

"For Marking Diagrams, C. M. Smith, No. 100-5488  
+ Elev of G. of R. on curved piers, is same as Crown  
+ E. of Bridge."

[illegible]

### DETAILS OF COLUMN

Scale  $\frac{3}{4}" = 1' - 0"$

H.O. Carson, Borough Eng

Made by nrfw Date 3-17-14

Traced by C.M.R. Date 5/19/14

Checked by: \_\_\_\_\_ Date: \_\_\_\_\_

Rev. 54-7-18 for 1918  
Rev. 54-7-18 for 1918

[illegible]
$$\|W_{\alpha}(t)\| \leq e^{(\alpha^2 + \alpha)t} \|W_{\alpha}(0)\|$$

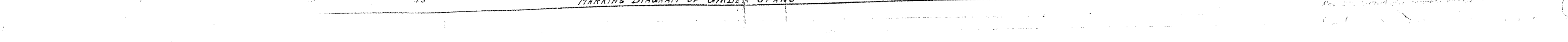
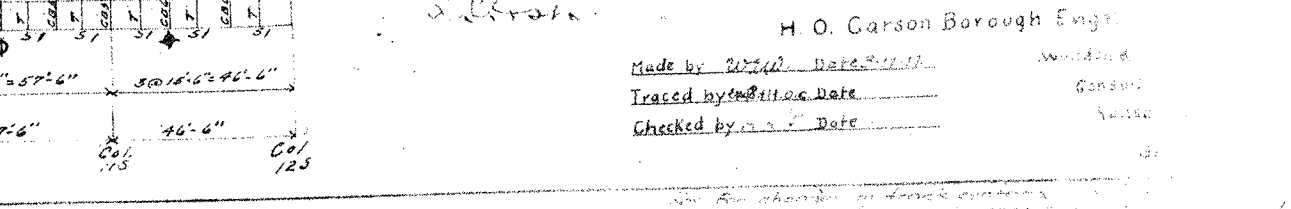
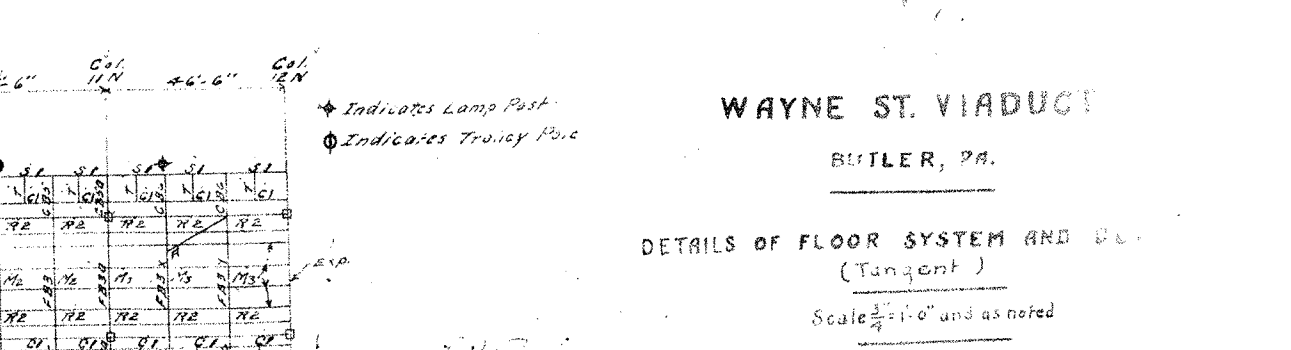
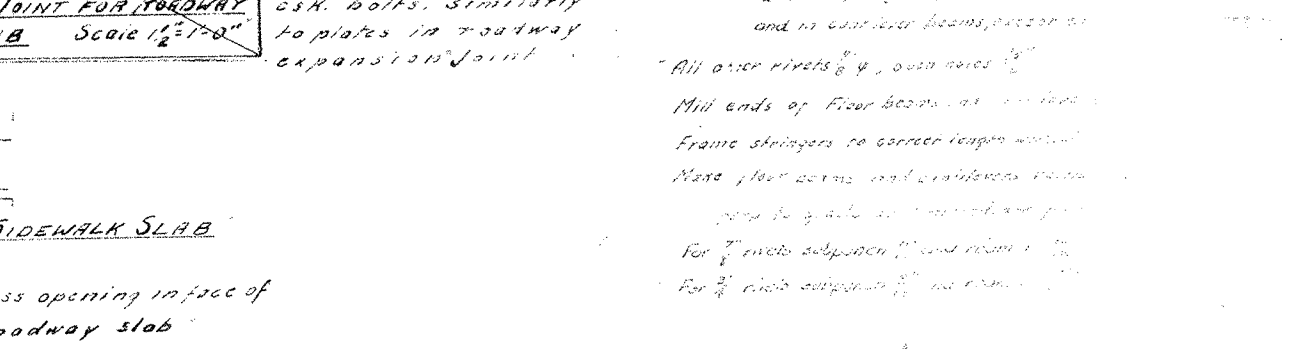
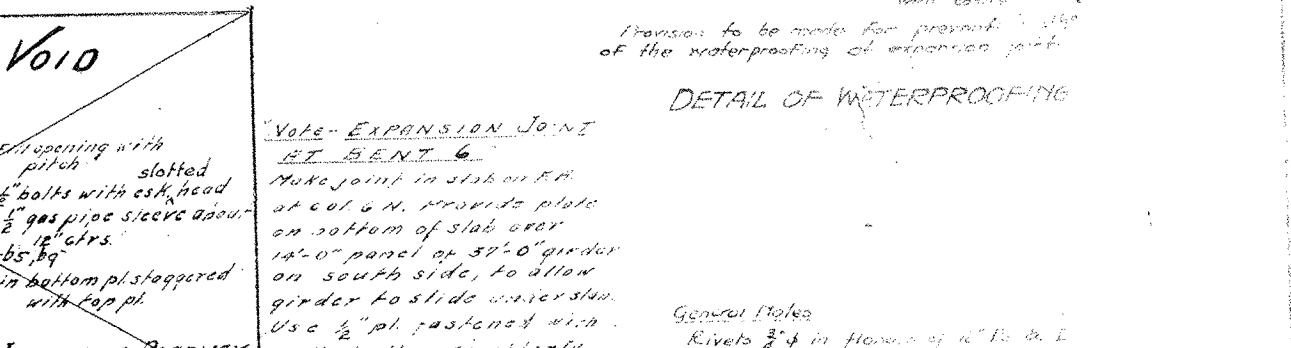
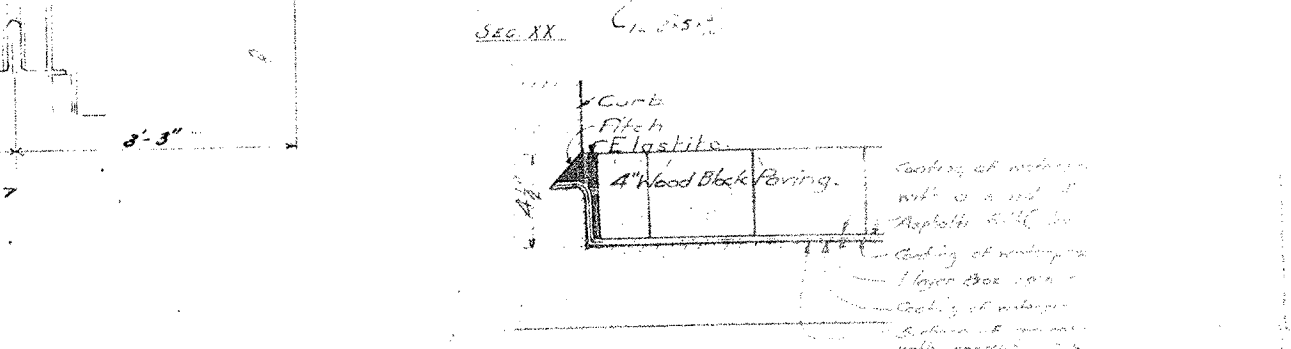
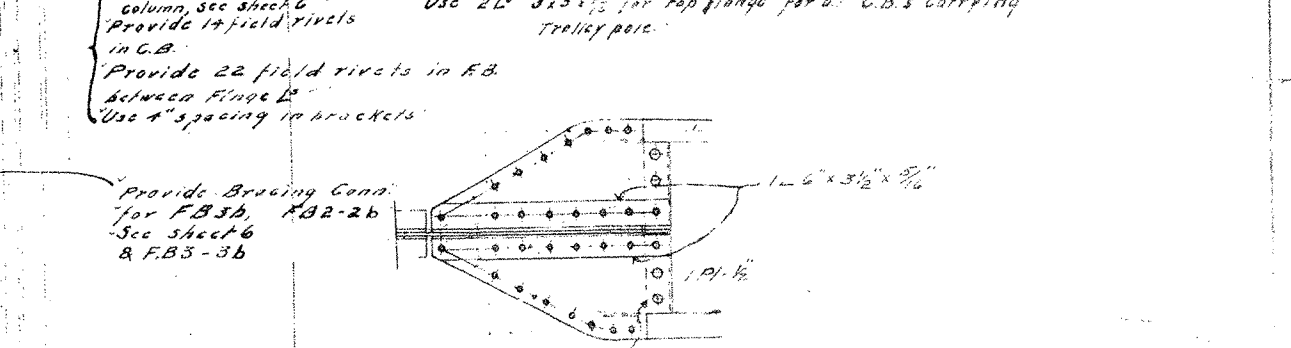
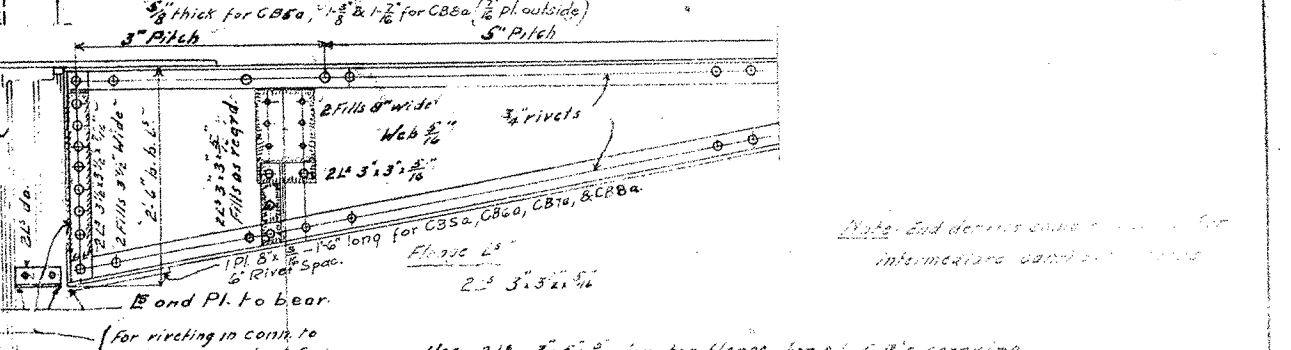
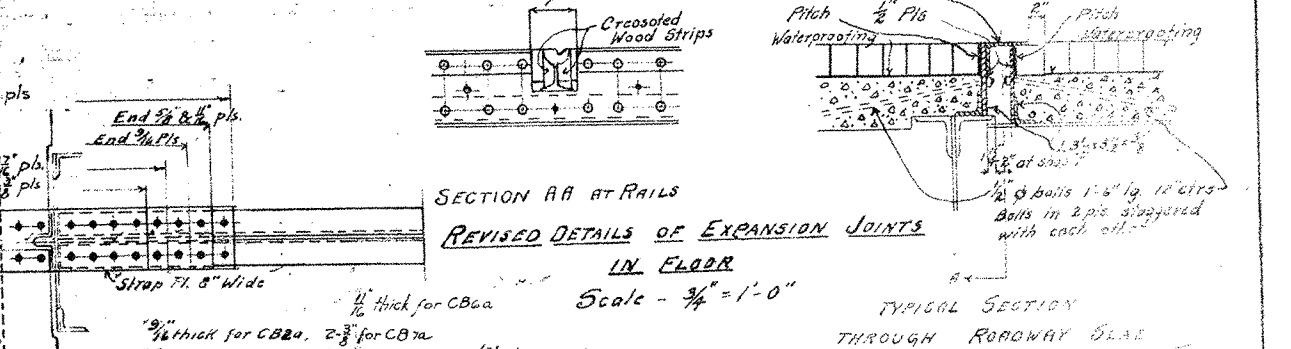
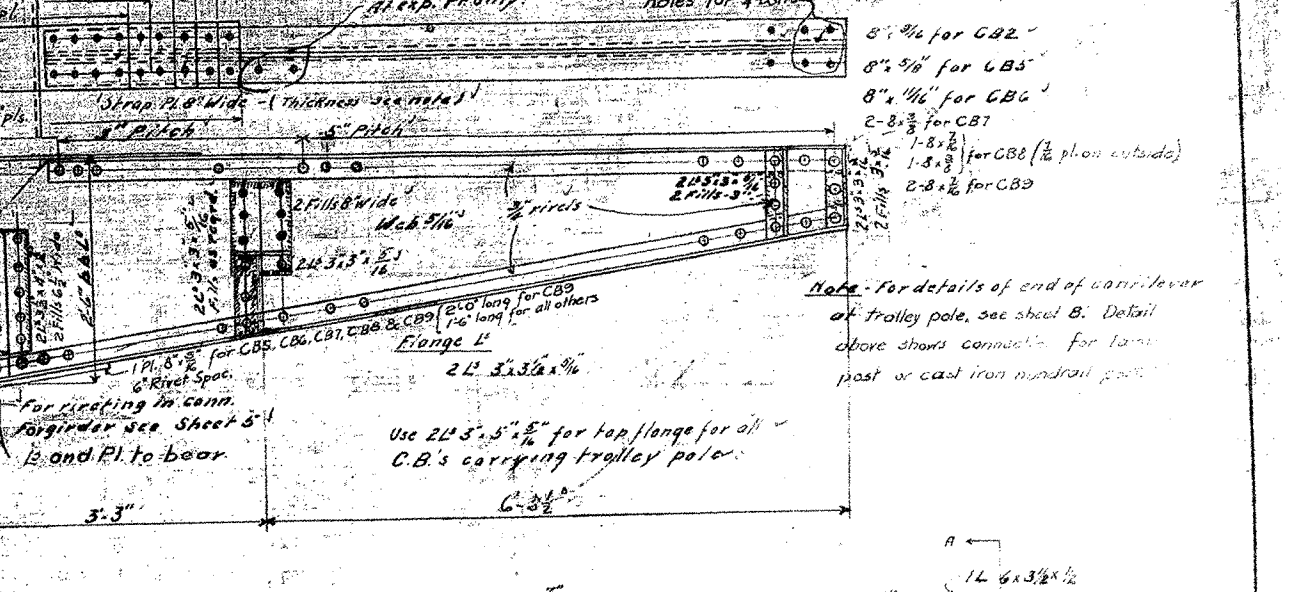
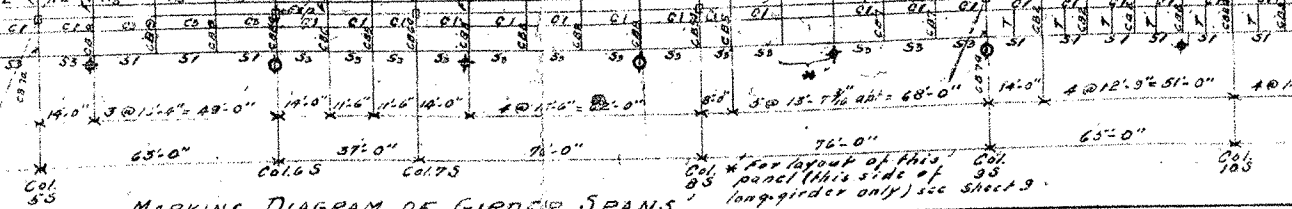
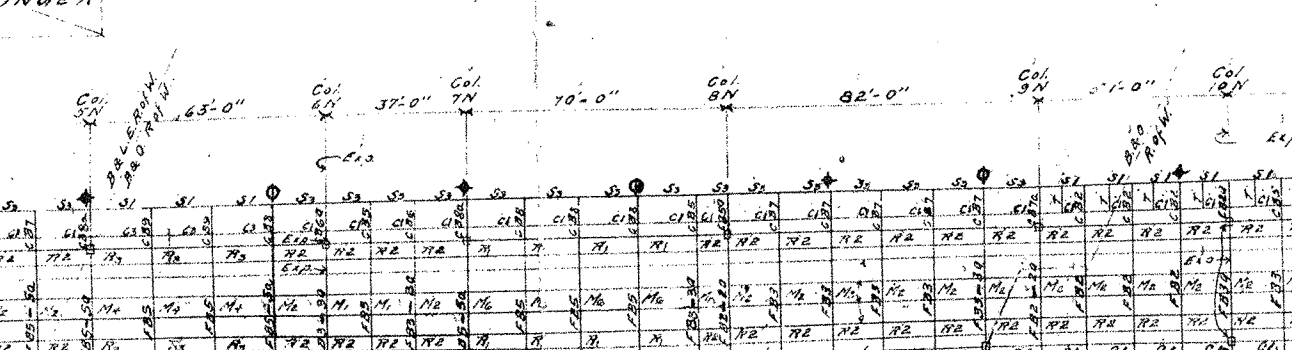
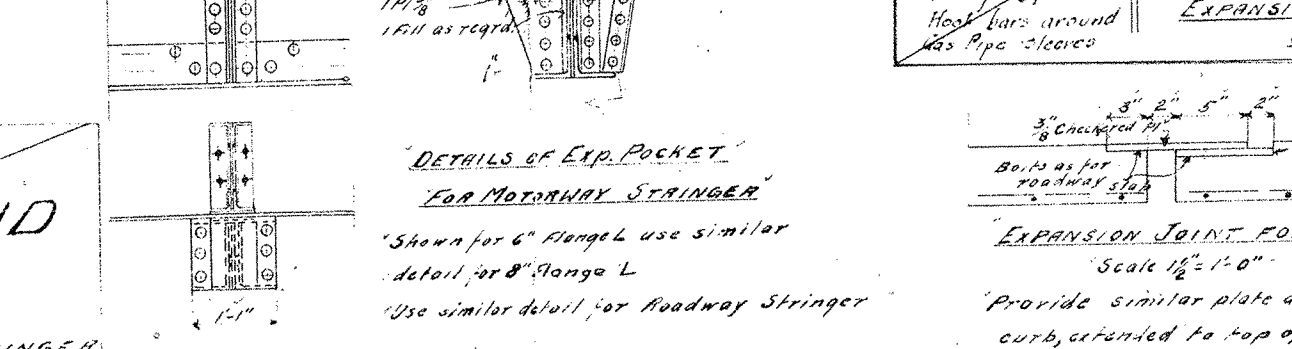
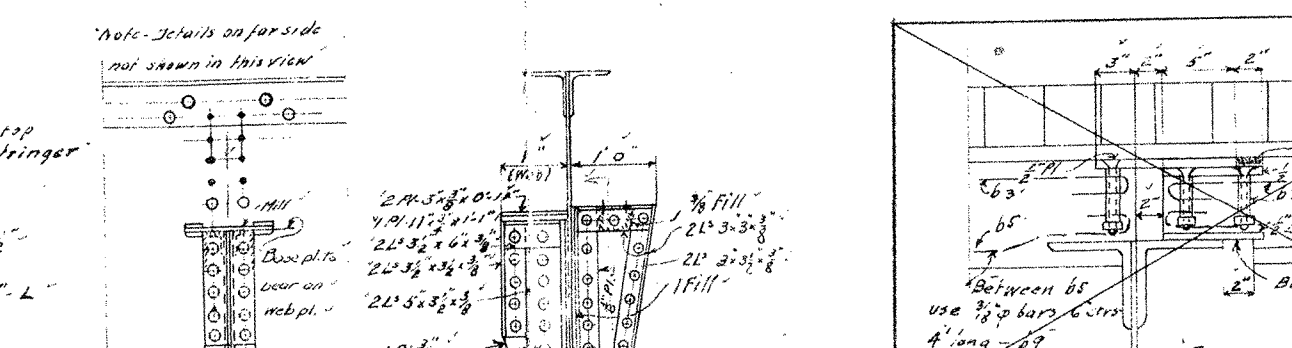
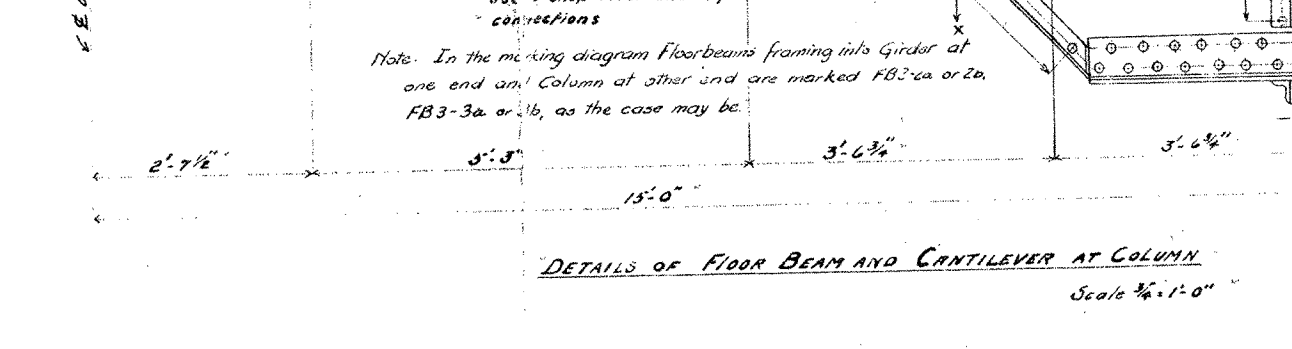
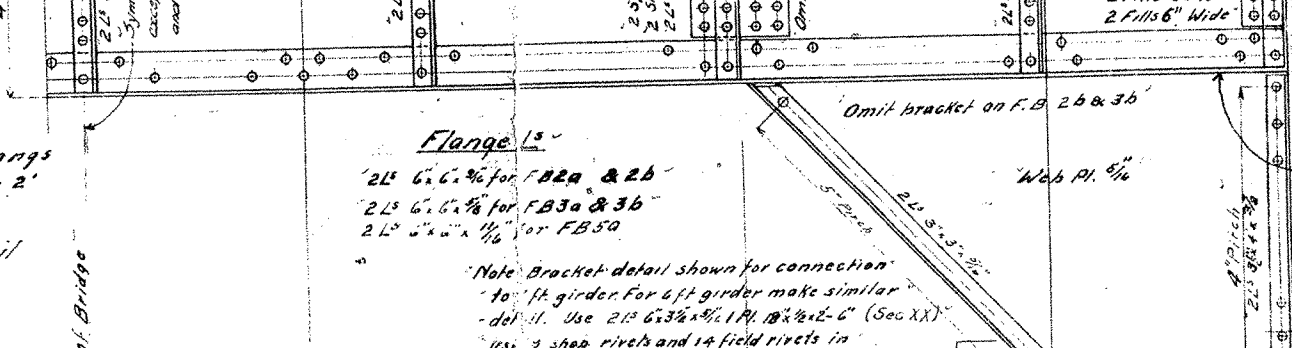
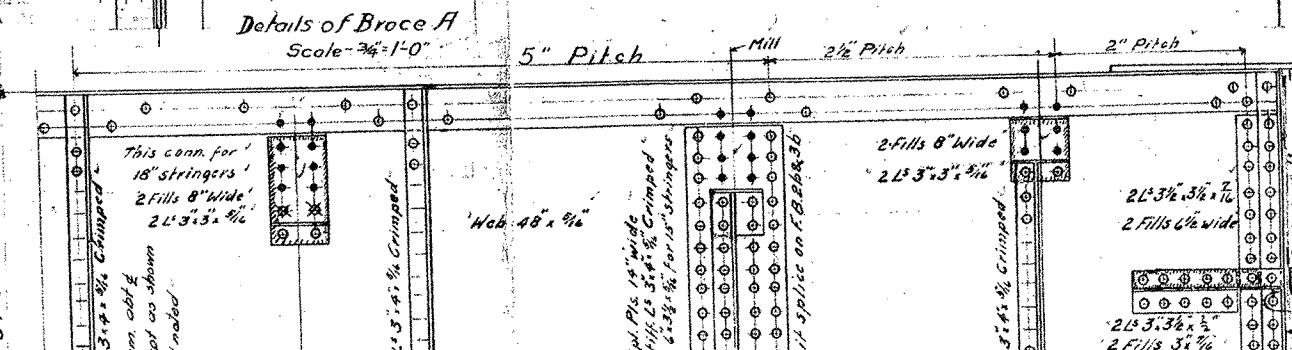
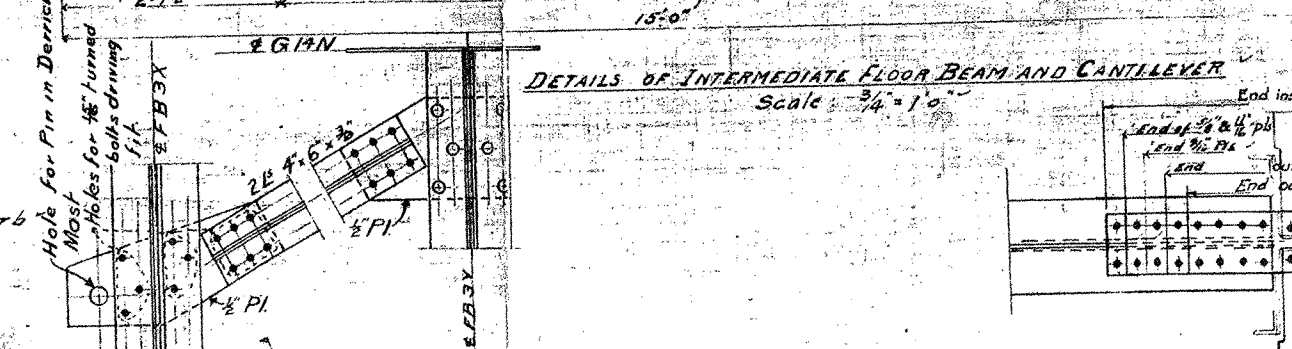
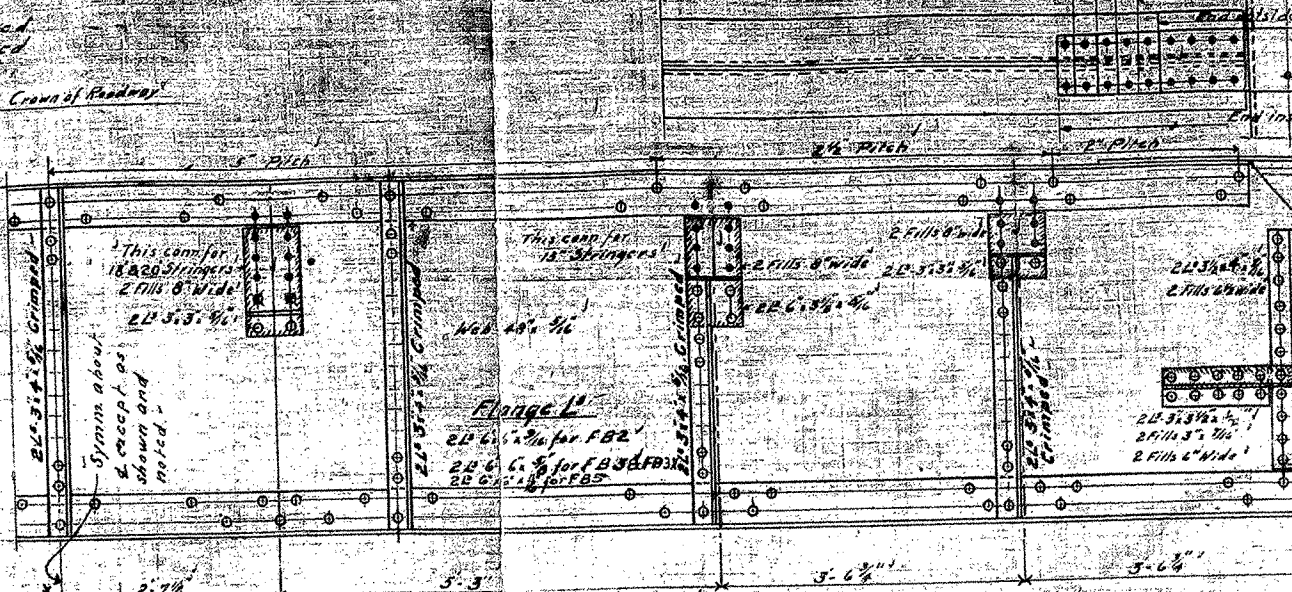
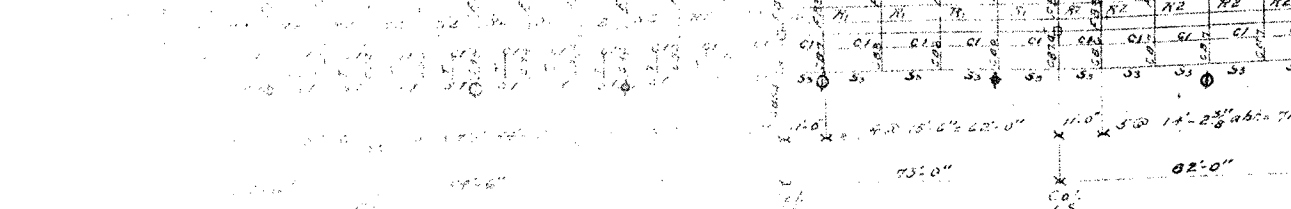
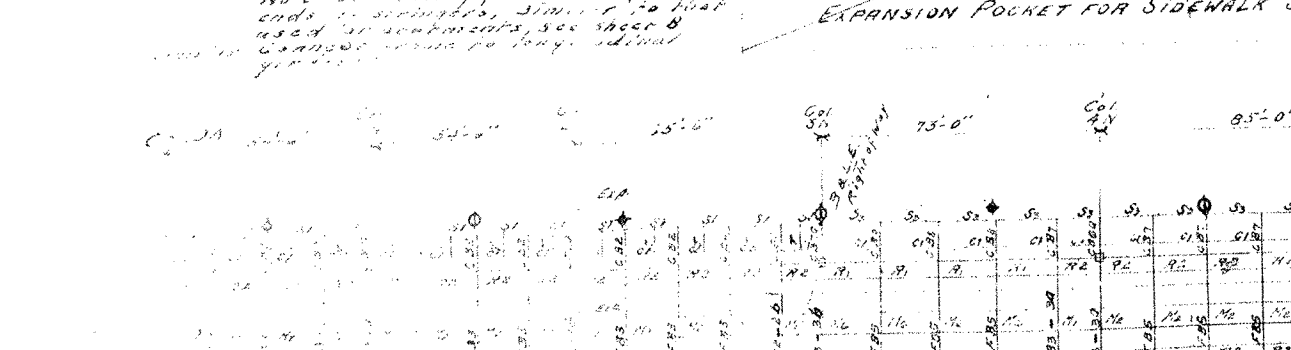
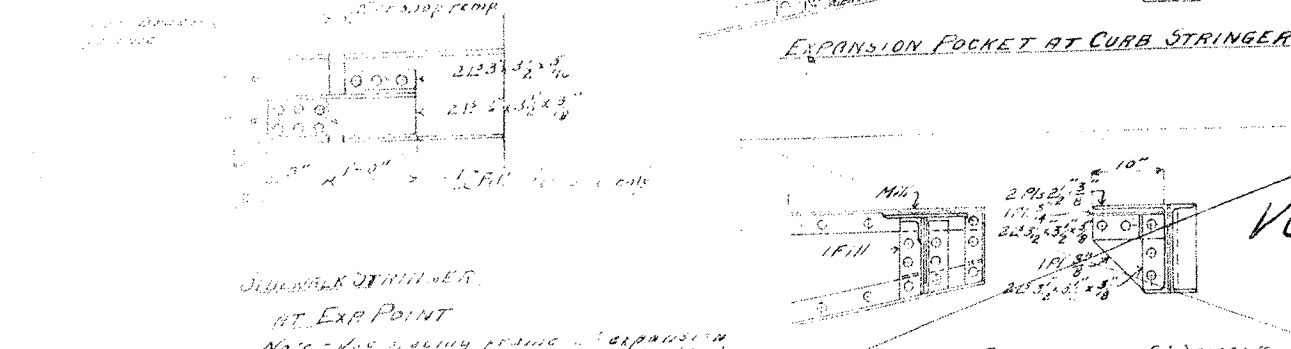
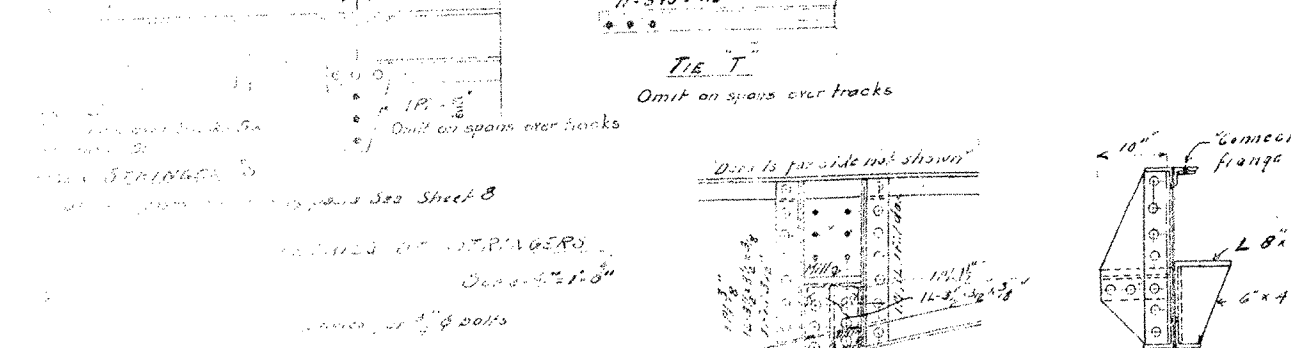
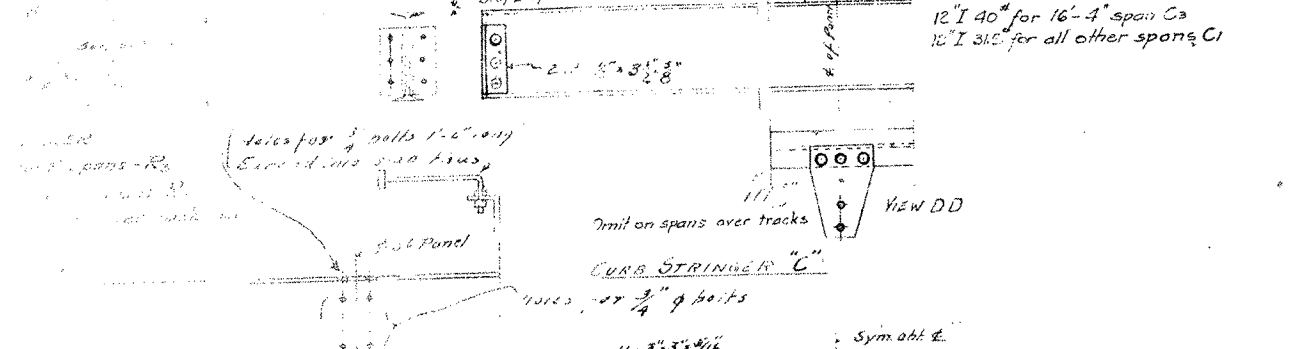
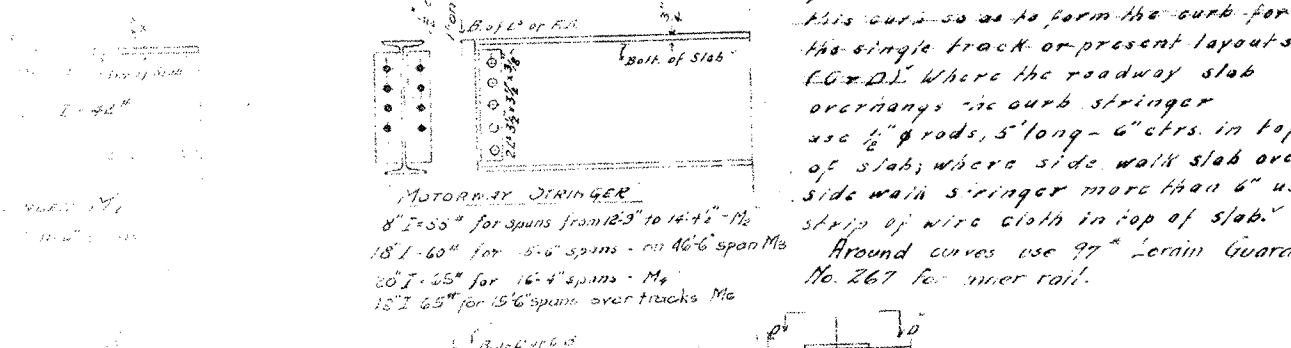
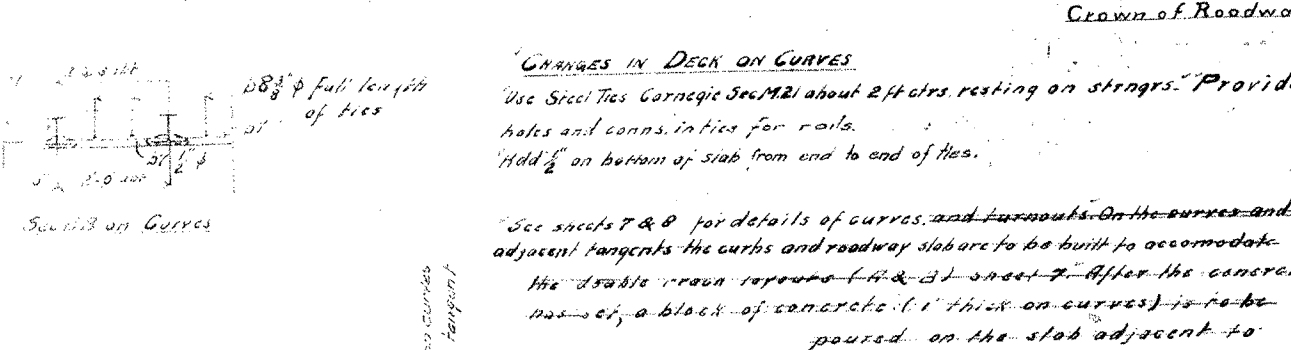
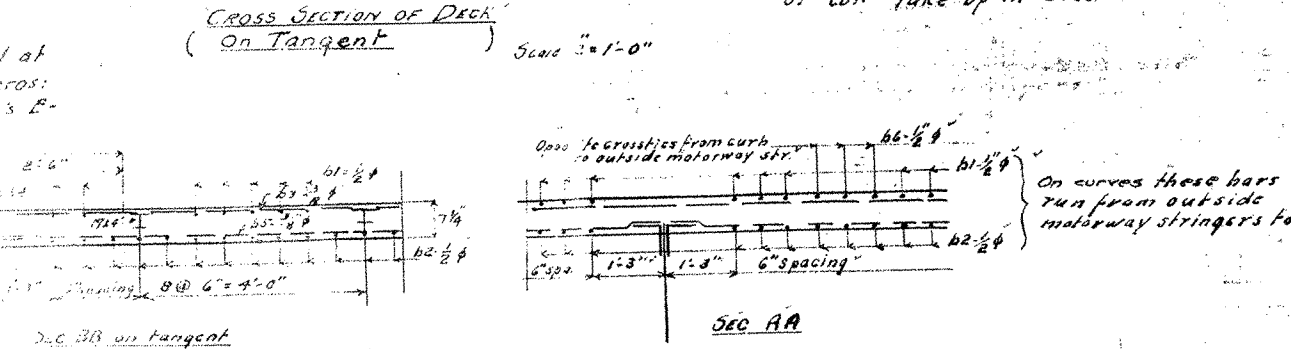
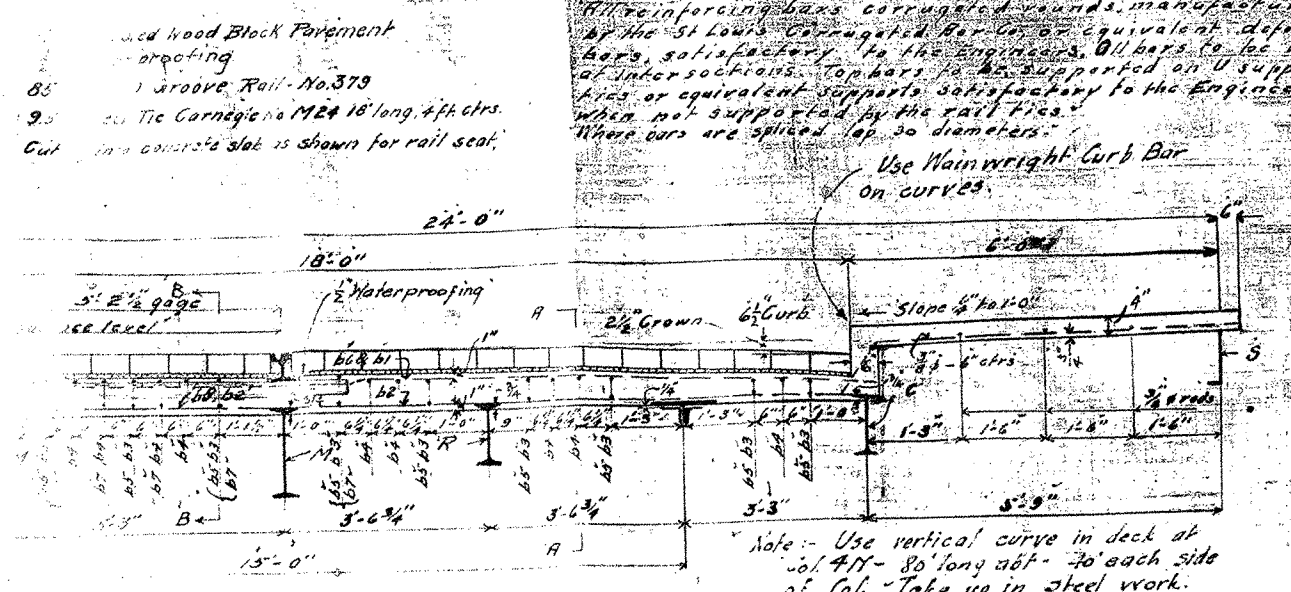
Conservation Easements

Kensel's City, ~~NY~~

Sheet 7

[illegible]

*L.*

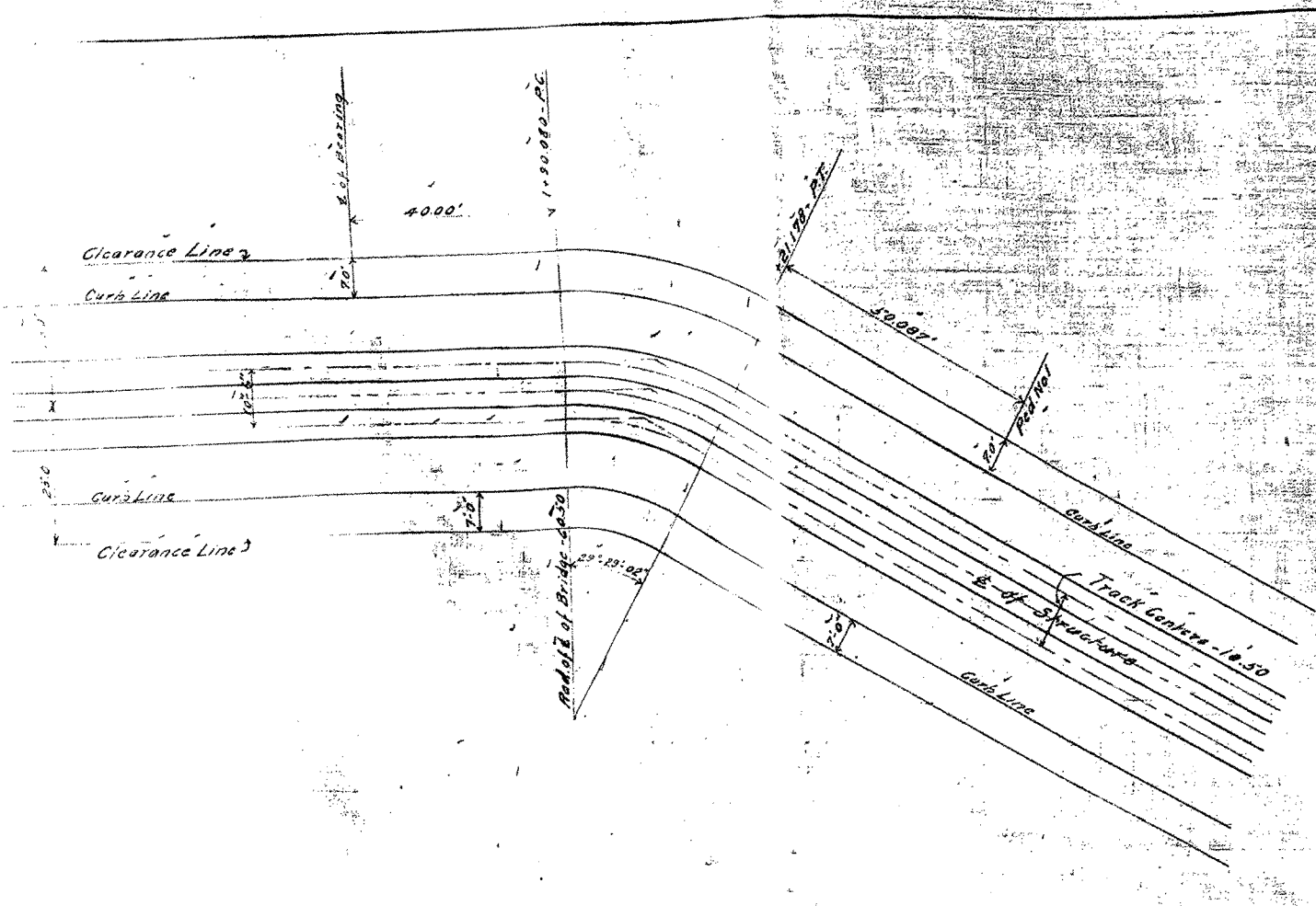


**WAYNE ST. VIADUCT**  
BUTLER, PA.

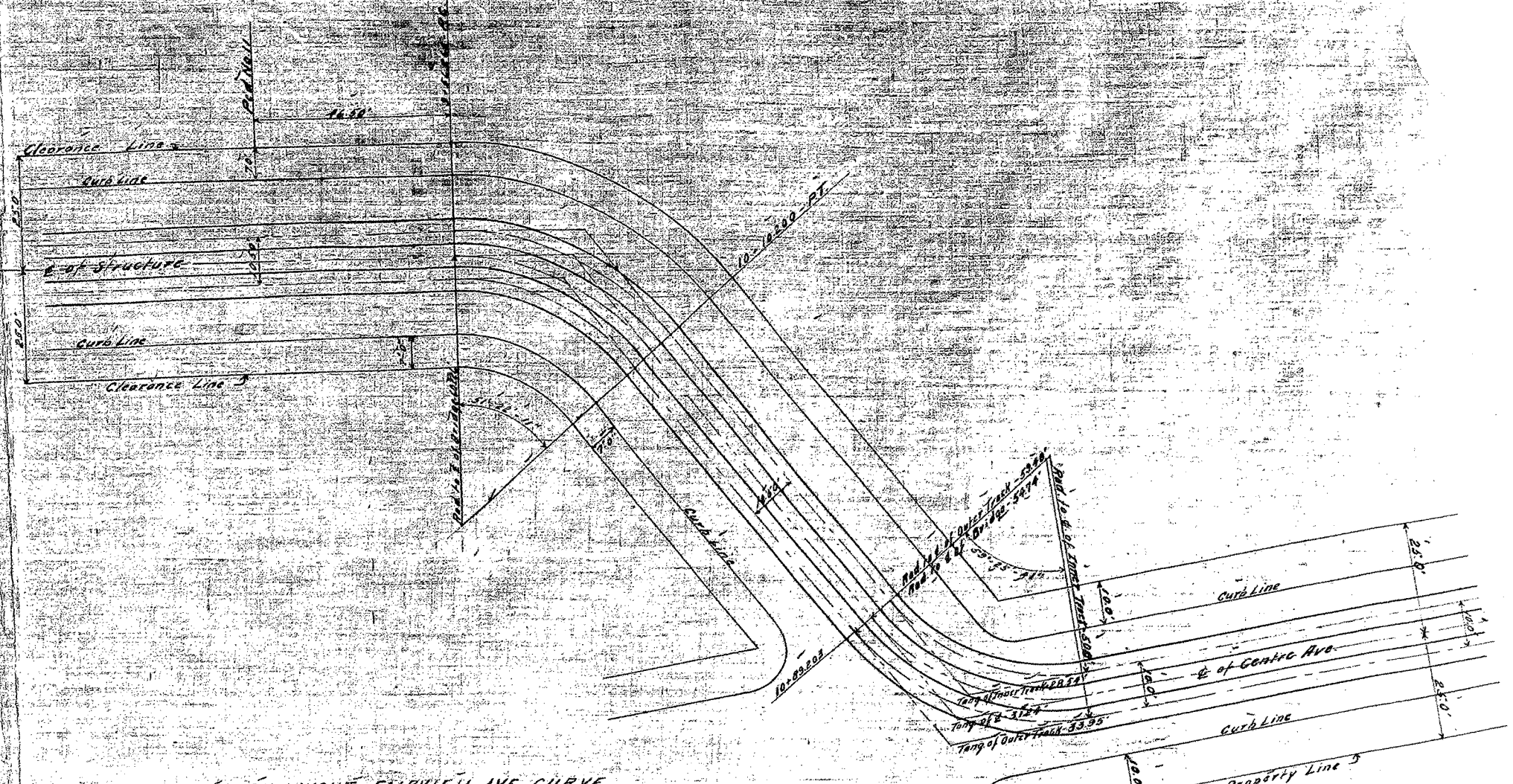
**DETAILS OF FLOOR SYSTEM AND DECK (Tangent)**  
Scale: 1/4" = 1'-0" and as noted

H. O. Carson Borough Eng.

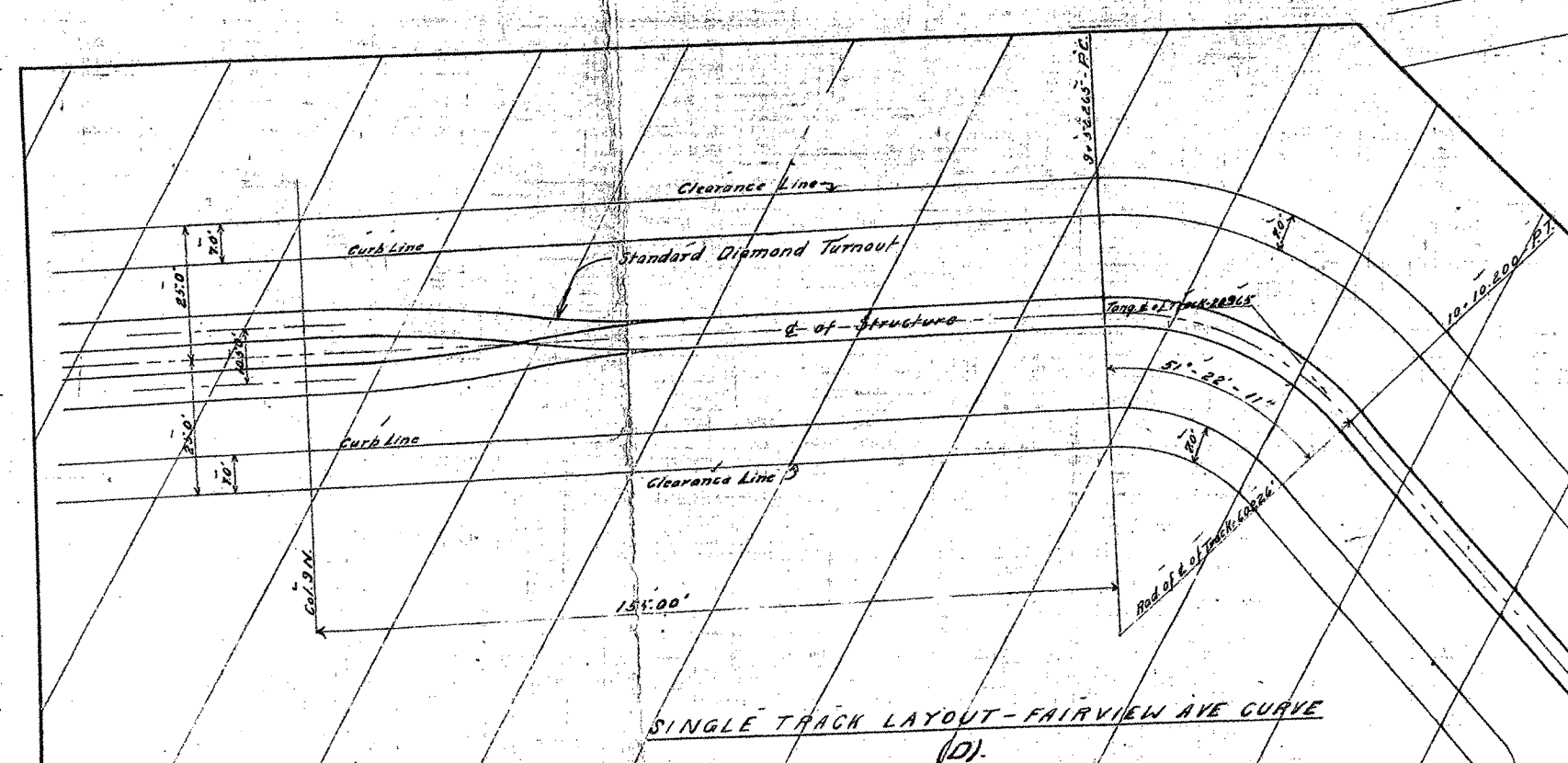
Made by: [Signature]  
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TRACK LAYOUT - WAYNE ST CURVE

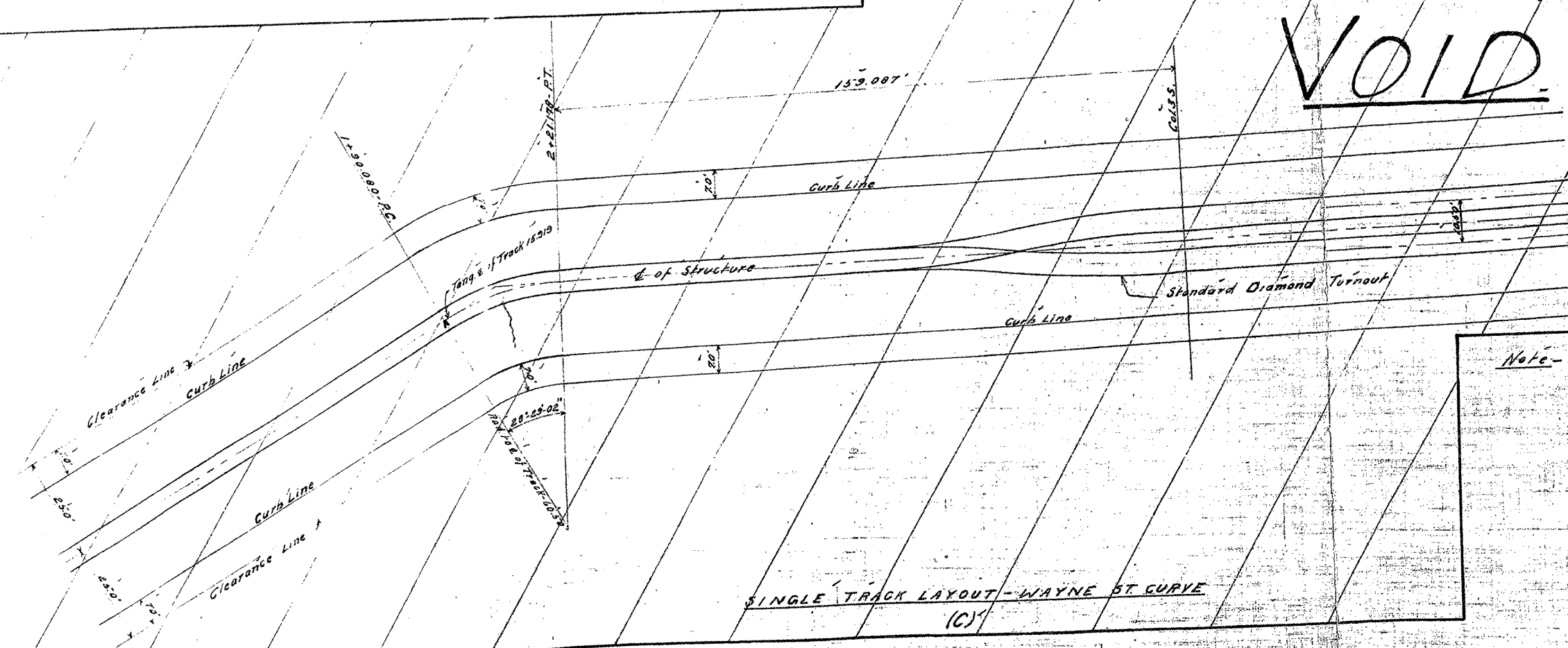


TRACK LAYOUT FAIRVIEW AVE CURVE



SINGLE TRACK LAYOUT - FAIRVIEW AVE CURVE (D)

**VOID**



SINGLE TRACK LAYOUT - WAYNE ST CURVE (C)

Note - Gauge on curves to be widened  $\frac{1}{4}$ " to  $3\frac{1}{2}$ "

**WAYNE ST. VIADUCT  
BUTLER PA.**

LAYOUT OF TRACKS ON CURVE

Scale - 1"=20'

H. O. Garson

APPROVED  
WADDELL & HARRINGTON  
By *[Signature]*

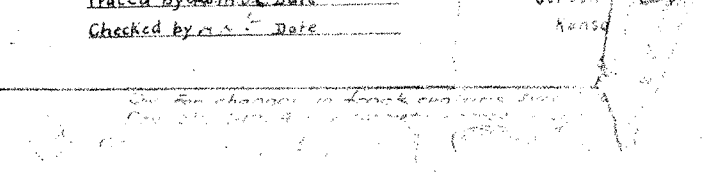
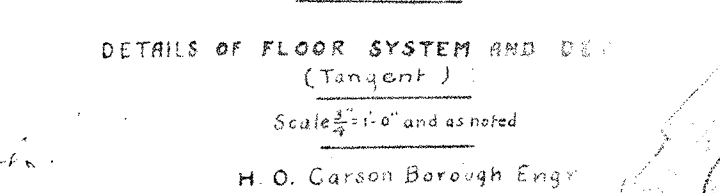
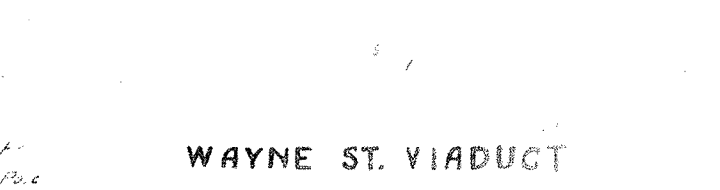
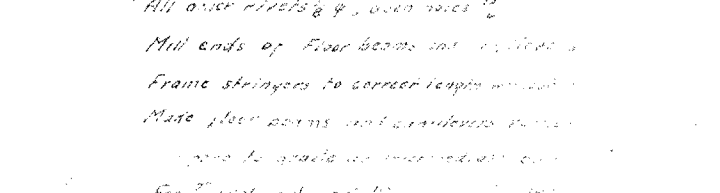
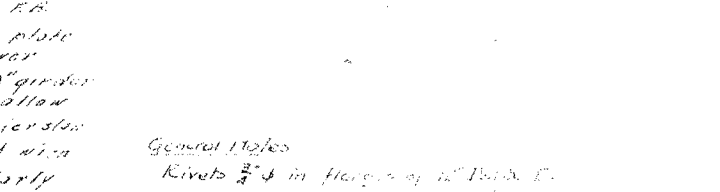
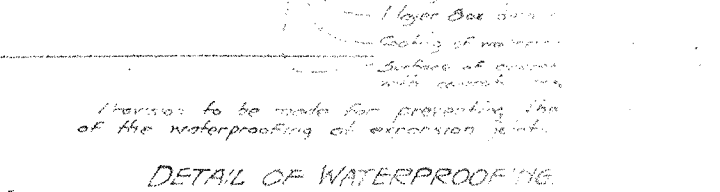
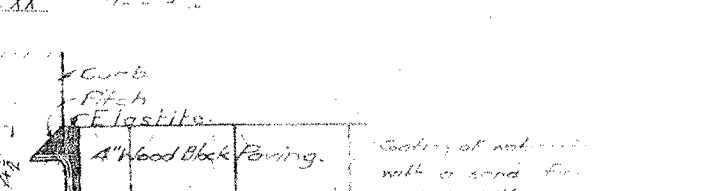
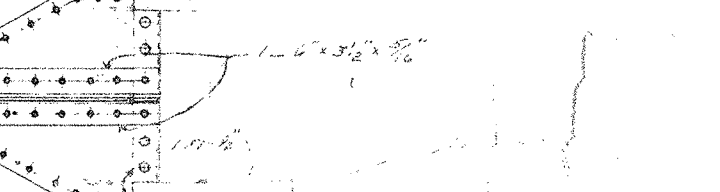
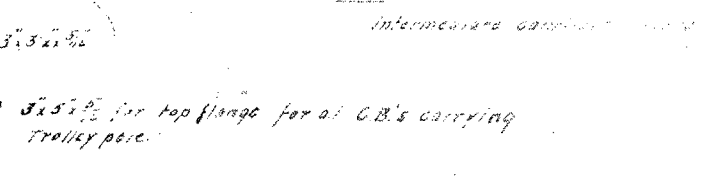
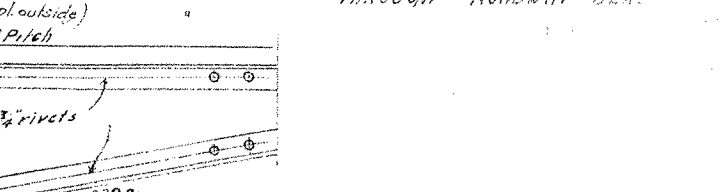
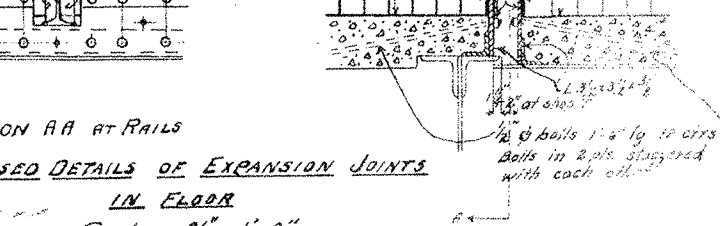
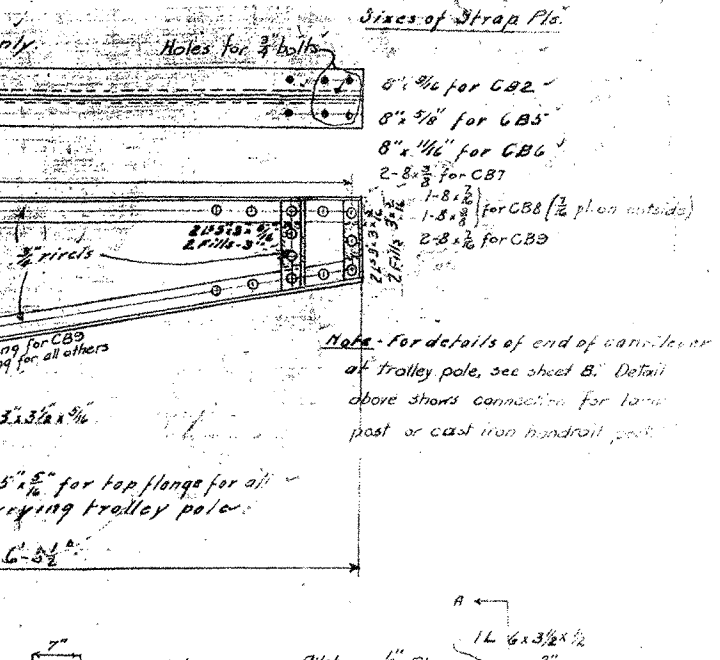
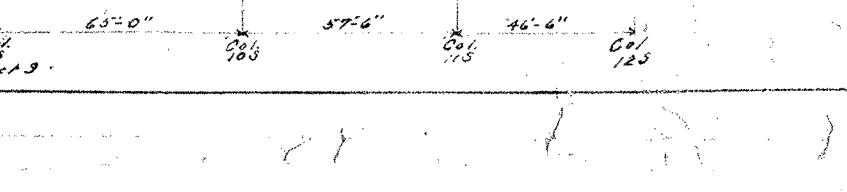
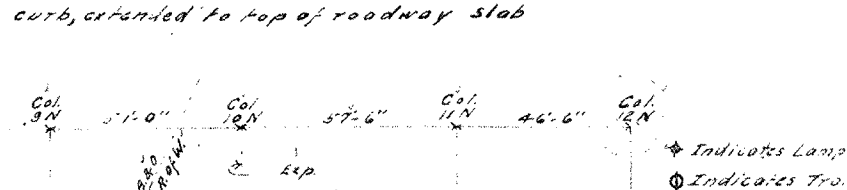
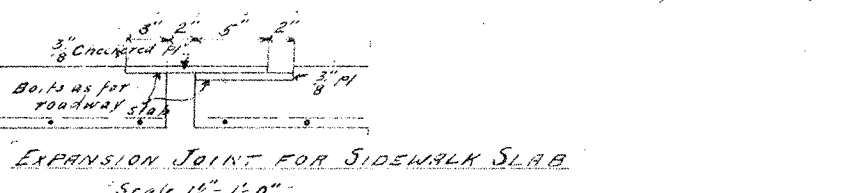
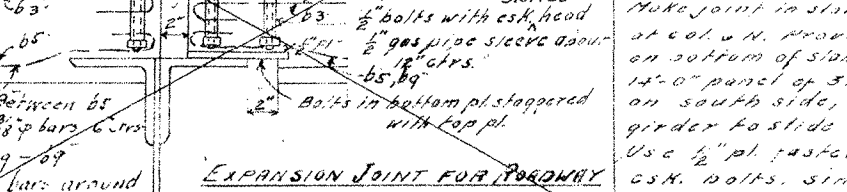
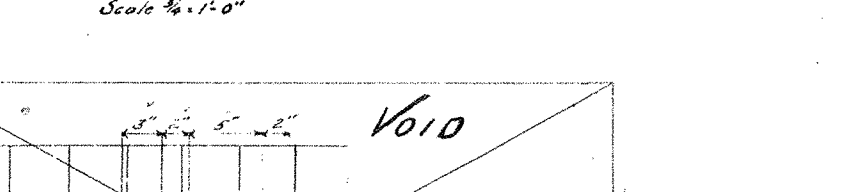
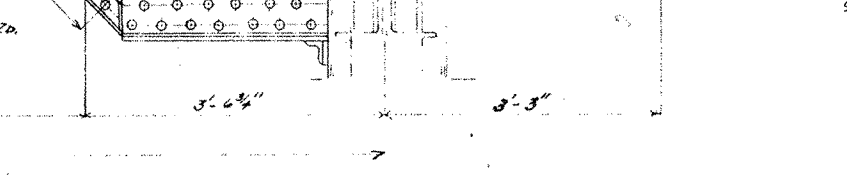
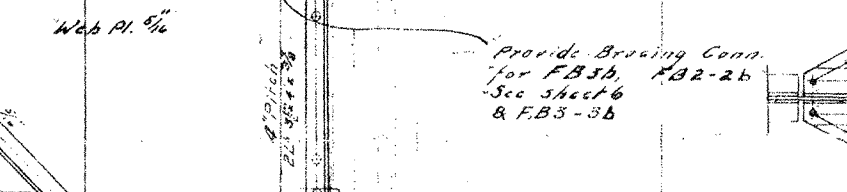
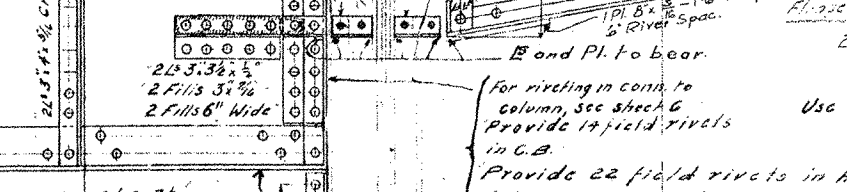
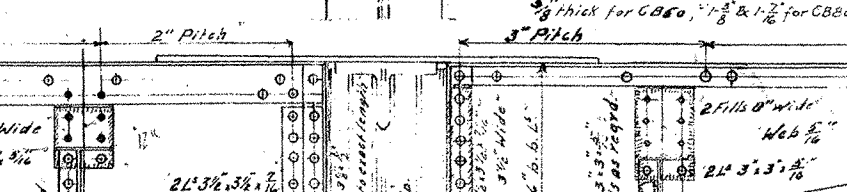
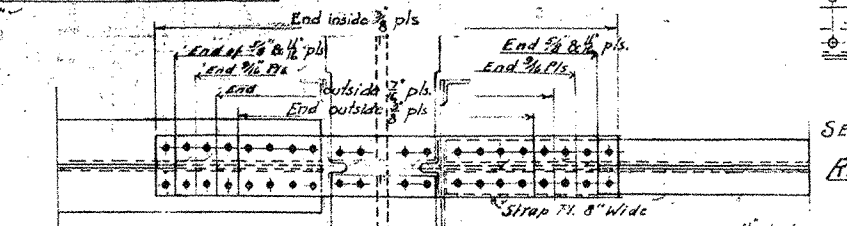
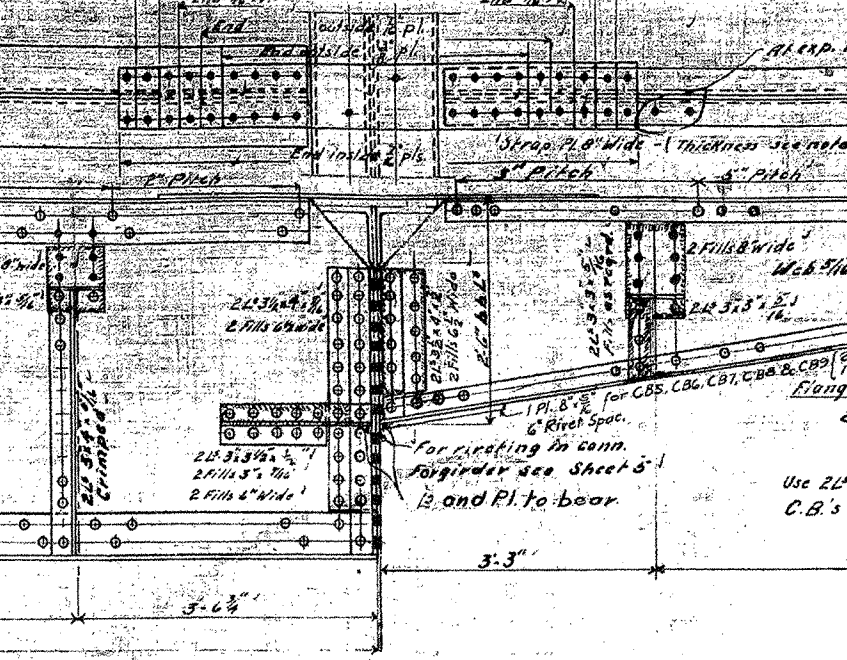
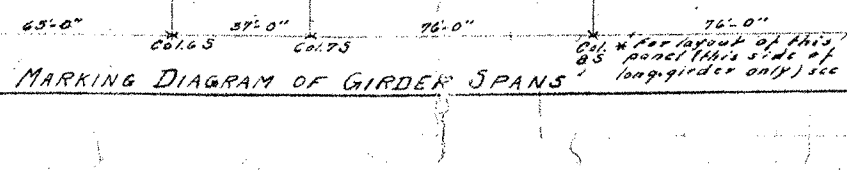
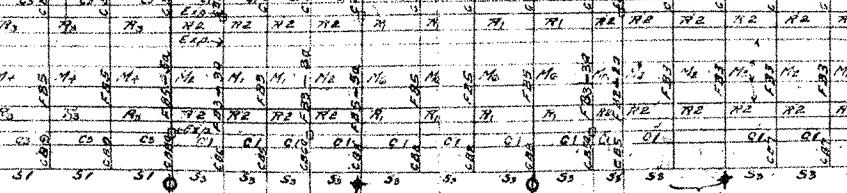
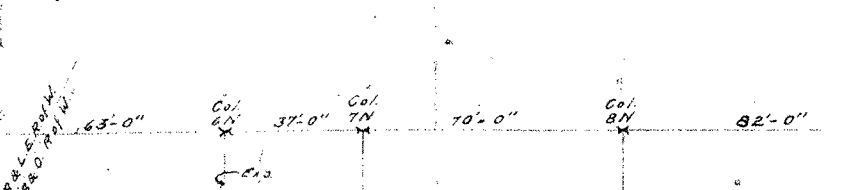
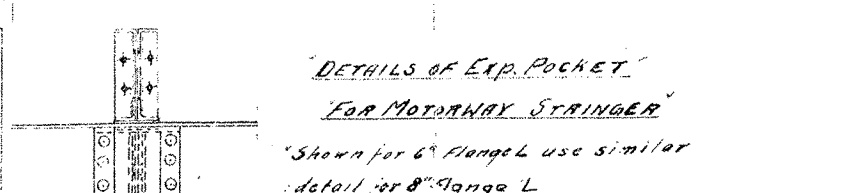
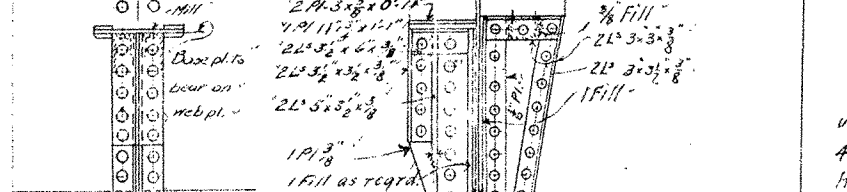
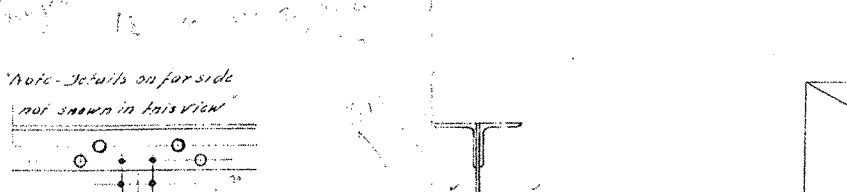
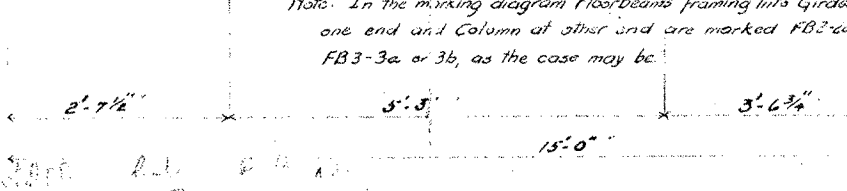
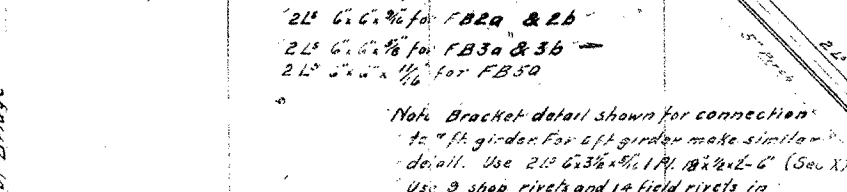
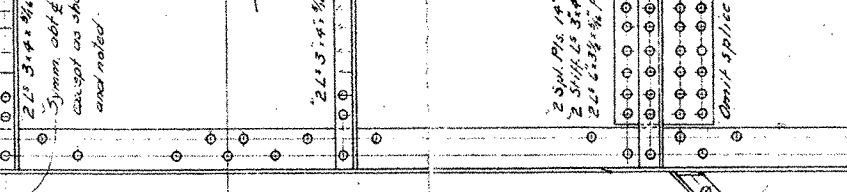
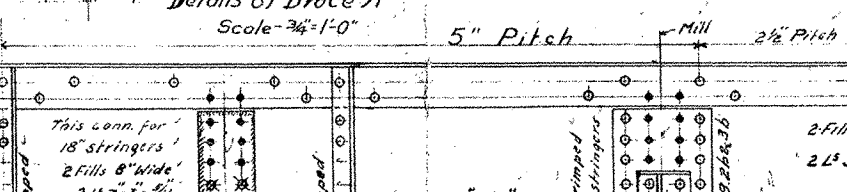
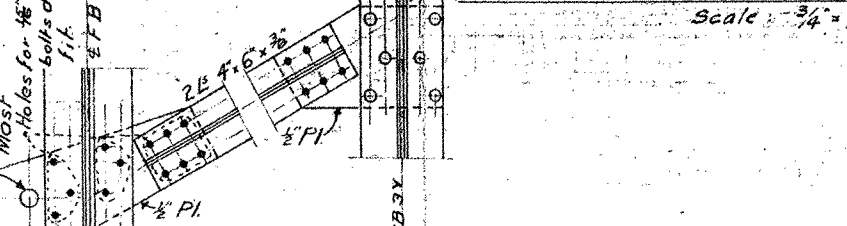
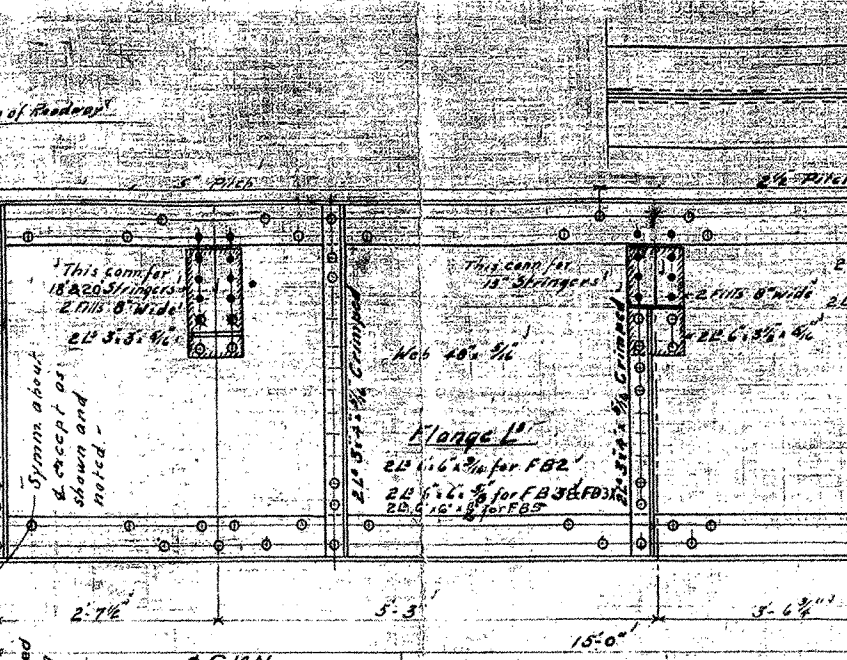
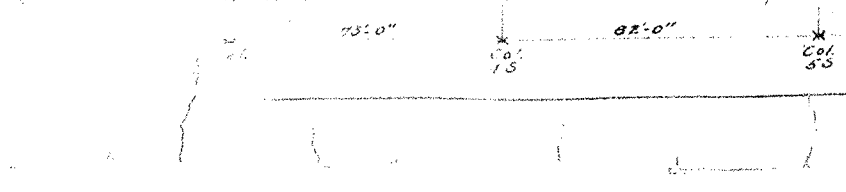
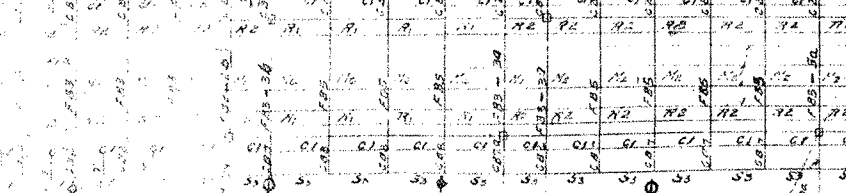
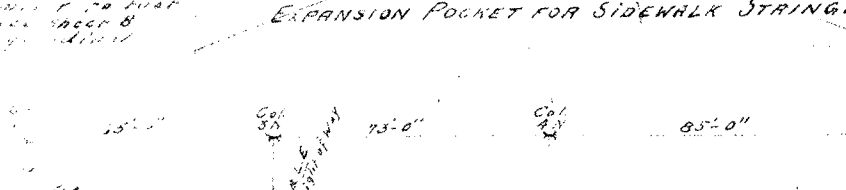
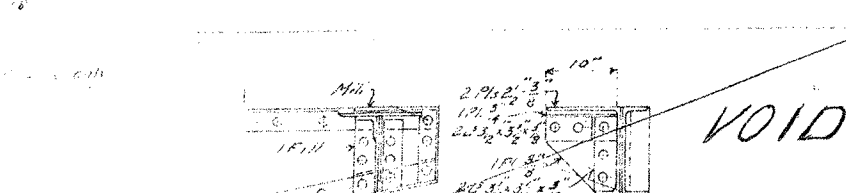
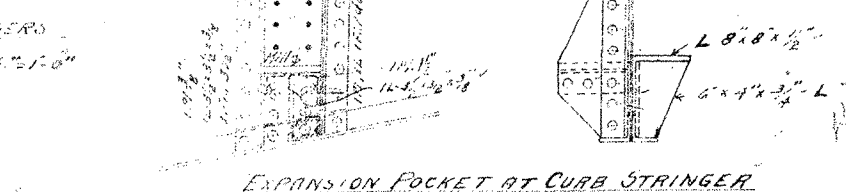
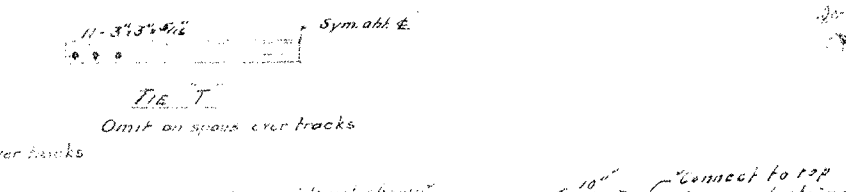
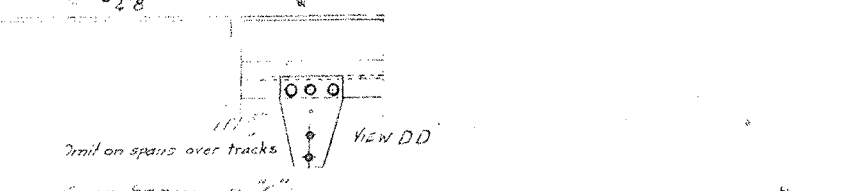
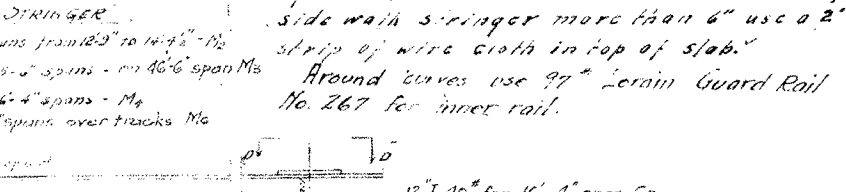
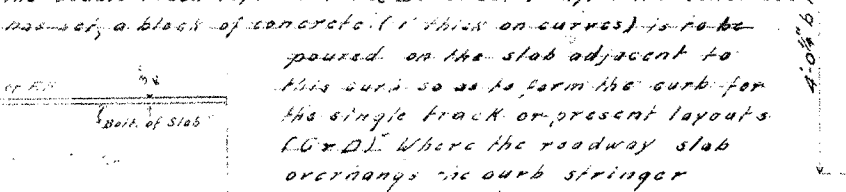
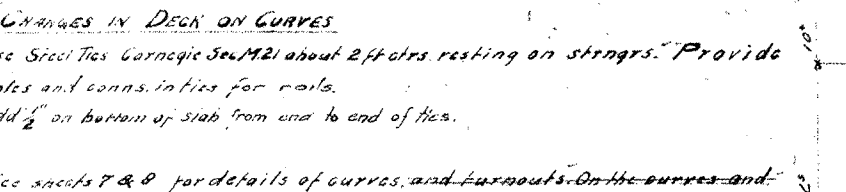
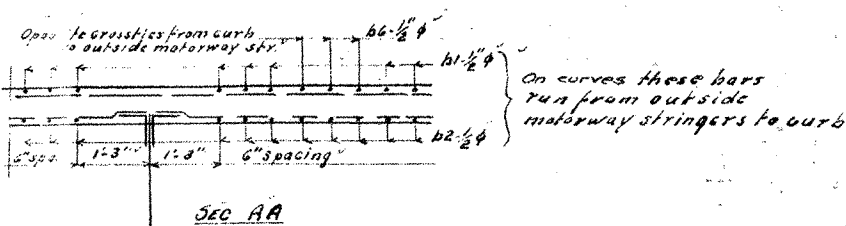
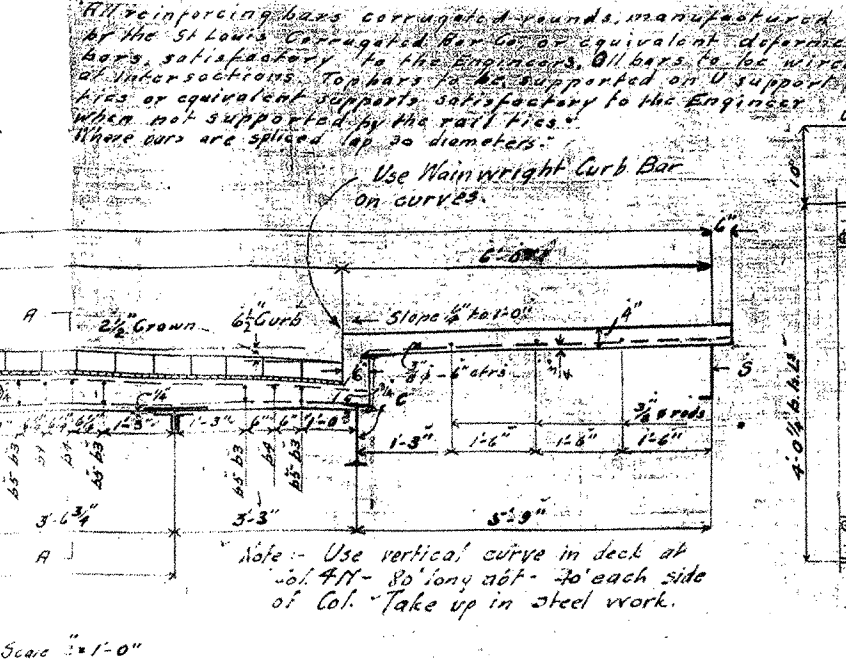
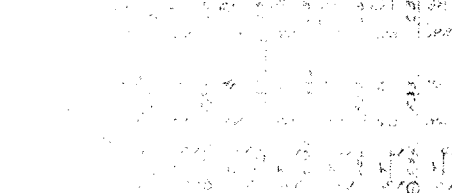
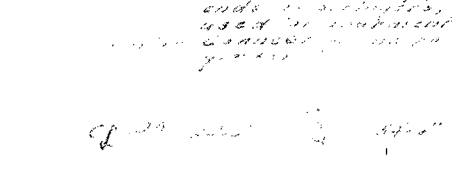
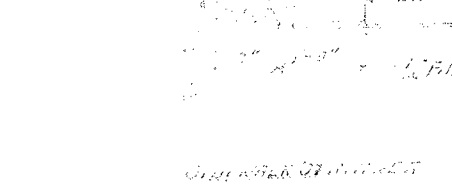
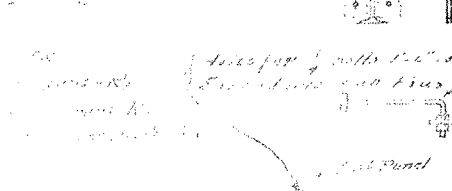
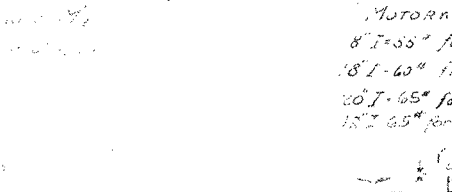
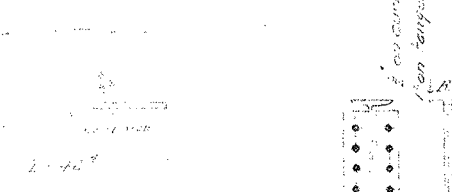
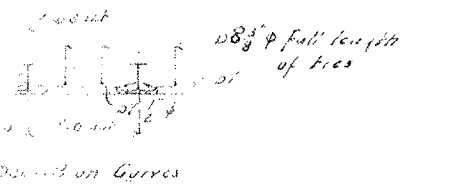
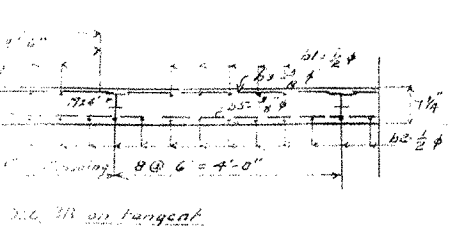
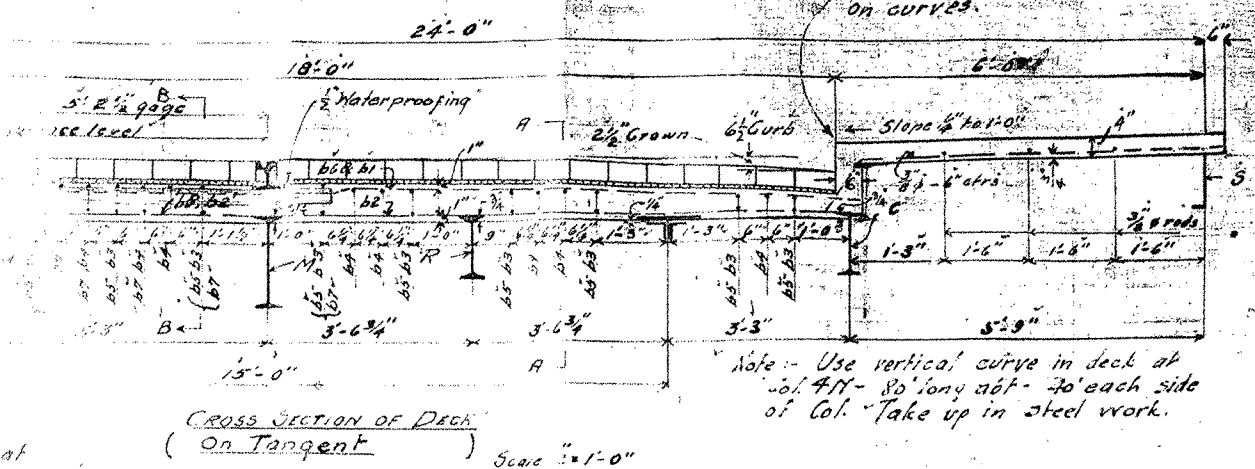
Made by - *[Signature]* Date 3-11-14  
Traced by C.M.R. Date 3-12-14  
Checked by *[Signature]* Date 3-15-14

Rev. for changes in track centers Sheet 7-15-14





Wood Block Pavement  
 85' 10" Groove Rail No. 379  
 90' 10" Tie Carnegie No. 1724 18' long 4 ft. chrs.  
 Cut in concrete slab is shown for rail seat.



DETAILS OF INTERMEDIATE FLOOR BEAM AND CANTILEVER  
 Scale 1/4" = 1'-0"

DETAILS OF BRIDGE  
 Scale 1/4" = 1'-0"

DETAILS OF FLOOR BEAM AND CANTILEVER AT COLUMN  
 Scale 1/4" = 1'-0"

DETAILS OF EXP. POCKET  
 FOR MOTORWAY STRINGER  
 Scale 1/4" = 1'-0"

DETAILS OF EXP. POCKET  
 FOR SIDEWALK STRINGER  
 Scale 1/4" = 1'-0"

EXPANSION JOINT FOR ROADWAY  
 SLAB Scale 1/4" = 1'-0"

EXPANSION JOINT FOR SIDEWALK  
 SLAB Scale 1/4" = 1'-0"

DETAIL OF WATERPROOFING  
 Scale 1/4" = 1'-0"

DETAIL OF WATERPROOFING  
 Scale 1/4" = 1'-0"

DETAIL OF WATERPROOFING  
 Scale 1/4" = 1'-0"

DETAILS OF FLOOR SYSTEM AND DECK  
 (Tangent)  
 Scale 1/4" = 1'-0" and as noted

DETAILS OF FLOOR SYSTEM AND DECK  
 (Tangent)  
 Scale 1/4" = 1'-0" and as noted

DETAILS OF FLOOR SYSTEM AND DECK  
 (Tangent)  
 Scale 1/4" = 1'-0" and as noted

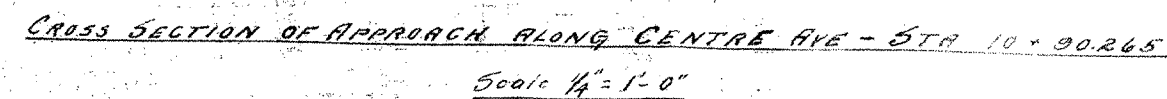
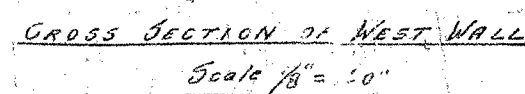
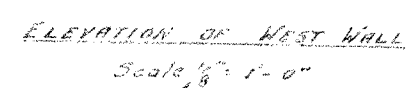
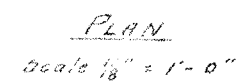
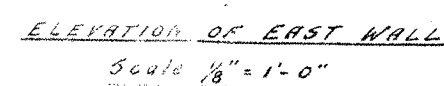
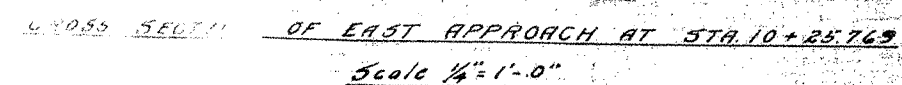
MARKING DIAGRAM OF GIRDER SPANS

**WAYNE ST. VIADUCT**  
 BUTLER, PA.

DETAILS OF FLOOR SYSTEM AND DECK  
 (Tangent)  
 Scale 1/4" = 1'-0" and as noted

H. O. Carson Borough Engr.

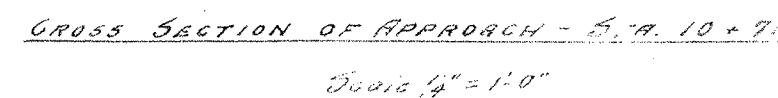
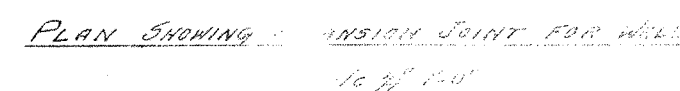
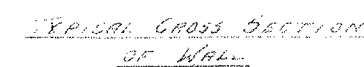
Made by W. H. D. Date 11-11-11  
 Traced by H. H. D. Date 11-11-11  
 Checked by H. H. D. Date 11-11-11



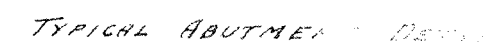
A hand-drawn cross-section diagram of a concrete abutment. The diagram shows a vertical wall with a sloped top surface. Key features and labels include:

- Slope top of wall to grade**: A line pointing to the top edge of the wall.
- Grade recess for seat for roadway and square ends of Bearing**: A horizontal line indicating a recessed area at the top of the wall.
- Splice**: A label pointing to a vertical joint in the wall.
- Bottom edge to 10'**: A label pointing to the base of the wall.
- 10'**: Two dimension lines at the base of the wall, each labeled '10'.
- ABUTMENT**: A label at the bottom right of the diagram.

The diagram is a technical sketch showing the profile of the abutment wall and its base. The wall is shown in cross-section, with a sloped top and a vertical face. The base is marked with two 10-foot dimensions. The drawing is labeled 'ABUTMENT' and includes various annotations for construction details.



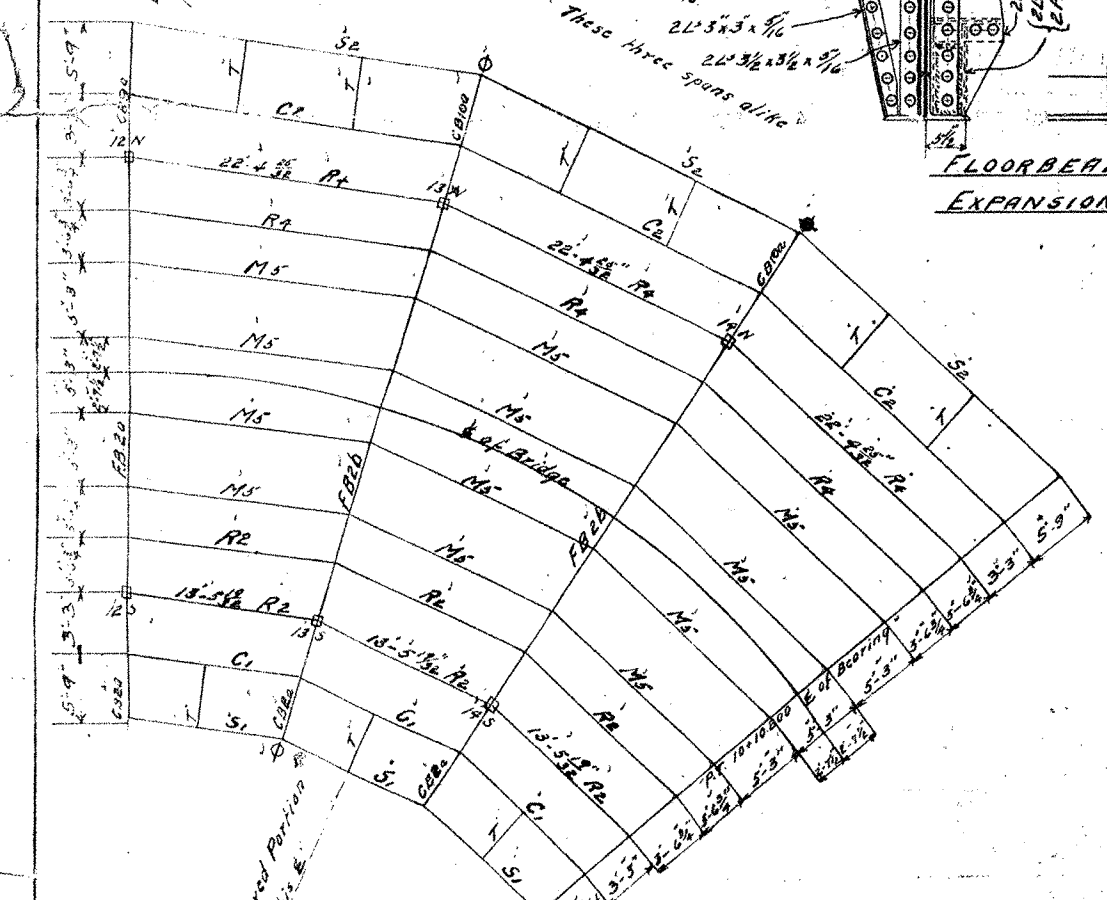
General Notes—From Switch Point to Sta. 10+39.80, end of Tr. and 24th Street Tie  
Carnegie No. M24, 7 feet long; 4 feet 6  
Light Conduit to be placed one (1) inch from top of concrete  
wall and 24"-2" from E of Viaduct. 1  
to light posts and conduit on steel  
Tie.



Finish Bridge Seat  $\frac{3}{4}$ " below L



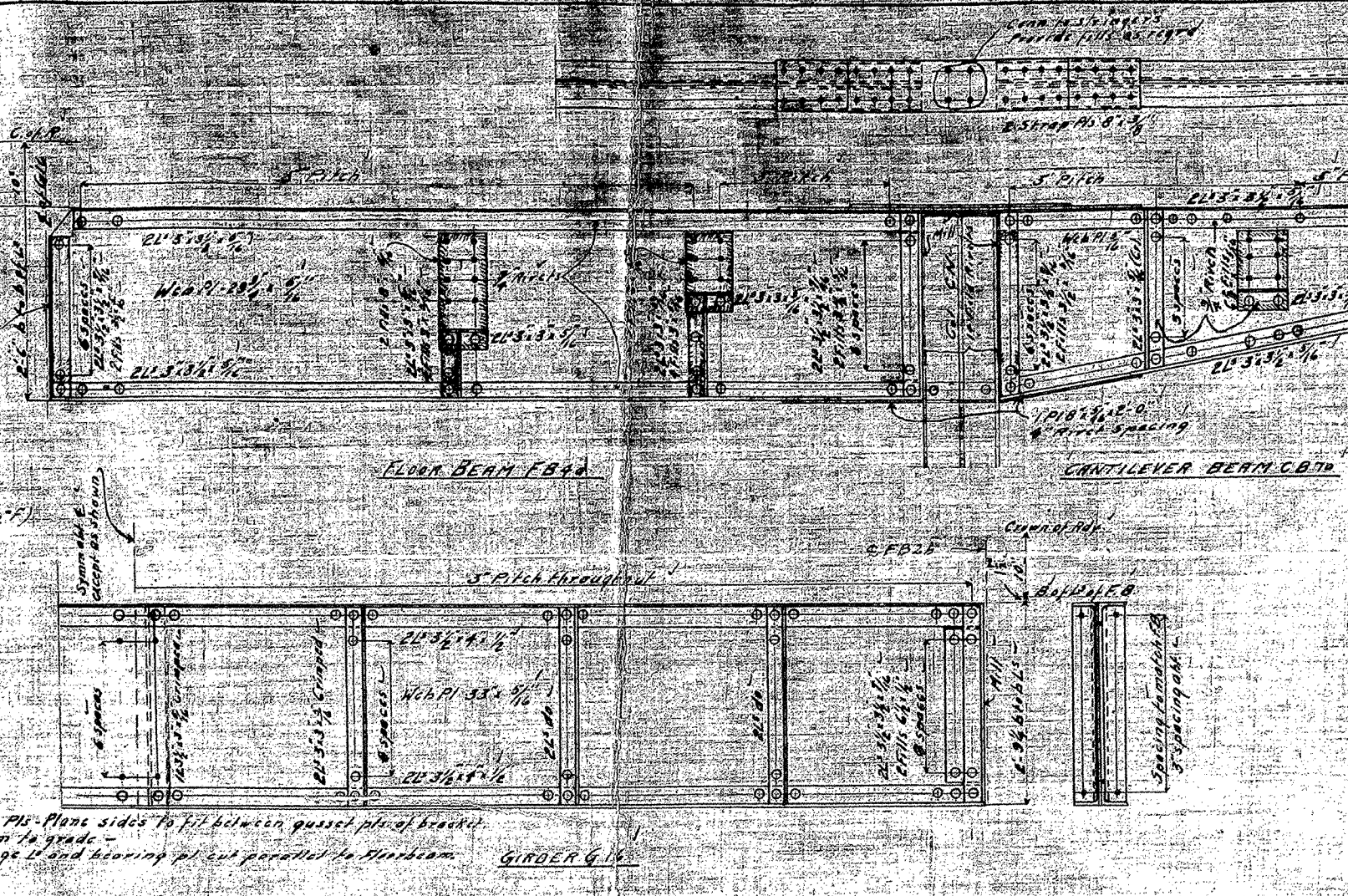
LAYOUT OF STRINGER SPANS AT WEST END  
Scale 1/8" = 1'-0"



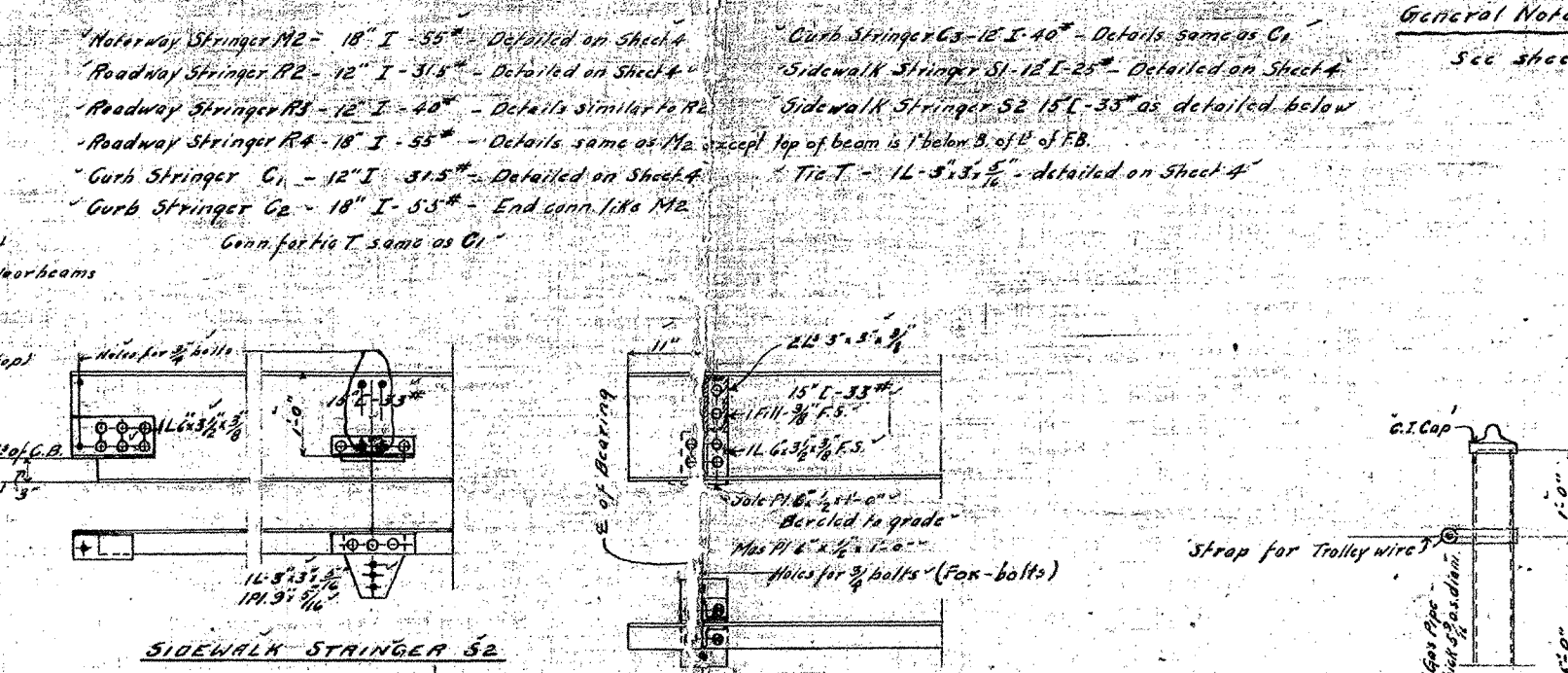
LAYOUT OF STRINGER SPANS AT EAST END

LOCATION OF LAMP POSTS & TROLLEY POLES  
See marking diagram Sheet 4 & Cantilever Table above.  
On tangent location given on N. side - Place poles opposite these on South side.

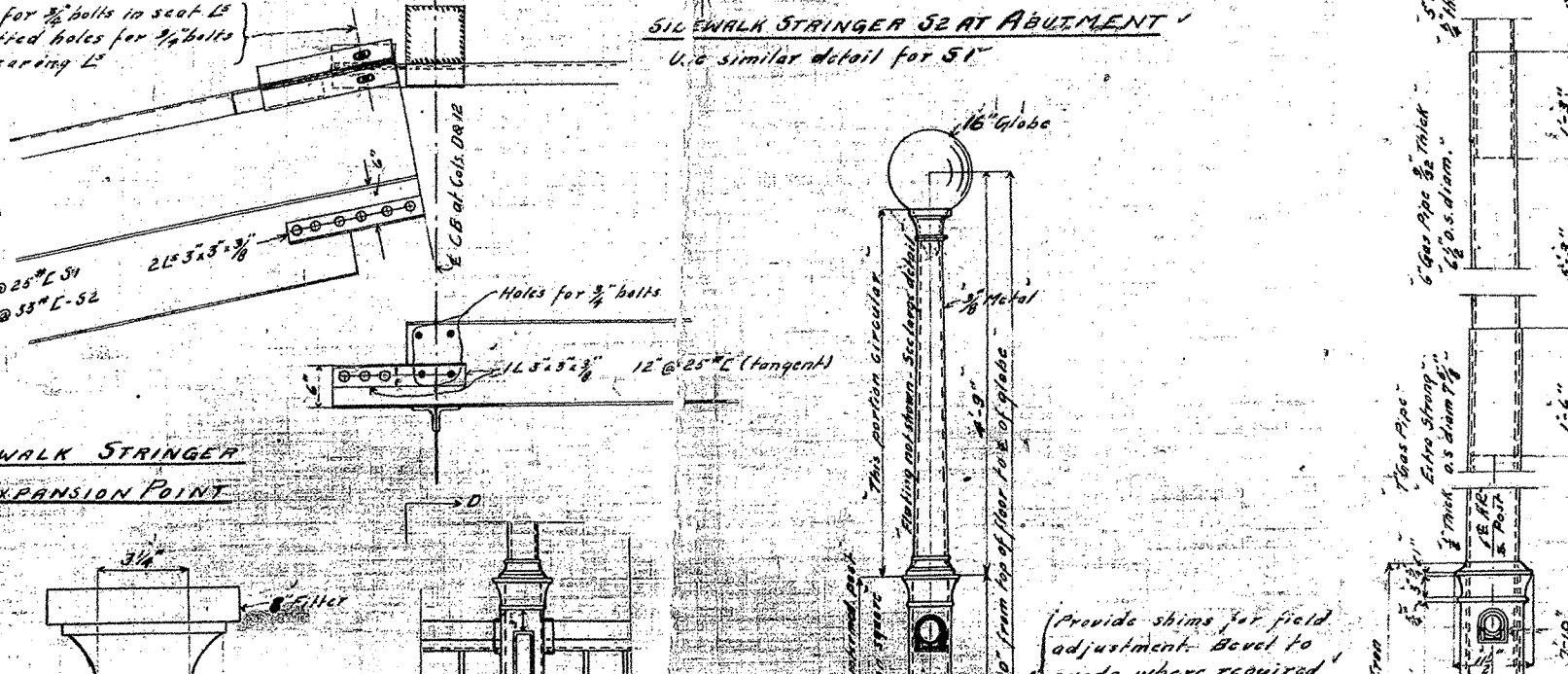
LAMP POSTS		TROLLEY POLES	
Sta.	Location	Sta.	Location
0+72	Retaining walls N. & S.	1+15	Retaining walls N. & S.
1+723	Col. N. & S.	1+944	Col. B. S.
2+400	2nd Panel P. Span 1	2+053	Col. C. N.
3+339	1st " " " 3	2+985	2nd Panel P. Span 2
4+376	3rd " " " 4 N	3+912	Col. B. N.
5+926	Col. S. N.	4+326	2nd Panel P. Span 5 N
6+482	Col. T. N.	5+926	3rd " " " 6 N
7+416	2nd Panel P. Span 8 N	6+976	3rd " " " 8 N
8+357	5th " " " 10 N	7+926	5th " " " 10 N
9+252	1st " " " 12 N	8+912	2nd " " " 12 N
9+922	Col. 14 N	9+922	Col. 13 N. & S.
10+95	Retaining walls E. & W. 10+950 Parapet E. & W. 1 on stairway landing		Ends of Retaining walls
Total = 24		Total = 24	
Lamp Posts marked - ♦		Trolley Poles marked - ○	



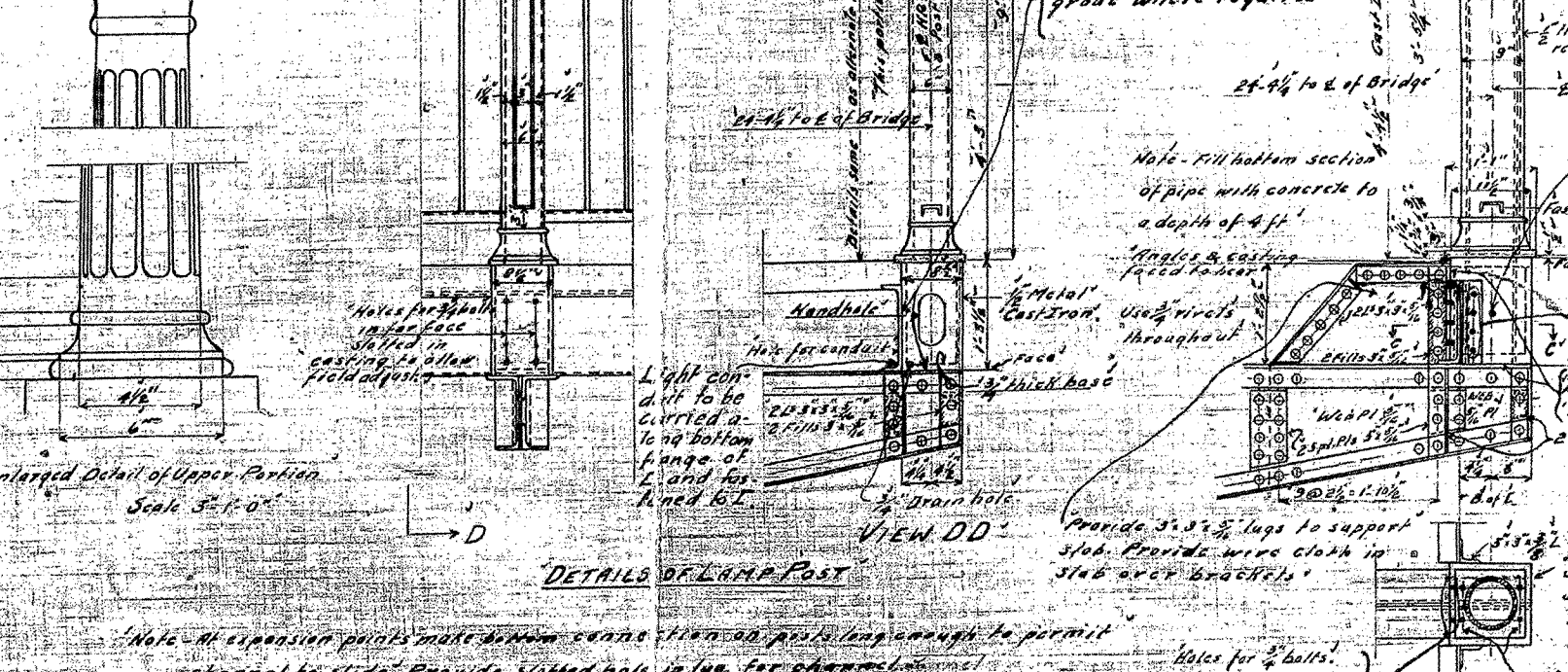
FLOOR BEAM FB44



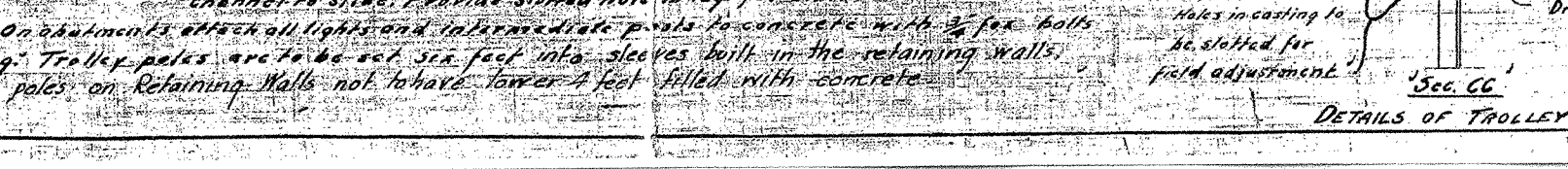
CANTILEVER BEAM CB79



SIDEWALK STRINGER S2



SIDEWALK STRINGER S2 AT ABUTMENT

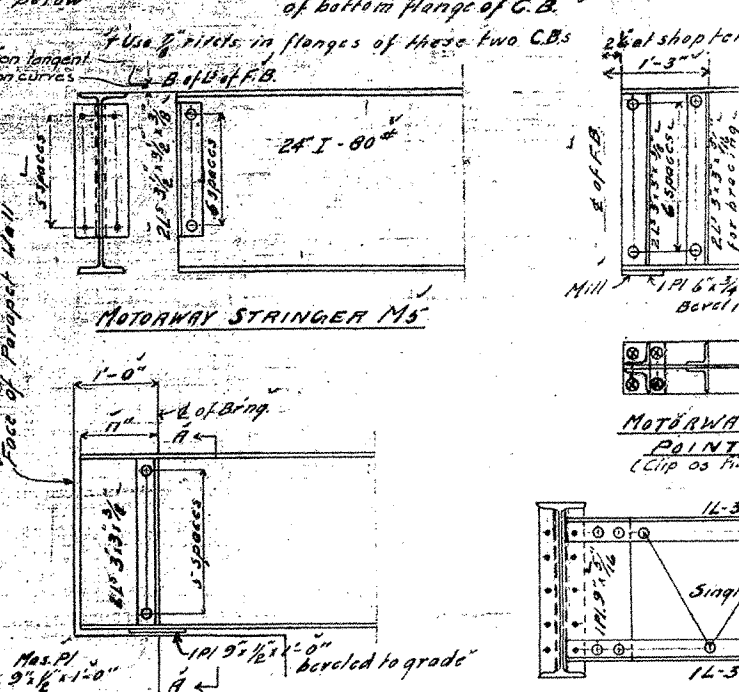


SIDEWALK STRINGER AT EXPANSION POINT

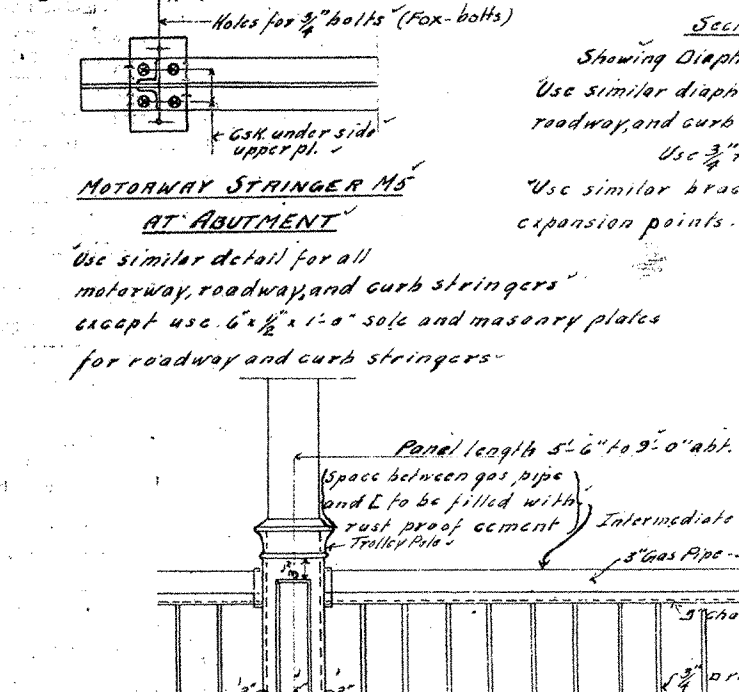
TABLE FOR CANTILEVER BEAMS ON CURVES

No.	Location	Flange*	Strap Pts. spacings	Remarks
1	Col. B. S.	20" x 1/2"	2' 0"	Trolley pole at 15N
2	Col. C. N.	20" x 1/2"	2' 0"	Trolley pole at 15N
3	Col. B. N.	20" x 1/2"	2' 0"	Trolley pole at 15N
4	Col. S. N.	20" x 1/2"	2' 0"	Trolley pole at 15N
5	Col. T. N.	20" x 1/2"	2' 0"	Trolley pole at 15N
6	Col. 13 N. & S.	20" x 1/2"	2' 0"	Trolley pole at 15N

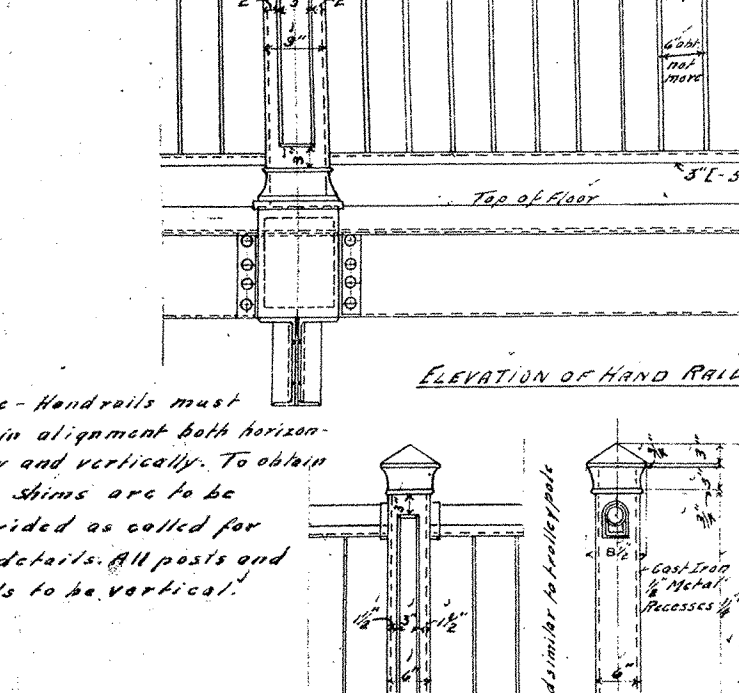
For some floor beams, use similar detail as shown in detail below.



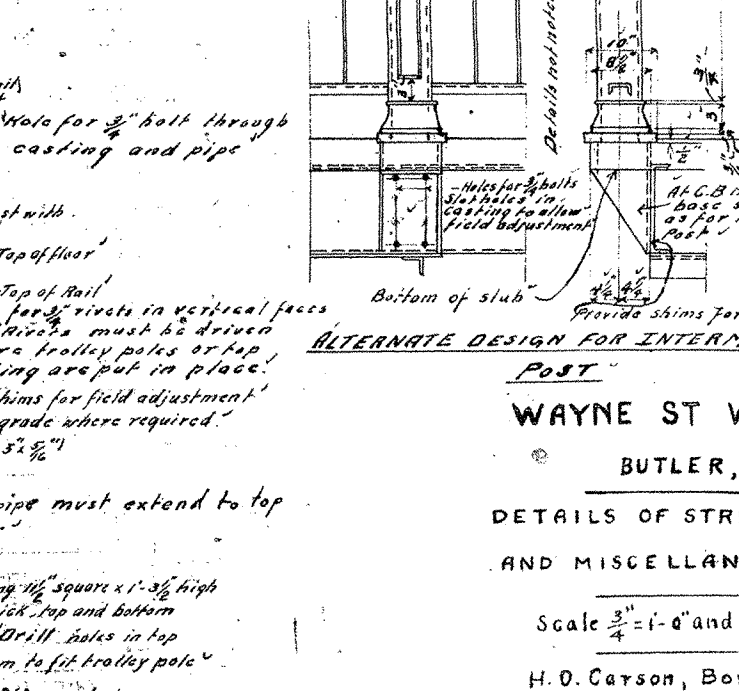
MOTORWAY STRINGER M5



MOTORWAY STRINGER M5 AT ABUTMENT



ELEVATION OF HAND RAIL



WAYNE ST VIADUCT

BUTLER, PA.

DETAILS OF STRINGER SPANS AND MISCELLANEOUS DETAILS

Scale 1/8" = 1'-0" and as noted

H. O. Carson, Borough Engineer

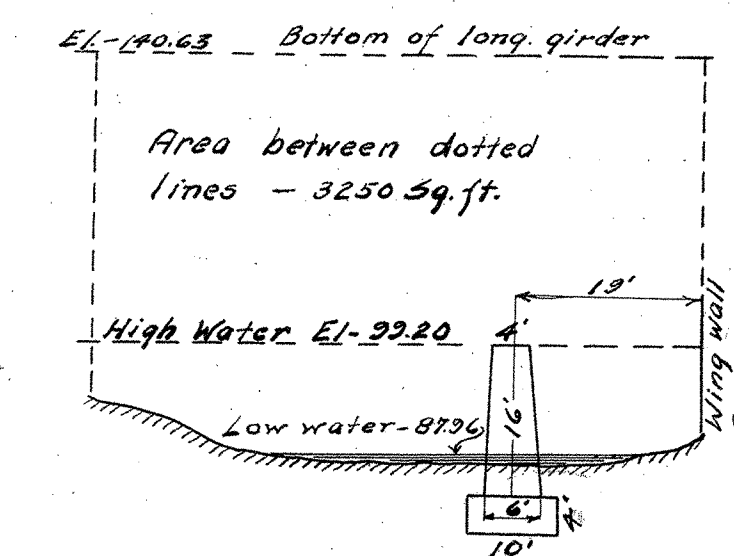
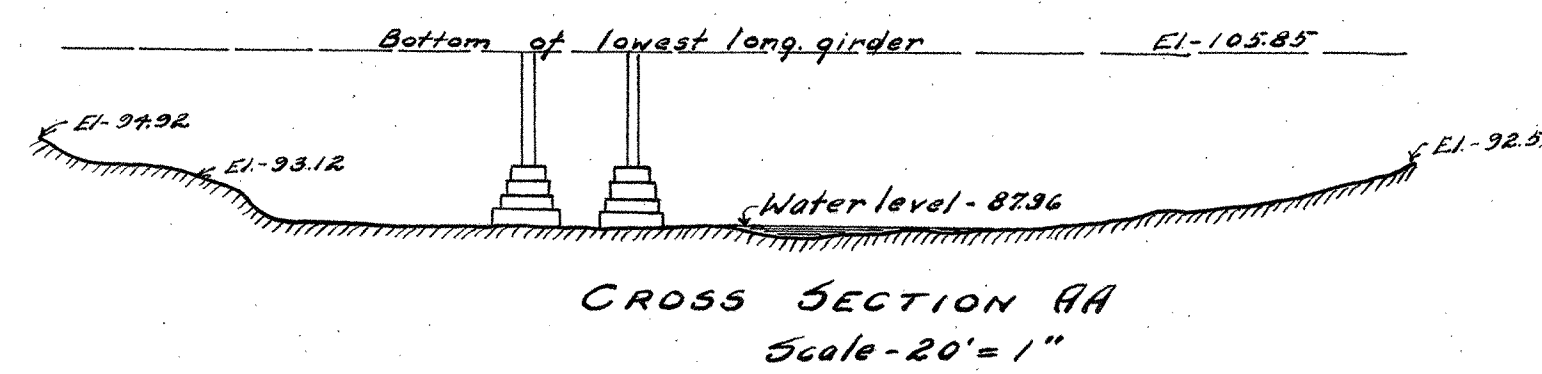
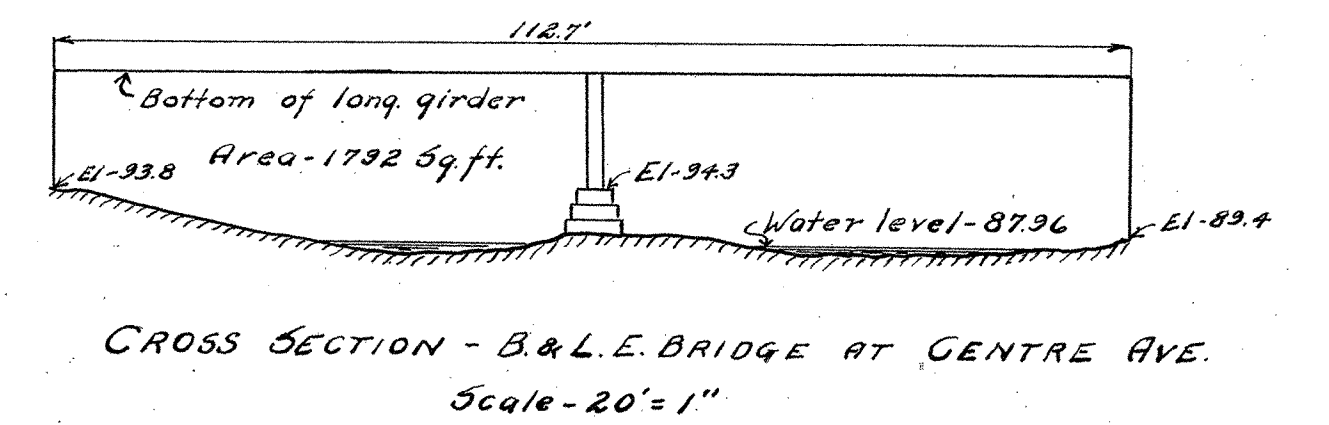
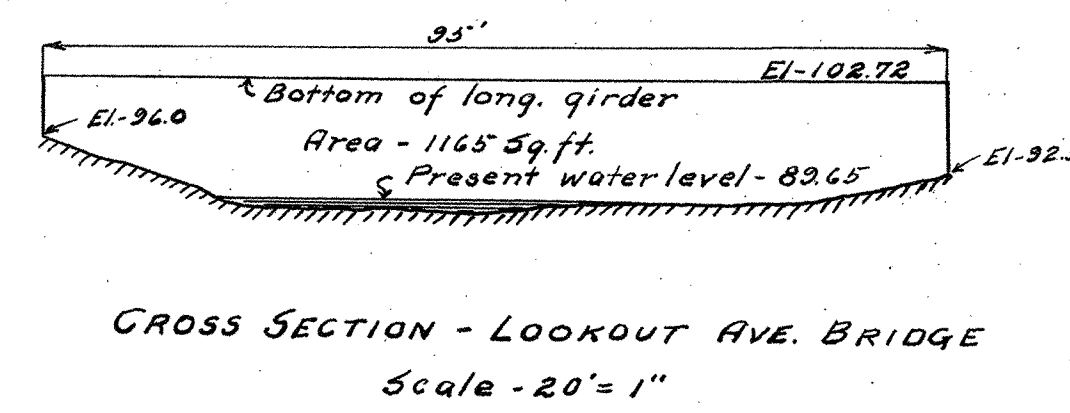
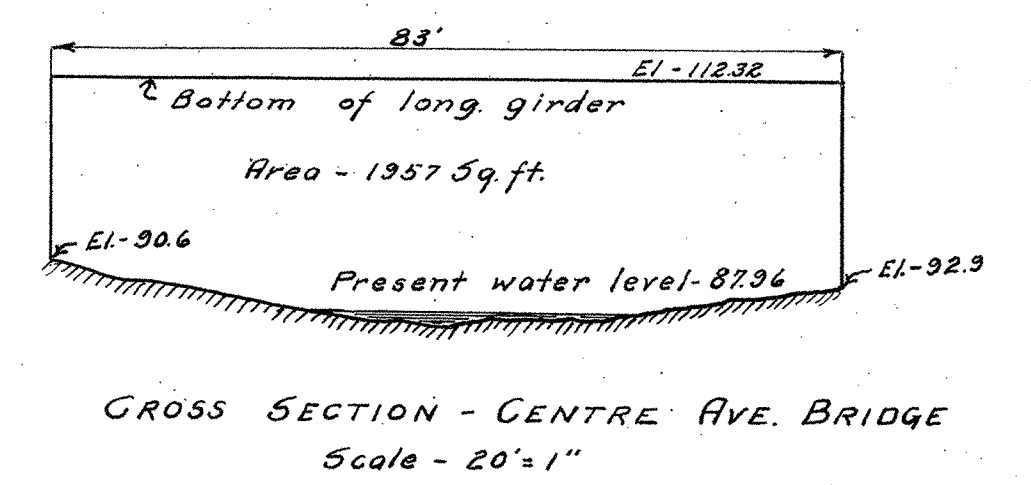
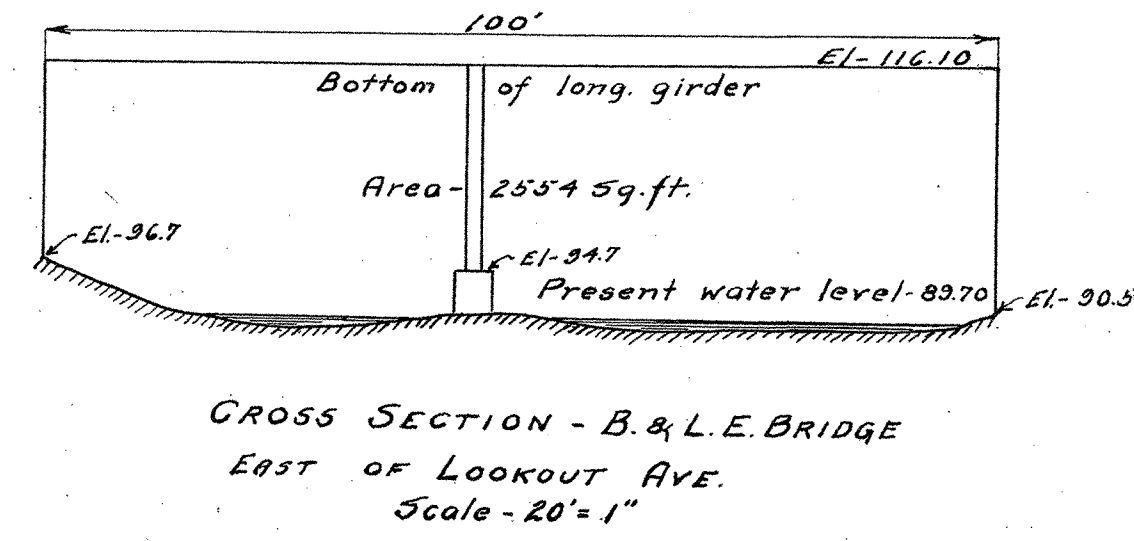
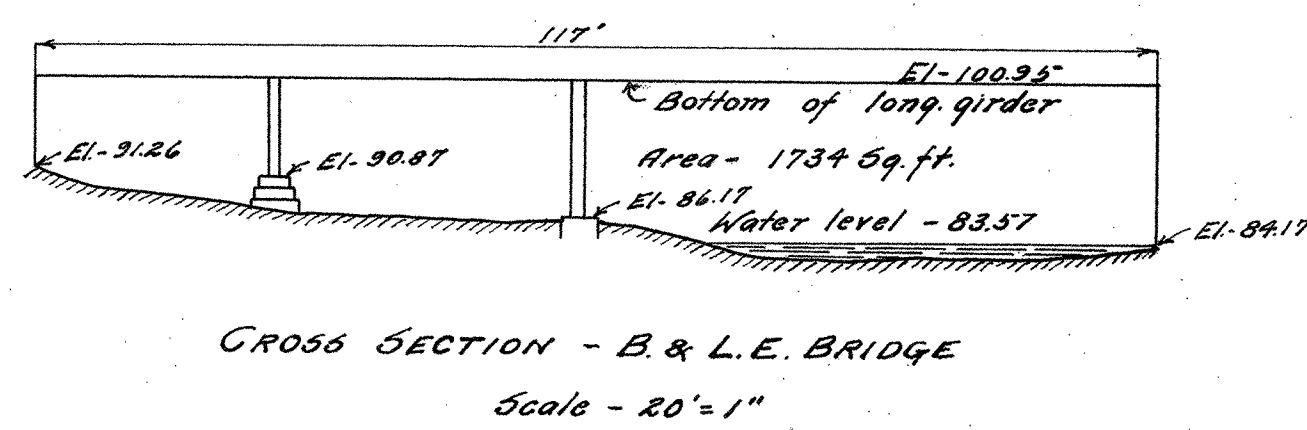
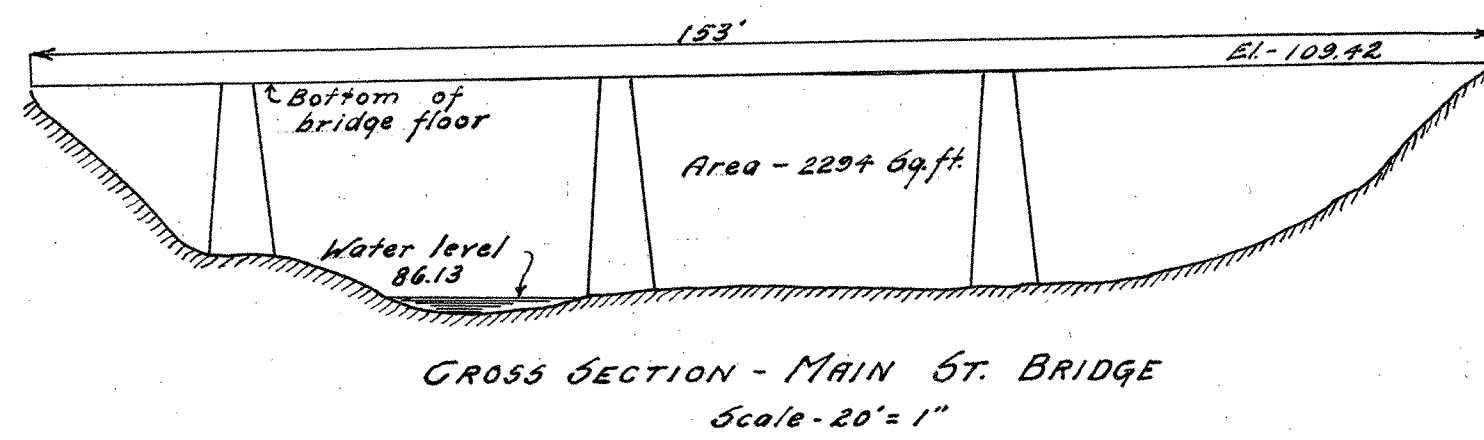
Made by W.E.W. Date 3-14-16

Traced by H. a.c. Date 3-16-16

APPROVED

WADDELL & HARRINGTON

By L.L. Fish



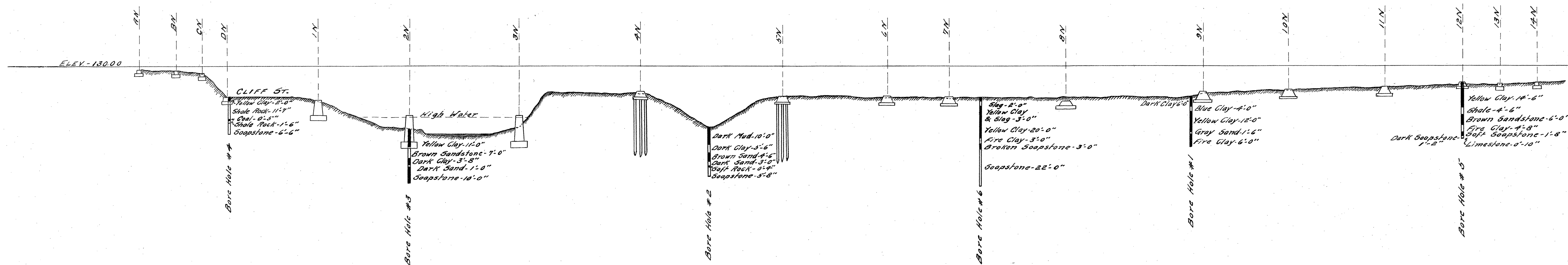
Note - Obstruction offered by pedestal at high water is 583 sq. ft.

GENERAL NOTES All areas given have obstruction areas, offered by piers, deduct.

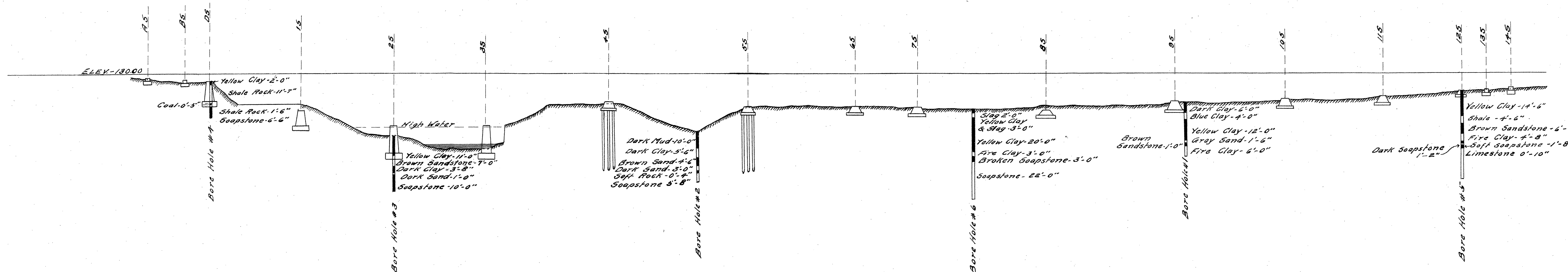
2009 46

BUTLER BORO	
WAYNE ST VIADUCT	
SURVEY OF CONNOQUENESSING	
FOR	
STATE WATERWAYS COM.	
Drawn by - <i>W.R.</i>	Scale - As noted
Traced by - <i>W.R.</i>	Date - 9/30/1914
Checked by - <i>H.O.C.</i>	Engineer - <i>H.O.C.</i>





N. PEDESTAL LINE



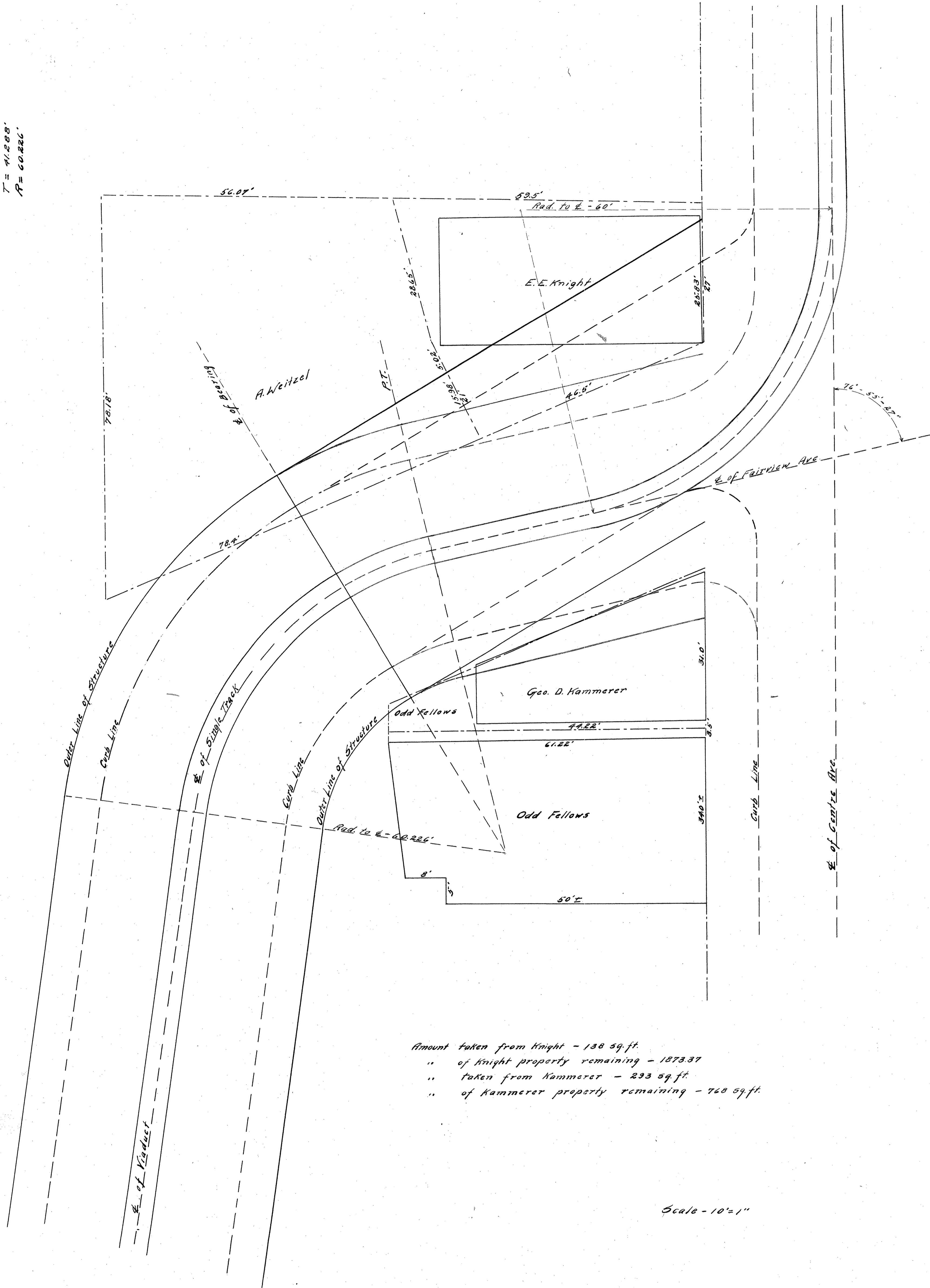
S. PEDESTAL LINE

2007  
 867

BUTLER BOROUGH	
WAYNE ST. VIADUCT	
PROFILE	
ON	
PEDESTAL LINES	
Drawn by - LWS	Scale - 30' = 1"
Traced by - LWS	Date - 2/11/15
Checked by - H.O.C.	Engineer - H.O. Carlson

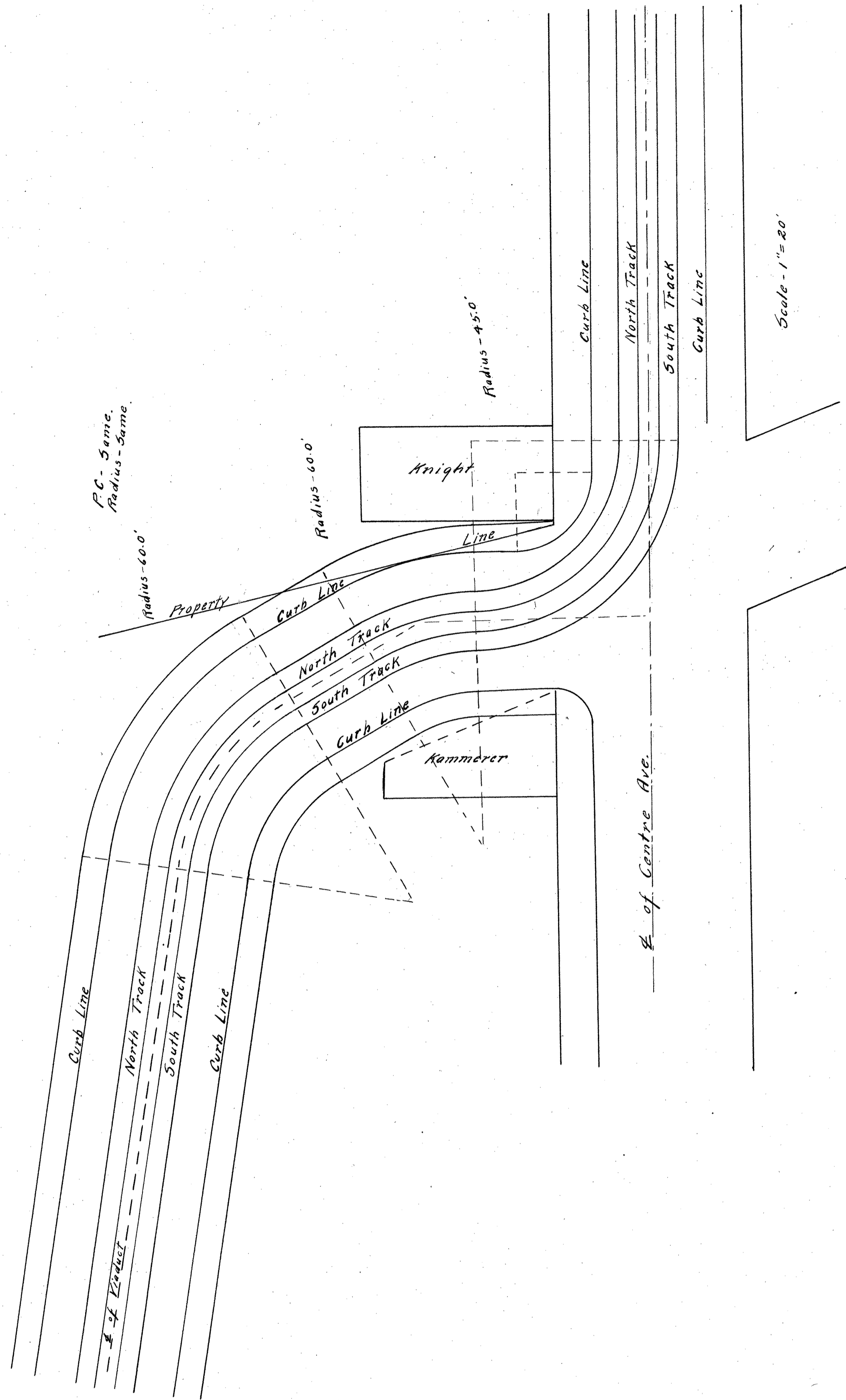


Curve on Structure  
 $\alpha = 68^{\circ} 34' 38''$   
 $T = 41.208'$   
 $R = 60.226'$



Amount taken from Knight - 138 sq. ft.  
 " of Knight property remaining - 1873.37  
 " taken from Hammerer - 233 sq. ft.  
 " of Hammerer property remaining - 728 sq. ft.

Scale - 1" = 10'



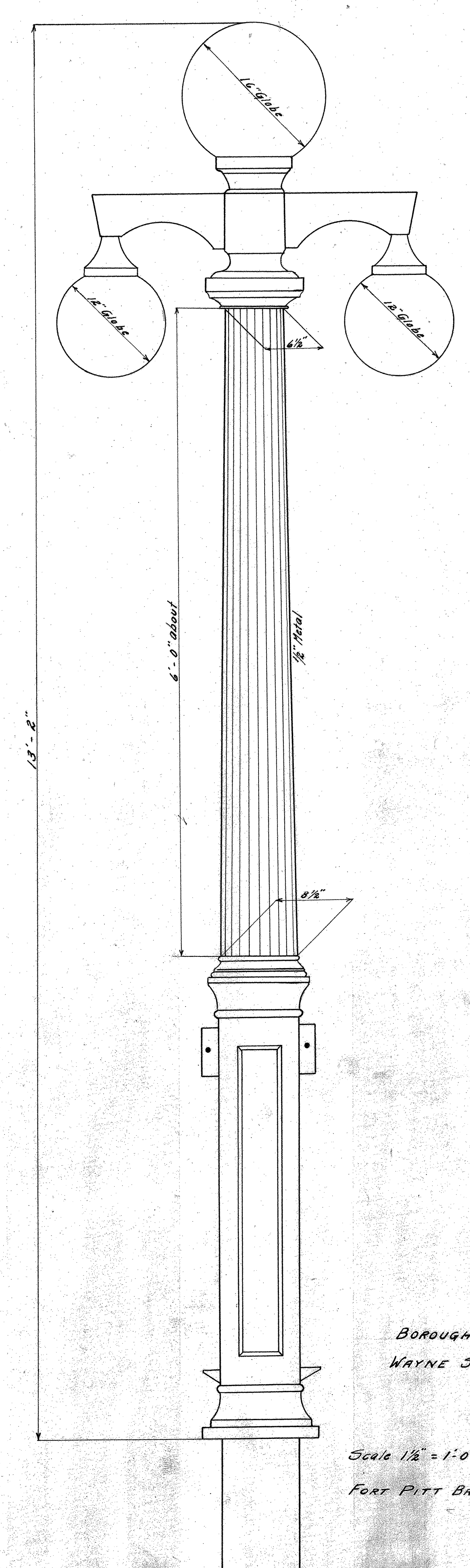
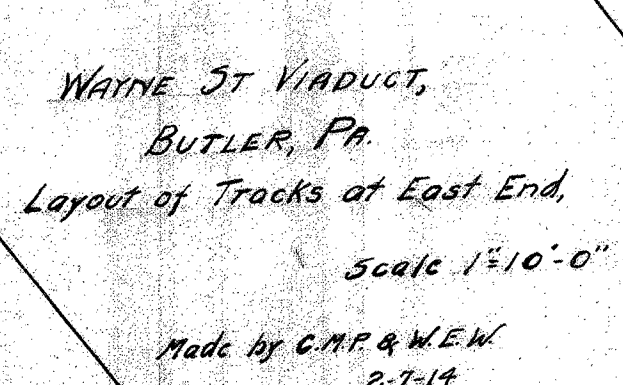
Scale - 1" = 20'

2008  
 4674

BUTLER BOROUGH

WAYNE ST. VIADUC  
 PROPOSED CHANGE ON FAIRVIEW  
 AS SUGGESTED BY COUNCIL

Drawn by - <i>W.C.</i>	Scale - As noted
Traced by - <i>W.C.</i>	Date - 1/7/15
Checked by - <i>H.O.C.</i>	Engineer - <i>H.O.C.</i>



FCR

4698 202

BUTLER BOROU

WAYNE ST. VIADUCT

CLEARANCE CURVES ON FAIRVIEW

NAME PLATES

PROPOSED CHANGE IN LIGHT STAN

Drawn by-GMR	Scale-As noted
Traced by-LWB	Date- 2/9/15
Checked by-H.O.C.	Engineer-HO Carson

2'g'

CONTRACTOR FOR SUBSTRUCTURE

F. M. HARPER

BUTLER, PA

CONTRACTOR FOR SUPERSTRUCTURE

AND ERECTION

FORT PITT BRIDGE WORKS

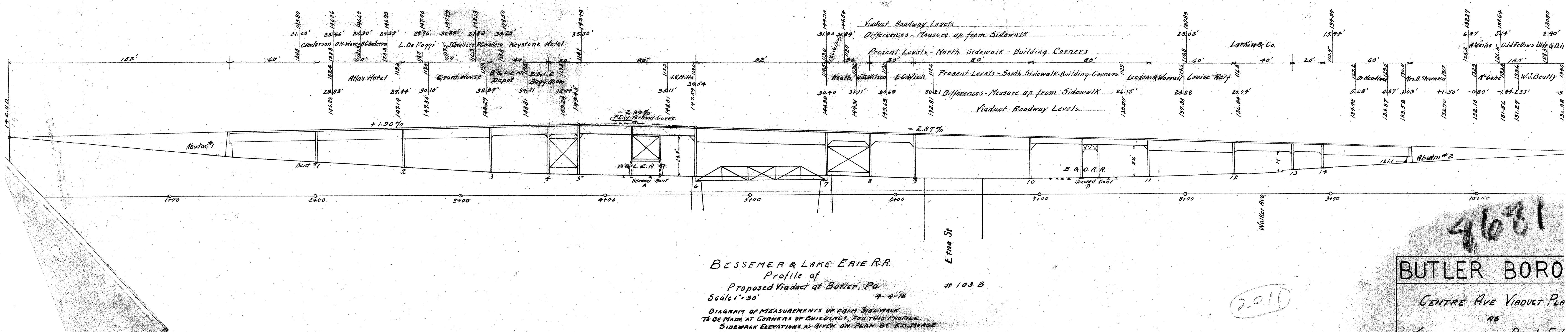
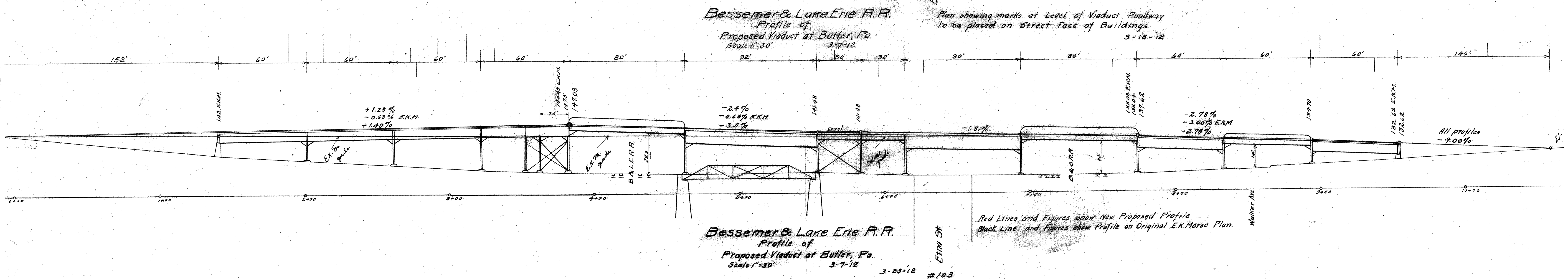
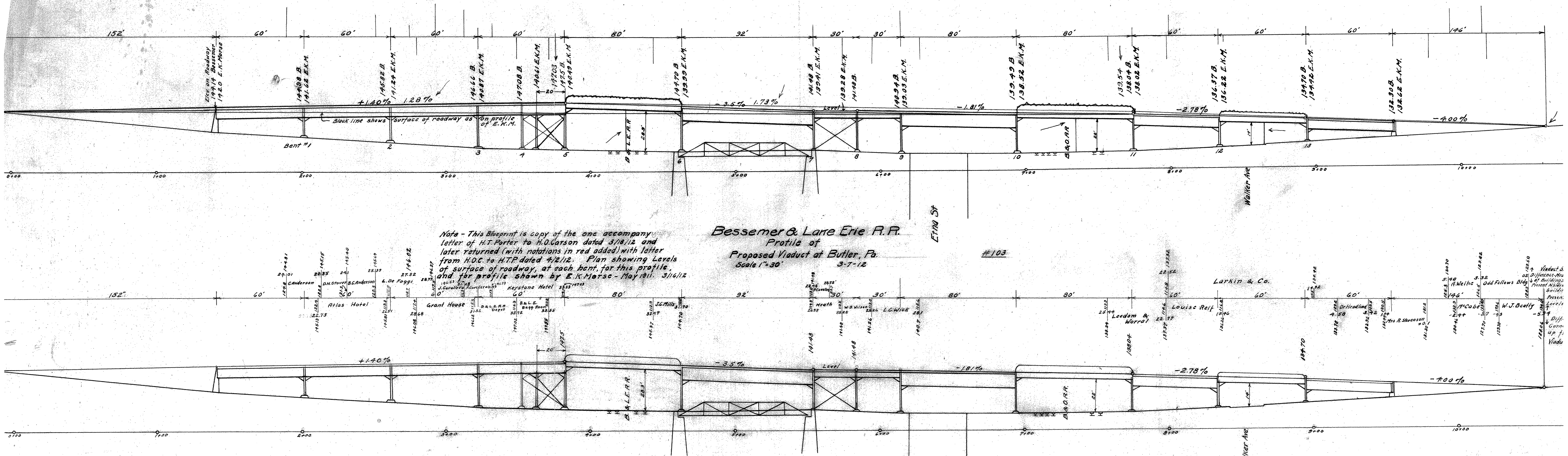
PITTSBURGH, PA.

WAYNE ST VIADUCT  
BUTLER, PA.  
DETAILS OF NAME PLATE  
Scale 3"=1'-0"  
Waddell & Harrington,  
Consulting Engineers  
Kansas City, Mo.

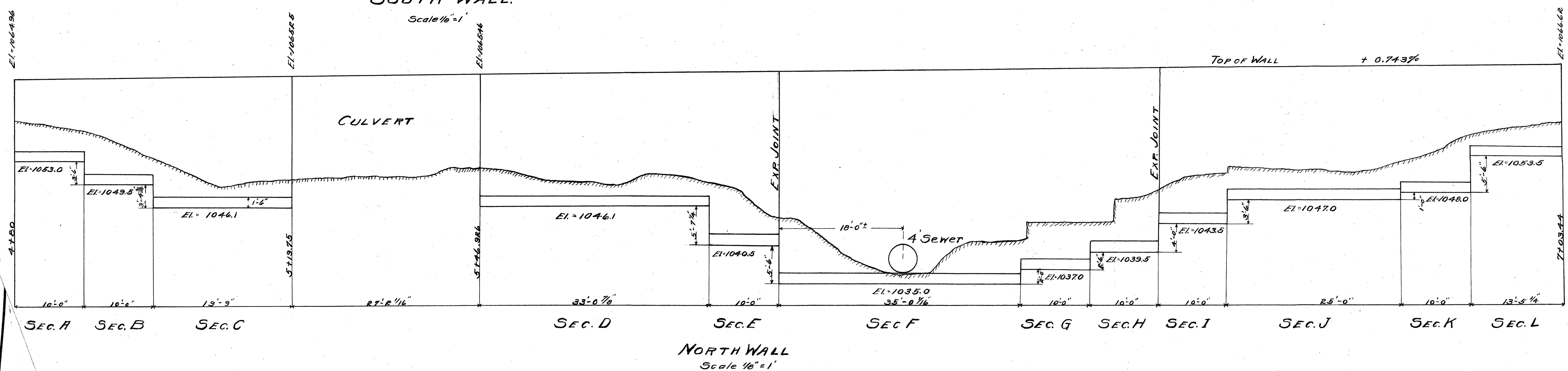
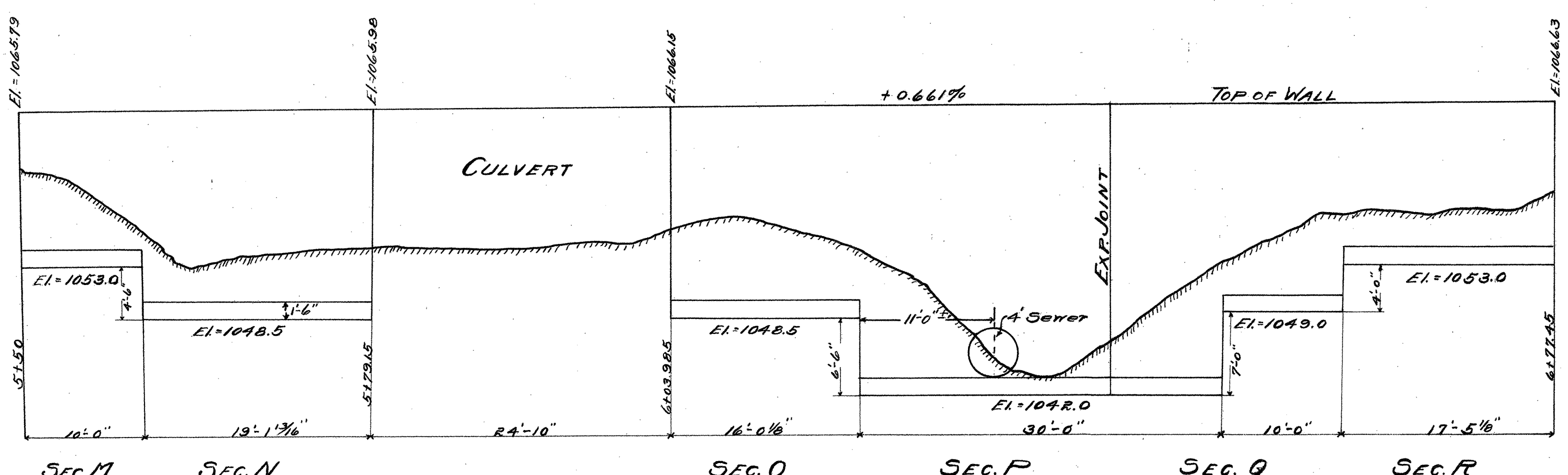
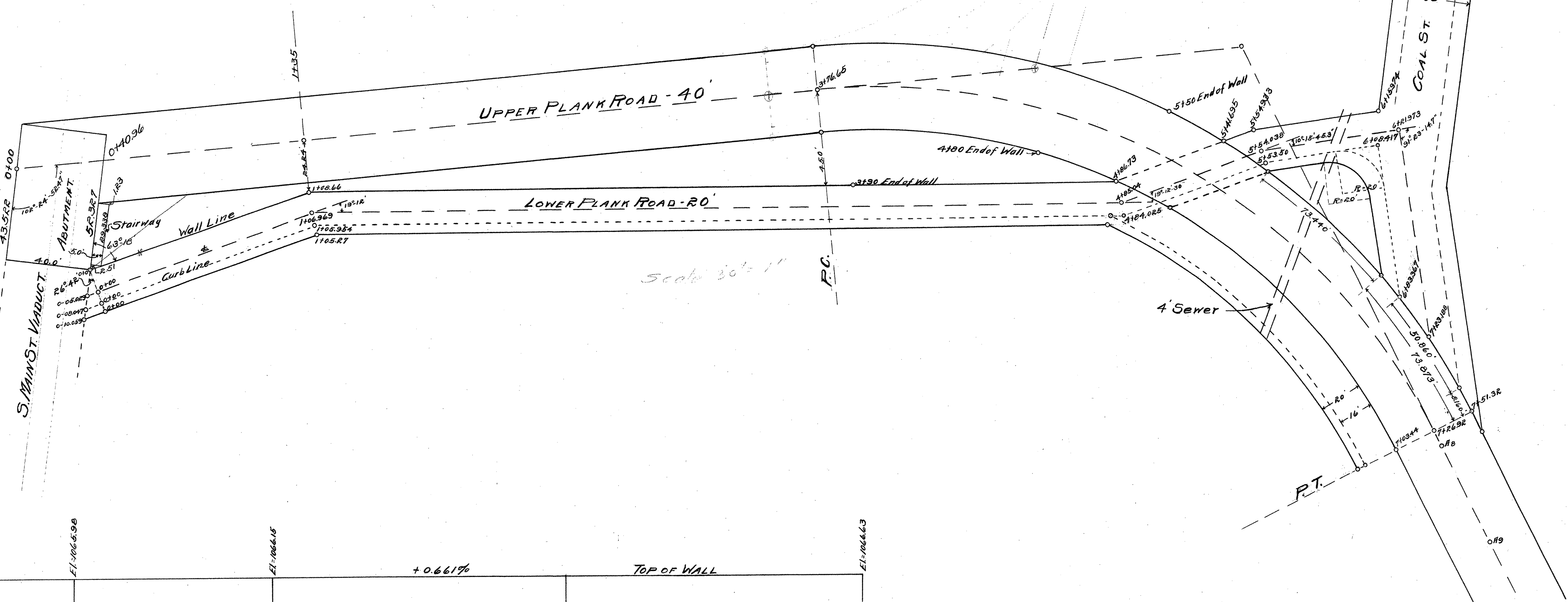
WAYNE ST VIADUCT  
BUTLER, PA.  
DETAILS OF CONTRACTORS NAMEPLATE  
Scale-3"=1'-0"  
Haddell & Harrington.  
Consulting Engineers  
Kansas City, Mo.

S.H. 9-26-14

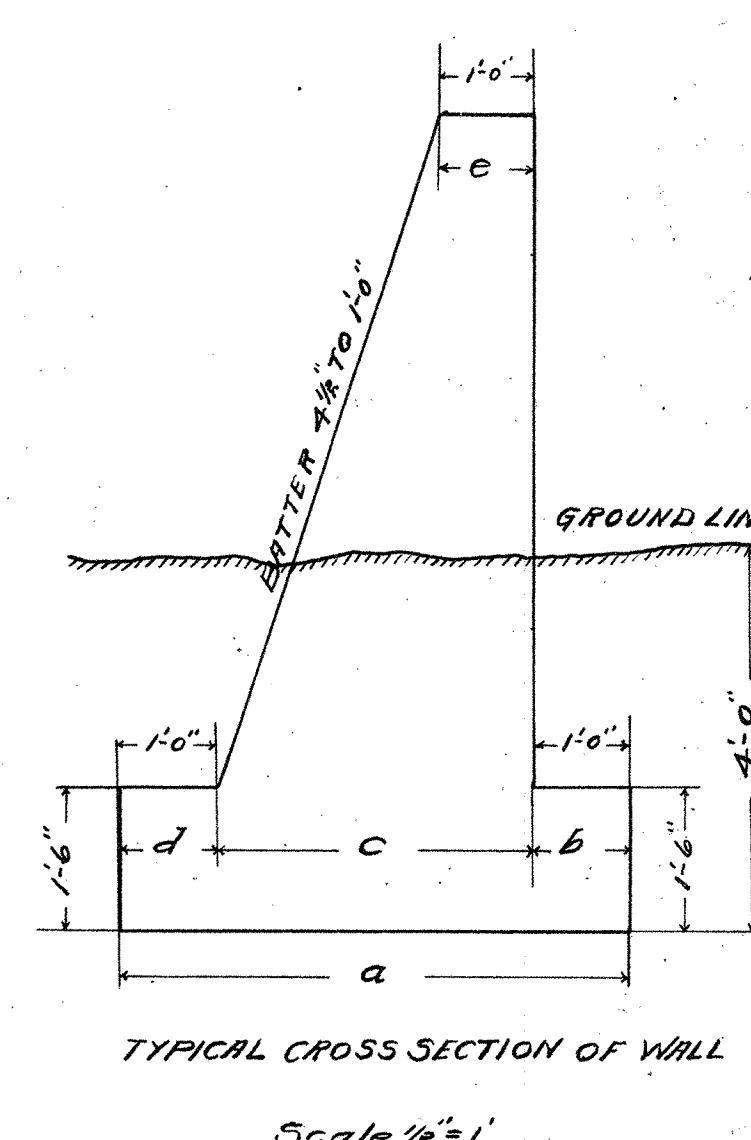
D7



DIMENSIONS FOR WING WALLS.				
SECTION	a East	a West	c East	c West
A	6'-11"	6'-11 3/8"	4'-11"	4'-11 3/8"
B	8'-3 3/8"	8'-3 3/8"	6'-3 3/8"	6'-3 3/8"
C	9'-6 3/4"	9'-7 7/8"	7'-6 3/4"	7'-7 7/8"
D	9'-8 3/8"	9'-9 1/2"	7'-8 3/8"	7'-9 1/2"
E	11'-10 7/8"	11'-11"	9'-10 7/8"	9'-11"
F	13'-11 3/4"	14'-1"	11'-11 3/4"	12'-1"
G	13'-4"	13'-4 1/4"	11'-4"	11'-4 1/4"
H	12'-5"	12'-5 1/4"	10'-5"	10'-5 1/4"
I	10'-11 3/8"	10'-11 3/8"	8'-11 3/8"	8'-11 3/8"
J	9'-8"	9'-8 3/4"	7'-8"	7'-8 3/4"
K	9'-4 1/4"	9'-4 5/8"	7'-4 1/4"	7'-4 5/8"
L	7'-3 7/8"	7'-4 1/4"	5'-3 7/8"	5'-4 1/4"
M	7'-2 3/4"	7'-3 1/8"	5'-2 3/4"	5'-3 1/8"
N	8'-11 7/8"	9'-11 7/8"	6'-11 7/8"	6'-11 7/8"
O	9'-0 5/8"	9'-1 1/8"	7'-0 5/8"	7'-1 1/8"
P	11'-6 3/8"	11'-7 1/4"	9'-6 3/8"	9'-7 1/4"
Q	8'-11 7/8"	9'-0 1/8"	6'-11 7/8"	7'-0 1/8"
R	7'-6 1/8"	7'-6 5/8"	5'-6 1/8"	5'-6 5/8"

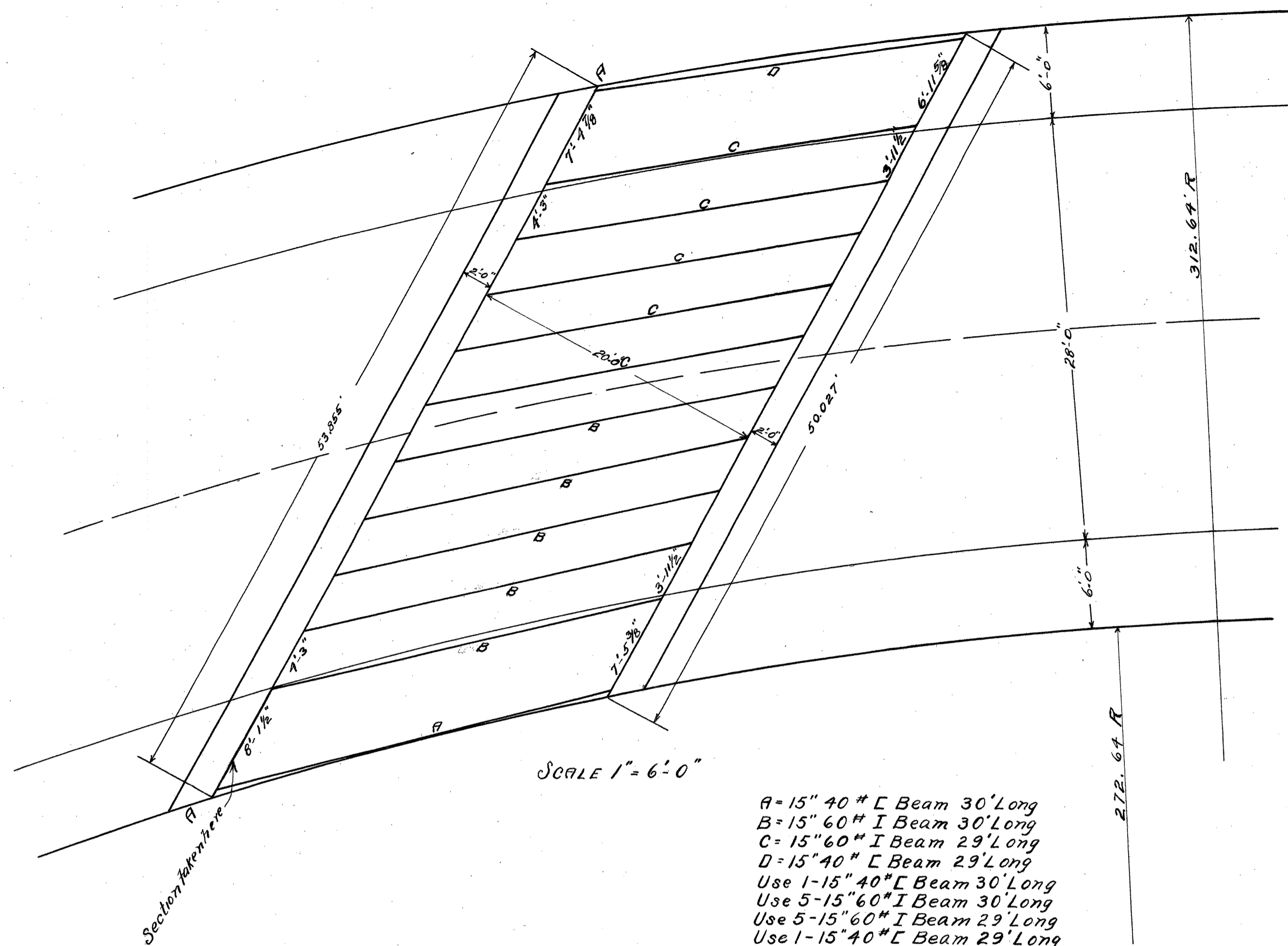


**General Notes**  
 The exact depth to which foundations shall be carried shall be determined by the Resident Engineer.  
 Provide weepholes in walls and abutments about 10 ft. apart at elevation of ground surface. Use a 3" diam. drain tile. Place a layer of coarse broken stone 16" wide and 12" deep along the back of the wall at the elevation of the weepholes.  
 Concrete Mix unless otherwise specified shall be as follows:  
 1- Part Portland Cement  
 3- Parts River Washed Sand  
 5- Parts Limestone or River Washed Gravel which will pass a No. 10 ring.



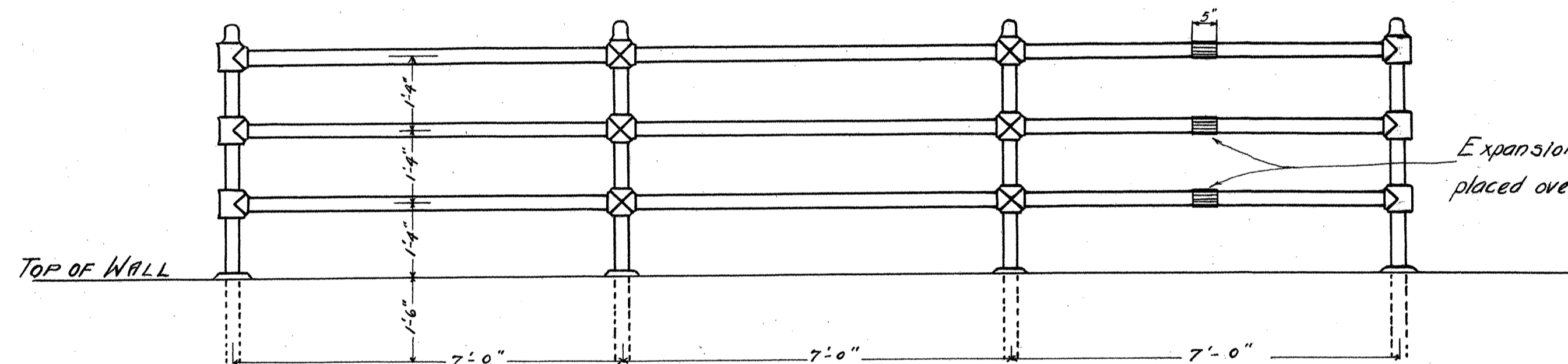
**CITY OF BUTLER**  
 GROUND PLAN FROM MAIN ST TO WEST SIDE OF COAL STREET NORTH AND SOUTH WALLS AT MUNTZ COAL BANK.  
 Drawn by - J.E.W. Scale - As noted  
 Traced by - J.E.W. Date - 8-25-19  
 Checked by - H.O.C. Engineer - H.O.C. Carson

8701



SCALE 1" = 6'-0"

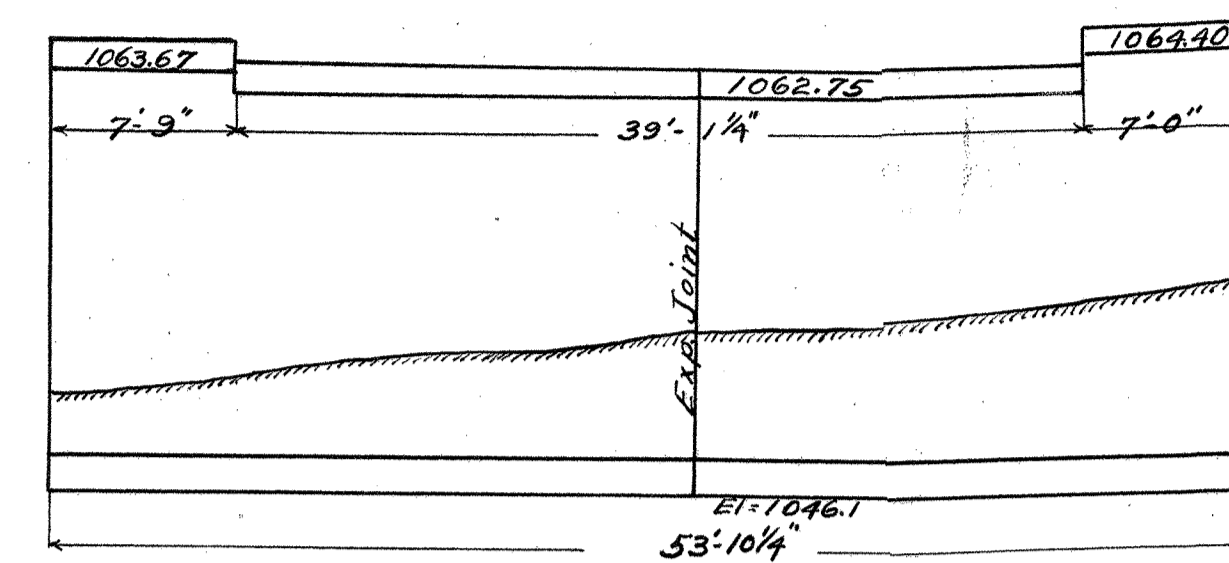
A = 15" 40# I Beam 30' Long  
 B = 15" 60# I Beam 30' Long  
 C = 15" 60# I Beam 29' Long  
 D = 15" 40# I Beam 29' Long  
 Use 1-15" 40# I Beam 30' Long  
 Use 5-15" 60# I Beam 30' Long  
 Use 5-15" 60# I Beam 29' Long  
 Use 1-15" 40# I Beam 29' Long



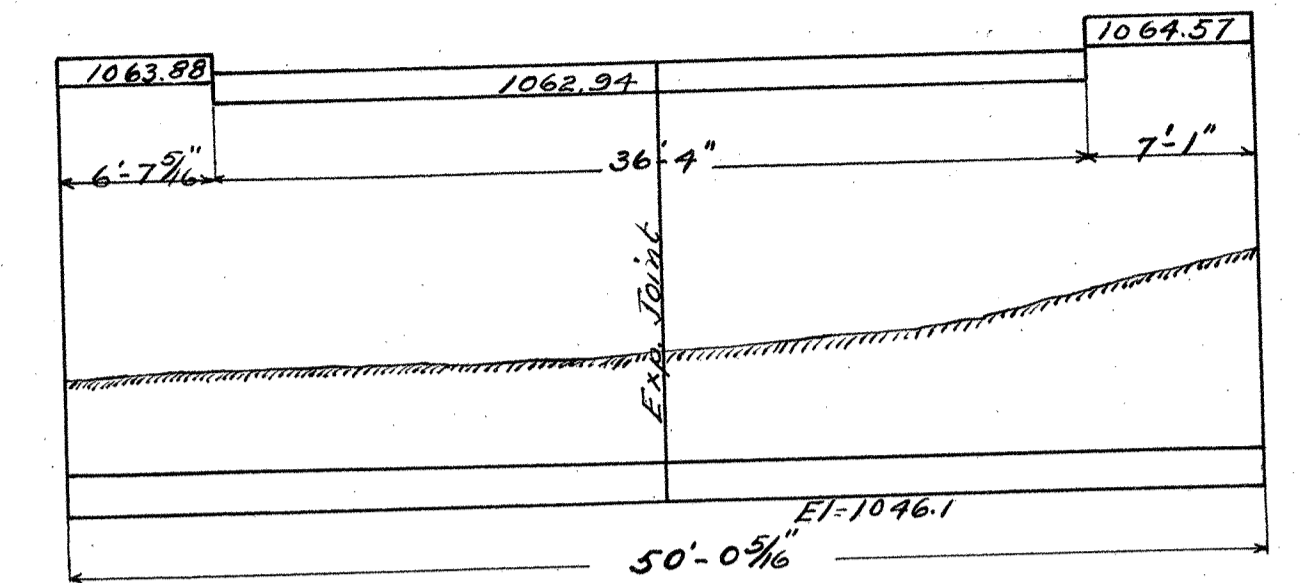
Scale = 1/2" = 1'

DETAIL OF HAND RAIL  
 2" Galvanized Iron Pipe  
 Threads and Tees to be Rights and Lefts  
 Hand Rail to be set in 2 3/8" Pipe placed  
 in Wall and Leaded.

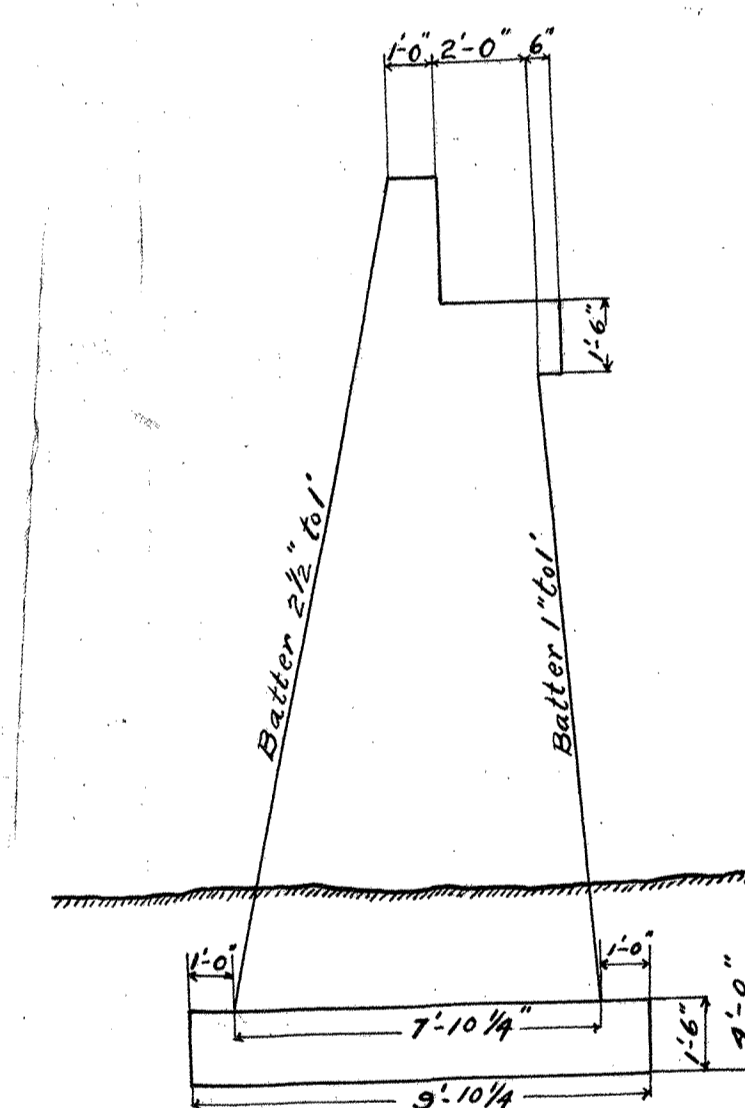
Hand Railing to be constructed between the  
 following Points.  
 North Wall at Muntz Coal Bank Sta. 4+80 to 7+03.44  
 South Wall at Muntz Coal Bank Sta. 5+50 to 6+77.45  
 North Wall at Muntz Heirs Property Sta. 21+94 to 24+54.55  
 Hand Rail to be set in 6" from face of Wall and bent to curve  
 Hand Rail to be Painted with Three Coats of approved Bridge Paint  
 Hand Rail to be securely attached to Top + Bottom of Channel Beams



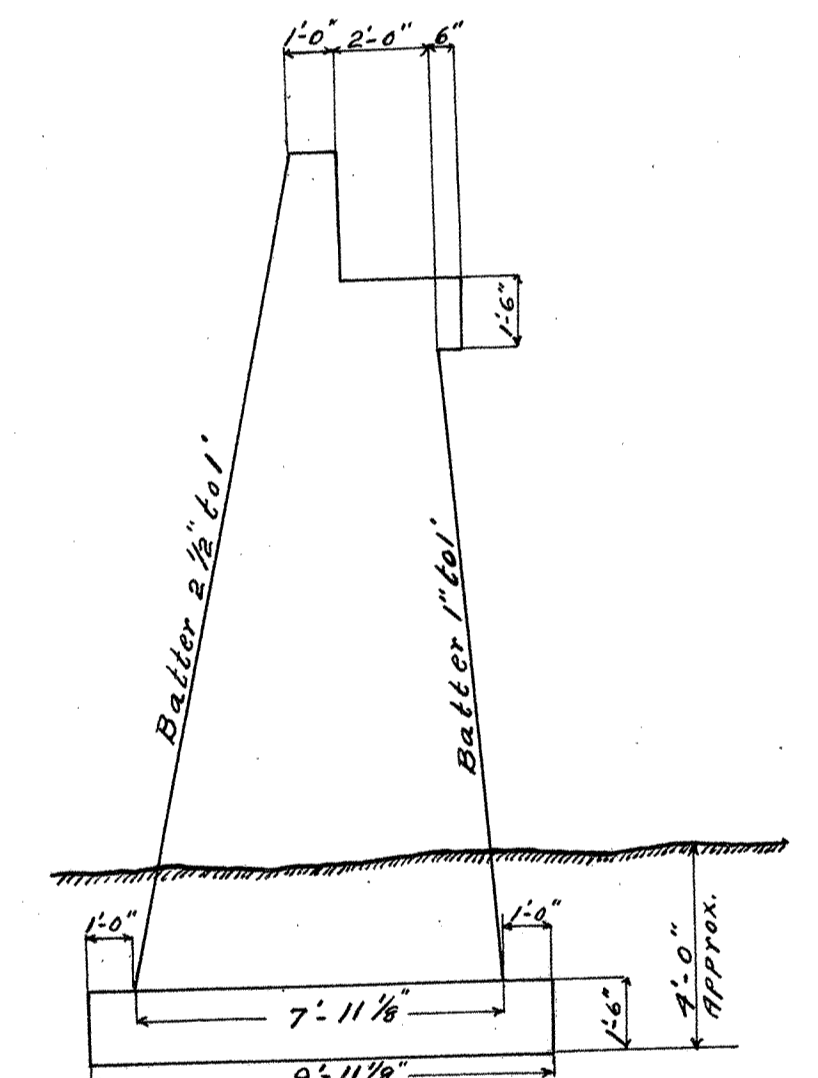
SECTION THROUGH EAST CULVERT WALL  
 SCALE 1/4" = 1'



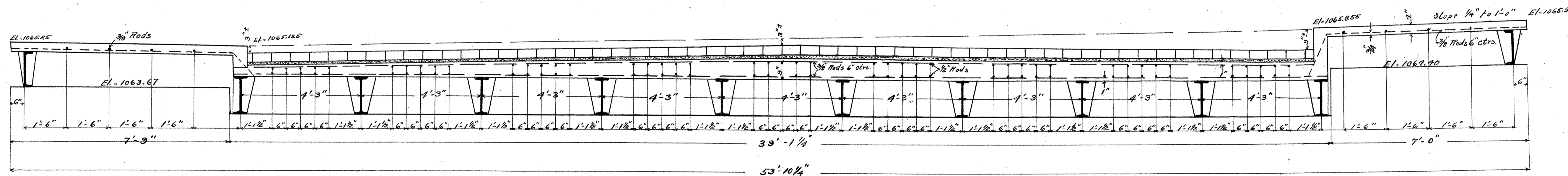
SECTION THROUGH WEST CULVERT WALL  
 SCALE 1/8" = 1'



CROSS SECTION OF EAST CULVERT WALL  
 SCALE - 1/4" = 1'



CROSS SECTION OF WEST CULVERT WALL  
 SCALE - 1/4" = 1'



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

4" Brick Block Pavement  
 1 1/2" Sand Cushion

Note: - I Beams and Channels to be wrapped  
 with wire cloth, 1 1/2" x 1 1/2" Mesh and  
 encased. The concrete encasement  
 in all cases to be at least 3" Thick  
 All reinforcing rods to be Corrugated.  
 Use Wainwright curb bar and frogs.

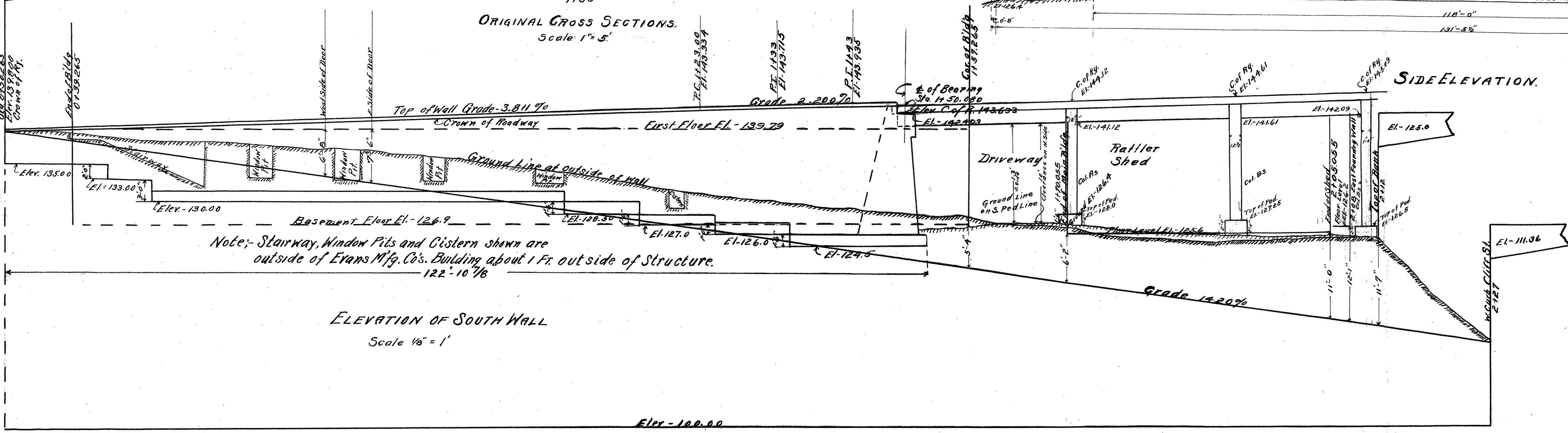
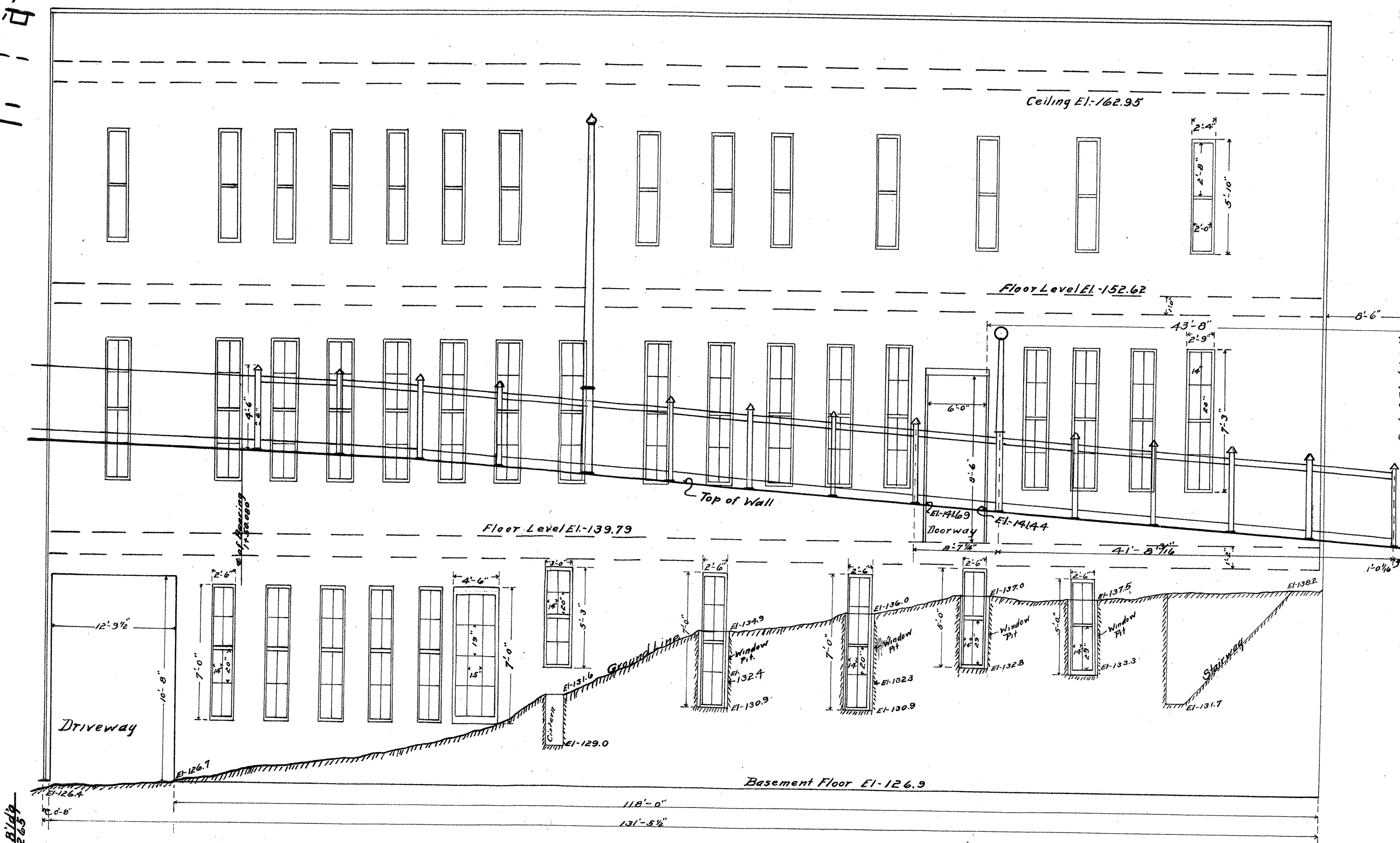
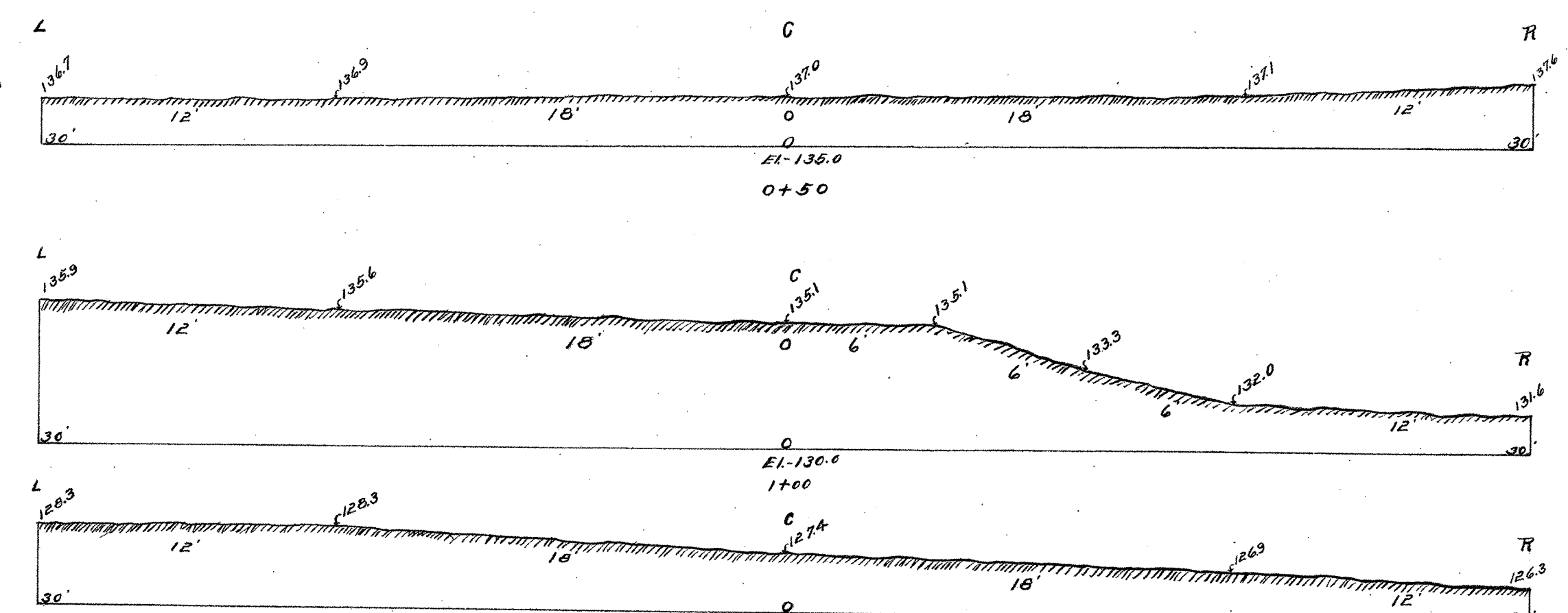
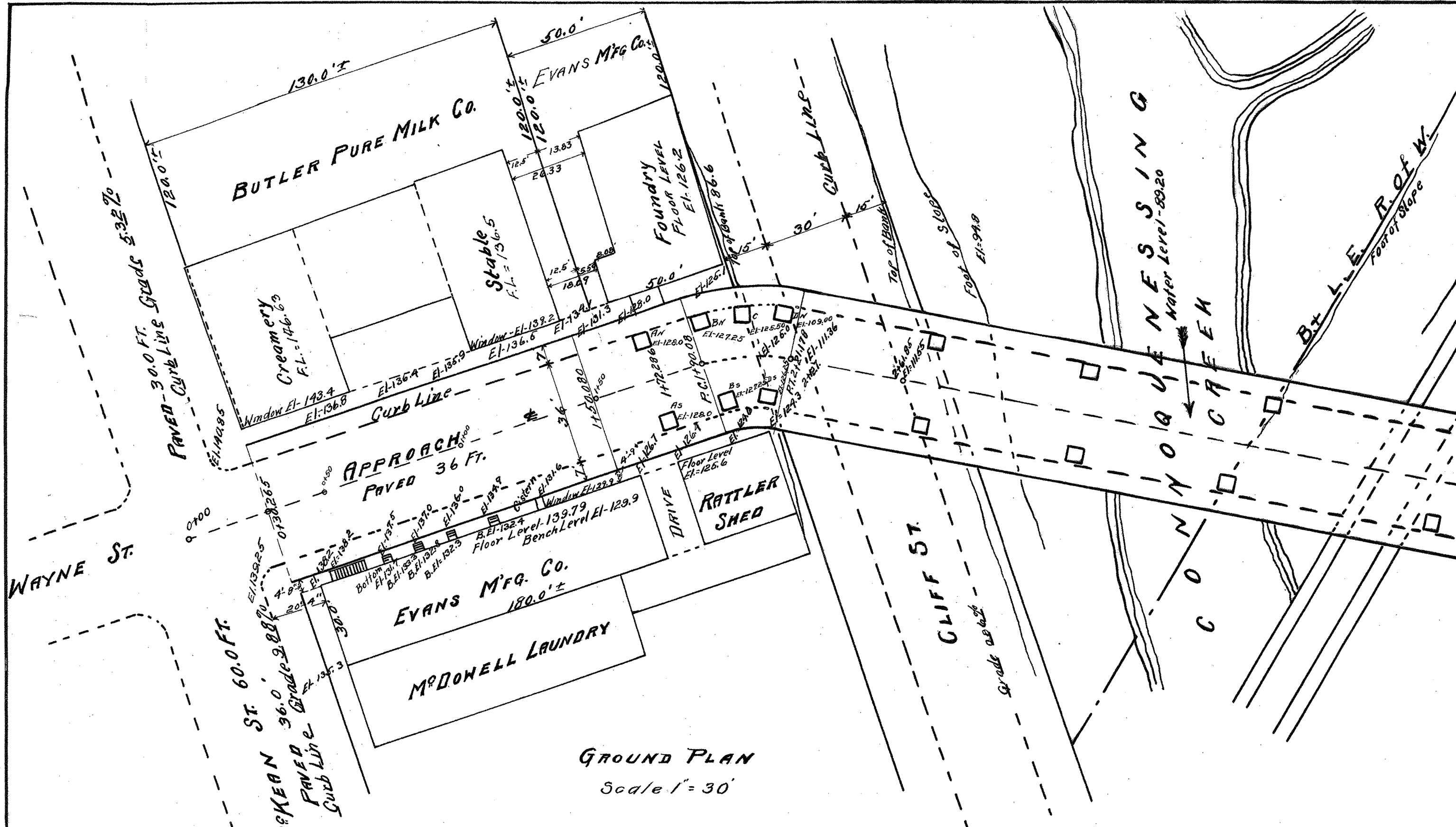
Mix: - 1 Part Portland Cement  
 2 Parts River washed Sand  
 4 Parts Limestone or River washed Gravel,  
 which will pass through a 2 1/2" ring.  
 Reinforced Concrete shall be kept wet until  
 thoroughly set, by drenching at least twice a day.  
 See Specifications for Sidewalks.

CITY OF BUTLER

ABUTMENTS AND FLOOR PLAN  
 OF BRIDGE AT MUNTZ COAL  
 BANK.  
 DETAIL OF HAND RAILING.

DRAWN BY - H.O.C.	SCALE - AS NOTED
TRACED BY - F.J.M.	DATE - 8-25-19
CHECKED BY - H.O.C.	ENGINEER - H.O. CHANSON

149



Scale  
Hor. 1/8" = 1'  
Ver. 1/4" = 1'

Note: Elevations shown are on assumed datum. U.S. Datum is 898.36' higher.

2029 4699

CITY OF BUTLER	
PLAN AND ELEVATION SHOWING WAYNE ST. VIADUCT APPROACH AND EVANS MFG. CO.'S BUILDINGS.	
DRAWN BY - J.E.W.	SCALE - As Shown
TRACED BY - J.E.W.	DATE - 2-4-19
CHECKED BY - H.O.C.	ENGINEER - H.O. CAISON

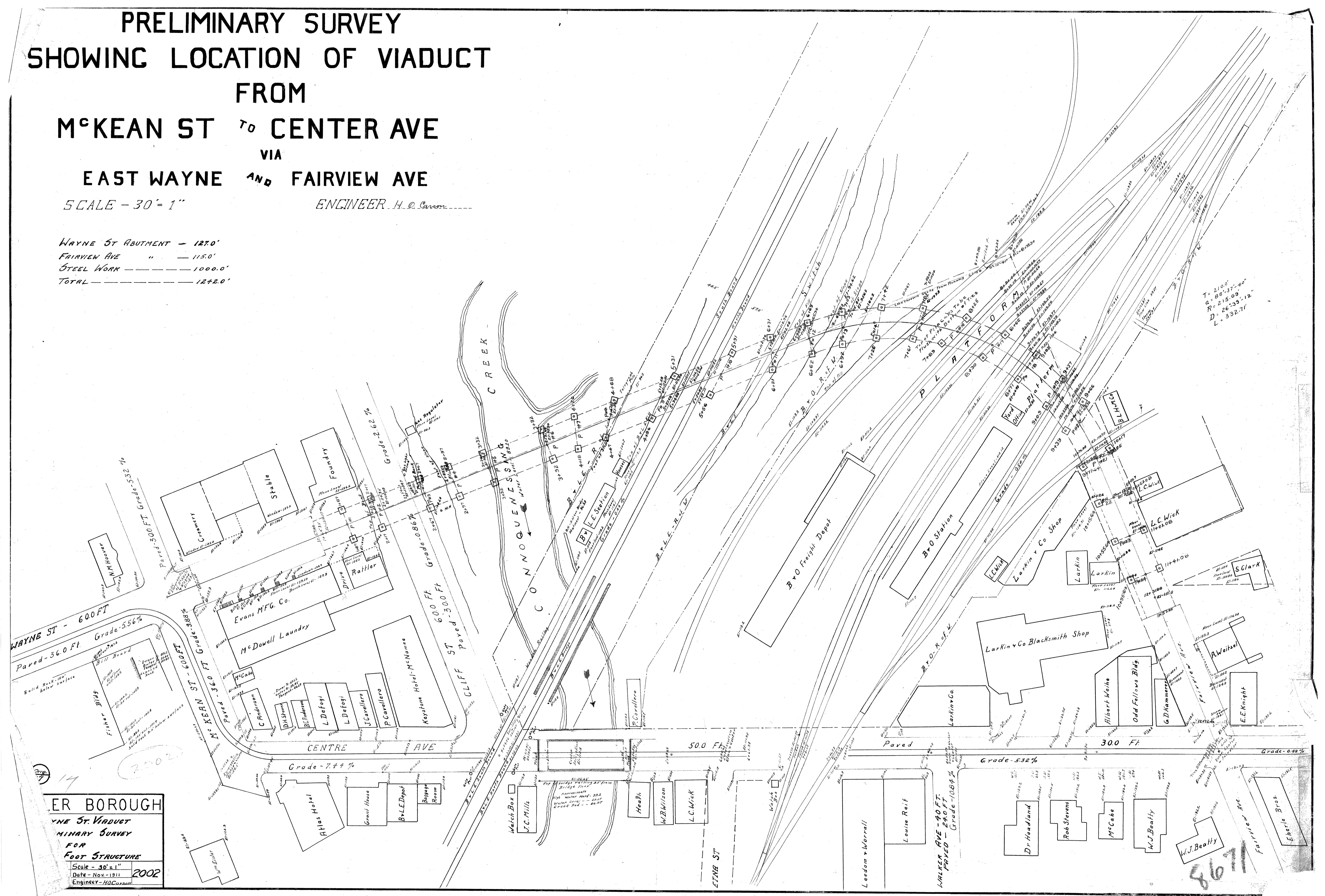
# PRELIMINARY SURVEY SHOWING LOCATION OF VIADUCT FROM M<sup>c</sup>KEAN ST TO CENTER AVE VIA EAST WAYNE AND FAIRVIEW AVE

SCALE - 30' = 1"

ENGINEER H. O. CARMAN

WAYNE ST ABUTMENT - 1270'  
FAIRVIEW AVE " - 1150'  
STEEL WORK - 1000.0'  
TOTAL - 1242.0'

T = 210.0'  
a = 85° 33' 40"  
R = 215.09'  
D = 26° 33' 12"  
L = 332.71'



SCALE - 30' = 1"

ENGINEER H. O. Carson...

**CURVES ON WAYNE STREET**

Outer Edge N. Side walk		Outer Edge S. Side walk
$T = 21.94'$	$T = 15.32'$	$T = 10.00'$
$A = 29^{\circ}29'-02''$	$A = 25^{\circ}29'-02''$	$A = 37^{\circ}29'-02''$
$R = 83.00'$	$R = 60.50'$	$R = 39.00'$
$L = 65^{\circ}04'.22''$	$L = 54^{\circ}48'-26''$	$L = 105^{\circ}15'-00''$
$E = 42.68'$	$L = 31.09'$	$E = 13.48'$

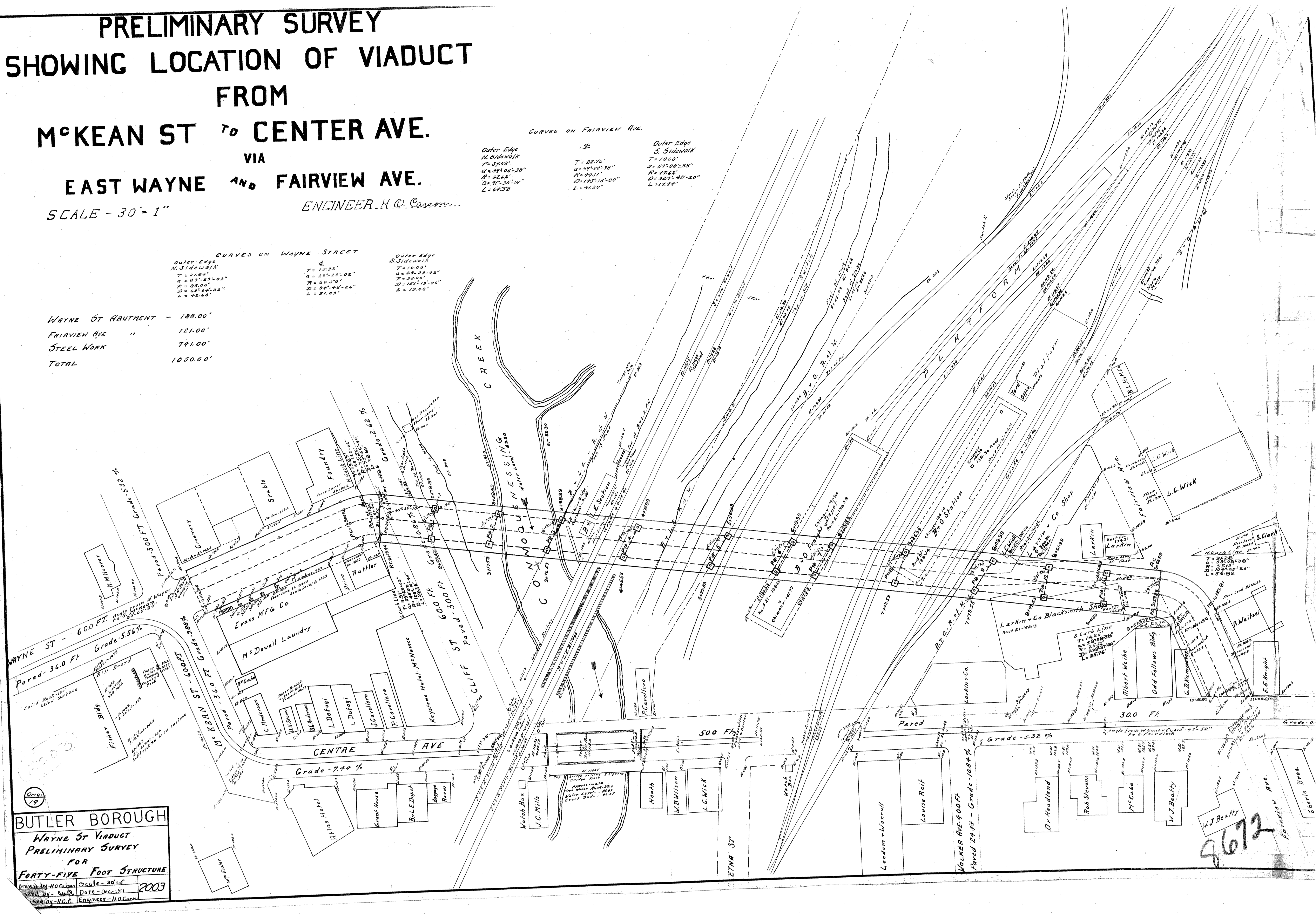
WAYNE ST ABUTMENT -	188.00'
FAIRVIEW AVE "	121.00'
STEEL WORK	741.00'
TOTAL	1050.00'

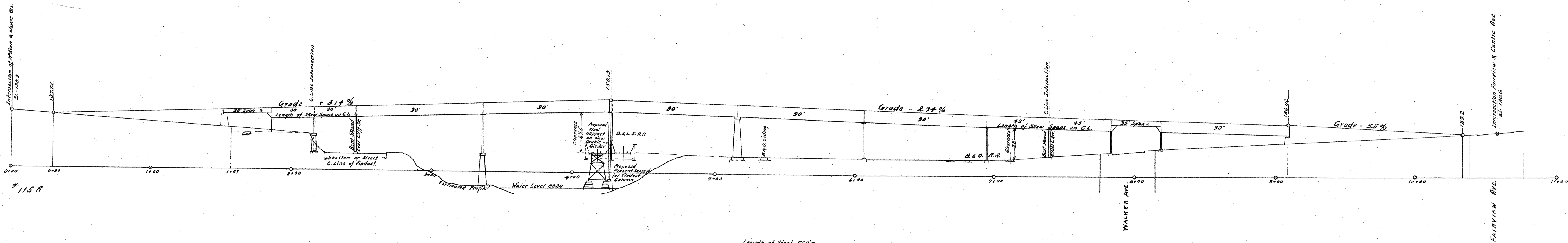
CURVES ON FAIRVIEW AVE.

Outer Edge  
N. Sidewalk  
 $T = 35^{\circ}53'$   
 $\alpha = 59^{\circ}08'38''$   
 $R = 62.62'$   
 $D = 91^{\circ}35'15''$   
 $L = 64^{\circ}58'$

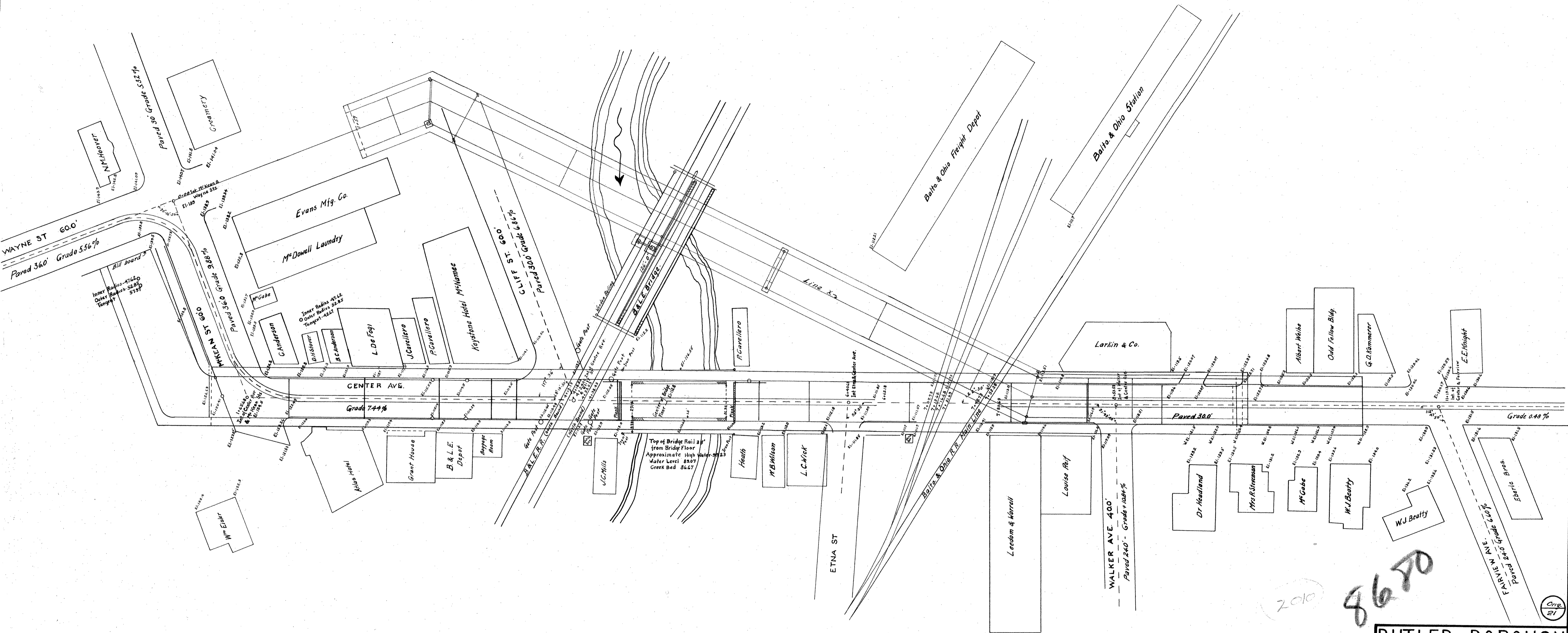
$T = 22.76'$   
 $\alpha = 59^{\circ}08'38''$   
 $R = 40.11'$   
 $D = 143^{\circ}13'00''$   
 $L = 41.30'$

Outer Edge  
S. Sidewalk  
 $T = 10.00'$   
 $\alpha = 59^\circ 08' = 38''$   
 $R = 17.62'$   
 $D = 329' - 42' - 20''$   
 $L = 17.94'$





Length of Steel Ties  
BESSEMER & LAKE ERIE R.R.  
PROFILE OF VIADUCT (LINE X)  
BUTLER, PA.  
Scale 1"=30' 4-15-12



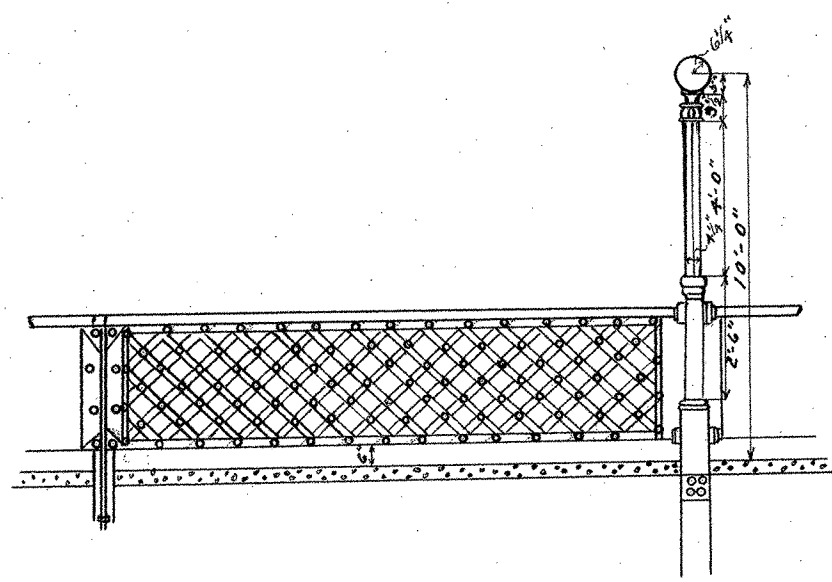
CENTER AVENUE VIADUCT  
BUTLER PA.

Scale 1"=50' LINE X 4-15-12 May 1911  
For Profile on this line see Plan #115A  
P. R. Niles & Co.  
Pittsburg, Pa.

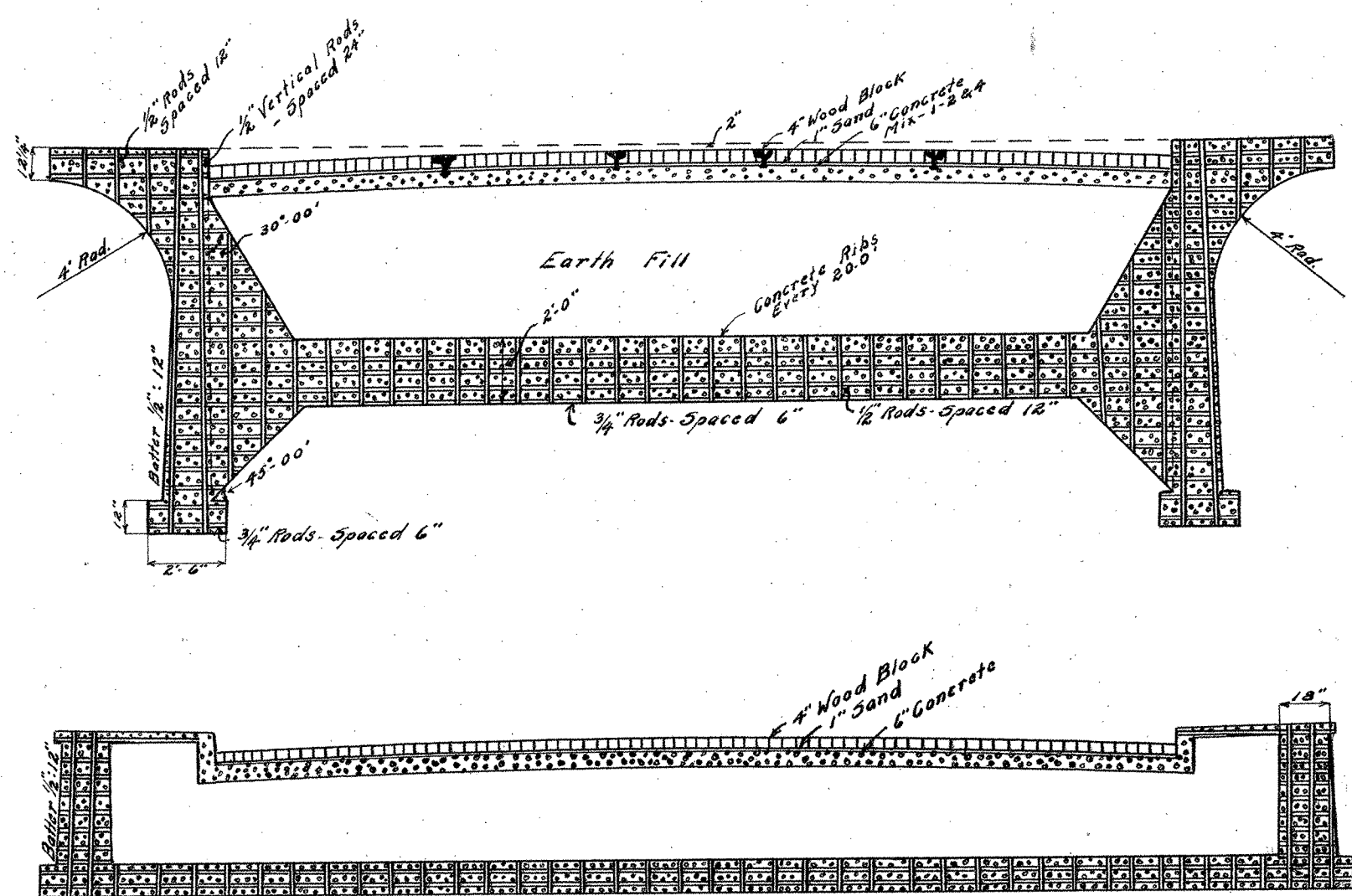
Traced April 9, 1912 BALEER Greenville, Pa.

BUTLER BOROUGH	
PROPOSED VIADUCT PLANS	
OF	
B. & L. E. R. R.	
Drawn by	Scale - As Noted
Traced by W.W.V.	Date - 3/1/15
Checked by H.O.C.	Engineer - H.O.C.

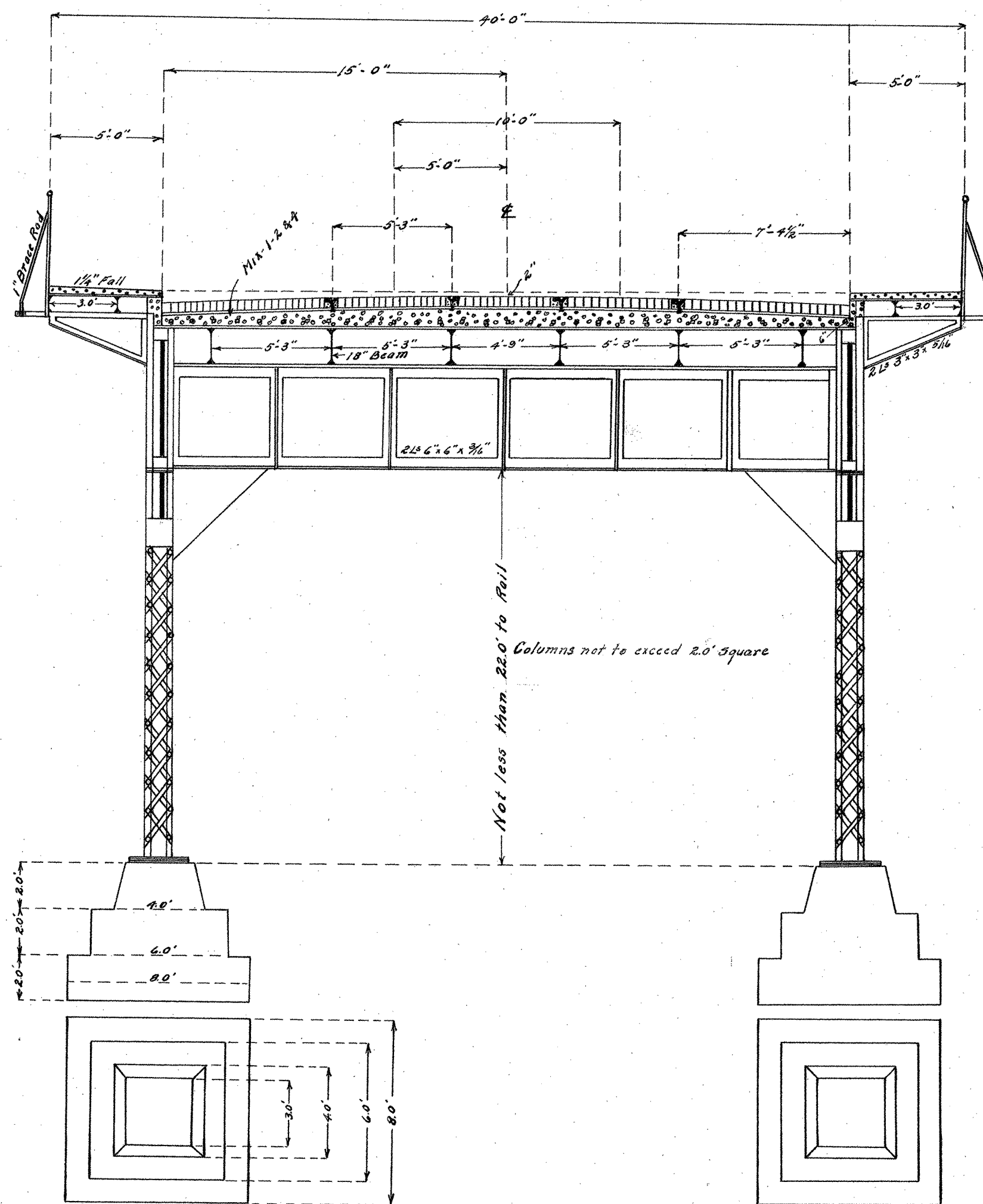
2010



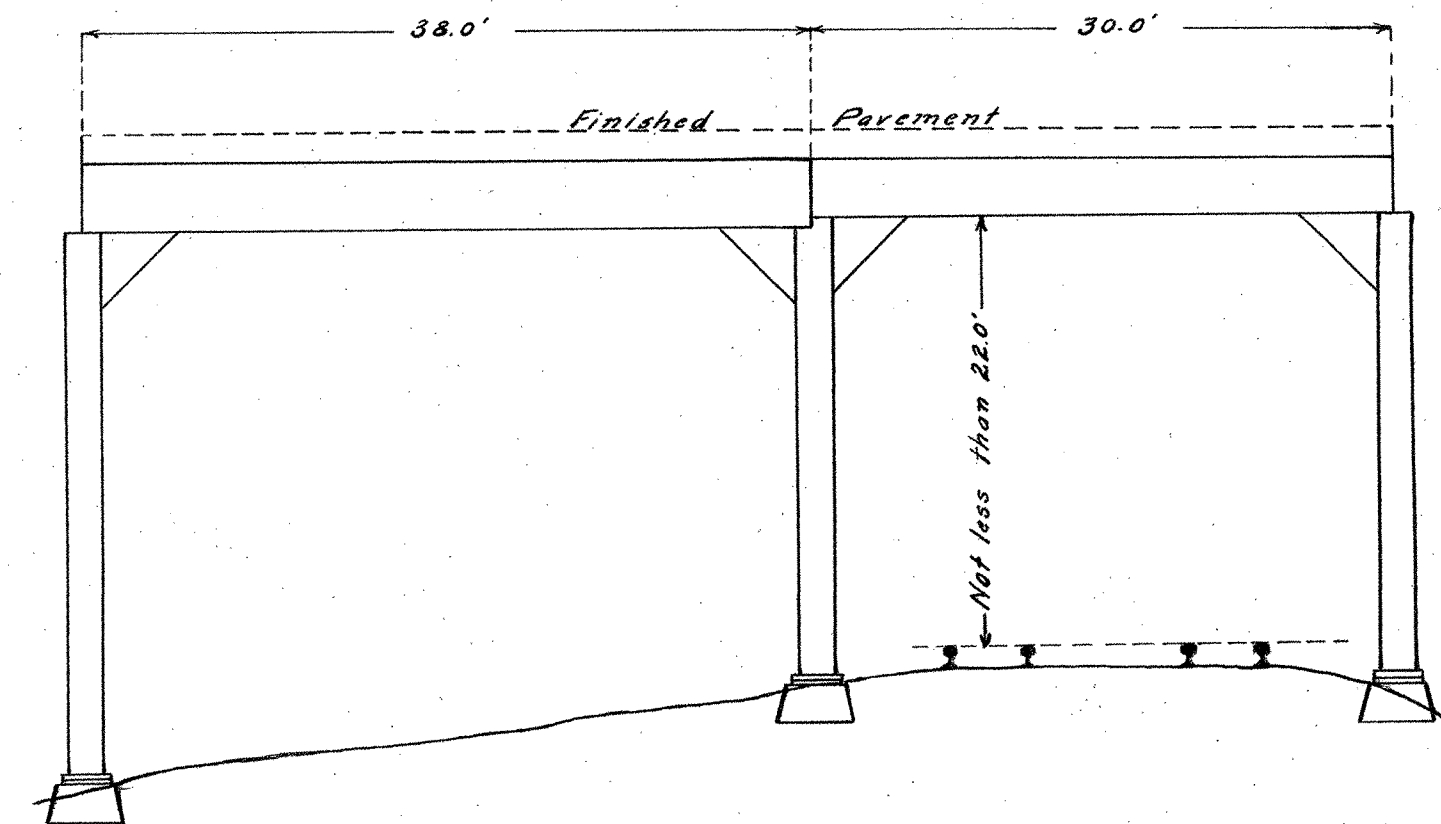
HANDRAIL AND LAMP POST



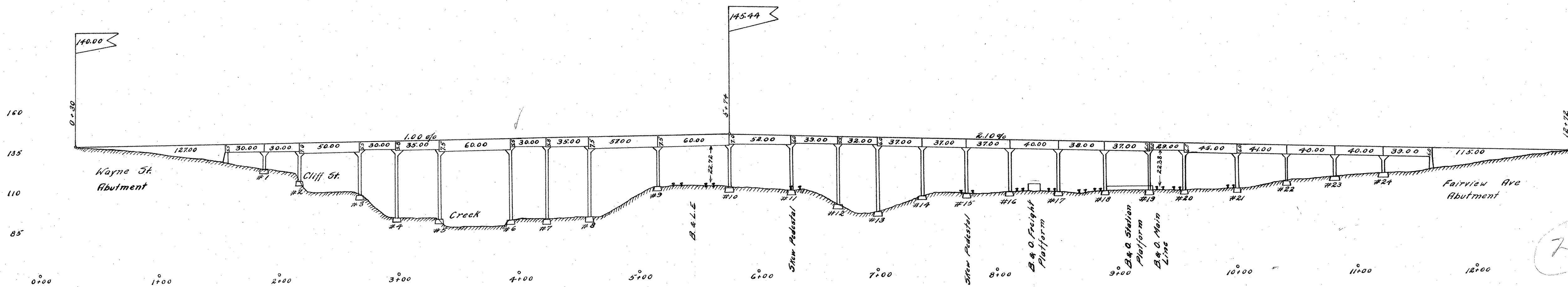
CROSS SECTIONS OF ABUTMENT  
Scale  $\frac{1}{4}'' = 1'$



TYPICAL CROSS SECTION OF STRUCTURE  
Scale  $\frac{1}{4}'' = 1'$

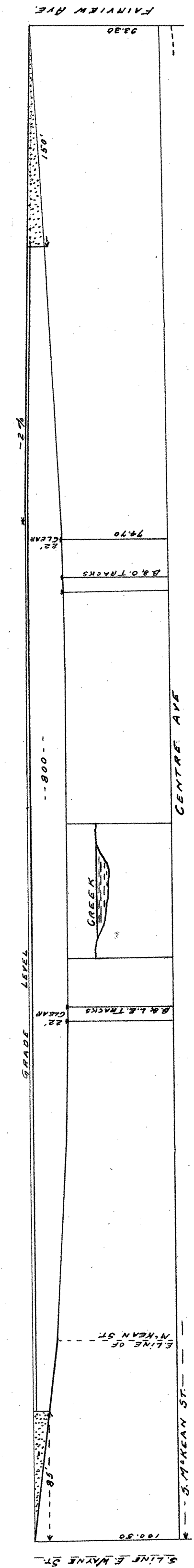
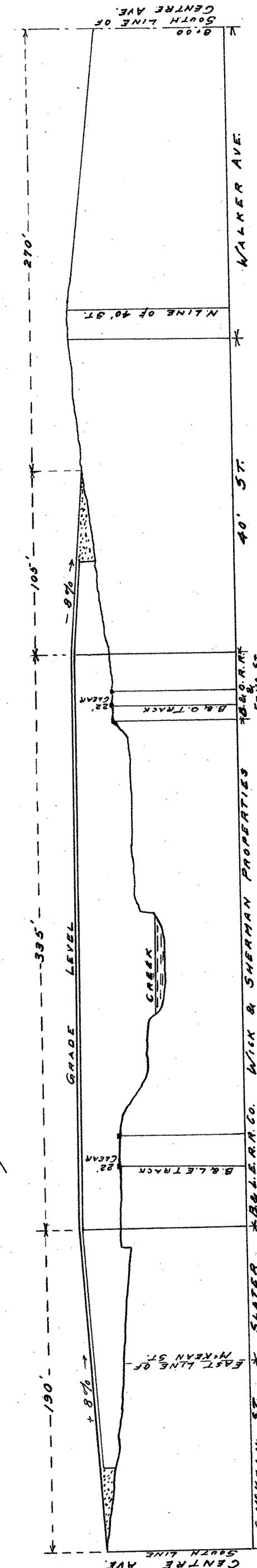
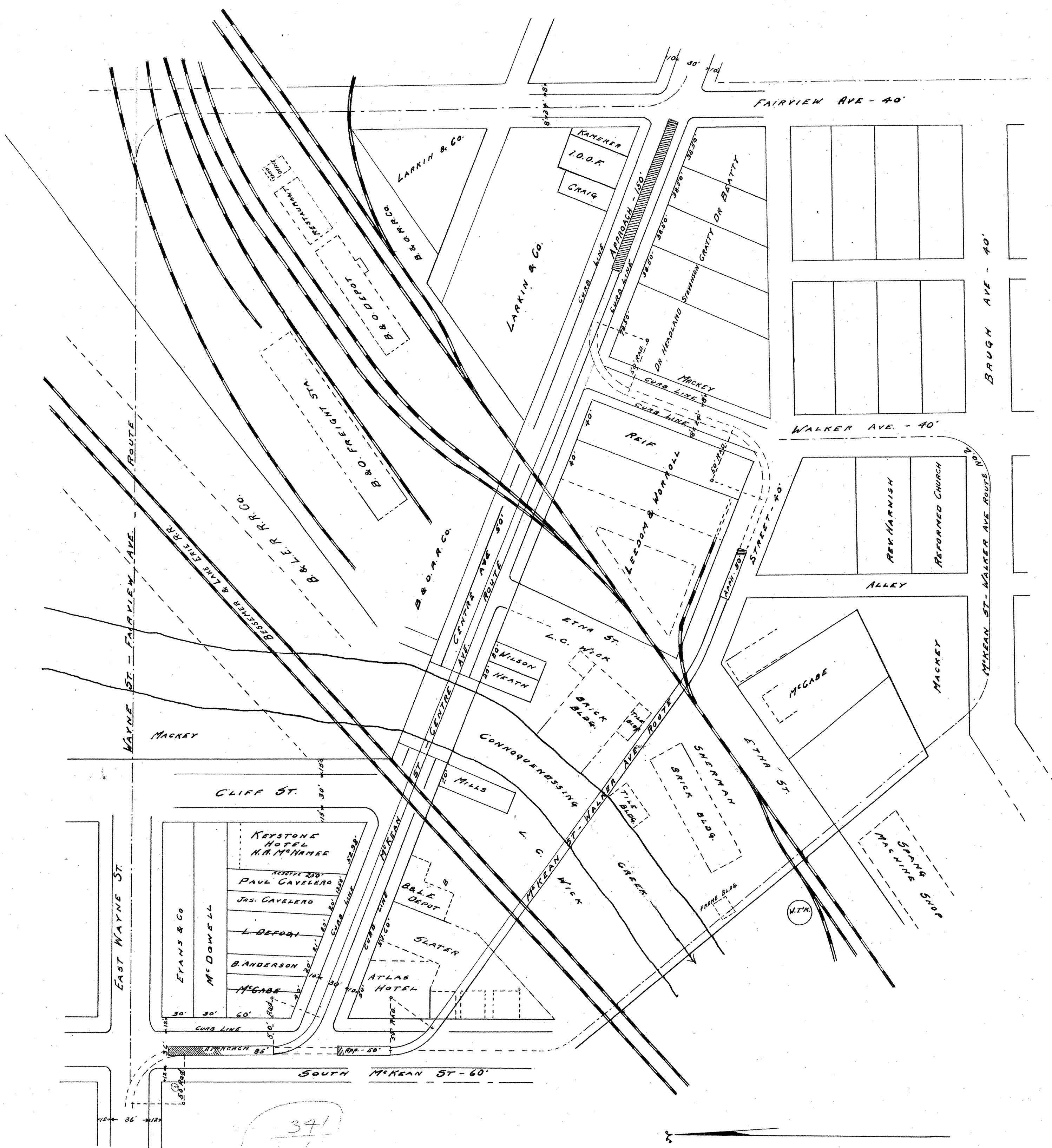


SIDE VIEW OF STRUCTURE  
Scale  $\frac{1}{8}'' = 1'$



PROPOSED ROUTE  
MCKEEN TO FAIRVIEW  
ORDINANCE - NO 1  
Scales - Ver.  $\frac{1}{8}'' = 1'$  Hor.  $\frac{1}{4}'' = 1'$  Engineer - H.D. Carson

BUTLER BOROUGH			
WAYNE ST. VIADUCT			
PRELIMINARY PLANS			
ON			
FORTY FOOT STRUCTURE			
Drawn by - H.D.C.	Scale - As Noted	2004	
Traced by - W.M.B.	Date - 1911		
Checked by - H.D.C.	Engineer - H.D. Carson		



DEC. 1, 1910.  
SCALE 50' = 1"

BUTLER, PA.

G. S. McMillan

BUTLER BOROUGH

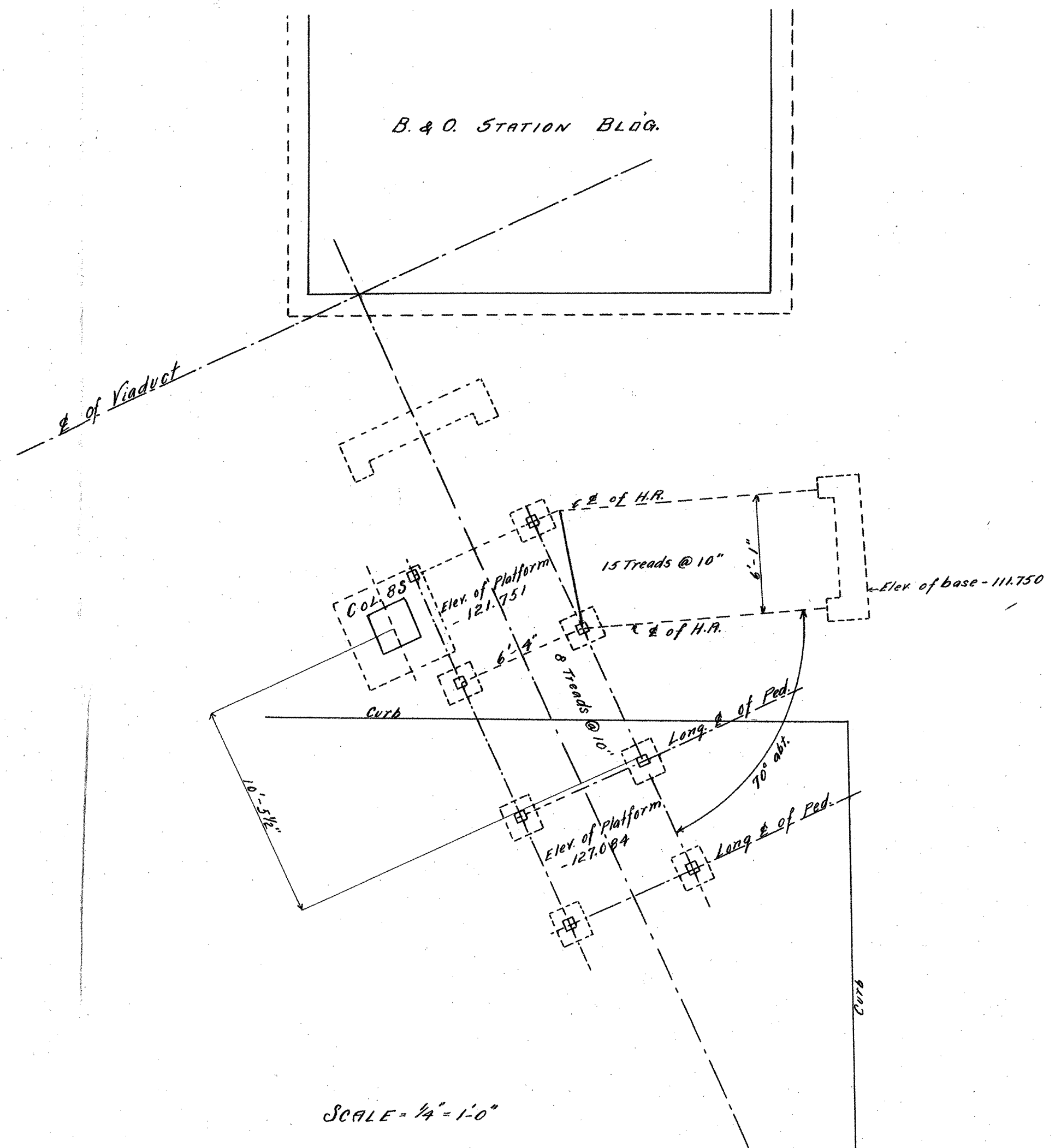
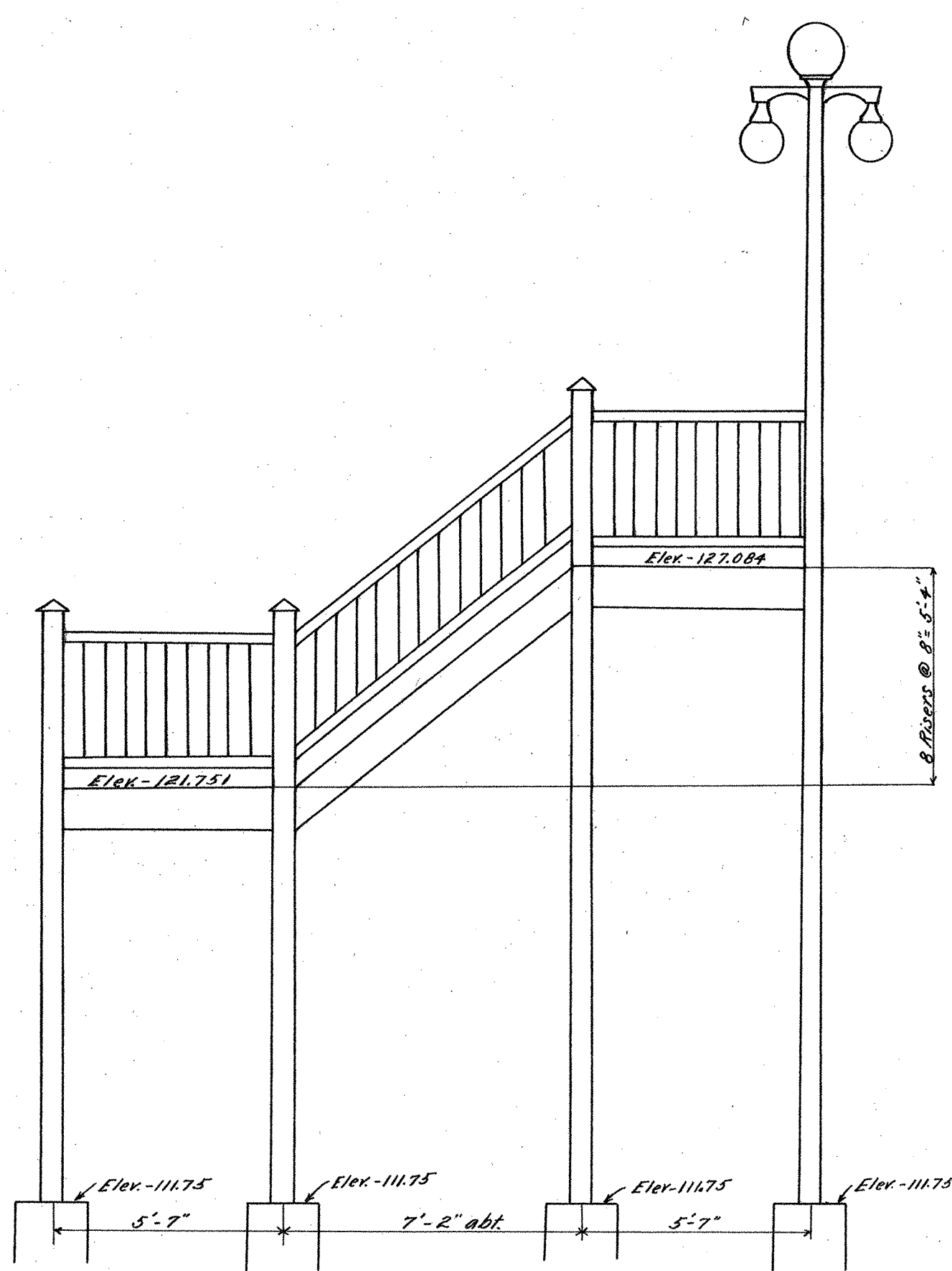
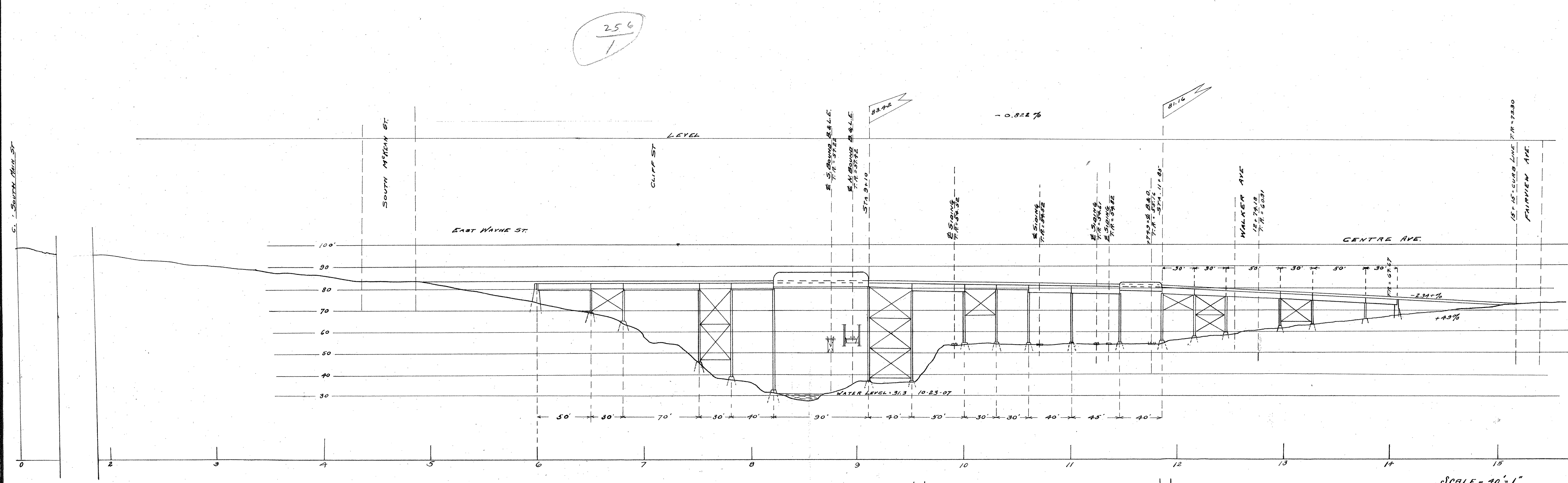
PROPOSED PLANS AND PROFILES  
OF  
FEASIBLE VIADUCT ROUTES

Drawn by - L. M. G. Scale - 50' = 1"  
Traced by - G. M. B. Date - 12/1/10  
Checked by - H. O. C. Engineer - H. O. C.

2001

8673

18

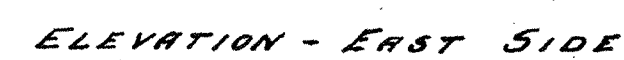
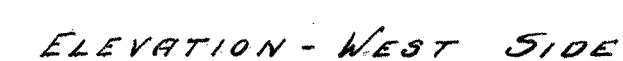
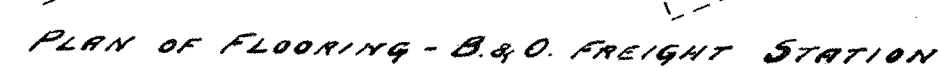
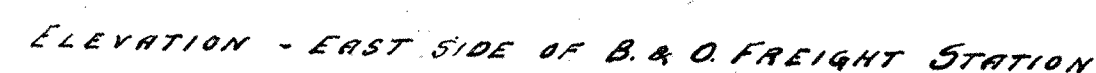


2012

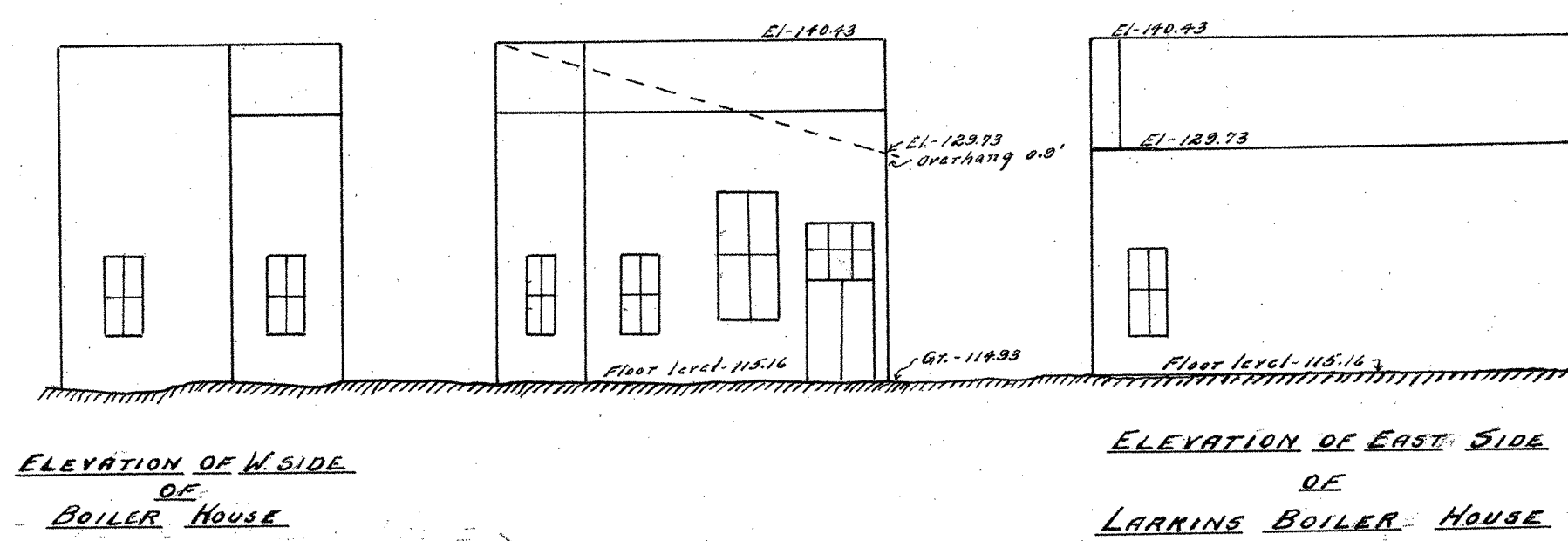
8682

2012

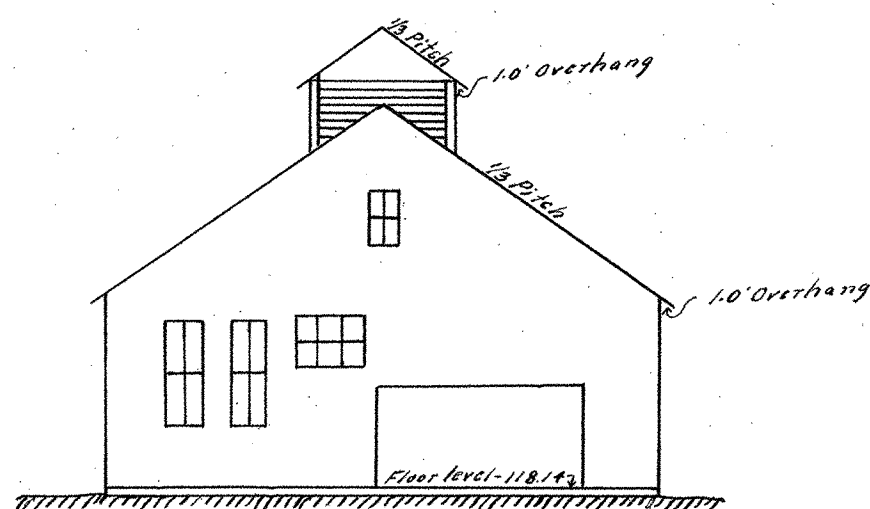
<b>BUTLER BOROUGH</b>	
PROPOSED VIADUCT - M'KEAN TO FAIRVIEW VIA WAYNE AND CENTRE PROPOSED STAIRWAY FROM VIADUCT TO B & O STATION	
Drawn by - C.M.P. Scale - AS NOTED	Traced by - H.D.C. Date - 7-17-15
Checked by - H.D.C. Engineer - H.D.C. Carson	



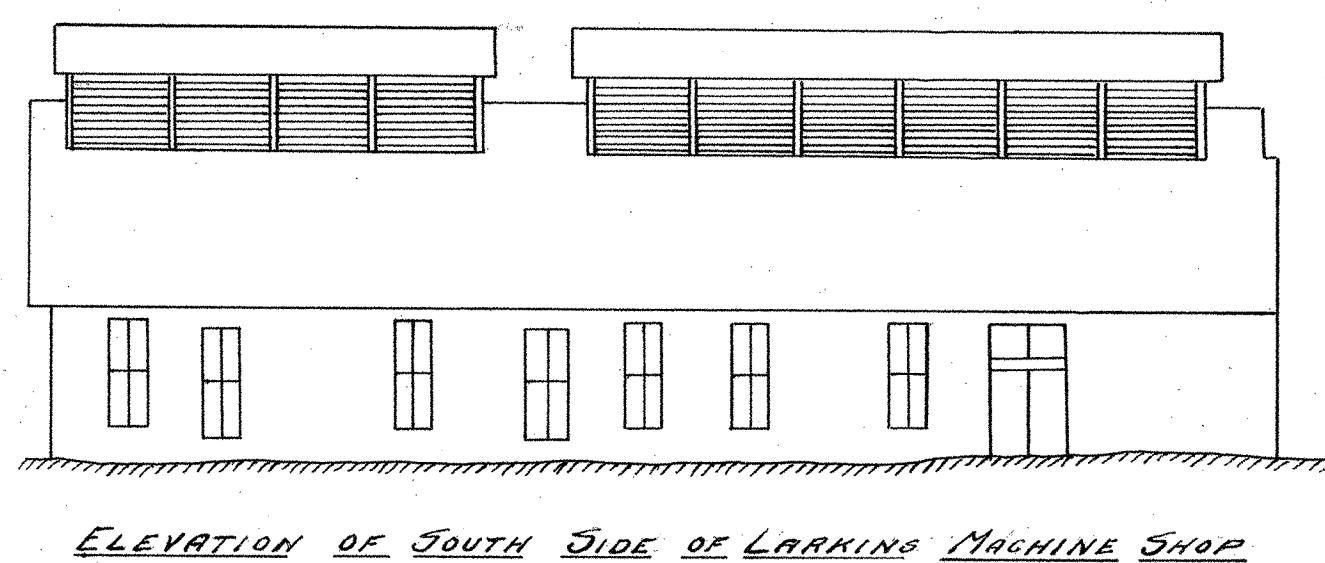
BUTLER BOROUGH		
WAYNE ST VIADUCT		
PLAN SHOWING		
B. & O. PASSENGER AND		
FREIGHT DEPOTS		
Drawn by - km8	Scale - 1/8" = 1'	2013
Treed by - Wm8	Date - 2/1/15	
Checked by - H.O.C	Engineer - H.O.C Carson	



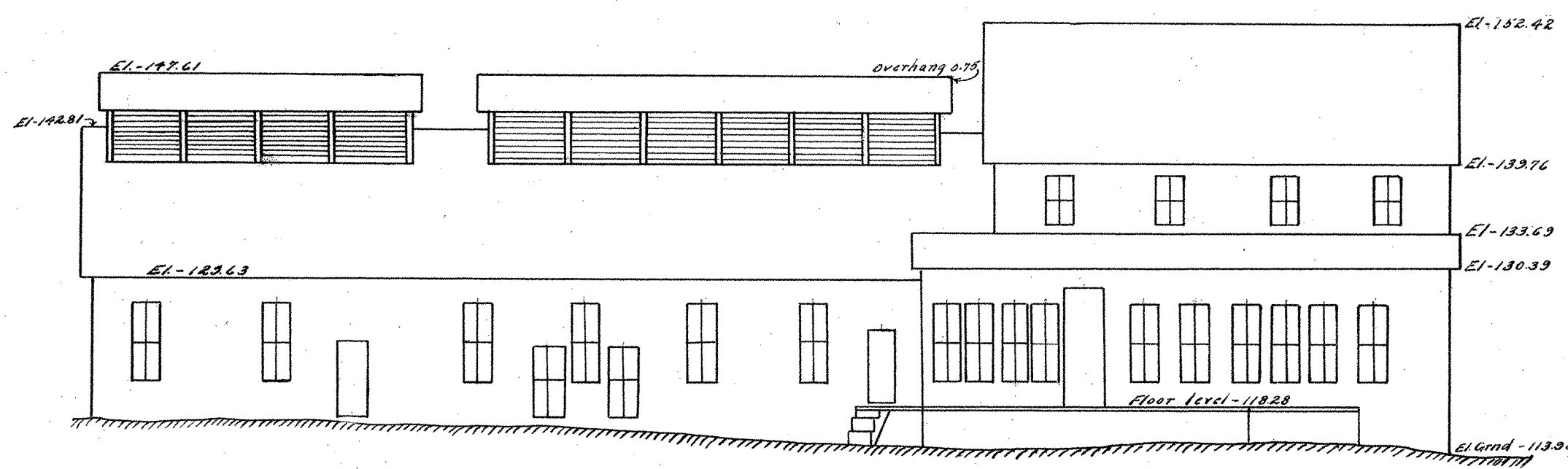
PLAN AND ELEVATION - END OF LARKINS BOILER HOUSE



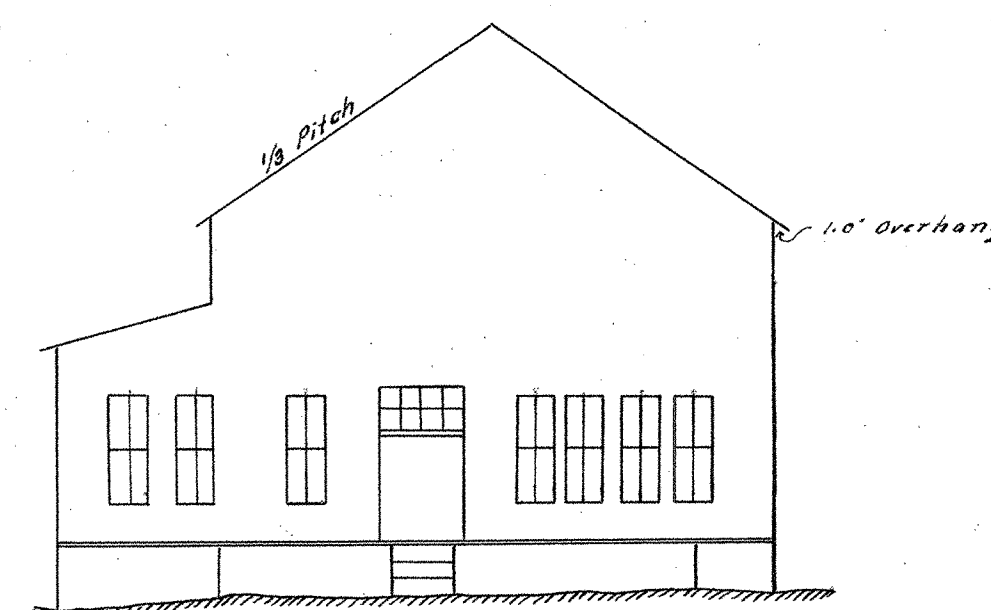
ELEVATION OF EAST END OF LARKINS MACHINE SHOP



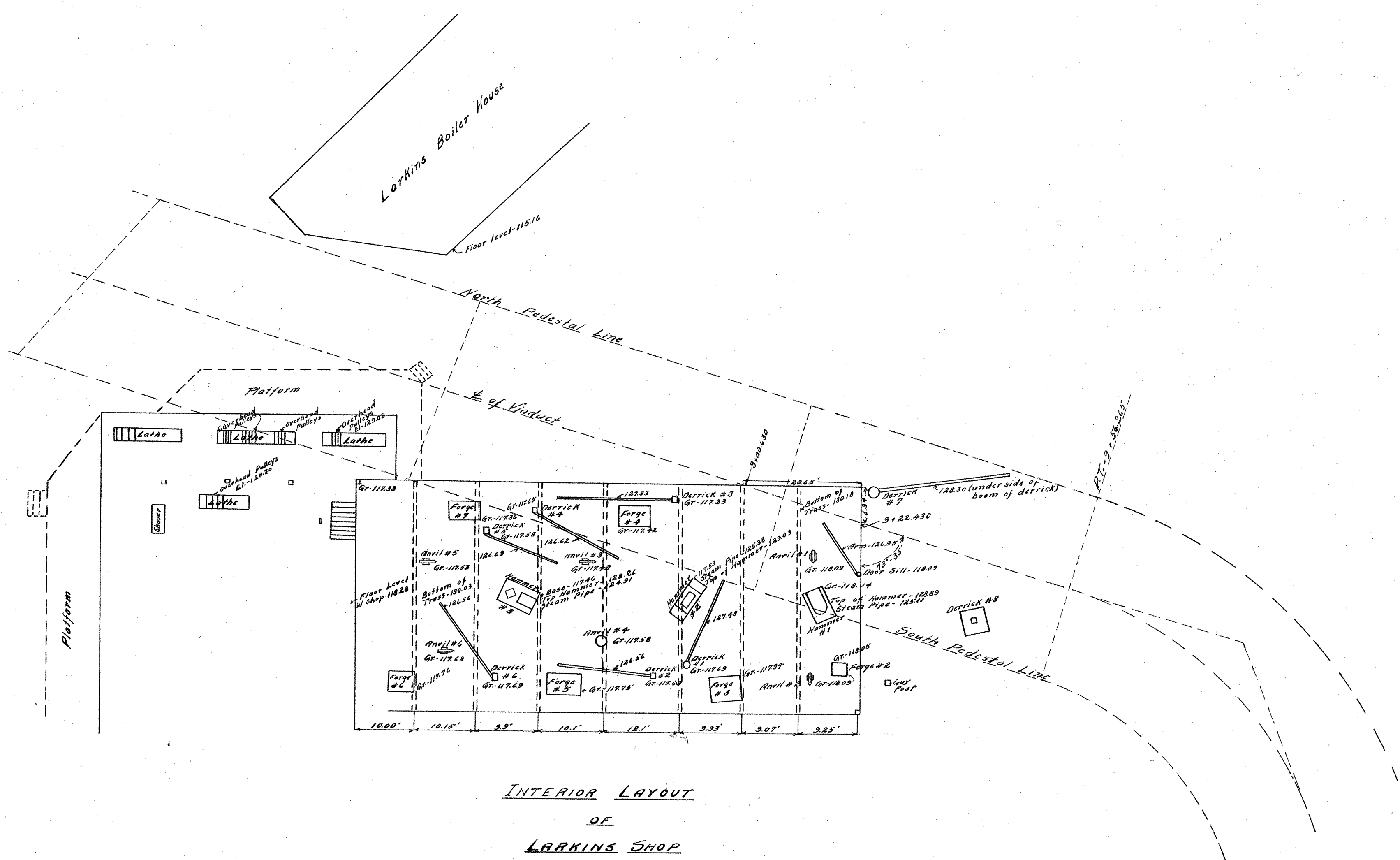
ELEVATION OF SOUTH SIDE OF LARKINS MACHINE SHOP



ELEVATION OF NORTH SIDE OF LARKINS MACHINE SHOP



ELEVATION OF WEST END OF LARKINS MACHINE SHOP



INTERIOR LAYOUT OF LARKINS SHOP Scale - 1" = 10'

2014

4684

Butler Borough

Wayne St Viaduct

LAYOUT OF LARKINS BUILDINGS

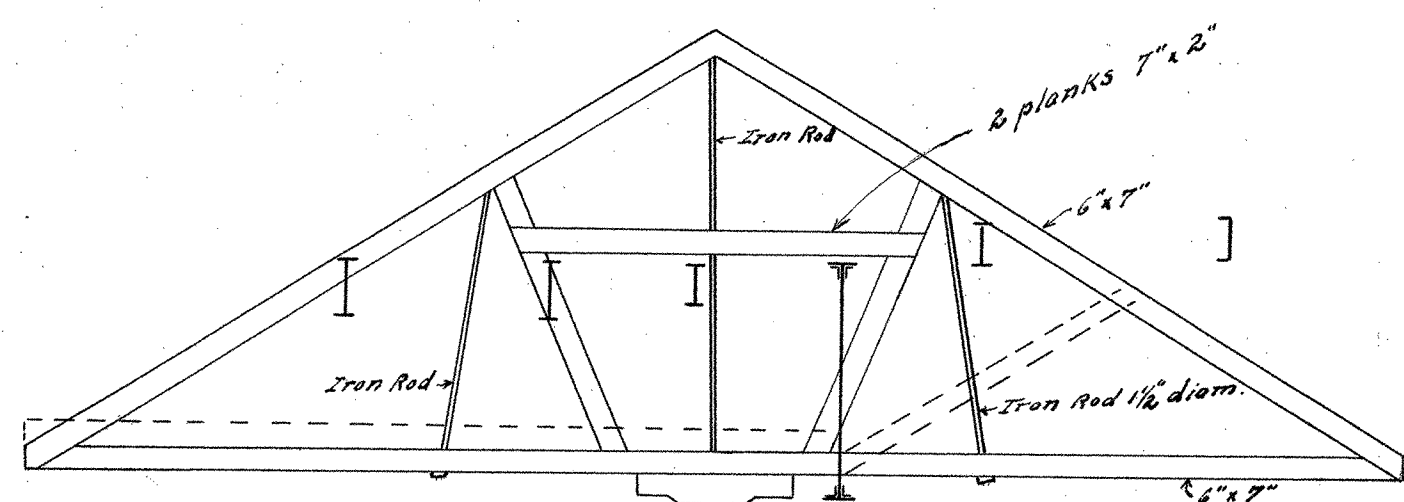
Drawn by: GWR	Scale: 1" = 10'	2014
Traced by: GWR	Date: 2/2/14	
Checked by: HOC	Engineer: H.O. Carson	

E.P. of Land Taken - 10/17/00  
 " " of Building Taken - 2/15/07  
 " " of Building Taken - 2/15/07  
 " " of Building Taken - 2/15/07  
 Scale - 10' = 1"

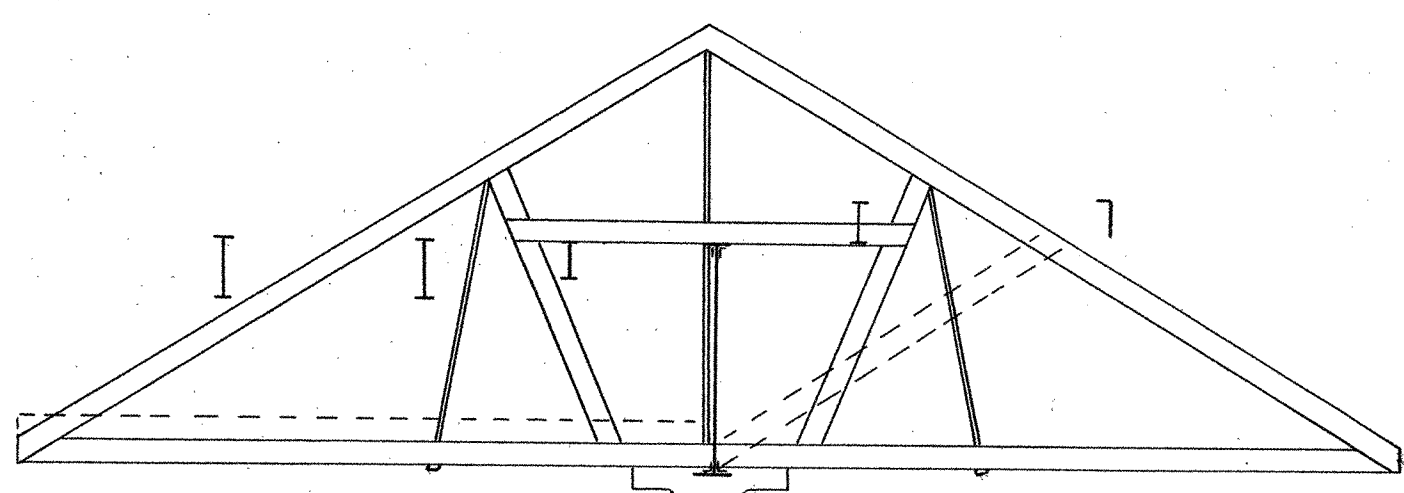


2016 8686

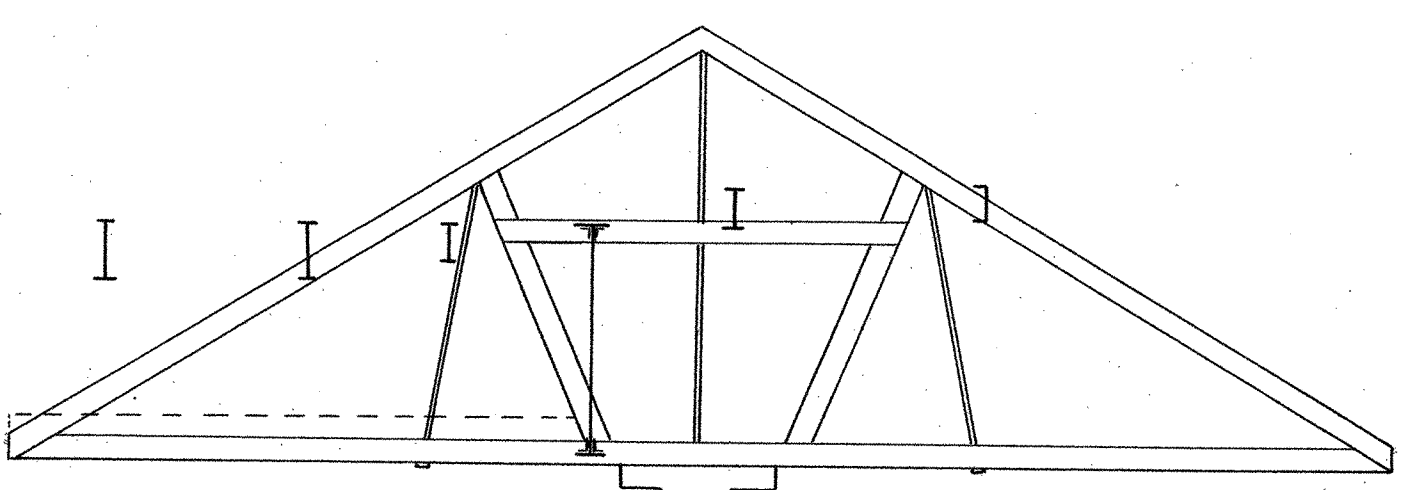
BUTLER BOROUGH	
WAYNE ST VIADUCT	
PROPERTIES	
ABUTTING ON	
FAIRVIEW AVE APPROACH	
Drawn by - tmm	Scale - 10' = 1"
Traced by - bmm	Date - 2/15/15
Checked by - HOC Engineer - HOC	2016



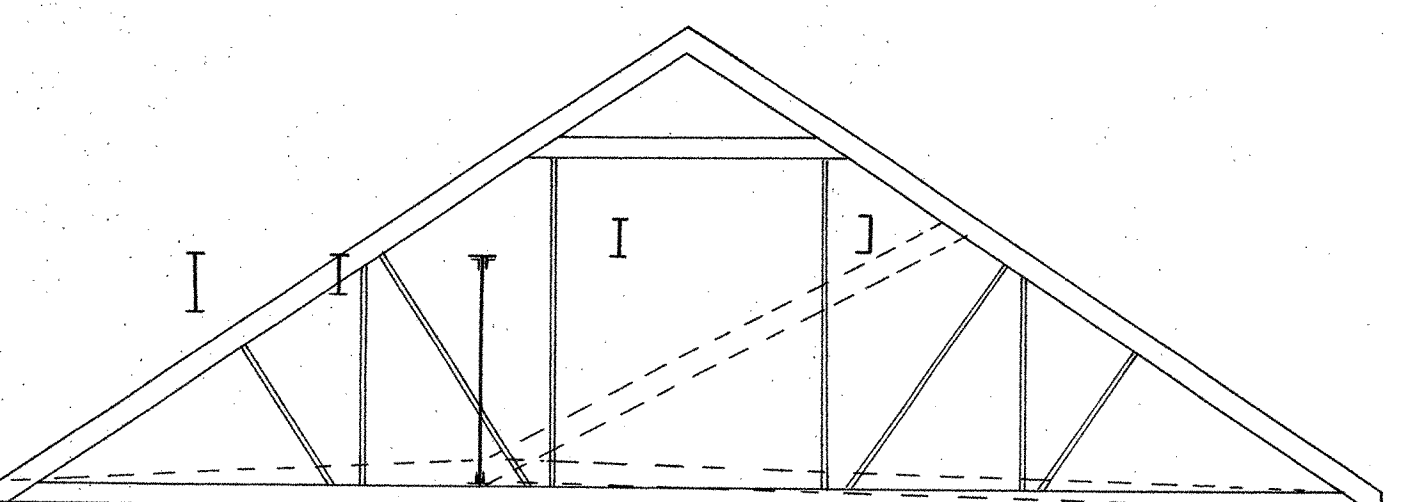
Sta. 3+26.4 - Truss over east door  
No. 8



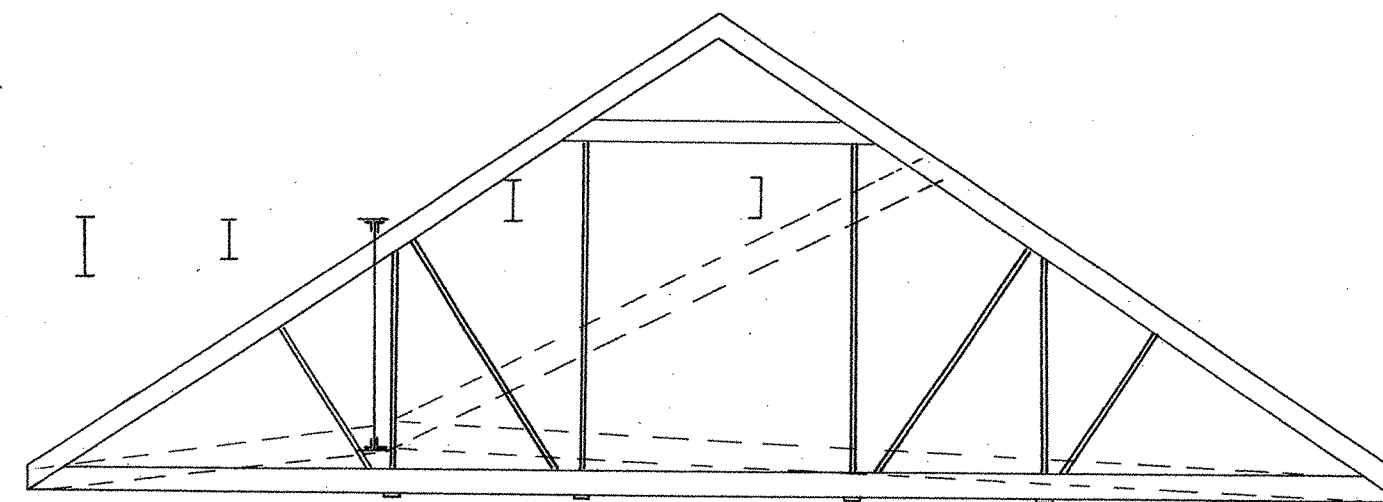
Sta. 3+17.34  
No. 7



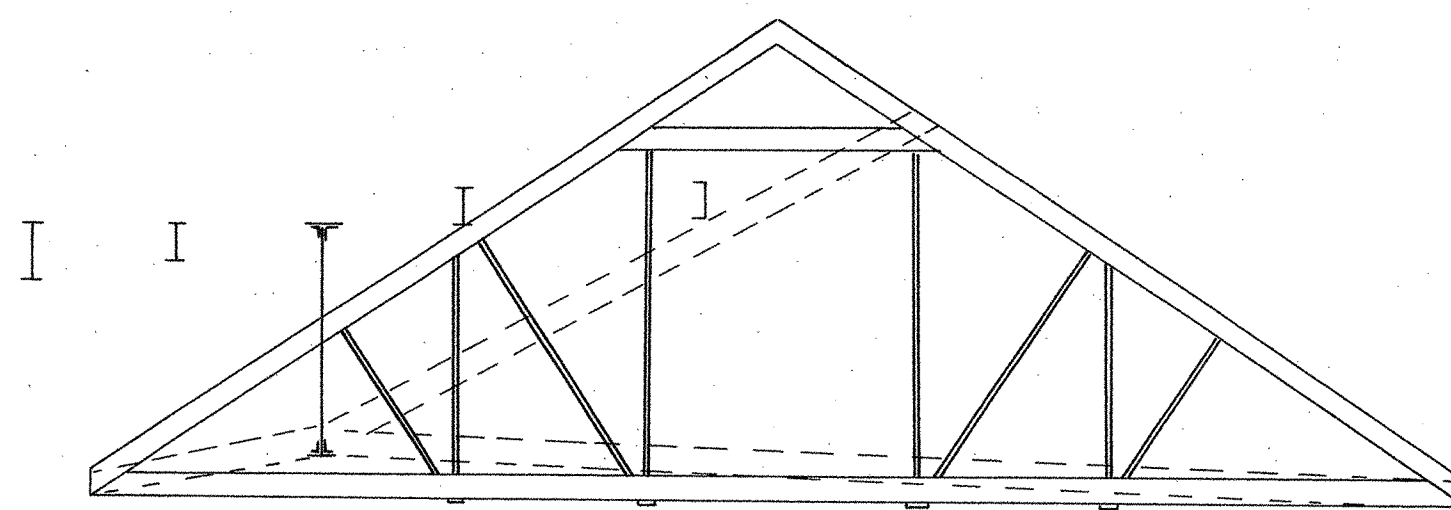
Sta. 3+07.98 - Col. 115 - 3+09.765  
No. 6



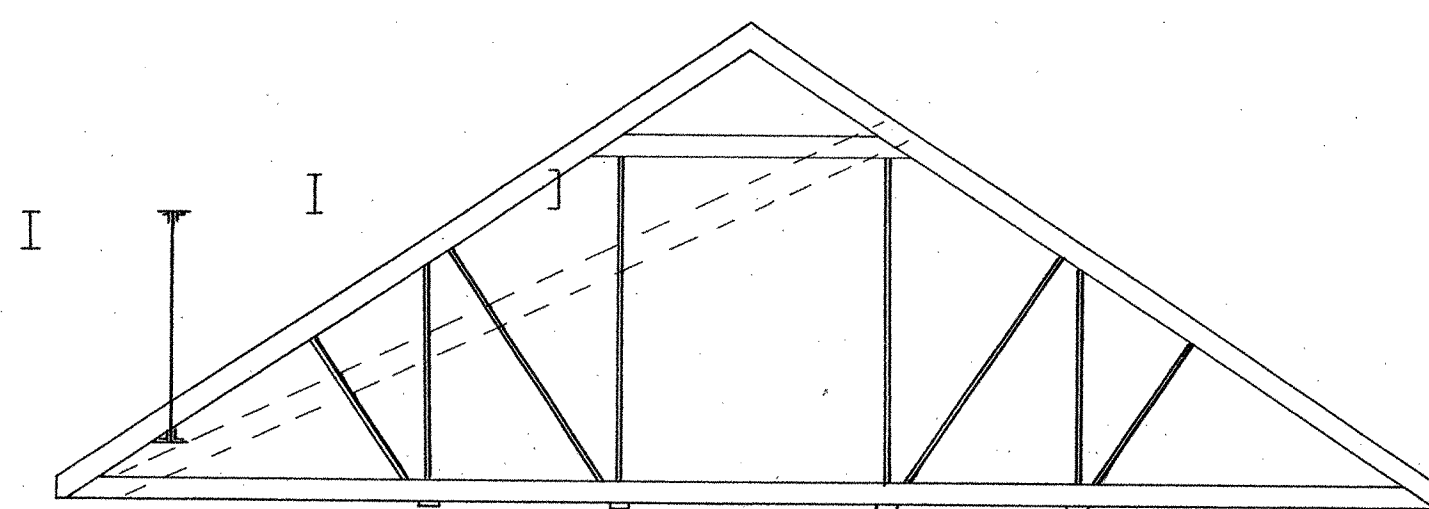
Sta. 3+37.49  
No. 5



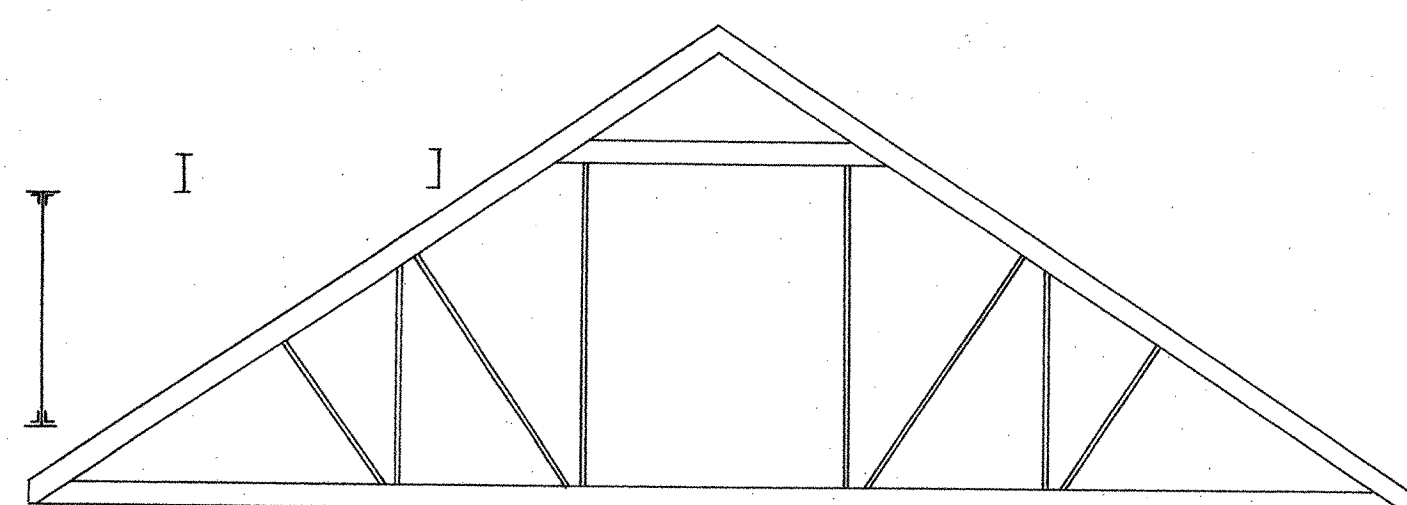
Sta. 3+84.88  
No. 4



Sta. 3+79.35  
No. 3



Sta. 3+64.03  
No. 2



Sta. 3+53.61 - Col. 10 - 3+52.265  
No. 1

Sta.	Col. P.	Elev. Bot. of Long. Girder	Top of Bot. Chord to Truss	Top of Bot. Chord to Girder
3+26.4	136.76	133.68	130.02	-1.13
3+17.34	137.09	130.05	130.02	-0.77
3+07.98	137.42	130.34	130.73	-0.39
3+37.49	137.78	130.66	130.73	-0.07
3+84.88	138.22	131.06	130.65	-0.41
3+79.35	138.59	131.43	130.92	-0.47
3+64.03	138.95	131.87	130.88	-0.93
3+53.61	139.32	132.28	130.81	-1.47

Note: Stations are on south girder and are referred to L.

Note: Running longitudinally over the trusses are timbers (10" x 10" abt.). There are two of these east of the fourth truss (from the east end). One is three feet from peak of roof on each side and the next one is seven feet from this one. There are two each side of the peak of roof. The two timbers next the peak run only to the fourth truss. The other two run clear through. Running transversely across the longitudinal timbers are 2" x 4" timbers spaced about 24" centres, on which the sheathing is laid. The roof is of slate. From the fourth truss west there is a two by four inch timber in the comb of roof.

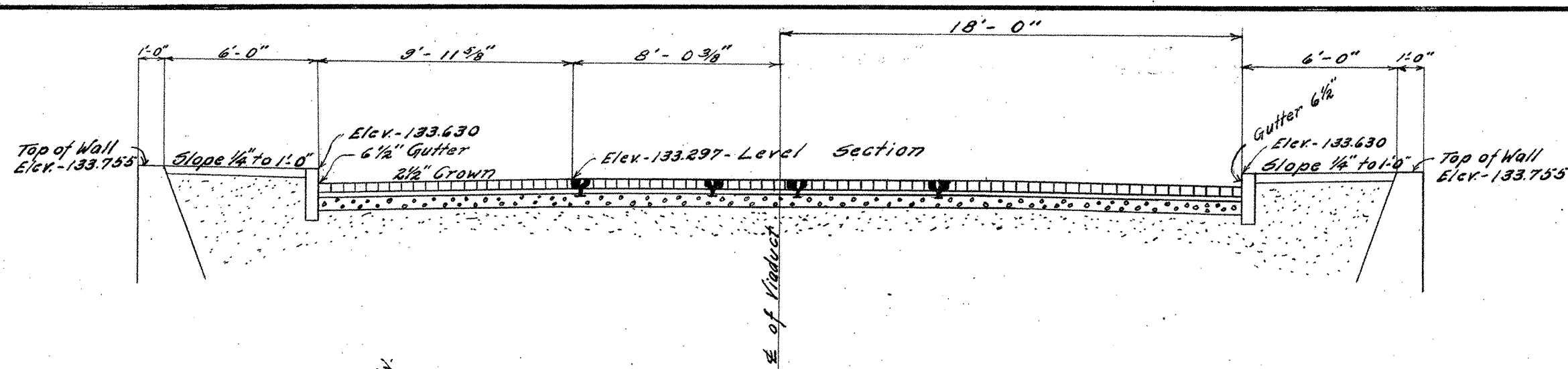
2015

8645

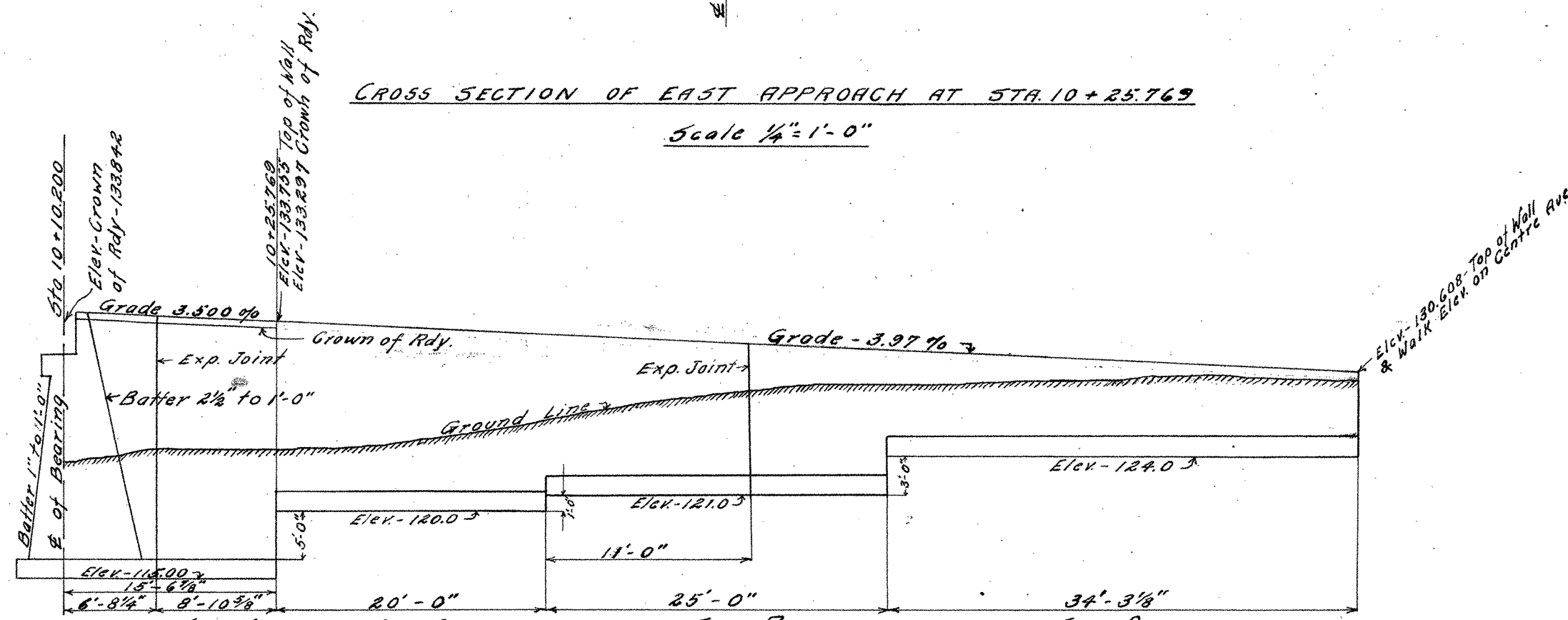
2015

BUTLER BOROUGH	
WAYNE ST. VIADUCT	
ROOF TRUSSES	
IN	
LARKIN'S SHOP	
Drawn by: J. M. S.	Scale 1/4" = 1'
Traced by: J. M. S.	Date: 1/29/15
Checked by: H. G. C.	Engineer: H. G. C.

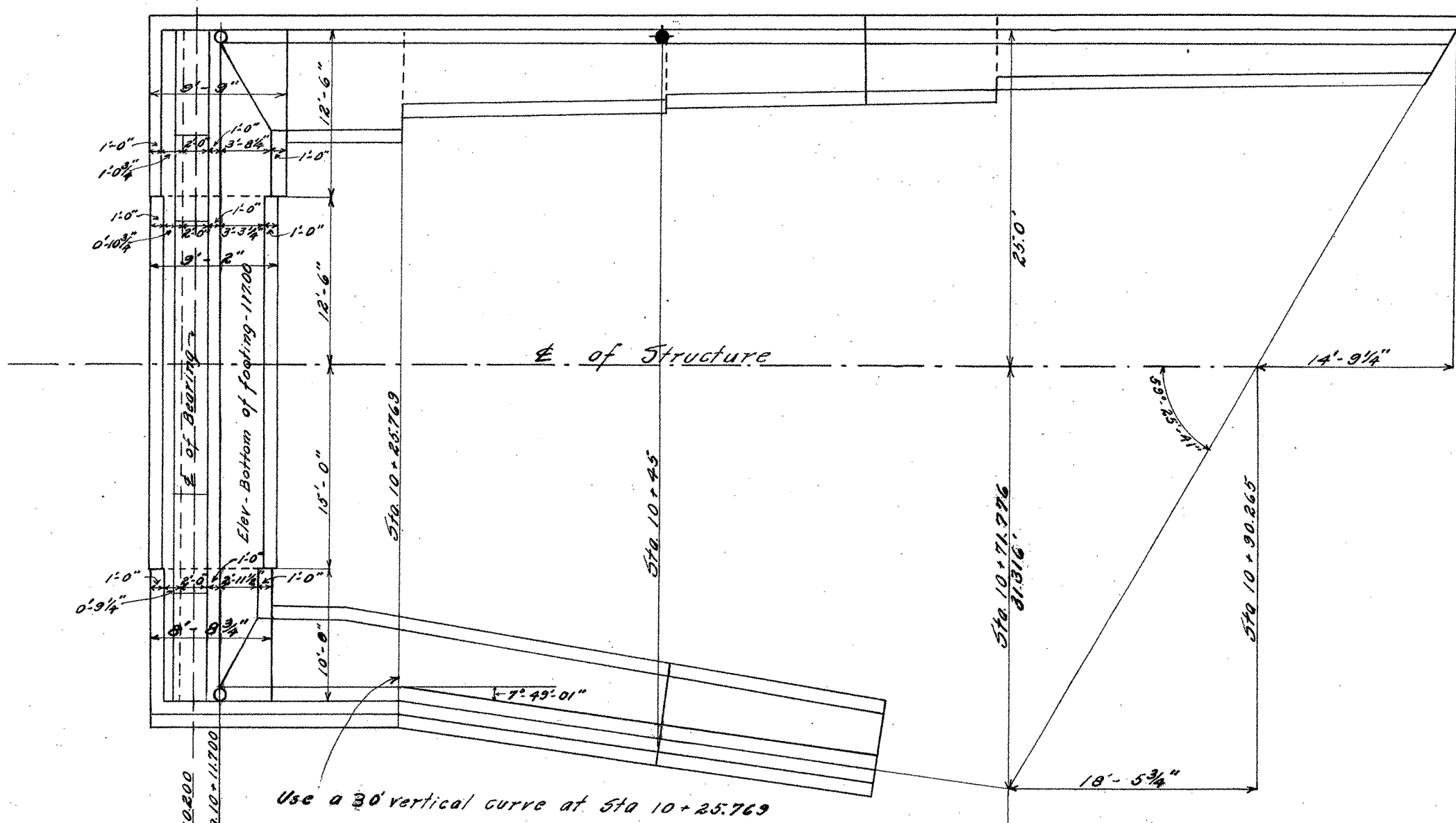
2015



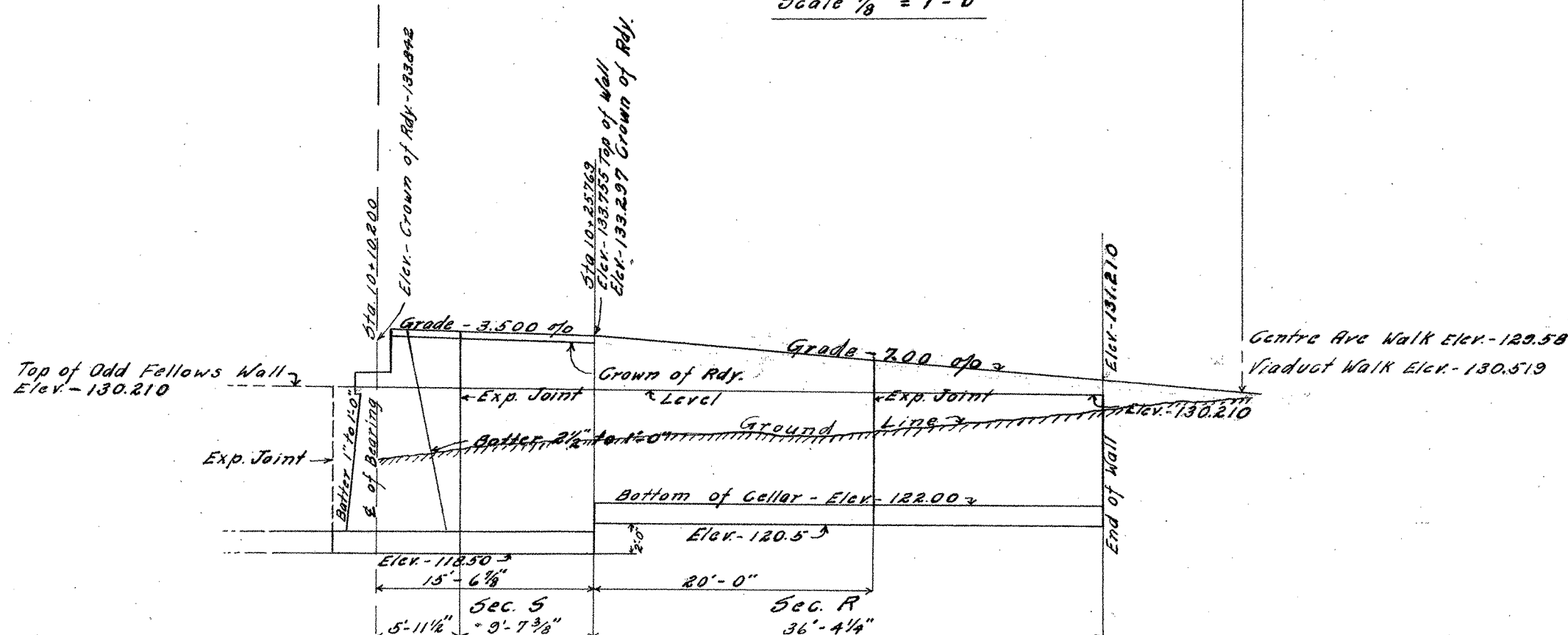
CROSS SECTION OF EAST APPROACH AT STA 10+25.763  
Scale 1/4" = 1'-0"



ELEVATION OF EAST WALL  
Scale 1/8" = 1'-0"

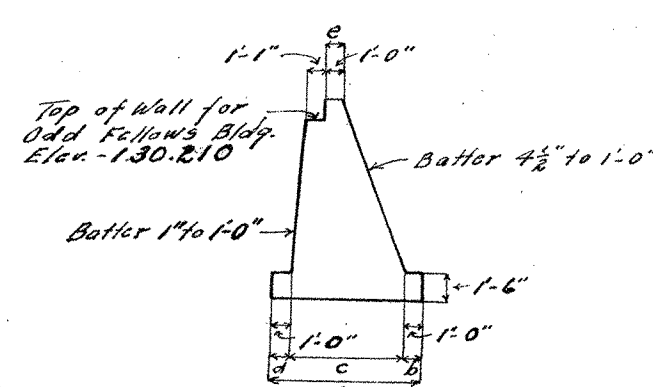


PLAN  
Scale 1/8" = 1'-0"

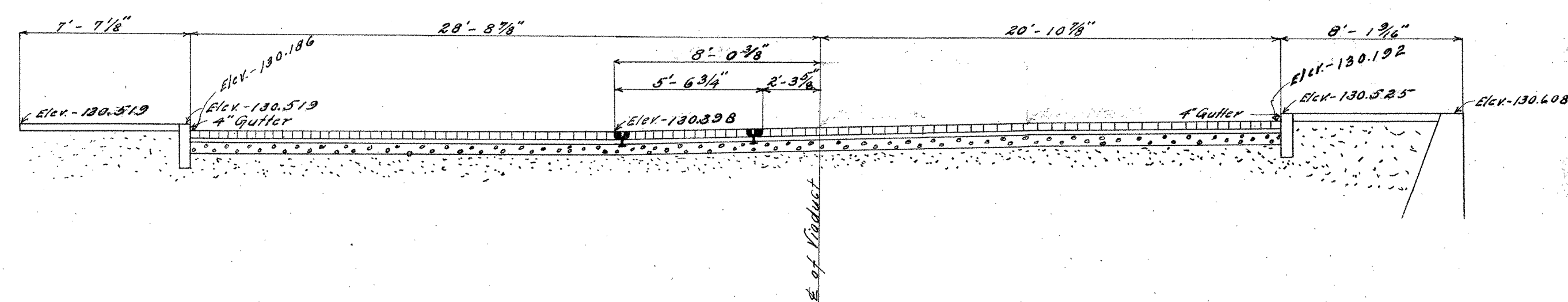


ELEVATION OF WEST WALL  
Scale 1/8" = 1'-0"

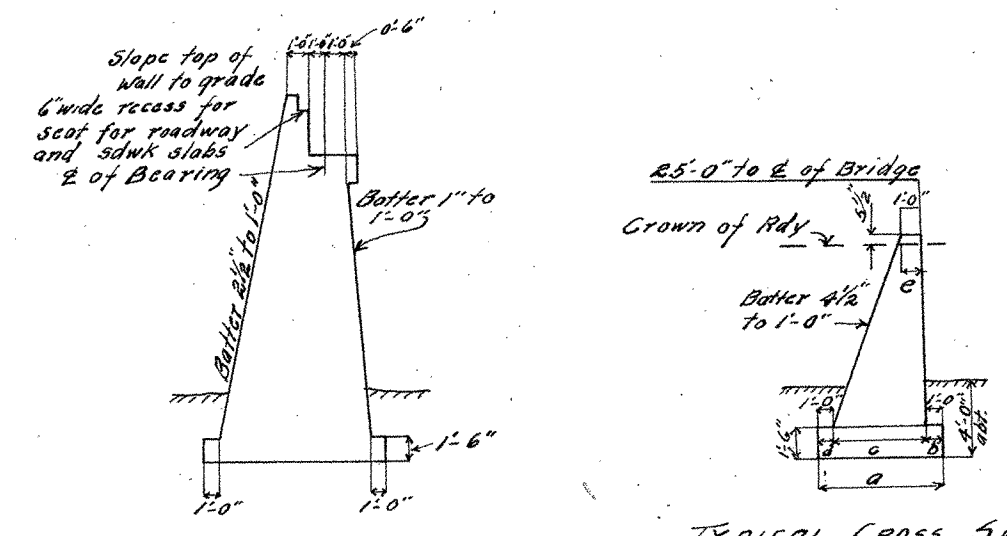
DETAILS OF EAST APPROACH



CROSS SECTION OF WEST WALL  
Scale 1/8" = 1'-0"



CROSS SECTION OF APPROACH ALONG CENTRE AVE - STA 10+90.265  
Scale 1/4" = 1'-0"



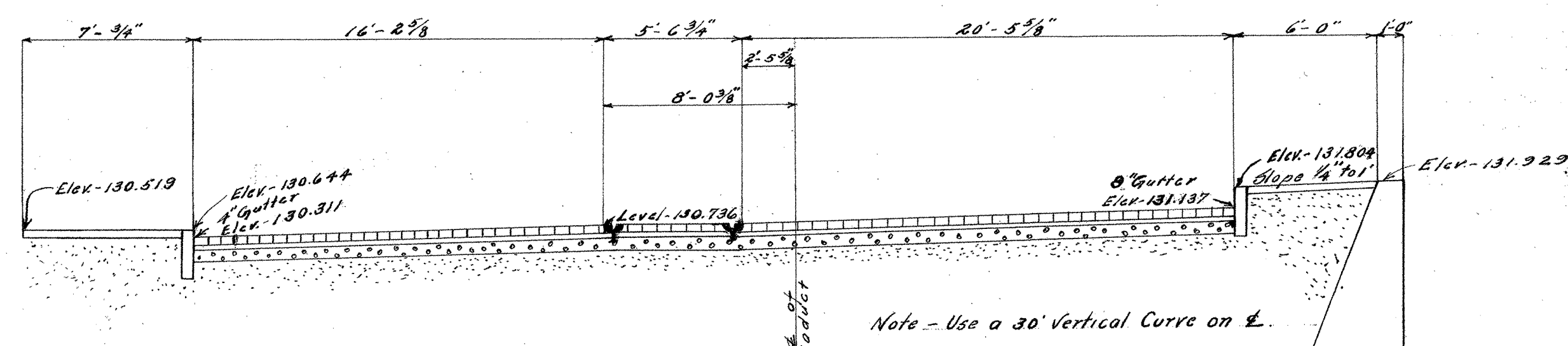
TYPICAL CROSS SECTION OF WALL

CROSS SECTION OF ABUTMENT

Section	a	b	c	d	e
N North	9'-5"	1'-0"	7'-9"	1'-0"	1'-0"
N South	9'-5"	1'-0"	7'-9"	1'-0"	1'-0"
O North	7'-7"	1'-0"	5'-7"	1'-0"	1'-0"
O South	7'-7"	1'-0"	5'-7"	1'-0"	1'-0"
P North	6'-11"	1'-0"	4'-11"	1'-0"	1'-0"
P South	6'-11"	1'-0"	4'-11"	1'-0"	1'-0"
Q North	5'-5"	1'-0"	3'-5"	1'-0"	1'-0"
Q South	5'-5"	1'-0"	3'-5"	1'-0"	1'-0"
R North	4'-11"	1'-0"	2'-11"	1'-0"	1'-0"
R South	4'-11"	1'-0"	2'-11"	1'-0"	1'-0"
S North	3'-5"	1'-0"	2'-5"	1'-0"	1'-0"
S South	3'-5"	1'-0"	2'-5"	1'-0"	1'-0"

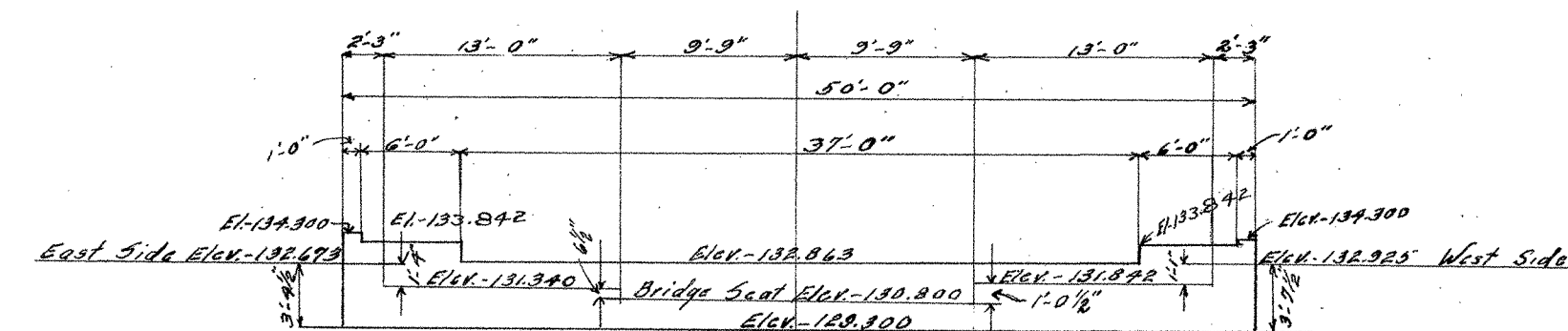
Face of Wall	Face of Wall
4'-4" Key located to permit drawing form	4'-4" Key located to permit drawing form
1" thickness for paper across centre wall and footing	1" thickness for paper across centre wall and footing

PLAN SHOWING EXPANSION JOINT FOR WALL  
Scale 1/4" = 1'-0"



CROSS SECTION OF APPROACH - STA 10+91.776  
Scale 1/4" = 1'-0"

General Notes - From Switch Point to Sta 10+88.00, end of track, use 35# Steel Tie - Carnegie No. 1424, 2 feet long, 4 feet apart.  
Light Conduit to be placed one (1) inch below top of retaining wall and 24"-8" from  $\Delta$  of Viaduct. Provide connections to light posts and conduits on steel work.

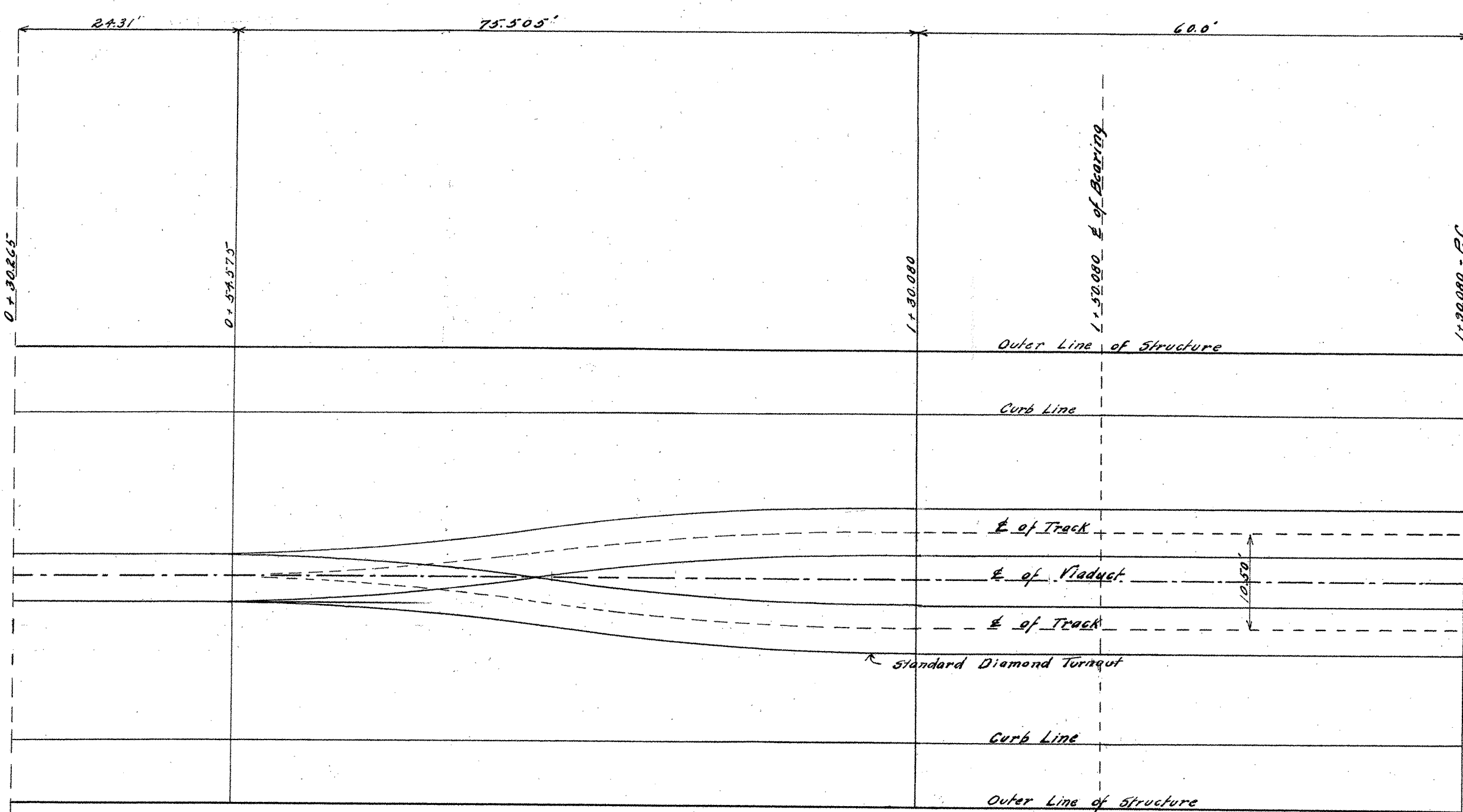


TYPICAL ABUTMENT DETAILS

Finish Bridge Seat 1/4" below Elev shown to allow for grouting.

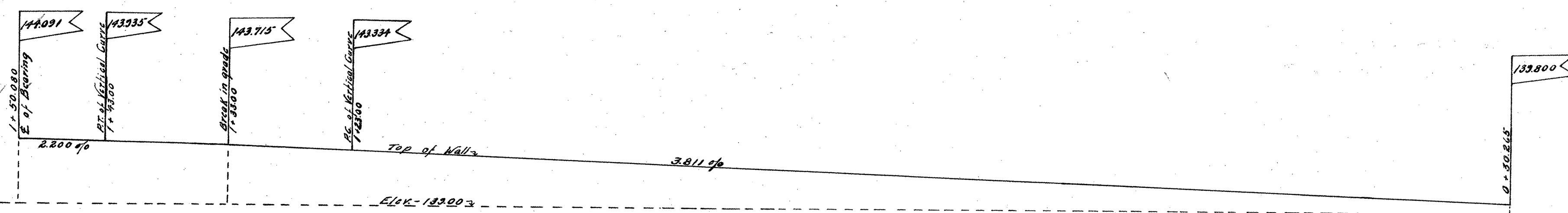
BUTLER BOROUGH  
WAYNE ST VIADUCT  
DETAILS OF  
EAST APPROACH.  
Drawn by - H.O.G. Scale - As noted  
Traced by - H.O.G. Date - 3-30-15  
Checked by - H.O.G. Engineer - H.O.Garson

202 4697  
Orig. 11

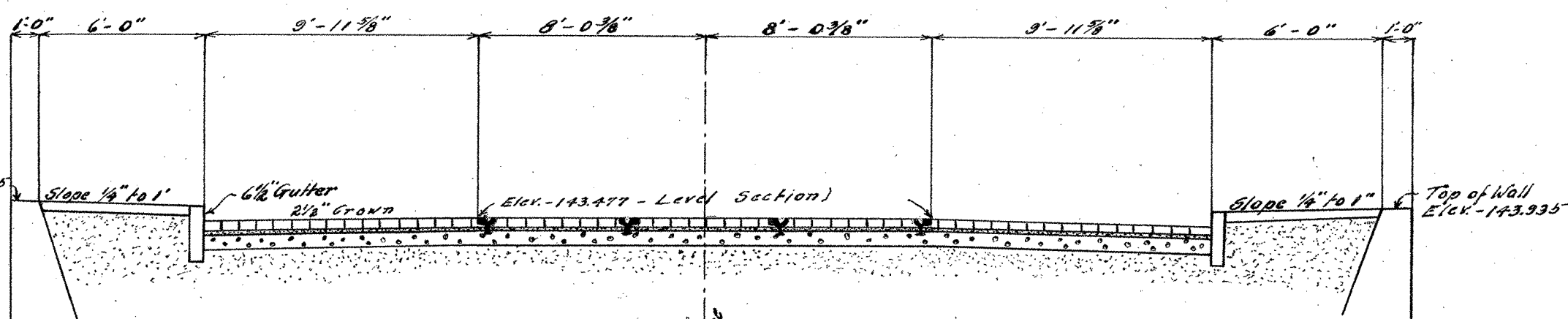


Note - From Sta 0+30265 to Sta 0+39375 use 35# Steel Ho.  
Carnegie No M24 - 7 ft long, 4 ft c/crs.

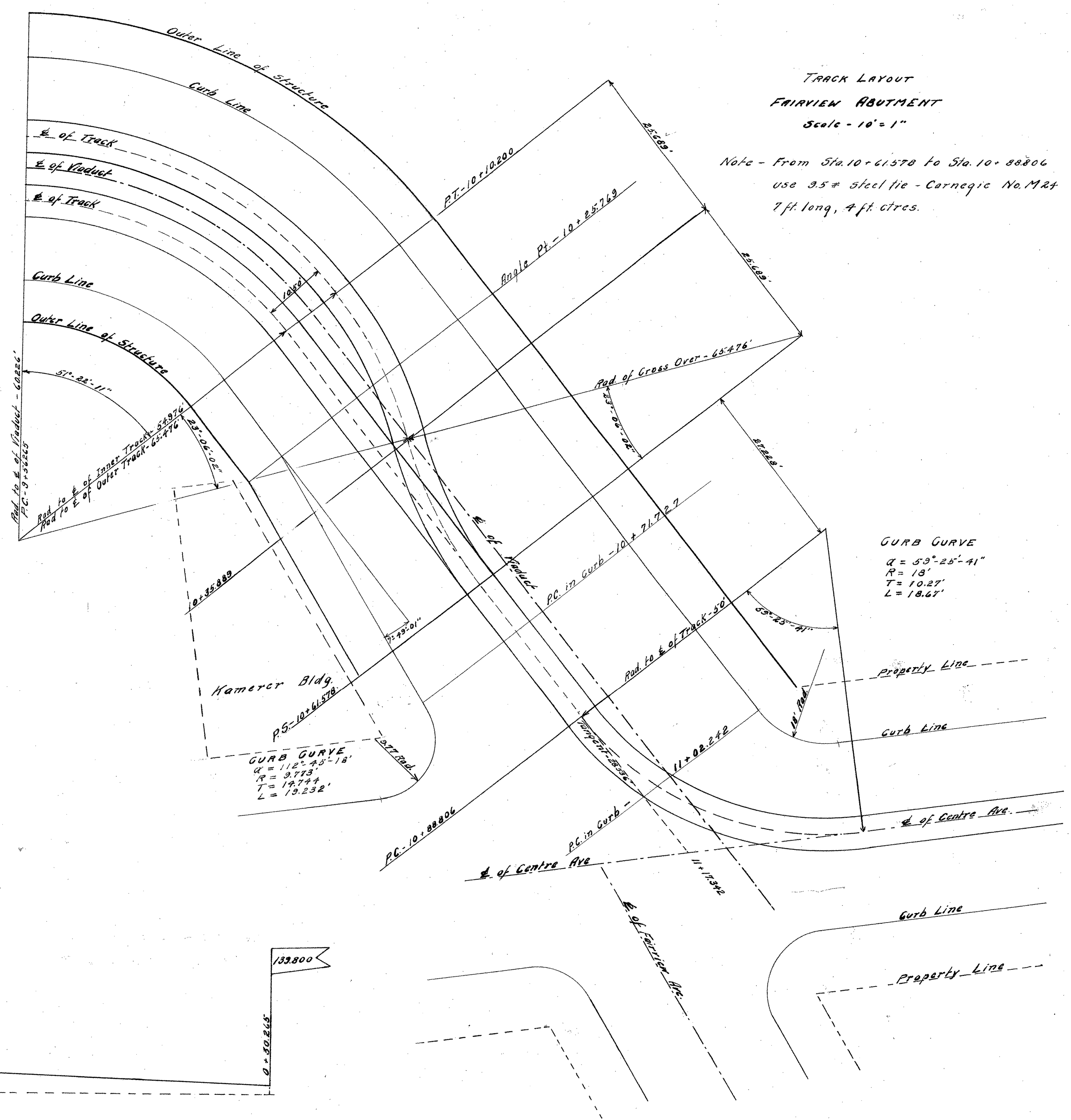
TRACK LAYOUT - WAYNE ST ABUTMENT  
Scale - 10' = 1"



PROFILE OF SOUTH WALL - WEST APPROACH  
Scale - 1/4" = 1'



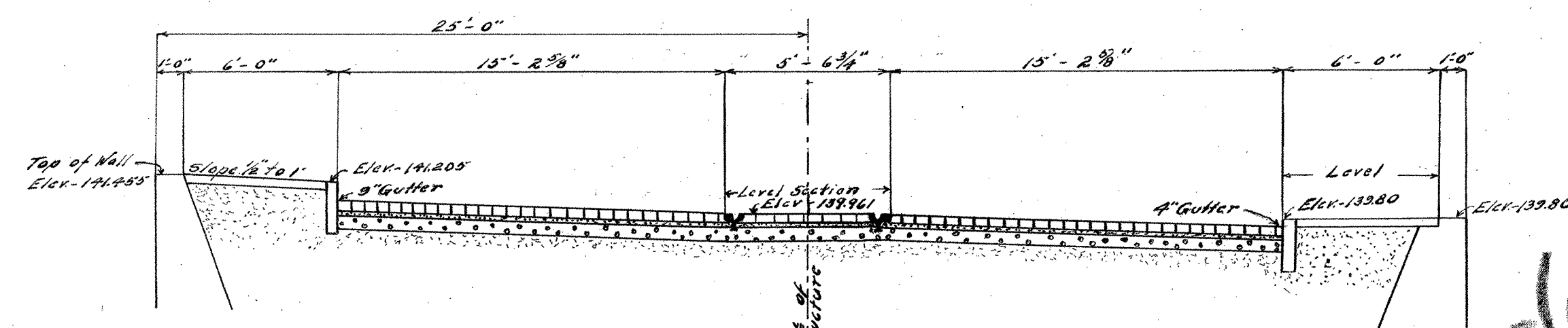
CROSS SECTION OF WEST APPROACH AT STA 1+43  
Scale - 1/4" = 1'



TRACK LAYOUT  
WAYNE ST VIADUCT  
Scale - 10' = 1"

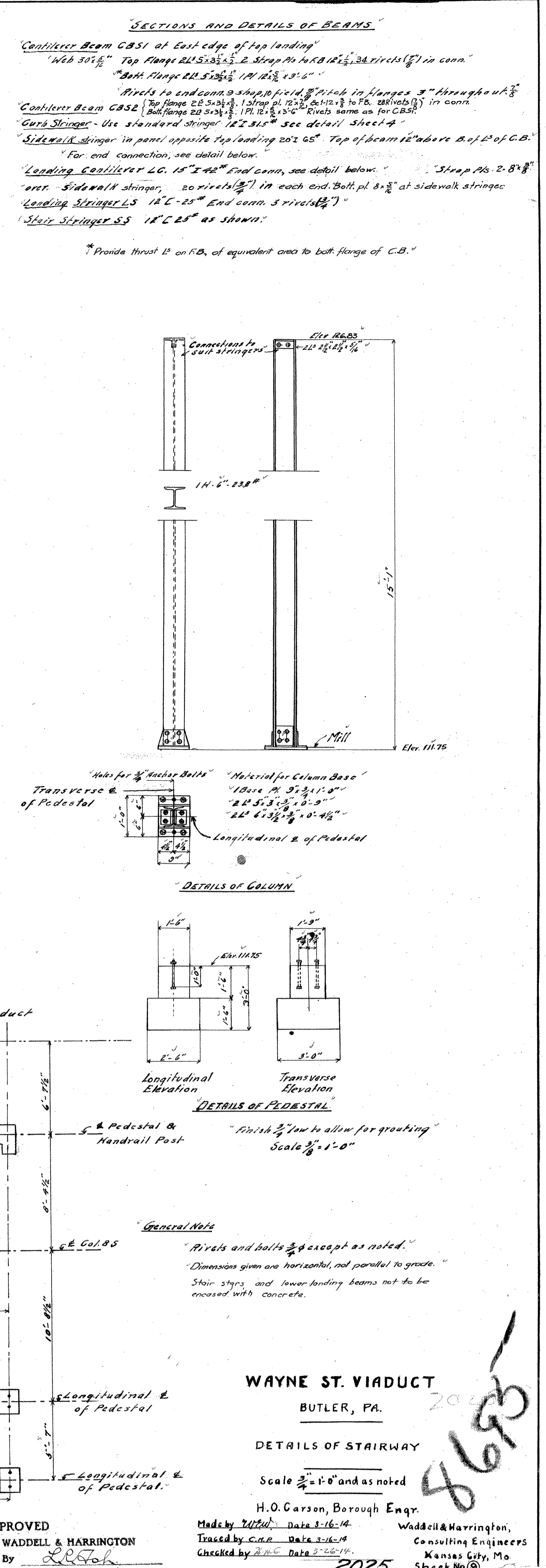
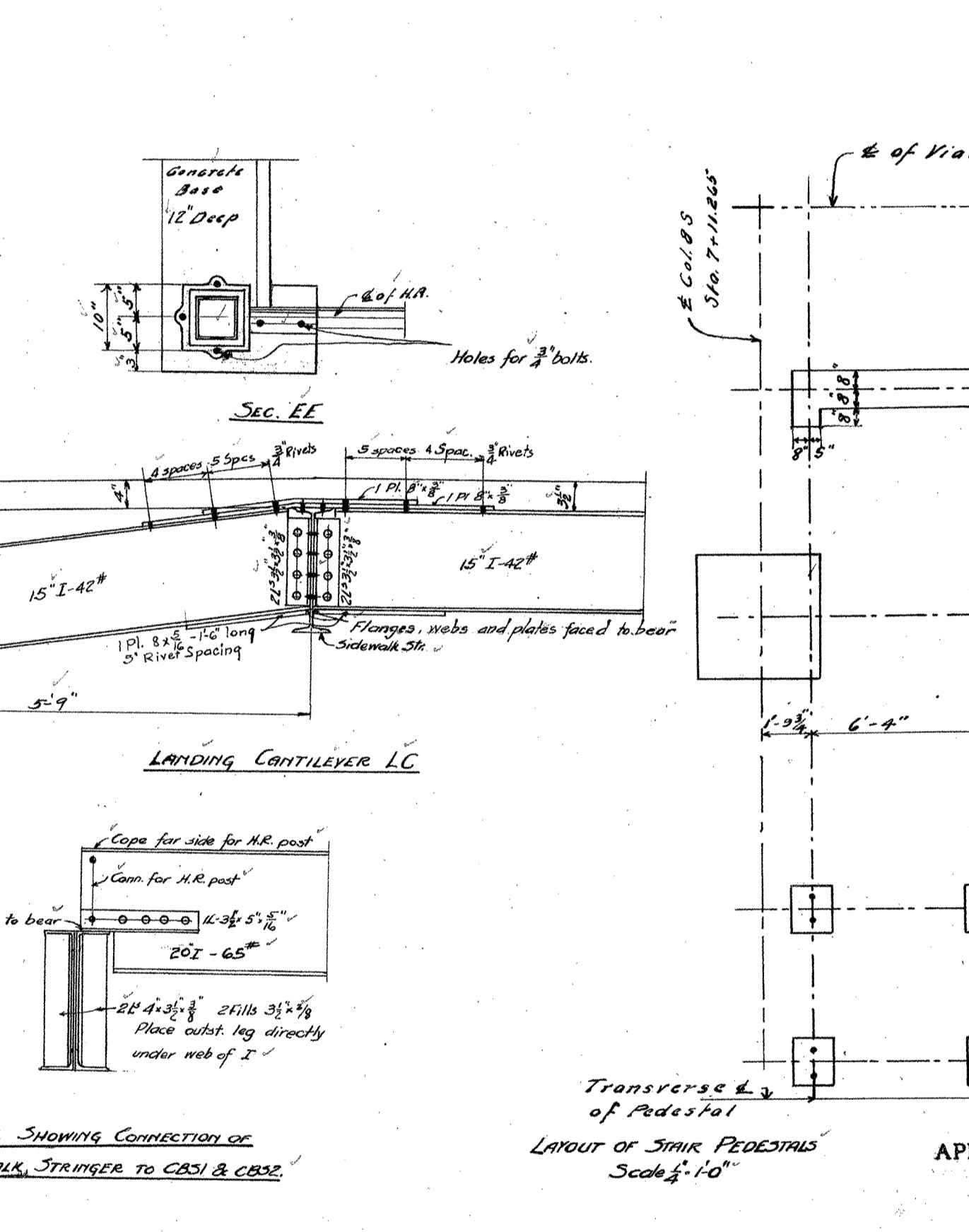
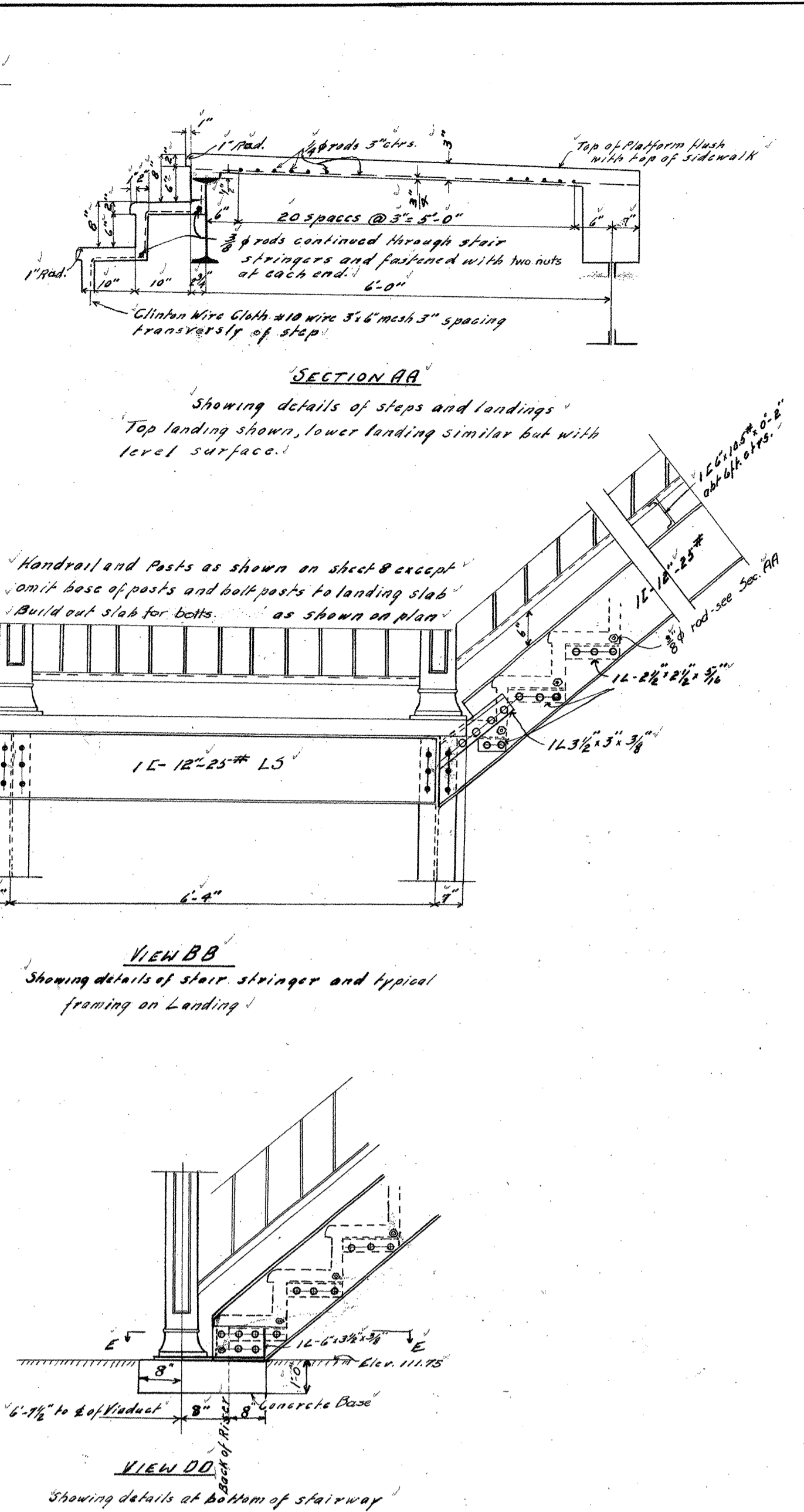
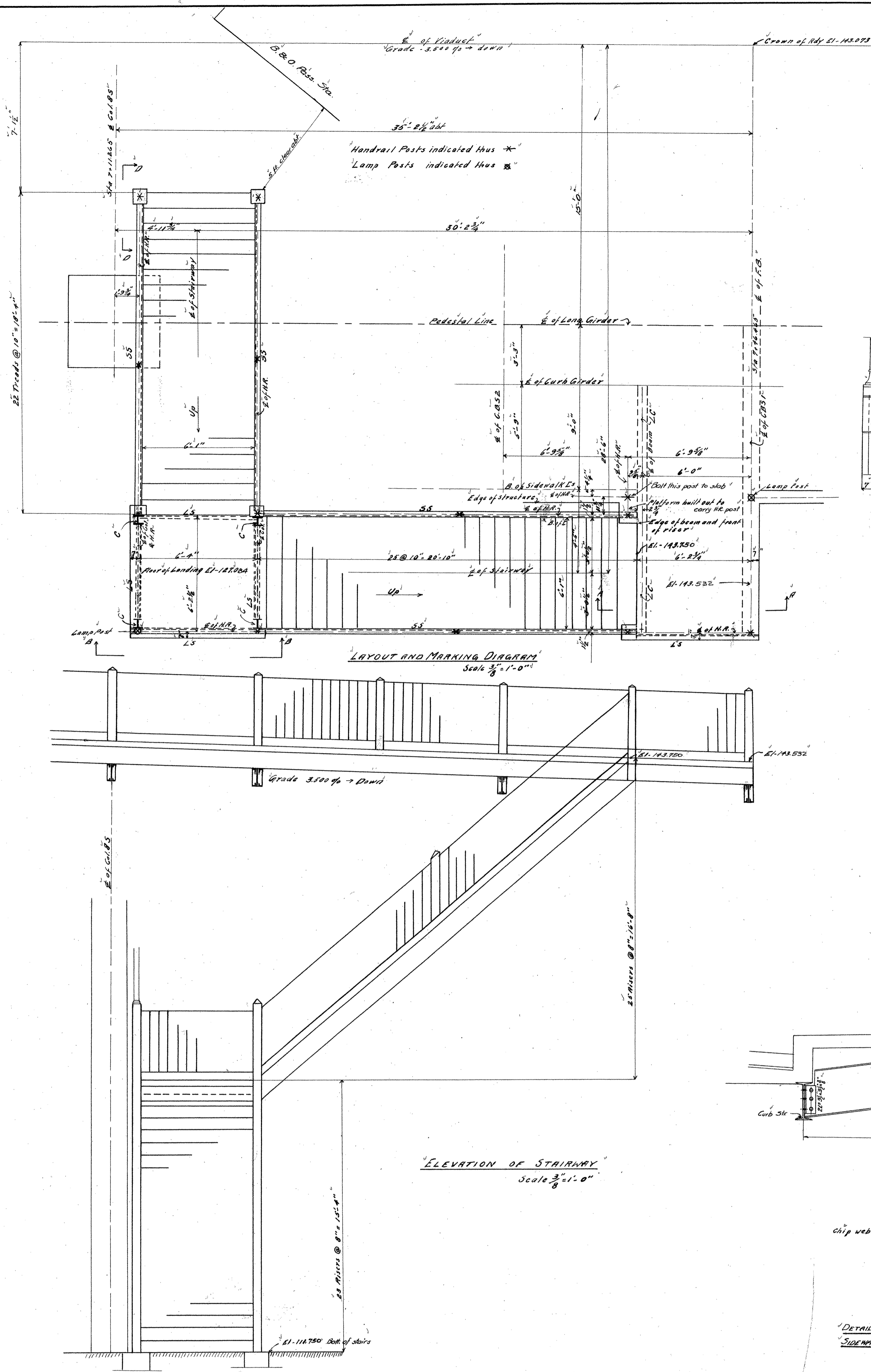
Note - From Sta 10+61570 to Sta 10+80806  
use 35# Steel Ho - Carnegie No M24  
7 ft long, 4 ft c/crs.

CURB CURVE  
d = 53° 25' 41"  
R = 13'  
T = 10.25'  
L = 18.62'



CROSS SECTION OF WEST APPROACH STA 0+30265  
Scale - 1/4" = 1'

BUTLER BOROUGH  
WAYNE ST VIADUCT  
TRACK LAYOUT ON APPROACHES  
CROSS SECTIONS ON APPROACHES  
Drawn by: WNS Scale: As noted  
Traced by: WNS Date: 1/29/18  
Checked by: H.O.C. Engineer - H.O.C. Carson



WAYNE ST. VIADUCT  
BUTLER, PA.

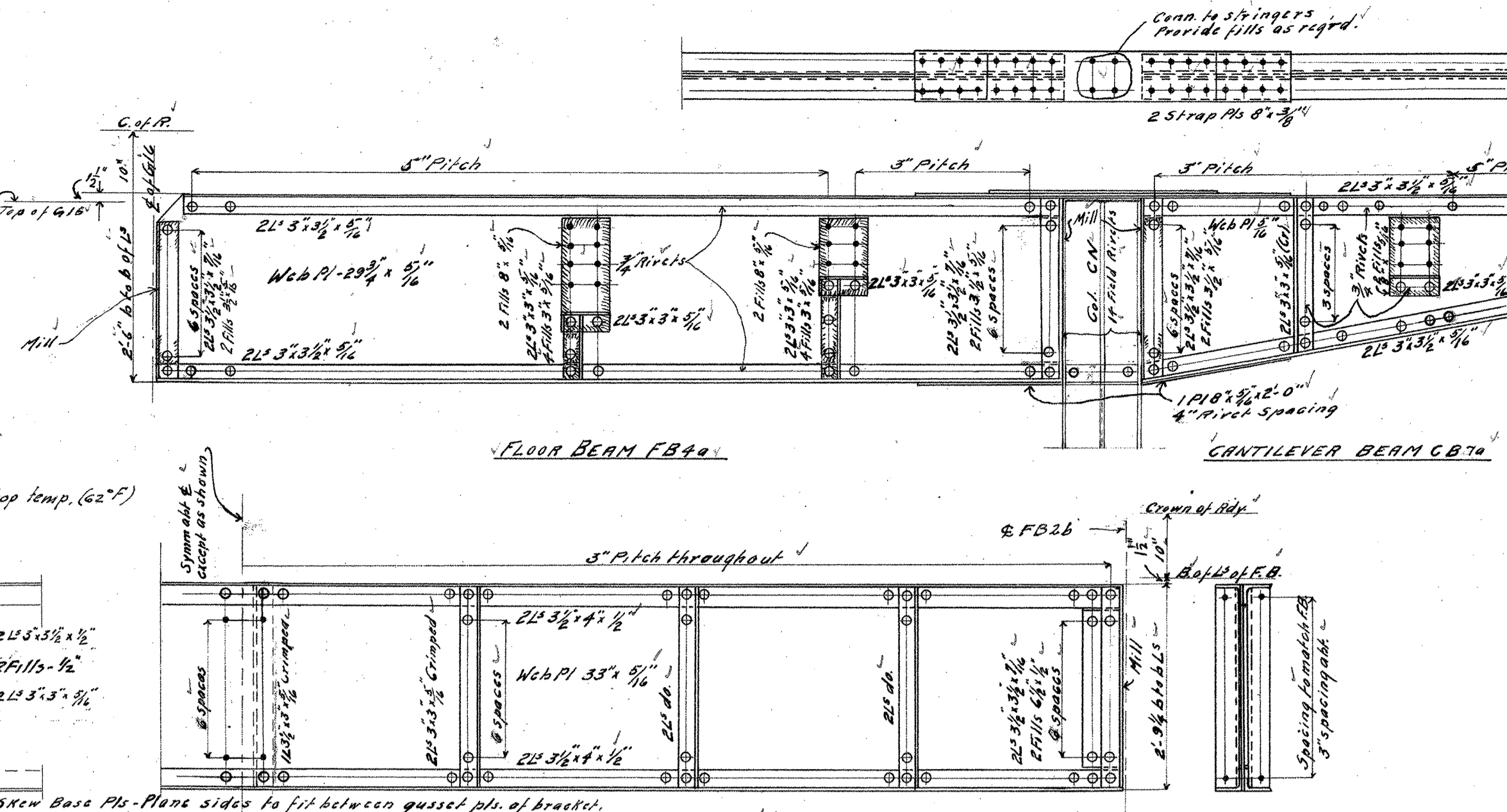
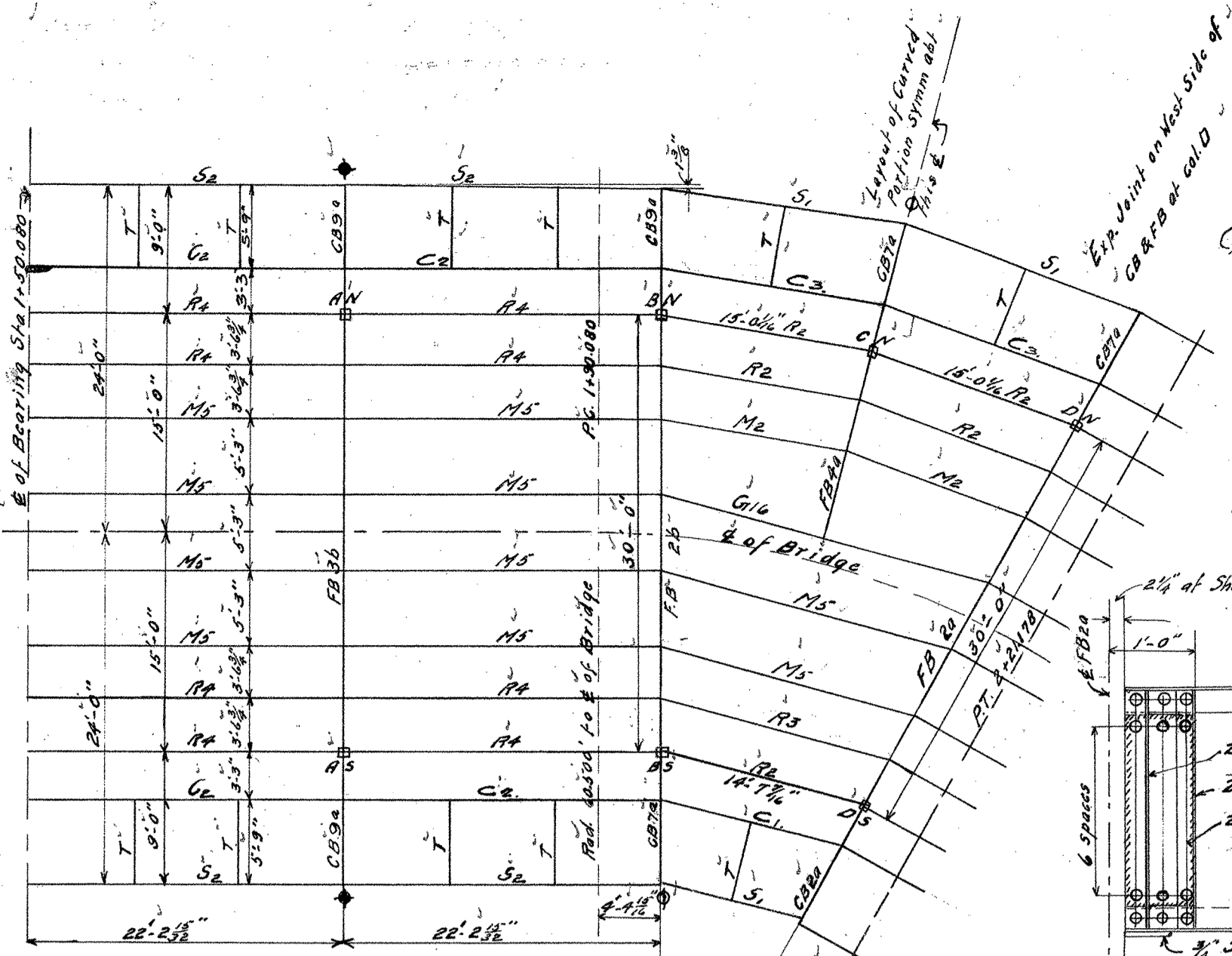
DETAILS OF STAIRWAY  
Scale 3/8" = 1'-0" and as noted

H.O. Carson, Borough Engr.  
Made by J.W.D. Date 3-16-14  
Traced by C.M.E. Date 3-16-14  
Checked by J.W.C. Date 3-16-14

Waddell & Harrington,  
Consulting Engineers  
Kansas City, Mo.  
Sheet No. 8693

APPROVED  
WADDELL & HARRINGTON  
By L.L. Johnson

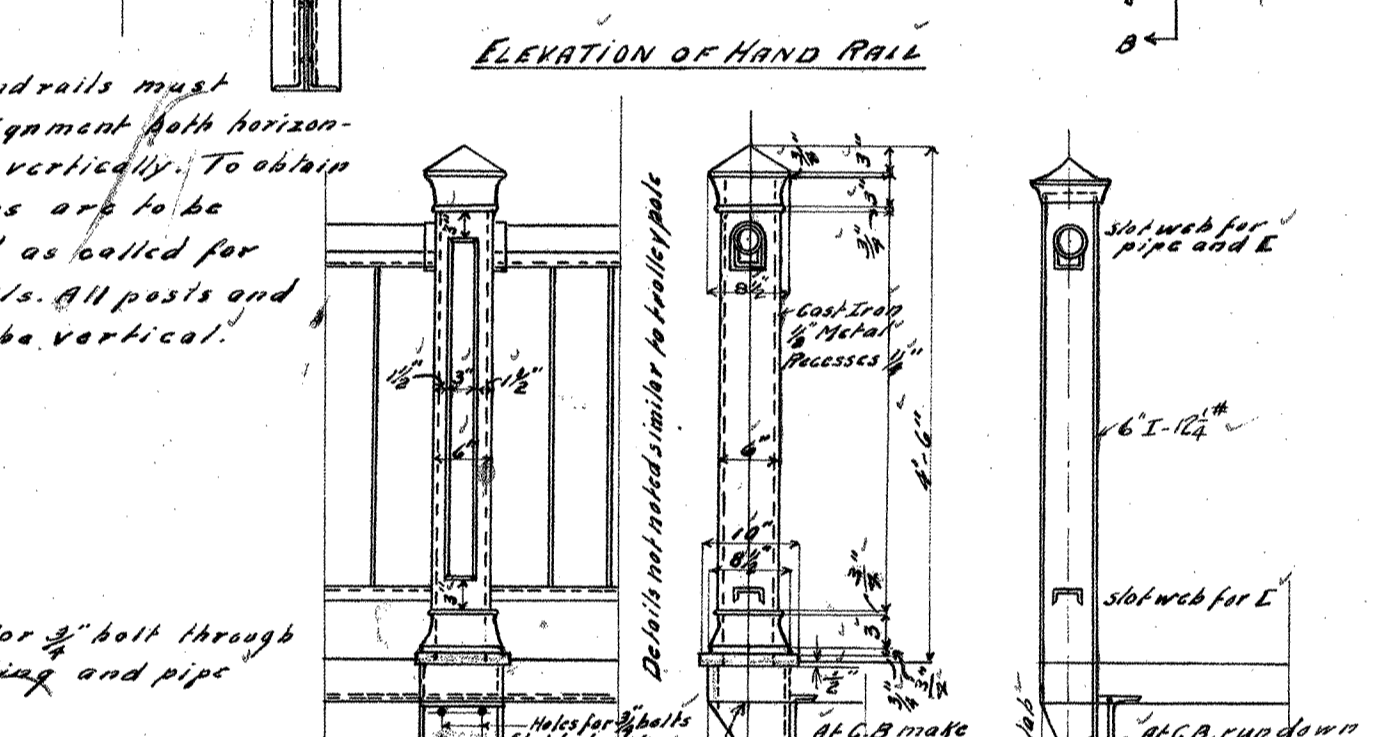
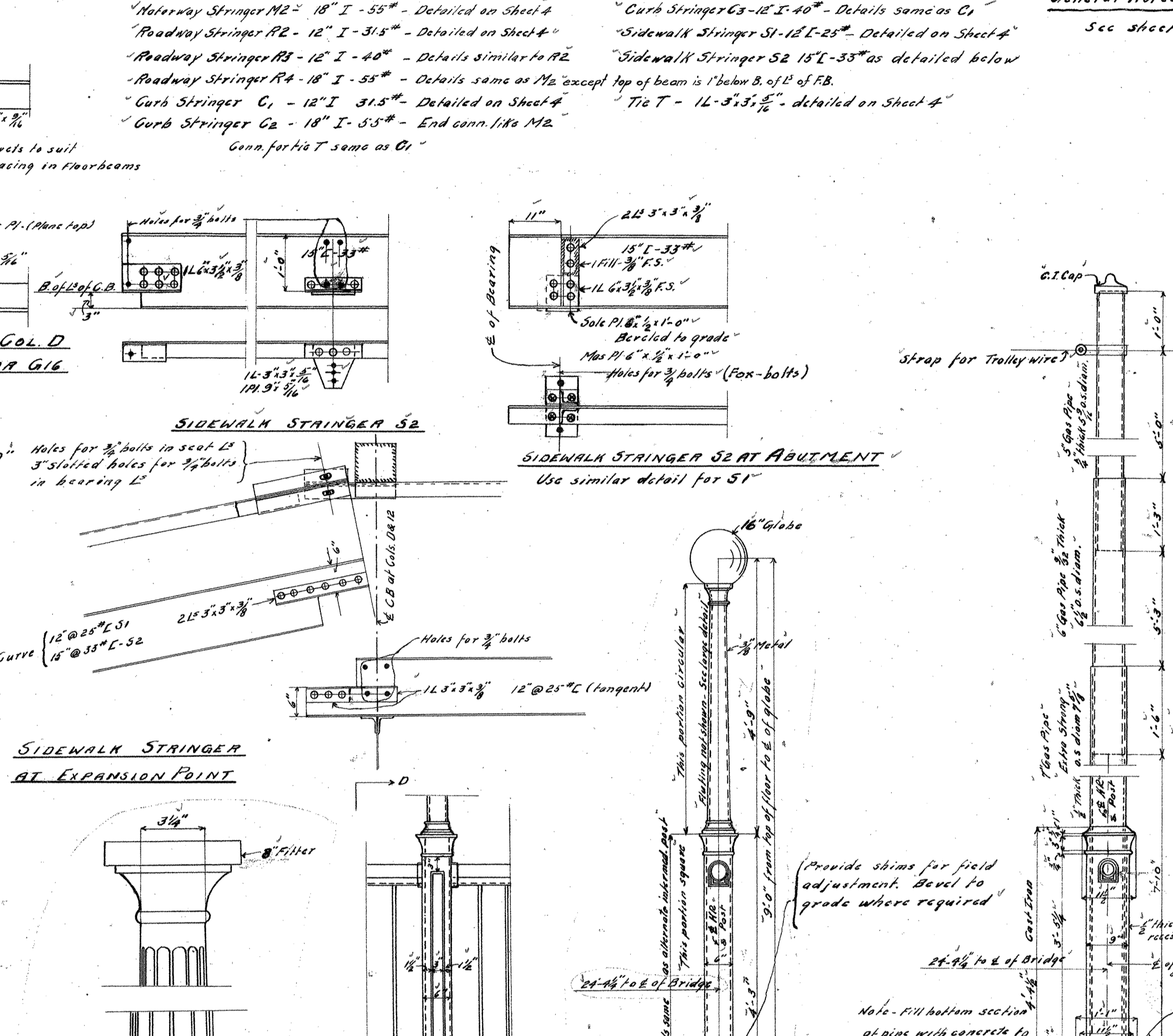
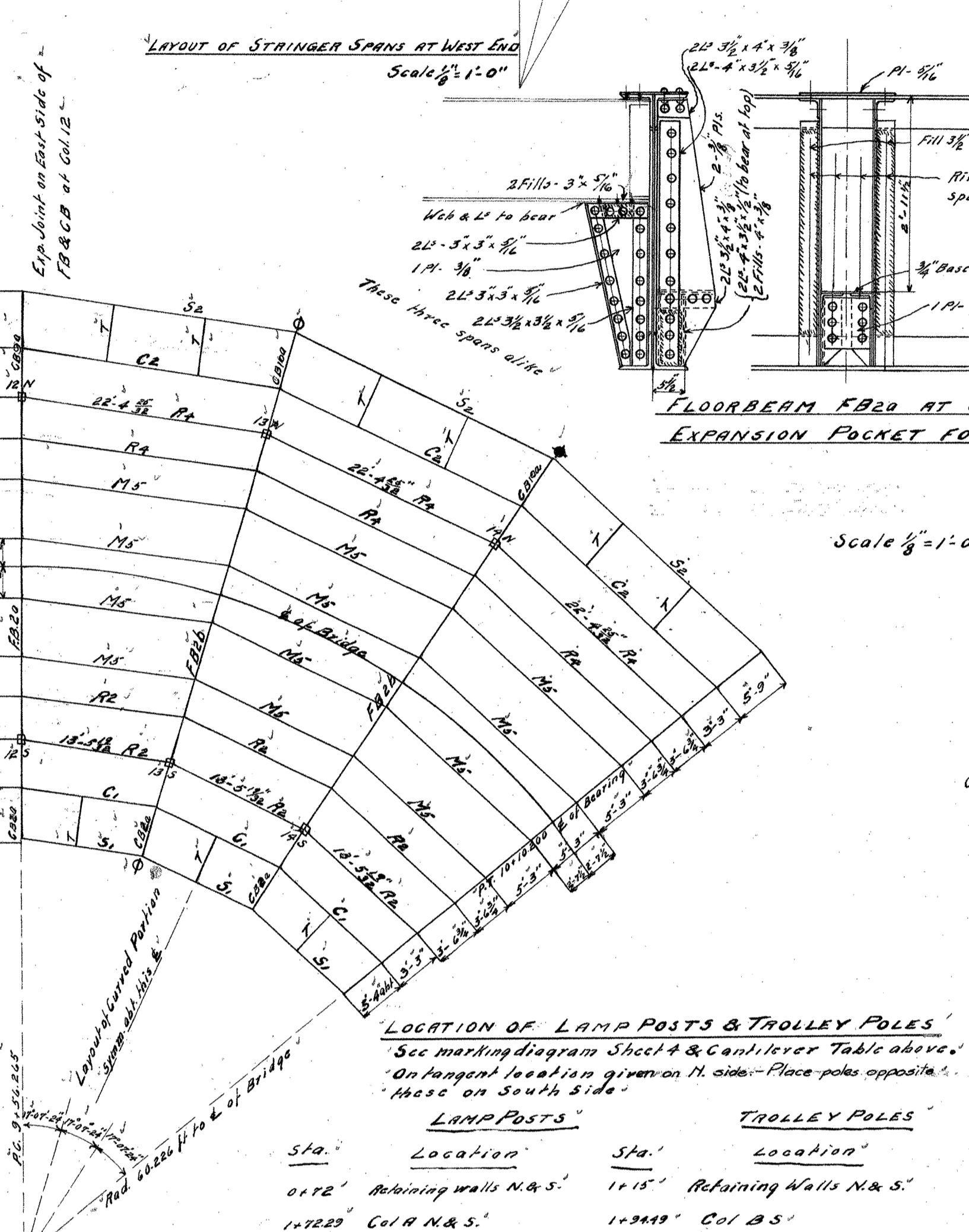
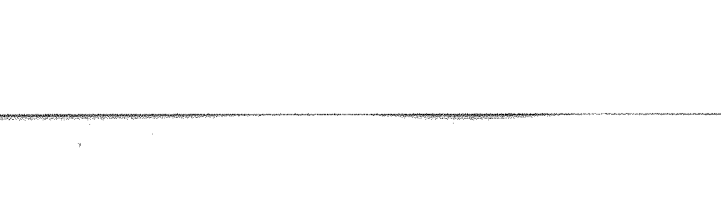
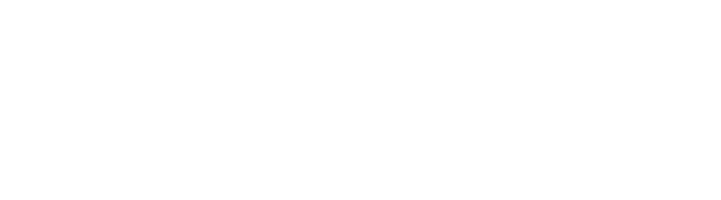
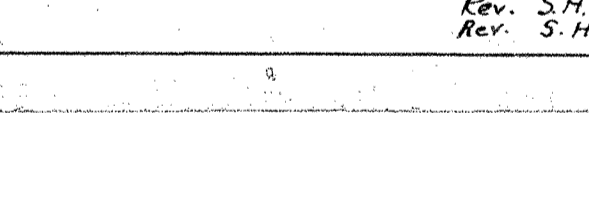
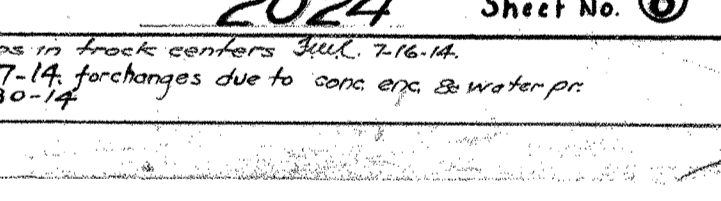
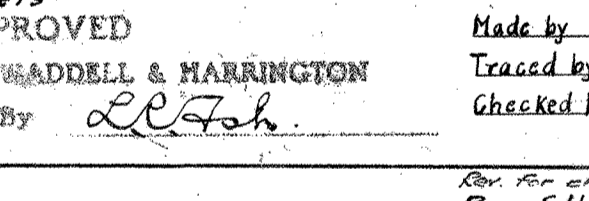
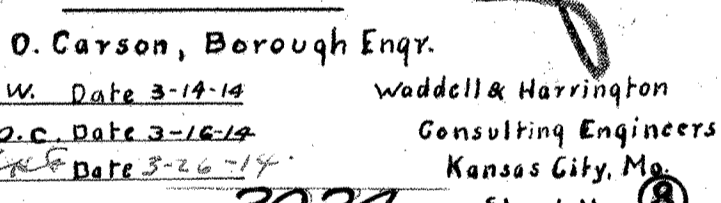
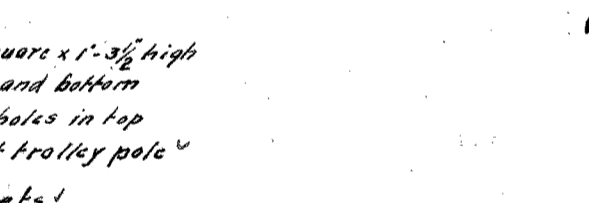
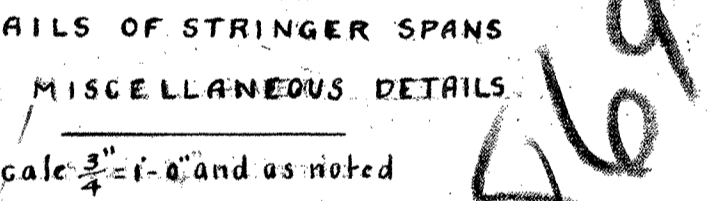
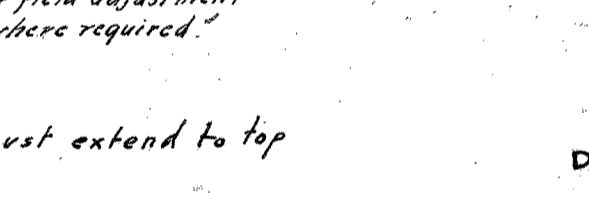
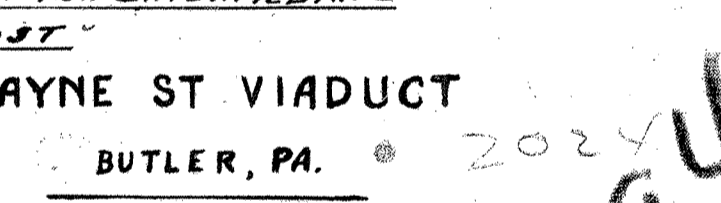
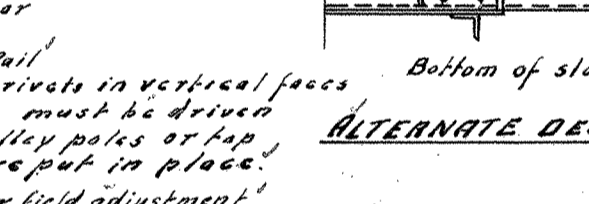
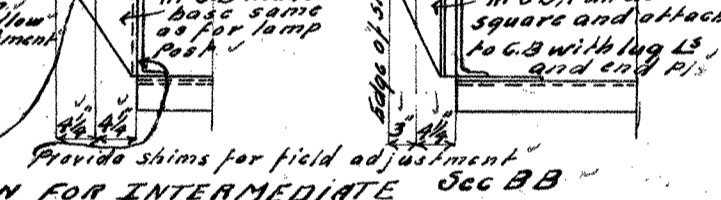
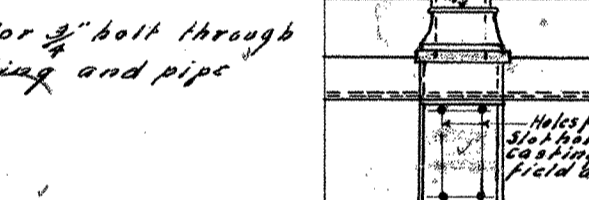
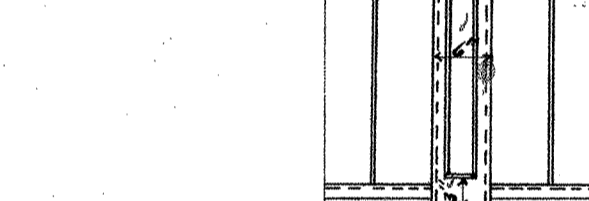
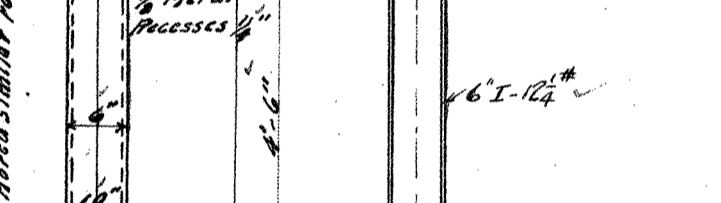
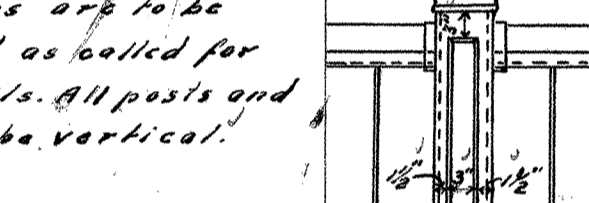
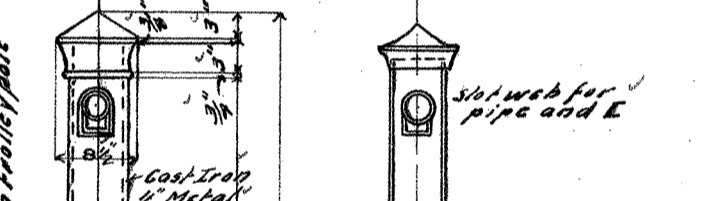
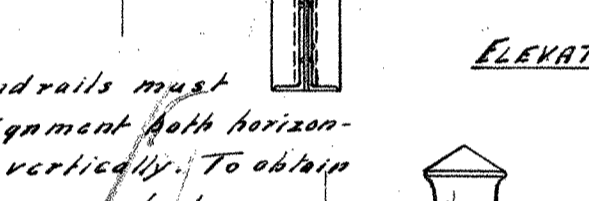
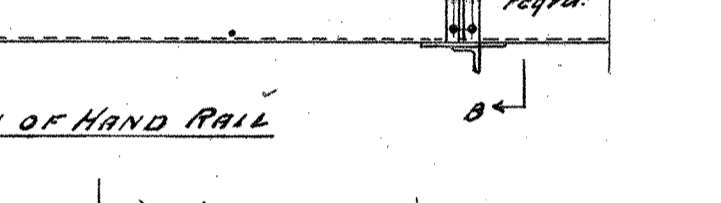
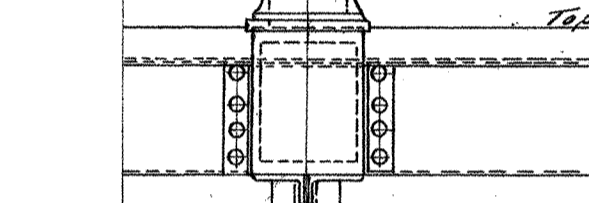
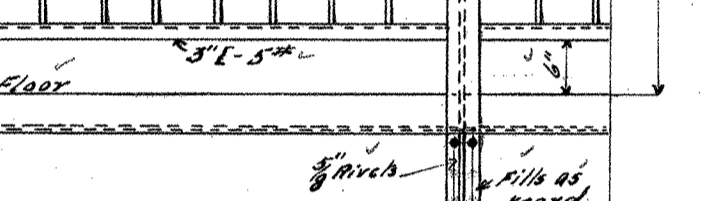
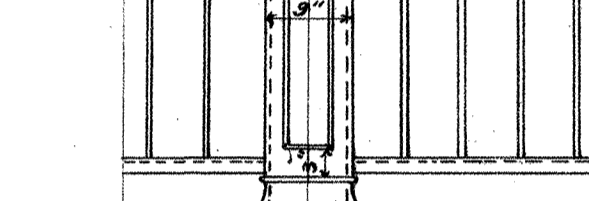
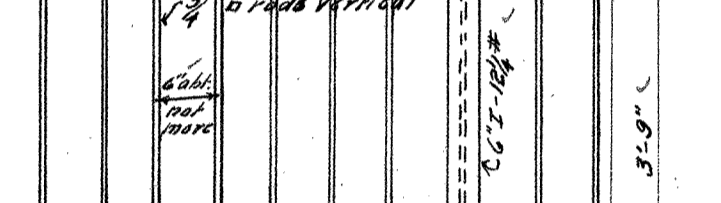
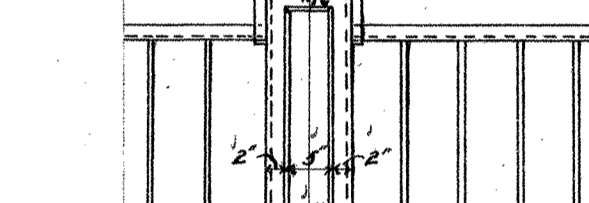
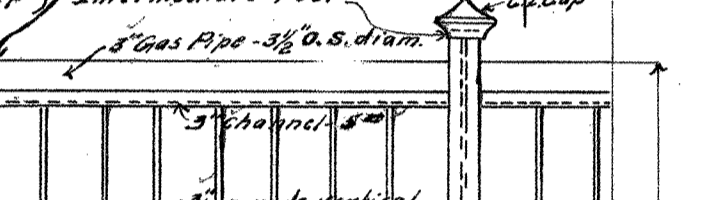
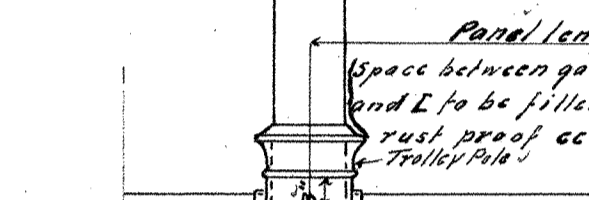
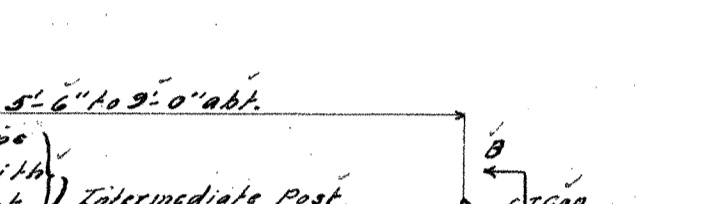
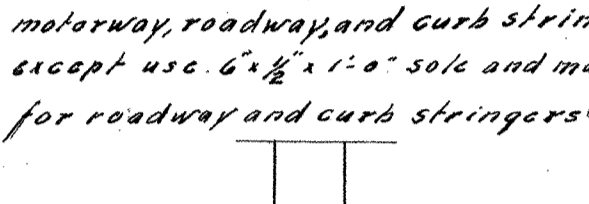
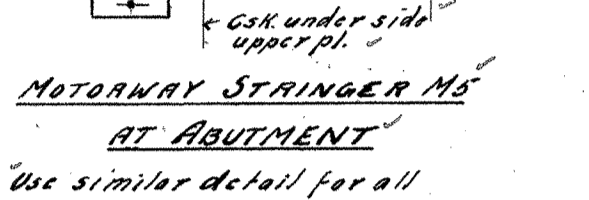
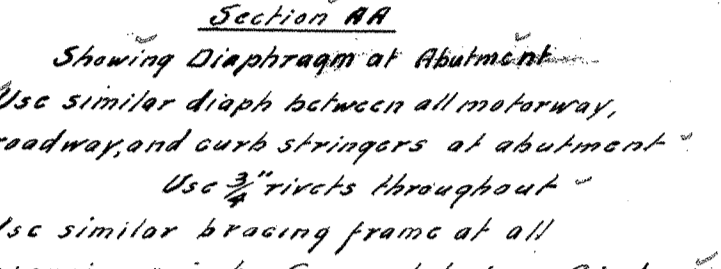
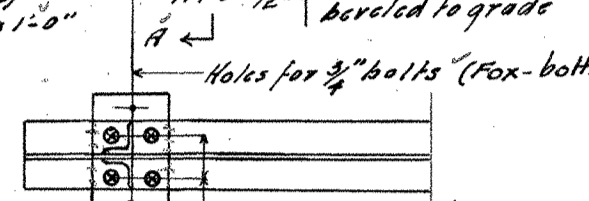
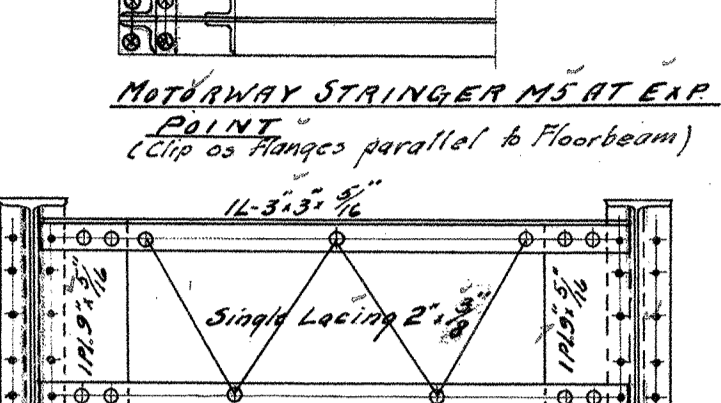
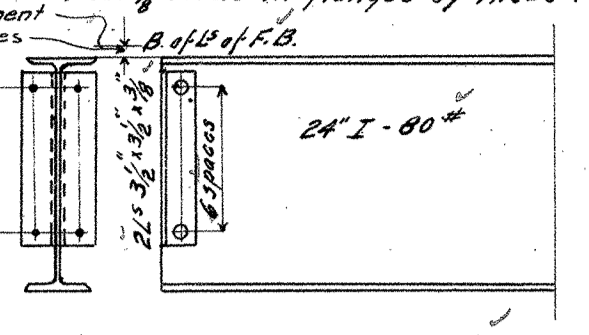
Rev. 5.4. 7-17-14 for changes due to refer.



**TABLE FOR CANTILEVER BEAMS ON CURVES**

No.	Location	Span	Remarks
1	10' 0" to 12' 0"	12' 0"	Trailing edge of C, and B
2	12' 0" to 14' 0"	14' 0"	Trailing edge of C, and B
3	14' 0" to 16' 0"	16' 0"	Trailing edge of C, and B
4	16' 0" to 18' 0"	18' 0"	Trailing edge of C, and B
5	18' 0" to 20' 0"	20' 0"	Trailing edge of C, and B
6	20' 0" to 22' 0"	22' 0"	Trailing edge of C, and B
7	22' 0" to 24' 0"	24' 0"	Trailing edge of C, and B
8	24' 0" to 26' 0"	26' 0"	Trailing edge of C, and B
9	26' 0" to 28' 0"	28' 0"	Trailing edge of C, and B
10	28' 0" to 30' 0"	30' 0"	Trailing edge of C, and B

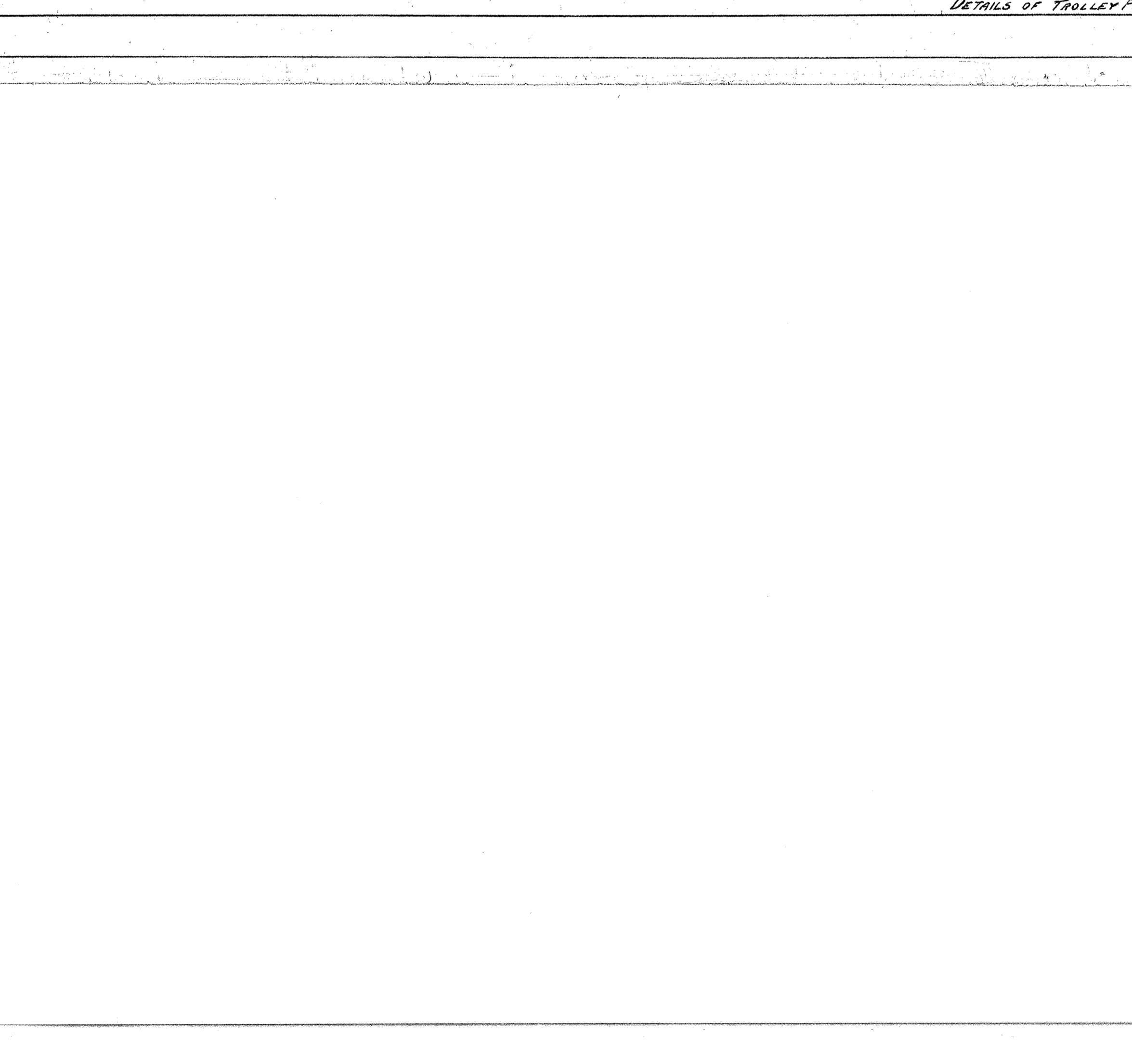
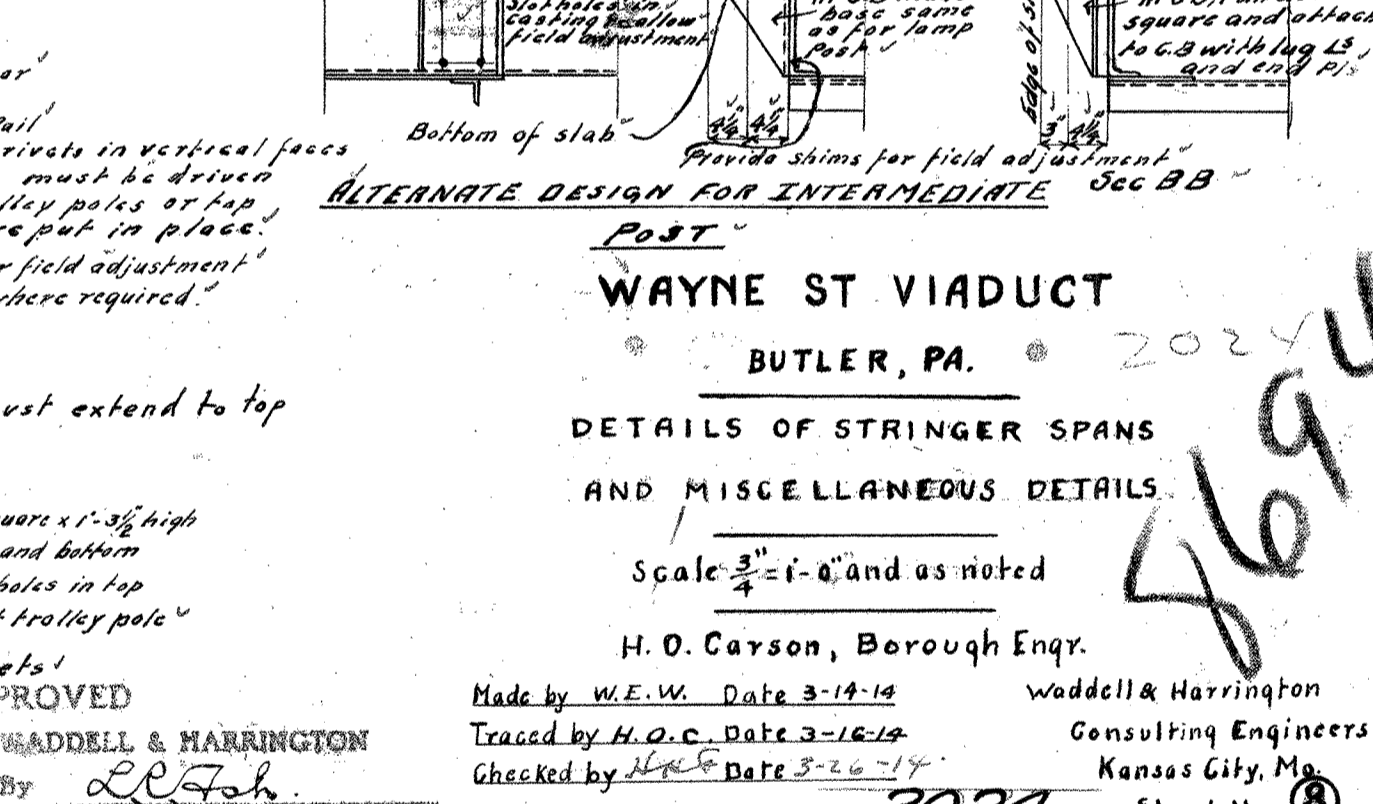
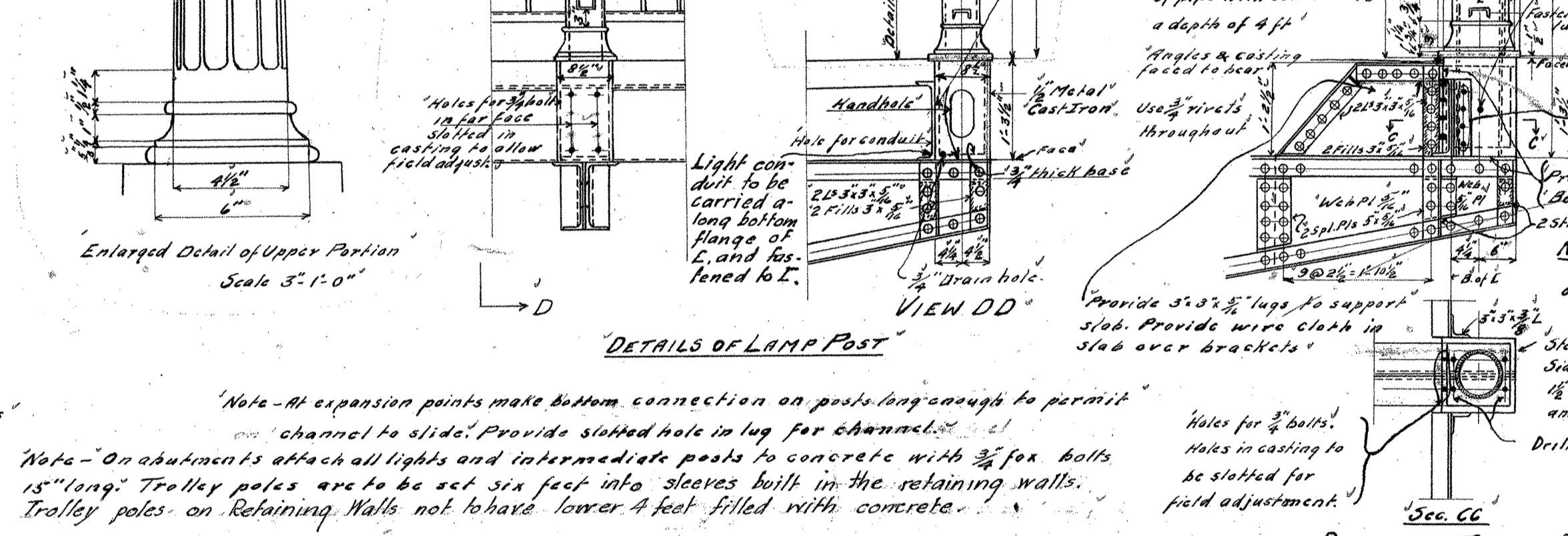
For typical details of cantilevers and floor beams see sheet 4. Flange section for floor beams same as given in sheet 4 for same floor beams. Similar details for 4/16 and sidewalk stringers see details on this sheet.



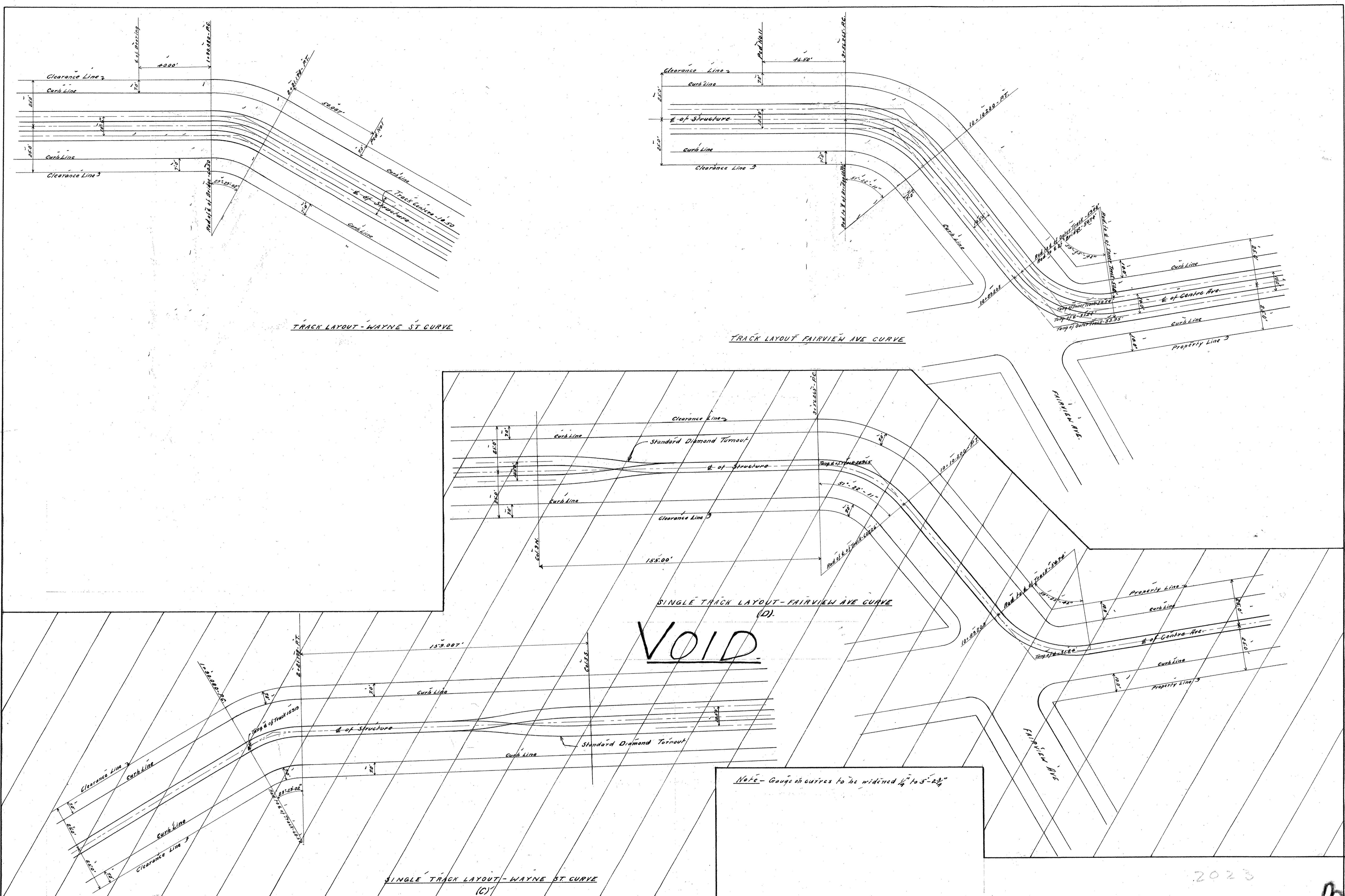
**LOCATION OF LAMP POSTS & TROLLEY POLES**

See marking diagram Sheet 4 & Cantilever Table above. On longest location given on N. side. Place poles opposite. Marked on South side.

Sta.	Location	Sta.	Location
0172	Retaining walls N & S	1015	Retaining walls N & S
10220	Col. R N & S	10220	Col. B S
20401	2nd Panel PA Span 1	20523	Col. C N
51330	1st " " " 3	21381	2nd Panel PA Span 2
61376	3rd " " " 4 N	31416	Col. S N
51326	Col. S N	41326	2nd Panel PA Span 3 N
61326	Col. T N	51326	3rd " " " 6 N
71406	2 Panel PA Span 3 N	61376	3rd " " " 8 N
81330	3rd " " " 10 N	70326	5th " " " 10 N
91326	1st " " " 12 N	81326	2nd " " " 11 N
101326	Col. 14 N	91326	Col. 13 N & S
101326	Retaining walls E & W 101326	101326	Parapet E & W
101326	1st Stairway Landing	101326	Ends of Retaining Walls
Total - 24		Total - 24	
Lamp Posts marked - ♦			
Trolley Poles marked - ○			



**WAYNE ST VIADUCT**  
BUTLER, PA.  
DETAILS OF STRINGER SPANS  
AND MISCELLANEOUS DETAILS  
Scale 1/2" = 1'-0", and as noted  
H. D. Carson, Borough Engr.  
Made by W.E.W. Date 9-17-16  
Traced by H.D.C. Date 3-16-20  
Checked by H.D.C. Date 3-16-20  
Waddell & Harrington  
Kansas City, Mo.  
Sheet No. 8

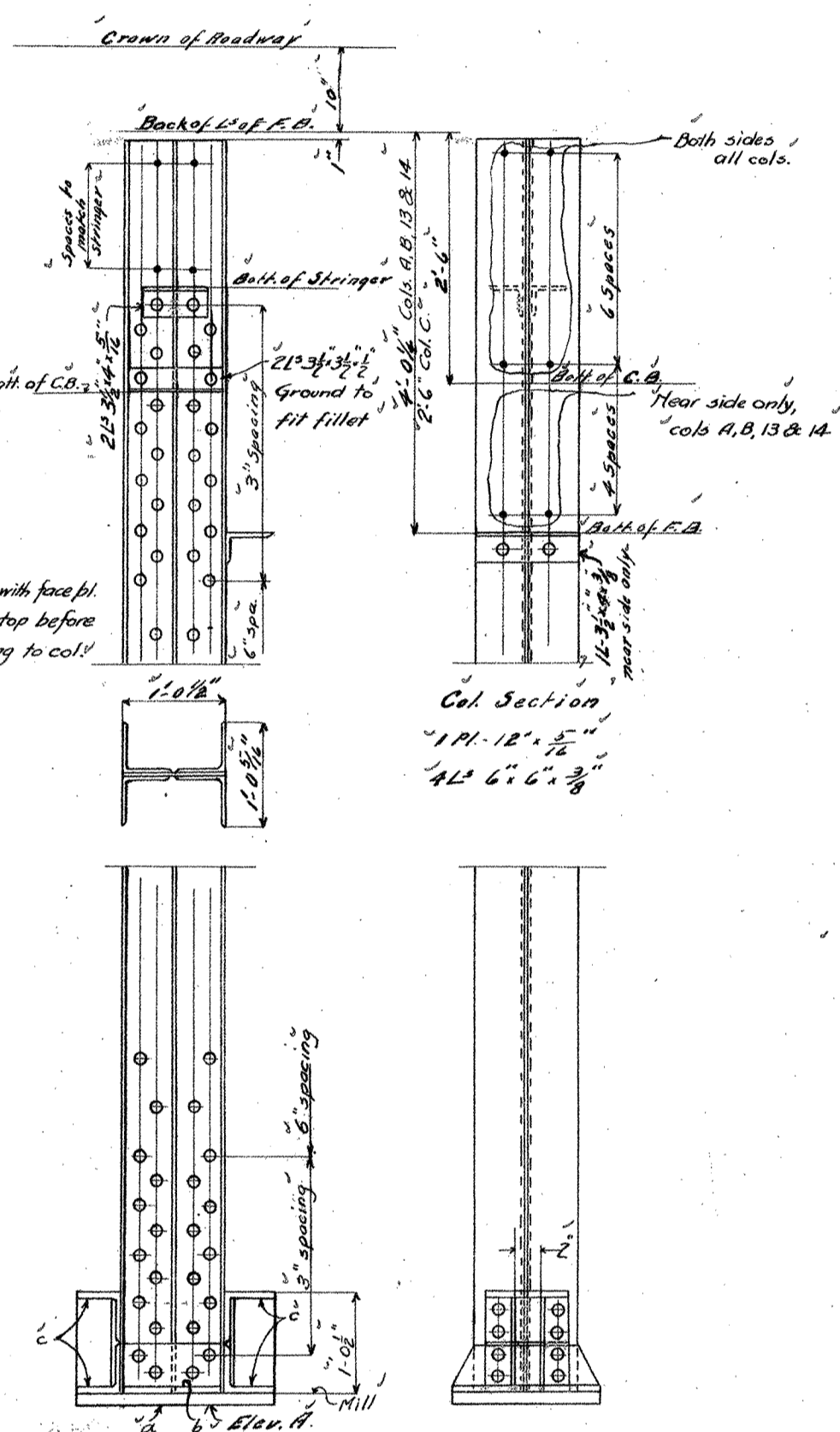
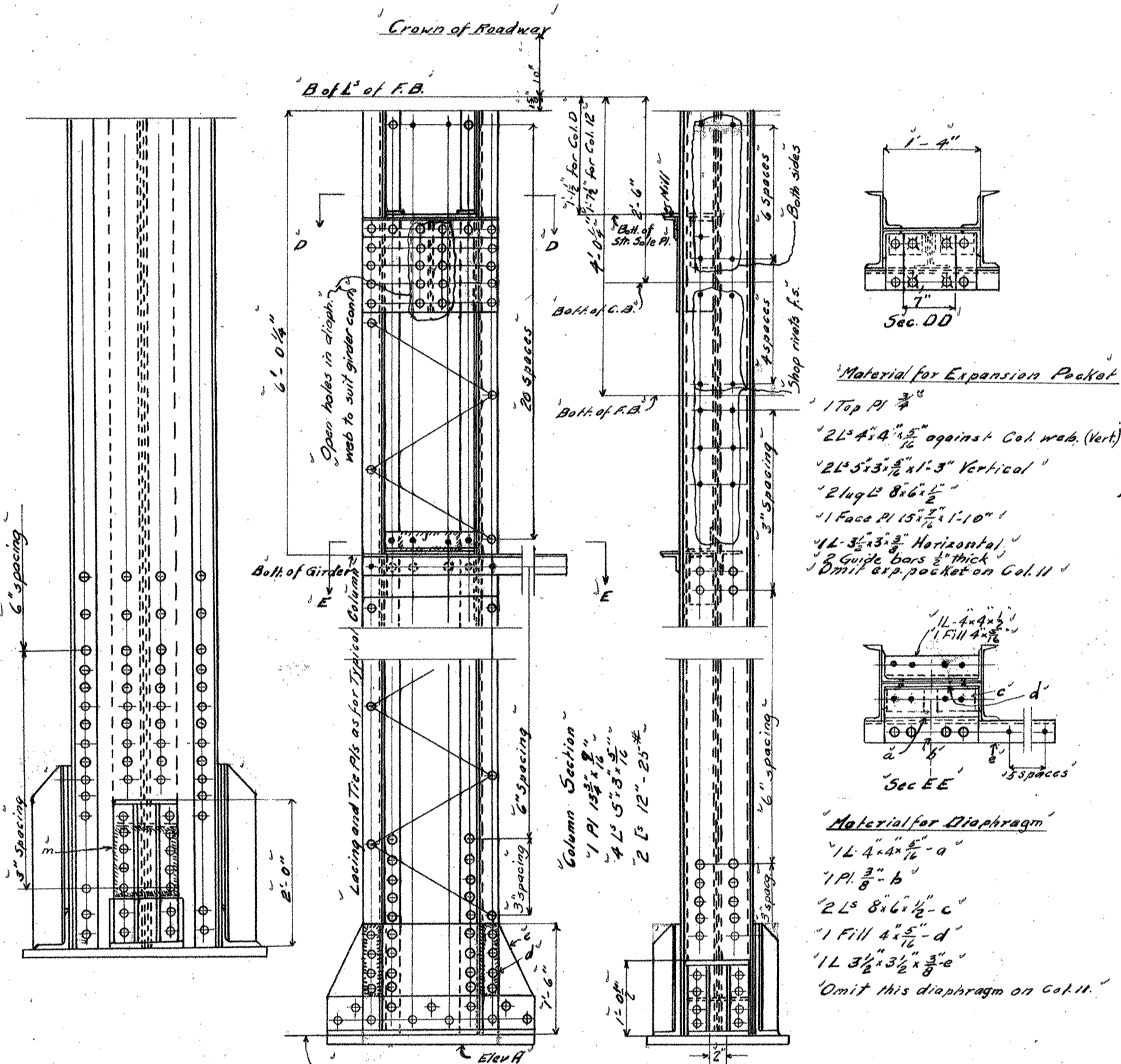
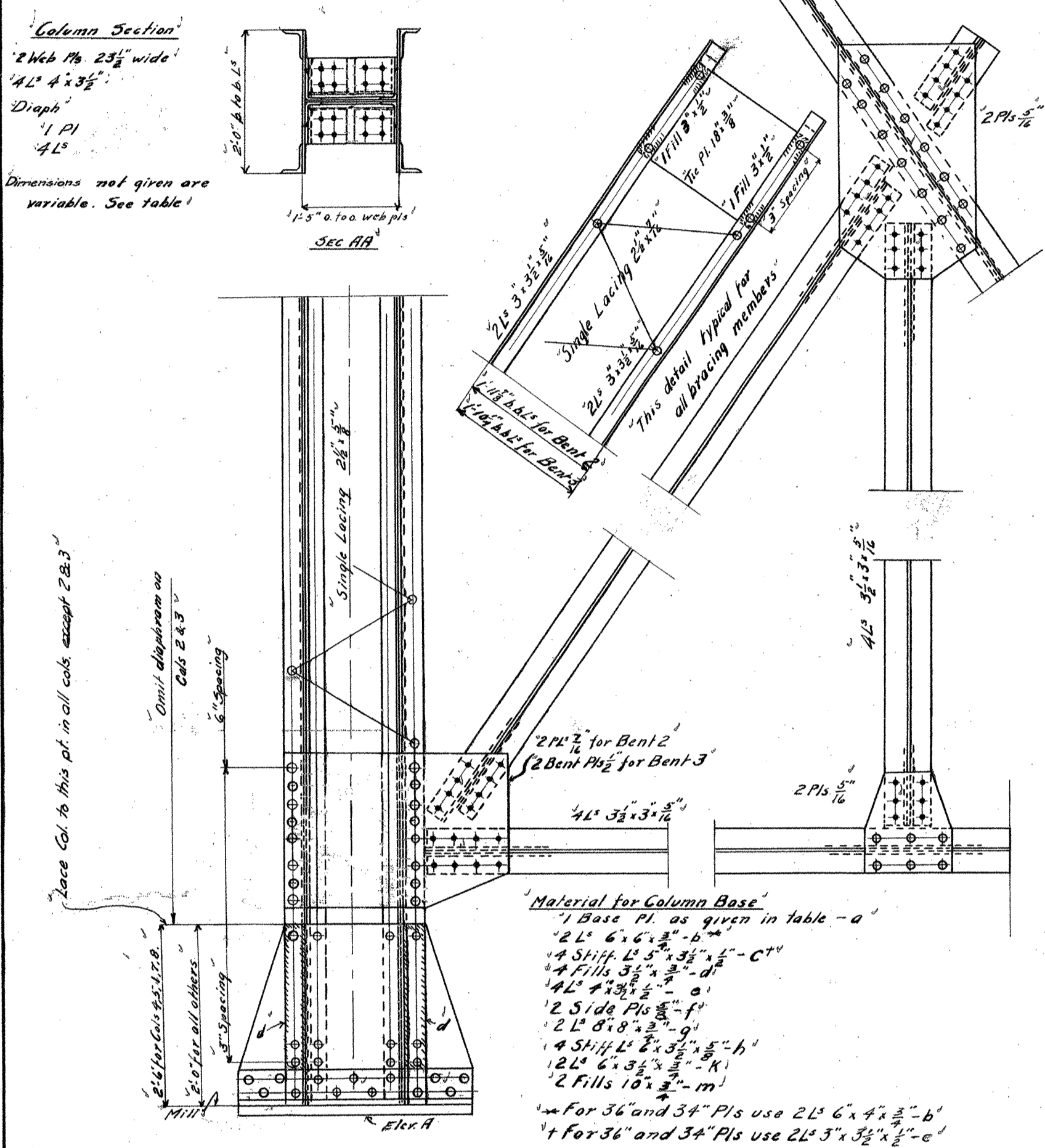
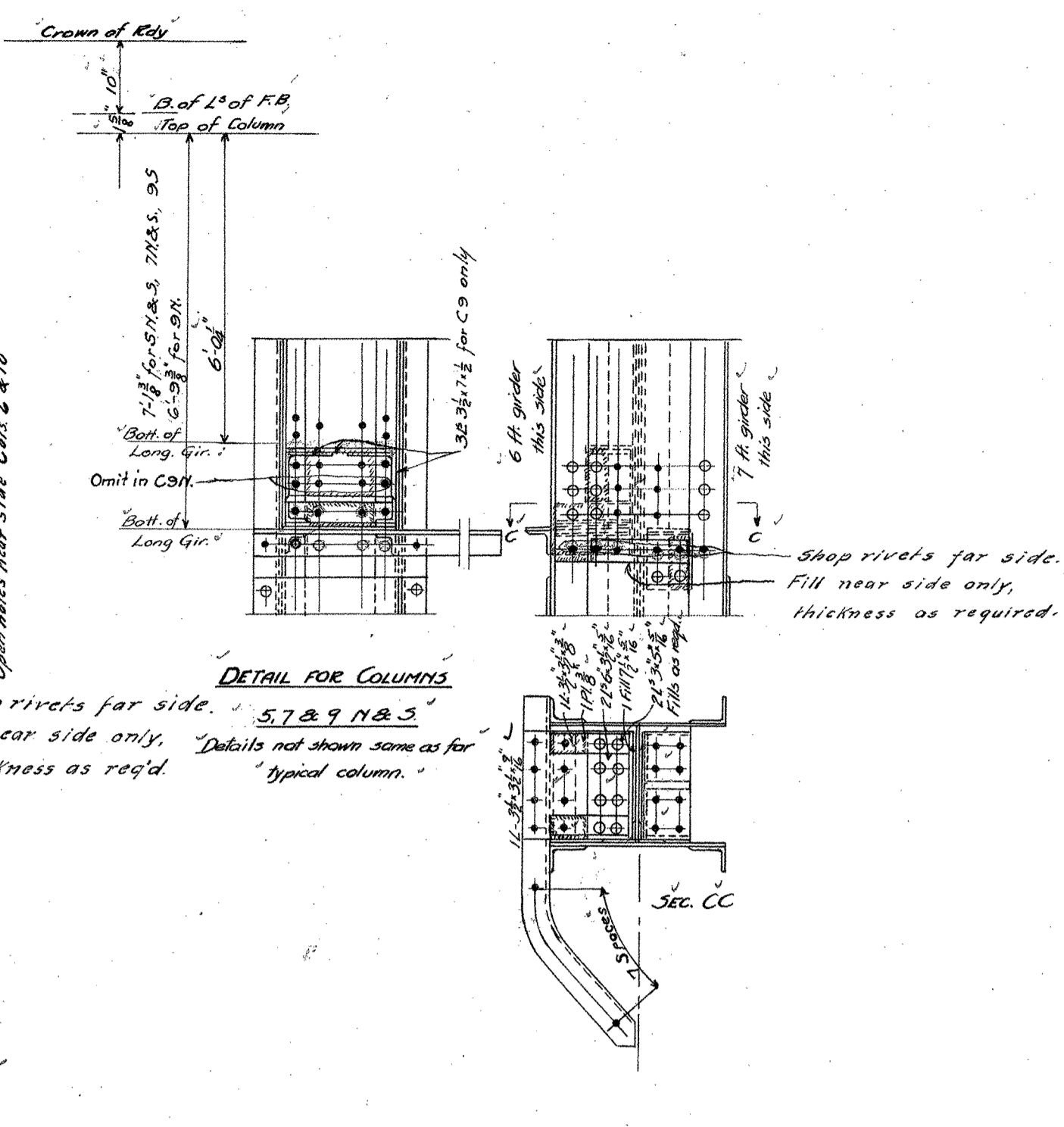
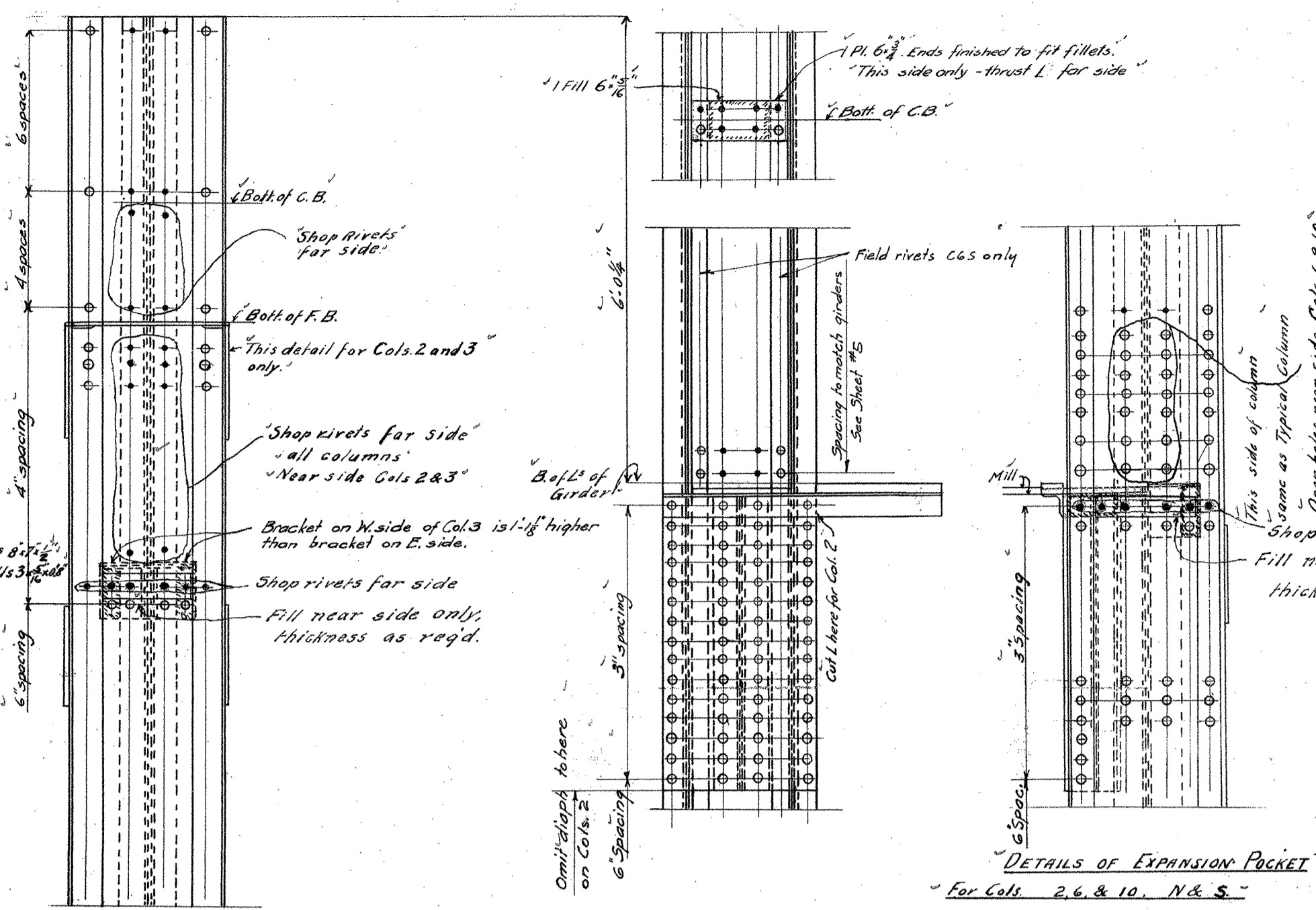
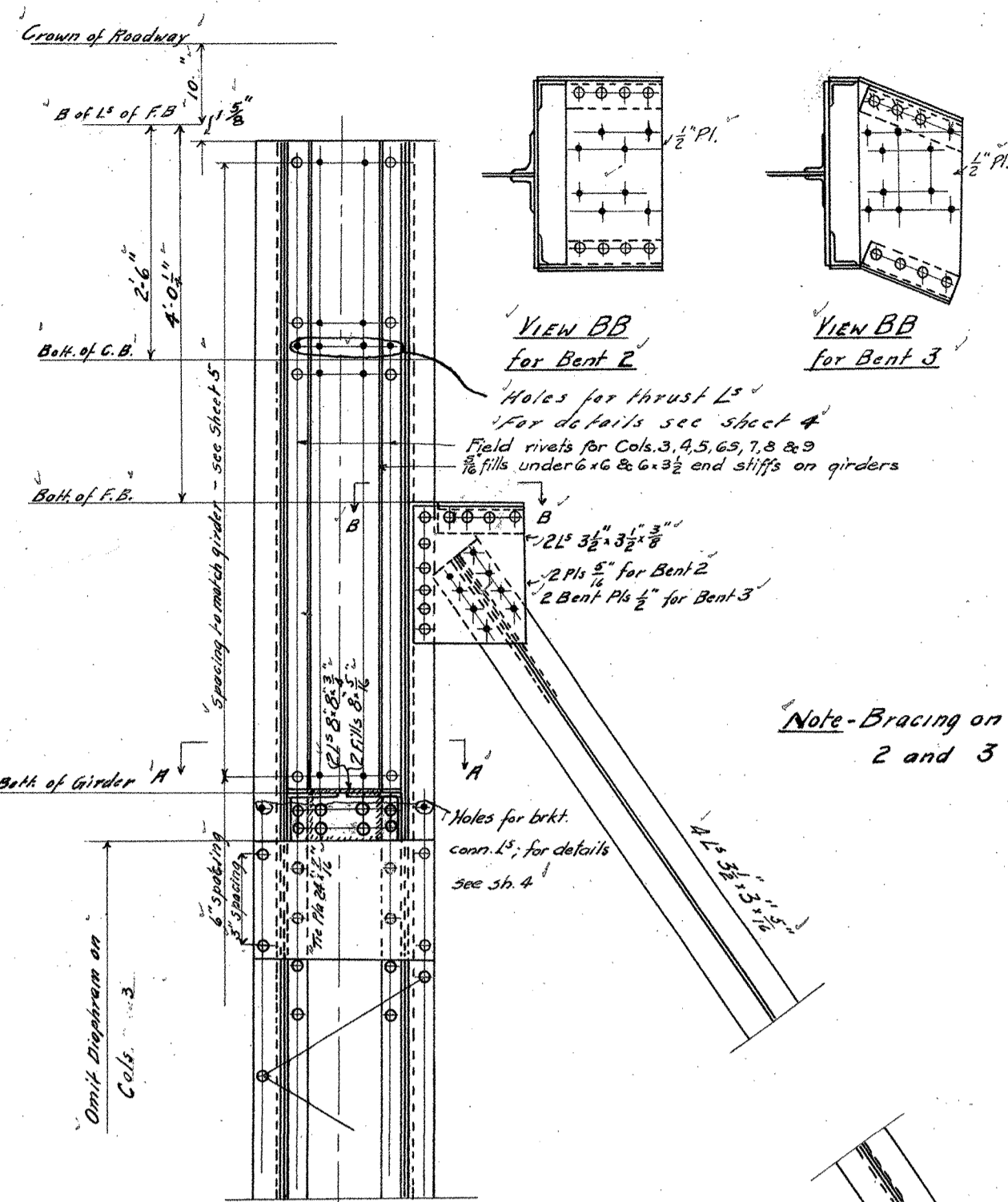


2023  
**WAYNE ST. VIADUCT**  
 BUTLER PA.

LAYOUT OF TRACKS ON CURVES  
 Scale - 1"=20'-0"

APPROVED  
 WADDELL & HARRINGTON  
 By W. S. H.  
 Made by - W. S. H. Date 2-11-12  
 Traced by C. H. R. Date 3-12-12  
 Checked by W. S. H. Date 3-15-12  
 H. O. Garson, Borough Engr.  
 Waddell & Harrington  
 Consulting Engineers  
 Kansas City, Mo.  
 2023 Sheet No. ②

Rev. For changes in track centers Book 7-15-12



No.	Col.	Section	Base	Remarks
1	1	1	1	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	
7	7	7	7	
8	8	8	8	
9	9	9	9	
10	10	10	10	
11	11	11	11	
12	12	12	12	
13	13	13	13	
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31	31	31	31	
32	32	32	32	
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90	90	90	90	
91	91	91	91	
92	92	92	92	
93	93	93	93	
94	94	94	94	
95	95	95	95	
96	96	96	96	
97	97	97	97	
98	98	98	98	
99	99	99	99	
100	100	100	100	

For Marking Diagram of Columns, see Sheets 9 & 10  
 \* Elevation of Col. A on curved portions is theoretical Crown on  
 \* E of Bridge.

General Notes  
 \* Notes of open holes if except as noted  
 \* Notes subpunched if rounded to 1/8"  
 \* Panels across all cols. to take thrust from centerline  
 \* Drawings on columns and details  
 \* Fill all col. bases with 1:3 concrete, and level top to drain.

WAYNE ST. VIADUCT  
 BUTLER, PA.

DETAILS OF COLUMNS  
 Scale 1/4" = 1'-0"

APPROVED  
 WADDELL & MARRINGTON  
 By [Signature]  
 H. O. Garson, Borough Engr.

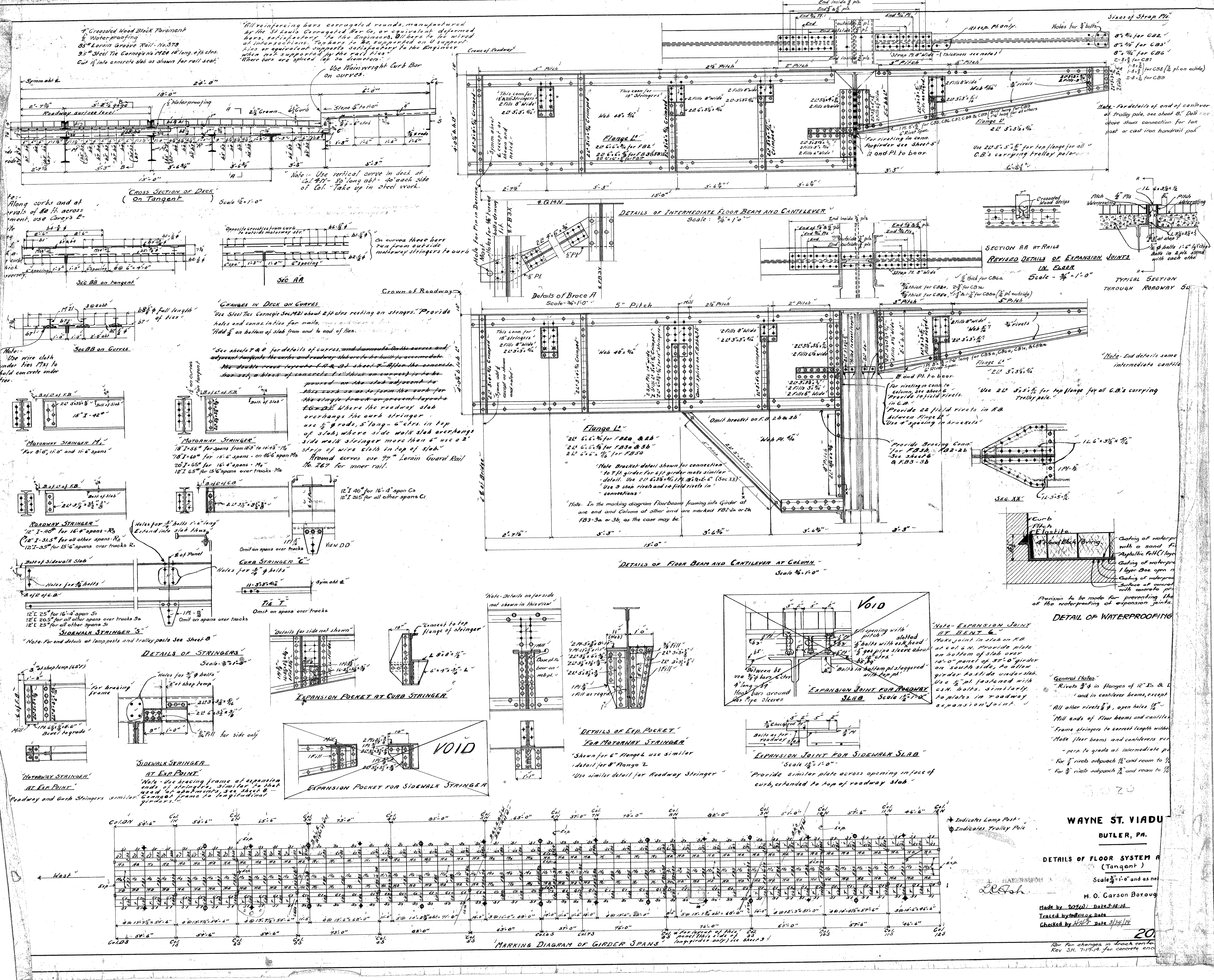
Made by [Signature] Date 1-12-14  
 Traced by [Signature] Date 3-3-14  
 Checked by [Signature] Date 2-3-14  
 Rev. 3.11.7-17-14, for changes due to same and water po.  
 Rev. 3.11.7-30-14

8692

2022

Sheet No. 6





WAYNE ST. VIADUCT  
BUTLER, PA.

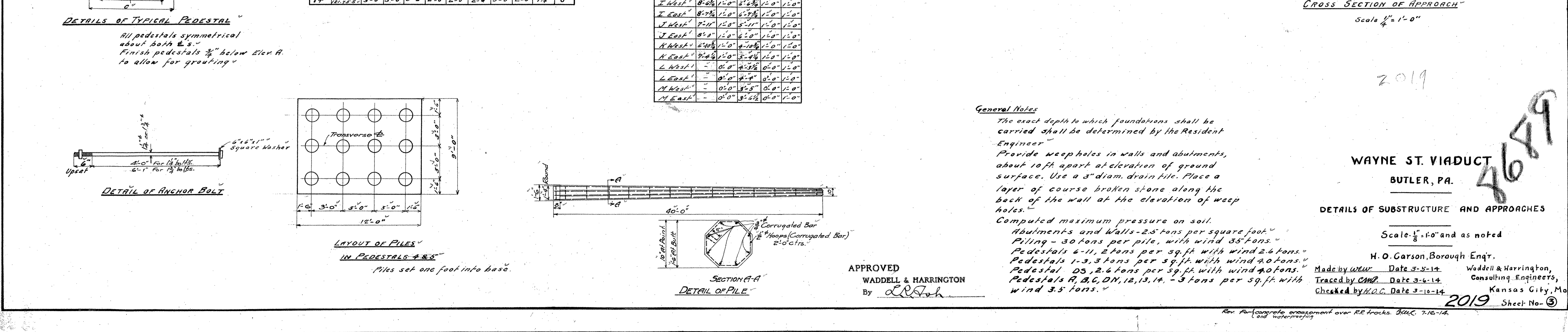
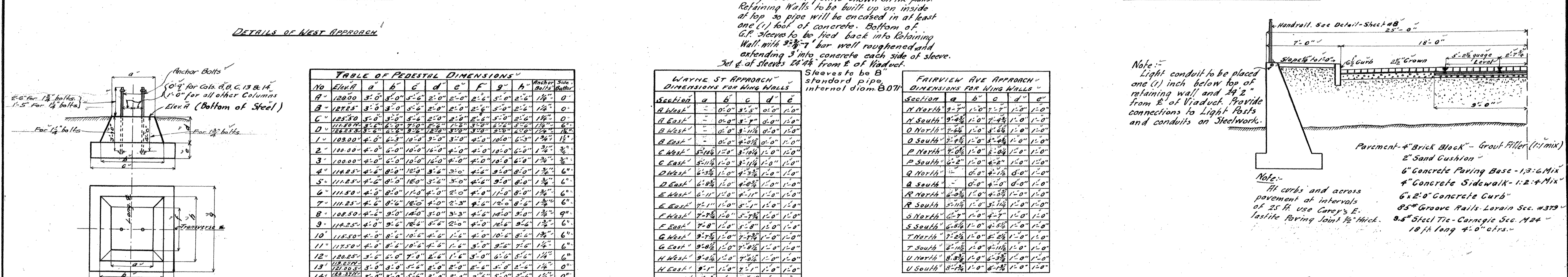
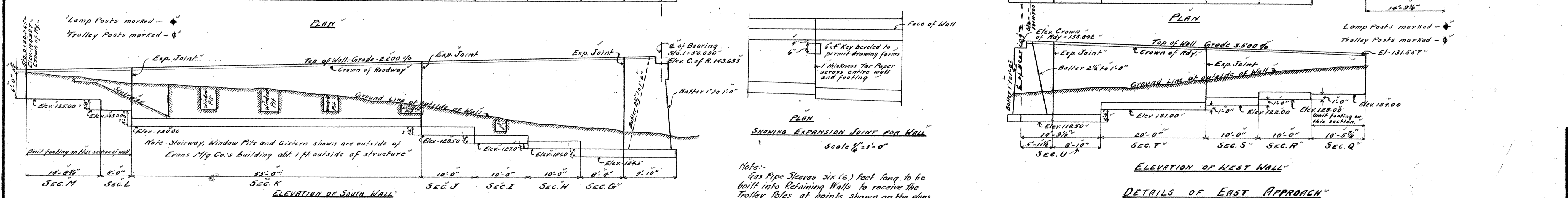
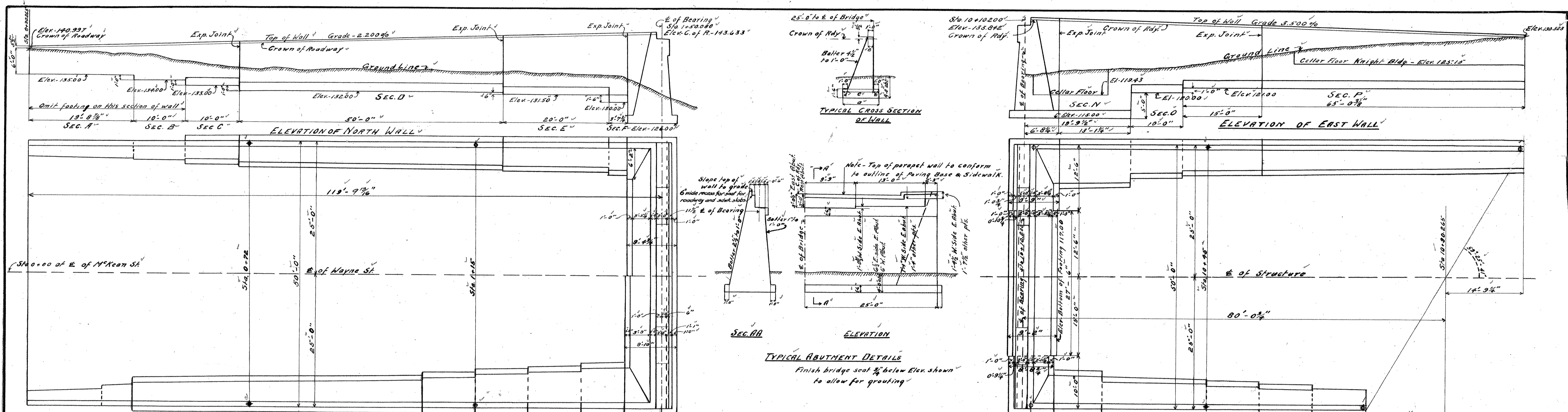
DETAILS OF FLOOR SYSTEM  
(Tangent)

Scale 1/2" = 1'-0"

M. O. Carson Borough

Made by 3/23/11 Date 3-23-11  
Traced by 3/23/11 Date 3-23-11  
Checked by 3/23/11 Date 3-23-11

Rev. 3/11/11 for concrete work



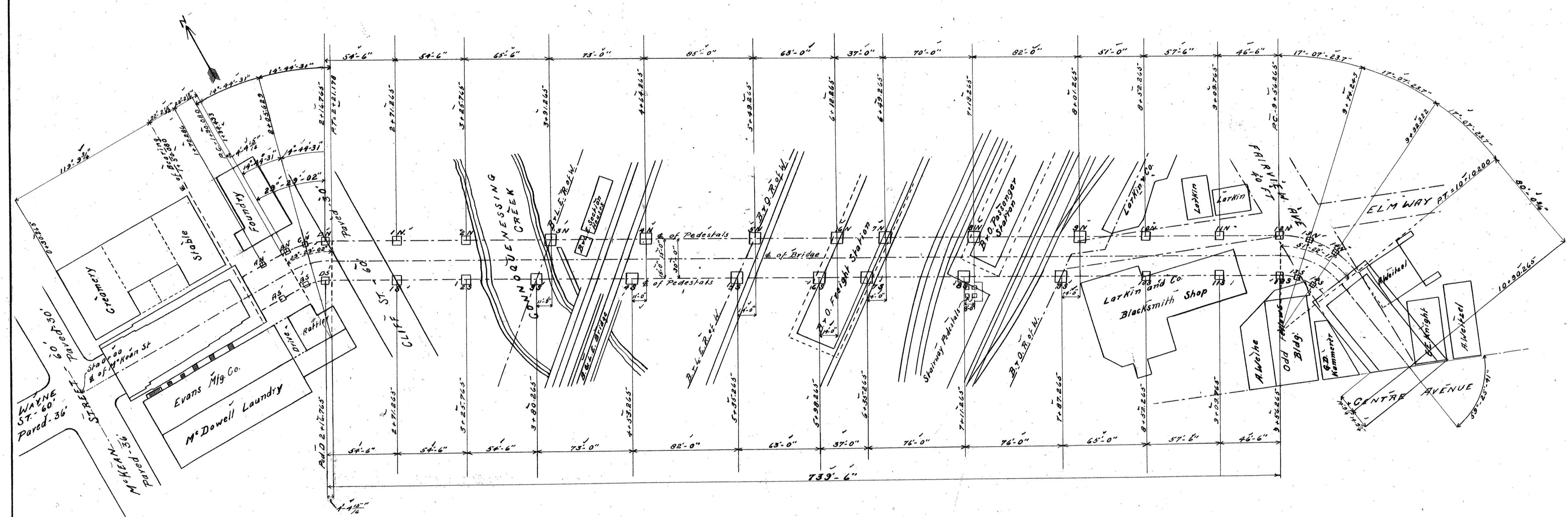
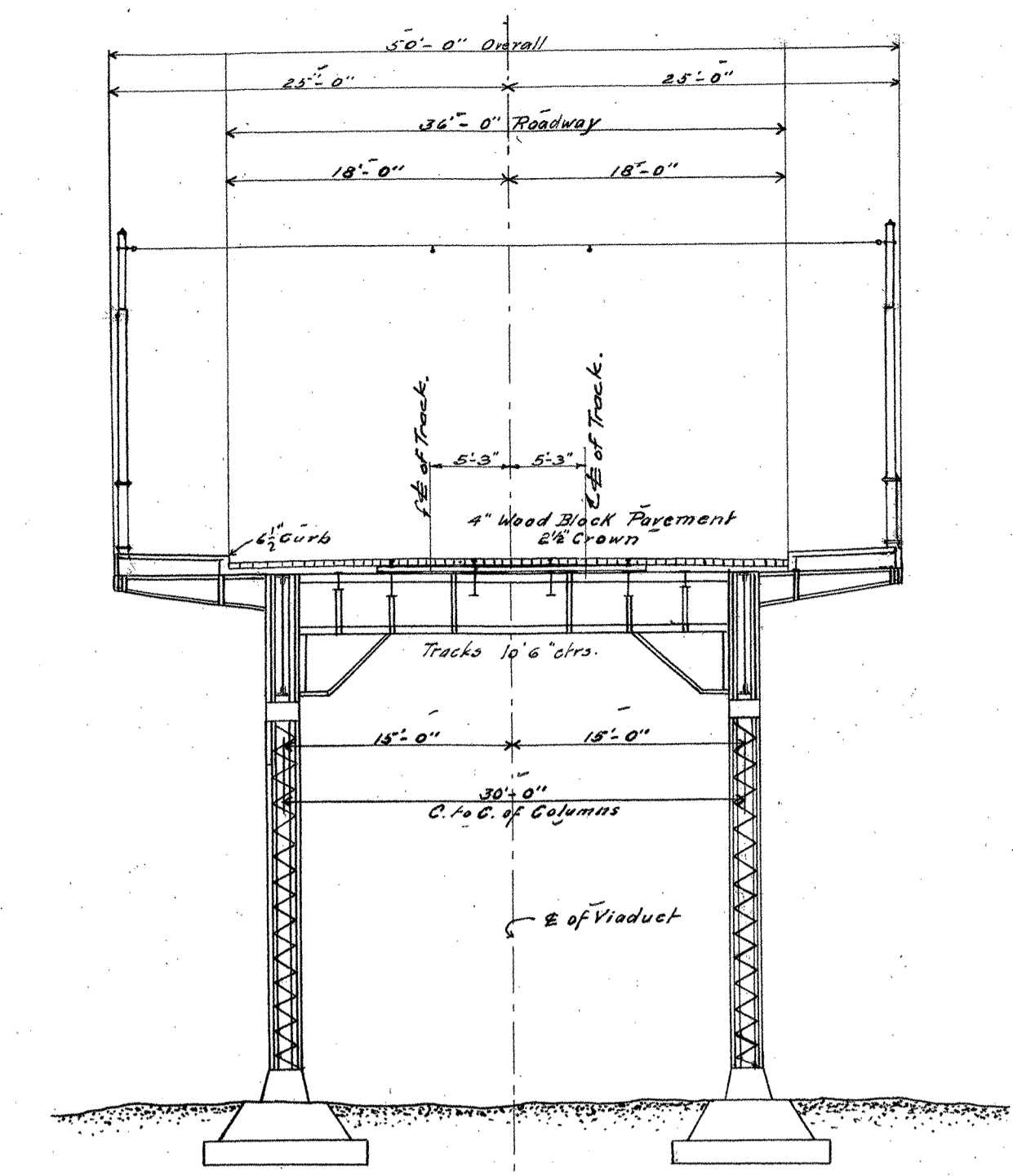
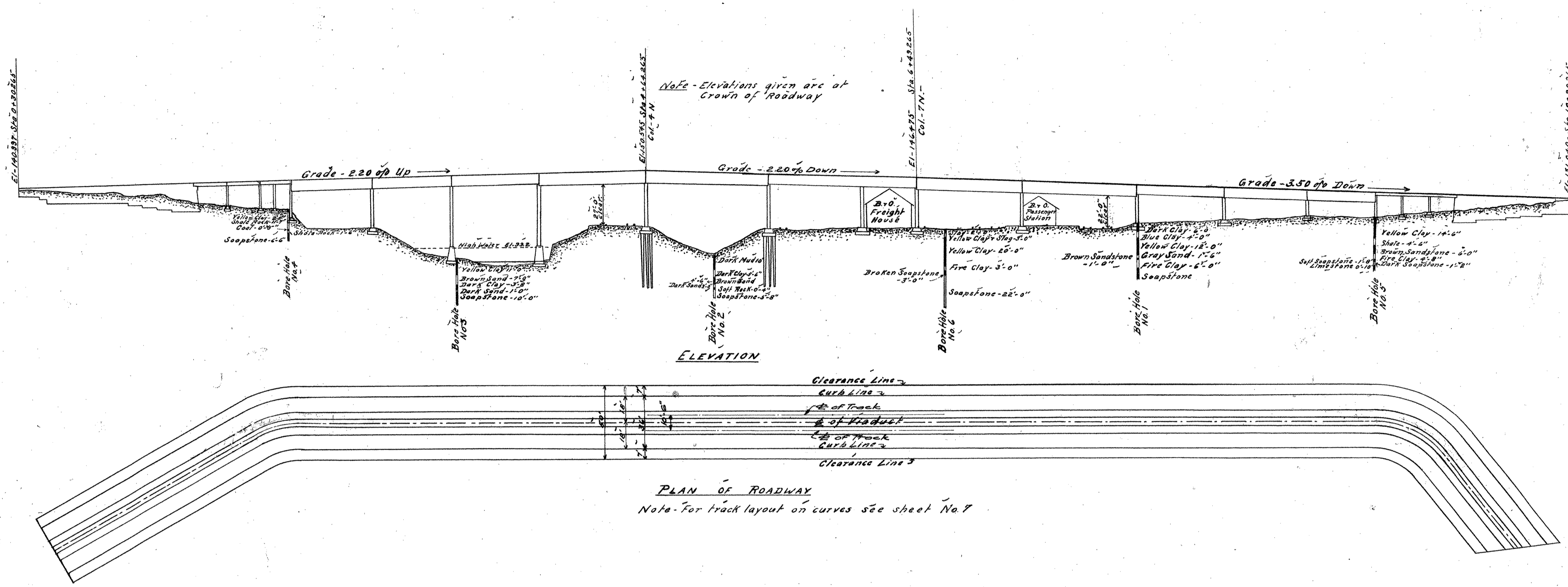
**WAYNE ST. VIADUCT**  
**BUTLER, PA.**

**DETAILS OF SUBSTRUCTURE AND APPROACHES**

Scale: 1" = 10' and as noted

H. O. Carson, Borough Engr.  
 Waddell & Harrington,  
 Consulting Engineers,  
 Kansas City, Mo.

2019



**FAIRVIEW AVE CURVE - E**

$T = 283.65$   
 $a = 31^{\circ}22'11''$   
 $PT = 602.24$   
 $DT = 95^{\circ}12'42''$   
 $L = 333.35$   
 $PC = 3+362.65$   
 $PT = 10+020.00$

**WAYNE ST. CURVE - E**

$T = 153.13$   
 $a = 29^{\circ}23'02''$   
 $PT = 603.0$   
 $DT = 94^{\circ}45'43''$   
 $L = 31.058$   
 $PC = 1+30.000$   
 $PT = 2+21.170$

APPROVED  
 WADDELL & HARRINGTON  
 By *[Signature]*

**WAYNE ST. VIADUCT**  
**BUTLER, PA.**  
**GENERAL PLAN AND ELEVATION**  
 Scale 1"=40'-0" and as noted.

H. O. Carson, Borough Engr.  
 Made by *[Signature]* Date 2-2-14  
 Traced by *[Signature]* Date 2-2-14  
 Checked by *[Signature]* Date 3-7-14

2018 Sheet No. 1

Rev. for changes in track centers 3-15-14.  
 Rev. for changes due to conc. and waterpr. 5-11-14.

# WAYNE ST. VIADUCT

BUTLER, PA.

MAP

Scale - 30' = 1"

H. O. Carson, Borough Engr

Traced by H.O.C. Date 3-2-12

Waddell & Harrington

Checked by H.O.C. Date 3-2-12

Consulting Engineers

Kansas City, Mo.

Sheet No. 1

## Note

The stations given on this plan for the pedestals are the actual stations on the pedestal lines and are not referred to the centerline except on the Wayne St tangent.

## CURVE ON WAYNE ST

### S. OUTSIDE

T = 384.1'  
A = 29° 23' 02"  
R = 33.50'  
D = 185° 07' 33"  
L = 10.807'

### E

T = 152.19'  
A = 29° 23' 02"  
R = 33.50'  
D = 185° 07' 33"  
L = 31.038'

### N. OUTSIDE

T = 42.439'  
A = 29° 23' 02"  
R = 33.50'  
D = 185° 07' 33"  
L = 43.972'

### S. CURB

T = 11.183'  
A = 29° 23' 02"  
R = 33.50'  
D = 185° 07' 33"  
L = 21.018'

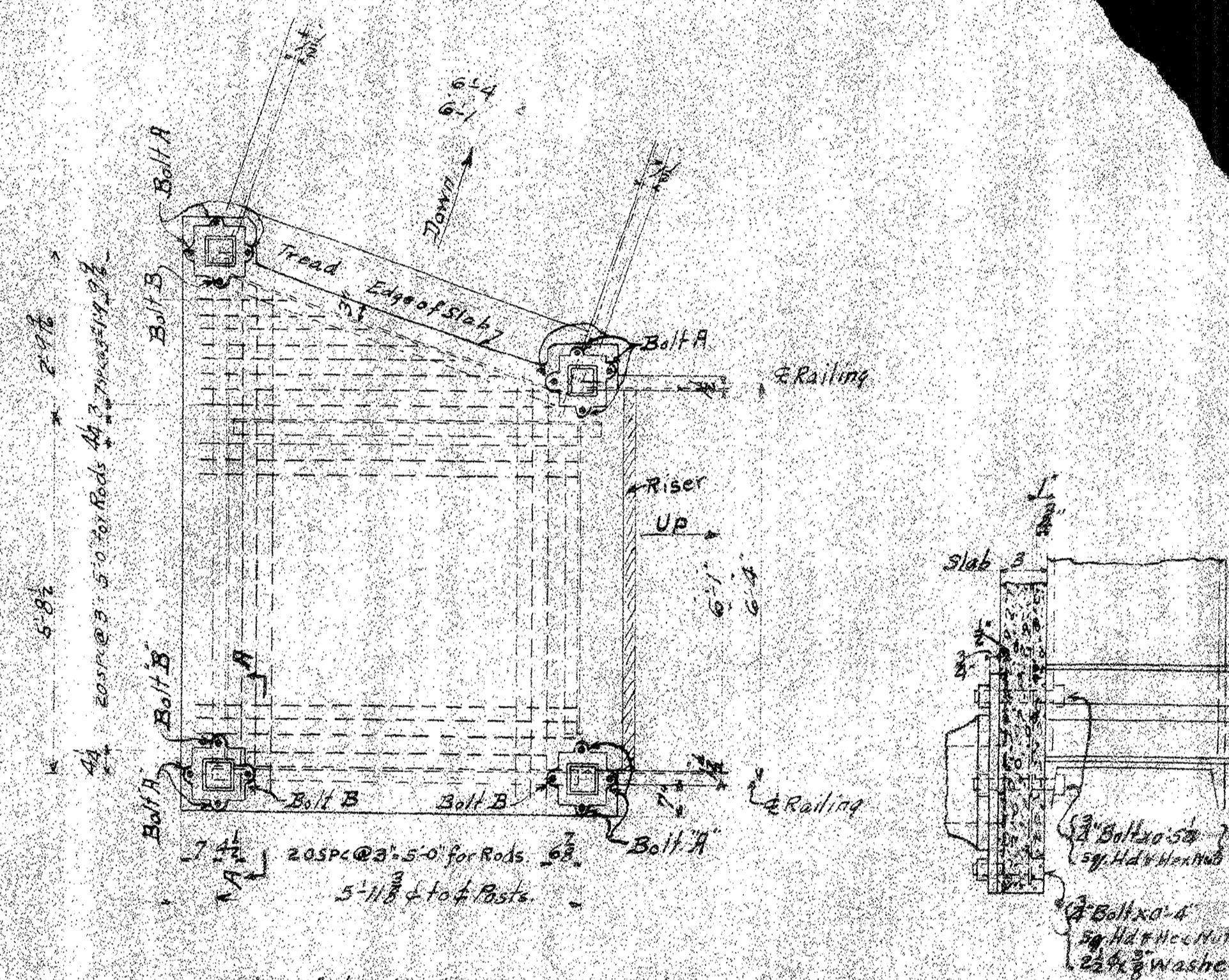
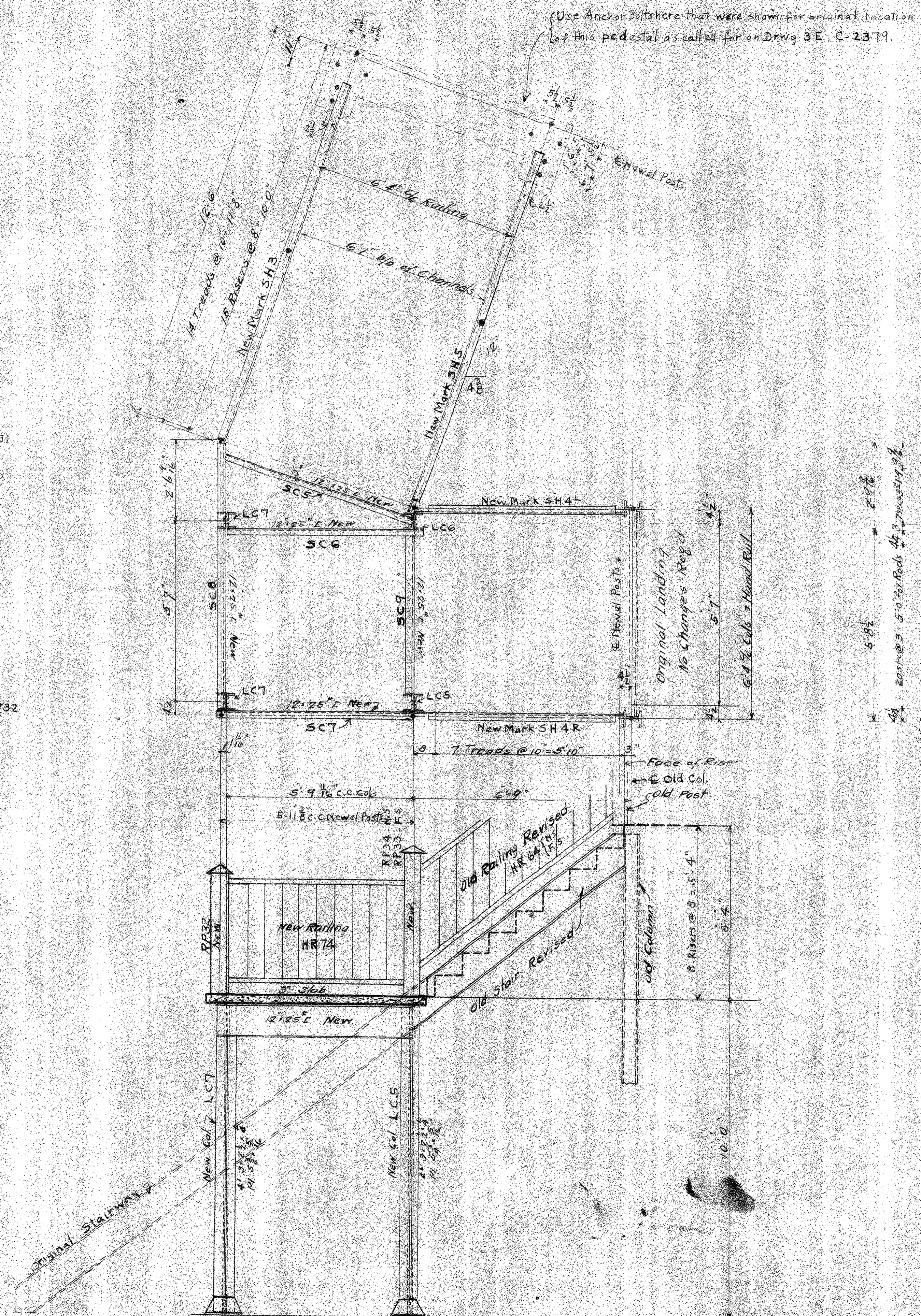
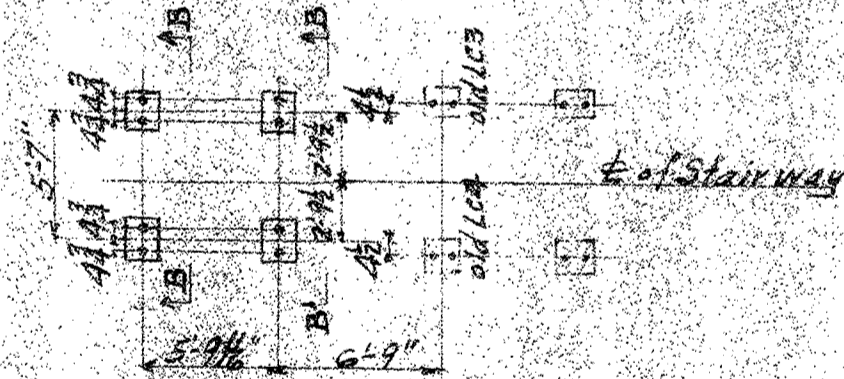
### N. CURB

T = 20.635'  
A = 29° 23' 02"  
R = 33.50'  
D = 185° 07' 33"  
L = 40.340'



APPROVED  
WADDELL & HARRINGTON  
BY L. C. H. 2017

Sheet No. 1



Plan of Stair Landing Showing Concrete  
Slab - Reinforcing Rods and Anchor Bolts & Newel Post

{ Reinforcing Bars  $\frac{3}{4}$ " above Bottom of Slab,  
 23 Bars  $\frac{3}{4}$ " x 6'-5"  
 6 "  $\frac{3}{4}$ " x Length 1'-8" 2'-4" 3'-0" 3'-8" 4'-4"  
 { Reinforcing Bars  $\frac{3}{4}$ " above Bottom of Slab  
 21 Bars  $\frac{3}{4}$ " x Length 6'-4" to 8'-5" inclusive. Lengths

10/088

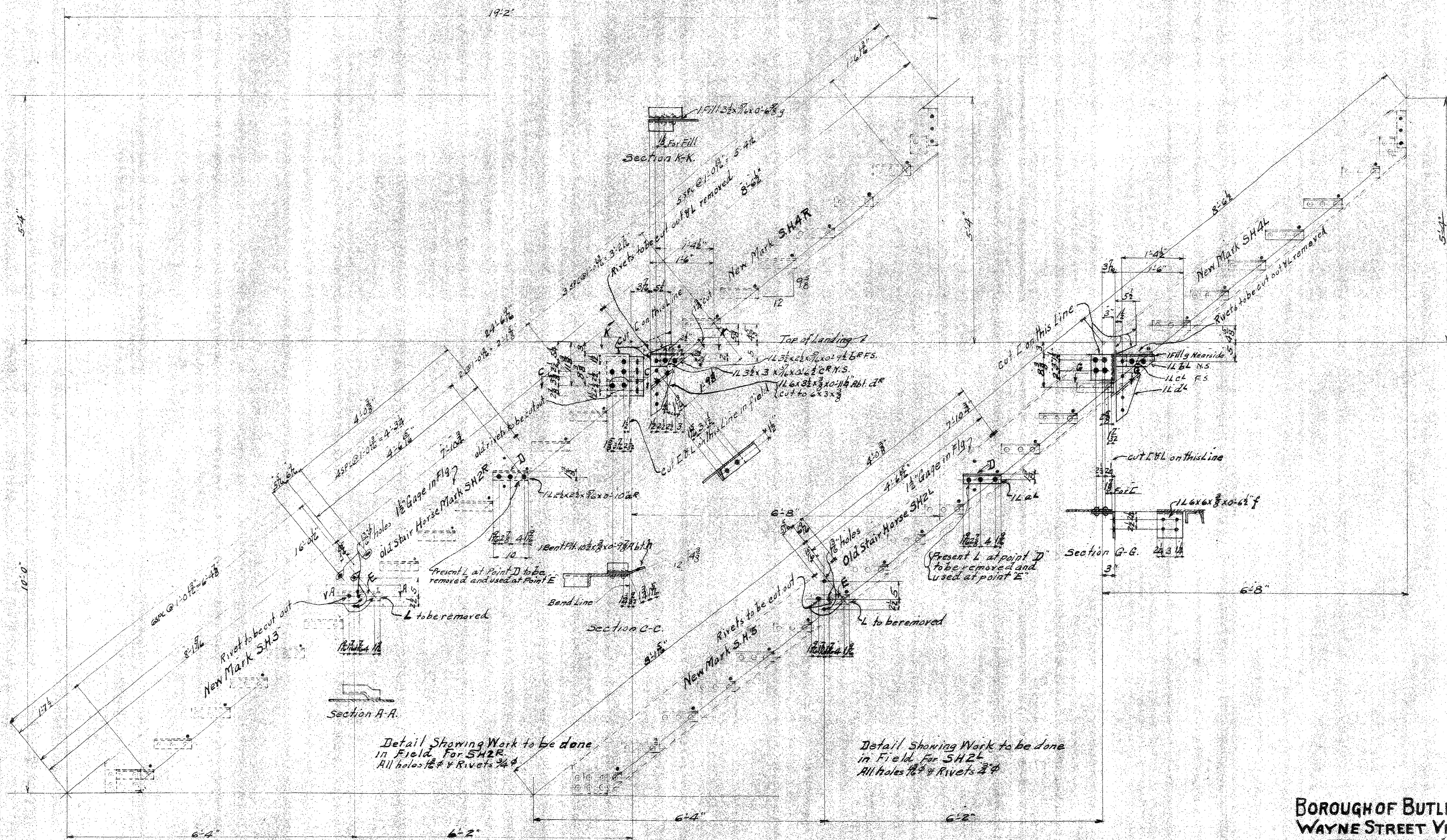
Stairway  
Butler Viaduct  
Plan showing Proposed arrangement  
of Revised Stairway

MADE BY CEY CHECKED BY \_\_\_\_\_ DATE July-29-1915

RIVETS \_\_\_\_\_ DIAM. | UNLESS OTHERWISE NOTED  
OPEN HOLES \_\_\_\_\_ DIAM.

**FORT PITT BRIDGE**  
CANONSBURG PA

APPROVED \_\_\_\_\_ CONTRACT \_\_\_\_\_  
BY \_\_\_\_\_ DRAWING NO \_\_\_\_\_  
\_\_\_\_\_ BILL PAGES \_\_\_\_\_



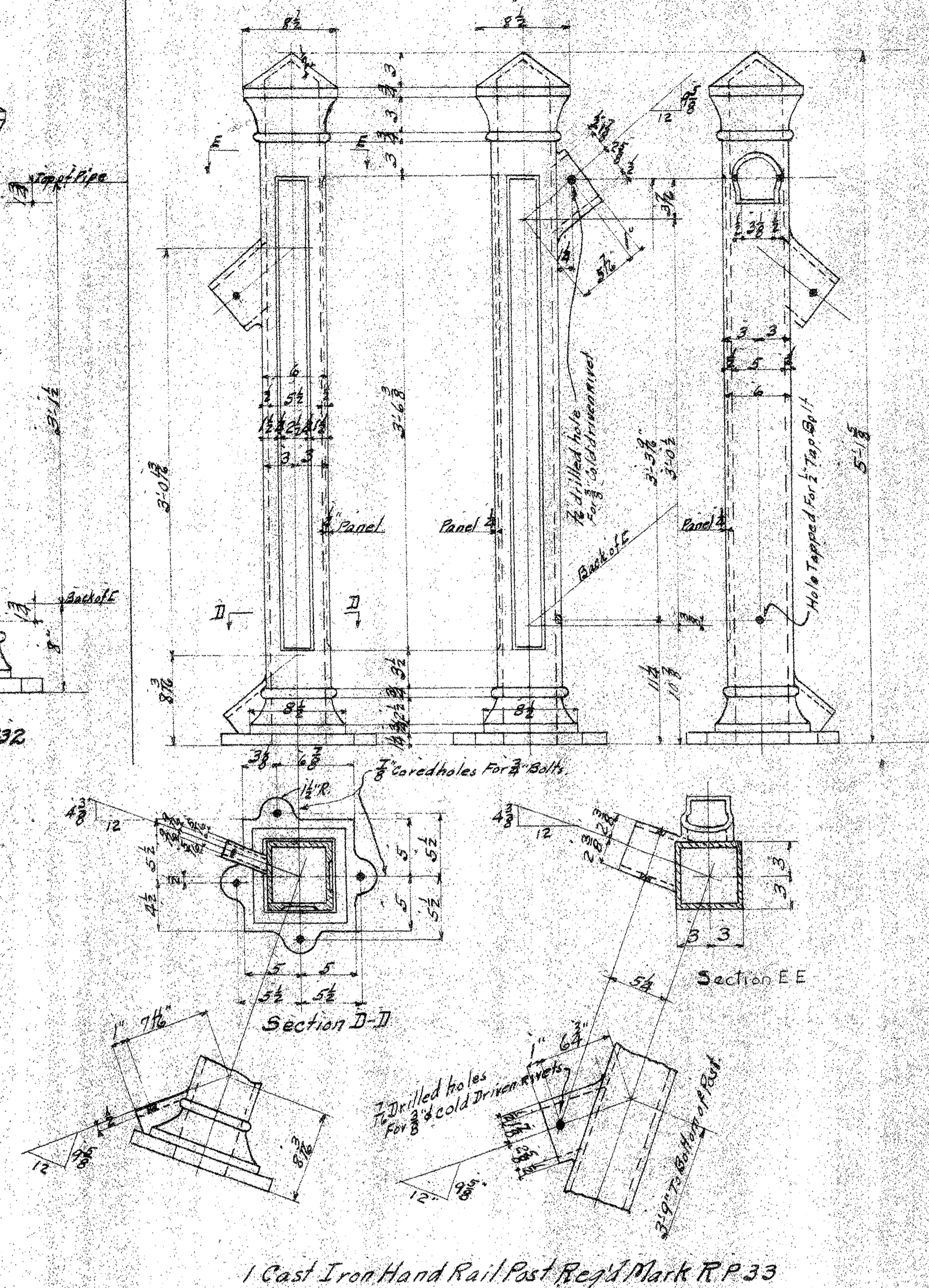
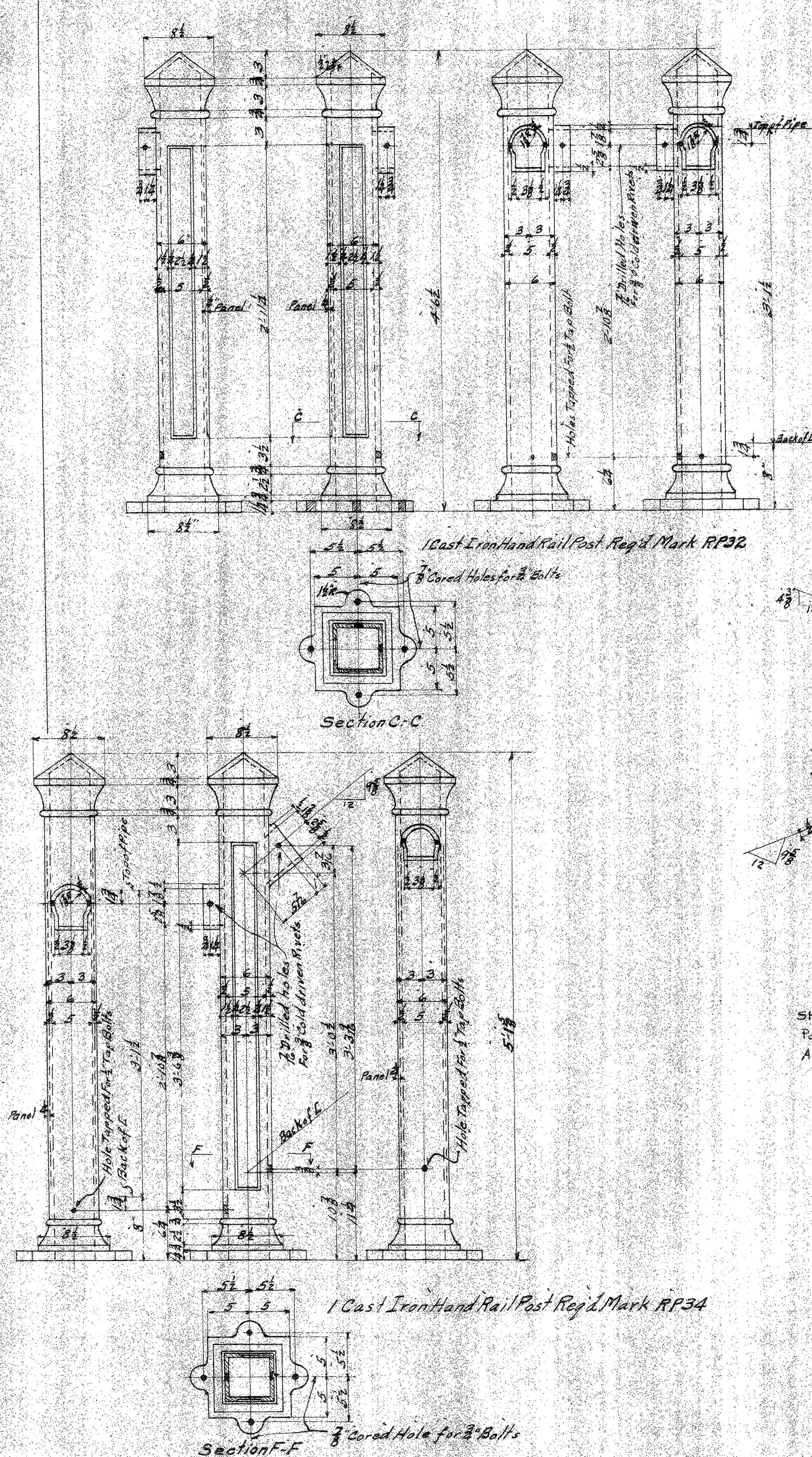
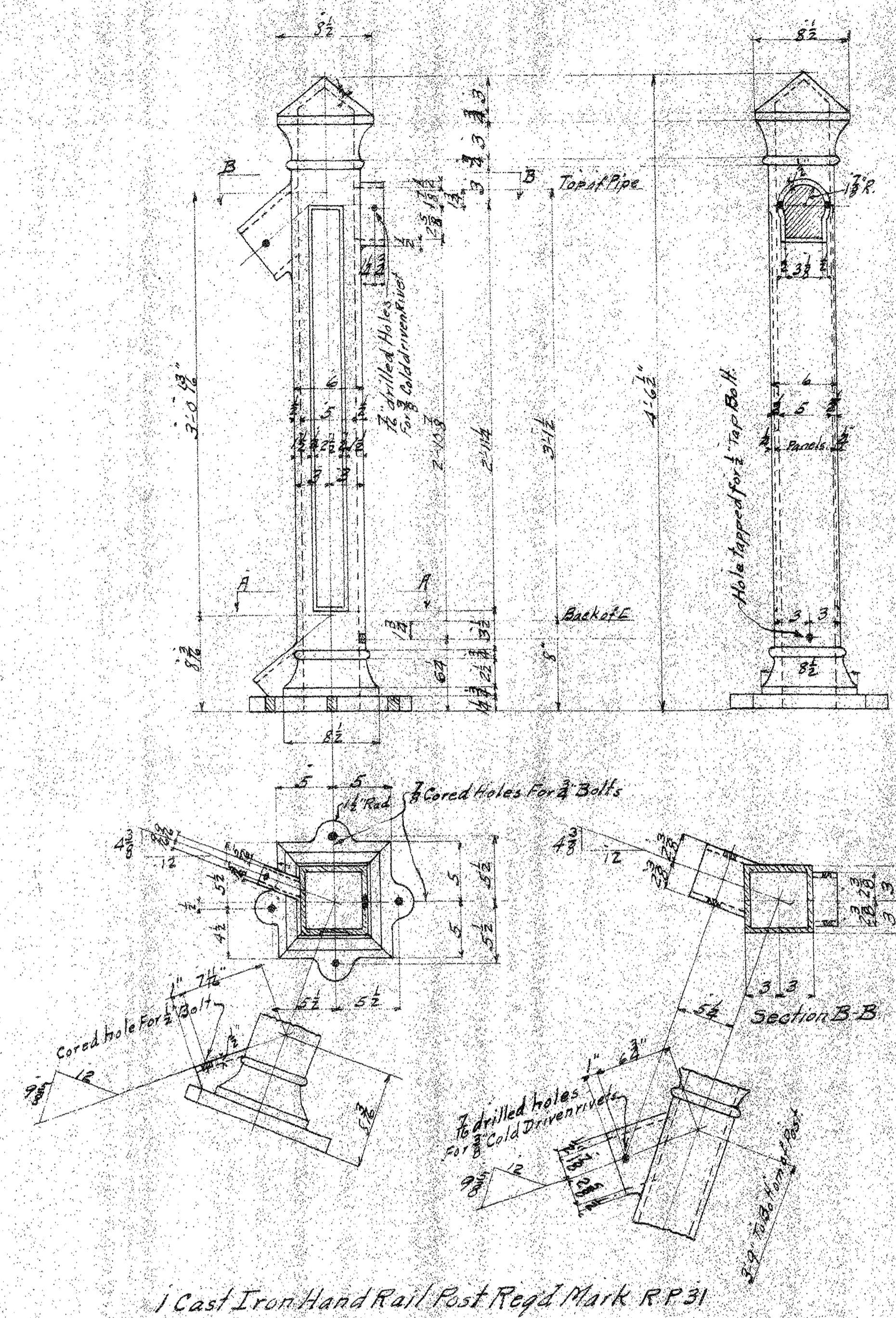
- |                               |                               |
|-------------------------------|-------------------------------|
| 1 Angle Req'd as shown Mark a | 1 Angle Req'd as shown Mark f |
| 1 " " Opp Hand " dL           | 2 Filters " " " " g           |
| 1 " " as shown " dR           | 1 Plate " " " " h             |
| 1 " " Opp Hand " dL           |                               |
| 1 " " as shown " dR           |                               |
| 1 " " Opp Hand " dL           |                               |
| 1 " " as shown " dR           |                               |
| 1 " " Opp Hand " dL           |                               |

Gen. Note:-  
 Shop Paint - Patterson-Sargents Nobrac  
 All parts one coat in shop

# BOROUGH OF BUTLER PA. WAYNE STREET VIADUCT.

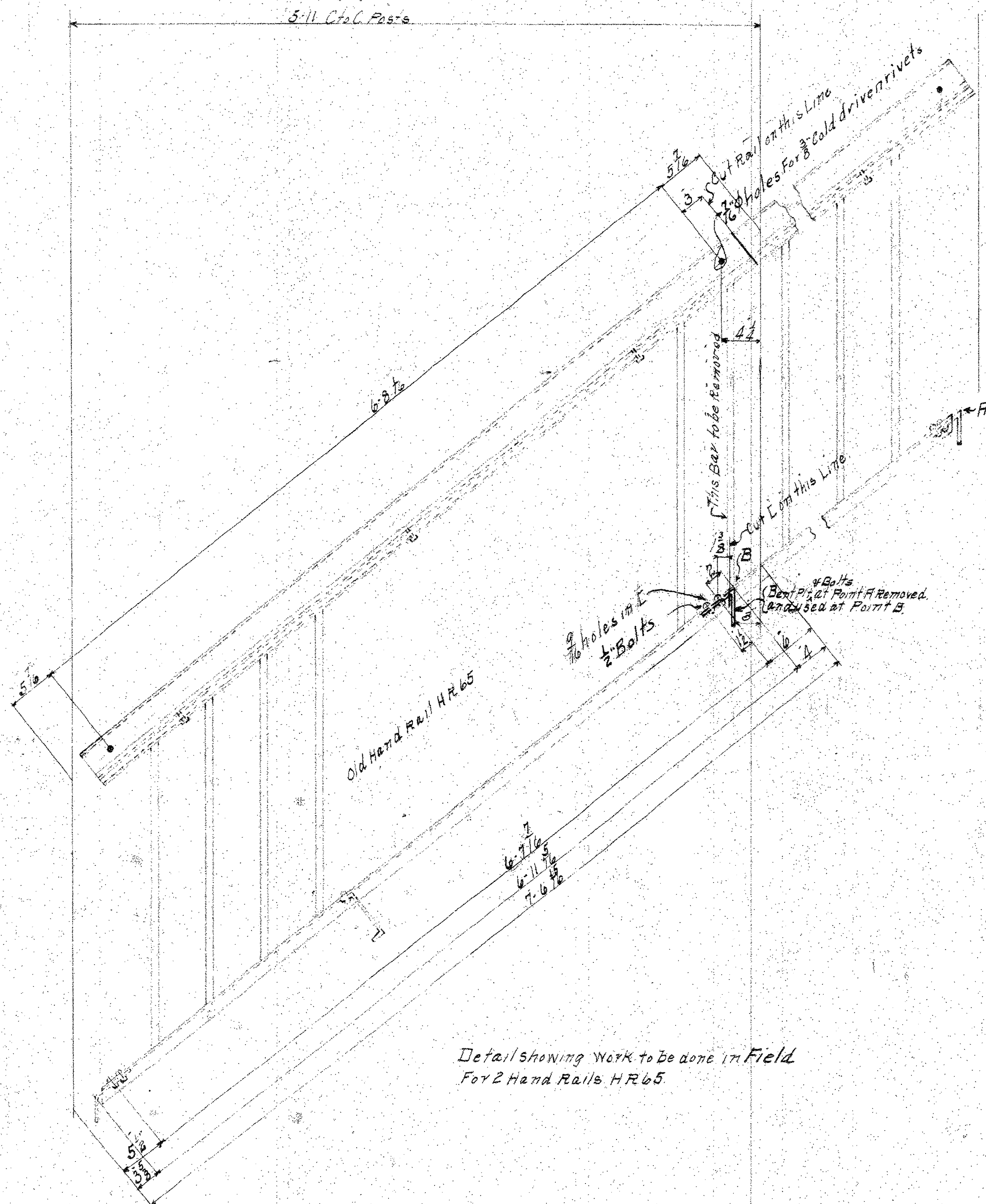
DETAIL OF STAIRS REVISED  
 MADE BY W.T.W. CHECKED BY R.S. DATE 8-31  
 FORT PITT BRIDGE WORKS CANONSBURG



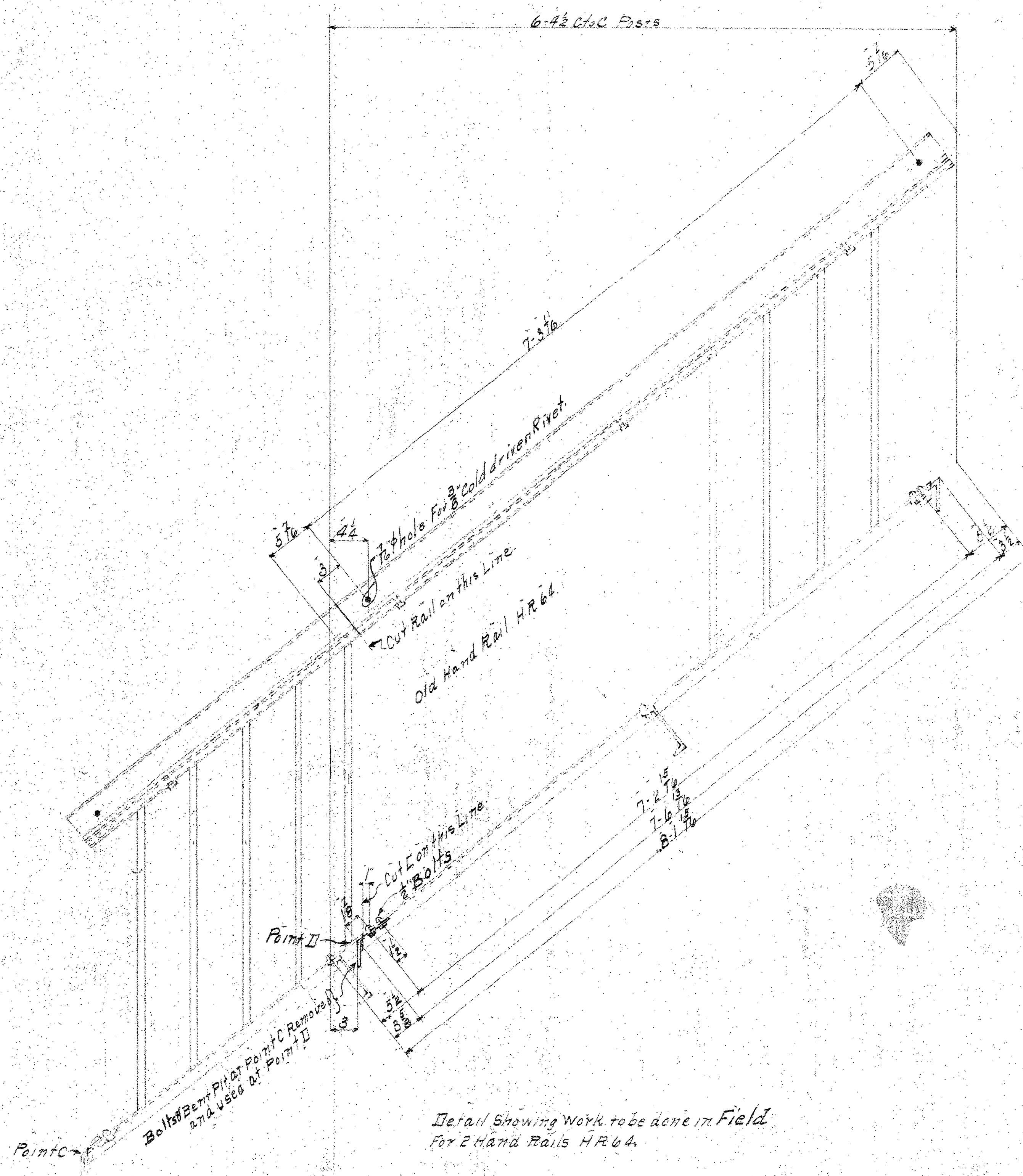


General Note  
Shop Paint - Patterson Sargent's Nobrac  
Parts in contact to receive one coat before assembling  
All other parts one coat in shop.

BOROUGH OF BUTLER PA.  
WAYNE STREET VIADUCT.  
DETAILS OF CAST IRON HAND RAIL POSTS  
MADE BY R.S. CHECKED BY W.T.W. DATE 7-1-13  
FORT PITT BRIDGE WORKS, CANONSBURG PA



Detail showing work to be done in field  
For 2 Hand Rails HR 65

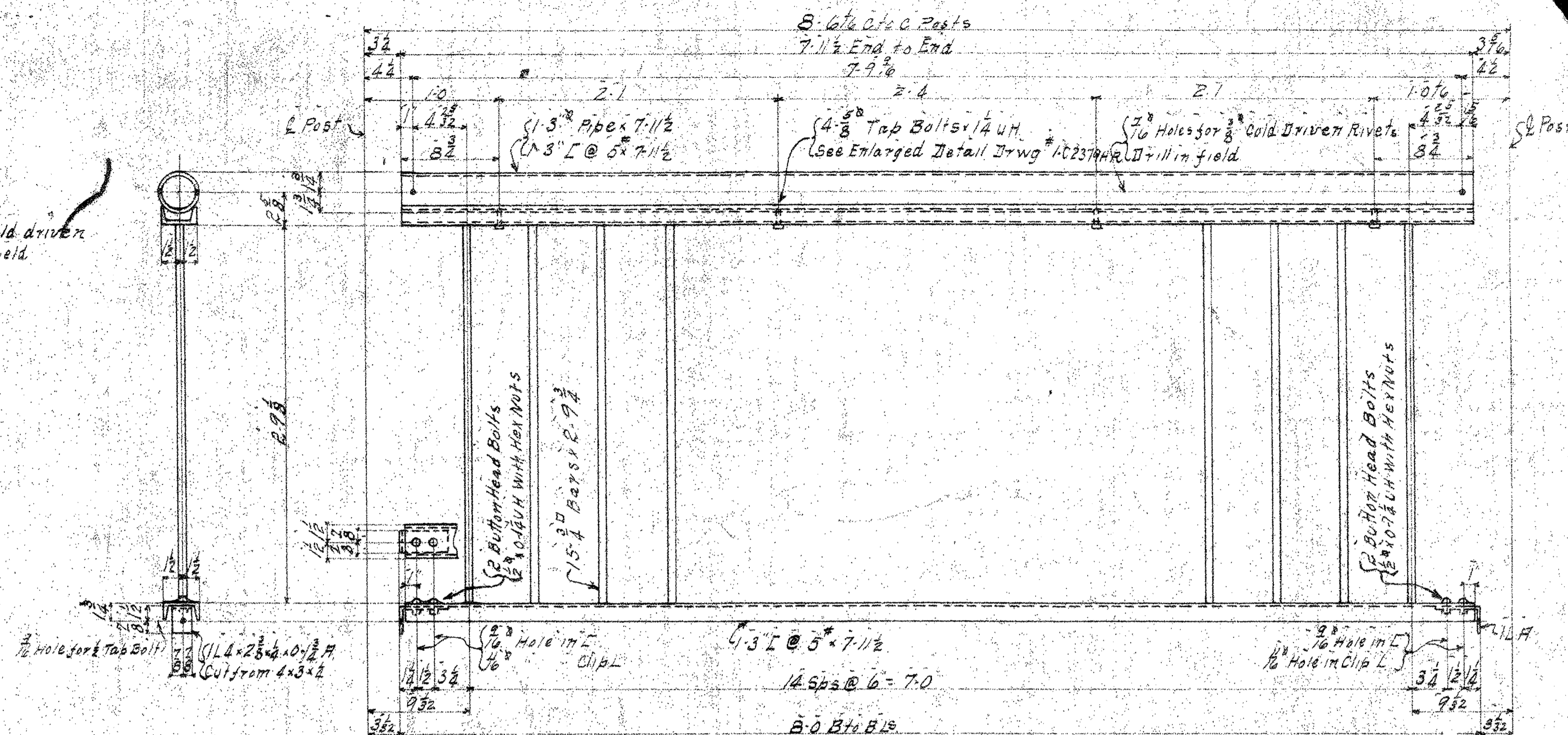


Detail showing work to be done in field  
For 2 Hand Rails HR 64

**BOROUGH OF BUTLER PA.  
WAYNE STREET VIADUCT.**

DETAIL OF HAND RAIL REVISED.  
MADE BY W.B. CHECKED BY W.T.W. DATE 9-1-15

FORT PITT BRIDGE WORKS CANONSBURG PA

[illegible]

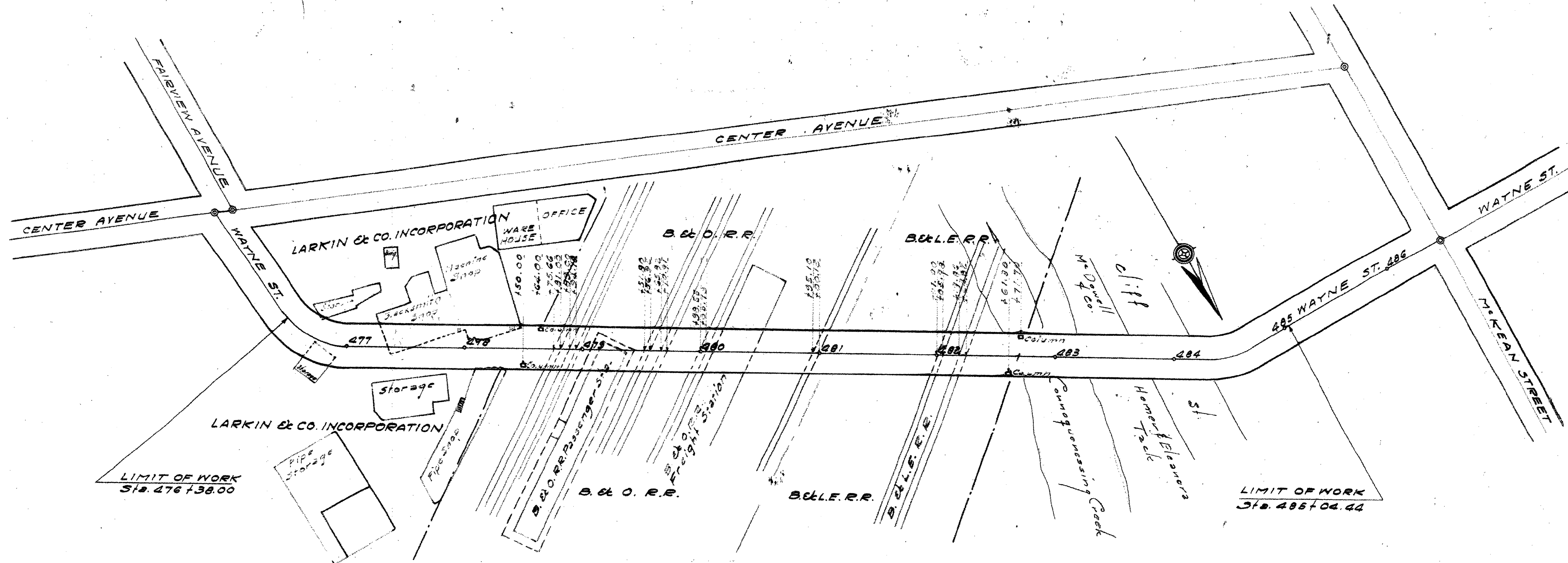
Hand Rail Regd Mark H R 74

MADE BY W.B. CHECKED BY W.T.W. DATE 8-31-15

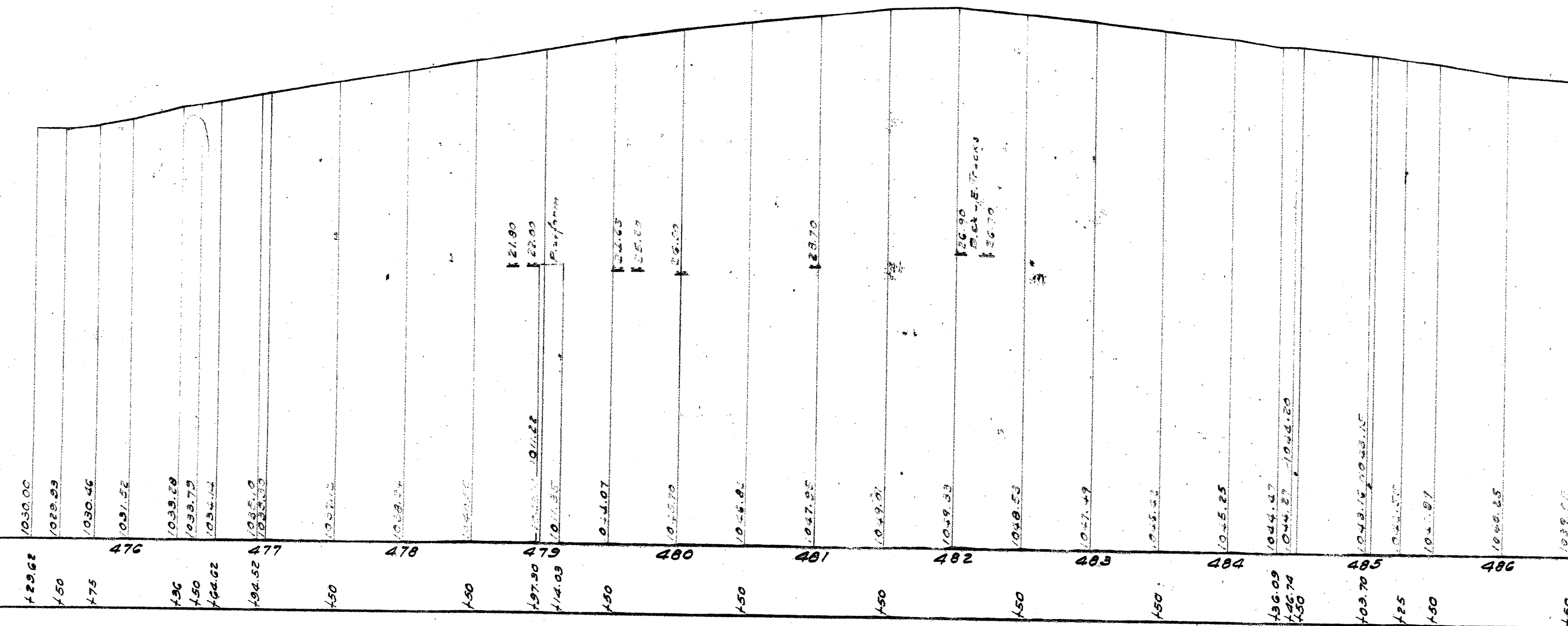
FORT PITT BRIDGE WORKS CANONSBURG PA

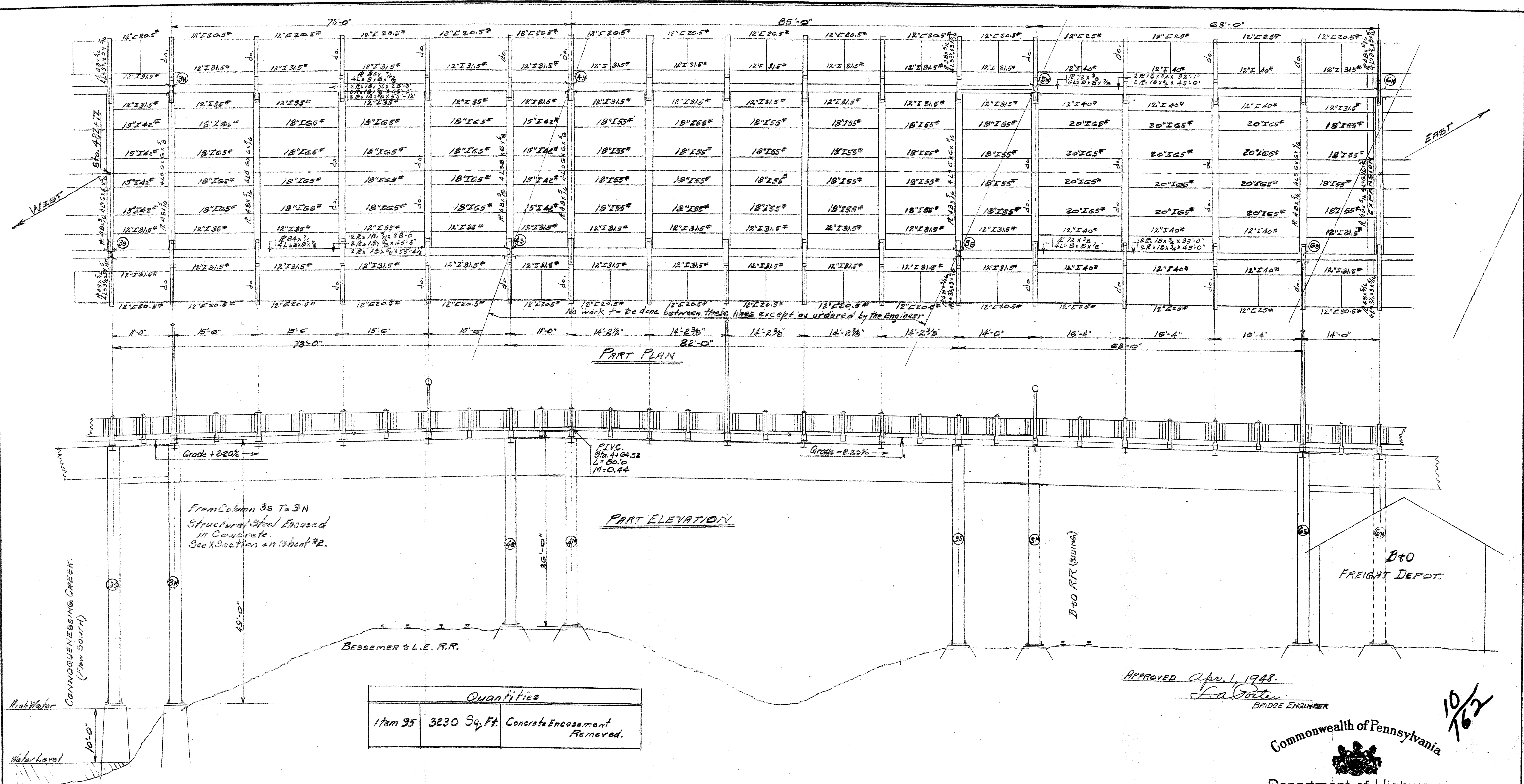
DISTRICT 10 COUNTY BUTLER  
BUTLER CITY

REQUIRED 1



DATUM 970

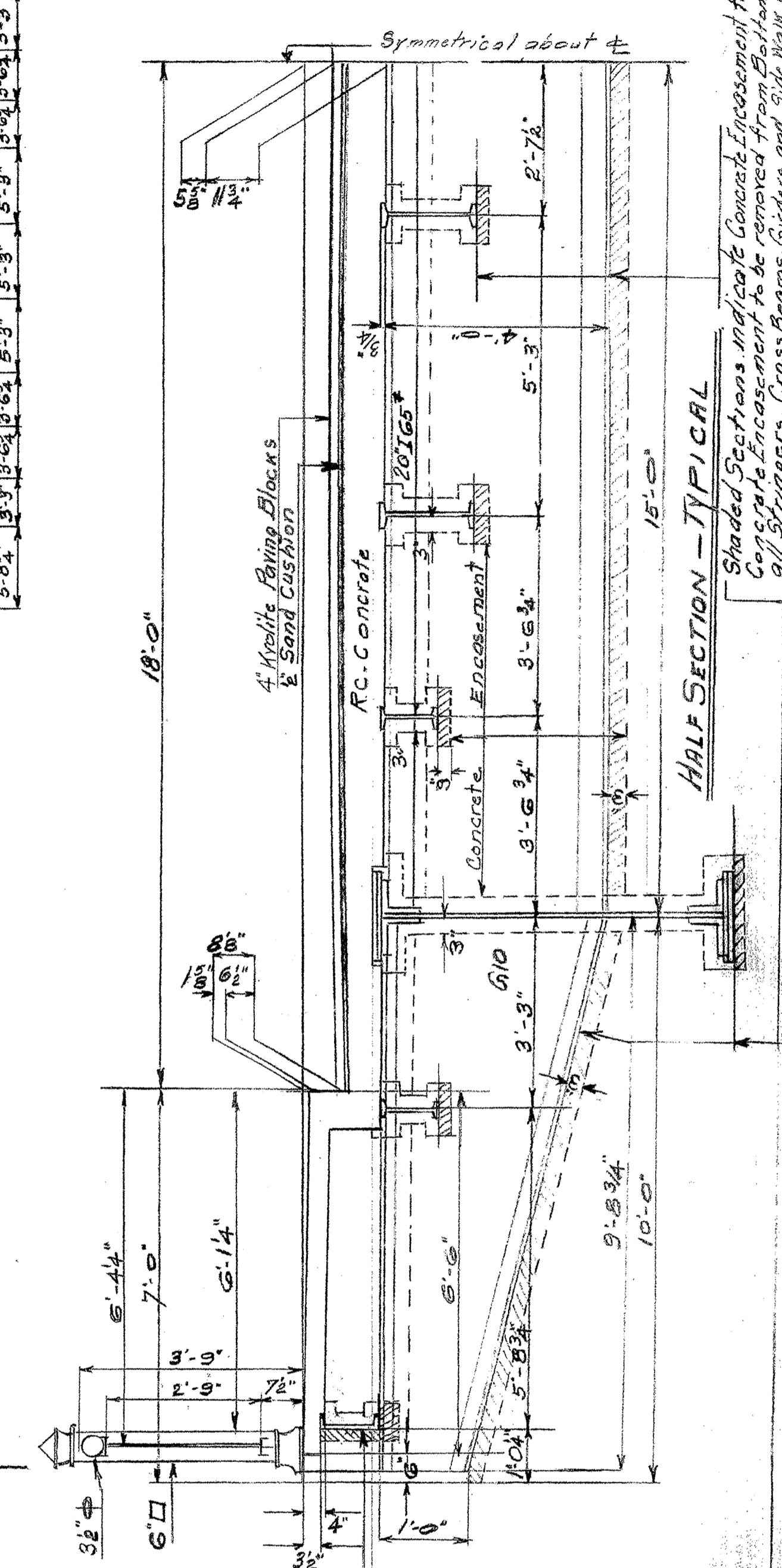
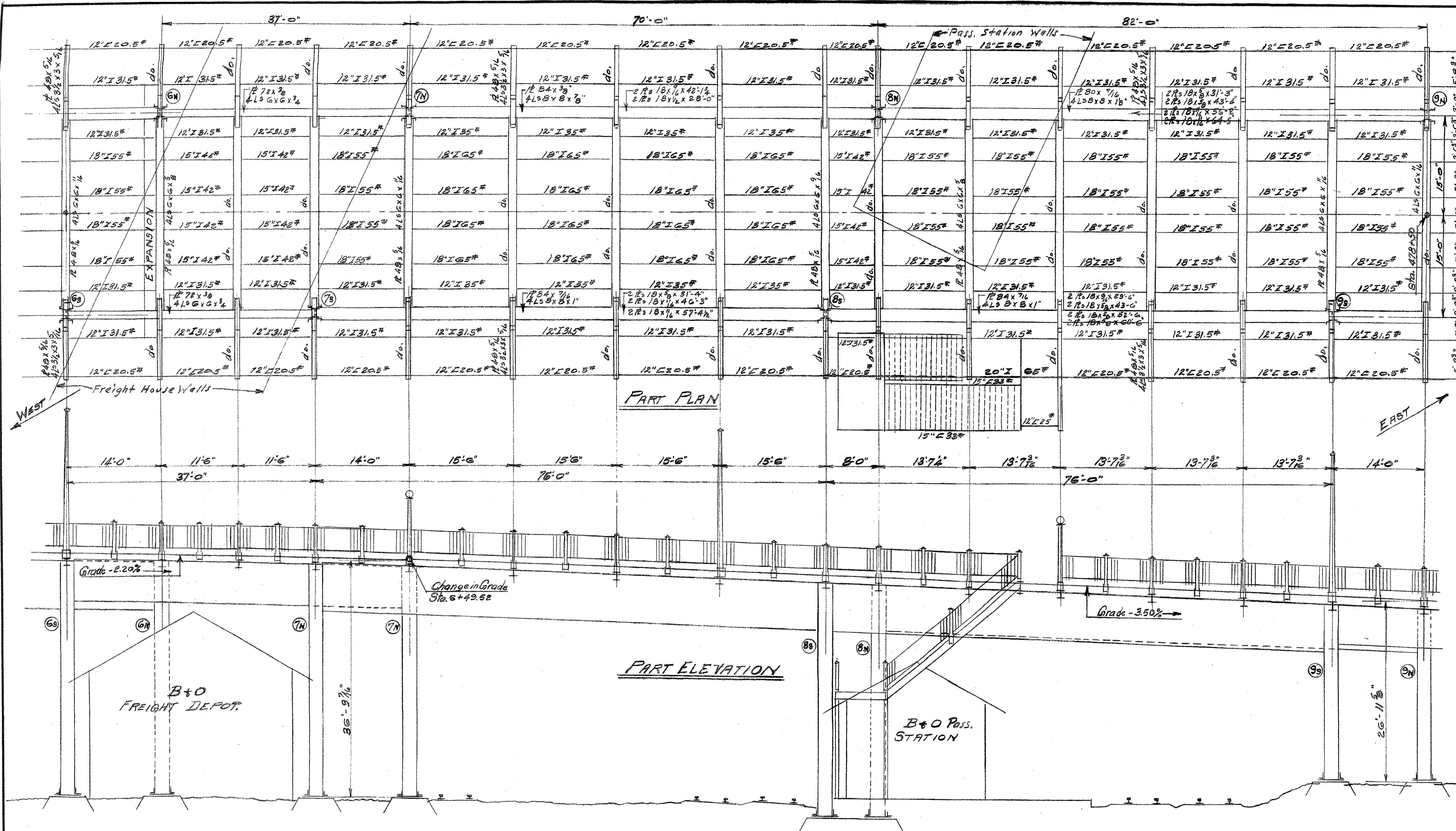




S.N.H. 3-25-48

APPROVED Apr. 1, 1948.  
L. A. Fortin  
BRIDGE ENGINEER

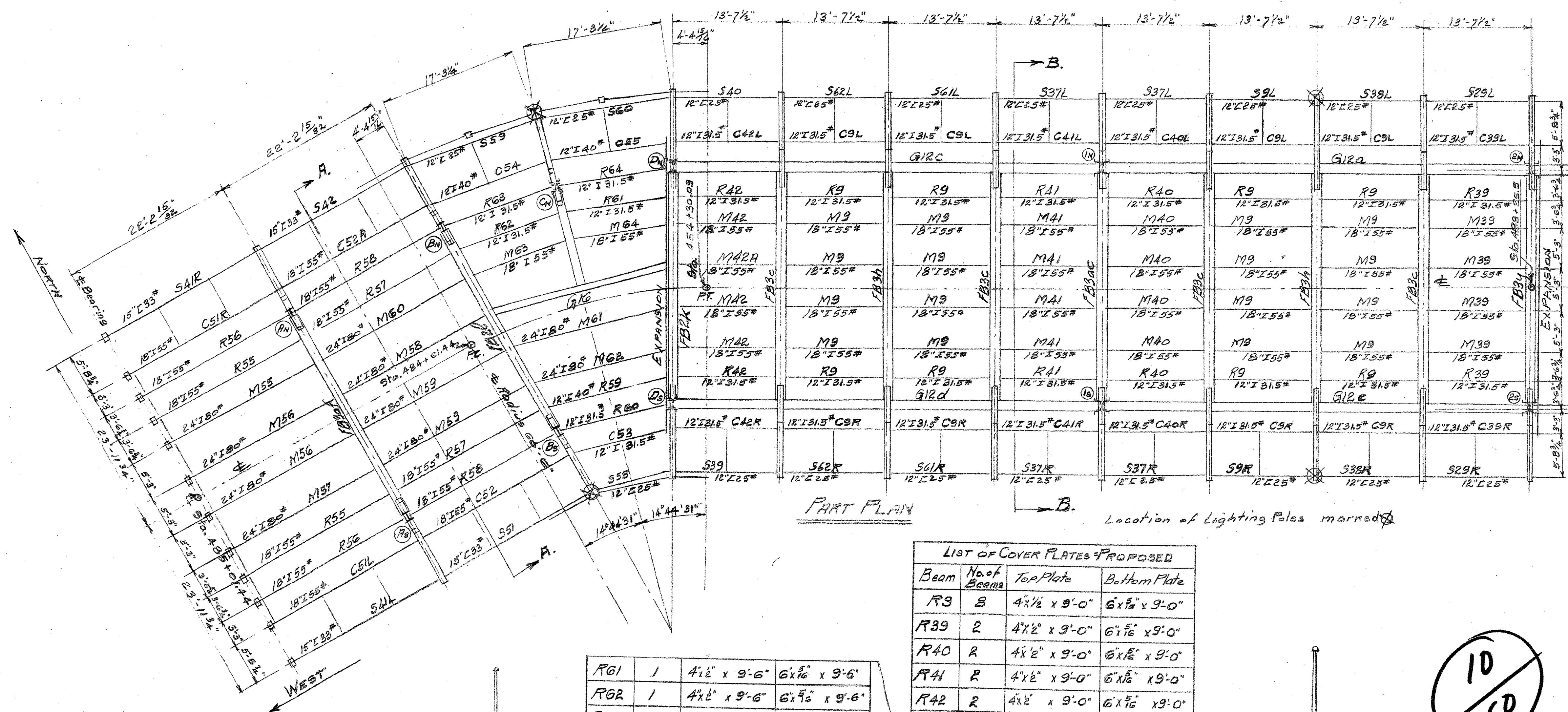
Commonwealth of Pennsylvania  
Department of Highways  
BRIDGE UNIT  
BRIDGE REPAIRS  
WAYNE STREET VIADUCT  
ROUTE 10030 STA 480+61  
BUTLER COUNTY.  
Scale: 1/8" = 1 Foot.  
R394A



APPROVED Apr. 1, 1948.  
*G. A. Porter*  
 BRIDGE ENGINEER

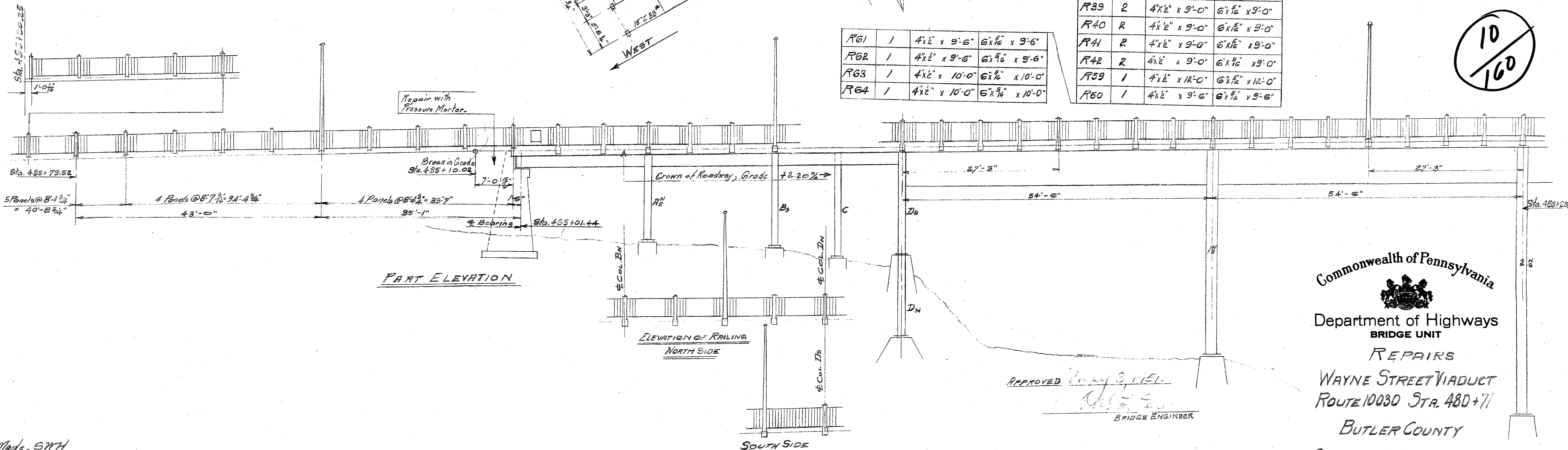
Commonwealth of Pennsylvania  
 Department of Highways  
 BRIDGE UNIT  
 BRIDGE REPAIRS  
 WAYNE STREET VIADUCT  
 ROUTE 10030 STA. 480+61  
 BUTLER COUNTY.  
 Scales: 1/2" = 1' Foot.

QUANTITIES		
Item 28	1056	C.Y. Class A Concrete.
Item 29	21	C.Y. Class B Concrete.
Item 30	296180	Lbs. Reinforcement Bars.
Item 32	35560	Lbs. Fabricated Structural Steel.
Item 40	L.S.	Removal of Portion of Existing Bridge.
Item 96	L.S.	Painting.
Item 47	6	Bags Cement Used in Pressure Mortar Build-Up.
Item 95	624	Sq. Feet, Blast Plates
Item 3	33	Cu. Yds. Class 2 Excavation.



LIST OF COVER PLATES PROPOSED			
Beam	No. of Beams	Top Plate	Bottom Plate
R3	2	4'x1/2" x 9'-0"	6'x1/2" x 9'-0"
R39	2	4'x1/2" x 9'-0"	6'x1/2" x 9'-0"
R40	2	4'x1/2" x 9'-0"	6'x1/2" x 9'-0"
R41	2	4'x1/2" x 9'-0"	6'x1/2" x 9'-0"
R42	2	4'x1/2" x 9'-0"	6'x1/2" x 9'-0"
R59	1	4'x1/2" x 12'-0"	6'x1/2" x 12'-0"
R60	1	4'x1/2" x 9'-6"	6'x1/2" x 9'-6"

R61	1	4'x1/2" x 9'-6"	6'x1/2" x 9'-6"
R62	1	4'x1/2" x 9'-6"	6'x1/2" x 9'-6"
R63	1	4'x1/2" x 10'-0"	6'x1/2" x 10'-0"
R64	1	4'x1/2" x 10'-0"	6'x1/2" x 10'-0"



APPROVED *May 3, 1961*  
*[Signature]*  
 BRIDGE ENGINEER

Commonwealth of Pennsylvania  
 Department of Highways  
 BRIDGE UNIT  
 REPAIRS

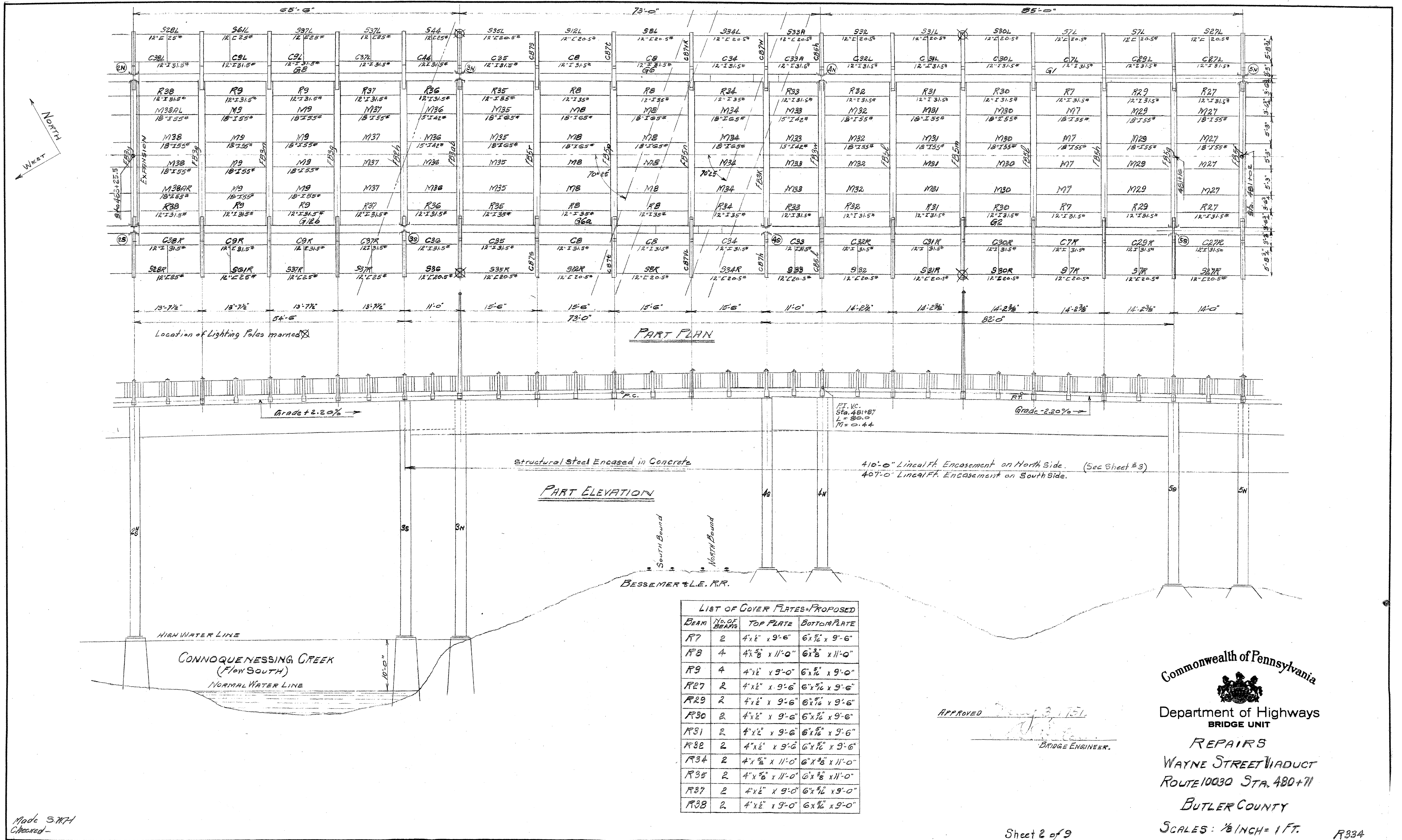
WAYNE STREET VIADUCT  
 ROUTE 10030 STA. 480+71

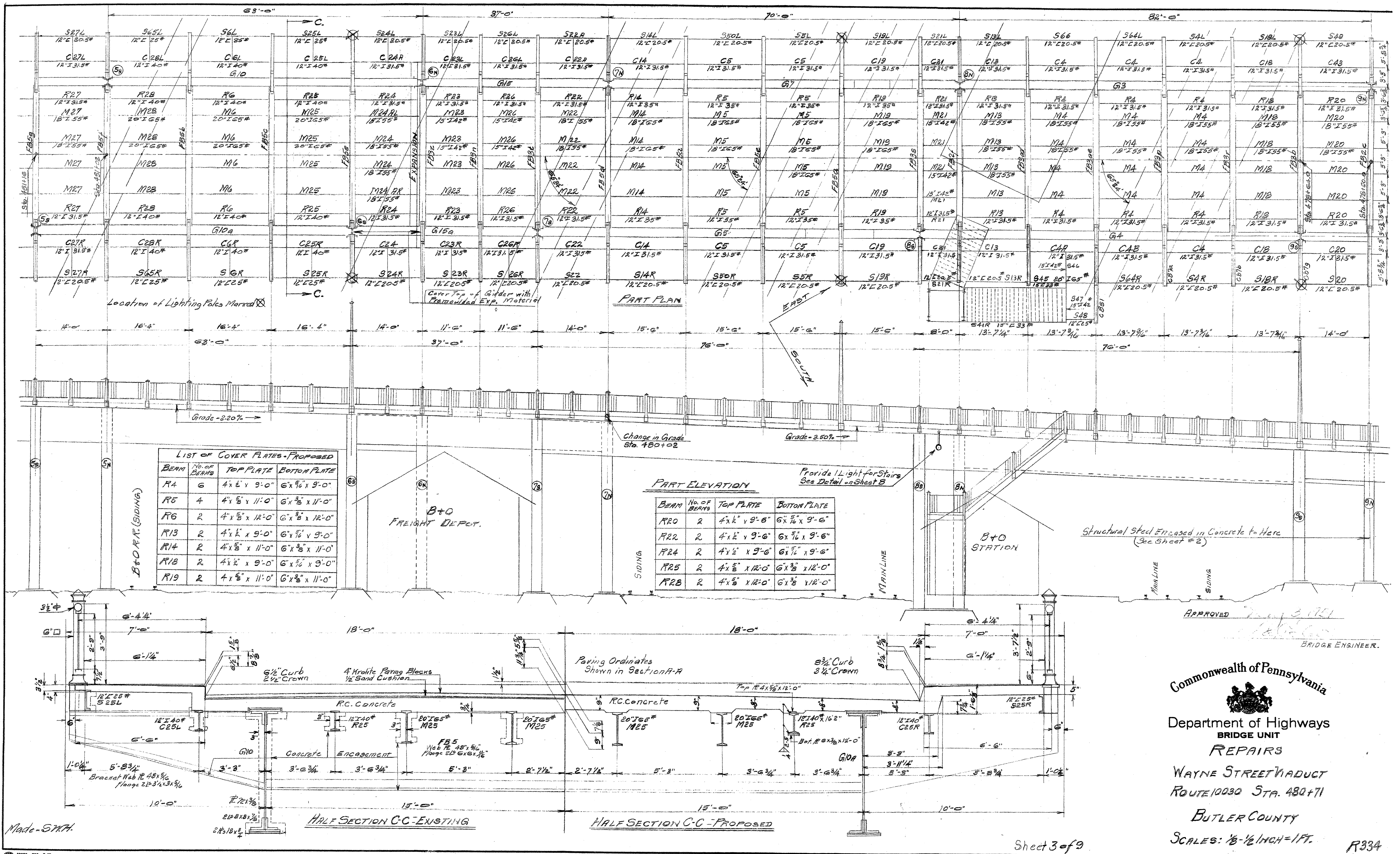
BUTLER COUNTY

SCALES: 1/8" = 1 FT.

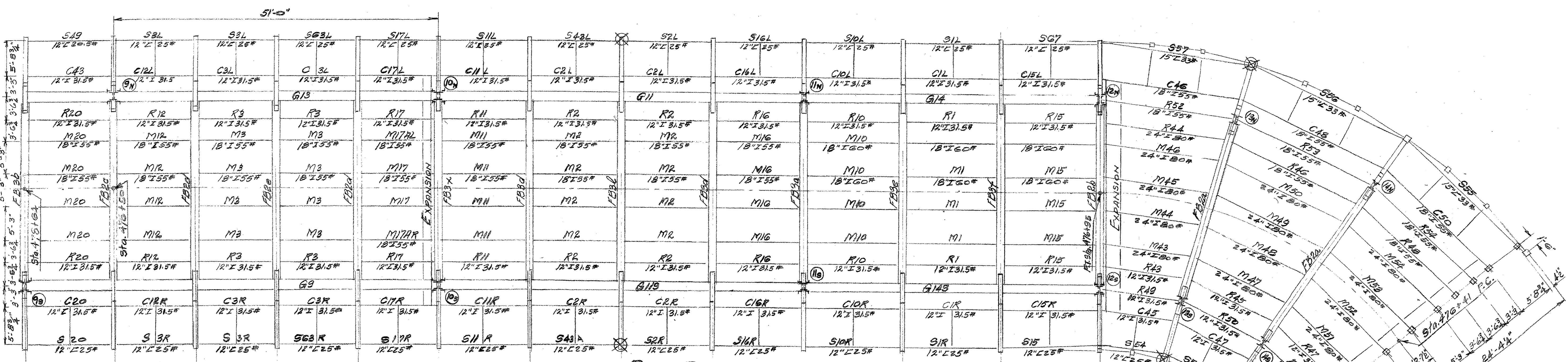
Sheet 1 of 9

R334



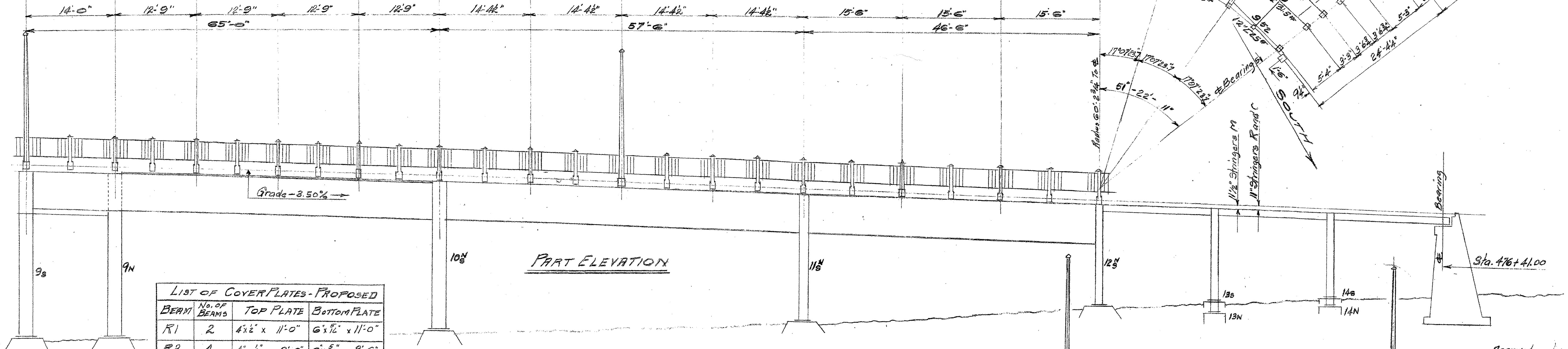


Commonwealth of Pennsylvania  
 Department of Highways  
 BRIDGE UNIT  
 REPAIRS  
 WAYNE STREET VIADUCT  
 ROUTE 10030 STA. 480+71  
 BUTLER COUNTY  
 SCALES: 1/8" = 1 FT.  
 R334



Location of Lighting Poles Marked X

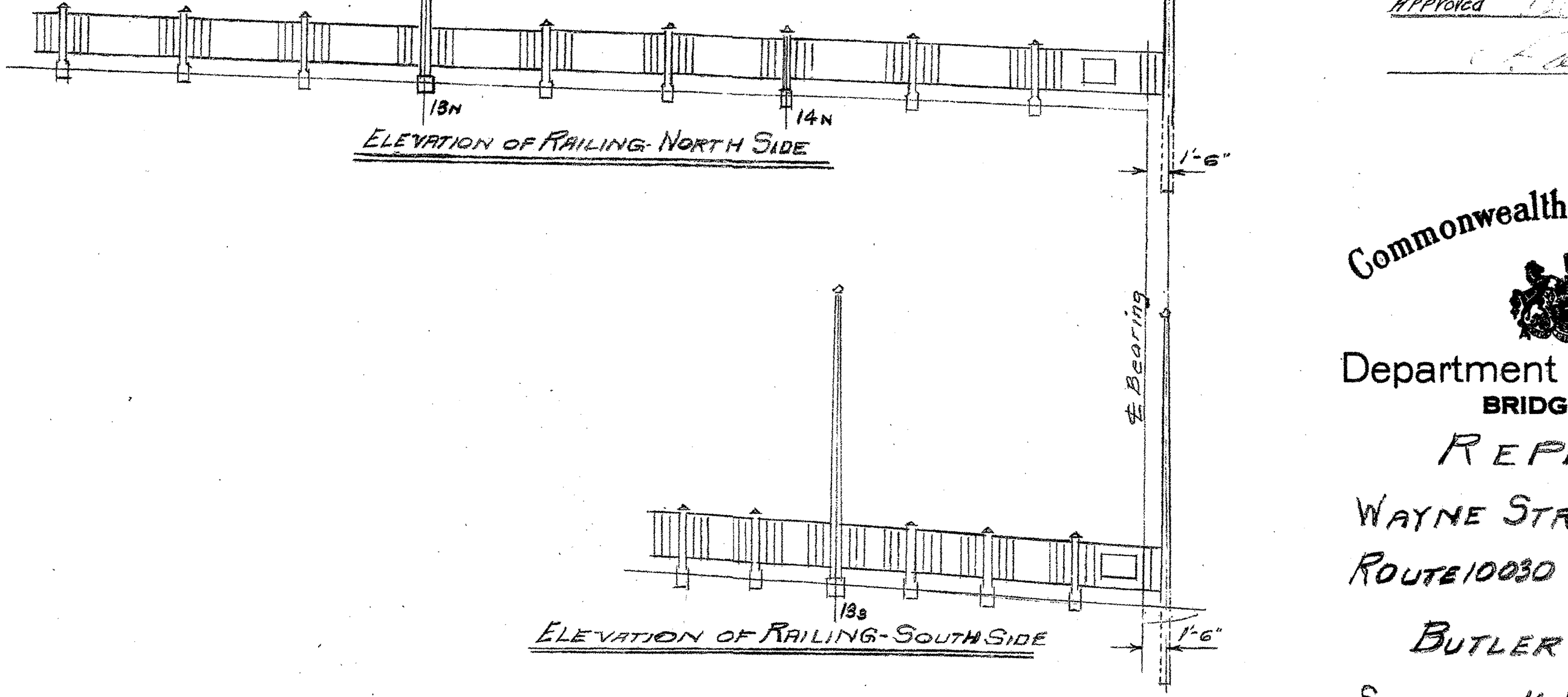
PART PLAN



PART ELEVATION

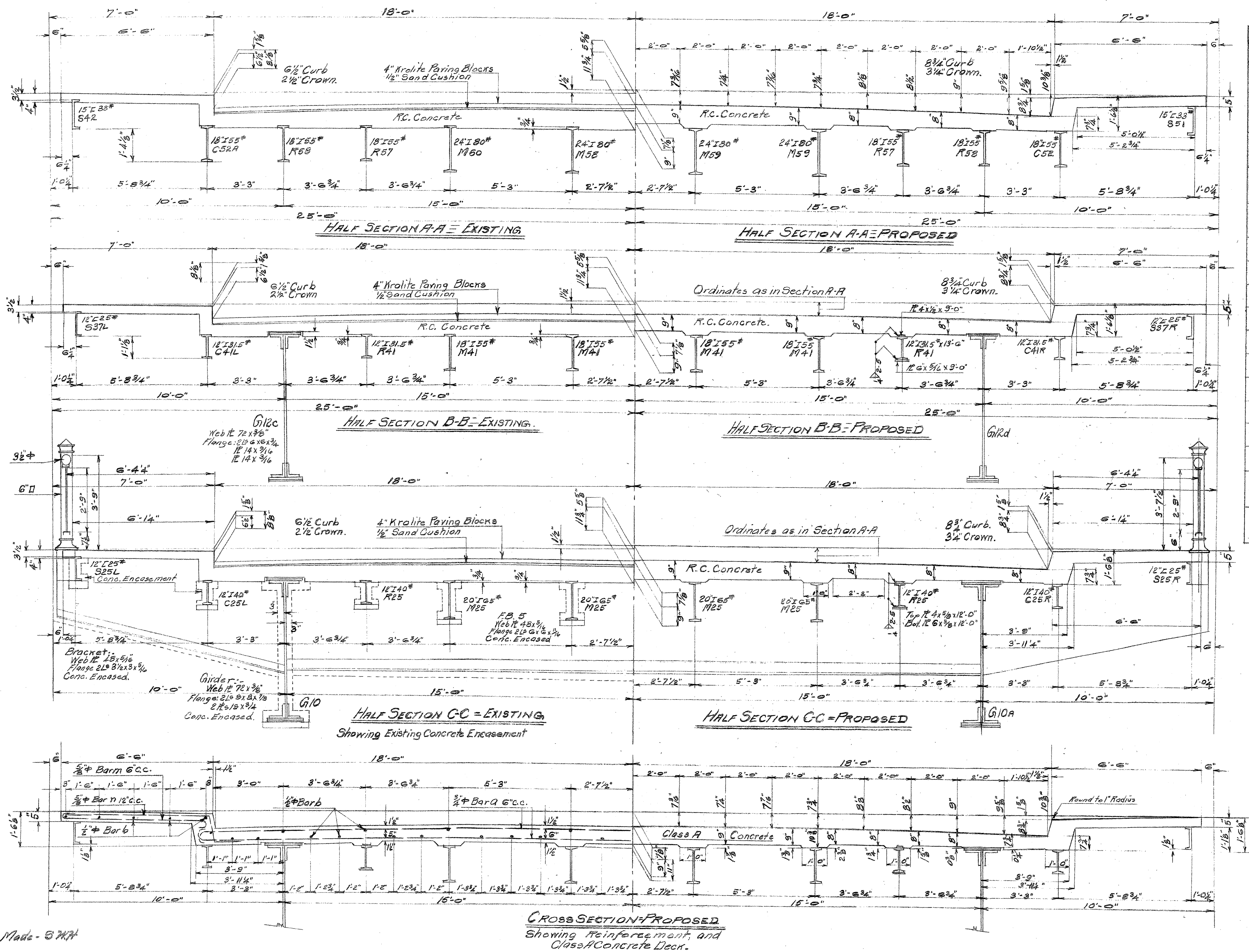
LIST OF COVER PLATES - PROPOSED				
BEAM	NO. OF BEAMS	TOP PLATE	BOTTOM PLATE	
R1	2	4' x 2" x 11'-0"	6' x 1/2" x 11'-0"	
RR	4	4' x 2" x 9'-6"	6' x 1/2" x 9'-6"	
R3	4	4' x 2" x 8'-6"	6' x 1/2" x 8'-6"	
R19	2	4' x 2" x 11'-0"	6' x 1/2" x 11'-0"	
R11	2	4' x 2" x 9'-6"	6' x 1/2" x 9'-6"	
R12	2	4' x 2" x 8'-6"	6' x 1/2" x 8'-6"	
R15	2	4' x 2" x 11'-0"	6' x 1/2" x 11'-0"	
R16	2	4' x 2" x 9'-6"	6' x 1/2" x 9'-6"	
R17	2	4' x 2" x 8'-6"	6' x 1/2" x 8'-6"	
R43	1	4' x 2" x 9'-6"	6' x 1/2" x 9'-6"	
R45	1	4' x 2" x 9'-6"	6' x 1/2" x 9'-6"	
R47	1	4' x 2" x 11'-0"	6' x 1/2" x 11'-0"	
R49	1	4' x 2" x 9'-0"	6' x 1/2" x 9'-0"	
R50	1	4' x 2" x 9'-0"	6' x 1/2" x 9'-0"	
R51	1	4' x 2" x 9'-6"	6' x 1/2" x 9'-6"	
Total Number of Pls. 216				
Weight of 216 Plates 14,611 Lbs.				

Made - S.M.H.



Approved May 3, 1951.  
*[Signature]*  
 Bridge Engineer

Commonwealth of Pennsylvania  
 Department of Highways  
 BRIDGE UNIT  
 REPAIRS  
 WAYNE STREET VIADUCT  
 ROUTE 10030 STA. 480+71  
 BUTLER COUNTY  
 SCALES: 1/8" = 1 FT.



Mark	No.	Stock	Bending
A	3160	3/4" x 39'-0"	R-3 36'-8" 4 1/2" R-3
A1	430	3/4" x 19'-6"	R-3 18'-4" 4 1/2"
A2	350	3/4" x 22'-6"	R-3 21'-4" 4 1/2"
b	82	1/2" x 25'-6"	25'-6"
b1	41	1/2" x (10'-0" to 35'-0") Vary by 1/2" One of Each.	(10'-0") to (35'-0")
b2	123	1/2" x 29'-0"	29'-0"
b3	41	1/2" x 27'-4"	27'-4"
b4	328	1/2" x 33'-6"	33'-6"
b5	41	1/2" x 31'-10"	31'-10"
b6	205	1/2" x 35'-6"	35'-6"
b7	41	1/2" x 34'-0"	34'-0"
b8	82	1/2" x 36'-4"	36'-4"
b9	41	1/2" x 35'-0"	35'-0"
b10	82	1/2" x (12'-8" to 26'-0") Vary by 4" Two of Each.	(12'-8") to (26'-0")
b11	41	1/2" x (13'-0" to 27'-2") Vary by 4 1/2" One of Each.	(13'-0") to (27'-2")
m	3550	5/8" x 7'-7"	5'-11 1/2" R-3
n	3550	5/8" x 9'-5"	6'-2" 29 1/2" R-3

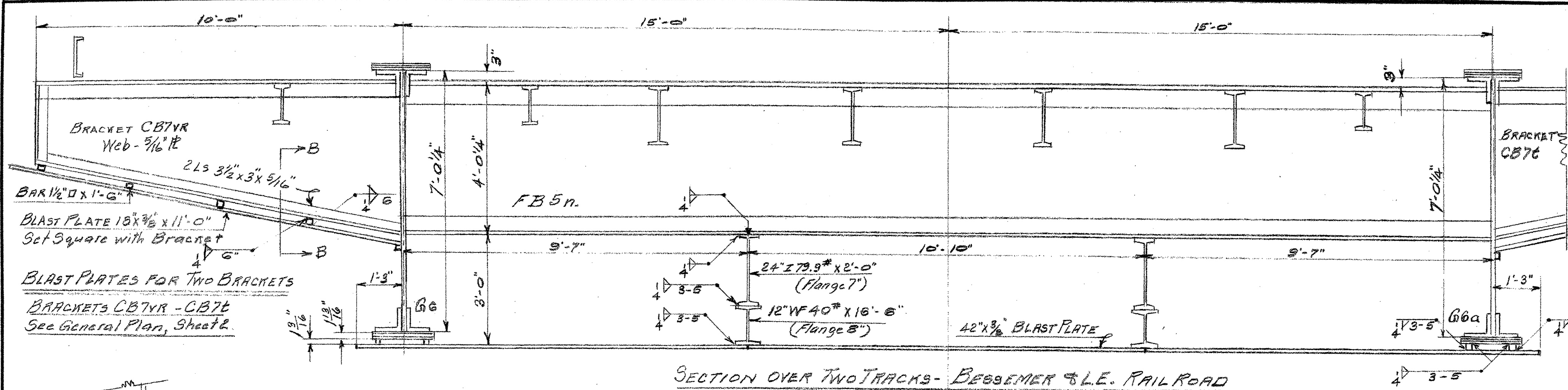
APPROVED *[Signature]*  
 BRIDGE ENGINEER

Commonwealth of Pennsylvania  
 Department of Highways  
 BRIDGE UNIT  
 REPAIRS  
 WAYNE STREET VIADUCT  
 ROUTE 10030 STA. 480+71  
 BUTLER COUNTY

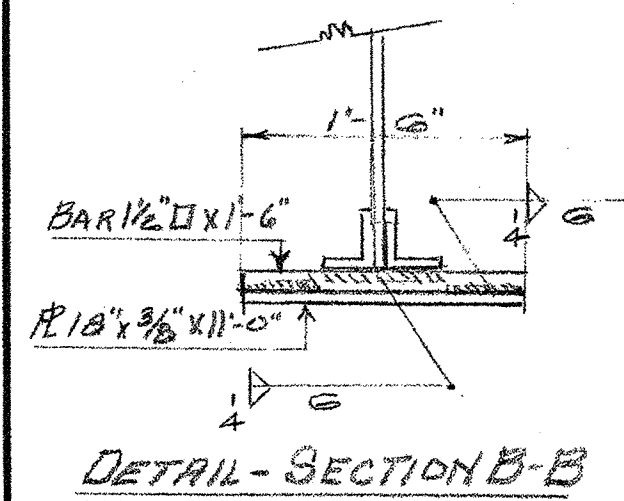
SCALES: 1/2" INCH = 1 FT.

R334

Sheet 5 of 9



SECTION OVER TWO TRACKS - BESSEMER & L.E. RAILROAD

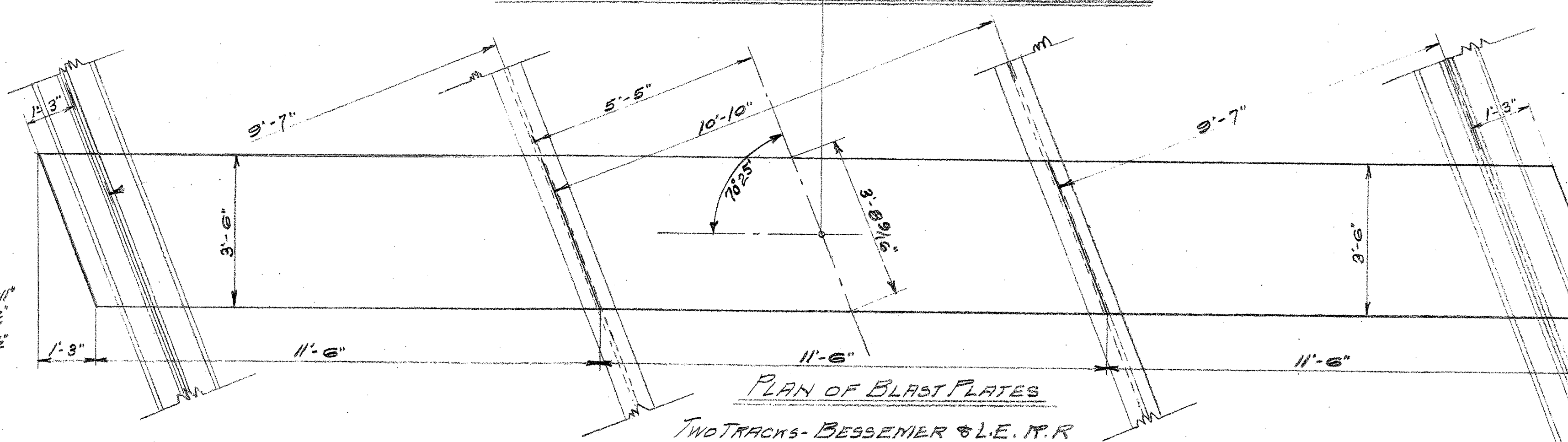


DETAIL - SECTION B-B

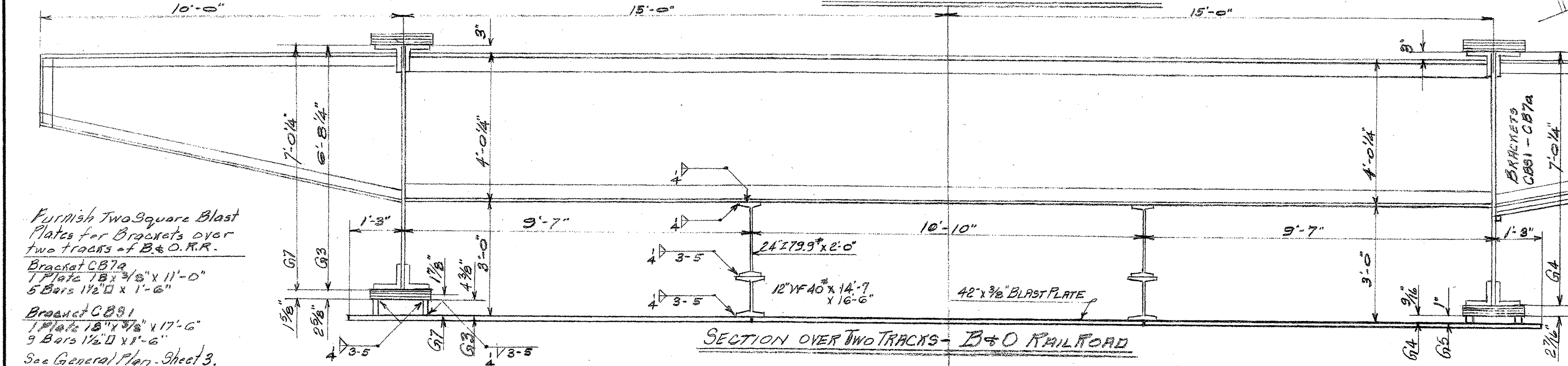
Girder G6  
Web 1/2" x 3/16" x 17'-0"  
210 x 3/16" x 17'-0"  
12 x 3/16" x 55'-4 1/2"  
12 x 3/16" x 45'-0"  
12 x 3/16" x 23'-3"

Girder G6a  
Web 1/2" x 3/16" x 17'-0"  
210 x 3/16" x 17'-0"  
12 x 3/16" x 55'-4 1/2"  
12 x 3/16" x 45'-0"  
12 x 3/16" x 23'-3"

Flange Beam FB 5n  
Web 1/2" x 3/16" x 17'-0"  
210 x 3/16" x 17'-0"



PLAN OF BLAST PLATES  
TWO TRACKS - BESSEMER & L.E. R.R.



SECTION OVER TWO TRACKS - B & O RAILROAD

Furnish Two Square Blast Plates for Brackets over two tracks of B & O R.R.

Bracket CB7A  
1 Plate 18" x 3/16" x 11'-0"  
5 Bars 1/2" x 1'-0"

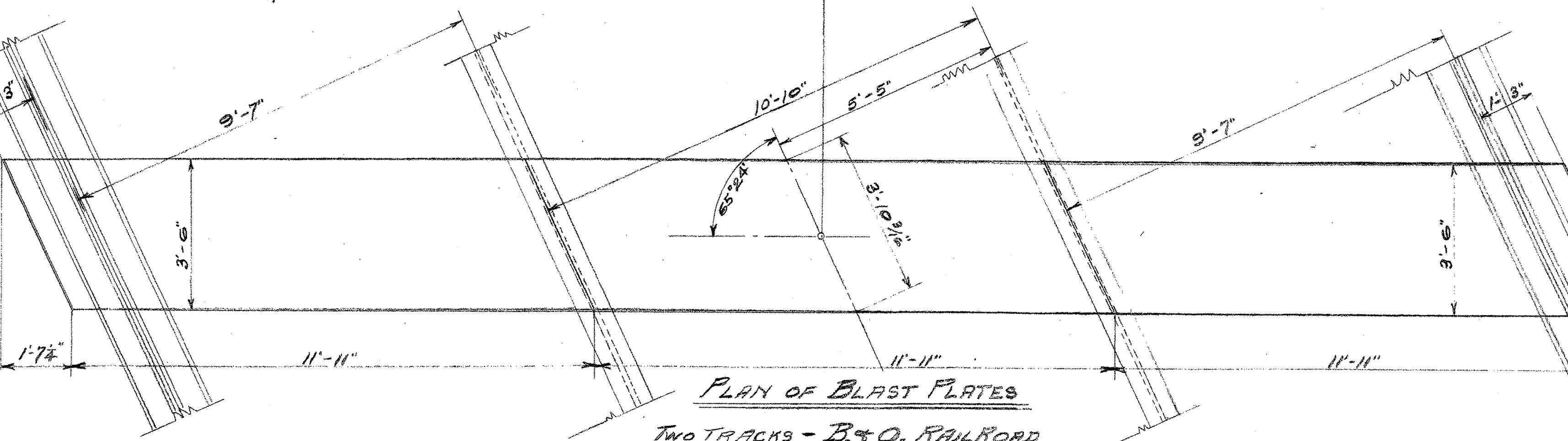
Bracket CB7B  
1 Plate 18" x 3/16" x 17'-0"  
5 Bars 1/2" x 1'-0"

See General Plan - Sheet 3.

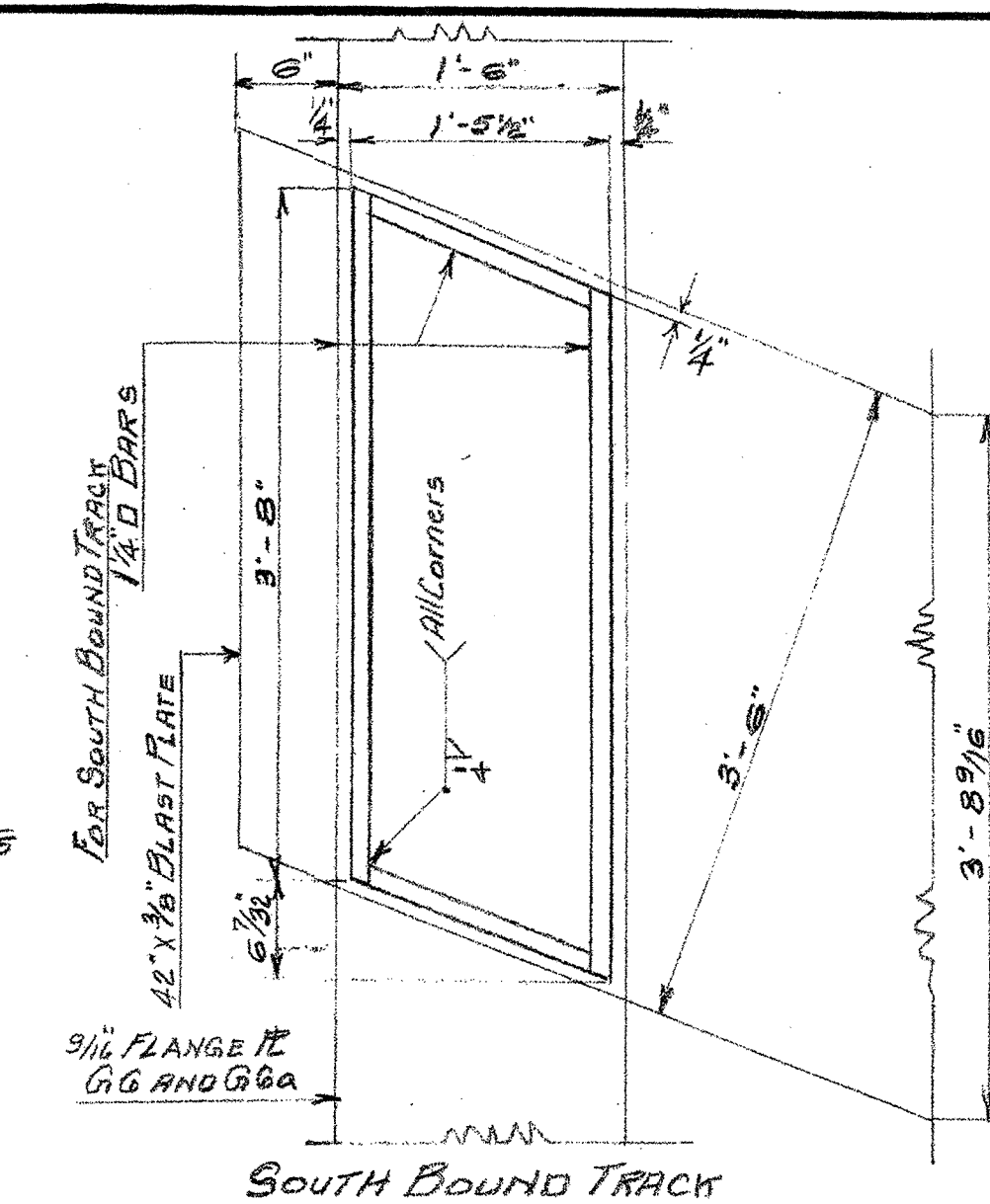
Girder G3  
Web 1/2" x 3/16" x 17'-0"  
210 x 3/16" x 17'-0"  
12 x 3/16" x 55'-4 1/2"  
12 x 3/16" x 45'-0"  
12 x 3/16" x 23'-3"

Girder G7  
Web 1/2" x 3/16" x 17'-0"  
210 x 3/16" x 17'-0"  
12 x 3/16" x 55'-4 1/2"  
12 x 3/16" x 45'-0"  
12 x 3/16" x 23'-3"

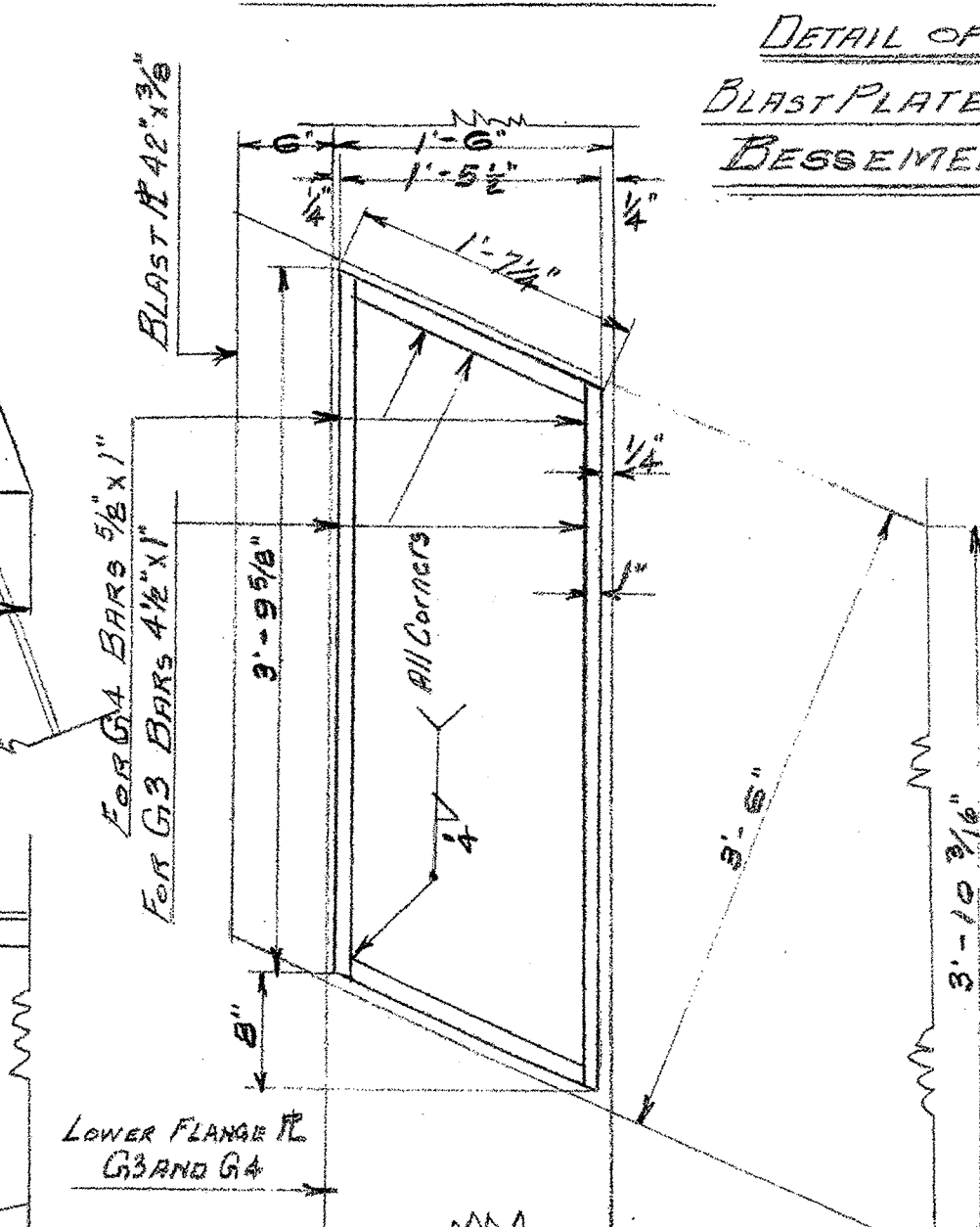
Flange Beam FB 5n  
Web 1/2" x 3/16" x 17'-0"  
210 x 3/16" x 17'-0"



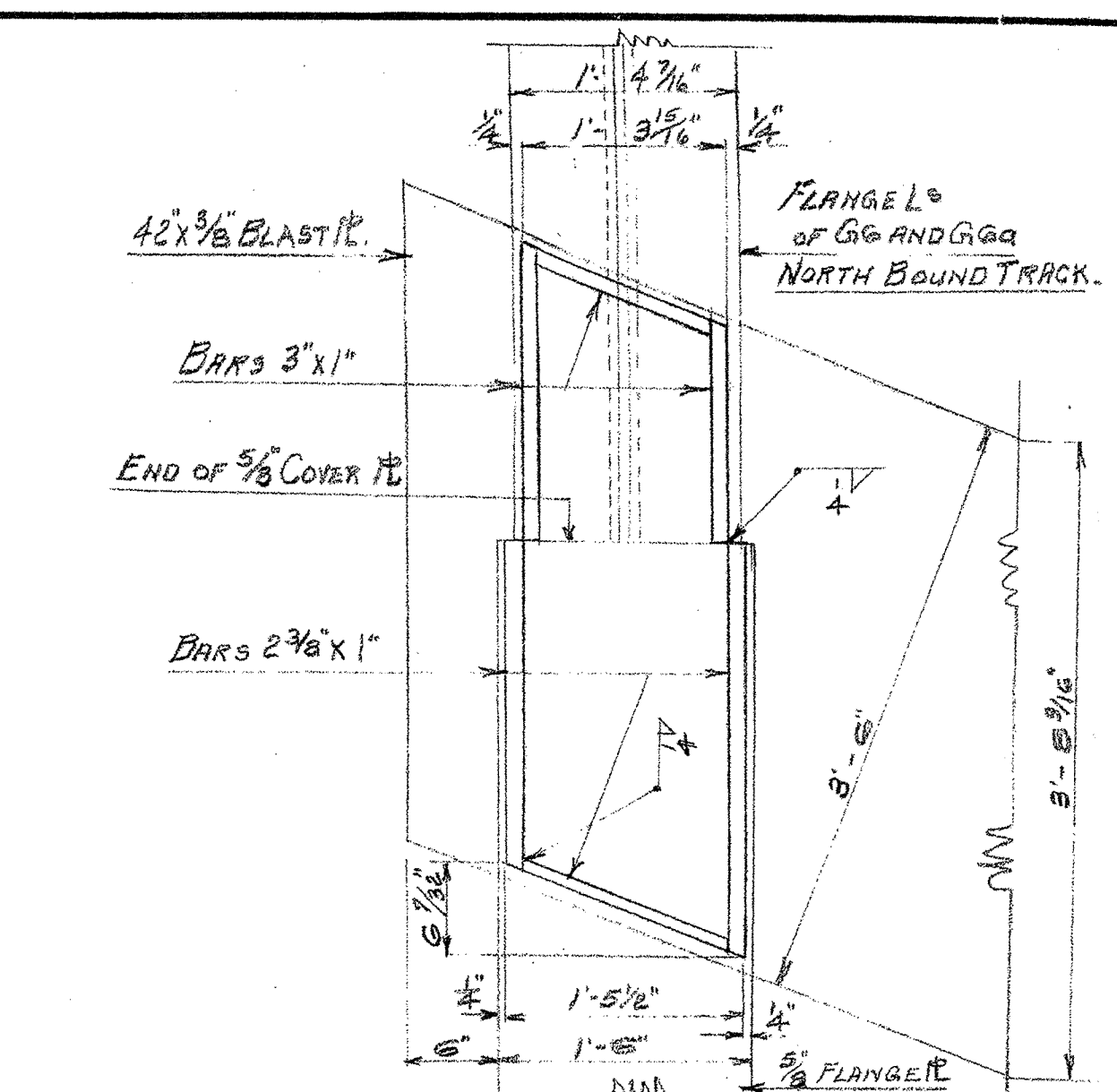
PLAN OF BLAST PLATES  
TWO TRACKS - B & O RAILROAD



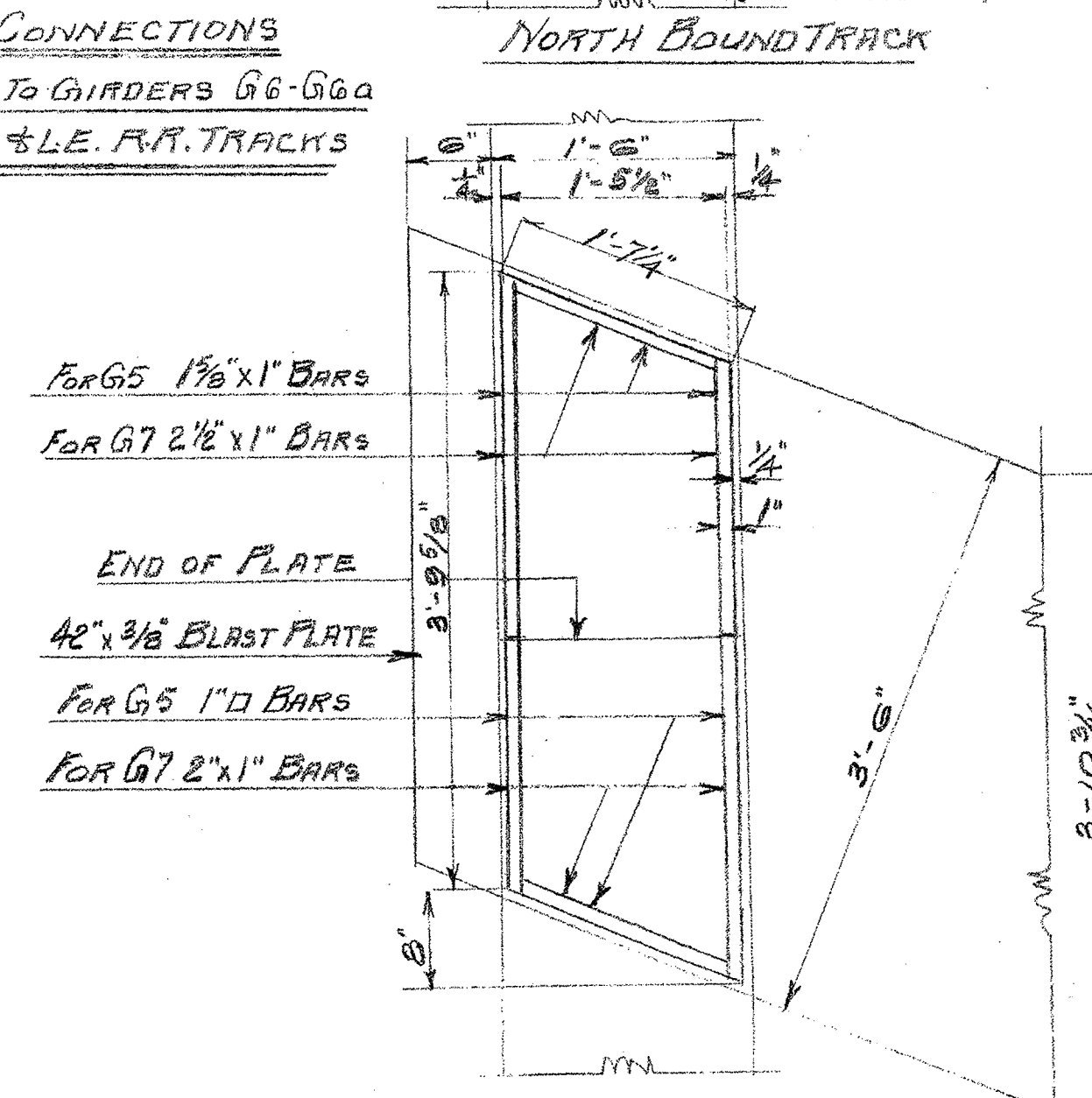
SOUTH BOUND TRACK



EAST TRACK



NORTH BOUND TRACK



WEST TRACK

DETAIL OF CONNECTIONS  
BLAST PLATES TO GIRDERS G6-G6a  
BESSEMER & L.E. R.R. TRACKS

DETAIL OF CONNECTIONS  
BLAST PLATES TO GIRDERS G3-G4 AND G5-G6  
B & O R.R. TRACKS

Blast Plate Quantities	
2 Tracks, Bessemer & L.E. R.R.	308
2 Tracks, B & O R.R.	316
Total Blast Plates, Sq. Ft.	624

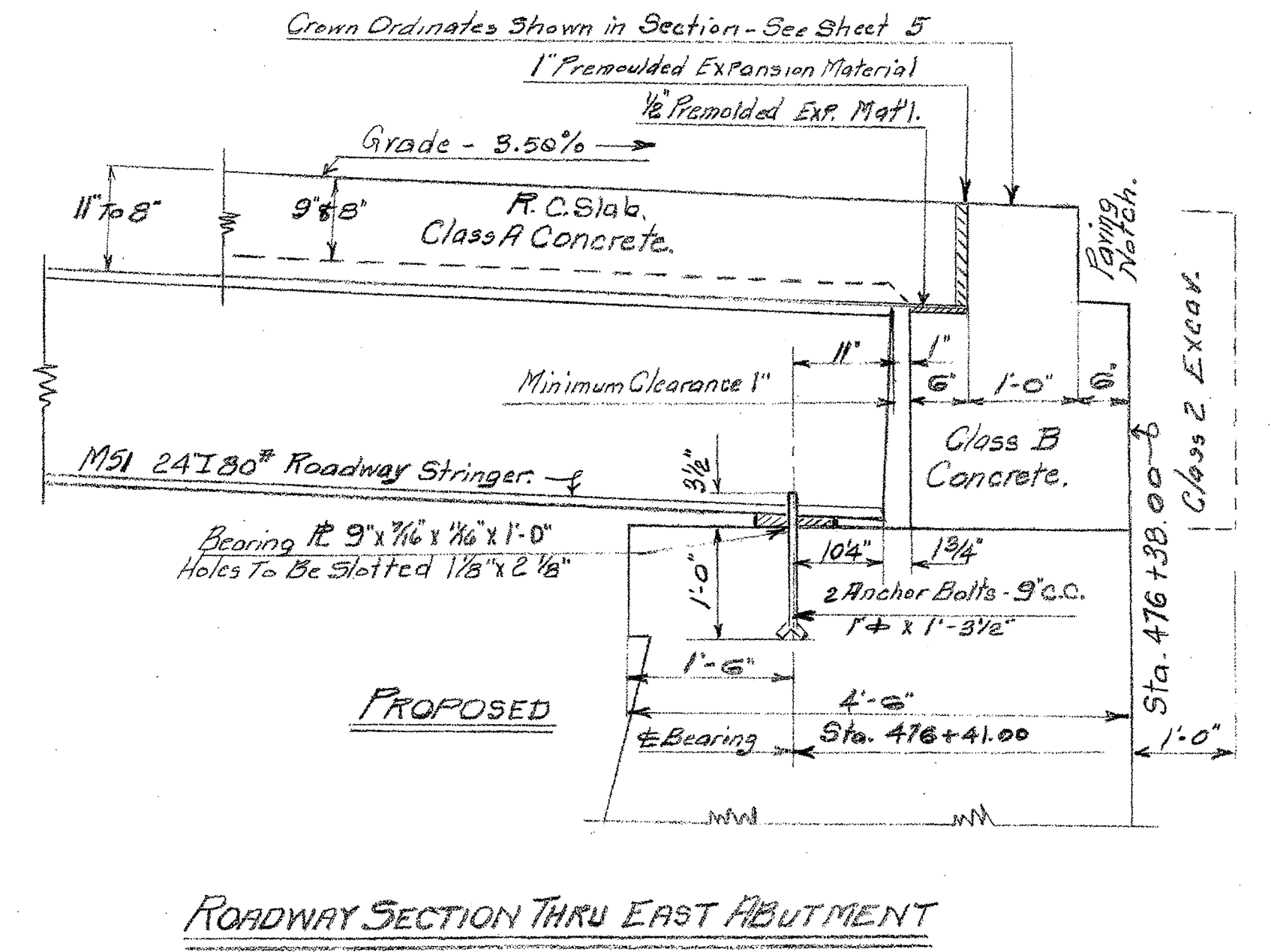
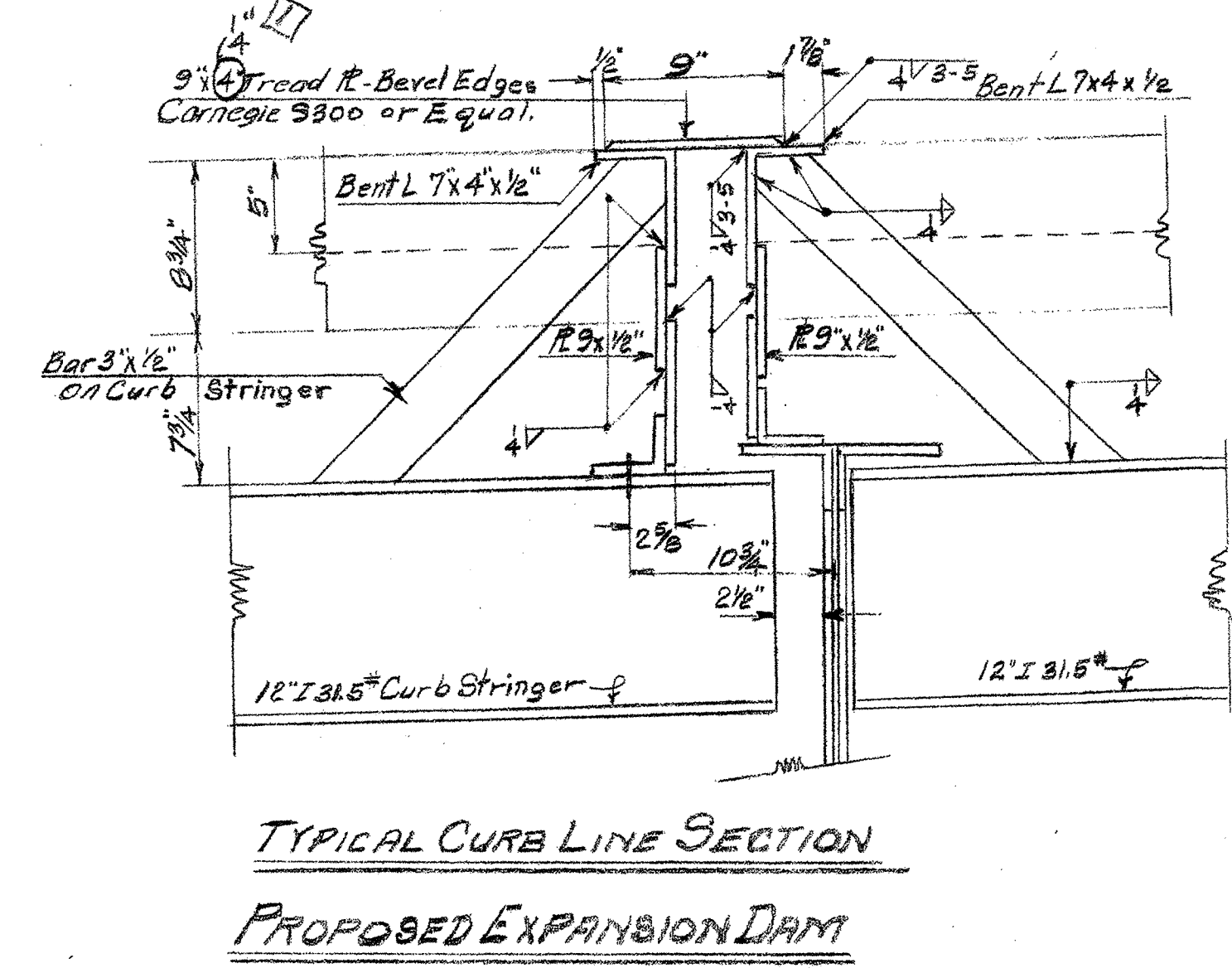
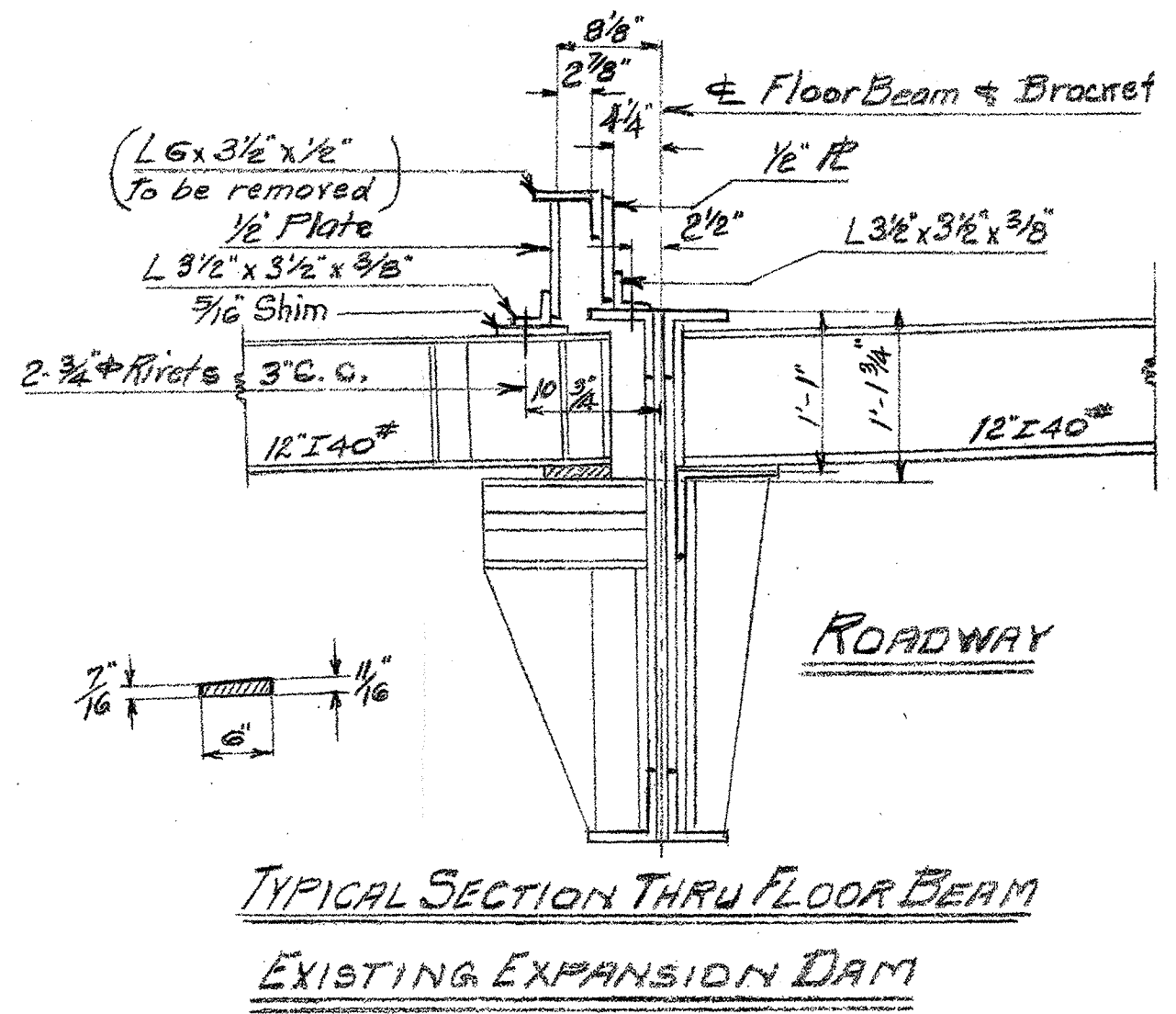
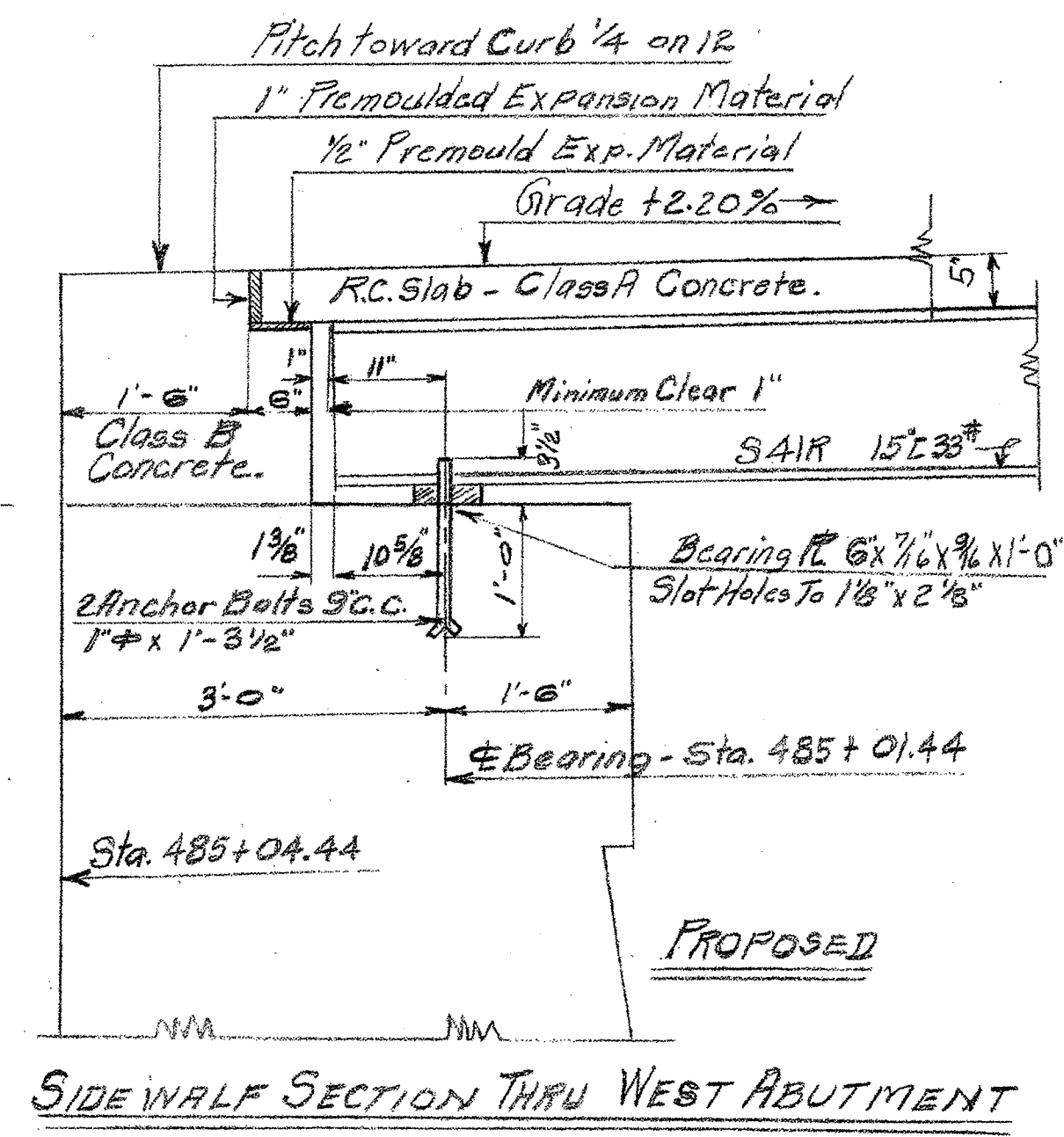
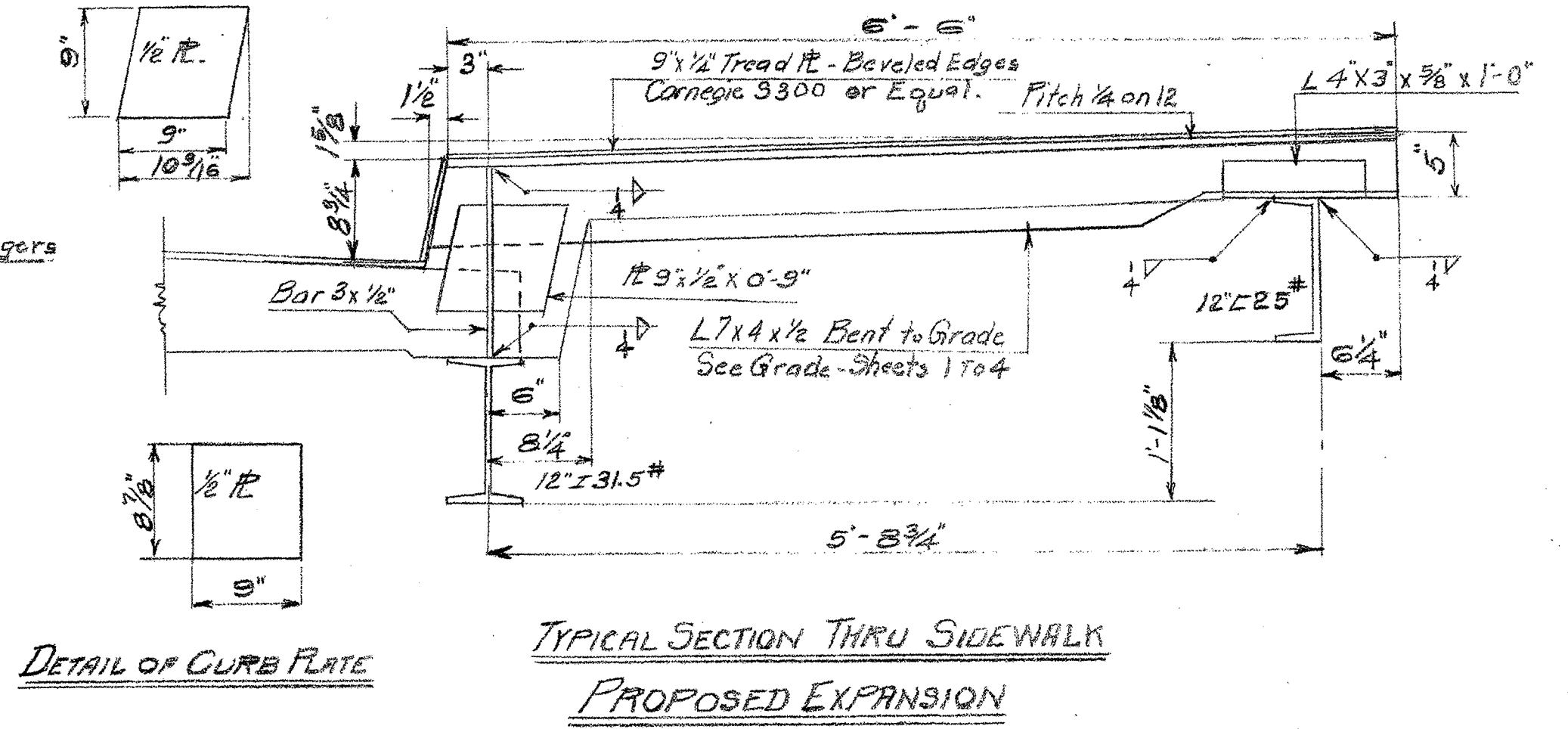
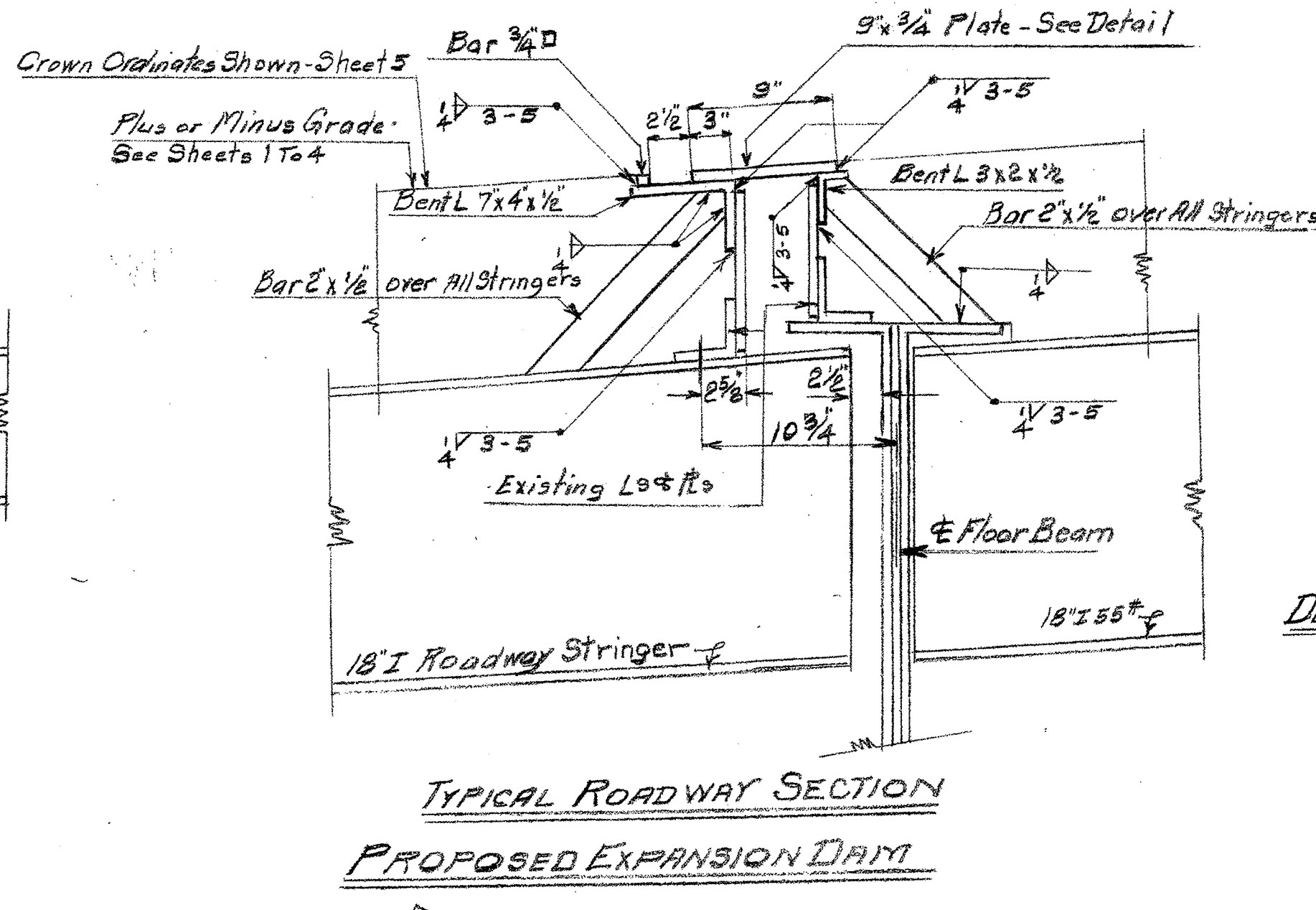
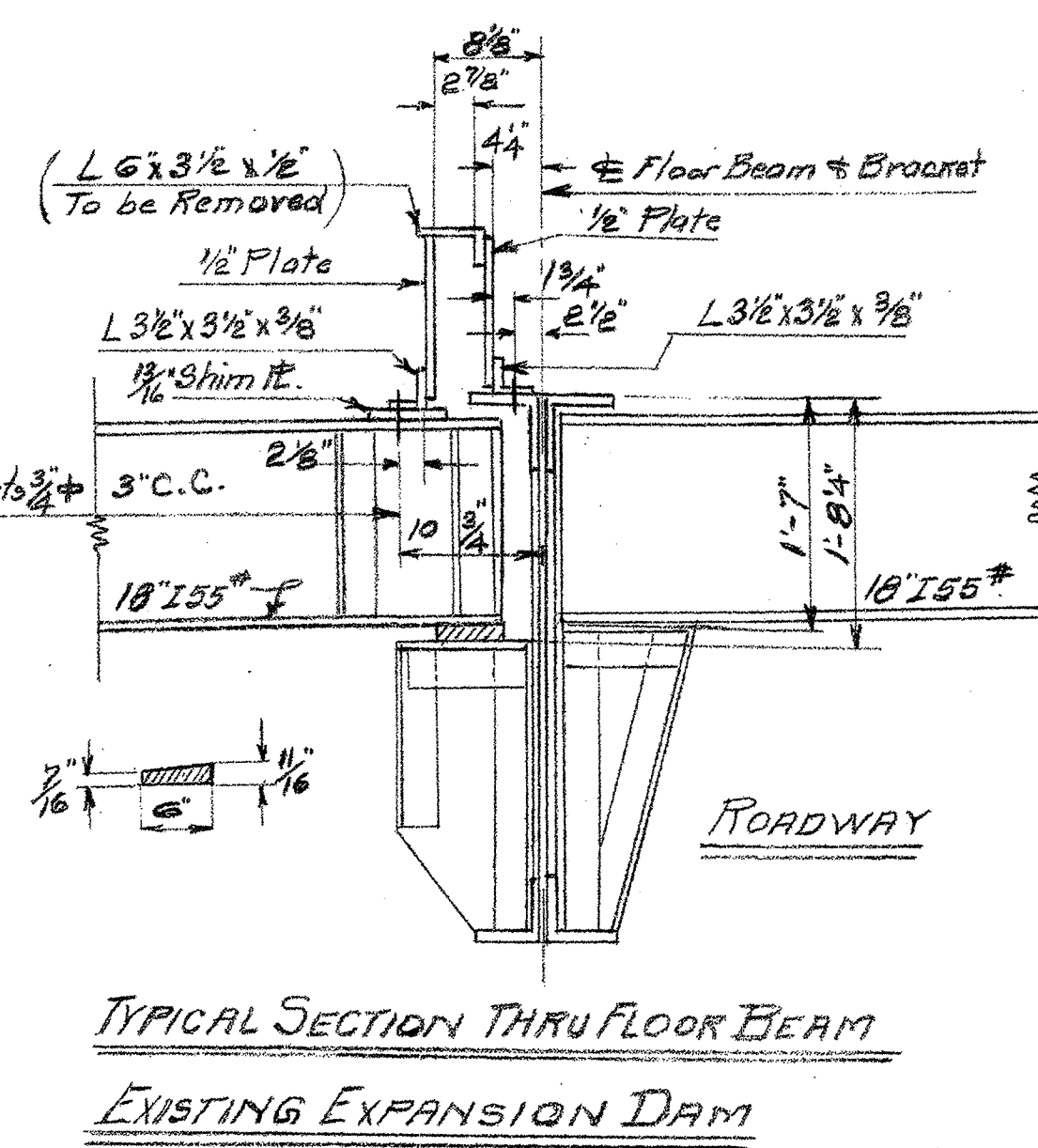
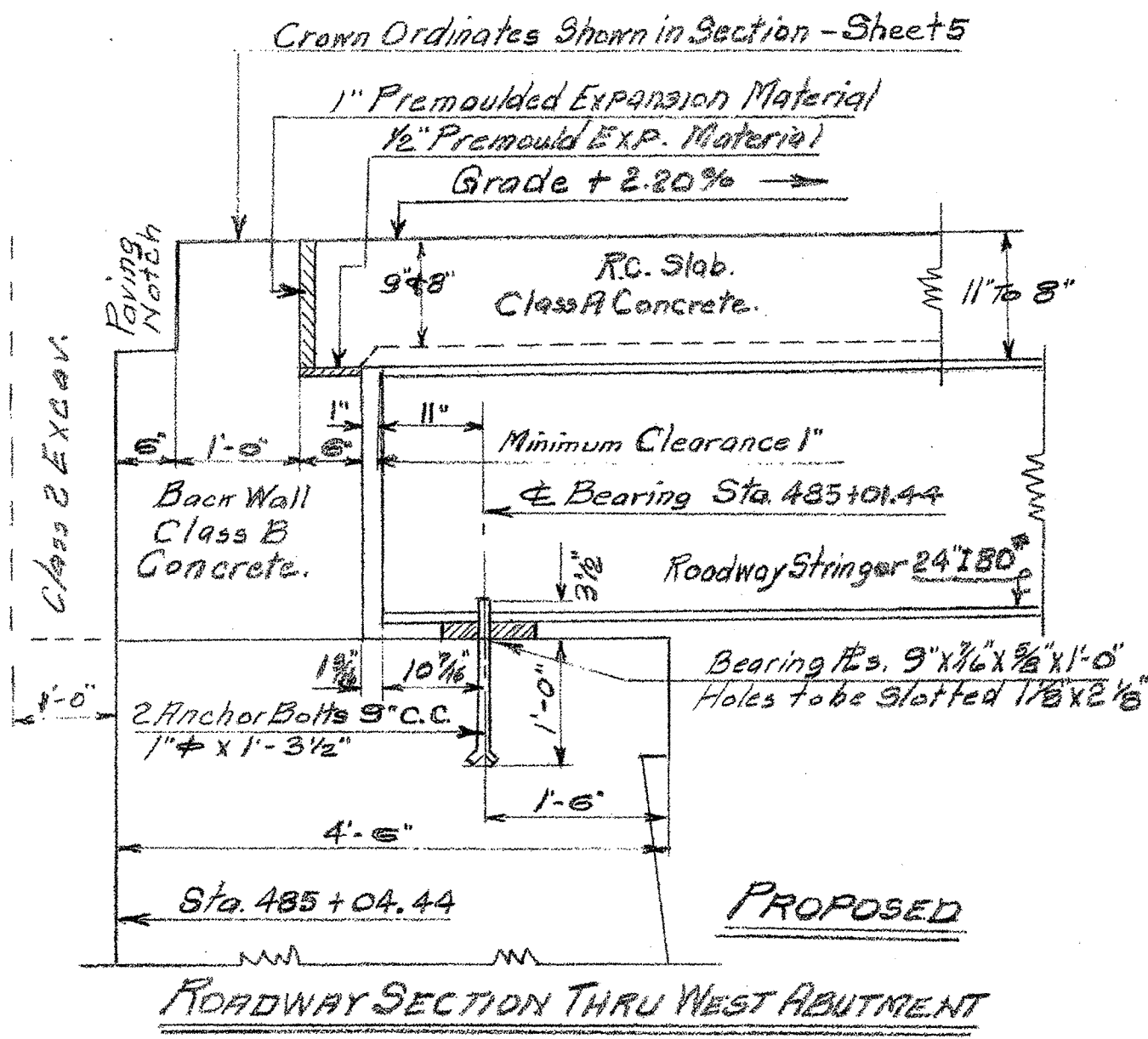
Girder G4  
Web 1/2" x 3/16" x 17'-0"  
210 x 3/16" x 17'-0"  
12 x 3/16" x 55'-4 1/2"  
12 x 3/16" x 45'-0"  
12 x 3/16" x 23'-3"

Girder G5  
Web 1/2" x 3/16" x 17'-0"  
210 x 3/16" x 17'-0"  
12 x 3/16" x 55'-4 1/2"  
12 x 3/16" x 45'-0"  
12 x 3/16" x 23'-3"

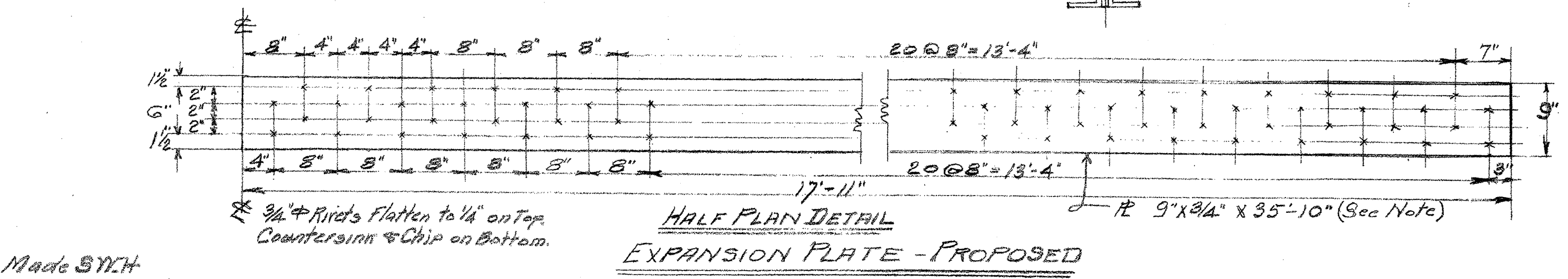
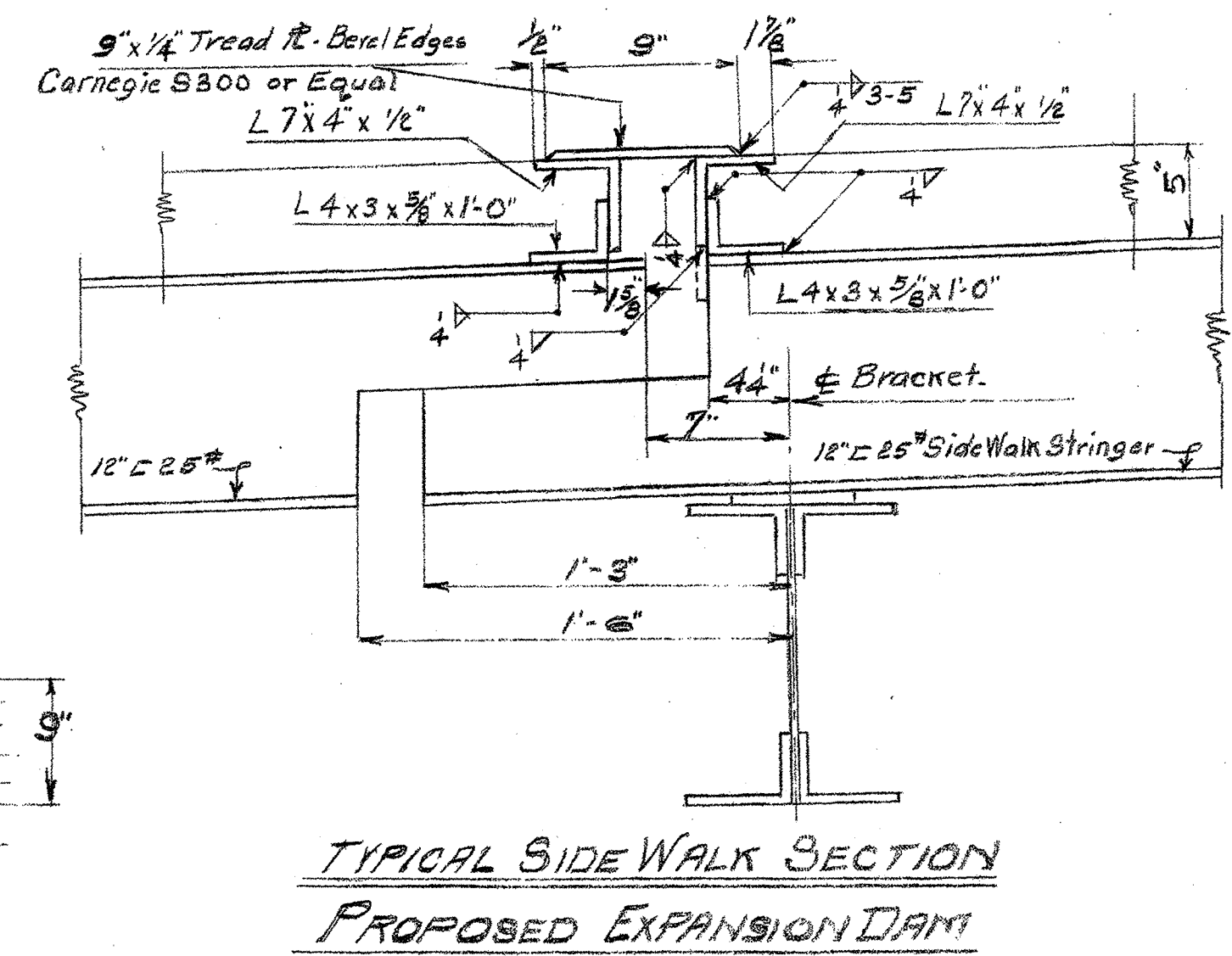
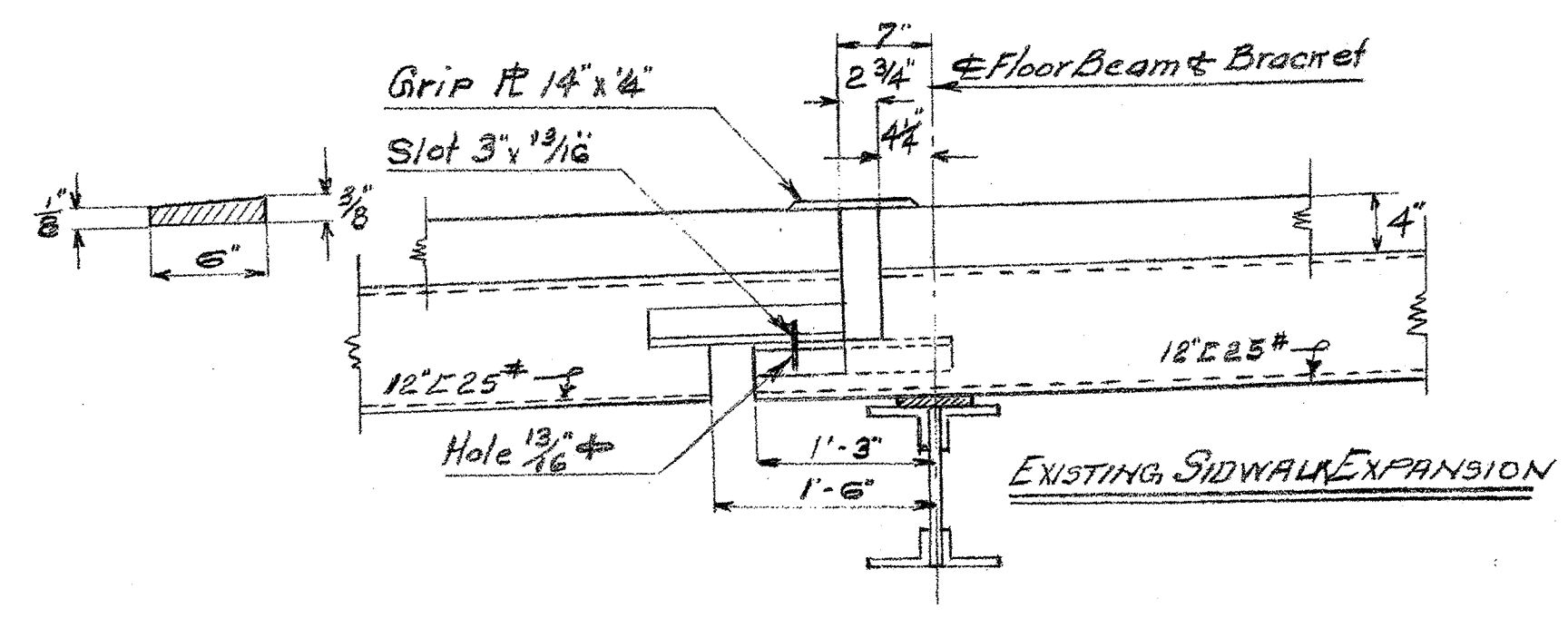
Flange Beam FB 3b  
Web 1/2" x 3/16" x 17'-0"  
210 x 3/16" x 17'-0"

APPROVED *May 3, 1921.*  
BRIDGE ENGINEER

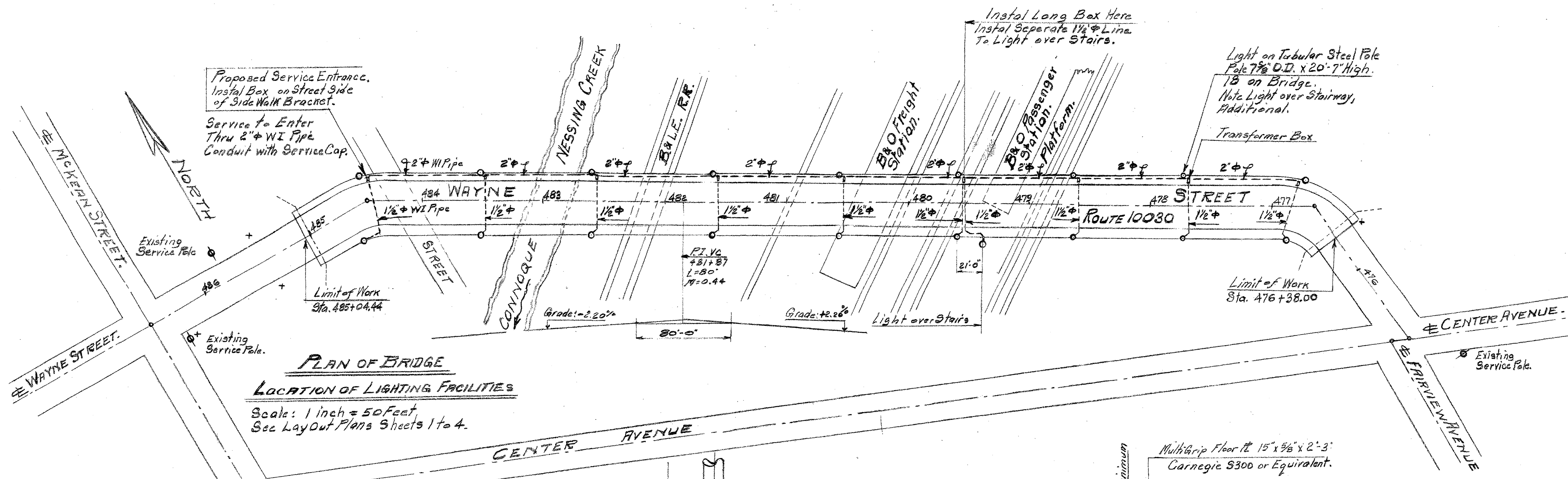
Commonwealth of Pennsylvania  
Department of Highways  
BRIDGE UNIT  
REPAIRS  
WAYNE STREET VIADUCT  
ROUTE 10080 STA. 480+71  
BUTLER COUNTY



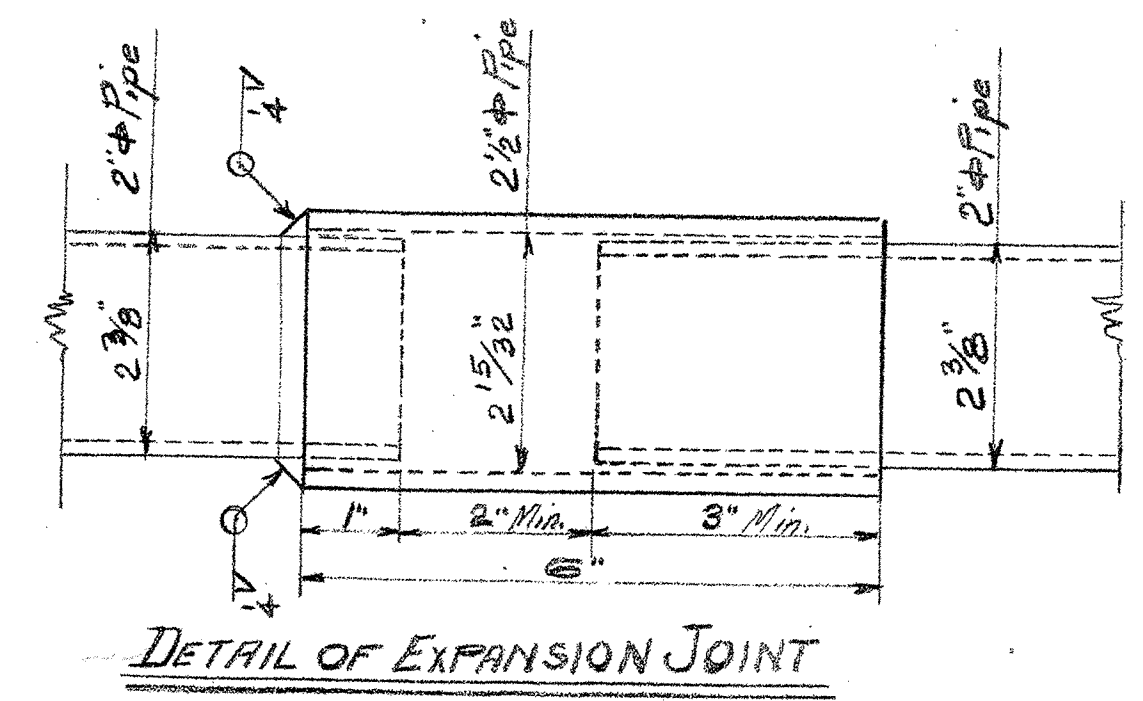
Note:-  
4 Expansion P's Required 35'-10" Long  
1 Exp. P. over FB&B will be  
approximately 0'-1 1/2" Longer.  
Check in Field.  
Fabricated Structural Steel in  
5 Expansion Dams 11 3/4" x 40"



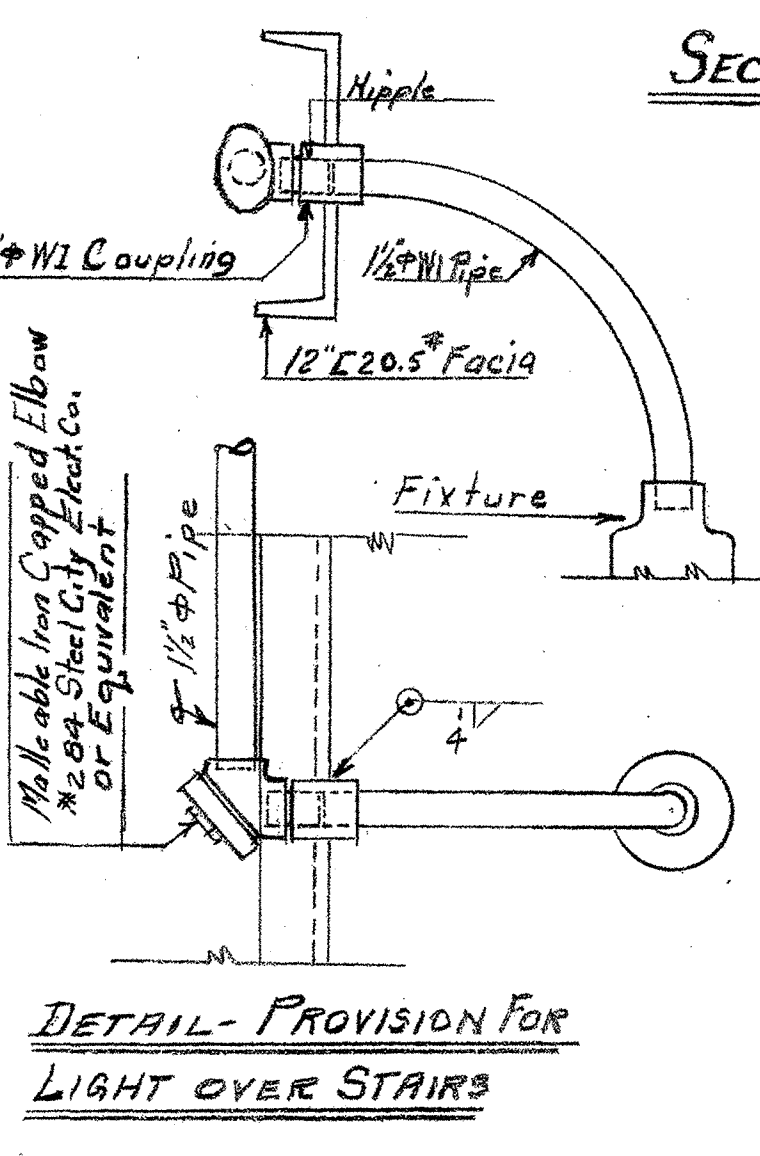
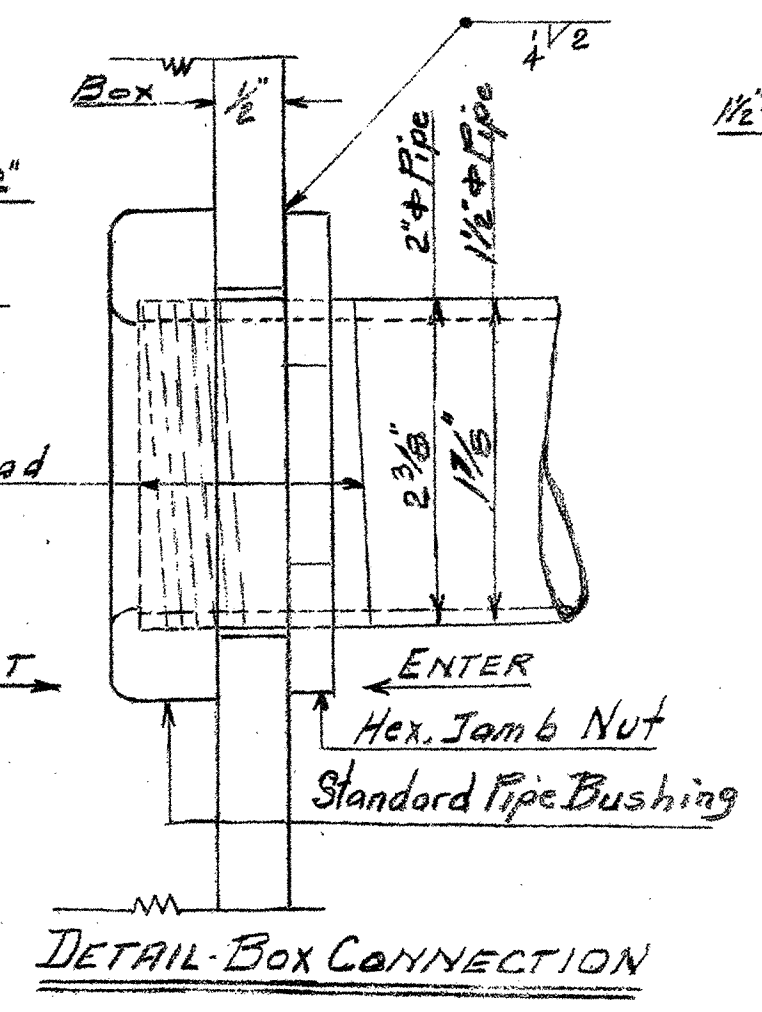
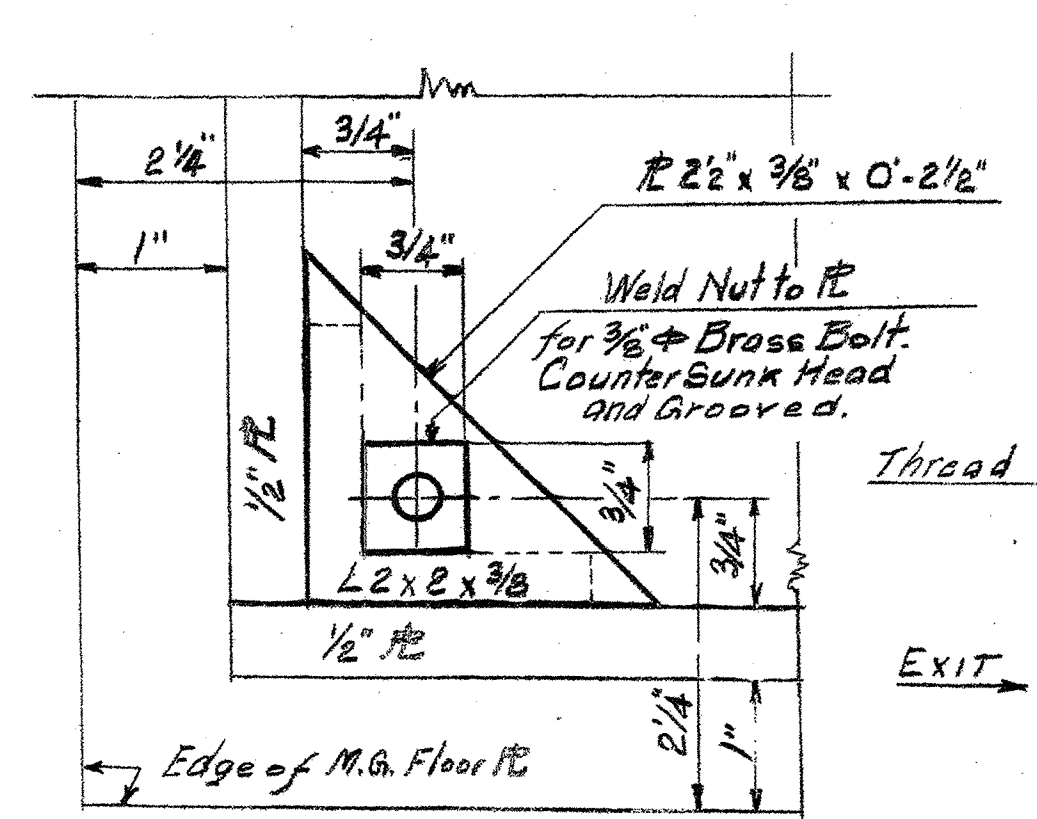
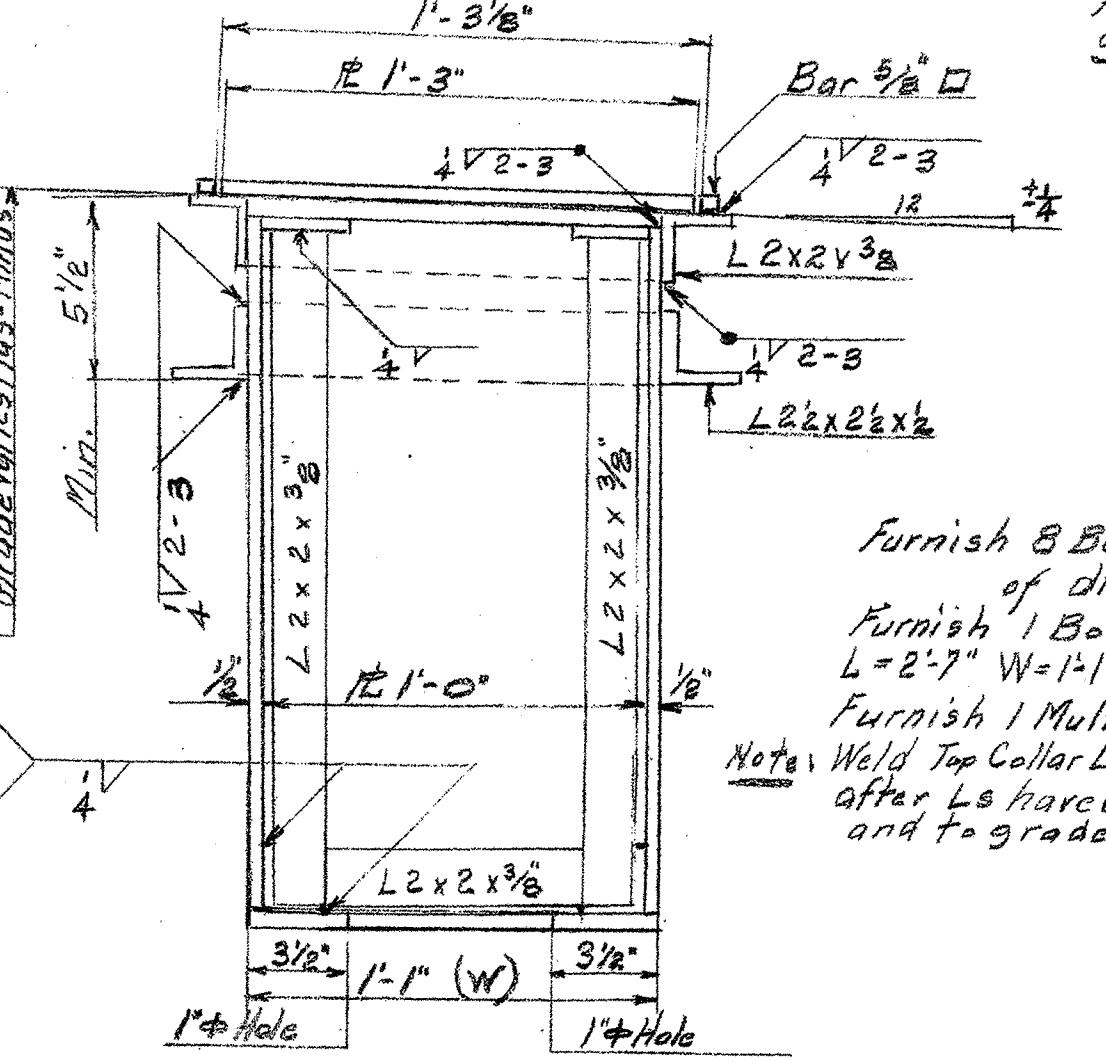
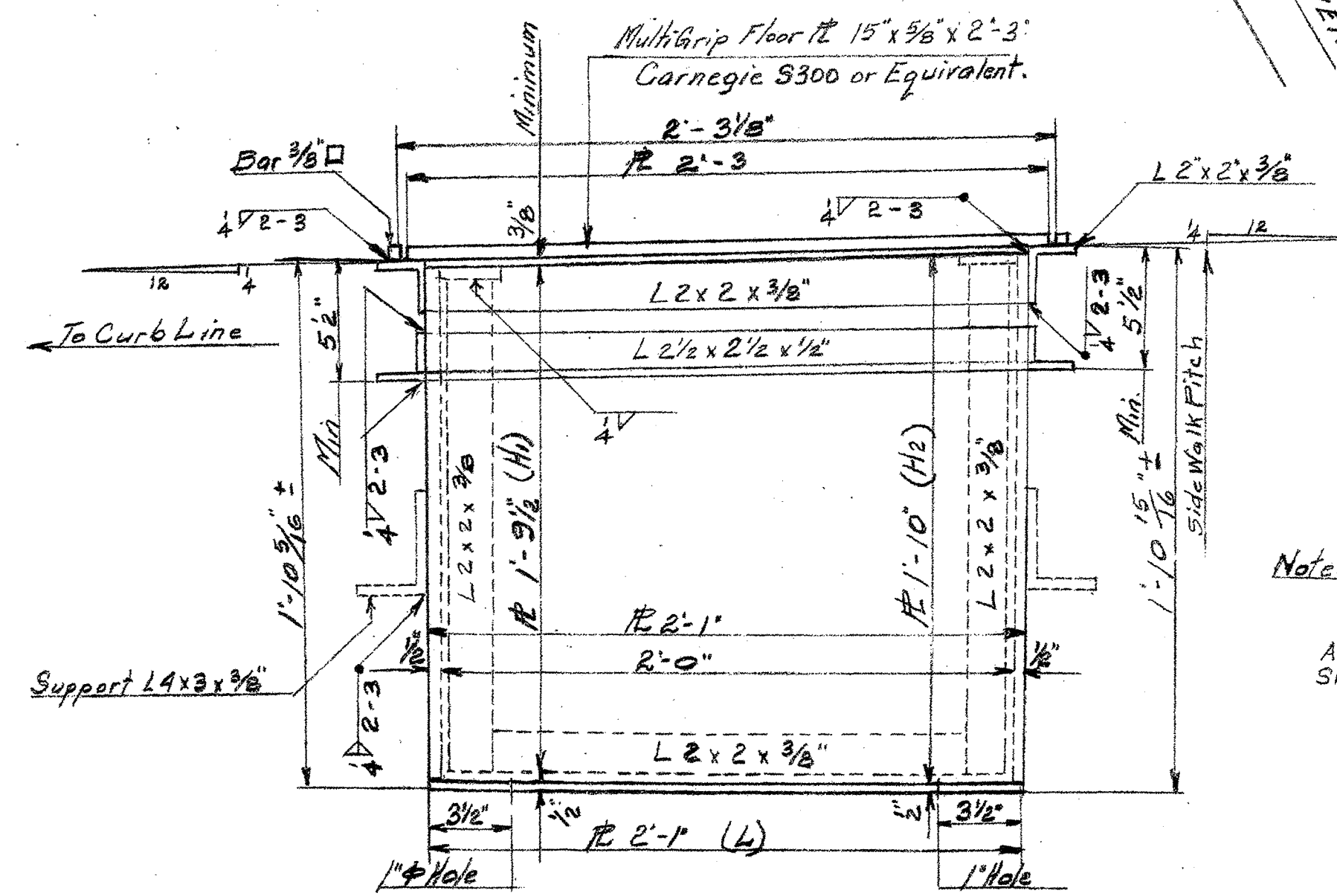
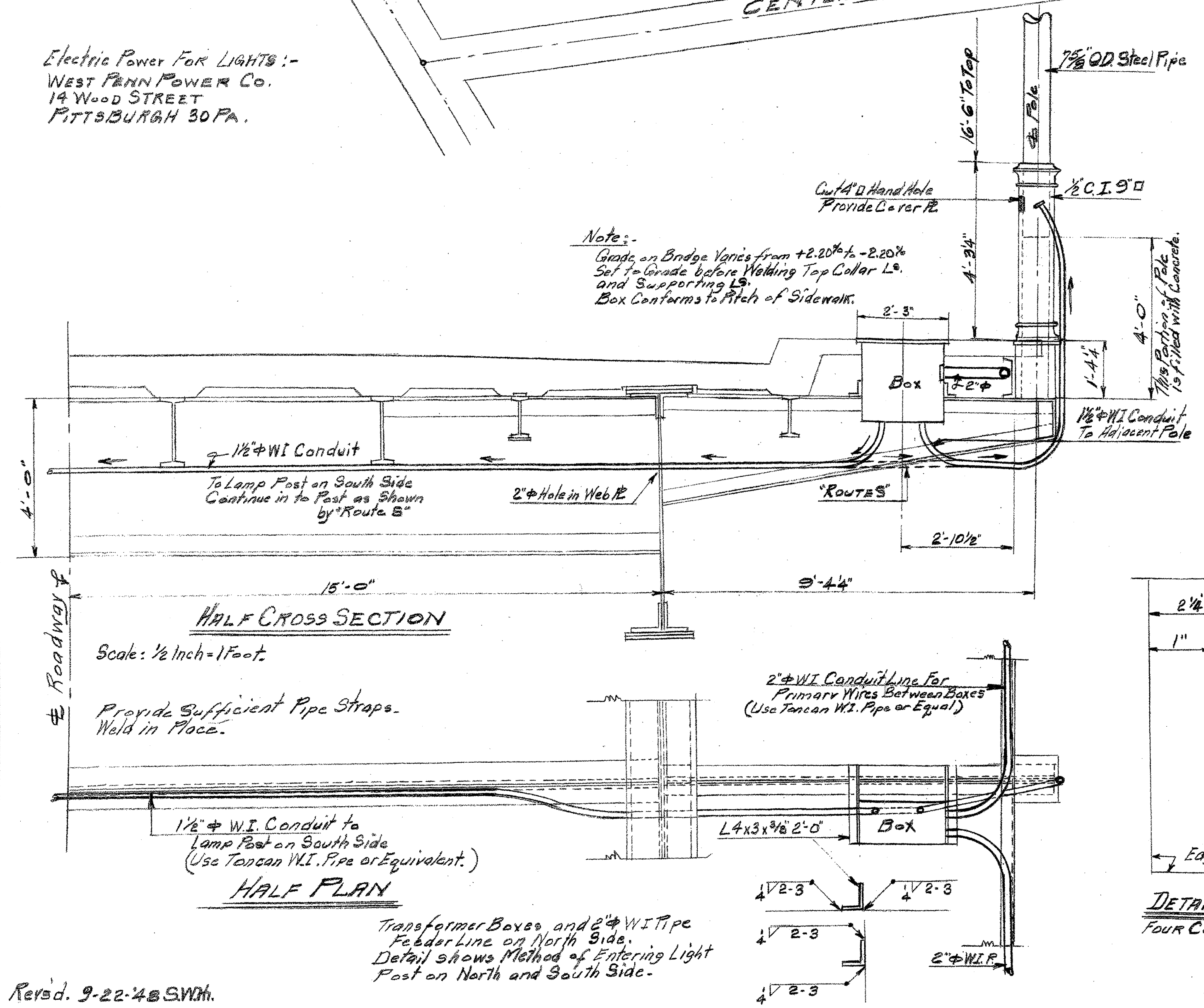
Commonwealth of Pennsylvania  
Department of Highways  
BRIDGE UNIT  
REPAIRS  
WAYNE STREET VIADUCT  
ROUTE 10030 STA. 480+71  
BUTLER COUNTY  
SCALES:- 3/4" = 1 FT.  
APPROVED [Signature]  
BRIDGE ENGINEER  
Rev. 8-8-51 (4" x 4" (Tread R thickness))



300	Lin Ft. 2" WI Pipe (3.678)	2945
650	Lin Ft. 1 1/2" WI Pipe (2.731)	1775
	Plates - Ls - Bars Etc.	4250
	Total Fabricated Struct Steel-Lbs	8970



Electric Power For LIGHTS:-  
WEST PENN POWER CO.  
14 WOOD STREET  
PITTSBURGH 30 PA.

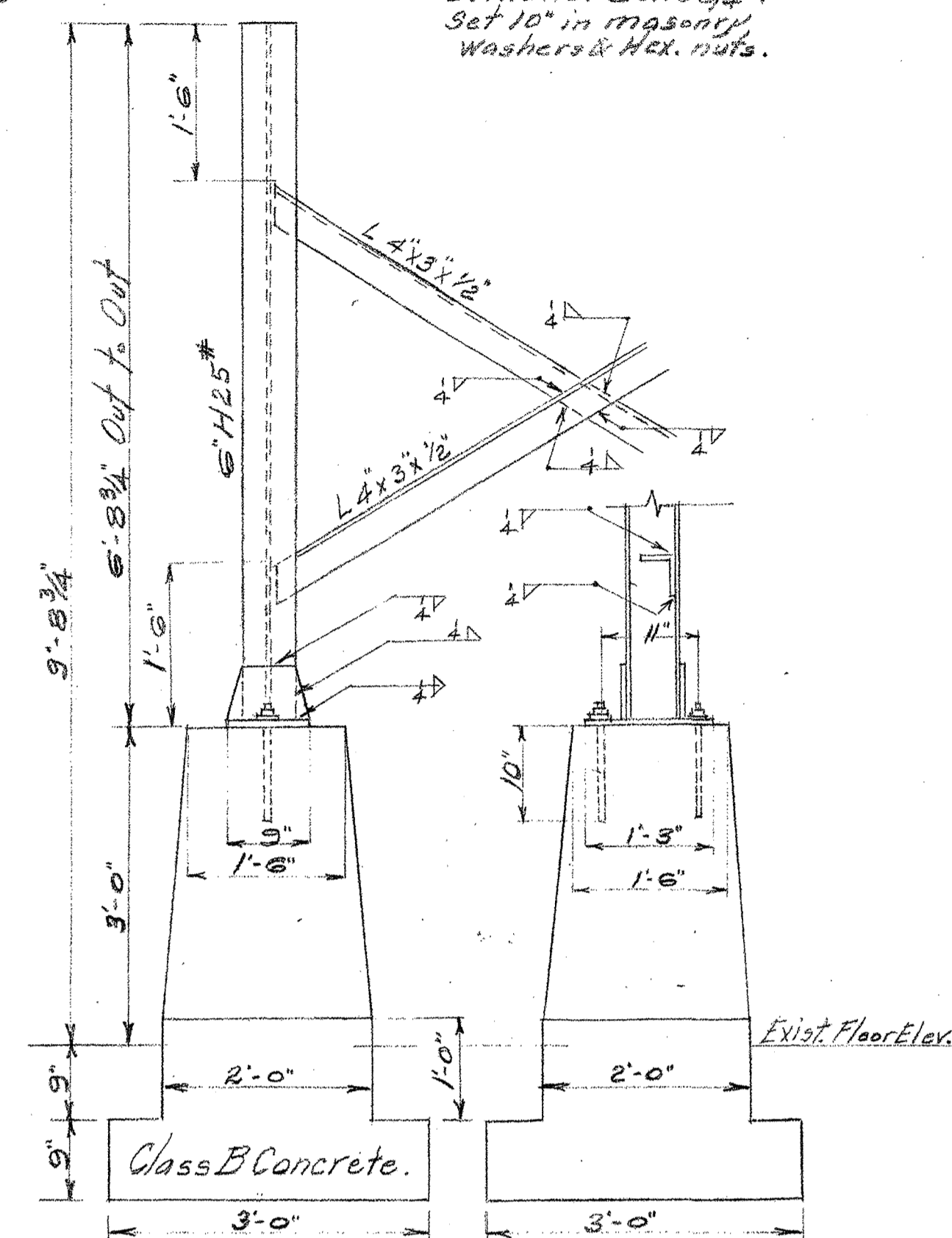


Approved May 5, 1951.  
*[Signature]*  
Bridge Engineer

Commonwealth of Pennsylvania  
Department of Highways  
BRIDGE UNIT  
REPAIRS  
WAYNE STREET VIADUCT  
ROUTE 10030 STA. 480+71  
BUTLER COUNTY

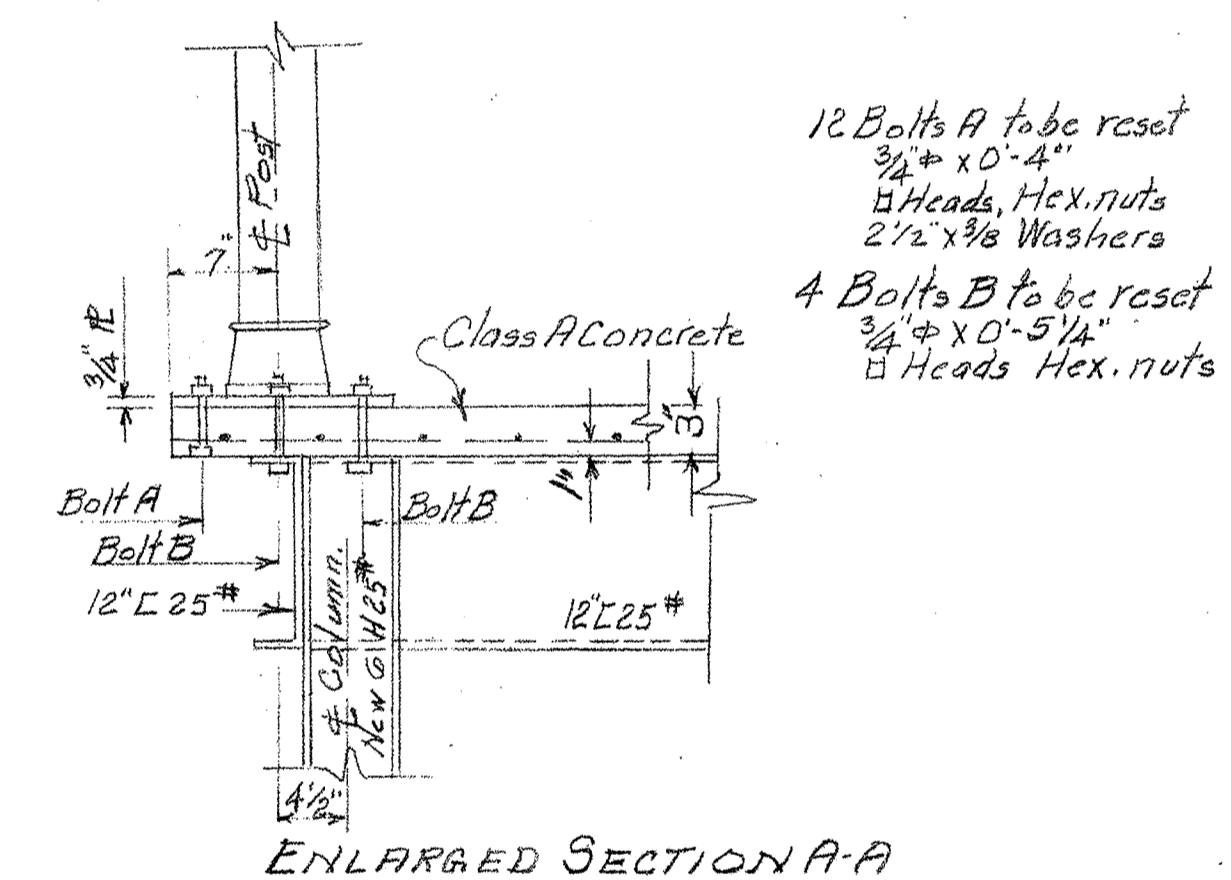
Rev'd. 9-22-48 SWH.  
Made 5-28-48 SWH.

Material in Column Base:-  
 1 Pl. 9" x 3/4" x 1'-3"  
 2 Pls. 6" x 1/2" x 0'-9"  
 2 Anchor Bolts 3/4"  $\phi$   
 Set 10" in masonry  
 washers & hex. nuts.



CONCRETE PEDESTALS & COLUMNS  
WITH X BRACING  
TYPICAL FOR LC5-LC6-LC7-LC8

REINFORCEMENT BAR LIST			
Mark	Number	Stock	Description.
a	5	$\frac{3}{8} \times 7'-3"$	Straight
b	5	$\frac{3}{8} \times 9'-5"$	Straight
c	4	$\frac{3}{8} \times \begin{matrix} 6'-11" \text{ to} \\ 7'-2" \end{matrix}$	Straight 1 Each Vary 1"
d	15	$\frac{3}{8} \times \begin{matrix} 7'-3" \text{ to} \\ 8'-6\frac{3}{4}" \end{matrix}$	Straight 1 Each Vary 1 $\frac{1}{2}$ "
e	14	$\frac{3}{8} \times 7'-0"$	Straight
f	4	$\frac{3}{8} \times \begin{matrix} 5'-4" \text{ to} \\ 1'-4" \end{matrix}$	Straight 1 Each Vary 1'-4"
g	2	$\frac{3}{8} \times 1'-0"$	Straight



Approved May 3, 1951.  
C. L. Forster  
Bridge Engineer

**Commonwealth of Pennsylvania**



Department of Highways  
BRIDGE UNIT

REPAIRS  
WAYNE STREET VIADUCT  
ROUTE 10030 STA. 480+71  
BUTLER COUNTY

## REPAIRS TO STAIRWAY

Sheet 9 of 9 Scale:  $\frac{3}{8}$ " =  $\frac{1}{2}$ " =  $\frac{3}{4}$ " = 1 Foot.

R 334

## COMMONWEALTH OF PENNSYLVANIA



## DEPARTMENT OF HIGHWAYS

DRAWINGS  
FOR  
CONSTRUCTION  
OF

ROUTE NO. LR 79 PARALLEL SECTION NO. 1  
ROUTE NO. 387 SECTION NO. 5  
APPL. NO. 405 SECTION NO. 2  
ROUTE NO. 10030 SECTION NO. 4  
IN BUTLER COUNTY

L.R. 79  
Parallel From Sta. 924 + 05 to Sta. 972 + 97 Length 2,674.00 Ft. 0.51 Mi.  
L.R. 387 From Sta. 111 + 07 to Sta. 413 + 83 Length 29,361.00 Ft. 5.56 Mi.  
Appl. 405 From Sta. 40 + 27 to Sta. 53 + 87 Length 1,360.00 Ft. 0.26 Mi.  
L.R. 10030 From Sta. 0 + 00 to Sta. 475 + 30 Length 47,309.00 Ft. 8.96 Mi.

PROJECT TOTAL LENGTH 80,704.00 15.29

DISTRICT	COUNTY	TOWNSHIP	CITY	ROUTE	SECT.	APPL.	TOTAL SHEETS
S	10	BUTLER	BUTLER	79 Parallel	1		6
		BUTLER	BUTLER		5		
		BUTLER	BUTLER	10030	2	405	
		BUTLER	BUTLER		4		

COMMONWEALTH OF PENNSYLVANIA:  
COUNTY OF DAUPHIN: SS

On this \_\_\_\_\_ day of \_\_\_\_\_, A. D. 19\_\_\_\_,  
before me, a Notary Public, personally came  
\_\_\_\_\_, Secretary of the  
Department of Highways of the Commonwealth of  
Pennsylvania, who, in due form of law, acknowledg-  
ed the within plan, comprising  
separate sheets or sections to be an official plan of  
the Department of Highways of the Commonwealth of  
Pennsylvania and desired that the same be recorded  
as such, in accordance with the provisions of Section  
210 of the Act approved June 1, 1945, P. L. 1242 as  
amended, and/or Section 6 of the Act approved  
May 29, 1945, P. L. 1108 as amended.

Witness my hand and notarial seal this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

Notary Public  
My commission expires the \_\_\_\_\_ day  
of \_\_\_\_\_, 19\_\_\_\_.

APPROVING AND ESTABLISHING BY ORDINANCE THE REMOVAL OF  
THE EXISTING BITUMINOUS SURFACE COURSE AND REPLACING  
SAME WITH FOUR (4) INCHES OF BITUMINOUS SURFACE COURSE ON  
STATE HIGHWAY ROUTE 79 PARALLEL, ON CUNNINGHAM ST. AND WEST  
JEFFERSON STREET FROM S.L.D. STA. 924+05 TO S.L.D. STA. 972+  
97 AND STATE HIGHWAY ROUTE 10030 ON CENTER AVENUE FROM  
S.L.D. STA. 434+76 A. TO S.L.D. STA. 475+30 IN THE CITY OF BUTLER,  
BUTLER COUNTY.

APPROVED \_\_\_\_\_ 1966

PRESIDENT OF COUNCIL

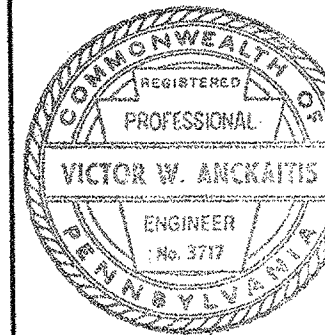
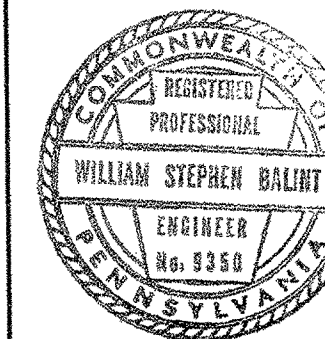
APPROVED MARCH 27, 1966 1966

MAYOR

ATTEST MARCH 27, 1966 1966

SEAL

SECRETARY OF COUNCIL



REVISED FOR CHANGE IN APPROVAL DATE FOR  
STANDARD DRAWING SD-14 ON SHEET 3

APPROVED April 24th 1966  
William S. Balint  
ASSISTANT CHIEF ENGINEER

ESTABLISHED BY AUTHORITY OF LAW, AS AND FOR  
THE WIDTH, LINES, LOCATION AND GRADES OF  
STATE HIGHWAY WITHIN THE STATIONS INDICATED  
AS SHOWN ABOVE.

RECOMMENDED March 2 1966  
William S. Balint  
DISTRICT ENGINEER

RECOMMENDED March 14 1966  
W. Anckaitis  
CHIEF ENGINEER

APPROVED March 14 1966  
Victor W. Anckaitis  
SECRETARY OF HIGHWAYS

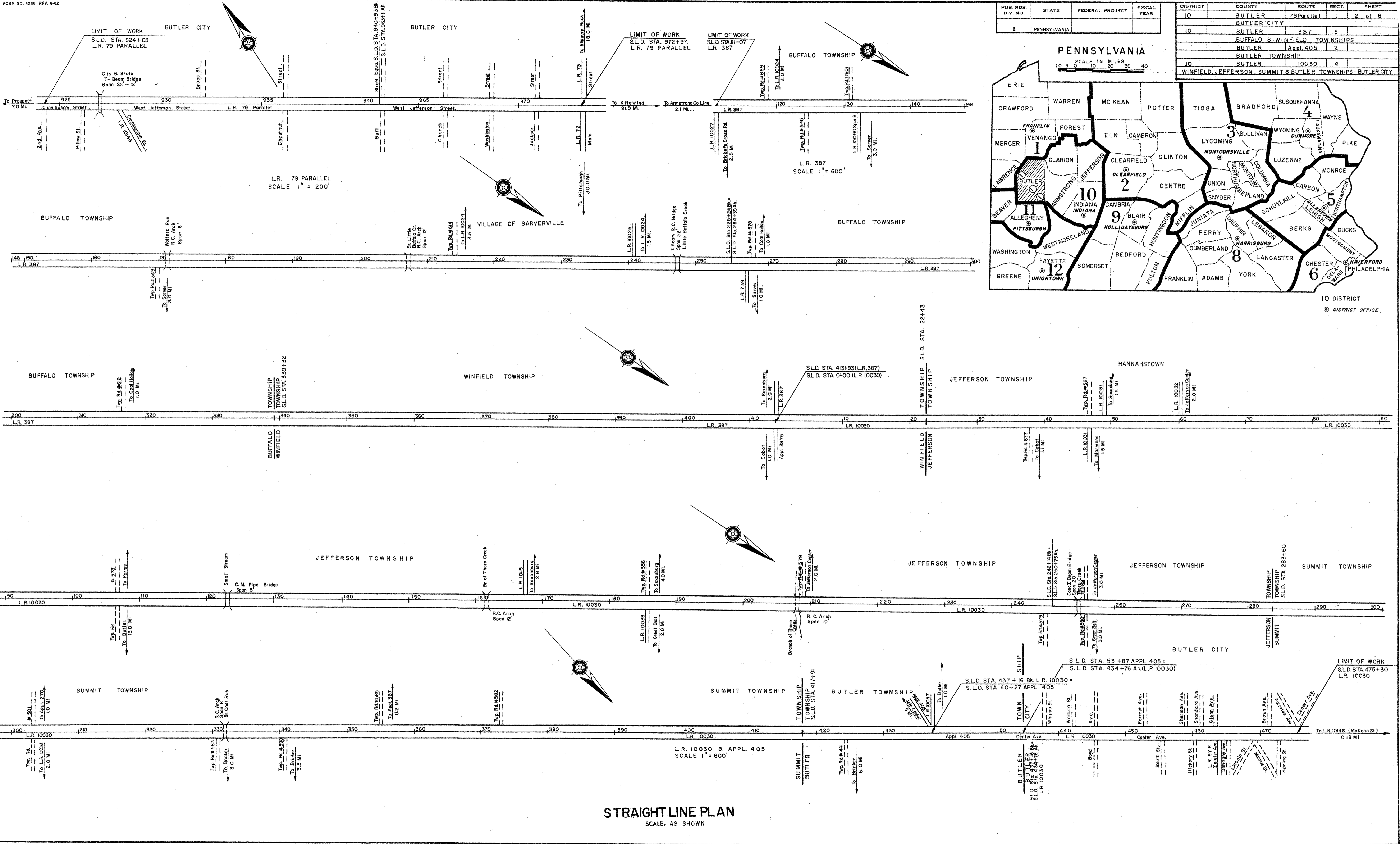
APPROVED April 7 1966  
William W. D...  
GOVERNOR

Recorded in the office for the recording of deeds, etc.,  
in and for the County of \_\_\_\_\_ Book No. \_\_\_\_\_  
Vol. \_\_\_\_\_, Page \_\_\_\_\_

Witness my hand and Seal of office this \_\_\_\_\_ day  
of \_\_\_\_\_, A. D. 19\_\_\_\_

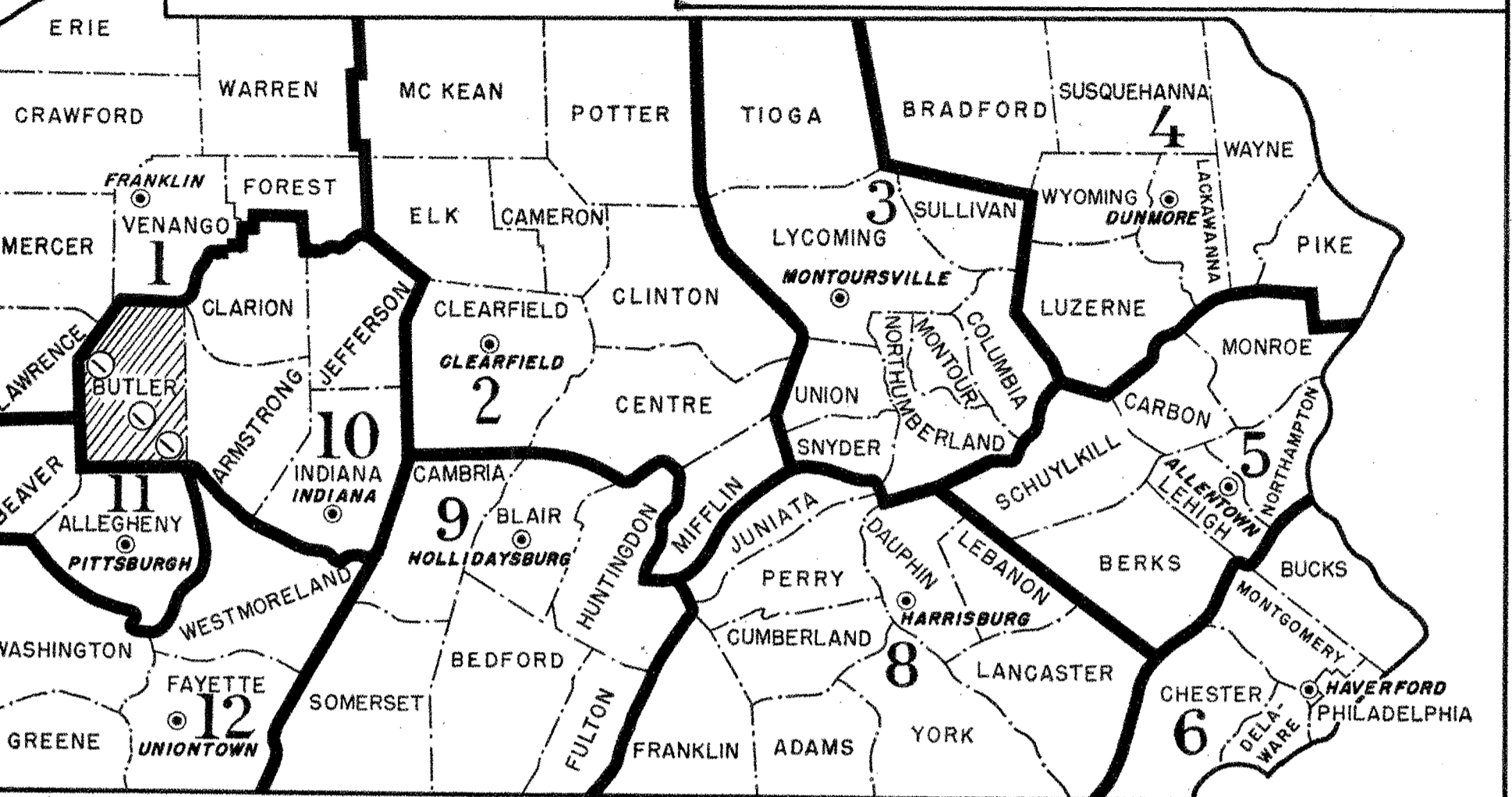
Recorder

Received from \_\_\_\_\_

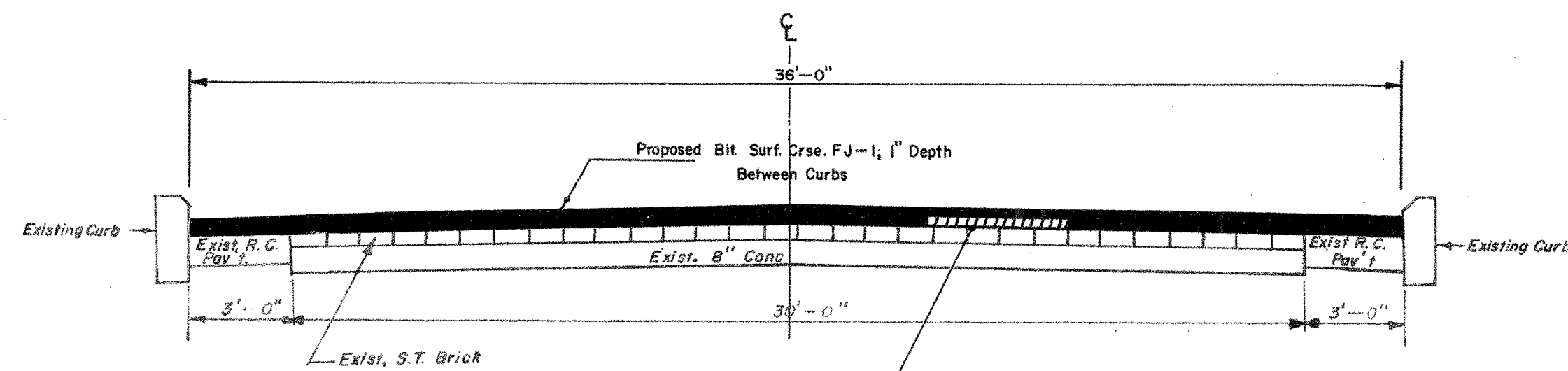


STRAIGHT LINE PLAN  
SCALE: AS SHOWN

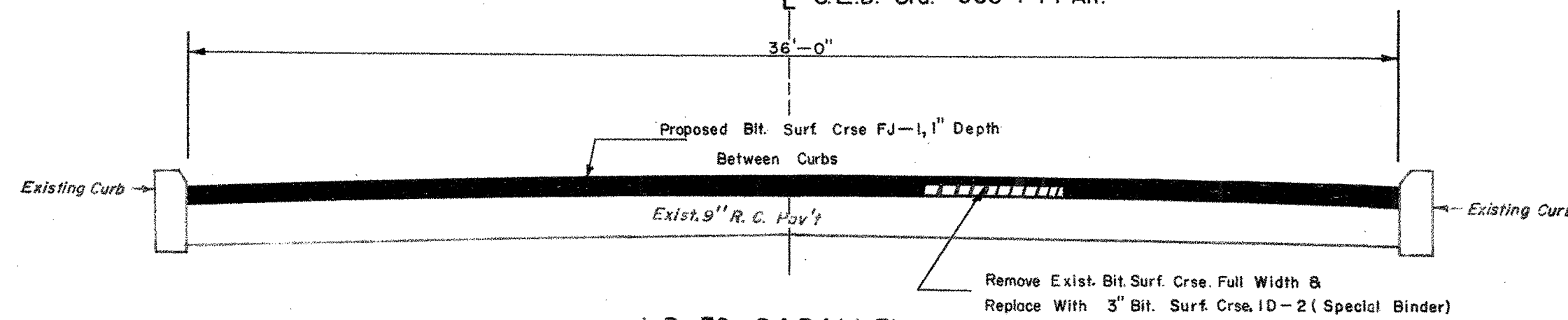
PUB. RDS. DIV. NO.	STATE	FEDERAL PROJECT	FISCAL YEAR	DISTRICT	COUNTY	ROUTE	SECT.	SHEET
2	PENNSYLVANIA			10	BUTLER	79 Parallel	1	2 of 6
				10	BUTLER	387	5	
					BUTLER & WINFIELD TOWNSHIPS			
					BUTLER	Appl. 405	2	
					BUTLER TOWNSHIP			
				10	BUTLER	10030	4	
					WINFIELD, JEFFERSON, SUMMIT & BUTLER TOWNSHIPS - BUTLER CITY			



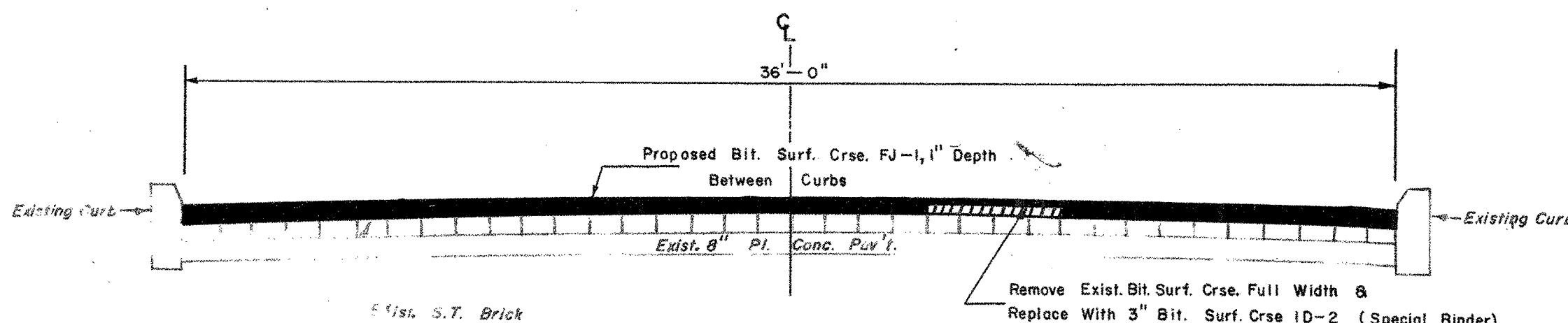
10 DISTRICT  
DISTRICT OFFICE



L.R. 79 PARALLEL  
S.L.D. Sta. 924+05 to S.L.D. Sta. 925+76  
S.L.D. Sta. 932+84 to S.L.D. Sta. 940+93 Bk. =  
S.L.D. Sta. 963+11 Ah.



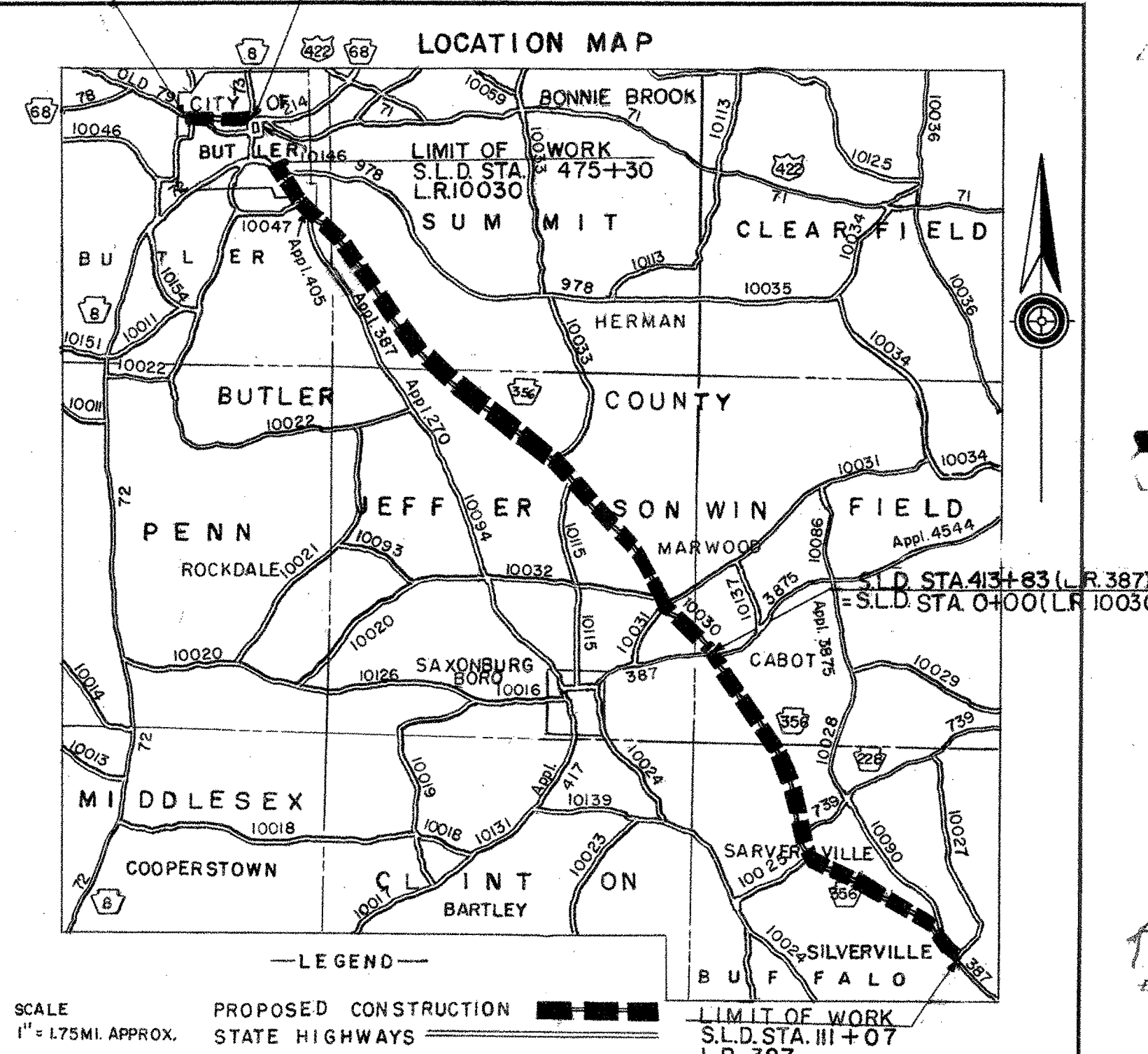
L.R. 79 PARALLEL  
S.L.D. Sta. 925+76 to S.L.D. Sta. 932+84



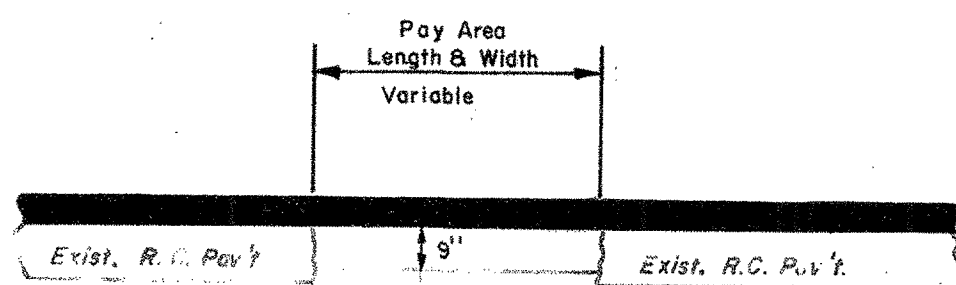
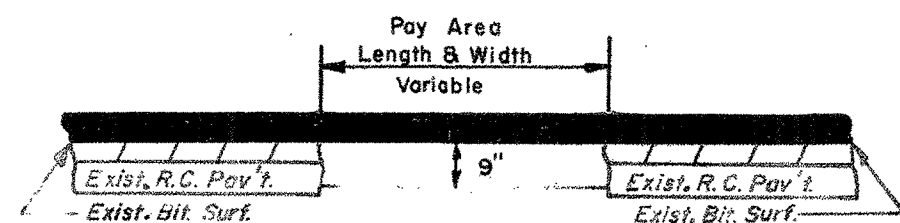
L.R. 79 PARALLEL  
S.L.D. Sta. 963+11 Ah. = to S.L.D. Sta. 972+97  
S.L.D. Sta. 940+93 Bk.

LIMIT OF WORK  
S.L.D. STA. 924+05  
L.R. 79 Parallel

LIMIT OF WORK  
S.L.D. STA. 972+97  
L.R. 79 Parallel

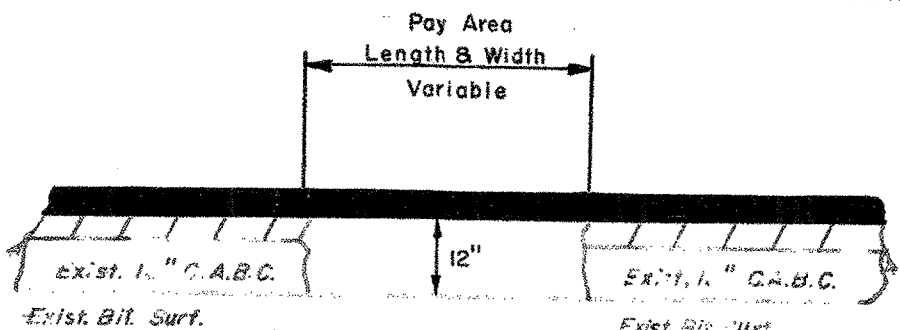


ITEM 12 H.E.S. PLAIN CEM. CONC. BASE CRSE. 9" DEPTH  
(UNIT BID PRICE INCLUDES EXCAVATION AND SUBGRADE)

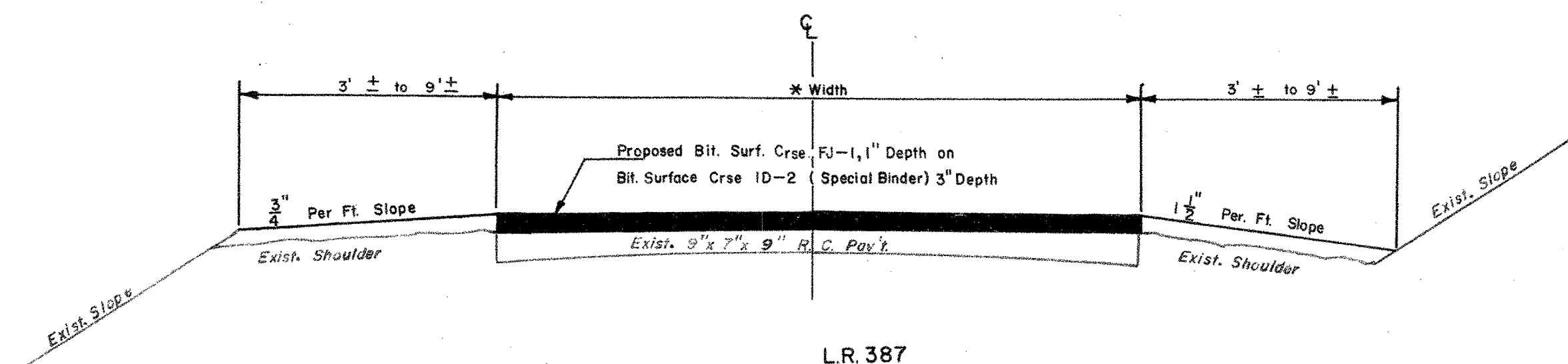


REPLACEMENT OF EXISTING PAVEMENT  
TO BE PLACED AS DIRECTED BY THE ENGINEER

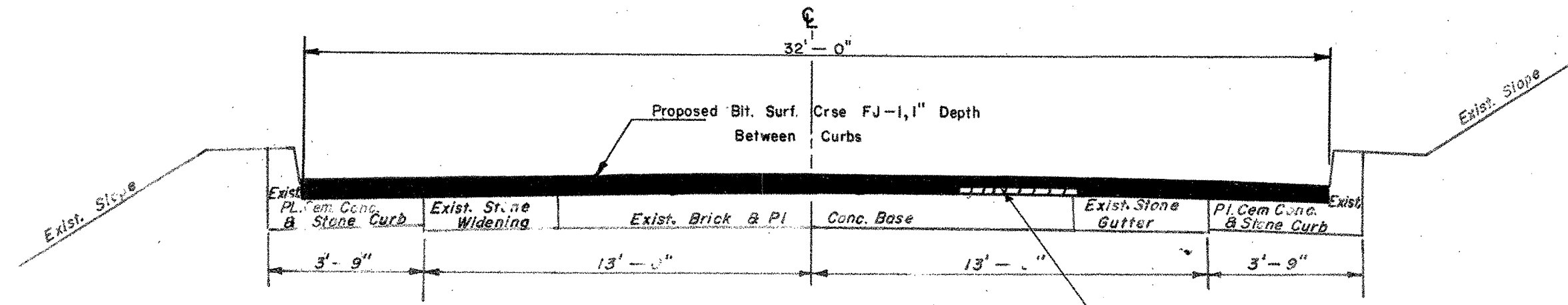
ITEM 14 CR. AGGR. BASE CRSE. TYPE A, 12" DEPTH  
(UNIT BID PRICE INCLUDES EXCAVATION AND SUBGRADE)



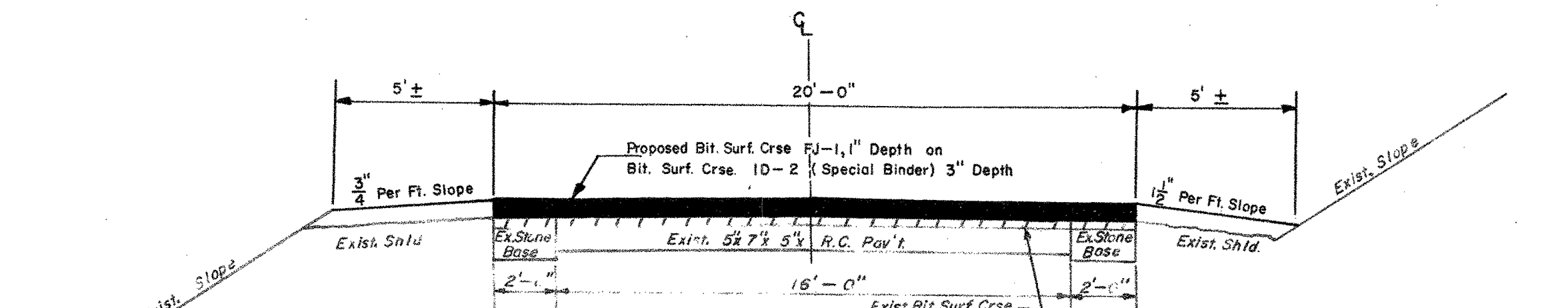
REPLACEMENT OF EXISTING BASE COURSE  
(TO BE PLACED AS DIRECTED BY THE ENGINEER)



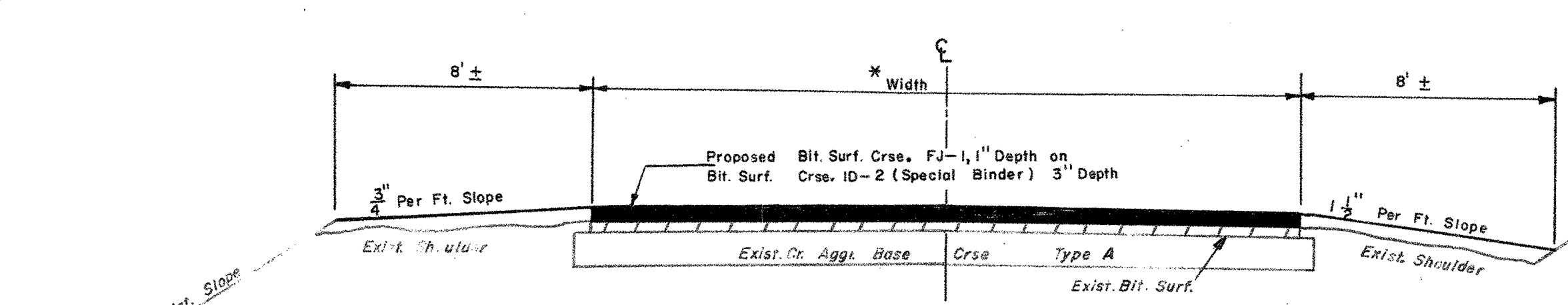
L.R. 387  
\* S.L.D. Sta. 111+07 to S.L.D. Sta. 255+24 Bk. 20'-0" Width  
\* S.L.D. Sta. 264+39 Ah. to S.L.D. Sta. 413+83 18'-0" Width  
L.R. 10030  
\* S.L.D. Sta. 0+00 to S.L.D. Sta. 246+14 Bk. 20'-0" Width  
\* S.L.D. Sta. 250+75 Ah. to S.L.D. Sta. 386+77 18'-0" Width



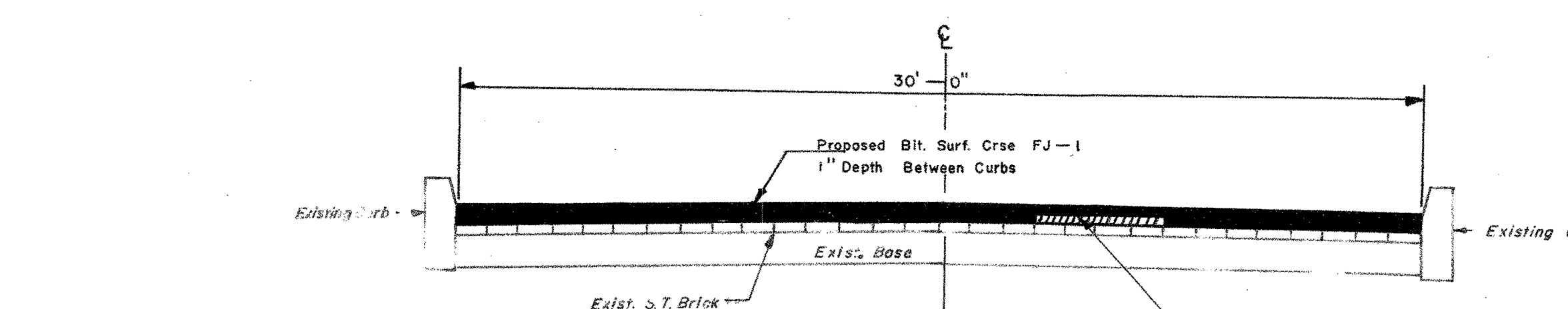
APPL. 405  
S.L.D. Sta. 40+27 to S.L.D. Sta. 53+87



L.R. 10030  
S.L.D. Sta. 386+77 to S.L.D. Sta. 433+81



L.R. 10030  
\* S.L.D. Sta. 433+81 to S.L.D. Sta. 433+95 22'-0" Width  
\* S.L.D. Sta. 433+95 to S.L.D. Sta. 435+70 33'-0" Width  
\* S.L.D. Sta. 435+70 to S.L.D. Sta. 437+16 Bk. 22'-0" Width



L.R. 10030  
S.L.D. Sta. 434+76 Ah. to S.L.D. Sta. 475+30

NOTE:  
FOR DETAIL OF EXISTING BITUMINOUS SURFACE  
REMOVAL AT LIMIT OF WORK SEE SHEET # 5

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10	BUTLER	79 Parallel	1	3 of 6
BUTLER CITY				
10	BUTLER	387	5	
BUFFALO & WINFIELD TOWNSHIPS				
10	BUTLER	Appl. 405	2	
BUTLER TOWNSHIP				
10	BUTLER	10030	4	
WINFIELD, JEFFERSON, SUMMIT & BUTLER TOWNSHIPS - BUTLER CITY				

## GENERAL NOTES

### RIGHT OF WAY

The Existing Legal Width of Right of Way on L.R. 79 Parallel From S.L.D. Sta. 924+05 to S.L.D. Sta. 929+52.70 is 50 Feet in Accordance with Road Docket No 1, Page 12 Recorded in the Butler County Courthouse.

The Existing Legal Width of Right of Way on L.R. 79 Parallel From S.L.D. Sta. 929+52.70 to S.L.D. Sta. 932+84 is 60 Feet in Accordance with Plan Ordained by Butler City Council January 3, 1939.

The Existing Legal Width of Right of Way on L.R. 79 Parallel From S.L.D. Sta. 932+84 to S.L.D. Sta. 972+97 is 60 Feet in Accordance with Construction Plan Signed by Gov. Edward Martin, April 15, 1946.

The Existing Legal Width of Right of Way on L.R. 387 From S.L.D. Sta. 111+07 to S.L.D. Sta. 255+24 Bk. is Variable 60 Feet to 70 Feet in Accordance with Construction Plan Signed by Gov. George Earle, May 31, 1938.

The Existing Legal Width of Right of Way on L.R. 387 from S.L.D. Sta. 264+39 Ah. to S.L.D. Sta. 412+76 is Variable 34 Feet to 53 Feet in Accordance with Plan Signed by Gov. John Fisher, October 1927.

The Existing Legal Width of Right of Way on L.R. 387 from S.L.D. Sta. 412+76 to S.L.D. Sta. 413+83 is 60 Feet in Accordance with Construction Plan Signed by Gov. George Earle, July 24, 1936.

The Existing Legal Width of Right of Way on Appl. 405 From S.L.D. Sta. 40+25 to S.L.D. Sta. 53+87 is 60 Feet in Accordance with Construction Plan Signed by Gov. James Duff, February 9, 1950.

The Existing Legal Width of Right of Way on L.R. 10030 From S.L.D. Sta. 0+00 to S.L.D. Sta. 174+11 is 60 Feet in Accordance with Construction Plan Signed by Gov. George Earle, July 24, 1936.

The Existing Legal Width of Right of Way on L.R. 10030 From S.L.D. Sta. 174+11 to S.L.D. Sta. 246+14 Bk. is 60 Feet in Accordance with Construction Plan Signed by Gov. George Earle, July 3, 1936.

The Existing Legal Width of Right of Way on L.R. 10030 From S.L.D. Sta. 250+75 Ah. to S.L.D. Sta. 386+77 is 80 Feet in Accordance with Construction Plan Signed by Gov. John S. Fisher, September 9, 1930.

The Existing Legal Width of Right of Way on L.R. 10030 From S.L.D. Sta. 386+77 to S.L.D. Sta. 437+16 Bk. = S.L.D. Sta. 434+76 Ah. is 60 Feet in Accordance with Construction Plan Signed by Gov. James Duff, February 9, 1950.

The Existing Legal Width of Right of Way on L.R. 10030 From S.L.D. Sta. 434+76 Ah. to S.L.D. Sta. 475+30 is 50 Feet in Accordance to Rack Plan #2, Page 1 Recorded in the Year of 1892 in the Butler County Courthouse.

All Proposed Work is to be Confined within the Existing Legal Right of Way and/or Existing Graded Roadway Width and no Additional Right of Way will be necessary.

This Project shall be Constructed in Accordance with Specifications Form 408, Dated 1960.

Class A-1 Asphalt Cement shall be used in Bituminous Surface Course.

Construction Details other than those shown on these Drawings shall Conform to the attached Standard Sheets.

SD-14 Approved Mar 17, 1966  
B-1 Approved Feb. 28, 1966

Bituminous Surface Course on this project shall be furnished and placed in Accordance with Supplements Section 5.9 Exp. & Section 5.10 Exp. See Proposal.

SEE SHEET #5 FOR REQUIRED LIST

FILLING DEPRESSIONS IN EXISTING PAV'T

ROUTE	S.L.D. STATION	to	S.L.D. STATION	ITEM 27b BIT. SURF. CRSE. ID-2	REMARKS
79 Parallel	924 + 05		972 + 97	32 Tons (Wearing Course)	
79 Parallel	924 + 05		972 + 97	96 Tons (Binder Course)	
	Total L.R. 79 Parallel			128 Tons	
387	III + 07		413 + 83	185 Tons (Wearing Course)	As Directed By The Engineer
387	III + 07		413 + 83	556 Tons (Binder Course)	
	Total L.R. 387			741 Tons	
Appl. 405	40 + 27		53 + 87	14 Tons (Wearing Course)	
Appl. 405	40 + 27		53 + 87	44 Tons (Binder Course)	
	Total Appl. 405			58 Tons	
10030	0 + 00		475 + 30	321 Tons (Wearing Course)	
10030	0 + 00		475 + 30	961 Tons (Binder Course)	
	Total L.R. 10030			1282 Tons	
	PROJECT TOTAL			2209 TONS	

ITEM 27 & 27a BITUMINOUS SURFACE COURSE FJ-1,1" DEPTH

ROUTE	S.L.D. STATION	to	S.L.D. STATION	DESCRIPTION	ITEM 27 SQ. YDS.	ITEM 27a TONS
79 Parallel	924 + 05		972 + 97	Roadway (City Portion)	—	539
387	III + 07		413 + 83	Roadway	61,926	—
Appl. 405	40 + 27		53 + 87	Roadway (City Portion)	—	244
10030	0 + 00		437 + 16	Roadway	93,405	—
10030	434 + 76		475 + 30	Roadway (City Portion)	—	691
10030, Appl. 405	Channelized Intersection			Roadway	—	53
	Total				155,331	1,527

ITEM 27c BITUMINOUS SURFACE COURSE ID-2 (SPECIAL BINDER)

ROUTE	S.L.D. STATION	to	S.L.D. STATION	DESCRIPTION	TONS
79 Parallel	924 + 05		972 + 97	3" Special Binder Under FJ-1 Surface	1,829
387	III + 07		413 + 83	3" Special Binder Under FJ-1 Surface	10,589
Appl. 405	40 + 27		53 + 87	3" Special Binder Under FJ-1 Surface	827
10030	0 + 00		475 + 30	3" Special Binder Under FJ-1 Surface	18,318
10030, Appl. 405, 10047	Channelized Intersection			3" Special Binder Under FJ-1 Surface	180
	TOTAL				31,743

SUBSEALING

ITEM 25

ITEM 26

ROUTE	S.L.D. STATION	to	S.L.D. STATION	HOLES DRILLED EACH	ASPHALT CEM. CLASS U-1 GALLONS	REMARKS
387	III + 07		413 + 83	5,862	162,556	As Directed By The Engineer
	Total L.R. 387					
10030	0 + 00		386 + 77	7,632	214,688	
	Project Total			13,494	377,244	

DRIVES, APPROACHES & MISC. ADJ.

ITEM 19

ITEM 27b

ITEM 27a

ROUTE	S.L.D. STATION	to	S.L.D. STATION	SEL. MAT'L SURF (2A, AGGR.) CU YDS.	BIT. SURF. CRSE. ID-2 (BINDER) TONS	BIT. SURF. CRSE. FJ-1 TONS	REMARKS
79 Parallel	924 + 05		972 + 97	—	35	91	16 Drives & Apprs.
387	III + 07		413 + 83	—	95	42	Gutter Adj. Rdwy.
387	III + 07		413 + 83	509	—	—	128 Drives & Apprs.
387	III + 07		413 + 83	—	69	188	47 Drives & Apprs.
387	III + 07		413 + 83	—	2	1	Bridge, Waterable
Appl. 405	40 + 27		53 + 87	—	9	23	4 Drives & Apprs.
Appl. 405	40 + 27		53 + 87	—	5	2	Gutter adj. Rdwy.
10030	0 + 00		475 + 30	897	—	—	233 Drives & Apprs.
10030	0 + 00		475 + 30	—	186	480	84 Drives & Apprs.
10030	0 + 00		475 + 30	—	1	1	Bridge, Waterable
	TOTAL			1,406	402	828	

REMOVAL OF EXISTING BIT SURF. CRSE. ITEM 97

ROUTE	S.L.D. STATION	to	S.L.D. STATION	SQ. YDS.	REMARKS
79 Parallel	924 + 05		972 + 97	10,696	
	Drives & Approaches			351	AS DIRECTED
	Total L.R. 79 Parallel			11,047	BY THE
Appl. 405	40 + 27		53 + 87	4,836	ENGINEER
	TOTAL Appl. 405			4,836	
10030	434 + 76		475 + 30	13,713	
	Drives & Approaches			996	
	TOTAL L.R. 10030			14,709	
	PROJECT TOTAL			30,592	

CONSTRUCTION & OVERALL LENGTH

L.R. 79 Parallel Sec. 1

S.L.D. Sta. 924 + 05	to	S.L.D. Sta. 940 + 93	=	1,688	L.F.	
EQA. S.L.D. Sta. 940 + 93 Bk.	to	S.L.D. Sta. 963 + 11 Ah.	=	—	L.F.	
S.L.D. Sta. 963 + 11	to	S.L.D. Sta. 972 + 97	=	986	L.F.	
		TOTAL		2,674	L.F.	(0.51 Mi.)

L.R. 387 Sec. 5

S.L.D. Sta. III + 07	to	S.L.D. Sta. 255 + 24	=	14,417	L.F.	
EQA. S.L.D. Sta. 255 + 24 Bk.	to	S.L.D. Sta. 264 + 39 Ah.	=	—	L.F.	
S.L.D. Sta. 264 + 39	to	S.L.D. Sta. 413 + 83	=	14,944	L.F.	
		TOTAL		29,361	L.F.	(5.56 Mi.)

Appl. 405 Sec. 2

S.L.D. Sta. 40 + 27	to	S.L.D. Sta. 53 + 87	=	1,360	L.F.	
		TOTAL		1,360	L.F.	(0.26 Mi.)

L.R. 10030 Sec. 4

S.L.D. Sta. 0 + 00	to	S.L.D. Sta. 246 + 14	=	24,614	L.F.	
EQA. S.L.D. Sta. 246 + 14 Bk.	to	S.L.D. Sta. 250 + 75 Ah.	=	—	L.F.	
S.L.D. Sta. 250 + 75	to	S.L.D. Sta. 437 + 16	=	18,641	L.F.	
EQA. S.L.D. Sta. 437 + 16 Bk.	to	S.L.D. Sta. 434 + 76 Ah.	=	—	L.F.	
S.L.D. Sta. 434 + 76	to	S.L.D. Sta. 475 + 30	=	4,054	L.F.	
		TOTAL		47,309	L.F.	(8.96 Mi.)

Total Construction & Overall Length = 80,704 L.F. (15.29 Mi.)

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10	BUTLER	79 Parallel	1	4 of 6
BUTLER CITY				
10	BUTLER	387	5	
BUFFALO & WINFIELD TOWNSHIPS				
10	BUTLER	Appl. 405	2	
BUTLER TOWNSHIP				
10	BUTLER	10030	4	
WINFIELD, JEFFERSON, SUMMIT & BUTLER TOWNSHIPS - BUTLER CITY				

RECORD OF STATIONS OF EXISTING ROAD TYPES

L.R. 79 Parallel

Adjacent to S.L.D. Sta. 924 + 05 Bit. Surf. Crse. on Brick on Pl. Conc. & R.C. Widening, Width 36' Between Curbs  
From S.L.D. Sta. 924 + 05 to S.L.D. Sta. 925 + 76 Bit. Surf. Crse. on Brick on Pl. Conc. & R.C. Widening, Width 36' Between Curbs.  
From S.L.D. Sta. 925 + 76 to S.L.D. Sta. 932 + 84 Bit. Surf. Crse. on R.C. Pav't. Width 36' Between Curbs.  
From S.L.D. Sta. 932 + 84 to S.L.D. Sta. 940 + 93 Bk. Bit. Surf. Crse. on Brick on Conc. Base & Conc. Widening, Width 36' Between Curbs.  
From S.L.D. Sta. 940 + 93 Bk. to S.L.D. Sta. 972 + 97 Bit. Surf. Crse. on Brick on Pl. Conc. Base, Width 36' Between Curbs.  
Adjacent to S.L.D. Sta. 972 + 97 Bit. Surf. Crse. on Brick on Conc. Base, Width 50' Between Curbs.

L.R. 387

Adjacent to S.L.D. Sta. III + 07 Bit. Surf. Crse. on R.C. Pav't. Width 20'  
From S.L.D. Sta. III + 07 to S.L.D. Sta. 255 + 24 Bk. R.C. Pav't. Width 20'  
From S.L.D. Sta. 264 + 39 Ah. to S.L.D. Sta. 413 + 83 Conc. Pav't. Width 18'  
Adjacent to S.L.D. Sta. 413 + 83 R.C. Pav't. Width 20' (L.R. 10030)

Appl. 405

Adjacent S.L.D. Sta. 40 + 27 Bit. Surface Crse. on C.A.B.C., Width 22'.  
From S.L.D. Sta. 40 + 27 to S.L.D. Sta. 53 + 87 Bit. Surface Crse. on Brick on Pl. Cem. Conc. Base Width 16' and 8' Sel. Local Stone & 8' Pl. Cem. Conc. Widening, Width 32' Between Curbs.  
Adjacent to S.L.D. Sta. 53 + 87 Bit. Surf. Crse. on Brick, Width 30' Between Curbs.

L.R. 10030

Adjacent to S.L.D. Sta. 0 + 00 Conc. Pav't. Width 18' (L.R. 387)  
From S.L.D. Sta. 0 + 00 to S.L.D. Sta. 246 + 14 Bk. R.C. Pav't., Width 20'  
From S.L.D. Sta. 250 + 75 Ah. to Sta. 386 + 77 Conc. Pav't., Width 18'  
From S.L.D. Sta. 386 + 77 to Sta. 433 + 81 Bit. Surf. Crse., on R.C. Pav't. Width 16' & 4' Nat. Stone Base Widening, Width 20'  
From S.L.D. Sta. 433 + 81 to S.L.D. Sta. 433 + 95 Bit. Surf. Crse. on C.A.B.C., Width 22'.  
From S.L.D. Sta. 433 + 95 to S.L.D. Sta. 435 + 70 Bit. Surf. Crse. Width 33' on C.A.B.C., Width 33'  
From S.L.D. Sta. 435 + 70 to S.L.D. Sta. 437 + 16 Bk. Bit. Surf. Crse. on C.A.B.C., Width 22'.  
Adjacent to S.L.D. Sta. 437 + 16 Bit. Surf. Crse. on Brick on Pl. Conc. Base Width 16' and Sel. Local Stone Width 8' and Pl. Cem. Conc. Widening Width 8', Width 32' Between Curbs. (Appl. 405)  
Adjacent to S.L.D. Sta. 434 + 76 Ah. Bit. Surf. Crse. on Brick on Pl. Cem. Conc. Base. Width 16' and 8' Sel. Local Stone and 8' Pl. Cem. Conc. Widening, Width 32' Between Curbs. (Appl. 405)  
From S.L.D. Sta. 434 + 76 Ah. to S.L.D. Sta. 475 + 30 Bit. Surf. Crse. on Brick, Width 30' Between Curbs.  
Adjacent to S.L.D. Sta. 475 + 30 Bit. Surf. Crse. on Brick on Conc. Base, Width 42' Between Curbs.

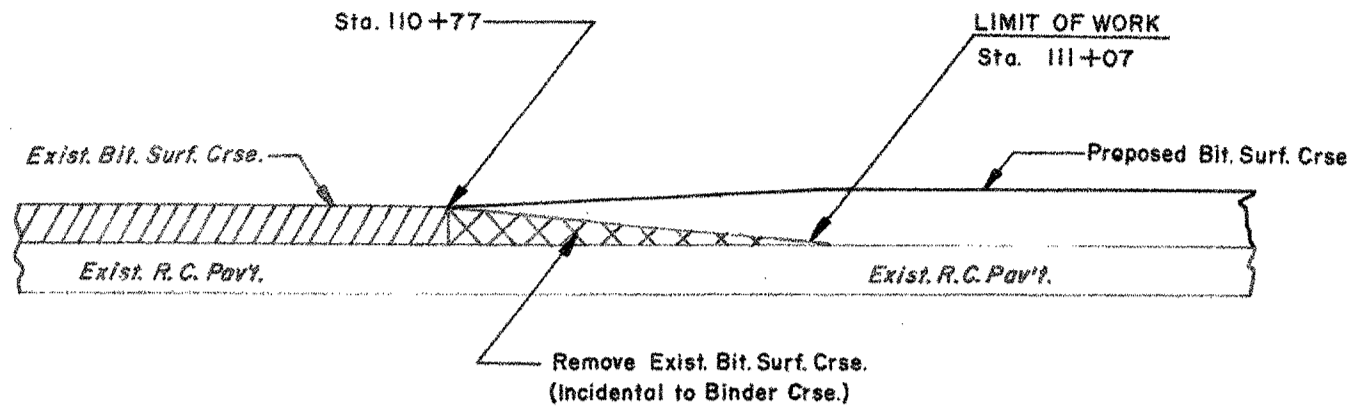
PIPE UNDERDRAIN & SUBGRADE DRAINS						
ROUTE	S.L.D. STATION	to S.L.D. STATION	ITEM 72 6" PIPE U'DRAIN TYPE II B'FILL LIN. FT.	ITEM 76 6" PIPE U'DRAIN OUTLETS LIN. FT.	ITEM 77 SUBGRADE DRAINS	REMARKS
387	III+07	413+83	840	120	420	AS DIRECTED BY THE ENGINEER
10030	0+00	437+16	1350	180	680	
	PROJECT TOTAL		2190	300	1,100	

ITEM 12 H.E.S. PL. CEM. CONC. BASE CRSE. 9" DEPTH					
ROUTE	S.L.D. STATION	to S.L.D. STATION	SQ. YDS.		REMARKS
79 Parallel	924+05	972+97	200		AS DIRECTED BY THE ENGINEER
387	III+07	413+83	314		
Appl. 405	40+27	53+87	400		
10030	0+00	433+81	449		
	PROJECT TOTAL		1363		

ITEM 10 RECONSTRUCTED SHOULDERS				
ROUTE	S.L.D. STATION	to S.L.D. STATION	LIN. FT.	
387	III+07	413+83	26,694	
10030	0+00	437+16BK	39,550	
	PROJECT TOTAL		66,244	

ITEM 14 CR. AGGR. BASE CRSE. TYPE A 12" DEPTH					
ROUTE	S.L.D. STATION	to S.L.D. STATION	SQ. YDS.		REMARKS
10030	433+81	437+16 Bk.	300		AS DIRECTED BY THE ENGINEER
	PROJECT TOTAL		300		

ITEM 96, 96a, MAINTENANCE & PROTECTION OF TRAFFIC DURING CONSTRUCTION	
Item 96	L.R. 79 Parallel LUMP SUM
Item 96a	L.R. 387, Appl 405 & L.R. 10030 LUMP SUM



L. R. 387 SEC.5  
DETAIL OF EXISTING BITUMINOUS SURFACE  
REMOVAL AT LIMIT OF WORK

PUBLIC UTILITIES  
  
THE BUTLER WATER COMPANY  
120 EAST CUNNINGHAM STREET  
BUTLER, PENNA., 16001

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10	BUTLER	79 Parallel	1	5 of 6
BUTLER CITY				
10	BUTLER	387	5	
BUFFALO & WINFIELD TOWNSHIPS				
10	BUTLER	Appl. 405	2	
BUTLER TOWNSHIPS				
10	BUTLER	10030	4	
WINFIELD, JEFFERSON, SUMMIT & BUTLER TOWNSHIPS - BUTLER CITY				

- REQUIRED LIST  
SUMMARY FROM TABULATION SHEET 4 & 5
- 2,611 Tons Bit. Surf. Crse. ID-2
  - 2,355 Tons Bit. Surf. Crse. FJ-1
  - 155,331 SY Bit. Surf. Crse. FJ-1 1" Depth
  - 31,743 Tons Bit. Surf. Crse. ID-2 (Special Binder)
  - 377,244 Gals. Asphalt Cement Class U-1 (Sub Sealing)
  - 13,494 Ea. Holes Drilled
  - 1,406 CY Sel. Matl. Surf. (2 A Aggr)
  - 30,592 SY Removal of Existing Bit. Surf. Crse.
  - 2,190 LF 6" Pipe U'Drain Type II B'fill
  - 300 LF 6" Pipe U'Drain Outlets
  - 1,100 LF Subgrade Drains
  - 1,363 SY H.E.S. Pl. Cem. Conc. Base Crse., 9" Depth
  - 66,244 LF Reconstructed Shoulders
  - 300 SY Cr. Aggr. Base Crse. Type A 12" Depth

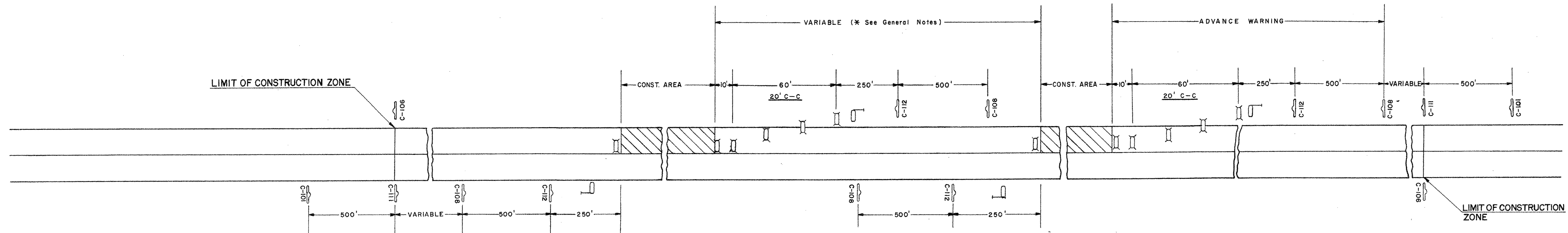
Item 96 Lump Sum Maintenance and Protection of Traffic during Construction L.R. 79 Parallel

Item 96a Lump Sum Maintenance and Protection of Traffic during Construction L.R. 387, Appl. 405 & L.R. 10030

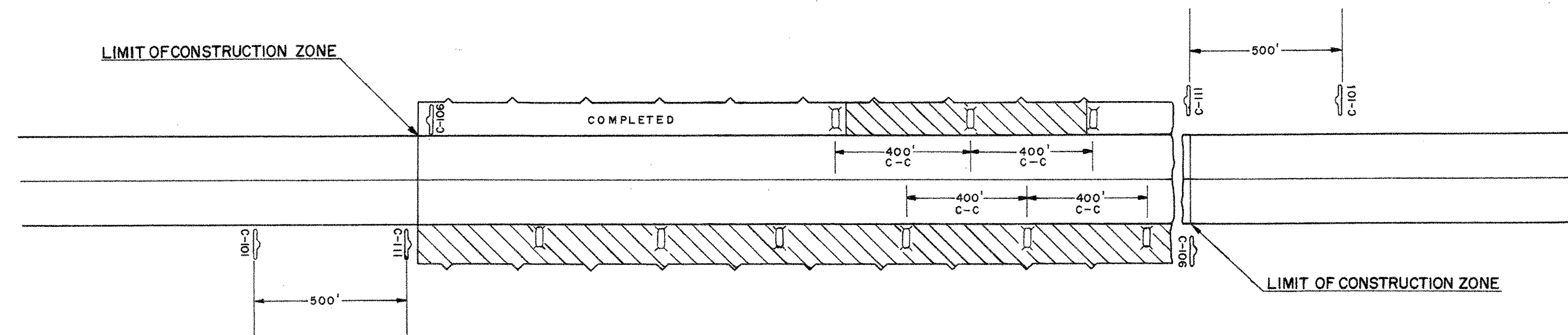
# MAINTENANCE AND PROTECTION OF TRAFFIC ON RESURFACING PROJECTS SUPPLEMENT TO BULLETIN 43

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10	BUTLER	79Parallel	1	6 of 6
BUTLER CITY				
10	BUTLER	378	5	
BUFFALO & WINFIELD TOWNSHIPS				
10	BUTLER	Appl. 405	2	
BUTLER TOWNSHIP				
10	BUTLER	10030	4	
WINFIELD, JEFFERSON, SUMMIT & BUTLER TOWNSHIPS—BUTLER CITY				

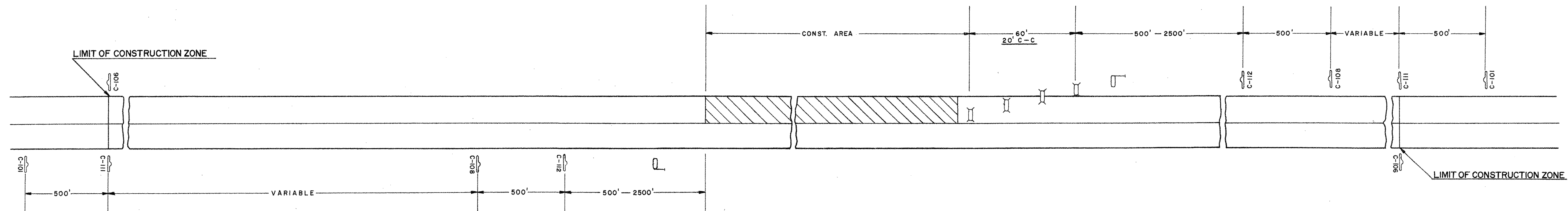
## PAVEMENT REPLACEMENT OPERATION CONTROLLED ONE LANE TRAFFIC



## LOW SHOULDER PROTECTION LITTLE OR NO INTERRUPTION OF TRAFFIC FLOW



## RESURFACING OPERATION CONTROLLED ONE LANE TRAFFIC



### GENERAL NOTES

These are the minimum required traffic control devices for the maintenance and protection of traffic during the construction of this project.

All signs and protection devices must be in place and approved by the Engineer before work begins. They shall be removed or covered as soon as they no longer apply to existing conditions.

All signs will be reflectorized and erected on portable sign supports.

It will be necessary to provide transitions for all construction zones where traffic is diverted from its traveled lane.

The same type of channelizing devices selected must be used uniformly throughout the entire project.

\* When the construction area within the limit of work exceeds 2500 ft. or the sight distance is limited it will be necessary to repeat the advance warning.

The sign C-103 (Speed Limit) if deemed necessary by the Traffic Engineer will be used throughout the project as directed by the Engineer.

The first two signs approaching the project will have type "B" warning lights mounted on the top left hand corner facing on-coming traffic and at other locations as directed by the Engineer.

C-107 Signs will be required on the following intersecting roads.  
L.R. 387 (TR 356) Appl. 405  
Appl. 3875 L.R. 10025  
L.R. 10047 L.R. 10033  
L.R. 739

### LEGEND

C-101 Road Under Construction Next Mile  
C-103 Speed Limit  
C-106 End of Construction Resume Speed  
C-108 One Lane Traffic  
C-111 Reduce Speed  
C-112 Flagman Ahead

Construction Area  
Sign (Erected on Portable Sign Supports)  
Class III Barricade With Type "A" Warning Light  
Flagman



# FINAL SUMMARY OF QUANTITIES \*

ITEM	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	TOTAL
Class AA Cement Concrete	C.Y.	—	25 28.73	25 28.7
Class A Cement Concrete	C.Y.	42 41.86	—	42 41.9
Class H.E.S. Cement Concrete	C.Y.	—	3 1.2	3 1.2
Bituminous Binder Course, ID-2	Tons	—	300 292	300 292
Bituminous Wearing Course, ID-2, 1" Depth SRL-H	S.Y.	—	3,500 3,486.26	3,500 3,486.3
Selected Borrow Exc-Structure Backfill	C.Y.	10 8.89	—	10 8.8
Class 3 Excavation	C.Y.	10 8.89	—	10 8.8
Reinforcement Bars	Lbs.	5,550 6,193.19	905 0	5,935 6,193
Class 1 Excavation	C.Y.	22 20.58	—	22 20.6
Cement Concrete Sidewalk	S.Y.	—	15 8.01	15 8
Fabricated Structural Steel, Special **	Lbs.	—	23,600 36,809.89	23,600 36,810
Dowel Holes	Ea.	100 190	40 0	237 190
Downspouting	L.S.	—	100 L.F. 100%	100 100%
Plain Cement Concrete Curb	L.F.	—	21 13.67	21 13.7
Plain Stone Slope Wall, Special	C.Y.	—	265 168.05	265 168
Painting Portion of Existing Bridge	L.S.	—	—	100%
Removal of Portion of Existing Bridge	L.S.	—	—	100%
Approach Slab	S.Y.	—	40 41.11	40 41.1
Right of Way Fence, Type I	L.F.	—	25 34	25 34
Precast Cement Concrete Block Slope Wall	S.Y.	—	167 177.55	167 177.6
Type 2-S Guard Rail	L.F.	50 ✓	—	50 ✓
Royston Unidam Exp. Dam Model L.K. 25	L.F.	—	76 76.28	76 ✓
Royston Unidam Exp. Dam Model L.K. 80	L.F.	—	114 114.42	114 ✓
Synthetic Resin Protective Coating, SRTC	S.Y.	—	3,458 3,390.93	3,458 3,391
Terminal Section - Single	Ea.	2 ✓	—	2 ✓

\* All quantities are approximate.

\*\* Includes 20,000 lbs. of steel to be placed at deteriorated areas as directed by the Engineer.

## NATURE OF WORK

- Place precast cement concrete block slope wall and plain stone slope wall special at north abutment.
- Place plain stone slope wall special at stream location at column #13.
- Replace existing north abutment backwall and bearing seats.
- Modify the anchorage system at the columns.
- Remove existing concrete and replace with reinforcement bars, class A cement concrete in lower portion of columns.
- Remove partial existing footing and replace with reinforcement bars and Class A Cement Concrete.
- Replace existing cross bracing at column #13.
- Replace all stringer floor beam connections at expansion dam locations.
- Place scuppers at columns #3, #5 and #13.
- Replace top portion of existing concrete sidewalk with class AA cement concrete.
- Remove 1/2" existing bituminous surface pavement.
- Patched sections of deck shall be removed and replaced with bituminous surface course.
- Remove existing expansion dams and replace with Royston Unidam a columns #3, #5, #9, #13 and #15.
- Apply bridge SRTC Protective Coating over entire deck prior to placing overlay.
- Place 2 1/2" bituminous surface course overlay on entire deck.
- Sandblast and paint floor beams and columns at #3, #5, #9, #13 and #15.
- Partial column #8n replacement as shown on sheet 12 of 12

## FINAL SUMMARY OF QUANTITIES (CONT'D)

ITEM	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	TOTAL
EXTRA WORK				
REMOVAL EXISTING BRIDGE DECK	S.Y.	—	105.80	105.80
CLASS AA CEMENT CONCRETE	C.Y.	—	32.45	32.5
REINFORCEMENT BARS	LBS.	—	4,872	4,872
CLEAN & PAINT MAIN GIRDER STRINGER AND SIDEWALK BEAMS BETWEEN PIER #5 & #6	L.S.	—	—	100 %
SUPPLY & ERECT DOWNSPOUT @ PIER #5	L.F.	—	25.4	25.4
FINAL FORCE ACCOUNT				
REMOVAL OF PORTIONS OF EXISTING BRIDGE DECK AND REPAIR WITH CLASS AA CEMENT CONCRETE	L.S.	—	—	ELIMINATED
REMOVAL OF PORTION OF EXIST. BRIDGE DECK BELOW FIRST MAT OF REINF BARS AND PATCH WITH CLASS AA CEMENT CONC.	L.S.	—	100 %	100 %
REPAIR HAND RAIL DUE TO AUTO ACCIDENT	L.S.	—	—	100 %

## GENERAL NOTES

- Materials and workmanship shall be in accordance with Specification Forms 408/76 and 409/73.
- Design Specifications: Design Division of 1973 AASHTO, "Standard Specifications for Highway Bridges" (including 1974 Interim Specifications) and as supplemented by the Design Manual, Part 4, Structures (including 5-73 Revisions).
- Live Load: HS 20-44 Loading.
- Temporary supports shall be designed by the contractor and submitted to the District Bridge Engineer for approval.
- The contractor shall verify all dimensions of the Existing Structure in the field.
- Exposed concrete edges shall be chamfered 1"x1" except as noted.
- Reaming of holes for field connections will be permitted as per Form 409 Sec. 1054.10.
- 2" concrete cover shall be provided on reinforcement bars except where noted.
- All fasteners shall be 7/8" (ASTM A325) bolts except as noted, alternate equivalent welded shop connections will be permitted with the Engineers approval.
- Structural steel shall conform to ASTM Designation A36.
- Bearing areas shall be prepared as specified in Section 1054.4 (a) of Form 409.
- All holes for 7/8" A325 bolts shall be 1 1/16", except guard-rail connections to post which shall be as shown on Standard Drawing RC-52.
- Class AA Cement Concrete shall be used in abutment backwall and sidewalks.
- Class A Cement Concrete shall be used in splash blocks, abutment, wing wall and columns.
- Class H.E.S. Cement Concrete shall be used in scupper support.
- Standard Drawing RC-52 shall apply only for details pertaining to Type 2-S rail element, backing plates, steel plates, post bolts, splice bolts and nuts.
- Finish paint for structural steel shall be Sea Mist Green.
- Prior to field welding, any moisture present in the weld area due to frost, dew, etc., shall be driven off by heating of the area.
- Shaded portions indicate areas of new construction, except for Bit. Wearing Surface.
- Columns that are to be concrete encased shall be cleaned and plated if necessary, in the concrete encased area as directed by the Engineer.
- Shop drawings of the existing structure as constructed in 1915 and rehabilitation plan of 1948 are available at the District Office.
- The Engineer shall inspect all areas and become familiar with the actual conditions as soon as scaffolding and access is available.
- All work and replacement is left to the judgement of the Engineer and requires his approval whether or not it is shown on the plan.
- Any substandard condition whether or not shown on the plan shall be restored under its respective items as directed by the Engineer and at the unit price bid for the items required.
- Areas of existing concrete coming in contact with new concrete shall have an approved epoxy primer bonding agent applied as per manufacturers specifications before new concrete is placed. Existing reinforcing in areas where concrete is removed shall be preserved and cleaned if their condition is reasonable, otherwise it shall be replaced and satisfactorily spliced to existing reinforcing.

- Preformed Neoprene Strip Seal Joint shall be shipped and installed in one continuous piece.
- Complete details of Expansion Devices with dimensions are to be shown on shop drawings prepared by the Fabricator and approved by the Engineer. Dimensions shown on these drawings should be compared and verified with the shop drawings by the Fabricator and revised considering the Fabricator's requirements.
- Superstructure dimensions shall be attained at 68°F.

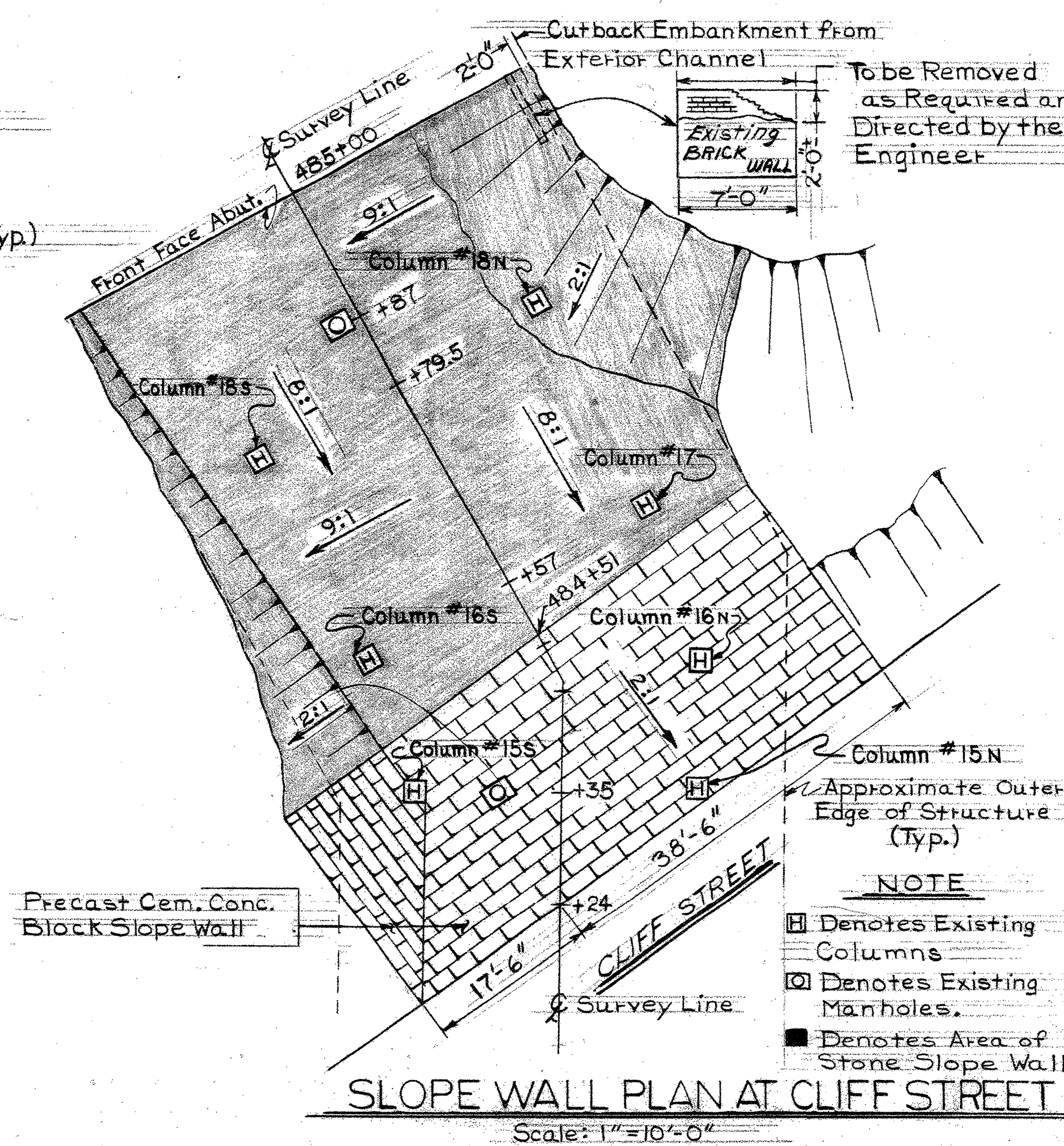
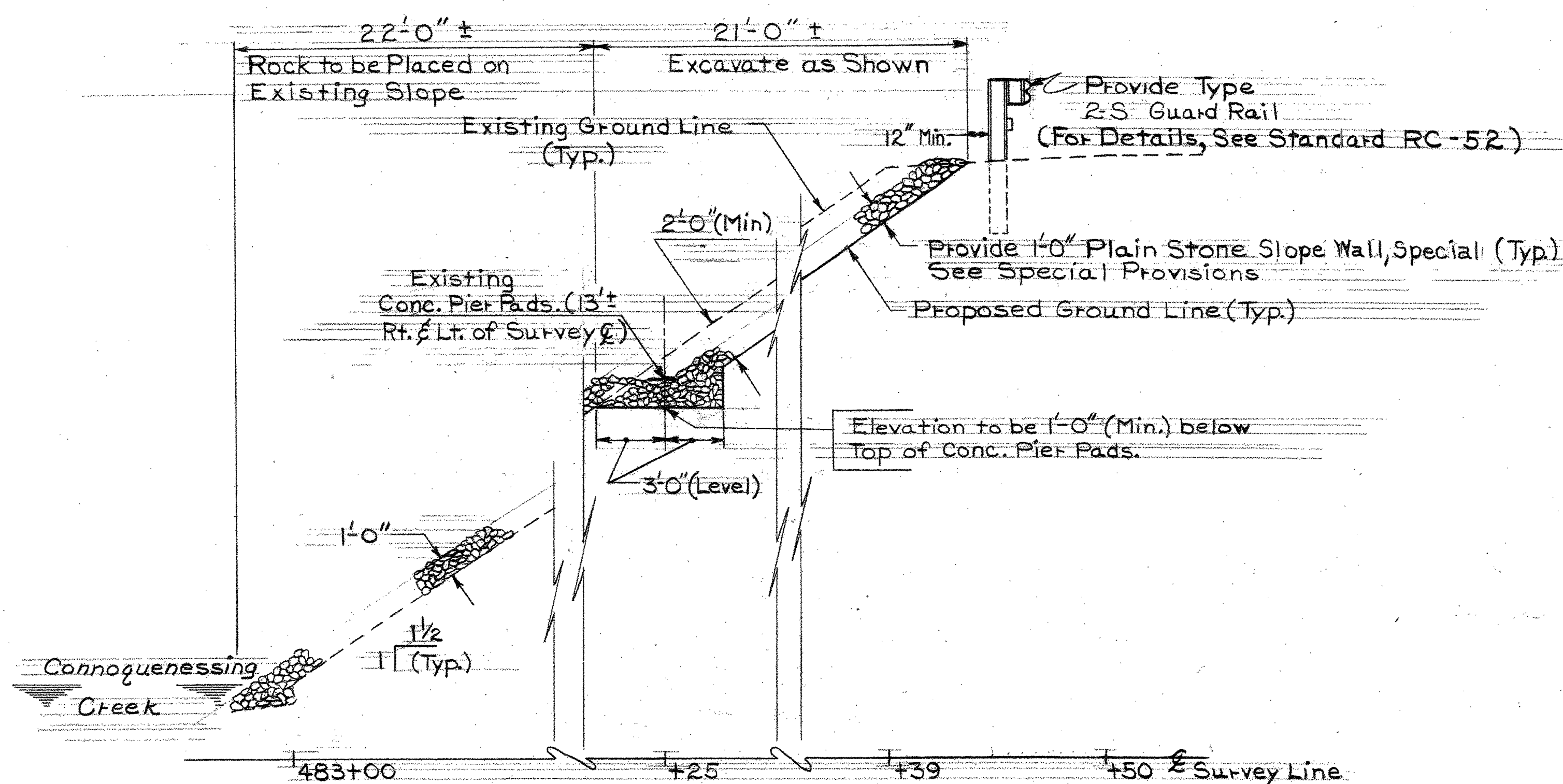
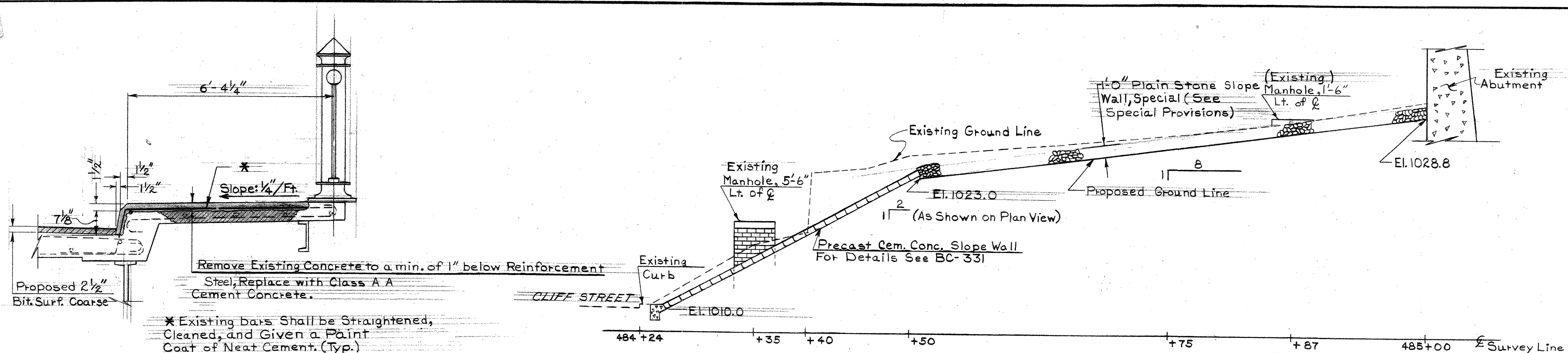
Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF DESIGN

BUTLER COUNTY  
L.R. 10030 SEC. D09  
L.R. 10030-D09 STA. 480 + 71.00  
OVER CONNOQUENESS CREEK AND RAILROADS  
BRIDGE REHABILITATION PLAN  
GENERAL NOTES, NATURE OF WORK & QUANTITIES

APPROVED JUN 16 1976  
B. Kotalik  
BRIDGE ENGINEER

SHEET 2 OF 12  
S-12431



Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF DESIGN

BUTLER COUNTY  
L.R. 10030 SEC. D09  
L.R. 10030-D09 STA. 480+71.00  
OVER CONNOQUENESSING CREEK AND RAILROADS  
BRIDGE REHABILITATION PLAN  
SLOPE WALL AND SIDEWALK DETAILS

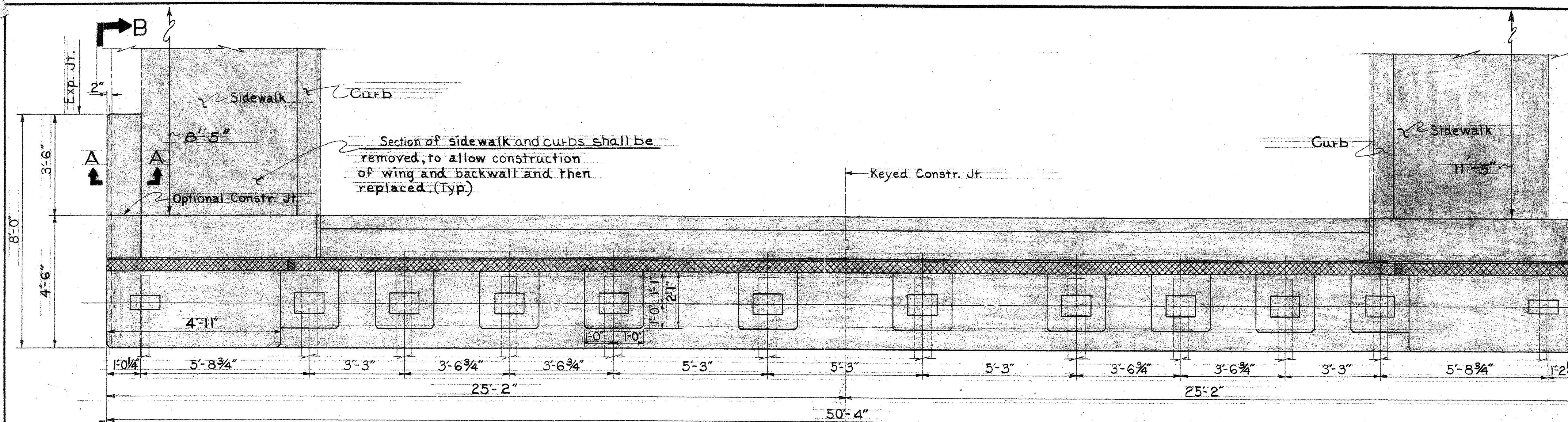
APPROVED JUN 16 1976  
B. J. Kotab  
BRIDGE ENGINEER

SHEET 3 OF 12  
S-12431

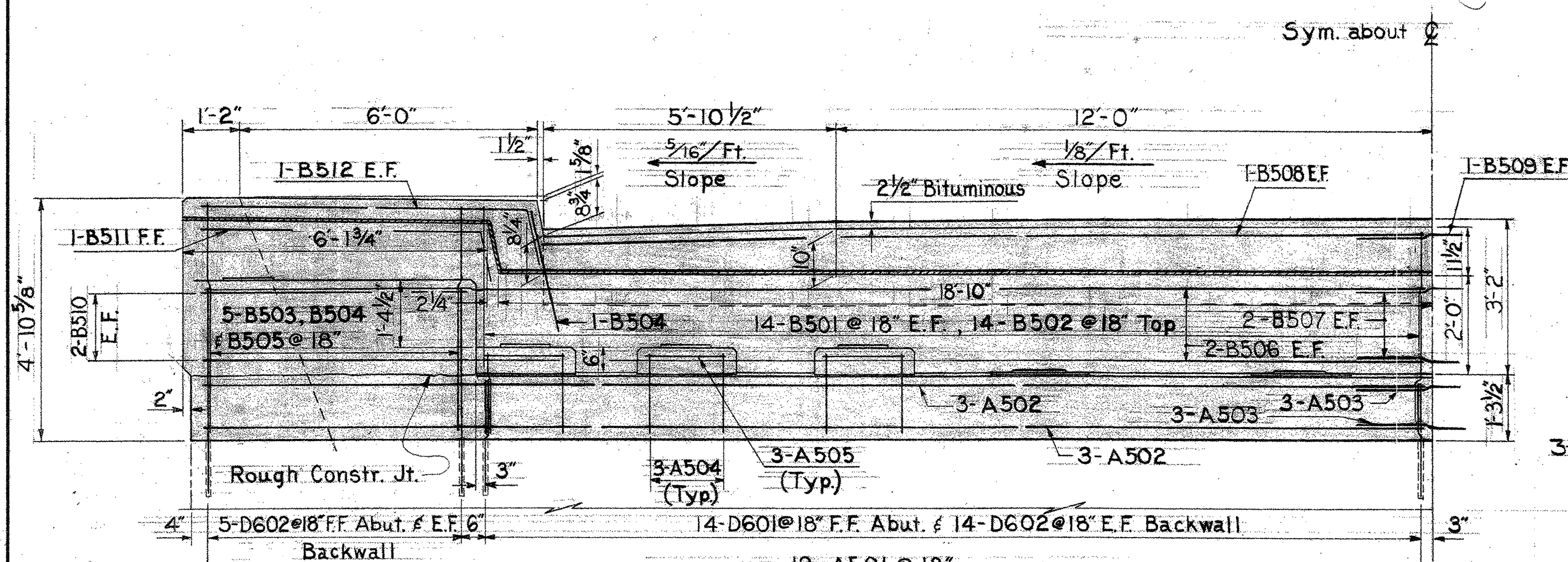
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BARCLAY BROTHERS, INC. #4101-8

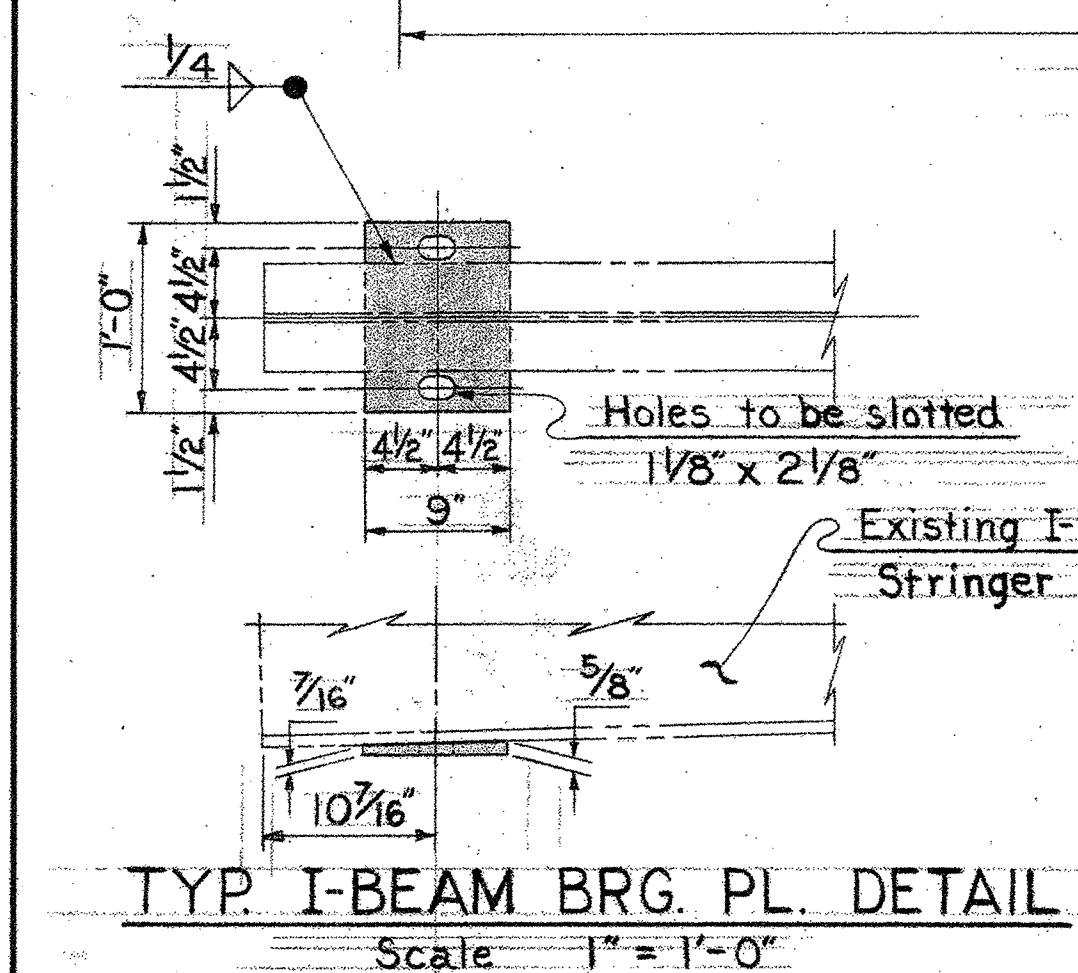
9/19/2006



PLAN VIEW  
Scale 1/2" = 1'-0"

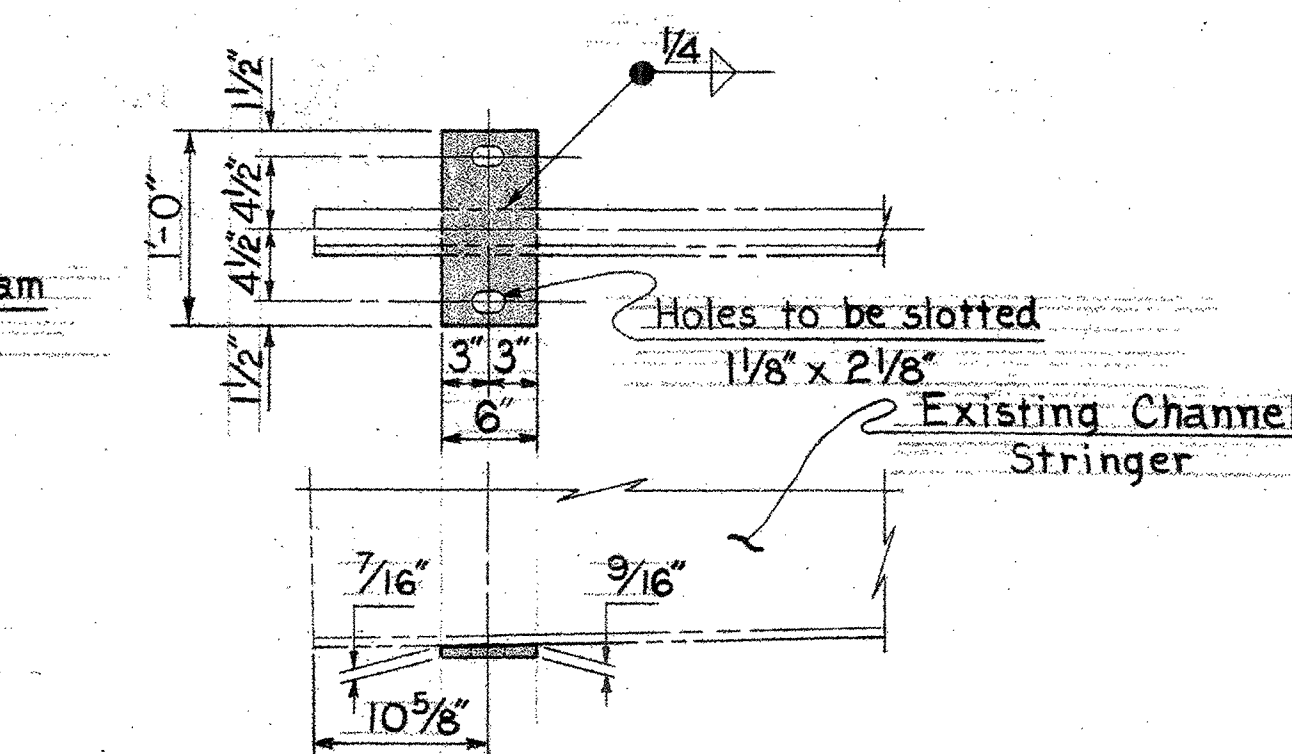


HALF ELEVATION VIEW  
Scale 1/2" = 1'-0"

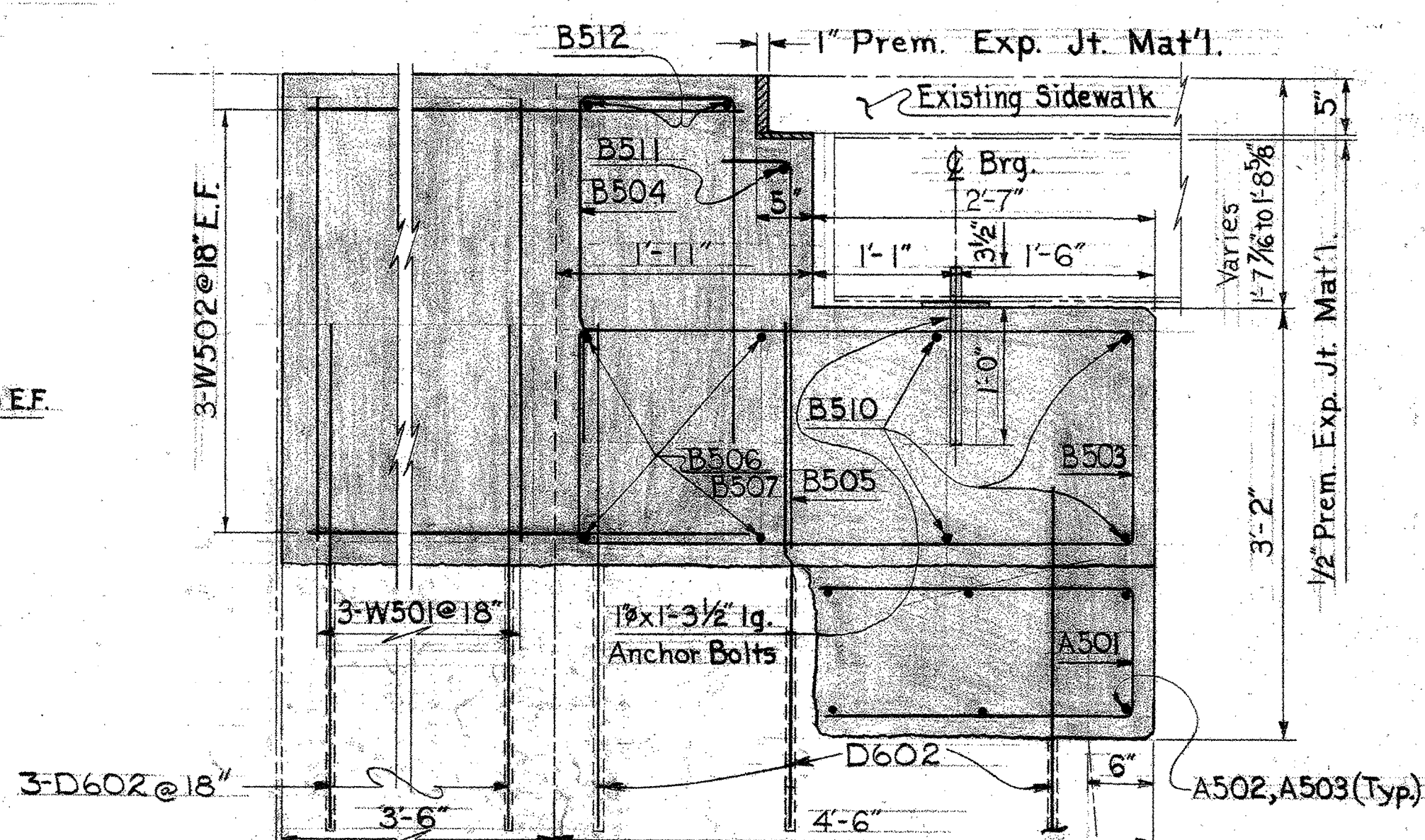


TYP. I-BEAM BRG. PL. DETAIL  
Scale 1" = 1'-0"

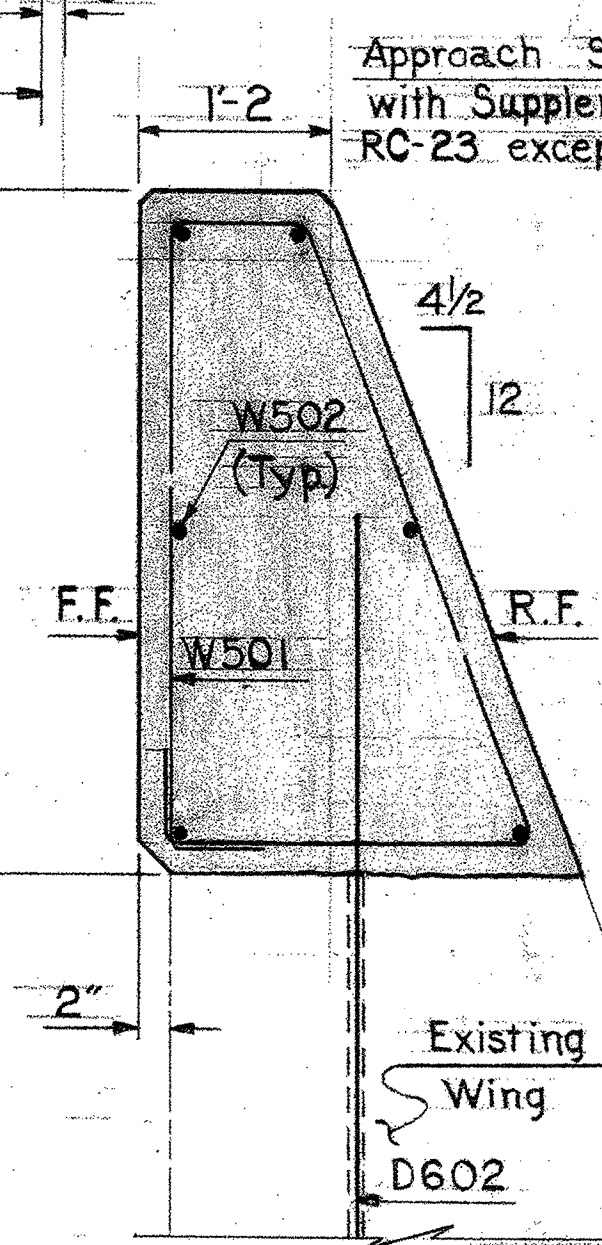
DESIGNED BY DIST. 10-0  
Designed by W. C. W.  
Drawn by W. C. W.  
Traced by W. C. W.  
Checked by J. P. H.



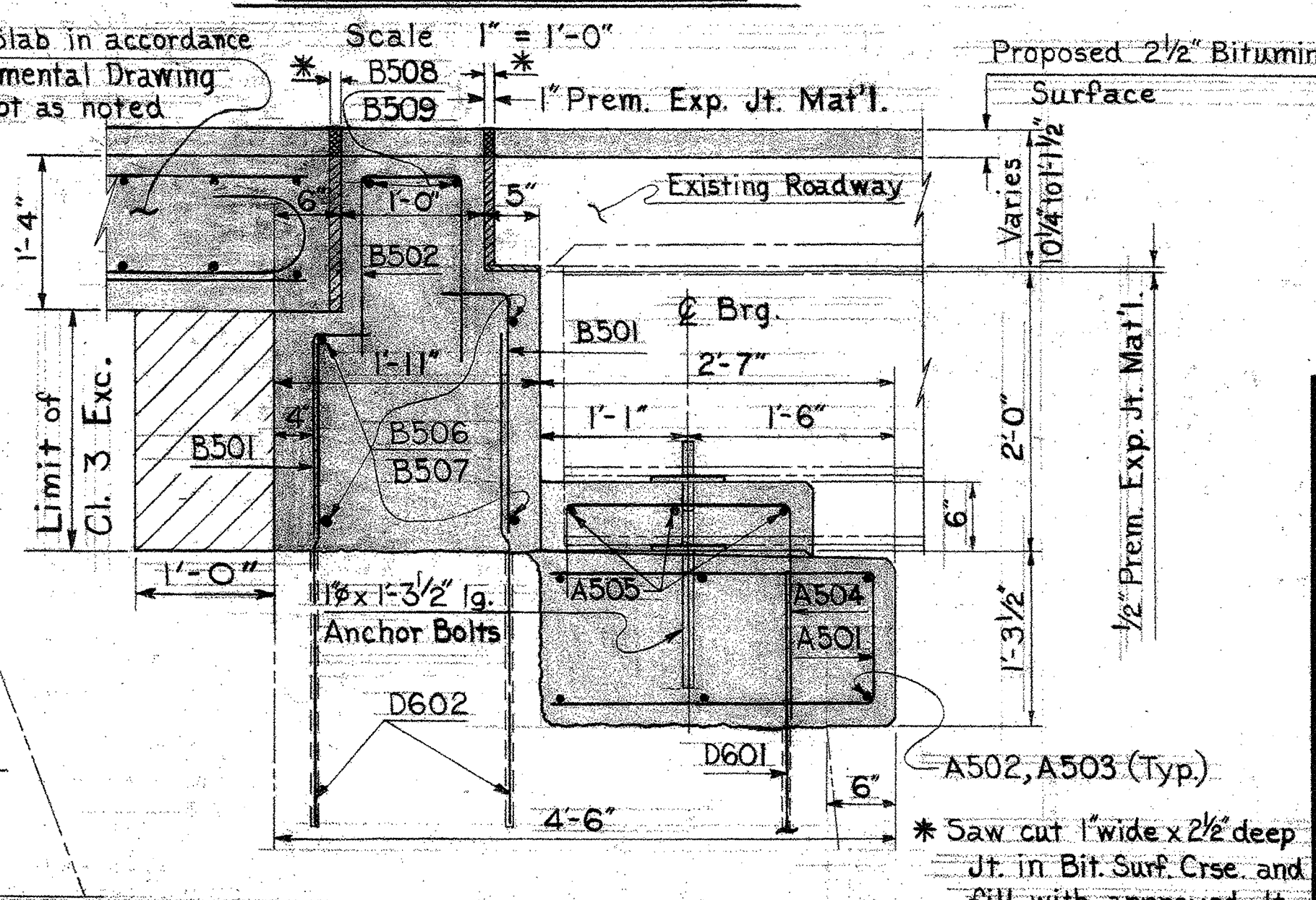
TYP. CHANNEL BRG. PL. DETAIL  
Scale 1" = 1'-0"



SECTION B-B



SECTION A-A  
Scale 1" = 1'-0"



ROADWAY SECTION THRU ABUT.  
Scale 1" = 1'-0"

REINFORCEMENT BAR SCHEDULE					
Mark	No.	Size	Length	Type	Remarks
D601	28	6	3'-0"	STR.	DOWEL BAR
D602	89	6	3'-11"	STR.	DOWEL BAR
A501	38	5	5'-7"	1	
A502	6	5	24'-8"	STR.	
A503	6	5	26'-7"	STR.	
A504	18	5	4'-0"	2	
A505	18	5	1'-8"	STR.	
B501	56	5	1'-9"	3	A = 6", B = 1'-3"
B502	28	5	3'-8"	4	A = 8", B = 1'-6"
B503	10	5	12'-6"	5	
B504	12	5	6'-2"	4	A = 1'-2", B = 2'-6"
B505	10	5	3'-8"	3	A = 6", B = 3'-2"
B506	4	5	24'-8"	STR.	
B507	4	5	26'-7"	STR.	
B508	2	5	20'-0"	STR.	
B509	2	5	21'-11"	STR.	
B510	8	5	4'-5"	STR.	
B511	2	5	6'-7"	3	A = 1'-0", B = 5'-7"
B512	4	5	7'-8"	3	A = 1'-0", B = 6'-8"
W501	3	5	10'-7"	6	
W502	6	5	4'-8"	STR.	
S601	48	6	3'-8"	STR.	DOWEL BAR
S602	24	6	3'-2"	STR.	

- NOTES**
- All Dowels shall be placed in 1/4" predrilled holes, 2'-0" deep and filled with non-shrink grout.
  - F.F. = Front Face, R.F. = Rear Face and E.F. = Each Face.
  - Reinforcement bars in the sidewalks shall be cleaned, straightened and reused.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

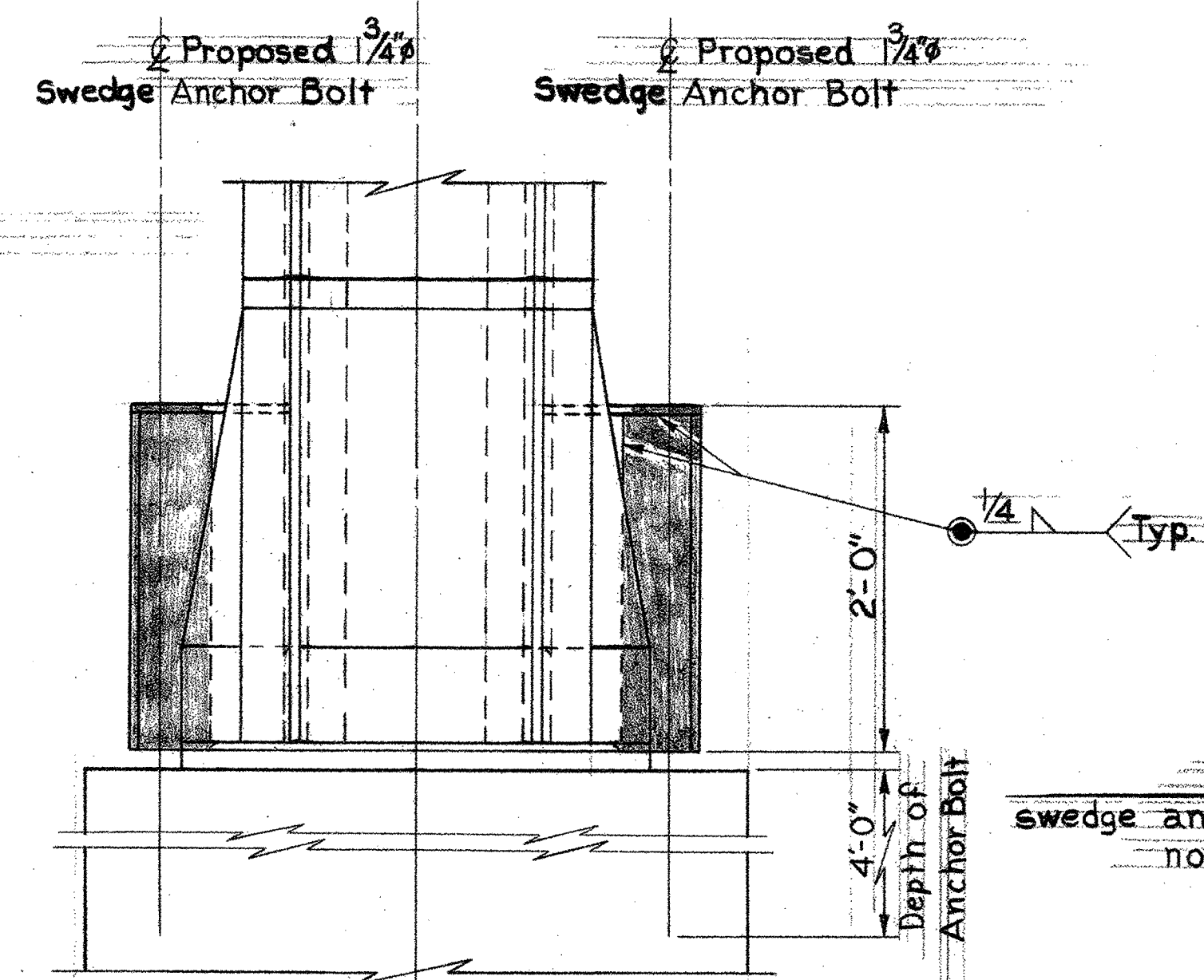
**Commonwealth of Pennsylvania**  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF DESIGN

BUTLER COUNTY  
L.R. 10030 SEC. D09  
L.R. 10030-D09 STA. 480 + 71.00  
OVER CONNOQUENESSING CREEK AND RAILROADS

**BRIDGE REHABILITATION PLAN**  
**NORTH ABUTMENT PLAN**

APPROVED JUN 16 1976  
B. J. Kotalik  
BRIDGE ENGINEER

SHEET 4 OF 12  
S-12431



PROPOSED ELEVATION VIEW - REPAIR OF ANCHOR SUPPORT

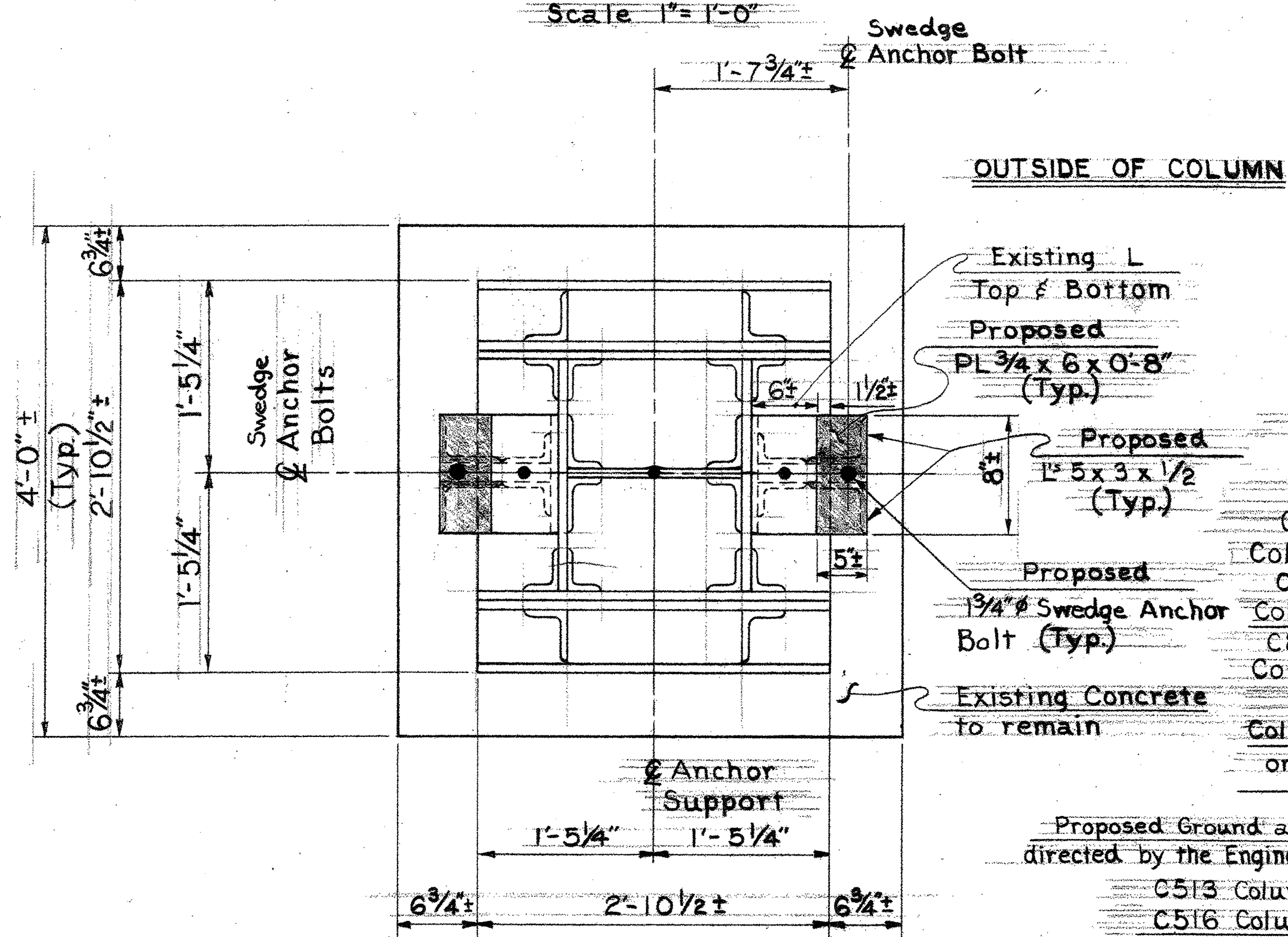
COLUMNS #13 N&S & #5 N

Scale: 1"=1'-0"

PROPOSED SIDE VIEW - REPAIR OF ANCHOR SUPPORT

COLUMNS #13 N&S & #5 N

Scale: 1"=1'-0"



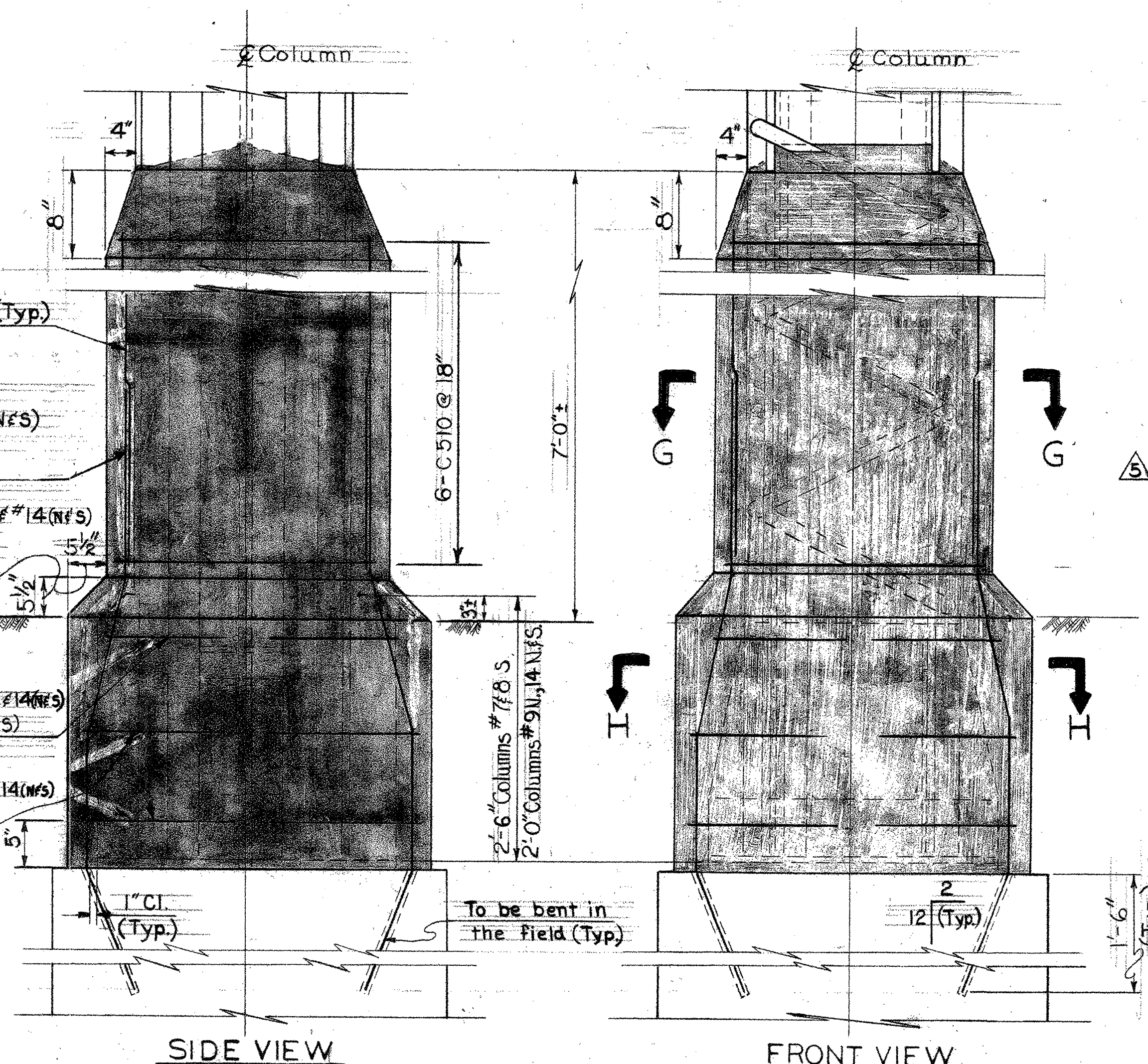
PROPOSED PLAN VIEW - REPAIR OF ANCHOR SUPPORT

COLUMNS #13 N&S & #5 N

Scale: 1"=1'-0"

**NOTE**

At 13 (N&S) replace anchor bolts before placing new strut as shown on sheet 8 of 12.

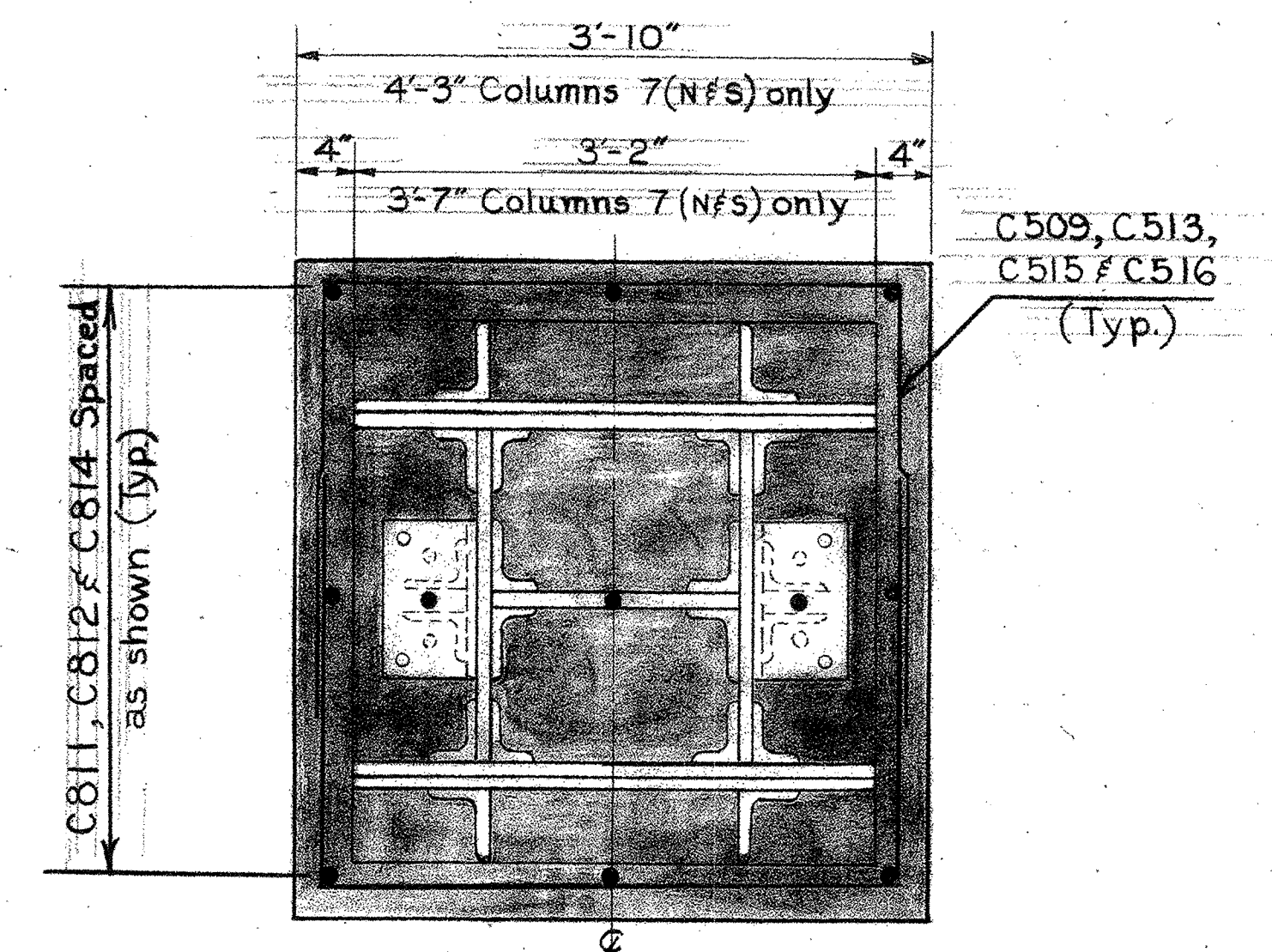


SIDE VIEW

FRONT VIEW

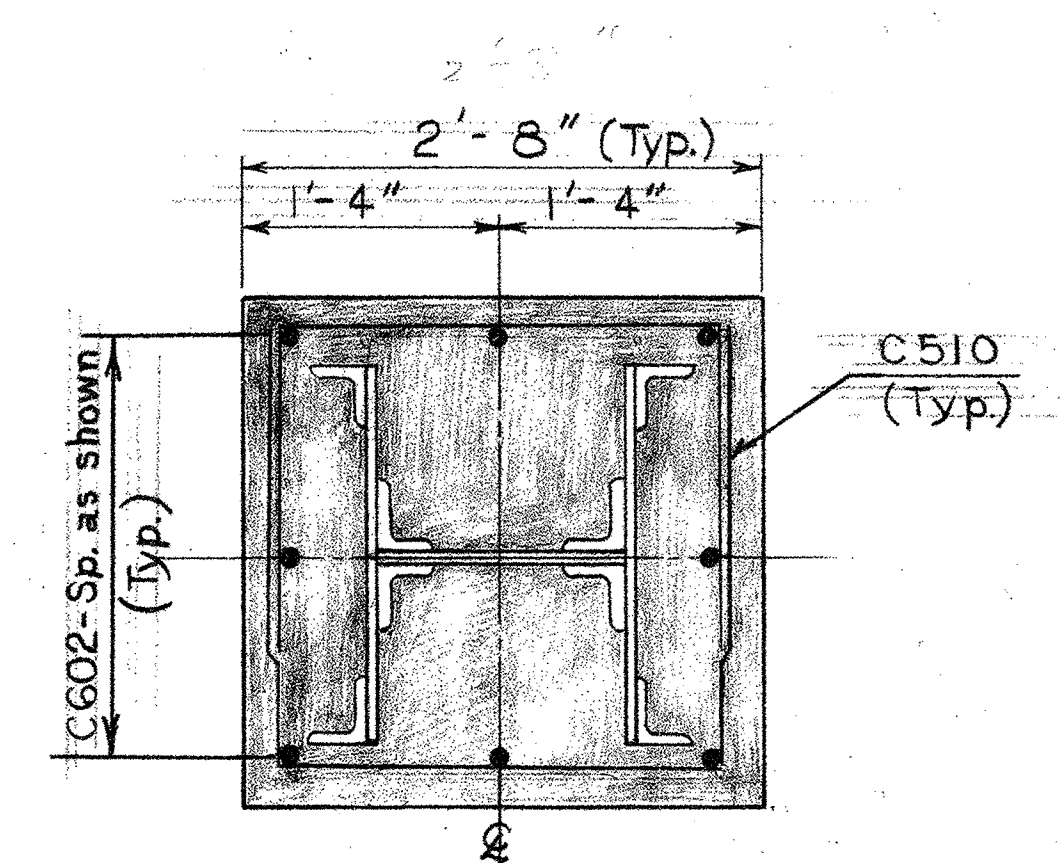
PROPOSED REPAIR - COLUMNS #14 N.S., #9 N., #8 S., #7 N.S.

Scale: 1"=1'-0"



SECTION H-H

Scale: 1"=1'-0"



SECTION G-G

Scale: 1"=1'-0"

**NOTES**

- Existing concrete shall be removed to bottom of Base Plate and replaced as shown.
- See sheet 6 of 12 for reinforcement bar schedule.

Mark	Description	By	Chk'd.	App'd.	Date
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OVER CONNOQUENESSING CREEK AND RAILROADS  
BRIDGE REHABILITATION PLAN  
ANCHOR SUPPORT REPAIRS - COLUMNS  
NO. 13 N&S, 5 N, 14 N&S, 9 N, 8 S AND 7 N&S.

APPROVED JUN 16 1976

B. J. Kotab

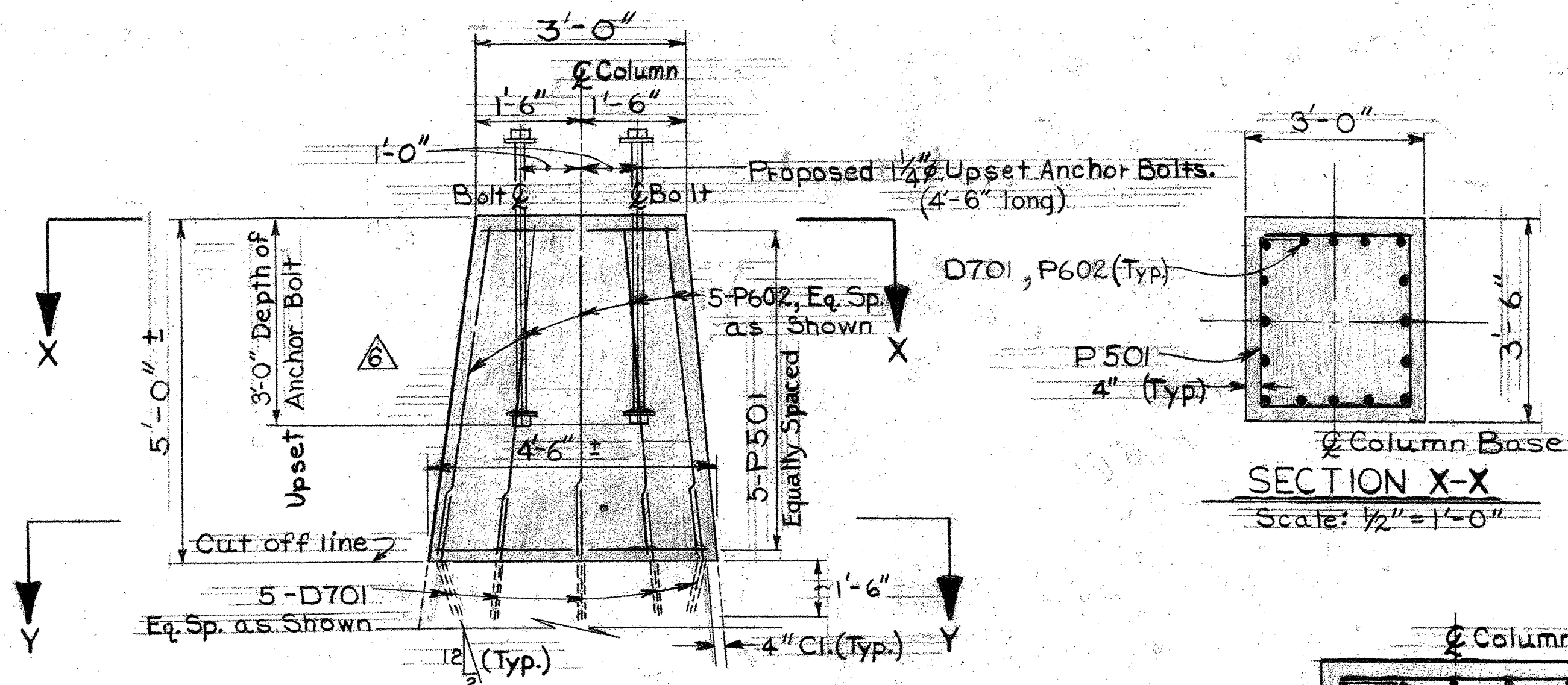
BRIDGE ENGINEER

SHEET 5 OF 12

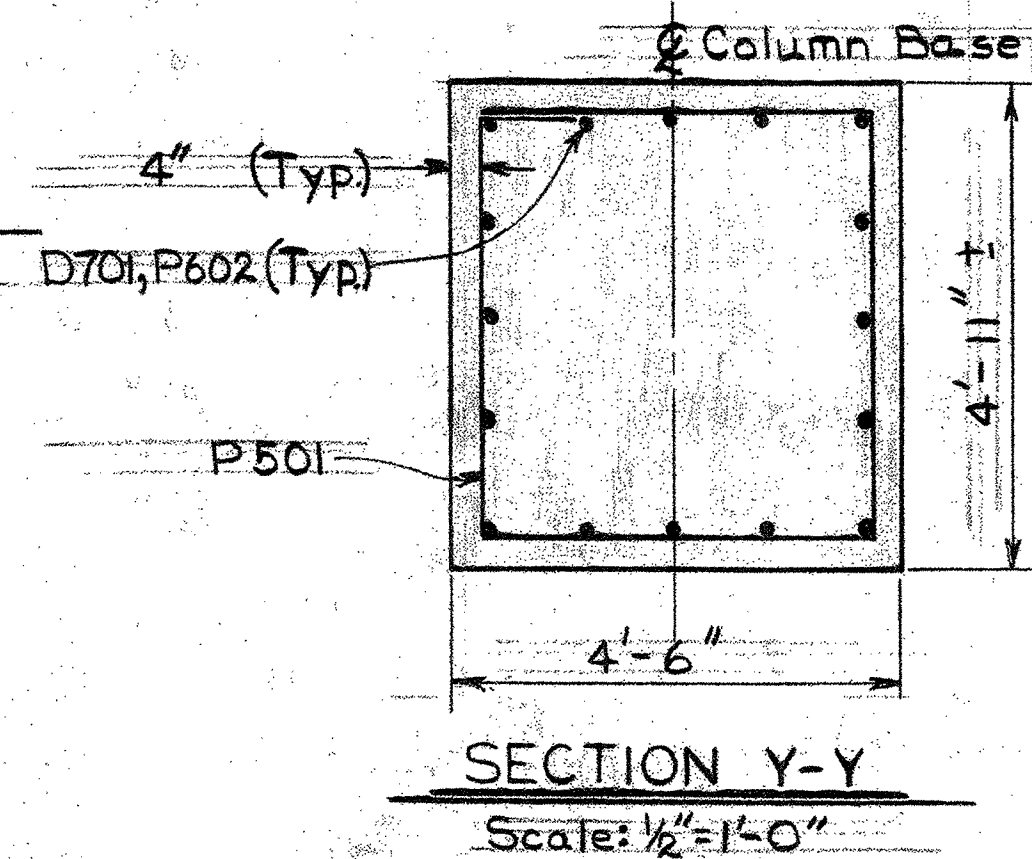
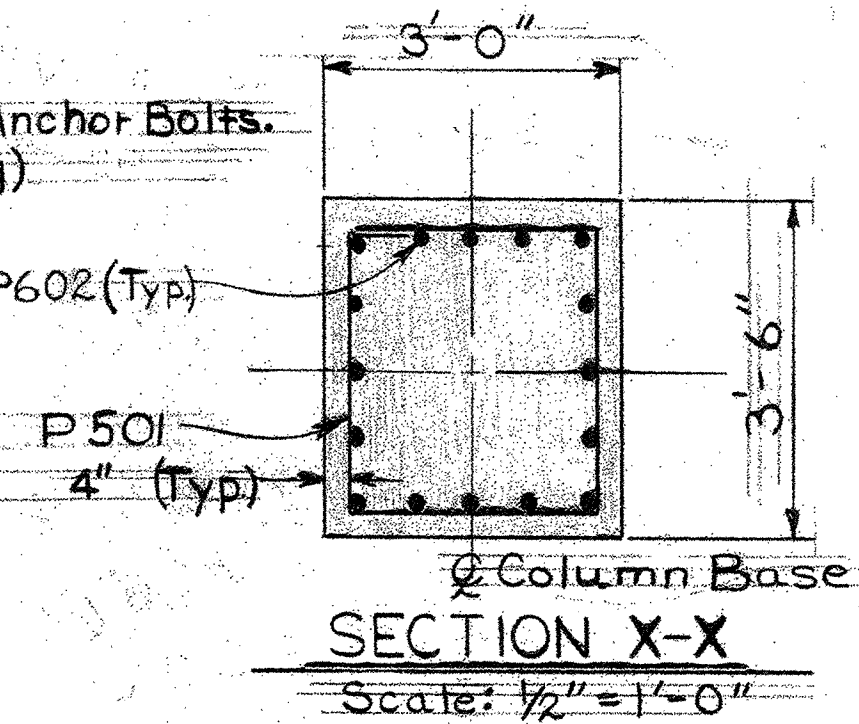
S-12431

DESIGNED BY DIST. 10-0  
Designed by L.J.B.  
Drawn by L.J.B.  
Traced by W.C.W. & D.E.M.  
Checked by J.H.H.

K&E 19 1155 9-72 WD11



PROPOSED ANCHOR BASE COLUMN #15s  
Scale: 1/2" = 1'-0"

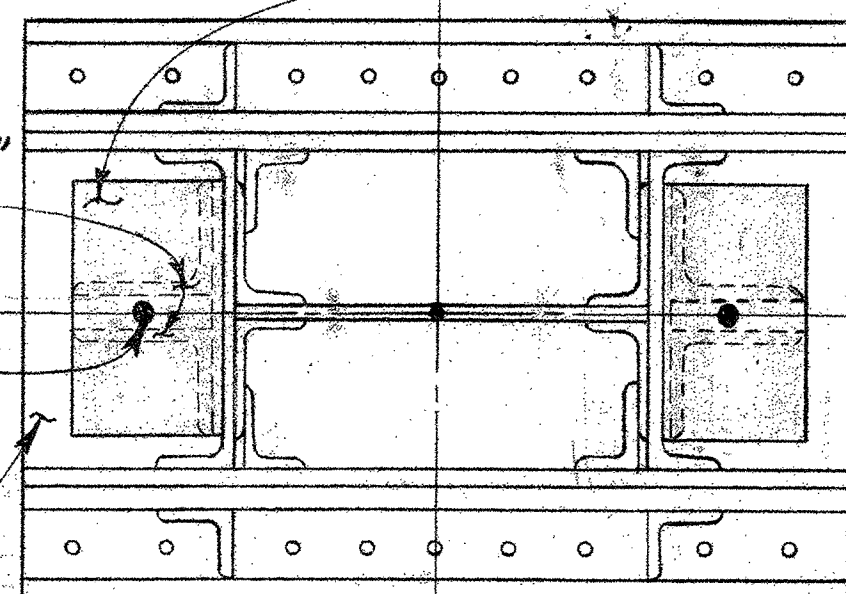


Replace existing Zs (2- 5/8" x 6" x 11" x 10" wide) (Typ.)

Replace existing Zs (2- 5/8" x 3 1/2" x 1/2" x 11" height) (Typ.)

Replace existing Bolts (Typ.)

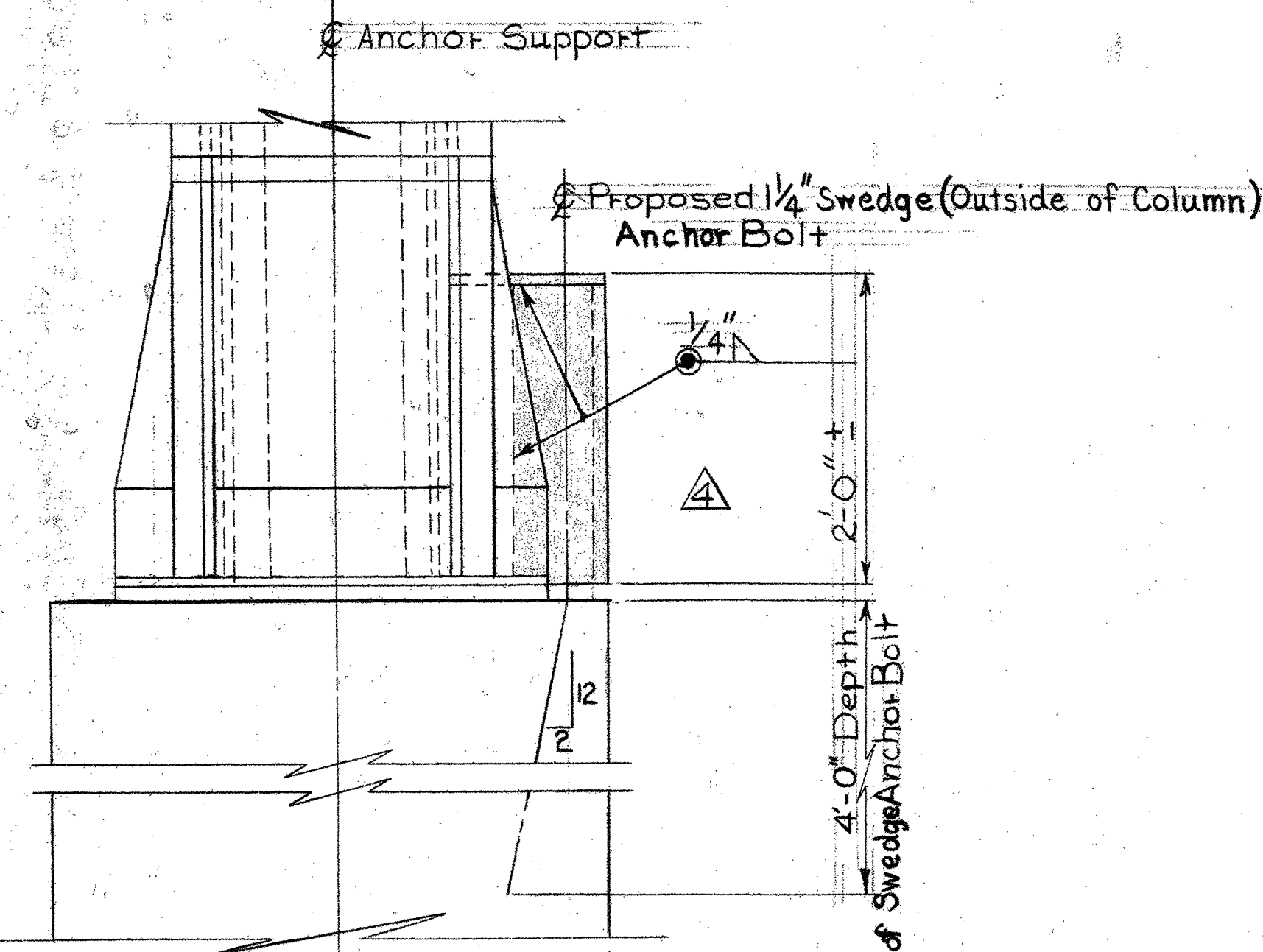
Existing Masonry R & Anchor Support to Remain



ANCHOR SUPPORT COLUMN #15s DETAIL  
Scale: 1/2" = 1'-0"

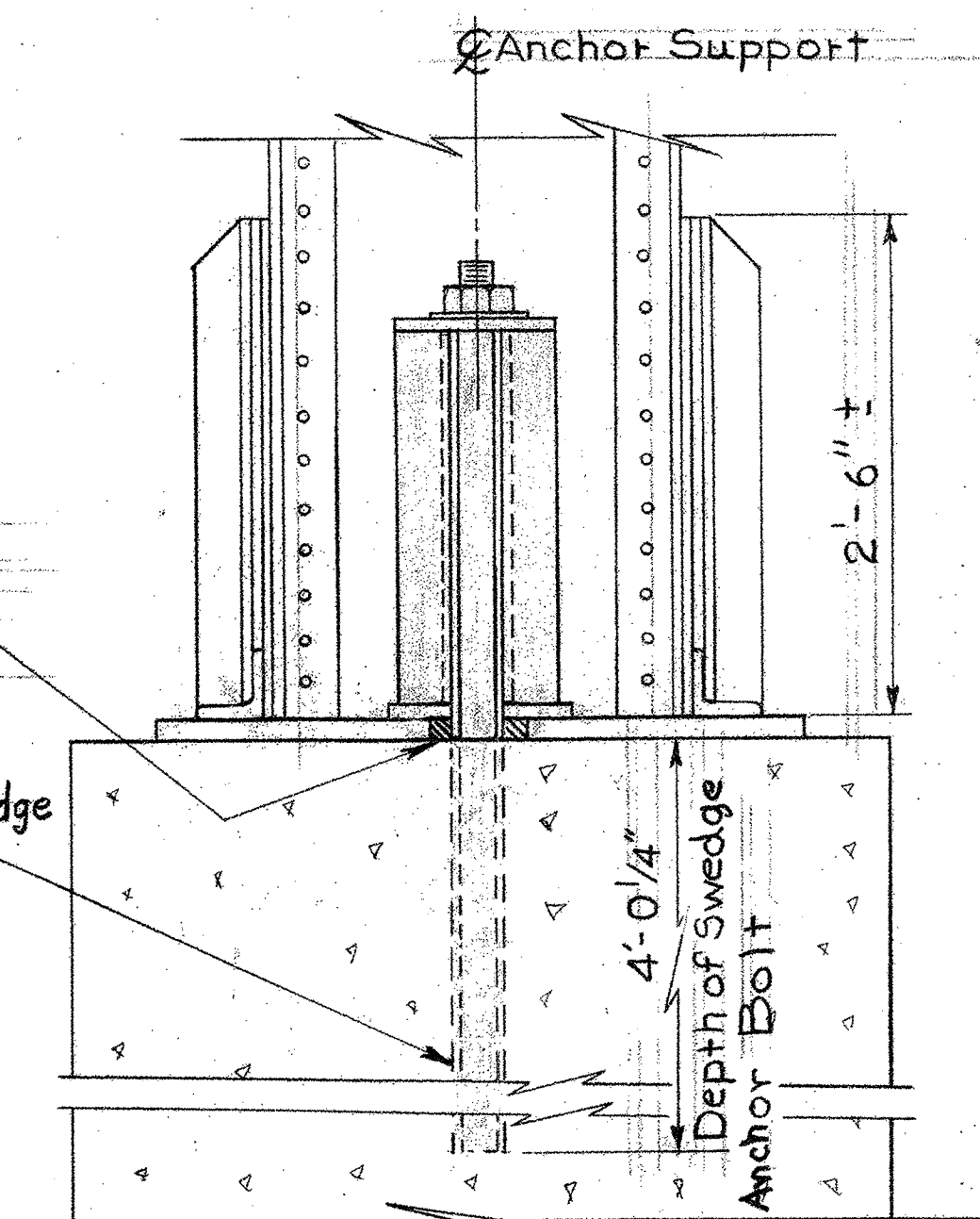
MARK	NO.	SIZE	LENGTH	TYPE	REMARKS
C801	16	8	6'-1 3/4"	I	A=2'-0", B=1'-7 3/4", C=5'-1/2", D=2'-6"
C602	72	6	5'-10"	Str.	
C503	24	5	5'-4"	II	A=1'-11 1/2", B=1'-5"
C504	4	5	6'-4"	II	A=2'-3", B=1'-10"
C505	4	5	6'-10"	II	A=2'-3", B=2'-4"
C506	12	5	4'-1 1/2"	II	A=1'-4 1/2", B=1'-4 1/2"
C507	4	5	5'-10"	II	A=2'-4", B=1'-10"
C808	8	8	6'-0"	I	A=2'-6", B=1'-0", C=6", D=2'-6"
C509	10	5	8'-6"	II	A=2'-6", B=3'-6"
C510	78	5	6'-4"	II	A=2'-0", B=2'-4"
C811	8	8	6'-8"	I	A=3'-0", B=1'-2", C=5'-1/2", D=2'-6"
C812	24	8	6'-2"	I	A=2'-6", B=1'-2", C=5'-1/2", D=2'-6"
C513	12	8	7'-8"	II	A=2'-4", B=3'-0"
C814	16	8	7'-4"	I	A=3'-0", B=1'-0", C=9'-1/2", D=2'-6"
C515	8	5	9'-5"	II	A=2'-9", B=3'-11"
C516	4	5	8'-1"	II	A=2'-5", B=3'-3"

PROPOSED ELEVATION VIEW - REPAIR OF ANCHOR SUPPORT - COLUMN #11N & #11S  
Scale: 1" = 1'-0"

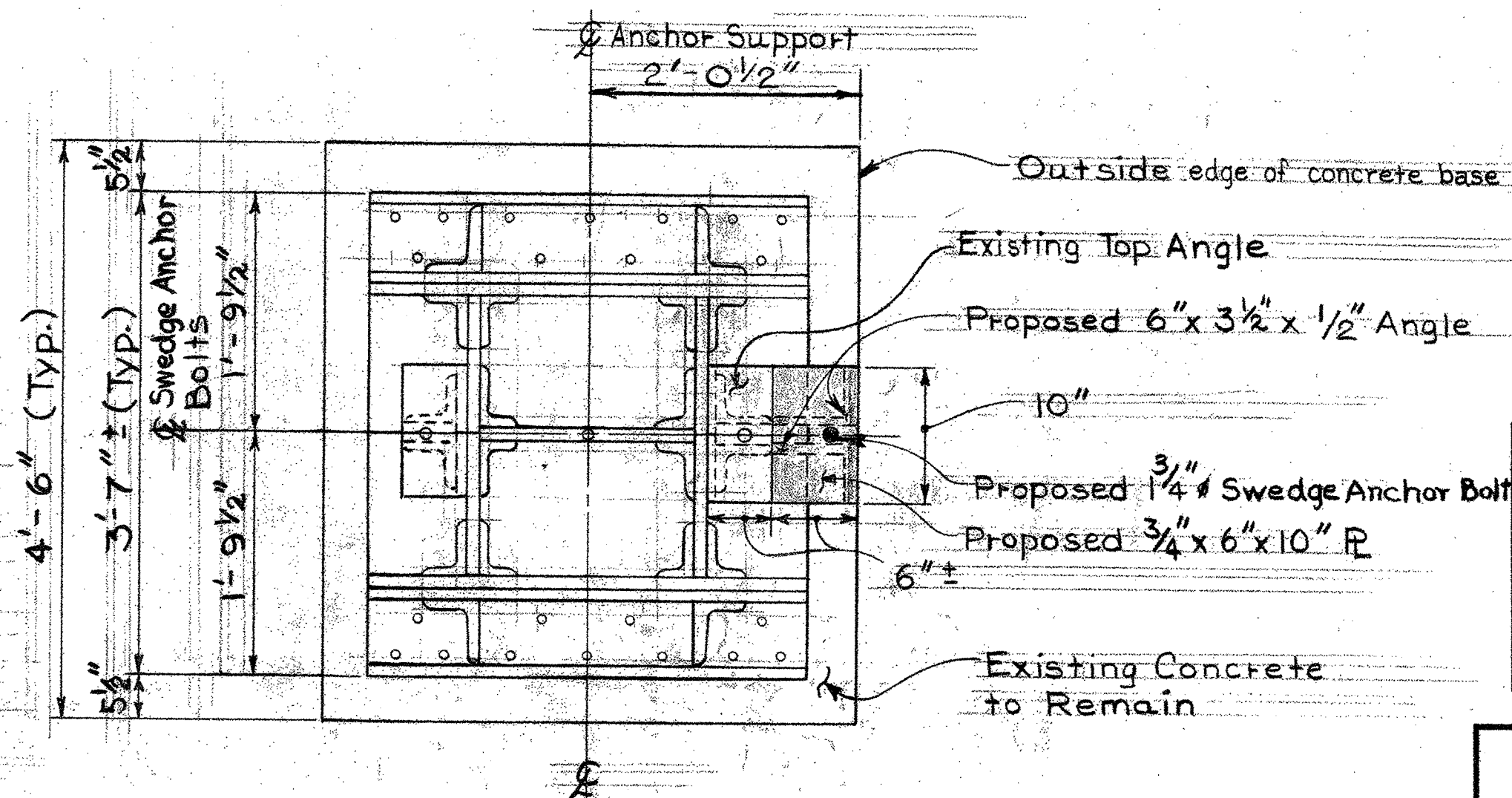


To drill 3/4" hole in existing concrete Cut out 3"x3" in Masonry R

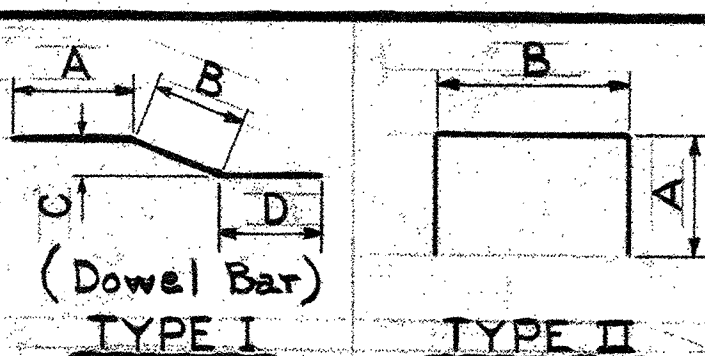
Proposed 3/4" hole for 1/4" swedge anchor bolt length 6'-7", drill and fill with non-shrink grout.



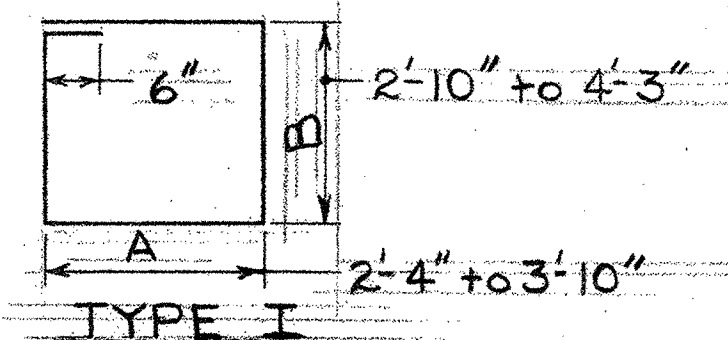
PROPOSED SIDE VIEW - REPAIR OF ANCHOR SUPPORT - COLUMN #11N & #11S  
Scale: 1" = 1'-0"



PROPOSED PLAN VIEW - REPAIR OF ANCHOR SUPPORT - COLUMN #11N & #11S  
Scale: 1" = 1'-0"



MARK	NO.	SIZE	LENGTH	TYPE	REMARKS
P501	6	5	10'-10" to 16'-8"	I	Vary A by 3 3/8", Vary B by 3 3/8"
P602	16	6	4'-7"	Str.	
D701	16	7	3'-11"	Str.	Dowel Bar



Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania  
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BUTLER COUNTY  
L.R. 10030 SEC. D09  
L.R. 10030 - D09 STA. 480 + 71.00  
OVER CONNOQUENESS CREEK AND RAILROADS  
BRIDGE REHABILITATION PLAN  
ANCHOR SUPPORT REPAIR - COLUMN #11N, 11S  
ALSO ANCHOR BASE FOR COLUMN #15N

APPROVED JUN 16 1976

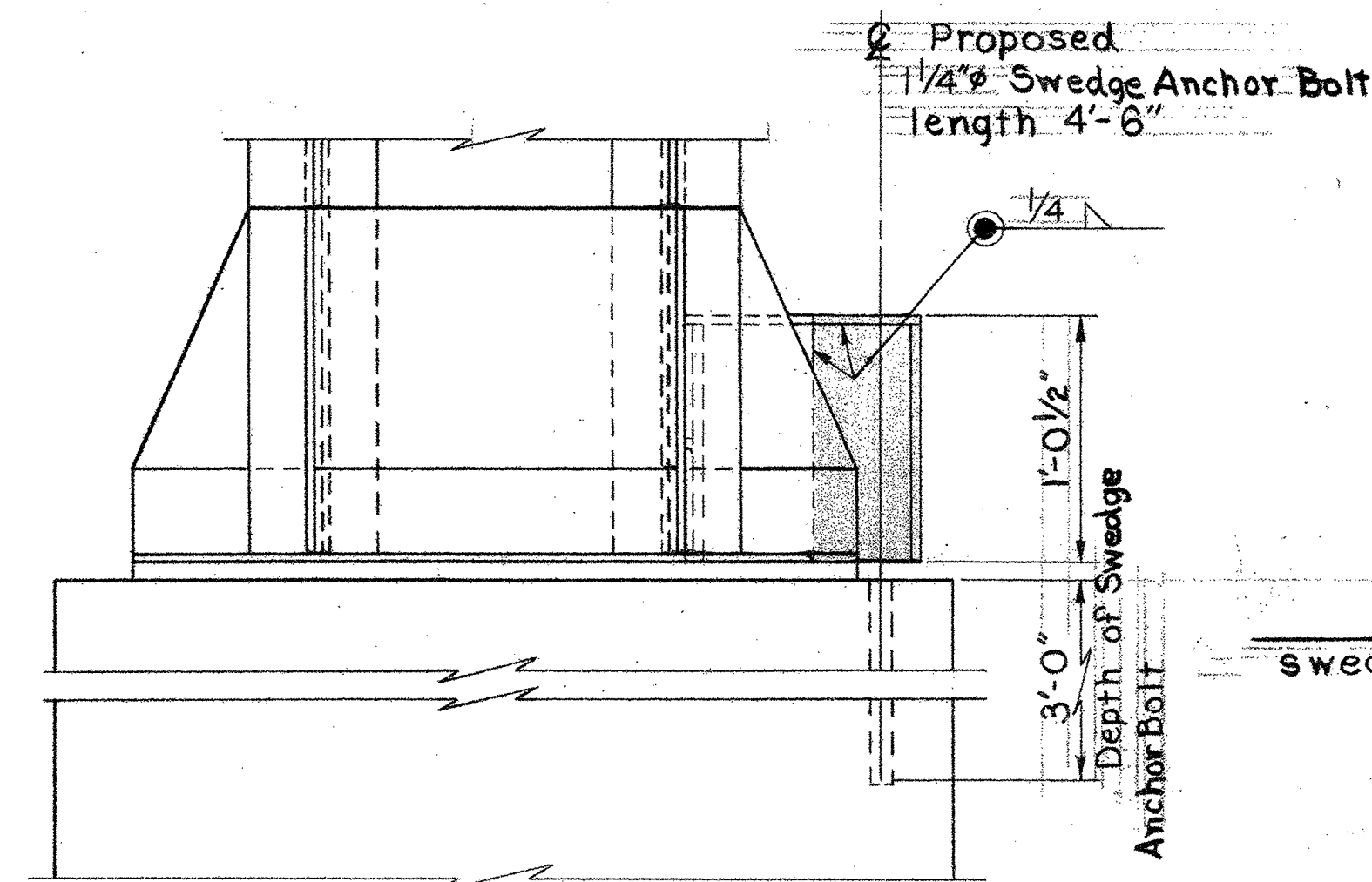
BRIDGE ENGINEER

SHEET 6 OF 12

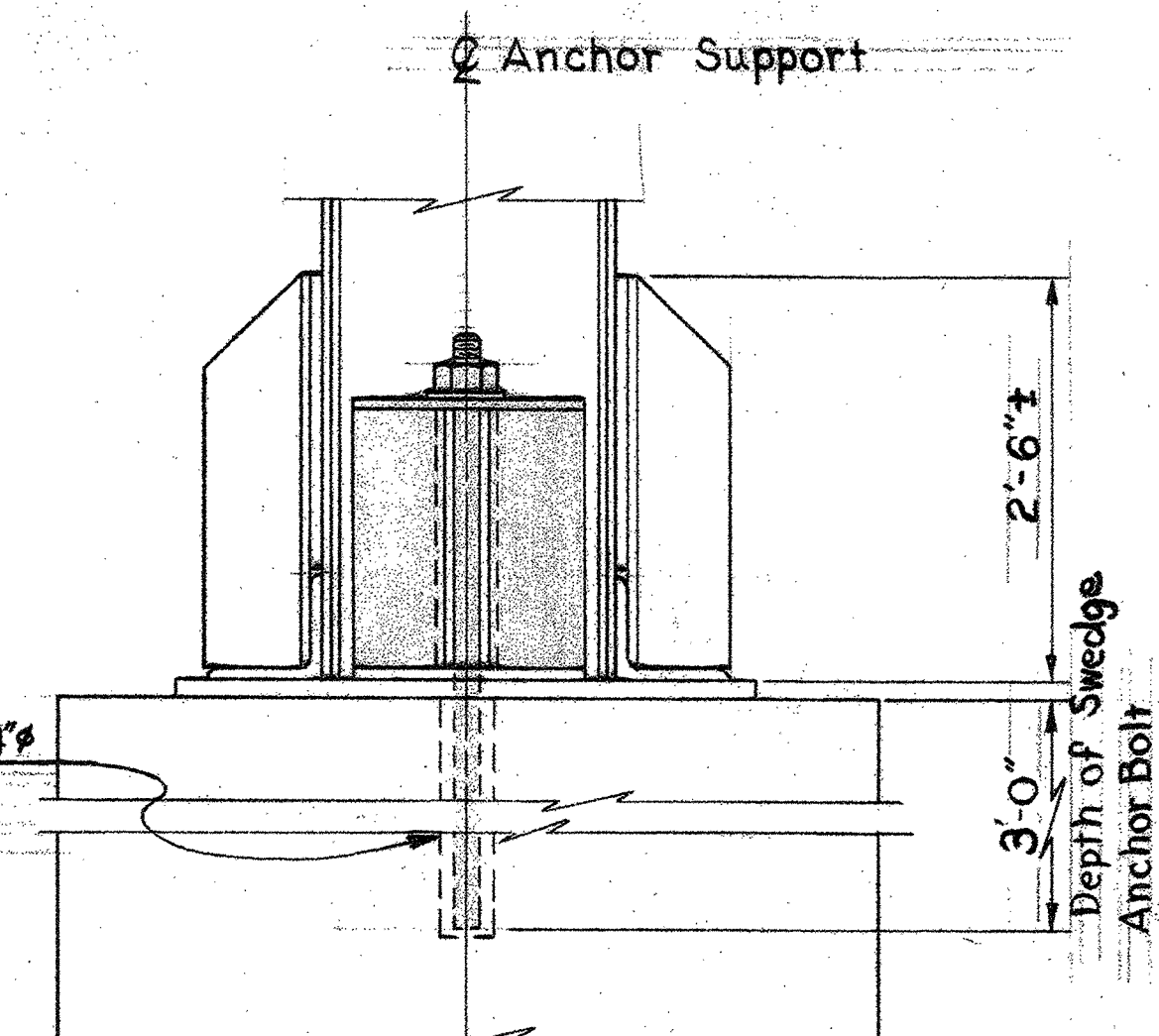
S-12431

DESIGNED BY DIST. 10-0 Des. VJB Dwn. VJB Trc. DEM Ckd. JAM

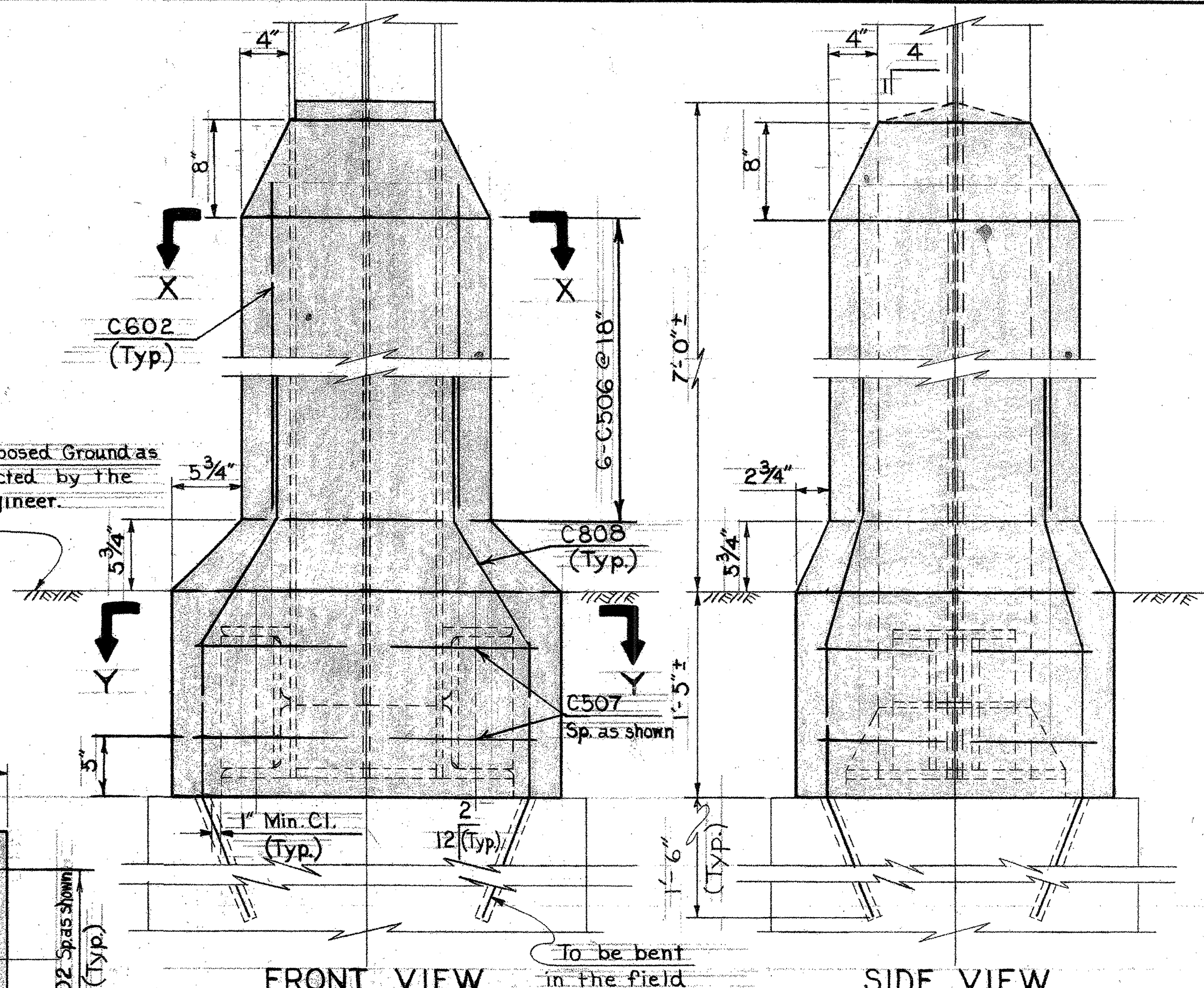
BARCLAY BROTHERS, INC. #4101-B



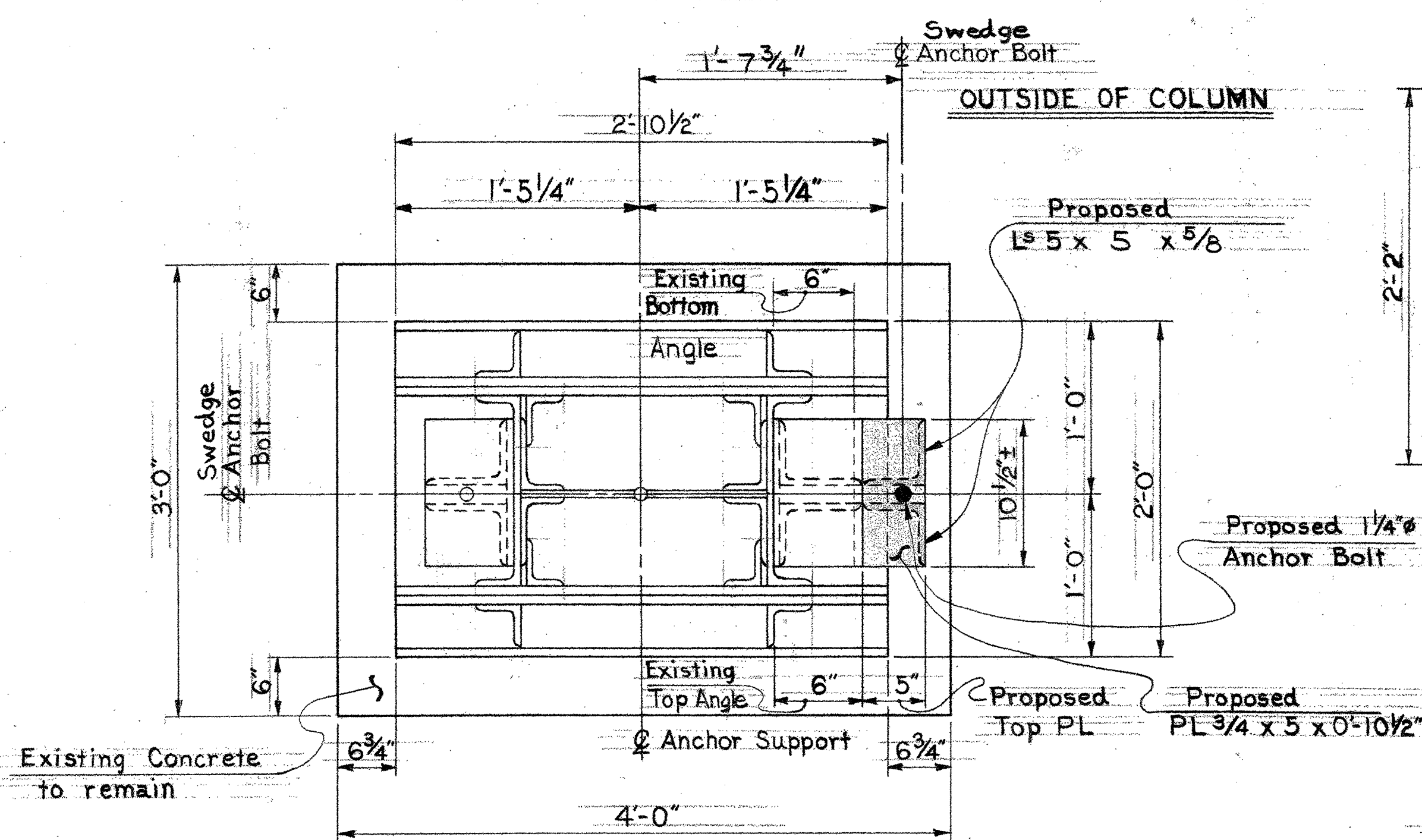
PROPOSED ELEVATION VIEW - REPAIR OF ANCHOR SUPPORT  
COLUMNS #3N & 4N  
Scale 1 1/2" = 1'-0"



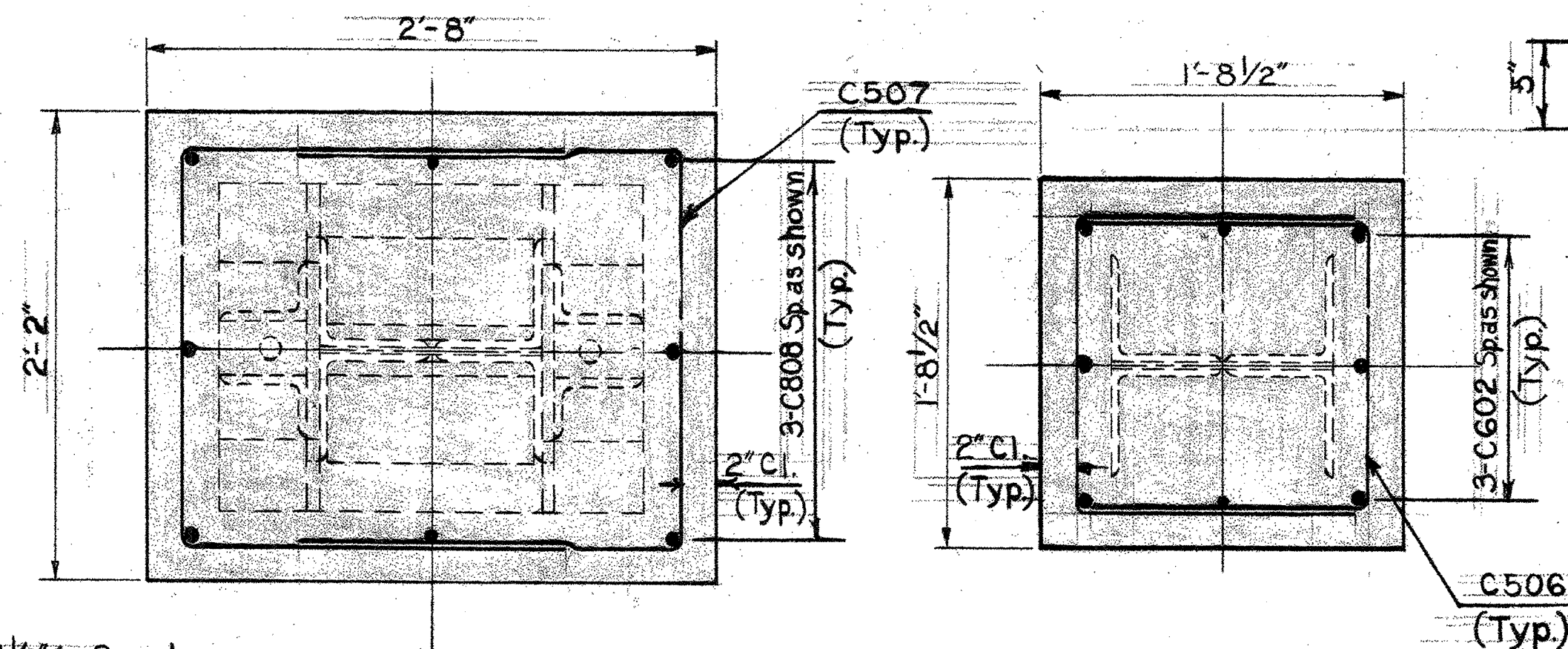
PROPOSED SIDE VIEW - REPAIR OF ANCHOR SUPPORT  
COLUMNS #3N & 4N  
Scale 1 1/2" = 1'-0"



FRONT VIEW  
SIDE VIEW  
PROPOSED REPAIR OF ANCHOR SUPPORT - COLUMN #2s  
Scale 1 1/2" = 1'-0"



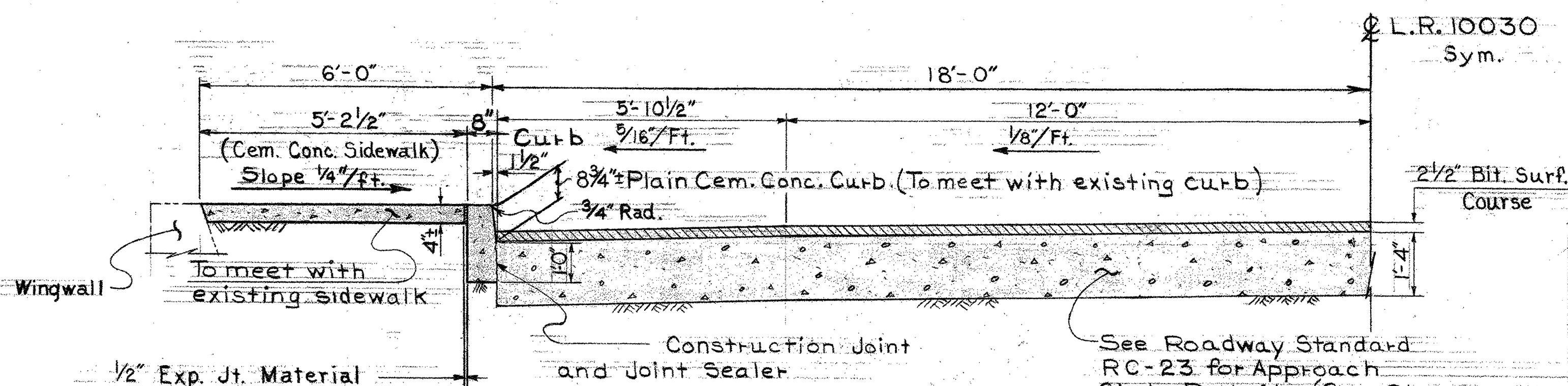
PROPOSED PLAN VIEW - REPAIR OF ANCHOR SUPPORT  
COLUMNS #3N & 4N  
Scale 1 1/2" = 1'-0"



SECTION Y-Y  
SECTION X-X  
Scale 1 1/2" = 1'-0"

#### NOTES

- Existing concrete shall be removed to bottom of Base Plate and replaced as shown.
- See sheet 6 of 12 for reinforcement bar schedule.



PROPOSED  
APPROACH SLAB AND SIDEWALK  
Scale 1 1/2" = 1'-0"

Mark	Description	By	Chk'd	App'd	Date
REVISIONS					

Commonwealth of Pennsylvania  
DEPARTMENT OF TRANSPORTATION  
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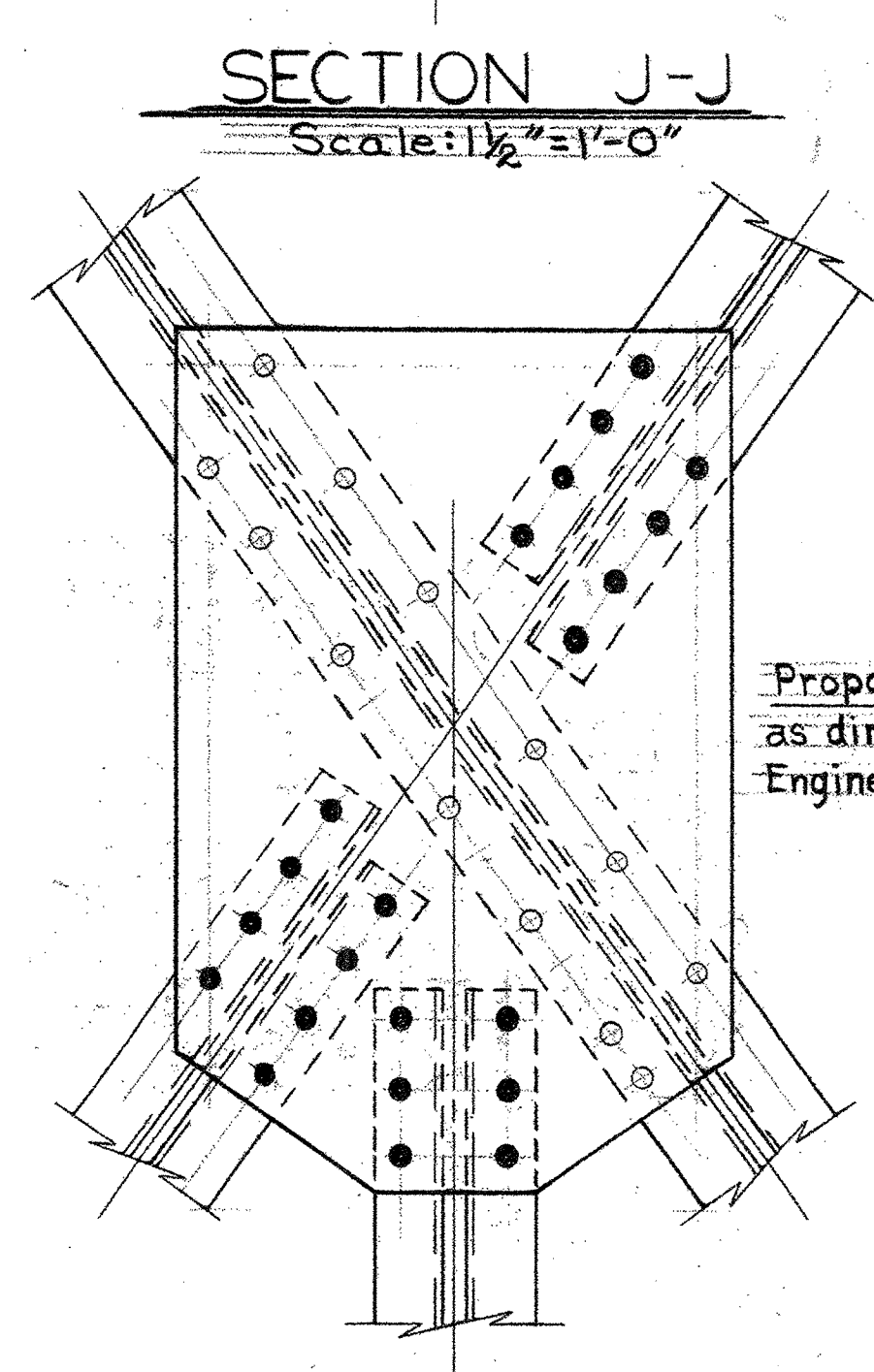
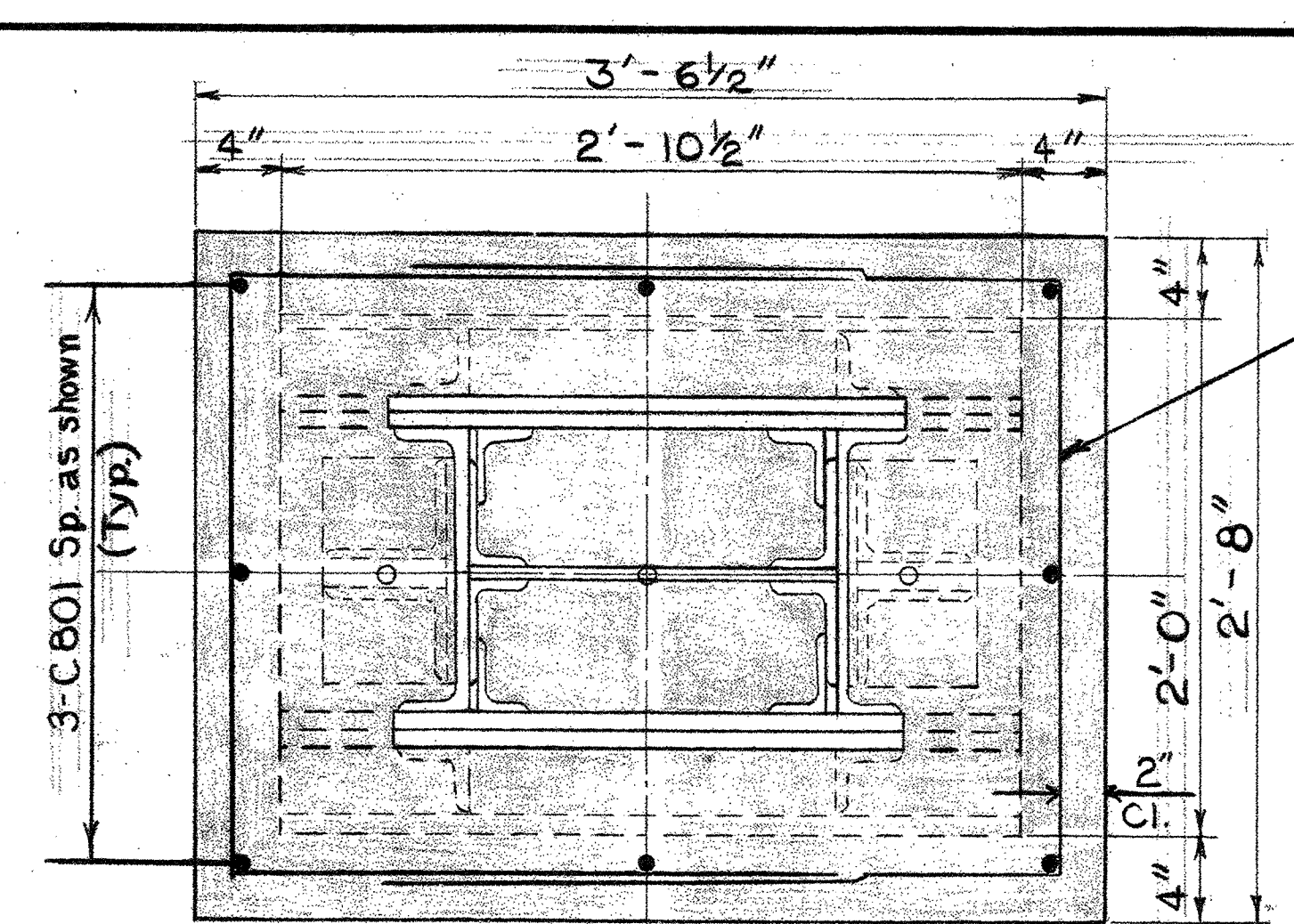
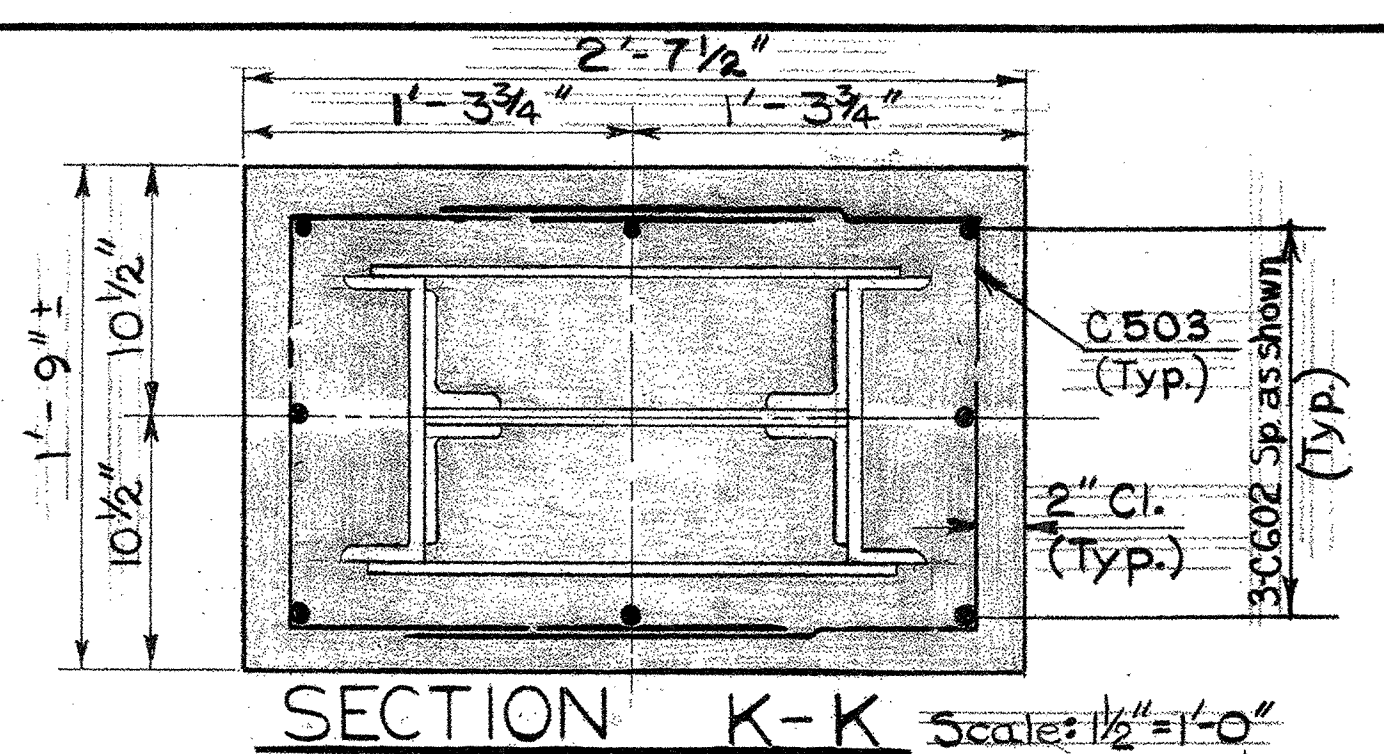
BUTLER COUNTY  
L.R.10030 SEC. D09  
L.R.10030-D09 STA. 480 + 71.00  
OVER CONNOQUENESSING CREEK AND RAILROADS  
BRIDGE REHABILITATION PLAN  
ANCHOR SUPPORT REPAIR COLUMNS #2s, #3N & 4N

APPROVED JUN 16 1976  
BRIDGE ENGINEER

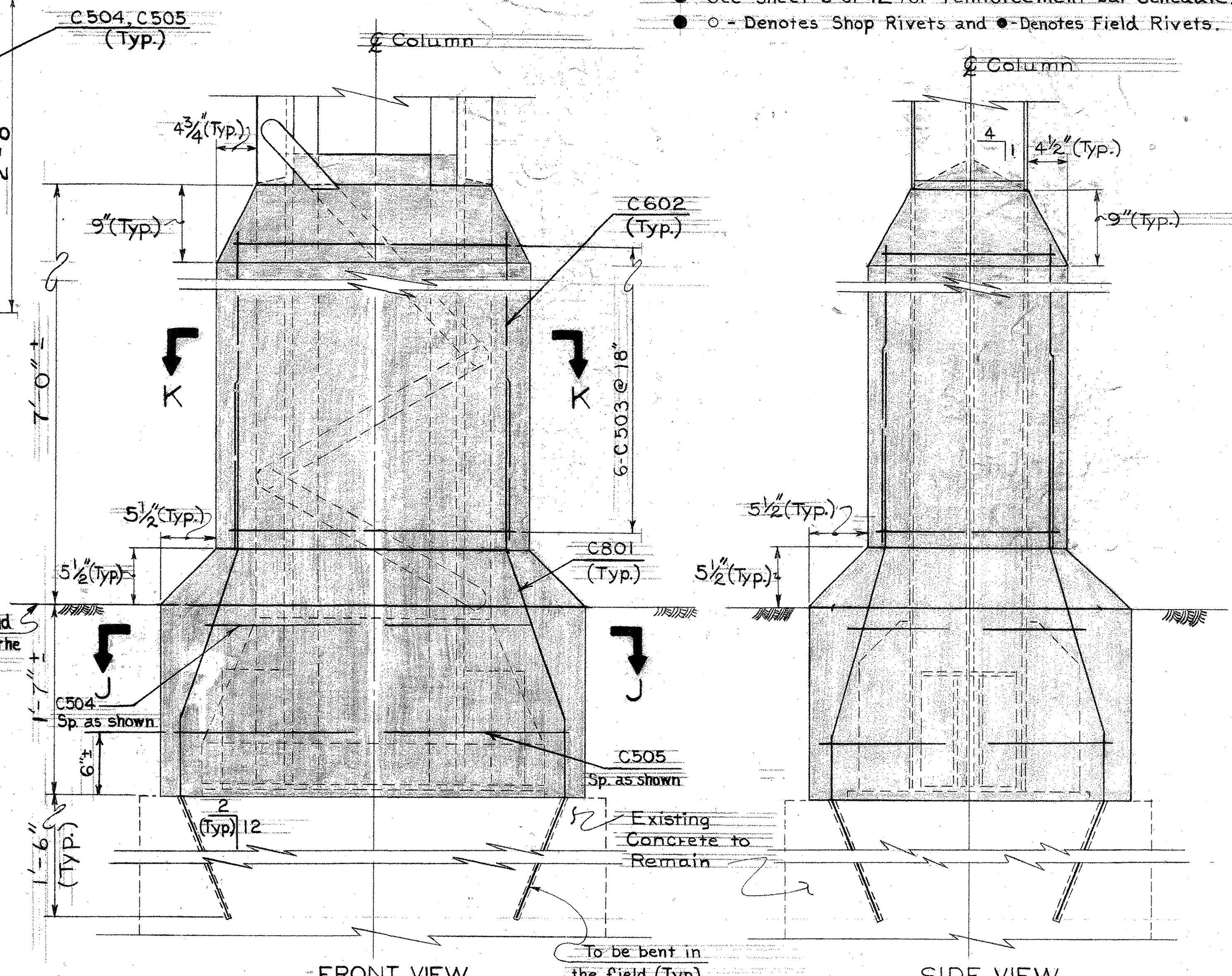
SHEET 7 OF 12  
S-12431

DESIGNED BY DIST. 10-0  
Designed by L.J.B.  
Drawn by L.J.B.  
Traced by W.C.W. & D.E.M.  
Checked by J.H.H.

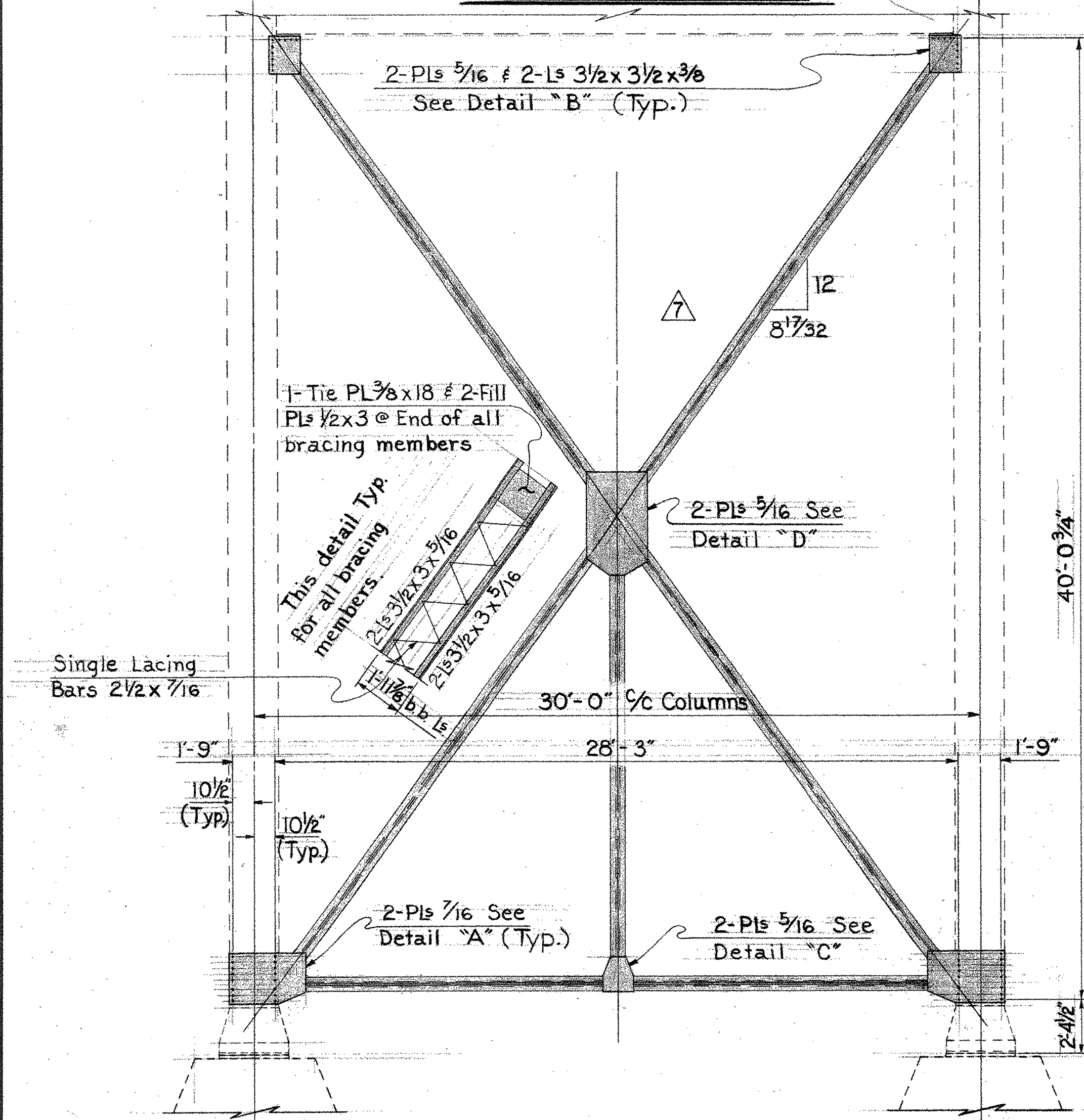
BARCLAY BROTHERS, INC. #4101-B



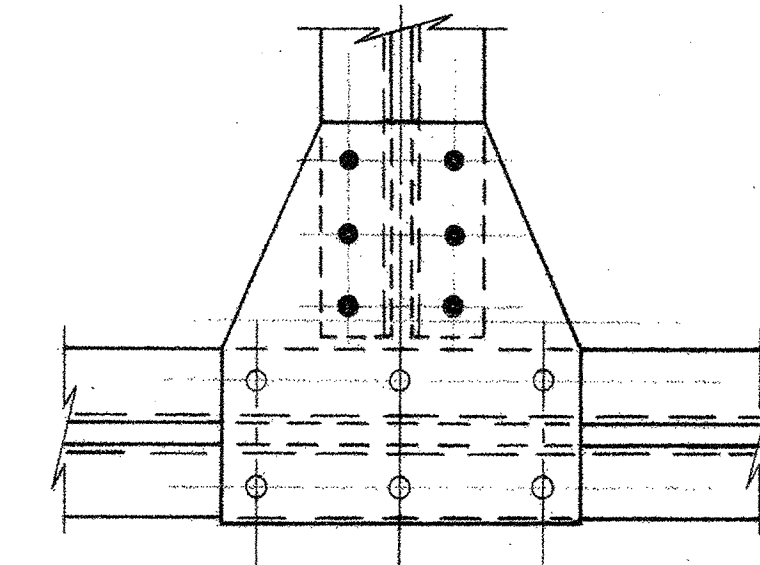
DETAIL "D" Scale: 1/2" = 1'-0"



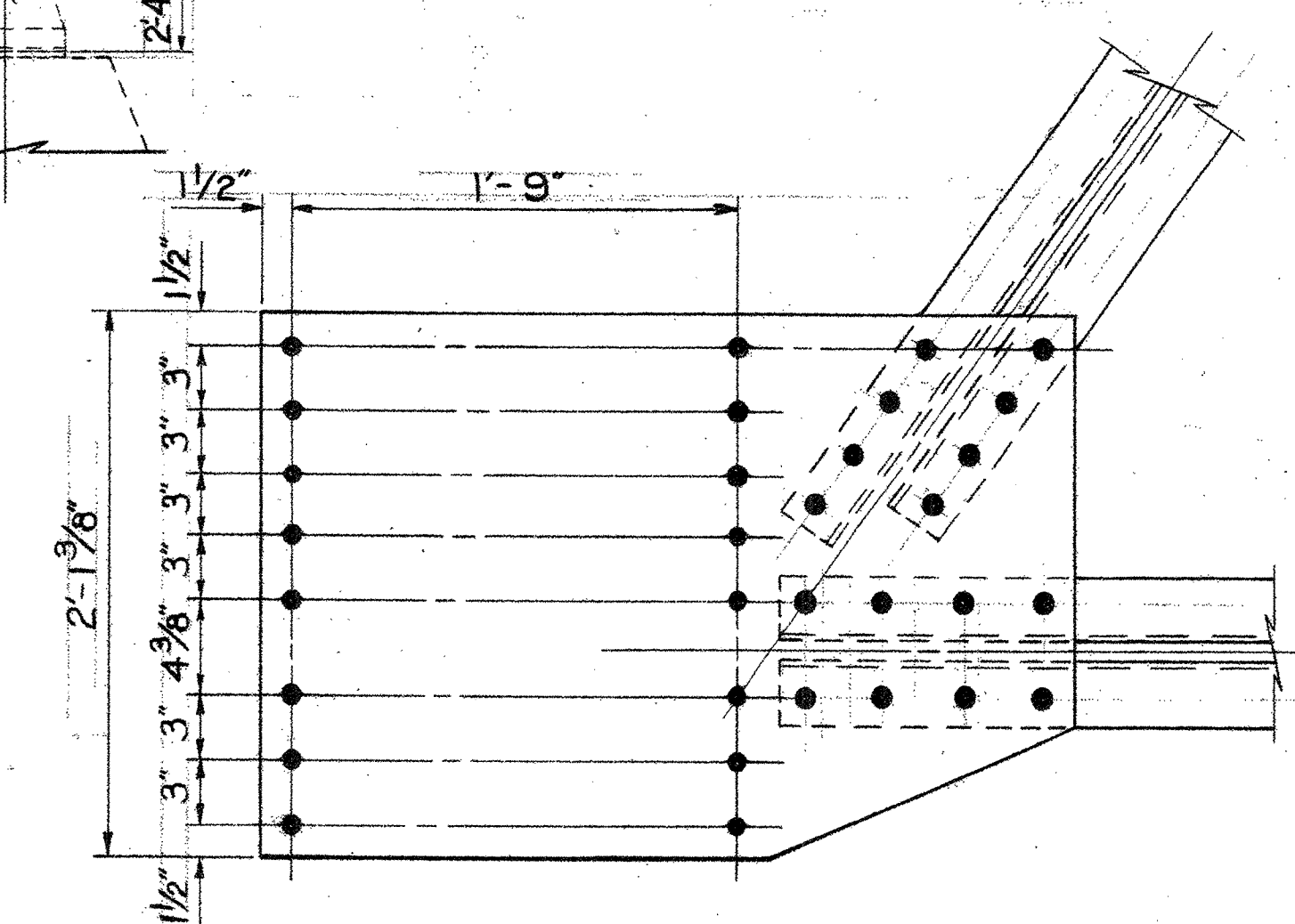
PROPOSED VIEW-COLUMN #3S & #15N Scale: 1/2" = 1'-0"



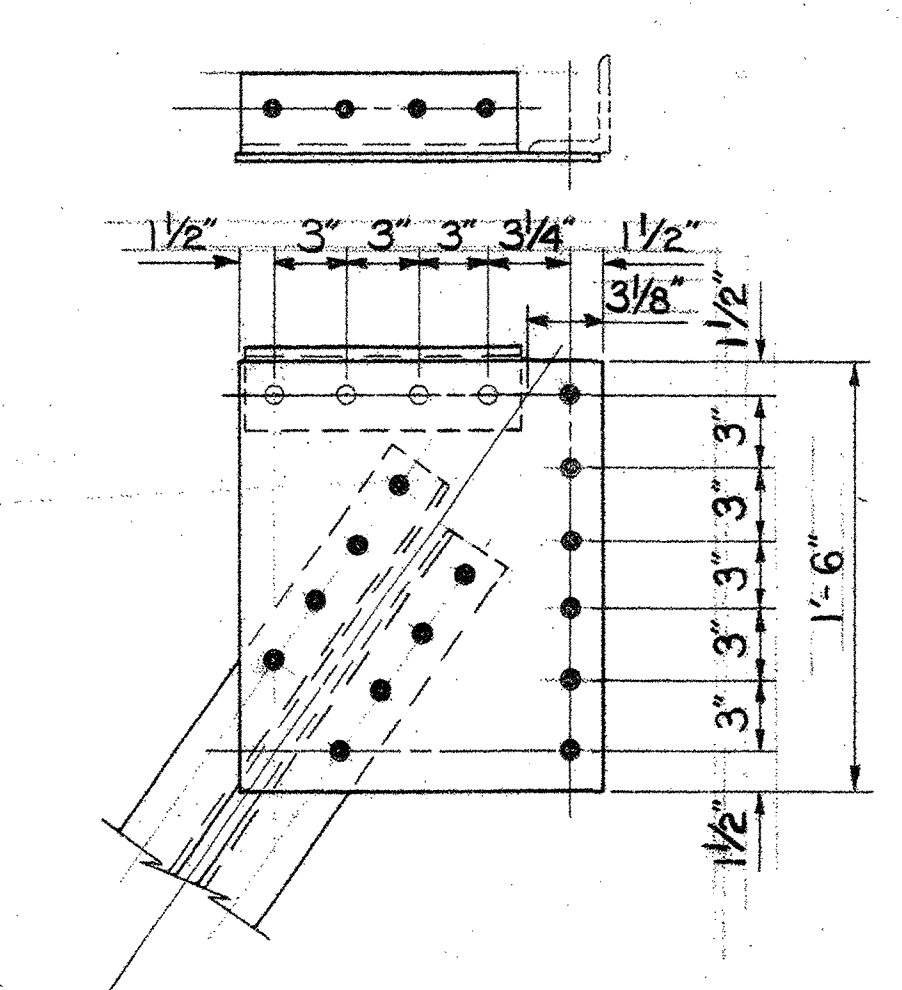
COLUMN #13 CROSS BRACING Scale: 1/4" = 1'-0"



DETAIL "C" Scale: 1/2" = 1'-0"



DETAIL "A" Scale: 1/2" = 1'-0"



DETAIL "B" Scale: 1/2" = 1'-0"

- NOTES
- Existing concrete shall be removed to bottom of Base Plate and replaced as shown.
  - See sheet 6 of 12 for reinforcement bar schedule.
  - - Denotes Shop Rivets and ● - Denotes Field Rivets.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania  
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BUTLER COUNTY  
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L.R. 10030-D09 STA. 480 + 71.00  
OVER CONNOQUENESSING CREEK AND RAILROADS  
BRIDGE REHABILITATION PLAN  
CROSS BRACING DETAILS @ COLUMN #13 AND  
REPAIR @ COLUMNS #3S & #15N

APPROVED JUN 16 1976  
β2 Kotahil  
BRIDGE ENGINEER

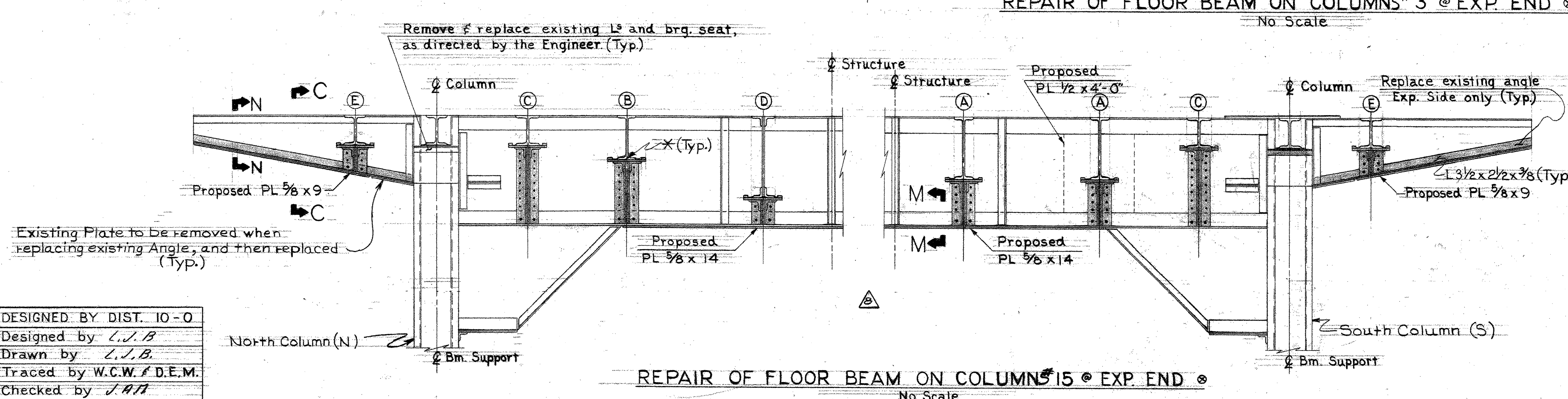
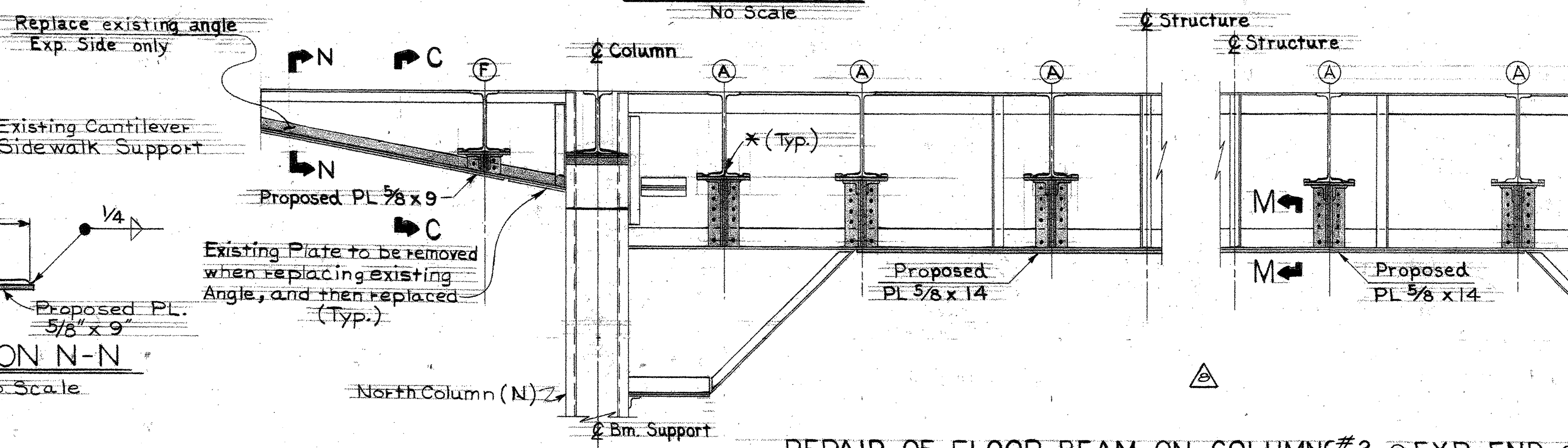
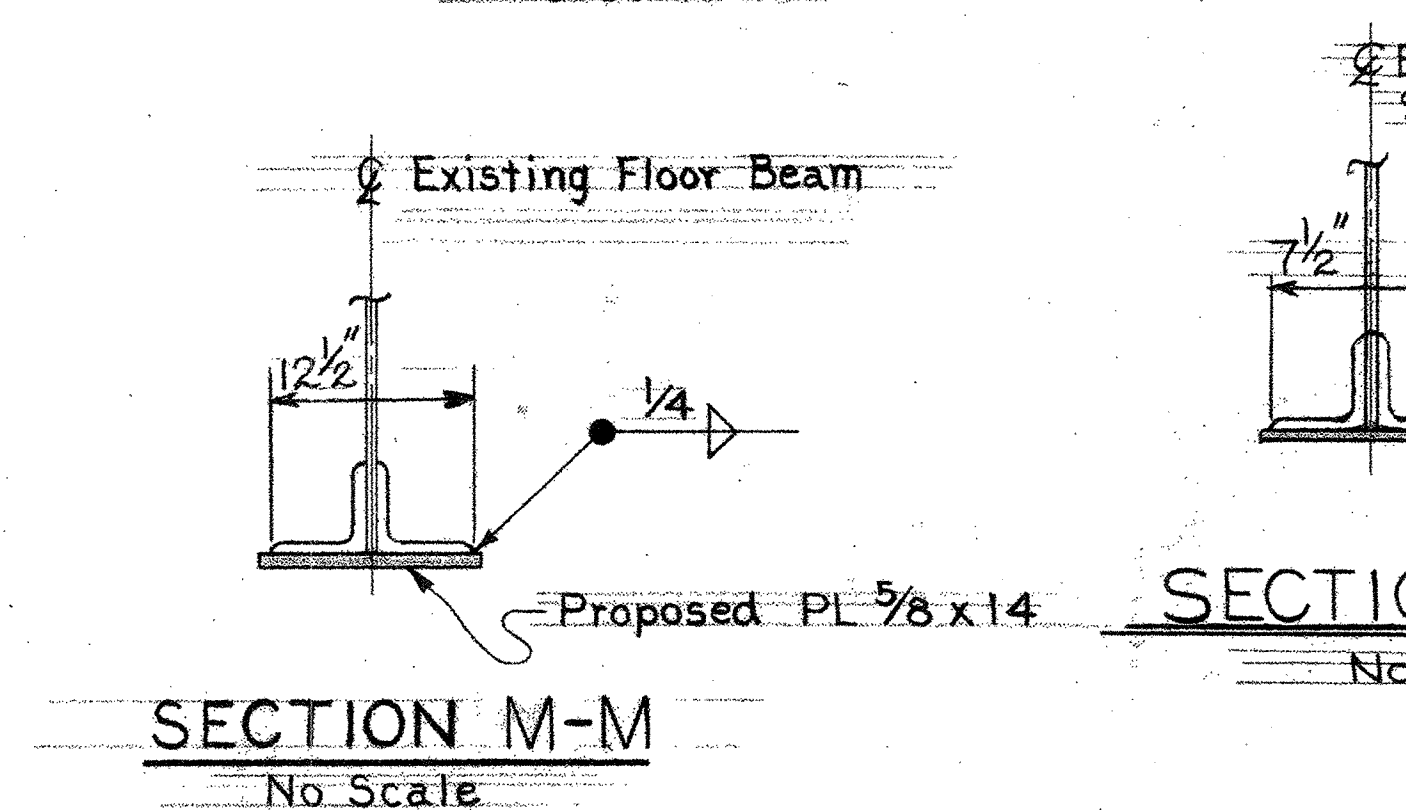
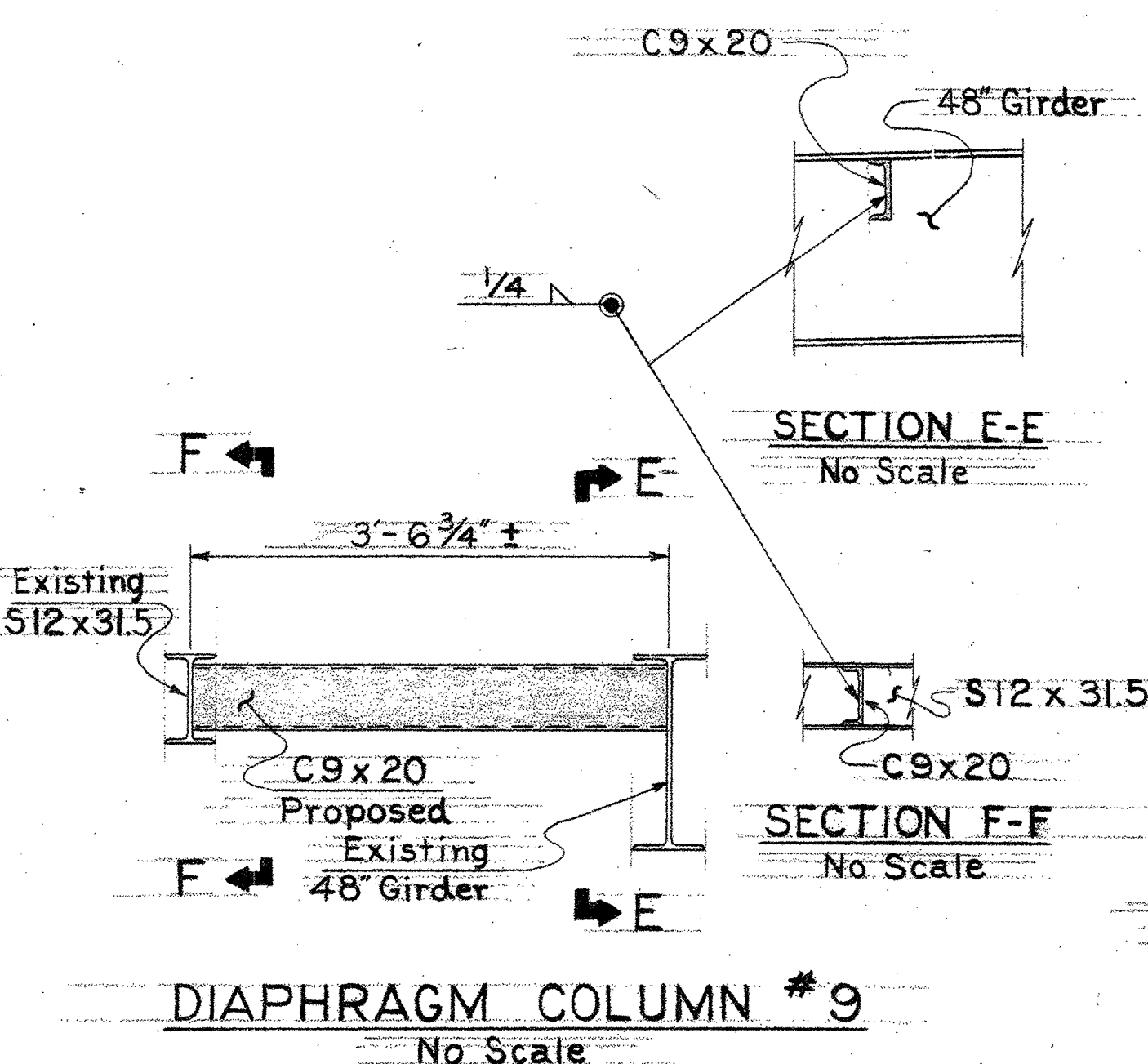
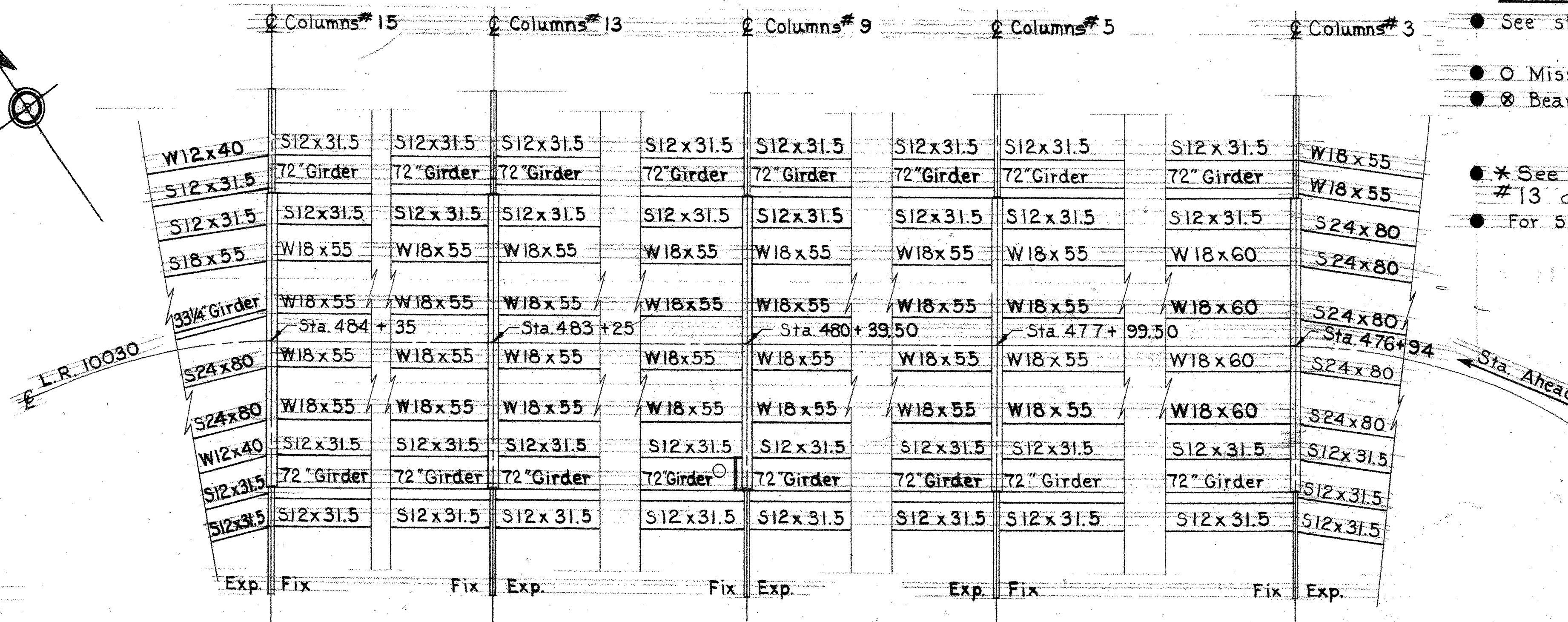
SHEET 8 OF 12  
S-12431

DESIGNED BY DIST. 10-0  
Designed by W.C.W. &  
Drawn by W.C.W. &  
Traced by W.C.W. & D.E.M.  
Checked by J.H.17

BARCLAY BROTHERS, INC. #4101-B

# NOTES

- See sheet 10 of 12 for beam seat (A) (B) (C) (D) (E) (F) details.
- O Missing diaphragm to be replaced, see Framing Plan.
- ⊗ Beam seats are not at right angles.
- \* See sheet 10 of 12 for Bearing Plate Detail, Column #3, #5, #9, #13 and Column #15.
- For Section C-C see sheet 10 of 12.



Mark	Description	By	Chk'd	App'd	Date
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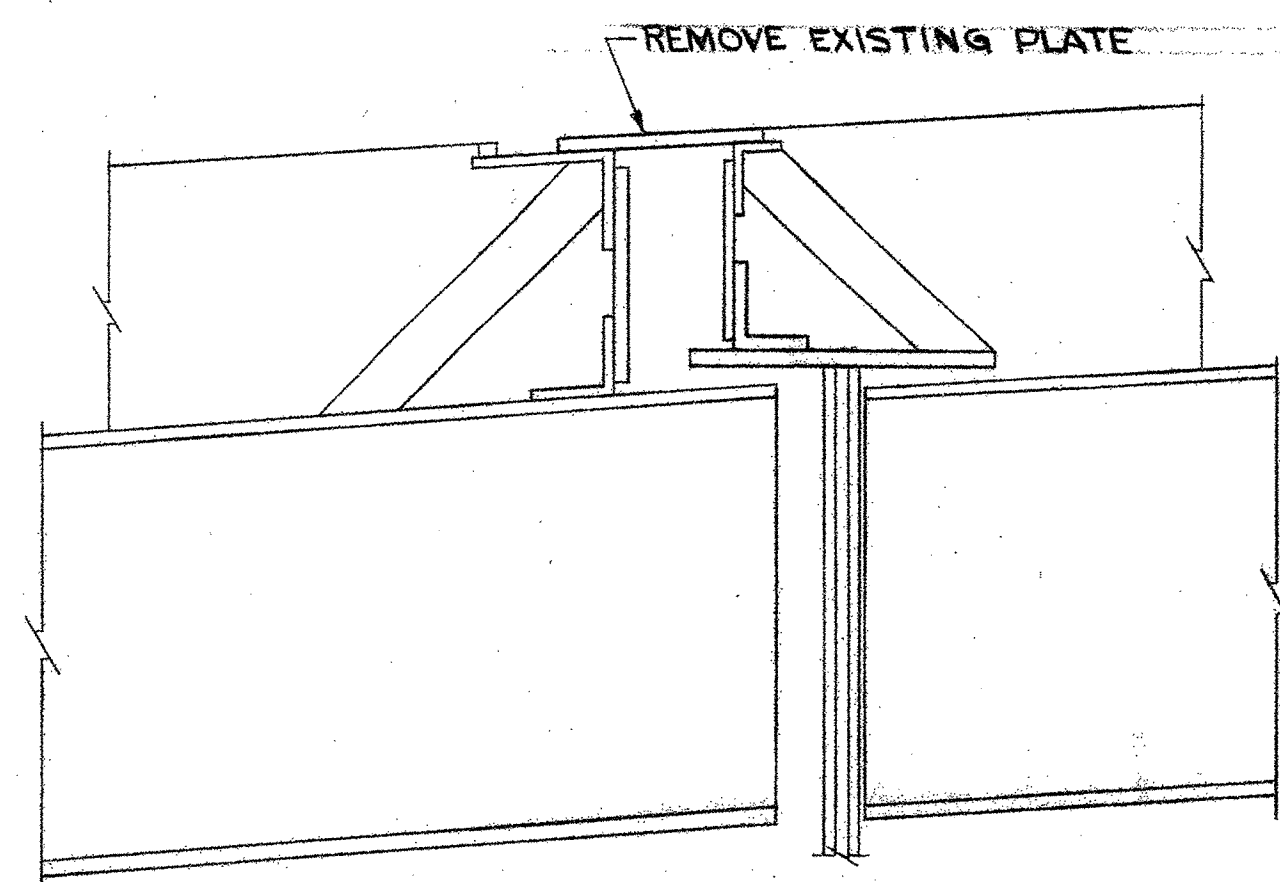
Commonwealth of Pennsylvania  
DEPARTMENT OF TRANSPORTATION  
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L.R. 10030 SEC. D09  
L.R. 10030-D09 STA. 480 + 71.00  
OVER CONNOQUENESSING CREEK AND RAILROADS  
BRIDGE REHABILITATION PLAN  
FRAMING PLAN - BEAM SUPPORT LOCATIONS - DIAPH. DETAILS

APPROVED JUN 16 1976  
B. K. Kotal  
BRIDGE ENGINEER

SHEET 9 OF 12  
S-12431

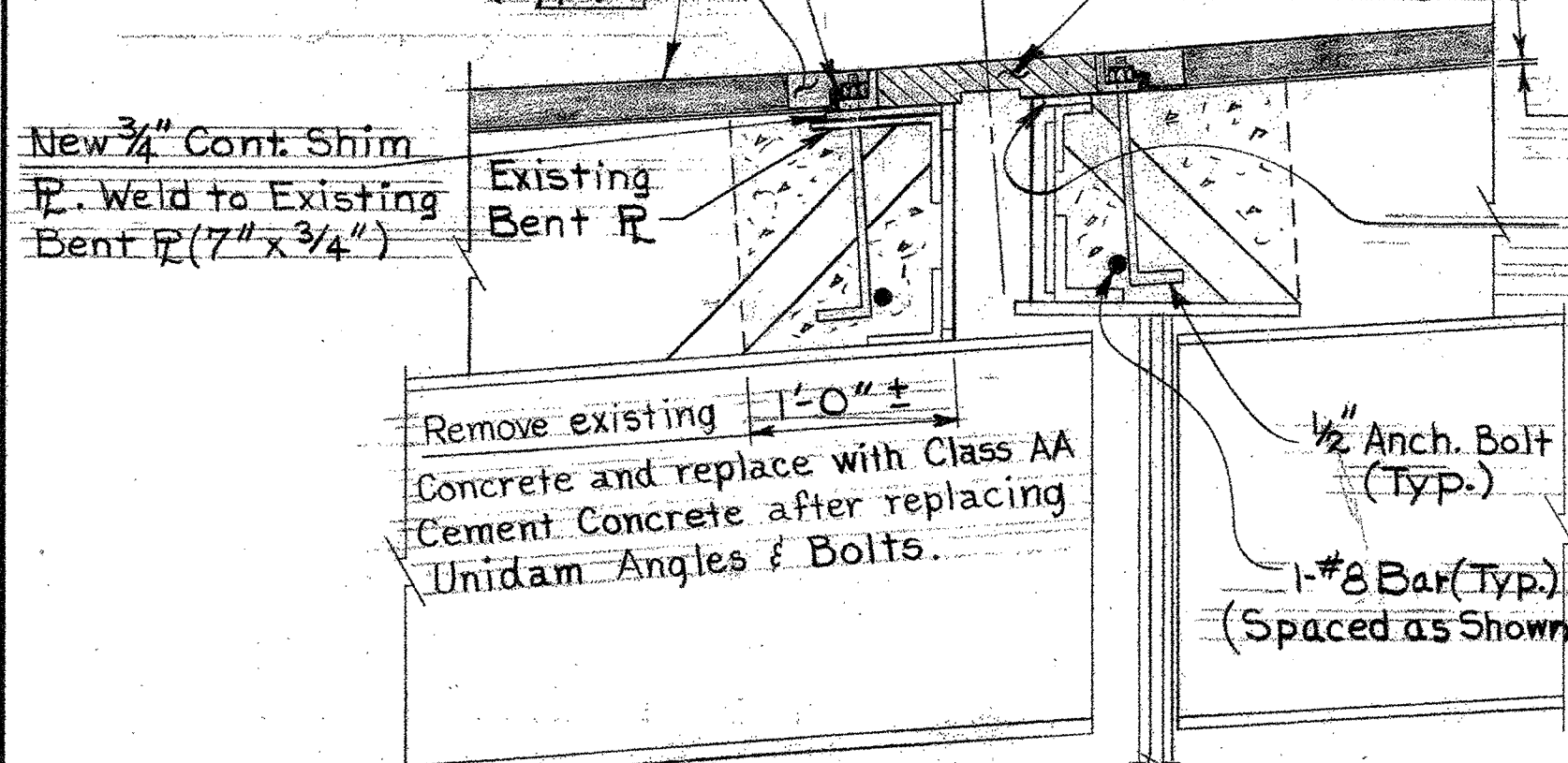
DESIGNED BY DIST. 10-0  
Designed by L.J.B.  
Drawn by L.J.B.  
Traced by W.C.W. & D.E.M.  
Checked by J.A.H.



TYPICAL EXISTING ROADWAY SECTION AT EXPANSION DAMS

NO SCALE

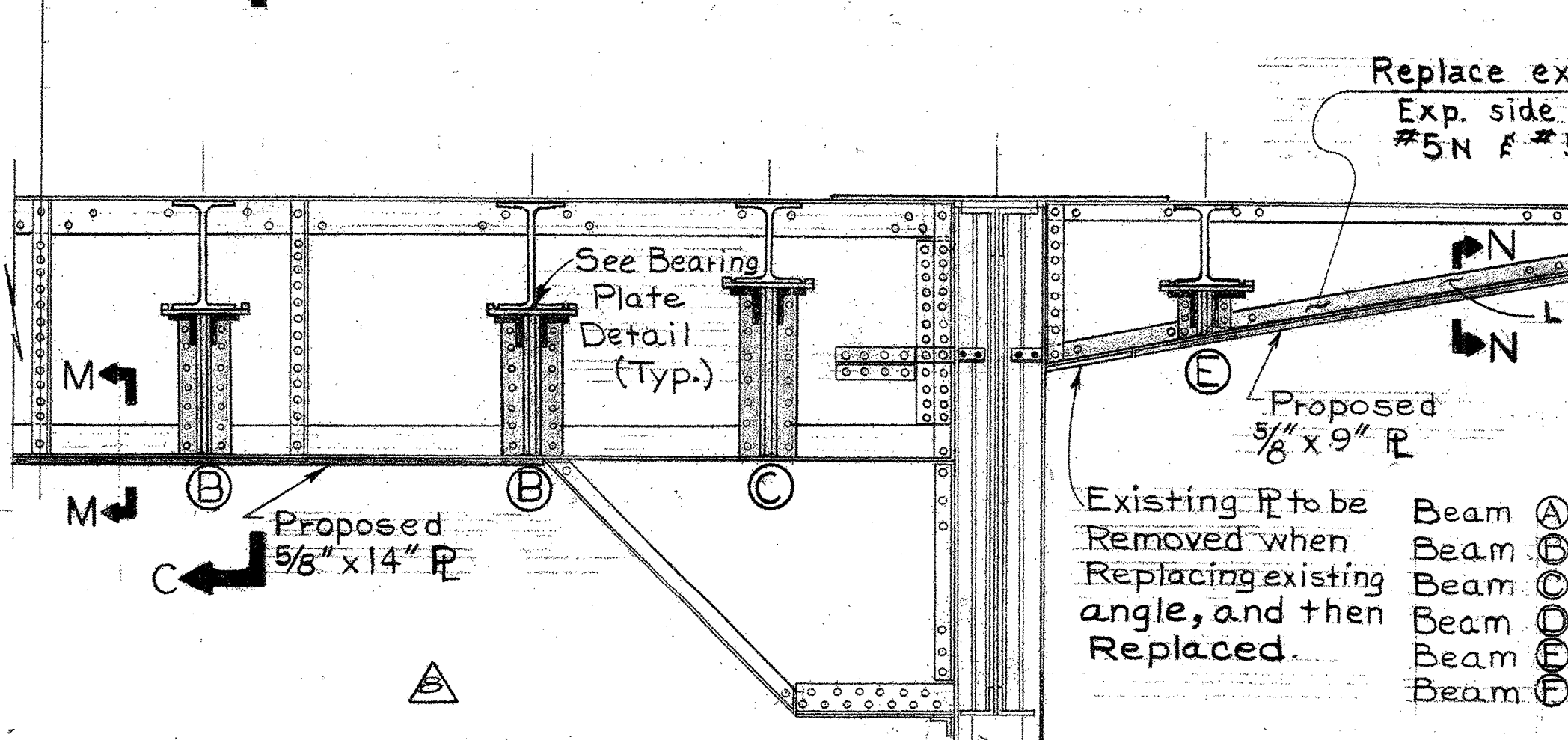
Fill this area with Asphalt + 12% to 14% Asbestos Fibers (Typ.)  
2 1/2" Bit. Surf. Crse. Slope Surface to meet new Elastomeric Belt. (Typ.)



PROPOSED MODEL LK 25 UNIDAM AT COLUMNS 3, 5, 9 & 13  
PROPOSED MODEL LK 80 UNIDAM AT COLUMNS 5, 9 & 13

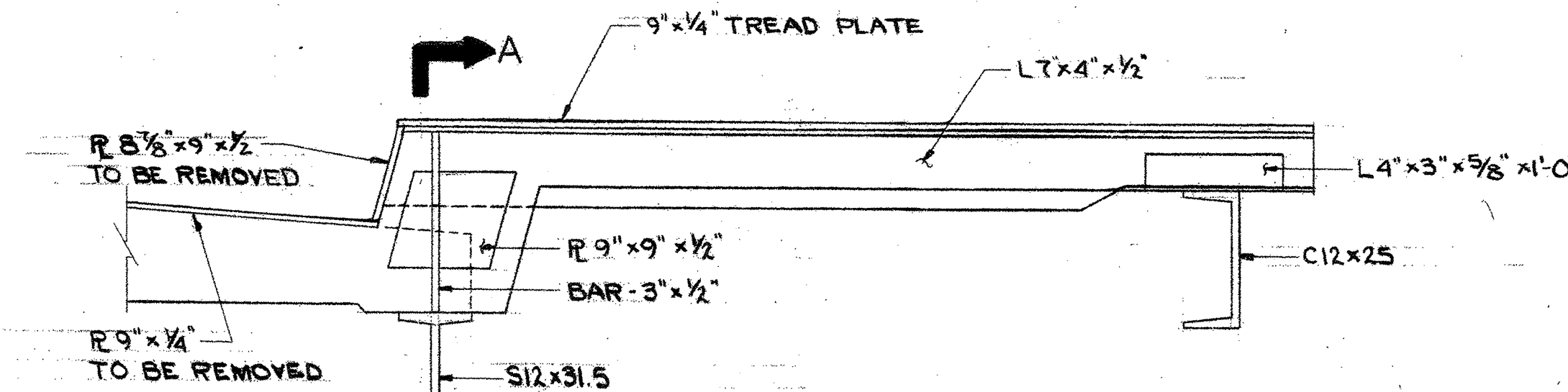
No Scale

Structure (Sym.)



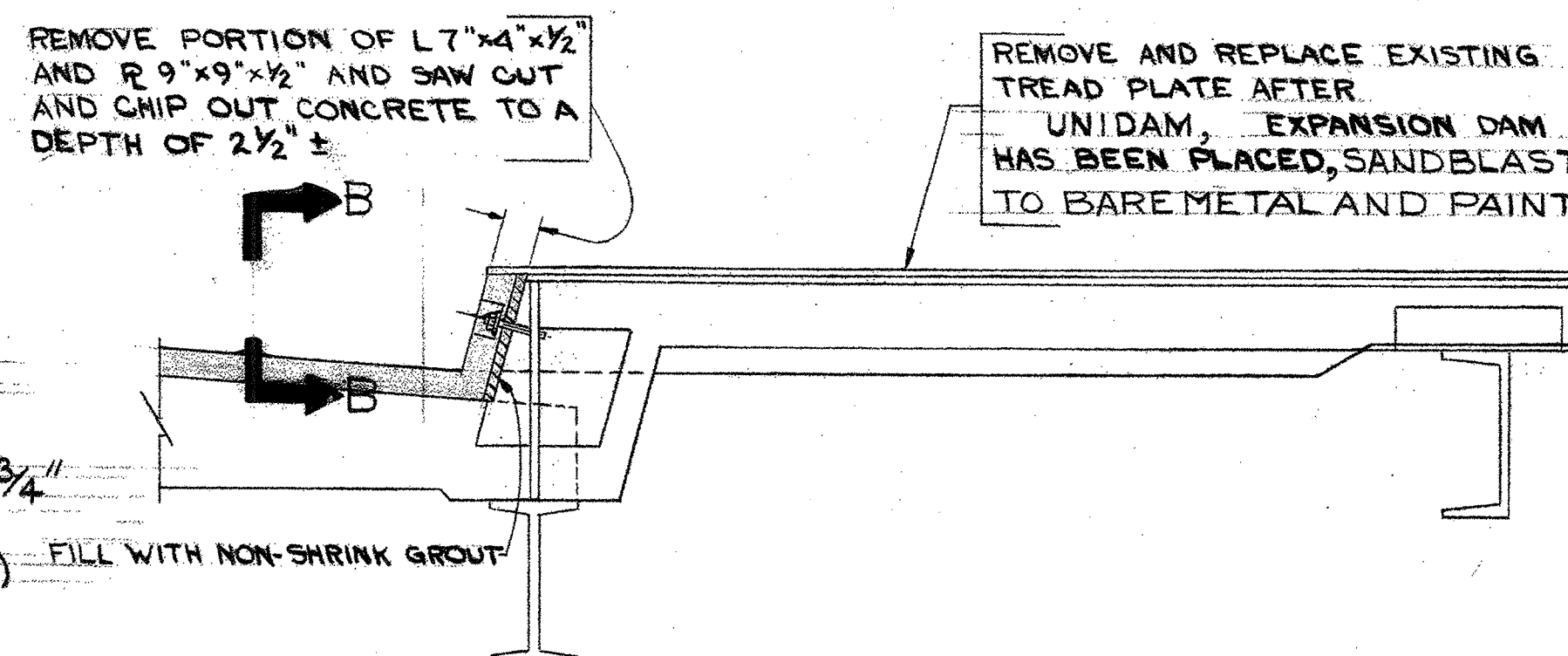
REPAIR OF FLOOR BEAMS ON COLUMNS 5-9-13 - EXP. END

NO SCALE



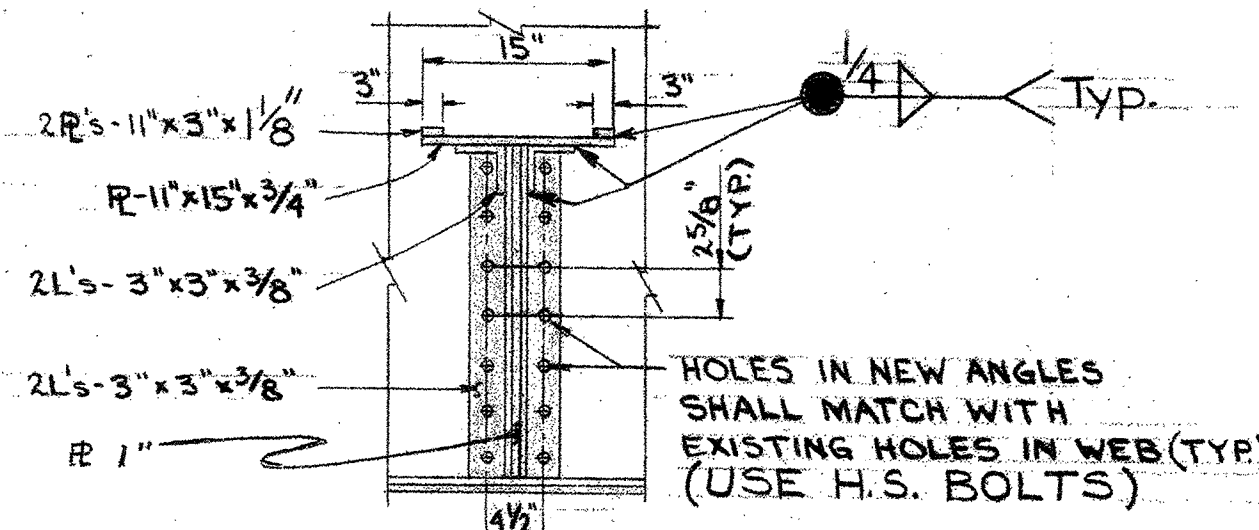
TYPICAL EXISTING SECTION THRU SIDEWALK AT EXPANSION DAM

NO SCALE



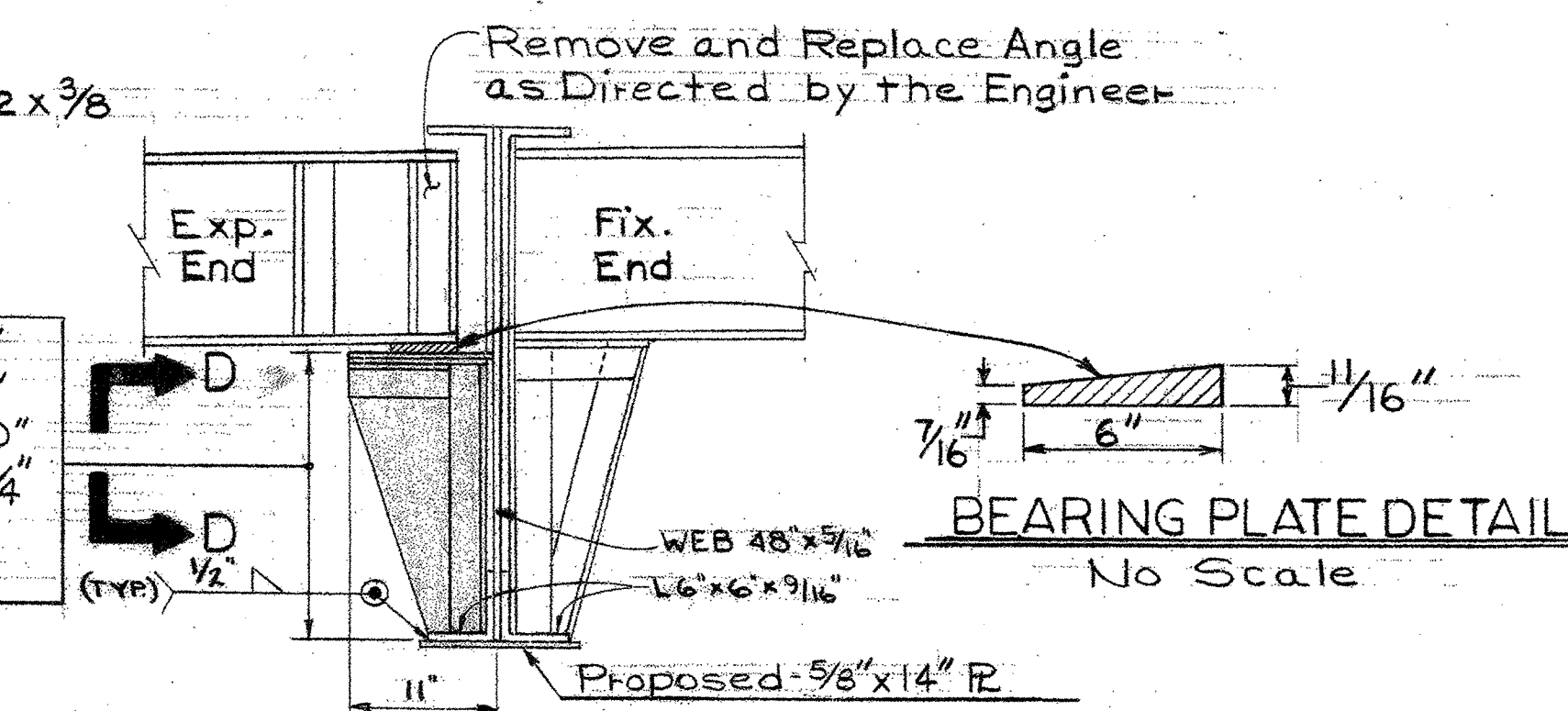
TYPICAL PROPOSED SECTION THRU SIDEWALK AT EXPANSION DAM

NO SCALE



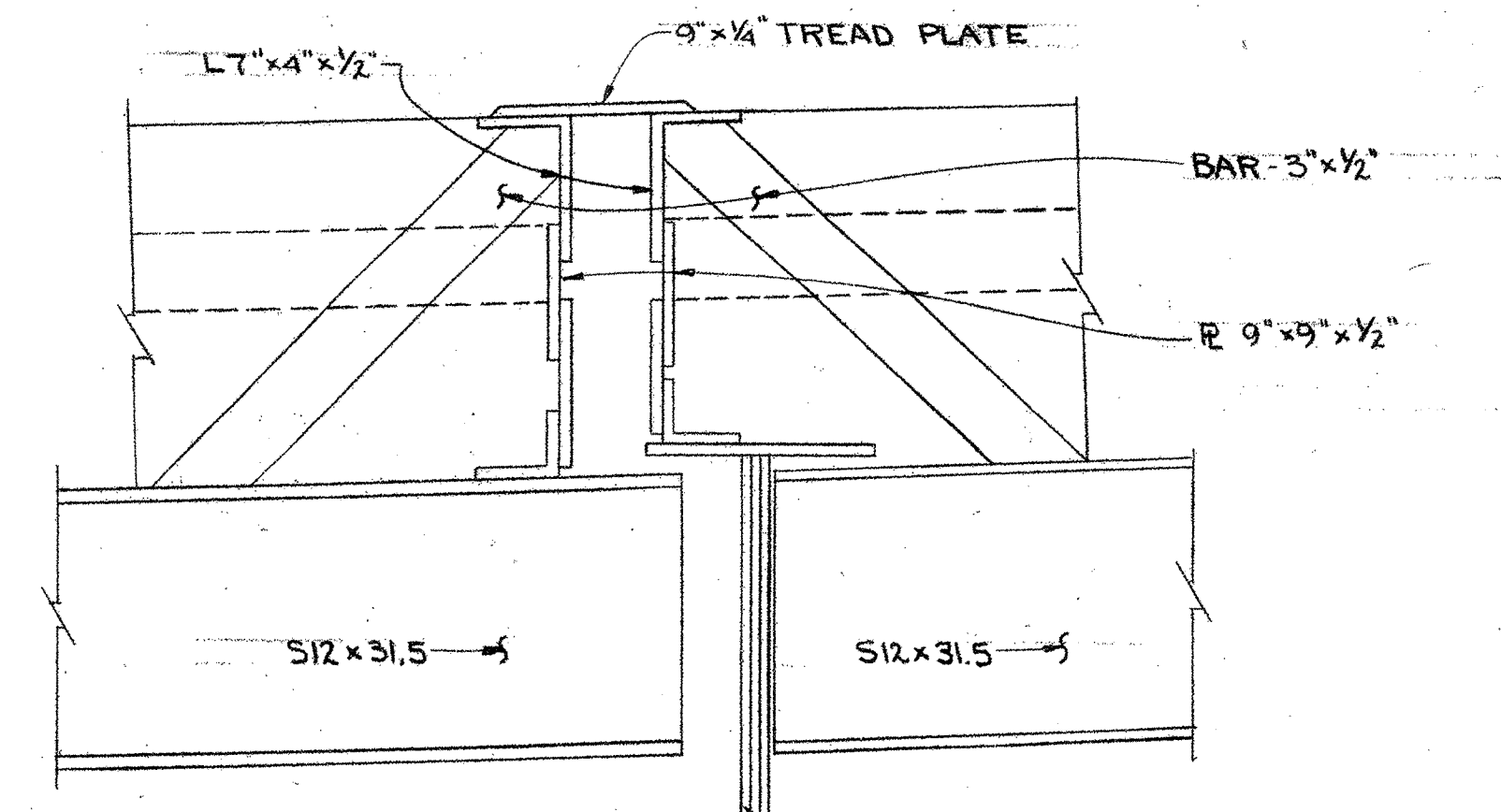
SECTION D-D

NO SCALE



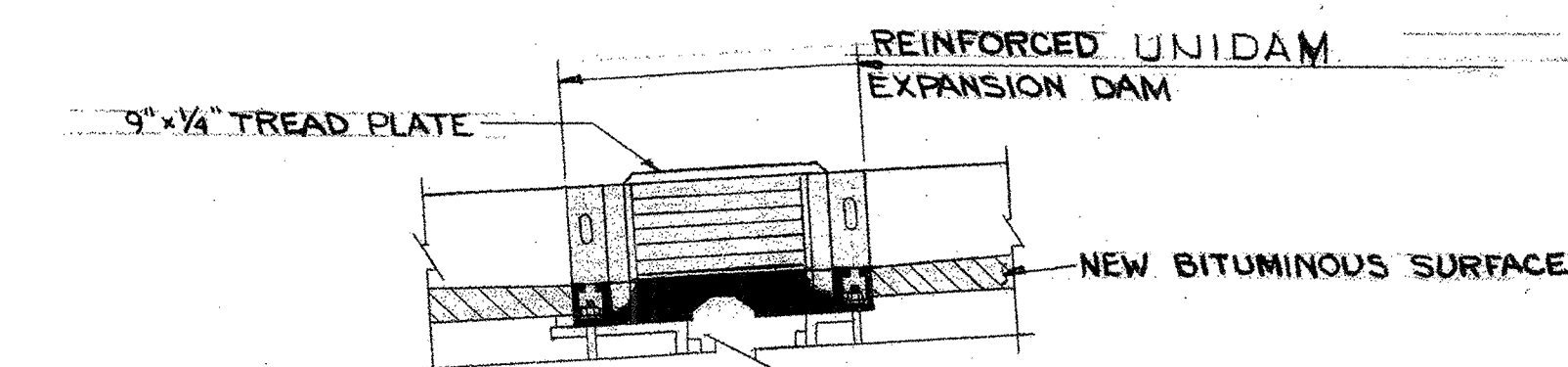
SECTION C-C

NO SCALE



SECTION A-A

NO SCALE



SECTION B-B

NO SCALE

# NOTES

- ▲ See Sheet 9 of 12 for Framing Plan.
- ▲ See Sheet 9 of 12 for Section M-M and N-N.
- ▲ See Sheet 1 of 12 for Expansion Dam Locations.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania  
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L.R. 10030 SEC. D09  
L.R. 10030 - D09 STA. 480 + 71.00  
OVER CONNOQUENESSING CREEK AND RAILROADS  
BRIDGE REHABILITATION PLAN  
BEAM SUPPORT LOCATION AT COLUMNS 5, 9, 13 AND  
EXPANSION DAM DETAILS

APPROVED JUN 16 1976

B. J. Kotabik

BRIDGE ENGINEER

SHEET 10 OF 12

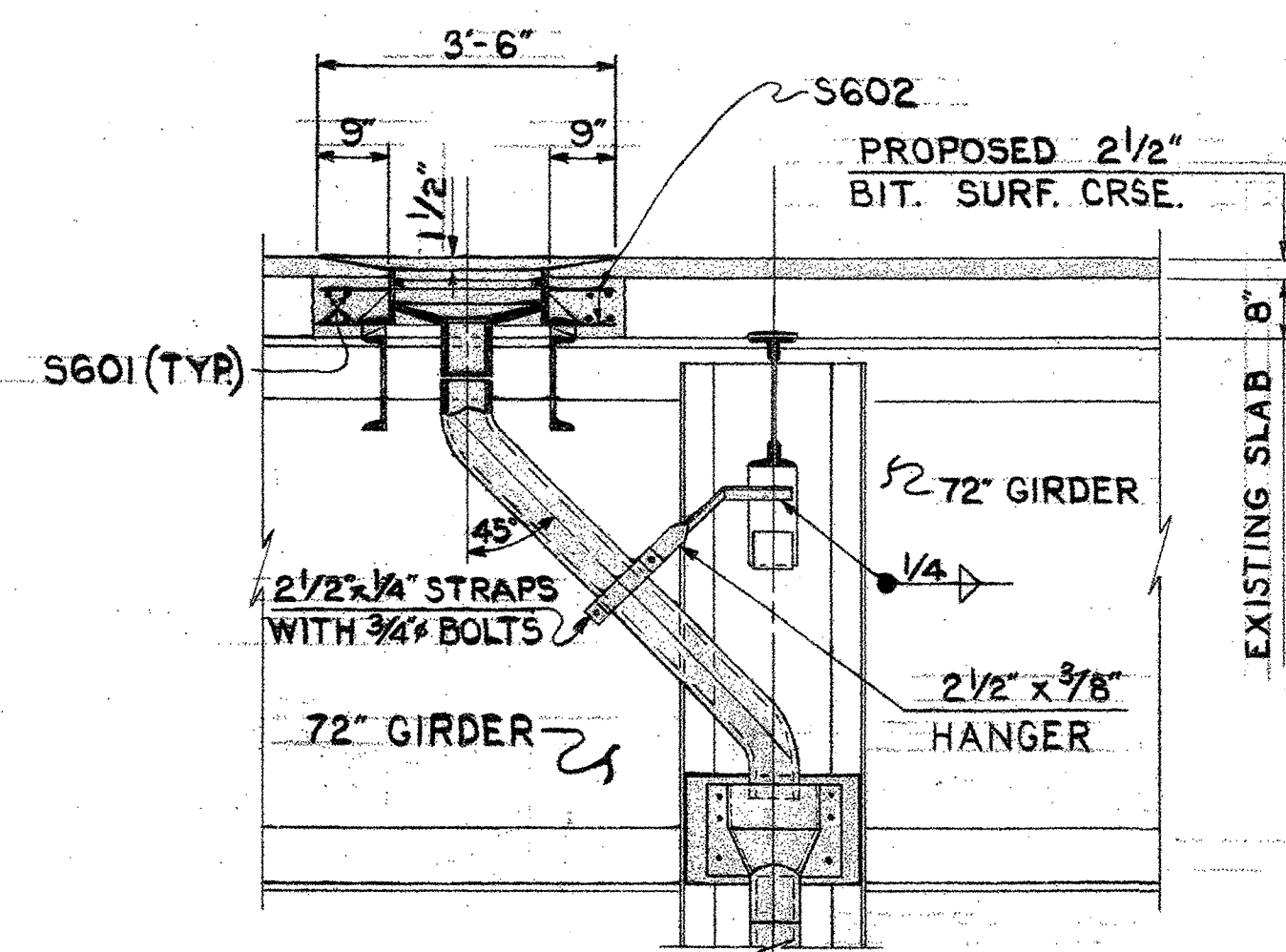
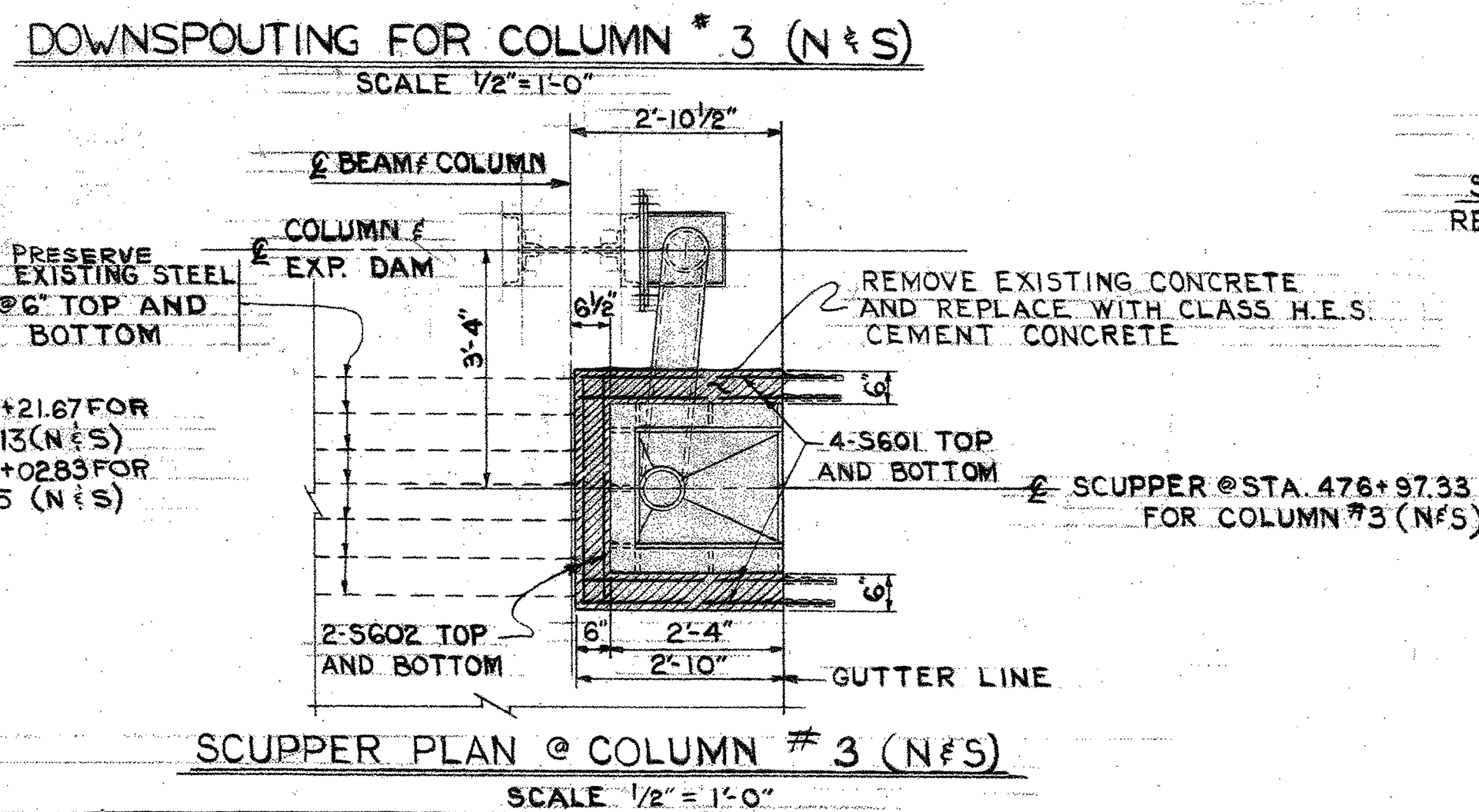
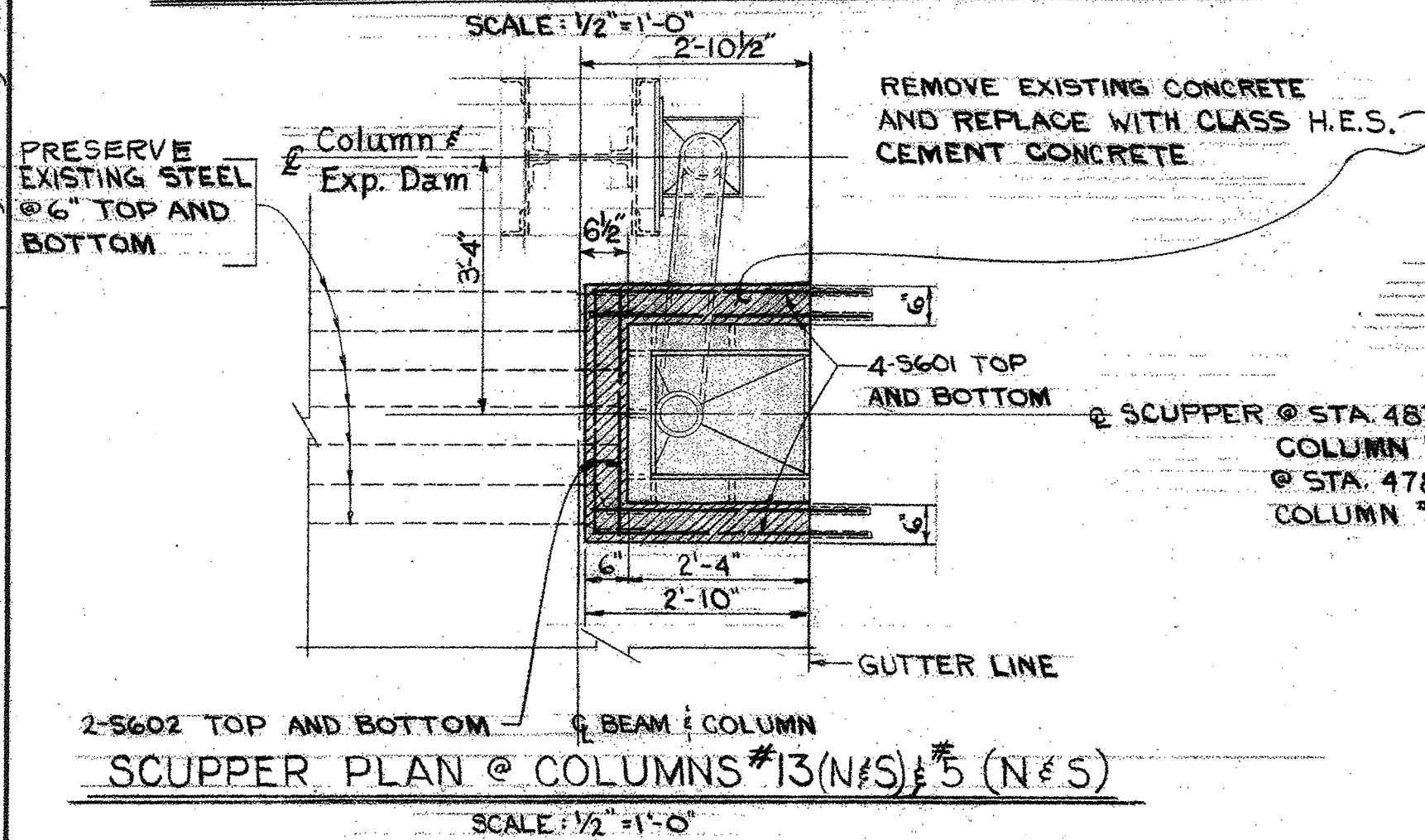
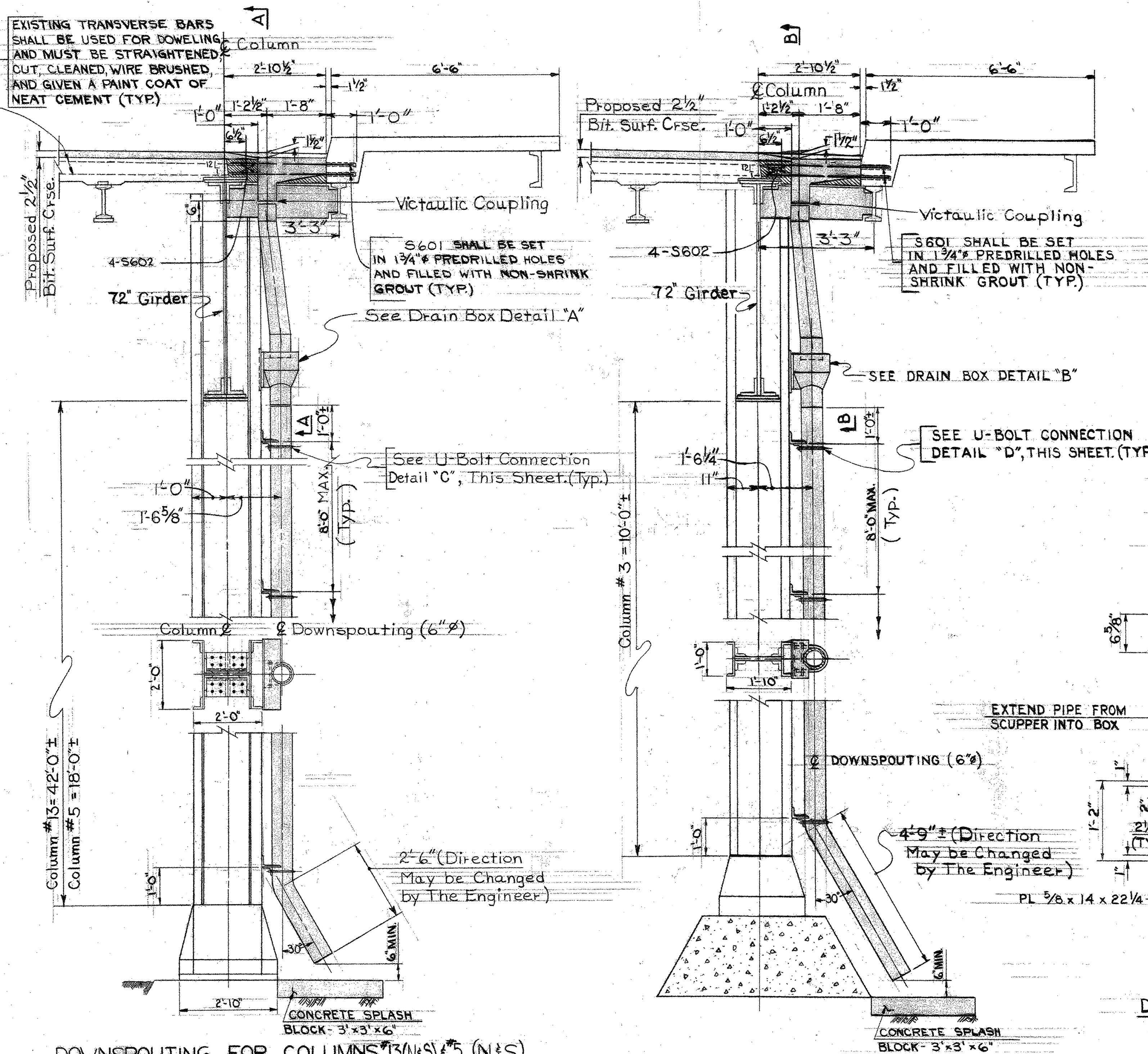
S-12431

DESIGNED BY DIST. 10-0 Des. by LJB Dwn. by LJB T.C. by J.C.B. Chk'd. by JAH

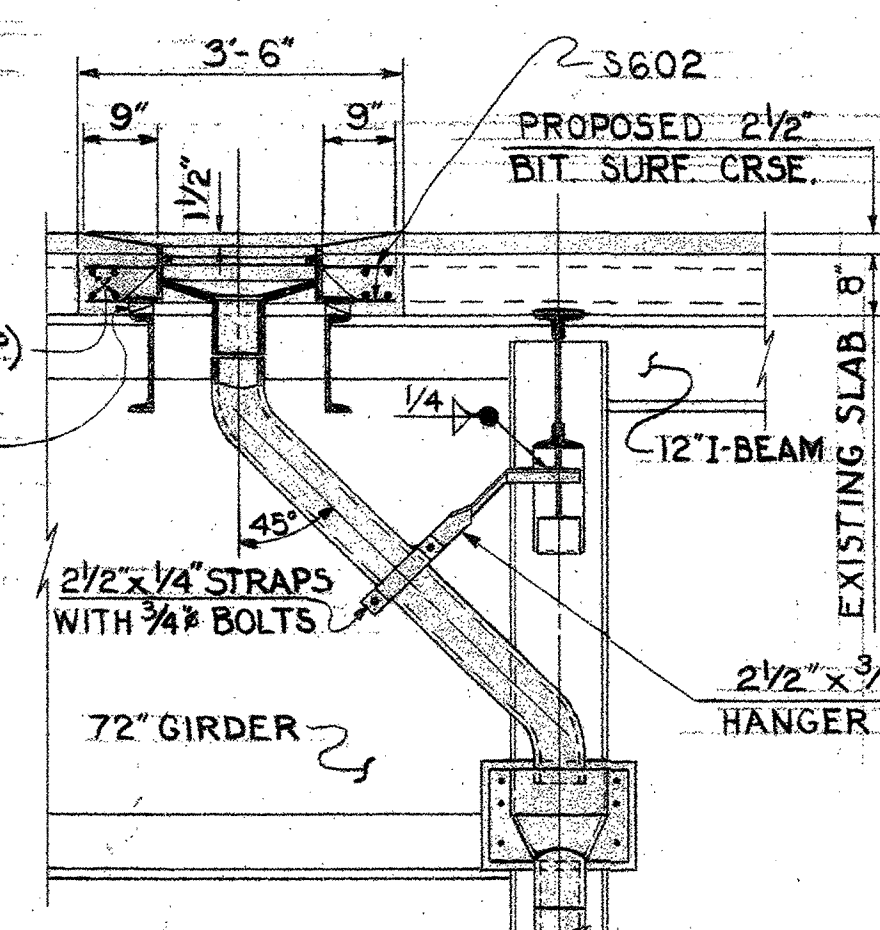
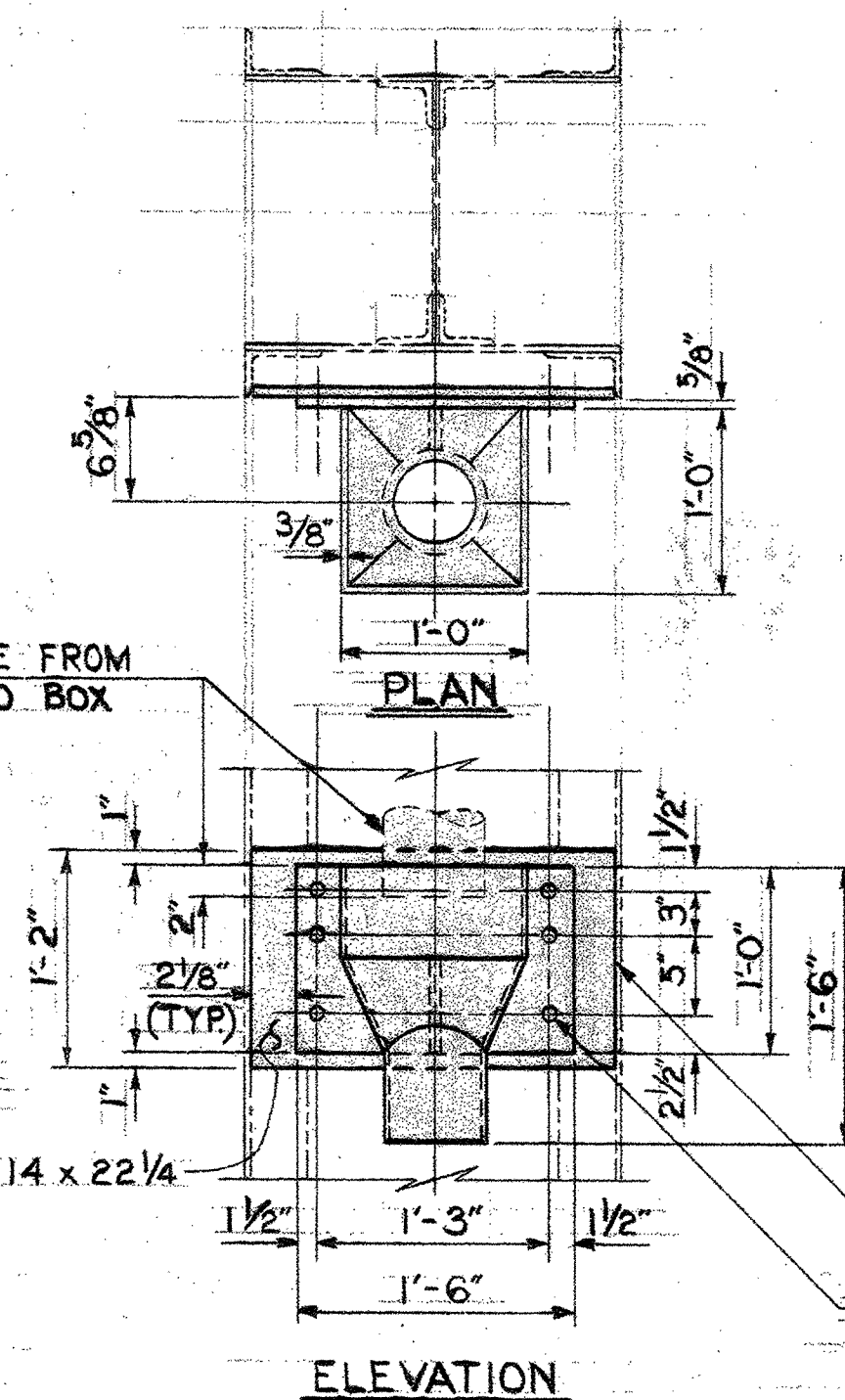
BARCLAY BROTHERS, INC. #4101-B

9/19/2006

DESIGNED BY DIST. 10-0-0 | Drawn by WCM/Checked by JAM | Traced by JAM



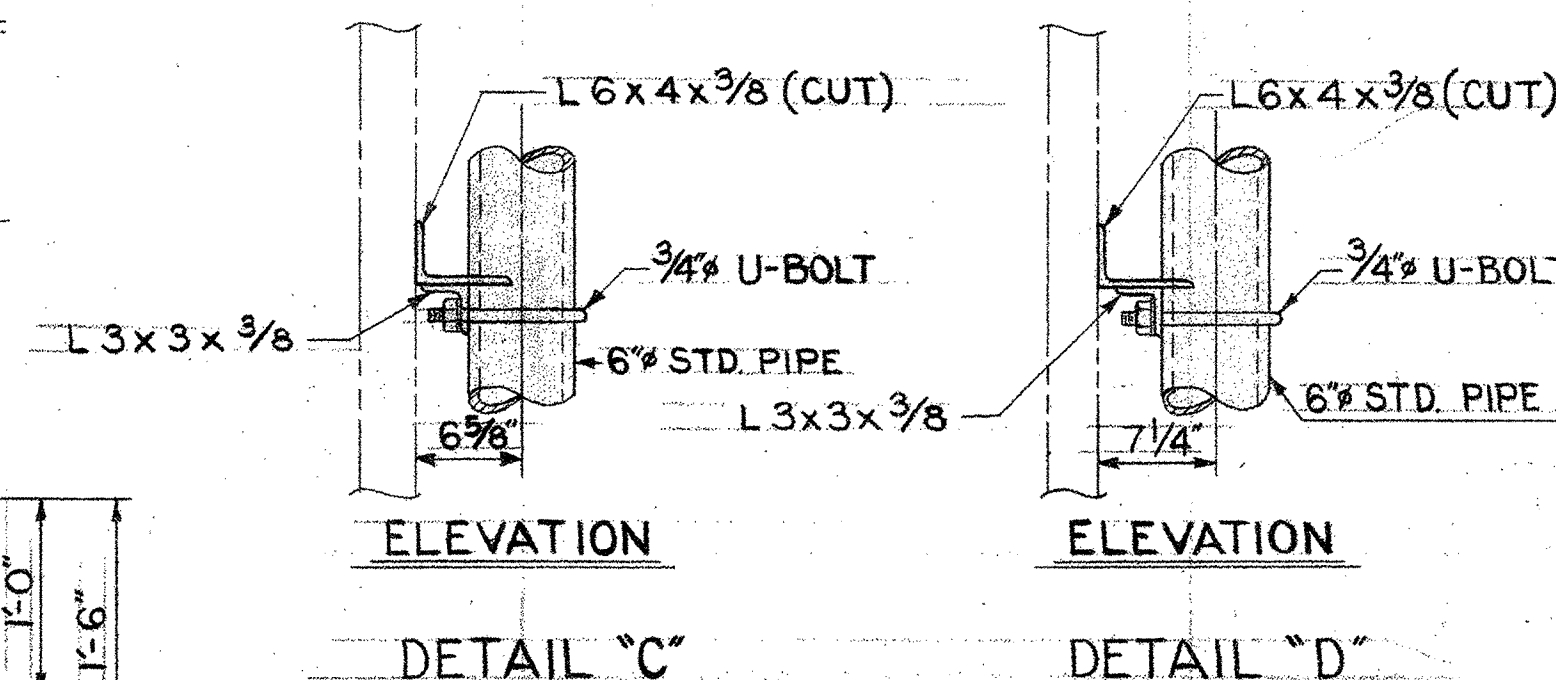
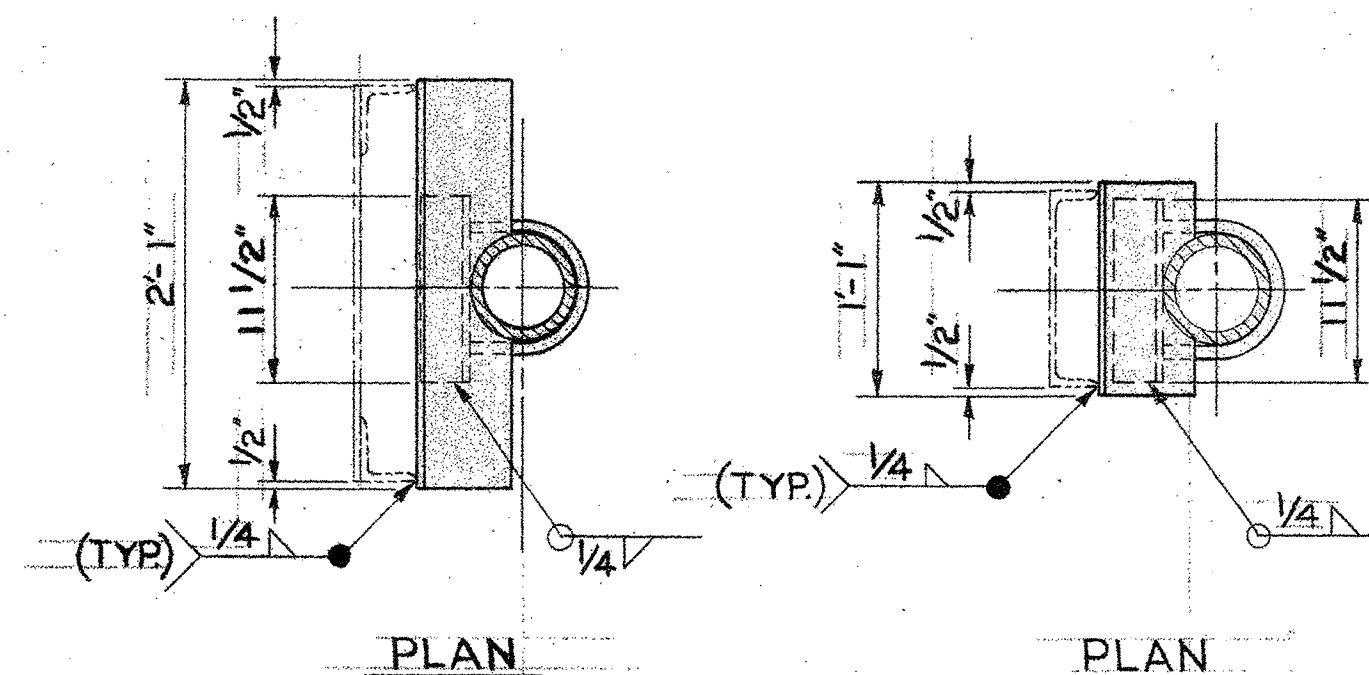
SECTION A-A  
SCALE 1/2" = 1'-0"



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

## NOTES

- All items called for are new except as noted otherwise.
- See Standard BC 351 for details not shown, Scuppers will be Type A - Welded Construction.
- For Reinforcement Bar Schedule see sheet 4 of 12.



U-BOLT CONNECTION DETAILS  
SCALE 1" = 1'-0"

Mark	Description	By	Chk'd	App'd	Date
REVISIONS					

Commonwealth of Pennsylvania  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF DESIGN

BUTLER COUNTY  
L.R. 10030 SEC. D09  
L.R. 10030-D09 STA. 480+71.00  
OVER B.O. R.R., B.L.E.R.R. AND CONNOQUENESSING CREEK  
BRIDGE REHABILITATION PLAN  
DRAINAGE LOCATION AND DETAILS

APPROVED JUN 16 1976

*B. J. Kotabek*

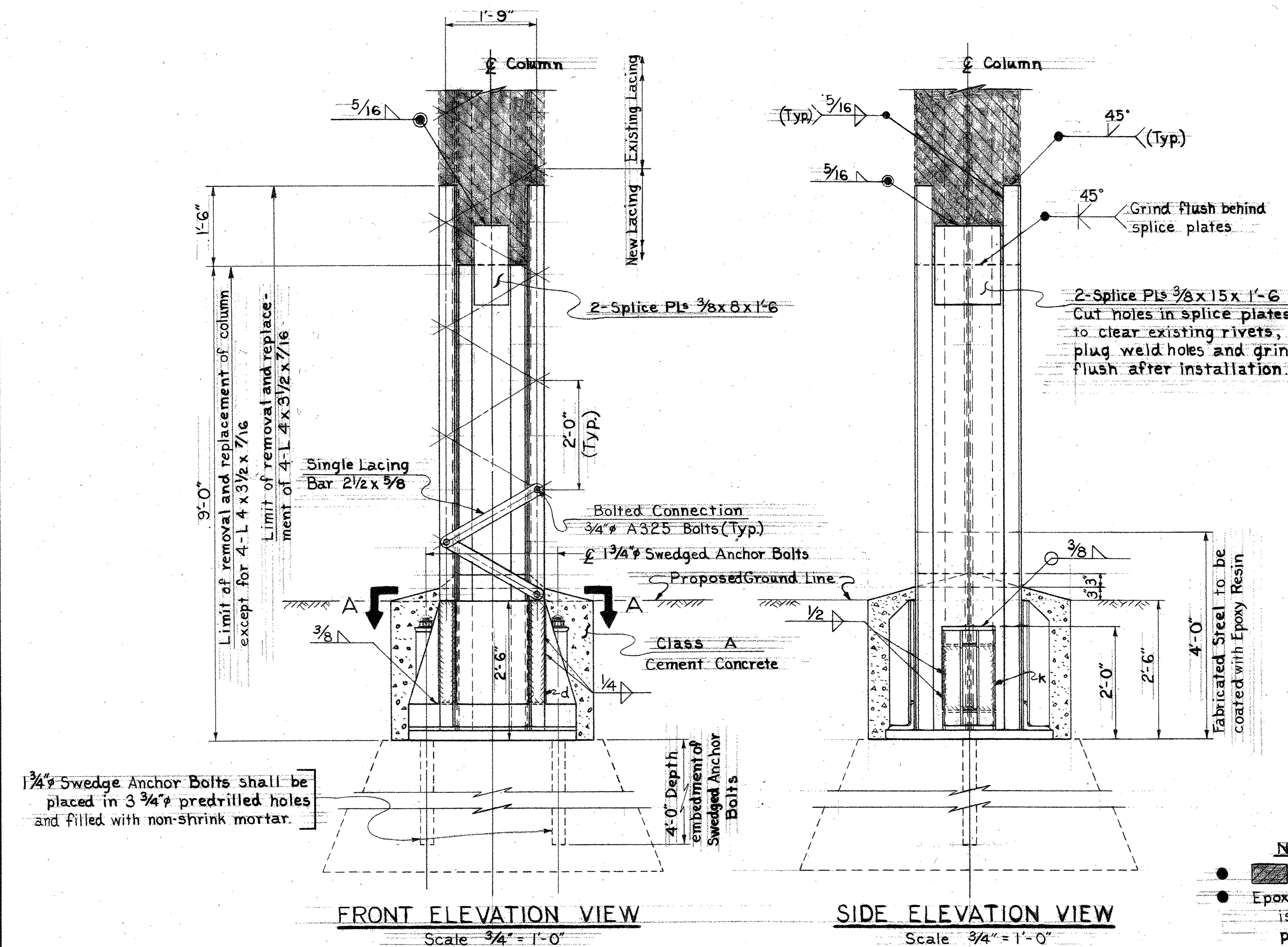
BRIDGE ENGINEER

SHEET 11 OF 12

S-12431

## SEQUENCE OF WORK

1. Provide Temporary Girder Support.
2. Remove deteriorated portion of Existing Column to height shown on plan and remove Existing Anchor Bolts flush with top of Footer.
3. Drill holes for placement of Swedged Anchor Bolts.
4. Prepare Bearing Seat for placement of Column.
5. Place Column and Splice Plates.
6. Place Swedged Anchor Bolts and fill with non-shrink mortar.
7. Place Epoxy Resin Protective Coating to height shown on plan.
8. Place Concrete around Column Base.
9. Place Epoxy Resin Protective Coating over concrete surface above ground line.

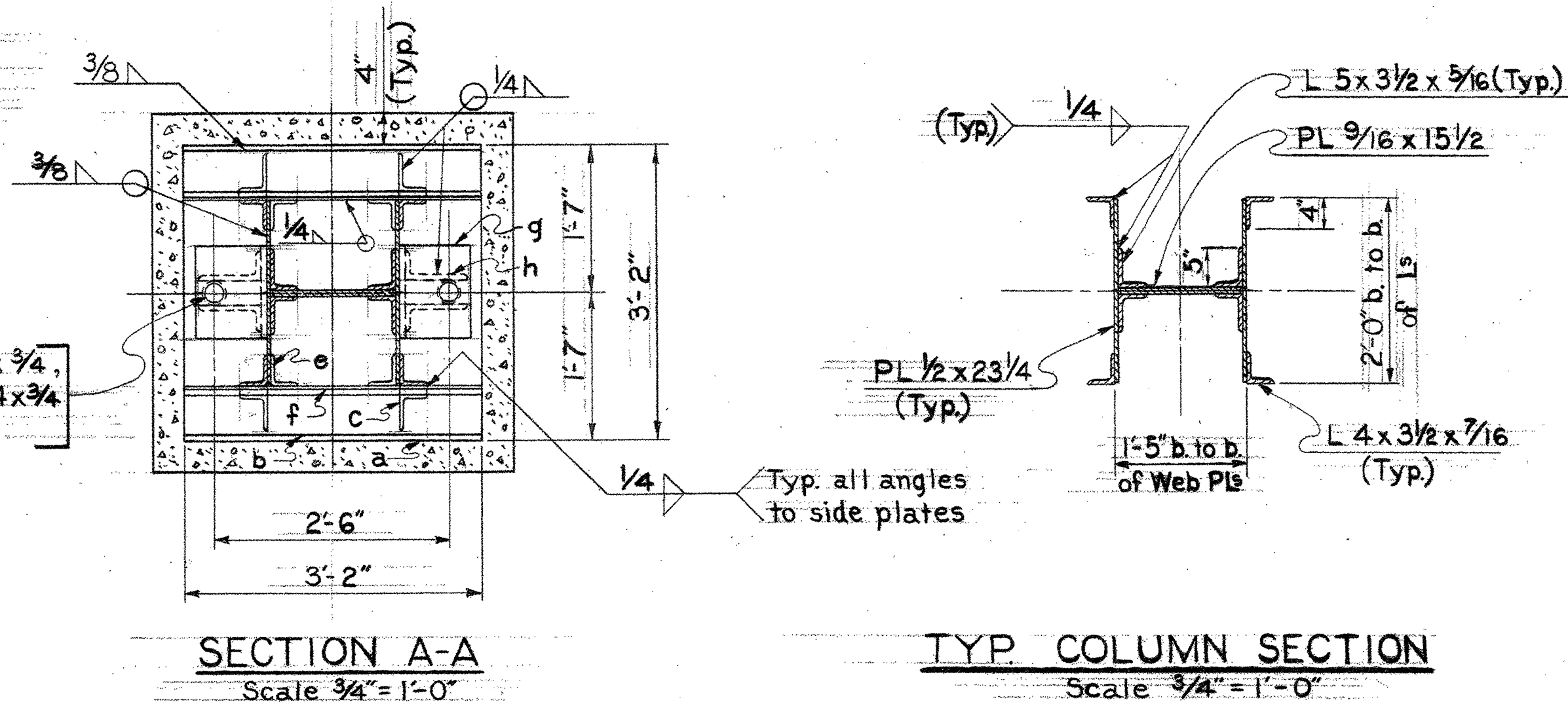


## NOTES

- Indicates existing portion of column.
- Epoxy Resin Protective Coating at the column base is incidental to the base replacement and no separate payment will be made.

## MATERIAL FOR COLUMN BASE

- 1-Base PL 2 1/4 x 38 - a
  - 2-L 6 x 6 x 3/4 - b
  - 4-Stiffeners L 5 x 3 1/2 x 1/2 - c
  - 4-Filler PL 3/4 x 4 - d
  - 4-L 4 x 3 1/2 x 1/2 - e
  - 2-Side PL 5/8 - f
  - 4-L 9 x 4 x 3/4 - g
  - 4-Stiffeners L 8 x 4 x 5/8 - h
  - 2-Filler PL 3/4 x 13 1/4 - k
- 2 1/8" hole in Top L 9 x 4 x 3/4,  
3 3/4" hole in Bottom L 9 x 4 x 3/4  
and Base Plate



Mark	Description	By	Chk'd	App'd	Date
REVISIONS					

Commonwealth of Pennsylvania  
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BUREAU OF DESIGN

BUTLER COUNTY  
L.R. 10030 SEC. D09  
L.R. 10030 - D09 STA. 480+71.00  
OVER CONNOQUEENESS CREEK AND RAILROADS  
BRIDGE REHABILITATION PLAN  
PARTIAL COLUMN #8N REPLACEMENT

APPROVED JUN 16 1976

BRIDGE ENGINEER

SHEET 12 OF 12

S-12431