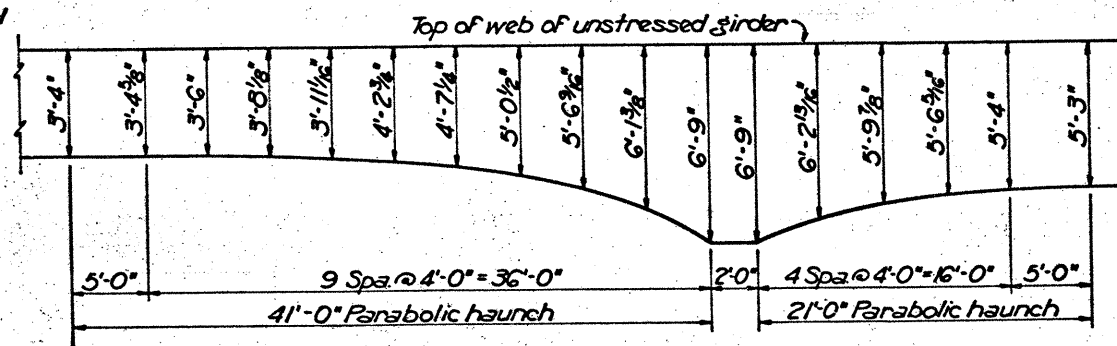
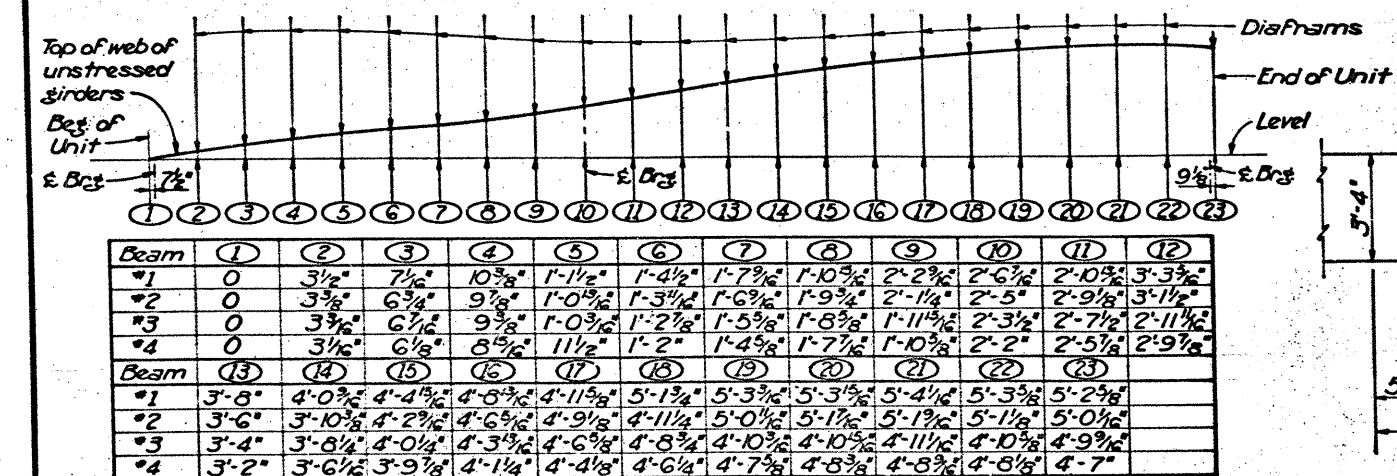


TABLE OF VARIABLES				
	Bm #1	Bm #2	Bm #3	Bm #4
"A"	282'-2 1/8"	281'-7"	281'-0"	280'-4 1/8"
"B"	170'-4 1/8"	169'-4 3/8"	168'-4 1/8"	167'-5"
"C"	110'-5 1/2"	110'-10"	111'-2 3/8"	111'-7 1/8"
"D"	37'-1 1/2"	36'-1 1/2"	35'-1 1/2"	34'-2 1/8"
"E"	55'-0 1/8"	55'-5 1/2"	55'-10 1/8"	56'-2 1/8"
"F"	20'-1 1/4"	19'-1 1/2"	18'-1 1/8"	17'-2 1/8"
"G"	74'-0 1/8"	74'-5 1/2"	74'-10 1/8"	75'-2 1/8"
"H"	231'-4"	230'-4 1/8"	229'-4 1/8"	228'-4 1/8"
"J"	50'-10 1/8"	51'-2 1/8"	51'-7 1/8"	51'-11 1/8"



Note: All structural steel shall be High Yield Carbon unless otherwise noted.

HS20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

UNIT #15
(FOR CONNECTION G) 235
280'-8 15/16" (112'-0" ~ 168'-8 15/16")

IH20 - US67 INTERCHANGE

Sheet 1 of 3

ORIGINAL DRAWING DATE: April ~ 1969	STATE: TEXAS	FEDERAL AID PROJECT: 120-5(6)457	SHEET: 235
REVISIONS:	COUNTY: Dallas	SECTION: 2374.4	JOB: I-20

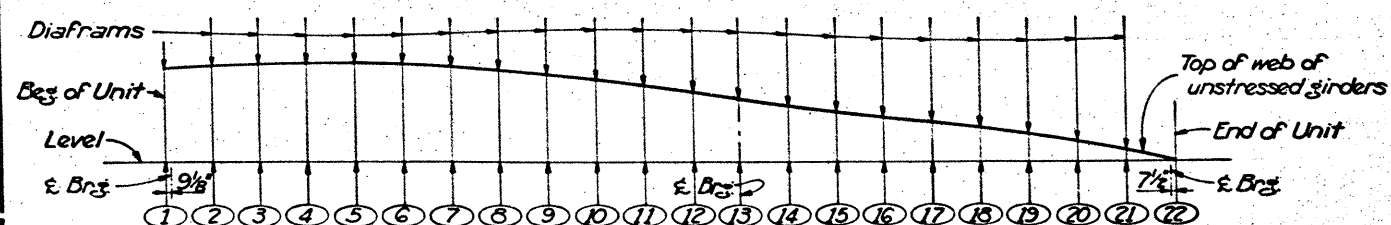
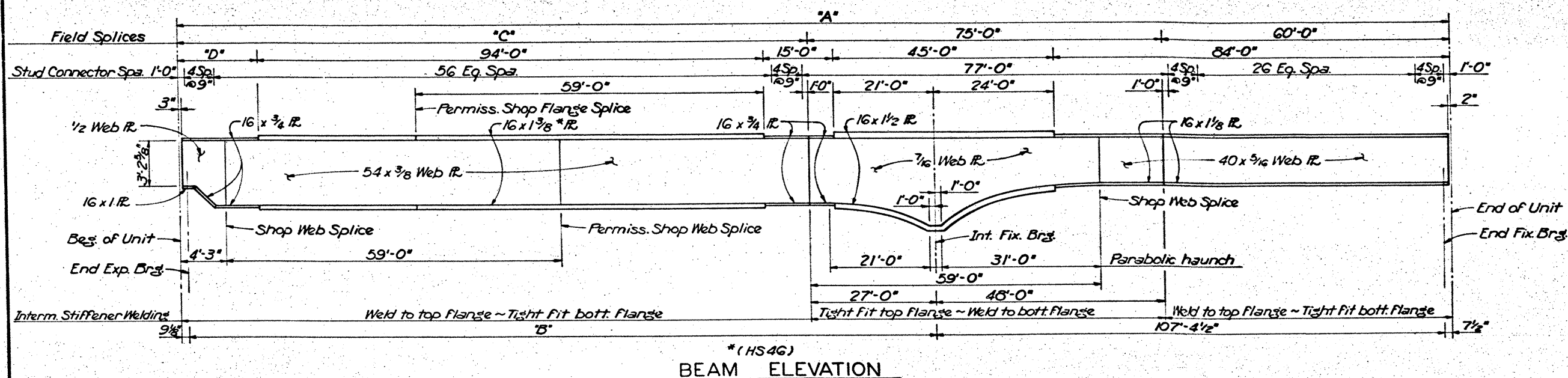
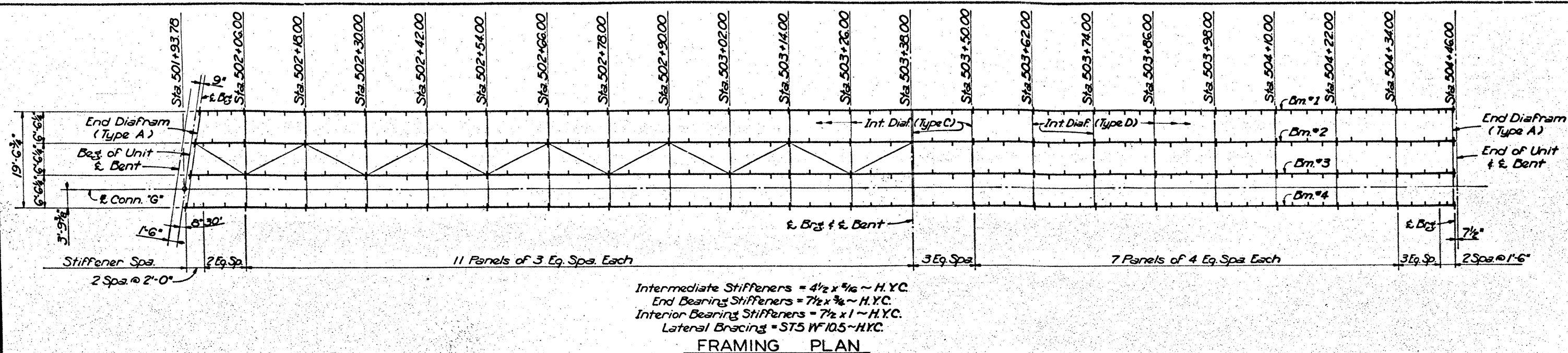


TABLE OF VARIABLES				
	Bm.*1	Bm.*2	Bm.*3	Bm.*4
*A	249'-10 3/8"	250'-10 1/8"	251'-9 3/4"	252'-9 1/8"
*B	141'-1 3/8"	142'-1 1/8"	143'-0 3/4"	144'-0 1/8"
*C	114'-10 3/8"	115'-10 1/8"	116'-9 3/4"	117'-9 1/8"
*D	11'-10 3/8"	12'-10 1/8"	13'-9 3/4"	14'-9 1/8"

Note: See Unit #11 For Web Cutting Diagram.
 All structural steel shall be High Yield Carbon unless otherwise noted.

HS20 LOADING

TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION

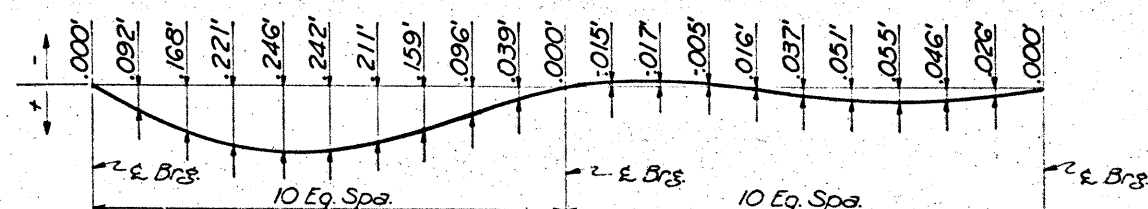
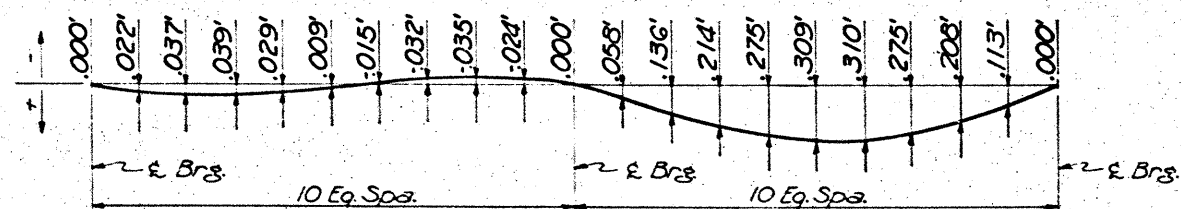
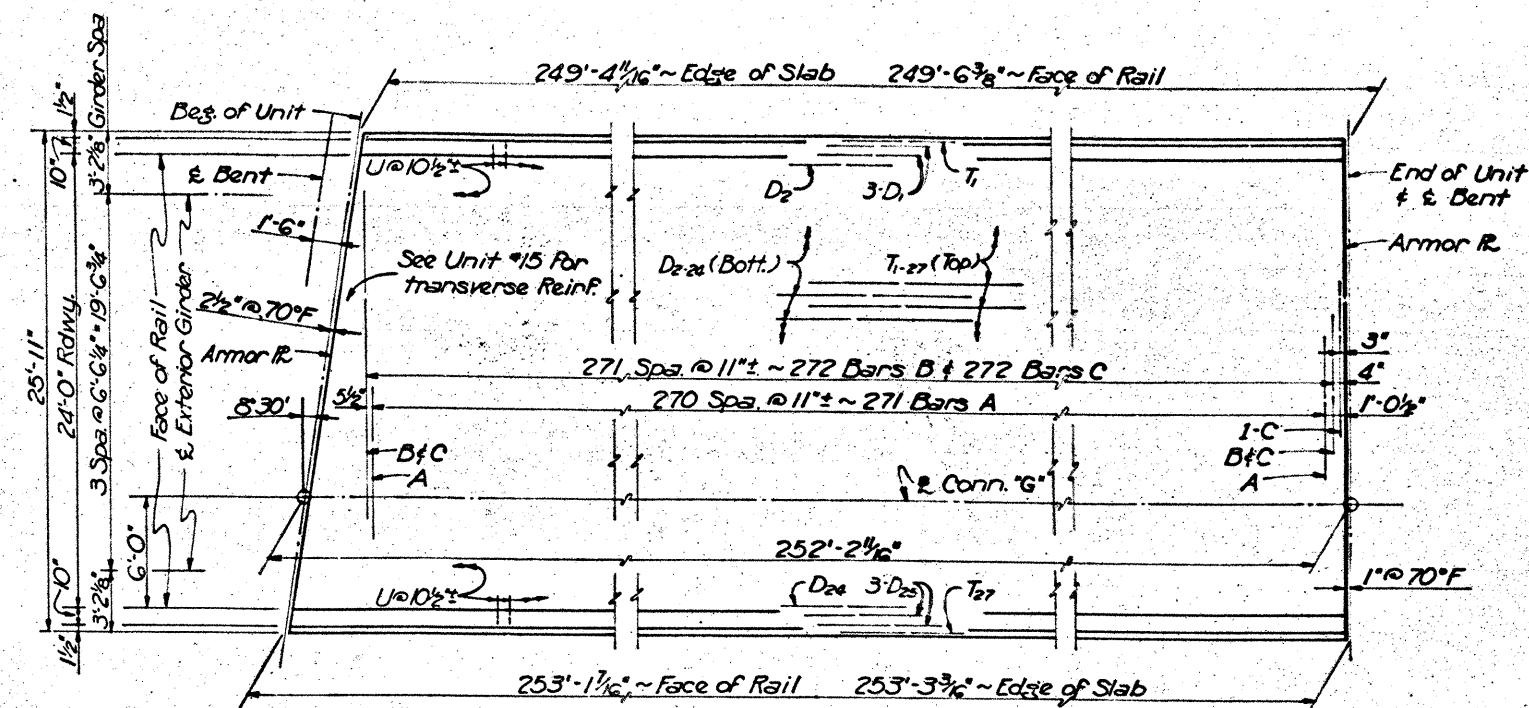
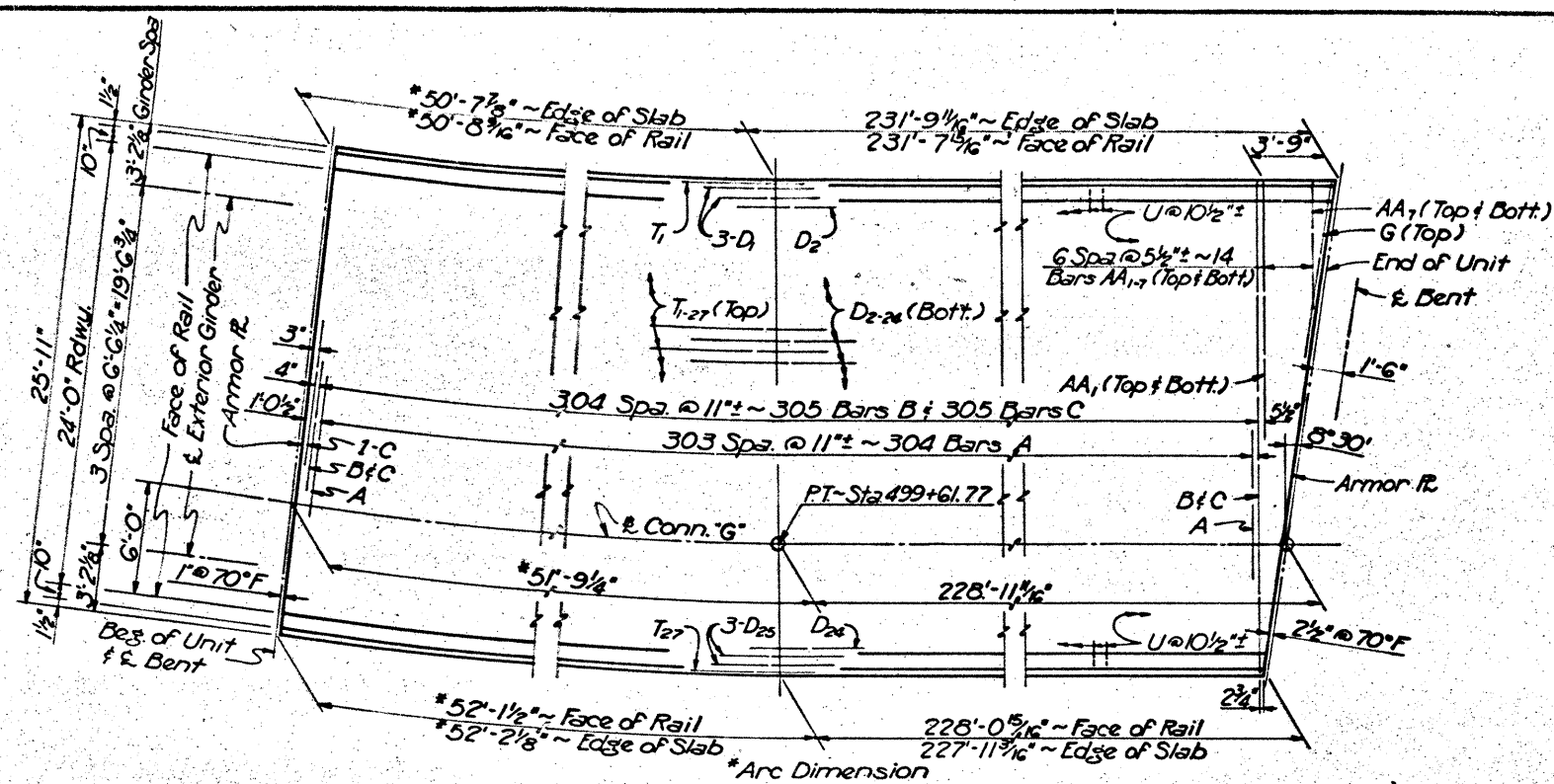
UNIT #16

(FOR CONNECTION G) 236

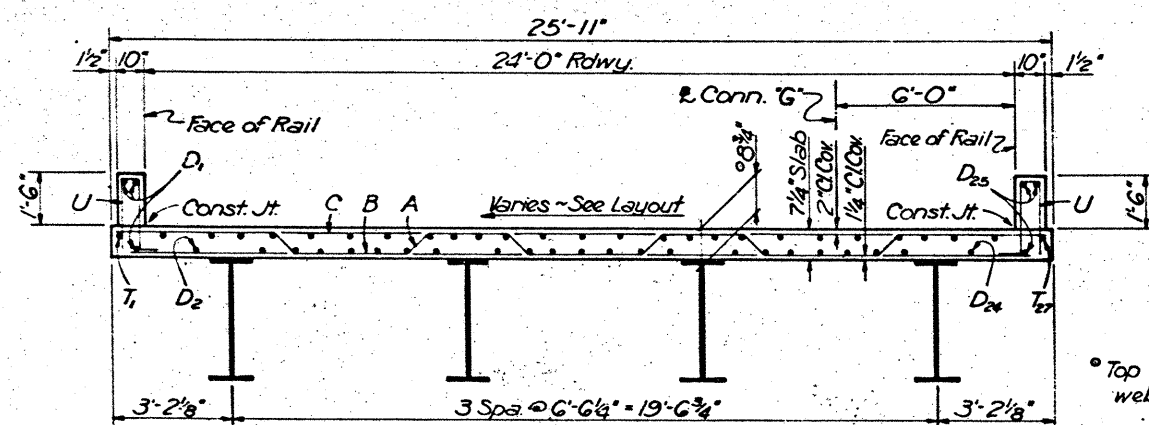
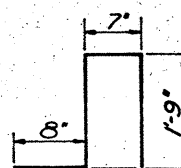
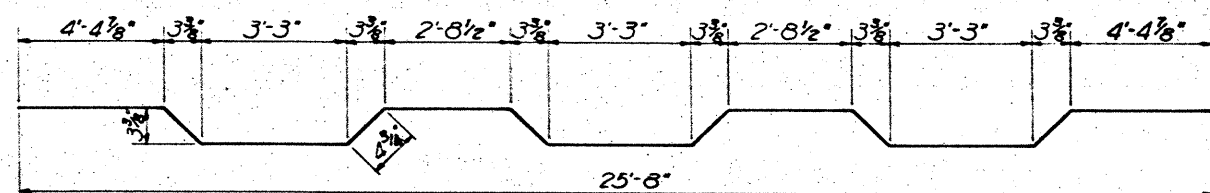
252'-2 11/16" (144'-2 11/16" ~ 108'-0")

IH20 - US67 INTERCHANGE

ORIGINAL DRAWING DATE: April ~ 1969	STATE: TEXAS	FEDERAL AID PROJECT: 18 6 I 20-5617457	SHEET: 236
DESIGNED BY: LEC	REVISIONS:	COUNTY: Dallas	SECTION: 2374 4 2
CHECKED BY: RDS			
DRAWN BY: DRG			
CHECKED BY: LEC			



GENERAL NOTES:
Designed according to A.A.S.H.O. 1965 Standard Specifications and Interim Specifications thereto, and complies with PPM 20-4, Sec. 4c.
Chamfer all exposed corners $\frac{3}{4}$ " unless otherwise noted.
Concrete shall be placed by continuous placement.



* Top of slab to top of web @ E Brgs.

*Length includes 4-20 Dia. laps. (1'-0" Min.)

BILL OF REINFORCING STEEL & ESTIMATED QUANTITIES

[illegible]

Reinf. Steel	Lb	38,793	Reinf. Steel	Lb	34,671
Class "C" Conc.	C.Y.	189.2	Class "C" Conc.	C.Y.	169.0
Str. Stl. (Shoe & Armor Jt.)	Lb	1,020	Str. Stl. (Shoe & Armor Jt.)	Lb	1,020
Str. Stl. (H.Y.C.)	Lb	213,200	Str. Stl. (H.Y.C.)	Lb	172,300
Str. Stl. (HS4G)	Lb	80,100	Str. Stl. (HS4G)	Lb	56,300

The girders shall be fabricated to produce either arcs or chords of circles between diaphragms. These circles shall be to the radii shown on the framing plan. A detailed fabrication procedure shall be submitted to the Bridge Division for approval.

See Plate Girder Details sheet for details not shown. See Bearing Details sheet for Bearing Assembly. All diaphragms and E Bents are radial lines.

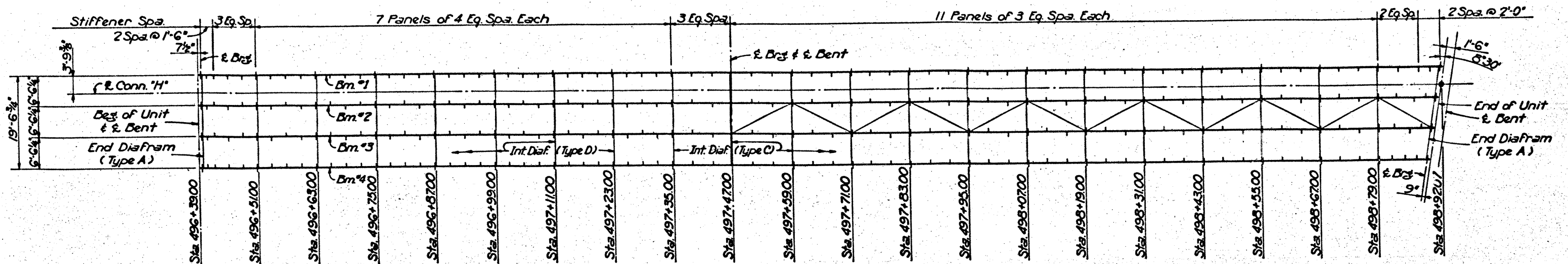
HS20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
UNIT *15 & UNIT*16
(FOR CONNECTION G)

IH20-US67 INTERCHANGE

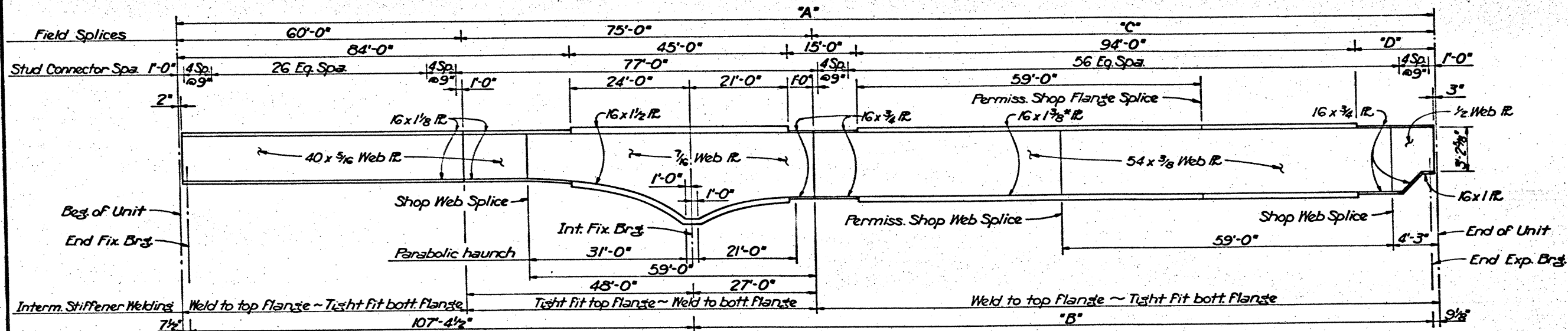
Sheet 3 of 3

ORIGINAL DRAWING DATE <u>July ~ 1967</u>		STATE FEDERAL REGION		FEDERAL AID PROJECT		SHEET
CH - LEC	REVISIONS	18	6	I 20-5(6) 257		237
CH - RDS		COUNTY				
CH - DRG		CONTRACT		SECTION	JOB	NUMBER
CH - LEC		2376		4	2	1-20



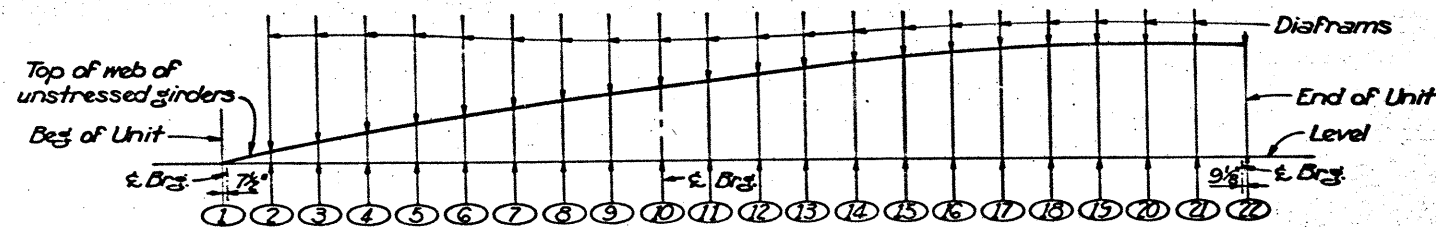
Intermediate Stiffeners = $4\frac{1}{2} \times \frac{3}{16}$ ~ H.Y.C.
 End Bearing Stiffeners = $7\frac{1}{2} \times \frac{3}{16}$ ~ H.Y.C.
 Interior Bearing Stiffeners = $7\frac{1}{2} \times 1$ ~ H.Y.C.
 Lateral Bracing = ST5W10.5 ~ H.Y.C.

FRAMING PLAN



BEAM ELEVATION

TABLE OF VARIABLES				
	Bm. #1	Bm. #2	Bm. #3	Bm. #4
"A"	253'-7 $\frac{1}{16}$ "	252'-7 $\frac{3}{4}$ "	251'-8"	250'-8 $\frac{3}{8}$ "
"B"	144'-10 $\frac{1}{16}$ "	143'-10 $\frac{1}{2}$ "	142'-11"	141'-11 $\frac{3}{8}$ "
"C"	118'-7 $\frac{1}{16}$ "	117'-7 $\frac{3}{4}$ "	116'-8"	115'-8 $\frac{3}{8}$ "
"D"	15'-7 $\frac{1}{16}$ "	14'-7 $\frac{3}{4}$ "	13'-8"	12'-8 $\frac{3}{8}$ "



Beam	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
#1	0	6 $\frac{5}{16}$ "	1'-1 $\frac{1}{4}$ "	1'-7 $\frac{1}{8}$ "	2'-0 $\frac{1}{2}$ "	2'-5 $\frac{3}{8}$ "	2'-9 $\frac{1}{8}$ "	3'-2 $\frac{1}{4}$ "	3'-6 $\frac{1}{2}$ "	3'-10 $\frac{3}{8}$ "	4'-3 $\frac{1}{2}$ "
#2	0	7 $\frac{1}{8}$ "	1'-1 $\frac{3}{8}$ "	1'-7 $\frac{3}{8}$ "	2'-1 $\frac{1}{8}$ "	2'-6 $\frac{1}{4}$ "	2'-10 $\frac{3}{8}$ "	3'-3 $\frac{1}{4}$ "	3'-7 $\frac{3}{8}$ "	4'-0 $\frac{1}{8}$ "	4'-4 $\frac{1}{2}$ "
#3	0	7 $\frac{1}{8}$ "	1'-1 $\frac{3}{8}$ "	1'-8"	2'-1 $\frac{1}{8}$ "	2'-6 $\frac{1}{4}$ "	2'-11 $\frac{3}{8}$ "	3'-4 $\frac{1}{4}$ "	3'-8 $\frac{3}{8}$ "	4'-1 $\frac{1}{8}$ "	4'-5 $\frac{1}{2}$ "
#4	0	7 $\frac{1}{8}$ "	1'-2 $\frac{1}{8}$ "	1'-8 $\frac{1}{2}$ "	2'-2 $\frac{1}{4}$ "	2'-7 $\frac{3}{8}$ "	3'-0 $\frac{1}{2}$ "	3'-5 $\frac{3}{8}$ "	3'-10 $\frac{1}{8}$ "	4'-2 $\frac{1}{4}$ "	4'-7 $\frac{1}{2}$ "
Beam	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
#1	4'-7 $\frac{1}{2}$ "	4'-11 $\frac{1}{4}$ "	5'-2 $\frac{1}{2}$ "	5'-6 $\frac{1}{2}$ "	5'-8 $\frac{3}{4}$ "	5'-10 $\frac{1}{4}$ "	6'-0 $\frac{1}{8}$ "	6'-0 $\frac{3}{8}$ "	6'-0 $\frac{1}{2}$ "	5'-11 $\frac{3}{8}$ "	
#2	4'-8 $\frac{3}{8}$ "	5'-0 $\frac{3}{8}$ "	5'-4 $\frac{3}{8}$ "	5'-7 $\frac{1}{2}$ "	5'-10 $\frac{1}{8}$ "	6'-0 $\frac{1}{8}$ "	6'-1 $\frac{1}{2}$ "	6'-2 $\frac{3}{8}$ "	6'-2 $\frac{1}{2}$ "	6'-1 $\frac{1}{8}$ "	6'-0 $\frac{1}{2}$ "
#3	4'-10"	5'-2"	5'-5 $\frac{1}{2}$ "	5'-8 $\frac{3}{8}$ "	5'-11 $\frac{1}{2}$ "	6'-1 $\frac{1}{2}$ "	6'-2 $\frac{3}{8}$ "	6'-3 $\frac{1}{2}$ "	6'-3 $\frac{1}{8}$ "	6'-3 $\frac{1}{4}$ "	6'-2 $\frac{1}{4}$ "
#4	4'-11 $\frac{3}{8}$ "	5'-3 $\frac{3}{8}$ "	5'-7"	5'-10 $\frac{3}{8}$ "	6'-0 $\frac{3}{8}$ "	6'-2 $\frac{1}{4}$ "	6'-4 $\frac{1}{2}$ "	6'-4 $\frac{1}{8}$ "	6'-5 $\frac{1}{8}$ "	6'-4 $\frac{3}{8}$ "	6'-3 $\frac{3}{8}$ "

VERTICAL CAMBER DIAGRAM

Note: Web may be cut on straight lines between ordinates or to a smooth curve at the fabricator's option.

Note: See Unit #11 for Web Cutting Diagram.
 All structural steel shall be High Yield Carbon unless otherwise noted.

HS20 LOADING

TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION

UNIT #17

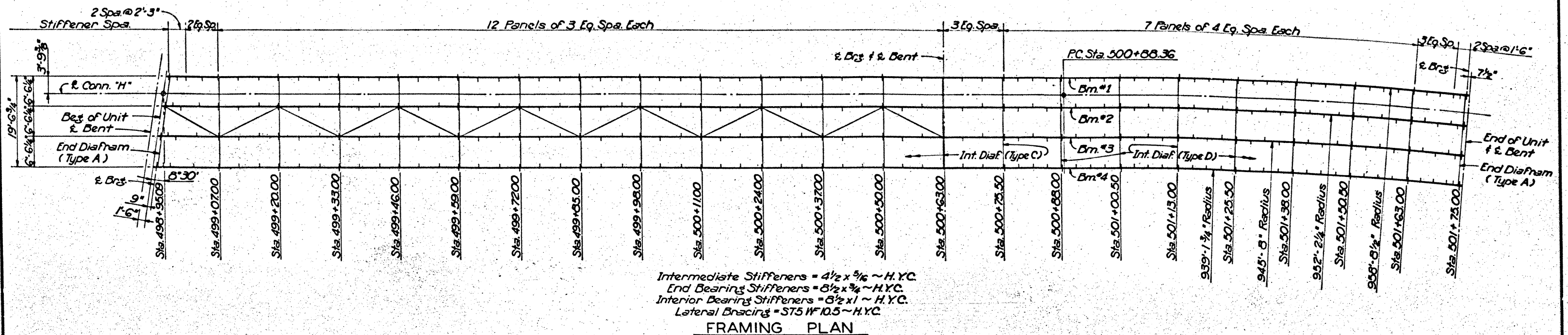
(FOR CONNECTION H)

253'-0 $\frac{5}{8}$ " (108'-0" ~ 145'-0 $\frac{5}{8}$ ") **238**

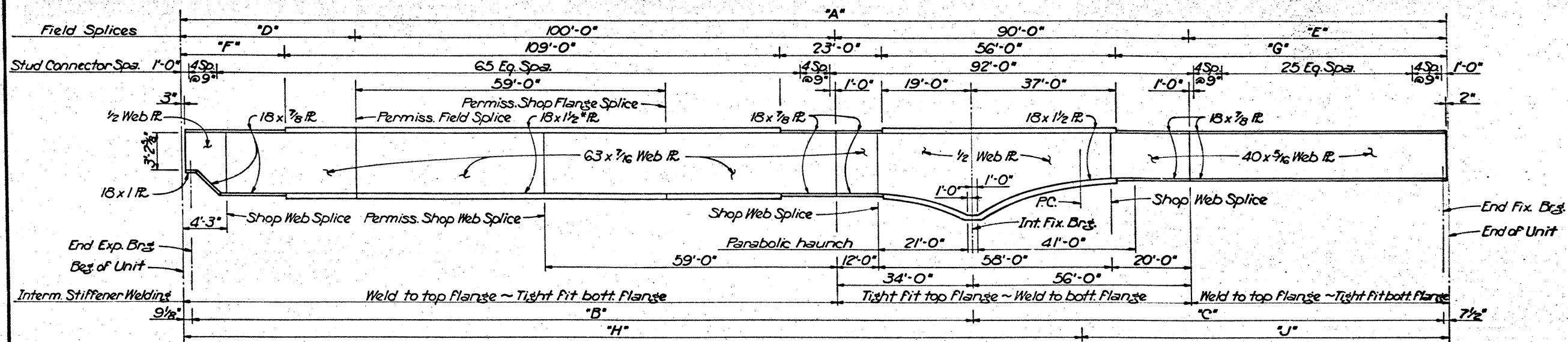
IH20-US67 INTERCHANGE

Sheet 1 of 3

ORIGINAL DRAWING DATE: May ~ 1969	STATE: TEXAS	FEDERAL AID PROJECT: 13 6	SHEET: 238
REVISIONS:	COUNTY: Dallas	SECTION: 2374 4	JOB: IH20
DR: LEC	CK: RDS	INSTR: 120-5(G)457	
DW: DPG	CK: LEC		

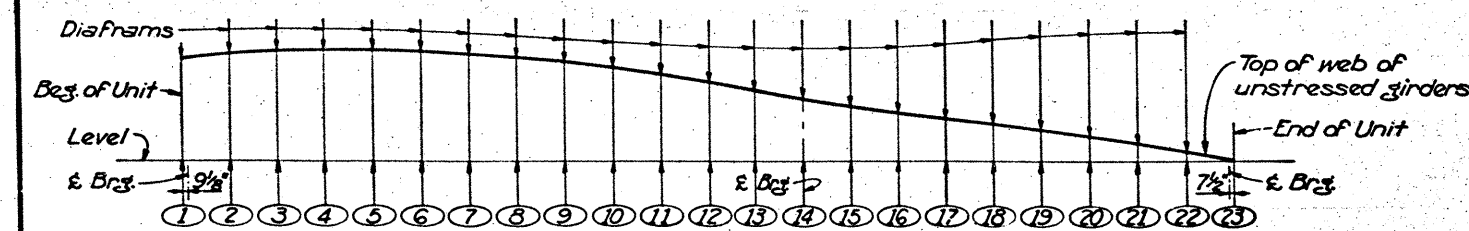


FRAMING PLAN



BEAM ELEVATION

Note: All dimensions shown are developed lengths along & Beam.



Beam	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
#1	6'-7 1/8"	6'-8 1/8"	6'-9 1/8"	6'-10 1/8"	6'-9 3/8"	6'-8 3/8"	6'-7 3/8"	6'-4 5/8"	6'-1 5/8"	5'-10 5/8"	5'-6 1/8"	5'-1 1/8"
#2	6'-9 3/8"	6'-11 1/8"	7'-0 1/8"	7'-0 3/8"	7'-0 3/8"	6'-11 3/8"	6'-9 3/8"	6'-7 3/8"	6'-4 1/8"	6'-0 3/8"	5'-7 3/8"	5'-3 3/8"
#3	7'-0 3/8"	7'-2 1/8"	7'-3 1/8"	7'-3 3/8"	7'-2 3/8"	7'-0 1/8"	6'-9 3/8"	6'-6 1/8"	6'-2 3/8"	5'-9 3/8"	5'-4 3/8"	5'-4 3/8"
#4	7'-3 3/8"	7'-5"	7'-6"	7'-6 3/8"	7'-6 1/8"	7'-4 1/8"	7'-2 3/8"	6'-11 3/8"	6'-8 3/8"	6'-4 3/8"	5'-11 3/8"	5'-6 1/2"
Beam	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	
#1	4'-8 3/8"	4'-3 1/2"	3'-10 3/8"	3'-5 3/8"	3'-0 3/8"	2'-7 1/8"	2'-2 1/8"	1'-8 3/8"	1'-1 3/8"	7 1/8"	0	
#2	4'-10 1/8"	4'-4 1/8"	3'-11 3/8"	3'-6 3/8"	3'-1 1/8"	2'-8 3/8"	2'-2 1/8"	1'-8 3/8"	1'-2 1/8"	7 1/8"	0	
#3	4'-11 3/8"	4'-6 1/8"	4'-1"	3'-7 1/8"	3'-2 3/8"	2'-8 3/8"	2'-3 3/8"	1'-9 3/8"	1'-2 3/8"	7 1/8"	0	
#4	5'-1 3/8"	4'-7 3/8"	4'-2 1/8"	3'-8 3/8"	3'-3 1/8"	2'-9 3/8"	2'-3 3/8"	1'-9 3/8"	1'-2 3/8"	7 1/8"	0	

VERTICAL CAMBER DIAGRAM

Note: Web may be cut on straight lines between ordinates or to a smooth curve at the fabricator's option.

TABLE OF VARIABLES				
	Bm. #1	Bm. #2	Bm. #3	Bm. #4
A	279'-6 5/8"	280'-0 5/8"	280'-5 1/2"	280'-10 1/8"
B	166'-7 1/8"	167'-6 3/4"	168'-6 1/8"	169'-6 1/8"
C	111'-8 3/8"	111'-1 1/2"	110'-6 3/8"	109'-11 3/8"
D	33'-4 3/8"	34'-3 3/8"	35'-3 3/8"	36'-3 1/4"
E	56'-4 1/8"	55'-9"	55'-1 1/8"	54'-6 1/8"
F	16'-4 1/8"	17'-3 3/8"	18'-3 3/8"	19'-3 1/4"
G	75'-4 1/8"	74'-9"	74'-1 1/8"	73'-6 3/8"
H	192'-8 1/2"	193'-8 3/8"	194'-7 1/8"	195'-7 1/8"
J	86'-11 1/8"	86'-4 1/8"	85'-9 3/8"	85'-2 1/8"

Note: See Unit #15 for Web Cutting Diagram.
 All structural steel shall be High Yield Carbon unless otherwise noted.

HS20 LOADING

TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION

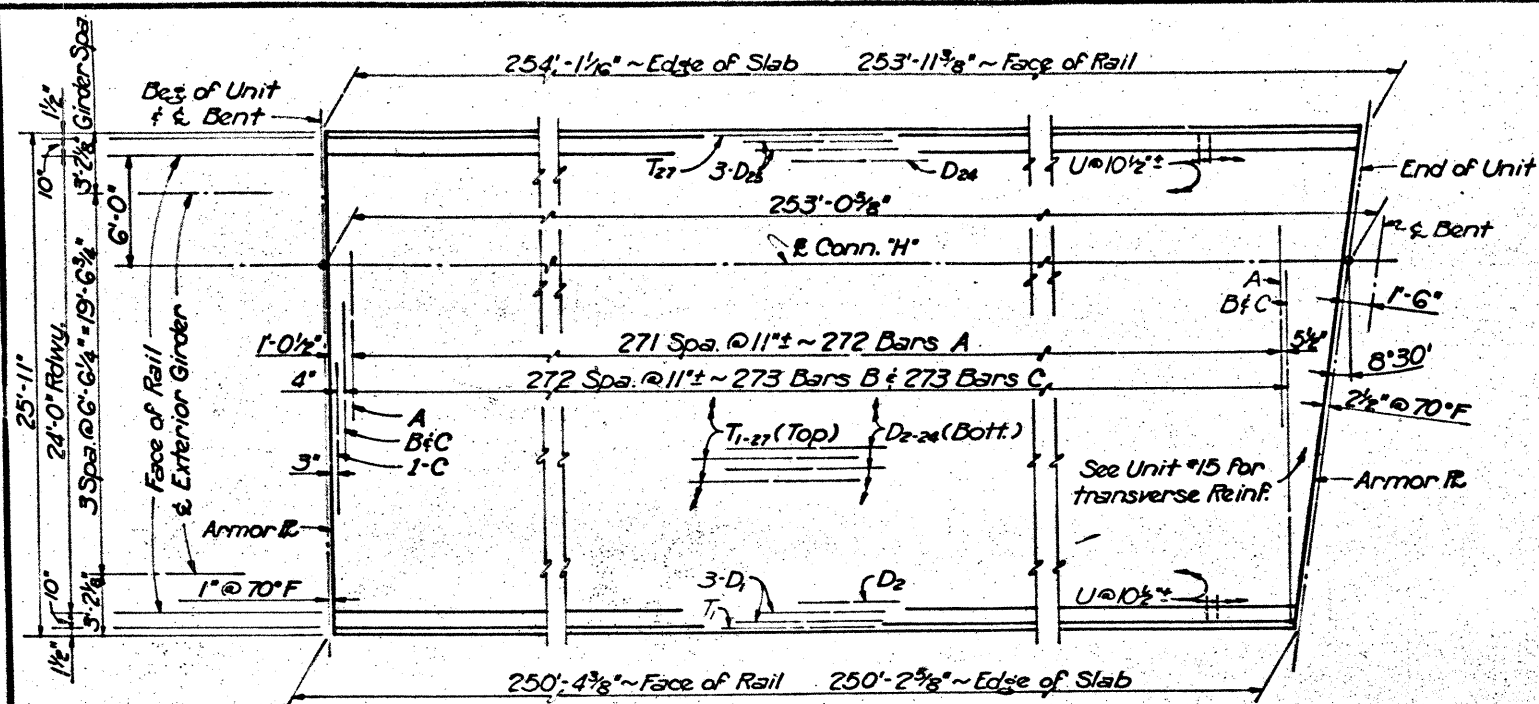
UNIT #18
 (FOR CONNECTION H) 239

279'-10 15/16" (167'-10 15/16" ~ 112'-0")

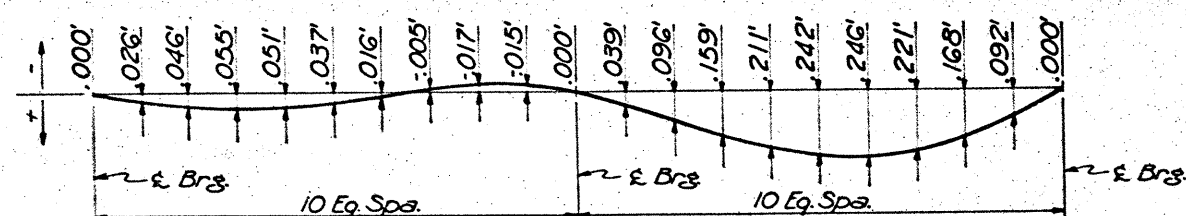
IH20 - US67 INTERCHANGE

Sheet 2 of 3

ORIGINAL DRAWING DATE: April ~ 1969	STATE FEDERAL DISTRICT	FEDERAL AID PROJECT	ENTRY
DR: LEO	18	6	239
CR: RDS	COUNTY	SECTION	JOB
DR: DRQ	Dallas	2374	2
CR: LEO			IH-20

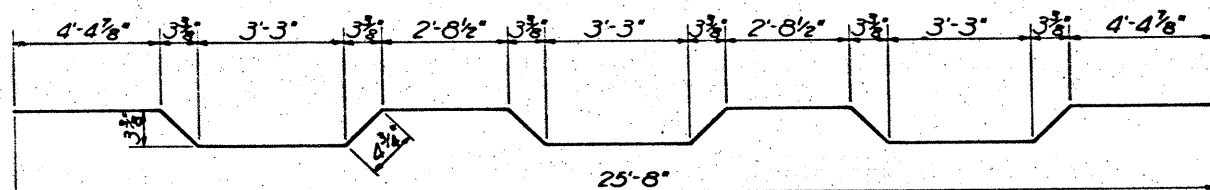


PLAN ~ UNIT *17

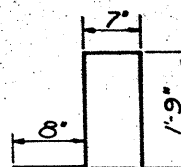


DEAD LOAD DEFLECTION DIAGRAM ~ UNIT *17

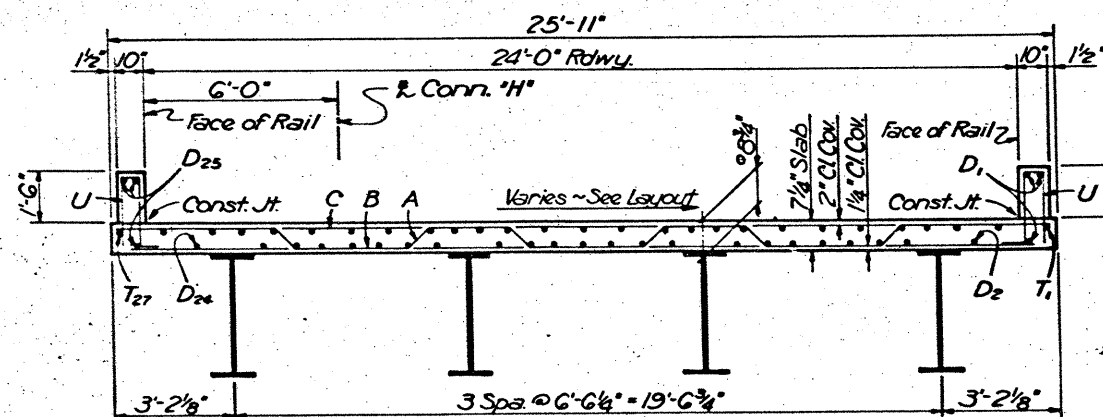
(Due to Conc. and Rail only.)



BARS A

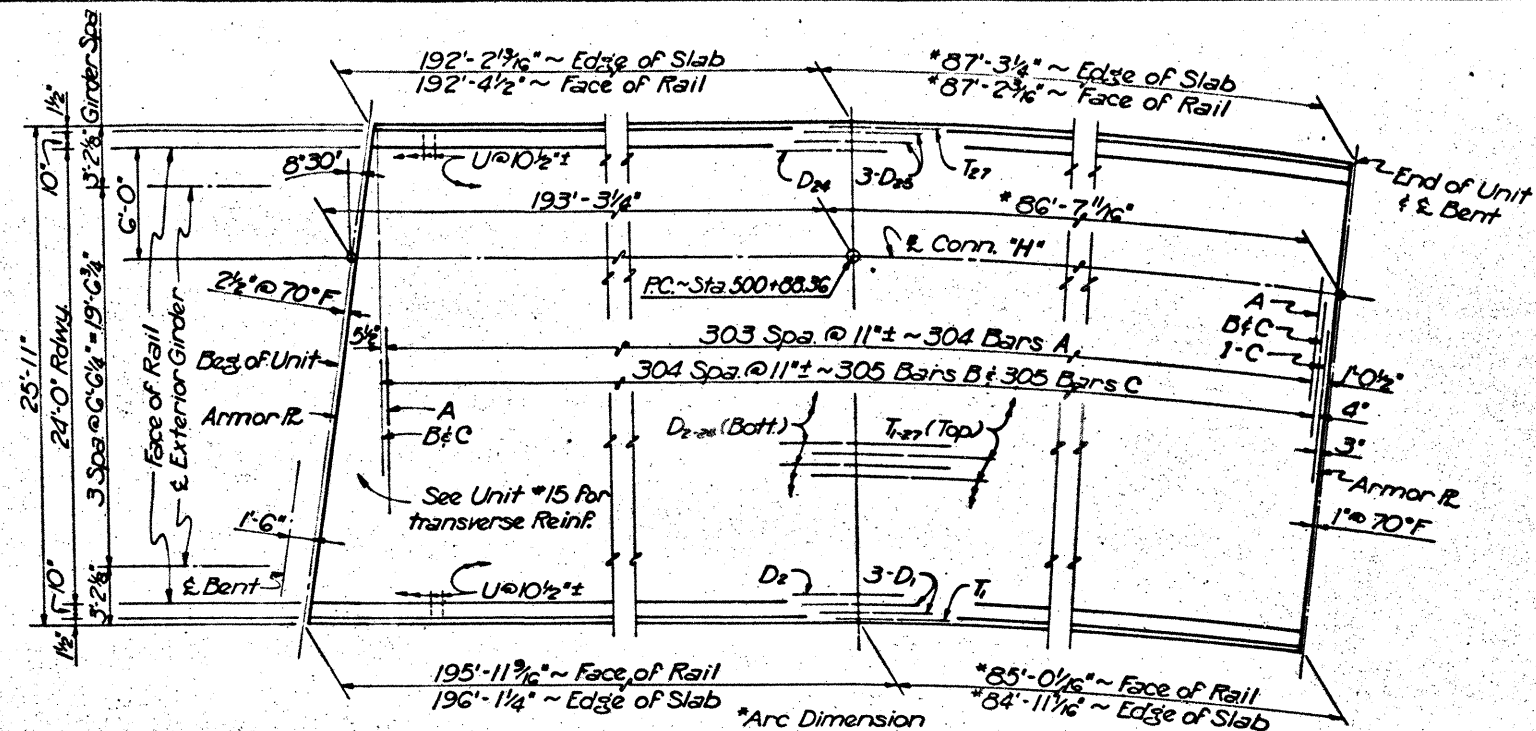


BARS U

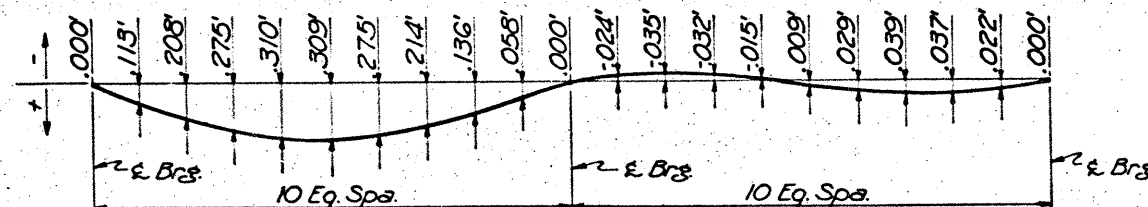


TYPICAL SECTION

*Top of slab to top of web @ E Brgs.



PLAN ~ UNIT *18



DEAD LOAD DEFLECTION DIAGRAM ~ UNIT *18

(Due to Conc. and Rail only.)

GENERAL NOTES:

Designed according to A.A.S.H.O. 1965 Standard Specifications and Interim Specifications thereto, and complies with PPM 20-4, Sec. 4c. Chamfer all exposed corners 3/4" unless otherwise noted. Concrete shall be placed by continuous placement.

The girders shall be fabricated to produce either arcs or chords of circles between diaphragms. These circles shall be to the radii shown on the framing plan. A detailed fabrication procedure shall be submitted to the Bridge Division for approval. See Plate Girder Details sheet for details not shown. See Bearing Details sheet for Bearing Assembly. All diaphragms and E Bents are radial lines.

*Length includes 4-20 Dia. laps. (1'-0" Min.)

UNIT *17					UNIT *18				
Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight
A	272	#5	26'-4"	7,471	A	304	#5	26'-4"	8,350
B	273	#4	24'-11"	4,544	B	305	#4	24'-11"	5,077
C	274	#5	25'-8"	7,335	C	306	#5	25'-8"	8,192
D ₁	3	#5	254'-2"	795	D ₁	3	#5	284'-5"	891
D ₂₋₂₄	23	#5	256'-0"	6,141	D ₂₋₂₄	23	#5	284'-0"	6,813
D ₂₅	3	#5	257'-10"	807	D ₂₅	3	#5	283'-4"	887
T ₁₋₂₇	27	#4	255'-8"	4,611	T ₁₋₂₇	27	#4	283'-8"	5,116
U	576	#5	4'-9"	2,854	U	640	#5	4'-9"	3,171
G	1	#5	25'-11"	27	G	1	#5	25'-11"	27
AA ₁₋₇	14	#5	13'-10"	202	AA ₁₋₇	14	#5	13'-10"	202
Reinf. Steel					Reinf. Steel				
Class "C" Conc.					Class "C" Conc.				
Str. Stl. (Shoe & Armor Jt.)					Str. Stl. (Shoe & Armor Jt.)				
Str. Stl. (H.Y.C.)					Str. Stl. (H.Y.C.)				
Str. Stl. (HS4G)					Str. Stl. (HS4G)				
Lb. 34,787					Lb. 38,726				
C.Y. 169.6					C.Y. 188.5				
Lb. 1,020					Lb. 1,020				
Lb. 172,800					Lb. 212,400				
Lb. 56,300					Lb. 80,100				

HS20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

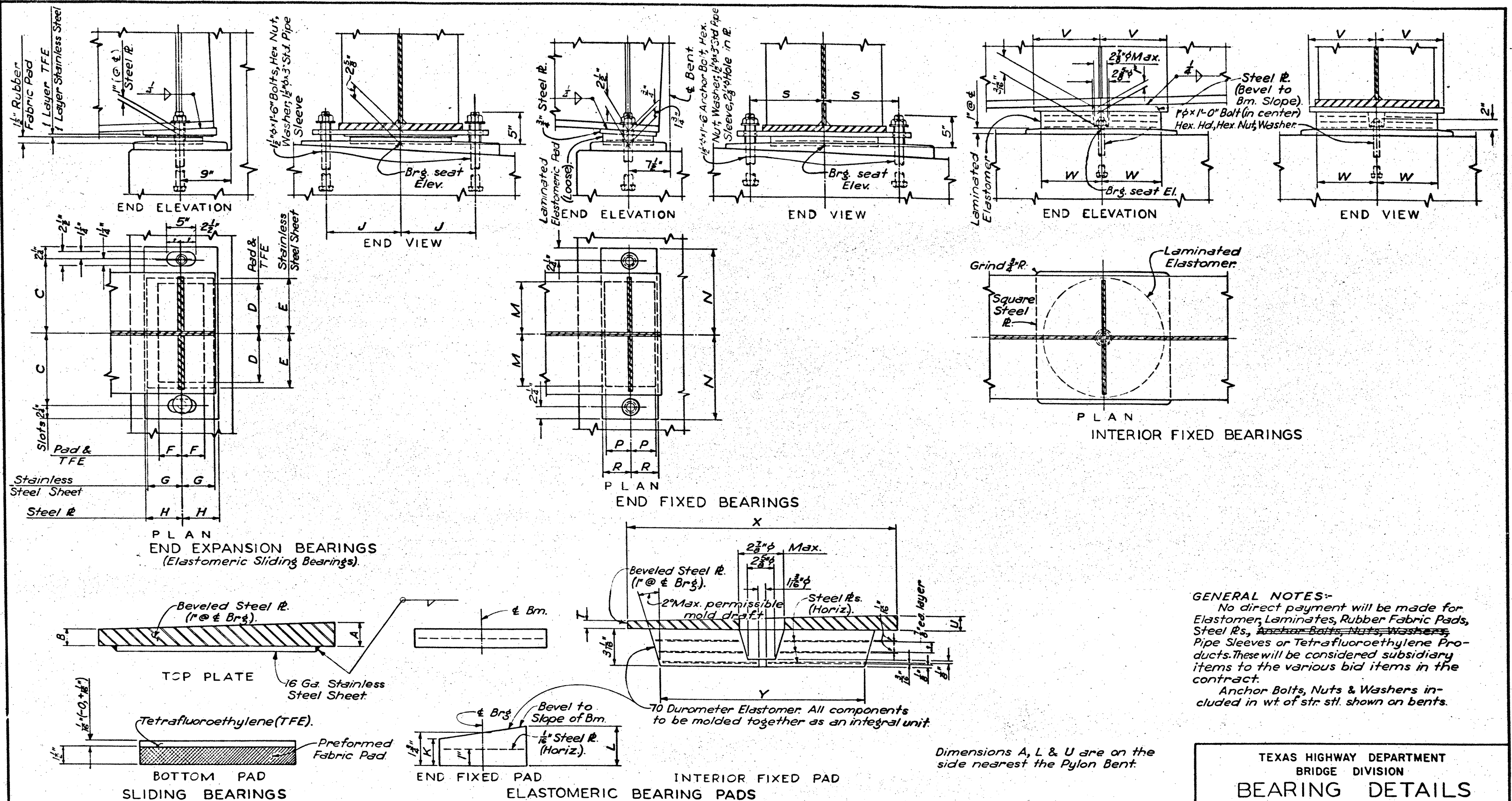
UNIT *17 & UNIT *18
(FOR CONNECTION H)

240

IH20-US67 INTERCHANGE

Sheet 3 of 3

ORIGINAL DRAWING DATE: July ~ 1967	STATE: TEXAS	FEDERAL AID PROJECT: 720-5(61)457	SHEET: 240
REVISIONS:	COUNTY: DALLAS	SECTION: 2374.4	JOB: I-20
DR: LEC	CR: RDS	DR: DRG	CR: LEC



GENERAL NOTES:-
 No direct payment will be made for Elastomer, Laminates, Rubber Fabric Pads, Steel Rs., Anchor Bolts, Nuts, Washers, Pipe Sleeves or Tetrafluoroethylene Products. These will be considered subsidiary items to the various bid items in the contract.
 Anchor Bolts, Nuts & Washers included in wt. of str. stl. shown on bents.

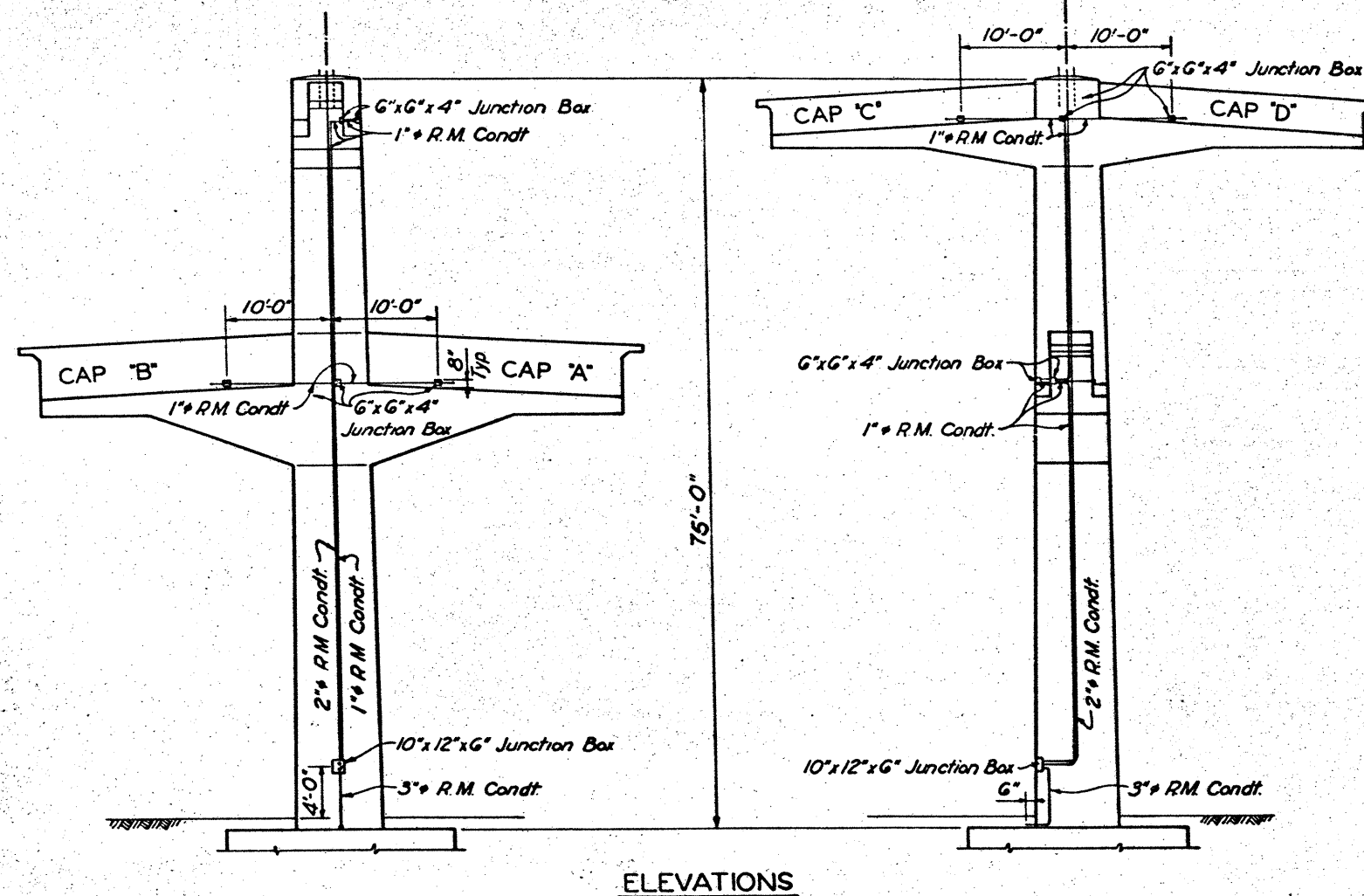
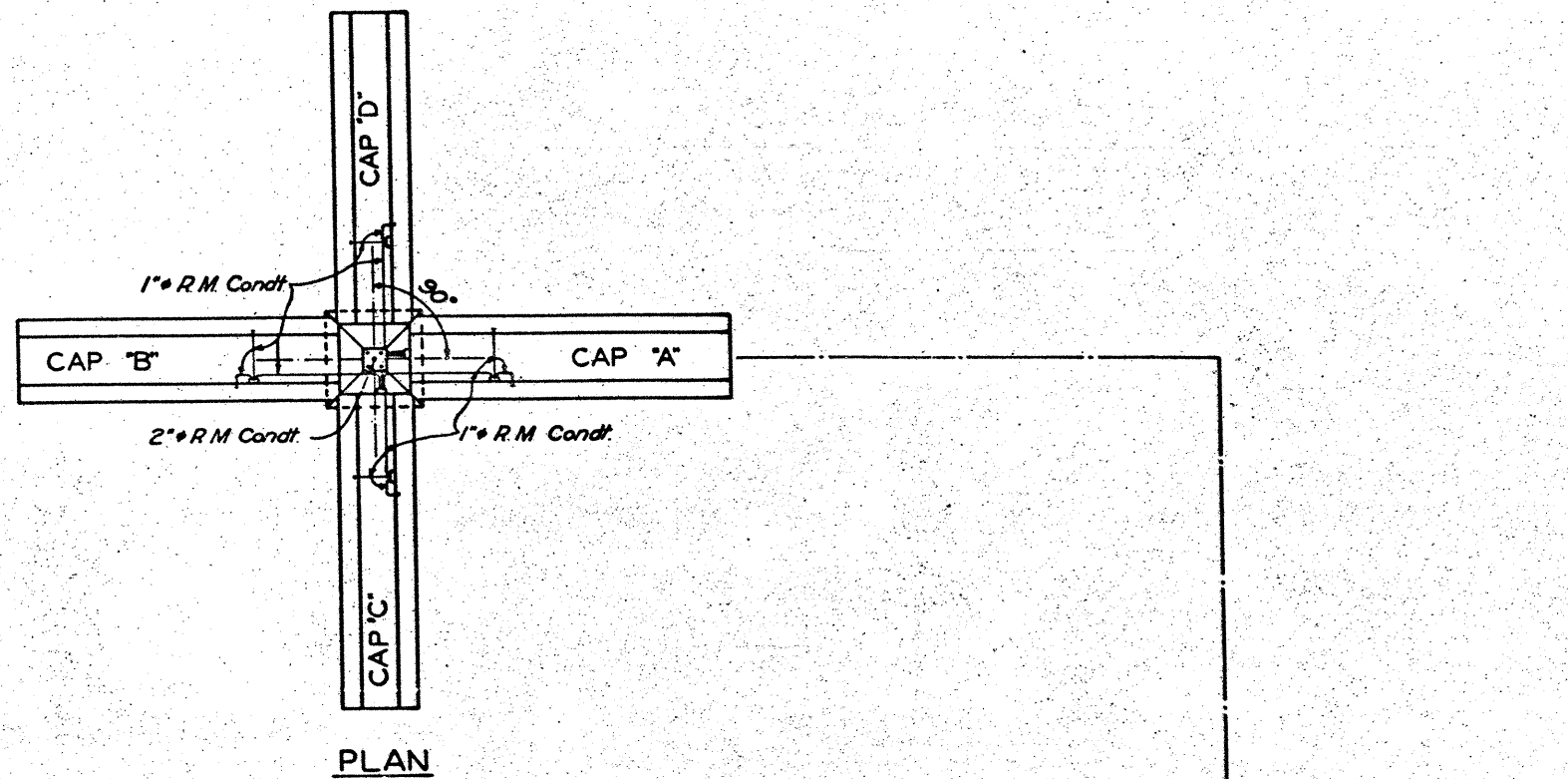
	TABLE OF VARIABLE DIMENSIONS																					
	END EXPANSION BEARING									END FIXED BEARING						INTERIOR FIXED BEARING						
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W	X (Sq)	Y (Dia)
UNIT #11	1"	1"	10 1/2"	6"	7"	4"	6"	6 1/2"	10 1/4"	13 1/4"	13 1/4"	9 1/2"	1'-0 1/2"	4 1/2"	5"	10 1/4"	15 1/16"	1 1/8"	1'-0"	10 3/4"	2'-0"	1'-9 1/2"
UNIT #12	1"	1"	10 3/8"	6"	7"				10 1/4"	13 1/8"	13 1/8"		1'-0 1/2"			10 1/4"	15 1/16"	1 1/8"	1'-0"	10 3/4"	2'-0"	1'-9 1/2"
UNIT #13	1 1/8"	1 1/8"	10 3/8"	6"	7"				10 1/4"	13 1/8"	13 1/8"		1'-0 1/2"			10 1/4"	15 1/16"	1 1/8"	1'-0"	10 3/4"	2'-0"	1'-9 1/2"
UNIT #14	1 1/8"	1 1/8"	10 3/8"	6"	7"				10 1/4"	13 1/8"	13 1/8"		1'-0 1/2"			10 1/4"	15 1/16"	1 1/8"	1'-0"	10 3/4"	2'-0"	1'-9 1/2"
UNIT #15	1"	1"	11 3/8"	8"	9"				11 1/4"	14 1/8"	14 1/8"		1'-1 1/2"			11 1/4"	16 1/16"	1 1/8"	1'-0"	11 3/4"	2'-0"	1'-9 1/2"
UNIT #16	1"	1"	10 3/8"	6"	7"				10 1/4"	13 1/8"	13 1/8"		1'-0 1/2"			10 1/4"	15 1/16"	1 1/8"	1'-0"	10 3/4"	2'-0"	1'-9 1/2"
UNIT #17	1"	1"	10 3/8"	6"	7"				10 1/4"	13 1/8"	13 1/8"		1'-0 1/2"			10 1/4"	15 1/16"	1 1/8"	1'-0"	10 3/4"	2'-0"	1'-9 1/2"
UNIT #18	1"	1"	10 3/8"	8"	9"				11 1/4"	14 1/8"	14 1/8"		1'-1 1/2"			11 1/4"	16 1/16"	1 1/8"	1'-0"	11 3/4"	2'-0"	1'-9 1/2"

TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION
BEARING DETAILS
 FOR
 CONTINUOUS PLATE GIRDER UNITS

242

I-20~US:67 INTERCHANGE

ORIGINAL DRAWING DATE	STATE	FEDERAL DISTRICT	FEDERAL AID PROJECT	SHEET
10-1-60	TX	6	I-20-567457	242
REVISIONS	COUNTY	SECTION	JOB	ROADWAY
	DALLAS	23-2		I-20



R. M. CONDUIT QUAN.

Size	120 - US 67 Interchange
1"	132
2"	72
3"	5

GENERAL NOTES:

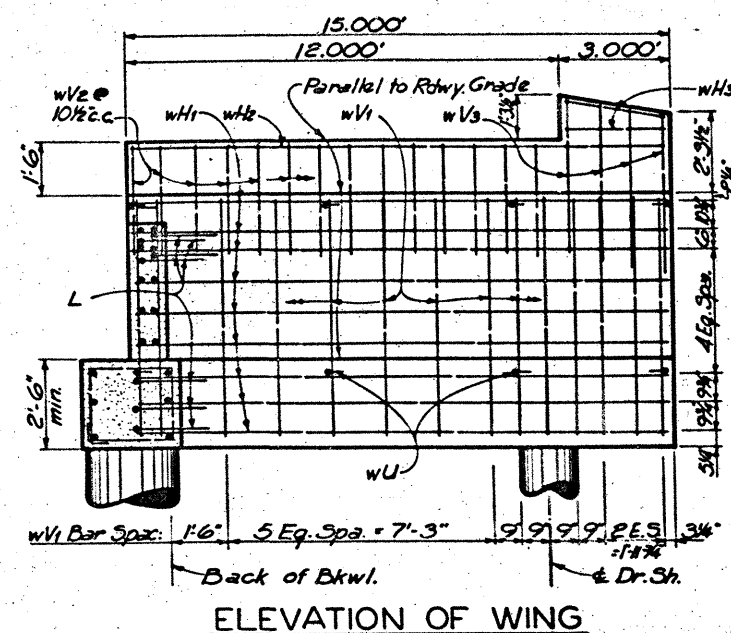
- All Junction Boxes will be provided with all-weather covers.
- Cap all open ends of Conduit with screw type caps.
- Place Reinforcing as required to clear junction boxes 1".

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

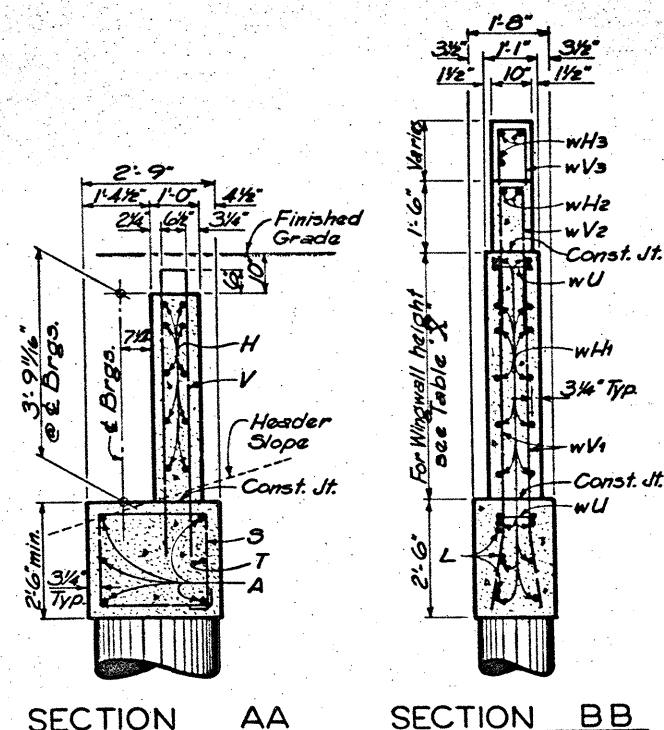
PYLON LIGHTING DETAILS

243

ORIGINAL DRAWING DATE: Dec. 1966	STATE: TEXAS	FEDERAL AID PROJECT: 120-5(61)457	SHEET: 243
REVISIONS:	DATE: 18 6	COUNTY: DALLAS	JOB: 243
DESIGNED BY: HND	CHECKED BY: LEC	DATE: 2374	JOB: 4 2 1



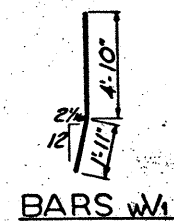
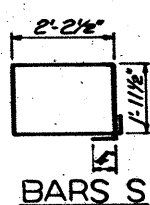
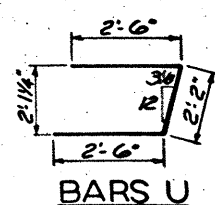
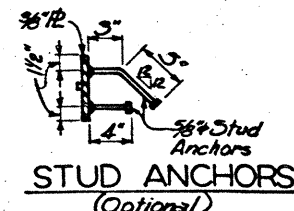
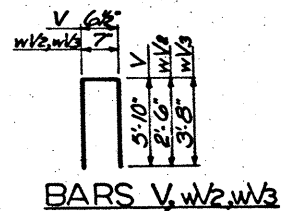
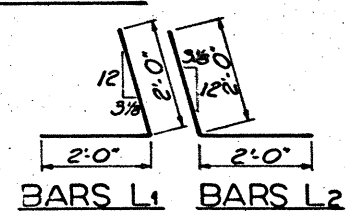
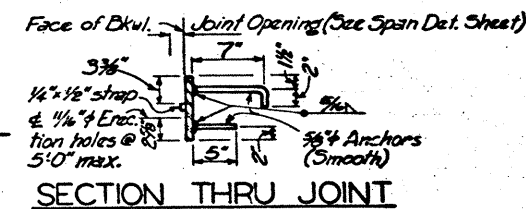
Bar	No.	Size	Length	Weight
A	5	# 11	45'-0"	1195
H	10	# 5	45'-2"	471
L ₁	7	# 6	4'-0"	42
L ₂	7	# 6	4'-0"	42
S	41	# 4	9'-0"	246
T	1	# 5	45'-0"	17
U	4	# 6	7'-2"	43
V	43	# 4	12'-3"	352
wH ₁	36	# 6	14'-9"	798
wH ₂	4	# 5	14'-9"	62
wH ₃	6	# 5	2'-9"	17
wU	16	# 5	1'-7"	26
wV ₁	56	# 5	6'-9"	394
wV ₂	28	# 5	5'-7"	163
wV ₃	8	# 5	7'-11"	66
Total Weight (Lbs.)				3964



TOTAL ESTIMATED QUANTITIES		
Reinforcing Steel	Lbs	3964
Class "C" Concrete	C.Y.	29.1
Uncl. Struct. Excav.	C.Y.	39
Str. Stl. (Shoe & Ar. Jt.)	Lbs	* 413

*Quantity shown is for one armor plate to be placed in approach slab.

GENERAL NOTES:
Designed according to A.A.S.H.O.
1965 Standard Specifications and
complies with P.R.M. 20-4, sec. 4c.
Chamfer all exposed corners $\frac{3}{4}$ "
unless otherwise noted.
Calculated shaft load = 52 Tons/Dn. Sh.



SECTION AA

SECTION BB

AR. R. ELEVATION
(Armor R. to be placed in Approach Slab)

TABLE	"X"
WINGWALL	HEIGHTS

Abutment	Wingwall	Height
Number 1 Northbound	East	4'-7 3/8"
	West	4'-8 1/16"
Number 5 Northbound	East	4'-7 3/8"
	West	4'-8 1/16"
Number 1 Southbound	East	4'-8 1/16"
	West	4'-7 3/8"
Number 5 Southbound	East	4'-8 1/16"
	West	4'-7 3/8"

HS 20 LOADING

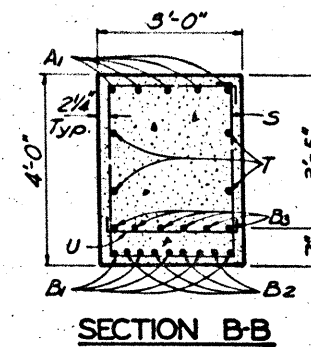
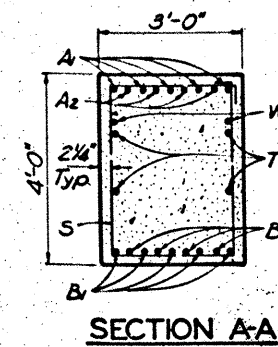
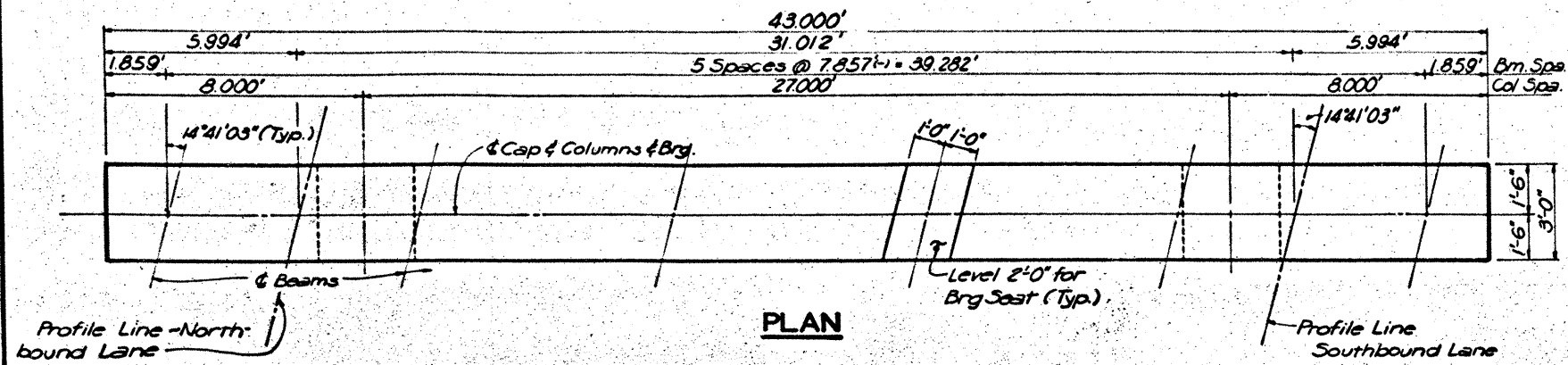
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

ABUTMENTS

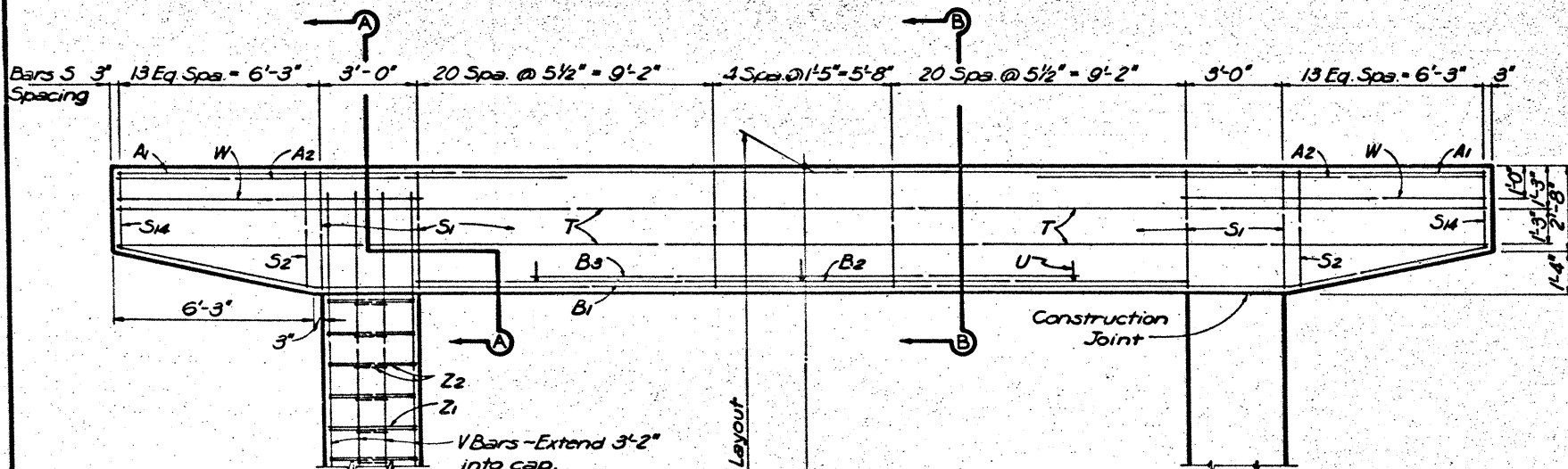
U.S. 67 UNDERPASS

244

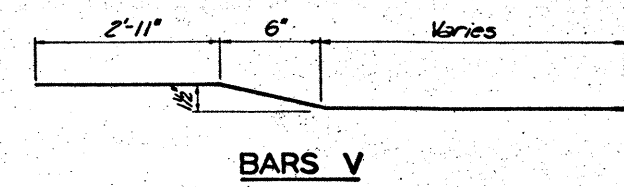
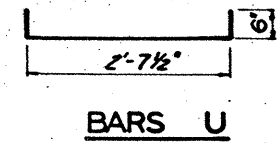
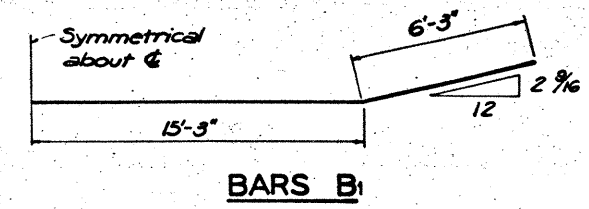
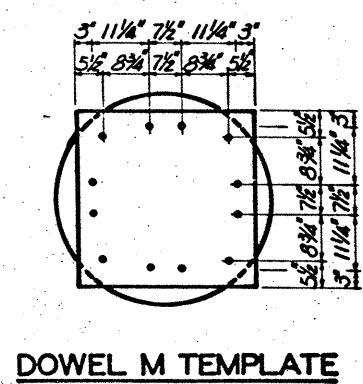
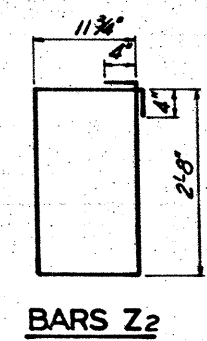
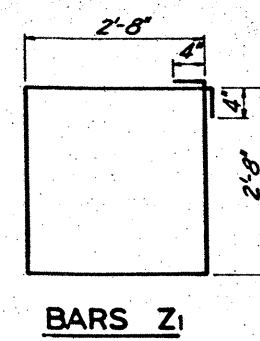
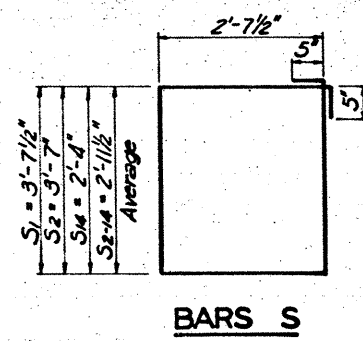
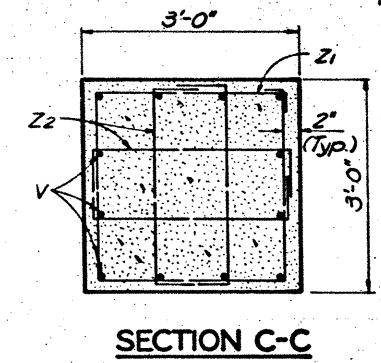
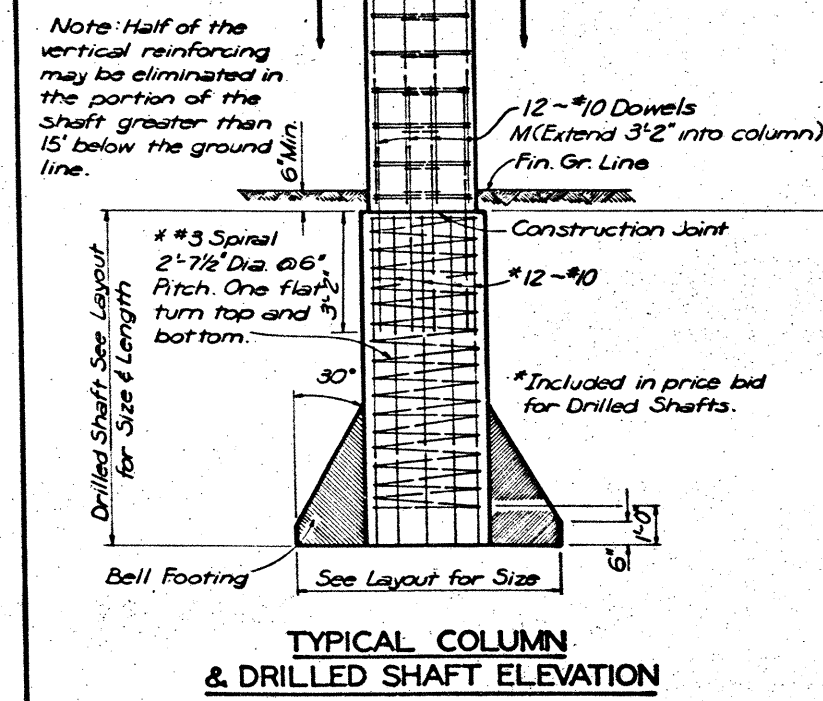
ORIGINAL DRAWING DATE: April, 1969		STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
REVISONS		10	6	20-5(6) 457	24
DR. - CDB		COUNTY		CONTROL	SECTION
CR. - GLH		DALLAS		2374	2
DR. - GLH					
CR. - LEC					



BILL OF CONSTANT REINFORCING STEEL				
Bars	Number	Size	Length	Weight
A1	5	#11	42'-8"	1133
A2	8	#11	14'-0"	595
B1	5	#11	43'-0"	1142
B2	4	#11	24'-0"	510
B3	6	#11	17'-0"	542
S	47	#5	13'-4"	654
S2-14 Avg	26	#5	12'-0"	325
T	4	#5	42'-8"	178
W	4	#5	9'-6"	40
U	3	#4	3'-8"	7
M	24	#10	6'-4"	654
Reinforcing Steel			Lbs.	5780

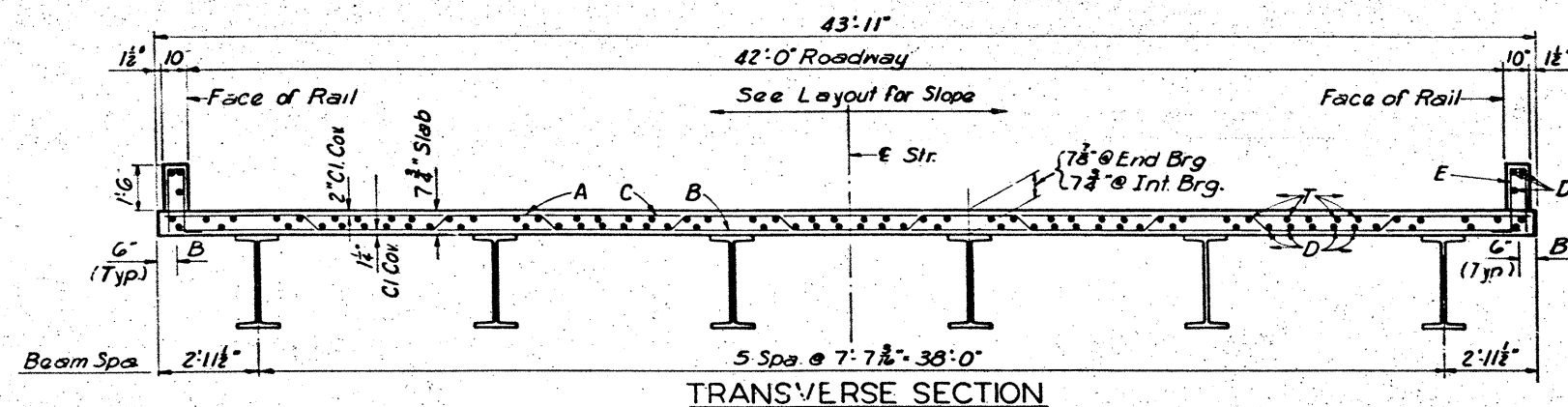
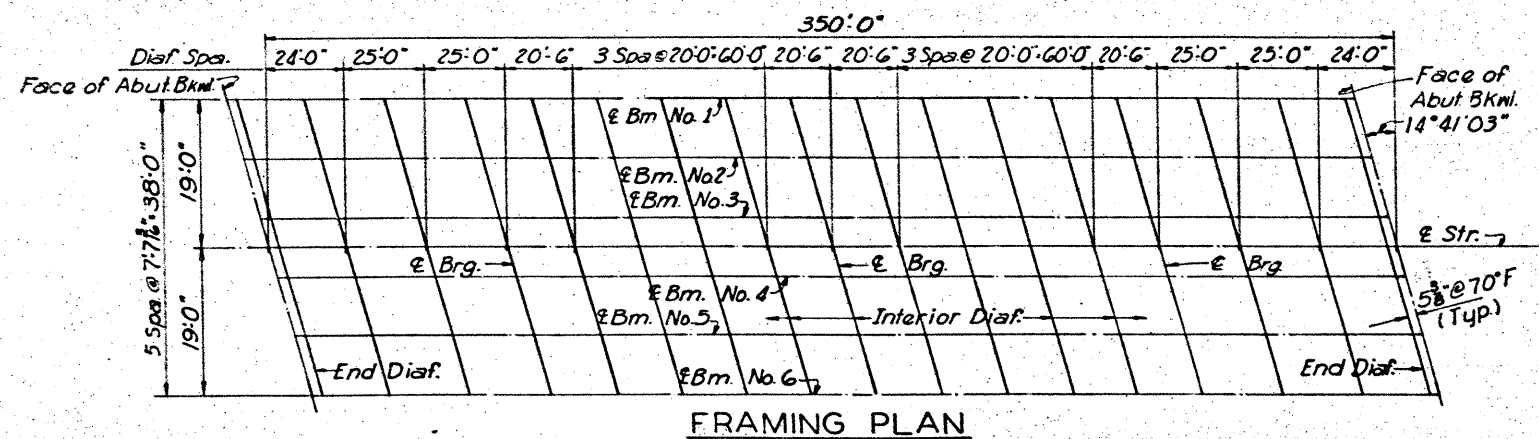
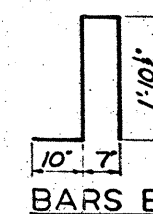
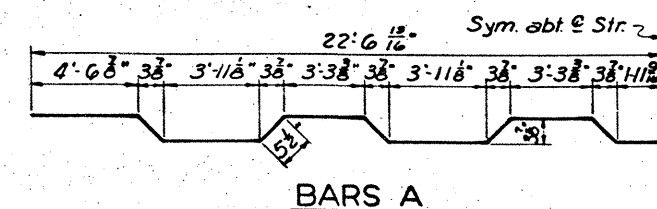
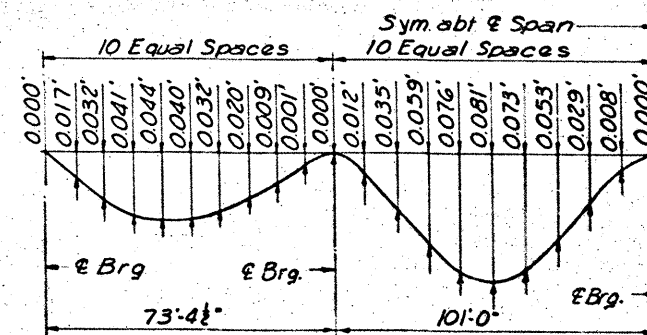
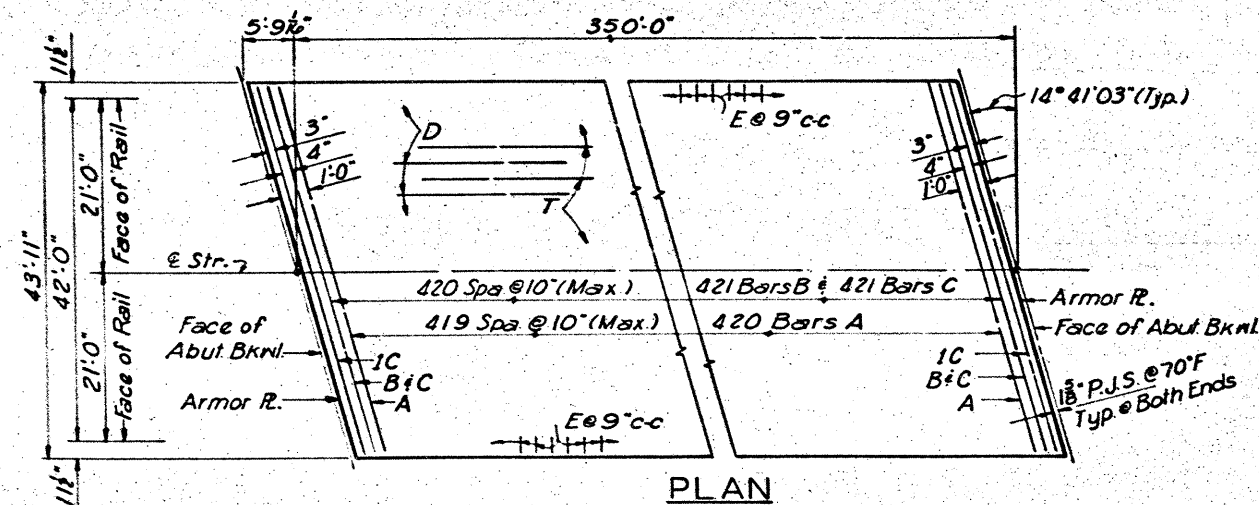
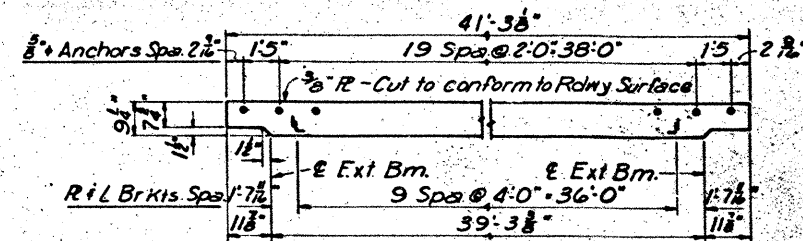
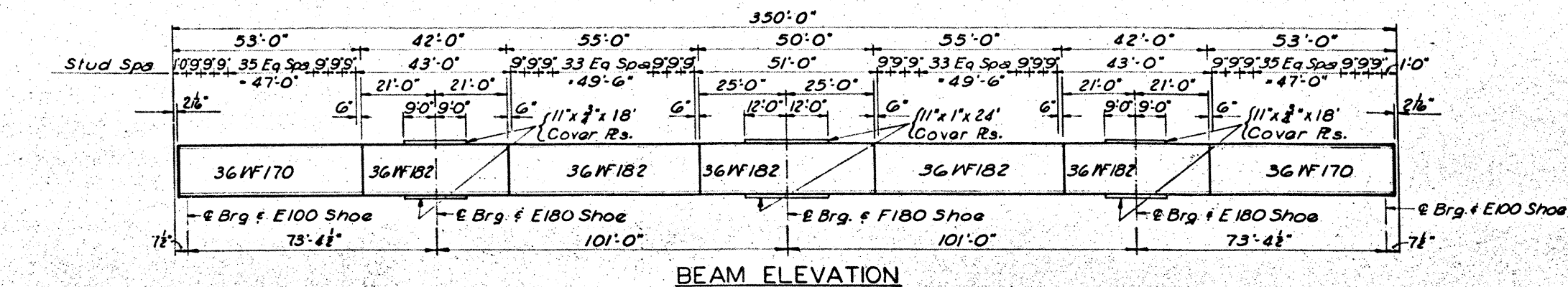


BILL OF VARIABLE REINFORCING STEEL								TOTAL ESTIMATED QUANTITIES	
Y	Bars Z1 #4			Bars Z2 #4			Bars V 24-#10	Reinf. Steel	Class C Concrete
Ft.	No.	Lgth	Wt.	No.	Lgth	Wt.	Length Weight	Lbs.	C.Y.
17	28	11'-4"	212	56	8'-0"	299	16'-2"	1670	7961
18	30	11'-4"	227	60	8'-0"	321	17'-2"	1773	8101
19	32	11'-4"	242	64	8'-0"	342	18'-2"	1876	8240
20	34	11'-4"	257	68	8'-0"	363	19'-2"	1979	8379
21	36	11'-4"	273	72	8'-0"	385	20'-2"	2083	8521
22	38	11'-4"	288	76	8'-0"	406	21'-2"	2186	8660



GENERAL NOTES:
 Designed according to A.A.S.H.O. 1965 Standard Specifications and complies with P.P.M. 20-4, Sec. 4c. Chamfer all exposed corners 3/4" unless otherwise noted.
 Calculated Shaft Load = 242 Tons/Shaft for Bts #2-#4 = 258 Tons/Shaft for Bt. #3.

HS 20 LOADING				
TEXAS HIGHWAY DEPARTMENT BRIDGE DIVISION				
INTERIOR BENTS				
U.S. 67 UNDERPASS				
14° 41' 03" R.F. SKEW 245				
ORIGINAL DRAWING DATE: April, 1969	STATE FEDERAL DISTRICT REGION	FEDERAL AID PROJECT	SHEET	
DN: LRC	18	6	I 20-5(61) 457 245	
CR: CBL	COUNTY	CONTROL SECTION JOB	HIGHWAY	
CR: CBL	DALLAS	2324	4 2 JH20	

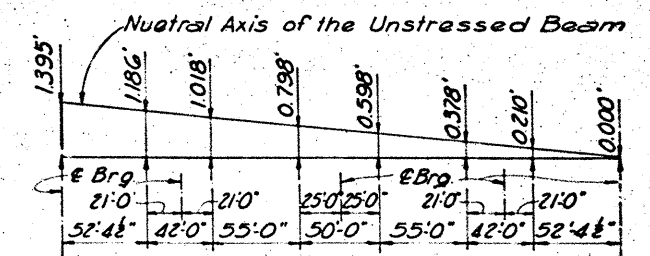


BILL OF REINFORCING STEEL AND ESTIMATED QUANTITIES	
---	--

Bar	No.	Size	Length	Weight
A	420	#5	46'-6"	20,370
B	421	#4	44'-5"	12,491
C	423	#5	45'-2"	19,927
D	50	#5	35'-4 1/2"	18,509
E	934	#5	5'-2"	5033
T	46	#4	35'-4 1/2"	10,893

Rainf. Steel	Lb.	87,223
Class C Conc.	C.Y.	400.1
Str. Steel - H.Y.C.	Lb.	423,800
Str. Steel (Shoe & Ar. Jt.)	Lb.	*9010

* Includes 5-20 dia Lap (1'-0" Min.)
* Includes 1140 lbs. for 2 Ar. Plates



GENERAL NOTES:

Designed according to A.A.S.H.O. 1965
Standard Specifications.

Chamfer all exposed corners $\frac{3}{4}$ " unless otherwise noted.

Design $f_c = 1200 \text{ psi.}$

Concrete shall be placed by continuous placement.

All Structural Steel shall be H.Y.C.

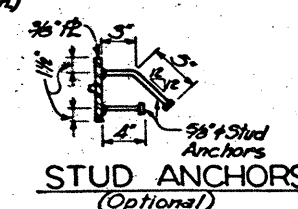
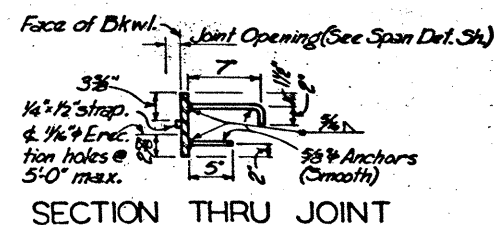
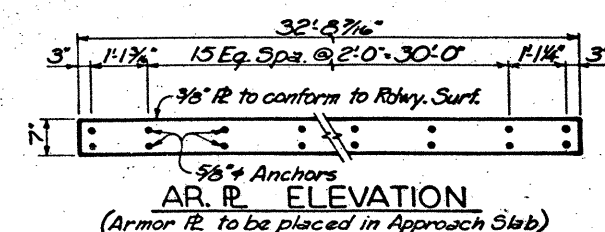
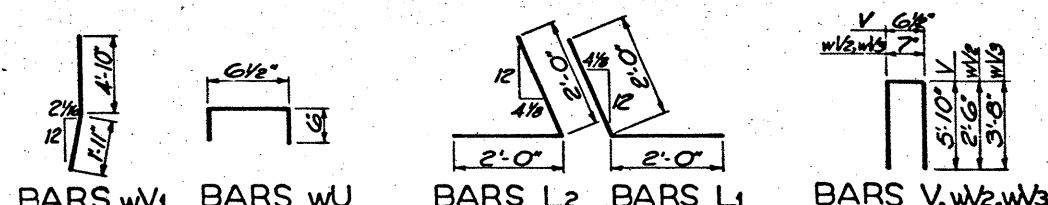
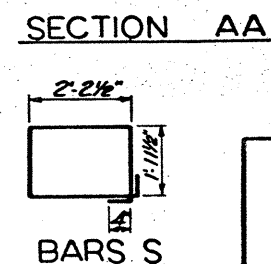
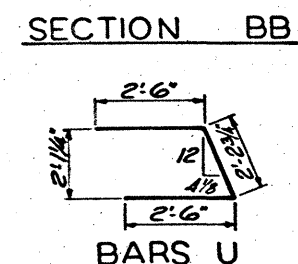
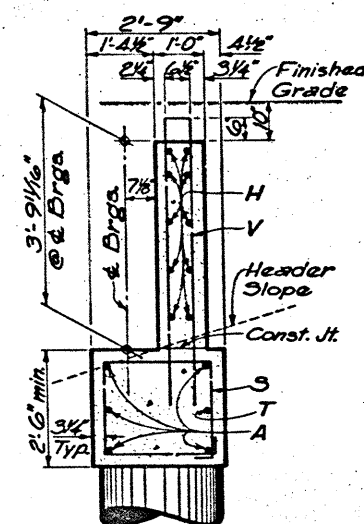
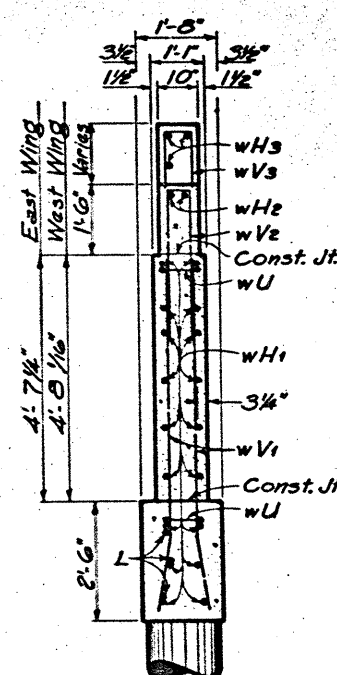
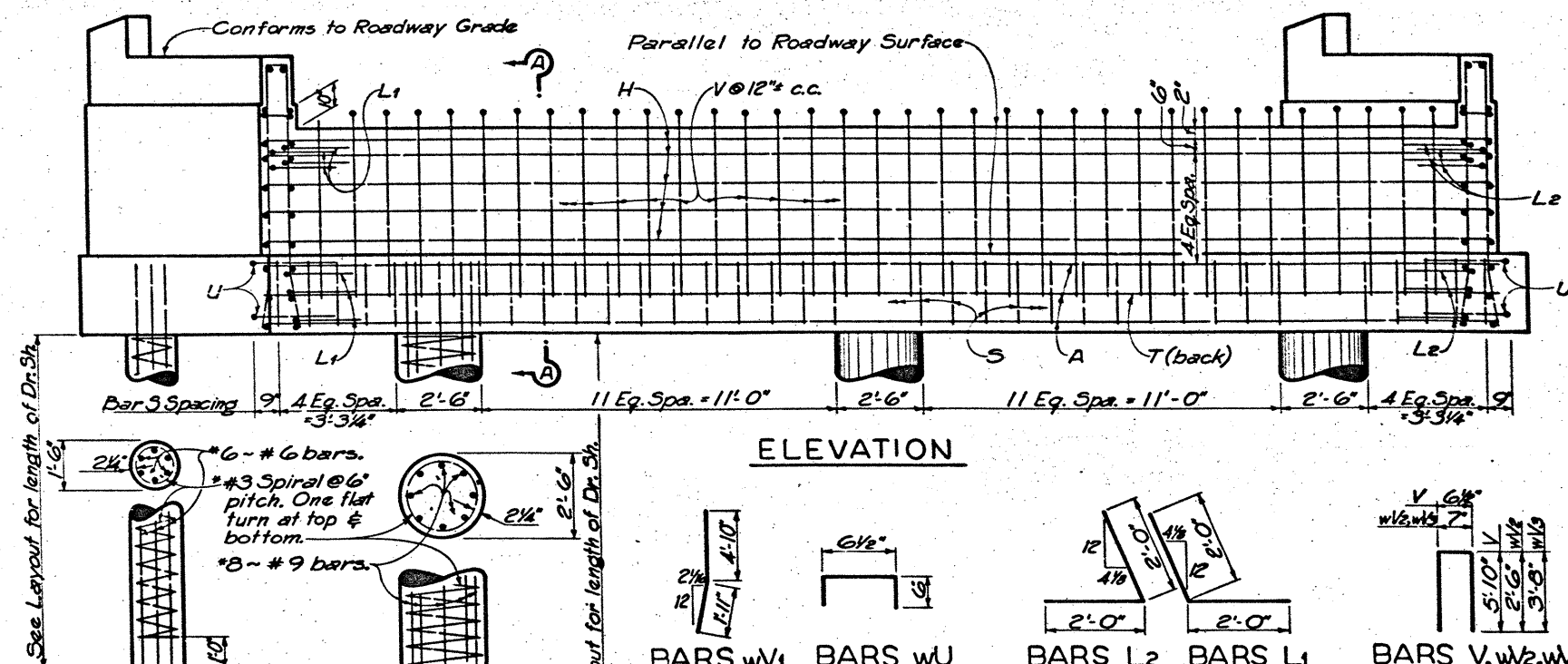
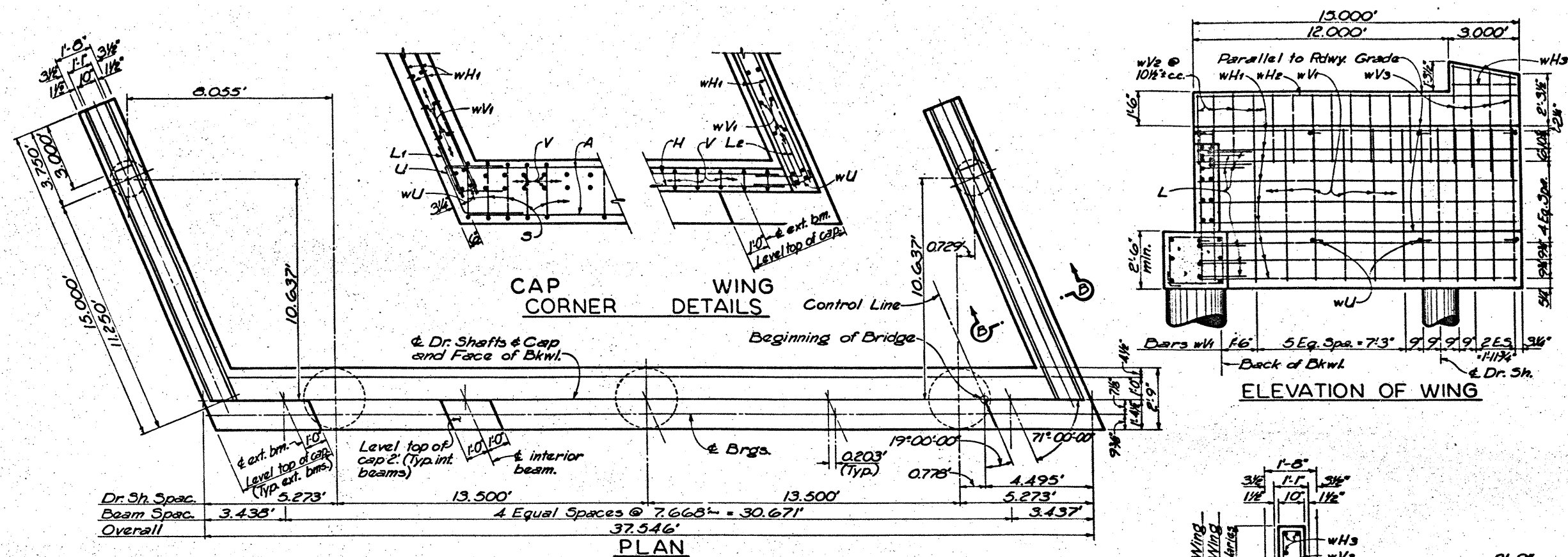
HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

350'-0" CONTINUOUS I-BEAM UNIT

42'-0" ROADWAY~14°41'03" R.F. SKEW

ORIGINAL DRAWING DATE: <u>MARCH '69</u>		STATE DISTRICT		FEDERAL REGION		FEDERAL AID PROJECT		SHEET	
DN: <u>LEC</u> CR: <u>ADC</u> DW: <u>GS0</u> CK: <u>ADC</u>		REVISIONS		1B 6		I 20-5 (61) 457		246	
				COUNTY		CONTROL	SECTION	JOB	HIGHWAY
				DALLAS		237A	4	2	US67



BILL OF REINFORCING STEEL

Bar	No.	Size	Length	Weight
A	5	#11	36'-6"	970
H	10	#5	36'-8"	382
L1	7	#6	4'-0"	42
L2	7	#6	4'-0"	42
S	34	#4	9'-0"	204
T	1	#5	36'-6"	33
U	4	#6	7'-3"	43
V	35	#4	12'-3"	286
wH1	36	#6	14'-9"	798
wHe	4	#5	14'-9"	62
wH3	6	#5	2'-9"	17
wU	16	#5	1'-7"	26
wV1	56	#5	6'-9"	391
wV2	28	#5	5'-7"	163
wV3	8	#5	7'-11"	66
Total Weight (Lbs.)				3533

TOTAL ESTIMATED QUANTITIES

Reinforcing Steel	Lbs.	3533
Class 'C' Concrete	C.Y.	25.7
Uncl. Struct. Excav.	C.Y.	35
Str. Stl. (Shoe & Ar. Jt.)	Lbs.	* 328

*Quantity shown is for one armor plate to be placed in approach slab.

GENERAL NOTES:
Designed according to A.A.S.H.O.
1965 Standard Specifications and
complies with R.P.M. 20-4, sec. 4c.
Chamfer all exposed corners $\frac{3}{4}$ "
unless otherwise noted.
Calculated shaft load = 51 TONS/pr. sh.

* Included in price bid
for drilled shafts.

Shaded portion limits of
Bell footing for payment.

Note:
Armor PL's shall be shipped in convenient lengths (10' min. - 22' max.) and field butt welded.

HS 20 LOADING

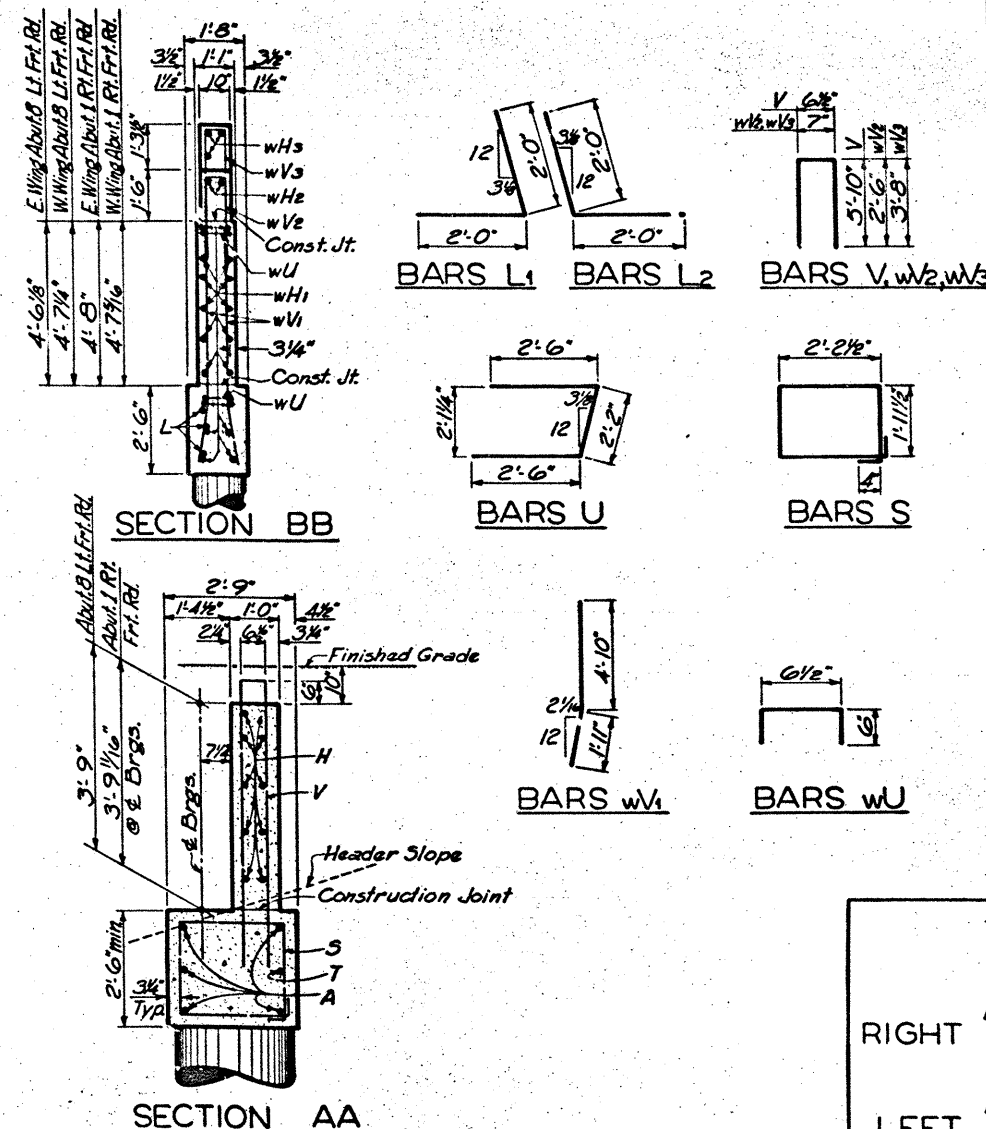
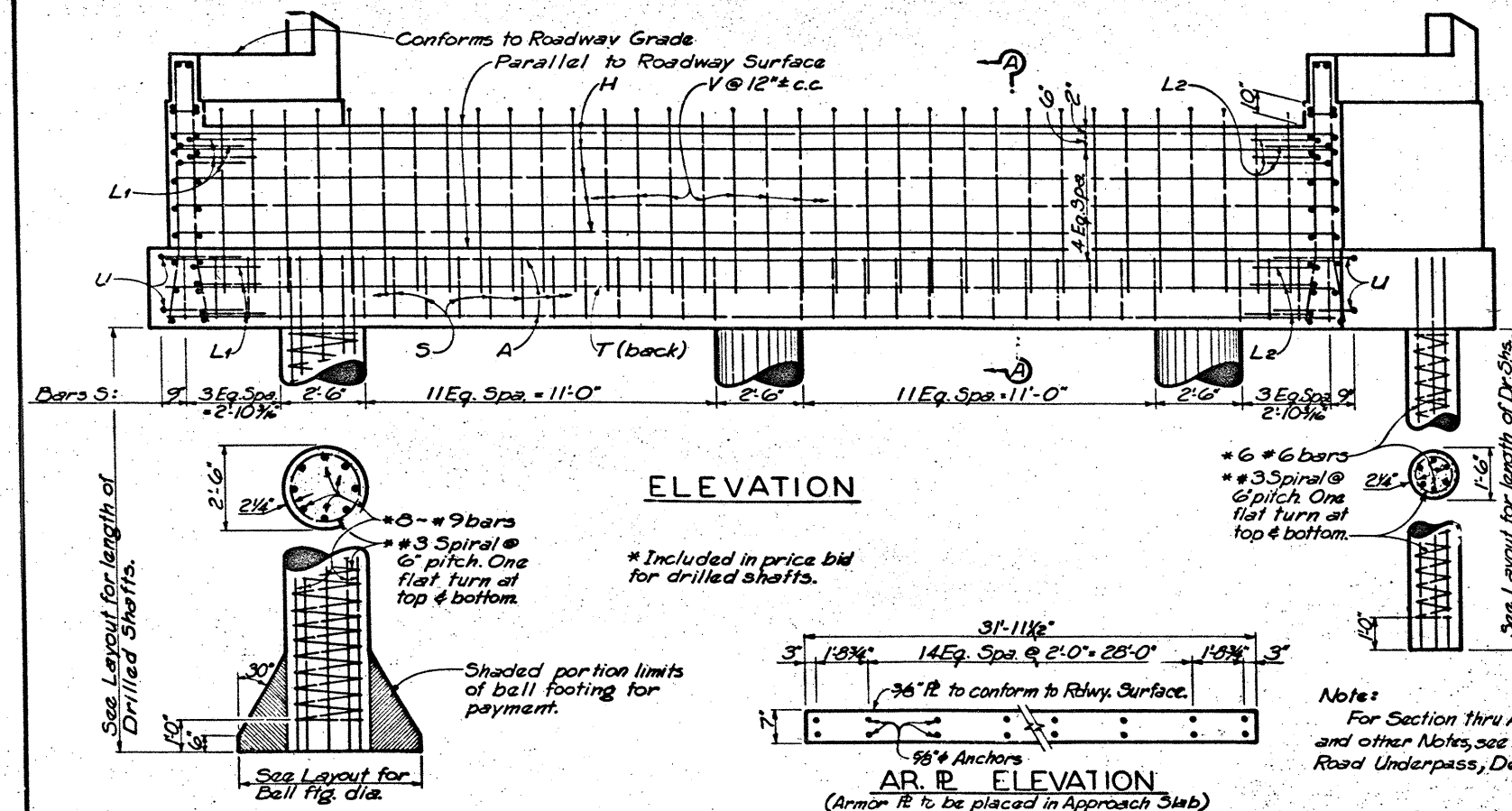
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

ABUTMENT NO. 1

LEFT FRONTAGE RD. UNDERPASS

247

ORIGINAL DRAWING DATE: <i>March, 1969</i>		STATE DISTRICT	FEDERAL PROJECT	FEDERAL AID PROJECT	SHEET
REVISIONS		<i>15</i>	<i>6</i>	<i>I 20-5 (G) 457</i>	<i>247</i>
DN: <i>CBL</i>		COUNTY	CONTROL	SECTION	JOB
CK: <i>GLH</i>		<i>DALLAS</i>	<i>2374</i>	<i>4</i>	<i>2</i>
DN: <i>GLH</i>					<i>14.20</i>



TOTAL ESTIMATED QUANTITIES		
Reinforcing Steel	Lb.	3677
Class "C" Concrete	C.Y.	270
Uncl. Struct. Excav.	C.Y.	37
Str. Stl. (Shoe & Ar. Jt.)	Lb.	*320

* Quantity shown is for one armor plate to be placed in approach slab.

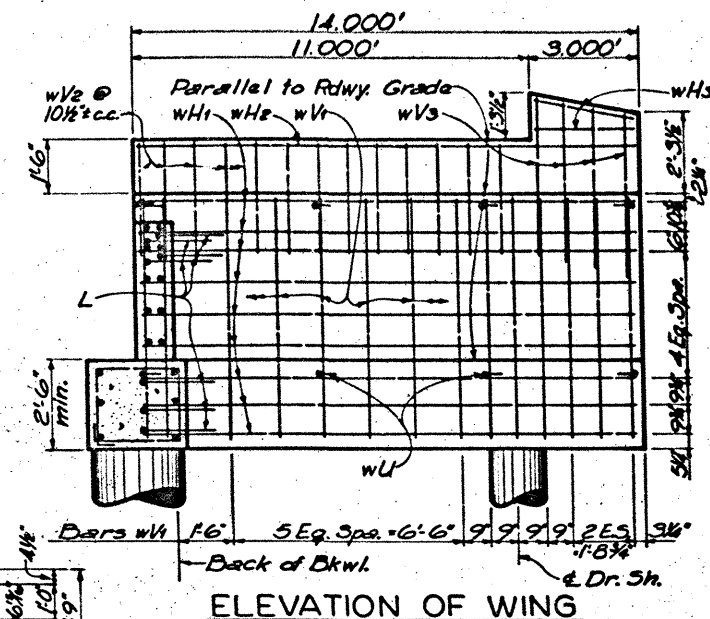
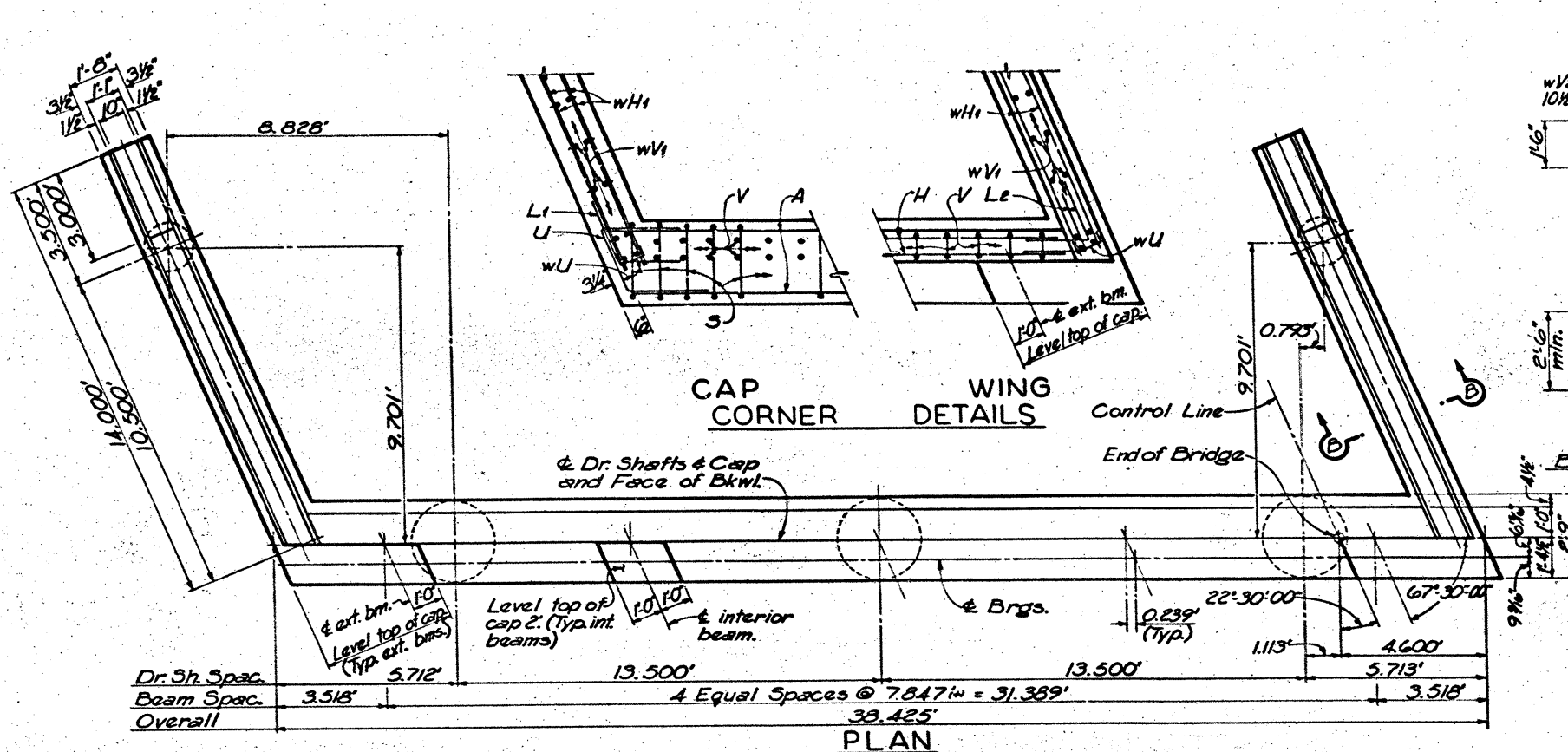
GENERAL NOTES:
Designed according to A.A.S.H.O.
1965 Standard Specifications and
complies with R.P.M. 20-4, sec.4c.
Chamfer all exposed corners $\frac{3}{4}$ "
unless otherwise noted.
Calculated shaft load:
Rt. Frt. Rd. Abut. #1 = 63 Tons/Dn. Sh.
Lt. Frt. Rd. Abut. #8 = 55 Tons/Dn. Sh.

HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

RIGHT FRONTAGE RD. UNDERPASS
AND
LEFT FRONTAGE RD. UNDERPASS

ORIGINAL DRAWING DATE: <u>March, 1967</u>		STATE	FEDERAL	FEDERAL AID PROJECT &		SHEET
DN: - CBL CR: - GLH DW: - GLH CK: - LEC		DISTRICT	RD-100			
REVISIONS		10	6	E20-5601457		238
		COUNTY		CONTROL	SECTION	JOB
		DALLAS		E374	4	2
						1420



BILL OF REINFORCING STEEL

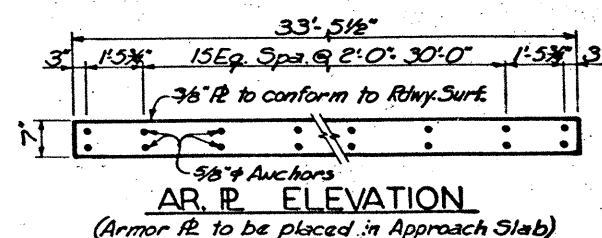
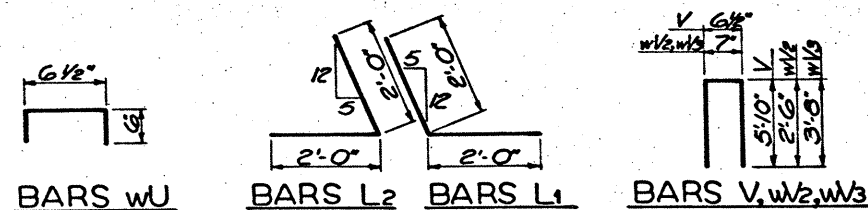
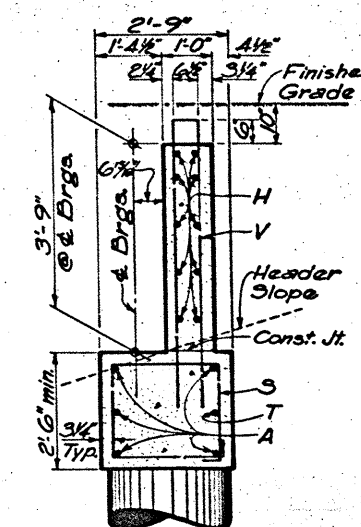
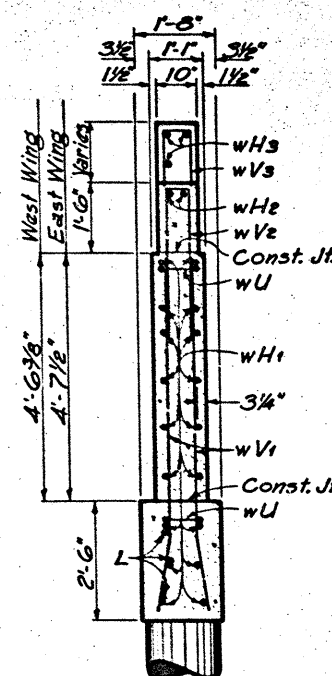
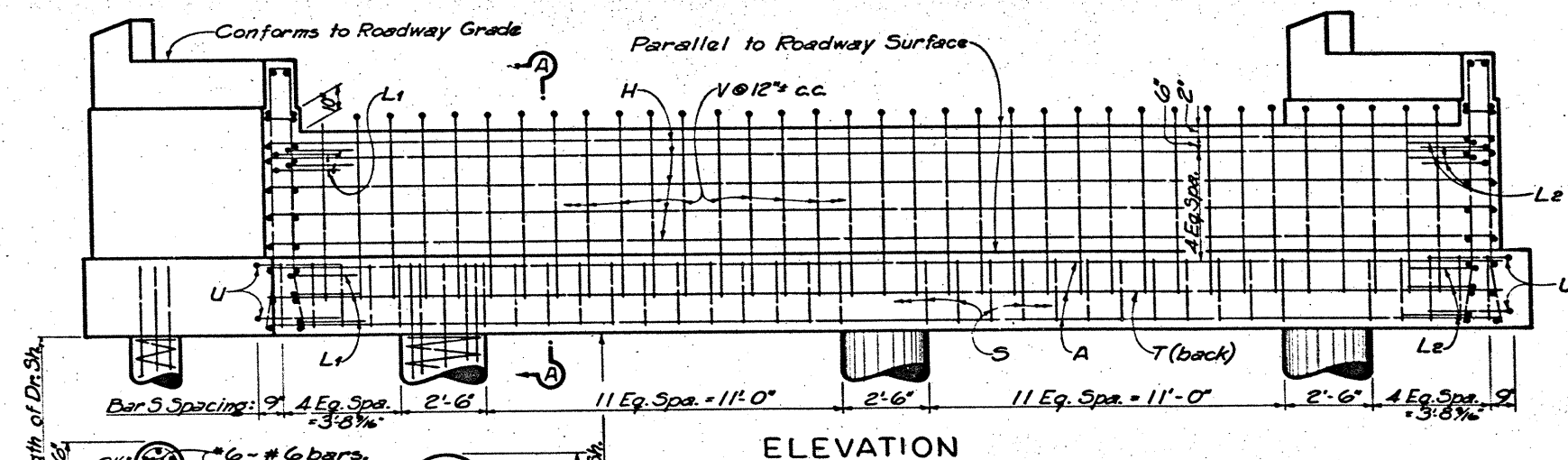
Bar	No.	Size	Length	Weight
A	5	#11	37'-5"	994
H	10	#5	37'-7"	392
L1	7	#6	4'-0"	42
L2	7	#6	4'-0"	42
S	34	#4	9'-0"	204
T	1	#5	37'-5"	39
U	4	#6	7'-4"	44
V	36	#4	12'-3"	293
wH1	36	#6	13'-9"	743
wH2	4	#5	13'-9"	57
wH3	6	#5	2'-9"	17
wU	16	#5	1'-7"	26
wV1	56	#5	6'-9"	394
wV2	26	#5	5'-7"	151
wV3	8	#5	7'-11"	66
Total Weight (Lbs.)				3506

TOTAL ESTIMATED QUANTITIES

Reinforcing Steel	Lbs.	3506
Class 'C' Concrete	C.Y.	25.3
Uncl. Struct. Excav.	C.Y.	34
Str. Stl. (Shoe & Ar. Jt.)	Lbs.	*335

*Quantity shown is for one armor plate to be placed in approach slab.

GENERAL NOTES:
 Designed according to A.A.S.H.O. 1965 Standard Specifications and complies with P.R.M. 20-4, sec. 4c. Chamfer all exposed corners 3/4" unless otherwise noted. Calculated shaft load: 45 TONS/DR. SH.



Notes:
 For Section thru Armor Joint, Anchor Details, and other Notes, see Abutment #1, Left Frontage Road Underpass, Details Sheet.

* Included in price bid for drilled shafts.

Shaded portion limits of Bell footing for payment.

HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION

ABUTMENT NO. 9

RIGHT FRONTAGE RD. UNDERPASS

249

ORIGINAL DRAWING DATE: March, 1969	STATE: TEXAS	FEDERAL AID PROJECT: 120-5(1)457	SHEET: 249
DESIGNED BY: GLH	CHECKED BY: GLH	APPROVED BY: GLH	DATE: 1/1/70
COUNTY: DALLAS	SECTION: 4	JOB: 2	DATE: 1/1/70

BILL OF CONSTANT REINFORCING STEEL				
Bars	Number	Size	Length	Weight
A ₁	3	#11	34'-2"	545
A ₂	8	#11	12'-0"	510
B ₁	4	#11	34'-6"	733
B ₂	3	#11	18'-0"	287
B ₃	3	#11	12'-0"	191
S ₁	21	#5	11'-4"	248
S ₂ 12 Avg.	22	#5	10'-1"	233
T	4	#5	34'-2"	143
W	4	#5	8'-6"	35
U	3	#4	3'-2"	6
M	24	#1	7'-0"	893
Reinforcing Steel			Lbs.	3924

BILL OF VARIABLE REINFORCING STEEL								TOTAL ESTIMATED QUANTITIES	
Yr	Bars Z1 #4			Bars Z2 #4			Bars V 24-#11	Reinf. Steel	Class C Concrete
Ft.	No.	Lgth.	Wt.	No.	Lgth.	Wt.	Length	Weight	Lbs. CY.
16	26	9'-4"	162	52	6'-7"	229	15'-6"	1976	6191
17	28	9'-4"	175	56	6'-7"	246	16'-6"	2104	6349
18	30	9'-4"	187	60	6'-7"	264	17'-6"	2231	6506
19	32	9'-4"	200	64	6'-7"	281	18'-6"	2359	6664
20	34	9'-4"	212	68	6'-7"	299	19'-6"	2486	6821
						</			

GENERAL NOTES:
 Designed according to A.A.S.H.O. 1965 Standard Specifications and complies with P.P.M. 20-4, Sec. 4c.
 Chamfer all exposed corners 3/4" unless otherwise noted.
 Calculated Shaft Load = 166 Tons/Shaft.

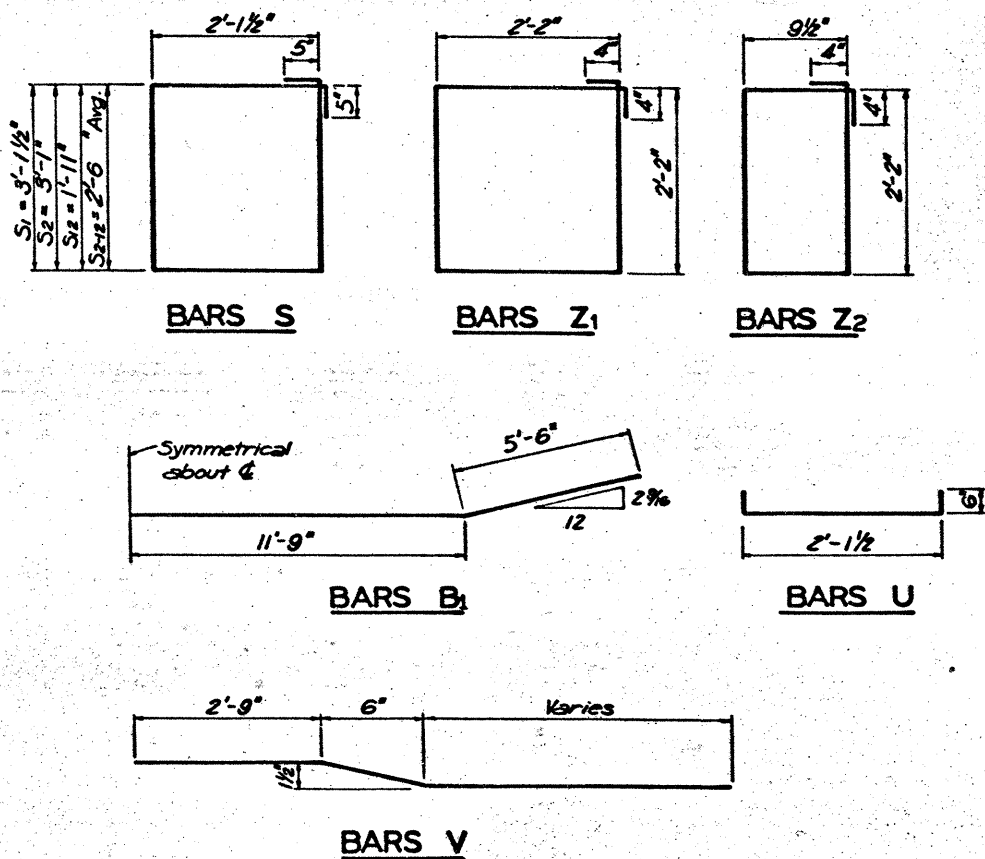
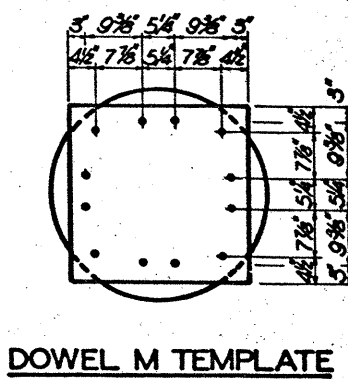
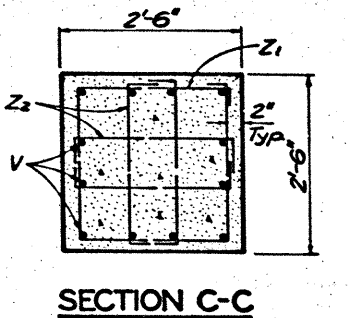
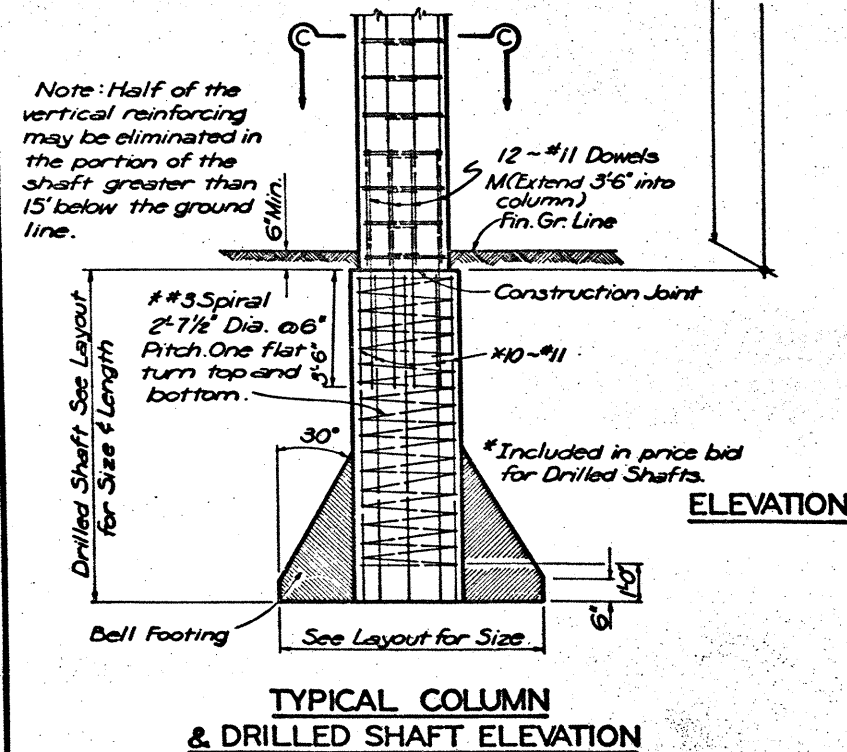
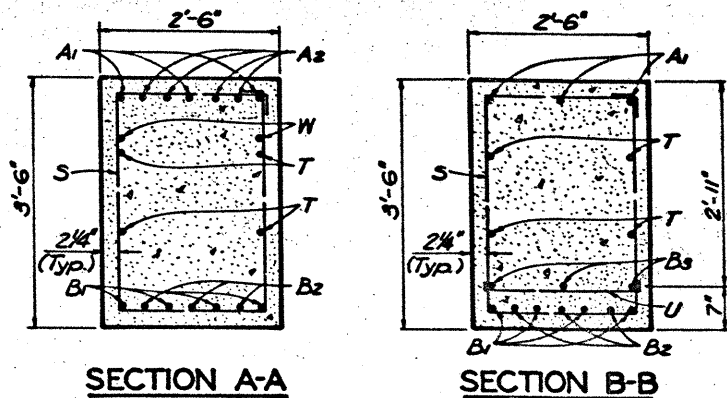
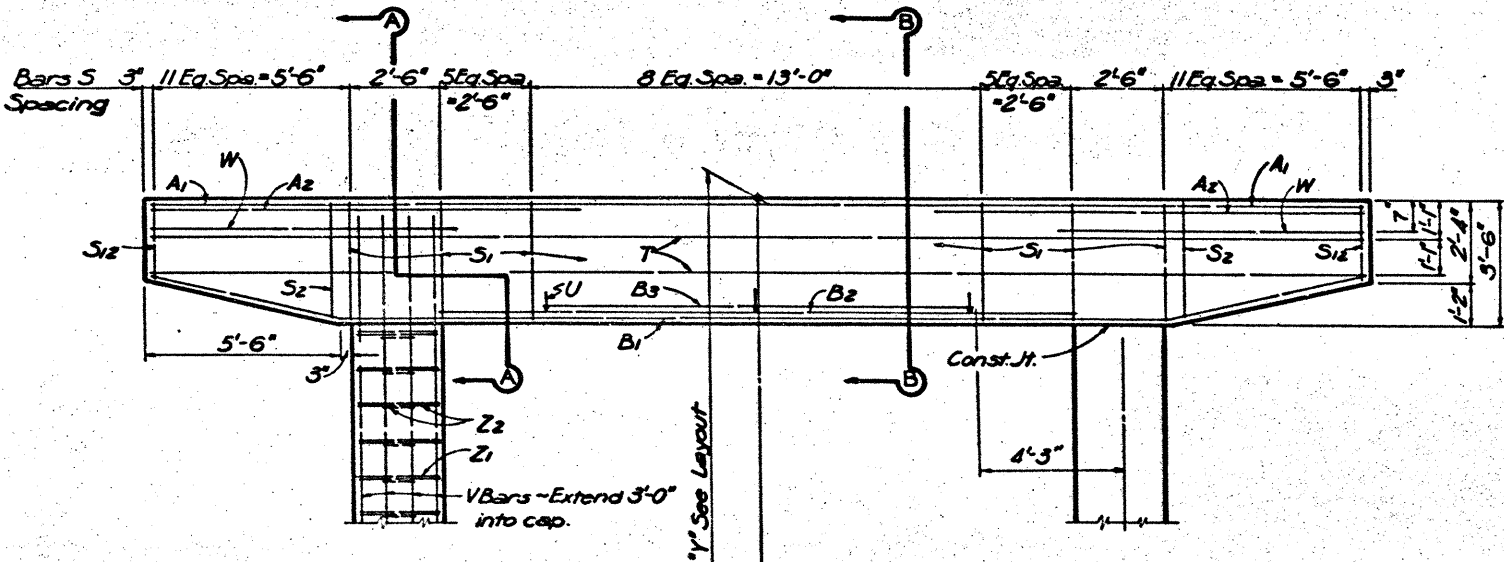
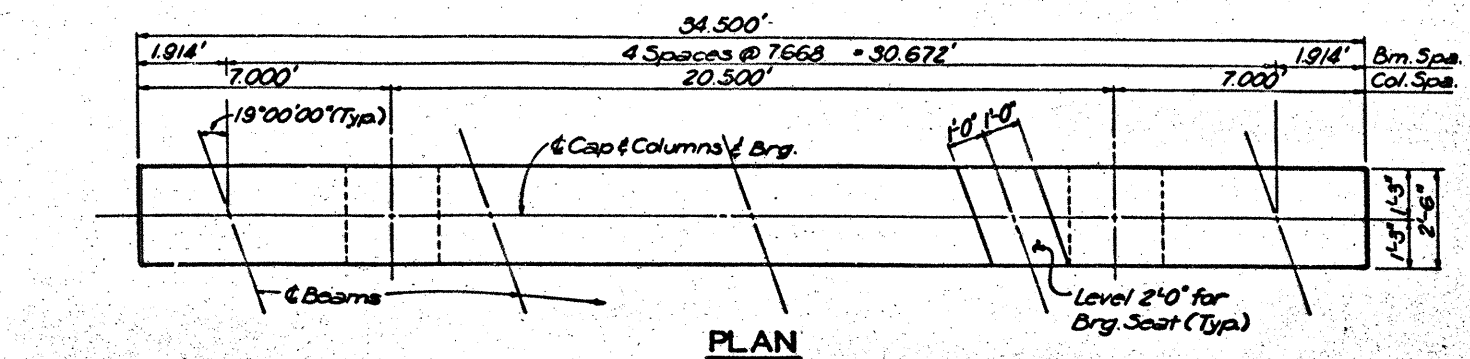
HS 20 LOADING

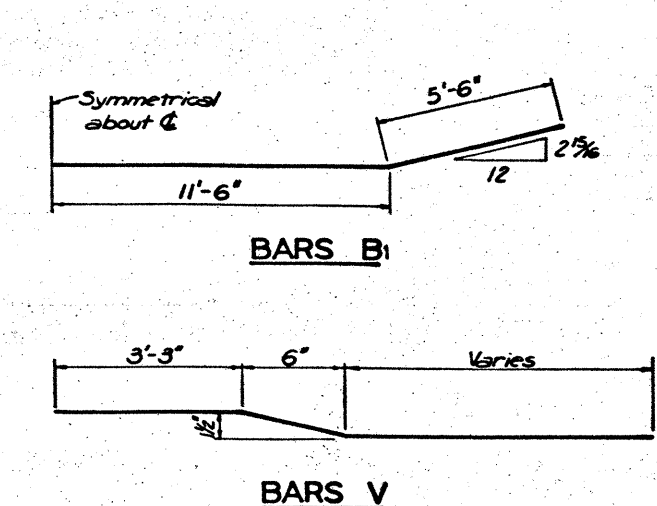
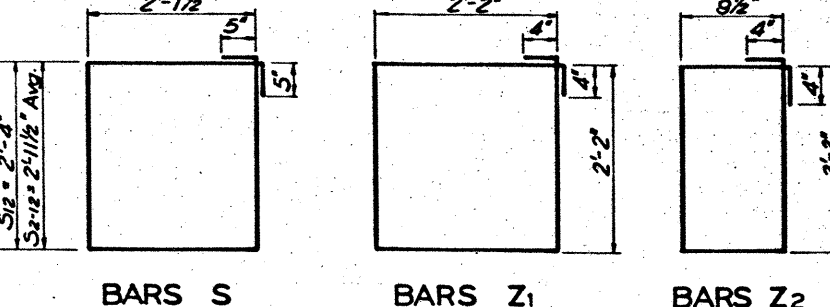
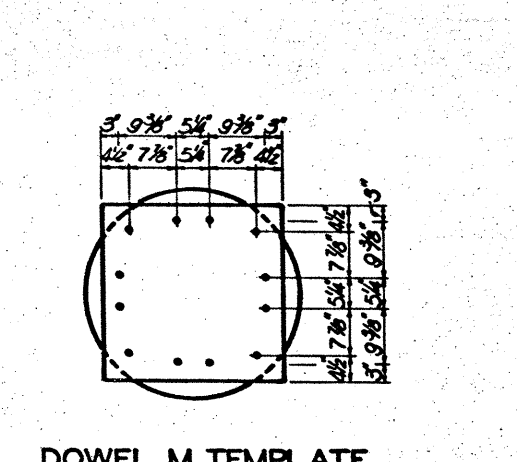
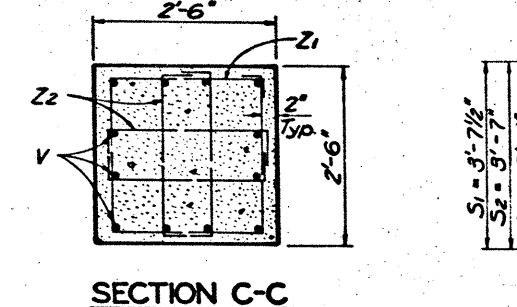
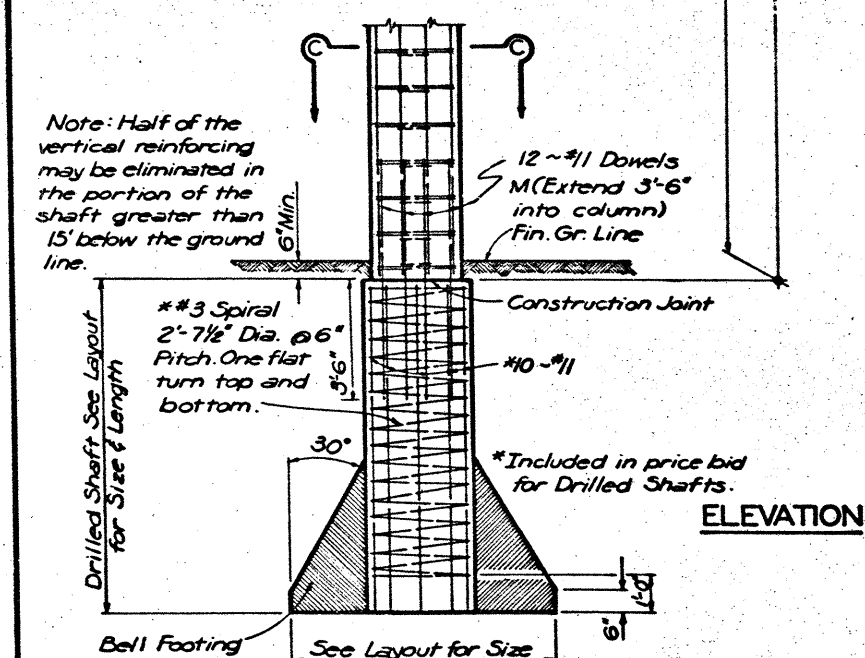
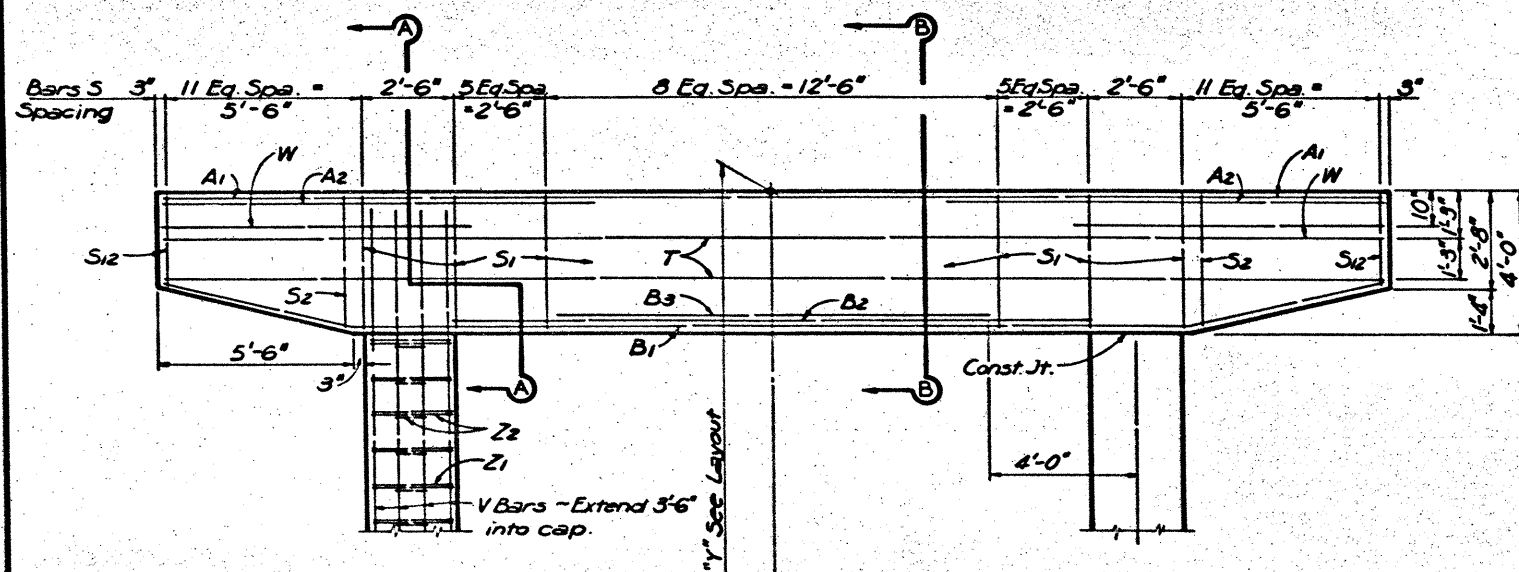
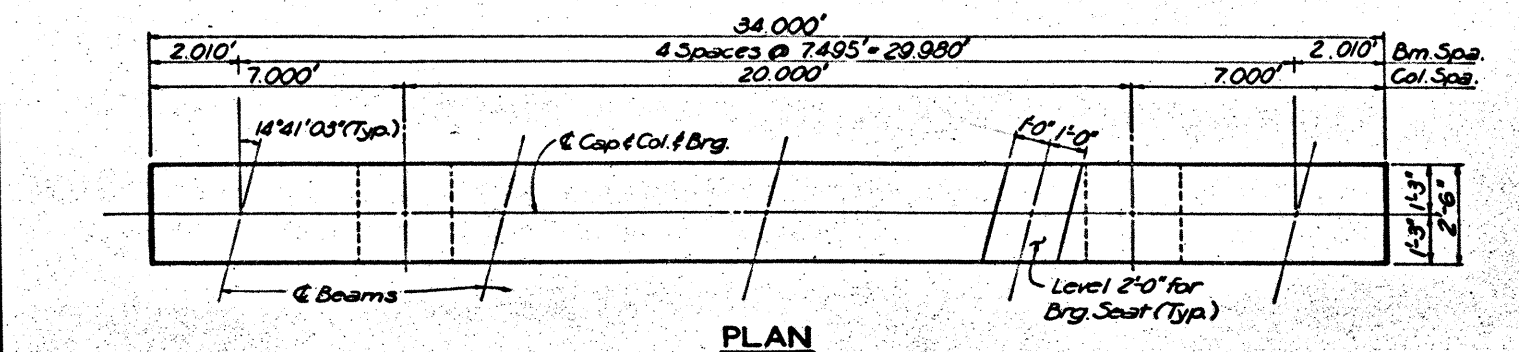
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

LEFT FRONTAGE ROAD
BENT NO. 2
19° 00' 00" L.F. SKEW

250

ORIGINAL DRAWING DATE: April, 1969	STATE FEDERAL PROJECT	REVISIONS	18 6 I 20-5(61)457 250
DR: CBL	COUNTY	SECTION	JOB
CR: LEC	DALLAS	2324	4 2
DW: TBS			
CK: CBL			





BILL OF CONSTANT REINFORCING STEEL				
Bars	Number	Size	Length	Weight
A1	3	#11	33'-8"	537
A2	8	#11	12'-0"	310
B1	3	#11	34'-0"	542
B2	4	#11	17'-6"	372
B3	2	#11	12'-0"	128
S1	21	#5	12'-4"	270
S2-12 Avg.	22	#5	11'-0"	252
T	4	#5	33'-8"	140
W	4	#5	8'-6"	35
M	24	#11	7'-0"	893
Reinforcing Steel			Lbs.	3679

BILL OF VARIABLE REINFORCING STEEL							TOTAL ESTIMATED QUANTITIES	
Yr	Bars Z1 #4		Bars Z2 #4		Bars V 24-#11		Reinf. Steel Lbs.	Class C Concrete C.Y.
Ft.	No.	Lgth.	No.	Lgth.	Length	Weight		
17	28	9'-4"	175	56	6'-7"	246	16'-6"	2104
18	30	9'-4"	187	60	6'-7"	264	17'-6"	2231
19	32	9'-4"	200	64	6'-7"	281	18'-6"	2359
20	34	9'-4"	212	68	6'-7"	299	19'-6"	2486
21	36	9'-4"	224	72	6'-7"	317	20'-6"	2614
22	38	9'-4"	237	76	6'-7"	334	21'-6"	2741
23	40	9'-4"	249	80	6'-7"	352	22'-6"	2869

GENERAL NOTES:
 Designed according to A.A.S.H.O. 1965 Standard Specifications and complies with P.P.M. 20-4, Sec. 4c.
 Chamfer all exposed corners 3/4" unless otherwise noted.
 Calculated Shaft Load = 211 Tons/Shaft

HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION

LEFT FRONTAGE ROAD
 BENT NO. 5

RIGHT FRONTAGE ROAD
 BENT NO. 4

14' 4' 03" R.F. SKEW

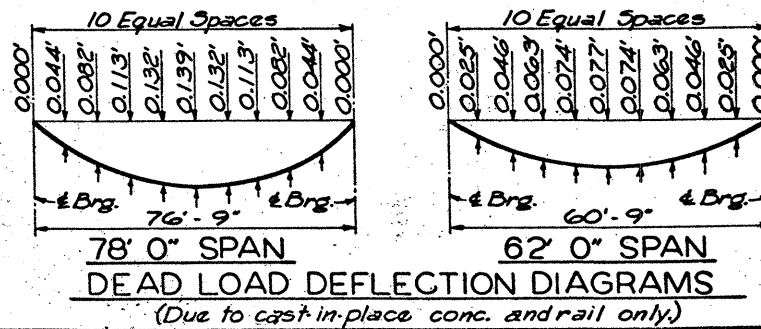
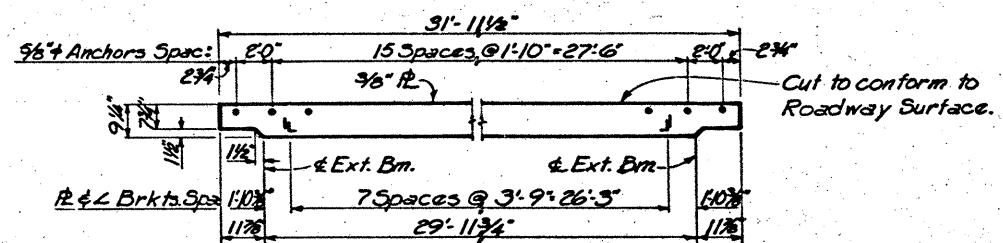
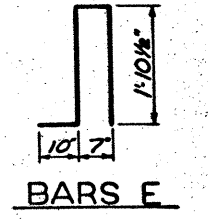
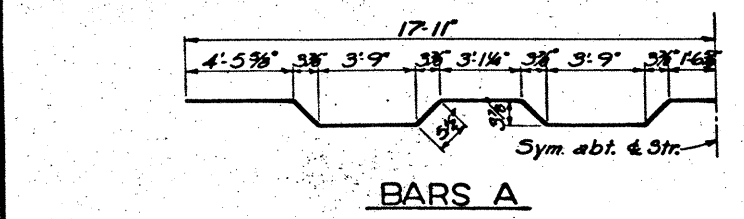
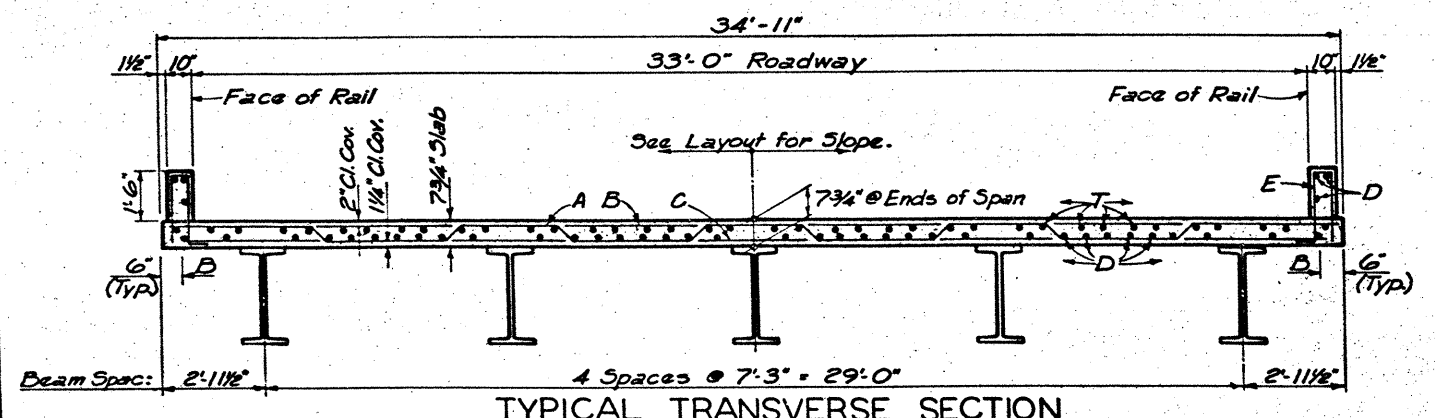
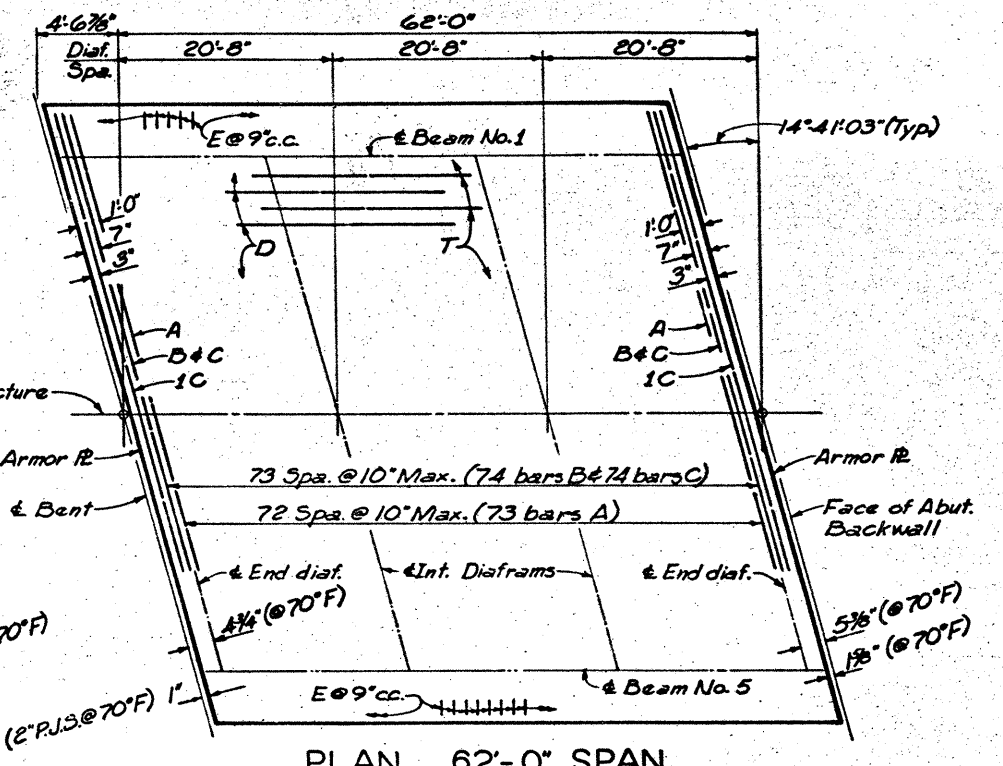
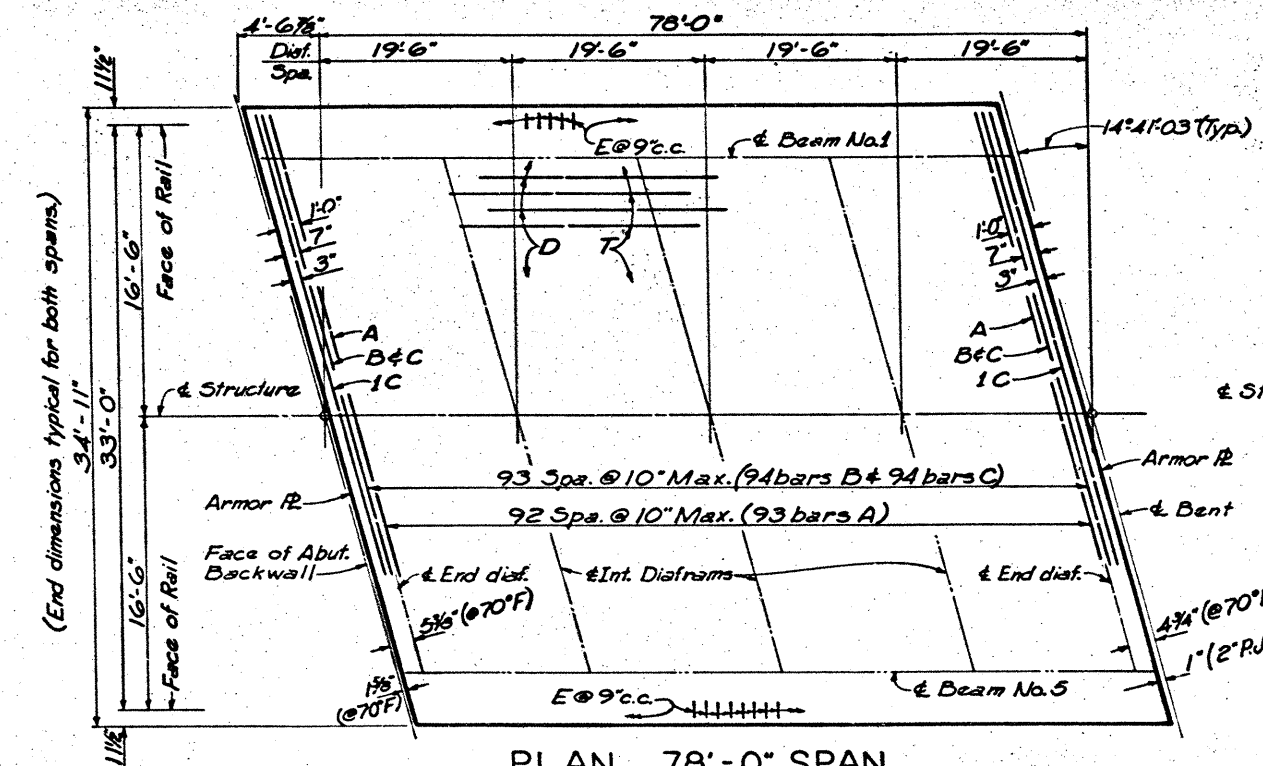
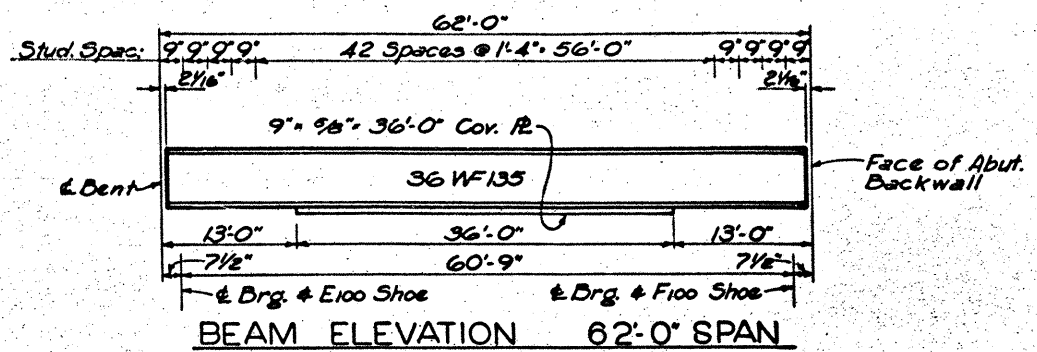
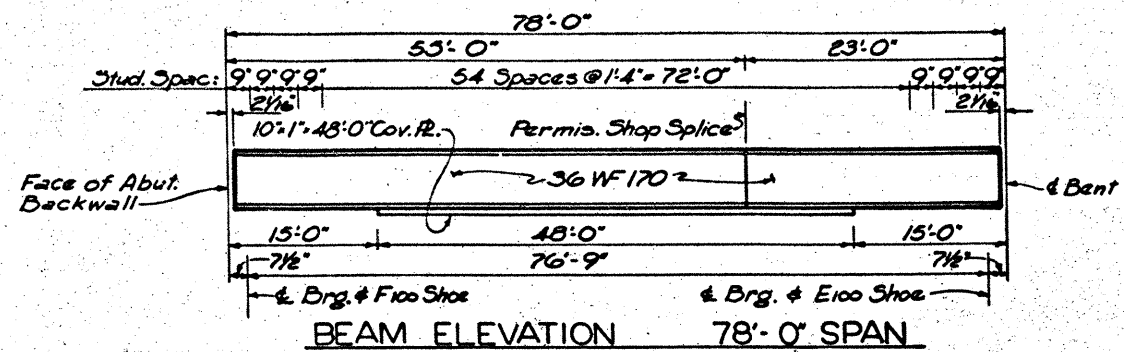
252

ORIGINAL DRAWING DATE: April, 1969

STATE: TEXAS FEDERAL AID PROJECT: 18 6 I20-5(61)457

REVISIONS: 18 6 I20-5(61)457

COUNTY: DALLAS CONTROL SECTION: 2574.4 JOB: 2 HIGHWAY: 252



BILLS OF REINFORCING STEEL AND ESTIMATED QUANTITIES

78'-0" SPAN					62'-0" SPAN				
Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight
A	93	#5	36'-11"	3,581	A	73	#5	36'-11"	2,811
B	94	#4	35'-1"	2,203	B	74	#4	35'-1"	1,734
C	96	#5	35'-10"	3,588	C	76	#5	35'-10"	2,840
D	42	#5	* 78'-7"	3,442	D	42	#5	* 62'-7"	2,742
E	210	#5	5'-2"	1,132	E	168	#5	5'-2"	905
T	38	#4	* 78'-6"	1,993	T	38	#4	* 62'-6"	1,557
Total Reinf. Steel					Total Reinf. Steel				
Lb. 15,939					Lb. 12,619				
Class 'C' Conc.					Class 'C' Conc.				
C.Y. 72.2					C.Y. 57.3				
Str. Stl. (H.Y.C.)					Str. Stl. (H.Y.C.)				
Lb. 80,000					Lb. 49,600				
Str. Stl. (Shoe & Ar. Jt.)					Str. Stl. (Shoe & Ar. Jt.)				
Lb. * 2,380					Lb. * 2,380				

* Includes one 20-diameter lap. (1'-0" minimum)
* Weight includes 900 lbs. for 2 Armor Pls.

GENERAL NOTES:
Designed according to A.A.S.H.O. 1965
Standard Specifications.
Chamfer all exposed corners 3/4" unless
otherwise noted.
Design fc = 1200 p.s.i.
One Slab Const. Jt., either normal to the Structure &
or parallel with the slab ends, will be allowed in each
span.
All Structural Steel is H.Y.C.

HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

78'-0" & 62'-0" SIMPLE
I-BEAM SPANS 254

33'-0" ROADWAY - 14'-4" 03" R.F. SKEW
LT. & RT. FRONTAGE RD. UNDERPASSES

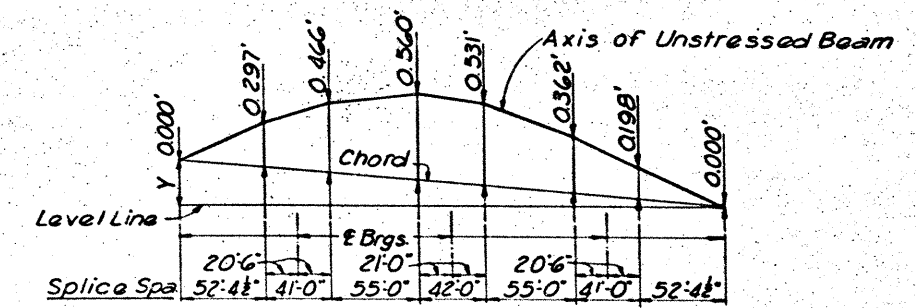
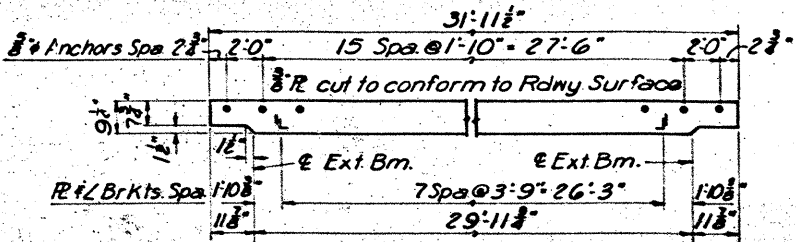
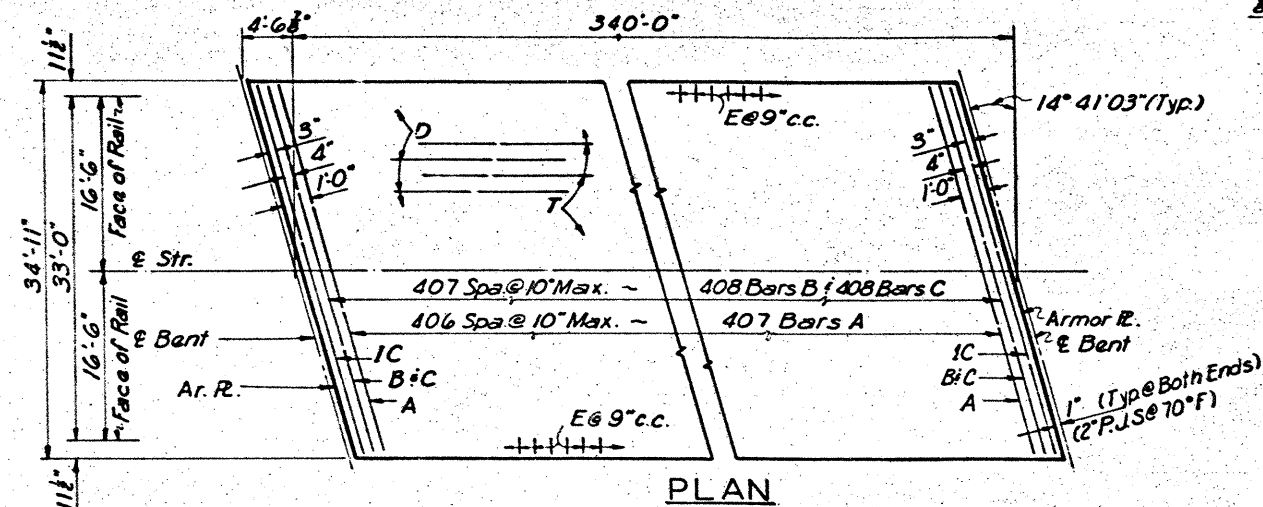
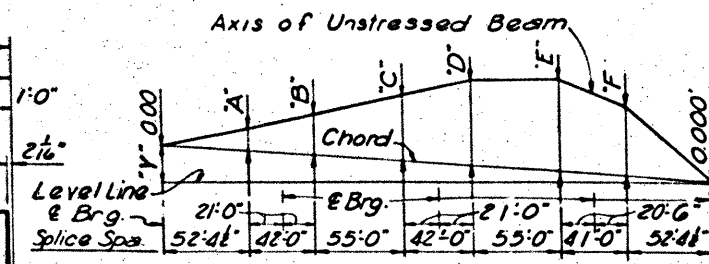
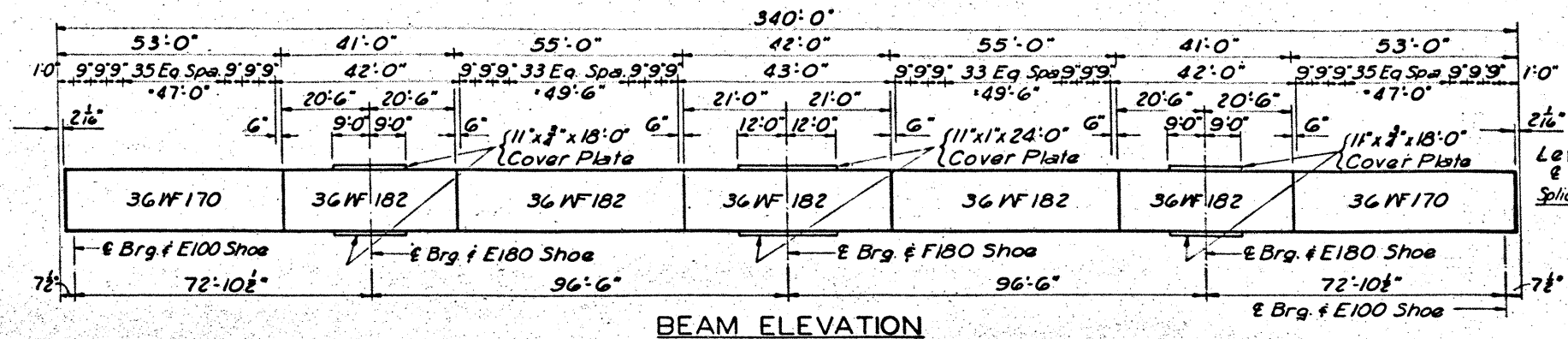
ORIGINAL DRAWING DATE: April, 1969
STATE DISTRICT: 10
FEDERAL REGION: 6
FEDERAL AID PROJECT: I 20-5 (61) 457
SHEET: 254
COUNTY: DALLAS
CONTROL SECTION: 4
JOB: 2
HIGHWAY: I.H. 20

BILL OF REINFORCING STEEL AND ESTIMATED QUANTITIES

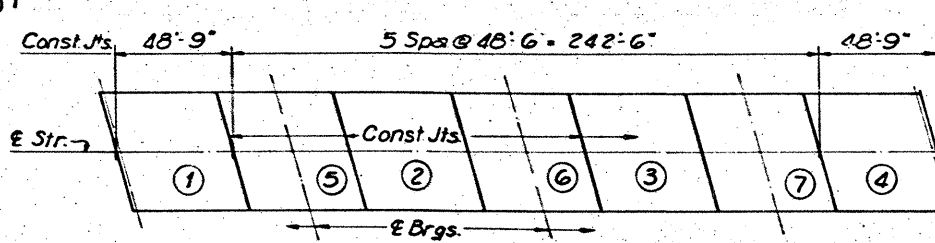
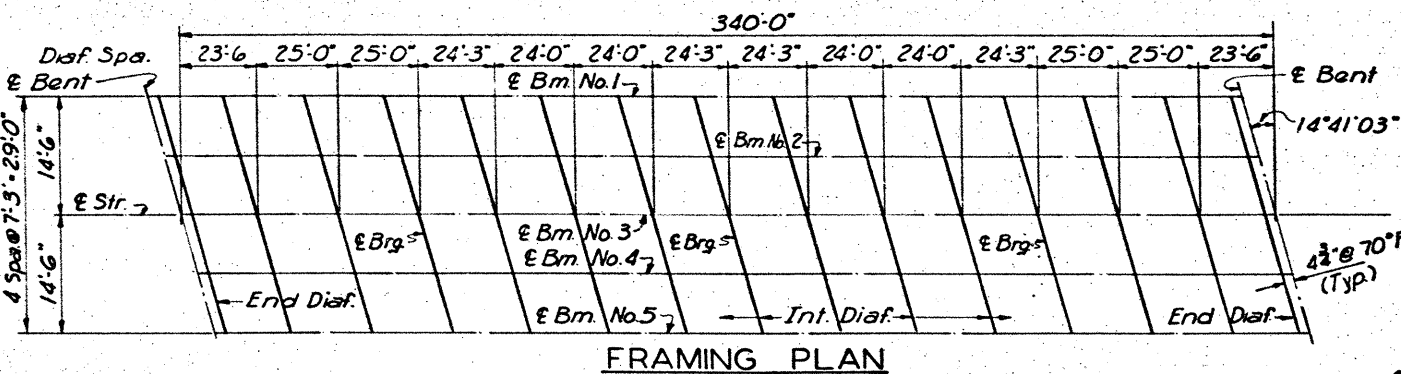
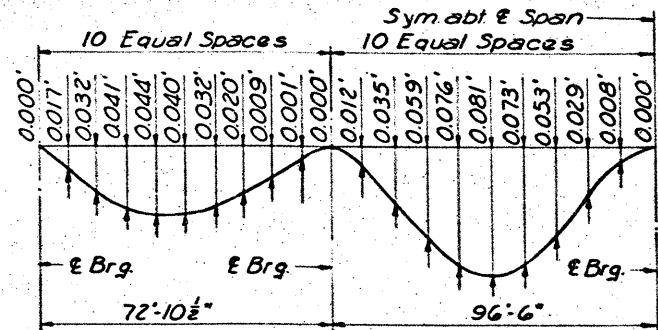
Bar	No	Size	Length	Weight
A	407	#5	36'11"	15,671
B	408	#4	35'1"	9,562
C	410	#5	35'10"	13,323
D	42	#5	344'11"	13,109
E	906	#5	5'2"	4,882
T	38	#4	344'6"	8,745

Reinf. Steel	Lb.	69,292
Class C Conc.	C.Y.	315.4
Str. Steel-HYC	Lb.	340,200
Str. Steel(Shoe & Ar. Jt.)	Lb.	7,460

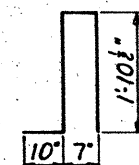
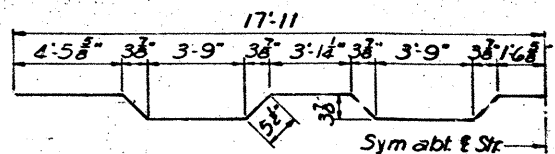
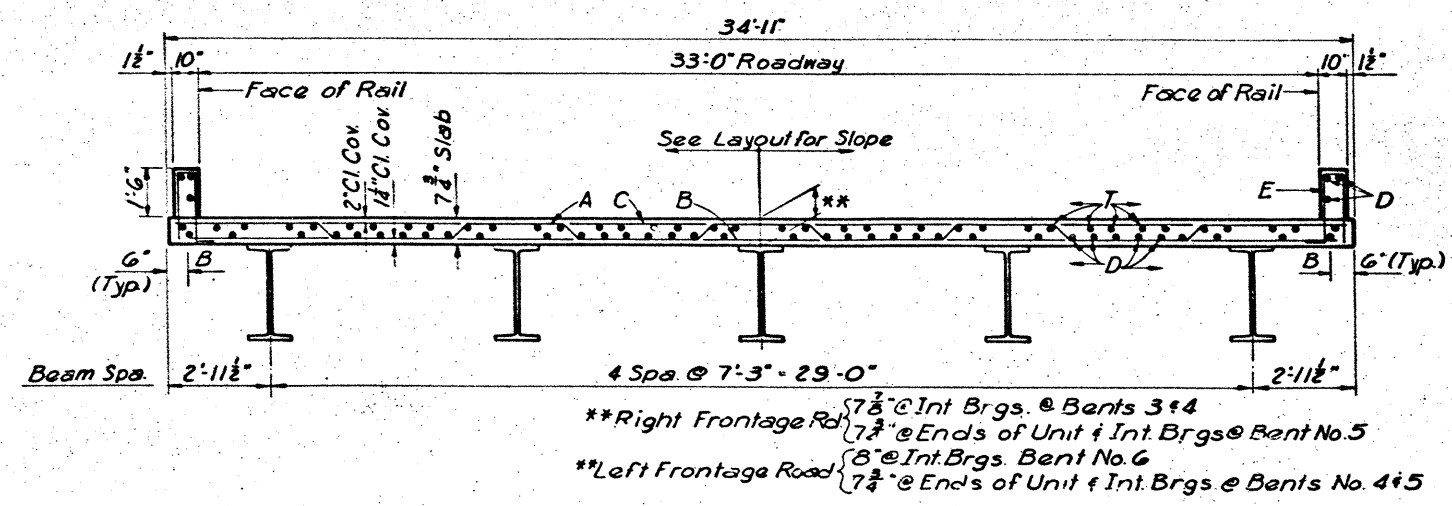
* Includes 5-20 dia Laps (1'-0" min.)
* Weight includes 900° for 2 Ar. R's.



	Bm No 1	Bm No 2	Bm No 3	Bm No 4	Bm No 5
Y	0.307'	0.326'	0.345'	0.364'	0.383'



GENERAL NOTES:
Designed according to AASHTO 1965
Standard Specifications.
Chamfer all exposed corners $\frac{3}{8}$ " unless
otherwise noted.
Design $f_c = 1200$ psi.
All Structural Steel is HYC.



HS20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

340'-0" CONTINUOUS
I-BEAM UNIT 255
(73'-6"-96'-6"-96'-6"-73'-6")

33'-0" ROADWAY-14'4"03" R.F. SKEW
LEFT AND RIGHT FRONTAGE ROAD

ORIGINAL DRAWING DATE: MARCH 69	STATE: TEXAS	FEDERAL AID PROJECT: 0	SHEET: 255
REVISIONS: 18 6	DESIGN: LEC	CHECK: ADC	INCHES: 1/8
COUNTY: DALLAS	SECTION: 2374	JOB: 4	INCHES: 1/8

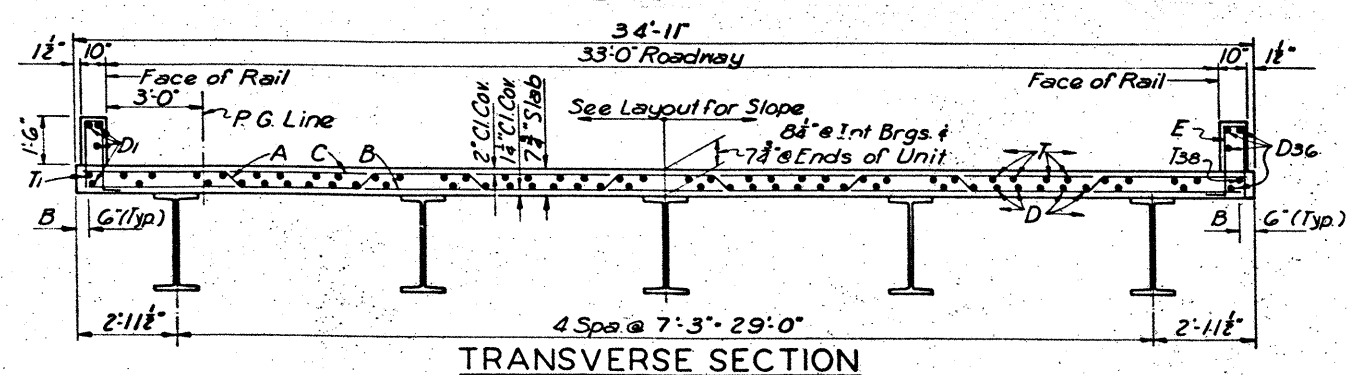
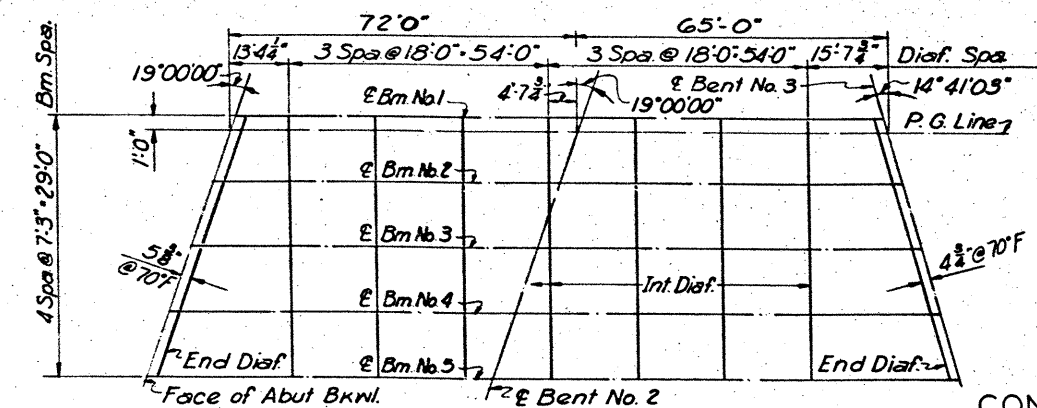
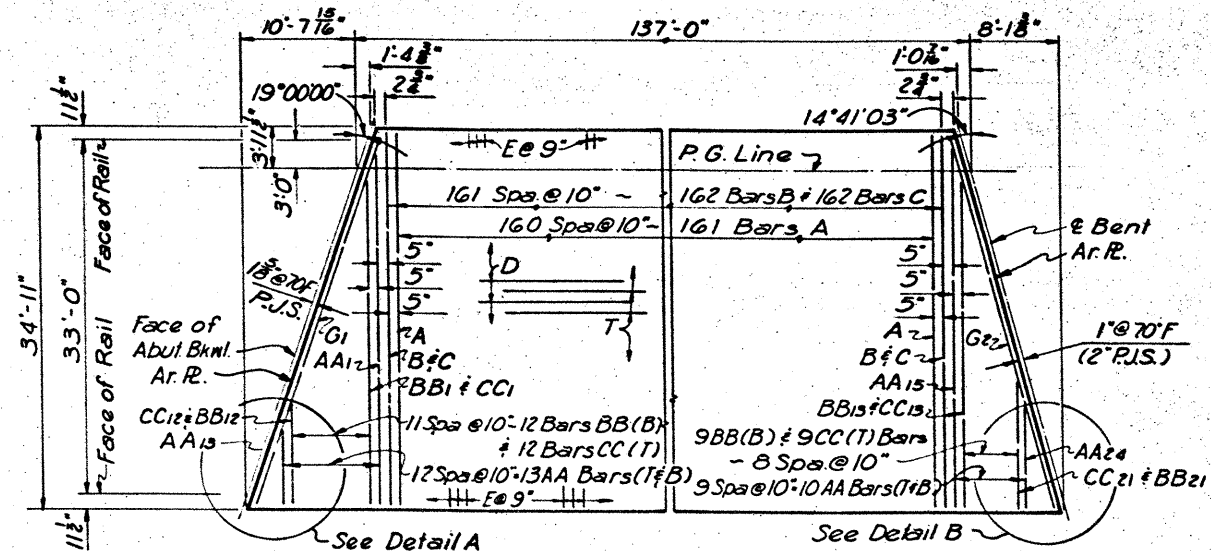
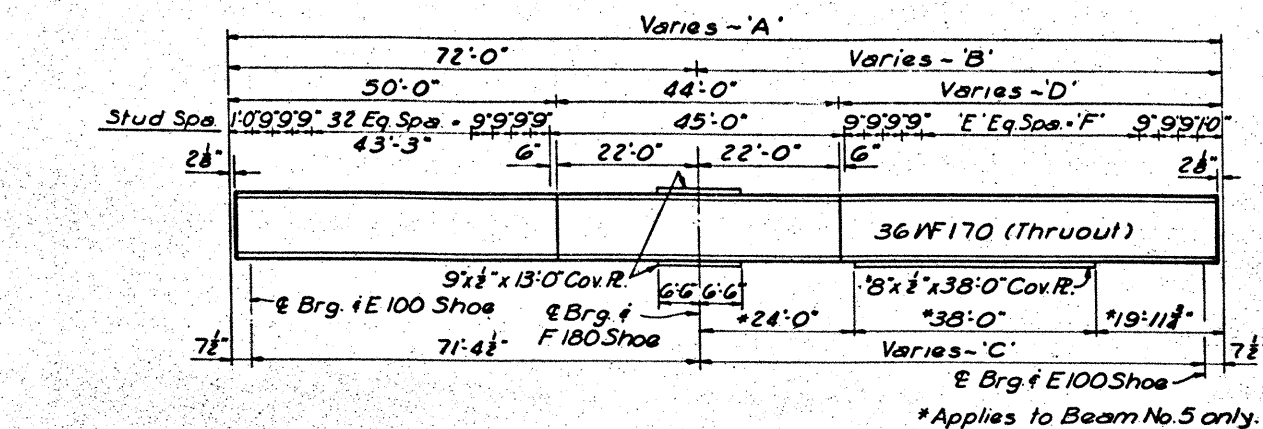
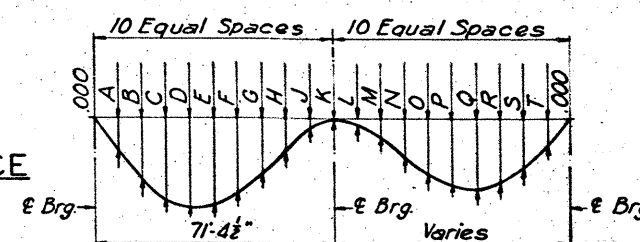
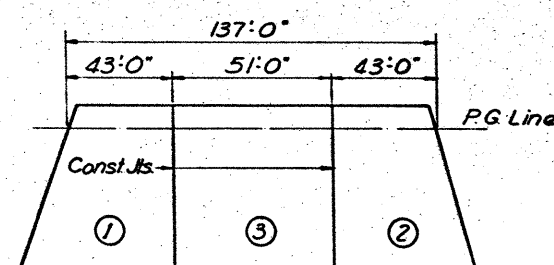
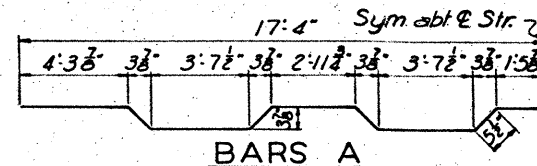
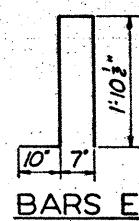
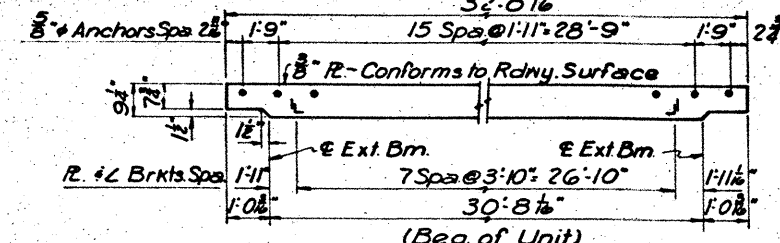
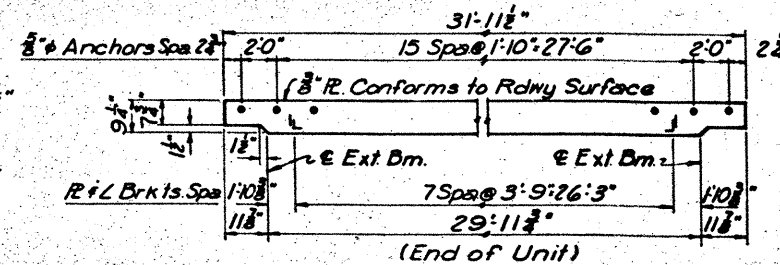
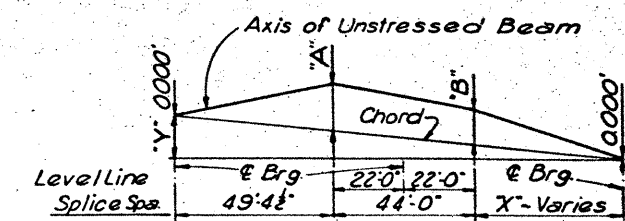
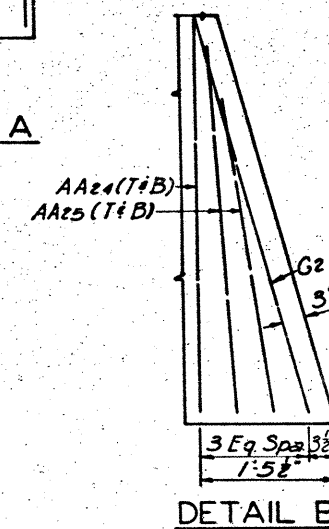
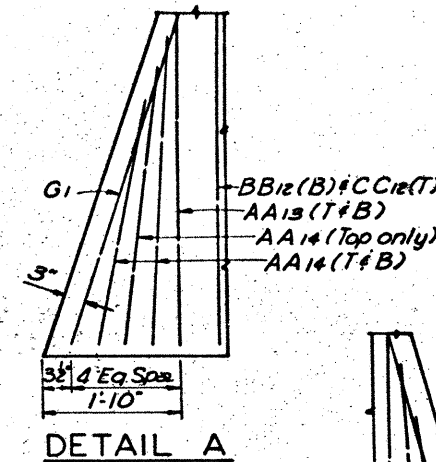


TABLE OF VARIABLE DIMENSIONS

	'A'	'B'	'C'	'D'	'E'	'F'
Bm.No1	136:4 $\frac{1}{2}$ "	64:4 $\frac{1}{2}$ "	63:9 $\frac{1}{2}$ "	42:4 $\frac{1}{2}$ "	32	35:7 $\frac{1}{2}$ "
Bm.No2	140:9 $\frac{1}{2}$ "	68:9 $\frac{1}{2}$ "	68:2"	46:9 $\frac{1}{2}$ "	32	40:0 $\frac{1}{2}$ "
Bm.No3	145:2 $\frac{1}{2}$ "	73:2 $\frac{1}{2}$ "	72:6 $\frac{1}{2}$ "	51:2 $\frac{1}{2}$ "	32	44:5 $\frac{1}{2}$ "
Bm.No4	149:7"	77:7"	76:11 $\frac{1}{2}$ "	55:2"	33	48:10"
Bm.No5	153:11 $\frac{1}{2}$ "	81:11 $\frac{1}{2}$ "	81:4 $\frac{1}{2}$ "	59:11 $\frac{1}{2}$ "	36	53:2"



	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T
Beam No 1	021	039	052	058	056	048	035	021	008	000	000	005	012	019	025	027	025	020	017
Beam No 2	020	036	048	053	051	043	030	017	006	000	003	013	025	035	043	045	041	031	019
Beam No 3	019	034	044	049	046	038	026	014	004	000	006	021	037	050	060	062	056	043	028
Beam No 4	018	032	040	045	041	033	022	010	002	000	009	029	049	066	077	079	071	055	026
Beam No 5	016	029	037	040	036	028	017	006	001	000	013	036	061	082	095	097	088	066	035



**BILL OF REINFORCING STEEL
AND ESTIMATED QUANTITIES**

Bar	No	Size	Length	Weight
A	161	15	35'9"	6003
B	162	14	33'11"	3670
C	162	15	34'8"	5857
D ₁	3	15	113'6"	427
D ₃₆	3	15	157'7"	493
D ₁₃₆	36	15	147'1" Ar	5523
E	388	15	5'2"	2091
G ₁	1	15	36'8"	38
G ₂	1	15	35'10"	37
T ₁₃₈	38	14	146'11" Ar	3729
AA113	26	15	19'3" Ar	522
AA1	5	15	4'3"	22
AA15-24	20	15	19'2" Ar	400
AA25	4	15	4'5"	18
BB1-12	12	14	18'10" Ar	151
BB13-21	9	14	18'9" Ar	115
CC1-12	12	15	19'3" Ar	241
CC13-21	9	15	19'2" Ar	180

Rainf. Steel	Lb	29,515
Class C Conc.	C.Y.	134.7
Str Steel - H.Y.C.	Lb	136,000
Str Steel (Shoe & Ar. Jt.)	Lb	4,050

*Includes 2-20 Dia. Laps (1:0" Min.)
 † Weight includes 893 lb. for 2 Ar. Rps.

TABLE OF VARIABLE DIMENSIONS

	Bm. No. 1	Bm. No. 2	Bm. No. 3	Bm. No. 4	Bm. No. 5
"X"	41' 9 1/2"	46' 2"	50' 6 1/2"	54' 11 1/2"	59' 4 1/2"
"Y"	1.407'	1.435'	1.463'	1.489'	1.515'
"A"	0.288'	0.303'	0.319	0.334'	0.350'
"B"	0.192'	0.218'	0.245	0.273'	0.302'

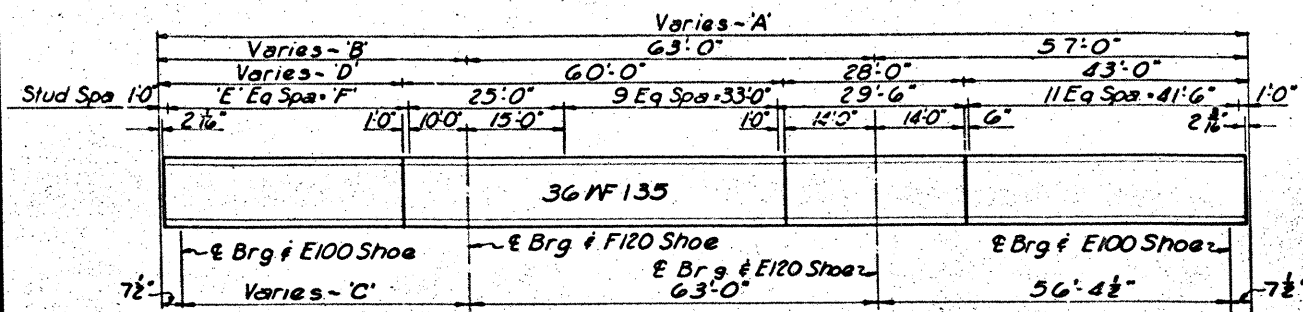
GENERAL NOTES:
Designed according to A.A.S.H.O. 1965 Standard Specifications.
Chamfer all exposed corners $\frac{3}{4}$ " unless otherwise noted.
Design for 1200 p.s.i.
All Structural Steel is H.Y.C.

HS 20 LOADING

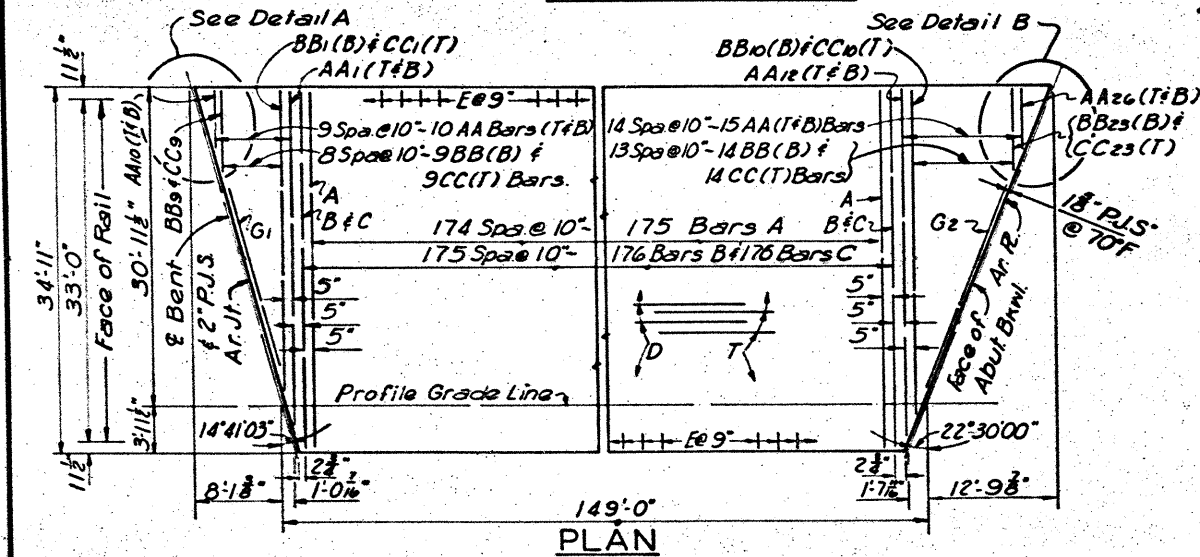
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

137'-0" CONTINUOUS
I-BEAM UNIT
33'-0" ROADWAY 256
LEFT FRONTAGE ROAD

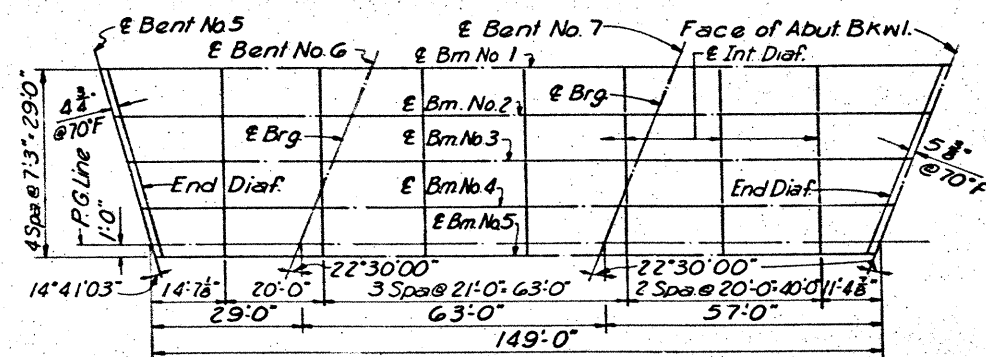
ORIGINAL DRAWING DATE: <u>APRIL '69</u>		STATE DISTRICT	FEDERAL SECTION	FEDERAL AID PROJECT		SHEET
REVISIONS		18	6	I20-5(61)457		256
DN:--LFC		COUNTY		CONTROL	SECTION	JOB
CR:--ADC		DALLAS		2374	6	2
DN:--GSO						US67
CR:--ADC						



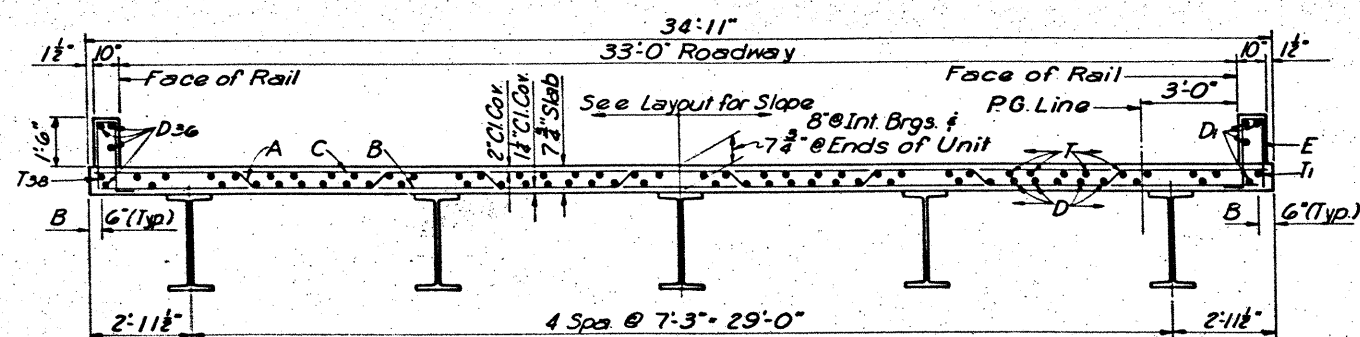
BEAM ELEVATION



PLAN



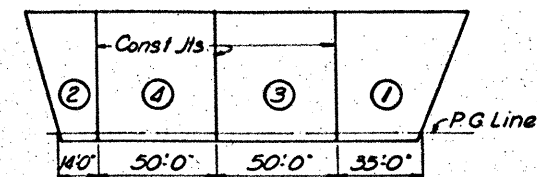
FRAMING PLAN



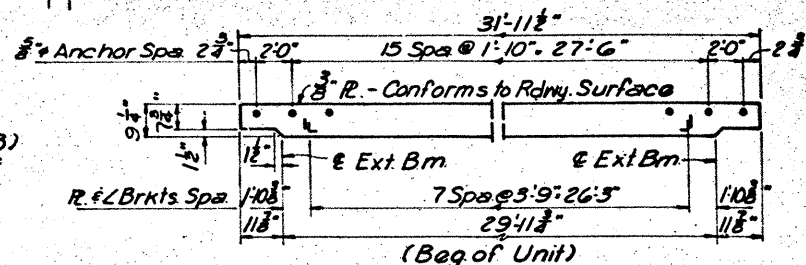
TRANSVERSE SECTION

TABLE OF VARIABLE DIMENSIONS

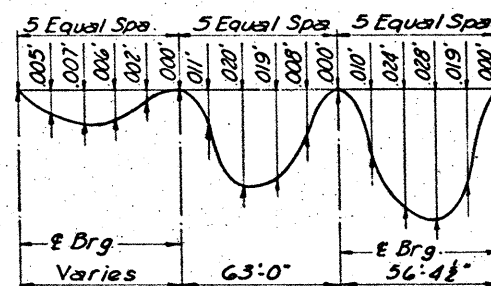
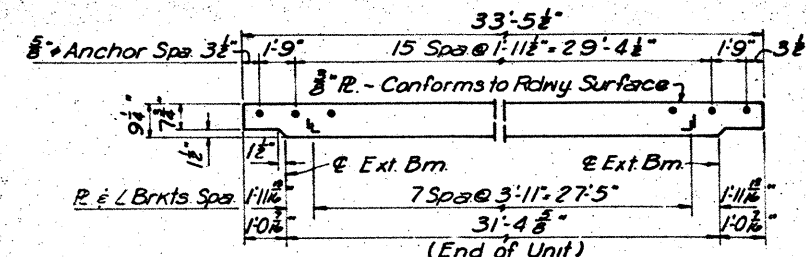
Beams	A	B	C	D	E	F
No 5	148° 38'	28° 38'	27° 8'	17° 38'	5	17° 58'
No 4	153° 23'	33° 23'	32° 74'	22° 23'	6	22° 23'
No 3	158° 18'	38° 18'	37° 6 1/2'	27° 18'	7	27° 18'
No 2	163° 08'	43° 08'	42° 48'	32° 08'	8	32° 08'
No 1	167° 44'	47° 44'	47° 33'	36° 44'	10	36° 44'



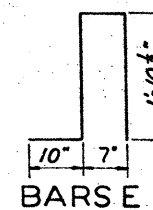
CONCRETE PLACEMENT SEQUENCE



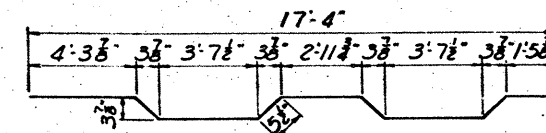
ELEV. OF ARMOR PLATES



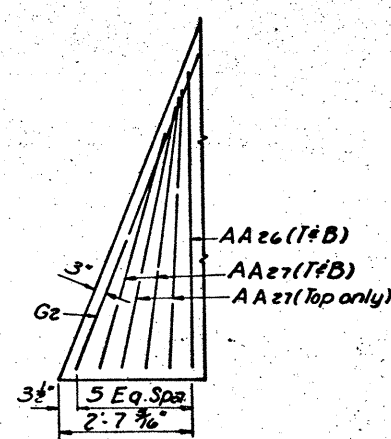
DEAD LOAD DEFLECTION DIAGRAM



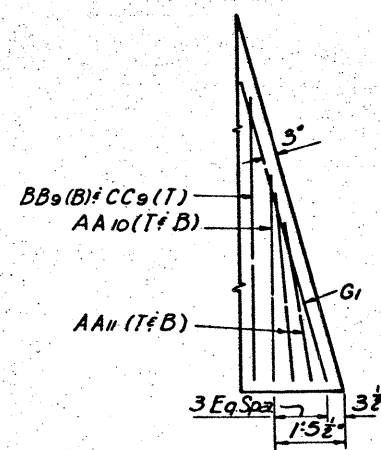
BARS E



BARS A



DETAIL B



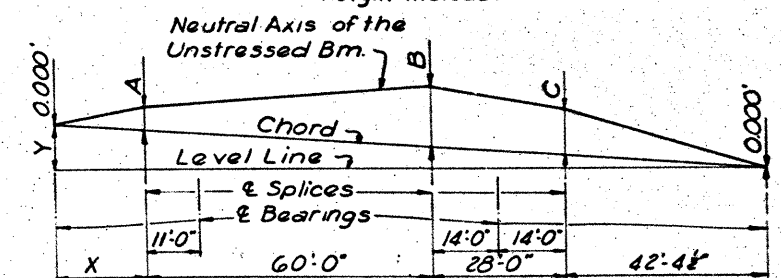
DETAIL A

BILL OF REINFORCING STEEL AND ESTIMATED QUANTITIES

Bar	No	Size	Length	Weight
A	175	#5	35'-9"	6525
B	176	#4	33'-11"	3988
C	176	#5	34'-8"	6364
D ₁	3	#5	*148'-5"	464
D ₃₆	3	#5	*171'-10"	538
D+36	36	#5	*160'-11"K	6011
E	429	#5	5'-2"	2312
G ₁	1	#5	35'-10"	37
G ₂	1	#5	37'-6"	39
T+38	38	#4	*159'-11"K	4059
AA+10	20	#5	19'-5"K	402
AA11	4	#5	4'-5"	18
AA+26	30	#5	19'-0"K	621
AA27	6	#5	5'-5"	34
BB+9	9	#4	18'-11"K	114
BB10+23	14	#4	19'-6"K	182
CC10	9	#5	19'-5"K	181
CC10+23	14	#5	19'-10"K	290

Reinf. Steel	32,179
Class "C" Concrete	146.3
Str. Steel - NYC	116,200
Str. Steel (Shoe & Ar. Jt.)	\$4390

* Weight includes 921 Lbs. for 2 Ar. Rs.



BLOCKING DIAGRAM

TABLE OF VARIABLE DIMENSIONS

	Bm No 1	Bm No 2	Bm No 3	Bm No 4	Bm No 5
X	36.310'	31.408'	26.505'	21.602'	16.649'
Y	1.831'	1.756'	1.683'	1.611'	1.550'
A	0.217'	0.184'	0.152'	0.121'	0.091'
B	0.414'	0.393'	0.372'	0.350'	0.329'
C	0.334'	0.322'	0.309'	0.296'	0.283'

GENERAL NOTES:

Designed according to AASHO 1965 Standard Specifications.

Chamfer all exposed corners $\frac{3}{4}$ " unless otherwise noted.

Design $f_c = 1200 \text{ psi.}$

All Structural Steel is H.Y.C.

HS 20 LOADING

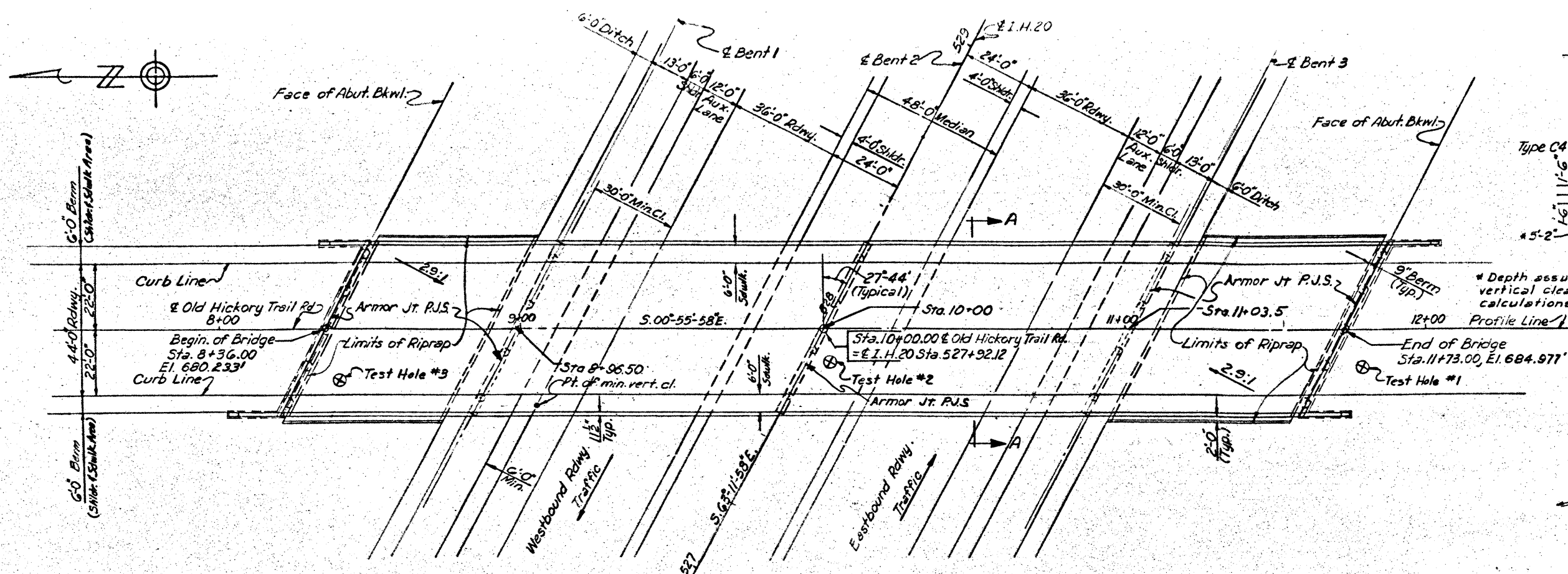
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

149'-0' CONTINUOUS

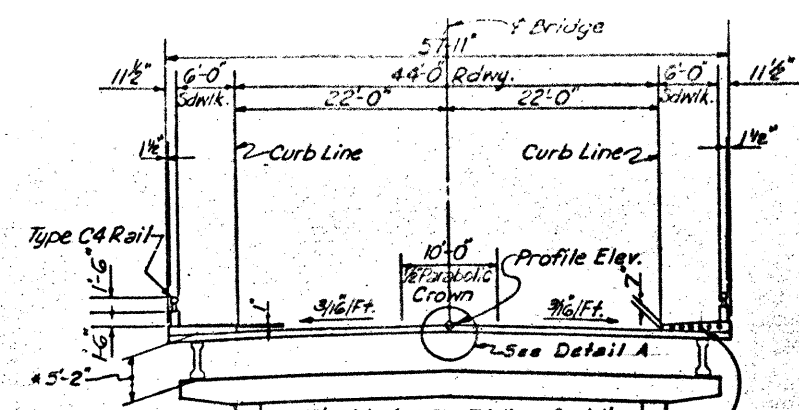
T REAM UNIT

RIGHT FRONTAGE ROAD

ORIGINAL DRAWING DATE: <u>APRIL '69</u>		STATE DISTRICT		FEDERAL AID PROJECT		SHEET	
REVISONS		18 6		I20-5(61) 457		257	
DN: <u>LEC</u>		COUNTY		CONTROL	SECTION	JOB	HIGHWAY
CR: <u>ADC</u>		DALLAS		257A	4	2	US67
DW: <u>OSG</u>							
DK: <u>ADC</u>							



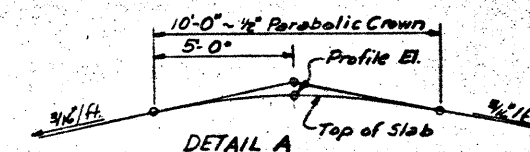
PLAN
Scale: 1"=20'



6-4" Std. Steel Pipe Telephone Conduits in West sidewalk spaced @ 8" c-c. Conduit shall extend 5'-0" beyond ends of bridge. Ends of conduit shall be threaded and capped. Pipes with threaded couplings shall be galvanized after threading. Expansion joint devices with band-in jumpers shall be provided at all expansion joints in bridge slab.

SECTION A-A

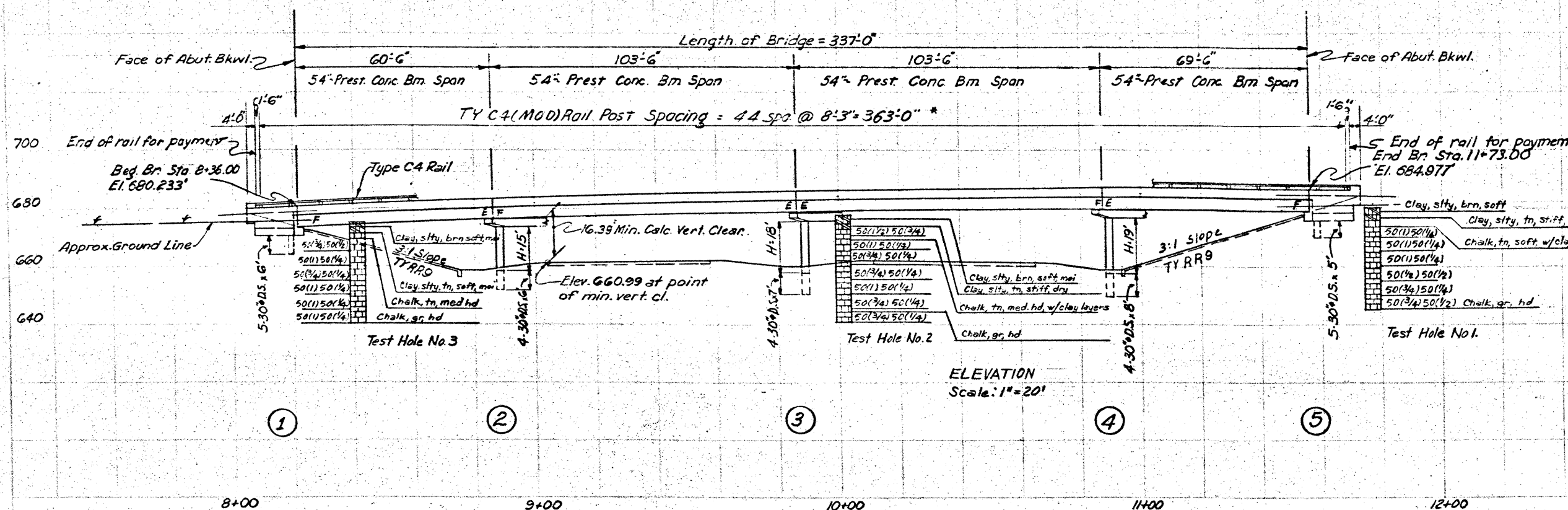
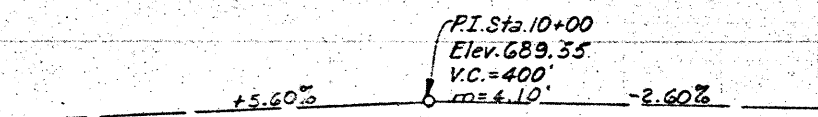
Scale: 1"=10'



Design Note:

Bridge designed for H20-44 loading under 1965 A.A.S.H.O. Specifications and interim revisions thereto.

Design Wind Velocity ~ 78 M.P.H. Max.



ELEVATION
Scale: 1"=20'

* Note: Post spacing shown is for Type C4 (Aluminum) Rail. Spacing to be adjusted to 10'-0" Max for steel option.

TEXAS HIGHWAY DEPARTMENT
I.H. 20

OLD HICKORY TRAIL RD UNDERPASS

LAYOUT

259

DN:	Drawing Date	22-5-66	STATE	TEXAS	FEDERAL AID PROJECT NO.	120-5(66)457 IH20
CK:	Original	Feb. '67	REVISED	Sept. '67	BY	259
DW:	CM	Revised	Feb. '68	18	DALLAS	2374 4 2 259
CK:	HBS	Revised	Feb. '68	18	DALLAS	2374 4 2 259

COCKRELL HILL ROAD OVERPASS-WEST BOUND

ESTIMATED QUANTITIES

ITEM	Uncl Str Excav CY	Drilled Shaft		Class C Concrete			Prest Conc. Bm Size 54" LF	Riprap (Conc.) (Class B)	Reinf Steel LB	Str Steel (Shoe & Armor Pl) LB	Rail Type T- LF	Conc Surf Treat. SY
		18" LF	30" LF	Abut CY	Bent CY	Slab CY						
2-ABUTMENT BENTS	110	58	114	83.2					10756		580	
2-INTERIOR BENTS			57		54.4				14232			
2-53'6" PC.BM. SPANS						178.2	850.66		39448	3278	214.0	678
1-107'0" PC.BM. SPAN						154.6	960.00		34530	1093	214.0	678
TOTALS	110	58	171	83.2	54.4	332.8	1810.66		98966	4371	486.0	1356

BEARING SEAT ELEVATIONS

BENTS	BEAMS									
	BM.1	BM.2	BM.3	BM.4	BM.5	BM.6	BM.7	BM.8	BM.9	
Abut. No 1	719.734	719.896	720.057	720.218	720.379	720.447	720.335	720.200		
Bent No 2 Back	719.896	720.052	720.207	720.362	720.516	720.578	720.459	720.317		
Bent No 2 Forward	719.889	720.025	720.160	720.300	720.431	720.555	720.552	720.433	720.308	
Bent No 3 Back	719.932	720.056	720.181	720.304	720.428	720.541	720.527	720.396	720.260	
Bent No 3 Forward	719.940	720.083	720.224	720.366	720.506	720.555	720.423	720.267		
Abut. No 4	719.821	719.956	720.092	720.226	720.361	720.403	720.264	720.102		

COCKRELL HILL ROAD OVERPASS-EAST BOUND

ESTIMATED QUANTITIES

ITEM	Uncl Str Excav CY	Drilled Shaft		Class C Concrete			Prest Conc. Bm Size 54" LF	Riprap (Conc.) (Class B)	Reinf Steel LB	Str Steel (Shoe & Armor Pl) LB	Rail Type T- LF	Conc Surf Treat. SY
		18" LF	30" LF	Abut CY	Bent CY	Slab CY						
2-ABUTMENT BENTS	110	58	114	83.2					10756		580	
2-INTERIOR BENTS			57		54.4				14232			
2-53'6" PC.BM. SPANS						178.2	850.66		39448	3278	214.0	678
1-107'0" PC.BM. SPAN						154.6	960.00		34530	1093	214.0	678
TOTALS	110	58	171	83.2	54.4	332.8	1810.66		98966	4371	486.0	1356

BEARING SEAT ELEVATIONS

BENTS	BEAMS									
	BM.1	BM.2	BM.3	BM.4	BM.5	BM.6	BM.7	BM.8	BM.9	
Abut. No 1	720.257	720.414	720.546	720.498	720.358	720.217	720.076	719.934		
Bent No 2 Back	720.338	720.488	720.637	720.559	720.413	720.265	720.118	719.970		
Bent No 2 Forward	720.329	720.459	720.585	720.594	720.476	720.347	720.218	720.089	719.959	
Bent No 3 Back	720.206	720.325	720.439	720.437	720.307	720.167	720.027	719.886	719.745	
Bent No 3 Forward	720.212	720.349	720.461	720.394	720.233	720.073	719.912	719.750		
Abut. No 4	720.011	720.141	720.247	720.172	720.006	719.839	719.671	719.503		

OLD HICKORY TRAIL ROAD UNDERPASS

ESTIMATED QUANTITIES

ITEM	Uncl. Str. Excav CY	Drilled Shaft		Class C Concrete			Prest Conc. Bm Size 54" LF	Riprap (Conc.) (Class B)	Reinf Steel LB	Str Steel (Shoe & Armor Pl) LB	Rail Type C & (Mod.) LF	Conc Surf Treat. SY	Rigid Steel Conduit 4" Dia. L.F.
			30" LF	Abut CY	Bent CY	Slab CY							
2-ABUTMENT BENTS	112		55	87.0				88	11706		580		60.0
3-INTERIOR BENTS			84		94.0				27362				
1-60'6" PC.BM. SPAN						123.4	421.17		25041	1709	121.0	408	363.0
1-69'6" PC.BM. SPAN						140.0	484.17		28170	1709	139.0	468	417.0
2-103'6" PC.BM. SPAN						378.4	2063.34		75098	1139	414.0	1395	1242.0
TOTALS	112		139	87.0	94.0	641.8	2968.68	88	167377	4557	732.0	2271	2082.0

BEARING SEAT ELEVATIONS

BENTS	BEAMS									
	BM.1	BM.2	BM.3	BM.4	BM.5	BM.6	BM.7	BM.8	BM.9	BM.10
Abut. No 1	675.315	675.240	675.161	675.036	674.714	674.357	673.990			
Bent No 2 Back	677.659	677.639	677.615	677.545	677.284	676.977	676.665			
Bent No 2 Forward	677.732	677.720	677.706	677.690	677.655	677.545	677.361	677.158	676.953	676.745
Bent No 3 Back	680.064	680.116	680.165	680.213	680.242	680.196	680.075	679.936	679.794	679.650
Bent No 3 Forward	680.079	680.132	680.182	680.231	680.260	680.215	680.095	679.956	679.815	679.672
Bent No 4 Back	680.241	680.358	680.472	680.584	680.677	680.696	680.640	680.564	680.487	680.408
Bent No 4 Forward	680.199	680.374	680.544	680.669	680.602	680.489	680.372			
Abut. No 5	679.088	679.327	679.561	679.750	679.747	679.699	679.646			

NOTE:
BEAMS ARE NUMBERED FROM LEFT TO
RIGHT FACING INCREASING STATIONS.

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
BRG. SEAT ELEVATIONS
&
ESTIMATED QUANTITIES 260

OLD HICKORY TRAIL ROAD UNDERPASS

ORIGINAL DRAWING DATE: JUNE 69

STATE FEDERAL DISTRICT REGION

18 6

REVISIONS

COUNTY

DALLAS

FEDERAL AID PROJECT

260

CONTROL SECTION JOB

234 4

SHEET

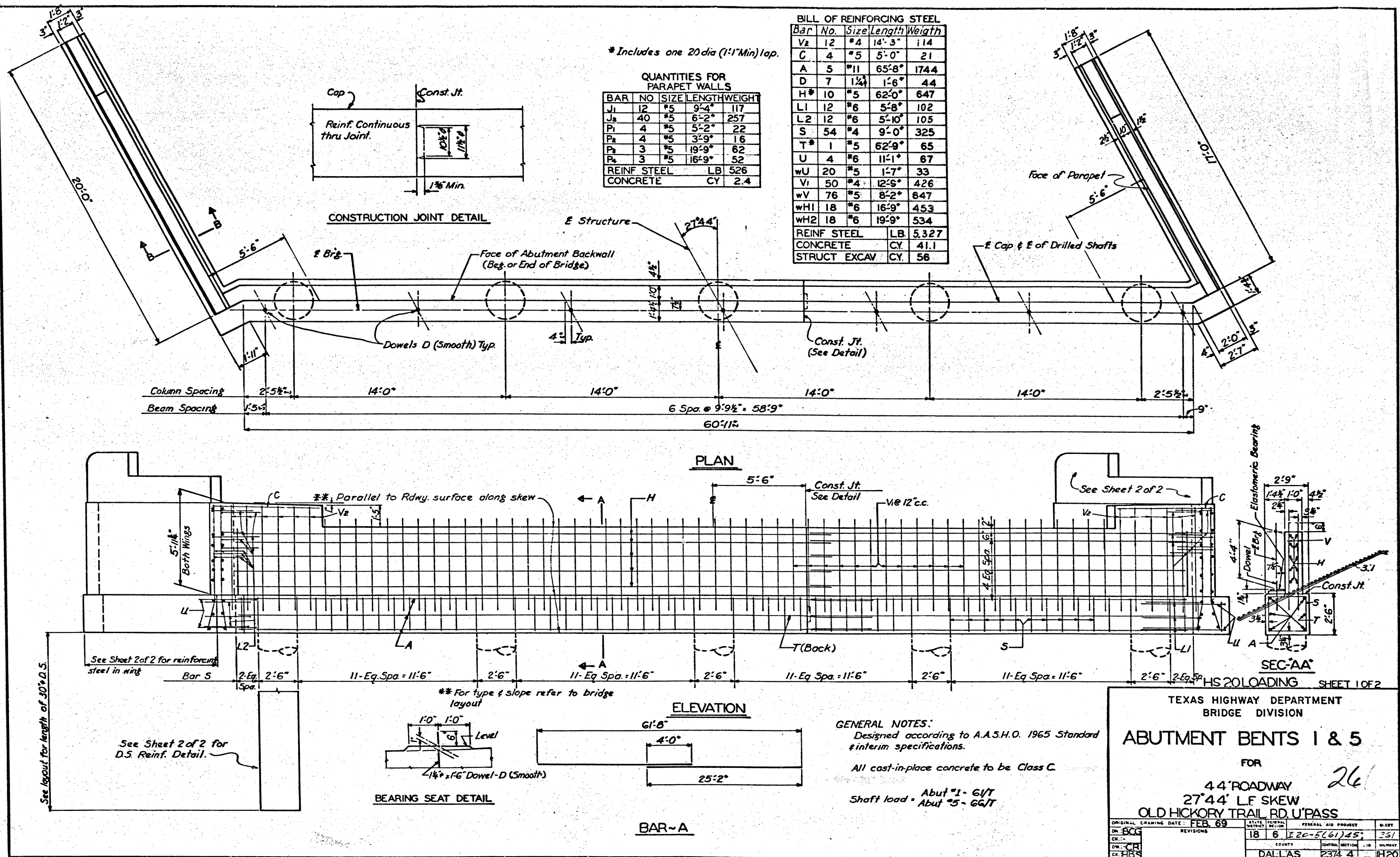
260

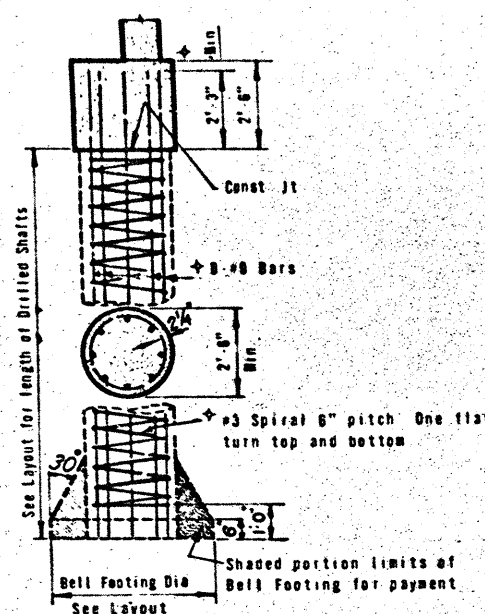
CR

RMS

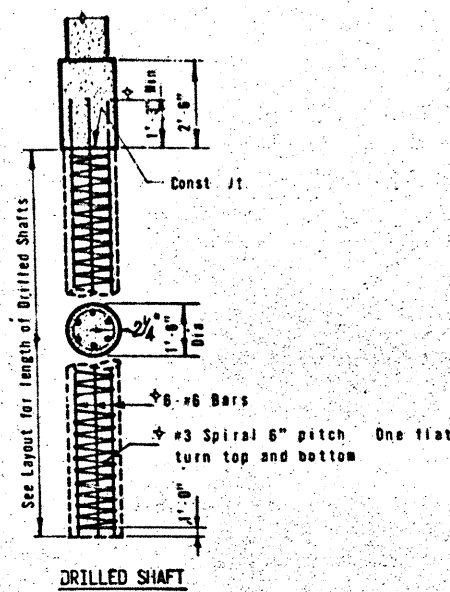
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RMS

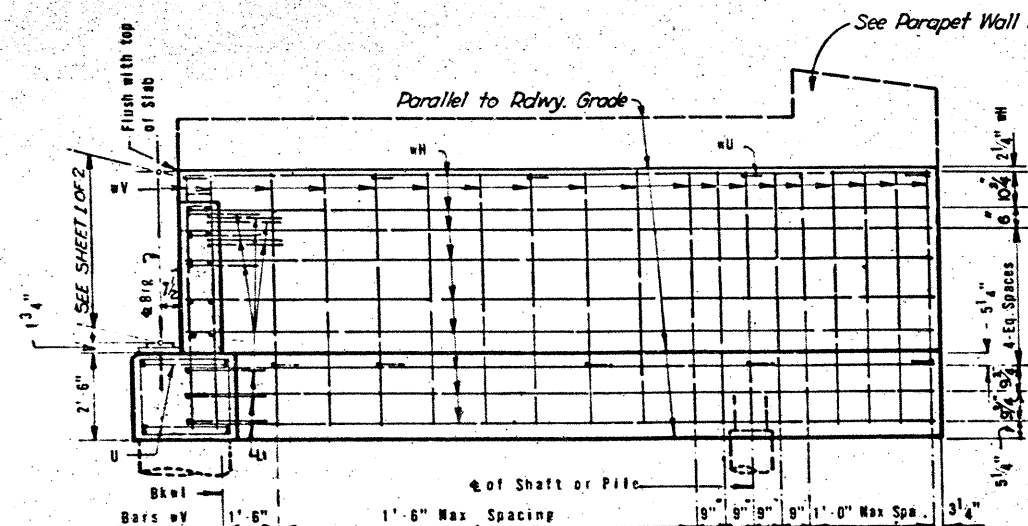




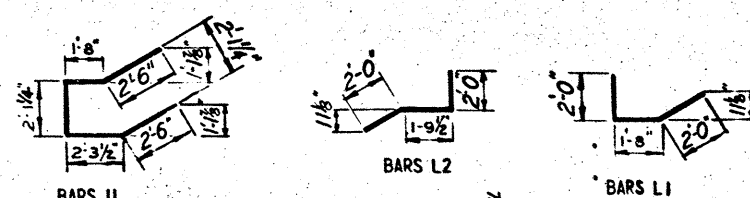
DRILLED SHAFT



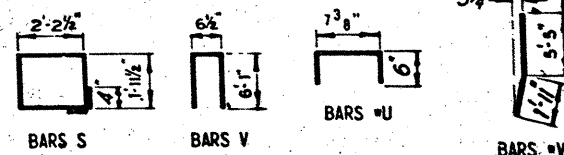
Included in price bid for Drilled Shafts



ELEVATION OF WINGWALL

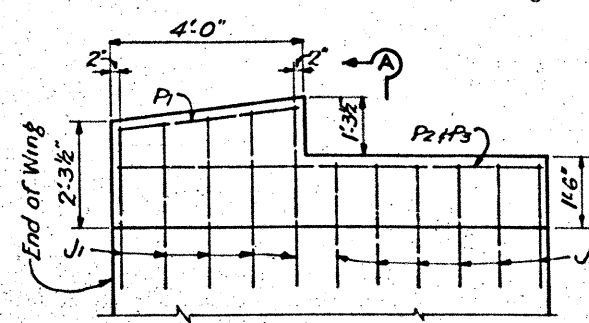


REINFORCING STEEL

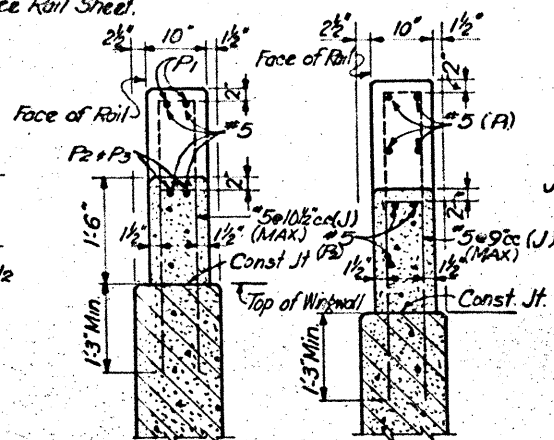


CONSTANT STEEL

Note: Provide MBGF Anchorage on wings. See Rail Steel.

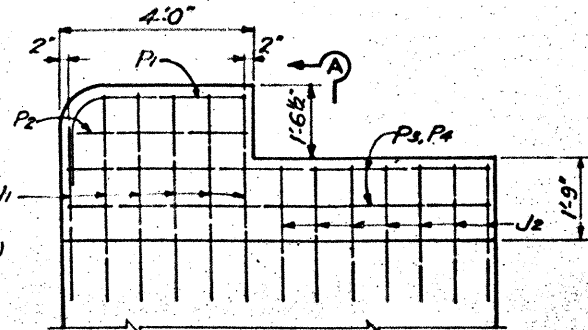


ABUTMENT WINGWALL
COCKRELL HILL



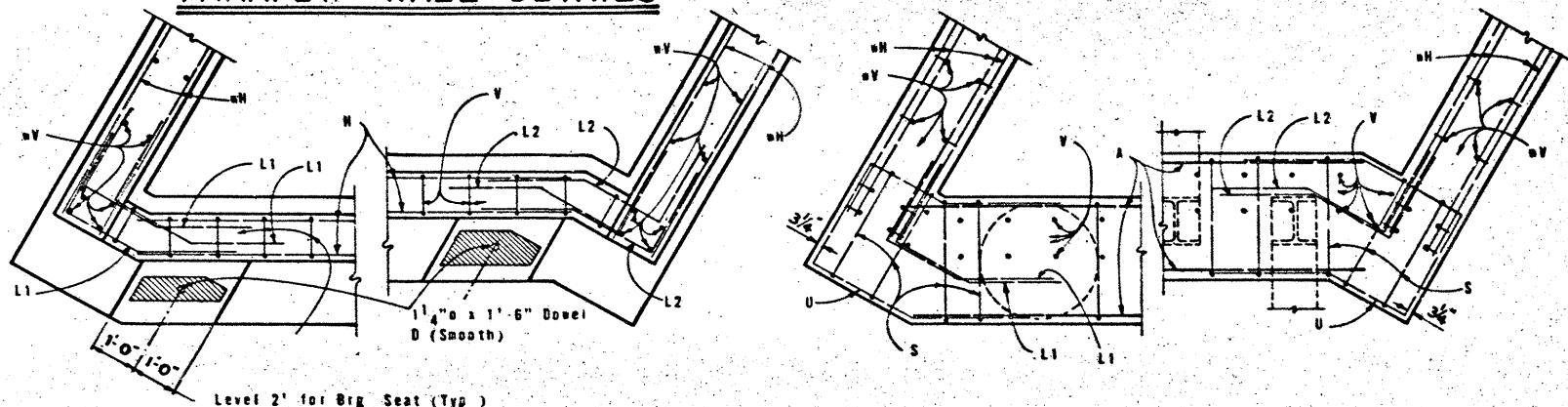
SEC A-A
COCKRELL HILL

SEC A-A
OLD HICKORY



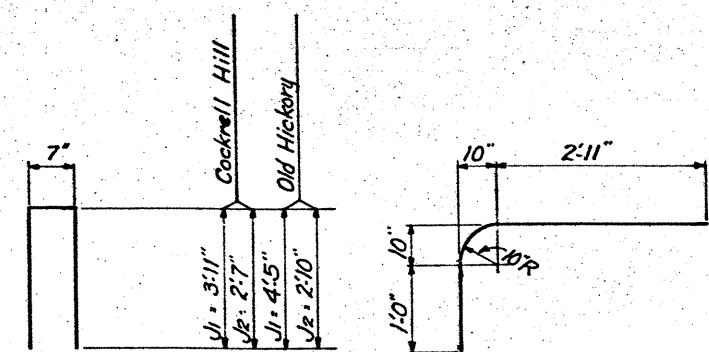
ABUTMENT WINGWALL
OLD HICKORY

PARAPET WALL DETAILS



WING

CORNER DETAILS



BARS J

BAR P

GENERAL NOTES:

Designed according to A A S H O 1955 Standard Specifications

All cast in place Concrete to be Class C Design fc = 1200 p.s.i.

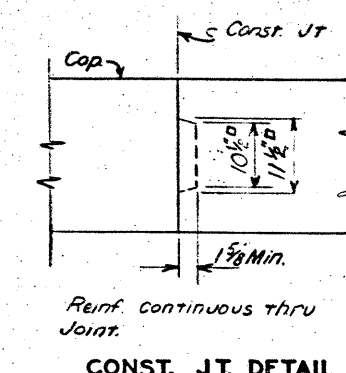
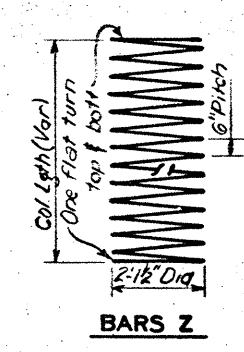
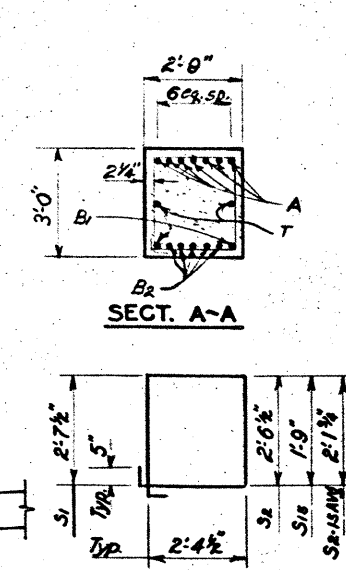
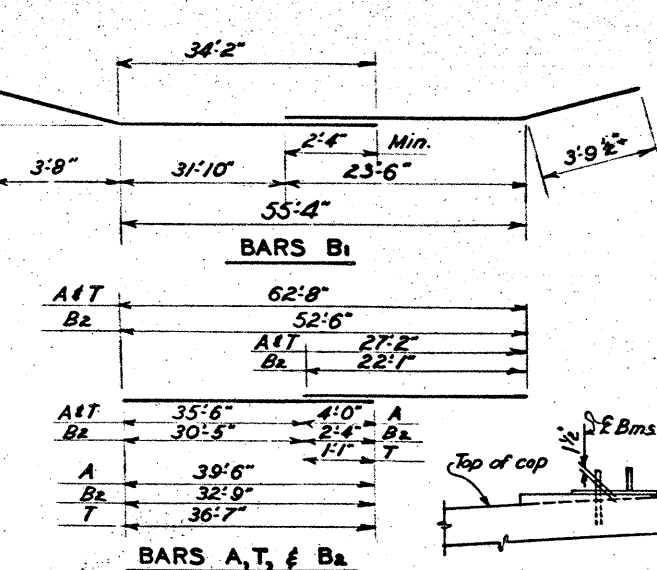
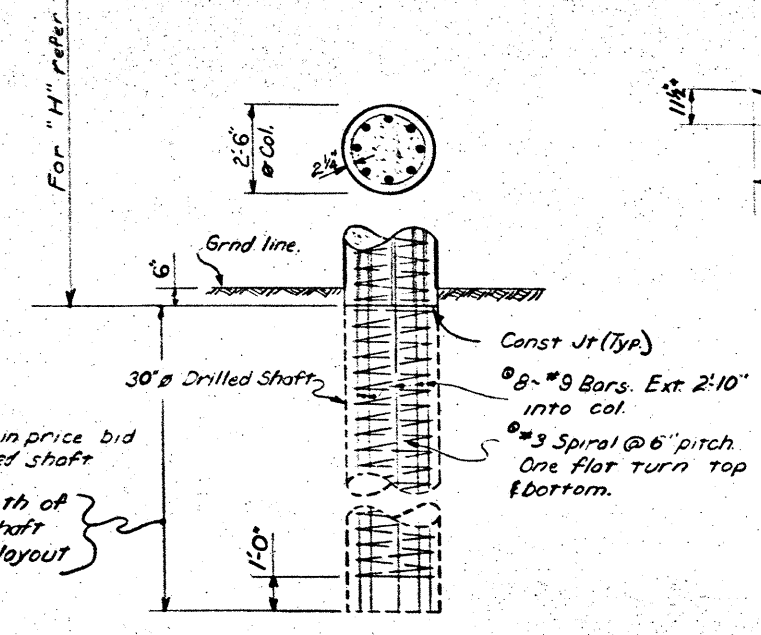
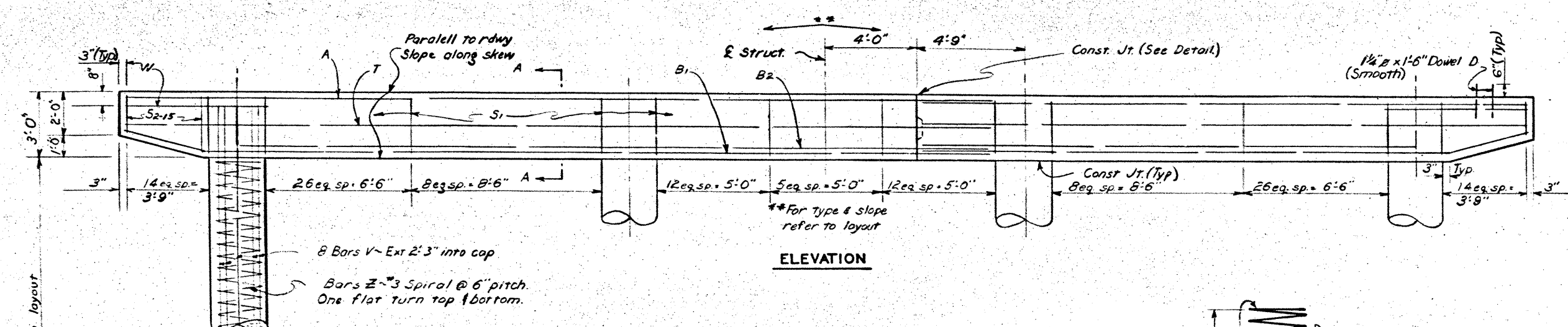
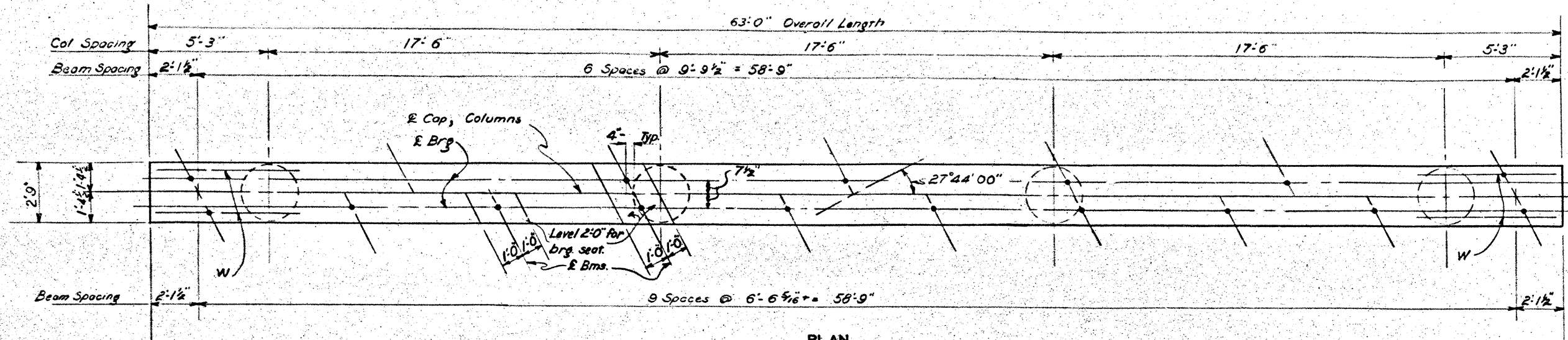
HS-20 LOADING
SHEET 2 OF 2

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

ABUTMENTS
FOR
PRESTRESSED CONCRETE BEAM SPANS

OLD HICKORY TRAIL RD U'PASS 262

ORIGINAL	DRAWING DATE	STATE	FEDERAL	CORRELATION	SHEET
DN H.J.D.	JAN. 69	18	6	120-5(61)457	262
CH		COUNTY	DISTRICT	SECTION	JOB
DW: CH		DALLAS	2374	4	2
CR: RNS					1120



Note: Built up portions of Bearing Seat shall be cast integrally with cap or constructed as follows: The area under the built up portion is to be prepared in accordance with specification requirements for construction joints. The pedestal shall be placed using an approved latex based grout mixed in accordance with the manufacturers recommendations.

BILL OF REINF. STEEL & EST. QUANTITIES FOR 4 COL.

H	Bars V	Bars Z	Reinf. Steel	Cl. C	QUANTITIES
Hr	32-#9	#3-Spiral	Reinf. Steel	Cl. C	CX
Lgth	Wt	Lgth	Wt	L.B.	CY
12'	14'-3"	1550	174'	280	1810 8.7
13'	15'-3"	1659	187'	280	1939 8.5
14'	16'-3"	1768	201'	304	2072 10.2
15'	17'-3"	1877	214'	320	2197 11.0
16'	18'-3"	1986	228'	344	2330 11.6
17'	19'-3"	2094	241'	364	2458 12.3
18'	20'-3"	2203	254'	384	2587 13.1
19'	21'-3"	2312	268'	404	2716 13.9
20'	22'-3"	2421	281'	428	2849 14.5

BILL OF REINF. STEEL & EST. QUANT. FOR 1 CAP

Bar	No.	Size	Length	Weight
A	7	#11	66'-8"	2479
W	4	#5	6'-4"	26
T	2	#5	63'-9"	133
B1	2	#11	65'-3"	693
B2	5	#11	54'-10"	1457
S1	102	#5	10'-10"	1153
S2-16	28	#5	9'-11" w/ 290	
D	17	#4	1'-6"	106
Reinf. Steel			L.B.	6337
Class C Concrete			CX	18.7

*One 35 dia. lap included (4'-0" Min.)
 *One 20 dia. lap included (1'-1" Min.)
 *One 20 dia. lap included (2'-4" Min.)

GENERAL NOTES:
 Designed according to A.A.S.H.O 1965 Standard & interim specifications & complies with R.P.M. 204 Sect. 4c.
 All cast-in-place concrete to be class "C".
 All dimensions to reinf. are to E of bars.
 Calculated column loads: Bent #2=1627/col.
 Bent #4=1697/col.

H.S. 20 LOADING

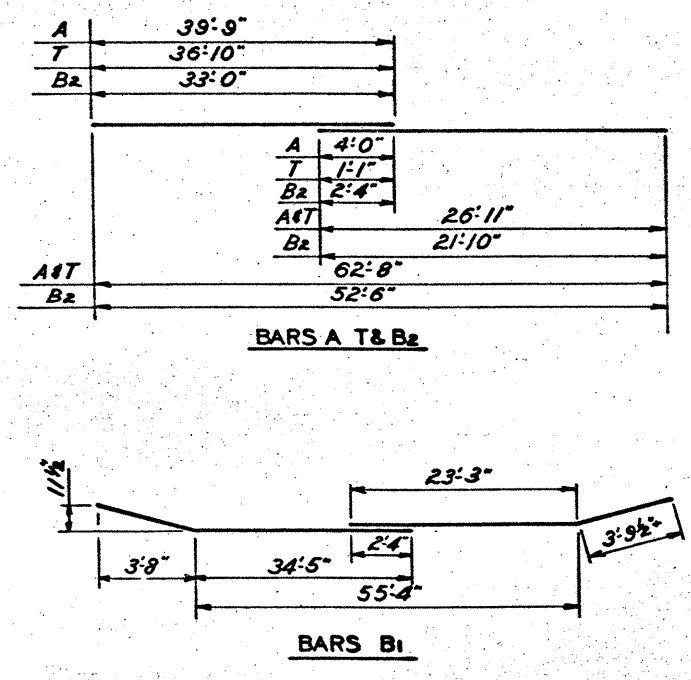
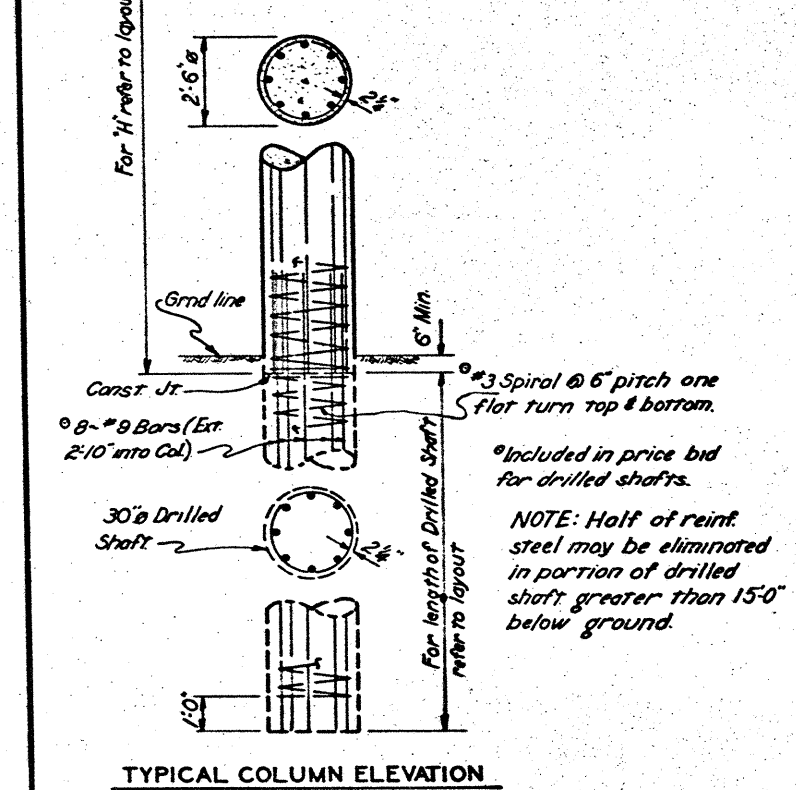
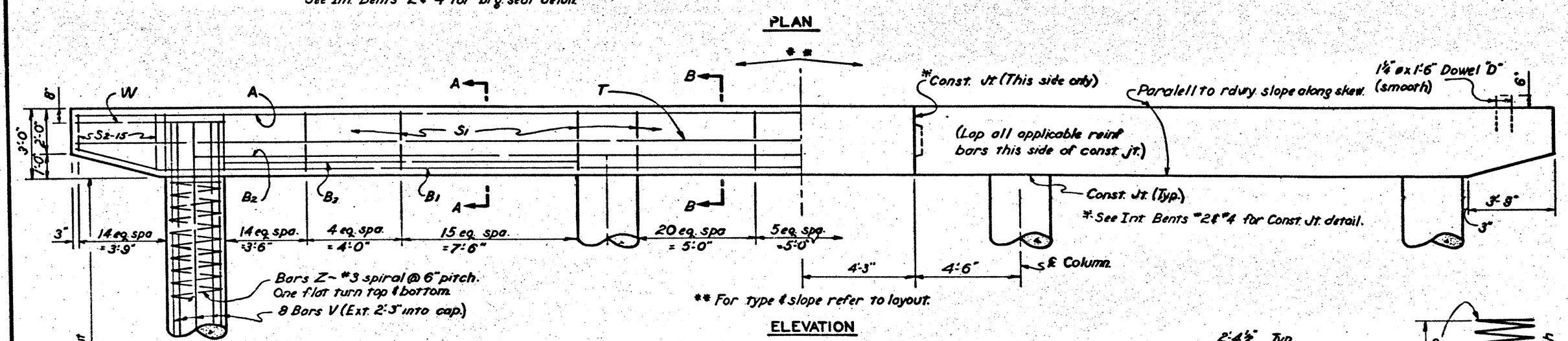
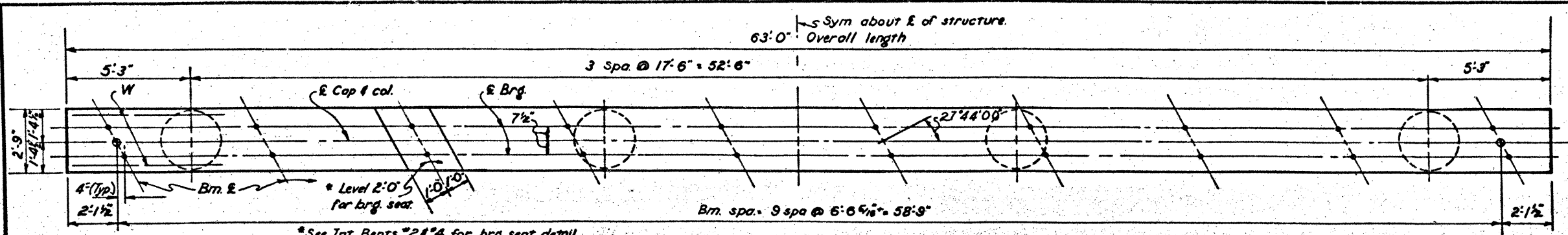
TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION

INTERIOR BENTS NO. 2&4

OLD HICKORY TRAIL RD. U-PASS.

263

ORIGINAL DRAWING DATE: Feb. 1969	STATE: TEXAS	FEDERAL AID PROJECT: 120-5(61)457	SHEET: 263
REVISIONS:	COUNTY: DALLAS	SECTION: 2374	JOB: 4
DR: HJD	CK: HBS	CR: CR	



BILL OF REINF. STEEL & EST. QUANT. FOR 4 COL.

H'	Bars V 32-#9		Bars Z 4-#3 Spiral		Reinf. Steel LB	Cl. C' Conc. CY
	Length	Wt	Length	Wt		
15'	17'-3"	1877	214'	320	2197	11.0
16'	18'-3"	1986	228'	344	2330	11.6
17'	19'-3"	2094	241'	364	2458	12.3
18'	20'-3"	2203	254'	384	2587	13.1
19'	21'-3"	2312	268'	404	2716	13.8
20'	22'-3"	2421	281'	428	2849	14.5

BILL OF REINF. STEEL & EST. QUANT. FOR 1 CAP

Bar	NO.	Size	Length	Weight
A	8	#11	66'-8"	2834
W	4	#5	6'-4"	26
T	2	#5	63'-9"	133
B1	2	#11	65'-3"	683
B2	5	#11	54'-10"	1457
B3	4	#11	15'-0"	319
S1	116	#5	10'-10"	1311
S2-15	28	#5	9'-11" av	280
D	20	1 1/2"	1'-6"	12.5
Reinf. Steel LB				7188
Class C' Concrete CY				18.7

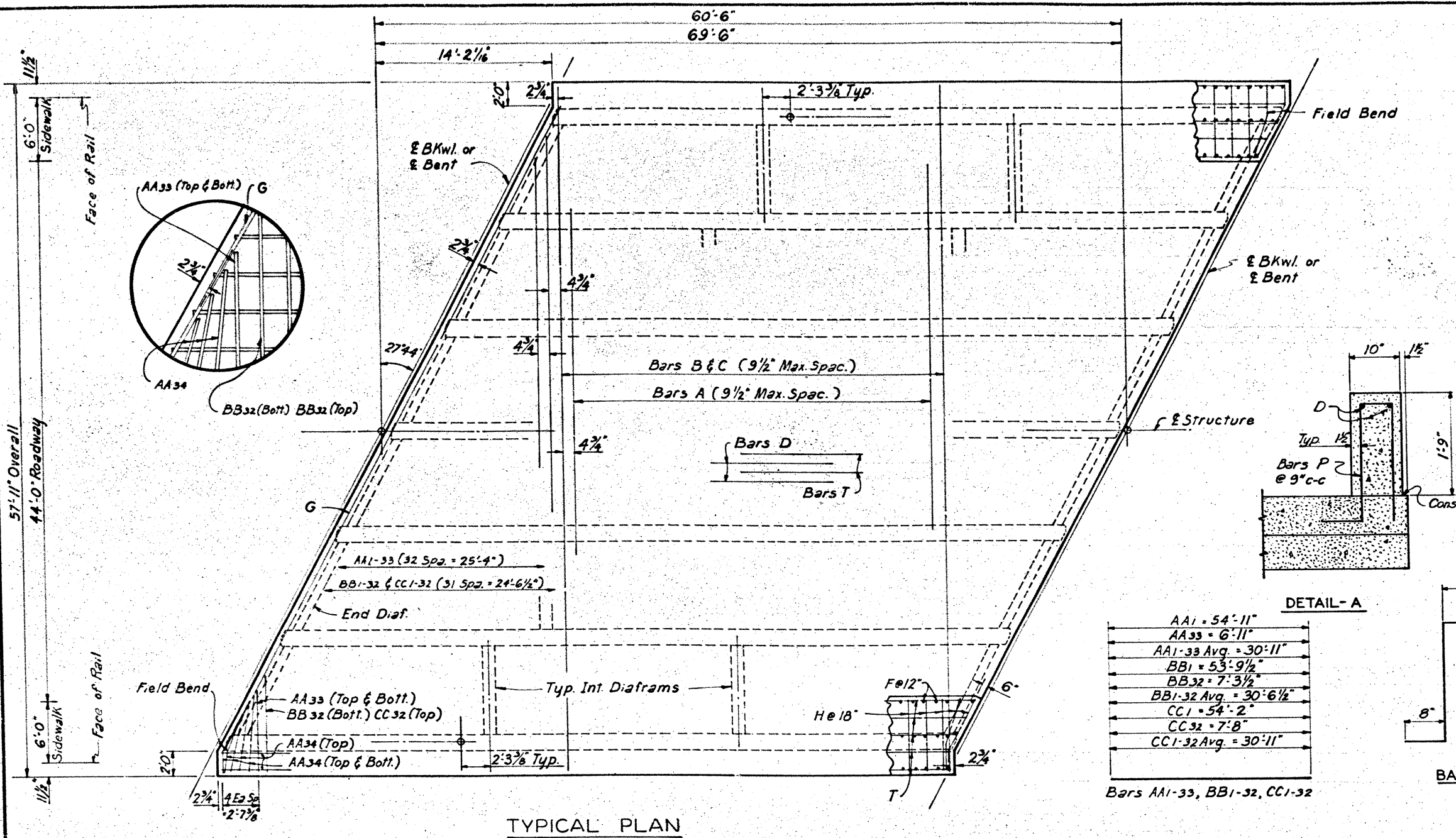
* One 35 dia. lap included (4'-0" Min.)
* " 20 " " " (1'-1" ")
* " " " " " (2'-4" ")

Designed according to A.A.S.H.O. 1965 standard and interim specifications and complies with PPM. 20.4 sect. 4c. All cast-in-place concrete shall be Class C'. All dimension to reinf. are E of bars. Calculated column loads: 203 1/2 col.

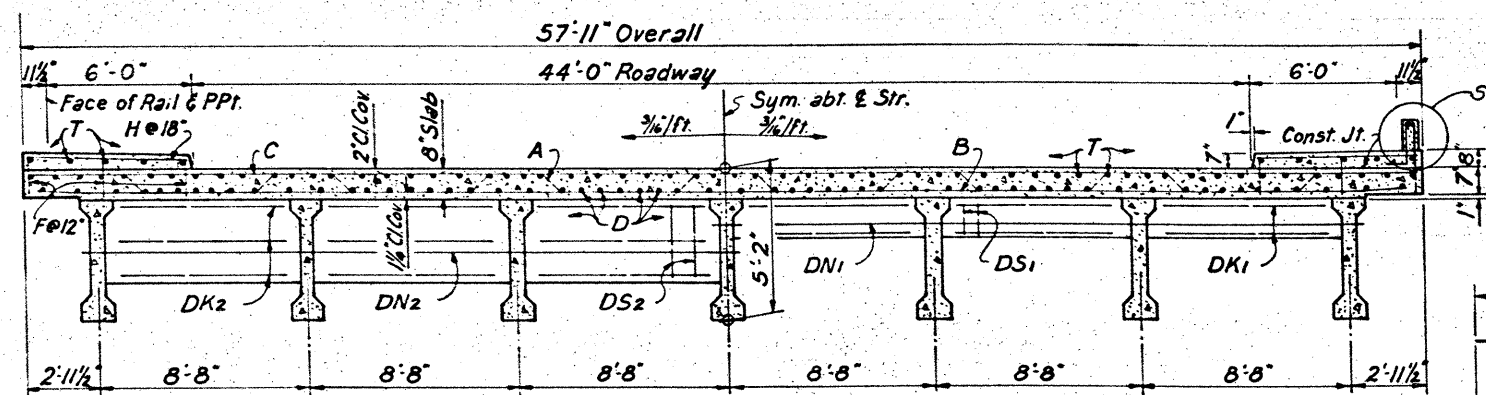
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
INTERIOR BENT NO. 3
OLD HICKORY TRAIL RD. U-PASS

264

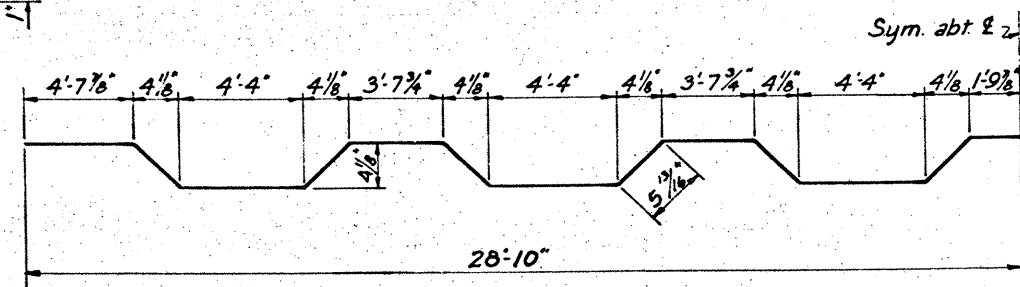
ORIGINAL DRAWING DATE: FEB 1969	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
CM: HLD	18	6	I 20-5(61)457	264
CK: HRS	COUNTY	CONTROL SECTION	MONDAY	
CK: CR	DALLAS	2374.4	2 I 20	



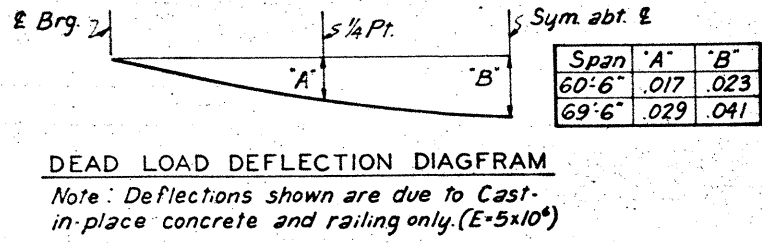
TYPICAL PLAN



TRANSVERSE SECTION



BAR A DETAIL



DEAD LOAD DEFLECTION DIAGRAM
Note: Deflections shown are due to Cast-in-place concrete and railing only. (E=5x10⁶)

BILL OF REINF. STEEL & EST. QUANT.

60'-6" SPAN					69'-6" SPAN				
Bar	No	Size	Length	Weight	Bar	No	Size	Length	Weight
A	40	#5	59'-4"	2475	A	52	#5	59'-4"	3218
B	41	#4	56'-11"	1559	B	53	#4	56'-11"	2015
C	41	#5	57'-8"	2466	C	53	#5	57'-8"	3188
*D	62	#5	61'-4"	3966	*D	62	#5	70'-4"	4548
*T	70	#4	61'-3"	2864	*T	70	#4	70'-3"	3285
DK ₁	48	#5	8'-0"	401	DK ₁	48	#5	8'-0"	401
DK ₂	72	#5	7'-1"	532	DK ₂	72	#5	7'-1"	532
DS ₁	96	#4	3'-10"	246	DS ₁	96	#4	3'-10"	246
DS ₂	84	#4	7'-6"	421	DS ₂	84	#4	7'-6"	421
DN ₁	2	#8	59'-9"	319	DN ₁	2	#8	59'-9"	319
DN ₂	12	#8	9'-7"	307	DN ₂	12	#8	9'-7"	307
F	366	#5	1'-0"	382	F	420	#5	1'-0"	438
H	80	#4	6'-7"	352	H	84	#4	6'-7"	369
P	162	#5	5'-3"	887	P	186	#5	5'-3"	1019
2 Skewed Ends Lbs. 7864					2 Skewed Ends Lbs. 7864				
Reinf. Steel Lbs. 25041					Reinf. Steel Lbs. 28170				
Class C Conc. C.Y. 12.5.4					Class C Conc. C.Y. 14.0.0				
54' Beams L.F. 421.17					54' Beams L.F. 484.17				
Conc. Surf. Treat. S.Y. 408					Conc. Surf. Treat. S.Y. 468				

2 SKEWED ENDS

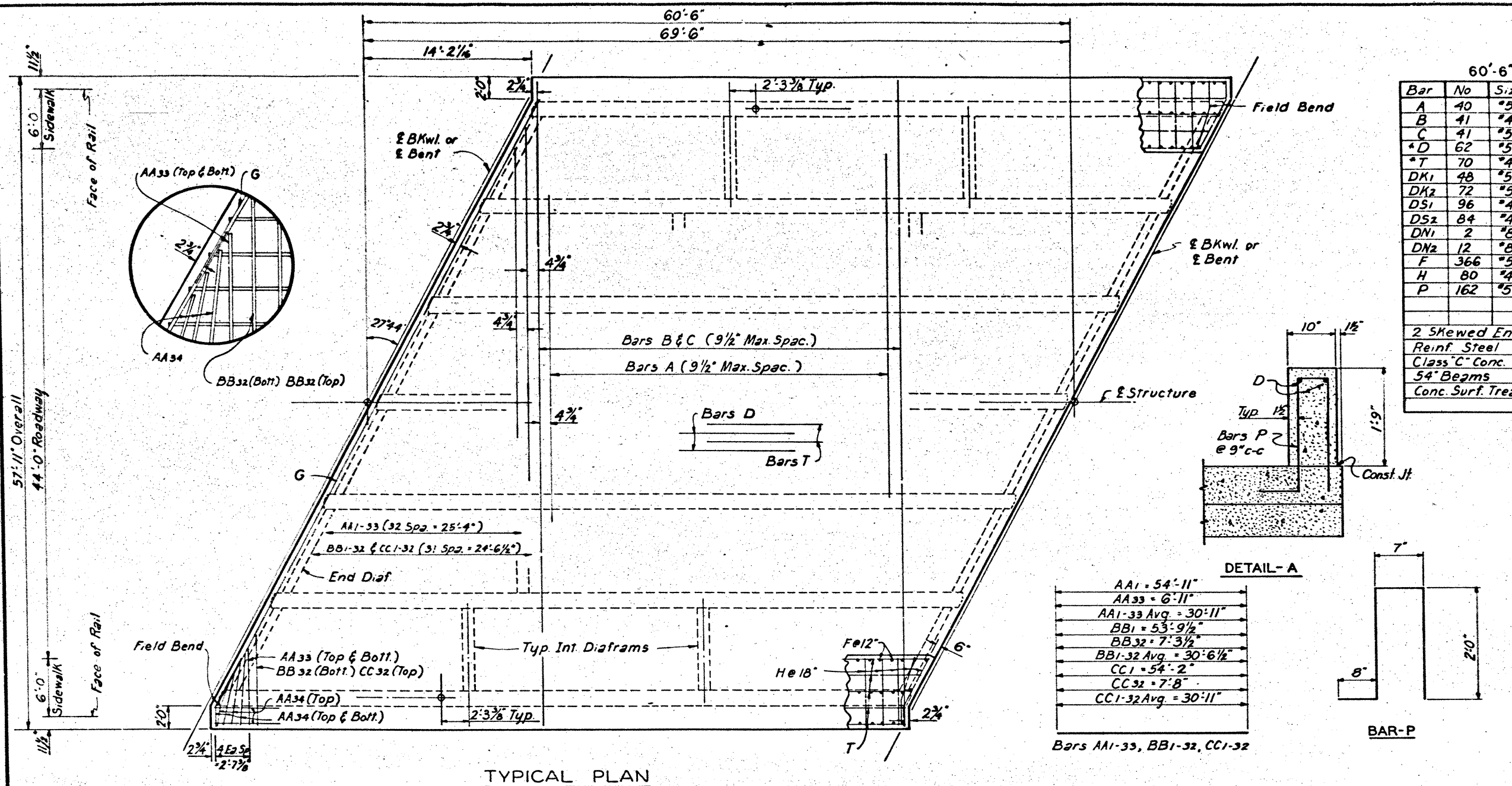
Bar	No	Size	Length	Weight
AA1-33	132	#5	30'-11" Avg.	4256
AA34	20	#5	5'-3"	110
BB1-32	64	#4	30'-7 7/8" Avg.	1307
CC1-32	64	#5	30'-11" Avg.	2064
G	2	#5	60'-11"	127
Total			Lbs.	7864

GENERAL Notes
Designed according to A.A.S.H.O. 1965 Standard and Interim Specifications.
All cast-in-place Concrete to be Class C.
Design for 1200 p.s.i.
*Includes one 20 dia lap (1'-0" Min)

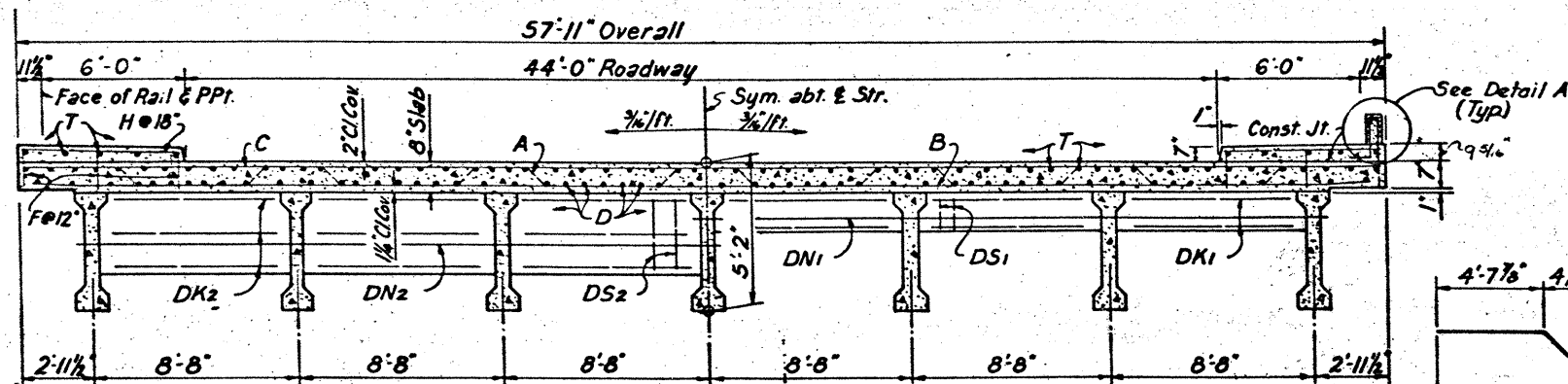
HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
PREST. CONC. BEAM SPANS
60'-6" & 69'-6" 265
44'-0" ROADWAY 27°44' SKEW
OLD HICKORY TRAIL ROAD U' PASS

ORIGINAL	DRAWING DATE	REVISIONS	STATE	FEDERAL AID PROJECT	SHEET
DN: HJD	MARCH, 1969	1B	6. I-35-E (61) 457	265	
CR: L.D.S.			COUNTY	CONTROL SECTION	JOB
CR: CR			DALLAS	2374 4	2 11.20



TYPICAL PLAN

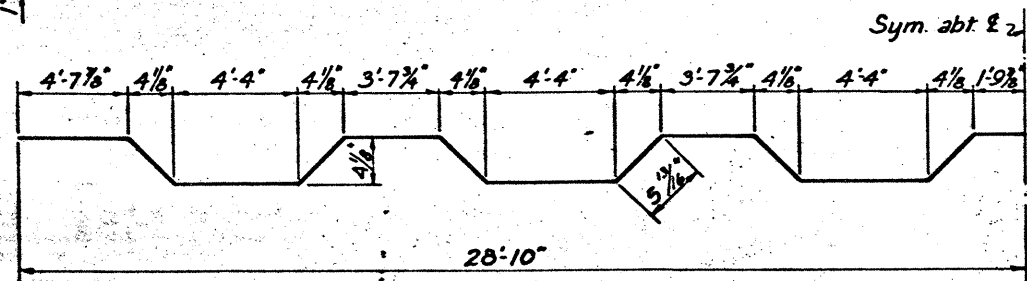


SHOWING INT. DIAFRAMS

SHOWING END DIAFRAMS

TRANSVERSE SECTION

DEAD LOAD DEFLECTION DIAGRAM
Note: Deflections shown are due to Cast-in-place concrete and railing only. (E=5x10⁶)



BAR A DETAIL

BILL OF REINF. STEEL & EST. QUANT.

60'-6" SPAN					69'-6" SPAN				
Bar	No	Size	Length	Weight	Bar	No	Size	Length	Weight
A	40	#5	59'-4"	2475	A	52	#5	59'-4"	3218
B	41	#4	56'-11"	1559	B	53	#4	56'-11"	2015
C	41	#5	57'-8"	2466	C	53	#5	57'-8"	3188
D	62	#5	61'-4"	3966	D	62	#5	70'-4"	4548
T	70	#4	61'-3"	2864	T	70	#4	70'-3"	3285
DK1	48	#5	8'-0"	401	DK1	48	#5	8'-0"	401
DK2	72	#5	7'-1"	532	DK2	72	#5	7'-1"	532
DS1	96	#4	3'-10"	246	DS1	96	#4	3'-10"	246
DS2	84	#4	7'-6"	421	DS2	84	#4	7'-6"	421
DN1	2	#8	59'-9"	319	DN1	2	#8	59'-9"	319
DN2	12	#8	9'-7"	307	DN2	12	#8	9'-7"	307
F	366	#5	1'-0"	382	F	420	#5	1'-0"	438
H	80	#4	6'-7"	352	H	84	#4	6'-7"	369
P	162	#5	5'-3"	887	P	186	#5	5'-3"	1019
2 Skewed Ends Lbs. 7864					2 Skewed Ends Lbs. 7864				
Reinf. Steel Lbs. 25,041					Reinf. Steel Lbs. 28,170				
Class "C" Conc. C.Y. 12					Class "C" Conc. C.Y. 14.76				
54' Beams L.F. 421.17					54' Beams L.F. 484.17				
Conc. Surf. Treat. S.Y. 408					Conc. Surf. Treat. S.Y. 468				

2 SKEWED ENDS

Bar	No	Size	Length	Weight
AA1-33	132	#5	30'-11" Avg.	4256
AA34	20	#5	5'-3"	110
BB1-32	64	#4	30'-7" Avg.	1307
CC1-32	64	#5	30'-11" Avg.	2064
G	2	#5	60'-11"	127
Total			Lbs.	7864

GENERAL Notes
Designed according to A.R.S.H.D. 1965 Standard and Interim Specifications.
All cast-in-place Concrete to be Class C.
Design f_c 1200 p.s.i.
*Includes one 20 dia. lap (1'-0" Min.)

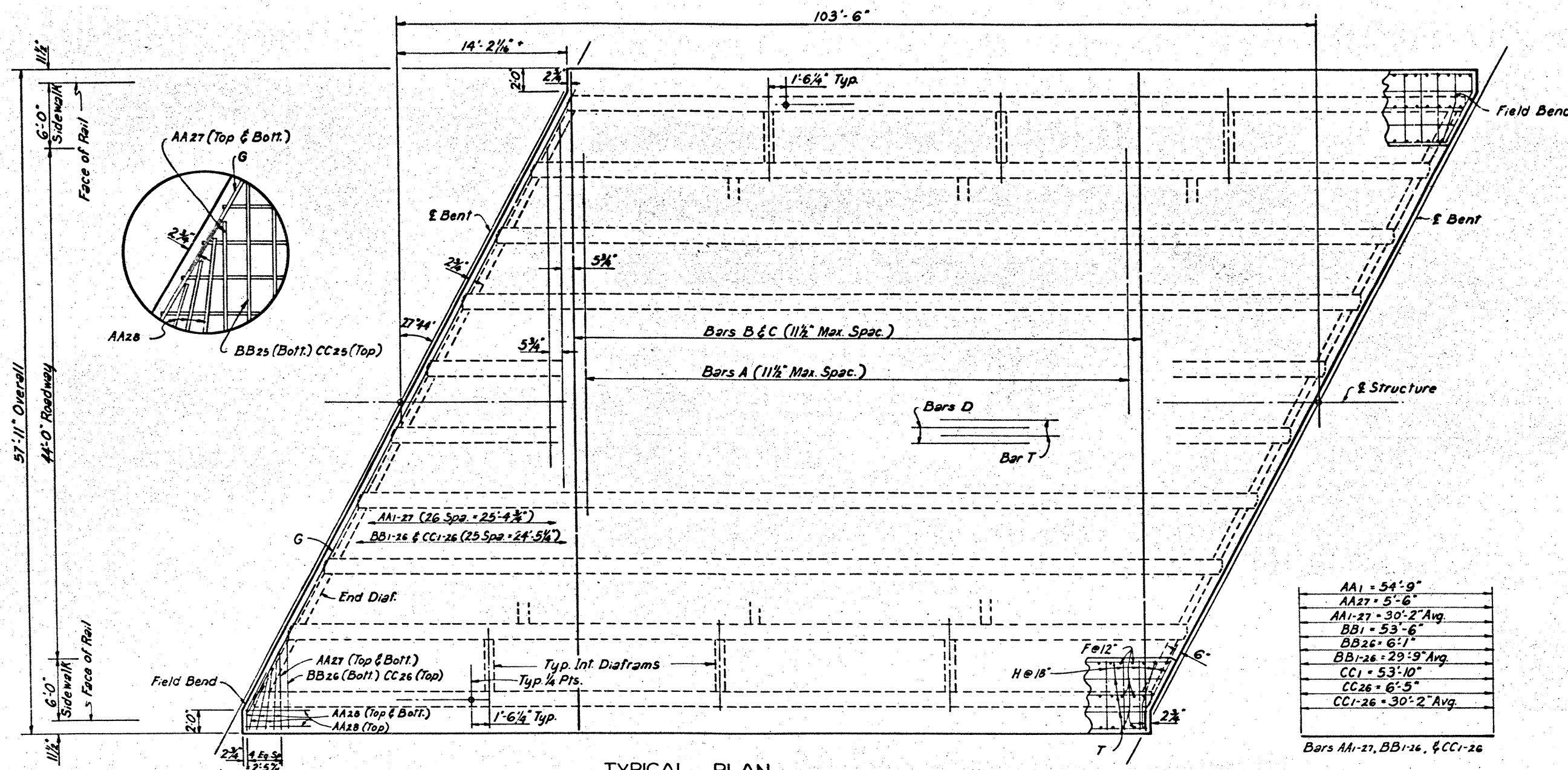
FIELD CHANGE 14

Revised Sidewalk Depth 9'-5" 74

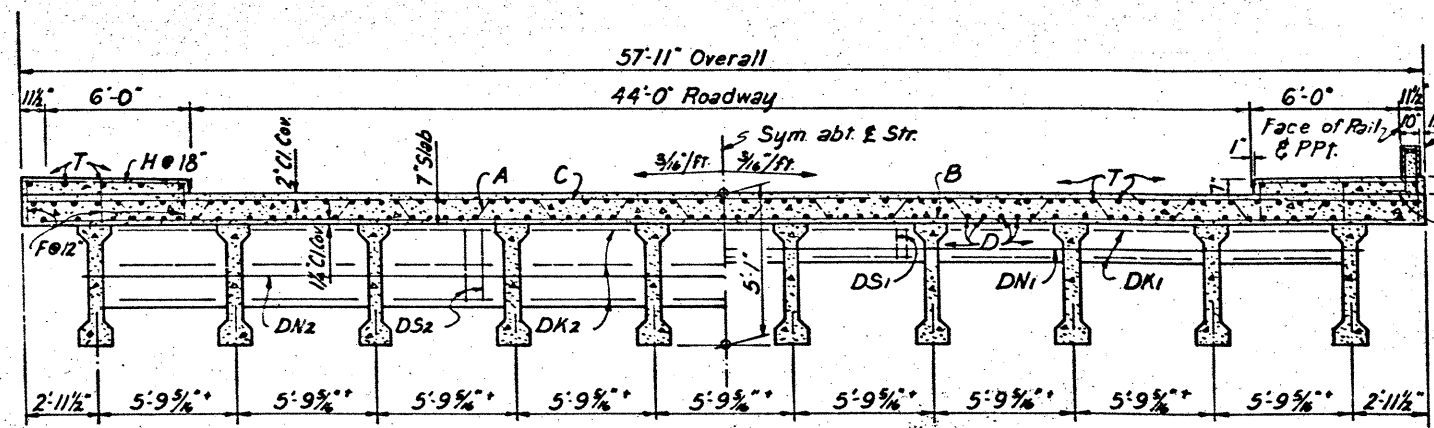
HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
PREST. CONC. BEAM SPANS
60'-6" & 69'-6"
44'-0" ROADWAY 27°44' SKEW
OLD HICKORY TRAIL ROAD U' PASS

ORIGINAL DRAWING DATE: MARCH, 1969	STATE: TEXAS	FEDERAL AID PROJECT: 10-5(41)457	SHEET: 265
REVISIONS:	COUNTY: DALLAS	SECTION: 2374	JOB: 4
DR: JLD	DESIGNED BY: JLD	CHECKED BY: CR	DATE: 11/20



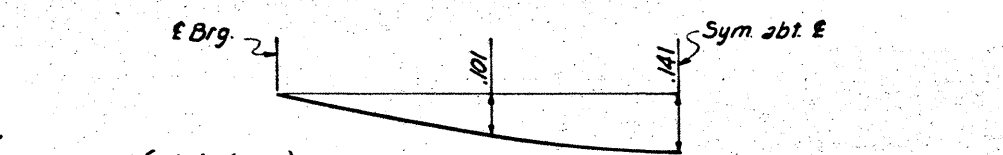
TYPICAL PLAN



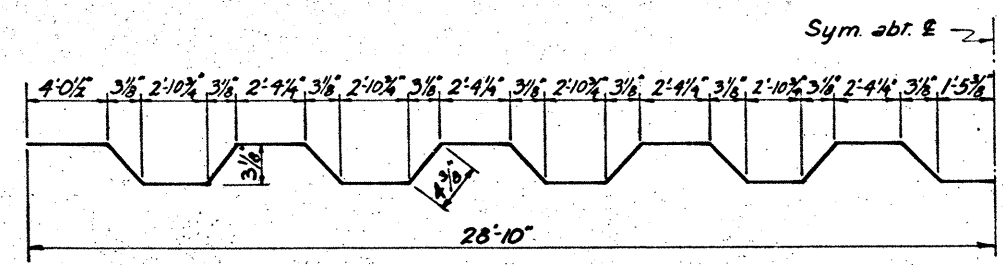
SHOWING INT. DIAFRAMS

SHOWING END DIAFRAMS

TRANSVERSE SECTION



DEAD LOAD DEFLECTION DIAGRAM
Note: Deflections shown are due to cast-in-place concrete and railing only. (E=5x10⁶)



BARS A DETAIL

BILL OF REINF. STEEL & EST. QUANT.

Bar	No.	Size	Length	Weight
A	78	#5	59'-6"	4841
B	79	#4	56'-11"	3004
C	79	#5	57'-8"	4752
D	71	#5	104'-4"	7726
T	79	#4	104'-3"	5501
DK1	72	#5	4'-9"	357
DK2	162	#5	4'-2"	704
DS1	90	#4	3'-10"	230
DS2	108	#4	7'-6"	541
DN1	2	#8	59'-9"	319
DN2	27	#8	6'-8"	481
F	624	#5	1'-0"	651
H	140	#4	6'-7"	616
P	278	#5	5'-3"	1522

2 Skewed Ends	Lbs.	6304
Reinf. Steel	Lbs.	37549
Concrete	C.Y.	189.2
54' Beams	L.F.	1031.67
Conc. Surf. Treatment	S.Y.	698

2 SKEWED ENDS

Bars	No.	Size	Length	Weight
AA1-27	108	#5	30'-2" Avg.	3398
AA28	20	#5	5'-3"	110
BB1-26	52	#4	29'-9" Avg.	1033
CC1-26	52	#5	30'-2" Avg.	1636
G	2	#5	60'-11"	127
Total			Lbs.	6304

GENERAL NOTES:
Designed according to A.A.S.H.O. 1965
Standard & Interim Specifications.
All cast-in-place Concrete to be Class C.
Design ft 1200 p.s.i.
*Includes on 20 dia. lap (1'-0" Min.)

HS 20 LOADING

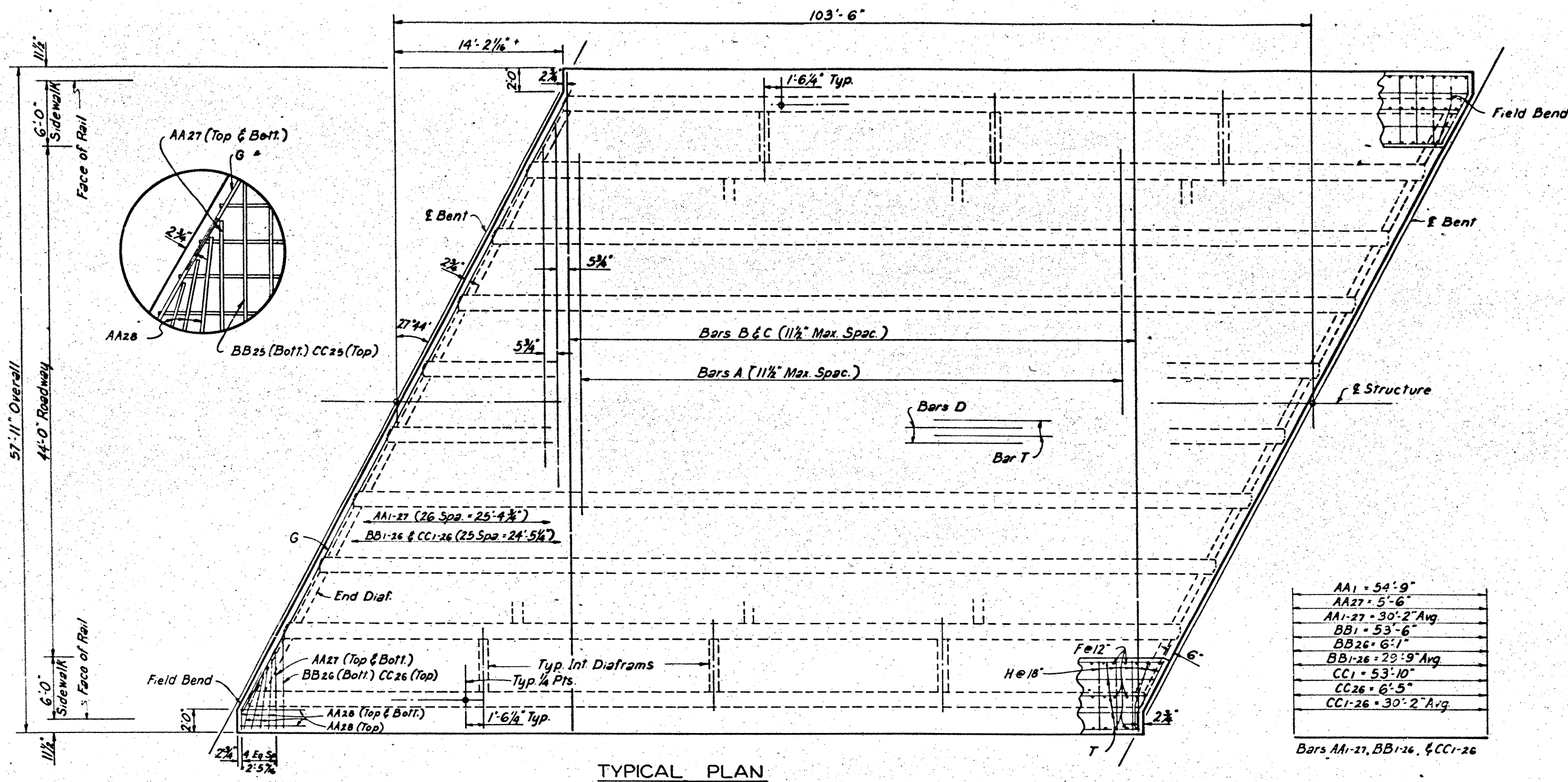
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

103'-6" PRESTRESSED CONC.
BEAM SPAN 266

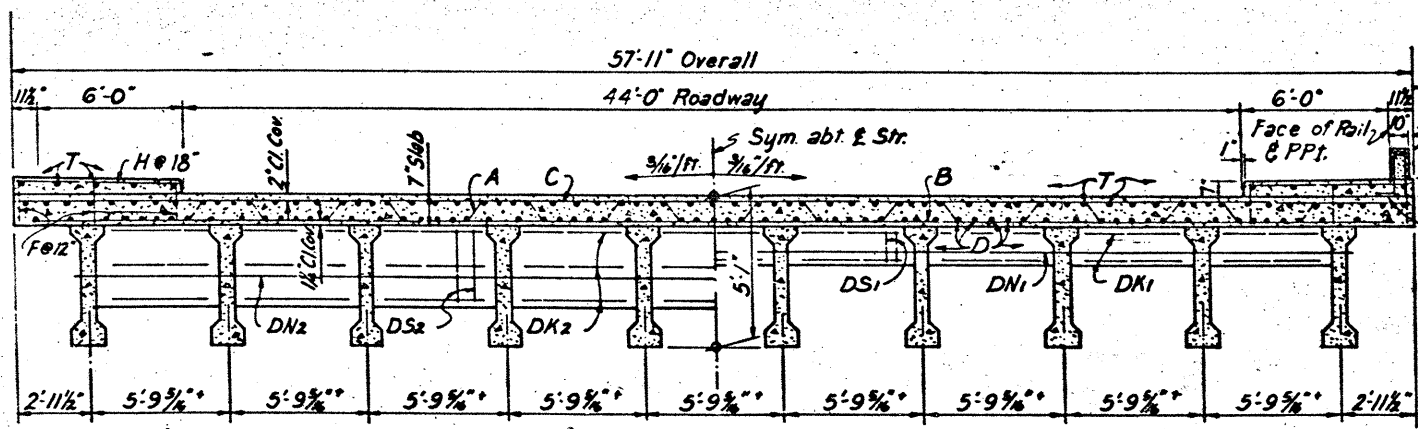
44'-0" ROADWAY 27°44' SKEW

OLD HICKORY TRAIL ROAD U'PASS

ORIGINAL DRAWING DATE: FEB. 1969	STATE DISTRICT: 18	FEDERAL REGION: 6	FEDERAL AID PROJECT: I-20-5(61)57	SHEET: 266
DESIGNED BY: HJD	CONTROL BY: HJD	COUNTY: DALLAS	DATE: 2/27/69	BY: HJD
CHECKED BY: LBS	APPROVED BY: HJD			



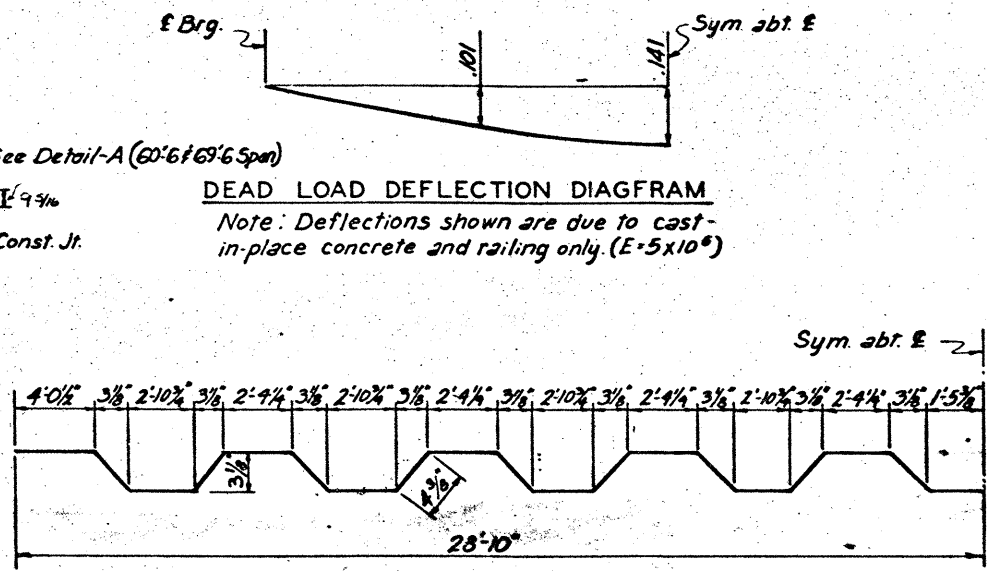
TYPICAL PLAN



SHOWING INT. DIAFRAMS

SHOWING END DIAFRAMS

TRANSVERSE SECTION



BARS A DETAIL

BILL OF REINF. STEEL
& EST. QUANT.

Bar	No	Size	Length	Weight
A	78	#5	59'-6"	4841
B	79	#4	56'-11"	3004
C	79	#5	57'-8"	4752
D	71	#5	104'-4"	7726
T	79	#4	104'-3"	5501
DK1	72	#5	4'-9"	357
DK2	162	#5	4'-2"	704
DS1	90	#4	3'-10"	230
DS2	108	#4	7'-6"	541
DN1	2	#8	59'-9"	319
DN2	27	#8	6'-8"	481
F	624	#5	1'-0"	651
H	140	#4	6'-7"	616
P	278	#5	5'-3"	1522
2 Skewed Ends				Lbs. 6304
Reinf Steel				Lbs. 37549
Concrete				CY. 192.11
54' Beams				L.F. 1031.67
Conc. Surf. Treatment				S.Y. 698

2 SKEWED ENDS

Bars	No	Size	Length	Weight
AA1-27	108	#5	30'-2" Avg	3398
AA28	20	#5	5'-3"	110
BB1-26	52	#4	29'-9" Avg	1033
CC1-26	52	#5	30'-2" Avg	1636
G	2	#5	60'-11"	127
Total				Lbs. 6304

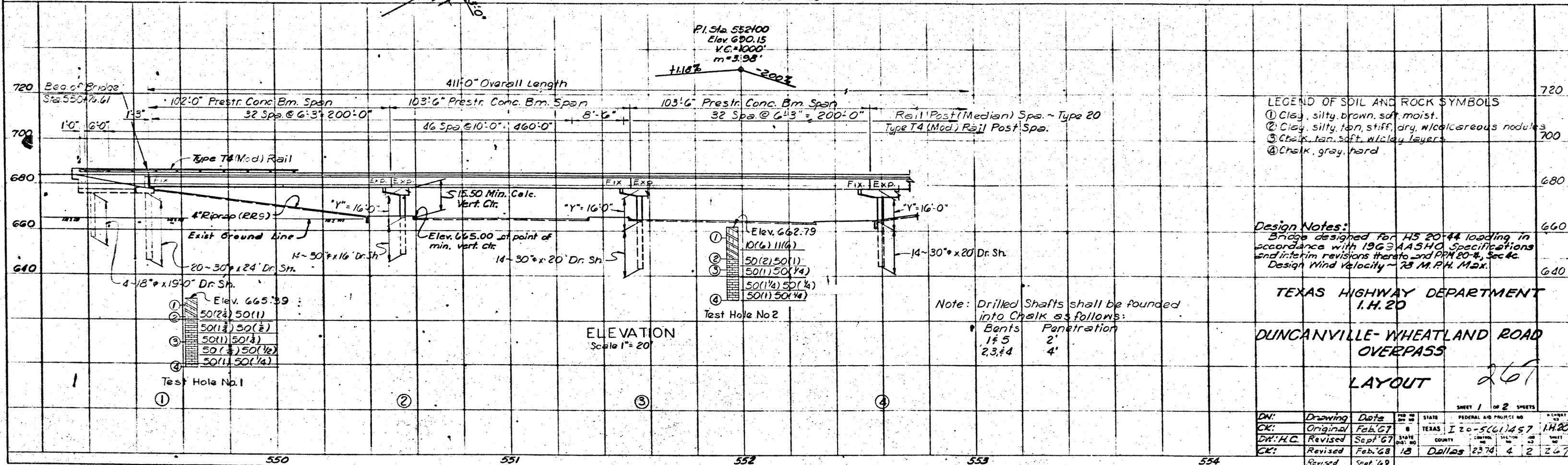
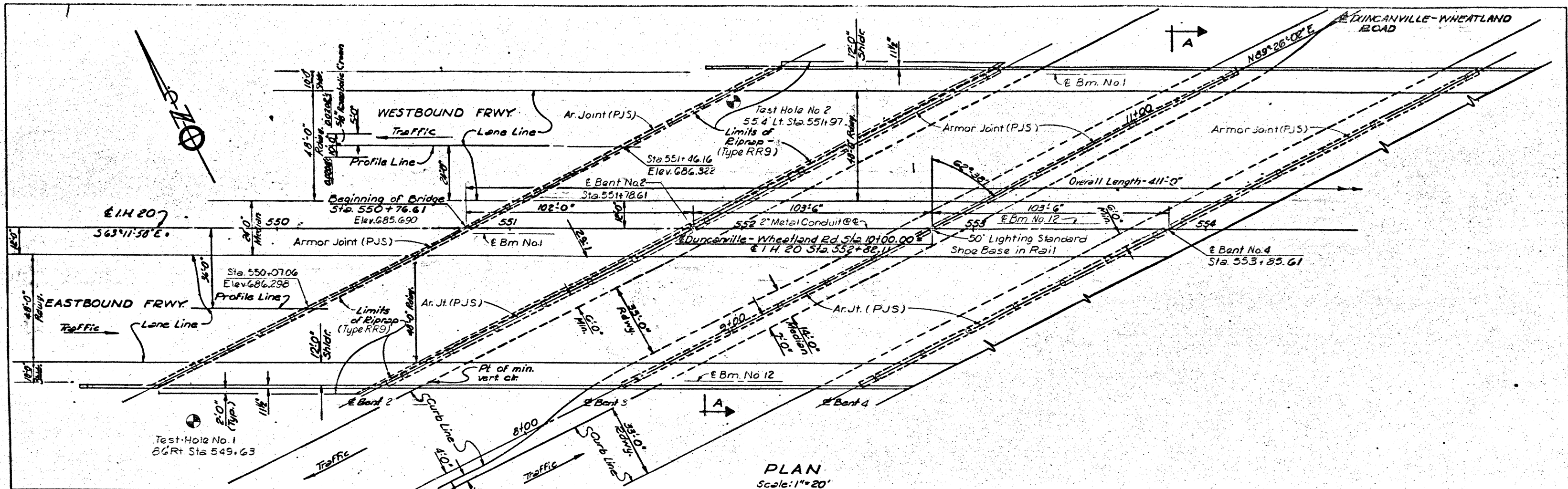
GENERAL NOTES:
Designed according to A.A.S.H.O. 1965
Standard & Interim Specifications.
All cast-in-place Concrete to be Class C.
Design for 1200 p.s.i.
*Includes on 20 dia. lap (1'-0" Min.)

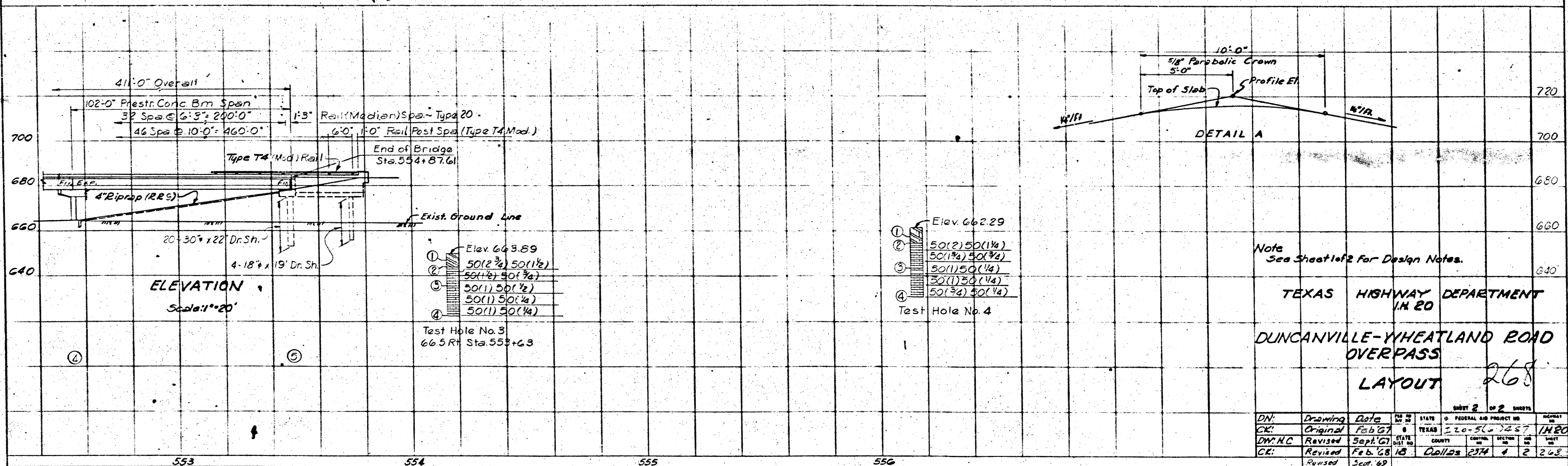
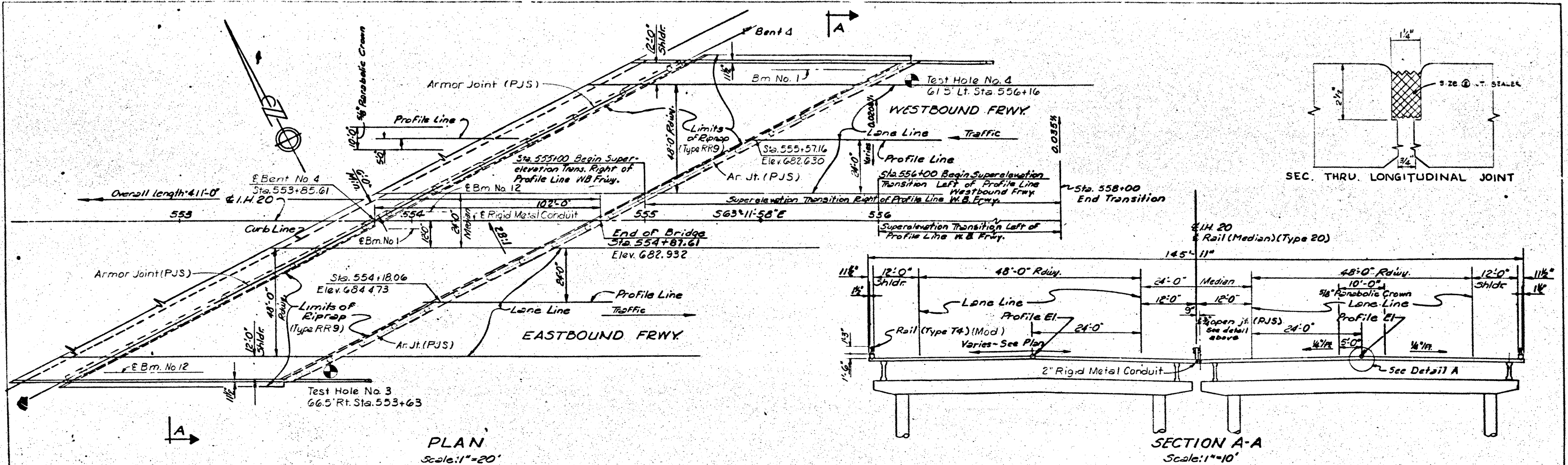
FIELD CHANGE 14

Revised Sidewalk Depth 9'-5-74
HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
103'-6" PRESTRESSED CONC.
BEAM SPAN 256A
44'-0" ROADWAY 27'-44" SKEW
OLD HICKORY TRAIL ROAD U'PASS

ORIGINAL DRAWING DATE: FEB., 1969	STATE: TEXAS	FEDERAL AID PROJECT: 120-5(61)457	SHEET: 266
DESIGNER: HJD	COUNTY: DALLAS	SECTION: 2374.4	DATE: 11/7





ESTIMATED QUANTITIES FOR DUNCANVILLE WHEATLAND ROAD OVERPASS														
Item	Uncl. Str. Excav.	Drilled Shafts		Class "C" Concrete			Prestr. Conc. Bms.	Riprap Class "B" Concrete	Reinf. Steel	Str. Stl. (Shoe & Armor Jt.)	Type T-4 (Mod) Rail	Type 20 (Med) Rail	Concrete Surface Treat.	2" Rigid Metal Conduit
		18" +	30" +	Abuts.	Bents	Slabs	54"							
		C.Y.	L.F.	C.Y.	C.Y.	C.Y.	L.F.	C.Y.	Lb.	Lb.	L.F.	L.F.	S.Y.	L.F.
2 ~ Abutment Bents	388	152	920	317.0				439	41,080	5,773	126		24	
6 ~ Interior Bents			784		423.6				99,978					
4 ~ 102'-0" Prestr. Conc. Bm. Spans						769.8	4,880.00		198,724	11,546	408	204	3,332	204
4 ~ 103'-6" Prestr. Conc. Bm. Spans						779.6	4,952.00		200,588	11,546	414	207	3,381	207
Totals	388	152	1,704	317.0	423.6	1,549.4	9,832.00	439	540,370	28,865	948	411	6,737	411

BEARING SEAT ELEVATIONS FOR WESTBOUND FREEWAY													
Bent	Bearing	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5	Beam #6	Beam #7	Beam #8	Beam #9	Beam #10	Beam #11	Beam #12
* 1		680.179	680.359	680.535	680.705	680.872	681.027	681.058	680.962	680.854	680.741	680.624	680.502
* 2	Back	679.517	679.735	679.948	680.157	680.361	680.554	680.623	680.565	680.495	680.420	680.341	680.257
	Forward	679.508	679.726	679.940	680.149	680.353	680.547	680.616	680.559	680.489	680.415	680.336	680.252
* 3	Back	678.550	678.807	679.059	679.307	679.551	679.783	679.891	679.873	679.841	679.806	679.766	679.721
	Forward	678.536	678.794	679.047	679.295	679.539	679.771	679.880	679.862	679.831	679.796	679.757	679.712
* 4	Back	677.242	677.538	677.830	678.117	678.400	678.671	678.818	678.839	678.847	678.851	678.850	678.844
	Forward	677.223	677.520	677.813	678.101	678.384	678.655	678.803	678.825	678.833	678.837	678.837	678.832
* 5		675.548	675.956	676.348	676.674	676.995	677.304	677.490	677.579	677.648	677.685	677.690	677.708

BEARING SEAT ELEVATIONS FOR EASTBOUND FREEWAY													
Bent	Bearing	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5	Beam #6	Beam #7	Beam #8	Beam #9	Beam #10	Beam #11	Beam #12
* 1		680.504	680.631	680.753	680.872	680.985	681.086	681.060	680.910	680.749	680.583	680.413	680.239
* 2	Back	680.285	680.450	680.611	680.767	680.918	681.057	681.069	680.957	680.834	680.706	680.574	680.437
	Forward	680.281	680.447	680.607	680.764	680.916	681.055	681.067	680.956	680.833	680.706	680.574	680.438
* 3	Back	679.777	679.981	680.181	680.376	680.566	680.744	680.795	680.723	680.639	680.550	680.457	680.360
	Forward	679.769	679.973	680.173	680.369	680.560	680.738	680.790	680.718	680.634	680.546	680.454	680.357
* 4	Back	678.928	679.171	679.410	679.644	679.874	680.091	680.182	680.148	680.103	680.054	680.000	679.942
	Forward	678.915	679.159	679.399	679.633	679.864	680.081	680.172	680.139	680.095	680.046	679.993	679.935
* 5		677.818	678.100	678.377	678.650	678.918	679.173	679.302	679.307	679.301	679.290	679.274	679.255

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

ESTIMATED QUANTITIES
AND 269
BEARING SEAT ELEVATIONS
DUNCANVILLE WHEATLAND
ROAD OVERPASS

ORIGINAL DRAWING DATE: March, 1970

STATE DISTRICT REGION
18 6 I20-5(61)257

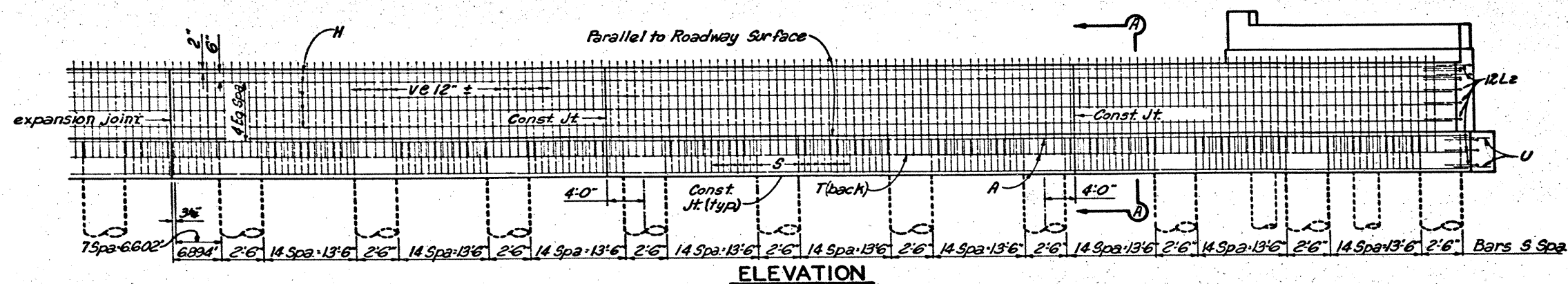
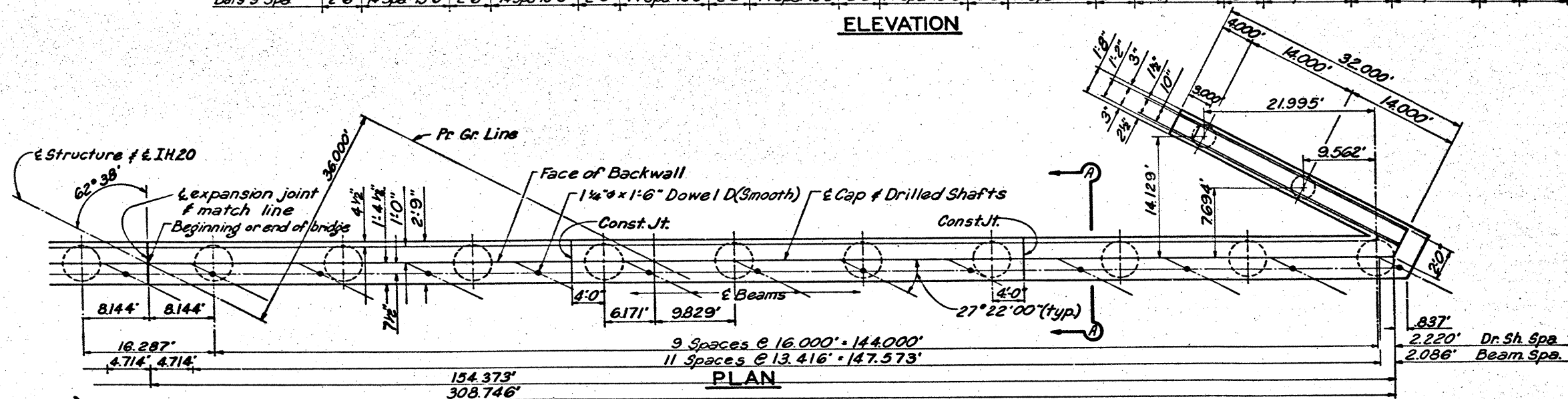
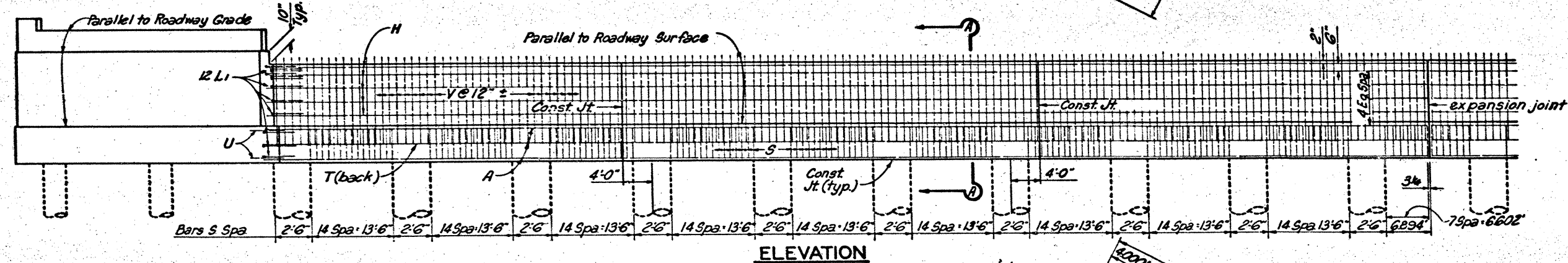
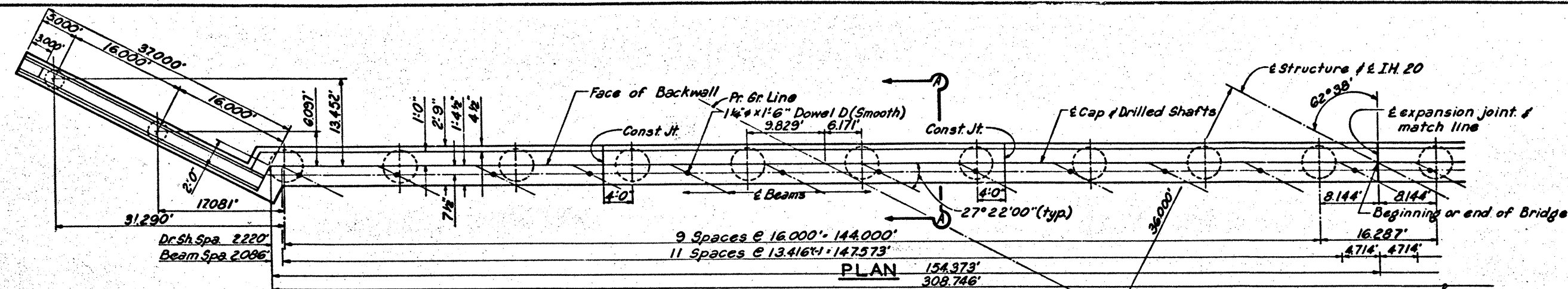
FEDERAL AID PROJECT SHEET
269

REVISIONS

COUNTY
Dallas

CONTROL SECTION JOB
2374 4 2

DATE
12/20



BILL OF REINFORCING STEEL AND ESTIMATED QUANTITIES

Bar	Na	Size	Length	Weight
A	10	"11	"163.4"	8678
D	24	1 1/4"	1' 6"	150
H	20	"5	"156.6"	3265
L1	12	"6	5'10"	105
L2	12	"6	5' 8"	102
S	293	"4	9'0"	1762
T	2	"5	"157.4"	328
U	4	"6	11' 1"	67
V	306	"4	12' 9"	2606
wH1	18	"6	36' 9"	994
wH2	2	"5	36' 9"	77
wH3	6	"5	2' 9"	17
wH4	18	"6	31' 9"	858
wH5	2	"5	31' 9"	66
wU	32	"5	1' 8"	56
wV1	122	"5	7' 3"	923
wV2	72	"5	5' 7"	420
wVs	8	"5	7' 11"	66

Reinforcing Steel	Lb	29540
Class "C" Concrete	CY	1585
Uncl. Struct. Excavation	CY	194
° Str. Stl. (Shoe & Ar. Ht.)	Lb	5774

- * Includes Two 35 Dia. Laps.
- * Includes Two 20 Dia. Laps.
- * Quantity shown for one Armor Angle to be placed in approach Slab

HS 20 LOADING SHEET 1 OF 2

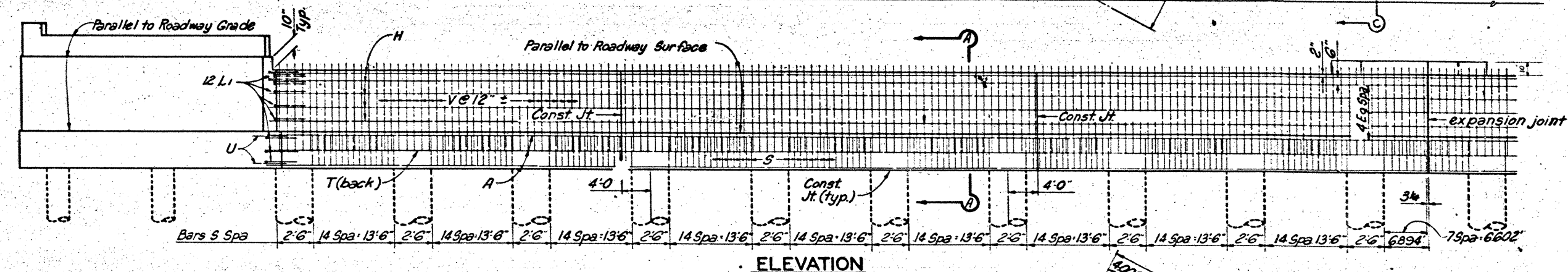
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

ABUTMENTS

270

DUNCANVILLE-WHEATLAND ROAD OVERPASS

ORIGINAL DRAWING DATE: <u>JANUARY 70</u>		STATE	FEDERAL	FEDERAL AID PROJECT		SHEET
DN.: <u>-MFS</u> CK.: <u>-MSJ</u> DW.: <u>-RGR</u> CK.: <u>-MGA</u>		REVISONS		18	6	I 20-5(61)257 274
COUNTY				CONTROL	SECTION	JOB
DALLAS				2974	4	2 IH-20

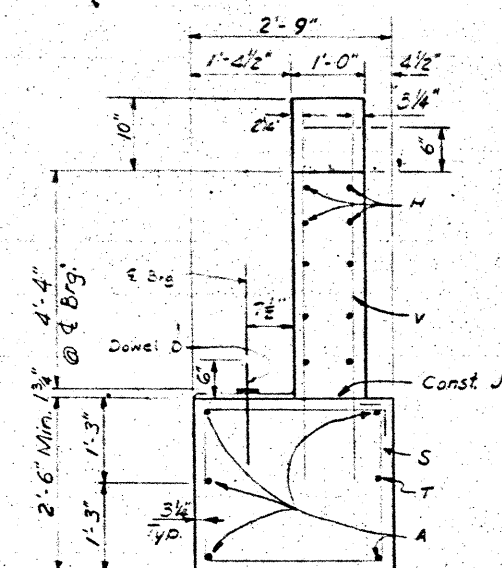
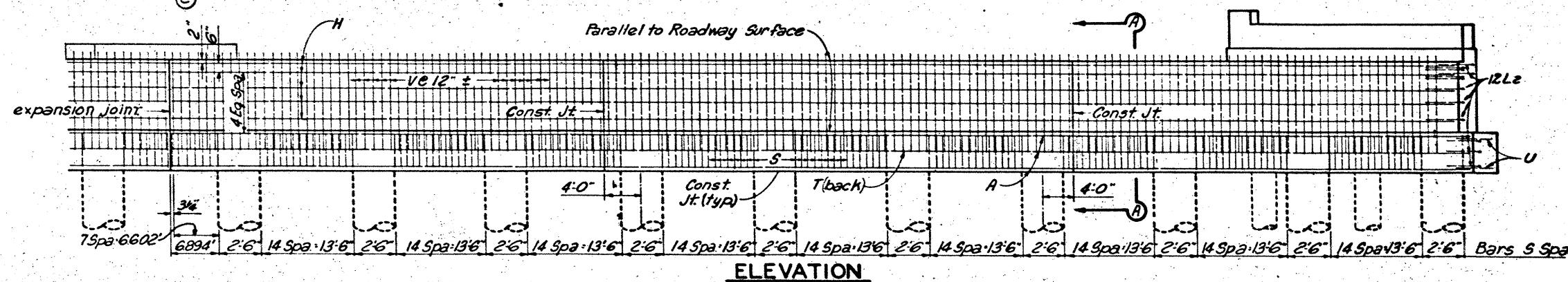
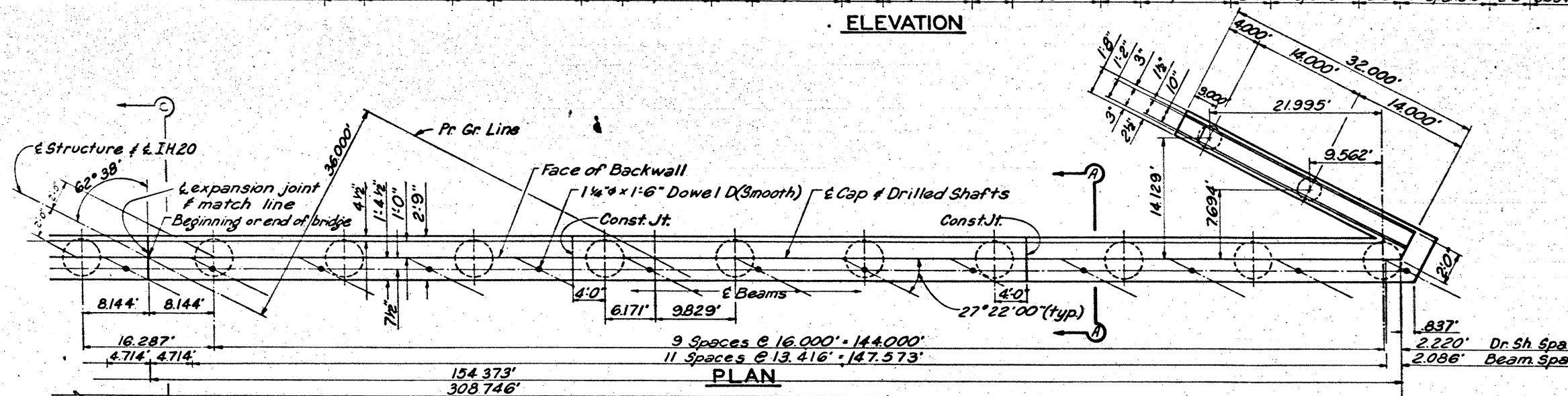


BILL OF REINFORCING STEEL AND ESTIMATED QUANTITIES

Bar	No.	Size	Length	Weight
A	10	"11	*163' 4"	8678
D	24	1 1/2"	1' 6"	150
H	20	*5	*136' 6"	3265
L1	12	*6	5' 10"	105
L2	12	*6	5' 8"	102
S	293	*4	9' 0"	1762
T	2	*5	*157' 4"	328
U	4	*6	11' 1"	67
V	306	*4	12' 9"	2606
wH1	18	*6	36' 9"	994
wH2	2	*5	36' 9"	77
wH3	6	*5	2' 9"	17
wH4	18	*6	31' 9"	858
wH5	2	*5	31' 9"	66
wU	32	*5	1' 8"	56
wV1	122	*5	7' 3"	929
wV2	72	*5	5' 7"	420
wV3	8	*5	7' 11"	66

Reinforcing Steel	Lb	29540
Class "C" Concrete	CY	158.8
Uncl. Struct. Excavation	CY	194
° Str. Stl. (Shoe & Ar. Jt.)	Lb	5774

- * Includes Two 35 Dia Laps.
- * Includes Two 20 Dia Laps.
- o Quantity shown for one Armor Angle to be placed in approach Slab



SEC CC

HS 20 LOADING SHEET 1 OF 2

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

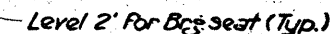
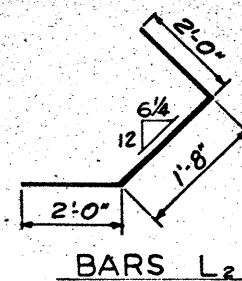
ABUTMENTS *cont*

FIELD CHANGE * 2 2 10

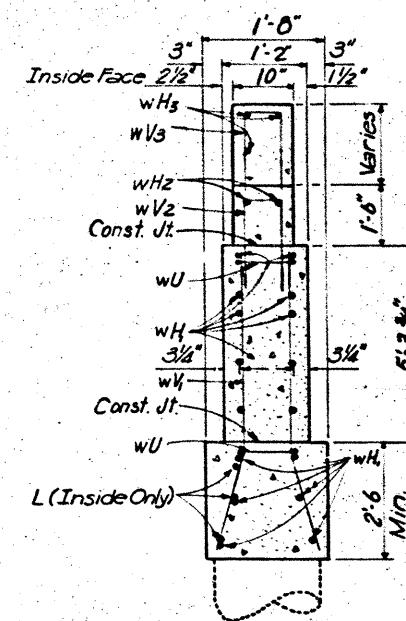
DUNCANVILLE - WHEATLAND ROAD

OVERPASS

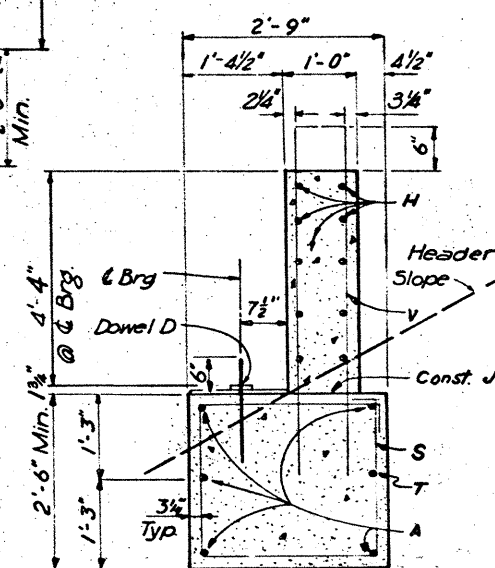
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DR. <u>MES</u>	REVISIONS	<u>18</u>	<u>6</u>	<u>I 20-5(61)457</u>		<u>270</u>
CR. <u>M6J</u>		COUNTRY		CENTRAL SECTION	JOB	INDICATE
DR. <u>RDR</u>		<u>DALLAS</u>		<u>2926</u>	<u>2</u>	<u>IN-20</u>
CR. <u>M6J</u>						



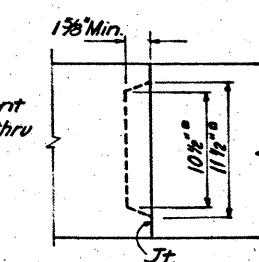
GENERAL NOTES:
Designed according to A.A.S.H.O. 1969 Standard Specifications and complies with R.P.M. 20-4, Sec. 4c.
Chamfer all exposed corners $\frac{3}{4}$ " unless otherwise noted.
Shaft Load = 60 Tons/Dr. Shaft.
Payment for furnishing and placing plastic water-stops, asphalt and preformed non-bit fiber material will be included in the price bid for Class "C" Concrete.



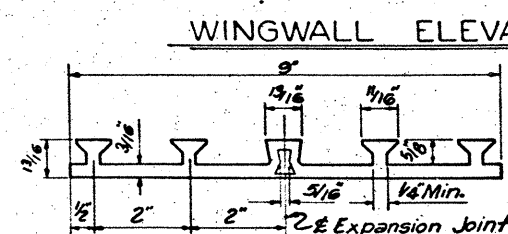
SEC. B B



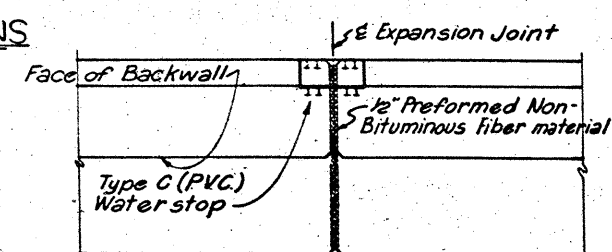
S&C A A



CONST JT. DETAIL

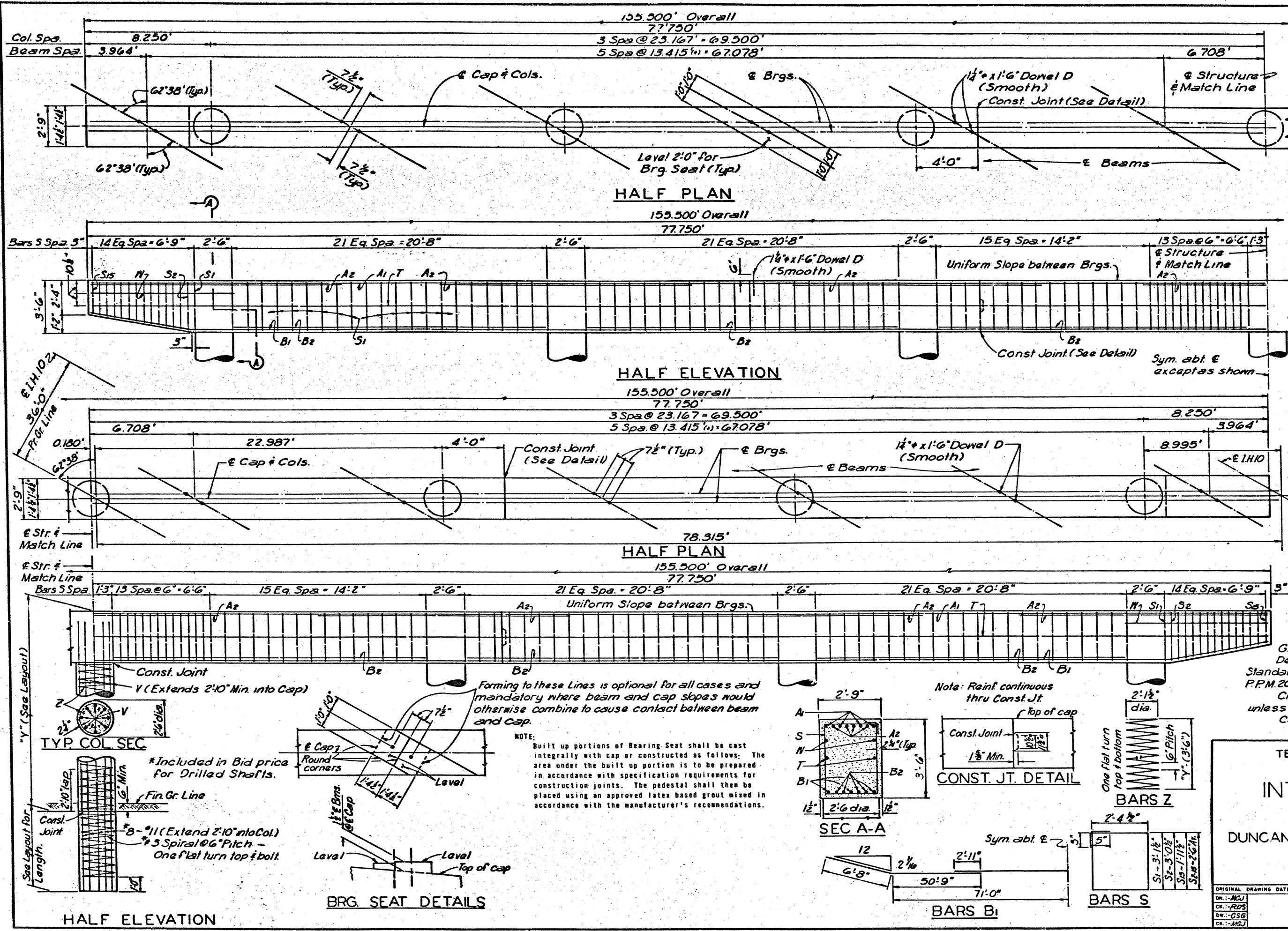


**TYPE C
PVC WATERSTOP**



PLAN OF EXPANSION JOINT IN ABUTMENT

ORIGINAL DRAWING DATE <u>JAN 1970</u>		STATE DISTRICT	FEDERAL NUMBER	FEDERAL AID PROJECT		SHEET
EN - <u>MES</u>	REVISIONS	18	6	I 20-5601-57		271
EN - <u>MGJ</u>		COUNTY		CENTER	SECTION	JOB
EN - <u>NOR</u>		Dallas		2378	4	2
EN - <u>MGJ</u>						



BILL OF CONSTANT REINFORCING STEEL				
Bar	No.	Size	Length	Weight
A1	4	#11	16'3.5"	5473
A2	28	#11	16'6"	2453
B1	3	#11	16'0.0"	2530
B2	24	#10	20'8"	2134
D	24	#14	1'6"	150
T	2	#5	158'4"	330
N	4	#5	9'6"	40
S1	148	#5	11'10"	1827
S2-S5	28	#5	10'7 1/4"	309
Total Weight (Lb.)				13,268

BILL OF VARIABLE REINFORCING STEEL				
Bar	No.	Size	Length	Weight
7 Bars 2 #3 Spiral	56	#3	56' - 29'	
12	127	#5	11'4"	2158
13	141	#5	12'4"	2348
14	154	#5	13'4"	2539
15	167	#5	14'4"	2729
16	181	#5	15'4"	2919
17	194	#5	16'4"	3110
18	207	#5	17'4"	3300
Total Weight (Lb.)				2494

ESTIMATED QUANTITIES		
Bar	Reinf. Steel Lb.	Class C Conc. C.Y.
12	13762	65.5
13	15987	66.8
14	16213	68.0
15	16438	69.3
16	16663	70.6
17	16889	71.9
18	17114	73.2

GENERAL NOTES:
Designed according to AASHTO, 1969 Standard Specifications and complies with P.P.M. 20-4, Sec. 4c.
Chamfer all exposed corners 3/4" unless otherwise noted.
Calculated Dr. Shaft Load: 135 TYP. SH.
HS 20 LOADING

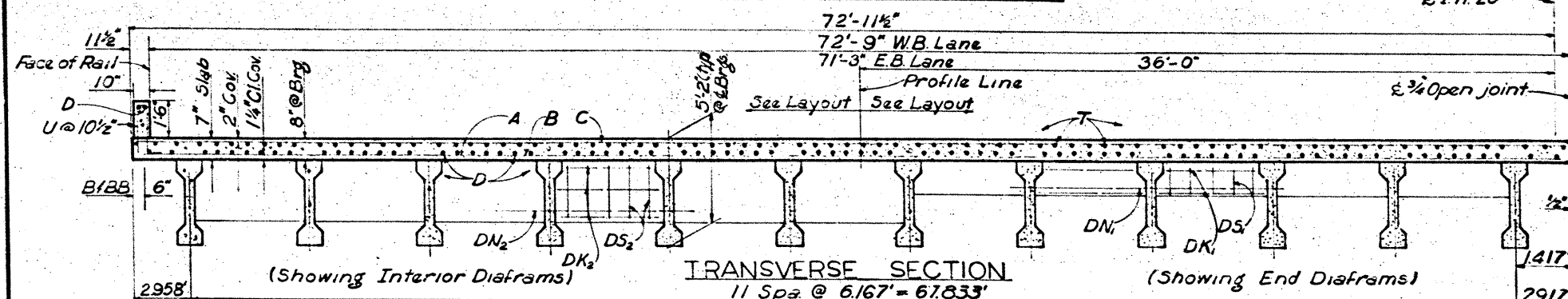
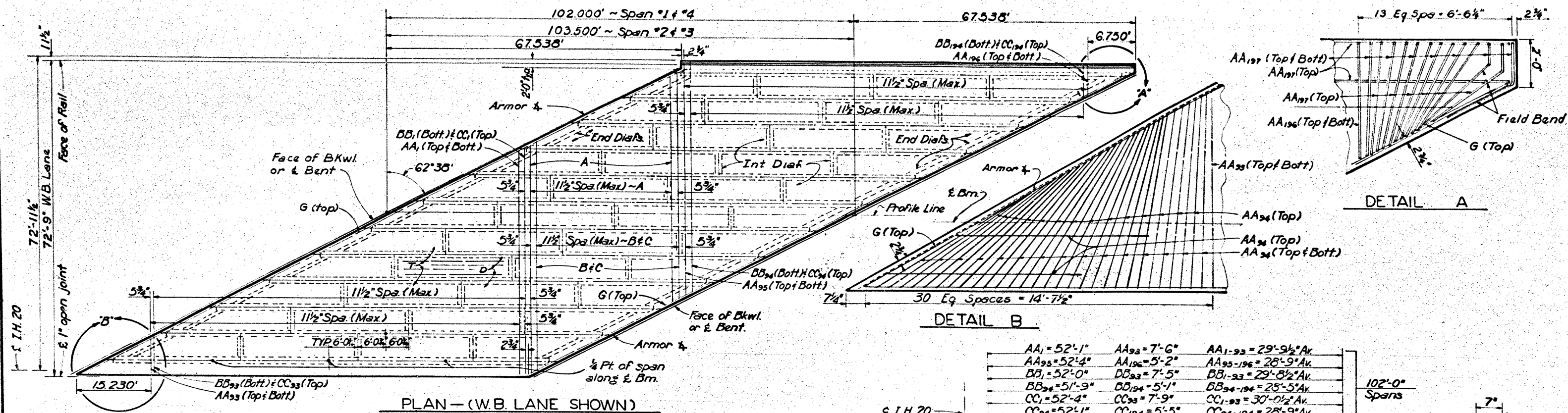
**TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION**

INTERIOR BENTS

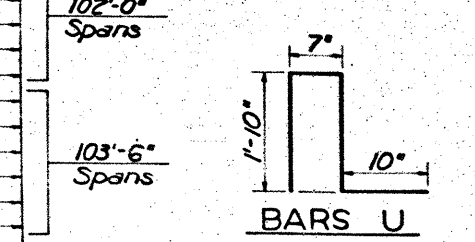
272

DUNCANVILLE - WHEATLAND ROAD OVERPASS

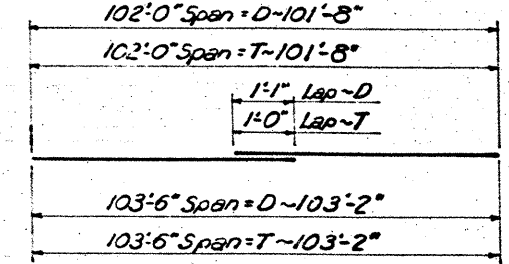
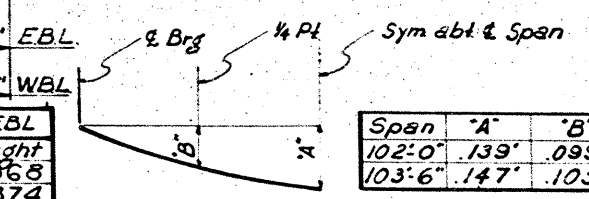
ORIGINAL DRAWING DATE: FEB. 70	STATE FEDERAL PROJECT: 18 6 I 20-5(61)457	SHEET: 272
REVISIONS:	COUNTY: DALLAS	SECTION: 2374
DATE: 10-1-70	JOB: 4	BY: JH. 20



AA ₁ = 52'-1"	AA ₉₃ = 7'-6"	AA ₁₋₉₃ = 29'-9 1/2" Av.
AA ₉₅ = 52'-4"	AA ₁₉₆ = 5'-2"	AA ₉₅₋₁₉₆ = 28'-9" Av.
BB ₁ = 52'-0"	BB ₉₃ = 7'-5"	BB ₁₋₉₃ = 29'-8 1/2" Av.
BB ₉₄ = 51'-9"	BB ₁₉₄ = 5'-1"	BB ₉₄₋₁₉₄ = 28'-5" Av.
CC ₁ = 52'-4"	CC ₉₃ = 7'-9"	CC ₁₋₉₃ = 30'-0 1/2" Av.
CC ₉₄ = 52'-1"	CC ₁₉₄ = 5'-5"	CC ₉₄₋₁₉₄ = 28'-9" Av.
AA ₁ = 53'-0"	AA ₉₃ = 7'-6"	AA ₁₋₉₃ = 30'-3" Av.
AA ₉₅ = 53'-3"	AA ₁₉₆ = 5'-2"	AA ₉₅₋₁₉₆ = 29'-2 1/2" Av.
BB ₁ = 52'-11"	BB ₉₃ = 7'-5"	BB ₁₋₉₃ = 30'-2" Av.
BB ₉₄ = 52'-8"	BB ₁₉₄ = 5'-1"	BB ₉₄₋₁₉₄ = 28'-10 1/2" Av.
CC ₁ = 53'-3"	CC ₉₃ = 7'-9"	CC ₁₋₉₃ = 30'-6" Av.
CC ₉₄ = 53'-0"	CC ₁₉₄ = 5'-5"	CC ₉₄₋₁₉₄ = 29'-2 1/2" Av.



BARS AA, BB & CC



Bar	No.	Size	Length	Weight
AA ₁₋₉₃	186	5	29'-10 1/4"	5,788
BB ₁₋₉₃	93	4	29'-9" Av.	1,848
CC ₁₋₉₃	93	5	30'-1" Av.	2,918
A	76	5	52'-5"	4,155
B	38	4	52'-5"	1,331
C	38	5	52'-5"	2,078
D	83	5	102'-9"	8,895
T	83	4	102'-8"	5,692
U	117	5	5'-1"	620
AA ₉₅₋₁₉₆	204	5	28'-9" Av.	6,117
BB ₉₄₋₁₉₄	101	4	28'-5" Av.	1,917
CC ₉₄₋₁₉₄	101	5	28'-9" Av.	3,029
DK ₁	88	5	9'-11"	910
DK ₂	198	5	4'-7"	946
DN ₁	2	8	149'-7"	799
DN ₂	33	8	7'-1"	624
DS ₁	220	4	4'-8"	686
DS ₂	165	4	7'-6"	827
G	2	5	158'-2"	330
AA ₉₄	46	5	7'-5"	356
AA ₁₉₇	22	5	5'-1"	117
Reinforcing Steel	Lb.			49,983
Class "C" Concrete	C.Y.			194.1
54" Beam	L.F.			1220.00
Str. Stl. (Shoe & Ar. Jt.)	Lb.			2917

Bar	No.	Size	Length	Weight
AA ₁₋₉₃	186	5	30'-5" Av.	5,868
BB ₁₋₉₃	93	4	30'-2" Av.	1,874
CC ₁₋₉₃	93	5	30'-6" Av.	2,958
A	74	5	53'-2"	4,104
B	37	4	53'-2"	1,314
C	37	5	53'-2"	2,052
D	83	5	104'-3"	9,025
T	83	4	104'-2"	5,776
U	119	5	5'-1"	631
AA ₉₅₋₁₉₆	204	5	29'-3" Av.	6,224
BB ₉₄₋₁₉₄	101	4	28'-11" Av.	1,951
CC ₉₄₋₁₉₄	101	5	29'-3" Av.	3,081
DK ₁	88	5	9'-11"	910
DK ₂	198	5	4'-7"	946
DN ₁	2	8	149'-7"	799
DN ₂	33	8	7'-1"	624
DS ₁	220	4	4'-8"	686
DS ₂	165	4	7'-6"	827
G	2	5	158'-2"	330
AA ₉₄	46	5	7'-5"	356
AA ₁₉₇	22	5	5'-1"	117
Reinforcing Steel	Lb.			50,453
Class "C" Concrete	C.Y.			196.6
54" Beam	L.F.			1238.00
Str. Stl. (Shoe & Ar. Jt.)	Lb.			2917

Bar	No.	Size	Length	Weight
AA ₁₋₉₃	186	5	29'-10 1/4"	5,788
BB ₁₋₉₃	93	4	29'-9" Av.	1,848
CC ₁₋₉₃	93	5	30'-1" Av.	2,918
A	70	5	52'-5"	3,827
B	35	4	52'-5"	1,226
C	35	5	52'-5"	1,914
D	83	5	102'-9"	8,895
T	83	4	102'-8"	5,692
U	117	5	5'-1"	620
AA ₉₅₋₁₉₆	204	5	28'-9" Av.	6,117
BB ₉₄₋₁₉₄	101	4	28'-5" Av.	1,917
CC ₉₄₋₁₉₄	101	5	28'-9" Av.	3,029
DK ₁	88	5	9'-11"	910
DK ₂	198	5	4'-7"	946
DN ₁	2	8	149'-7"	799
DN ₂	33	8	7'-1"	624
DS ₁	220	4	4'-8"	686
DS ₂	165	4	7'-6"	827
G	2	5	154'-11"	323
AA ₉₄	46	5	7'-5"	356
AA ₁₉₇	22	5	5'-1"	117
Reinforcing Steel	Lb.			49,379
Class "C" Concrete	C.Y.			190.8
54" Beam	L.F.			1220.00
Str. Stl. (Shoe & Ar. Jt.)	Lb.			2856

Bar	No.	Size	Length	Weight
AA ₁₋₉₃	186	5	30'-5" Av.	5,868
BB ₁₋₉₃	93	4	30'-2" Av.	1,874
CC ₁₋₉₃	93	5	30'-6" Av.	2,958
A	68	5	53'-2"	3,771
B	34	4	53'-2"	1,208
C	34	5	53'-2"	1,886
D	83	5	104'-3"	9,025
T	83	4	104'-2"	5,776
U	119	5	5'-1"	631
AA ₉₅₋₁₉₆	204	5	29'-3" Av.	6,224
BB ₉₄₋₁₉₄	101	4	28'-11" Av.	1,951
CC ₉₄₋₁₉₄	101	5	29'-3" Av.	3,081
DK ₁	88	5	9'-11"	910
DK ₂	198	5	4'-7"	946
DN ₁	2	8	149'-7"	799
DN ₂	33	8	7'-1"	624
DS ₁	220	4	4'-8"	686
DS ₂	165	4	7'-6"	827
G	2	5	154'-11"	323
AA ₉₄	46	5	7'-5"	356
AA ₁₉₇	22	5	5'-1"	117
Reinforcing Steel	Lb.			49,841
Class "C" Concrete	C.Y.			193.2
54" Beam	L.F.			1238.00
Str. Stl. (Shoe & Ar. Jt.)	Lb.			2856

General Notes:
Designed according to AASHTO 1969 Standard Specifications and complies with PPM 26-4 Sec. 4C.
All cast-in-place Concrete to be Class "C".
Chamfer all exposed corners 1/4" unless otherwise noted.
Design $f_c = 1200$ psi.
Two slab construction joints, either normal to the structure center line or parallel with the slab ends, will be allowed in each span.

* Length includes 2-20 Dia. laps.
* Length includes 1-20 Dia. Lap (1'-0" Min.)
* Weight for 1 complete Armor Jt.

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

102'-0" & 103'-6" PRESTRESSED
CONCRETE BEAM SPANS

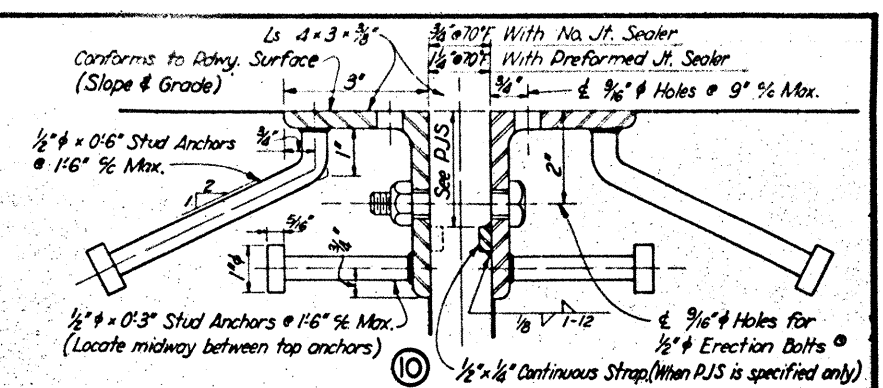
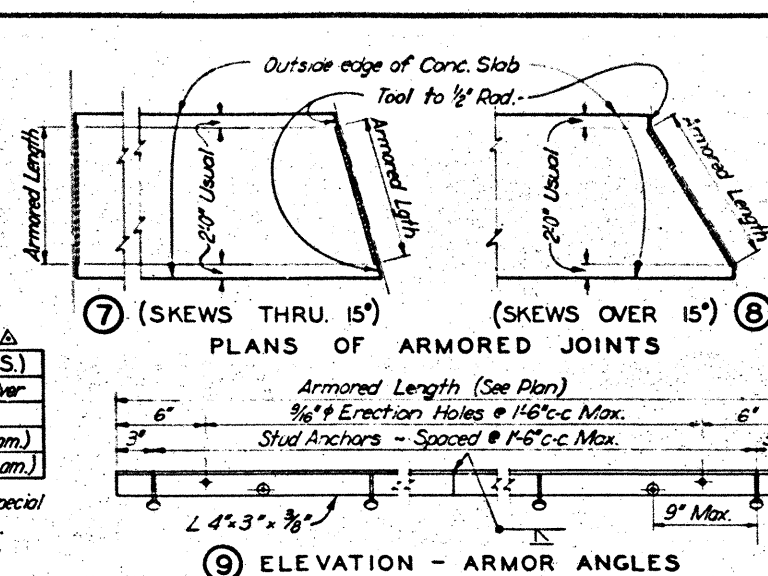
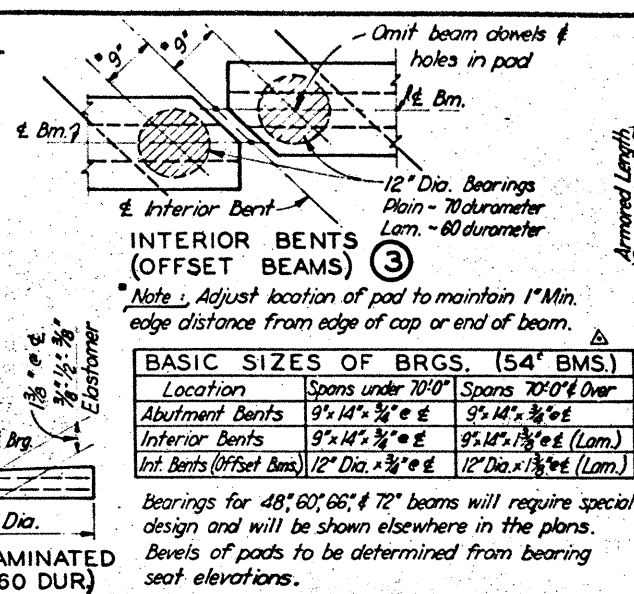
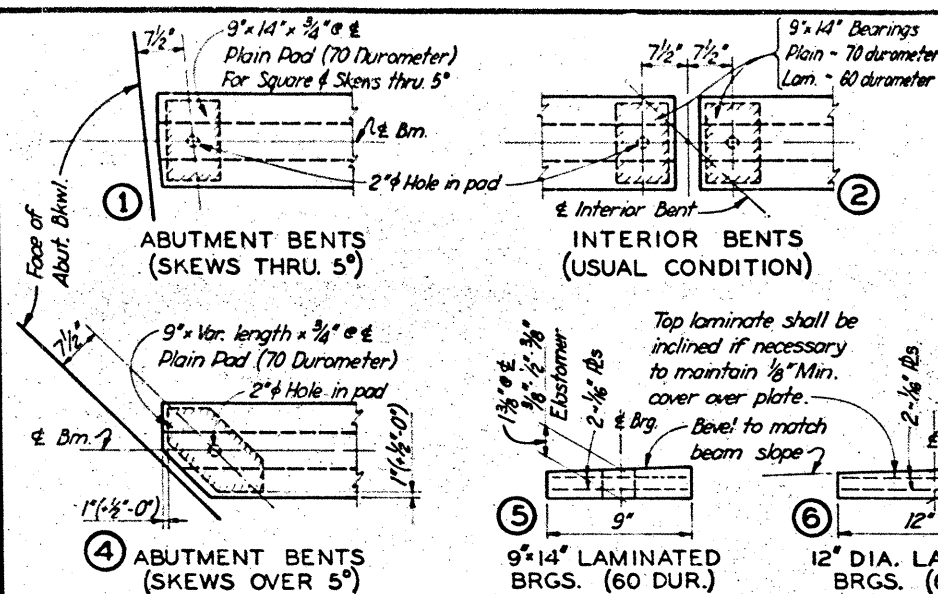
EBL & WBL 273

DUNCANVILLE WHEATLAND
ROAD OVERPASS

ORIGINAL DRAWING DATE: Feb ~ 1970

STATE: TEXAS FEDERAL AID PROJECT: 18 6 I-35-5(61) 457 273

COUNTY: DALLAS CONTROL SECTION: 2374 4 2 INHO

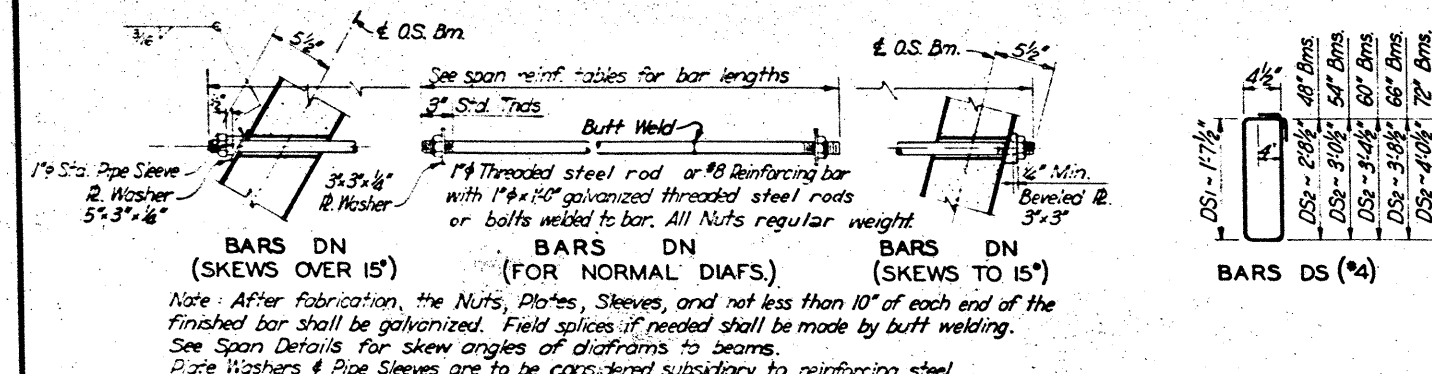
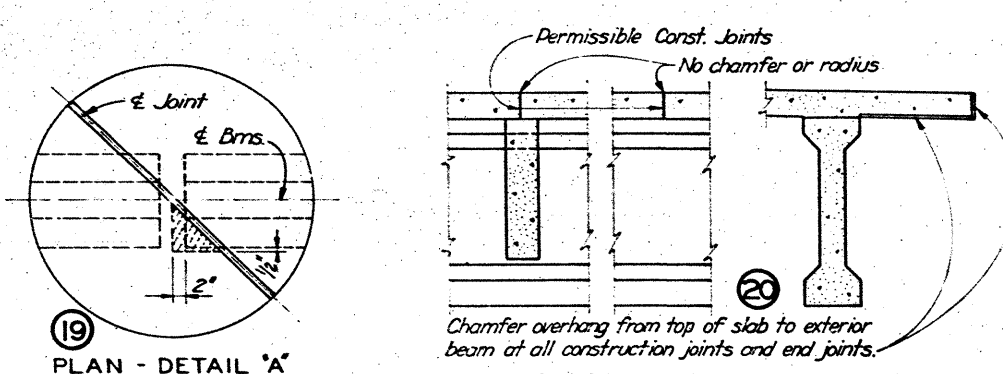
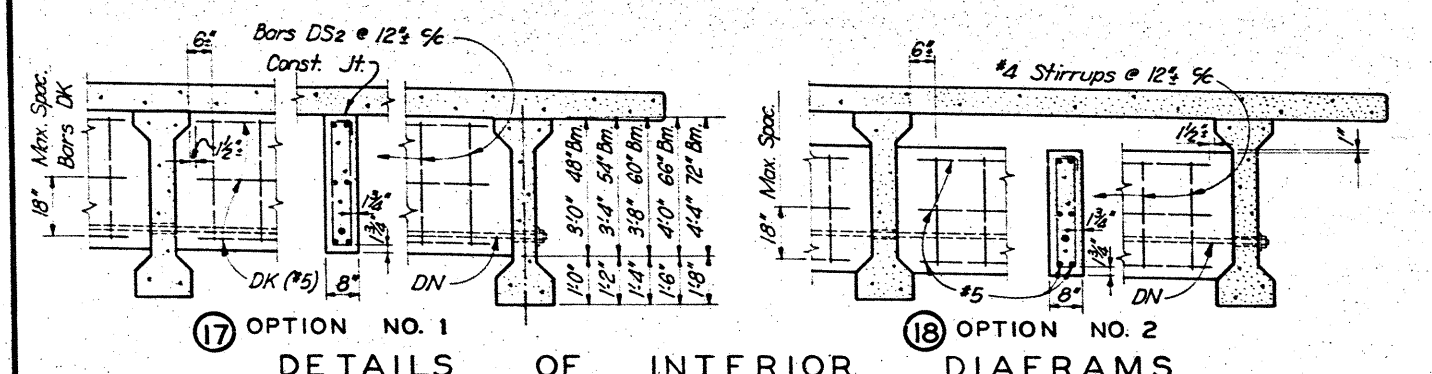
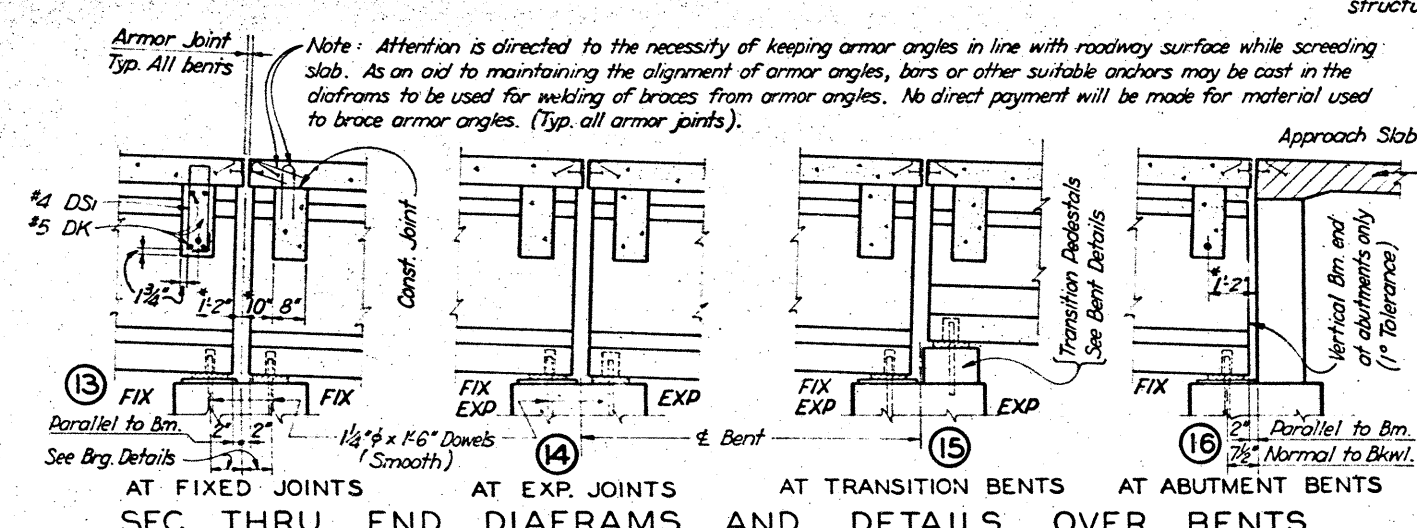
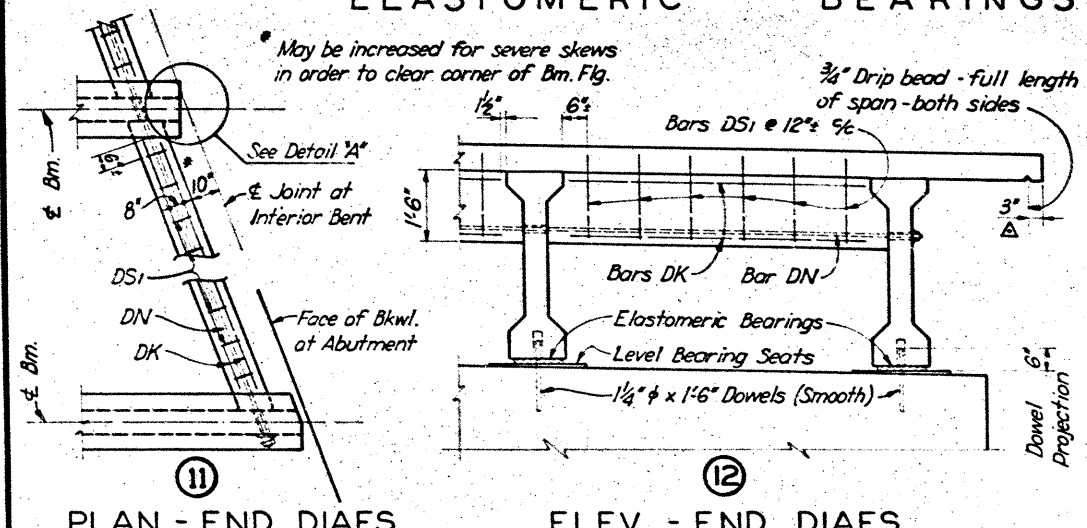


WT. OF STR. STEEL FOR ONE COMPLETE JOINT										
Roadway Width	Square Spans		15° Skew		30° Skew		45° Skew		Per Lin. Ft.	
	Lb	▲ Lb	Lb	▲ Lb	Lb	▲ Lb	Lb	▲ Lb	Lb	▲ Lb
26:0"	433	453	448	470	500	524	612	642		
34:0"	575	603	595	624	664	696	813	852		
40:0"	682	715	706	740	788	826	964	1010	17.84	18.70
42:0"	718	753	743	779	829	869	1015	1064		
44:0"	754	790	780	818	870	912	1066	1117		
48:0"	825	865	854	895	953	999	1167	1223		

GENERAL NOTES: ~

All cast-in-place concrete shall be Class C unless otherwise shown on span details.

No concrete shall be placed in the bridge slab until the diaphragms are in place, the diaphragm concrete has reached a minimum flexural strength of 300 psi, and the nuts of bars DN have subsequently been firmly tightened.



DUNCANVILLE WHEATLAND ROAD OVERPASS

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

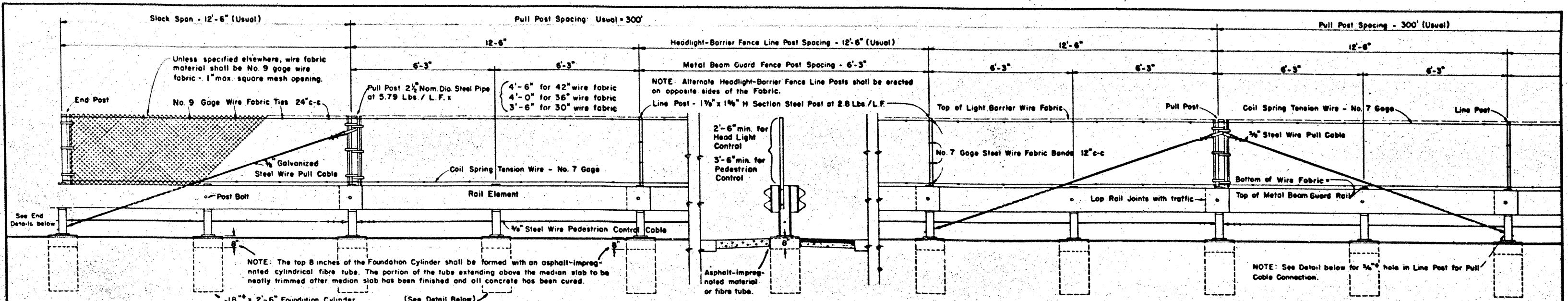
273B

PRESTRESSED CONCRETE
BEAM SPAN DETAILS

FOR USE WITH BMS. 48, 54, 60, 66, & 72

*(MOD.) Gp D

ORIGINAL DRAWING DATE	REVISED	STATE DISTRICT	FEDERAL DESIGN	FEDERAL AID PROJECT	SHEET
BR. TMD		18	6	I 20-5(4)1457	273B
CR. TMD	Rev 4-69 Δ				
DR. RNS	Mod 2-70 - Moved 1 1/2' & hole for DN bar			COUNTY	
CE. LAW				DALLAS	
				SHEET	273B
				JOB	273B
				WORK	273B

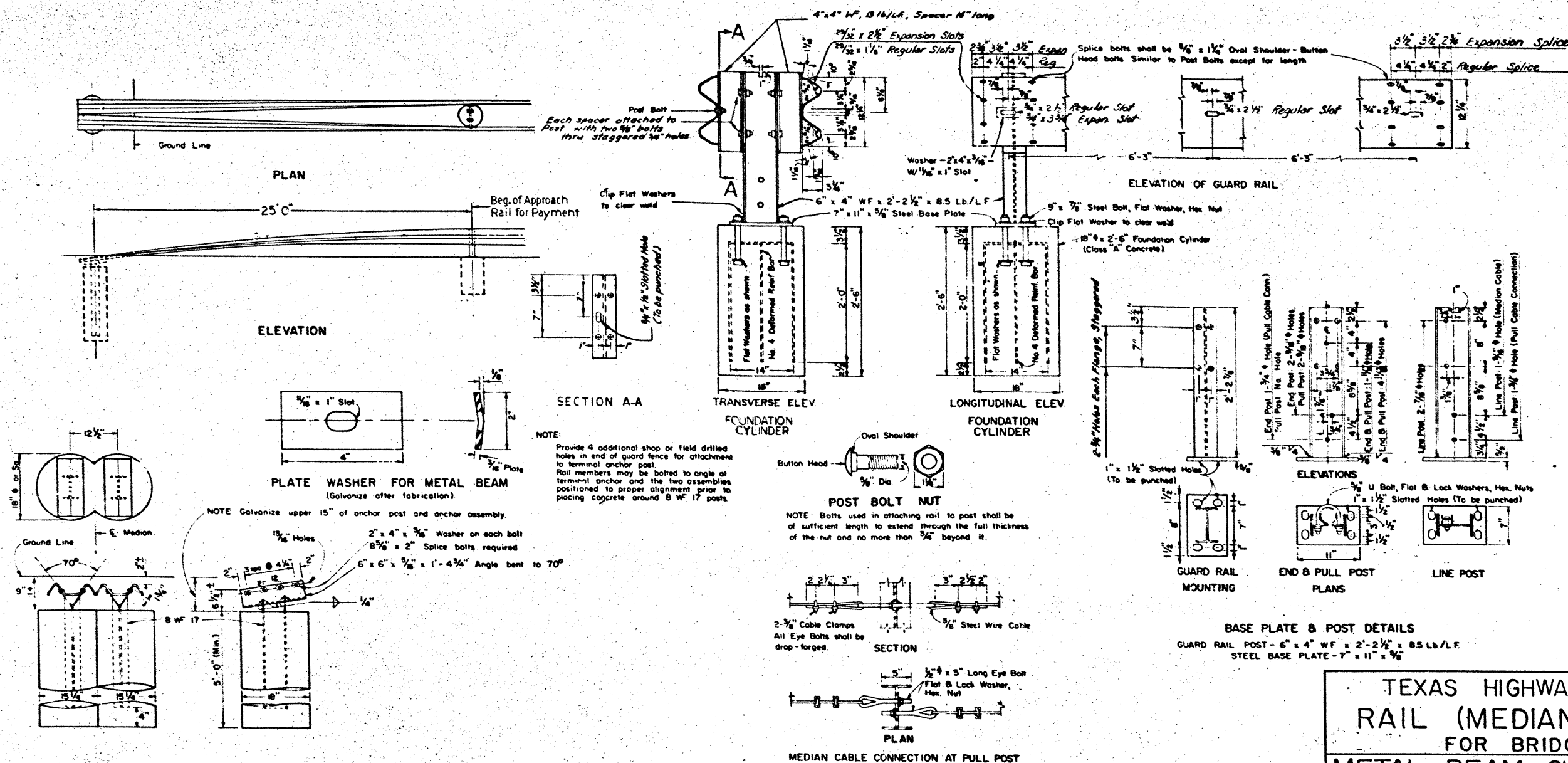


METAL BEAM GUARD FENCE (BARRIER) & CONTROL-OF-ACCESS HEADLIGHT-BARRIER FENCE

RAIL ELEMENT:
THICKNESS: FOR M.B.G.F. (BARRIER) SEE ITEM 560.
FOR RAIL (TYPE 20) ALUMINUM, NOM.
THICKNESS = 0.186".
FOR STEEL, NOM. THICKNESS = 0.1345"
EXCLUSIVE OF PROTECTIVE COATING.

GENERAL NOTES

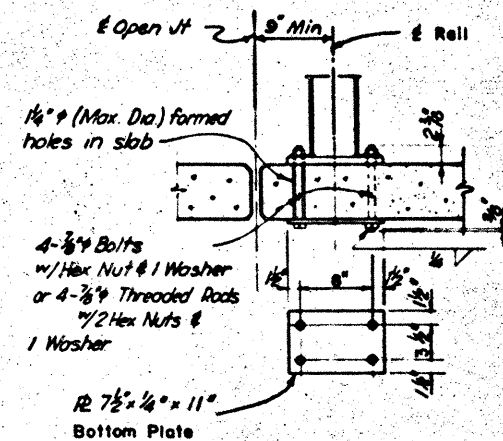
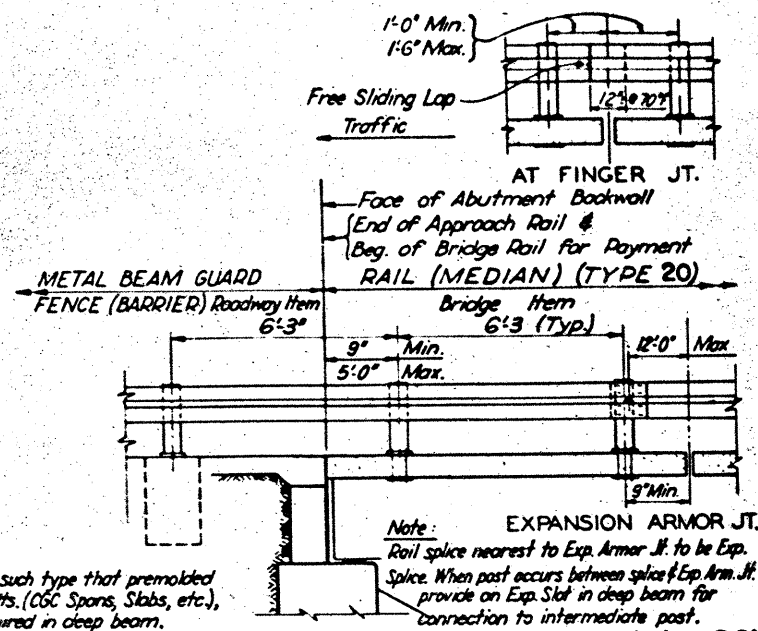
- BOLTS USED IN ATTACHING THE LINE AND PULL POSTS OF THE CONTROL-OF-ACCESS HEADLIGHT BARRIER FENCE TO THE METAL BEAM GUARD FENCE POSTS SHALL BE OF SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT, BUT NOT MORE THAN THE DIAMETER OF THE BOLT BEYOND IT.
- SECTIONS OF RAIL MEMBERS OF COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.
- AT THE OPTION OF THE CONTRACTOR, THE RAIL ELEMENT FOR THE GUARD FENCE MAY BE FURNISHED IN 25 FOOT LENGTHS, WITH POST BOLT SLOTS FOR 5/8" DIAMETER BOLT ANCHORAGE TO INTERMEDIATE POSTS.
- ALL STEEL FITTINGS SHALL BE GALVANIZED.
- A 3/8" PEDESTRIAN CONTROL CABLE SHALL BE PLACED THROUGH THE POSTS AS INDICATED UNLESS OTHERWISE SPECIFIED.
- THE TYPE OF END TREATMENT SHOWN SHALL BE USED UNLESS OTHERWISE SHOWN ON THE PLANS.
- FOR CONTROL OF ACCESS HEADLIGHT BARRIER FENCE DETAILS, SEE STANDARD CA HBF-07.
- ALL ANCHORAGE PROVISIONS INCLUDING BOLTS, NUTS AND WASHERS ARE CONSIDERED AS PARTS OF THE RAIL FOR PAYMENT.
- AT EXPANSION SPLICES, TIGHTEN BOLTS, BACK OFF ONE HALF TURN AND BURR THREADS.
- APPROACH POSTS SHALL BE SET VERTICAL. BRIDGE POSTS SHALL BE SET PERPENDICULAR TO PROFILE GRADE AND CROSS SLOPE OF DECK.
- BRIDGE POSTS SHALL BE SEATED ON ELASTOMERIC PADS 7"x11"x1/16". ADDITIONAL PADS OR HALF PADS MAY BE USED IN SHIMMING FOR ALIGNMENT. POST HEIGHT SHOWN WILL INCREASE BY THE THICKNESS OF THE PAD. FOR RAILS ON HORIZONTAL CURVES FABRICATE OR FURNISH AS FOLLOWS:
THRU 150' RAD. - FABRICATE TO THE REQUIRED RADIUS.
OVER 150' RAD. - FURNISH IN STRAIGHT SECTIONS.



TEXAS HIGHWAY DEPARTMENT
RAIL (MEDIAN) (TYPE 20)
FOR BRIDGES
METAL BEAM GUARD FENCE
(BARRIER) (MOD) APPROACHES

Sheet 1 of 2

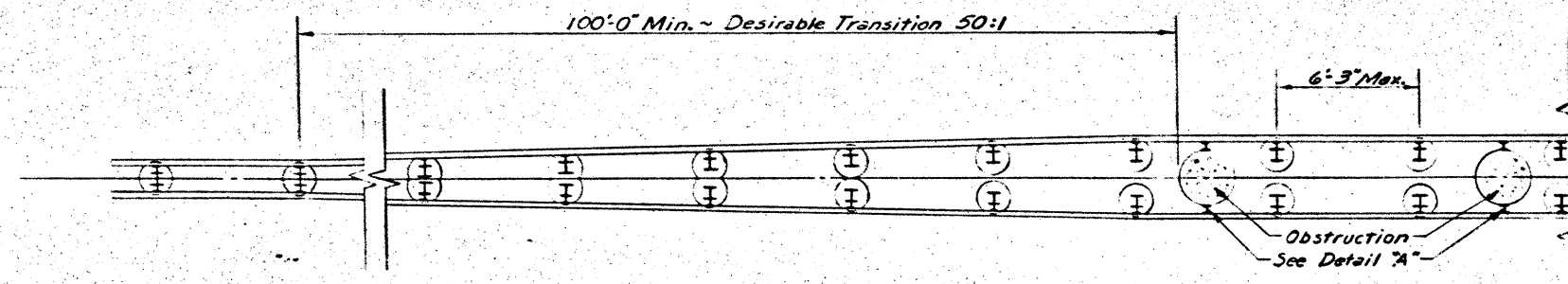
FED. PROJ. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
120-5617-457	TEXAS	273C	273C
COUNTY	CONTRACT	SECTION	BRIDGE NO.
DALLAS	2374	4	2



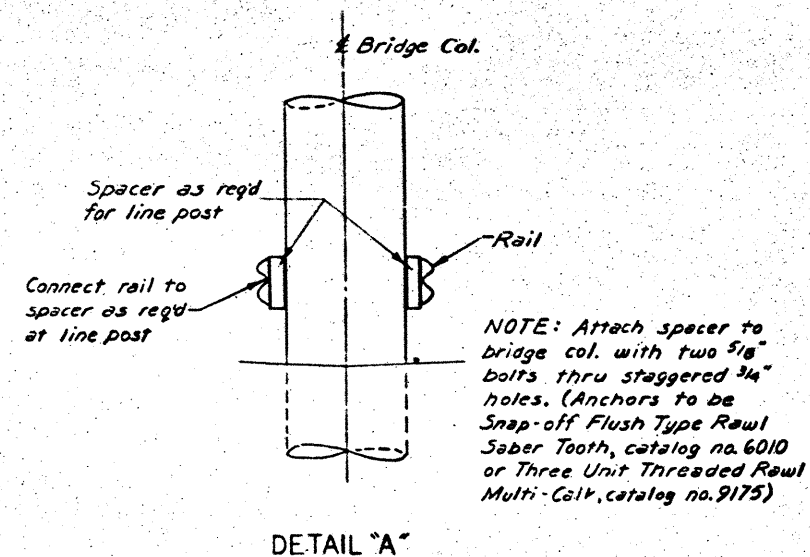
TYPICAL BRIDGE POST
Note: Bottom Rs. may be embedded flush with bottom of slab at Contractor's option.

Note: Bm. Splices - For spans of such type that preformed Exp. Jt. Matl. is used at Exp. Jts. (CSC Spans, Slabs, etc.), no Exp. type splices will be required in deep beam.

ELEV. - RAIL (MEDIAN) (TY.20) AT BRIDGES



TREATMENT AT MEDIAN OBSTRUCTION (NARROW MEDIAN~LESS THAN 30' WIDTH)



DETAIL "A"

See Sheet 1 of 2 for notes and details not shown.

273D

NOTE:

At median obstructions the metal beam guard fence will be split apart and each rail set on a separate row of posts. Payment shall be made at the unit price bid for Item 560, Galvanized Steel Beam Guard Fence (Barrier) (Class A) Blockout, based on the average length of the split rail section. It is intended that this installation be paid for as though both rails where on one row of posts.

TREATMENT AT MEDIAN OBSTRUCTION (WIDE MEDIAN~30' OR WIDER)

TEXAS HIGHWAY DEPARTMENT

RAIL (MEDIAN) (TYPE 20) FOR BRIDGES

METAL BEAM GUARD FENCE (BARRIER) FOR APPROACHES (MOD.)

ITEM NO.	STATE	SECTION	POSTS	DATE
18	TEXAS	2374	4	2

Sheet 2 of 2

TABLE OF ESTIMATED QUANTITIES															
Item	Uncl. Str. Excav. C.Y.	Drilled Shafts		Concrete Class "C"			Riprap Class "B"	Reinf. Steel	Structural Steel			Rail Type	Conc. Surface	COND T (RIGID METAL) (2 IN)	
		18" φ	30" φ	Abutments	Bents	Slab	Concrete		HVC	H5		Shoes & Ar. Jr.	T4 (Mod.)	Treat.	
		L.F.	L.F.	C.Y.	C.Y.	C.Y.	C.Y.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	L.F.	S.Y.	L.F.
4 Abutment Bents	276	192	304	188.4			178	22,924				2,184	168.00	33	50
4 Interior Bents			128		116.2			22,146							
2- 262'-6" Cont. Plate Girder Unit						639.4		139,864	232,000	247,600		18,300	1050.00	2625	268
Totals	276	192	432	188.4	116.2	639.4	178	184,934	232,000	247,600		20,484	1218.00	2658	313

TABLE OF BEARING SEAT ELEVATIONS FOR SOUTHBOUND ROADWAY					
Bent	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5
#1	715.821	716.009	716.191	716.369	716.543
#2	715.188	715.339	715.485	715.627	715.764
#3	714.746	714.827	714.903	714.974	715.040
#4	714.927	714.971	715.011	715.046	715.076

TABLE OF BEARING SEAT ELEVATIONS FOR NORTHBOUND ROADWAY					
Bent	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5
#1	716.595	716.447	716.294	716.136	715.974
#2	715.664	715.479	715.290	715.096	714.897
#3	714.643	714.387	714.128	713.863	713.593
#4	714.525	714.234	713.928	713.637	713.331

TEXAS HIGHWAY DEPARTMENT

BRIDGE DIVISION

ESTIMATED QUANTITIES
AND
BEARING SEAT ELEVATIONS
DUNCANVILLE - WHEATLAND ROAD
OVERPASS

ORIGINAL DRAWING DATE: May, 1969

STATE DISTRICT

FEDERAL REGION

FEDERAL AID PROJECT

SHEET

DN: -

CK: -

DW: -785

CK: -LEC

REVISIONS

18

6

120-5667457

275

COUNTY

CONTROL SECTION

JOB

HIGHWAY

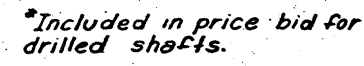
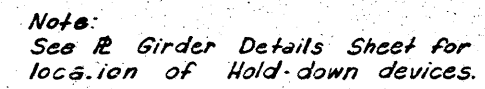
DALLAS

2374

4

2

US67



NOTE:
Bell Footing Diameter
See Layout

See Layout for length of

*8-*9 Bars Extend 2'3"
min. into Cap.

*6-6 Bars Extend
1'-3" min. into Cap.-

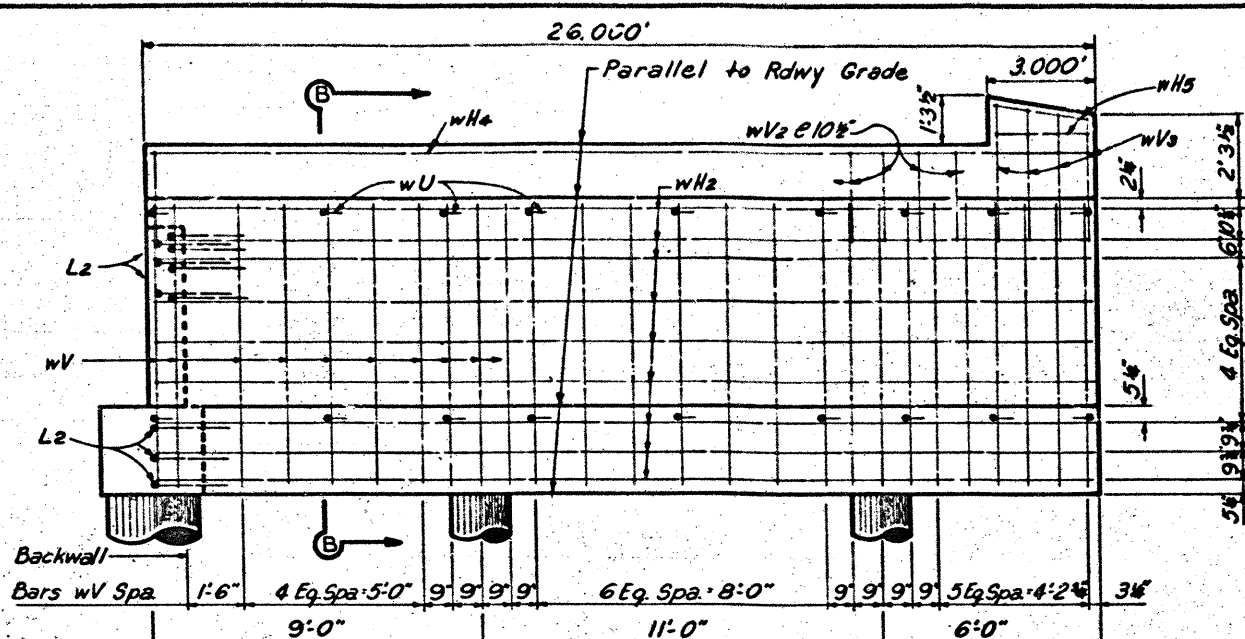
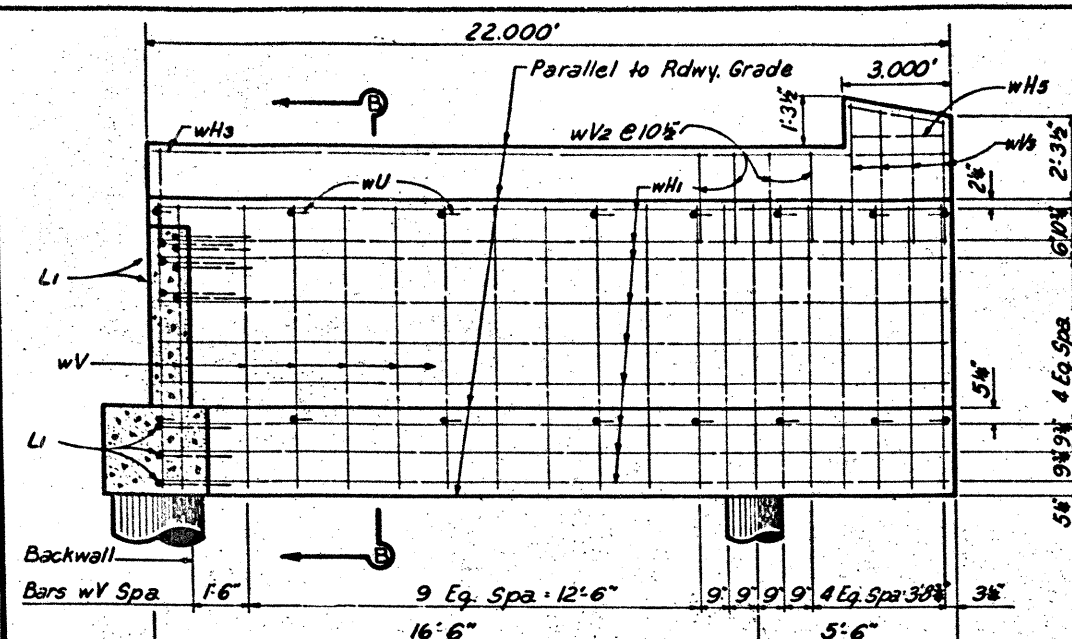
See layout for length of Drilled Shaft

HS 20 LOADING SHEET 1 OF 2

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

ABUTMENTS
FOR
42° 30' R.F. SKEW
DUNCANVILLE WHEATLAND
ROAD OVERPASS

ORIGINAL DRAWING DATE: APRIL 69		STATE	FEDERAL	FEDERAL AID PROJECT		SHEET
DN: RDS		DIST	6	I 20-5(6) 457		276
CR: VCH		COUNTY		CONTROL SECTION	JOB	INVENTORY
DW: ROR		DALLAS		2374	4 2	US67
CK: VCH						



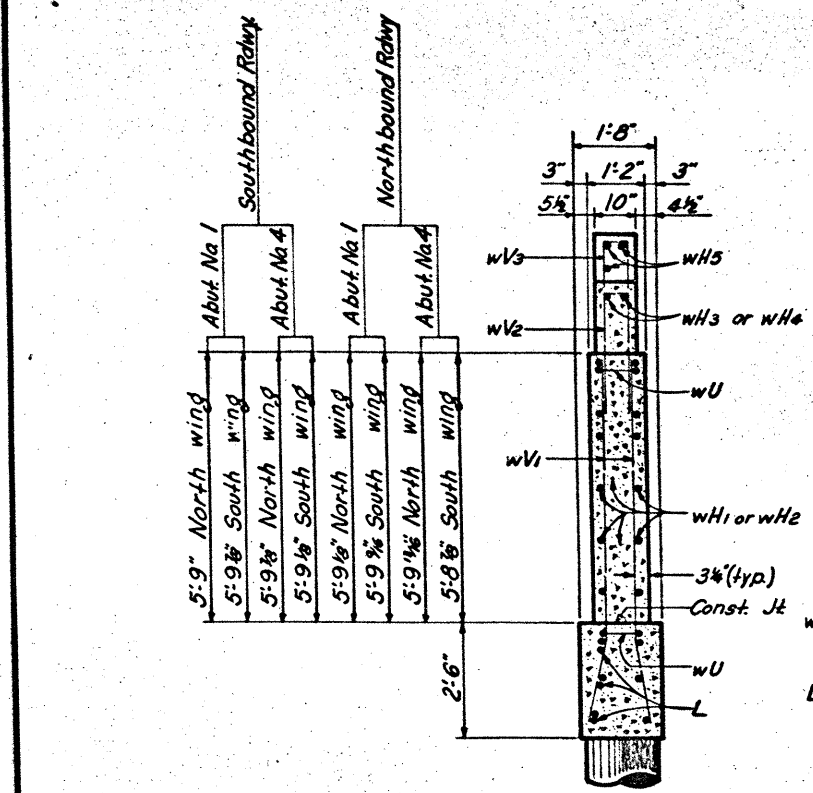
ELEVATIONS OF WINGWALLS

BILL OF REINFORCING STEEL

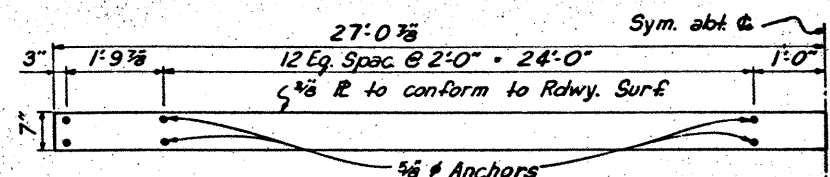
BAR	NO.	SIZE	LENGTH	WEIGHT
A	5	#11	54'-7"	1,450
H	10	#5	54'-5"	568
L1	10	#6	5'-8"	85
L2	10	#6	5'-10"	88
S	53	#4	9'-0"	319
T	1	#5	54'-7"	57
U	4	#6	11'-1"	67
V	57	#4	14'-0"	533
wH1	18	#6	21'-9"	588
wH2	18	#6	25'-9"	696
wH3	2	#5	21'-9"	45
wH4	2	#5	25'-9"	54
wH5	6	#5	2'-9"	17
wU	34	#5	1'-7"	56
wV1	92	#5	8'-0"	768
wV2	47	#5	5'-7"	274
wV3	8	#5	7'-11"	66
Total				5,731

ESTIMATED QUANTITIES

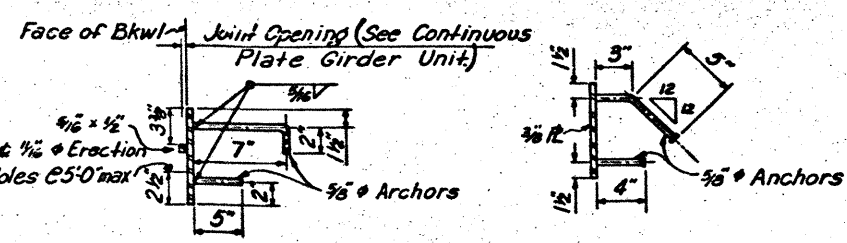
REINFORCING STEEL	LB.	5,731
CLASS "C" CONCRETE	CY	47.1
STRUCTURAL EXCAV.	CY	69
STR. STL. (SHOES & AR. JT.)	LB.	546



SEC. B-B



HALF ELEVATION



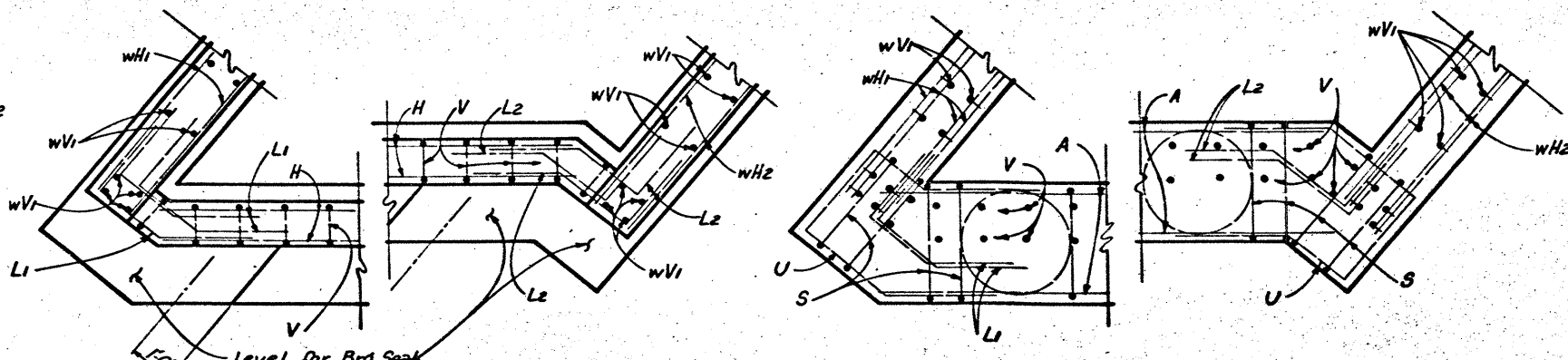
SEC. THRU JOINT

STUD ANCHORS

OPTIONAL

Armor R to be placed in Approach Slab
See Continuous Plate Girder Unit for Armor Joint Notes

ARMOR JOINT DETAILS



WING

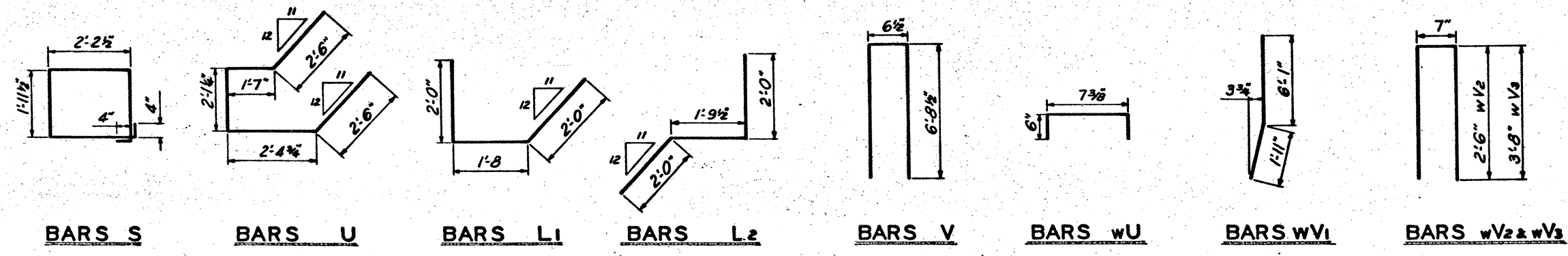
CORNER DETAILS

CAP

GENERAL NOTES:
Designed according to AASHO 1965
Standard Specifications.
Chamfer all exposed corner 3/4" unless otherwise noted.
Calculated Shaft Load 43 Tons shaft

HS 20 LOADING SHEET 2 OF 2

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
ABUTMENTS
FOR
42° 30' R.F. SKEW
DUNCANVILLE WHEATLAND
ROAD OVERPASS



BARS S

BARS U

BARS L1

BARS L2

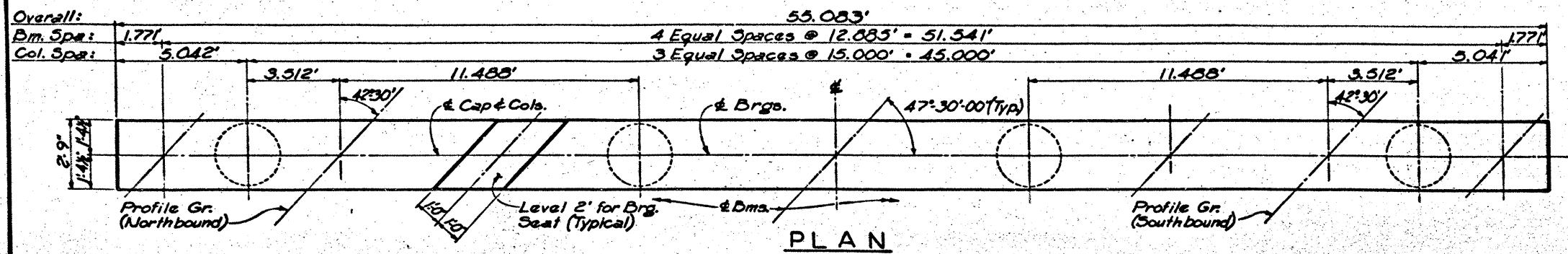
BARS V

BARS wU

BARS wV1

BARS wV2 & wV3

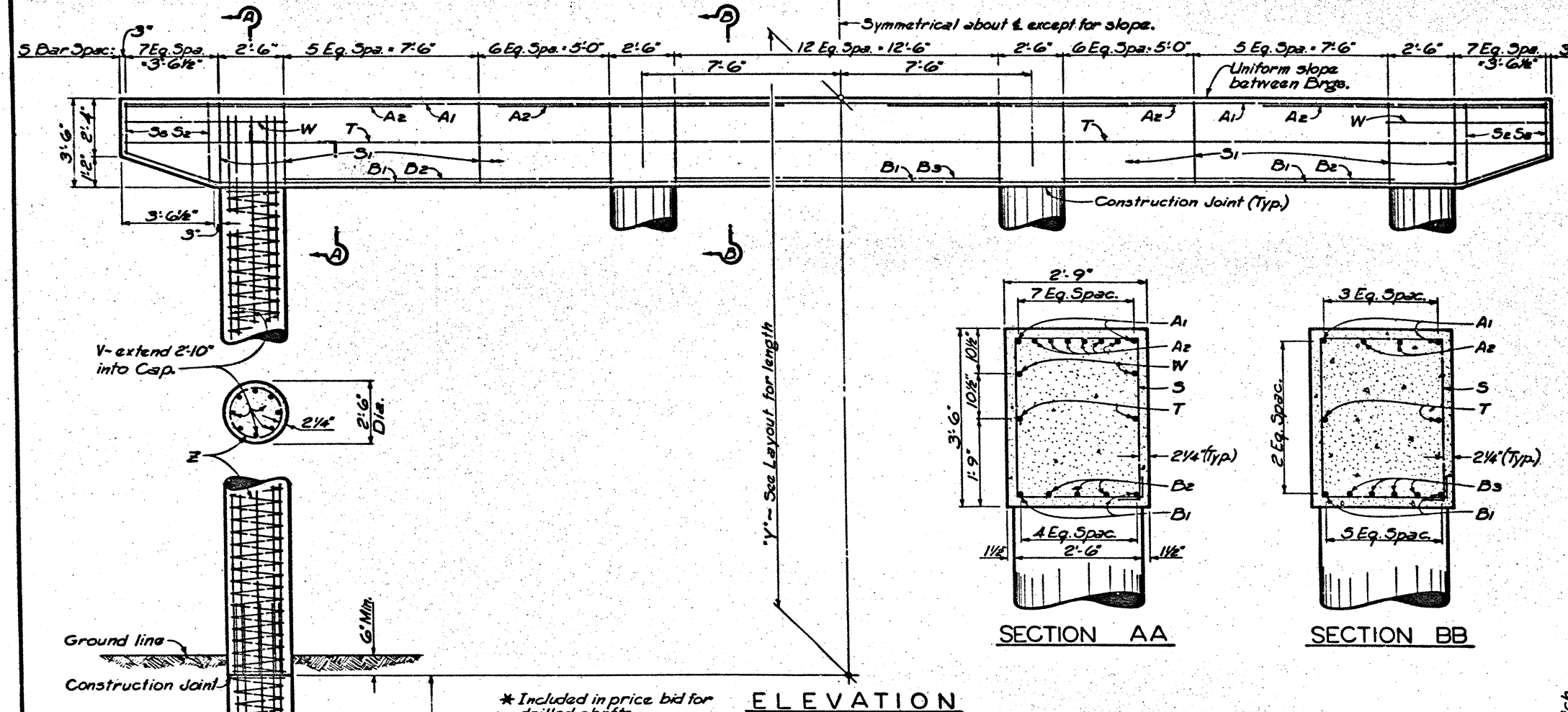
ORIGINAL DRAWING DATE: April 69	STATE: TEXAS	FEDERAL DISTRICT: 18	FEDERAL PROJECT: 12-50-10857	SHEET: 277
DESIGNED BY: RDS	CHECKED BY: VCH	DATE: 10/1/68	COUNTY: DALLAS	SECTION: 2374
DRAWN BY: ROK	CHECKED BY: VCH	DATE: 10/1/68	SECTION: 4	JOB: 2
				REVISION: 1



Notes:
See Span Detail and
Layout for type of shoe.
See Shoe Sheet for Anchor
bolt location.

BILL OF CONSTANT REINFORCING STEEL

Bar	Number	Size	Length	Weight
A1	2	# 11	54'-9"	502
A2	16	# 11	11'-0"	935
B1	2	# 11	55'-1"	535
B2	6	# 10	12'-6"	323
B3	4	# 11	12'-6"	266
S1	39	# 5	11'-10"	481
S2	14	# 5	10'-8" Avg.	156
T	2	# 5	54'-9"	114
W	4	# 5	6'-3"	26
Total Weight				Lbs. 3460



BILL OF VARIABLE REINFORCING STEEL

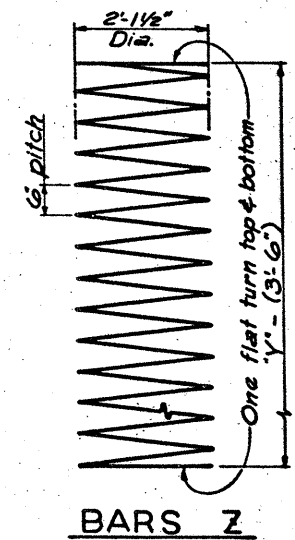
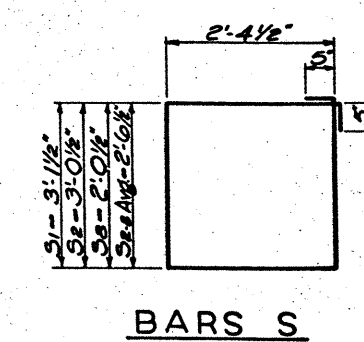
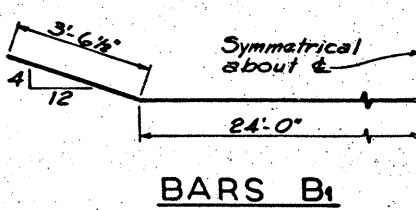
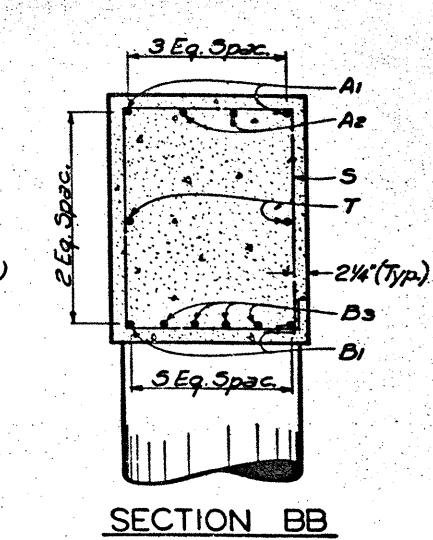
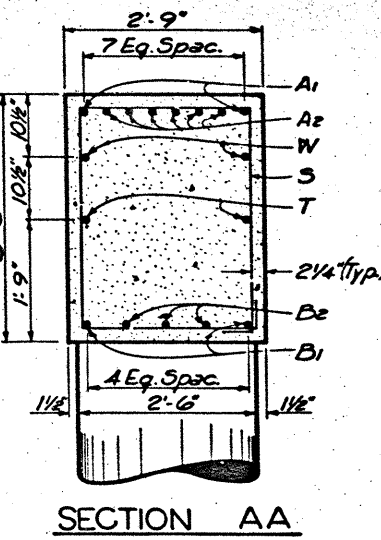
Y Ft.	Bars V 32 - # 9		Bars Z 4 - # 3 Spr		Total Weight Lbs.	TOTAL ESTIMATED QUANTITIES	
	Length	Weight	Length	Weight		Reinf. Steel Lbs.	Cl. 'C' Conc. C.Y.
12	11'-4"	1233	127'	191	1424	4892	25.4
13	12'-4"	1342	141'	212	1554	5022	26.1
14	13'-4"	1450	154'	232	1682	5150	26.9
15	14'-4"	1559	167'	251	1810	5278	27.6
16	15'-4"	1668	181'	272	1940	5405	28.3
17	16'-4"	1777	194'	292	2069	5537	29.0
18	17'-4"	1886	207'	311	2197	5665	29.8

GENERAL NOTES:
Designed according to A.A.S.H.O. 1965
Standard Specifications.
All concrete shall be class 'C'.
Chamfer all exposed corners 3/4" unless
otherwise noted.
Column load = 129 Tons/Column.

* #3 Spiral @ 6" pitch. One flat turn at top & bottom.
* #8 #9 bars - extend 2'-10" into Col.
30% Drilled Shaft - See Layout for length.
Shaded portion limits of bell fig. for payment.

* Included in price bid for drilled shafts.
Note:
Half the vertical reinforcing steel may be eliminated in the portion of the shaft greater than 15' below the ground line.

ELEVATION



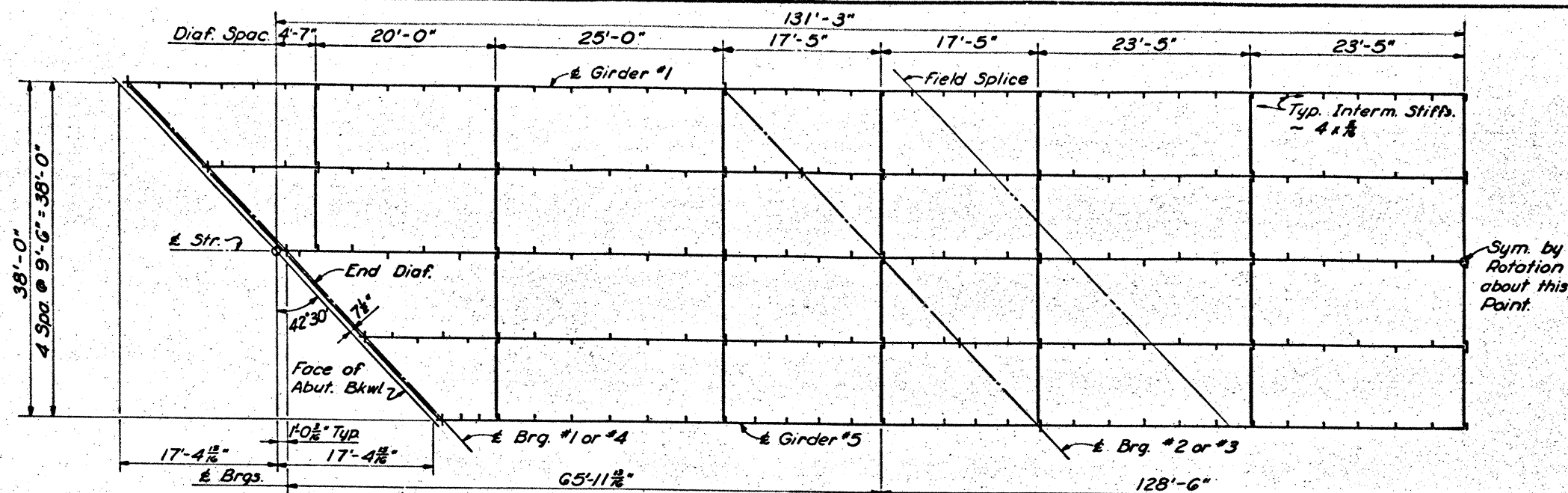
278

HS 20 LOADING

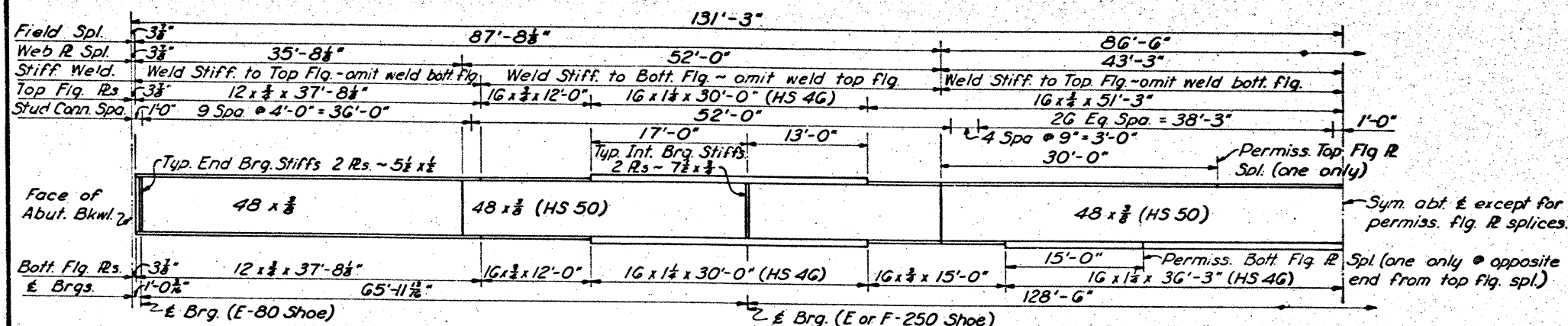
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
INTERIOR BENTS
42°-30' R. F. SKEW
DUNCANVILLE - WHEATLAND ROAD
OVERPASS

ORIGINAL DRAWING DATE: April, 1969
REVISIONS
STATE DISTRICT
FEDERAL REGION
FEDERAL AID PROJECT
SHEET

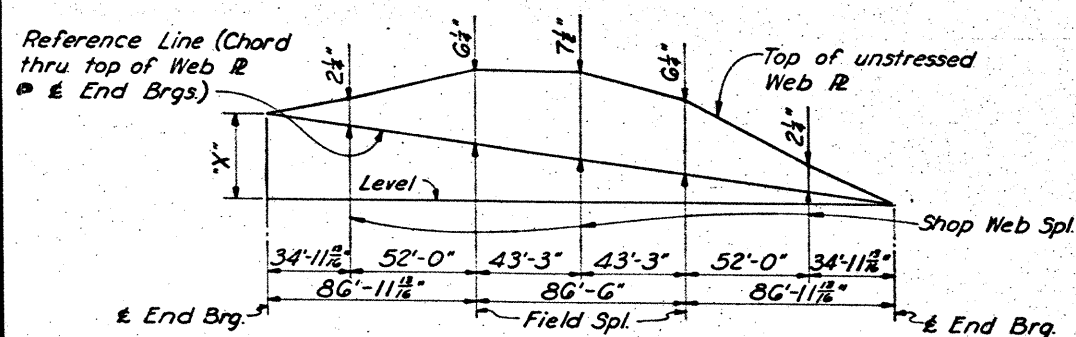
18 6 225-5(6)457 278
COUNTY
CONTROL SECTION JOB HIGHWAY
DALLAS 2374 4 2 US67



HALF ~ FRAMING PLAN



HALF ~ GIRDER ELEVATION



"X" DIMENSIONS

	Gir. #1	Gir. #2	Gir. #3	Gir. #4	Gir. #5
S.B. Rdwy.	.894'	1.037'	1.181'	1.324'	1.467'
N.B. Rdwy.	2.070'	2.213'	2.356'	2.500'	2.643'

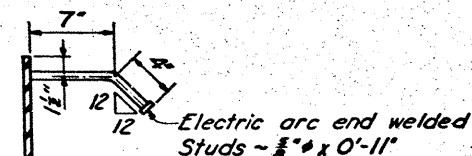
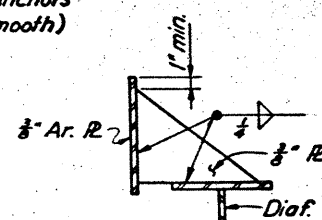
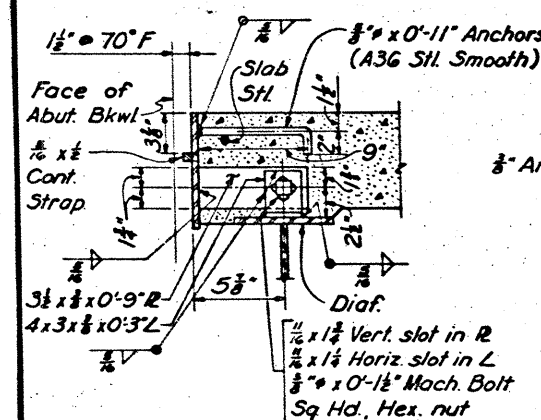
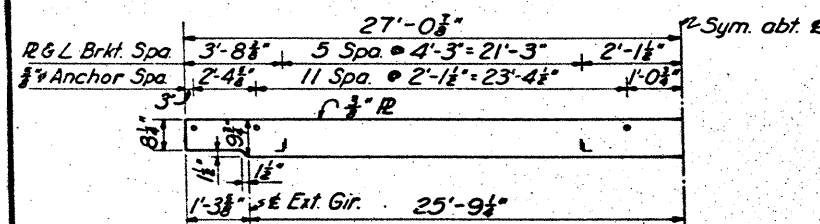
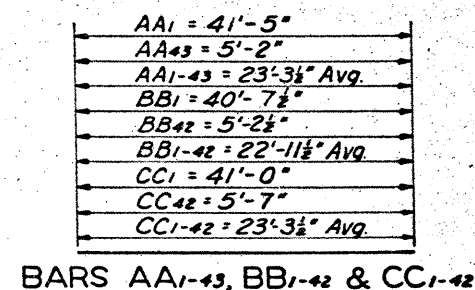
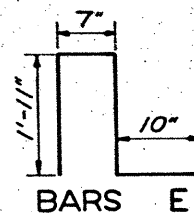
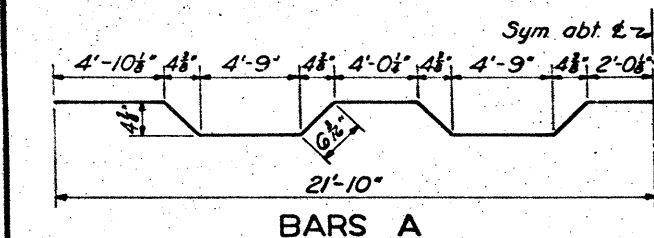
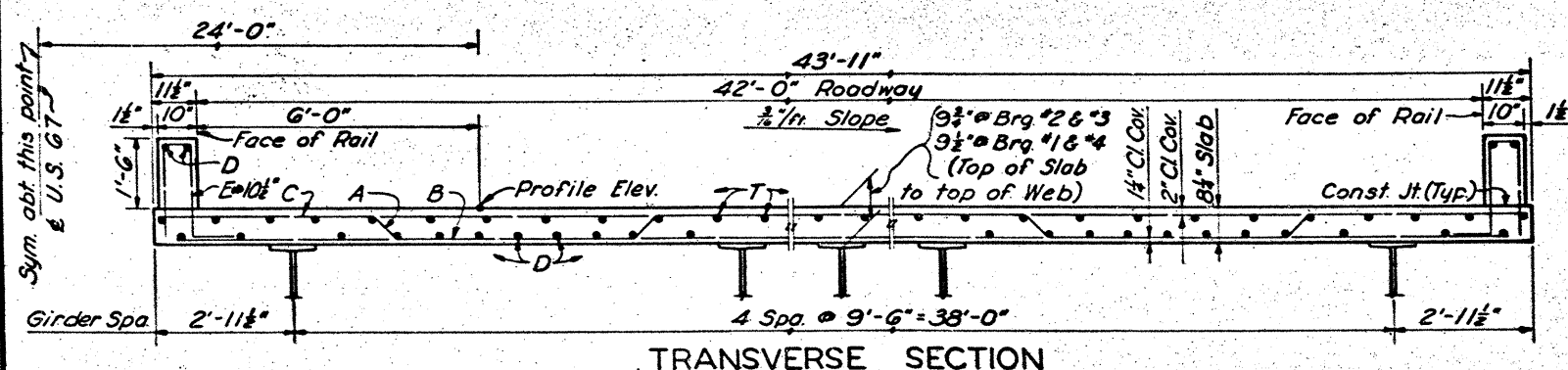
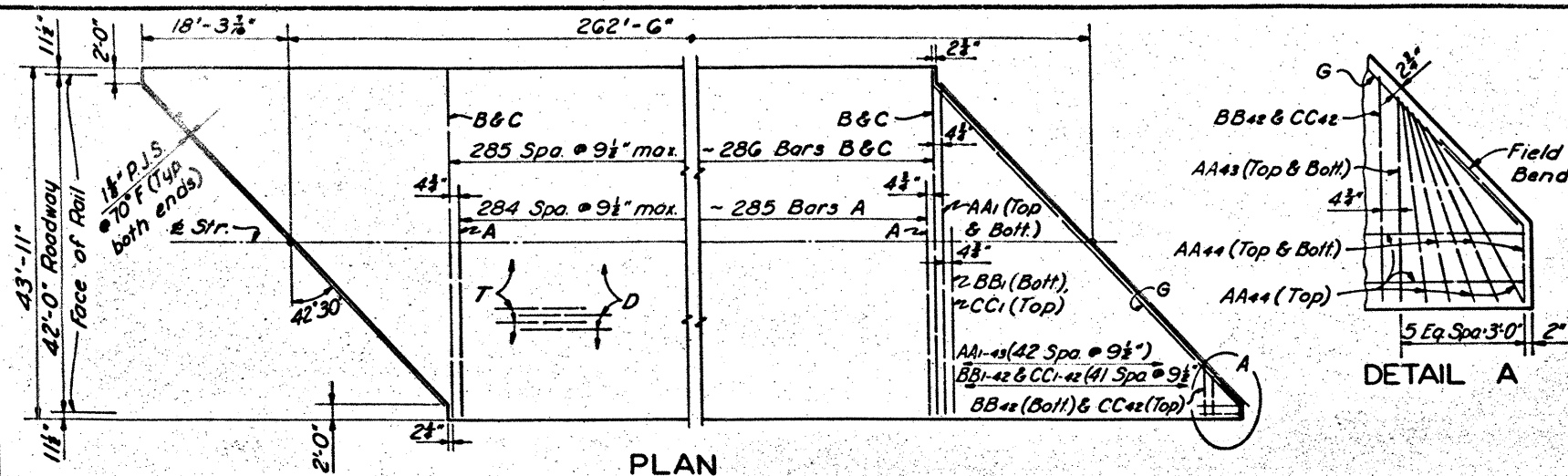
VERTICAL BLOCKING DIAGRAM

Note: Interm. Stiffs. to be placed at equal spaces between Diaphragms as shown on Framing Plan. Unless otherwise noted all structural steel shall be H.Y.C.

279

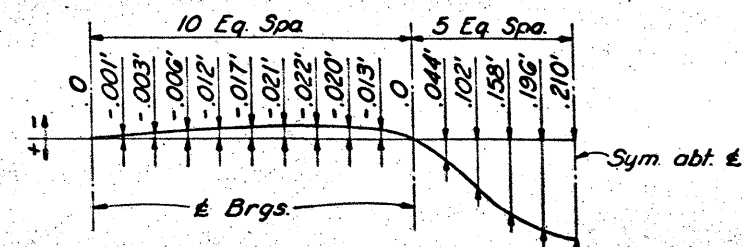
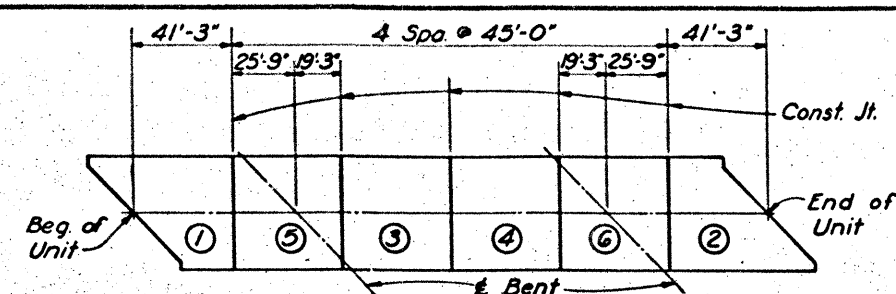
HS20 LOADING Sheet 1 of 2

TEXAS HIGHWAY DEPARTMENT BRIDGE DIVISION			
262'-6" CONTINUOUS PLATE GIRDER UNIT			
42'-0" ROADWAY		42° 30' R.F. SKEW	
DUNCANVILLE - WHEATLAND ROAD OVERPASS			
ORIGINAL DRAWING DATE: March, 1969	STATE: TEXAS	FEDERAL AID PROJECT: 18 6 I20-5(61)457	SHEET: 279
DESIGNER: LEC	REVISIONS:	COUNTY: DALLAS	SECTION: 2374 4 2
CHECKER: ADC		JOB: 2374 4 2	HIGHWAY: US 67



STIFFENER R
Stiffener R for Armor R
midway between R & L brkts.

Notes. The sections of the two armor Rs for a complete jt. after being cut to crown, shall be matched for fit & the matched Rs bolted together for shipment. Rs shall be shipped in convenient lengths (10' min. - 20' max.) and field butt welded. Field weld angles to top flanges of diaphragm; adjust armor R to correct grade & alignment and bolt for final field welding.



BILL OF REINFORCING STEEL & ESTIMATED QUANTITIES	
1	100' 0" x 100' 0" x 10' 0" CONCRETE
2	100' 0" x 100' 0" x 10' 0" REINFORCING STEEL
3	100' 0" x 100' 0" x 10' 0" FORMWORK
4	100' 0" x 100' 0" x 10' 0" BRICKWORK
5	100' 0" x 100' 0" x 10' 0" PLASTER
6	100' 0" x 100' 0" x 10' 0" PAINT
7	100' 0" x 100' 0" x 10' 0" ROOFING
8	100' 0" x 100' 0" x 10' 0" FLOORING
9	100' 0" x 100' 0" x 10' 0" MECHANICAL
10	100' 0" x 100' 0" x 10' 0" ELECTRICAL
11	100' 0" x 100' 0" x 10' 0" INTERIORS
12	100' 0" x 100' 0" x 10' 0" EXTERIORS
13	100' 0" x 100' 0" x 10' 0" LANDSCAPE
14	100' 0" x 100' 0" x 10' 0" UTILITIES
15	100' 0" x 100' 0" x 10' 0" SPECIALTIES
16	100' 0" x 100' 0" x 10' 0" TOTAL

Bar	No.	Size	Length	Weight
A	285	#5	44'-11"	13,353
B	286	#5	42'-11"	12,803
C	286	#5	43'-8"	13,027
D	44	#5	*266'-7"	12,234
E	600	#5	5'-3"	3,285
G	2	#5	54'-2"	113
T	38	#4	*266'-3"	6,758
AA1-43	172	#5	23'-4" Avg.	4,185
AA44	22	#5	5'-0"	115
BB1-45	84	#5	23'-0" Avg.	2,015
CC1-42	84	#5	23'-4" Avg.	2,044
Total Wt. Lb.				69,932
Class "C" Concrete			C.Y.	319.7
Reinforcing Steel			Lb.	69,932
Str. SH. (H.Y.C.)			Lb.	116,000
Str. SH. (H5 46)			Lb.	65,500
Str. SH. (H5 50)			Lb.	58,300
Str. SH. (Shoe & Armor Jt.)			Lb.	9,150

- * Incl. 4 - 20 dia. lops (1'-0" min)
- * Incl. 1,891' for one complete Armor Jt. and 8 Hold Down Devices.

GENERAL NOTES:
Designed according to A.A.S.H.O. 1965
Standard Specifications.
Chamfer all exposed corners $\frac{3}{4}$ " unless otherwise
noted.
Design f.c. = 1200 p.s.i.

HS20 LOADING *Sheet 2 of 2*

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
262'-6" CONTINUOUS PLATE
GIRDER UNIT
42'-0" ROADWAY 42° 30' R.F. SKEW
DUNCANVILLE - WHEATLAND ROAD
OVERPASS

ORIGINAL DRAWING DATE: <i>March 1969</i>		STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT		SHEET
DN: <i>LEC</i>	REVISIONS	<i>18</i>	<i>6</i>	<i>I 20-561</i>	<i>457</i>	<i>280</i>
CK: <i>ADC</i>						
DW: <i>AND</i>						
CD: <i>AND</i>						
		COUNTY	CENTRAL	SECTION	JOB	HIGHWAY
		<i>DALLAS</i>	<i>2374</i>	<i>4</i>	<i>Z</i>	<i>USGT</i>

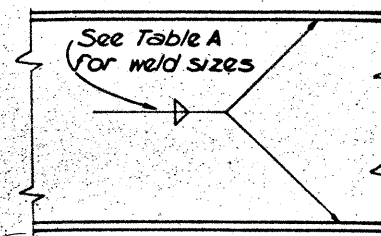
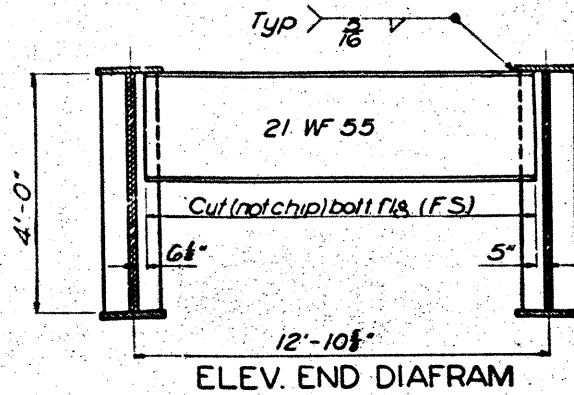
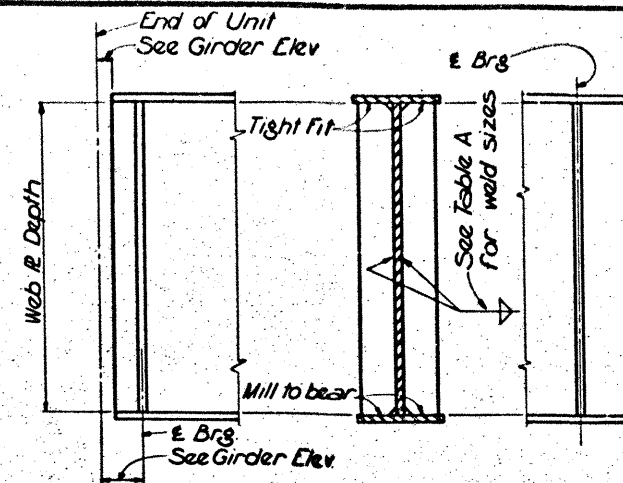


TABLE A	
Plate Thickness (Flg. or stiffener)	Weld Size
Over 1/2" to 3/4"	3/8"
Over 3/4" to 1 1/2"	1/2"
Over 1 1/2"	3/4"

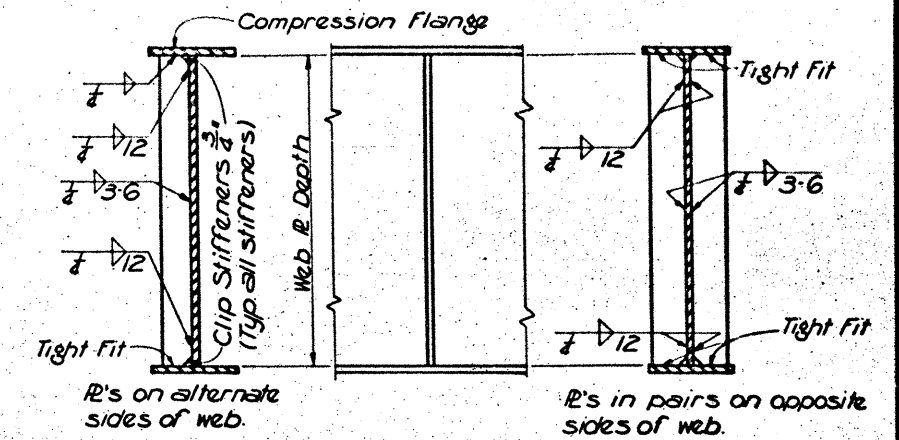
FLANGE TO WEB WELDING

Note: If the automatic submerged arc process is used, either the fillet welds shown or a square butt weld may be used between flange and web at the fabricators option.



END BEARINGS

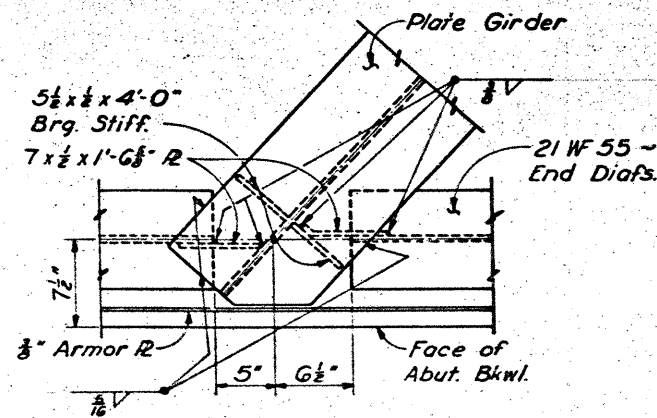
INTERIOR BEARINGS



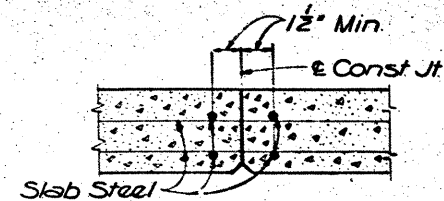
INTERMEDIATE

STIFFENER DETAILS

(See Framing Plan for size & location)

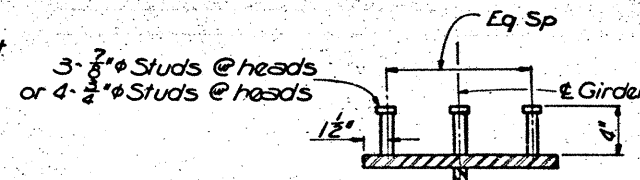


PLAN ~ END DIAF. CONN.



CONSTRUCTION JOINT DETAIL

Chamfer all const jts or open jts from top of slab to outside of beam or armor R.



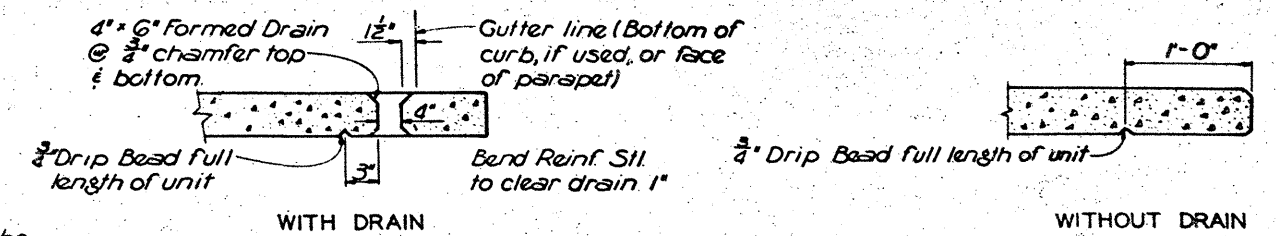
STUD CONNECTOR DETAILS

Notes: Studs shall be Electric arc end-welded to the flanges with complete fusion.

Unless otherwise shown on the Girder Elevation, stud connectors shall be spaced as follows:

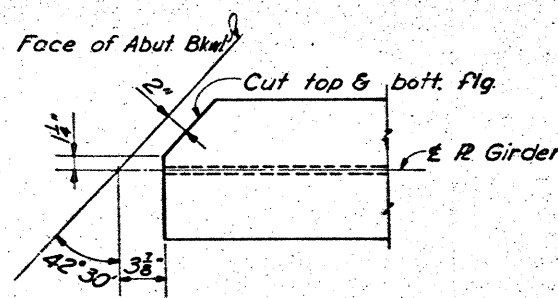
For HS 20 Loading, stud connectors shall be spaced on all girders at 40" centers throughout the length of the gir. except that they shall be omitted within a distance of 1/4 the span on each side of each interior support for continuous units.

For H15 & H20 Loading, stud connectors shall be spaced on the outside girders only at 10'-0" centers on the portions of the girder as stated above for HS 20 Loading.

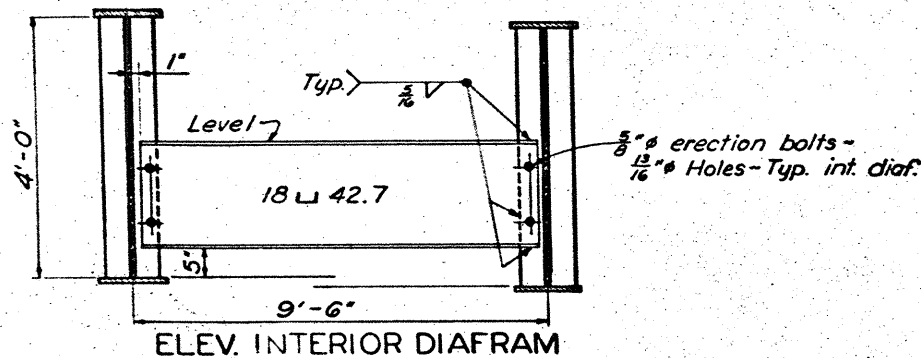


Note: Drains, if any, to be located as directed by the field engineer. No drains shall be permitted over rdways & RR tracks.

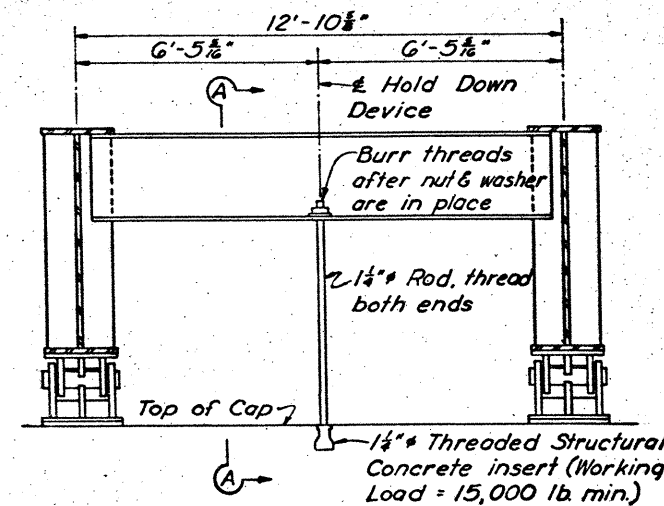
EDGE OF SLAB DETAILS



END OF PLATE GIRDER DETAIL

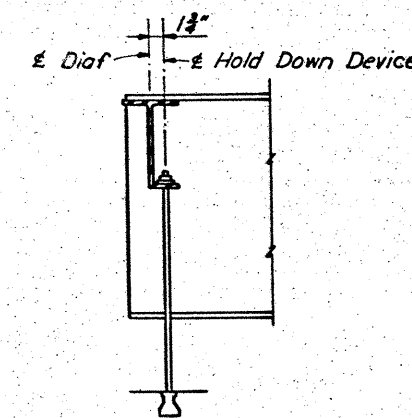


ELEV. INTERIOR DIAFRAM



ELEVATION

HOLD DOWN DETAILS AT ABUTMENTS



SEC. A-A

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

PLATE GIRDER DETAILS

DUNCANVILLE - WHEATLAND ROAD
OVERPASS

PG-D MOD.

ORIGINAL DRAWING DATE: March, 1969	STATE: TEXAS	FEDERAL DISTRICT: 18	FEDERAL AND PROJECT: 232-5-01457	SHEET: 281
DESIGNER: TMD	REVISIONS:	COUNTY: DALLAS	CONTRACT: 232-5-01457	JOB: HIGHWAY
CHECKER: LJC				
BY: HWD				
DATE: ADG				

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ESTIMATED QUANTITIES

		Uncl.	Drilled		Class "C"			Prest.	Riprap	Reinf.	Str. Sh.	Rail	Conc.	R. M.
		Str.	Shafts		Concrete			Conc. Bms.	Conc.	Steel	(Shoe &	(Type T-4	Surf.	Conduit
		Excav.	18"	30"	Abut.	Bent	Slab	Size 54	Class "B"		Armor Jt.)	Mod.)	Treat.	2"
Westbound Freeway	2- Abutments	C.Y.	L.F.	L.F.	C.Y.	C.Y.	C.Y.	L.F.	C.Y.	Lb.	Lb.	L.F.	S.Y.	L.F.
	2- Interior Bents	110	74	265	89.0	75.8			100	11,738	1,340	52.00	18	34
	2- 48'-2" Prest. Conc. Beam Span						199.8	861.02		42,464	2,660	192.67	820	96
	1- 97'-0" Prest. Conc. Beam Span						184.9	1,160.00		40,347	1,330	194.00	826	97
	Totals	110	74	397	89.0	75.8	384.7	2,021.02	100	110,167	5,330	438.67	1,664	227
Eastbound Freeway	2- Abutments	130	74	265	90.9				100	11,839	1,350	52.00	18	34
	2- Interior Bents			132		76.0				15,650				
	2- 48'-6" Prest. Conc. Beam Span						201.4	866.90		42,949	2,690	193.98	826	97
	1- 97'-8" Prest. Conc. Beam Span						187.4	1,167.78		40,832	1,340	195.30	832	98
	Totals	130	74	397	90.9	76.0	388.8	2,034.68	100	111,270	5,380	441.28	1,676	229
GRAND TOTALS		240	148	794	179.9	151.8	773.5	4,055.70	200	221,437	10,710	579.95	3,340	456

BEARING SEAT ELEVATIONS

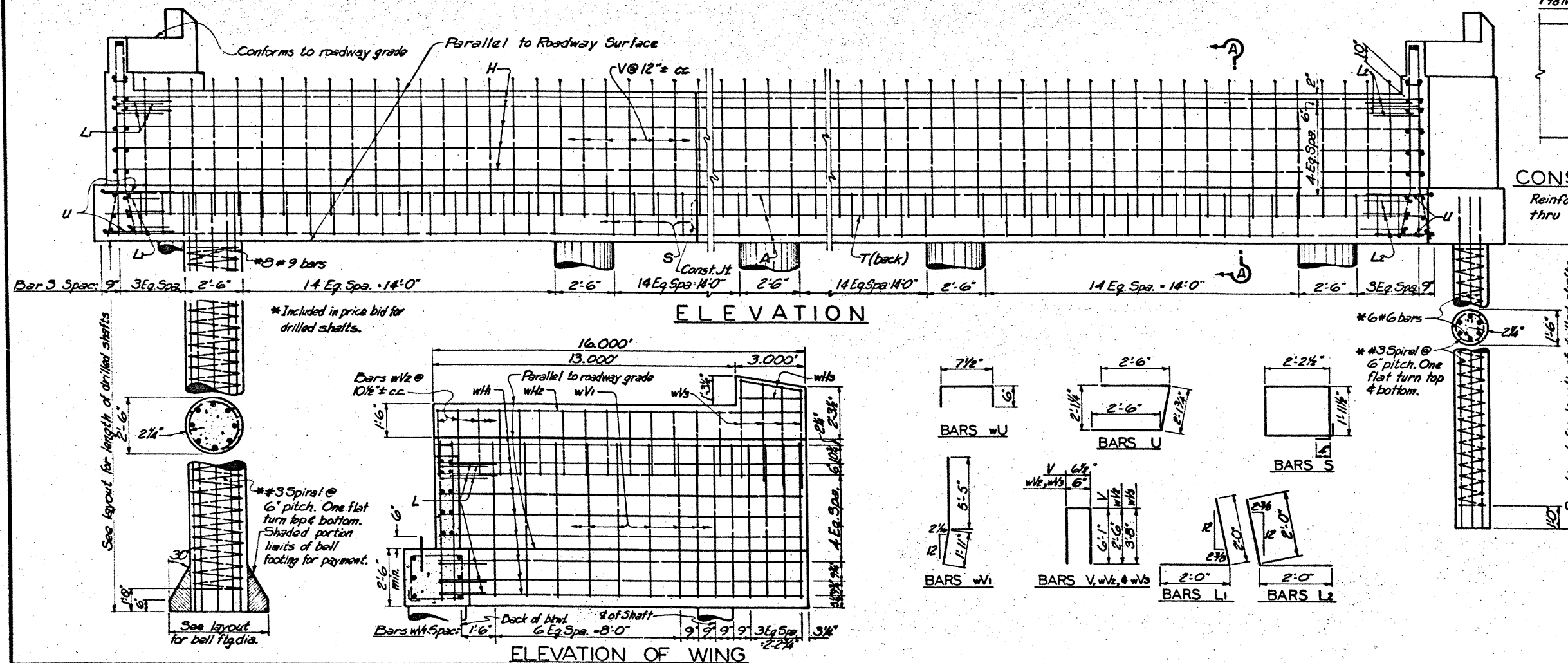
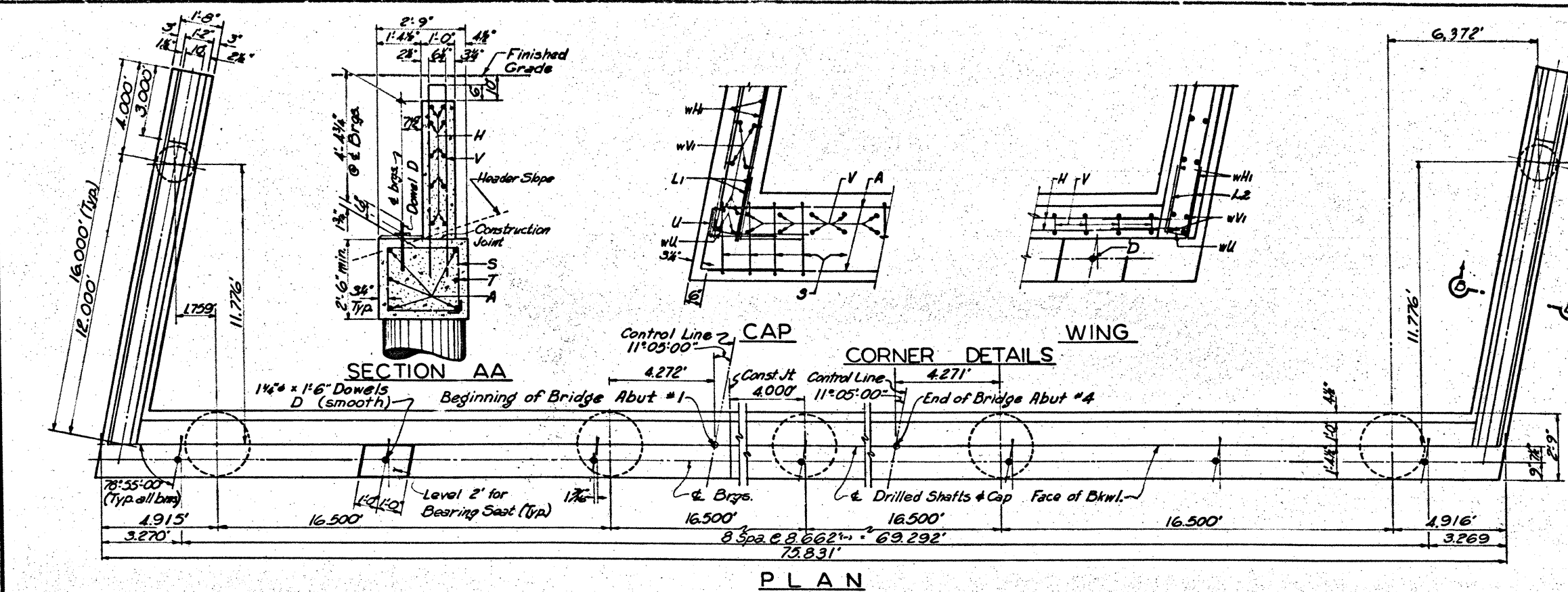
Westbound Freeway	Brg.	Bm. #1	Bm. #2	Bm. #3	Bm. #4	Bm. #5	Bm. #6	Bm. #7	Bm. #8	Bm. #9	Bm. #10	Bm. #11	Bm. #12
	#1	GG3.542	GG3.769	GG3.993	GG4.215	GG4.420	GG4.548	GG4.657	GG4.762	GG4.861			
	#2 Bk.	GG3.746	GG3.941	GG4.134	GG4.325	GG4.494	GG4.561	GG4.604	GG4.642	GG4.675			
	#2 Fwd.	GG3.759	GG3.901	GG4.041	GG4.181	GG4.319	GG4.449	GG4.534	GG4.574	GG4.604	GG4.632	GG4.656	GG4.679
	#3 Bk.	GG3.750	GG3.876	GG4.002	GG4.127	GG4.253	GG4.363	GG4.394	GG4.343	GG4.274	GG4.203	GG4.130	GG4.054
Eastbound Freeway	Brg.	Bm. #1	Bm. #2	Bm. #3	Bm. #4	Bm. #5	Bm. #6	Bm. #7	Bm. #8	Bm. #9	Bm. #10	Bm. #11	Bm. #12
	#1	GG3.552	GG3.792	GG4.031	GG4.271	GG4.510	GG4.749	GG4.988	GG5.227	GG5.466			
	#2 Bk.	GG3.573	GG3.810	GG4.046	GG4.283	GG4.519	GG4.755	GG4.991	GG5.227	GG5.463			
	#2 Fwd.	GG3.583	GG3.755	GG3.927	GG4.099	GG4.271	GG4.443	GG4.615	GG4.786	GG4.958	GG5.129	GG5.301	GG5.472
	#3 Bk.	GG3.376	GG3.544	GG3.712	GG3.880	GG4.048	GG4.216	GG4.384	GG4.551	GG4.719	GG4.887	GG5.054	GG5.222
	Brg.	Bm. #1	Bm. #2	Bm. #3	Bm. #4	Bm. #5	Bm. #6	Bm. #7	Bm. #8	Bm. #9	Bm. #10	Bm. #11	Bm. #12
	#4	GG3.136	GG3.365	GG3.594	GG3.822	GG4.051	GG4.279	GG4.507	GG4.736	GG4.964			

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TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
ESTIMATED QUANTITIES
AND
BEARING SEAT
ELEVATIONS

HAMPTON ROAD OVERPASS

ORIGINAL DRAWING DATE: March, 1970	STATE DISTRICT	FEDERAL AID PROJECT	SHEET
REVISIONS	18	6	283
COUNTY	DALLAS	SECTION	JOB



BILL OF REINFORCING STEEL

Bar	Number	Size	Length	Weight
A	5	#11	78'11"	2096
D	9	1 1/4"	1'-6"	56
H	10	#5	75'11"	791
L1	7	#6	1'-0"	42
L2	7	#6	4'-0"	42
S	68	#4	9'-0"	409
T	1	#5	75'11"	79
U	4	#6	7'-2"	43
V	74	#4	12'-9"	630
wH1	36	#6	15'-9"	852
wH2	4	#5	15'-9"	66
wH3	6	#5	2'-9"	17
wU	16	#5	1'-8"	20
wV1	64	#5	7'-4"	189
wV2	28	#5	5'-7"	163
wV3	8	#5	7'-11"	66
Total Weight (Lbs.)				5869

*Includes one 35 Dia. Lap
**Includes one 20 Dia. Lap (10' min)

TOTAL ESTIMATED QUANTITIES

Reinforcing Steel	Lb.	5869
Class "C" Concrete	C.Y.	44.5
Uncl. Structural Excav.	C.Y.	55
Str. Stl. (Shoe & Ar. Jt.)	Lb.	* 670

* Quantity shown is for one armor plate to be placed in approach slab. (RJS.)

GENERAL NOTES:

Designed according to AASHTO 1969
Standard specifications & complies with
R.P.M. 20-4, Sec. 4c.
Chamfer all exposed corners 3/4" unless
otherwise noted.
Calculated shaft load = 70 Tons/Dn Shaft.

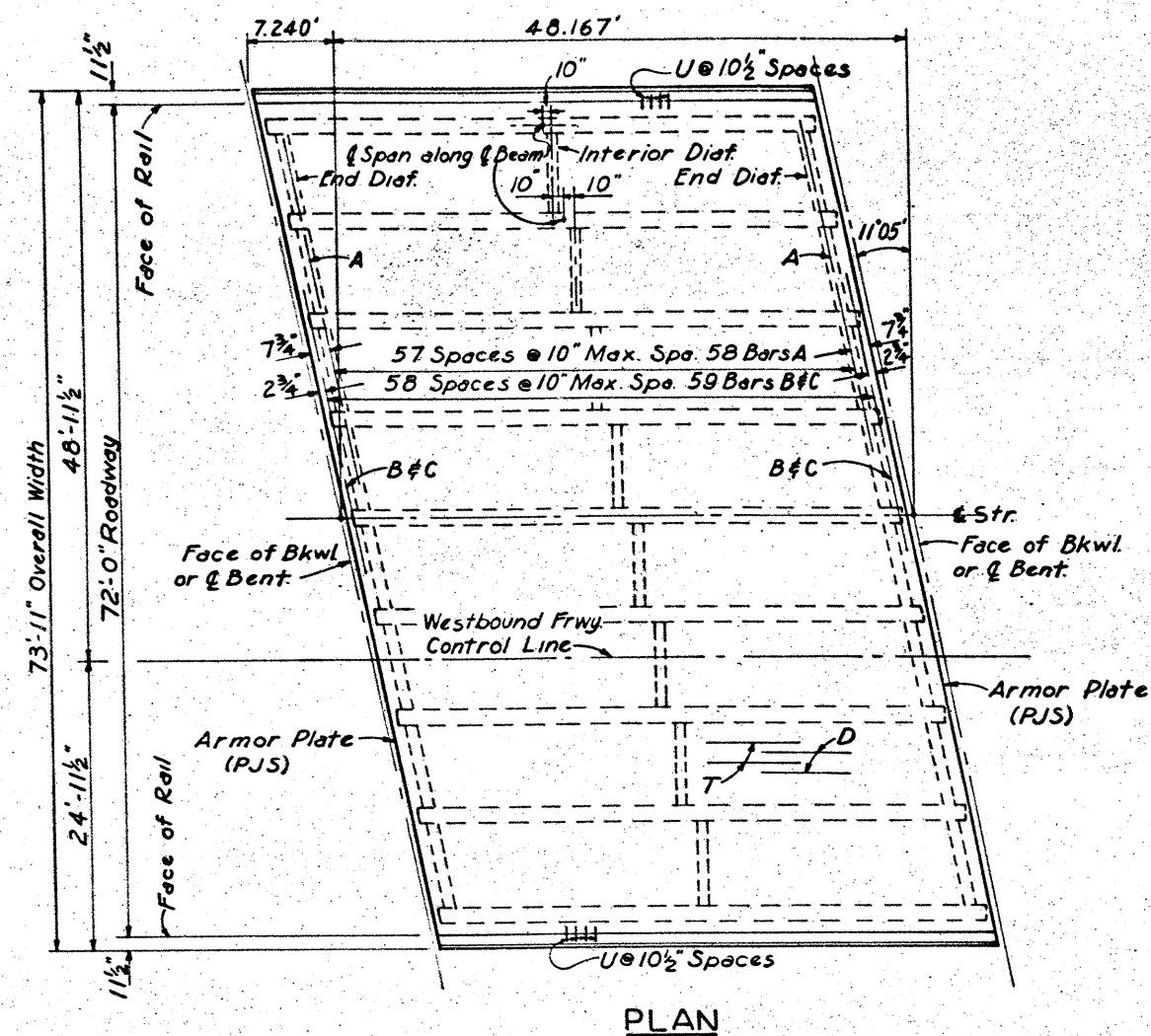
HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
ABUTMENTS
11°05'00" R.F. SKEW

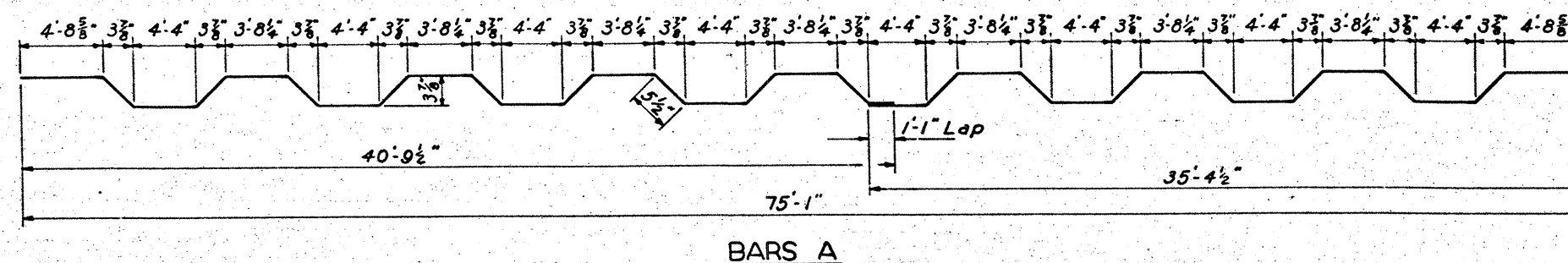
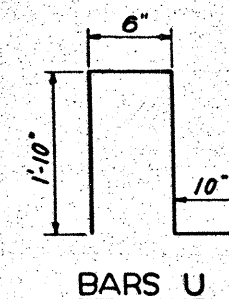
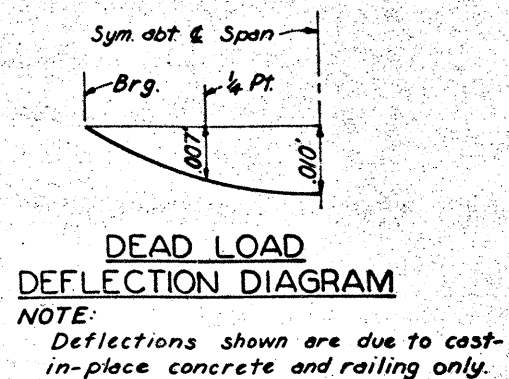
HAMPTON ROAD OVERPASS
WESTBOUND FREEWAY

ORIGINAL DRAWING DATE: FEB. 1970	STATE FEDERAL PROJECT	10 6 I 25-5(61) 457	SHEET	284
REVISIONS	COUNTY	SECTION	JOB	HIGHWAY
	DALLAS	2374	4	2

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PLAN

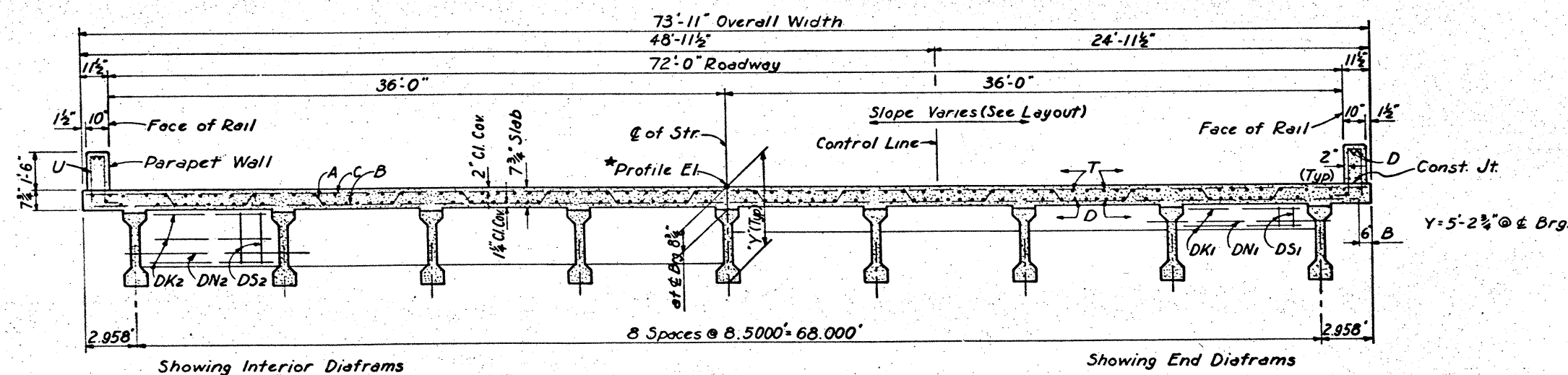


BILL OF REINFORCING STEEL
AND ESTIMATED QUANTITIES

Bar	No.	Size	Length	Weight
A	58	#5	* 78'-4"	4739
B	59	#4	* 75'-4"	2969
C	59	#5	* 76'-2"	4667
D	80	#5	47'-10"	3991
U	112	#5	5'-0"	584
T	70	#4	47'-10"	2237
DK ₁	64	#5	7'-1"	473
DK ₂	48	#5	6'-11"	346
DS ₁	112	#4	4'-8"	349
DS ₂	56	#4	7'-6"	281
DN ₁	2	#8	70'-3"	375
DN ₂	8	#8	9'-5"	201
Reinforcing Steel			Lb.	21,232
Class "C" Concrete			C.Y.	99.9
Size 54 Beams			L.F.	43051
Str. Stl. (Shoe & Armor Jt.)			Lb.	*1330

* Includes one 20 Dia. Lap (1'-0" Min)
** Quantity shown is for one complete armor joint. (PJS)

GENERAL NOTES:
Designed according to A.A.S.H.O 1969 Standard Specifications and complies with P.P.M. 20-4, Sec 4c.
All cast-in-place concrete to be Class "C".
Chamfer all exposed corners $\frac{1}{4}$ " unless otherwise noted.
Design $f_c = 1200$ p.s.i.



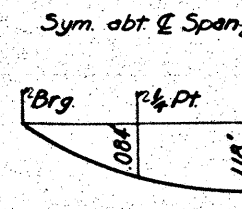
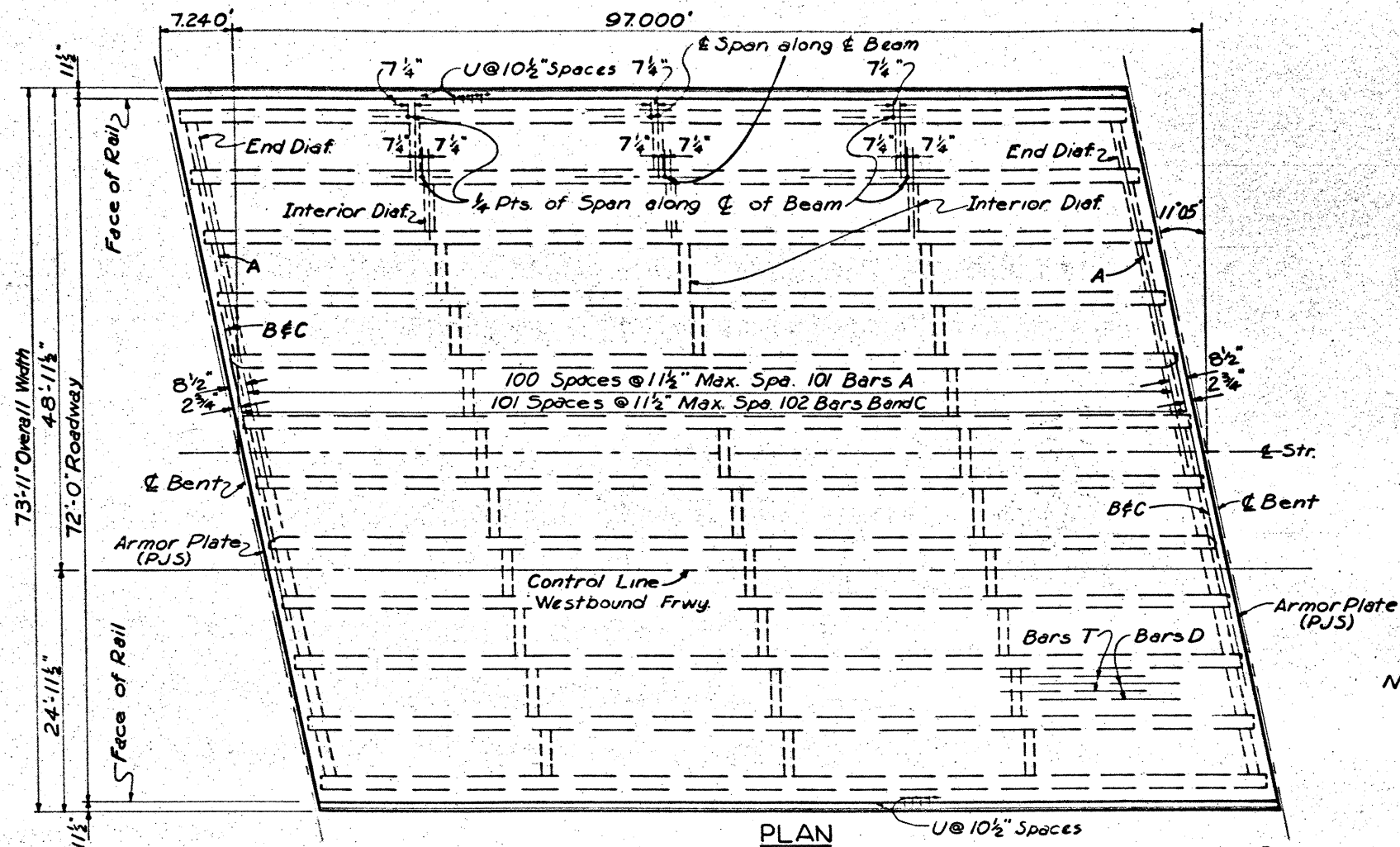
TRANSVERSE SECTION

★ See Detail A of Layout.

HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
48'-2" PRESTRESSED
CONCRETE BEAM SPANS
11°05' R.F. SKEW
HAMPTON ROAD OVERPASS
WESTBOUND FREEWAY

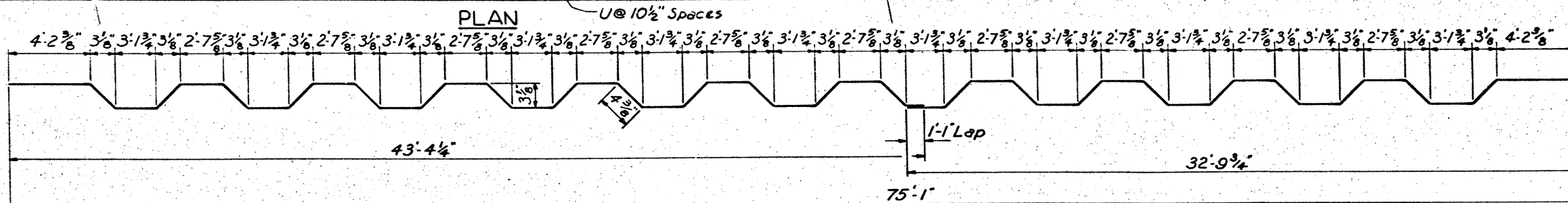
ORIGINAL DRAWING DATE: <u>October, 1969</u>		STATE	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
REVISONS		<u>18</u>	<u>6</u>	<u>IRC-5(6) 457</u>	<u>28</u>
DR: <u>CBL</u>		COUNTY		CONTROL SECTION	JOB
CR: <u>MPN</u>		<u>DALLAS</u>		<u>2374</u>	<u>4</u>
DR: <u>JWD</u>				<u>Z</u>	<u>TH</u>
CR: <u>CAL</u>					



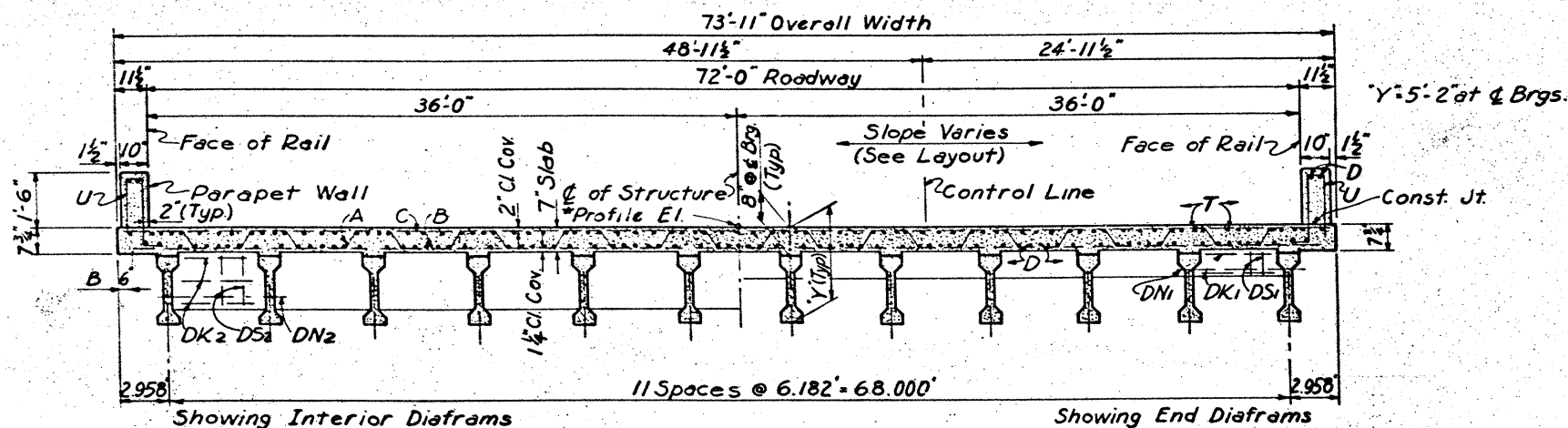
DEAD LOAD DEFLECTION DIAGRAM

NOTE:
Deflections shown are due to cast-in-place concrete and railing only.

NOTE:
One Slab Construction Joint, either normal to the Structure Centerline or parallel with the Slab Ends, will be allowed.

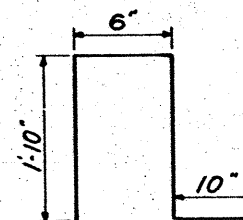


BARS A



TRANSVERSE SECTION

*See Detail A of Layout.



BARS U

BILL OF REINFORCING STEEL AND ESTIMATED QUANTITIES

Bar	No.	Size	Length	Weight
A	101	#5	*78'-6"	8269
B	102	#4	*75'-5"	5138
C	102	#5	*76'-2"	8103
D	85	#5	*97'-10"	8673
U	224	#5	5'-0"	1168
T	83	#4	*97'-9"	5420
DK1	88	#5	4'-9"	436
DK2	198	#5	4'-8"	964
DS1	110	#4	4'-8"	343
DS2	165	#4	7'-6"	827
DN1	2	#8	70'-3"	375
DN2	33	#8	7'-2"	631

Reinforcing Steel	Lb.	40,347
Class "C" Concrete	C.Y.	184.9
Size 54 Beams	L.F.	1160.00
Str. Stl. (Shoe & Armor Jt.)	Lb.	**1330

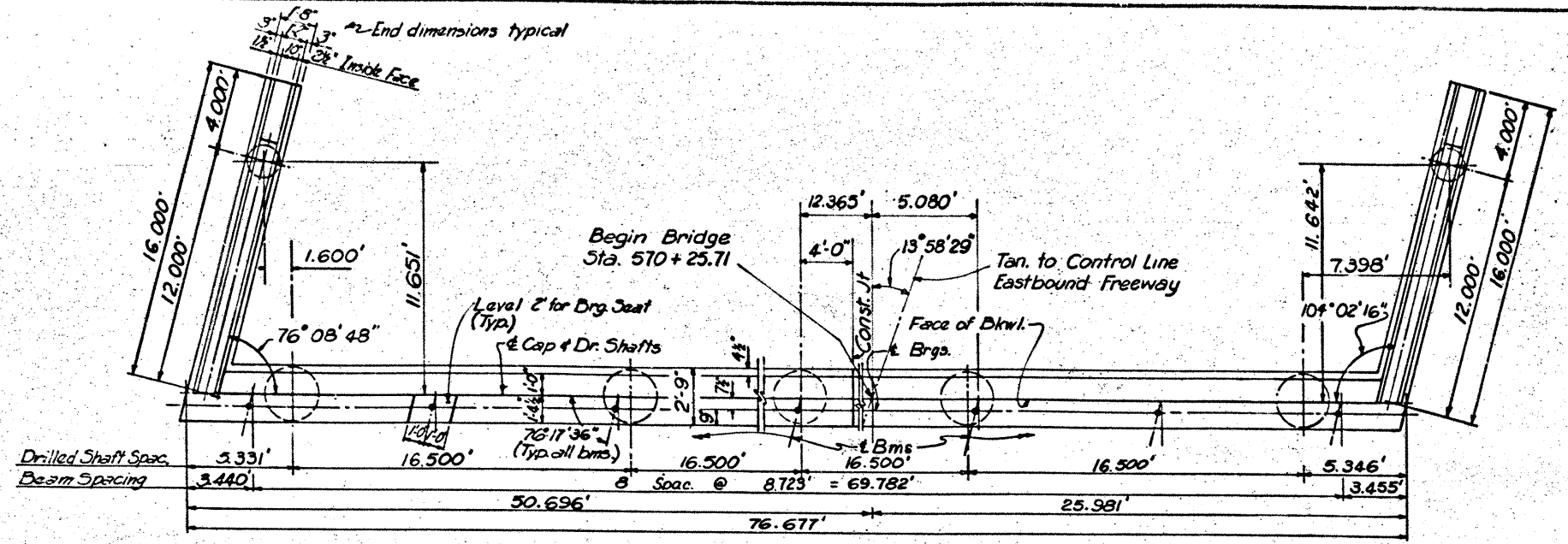
*Includes one 20 Dia. Lap (1'-0" Min.)
**Quantity Shown is for one complete armor joint (PJS)

GENERAL NOTES
Designed according to A.A.S.H.O. 1969
Standard Specifications and complies
with P.P.M. 20-4, Sec. 4c.
All cast-in-place concrete to be Class "C".
Chamfer all exposed corners 3/4" unless
otherwise noted.
Design fc=1200 p.s.i.

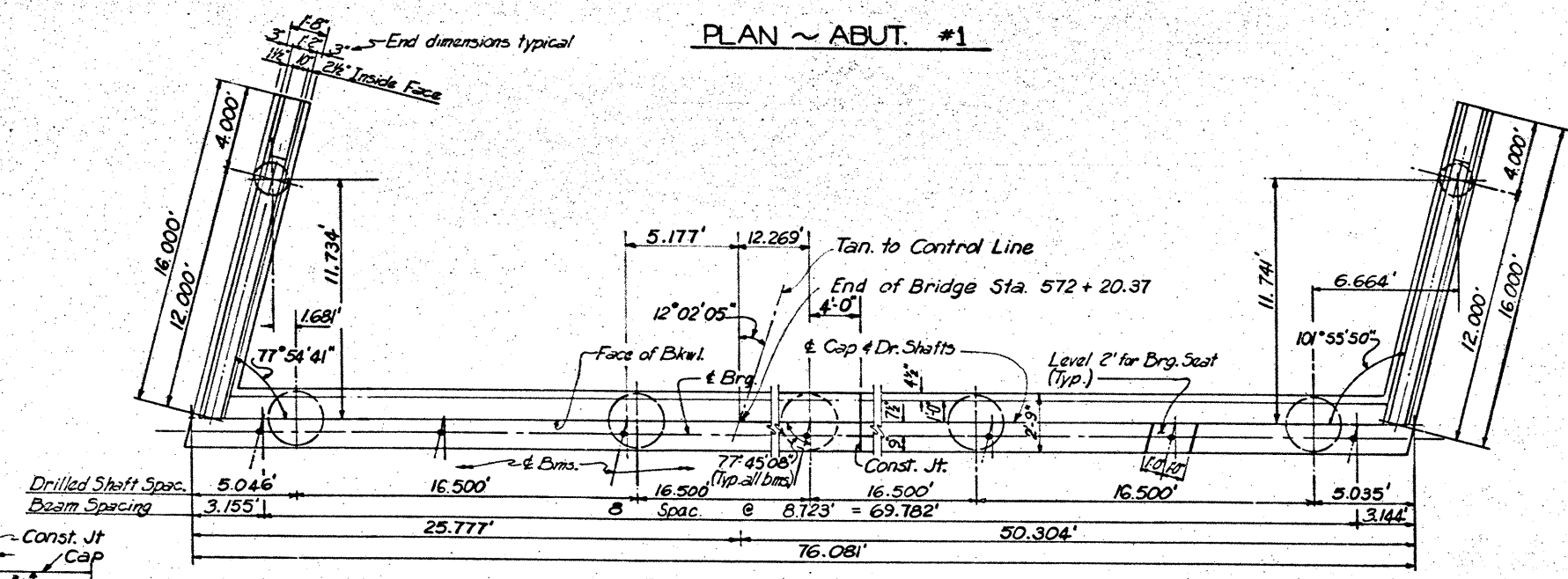
HS 20 LOADING 288

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
**97'-0" PRESTRESSED
CONCRETE BEAM SPAN**
11°05' R.F. SKEW
HAMPTON ROAD OVERPASS
WESTBOUND FREEWAY

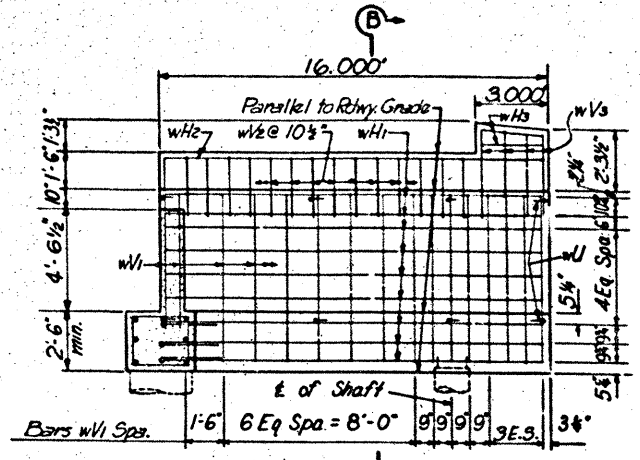
ORIGINAL DRAWING DATE: October 1969	STATE DISTRICT	FEDERAL AID PROJECT	SHEET
REVISIONS	10	6	1
CONTRACT	SECTION	JOB	ROADWAY
DALLAS	2374	4	1



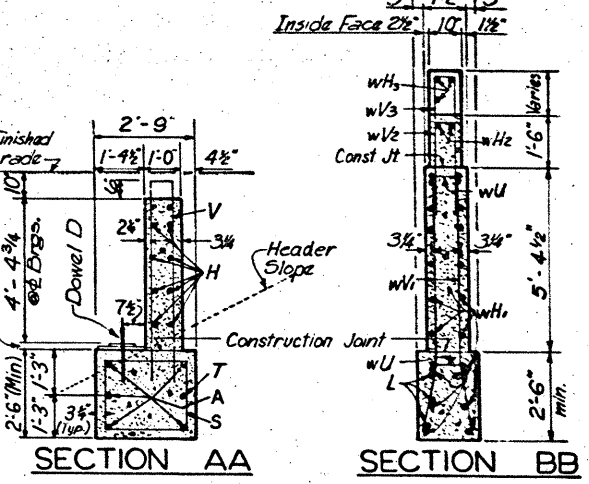
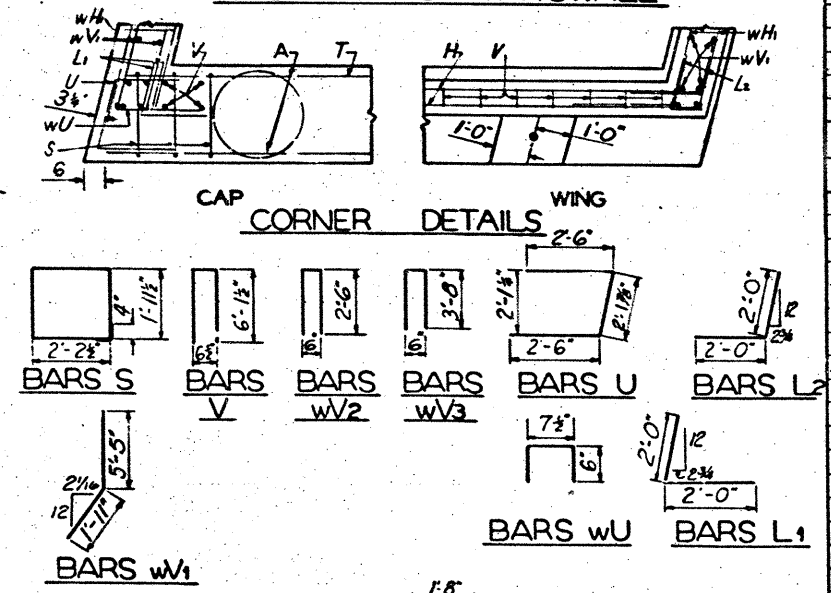
PLAN ~ ABUT. #1



PLAN ~ ABUT. #4



ELEVATION OF WINGWALL



SECTION AA

SECTION BB

BILLS OF REINFORCING STEEL AND ESTIMATED QUANTITIES

ABUTMENT NO. 1				
Bar	No	Size	Length	Weight
A	5	#11	79'-8"	2116
H	10	#5	77'-0"	803
L1	7	#6	4'-0"	42
L2	7	#6	4'-0"	42
S	66	#4	9'-0"	397
U	4	#6	7'-2"	43
WU	16	#5	1'-8"	28
WV1	64	#5	7'-4"	489
V	77	#4	12'-10"	660
T	1	#5	76'-8"	80
D	9	#4	1'-6"	58
WH1	36	#6	15'-9"	852
WH2	4	#5	15'-9"	66
WH3	6	#5	2'-9"	17
WV2	30	#5	5'-6"	172
WV3	8	#5	7'-10"	65
Reinforcing Steel				lb. 5930
Class "C" Concrete				CY 456
Uncl. Str. Excavation				CY 65
Str. Steel (Shoe & Armor Jt.)				lb. 680

ABUTMENT NO. 4				
Bar	No	Size	Length	Weight
A	5	#11	79'-1"	2101
H	10	#5	76'-6"	798
L1	7	#6	4'-0"	42
L2	7	#6	4'-0"	42
S	66	#4	9'-0"	397
U	4	#6	7'-2"	43
WU	16	#5	1'-8"	28
WV1	64	#5	7'-4"	489
V	77	#4	12'-10"	660
T	1	#5	76'-1"	79
D	9	#4	1'-6"	58
WH1	36	#6	15'-9"	852
WH2	4	#5	15'-9"	66
WH3	6	#5	2'-9"	17
WV2	30	#5	5'-6"	172
WV3	8	#5	7'-10"	65
Reinforcing Steel				lb. 5909
Class "C" Concrete				CY 45.3
Uncl. Str. Excavation				CY 65
Str. Steel (Shoe & Armor Jt.)				lb. 670

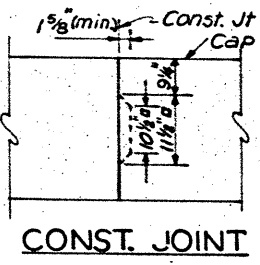
*Includes one 35 dia. lap
 *Includes one 20 dia. lap (1'-0" min.)
 *Quantities shown are for one armor 12 to be placed in approach slab (PIS)
 Designed according to A.A.S.H.O 1969 Standard Specifications and complies with P.P.M. 20-4, sec. 4c.
 All cast-in-place concrete shall be Class C.
 Chamfer all exposed corners 3/4" unless otherwise noted.
 Calculated Drilled Shaft Load = 70 TONS/DR. SHAFT
 HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION

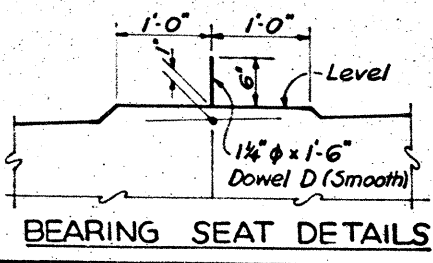
ABUTMENTS 289

HAMPTON ROAD OVERPASS
 EASTBOUND FREEWAY

ORIGINAL DRAWING DATE: FEB. 1970	STATE: TEXAS	FEDERAL DISTRICT: 18	FEDERAL REGION: 6	FEDERAL AID PROJECT: 12C-56(1)457	SHEET: 289
REVISIONS:	COUNTY: DALLAS	SECTION: 2374	JOB: 4	DATE: 2/14/70	



CONST. JOINT

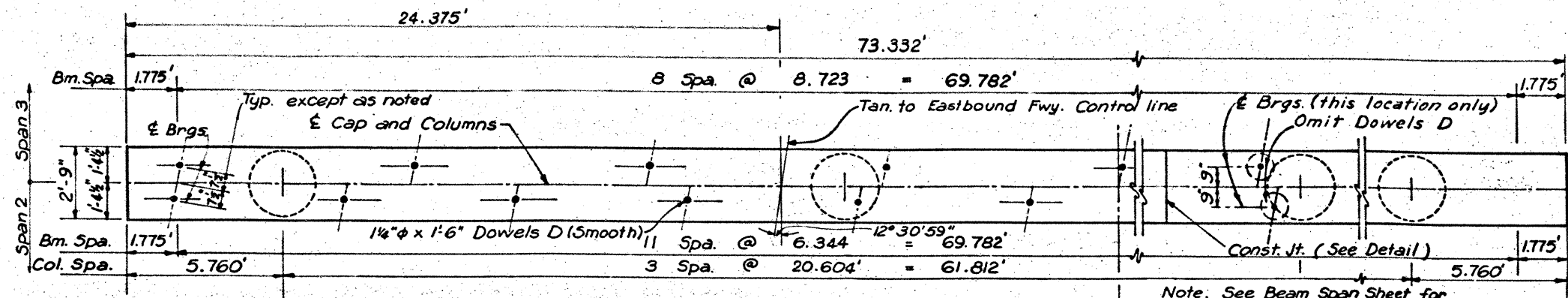


BEARING SEAT DETAILS

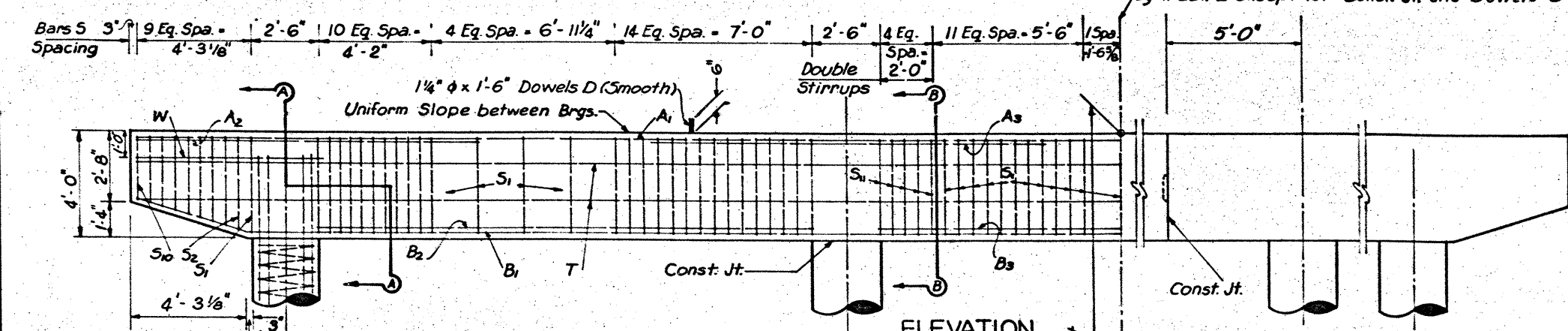
* Included in price bid for Drilled Shafts.

Note: Bend shaft steel as necessary to avoid fouling Bars A in Cap.

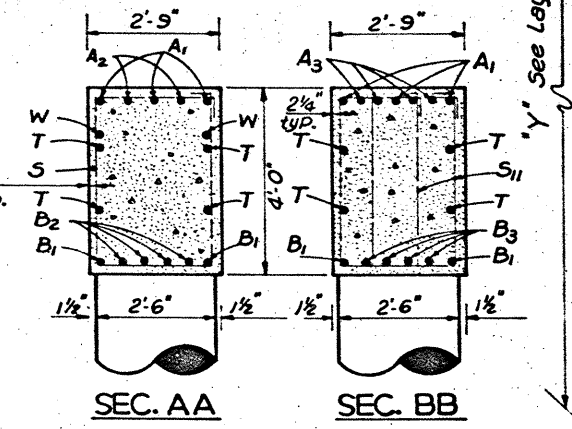
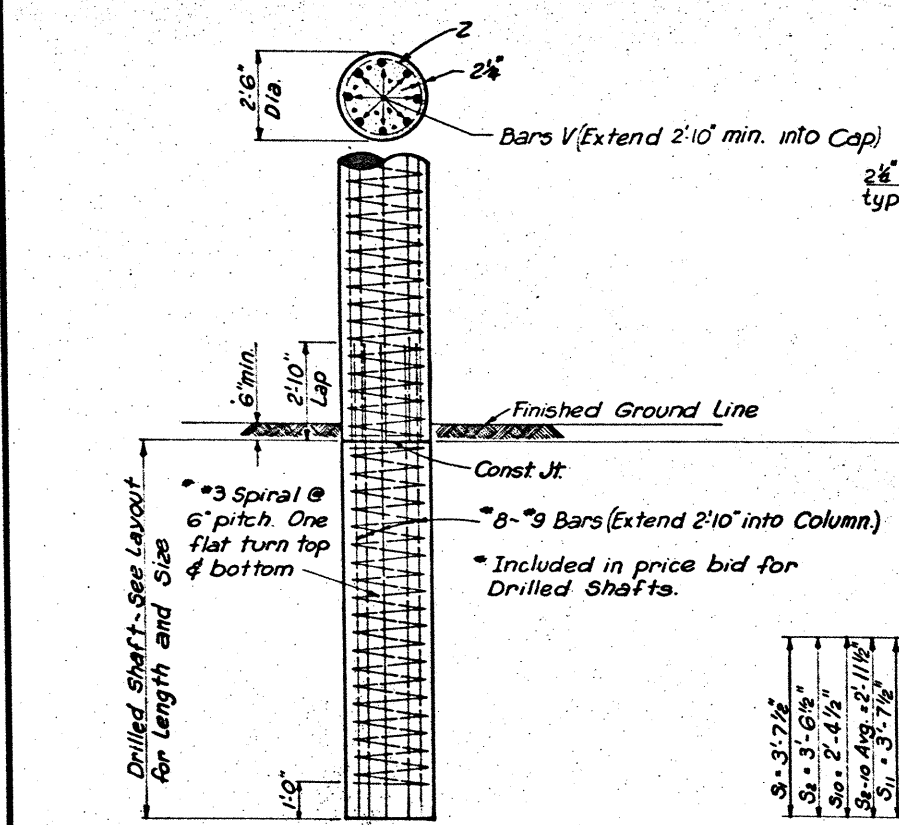
ELEVATION



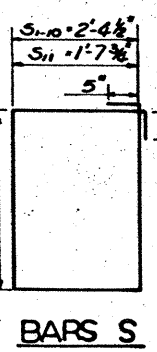
PLAN



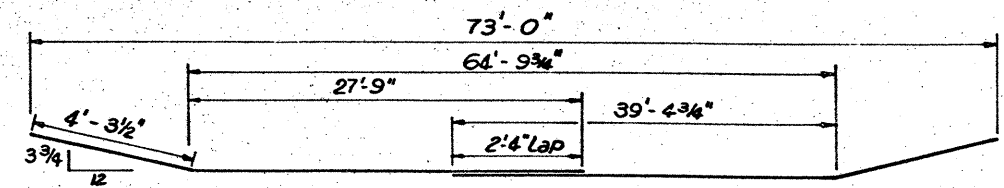
ELEVATION



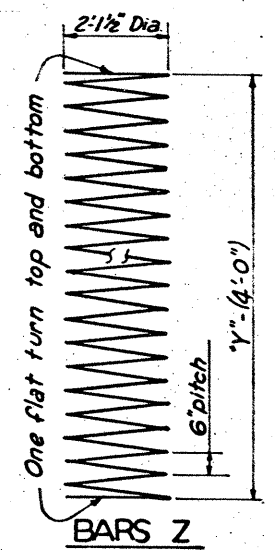
Note: Reinforcing Steel Continuous thru Construction Joint.



BARS S

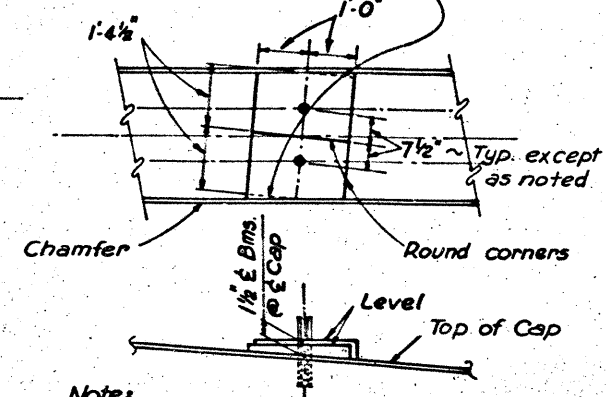


BARS B1



BARS Z

Forming to these lines is optional for all cases and mandatory where beam and cap slopes would otherwise combine to cause contact between beam and cap



BRG. SEAT DETAILS

Notes:
Built up portions of Bearing Seat shall be cast integrally with cap or constructed as follows: The area under the built up portion is to be prepared in accordance with specification requirements for construction joints. The pedestal shall then be placed using an approved latex based grout mixed in accordance with manufacturer's recommendations.

BILL OF CONSTANT REINFORCING STEEL

Bar	No.	Size	Length	Weight
A ₁	3	#11	77'-1"	1229
A ₂	4	#10	12'-6"	215
A ₃	8	#11	14'-6"	616
B ₁	2	#11	15'-9"	805
B ₂	8	#11	18'-0"	765
B ₃	4	#10	18'-0"	310
S ₁	83	#5	12'-10"	1111
S _{2-S10}	18	#5	11'-6" Avg.	216
S ₁₁	20	#5	11'-5"	238
W	4	#5	7'-0"	29
T	4	#5	14'-1"	309
D	19	1/4" φ	1'-6"	106
Reinforcing Steel			Lbs.	5949

*Includes one 35 Dia. Lap
**Includes one 20 Dia. Lap

BILL OF VARIABLE REINFORCING STEEL

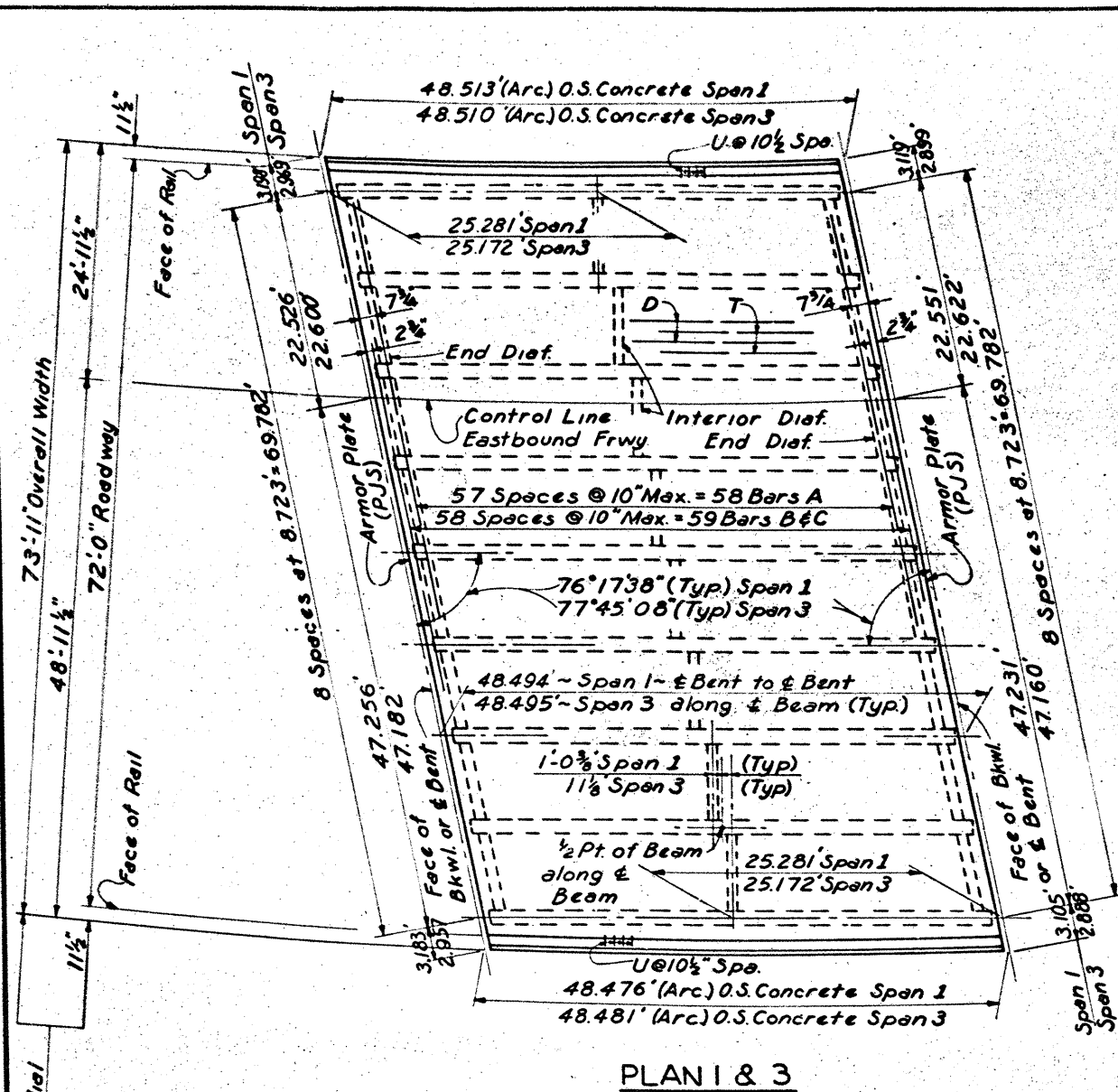
Y	Bars Z 4 ~ 3		Bars V 32 ~ 9		TOTAL EST. QUANT.	
	Length	Weight	Length	Weight	Reinf. Steel Lbs.	C.I.C. Conc. C.Y.
14	147	221	12'-10"	1396	7566	36.6
16	174	262	14'-10"	1614	7825	38.0
18	201	303	16'-10"	1831	8083	39.4
20	228	343	18'-10"	2049	8341	40.9

General Notes:
Designed according to A.A.S.H.O 1969 Standard Specifications.
Chamfer all exposed corners 3/4" unless otherwise noted.
Calculated Shaft Load = 162 Tons/shaft.

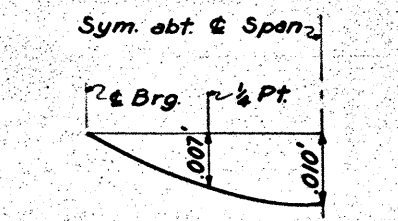
HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
INTERIOR
BENT NO.3 291
HAMPTON ROAD OVERPASS
(EASTBOUND FWY.)

ORIGINAL DRAWING DATE: Feb. 1970	STATE: TEXAS	FEDERAL REGION: 18	FEDERAL AND PROJECT: I-20-SC(1)457	SHEET: 291
REVISIONS:	COUNTY: DALLAS	SECTION: 2374	JOB: 4	DATE: 1-20

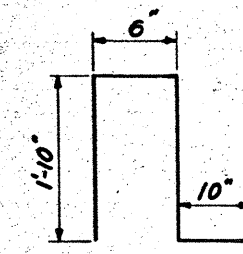


PLAN I & 3

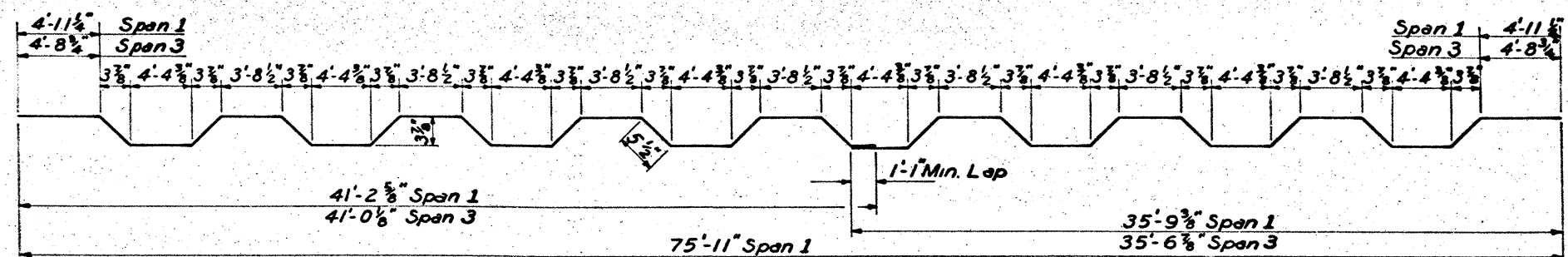


DEAD LOAD DEFLECTION DIAGRAM

NOTE:
Deflections Shown are due to cast-in-place concrete and railing only.



BARS U

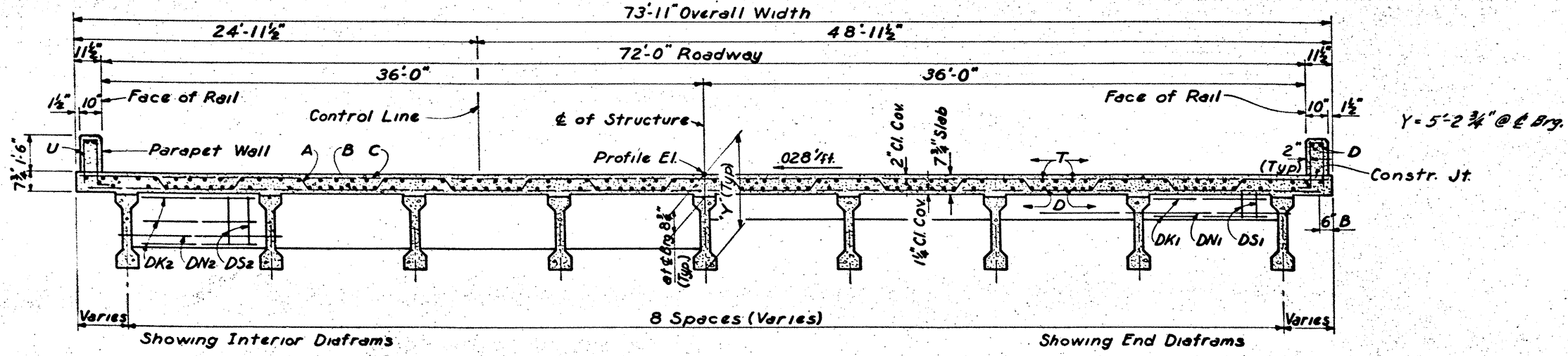


BARS A

BILL OF REINFORCING STEEL AND ESTIMATED QUANTITIES						
			SPAN 1		SPAN 3	
Bar	No.	Size	Length	Weight	Length	Weight
A	58	#5	* 79'-2"	4789	* 78'-9"	4764
B	59	#4	* 76'-2"	3002	* 75'-9"	2985
C	59	#5	* 77'-0"	4738	* 76'-7"	4713
D	80	#5	48'-2"	4019	48'-2"	4019
U	112	#5	5'-0"	584	5'-0"	584
T	70	#4	48'-2"	2252	48'-2"	2252
DK1	64	#5	7'-2"	478	7'-2"	478
DK2	48	#5	6'-11"	346	6'-11"	346
DN1	2	#8	70'-9"	378	70'-9"	378
DN2	8	#8	9'-5"	201	9'-6"	203
DS1	128	#4	4'-8"	399	4'-8"	399
DS2	64	#4	7'-6"	321	7'-6"	321
Reinforcing Steel			Lb.	21,507	Lb.	21,442
Class 'C' Concrete			C.Y.	100.7	C.Y.	100.7
Size 54 Beams			L.F.	433.44	L.F.	433.46
Str. Stl. (Shoe & Armor Pl.)			Lb.	**/350	Lb.	**/340

* Includes one 20 dia. lap. (1'-0" min.)
** Quantity shown is for one complete armor joint. (PJS)

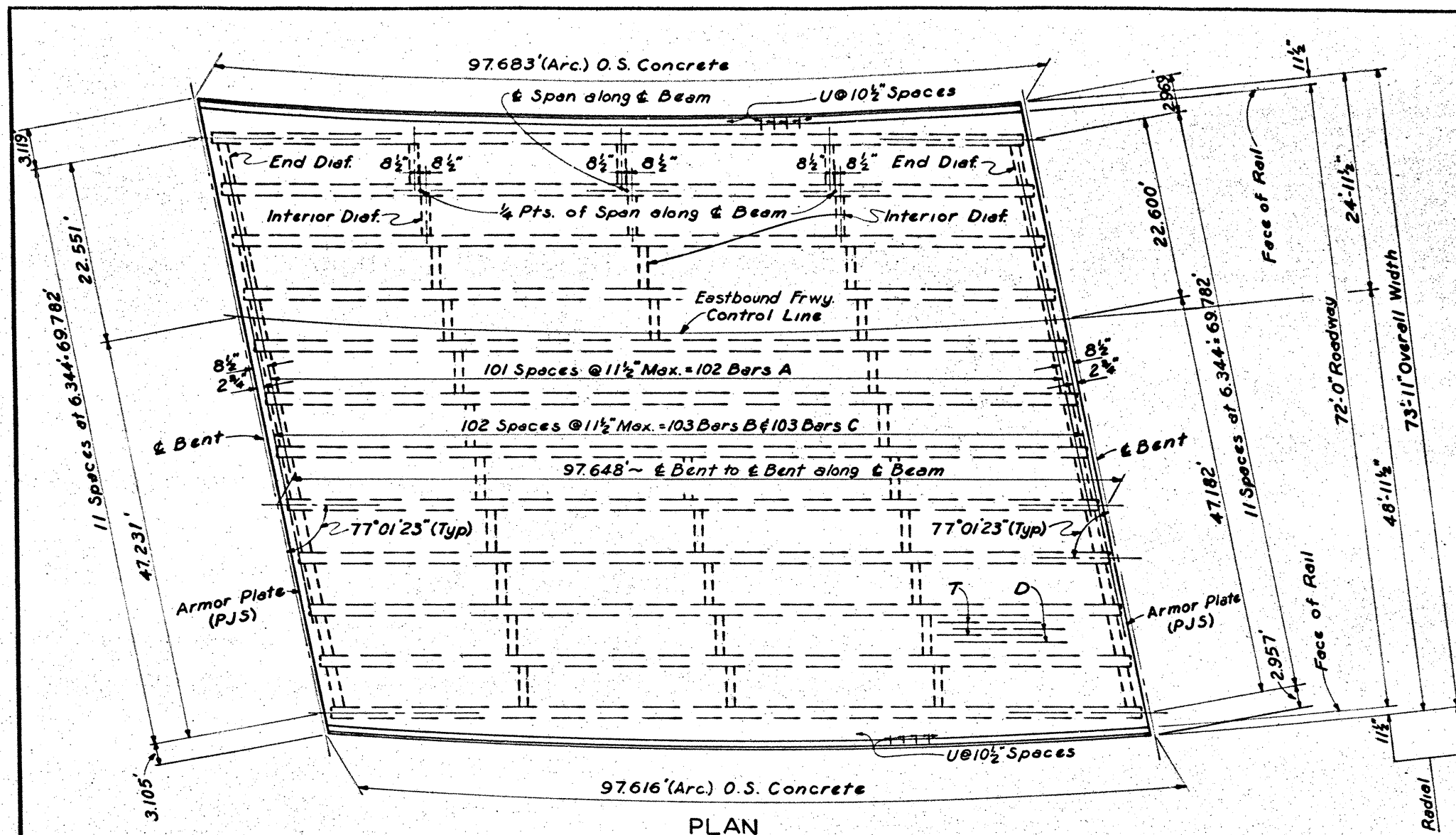
GENERAL NOTES:
Designed according to A.A.S.H.O. 1969 Standard Specifications and complies with P.P.M. 20-4 Sec. 4c.
All cast-in-place concrete to be Class "C."
Chamfer all exposed corners 3/4" unless otherwise noted.
Design $f_c = 1200 \text{ p.s.i.}$



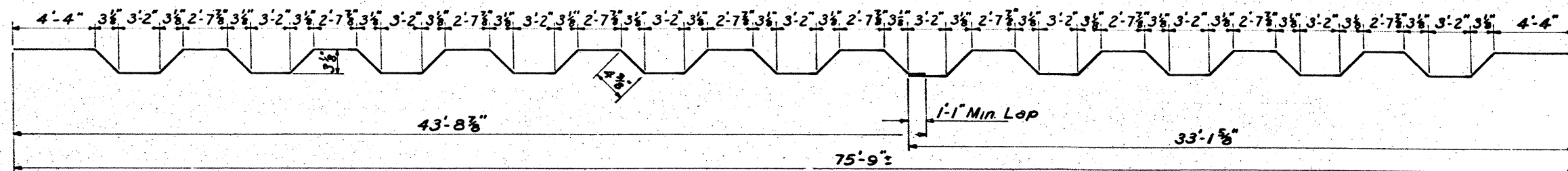
RADIAL SECTION

HS 20 LOADING

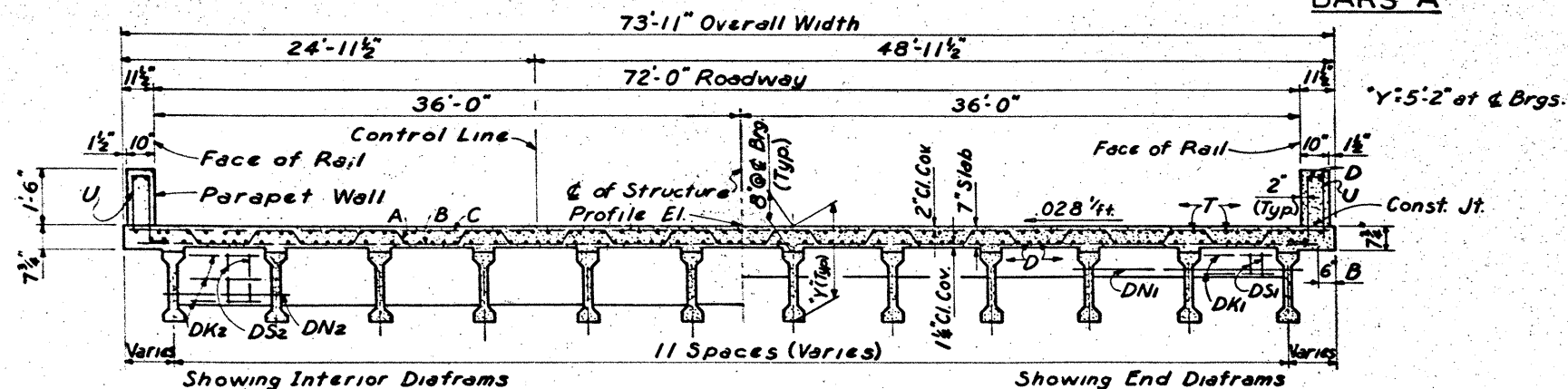
TEXAS HIGHWAY DEPARTMENT BRIDGE DIVISION						
PRESTRESSED CONCRETE BEAM SPANS NO. 1 & 3						
HAMPTON ROAD OVERPASS EASTBOUND FREEWAY						
ORIGINAL DRAWING DATE: DECEMBER, 1966	STATE	FEDERAL	FEDERAL AID PROJECT	SHEET		
DN: CBL	18	6	I 20-566/457	292		
CK: JWD	COUNTY		CONTROL SECTION	JOB		
CK: CBL	DALLAS		2374	E I-20		



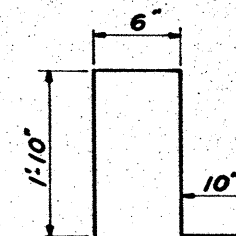
PLAN



BARS A



RADIAL SECTION



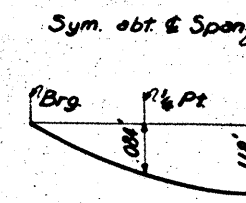
BARS. U

BILL OF REINFORCING STEEL AND ESTIMATED QUANTITIES

Bar	No.	Size	Length	Weight
A	102	#5	* 79'-2"	8422
B	103	#4	* 76'-1"	5235
C	103	#5	* 76'-11"	8263
D	85	#5	* 98'-6"	8733
U	224	#5	5'-0"	1168
T	83	#4	* 98'-5"	5457
DK ₁	88	#5	4'-8"	428
DK ₂	198	#5	4'-7"	947
DS ₁	110	#4	4'-8"	343
DS ₂	165	#4	7'-6"	827
DN ₁	2	#8	70'-10"	378
DN ₂	33	#8	7'-2"	631

Reinforcing Steel	Lb.	40,832
Class "C" Concrete	CY	187.4
Size 54 Beams	L.F.	1167.78
Str. Stl. (Shoe & Armor)	Lb.	** 1340

* Includes one 20 dia. lap. (11'0" min)
** Quantity shown is for one complete
Armor joint. (PJS)



DEAD LOAD DEFLECTION DIAGRAM

NOTE:
Deflections shown are due to
cast-in-place concrete and railing
only.

NOTE:
One Slab Construction Joint, either normal to the Structure Centerline or parallel with the Slab Ends, will be allowed.

GENERAL NOTES:
Designed according to A.A.S.H.O. 1969
Standard Specifications and complies
with P.P.M. 20-4, Sec. 4c.
All cast-in-place concrete to be Class "C"
Chamfer all exposed corners $\frac{3}{4}$ " unless
otherwise noted
Design $f_c = 1200$ p.s.i.

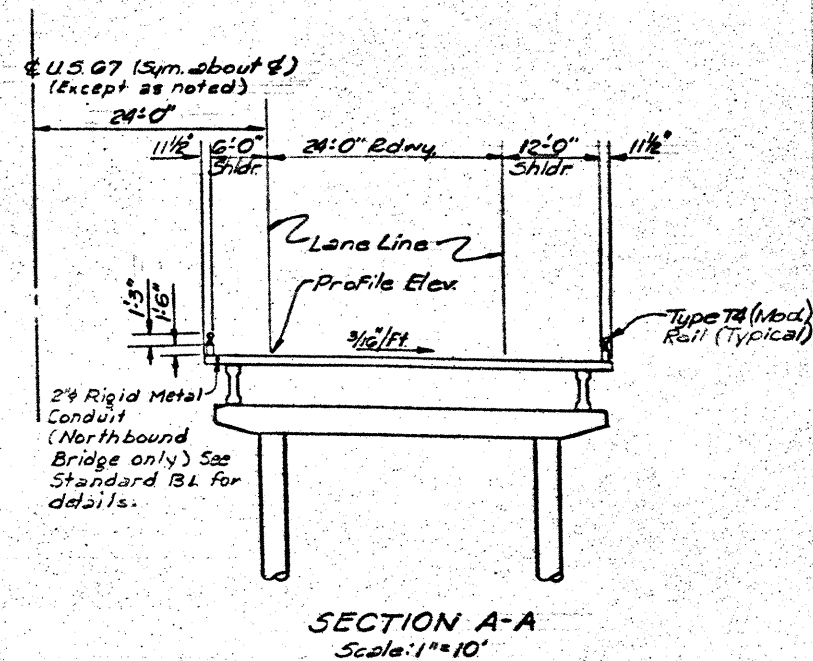
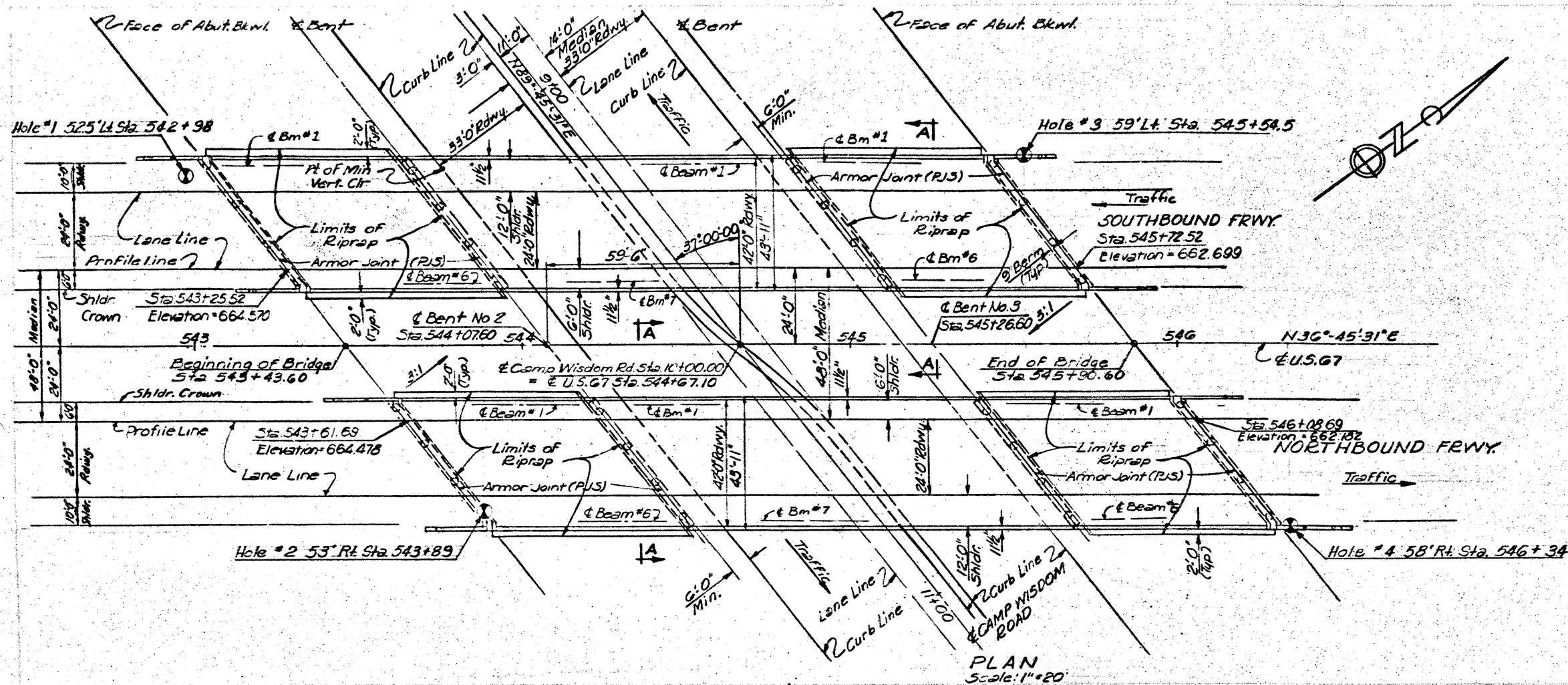
H S 20 LOADING 292A

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

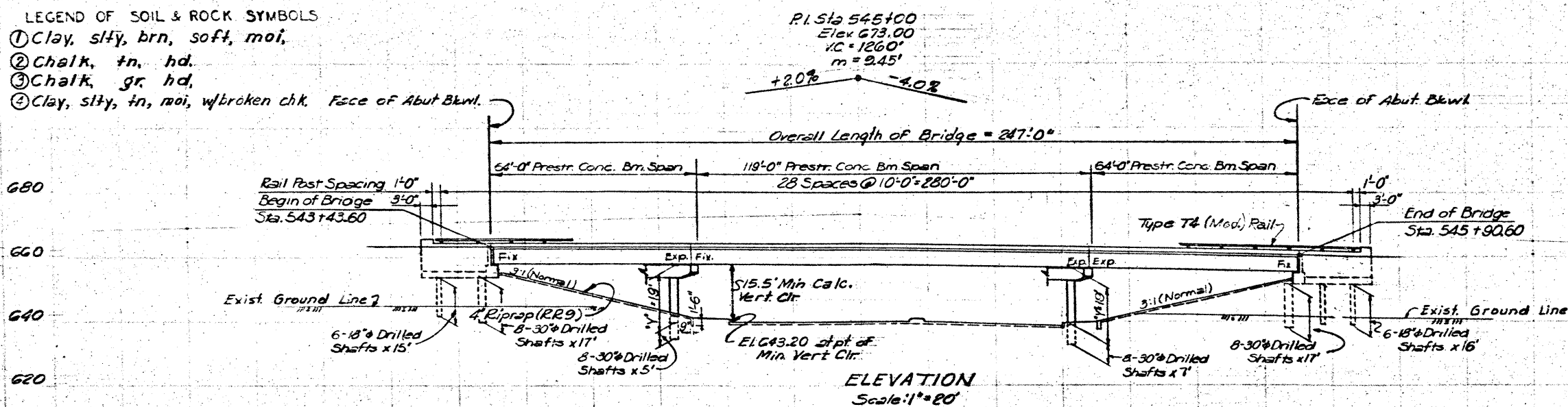
PRESTRESSED CONCRETE BEAM SPAN NO.2

HAMPTON ROAD OVERPASS
EASTBOUND FREEWAY

ORIGINAL DRAWING DATE: <u>DECEMBER 1968</u>		STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
REVISIONS		18	6	I-20-560457	292A
DN: CBL		COUNTY		CONTROL SECTION	JOB
CK: MPN		DALLAS		2374	4 2
DW: J.W.G.					I-20
CK: CBL					



- LEGEND OF SOIL & ROCK SYMBOLS
- ① Clay, slty, brn, soft, moi.
 - ② Chalk, tn, hd.
 - ③ Chalk, gr, hd.
 - ④ Clay, slty, tn, moi, w/broken chk. Face of Abut. Bkwl.



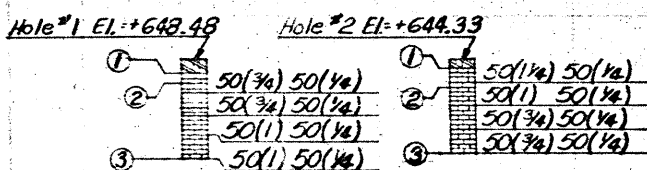
DESIGN NOTE:
Bridge designed for HS20-44 loading under 1995
A.A.H.D. Specifications
Design Wind Velocity - 78 MPH Max

TEXAS HIGHWAY DEPARTMENT
U.S. HWY. 67

CAMP WISDOM ROAD OVERPASS

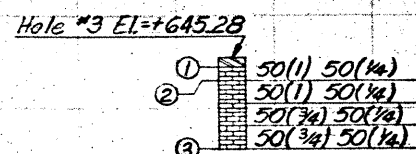
LAYOUT 293

DN:	Drawing	Date	120-5(61)457 U.S.67
CE:	Original	Feb. 67	
DW:HC	Revised	Feb. 68	
CC:			18 Dallas 2374 4 2 293



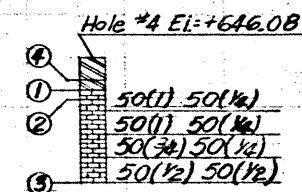
①

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③

④



543

544

545

546

TABLE OF ESTIMATED QUANTITIES														
Item	Uncl. Str. Excav.	Drilled Shafts		Class "C" Concrete			Prestressed Concrete Beams		Riprap Class "B" Concrete	Reinf. Steel	Str. Str. (Shoas & Armor Jt.)	Type T-4 (Mod) Rail	Concrete Surface Treat.	CONDY (RIGID METAL) (2 IN)
		18" ϕ	30" ϕ	Abutments	Bents	Slab	54 "	AA.S.H.O. II						
		C.Y.	L.F.	L.F.	C.Y.	C.Y.	C.Y.	L.F.						
4-Abutment Bents	216	186	272	157.2					174	20,336	1868	140	30	43
4-Interior Bents			96		110.8					23696.				
4-64'-0" Prest. Conc. Bm. Spans						318.8	1,528			73,316	3740	312	1280	128
2-119'-0" Prest. Conc. Bm. Spans						276.8		1661.34		61,918	1870	478	1190	119
Totals	216	186	368	157.2	110.8	595.6	1,528	1661.34	174	179,266	7478	1128	2,500	290

TABLE OF BEARING SEAT ELEVATIONS FOR SOUTHBOUND FREEWAY								
Bent	Bearing	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5	Beam #6	Beam #7
#1		658.880	658.925	659.108	659.220	659.330	659.439	-
#2	Back	658.703	658.801	658.897	658.992	659.085	659.176	-
	Forward	658.688	658.769	658.850	658.929	659.007	659.084	659.160
#3	Back	657.940	657.995	658.048	658.101	658.152	658.202	658.251
	Forward	657.939	658.004	658.067	658.129	658.190	658.248	-
#4		657.321	657.369	657.415	657.460	657.503	657.545	-

TABLE OF BEARING SEAT ELEVATIONS FOR NORTHBOUND FREEWAY								
Bent	Bearing	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5	Beam #6	Beam #7
#1		659.361	659.222	659.083	658.941	658.798	658.654	-
#2	Back	659.008	658.853	658.696	658.538	658.378	658.216	-
	Forward	658.990	658.860	658.730	658.598	658.465	658.331	658.196
#3	Back	657.912	657.756	657.599	657.440	657.280	657.120	656.958
	Forward	657.908	657.720	657.530	657.339	657.146	656.952	-
#4		657.115	656.910	656.703	656.494	656.284	656.073	-

TEXAS HIGHWAY DEPARTMENT

BRIDGE DIVISION

ESTIMATED QUANTITIES

AND

BEARING SEAT ELEVATIONS

CAMP WISDOM ROAD OVERPASS

ORIGINAL DRAWING DATE: April, 1969

REVISIONS

STATE DISTRICT

FEDERAL REGION

FEDERAL AID PROJECT

SHEET

18

6

120-5(61)457

294

COUNTY

SECTION

JOB

HIGHWAY

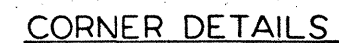
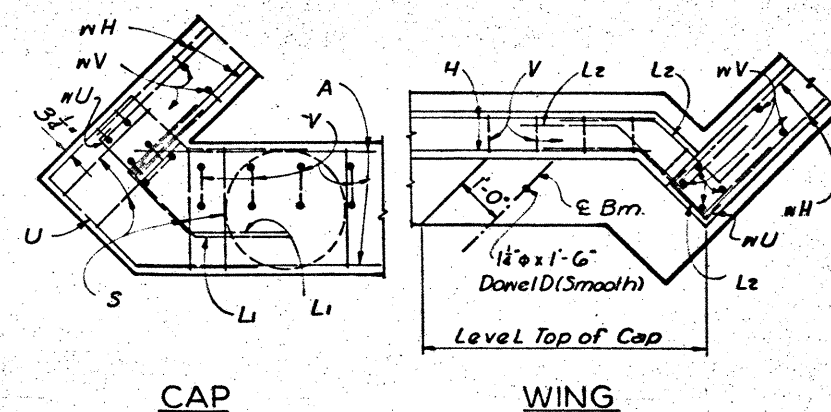
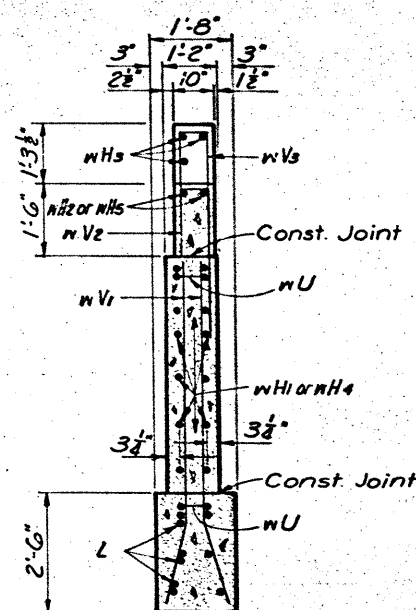
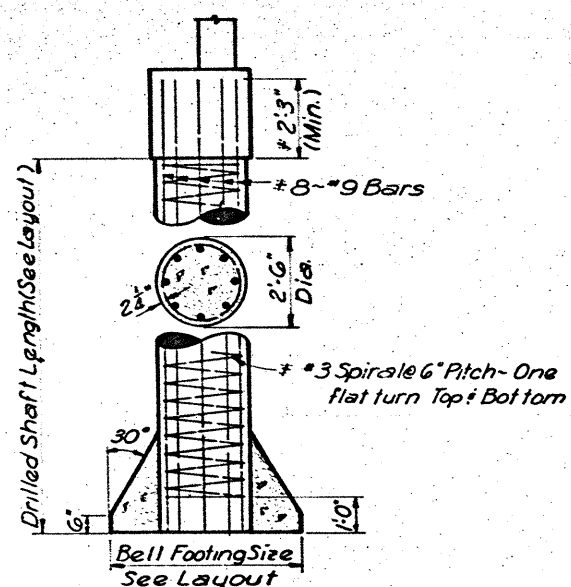
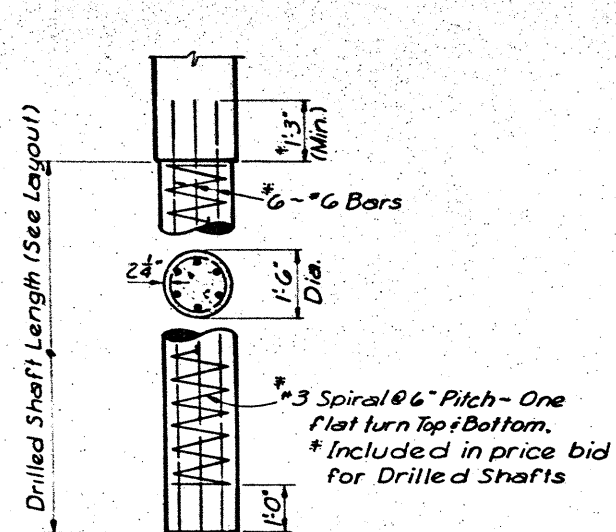
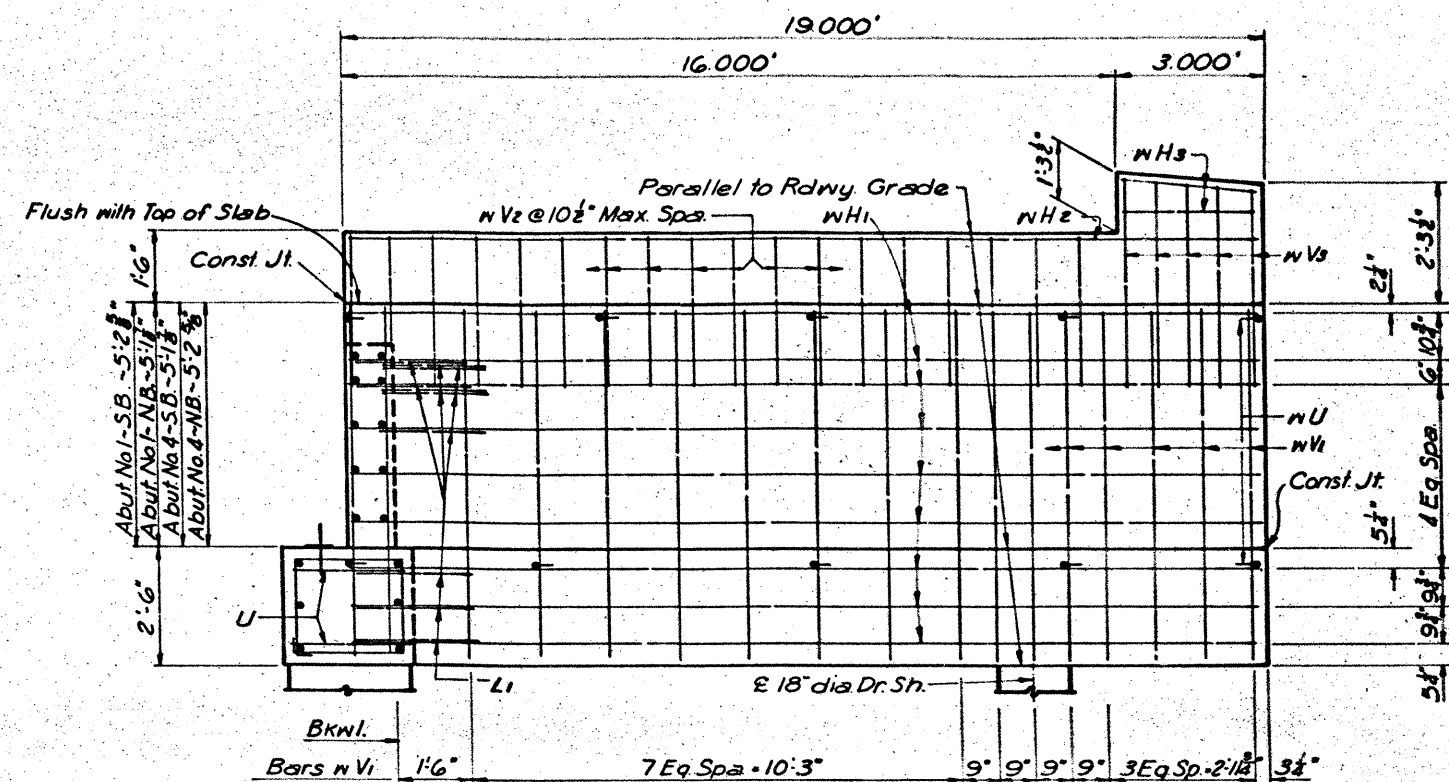
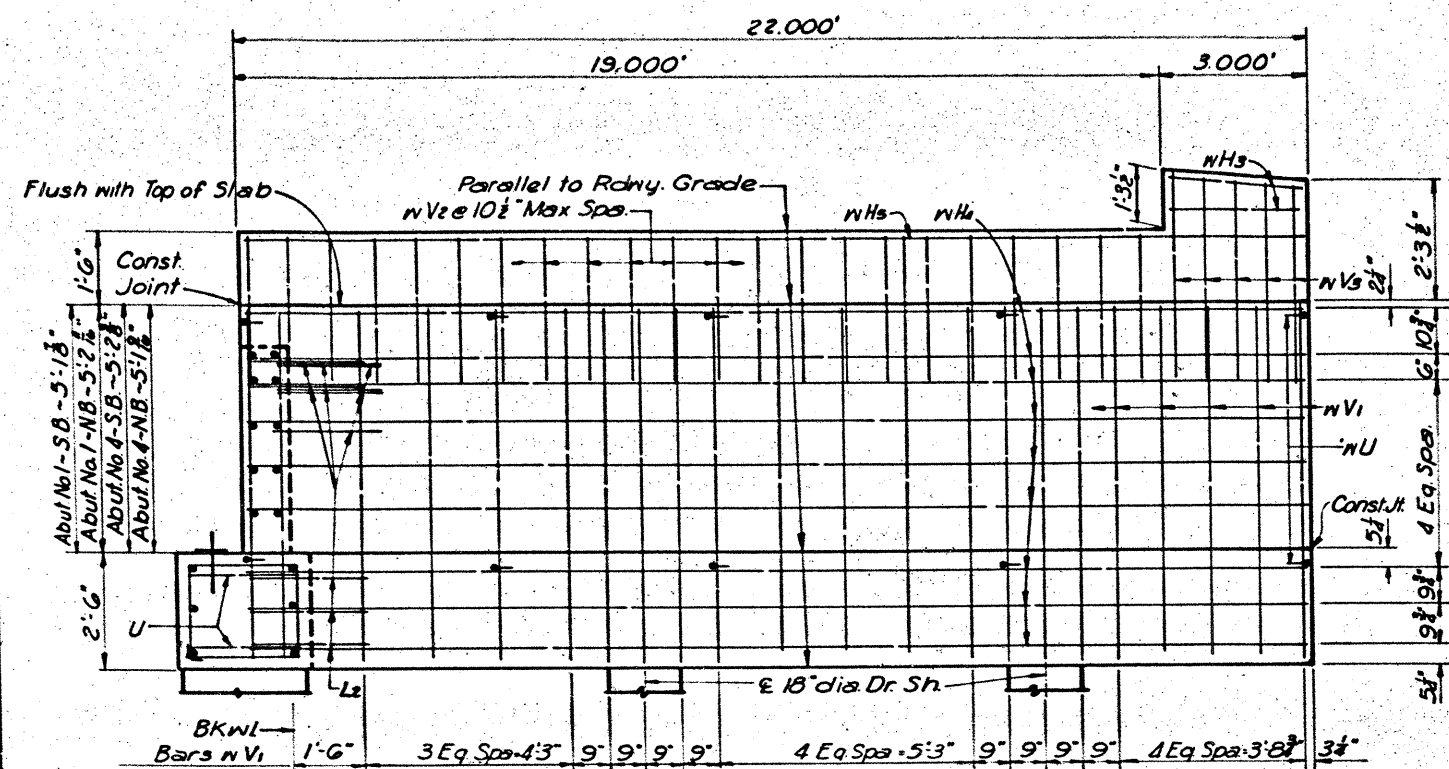
DALLAS

2374

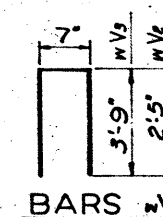
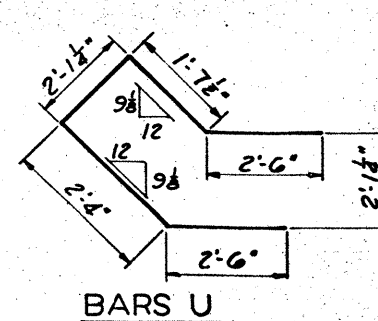
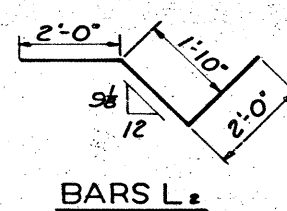
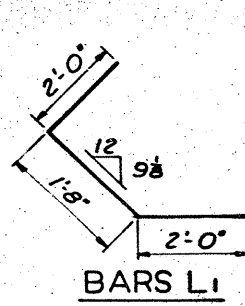
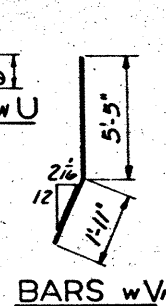
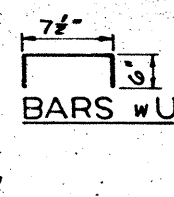
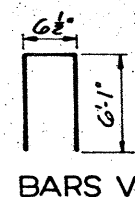
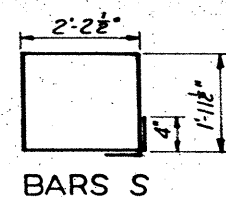
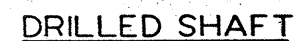
4

2

US67



GENERAL NOTES:
Designed according to AASHTO 1965 Standard Specifications.
Chamfer all exposed corners $\frac{3}{8}"$ unless otherwise noted.
Design $f_c = 1200$ psi.
Calculated Shaft Load: 6.3 T_{pr} Sh.



HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

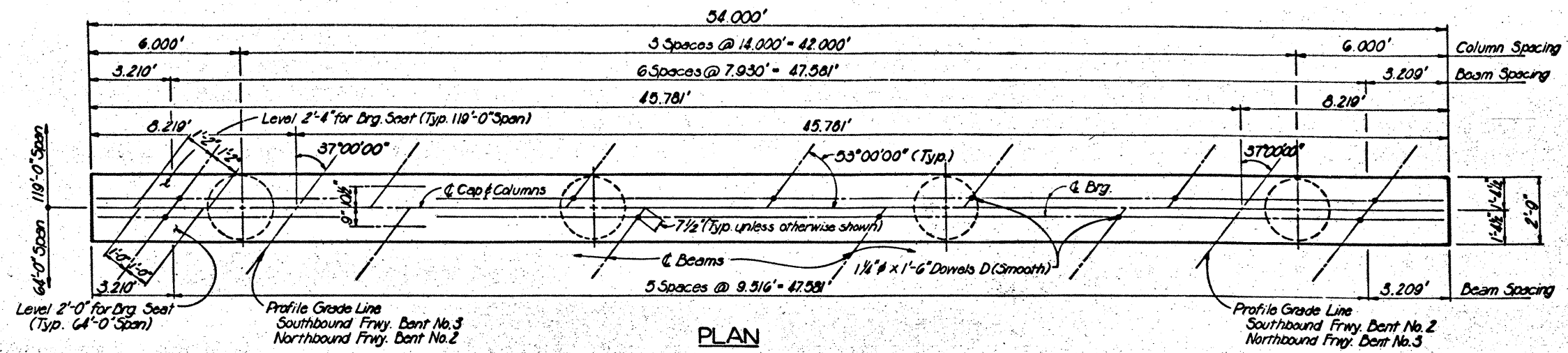
ABUTMENTS

37°00'00" RF SKEW 296

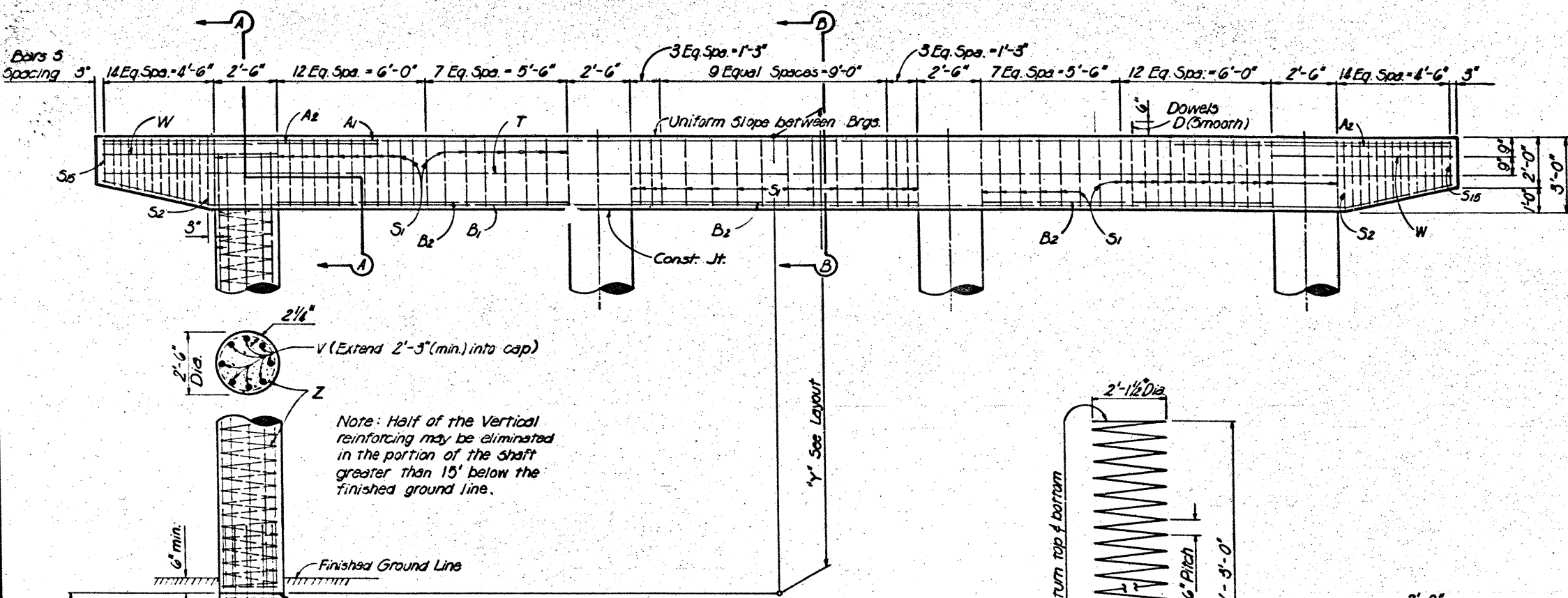
CAMP WISDOM ROAD OVERPASS

Sheet 2 of 2

ORIGINAL DRAWING DATE: OCT. '68		STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
DN - MES	REVISONS	18	6	IRZ-5(61)457	296
CK - MCH					
DW - GSG		COUNTY	CONTR.	SECTION	AGE
CK - HND		DALLAS 2574 4 2 USG...			



BILL OF CONSTANT REINF. STEEL					
Bars	No.	Size	Length	Weight	
A ₁	4	#11	53'-8"	1141	
A ₂	6	#10	11'-0"	284	
B ₁	2	#11	53'-10"	572	
B ₂	9	#10	11'-6"	445	
S ₁	58	#5	10'-10"	655	
S ₂₋₅ Avg.	28	#5	9'-10"	287	
T	2	#5	53'-8"	112	
W	4	#5	7'-3"	30	
D	11	1 1/4" ϕ	1'-6"	69	
Total			10.	3595	



BILL OF VARIABLE REINFORCING STEEL AND ESTIMATED QUANTITIES						
'Y'	Bars Z 4 ~ #3	Bars V 32 ~ #9	Reinf. Steel	Class 'C' Concrete		
Feet	Length	Weight	Length	Weight	Lb.	C.Y.
15	174'	262	14'-3"	1550	5407	24.8
16	187'	281	15'-3"	1659	5535	25.5
17	201'	302	16'-3"	1768	5665	26.2
18	214'	322	17'-3"	1877	5794	26.9
19	228'	343	18'-3"	1986	5924	27.7
20	241'	362	19'-3"	2094	6051	28.4

GENERAL NOTES:
 Designed according to A.A.S.H.O. 1965 Standard Specification.
 Chamfer all exposed corners 3/4" unless otherwise noted.
 Calculated Shaft Load = 145 Tons/Shaft

HS 20 LOADING

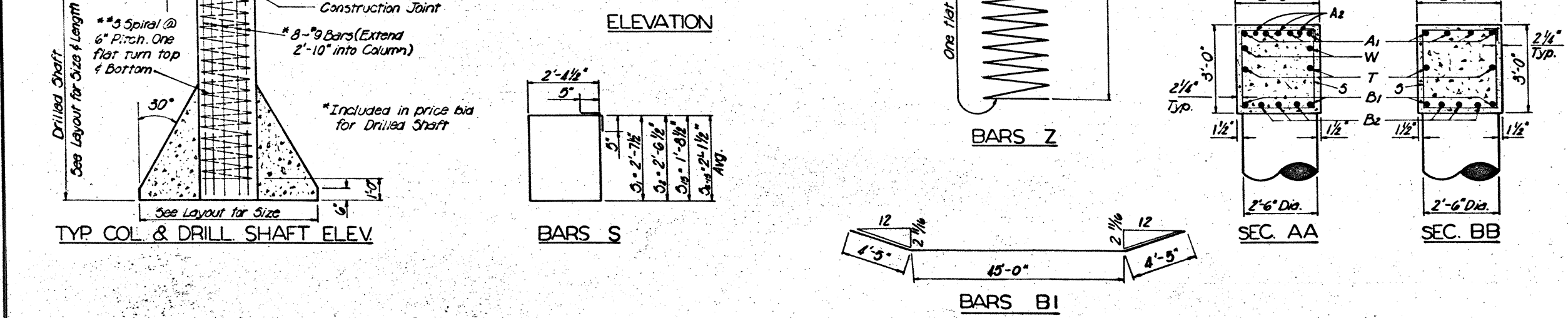
TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION

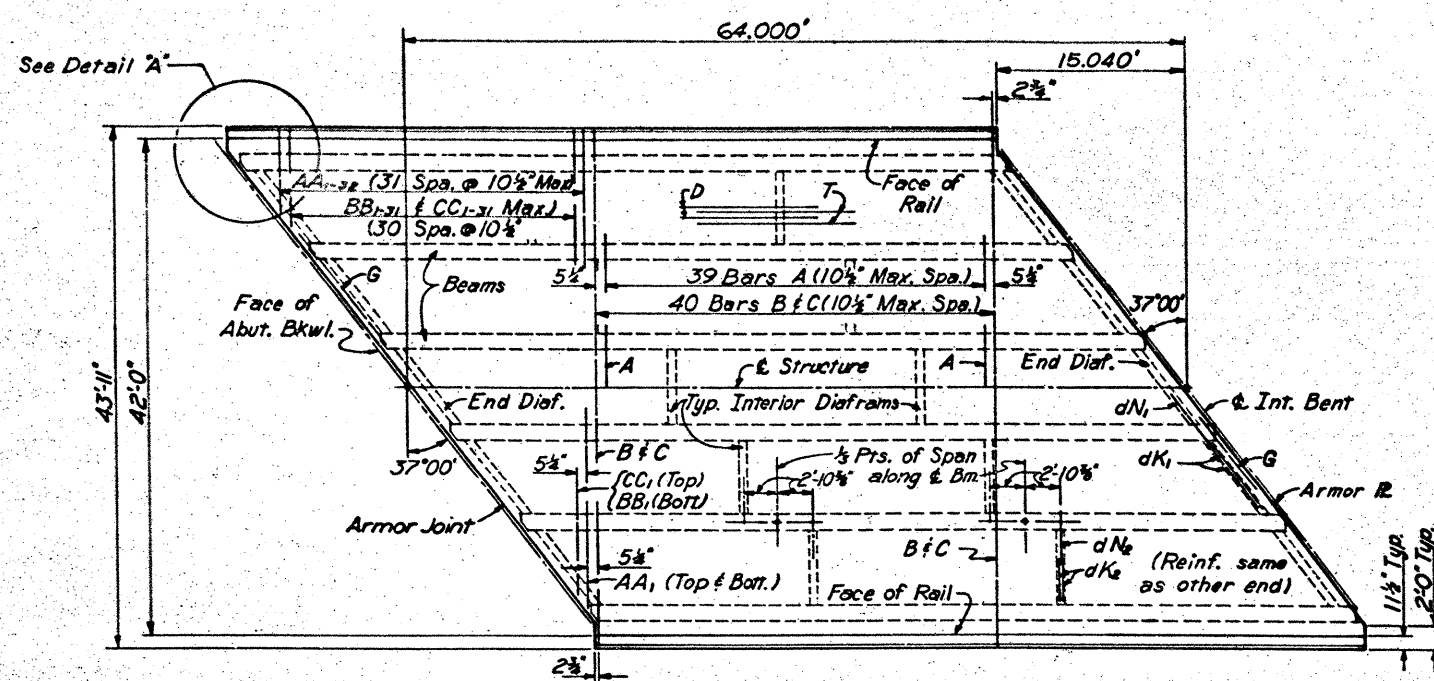
**INTERIOR BENT
 NO. 2 OR NO. 3**

37°00' R.F. SKEW
 CAMP WISDOM ROAD OVERPASS

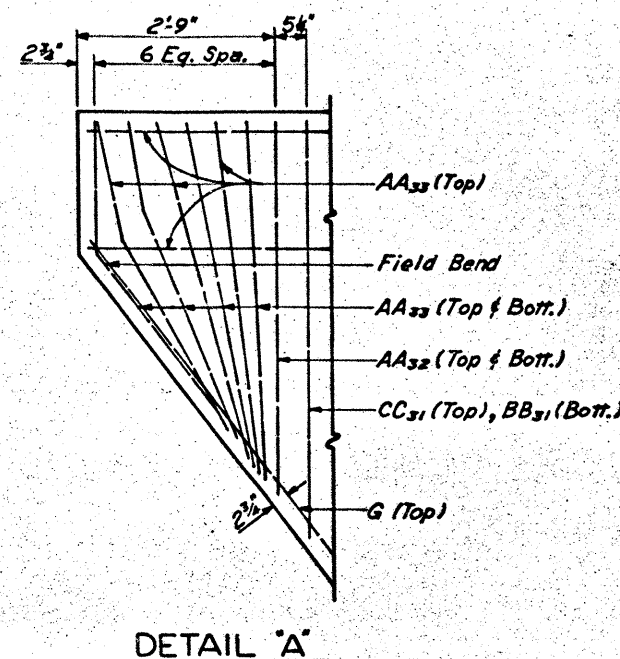
297

ORIGINAL DRAWING DATE: September, 1968	STATE: TEXAS	FEDERAL DISTRICT: 10	FEDERAL AID PROJECT: 6-1-5001457	SHEET: 297
DESIGNED BY: JCH	CHECKED BY: JCH	APPROVED BY: JCH	COUNTY: DALLAS	JOB: 297

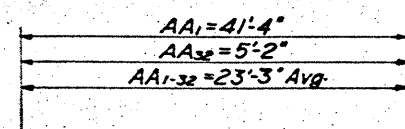




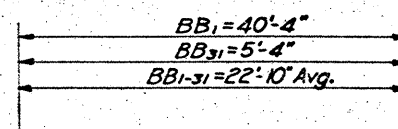
PLAN



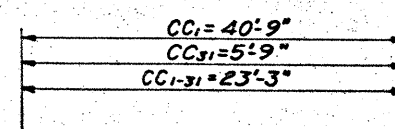
DETAIL 'A'



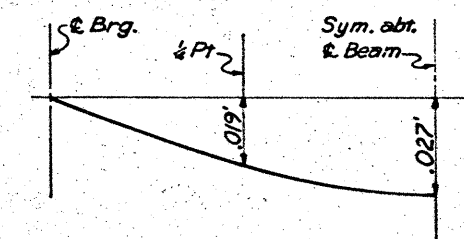
BARS AA



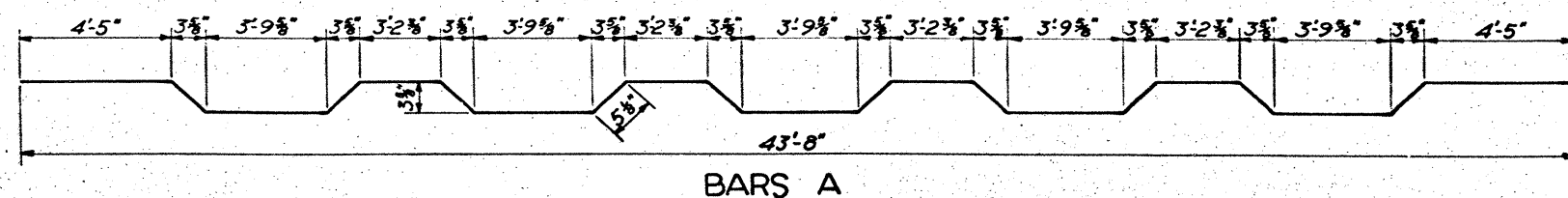
BARS BB



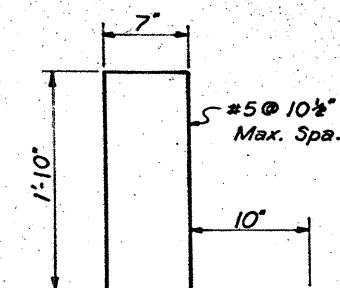
BARS CC



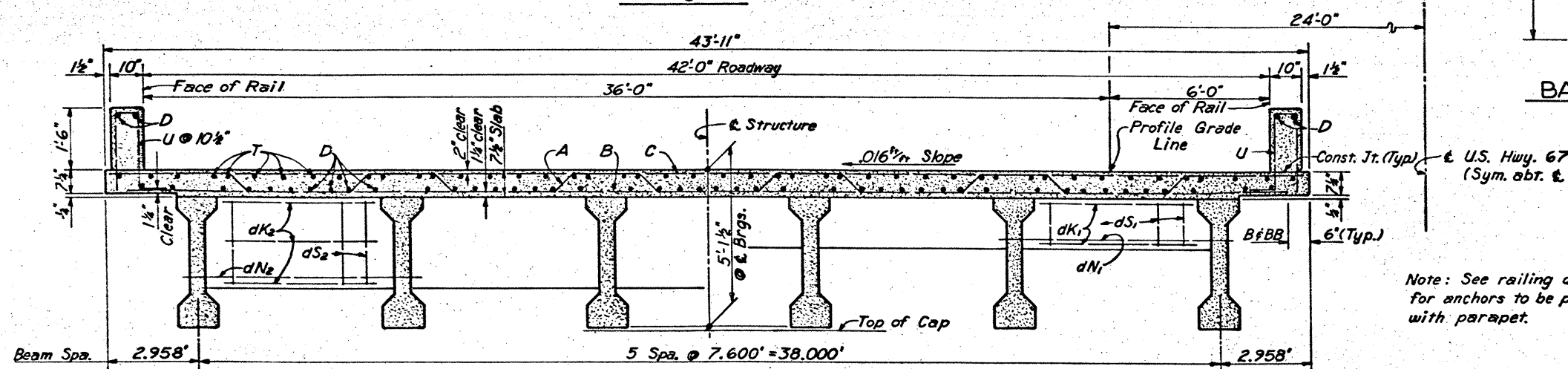
DEAD LOAD DEFL. DIAG.
(Due to cast in place concrete and rail only)



BARS A



BARS U



Showing Interior Diagrams

Showing End Diagrams

TRANSVERSE SECTION

BILL OF REINFORCING STEEL AND ESTIMATED QUANTITIES

Bar	No.	Size	Length	Weight
A	39	#5	44'-11"	1827
B	40	#4	42'-11"	1147
C	40	#5	43'-8"	1822
AA ₁₋₃₂	128	#5	23'-3" Avg.	3104
AA ₃₃	26	#5	5'-0"	136
BB ₁₋₃₁	62	#4	22'-10" Avg.	946
CC ₁₋₃₁	62	#5	23'-3" Avg.	1504
* D	48	#5	64'-10"	3245
* T	46	#4	64'-9"	1990
G	2	#5	50'-0"	104
U	146	#5	5'-1"	774
dN ₁	2	#8	48'-9"	260
dN ₂	10	#8	8'-6"	226
dK ₁	40	#5	7'-6"	313
dK ₂	60	#5	6'-0"	375
dS ₁	80	#4	4'-8"	205
dS ₂	70	#4	7'-6"	351

Reinforcing Steel	Lb. 18,329
Concrete	C.Y. 79.7
54" Beams	L.F. 382.00
Str. Steel (Armor Joint & Sho)	Lb. 935

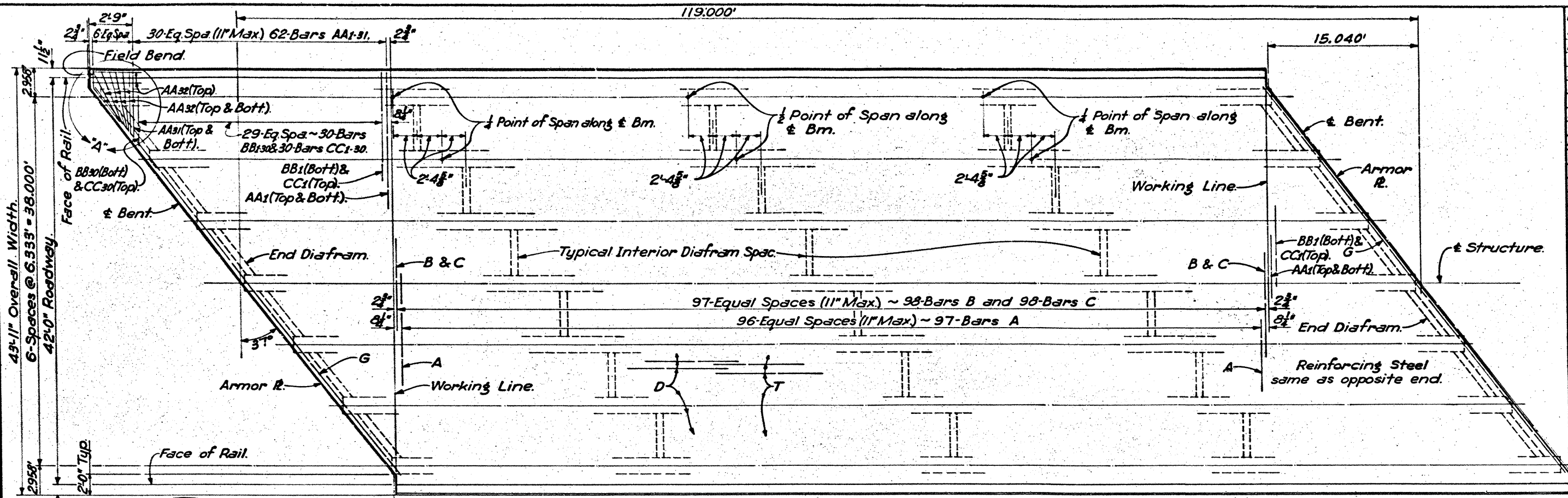
* Includes one 20 dia. Lap (1'-0" Min.)
* Quantity shown for one complete armor joint.

GENERAL NOTES:
Designed according to AASHTO 1965 Standard Specifications.
Chamfer all exposed corners 3/4" unless otherwise noted.
Design $f_c = 1200$ psi.
One slab construction joint, either normal to the structure centerline or parallel with the slab ends will be permitted.

HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
**64'-0" PRESTRESSED
CONCRETE BEAM SPANS**
37°00' R.F. SKEW **298**
CAMP WISDOM ROAD OVERPASS

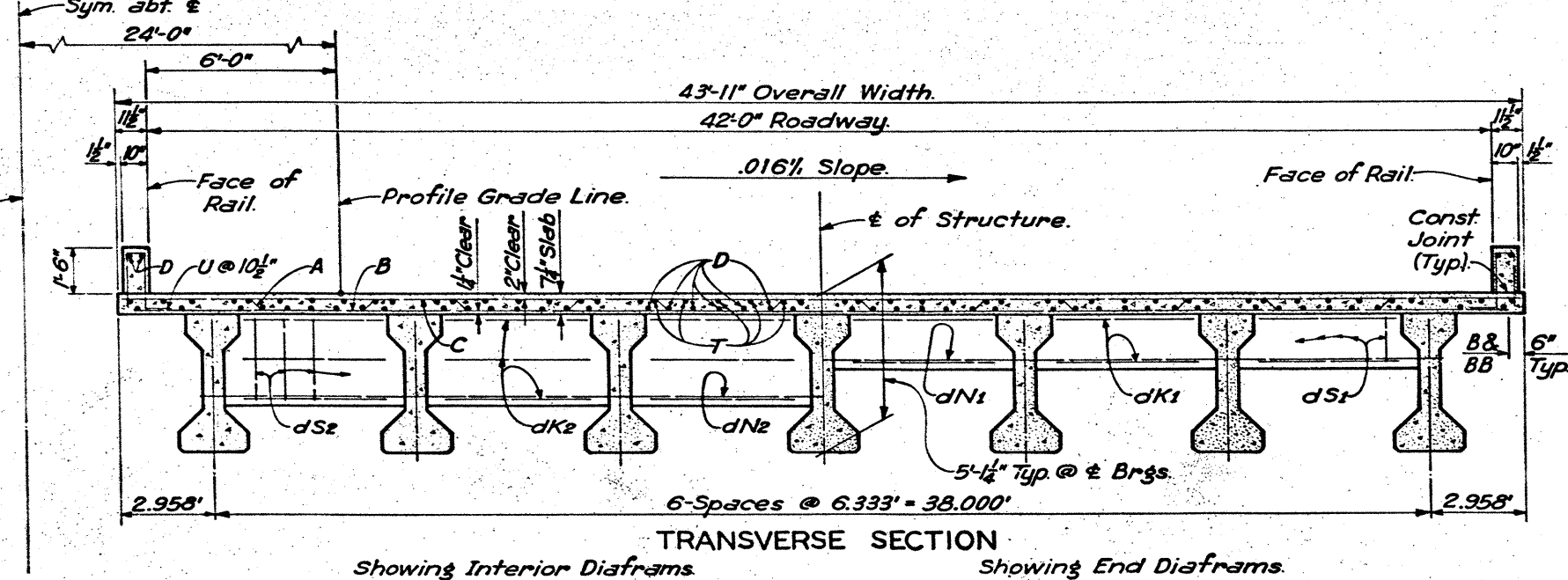
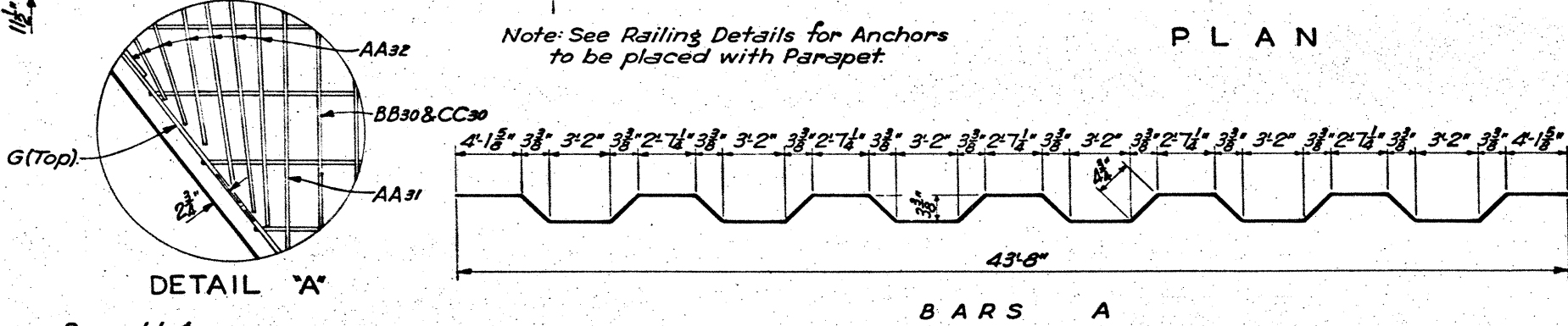
ORIGINAL DRAWING DATE	OCTOBER 1968	STATE	FEDERAL AID PROJECT	SHEET
DR. - M/S	REVISIONS	18	6	120-5660457 298
CR. - LEC		COUNTY	CONTROL SECTION	JOB
DW. - DEU		DALLAS	2372	2
CF. - ZCF				US 67



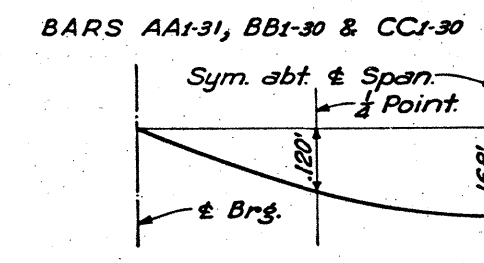
Bar	No	Size	Length	Weight
A	97	#5	45'-1"	4561
AA131	124	#5	23'-2" Avg.	2997
AA32	26	#5	4'-10"	131
B	98	#4	42'-11"	2809
BB1-30	60	#4	22'-10" Avg.	915
C	98	#5	43'-8"	4463
CC1-30	60	#5	23'-2" Avg.	1450
D	50	#5	119'-9"	6245
T	48	#4	119'-8"	3837
G	2	#5	50'-0"	104
U	274	#5	5'-1"	1452
dK1	48	#5	5'-6"	275
dK2	108	#5	4'-4"	488
dS1	72	#4	5'-4"	208
dS2	90	#4	6'-10"	411
dN1	2	#8	48'-10"	261
dN2	18	#8	7'-4"	352

Reinforcing Steel, Lb. 30,959
 Str. Sh. (Shoes & Armor It), Lb. ** 935
 Class C Concrete, C.Y. 138.4
 Prest. Conc. Brms. (AASHO, Type IV, LF 83067)

*Includes one 20 dia. lap (1'-0" Min).
 **Quantity shown for 1 complete Armor Joint.



AA1 ~	41'-2"
AA31 ~	5'-2"
AA1-31 ~	23'-2" Avg.
BB1 ~	40'-3"
BB30 ~	5'-5"
BB1-30 ~	22'-10" Avg.
CC1 ~	40'-7"
CC30 ~	5'-9"
CC1-30 ~	23'-2" Avg.



DEAD LOAD DEFLECTION DIAGRAM
 Note: Deflections shown are due to cast-in-place concrete and rail only.

GENERAL NOTES:
 Designed according to A.A.S.H.O. 1965 Standard Specifications.
 Design $f_c = 1200$ p.s.i.
 Chamfer all exposed corners $\frac{1}{4}$ " unless otherwise noted.
 One slab construction joint, either normal to structure centerline or parallel with the slab ends, will be permitted.

HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
 BRIDGE DIVISION
 119'-0" PRESTRESSED
 CONCRETE BEAM SPANS
 37° R.F. SKEW
 CAMP WISDOM ROAD OVERPASS

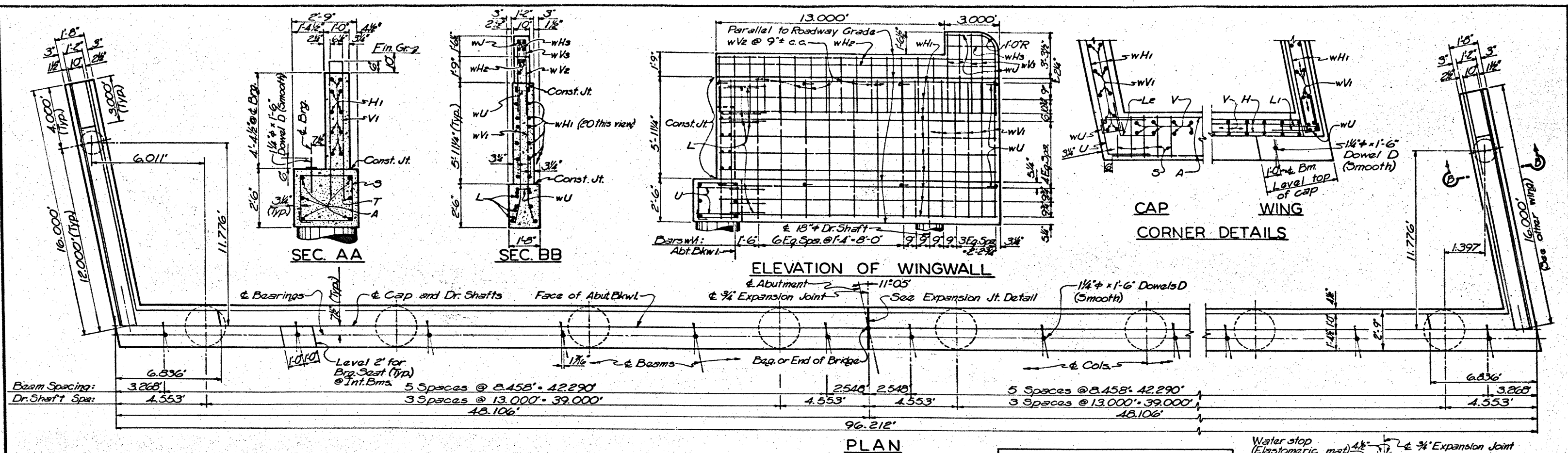
ORIGINAL DRAWING DATE: OCT 1968	STATE DISTRICT	FEDERAL AID PROJECT	SHEET
REVISIONS	18	6	299
COUNTY	DALLAS	294	4
CK: D.D.G.			

Item	Undl. Str. Excav.	Drilled Shafts		Class "C" Concrete			Prestn Conc. Bms. Size 54	Riprap Class "B" Concrete	Reinf. Steel	Str. Steel (Shoes, Armor Jt.)	Railing Type C4 (Mod)	Concrete Surface Treatment	Tele. Conduit Std. Stl Pipe 4" I.D.
		18"	30"	Abutments	Bents	Spans							
		C.Y.	L.F.	L.F.	C.Y.	C.Y.							
2 Abutment Bents	140	24	128	110.0	-	-	-	170	14,344	1450	52	18	-
6 Interior Bents	-	-	132	-	149.4	-	-	-	34,022	-	-	-	-
2-48'-6" Prestn. Conc. Bm. Spans	-	-	-	-	-	148.4	578.00	-	28,500	2538	97	523	481
2-73'-6" Prestn. Conc. Bm. Spans	-	-	-	-	-	217.1	878.00	-	43,013	3,064	147	793	776
4-97'-6" Prestn. Conc. Bm. Spans	-	-	-	-	-	556.0	2,720.68	-	110,792	7088	330	2104	1753
Totals	140	24	260	110.0	149.4	921.5	4176.68	170	230,671	14140	606	3438	2962

Bent	Bearing	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5	Beam #6	Beam #7
#1		658.74	658.348	658.421	658.494	658.568	658.611	-
#2	Back	659.840	659.918	659.995	660.072	660.149	660.196	-
	Forward	659.870	659.934	659.999	660.063	660.128	660.192	660.226
#3	Back	662.710	662.781	662.852	662.923	662.994	663.065	663.105
	Forward	662.744	662.815	662.886	662.957	663.028	663.099	663.139
#4	Back	665.114	665.192	665.270	665.347	665.425	665.502	665.549
	Forward	665.153	665.246	665.339	665.432	665.525	665.588	-
#5		666.644	666.741	666.838	666.935	667.032	667.099	-

Bent	Bearing	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5	Beam #6	Beam #7
#1		658.577	658.421	658.234	658.018	657.862	657.675	-
#2	Back	660.164	660.012	659.830	659.647	659.465	659.282	-
	Forward	660.194	660.073	659.921	659.769	659.617	659.464	659.312
#3	Back	663.078	662.963	662.818	662.672	662.527	662.381	662.235
	Forward	663.113	662.997	662.852	662.707	662.561	662.416	662.270
#4	Back	665.527	665.419	665.280	665.141	665.002	664.863	664.724
	Forward	665.566	665.430	665.263	665.097	664.930	664.763	-
#5		667.079	666.947	666.785	666.623	666.461	666.299	-

ORIGINAL DRAWING DATE: <i>May 1969</i>		STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT		SHEET
REVISONS		<i>18</i>	<i>6</i>	<i>I 20-5(6)457</i>		<i>301</i>
DR. :-		COUNTRY		CONTROL SECTION	JOB	
CR. :-		DALLAS		<i>2374</i>	<i>2</i>	
DW. :- <i>LLC</i>					<i>1.420</i>	
CK. :- <i>GLH</i>						

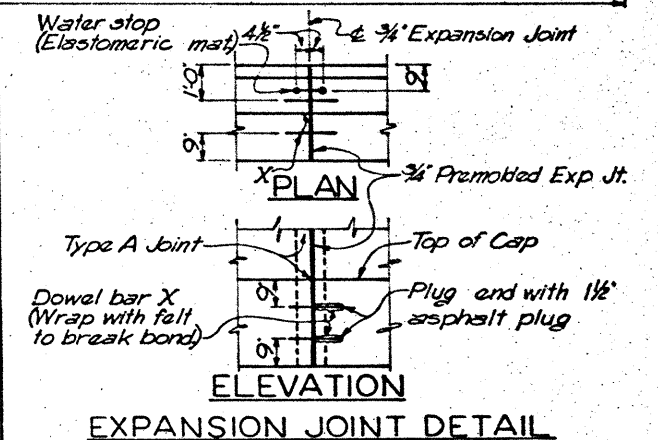


BILL OF REINF. STEEL & ESTIMATED QUANTITIES

Bar	Number	Size	Length	Weight
A	10	#11	47'-4"	2515
D	12	#14	1'-6"	75
H1	20	#5	47'-7"	993
L1	9	#6	4'-0"	54
L2	9	#6	4'-0"	54
S	88	#4	9'-0"	529
T	2	#5	47'-4"	99
U	4	#6	7'-2"	43
V1	82	#4	12'-10"	703
WH1	40	#6	15'-9"	946
WH2	6	#5	15'-9"	99
WH3	4	#5	2'-9"	11
WH4	4	#5	6'-7"	27
WH5	16	#5	1'-8"	28
WH6	64	#5	8'-2"	545
WH7	34	#5	6'-0"	213
WH8	8	#5	9'-1"	76
X	4	#6	3'-0"	18
V2	12	#4	14'-8"	118
H2	4	#5	6'-3"	26

Total Weight	Lbs.	7172
Reinforcing Steel	Lbs.	7172
Class "C" Concrete	C.Y.	55.0
Uncl. Str. Excavation	C.Y.	70
Str. Stl. (Shoe & Ar. Jt.)	Lb.	725

*Quantity shown is for 1/2 Armor Joint.
Note: For Ar. Jt. Details see GpD Sheet.
Armor plates to be placed in approach slab.
Quantities shown are for one abutment only.



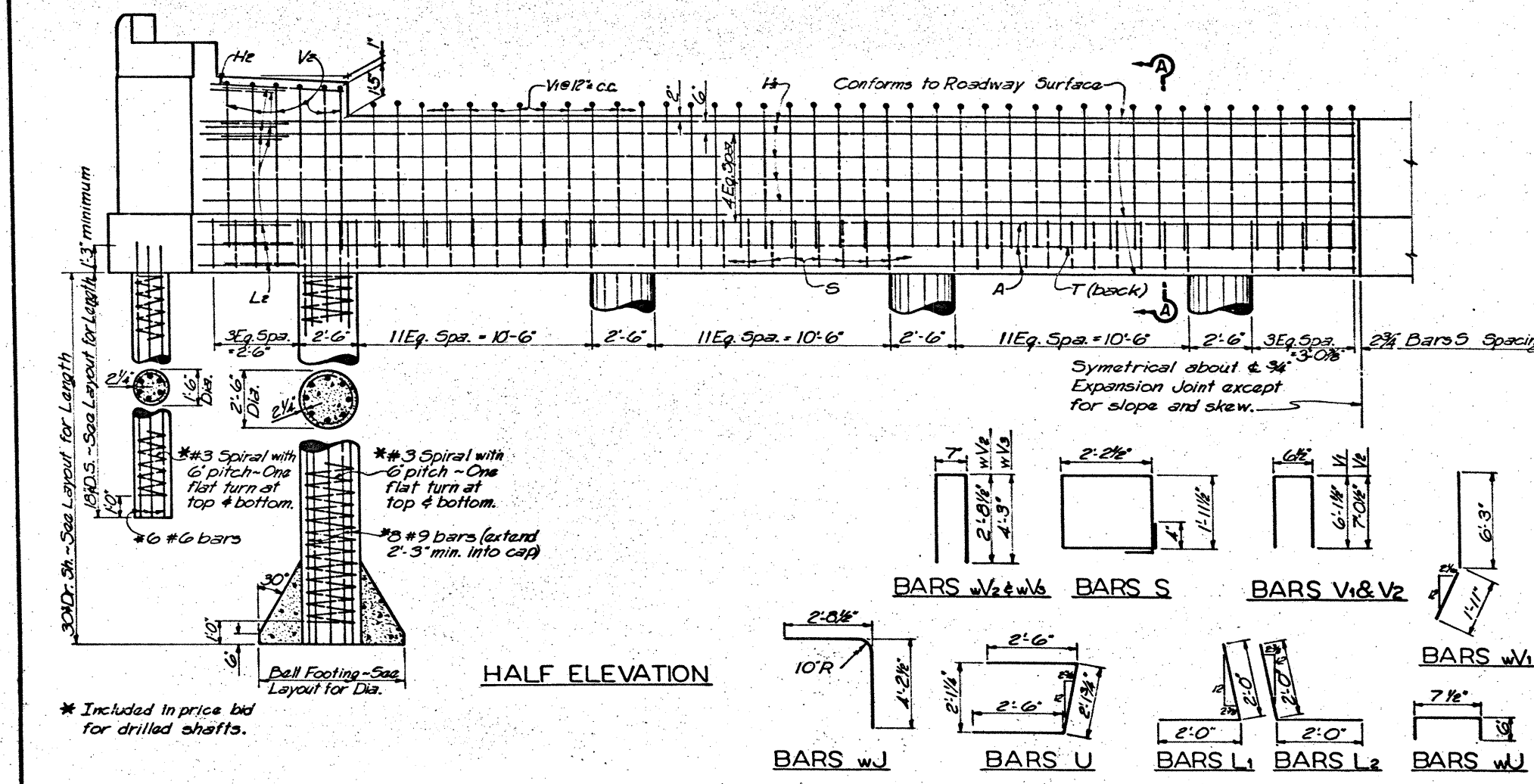
GENERAL NOTES:
Designed according to A.A.S.H.O. 1965 Standard Specifications.
Chamfer all exposed corners 3/4" unless otherwise note.
Design $f_c = 1200$ p.s.i.
Calculated shaft load: Abut. #1 = 58 Tons
Abut. #5 = 74 Tons

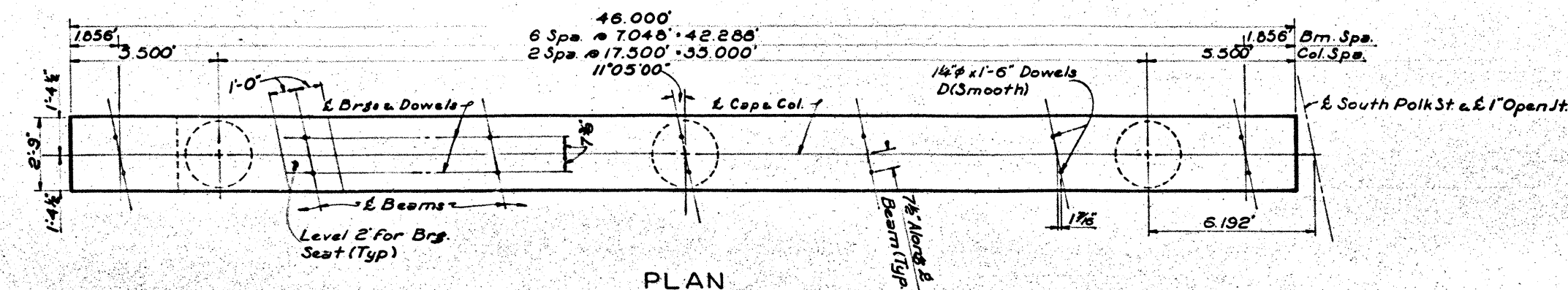
HS 20 LOADING

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
ABUTMENTS
11:05' L.F. SKEW

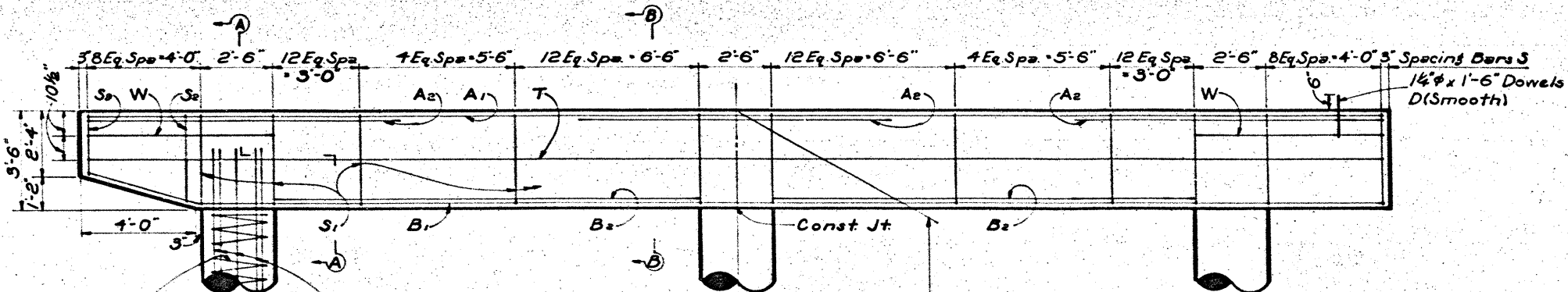
SOUTH POLK STREET UNDERPASS

ORIGINAL DRAWING DATE: December, 1968	STATE DISTRICT: 18	FEDERAL REGION: 6	FEDERAL AID PROJECT: 120-5(61)457	SHEET: 302
REVISIONS:	COUNTY: DALLAS	SECTION: 2374	JOB: 4	DATE: 11/20

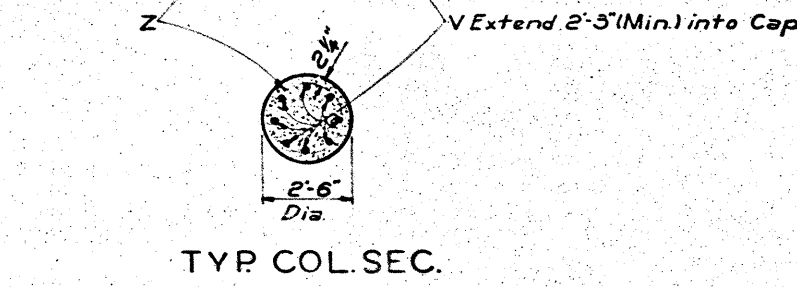




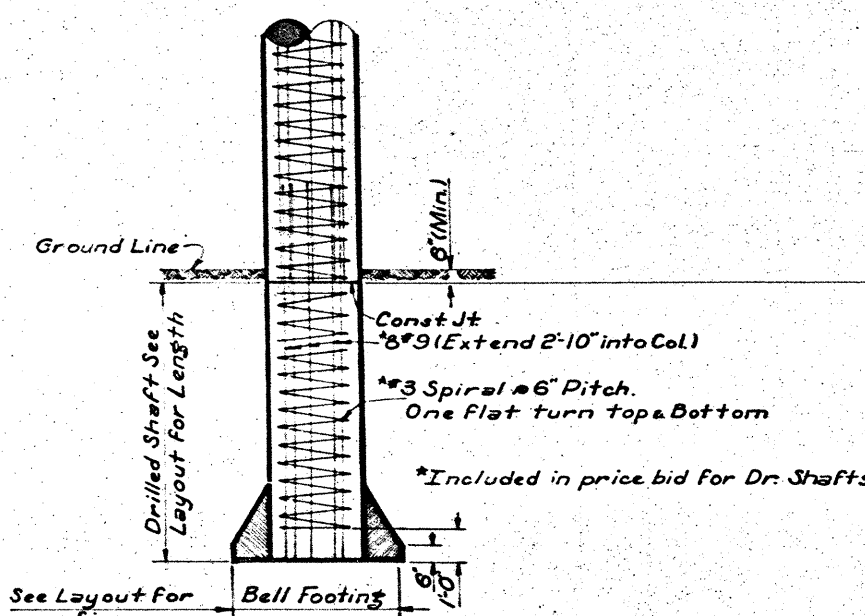
PLAN



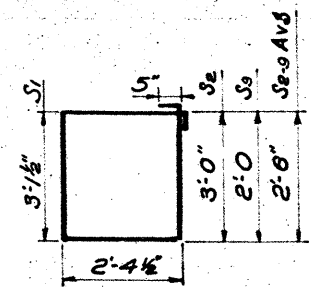
ELEVATION



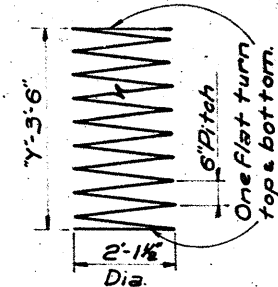
TYP. COL. SEC.



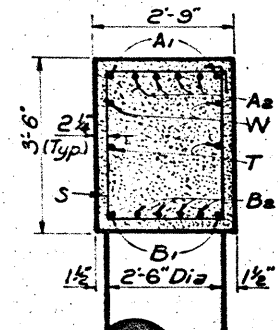
*Note: Half of the Vertical Reinforcing may be eliminated in the portion of the shaft greater than 15' below the ground line.



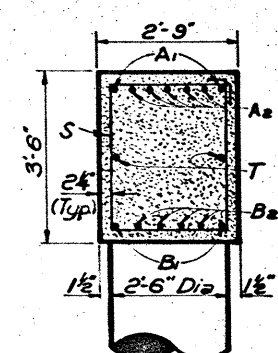
BARSS



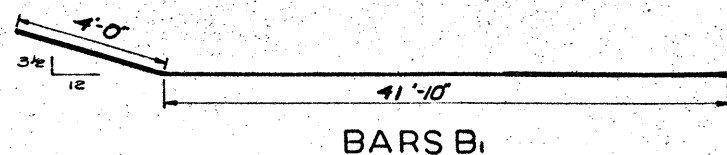
BARS Z



SEC. AA



SEC. BB



BARS B

BILL OF CONSTANT REINFORCING STEEL				
Bar	No	Size	Length	Weight
A ₁	2	#11	45'-8"	485
A ₂	13	#11	11'-0"	760
B ₁	2	#11	45'-10"	487
B ₂	8	#11	15'-0"	638
S ₁	68	#5	11'-10"	839
S ₂₋₉	8	#5	10'-7" Avg	88
T	2	#5	45'-8"	95
W	4	#5	6'-9"	28
D	14	1/4"	1'-6"	88
Total Wt			Lb	3508

BILL OF VARIABLE REINF. STEEL					TOTAL ESTIMATED QUANTITIES	
"Y"	Bars V 2#4 #9	Bars Z 3#3 Spiral	Total Weight LB.	Reinforcing Steel LB	Class "C" Concrete CY.	
13'-0"	11'-9"	359	141	159	1118	4626
14'-0"	12'-9"	1040	154	174	1214	4722
15'-0"	13'-9"	1122	167	189	1311	4819
16'-0"	14'-9"	1204	181	204	1408	4916
17'-0"	15'-9"	1285	194	219	1504	5012
18'-0"	16'-9"	1367	207	234	1601	5109
19'-0"	17'-9"	1448	221	249	1697	5205
20'-0"	18'-9"	1530	234	264	1794	5302
21'-0"	19'-9"	1612	248	279	1891	5399
22'-0"	20'-9"	1693	261	294	1987	5495
23'-0"	21'-9"	1775	274	309	2084	5592
24'-0"	22'-9"	1856	288	324	2180	5688
25'-0"	23'-9"	1938	301	339	2277	5785
26'-0"	24'-9"	2020	315	354	2374	5882
27'-0"	25'-9"	2101	328	369	2470	5978
28'-0"	26'-9"	2183	341	384	2567	6075

GENERAL NOTES
Designed According to A.A.S.H.O. 1965 Standard Specifications.
Chamfer all exposed corners 3/4" unless otherwise noted.
Foundation Load: 206 Tons/Shaft

HS 20 LOADING

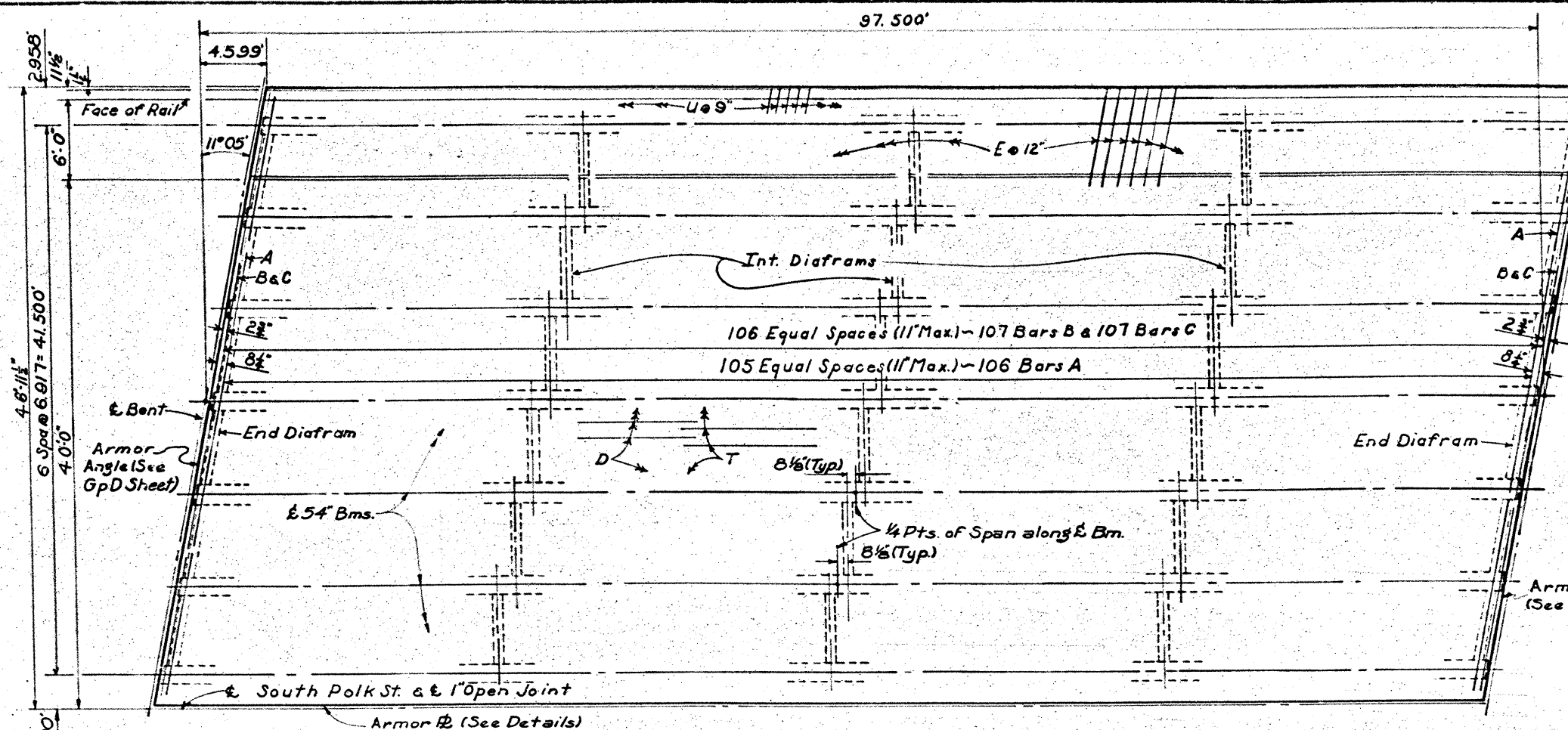
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

**INTERIOR BENT
NO. 3**

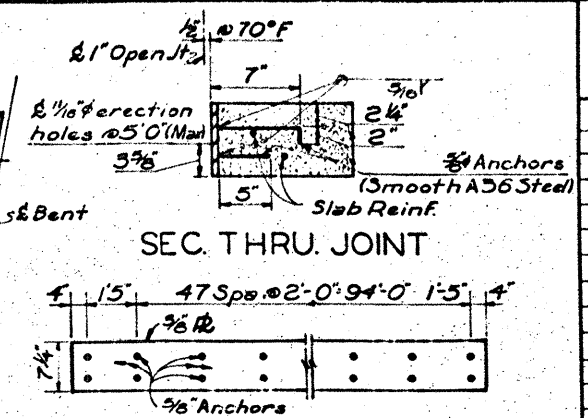
SOUTH POLK ST. UNDERPASS

304

ORIGINAL DRAWING DATE: Feb 1969		STATE DISTRICT: 18	FEDERAL REGION: 6	FEDERAL AID PROJECT #: 26-5(11)257	SHEET: 304
DR: VCH	REVISIONS:				
CK: JLC		COUNTY: DALLAS	SECTION: 2574	JOB: 4	ROADWAY: 1120

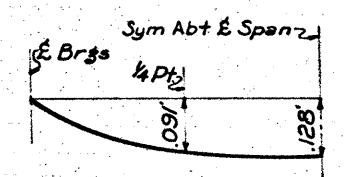


PLAN



SEC. THRU. JOINT
ELEV.-ARMOR PLATE ARMORED JOINT DETAILS

Note: The sections of the two armor plates for a complete joint shall be matched for fit and the matched plates bolted together for shipment. Plates shall be shipped in convenient lengths (10'-0" min. - 20'-0" max.) and field butt welded.



DEAD LOAD DEFLECTION DIAGRAM

Note: Deflections shown are due to cast-in-place concrete and rail only.

◎BILL OF REINF. STEEL & EST. QUAN. - SPANS

Bar	No.	Size	Length	Weight
A	106	#5	48'-11"	5408
B	107	#4	46'-10"	3347
C	107	#5	47'-7"	5310
*D	55	#5	98'-4"	5641
*T	62	#4	98'-3"	4069
E	98	#4	8'-2"	535
U	130	#5	7'-1"	960
dN ₁	2	#6	43'-5"	231
dN ₂	18	#8	7'-10"	376
dK ₁	48	#5	5'-5"	271
dK ₂	108	#5	5'-4"	600
dS ₁	72	#4	4'-8"	184
dS ₂	108	#4	7'-6"	541

Reinforcing Steel	LB.	27,473
Class C Concrete	CY.	156.4
54" Prest. Conc. Bms.	LF.	680.17
Str. Steel (Shoe & Armor Jt.)	LB.	1,772

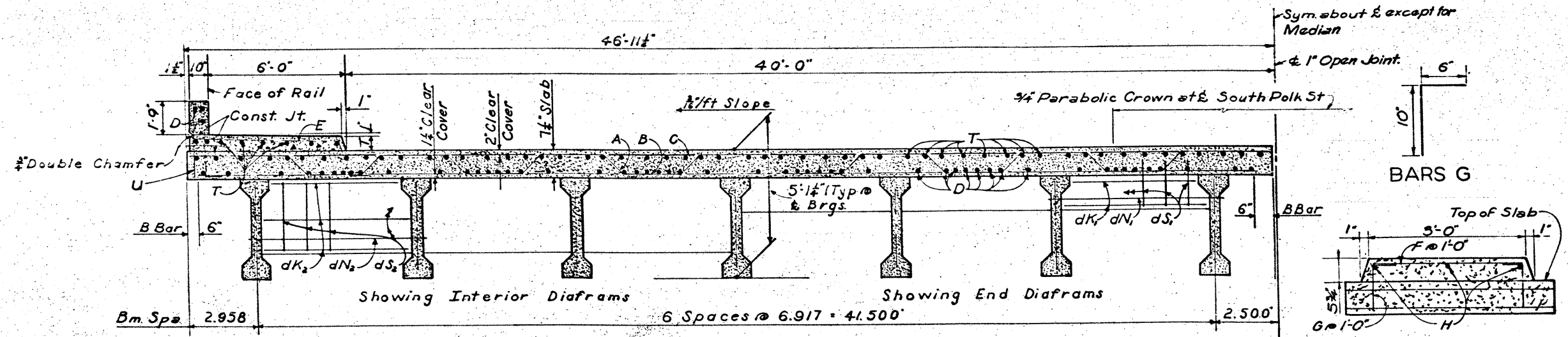
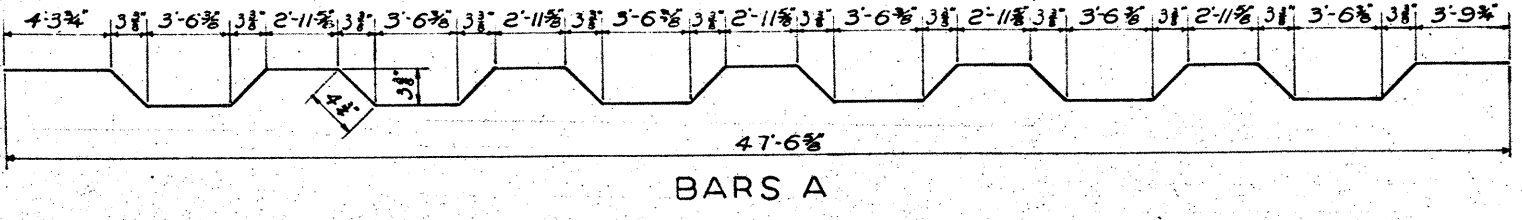
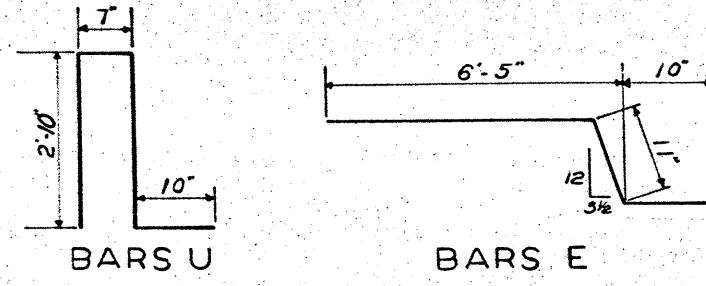
◎BILL OF REINF. STEEL & EST. QUAN. - MEDIAN

Bar	No.	Size	Length	Weight
F	98	#4	2'-5"	158
G	196	#4	1'-4"	174
*H	3	#3	105'-0"	118

Class C Concrete	CY.	52
Reinforcing Steel	Lb	450

*Includes one 20 dia lap (1'-0" Min)
*Quan shown is for 2 Armor Angles & 1 Armor Pl.
◎Quantities For 1 Rdwy. only.

GENERAL NOTES:
Designed according to AAS.H.O. 1965 Standard Specifications.
Design $f_c = 1200$ p.s.i.
Chamfer all exposed corners
*unless otherwise noted
One Slab Construction Joint, either normal to Structure Centerline or parallel with the slab ends will be permitted.

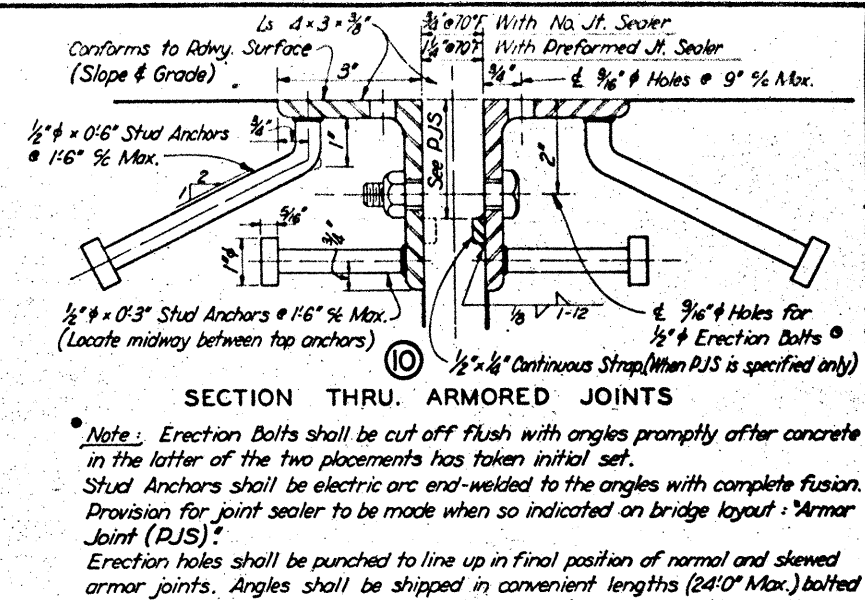


TRANSVERSE SECTION

SECTION THRU. MEDIAN
(See Layout for location)
Note: Cut Reinf. Stl. at 1' Open Jt.

HS 20 LOADING
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
97'-6" PRESTRESSED
CONCRETE BEAM SPAN
11'-05" LF. SKEW 306
SOUTH POLK ST. UNDERPASS

ORIGINAL DRAWING DATE: OCT. 1968	DATE: 10/1/68	FEDERAL AID PROJECT: 120-5(61)457	SHEET: 306
DESIGNED BY: JLE	CHECKED BY: JLE	APPROVED BY: JLE	DATE: 10/1/68
COUNTY: DALLAS	SECTION: 2374	JOB: 2	INCHES: 1/4"



SECTION THRU. ARMORED JOINTS

Note: Erection Bolts shall be cut off flush with angles promptly after concrete in the latter of the two placements has taken initial set.

Stud Anchors shall be electric arc end-welded to the angles with complete fusion. Provision for joint sealer to be made when so indicated on bridge layout : "Armor Joint (RJS)".

Erection holes shall be punched to line up in final position of normal and skewed armor joints. Angles shall be shipped in convenient lengths (24'-0" Max.) bolted together (with spacers) in the same relative position they will take in the structure. Field splices shall be made by butt welding.

WT. OF STR. STEEL FOR ONE COMPLETE JOINT										
Roadway Width	Square Spans		15° Skew		30° Skew		45° Skew		Per Lin. Ft.	
	Lb	▲ Lb.	Lb	▲ Lb.	Lb	▲ Lb.	Lb	▲ Lb.	Lb	▲ Lb
26:0"	433	453	448	470	500	524	612	642		
34:0"	575	603	595	624	664	696	813	852		
40:0"	682	715	706	740	788	826	964	1010	17.84	18.70
42:0"	718	753	743	779	829	869	1015	1064		
44:0"	754	790	780	818	870	912	1066	1117		
48:0"	825	865	854	895	953	999	1167	1223		

▲ *Weights of Armor Joints for Preformed Jt. Sealer*

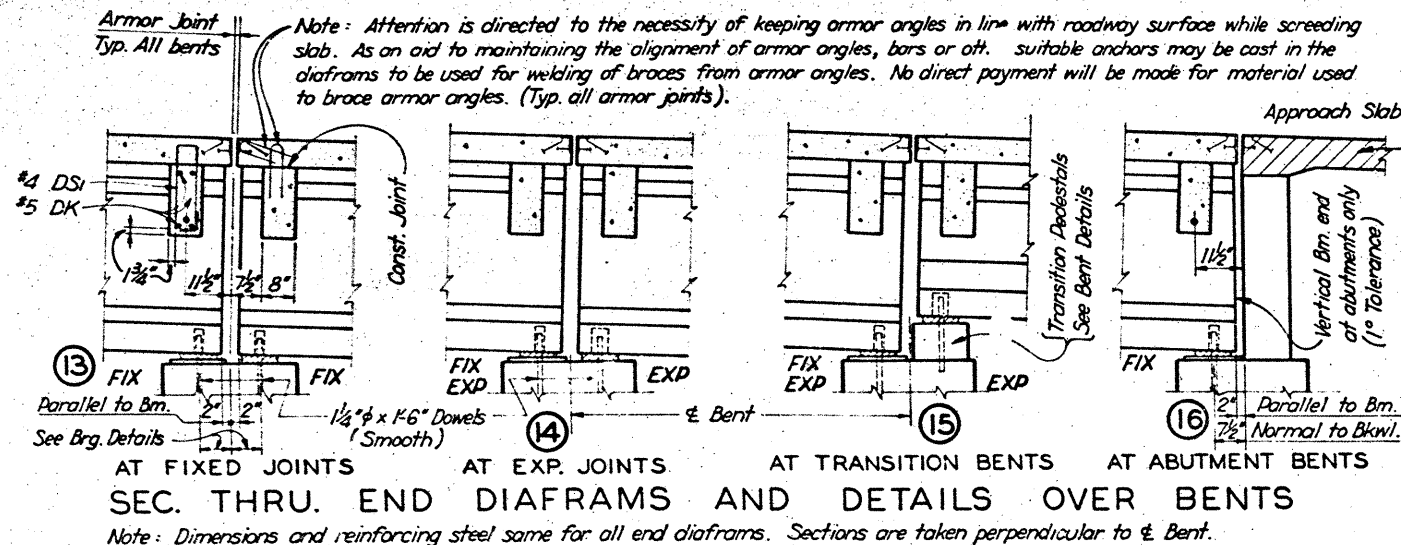
GENERAL NOTES : ~

*All cast-in-place concrete shall be Class C unless otherwise shown on span details.
No concrete shall be placed in the bridge slab until the diaphragms are in place, the diaphragm concrete has reached a minimum flexural strength of 300 psi, and the nuts of bars DN have subsequently been firmly tightened.*

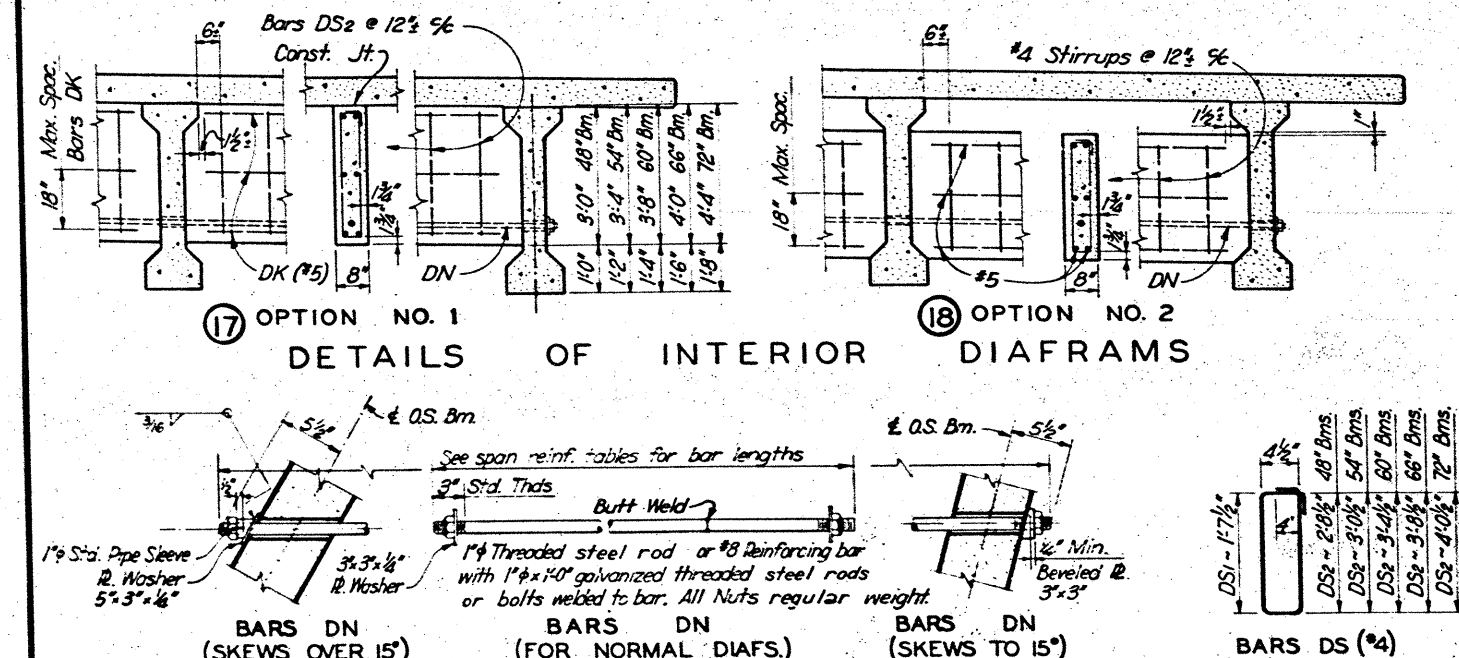
Contractor shall notify fabricators which interior diaphragm option he intends to use. Precast concrete diaphragms (normal to beams only) will be permitted as a third option provided that the contractor submits detailed drawings of such diaphragms showing proposed connection to beams to the Engineer for approval. Payment for concrete and reinforcing steel will be based on option No. 1.

Beams shall be seated on elastomeric bearings of the dimensions shown. Bearings shall be furnished with their thickness varying in one or both directions depending on the slope of the erected beam and the skew angle of the pad. Constant thickness bearings may be used for moderate beam slopes and skews if the variation is within the allowable dimensional tolerances given in the specifications. Cost of furnishing and installing elastomeric bearings shall be included in unit price bid for "Prestressed Concrete Beams."

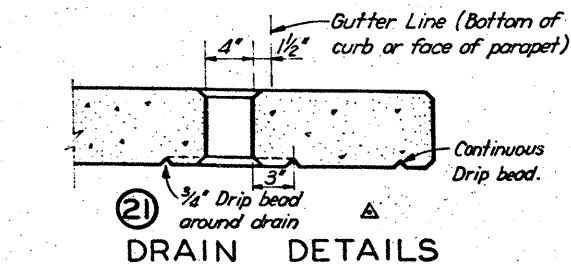
Designed in accordance with current A.A.S.H.O. Specifications.



CONST. JOINT DETAIL



Note: At all skewed joints (Fixed & Exp) where corners of beam project into slab of adjacent span, or come within 1" of slab, a strip of polystyrene (styrafoam) shall be provided at the bottom of slab over each beam corner prior to the placing of concrete.

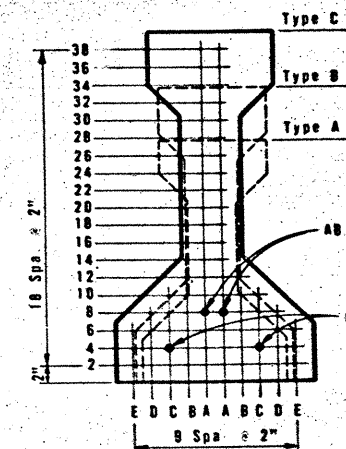


4"x6" formed drain. Bend reinforcing steel to clear drain 1". Drains if any shall be located as directed by the Engineer. No drains shall be placed over railroad tracks or roadways.

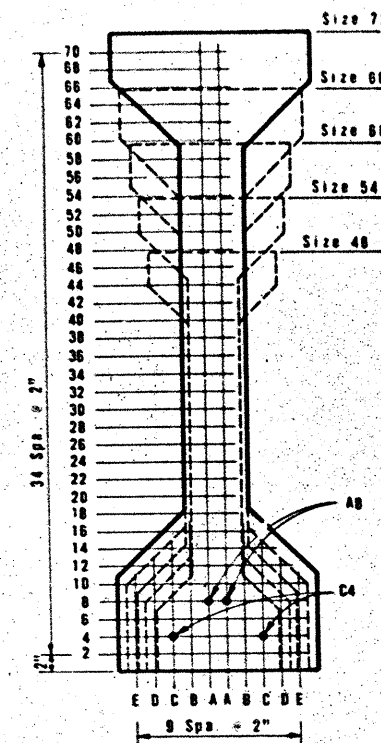
DESIGNED BEAMS (DEPRESSED STRANDS)												
STRUCTURE	SPAN	BEAM NO.	BEAM TYPE	PRESTRESSING STRANDS						CONCRETE		
				TOTAL				DEPRESSED		RELEASE STRENGTH f'ci (p.s.i.)	MIN. COMP. 28 DAY STRENGTH f'cd (p.s.i.)	
				NO.	SIZE	STRGTH.	"e" IN.	"e"End IN.	NO.			TO
OLD HICKORY	60'-6"	A11	54	16	1/2	270K	21.78	15.78	6	A22	4000	5000
	69'-6"	A11	54	22	1/2	270K	20.80	14.99	8	A24	4700	5700
	103'-6"	A11	54	36	1/2	270K	17.75	9.75	18	A34	6300	7600
SOUTH POLK STREET UNDERPASS	48'-6"	A11	54"	14	1/2"	270K	22.10	16.96	6	A18	4000	5000
	73'-6"	A11	54"	22	1/2"	270K	20.80	12.80	8	A30	4600	5200
	97'-6"	A11	54"	34	1/2"	270K	18.35	8.94	16	A36	6200	6900
HAMPTON ROAD OVERPASS	1 & 3	A11	54"	10	1/2"	270K	22.73	19.53	4	A12	4000	5000
	2	A11	54"	30	1/2"	270K	19.40	9.00	12	A38	5500	6000
DUNCANVILLE - WHEATLAND ROAD OVERPASS (I.H. 20)	102'-0"	A11	54"	34	1/2"	270K	18.35	8.00	16	A38	6000	6600
	103'-6"	A11	54"	34	1/2"	270K	18.35	8.00	16	A38	6000	6600
WESTMORELAND ROAD UNDERPASS	63'-0"	A11	54"	16	1/2"	270K	21.78	16.53	6	A20	4000	5000
	92'-0"	A11	54"	30	1/2"	270K	19.40	9.80	12	A36	5700	6300
CAMP WISDOM ROAD OVERPASS (U.S. 67)	64'-0"	A11	54"	16	1/2"	270K	21.79	14.28	6	A26	4000	5000

DESIGNED BEAMS (STRAIGHT STRANDS)											
STRUCTURE	SPAN	BEAM NO.	BEAM TYPE	PRESTRESSING STRANDS						CONCRETE	
				NO.	SIZE	STRGTH.	"e" IN.	STRAND ARRANGEMENT		RELEASE STRENGTH f'ci (p.s.i.)	MIN COMP 28 DAY STRENGTH f'cd (p.s.i.)
HAMPTON ROAD OVERPASS	1#3	A11	54"	10	1/2"	270*	20.92	ABC (4)	AB (6)	4000	5000
									</		

MINIMUM NUMBER OF 1/2" STRANDS									
BM. TYPE	A	B	C	48"	54"	60"	66"	72"	
NO. STRDS	6	8	10	8	10	14	16	18	



TYPES A, B, & C



SIZES 48, 54, 60, 66 & 72

GENERAL NOTES:

All concrete shall be Class H.

The possibilities of end splitting and cracking upon release of hold-down devices should be considered in the fabrication of the beam. If these problems can be predicted by the latest accepted design methods, suitable measures will be required to prevent their occurrence. If these problems occur during manufacture without being anticipated, immediate notification shall be given the Bridge Division, and suitable corrective measures will be initiated. In general, cracking or splitting will be anticipated whenever the calculated tensile stress exceeds 500 p.s.i.

For Depressed Strand Designed Beams, strands shall be located as low as possible on the 2" Grid System shown above. Fill Row "2", then Row "4", then Row "6" etc., beginning each Row in the "A" position and working outward until the required number of strands is reached. All strands in the "A" position shall be depressed maintaining the 2" spacing so that the upper two strands are at the position shown in the table at the beam ends.

When beams are listed in table "Designed Beams (Straight Strands)", the fabricator may use all straight strands grouped as shown in the strand arrangement in lieu of using the depressed strand design.

Where necessary, the fabricator shall furnish required mild steel reinforcement at beam ends to secure bars V and W. Such bars shall be indicated on shop drawings.

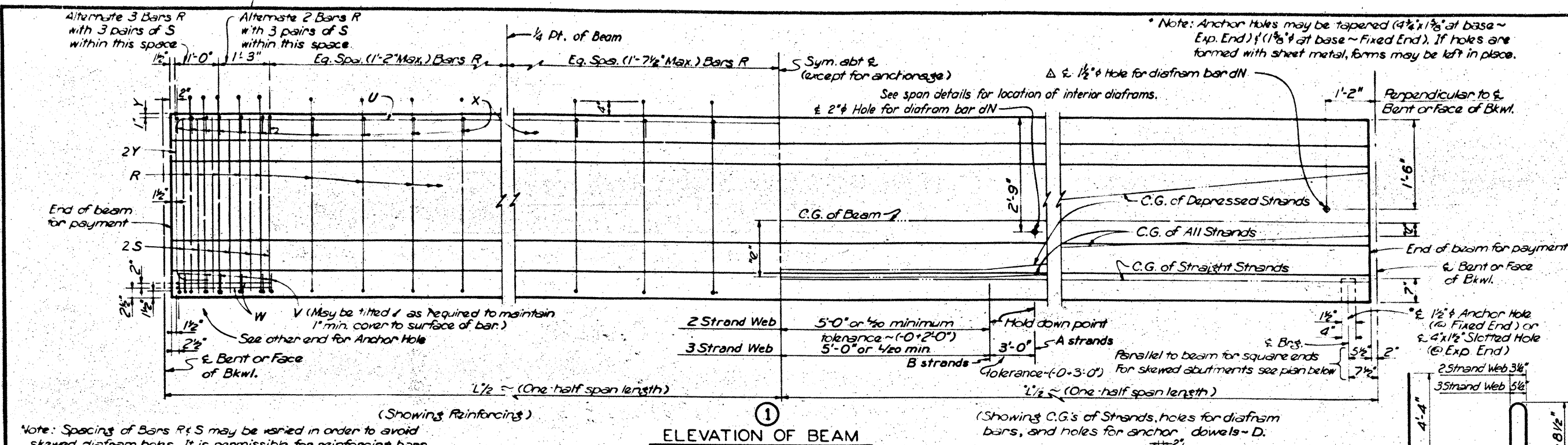
Initial pretension for strands:

1/2"	250K	25.2K
1/2"	270K	28.9K

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
PRESTRESSED
CONCRETE BEAMS
NON STANDARD SPANS

Gp NS

ORIGINAL DRAWING DATE: AUG. '68		STATE	FEDERAL	FEDERAL AID PROJECT	SHEET
DR. - THD	REVISIONS	18	6	120-561457	311
CR. - THD					
DW. - DMS					
CR. - HJD					
		COUNTY	DISTRICT	SECTION	JOB
		DALLAS	2374	4	2 11H20



SAMPLE REINF. TABLE

Bar	No.	Size	Length	Weight
*R	57	#4	10'-2"	387
S	20	#7	4'-4"	177
U	2	#5	66'-3"	139
*V	14	#4	2'-7"	24
W	4	#4	6'-4"	17
X	63	#4	2'-2"	91
Y	4	#6	5'-6"	33
Total weight (Lbs.)				868

* Includes 1'-10" lap for bars over 60'-0" in length.
 Note: For skewed spans, length of Bars U may vary.
 Quantities shown in tables are for Contractor's information only and not for bidding purposes.
 * Bars R & V Grade 60 steel.

ESTIMATED BEAM QUANTITIES

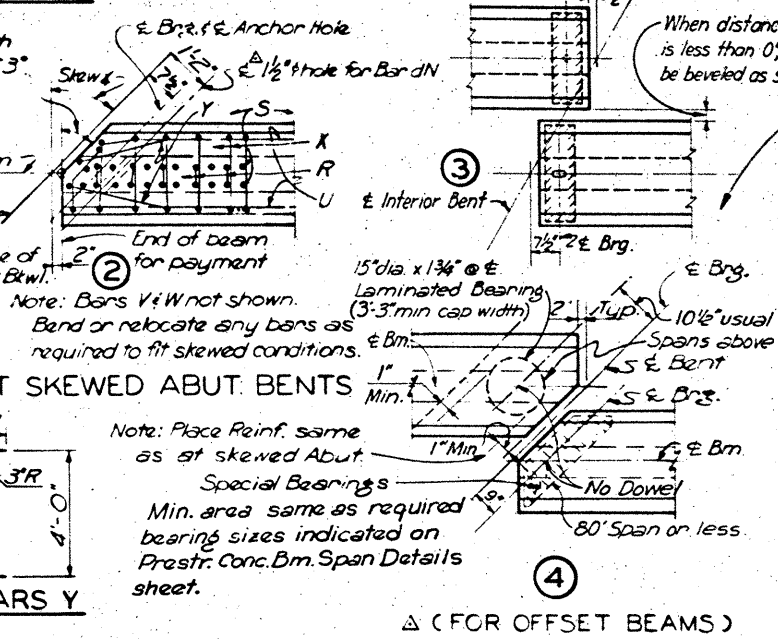
Per Lin. Ft. Quantities	Concrete	Reinf. Steel	Extra Reinf. Steel for 2 beam ends
	C.Y.	Lb.	Lb.
203	9.568	358	

* Includes 4Lb. for 2'-1'-10" Laps in Bars U

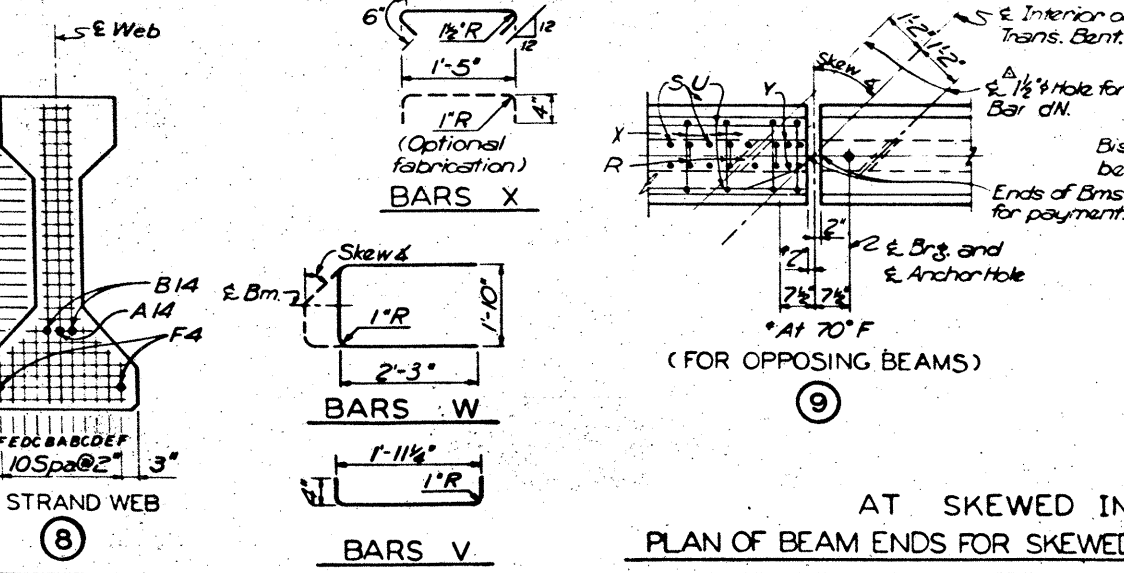
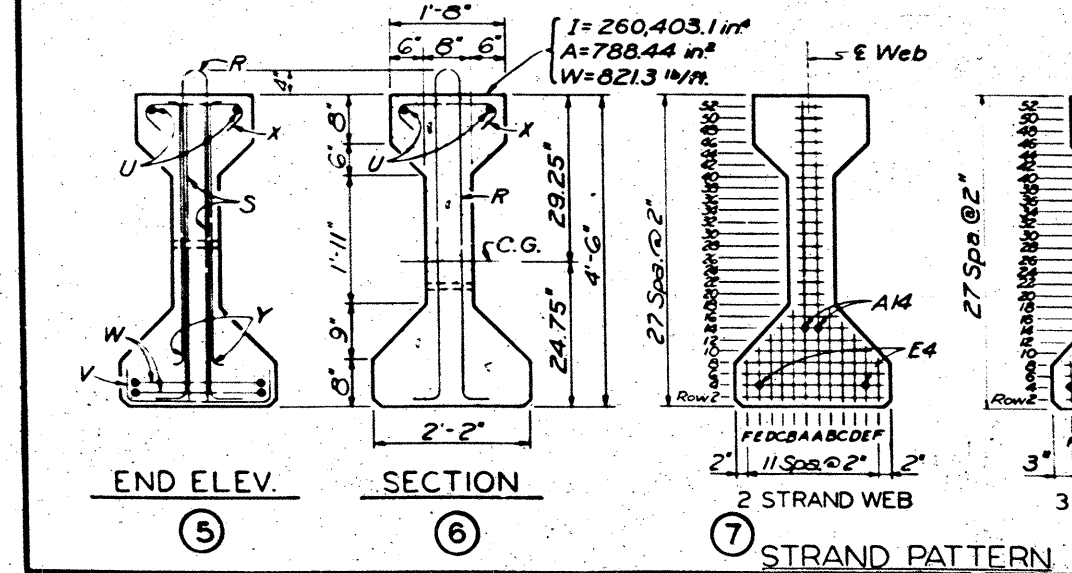
Note: Spacing of Bars R & S may be varied in order to avoid skewed diaphragm holes. It is permissible for reinforcing bars and or strands to come in contact with materials used in forming anchor and diaphragm holes.

BEAM DESIGN REQUIREMENTS												
Structure	Span	Beam No.	Web ^Δ Strand Pattern (2 or 3)	DESIGNED BEAM								
				Prestressing Strands						Concrete		
				Total				2' at end	Depressed		Release	Min Comp
				No.	Size	Strength	2"		No.	To Row	Strength fc'(psi)	28day Str. fc'(psi)
Camp Wisdom Rd. Overpass (U.S. 67)	119'	All	3	51	1/2"	270K	19.06	6.71	15	A52	4800	6800
												</

NOTE
 Strands shall be located as low as possible on the 2" Grid System shown below. Fill Row 2, then Row 4, then Row 6, etc., beginning each Row in the A position and working outward, keeping symmetry about the Center Line of the Web until the required number of strands is reached. All strands in the Web position shall be depressed, maintaining the 2" spacing so that the upper strand or strands are at the position shown in the table of the beam ends.



GENERAL NOTES:
 All concrete shall be Class H.
 All exposed corners of beams shall be chamfered 3/4" or rounded to a 3/4" radius unless otherwise shown.
 Suitable holes or anchorage devices for supporting forms for cast-in-place concrete may be cast in the beams at the option of the Contractor, provided they are indicated on the shop drawings and approved by the Engineer.
 Attention is called to the increased difficulty of lifting beams without end blocks. The Contractor's proposed lifting details should be given careful consideration before being submitted on shop drawings for approval. The use of diaphragm holes for lifting purposes will not be permitted.
 The stressing procedure shall be such that no cracks will develop during manufacture of the beam. Beams may require external hold-down force to counteract tension produced upon releasing the internal hold-down devices before relaxing tendons.
 The possibility of end splitting and cracking upon release of hold-down devices shall be considered.
 If these problems can be predicted by the latest accepted design methods, suitable measures will be required to prevent their occurrence. If these problems occur during manufacture, without being anticipated, immediate notification shall be given the Bridge Division, and suitable corrective measures will be initiated. In General, cracking or splitting will be anticipated whenever the calculated tensile stress exceeds 500 psi.
 The Prestressed Beam Fabricator shall provide the designed beam. Where the design information is given for both 2-strand and 3-strand webs the fabricator may furnish either beam in accordance with the design shown.
 The initial pretension for 1/2"-270K strands = 28.9K.
 Designed in accordance with current A.A.S.H.O. Specifications.

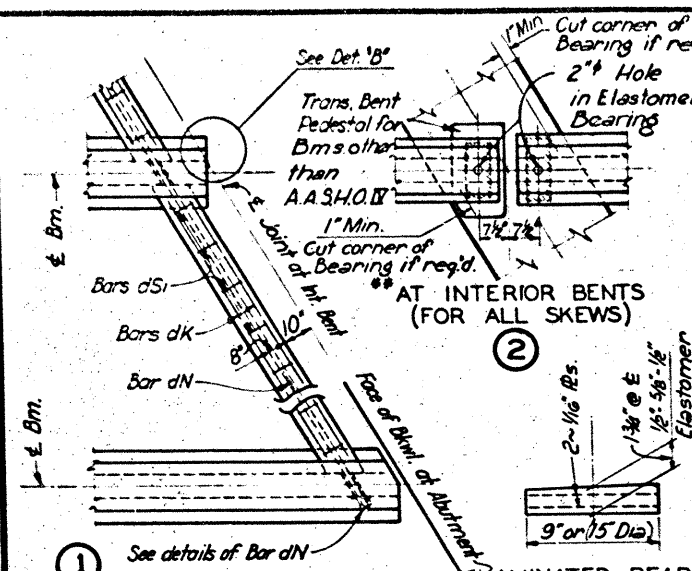


TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

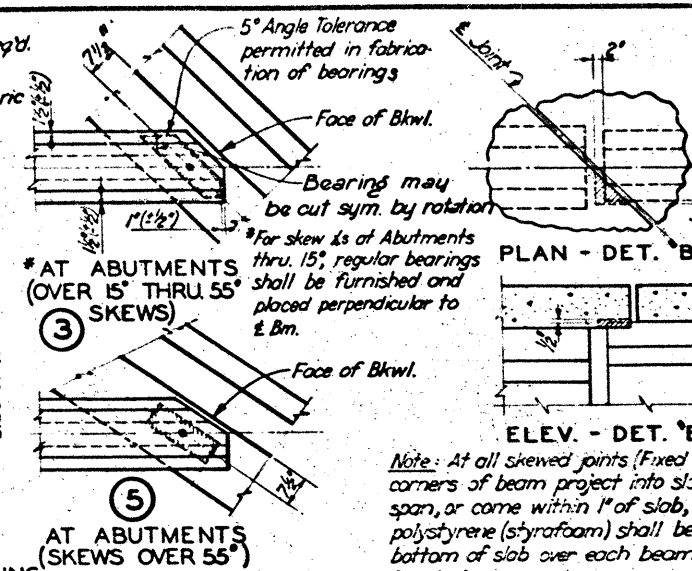
PRESTRESSED CONCRETE BEAMS
A.A.S.H.O. TYPE IV

Gp F

ORIGINAL DRAWING DATE: Aug. 1968
 REVISIONS: 13, 6, 120-5-11257, 312
 COUNTY: Dallas
 SHEET: 374, 4, 2, U.S. 67



1 PLAN OF END DIAFRAMS
 Note: See Prest. Conc. Beam Details for special Bearings for offset Bms.

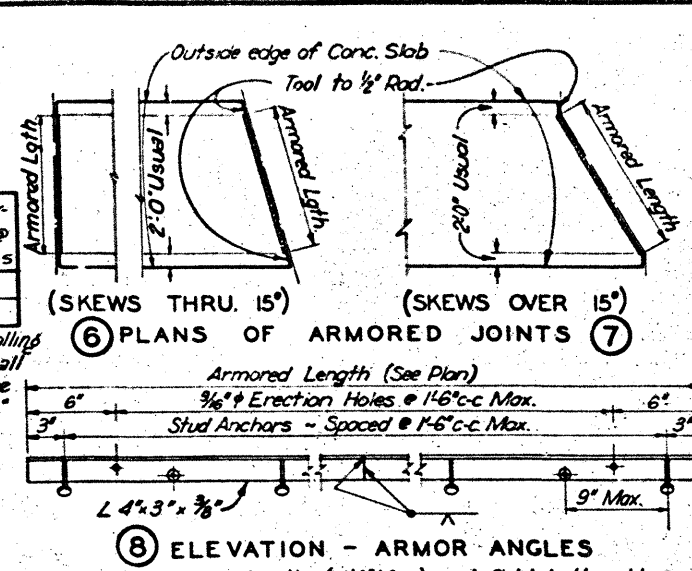


2 PLAN - DET. B
 Note: At all skewed joints (Fixed & Exp.) where corners of beam project into slab of adjacent span, or come within 1" of slab, a strip of polystyrene (styrofoam) shall be provided at the bottom of slab over each beam corner prior to placing concrete.

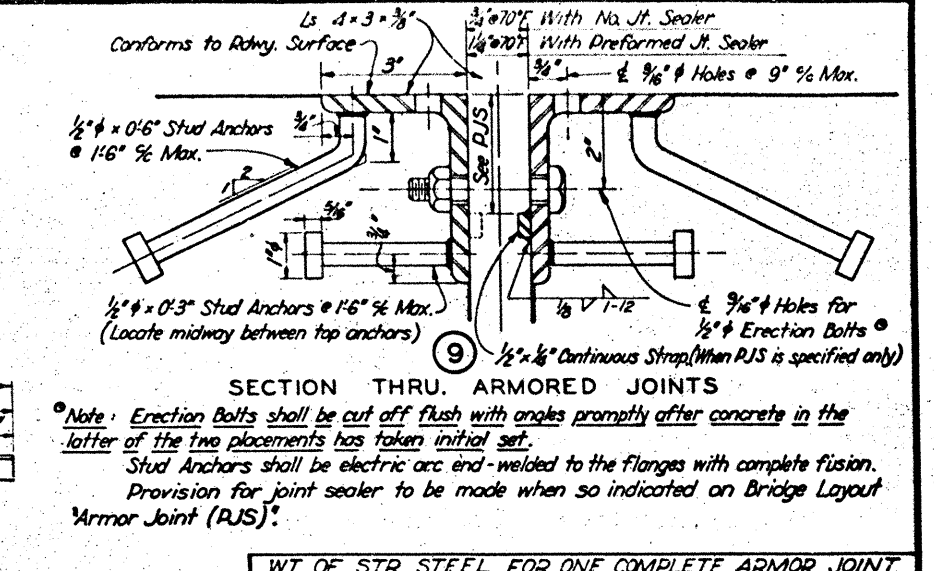
ELASTOMERIC BEARING THICKNESS AT INTERIOR BENTS

Span Length	Thickness @ Brgs
80' or less	1"
Above 80'	1 3/4"

Cost of furnishing & installing elastomeric bearings shall be included in unit price bid for "Prest. Conc. Bms."



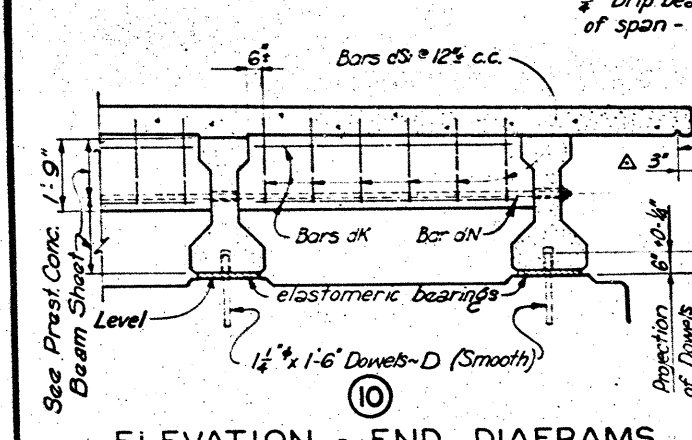
3 PLANS OF ARMORED JOINTS
4 ELEVATION - ARMOR ANGLES
 Note: Ship angles in lengths (24' 0" Max.) and field butt weld.



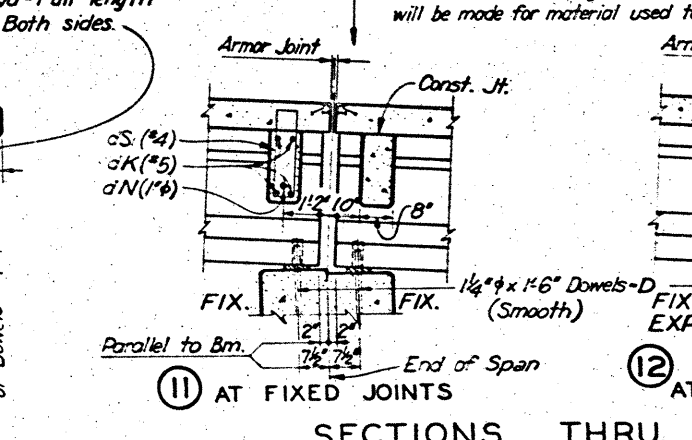
5 SECTION THRU. ARMORED JOINTS
 Note: Erection Bolts shall be cut off flush with angles promptly after concrete in the latter of the two placements has taken initial set. Stud Anchors shall be electric arc end-welded to the flanges with complete fusion. Provision for joint sealer to be made when so indicated on Bridge Layout "Armor Joint (AJS)".

WT. OF STR. STEEL FOR ONE COMPLETE ARMOR JOINT

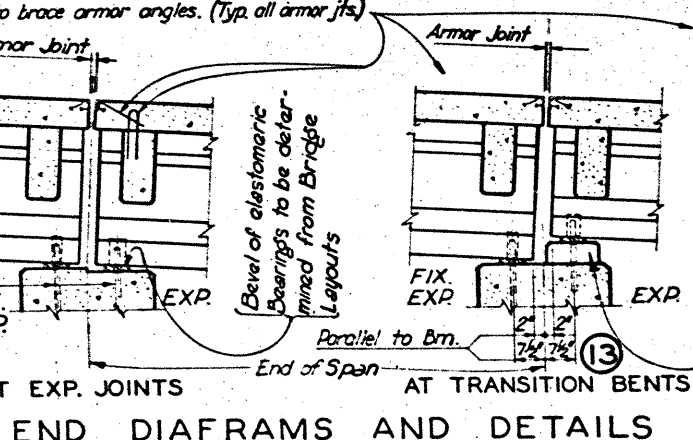
Roadway Width	15° Skew		30° Skew		45° Skew		Per Lin. Ft.	
	Lb.	Sq. Ft.	Lb.	Sq. Ft.	Lb.	Sq. Ft.	Lb.	Sq. Ft.
26' 0"	433	453	448	470	500	524	612	642
34' 0"	575	603	595	624	664	696	819	852
40' 0"	682	715	706	740	788	826	964	1010
42' 0"	718	753	743	779	829	869	1015	1064
44' 0"	754	790	780	818	870	912	1066	1117
48' 0"	825	865	854	895	953	999	1167	1223



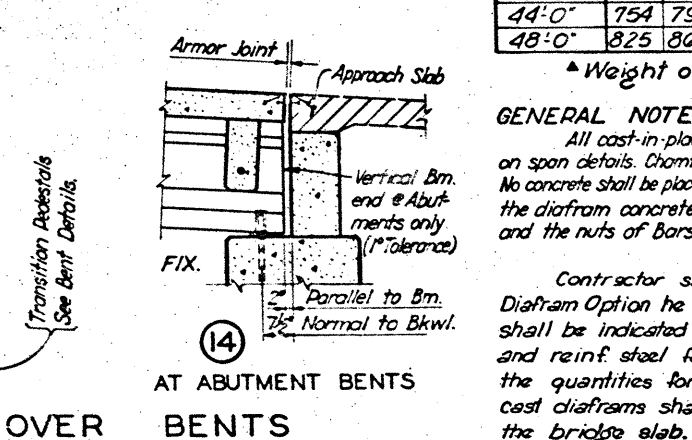
6 ELEVATION - END DIAFRAMS



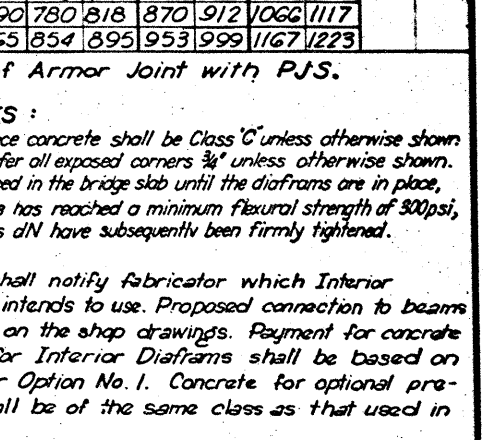
7 SECTION THRU. END DIAFRAMS AND DETAILS OVER BENTS
 Note: Dimensions and reinforcing steel same for all end diaframs. Sections are taken perpendicular to & Bent.



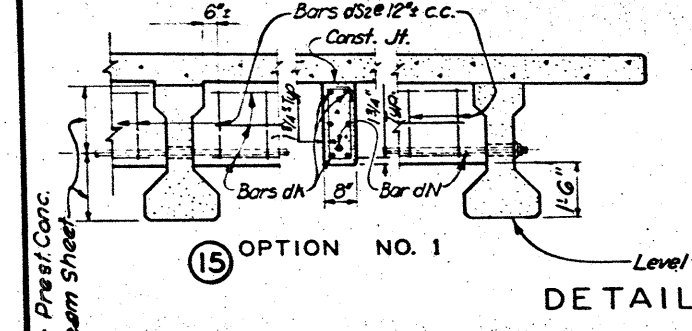
8 SECTION THRU. END DIAFRAMS AND DETAILS OVER BENTS



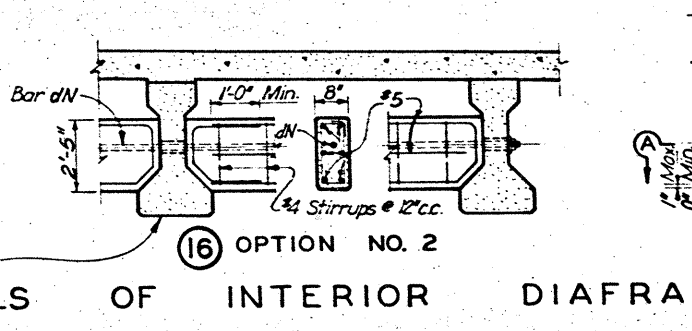
9 SECTION THRU. END DIAFRAMS AND DETAILS OVER BENTS



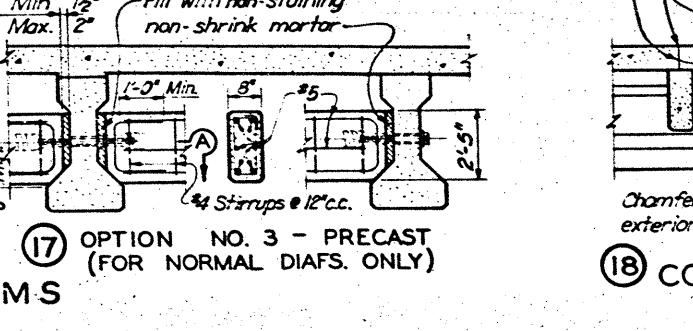
10 SECTION THRU. END DIAFRAMS AND DETAILS OVER BENTS



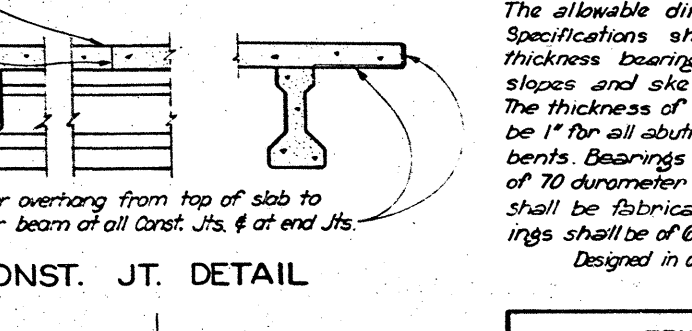
11 OPTION NO. 1



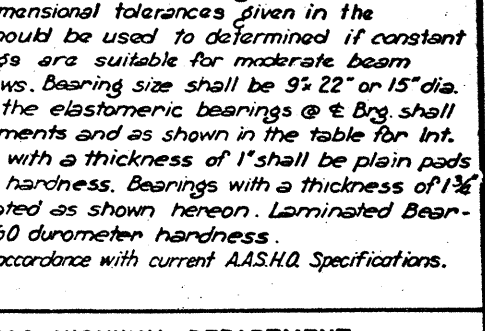
12 OPTION NO. 2



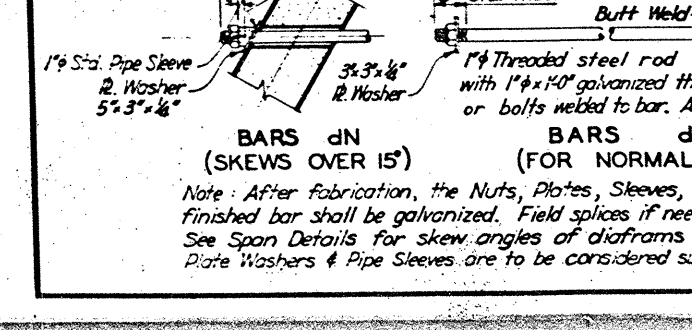
13 OPTION NO. 3 - PRECAST (FOR NORMAL DIAFS. ONLY)



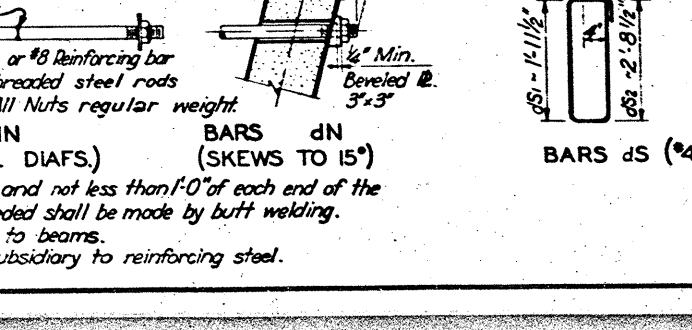
14 CONST. JT. DETAIL



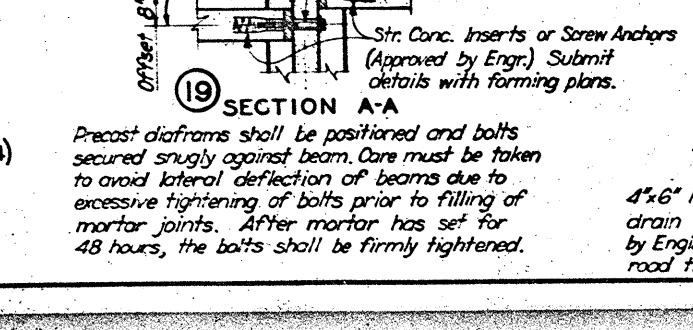
15 SECTION A-A



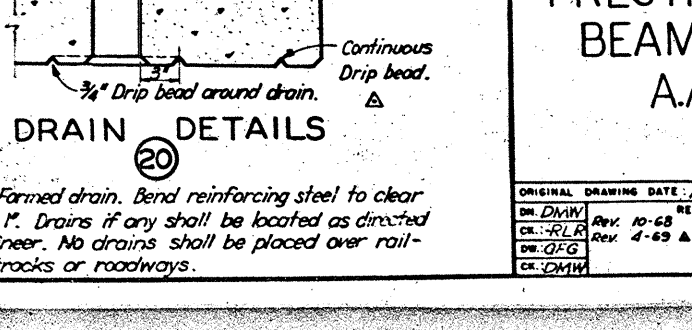
16 BARS dN (SKEWS OVER 15°)



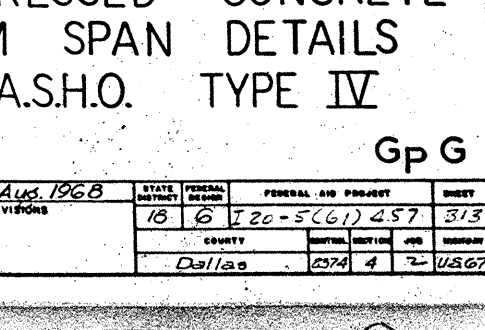
17 BARS dN (FOR NORMAL DIAFS.)



18 BARS dN (SKEWS TO 15°)



19 DRAIN DETAILS



20 DRAIN DETAILS

GENERAL NOTES:
 All cast-in-place concrete shall be Class 'C' unless otherwise shown on span details. Chamfer all exposed corners 3/4" unless otherwise shown. No concrete shall be placed in the bridge slab until the diaframs are in place, the diafram concrete has reached a minimum flexural strength of 300psi, and the nuts of Bars dN have subsequently been firmly tightened.

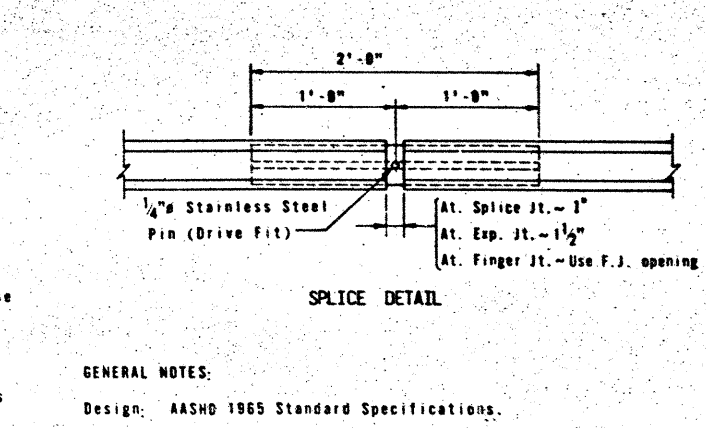
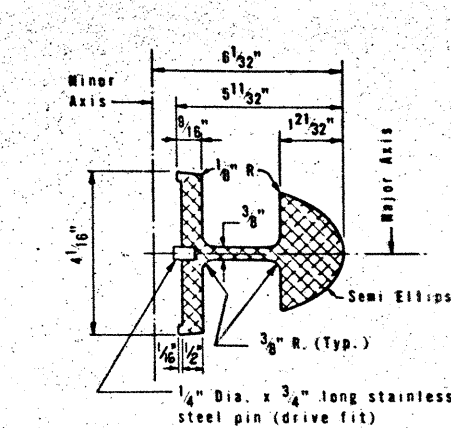
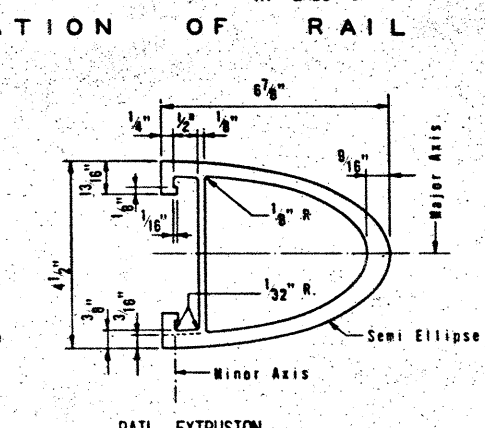
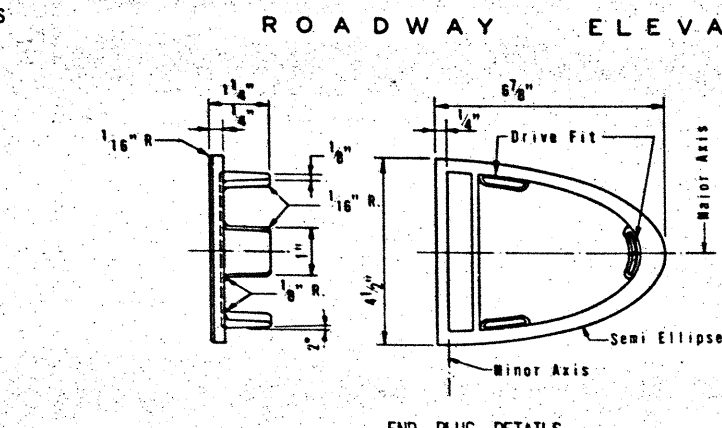
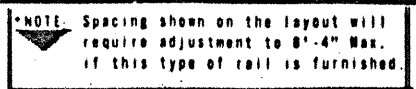
Contractor shall notify fabricator which Interior Diafram Option he intends to use. Proposed connection to beams shall be indicated on the shop drawings. Payment for concrete and reinf. steel for Interior Diaframs shall be based on the quantities for Option No. 1. Concrete for optional precast diaframs shall be of the same class as that used in the bridge slab.

Beams shall be seated on plain or laminated elastomeric bearings. Bearings shall be furnished with varying thickness in one or both directions depending on the slope of the erected beam and the skew angle of the bent. The allowable dimensional tolerances given in the Specifications should be used to determine if constant thickness bearings are suitable for moderate beam slopes and skews. Bearing size shall be 9" x 22" or 15" dia. The thickness of the elastomeric bearings @ & Brg. shall be 1" for all abutments and as shown in the table for Int. bents. Bearings with a thickness of 1" shall be plain pads of 70 durometer hardness. Bearings with a thickness of 1 3/4" shall be fabricated as shown hereon. Laminated Bearings shall be of 60 durometer hardness.

Designed in accordance with current AASHTO Specifications.

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION
PRESTRESSED CONCRETE
BEAM SPAN DETAILS
A.A.S.H.O. TYPE IV
Gp G

ORIGINAL DRAWING DATE	STATE	FEDERAL	FEDERAL AID PROJECT	SHEET
AUG. 1968	TX	6	120-5(61) 457	313
REV. 10-68				
REV. 4-69				
COUNTY	CITY	SECTION	POST MILE	STATION
Dallas		2374	4	2-15.67



VIEW A - A

METAL BEAM GUARD FENCE ANCHORAGE

REAR ELEVATION OF POST

SECTION THROUGH POST

1" R. on Boss Typ.

9/16" x 13/16" Slotted Holes (4) Places +5° Draft

3 1/8"

1 9/16" 1 9/16"

1 1/16"

3"

3 1/4" Rad. Typ.

1 1/2" R.

3 3/8"

3 3/8"

6 3/4"

1 1/8"

4 7/8"

4 7/8"

1 1/8"

12"

1 1/2" Dia. Cored Holes +5° Draft

1 1/2"

2"

3 1/8"

1 1/2"

3 1/2"

6 3/8"

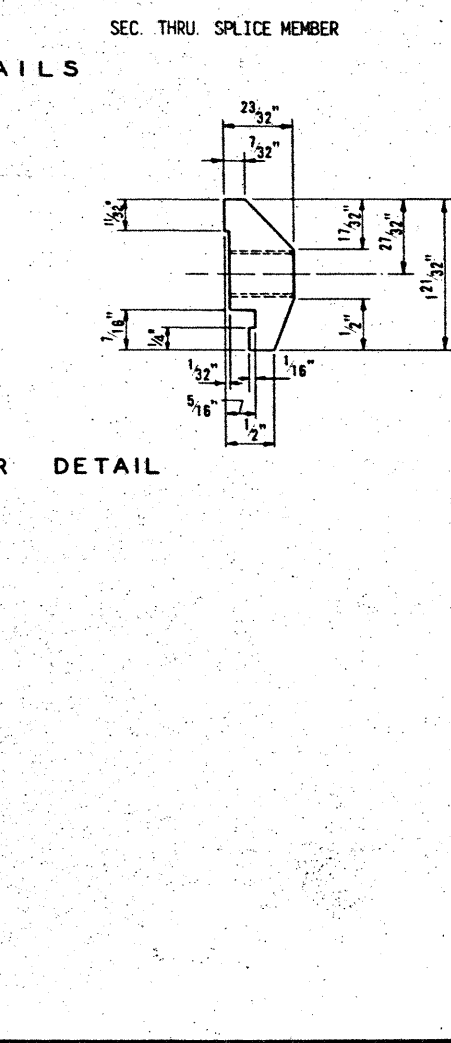
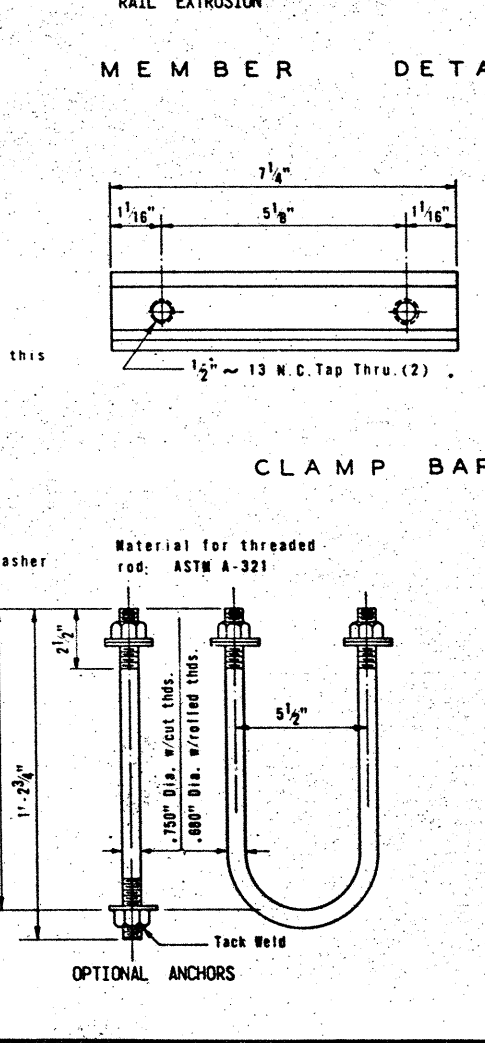
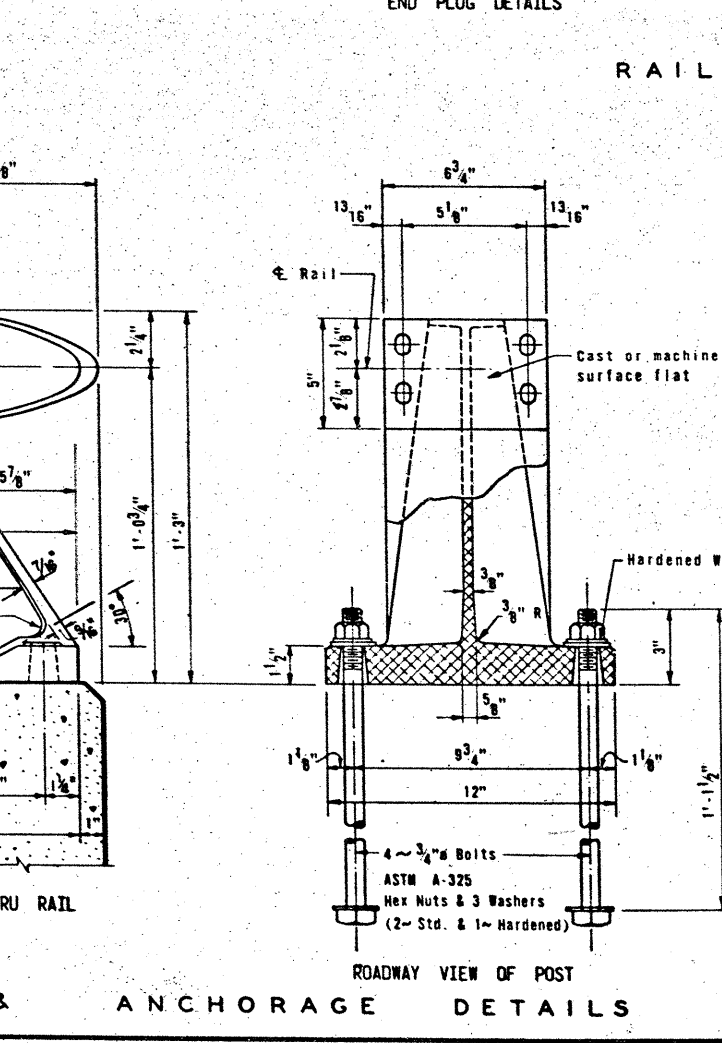
7/16"

1 1/2" R.

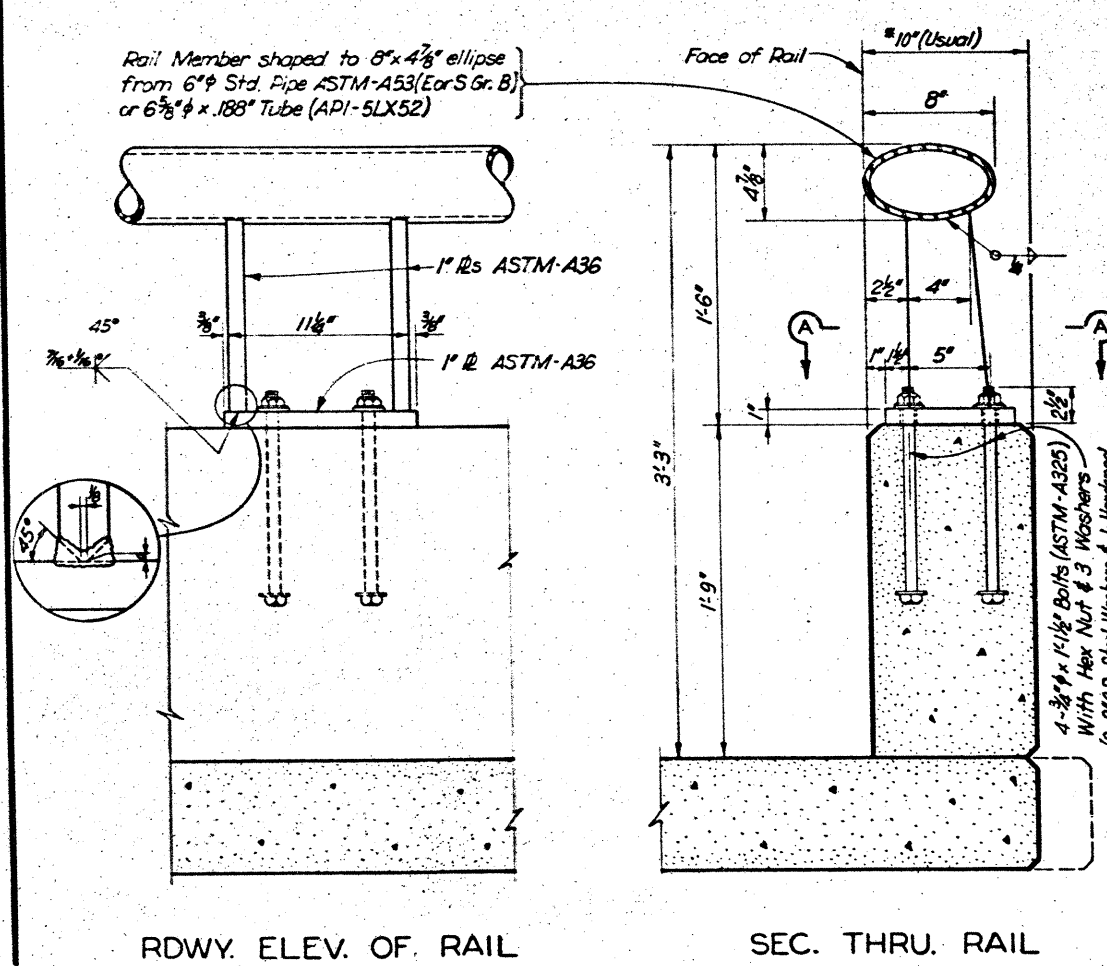
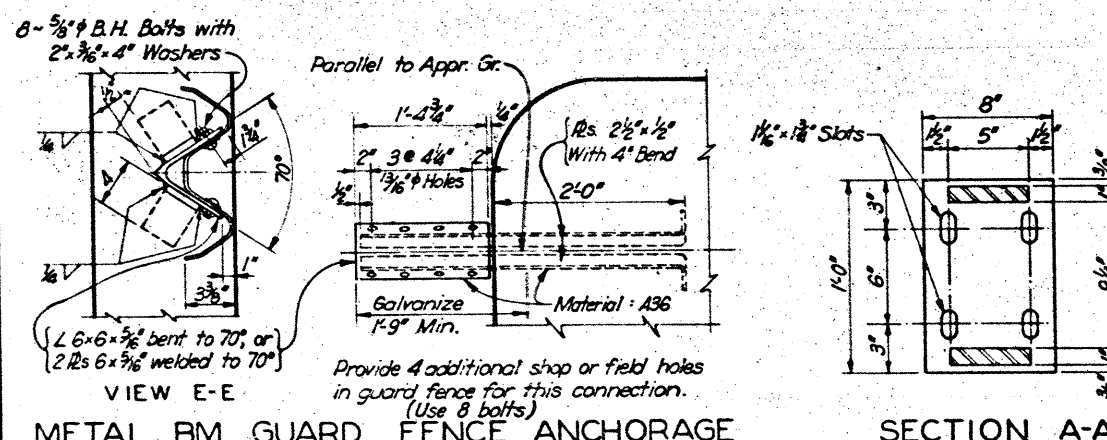
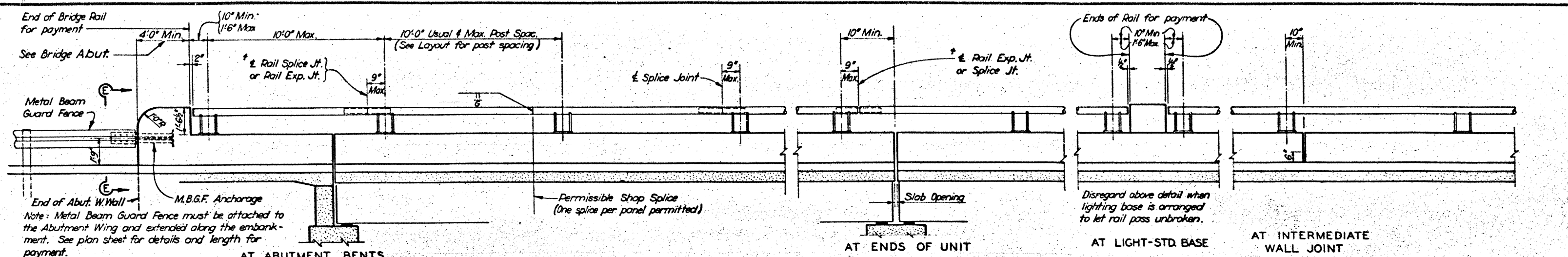
1 1/8"

5 1/2"

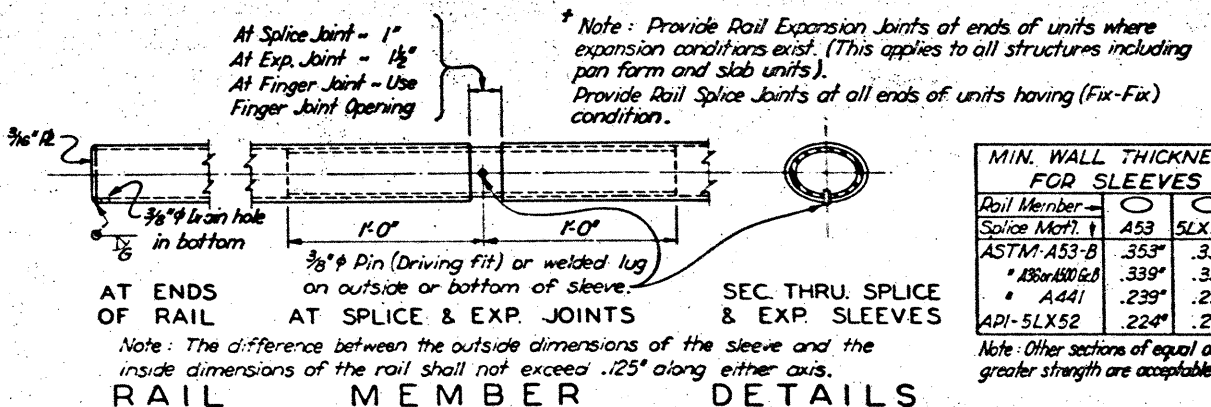
8"



TEXAS HIGHWAY DEPARTMENT			
BRIDGE DIVISION			
TRAFFIC RAIL			
TYPE T4			
(MOD.)			
(ALUMINUM)			
ORIGINAL DRAWING DATE: APRIL '69		STATE UTAH	FEDERAL AID PROJECT 120-5(61)457
REVISIONS:		COUNTY DALLAS	SECTION 2374
DN. - HEC			
CK. - DLD			
DN. - DNS			
CK. - ADM			



ROADWAY ELEVATION OF RAIL



MIN. WALL THICKNESS FOR SLEEVES		
Rail Member	5LX52	5LX52
Splice Mort.	A53	5LX52
ASTM-A53-B	.353"	.339"
A36 or A501 Gr. B	.339"	.325"
A441	.239"	.231"
API-5LX52	.224"	.216"

Note: Other sections of equal or greater strength are acceptable.

RAILS ON HORIZONTAL CURVES		
Rad. to face of rail	Max. Chord Lgth.	Fabrication
Over 1910'	20'-0"	Furnish in straight rail panels
Over 950' - 1910'	10'-0"	Bevel weld or bend chord sections of rail member & sleeves or fabricate to the reqd. rad.
Over 300' - 950'	10'-0"	Fabricate to the required radius
Thru. 300'	0	Fabricate to the required radius

** Loss of one half the tolerance provided between bolts and holes, or between splice sleeves and rail members has been allowed in determining these controls.

GENERAL NOTES:

Design: AASHTO 1964 Interim Specifications.

All open ends of rail shall be capped.

Rail posts shall be seated on elastomeric pads having the same dimensions as post base and 1/16" thick. Additional pads or half pads may be used in shimming for alignment. Post heights shown will increase by the thickness of the pad.

Rail posts shall be set perpendicular to top of parapet wall.

Anchor bolts, nuts and washers shall be galvanized after fabrication. For protective coating of steel railing see special provision to Item 450.

Panel lengths of rail shall be attached to a minimum of one post and a maximum of four.

Unit bid price for Rail Type C4 includes:

Metal Railing, Posts, Connectors, Anchor Bolts, Elastomeric Pads, and M.B.G.F. Anchorage.

QUANTITIES FOR PARAPET WALL ARE INCLUDED IN CONCRETE AND REINFORCING STEEL FOR SLABS AND ABUTMENT BENTS.

TEXAS HIGHWAY DEPARTMENT

BRIDGE DIVISION

COMBINATION RAIL

TYPE C4 (MOD)

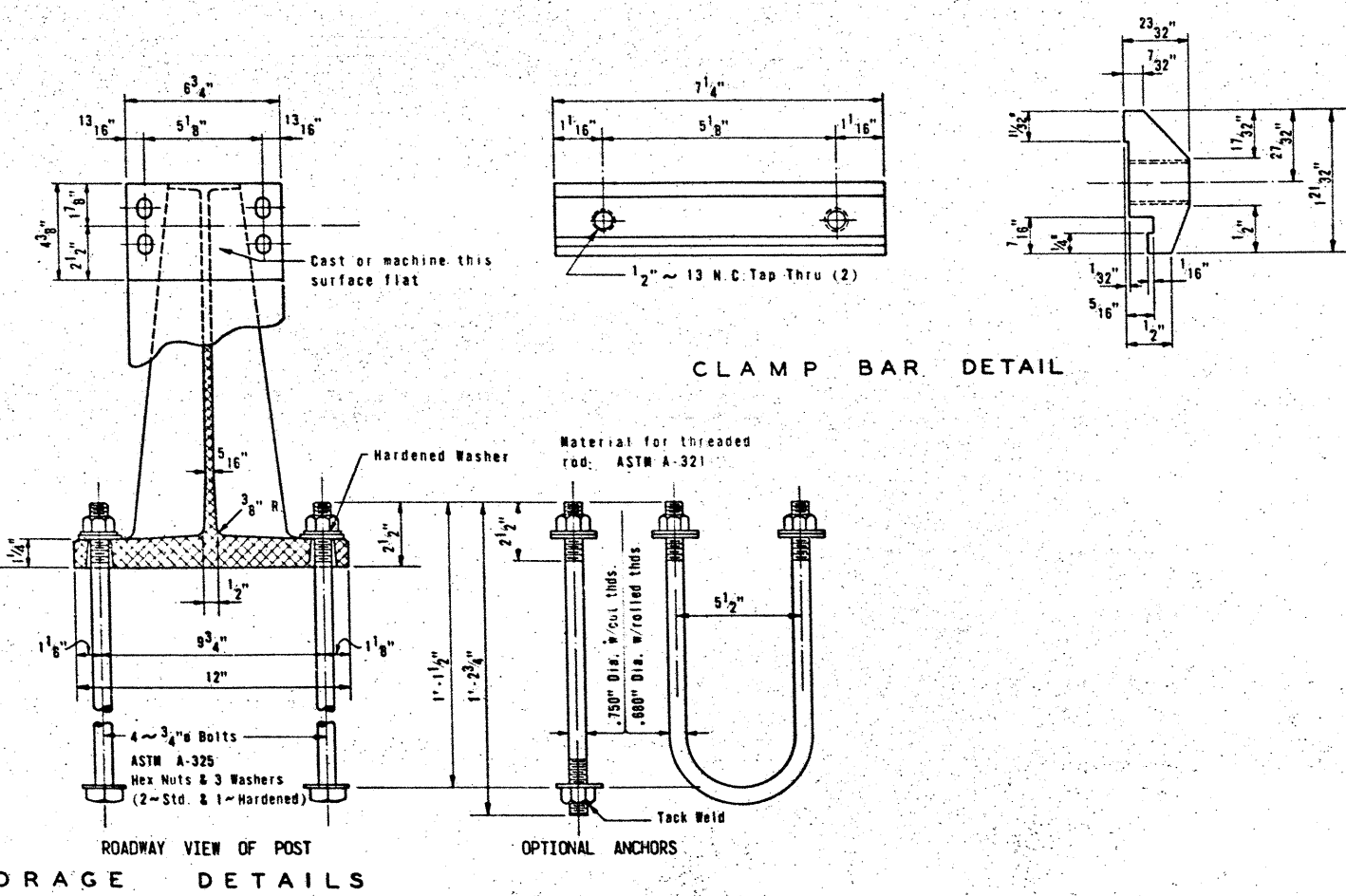
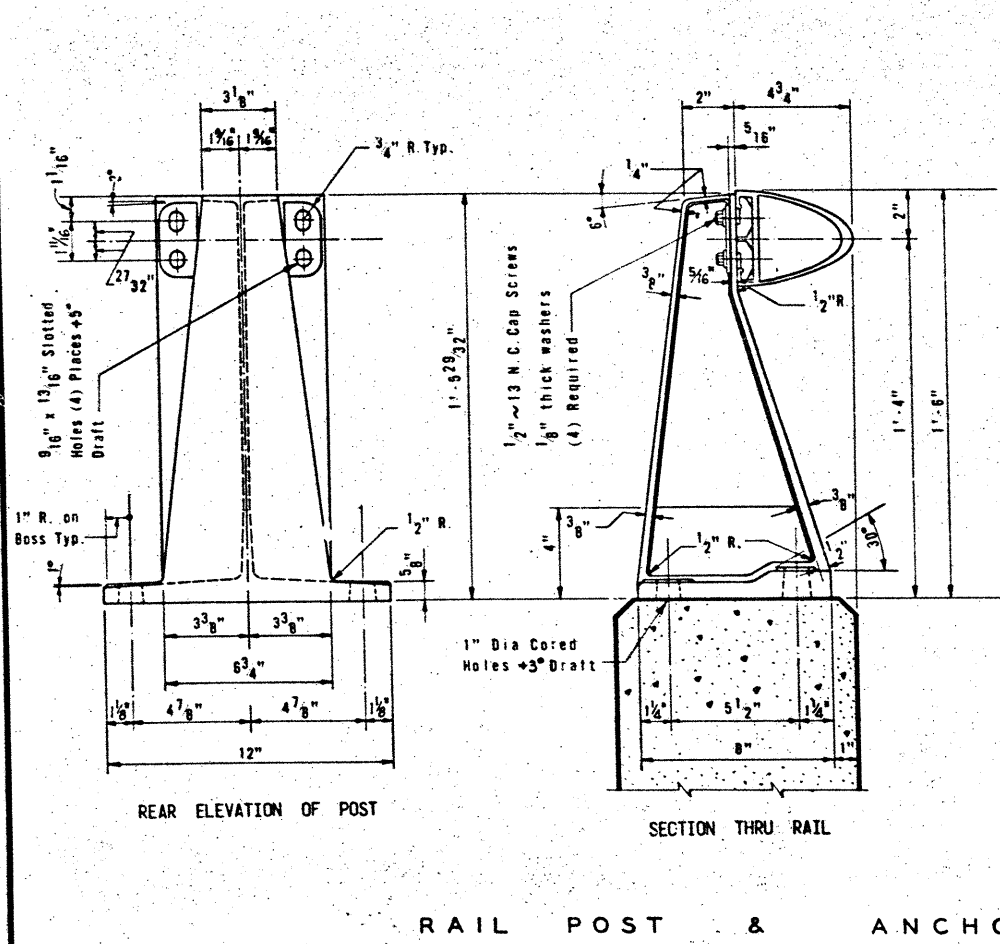
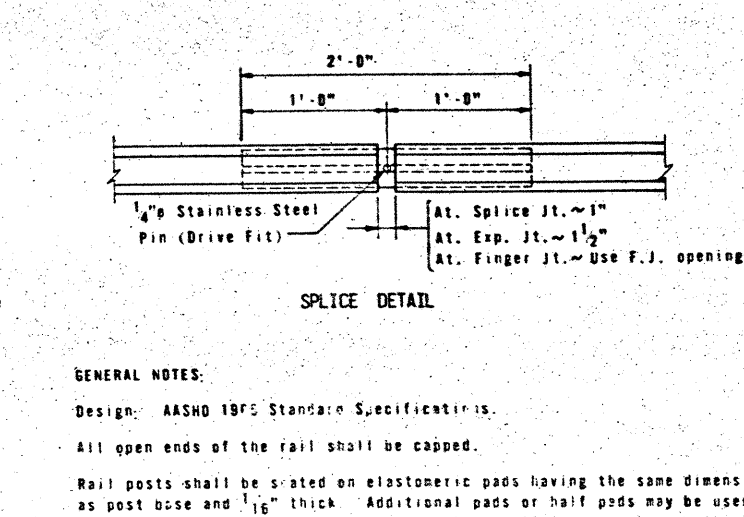
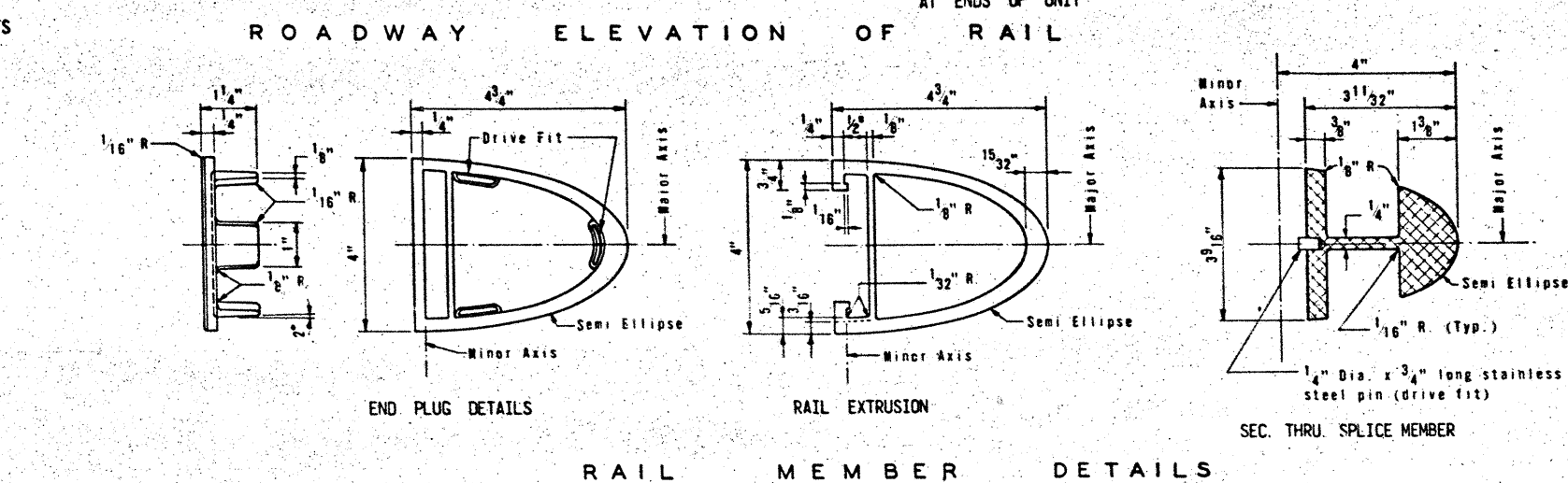
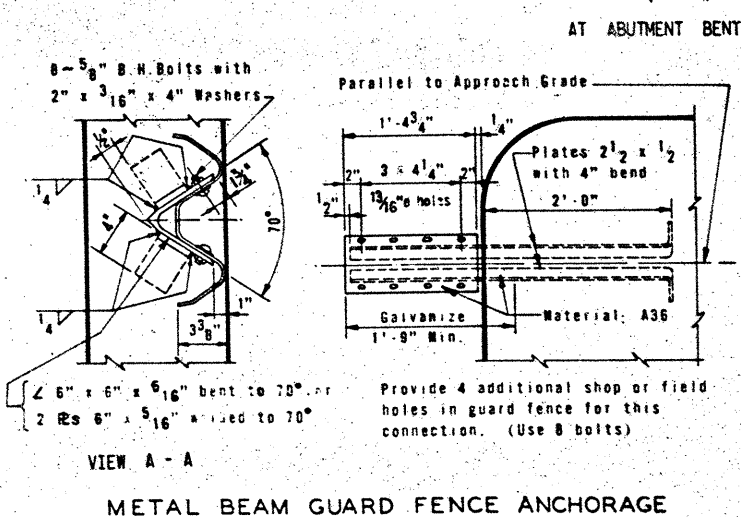
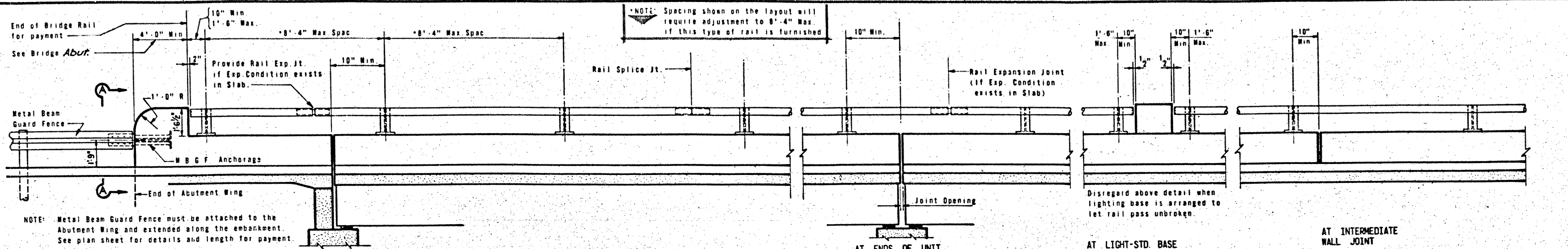
(PARAPET NOT INCLUDED)

316

(STEEL)

1/2

ORIGINAL DRAWING DATE: APRIL '69	STATE PROJECT: 18 6	FEDERAL PROJECT: I-20-5(6)1257	SHEET: 316
DESIGNER: JJP	REVISIONS: 7-69 Parapet Not Included	COUNTY: Dallas	DATE: 3-24-72
CHECKER: RLS			
CHECKER: JJP			



GENERAL NOTES:

Design: AASHTO 1975 Standard Specifications.

All open ends of the rail shall be capped.

Rail posts shall be seated on elastomeric pads having the same dimensions as post base and 1/16" thick. Additional pads or half pads may be used in shimming for alignment. Post heights shown will increase by the thickness of the pad.

Rail posts shall be set perpendicular to top of parapet wall.

Panel lengths of rail shall be attached to a minimum of three posts except at abutment wingwall.

Anchor bolts to be galvanized after fabrication.

Posts shall be cast aluminum, alloy A344-T4.

Material for rails shall be aluminum - A.S.T.M. 8221 - alloy 6061-T6.

Machine screws for rail attachment shall be stainless steel.

For horizontal curves of radius less than 1000 ft. the rail member shall be fabricated to follow the curvature of the roadway.

Castings shall have a maximum draft of 3° and a minimum radius of fillet of 1/4" unless otherwise shown.

Unit bid price for Rail Type C4 includes:

Metal Railing, Posts, Connectors, Anchor Bolts, Elastomeric pads and M.B.G.F. Anchorage.

"QUANTITIES FOR PARAPET WALL ARE INCLUDED IN CONCRETE AND REINFORCING STEEL FOR SLABS AND ABUTMENT BENTS".

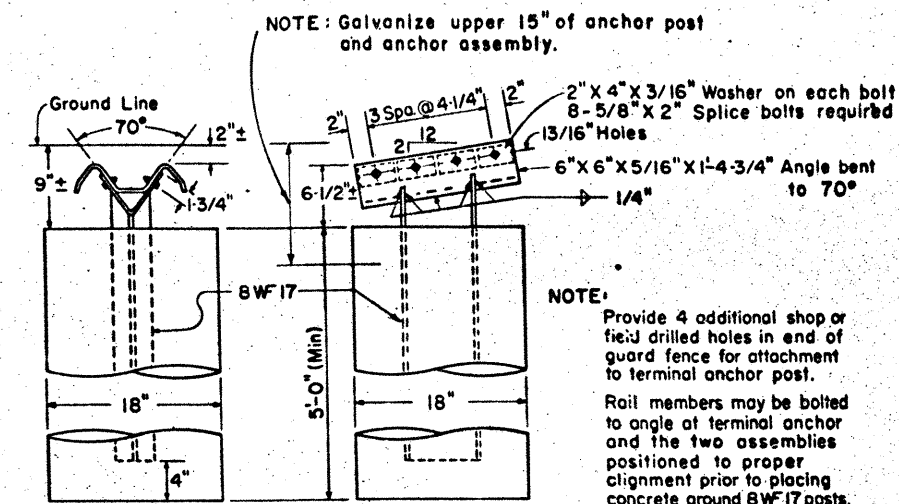
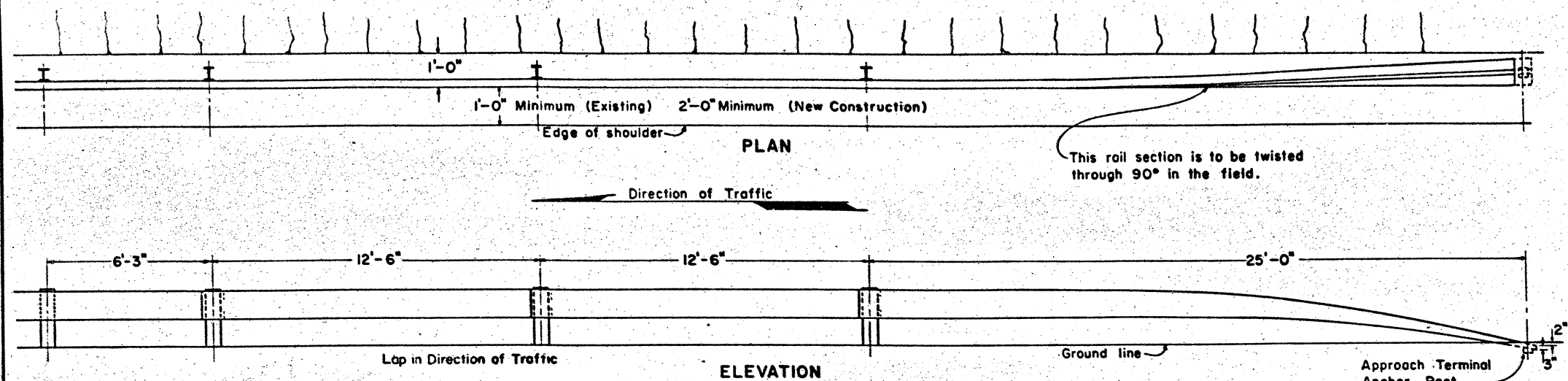
TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

COMBINATION RAIL
TYPE C4 (MOD)
(PARAPET NOT INCLUDED)

(ALUMINUM) 317

ORIGINAL DRAWING DATE: APRIL '69	STATE FEDERAL PROJECT	SHEET
REVISIONS	18 6 120-5(6) 457	317
DM: -HEC	7-69 Parapet not included	
CK: -DLB	COUNTY	SECTION JOB
DM: -DMS	Dallas	277A 4 2 1120
CK: -ABM		

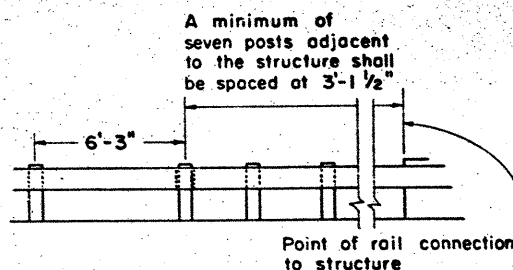
ORIGINAL
ORIGINAL UNIT 317



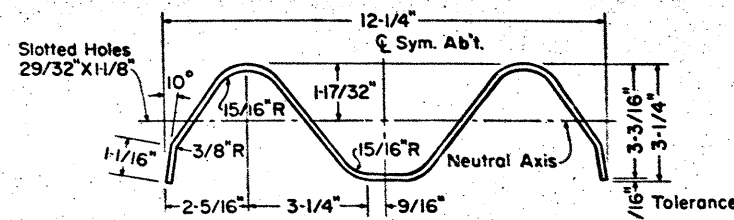
DETAIL OF TERMINAL ANCHOR POST

GENERAL NOTES

- EXCEPT WHERE USED AT STRUCTURES OR UNDERPASSES THAT ARE NARROWER THAN CROWN WIDTH OR WHERE OTHERWISE INDICATED ON THE PLANS, THE GUARD FENCE SHALL BE LOCATED A MINIMUM OF ONE FOOT AND DESIRABLY TWO FEET OUTSIDE THE SHOULDER EDGE WHERE REQUIRED. RAIL SHALL BE TRANSITIONED TO A SMOOTH CONNECTION WITH OTHER RAIL AS SHOWN ELSEWHERE IN PLANS.
- AT THE OPTION OF THE CONTRACTOR THE RAIL ELEMENTS FOR THE GUARD FENCE MAY BE FURNISHED IN EITHER 17 1/2 OR 25 FOOT NOMINAL LENGTHS. RAIL SHALL BE FURNISHED WITH POST BOLT SLOTS FOR 5/8" DIAMETER BOLT CONNECTION TO POSTS.
- BOLTS USED IN ATTACHING RAIL TO POST SHALL BE OF SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.
- THE TOP OF THE TERMINAL ANCHOR POST ASSEMBLY AND ALL STEEL FITTINGS THEREON SHALL BE GALVANIZED AS SHOWN.
- WHERE ROCK IS ENCOUNTERED OR WHERE SHOWN ON THE PLANS, THE DIAMETER OF THE HOLES AND THE MATERIAL FOR BACKFILLING SHALL BE AS DIRECTED BY THE ENGINEER.
- THE TERMINAL ANCHOR POST SHALL BE SET IN CLASS "A" OR "C" CONCRETE IN ACCORDANCE WITH ITEMS "CONCRETE FOR STRUCTURES" OR "CONCRETE PAVEMENT," CLASS "A" OR "C" CONCRETE SHALL BE SUBSIDIARY TO THE BID ITEM "TERMINAL ANCHOR SECTION".
- TIMBER POSTS MAY BE BEVELED AT APPROXIMATELY 10 DEGREES ON THE TOP OR BOTH ENDS WITH HIGH SIDE OF TOP OF POST PLACED TOWARD THE ROADWAY OR THEY MAY BE DOMED OR SAWED SQUARE.
- AN ANCHOR OTHER THAN TO A TERMINAL ANCHOR POST SHALL CONSIST OF NOT LESS THAN AN EIGHT BOLT CONNECTION SIMILAR TO THE RAIL SPLICE.
- SPECIAL FABRICATION WILL BE REQUIRED IN INSTALLATIONS HAVING A CURVATURE OF LESS THAN 150' RADIUS.
- POST SPACING WILL BE 6'-3" EXCEPT THAT THE FIRST POST WILL BE 25' FROM THE TERMINAL ANCHOR POST AND THE NEXT TWO POSTS SPACED AT 12'-6" WITH A MINIMUM OF 7 POSTS ADJACENT TO THE STRUCTURE SPACED AT 3'-1 1/2".

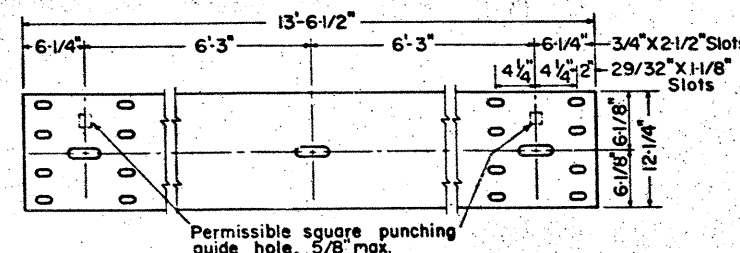


POST TREATMENT AT STRUCTURES

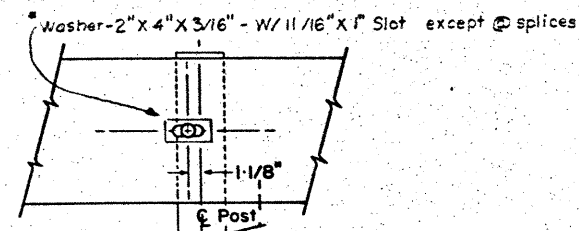


NOTE: Actual section may be slightly different depending upon the manufacturer.

SECTION THRU RAIL ELEMENT



ELEVATION OF GUARD RAIL



POST CONNECTION STEEL POST

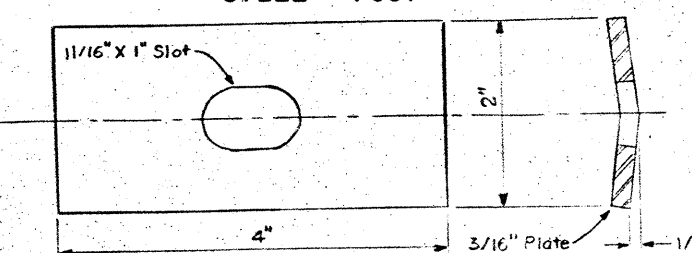
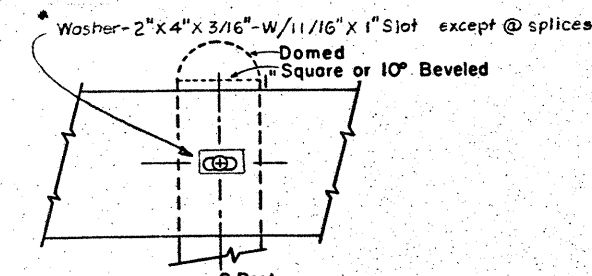


PLATE WASHER FOR METAL BM.

*These washers will not be used on the first 50' of guard fence but will be used on the guard fence beginning with the post 50' from the terminal anchor section.



POST CONNECTION WOOD POST

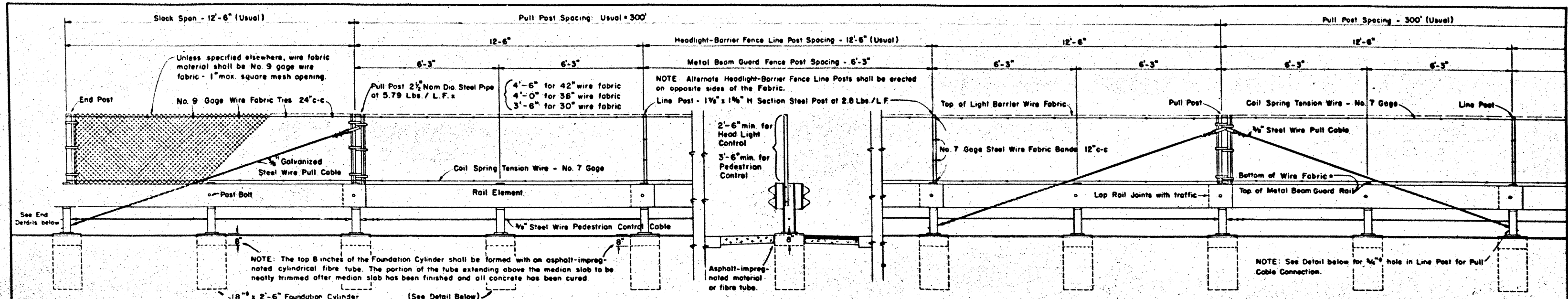
Wood Post May Be Domed, Beveled or Squared.

TEXAS HIGHWAY DEPARTMENT
METAL BEAM GUARD FENCE

GF(TD)-70B(MOD) 3/8

DN	DRAWING	DATE	FED. DIV. NO.	STATE	FED. PROJECT NO.	SHEET NO.
CK. DN.	ORIGINAL	AUG. 1968	6	TEXAS	120-5(61)457(1)592(23)	3-8
CK. DW.				COUNTY	CONT. SECT. JOB	HIGHWAY NO.
CK. TR.			18	Dallas	2374 4 2	1420

261 283 19420 US67

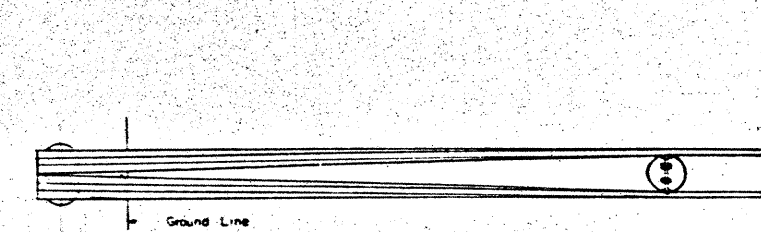


METAL BEAM GUARD FENCE (BARRIER) & CONTROL-OF-ACCESS HEADLIGHT-BARRIER FENCE

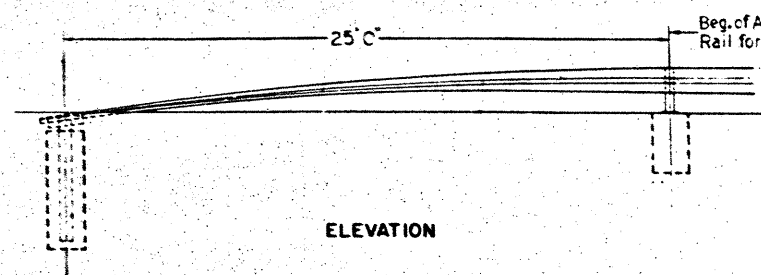
RAIL ELEMENT:
THICKNESS: FOR M.B.G.F. (BARRIER) SEE ITEM 560.
 FOR RAIL (TYPE 20) ALUMINUM, NOM. THICKNESS = 0.186".
 FOR STEEL, NOM. THICKNESS = 0.1348" EXCLUSIVE OF PROTECTIVE COATING.

GENERAL NOTES

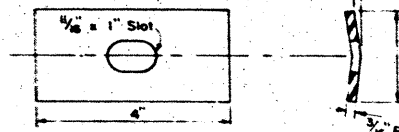
- BOLTS USED IN ATTACHING THE LINE AND PULL POSTS OF THE CONTROL-OF-ACCESS HEADLIGHT BARRIER FENCE TO THE METAL BEAM GUARD FENCE POSTS SHALL BE OF SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT BUT NOT MORE THAN THE DIAMETER OF THE BOLT BEYOND IT.
- SECTIONS OF RAIL MEMBERS OF COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.
- AT THE OPTION OF THE CONTRACTOR, THE RAIL ELEMENT FOR THE GUARD FENCE MAY BE FURNISHED IN 25 FOOT LENGTHS, WITH POST BOLT SLOTS FOR 5/8" DIAMETER BOLT ANCHORAGE TO INTERMEDIATE POSTS.
- ALL STEEL FITTINGS SHALL BE GALVANIZED.
- A 3/8" PEDESTRIAN CONTROL CABLE SHALL BE PLACED THROUGH THE POSTS AS INDICATED UNLESS OTHERWISE SPECIFIED.
- THE TYPE OF END TREATMENT SHOWN SHALL BE USED UNLESS OTHERWISE SHOWN ON THE PLANS.
- FOR CONTROL OF ACCESS HEADLIGHT BARRIER FENCE DETAILS, SEE STANDARD CA HBF-67.
- ALL ANCHORAGE PROVISIONS INCLUDING BOLTS, NUTS AND WASHERS ARE CONSIDERED AS PARTS OF THE RAIL FOR PAYMENT.
- AT EXPANSION SPLICES, TIGHTEN BOLTS, BACK OFF ONE HALF TURN AND BURR THREADS.
- APPROACH POSTS SHALL BE SET VERTICAL. BRIDGE POSTS SHALL BE SET PERPENDICULAR TO PROFILE GRADE AND CROSS SLOPE OF DECK.
- BRIDGE POSTS SHALL BE SEATED ON ELASTOMERIC PADS 7"x11"x1/16". ADDITIONAL PADS OR HALF PADS MAY BE USED IN SHIMMING FOR ALIGNMENT. POST HEIGHT SHOWN WILL INCREASE BY THE THICKNESS OF THE PAD. FOR RAILS ON HORIZONTAL CURVES FABRICATE OR FURNISH AS FOLLOWS:
 THRU 150' RAD. - FABRICATE TO THE REQUIRED RADIUS.
 OVER 150' RAD. - FURNISH IN STRAIGHT SECTIONS.



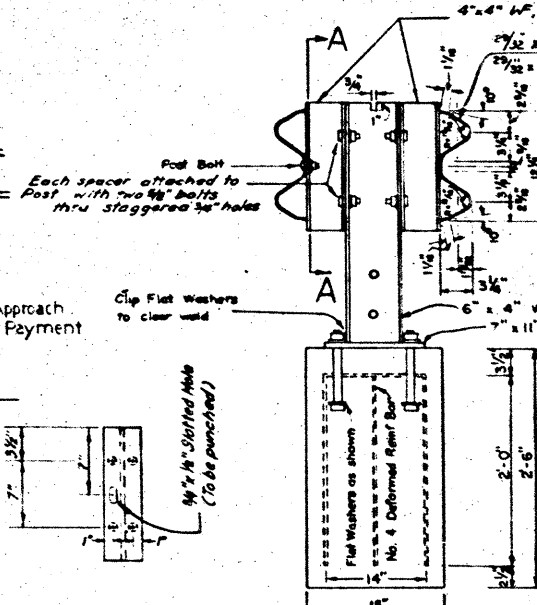
PLAN



ELEVATION



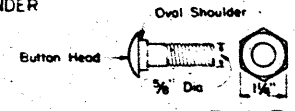
DETAIL OF TERMINAL ANCHOR POST



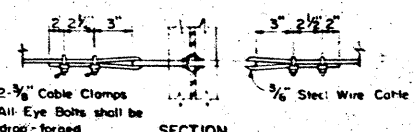
SECTION A-A

TRANSVERSE ELEV
FOUNDATION CYLINDER

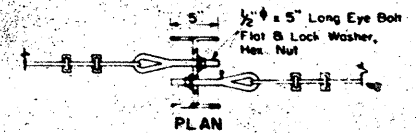
LONGITUDINAL ELEV
FOUNDATION CYLINDER



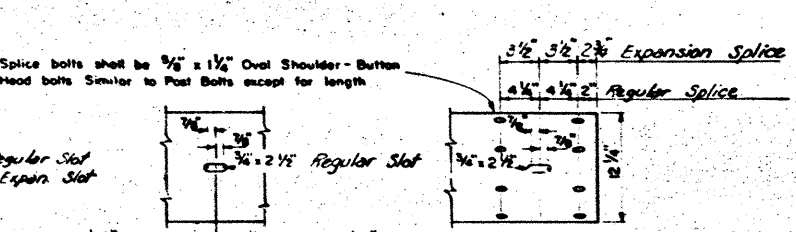
POST BOLT NUT
 NOTE: Bolts used in attaching rail to post shall be of sufficient length to extend through the full thickness of the nut and no more than 3/4" beyond it.



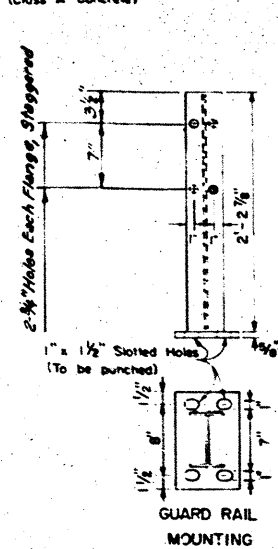
SECTION



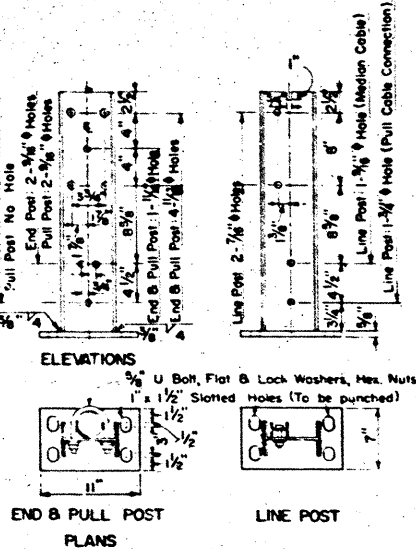
PLAN
MEDIAN CABLE CONNECTION AT PULL POST



ELEVATION OF GUARD RAIL



BASE PLATE & POST DETAILS
 GUARD RAIL POST - 6" x 4" WF x 2'-2 1/2" x 85 LB./LF.
 STEEL BASE PLATE - 7" x 11" x 3/4"



ELEVATIONS

END & PULL POST PLANS

LINE POST

TEXAS HIGHWAY DEPARTMENT

RAIL (MEDIAN) (TYPE 20)

FOR BRIDGES

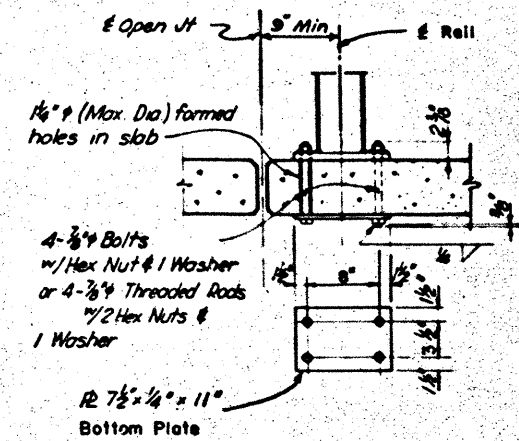
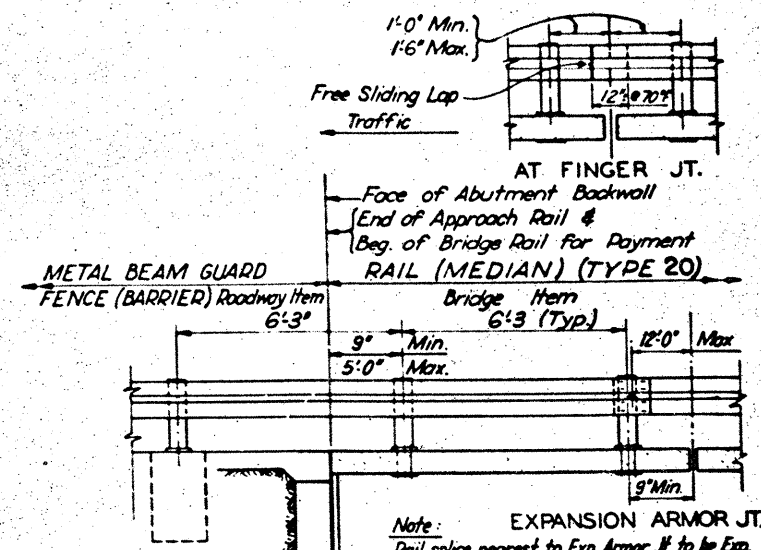
METAL BEAM GUARD FENCE

(BARRIER) (MOD) APPROACHES

319

Sheet 1 of 2

FED. PROJ. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
120-5(4)457 & US592(25)	TEXAS		319
STATE DIST. NO.	COUNTY	CONTRACT	SECTION
18	DALLAS	2374	2

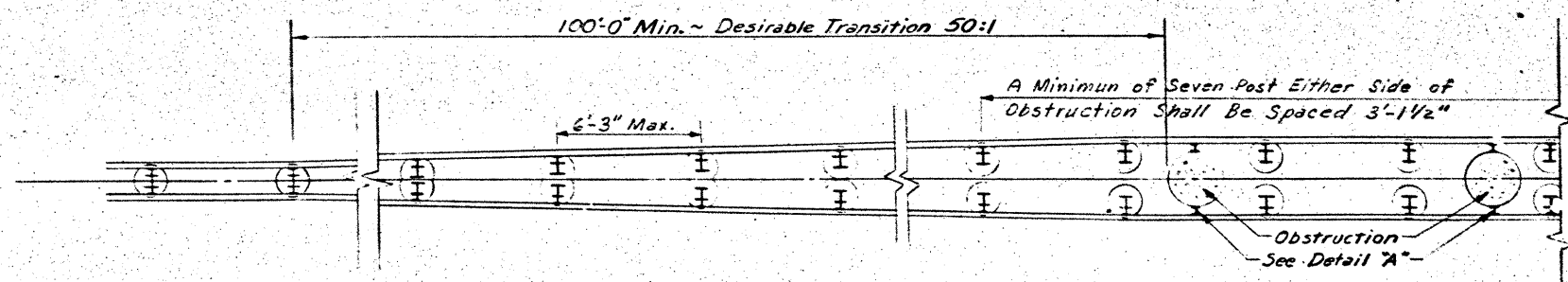


TYPICAL BRIDGE POST
 Note: Bottom Rs. may be embedded flush with bottom of slab at Contractor's option.

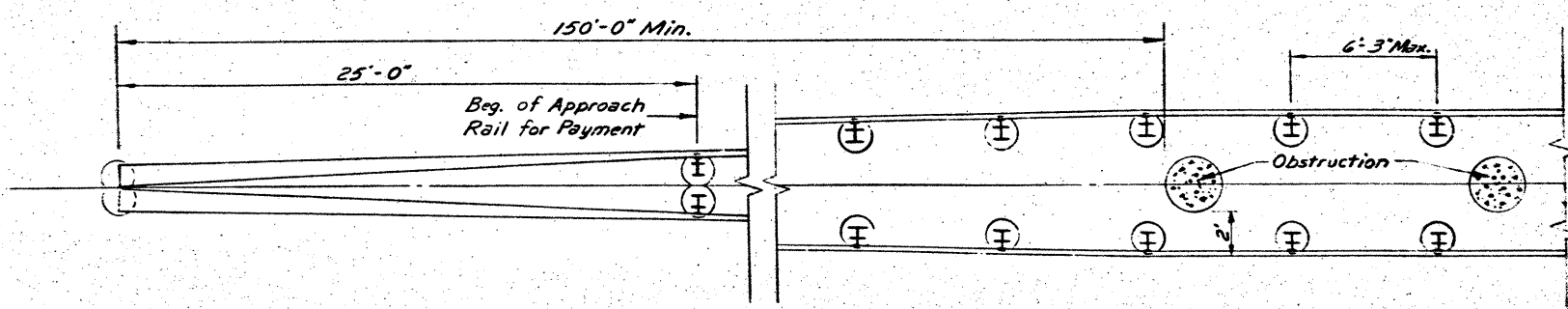
Note: Exp. Jts. - For spans of such type that preformed Exp. Jt. Matl. is used at Exp. Jts. (CSC Spans, Slabs, etc.), no Exp. type splices will be required in deep beam.

Note: EXPANSION ARMOR JT. - Rail splice nearest to Exp. Armor Jt. to be Exp. Splice. When post occurs between splice & Exp. Armor Jt. provide an Exp. Slot in deep beam for connection to intermediate post.

ELEV. - RAIL (MEDIAN) (TY.20) AT BRIDGES

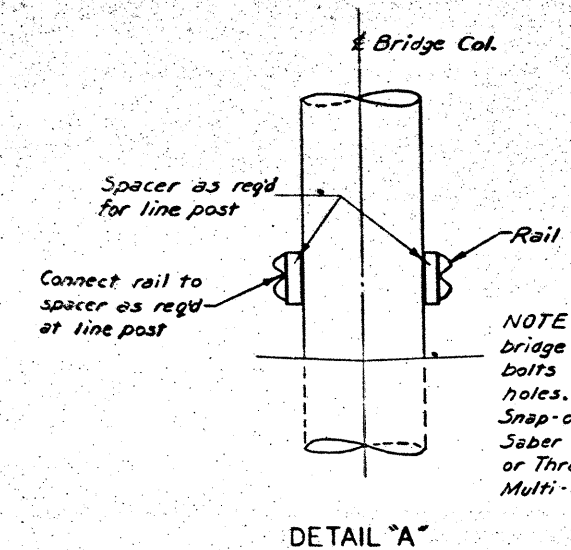


TREATMENT AT MEDIAN OBSTRUCTION (NARROW MEDIAN ~ LESS THAN 30' WIDTH)



TREATMENT AT MEDIAN OBSTRUCTION (WIDE MEDIAN ~ 30' OR WIDER)

NOTE:
 At median obstructions the metal beam guard fence will be split apart and each rail set on a separate row of posts. Payment shall be made at the unit price bid for Item 560, Galvanized Steel Beam Guard Fence (Barrier) (Class A) Blockout, based on the average length of the split rail section. It is intended that this installation be paid for as though both rails where on one row of posts.



DETAIL "A"

See Sheet 1 of 2 for notes and details not shown.

TEXAS HIGHWAY DEPARTMENT					
RAIL (MEDIAN) (TYPE 20) FOR BRIDGES					
METAL BEAM GUARD FENCE (BARRIER) FOR APPROACHES 220 (MOD.)					
ITEM NO. 6	STATE TEXAS	FEDERAL PROJECT NO. 120-5(60)576 U592(23)	COUNTY DALLAS	CONTRACT 237A	SECTION 2
SHEET NO. 18					
DATE 261 243 19420 U.S.G.					

PROFILE		PV	DATE
NOTE ROOM	UNRECORDED NOTED GOS DES CH		

#4 BARS M IN TOP SLAB						#2 BARS N IN BOTTOM SLAB					
No.	Span	Length	Width	"X"	"Y"	No.	Span	Length	Width	"X"	"Y"
61	9"	8'-5"	343	3'-9"	2'-4"	61	9"	6'-9"	275	3'-9"	
61	9"	10'-5"	425	3'-9"	3'-4"	61	9"	6'-9"	275	3'-9"	
78	7"	9'-6"	435	4'-10"	2'-4"	78	7"	7'-10"	408	4'-10"	
78	7"	11'-6"	599	4'-10"	3'-4"	78	7"	7'-10"	408	4'-10"	
78	7"	13'-6"	703	4'-10"	4'-4"	78	7"	7'-10"	408	4'-10"	

For Direct Traffic construct slab to conform to crown of roadway, maintaining constant thickness of slab.

HALF SEC. TYPE 1

HALF SEC. TYPE 2

HALF SEC. TYPE 3

PART PLAN-REINF. STEEL
3x2 To 4x4

PART PLAN-REINF. STEEL
5x2 To 10x10

BARS C

BARS D

BARS M

BARS N

GENERAL NOTES:
 Design: H20 or H20-S16 Loading in accordance with A.A.S.H.O. 1957 Standard Specifications.

All concrete shall be Class C. Chamfer exposed corners $\frac{3}{4}$ ".
 All dimensions relating to reinforcing steel are to centers of bars.

Quantities of reinforcing steel shown hereon are for 44'-0" clear width between headwalls.

CONSTRUCTION JOINTS: SHOWN AT THE FLOW LINE MAY BE RAISED A MAXIMUM OF 6" AT THE CONTRACTOR'S OPTION. BARS E MAY BE CUT OFF OR RAISED. BARS M & N MAY BE REVERSED (N ON TOP) AND BARS C & D MAY BE REVERSED (D ON TOP) EXCEPT WHERE BAR SIZE IS DIFFERENT. IN WHICH CASE BARS C MAY BE CUT OFF AND BARS D EXTENDED TO PROVIDE 30 DIA. LAP WITH C.

BARS K

SECTION
THRU CURB

TEXAS HIGHWAY DEPARTMENT
SINGLE CULVERTS-15° SKEW
3'x2' TO 10'x10'
DIRECT TRAFFIC & FILL TYPES
SC 15° A, B & C

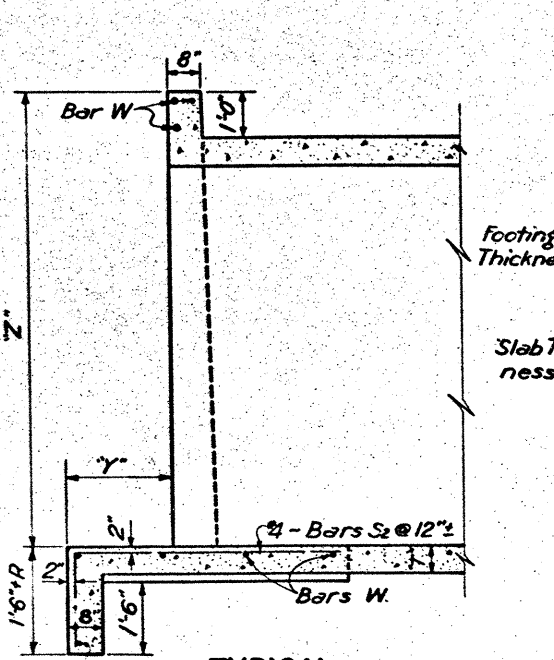
DN.	WH.	DRAWING	DATE	PER. BOARD	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
CK. DN.	RMM	Original	JAN 1958		TEXAS	I20-5(6) 457	322
DN.	MDA	Rev Jan 1959					
CK. DN.	KM	Rev Nov 1984					
TR.	AOB	Rev Nov 1967					
CK. TR.	K.M.						

BILLS OF REINFORCING STEEL FOR 44'-0" CLEAR ROADWAY WIDTH

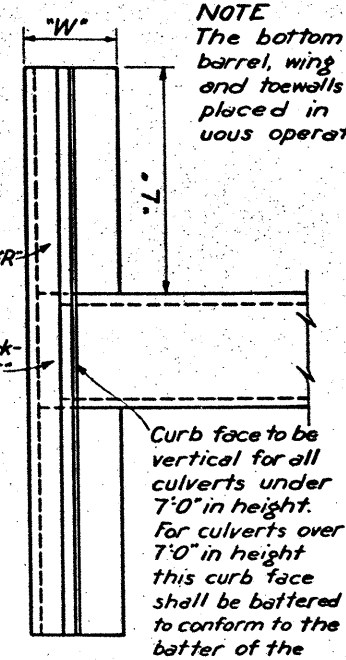
SIZE	BARS A					BARS A-Ax					BARS B					BARS B-Bx					BARS C					BARS D					14" BARS E					14" BARS F					BARS H					14" BARS K					14" BARS M					14" BARS N																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size	Spa	Length	Weight	S	H	No	Size

BILLS OF REINFORCING STEEL - FOR 44' CLEAR WIDTH - BARRELS ONLY																										
2 SPANS ~ 10' x 6'													2 SPANS ~ 10' x 7'													
MARK	B	C	D	E1	E2	F1	F2	F3	H	K	M	Y	Z	B	C	D	E1	E2	F1	F2	F3	H	K	M	Y	Z
NUMBER	146	122	122	91	99	23	24	21	4	44	62	46	46	146	138	138	91	99	23	30	21	4	44	62	46	46
SIZE	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4
SPACING	7 1/2"	9"	9"	6"	5 1/2"	18"	18"	18"	12"	18"	12"	12"	12"	7 1/2"	8"	8"	6"	5 1/2"	17"	17"	17"	12"	18"	12"	12"	12"
LENGTH	21'-5"	9'-5"	9'-5"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	21'-5"	4'-6"	5'-11"	3'-11"	3'-5"	21'-5"	10'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	21'-5"	4'-6"	5'-11"	3'-11"	3'-5"
WEIGHT	3262	1199	646	775	843	692	722	632	57	132	245	120	412	3262	1500	731	775	843	692	901	632	57	132	267	120	474
3 SPANS ~ 10' x 6'													3 SPANS ~ 10' x 7'													
NUMBER	146	122	122	182	198	35	32	31	4	66	62	92	92	146	138	138	182	198	35	40	31	4	66	62	92	92
SIZE	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4
SPACING	7 1/2"	9"	9"	6"	5 1/2"	18"	18"	18"	12"	18"	12"	12"	12"	7 1/2"	8"	8"	6"	5 1/2"	17"	17"	17"	12"	18"	12"	12"	12"
LENGTH	32'-0"	9'-5"	9'-5"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	32'-0"	4'-6"	5'-11"	3'-11"	3'-5"	32'-0"	10'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	32'-0"	4'-6"	5'-11"	3'-11"	3'-5"
WEIGHT	4873	1199	646	1550	1686	1054	963	933	86	198	245	241	625	4873	1500	731	1550	1686	1054	1204	933	86	198	287	241	948
4 SPANS ~ 10' x 6'													4 SPANS ~ 10' x 7'													
NUMBER	146	122	122	273	297	47	40	41	4	88	62	138	138	146	138	138	273	297	47	50	41	4	88	62	138	138
SIZE	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4
SPACING	7 1/2"	9"	9"	6"	5 1/2"	18"	18"	18"	12"	18"	12"	12"	12"	7 1/2"	8"	8"	6"	5 1/2"	17"	17"	17"	12"	18"	12"	12"	12"
LENGTH	42'-7"	9'-5"	9'-5"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	42'-7"	4'-6"	5'-11"	3'-11"	3'-5"	42'-7"	10'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	42'-7"	4'-6"	5'-11"	3'-11"	3'-5"
WEIGHT	6484	1199	646	2325	2529	1415	1204	1234	114	265	245	361	1237	6484	1500	731	2325	2529	1415	1505	1234	114	265	287	361	1421
5 SPANS ~ 10' x 6'													5 SPANS ~ 10' x 7'													
NUMBER	146	122	122	364	396	59	48	51	4	108	62	184	184	146	138	138	364	396	59	60	51	4	108	62	184	184
SIZE	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4
SPACING	7 1/2"	9"	9"	6"	5 1/2"	18"	18"	18"	12"	18"	12"	12"	12"	7 1/2"	8"	8"	6"	5 1/2"	17"	17"	17"	12"	18"	12"	12"	12"
LENGTH	53'-2"	9'-5"	9'-5"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	53'-2"	4'-6"	5'-11"	3'-11"	3'-5"	53'-2"	10'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	53'-2"	4'-6"	5'-11"	3'-11"	3'-5"
WEIGHT	8096	1199	646	3100	3372	1776	1445	1535	142	325	245	482	1649	8096	1500	731	3100	3372	1776	1806	1535	142	325	287	482	1895
6 SPANS ~ 10' x 6'													6 SPANS ~ 10' x 7'													
NUMBER	146	122	122	455	495	71	56	61	4	130	62	230	230	146	138	138	455	495	71	70	61	4	130	62	230	230
SIZE	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4
SPACING	7 1/2"	9"	9"	6"	5 1/2"	18"	18"	18"	12"	18"	12"	12"	12"	7 1/2"	8"	8"	6"	5 1/2"	17"	17"	17"	12"	18"	12"	12"	12"
LENGTH	64'-9"	9'-5"	9'-5"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	64'-9"	4'-6"	5'-11"	3'-11"	3'-5"	64'-9"	10'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	64'-9"	4'-6"	5'-11"	3'-11"	3'-5"
WEIGHT	9860	1199	646	3875	4216	2137	1686	1836	170	391	245	602	2062	9860	1500	731	3875	4216	2137	2107	1836	170	391	287	602	2369
2 SPANS ~ 10' x 10'													2 SPANS ~ 10' x 8'													
MARK	B	C	D	E1	E2	F1	F2	F3	H	K	M	Y	Z	B	C	D	E1	E2	F1	F2	F3	H	K	M	Y	Z
NUMBER	146	182	182	91	109	23	42	21	4	46	62	46	46	146	138	138	91	99	23	30	21	4	46	62	46	46
SIZE	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4
SPACING	7 1/2"	9"	9"	6"	6"	17"	17"	17"	12"	18"	12"	12"	12"	7 1/2"	8"	8"	6"	5 1/2"	17"	17"	17"	12"	18"	12"	12"	12"
LENGTH	21'-8"	13'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	21'-8"	4'-6"	9'-11"	3'-11"	21'-5"	21'-8"	11'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	21'-8"	4'-6"	9'-11"	3'-11"	21'-5"
WEIGHT	3300	2547	964	775	928	692	1264	632	58	138	411	120	658	3300	1644	731	775	843	692	903	632	58	138	328	120	535
3 SPANS ~ 10' x 10'													3 SPANS ~ 10' x 8'													
NUMBER	146	182	182	182	218	35	56	31	4	66	62	92	92	146	138	138	182	198	35	40	31	4	66	62	92	92
SIZE	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4
SPACING	7 1/2"	9"	9"	6"	5"	17"	17"	17"	12"	18"	12"	12"	12"	7 1/2"	8"	8"	6"	5 1/2"	17"	17"	17"	12"	18"	12"	12"	12"
LENGTH	32'-4"	13'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	32'-4"	4'-6"	9'-11"	3'-11"	21'-5"	32'-4"	11'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	32'-4"	4'-6"	9'-11"	3'-11"	21'-5"
WEIGHT	4923	2547	964	1550	1857	1054	1686	933	86	198	411	241	1316	4923	1644	731	1550	1686	1054	1204	933	86	198	328	241	1071
4 SPANS ~ 10' x 10'													4 SPANS ~ 10' x 8'													
NUMBER	146	182	182	273	327	47	70	41	4	88	62	138	138	146	138	138	273	297	47	50	41	4	88	62	138	138
SIZE	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#4	#4	#4	#4	#4	#4	#4	#4
SPACING	7 1/2"	9"	9"	6"	5"	17"	17"	17"	12"	18"	12"	12"	12"	7 1/2"	8"	8"	6"	5 1/2"	17"	17"	17"	12"	18"	12"	12"	12"
LENGTH	43'-0"	13'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	43'-0"	4'-6"	9'-11"	3'-11"	21'-5"	43'-0"	11'-5"	5'-1"	5'-8"	5'-8"	45'-0"	45'-0"	45'-0"	43'-0"	4'-6"	9'-11"	3'-11"	21'-5"
WEIGHT	6548	2547	964	2325	2785	1415	2107	1234	115	265	411	361	1975	6548	1644	731	2325	2529	1415	1505	1234	115	265	328	361	1606
5 SPANS ~ 10' x 10'													5 SPANS ~ 10' x 8'													
NUMBER	146	182	182	364	436	59	84																			

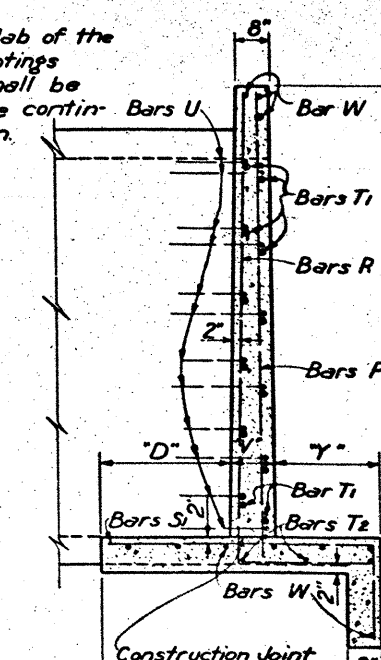
CULVERT SIZE		SLAB DEPTH		MAX FILL		WING HEIGHT		WING LENGTH		TOTAL QUANT. 4 WING WALLS CONC. REINF. CY. LB.		TABLE OF DIMENSIONS					TABLE OF REINFORCING STEEL FOR 4 WING WALLS																							
												WING SIZE		BARS R			BARS S ₁			*4 BARS T ₁ @ 18":		*4 BARS T ₂ @ 12":		BARS U				*4 BARS P @ 18":			*4 BARS W @ 12":			TOTAL						
S	H	T"	FT	Z"	L"	R"	W"	V"	D"	Y"	Z"	L"	NO	SIZE	SPAC	LENGTH	WEIGHT	NO	SIZE	SPAC	LENGTH	WEIGHT	NO	LENGTH	WEIGHT	NO	LENGTH	WEIGHT	NO	SIZE	SPAC	LENGTH	WEIGHT	SPAC	LENGTH	WEIGHT	NO	LENGTH	WEIGHT	WEIGHT
3	2	6"	14'	3'-6"	5'-3"	6 1/2"	2'-6"	8"	10'-1'-0"	3'-6"	5'-3"	24	#4	12"	5'-1"	81	24	#4	12"	3'-11"	63	16	5'-0"	53	8	5'-0"	27	16	#5	18"	6'-0"	100	20	3'-9"	50	28	8'-9"	164	538	
3	3	6"	14'	4'-6"	6'-9"	6 1/2"	2'-10"	8"	1'-2"-1'-0"	4'-6"	6'-9"	32	#4	11"	6'-1"	130	32	#4	11"	4'-3"	91	24	6'-0"	104	8	6'-6"	35	24	#5	18"	6'-0"	150	24	4'-9"	76	28	11'-3"	210	796	
4	2	6"	12'	3'-6"	5'-3"	6 1/2"	2'-6"	8"	1'-0"-1'-0"	5'-6"	8'-3"	60	#4	7"	7'-3"	291	60	#4	7"	4'-10"	194	32	8'-0"	171	8	8'-0"	43	32	#5	18"	6'-0"	200	28	5'-9"	108	32	13'-3"	283	1290	
4	3	6"	12'	4'-6"	6'-9"	6 1/2"	2'-10"	8"	1'-2"-1'-0"	6'-6"	9'-9"	56	#5	8 1/2"	8'-5"	492	60	#5	8"	5'-5"	339	32	9'-6"	203	12	9'-6"	76	32	#5	18"	6'-0"	200	32	6'-9"	144	36	15'-9"	379	1833	
4	4	6"	12'	5'-6"	8'-3"	8 1/2"	3'-5"	8"	1'-7"-1'-2"	7'-6"	11'-3"	80	#5	7"	9'-10"	820	80	#5	7"	6'-1"	507	40	11'-0"	294	12	11'-0"	88	40	#5	18"	6'-0"	250	36	7'-9"	186	36	17'-3"	415	2560	
5	2	6"	8'	3'-6"	5'-3"	4 1/2"	2'-6"	8"	1'-0"-1'-0"	8'-6 1/2"	12'-10"	112	#5	5 1/2"	11'-4"	1324	104	#5	6"	6'-7"	714	48	12'-7"	403	12	12'-7"	101	48	#5	18"	6'-0"	300	40	8'-9"	234	40	18'-11"	505	3581	
5	3	6"	8'	4'-6"	6'-9"	6 1/2"	2'-10"	8"	1'-2"-1'-0"	9'-6 1/2"	14'-4"	108	#6	6 1/2"	12'-9"	2068	116	#6	6"	7'-4"	1277	48	14'-1"	452	16	14'-1"	150	48	#5	18"	6'-0"	300	44	9'-9"	287	44	20'-6"	603	5137	
5	4	6"	8'	5'-6"	8'-3"	8 1/2"	3'-5"	8"	1'-7"-1'-2"	10'-7"	15'-10"	140	#6	5 1/2"	14'-4"	3013	140	#6	5 1/2"	7'-4"	1665	56	15'-7"	583	16	15'-7"	167	56	#5	18"	6'-0"	350	48	10'-10"	347	44	22'-0"	647	6772	
5	5	6"	8'	6'-6"	9'-9"	11 1/8"	4'-0"	8"	2'-0"-1'-4"	11'-7"	17'-4"	168	#6	5"	15'-9"	3974	168	#6	5"	8'-7"	2165	64	17'-1"	730	16	17'-1"	183	64	#5	18"	6'-0"	401	52	11'-10"	411	48	23'-6"	754	8618	



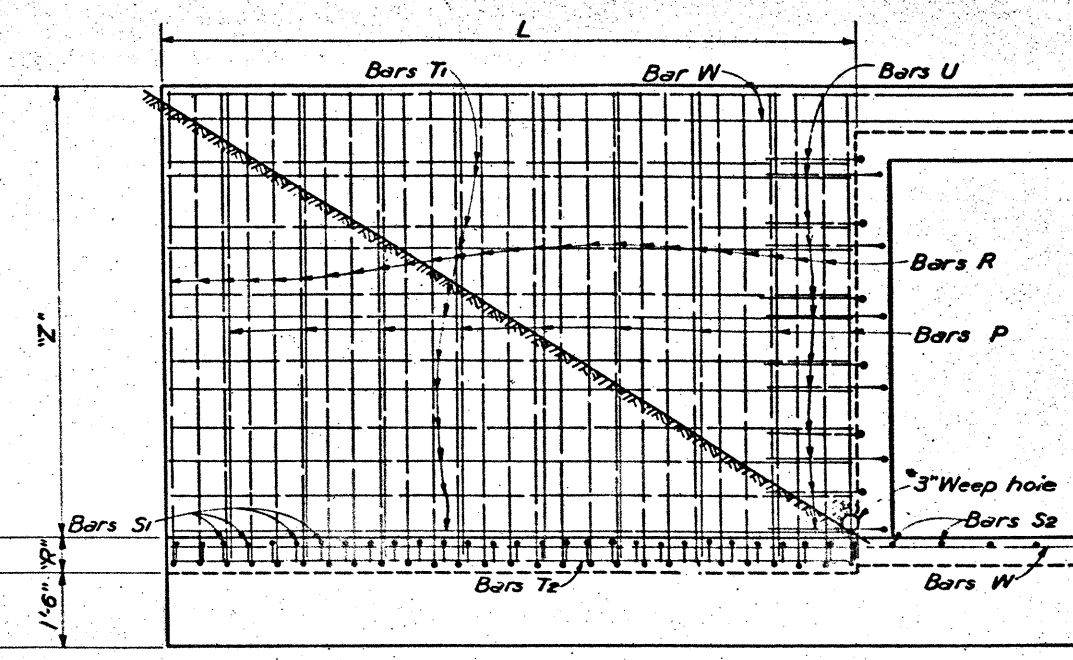
TYPICAL LONGITUDINAL SECTION THRU BOX SHOWING DETAIL OF APRON



PLAN VIEW OF WING WALL



SECTION



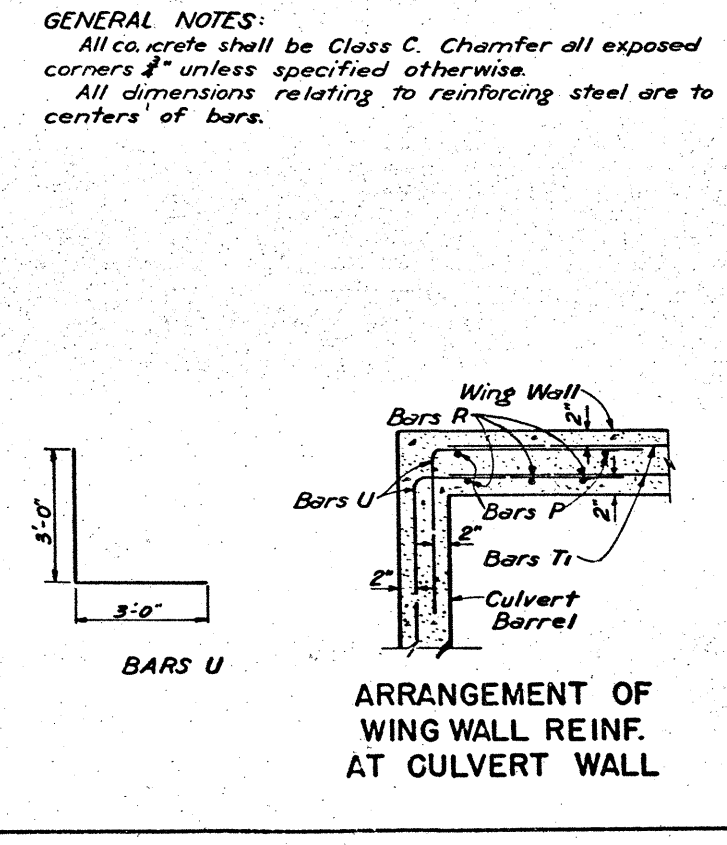
HALF ELEVATION

GENERAL NOTES:
All concrete shall be Class C. Chamfer all exposed corners $\frac{1}{4}$ " unless specified otherwise.
All dimensions relating to reinforcing steel are to centers of bars.

*Place one weep hole per wing at approximate earth line as shown. Fill around inlet of drains with broken stone or coarse gravel to permit free passage of water. Weep holes required for Z-6'-6" and greater.

BILL OF MATERIALS		CONCRETE		REINFORCING STEEL	
ITEM	QUANTITY	ITEM	QUANTITY	ITEM	QUANTITY
1	1.00	2	1.00	3	1.00
4	1.00	5	1.00	6	1.00
7	1.00	8	1.00	9	1.00
11	1.00	12	1.00	13	1.00
15	1.00	16	1.00	17	1.00
19	1.00	20	1.00	21	1.00
23	1.00	24	1.00	25	1.00
27	1.00	28	1.00	29	1.00
31	1.00	32	1.00	33	1.00
35	1.00	36	1.00	37	1.00
39	1.00	40	1.00	41	1.00
43	1.00	44	1.00	45	1.00
47	1.00	48	1.00	49	1.00
51	1.00	52	1.00	53	1.00
55	1.00	56	1.00	57	1.00
59	1.00	60	1.00	61	1.00
63	1.00	64	1.00	65	1.00

BARS R		BARS T ₁		BARS S ₂ (Culvert Apron)	
2'-2" (Z-3'-6")	2'-6" (Z-4'-6")	5'-0" (Z-3'-6")	2'-2" (Z-3'-6")	2'-2" (Z-3'-6")	2'-6" (Z-4'-6")
3'-1" (Z-5'-6")	3'-5" (Z-6'-6")	6'-6" (Z-4'-6")	2'-6" (Z-4'-6")	3'-1" (Z-5'-6")	3'-5" (Z-6'-6")
4'-0" (Z-6'-6")	4'-4" (Z-7'-6")	8'-0" (Z-5'-6")	3'-1" (Z-5'-6")	4'-0" (Z-6'-6")	4'-4" (Z-7'-6")
5'-0" (Z-7'-6")	5'-4" (Z-8'-6")	9'-6" (Z-6'-6")	3'-5" (Z-6'-6")	5'-0" (Z-7'-6")	5'-4" (Z-8'-6")
6'-0" (Z-8'-6")	6'-4" (Z-9'-6")	11'-0" (Z-7'-6")	3'-9" (Z-7'-6")	6'-0" (Z-8'-6")	6'-4" (Z-9'-6")
7'-0" (Z-9'-6")	7'-4" (Z-10'-6")	12'-7" (Z-8'-6")	4'-4" (Z-7'-6")	7'-0" (Z-9'-6")	7'-4" (Z-10'-6")
8'-0" (Z-10'-6")	8'-4" (Z-11'-6")	14'-1" (Z-9'-6")	4'-8" (Z-8'-6")	8'-0" (Z-10'-6")	8'-4" (Z-11'-6")
9'-0" (Z-11'-6")	9'-4" (Z-12'-6")	15'-7" (Z-10'-7")	5'-5" (Z-9'-6")	9'-0" (Z-11'-6")	9'-4" (Z-12'-6")
10'-0" (Z-12'-6")	10'-4" (Z-13'-6")	17'-4" (Z-11'-7")	6'-0" (Z-10'-7")	10'-0" (Z-12'-6")	10'-4" (Z-13'-6")
11'-0" (Z-13'-6")	11'-4" (Z-14'-6")		6'-8" (Z-11'-7")	11'-0" (Z-13'-6")	11'-4" (Z-14'-6")



TEXAS HIGHWAY DEPARTMENT
PARALLEL WINGS-NORMAL
FOR SINGLE BOX CULVERTS
3 X 2 TO 10 X 10

325
PW-N

DR. C. E. SEWELL	DRAWING	DATE	REV. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
DR. C. E. SEWELL	Original	June 1948	1	TEXAS	120-5(6)457	325
DR. A. B. L.	Rev. Oct 1958					
DR. D. M. W. H.	Rev. Jan 1959					
DR. A. C. B.	Rev. Nov. 1962					
DR. T. A. W. H.	Rev. Nov 1967					

PLAN
NOTE: SEE PLAN
PROFILES
NOTE: SEE PROFILES
TEMPORARY MEASUREMENTS

CULVERT SIZE	MAX FILL	TABLE OF DIMENSIONS									* TOTAL QUANT.	
		SLAB	WING								CONC. C.Y.	REINF. LB.
			T	Z	L	R	W	V	D	Y		
S	H	FT.	T	Z	L	R	W	V	D	Y		
SC-15°C	3'x2'	14"	6"	3'-6"	5'-5"	6½"	2'-6"	8"	10"	1'-0"	4.23	562
	3'x3'	14"	6"	4'-6"	7'-0"	7"	2'-10"	8"	1'-2"	1'-0"	6.34	836
	4'x2'	12'	6"	3'-6"	5'-5"	6½"	2'-6"	8"	10"	1'-0"	4.35	567
	4'x3'	12'	6"	4'-6"	7'-0"	7"	2'-10"	8"	1'-2"	1'-0"	6.46	841
	4'x4'	12'	6"	5'-6"	8'-6"	7"	3'-5"	8"	1'-7"	1'-2"	9.02	1334
	5'x2'	8'	6"	3'-6"	5'-5"	7"	2'-6"	8"	10"	1'-0"	4.56	572
	5'x3'	8'	6"	4'-6"	7'-0"	7"	2'-10"	8"	1'-2"	1'-0"	6.58	847
	5'x4'	8'	6"	5'-6"	8'-6"	7"	3'-5"	8"	1'-7"	1'-2"	9.14	1341
	5'x5'	8'	6"	6'-6"	10'-1"	7"	4'-0"	8"	2'-0"	1'-4"	12.27	1994
	6'x3'	8'	6"	4'-6"	7'-0"	7"	2'-10"	8"	1'-2"	1'-0"	6.70	853
SC-15°A	6'x4'	8'	6"	5'-6"	8'-6"	7"	3'-5"	8"	1'-7"	1'-2"	9.27	1347
	6'x5'	8'	6"	6'-6"	10'-1"	7"	4'-0"	8"	2'-0"	1'-4"	12.40	2002
	6'x6'	8'	6"	7'-6"	11'-8"	7"	4'-8"	8"	2'-3"	1'-9"	16.14	2648
	7'x3'	8'	6½"	4'-6½"	7'-1"	7"	2'-10"	8"	1'-2"	1'-0"	6.92	858
	7'x4'	8'	6½"	5'-6½"	8'-7"	7"	3'-5"	8"	1'-7"	1'-2"	9.52	1354
	7'x5'	8'	6½"	6'-6½"	10'-2"	7"	4'-0"	8"	2'-0"	1'-4"	12.69	2009
	7'x6'	8'	6½"	7'-6½"	11'-9"	7"	4'-8"	8"	2'-3"	1'-9"	16.47	2656
	7'x7'	8'	6½"	8'-6½"	13'-3"	8"	5'-2"	9½"	2'-6½"	1'-10"	22.25	3811
	8'x4'	4'	6½"	5'-6½"	8'-7"	7"	3'-5"	8"	1'-7"	1'-2"	9.65	1360
	8'x5'	4'	6½"	6'-6½"	10'-2"	7"	4'-0"	8"	2'-0"	1'-4"	12.82	2016
SC-15°B	8'x6'	4'	6½"	7'-6½"	11'-9"	7"	4'-8"	8"	2'-3"	1'-9"	16.62	2664
	8'x7'	4'	6½"	8'-6½"	13'-3"	8"	5'-2"	9½"	2'-6½"	1'-10"	22.41	3820
	8'x8'	4'	6½"	9'-6½"	14'-10"	9"	5'-9"	10½"	2'-8½"	2'-2"	29.49	5562
	8'x4'	6'	7"	5'-7"	8'-8"	7"	3'-5"	8"	1'-7"	1'-2"	9.78	1360
	8'x5'	6'	7"	6'-7"	10'-3"	7"	4'-0"	8"	2'-0"	1'-4"	12.98	2016
	8'x6'	6'	7"	7'-7"	11'-9"	7"	4'-8"	8"	2'-3"	1'-9"	16.70	2664
	8'x7'	6'	7"	8'-7"	13'-4"	8"	5'-2"	9½"	2'-6½"	1'-10"	22.64	3820
	8'x8'	6'	7"	9'-7"	14'-11"	9"	5'-9"	10½"	2'-8½"	2'-2"	29.76	5562
	8'x4'	8'	7½"	5'-7½"	8'-9"	7"	3'-5"	8"	1'-7"	1'-2"	9.92	1360
	8'x5'	8'	7½"	6'-7½"	10'-3"	7"	4'-0"	8"	2'-0"	1'-4"	13.04	2016
SC-15°A	8'x6'	8'	7½"	7'-7½"	11'-10"	7"	4'-8"	8"	2'-3"	1'-9"	16.89	2664
	8'x7'	8'	7½"	8'-7½"	13'-5"	8"	5'-2"	9½"	2'-6½"	1'-10"	22.86	3820
	8'x8'	8'	7½"	9'-7½"	14'-11"	9"	5'-9"	10½"	2'-8½"	2'-2"	29.88	5562
	9'x5'	6'	7"	6'-7"	10'-3"	7"	4'-0"	8"	2'-0"	1'-4"	13.11	2023
	9'x6'	6'	7"	7'-7"	11'-9"	7"	4'-8"	8"	2'-3"	1'-9"	16.86	2672
	9'x7'	6'	7"	8'-7"	13'-4"	8"	5'-2"	9½"	2'-6½"	1'-10"	22.80	3829
	9'x8'	6'	7"	9'-7"	14'-11"	9"	5'-9"	10½"	2'-8½"	2'-2"	29.95	5572
	9'x9'	6'	7"	10'-7"	16'-5"	9"	6'-4"	12½"	2'-10½"	2'-5"	38.63	7085
	9'x5'	8'	8"	6'-8"	10'-4"	7"	4'-0"	8"	2'-0"	1'-4"	13.29	2023
	9'x6'	8'	8"	7'-8"	11'-11"	7½"	4'-9"	8½"	2'-3½"	1'-9"	17.98	2672
SC-15°B	9'x7'	8'	8"	8'-8"	13'-5"	8½"	5'-4"	9½"	2'-7½"	1'-11"	23.86	3829
	9'x8'	8'	8"	9'-8"	15'-0"	9½"	6'-0"	11"	2'-11"	2'-2"	31.79	5572
	9'x9'	8'	8"	10'-8"	16'-7"	10"	6'-6"	12½"	2'-11½"	2'-6"	40.35	7085
	10'x5'	4'	7"	6'-7"	10'-3"	7"	4'-0"	8"	2'-0"	1'-4"	13.25	2031
	10'x6'	4'	7"	7'-7"	11'-9"	7"	4'-8"	8"	2'-3"	1'-9"	17.01	2680
	10'x7'	4'	7"	8'-7"	13'-4"	8"	5'-2"	9½"	2'-6½"	1'-10"	22.96	3838
	10'x8'	4'	7"	9'-7"	14'-11"	9"	5'-9"	10½"	2'-8½"	2'-2"	30.13	5581
	10'x9'	4'	7"	10'-7"	16'-5"	9½"	6'-4"	12½"	2'-10½"	2'-5"	38.83	7095
	10'x10'	4'	7"	11'-7"	18'-0"	11"	7'-0"	13½"	3'-2"	2'-8"	49.86	8976
	SC-15°C	10'x5'	6'	8"	6'-8"	10'-4"	7"	4'-0"	8"	2'-0"	1'-4"	13.48
10'x6'		6'	8"	7'-8"	11'-11"	7½"	4'-9"	8½"	2'-3½"	1'-9"	18.14	2680
10'x7'		6'	8"	8'-8"	13'-5"	8½"	5'-4"	9½"	2'-7½"	1'-11"	24.03	3838
10'x8'		6'	8"	9'-8"	15'-0"	9½"	6'-0"	11"	2'-11"	2'-2"	31.98	5581
10'x9'		6'	8"	10'-8"	16'-7"	10"	6'-6"	12½"	2'-11½"	2'-6"	40.56	7095
10'x10'		6'	8"	11'-8"	18'-1"	11"	7'-0"	13½"	3'-2"	2'-8"	50.43	8976
10'x5'		8'	8½"	6'-8½"	10'-5"	7"	4'-0"	8"	2'-0"	1'-4"	13.64	2031
10'x6'		8'	8½"	7'-8½"	12'-0"	7½"	4'-9"	8½"	2'-3½"	1'-9"	18.35	2680
10'x7'		8'	8½"	8'-8½"	13'-6"	8½"	5'-4"	9½"	2'-7½"	1'-11"	24.27	3838
10'x8'		8'	8½"	9'-8½"	15'-1"	9"	6'-0"	11"	2'-11"	2'-2"	32.28	5581
SC-15°C	10'x9'	8'	8½"	10'-8½"	16'-8"	10"	6'-6"	12½"	2'-11½"	2'-6"	40.91	7095
	10'x10'	8'	8½"	11'-8½"	18'-2"	11"	7'-0"	13½"	3'-2½"	2'-8"	50.82	8976

BILL OF *4 BARS S ₂ @ 12" FOR 2 CULVERT APRONS											
H	SPAN	NO.	LGTH.	WT.	H	SPAN	NO.	LGTH.	WT.		
2'-0"	3'-0"	8	3'-11"	21	5'-0"	9'-0"	20	5'-5"	72		
	4'-0"	10	3'-11"	26		10'-0"	22	5'-5"	80		
	5'-0"	12	3'-11"	31		6'-0"	14	6'-1"	57		
3'-0"	3'-0"	8	4'-3"	23	6'-0"	7'-0"	16	6'-1"	65		
	4'-0"	10	4'-3"	28		8'-0"	18	6'-1"	73		
	5'-0"	12	4'-3"	34		9'-0"	20	6'-1"	81		
4'-0"	3'-0"	8	4'-3"	40	7'-0"	7'-0"	16	6'-7"	70		
	4'-0"	10	4'-10"	32		8'-0"	18	6'-7"	79		
	5'-0"	12	4'-10"	39		9'-0"	20	6'-7"	88		
5'-0"	3'-0"	8	4'-10"	45	8'-0"	7'-0"	18	7'-2"	86		
	4'-0"	10	4'-10"	52		8'-0"	20	7'-2"	96		
	5'-0"	12	4'-10"	58		9'-0"	22	7'-2"	105		
6'-0"	3'-0"	8	5'-5"	51	9'-0"	7'-0"	20	7'-9"	104		
	4'-0"	10	5'-5"	58		10'-0"	22	7'-9"	114		
	5'-0"	12	5'-5"	65		10'-0"	22	8'-5"	124		

TABLE OF REINFORCING STEEL FOR 4 WINGWALLS

WING SIZE		*4 BARS B @ 12"		BARS R		BARS S ₁		*4 BARS T ₁ @ 18"		*4 BARS T ₂ @ 18"		BARS U ₁ @ 18"		BARS U ₂ @ 18"		*4 BARS W @ 12"		*4 BARS P @ 18"		TOTAL
H	L	NO.	LGTH.	WT.	NO.	SIZE	SPAC.	LGTH.	WT.	NO.	LGTH.	WT.	NO.	SIZE	LGTH.	WT.	NO.	LGTH.	WT.	WEIGHT
2'-0"	5'-5"	8	5'-0"	27	24	#4	12"	5'-1"	81	24	#4	12"	3'-11"	63	8	5'-2"	28	8	5'-2"	541
3'-0"	7'-0"	8	6'-7"	35	32	#4	11"	6'-1"	130	32	#4	11"	4'-3"	91	12	6'-7"	53	12	6'-7"	813
4'-0"	8'-6"	8	8'-1"	43	60	#4	7"	7'-3"	291	60	#4	7"	4'-10"	194	16	8'-1"	86	16	8'-3"	1302
5'-0"	10'-1"	12	9'-8"	78	64	#5	8"	8'-5"	562	64	#5	8"	5'-5"	362	16	9'-8"	103	16	9'-10"	1951
6'-0"	11'-8"	12	11'-3"	90	80	#5	7"	9'-10"	820	80	#5	7"	6'-1"	507	20	11'-3"	150	20	11'-5"	2591
7'-0"	13'-3"	12	12'-10"	103	116	#5	5 1/2"	11'-4"	1371	116	#5	5 1/2"	6'-7"	796	24	12'-10"	206	24	13'-0"	3741
8'-0"	14'-10"	16	14'-5"	154	120	#6	6"	12'-9"	2298	120	#6	6"	7'-4"	1321	24	14'-5"	231	24	14'-7"	5476
9'-0"	16'-5"	16	16'-0"	171	144	#6	5 1/2"	14'-4"	3099	144	#6	5 1/2"	7'-11"	1713	28	16'-0"	299	28	16'-2"	6981
10'-0"	18'-0"	16	17'-7"	188	172	#6	5"	15'-9"	4069	172	#6	5"	8'-7"	2217	32	17'-7"	376	32	17'-9"	8852

* These Total Quantities are for 4 Wing Walls and 2 Aprons.

Variable Slope - Max 1 1/2:1 - See Plan View.

SECTION A-A

SECTION C-C

HALF ELEVATION

DETAIL OF WINGWALL

SECTION B-B

PLAN VIEW OF WINGWALL

GENERAL NOTES:

- All Concrete shall be Class C. Chamfer all exposed corners 3/4".
- All dimensions relating to reinforcing steel are to centers of bars.
- Provide weepholes for H=5'-0" and greater. The bottom slab of the barrel, wing footings and toe walls shall be placed in one continuous operation.
- Wings shall be constructed monolithic with the barrel. If construction joints are used near the top of the barrel walls these joints shall continue through the wings.

BRIDGE DIVISION - TEXAS HIGHWAY DEPARTMENT

PARALLEL WINGS - 15° SKEW

FOR SINGLE BOX CULVERTS

SIZES 3'x2' TO 10'x10'

326 PW-15°

DR. C.F.S.E.W.H.	DRAWING	DATE	SHEET NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
CK. DR. W.H.	ORIGINAL	DEC. 1949	6	TEXAS	I-20-5(61)457	326
DR. M.D.A.	Rev. OCT. 1958					
CK. DR. A.O.B.	Rev. Jan. 1959					
TE. L.A.O.B.	Rev. Nov. 1964					
CK. TR. M.D.A.	Rev. Nov. 1967					
			18	Dallas	2374	4 2 1420

	CULVERT SIZE	MAX FILL	TABLE OF DIMENSIONS										* TOTAL QUANT.	
			SLAB T	WING								CONC. CY	REINF. LBS.	
				S	H	FT	Z	L	R	W	V			D
SC-30°A	3 x 2	14'	6"	3'-6"	6'-1"	6'-2"	2'-6"	8"	10"	1'-0"	4.75	618		
	3 x 3	14'	6"	4'-6"	7'-10"	7"	2'-0"	8"	1'-2"	1'-0"	7.09	912		
	4 x 2	12'	6"	3'-6"	6'-1"	6'-2"	2'-6"	8"	10"	1'-0"	4.88	623		
	4 x 3	12'	6"	4'-6"	7'-10"	7"	2'-0"	8"	1'-2"	1'-0"	7.23	918		
	4 x 4	12'	6"	5'-6"	9'-6"	7"	3'-5"	8"	1'-7"	1'-2"	10.08	1480		
	5 x 2	8'	6"	3'-6"	6'-1"	7"	2'-6"	8"	10"	1'-0"	5.12	629		
	5 x 3	8'	6"	4'-6"	7'-10"	7"	2'-0"	8"	1'-2"	1'-0"	7.36	924		
	5 x 4	8'	6"	5'-6"	9'-6"	7"	3'-5"	8"	1'-7"	1'-2"	10.22	1486		
	5 x 5	8'	6"	6'-6"	11'-3"	7"	4'-0"	8"	2'-0"	1'-4"	13.69	2154		
	6 x 3	8'	6"	4'-6"	7'-10"	7"	2'-0"	8"	1'-2"	1'-0"	7.49	929		
SC-30°B	6 x 4	8'	6"	5'-6"	9'-6"	7"	3'-5"	8"	1'-7"	1'-2"	10.36	1493		
	6 x 5	8'	6"	6'-6"	11'-3"	7"	4'-0"	8"	2'-0"	1'-4"	13.83	2161		
	6 x 6	8'	6"	7'-6"	13'-0"	7"	4'-8"	8"	2'-3"	1'-9"	17.98	2970		
	7 x 3	8'	6 1/2"	4'-6 1/2"	7'-10"	7"	2'-0"	8"	1'-2"	1'-0"	7.67	935		
	7 x 4	8'	6 1/2"	5'-6 1/2"	9'-7"	7"	3'-5"	8"	1'-7"	1'-2"	10.63	1499		
	7 x 5	8'	6 1/2"	6'-6 1/2"	11'-4"	7"	4'-0"	8"	2'-0"	1'-4"	14.14	2168		
	7 x 6	8'	6 1/2"	7'-6 1/2"	13'-1"	7"	4'-8"	8"	2'-3"	1'-9"	18.34	2978		
	7 x 7	8'	6 1/2"	8'-6 1/2"	14'-10"	8"	5'-2"	9 1/2"	2'-6 1/2"	1'-10"	24.90	4263		
	8 x 4	8'	6 1/2"	5'-6 1/2"	9'-7"	7"	3'-5"	8"	1'-7"	1'-2"	10.77	1506		
	8 x 5	8'	6 1/2"	6'-6 1/2"	11'-4"	7"	4'-0"	8"	2'-0"	1'-4"	14.29	2175		
SC-30°C	8 x 6	8'	6 1/2"	7'-6 1/2"	13'-1"	7"	4'-8"	8"	2'-3"	1'-9"	18.51	2986		
	8 x 7	8'	6 1/2"	8'-6 1/2"	14'-10"	8"	5'-2"	9 1/2"	2'-6 1/2"	1'-10"	25.08	4272		
	8 x 8	8'	6 1/2"	9'-6 1/2"	16'-6"	9"	5'-9"	10 1/2"	2'-8 1/2"	2'-2"	33.81	6074		
	8 x 4	6'	7"	5'-7"	9'-8"	7"	3'-5"	8"	1'-7"	1'-2"	10.91	1506		
	8 x 5	6'	7"	6'-7"	11'-5"	7"	4'-0"	8"	2'-0"	1'-4"	14.46	2175		
	8 x 6	6'	7"	7'-7"	13'-2"	7"	4'-8"	8"	2'-3"	1'-9"	18.71	2986		
	8 x 7	6'	7"	8'-7"	14'-10"	8"	5'-2"	9 1/2"	2'-6 1/2"	1'-10"	25.19	4272		
	8 x 8	6'	7"	9'-7"	16'-7"	9"	5'-9"	10 1/2"	2'-8 1/2"	2'-2"	33.10	6074		
	9 x 5	6'	7"	6'-7"	11'-5"	7"	4'-0"	8"	2'-0"	1'-4"	14.61	2190		
	9 x 6	6'	7"	7'-7"	13'-2"	7"	4'-8"	8"	2'-3"	1'-9"	18.88	3002		
SC-30°A	9 x 7	6'	7"	8'-7"	14'-10"	8"	5'-2"	9 1/2"	2'-6 1/2"	1'-10"	25.37	4283		
	9 x 8	6'	7"	9'-7"	16'-7"	9"	5'-9"	10 1/2"	2'-8 1/2"	2'-2"	33.30	6093		
	9 x 9	6'	7"	10'-7"	18'-4"	9 1/2"	6'-4"	12 1/2"	2'-10 1/2"	2'-5"	43.14	7836		
	9 x 5	8'	8"	6'-8"	11'-7"	7"	4'-0"	8"	2'-0"	1'-4"	14.89	2190		
	9 x 6	8'	8"	7'-8"	13'-3"	7 1/2"	4'-9"	8 1/2"	2'-3 1/2"	1'-9"	20.00	3002		
	9 x 7	8'	8"	8'-8"	15'-0"	8 1/2"	5'-4"	9 1/2"	2'-7 1/2"	1'-11"	26.67	4289		
	9 x 8	8'	8"	9'-8"	16'-9"	9 1/2"	6'-0"	11"	2'-11"	2'-2"	35.50	6093		
	9 x 9	8'	8"	10'-8"	18'-6"	10"	6'-6"	12 1/2"	2'-11 1/2"	2'-6"	45.01	7836		
	10 x 5	4'	7"	6'-7"	11'-5"	7"	4'-0"	8"	2'-0"	1'-4"	14.76	2197		
	10 x 6	4'	7"	7'-7"	13'-2"	7"	4'-8"	8"	2'-3"	1'-9"	19.05	3011		
SC-30°B	10 x 7	4'	7"	8'-7"	14'-10"	8"	5'-2"	9 1/2"	2'-6 1/2"	1'-10"	25.55	4298		
	10 x 8	4'	7"	9'-7"	16'-7"	9"	5'-9"	10 1/2"	2'-8 1/2"	2'-2"	33.50	6103		
	10 x 9	4'	7"	10'-7"	18'-4"	9 1/2"	6'-4"	12 1/2"	2'-10 1/2"	2'-5"	43.36	7847		
	10 x 10	4'	7"	11'-7"	20'-1"	11"	7'-0"	13 1/2"	3'-2 1/2"	2'-8"	55.63	9957		
	10 x 5	6'	8"	6'-8"	11'-7"	7"	4'-0"	8"	2'-0"	1'-4"	15.10	2197		
	10 x 6	6'	8"	7'-8"	13'-3"	7 1/2"	4'-9"	8 1/2"	2'-3 1/2"	1'-9"	20.18	3011		
	10 x 7	6'	8"	8'-8"	15'-0"	8 1/2"	5'-4"	9 1/2"	2'-7 1/2"	1'-11"	26.86	4298		
	10 x 8	6'	8"	9'-8"	16'-9"	9 1/2"	6'-0"	11"	2'-11"	2'-2"	35.71	6103		
	10 x 9	6'	8"	10'-8"	18'-6"	10"	6'-6"	12 1/2"	2'-11 1/2"	2'-6"	45.25	7847		
	10 x 10	6'	8"	11'-8"	20'-2"	11"	7'-0"	13 1/2"	3'-2 1/2"	2'-8"	56.24	9957		
SC-30°C	10 x 5	8'	8 1/2"	6'-8 1/2"	11'-7"	7"	4'-0"	8"	2'-0"	1'-4"	15.17	2197		
	10 x 6	8'	8 1/2"	7'-8 1/2"	13'-4"	7 1/2"	4'-9"	8 1/2"	2'-3 1/2"	1'-9"	20.39	3011		
	10 x 7	8'	8 1/2"	8'-8 1/2"	15'-1"	8 1/2"	5'-4"	9 1/2"	2'-7 1/2"	1'-11"	27.12	4298		
	10 x 8	8'	8 1/2"	9'-8 1/2"	16'-10"	9 1/2"	6'-0"	11"	2'-11"	2'-2"	36.02	6103		
	10 x 9	8'	8 1/2"	10'-8 1/2"	18'-7"	10"	6'-6"	12 1/2"	2'-11 1/2"	2'-6"	45.62	7847		
	10 x 10	8'	8 1/2"	11'-8 1/2"	20'-3"	11"	7'-0"	13 1/2"	3'-2 1/2"	2'-8"	56.65	9957		

BILL OF MATERIALS BARS S2 @ 12" @ FOR 2 CULVERT APRONS													
H	SPAN	NO.	LGTH	WT.	H	SPAN	NO.	LGTH	WT.				
2'-0"	3'-0"	10	3'-11"	26	5'-0"	3'-0"	24	5'-5"	87				
	4'-0"	12	3'-11"	31		10'-0"	26	5'-5"	94				
	5'-0"	14	3'-11"	37		6'-0"	16	6'-1"	65				
3'-0"	3'-0"	10	4'-3"	28	6'-0"	7'-0"	18	6'-1"	73				
	4'-0"	12	4'-3"	34		8'-0"	20	6'-1"	81				
	5'-0"	14	4'-3"	40		9'-0"	24	6'-1"	97				
	6'-0"	16	4'-3"	45		10'-0"	26	6'-1"	106				
	7'-0"	18	4'-3"	51		7'-0"	18	6'-7"	79				
4'-0"	4'-0"	12	4'-10"	39	7'-0"	8'-0"	20	6'-7"	88				
	5'-0"	14	4'-10"	45		9'-0"	24	6'-7"	105				
	6'-0"	16	4'-10"	52		10'-0"	26	6'-7"	114				
	7'-0"	18	4'-10"	58		8'-0"	20	7'-2"	96				
	8'-0"	20	4'-10"	65		9'-0"	24	7'-2"	115				
5'-0"	5'-0"	14	5'-5"	51	8'-0"	10'-0"	26	7'-2"	125				
	6'-0"	16	5'-5"	58		9'-0"	24	7'-9"	124				
	7'-0"	18	5'-5"	65		10'-0"	26	7'-9"	135				
	8'-0"	20	5'-5"	72		10'-0"	26	8'-5"	146				

TABLE OF REINFORCING STEEL FOR 4 WINGWALLS

WING SIZE	*4 BARS B@12"	BARS R	BARS S1	*4 BARS T@18"	*4 BARS T2@18"	BARS U1@18"	BARS U2@18"	*4 BARS W@12"	*4 BARS P@18"	TOTAL WEIGHT
2'-0" x 6'-1"	8	5'-6"	29	28	#4 12" 5'-1"	95	28	#4 12" 3'-11"	73	8
3'-0" x 7'-10"	8	7'-3"	39	36	#4 11" 6'-1"	146	36	#4 11" 4'-3"	102	12
4'-0" x 9'-6"	8	8'-11"	48	68	#4 7" 7'-3"	329	68	#4 7" 4'-10"	219	16
5'-0" x 11'-3"	12	10'-8"	86	68	#5 8" 8'-5"	597	68	#5 8" 5'-5"	384	16
6'-0" x 13'-0"	12	12'-5"	100	92	#5 7" 9'-10"	943	92	#5 7" 6'-1"	583	20
7'-0" x 14'-10"	12	14'-3"	114	132	#5 5 1/2" 11'-4"	1560	132	#5 5 1/2" 6'-7"	906	24
8'-0" x 16'-6"	16	15'-11"	170	132	#6 6" 12'-9"	2528	132	#6 6" 7'-4"	1453	24
9'-0" x 18'-4"	16	17'-9"	190	160	#6 5 1/2" 14'-4"	3444	160	#6 5 1/2" 7'-11"	1903	28
10'-0" x 20'-1"	16	19'-6"	208	192	#6 5" 15'-9"	4542	192	#6 5" 8'-7"	2474	32

*These Total Quantities are for 4 Wing Walls and 2 Aprons.

GENERAL NOTES:

All Concrete shall be Class C. Chamfer all exposed corners 3/4".

All dimensions relating to reinforcing steel are to centers of bars.

Provide weepholes for H:5'-0" and greater. The bottom slab of the barrel, wing footings and toe walls shall be placed in one continuous operation.

Wings shall be constructed monolithic with the barrel. If construction joints are used near the top of the barrel walls these joints shall continue through the wings.

BILL OF *4 BARS S2@12" FOR 2 CULVERT-APRONS

H	SPAN	NO.	LGTH.	WT.	H	SPAN	NO.	LGTH.	WT.
2'-0"	3'-0"	12	3'-11"	26	5'-0"	9'-0"	24	5'-5"	87
4'-0"	4'-0"	10	3'-11"	31	10'-0"	26	5'-5"	94	
5'-0"	14	3'-11"	37	6'-0"	16	6'-1"	65		
3'-0"	10	4'-3"	28	7'-0"	18	6'-1"	73		
4'-0"	12	4'-3"	34	8'-0"	20	6'-1"	81		
5'-0"	14	4'-3"	40	9'-0"	24	6'-1"	97		
6'-0"	16	4'-3"	45	10'-0"	26	6'-1"	106		
7'-0"	18	4'-3"	51	7'-0"	18	6'-7"	79		
4'-0"	12	4'-10"	39	8'-0"	20	6'-7"	88		
5'-0"	14	4'-10"	45	9'-0"	24	6'-7"	105		
6'-0"	16	4'-10"	52	10'-0"	26	6'-7"	114		
7'-0"	18	4'-10"	58	8'-0"	20	7'-2"	96		
8'-0"	20	4'-10"	65	9'-0"	24	7'-2"	115		
5'-0"	14	5'-5"	51	10'-0"	26	7'-2"	125		
6'-0"	16	5'-5"	58	9'-0"	24	7'-9"	124		
7'-0"	18	5'-5"	65	10'-0"	26	7'-9"	135		
8'-0"	20	5'-5"	72	10'-0"	26	8'-5"	146		

TEXAS HIGHWAY DEPARTMENT

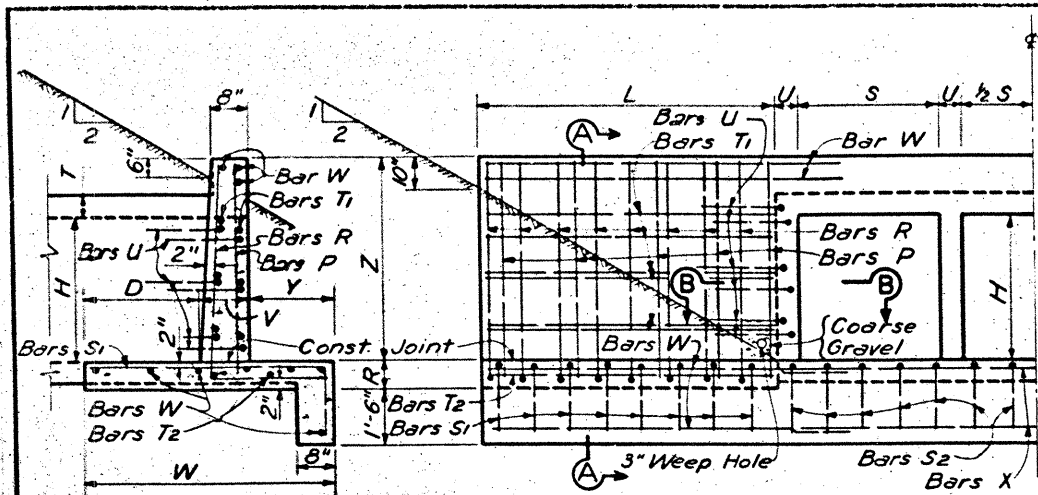
PARALLEL WINGS 30° SKEW

FOR SINGLE BOX CULVERTS

SIZES 3' x 2' TO 10' x 10'

PW-30°

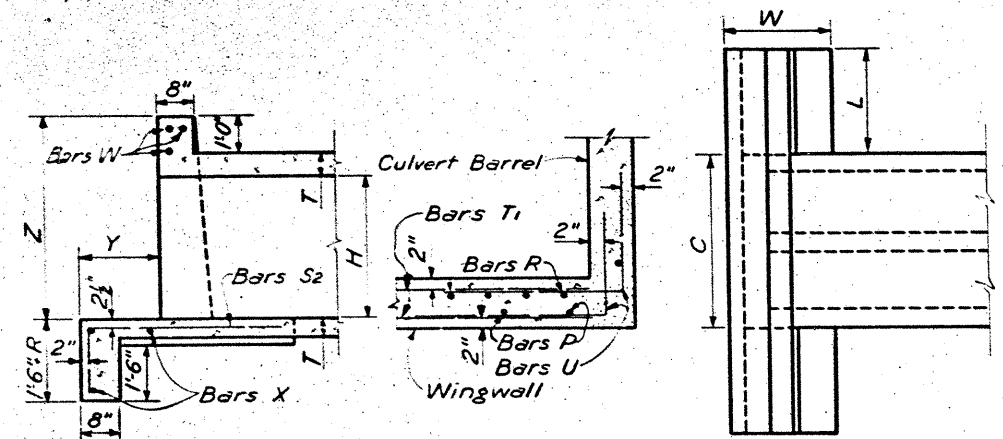
BN: CES:W/H	DRAWING	DATE	REV. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
EX. DM. W.H.	ORIGINAL	JAN 1950	6	TEXAS	120-5(61)257	327
OW: MDA	Rev. Oct. 1958					
CK. DM: K.M.	Rev. Jan. 1959					
TR: AOB	Rev. N.V. 1964					
CK. TR: MDA	Rev. Nov. 1967					



SECTION A-A

HALF ELEVATION

DETAIL OF WINGWALL



LONGITUDINAL SECTION
THRU BOX SHOWING
DETAIL OF APRON

SECTION B-B

PLAN VIEW OF
WINGWALL

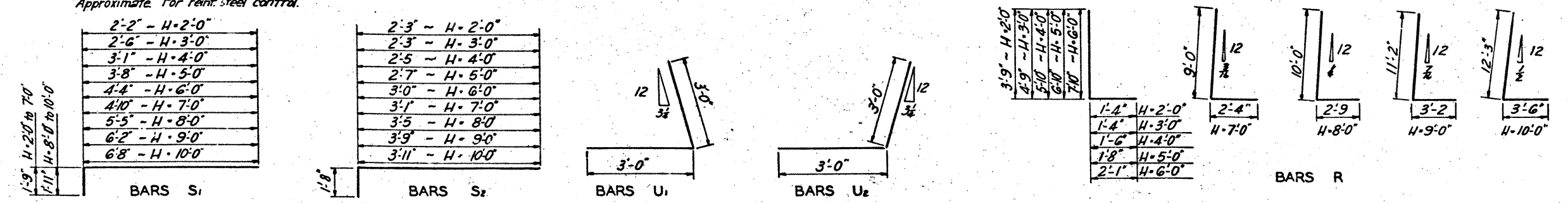
BARS S ₁		BARS T ₁		BARS S ₂ (Culvert Apron)	
2'-2" (H=2'-0")	2'-5" (H=3'-0")	3'-1" (H=4'-0")	3'-8" (H=5'-0")	5'-1" (H=2'-0")	7'-2" (H=3'-0")
2'-6" (H=3'-0")	3'-1" (H=4'-0")	3'-8" (H=5'-0")	4'-4" (H=6'-0")	7'-2" (H=3'-0")	9'-3" (H=4'-0")
3'-1" (H=4'-0")	3'-8" (H=5'-0")	4'-4" (H=6'-0")	5'-0" (H=6'-0")	9'-3" (H=4'-0")	11'-3" (H=5'-0")
3'-8" (H=5'-0")	4'-4" (H=6'-0")	5'-0" (H=6'-0")	5'-7" (H=6'-0")	11'-3" (H=5'-0")	13'-3" (H=6'-0")
4'-4" (H=6'-0")	5'-0" (H=6'-0")	5'-7" (H=6'-0")	6'-2" (H=6'-0")	13'-3" (H=6'-0")	15'-3" (H=7'-0")
4'-10" (H=7'-0")	5'-7" (H=6'-0")	6'-2" (H=6'-0")	6'-8" (H=6'-0")	15'-3" (H=7'-0")	17'-4" (H=8'-0")
5'-7" (H=6'-0")	6'-2" (H=6'-0")	6'-8" (H=6'-0")	6'-11" (H=6'-0")	17'-4" (H=8'-0")	19'-6" (H=9'-0")
6'-2" (H=6'-0")	6'-8" (H=6'-0")	6'-11" (H=6'-0")		19'-6" (H=9'-0")	21'-8" (H=10'-0")
6'-8" (H=6'-0")				21'-8" (H=10'-0")	

REINFORCING FOR 2 CULVERT APRONS																							
BARS X-4 @ 12" ±												BARS S ₂ - 4 @ 12" ±											
NUMBER OF SPANS						NUMBER OF SPANS						NUMBER OF SPANS						NUMBER OF SPANS					
2	3	4	5	6	WT.	2	3	4	5	6	WT.	2	3	4	5	6	WT.	2	3	4	5	6	WT.
31	45	60	75	90	3/4"	24	36	48	60	72	3/4"	24	36	48	60	72	3/4"	24	36	48	60	72	3/4"
31	45	60	75	90	3/4"	24	36	48	60	72	3/4"	24	36	48	60	72	3/4"	24	36	48	60	72	3/4"
31	45	60	75	90	3/4"	24	36	48	60	72	3/4"	24	36	48	60	72	3/4"	24	36	48	60	72	3/4"
47	69	92	114	137	4/8"	24	36	48	60	72	3/4"	24	36	48	60	72	3/4"	24	36	48	60	72	3/4"
36	53	71	88	105	3/4"	28	42	56	70	84	3/4"	28	42	56	70	84	3/4"	28	42	56	70	84	3/4"
36	53	71	88	105	3/4"	28	42	56	70	84	3/4"	28	42	56	70	84	3/4"	28	42	56	70	84	3/4"
55	81	108	134	161	4/8"	28	42	56	70	84	3/4"	28	42	56	70	84	3/4"	28	42	56	70	84	3/4"
55	81	108	134	161	4/8"	28	42	56	70	84	3/4"	28	42	56	70	84	3/4"	28	42	56	70	84	3/4"
41	61	81	102	122	3/4"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"
41	61	81	102	122	3/4"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"
63	94	124	154	185	4/8"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"
63	94	124	154	185	4/8"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"
63	94	124	154	185	4/8"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"
63	94	124	154	185	4/8"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"	32	48	64	80	96	3/4"
47	69	92	115	138	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
47	69	92	115	138	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
71	106	140	174	209	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
71	106	140	174	209	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
71	106	140	174	209	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
71	106	140	174	209	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
96	143	189	235	281	5/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
96	143	189	235	281	5/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
47	69	92	115	138	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
47	69	92	115	138	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
71	106	140	174	209	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
71	106	140	174	209	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
71	106	140	174	209	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
71	106	140	174	209	4/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
96	143	189	235	281	5/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
96	143	189	235	281	5/8"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"	36	54	72	90	108	3/4"
79	118	156	194	233	4/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
79	118	156	194	233	4/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
79	118	156	194	233	4/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
107	159	210	262	314	5/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
107	159	210	262	314	5/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
79	118	156	194	233	4/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
79	118	156	194	233	4/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
79	118	156	194	233	4/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
107	159	210	262	314	5/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
107	159	210	262	314	5/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
79	118	156	194	233	4/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
79	118	156	194	233	4/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
79	118	156	194	233	4/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
107	159	210	262	314	5/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
107	159	210	262	314	5/8"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"	40	60	80	100	120	3/4"
87	130	172	214	260	4/8"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"
87	130	172	214	260	4/8"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"
118	175	232	289	350	5/8"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"
118	175	232	289	350	5/8"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"
118	175	232	289	350	5/8"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"
87	130	172	214	260	4/8"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"
87	130	172	214	260	4/8"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"
118	175	232	289	350	5/8"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"
118	175	232	289	350	5/8"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"	44	66	88	110	132	3/4"

The image contains three technical drawings of a wingwall structure:

- SEC. A-A**: A longitudinal section of the wingwall. It shows a vertical wall of height H and a horizontal apron of thickness T and width W . The wall is reinforced with vertical bars U_1 , U_2 , U_3 , U_4 , U_5 and horizontal bars W . The apron is reinforced with bars R , T_1 , T_2 , T_3 , T_4 , T_5 , T_6 , T_7 , T_8 , T_9 , T_{10} , T_{11} , T_{12} , T_{13} , T_{14} , T_{15} , T_{16} , T_{17} , T_{18} , T_{19} , T_{20} , T_{21} , T_{22} , T_{23} , T_{24} , T_{25} , T_{26} , T_{27} , T_{28} , T_{29} , T_{30} , T_{31} , T_{32} , T_{33} , T_{34} , T_{35} , T_{36} , T_{37} , T_{38} , T_{39} , T_{40} , T_{41} , T_{42} , T_{43} , T_{44} , T_{45} , T_{46} , T_{47} , T_{48} , T_{49} , T_{50} , T_{51} , T_{52} , T_{53} , T_{54} , T_{55} , T_{56} , T_{57} , T_{58} , T_{59} , T_{60} , T_{61} , T_{62} , T_{63} , T_{64} , T_{65} , T_{66} , T_{67} , T_{68} , T_{69} , T_{70} , T_{71} , T_{72} , T_{73} , T_{74} , T_{75} , T_{76} , T_{77} , T_{78} , T_{79} , T_{80} , T_{81} , T_{82} , T_{83} , T_{84} , T_{85} , T_{86} , T_{87} , T_{88} , T_{89} , T_{90} , T_{91} , T_{92} , T_{93} , T_{94} , T_{95} , T_{96} , T_{97} , T_{98} , T_{99} , T_{100} . The wall is also reinforced with bars R , T_1 , T_2 , T_3 , T_4 , T_5 , T_6 , T_7 , T_8 , T_9 , T_{10} , T_{11} , T_{12} , T_{13} , T_{14} , T_{15} , T_{16} , T_{17} , T_{18} , T_{19} , T_{20} , T_{21} , T_{22} , T_{23} , T_{24} , T_{25} , T_{26} , T_{27} , T_{28} , T_{29} , T_{30} , T_{31} , T_{32} , T_{33} , T_{34} , T_{35} , T_{36} , T_{37} , T_{38} , T_{39} , T_{40} , T_{41} , T_{42} , T_{43} , T_{44} , T_{45} , T_{46} , T_{47} , T_{48} , T_{49} , T_{50} , T_{51} , T_{52} , T_{53} , T_{54} , T_{55} , T_{56} , T_{57} , T_{58} , T_{59} , T_{60} , T_{61} , T_{62} , T_{63} , T_{64} , T_{65} , T_{66} , T_{67} , T_{68} , T_{69} , T_{70} , T_{71} , T_{72} , T_{73} , T_{74} , T_{75} , T_{76} , T_{77} , T_{78} , T_{79} , T_{80} , T_{81} , T_{82} , T_{83} , T_{84} , T_{85} , T_{86} , T_{87} , T_{88} , T_{89} , T_{90} , T_{91} , T_{92} , T_{93} , T_{94} , T_{95} , T_{96} , T_{97} , T_{98} , T_{99} , T_{100} . The wall is also reinforced with bars R , T_1 , T_2 , T_3 , T_4 , T_5 , T_6 , T_7 , T_8 , T_9 , T_{10} , T_{11} , T_{12} , T_{13} , T_{14} , T_{15} , T_{16} , T_{17} , T_{18} , T_{19} , T_{20} , T_{21} , T_{22} , T_{23} , T_{24} , T_{25} , T_{26} , T_{27} , T_{28} , T_{29} , T_{30} , T_{31} , T_{32} , T_{33} , T_{34} , T_{35} , T_{36} , T_{37} , T_{38} , T_{39} , T_{40} , T_{41} , T_{42} , T_{43} , T_{44} , T_{45} , T_{46} , T_{47} , T_{48} , T_{49} , T_{50} , T_{51} , T_{52} , T_{53} , T_{54} , T_{55} , T_{56} , T_{57} , T_{58} , T_{59} , T_{60} , T_{61} , T_{62} , T_{63} , T_{64} , T_{65} , T_{66} , T_{67} , T_{68} , T_{69} , T_{70} , T_{71} , T_{72} , T_{73} , T_{74} , T_{75} , T_{76} , T_{77} , T_{78} , T_{79} , T_{80} , T_{81} , T_{82} , T_{83} , T_{84} , T_{85} , T_{86} , T_{87} , T_{88} , T_{89} , T_{90} , T_{91} , T_{92} , T_{93} , T_{94} , T_{95} , T_{96} , T_{97} , T_{98} , T_{99} , T_{100} . The wall is also reinforced with bars R , T_1 , T_2 , T_3 , T_4 , T_5 , T_6 , T_7 , T_8 , T_9 , T_{10} , T_{11} , T_{12} , T_{13} , T_{14} , T_{15} , T_{16} , T_{17} , T_{18} , T_{19} , T_{20} , T_{21} , T_{22} , T_{23} , T_{24} , T_{25} , T_{26} , T_{27} , T_{28} , T_{29} , T_{30} , T_{31} , T_{32} , T_{33} , T_{34} , T_{35} , T_{36} , T_{37} , T_{38} , T_{39} , T_{40} , T_{41} , T_{42} , T_{43} , T_{44} , T_{45} , T_{46} , T_{47} , T_{48} , T_{49} , T_{50} , T_{51} , T_{52} , T_{53} , T_{54} , T_{55} , T_{56} , T_{57} , T_{58} , T_{59} , T_{60} , T_{61} , T_{62} , T_{63} , T_{64} , T_{65} , T_{66} , T_{67} , T_{68} , T_{69} , T_{70} , T_{71} , T_{72} , T_{73} , T_{74} , T_{75} , T_{76} , T_{77} , T_{78} , T_{79} , T_{80} , T_{81} , T_{82} , T_{83} , T_{84} , T_{85} , T_{86} , T_{87} , T_{88} , T_{89} , T_{90} , T_{91} , T_{92} , T_{93} , T_{94} , T_{95} , T_{96} , T_{97} , T_{98} , T_{99} , T_{100} . The wall is also reinforced with bars R , T_1 , T_2 , T_3 , T_4 , T_5 , T_6 , T_7 , T_8 , T_9 , T_{10} , T_{11} , T_{12} , T_{13} , T_{14} , T_{15} , T_{16} , T_{17} , T_{18} , T_{19} , T_{20} , T_{21} , T_{22} , T_{23} , T_{24} , T_{25} , T_{26} , T_{27} , T_{28} , T_{29} , T_{30} , T_{31} , T_{32} , T_{33} , T_{34} , T_{3

<p>*NUMBER OF BARS X</p> <p>2 Bars when H = 2', 3', & 4'</p> <p>3 Bars when H = 5', 6', & 7'</p> <p>4 Bars when H = 8', 9', & 10'</p> <p>Length = Dimension C</p>	<p>GENERAL NOTES:</p> <p>All concrete shall be class C. Chamfer all exposed corners $\frac{1}{4}$" unless otherwise specified.</p> <p>All dimensions relating to reinforcing steel are to centers of bars. Provide Weep Holes for H=5'-0" and greater.</p> <p>The bottom slab of the barrel, wing footing and toe wall shall be placed in one continuous operation.</p> <p>TEXAS HIGHWAY DEPARTMENT</p> <p>BRIDGE DIVISION</p>
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GENERAL NOTES:
All concrete shall be class C. Chamfer all exposed corners $\frac{3}{4}$ " unless otherwise specified.
All dimensions relating to reinforcing steel are to centers of bars. Provide Weep Holes for 4'-5'-0" and greater.
The bottom slab of the barrel, wing footing and toe wall shall be placed in one continuous operation.

TEXAS HIGHWAY DEPARTMENT
BRIDGE DIVISION

PARALLEL WINGS - 15° SKEW
FOR MULTIPLE BOX CULVERTS
5' x 2' TO 10' x 10' 329

MCW-P-15°

REVISIONS <i>Rev. Nov. 24</i> <i>Rev. Nov. 1967</i>	FED. RD. DIST. NO.	STATE	FEDERAL PROJECT NO.			SHEET NO.
	0	TEXAS	120-5(61)457			32
	STATE DIST. NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
	18	Dallas	232A	1	2	114

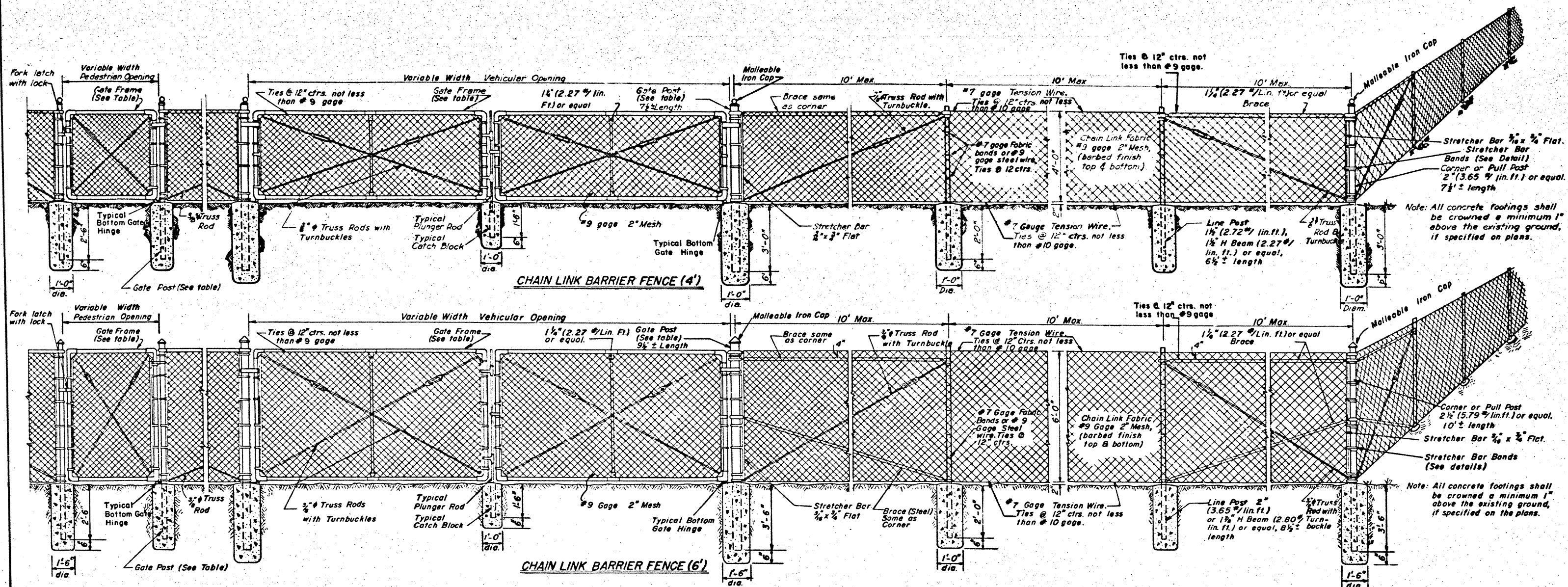
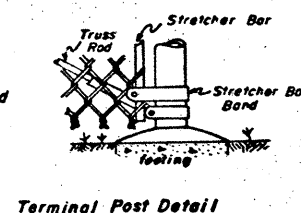
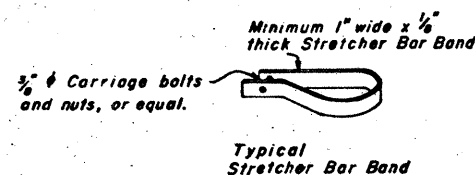
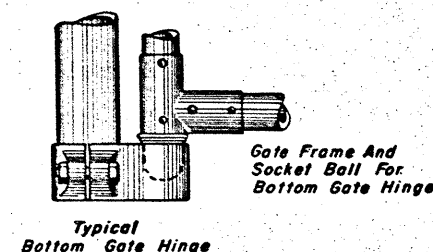
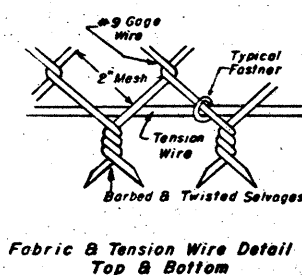


TABLE OF MINIMUM SIZES & WEIGHTS

GATE OPENING TYPE		GATE FRAME		GATE POSTS	
SINGLE, INCLUSIVE	DOUBLE, INCLUSIVE	SIZE	WT./LIN. FT.	SIZE	WT./LIN. FT.
UP TO 6'	UP TO 12'	1 1/2"	2.72 Lbs.	2 1/2" or equal	5.79 Lbs.
Over 6' TO 12'	Over 12' TO 26'	2"	2.72 Lbs.	3 1/2" or equal	9.11 Lbs.
Over 12' TO 18'	Over 26' TO 36'	Equal	2.72 Lbs.	6"	18.97 Lbs.
Over 18'	Over 36'			8"	24.70 Lbs.

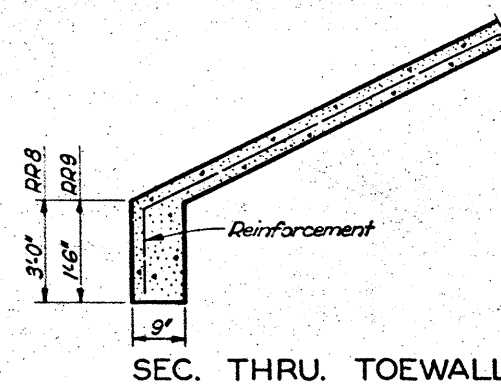
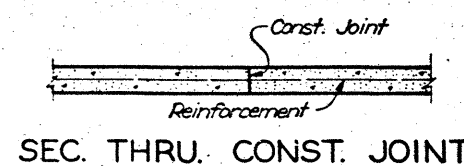
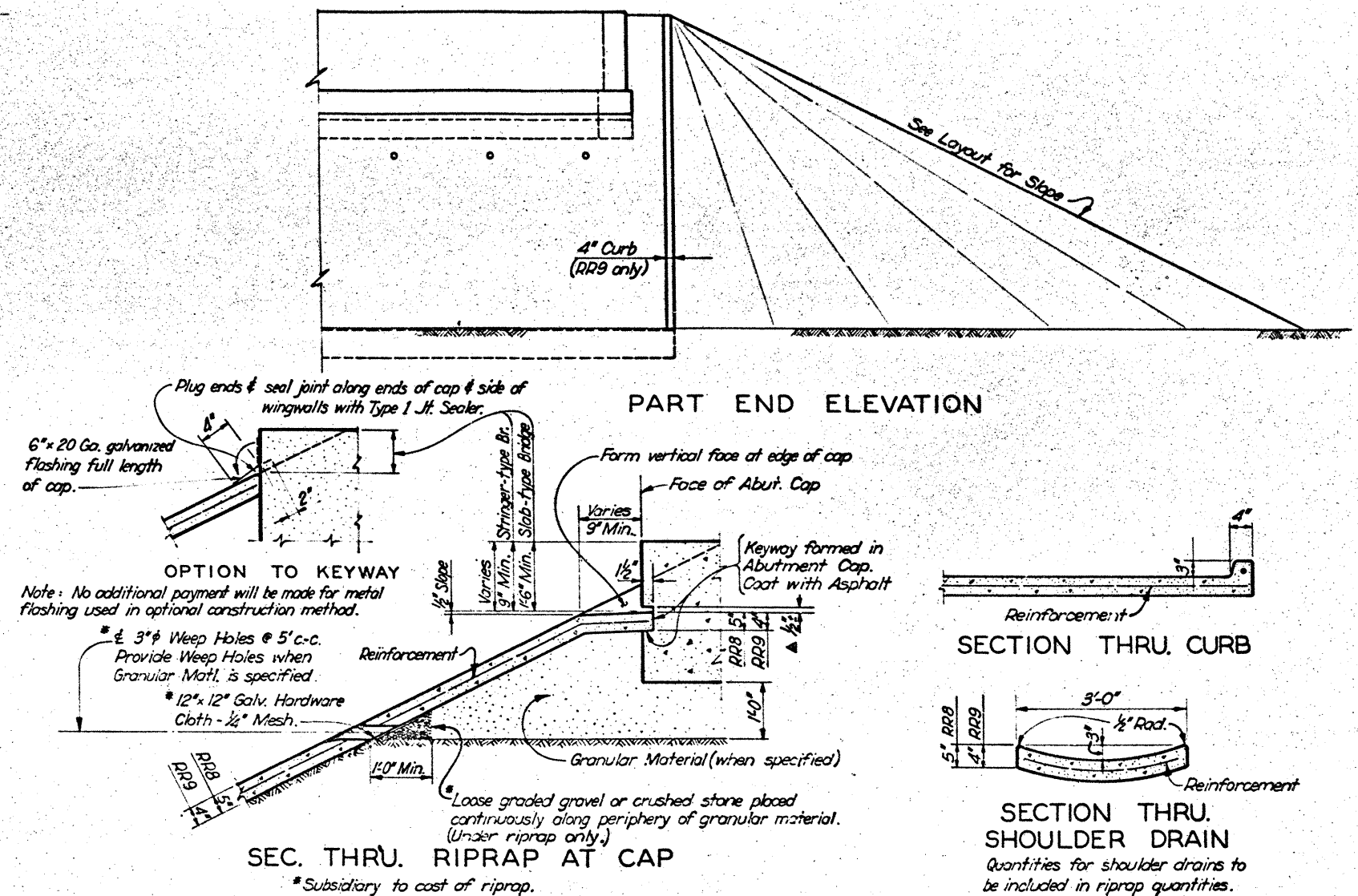
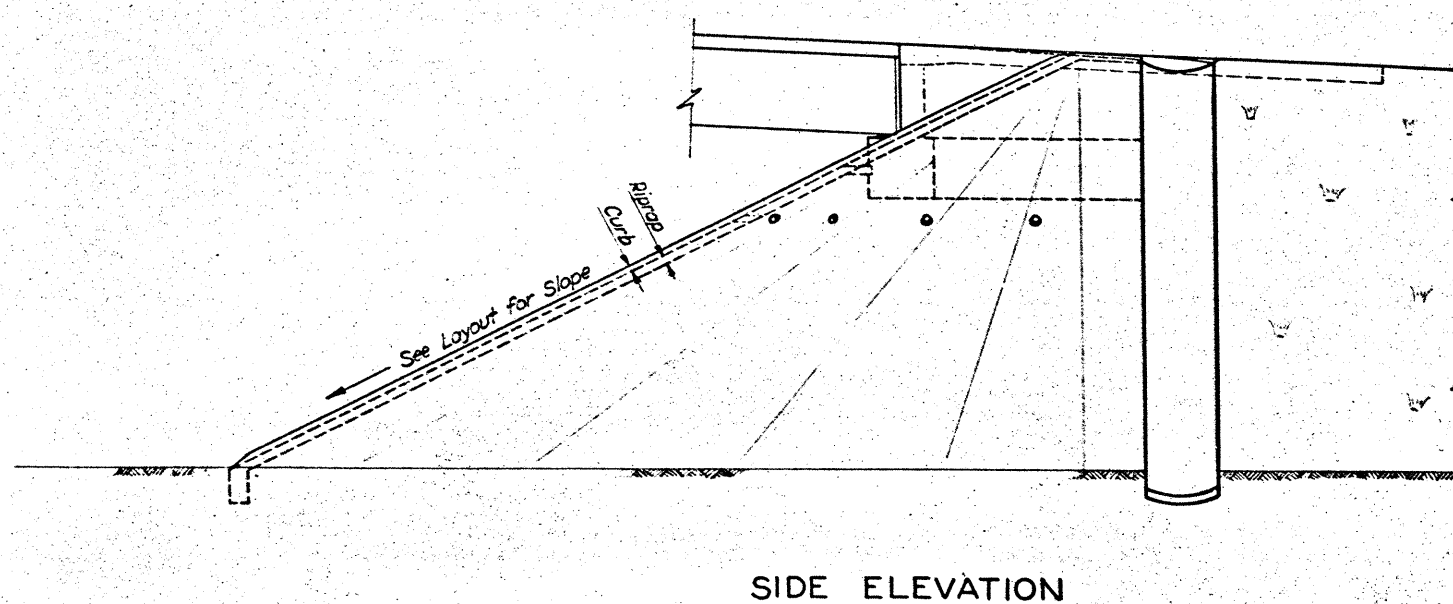
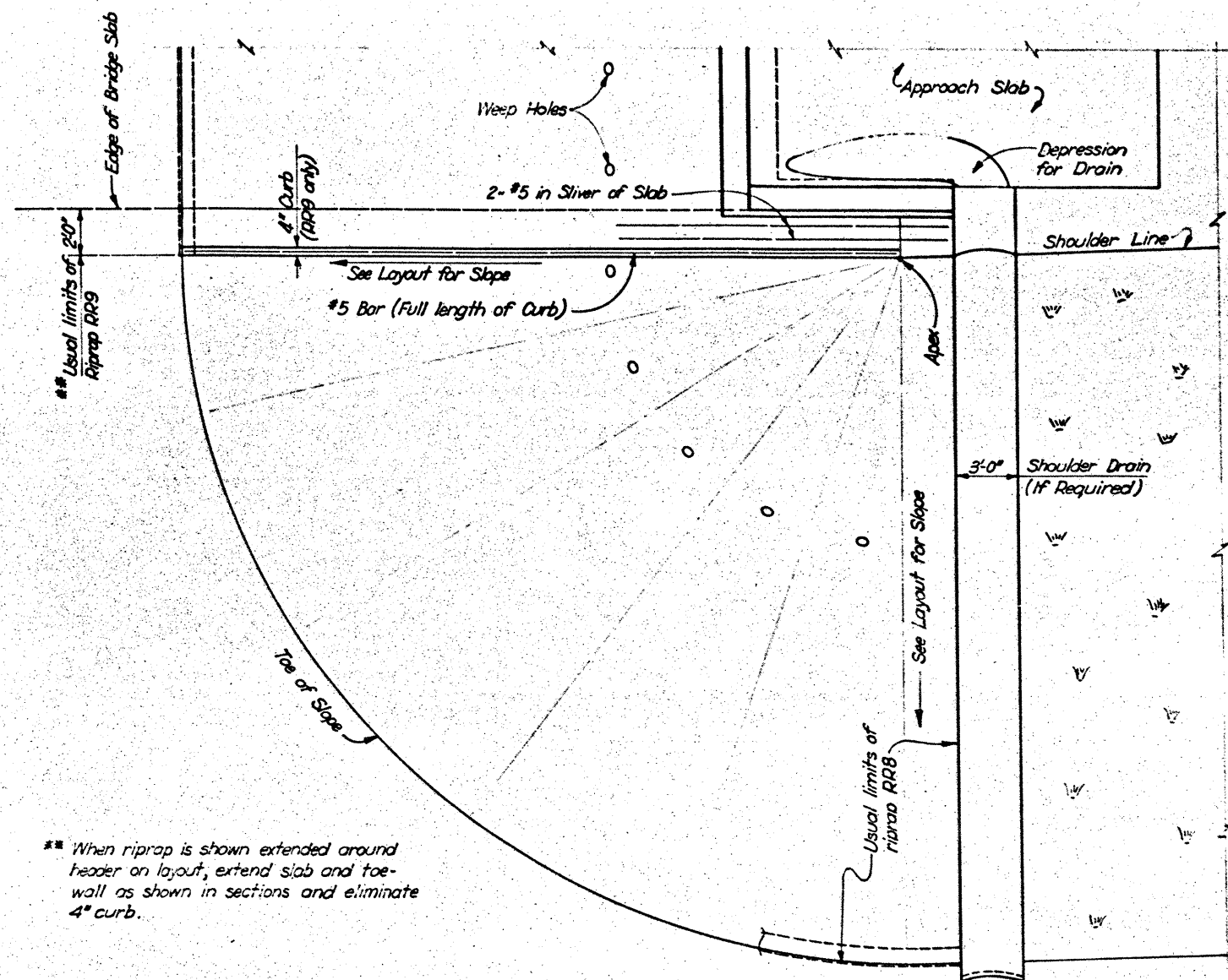


GENERAL NOTE:
Typical installation plan may vary as shown on the plans or as directed by the Engineer. Location of gates to be shown on plans.

TEXAS HIGHWAY DEPARTMENT
CHAIN LINK BARRIER FENCE
4' AND 6' FEET HIGH

CLF-69

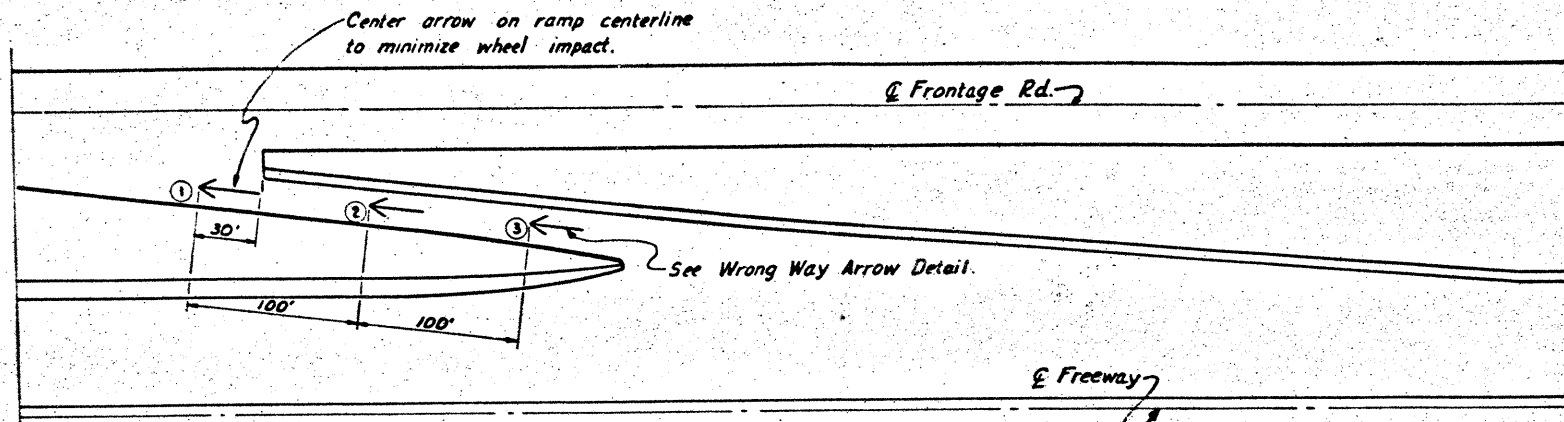
DATE	SHEET NO.	DATE	STATE	FEDERAL PROJECT NO.	SHEET NO.
12-1-69	1	12-1-69	TEXAS	120-56(1)4574054003	33
12-1-69	2	12-1-69	TEXAS	120-56(1)4574054003	34
12-1-69	3	12-1-69	TEXAS	120-56(1)4574054003	35
12-1-69	4	12-1-69	TEXAS	120-56(1)4574054003	36
12-1-69	5	12-1-69	TEXAS	120-56(1)4574054003	37
12-1-69	6	12-1-69	TEXAS	120-56(1)4574054003	38
12-1-69	7	12-1-69	TEXAS	120-56(1)4574054003	39
12-1-69	8	12-1-69	TEXAS	120-56(1)4574054003	40
12-1-69	9	12-1-69	TEXAS	120-56(1)4574054003	41
12-1-69	10	12-1-69	TEXAS	120-56(1)4574054003	42



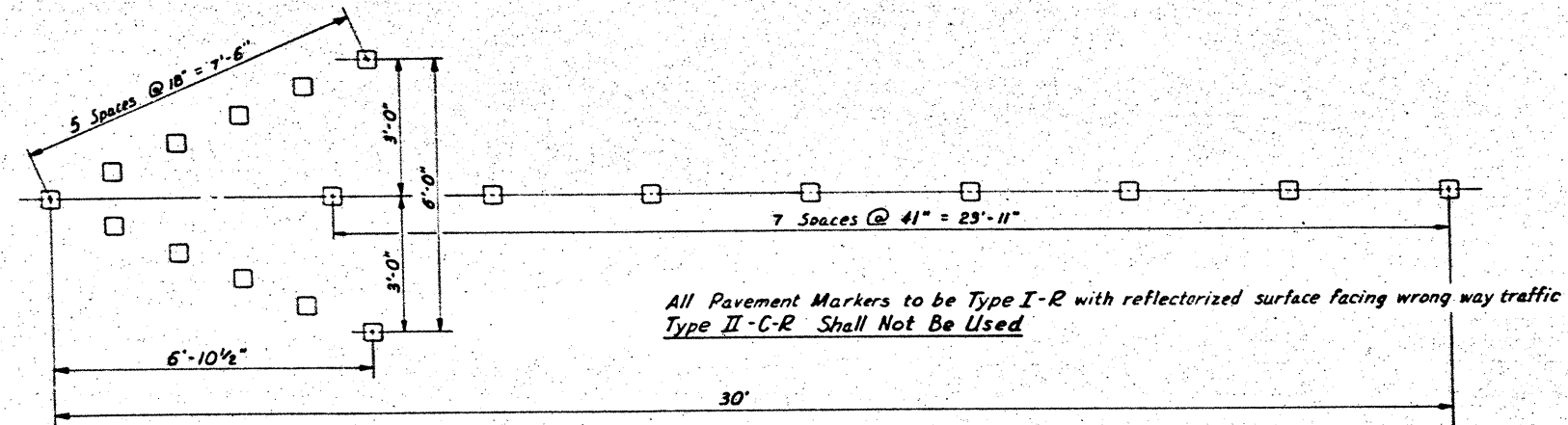
GENERAL NOTES :
Concrete shall be Class B unless otherwise noted on the layout.
See Specifications for reinforcement.
Construction Joints shall be as shown or as directed by the Engineer.
RR8 to be used on stream crossings.
RR9 to be used on other header banks.

TEXAS HIGHWAY DEPARTMENT BRIDGE DIVISION				333	
CONCRETE RIPRAP FOR EMBANKMENT SLOPES UNDER BRIDGE ENDS					
RR8 & RR9					
ORIGINAL DRAWING DATE: JUNE 70		STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
REVISIONS		18	I20-5(1) 457		333
DN:--TMD CR:--TMD DW:--RNS CR:--RLR		COUNTY		CONTROL SECTION	JOB
		DALLAS		2374 4	2 I. 20

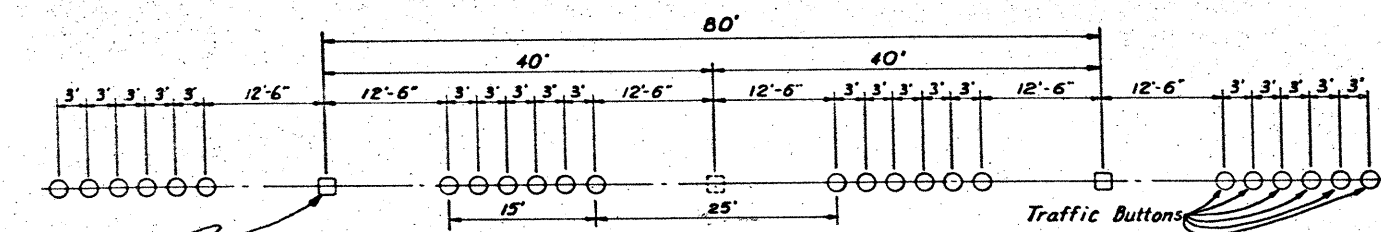
Reflectorized arrow(s) to be placed on all exit ramps within the limits of the project.
 Number of arrows to be placed on an exit ramp shall be varied to suit field conditions.
 Location of arrow ① shall be as shown. A second arrow shall be placed at location ②, and a third arrow at location ③ if the ramp is sufficiently long. No more than three arrows shall be placed on any one ramp.



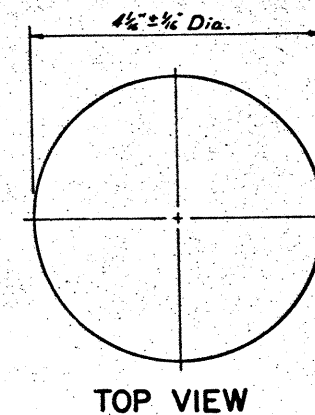
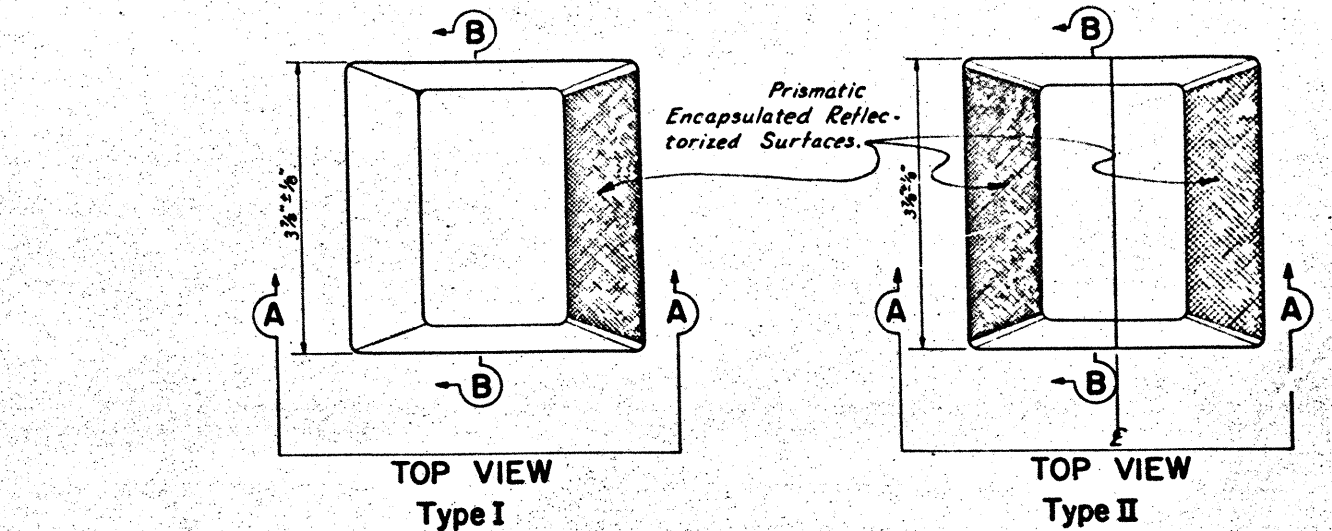
WRONG WAY ARROW PLACEMENT ON EXIT RAMP



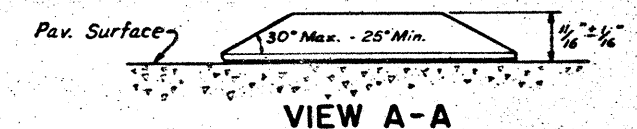
WRONG WAY ARROW DETAIL



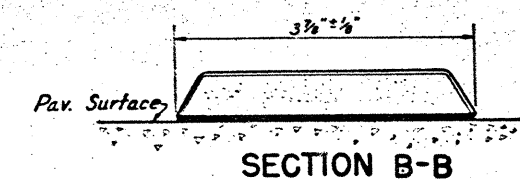
TRAFFIC BUTTON AND PAVEMENT MARKER LANE LINE DETAIL



TOP VIEW



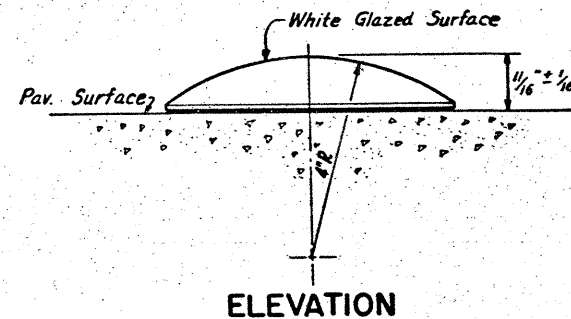
VIEW A-A



SECTION B-B

Minimum area of markers shall be not less than 12.5 square inches.

Marker shown is for illustrative purposes only and is not intended to specify any particular product.

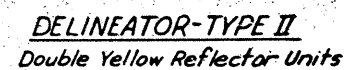
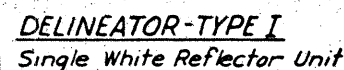


ELEVATION

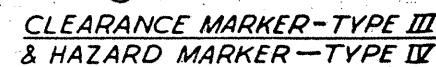
TRAFFIC BUTTONS

PAVEMENT MARKERS (REFLECTORIZED) Types I & II

TEXAS HIGHWAY DEPARTMENT					
TRAFFIC BUTTONS (NON - REFLECTORIZED) & PAVEMENT MARKERS (REFLECTORIZED)					
FOR LANE LINES AND WRONG WAY ARROWS					
INTERSTATE AND OTHER CONTROLLED ACCESS HIGHWAYS					
TB & PM-66					
ORIGINAL DRAWING DATE	7-26-66	STATE DISTRICT	18	FEDERAL AID PROJECT	334
REVISIONS		COUNTY	Dallas	SECTION	4
CR. 1		JOB		DATE	1/1/70
CR. 2					
CR. 3					



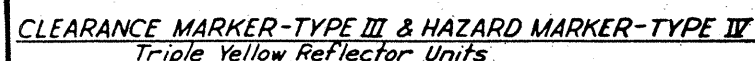
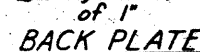
MILEPOST numerals shall be G" Series D white reflective with Interstate Green reflective background, made with green transparent ink on a white flat surface reflective sheeting, using the reverse screen process. Milepost marker blanks shall be $\frac{3}{8}$ " Type A, High Density plywood.



Triple Yellow Reflector Units

ACRYLIC PLASTIC REFLECTOR UNIT MARKERS

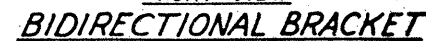
(Independently Housed)



Multiple Mirror Reflectors (MMRs)

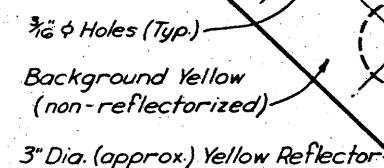
ENCAPSULATED REFLECTIVE SHEETING MARKERS

(Illustrative only - see specifications for limitations)



FOR DELINEATORS - TYPES I & II ONLY

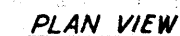
(Obtainable from the Texas Highway Department)



Dimensions shown are minimum
except for the hole sizes and
the size of the reflectors.

NOTE: With Center Mount Reflector Units, the "Type V" Hazard Marker blank shall be 0.125" thick sheet aluminum conforming with A.S.T.M. Specification B209 alloy 6061-T6, or 12 gauge sheet steel conforming with A.S.T.M. Specification A-415.

GENERAL NOTES: See sheet 1 of 2.



BREAK AWAY CHANNEL POST

(Where specified on plans)

Sheet 2 of 2

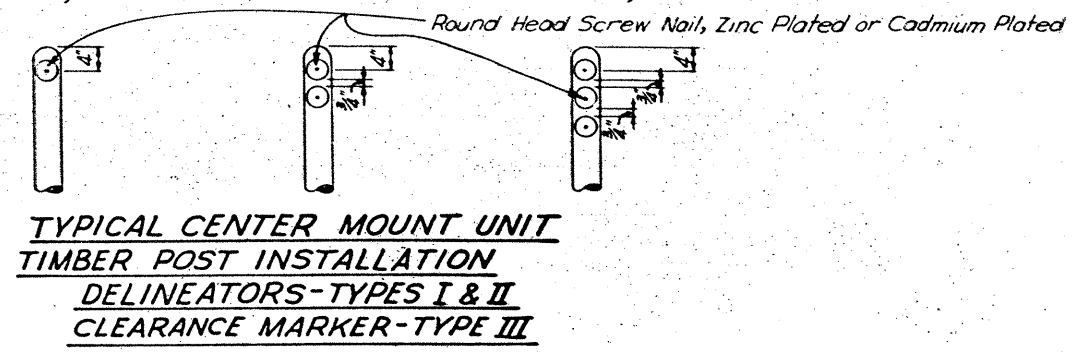
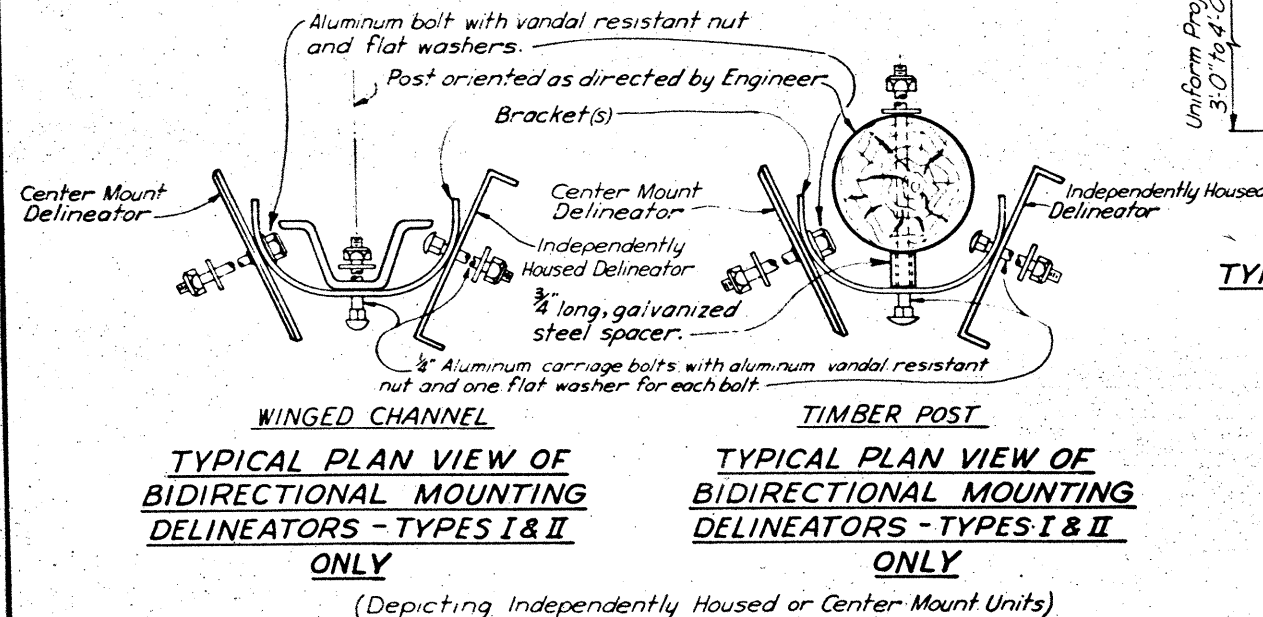
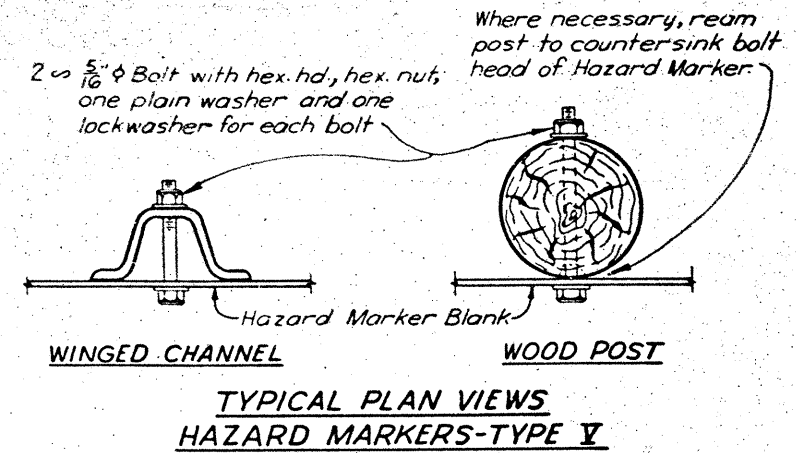
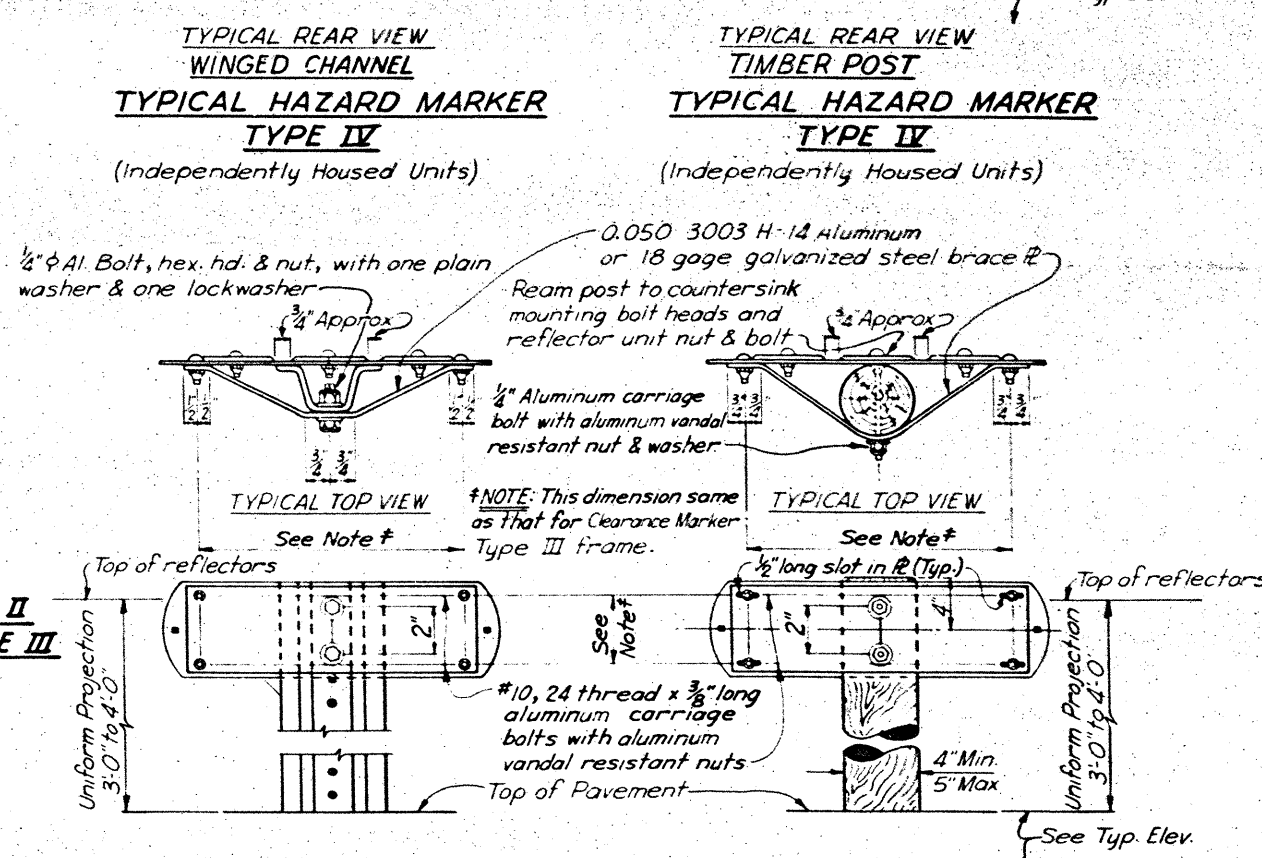
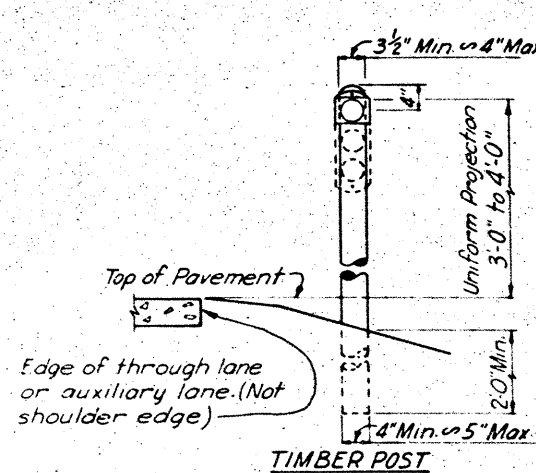
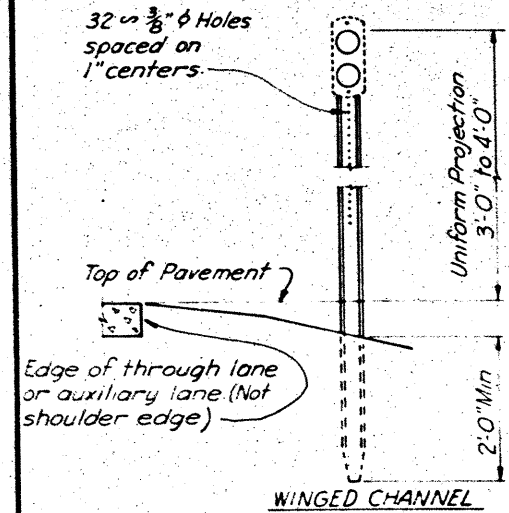
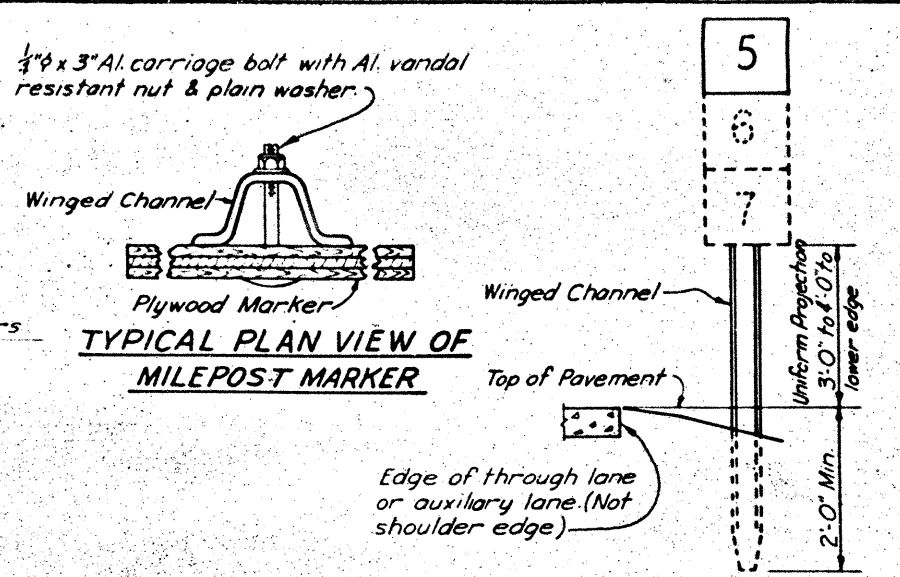
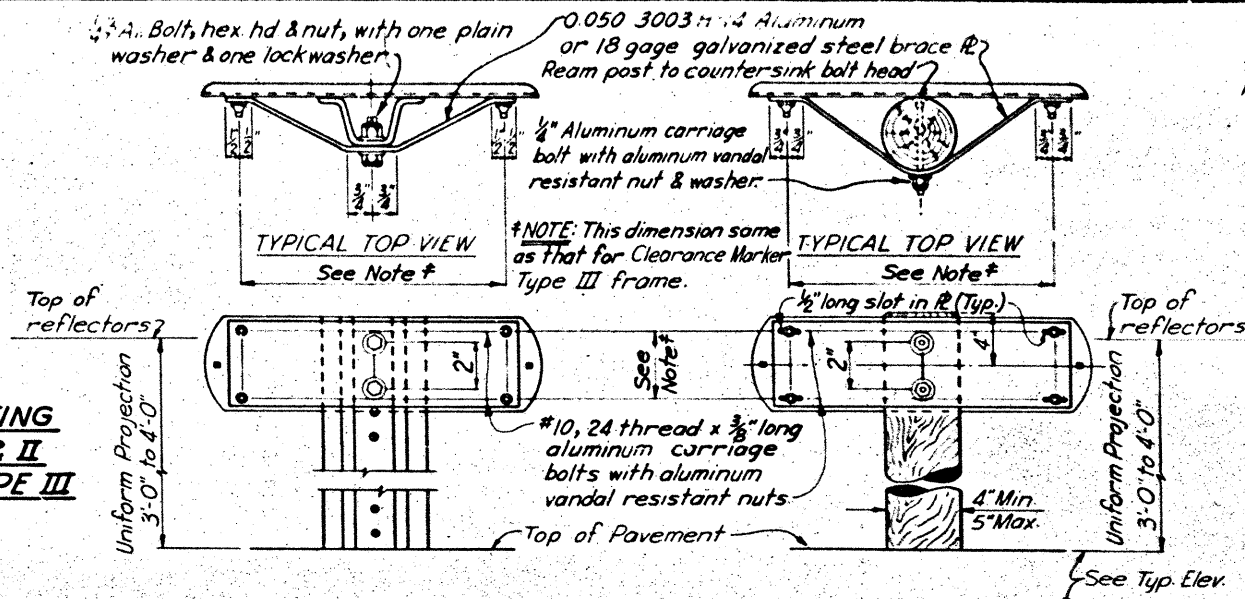
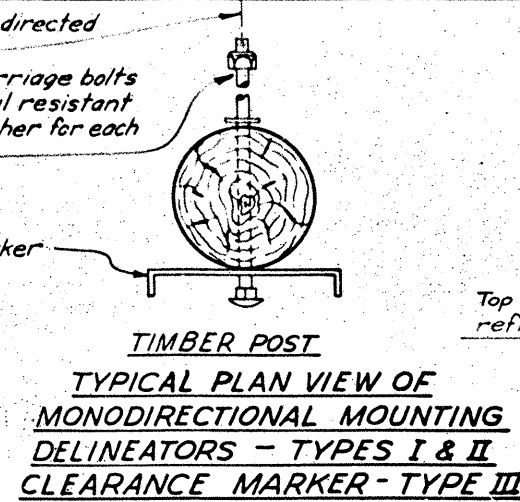
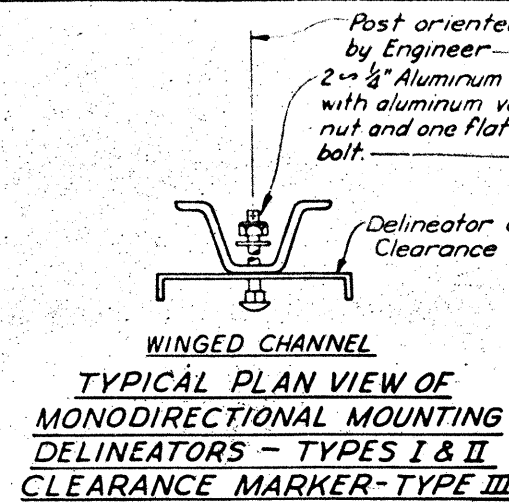
TEXAS HIGHWAY DEPARTMENT

STANDARD ROADSIDE SIGN MOUNTING DETAILS FOR 335

DELINEATORS, CLEARANCE MARKERS,
HAZARD MARKERS, & MILEPOST MARKERS

SMD-6A

ORIGINAL DRAWING DATE <i>Jan, 1967</i>		STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	DWST
DW - <i>CH</i>	REVISIONS	<i>1B</i>	<i>6</i>	<i>120-5(6)145734US932</i>	<i>33</i>
CR -		COUNTY		CONTROL	SECTION
DW - <i>JK</i>		<i>Dallas</i>		<i>3324</i>	<i>4 2</i>
CR -				<i>361 783 83 2</i>	<i>114</i>



GENERAL NOTES:

LOCATION of Delineators, Types I & II, and Milepost Markers: Facing on-coming traffic, two feet from edge of shoulder or two feet from face of unmountable curb or in line with guard fence where guard fence is used.

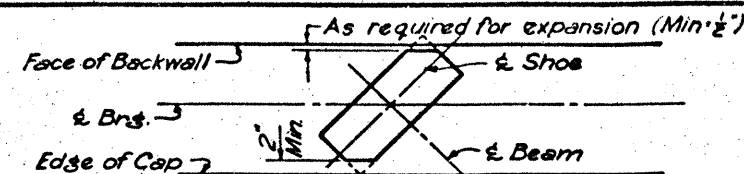
LOCATION of Clearance Markers, Type III, and Hazard Markers, Types IV and V, to be at points designated on plan sheets.

HARDWARE shall be galvanized steel, stainless steel or aluminum; except as noted.

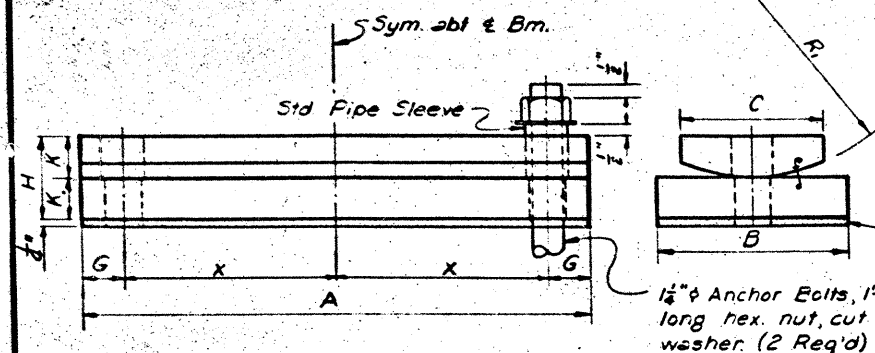
POSTS for supporting reflector units shall be in accordance with the applicable specification items for delineator posts.

Sheet 1 of 2

TEXAS HIGHWAY DEPARTMENT									
STANDARD ROADSIDE SIGN MOUNTING DETAILS 336									
FOR DELINEATORS, CLEARANCE MARKERS, HAZARD MARKERS, & MILEPOST MARKERS SMD-6A									
ORIGINAL DRAWING DATE	Jan, 1967	STATE	FEDERAL AID PROJECT	SHEET					
CD	CH	18	6	120-5(41)4573/1592(28)336	REVISIONS				
CD	J.R.	2374	4	2	TH 26	COUNTY			
CD						Dallas			
						261 283 1932 1/A			



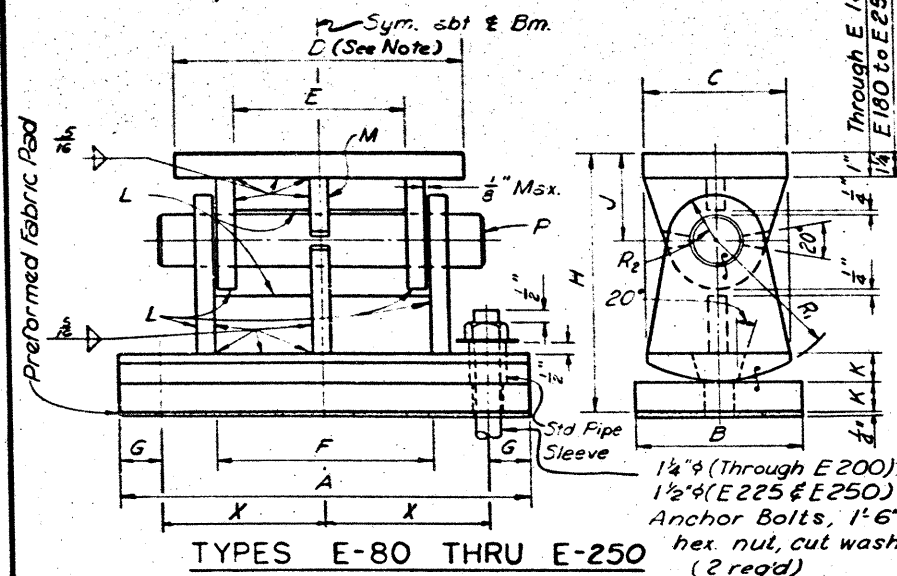
DETAIL OF SHOE @ SKEWED ABUTMENTS
(Cut corners of shoe as required)



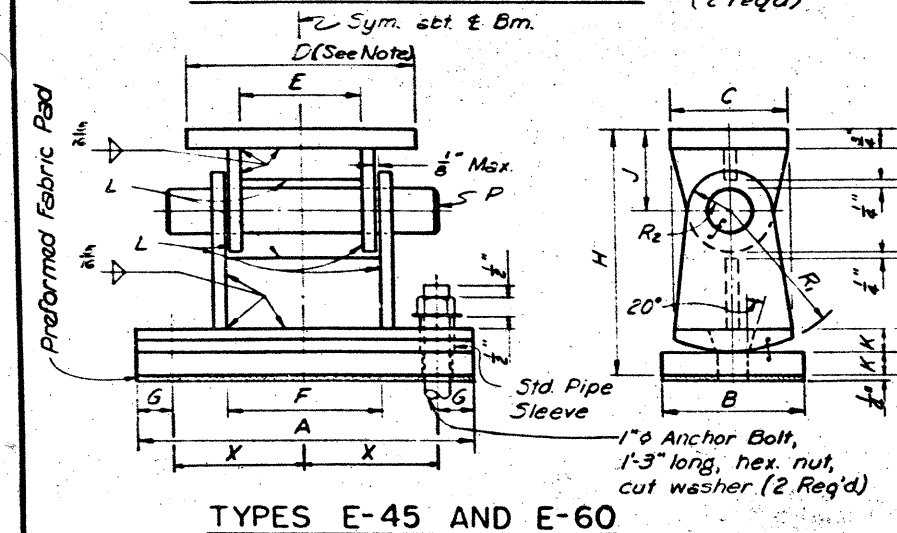
** Note: This type of shoe shall not be used unless specifically called for on bridge layout or span details.

TYPES F-45A THRU F-160A

Note: D value = Beam flange (or cover plate) width plus 1" (± 1/2"). Min. D = E + 3 1/2"



TYPES E-80 THRU E-250



TYPES E-45 AND E-60

Preformed Fabric Pad

Preformed Fabric Pad

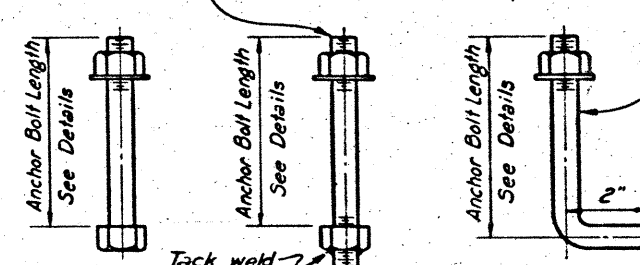
Preformed Fabric Pad

Preformed Fabric Pad

Shoe	Wt. (#)	A	B	C	X	Y	E	F	G	H	J	K	L	M	R ₁	R ₂	P	Anchor Bolt Projection
E-45	86	1'-2"	6"	5"	5 1/2"	5"	5"	6 1/2"	1 1/2"	10 1/2"	3 1/2"	1"	1 1/2" R	-	6"	1 1/2"	2 1/2" x 10 1/2" Pin, 3/8" Cotter	4 1/2"
E-60	111	1'-3"	6"	5"	6"	5"	4 1/2"	6 1/2"	1 1/2"	11"	3 1/2"	1"	1 1/2" R	-	6"	2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	4 1/2"
E-80	151	1'-5"	7"	6"	6 1/2"	5"	7 1/2"	9"	1 1/2"	11"	3 1/2"	1"	1 1/2" R	1" R	6"	2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	5"
E-100	161	1'-6"	7"	6"	7 1/2"	5"	7 1/2"	9 1/2"	1 1/2"	11 1/2"	4 1/2"	1"	1 1/2" R	1" R	6"	2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	5"
E-120	203	1'-9"	7"	6"	8 1/2"	5"	8 1/2"	10 1/2"	1 1/2"	12"	4 1/2"	1"	1 1/2" R	1" R	6"	2 1/2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	5 1/2"
E-140	261	1'-7"	9"	7"	7 1/2"	5"	7 1/2"	9 1/2"	1 1/2"	12 1/2"	4 1/2"	1"	1 1/2" R	1" R	8"	2 1/2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	6"
E-160	291	1'-9"	9"	7"	8 1/2"	5"	7 1/2"	9 1/2"	1 1/2"	12 1/2"	4 1/2"	1"	1 1/2" R	1" R	8"	2 1/2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	6"
E-180	340	1'-9"	9"	7"	8 1/2"	5"	7 1/2"	10"	2"	1'-4"	5"	2"	1 1/2" R	1 1/2" R	9"	2 1/2"	3" x 1'-3 1/2" Pin*	6 1/2"
E-200	390	1'-9"	10"	8"	8 1/2"	5"	7 1/2"	10"	2"	1'-5"	5"	2"	1 1/2" R	1 1/2" R	10"	2 1/2"	3" x 1'-3 1/2" Pin*	6 1/2"
E-225	490	1'-9"	11"	9"	9 1/2"	5"	8 1/2"	10"	2"	1'-6"	5"	2 1/2"	1 1/2" R	1 1/2" R	11"	2 1/2"	3" x 1'-3 1/2" Pin*	7 1/2"
E-250	610	1'-10"	12"	10"	8 1/2"	5"	7 1/2"	10 1/2"	2 1/2"	1'-8"	5 1/2"	2 1/2"	1 1/2" R	1 1/2" R	12"	2 1/2"	3 1/2" x 1'-4 1/2" Pin*	7 1/2"
F-60	89	1'-0"	7"	5"	5"	2"	4 1/2"	6 1/2"	-	11"	3 1/2"	1 1/2"	1 1/2" R	-	-	2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	3"
F-80	121	1'-0"	7"	6"	2 1/2"	1 1/2"	7 1/2"	9"	3 1/2"	11"	3 1/2"	1 1/2"	1 1/2" R	1" R	-	2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	3"
F-100	136	1'-1"	8"	6"	2 1/2"	2 1/2"	7 1/2"	9 1/2"	3 1/2"	11 1/2"	4 1/2"	1 1/2"	1 1/2" R	1" R	-	2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	3"
F-120	163	1'-4"	8"	6"	3"	2 1/2"	8 1/2"	10 1/2"	5"	1'-0"	4 1/2"	1 1/2"	1 1/2" R	1" R	-	2 1/2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	3 1/2"
F-140	212	1'-4"	9"	7"	2 1/2"	2 1/2"	7 1/2"	9 1/2"	5 1/2"	1'-2"	4 1/2"	1 1/2"	1 1/2" R	1" R	-	2 1/2"	2 1/2" x 11 1/2" Pin, 3/8" Cotter	3 1/2"
F-160	242	1'-4"	10"	7"	2 1/2"	3 1/2"	7 1/2"	9 1/2"	5 1/2"	1'-2"	4 1/2"	1 1/2"	1 1/2" R	1" R	-	2 1/2"	3" x 1'-2 1/2" Pin*	3 1/2"
F-180	310	1'-5"	11"	7"	2 1/2"	3 1/2"	7 1/2"	9 1/2"	5 1/2"	1'-4"	5"	2"	1 1/2" R	1 1/2" R	-	2 1/2"	3" x 1'-3 1/2" Pin*	3 1/2"
F-200	350	1'-5"	12"	8"	2 1/2"	4 1/2"	7 1/2"	9 1/2"	5 1/2"	1'-5"	5"	2"	1 1/2" R	1 1/2" R	-	2 1/2"	3" x 1'-3 1/2" Pin*	3 1/2"
F-225	450	1'-6"	13"	9"	2 1/2"	4 1/2"	6 1/2"	10"	6 1/2"	1'-6"	5"	2 1/2"	1 1/2" R	1 1/2" R	-	2 1/2"	3" x 1'-3 1/2" Pin*	4"
F-250	540	1'-8"	13"	10"	4 1/2"	4 1/2"	7 1/2"	11"	5 1/2"	1'-8"	5 1/2"	2 1/2"	1 1/2" R	1 1/2" R	-	2 1/2"	3 1/2" x 1'-4 1/2" Pin*	4 1/2"
F-60A	66	1'-5"	5"	4"	7"	-	-	-	1 1/2"	2 1/2"	-	-	-	-	6"	-	-	-
F-80A	83	1'-7"	6"	5"	7 1/2"	-	-	-	1 1/2"	2 1/2"	-	-	-	-	6"	-	-	-
F-100A	102	1'-8"	6"	5"	8 1/2"	-	-	-	1 1/2"	3"	-	-	-	-	6"	-	-	-
F-120A	106	1'-9"	6"	5"	8 1/2"	-	-	-	1 1/2"	3"	-	-	-	-	6"	-	-	-
F-140A	132	1'-9"	7"	6"	8 1/2"	-	-	-	1 1/2"	3 1/2"	-	-	-	-	8"	-	-	-
F-160A	152	1'-9"	8"	6"	8 1/2"	-	-	-	1 1/2"	3 1/2"	-	-	-	-	8"	-	-	-
F-45A	53	1'-4"	5"	4"	6 1/2"	-	-	-	1 1/2"	2"	-	-	-	-	6"	-	-	-
F-45	70	9"	7"	5"	-	2"	5"	6 1/2"	-	10 1/2"	3 1/2"	1"	5/8" R	-	-	1 1/2"	2 1/2" x 10 1/2" Pin, 3/8" Cotter	2 1/2"

* With recessed pin nuts.

Material: Smooth Steel A.S.T.M.-A36 or A.S.T.M.-A306 (Min. Gr. 65)



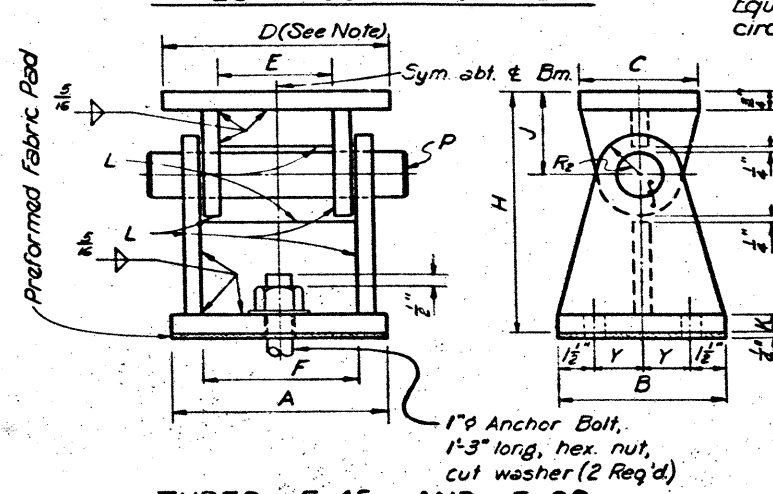
ALTERNATE ANCHOR BOLTS

Note: Each shoe shall be placed on a preformed fabric pad as specified in Item 441.33(2) except that the pad thickness shall be 1/4" (± 1/32")

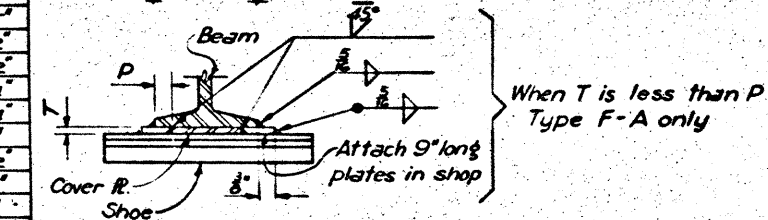
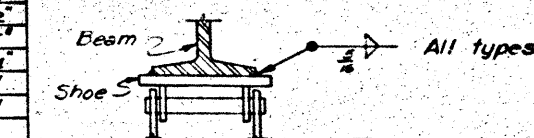
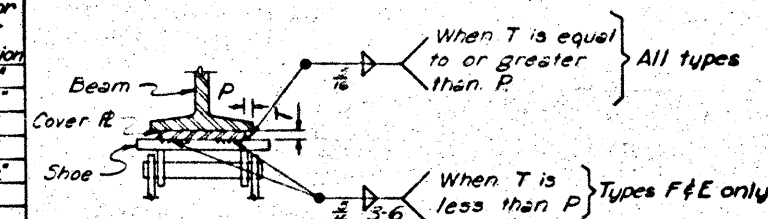
When the masonry is placed below grade, the bearing seat area shall be raised to grade on a bed of Portland cement mortar as specified in Item 441.33(6). No direct payment will be made for preformed fabric pads, they will be considered subsidiary to the Item Structural Steel (Shoe & Armor Jt). Preformed fabric pads shall consist of 8 ounce duck and high quality natural rubber in 16 (± 2) plies.

Equal tangents to circle of R₂
OPTIONAL METHOD OF FABRICATION

TYPES F-80 THRU F-250



TYPES F-45 AND F-60



CONNECTIONS TO BEAMS

GENERAL NOTES:

Material for shoes shall conform to Specification "Metal for Structures" except:

Cast ductile iron will not be permitted for top bolsters of shoes. Top bolsters shall be structural steel or cast steel. If cast ductile iron is used for portions of shoes other than top bolsters, then shop welding will not be permitted.

Surface finishes shall conform to A.S.A. Standard Finishes as follows:

Pins and Pin Holes #125
Rockers #250

Holes in base plates shall be 1/8" larger than the anchor bolt size.

Bottoms of holes in rocker plates shall be 1/2" larger than the anchor bolt size.

The nominal diameter of the standard pipe sleeves for expansion shoes shall be the same as the anchor bolt size.

Anchor bolt nuts shall be tightened and threads burred.

Titles under shoe details indicate type of shoe and design capacity, i.e.:

F-45 - Fixed shoe with a capacity of 45 kips
F-45A - Fixed shoe, alternate, with a capacity of 45 kips.
E-45 - Expansion shoe with a capacity of 45 kips.

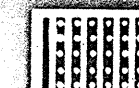
Payment for shoes will be made on the basis of the weights shown in the table regardless of the actual weights. Anchor bolts are included in weights shown. Weld metal is not included.

TEXAS HIGHWAY DEPARTMENT

STANDARD SHOES

I-SS

DR.	DRAWING	DATE	FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET
DR. ERF	ORIGINAL	May-1965	8	TEXAS	120-5(4)451	344
DR. RLR	Rev. 12-66					
DR. RLR	Rev. 3-69					
DR. RLR	Rev. 5-70					

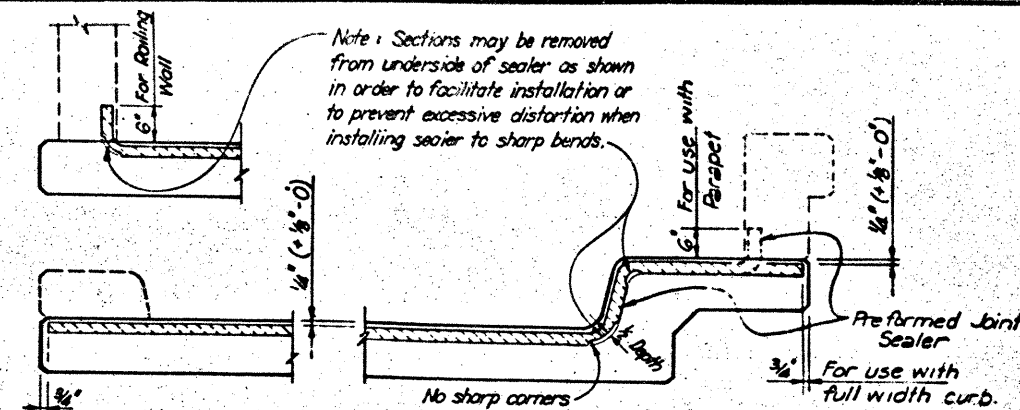


PREFORMED JOINT SEALER

The Joint Sealer shall be a vulcanized elastomeric compound using polymerized chloroprene as its basic component. The sealer shall be in extruded strip form with smooth surfaces, shall be in straight lengths and shall meet the cross sectional dimensions and tolerances specified. The lengths furnished shall be such as to provide continuous placement with no joints. The Joint Sealer shall be installed with an appropriate tool which will compress the sealer and place it in the joint at the proper depth and shape. One extruded strip of each size required shall be furnished with a minimum of three feet of excess length. These extra lengths shall be removed at the job site and submitted to the Texas Highway Department Laboratory for such further testing as may be required. The manufacturer shall furnish certified tests as to compliance with the tests described below.

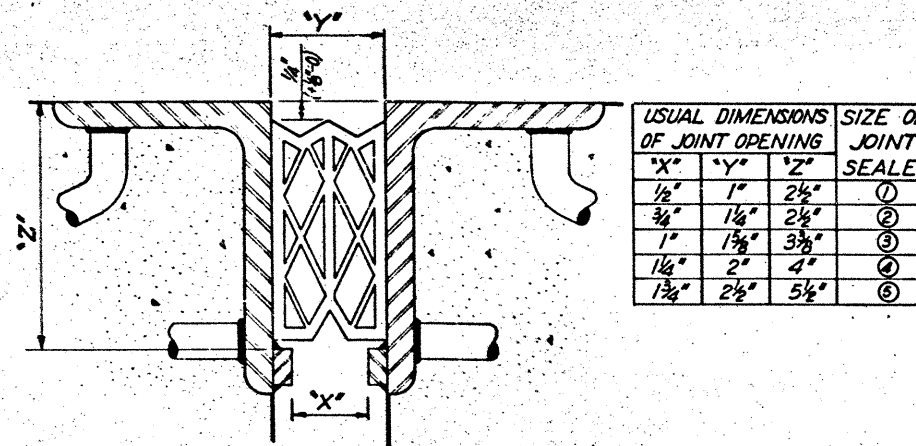
Property	ASTM Procedure	Physical Requirements
Tensile Strength, psi, min.	D-412-51T	2000
Elongation at Break, %, min.	D-412-51T	250
Hardness, Type A Durometer	D-676-59T	525 ± 7.5
* Permanent Set, % Max.	D-412-51T (partial)	10% Max
Oil Swell, ASTM Oil No. 3, 70 Hrs./212°F.	D-471	
Volume Change, Max. %		80
Ozone Resistance, 20% Stan. 300 pphm in air, 70 Hrs./100°F. (Wipe with solvent to remove surface contamination)	D-1149	No Cracks

* Specimen extended 50%, held extended for 22 Hrs./158°F., load released and specimen allowed to recover @ room temperature for 30 Min. after which set reading is made.



SECTION THRU. SLAB

Showing typical installation at expansion and construction joints in slab.



SECTION THRU. ARMOR JT. (SHOWING SEALER INSTALLED)

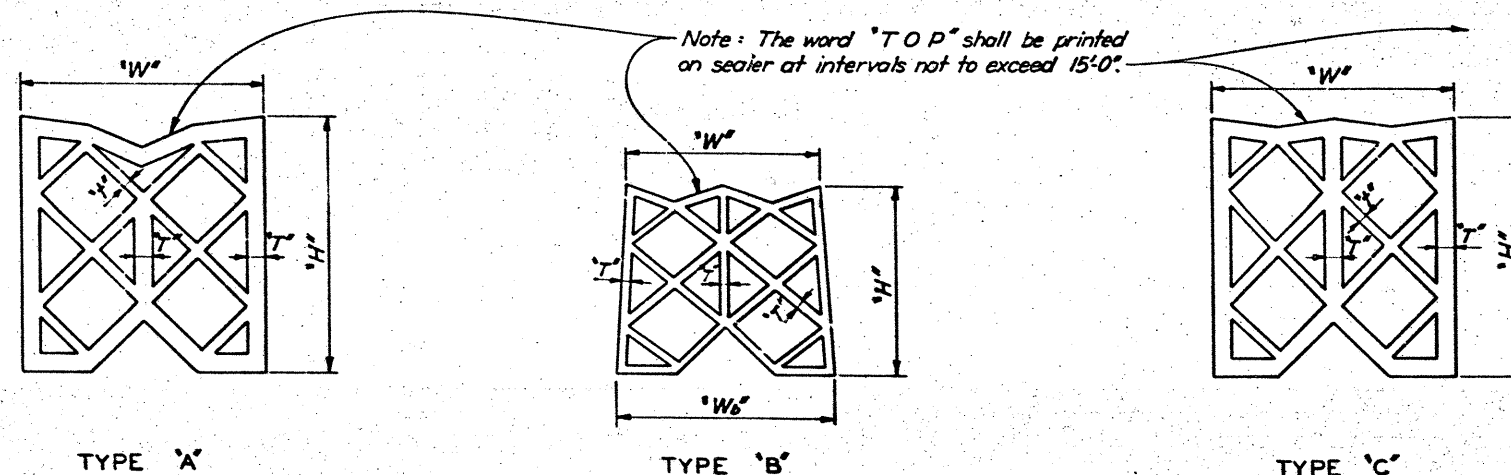
Note: Lubricant-Adhesive shall be utilized in the installation of the extrusion and shall be applied in accordance with manufacturer's recommendations. Stretching of extrusion while installing in the joint will not be permitted. The lubricant-adhesive shall be a one component compound containing only polychloroprene and soluble phenolic resins blended together with anti-oxidants and acid acceptors in an aromatic hydrocarbon solvent mixture and shall have the following physical properties:
Avg. net wt. per Gal. - 7.84 Lb. ± 5% Solids content - 24-26% by Wt.
Brookfield Viscosity at 77°F, #2 Spindle @ 10 RPM - 7000-7500 cps.
The adhesive shall remain fluid from 5°F to 120°F
Film strength (ASTM D-412) - 2300 Min. tensile strength - 750% Min. elongation at break.

The Manufacturer shall furnish certification as to the compliance with these physical requirements.

Preformed Joint Sealer to be installed in Armor Joints when thus indicated on bridge layout: "Armor Joint (PJS)" or as otherwise shown on plans.

The Contractor has the option of using any of the joint sealer types of the proper size shown hereon.

Cost of furnishing and installing Preformed Joint Sealer shall be included in the unit price bid for the items of construction in which this material is used.



TYPE 'A'

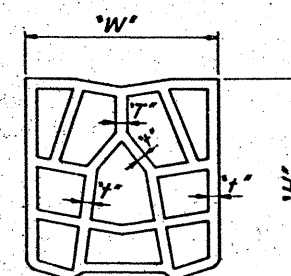
TYPE 'B'

TYPE 'C'

TYPE 'D'

JOINT SEALER DIMENSIONS & TOLERANCES

SIZE OF JT. SEALER	TYPE	"W"	"H"	"T"	"t"	TYPE	"W"	"W ₆ "	"H"	"T"	"t"	TYPE	"W"	"W ₆ "	"H"	"T"	"t"
①	'A'	1 1/8 ± 3/64	2 ± 1/8	1/8 ± 1/32	3/32 ± 1/64	'B'	1 1/8 ± 3/64	1 1/8 ± 3/64	1 1/8 ± 3/64	1/8 ± 1/32	-						
②	'A'	2 ± 3/64	2 1/2 ± 1/8	1/8 ± 1/32	3/32 ± 1/64	'B'	2 ± 3/64	2 1/2 ± 3/64	2 ± 1/8	1/8 ± 1/32	-						
③	'A'	2 1/2 ± 1/8	2 3/4 ± 1/8	3/16 ± 1/64	3/32 ± 1/64	'C'	2 1/2 ± 3/64	-	2 3/4 ± 3/64	3/16 ± 1/32	1/8 ± 1/32						
④	'A'	3 ± 1/8	3 1/2 ± 1/8	3/16 ± 1/64	1/8 ± 1/64	'D'	3 ± 1/8	-	3 ± 1/8	3/16 ± 1/32	1/8 ± 1/32	E	3 1/2 ± 1/8	-	4 ± 3/64	1/4 ± 1/32	7/32 ± 1/64
⑤	'A'	4 ± 1/8	4 1/2 ± 1/8	1/4 ± 1/64	3/16 ± 1/64							E	4 ± 1/8	-	4 1/2 ± 3/64	1/4 ± 1/32	7/32 ± 1/64



TYPE 'E'


TEXAS HIGHWAY DEPARTMENT BRIDGE DIVISION				345	
PREFORMED JOINT SEALER					
PJS					
ORIGINAL DRAWING DATE: JUNE 70	STATE: TEXAS	FEDERAL: 18	FEDERAL AID PROJECT: I 20-5(6)457	SHEET: 345	
DESIGNER: RNS	COUNTY: DALLAS	SECTION: 2374	JOB: 4	SHEET: 2	
DATE: 10/20/70					

BEAM SCHEDULE														
ERECTED SHEET	SPAN	TYPE	AK NO	NO	LENGTH	STRAIGHT	DRAPED	RELEASE	CONCRETE	WEIGHT	DETAILS	NEW	BATTER	REMARKS
				REQD	PAY	CAST			TYPE	TOUS/INT	ON SHT NO	F	E	
CAMP WISDOM ROAD OVERPASS SOUTHBOUND BRIDGE														
E1	A	B4	54-64-100	1	63.667	10-1/2"	6-1/2"	4000	5000	1636	F1	37'00"	NONE	NONE
			54-64-101	1							F2	37'00"		
			54-64-102	3							F1	NONE		
			54-64-103	1							F1			
	B	IV	54-119-100	1	118.667	36-1/2"	15-1/2"	4500	6500	4859	F3	NONE		
			54-119-101	1							F4	37'00"		
			54-119-102	3							F3	NONE		
			54-119-103	1							F5	37'00"		
	C	IV	54-119-104	1							F5	NONE		
		B4	54-64-100	1	63.667	10-1/2"	6-1/2"	4000	5000	1636	F1	37'00"		
			54-64-101	1							F2	37'00"		
			54-64-102	3							F1	NONE		
			54-64-103	1							F1			
CAMP WISDOM ROAD OVERPASS NORTHBOUND BRIDGE														
E1	A	B4	54-64-100	1	63.667	10-1/2"	6-1/2"	4000	5000	1636	F1	37'00"	NONE	NONE
			54-64-101	1							F2	37'00"		
			54-64-102	3							F1	NONE		
			54-64-103	1							F1			
	B	IV	54-119-100	1	118.667	36-1/2"	15-1/2"	4500	6500	4859	F3	NONE		
			54-119-101	1							F4	37'00"		
			54-119-102	3							F5	NONE		
			54-119-103	1							F5	37'00"		
	C	IV	54-119-104	1							F5	NONE		
		B4	54-64-100	1	63.667	10-1/2"	6-1/2"	4000	5000	1636	F1	37'00"		
			54-64-101	1							F2	37'00"		
			54-64-102	3							F1	NONE		
			54-64-103	1							F1			
HAMPTON ROAD OVERPASS WESTBOUND BRIDGE														
E2	A	B4	54-48-200	1	47.833	10-1/2"	NONE	4000	5000	1239	F6	11'05"	NONE	NONE
			54-48-201	6							F6			
			54-48-202	1							F7	11'05"		
			54-48-203	1							F6	NONE		
	B	B4	54-97-200	1	96.667	18-1/2"	12-1/2"	3500	6000	484	F8	NONE		
			54-97-201	3							F8			
			54-97-202	1							F9	11'05"		
			54-97-203	1							F10	11'05"	NONE	
	C		54-97-204	1							F8	NONE		
			54-48-200	1	47.833	10-1/2"	NONE	4000	5000	1239	F6	11'05"		
			54-48-201	6							F6			
			54-48-202	1							F7	11'05"		
			54-48-203	1							F6	NONE		
HAMPTON ROAD OVERPASS EASTBOUND BRIDGE														
E2	A	B4	54-48-204	1	48.167	10-1/2"	NONE	4000	5000	1239	F11	12'42"	NONE	NONE
			54-48-205	6							F11			
			54-48-206	1							F12	12'42"		
			54-48-207	1							F11	NONE		
	B	B4	54-97-205	1	97.833	18-1/2"	12-1/2"	5300	6000	2501	F13	NONE		
			54-97-206	3							F13			
			54-97-207	1							F14	12'42"		
			54-97-208	1							F15	12'15"	NONE	
	C		54-97-209	1							F13	NONE		
			54-48-208	1	48.167	10-1/2"	NONE	4000	5000	1239	F16	12'15"		
			54-48-209	6							F16			
			54-48-210	1							F17	12'15"		
			54-48-211	1							F16	NONE		
DUNCANVILLE-WHEATLAND ROAD OR EASTBOUND BRIDGE														
E3	A	B4	54-102-300	1	101.667	18-1/2"	16-1/2"	6160	6600	2613	F18	52'56"	NONE	NONE
			54-102-301	10							F18			
			54-102-302	1							F18			
			54-102-303	1	103.667						F19	NONE		
	B		54-102-304	10							F19			
			54-102-305	1							F19			
			54-102-306	1							F19			
			54-102-307	1							F19			
	C		54-102-308	1							F19			
			54-102-309	10							F20	62'36"		
			54-102-310	1							F20			
			54-102-311	10							F20			
	D		54-102-312	1	101.667						F20			
			54-102-313	10							F20			
			54-102-314	1							F20			
			54-102-315	1							F20			

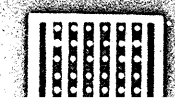
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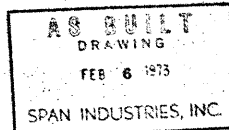
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO --- I-20-5(61)457
COUNTY --- DALLAS
HIGHWAY --- I.H.20

		SPAN INCORPORATED 1400 W. 14TH STREET DALLAS, TEXAS 75203		BEAM SCHEDULE	
Title BEAM INDEX SCHEDULE					
Customer BAILEY BRIDGE CO.					
Architect NONE					
Engineer TEXAS HIGHWAY DEPARTMENT					
Scale NONE					
Drawn By JY (3-30-71)				Date 7/1/71	
Checked By				Sheet No.	
Order No. 1008				I	

REVISIONS: 3/10/71 (CORRECTED PER TID)



BEAM SCHEDULE																				
ERECTION SHEET	SPAN		TYPE	MK NO'S	NO.	LENGTHS		STRAIGHT		CONCRETE STRENGTH		WEIGHT TONS/UNIT	DETAILS		SKEW		BATTER		REMARKS	
						REQ'D	PAY	CAST	STRAIGHT	DRAPED	RELEASE		28 DAYS	ON SHT NO.	F	E	F	E		
DUNCANVILLE WHEATLAND ROAD OR EASTBOUND BRIDGE																				
E3	A		54	54-102-300	1	101.667'			15-1/2'	16-1/4'	6000	6600	26.13	F18	67°35'	NONE	NONE	NONE		
				54-102-301	10									F18						
				54-102-302	1									F18						
				54-103-300	1	103.167'							26.91	F19	NONE					
	B			54-103-301	10									F19						
				54-103-302	1									F19						
E4	C			54-103-300	1									F19						
				54-103-301	10									F19						
				54-103-302	1									F19						
				54-102-300	1	101.667'							26.13	F18	67°35'					
	D			54-102-301	10									F18						
				54-102-302	1									F18						
OLD HICKORY TRAIL ROAD UNDERPASS																				
E5	A		54	54-60-400	1	60.214'	60'-5"	10-1/2'	6-1/2'		4000	5000	19.50	F21	27°44'	NONE	2 3/4"	NONE		
				54-60-401	5									F21						
				54-60-402	1									F21						
				54-103-400	1	103.195'	103'-5 1/2"	13-1/2'	13-1/2'		6300	7600	26.92	F22	NONE		NONE	NONE		
	B			54-103-401	8									F22						
				54-103-402	1									F22						
				54-103-403	1	103.168'	103'-5 1/2"						26.91	F23				NONE		
				54-103-404	8									F23						
	C			54-103-405	1									F23						
				54-69-400	1	69.182'	69'-2 3/4"	14-1/2'	8-1/2'		4700	5700	17.75	F24	27°44'		3/4"	NONE		
				54-69-401	5									F24						
				54-69-402	1									F24						
WESTMORELAND ROAD UNDERPASS NORTHBOUND AND SOUTHBOUND BRIDGES																				
E6	A		54	54-63-500	12	62.682'	62'-5 3/8"	10-1/2'	6-1/2'		4000	5000	16.11	F25	NONE	NONE	1 3/4"	NONE		
	B			54-92-500	14	91.667'	91'-9 1/8"	13-1/2'	12-1/2'		5700	6300	23.56	F26			NONE	NONE		
	C			54-92-501	14	91.667'	91'-9 1/8"	13-1/2'	12-1/2'		5700	6300	23.56	F27			NONE	NONE		
	D			54-63-501	12	62.677'	62'-8 7/8"	10-1/2'	6-1/2'		4000	5000	16.11	F28			1 3/4"	NONE		
SOUTH POLK STREET UNDERPASS NORTHBOUND AND SOUTHBOUND BRIDGES																				
E7	A		54	54-48-600	2	48.193'	48'-2 3/8"	8-1/2'	6-1/2'		4000	5000	18.31	F29	11°05'	NONE	1 3/4"	NONE		
				54-48-601	3															
				54-48-602	2															
				54-97-600	2	97.208'	97'-3 7/8"	13-1/2'	12-1/2'		6200	6900	24.93	F30	NONE		NONE			
	B			54-97-601	10															
				54-97-602	2															
				54-97-603	2	97.198'	97'-3 3/4"							F31						
				54-97-604	10															
	C			54-97-605	2															
				54-73-600	2	73.132'	73'-2 7/8"	14-1/2'	8-1/2'		4600	5200	18.81	F32	11°05'		1 1/8"			
				54-73-601	3															
				54-73-602	2															



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REVISED 6-14-71 ADD WESTMORELAND & POLK ST.
REVISED 6-8-71 ADD OLD HICKORY
REVISED 5/13/71 CORRECTED PER TUD.

TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. --- I-20-B(61)457
COUNTY --- DALLAS
HIGHWAY --- I.H. 20



SPAN
INCORPORATED
P.O. BOX 20001
DALLAS, TEXAS 75220

BEAM
SCHEDULE

Title
BEAM INDEX SCHEDULE

Customer BAILEY BRIDGE CO.
Architect NONE
Engineer TEXAS HIGHWAY DEPARTMENT
Scale NONE
Drawn By JY. (3-20-71)
Checked By
Order No. 7103

Approved
Sheat No.

II

BEAM SCHEDULE																				
ERECTION SHEET	UNIT	SPAN	TYPE	NK NOS	NO REQ'D	LENGTHS		STRAND 270K		CONCRETE STRENGTHS		WEIGHT TONS/UNIT	DETAILS ON SHOT NO		SKEW		BATTER		REMARKS	
						DAY	CAST	STRAIGHT	DRAPE	RELEASE	28 DAYS		F	E	F	E				
CONNECTION E																				
E8	1	E1	C	C-64-100	1	63.538	63.1074'	18-1/2"	6-1/2"	4600	7000	16.46	F33	NONE	NONE	NONE	9/16"			
				C-63-100	1	63.099	63.178'					16.27	F33							
				C-62-100	1	62.354	62.478'					16.07	F33							
		E2		C-64-101	1	63.755	63.934'	16-1/2"		4100	6400	16.44	F34				NONE			
				C-63-101	1	63.016	63.078'					16.24	F34							
				C-62-101	1	62.271	62.378'					16.05	F34							
	2	E3		C-64-102	1	63.838	63.1074'	18-1/2"		4600	7000	16.46	F35							
				C-63-102	1	63.099	63.178'					16.27	F35							
				C-62-102	1	62.354	62.478'					16.07	F35							
		E4		C-70-100	1	69.859	69.1118'	22-1/2"	8-1/2"	5400	7600	17.80	F36							
				C-69-100	1	69.047	69.138'					17.59	F36							
				C-68-100	1	68.240	68.358'					17.39	F36							
	3	E5		C-70-101	1	69.776	69.1018'	22-1/2"	8-1/2"	5400	7600	17.80	F37							
				C-69-101	1	68.964	69.078'					17.59	F37							
				C-68-101	1	68.156	68.278'					17.39	F37							
			E6		C-70-100	1	69.859	69.1118'	22-1/2"	8-1/2"	5400	7600	17.80	F36						
					C-69-100	1	69.047	69.138'					17.59	F36						
					C-68-100	1	68.240	68.358'					17.39	F36						
		E11		C-56-100	1	55.838	55.1074'	14-1/2"	4-1/2"	4000	5700	14.40	F38							
				C-55-100	1	55.136	55.238'					14.23	F38							
				C-54-101	1	54.536	54.618'					14.06	F38							
			E12		C-56-101	1	55.771	55.978'	12-1/2"			5200	14.38	F39						
					C-55-102	1	55.120	55.178'					14.21	F39						
					C-54-100	1	54.469	54.618'					14.04	F39						
E13		C-76-100	1	75.849	75.1074'	24-1/2"	6-1/2"	5400	7900	19.55	45 OF 92						SEE NOTE SH-450F42			
		C-75-100	1	74.969	74.1118'					19.33	45 OF 92						" " "			
		C-74-100	1	74.085	73.1118'					19.10	45 OF 92						" " "			
	E14		C-56-101	1	55.771	55.978'	12-1/2"	4-1/2"	4000	5200	14.38	F39								
			C-55-102	1	55.120	55.178'					14.21	F39								
			C-54-100	1	54.469	54.618'					14.04	F39								
E15		C-56-102	1	55.854	55.1074'	14-1/2"			5700	14.40	F40					19/16"				
		C-55-103	1	55.208	55.278'					14.23	F40									
		C-54-104	1	54.552	54.7118'					14.06	F40									
	CONNECTION F																			
	E9	3	F1	C	C-56-200	1	55.838	55.1074'	14-1/2"	4-1/2"	4000	5700	14.40	F41	NONE	NONE	NONE	17/8"		
					C-55-201	1	55.224	55.278'					14.23	F41						
				C-54-201	1	54.573	54.738'					14.07	F41							
F2				C-56-201	1	55.737	55.978'	12-1/2"			5200	14.38	F42				NONE			
				C-55-202	1	55.136	55.238'					14.21	F42							
				C-54-200	1	54.255	54.618'					14.06	F42							
E10		F3		C-76-200	1	75.850	75.1118'	24-1/2"	6-1/2"	5400	7900	19.56	F43							
				C-75-200	1	75.000	74.1118'					19.33	59 OF 92					SEE NOTE ON 450F42		
				C-74-200	1	74.120	74.074'					19.10	59 OF 92					SEE NOTE ON 450F42		
		F4		C-56-201	1	55.737	55.978'	12-1/2"	4-1/2"	4000	5200	14.38	F42							
				C-55-202	1	55.136	55.238'					14.21	F42							
				C-54-200	1	54.455	54.618'					14.06	F42							
1		F5		C-56-202	1	55.849	55.1074'	14-1/2"			5700	14.38	F44							
				C-55-203	1	55.198	55.278'					14.23	F44							
				C-54-204	1	54.547	54.718'					14.06	F44							
		F10		C-64-200	1	63.838	63.1074'	18-1/2"	6-1/2"	4600	7000	16.46	F45							
				C-63-200	1	63.099	63.178'					16.27	F45							
				C-62-200	1	62.354	62.478'					16.07	F45							
E10	1	F11		C-64-201	1	63.755	63.934'	16-1/2"		4100	6400	16.44	F46							
				C-63-201	1	63.016	63.078'					16.25	F46							
				C-62-201	1	62.271	62.378'					16.05	F46							
		F12		C-64-200	1	63.838	63.1074'	18-1/2"		4600	7000	16.46	F45							
				C-63-200	1	63.099	63.178'					16.27	F45							
				C-62-200	1	62.354	62.478'					16.07	F45							
	1	F13		C-64-200	1	63.838	63.1074'	18-1/2"				16.46	F45							
				C-63-200	1	63.099	63.178'					16.27	F45							
				C-62-200	1	62.354	62.478'					16.07	F45							
		F14		C-64-201	1	63.755	63.934'	16-1/2"		4100	6400	16.44	F46							
				C-63-201	1	63.016	63.078'					16.25	F46							
				C-62-201	1	62.271	62.378'					16.05	F46							
F15		C-64-202	1	63.854	63.1074'	18-1/2"		4600	7000	16.46	F47					7/8"				
		C-63-202	1	63.115	63.218'					16.27	F47									
			C-62-202	1	62.370	62.518'				16.07	F47									

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FEB 6 1973
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TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I 20-5(61)457
COUNTY - DALLAS
HIGHWAY NO. I-420



SPAN
INCORPORATED
P.O. BOX 2000
DALLAS TEXAS 75220

BEAM
SCHEDULE

Title BEAM INDEX SCHEDULE	
Customer BAILEY BRIDGE CO.	
Architect NONE	
Engineer TEXAS HIGHWAY DEPARTMENT	
Scale NONE	Date
Drawn By JIM YDE (7-15-71)	Approved
Checked By	Sheet No.
Order No. 7108	I - III


BEAM SCHEDULE																
ERECTION SHEET	UNIT	SPAN	TYPE	MARK NO	NO REQD	LENGTH CAST	UTRA STRAIGHT	CONCRETE RELEASE	STRENGTH 28 DAYS	WEIGHT TON/UNIT	DETAILS ON SHEET NO	SKEW F E	BATTER F E	REMARKS		
CONNECTION G																
E11	4	G1	C	C-51-300	1	50'-6"	50'-5"	12'-1/2"	4'-1/2"	4000	5300	13.06	F43	NONE	NONE	NONE
			C-51-301	1	51'-2"	51'-2"						13.21	F43			
			C-52-300	1	51'-7"	51'-7"						13.35	F43			
			C-52-301	1	52'-3"	52'-3"						13.50	F43			
		G2	C-53-300	1	52'-8"	52'-8"						13.64	F43			
			C-53-301	1	53'-4"	53'-4"						13.79	F43			
			C-54-300	1	53'-9"	53'-9"						13.93	F43			
			C-54-301	1	54'-5"	54'-5"						14.08	F43			
		G3	C-55-300	1	55'-0"	55'-0"						14.22	F43			
			C-55-301	1	55'-6"	55'-6"						14.37	F43			
			C-56-300	1	56'-1"	56'-1"						14.51	F43			
			C-56-301	1	56'-7"	56'-7"						14.66	F43			
	G4	C-57-300	1	57'-2"	57'-2"						14.80	F43				
		C-57-301	1	57'-8"	57'-8"						14.95	F43				
		C-58-300	1	58'-3"	58'-3"						15.09	F43				
		C-58-301	1	58'-9"	58'-9"						15.24	F43				
	5	G5	C	C-59-300	1	59'-7"	59'-6"	13'-1/2"	6'-1/2"	4600	7000	16.10	F51			
			C-59-301	1	60'-3"	60'-3"						16.25	F51			
			C-60-300	1	60'-8"	60'-8"						16.40	F51			
			C-60-301	1	61'-4"	61'-4"						16.54	F51			
		G6	C-61-300	1	61'-9"	61'-9"						16.69	F51			
			C-61-301	1	62'-5"	62'-5"						16.83	F51			
			C-62-300	1	62'-10"	62'-10"						16.98	F51			
			C-62-301	1	63'-6"	63'-6"						17.12	F51			
		G7	C-63-300	1	63'-11"	63'-11"						17.27	F51			
			C-63-301	1	64'-7"	64'-7"						17.41	F51			
			C-64-300	1	64'-12"	64'-12"						17.56	F51			
			C-64-301	1	65'-8"	65'-8"						17.70	F51			
	6	G8	C	C-65-300	1	65'-13"	65'-12"	18'-1/2"	8'-1/2"	5200	7600	18.00	F53			
			C-65-301	1	66'-9"	66'-9"						18.14	F53			
			C-66-300	1	66'-14"	66'-14"						18.29	F53			
			C-66-301	1	67'-10"	67'-10"						18.43	F53			
		G9	C-67-300	1	67'-15"	67'-15"						18.58	F53			
			C-67-301	1	68'-11"	68'-11"						18.72	F53			
			C-68-300	1	68'-16"	68'-16"						18.87	F53			
			C-68-301	1	69'-12"	69'-12"						19.01	F53			
		G10	C-69-300	1	69'-17"	69'-17"						19.16	F53			
			C-69-301	1	70'-13"	70'-13"						19.30	F53			
			C-70-300	1	70'-18"	70'-18"						19.45	F53			
			C-70-301	1	71'-14"	71'-14"						19.59	F53			
	7	G11	C	C-71-300	1	71'-19"	71'-18"	22'-1/2"	9'-1/2"	5400	7800	19.73	F55			
			C-71-301	1	72'-15"	72'-15"						19.88	F55			
			C-72-300	1	72'-20"	72'-20"						20.02	F55			
			C-72-301	1	73'-16"	73'-16"						20.17	F55			
		G12	C-73-300	1	73'-21"	73'-21"						20.31	F55			
			C-73-301	1	74'-17"	74'-17"						20.46	F55			
			C-74-300	1	74'-22"	74'-22"						20.60	F55			
			C-74-301	1	75'-18"	75'-18"						20.75	F55			
		G13	C-75-300	1	75'-23"	75'-23"						20.89	F55			
			C-75-301	1	76'-19"	76'-19"						21.04	F55			
			C-76-300	1	76'-24"	76'-24"						21.18	F55			
			C-76-301	1	77'-20"	77'-20"						21.33	F55			
	8	I1	C	C-77-300	1	77'-25"	77'-24"	22'-1/2"	9'-1/2"	5400	7800	19.73	F55			
			C-77-301	1	78'-21"	78'-21"						19.88	F55			
			C-78-300	1	78'-26"	78'-26"						20.02	F55			
			C-78-301	1	79'-22"	79'-22"						20.17	F55			
		I2	C-79-300	1	79'-27"	79'-27"						20.31	F55			
			C-79-301	1	80'-23"	80'-23"						20.46	F55			
			C-80-300	1	80'-28"	80'-28"						20.60	F55			
			C-80-301	1	81'-24"	81'-24"						20.75	F55			
		I3	C-81-300	1	81'-29"	81'-29"						20.89	F55			
			C-81-301	1	82'-25"	82'-25"						21.04	F55			
			C-82-300	1	82'-30"	82'-30"						21.18	F55			
			C-82-301	1	83'-26"	83'-26"						21.33	F55			
	9	I4	C	C-83-300	1	83'-31"	83'-30"	22'-1/2"	9'-1/2"	5400	7800	19.73	F55			
			C-83-301	1	84'-27"	84'-27"						19.88	F55			
			C-84-300	1	84'-32"	84'-32"						20.02	F55			
			C-84-301	1	85'-28"	85'-28"						20.17	F55			
		I5	C-85-300	1	85'-33"	85'-33"						20.31	F55			
			C-85-301	1	86'-29"	86'-29"						20.46	F55			
			C-86-300	1	86'-34"	86'-34"						20.60	F55			
			C-86-301	1	87'-30"	87'-30"						20.75	F55			
		I6	C-87-300	1	87'-35"	87'-35"						20.89	F55			
			C-87-301	1	88'-31"	88'-31"						21.04	F55			
			C-88-300	1	88'-36"	88'-36"						21.18	F55			
			C-88-301	1	89'-32"	89'-32"						21.33	F55			
	I7	C-89-300	1	89'-37"	89'-37"						21.47	F55				
		C-89-301	1	90'-33"	90'-33"						21.62	F55				
		C-90-300	1	90'-38"	90'-38"						21.76	F55				
		C-90-301	1	91'-34"	91'-34"						21.91	F55				

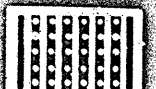
BEAM SCHEDULE																		
ERECTION SHEET	UNIT	SPAN	TYPE	MARK NO	NO REQD	LENGTHS		STEEL FOR		CONCRETE STRENGTH		WEIGHT	DETAILS	SKEW		BATTER		REMARKS
						DAY	CAST	STRAIGHT	DRAPE	RELEASE	28 DAYS			F	E	F	E	
CONNECTION H (CONT.)																		
E14	B	H12	C	C-64-402	1	12-1/2'	63-11/4'	18-1/2"	6-1/2"	4600	7000	16.47	F58	NONE	NONE	NONE	NONE	
			C-63-404	1	63-145'	63-85 5/8'					16.30	F58						
			C-63-405	1	62-60 1/4'	62-3'					16.14	F58						
		H13	C-64-401	1	63-80 1/2'	63-10 1/4'	16-1/2"		4100	6400	16.45	F57						
			C-63-402	1	63-162'	63-21 9/16'					16.38	F57						
			C-63-403	1	62-32 1/2'	62-67 5/8'					16.12	F57						
	B	H14	C-64-402	1	63-83 5/8'	63-11 1/4'	18-1/2"		4600	7000	16.47	F58						
			C-63-404	1	63-645'	63-25 5/8'					16.30	F58						
			C-63-405	1	62-60 1/4'	62-3'					16.14	F58						
		H15	C-64-402	1	63-83 5/8'	63-11 1/4'					16.47	F58						
			C-63-404	1	63-245'	63-25 5/8'					16.30	F58						
			C-63-405	1	62-60 1/4'	62-8'					16.14	F58						
10	B	H16	C-64-401	1	63-80 1/2'	63-10 1/4'	16-1/2"		4100	6400	16.45	F57						
			C-63-402	1	63-162'	63-21 9/16'					16.38	F57						
			C-63-403	1	62-32 1/2'	62-67 5/8'					16.12	F57						
		H17	C-64-402	1	63-83 5/8'	63-11 1/4'	18-1/2"		4600	7000	16.47	F58						
			C-63-404	1	63-245'	63-25 5/8'					16.30	F58						
			C-63-405	1	62-60 1/4'	62-8'					16.14	F58						
	H18	C-70-400	1	67-100'	67-3 1/2'	22-2 3/8"	3-1/2"	5400	7700	30.2	F58							
		C-67-400	1	67-24'	67-23 3/8"					17.84	F58							
		C-67-401	1	68-51 6'	68-7'					17.66	F58							
		C-70-401	1	67-32 3/8'	67-10 5/8'		6-1/2"	3200		18.00	F58							
		C-67-402	1	67-135'	67-6 5/8'					17.82	F58							
		C-63-400	1	63-433'	63-6'					17.62	F58							
H19	C-70-401	1	67-32 3/8'	67-10 5/8'					18.00	F58								
	C-67-402	1	67-135'	67-6 5/8'					17.82	F58								
	C-63-400	1	63-433'	63-6'					17.62	F58								
	C-70-402	1	67-135'	67-10 5/8'					18.00	F58								
	C-67-403	1	67-135'	67-10 5/8'					17.82	F58								
	C-63-400	1	63-433'	63-6'					17.62	F58								
H20	C-70-403	1	67-135'	67-10 5/8'		3-1/2"	5400		30.2	F58								
	C-67-404	1	67-24'	67-23 3/8"					17.84	F58								
	C-67-405	1	68-51 6'	68-7'					17.66	F58								
	C-70-404	1	67-32 3/8'	67-10 5/8'					18.00	F58								
	C-67-405	1	67-135'	67-6 5/8'					17.82	F58								
	C-63-401	1	63-433'	63-6'					17.62	F58								
H21	C-70-404	1	67-135'	67-10 5/8'					18.00	F58								
	C-67-406	1	67-24'	67-23 3/8"					17.84	F58								
	C-67-407	1	68-51 6'	68-7'					17.66	F58								
	C-70-405	1	67-32 3/8'	67-10 5/8'					18.00	F58								
	C-67-407	1	67-135'	67-6 5/8'					17.82	F58								
	C-63-402	1	63-433'	63-6'					17.62	F58								

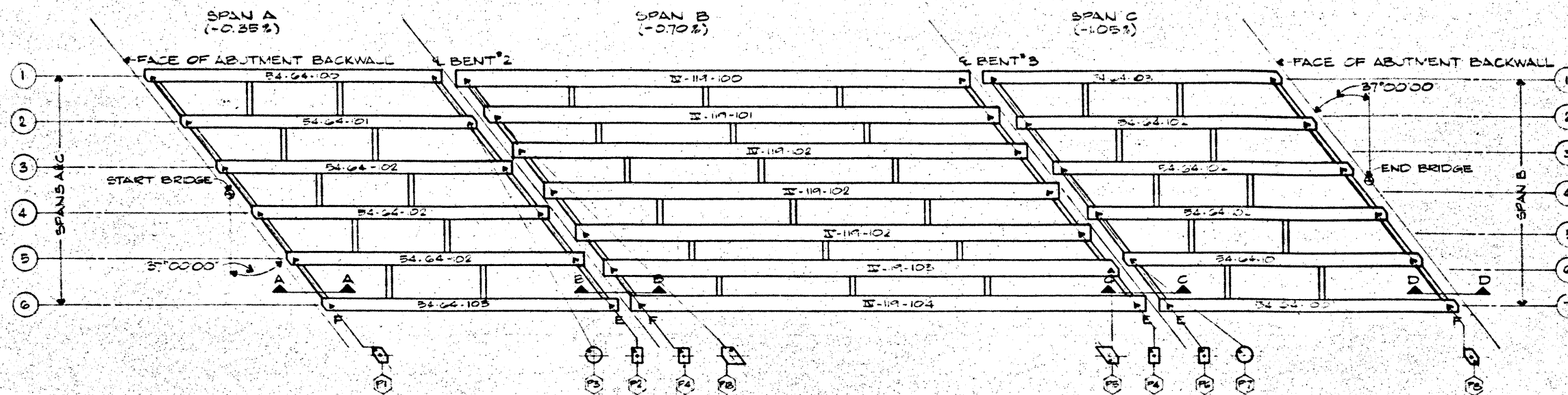
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DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

8-5

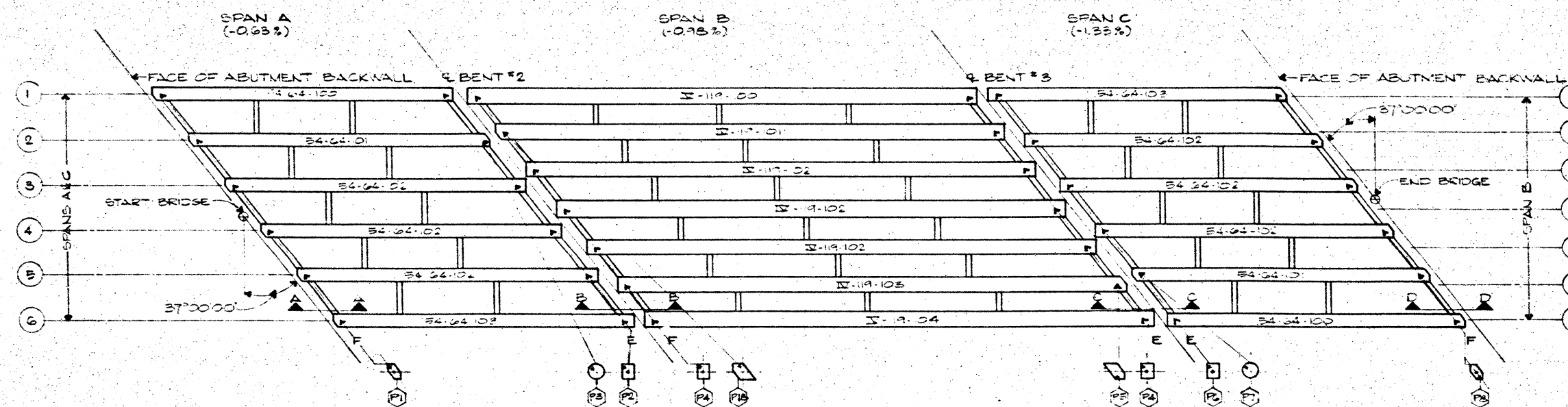
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. 120-B(6)487
COUNTY DALLAS
BRIDGE NO. 120

	SPAN INCORPORATED P.O. BOX 2028 DALLAS, TEXAS 75220	BEAM SCHEDULE
Title BEAM INDEX SCHEDULE		
Customer BAILEY BRIDGE CO.		
Architect NONE		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE	Date	Approved
Drawn By JUNIOR	Sheet No.	
Checked By		
Order No.		

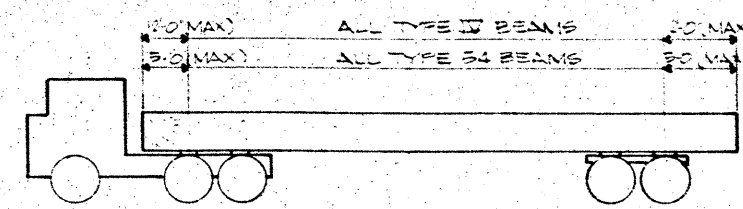
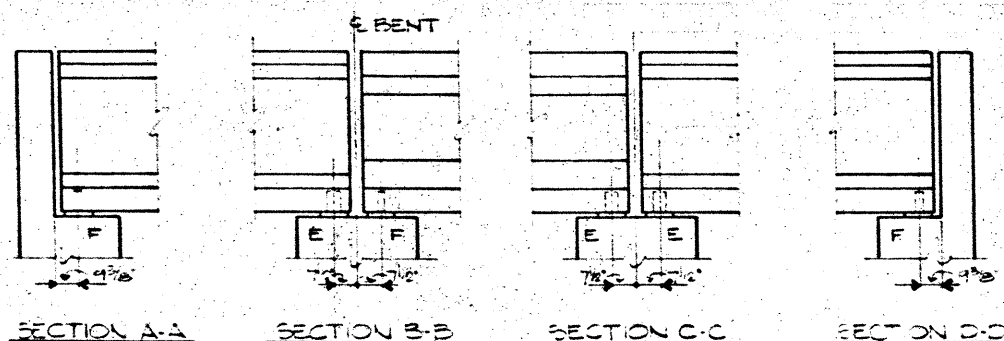




CAMP WISDOM ROAD OVERPASS
SOUTHBOUND LANES



CAMP WISDOM ROAD OVERPASS
NORTHBOUND LANES




ERECTOR DETAIL

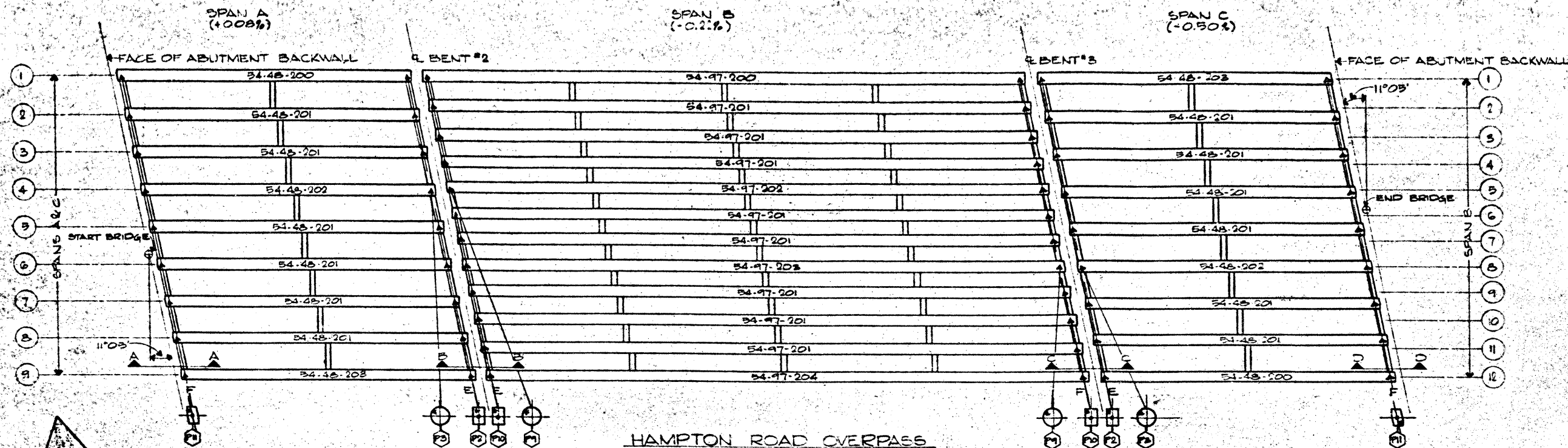
- GENERAL NOTES
1. DIAGRAMS TO BE CAST IN PLACE BY OTHERS.
 2. LESS OVERLAP THAN SHOWN ON HAULING DETAIL IS PERMISSIBLE.
 3. BEAMS TO BE HANDLED BY LIFTING LOOPS ONLY.
 4. LIFTING LOOPS TO BE CUT TO 1/2 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.
 5. ANCHOR HOLES AT FIXED END SHALL BE PLUGGED OR FILLED WITH MASTIC BY OTHERS BEFORE ROADWAY SLAB IS PLACED.

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FEB 6 1973
SPAN INDUSTRIES, INC.

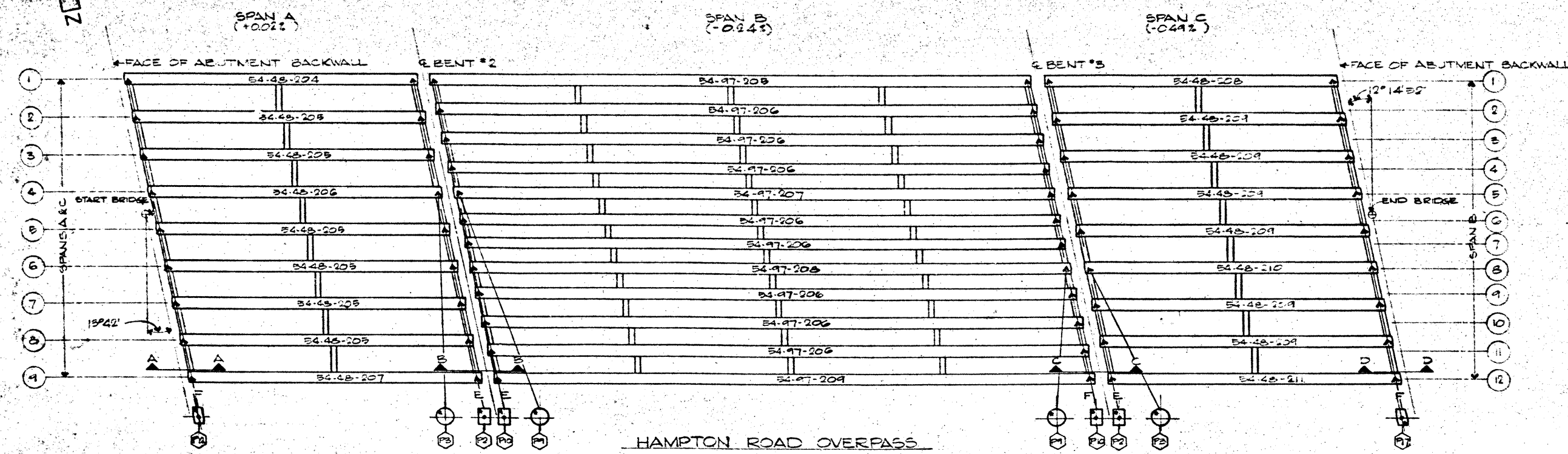
86

TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I-20-5(61)457
COUNTY DALLAS
HIGHWAY NO. US 67

 SPAN INCORPORATED P.O. BOX 2024 DALLAS, TEXAS 75220		ERECTION PLAN
Title CAMP WISDOM RD. OVERPASS		
Customer BAILEY BRIDGE CO		
Architect NONE		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE		
Drawn By JY. (3-22-71)		Date 3-22-71
Checked By JY.		Approved [Signature]
Order No. 7102		Sheet No. E1

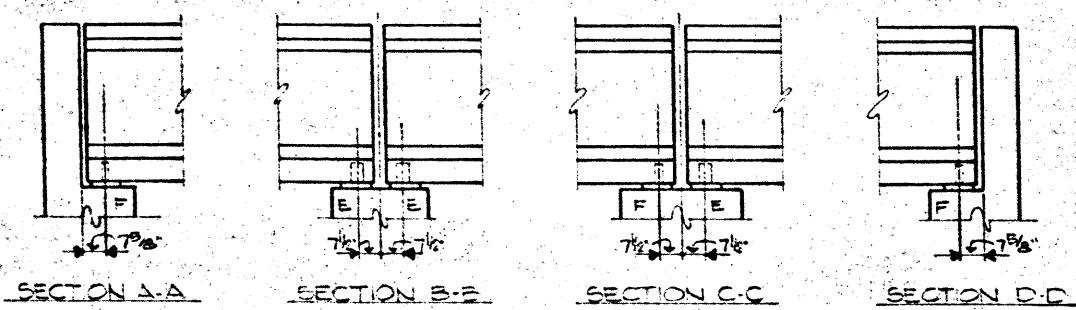


- GENERAL NOTES**
1. DIAPHRAGMS TO BE CAST IN PLACE BY OTHERS.
 2. LIFTING LOOPS TO BE CUT TO 1 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.
 3. BEAMS TO BE HANDLED BY LIFTING LOOPS ONLY.
 4. LIFTING LOOPS TO BE CUT TO 1 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.
 5. ANCHOR BOLTS AT FIXED END SHALL BE PLUGGED OR FILLED WITH MASTIC BY OTHERS BEFORE ROADWAY SLAB IS PLACED.




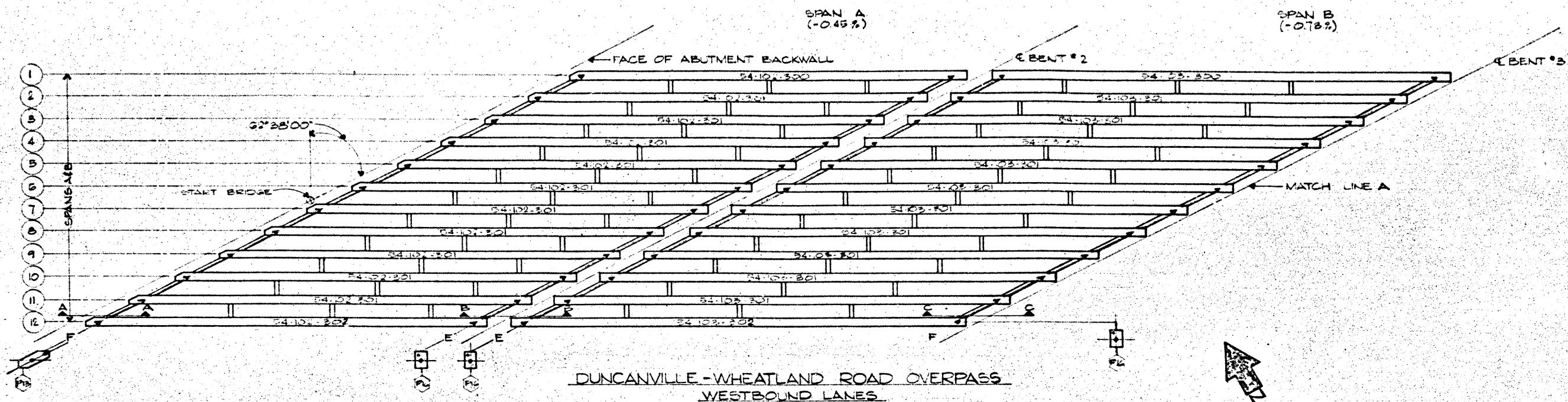
AS BUILT
DRAWING
FEB 8 1975
SPAN INDUSTRIES, INC.

8-7



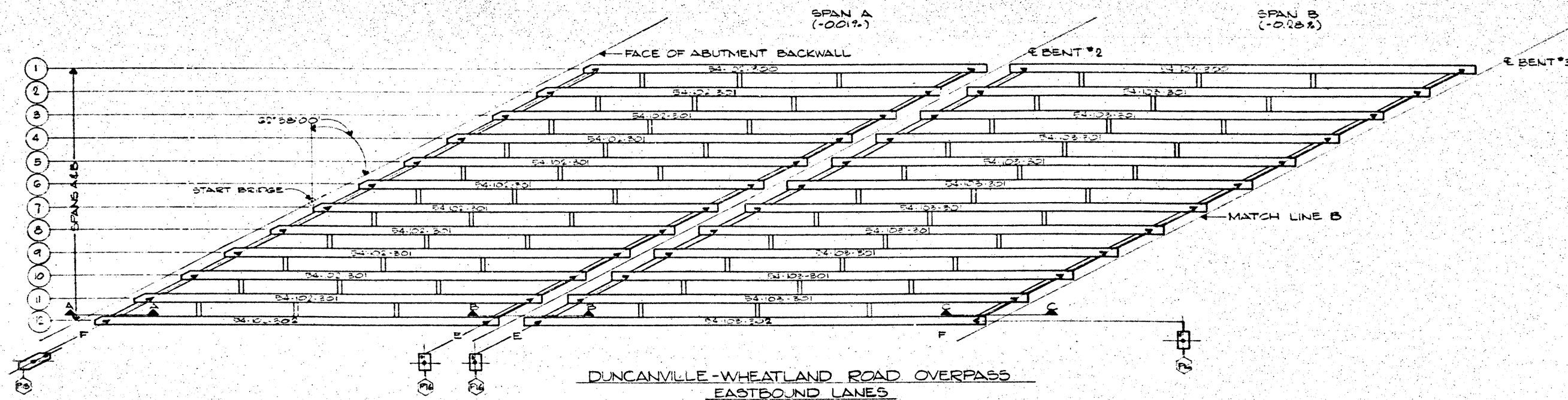
TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I-20-5(61)457
COUNTY DALLAS
HIGHWAY NO. US 67

 SPAN INCORPORATED P.O. BOX 1001 DALLAS, TEXAS 75201		ERECTION PLAN
HAMPTON ROAD OVERPASS		
Customer: BAILEY BRIDGE CO.		
Architect: NONE		
Engineer: TEXAS HIGHWAY DEPARTMENT		
Scale: NONE		
Drawn By: JY (3-22-71)		Date: 7/1/71
Checked By:		Sheet No.:
Order No. 7103		E2



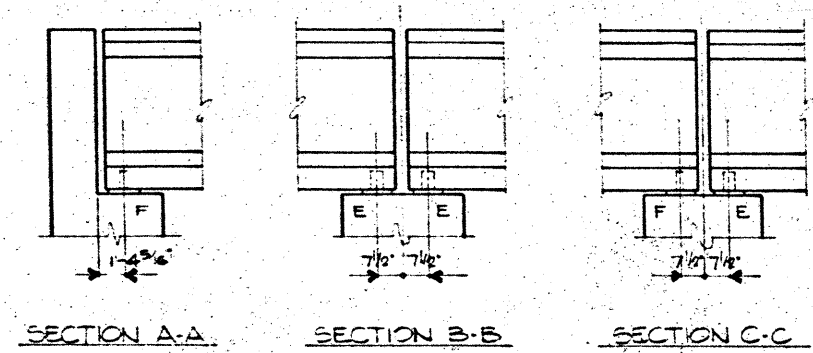
GENERAL NOTES

1. DIAPHRAGMS TO BE CAST IN PLACE BY OTHERS.
2. LESS OVERHANG THAN SHOWN ON HAULING DETAIL IS PERMISSIBLE.
3. BEAMS TO BE HANDLED BY LIFTING LOOPS ONLY.
4. LIFTING LOOPS TO BE CUT TO 1/4 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.
5. ANCHOR HOLES AT FIXED END SHALL BE PLUGGED OR FILLED WITH MASTIC BY OTHERS BEFORE ROADWAY SLAB IS PLACED.




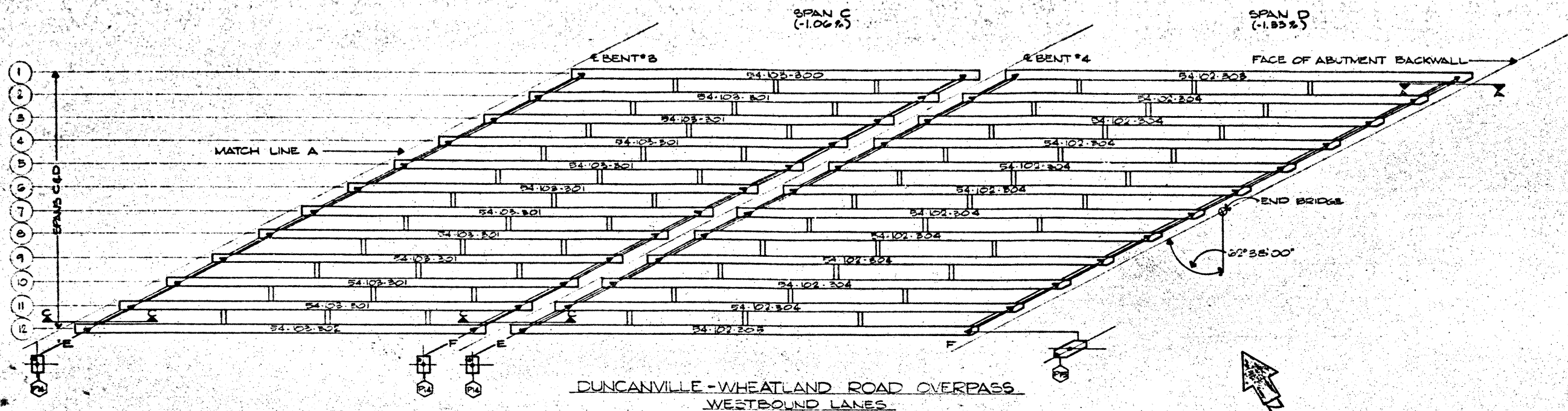
AS BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

88

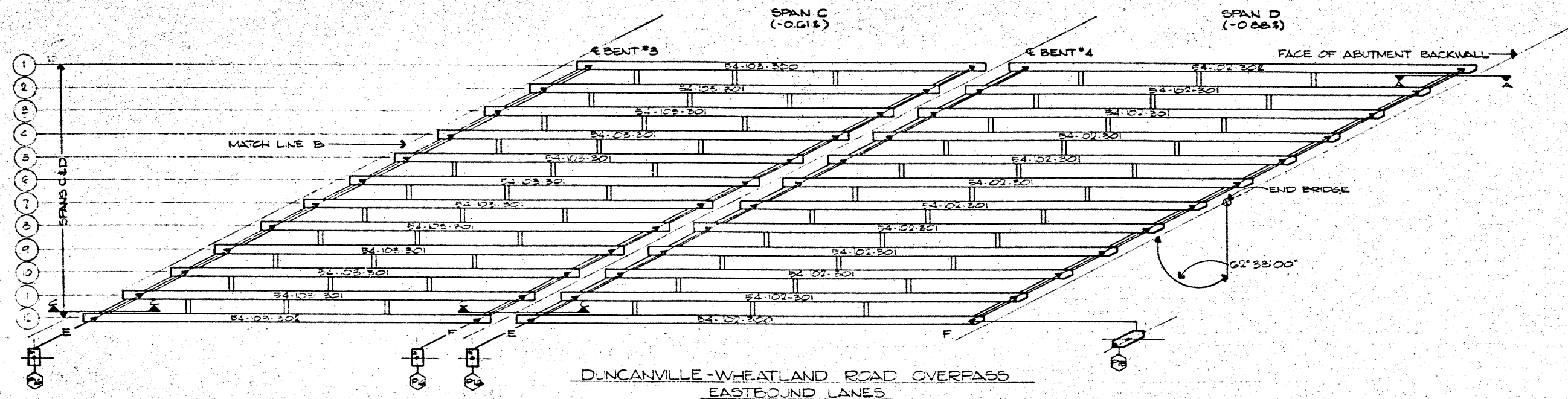


TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

 SPAN INCORPORATED P.O. BOX 2000 DALLAS, TEXAS 75220		ERECTION PLAN SPANS A&B	
Title: DUNCANVILLE-WHEATLAND RD. OP.			
Customer: BAILEY BRIDGE CO.			
Architect: NONE			
Engineer: TEXAS HIGHWAY DEPARTMENT			
Scale: NONE			
Drawn By: JY. (3-22-71)		Date:	
Checked By:		Approved:	
Order No. 7103		Sheet No. E3	




- GENERAL NOTES
1. DIAPHRAGMS TO BE CAST IN PLACE BY OTHERS.
 2. LESS OVERHANG THAN SHOWN ON HAULING DETAIL IS PERMISSIBLE.
 3. BEAMS TO BE HANDLED BY LIFTING LOOPS ONLY.
 4. LIFTING LOOPS TO BE CUT TO 1/2 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.
 5. ANCHOR HOLES AT FIXED END SHALL BE PLUGGED OR FILLED WITH MASTIC BY OTHERS BEFORE ROADWAY SLAB IS PLACED.

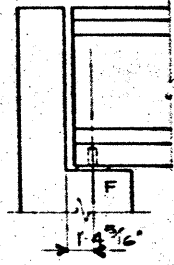


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FEB 6 1983
SPAN INDUSTRIES, INC.

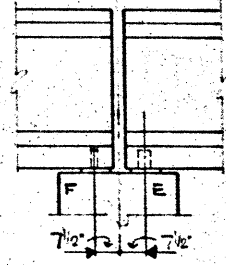
89

TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I-20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I H 20

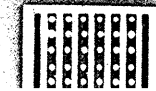
 SPAN INCORPORATED P.O. BOX 8028 DALLAS TEXAS 75220		ERECTION PLAN SPANS C & D
Title DUNCANVILLE-WHEATLAND RD OR		
Customer BAILEY BRIDGE CO.		
Architect NONE		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE		
Drawn By JY. (3-22-71)		Date
Checked By		Approved T. H.
Order No. 7103		Sheet No. E4

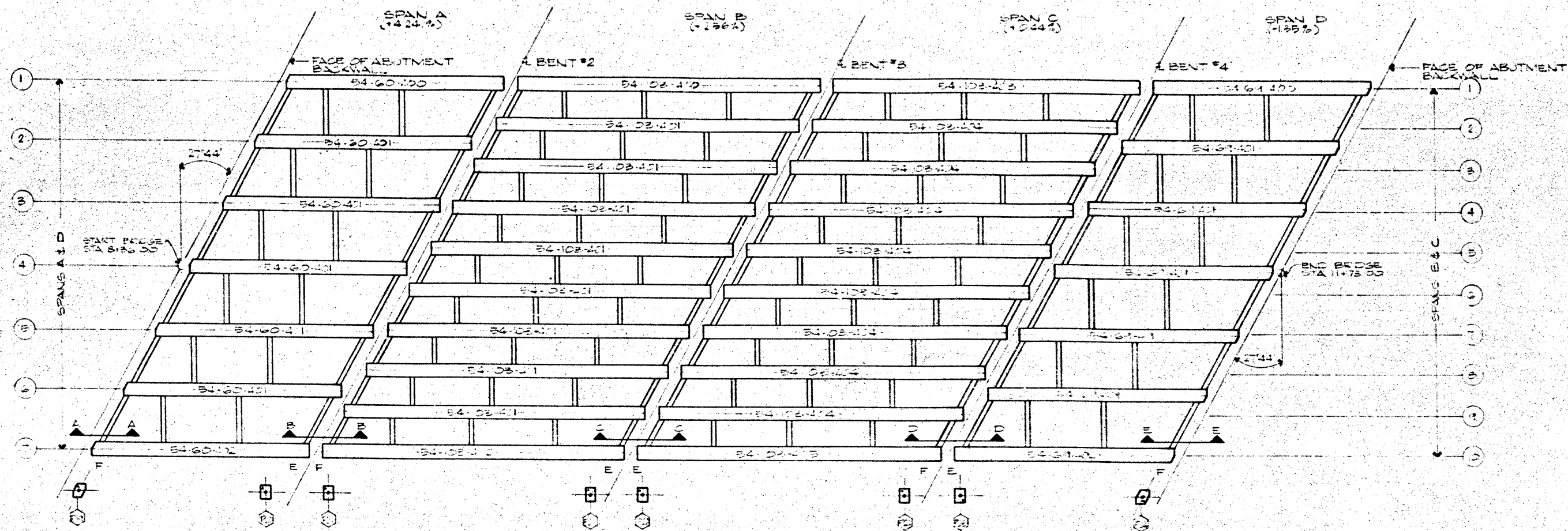


SECTION A-A



SECTION C-C





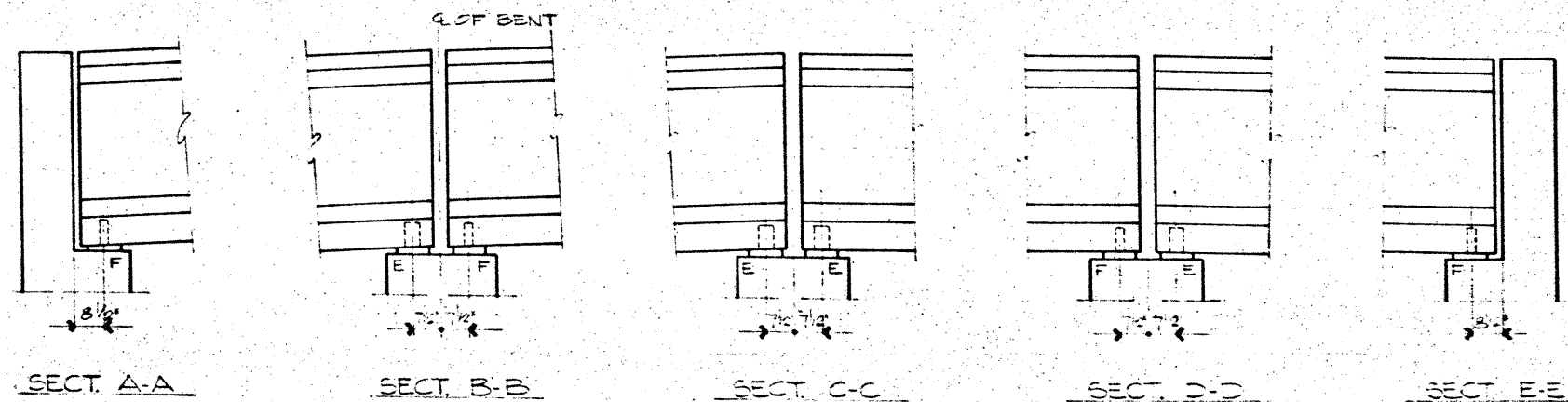
OLD HICKORY TRAIL RD. UNDERPASS

GENERAL NOTES


1. DIMENSIONS TO BE CAST IN PLACE BY OTHERS.
2. UNLESS OTHERWISE SHOWN ON HAULING DETAIL, IS PERMISSIBLE.
3. BEAMS TO BE MOVED BY LIFTING LOOPS ONLY.
4. LIFTING LOOPS TO BE CUT TO 4 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.

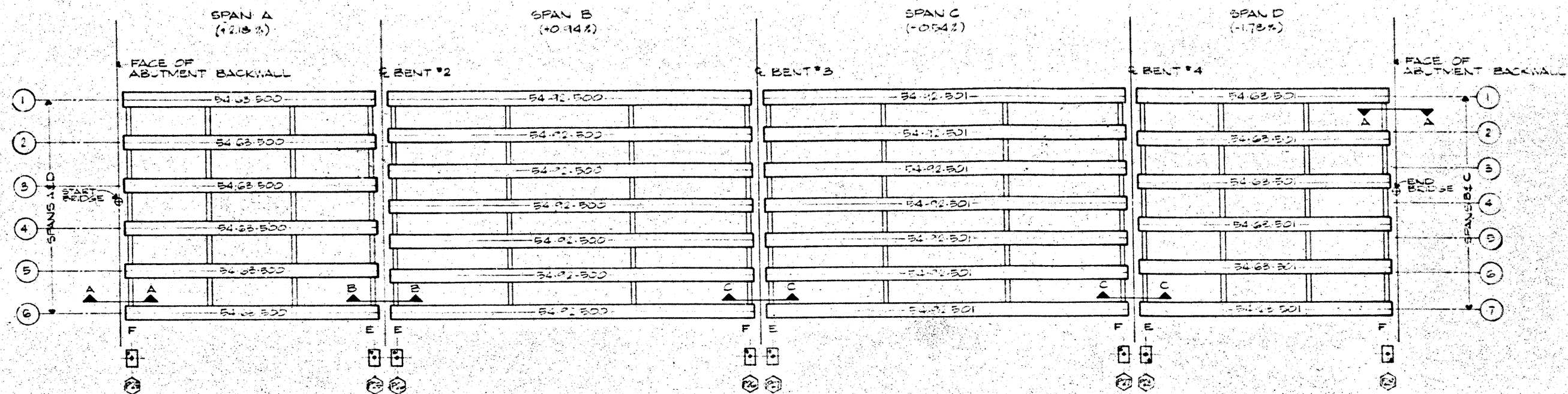
AS BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

S-10

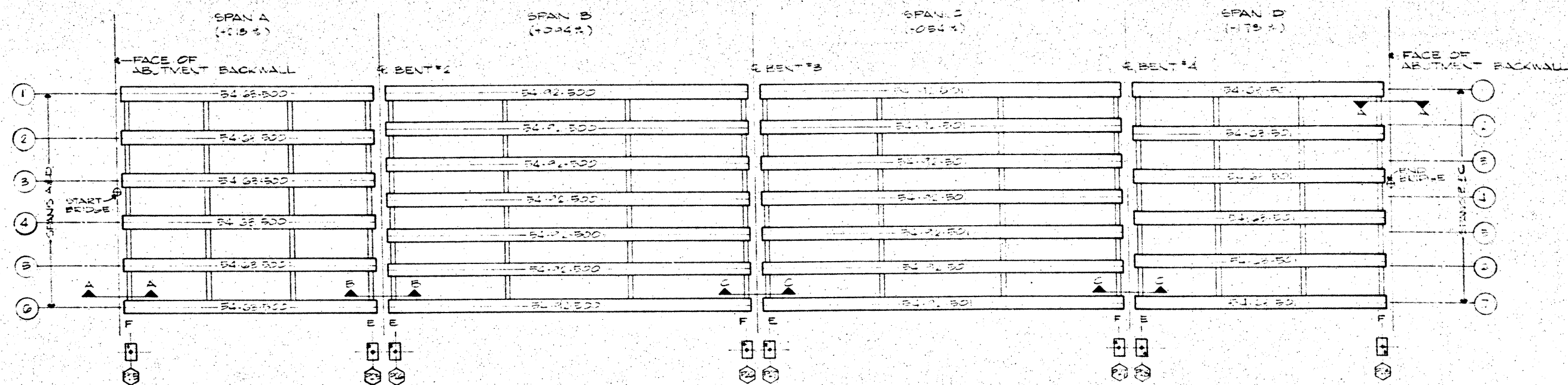


TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. 120-8(61)457
COUNTY DALLAS
SHWY NO. 24-20

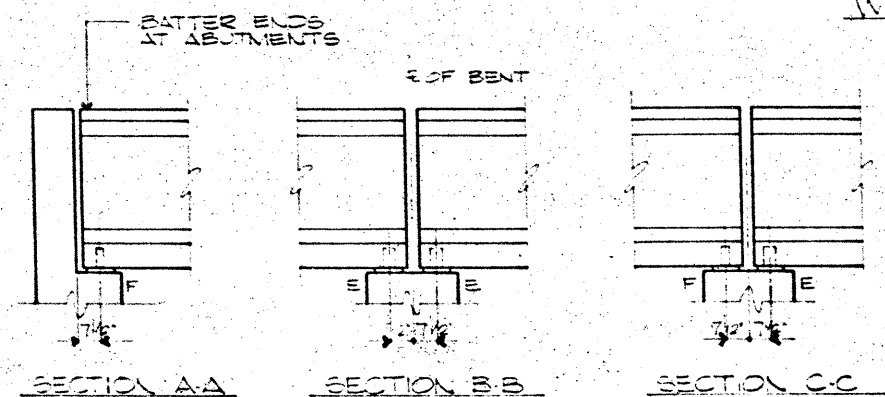
 SPAN INCORPORATED P.O. BOX 1770 DALLAS, TEXAS 75220		ERECTION PLAN	
Title OLD HICKORY TRAIL RD.			
Customer BAILEY BRIDGE CO.			
Architect NONE			
Engineer TEXAS HIGHWAY DEPARTMENT			
Scale NONE		Date 6-7-73	
Drawn By J. (G-73)		Approved [Signature]	
Checked By [Signature]		Sheet No. ES	
Order No. 702			



WESTMORELAND RD. UNDERPASS
NORTHBOUND LANES



WESTMORELAND RD. UNDERPASS
SOUTHBOUND LANES



- CONSTRUCTION NOTES:
1. BRIDGE DECK SHALL BE CONCRETE ON GRAVEL FILL.
 2. LESS OVERHANG THAN SHOWN ON ELEVATION DETAILS IS PERMISSIBLE.
 3. BRIDGES TO BE HANDLED BY LIFTING LOGS ONLY.
 4. LIFTING LOGS TO BE SET TO LIFT BRIDGE TOP OF DECK (BY OTHERS) AFTER LIFTING.

AS BUILT
DRAWING
FEB 6 1975
SPAN INDUSTRIES, INC.

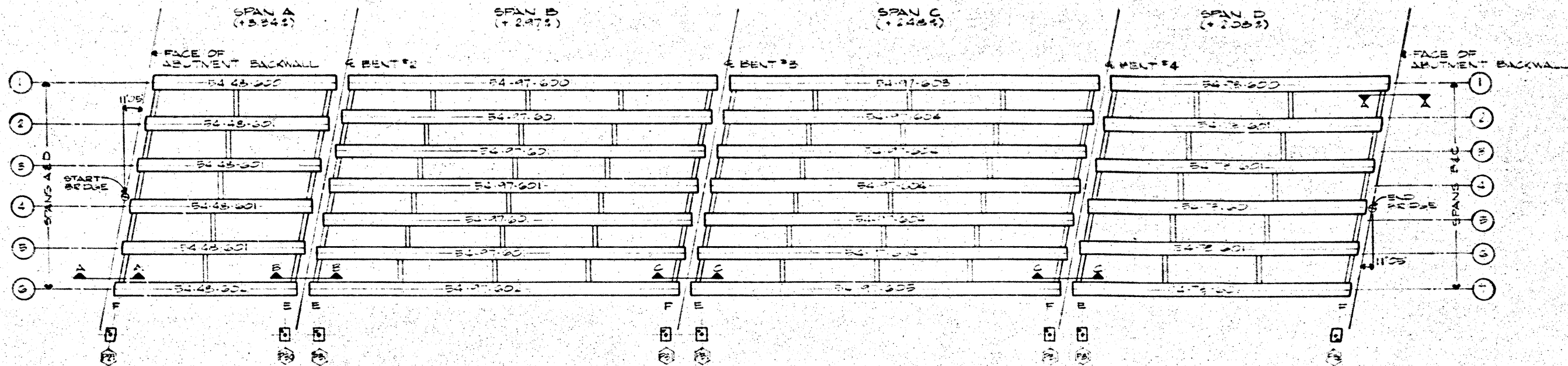
TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. 120-5(6)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20



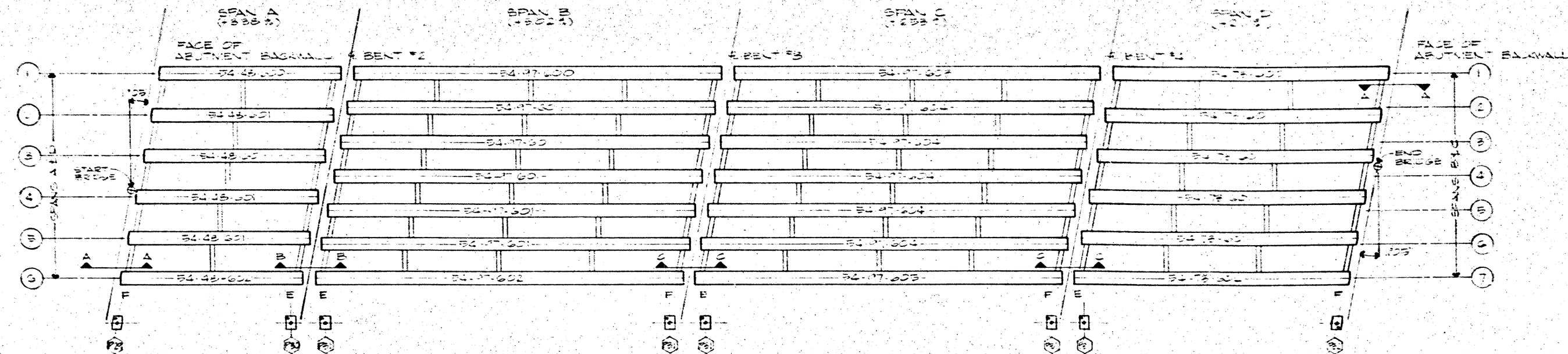
SPAN
INCORPORATED
1000 N. GILBERT
DALLAS, TEXAS 75202

ERECTION PLAN

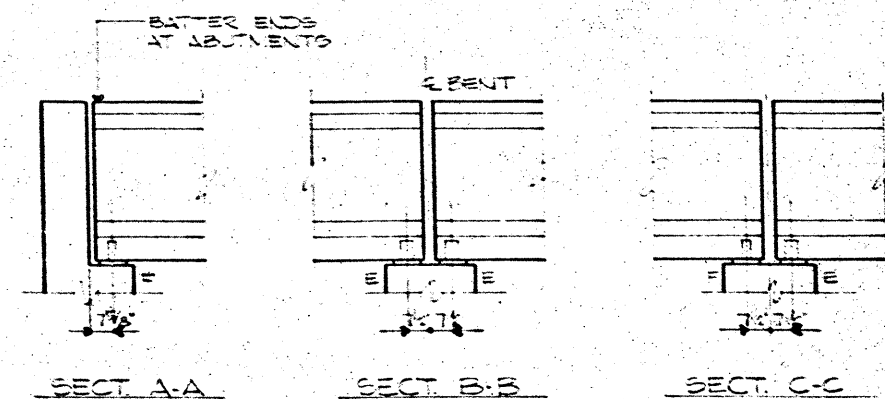
Title WESTMORELAND ROAD.	
Customer BARNETT BRIDGE CO.	
Architect NONE	
Engineer TEXAS HIGHWAY DEPARTMENT	
Scale NONE	Date
Drawn By J.M. (S-47)	Approved
Checked By	Shout No.
Order No. 22	E6



SOUTH POLK ST UNDERPASS
NORTHBOUND LANES



SOUTH POLK ST UNDERPASS
SOUTHBOUND LANES



AS BUILT
DRAWING
FEB 6 1993
SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. 120-5(6)457
COUNTY DALLAS
HIGHWAY NO. 2420

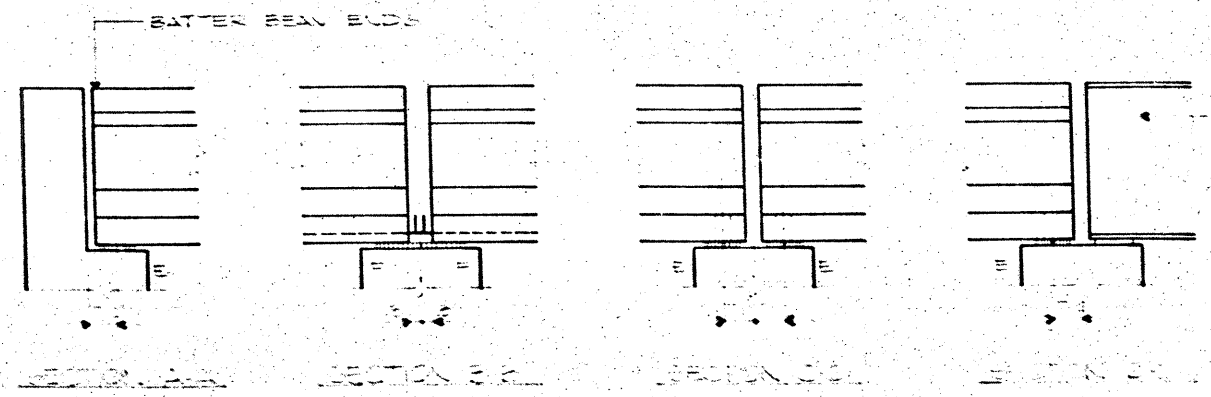
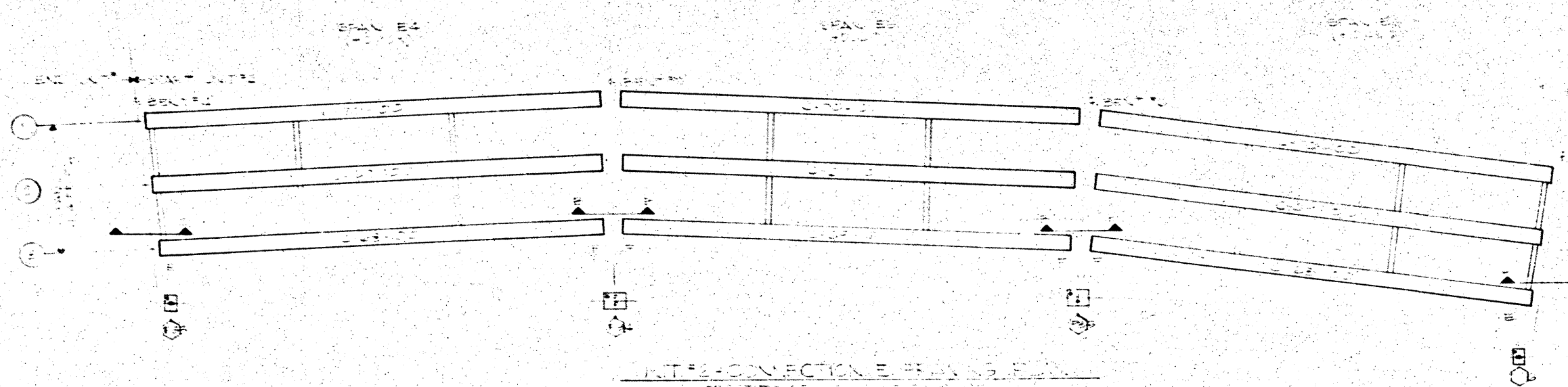
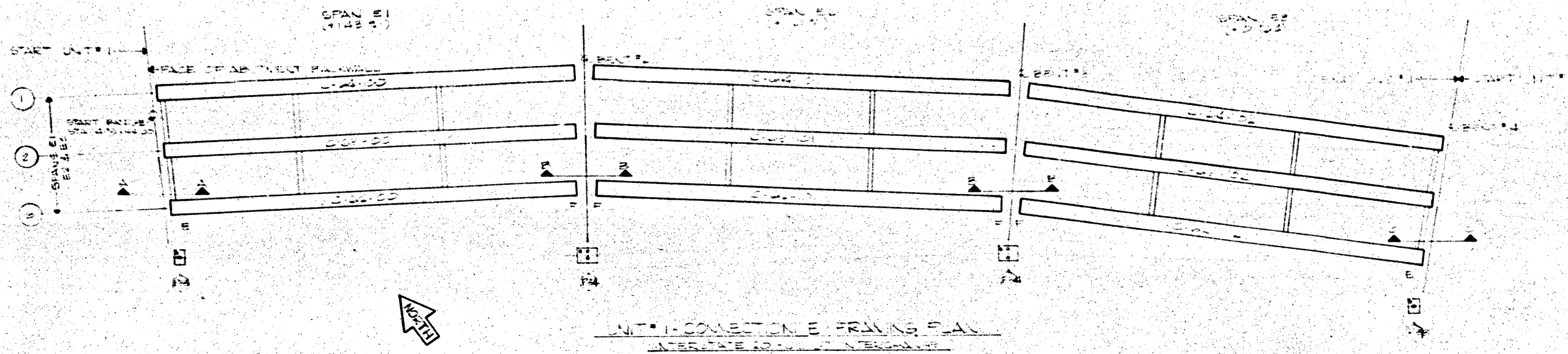


SPAN
INCORPORATED
4500 W. 20TH ST.
DALLAS, TEXAS 75224

ERECTION PLAN

Title SOUTH POLK STREET UNDERPASS	
Customer BAILEY BRIDGE CO	
Architect NONE	
Engineer TEXAS HIGHWAY DEPARTMENT	
Scale NONE	Date
Drawn By JY (5-17-71)	Approved By
Checked By	Sheet No.
Order No. 703	E7

NOTES:
1. BRIDGES TO BE INSTALLED IN PLACE FOR ERECTION.
2. ALL BRIDGES TO BE INSTALLED IN PLACE FOR ERECTION.
3. PERMISSIBLE.
4. DESIGN TO BE APPROVED BY ERECTION COMPANY.
5. ERECTION TO BE COMPLETED BY 10:00 AM ON 10/1/71.



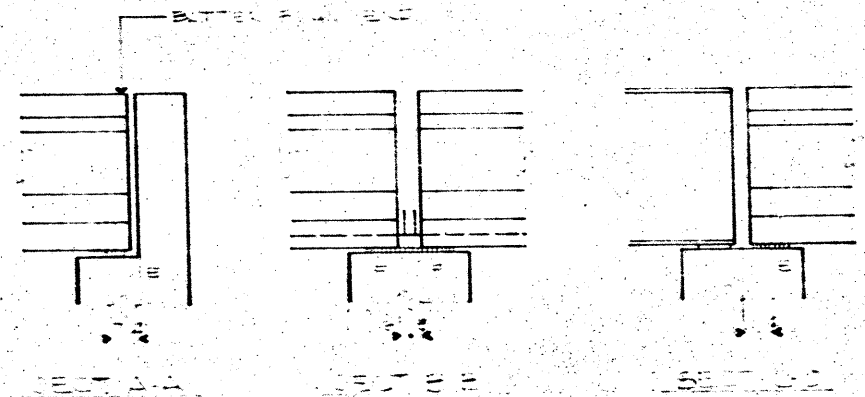
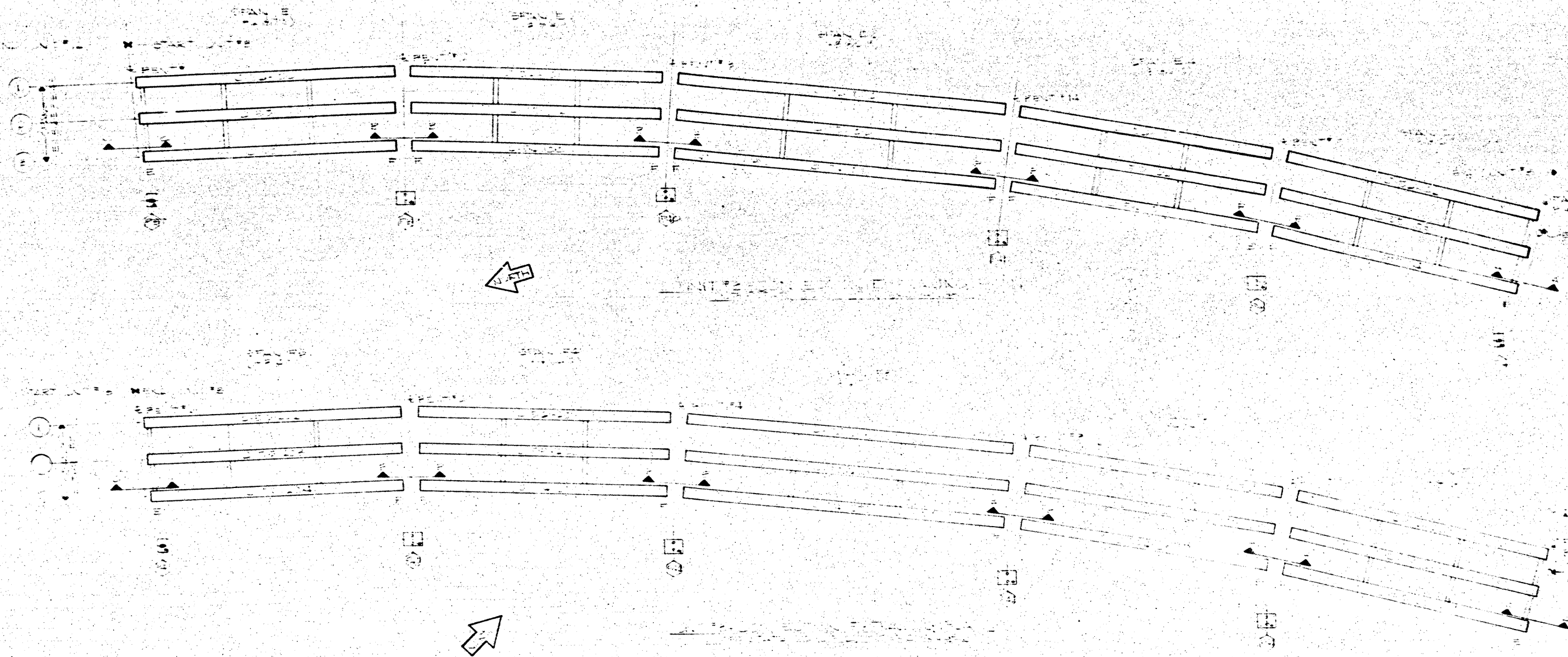
AS BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

SPECIAL NOTE: ALL DIMENSIONS
TYPE OF BEAM: CONNECTION TO
OF BEAM
C TO 100
LENGTH OF BEAM TO BEAM TO
TO BEAM TO

813


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FOR INFORMATION ONLY. IT IS NOT
TO BE USED FOR CONSTRUCTION
OR FOR ANY OTHER PURPOSE.

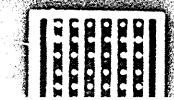
		SPAN <small>INDUSTRIES, INC.</small> <small>10000 W. 10TH AVE. SUITE 100</small> <small>DENVER, CO 80202</small>		SECTION PLANS	
Title UNIT #1 - CONNECTION E					
Customer BUREAU OF PUBLIC WORKS					
Architect H. J. HARRIS & ASSOCIATES					
Engineer H. J. HARRIS & ASSOCIATES					
Scale 1" = 10'				Date FEB 6 1973	
Drawn By J. L. HARRIS				Approved H. J. HARRIS	
Checked By J. L. HARRIS				Sheet No. 813	
Order No. 10000					

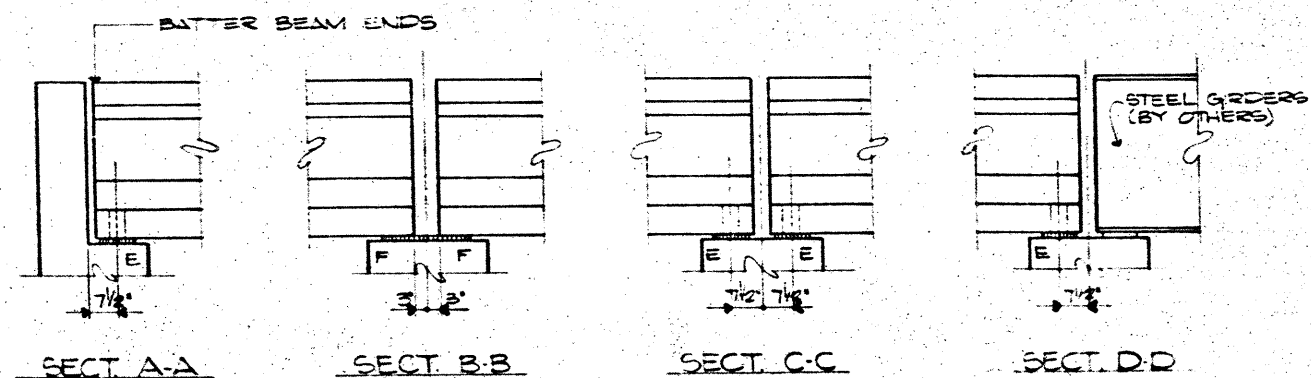
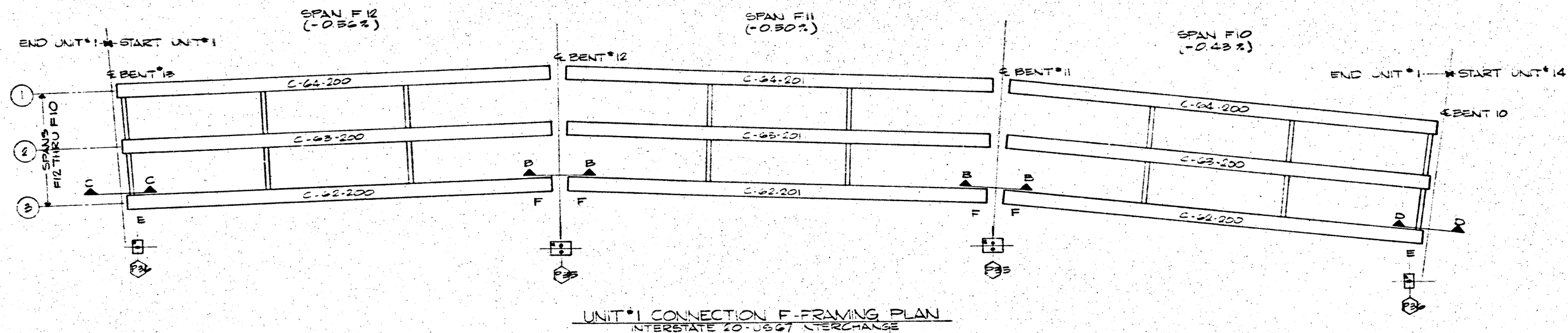
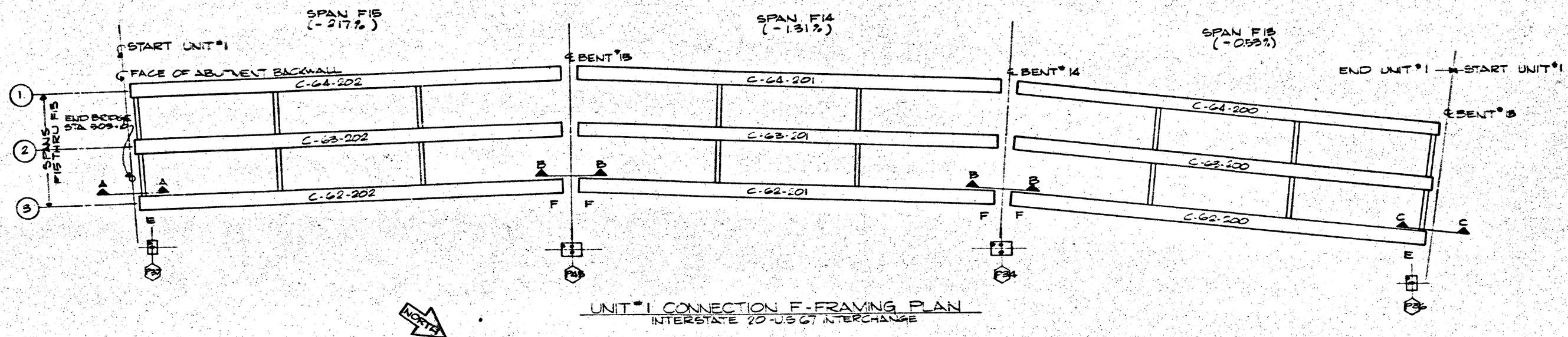


AS BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

\$14

 SPAN INDUSTRIES, INC.		SECTION F
Title: INTER CONNECTIONS END F		
Customer:	SPAN INDUSTRIES, INC.	
Architect:	SPAN INDUSTRIES, INC.	
Engineer:	SPAN INDUSTRIES, INC.	
Scale:	Date:	
Drawn By:	Approved:	
Checked By:	Sheet No:	




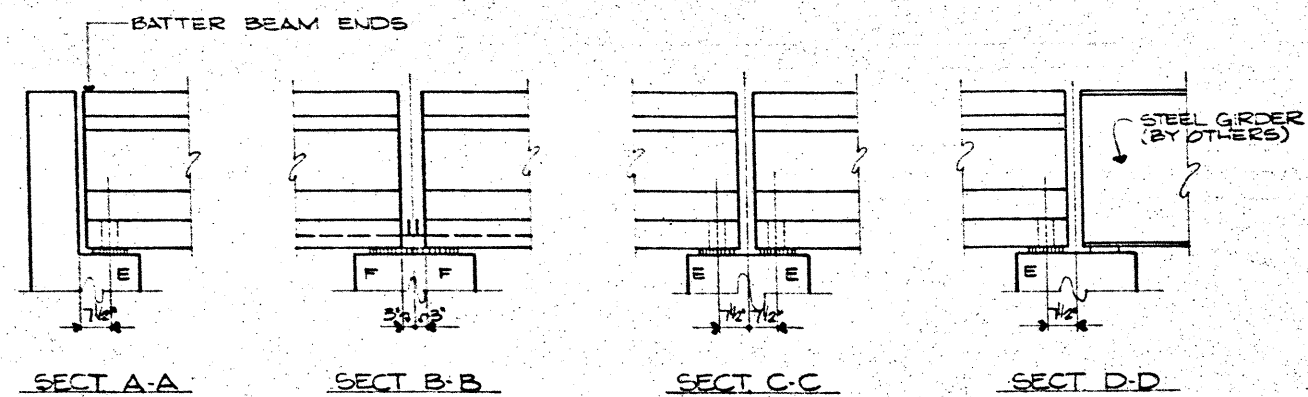
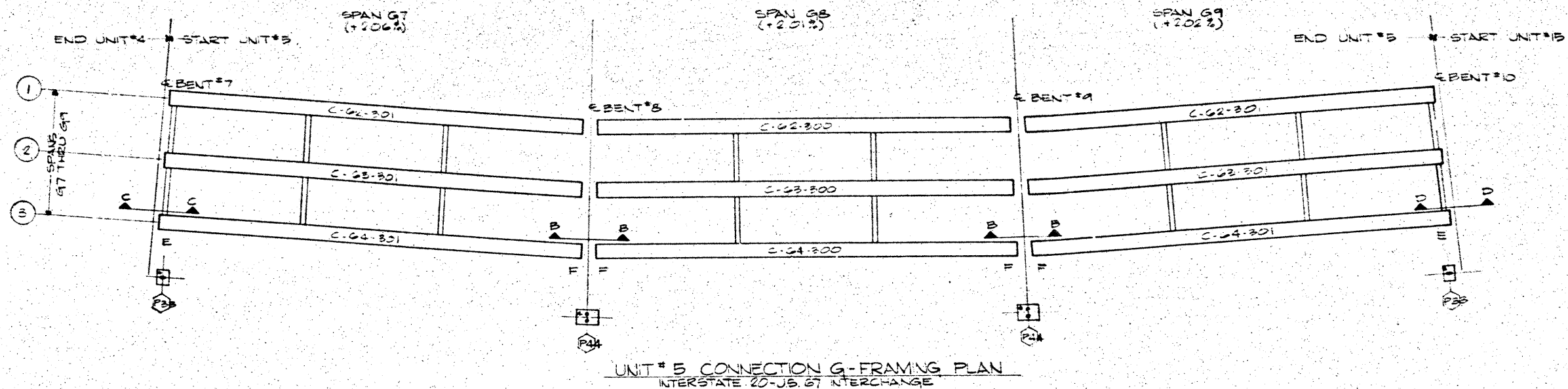
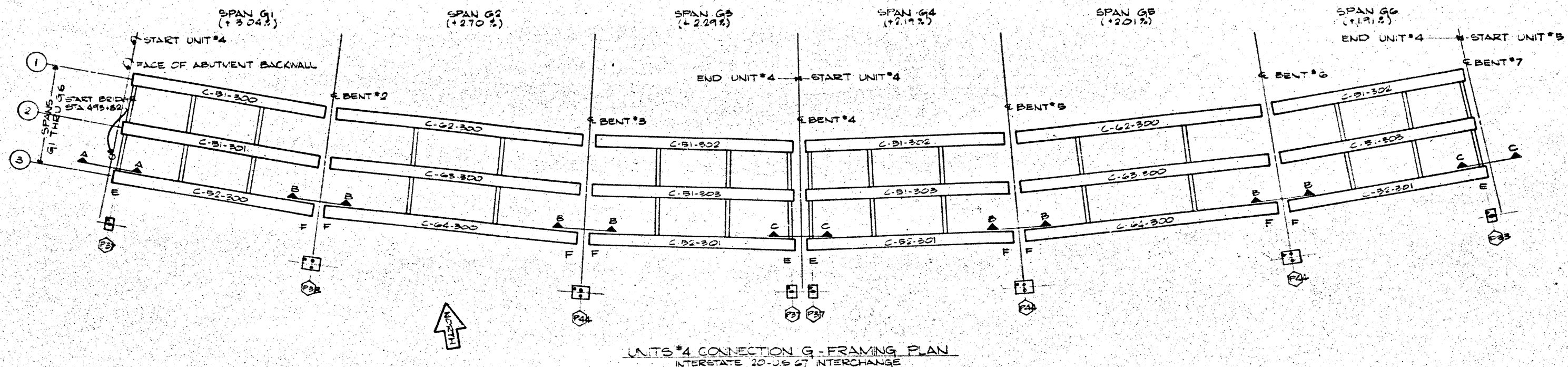


- GENERAL NOTES:
1. DIAGRAMS TO BE CAST IN PLACE BY OTHERS.
 2. LESS OVERHANG THAN SHOWN ON HAULING DETAIL IS PERMISSIBLE.
 3. BEAMS TO BE HANDLED BY LIFTING LOOPS ONLY.
 4. LIFTING LOOPS TO BE CUT TO 3 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.

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FEB 6 1973
SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I-20-B(4)487
COUNTY DALLAS
HIGHWAY NO. I-20

 SPAN INCORPORATED P.O. BOX 2000 DALLAS, TEXAS 75201		ERECTION PLAN	
		UNIT #1 CONNECTION F	
Customer		BAILEY BRIDGE CO.	
Architect		NONE	
Engineer		TEXAS HIGHWAY DEPARTMENT	
Scale		NONE	
Drawn By		JIM YOE (7-1-71)	
Checked By			
Order No.		708	
		Date	
		Approved	
		Sheet No.	
		E 10	



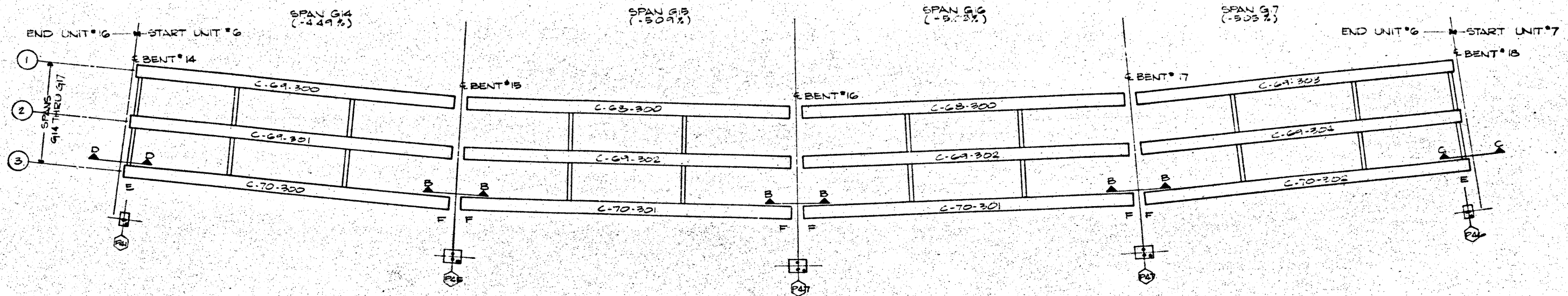
- GENERAL NOTES:
1. DIMENSIONS TO BE CAST IN PLACE BY OTHERS.
 2. LESS OVERLAP THAN SHOWN ON WELDING DETAIL IS PERMISSIBLE.
 3. BEAMS TO BE HANDLED BY LIFTING LOOPS ONLY.
 4. LIFTING LOOPS TO BE CUT TO 2 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.

AS BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

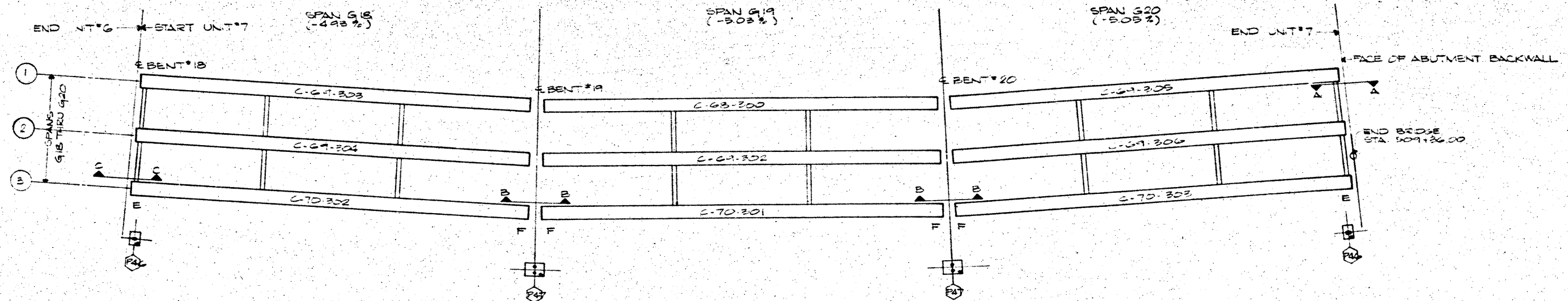
16

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I-20-5(G)457
COUNTY DALLAS
HIGHWAY NO. IH 20

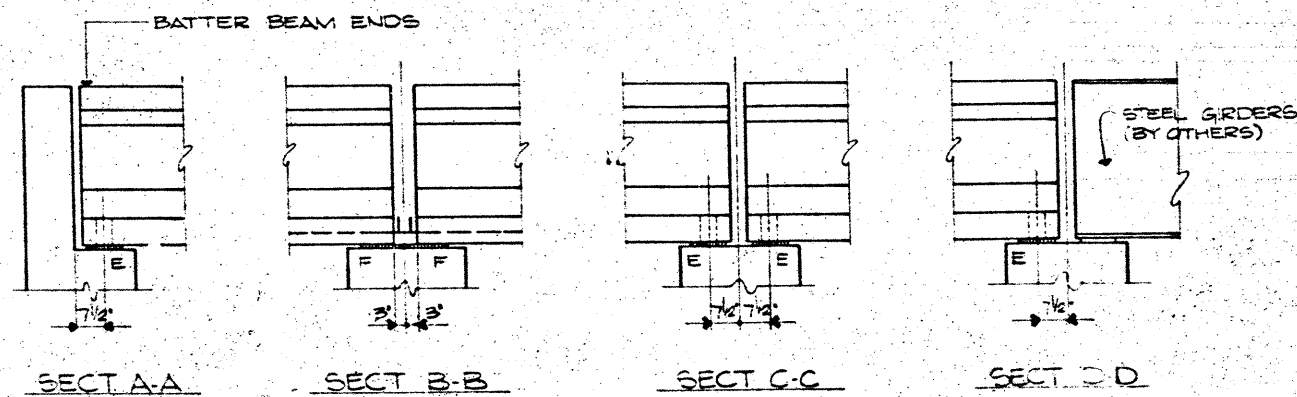
		ERECTOR PLAN	
Title UNITS #4 AND UNIT #5 CONNECTION G			
Customer BAILEY BRIDGE CO			
Architect NONE			
Engineer TEXAS HIGHWAY DEPARTMENT			
Scale NONE			
Drawn By JIM YOE (7-6-71)		Date	
Checked By		Sheet No.	
Order No. 05		E 11	



UNIT #6 CONNECTION G-FRAMING PLAN
INTERSTATE 20-US. 67 INTERCHANGE



UNIT #7 CONNECTION G-FRAMING PLAN
INTERSTATE 20-US. 67 INTERCHANGE




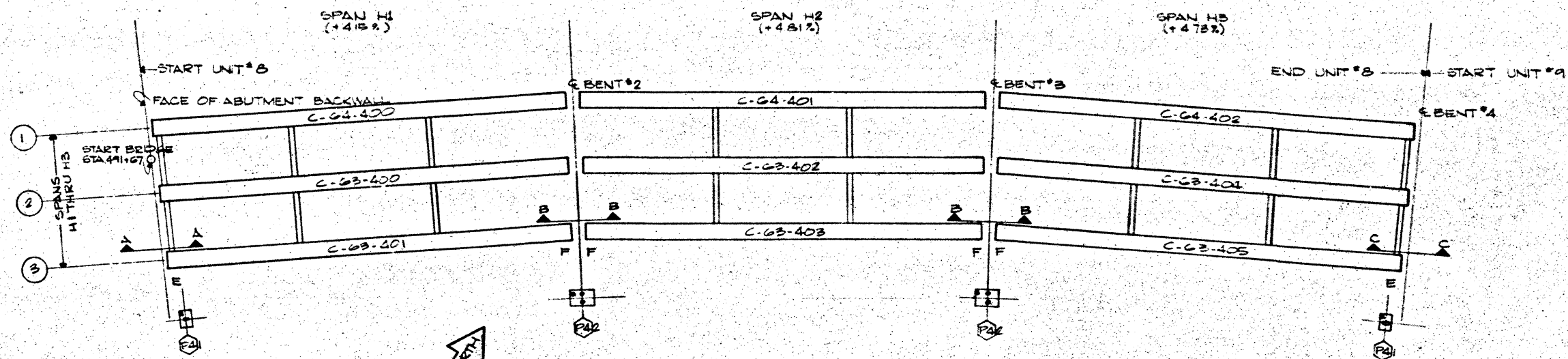
- GENERAL NOTES:
1. DIAPHRAGMS TO BE CAST IN PLACE BY OTHERS.
 2. LESS OVERHANG THAN SHOWN ON HAULING DETAIL IS PERMISSIBLE.
 3. BEAMS TO BE HANDLED BY LIFTING LOOPS ONLY.
 4. LIFTING LOOPS TO BE CUT TO 1/2 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.

AS BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

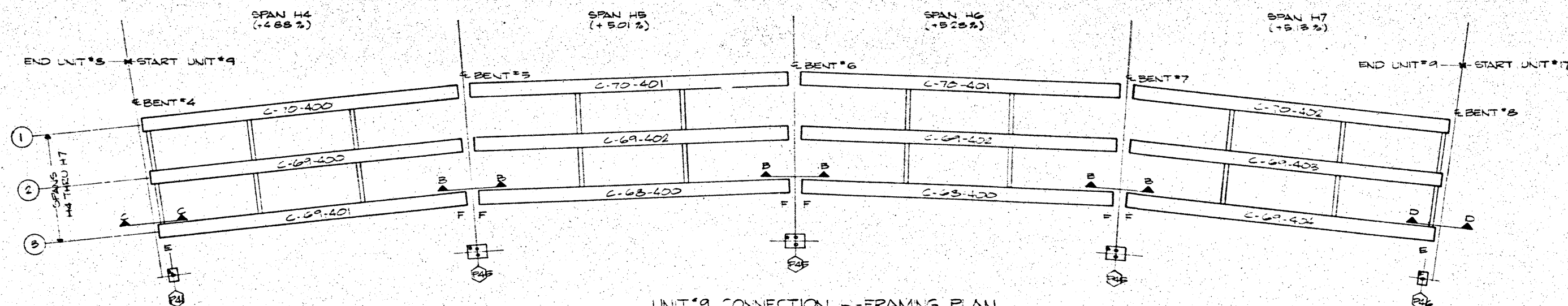
8-17

TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. ---I-20-B(61)457
COUNTY ---DALLAS
HIGHWAY NO. ---I.H. 20

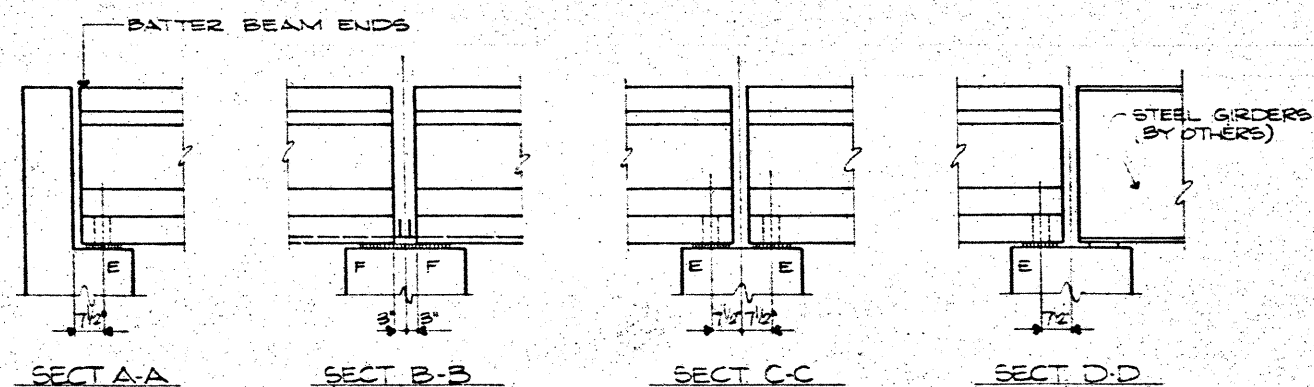
 SPAN INCORPORATED P.O. BOX 20001 DALLAS, TEXAS 75220		ERECTION PLAN	
Title UNITS #6 AND #7 CONNECTION G			
Customer BAILEY BRIDGE CO.			
Architect NONE			
Engineer TEXAS HIGHWAY DEPARTMENT			
Scale NONE		Date	
Drawn By JIM YOE (7-8-71)		Approved	
Checked By		Sheet No.	
Order No. 7105		E 12	



UNIT 8 CONNECTION H-FRAMING PLAN
INTERSTATE 20-US 67 INTERCHANGE




UNIT 9 CONNECTION H-FRAMING PLAN
INTERSTATE 20-US 67 INTERCHANGE

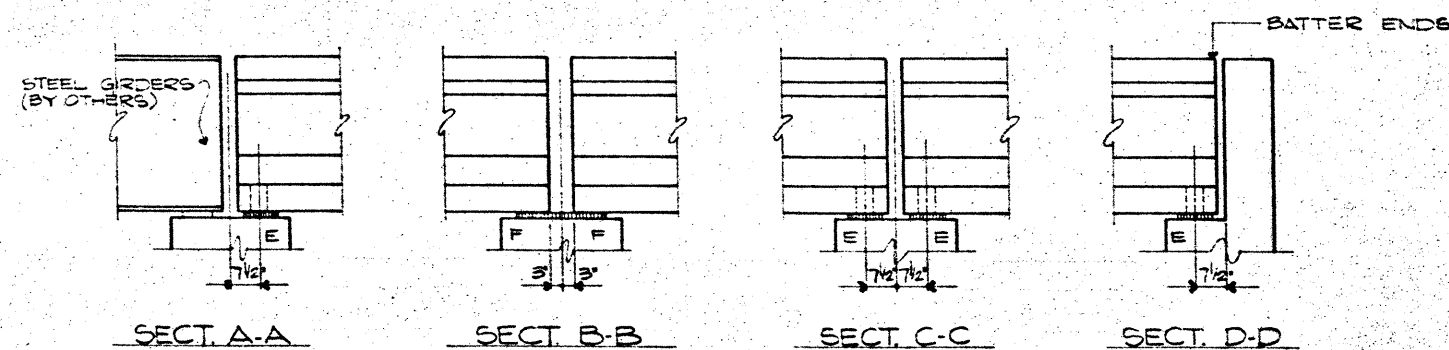
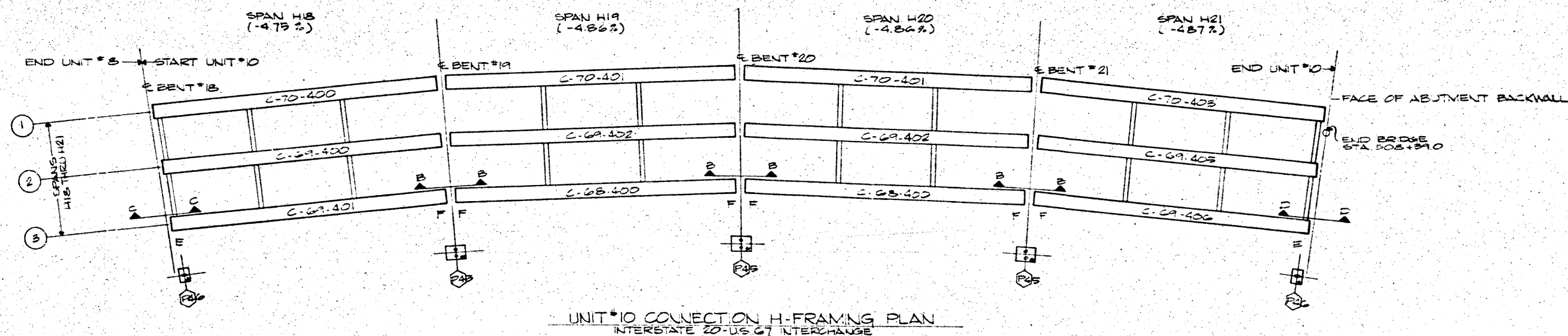
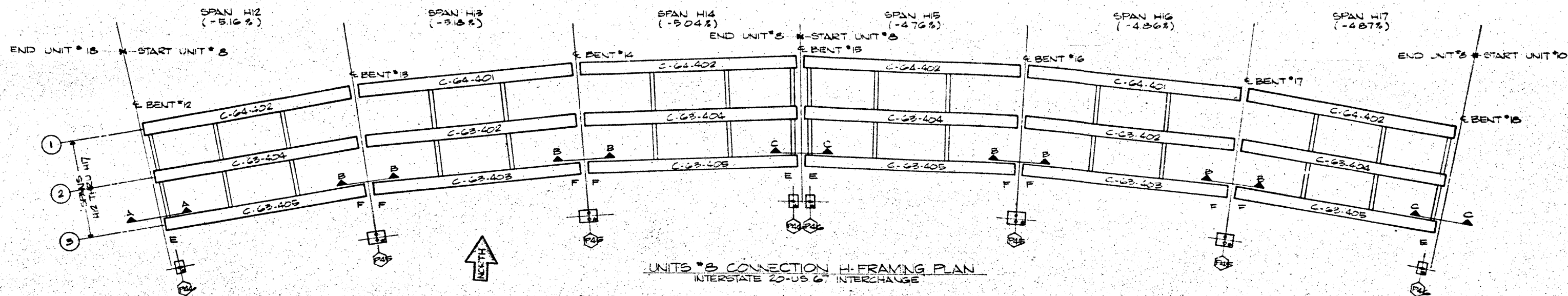


- GENERAL NOTES:
1. DIAPHRAGMS TO BE CAST IN PLACE BY OTHERS.
 2. LESS OVER-HANG THAN SHOWN ON HAULING DETAIL IS PERMISSIBLE.
 3. BEAMS TO BE HANDLED BY LIFTING LOOPS ONLY.
 4. LIFTING LOOPS TO BE CUT TO 1/4 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.

AS BUILT
DRAWING
FEB 6, 1993
SPAN INDUSTRIES, INC.


TEXAS HIGHWAY DEPARTMENT
FED AID. PROJECT NO. I-20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I-20

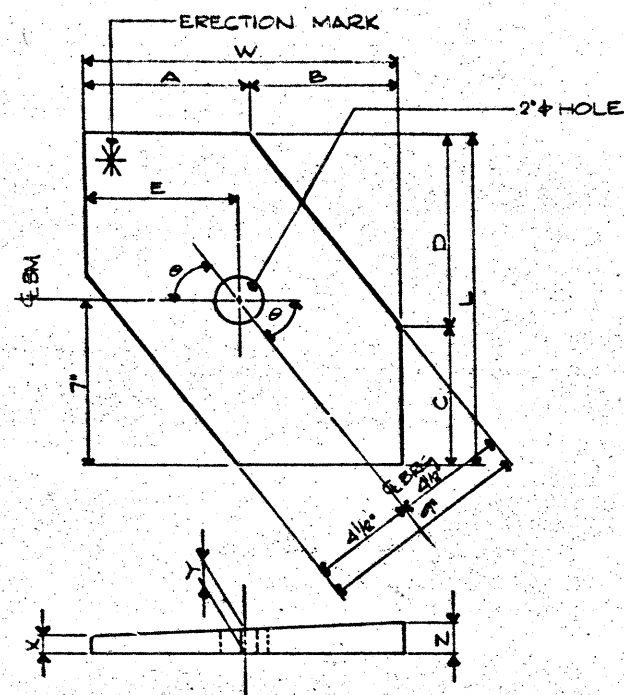
 SPAN INCORPORATED P.O. BOX 1000 DALLAS, TEXAS 75220		ERECTION PLAN	
		Title UNITS 8 AND 9 CONNECTION H	
Customer	BAILEY BRIDGE CO.		
Architect	NONE		
Engineer	TEXAS HIGHWAY DEPARTMENT		
Scale	NONE	Date	7-9-71
Drawn By	JIM YOE	Approved	
Checked By		Sheet No.	E13
Order No.	7103		



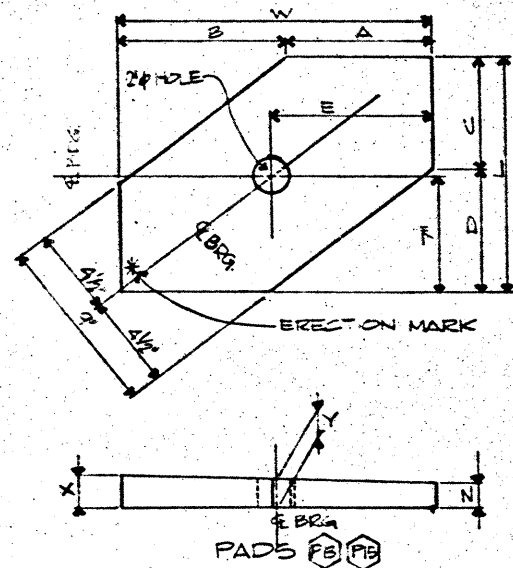
- GENERAL NOTES:
1. DIAPHRAGMS TO BE CAST IN PLACE BY OTHERS.
 2. LESS OVERLAP THAN SHOWN ON TYPICAL DETAIL IS PERMISSIBLE.
 3. BEAMS TO BE HANDLED BY LIFTING LOOPS ONLY.
 4. LIFTING LOOPS TO BE CUT TO 4 IN. ABOVE TOP OF BEAM BY OTHERS AFTER ERECTION.

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I-20-5(G)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

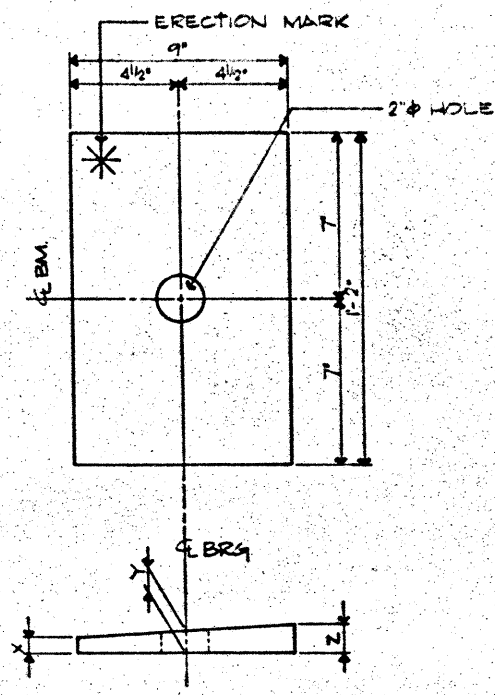
 SPAN INCORPORATED P.O. BOX 2000 DALLAS, TEXAS 75220		ERECTION PLAN	
UNIT #8 AND #10 CONNECTION H			
Customer: BAILEY BRIDGE CO.			
Architect: NONE			
Engineer: TEXAS HIGHWAY DEPARTMENT			
Scale: NONE		Date:	
Drawn By: JIM YOE (7-2-71)		Approved:	
Checked By:		Shout No.:	
Order No. 7108		E14	



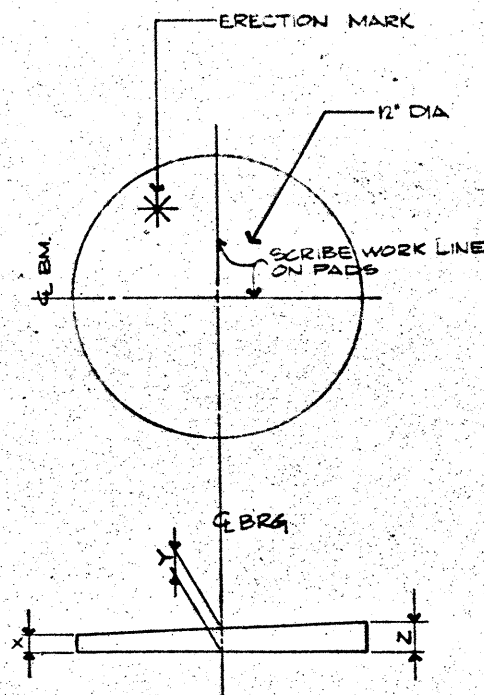
PADS P1 P3 P11 P2 P7



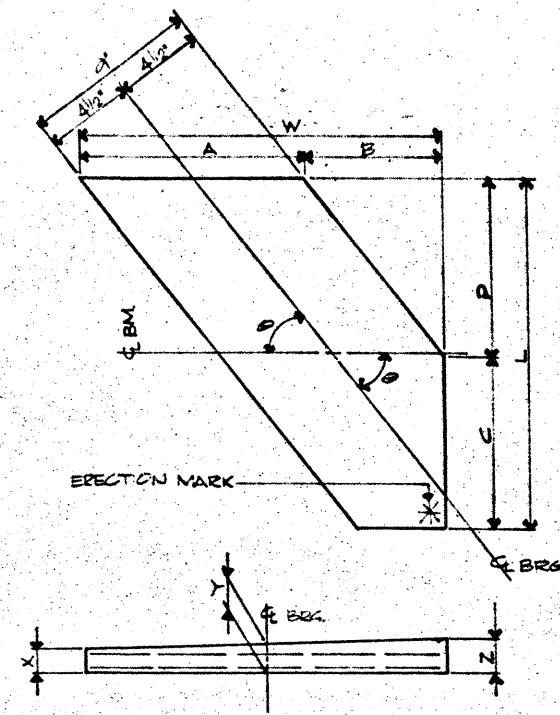
PADS P8 P9



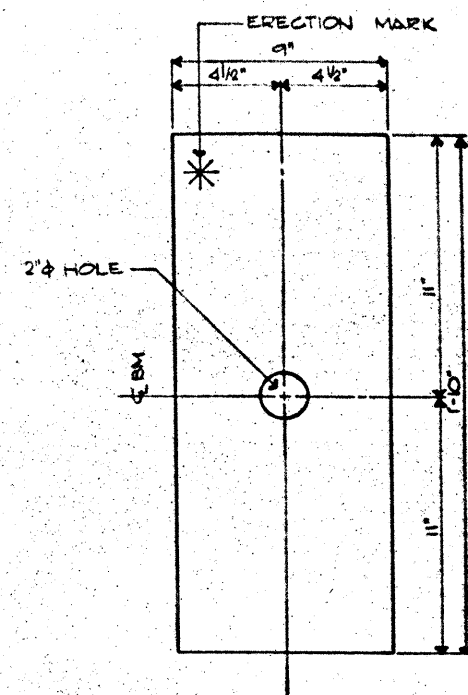
PADS P2 P6 P3 P4 P6 LAMINATED



PADS P3 P7 P6 LAMINATED



PAD P5




PAD P4

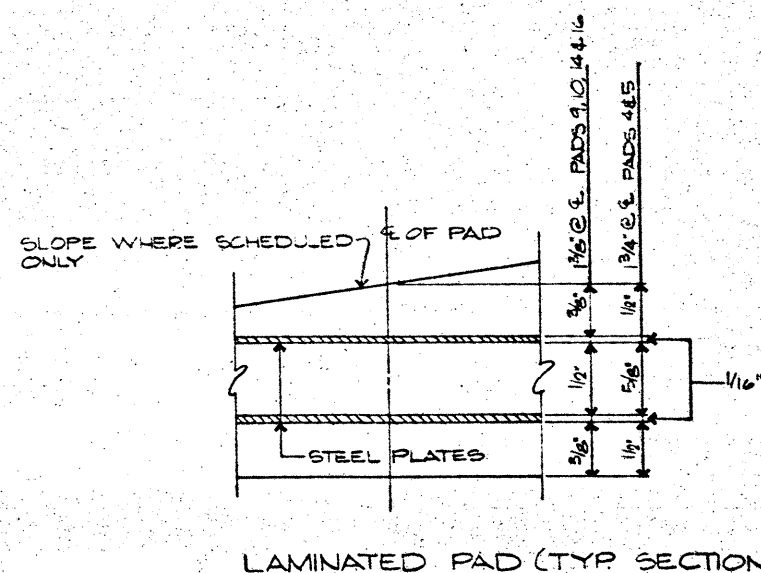
- GENERAL NOTES**
1. SEE SCHEDULE FOR LAMINATED PADS
 2. LAMINATED PADS SHALL BE FABRICATED OF TWO STEEL PLATES $\frac{1}{16}$ " THICK AND THREE LAYERS OF 60 DUROMETER NEOPRENE.
 3. PADS SHALL BE MARKED ON TOP SIDE WITH MK. NO., JOB NO., AND ERECTION MK.
 4. ALL PADS SHALL BE MANUFACTURED IN ACCORDANCE WITH T.H.D. SPECIFICATIONS

AS BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

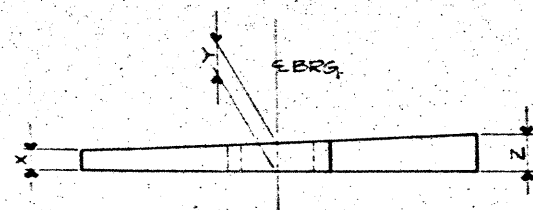
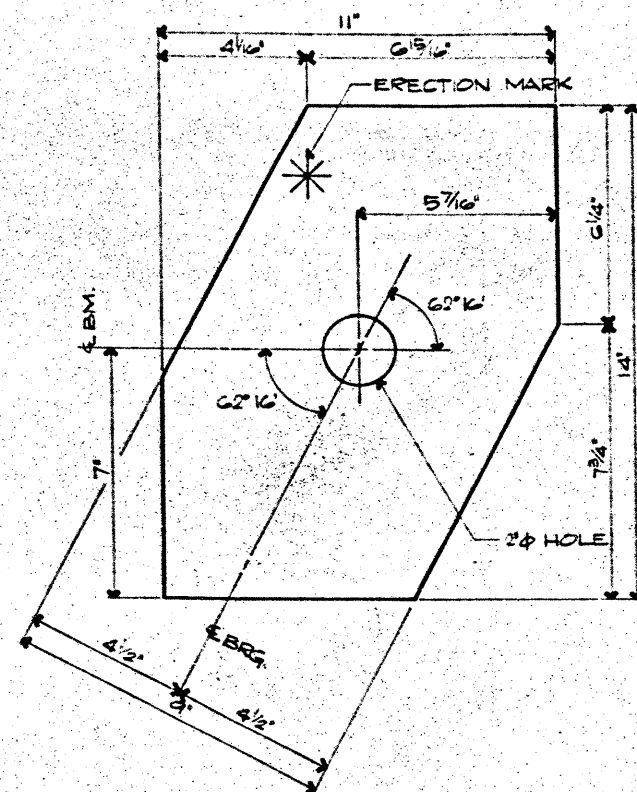
TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. ---I 20-B(61) 457
COUNTY --- DALLAS
HIGHWAY --- I.H. 20

		SPAN INCORPORATED STEEL REINFORCED CONCRETE P. O. BOX 1000 DALLAS TEXAS 75201		BEARING PADS	
Title PAD SCHEDULE					
Customer BAILEY BRIDGE CO.					
Architect NONE					
Engineer TEXAS HIGHWAY DEPARTMENT					
Scale NONE					
Drawn By J.Y. (4-1-71)			Date		
Checked By			Approved <i>T. H. D.</i>		
Order No. 7108			Sheet No.		
			B1		

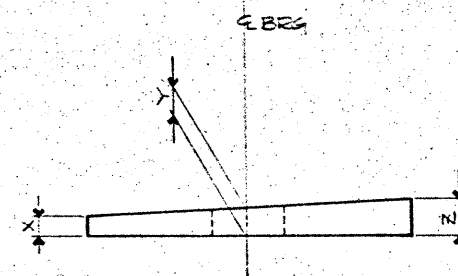
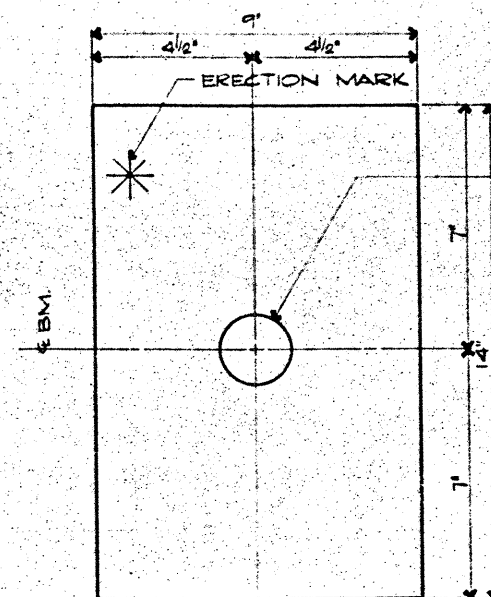
MK NO'S.		NO. REQ'D	SIZE										THICKNESS			TYPE	DUROMETER	REMARKS
			A	B	C	D	E	F	G	H	I	J	X	Y	Z			
1	12	5300	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	3/4"	3/4"	3/4"	FLAT	70	PLAIN
2	42		9" x 14"										3/4"	3/4"	3/4"	FLAT		
3	6		12" DIA										3/4"	3/4"	3/4"	FLAT		
4	24		9" x 22"										3/4"	3/4"	3/4"	FLAT	60	LAMINATED
5	2	5300	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	1 1/4"	1 1/4"	1 1/4"	SLOPED		
6	10		9" x 14"										3/4"	3/4"	3/4"	SLOPED	70	PLAIN
7	2		12" DIA										3/4"	3/4"	3/4"	SLOPED		
8	12	5300	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	6" x 6"	1 1/4"	1 1/4"	1 1/4"	SLOPED		
9	4		12" DIA										3/4"	3/4"	3/4"	FLAT	60	LAMINATED
10	44		9" x 14"										3/4"	3/4"	3/4"	FLAT		
11	18	7855	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	3/4"	3/4"	3/4"	FLAT	70	PLAIN
12	9	215	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	3/4"	3/4"	3/4"	FLAT		
13	24	735	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	3/4"	3/4"	3/4"	FLAT		
14	36		9" x 14"										1 1/4"	1 1/4"	1 1/4"	SLOPED	60	LAMINATED
15	24	6235	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	3/4"	3/4"	3/4"	SLOPED	70	PLAIN
16	108		9" x 14"										3/4"	3/4"	3/4"	FLAT	60	LAMINATED
17	9	7745	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	7" x 7"	3/4"	3/4"	3/4"	FLAT	70	PLAIN
18	2	5300	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	11" x 11"	1 1/4"	1 1/4"	1 1/4"	SLOPED	60	LAMINATED



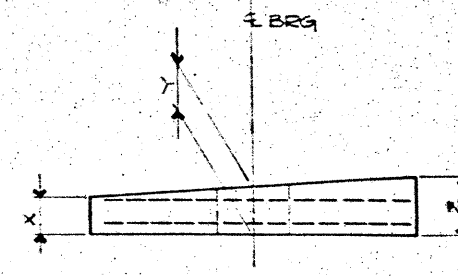
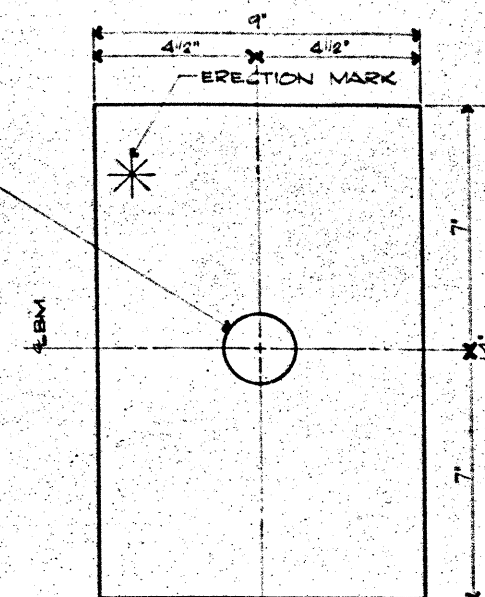
LAMINATED PAD (TYP. SECTION)



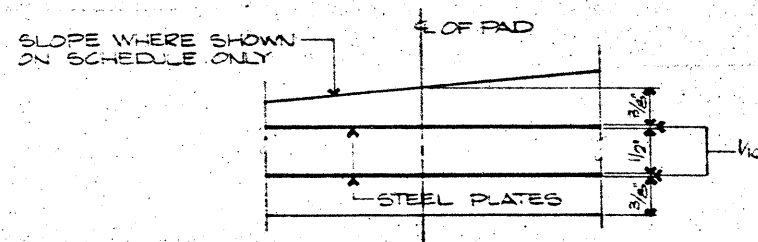
PADS P1 P2



PADS P3 P4



PADS P5 P6 (LAM.)




LAMINATED PAD
(TOP SECTION & E.O.F. PAD)

PAD SCHEDULE							
PK NO.	NO. REQD.	SIZE	THICKNESS			TYPE	DUR.
			X	Y	Z		
19	7	9" x 5 1/2"	1 1/2"	3/4"	5/8"	SLOPED	70
20	7	9" x 14"	1 1/2"	3/4"	5/8"	"	70
21	20	"	1 1/2"	3/4"	5/8"	"	60
22	20	"	1 1/2"	3/4"	5/8"	FLAT	60
23	7	"	1 1/2"	3/4"	5/8"	SLOPED	70
24	7	9" x 15 1/2"	1 1/2"	3/4"	5/8"	"	70

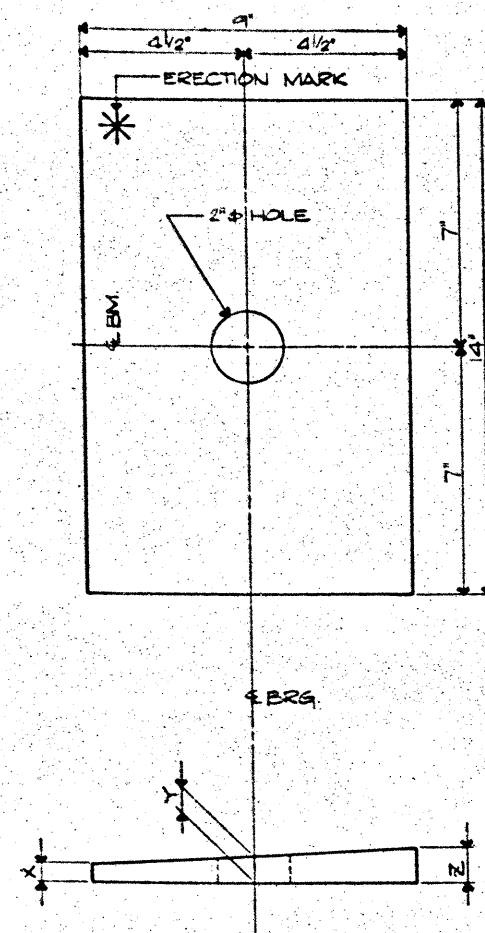
- NOTES:
1. SEE SCHEDULE FOR LAMINATED PADS.
 2. PADS SHALL BE MARKED ON TOP SIDE WITH MK. NO. JOB NO. AND ERECTION MK.
 3. ALL PADS SHALL BE MANUFACTURED IN ACCORDANCE WITH T.H.D. SPECIFICATIONS.

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. --- 120-5(61)457
COUNTY --- DALLAS
HIGHWAY NO. --- I.H. 20

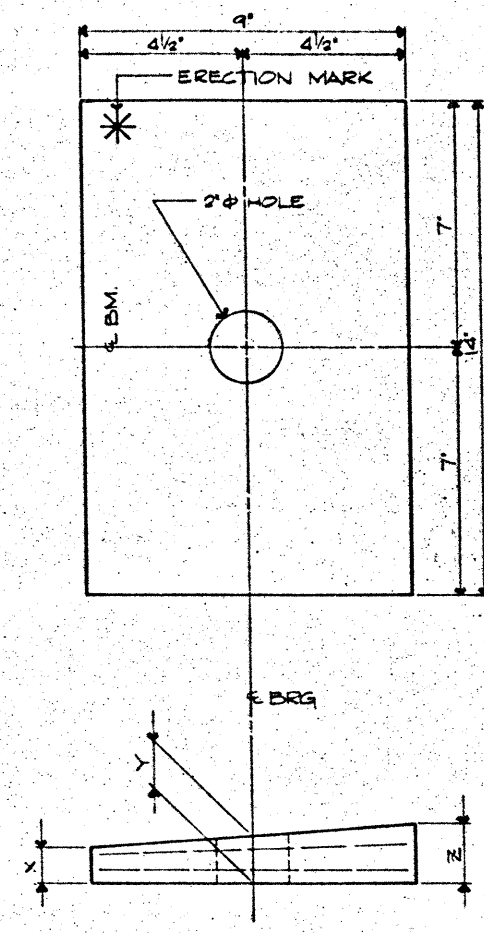
 SPAN INCORPORATED P.O. BOX 1000 DALLAS, TEXAS 75200		BEARING PADS	
		Title PAD DETAILS OLD HICKORY TRAIL RD UNDERPASS	
Customer	BAILEY BRIDGE CO		
Architect	NONE		
Engineer	TEXAS HIGHWAY DEPARTMENT		
Scale	NONE	Date	
Drawn By	JY (6-7-71)	Approved	T. J. J. J.
Checked By		Sheet No.	B2
Order No.	704		

821

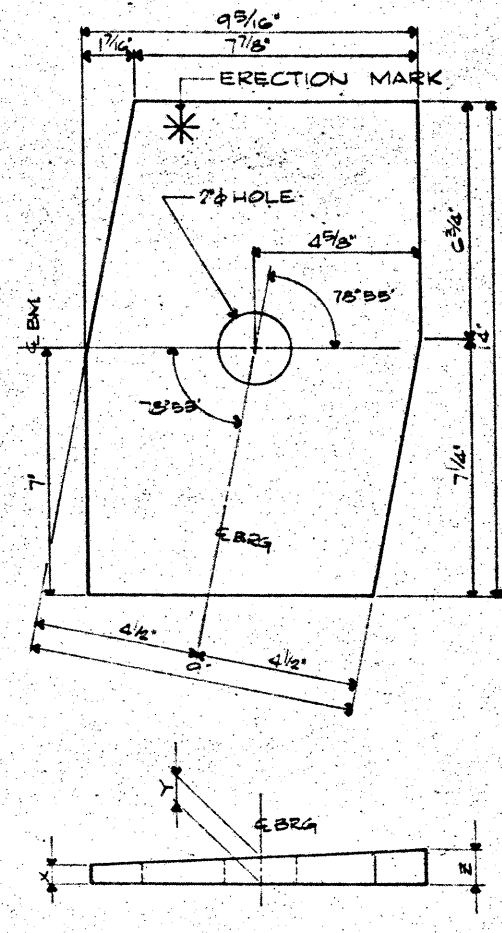
SPAN INDUSTRIES, INC.



PADS P25 P26 P30

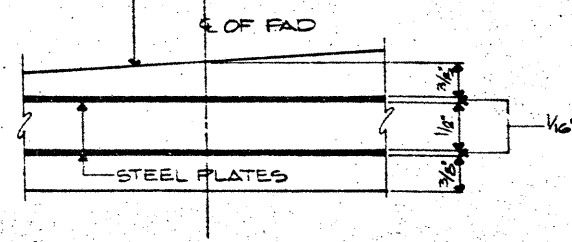


PADS P26 P27 (LAM.) P31



PADS P29 P32

SLOPE AS SHOWN ON SCHEDULE ONLY



LAMINATED PAD
(TYP SECTION & C OF PAD)

PAD SCHEDULE									
MARK NO	Q REQD	SIZE	THICKNESS			TYPE	DURO.		REMARKS
			X	Y	Z				
P25	24	9" x 14"	3/8"	3/4"	7/8"	SLOPED	70		PLAIN
P26	28	9" x 14"	1 1/8"	1 3/8"	1 1/2"	SLOPED	60		LAMINATED
P27	28	9" x 14"	1 3/8"	1 3/8"	1 3/8"	FLAT	60		LAMINATED
P28	24	9" x 14"	1 1/8"	3/4"	3/4"	SLOPED	70		PLAIN
P29	12	9" x 14 1/4"	3/8"	3/4"	7/8"	SLOPED	70		PLAIN
P30	12	9" x 14"	3/8"	3/4"	7/8"	SLOPED	70		PLAIN
P31	28	9" x 14"	1 1/8"	1 3/8"	1 1/2"	SLOPED	60		LAMINATED
P32	12	9" x 14 1/4"	3/8"	3/4"	7/8"	SLOPED	70		PLAIN

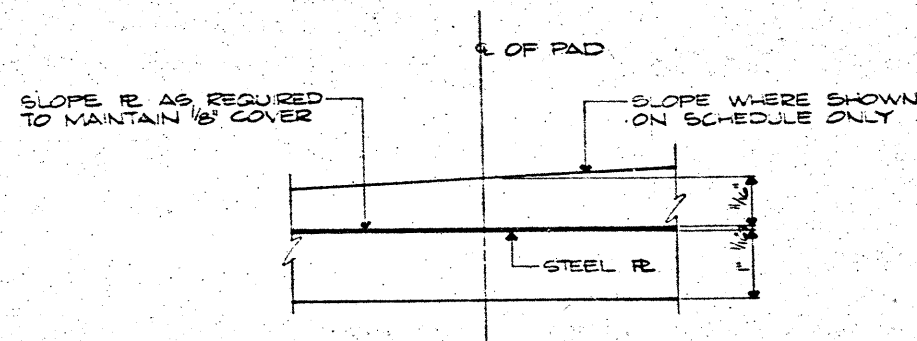
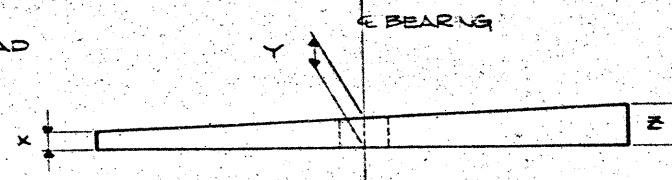
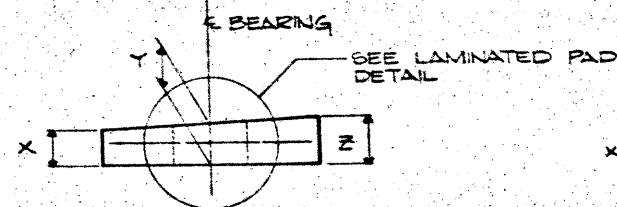
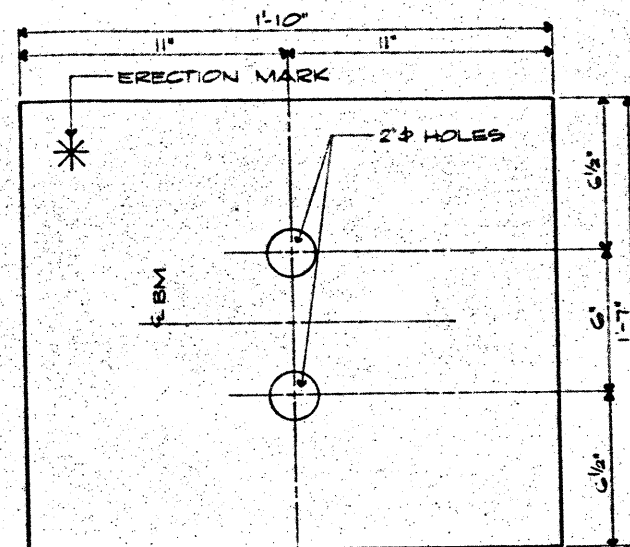
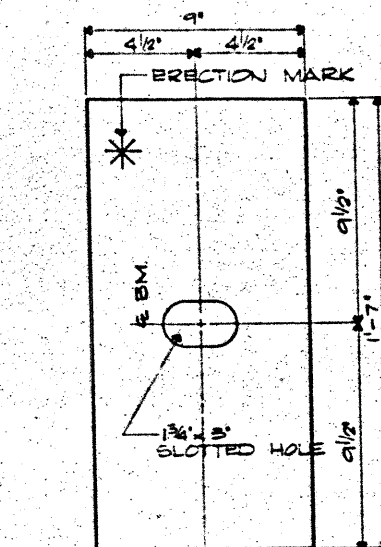
- NOTES:
1. SEE SCHEDULE FOR LAMINATED PADS.
 2. PADS SHALL BE MARKED ON TOP SIDE WITH MK. NO., JOB NO. AND ERECTION MK.
 3. ALL PADS SHALL BE MADE IN ACCORDANCE WITH T.H.D. SPECIFICATIONS.

AS BUILT
DRAWING
FEB 6 913
SPAN INDUSTRIES, INC.

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TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. --- I-20-5(61)457
COUNTY --- DALLAS
HIGHWAY NO. --- I.H. 20

SPAN INCORPORATED P.O. BOX 20281 DALLAS TEXAS 75220		BEARING PADS	
		Title: PAD DETAILS WESTMORELAND ROAD SOUTH FOLK STREET	
Customer	BAILEY BRIDGE CO.		
Architect	NONE		
Engineer	TEXAS HIGHWAY DEPARTMENT		
Scale	NONE	Date	
Drawn By	J.Y.	(6-13-71)	Approved: <i>[Signature]</i>
Checked By			Sheet No.
Order No.	7103		83



LAMINATED PAD
(TYP. SECTION & E OF PAD)

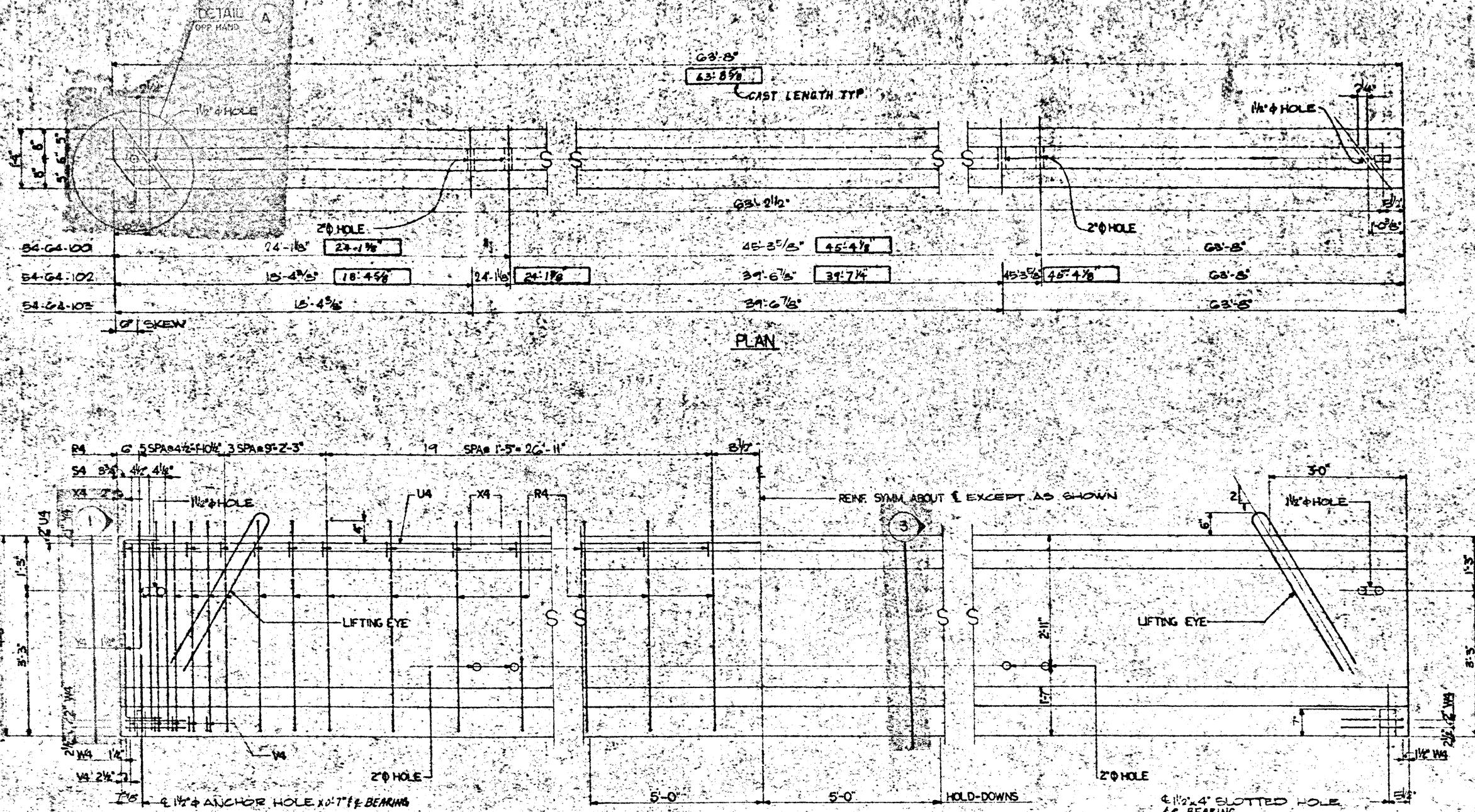
MARK NO.	NO. REQD.	SIZE	THICKNESS			TYPE	DUR.	REMARKS
			X	Y	Z			
P 33	13	9" x 1-7"	1 1/2"	1 3/4"	1 7/8"	SLOPED	60	LAMINATED
P 34	12	1-0" x 1-7"	1 1/2"	1 3/4"	1 7/8"		70	PLAIN
P 35	9	1-0" x 1-7"	1 1/2"	1 3/4"	1 7/8"		60	
P 36	12	9" x 1-7"	1 1/2"	1 3/4"	1 7/8"	FLAT	60	LAMINATED
P 37	15		1 1/2"	1 3/4"	1 7/8"	SLOPED	60	
P 38	3	1-0" x 1-7"	1 1/2"	1 3/4"	1 7/8"		70	PLAIN
P 39	3		1 1/2"	1 3/4"	1 7/8"			
P 40	12		1 1/2"	1 3/4"	1 7/8"			
P 41	21	9" x 1-7"	1 1/2"	1 3/4"	1 7/8"		60	LAMINATED
P 42	13	1-0" x 1-7"	1 1/2"	1 3/4"	1 7/8"		70	PLAIN
P 43	3		1 1/2"	1 3/4"	1 7/8"			
P 44	15		1 1/2"	1 3/4"	1 7/8"			
P 45	33		1 1/2"	1 3/4"	1 7/8"			
P 46	30	9" x 1-7"	1 1/2"	1 3/4"	2"		60	LAMINATED
P 47	12	1-0" x 1-7"	1 1/2"	1 3/4"	1 7/8"		70	PLAIN

- NOTES:
- SEE SCHEDULE FOR LAMINATED PADS.
 - PADS SHALL BE MARKED ON TOP SIDE WITH MK NO., JOB NO. AND ERECTION MK.
 - ALL PADS TO BE MANUFACTURED IN ACCORDANCE WITH T.H.D. SPECIFICATIONS.

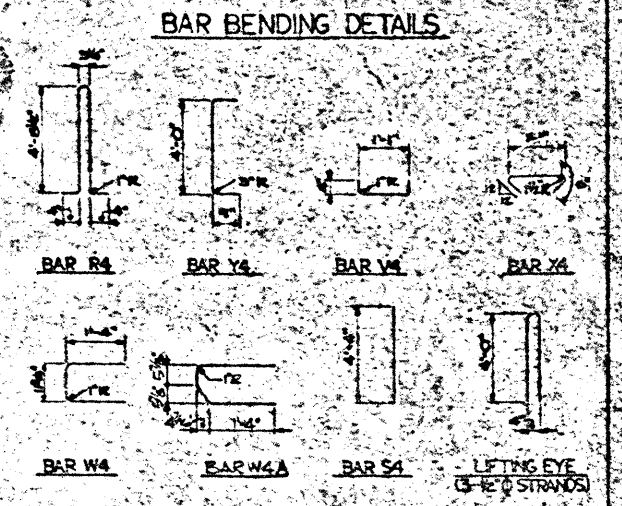
§ 23

REV. 1-26-72 BY CHANGE QUANTITIES
 TEXAS HIGHWAY DEPARTMENT
 FED. AID PROJECT NO. --- I-20-5(61)457
 COUNTY --- DALLAS
 HIGHWAY NO. --- I.H. 20

SPAN <small>INCORPORATED 1947 1100 N. GILBERT ST. DALLAS, TEXAS 75201</small>		BEARING PADS
Title PAD DETAILS CONNECTIONS E THRU H I.H. 20-U.S. 67 INTERCHANGE		
Customer BAILEY BRIDGE CO.		
Architect NONE		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE	Date	
Drawn By JIM YOE (7-13-71)		Approved
Checked By		Sheet No.
Order No. 708		Page E-4



BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-G4-100 54-G4-102 54-G4-103	R4	2	#4	10'-5"	553	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	6'-3"	146	
	V4	18	#6	1'-9"	12	
	W4	2	#5	3'-8"	3	
	X4	2	#4	1'-10"	68	
	Y4	4	#5	5'-6"	33	
	W4A	2	#5	4'-5"	3	
	Y4A	1	#4	1'-1"	1	
	X4A	1	#4	2'-0"	1	
TOTAL					759	



- GENERAL NOTES**
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
 2. REINFORCING—ASTM A65-40.
 3. U-BARS INCLUDE 1'-0" MINIMUM LAP, BARS OVER 60'-0".
 4. SPACING TOLERANCE OF $\pm 1\frac{1}{4}"$ FOR R BARS.
 5. $1\frac{1}{2}" \times 4"$ SLOTTED HOLE MAY BE TAPERED TO $1\frac{1}{8}" \times 4\frac{1}{2}"$ AT BASE.
 6. V BARS MAY BE TILTED THUS AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
 7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
 8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
 9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY ($\frac{1}{4}"$).
 10. INITIAL PULL OF 2000 LBS. PER STRAND.
 11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT

FED. AID PROJECT NO. 120-5(6)1457

COUNTY DALLAS

HIGHWAY NO. I-420

54' BEAM DETAIL

54-G4-100

54-G4-102

54-G4-103

CAMP WISDOM ROAD OVERPASS

Customer BAILEY BRIDGE CO.

Engineer TEXAS HIGHWAY DEPARTMENT

Scale NONE

Drawn By JY (3-31-71)

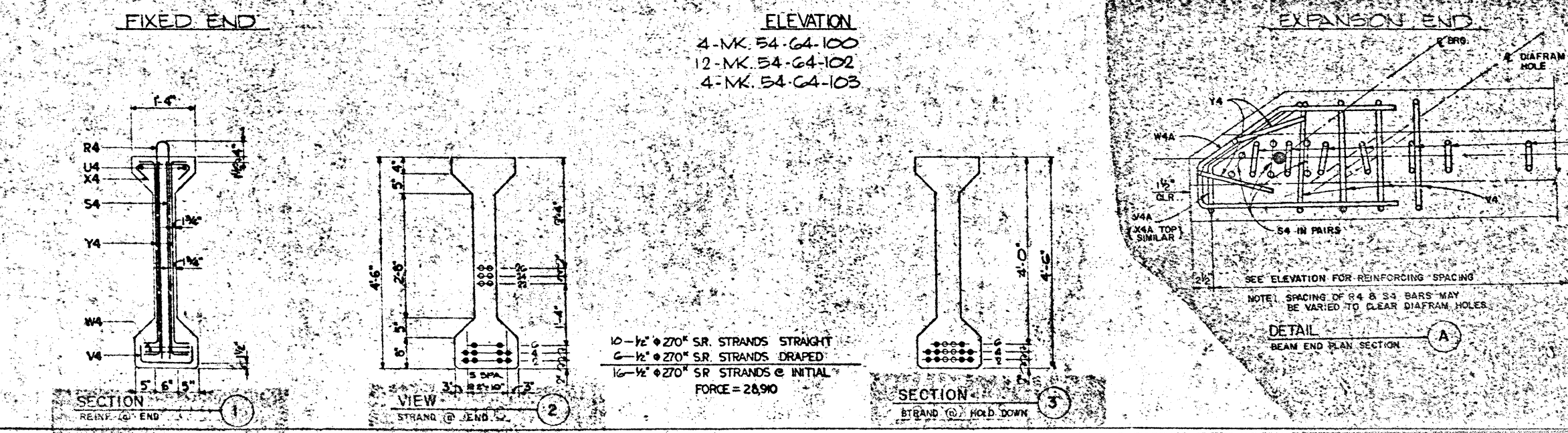
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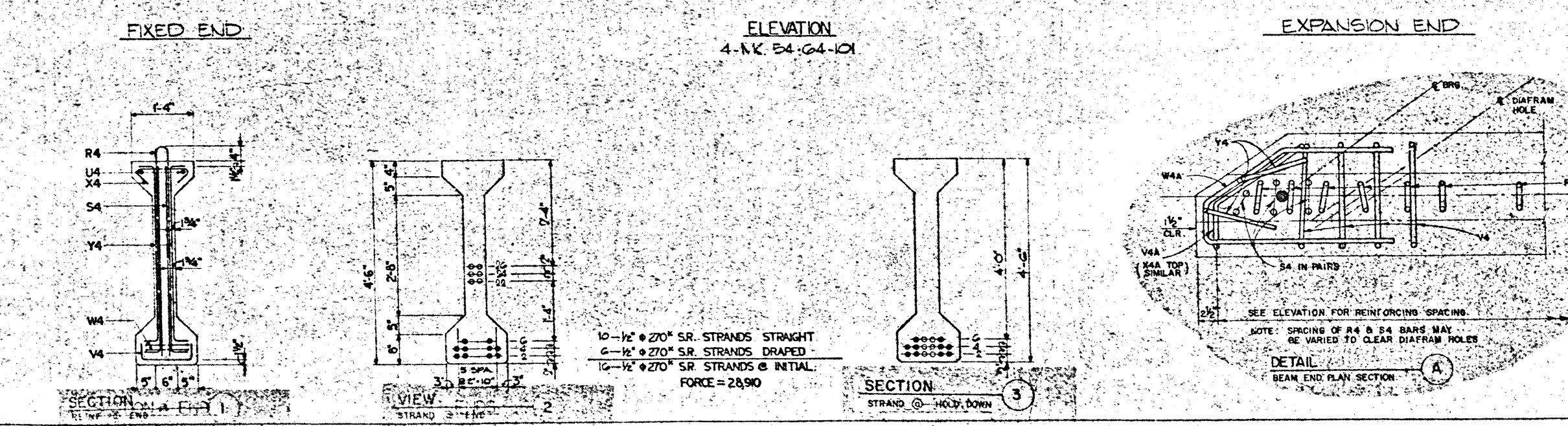
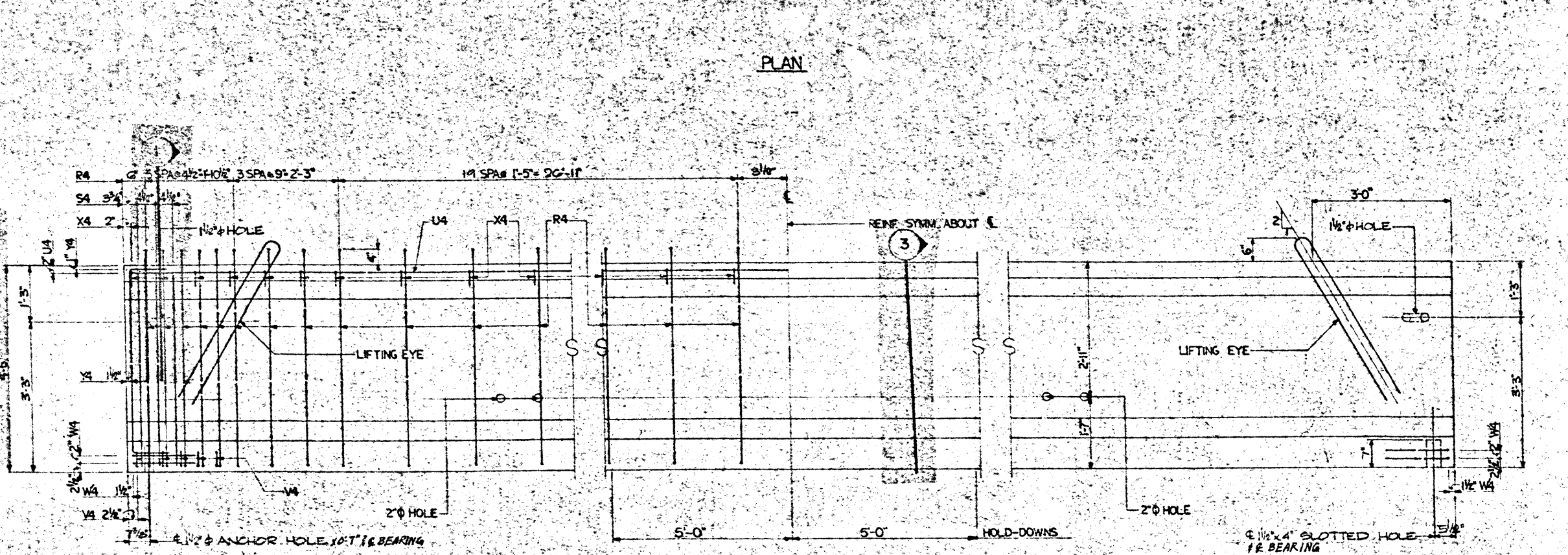
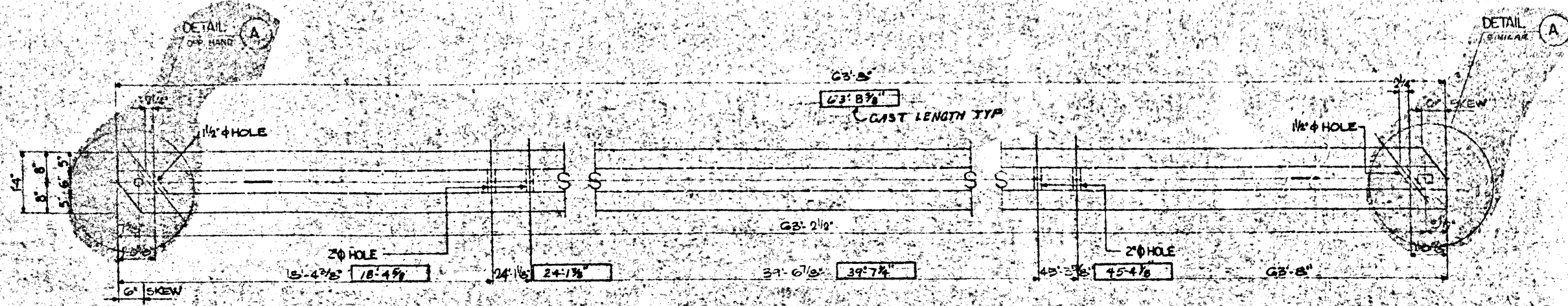
Order No. 105

Date

Approved

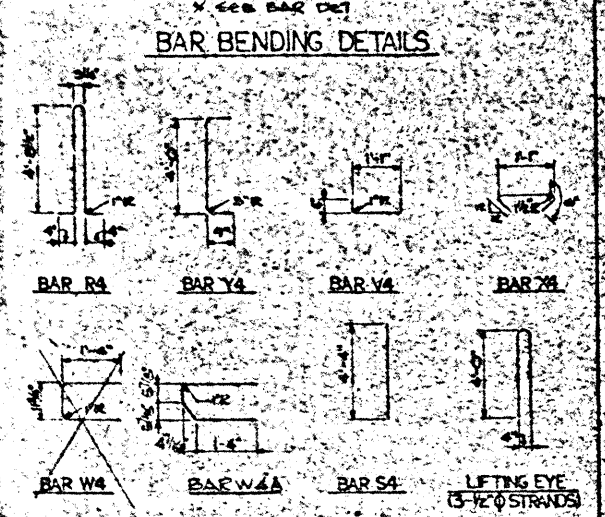
Sheet No. FI





BILL OF REINFORCING STEEL PER BEAM

BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-G4-101	R4	50	#4	10'-3"	353	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	65'-3"	116	
	V4	18	#4	1'-9"	12	
	W4	50	#4	3'-8"	64	
	X4	4	#6	5'-6"	33	
	Y4	4	#5	4'-5"	15	
	V4A	4	#4	2'-0"	2	
	X4A	4	#4	2'-1"	2	
	TOTAL				760	



- GENERAL NOTES**
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
 2. REINFORCING—ASTM A615-40.
 3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0".
 4. SPACING TOLERANCE OF $\pm 1/4"$ FOR R BARS.
 5. $1/2" \times 4"$ SLOTTED HOLE MAY BE TAPERED TO $1/4" \times 4"$ AT BASE.
 6. V BARS MAY BE TILTED THUS AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
 7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
 8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF $1/2"$ AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
 9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY ($3/4"$).
 10. INITIAL PULL OF 2000 LBS. PER STRAND.
 11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

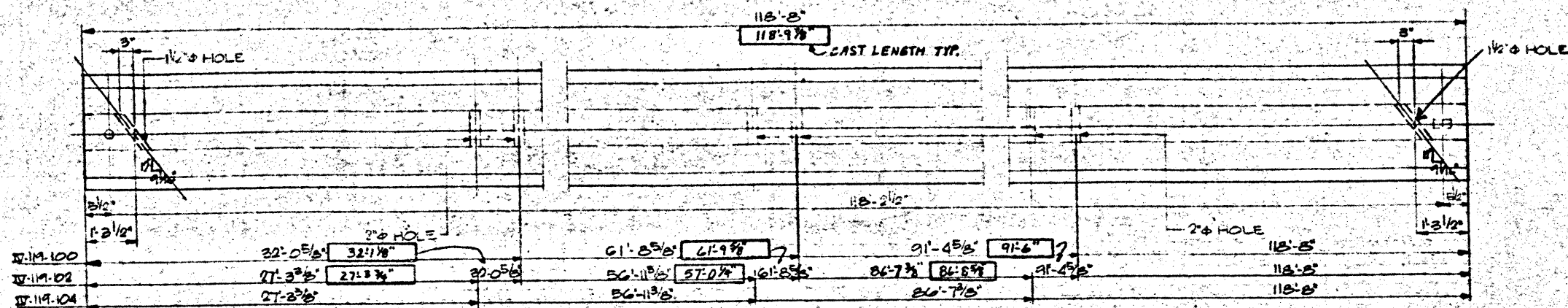
TEXAS HIGHWAY DEPARTMENT
 FED AID PROJECT NO. I-20-B(61)457
 COUNTY DALLAS
 HIGHWAY NO. I-10

SPAN
 INCORPORATED
 1100 N. GILBERT ST.
 DALLAS, TEXAS 75202

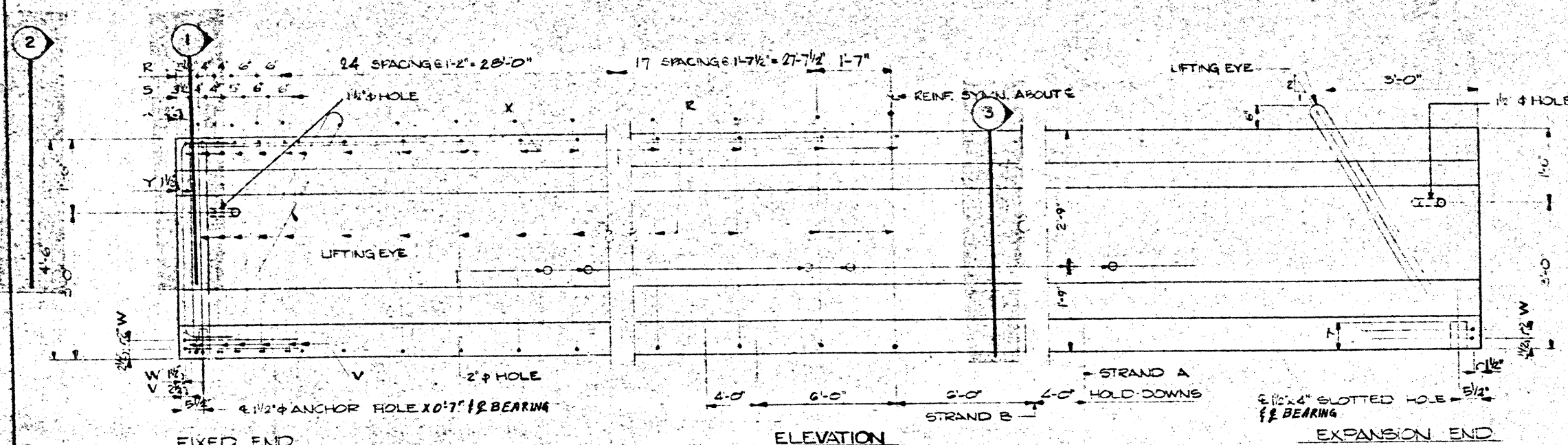
54' BEAM DETAIL
 54-G4-101

Title: CAMP WISDOM ROAD OVERPASS
 Customer: BAILEY BRIDGE CO.
 Engineer: TEXAS HIGHWAY DEPARTMENT
 Scale: NONE
 Drawn By: JY. (3-31-71)
 Checked By: [Signature]
 Order No. 708

Date: [Signature]
 Sheet No. F2

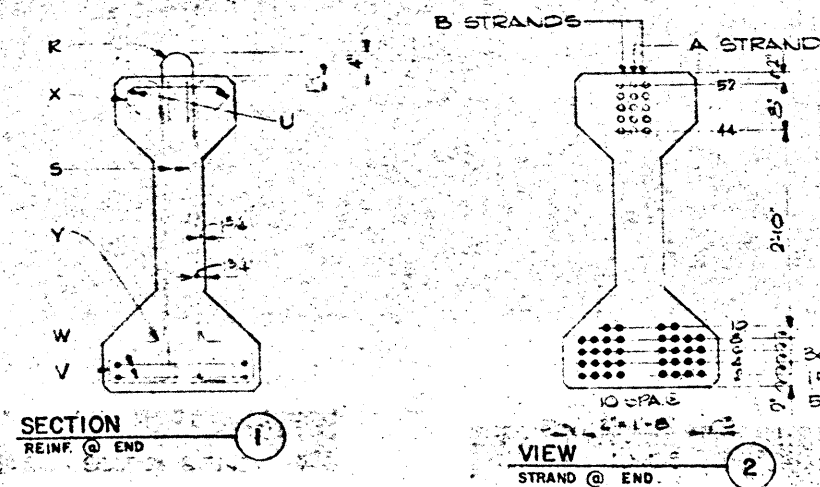


PLAN



ELEVATION

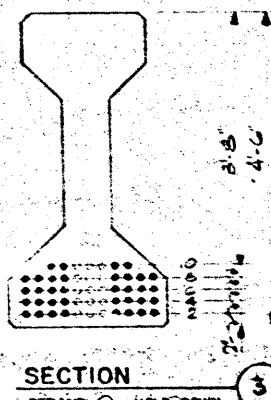
1-MK-IV-119-100
3-MK-IV-119-102
1-MK-IV-119-104



SECTION
REIN. @ END

VIEW

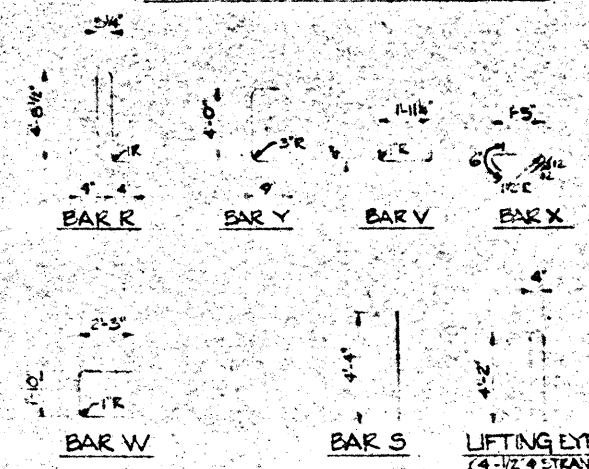
STRAND @ END



SECTION
STRAND @ HOLD-DOWN

BILL OF REINFORCING STEEL PER BM						
BEAM MARK	BAR MARK	NO. REQ'D	SIZE	LENGTH	WEIGHT	SPACING
IV-119-100 IV-119-102 IV-119-104	R	93	#4	10'-4"	642	SHOWN
	S	20	#7	4'-4"	177	
	U	2	#5	10'-5"	208	
	V	14	#4	2'-7"	24	
	W	4	#4	6'-4"	17	
	X	37	#4	2'-2"	129	
	Y	4	#6	5'-6"	59	
TOTAL					1230	

BAR BENDING DETAILS



GENERAL NOTES

1. CONCRETE TO BE CLASS H. SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING - A STM. A615-40 EXCEPT R&V BARS (GRADE 60 STEEL) A STM. A615-60.
3. U BARS INCLUDE 1'-0" MINIMUM LAP.
4. SPACING TOLERANCE OF $\pm 1/4"$ FOR R BARS.
5. $1 1/2" \times 4"$ SLOTTED HOLE MAY BE TAPERED TO $1 3/8" \times 4 3/4"$ AT BASE.
6. V BAR MAY BE TILTED THUS V AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS ALL STRAND AT SAME ELEVATION.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1' AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COATING OF EPOXY.
9. CHAMFER ENDS ($3/4"$).
10. INITIAL PULL OF 2000 LBS PER STRAND.

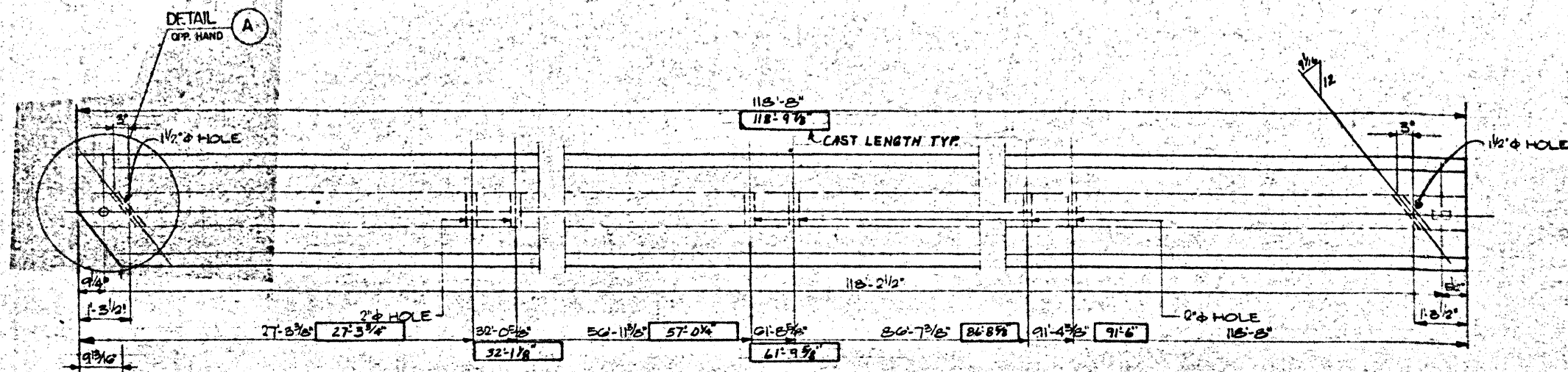
26

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DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

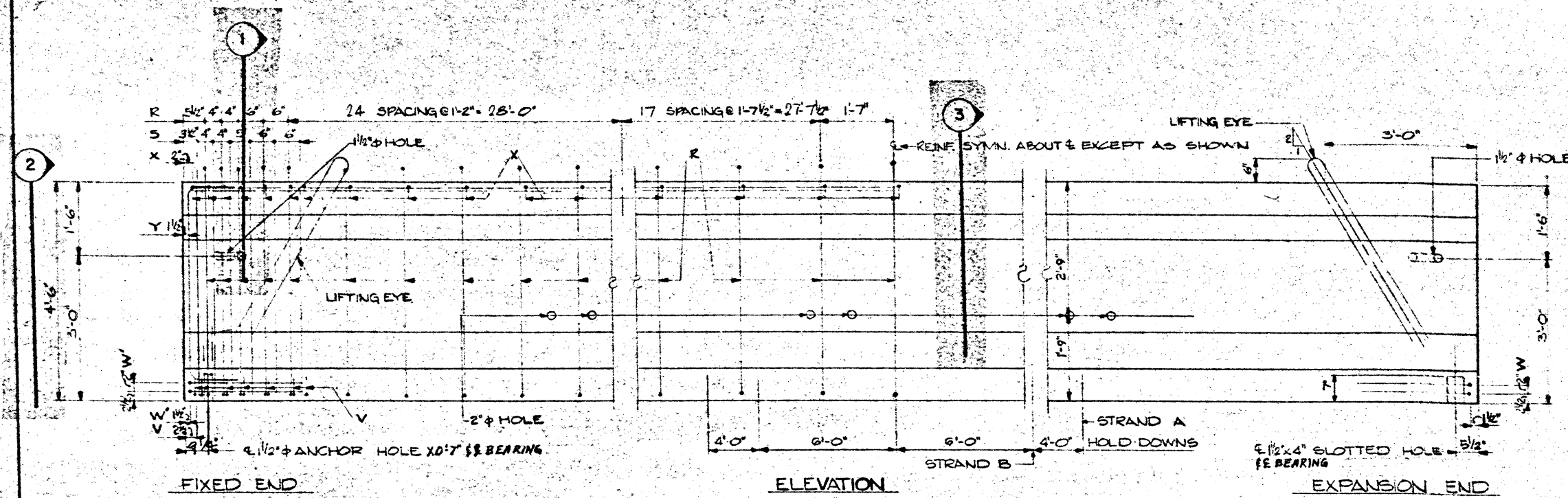
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. -- I-20-B(61) 457
COUNTY -- DALLAS
HIGHWAY NO. -- I.H.-20

Title		Type IV Beam Detail	
CAMP WISDOM ROAD CR		IV-119-100, IV-119-102 IV-119-104	
Customer: BAILEY BRIDGE CO.		Architect: NONE	
Engineer: TEXAS HIGHWAY DEPARTMENT		Scale: NONE	
Drawn By: JY (4-9-70)		Date: 7-1-70	
Checked By:		Approved: T. J. J.	
Order No. 7108		Sheet No. F3	





PLAN

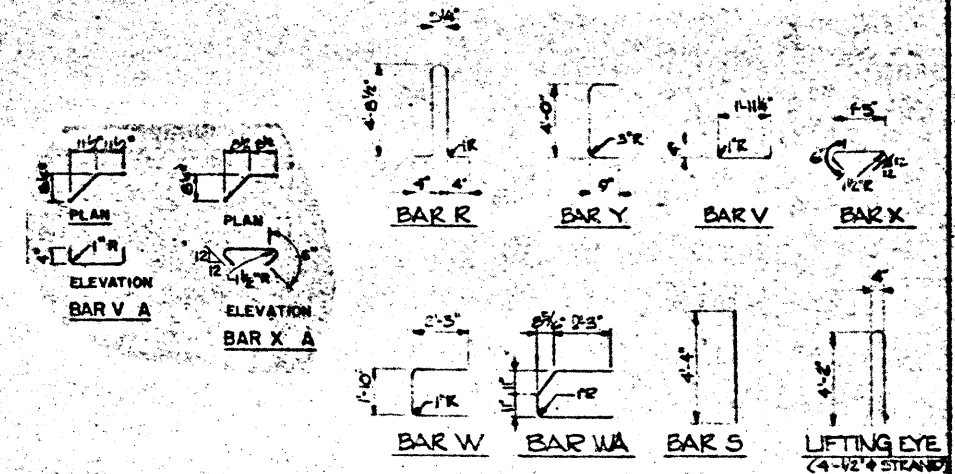


ELEVATION
I-MK IV-119-101

EXPANSION END

BILL OF REINFORCING STEEL PER BM						
BEAM MARK	BAR MARK	NO. REQ'D	SIZE	LENGTH	WEIGHT	SPACING
IV-119-101	*R	23	#4	10'-4"	242	SHOWN
	S	20	#7	4'-4"	177	
	U	2	#5	120'-3	208	
	*V	13	#4	2'-7"	22	
	W	2	#4	6'-4"	5	
	X	88	#4	2'-2"	127	
	Y	4	#6	3'-6"	33	
	WA	2	#4	7'-9"	10	
	*VA	1	#2	2'-4"	2	
	XA	1	#4	2'-4"	2	
TOTAL				1231		

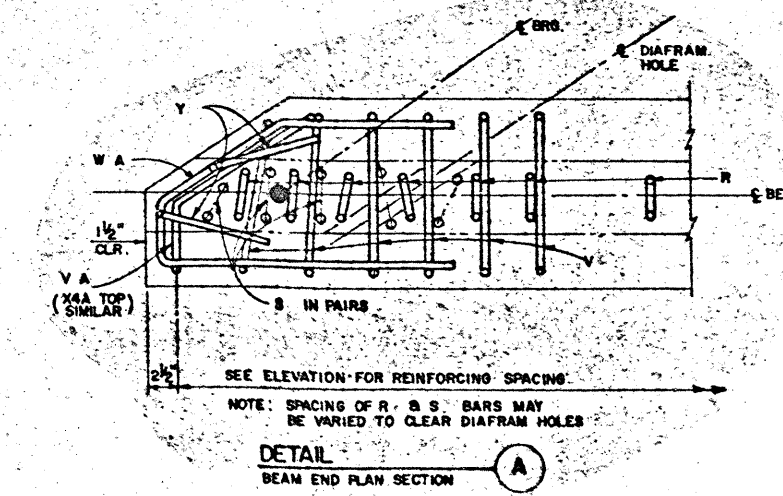
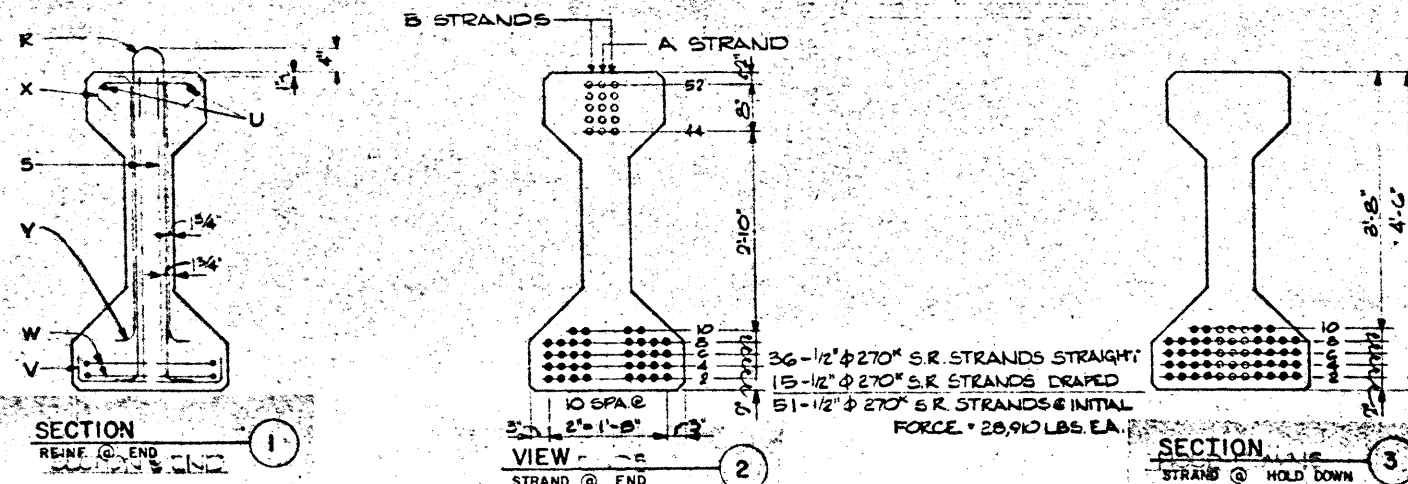
BAR BENDING DETAILS



GENERAL NOTES

1. CONCRETE TO BE CLASS H. SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING—A.S.T.M. A615-40 EXCEPT R&V BARS (GRADE 60 STEEL) A.S.T.M. A615-60.
3. U BARS INCLUDE 140" MINIMUM LAP.
4. SPACING TOLERANCE OF $\pm 1/4$ " FOR R BARS.
5. 1 1/2" x 4" SLOTTED HOLE MAY BE TAPERED TO 1 3/8" x 4 3/8" AT BASE.
6. V BAR MAY BE TILTED THUS V AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS ALL STRAND AT SAME ELEVATION.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1' AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COATING OF EPOXY.
9. CHAMFER ENDS (3/4").
10. INITIAL PULL OF 2000 LBS PER STRAND.

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SPAN INDUSTRIES, INC.



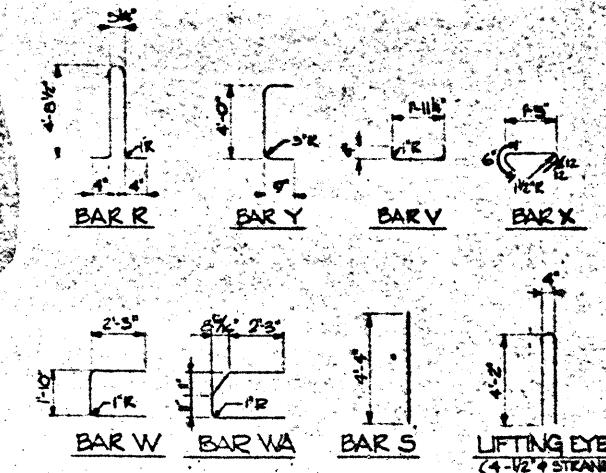
TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I 20-5(61) 457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

		TYPE IV BEAM DETAIL MK-IV-119-101	
CAMP WISDOM ROAD OP			
Customer: BAILEY BRIDGE CO.			
Architect: NONE			
Engineer: TEXAS HIGHWAY DEPARTMENT			
Scale: NONE		Date:	
Drawn By: JY (4-9-71)		Approved: T. J. [Signature]	
Checked By:		Sheet No. F4	
Order No. 7108			

REVISED 7/19/71 CORRECTED PER TID:

BILL OF REINFORCING STEEL PER BM.						
BEAM MARK	BAR MARK	NO. REQ'D	SIZE	LENGTH	WEIGHT	SPACING
IX-119-103	R	25	#4	10'-4"	242	SHOWN
	S	20	#7	4'-4"	177	
	U	2	#5	120'-3"	205	
	V	13	#4	2'-7"	22	
	W	2	#4	6'-4"	5	
	X	8	#4	2'-2"	127	
	Y	4	#6	5'-6"	33	
	WA	2	#4	7'-4"	10	
	VA	1	#4	2'-9"	2	
	XA	1	#4	2'-4"	2	
TOTAL					1231	

BAR BENDING DETAILS




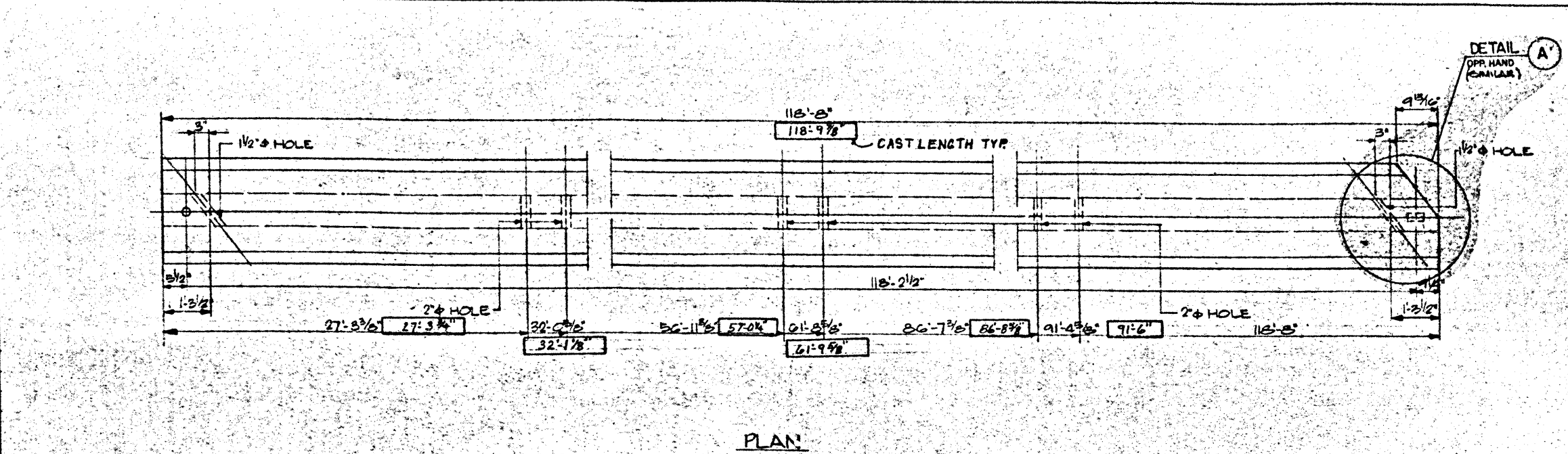
GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING—A.S.T.M. A615-40 EXCEPT R&V BARS (GRADE 60 STEEL) A.S.T.M. A615-60.
3. U BARS INCLUDE 1'-10" MINIMUM LAP.
4. SPACING TOLERANCE OF $\pm 1/4"$ FOR R BARS.
5. $1 1/2" \times 4"$ SLOTTED HOLE MAY BE TAPERED TO $1 3/8" \times 4 3/4"$ AT BASE.
6. V BAR MAY BE TILTED THUS V AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND L OPS FOR HANDLING OF BEAMS ALL STRAND AT SAME ELEVATION.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1' AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COATING OF EPOXY.
9. CHAMFER ENDS ($3/4"$).
10. INITIAL PULL OF 2000 LBS. PER STRAND.

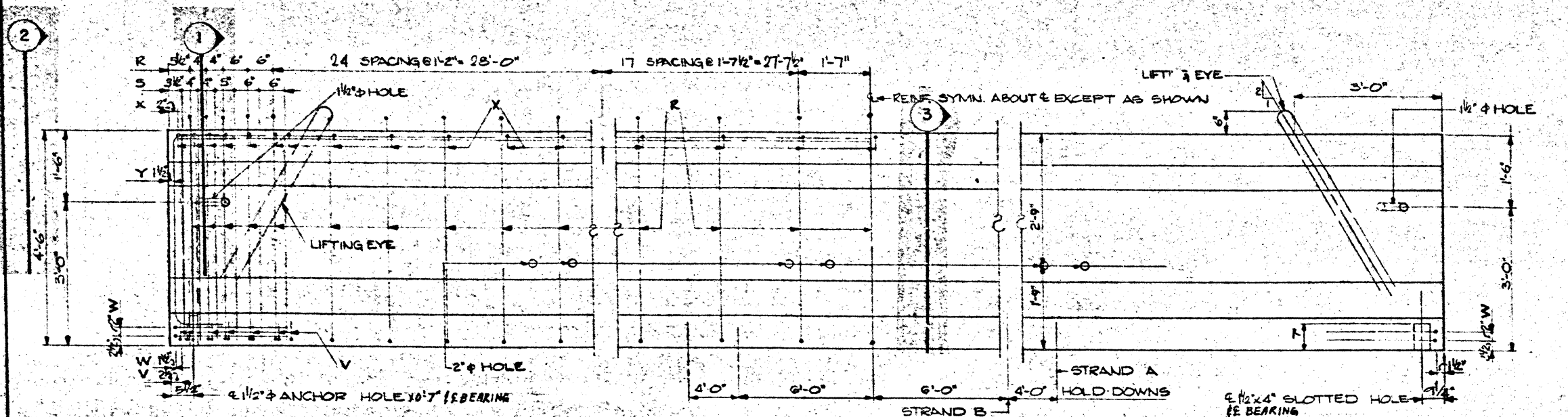
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TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. — I 20-5(61) 497
COUNTY — DALLAS
HIGHWAY NO. — I.H. 20

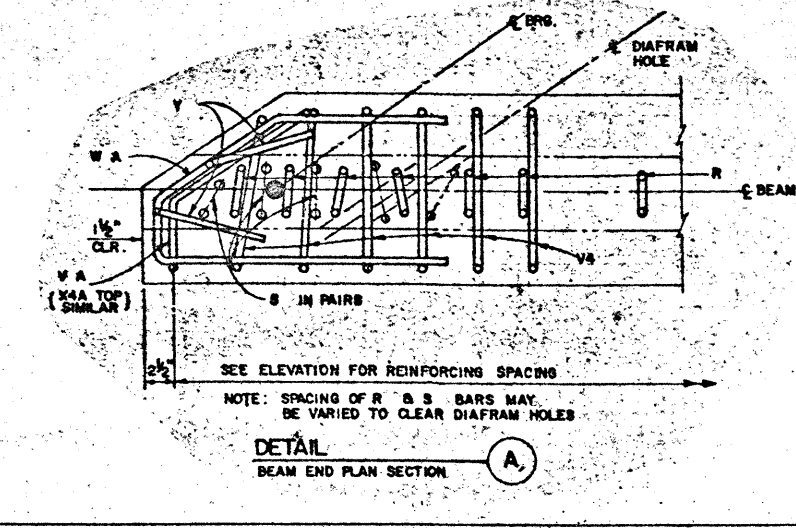
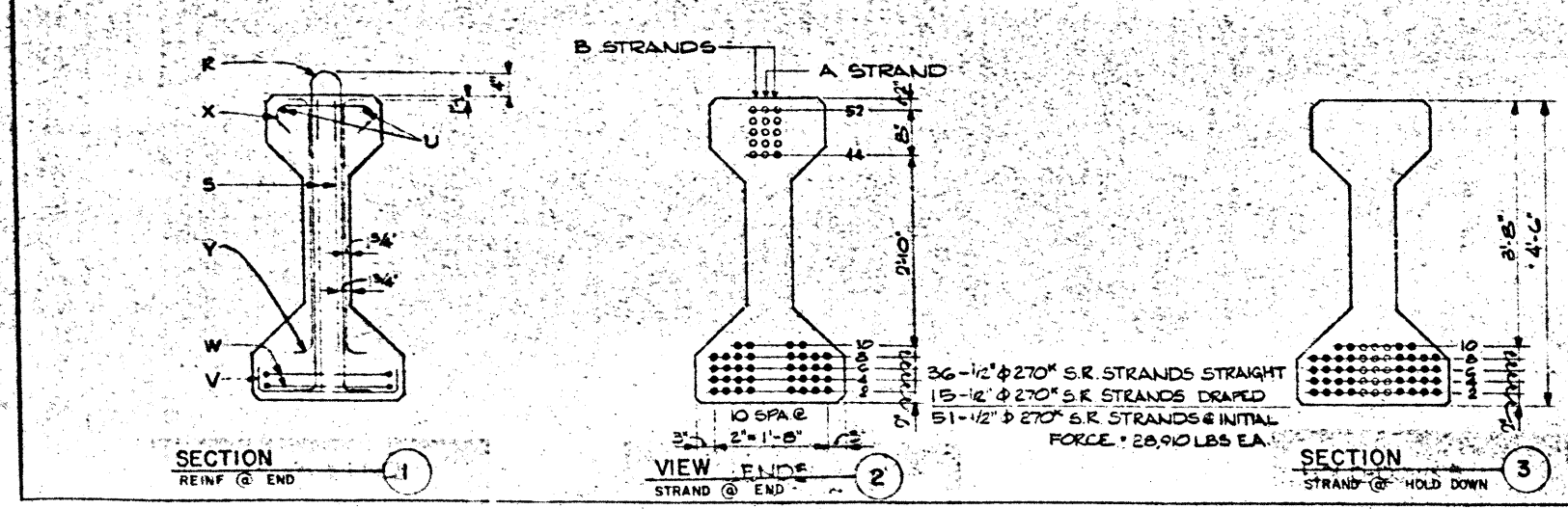
 SPAN INCORPORATED P.O. BOX 28007 DALLAS, TEXAS 75228	TYPE IV BEAM DETAIL IX-119-103	
	Title CAMP WISDOM ROAD OP	
Customer BAILEY BRIDGE CO.		
Architect NONE		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE		
Drawn By JY (4-9-71)		Date
Checked By 		Approved
Order No. 7108		Sheet No. FB



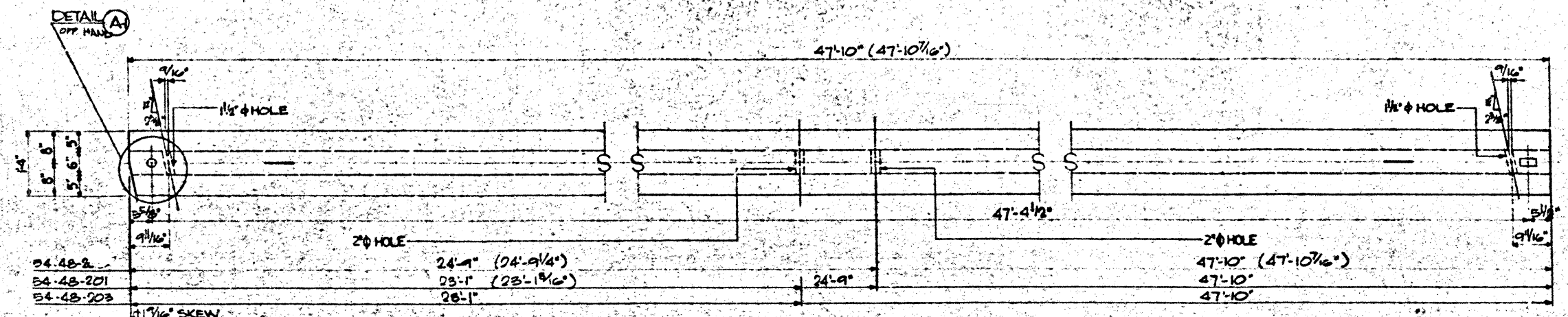
PLAN



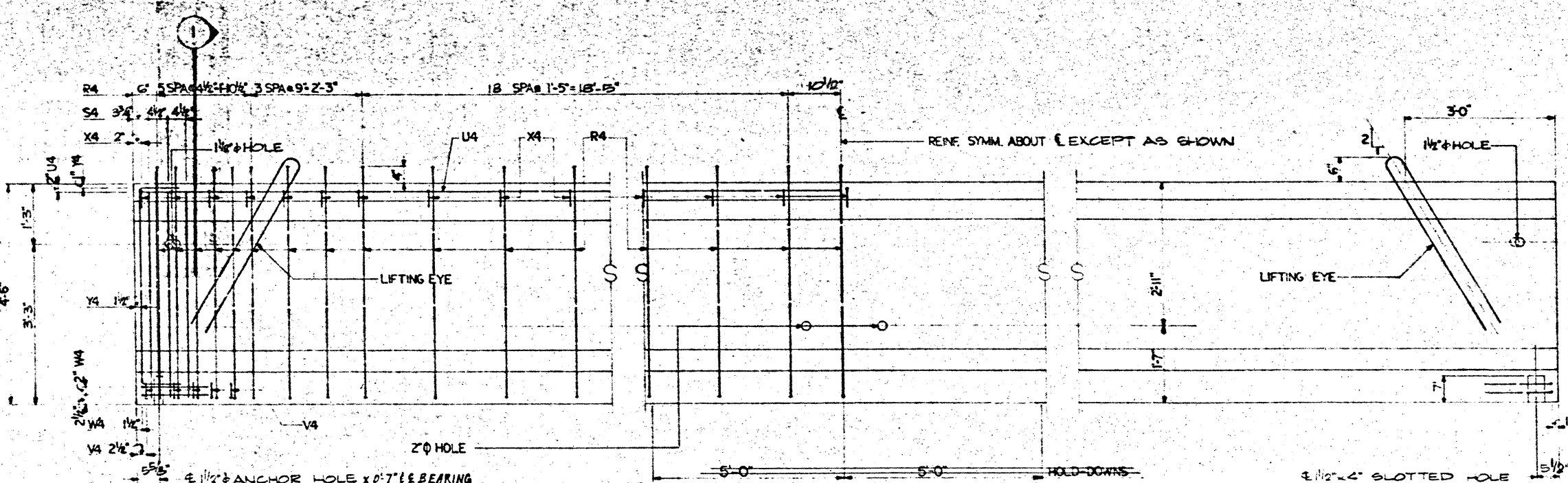
ELEVATION
I-MK IX-119-103



DETAIL
BEAM END PLAN SECTION
A



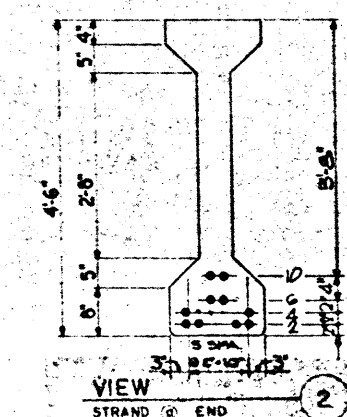
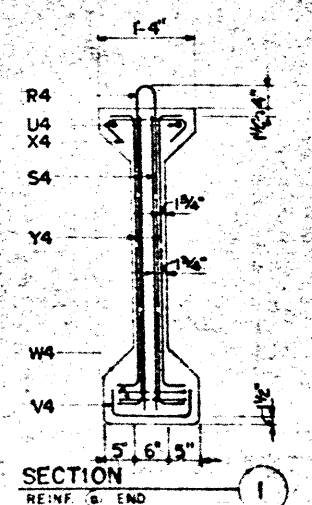
PLAN



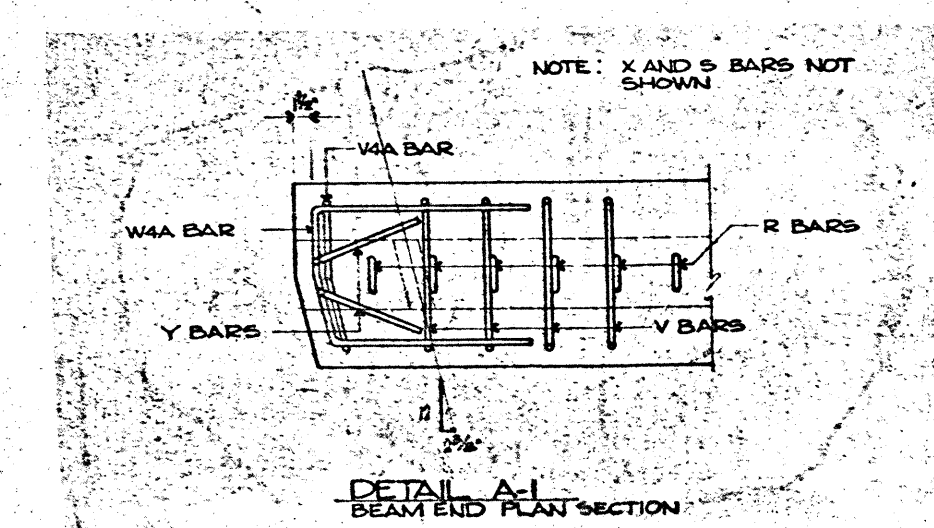
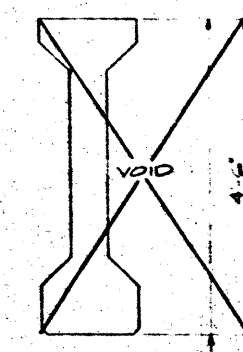
ELEVATION
2-MK 54-48-200
12-MK 54-48-201
2-MK 54-48-203

FIXED END

EXPANSION END



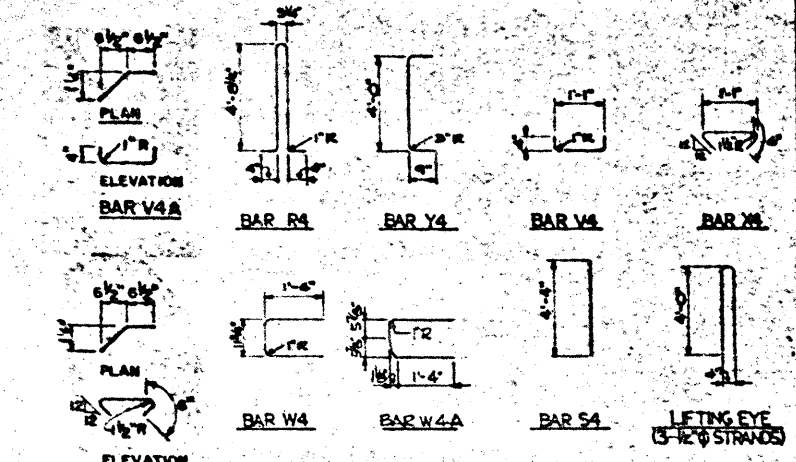
10-1/2" 270 SR STRANDS STRAIGHT
0-1/2" 270 SR STRANDS DRAPED
10-1/2" 270 SR STRANDS @ INITIAL
FORCE = 28,910



DETAIL A-1
BEAM END PLAN SECTION

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO	SIZE	LENGTH	WEIGHT	SPACING
54-48-200 54-48-201 54-48-203	R4	45	#4	17'-3"	825	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	47'-7"	145	
	V4	9	#4	15'-9"	11	
	W4	2	#5	3'-8"	8	
	X4	45	#4	1'-10"	49	
	Y4	4	#6	5'-6"	33	
	W4A	2	#5	3'-10"	8	
	V4A	1	#4	1'-11"	1	
	X4A	1	#4	2'-0"	1	
TOTAL					616	

BAR BENDING DETAILS



GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING - ASTM A65-40
3. U-BARS INCLUDE 1'-0" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1/8"$ FOR R BARS.
5. 1 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1 1/8" X 4 3/4" AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

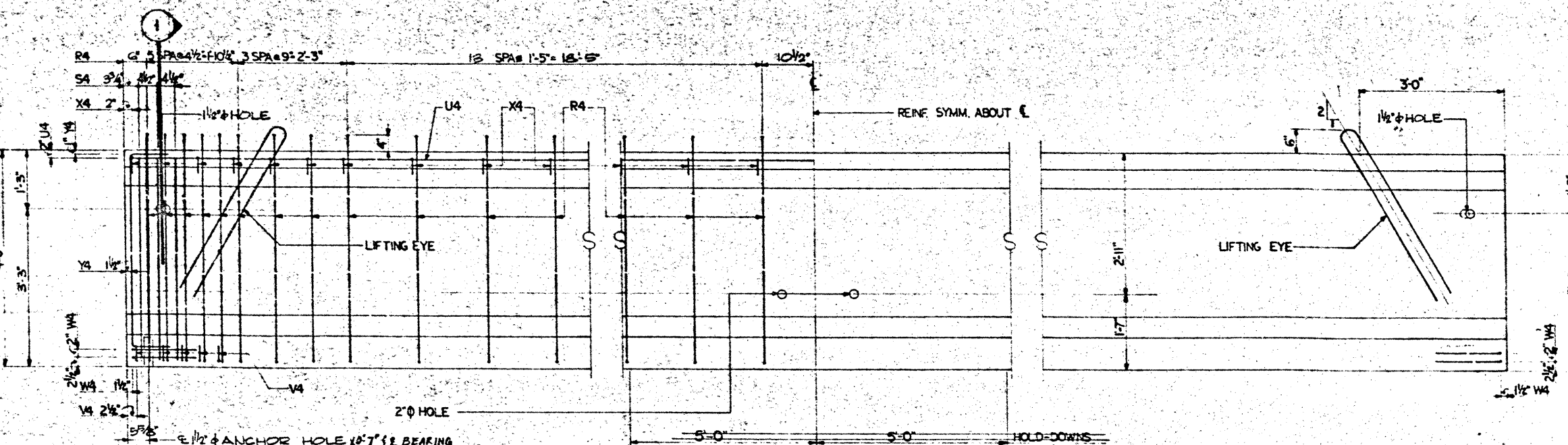
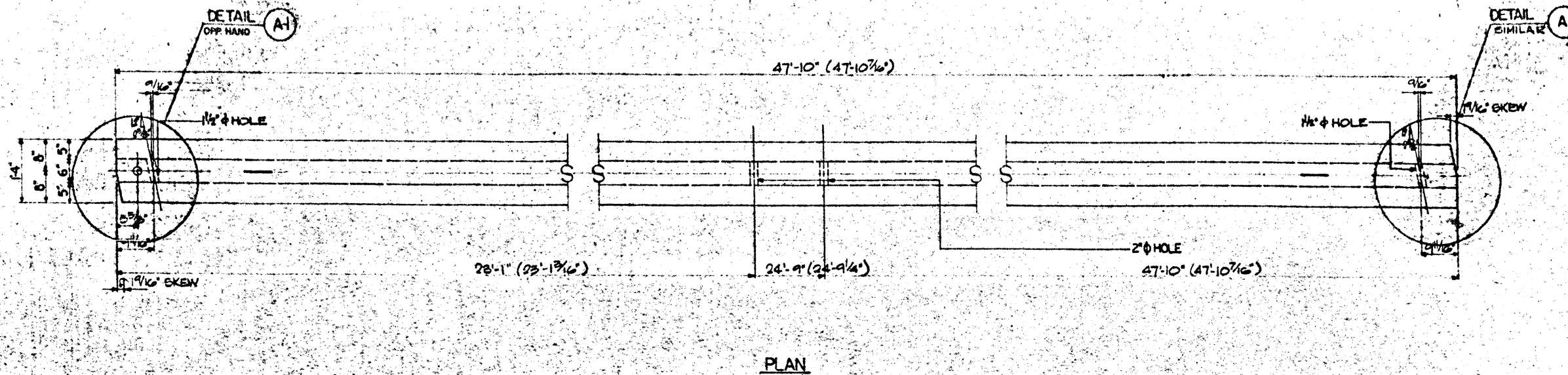
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

SPAN
INCORPORATED
P.O. BOX 2081
DALLAS, TEXAS 75220

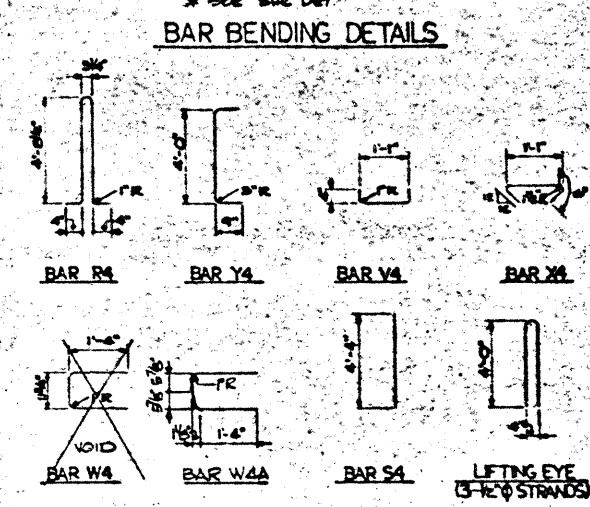
54" BEAM DETAIL
54-48-200
54-48-201
54-48-203

Title HAMPTON RD. OR WESTBOUND CR.
Customer BAILEY BRIDGE CO.
Architect
Engineer TEXAS HIGHWAY DEPARTMENT
Scale NONE Date
Drawn By J.Y. (3-31-71) Approved T. D. Smith
Checked By Order No. 7-55 Sheet No. FG

§ 29



BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-48-202	R4	45	#4	10'-5"	30.5	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	47'-7"	145	
	V4	10	#4	1'-9"	12	
	W4	4	#5	3'-8"		
	X4	40	#4	1'-10"	84	
	Y4	4	#6	5'-6"	33	
	W4A	4	#5	3'-10"	16	
	V4A	4	#4	1'-11"	2	
	X4A	4	#4	2'-0"	2	
		TOTAL			616	



- GENERAL NOTES
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
 2. REINFORCING — ASTM A615-40
 3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
 4. SPACING TOLERANCE OF $\pm 1/4"$ FOR R BARS.
 5. $1/2" \times 4"$ SLOTTED HOLE MAY BE TAPERED TO $1/4" \times 4 3/4"$ AT BASE.
 6. V BARS MAY BE TILTED THUS AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
 7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
 8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
 9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY ($3/8"$).
 10. INITIAL PULL OF 2,000 LBS. PER STRAND.
 11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

AS BUILT
DRAWING
FEB 6 1993
SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I-20-B(6)457
COUNTY DALLAS
HIGHWAY NO. I-20

54' BEAM DETAIL
54-48-202

Customer: BAILEY BRIDGE CO.

Engineer: TEXAS HIGHWAY DEPARTMENT

Scale: NONE

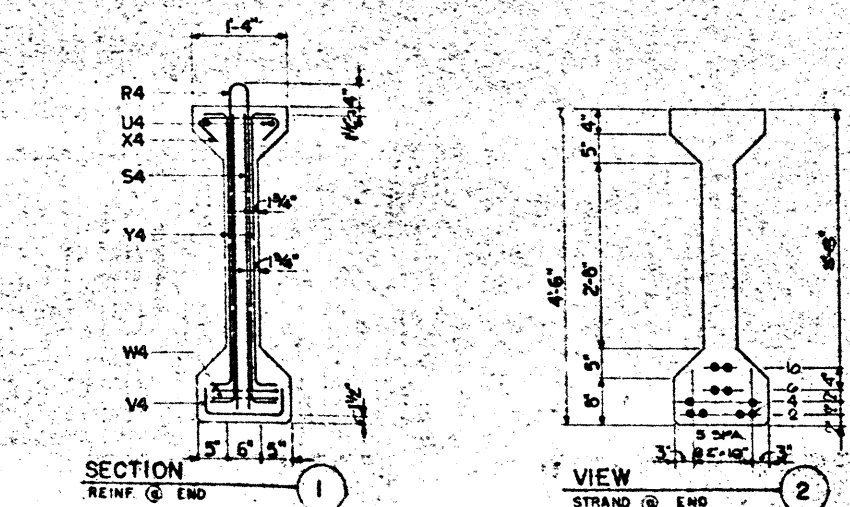
Drawn By: JY (3-31-71)

Checked By: JY

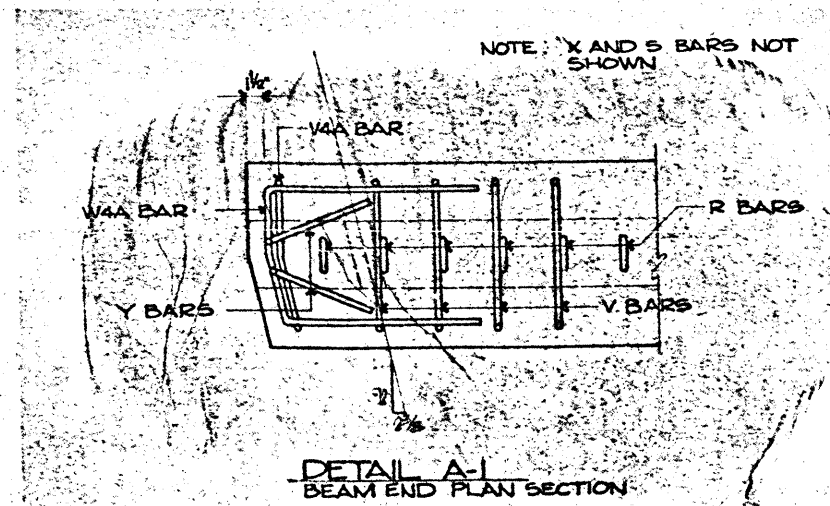
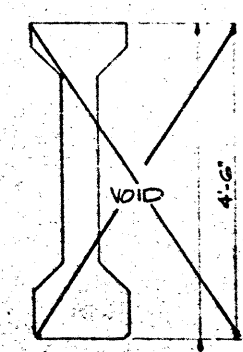
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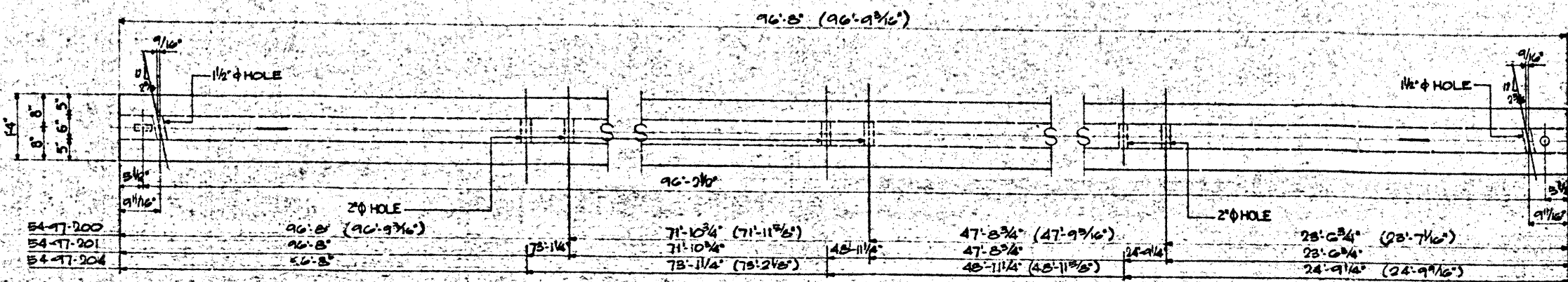
Date: 7/1/71

Sheet No. F7

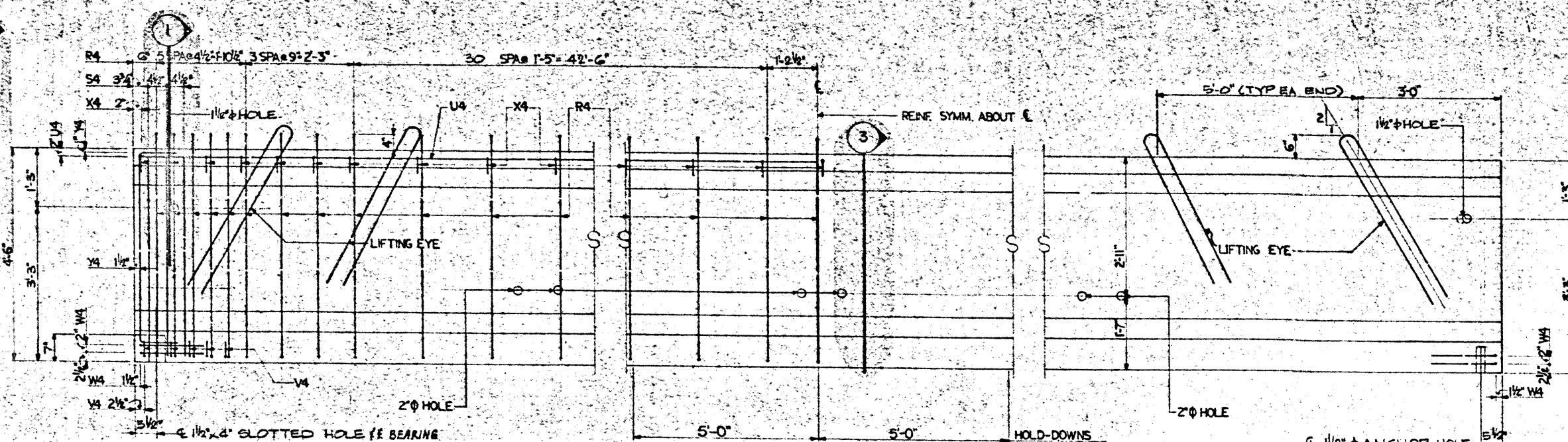


10 - $1/2" \times 270"$ S.R. STRANDS STRAIGHT
0 - $1/2" \times 270"$ S.R. STRANDS DRAPED
10 - $1/2" \times 270"$ S.R. STRANDS @ INITIAL
FORCE = 26,900

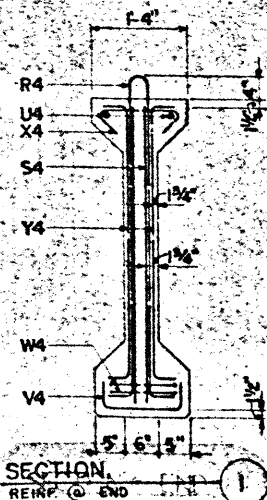




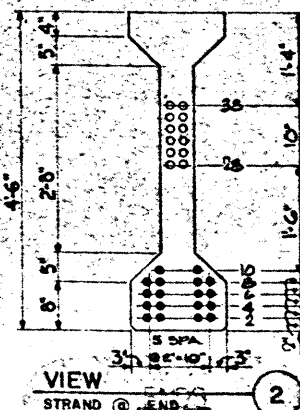
PLAN



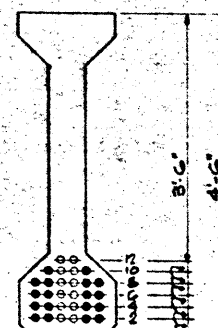
ELEVATION
1-MK 54-97-200
S-MK 54-97-201
1-MK 54-97-204



SECTION
REIN. @ END



VIEW
STRAND @ END

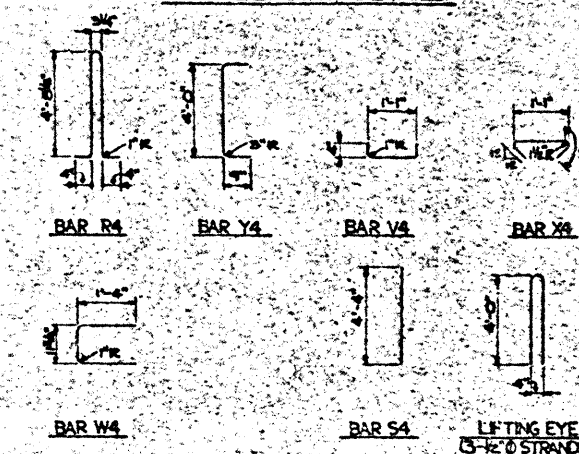


SECTION
STRAND @ HOLD-DOWN

18 - 1/2" ϕ 270° SR STRANDS STRAIGHT
12 - 1/2" ϕ 270° SR STRANDS DRAPED
30 - 1/2" ϕ 270° SR STRANDS @ INITIAL
FORCE = 28,910

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-97-200 54-97-201 54-97-204	R4	71	#4	10'-3"	541	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	95'-3"	295	
	V4	10	#4	1'-9"	12	
	W4	4	#5	3'-8"	13	
	X4	75	#4	1'-10"	92	
	Y4	4	#6	5'-6"	33	
TOTAL					1042	

BAR BENDING DETAILS



GENERAL NOTES

1. CONCRETE TO BE CLASS H. SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING - ASTM A65-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1/4"$ FOR R BARS
5. 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1 1/8" X 4 3/4" AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1' AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

AS BUILT
DRAWING
FEB 8 1977
SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

SPAN INCORPORATED
4000 WEST 10TH STREET
DALLAS, TEXAS 75201
54" BEAM DETAIL
54-97-200
54-97-201
54-97-204

HAMPTON RD. OP. WESTBOUND OP.

Customer: BAILEY BRIDGE CO.

Architect:

Engineer: TEXAS HIGHWAY DEPARTMENT

Scale: NONE

Drawn By: JY (3-51-71)

Checked By:

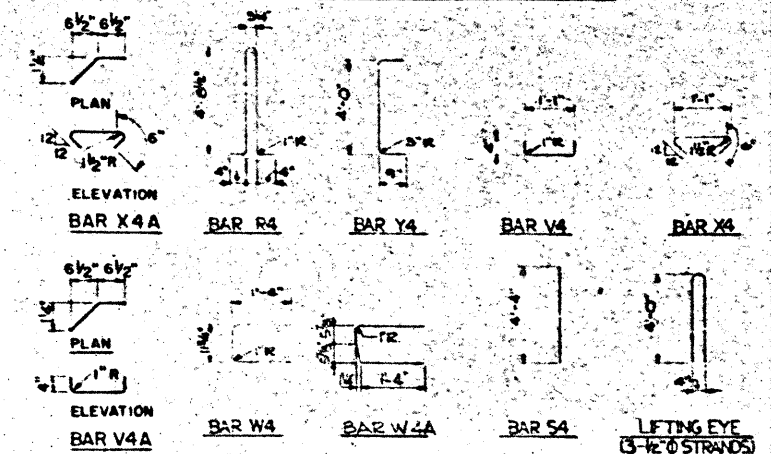
Order No. 7103

Approved: T. H. H.

Sheet No. FB

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-97-202	R4	79	#4	10'-3"	541	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	25'-3"	293	
	V4	9	#4	1'-9"	11	
	W4	2	#5	3'-8"	8	
	X4	74	#4	1'-10"	91	
	Y4	4	#6	5'-6"	33	
	W4A	2	#5	3'-11"	8	
	V4A	1	#4	1'-11"	1	
	X4A	1	#4	2'-0"	1	
TOTAL					1043	

BAR BENDING DETAILS



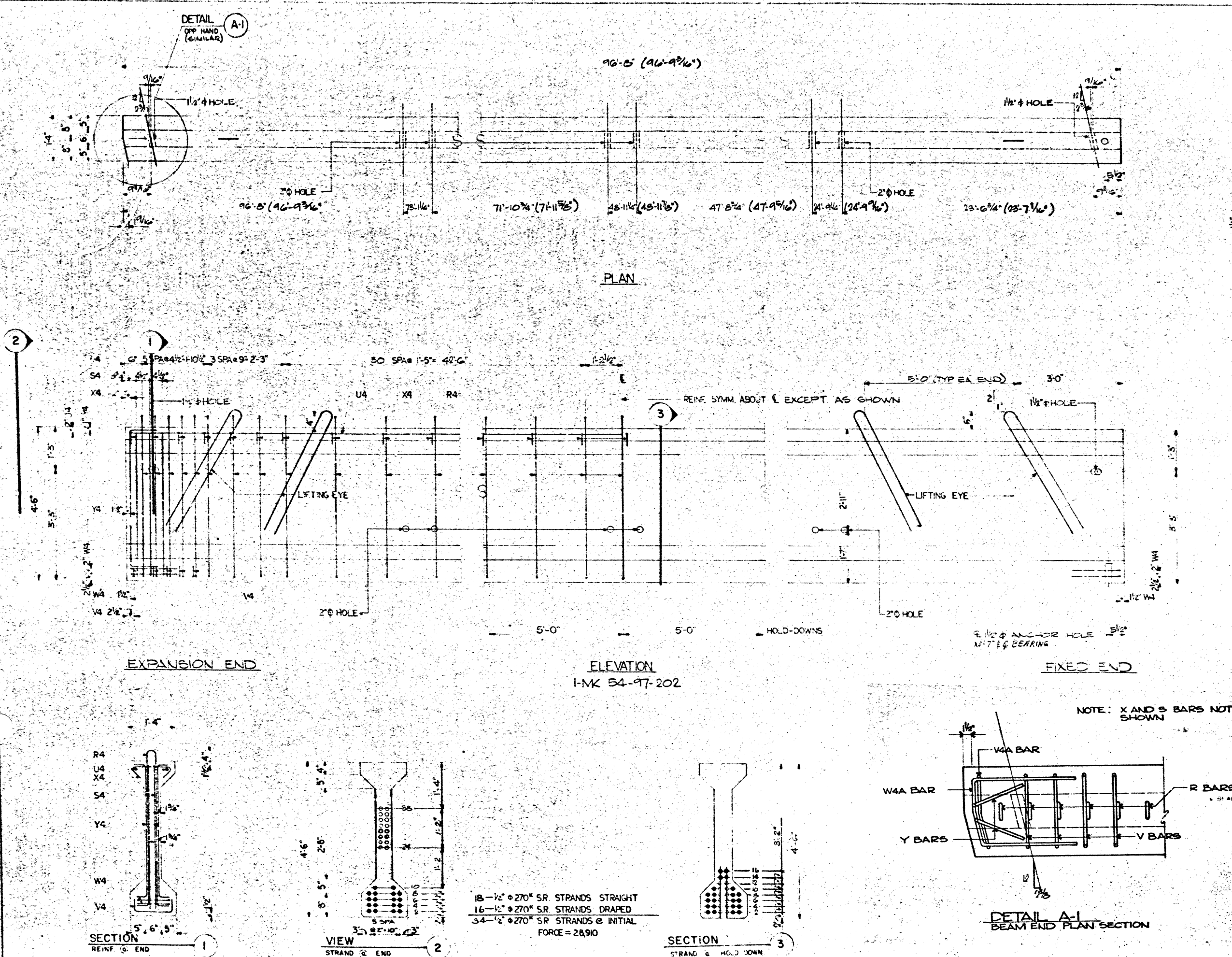
GENERAL NOTES

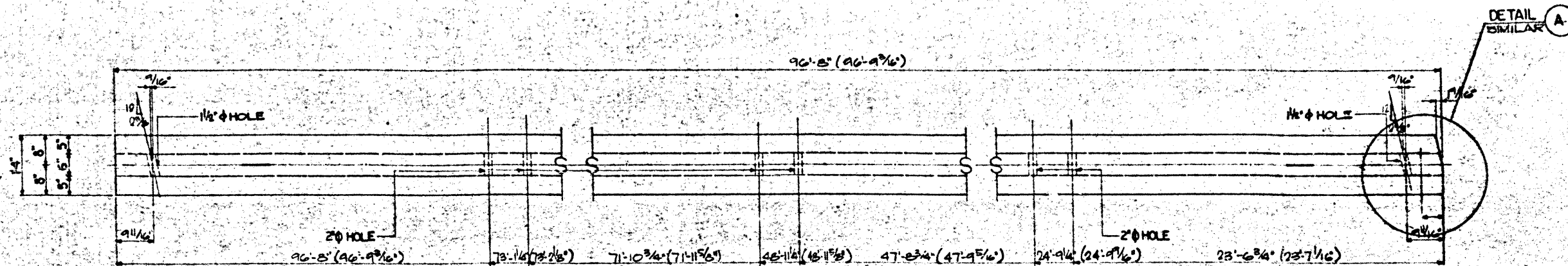
1. CONCRETE TO BE CLASS H. SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING—ASTM A65-40
3. U BARS INCLUDE 1'-0" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1/4"$ FOR R BARS.
5. $1/2" \times 4"$ SLOTTED HOLE MAY BE TAPERED TO $1/8" \times 4 3/4"$ AT BASE
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR
7. USE STRAND LOOPS FOR HANDLING OF BEAMS
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY ($3/8"$).
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

AS BUILT
DRAWING
FEB. 6, 1965
SPAN INDUSTRIES, INC.

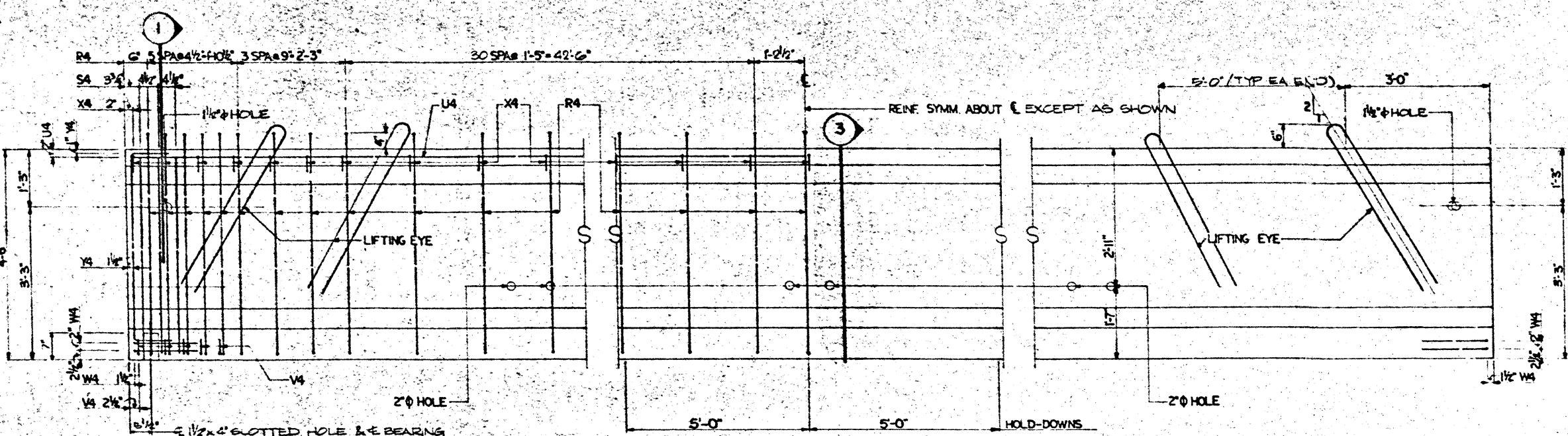
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. 10-5-61457
COUNTY DALLAS
HIGHWAY NO. 2410

SPAN		54' BEAM DETAIL 54-97-202	
HAMPTON RD OP. WESTBOUND OP.			
Customer: DALLAS COUNTY			
Architect: TEXAS HIGHWAY DEPARTMENT			
Drawn By: [Signature]		Date: [Date]	
Checked By: [Signature]		Approved: [Signature]	
Order No. [Number]		Sheet No. 79	

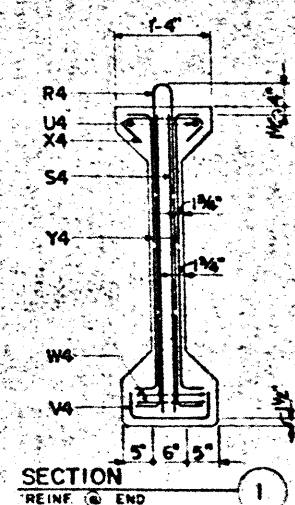




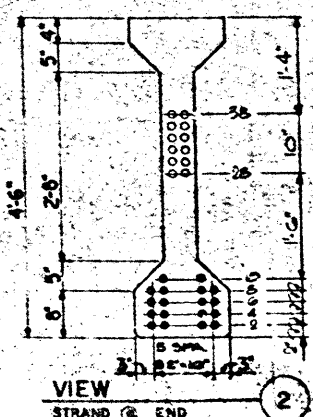
PLAN



ELEVATION
1-NK 54-97-203

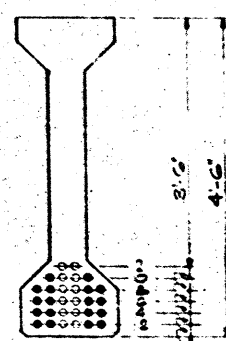


SECTION
REIN @ END

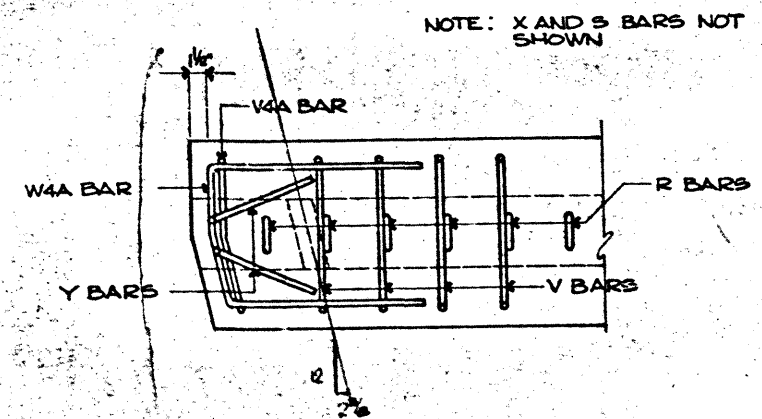


VIEW
STRAND @ END

15 - 1/2" ϕ 270° S.R. STRANDS STRAIGHT
15 - 1/2" ϕ 270° S.R. STRANDS DRAPED
30 - 1/2" ϕ 270° S.R. STRANDS @ INITIAL
FORCE = 28,910



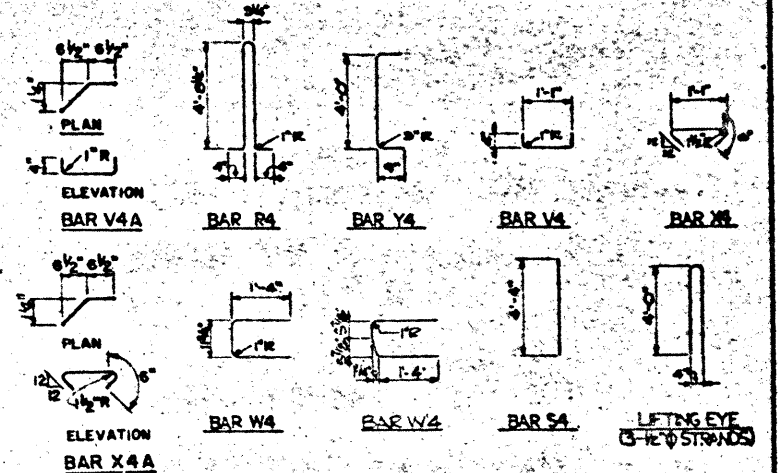
SECTION
STRAND @ HOLD DOWN



DETAIL A-1
BEAM END PLAN SECTION

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-97-203	R4	79	#4	17'-3"	541	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	18'-3"	295	
	V4	9	#4	1'-9"	10	
	W4	2	#5	3'-8"	8	
	X4	4	#4	1'-10"	11	
	Y4	4	#6	5'-6"	33	
	W4A	1	#5	3'-11"	8	
	V4A	2	#4	1'-11"	1	
	X4A	1	#4	5'-0"	1	
TOTAL					1042	

BAR BENDING DETAILS



GENERAL NOTES

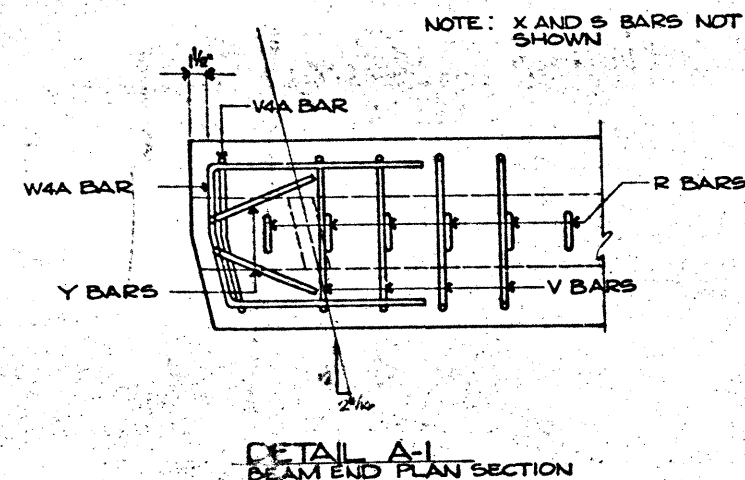
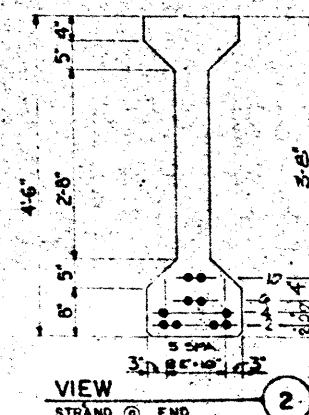
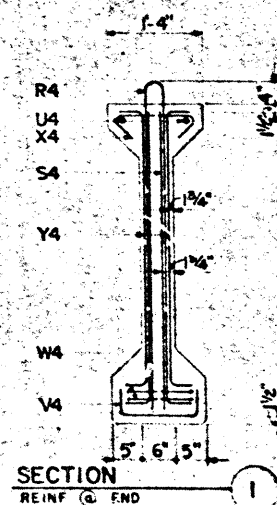
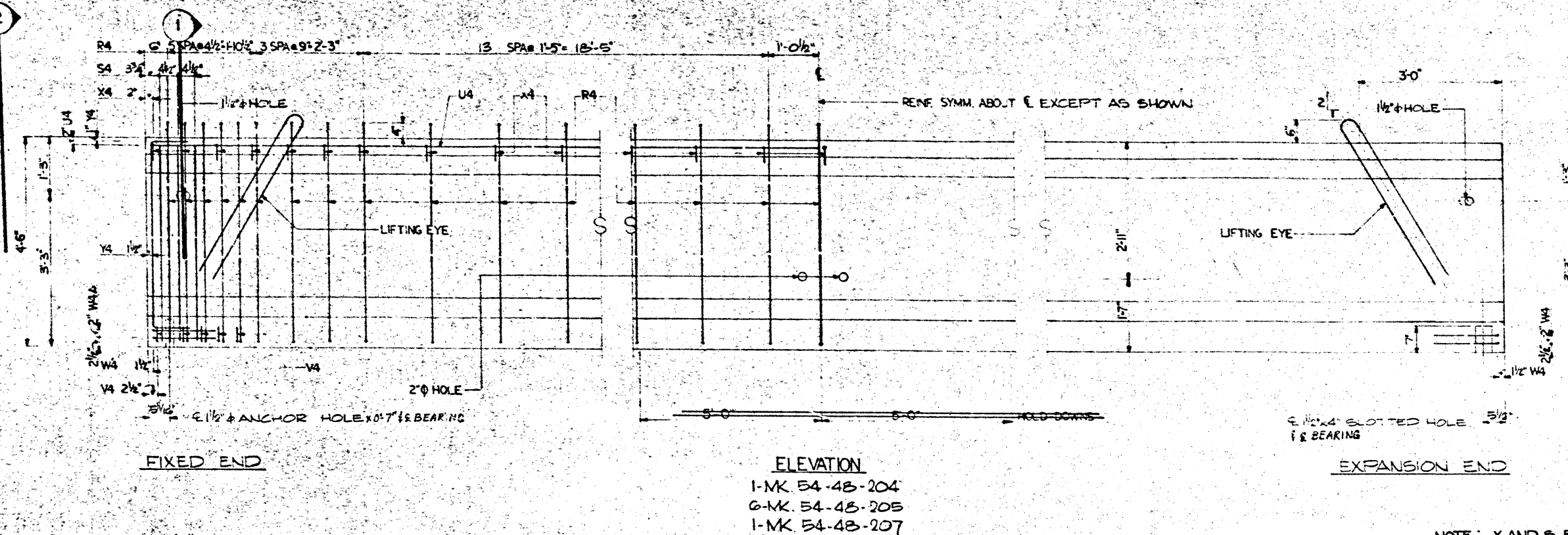
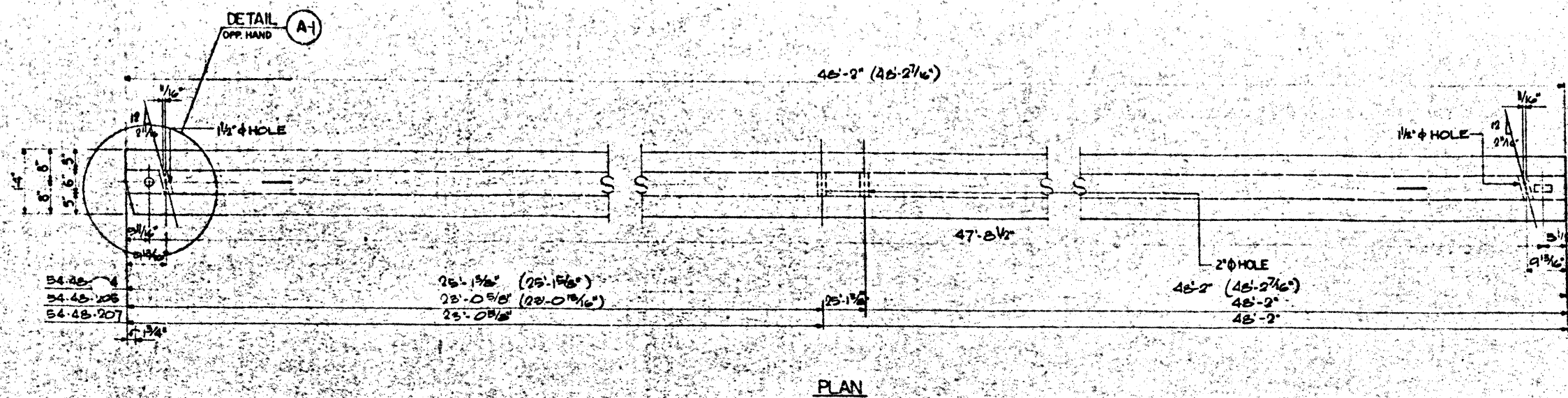
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING - ASTM A65-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1/4$ " FOR R BARS.
5. 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1/8" X 4" AT BASE.
6. V BARS MAY BE TILTED THUS AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

AS BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

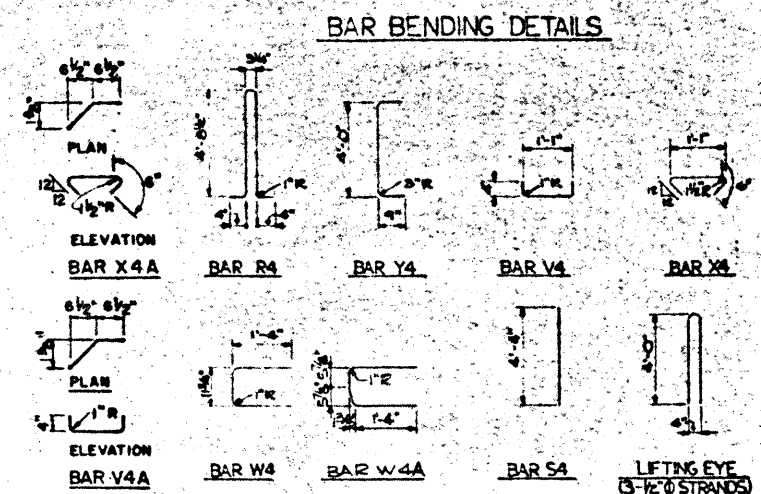
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I 20-5(61)457.
COUNTY DALLAS
HIGHWAY NO. I.H. 20

		54' BEAM DETAIL 54-97-203	
Title HAMPTON RD OP. WESTBOUND OP.			
Customer BAILEY BRIDGE CO			
Engineer TEXAS HIGHWAY DEPARTMENT			
Scale	NONE	Date	
Drawn By	J. (3-31-71)	Approved	7/10/71
Checked By		Sheet No.	F10
Order No.	103		

REVISION 5/17/71 CORRECTED PER TIDI




BILL OF REINFORCING STEEL PER BEAM.						
BEAM MARK	BAR MARK	NO RECD	SIZE	LENGTH	WEIGHT	SPACING
	R4	45	#4	10'-3"	308	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	47'-11"	144	
54-48-204	V4	9	#4	1'-9"	11	
54-48-205	W4	7	#5	3'-8"	8	
54-48-207	X4	40	#4	1'-10"	49	
	Y4	4	#6	5'-6"	33	
	W4A	2	#6	2'-11"	8	
	V4A	1	#4	1'-11"	1	
	X4A	1	#4	2'-0"	1	
				TOTAL	617	

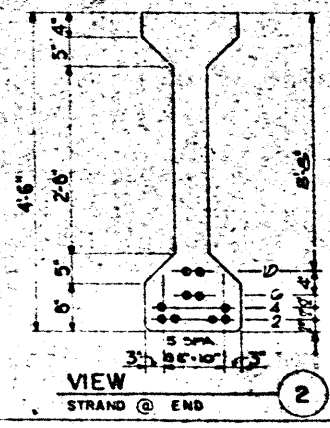
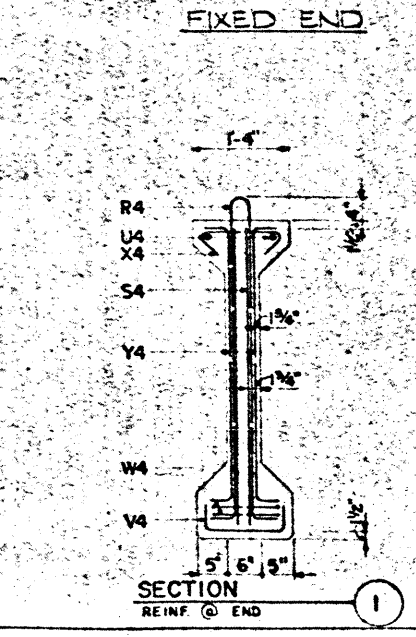
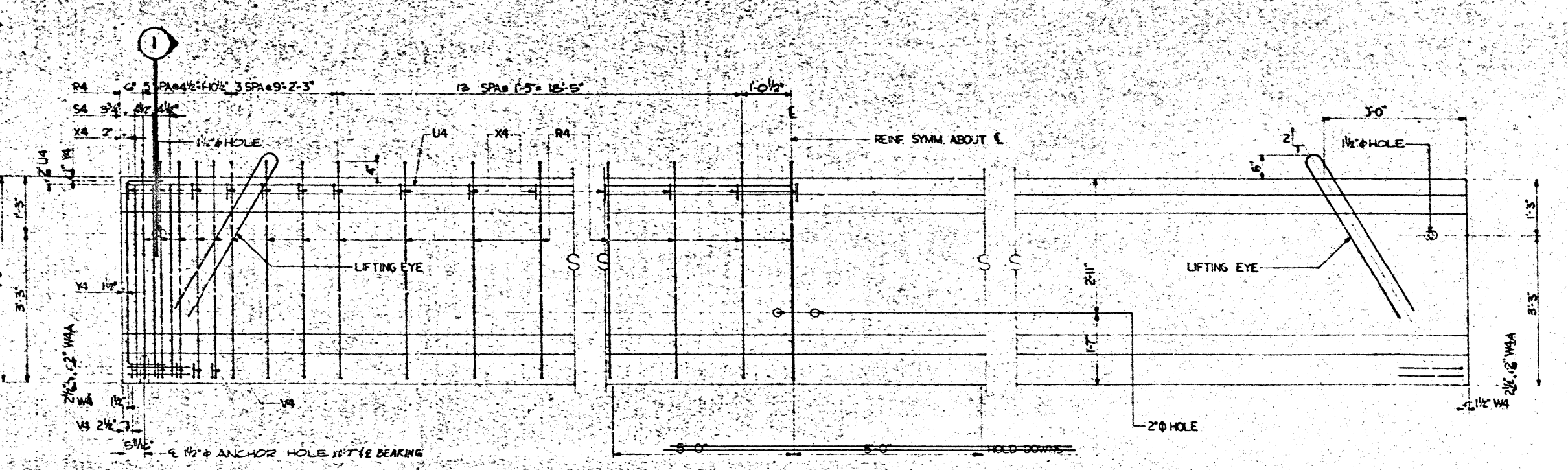
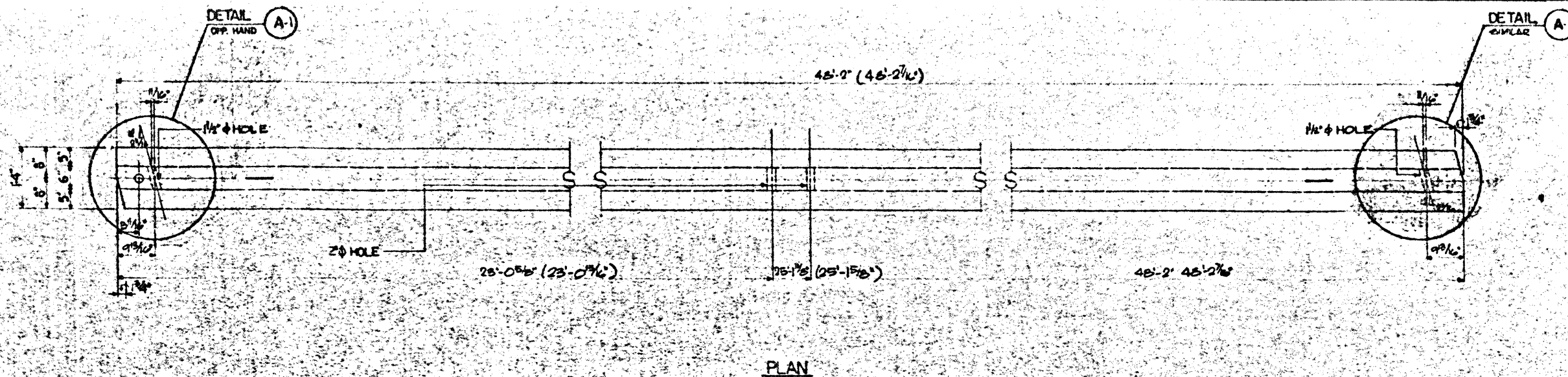


- ## GENERAL NOTES
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
 2. REINFORCING — ASTM A615 — J
 3. U-BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
 4. SPACING TOLERANCE OF $\pm 1\frac{1}{4}"$ FOR \varnothing BARS.
 5. $1\frac{1}{2}" \times 4"$ SLOTTED HOLE MAY BE TAPERED TO $1\frac{3}{8}" \times 4\frac{1}{4}"$ AT BASE
 6. V-BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
 7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
 8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
 9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY ($\frac{3}{4}"$).
 10. INITIAL PULL OF 2,000 LBS. PER STRAND.
 11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

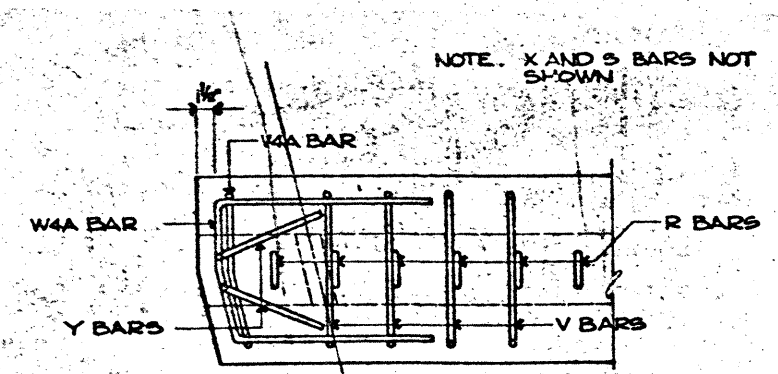
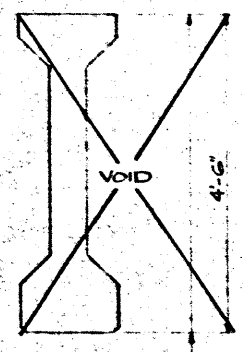
AS-BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. 120-561457
COUNTY DALLAS
HIGHWAY NO. 120

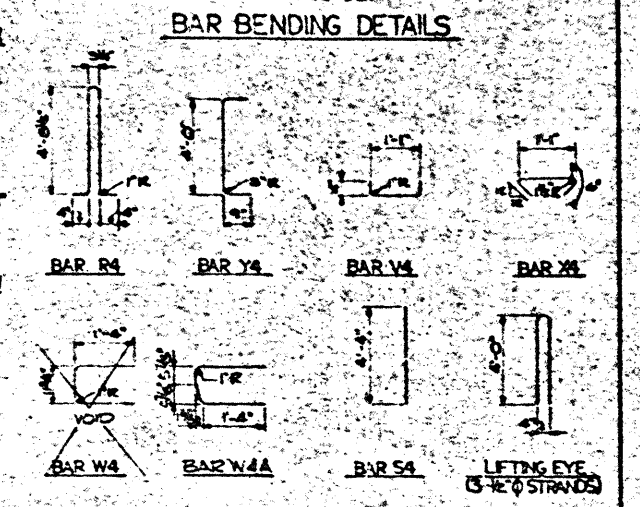
	SPAN <small>ROADWAY</small> <small>ROADWAY</small>	54" BEAM DETAIL 54-48-204 54-48-208 54-48-207
	The	
	HAMPTON RD. OR. EASTBOUND OR.	
	Customer: SALEY BRIDGE CO. Asphalt Engineer: TEXAS HIGHWAY DEPARTMENT Scale: 1" = 10' Drawn By: [Signature] Checked By: [Signature] Order No.	
		Date: Approved: [Signature] Sho. No.



10 - 1/2" x 270" S.R. STRANDS STRAIGHT
 0 - 1/2" x 270" S.R. STRANDS DRAPED
 15 - 1/2" x 270" S.R. STRANDS @ INITIAL
 FORCE = 28,910



BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-48-206	R4	45	#4	10'-3"	308	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	47'-11"	144	
	V4	8	#4	1'-9"	9	
	W4	1	#5	3'-8"	1	
	X4	89	#4	1'-10"	48	
	Y4	4	#6	5'-6"	33	
	W4A	4	#5	3'-11"	16	
	V4A	8	#4	1'-11"	2	
	X4A	8	#4	2'-0"	2	
TOTAL					616	



- GENERAL NOTES
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
 2. REINFORCING - ASTM A615-40
 3. U BARS INCLUDE 1'-0" MINIMUM LAP, BARS OVER 60'-0"
 4. SPACING TOLERANCE OF $\pm 1/4"$ FOR R BARS.
 5. 1/2" x 4" SLOTTED HOLE MAY BE TAPERED TO 1/8" x 4" AT BASE.
 6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN MINIMUM COVER TO BOTTOM SURFACE OF BAR.
 7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
 8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
 9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (1/4").
 10. INITIAL PULL OF 2000 LBS. PER STRAND.
 11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

AS BUILT DRAWING
 FEB 6 1975
 SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
 FED AID PROJECT NO. I 20-5(6) 457
 COUNTY DALLAS
 HIGHWAY NO. I H 20

54" BEAM DETAIL
 54-48-206

Hampton Rd Op Eastbound Op

Customer BAILEY BRIDGE CO

Engineer TEXAS HIGHWAY DEPARTMENT

Scale NONE

Drawn By (S-5-71)

Checked By

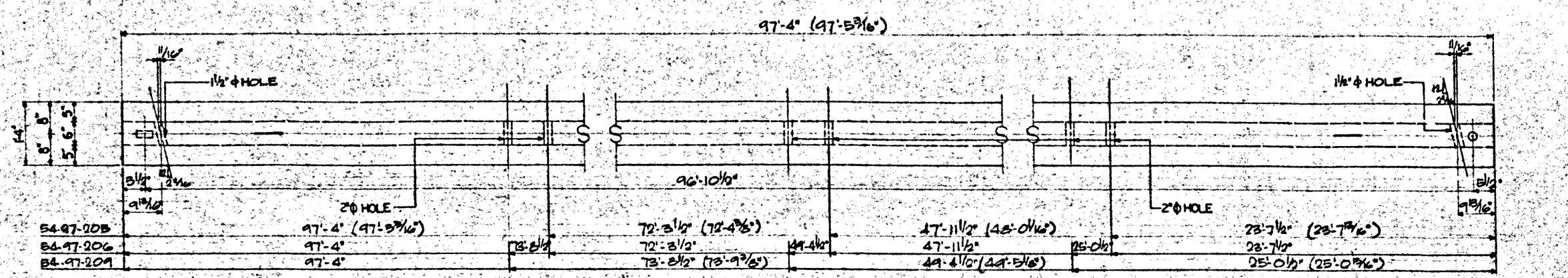
Order No

Date

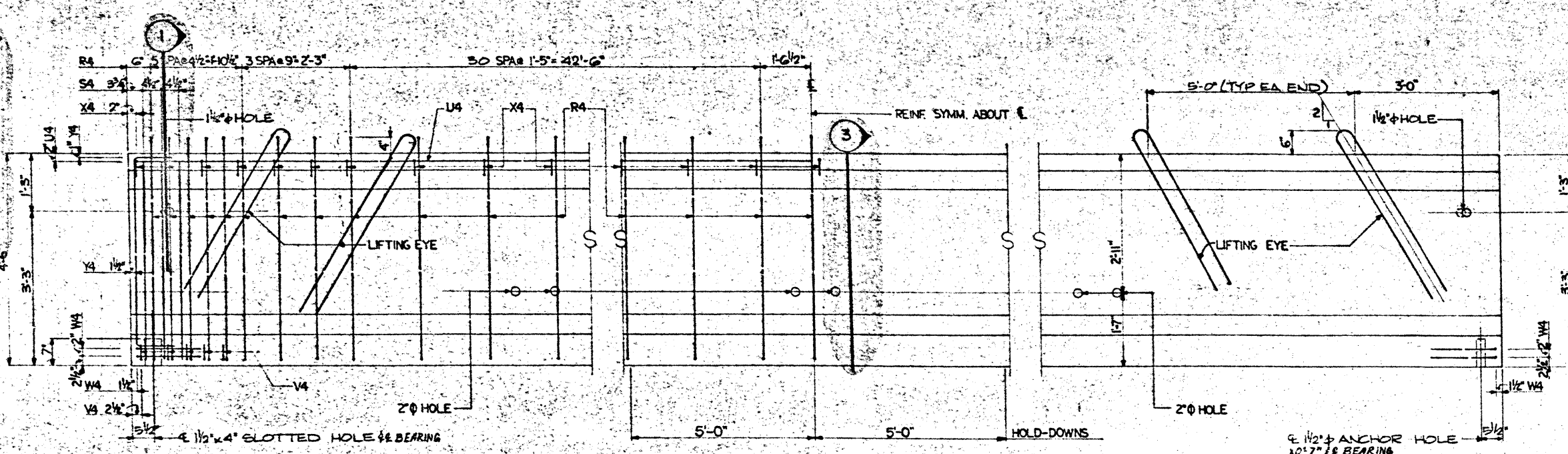
Approved T. Hunt

Sheet No.

F 12



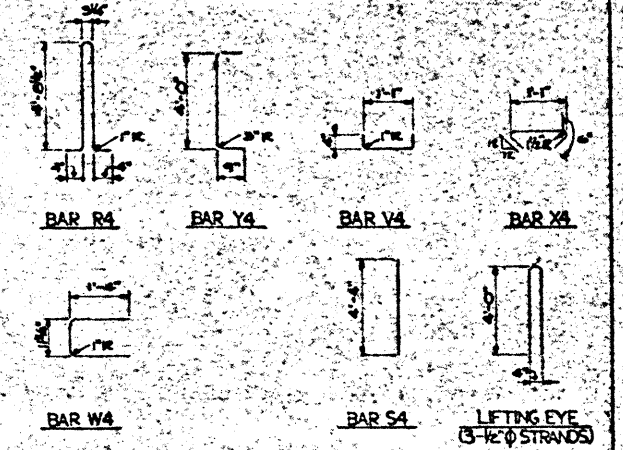
PLAN



ELEVATION
1-MK 54-97-205
3-MK 54-97-206
1-MK 54-97-209

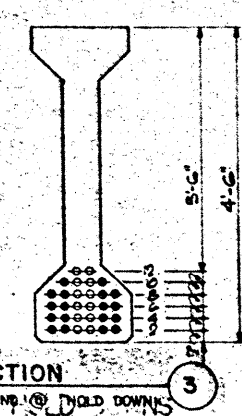
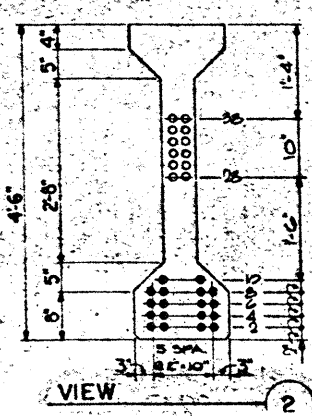
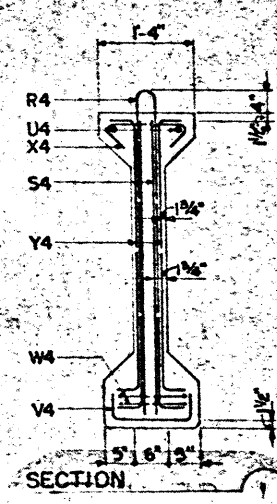
BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-97-205 54-97-206 54-97-209	R4	71	#4	10'-3"	541	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	28'-11"	247	
	V4	10	#4	1'-9"	12	
	W4	4	#5	3'-8"	13	
	X4	75	#4	1'-10"	92	
	Y4	4	#6	5'-6"	33	
				TOTAL	1044	

BAR BENDING DETAILS



GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING — ASTM A615-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1/8"$ FOR R BARS.
5. $1/2" \times 4"$ SLOTTED HOLE MAY BE TAPERED TO $1/8" \times 4 1/4"$ AT BASE.
6. V BARS MAY BE TILTED THUS AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1' AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 ML COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY ($1/4"$).
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.



18 - 1/2" ϕ 270° S.R. STRANDS STRAIGHT
12 - 1/2" ϕ 270° S.R. STRANDS DRAPED
30 - 1/2" ϕ 270° S.R. STRANDS @ INITIAL FORCE = 28,910

SECTION

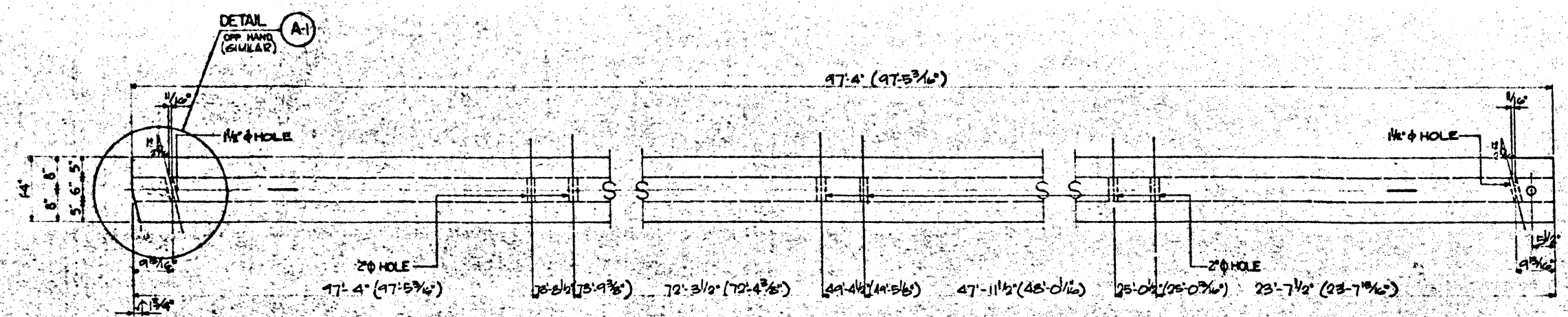
AS BUILT
DRAWING
FEB 8 1995
SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I-20-5(6) 1457
COUNTY DALLAS
HIGHWAY NO. I-20

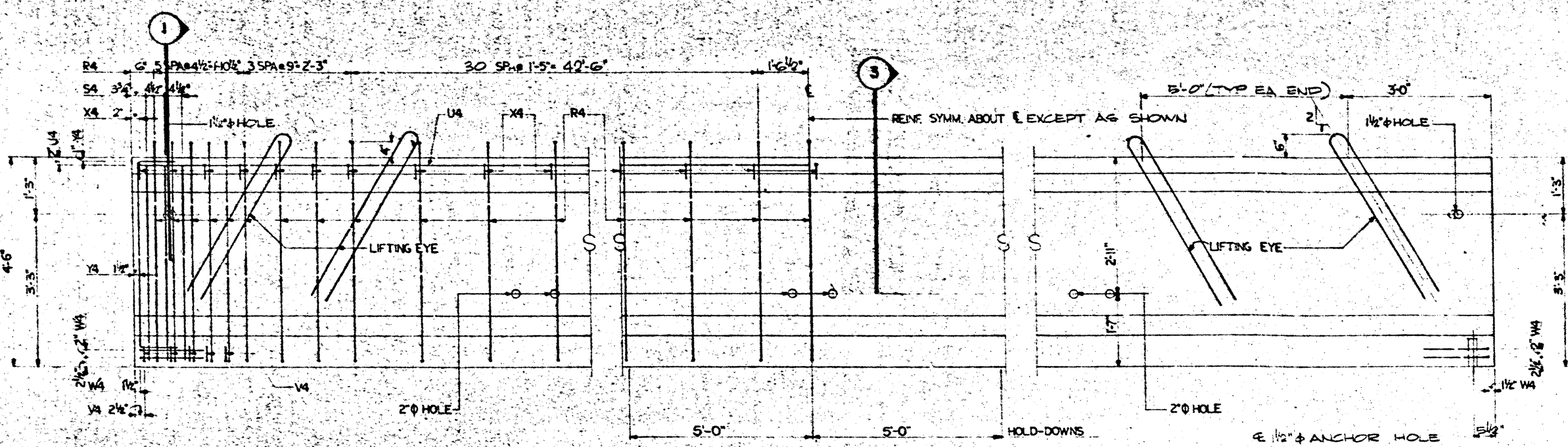
54' BEAM DETAIL
54-97-205
54-97-206
54-97-209

Customer: HAMPTON RD. OF EASTBOUND OF
Architect: BAILEY BRIDGE CO.
Engineer: TEXAS HIGHWAY DEPARTMENT
Scale: NONE
Drawn By: JY (3-21-71)
Checked By: JY
Order No.: 25

Date: 7/1/71
Approved: [Signature]
Sheet No.: F13



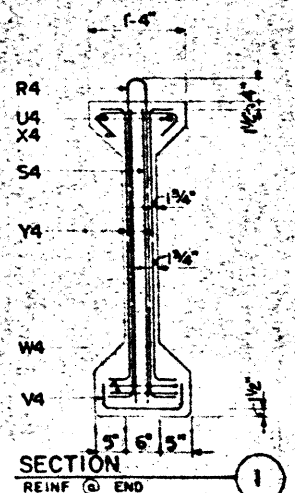
PLAN



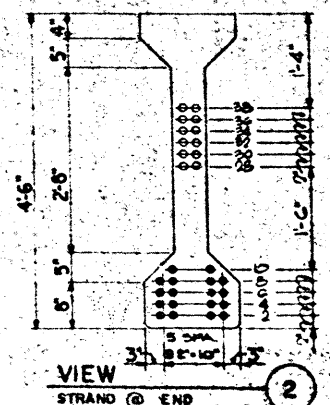
ELEVATION
I-MK 54-97-207

EXPANSION END

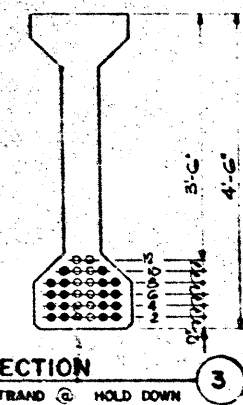
FIXED END



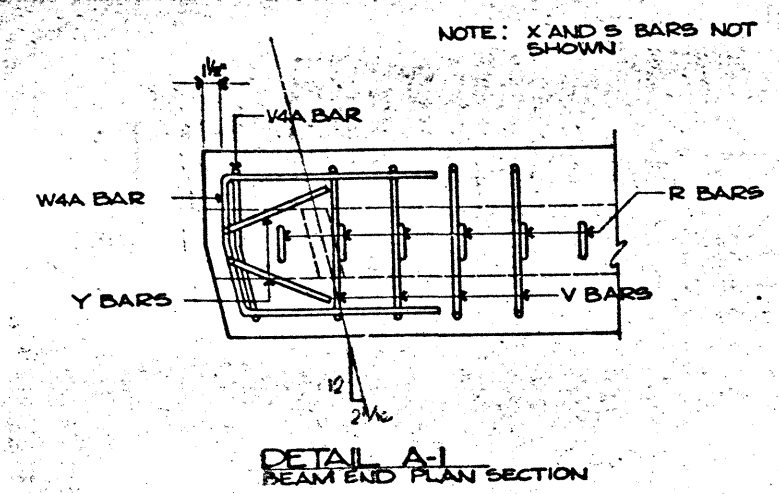
SECTION
REIN @ END



VIEW
STRAND @ END



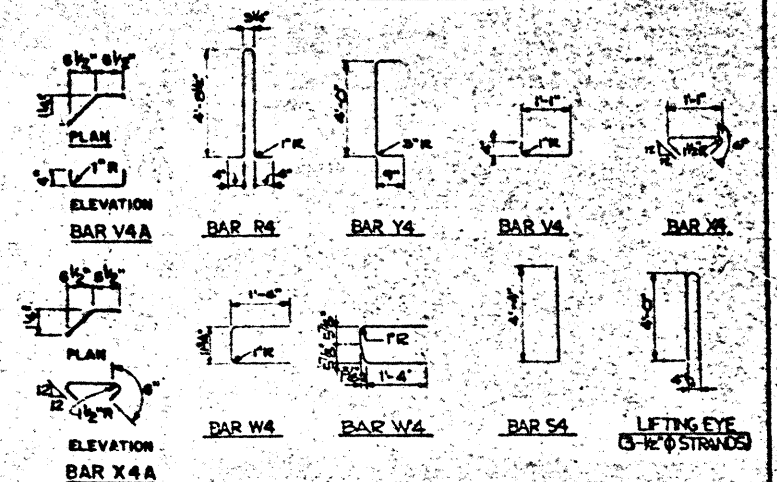
SECTION
STRAND @ HOLD DOWN



DETAIL A-1
BEAM END PLAN SECTION

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO. REQD	SIZE	LENGTH	WEIGHT	SPACING
54-97-207	R4	74	#4	10'-5"	541	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	25'-11"	297	
	V4	9	#4	1'-9"	11	
	W4	7	#5	3'-8"	8	
	X4	74	#4	1'-10"	91	
	Y4	4	#6	5'-6"	33	
	W4A	2	#5	3'-11"	8	
	V4A	1	#4	1'-11"	1	
	X4A	1	#4	2'-0"	1	
TOTAL					1045	

BAR BENDING DETAILS



GENERAL NOTES

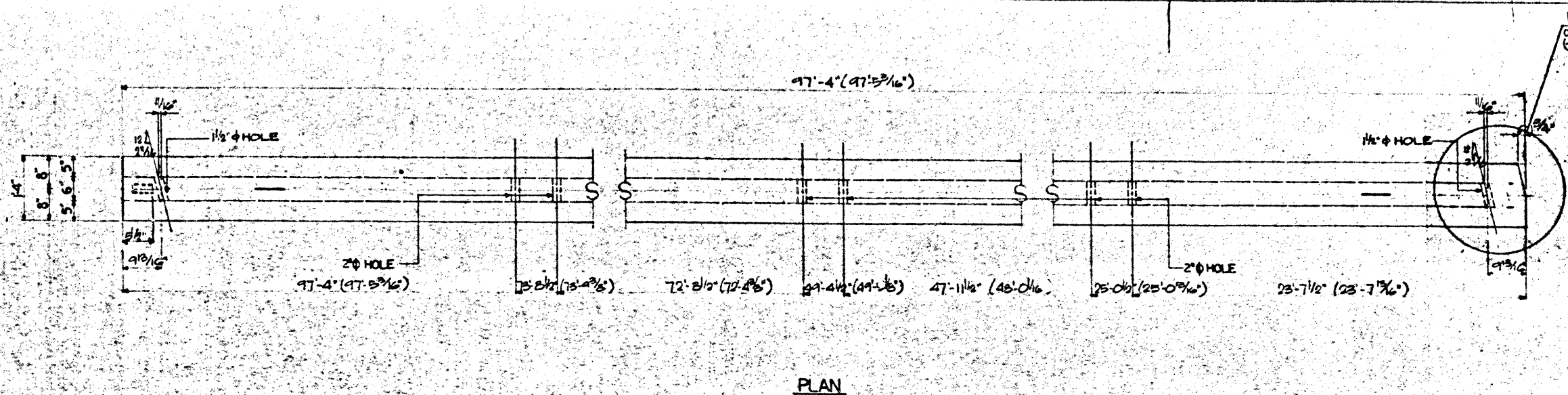
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING — ASTM A63-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1/4$ " FOR R BARS.
5. 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1/8" X 4/8" AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY ($3/8$ ").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

AS BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I H 20

		54" BEAM DETAIL 54-97-207	
Title: HAMPTON RD. OR. EASTBOUND OR.			
Customer: BAILEY BRIDGE CO.			
Architect:			
Engineer: TEXAS HIGHWAY DEPARTMENT			
Scale: NONE		Date:	
Drawn By: JY (3-5-71)		Approved: T. D.	
Checked By:		Sheet No.: F 14	
Order No.: 723			

REVISED: 5/19/71 (CORRECTED PER TIB)



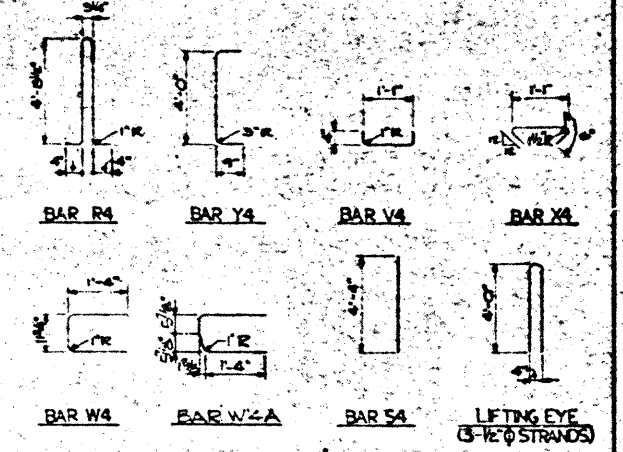
PLAN

DETAIL A-1
OPP. HAND (SIMILAR)



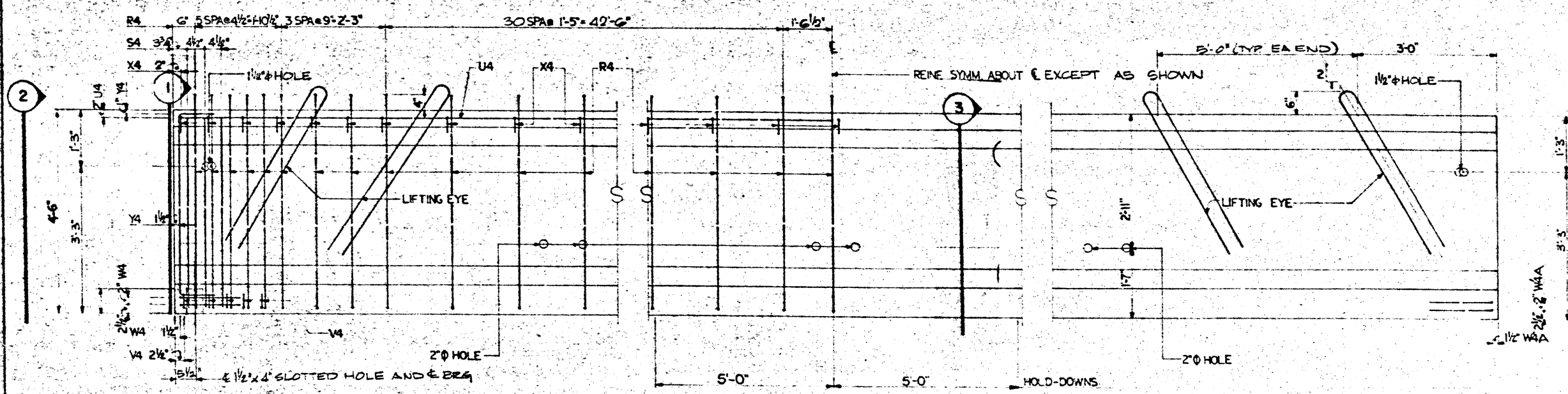
BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-97-208	R4	74	#4	17'-3"	54.1	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	98'-11"	297	
	V4	9	#4	1'-9"	11	
	W4	2	#5	3'-0"	8	
	X4	74	#4	1'-10"	41	
	Y4	4	#6	5'-6"	33	
	W4A	2	#5	3'-11"	8	
	V4A	1	#4	1'-11"	1	
	X4A	1	#4	0'-0"	1	
TOTAL				1045'		

BAR BENDING DETAILS



GENERAL NOTES

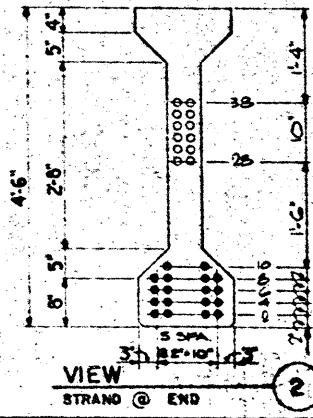
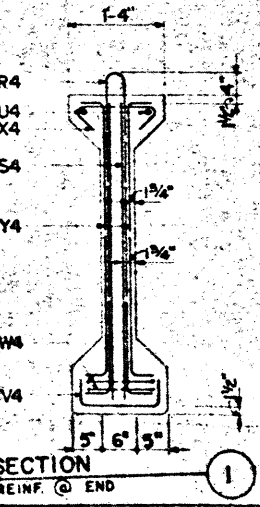
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING — ASTM A65-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1 1/4"$ FOR R BARS.
5. 1 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1 1/8" X 3 1/4" AT BASE.
6. V BARS MAY BE TILTED THUS AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/4").
10. INITIAL PULL OF 2,000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.



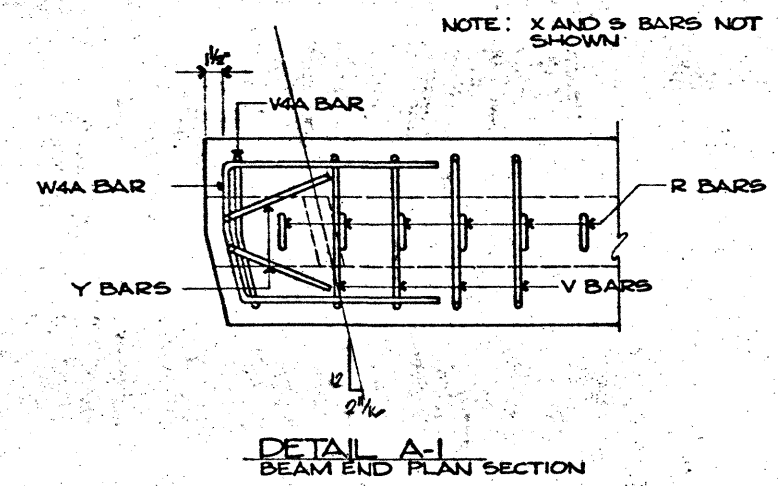
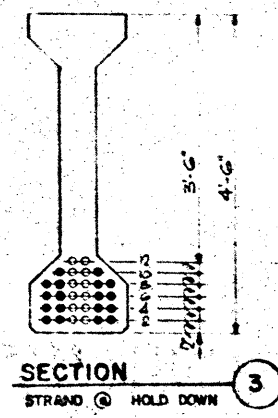
ELEVATION
I-MK 54-97-208

FIXED END

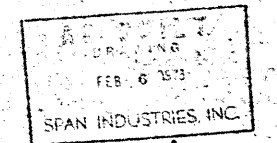
EXPANSION END



18 - 1/2" ϕ 270° S.R. STRANDS STRAIGHT
12 - 1/2" ϕ 270° S.R. STRANDS DRAPED
30 - 1/2" ϕ 270° S.R. STRANDS @ INITIAL FORCE = 28,900

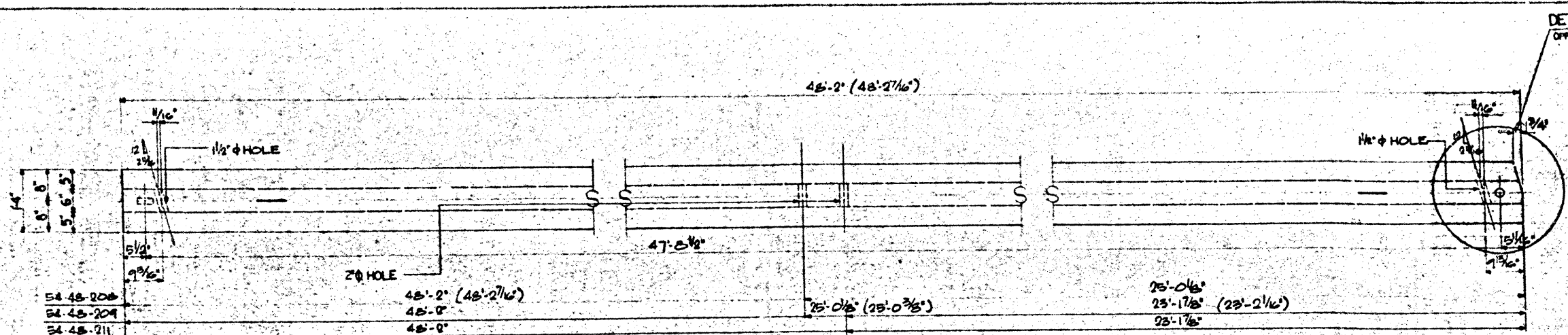


DETAIL A-1
BEAM END PLAN SECTION

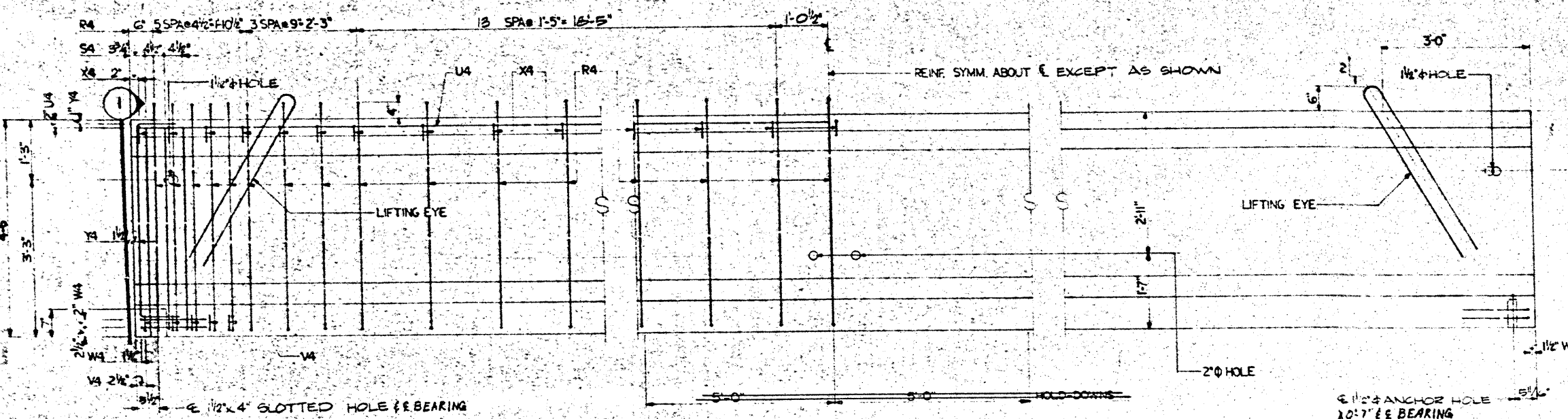


TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I 20-5-61457
COUNTY DALLAS
HIGHWAY NO. I-20

		54' BEAM DETAIL 54-97-208	
Title: HAMPTON RD OP. EASTBOUND OP.			
Customer: BAILEY BRIDGE CO.			
Engineer: TEXAS HIGHWAY DEPARTMENT			
Scale: NONE	Date:	Drawn By:	Approved:
Checked By:	Date:	Sheet No:	38

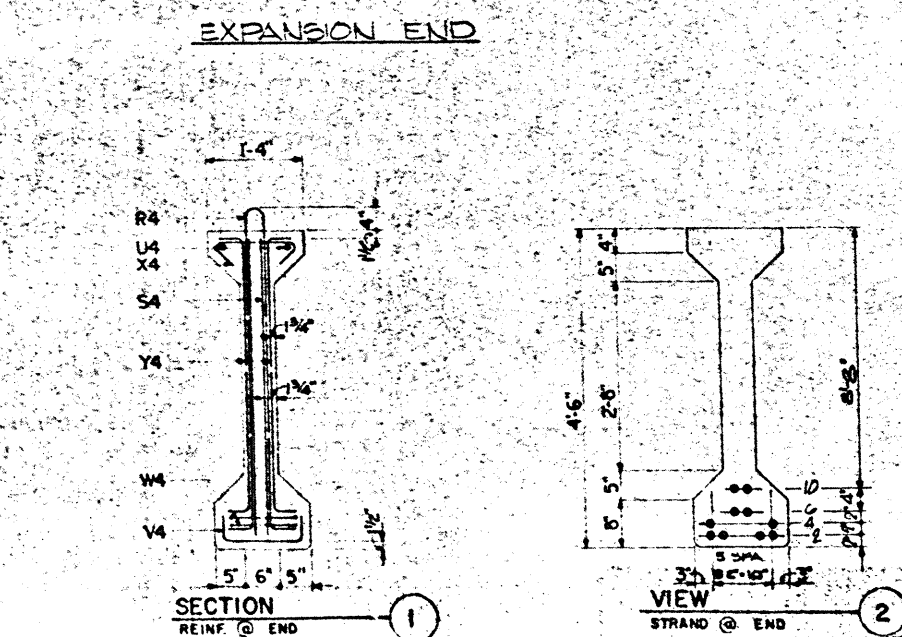


PLAN

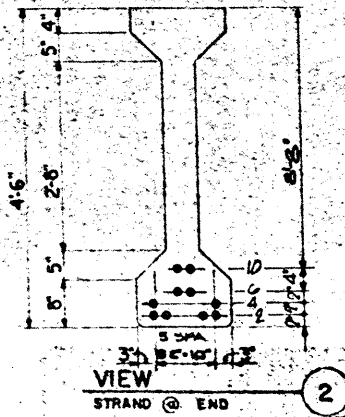


ELEVATION

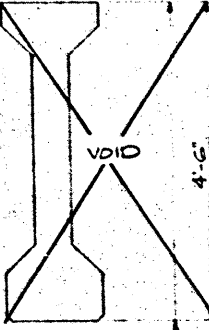
1-MK 54-48-208
G-MK 54-48-209
1-MK 54-48-211



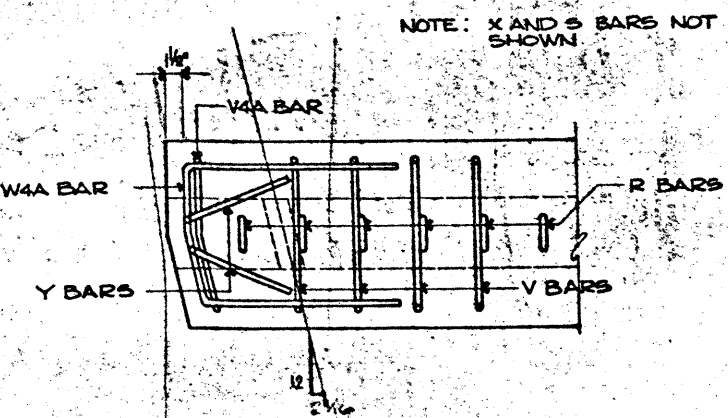
SECTION



STRAND @ END



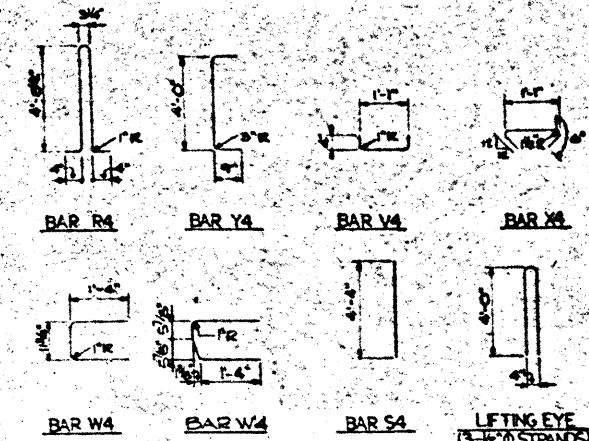
DETAIL A-1
BEAM END PLAN SECTION



NOTE: X AND S BARS NOT SHOWN

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-48-208 54-48-209 54-48-211	R4	45	#4	10'-3"	308	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	47'-11"	144	
	V4	1	#4	1'-9"	11	
	W4	1	#5	3'-8"	8	
	X4	40	#4	1'-10"	41	
	Y4	4	#6	5'-6"	33	
	W4A	2	#5	5'-11"	8	
	V4A	1	#4	1'-11"	1	
	X4A	1	#4	2'-0"	1	
	TOTAL				617	

BAR BENDING DETAILS



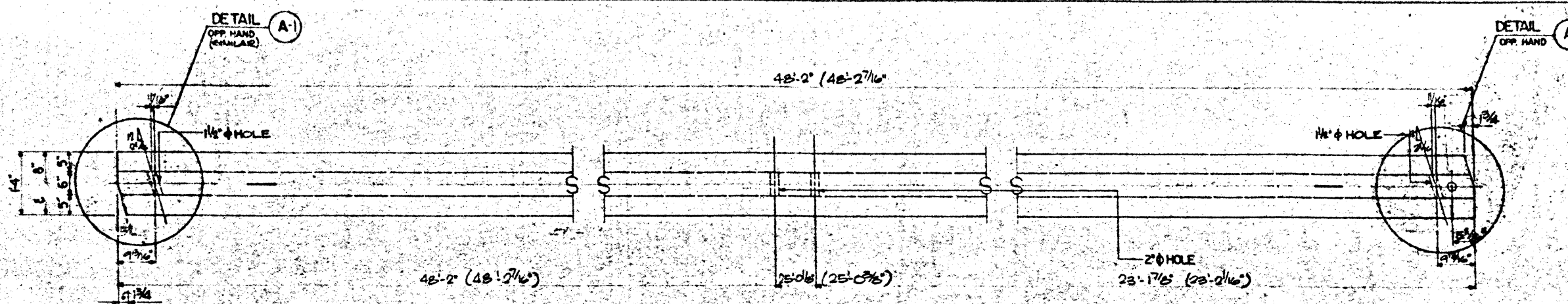
GENERAL NOTES

1. CONCRETE TO BE CLASS H. SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING—ASTM A65-40
3. U BARS INCLUDE 1'-0" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1/8"$ FOR R BARS.
5. $1 1/2" \times 4"$ SLOTTED HOLE MAY BE TAPERED TO $1 1/8" \times 4 1/4"$ AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY ($3/8"$).
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

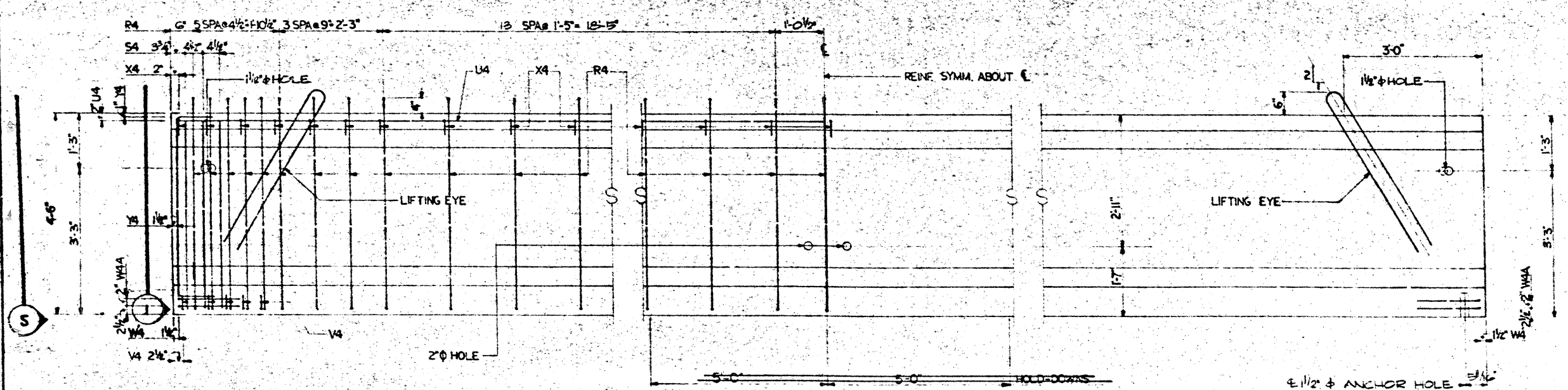
SPAN INDUSTRIES, INC.
DRAWING
FER 8 1972

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. IH 20

REVISED 1/23/71 CORRECTED PER TID			54' BEAM DETAIL 54-48-208 54-48-209 54-48-211	
	Title: HAMPTON RD OP. EASTBOUND OP.			
	Customer: BAILEY BRIDGE CO.			
	Engineer: TEXAS HIGHWAY DEPARTMENT			
Scale: NONE	Drawn By: (Signature)	Checked By: (Signature)	Date: (Date)	Approved: (Signature)
Order No. 55				Sheet No. FIG



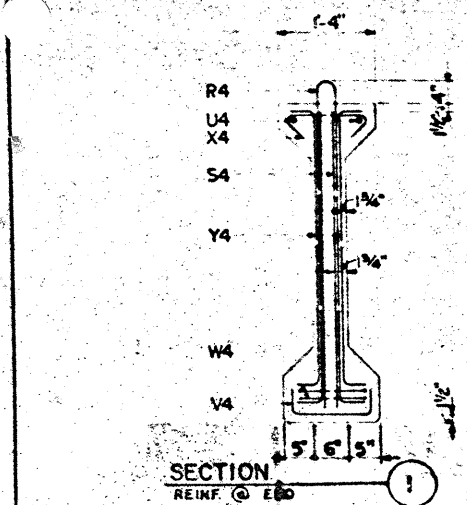
PLAN



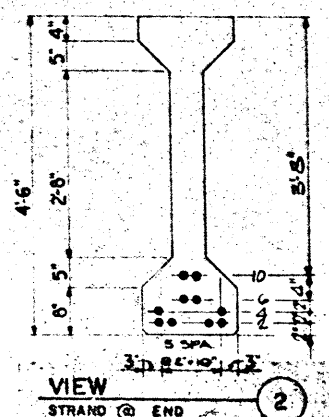
ELEVATION
I-NK 54-48-210

EXPANSION END

FIXED END

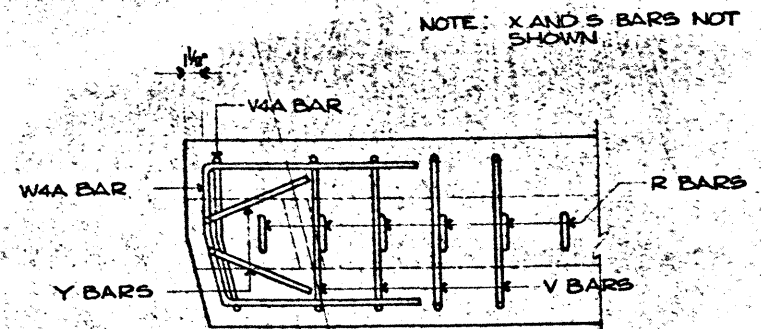
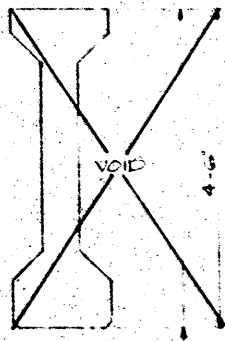


SECTION
REIN. @ END



VIEW
STRAND @ END

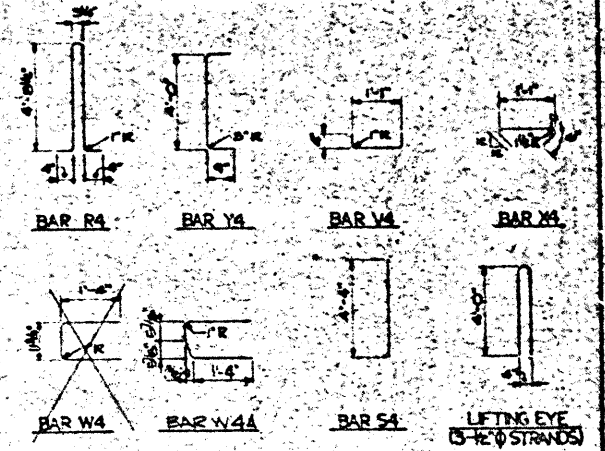
- 10 - 1/2" ϕ 270° S.R. STRANDS STRAIGHT
- 0 - 1/2" ϕ 270° S.R. STRANDS DRAPED
- 10 - 1/2" ϕ 270° S.R. STRANDS @ INITIAL FORCE = 28,910



DETAIL A-1
BEAM END PLAN SECTION

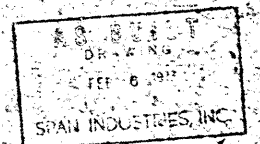
BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
	R4	45	#4	17'-3"	205	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	47'-11"	144	
	V4	10	#4	1'-9"	10	
	W4	5	#5	3'-8"		
	X4	59	#4	1'-10"	49	
	Y4	4	#6	5'-6"	33	
	W4A	4	#5	3'-11"	16	
	V4A	8	#4	1'-11"	2	
	X4A	8	#4	2'-0"	2	
				TOTAL	617	

BAR BENDING DETAILS



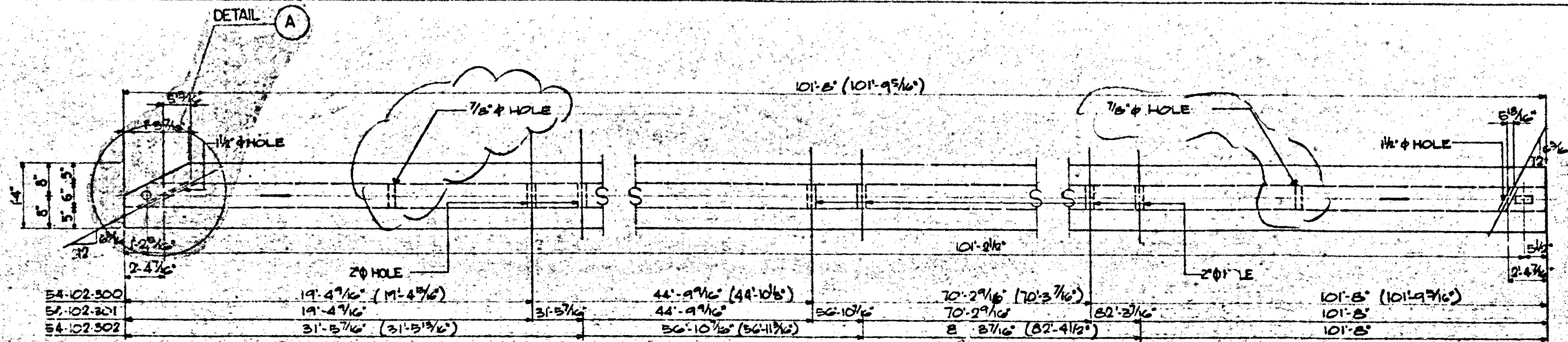
GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING — ASTM A615-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1"$ FOR R BARS.
5. 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1/2" X 4 1/4" AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1' AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT L TENDING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

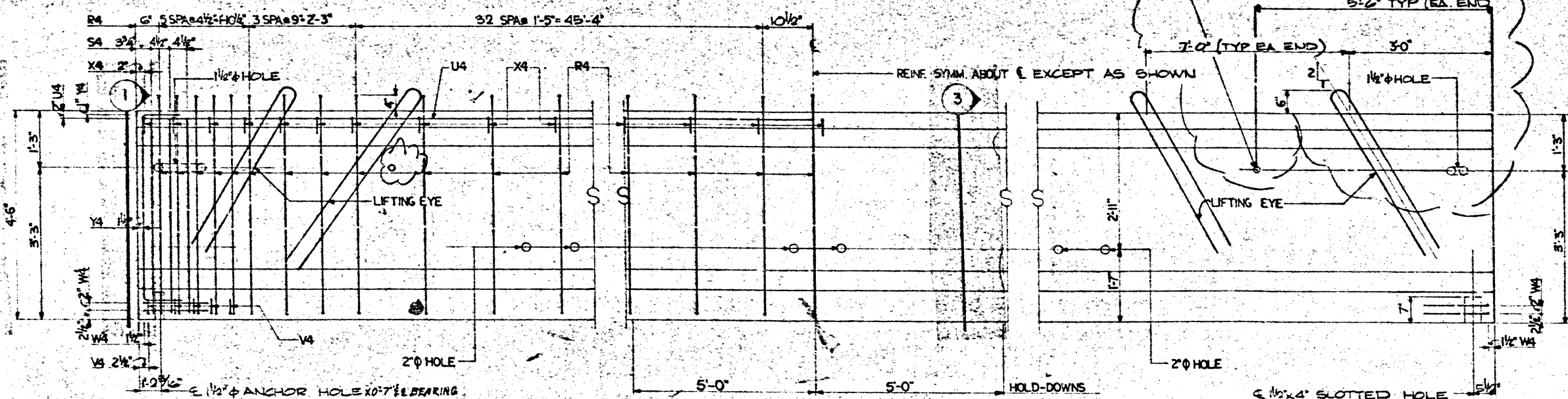


TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

		54" BEAM DETAIL 54-48-210	
Title: HAMPTON RD OP. EASTBOUND OP			
Customer: BAILEY BRIDGE CO.			
Architect:			
Engineer: TEXAS HIGHWAY DEPARTMENT			
Scale: NONE		Date: (3-31-71)	
Drawn By:		Approved:	
Checked By:		Sheet No.	
Order No.		F 17	



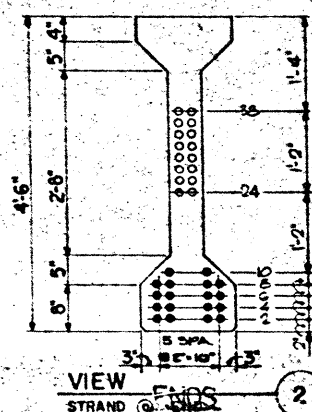
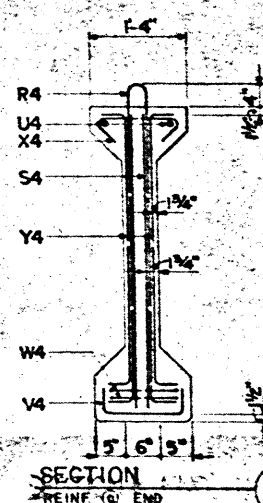
PLAN



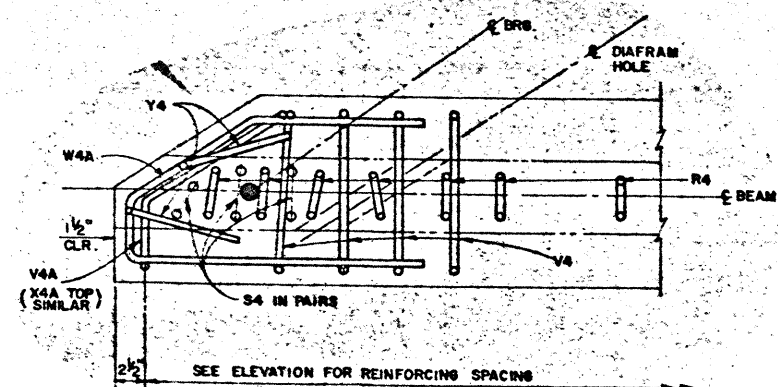
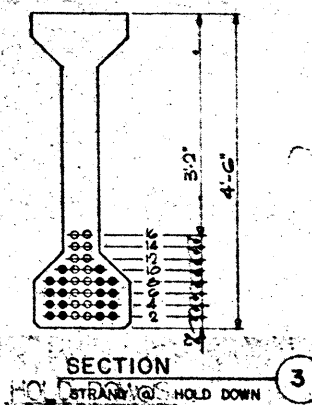
ELEVATION
3-MK 54-102-300
30-MK 54-102-301
3-MK 54-102-302

FIXED END

EXPANSION END



18 - 1/2" x 270" S.R. STRANDS STRAIGHT
16 - 1/2" x 270" S.R. STRANDS DRAPED
34 - 1/2" x 270" S.R. STRANDS @ INITIAL
FORCE = 28,910

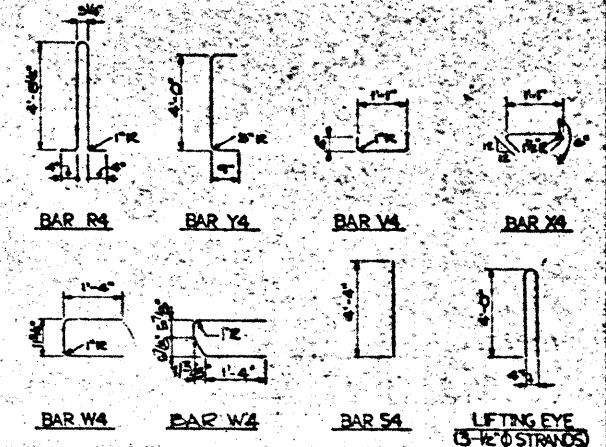


NOTE: SPACING OF R4 & S4 BARS MAY
BE VARIED TO CLEAR DIAFRAM HOLES

DETAIL
BEAM END PLAN SECTION

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-102-300	R4	23	#4	10'-5"	54	SHOWN
	U4	12	#5	4'-4"	54	
54-102-301	V4	2	#4	105'-3"	310	
	W4	2	#5	1'-9"	11	
54-102-302	X4	75	#4	1'-10"	96	
	Y4	4	#6	5'-6"	33	
	W4A	2	#5	5'-1"	10	
	V4A	1	#4	2'-2"	2	
	X4A	1	#4	2'-8"	2	
				TOTAL	1293	

BAR BENDING DETAILS

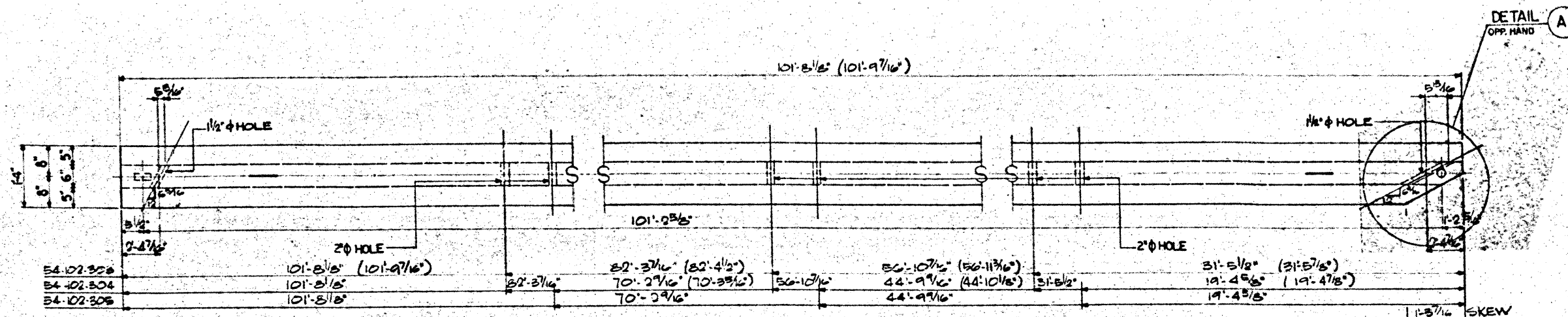


GENERAL NOTES

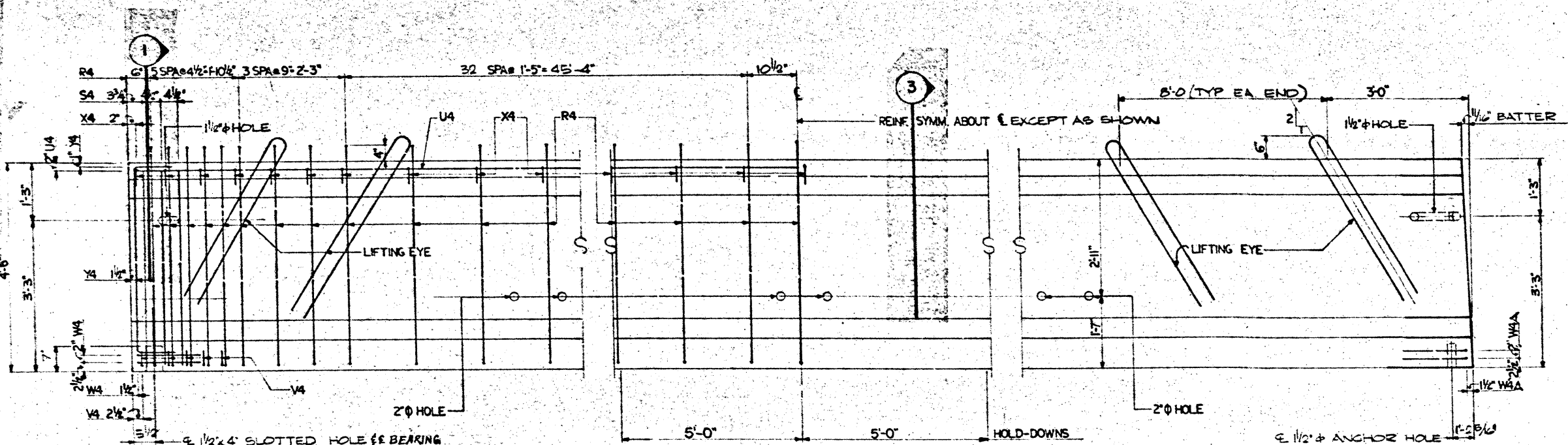
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING - ASTM A65-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1/4"$ FOR R BARS.
5. 1/2" x 4" SLOTTED HOLE MAY BE TAPERED TO 1/8" x 4" AT BASE
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

REV. 12-1-71 JY ADD 7/8" HOLES
841
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. 2420

		54' BEAM DETAIL 54-102-300 54-102-301 54-102-302	
Title LUGANVILLE-WHEATLAND RD. OP.			
Customer BAILEY BRIDGE CO.			
Engineer TEXAS HIGHWAY DEPARTMENT			
Scale NONE		Date 3-21-71	
Drawn By JY		Approved [Signature]	
Checked By [Signature]		Sheet No. F 13	
Order No. 7105			



PLAN

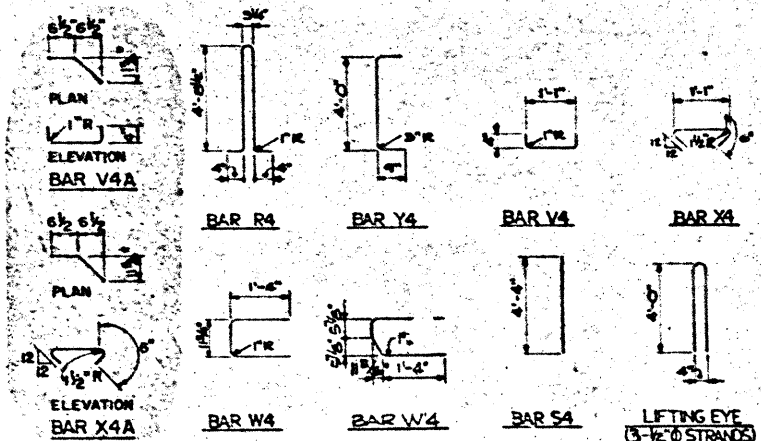


ELEVATION

1-MK 54-102-303
10-MK 54-102-304
1-MK 54-102-305

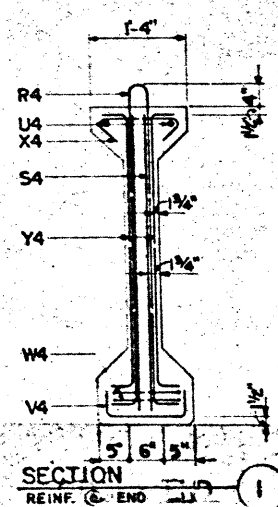
BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REOD	SIZE	LENGTH	WEIGHT	SPACING
	R4	25	#4	10'-3"	56.8	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	10'-3"	310	
54-102-303	V4	4	#4	1'-9"	11	
54-102-304	W4	2	#5	3'-8"	5	
54-102-305	X4	76	#4	1'-10"	46	
	Y4	4	#6	5'-6"	33	
	W4A	2	#5	5'-1"	10	
	V4A	1	#4	2'-5"	2	
	X4A	1	#4	2'-4"	2	
				TOTAL	1094	

BAR BENDING DETAILS

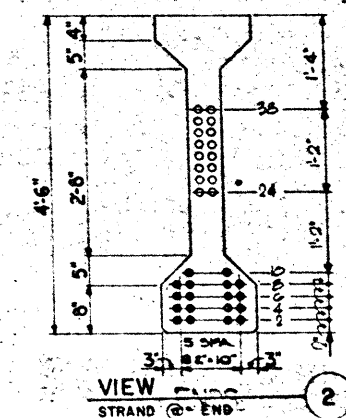


GENERAL NOTES

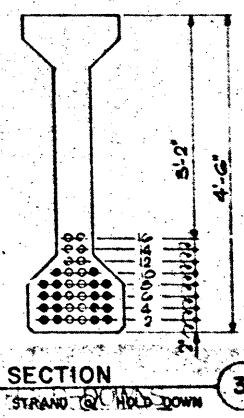
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING—ASTM A615-40
3. U-BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1/8"$ FOR R BARS.
5. $1/2" \times 4"$ SLOTTED HOLE MAY BE TAPERED TO $1/8" \times 4"$ AT BASE.
6. V BARS MAY BE TILTED THUS AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1' AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY ($3/4"$).
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.



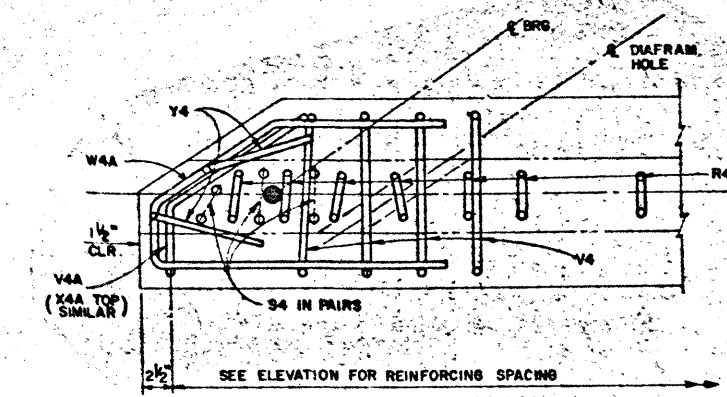
SECTION



VIEW



SECTION



DETAIL

AS BUILT
DRAWING
FEB 16 1993
SPAN INDUSTRIES, INC.

843

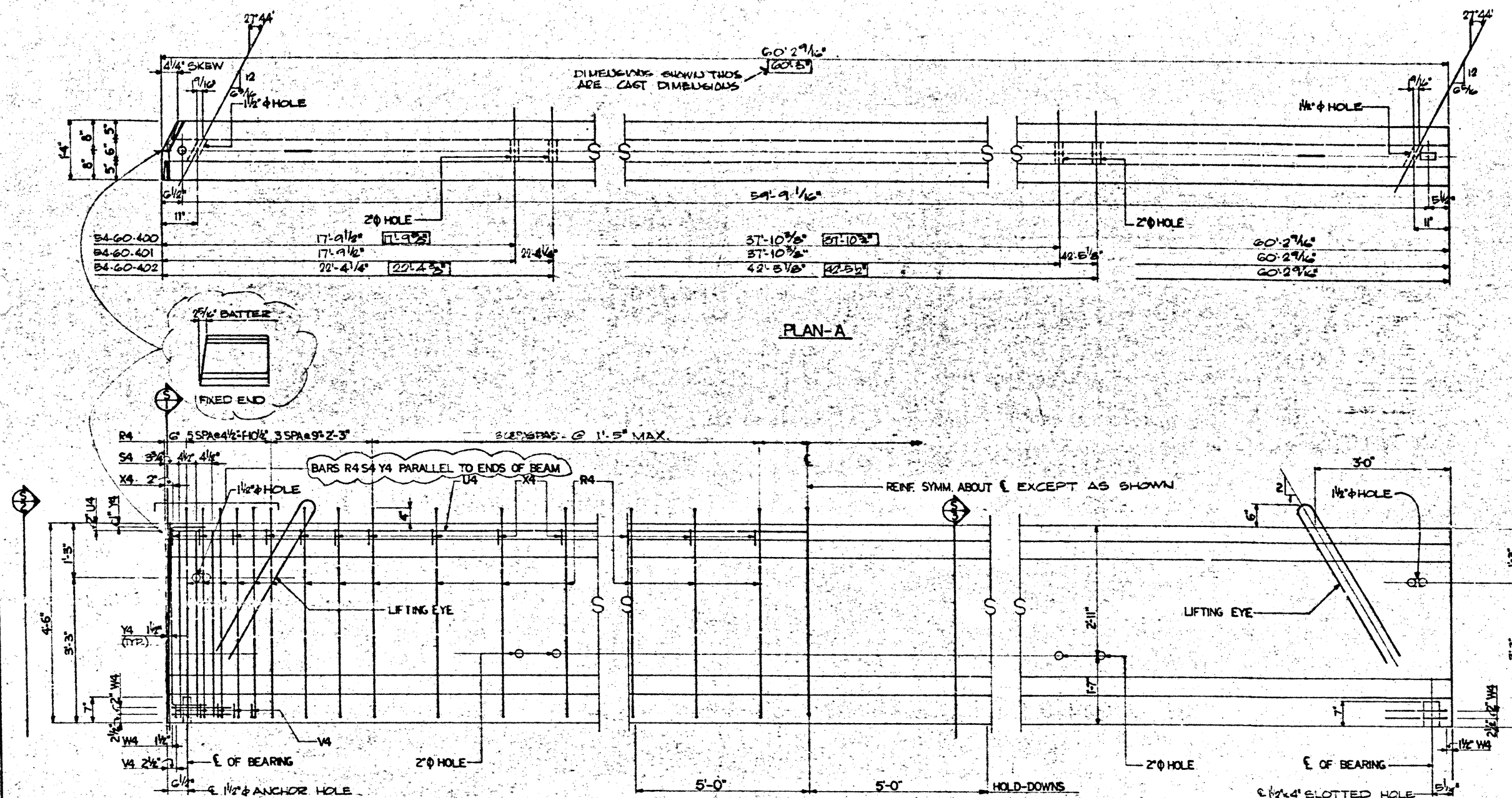
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. IH 20

SPAN INDUSTRIES, INC.
54" BEAM DETAIL
54-102-303
54-102-304
54-102-305

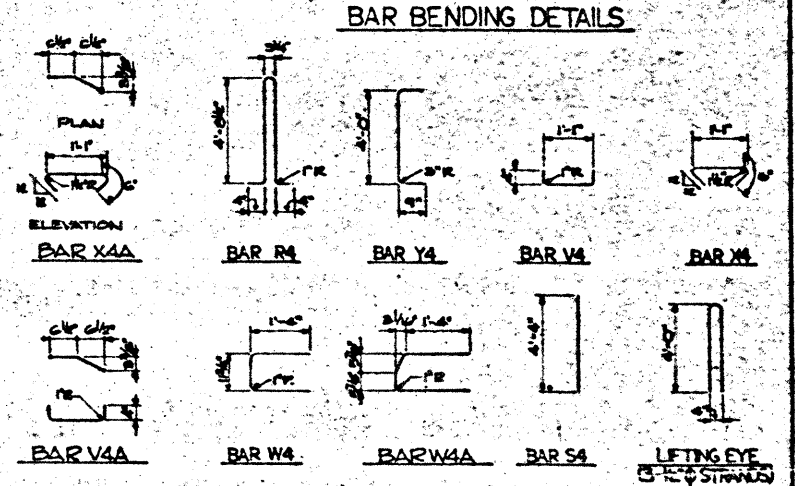
Title
DUNCANVILLE-WHEATLAND RD. OP.

Customer BAILEY BRIDGE CO
Architect
Engineer TEXAS HIGHWAY DEPARTMENT
Scale NONE
Drawn By JY (3-31-71)
Checked By
Order No. 103

Date
Approved 7/1/71
Sheet No.
F 20



BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING SHOWN
54-60-400 54-60-401 54-60-402	R4	12	#4	10'-3"	362	
	S4	12	#5	4'-4"	54	
	U4	2	#6	60'-0"	180	
	V4	8	#4	1'-9"	12	
	W4	2	#5	3'-8"	8	
	X4	48	#4	1'-10"	99	
	Y4	4	#6	5'-6"	33	
	V4A	1	#4	1'-10"	1	
	X4A	1	#4	1'-11"	1	
	W4A	2	#5	4'-2"	9	
TOTAL					718	



- GENERAL NOTES
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
 2. REINFORCING - ASTM A615-40
 3. U-BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0" SPACING TOLERANCE OF $\pm 1/4"$ FOR R-BARS.
 4. 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1/8" X 4" AT BASE.
 5. V-BARS MAY BE TILTED THUS AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
 6. USE STRAND LOOPS FOR HANDLING OF BEAMS.
 7. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
 8. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/4").
 9. INITIAL PULL OF 2000 LBS. PER STRAND.
 10. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

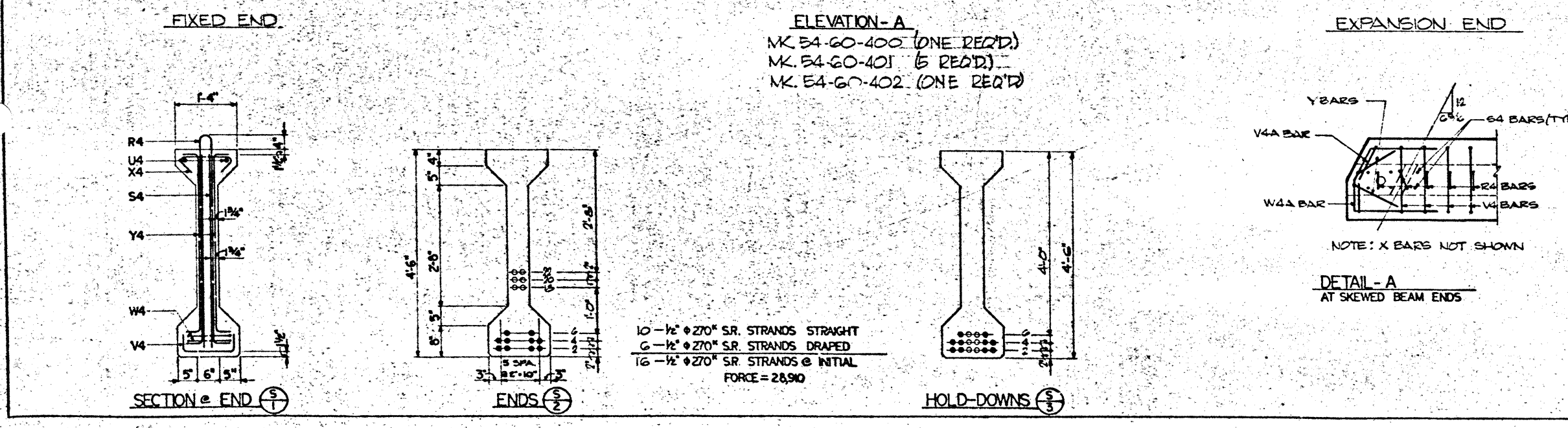
DATE: FEB. 6, 1978
SPAN INDUSTRIES, INC.

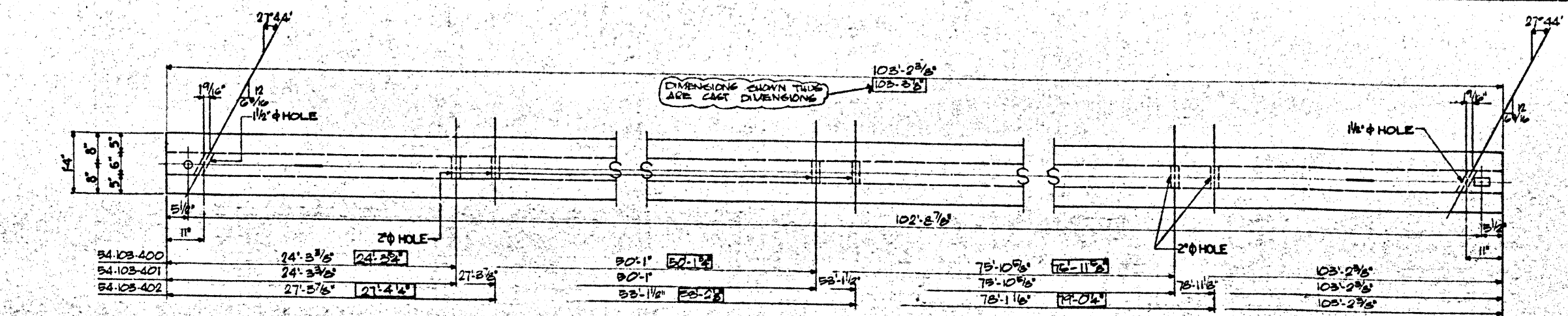
TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

54' BEAM DETAIL
54-60-400
54-60-401
54-60-402

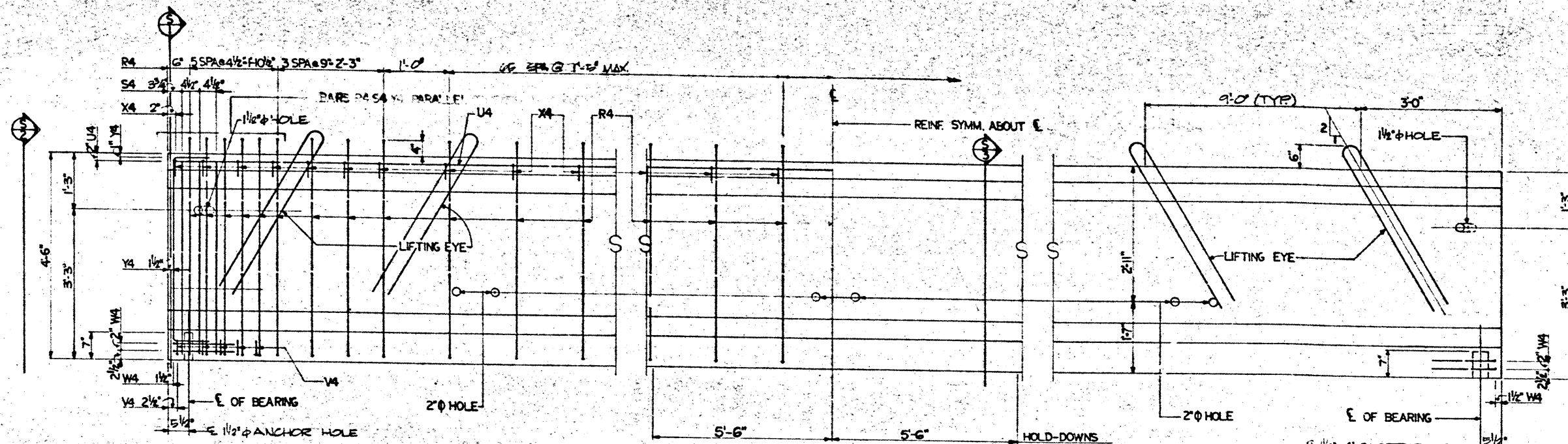
Customer: BAILEY BRIDGE CO.
Architect: TEXAS HIGHWAY DEPARTMENT
Scale: NONE
Drawn By: J.Y. (6-B-71)
Checked By: J.Y.
Order No. 7108

Date: 7.2.78
Approved: J.2.78
Sheet No. F 21





PLAN-A

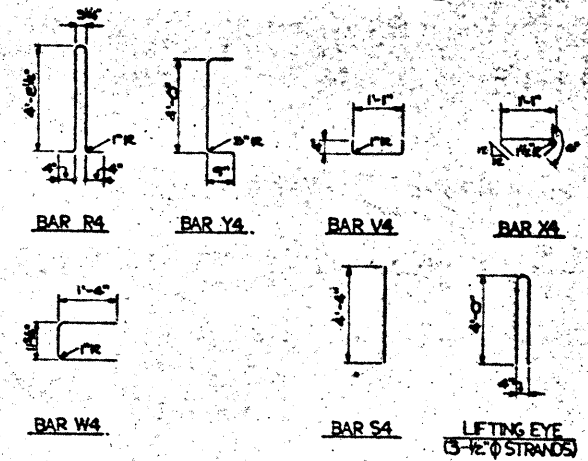


ELEVATION-A

NK. 54-103-400 (ONE REQ'D)
 NK. 54-103-401 (ONE REQ'D)
 NK. 54-103-402 (ONE REQ'D)

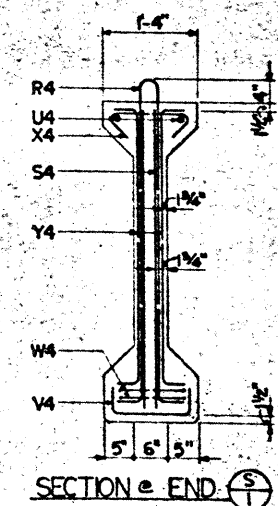
BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
	R4	64	#4	10'-2"	575	SHOWN
	S4	12	#5	4'-4"	54	
	U4	4	#6	52'-9"	315	
54-103-400	V4	10	#4	1'-9"	12	
54-103-401	W4	4	#5	3'-8"	15	
54-103-402	X4	80	#4	1'-10"	98	
	Y4	4	#6	5'-6"	33	
TOTAL					1102	

BAR BENDING DETAILS

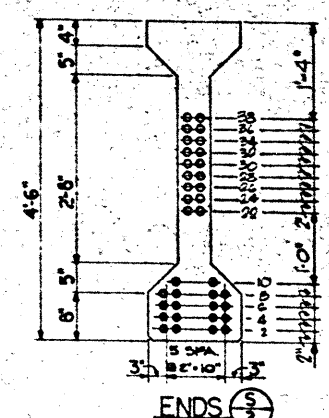


GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING — ASTM A65-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF 1/4" FOR R BARS
5. 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1/8" X 4 3/4" AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAIR — R ENDS AT BOTTOM OF BEAM ONLY (3/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

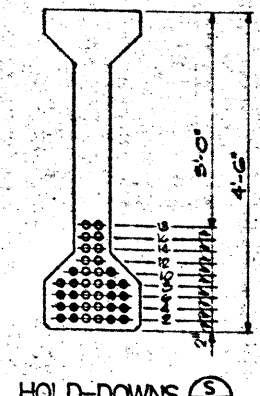


SECTION @ END



ENDS

18 - 1/2" #270* S.R. STRANDS STRAIGHT
 15 - 1/2" #270* S.R. STRANDS DRAPED
 36 - 1/2" #270* S.R. STRANDS @ INITIAL FORCE = 28,900

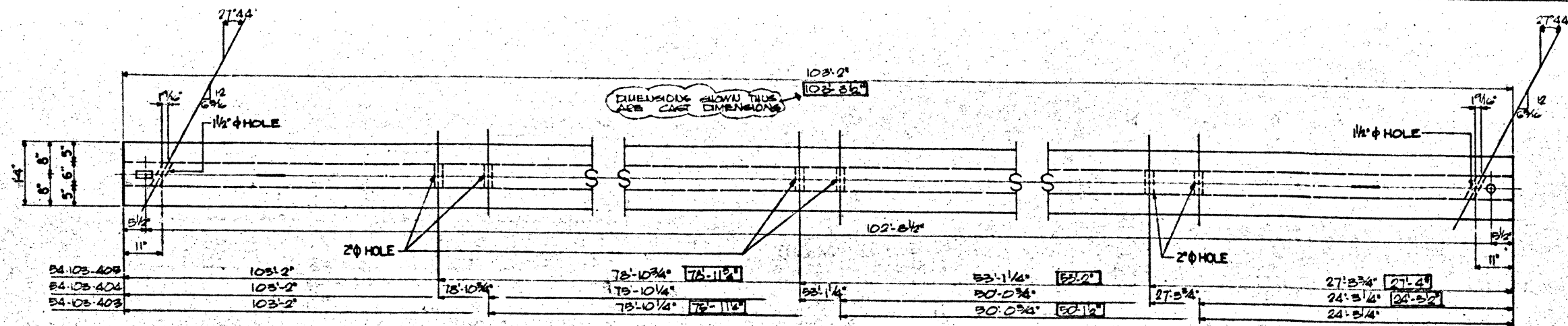


HOLD-DOWNS

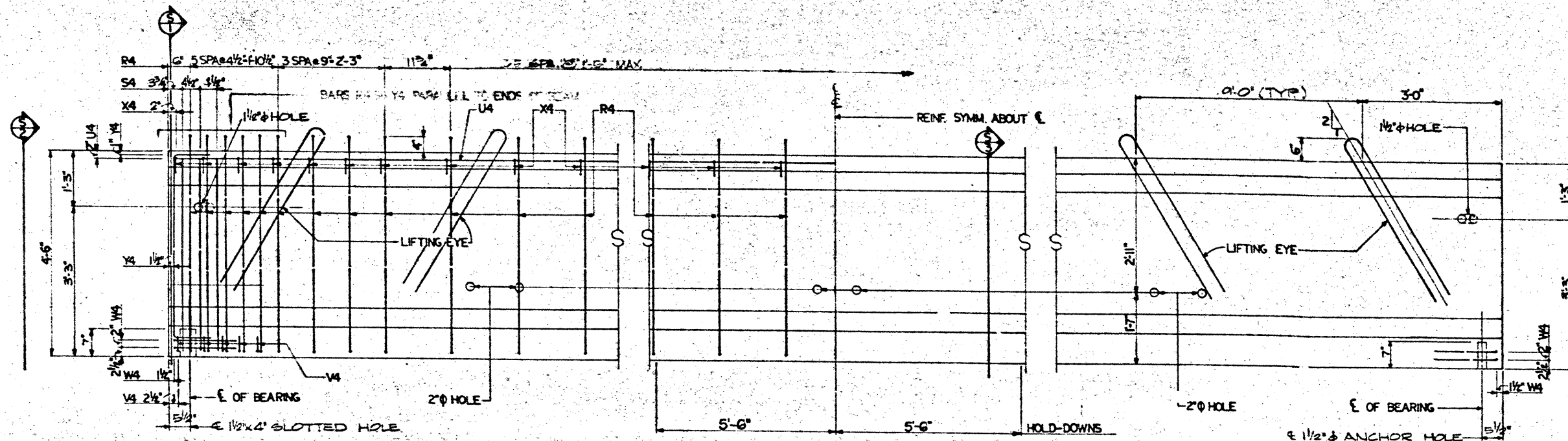
DESIGNED BY
 DRAWING
 FEB. 6 1973
 SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
 FED. AID PROJECT NO. I 20-5(61)457
 COUNTY DALLAS
 HIGHWAY NO. I.H. 20

	SPAN INCORPORATED <small>2000 W. HICKORY TRAIL RD. SUITE 100 DALLAS, TEXAS 75243</small>	54' BEAM DETAIL 54-103-400 54-103-401 54-103-402
	Title OLD HICKORY TRAIL RD.	
Customer BAILEY BRIDGE CO.		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE	Date 7-2-73	
Drawn By JN	Checked By (G.B.71)	Approved F. Daniel
Order No. 7108	Sheet No. F.22	

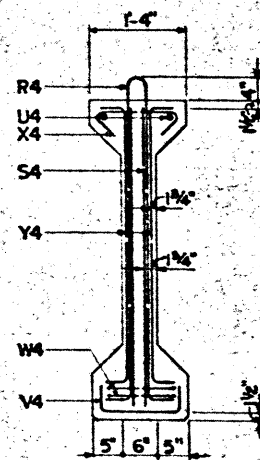


PLAN-A

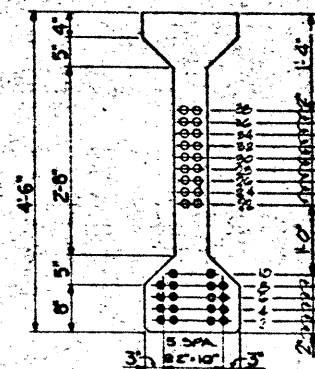


ELEVATION-A

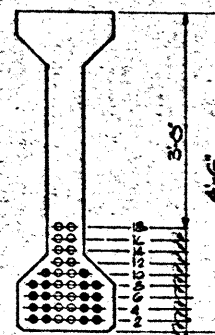
MK 54-103-405 (ONE REQ'D)
MK 54-103-404 (8 REQ'D)
MK 54-103-403 (ONE REQ'D)



SECTION @ END



ENDS

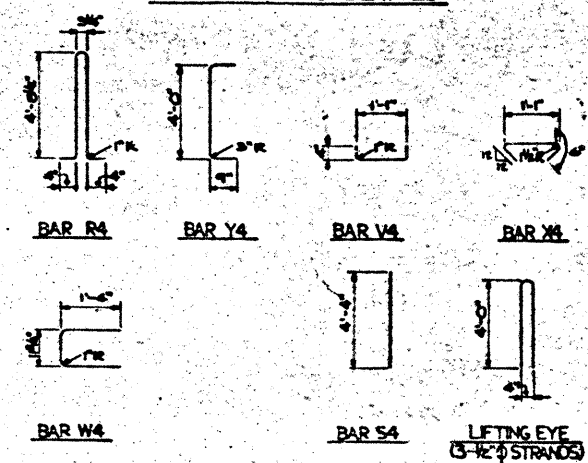


HOLD-DOWNS

13 - 1/2" x 270" S.R. STRANDS STRAIGHT
13 - 1/2" x 270" S.R. STRANDS DRAPED
36 - 1/2" x 270" S.R. STRANDS @ INITIAL
FORCE = 28,900

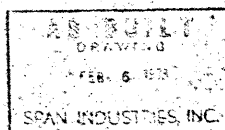
BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
54-103-405 54-103-404 54-103-403	R4	24	#4	10'-3"	575	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	52'-5"	315	
	V4	10	#4	1'-9"	12	
	W4	4	#5	3'-6"	15	
	X4	80	#4	1'-10"	75	
	Y4	4	#6	5'-6"	33	
TOTAL					1102	

BAR BENDING DETAILS



GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING—ASTM A65-40
3. U-BARS INCLUDE 1'-0" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF $\pm 1/4"$ FOR R-BARS
5. 1 1/2" x 4" SLOTTED HOLE MAY BE TAPERED TO 1 3/8" x 4 3/4" AT BASE.
6. V-BARS MAY BE TILTED THUS 1/4" AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1' AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.



TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20



SPAN
INCORPORATED
P.O. BOX 1000
DALLAS, TEXAS 75201

54" BEAM DETAIL
54-103-405
54-103-404
54-103-403

OLD HICKORY TRAIL RD.

Customer BAILEY BRIDGE CO.

Architect

Engineer TEXAS HIGHWAY DEPARTMENT

Scale NONE

Drawn By JY. (6-10-71)

Checked By

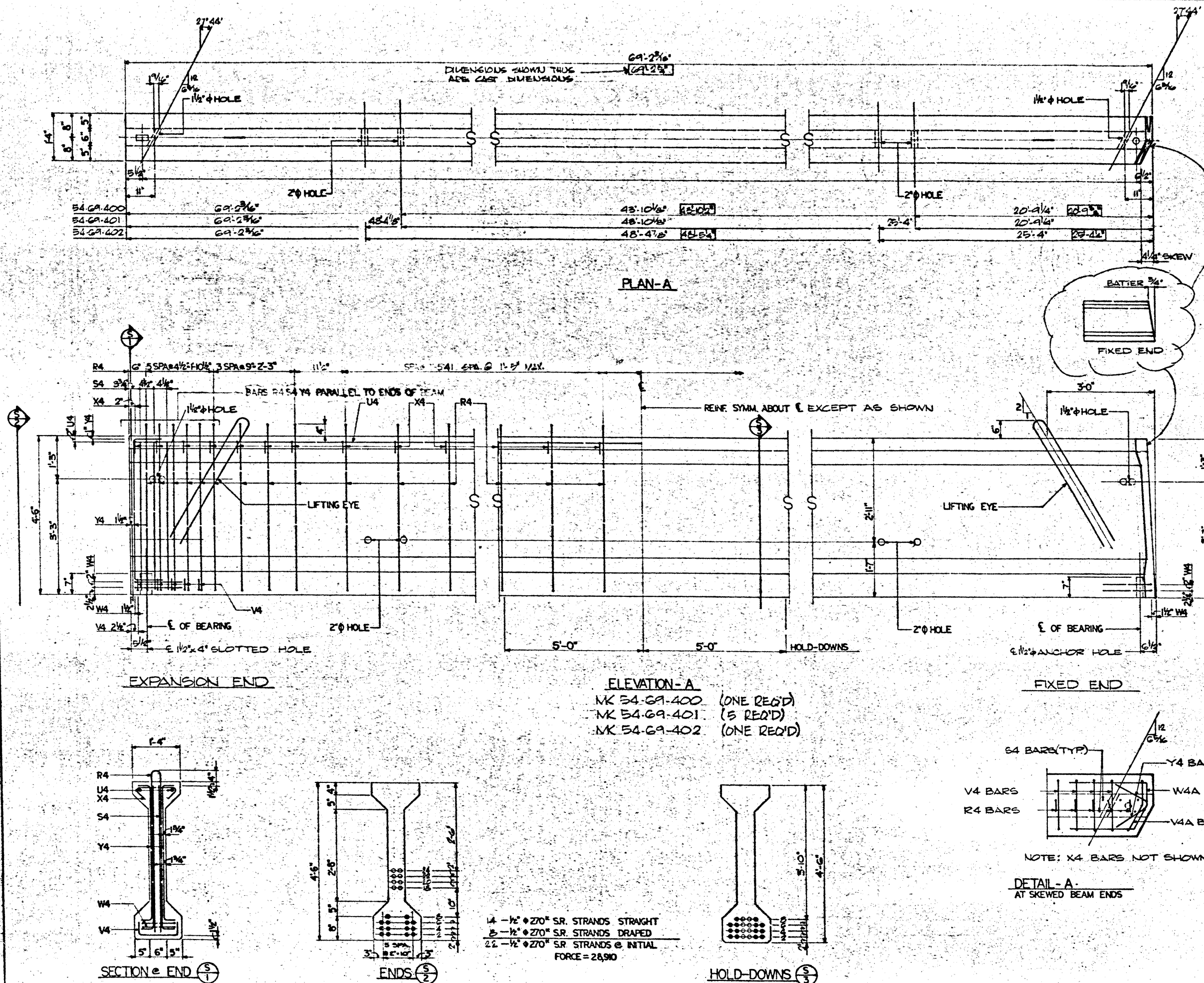
Order No. 7105

Date

Approved T. Quinn

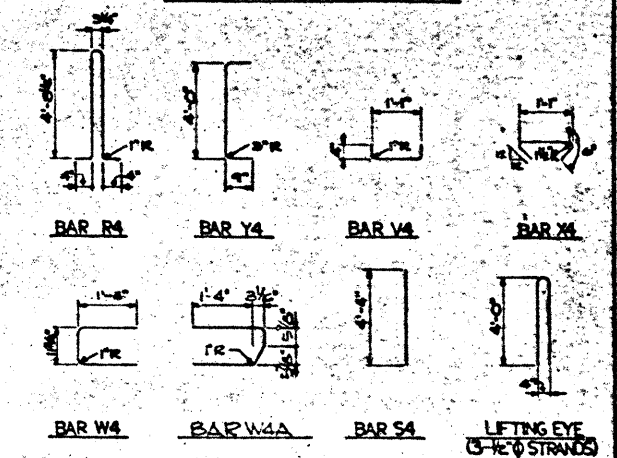
Sheet No.

F23



BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
54-GA-400	R4	60	#4	10'-5"	411	SHOWN
	S4	12	#3	4'-4"	54	
	U4	4	#6	25'-5"	213	
	V4	10	#4	1'-9"	12	
54-GA-401	W4	2	#5	3'-8"	8	
54-GA-402	X4	55	#4	1'-10"	67	
	Y4	4	#6	5'-6"	33	
	W4A	2	#5	4'-8"	9	
	V4A	1	#4	1'-10"	1	
	X4A	1	#4	1'-11"	1	
TOTAL					808	

BAR BENDING DETAILS



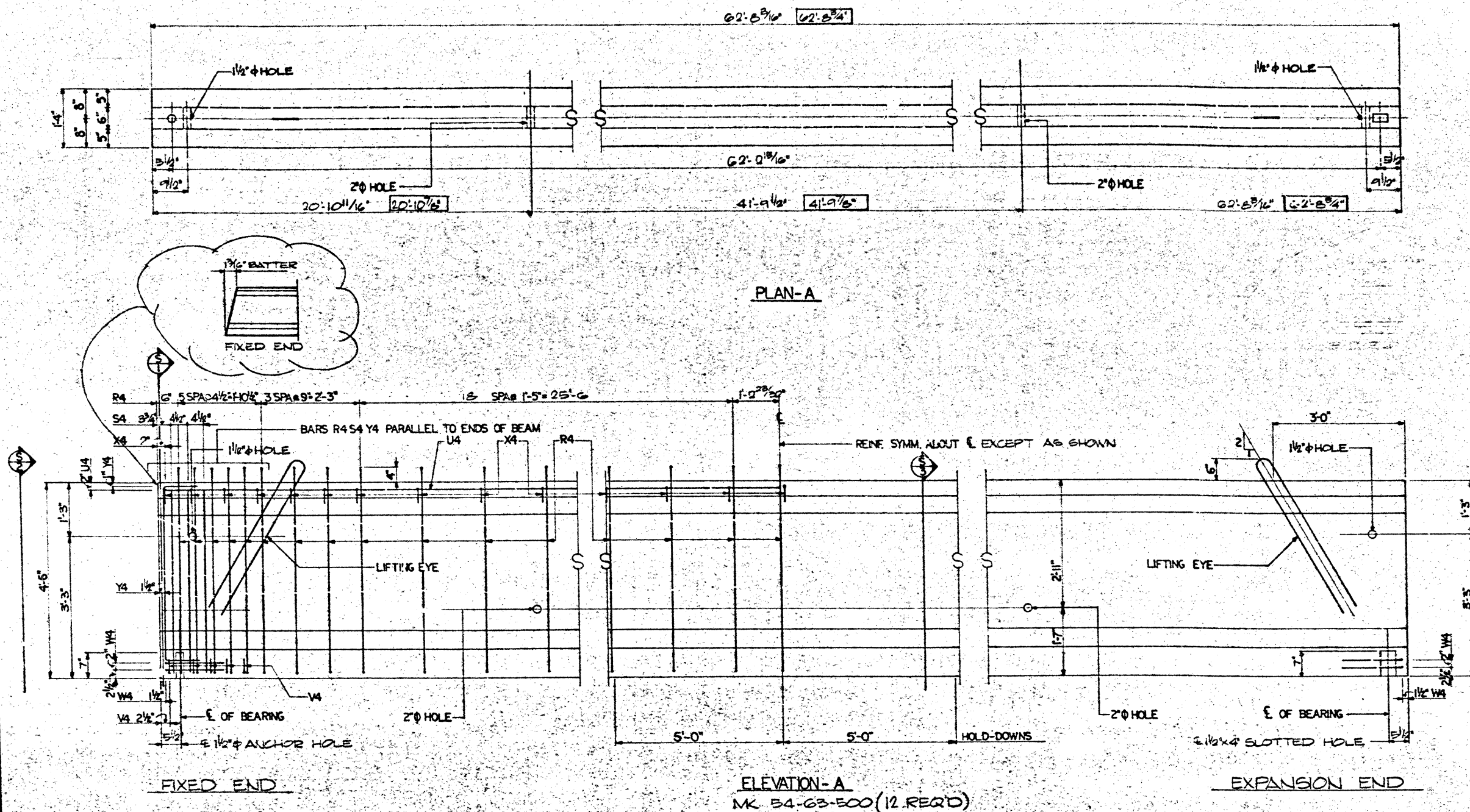
GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING - ASTM A615-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. SPACING TOLERANCE OF 1/4" FOR R BARS
5. 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1/8" X 4" AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

DESIGNED BY
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

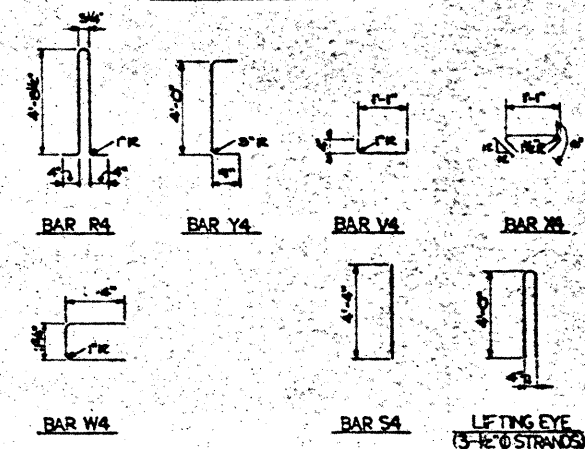
TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

SPAN INCORPORATED P.O. BOX 1000 DALLAS, TEXAS 75201		54' BEAM DETAIL 54-GA-400 54-GA-401 54-GA-402
Title OLD HICKORY TRAIL RD.		
Customer BAILEY BRIDGE CO.		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE	Date	Approved <i>[Signature]</i>
Drawn By JY.	(6-10-71)	Sheet No.
Checked By		
Order No. 7108		F 24



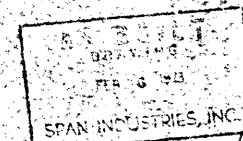
BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
54-G3-500	R4	55	#4	10'-5"	877	SHOWN
	S4	12	#5	4'-4"	54	
	U4	8	#6	20'-2"	193	
	V4	10	#4	11'-9"	12	
	W4	4	#5	3'-8"	15	
	X4	51	#4	1'-10"	22	
	Y4	4	#6	5'-6"	33	
TOTAL					746	

BAR BENDING DETAILS



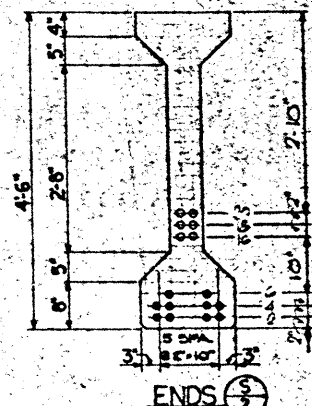
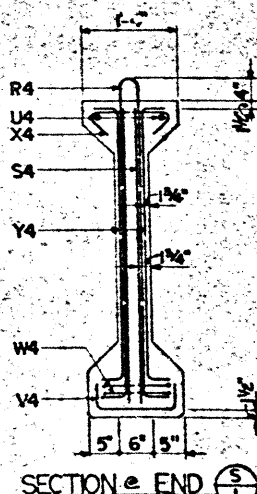
GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING — A.S.T.M. A615-40
3. U.BARS INCLUDE 1'-0" MINIMUM LAP, BARS OVER 60'-0"
4. CAST LENGTH INDICATED STRIPS
5. 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1/2" X 4" AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1' AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/4").
10. INITIAL PULL OF 2,000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

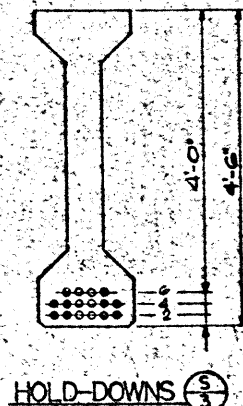


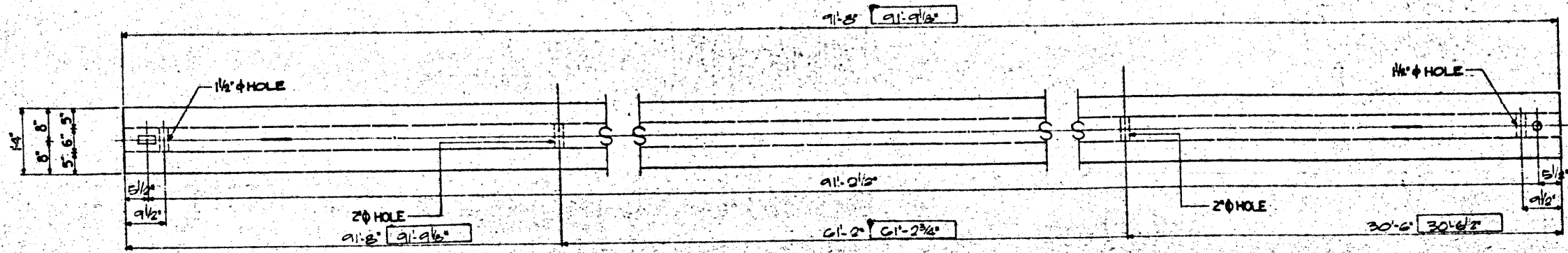
TEXAS HIGHWAY DEPARTMENT
 FED. AID PROJECT NO. I 20-5(61)457
 COUNTY DALLAS
 HIGHWAY NO. I.H. 20

SPAN INCORPORATED 10000 W. 10TH ST. DALLAS, TEXAS 75243		54" BEAM DETAIL 54-G3-500
Title WESTMORELAND RD. UNDERPASS		
Customer BAILEY BRIDGE CO.		
Architect		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE	Date	
Drawn By JY.	(6-14-71)	Approved
Checked By	Sheet No.	
Order No. 7108	F25	

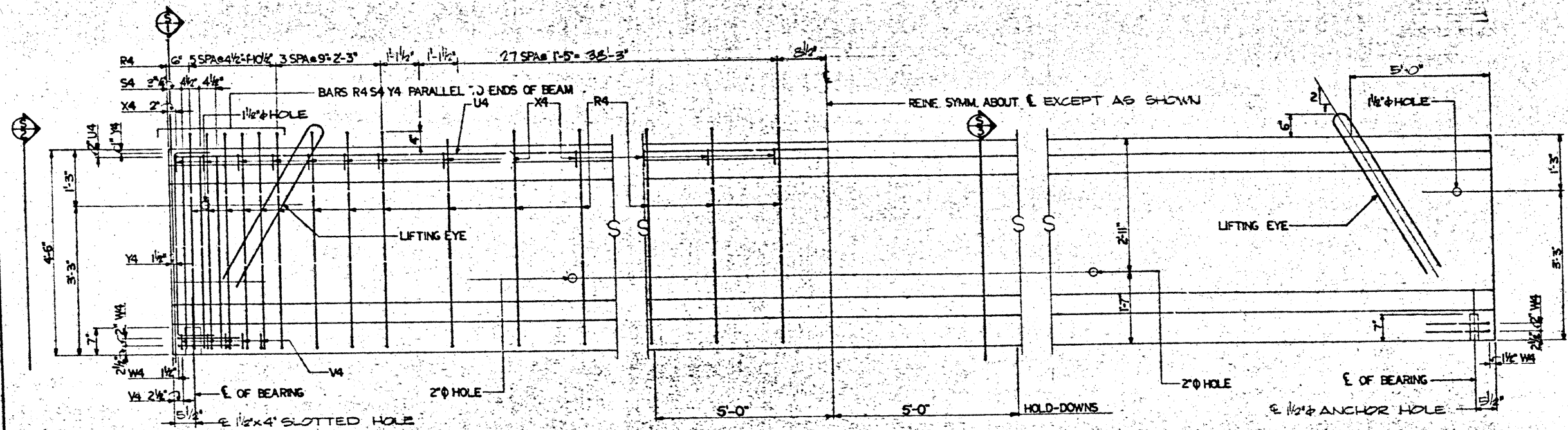


10 - 1/2" #270 S.R. STRANDS STRAIGHT
 6 - 1/2" #270 S.R. STRANDS DRAPED
 16 - 1/2" #270 S.R. STRANDS @ INITIAL
 FORCE = 28,910





PLAN-A

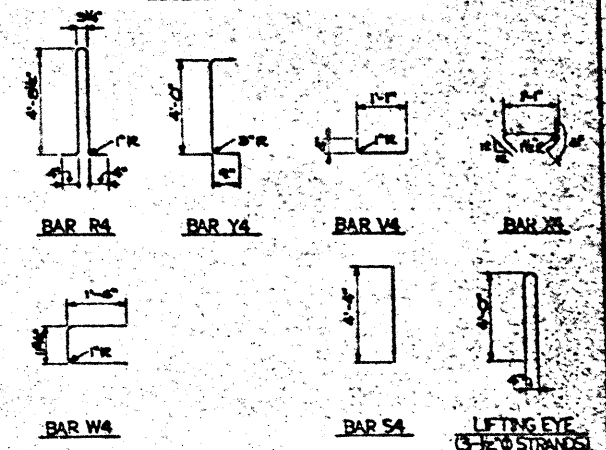


ELEVATION-A

MC 54-92-501 (14 REQ'D)

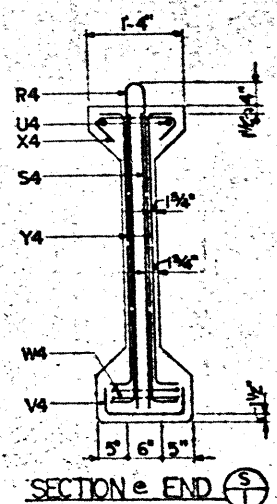
BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO. REQ'D	SIZE	LENGTH	WEIGHT	SPACING
54-92-501	R4	72	#4	17'-5"	520	SHOWN
	S4	12	#5	4'-4"	54	
	U4	4	#6	40'-8"	280	
	V4	10	#4	1'-9"	12	
	W4	4	#5	3'-8"	15	
	X4	72	#4	1'-10"	88	
	Y4	4	#6	5'-6"	33	
TOTAL					1002	

BAR BENDING DETAILS

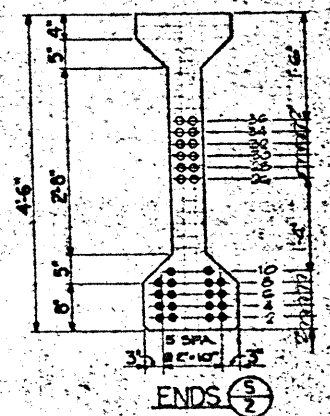


GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING — ASTM A65-40
3. U BARS INCLUDE 1'-0" MINIMUM LAP, BARS OVER 60'-0"
4. CASK LENGTHS INDICATED THUS
5. 1 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1 1/8" X 4 1/4" AT BASE.
6. V BARS MAY BE TILTED THUS AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (1/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

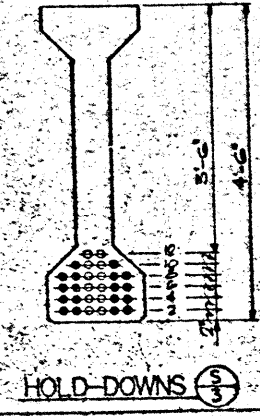


SECTION e END



ENDS

15 — 1/2" #270 SR. STRANDS STRAIGHT
12 — 1/2" #270 SR. STRANDS DRAPED
30 — 1/2" #270 SR. STRANDS @ INITIAL FORCE = 28,910



HOLD-DOWNS

SPAN
INCORPORATED
1700 WEST LOOP
P.O. BOX 8001
DALLAS, TEXAS 75208

54' BEAM DETAIL
54-92-501

Title: **WESTMORELAND RD. UNDERPASS**

Customer: **BAILEY BRIDGE CO.**

Architect: _____

Engineer: **TEXAS HIGHWAY DEPARTMENT**

Scale: **NONE** Date: _____

Drawn By: **JY** (6-15-71) Approved: **T. C. ...**

Checked By: _____ Sheet No. _____

Order No. **7105** F27

BAR BENDING DETAILS

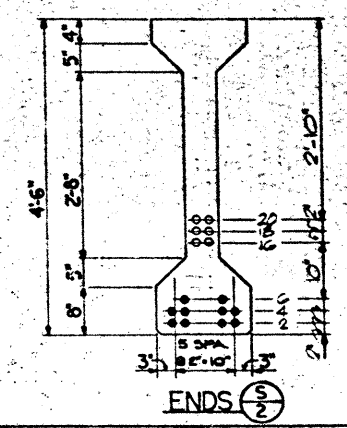
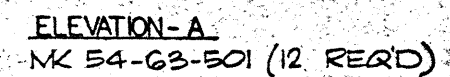


- AS BUILT
DRAWING
FEB 8 1955
SPAN INDUSTRIES, INC.

SPAN
INCORPORATED
PREFORMED CONCRETE
P.O. BOX 76291
DALLAS TEXAS 75226

54" BEAM DETAIL
54-63-501

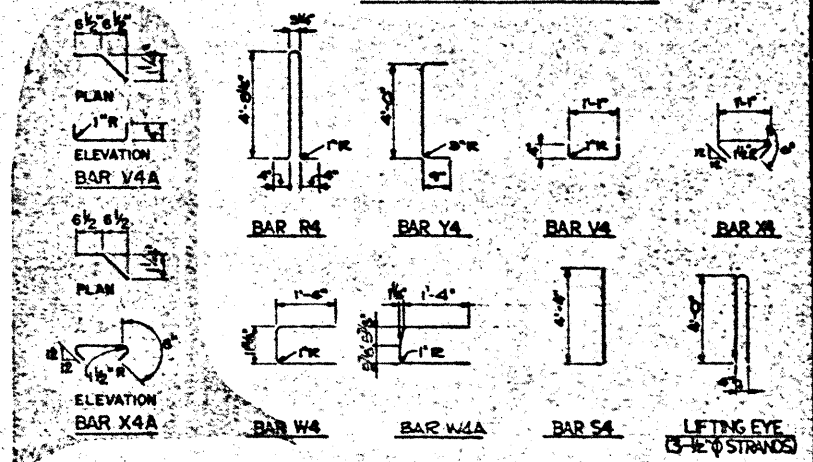
Checked By	Sheet No.
Order No. 7108	F28



HOLD-DOWNS

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQD	SIZE	LENGTH	WEIGHT	SPACING
54-48-600 54-48-601 54-48-602	R4	45	#4	10'-3"	305	SHOWN
	S4	12	#5	4'-4"	54	
	U4	2	#6	48'-1"	149	
	V4	19	#4	1'-9"	12	
	W4	2	#5	3'-6"	8	
	X4	40	#4	1'-10"	50	
	Y4	4	#6	5'-6"	33	
	V4A	1	#4	1'-7"	1	
	X4A	1	#4	1'-10"	1	
	W4A	2	#5	3'-10"	8	
TOTAL					619	

BAR BENDING DETAILS



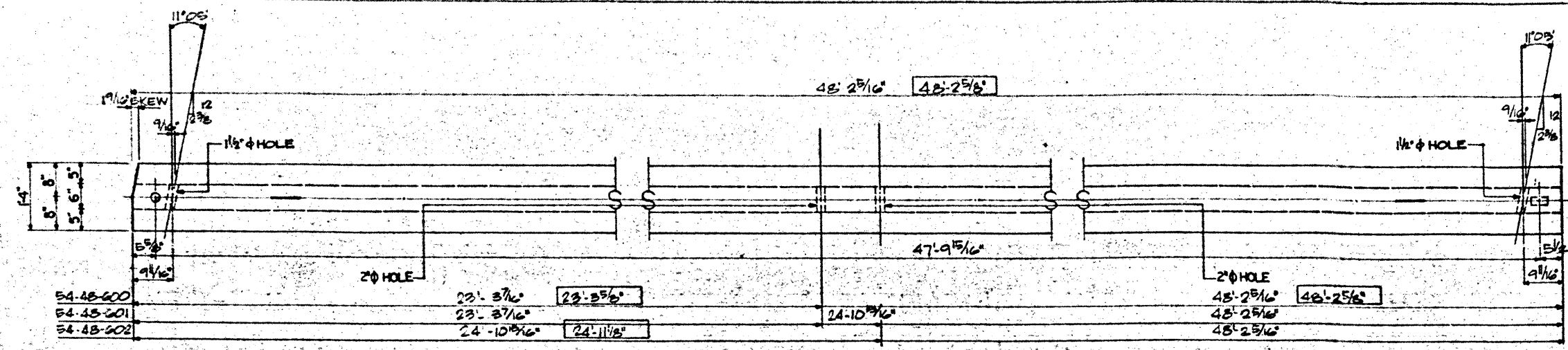
GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING—ASTM A65-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. CAST LENGTHS INDICATED THUS
5. 1 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1 1/8" X 4 1/4" AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10-MIL COAT OF EPOXY.
9. CHAIR ENDS AT BOTTOM OF BEAM ONLY (1/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

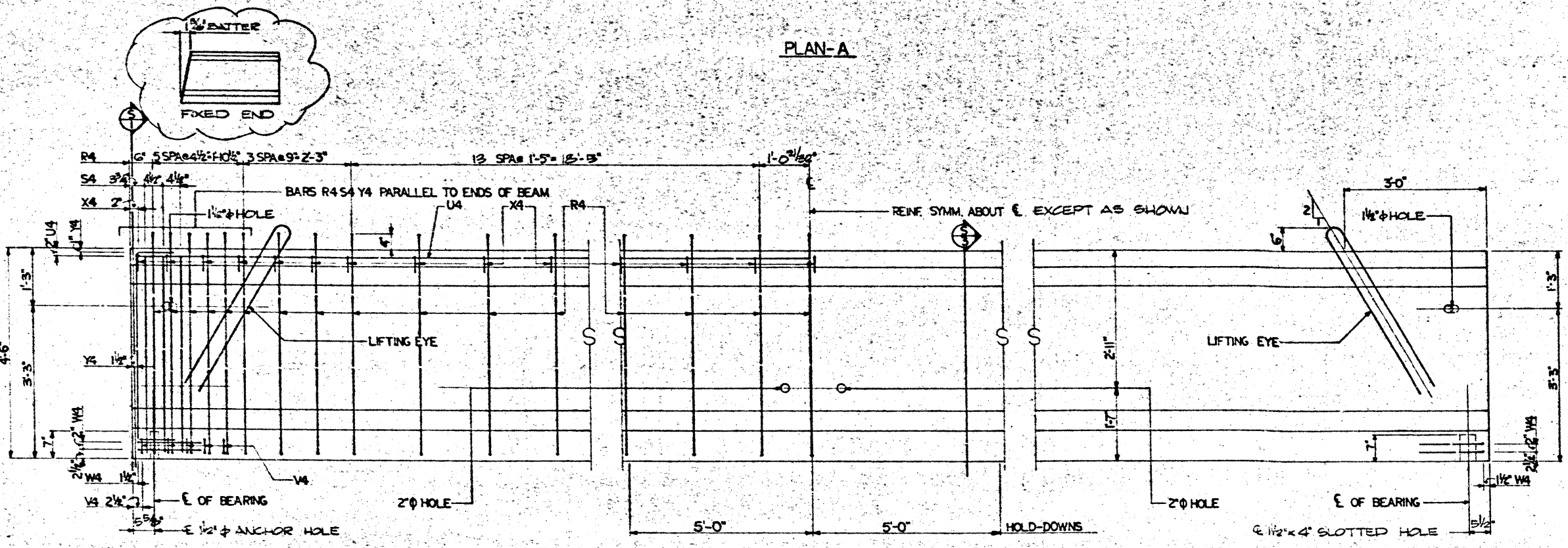
SPAN INDUSTRIES, INC.
FEB 6, 1978

TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

		54' BEAM DETAIL 54-48-600 54-48-601 54-48-602	
SOUTH POLK STREET UNDERPASS			
Customer: BAILEY BRIDGE CO.			
Engineer: TEXAS HIGHWAY DEPARTMENT			
Scale: NONE		Date:	
Drawn By: J.Y. (G-21-71)		Approved: T. Arnold	
Checked By:		Sheet No.:	
Order No. 7108		F 29	



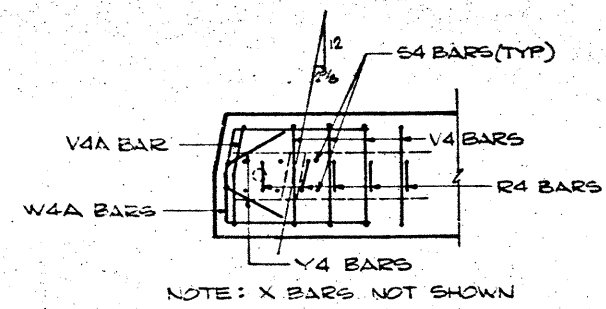
PLAN-A



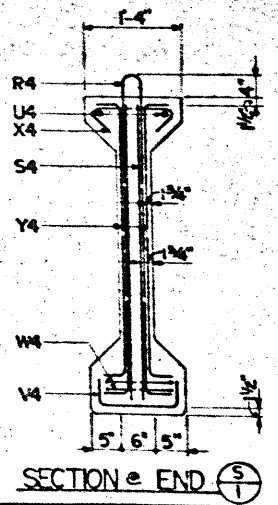
ELEVATION-A

MK 54-48-600 (2 REQD)
MK 54-48-601 (8 REQD)
MK 54-48-602 (2 REQD)

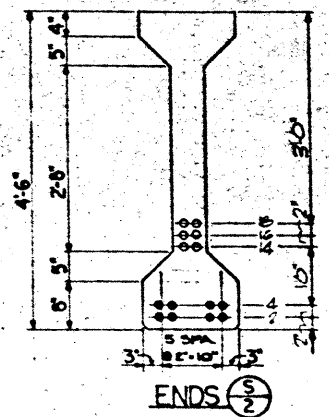
EXPANSION END



DETAIL-A
AT SKEWED BEAM ENDS

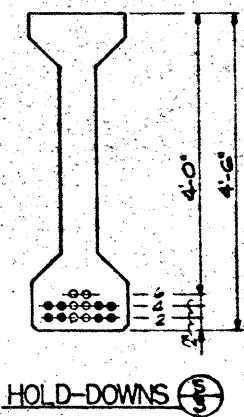


SECTION-C

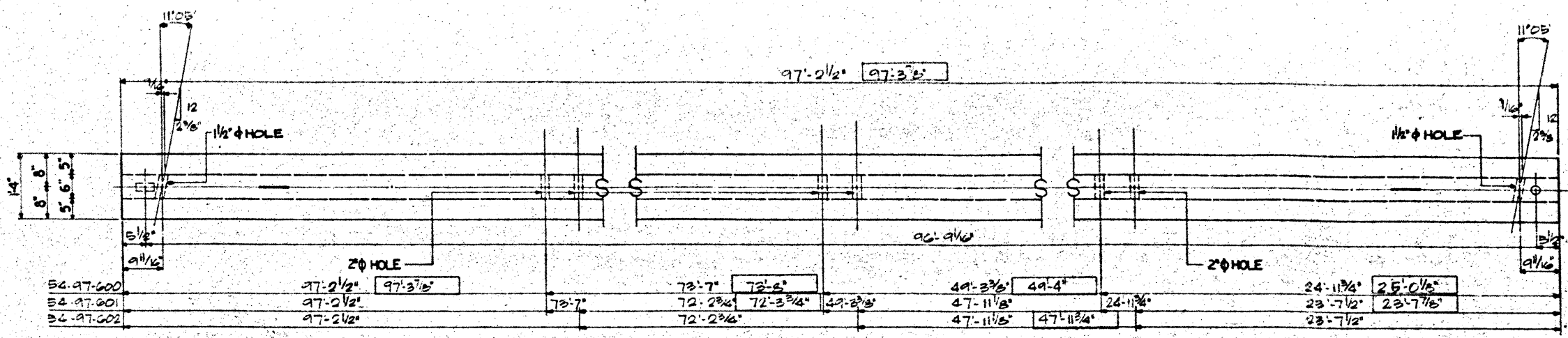


ENDS

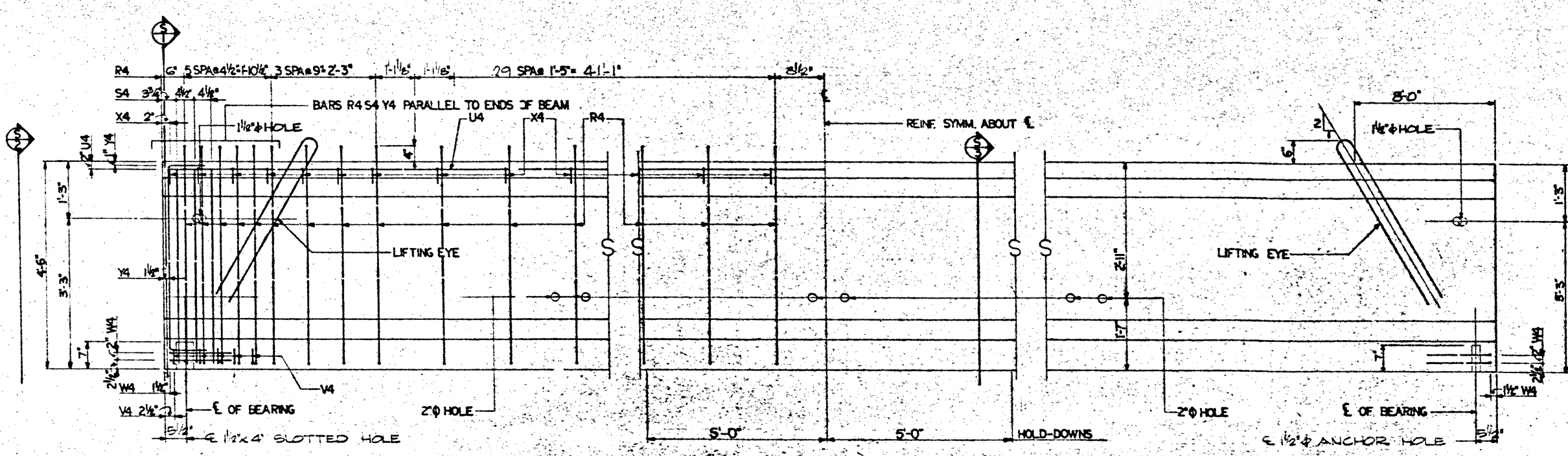
3 - 1/2" X 270" S.R. STRANDS STRAIGHT
6 - 1/2" X 270" S.R. STRANDS DRAPED
14 - 1/2" X 270" S.R. STRANDS @ INITIAL FORCE = 28,910



HOLD-DOWNS

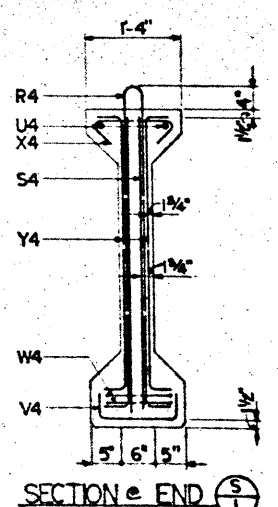


PLAN-A

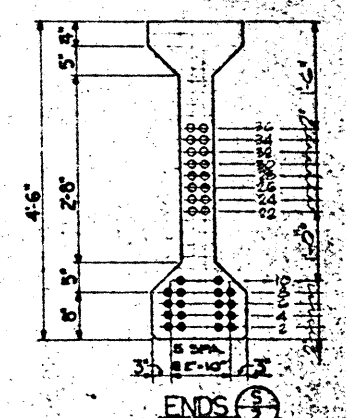


ELEVATION-A

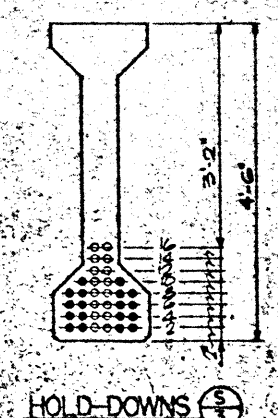
NK 54-97-600 (2 REQ'D)
NK 54-97-601 (10 REQ'D)
NK 54-97-602 (2 REQ'D)



SECTION @ END



ENDS

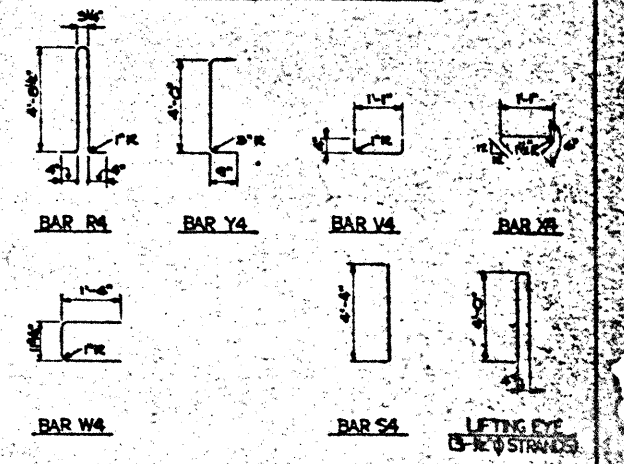


HOLD-DOWNS

16 - 1/2" #270 S.R. STRANDS STRAIGHT
16 - 1/2" #270 S.R. STRANDS DRAPED
54 - 1/2" #270 S.R. STRANDS @ INITIAL
FORCE = 28,910

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
54-97-600 54-97-601 54-97-602	R4	20	#4	17'-3"	55.2	SHOWN
	S4	12	#5	4'-4"	54	
	U4	4	#6	44'-5"	297	
	V4	10	#4	1'-9"	12	
	W4	4	#5	3'-8"	15	
	X4	76	#4	1'-10"	93	
	Y4	4	#6	5'-6"	33	
TOTAL					1056	

BAR BENDING DETAILS

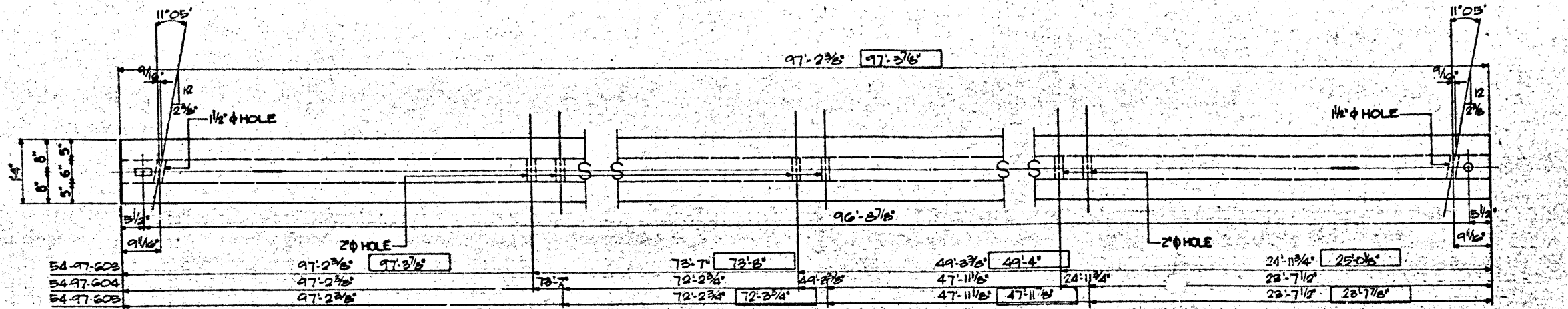


GENERAL NOTES

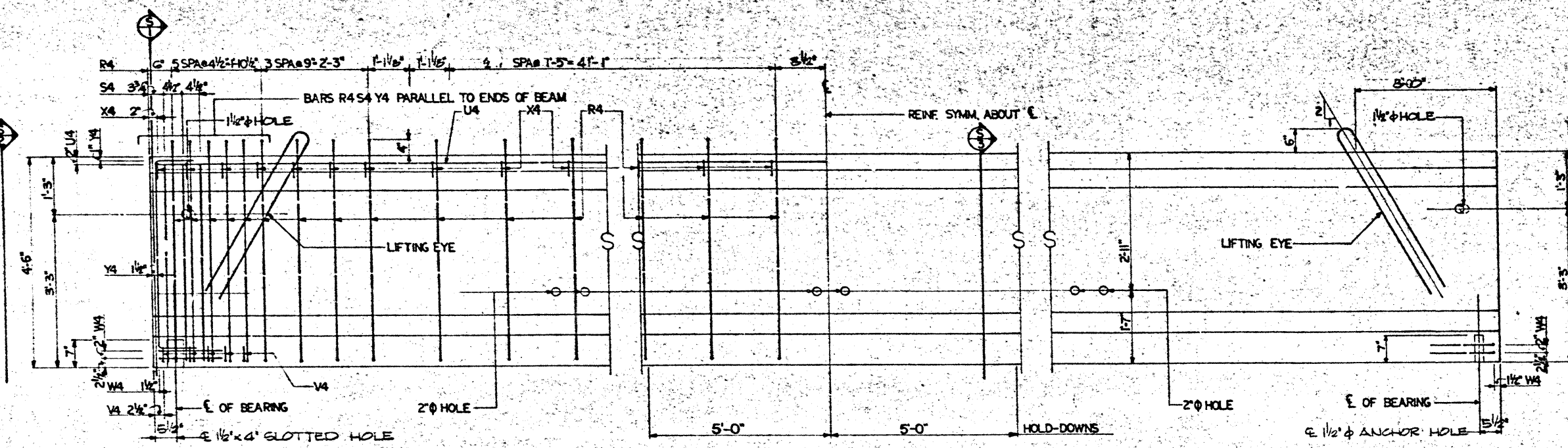
1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING—ASTM A65-40
3. U BARS INCLUDE 1'-10" MINIMUM LAP, BARS OVER 60'-0"
4. CAST LENGTHS INDICATED THUS
5. 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1/8" X 4" AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (3/8").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. I 20-5(6)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

		54' BEAM DETAIL 54-97-600 54-97-601 54-97-602	
Title: SOUTH POLK STREET UNDERPASS			
Customer: BAILEY BRIDGE CO.			
Engineer: TEXAS HIGHWAY DEPARTMENT			
Scale: NONE	Drawn By: JY. (6-21-71)	Approved: [Signature]	Date: 7-1-71
Checked By:	Order No. 7108	Sheet No. F30	



PLAN-A



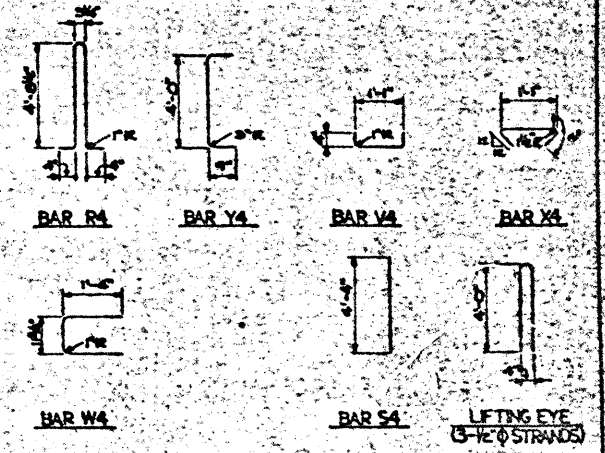
ELEVATION-A

MK 54-97-603 (2 REQ'D)
MK 54-97-604 (10 REQ'D)
MK 54-97-605 (2 REQ'D)

BILL OF REINFORCING STEEL PER BEAM

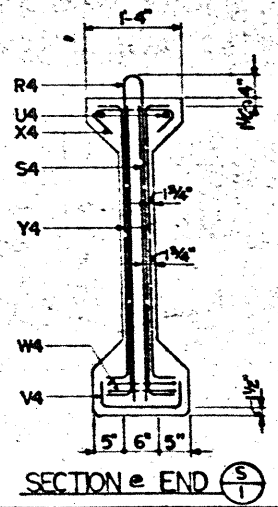
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
54-97-603	R4	80	#4	10'-3"	532	SHOWN
	S4	12	#5	4'-4"	54	
	U4	8	#6	49'-5"	297	
	V4	10	#5	1'-9"	12	
	W4	4	#5	3'-8"	15	
54-97-604	X4	76	#4	1'-10"	93	
	Y4	4	#6	5'-6"	33	
TOTAL					1056	

BAR BENDING DETAILS

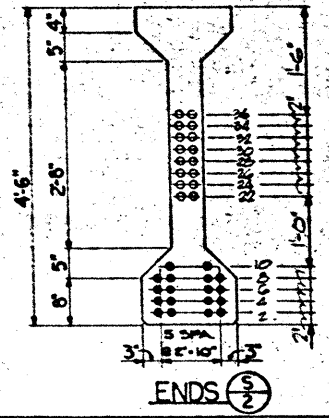


GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING - ASTM A65-40
3. U BARS INCLUDE 1'-0" MINIMUM LAP, BARS OVER 60'-0"
4. CAST LENGTHS INDICATED THUS
5. 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1/4" X 4" AT BASE.
6. V BARS MAY BE TILTED THUS AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (1/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

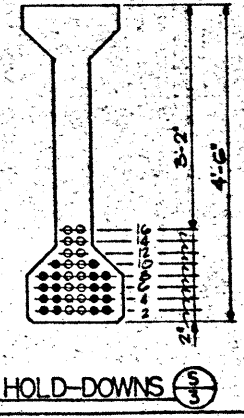


SECTION e END



ENDS

18 - 1/2" #270 SR STRANDS STRAIGHT
16 - 1/2" #270 SR STRANDS DRAPED
34 - 1/2" #270 SR STRANDS @ INITIAL FORCE = 28,900



HOLD-DOWNS

DETAIL A
AT FIXED BEAM END

8-54

TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I-20-5(61)451
COUNTY DALLAS
HIGHWAY NO. I-20

SPAN
INCORPORATED
PRACTICALLY COMPLETE
4000 WEST 10TH
DALLAS TEXAS 75205

54' BEAM DETAIL
54-97-603
54-97-604
54-97-605

Title SOUTH POLK STREET UNDERPASS

Customer BAILEY BRIDGE CO.

Architect

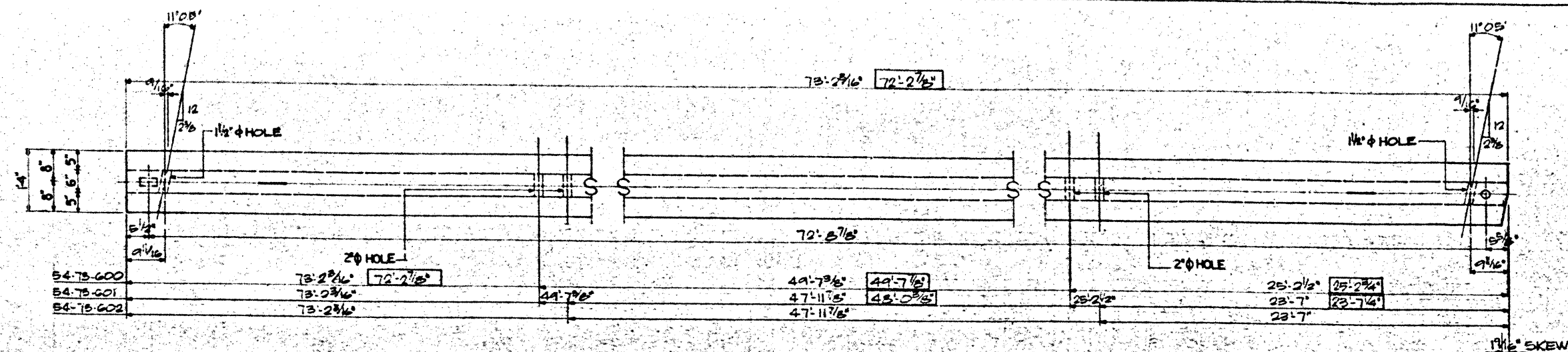
Engineer TEXAS HIGHWAY DEPARTMENT

Scale NONE Date

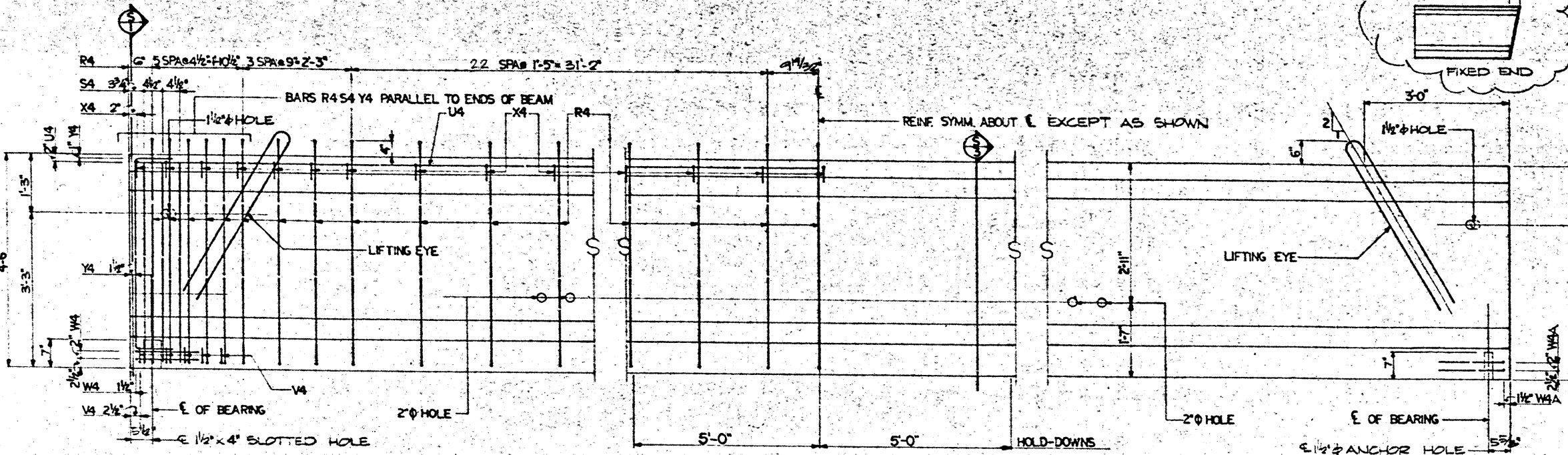
Drawn By J.Y. (6-21-71) Approved T.C. 7/2/71

Checked By

Order No. 7108 Sheet No. (F3)

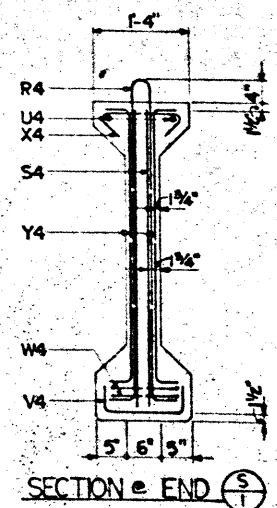


PLAN-A

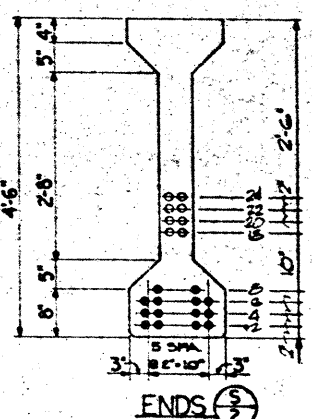


ELEVATION-A

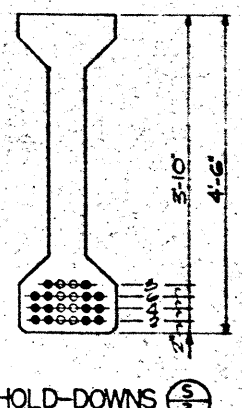
MK 54-73-600 (2 REQ'D)
MK 54-73-601 (3 REQ'D)
MK 54-73-602 (2 REQ'D)



SECTION @ END

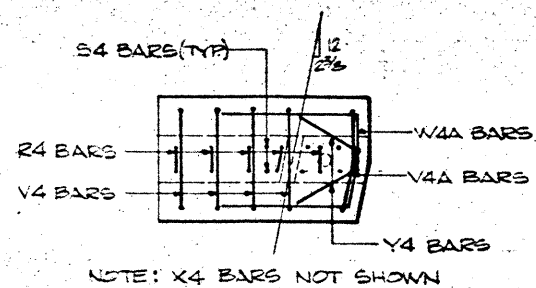


ENDS



HOLD-DOWNS

14 - 1/2" Ø 270* S.R. STRANDS STRAIGHT
8 - 1/2" Ø 270* S.R. STRANDS DRAPED
22 - 1/2" Ø 270* S.R. STRANDS @ INITIAL
FORCE = 28,910

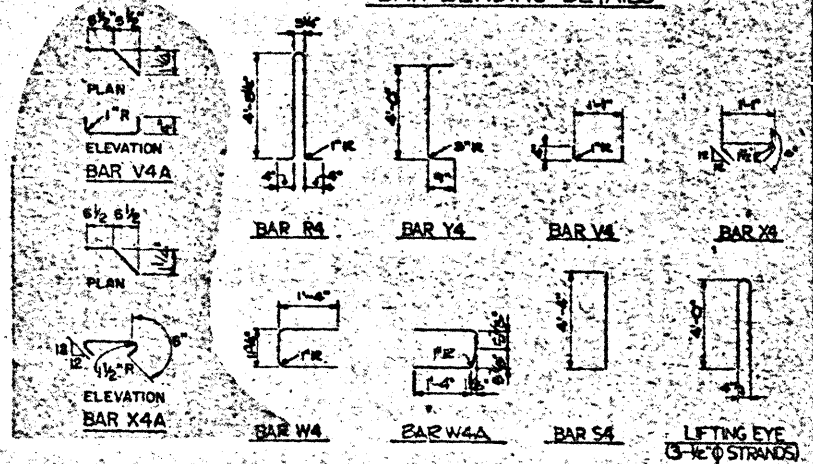


NOTE: X4 BARS NOT SHOWN

DETAIL - A
AT SKEWED BEAM ENDS

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
54-73-600 54-73-601 54-73-602	R4	63	#4	10'-3"	431	SHOWN
	S4	12	#5	4'-4"	54	
	U4	8	#6	37'-3"	226	
	V4	10	#4	1'-9"	12	
	W4	2	#5	3'-8"	5	
	X4	56	#4	1'-10"	71	
	Y4	4	#6	3'-6"	33	
	V4A	1	#4	1'-4"	1	
	X4A	1	#4	1'-0"	1	
	W4A	2	#5	3'-0"	3	
	TOTAL				843	

BAR BENDING DETAILS



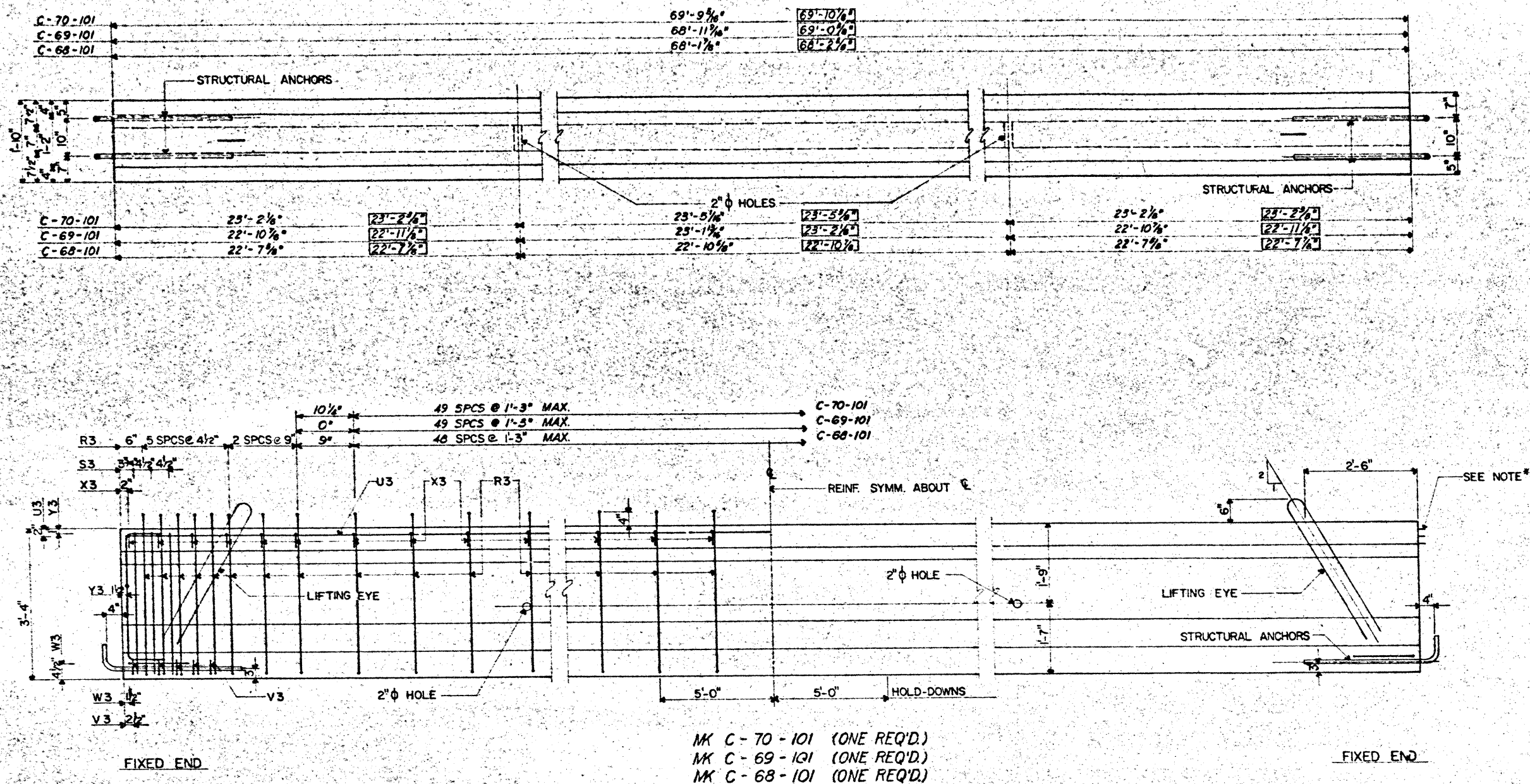
GENERAL NOTES

1. CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING—ASTM A615-40
3. U BARS INCLUDE 1'-0" MINIMUM LAP, BARS OVER 60'-0"
4. CAST LENGTHS INDICATED THROUGHOUT
5. 1 1/2" X 4" SLOTTED HOLE MAY BE TAPERED TO 1 1/8" X 4 1/4" AT BASE.
6. V BARS MAY BE TILTED THUS / AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COAT OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (1/4").
10. INITIAL PULL OF 2000 LBS. PER STRAND.
11. CUT LIFTING LOOPS TO 4" AFTER COMPLETION OF ERECTION.

SPAN INDUSTRIES, INC.
FEB. 6 '92

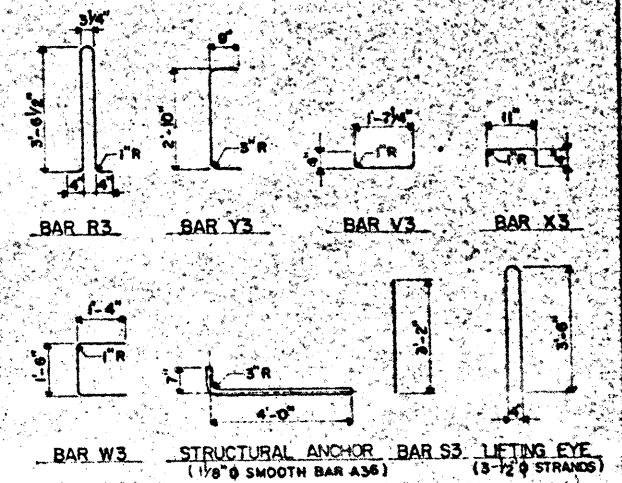
TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. I 20-5(61)457
COUNTY DALLAS
HIGHWAY NO. I.H. 20

SPAN INCORPORATED P.O. BOX 8070 DALLAS, TEXAS 75280		54" BEAM DETAIL 54-73-600 54-73-601 54-73-602
Title: SOUTH FOLK STREET UNDERPASS		
Customer: BAILEY BRIDGE CO.		
Architect:		
Engineer: TEXAS HIGHWAY DEPARTMENT		
Scale: NONE	Date:	Approved:
Drawn By: JY.	(6-21-71)	Sheet No.:
Checked By:	Order No.: 7108	F32



BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
C-70-101 C-69-101 C-68-101	R3	65	#4	8'-0"	348	SHOWN
	S3	12	#5	3'-2"	40	
	U	4	#5	35'-9"	149	
	V3	10	#4	2'-3"	15	
	W3	2	#5	4'-2"	9	
	X3	61	#4	1'-8"	68	
TOTAL					655	

BAR BENDING DETAILS



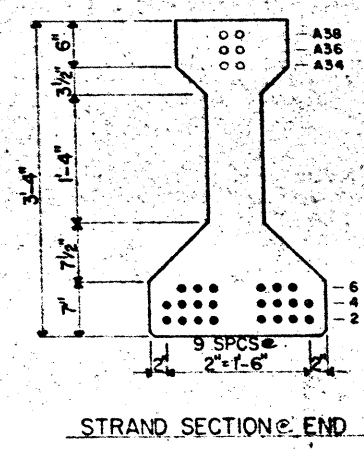
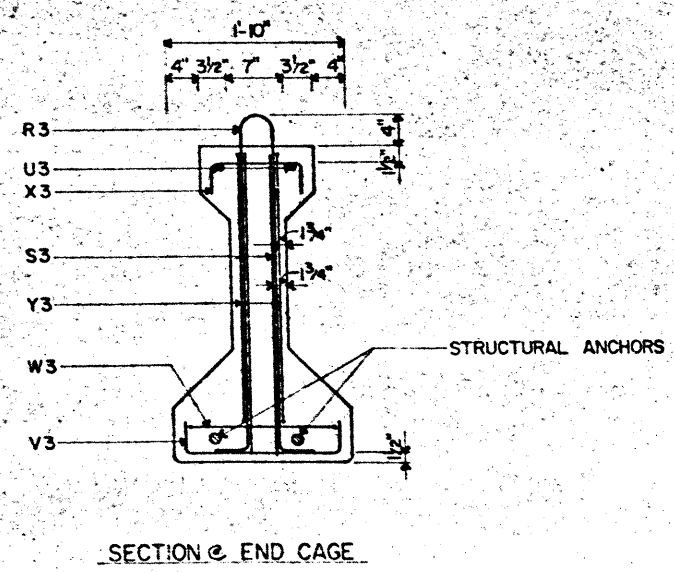
NOTES:

- ALL REINFORCING TO BE ASTM A-615, GRADE 40.
- SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAGM HOLES.
- CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
- U BARS SHALL BE LAPPED A MINIMUM OF 1'-10" AT MIDSPAN FOR BEAMS GREATER THAN 60'-0" IN LENGTH.
- BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
- DIMENSIONS SHOWN THIS WAY ARE CAST DIMENSIONS, OTHER DIMENSIONS ARE FINAL DIMENSIONS.
- CONCRETE TO BE CLASS H. SEE BEAM SCHEDULE FOR STRENGTHS.
- CUT STRAND OFF 2" BEYOND END OF BEAM AT BOTH ENDS OF BEAM.

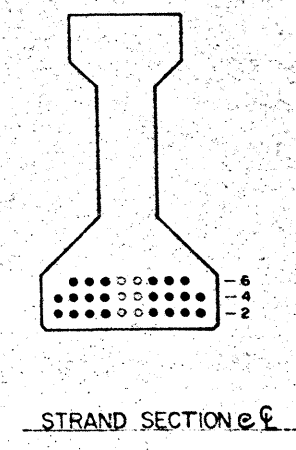
AS BUILT
DRAWING
FEB 6 1993
SPAN INDUSTRIES, INC.

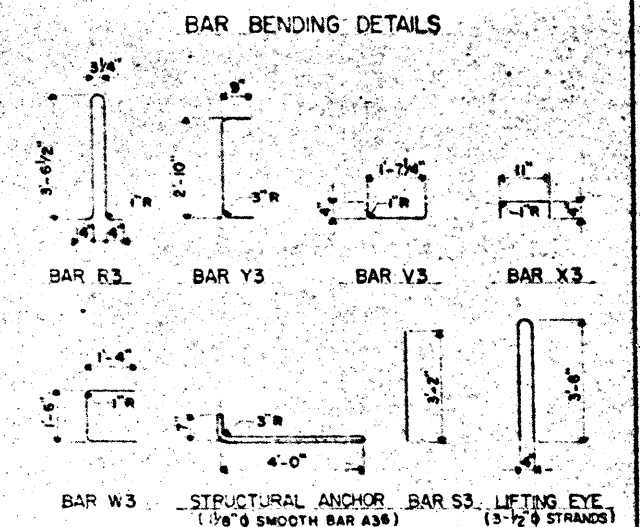
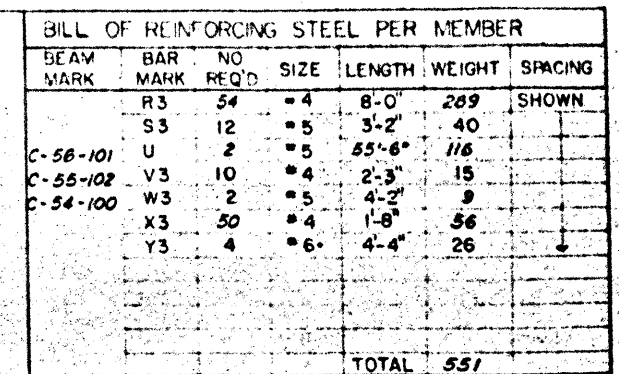
TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. 120-5(61)457
COUNTY DALLAS
HIGHWAY NO. 1H 20

		C-BEAM DETAIL C-70-101 C-69-101 C-68-101	
Title UNIT 2 - CONNECTION E			
Customer BAILEY BRIDGE CO.			
Architect NONE			
Engineer TEXAS HIGHWAY DEPARTMENT			
Scale NONE		Date	
Drawn By GDH		Approved	
Checked By		Sheet No. F37	
Order No. 7108			

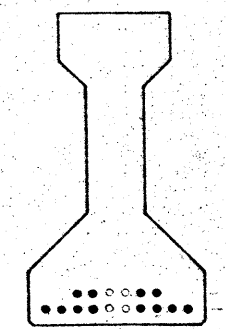
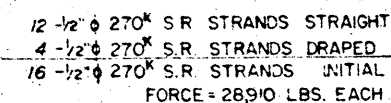



22 - 1/2" ϕ 270^K S.R. STRANDS STRAIGHT
 6 - 1/2" ϕ 270^K S.R. STRANDS DRAPED
 28 - 1/2" ϕ 270^K S.R. STRANDS INITIAL
 FORCE = 28910 LBS. EACH

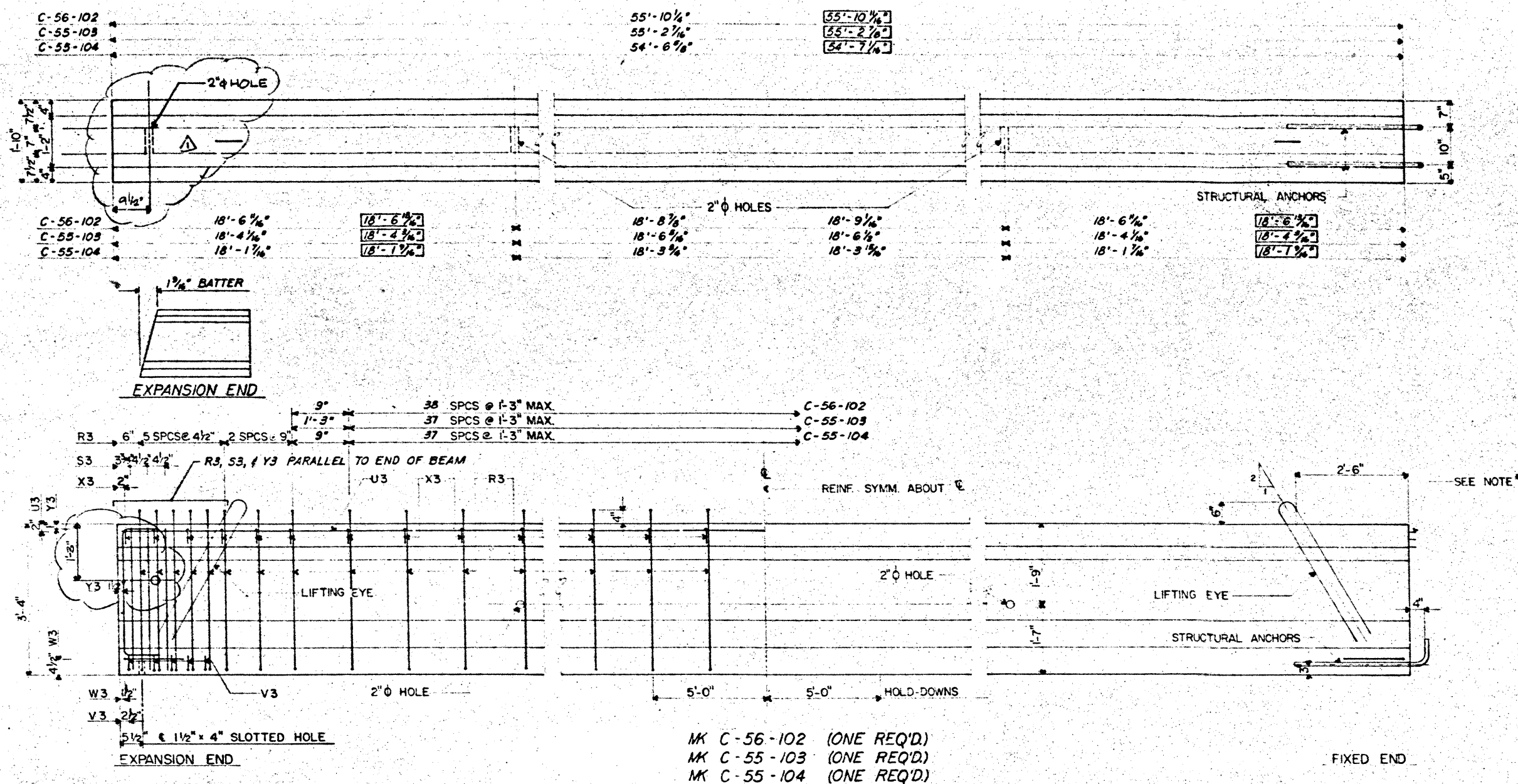




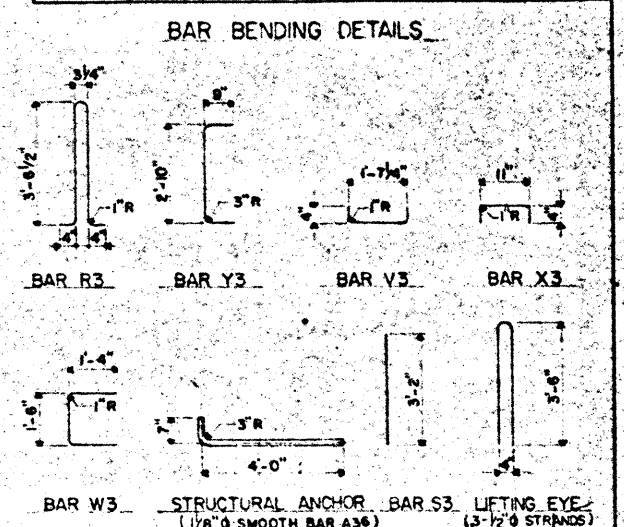
- ## NOTES:
- ALL REINFORCING TO BE ASTM A-615, GRADE 60.
 - SPACING OF L AND R BARS MAY BE VARIED TO AVOID INTERFERING WITH DIAPHRAGM HOLES.
 - CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR IN DIAPHRAGM HOLE IS PERMISSIBLE.
 - L BARS SHALL BE LAPSPED A MINIMUM OF 1'-0" AT MIDSPAN. L AND R BARS GREATER THAN 6'-0" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - DIMENSIONS SHOWN THUS ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
 - CONCRETE TO BE CLASS 40. SEE BEAM SCHEDULE FOR STRENGTHS.
 - CUT STRAND OFF 2" BEYOND END OF BEAM AT BOTH ENDS OF BEAM.



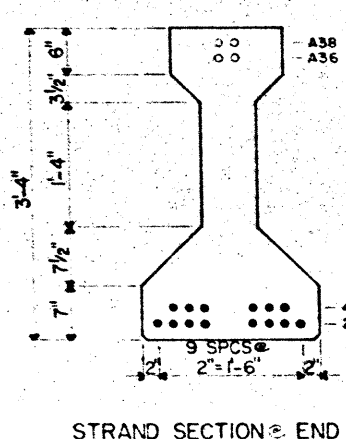
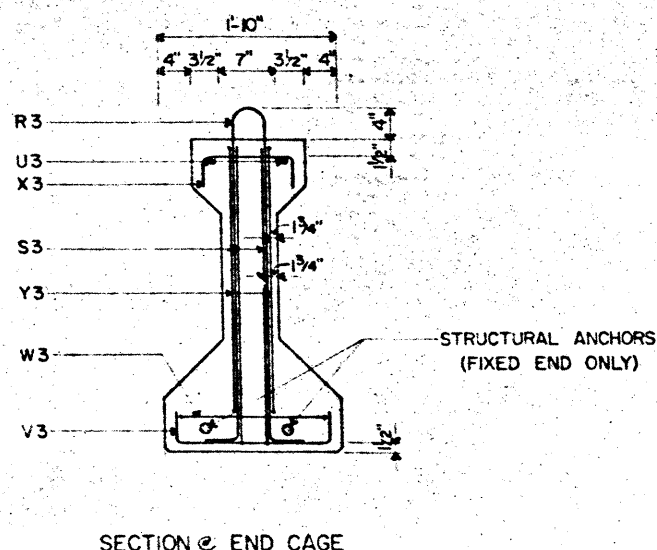
 SPAN INCORPORATED 10000 W. 10th St. Suite 100 Dallas, Texas 75243 Tel: (214) 343-1000		C-BEAM DETAIL C-56-101 C-55-102 C-54-100
Title: UNIT 3 - CONNECTION E		
Customer: BAILEY BRIDGE CO		
Architect: NONE		
Engineer: TEXAS HIGHWAY DEPARTMENT		
Scale: NONE		Date:
Drawn By: GDH		Approved:
Checked By:		Sheet No.
Order No. 7108		F39



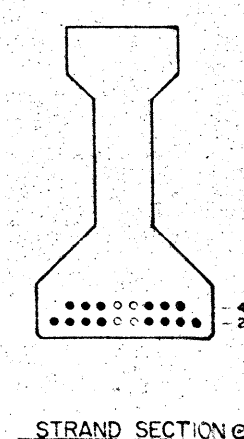
BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
C-56-102 C-55-103 C-55-104	R3	54	#4	8'-0"	289	SHOWN
	S3	12	#5	3'-2"	40	
	U	2	#5	55'-8"	117	
	V3	10	#4	2'-3"	15	
	W3	2	#5	4'-2"	9	
C-55-104	X3	50	#4	1'-8"	56	
	Y3	4	#6	4'-4"	26	
TOTAL					552	



- NOTES:
- ALL REINFORCING IS PER ASTM A-615, GRADE 60.
 - SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAGM HOLES.
 - CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
 - U BARS SHALL BE LAPPED A MINIMUM OF 2'-0" AT MIDSPAN FOR BEAMS GREATER THAN 2'-0" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - DIMENSIONS SHOWN, THUS ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
 - CONCRETE TO BE CLASS 4. SEE BEAM SCHEDULE FOR STRENGTHS.
 - CUT STRAND OFF 2" BEYOND END OF BEAM AT ONE END OF BEAM, AS SHOWN.



14 - 1/2" ϕ 270^K S.R. STRANDS STRAIGHT
 4 - 1/2" ϕ 270^K S.R. STRANDS DRAPED
 18 - 1/2" ϕ 270^K S.R. STRANDS INITIAL
 FORCE = 28,910 LBS. EACH



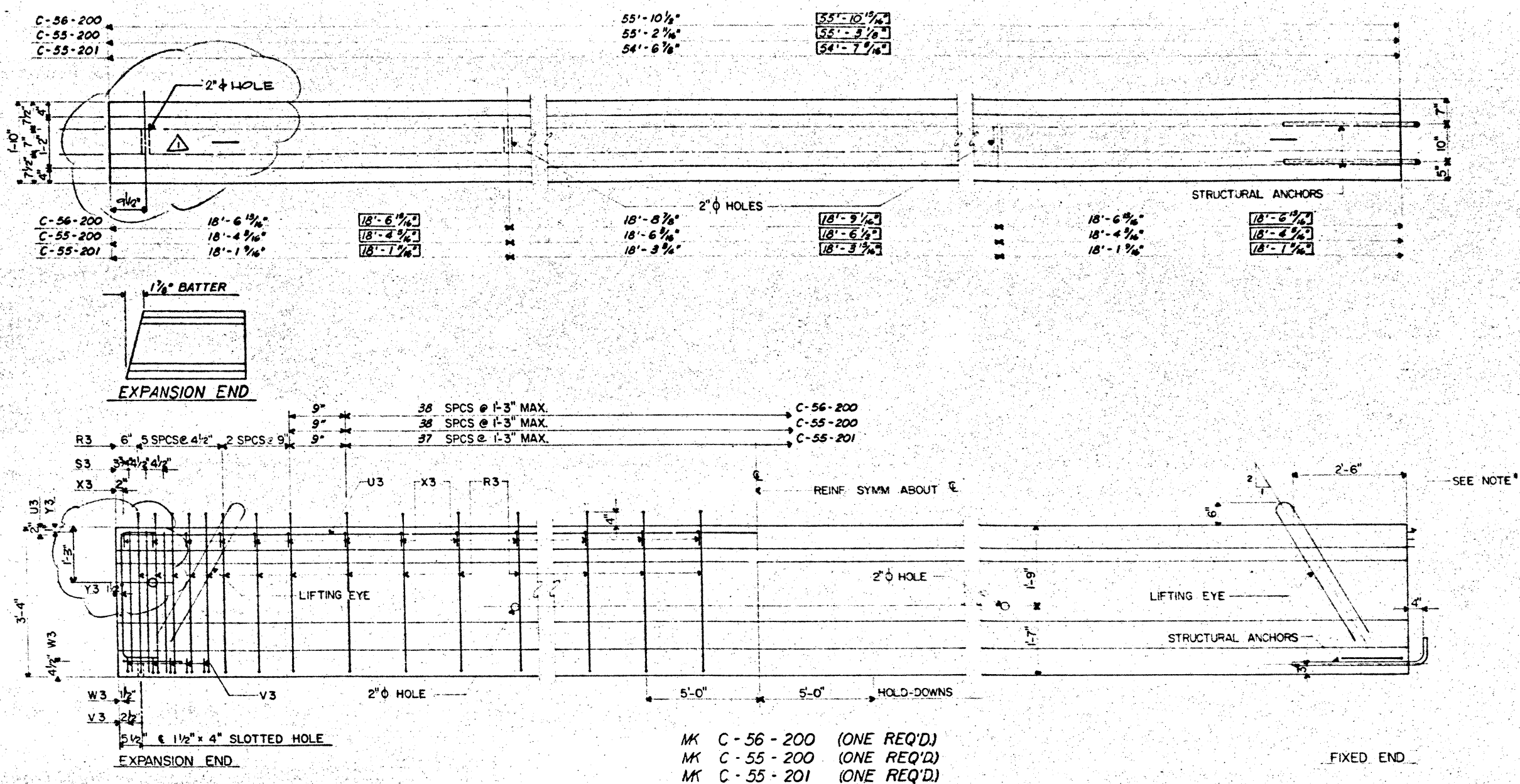
AS BUILT
 DRAWING
 FEB 8 1973
 SPAN INDUSTRIES, INC.

REV 10-17-71 J.Y. Δ ADD END DIA HOLE

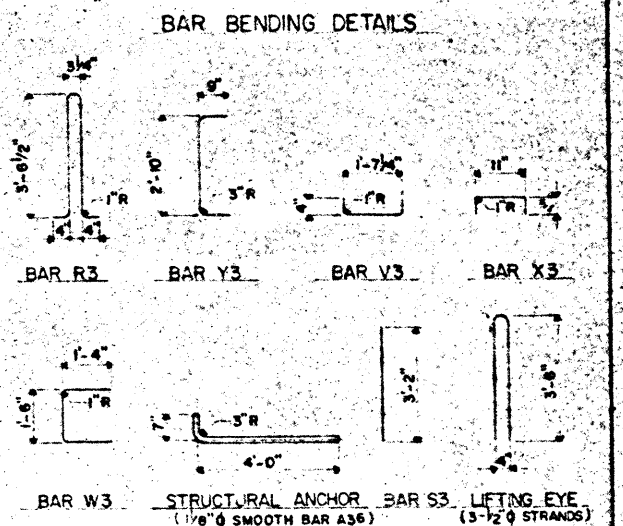
TEXAS HIGHWAY DEPARTMENT
 FED AID PROJECT NO. 120-5(61)457
 COUNTY DALLAS
 HIGHWAY NO. IH 20

UNIT 3 - CONNECTION E

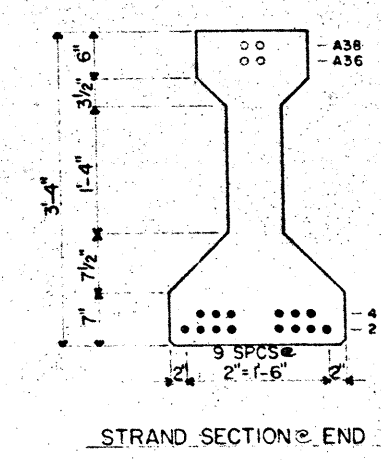
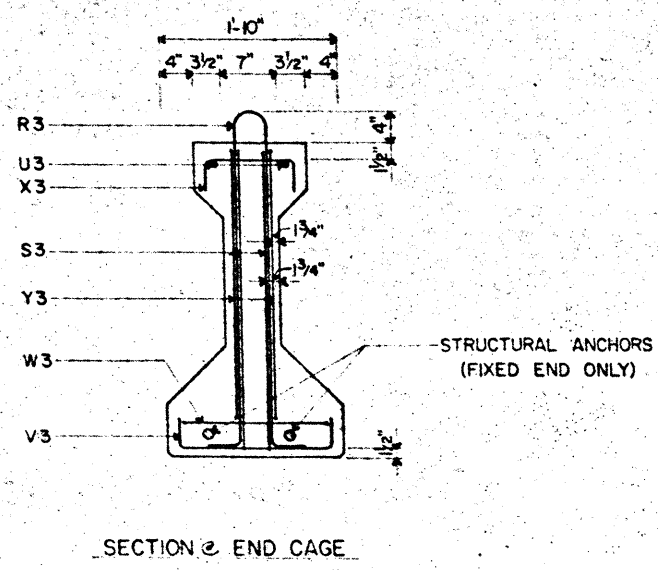
Customer BAILEY BRIDGE CO.
 Architect NONE
 Engineer TEXAS HIGHWAY DEPARTMENT
 Scale NONE
 Date
 Drawn By GDH
 Approved
 Checked By
 Sheet No. F40
 Order No. 7108



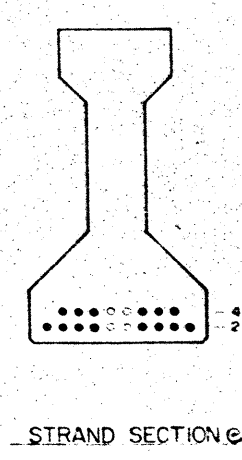
BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
	R3	54	#4	8'-0"	289	SHOWN
	S3	12	#5	3'-2"	40	
C-56-200	U	2	#5	55'-9"	117	
C-55-200	V3	10	#4	2'-3"	15	
C-55-201	W3	2	#5	4'-2"	9	
	X3	50	#4	1'-8"	56	
	Y3	4	#6	4'-4"	26	
TOTAL					552	



- NOTES:
- ALL REINFORCING TO BE ASTM A-615, GRADE 60.
 - SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAGM HOLES.
 - CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
 - U BARS SHALL BE LAPPED A MINIMUM OF 1'-0" AT MIDSPAN FOR BEAMS GREATER THAN 6'-0" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - DIMENSIONS SHOWN THUS ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
 - CONCRETE TO BE CLASS H. SEE BEAM SCHEDULE FOR STRENGTHS.
 - CUT STRAND OFF 2" BEYOND END OF BEAM AT ONE END OF BEAM AS SHOWN.



14 - 1/2" x 270* S.R. STRANDS STRAIGHT
4 - 1/2" x 270* S.R. STRANDS DRAPED
12 - 1/2" x 270* S.R. STRANDS INITIAL
FORCE = 28,910 LBS. EACH



AS BUILT
DRAWING
FEB 6 1978
SPAN INDUSTRIES, INC.

REV 10-17-71 JY. A ADD END DIA HOLE

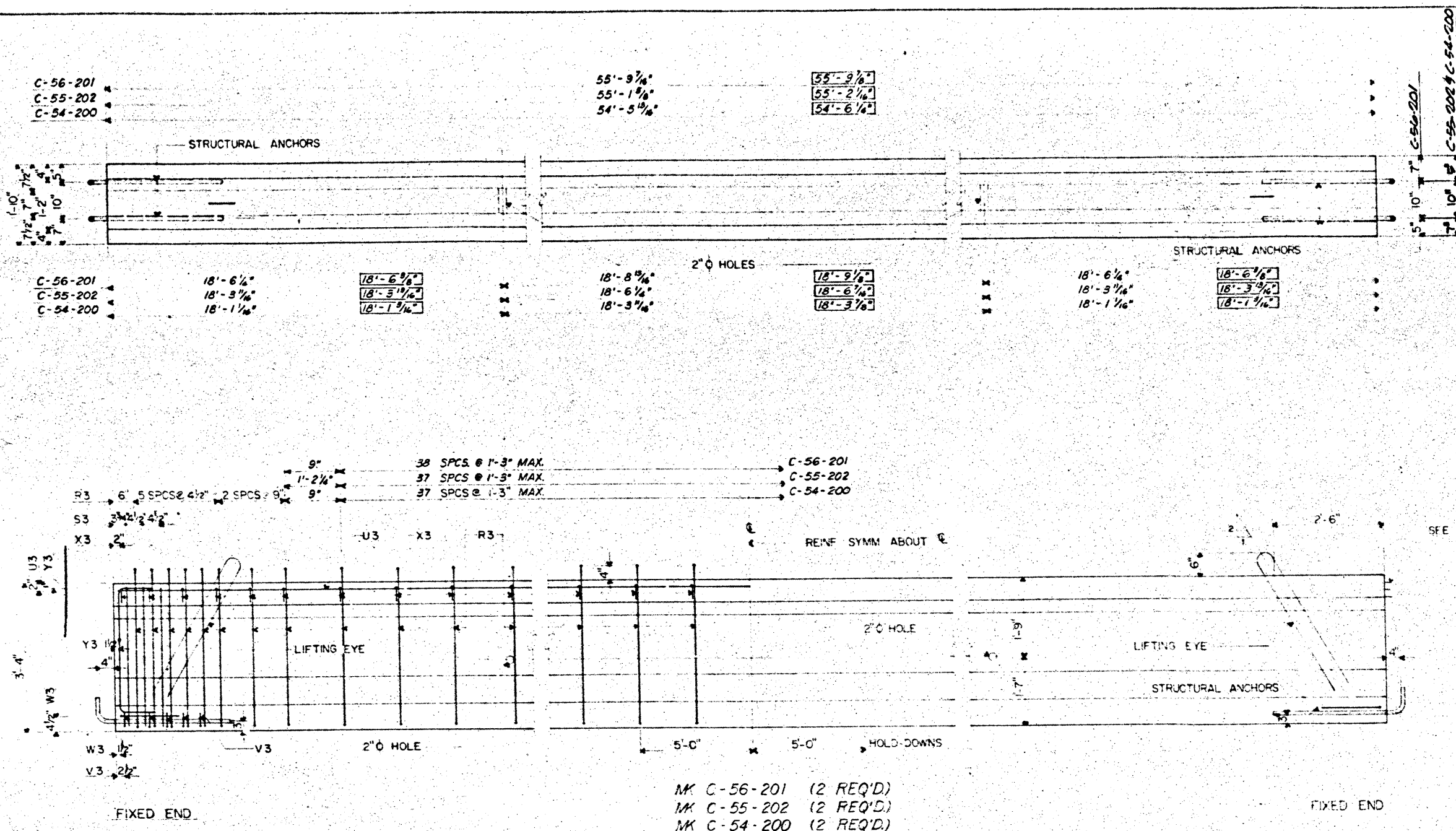
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. 120-5(6)457
COUNTY DALLAS
HIGHWAY NO. IH 20

C-BEAM DETAIL
C-56-200
C-55-200
C-55-201

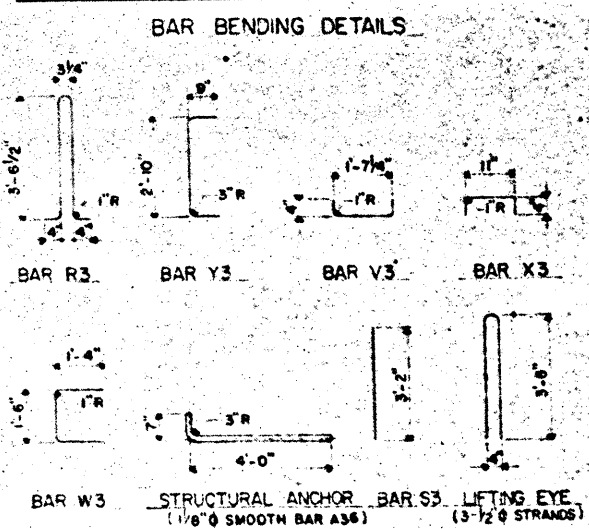
UNIT 3 - CONNECTION F

Customer BAILEY BRIDGE CO
Architect NONE
Engineer TEXAS HIGHWAY DEPARTMENT
Scale NONE
Drawn By GDH
Checked By
Order No. 7108

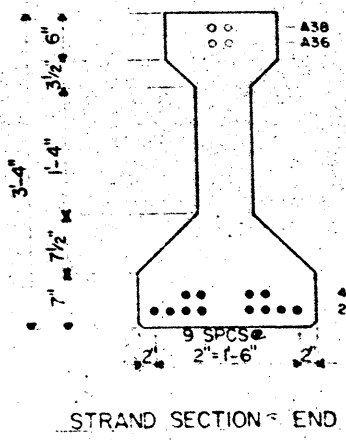
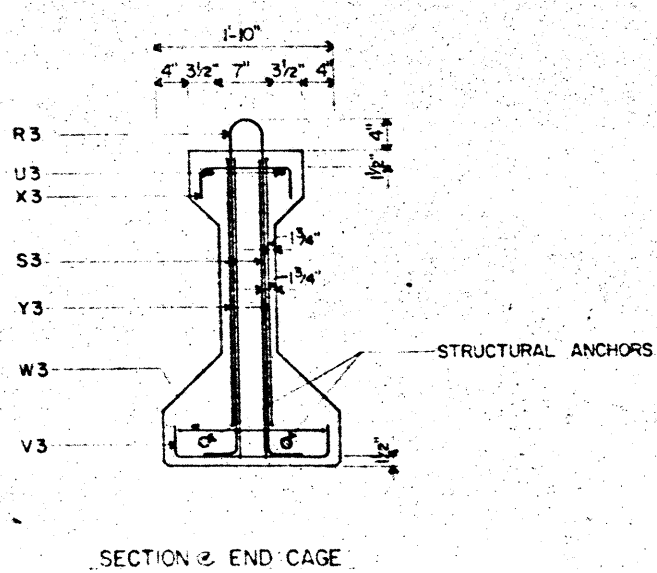
Date
Approved
Sheet No. F41



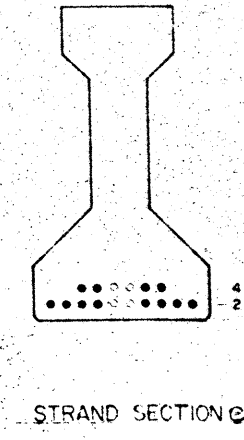
BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
C-56-201	R3	54	#4	8'-0"	289	SHOWN
	S3	12	#5	3'-2"	40	
	U	2	#5	55'-6"	116	
C-55-202	V3	10	#4	2'-3"	15	
C-54-200	W3	2	#5	4'-2"	9	
	X3	50	#4	1'-8"	56	
	Y3	4	#6	4'-4"	26	
TOTAL					551	



- NOTES:
- ALL REINFORCING TO BE WITH A-17, GRADE 60.
 - SPACING OF U AND P BARS MAY BE VARIED TO AVOID SMALL DIAPHRAGM HOLES.
 - CONTACT BETWEEN REINFORCING OF STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
 - STRANDS SHALL BE LAPPED A MINIMUM OF 1'-10" AT MIDSPAN AND BEAMS GREATER THAN 1'-10" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - DIMENSIONS SHOWN WITH ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
 - CONCRETE TO BE CLASS HL. SEE BEAM SCHEDULE FOR STRENGTHS.
 - CUT STRAND OFF 2" BEYOND END OF BEAM AT BOTH ENDS OF BEAM.



12 - 1/2" Ø 270^K S.R. STRANDS STRAIGHT
 4 - 1/2" Ø 270^K S.R. STRANDS DRAPED
 16 - 1/2" Ø 270^K S.R. STRANDS INITIAL
 FORCE = 28910 LBS. EACH

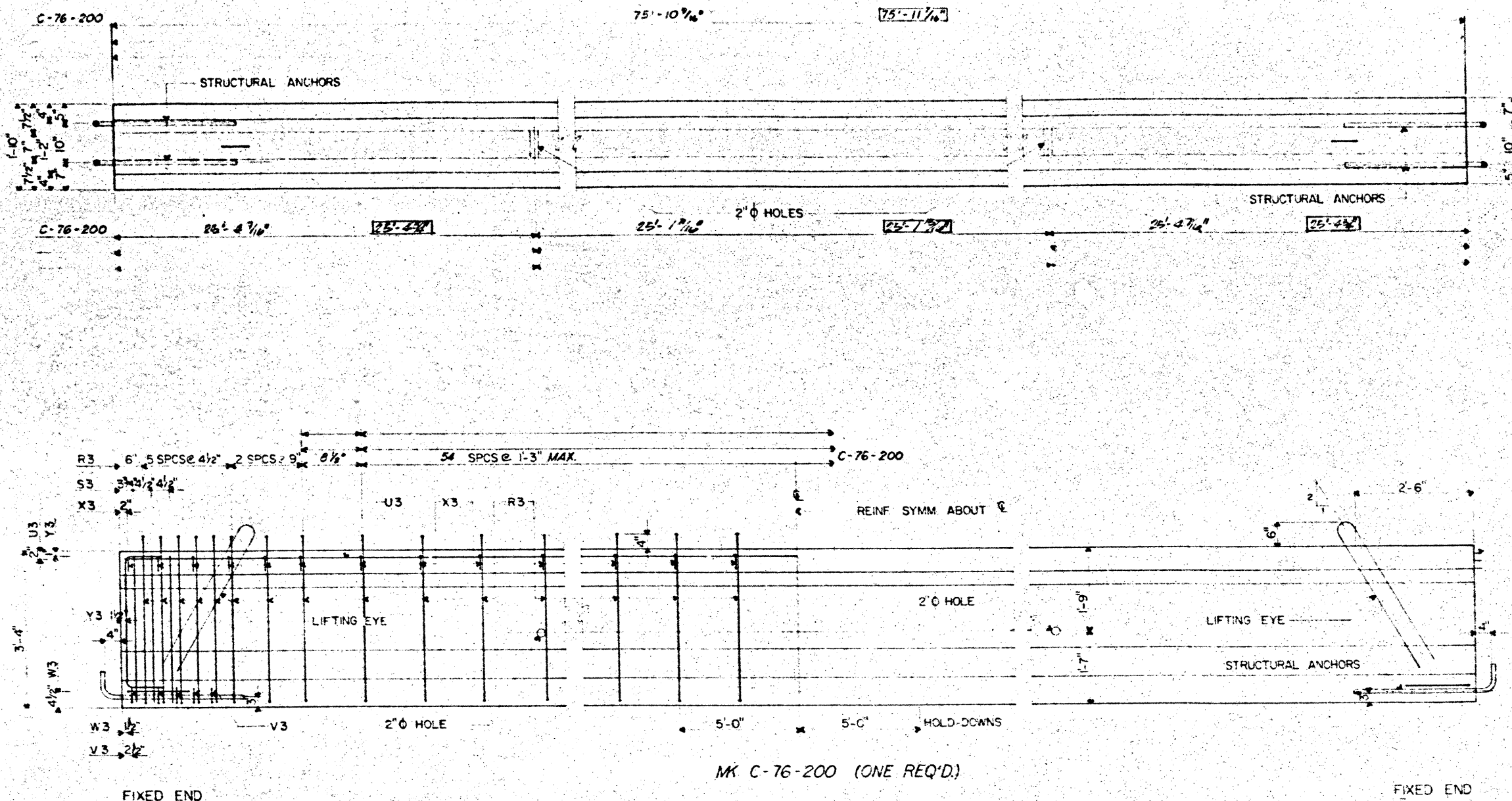


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 DRAWING
 FEB. 6 1973
 SPAN INDUSTRIES, INC.

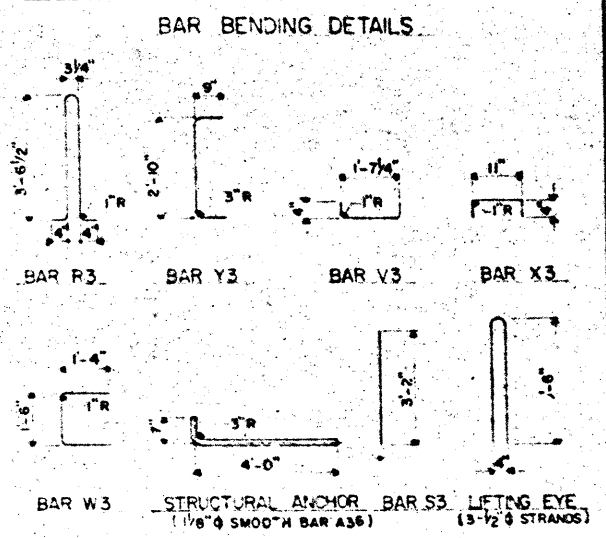
TEXAS HIGHWAY DEPARTMENT
 FED AID PROJECT NO. 120-5(61)457
 COUNTY DALLAS
 HIGHWAY NO. IH 20

865

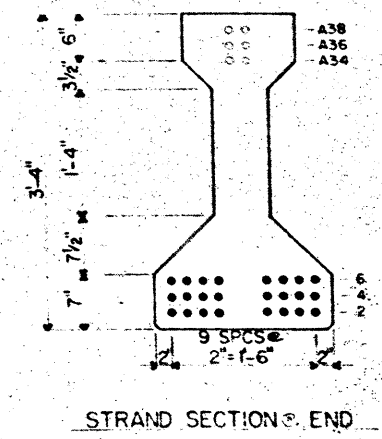
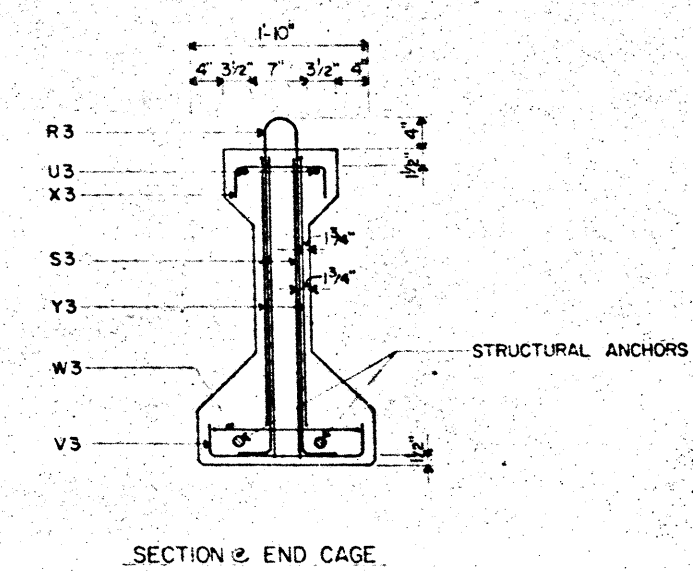
		C-BEAM DETAIL C-56-201 C-55-202 C-54-200
Title UNIT 3 - CONNECTION F		
Customer BAILEY BRIDGE CO		
Architect NONE		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE		Date
Drawn By GDM		Approved
Checked By		Sign. No. F42
Order No. 7108		



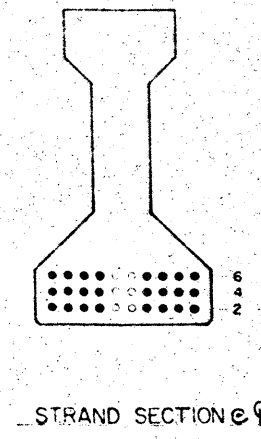
BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
C-76-200	R3	70	#4	8'-0"	375	SHOWN
	S3	12	#5	3'-2"	40	
	U	4	#5	36'-9"	162	
	V3	10	#4	2'-3"	15	
	W3	2	#5	4'-2"	9	
	X3	66	#4	1'-8"	74	
	Y3	4	#6	4'-4"	26	
TOTAL					701	



- NOTES:
- ALL REINFORCING TO BE ASTM A615, GRADE 60.
 - SPACING OF #4 AND #5 BARS MAY BE VARIED TO AVOID SPACING VIOLATIONS.
 - WELLS BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM WALL ENDS IS PERMISSIBLE.
 - STRANDS SHALL BE LAPPED A MINIMUM OF 1'-0" AT MIDSPAN FOR SPANS GREATER THAN 1'-0" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - LIFTING LOOPS SHALL BE CAST DIMENSIONS, OTHER DIMENSIONS ARE FIELD DIMENSIONS.
 - STRANDS SHALL BE CAST IN SEE BEAM SCHEDULE FOR STRENGTH.
 - CUT STRAND OFF 2" BEYOND END OF BEAM AT BOTH ENDS OF BEAM.



24 - 1/2" Ø 270^K S.R. STRANDS STRAIGHT
 6 - 1/2" Ø 270^K S.R. STRANDS DRAPED
 30 - 1/2" Ø 270^K S.R. STRANDS INITIAL
 FORCE = 28910 LBS. EACH



AS BUILT
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 FEB. 6 1973
 SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
 FED AID PROJECT NO. 120-5(6)457
 COUNTY DALLAS
 HIGHWAY NO. 1H 20

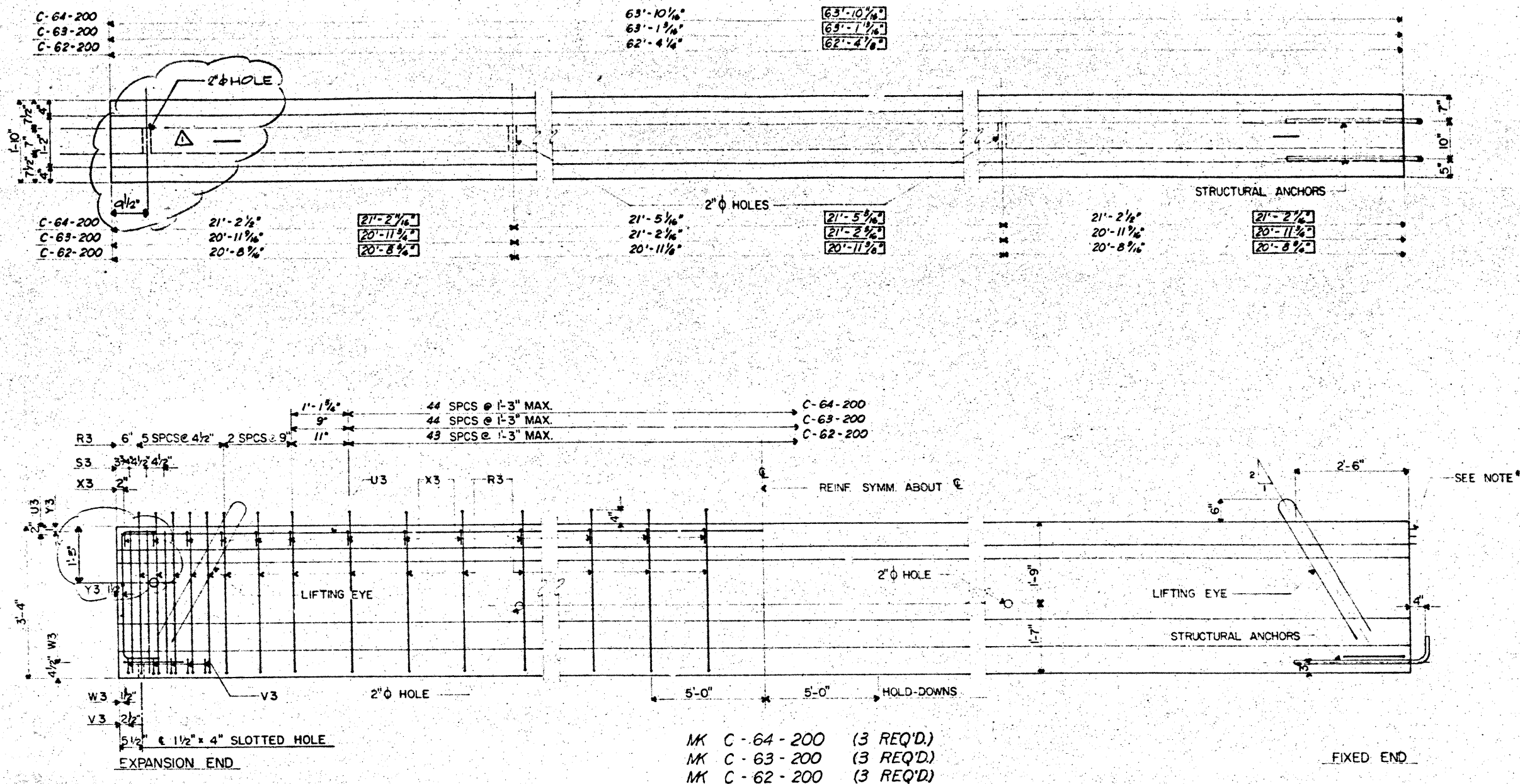
Customer BAILEY BRIDGE CO.
 Architect NONE
 Engineer TEXAS HIGHWAY DEPARTMENT
 Scale NONE
 Drawn By GDM
 Checked By
 Order No. 7108

SPAN
 INCORPORATED
 10000 W. 10TH AVE.
 DALLAS, TEXAS 75243

C-BEAM DETAIL
 C-76-200

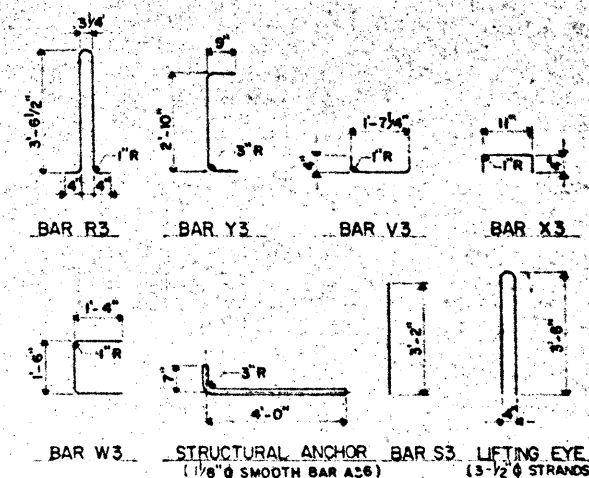
UNIT 3 - CONNECTION F

Date
 Approved
 Sheet No. F43



BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
C-64-200 C-63-200 C-62-200	R3	60	#4	8'-0"	321	SHOWN
	S3	12	#5	3'-2"	40	
	U	4	#5	32'-9"	157	
	V3	10	#4	2'-3"	15	
	W3	2	#5	4'-2"	9	
	X3	56	#4	1'-8"	69	
	Y3	4	#6	4'-4"	26	
TOTAL					611	

BAR BENDING DETAILS



NOTES:

- ALL REINFORCING TO BE ASTM A-61, GRADE 60.
- SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAGM HOLES.
- CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
- U BARS SHALL BE LAPPED A MINIMUM OF 1'-0" AT MIDSPAN FOR BEAMS GREATER THAN 60'-0" IN LENGTH.
- BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
- DIMENSIONS SHOWN THUS ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
- CONCRETE TO BE CLASS M. SEE BEAM SCHEDULE FOR STRENGTHS.
- CUT STRAND OFF 2" BEYOND END OF BEAM AT ONE END OF BEAM AS SHOWN.

18 BUILT
DRAWING
FEB. 6 1913
SPAN INDUSTRIES, INC.

REV 10-17-71 JY. ADD END DIA HOLE

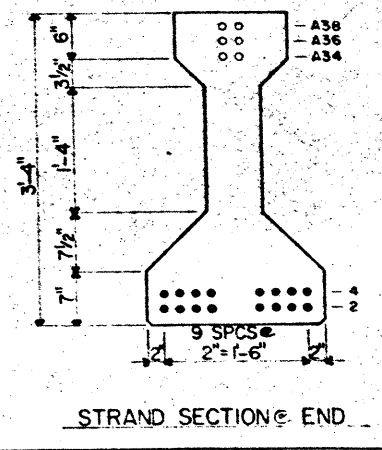
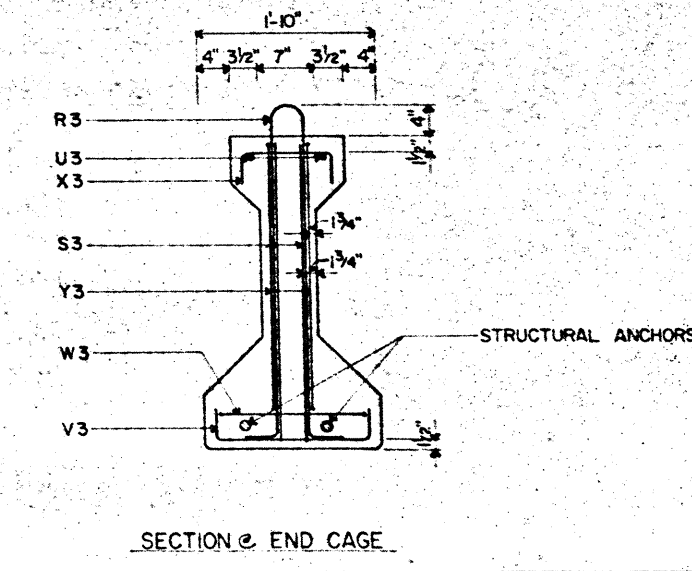
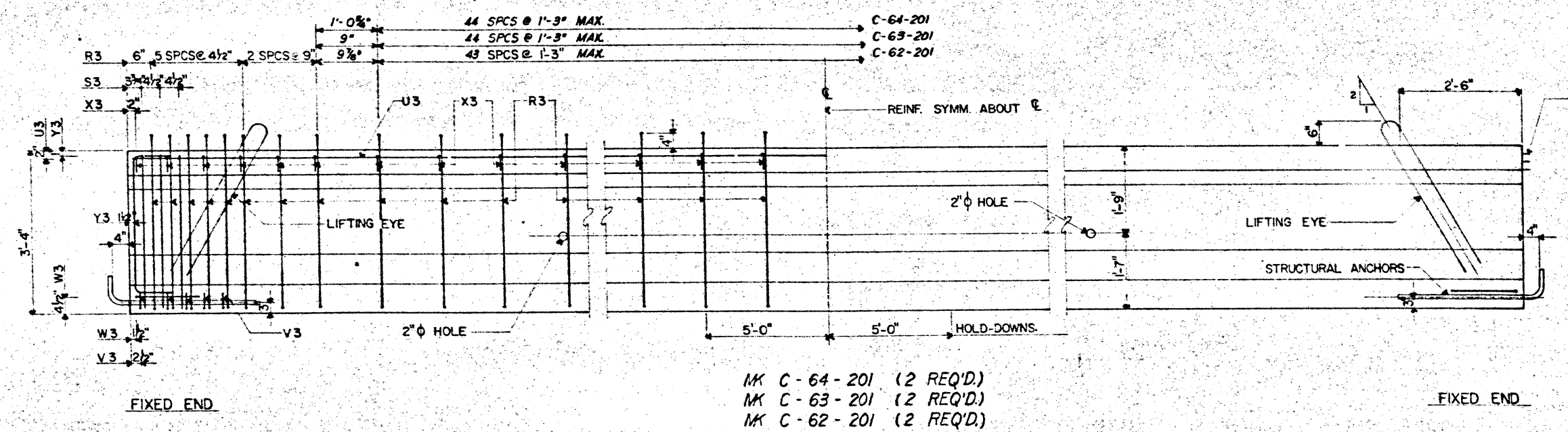
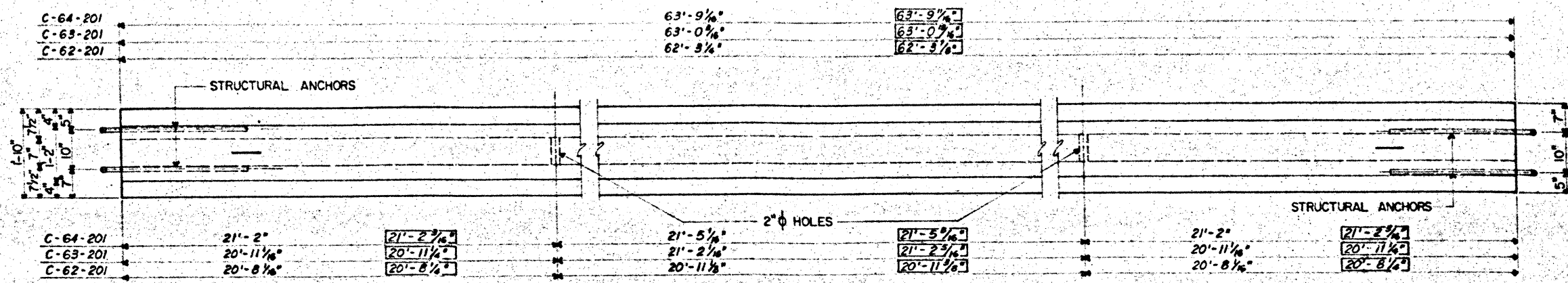
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. 120-5(61)457
COUNTY DALLAS
HIGHWAY NO. IH 20

C-BEAM DETAIL
C-64-200
C-63-200
C-62-200

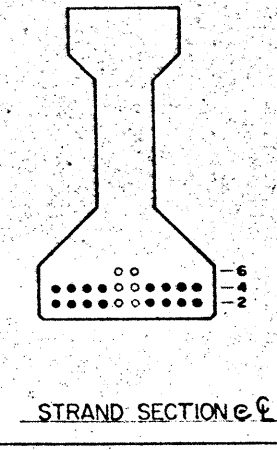
UNIT 1 - CONNECTION F

Customer: BAILEY BRIDGE CO.
Architect: NONE
Engineer: TEXAS HIGHWAY DEPARTMENT
Scale: NONE
Drawn By: GDH
Checked By:
Order No.: 7108

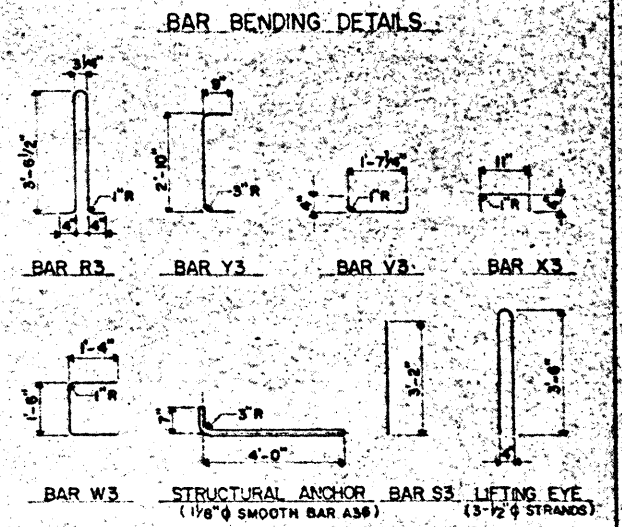
Date:
Approved:
Sheet No.: F45



16 - 1/2" ϕ 270^K S.R. STRANDS STRAIGHT
 6 - 1/2" ϕ 270^K S.R. STRANDS DRAPED
 22 - 1/2" ϕ 270^K S.R. STRANDS INITIAL
 FORCE = 28910 LBS. EACH



BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
C-64-201 C-63-201 C-62-201	R3	60	#4	8'-0"	321	SHOWN
	S3	12	#5	3'-2"	40	
	U	4	#5	32'-8"	137	
	V3	10	#4	2'-3"	15	
	W3	2	#5	4'-2"	9	
	X3	56	#4	1'-8"	63	
	Y3	4	#6	4'-4"	26	
TOTAL					611	



- NOTES:
- ALL REINFORCING TO BE ASTM A-615, GRADE -C.
 - SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAGM HOLES.
 - CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
 - U BARS SHALL BE LAPPED A MINIMUM OF 1'-10" AT MIDSPAN FOR BEAMS GREATER THAN 50'-0" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - DIMENSIONS SHOWN THUS \square ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINISH DIMENSIONS.
 - CONCRETE TO BE CLASS -C. SEE BEAM SCHEDULE FOR STRENGTHS.
 - CUT STRAND OFF 2" BEYOND END OF BEAM AT BOTH ENDS OF BEAM.

SPAN INDUSTRIES, INC.

TEXAS HIGHWAY DEPARTMENT
 FED AID PROJECT NO. 120-5(6)457
 COUNTY DALLAS
 HIGHWAY NO. 1H 20

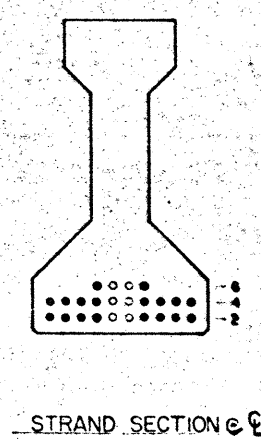
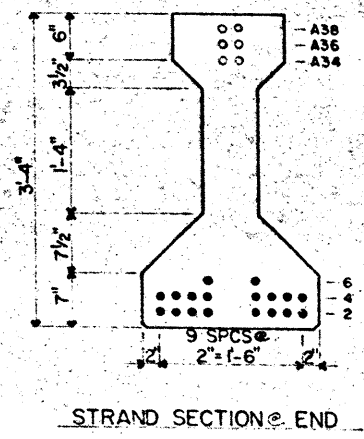
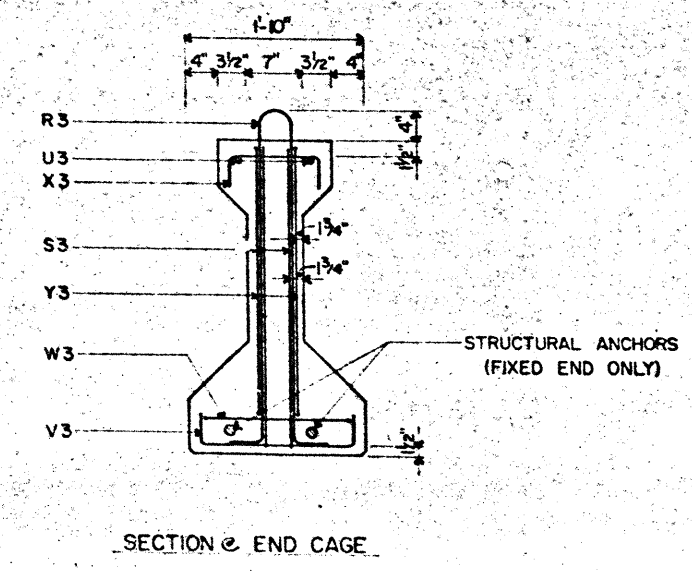
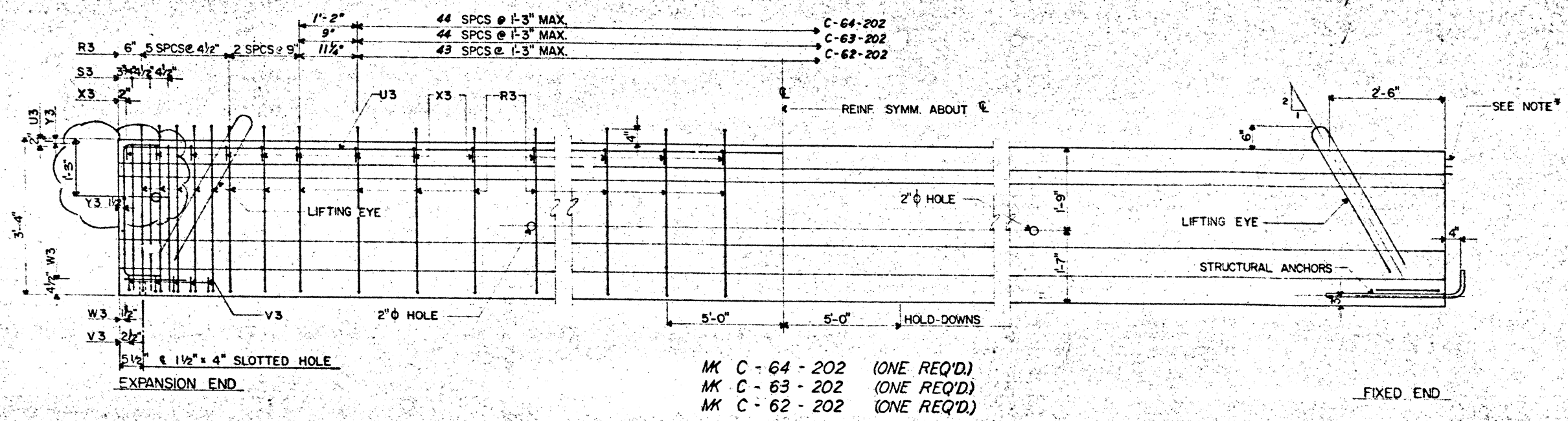
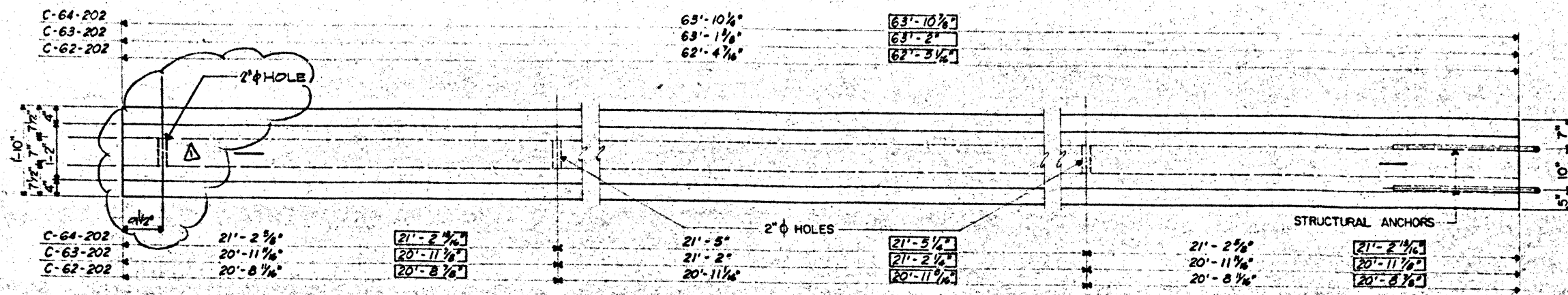
Customer BAILEY BRIDGE CO.
 Architect NONE
 Engineer TEXAS HIGHWAY DEPARTMENT
 Scale NONE
 Drawn By GDH
 Checked By
 Order No. 7108

SPAN INCORPORATED
 10000 W. 10TH AVE.
 DALLAS, TEXAS 75243

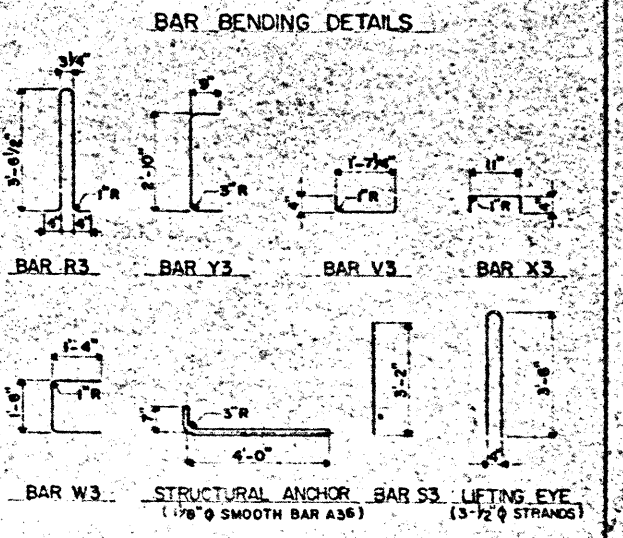
C-BEAM DETAIL
 C-64-201
 C-63-201
 C-62-201

UNIT 1 - CONNECTION F

Date
 Approved
 Sheet No. 546



BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO. REQ'D	SIZE	LENGTH	WEIGHT	SPACING
	R3	60	#4	8'-0"	921	SHOWN
	S3	12	#5	3'-2"	40	
C-64-202	U	4	#5	32'-9"	137	
C-63-202	V3	10	#4	2'-3"	15	
C-62-202	W3	2	#5	4'-2"	9	
	X3	56	#4	1'-8"	63	
	Y3	4	#6	4'-4"	26	
TOTAL					611	



- NOTES:
- ALL REINFORCING TO BE ASTM A-615, GRADE 60.
 - SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAGM HOLES.
 - CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
 - U BARS SHALL BE LAPPED A MINIMUM OF 1'-3" AT MIDSPAN FOR BEAMS GREATER THAN 20'-0" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - DIMENSIONS SHOWN THUS ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
 - CONCRETE TO BE CLASS H, SEE BEAM SCHEDULE FOR STRENGTHS.
 - CUT STRAND OFF 2" BEYOND END OF BEAM AT EACH END OF BEAM AS SHOWN.

AS BUILT
DRAWING
FEB 6 1973
SPAN INDUSTRIES, INC.

REV 10-17-71 JY ADD END DIA. HOLE

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. 120-5(6)457
COUNTY DALLAS
HIGHWAY NO. IH 20

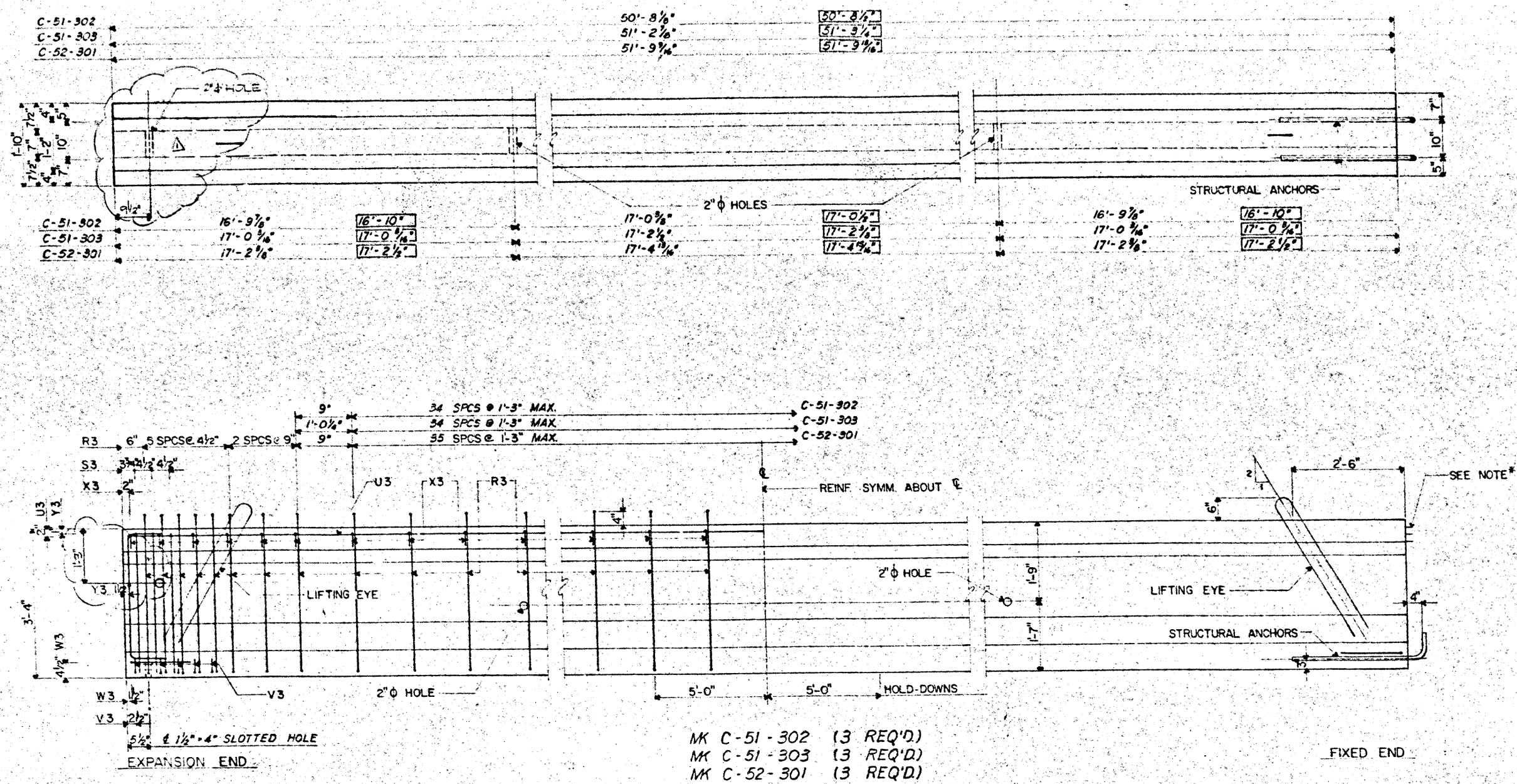
SPAN
INCORPORATED
FARMERS ROAD
DALLAS TEXAS 75220

C-BEAM DETAIL
C-64-202
C-63-202
C-62-202

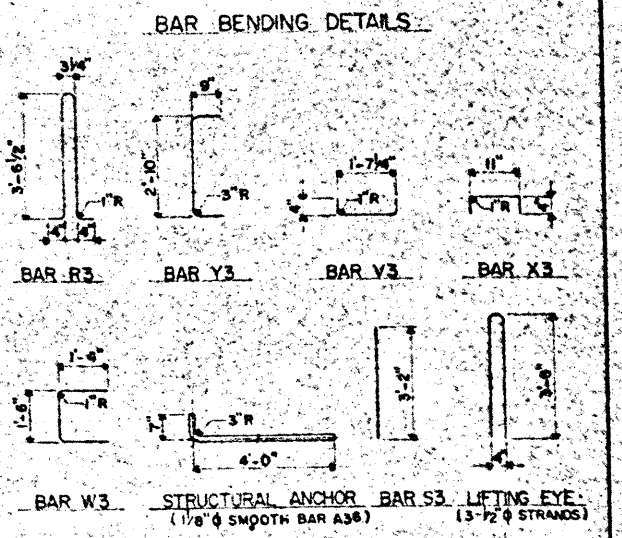
UNIT 1 - CONNECTION F

Customer BAILEY BRIDGE CO.
Architect NONE
Engineer TEXAS HIGHWAY DEPARTMENT
Scale NONE
Drawn By GDH
Checked By
Order No. 7108

Date
Approved
Sheet No. F27



BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
C-51-302 C-51-303 C-52-301	R3	51	#4	8'-0"	273	SHOWN
	S3	12	#5	3'-2"	40	
	U	2	#5	5'-7"	108	
	V3	10	#4	2'-3"	15	
	W3	2	#5	4'-2"	9	
C-52-301	X3	47	#4	1'-8"	52	
	Y3	4	#6	4'-4"	26	
TOTAL					523	



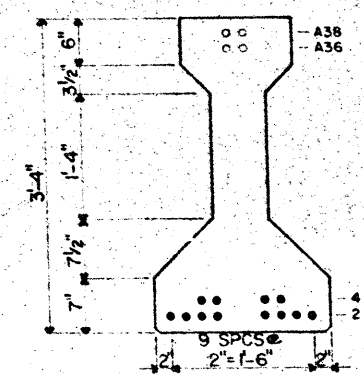
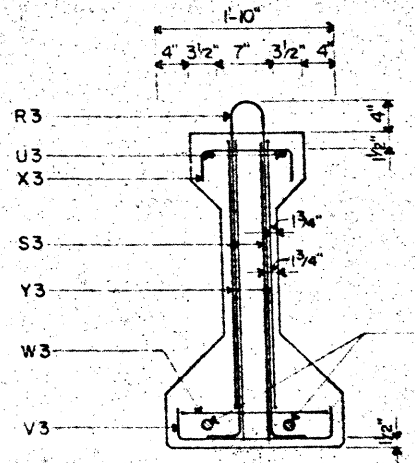
- NOTES:
- ALL REINFORCING TO BE ASTM A-615, GRADE 60.
 - SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAGM HOLES.
 - CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
 - U BARS SHALL BE LAPPED A MINIMUM OF 1'-10" AT MIDSPAN FOR BEAMS GREATER THAN 50'-0" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - DIMENSIONS SHOWN THIS ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
 - CONCRETE TO BE CLASS 4. SEE BEAM SCHEDULE FOR STRENGTHS.
 - CUT STRAND OFF 2" BEYOND END OF BEAM AT EXPOSED END OF BEAM AS SHOWN.

8-73

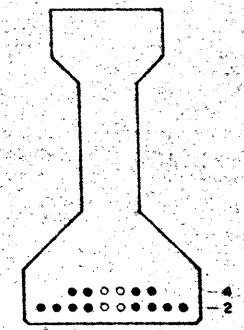
REV 10-17-71 JY. ADD END DIA HOLE

TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. 120-5(61)457
COUNTY DALLAS
HIGHWAY NO. IH 20

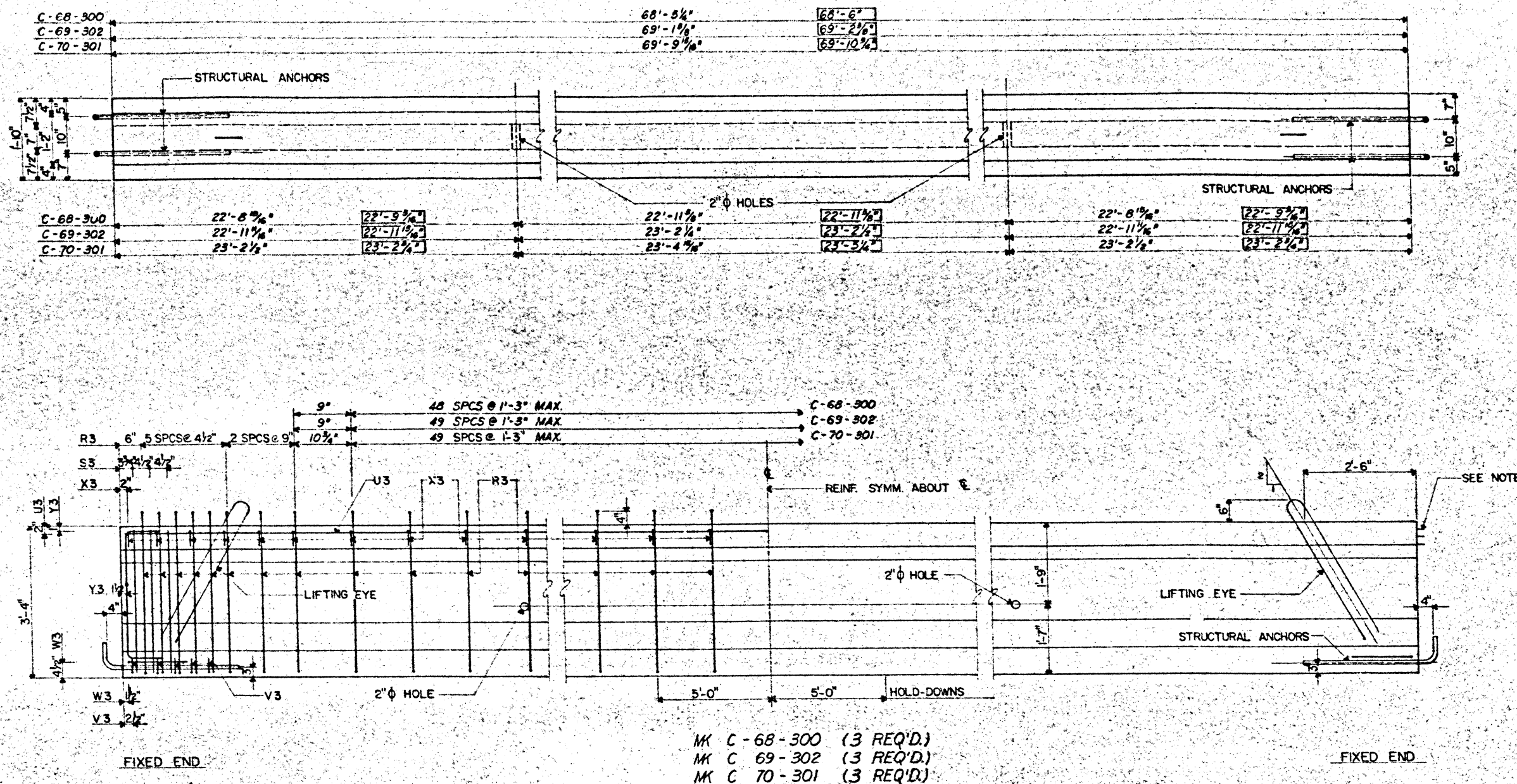
	C-BEAM DETAIL C-51-302 C-51-303 C-52-301	
	UNIT 4 - CONNECTION G	
Customer BAILEY BRIDGE CO		
Architect NONE		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE	Date	
Drawn By GDH	Approved	
Checked By	Sheet No. FSD	
Order No. 7108		



12 - 1/2" # 270 S.R. STRANDS STRAIGHT
4 - 1/2" # 270 S.R. STRANDS DRAPED
16 - 1/2" # 270 S.R. STRANDS INITIAL
FORCE = 28,910 LBS. EACH

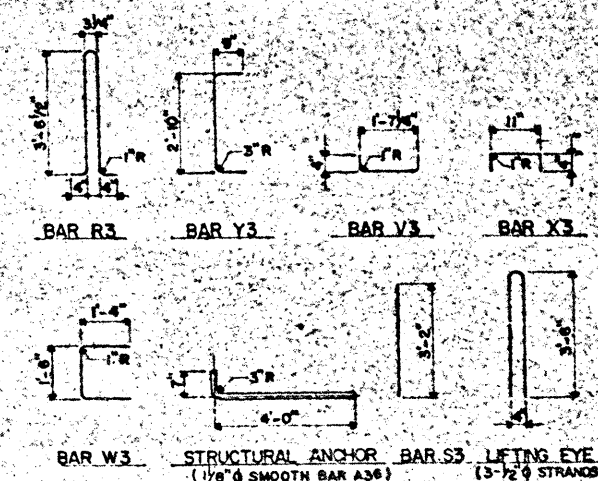


AS-BUILT
DRAWING
FEB. 8, 1973
SPAN INDUSTRIES, INC.



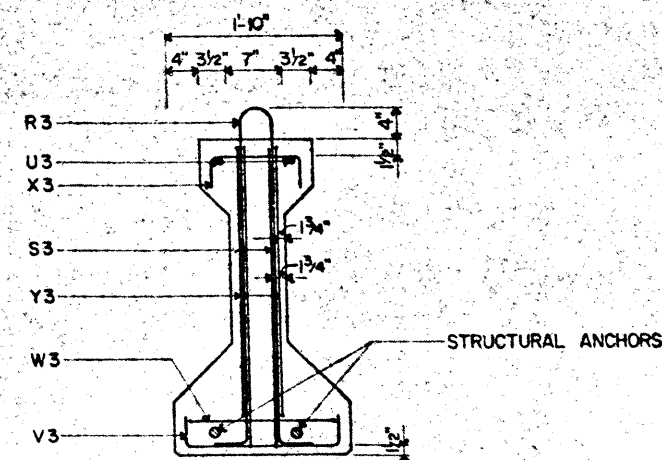
BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
C-68-300	R3	65	#4	8'-0"	348	SHOWN
	S3	12	#5	3'-2"	40	
	U	4	#5	35'-9"	149	
	V3	10	#4	2'-3"	15	
C-69-302	W3	2	#5	4'-2"	9	
C-70-301	X3	61	#4	1'-8"	68	
	Y3	4	#6	4'-4"	26	
TOTAL					656	

BAR BENDING DETAILS

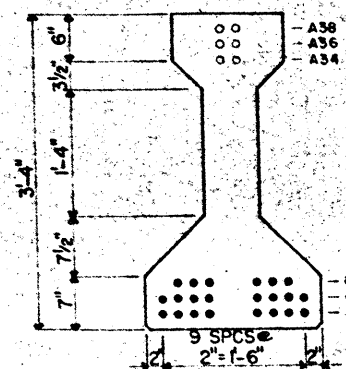


NOTES:

- ALL REINFORCING TO BE ASTM A-615, GRADE 60.
- SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAGM HOLES.
- CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
- U BARS SHALL BE LAPPED A MINIMUM OF 1'-10" AT MIDSPAN FOR BEAMS GREATER THAN 6'-0" IN LENGTH.
- BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
- DIMENSIONS SHOWN THUS ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
- CONCRETE TO BE CLASS H; SEE BEAM SCHEDULE FOR STRENGTHS.
- CUT STRAND OFF 2" BEYOND END OF BEAM AT BOTH ENDS OF BEAM.

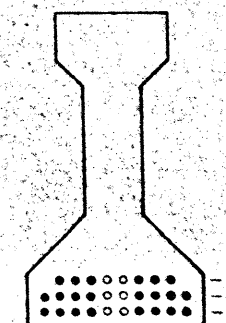


SECTION @ END CAGE

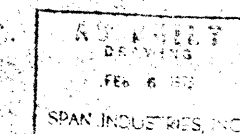


STRAND SECTION @ END


22 - 1/2" Ø 270^k S.R. STRANDS STRAIGHT
6 - 1/2" Ø 270^k S.R. STRANDS DRAPED
28 - 1/2" Ø 270^k S.R. STRANDS INITIAL
FORCE = 28,910 LBS. EACH

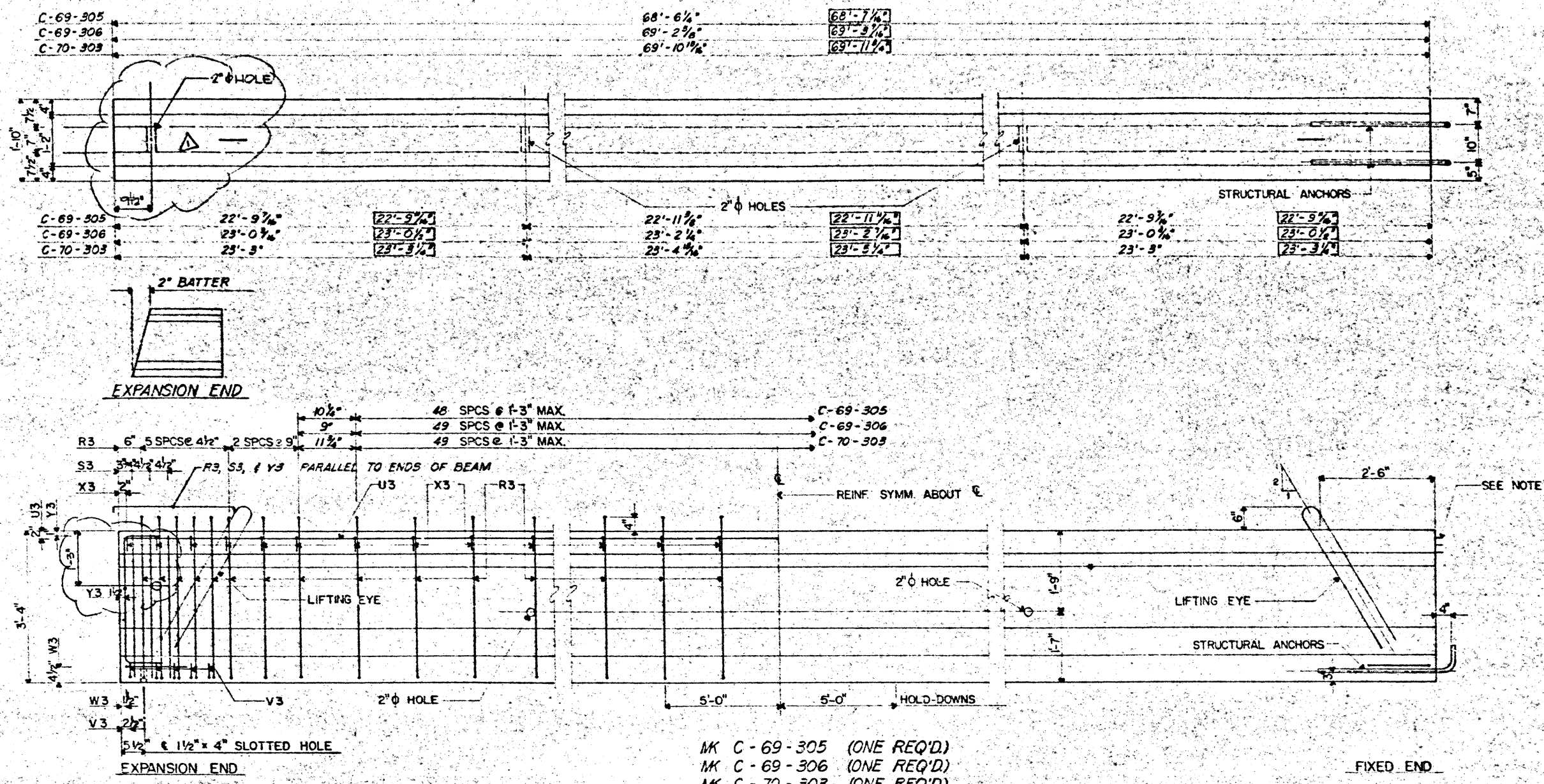


STRAND SECTION @ C



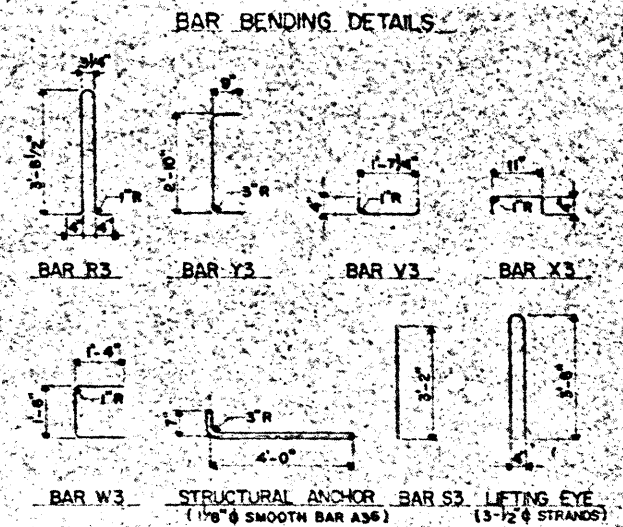
TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. 120-5(61)457
COUNTY DALLAS
HIGHWAY NO. IH 20

	SPAN	C-BEAM DETAIL
	INCORPORATED	C-68-300
	<small>INCORPORATED, 2201 N. GLENN ST. DALLAS, TEXAS 75208</small>	C-69-302
	<small>DALLAS 19 HAS 75208</small>	C-70-301
Title		
UNITS 6 & 7 - CONNECTION G		
Customer BAILEY BRIDGE CO		
Architect NONE		
Engineer TEXAS HIGHWAY DEPARTMENT		
Scale NONE		Date
Drawn By SDH		Approved
Checked By		Sheet No.
Order No. 7108		F53



MK C-69-305 (ONE REQ'D)
 MK C-69-306 (ONE REQ'D)
 MK C-70-303 (ONE REQ'D)

BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
	R3	63	#4	8'-0"	348	SHOWN
	S3	12	#5	3'-2"	40	
C-69-305	U	4	#5	35'-10"	149	
C-69-306	V3	10	#4	2'-3"	15	
C-70-303	W3	2	#5	4'-2"	9	
	X3	61	#4	1'-8"	66	
	Y3	4	#6	4'-4"	26	
TOTAL					656	



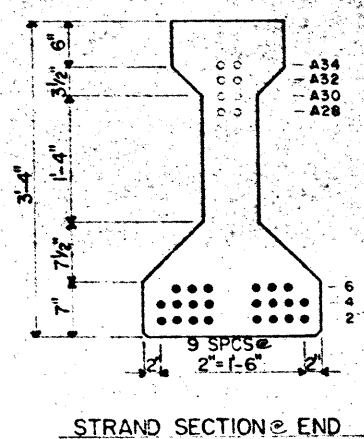
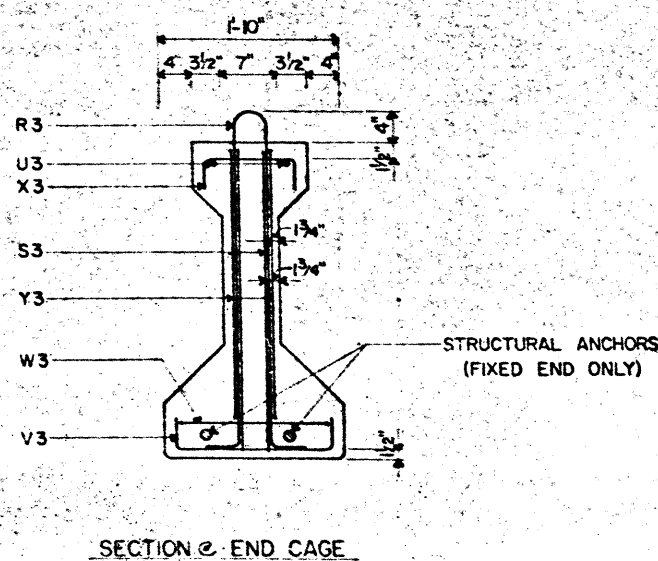
- NOTES:
- ALL REINFORCING TO BE ASTM A-36, GRADE 60.
 - SPACING OF S AND R BARS MAY BE VARYED TO AVOID SKEWED DIAPHRAM HOLES.
 - CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAM HOLE FORMS IS PERMISSIBLE.
 - U BARS SHALL BE LAPPED A MINIMUM OF 1'-10" AT MIDSPAN FOR BEAMS GREATER THAN 1'-10" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - DIMENSIONS SHOWN THUS ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
 - CONCRETE TO BE CLASS 4. SEE BEAM SCHEDULE FOR STRENGTHS.
 - CUT STRAND OFF 2" BEYOND END OF BEAM AT ONE END OF BEAM AS SHOWN.

S-78

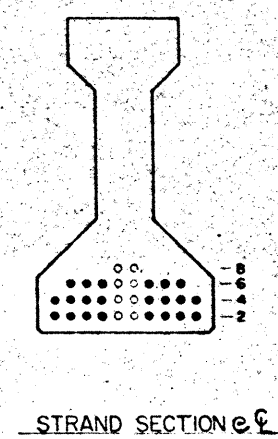
REV. 10-17-71 JY. A ADD END DIA HOLE

TEXAS HIGHWAY DEPARTMENT
 FED. AID PROJECT NO. 120-5(61)457
 COUNTY DALLAS
 HIGHWAY NO. IH 20

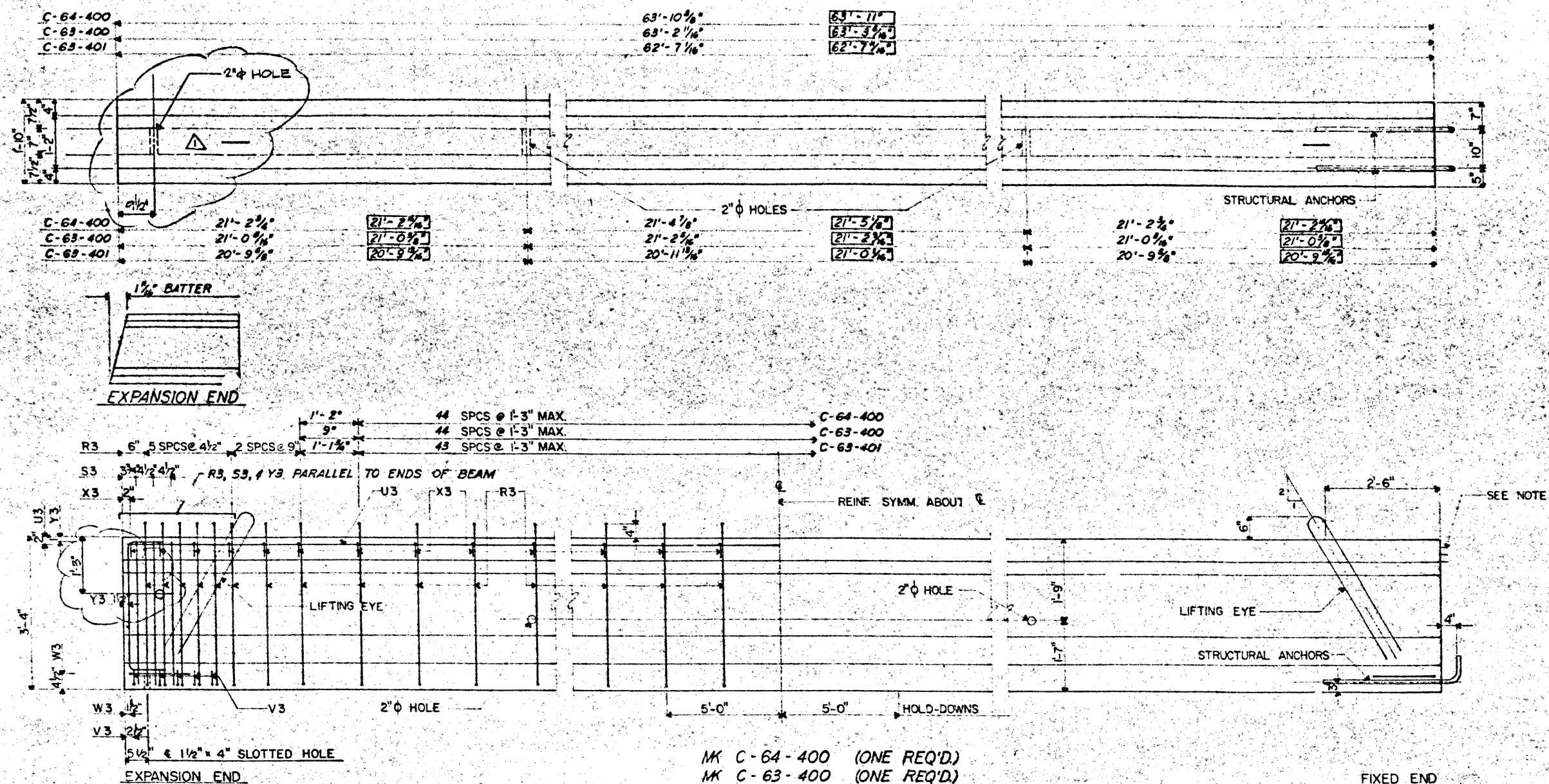
		C-BEAM DETAIL C-69-305 C-69-306 C-70-303	
UNIT 7 - CONNECTION 6			
Customer: BAILEY BRIDGE CO. Architect: NONE Engineer: TEXAS HIGHWAY DEPARTMENT Scale: NONE Drawn By: GDH Checked By:			
Order No. 7108		Date:	
		Approved:	
		Sheet No.	



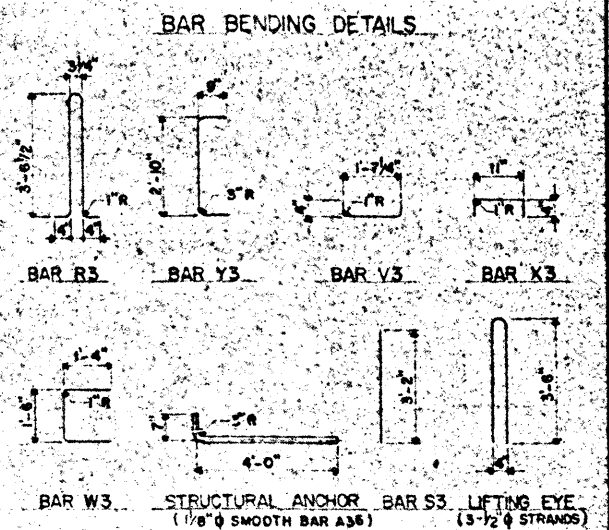
22 - 1/2" 270^K S.R. STRANDS STRAIGHT
 8 - 1/2" 270^K S.R. STRANDS DRAPED
 30 - 1/2" 270^K S.R. STRANDS INITIAL
 FORCE = 28910 LBS. EACH




DRAWING
 FEB - 6
 SPAN INDUSTRIES, INC.



	BILL OF REINFORCING STEEL PER MEMBER					
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
	R3	60	#4	8'-0"	321	SHOWN
	S3	12	#5	3'-2"	40	
C-64-400	U	4	#5	32'-9"	137	
C-63-400	V3	10	#4	2'-3"	15	
C-65-401	W3	2	#5	4'-2"	9	
	X3	56	#4	1'-8"	63	
	Y3	4	#6	4'-4"	26	
				TOTAL	611	

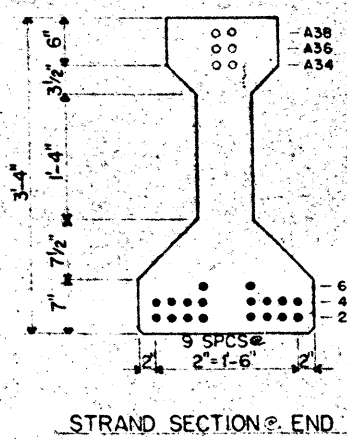
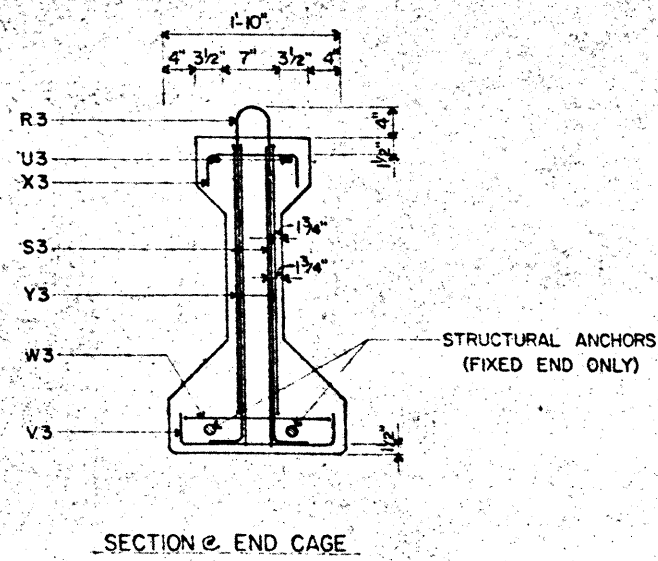
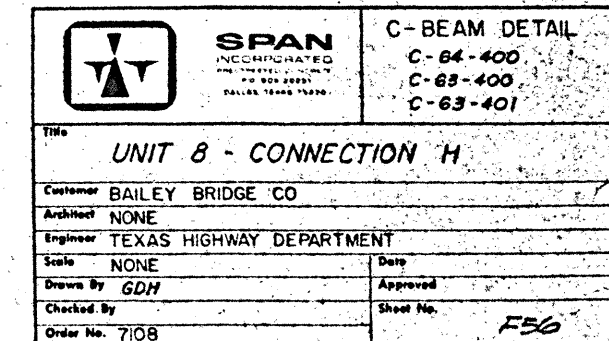


- NOTES:**
- ALL REINFORCING TO BE ASTM A-601, GRADE 60.
 - SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAM HOLES.
 - CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAM HOLE FORMS IS PERMISSIBLE.
 - U BARS SHALL BE LAPPED A MINIMUM OF 1'-3" AT MIDSPAN FOR BEAMS GREATER THAN 12'-6" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - DIMENSIONS SHOWN THUS  ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
 - CONCRETE TO BE CLASS "A" SEE BEAM SCHEDULE FOR STRENGTHS.
 - * CUT STRAND OFF 2" BEYOND END OF BEAM AT ONE END OF BEAM AS SHOWN

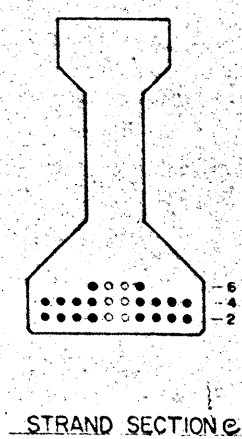
S-79

REV 10-17-71 JY. Δ ADD END DIA. HOLE

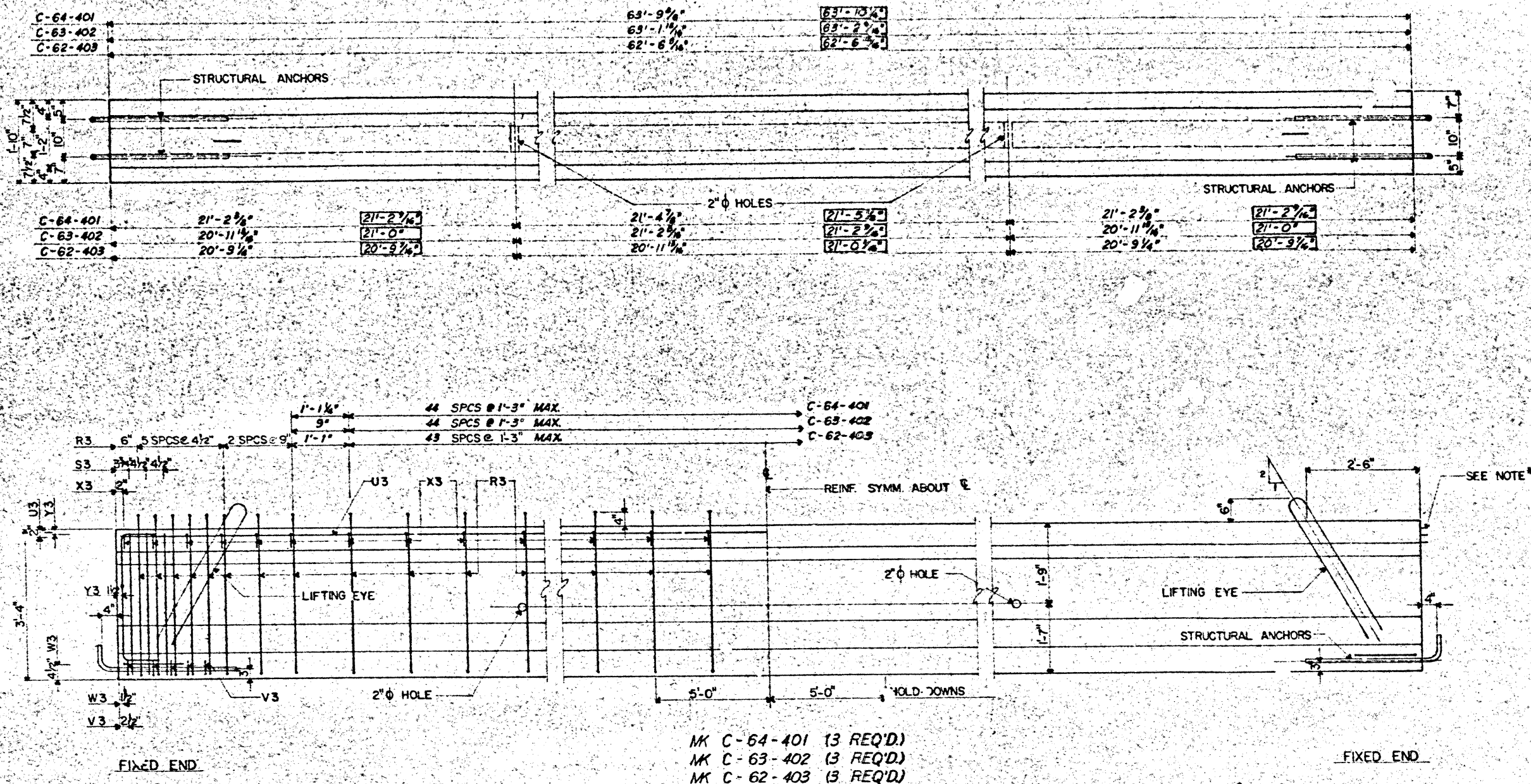
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. 120-5(61)457
COUNTY DALLAS
HIGHWAY NO. 1H 20



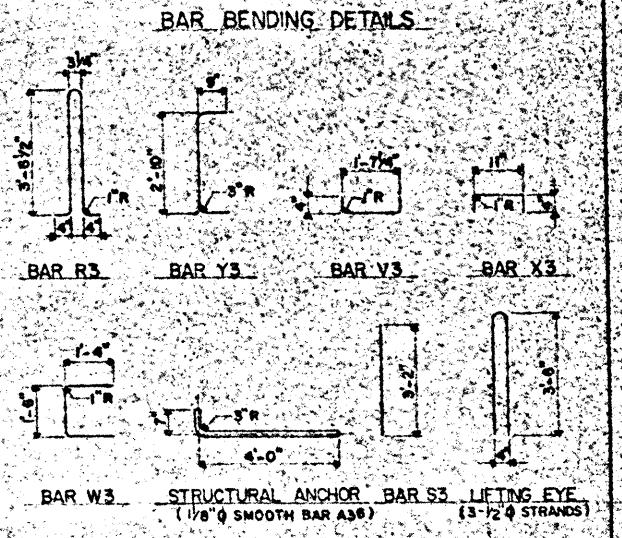
18	-1/2" Ø	270*	S.R. STRANDS STRAIGHT
6	-1/2" Ø	270*	S.R. STRANDS DRAPED
24	-1/2" Ø	270*	S.R. STRANDS INITIAL
FORCE = 28,910 LBS. EACH			



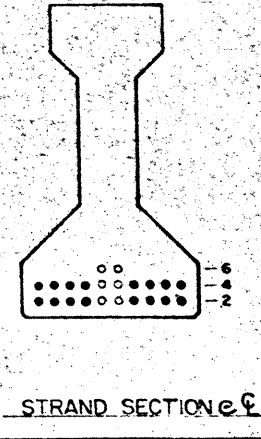
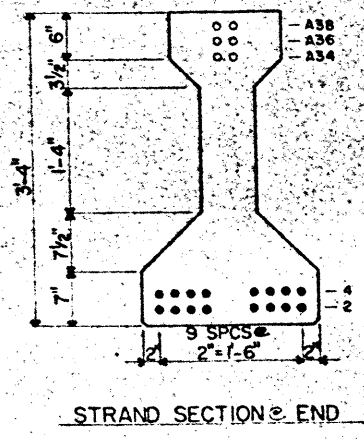
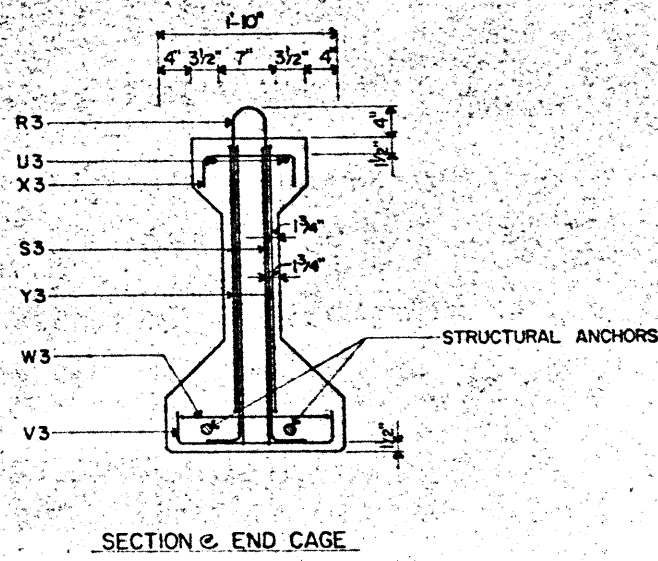
STRAND SECTION e-f



BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
C-64-401 C-63-402 C-62-403	R3	60	#4	8'-0"	321	SHOWN
	S3	12	#5	5'-2"	40	
	U	4	#5	32'-0"	137	
	V3	10	#4	2'-3"	15	
	W3	2	#5	4'-2"	5	
	X3	26	#4	1'-8"	63	
	Y3	4	#6	4'-4"	26	
TOTAL					671	



- NOTES:
- ALL REINFORCING TO BE ASTM A-255, GRADE 40.
 - SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAM HOLES.
 - CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAM HOLE FORMS IS PERMISSIBLE.
 - U BARS SHALL BE LAPPED A MINIMUM OF 1'-10" AT MIDSPAN FOR BEAMS GREATER THAN 50'-0" IN LENGTH.
 - BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
 - DIMENSIONS SHOWN THUS [] ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
 - CONCRETE TO BE CLASS M, SEE BEAM SCHEDULE FOR STRENGTHS.
 - CUT STRAND OFF 2" BEYOND END OF BEAM AT BOTH ENDS OF BEAM.



AS BUILT
DRAWING
JTB & S
SPAN INDUSTRIES, INC.

880

TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. 120-5(6)457
COUNTY DALLAS
HIGHWAY NO. IH 20

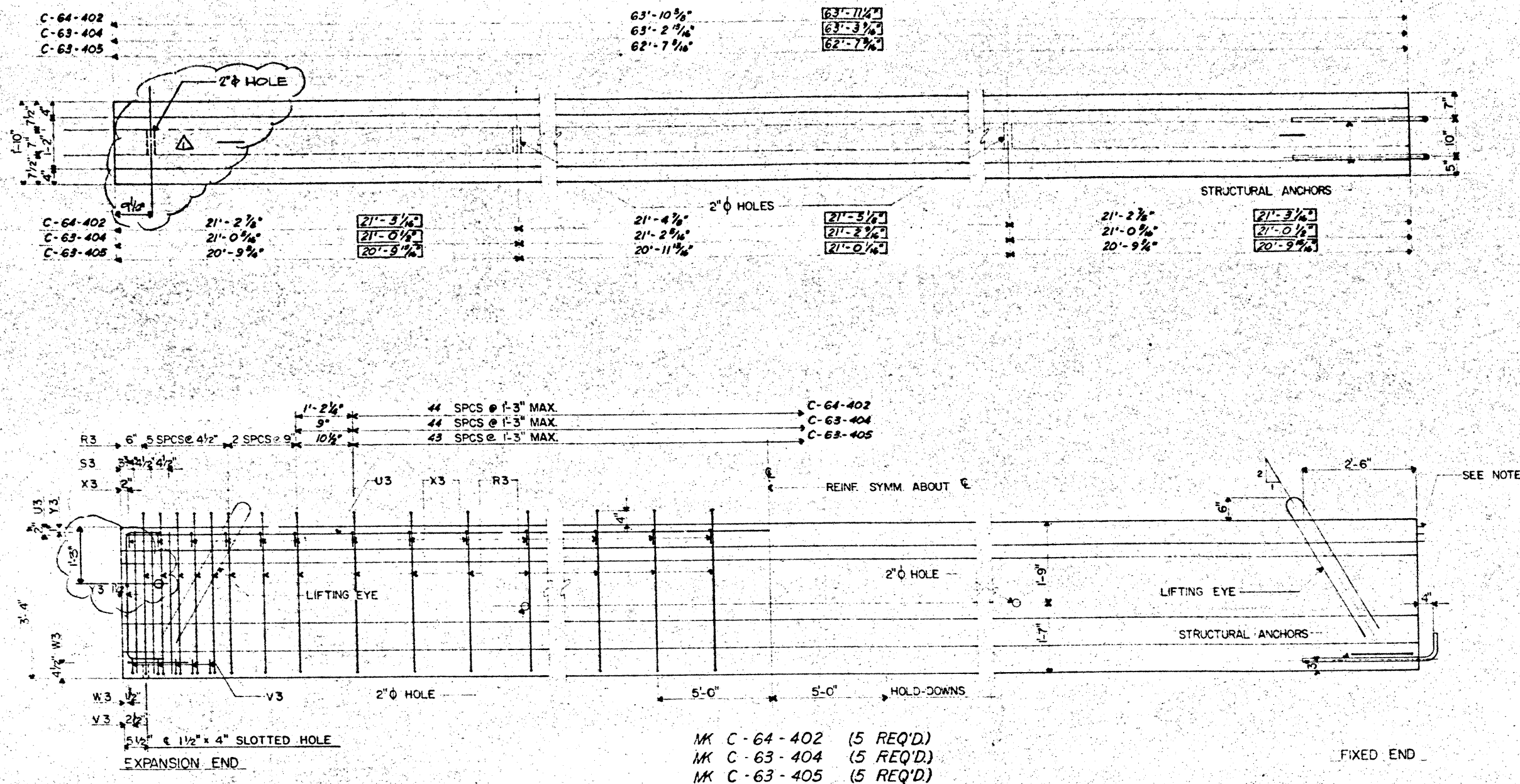
SPAN INDUSTRIES, INC.
INCORPORATED
P.O. BOX 20251
DALLAS, TEXAS 75220

C-BEAM DETAIL
C-64-401
C-63-402
C-62-403

UNIT 8 - CONNECTION H

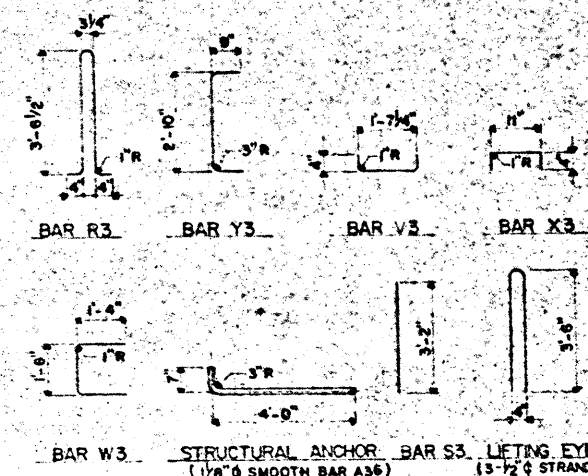
Customer BAILEY BRIDGE CO.
Architect NONE
Engineer TEXAS HIGHWAY DEPARTMENT
Scale NONE
Drawn By GDM
Checked By
Order No. 7108

Date
Approved
Sheet No. F57



BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
C-64-402	R3	60	#4	8'-0"	321	SHOWN
	S3	12	#5	3'-2"	40	
C-63-404	U	4	#5	32'-9"	137	
	V3	10	#4	2'-3"	15	
C-63-405	W3	2	#5	4'-2"	9	
	X3	56	#4	1'-8"	88	
	Y3	4	#6	4'-4"	26	
TOTAL					671	

BAR BENDING DETAILS



NOTES:

- ALL REINFORCING TO BE ASTM A-615, GRADE 60.
- SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAGM HOLES.
- CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
- U BARS SHALL BE LAPPED A MINIMUM OF 1'-10" AT MIDSPAN FOR BEAMS GREATER THAN 1'-10" IN LENGTH.
- BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
- DIMENSIONS SHOWN IN ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
- CONCRETE TO BE CLASS "C" - SEE BEAM SCHEDULE FOR STRENGTHS.
- CUT STRAND OFF 2" BEYOND END OF BEAM AT ONE END OF BEAM, AS SHOWN.

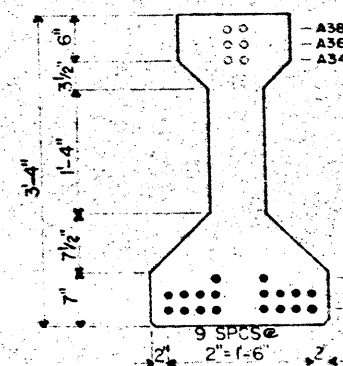
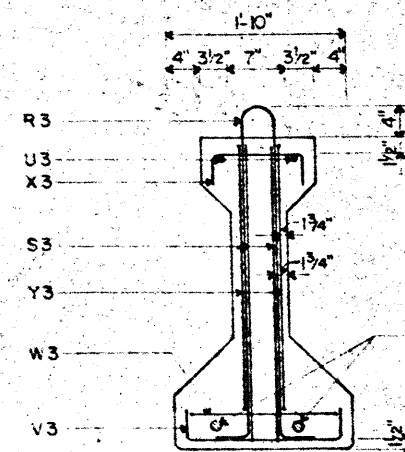
881

REV 10-17-71 JY Δ ADD END DIA HOLE

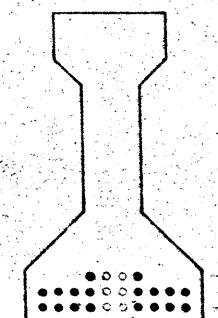
TEXAS HIGHWAY DEPARTMENT
FED AID PROJECT NO. 120-5(6)457
COUNTY DALLAS
HIGHWAY NO. IH 20

	C-BEAM DETAIL	
	C-64-402	
	C-63-404	
	C-63-405	

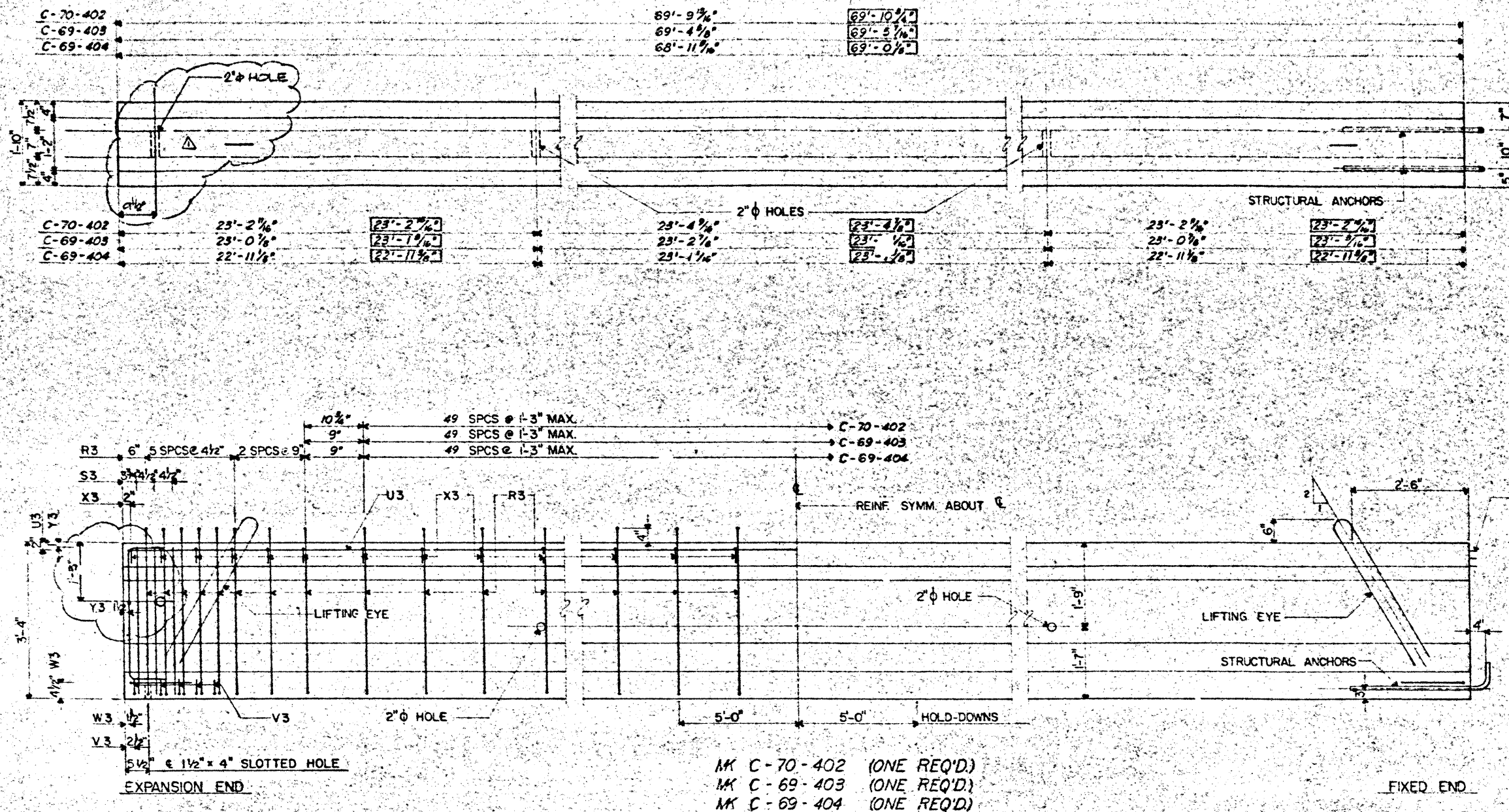
UNIT 3 - CONNECTION H	
Customer	BAILEY BRIDGE CO
Architect	NONE
Engineer	TEXAS HIGHWAY DEPARTMENT
Scale	NONE
Drawn By	GDM
Checked By	
Order No.	7108
Date	
Approved	
Sheet No.	F58



18 - 1/2" Ø 270^K S.R. STRANDS STRAIGHT
6 - 1/2" Ø 270^K S.R. STRANDS DRAPED
24 - 1/2" Ø 270^K S.R. STRANDS INITIAL
FORCE = 28,910 LBS. EACH

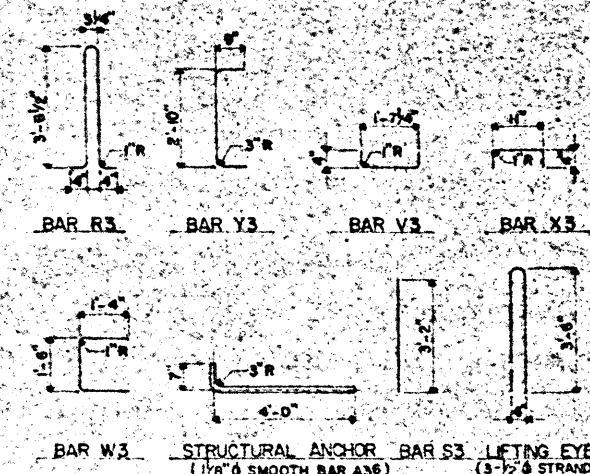


SPAN INDUSTRIES INC.



BILL OF REINFORCING STEEL PER MEMBER						
BEAM MARK	BAR MARK	NO REQ'D	SIZE	LENGTH	WEIGHT	SPACING
	R3	65	#4	8'-0"	240	SHOWN
	S3	12	#5	3'-2"	40	
C-70-402	U	4	#5	35'-9"	149	
C-69-403	V3	10	#4	2'-8"	15	
C-69-404	W3	2	#5	4'-2"	9	
	X3	61	#4	1'-8"	68	
	Y3	4	#6	4'-4"	26	
TOTAL					633	

BAR BENDING DETAILS



NOTES:

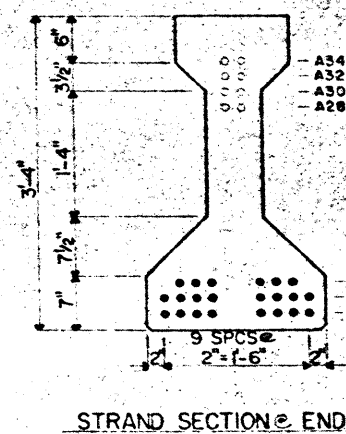
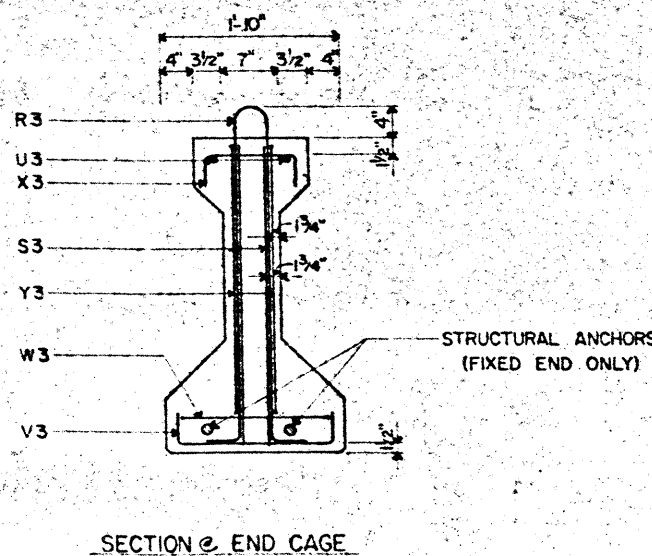
- ALL REINFORCING TO BE ASTM A-615, GRADE 60.
- SPACING OF S AND R BARS MAY BE VARIED TO AVOID SKEWED DIAPHRAGM HOLES.
- CONTACT BETWEEN REINFORCING OR STRAND WITH ANCHOR OR DIAPHRAGM HOLE FORMS IS PERMISSIBLE.
- U BARS SHALL BE LAPPED A MINIMUM OF 1'-0" AT MIDSPAN FOR BEAMS GREATER THAN 6'-0" IN LENGTH.
- BEAMS SHALL BE HANDLED BY LIFTING LOOPS ONLY.
- DIMENSIONS SHOWN THUS ARE CAST DIMENSIONS. OTHER DIMENSIONS ARE FINAL DIMENSIONS.
- CONCRETE TO BE CLASS H. SEE BEAM SCHEDULE FOR STRENGTHS.
- CUT STRAND OFF 2" BEYOND END OF BEAM AT ONE END OF BEAM, AS SHOWN.

884

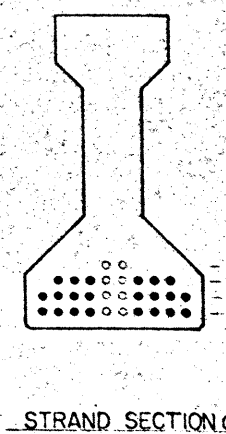
REV 10-17-71 JY. ADD END DIA HOLE

TEXAS HIGHWAY DEPARTMENT
FED. AID PROJECT NO. 120-5(61)457
COUNTY DALLAS
HIGHWAY NO. IH 20

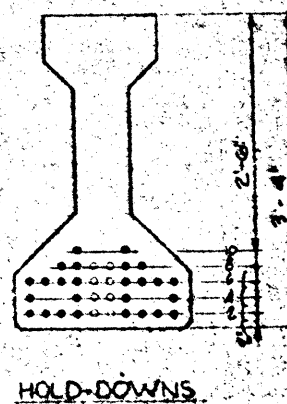
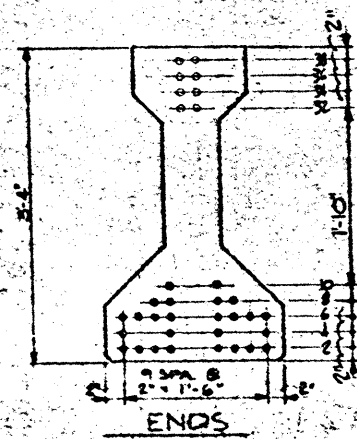
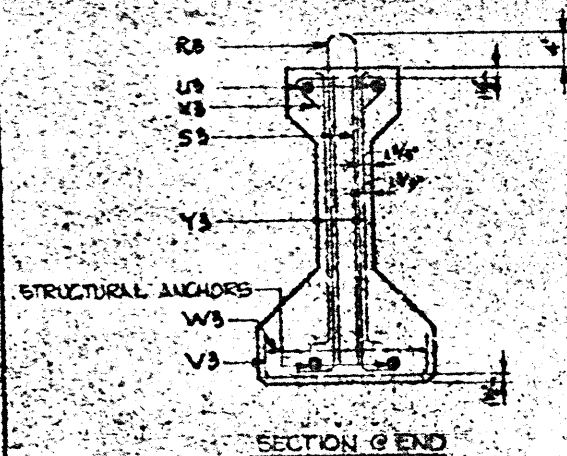
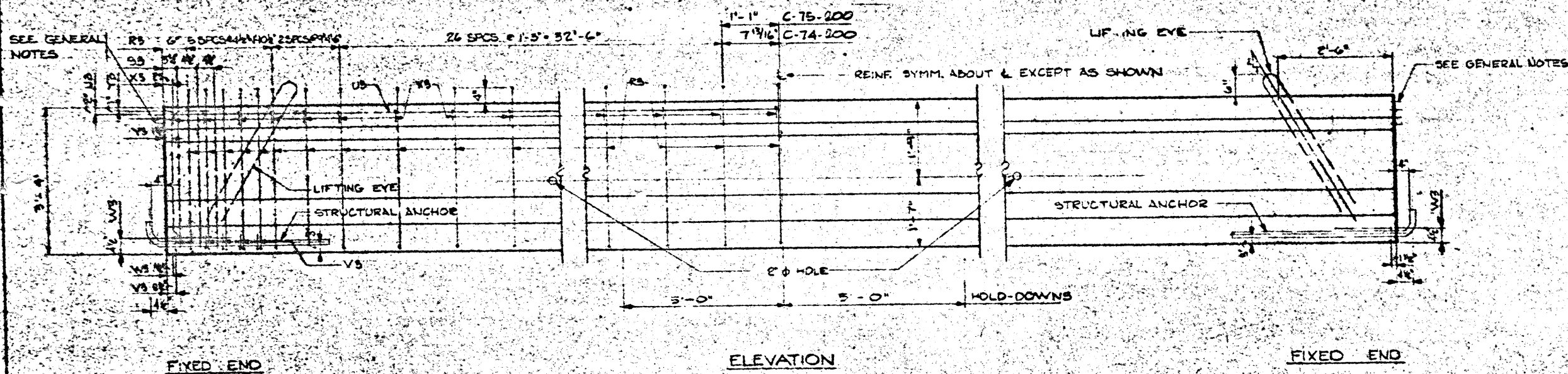
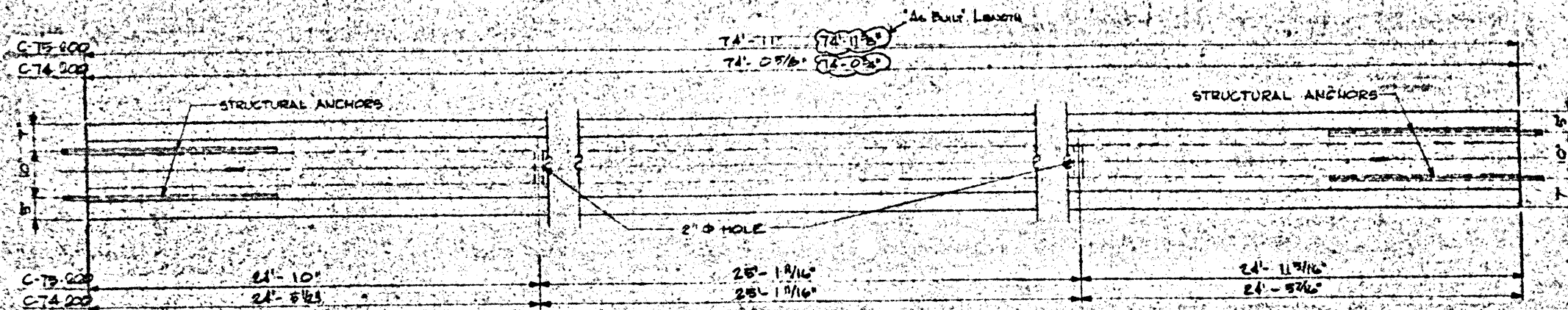
		C-BEAM DETAIL C-70-402 C-69-403 C-69-404	
UNIT 9 - CONNECTION H			
Customer: BAILEY BRIDGE CO. Architect: NONE Engineer: TEXAS HIGHWAY DEPARTMENT Scale: NONE Date: _____ Drawn By: GDM Checked By: _____ Order No. 7108			
		Approved: _____ Sheet No. F01	



22 - 1/2" x 270 S.R. STRANDS STRAIGHT
8 - 1/2" x 270 S.R. STRANDS DRAPED
30 - 1/2" x 270 S.R. STRANDS INITIAL
FORCE = 28910 LBS. EACH



NO. 600
DRAWING
FEB 6, 1972
SPAN INDUSTRIES, INC.



SEE NOTE ON SHEET 45 OF 92

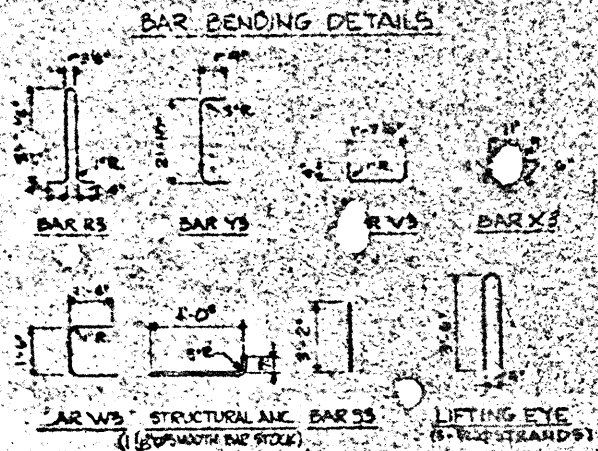
EXIST. MARK NEW MARK

C-75-600 = C-75-200

C-74-600 = C-74-200

AS BUILT DRAWING FEB 8 77 SPAN INDUSTRIES, INC.

BILL OF REINFORCING STEEL PER BEAM						
BEAM MARK	BAR MARK	NO. REQ'D	SIZE	LENGTH	WEIGHT	REMARKS
C-75-200	R3	64	#4	87'-5"	369	DOWN
	S3	12	#5	3'-3"	40	DOWN
	U3	2	#5	76'-6"	160	DOWN
	V3	10	#4	2'-3"	15	DOWN
	W3	2	#5	4'-2"	9	DOWN
C-74-200	X3	65	#4	11'-7"	69	DOWN
	Y3	4	#6	4'-4"	26	DOWN
	STEELER	1	#5	1'-8"	54	DOWN



- GENERAL NOTES
1. CONCRETE TO BE CLASS H. SEE BEAM SCHEDULE FOR STRENGTHS.
 2. REINFORCING - A.S.T.M. A615-40.
 3. U.S. IRS INCLUDE 1'-10" MINIMUM LAP.
 4. SPACING TO FRANGE OF 2 1/2" FOR R BARS.
 5. CUT STRANDS OFF 2' BEYOND END OF BEAM AT FIXED END ONLY.
 6. V BAR MAY BE TILTED THUS V AS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
 7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
 8. AT ENDS OF MEMBER THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COATING OF EPOXY.
 9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (1/4").
 10. INITIAL PULL OF 2000 LB PER STRAND.
 11. CUT LIFTING DOPS TO 4' AFTER COMPLETION OF ERECTION.
 12. CUT STRANDS OFF 2' BEYOND END OF BEAM AT BOTH ENDS.

TEXAS HIGHWAY DEPARTMENT
FED AID PROJ NO. 120-5(61)457
COUNTY DALLAS
HWY NO. I.H. 20

SPAN INDUSTRIES, INC.
INCORPORATED
P.O. BOX 9000
DALLAS, TEXAS 75208

C BEAM DETAIL
C-75-200
C-74-200

CONNECTION F UNIT 3

Customer BAILEY BRIDGE CO

Architect TEXAS HIGHWAY DEPARTMENT

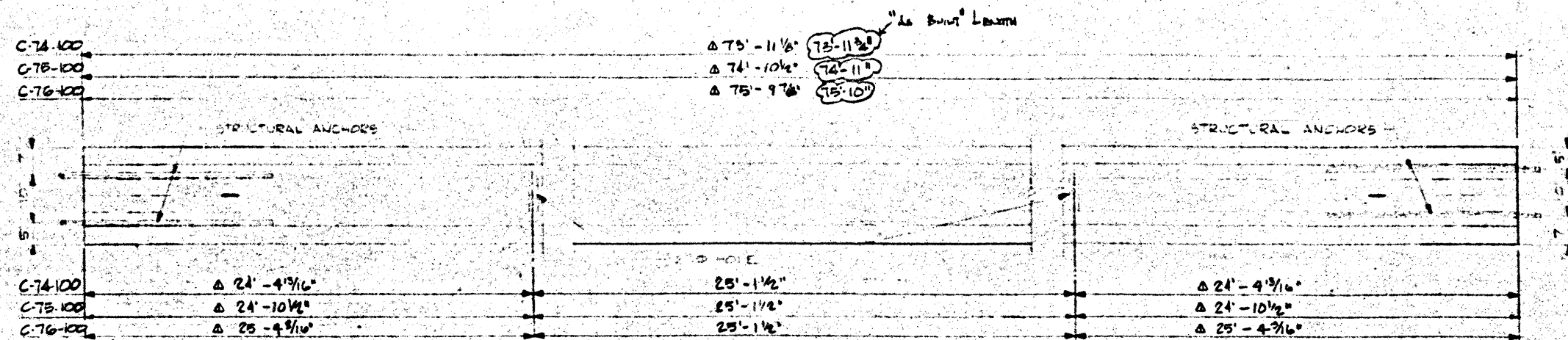
Date 5-29-70

Drawn By H.M. 1-8-70 Approved G.E.

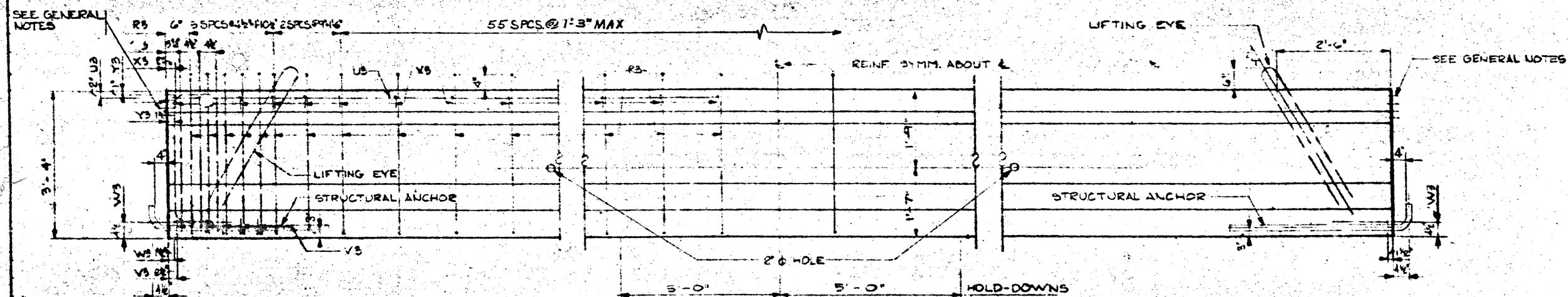
Checked By G.E. 5-27-70

Order No. 9106

Sheet No. 29 OF 92



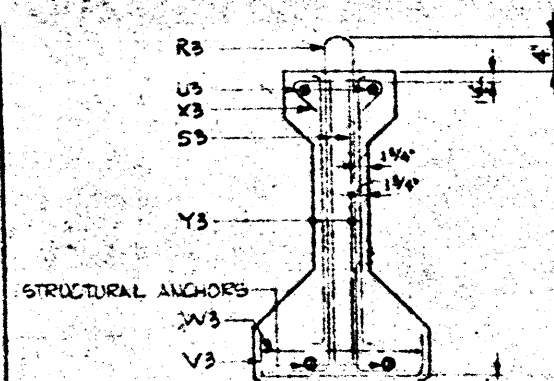
PLAN



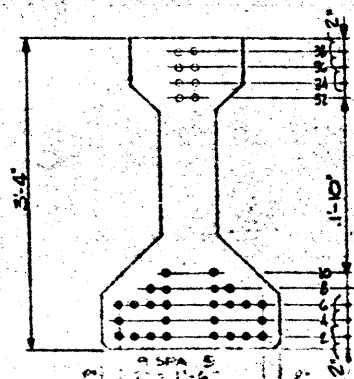
FIXED END

ELEVATION

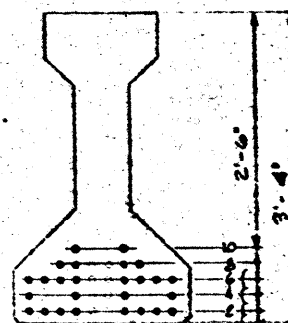
EXPANSION END



SECTION @ END



ENDS



HOLD-DOWNS

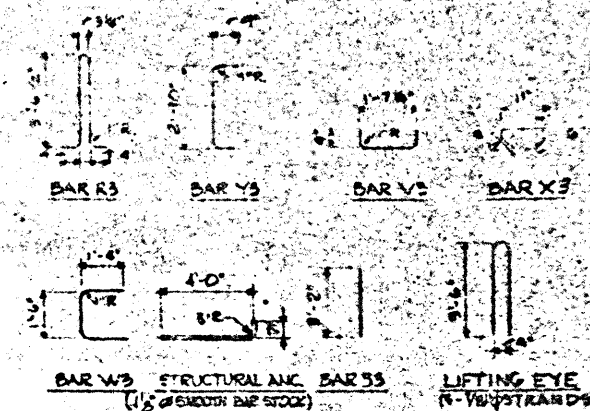
THESE BEAMS WERE CUT BY SPAN INDUSTRIES, INC. 7/12/71
 28-DAY CYLINDER STRENGTH AVERAGED 8005 PSI. REQUIRED 28-DAY STRENGTH WAS 8400 PSI.
 WE PROPOSE TO SUBSTITUTE THESE BEAMS IN PROJECT I-20-5(61)457 ACCORDING TO THE EQUATION BELOW.

EXIST. MARK NEW MARK
 C-73-400 = C-74-100
 C-74-400 = C-75-100
 C-75-400 = C-76-100

AS BUILT
 DRAWING
 FEB 6 1973
 SPAN INDUSTRIES, INC.

BEAM MARK	BAR MARK	NO. REIN.	SIZE	LENGTH	WEIGHT	SPACING
	R3	2	#5	5'-0"	574	SHOWN
	U3	2	#5	3'-2"	40	SHOWN
	U3	2	#5	7'-8"	161	SHOWN
	V3	10	#4	2'-3"	15	SHOWN
C-74-100	W3	2	#5	4'-2"	9	SHOWN
C-75-100	X3	2	#5	4'-2"	9	SHOWN
C-76-100	Y3	2	#5	4'-2"	9	SHOWN
	STRAND	4	#5	4'-8"	64	SHOWN

BAR BENDING DETAILS




GENERAL NOTES

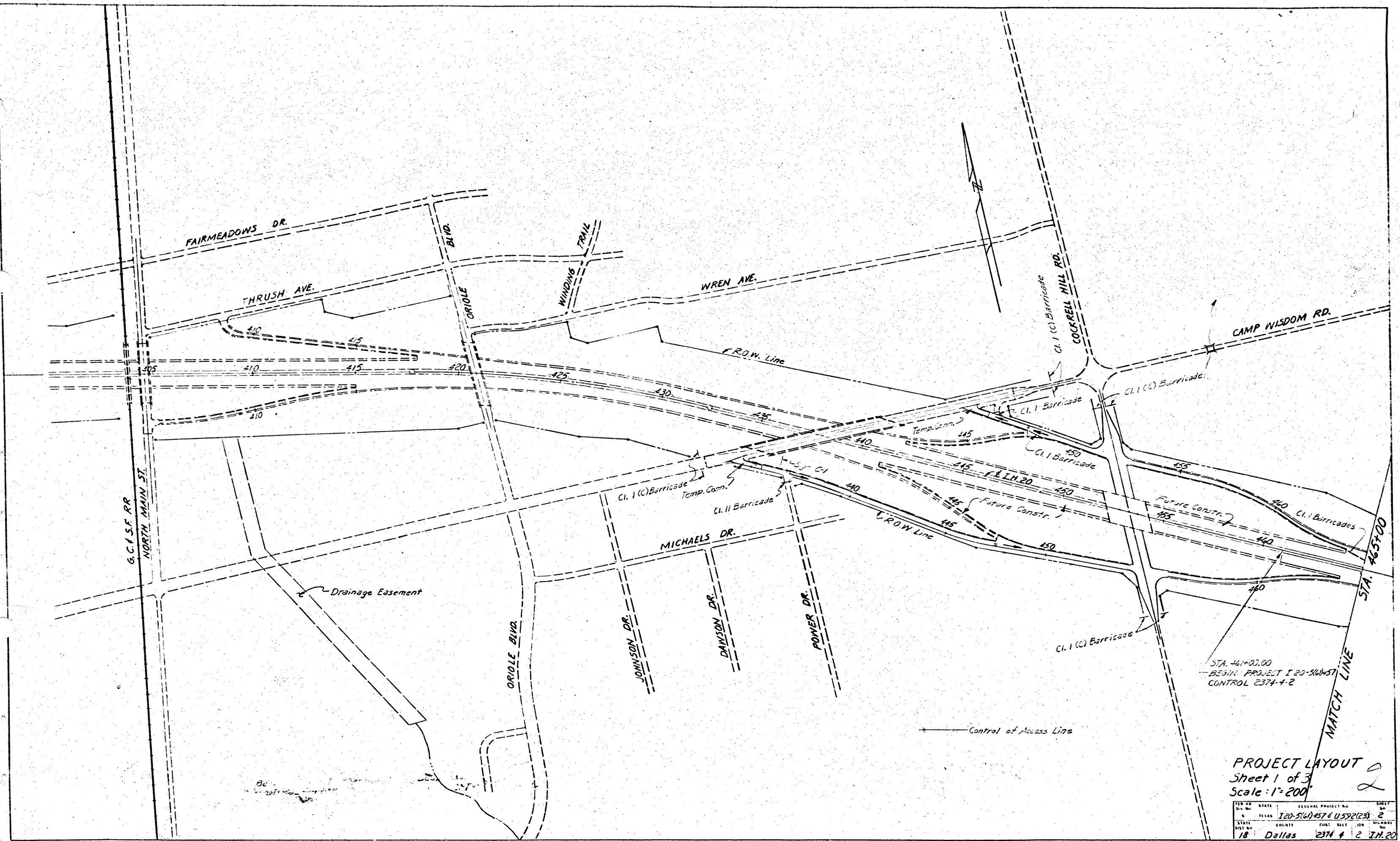
1. CONCRETE TO BE CLASS H. SEE BEAM SCHEDULE FOR STRENGTHS.
2. REINFORCING - A.S.T.M. A615-40.
3. U BARS INCLUDE 1'-0" MINIMUM LAP.
4. SPACING TOLERANCE OF 3/4" FOR R BARS.
5. CUT STRANDS OFF 2' BEYOND END OF BEAM AT FIXED END ONLY.
6. V BAR MAY BE TILTED THUS 1/4" IS REQUIRED TO MAINTAIN 1" MINIMUM COVER TO BOTTOM SURFACE OF BAR.
7. USE STRAND LOOPS FOR HANDLING OF BEAMS.
8. AT ENDS OF MEMBER, THE ENDS AND A MINIMUM AREA OF 1" AROUND EACH TENDON SHALL BE COATED WITH APPROXIMATELY A 10 MIL COATING OF EPOXY.
9. CHAMFER ENDS AT BOTTOM OF BEAM ONLY (1/4").
10. INITIAL PULL OF 2000 LB. PER STRAND.
11. CUT LIFTING LOOPS TO 4' AFTER COMPLETION OF ERECTION.
12. CUT STRANDS OFF 2' BEYOND END OF BEAM AT BOTH ENDS OF BEAM.

7178
 10 887

TEXAS HIGHWAY DEPARTMENT
 FED AID PROJ NO. I-20-5(61)457
 COUNTY DALLAS
 HWY NO. I.H. 20

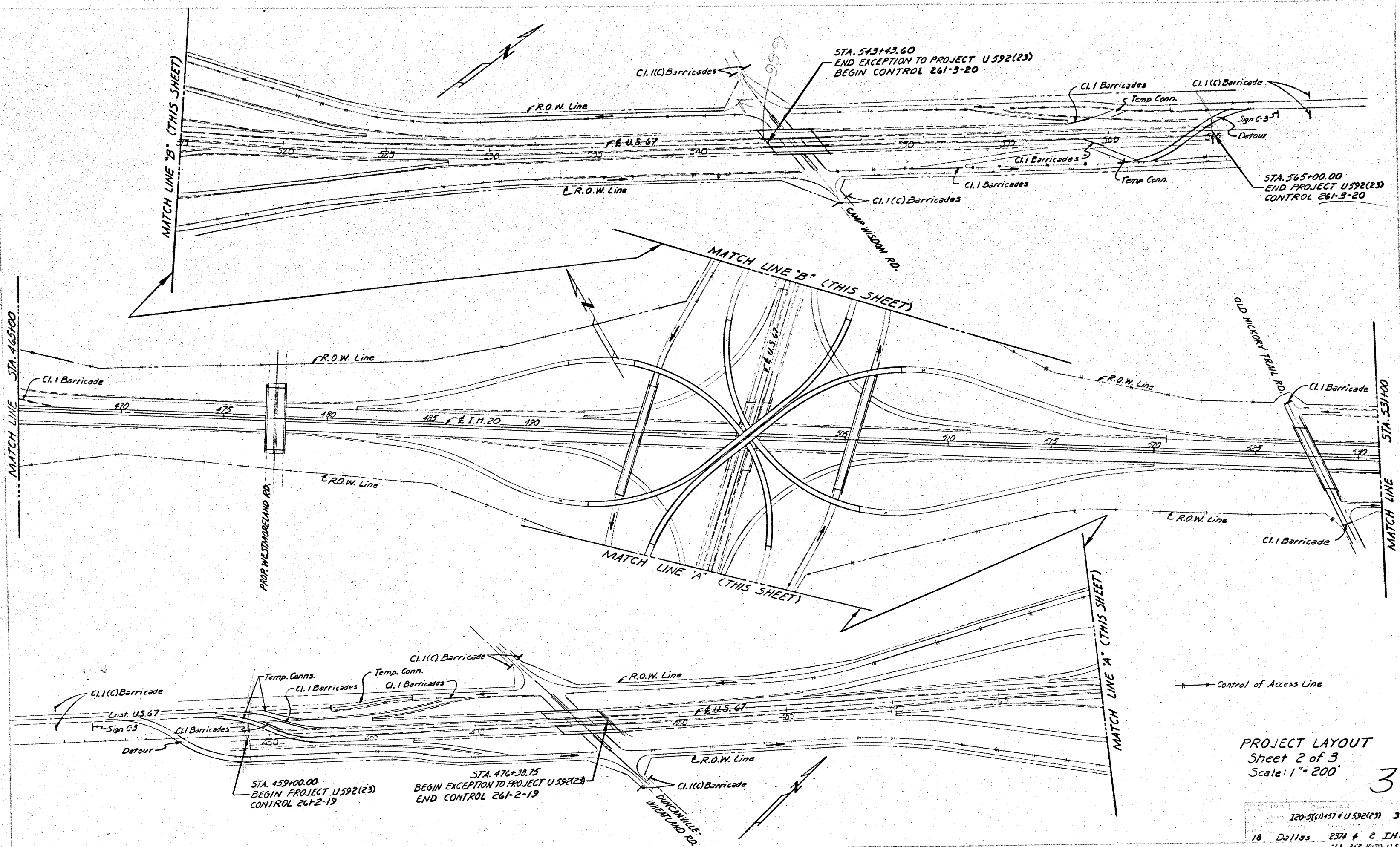
 SPAN INCORPORATED 7801 GERRARD DALLAS, TEXAS 75249		C. BEAM DETAIL C-74-100 C-75-100 C-76-100
CONNECTION E UNIT 3		
Customer: BAILEY BRIDGE CO.		
Engineer: TEXAS HIGHWAY DEPARTMENT		
Date: 5-29-70	Approved: [Signature]	
Drawn By: H.M.	1-8-70	Checked By: [Signature]
5-26-70	Sheet No. 45 of 92	Date: 7-10-73

REV. 4-6-71, REV. BEAM LENGTHS D.B.



PROJECT LAYOUT
Sheet 1 of 3
Scale: 1"=200'

FED. RD. DIST. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
18	Dallas	2374-4-2	2
		261 263 1820 US 57	



120-5(11157) U592(23) 3
 18 Dallas 2374 & 2 I.H. 20
 261 243 19/20 U.S. 67

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
------------------	--------------------

SHEET NO.	25238-11
1	TITLE SHEET
2-4	PROJECT LAYOUT SHEETS
5-9	TYPICAL SECTIONS
10	TYPICAL SECTIONS FOR SHAPING AND FINISHING ROADWAYS
11-14-14A	ESTIMATE AND QUANTITY
15-18	SPECIFICATION DATA
19	GRADING SUMMARY
20 & 20A	STRUCTURES SUMMARY
21-22	INLETS SUMMARY
23	STORM SEWER SUMMARY
24A-24B	MISCELLANEOUS SUMMARY
25	EROSION CONTROL DETAILS & SUMMARY
26-64	I.H. 20 PLAN-PROFILE SHEETS
65-79	U.S. 67 PLAN-PROFILE SHEETS
80-88	CROSS STREETS PLAN-PROFILE SHEETS
89-93	SUPERELEVATION TRANSITIONS
94-95	I.H. 20-U.S. 67 GRADING CONTOURS
96-100	DRAINAGE AREA MAP
101-106	HYDRAULIC DATA
107-137 & 138A	I.H. 20 DRAINAGE PLAN-PROFILE SHEETS
139A-141 & 138-148	U.S. 67 DRAINAGE PLAN-PROFILE SHEETS
149-152	INLET DETAILS
153-154	MANHOLE & JUNCTION BOX DETAILS
155-156	MOD. CULVERT STANDARDS
167	STANDARD DIRECT CONN. TAPERS
168	STANDARD RAMP TAPERS
169	RC (CPCR) - 69 (MOD.)
170-173	PAYEMENT DETAILS -----
174-174A	BRIDGE APPROACH SLAB DETAILS
175	MISCELLANEOUS DETAILS
175-182 & 182A	WESTMORELAND ROAD UNDERPASS DETAILS
183-258	I.H. 20-U.S. 67 INTERCHANGE DETAILS
259-266	OLD HICKORY TRAIL ROAD UNDERPASS
267-281	DUNCANVILLE-WHEATLAND ROAD AT I.H. 20 OVERPASS DETAILS & AT U.S. 67
282-293	HAMPTON ROAD OVERPASS DETAILS & CAMP WISDOM ROAD OVERPASS DETAILS
300-317	SOUTH POLK STREET UNDERPASS DETAILS & BRIDGE STANDARDS
318	SF (TD) - 70 B (MOD)
318-320	MEDIAN GUARD FENCE DETAILS
321-323	SINGLE CULVERTS DETAILS (SC-1A SC-NB SC-NC, SC-15 A,B,C, SC-30A)
324	MULTIPLE BOX CULVERTS DETAILS (MC 10-3)
325-329	BOX CULVERT WINGWALL DETAILS (PW-N, PW-15, PW-30, MCW-P, MCW-P-15)
330	P.I.P.E HEADWALLS DETAILS (CH-11)
331	CLF-69
332	M-69
333	RR-9
334	TB & FM-66
335-336	SMD-6A (1) & (2)
337	CIS-71
338-343	BC (1) THRU (6) - 70
344	I-55
345	PJS
346	BL
14:	

EQUATIONS
Project I20-5(61)457
Sta. 643+02.01 Bk. Sta. 65+44.00 Fwd.
Project U 592 (23)
None
EXCEPTIONS
Project I20-5(61)457
None
Project U592 (23)
Sta. 476+38.75 to Sta. 543+43.60

CONVENTIONAL SIGNS

STATE OR NATIONAL LINE	— — — — —
CITY OR VILLAGE LINE	— — — — —
COUNTY LINE	— — — — —
BASE OR SURVEY LINE	— — — — —
RIGHT OF WAY LINE	— — — — —
RIGHT OF WAY MARKERS	— — — — —
FENCE LINE	— — — — —
RAILROAD	— — — — —
TRAVELLED WAY	— — — — —
CULVERT OR BRIDGE	— — — — —
POWER LINE	— — — — —
TELEGRAPH OR TELEPHONE	— — — — —

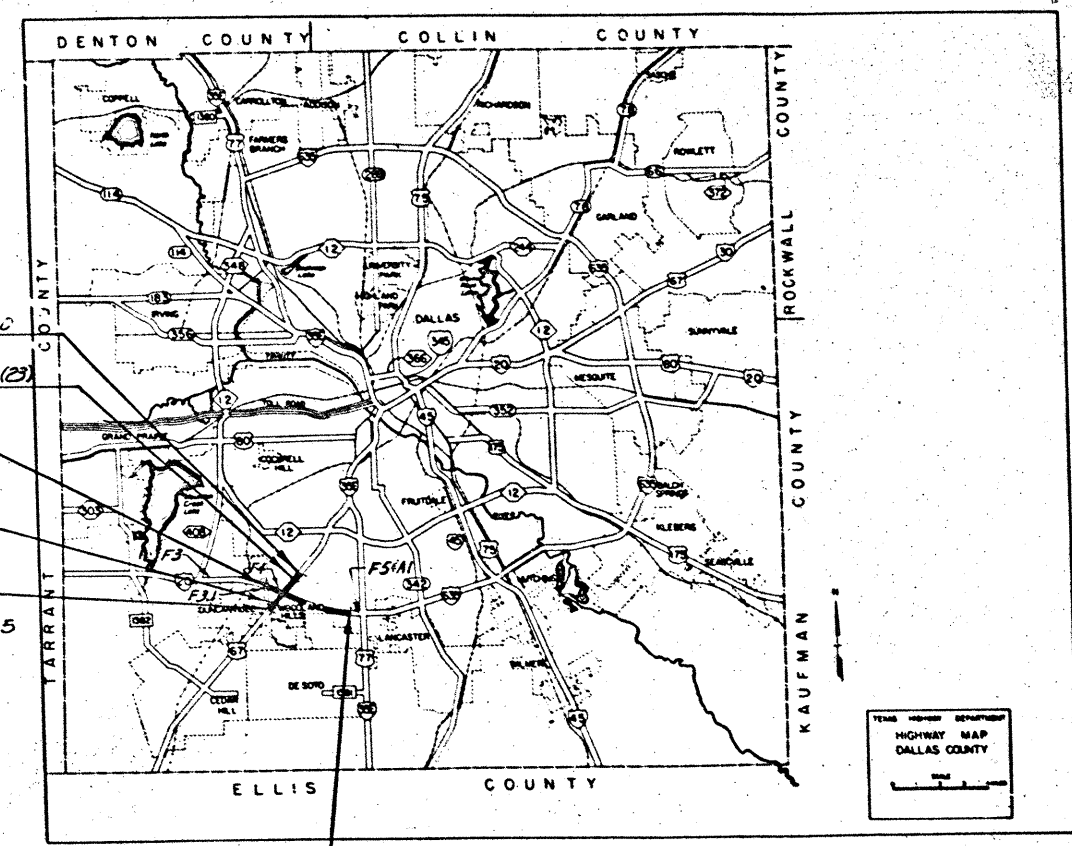
SPECIFICATIONS ADOPTED BY THE STATE HIGHWAY DEPARTMENT
OF TEXAS, JANUARY 2, 1962 AND SPECIFICATION ITEMS LISTED
AND DATED AS FOLLOWS SHALL GOVERN ON THIS
PROJECT: REQUIRED CONTRACT PROVISIONS ALL FEDERAL-
AID CONSTRUCTION CONTRACTS (FORM PR-127,
OCTOBER 1969)

STATE OF TEXAS
STATE HIGHWAY DEPARTMENT
PLAN OF PROPOSED
STATE HIGHWAY IMPROVEMENT
FEDERAL AID PROJECTS
I 20- 5 (61) 457 U 592 (23)
INTERSTATE HIGHWAY 20 & U.S. HIGHWAY 67
DALLAS COUNTY

FEDERAL AID PROJECTS
I 20-5(61)457 U592(23)
INTERSTATE HIGHWAY 20 & U.S. HIGHWAY 67
DALLAS COUNTY
PROJECT I20-5(61)457 PROJECT U592(23)
From: East of Cockrell Mill Road From: South of Duncanville
To: West of Willoughby Avenue To: North of Camp Wisdom

<u>PROJECT</u>	<u>NET LENGTH</u>		<u>ROADWAY</u>		<u>BRIDGES</u>	
	<u>FT.</u>	<u>MILES</u>	<u>FT.</u>	<u>MILES</u>	<u>FT.</u>	<u>MILES</u>
I 20-5 (61) 457	19,058.01	3.608	18,430.60	3.490	627.41	0.118
U 592 (23) 261-2-19	1,738.75	0.328	1,476.25	3.279	262.50	0.049
261-3-20	2,156.40	0.408	1,909.40	0.362	247.00	0.046
TOTALS	22,953.16	4.344	21,816.25	4.131	1136.91	0.213

TYPE: Grading, Structures, Storm
Sewers, & Concrete Pavement



END PROJECT I 20-5(6) 457
CONTROL 2374-4-2 STA. 74400.00
= 1635-6(59) 422 CONTROL 2374-3-12
F 7+3.3 Mi.

FINAL PLANS
DATE WORK BEGAN: MARCH 3, 1971
DATE COMPLETED: JULY 15, 1974

PRG. GROUP PRG. NO.	STATE	FEDERAL AID PROJECT NO.	PROJECT NO.
6	TEXAS	120-5(W)457 & US92(23)	1
STATE POST NO.	COUNTY	STATE CONTRACT NO.	DISPOSAL NO.
18	DALLAS	23N42P28-219	20667

24320

FIELD CHANGES

- FIELD CHANGES
- NO.1 VOID THE TESTING OF DENSITY AND WATER ABSORPTION SPECIFIED FOR PREFORMED NON-BITUMINOUS FIBER JOINT MATERIAL IN ITEM 420 A.S.T.M. DESIGNATION D-1751.
- NO.2 REVISION OF APPROACH SLABS LOCATED AT WESTMORLAND RD. UNDERPASS, DUNCANVILLE - WHEATLAND RD. OVERPASS AND REVISE BRIDGE ABUTMENTS LOCATED AT WESTMORELAND RD. UNDERPASS (DUNCANVILLE - WHEATLAND RD. OVERPASS.
- NO.3 PLACE THREE (3) 48" SHAFTS FIVE (5) FEET DEEP ON BENT #9 CONNECTION "F" INSTEAD OF TWO (2) 54" SHAFTS - FIVE (5) FEET DEEP.
- NO.4 REVISE SIZE AND LOCATION OF STORM SEWER LINE "P-2" AND LATERAL TO INLET #99. CHANGE LOCATION AND TYPE OF INLET #98 FROM TYPE 1-3 GRATE TO TYPE V-15 FT. INCREASE SIZE OF INLET #99 FROM TYPE 1-1 GRATE TO TYPE 1-3 GRATE.
- NO.5 WEB TO WEB HOLD DOWN DEVICE ON 5 I-BEAMS ON THE RIGHT FRONTAGE ROAD BRIDGE OF U.S. 67 AT IH. 20.
- NO.6 TO PROVIDE A METHOD OF PAYMENT FOR THE CONCRETE POURED INTO THE SLAB OF THE 73'-6" PRESTRESSED CONCRETE BEAM SPAN OF THE SOUTH POLK STREET UNDERPASS.
- NO.7 ALLOW THE MECHANICAL PLACEMENT OF REINFORCING STEEL IN ACCORDANCE WITH ITEM 360.8 SUBSECTION 3(A) OF THE 1972 STANDARD SPECIFICATIONS.
- NO.8 TO REVISE PLAN QUANTITY FOR PREF. ROW.
- NO.9 PROVIDE FOR FILTER MATERIAL (TYPE).
- NO.10 ALLOW CONCRETE PAVING TO BE PLACED IN ACCORDANCE WITH 1972 STANDARD SPECIFICATIONS.
- NO.11 ELIMINATE 68' OF CHAIN LINK BARRIER FENCE (5 FT.).
- NO.12 MODIFY CULVERT C-3 TO USE A SC-15' B MOD. 18" FILL DETAIL INSTEAD OF A SC-15' B MOD. 24" FILL DETAIL.
- NOTE:
The Contractor shall make his own investigation and arrangements for

NOTE:
The Contractor shall make his own investigation and arrangements for trackage facilities.

The Contractor shall provide and erect barricades and warning signs in accordance with SC(1) thru (6)-70 at points indicated and as directed.

Construction identification signs for Federal Aid Projects shall be erected in accordance with CIS-71 at points indicated on the plans.

7500.11 0.01

RETURN TO
RECORDS MANAGEMENT
DEPARTMENT OF
TRANSPORTATION

the com
barricad
with 100
and 95
Construct
Federal
records
and fore

- NO.13 ELIMINATE CH-11B HEADWALL AND EXTEND PIPE SEWER (C.H.1154IN) 21.2 LF.
NO.14 INCREASE SIDEWALK SLAB THICKNESS ON OLD HICKORY ROAD UNDERPASS
(STR. NO. 216).
NO.15 PROVIDE PLACEMENT OF HMA CP BETWEEN RIPRAP (CONC) (CLB) AND MONO
CURB AT OVERPASSES, TEMP. CONN. & DETOUR AT US.67 STA. 453+50 TO 459+00,
DRIVEWAYS LT OF US.67 STA. 546+00 TO 557+00, WIDENING ADJACENT TO BR. APPR.
SLABS FOR GD. FENCE CONSTRUCTION AND ADDITIONAL QUANT. FOR SHOULDERS
AND MEDIANS. TO PROVIDE A METHOD OF PAYMENT FOR ITEM 340 ON PORTION THAT
EXCEEDS 120 PERCENT OF THE CONTRACT QUANTITIES.

TEXAS HIGHWAY DEPARTMENT

CORRECT SEPT 5 1969

NO EXTRA WORK ORDER.

Dwight L. Bird
DESIGN ENGINEER

CORRECT 9-8 1969

J. K. Kautz
DISTRICT DESIGN ENGINEER

CORRECT: AUG. 14, 1969

William E. H. Edmunds
SEVEN RESIDENT ENGINEER

RECOMMENDED
FOR APPROVAL: 3-8-69

APPROVED: _____

BRIDGE ENGINEER

SECRET

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:  
DIVISION ENGINEER DATE