

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
 FEDERAL AID HIGHWAY**

ROUTE	SECTION	COUNTY	SHEET
FAU2843 10103 I-DL(86)	COOK	7	1

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SLT-91-001-86

INDEX OF SHEETS

- (1) TITLE SHEET
- LOCATION MAP
- INDEX OF SHEETS
- LIST OF APPLICABLE STANDARDS
- SUMMARY OF QUANTITIES
- (2) PLAN AND ELEVATION
- (3) JOINT RECONSTRUCTION
- (4) WORK STAGING-TRAFFIC CONTROL DETAIL
- (5) DETAIL-BAR SPLICER(COUPLER)
- (6) & (7) AS BUILT PLAN SHEETS-FOR INFORMATION ONLY

SCALES { PLAN
 PROFILE VIEW
 PROFILE VIEW
 CROSS SECTION

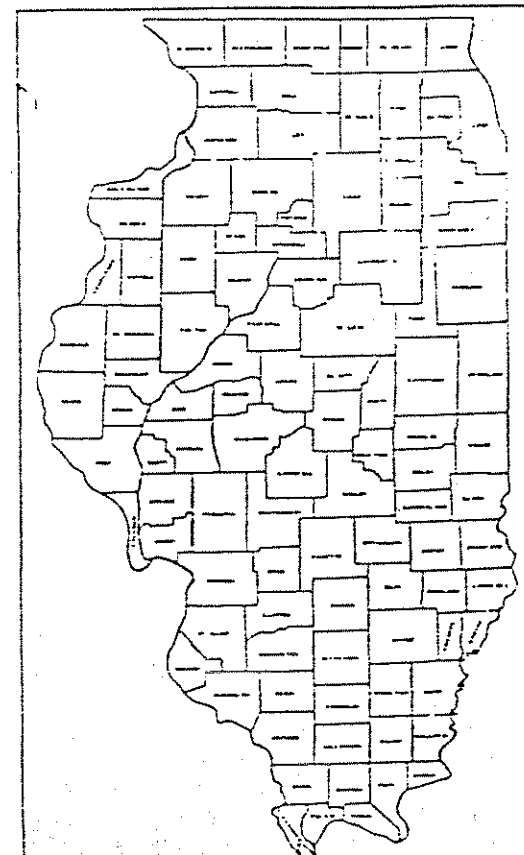
ROUTE: FAU 2843 (WESTERN AVE.)
 DISTRICT ONE SECTION: 0103 I-DL(86)
 COUNTY: COOK
 SLT-91-001-86

APPLICABLE STATE STANDARDS

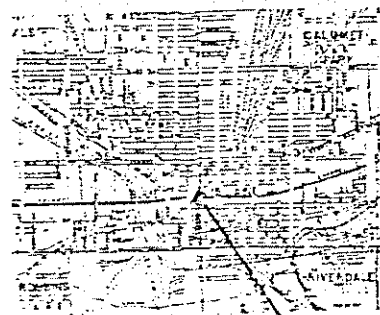
2295-7 2299-10 2300-3 2316-10 2382-1

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
501024	CONCRETE REMOVAL	CU.YD.	3.0
504003	CLASS X CONCRETE	CU.YD.	3.0
507004	FURNISH AND ERECT STRUCTURAL STEEL	POUND	895.0
512002	REINFORCEMENT BARS(EPOXY COATED)	POUND	420.0
648017	TRAFFIC CONTROL AND PROTECTION	L.SUM.	1.0
650001	MOBILIZATION	L.SUM.	1.0
X07187	INSTALL AND REMOVE TEMPORARY CONCRETE BARRIER	UNIT	21
X07459	RELOCATE TEMPORARY CONCRETE BARRIER	UNIT	23
X08342	PROTECTIVE SHIELD	SQ.YD.	15
X50316	PREFORMED JOINT SEAL 2 1/2"	LIN.FT.	33
X51641	TEMPORARY CONCRETE BARRIER TERMINAL SECTION	EACH	2



LOCATION OF SECTION INDICATED THUS: —



LOCATION OF IMPROVEMENT
 WESTERN AVE OVER THE
 CALUMET SAG CHANNEL
 SN 016-0777

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

DESIGNED BY: E. VERDIER

CHECKED BY: _____

APPROVED BY: _____

CONTRACT NO.

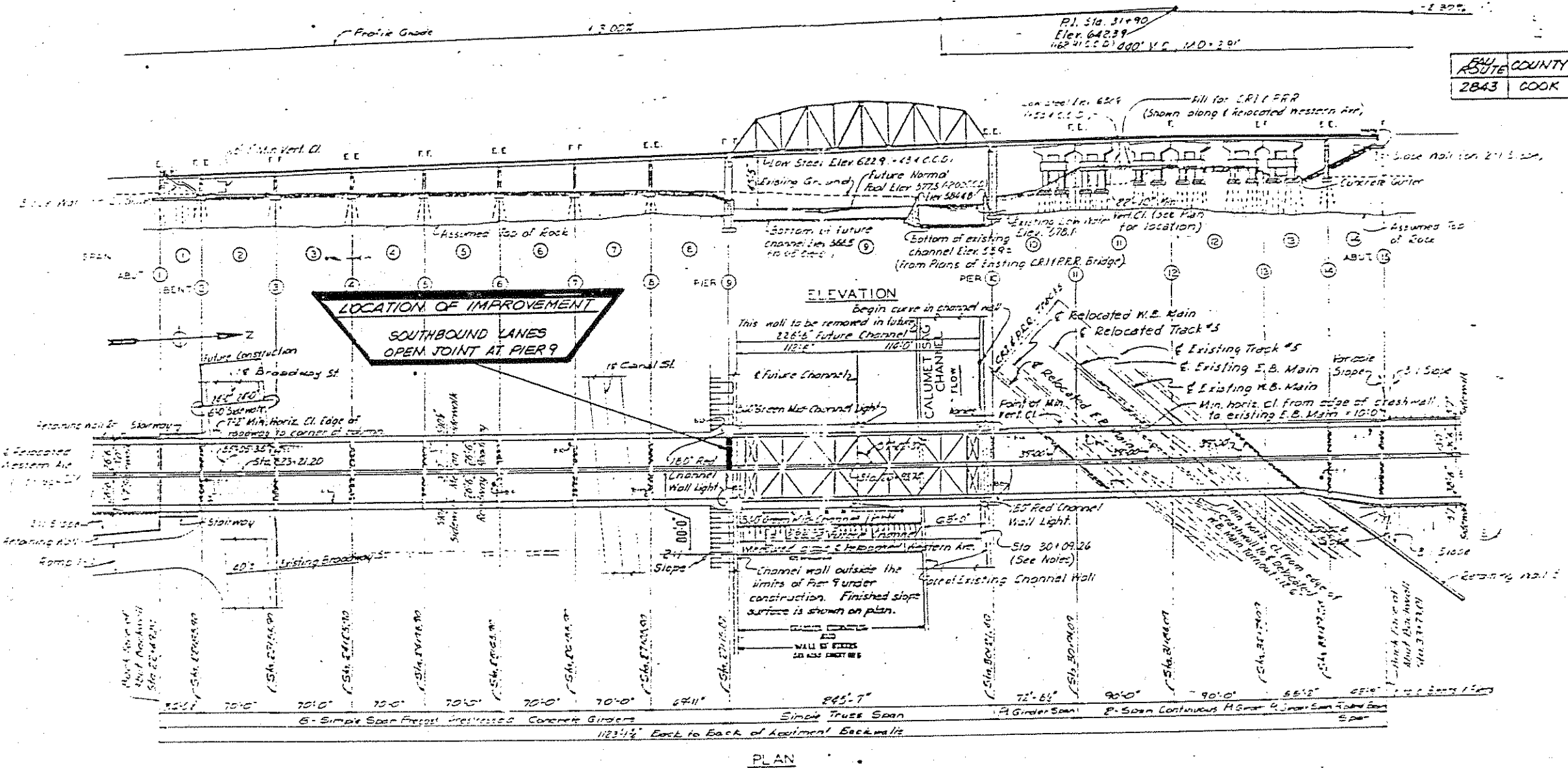
3123004-4100

B. KRASINSKI / E. VERDIER

0110

FOR INFORMATION ONLY

RAIL ROUTE	COUNTY	SECTION	TOTAL SHEETS	SHEET NO.
2843	COOK	01031-D4(6)	7	2



LOCATION OF IMPROVEMENT
SOUTHBOUND LANES OPEN JOINT AT PIER 9

PLAN

NOTES
 1. Minimum clearance dimensions from the top of structural or semi-structural railroad trucks are not shown at all points where not shown, the clearances are in excess of 10'-0" for existing tracks and relocated track and in excess of 12'-0" for relocated E.B. and W.B. Mains.

DESCRIPTION OF IMPROVEMENT
 The improvement consist of sealing the open fixed joint on the southbound lanes at Pier 9.

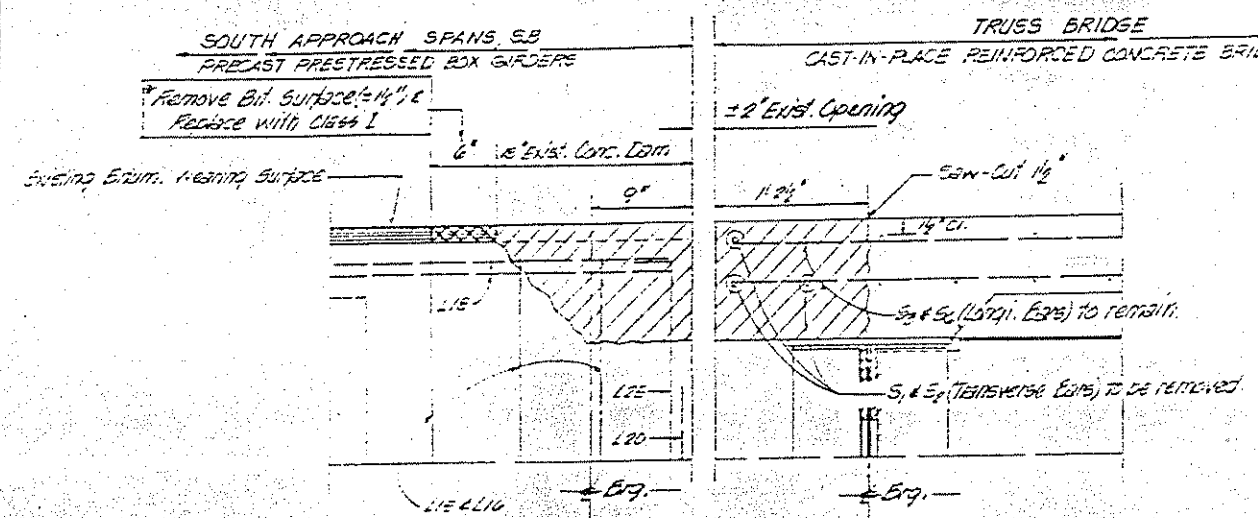
2. See data provision for construction of the pier which must be constructed of steel. The details of the pier construction shall be as shown on the plan sheet.

3. The profile grade shown on this sheet is based on the existing ground level shown on the plan sheet. The Chicago City Datum is used for all bench marks. The elevations shown on this sheet are based on the Chicago City Datum.

ENGINEERS BY
 SYDORUP & PARCEL, INC.
 ENGINEERS - ARCHITECTS
 ST. LOUIS, MISSOURI

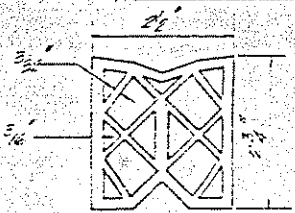
REVISIONS	
DATE	DESCRIPTION

DEPARTMENT OF HIGHWAYS	
GENERAL PLAN AND ELEVATION WESTERN AVENUE RELOCATION OVER CALLUMET SAG CHANNEL	
DATE	SCALE
APPROVED	

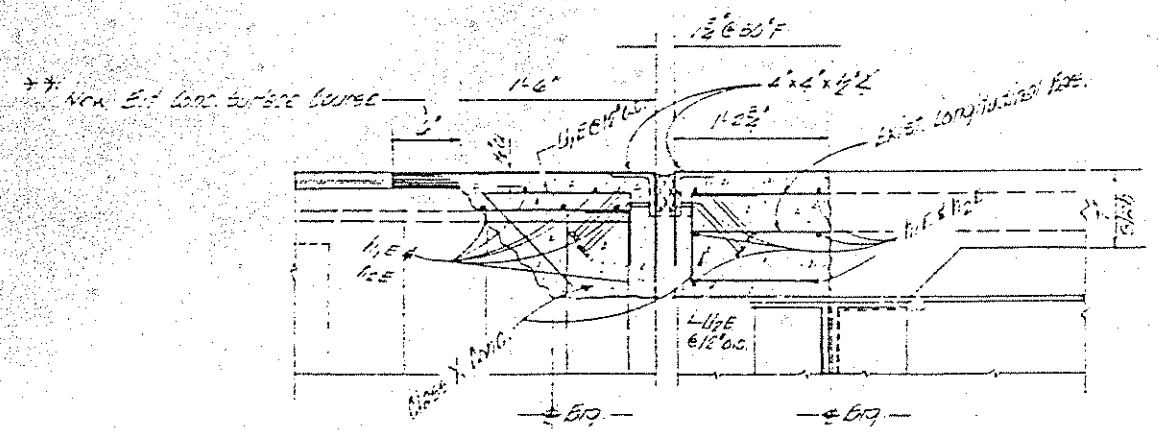


EXISTING CONDITION AT PIER 9 FIXED JOINT

/// - Indicates Concrete Removal. (All existing reinf. bars in the Box Girders to remain.)
 * The full-depth removal of existing bituminous wearing surface will not be paid separately but included in the unit cost per cubic yard of concrete removal.



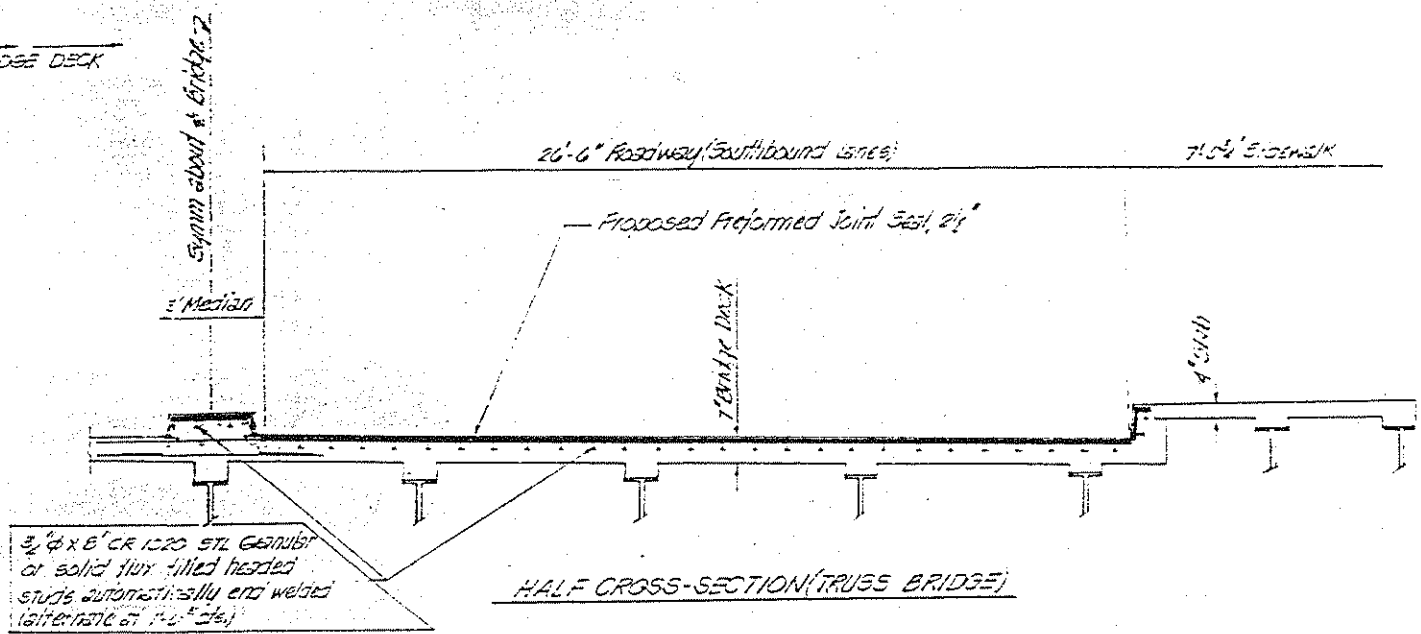
PROPOSED PREFORMED JOINT SEAL, 2' x 2'
 See Special Provision



PROPOSED FIXED JOINT RECONSTRUCTION
 AT PIER 9 - SOUTHBOUND LANES ONLY

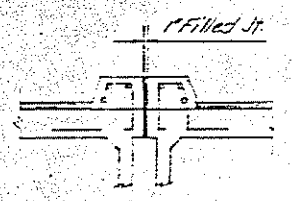
NOTES: The existing Prim. 12' Seal on the northbound lanes at Pier 9 shall remain.

** The reinforcement for the existing 6\"/>

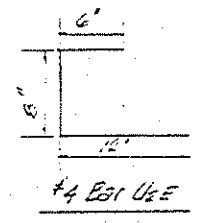
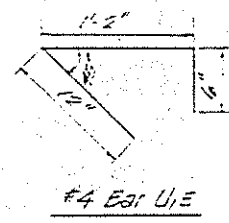


HALF CROSS-SECTION (TRUSS BRIDGE)

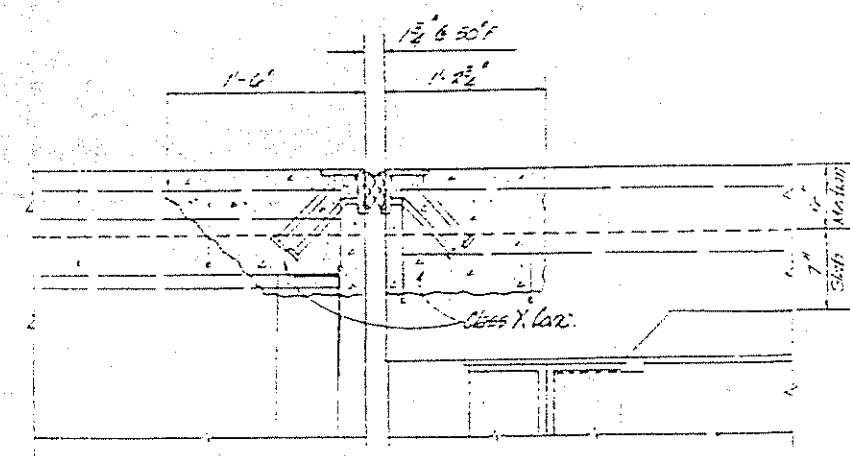
3/4\"/>



SECTION THRU MEDIAN
 AT SOUTH APPROACH SPANS



BILL OF MATERIALS				
BAR SIZE	NO.	LENGTH	SHAPE	WEIGHT
#5	12	13'-0"		18.5 LB
#5	12	15'-0"		22.5
#5	27	8'-0"		36.0
#5	27	2'-0"		3.6
REINFORCEMENT BARS = 420 LB				
CONCRETE REMOVAL = 3 CU. YD.				
CLASS X CURB = 3 CU. YD.				
PREFORMED JOINT SEAL, 2' x 2' = 33 LB.				
26' CONCRETE JOINT SEAL = 12 LB.				

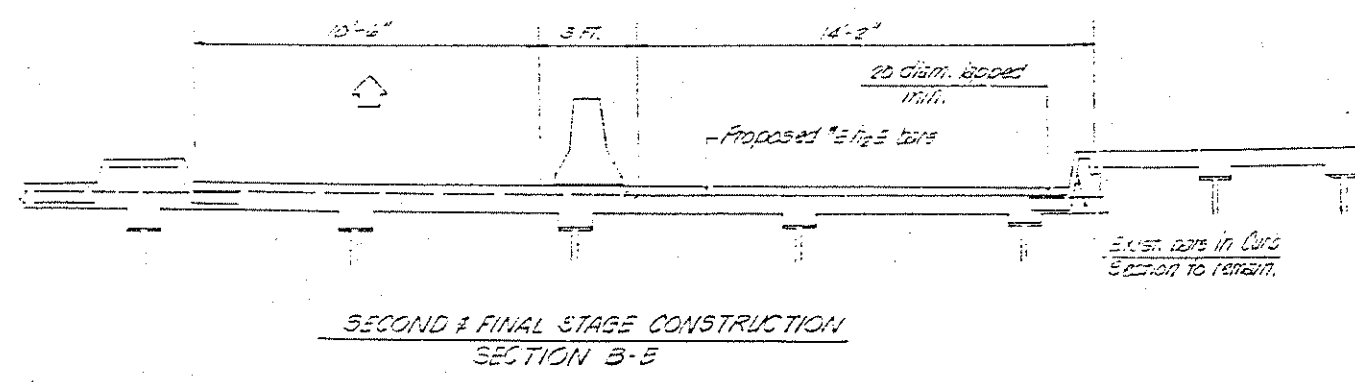
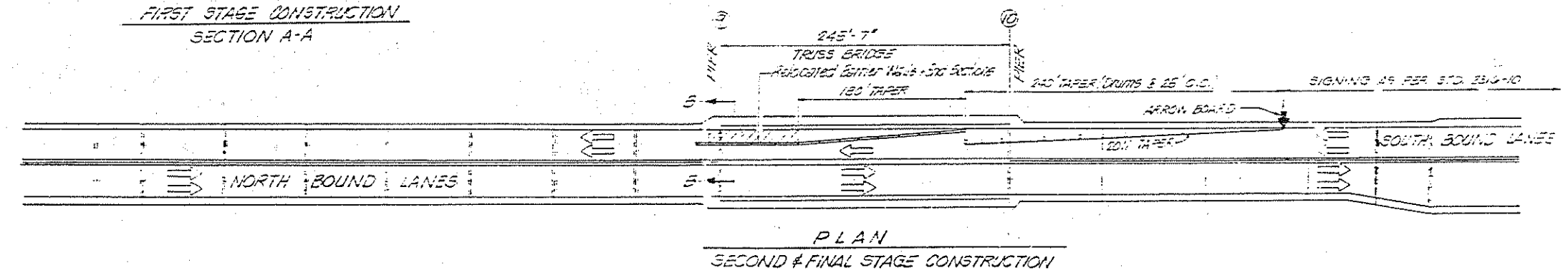
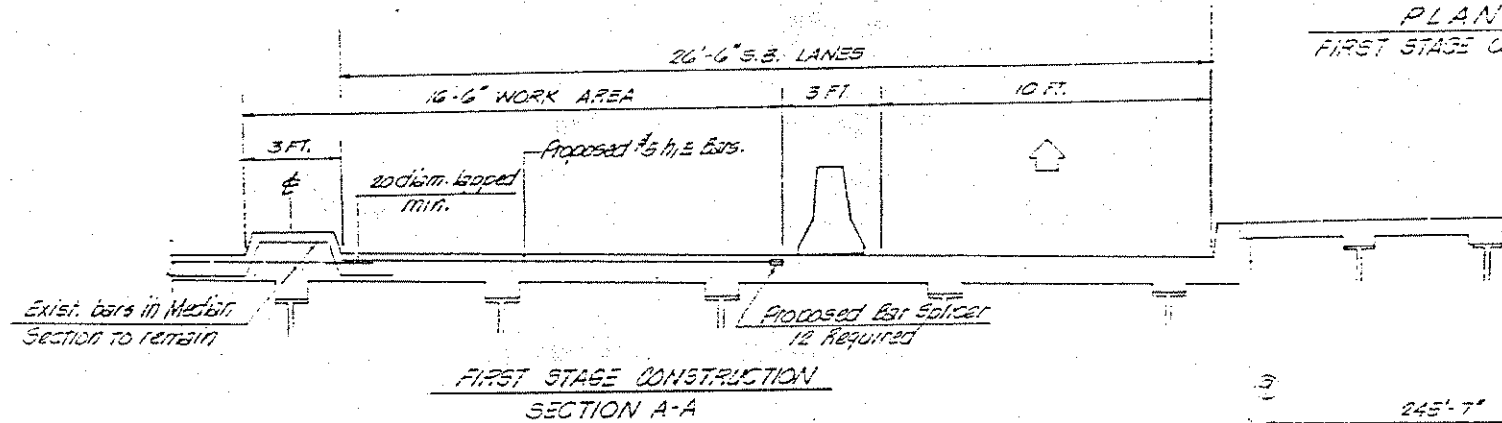
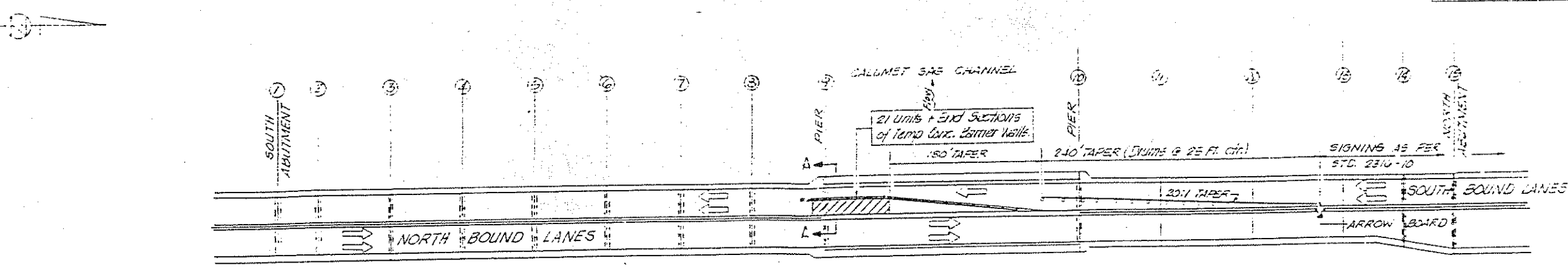


PROPOSED JOINT RECONSTRUCTION THRU MEDIAN AT PIER 9

NOTE: All existing reinforcement bars shall remain (both in section & Median section) if shall be desired being incorporated into the new concrete.

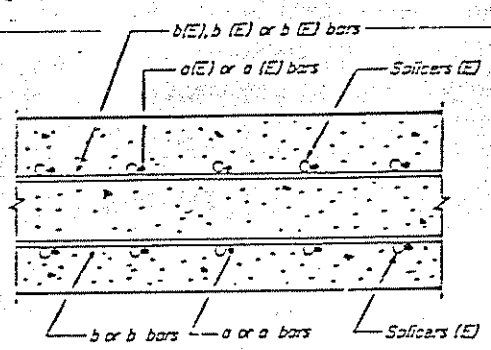
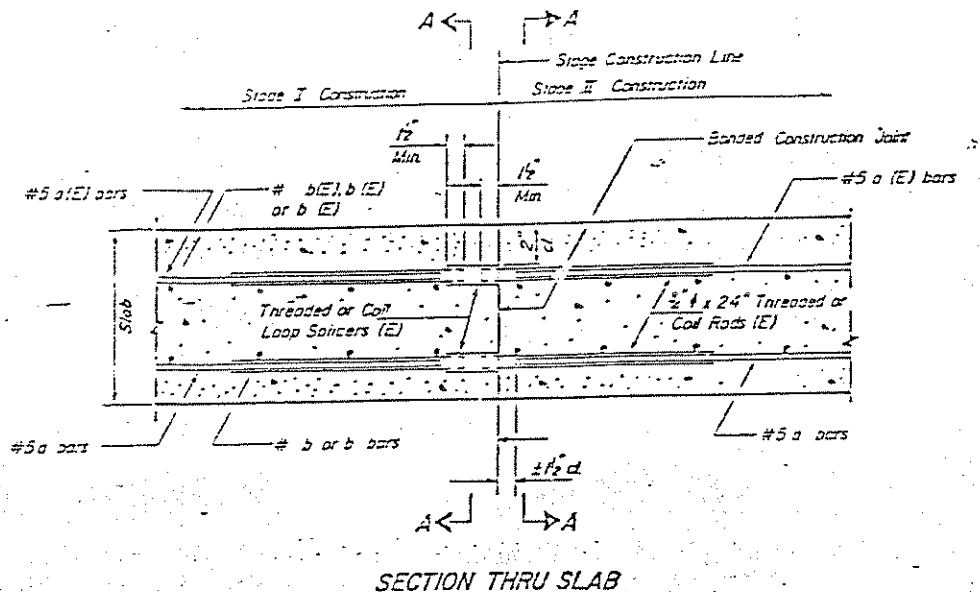
JOINT RECONSTRUCTION
 WESTERN AVENUE BRIDGE
 OVER CAL SAG CHANNEL
 S.M. 014-577

WORK THIS SHEET WITH SHEET # 4



Bi-Directional Vertical Panels shall be mounted on Conc. Barriers @ 20' on. High intensity reds reflective sheeting shall be used on vertical panels. Panels shall be pre-equipped with mono-directional steady burn lights (Incidental to traffic control and protection)

WORK STAGES
TRAFFIC CONTROL AND PROTECTION
WESTERN AVE. OVER CAL SAG CHANNEL
SN 016-077



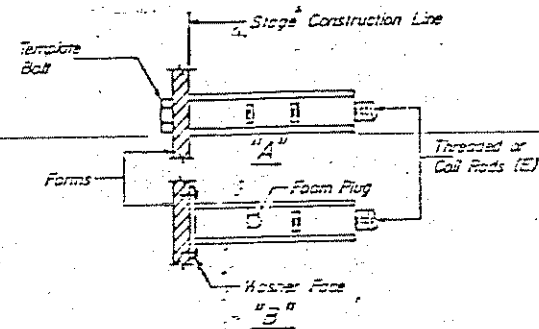
SECTION A-A

SPLICER DETAILS
(No Req'd.)

ONE PIECE
Wire Connector

WELDED SECTIONS

SPLICER ALTERNATIVES
** heavy Hex Nuts conforming to ASTM A 563, Grade C, D or GH may be used.



INSTALLATION AND SETTING METHODS

"A" - Set splicer by means of a template bolt.
"B" - Set splicer by nailing to wood forms or cementing to steel forms.
(E) - Indicates epoxy coating, see Special Provisions.

NOTES

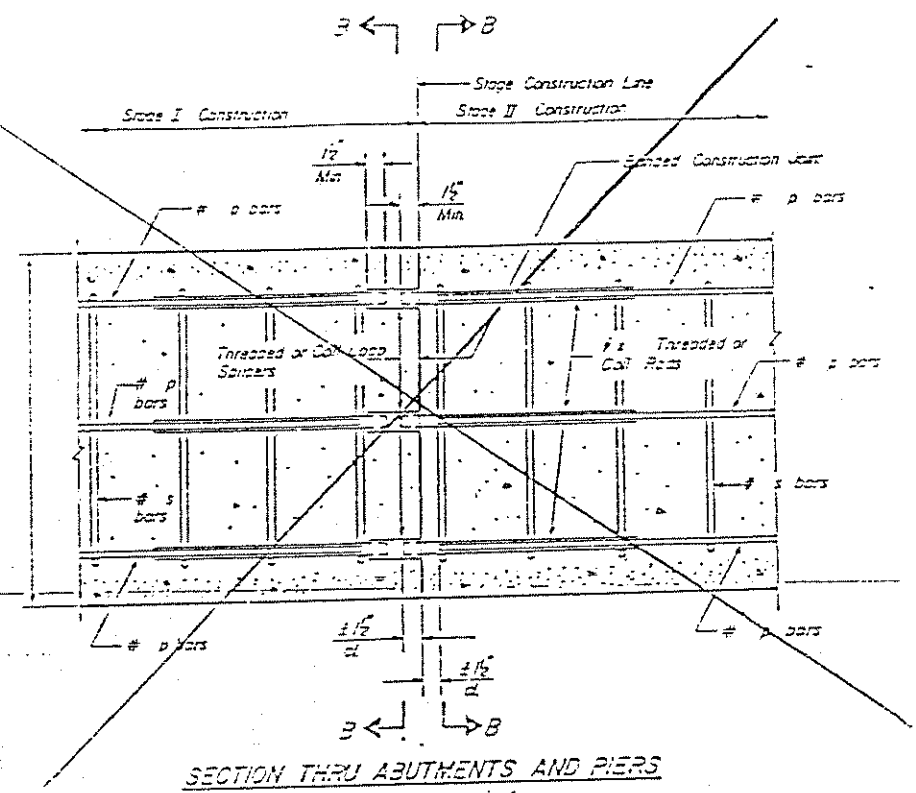
Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Steel Splicer rods shall be of minimum 50 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal or greater than that of the lapped reinforcement bars.
Splicer rods shall extend minimum 1/2 inches into the coupler.
All reinforcement bars shall be lapped and tied to the splicer rods.
Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

1. Minimum Capacity = $1.25 \times f_y \times A_s$
(Tension in kips)
2. Minimum Pull-out Strength = $1.25 \times f_s \times A_s$
(Tension in kips)

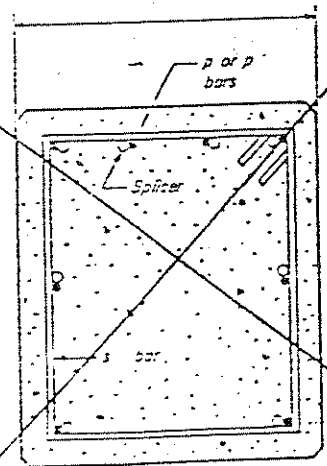
Where f_y = Yield strength of lapped reinforcement bars in k.s.i.
 f_s = Allowable tensile stress in lapped reinforcement bars in k.s.i. (Service Load)
 A_s = Tensile stress area of lapped reinforcement bars.
* 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

In Slab	#5 bar lap with 1/2" Splicer (Coupler) & 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension
		Minimum Pull-out Strength = 9.2 kips-tension
In Sub-structures	#7 bar lap with 1/2" Splicer (Coupler) & 3'-0" Splicer Rods	Minimum Capacity = 45.1 kips-tension
		Minimum Pull-out Strength = 19.0 kips-tension
	#8 bar lap with 1/2" Splicer (Coupler) & 4'-6" Splicer Rods	Minimum Capacity = 52.9 kips-tension
		Minimum Pull-out Strength = 23.6 kips-tension



SECTION THRU ABUTMENTS AND PIERS
No epoxy coating required.



SECTION B-B

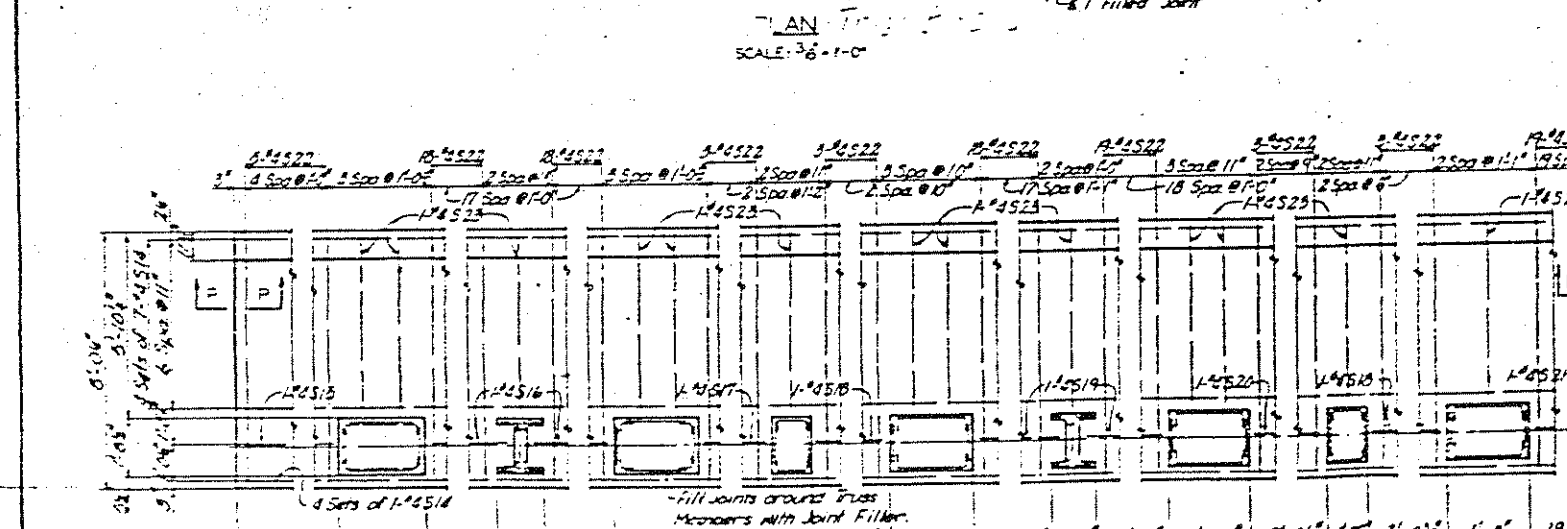
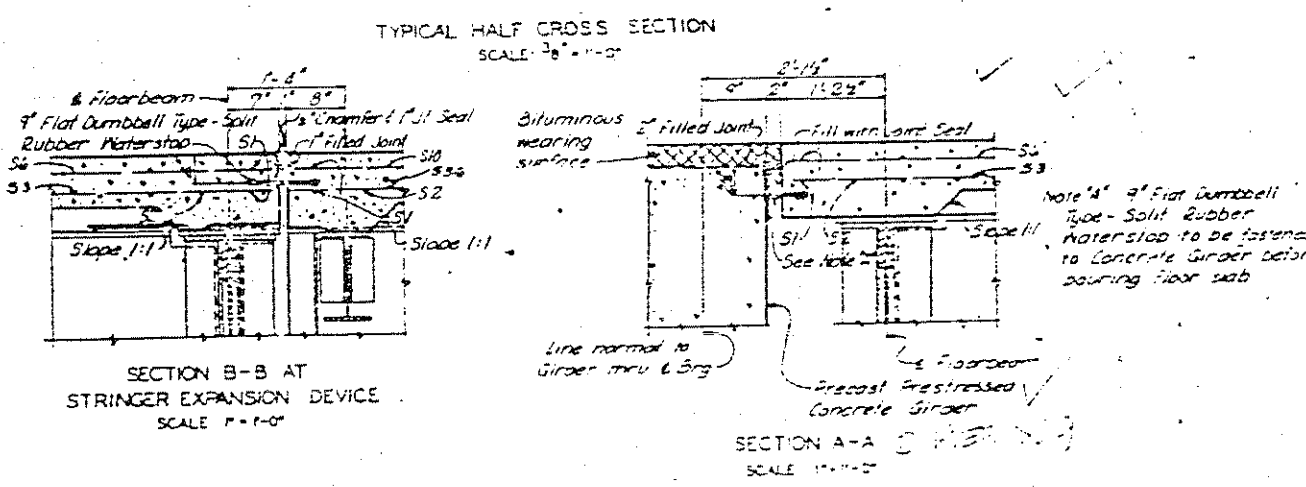
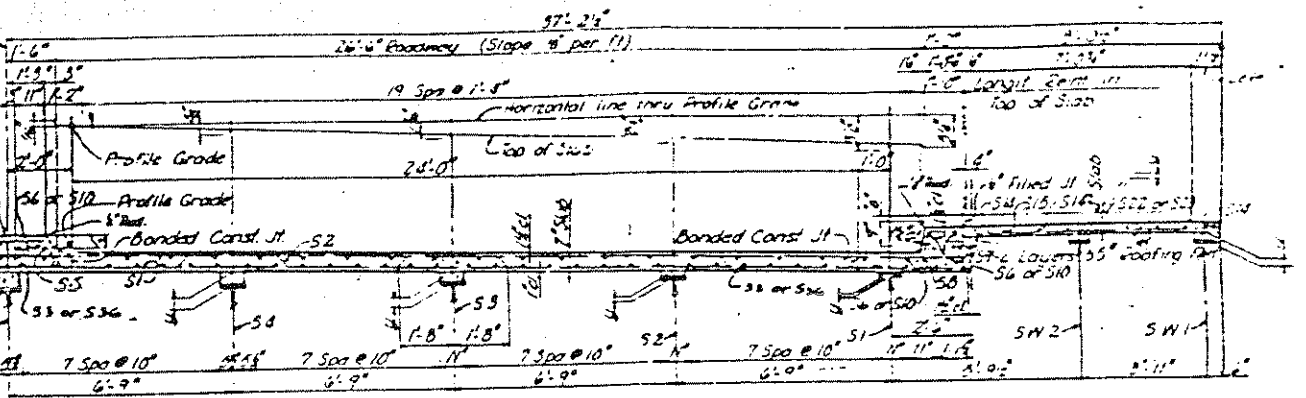
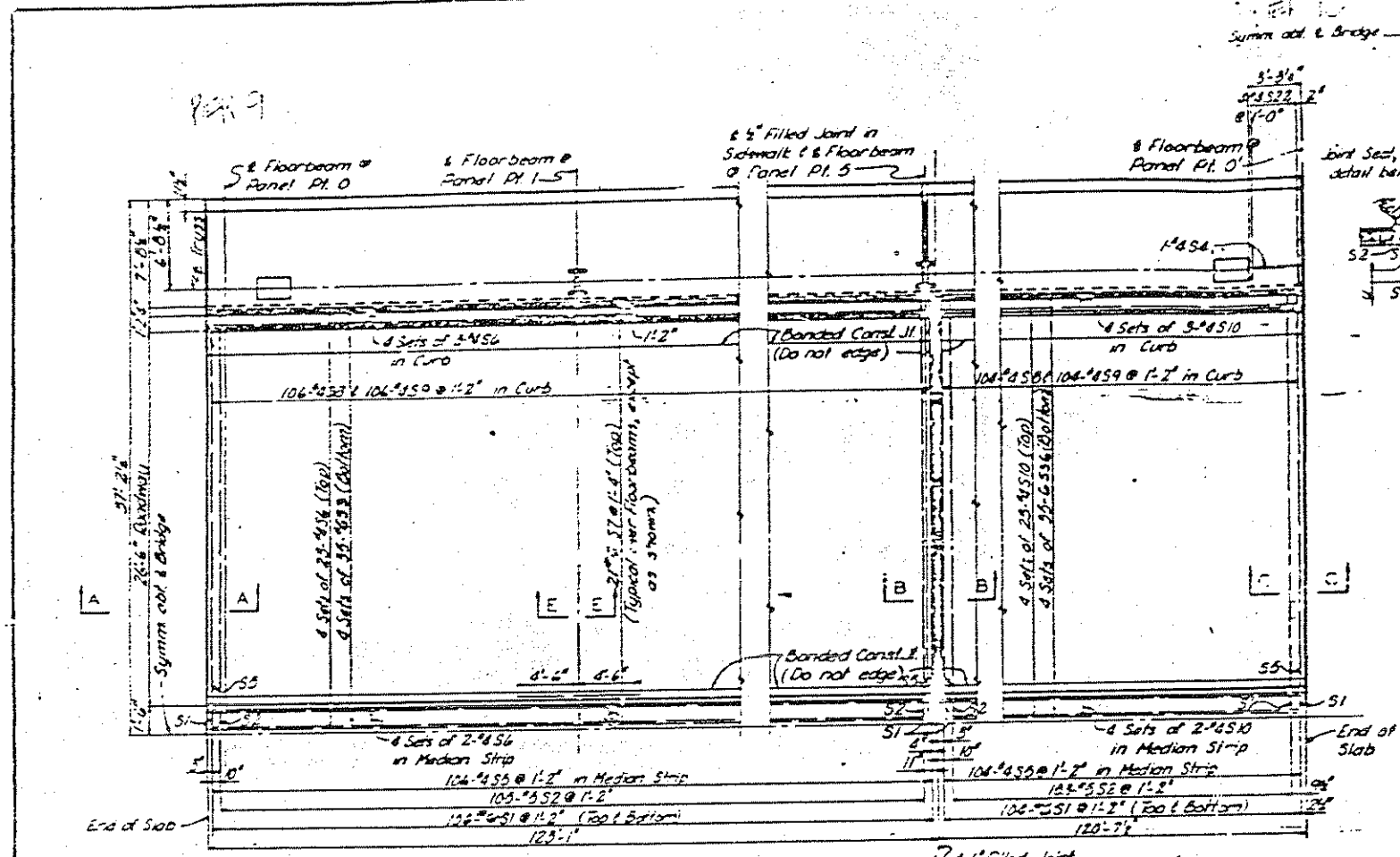
SPLICER DETAILS
(No Req'd.)

BAR SPLICER (COUPLER) DETAILS
AT STAGE CONSTRUCTION

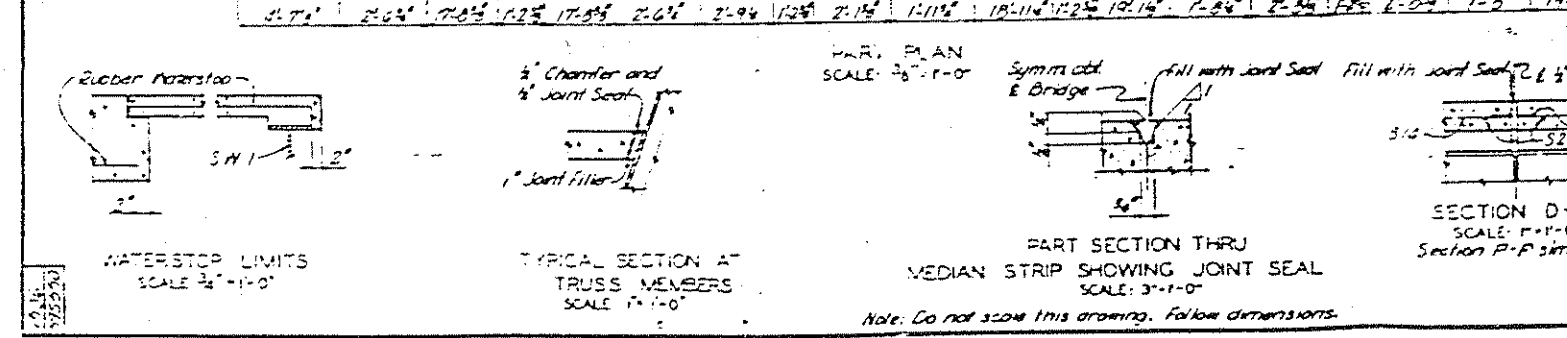
WESTERN AVENUE OVER CAL SAG CHANNEL
SN 016-077

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

FOR INFORMATION ONLY



FLOOR HEIGHTS (ft)		FINISH HEIGHTS (ft)		TOTAL FINISH HEIGHTS (ft)	
STRANDER	LD	STR	L	STR	L
S1	14'	14'	2'	14'	16'
S2	2'	2'	2'	2'	4'
S3	2 1/2'	2 1/2'	2'	2 1/2'	4 1/2'
S4	8 1/2'	8 1/2'	2'	8 1/2'	10 1/2'
S5	4 1/2'	4 1/2'	2'	4 1/2'	6 1/2'
SW1	2 1/2'	2 1/2'	2'	2 1/2'	4 1/2'
SW2	2 1/2'	2 1/2'	2'	2 1/2'	4 1/2'



Note: Haunch heights if shown above are given at E of floorbeam except as noted above. Haunch heights include the vertical curve ordinates, dead load deflection of floorbeams and roadway crown.

Edge sidewalk curbs and median edges with a 4" radius coping tool.

NOTES

For Sections C-C & E-E see Sheet 29

All longitudinal dimensions shown in Plans are measured parallel to a +3% grade.

Reinforcement shall be field bent as required to clear roadway drains and manholes for navigation lights.

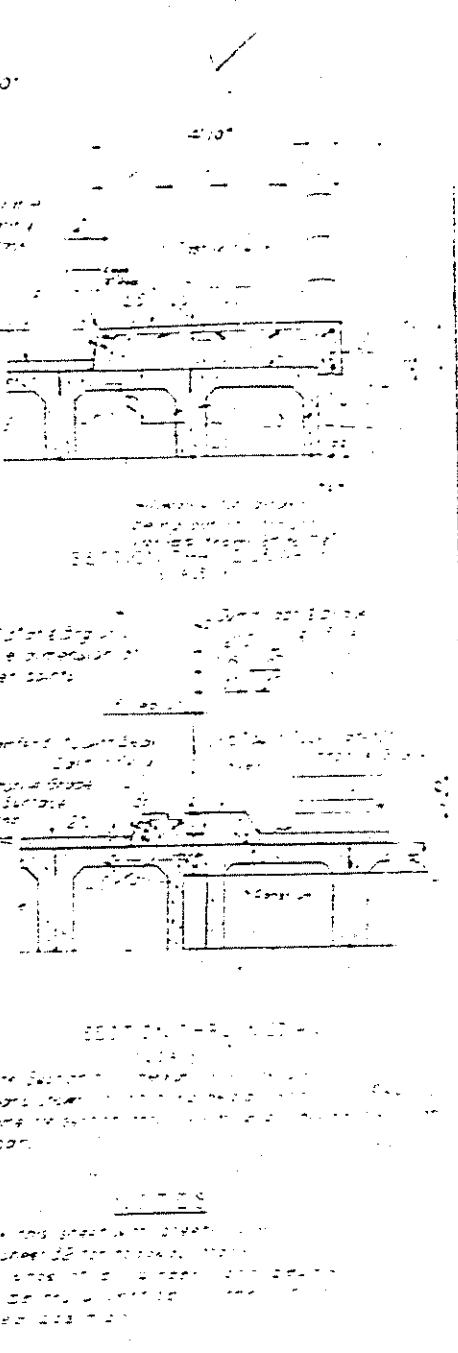
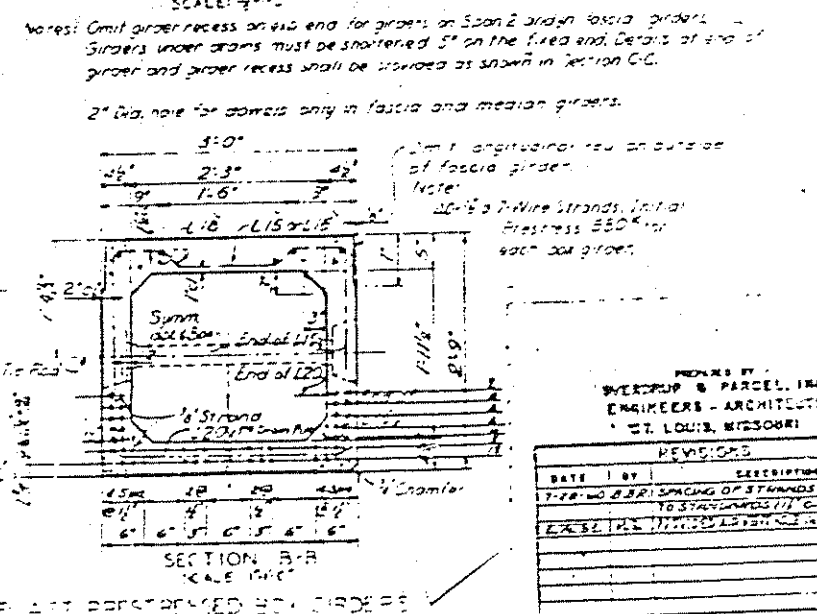
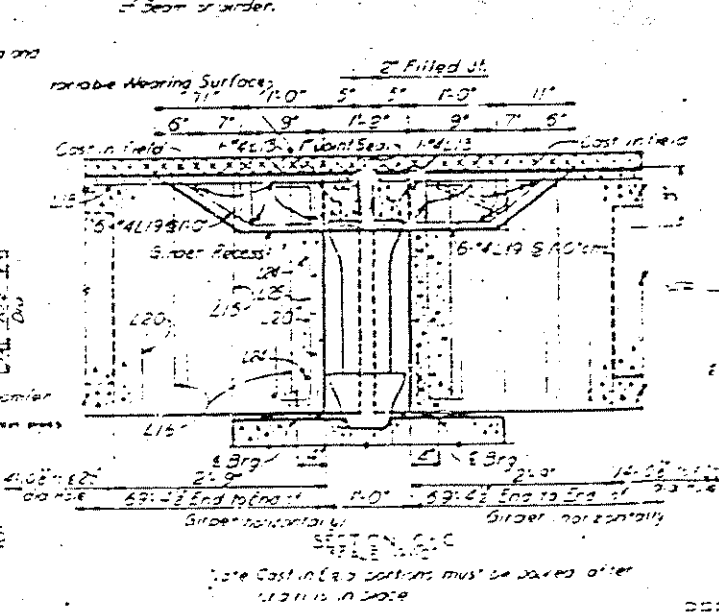
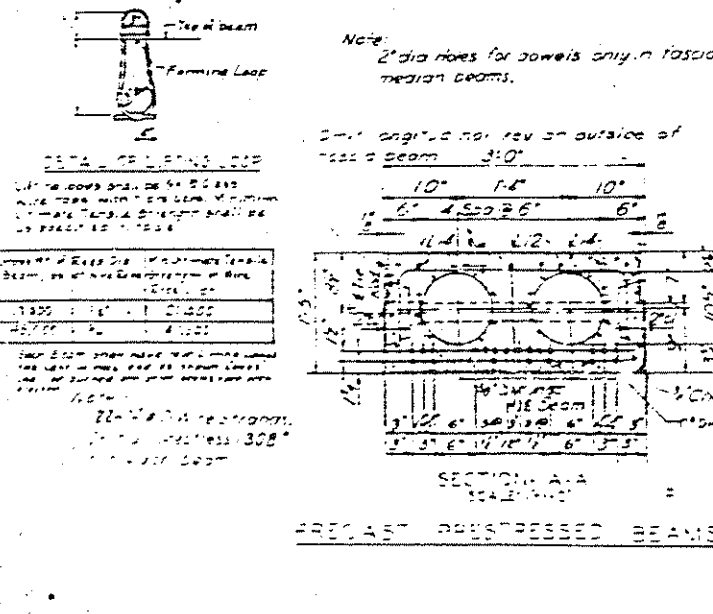
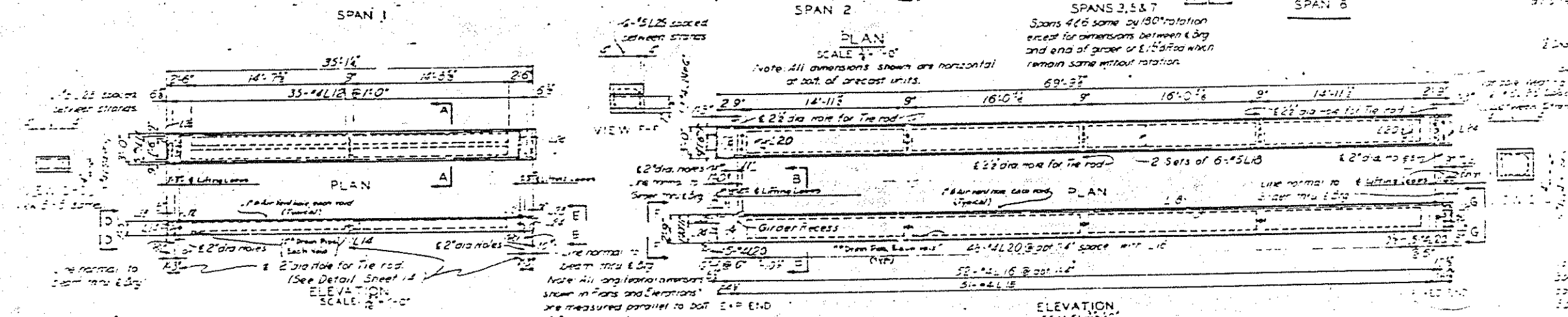
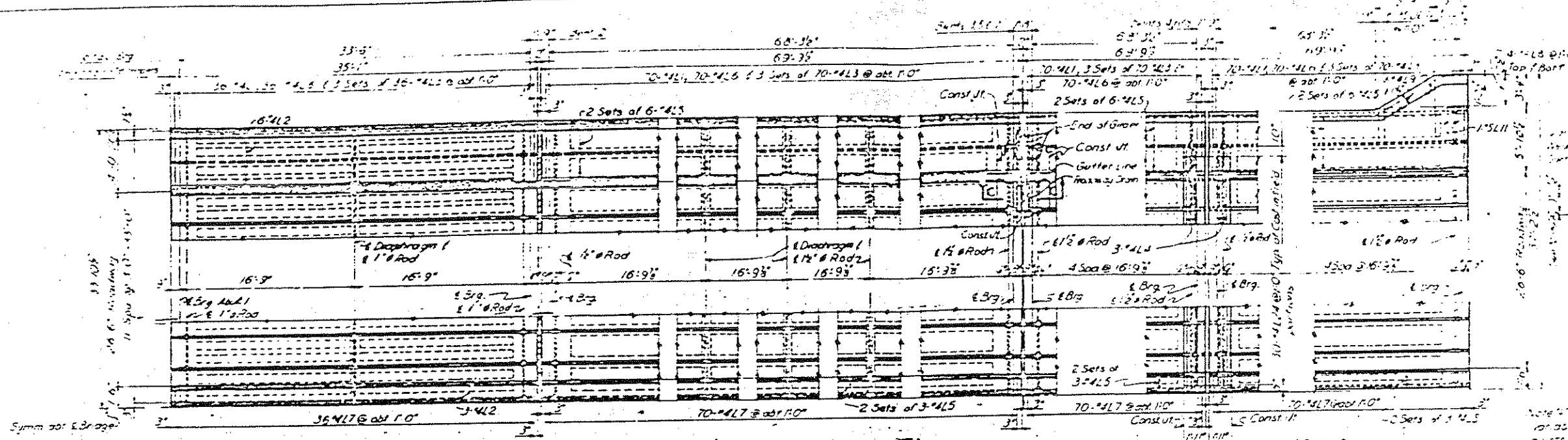
DEPARTMENT OF HIGHWAYS
 COOK COUNTY, ILLINOIS
 SLAB - TRUSS SPAN
 WESTERN AVENUE RELOCATION
 OVER
 CALUMET SAG CHANNEL

DESIGNED BY
 ENGINEER D. PALMER & ASSOCIATES
 ARCHITECTS
 170 W. MADISON ST.
 CHICAGO, ILL.

COMPUTED BY
 CHECKED BY
 APPROVED BY

SECTION 055A-003-M.E.T.
 SCALE: AS SHOWN
 APPROVED: [Signature]
 55A 1261 27 44

FOR INFORMATION ONLY



DATA TABLES

Span	1	2	3, 5 & 7	8
Length	35'-1 1/2"	69'-3 3/8"	69'-3 3/8"	69'-3 3/8"
Beam Count	2	2	2	2
Reinforcement	2 Sets of 6-#4's	2 Sets of 6-#4's	2 Sets of 6-#4's	2 Sets of 6-#4's

DEPARTMENT OF HIGHWAYS
COCK COUNTY, ILLINOIS

SEYMOUR SMITH

PRECAST PRESTRESSED CONCRETE
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

ENGINEERS BY
OVERSEAS & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

DATE	BY	DESCRIPTION
7-28-60	W.B.P.	SPACING OF STRANDS TO COMPLY WITH STANDARD SPEC.
8-1-60	W.B.P.	REVISIONS TO STANDARD SPEC.

COMPUTED BY: W.B.P.
DRAWN BY: W.B.P.
CHECKED BY: W.B.P.

APPROVED BY: [Signature]
DATE: 1960

SECTION 120-100-100
SCALE: 1/4" = 1'-0"
SHEET 7 OF 7 SHEETS

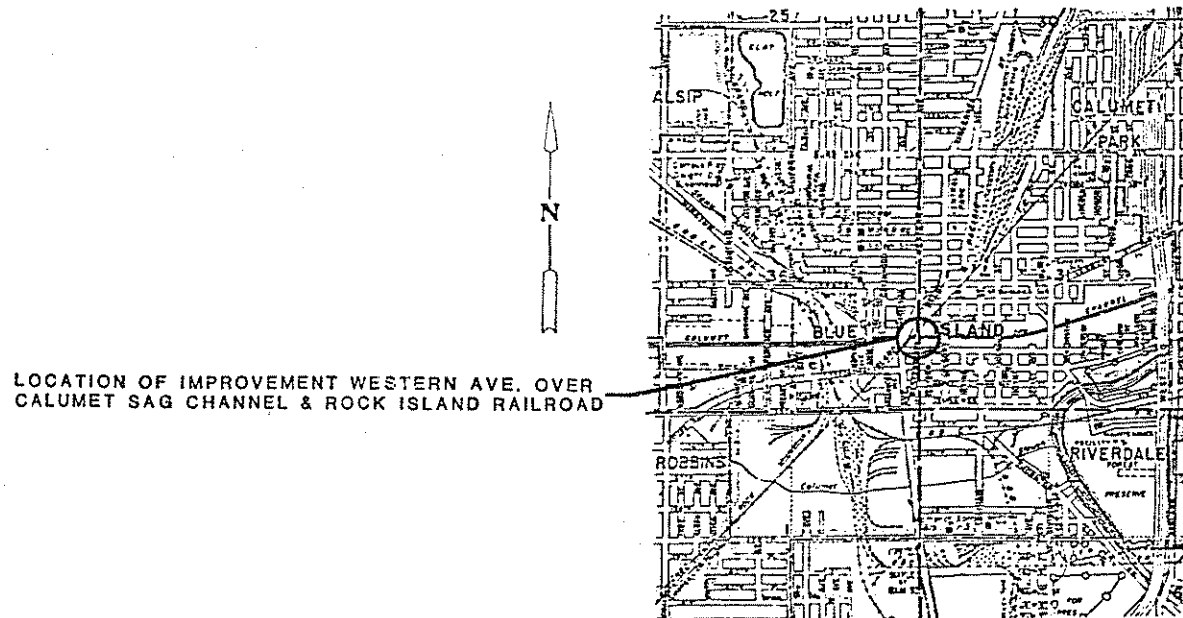
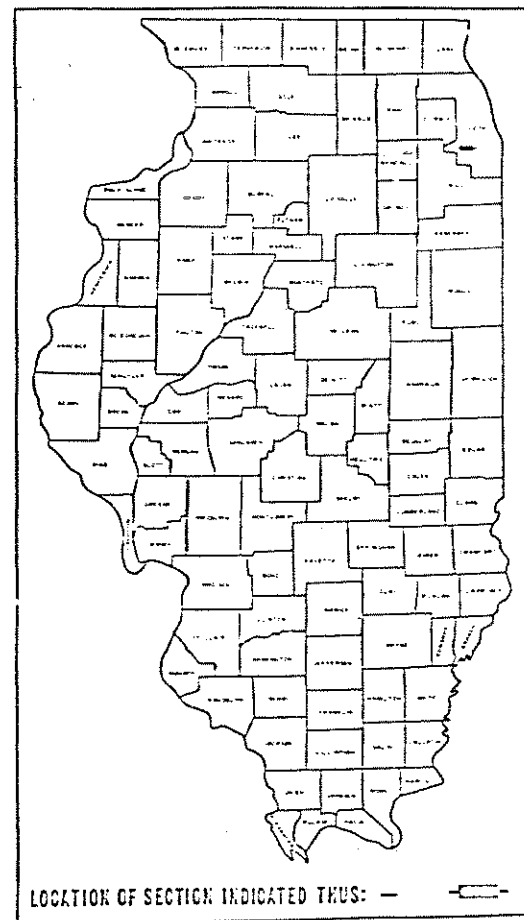
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 PLANS FOR PROPOSED
 FEDERAL AID HIGHWAY

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAC 2843	146B&C(2)R-I(85)	Cook	5	1
ILLINOIS PROJECT		P-91-488-85 * (WESTERN AVENUE)		

- INDEX OF SHEETS
- TITLE SHEET, LOCATION MAP, INDEX OF SHEETS AND LIST OF STATE STANDARDS
 - SUMMARY OF QUANTITIES AND GENERAL NOTES
 - GENERAL PLAN AND ELEVATION
 - PIER REPAIR SCHEDULE
 - DETAILS OF PIERS 2 THRU 8 (FOR INFORMATION ONLY)
- STATE STANDARDS
 DISTRICT ONE STANDARD: CASE U-2
 2298-7
 2299-10
 2300-3

SCALES (PLAN PROFILE HORIZ. PROFILE VERT. CROSS SECTIONS)

ROUTE: F.A.U. 2843 (WESTERN AVE.)
 SECTION: 146B&C(2)R-I(85)
 COOK COUNTY
 C-91-488-85
 PIER REPAIRS



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

REMITTED: MARCH 21, 1986
 Carl C. Williams (R.K.)
 SUPERVISOR

EXAMINED: 4/29, 1986
 P. Williams
 SUPERVISOR OF PAVEMENT DISTRICTS

PASSED: 4/29, 1986
 [Signature]
 SUPERVISOR OF DESIGN

APPROVED: 4/29, 1986
 [Signature]
 DISTRICT ENGINEER OF COOK COUNTY

B. KRABINSKI / S. REISS MAINT. PLANS & CONTRACTS (312) 684-4168

CONTRACT NO. 40915

BRIDGE NO. 016-0777

COOK COUNTY SECTION: 146B&C(2)R-I(85) ROUTE: F.A.U. 2843 (WESTERN AVE.)

REEL 0-195

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANT.
648017	TRAFFIC CONTROL AND PROTECTION	L. SUM	1
650001	MOBILIZATION	L. SUM	1
Z10039	BRIDGE SEAT SEALER	L. SUM	1
Z10375	REPAIR CONCRETE STRUCTURES	SQ.FT.	1470

GENERAL NOTES

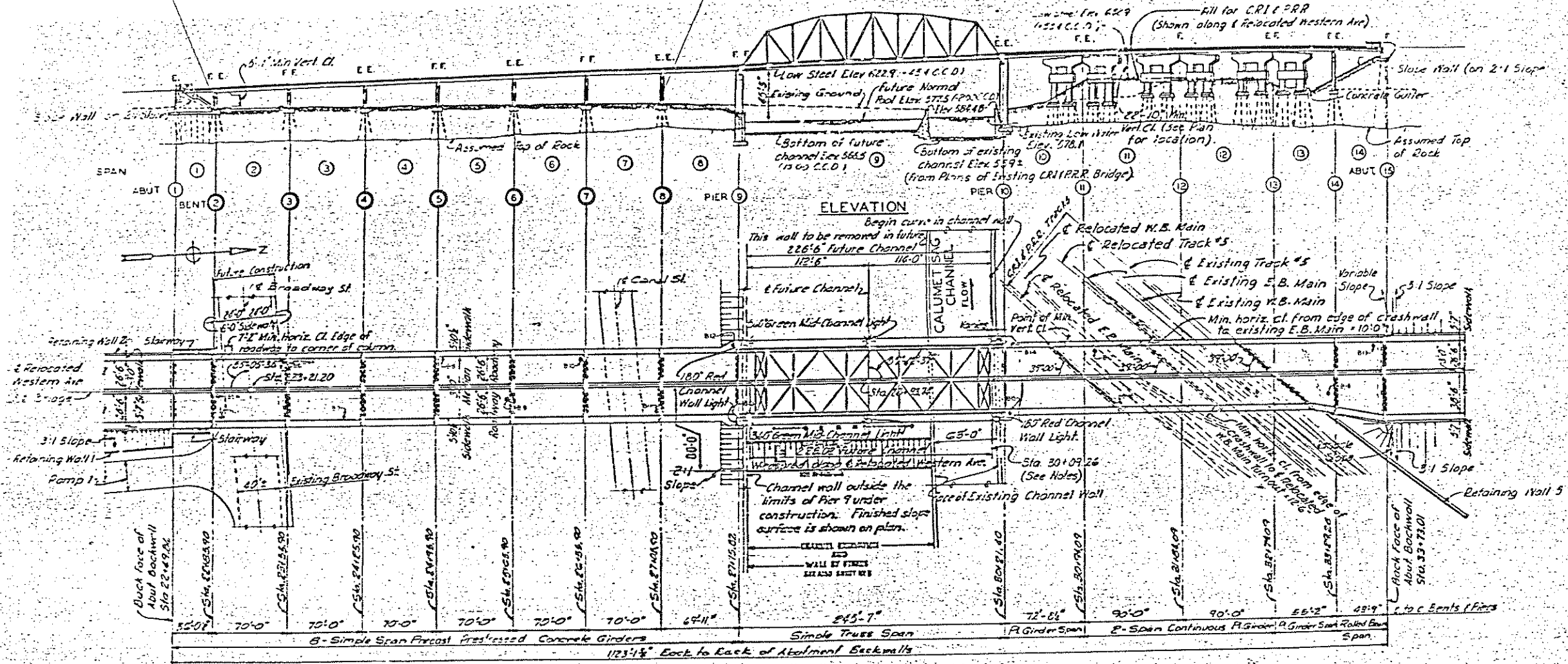
THESE PLANS HAVE BEEN PREPARED FROM FIELD NOTES RECEIVED FROM FIELD MAINTENANCE ENGINEERS.

PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

WHERE SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED THEIR LOCATION.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUIRE PERMISSION TO ENTER UPON RAILROAD PROPERTY. THIS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

REPAIR CONCRETE STRUCTURES PIERS 2 THRU 8
(SEE SHEET NO.4)



PLAN

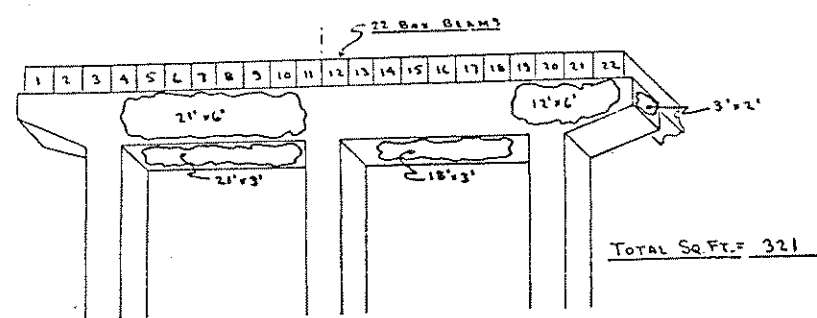
WESTERN AVENUE AT N.I.R.C. (SEE C.R.I.P.)

PASSENGER MOVEMENTS	- 57	- MAXIMUM SPEED 60 MPH
DEAD HEADS	- 12	- MAXIMUM SPEED 60 MPH
FREIGHT MOVEMENTS	- 4	- MAXIMUM SPEED 30 MPH
YARD SWITCH	- 24	- MAXIMUM SPEED 10 MPH

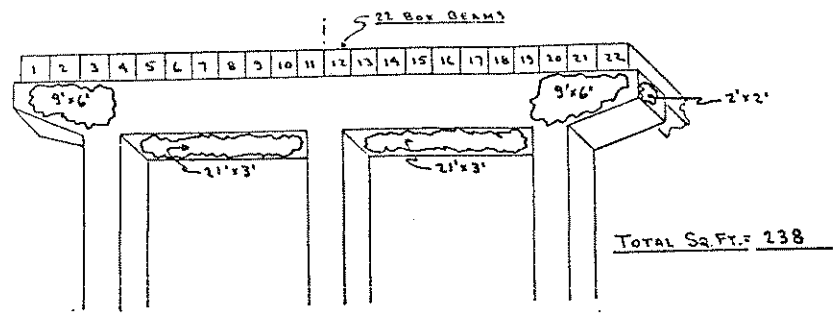
F.A.U. ROUTE 2843 (WESTERN AVE.)
SECTION: 146B8C(2)R-1(85)
COOK COUNTY
BRIDGE NUMBER 016-0777
LOCATED OVER CALUMET SAG CHANNEL
AND ROCK ISLAND RAILROAD

PIER REPAIR SCHEDULE

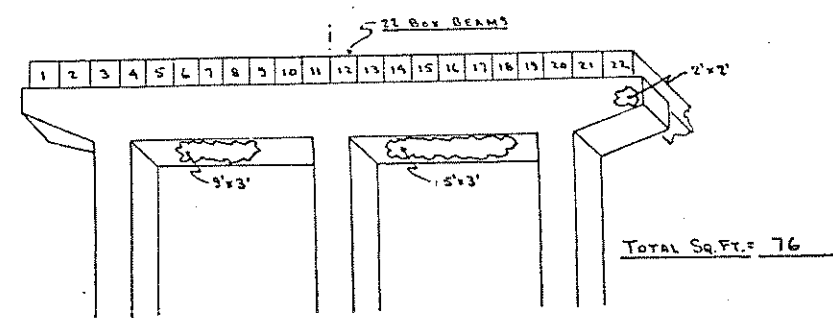
ROUTE	SECTION	COUNTY	TOTAL SHEET NUMBER
FAU 2843	14688C(2)R-1(85)	Cook	5 4
(WESTERN AVENUE) P-91-468-85			



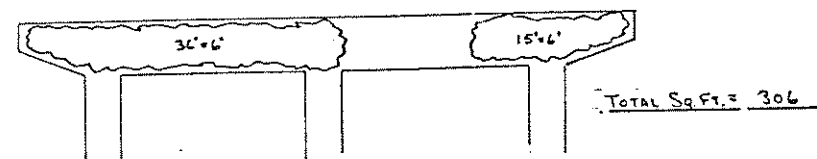
View Looking North



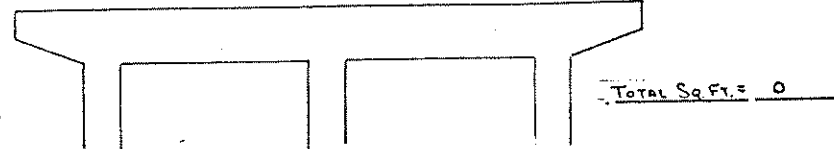
View Looking North



View Looking North



View Looking South



View Looking South



View Looking South

CONC. REPAIR FOR PIER #2 FROM S. ABUT.

CONC. REPAIR FOR PIER #5 FROM S. ABUT.

CONC. REPAIR FOR PIER #8 FROM S. ABUT.

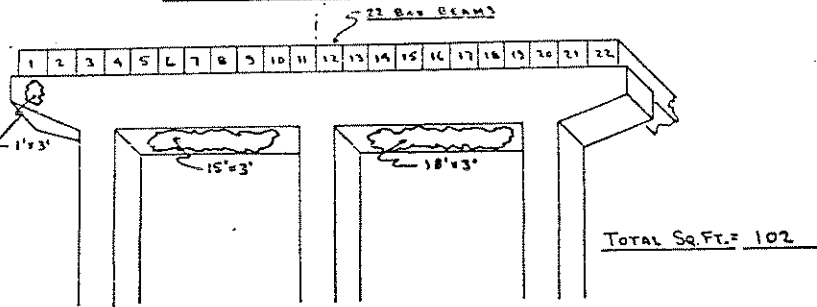
TOTAL REPAIRS OF CONCRETE STRUCTURES - 1470 SQ. FT.

- REPAIR CONCRETE STRUCTURES

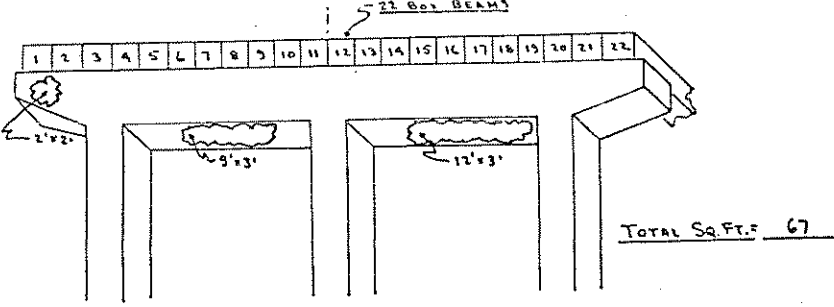
NOTE: REBARS WITH SECTION LOSS GREATER THAN 25% SHALL HAVE NEW REBARS, OF THE ORIGINAL SECTION, SPLICED ADJACENT TO THE EXIST. REBAR, AS DIRECTED BY THE ENGINEER IN THE FIELD.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 OR M-53 GRADE 60.

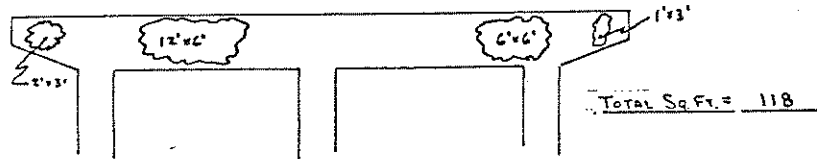
NOTE: BRIDGE SEAT SEALER SHALL BE APPLIED TO BRIDGE SEATS AND PIER TOPS 2 THRU 8. THIS WORK SHALL BE DONE IN ACCORD WITH APPLICABLE PORTIONS OF THE BRIDGE SPECIAL PROVISION FOR BRIDGE SEAT SEALER, EFFECTIVE JULY 1, 1971 AND REVISED OCTOBER 1, 1993.



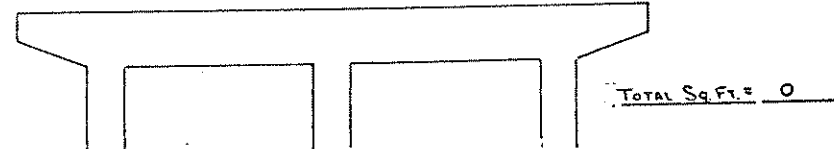
View Looking North



View Looking North



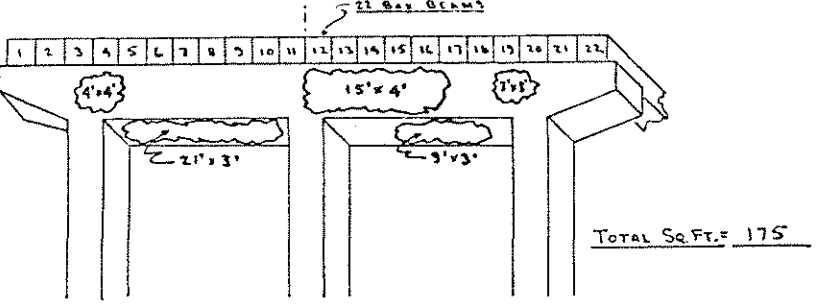
View Looking South



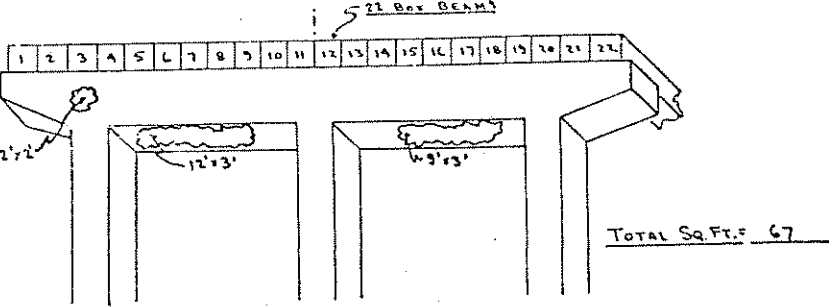
View Looking South

CONC. REPAIR FOR PIER #3 FROM S. ABUT.

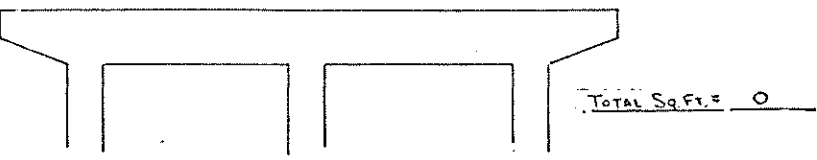
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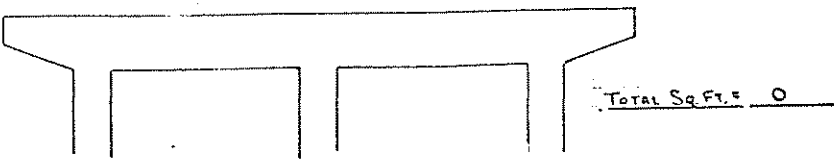
View Looking North



View Looking North



View Looking South



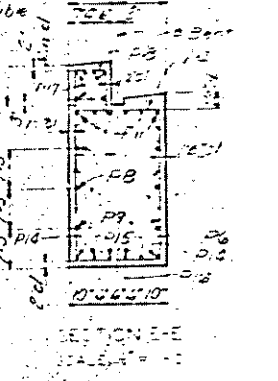
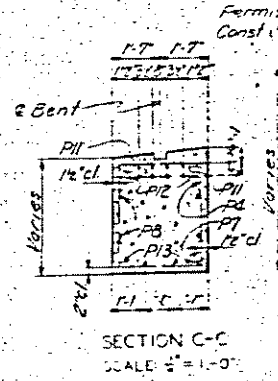
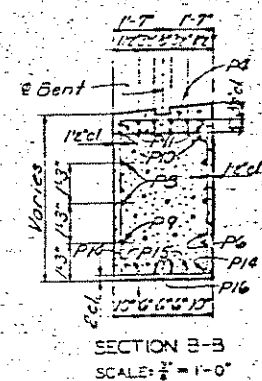
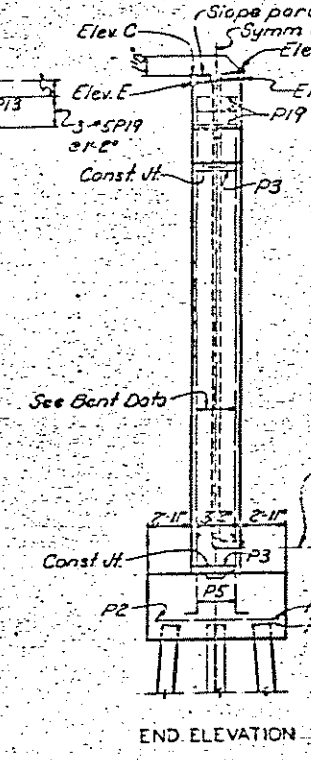
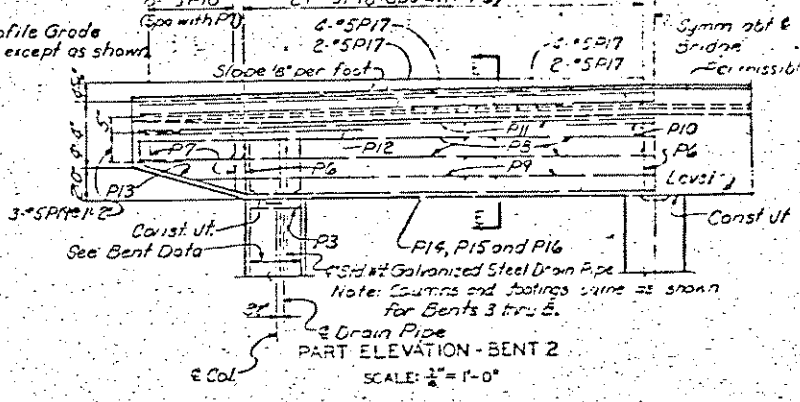
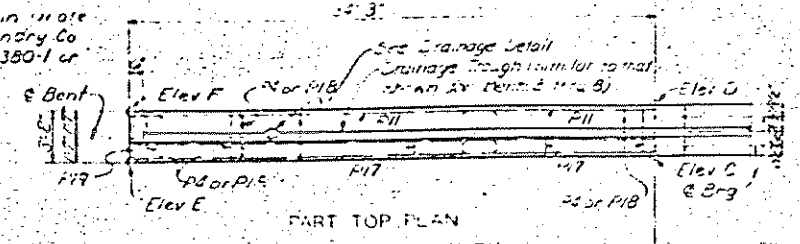
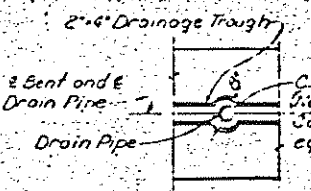
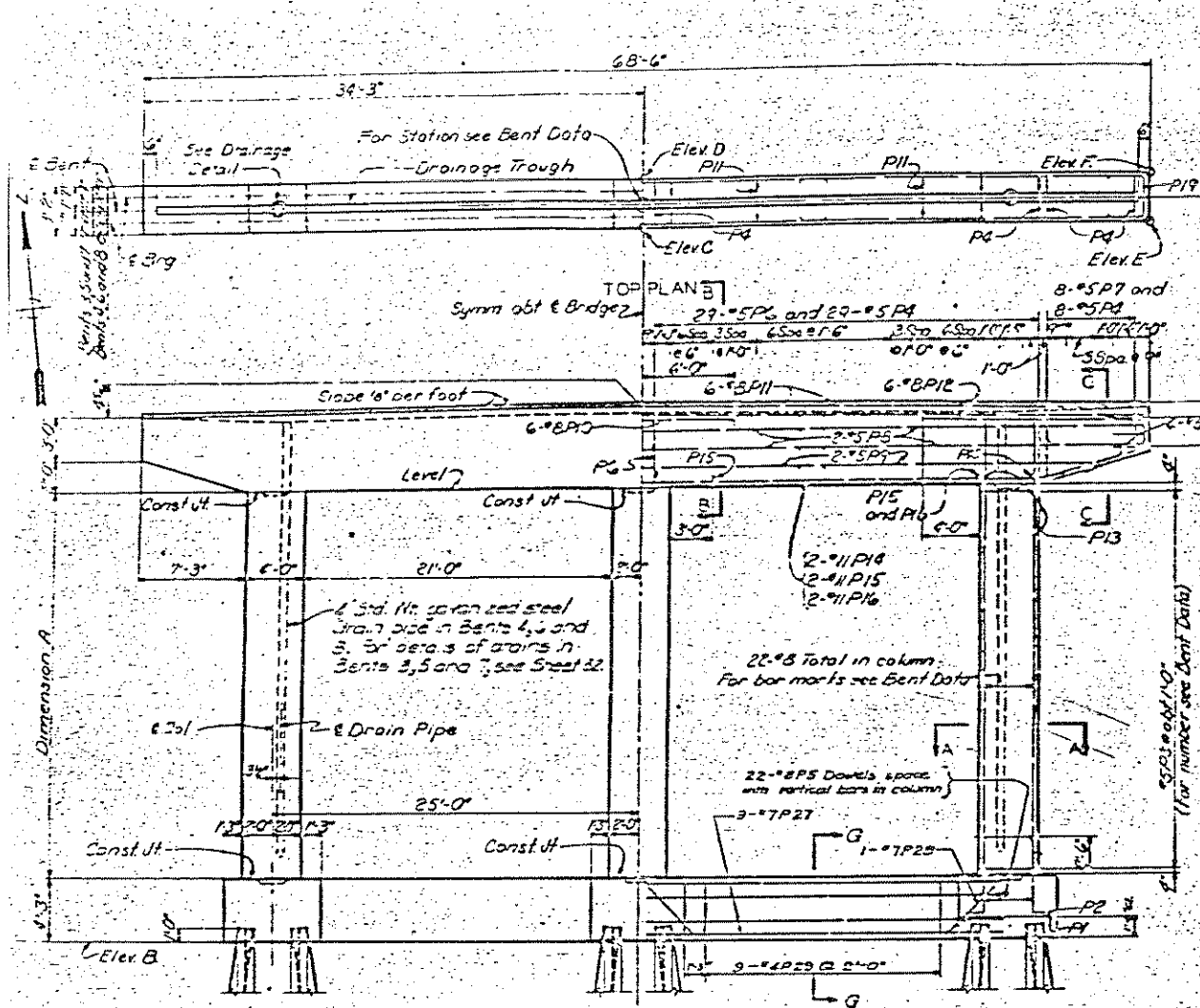
View Looking South

CONC. REPAIR FOR PIER #4 FROM S. ABUT.

CONC. REPAIR FOR PIER #7 FROM S. ABUT.

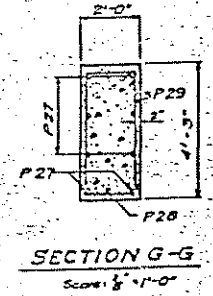
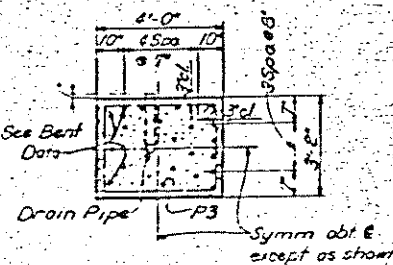
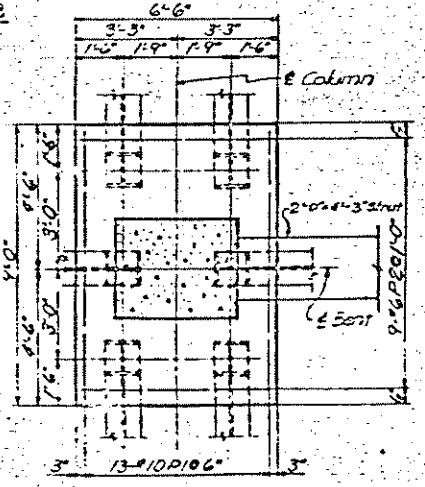
F.A.U. ROUTE 2843 (WESTERN AVE.)
SECTION: 14688C(2)R-1(85)
COOK COUNTY
BRIDGE NUMBER 016-0777
LOCATED OVER CALUMET SAG CHANNEL
AND ROCK ISLAND RAILROAD

(FOR INFORMATION ONLY)



BENT DATA										
BENT	STATION	DIM. 2	ELEV. B	ELEV. C	ELEV. D	ELEV. E	ELEV. F	BAR #	BAR #	BAR #
2	22+85.90	12'-6"	592.25	613.54	612.31	613.14	611.95	13	P10	13
3	23+55.90	14'-5"	592.25	618.31	617.40	613.95	612.05	15	P11	15
5	24+25.90	14'-0"	588.75	616.01	616.30	616.05	616.15	18	P12	18
6	24+95.90	17'-7"	589.25	618.31	618.60	618.15	618.05	20	P13	20
7	25+45.90	12'-7"	589.25	620.61	620.70	620.25	620.34	22	P14	22
8	26+35.90	12'-5"	587.75	622.71	622.80	622.35	622.45	24	P15	24
8	27+05.90	12'-5"	587.75	624.81	624.91	624.45	624.55	28	P16	28

• Indicates number of # bars for the column only.
 • Indicates bar mark for vertical column bars.



(FOR INFORMATION ONLY)

NOTES
 See Sheet 2 for work including precast concrete beams and box girders to Bent 2 and concrete cost of 2 galvanized steel drain pipes and C.I. manholes for Bents 2, 4, 6 and 8 shall be included in the price bid for Class A Concrete in substructure.
 See Sheet G for Pile Specs.

DEPARTMENT OF HIGHWAYS
 COOK COUNTY, ILLINOIS

SEYMOUR SIMON
 WILLIAM J. BORTNER

BENTS 2 THRU 8
 WESTERN AVENUE RELOCATION
 OVER
 CALUMET SAG CHANNEL

PREPARED BY
 EVERDRUP & PARCEL, INC.
 ENGINEERS - ARCHITECTS
 ST. LOUIS, MISSOURI

REVISIONS

DATE	BY	DESCRIPTION
B-11-62	R.L.	Provided steel reinforcement for

COMPUTED BY: E. J. ...
 DRAWN BY: H. ...
 CHECKED BY: G. ...

APPROVED BY: ...
 55A 1001 8 24

INDEX OF SHEETS

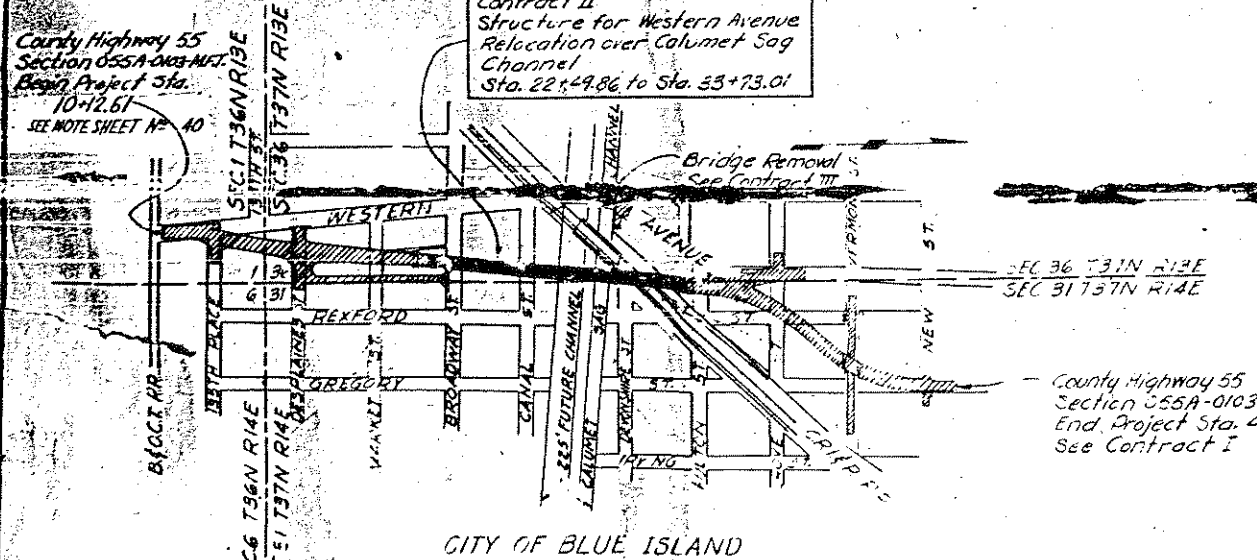
1	TITLE PAGE
2	GENERAL PLAN AND ELEVATION
3	GENERAL NOTES
4	LOG OF BORINGS
5	EXCAVATION, BACKFILL AND MISC. DETAILS
6	ABUTMENT 1
7	ABUTMENT 15
8	BENTS 2 THRU 8
9	PIER 9
10	PIER 10
11	BENTS 11, 12 AND 13
12	BENT 14
13	PRECAST PRESTRESSED CONCRETE
14	PRECAST PRESTRESSED CONCRETE
15	PRECAST PRESTRESSED CONCRETE
16	TRUSS SPAN STRESS SHEET
17	TRUSS DETAILS L0 TO L2
18	TRUSS DETAILS L3 TO L5
19	TRUSS FRAME
20	TRUSS SPAN FLOOR SYSTEM
21	SIDES
22	GIRDER LAYOUT AND FRAMING PLAN
23	GIRDER ELEVATIONS
24	GIRDER DETAILS
25	EXPANSION DEVICE AT PIER 10
26	EXPANSION DEVICE AT BENTS 11, 13 AND 14
27	SLAB - TRUSS SPAN
28	SLAB - SPANS 10, 11 AND 12
29	SLAB - SPANS 13 AND 14
30	HANDRAIL
31	HANDRAIL
32	ROADWAY DRAINAGE SYSTEM
33	PROVISIONS FOR ROADWAY LIGHTING
34	NAVIGATION LIGHTING
35	STAIRWAYS
36	STAIRWAYS
37	TYPICAL BAR TYPES AND HOOK DIMENSIONS
38	BAR LIST
39	BAR LIST AND SPECIAL BENDING DETAILS
40	TRAVERSE LAYOUT
41	FIELD OFFICE AND LABORATORY
42 to 44	REMOVAL OF STRUCTURES

STATE OF ILLINOIS
 COUNTY OF COOK
 DEPARTMENT OF HIGHWAYS

PLANS FOR PROPOSED
 COUNTY HIGHWAY
 STRUCTURE
 FOR
 WESTERN AVENUE RELOCATION
 OVER THE
 CALUMET SAG CHANNEL
 SECTION 055A-0103-M.F.T.
 CONTRACT II

SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM
7,335	Cu. Yds.	Class A Excavation For Structures
1,345	Cu. Yds.	Class B Excavation For Structures
520	Cu. Yds.	Rock Excavation For Structures
602	Cu. Yds.	Porous Granular Embankment
2,650	Lin. Ft.	Furnishing 10BP42 Steel Piles
2,650	Lin. Ft.	Driving 10BP42 Steel Piles
5,182	Lin. Ft.	Furnishing 11BP73 Steel Piles
5,182	Lin. Ft.	Driving 11BP73 Steel Piles
22	Each	17' Precast Prestressed Concrete Bridge Box Beams
154	Each	33' Precast Prestressed Concrete Bridge Box Girders
1339.7	Cy. Yds.	Class X Concrete in Superstructure
3088.9	Cy. Yds.	Class X Concrete in Substructure
697865	Lbs.	Reinforcement Bars
1,318,816	Lbs.	Furnishing and Erecting Structural Steel-Truss Span
1,005,994	Lbs.	Furnishing and Erecting Structural Steel-Approach Spans
35,114	Lbs.	Furnishing and Erecting Cast Steel
2,243	Lin. Ft.	Aluminum Handrail
156	Lin. Ft.	Aluminum Pipe Handrail -
6	Each	Roadway Drain - Type 1
8	Each	Roadway Drain - Type 2
367	Lin. Ft.	Cast Iron Downspouts
1	Lump Sum	Navigation Lighting System
1	Lump Sum	Provisions for Roadway Lighting
942	Sq. Yds.	Slope Wall
87	Lin. Ft.	Concrete Gutter
306	Gals.	Bituminous Materials (Prime Coat)
227	Tons	Bituminous Concrete Binder Course
205	Tons	Bituminous Concrete Surface Course, Subclass I-II
2535	Tons	Stabilized Sand Embankment
1	Each	Building Removal, Parcel 103
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1	Each	Building Removal, Parcel 195
1	Each	Building Removal, Parcel 196
1	Each	Building Removal, Parcel 197
1	Each	Building Removal, Parcel 198
1	Each	Building Removal, Parcel 199
1	Each	Building Removal, Parcel 200
14,800	Tons	Sand or Gravel Embankment



DRAWN: G.E. Keithly
 CHECKED: G. Pennington

1	Each	Building Removal, Parcel 311
1	Each	Building Removal, Parcel 312
1	Each	Building Removal, Parcel 313
1	Each	Building Removal, Parcel 314
14,800	Tons	Sand or Gravel Embankment

REVISIONS

DATE	BY	DESCRIPTION
8-16-62	M.S.	Revised quantities on Class X Concrete, Class X Conc. Reinf. Bars. Added Bldg. Removal and Item 3 Sand or Gravel Embankment.

COUNTY OF COOK
 DEPARTMENT OF HIGHWAYS

APPROVED: *[Signature]* OCTOBER 2, 1961
 CHIEF ENGINEER

APPROVED: *[Signature]* OCTOBER 2, 1961
 SUPERINTENDENT

SVERDRUP & PARCEL, INC.
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MISSOURI

U.S. ARMY ENGINEER DISTRICT
 CORPS OF ENGINEERS
 CHICAGO, ILLINOIS

WESTERN AVENUE RELOCATION
 OVER
 CALUMET SAG CHANNEL

APPROVED: *[Signature]* DATE: 14 MAY 1962
 CHIEF ENGINEER DIVISION

APPROVED: *[Signature]* DATE: _____
 DIRECTOR

SCALE: NONE INV NO: _____ DRAWING NO: _____
 SHEET 1 OF 44

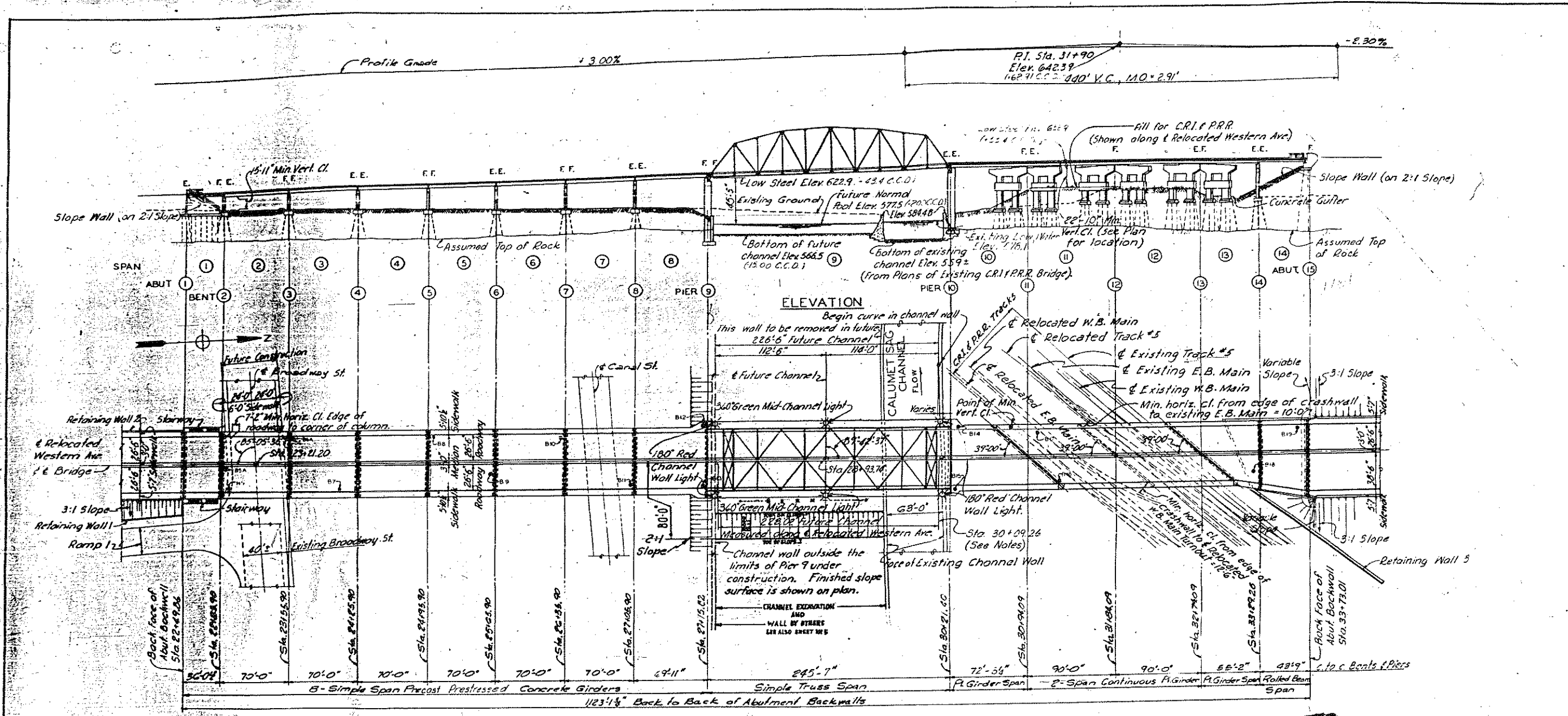
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
 DIVISION OF HIGHWAYS

APPROVED: *[Signature]* DATE: _____
 CHIEF HIGHWAY ENGINEER

APPROVED: *[Signature]* DATE: _____
 DIRECTOR



REELS 180-B (MOSTLY B0) & 180-B



NOTES

Horizontal clearance dimensions from face of crashwall on Bents 11, 12 and 13 to adjacent railroad tracks are not shown at all points. Where not shown, the clearances are in excess of 10'-0" for Existing Tracks and Relocated Track #5 and in excess of 12'-0" for Relocated E.B. and W.B. Mains.

See Special Provisions for construction clearances which must be maintained at C.R.I. & P.R.R. tracks, Calumet Sag Channel, Broadway Street, and Canal Street.

Locations of borings for subsurface data are shown in Plan thusly: For Log of Borings see Sheet 4.

Sta. 30+09.26 at channel face of existing channel wall shall be used as a reference point for measuring stations along centerline Relocated Western Avenue.

Note: Do not scale this drawing. Follow dimensions.

All elevations on these drawings are based on Mean Sea Level datum 579.48 M.S.L. (1929) = 500 Chicago City Datum. See Sheet 40 for Bench Marks. In the event of conflict between M.S.L. elevations and Chicago City Datum elevations (M.C.D.), the M.S.L. elevations shall prevail.

DEPARTMENT OF HIGHWAYS
 COOK COUNTY, ILLINOIS

BEYMOUR SIMON
 PERMIT NO. 100-100000000

WILLIAM J. MORTIMER
 SUPERINTENDENT OF HIGHWAYS

GENERAL PLAN AND ELEVATION
WESTERN AVENUE RELOCATION
 OVER
CALUMET SAG CHANNEL

SECTION 055A-0103 - M.F.T.
 SCALE 1" = 50'

COMPUTED BY: _____
 DRAWN BY: H. H. HARRIS
 CHECKED BY: J. J. JONES
 APPROVED BY: M. E. P. [Signature]

DATE: 8.16.61 BY: H.E. REVISED DETAIL OF PLAN OF CHANNEL NOTES

DATE	BY	DESCRIPTION

APPROVED: [Signature] 55A 1961 2 44

7/26/61

SPECIFICATIONS: Illinois Division of Highways "Standard Specifications for Road and Bridge Construction" 1958 Edition, and Special Provisions.

DESIGN: In accordance with Division I of the AASHTO "Standard Specifications for Highway Bridges", 1957 Edition, and Cook County Standard Details for Precast Prestressed Concrete Box Girders, with the modifications or interpretations as noted on these drawings.

DESIGN LOADING:

Roadway Live Load: H20-S16-44 except for the design of floor system members (concrete or steel girders and beams, stringers and floorbeams), a special loading of two 24,000 lb. axles at 4'-0" centers is used where this loading governs over the standard truck loading. For lane loads the standard loading is used except for the truss span the concentrated load used in combination with uniform load is 24,000 lbs. for both shear and moment calculations.

Sidewalk Live Load: 85 lbs. per sq. ft. on truss span and 60 lbs. per sq. ft. on approach spans over a 5 ft. width.
Dead Load: On the truss span only a provision of 50 lbs. per sq. ft. is made for future utility lines. On the truss span and steel approach spans provision is made for a 15 lb. per sq. ft. future wearing surface.

LIVE LOAD DEFLECTION: The live load deflection on steel approach spans is limited to 1/600 of the span.

ROADWAY WEARING SURFACE: The concrete roadway slab as detailed includes a 1/2" wearing surface poured monolithically with the slab. See Cross Section on Sheet 14 for bituminous wearing surface on Spans 1 thru 8.

FOUNDATION DESIGN LOADS:

	Steel Piles	Rock Pressure
Vertical forces	4000 lbs./sq. in. on tip	12 tons/sq. ft.
Vertical plus lateral forces	25% Increase	16 tons/sq. ft.
Vertical plus longitudinal forces	25% Increase	16 tons/sq. ft.
Vertical plus diagonal forces	33 1/3% Increase	20 tons/sq. ft.

Maximum pile load for abutments is limited to the value shown for vertical forces.

CONCRETE: All concrete shall be Class X, except for precast prestressed units. Concrete for precast prestressed units shall be air entrained and shall have a minimum compressive strength $f'_c = 5000$ lbs. per sq. in. at 28 days and $f'_{ci} = 4000$ lbs. per sq. in. at time of prestressing.

DESIGN UNIT STRESSES FOR CLASS X CONCRETE: $f_s = 20,000$ lbs. per sq. in. Flexure (except stressed by earth) $f_c = 1400$ lbs. per sq. in. Flexure (stressed by earth) $f_c = 800$ lbs. per sq. in. Shear - In accordance with AASHTO, except maximum allowable in footings = 75 lbs. per sq. in.

REINFORCING STEEL: All reinforcement except prestressing steel and welded wire fabric shall be intermediate or hard grade, billet steel, deformed bars, conforming to ASTM Designation A15. Welded wire fabric shall conform to ASTM Designation A185. See Special Provisions for prestressing steel.

All dimensions to reinforcing steel are to centerline of bar except where the clear dimension from face of concrete is shown on the drawings.

Reinforcement bars shall be lapped a minimum of 50 bar diameters at splices unless otherwise shown or noted.

METALWORK:

Materials: All material shall be structural carbon steel conforming to ASTM Designation A7 unless otherwise noted on the drawings. Low alloy structural steel for expansion device at Pier 10 (designated A.S. on the drawings) shall conform to ASTM Designation A 242. Weldable structural carbon steel (designated W.S. on the drawings) shall conform to ASTM Designation A 373. Structural rivet steel shall conform to ASTM Designation A 141. High strength steel bolts shall conform to ASTM Designation A 325. All other metalwork items shall be of the material noted on the drawings or in the Special Provisions.

Connections: Where desired for convenience, shop and field connections may be interchanged. Field connections may be made with high strength steel bolts in lieu of rivets, if the Contractor so desires. All rivets or high strength bolts shall be 1/2" dia. unless otherwise noted.

Paint: Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. Certain surfaces of expansion devices shall be given two shop coats of red lead paint as noted on the drawings. Certain surfaces on the truss span shall receive one field coat of red lead paint prior to the two field coats of aluminum paint, as specified in Article 56.5 (a) of the Standard Specifications. Steel which is noted on the drawings to be galvanized shall not be painted.

CHAMFERED EDGES: All exposed edges of concrete shall be chamfered 3/4" unless otherwise shown or noted.

ANCHOR BOLTS: Anchor bolts for truss span shall be grouted into anchor bolt wells. Dowels for concrete spans shall be drilled in place after the superstructure units have been positioned. Anchor bolts for steel approach spans shall be cast in place. See Special Provisions.

BEARING AREAS: Bearing areas to receive concrete and steel approach superstructure units shall be finished smooth and true at the proper elevation and grade. Bearing areas for truss shoes shall be ground to the proper elevation in accordance with the Special Provisions.

FILLED JOINTS: All joint filler shall be bituminous preformed fiber joint filler (Type 3, bituminous fiber), ASTM Designation D 544. Joint seal for horizontal surfaces shall be Prestite Joint Sealer #1-RM as manufactured by Servisised Products Corp., or equal. Joint seal for inclined surfaces of median and curb shall be black Vertiseal as manufactured by Servisised Products Corp., or equal.

CONCRETE SURFACE TREATMENT: Certain exposed concrete surfaces shall be waterproofed with a water soluble silicone surface treatment in accordance with the Special Provisions.

PILE DRIVING: All piling shall be driven to refusal in rock and shall be capable of sustaining the maximum design load shown on these Plans. See Special Provisions.

CLEARING: Clearing, including removal of existing buildings, is included in this contract, Western Avenue Relocation, Contract I.

EXISTING UTILITIES: Unless indicated otherwise the removal or relocation of existing utilities except waterlines and sewers will be performed by others.

PAYMENT FOR MISCELLANEOUS ITEMS: The cost of furnishing and placing all joint filler, joint seal and rubber waterstops shall be included in the unit price bid for the concrete to which the various items are attached.

SHOP DRAWINGS: Three sets of shop drawings for structural steel, reinforcing steel, aluminum handrail, aluminum pipe handrail and precast-prestressed concrete units shall be submitted to the Cook County Highway Department for approval. Upon approval, an additional three sets of all approved shop drawings shall be furnished. See Standard Specifications.

PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

REVISIONS		
DATE	BY	DESCRIPTION
8.16.61	K.S.	REMOVAL OF BLDGS ADDED TO CONTRACT

DEPARTMENT OF HIGHWAYS COOK COUNTY, ILLINOIS	
SKYLAUR SEASON PRESIDENT BOARD OF SUPERVISORS	WILLIAM J. MORTIMER DEPARTMENT OF HIGHWAYS
GENERAL NOTES WESTERN AVENUE RELOCATION OVER CALUMET SAG CHANNEL	
COMPUTED _____	SECTION 055A-0103-M.P.T.
DRAWN <i>A.P. Faust</i>	SCALE NONE
CHECKED <i>J. Grindheim</i>	APPROVED <i>W.J.P.</i>
APPROVED <i>W.J.P.</i>	55A 1061 3 44

HOLE B5				HOLE B5A				HOLE B6				HOLE B6A				HOLE B7				HOLE B8				HOLE B9				HOLE B10				HOLE B11							
ELEV.	N	Q	LOG	N	Q	LOG		N	Q	LOG		N	Q	LOG		N	Q	LOG	N	Q	LOG		N	Q	LOG	N	Q	LOG		N	Q	LOG							
586.0			Ground Surface Elev. 595.9			Ground Surface Elev. 594.1				Ground Surface Elev. 596.2				Ground Surface Elev. 596.2				Ground Surface Elev. 594.4			Ground Surface Elev. 598.0																		
			Sidewalk and fill material			See Log of Hole B5				Sidewalk, cinder fill				See Log of Hole B6				Airway paving fill			Fill material, cinders sand and gravel																		
			Yellow dry medium dense sandy silt							Brown moist very loose sandy silt with trace of gray clay								Gray moist stiff clay																					
			Gray moist medium stiff clay							Gray and yellow moist soft clay									Brown moist soft organic silt with sedimentary nodules																				
			Brown moist soft organic silt							Brown moist soft sedimentary peat with organic clay									Gray moist hard silty clay with gravel and limestone fragments																				
			Gray moist hard clayey silt with limestone gravel							Gray moist hard silty silt with angular limestone fragments									Gray moist hard silty silt with gravel and limestone fragments																				
			Gray limestone							Gray limestone									Gray limestone																				
540																																							
August 31, 1959				September 29, 1959				August 31, 1959				September 14, 1959				September 15, 1959				September 11, 1959				September 7, 1959				August 28, 1959				August 24, 1959							

HOLE B12				HOLE B13				HOLE B14				HOLE B15				HOLE B16				HOLE B17				HOLE B18				HOLE B19											
ELEV.	N	Q	LOG	N	Q	LOG		N	Q	LOG		N	Q	LOG		N	Q	LOG	N	Q	LOG		N	Q	LOG	N	Q	LOG		N	Q	LOG							
586.0			Ground Surface Elev. 590.0			Ground Surface Elev. 591.0				Ground Surface Elev. 587.7				Ground Surface Elev. 586.6				Ground Surface Elev. 590.6			Ground Surface Elev. 592.9				Ground Surface Elev. 592.8														
			Black topsoil with limestone boulders			Soil, black, dry				Fill material, broken limestone slabs				Fill material, yellow clay, cinders, limestone slab, etc.				Top soil and light brown loam			Fill material, cinders sand and gravel				Fill material, cinders, sand, gravel, limestone														
			Gray moist medium stiff clayey silt with traces of fine gravel			Brown moist medium stiff clayey silt with limestone fragments				Gray saturated very loose silty sand with some fine to medium gravel with traces of clay				Gray moist hard silty silt with limestone fragments				Yellow dry loose silt, traces of fine sand and clay			Yellow dry loose silty sand				Gray wet fine sand, trace fine gravel														
			Gray moist hard silty clay			Gray moist hard silty clay with limestone fragments with depth				Gray saturated very silty sand with some fine to medium gravel with traces of clay				Gray wet very loose organic silt				Light brown very loose wet fine sand			Gray wet medium stiff silt, trace of sand				Gray moist hard silt, with angular limestone fragments														
			Gray moist hard silty with limestone fragments			Gray moist hard silty with limestone fragments				Gray limestone, thinly bedded and weathered																Gray moist hard silty with fine gravel and limestone fragments in nodules with depth													
			Gray limestone, thinly bedded							Gray limestone, thinly bedded and highly fractured with soft shale seams																													
540																																							
August 21, 1959				August 19, 1959				August 24, 1959				August 25, 1959				August 26, 1959				August 26, 1959				August 26, 1959				August 27, 1959											

NOTES

The subsurface data shown herein were obtained by borings at the locations indicated on plan. These data are furnished for information only and do not guarantee the actual conditions which may be found when the work is executed.

"N" indicates blow per foot of penetration on a 2" O.D. sampling spoon; sampler weight = 2 lbs; Drop = 30 in.

"Q" indicates unconfined compressive strength in tons per square foot.

"W.L." indicates water level in hole 24 hours after boring.

PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

**DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS**

WILLIAM J. MORTIMER
SUPERVISOR OF HIGHWAYS

**LOG OF BORINGS
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL**

REVISIONS		
DATE	BY	DESCRIPTION

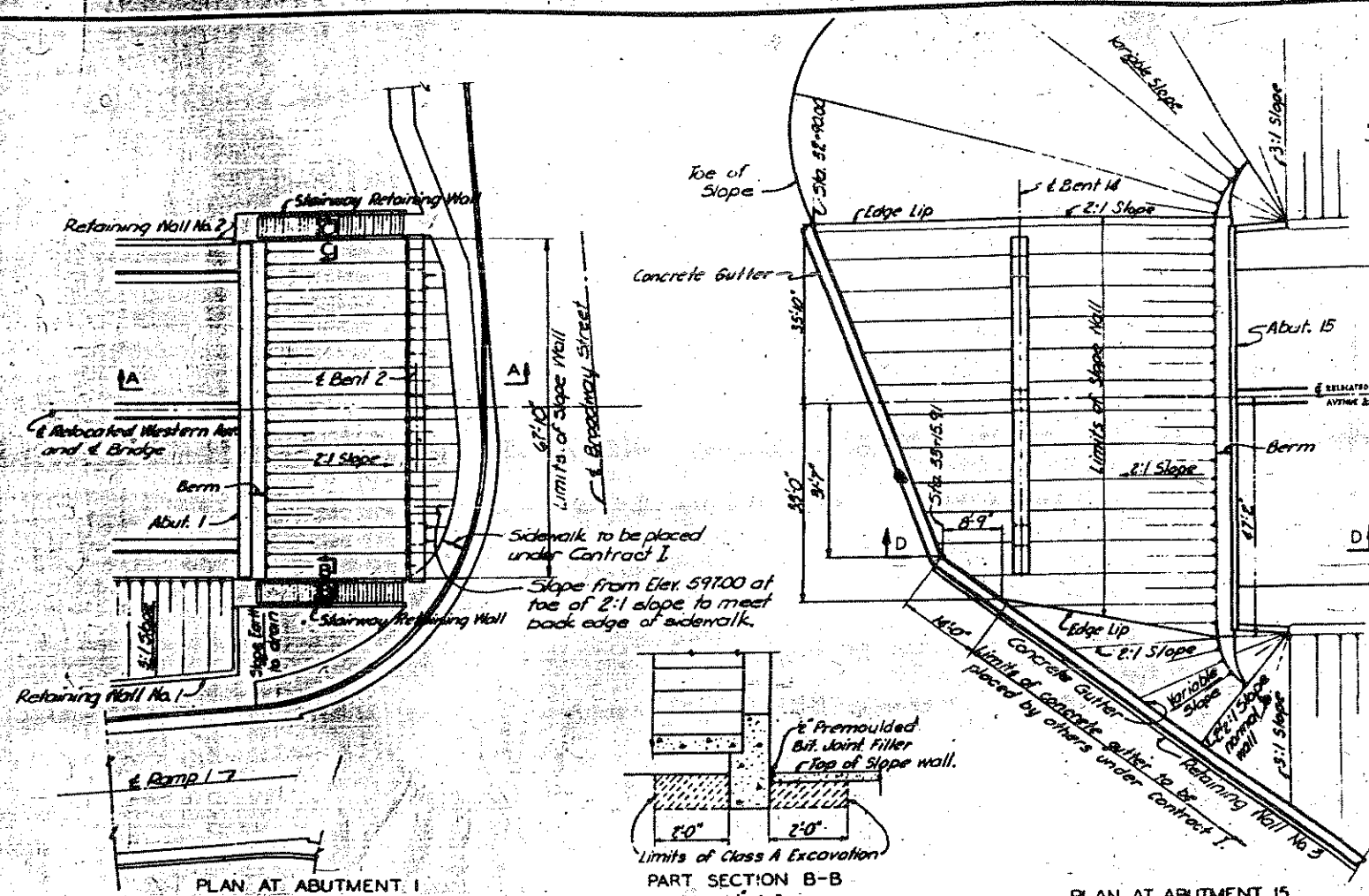
COMPUTED: _____ SECTION C55A-0103-M.F.T.

DRAWN: _____ SCALE: NONE

CHECKED: _____ APPROVED: *(Signature)*

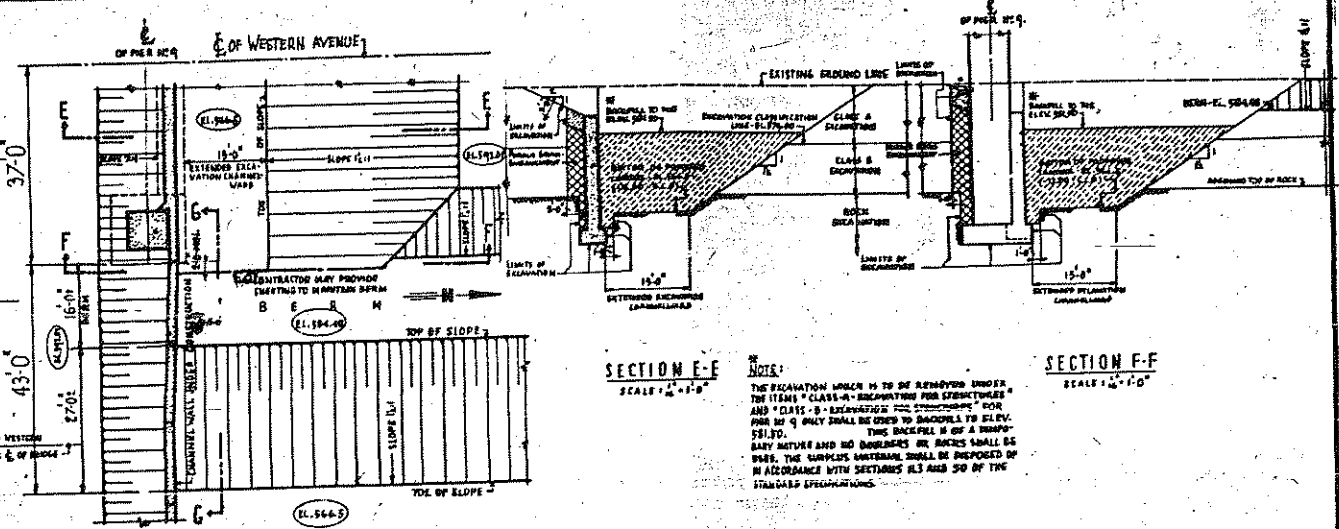
APPROVED: *(Signature)*

53A 12d 4 4t



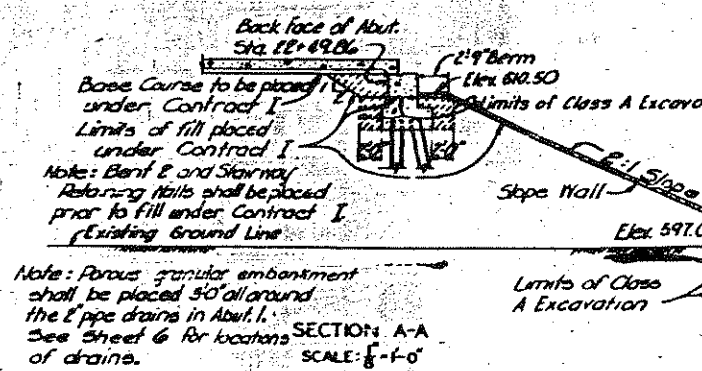
PLAN AT ABUTMENT I
SCALE: 1" = 15'

PLAN AT ABUTMENT 15
SCALE: 1" = 15'

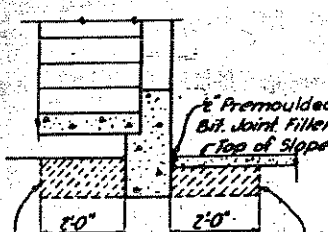


PART PLAN AT PIER NO. 9
SCALE: 1" = 10'

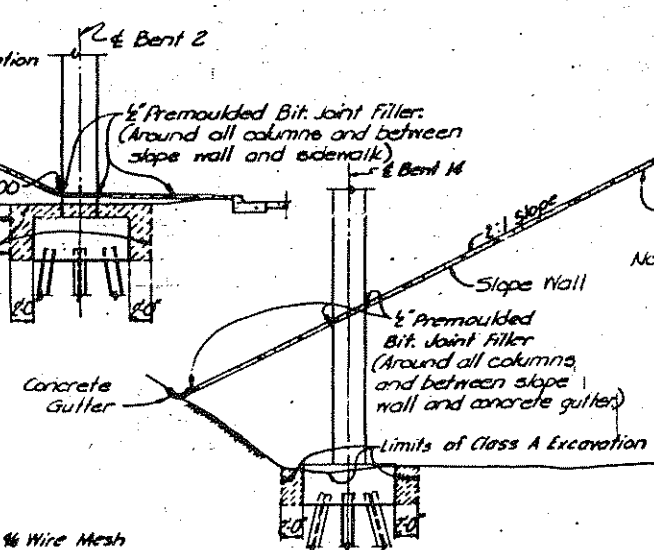
PART SECTION AT PIER 10
SCALE: 1/2" = 1'-0"



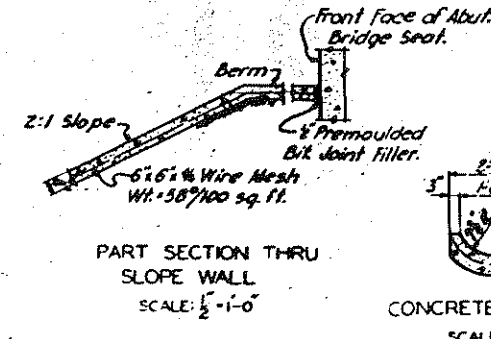
SECTION A-A
SCALE: 1/2" = 1'-0"



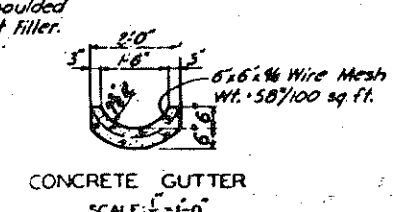
PART SECTION B-B
SCALE: 1/2" = 1'-0"



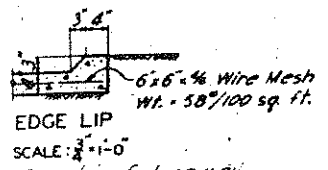
SECTION D-D
SCALE: 1/2" = 1'-0"



PART SECTION THRU SLOPE WALL
SCALE: 1/2" = 1'-0"



CONCRETE GUTTER
SCALE: 1/2" = 1'-0"



EDGE LIP
SCALE: 1/2" = 1'-0"

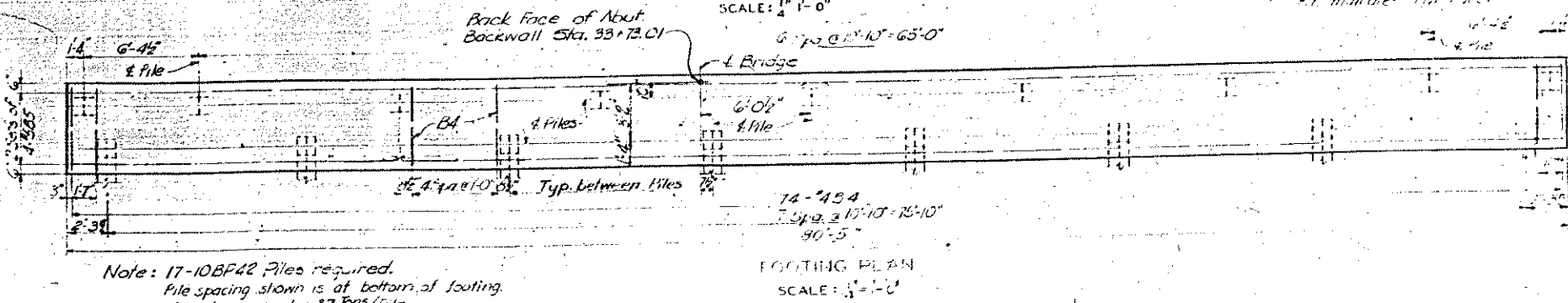
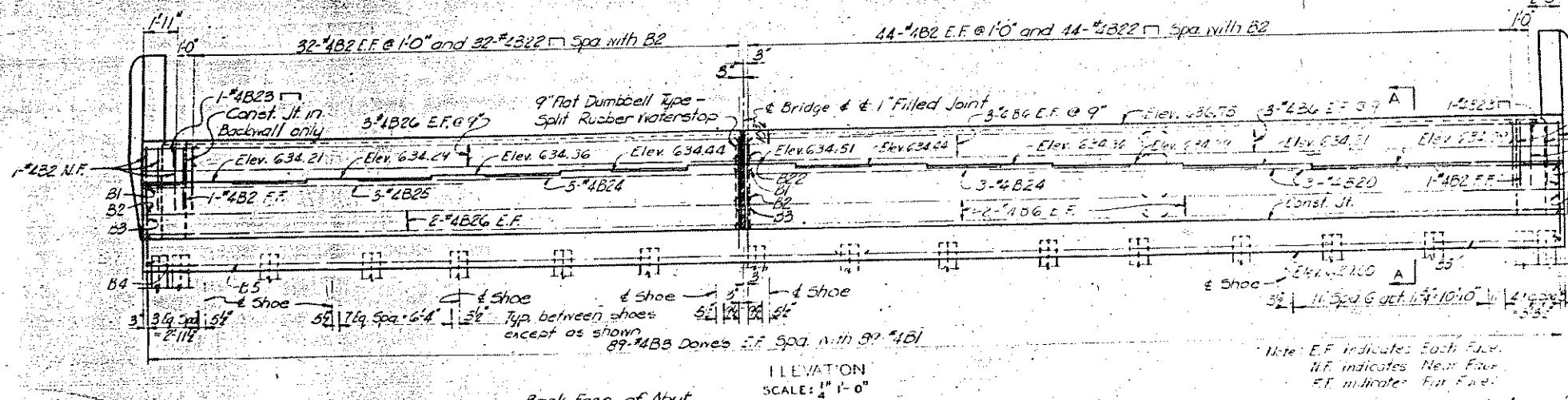
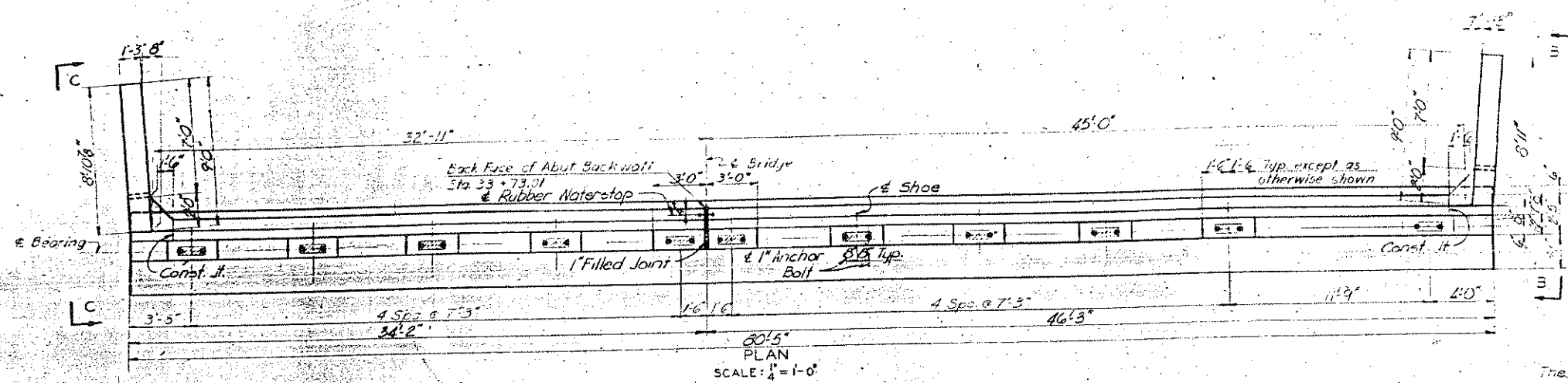
NOTE:
THE EXCAVATION WHICH IS TO BE REMOVED UNDER
THE ITEM "CLASS A EXCAVATION FOR STRUCTURES"
AND "CLASS B EXCAVATION FOR STRUCTURES" FOR
PIER NO. 9 ONLY SHALL BE USED TO BACKFILL TO ELEV.
581.00. THE BACKFILL IS OF A SANDY
SILT. SANDY SILT AND NO Boulders OR ROCKS SHALL BE
USED. THE SURPLUS MATERIAL SHALL BE DISPOSED OF
IN ACCORDANCE WITH SECTION 813 AND 810 OF THE
STANDARD SPECIFICATIONS.

NOTES
For bents and stairway retaining walls not shown, the limits
of Class A Excavation shall be vertical planes 2'-0" outside the
edges of footings or crash walls. These structures shall be
backfilled with Structural Backfill to existing ground line.
Unless otherwise shown or noted, the limits of Rock Excavation
shall be vertical planes at the neat lines of the footings.
Indicates Porous Granular Embankment.
Indicates backfill in accordance with Art. 80.10 of the Std. Spec.
Retaining Walls No. 1, 2 and 3 will be constructed by others under
Contract I.

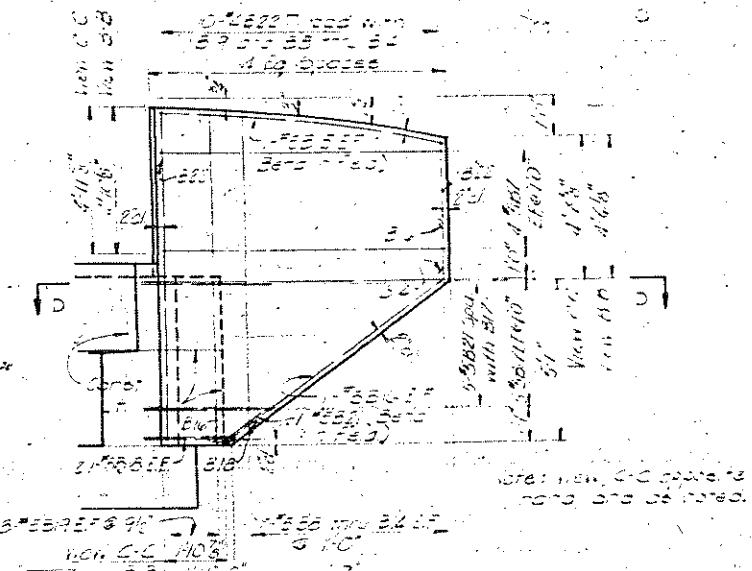
Note: Do not scale this drawing. Follow dimensions.

Note: For edge of slope wall
at Abutment 15 only.

DEPARTMENT OF HIGHWAYS COOK COUNTY, ILLINOIS PREPARED BY SVERDRUP & PARCEL, INC. ENGINEERS - ARCHITECTS ST. LOUIS, MISSOURI				WILLIAM A. BORTNER REGISTERED PROFESSIONAL ENGINEER EXCAVATION, BACKFILL AND MISC. DETAILS WESTERN AVENUE RELOCATION OVER CALUMET SAG CHANNEL			
REVISIONS DATE BY DESCRIPTION 8.16.61 M.E. REVISED DETAIL OF "PART PLAN AT PIER NO. 9" AND "VIEW G-G"				COMPUTED: J.M. Ballard DRAWN: J.M. Ballard CHECKED: R.E. Beck APPROVED: [Signature] SECTION 058A-0103-M.F.T. SCALE: AS SHOWN APPROVED: [Signature]			
APPROVED:	DATE:	BY:	NO.:	OF:	DATE:		
[Signature]	85A	1961	3	44			



Note: 17-10BP42 Piles required.
 Pile spacing shown is at bottom of footing.
 Max design load = 37 tons/pile.



The top of base wall within these limits are to be enclosed in a concrete curb in accordance with the Specs. for 20's.



NOTES
 See detail of Abut. E.C. on Sheet 55A-0103-M.E.T. for details of Abut. E.C. see Sheet 55A-0103-M.E.T. for details of Abut. E.C.

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 ST. LOUIS, MISSOURI

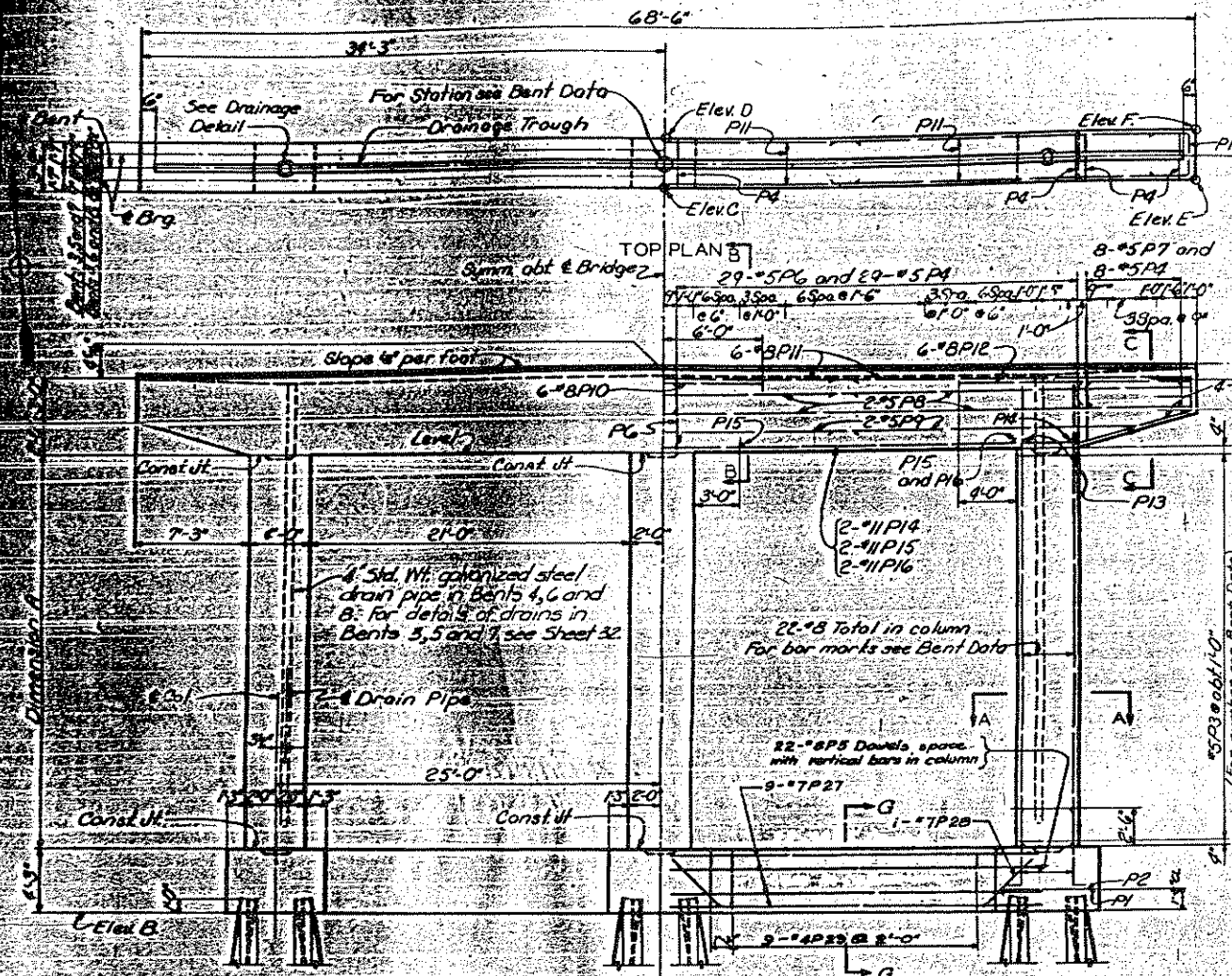
DEPARTMENT OF HIGHWAYS
 COOK COUNTY, ILLINOIS
 WILLIAM J. MORTIMER
 SUPERINTENDENT OF HIGHWAYS

ABUTMENT 15
 WESTERN AVENUE RELOCATION
 OVER
 CALUMET SAG CHANNEL

SECTION 055A-0103-M.E.T.
 SCALE AS SHOWN
 APPROVED: [Signature]
 55A 1961 7 44

REVISIONS		
DATE	BY	DESCRIPTION

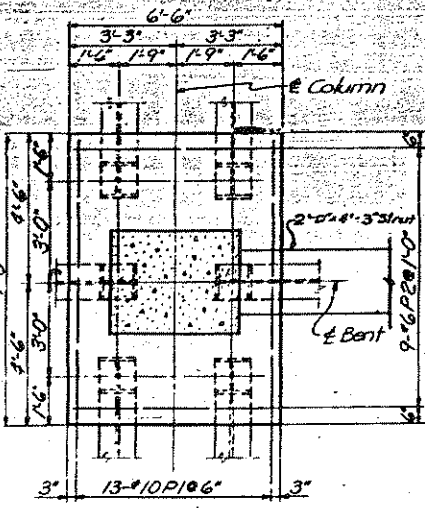
Note: Do not scale this drawing. Follow dimensions.



ELEVATION
BENTS 3 THRU 8
SCALE: 1/8" = 1'-0"

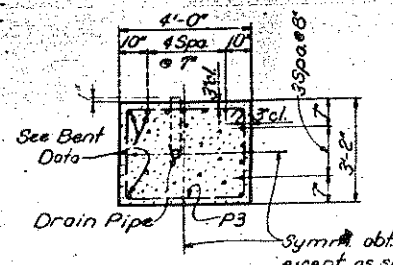
BENT DATA									
BENT	STATION	DIM. A'	ELEV. B	ELEV. C	ELEV. D	ELEV. E	ELEV. F	BAR P3	BAR MK
2	22+58.90	12'-4"	590.25	613.54	612.31	613.13	611.95	13	P20
3	23+53.90	14'-5"	590.25	614.3	614.7	613.95	614.05	15	P21
4	24+48.90	14'-0"	588.75	616.41	616.50	616.05	616.14	18	P22
5	24+95.90	17'-7"	589.25	618.51	618.60	618.15	618.24	20	P23
6	25+65.90	21'-9"	589.25	620.61	620.70	620.25	620.34	22	P24
7	26+35.90	25'-4"	587.75	622.71	622.80	622.35	622.45	26	P25
8	27+05.90	27'-5"	587.75	624.81	624.91	624.45	624.55	28	P26

* Indicates number of P3 bars for one column only.
 • Indicates bar mark for vertical column bars.



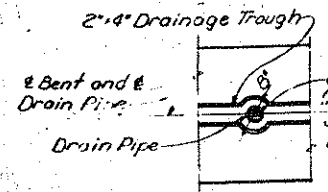
FOOTING PLAN
SCALE: 1/8" = 1'-0"

Note: 6-14 BP73 Piles in footing. Piles spaced at bottom of footing. All piles to be battered 2 in 12. Max. design load = 86 tons/pile.



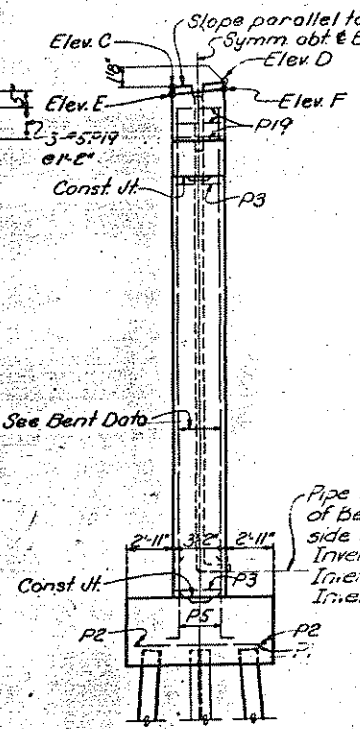
SECTION A-A
SCALE: 1/8" = 1'-0"

Note: Omit Drain Pipe in center column.



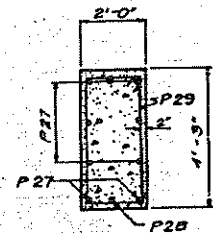
DRAINAGE DETAIL
SCALE: 1/2" = 1'-0"

Shown for Bents 4, 6 and 8. Drainage detail at Bent 2 similar.

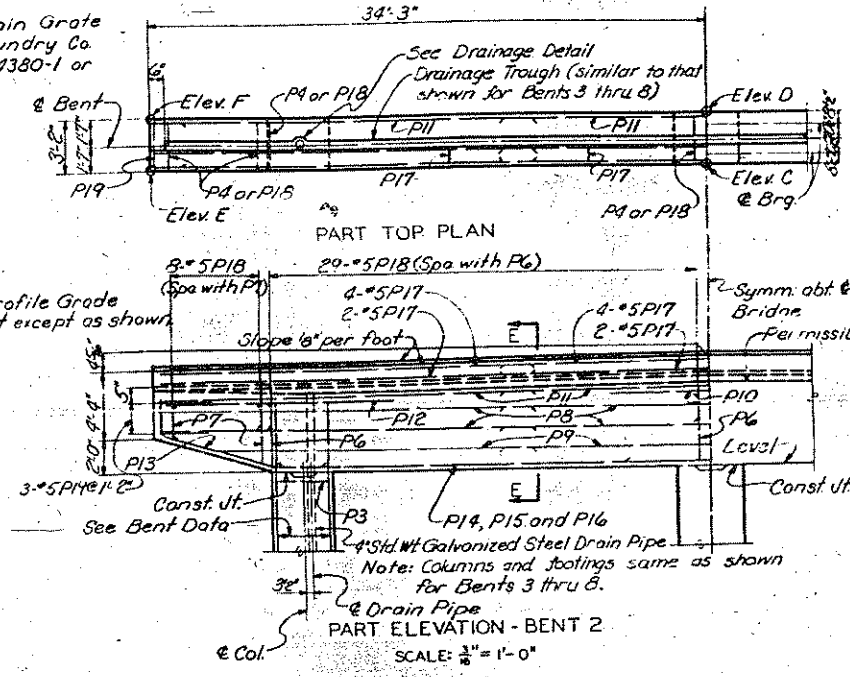


END ELEVATION

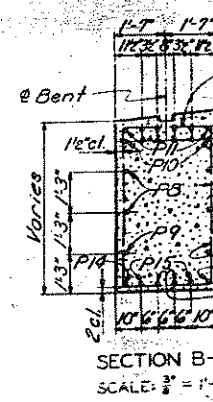
Pipe to drain on North side of Bents 4, 6 and 8; South side of Bent 2.
 Invert Elev. 597.50 (Bent 2)
 Invert Elev. 593.50 (Bents 4 and 6)
 Invert Elev. 594.00 (Bent 8)



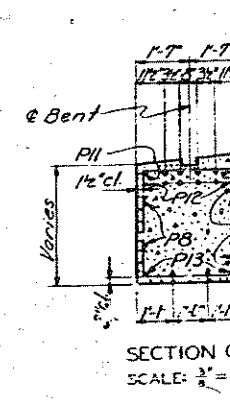
SECTION G-G
Scale: 1/8" = 1'-0"



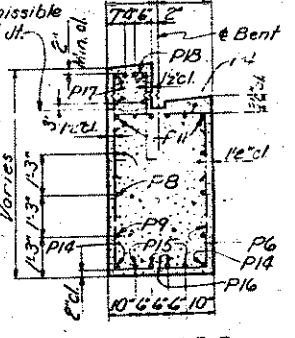
PART ELEVATION - BENT 2
SCALE: 1/8" = 1'-0"



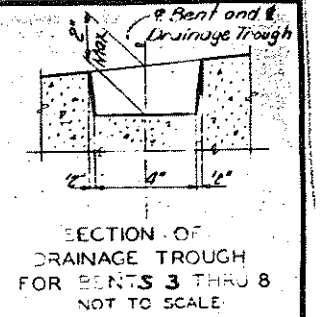
SECTION B-B
SCALE: 1/8" = 1'-0"



SECTION C-C
SCALE: 1/8" = 1'-0"



SECTION E-E
SCALE: 1/8" = 1'-0"



SECTION OF DRAINAGE TROUGH FOR BENTS 3 THRU 8
NOT TO SCALE

NOTES

See Sheet 14 for dowels connecting precast prestressed concrete beams and box girders to bent caps.
 Cost of 4" galvanized steel drain pipes and C.I. drain grates for Bents 2, 4, 6 and 8 shall be included in the price bid for Class X Concrete in Substructure.
 See Sheet G for Pile E, etc.

DEPARTMENT OF HIGHWAYS
 COOK COUNTY, ILLINOIS

PREPARED BY
 SVERDRUP & PARCEL, INC.
 ENGINEERS - ARCHITECTS
 ST. LOUIS, MISSOURI

WILLIAM J. MORTIMER
 DISTRICT ENGINEER OF HIGHWAYS

BENTS 2 THRU 8
 WESTERN AVENUE RELOCATION
 OVER
 CALUMET SAG CHANNEL

SECTION 055A-0103 - M.F.T.
 SCALE: AS SHOWN

COMPUTED: F. Derfossa
 DRAWN: W. Strack
 CHECKED: G. Strack

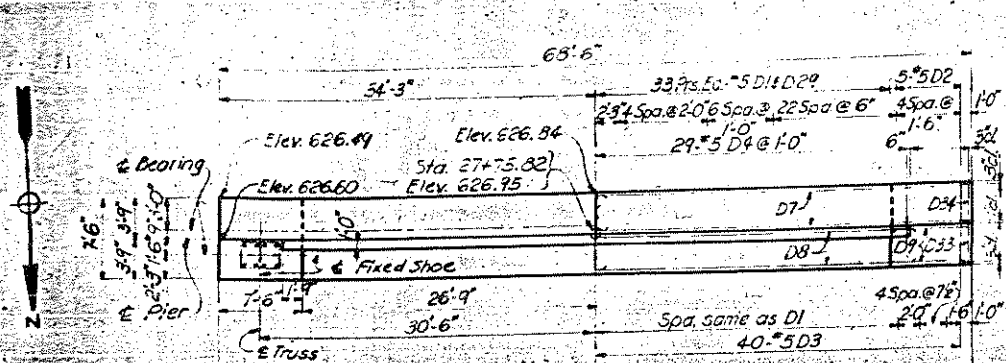
APPROVED: [Signature]

REVISIONS

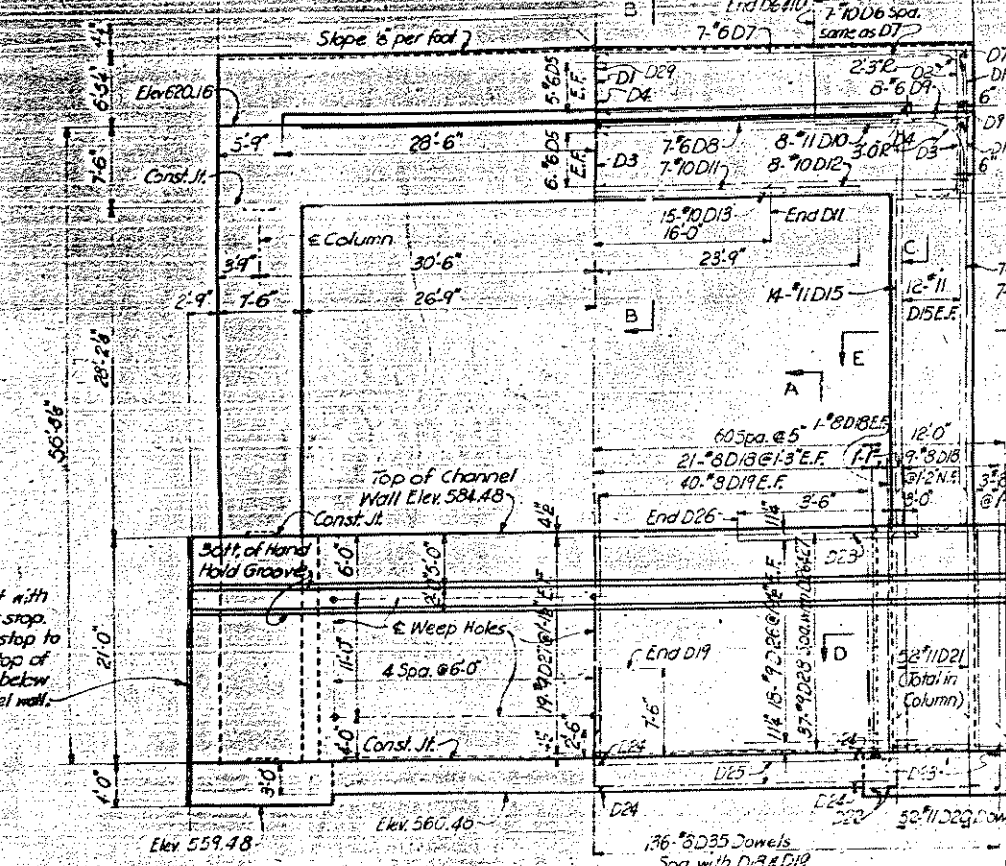
DATE	BY	DESCRIPTION
8-14-62	R.L.	Provided steel between piles

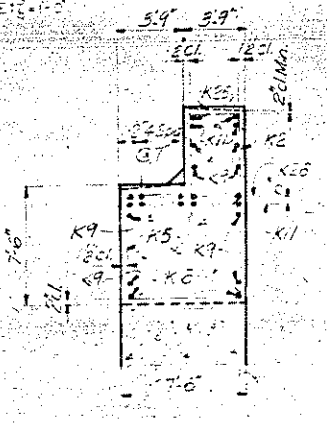
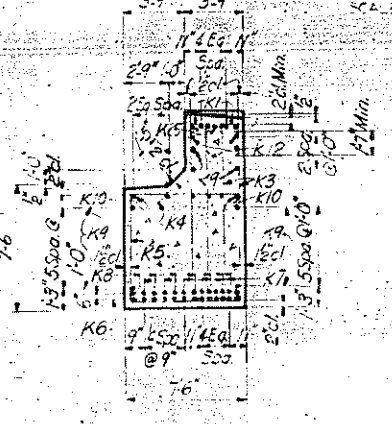
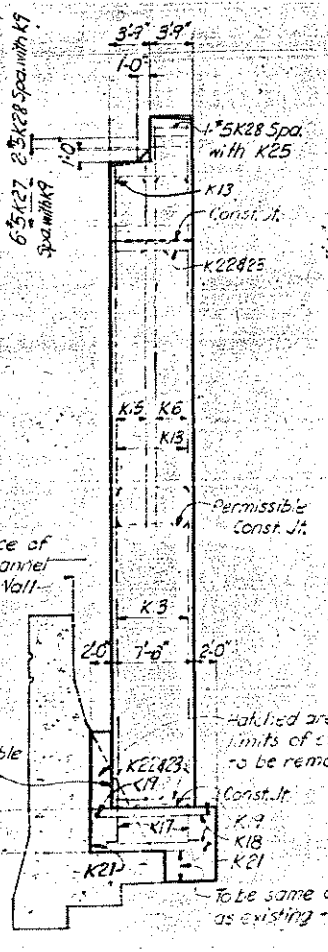
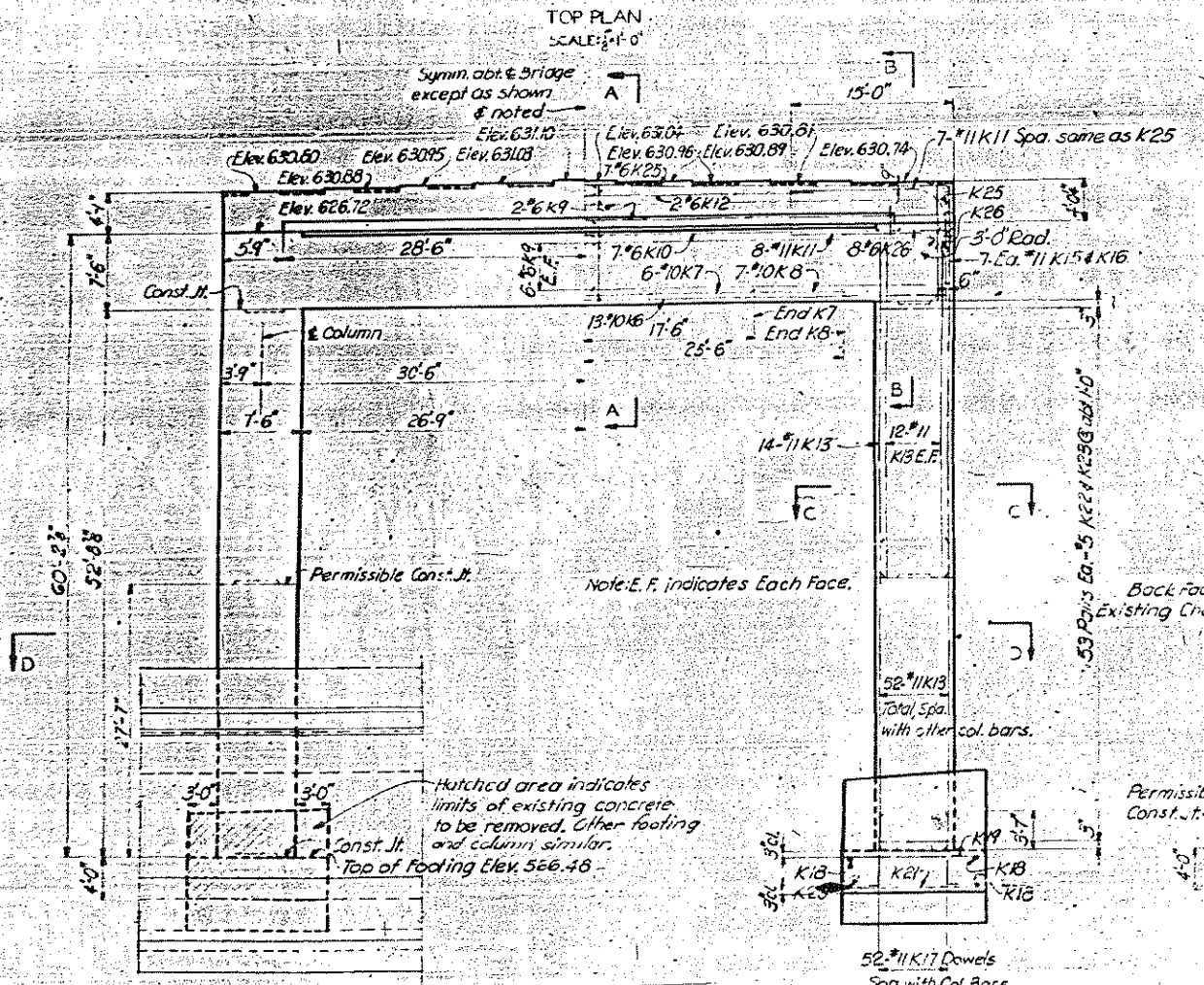
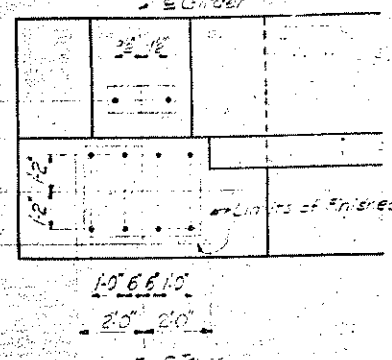
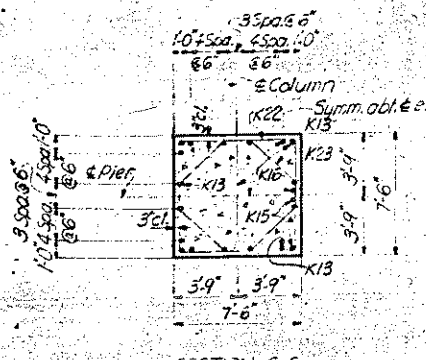
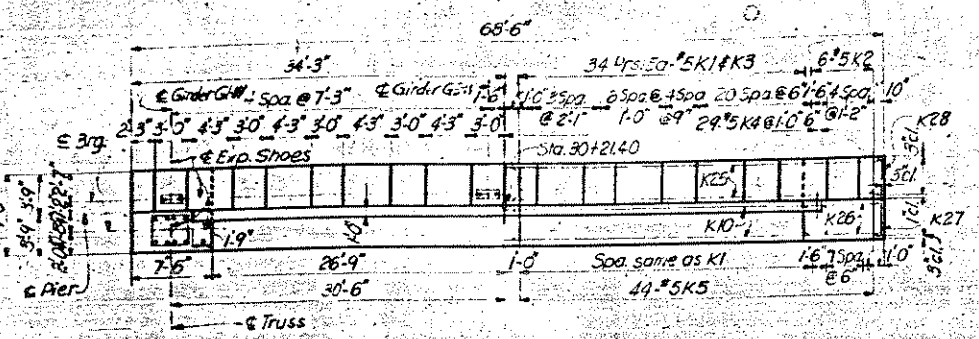
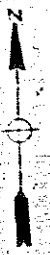
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55A 1961 8 41



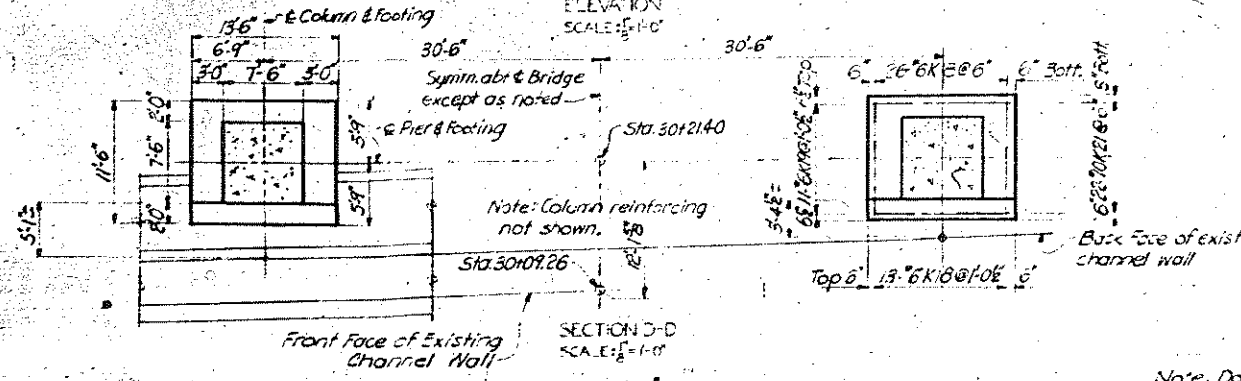
TOP PLAN
SCALE: 1/8"=1'-0"
Note: Elevations shown are top of cap elevations for Spans.
Symm. abt. & Bridge





ANCHOR BOLT WELL
SCALE: 1/4"=1'-0"
Note: Forms for anchor bolt wells shall be located with a template and secured against displacement during pouring of concrete.
After concrete has cured, anchor bolt wells shall be sealed to prevent corrosion of moisture. See Special Provisions.
After superstructure steel has been erected and adjusted, anchor bolts shall be securely grouted into wells with a non-shrink grout.

NOTES
Existing channel wall or back face of existing channel wall or any existing channel wall shall be removed with construction of Pier shall be removed and the location left in place shall be plugged with concrete.
The cost of removing and plugging drain tile shall be included in the price bid for Class X Concrete in Substructure.
See Sheet 21 for Anchor Bolt Anchor bolts for approach spans shall be cast in place.



Note: Do not scale this drawing. Follow dimensions.

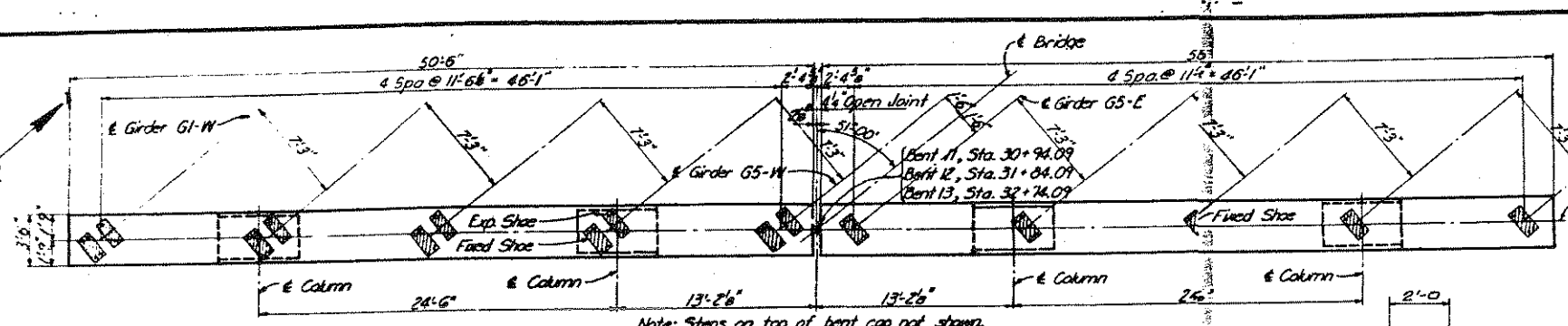
PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS
WILLIAM J. MCATIMER
SUPERINTENDENT OF HIGHWAYS

PIER 10
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

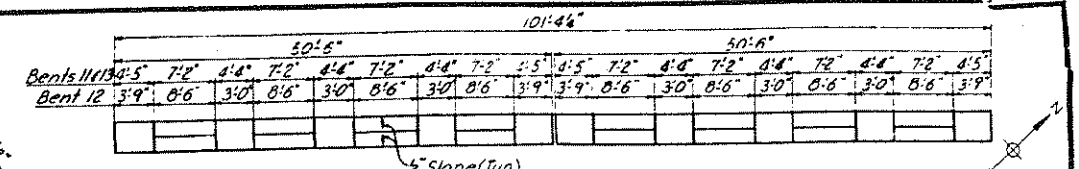
REVISIONS		
DATE	BY	DESCRIPTION

COMPUTED		SECTION	055A-0103-M.F.T.
DRAWN		SCALE	AS SHOWN
CHECKED		APPROVED	

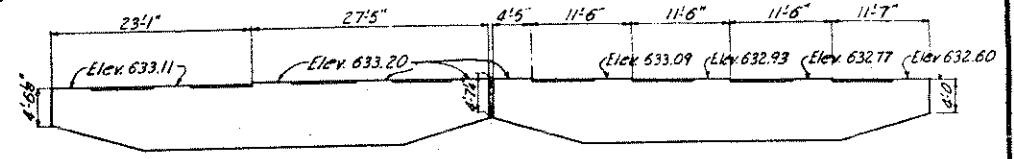


Note: Steps on top of bent cap not shown.
Shoes shown East of & Bridge are for Bent 12.
Shoes shown West of & Bridge are for Bent 11.
Shoes for Bent 13 are same as Bent 11 by 180° rotation.

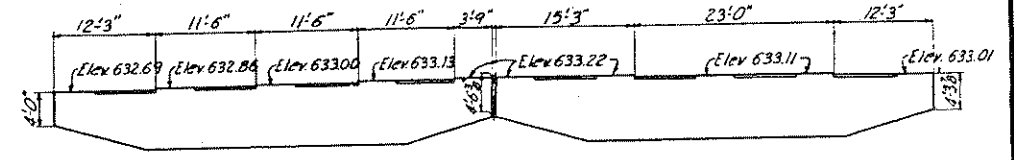
TOP PLAN
SCALE: 3/16"=1'-0"



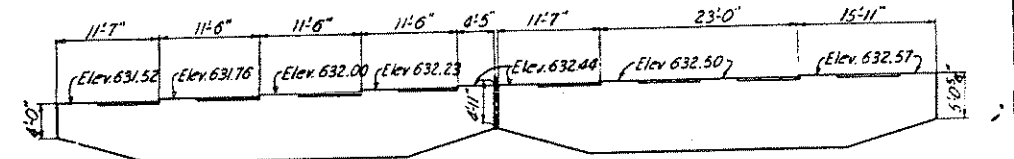
PLAN-BENTS 11, 12 & 13



ELEVATION-BENT 13

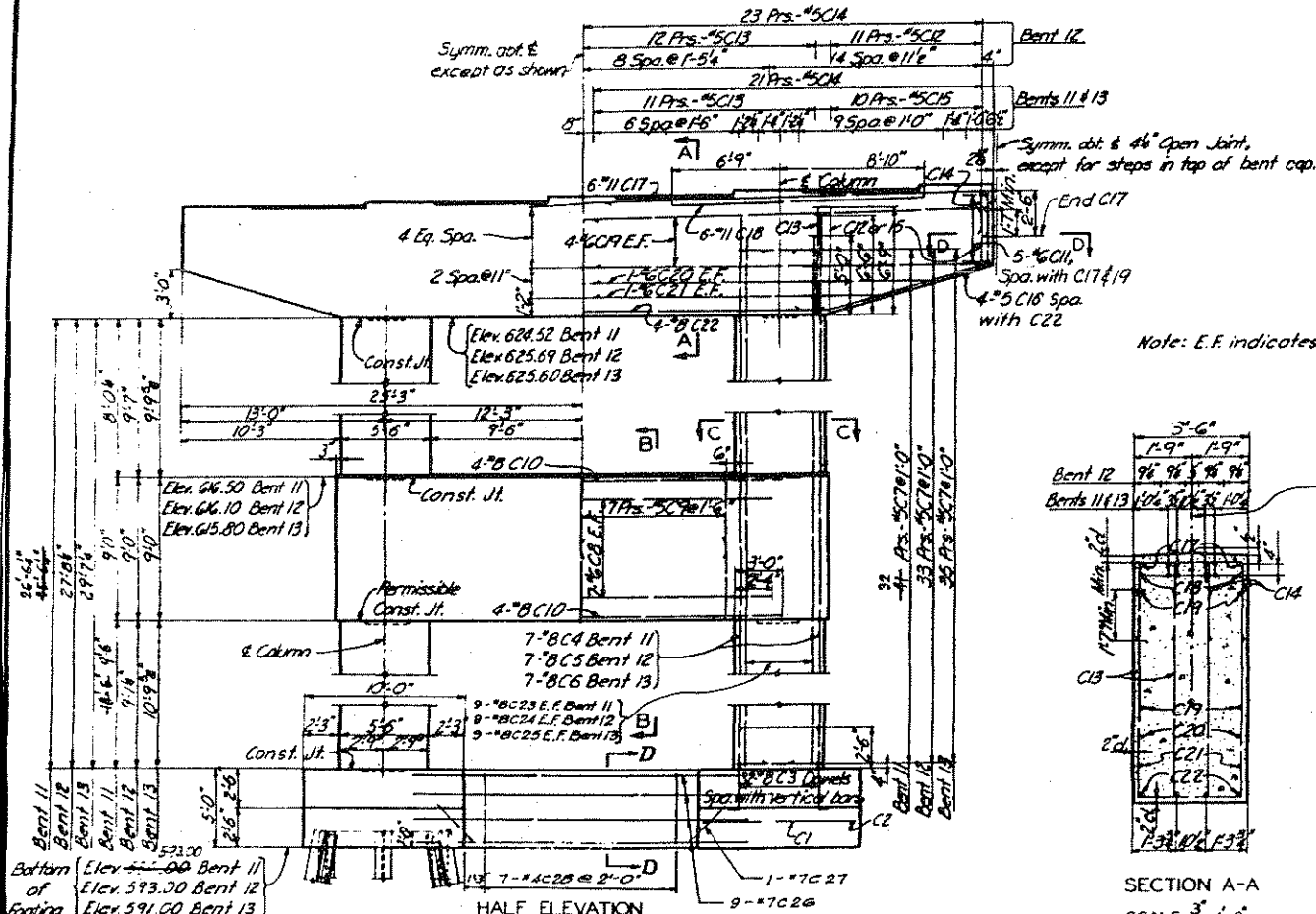


ELEVATION-BENT 12

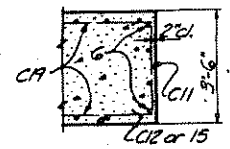


ELEVATION-BENT 11

CAP DETAILS
NOT TO SCALE
Note: Views shown are looking ahead on stationing.



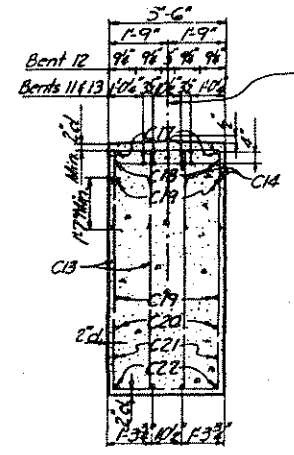
HALF ELEVATION
SCALE: 3/8"=1'-0"



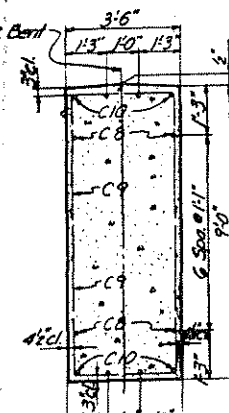
SECTION D-D
SCALE: 3/8"=1'-0"



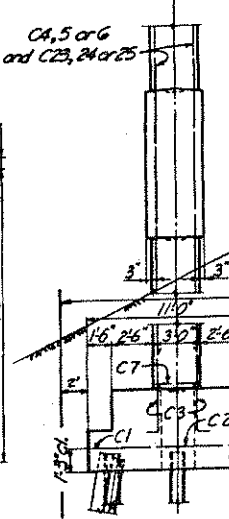
SECTION D-D
SCALE: 3/8"=1'-0"



SECTION A-A
SCALE: 3/8"=1'-0"



SECTION B-B
SCALE: 3/8"=1'-0"

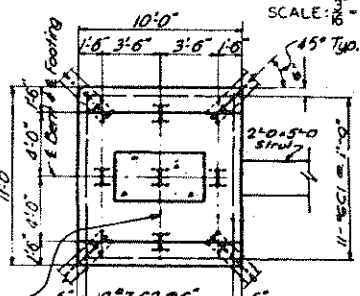


END VIEW
SCALE: 3/8"=1'-0"

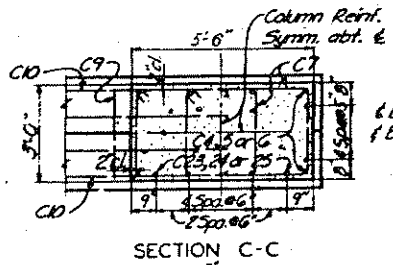
Note: E.F. indicates Each Face.

Note: Reinforcing in Cap not shown.

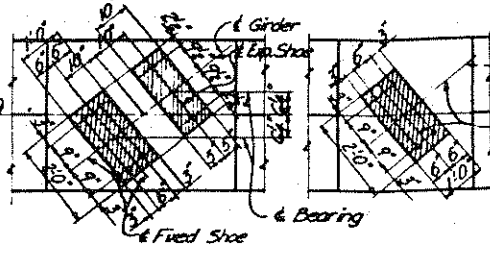
Note: 9-#4 CP73 Piles required per footing. Butter corner piles 2 in 12 in direction shown. File spacing shown is at bottom of footing. Max. design load = 86 tons pile.



FOOTING PLAN
SCALE: 3/8"=1'-0"



SECTION C-C
SCALE: 3/8"=1'-0"



TYPICAL ANCHOR BOLT PLAN
SCALE: 3/8"=1'-0"

Note: Do not scale this drawing. Follow dimensions.

NOTES

See Sheet 6 for pile splice.
See Sheet 21 for Anchor Bolts. Anchor bolts shall be cast in place.
See Specifications for backfilling cofferdams at Piers 11, 12 and 13 with Stabilized Sand Embankment.

REVISION IN BILL OF MATERIAL	
DUO TO RAISING BOTTOM OF FIG. OF PIER II (6" RAISE TO ELEV. 598.00)	
DECREASE OF CLASS-X CONCRETE	22 CU-YDS.
DECREASE OF REINFORCEMENT BARS	4,108 LBS.
DECREASE OF CLASS-A EXCAVATION	322 CU-YDS.
INCREASE OF FURNISHING 14#73 STEEL PILES	254 LIN. FT.
INCREASE OF DRIVING 14#73 STEEL PILES	324 LIN. FT.
DECREASE OF STABILIZED SAND FILL	450 TONS

REVISIONS		
DATE	BY	DESCRIPTION
8-14-62	R.L.	Provided Steel columns for Pier II.
12-4-62	M.L.	RAISED FIG. ELEV. OF BENT II (9'-0" RAISE)

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

WILLIAM J. BORTNER
SUPERVISOR OF HIGHWAYS

**BENTS 11, 12 AND 13
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL**

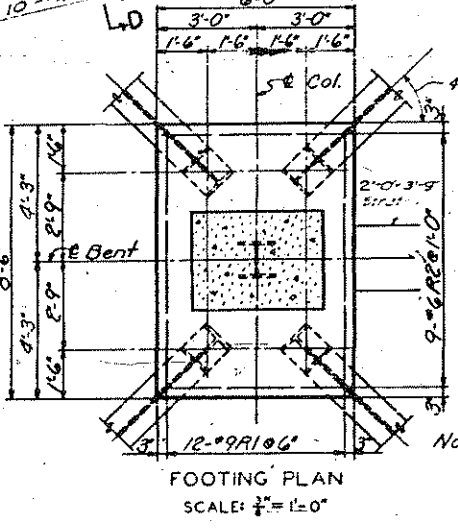
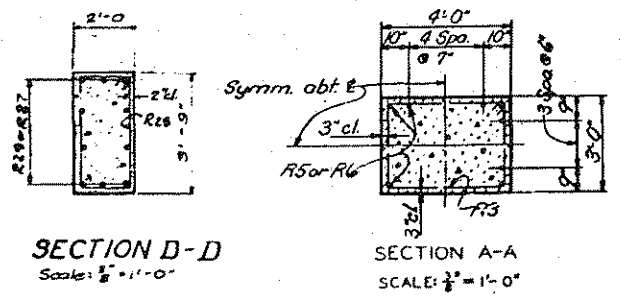
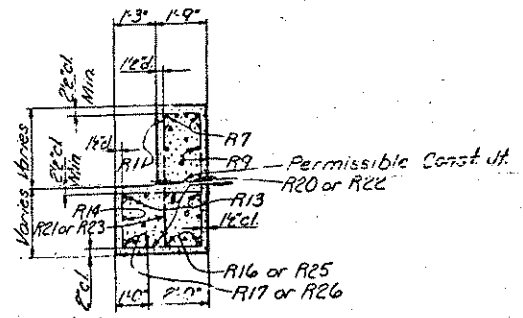
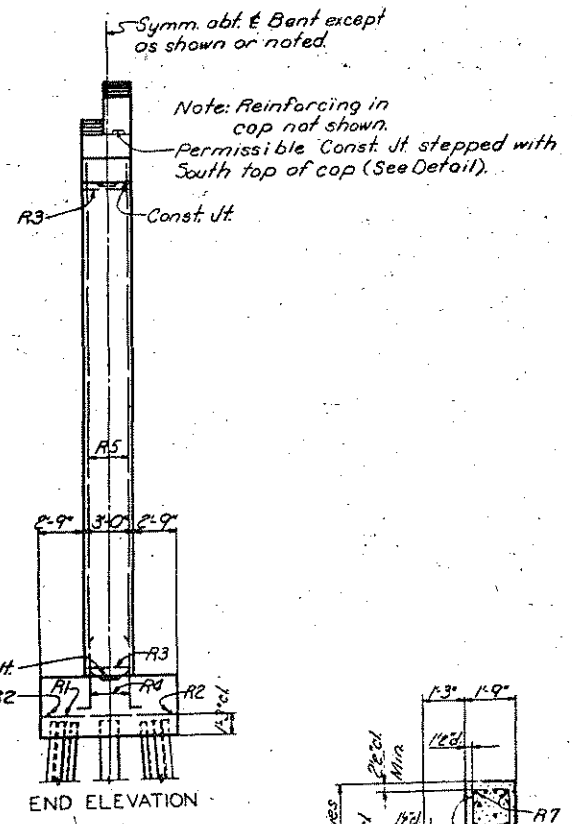
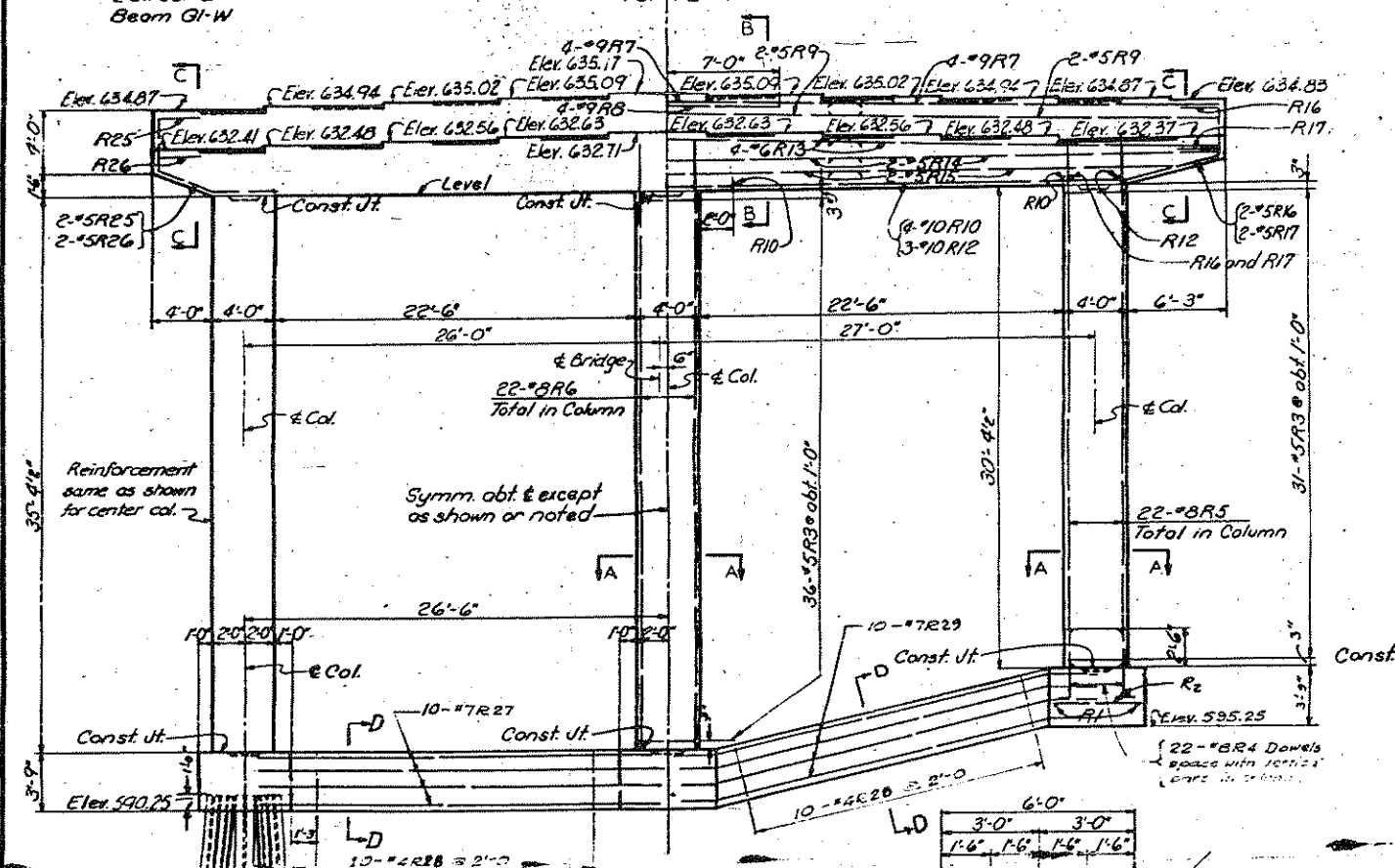
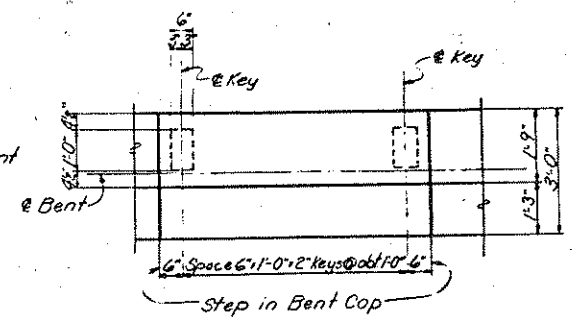
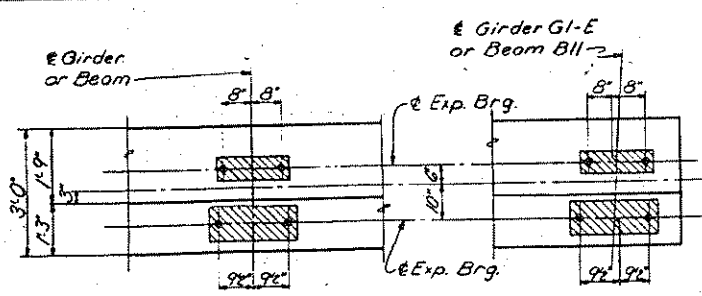
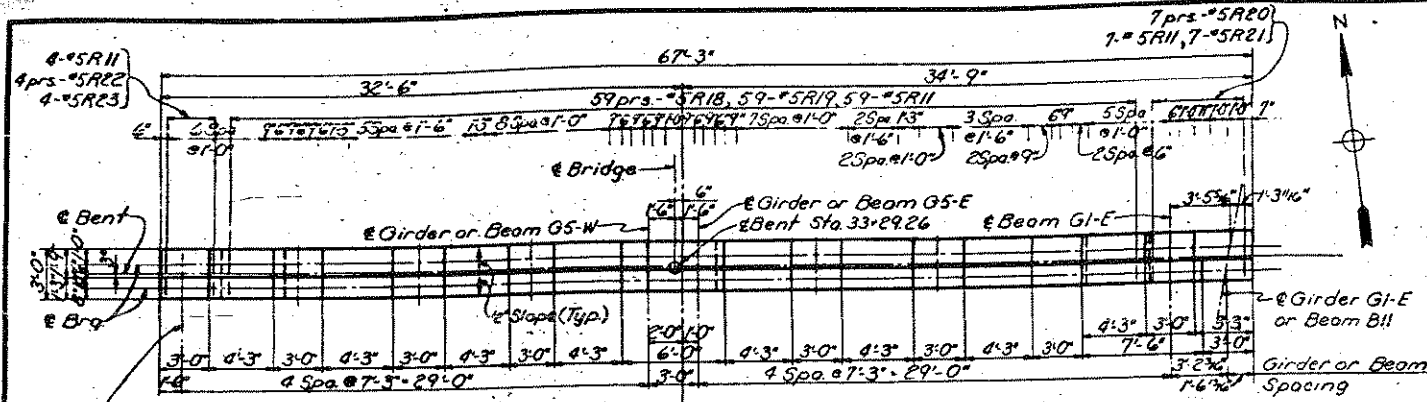
COMPUTED BY F. Dertogno
DRAWN BY W. J. Ballard
CHECKED BY R. E. Beck

APPROVED BY [Signature]

SECTION 055A-0103 - M.F.T.
SCALE AS SHOWN
APPROVED [Signature]

DATE	BY	DESCRIPTION
8-14-62	R.L.	Provided Steel columns for Pier II.
12-4-62	M.L.	RAISED FIG. ELEV. OF BENT II (9'-0" RAISE)

55A 1961 11 44



Note: 5-14BP73 Piles in footing. Batter corner piles 2in/12 in directions shown. Piles spaced at bottom of footing. Max design load = 60 tons/pile.
Note: Do not scale this drawing. Follow dimensions.

NOTES
See Sheet G for Pile Splice.
See Sheet 21 for Anchor Bolts.
Anchor bolts shall be cast in place.

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ST. LOUIS, MISSOURI

REVISIONS		
DATE	BY	DESCRIPTION
8-14-67	R.L.	Tranded strut between Pier Pigs.

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

WILLIAM J. BORTIMER
SUPERVISOR OF CONSTRUCTION

BENT 14
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

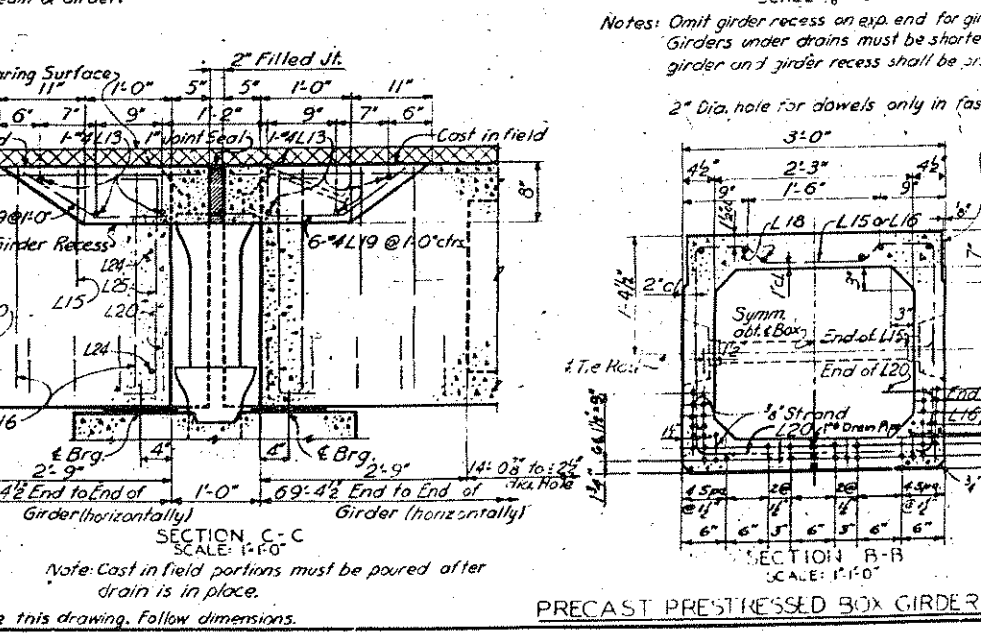
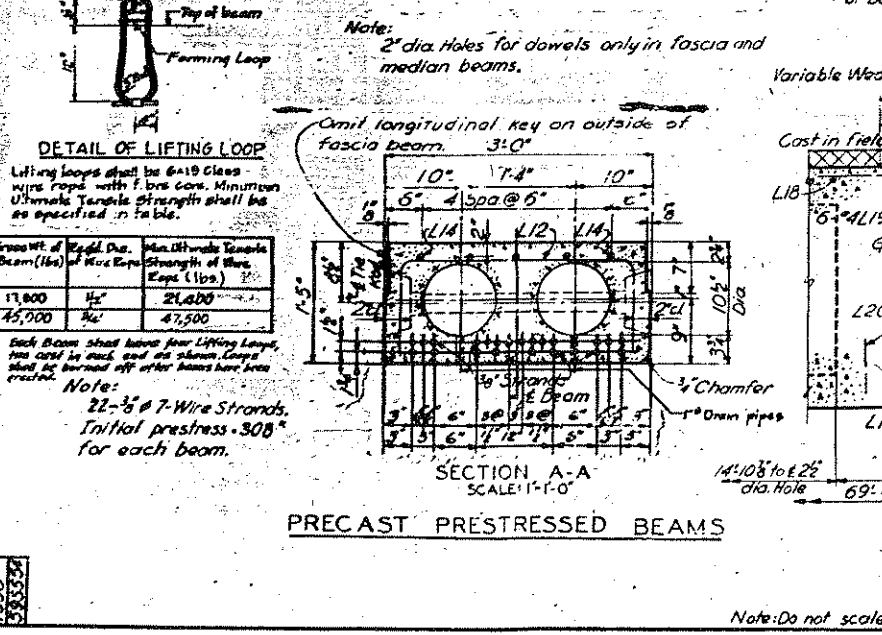
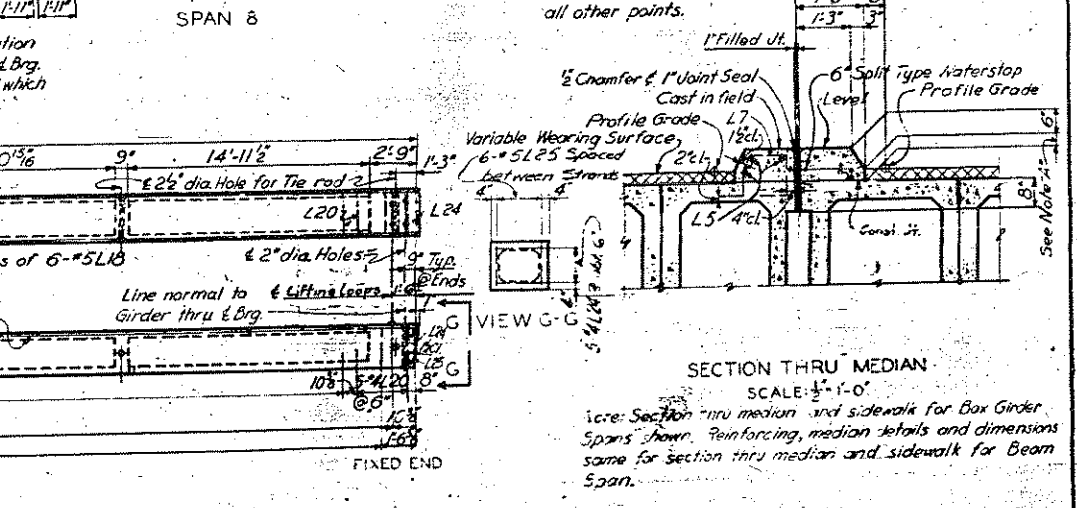
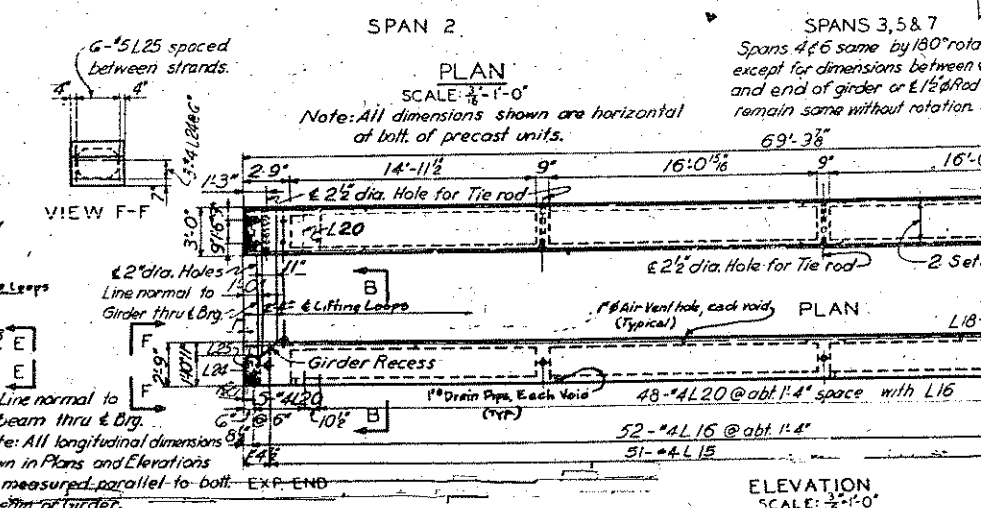
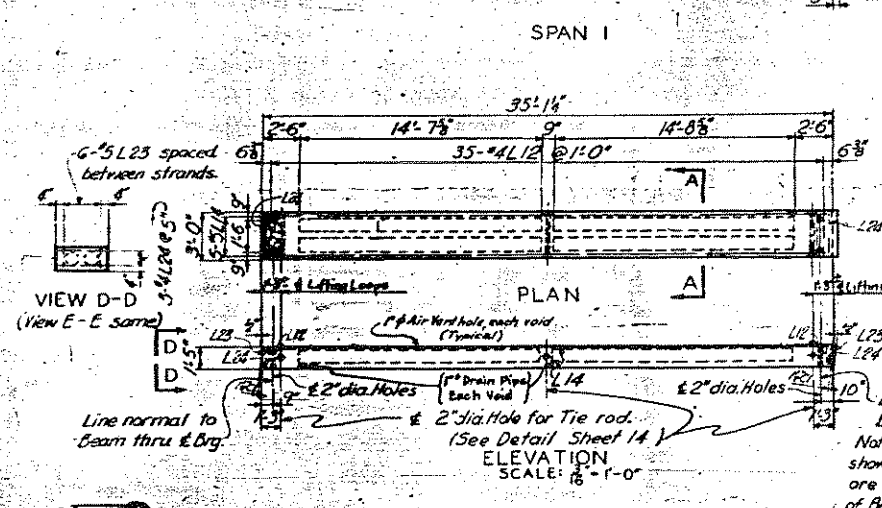
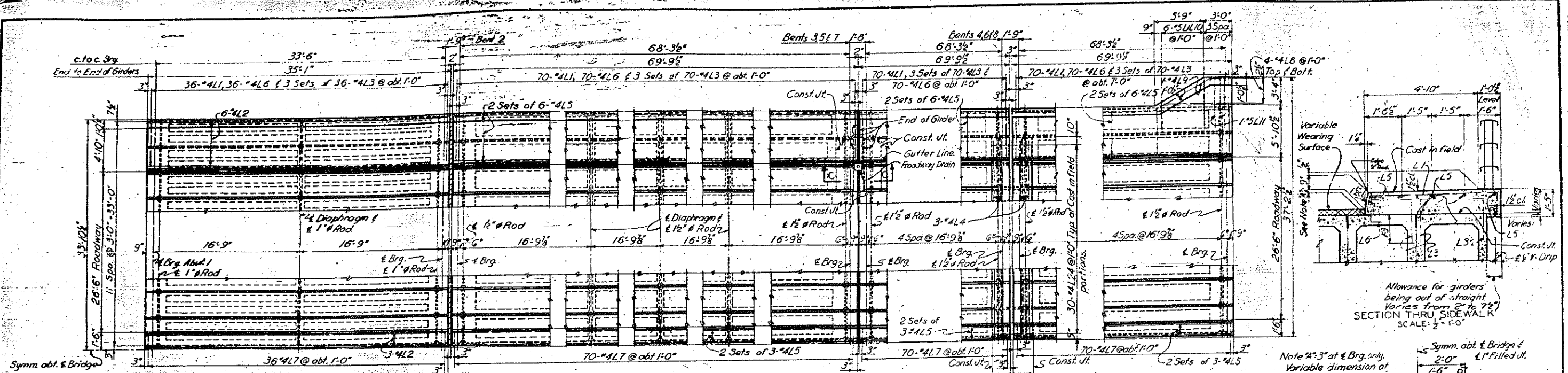
SECTION 055A-0103 - M.F.T.
AS SHOWN

APPROVED: *[Signature]*
DATE: 8/14/67

DATE	BY	DESCRIPTION
8-14-67	R.L.	Tranded strut between Pier Pigs.

COMPUTED: *[Signature]*
DRAWN: *[Signature]*
CHECKED: *[Signature]*
APPROVED: *[Signature]*

PROJECT	55A
YEAR	1961
SHEET	12
TOTAL SHEETS	21



NOTES

Work this sheet with Sheets 14 and 15. See Sheet 32 for roadway drains. The ends of all girders and beams shall be truly vertical in their final erected position.

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

PREPARED BY: SVERDRUP & PARCEL, INC. ENGINEERS - ARCHITECTS ST. LOUIS, MISSOURI

PRECAST PRESTRESSED CONCRETE WESTERN AVENUE RELOCATION OVER CALUMET SAG CHANNEL

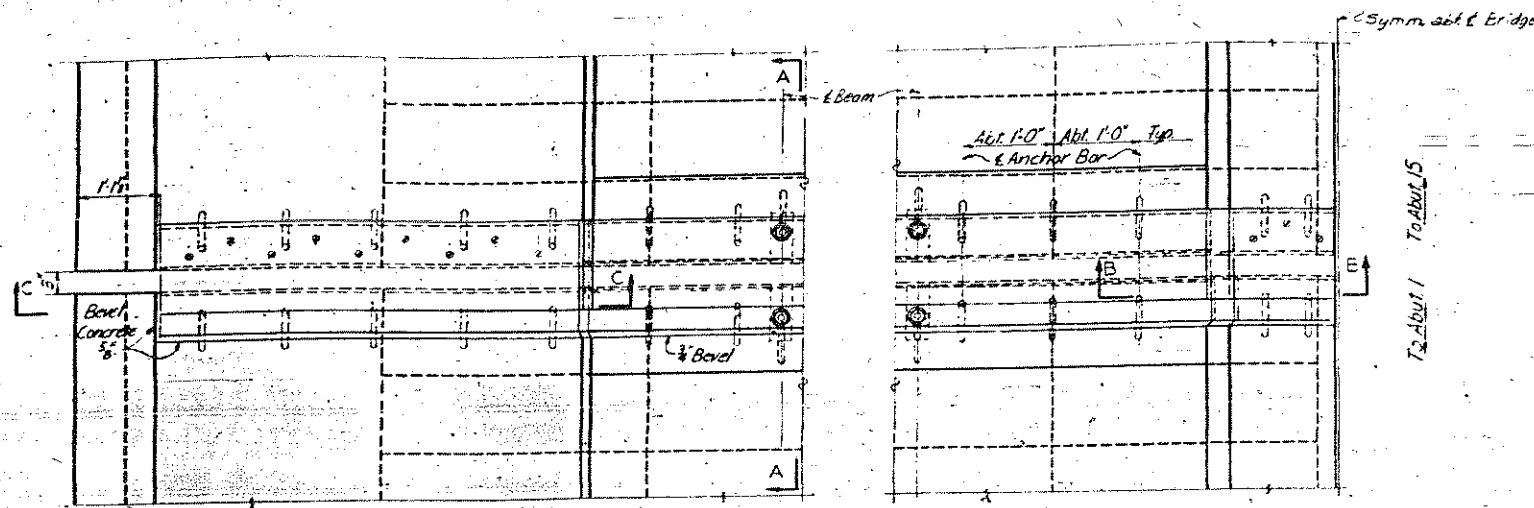
SECTION 055A-0103 - M.F.T.

SCALE: AS SHOWN

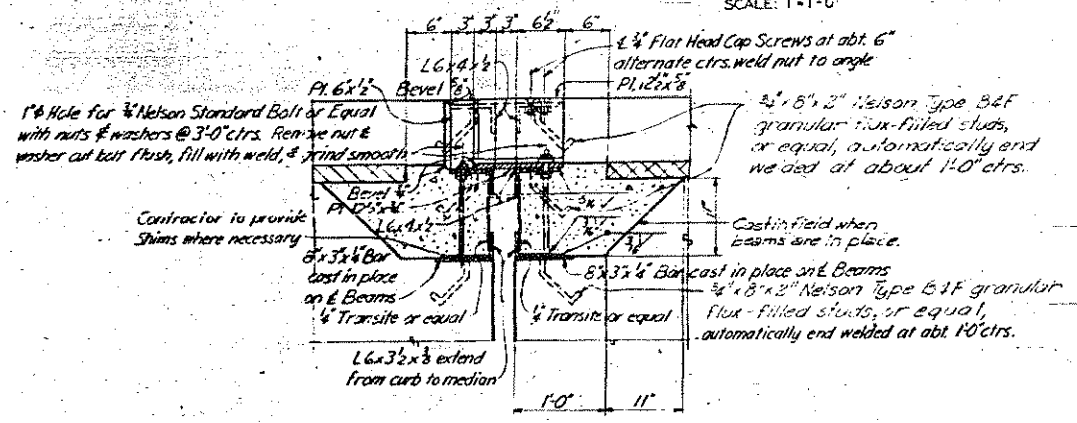
APPROVED: [Signature]

DATE	BY	DESCRIPTION
7-28-60	B.R.	SPACING OF STRANDS TO CONFORM TO STANDARDS (1) C.C.
8-14-61	M.E.	PROVIDE AIR VENT HOLE IN LIFTING LOOPS

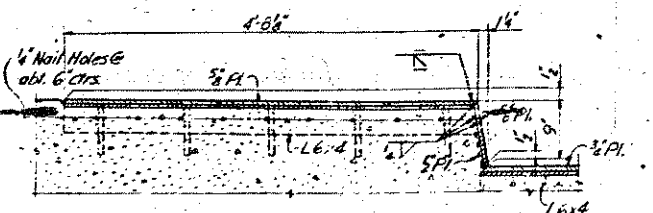
55A 1961 13 44



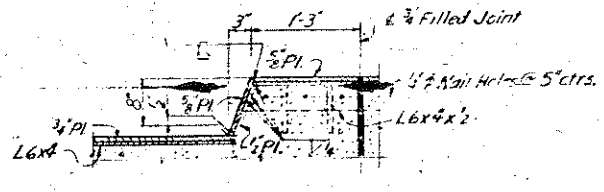
PART PLAN
EXPANSION DEVICE AT BENTS 4, 6 & 8
SCALE: 1"=1'-0"



SECTION A-A
SCALE: 1"=1'-0"



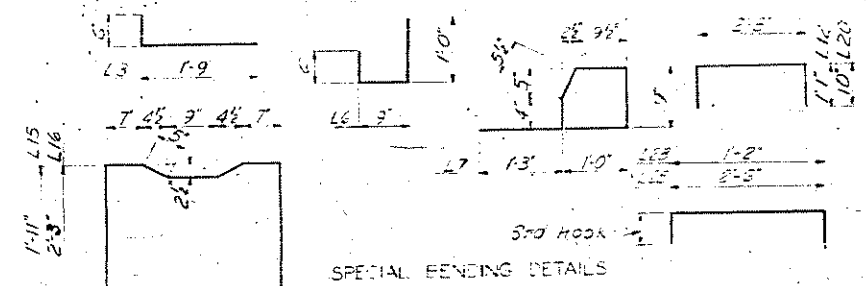
SECTION C-C
SCALE: 1"=1'-0"



SECTION B-B
SCALE: 1"=1'-0"

Note A: 8-L24 bars required for each girder with a recess on one end and 10-L24 bars for each girder without a recess. Heights shown for L24 bars are based on 5 bars per girder except for fascia girders where the height is based on 10 bars

PRECAST PRESTRESSED CONCRETE BEAM AND GIRDER QUANTITIES						
MARK	NO.	SIZE	LENGTH	TYPE	BAR REQ. - PER UNIT	
					ORDER ON BEAM TYPE	INTERIOR MEDIAN FASCIA
L7	70	4	21.5	Soil		28
L6	36	2	21.5	Soil		32
L7	36	2	21.5	Soil		32
L12	35	2	4.16	Soil	113	113
L14	5	5	30.2	Soil	151	151
L24	12	2	30.2	Soil	151	151
Reinforcement Bars					228	228
22'-4" Wide Channels					284	284
Precast Prestressed Concrete Curbs					52	52
Median of Bridge					170	170
Interior of Bridge					170	170
SUMMARY					10,000	10,000
Type					Beams	Beams
Interior without Access					16	16
Interior with Access						66
Median						14
Fascia						14
Adjacent to Fascia without Drain						2
Adjacent to Fascia under Drain						12
Interior under Drain						12
Total					22	154



NOTED
All expansion devices are shown in a normal position at a temperature of 50°F. All expansion devices shall be fabricated and erected to fit roadway. All metal of expansion devices is included in the quantity of Structural Steel. Longitudinal dimensions shown are horizontal. All exposed vertical surfaces on the inside face of joints shall be given two coats of red lead paint. Work this sheet with Sheets 13 & 14.

REVISIONS		
DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

PRECAST PRESTRESSED CONCRETE
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

SECTION 055A-0103-M.F.T.
SCALE: 1"=1'-0"

COMPUTED
DRAWN by *Butterfield*
CHECKED
APPROVED *Walter J. Steidl*

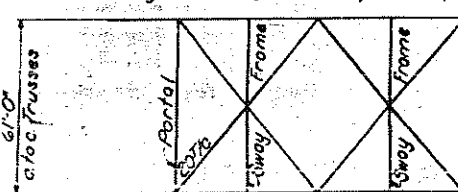
55A	1961	15	41
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Note: Do not scale this drawing. Follow dimensions.

TABLE OF TRUSS MEMBERS AND STRESSES

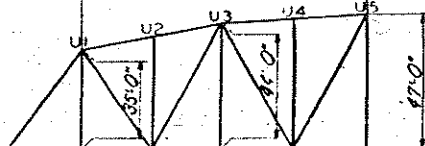
Member	DL	LL	I	Sidewalk LL (%)	75%	225%	DL+LL	DL+LL	DL+LL	Area in sq. in	Furnished	Net	Material
L0-L2	475T	112T	15T	17T	40T	127T	18T	69T	637T	515T	44.94	35.44	4x4-1/2, 2Pls 22x18, 2Cov Pls 16x18
L2-L4	883T	208T	28T	31T	77T	237T	34T	1150T	1186T	960T	80.44	64.44	4x4-1/2, 2Pls 22x18, 2Pls 14x18, 2Cov Pls 16x18
L4-L6	983T	232T	32T	35T	90T	277T	42T	1282T	1324T	1073T	92.76	74.26	4x4-1/2, 2Pls 22x18, 2Pls 14x18, 2Cov Pls 16x18
L0-U1	835C	197C	27C	30C	17C	5C	8C	1089C	1097C	852C	83.44	67	4x4-1/2, 2Pls 22x18, 2Pls 14x18, 2Cov Pls 16x18
U1-U3	762C	179C	24C	27C	15C	5C	8C	992C	1000C	750C	71.00	58	4x4-1/2, 2Pls 22x18, 2Pls 14x18, 2Cov Pls 16x18
U3-U5	977C	230C	31C	35C	127C	187C	277C	1273C	1281C	1073C	92.76	74.26	4x4-1/2, 2Pls 22x18, 2Pls 14x18, 2Cov Pls 16x18
U1-L2	481T	125T	17T	18T	10T	3T	5T	641T	649T	515T	44.94	35.44	4x4-1/2, 2Pls 22x18, 2Pls 14x18, 2Cov Pls 16x18
L2-U3	278C	74C	13C	13C	7C	2C	3C	398C	406C	327C	27.16	23	2-18x25, 2Cov Pls 18x18
U3-L4	192T	83T	11T	11T	6T	2T	3T	297T	305T	273T	21.70	18	2-15x33, 2Cov Pls 18x18
L4-U5	18C	61C	8C	8C	4C	1C	2C	124C	126C	101C	27.30	20.10	2-15x33, 2Cov Pls 18x18
U1-L1	127T	85T	26T	27T	15T	5T	8T	243T	251T	199T	16.30	13	4Bulb 4x6x3/8x13.9, 1Pl 18x16
U2-L2	21C	76C	11C	11C	6C	2C	3C	212C	220C	169C	13.30	11	2-12x25, 2Cov Pls 18x18
U3-L3	130T	85T	26T	27T	15T	5T	8T	243T	251T	199T	16.30	13	4Bulb 4x6x3/8x13.9, 1Pl 18x16
U4-L4	21C	76C	11C	11C	6C	2C	3C	212C	220C	169C	13.30	11	2-12x25, 2Cov Pls 18x18
U5-L5	127T	85T	26T	27T	15T	5T	8T	243T	251T	199T	16.30	13	4Bulb 4x6x3/8x13.9, 1Pl 18x16
Ro	768	180	25	27	22	7	9	1000	1009	790			

At Lower Chord
 ** Includes reversal due to passage of live load for which 100% of dead load is assumed effective.
 ** Member proportioned for bending stresses in combination with the stresses indicated in the above table.
 Allowable stresses for combination of loadings:
 U+L+I: 100% normal unit stress
 DL+75% Wind+125% normal unit stress
 DL+LL+I+22.5% Wind+LL+Wind+Ls=125% normal unit stress.
 Stresses are given in kips C=Compression; T=Tension.



PLAN OF UPPER LATERALS

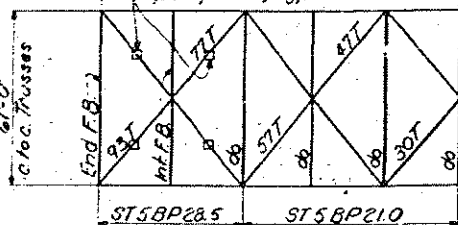
Symm. obt. E



ELEVATION OF TRUSS

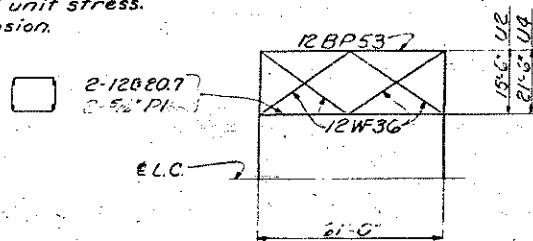
10 Panels @ 24'-3" = 242'-6" (Measured along E Lower Chord)

Hanger Conn. to stringer (Two per panel) Typical



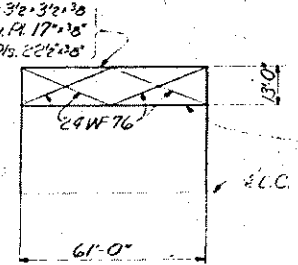
PLAN OF LOWER LATERALS

Note: The geometric shape of the truss shall be determined from the dimensions given above. The angular relationship between members for fabrication shall be in accordance with this geometric shape. All posts, hangers and floorbeams are to be normal to a 2% Grade. Lengths of members are to be adjusted for camber as given on the camber diagram.

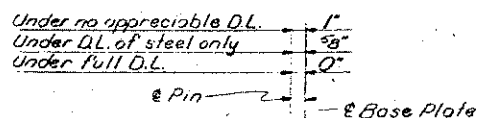


WAY FRAME AT U2&U4

Cov Pls 16x18
 4x4-1/2x3/8
 Cov Pls 17x18
 2Pls 22x18

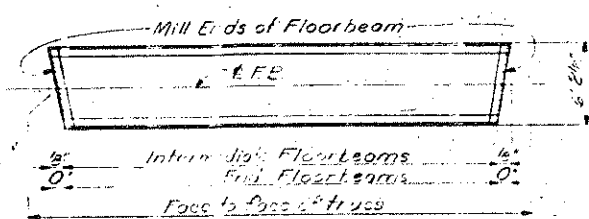


PORTAL AT U1-U4



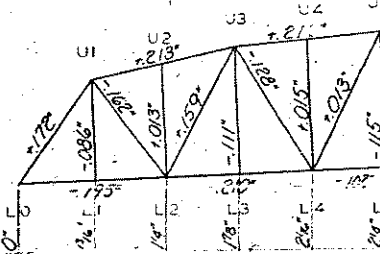
SHOE SETTINGS

Note: Set shoes as shown of median temperature of 55°. For temperatures above and below median temperature, increase or decrease the offsets shown by using coefficient of expansion $W \times 0.0000065$.



FLOORBEAM LEVEL DIAGRAM

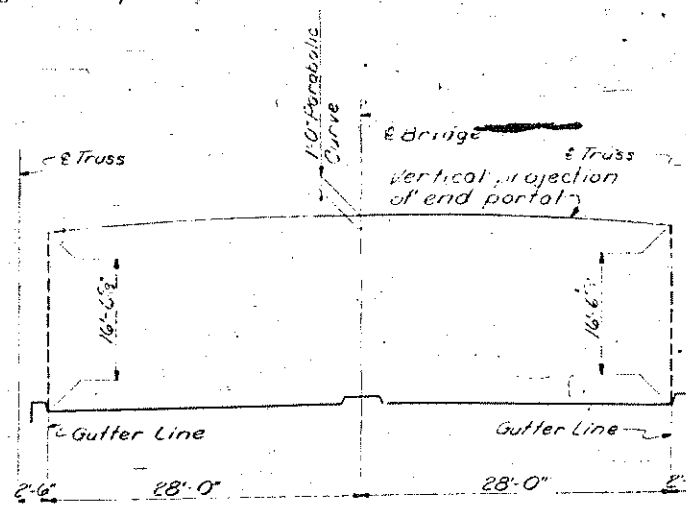
Level ends of all floorbeams as shown so that trusses will be vertical after calculated floorbeam dead load deflection has occurred. Floorbeams shall be level on the so.



DEAD LOAD CAMBER DIAGRAM

Note: Lengths of members to be computed in geometric shape of truss and the corrections indicated are to be applied to these lengths. + indicates lengthening; - indicates shortening. The blocking dimensions given are the positions of the lower chord joints above the geometric shape to provide for dead load deflection.

DL Camber Blocking



OVERHEAD CLEARANCE DIAGRAM

Note: Other overhead bracing provides greater vertical clearance.

Note: Do not scale this drawing. Follow dimensions.

TRUSS SPAN NOTES
 See General Notes on Sheet 3 and Truss Detail Notes on Sheet 17.
 Trusses shall be cambered for the design dead load including future wearing surface.
 Before ordering material the Contractor shall submit to the Engineer for approval, complete plans showing the method of erection he proposes to use, and showing erection stresses in all truss members. Erection stresses shall be composed of the dead load stress of the structure and erection equipment plus the stress from a 45 lb. wind on erection equipment and on the structure as defined in the AASHTO Standard Specifications. Erection stresses shall not exceed the normal unit stresses by more than 25% to prevent any damage to any extra material required for erection and use.

All gusset plates shall be cut back not more than 5" from the back of chord angles or channels, except as otherwise noted on the drawings.
 Access holes may be flame cut provided sloped edges are ground smooth.
 All web stiffeners for these members shall be cut back from the members and floorbeams and shall be removed from the site.

TRUSS SPAN NOTES

See General Notes on Sheet 3 and Truss Detail Notes on Sheet 17.
 Trusses shall be cambered for the design dead load including future wearing surface.
 Before ordering material the Contractor shall submit to the Engineer for approval, complete plans showing the method of erection he proposes to use, and showing erection stresses in all truss members. Erection stresses shall be composed of the dead load stress of the structure and erection equipment plus the stress from a 45 lb. wind on erection equipment and on the structure as defined in the AASHTO Standard Specifications. Erection stresses shall not exceed the normal unit stresses by more than 25% to prevent any damage to any extra material required for erection and use.
 All gusset plates shall be cut back not more than 5" from the back of chord angles or channels, except as otherwise noted on the drawings.
 Access holes may be flame cut provided sloped edges are ground smooth.
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DEPARTMENT OF HIGHWAYS
 COOK COUNTY, ILLINOIS
 WILLIAM J. MORTIMER
 SUPERINTENDENT OF HIGHWAYS

PREPARED BY
 SVERDRUP & PARCEL, INC.
 ENGINEERS - ARCHITECTS
 ST. LOUIS, MISSOURI

TRUSS SPAN STRESS SHEET
 WESTERN AVENUE RELOCATION
 OVER
 CALUMET SAG CHANNEL

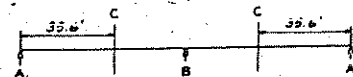
SECTION 055A-0103-M.F.T.
 SCALE NONE
 APPROVED [Signature]

DATE	BY	DESCRIPTION

APPROVED [Signature]
 55A 1961 18 41

PLATE GIRDER SPANS

MAXIMUM MOMENTS AND SHEARS - SPAN 10						
GIRDER		DL	SWLL	LL	I	TOTAL
G1-W	REACTION	22.3	50	9.8	2.9	400
	MOMENT	188	52	62	18	320
G2-W	REACTION	19.3	-	37.0	11.0	67.3
	MOMENT	200	-	320	100	620
G3-W	REACTION	24.0	-	38.8	11.1	73.9
	MOMENT	310	-	426	134	870
G4-W	REACTION	28.5	-	40.1	10.8	79.4
	MOMENT	430	-	533	147	1,110
G5-W	REACTION	29.7	-	20.4	5.3	55.4
	MOMENT	510	-	317	83	910
G5-E	REACTION	31.9	-	20.4	5.2	57.5
	MOMENT	570	-	354	86	990
G4-E	REACTION	42.2	-	42.1	10.1	94.4
	MOMENT	870	-	792	188	1,850
G3-E	REACTION	48.7	-	42.6	9.8	101.1
	MOMENT	1,110	-	900	210	2,220
G2-E	REACTION	55	-	43.1	9.6	107.7
	MOMENT	1,380	-	1,006	224	2,610
G1-E	REACTION	81.8	16.7	12.5	2.7	113.2
	MOMENT	2,208	442	317	73	3,040



MAXIMUM MOMENTS AND REACTIONS - SPANS 11 & 12							
GIRDER	LOADING	MAX. REACTION		MAX. POS. MOMENT		MAX. NEG. MOMENT	
		A	B	C	B	A	B
G1-W & G1-E	DL	50.0	167.0	834	-	-	-1,609
	SWLL	12.0	33.0	226	-	-	-321
	LL	11.9	18.5	202	-	-	-194
	I	2.8	4.3	47	-	-	-46
	TOTAL	76.7	222.8	1,309	-	-	-2,170
G2-W THRU G5-W & G5-E THRU G2-E	DL	35.0	117.0	590	-	-	-1,102
	LL	42.0	65.0	710	-	-	-661
	I	10.0	16.0	170	-	-	-157
	TOTAL	87.0	198.0	1,470	-	-	-1,920

MAXIMUM MOMENTS AND SHEARS - SPAN 13						
GIRDER		DL	SWLL	LL	I	TOTAL
G1-W	REACTION	69.1	13.7	12.3	2.8	97.9
	MOMENT	1,580	310	260	60	2,210
G2-W	REACTION	42.2	-	42.1	10.1	94.4
	MOMENT	870	-	792	188	1,850
G3-W	REACTION	37.2	-	41.5	10.5	89.2
	MOMENT	680	-	686	174	1,540
G4-W	REACTION	31.7	-	40.6	10.8	83.1
	MOMENT	510	-	580	150	1,240
G5-W	REACTION	23.8	-	19.6	5.4	48.8
	MOMENT	330	-	240	60	630
G5-E	REACTION	21.8	-	19.3	5.4	46.5
	MOMENT	280	-	217	63	560
G4-E	REACTION	19.8	-	37.2	11.2	68.2
	MOMENT	213	-	332	100	645
G3-E	REACTION	15.6	-	34.5	10.3	60.4
	MOMENT	130	-	227	63	420
G2-E	REACTION	11.3	-	30.4	9.1	50.8
	MOMENT	70	-	137	43	250
G1-E	REACTION	12.0	2.4	6.8	2.0	23.2
	MOMENT	48	10	24	7	89

TRUSS SPAN FLOOR SYSTEM

INTERIOR STRINGERS			
LOADING	MAX. MOMENT	MAX. SHEAR	SECTION
DL	58	9.6	24WF76
LL	150.7	28	
I	45.2	8.4	
TOTAL	253.9	46.0	

EXTERIOR STRINGERS			
LOADING	MAX. MOMENT	MAX. SHEAR	SECTION
DL	68	11.3	24WF76
LL	145.5	27	
I	43.6	8.1	
TOTAL	257.1	46.4	

INTERIOR FLOORBEAMS			
LOADING	MAX. MOMENT	MAX. SHEAR	SECTION
DL	1,585	102	74" X 38" WEB 4L5 6 X 6 X 3/4 2 Cov. 14 X 3/4 2 Cov. 14 X 1/2
LL	1,270	65	
I	343	23	
TOTAL	3,198	210	

END FLOORBEAMS			
LOADING	MAX. MOMENT	MAX. SHEAR	SECTION
DL	979	62	74" X 38" WEB 4L5 6 X 6 X 3/4 2 Cov. 14 X 3/4
LL	1,180	79.1	
I	319	21.4	
TOTAL	2,478	162.5	

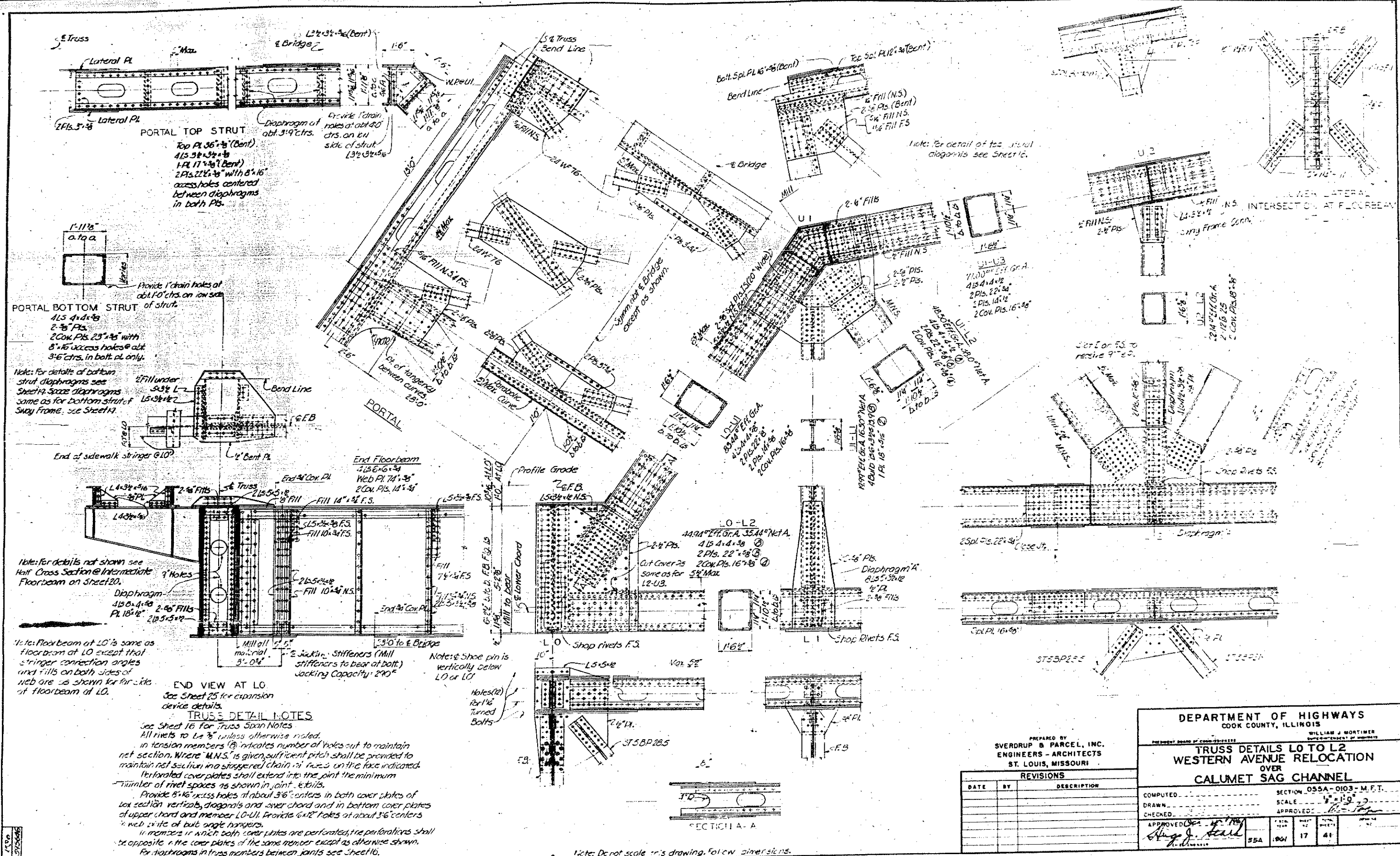
Jacking stresses do not govern design.

Note: All moments are given in foot-kips.
All shears and reactions are given in kips.

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REVISIONS		
DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS COOK COUNTY, ILLINOIS		WILLIAM J. MORTIMER DIRECTOR	
TRUSS FLOOR SYSTEM & PLATE GIRDER STRESS SHEET WESTERN AVENUE RELOCATION OVER CALUMET SAG CHANNEL			
COMPUTED T. DELLO	SECTION 085A-0805-N.T.P.	SCALE NONE	
DRAWN R.E.R.	CHECKED R.W.HRD	APPROVED	
APPROVED	Flood Year		



PORTAL TOP STRUT
 Top Pl. 36" x 1/2" (Bent)
 4 L.S. 3" x 3/4" x 1/2"
 1 Pl. 17" x 3/4" (Bent)
 2 Pls. 22" x 3/4" with 8" x 16" access holes centered between diaphragms in both Pls.

PORTAL BOTTOM STRUT
 4 L.S. 4" x 1/2" x 3/4"
 2 Pls. 23" x 3/4" with 8" x 16" access holes @ abt. 3'6" ctrs. in both pl. only.

END VIEW AT L0
 See Sheet 25 for expansion device details.

TRUSS DETAIL NOTES
 See Sheet 16 for Truss Span Notes
 All rivets to be 3/4" unless otherwise noted.
 in tension members @ indicates number of holes cut to maintain net section. Where "M.N.S." is given, sufficient pitch shall be provided to maintain net section in a staggered chain of rivets in the face indicated.
 Perforated cover plates shall extend into the joint the minimum number of rivet spaces as shown in joint details.
 Provide 8" x 16" access holes at about 3'6" centers in both cover plates of box section verticals, diagonals and lower chord and in bottom cover plates of upper chord and member L0-U1. Provide 6" x 2" holes at about 3'6" centers in web site of butt angle hangers.
 In members in which both cover plates are perforated, the perforations shall be opposite in the cover plates of the same member except as otherwise shown.
 For diaphragms in truss members between joints see Sheet 16.

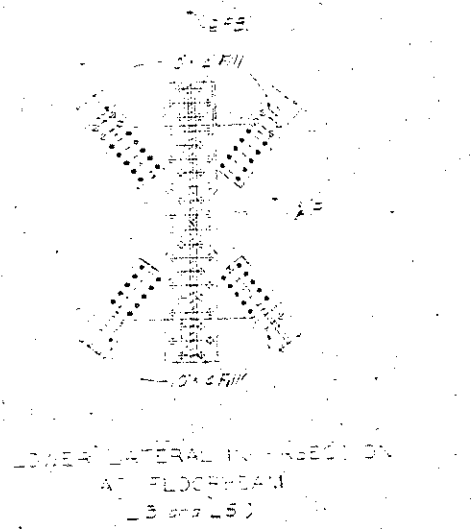
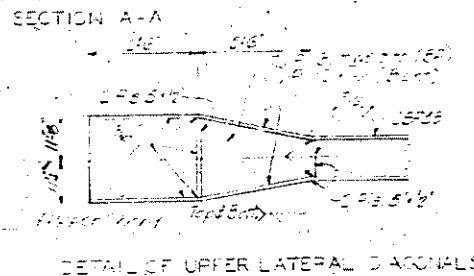
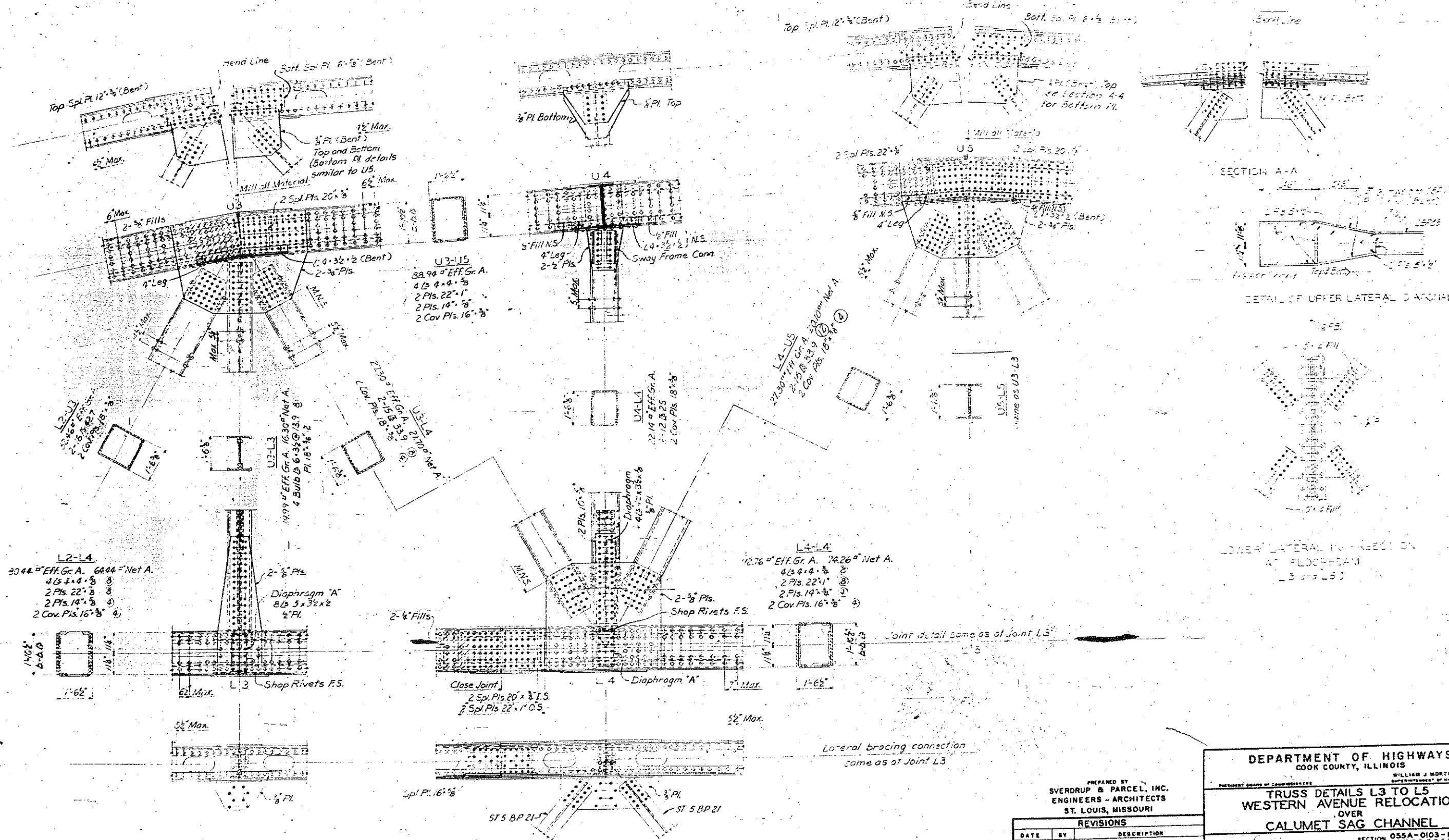
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DATE	BY	DESCRIPTION

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**TRUSS DETAILS L0 TO L2
 WESTERN AVENUE RELOCATION
 OVER
 CALUMET SAG CHANNEL**

SECTION 055A-0103 - M.F.T.
 SCALE 1" = 10'
 APPROVED: *[Signature]*
 55A 061 17 41



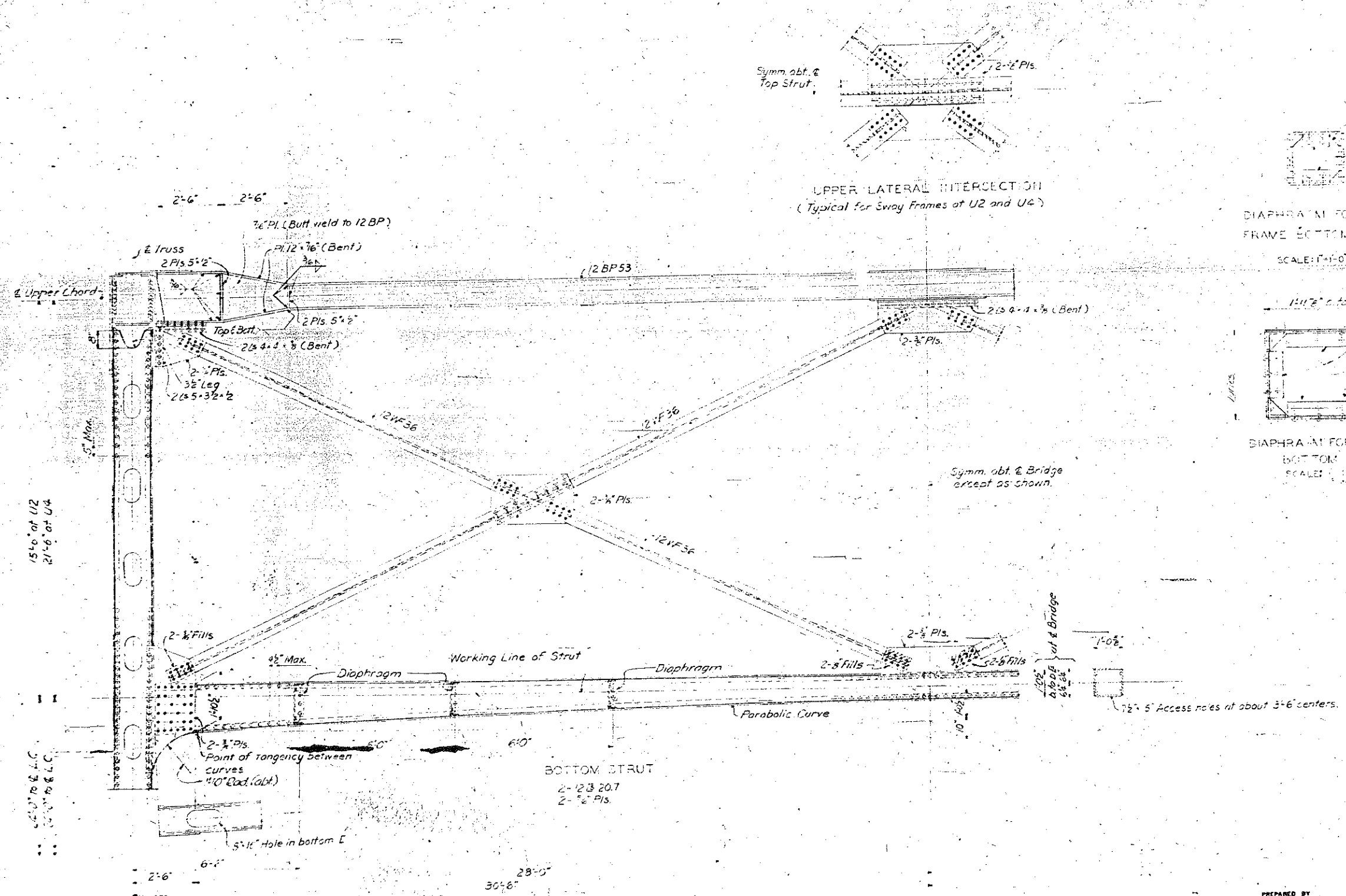
Note: Do not scale this drawing. Follow dimensions.

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DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS
WILLIAM J. MORTIMER
SUPERINTENDENT OF HIGHWAYS
PROJECT BOARD OF COMMISSIONERS
TRUSS DETAILS L3 TO L5
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

REVISIONS	
DATE	DESCRIPTION

COMPUTED	SECTION 055A-0103 - M.F.T.
DRAWN	SCALE 1/2" = 1'-0"
CHECKED	APPROVED <i>M.E.P.</i>
APPROVED <i>M.E.P.</i>	DATE 5/5A 1961



Symm. abt. & Top Strut.

UPPER LATERAL INTERSECTION
(Typical for Sway Frames at U2 and U4)

DIAPHRAGM FOR SWAY
FRAME BOTTOM STRUT
SCALE: 1"=1'-0"

DIAPHRAGM FOR PORTAL
BOTTOM STRUT
SCALE: 1"=1'-0"

Symm. abt. & Bridge
except as shown.

SWAY FRAME AT U2
Sway Frame at U4 similar
SCALE: 1/8" = 1'-0"

Note: Do not scale this drawing. Follow dimensions.

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COOK COUNTY, ILLINOIS

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SUPERVISOR OF HIGHWAYS

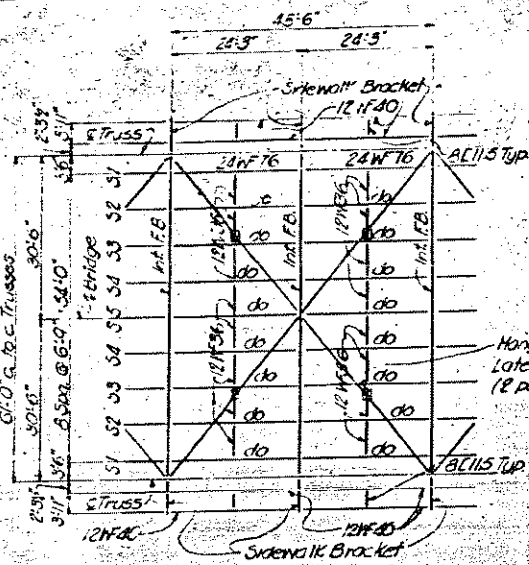
SECTION 055A-0103 - M.F.T.
SCALE AS SHOWN

SWAY FRAME
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

REVISIONS		
DATE	BY	DESCRIPTION

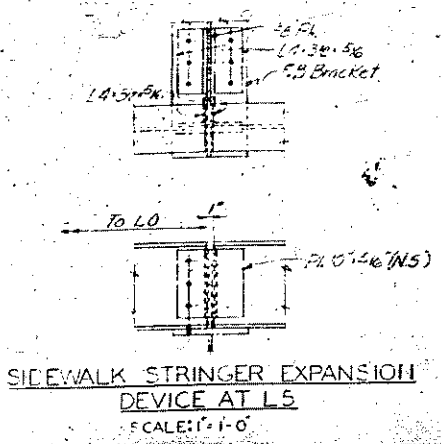
APPROVED: *[Signature]*

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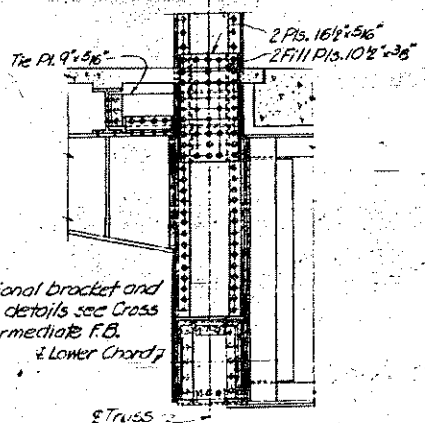


TYPICAL DOUBLE PANEL OF FLOOR FRAMING
SCALE: 1/16" = 1'-0"

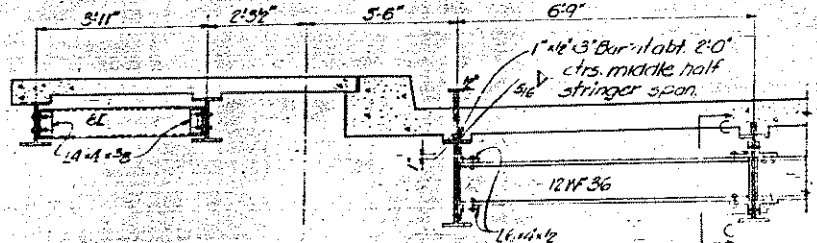
Note: 1-1/8" x 5" Nelson Type S3F granular flux-filled stud or equal, may be used as an alternate for each 1-1/2" x 3" Bar.



SIDEWALK STRINGER EXPANSION DEVICE AT L5
SCALE: 1" = 1'-0"

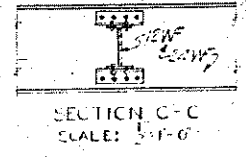


BRACKET DETAILS AT L1, L3 & L5
SCALE: 1" = 1'-0"

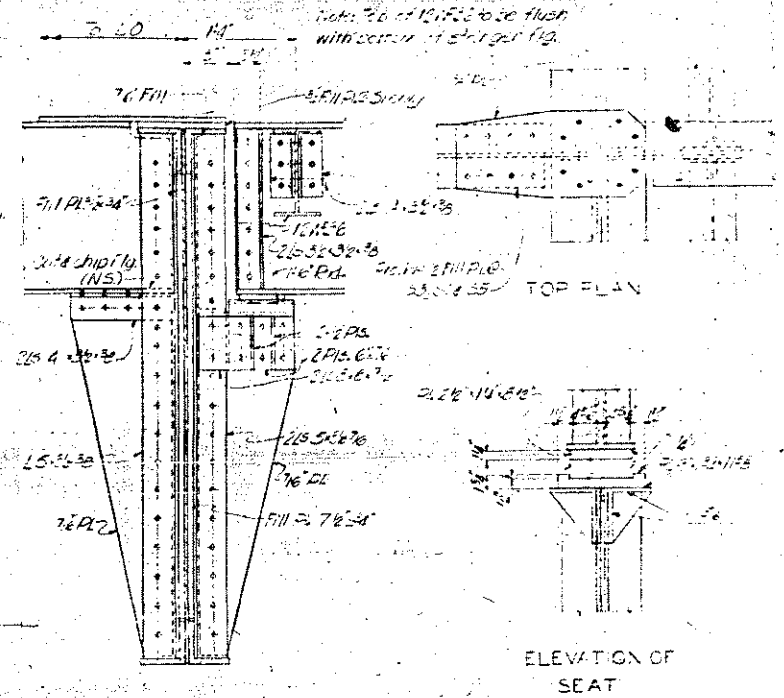


PART CROSS SECTION BETWEEN PANEL POINTS
SCALE: 1/2" = 1'-0"

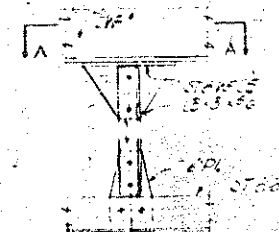
Note: For additional bracket and floor beam details see Cross Sect. @ Intermediate F.B. & Lower Chord.



SECTION C-C
SCALE: 1/2" = 1'-0"



STRINGER EXPANSION DEVICE AT L5
SCALE: 1" = 1'-0"

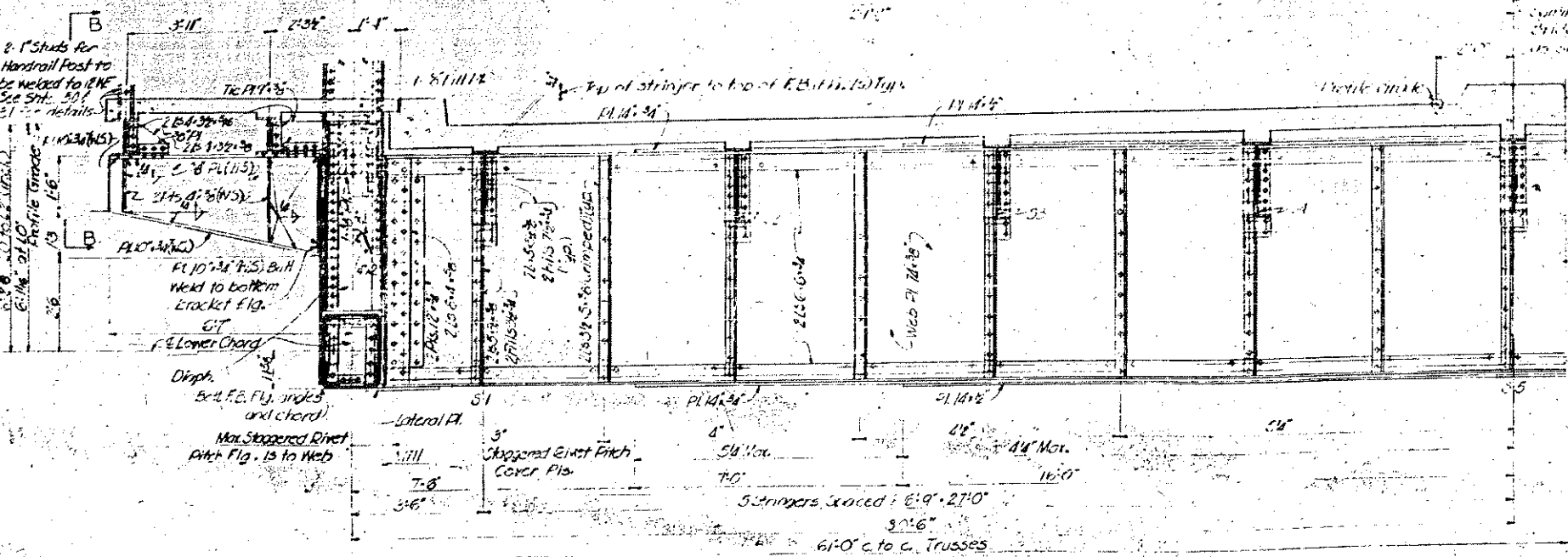


STRINGER CONNECTION TO FLOOR BEAM
SCALE: 1" = 1'-0"



FANGER CONNECTION TO LOWER LATERAL DIAGONALS
SCALE: 1/2" = 1'-0"

NOTES
All links to be 2" diameter for details of connections see sheet 17.
For floor beam level diagram see sheet 17.
Material marked as 'A' is weldable carbon steel.



HALF CROSS SECTION AT INTERMEDIATE FLOOR BEAM
SCALE: 1/2" = 1'-0"

Note: Drawn for Panel L5 Details, L1, L3 & L5 similar except for expansion & rail at L5, and bracket connection. Note: Do not scale this drawing. Follow dimensions.

REVISIONS		
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DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS
WILLIAM J. MORTIMER
SUPERVISOR OF HIGHWAYS

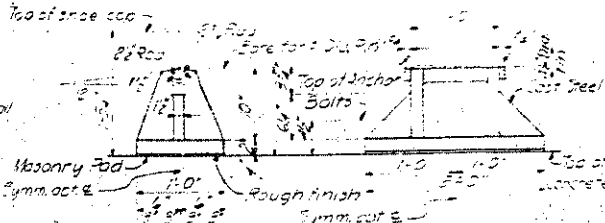
TRUSS SPAN FLOOR SYSTEM
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

COMPUTED: [Signature]
DRAWN: [Signature]
CHECKED: [Signature]
APPROVED: [Signature]

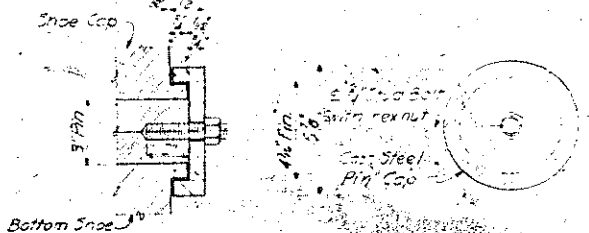
SECTION 055A-0103-M.F.T.
SCALE AS SHOWN
APPROVED: [Signature]

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Shoe cap same as shown for Exp. Shoe



FIXED SHOE FOR SPANS 10 THRU 13
(30 Required)
(For shoe cap at G1-E Bent 13, see detail 4)
SCALE: 3/4"=1'-0"

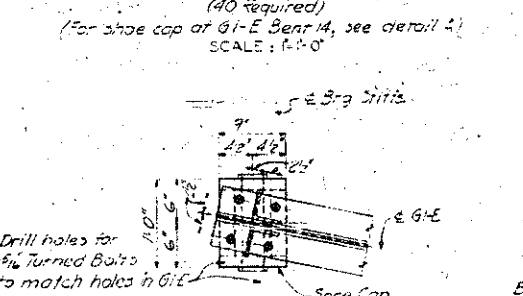


PIN END & PIN CAP
(For Spans 10 thru 13)
(70 Pins & 145 Pin Caps Req'd)
SCALE: 3/4"=1'-0"

NOTES

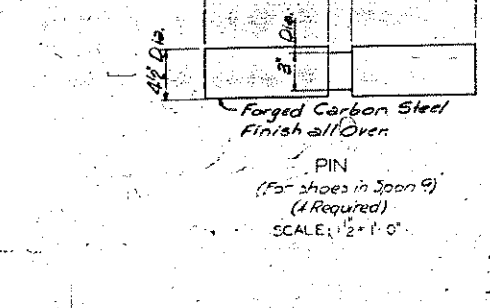
Cast steel shall conform to A.S.T.M. Designation A 27, Grade 48-55, fully annealed.
High strength cast steel shall conform to A.S.T.M. Designation A 48, Grade 50-55, fully annealed.
All fillets on castings for Span 9, toe 9, flanges on other castings to be 1/4".
All pins to be forged carbon steel conforming to A.S.T.M. Designation A 225, 5035 C1.
Bronze washers shall conform to A.S.T.M. Designation B 16, 1/2" dia. x 1/4" thick.
The rolled steel sole (5-E 30) of expansion shoe for Span 9 shall have a minimum yield point of 35,000 Lbs. per sq. in.
The washers of turned bolts shall be 1/4" smaller in diameter than the track diameter. The threaded portion shall be 1/4" smaller in diameter than the track diameter.
Welding shall be done in the same type and position as shown on the detail of concrete joints. See Special Provisions.

EXPANSION SHOE FOR SPANS 0 THRU 3
(40 Required)
(For shoe cap at G1-E Bent 14, see detail 4)
SCALE: 1/2"=1'-0"

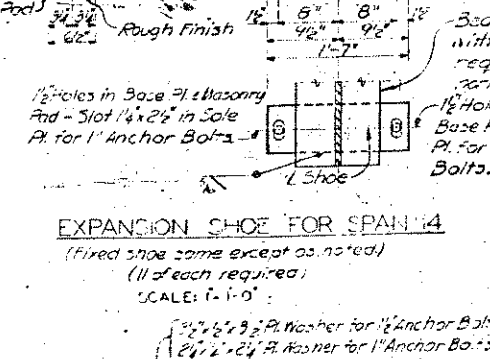


DETAIL A
(Location of holes in shoe cap for G1-E Span 13)
SCALE: 1/2"=1'-0"

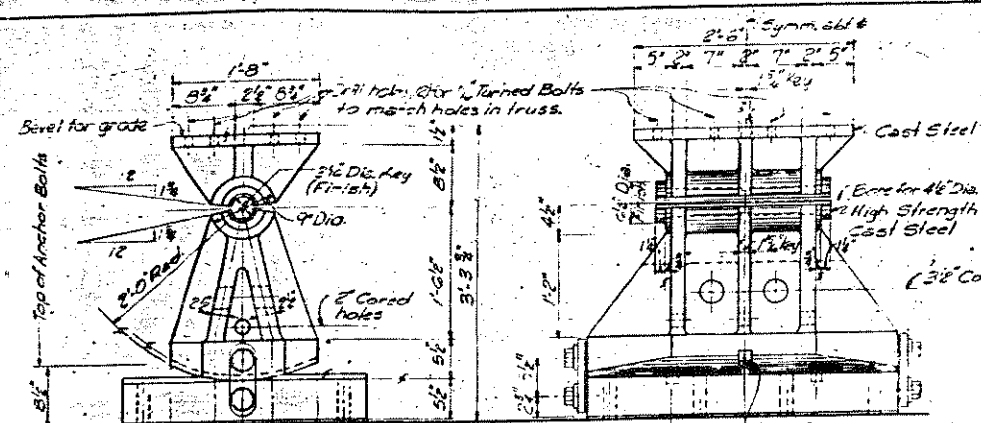
EXPANSION SHOE FOR SPAN 9
(2 Required)
SCALE: 1/2"=1'-0"



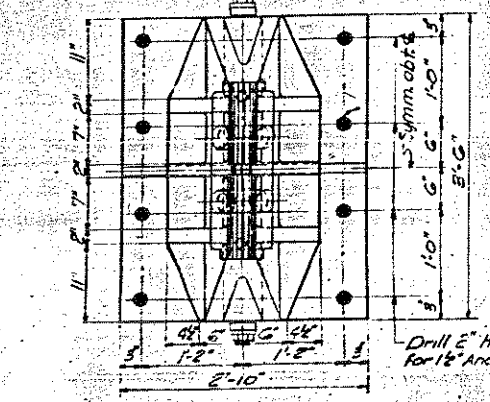
EXPANSION SHOE FOR SPAN 14
(Fixed shoe same except as noted)
(11 of each required)
SCALE: 1/2"=1'-0"



- 1/10" Sweaged
 - 1/8" Sweaged
 - 1/4" Sweaged
 - 3/8" Sweaged
 - 1/2" Sweaged
 - 3/4" Sweaged
- Exp. Shoes Span 9 (16 each req'd)
 - Fixed Shoes
 - 1/2" Fixed Span 14 (200 required)
 - 1/2" Fixed Span 2 (14 Req'd)

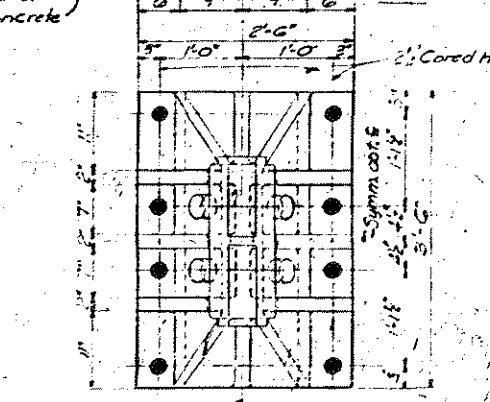
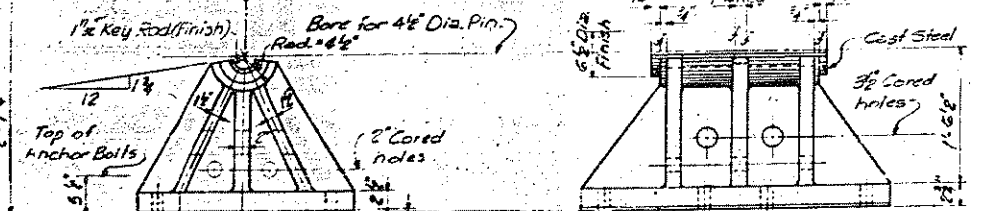


LINK BAR
(4 Required)
SCALE: 1/2"=1'-0"



LINK BOLT
(8 Required)
SCALE: 2"=1'-0"

PINTLE
(Finish all over)
(4 Required)
SCALE: 3/4"=1'-0"



FIXED SHOE FOR SPAN 9
(2 Required)
SCALE: 1/2"=1'-0"

DEPARTMENT OF HIGHWAYS
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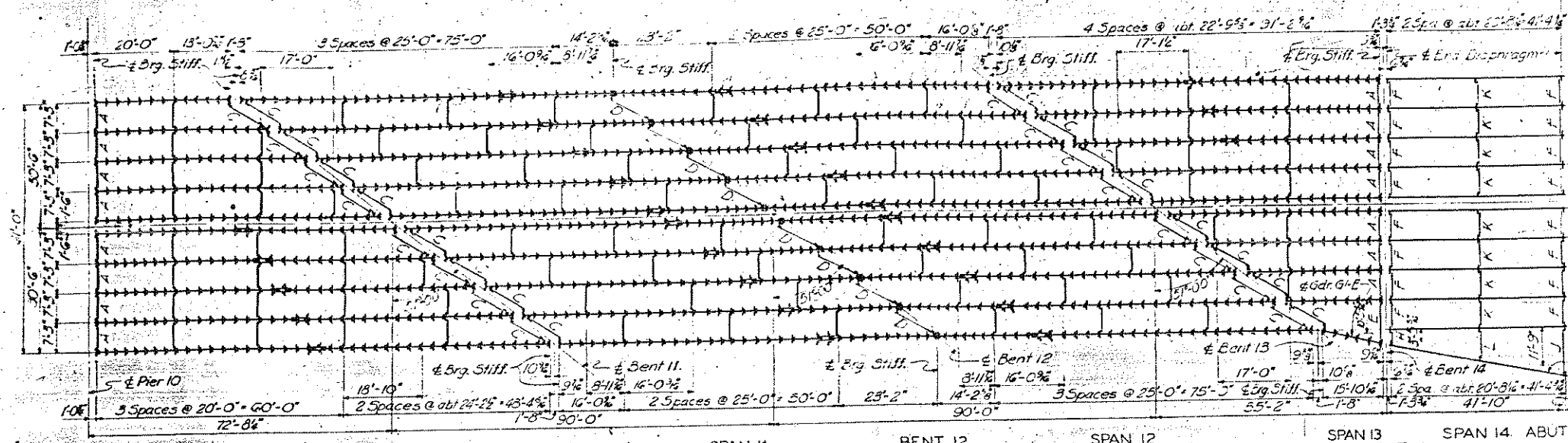
WILLIAM J. MORTIMER
SUPERVISOR OF HIGHWAYS

SHOES
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

SECTION 055A-0103-M.F.T.
SCALE AS SHOWN
APPROVED [Signature]

DATE	BY	DESCRIPTION

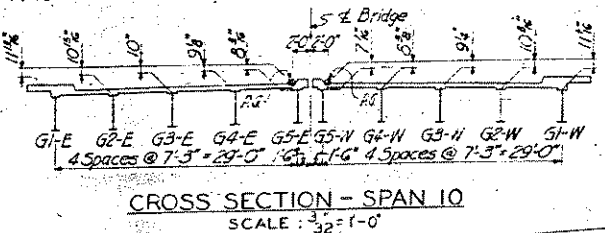
APPROVED [Signature]
55A 1961 21 41



- 4 Girder or Beam G1-W
- 4 Girder or Beam G2-W
- 4 Girder or Beam G3-W
- 4 Girder or Beam G4-W
- 4 Girder or Beam G5-W
- 4 Girder or Beam G1-E
- 4 Girder or Beam G2-E
- 4 Girder or Beam G3-E
- 4 Girder or Beam G4-E
- 4 Girder or Beam G5-E
- 4 Beam G11
- 4 Beam G12
- 4 Beam G13
- 4 Beam G14
- 4 Beam G15

NOTES
 Longitudinal dimensions locating cross frames and diaphragms framing plan is truly horizontal and refer to points along the surface of top flange angles and, if beams are framing into A, B, C and D indicate 1/16" offset of cross frames. All cross frames not marked are type B, F, J, K and L indicate different types of diaphragms. Girders for Spans 10 thru 15 are fabricated to the profile grade vertical curve and camber as shown on Sheet 24. Beams for Span 4 shall not be cambered.

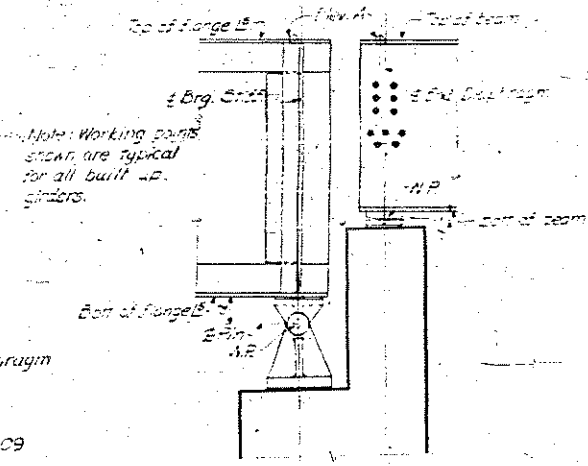
Notes: Vertical dimensions locate surface of top flange of girders. Cross section for Spans 11 and 12 is the same except for vertical dimensions which are symmetrical about the bridge and as given for G1-W thru G5-W.



FRAMING PLAN
 SCALE: 1/8" = 1'-0"

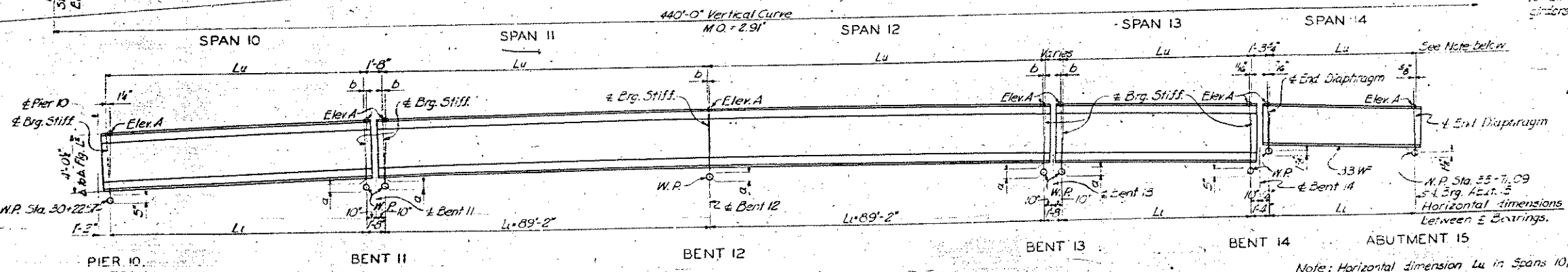
DETAILS OF VARIABLE CROSS SECTION
 SCALE: 3/32" = 1'-0"

Note: Details for Spans 11 and 12 are the same as for Spans 10 and 12. See Cross Section - Span 10.



Note: Working points shown are typical for all built-up girders.

LOCATION OF WORKING POINTS
 SCALE: NONE



GIRDER LAYOUT
 SCALE: NONE
 Note: Cover plates are not shown.

Note: Horizontal dimension Lu in Spans 10, 11, 12 and 13 is measured between bearing stiffeners at the surface of top flange angles. In Span 14 Lu is the horizontal distance between end diaphragms measured at top of WF beams.

Girder	TABLE OF VARIABLE DIMENSIONS & ELEVATIONS																
	Pier 10		Bent 11					Bent 12					Bent 13		Bent 14		Abut 15
	Elev. A	Elev. A	a	b	c	d	Elev. A	a	b	c	d	Elev. A	a	b	Elev. A	Elev. A	
G1-W	636.28	637.00	637.08	5' 5 3/8	1 1/2	1 1/2	635.29	2 3/8	2 3/8	2 3/8	2 3/8	635.29	2 3/8	2 3/8	637.88	637.87	637.21
G2-W	636.36	637.24	637.27	5' 0 3/8	1'	1'	638.44	2 3/8	2 3/8	2 3/8	2 3/8	638.44	2 3/8	2 3/8	637.96	637.94	637.29
G3-W	636.43	637.48	637.51	5' 5 3/8	1 1/2	1 1/2	638.58	2 3/8	2 3/8	2 3/8	2 3/8	638.58	2 3/8	2 3/8	638.01	638.02	637.36
G4-W	636.51	637.71	637.74	5' 5 3/8	1 1/2	1 1/2	638.71	2 3/8	2 3/8	2 3/8	2 3/8	638.71	2 3/8	2 3/8	638.11	638.09	637.44
G5-W	636.58	637.93	637.95	5 1/2	1 1/2	1 1/2	638.84	2 3/8	2 3/8	2 3/8	2 3/8	638.84	2 3/8	2 3/8	638.19	638.17	637.51
G1-E	636.52	637.92	638.01	5'	1 1/2	1 1/2	638.84	2 3/8	2 3/8	2 3/8	2 3/8	638.72	2 3/8	2 3/8	638.11	638.09	637.44
G2-E	636.58	637.97	638.06	5'	1 1/2	1 1/2	638.90	2 3/8	2 3/8	2 3/8	2 3/8	638.72	2 3/8	2 3/8	638.11	638.09	637.44
G3-E	636.67	638.08	638.10	5 1/2	1 1/2	1 1/2	638.74	2 3/8	2 3/8	2 3/8	2 3/8	638.45	2 3/8	2 3/8	637.96	637.94	637.29
G4-E	636.74	638.08	638.13	5'	1 1/2	1 1/2	638.74	2 3/8	2 3/8	2 3/8	2 3/8	638.27	2 3/8	2 3/8	637.96	637.94	637.29
G5-E	636.82	638.07	638.15	5 1/2	1 1/2	1 1/2	638.80	2 3/8	2 3/8	2 3/8	2 3/8	638.10	2 3/8	2 3/8	637.85	637.87	637.21
G11															637.83	637.09	

Girder	TABLE OF VARIABLE SPAN LENGTHS									
	Horizontal dimension Lu between bearing stiffeners.					Horizontal dimension L between bearings.				
	Span 10	Span 11	Span 12	Span 13	Span 14	Span 10	Span 11	Span 12	Span 13	Span 14
G1-W	53'-0"	89'-2"	89'-2"	91'-2"	41'-4"	53'-0"	91'-2"	41'-4"	41'-4"	41'-4"
G2-W	41'-1 1/2"	89'-2"	89'-2"	82'-3 3/4"	41'-4"	50'-11 1/2"	82'-2 3/4"	41'-4"	41'-4"	41'-4"
G3-W	50'-11 1/2"	89'-2"	89'-2"	73'-3 3/4"	41'-4"	59'-10 1/2"	82'-3 3/4"	41'-4"	41'-4"	41'-4"
G4-W	59'-1 1/2"	89'-2"	89'-2"	64'-4 1/2"	41'-4"	59'-10 1/2"	82'-3 3/4"	41'-4"	41'-4"	41'-4"
G5-W	68'-10 1/2"	89'-2"	89'-2"	51'-3 1/2"	41'-4"	72'-6 1/2"	82'-3 3/4"	41'-4"	41'-4"	41'-4"
G1-E	72'-6 1/2"	89'-2"	89'-2"	55'-4 1/2"	41'-4"	68'-10 1/2"	82'-3 3/4"	41'-4"	41'-4"	41'-4"
G2-E	81'-2 1/2"	89'-2"	89'-2"	42'-8 1/2"	41'-4"	61'-5 1/2"	82'-3 3/4"	41'-4"	41'-4"	41'-4"
G3-E	90'-5 1/2"	89'-2"	89'-2"	38'-9 1/2"	41'-4"	50'-5 1/2"	82'-3 3/4"	41'-4"	41'-4"	41'-4"
G4-E	99'-5 1/2"	89'-2"	89'-2"	24'-9 1/2"	41'-4"	49'-4 1/2"	82'-3 3/4"	41'-4"	41'-4"	41'-4"
G5-E	108'-2 1/2"	89'-2"	89'-2"	16'-1 1/2"	41'-4"	48'-4 1/2"	82'-3 3/4"	41'-4"	41'-4"	41'-4"
G11						42'-2 1/2"				

Do not scale this drawing. Follow dimensions.

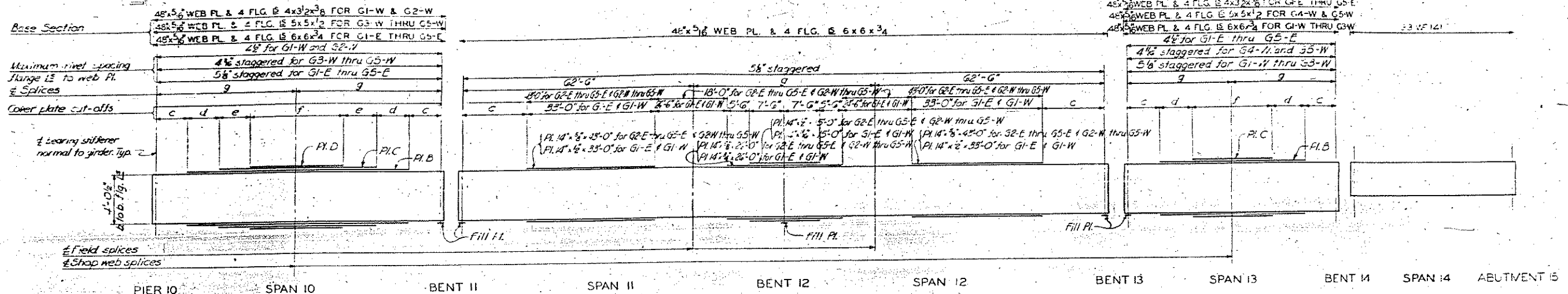
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REVISIONS		
DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS
 COOK COUNTY, ILLINOIS
 WILLIAM J. WORTIMER
 SUPERVISOR OF HIGHWAYS

GIRDER LAYOUT AND FRAMING PLAN
 WESTERN AVENUE RELOCATION
 OVER
CALUMET SAG CHANNEL

SECTION 055A-0103-M.F.T.
 SCALE AS SHOWN
 APPROVED: *[Signature]*
 55A 1961 22 41



Girder	VARIABLE DIMENSIONS										COVER PLATES				FILL PL. THICKNESSES					
	Span 10				Span 11 and 12			Span 13			Span 10		Span 13		Bent 11		Bent 13			
	c	d	e	f	g	c	g	d	f	g	PI. B	PI. C	PI. D	PI. B	PI. C	Span 10	Span 13	Span 10	Span 13	
G1-W						13'-8 1/2"	53'-5 1/2"	9'-7 1/4"	9'-0"	54'-0"	45'-7 1/4"						12'-4 1/2" x 7'-0"	14'-4 1/2" x 5'-0"		
G2-W	7'-3"			27'-0"		15'-2 1/2"	53'-5 1/2"	11'-1 1/2"	8'-6"	43'-0"	41'-1 1/2"	10'-3 1/2" x 27'-6"					14'-2 1/2" x 20'-0"	14'-1 1/2" x 43'-0"		
G3-W	11'-3 1/4"			27'-0"		15'-2 1/2"	53'-5 1/2"	14'-1 1/2"		40'-0"	36'-7 1/2"	10'-3 1/2" x 27'-6"					14'-2 1/2" x 5'-0"			
G4-W	8'-1 1/2"	6'-0"		26'-0"		15'-2 1/2"	53'-5 1/2"	8'-2"	5'-0"	36'-0"							12'-2 1/2" x 42'-0"	10'-1 1/2" x 36'-0"		
G5-W	14'-5 1/2"			40'-0"		15'-2 1/2"	53'-5 1/2"										12'-2 1/2" x 40'-0"			
G5-E						36'-3 1/2"	53'-5 1/2"	12'-4"		27'-0"							8'-3 1/2" x 27'-0"			
G2-E	11'-3 1/4"	3'-6"		42'-0"	40'-9 1/4"	15'-2 1/2"	53'-5 1/2"	7'-4 1/2"		20'-0"							14'-3 1/2" x 53'-0"	14'-2 1/2" x 42'-0"		
G3-E	9'-9"	8'-3"		53'-0"	45'-3"	15'-2 1/2"	53'-5 1/2"										14'-3 1/2" x 71'-0"	14'-4 1/2" x 55'-6"		
G2-E	8'-2 1/2"	7'-0"	13'-0"	45'-0"	49'-8 1/2"	15'-2 1/2"	53'-5 1/2"										14'-3 1/2" x 83'-0"	14'-4 1/2" x 69'-0"	14'-2 1/2" x 43'-0"	
G1-E	7'-2 1/2"	8'-0"	12'-0"	54'-0"	54'-2 1/2"	16'-8 1/2"	53'-5 1/2"										15'-3 1/2" x 34'-0"	16'-4 1/2" x 75'-0"	16'-2 1/2" x 54'-0"	

NOTES
 Longitudinal dimensions given are truly horizontal and refer to points along the surface of top flange angles. For dimensions between bearing stiffeners see Sheet 22.
 Width and length of fill plates to be same as shoe cap.
 Dashed lines under dimension 'g' indicate no shop web splice required.
 Dashed lines under cover plates and fill plate thicknesses indicate no plate required.

GIRDER NOTES
 All cover plates and flange splice plates shall be universal mill plates.
 All top and bottom cover plates shall be the same.
 Shop web splices may be omitted if desired by the Contractor.
 Position of splices shall be substantially as shown but may be shifted slightly in either direction if desired by the Contractor.
 Spacing of rivets in cover plates shall be according to sections 1.6.20, 1.6.21, 1.6.22, 1.6.23 and 1.6.24 in A.A.S.H.O. specifications.
 In lieu of crimped stiffeners the Contractor may provide fill plates at his own expense.
 See General Notes on Sheet 3.

Do not scale this drawing. Follow dimensions.

DEPARTMENT OF HIGHWAYS
 COOK COUNTY, ILLINOIS

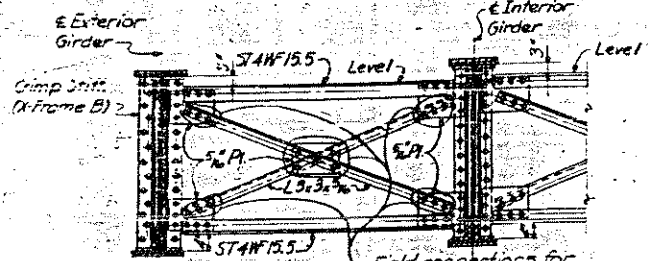
GIRDER ELEVATIONS
WESTERN AVENUE RELOCATION
 OVER
CALUMET SAG CHANNEL

WILLIAM J. MORTIMER
 DISTRICT ENGINEER OF HIGHWAYS

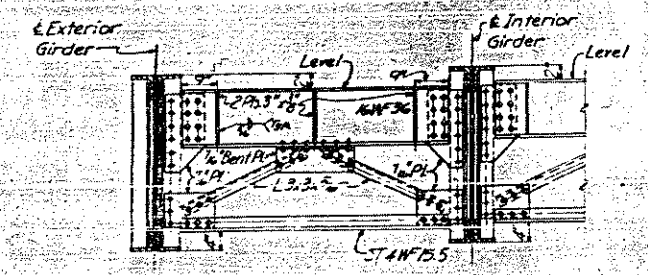
PREPARED BY
SVERDRUP & PARCEL, INC.
 ENGINEERS - ARCHITECTS
 ST. LOUIS, MISSOURI

REVISIONS		
DATE	BY	DESCRIPTION

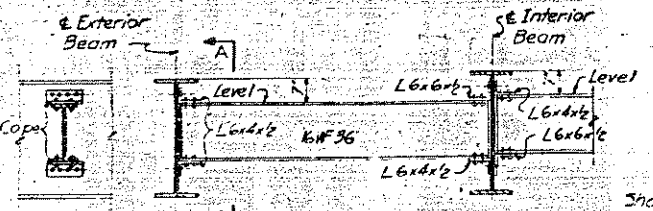
COMPUTED BY <i>E.S. ICC</i>	SECTION 055A-0103-M.F.T.
DRAWN BY <i>E.S. ICC</i>	SCALE NONE
CHECKED BY <i>E.S. ICC</i>	APPROVED <i>W.F. Payne</i>
APPROVED <i>Oct 2, 1961</i> <i>W.F. Payne</i>	DATE 10/2/61
58A	1061 23 41



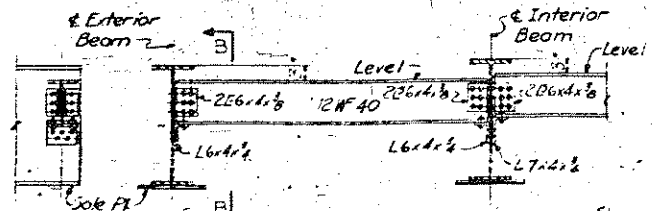
CROSS FRAMES B & D
 (Connection plates to be bent where required. No stitch rivets required thru stiffeners at Cross Frame B.)



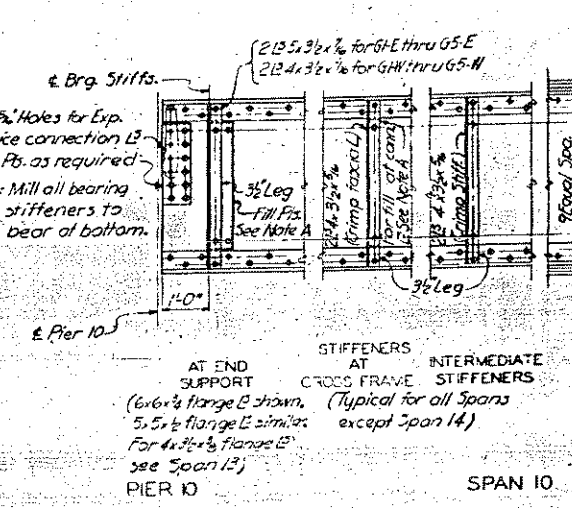
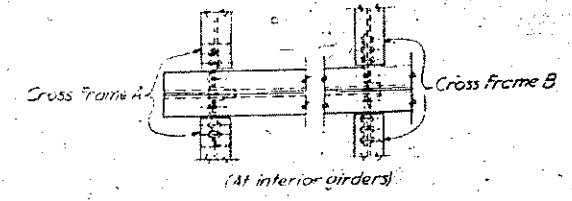
CROSS FRAMES A, C & E
 (Connection plates to be bent where required. Cross Frame C to be parallel to Bents II and III as shown in Top Flange Details.)



DIAPHRAGMS K & L



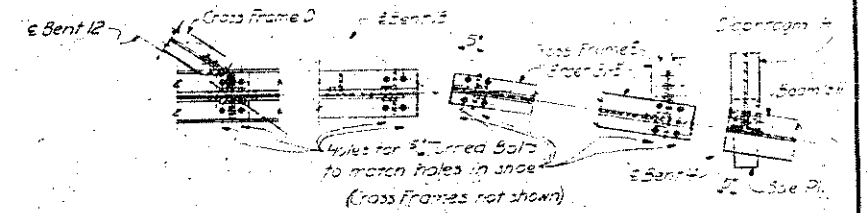
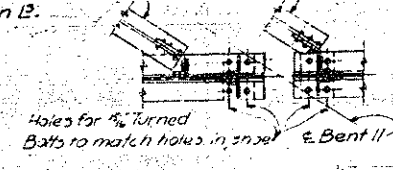
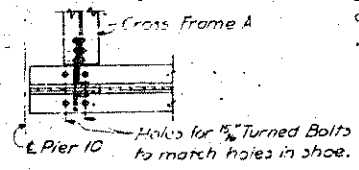
DIAPHRAGMS F, H & J



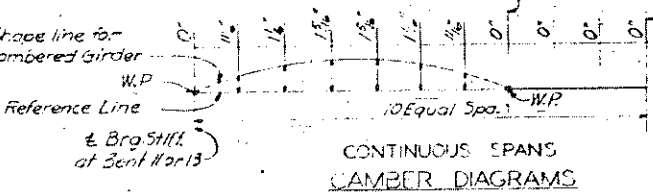
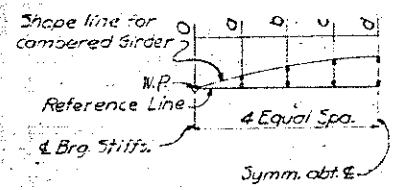
AT END SUPPORT (6x6 1/2 flange B shown, 5 1/2 flange B similar for 4x6 1/2 flange B see Span 13)
 STIFFENERS AT INTERMEDIATE CROSS FRAME STIFFENERS (Typical for all spans except Span 14)
 SHOP WEB SPLICE (Splice in Span 13 similar) (Location of stiffener B may vary)
 AT END SUPPORTS
 FIELD SPLICE (Location of stiffener B may vary)
 AT INTERMEDIATE SUPPORT
 AT END SUPPORTS (As per flange B shown)
 AT END SUPPORTS (As per flange B shown)

Note B: For size and location of fill pl. at shoes, see Sheet 23

Note A: Provide fill plates as required under bearing stiffeners and cross frame connection B.



Girder	Span 10				Span 13			
	a	b	c	d	a	b	c	d
G1E	10	10	10	10	10	10	10	10
G2E	10	10	10	10	10	10	10	10
G3E	10	10	10	10	10	10	10	10
G4E	10	10	10	10	10	10	10	10
G5E	10	10	10	10	10	10	10	10
G6W	10	10	10	10	10	10	10	10
G7W	10	10	10	10	10	10	10	10
G8W	10	10	10	10	10	10	10	10
G9W	10	10	10	10	10	10	10	10



Note: Reference Line is a chord between working points for girders in place. The working points are located on the top surface of flange B. The camber ordinates are truly vertical and include the effects of vertical curvature and D.L. deflection. WF beams in Span 14 shall not be cambered.

BOTTOM FLANGE
 (Exterior girders or beams shown, interior girders or beams similar.)

NOTES
 All rivets of high strength bolts in cross frames, diaphragms and outstanding legs of girder or flange to be 5/8" dia.
 Field connections for cross frames and diaphragms shall be made with 2" high strength bolts. A open hole in girder stiffener angles and all other material of Cross Frames B in Spans 10 and 13 shall be 1/2" dia. other open holes for 2" high strength bolts shall be 1/2" dia.
 Field connections for Cross Frames B in Spans 10 and 13 shall be temporary until all concrete has been placed. Then the connections shall be completed and all high strength bolts tightened.

REVISIONS		
DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS
 COOK COUNTY, ILLINOIS
 WILLIAM J. MORTIMER
 SUPERVISOR OF HIGHWAYS

GIRDER DETAILS
 WESTERN AVENUE-RELOCATION
 OVER
 CALUMET SAG CHANNEL

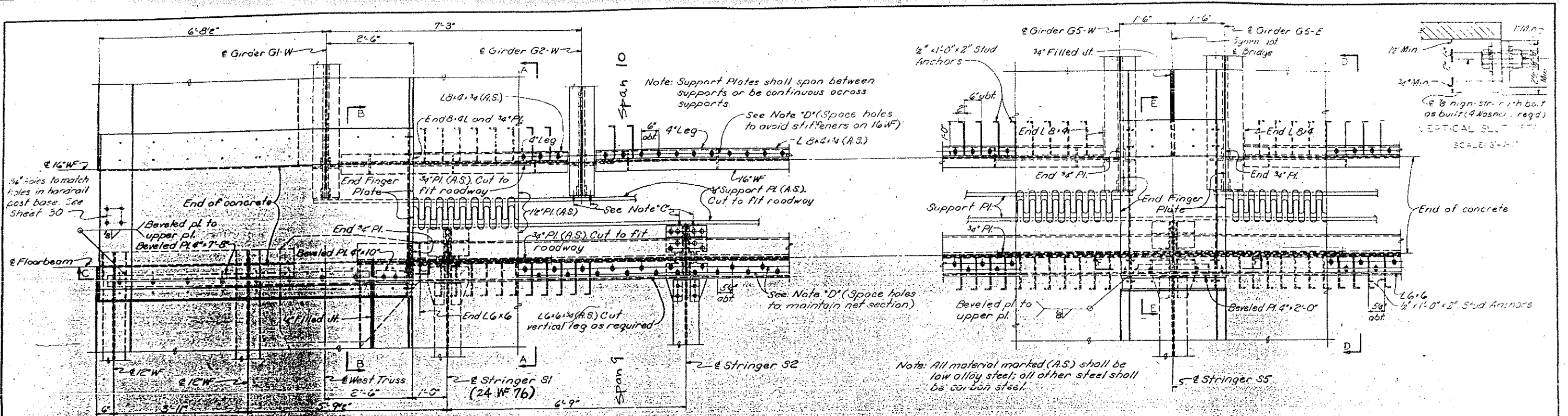
COMPUTED G.S. Trejo
 DRAWN J. Castro
 CHECKED C. Westrup

APPROVED [Signature]
 [Signature]

SECTION 055A-0403-M.F.T.
 SCALE 1/4"=1'-0"
 APPROVED [Signature]

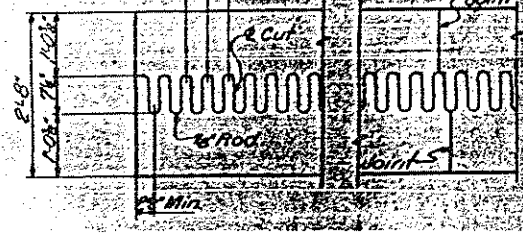
DATE 55A 1961
 SHEET 24
 TOTAL SHEETS 41

1536
 1535595

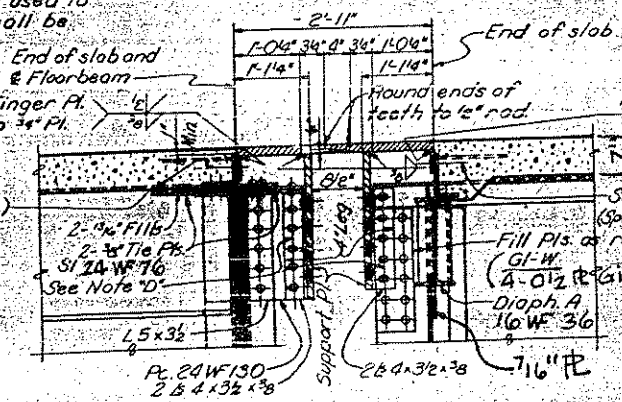


PART PLAN OF EXPANSION DEVICE AT PIER 10
SCALE: 3/4" = 1'-0"

Note: Flame cutting of finger plates shall be as narrow as practicable and shall not exceed 1/4" width. A mechanical guide shall be used to guide the cutting torch. All burrs shall be ground smooth.

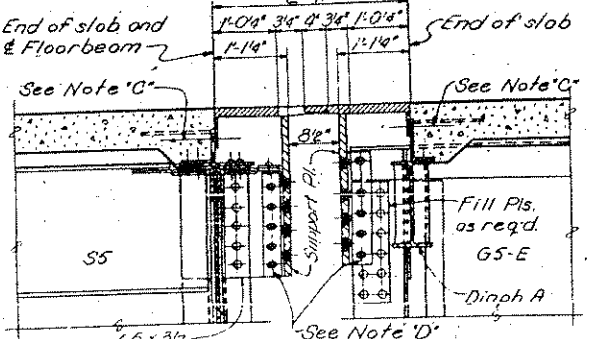


PLAN SHOWING CUTTING OF FINGER PLATE
NOT TO SCALE
Note: Finger plate dimensions include 1/4" allowance for flame cut.



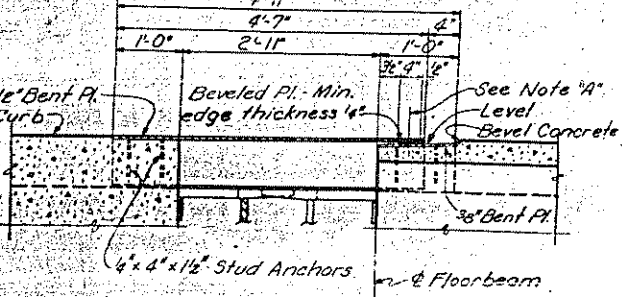
SECTION A-A
SCALE: 1/2" = 1'-0"

Note: Dimensions measured along grade.



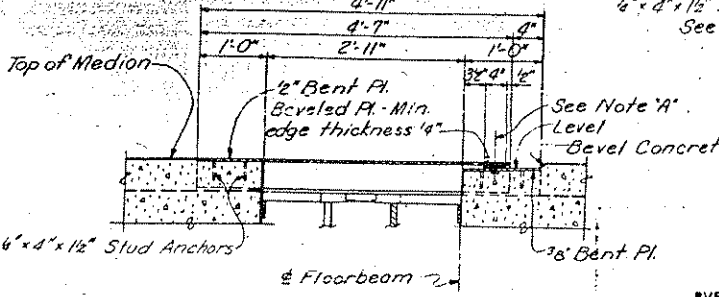
SECTION D-D
SCALE: 1/2" = 1'-0"

Note: Billings and dimensions not shown are same as in Section A-A.

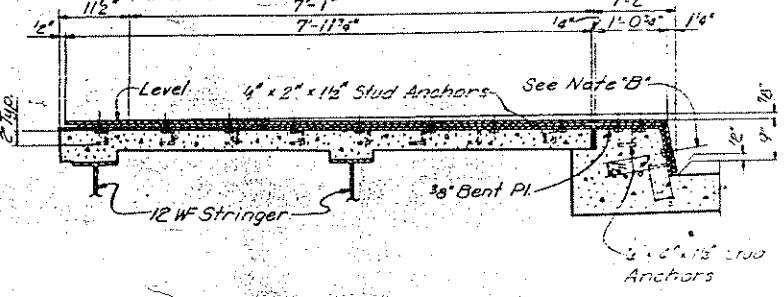


SECTION B-B
SCALE: 3/4" = 1'-0"

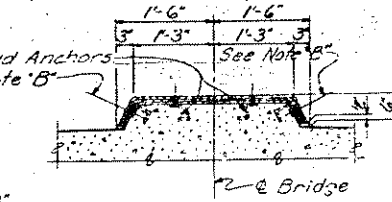
Note: Dimensions measured along grade.



SECTION E-E
SCALE: 3/4" = 1'-0"



SECTION C-C
SCALE: 3/4" = 1'-0"



SECTION F-F
SCALE: 3/4" = 1'-0"

NOTES
All stud anchors shall be Nelson Type B4F grade 50,000 psi steel studs or equal.
All rivets and high-strength bolts shall be raised to provide for lowering of Finger Plate Expansion Device to normal position of a temperature of 50°F.

Note A - 7/16" x 1 1/2" slots in top and beveled pl. 7/16" holes in bot form pl. for 3/8" bolts. Weld 1/8" sq nuts to bottom pl. Remove bolts after concrete has set.
Note B - 7/16" x 1 1/2" slot in outside pl. 7/16" hole in inside pl. for 3/8" bolt. Weld 1/8" sq nut to inside pl. Remove bolt after concrete has set.
Note C - 1/2" holes in L and 1 1/2" x 2 1/2" slots in Pl. to allow for future raising of Finger Plate.
Note D - 1/2" x 1 1/2" slots in connection L and 1/4" holes in all other material.

Note: Do not scale this drawing. Follow dimensions.

PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

REVISIONS		
DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

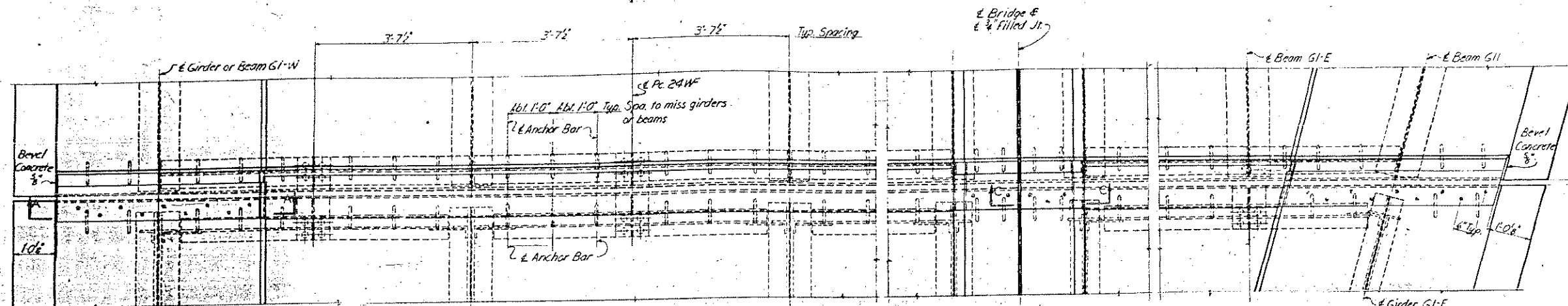
WILLIAM J. MORTIMER
SUPERINTENDENT OF HIGHWAYS

EXPANSION DEVICE AT PIER 10
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

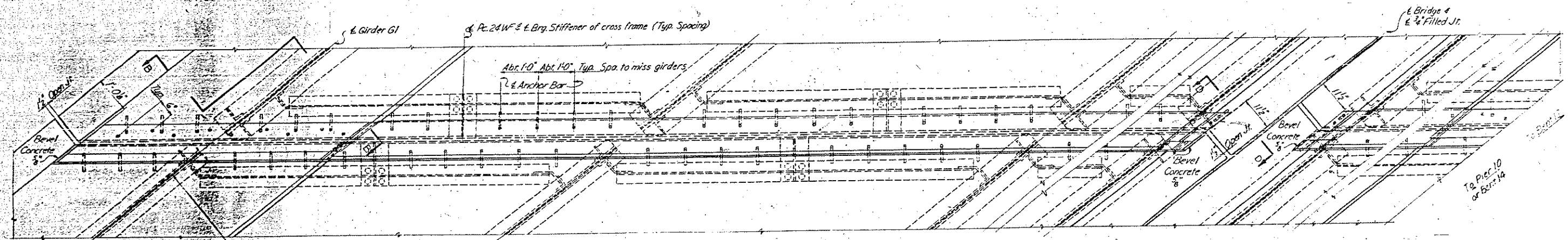
COMPUTED *H. Steack*
DRAWN *H. Steack*
CHECKED *W.C. Jurek*
APPROVED *H. Steack*

SECTION 055A-0103 - M.F.T.
SCALE AS SHOWN
APPROVED *H. Steack*

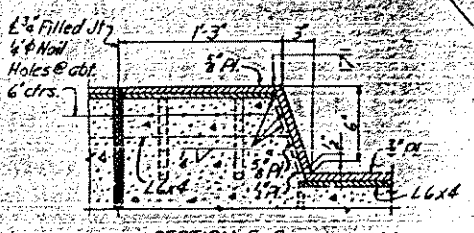
55A	1961	25	41
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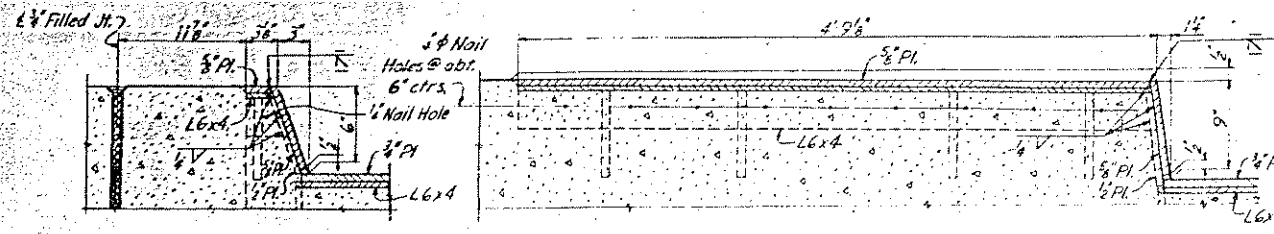
PART PLAN
EXPANSION DEVICE - BENT 14
SCALE: 3/4" = 1'-0"



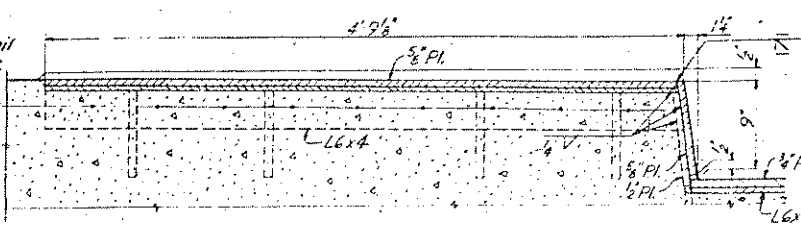
PART PLAN
EXPANSION DEVICE - BENTS 11 & 13
SCALE: 3/4" = 1'-0"



SECTION C-C



SECTION D-D

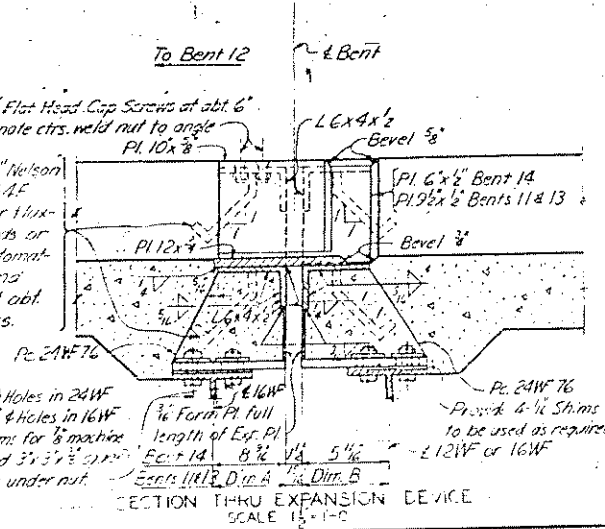


SECTION A-A
Section B-B similar

SECTIONS NOT TO SCALE

Note: Dim. A
11 1/4\"/>

E 2\"/>



SECTION THRU EXPANSION DEVICE
SCALE: 1 1/2\"/>

NOTES

All expansion devices are shown in a normal position at a temperature of 50°F.
All expansion devices shall be fabricated and erected to fit roadway.
All metal in expansion devices is included in the quantity of Structural Steel.
Longitudinal dimensions shown are horizontal.
All exposed vertical surfaces on the inside face of joints shall have two shop coats of red lead paint.

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ST. LOUIS, MISSOURI

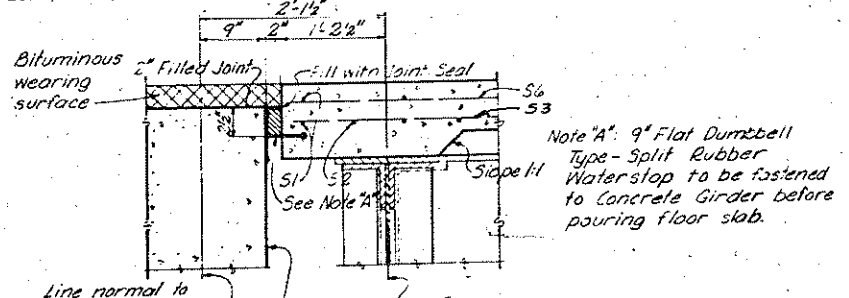
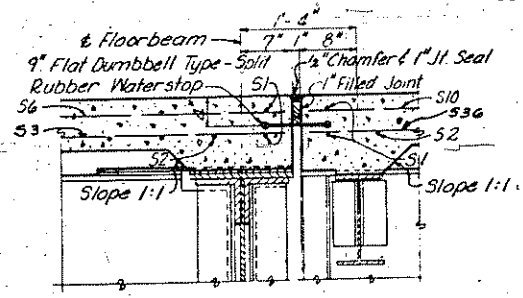
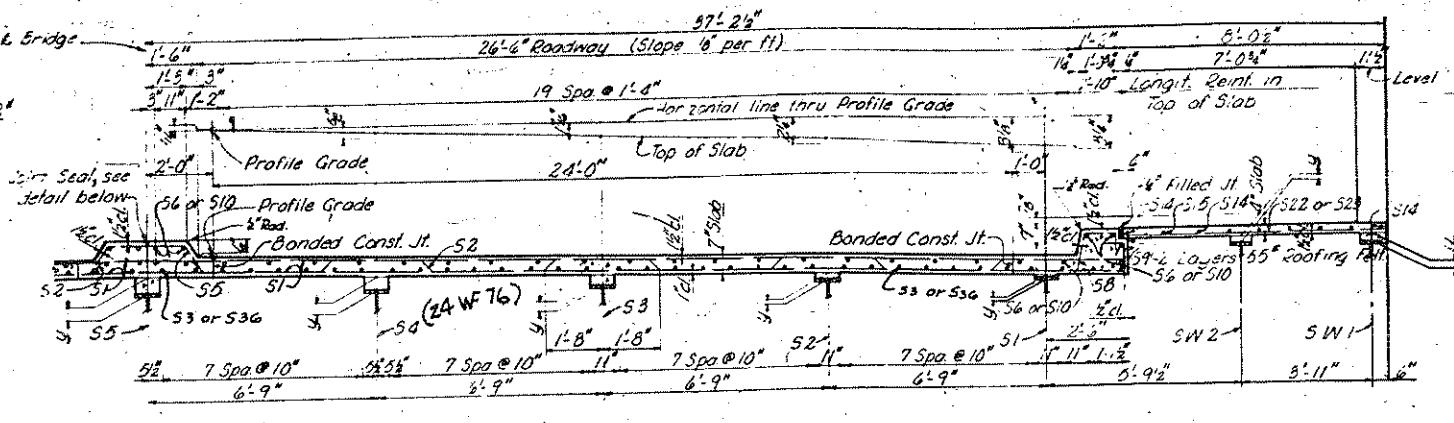
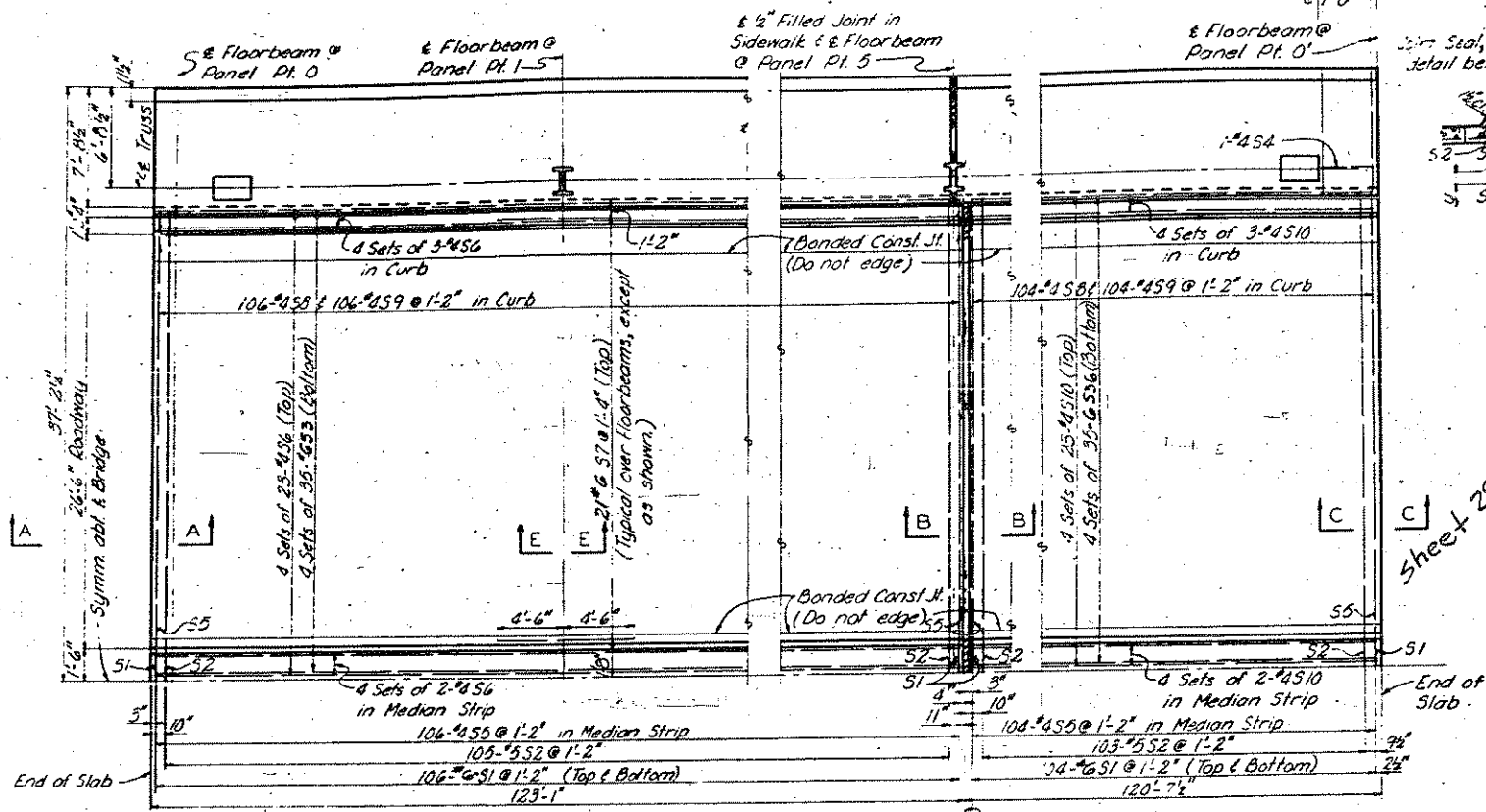
DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS
PROJECT DESIGN BY CONSULTANTS
WILLIAM J. MORTIMER
SUPERINTENDENT OF HIGHWAYS
EXPANSION DEVICE AT BENTS 11, 13 AND 14
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

REVISIONS		
DATE	BY	DESCRIPTION

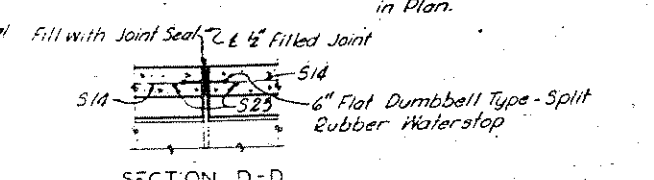
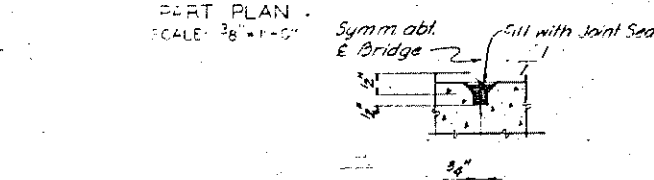
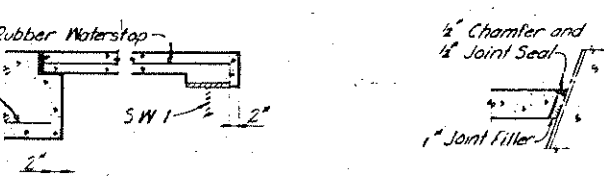
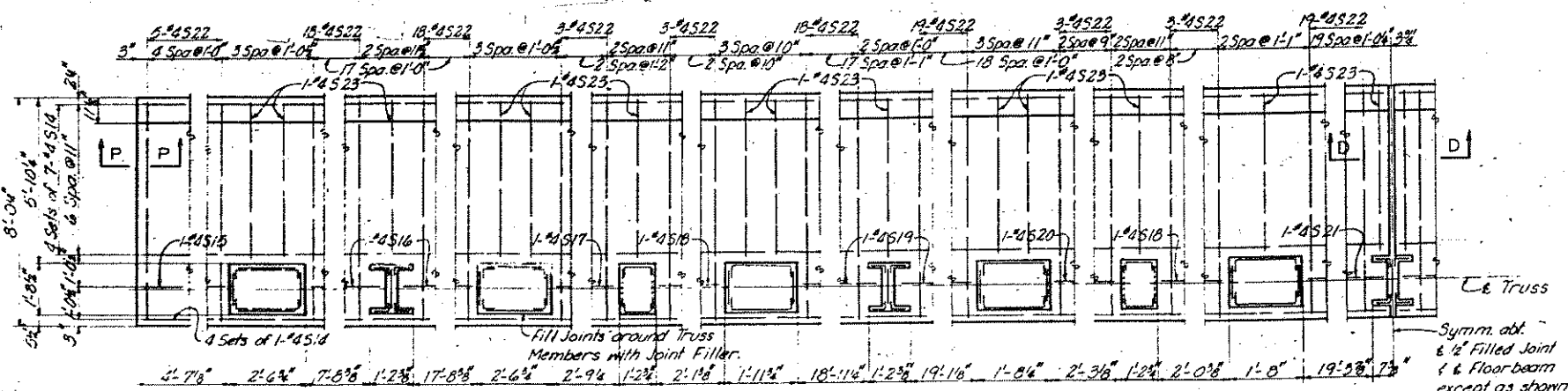
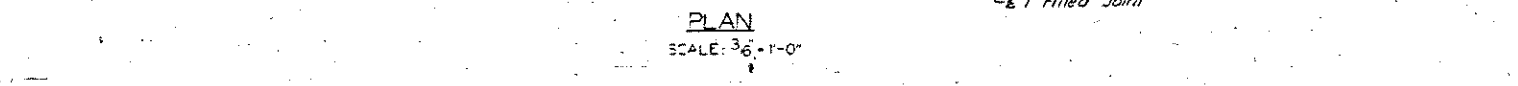
COMPUTED	SECTION 055A-0103 - M.F.T.
DRAWN R.V. Butterfield	SCALE AS SHOWN
CHECKED I. Spindler	APPROVED: W. J. Mortimer
APPROVED: [Signature]	DATE: 26
55A	1961

7536
593477

Note: Do not scale this drawing. Follow dimensions.



Note A: 9" Flat Dumbbell Type-Split Rubber Waterstop to be fastened to concrete girder before pouring floor slab.



HAUNCH HEIGHTS (y)

STRINGER	LO	LI
S1	1 1/2"	1 1/2"
S2	2"	2"
S3	2 1/2"	2 1/2"
S4	3 1/2"	3 1/2"
S5	4 1/2"	4 1/2"
SW1	2 1/2"	2 1/2"
SW2	2 1/2"	2 1/2"

HAUNCH HEIGHTS (y)

STRINGER	LI	-2
S1	1 1/2"	1 1/2"
S2	2"	2"
S3	2 1/2"	2 1/2"
S4	3 1/2"	3 1/2"
S5	4 1/2"	4 1/2"
SW1	2 1/2"	2 1/2"
SW2	2 1/2"	2 1/2"

HAUNCH HEIGHTS (y)

STR	E	A	I	B	-C
S1	1 1/2"	1"	2 1/2"	1"	1 1/2"
S2	2"	1 1/2"	2"	1"	1 1/2"
S3	2 1/2"	2 1/2"	2 1/2"	1 1/2"	1 1/2"
S4	3 1/2"	3 1/2"	2 1/2"	2"	2"
S5	4 1/2"	4 1/2"	3 1/2"	3 1/2"	2 1/2"
SW1	2 1/2"	2 1/2"	2"	1 1/2"	1 1/2"
SW2	2 1/2"	2"	1 1/2"	1 1/2"	1 1/2"

Note: Haunch heights y shown above are given at E of Floorbeam except as noted above. Haunch heights y include the vertical curve ordinates, dead load deflection of floorbeams and Roadway Crown.

Edge sidewalk curbs and median edges with a 2' radius edging tool.

NOTES
For Sections A-A, C-C, E-E see Sheet 29. All longitudinal dimensions shown in Plans are measured parallel to +3% grade. Reinforcement shall be field bent as required to clear roadway drains and manholes for navigation lights.

REVISIONS

DATE	BY	DESCRIPTION
8-14-62	B.L.	Rev. steel in roadway slabs

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

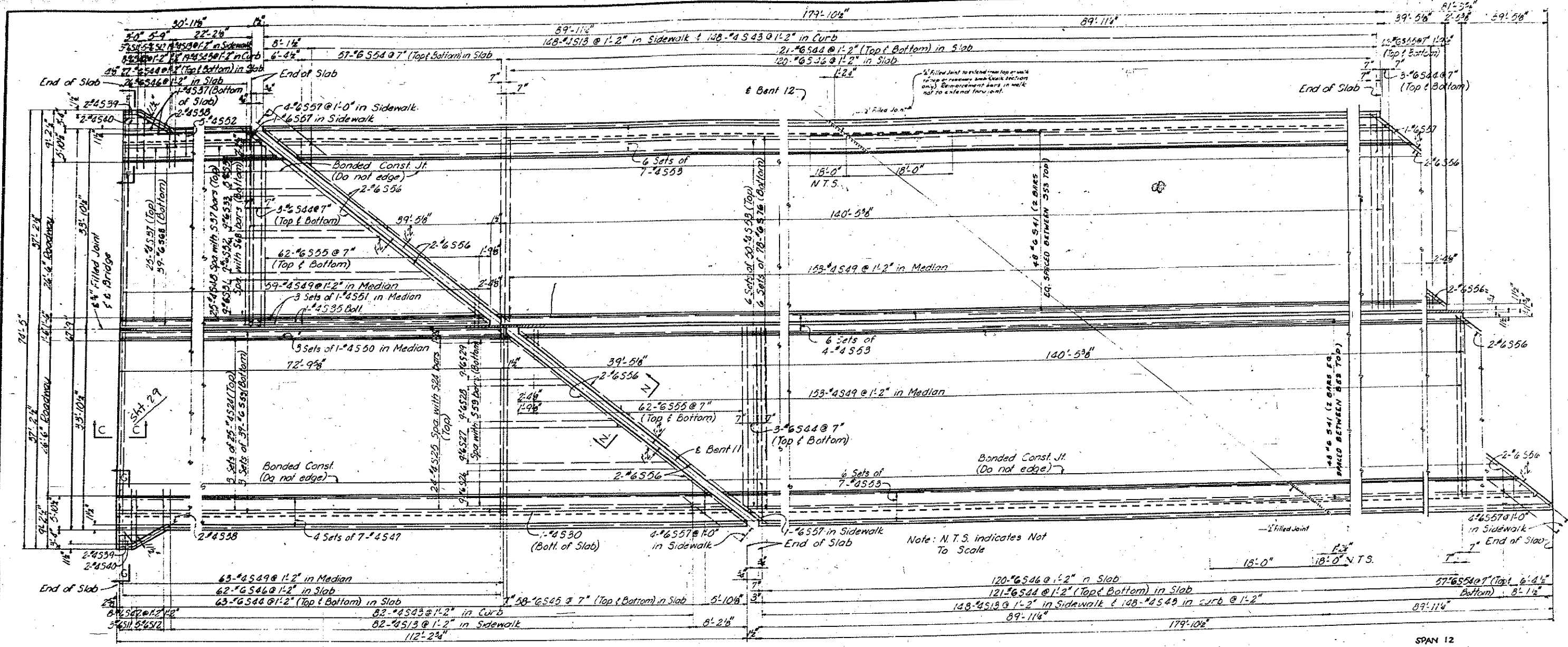
PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

SLAB - TRUSS SPAN
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

COMPUTED *J. V. Diller* SECTION 055A-0103-M.E.T.
DRAWN *K. P. Faust* AS SHOWN
CHECKED *J. Grinstead* APPROVED *[Signature]*
APPROVED *[Signature]*

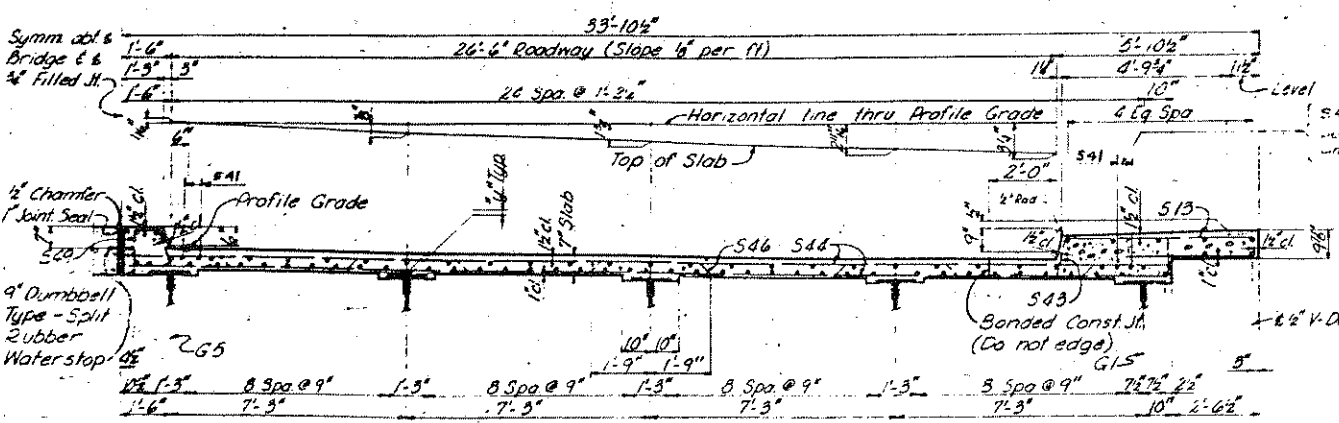
FILED	YEAR	MONTH	DAY
55A	1961	27	41

Note: Do not scale this drawing. Follow dimensions.



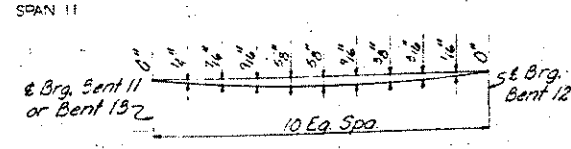
PLAN
SCALE: 1/8" = 1'-0"

Note: 'y' is a constant dimension measured from bottom of slab to top of flange. For Span 10, Girders G1-E thru G5-E 'y' = 14". For all other girders 'y' = 12".



TYPICAL HALF CROSS SECTION
SCALE: 3/8" = 1'-0"

Note: Do not scale this drawing. Follow dimensions.



DEAD LOAD DEFLECTION ORDINATES
Note: Deflections are for concrete only. For deflections of Span 10 see Sheet 29.

NOTES
For Sections C-C & N-N see Sheet 29. All longitudinal dimensions shown in Plan are measured truly horizontal. Reinforcement shall be held bent as required to clear roof drains and sidewalk topping boxes for roadway lighting. See Detail C on Sheet 33 for additional reinforcement and concrete bracket at roadway light locations. Edge sidewalk curbs and median edges with a 1/2" radius edging tool.

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

PREPARED BY
EVERDAUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

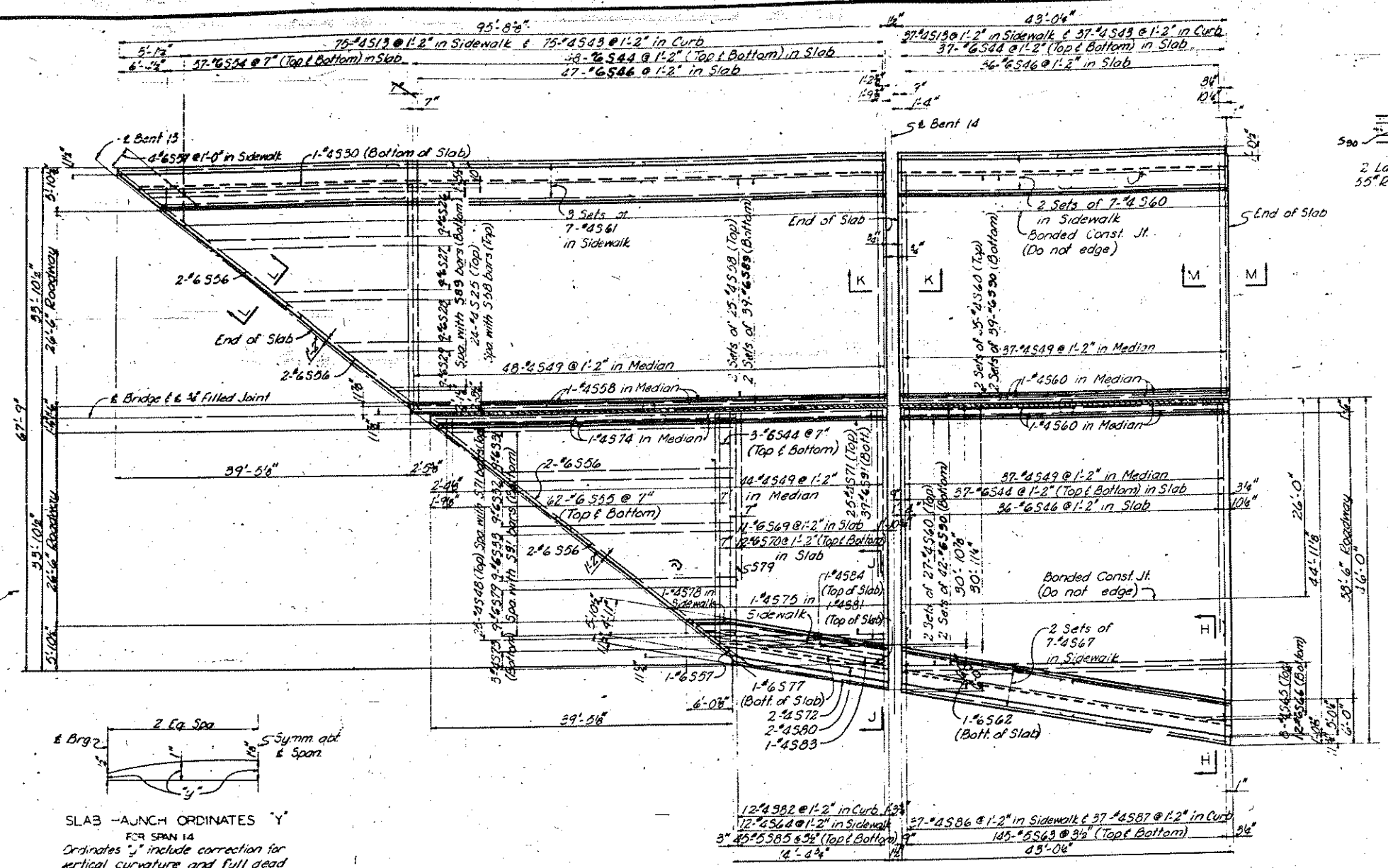
**SLAB - SPANS 10, 11 AND 12
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL**

DATE	BY	DESCRIPTION
B-14-50	R.L.	Rev. steel in rdwy slabs

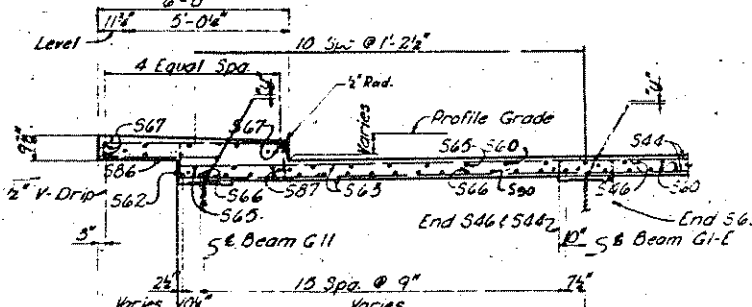
COMPUTED BY: I.V. Dillon
DRAWN BY: P. Faust
CHECKED BY: G. M. H. H. H.
APPROVED BY: [Signature]

SECTION 055A-0103-M.F.T.
SCALE: AS SHOWN
APPROVED: [Signature]

55A	1961	28	41
-----	------	----	----

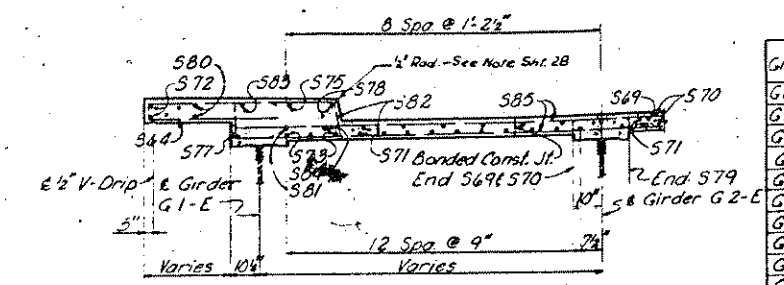


SLAB HAUNCH ORDINATES "Y"
FOR SPAN 14
Ordinates "y" include correction for vertical curvature and full dead load deflection. Dead load deflection for concrete only is $\frac{1}{16}$ " at $\frac{1}{2}$ span and $\frac{1}{8}$ " at quarter point.



Note: Dimensions not shown same as "Typical Half Cross Section" on Sheet 28 except slab haunch "y" varies in span 14.
SECTION H-H
SCALE: $\frac{3}{8}$ " = 1'-0"

PLAN
SCALE: 1" = 1'-0"

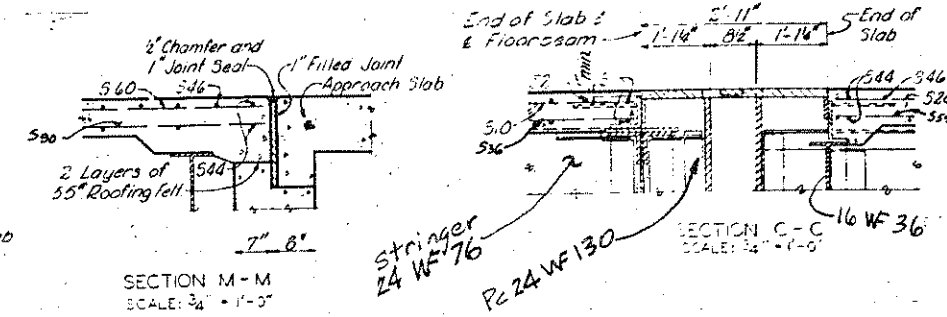


SECTION J-J
SCALE: $\frac{3}{8}$ " = 1'-0"
Same as Section H-H, except as shown.

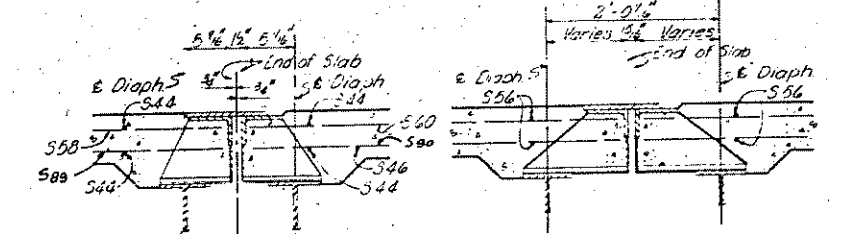
Note: Do not scale this drawing. Follow dimensions.

Girder	Span 10			Span 14		
	a	b	c	a	b	c
G1-E	12'-0"	12'-0"	12'-0"	0'	0'	0'
G2-E	12'-0"	12'-0"	12'-0"	0'	0'	0'
G3-E	12'-0"	12'-0"	12'-0"	0'	0'	0'
G4-E	12'-0"	12'-0"	12'-0"	0'	0'	0'
G5-E	12'-0"	12'-0"	12'-0"	0'	0'	0'
G6-W	12'-0"	12'-0"	12'-0"	0'	0'	0'
G4-W	12'-0"	12'-0"	12'-0"	0'	0'	0'
G5-W	12'-0"	12'-0"	12'-0"	0'	0'	0'
G2-W	12'-0"	12'-0"	12'-0"	0'	0'	0'
G1-W	12'-0"	12'-0"	12'-0"	0'	0'	0'

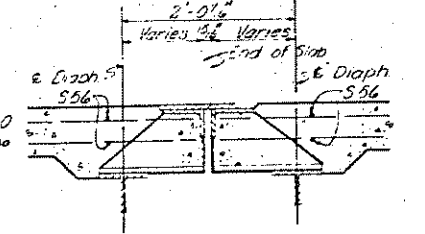
DEAD LOAD DEFLECTION ORDINATES
Note: Deflections are for concrete only. For span 14 see Slab Haunch Ordinates "y" on this sheet.



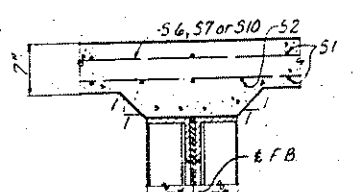
SECTION M-M
SCALE: $\frac{3}{4}$ " = 1'-0"



SECTION K-K
SCALE: 1" = 1'-0"



SECTION L-L
SCALE: 1" = 1'-0"
Section N-N same but opposite hand.



SECTION E-E
SCALE: 1" = 1'-0"

Note: Typical for all floorbeams from Panel Pt. 1 thru Panel Pt. 1' except for Panel Pt. 5. Cover plates on floorbeam not shown.

NOTES

All longitudinal dimensions shown in Plan are measured truly horizontal. Reinforcement shall be field bent as required to clear roadway drains and sidewalk topping boxes for roadway lighting.
See Detail Sheet 33 for additional reinforcement and concrete detail of roadway light locations.

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

SEYMOUR SIMON
CONSULTING ENGINEER

WILLIAM J. BORTNER
SUPERVISOR OF HIGHWAYS

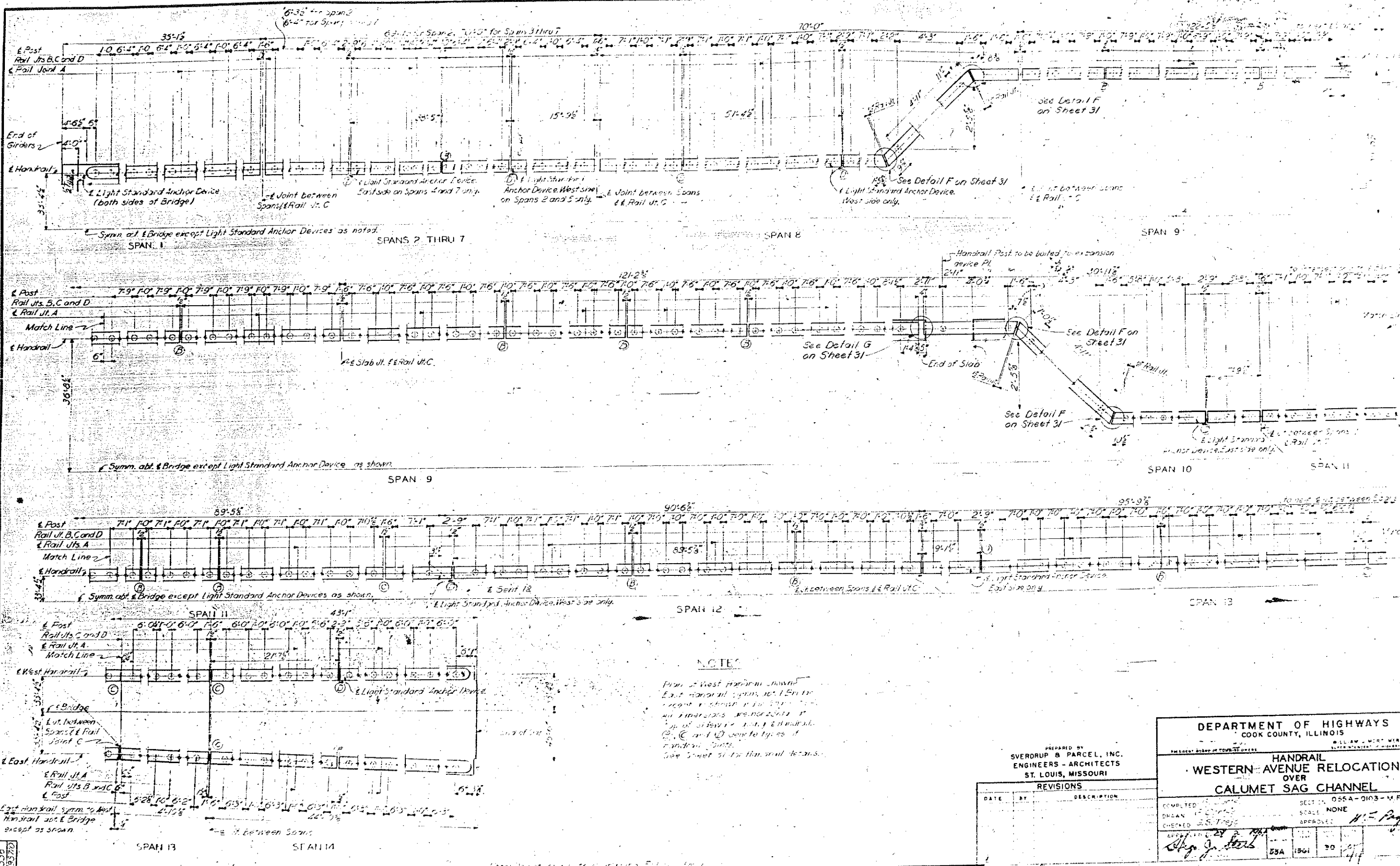
SLAB - SPANS 13 AND 14
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

NO.	BY	DESCRIPTION	DATE
1	R.L.	Rev. steel in roadway slabs	

COMPUTED: T.V. Gillon
DRAWN: K.P. Faust
CHECKED: C. Grinheim
APPROVED: *[Signature]*
DATE: Oct. 2, 1964

SECTION: 055A-0103 - M.P.T.
SCALE: AS SHOWN
APPROVED: *[Signature]*

PROJECT NO.	55A
DATE	10-2-64
SHEET NO.	29
TOTAL SHEETS	41



NOTES

Plan of West Handrail shown. East handrail symmetrical. Erection of handrail to be done in two stages. The handrail is to be erected in two stages. The handrail is to be erected in two stages. The handrail is to be erected in two stages.

PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

REVISIONS		
DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

HANDRAIL
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

SECTION 055A-0103-M.F.T.

SCALE NONE

APPROVED: *H. J. Pugh*

DATE: 5/31/61

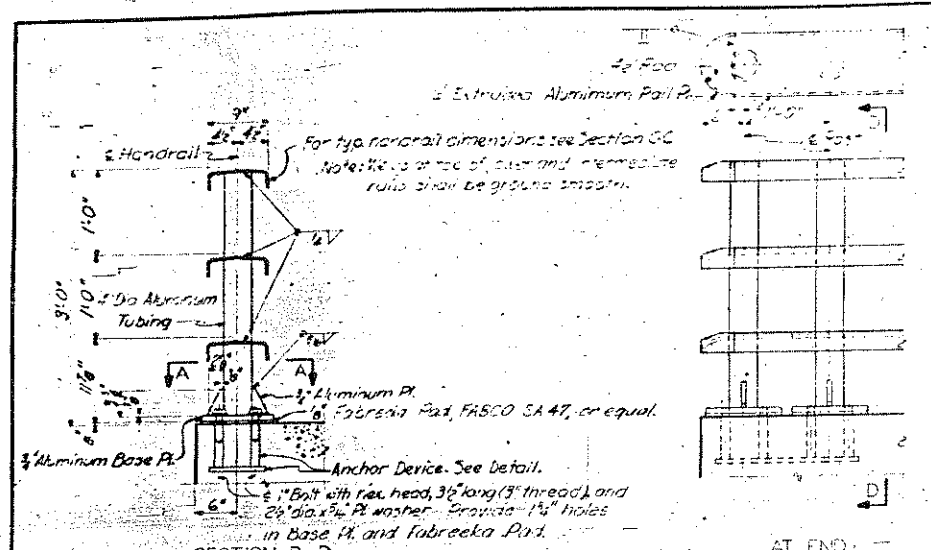
BY: *Shgo J. Steer*

CHECKED: *S.S. Tye*

DESIGNED: *S.S. Tye*

COMPLETED: *5/31/61*

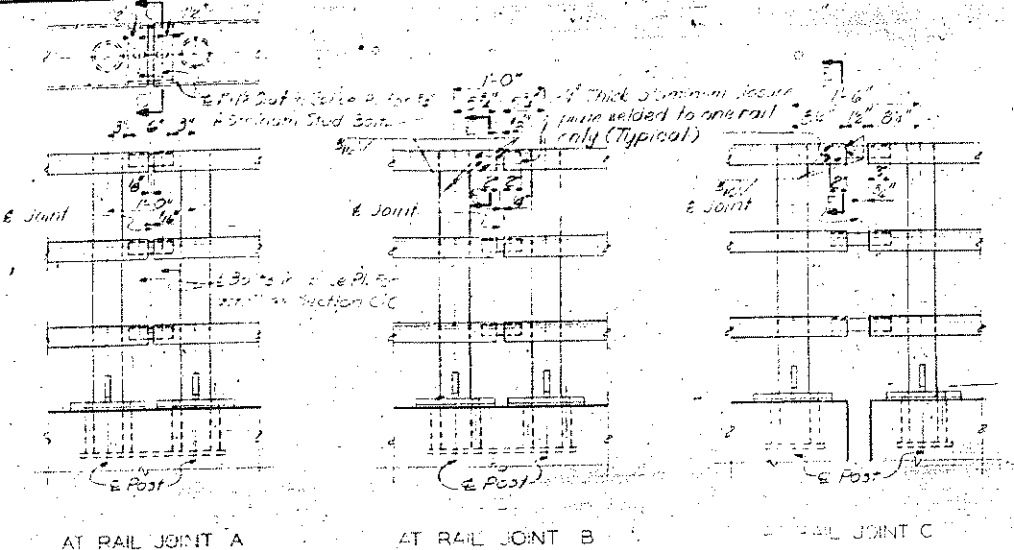
330
39370



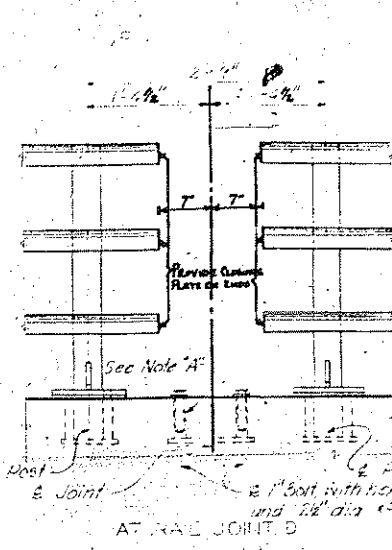
SECTION D-D
SCALE: 1"=1'-0"

Note: Base Pl. and Stiffeners may be cast as unit. See Special Provisions.

Note: All Handrail Posts shall be beveled at the bottom as necessary to make posts truly vertical.

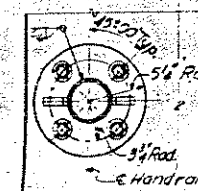


ELEVATION OF HANDRAIL
SCALE: 1"=1'-0"

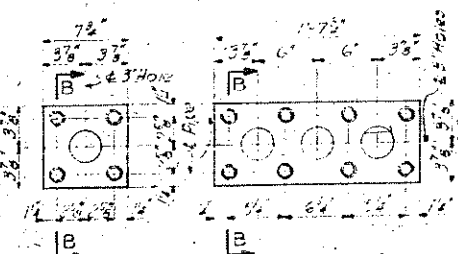


AT RAIL JOINT D

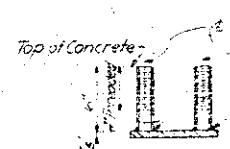
Note: All Handrail Posts shall be beveled at the bottom as necessary to make posts truly vertical.



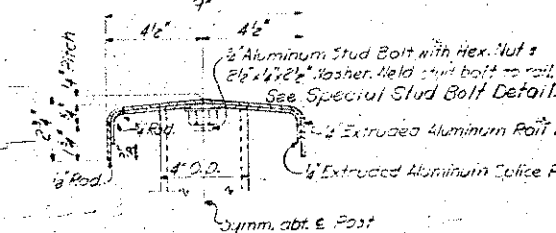
SECTION A-A
SCALE: 1/2"=1'-0"



ANCHOR DEVICE DETAILS
SCALE: 1/2"=1'-0"

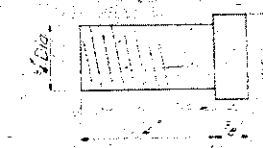


SECTION B-B

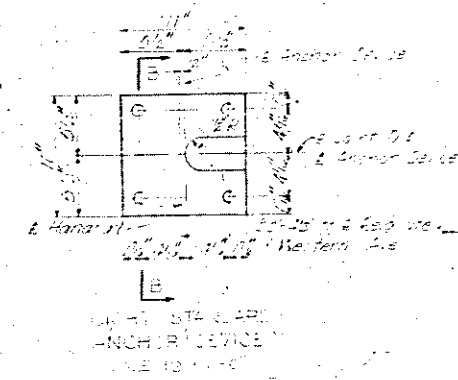


SECTION C-C
SCALE: 3/8"=1'-0"

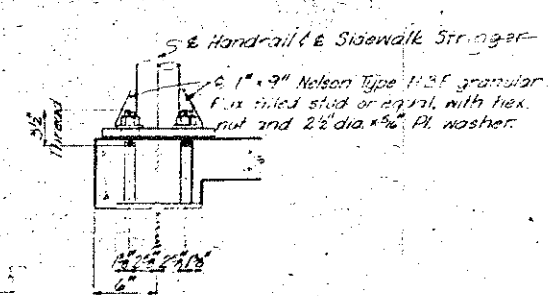
(Section E-E same except omit stud bolt and weld 1/4" closure pl. to one end of rail.)



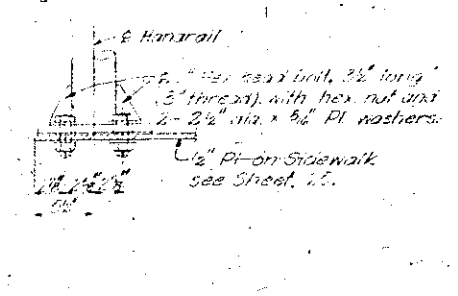
SPECIAL STUD BOLT
SCALE: FULL SIZE



ANCHOR DEVICE
SCALE: 1/2"=1'-0"

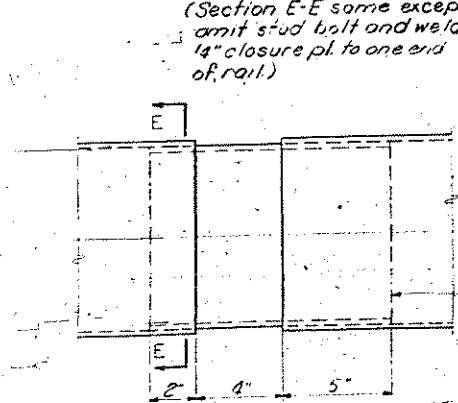


TRUSS SPAN

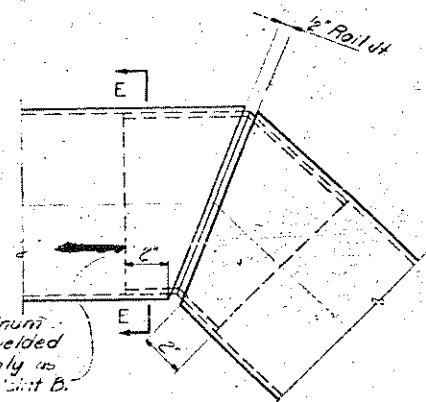


EXPANSION DEVICE
NUMBER 10

SPECIAL ANCHOR DETAILS
SCALE



DETAIL G
SCALE: 1/2"=1'-0"



DETAIL F
SCALE: 3/8"=1'-0"

Note: See Sheet 30 for location of Details F and G.

NOTES

All longitudinal dimensions are measured horizontally at top of sidewalk along Handrail.

Horizontal members of Handrail shall follow the bridge profile grade.

Work this sheet with Sheet 20.

For materials see Special Provisions.

The cost of all anchor bolts, nuts, washers, and posts shall be included in the unit price bid for Aluminum Handrail.

The cost of all light strapping or other devices shall be included in the unit price bid for Handrail.

PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS
WILLIAM J. MORTIMER
SUPERINTENDENT OF HIGHWAYS

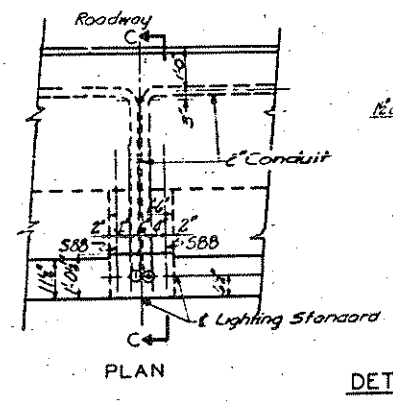
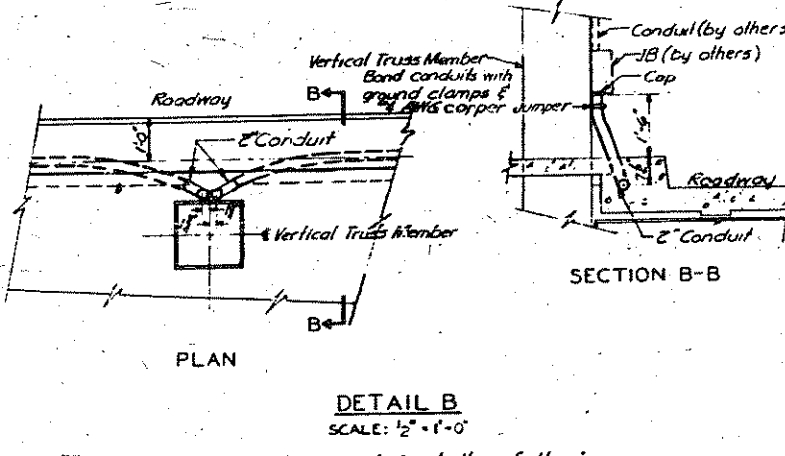
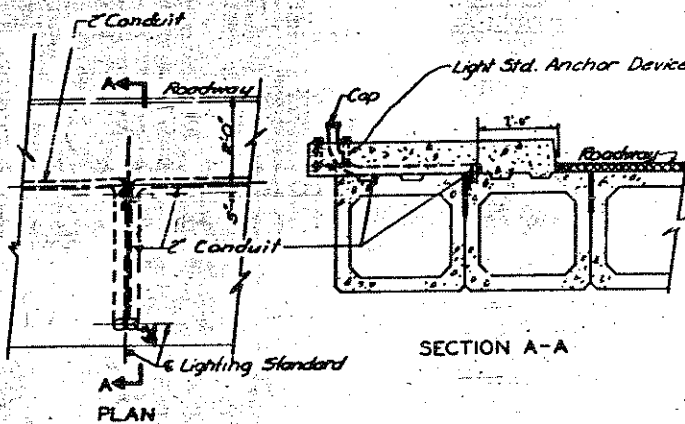
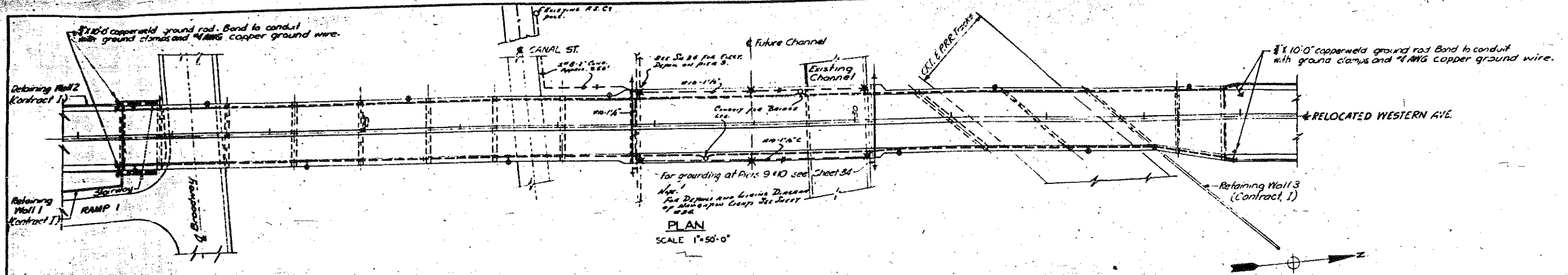
**HANDRAIL
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL**

REVISIONS		
DATE	BY	DESCRIPTION

COMPUTED: <i>W.P. Page</i>	SCALE: AS SHOWN
DRAWN: <i>W.P. Page</i>	APPROVED: <i>W.P. Page</i>
CHECKED: <i>W.P. Page</i>	
APPLIED: <i>W.P. Page</i>	
55A 1061 31	

1956
572659

Note: Do not scale this drawing. Follow dimensions.



- SYMBOLS**
- Provisions for lighting. See Detail B.
 - ⊙ Provisions for lighting standard. See Detail A.
 - ⊕ For anchor device locations and details, see Sheet 50 of 31.
 - ⊗ Provisions for lighting standard. See Detail C.
 - ⊕ For anchor device locations and details see Sheet 30 of 31.
 - 2" Rigid steel conduit, galv. Cap

NOTES

Street lighting spacing designed for use with 400 watt mercury vapor luminaires except at Ramp 1 where design is for 250 watt mercury vapor luminaires. Expansion fittings, OZ type EJ200 with Bonding Jumper EJ200 or equal, shall be installed where conduit crosses joints of piers and abutments.

All conduit to be properly grounded with #4 AWG ground wire.

To be provided at the following truss members:
U3-L3 on East Truss.
U3-L3 on West Truss.

Do not scale this drawing. Follow dimensions.

PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

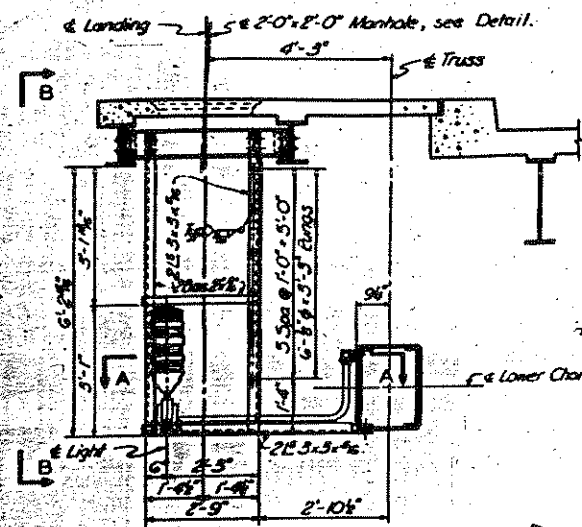
JOHN J. DOPPEY
WILLIAM J. BORTNER

PROVISIONS FOR ROADWAY LIGHTING
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

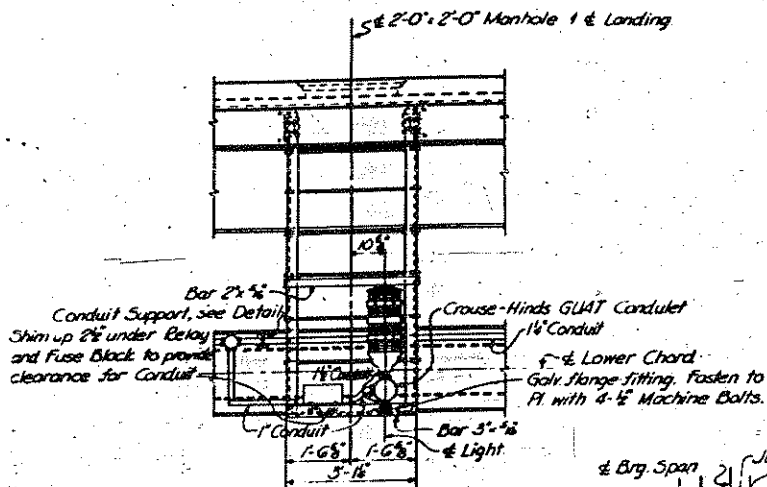
REVISIONS	
DATE	DESCRIPTION

COMPUTED	SECTION 055A-0103-M.F.T.
DRAWN	SCALE AS SHOWN
CHECKED	APPROVED
APPROVED	DATE
55A	1961 33 41

SCALE 1"=50'-0"

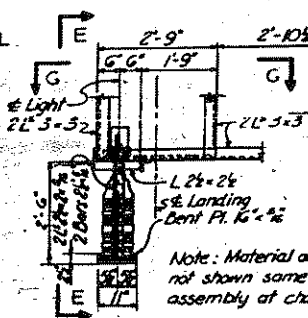


ASSEMBLY AT CHANNEL WALL
(4 Required)

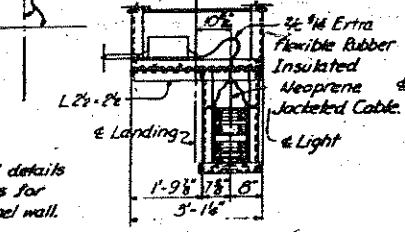


VIEW B-B

Note: Detail shown for Pier 10 and for West truss, Pier 9. Detail opposite hand for East truss, Pier 9.

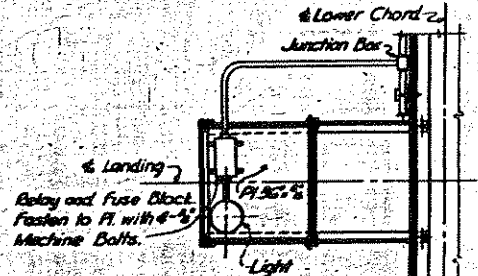


ASSEMBLY AT MID-CHANNEL
(2 Required)

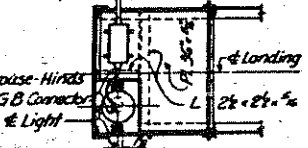


VIEW E-E

Notes: Landings to be shop fabricated with members welded together with a minimum of 1/4" fillet welds. Omit Junction Box at Channel Wall Lights near South end of trusses. Mid-Channel Lights to be 360° Green Duplex Lights with fresnel lenses. Channel Wall Lights to be 180° Red Duplex Lights with Fresnel lenses.



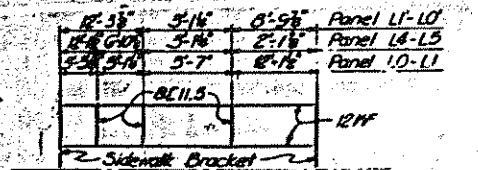
SECTION A-A



SECTION G-G

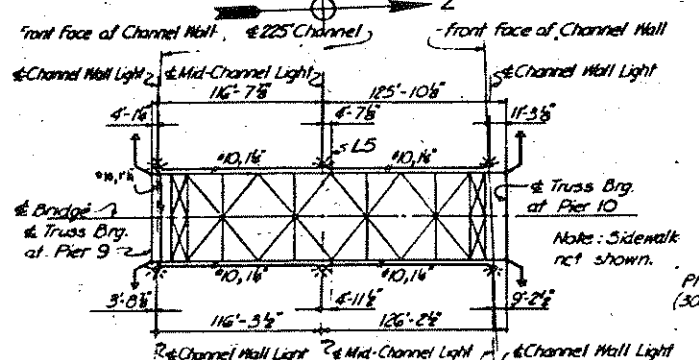
DETAILS OF LIGHT AND LANDING ASSEMBLIES

SCALE: 1/2" = 1'-0"



SPACING OF SIDEWALK DIAPHRAGMS IN
PANELS WITH MANHOLE

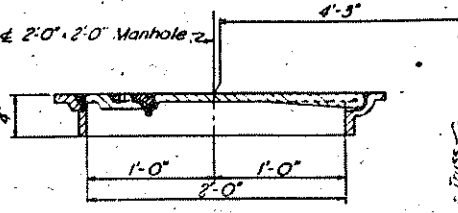
SCALE: NONE



LOCATION PLAN OF LIGHTS

SCALE: NONE

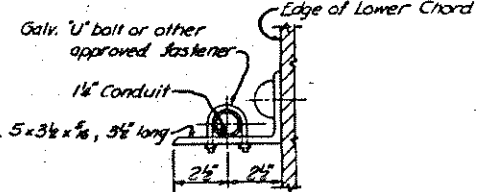
Note: Do not scale this drawing. Follow dimensions.



SECTION THRU MANHOLE FRAME AND COVER

SCALE: 1 1/2" = 1'-0"

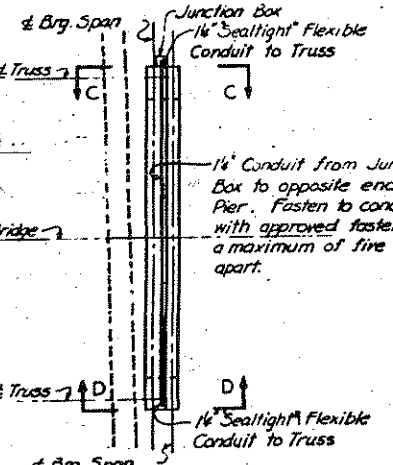
Note: Manhole frame and cover to be Hearnah Foundry Co. Cat. No. R-6660-K or equal, with two hinges type "S", one lift handle type "G" and two type "E" countersunk flat head cap screws. (6 Units Required)



DETAIL OF CONDUIT SUPPORT

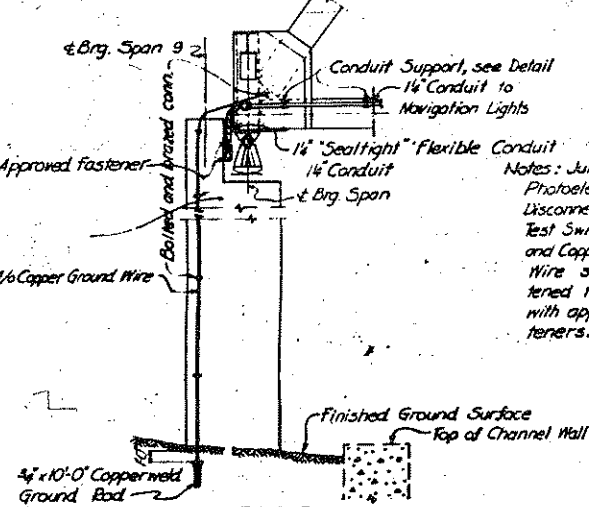
SCALE: 3" = 1'-0"

Note: Install conduit supports on about 5'-0" centers along lower chord of trusses as shown on Light and Landing details.



PLAN OF PIER 9 CAP

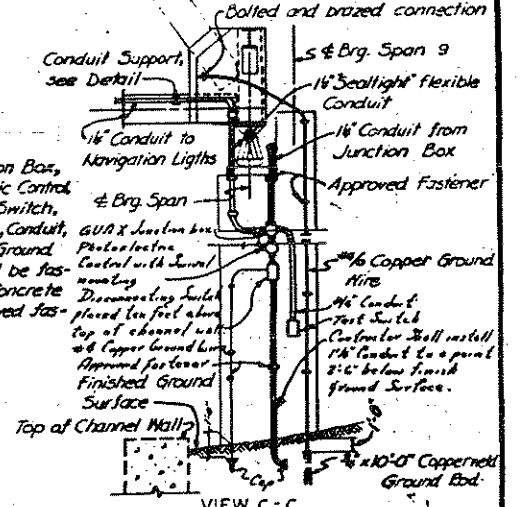
SCALE: NONE



VIEW D-D

SCALE: 3/16" = 1'-0"

Note: Span 9 not shown.



VIEW C-C

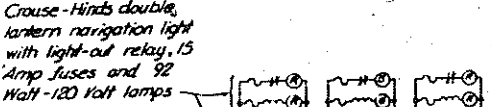
SCALE: 3/16" = 1'-0"

Note: Span 9 not shown.

ELECTRICAL CONNECTIONS AT PIER 9

Note: Dashed lines indicate existing structure.

NOTES: Navigation lights shall be provided during construction in accordance with Subpart 68.10-5 of Coast Guard Aids to Navigation Regulations CG-208. Furnishing and placing these lights shall be the Contractor's responsibility and all costs shall be included in his lump sum price for Navigation Lighting System. Trusses shall be grounded at Pier 9 in a similar manner as that shown for Pier 10. All structural steel shown on this sheet is included in the structural steel quantity shown on Sheet 1. Cost of furnishing and placing all lights, conduit, miscellaneous electrical accessories and manholes shall be included in the lump sum price bid for Navigation Lighting System. Wiring from source of power to Disconnect Switch will be installed by others. See Special Provisions.



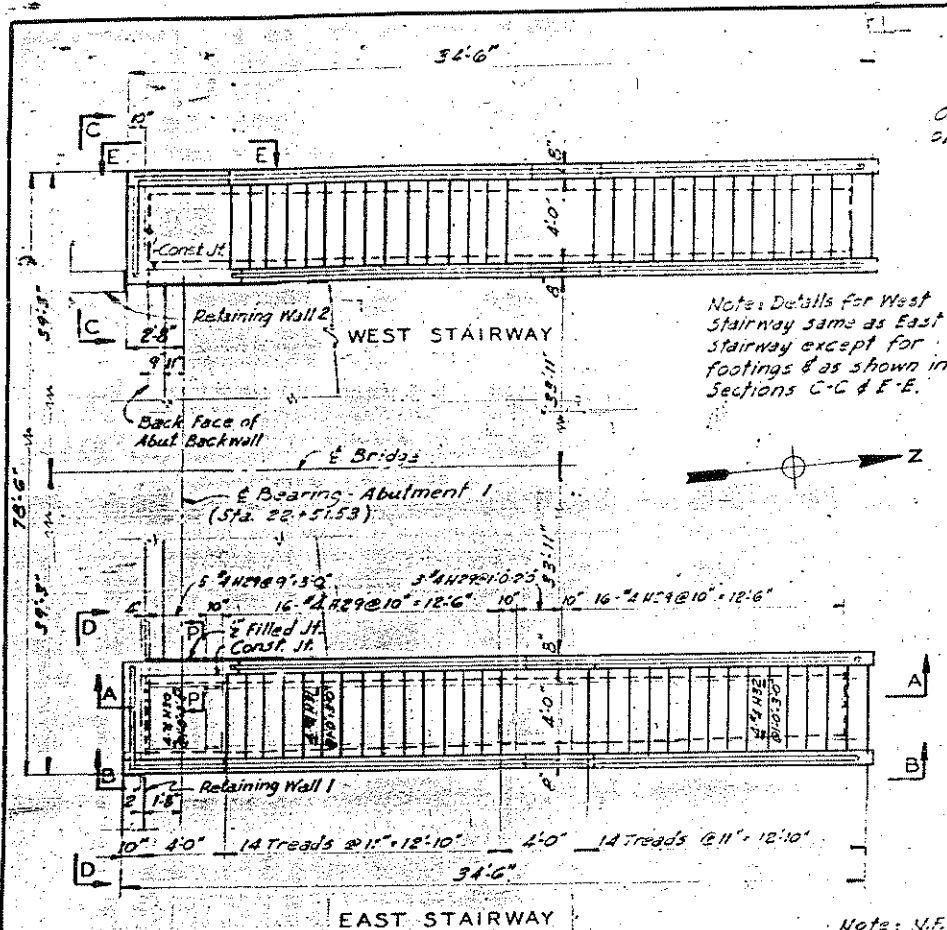
SCHEMATIC DIAGRAM

PREPARED BY
OVERMAN & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

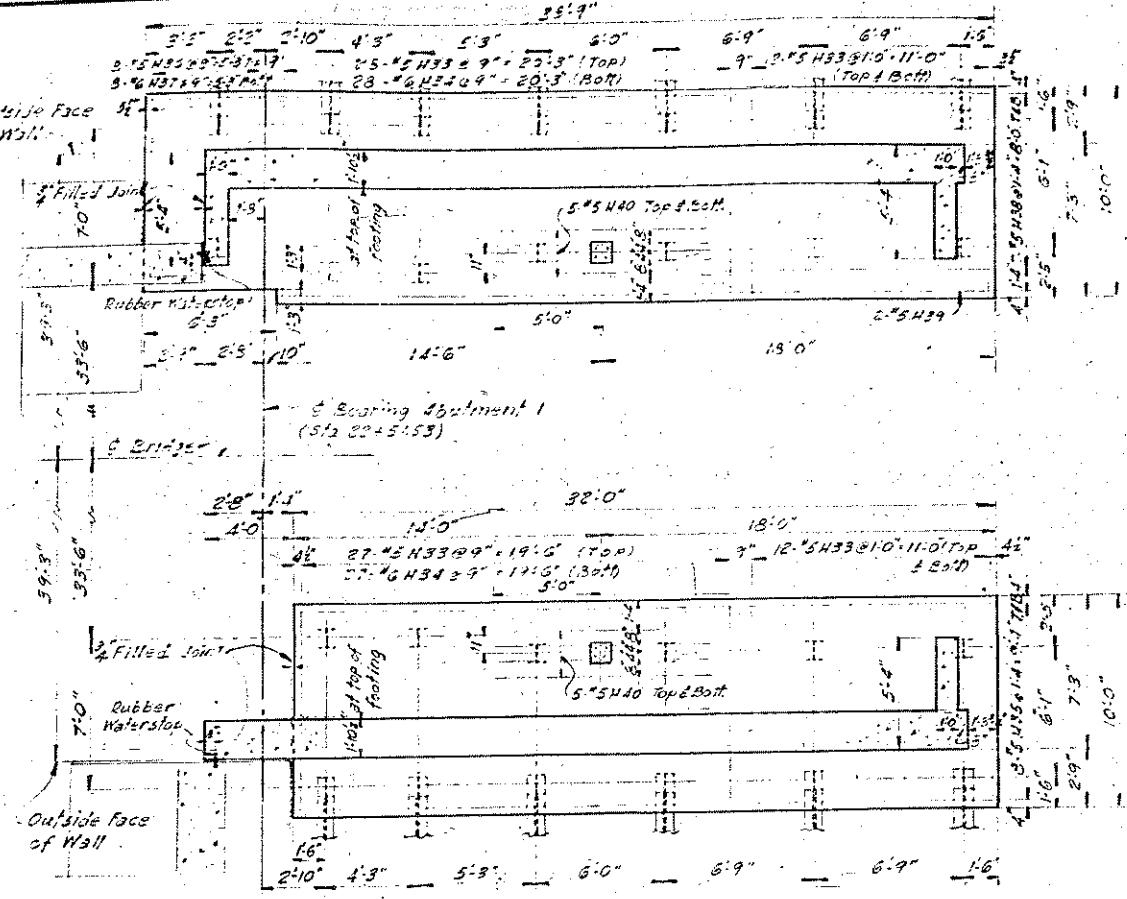
DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS
NAVIGATION LIGHTING
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

DATE	BY	DESCRIPTION
		Revision 1
		Revision 2
		Revision 3
		Revision 4
		Revision 5
		Revision 6
		Revision 7
		Revision 8
		Revision 9
		Revision 10

COMPUTED BY G. S. TRICE	SECTION 688A-003-M.P.T.
DRAWN BY G. S. TRICE	SCALE AS SHOWN
CHECKED BY C. C. WILSON	APPROVED M. E. P. [Signature]
DATE APR 24 1961	SHEET NO. 34



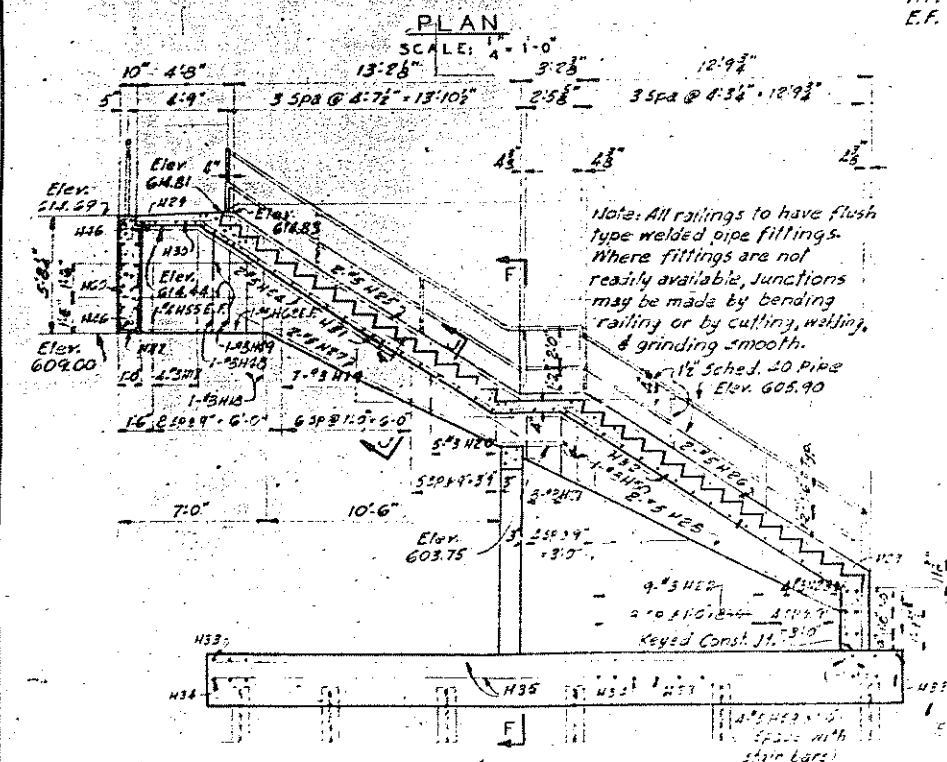
Note: Details for West Stairway same as East Stairway except for footings & as shown in Sections C-C & E-E.



FOOTING PLAN
SCALE: 1/4" = 1'-0"

Note: N.F. indicates near face.
F.F. indicates far face.
E.F. indicates each face.

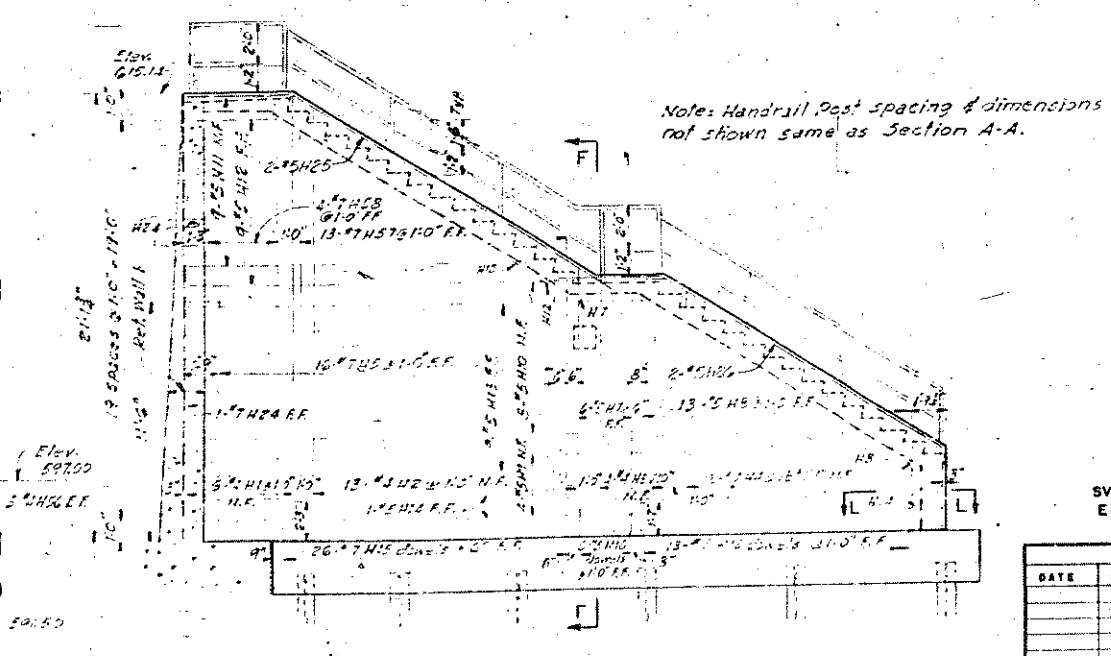
Note: Total of 26-10SP42 Steel Piles reqd. for both stairways. Pile spacing shown is at bottom of footing. Max. design load = 57 kips/pile.



SECTION A-A
SCALE: 1/4" = 1'-0"

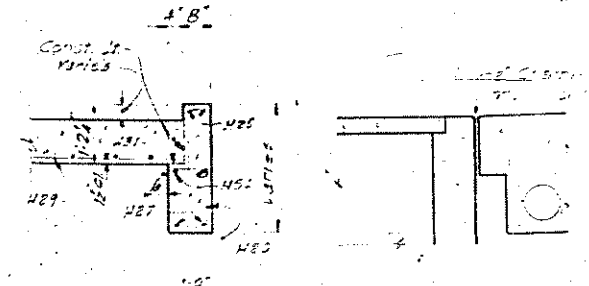
Note: All railings to have flush type welded pipe fillings. Where fillings are not readily available, junctions may be made by bending, railing or by cutting, welding, & grinding smooth.

Note: Do not see this drawing. Follow dimensions.



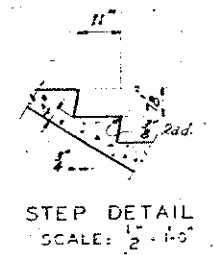
SECTION B-B
SCALE: 1/4" = 1'-0"

Note: Handrail Post spacing & dimensions not shown same as Section A-A.



SECTION J-J
SCALE: 1/2" = 1'-0"

SECTION P-P
SCALE: 1/2" = 1'-0"



STEP DETAIL
SCALE: 1/2" = 1'-0"

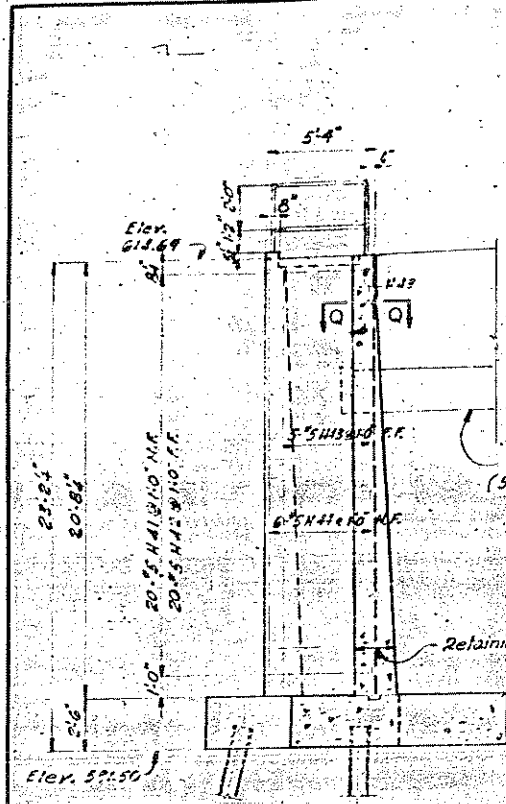
NOTES

- For General Notes see Sheet 5.
- Work this Sheet with Sheet 5.
- All parts of the handrail except anchor bolts to be aluminum. See Special Provisions.
- The contract price per linear foot for Aluminum Pipe handrail shall include furnishing and erecting the handrail complete with anchor bolts and shims. The length measured for payment shall be the total length measured along the top rail.
- The Contractor shall provide sufficient slotted aluminum shims to adequately sign all handrails.
- Reinforcing to be 2" clear unless otherwise noted.
- The top surface of concrete on steps shall be made rough by adding an abrasive aggregate to the concrete. See Special Provisions.
- Retaining Walls 1 and 2 are to be built by others under Contract I.
- For Pile Splice see Sheet 6.
- All concrete in stairways is included in the quantity of Class I Concrete in Substructure shown on Sheet 1.

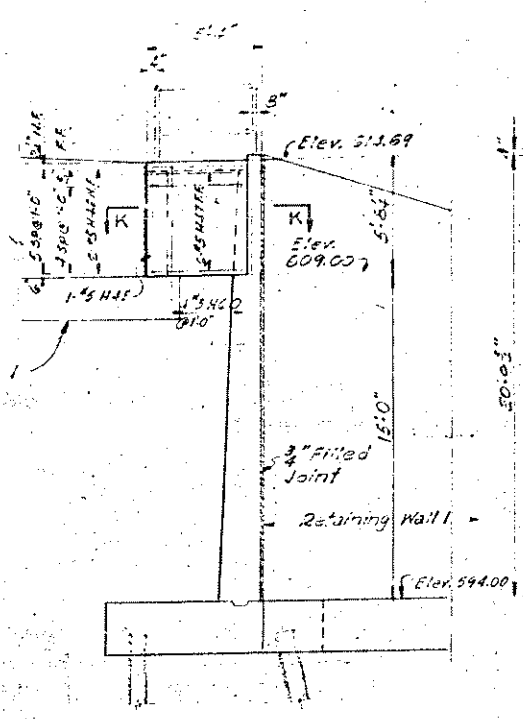
PREPARED BY:
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

DEPARTMENT OF HIGHWAYS COOK COUNTY, ILLINOIS WILLIAM J. MORTIMER SUPERINTENDENT OF HIGHWAYS	
STAIRWAYS WESTERN AVENUE RELOCATION OVER CALUMET SAG CHANNEL	
COMPUTED: E.E. [Signature] DRAWN: F. [Signature] CHECKED: H.D. [Signature]	SECTION: 055A-0103-M.F.T. SCALE: AS SHOWN APPROVED: M.F. [Signature]
DATE: 5/19/61 BY: [Signature]	SHEET: 35 OF: 41

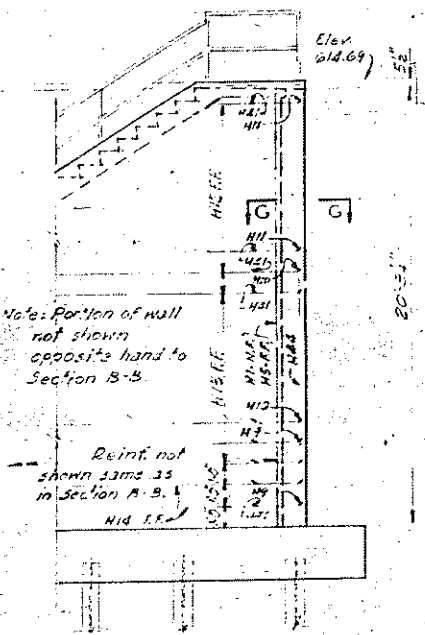
DATE	BY	DESCRIPTION



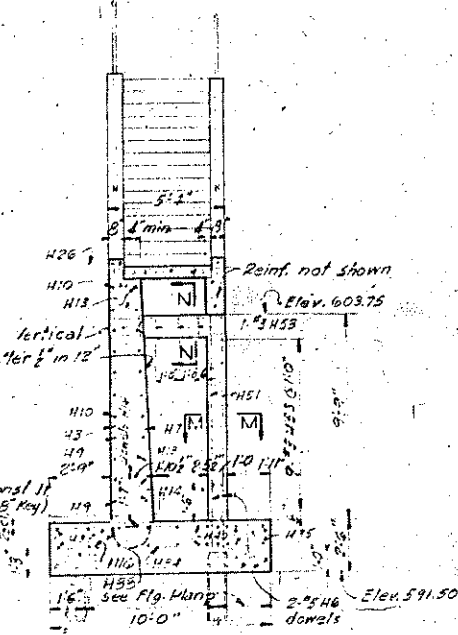
SECTION C-C
SCALE: 1/4" = 1'-0"



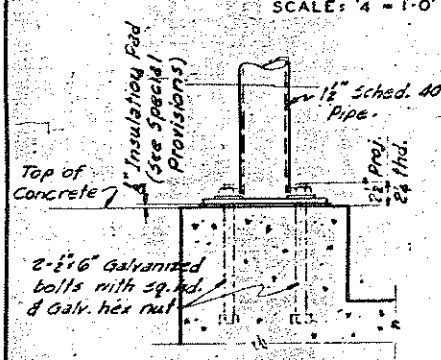
SECTION D-D
SCALE: 1/4" = 1'-0"



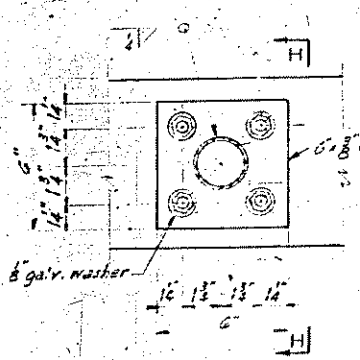
SECTION E-E
SCALE: 1/4" = 1'-0"



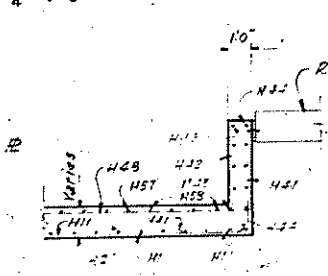
SECTION F-F
SCALE: 1/4" = 1'-0"



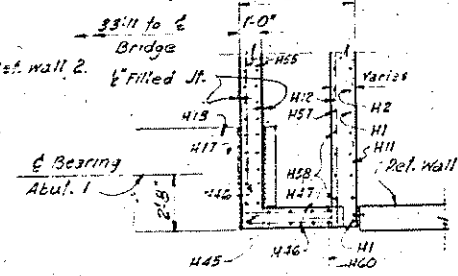
SECTION H-H
SCALE: 3/8" = 1'-0"



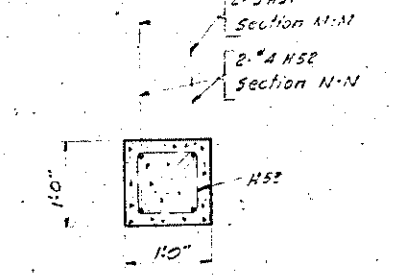
TYPICAL BASE DETAIL OF HANDRAIL POST
SCALE: 3/8" = 1'-0"



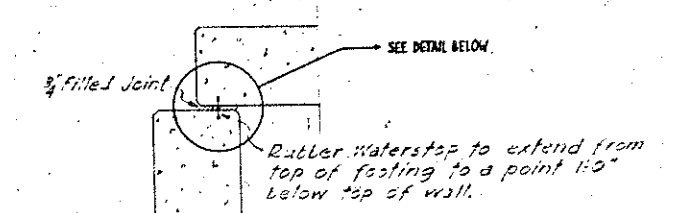
SECTION G-G
SCALE: 1/4" = 1'-0"



SECTION K-K
SCALE: 1/4" = 1'-0"

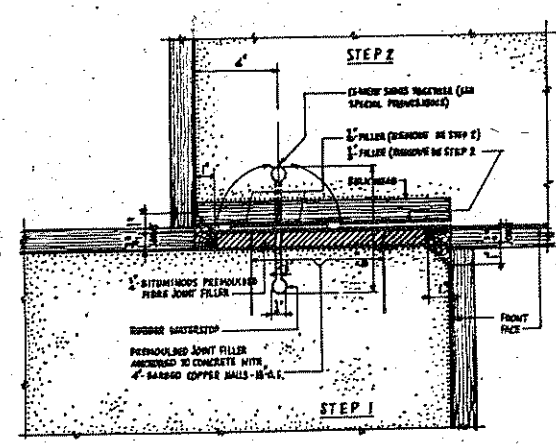


SECTION M-M
SECTION N-N
SCALE: 1/4" = 1'-0"



Rubber Waterstop to be 6" Flat Dunlop Type-Split as furnished by Serviced Products Corp. or an approved equivalent. Field splices shall be vulcanized, made in cemented sleeve sections or cemented lap joints made with an approved high strength cement in accordance with the recommendations of the manufacturer and the special provisions. The rubber waterstop as shown in the detail below is the same item as called for in the special provisions for "Rubber Water Seal".

TYPICAL SECTION THRU 3/4 FILLED JOINT IN WALL
SCALE: 1/2" = 1'-0"



NOTES

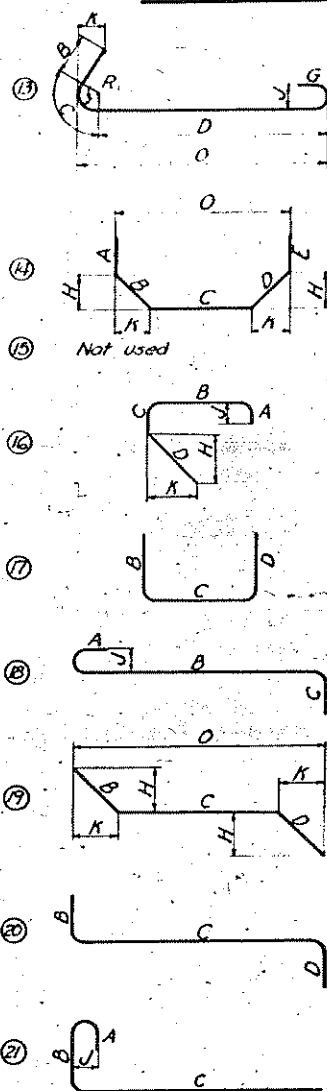
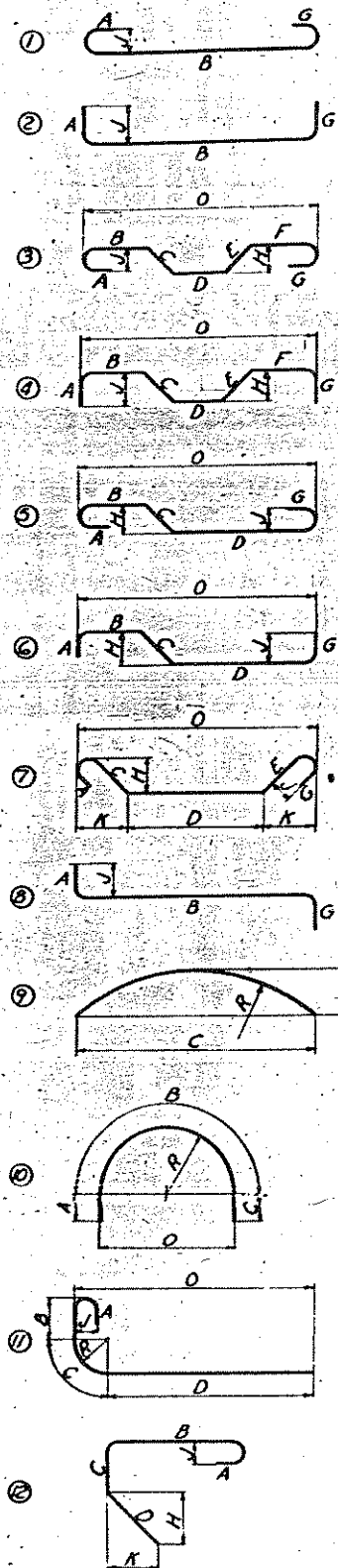
Work this sheet with sheet 35.

1536
575353

Note: Do not scale this drawing. Follow dimensions.

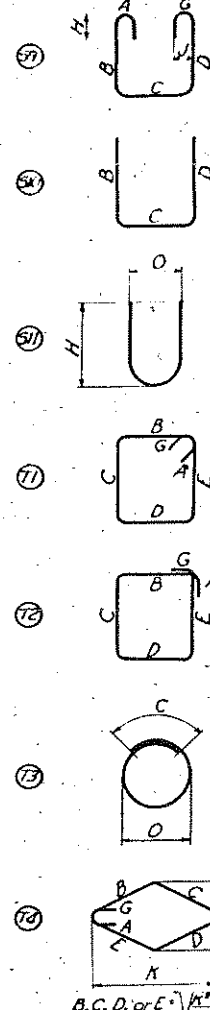
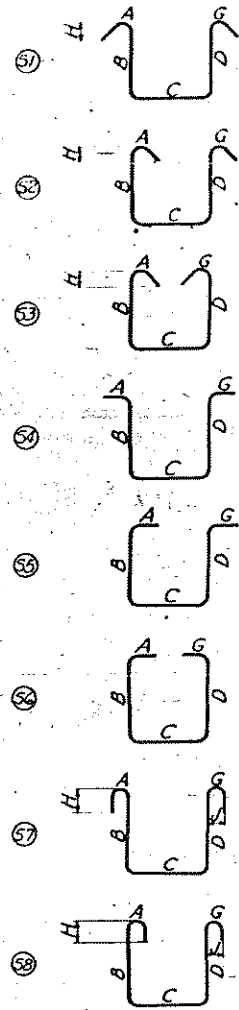
DEPARTMENT OF HIGHWAYS COOK COUNTY, ILLINOIS <small>WILLIAM J. MORTIMER SUPERINTENDENT OF HIGHWAYS</small>													
PREPARED BY SVERDRUP & PARCEL, INC. ENGINEERS - ARCHITECTS ST. LOUIS, MISSOURI													
PROJECT DESIGN BY STAIRWAYS WESTERN AVENUE RELOCATION OVER CALUMET SAG CHANNEL													
SECTION 055A-0103 - A.F.T. SCALE AS SHOWN													
APPROVED: <i>[Signature]</i> 55A 1961 36 41													
REVISIONS <table border="1"> <thead> <tr> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		DATE	BY	DESCRIPTION									
DATE	BY	DESCRIPTION											

TYPICAL BAR TYPES



Where slope differs from 45°, dimensions 'H' and 'K' must be shown.

ENLARGED VIEW SHOWING BAR BENDING DETAILS



NOTES

- All dimensions are out to out, except 'R' which is to inside of bend.
- 'J' Dimension on 180° hooks to be shown in Bar List only where necessary to restrict hook size, otherwise standard hooks are to be used.
- Where 'J' is not shown, 'J' will be kept equal to or less than 'H'. Where 'J' can exceed 'H', it should be shown in Bar List.
- 'H' Dimension on stirrups to be shown on Bar List where necessary to restrict hooks.
- Corrections in length, due to bending around a mandrel, will be made only when the radius 'R' (as in types 11 and 13) exceeds the standard radii indicated in standard hook dimensions. However, the dimensions 'A' or 'G' shown for standard hooks have been corrected for curvature.
- All bends shown are bent around a standard mandrel, except where radius 'R' is shown.
- Figures in circles show bar types.
- Where 'R' is shown on bar types 9, 10, 11 and 13, the length of bend shall be measured along outside of bend. The length of bar type T-3 shall also be measured along outside of bar.

STANDARD HOOK DIMENSIONS

180° HOOK

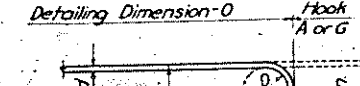


4d or 2 1/2 Min.

D = 6d For Bars #2 To #7
D = 8d For Bars #8 To #11

Bar Size	Hook A or G	J	Approx H
#2	4"	2"	3 1/2"
#3	5"	3"	4"
#4	6"	4"	4 1/2"
#5	7"	5"	5"
#6	8"	6"	6"
#7	10"	7"	7"
#8	1 1/4"	10"	9"
#9	1 3/8"	11 1/2"	10 1/2"
#10	1 1/2"	10 1/2"	11 1/2"
#11	1 7/8"	1 1/2"	1 1/2"

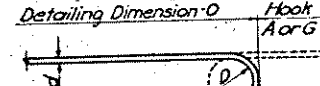
90° HOOK



D = 6d For Bars #2 To #7
D = 8d For Bars #8 To #11

Bar Size	Hook A or G	Approx J
#2	3"	3 1/2"
#3	3"	4"
#4	3"	4 1/2"
#5	4"	5"
#6	4"	6"
#7	5"	7"
#8	6"	9"
#9	7"	10"
#10	8"	11 1/2"
#11	9"	1 1/2"

135° STIRRUP HOOK



D = 5d

Bar Size	Hook A or G	H
#2	3 1/2"	2"
#3	4"	2 1/2"
#4	4 1/2"	2 1/2"
#5	5"	2 1/2"

BAR SIZE EQUIVALENTS

#2	6"	#7	2 1/2"
#3	5 1/2"	#8	1"
#4	1 1/2"	#9	1"
#5	3/8"	#10	1 1/2"
#6	3/4"	#11	1 1/2"

PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

REVISIONS

DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

WILLIAM J. MORTIMER
SUPERVISOR OF HIGHWAYS

TYPICAL BAR TYPES AND HOOK DIMENSIONS
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

SECTION 055A-0103 - M.F.T.

COMPUTED
DRAWN
CHECKED

SCALE NONE

APPROVED Oct 2, 1961
M.E. Papp

55A 1961 37 41

