

| SHEET NUMBER | SECTION | STRUCTURE | | | | | DRAWING NUMBER | SUBJECT | BRIDGE CONTRACT NO. |
|--------------|---------|-------------|---------|------|-----------|---------|--|---------|---------------------|
| | | NO. | TYPE | SPAN | OVER | STATION | | | |
| 1 | | | | | | | Index and Title Sheet | | |
| 2-4 | | | | | | 5.6.7 | Road Plan & Profile, Rd. Proj. W.P.M.H. 74-E | | |
| 5 | F 1784 | Steel Truss | 60, 100 | | 105+46.47 | S1 | Layout | | |
| 6 | | | | | | S2 | General Plan | | |
| 7 | | | | | | S3 | Bent No. 1 Details, & Bill of Materials | | |
| 8 | | | | | | S4 | Pier No. 2 Details, & Bill of Materials | | |
| 9 | | | | | | S5 | " " 3 " " " " " " | | |
| 10 | | | | | | S6 | " " 4 " " " " " " | | |
| 11 | | | | | | S7 | " " 5 " " " " " " | | |
| 12 | | | | | | S8 | " " 6 " " " " " " | | |
| 13 | | | | | | S9 | " " 7 " " " " " " | | |
| 14 | | | | | | S10 | " " 8 " " " " " " | | |
| 15 | | | | | | S11 | Abutment No. 9 Details | | |
| 16 | | | | | | S12 | " " " " " " " " | | |
| 17 | | | | | | S13 | " " " " " " " " | | |
| 18 | | | | | | S14 | Details Std. Conc. Handrail (March 29, 1935) | | |
| 19 | | | | | | 2 | Typical Cross Section, Rd. Proj. W.P.M.H. 74-E | | |
| 20 | | | | | | S14 | R.C. Box Culvert (Rev. Jan. 11, 1935) | | |
| 21 | | | | | | " | Miscell. Road Std. Sheet A (Feb. 1935) | | |
| 22 | | | | | | " | " " " " " " " " | | |
| 23 | | | | | | " | " " " " " " " " | | |
| 24 | | | | | | " | Defour. Barricades, Etc. (Rev. Jan. 8, 1936) | | |

STATE OF INDIANA
 STATE HIGHWAY COMMISSION

BRIDGE PLANS

FOR SPANS OVER 20 FEET

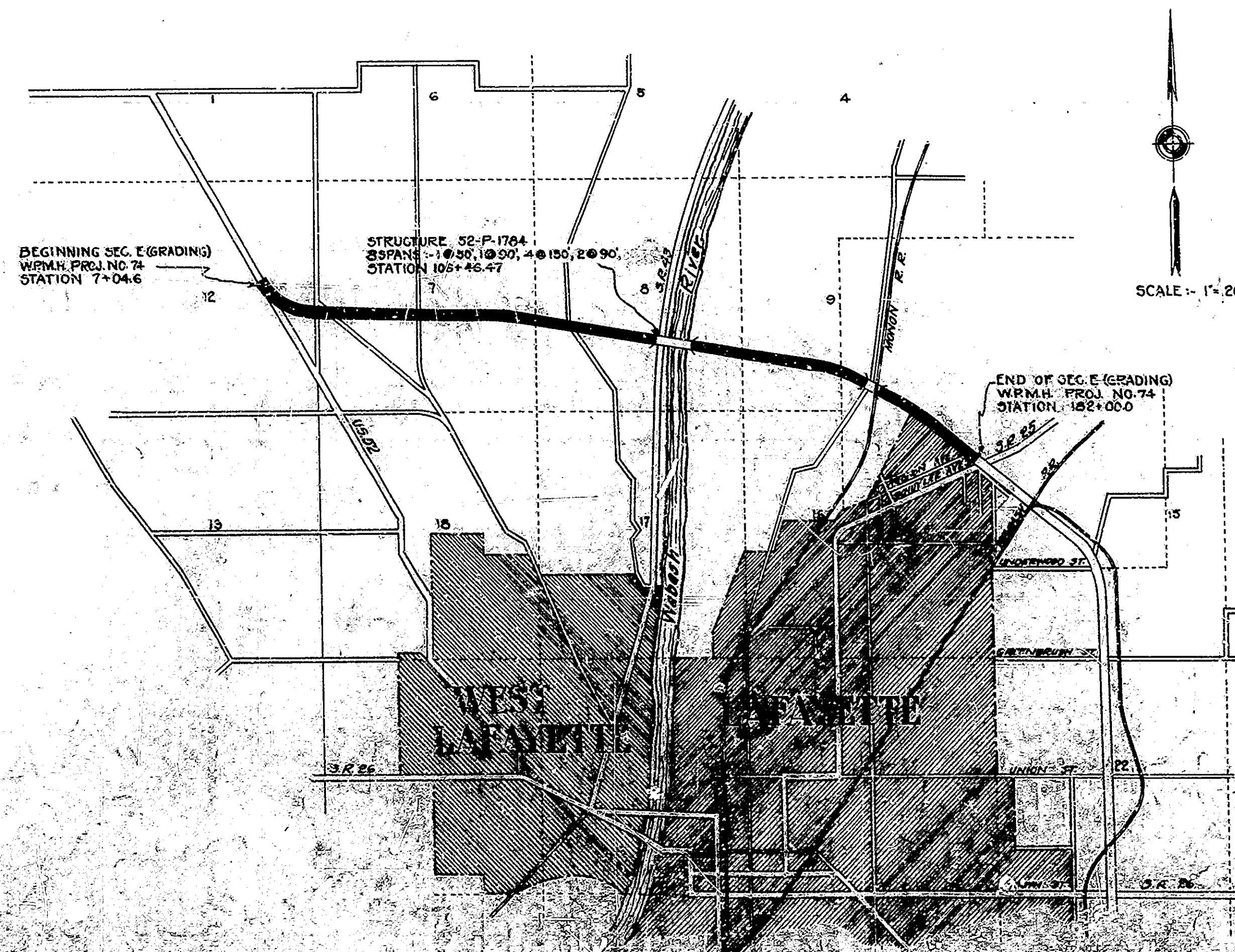
ON

W.P.M.H. PROJECT NO. 74 SEC. E (1936)

STATE ROAD NO. 52 SECTION P

DESCRIPTION OF W.P.M.H. PROJECT 74, SECTION E: GRADING (1936) FOWLER-LEBANON ROAD.
 BEGINNING ON U.S. 52 APPROX. 1/4 MILES NORTHWEST OF WEST LAFAYETTE AND RUNNING EAST AND SOUTHEAST TO A POINT JUST EAST OF THE INTERSECTION OF MONON AVENUE AND LEVERING AVENUE IN LAFAYETTE IN TIPPECANOE COUNTY.

GR055 LENGTH-- 3.313 MI.
 BRIDGE LENGTH-- 0.196 MI.
 NET LENGTH-- 3.313 MI.
 MAX. GRADE 6.00 %



PLANS FOR SUBSTRUCTURE STR. 52-P-1784
 APPROVED AND ADOPTED DECEMBER 31, 1935
 BY STATE HIGHWAY COMMISSION OF INDIANA

James D. Adams
 CHAIRMAN, STATE HIGHWAY COMMISSION OF INDIANA
 APPROVED DECEMBER 31, 1935

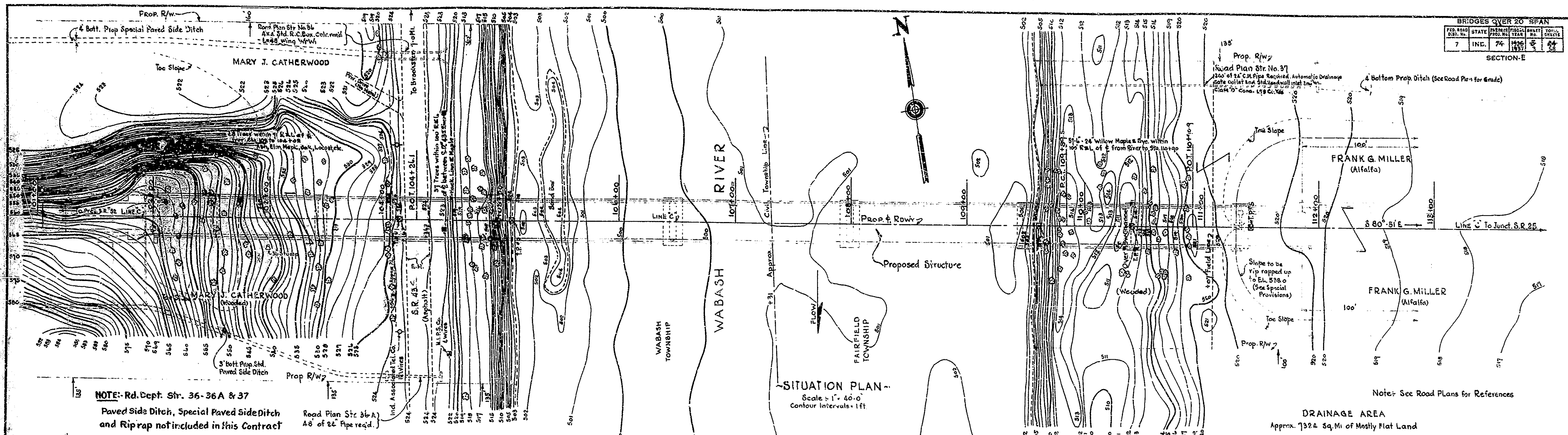
McKeel
 CHIEF ENGINEER, STATE HIGHWAY COMMISSION OF INDIANA
 RECOMMENDED FOR APPROVAL

RECOMMENDED FOR APPROVAL

APPROVAL

STATE HIGHWAY COMMISSION STANDARD
 BRIDGE SPECIFICATIONS 1922 & JULY 1932 SUPPLEMENT
 TO BE USED WITH THESE PLANS.

| BRIDGES OVER 20' SPAN | | | |
|-----------------------|-------|-----------|---------|
| NO. ROAD | STATE | PROJ. NO. | SECTION |
| 7 | IND. | 74 | 116 |
| SECTION-E | | | |



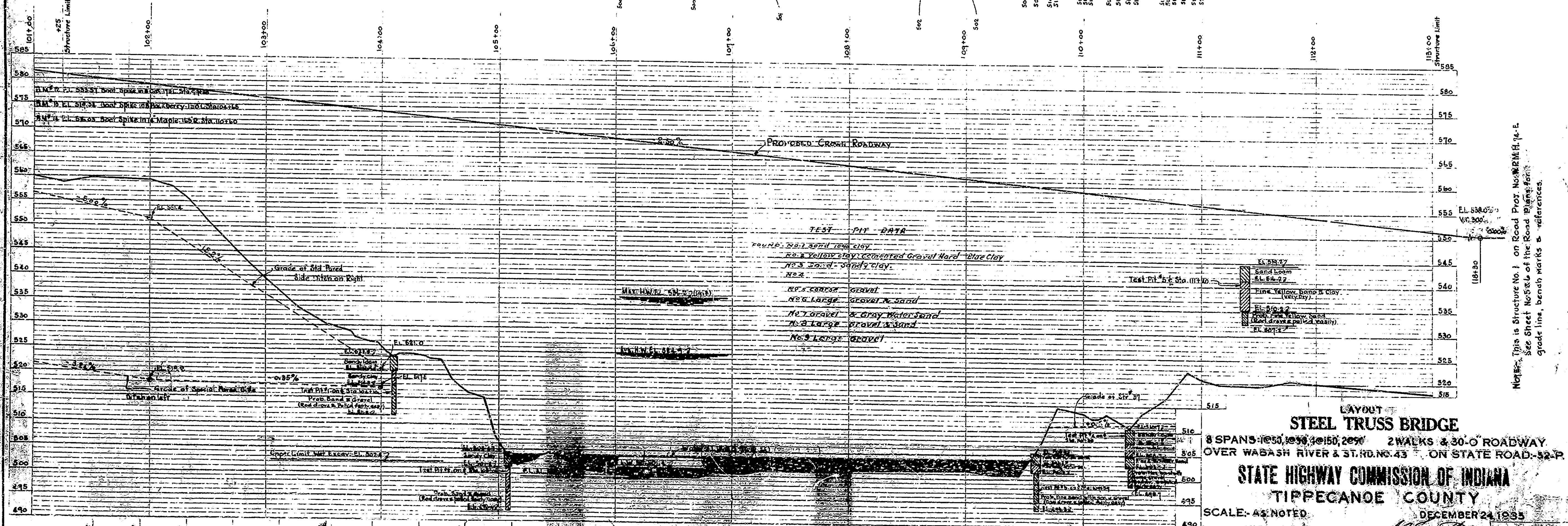
NOTE: Rd. Dept. Str. 36-36A & 37
 Paved Side Ditch, Special Paved Side Ditch and Riprap not included in this Contract

Road Plan Str. 36-A
 48" of 24" Pipe req'd.

SITUATION PLAN
 Scale = 1" = 40'-0"
 Contour Intervals = 1 ft

DRAINAGE AREA
 Approx. 732.4 Sq. Mi. of Mostly Flat Land

Note: See Road Plans for References



Note: This is Structure No. 1 on Road Proj. No. W.R.M.H. 74-E.
 See Sheet No. 514 of the Road Plans for grade line, bench marks & references.

~PROFILE ON PROPOSED E OF ROADWAY~
 Scale: Vert 1" = 10'-0", Hor. 1" = 40'-0"

LAYOUT
STEEL TRUSS BRIDGE
 8 SPANS @ 50', 100', 3 @ 150', 2 @ 200'
 2 WALKS & 30'-0" ROADWAY
 OVER WABASH RIVER & ST. RD. NO. 43 ON STATE ROAD 32-P
STATE HIGHWAY COMMISSION OF INDIANA
TIPPECANOE COUNTY
 SCALE: AS NOTED
 DECEMBER 24, 1935

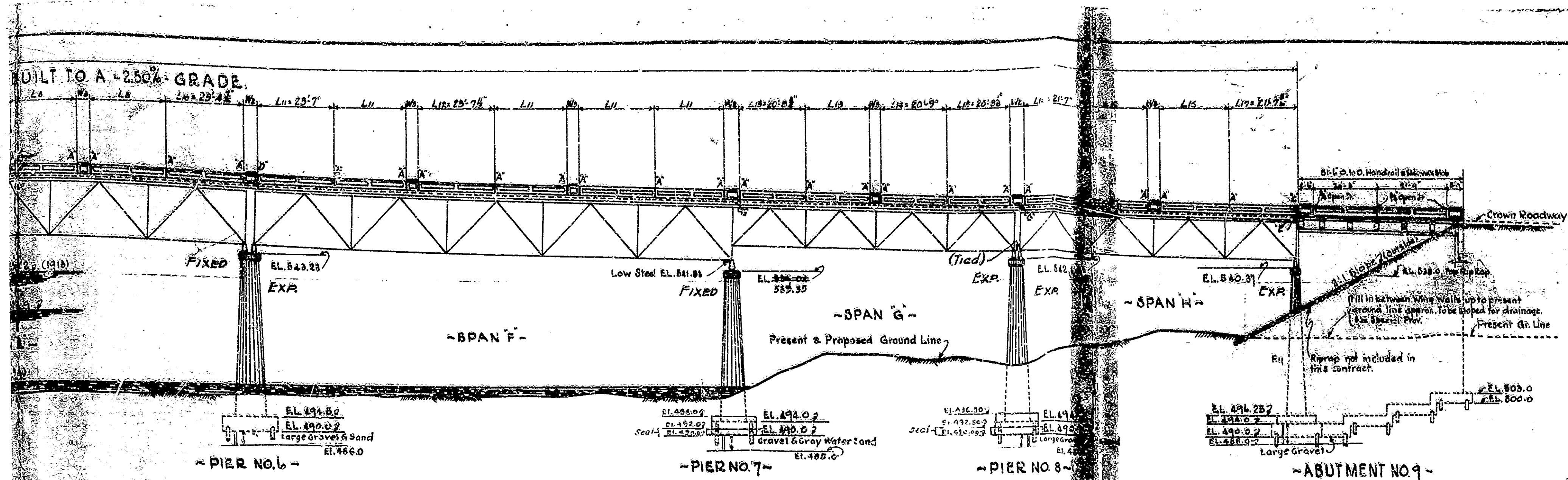
RECOMMENDED FOR APPROVAL:
 PROJECT: W.R.M.H. 74-E
 SECTION: E
 DRAWING: 511 OF 517
 BRIDGE CONTRACT NO. 1154 (See Encl.)

~PROFILE OF STREAM~
 Scale: Hor. 1" = 100'-0", Ver. 1" = 1'-0"

Field Notes - Book BR 734 pp. 1-50

BRIDGE TITLE SHEET 1164 Rev. 10-20-35 Approved Details





| BRIDGES OVER 20 SPAN | | | | |
|----------------------|------|--------|------|-------|
| NO. | SPAN | LENGTH | DATE | TOTAL |
| 1 | IND. | 74 | 1933 | 87 |

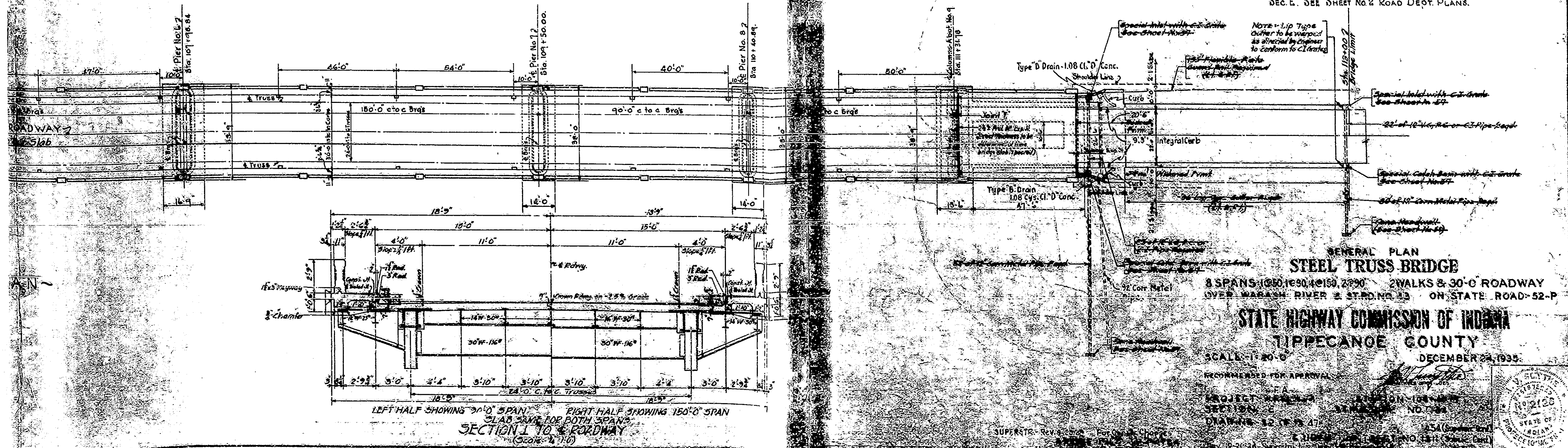
~ GENERAL NOTES ~

- No present structure at proposed bridge site.
- Depth of footings to be extended if found necessary. See Art. C14 of 1932 Supplement.
- Piles shall have bearing value shown on Foundation Details. Determine pile lengths by Art. C501 of 1932 Supplement.
- Concrete in Bent No. 1, Abutment No. 9, and in Pier No. 6 to be class 'E'.
- Concrete in Bent No. 1, Abutment No. 9, Above footings to be class 'D'.
- Concrete in Handrail above top sidewalk elevation to be class 'D'.
- Waterproof Abutment No. 9 in accordance with specifications.
- Seal forms 1/2 inch under copings and chamfer exposed edges 1/2 inch except copings and handrail.
- See Special Provisions for items included in this contract.
- Substructure is already in place. Constructed as Contract No. 1311.
- Contractor shall verify all dimensions affected by connection to present substructure and report any inconsistencies before starting work.
- Notes apply to substructure contract now complete.

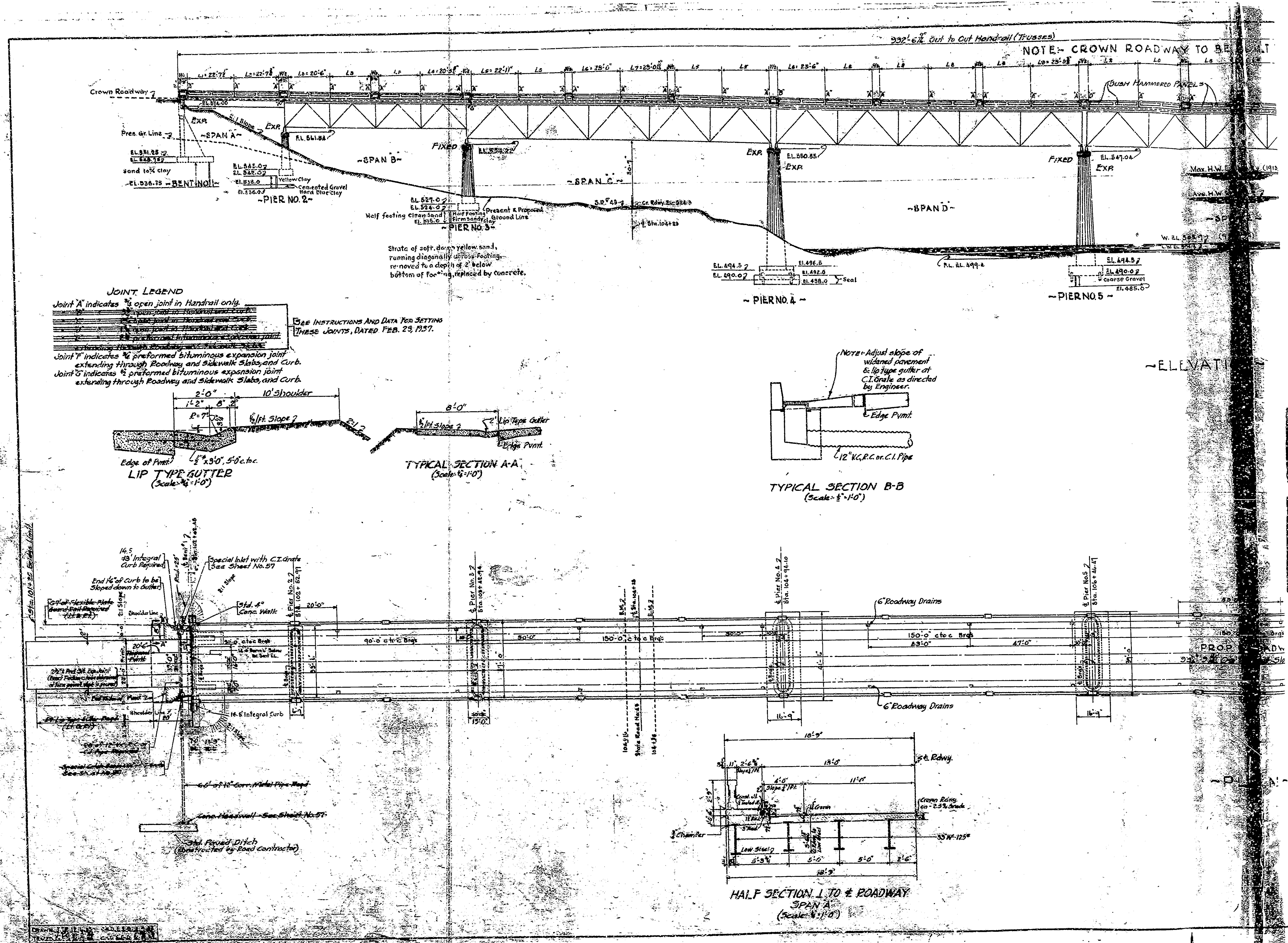
Approach Pavement placed by Road Contractor with the exception of the widening of each end of Structure.



TYPICAL CROSS SECTION
AS USED ON ROAD PROJ. No. W.R.M.H.-74
SEC. E. SEE SHEET No. 2 ROAD DEPT. PLANS.



GENERAL PLAN
STEEL TRUSS BRIDGE
8 SPANS 1090, 1690, 40190, 2090 2 WALKS & 30'-0" ROADWAY
OVER WABASH RIVER & ST. NO. 23 ON STATE ROAD 52-P
STATE HIGHWAY COMMISSION OF INDIANA
TIPPECANOE COUNTY
SCALE: 1" = 20'-0"
RECOMMENDED FOR APPROVAL
PROJECT ENGINEER
SECTION ENGINEER
DRAWING NO. 12 18 47
SUPERVISOR
DATE: DECEMBER 24, 1935



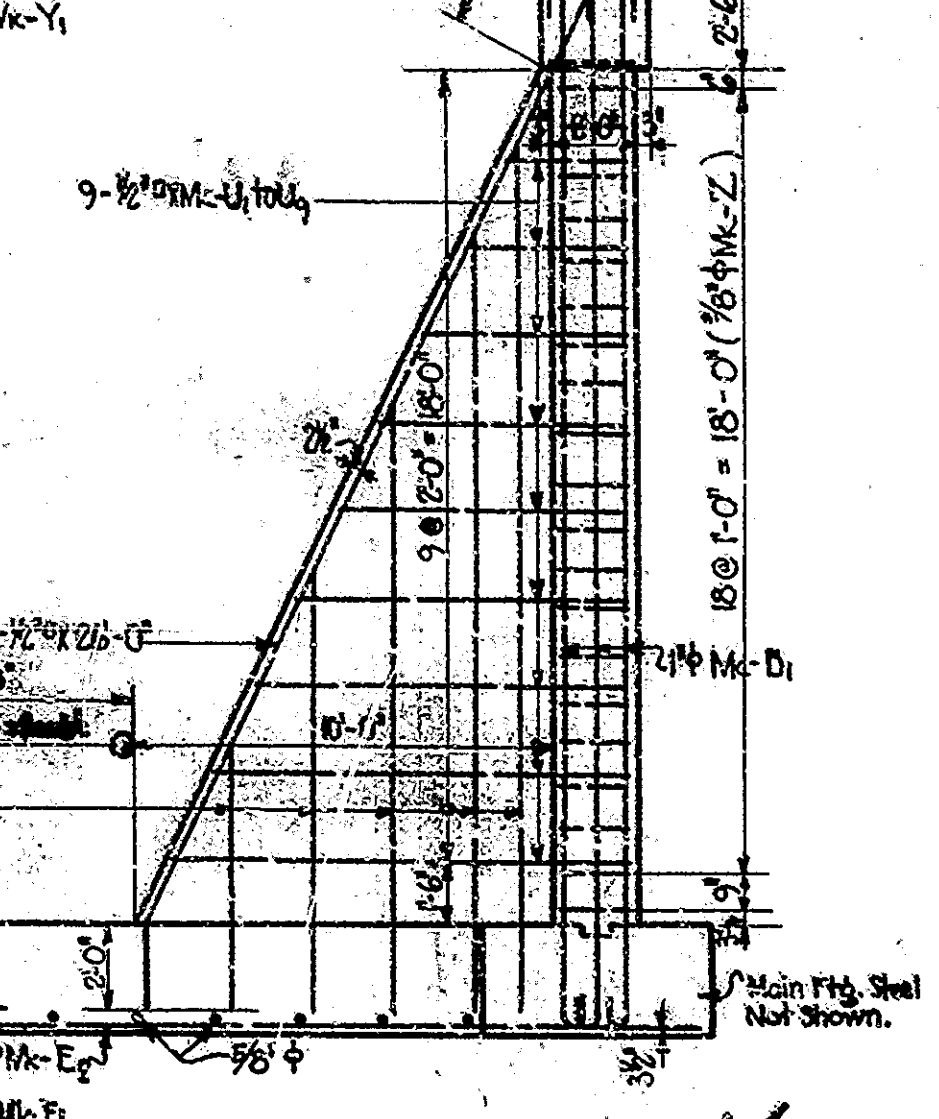
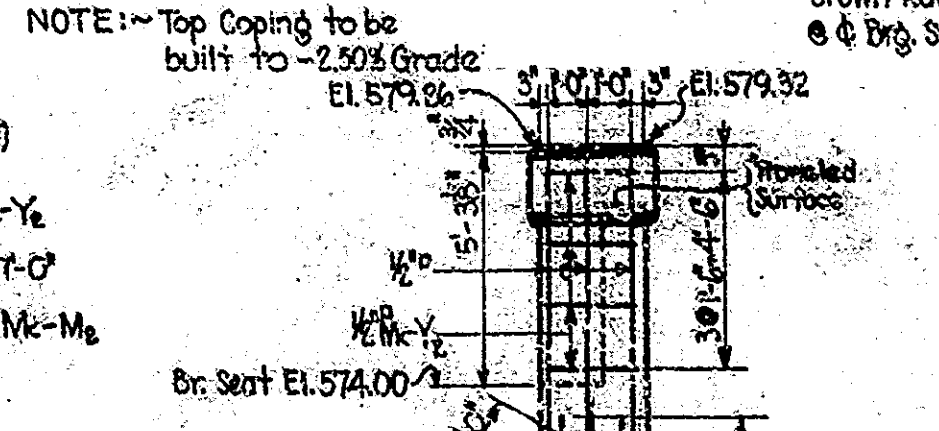
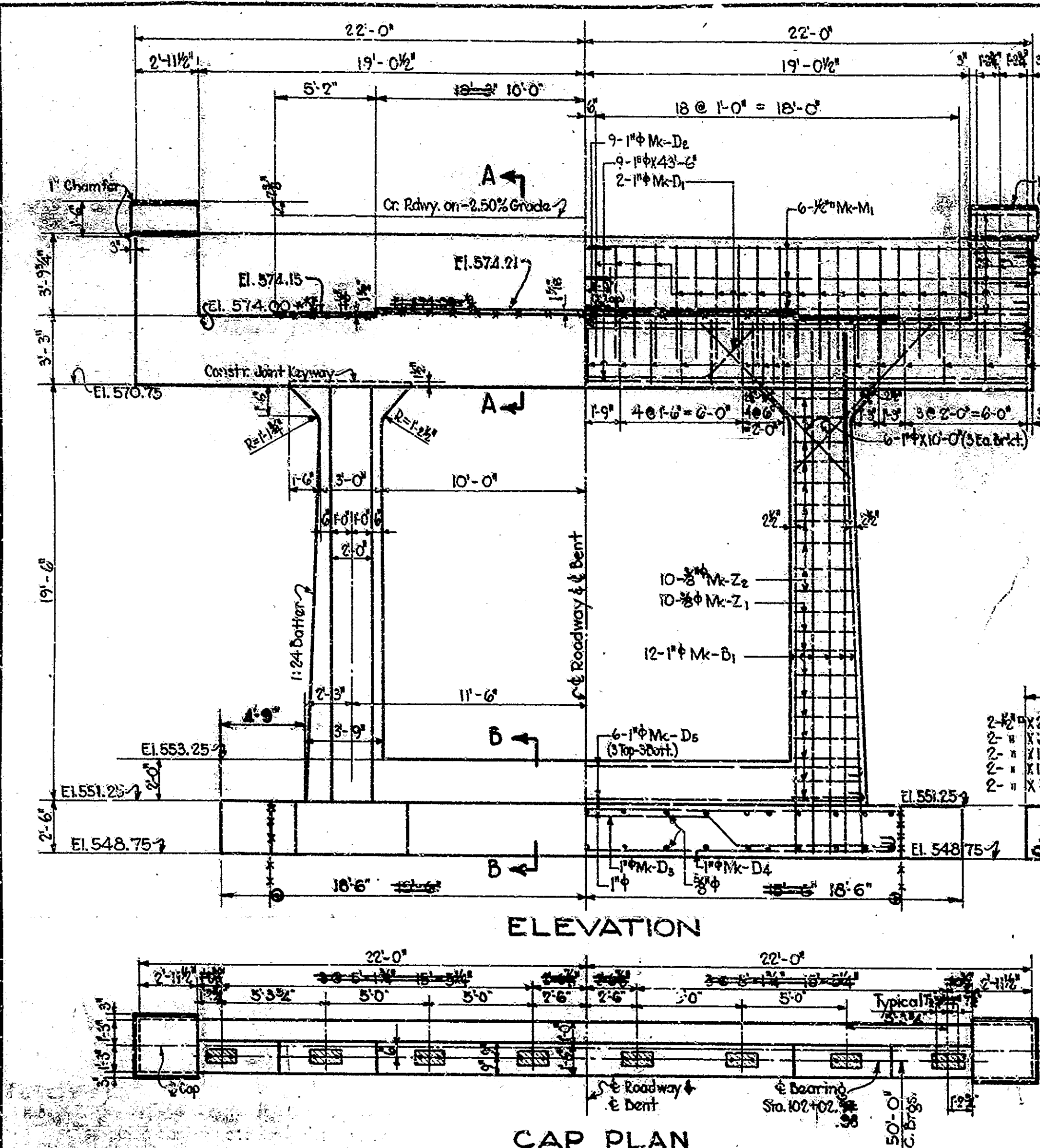
| YEAR | IND. | 74 | 1934 | 7 | 24 | TOTAL | |
|------|------|----|------|---|----|--------|---------|
| | | | | | | AMOUNT | PERCENT |
| 7 | IND. | 74 | 1934 | 7 | 24 | | |

SECTION-E

BILL OF MATERIALS

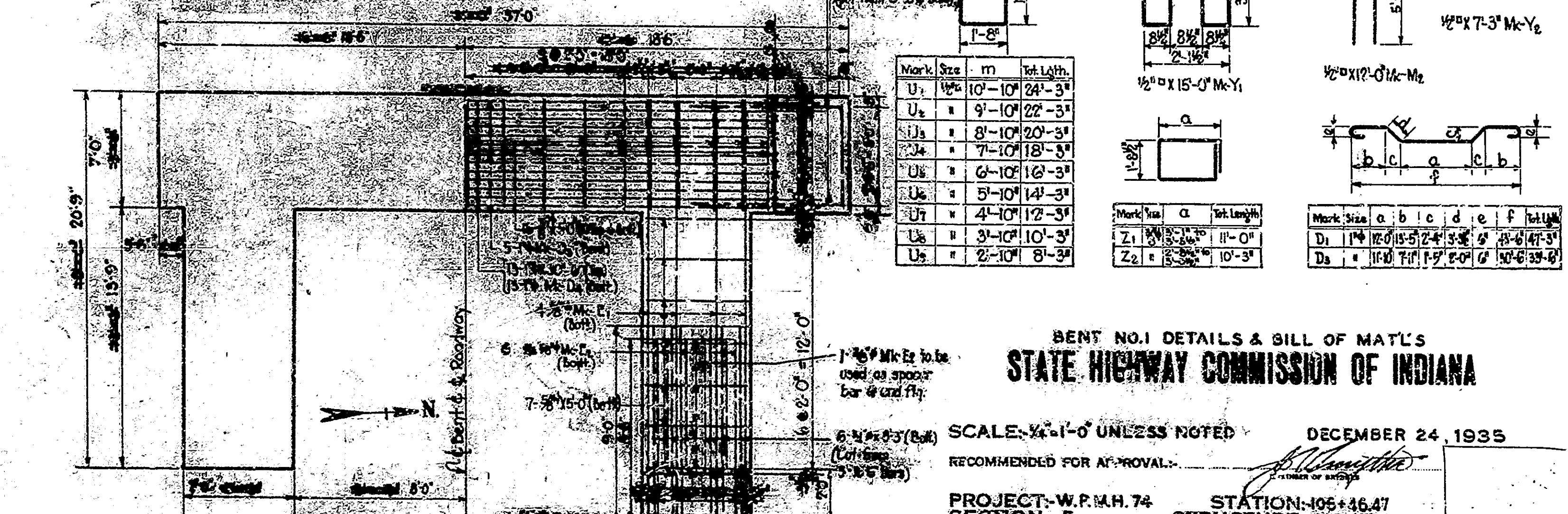
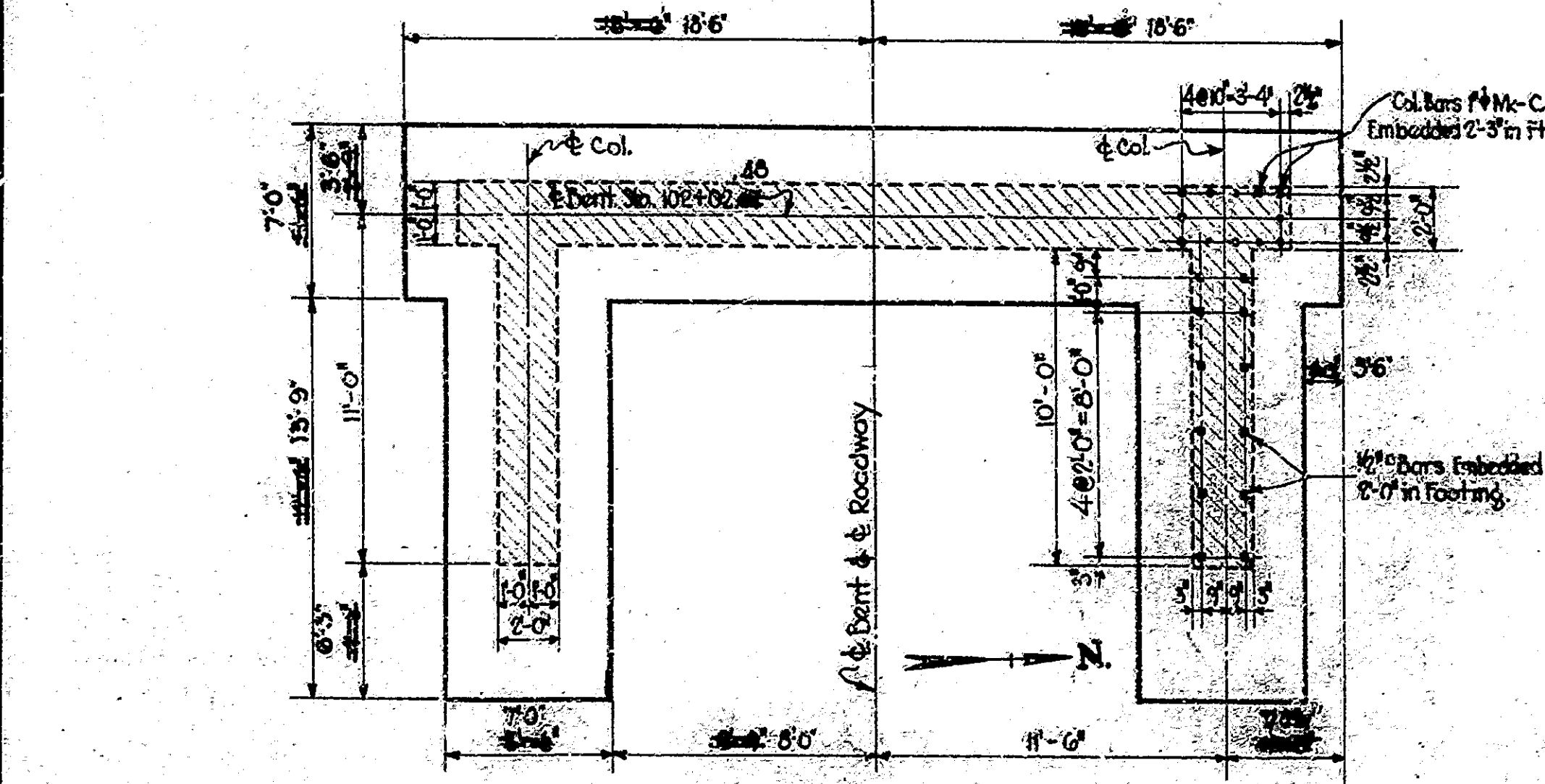
| Mark | No. | Qty. | Size | Length | Location | Total Length | Weight | Total Weight |
|------|-----|-------|--------|--------|-----------------------------------|-------------------|--------|--------------|
| D1 | 24 | 1"φ | 25'-0" | | Vert. Coils | 600'-0" | | |
| D1 | 2 | " | 47'-3" | | Cap (Bent) | 94'-6" | | |
| D1 | 9 | " | 45'-3" | | Cap (Top) | 407'-3" | | |
| D1 | 5 | " | 33'-6" | | Fig. (Bent) | 167'-0" | | |
| D1 | 13 | " | 32'-3" | | Fig. (Soff.) | 419'-3" | | |
| D1 | 6 | " | 28'-3" | | Strut | 169'-0" | | |
| D1 | 9 | " | 43'-0" | | Cap (Bent) | 387'-0" | | |
| D1 | 13 | " | 30'-0" | | Fig. (Top) | 390'-0" | | |
| D1 | 12 | " | 10'-0" | | Brackets (3 Each) | 120'-0" | | |
| | | | | | | 2760'-0" | 7468# | |
| E1 | 8 | 98"φ | 18'-0" | | Buttress Fig. (Both) | 144'-0" | | |
| E2 | 14 | " | 4'-9" | | " | 94'-0" | | |
| | 44 | " | 5'-0" | | Fig. 30" Dia. R Buttress (Top) | 220'-0" | | |
| | | | | | | 458'-0" | 486# | |
| M1 | 12 | 1/2"φ | 23'-0" | | Horiz. Curt. Wall | 276'-0" | | |
| M2 | 58 | " | 12'-0" | | Vert. " | 696'-0" | | |
| U1 | 2 | " | 27'-8" | | Horiz. Stirrups-Buttresses | 48'-0" | | |
| U2 | 2 | " | 22'-3" | | " | 44'-0" | | |
| U3 | 2 | " | 20'-9" | | " | 40'-0" | | |
| U4 | 2 | " | 18'-3" | | " | 36'-0" | | |
| U5 | 2 | " | 16'-3" | | " | 32'-0" | | |
| U6 | 2 | " | 14'-3" | | " | 28'-0" | | |
| U7 | 2 | " | 12'-3" | | " | 24'-0" | | |
| U8 | 2 | " | 10'-3" | | " | 20'-0" | | |
| U9 | 2 | " | 8'-3" | | " | 16'-0" | | |
| Y1 | 31 | " | 15'-0" | | Cap Stirrups | 465'-0" | | |
| Y2 | 8 | " | 7'-3" | | Horiz. End Posts | 58'-0" | | |
| | 4 | " | 26'-0" | | Sloping Face Buttresses | 104'-0" | | |
| | 4 | " | 20'-0" | | Vertical " | 80'-0" | | |
| | 4 | " | 17'-0" | | " | 70'-0" | | |
| | 4 | " | 14'-0" | | " | 56'-0" | | |
| | 4 | " | 10'-0" | | " | 40'-0" | | |
| | 14 | " | 7'-0" | | End Posts | 98'-0" | | |
| | 4 | " | 6'-0" | | Buttresses | 24'-0" | | |
| | | | | | | 2025'-0" | 1742# | |
| Z1 | 20 | 3/8"φ | 11'-0" | | Column Hoops | 220'-0" | | |
| Z2 | 20 | " | 10'-0" | | " | 200'-0" | | |
| | | | | | | 420'-0" | 162# | |
| | | | | | | TOTAL STEEL | | 9858# |
| | | | | | | SPLICE BARS | | |
| | 1 | 1"φ | 13'-0" | | Splice bars for 1" bars at joints | 13'-0" | 35# | |
| | 3 | 5/8"φ | 9'-0" | | " | 27'-0" | 30# | |
| | 3 | 1/2"φ | 8'-0" | | " | 24'-0" | 21# | |
| | 3 | 3/8"φ | 11'-0" | | Extra Hoops for test | 33'-0" | 13# | |
| | | | | | | TOTAL SPLICE BARS | | 99# |
| | | | | | | GRAND TOTAL STEEL | | 9957# |

| CONCRETE | | |
|-----------------------------------|--|----------------|
| Class "D" - Cap, Midwall, & Posts | | = 21.5 Cu Yds. |
| - Below Cap to Top Fig. | | = 28.0 " " |
| | | = 49.5 " " |
| Class "E" - Footing | | = 42.0 " " |



NOTE: -- Top Coping to be built to -2.50% Grade EL. 579.06
 Crown Rdwy. El. 578.67
 @ & Drg. Sta. 102+02.00 & 7.98
 Dr. Seat El. 574.00
 Max. Soil Press. = $\frac{T}{a}$
 2.2

EXTRA BARS AVAILABLE AT BRIDGE SITE - 30" x 166"
 USE AS FOLLOWS:
 Cut 52 - 5/8" x 8'-5" from 16" x 166" Use as noted on footing plan.
 Cut 52 - 5/8" x 14" from 13" x 166" Use to splice with fig. 52.
 Spacer Bars.



BENT NO. 1 DETAILS & BILL OF MAT'L'S
 STATE HIGHWAY COMMISSION OF INDIANA

SCALE: 1/4" = 1'-0" UNLESS NOTED
 DECEMBER 24, 1935

PROJECT: W.P.M.H. 74
 SECTION: E
 DRAWING: 33 OF 13

BRIDGE CONTRACT NO. 311
 STATION: 105+46.47
 STRUCTURE NO. 1784

DESIGNED BY: H.N. 12-10-36
 CHECKED BY: R.W.D. 12-10-36

| BRIDGES OVER 20' SPAN | | | | | | | |
|-----------------------|-------|-----------|---------|------|-------|--------------|-----------|
| FED. ROAD DIST. NO. | STATE | POST-MILE | SECTION | DATE | SCALE | TOTAL SHEETS | SHEET NO. |
| 7 | IND. | 74 | 1936 | 8 | | 24 | 24 |

SECTION - E

BILL OF MATERIALS

| REINFORCING STEEL | | | | | | |
|-------------------|----------|------|--------|---------------------------------|--------------|--------|
| Mark | No. Pcs. | Size | Length | Location | Total Length | Weight |
| W ₁ | 2 | 3/4" | 28'-0" | Br. Seat Under Mas. Plates | 56'-0" | |
| N ₁ | 5 | " | 13'-3" | Horizontal Nose (Each end) | 66'-3" | |
| N ₂ | 5 | " | 12'-3" | " (5" - ") | 61'-3" | |
| W ₂ | 20 | " | 27'-3" | Wall (Each face) | 545'-0" | |
| W ₃ | 68 | " | 16'-6" | Vertical Wall (Each face) | 1122'-0" | |
| W ₄ | 24 | " | 6'-6" | Stub bars footing | 158'-0" | |
| W ₅ | 16 | " | 3'-9" | Grillage bars under mas. plates | 126'-0" | |
| W ₆ | 24 | " | 2'-3" | " " " | 54'-0" | |
| W ₇ | 24 | " | 2'-3" | " " " | 54'-0" | |
| Total 3/4" | | | | | 2495'-0" | 3792* |
| F ₁ | 34 | 1/2" | 7'-0" | Transverse Footing | 238'-0" | |
| F ₂ | 8 | " | 17'-9" | Longitudinal | 143'-0" | |
| Total 1/2" | | | | | 380'-0" | 327* |
| Total Steel | | | | | | 4119* |

* Wt. for 1930 Sids.

CONCRETE

| | |
|--|--------------------|
| Class "E" Footing | 250 cu yd |
| Class "E" Above Footing Including Coping | 690 " |
| Class "E" Above Footing (Extension) | 20.0 " |
| Total | 89.07 cu yd |

BILL OF SPLICE BARS

FOR PIERS NO. 2 TO NO. 9 INCL.
(To Splice with Bars Cut for Test)

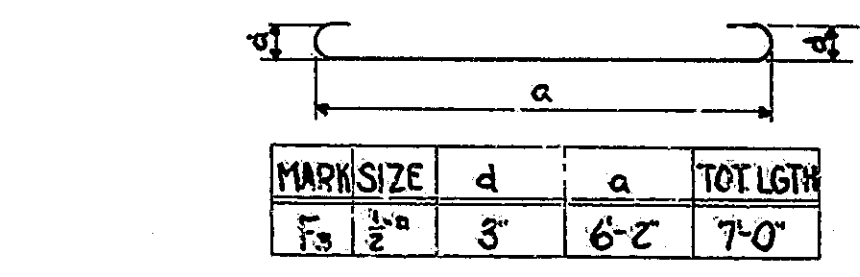
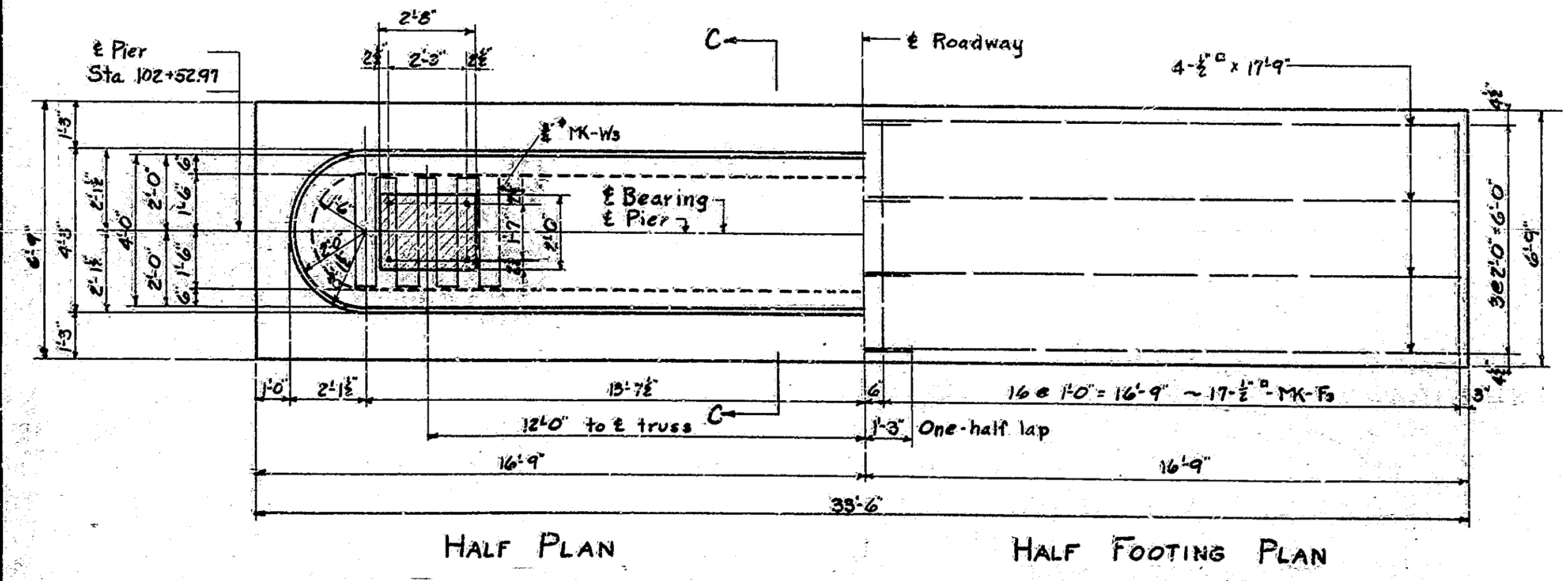
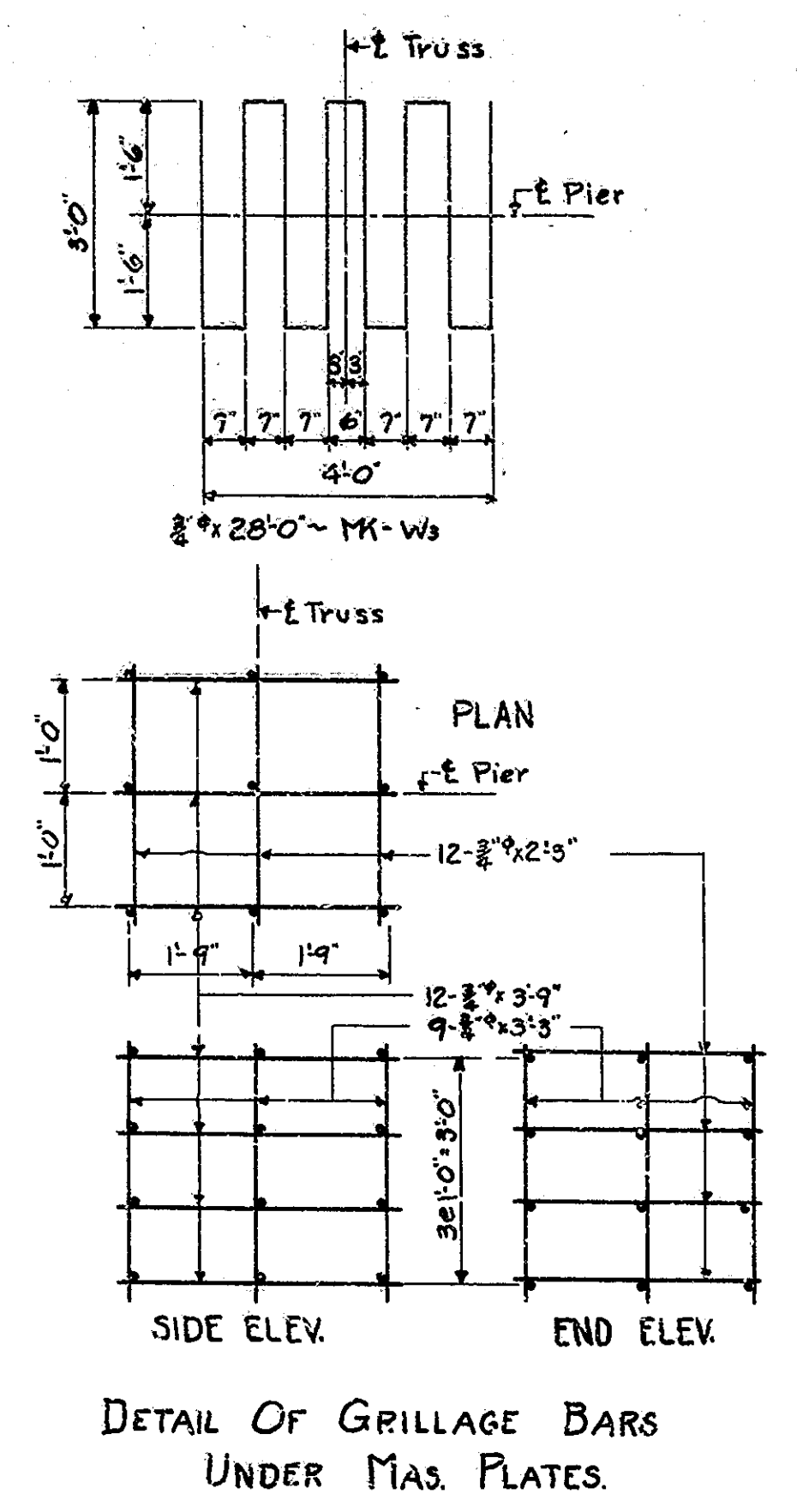
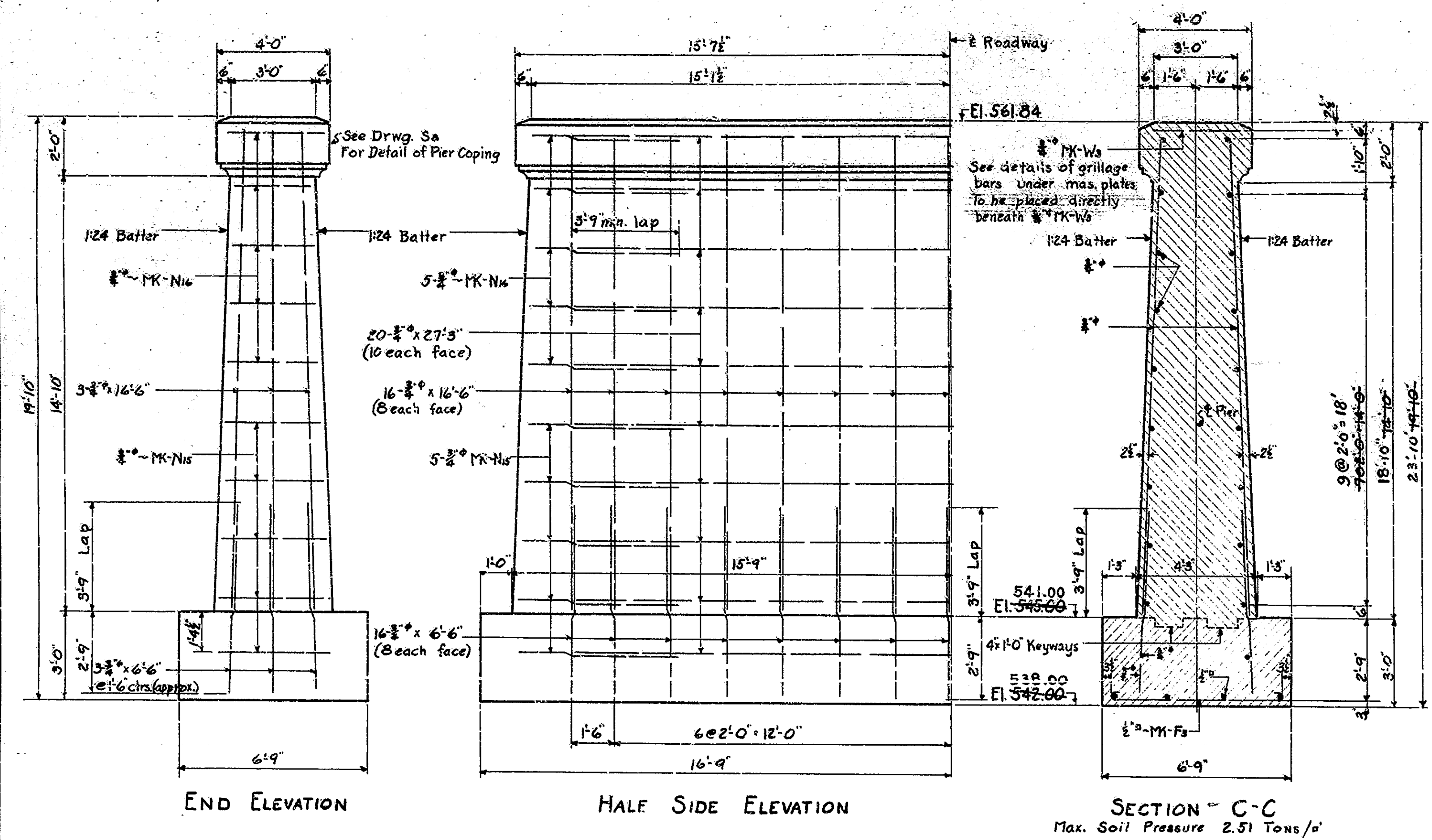
| No. Pcs. | Size | Length | Total Length | Weight |
|----------|------|--------|--------------|--------|
| 5 | 1" | 13'-0" | 65'-0" | 176* |
| 18 | 3/4" | 10'-6" | 189'-0" | 287* |
| 3 | 1/2" | 8'-0" | 24'-0" | 21* |

Total Weight of Splice Bars 484*

*Weights for 1930 Sids.

3'-3" Samples required for each 16000# of 3/4" and 1"

1'-3" Sample required for each 16000# of 1/2"



| MARK SIZE | R | | a | | b | | TOTAL LENGTH |
|---------------------|-----------|--------|------------|-----------|-----------|-------|--------------|
| | From | To | From | To | From | To | |
| N ₁ 3/4" | 1'-7" | 1'-10" | 4'-11 1/2" | 5'-9" | 4'-1 1/2" | 3'-9" | 13'-3" |
| N ₂ 1/2" | 1'-2 1/2" | 1'-6" | 3'-10 1/2" | 4'-2 1/2" | 4'-2 1/2" | 3'-9" | 12'-5" |

PIER NO. 2 DETAILS, BILL OF MATLS. & BILL OF SPLICE BARS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE: 3/8" = 1'-0" UNLESS NOTED

DECEMBER 24, 1935

RECOMMENDED FOR APPROVAL:

PROJECT - W.P.M.H. 74

STATION - 105+46.27

SECTION - E

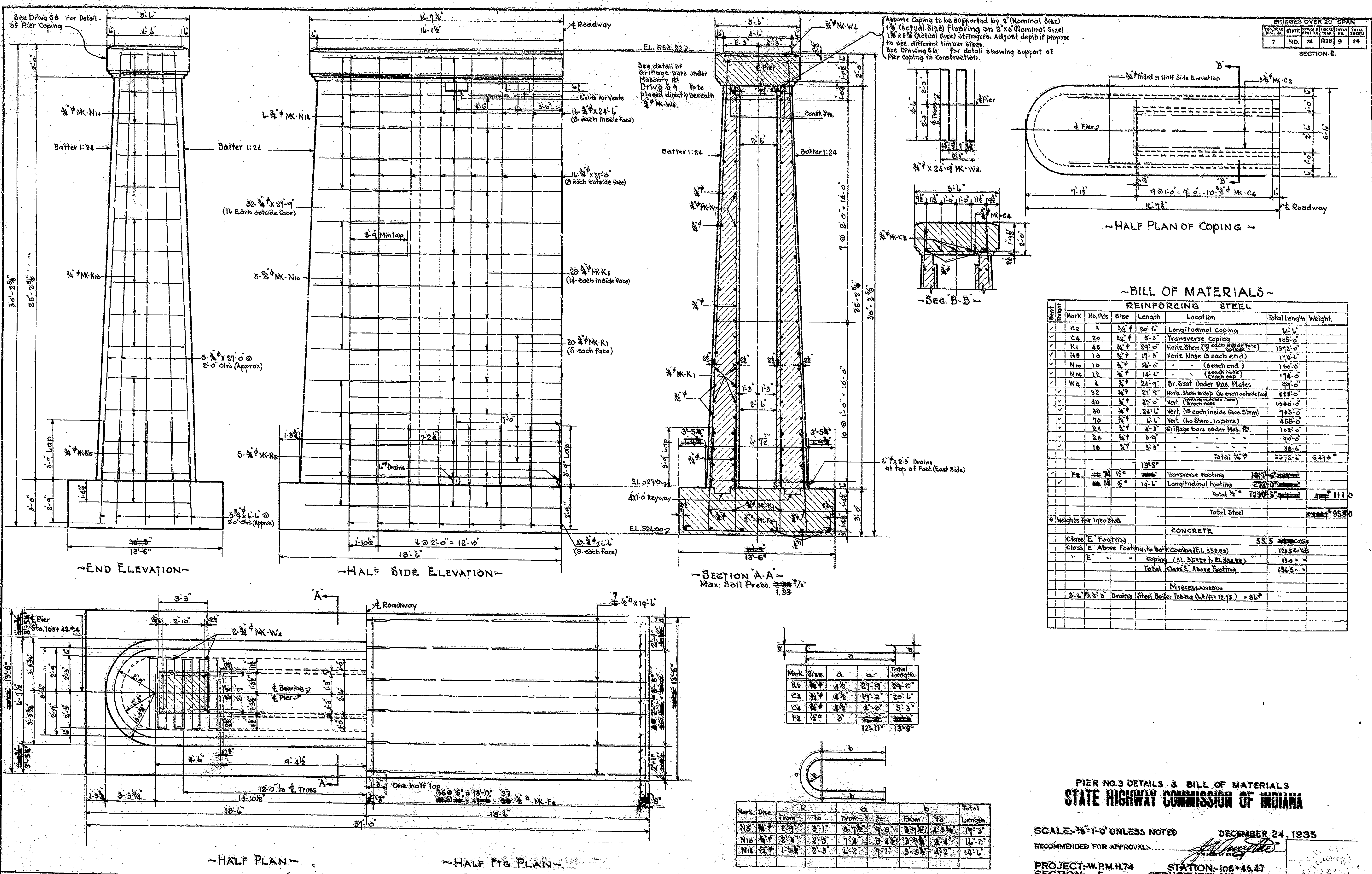
STRUCTURE NO. 1784

DRAWING - S 4 OF 13

BRIDGE CONTRACT NO. 1311

BRIDGE FILE 52-P-1784

| BRIDGES OVER 20' SPAN | | | | | |
|-----------------------|-------|-------------|----------|---------|--------------|
| FILE NO. | STATE | PROJECT NO. | PIER NO. | SECTION | TOTAL SHEETS |
| 7 | IND. | 74 | 1938 | B | 24 |



~BILL OF MATERIALS~

| REINFORCING STEEL | | | | | | |
|-------------------|---------|------|--------|--|--------------|--------|
| Mark | No. Pcs | Size | Length | Location | Total Length | Weight |
| C2 | 3 | 3/4" | 20'-L | Longitudinal Coping | 60'-L | |
| C4 | 20 | 3/4" | 5'-2" | Transverse Coping | 104'-0" | |
| K1 | 48 | 3/4" | 29'-0" | Horiz. Stem (18 each inside face outside face) | 1392'-0" | |
| N3 | 10 | 3/4" | 17'-0" | Horiz. Nose (5 each end) | 170'-0" | |
| N10 | 10 | 3/4" | 16'-0" | (5 each end) | 160'-0" | |
| N16 | 12 | 3/4" | 14'-L | (5 each nose) | 168'-0" | |
| W4 | 4 | 3/4" | 24'-9" | Dr. Seat Under Mas. Plates | 99'-0" | |
| N2 | 32 | 3/4" | 27'-9" | Horiz. Stem to Cap (10 each outside face) | 888'-0" | |
| N0 | 40 | 3/4" | 27'-0" | Vert. (5 each nose) | 1080'-0" | |
| N0 | 30 | 3/4" | 24'-L | Vert. (15 each inside face Stem) | 720'-0" | |
| N0 | 70 | 3/4" | 6'-L | Vert. (50 Stem to nose) | 420'-0" | |
| N2 | 24 | 3/4" | 4'-3" | Grillage bars under Mas. Pl. | 102'-0" | |
| N0 | 18 | 3/4" | 3'-0" | | 54'-0" | |
| | | | | Total 3/4" | 5372'-L | 8470* |
| F4 | 24 | 1/2" | 13'-9" | Transverse Footing | 332'-0" | |
| F4 | 14 | 3/4" | 14'-L | Longitudinal Footing | 196'-0" | |
| | | | | Total 1/2" | 528'-0" | 1110* |
| | | | | Total Steel | | 9580* |

| Weights for Into Stubs | | CONCRETE | |
|---|-------|---|-------|
| Class 'E' Footing | 55.5 | Class 'E' Footing | 55.5 |
| Class 'E' Above Footing to both Coping (El. 552.22) | 123.5 | Class 'E' Above Footing to both Coping (El. 552.22) | 123.5 |
| " " " " Coping (El. 552.22) | 13.0 | " " " " Coping (El. 552.22) | 13.0 |
| Total Class 'E' Above Footing | 192.0 | Total Class 'E' Above Footing | 192.0 |

| MISCELLANEOUS | | | |
|---------------|--------|-----------------------------------|-------|
| 3'-L x 2'-3" | Drains | Steel Boiler Tubing (A7/11-12.75) | = 86* |

PIER NO. 3 DETAILS & BILL OF MATERIALS
STATE HIGHWAY COMMISSION OF INDIANA

SCALE: 3/8"=1'-0" UNLESS NOTED
 DECEMBER 24, 1935

RECOMMENDED FOR APPROVAL: *[Signature]*

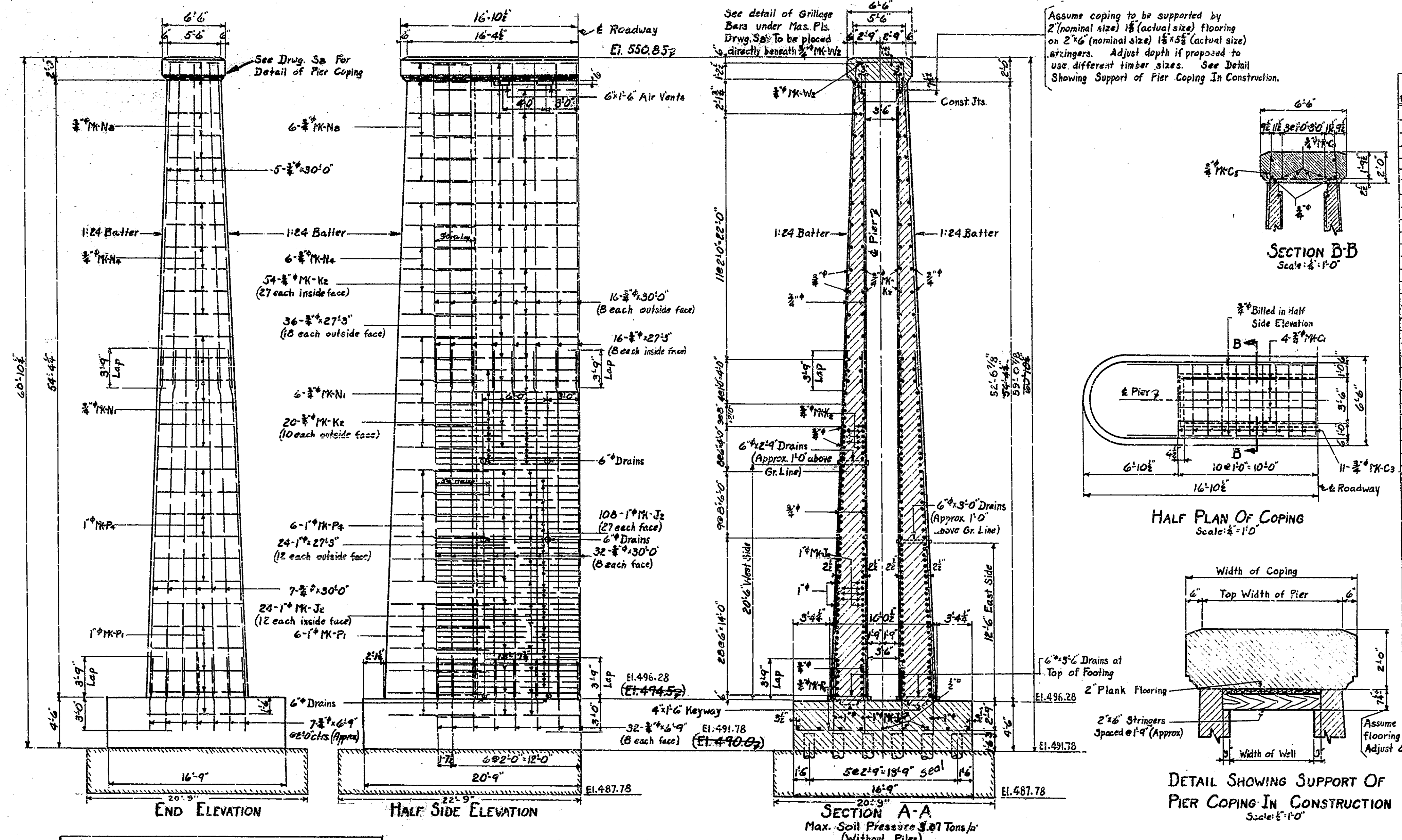
PROJECT: W.P.M.H.74 STATION: 106+45.47
 SECTION: E STRUCTURE NO. 1784

DRAWING: 35 OF 13 BRIDGE CONTRACT NO. 1311

DESIGNED BY: R. L. 22-35
 DRAWN BY: L. K. 11-25-35
 CHECKED BY: E. D. 11-25-35

| Mark | Size | a | b | Total Length |
|------|------|--------|--------|--------------|
| K1 | 3/4" | 4 1/2" | 27'-9" | 29'-0" |
| C2 | 3/4" | 4 1/2" | 19'-2" | 20'-L |
| C4 | 3/4" | 4 1/2" | 4'-0" | 5'-3" |
| F2 | 1/2" | 3" | | |

| Mark | Size | R | a | b | Total Length |
|------|------|------------|-----------|-------|--------------|
| N5 | 3/4" | 0'-9" | 0'-7 1/2" | 9'-8" | 3'-9 1/2" |
| N10 | 3/4" | 2'-4" | 2'-0" | 7'-4" | 0'-4 1/2" |
| N16 | 3/4" | 1'-11 1/2" | 2'-3" | 4'-2" | 3'-8 1/2" |



Assume coping to be supported by 2" (nominal size) 1 1/2" (actual size) stringers. Adjust depth if proposed to use different timber sizes. See Detail Showing Support of Pier Coping In Construction.

BILL OF MATERIALS
 REINFORCING STEEL

| Mark | No. | Size | Length | Location | Total Length | Weight |
|------|-----|--------|--------|--------------------------------------|------------------|----------------|
| J2 | 182 | 1" | 29'-0" | Horiz. Stem (31 inside x 92 outside) | 3228'-0" | |
| P | 12 | 2 1/2" | 24'-9" | Nose (6 each end) | 297'-0" | |
| P2 | 12 | 2 1/2" | 28'-6" | " (6 " " " | 282'-0" | |
| P2 | 24 | 2 1/2" | 27'-3" | Stem (12 each outside face) | 654'-0" | |
| | | | | Total 1" | 5061'-0" | 13,665# |
| C1 | 4 | 3/4" | 11'-6" | Longit. Coping | 86'-0" | |
| C2 | 21 | " | 6'-3" | Transv. " | 131'-3" | |
| K2 | 74 | " | 28'-6" | Horiz. Stem (54 inside x 20 outside) | 2109'-0" | |
| N1 | 12 | " | 19'-6" | Nose (6 each end) | 234'-0" | |
| N2 | 12 | " | 17'-9" | " (6 " " " | 213'-0" | |
| N2 | 12 | " | 16'-3" | " (6 " " " | 195'-0" | |
| R | 55 | " | 17'-6" | Transv. Footing | 1452'-6" | |
| W2 | 4 | " | 29'-6" | B'r. Seat under Masonry Br. | 116'-0" | |
| | | | | Vert. (24 Noses x 90 Stem) | 5420'-0" | |
| | | | | Vert. (18 " outside face " " " | 1798'-6" | |
| | | | | Stub bars footing | 499'-6" | |
| | | | | Grillage bars under Mas. Br. | 114'-0" | |
| | | | | 90'-0" | | |
| | | | | 58'-6" | | |
| | | | | Total 3/4" | 10593'-3" | 15,984# |
| | | | | Total Steel | # 29,991# | |

* Wgts. for 1930 Stds.

CONCRETE

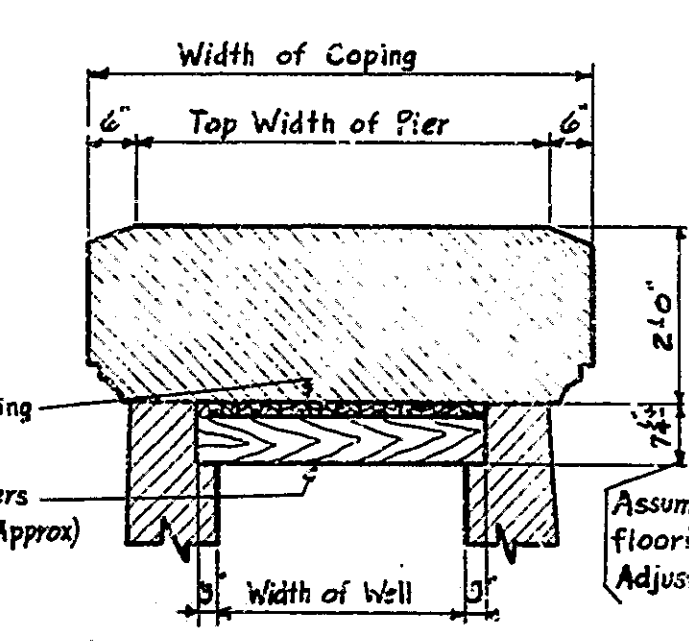
Class "E" Footing 116.0 cu. yds.
 " " " Above Footing to Bolt Coping (El. 548.85 to El. 550.85) 384.2 370.5
 " " " In Coping (El. 548.85 to El. 550.85) 15.0
 Total Class "E" Above Footing 406.2 385.5 cu. yds.

MISCELLANEOUS

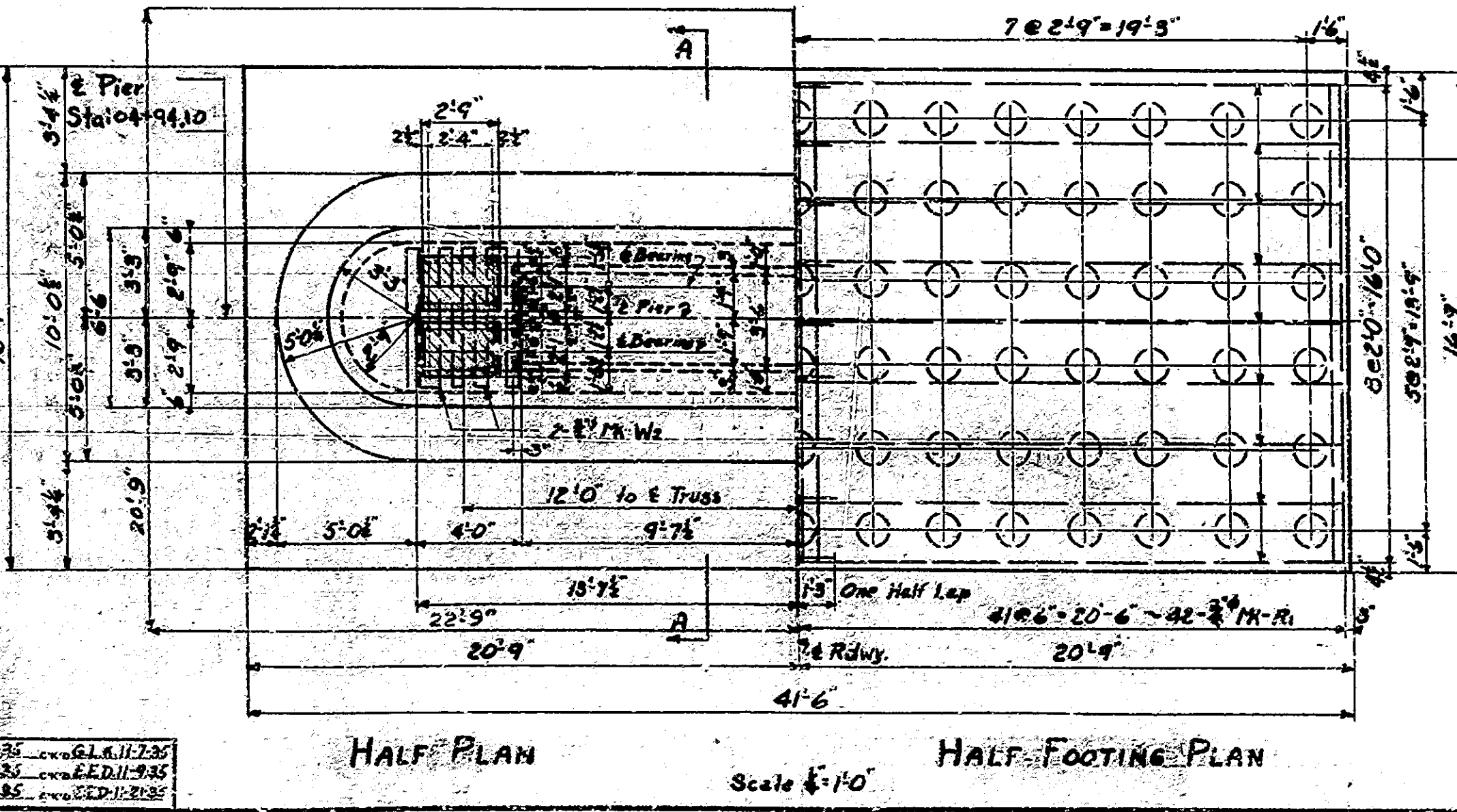
4-6" x 3'-0" Drains Steel Boiler Tubing (with 12-7/8") 150# 373#
 4-6" x 2'-9" " (with 12-7/8") 140# 319#
 8-6" x 2'-6" " (with 12-7/8") 267# 597#
 Total 657# 1800 Lin Ft.

Foundation Seal 149.6 Cu. Yds.

HALF PLAN OF COPING
 Scale: 1/4"=1'-0"



DETAIL SHOWING SUPPORT OF
 PIER COPING IN CONSTRUCTION
 Scale: 1/4"=1'-0"

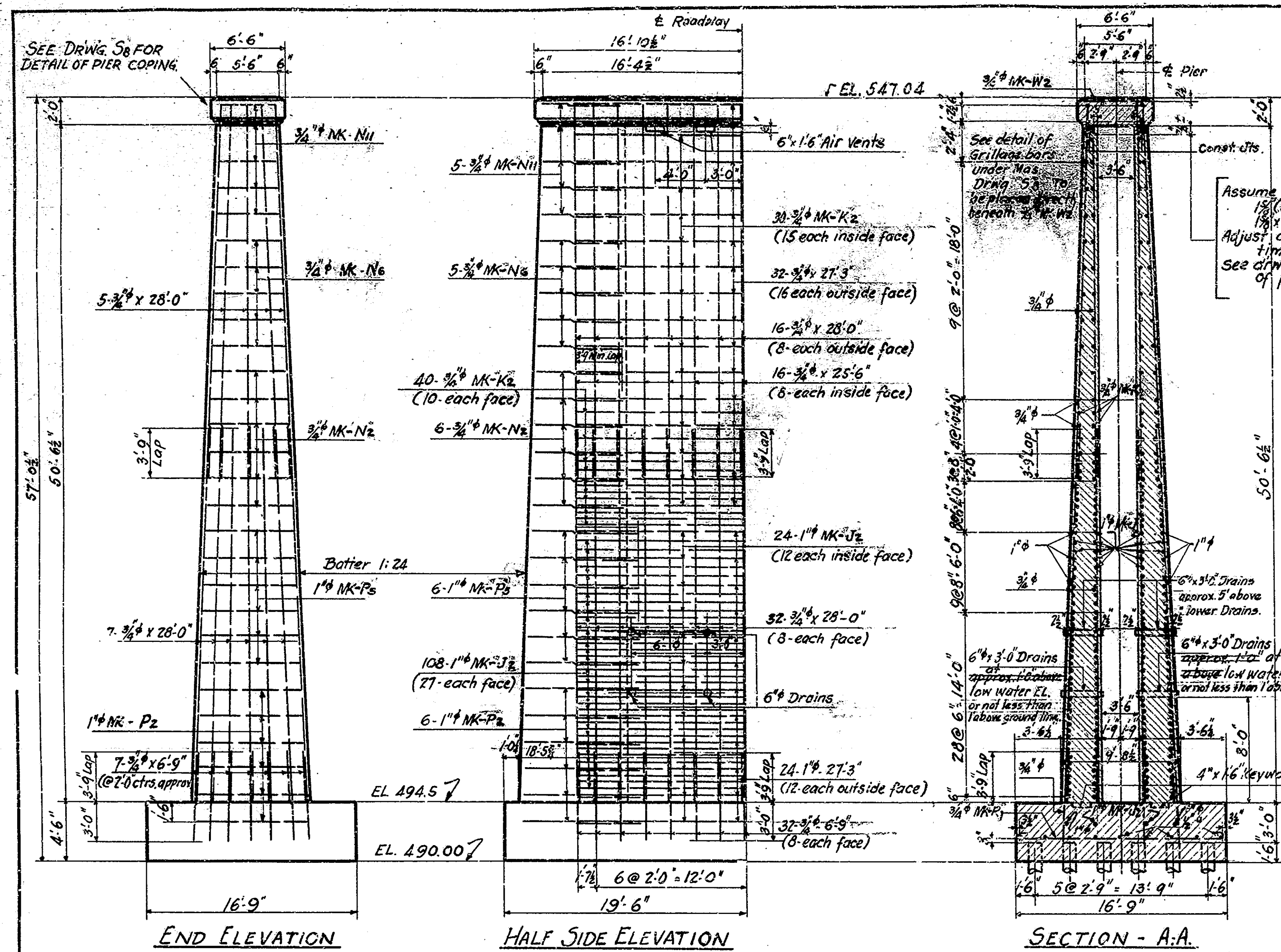


NOTE:
 90 Piles Total in Pier.
 Drive All Piles to 23 Tons.

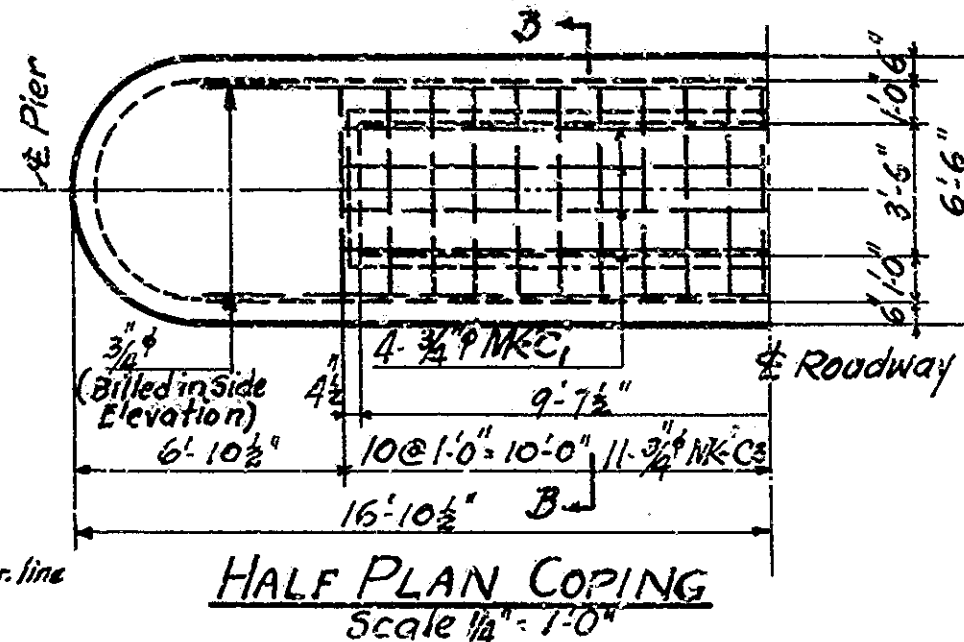
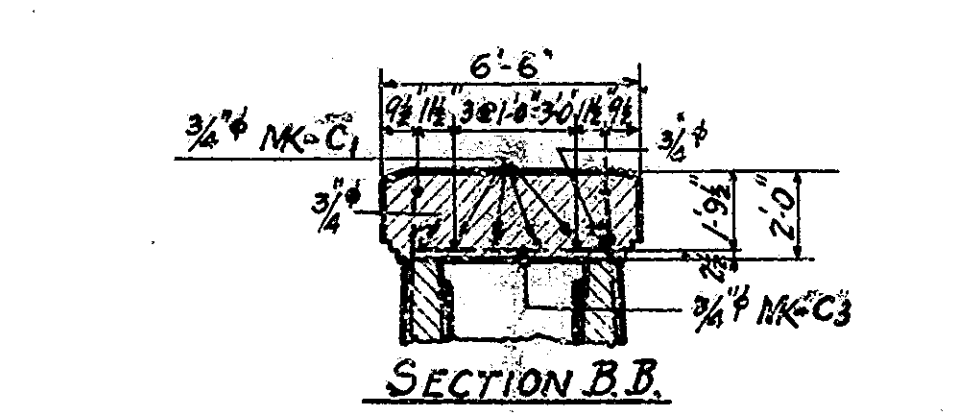
| Mark | Size | A | a | Total Length |
|------|------|----|--------|--------------|
| J2 | 1" | 6 | 27'-5" | 29'-0" |
| K2 | 1/2" | 48 | 27'-3" | 28'-6" |
| N1 | 3/4" | 16 | 16'-2" | 17'-6" |
| C1 | 3/4" | 48 | 20'-2" | 21'-6" |
| C2 | 3/4" | 48 | 5'-0" | 6'-3" |

| Mark | Size | From | To | From | To | Total Length |
|------|------|------------|-----------|-----------|------------|--------------|
| P1 | 1" | 4'-4 1/2" | 4'-8 1/2" | 10'-9" | 14'-9 1/2" | 4'-11 1/2" |
| P2 | 1" | 3'-10 1/2" | 4'-3 1/2" | 12'-2" | 13'-6" | 5'-0" |
| N1 | 3/4" | 3'-4 1/2" | 3'-7 1/2" | 10'-7" | 11'-11" | 5'-9 1/2" |
| N2 | 3/4" | 2'-10 1/2" | 3'-3 1/2" | 9'-0 1/2" | 10'-4" | 4'-5 1/2" |
| N3 | 3/4" | 2'-5 1/2" | 2'-8 1/2" | 7'-9" | 8'-9" | 4'-3" |

PIER NO. 4 DETAILS & BILL OF MATERIALS
 STATE HIGHWAY COMMISSION OF INDIANA
 SCALE: 3/16"=1'-0" UNLESS NOTED
 DECEMBER 24, 1938
 RECOMMENDED FOR APPROVAL: [Signature]
 PROJECT: W.P.M.H. 74 STATION: 106+46.47
 SECTION: E STRUCTURE NO. 1764
 DRAWING: S6 OF 13 BRIDGE CONTRACT NO. 1311
 BRIDGE FILE: 32-P-1784
 REV. 6-37 For Construction Changes



Assume Coping to be supported by 2" (nominal size) 15" (actual size) flooring on 2x6" (nominal size) 18x5" (actual size) stringers. Adjust depth if proposed to use different timber sizes. See drawing S6 for detail showing support of pier coping in construction.



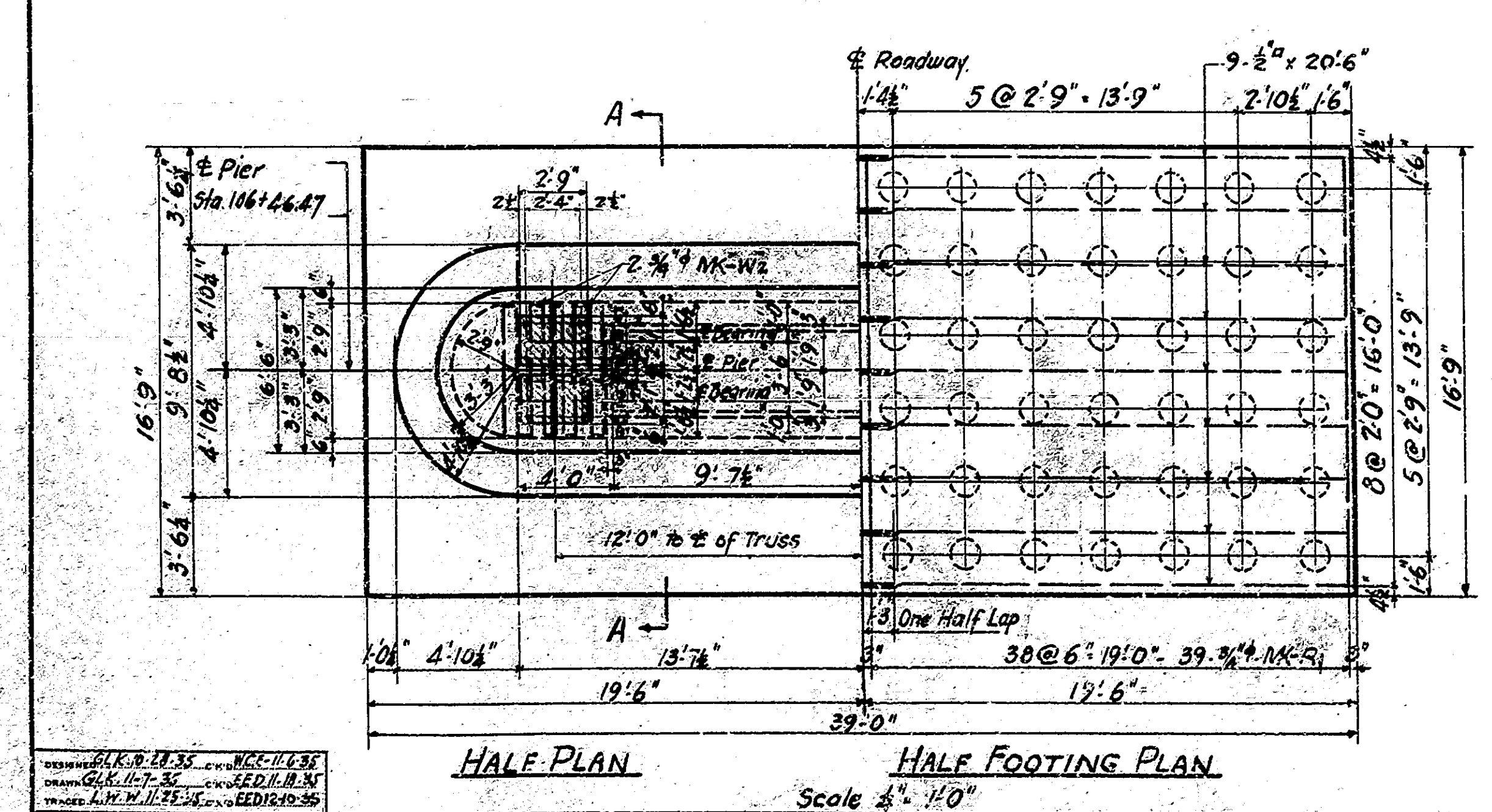
BILL OF MATERIALS

| REINFORCING STEEL | | | | | Total Length | Weight |
|-------------------|---------|------|--------|-------------------------------------|--------------|---------|
| Mark | No. Pcs | Size | Length | Location | | |
| U2 | 132 | 1" | 29'-0" | Horiz. Stem (37 to 40) inside face | 3828'-0" | |
| P2 | 12 | 1" | 24'-3" | Horiz. Nose (6 each end) | 291'-0" | |
| P5 | 12 | 1" | 23'-0" | " | 276'-0" | |
| | 24 | 1" | 27'-3" | Horiz. Stem (12 each outside face) | 654'-0" | |
| | | | | Total 1" | 5049'-0" | 13,632# |
| C1 | 4 | 3/4" | 21'-6" | Longit. Coping | 86'-0" | |
| C3 | 21 | 3/4" | 6'-3" | Transverse Coping | 132'-3" | |
| K2 | 70 | 3/4" | 20'-6" | Horiz. Stem (50) inside face | 1443'-0" | |
| N2 | 12 | 3/4" | 18'-9" | Horiz. Nose (6 each end) | 225'-0" | |
| N6 | 10 | 3/4" | 17'-3" | " (5 " " ") | 172'-6" | |
| N11 | 10 | 3/4" | 16'-0" | " (5 " " ") | 160'-0" | |
| R1 | 70 | 3/4" | 17'-6" | Transverse Footing | 1232'-0" | |
| B2 | 4 | 3/4" | 29'-6" | Or seat under Mas. Pile | 118'-0" | |
| | | | | Vertical (10) from top of footing | 3192'-0" | |
| | | | | Horiz. Stem (12) on each side face | 872'-0" | |
| | | | | Vert. Stem (15) inside face | 765'-0" | |
| | | | | Vert. (40) Stem - 4 Nose | 499'-6" | |
| | | | | Grillage bars under Mas. Pile | 114'-0" | |
| | | | | " | 90'-0" | |
| | | | | " | 58'-6" | |
| | | | | Total 3/4" | 9843'-9" | 14,963# |
| | | | | 18 1/2" 20'-6" Longitudinal Footing | 369'-0" | 317# |
| | | | | Total Steel | | 20,912# |

*Weights for 1930 Stats.

| CONCRETE | | |
|--|--|---------------|
| Class E Footing | | 109.0 cu. yds |
| " F Above Footing to Bolt Coping (EL 54.504) | | 349.0 cu. yds |
| " " " " " " (EL 54.504 to EL 54.700) | | 15.0 " " |
| Total Class E Allow. Pile | | 573.0 " " |

| MISCELLANEOUS | | |
|--|--|---------------|
| 16 5/8" 6" x 3" Drains - Steel Boiler Tubing (44 1/2" = 17 1/2") | | 612 |
| 84 Piles @ 20'-0" (Approx) = | | 1680 Lin. Ft. |



SECTION - A-A
 Max. Soil Press. - 2.59 Tons/sq ft
 (Without piling)

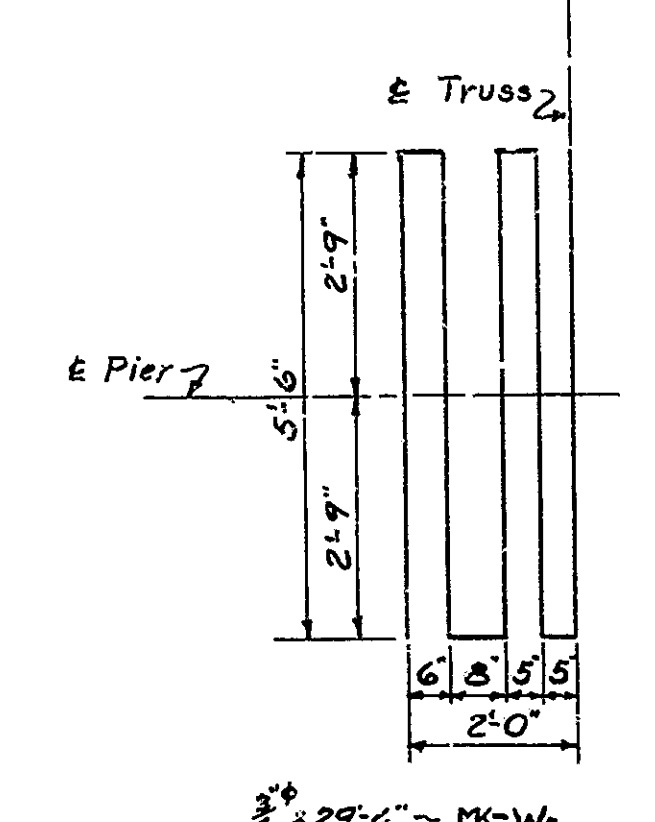
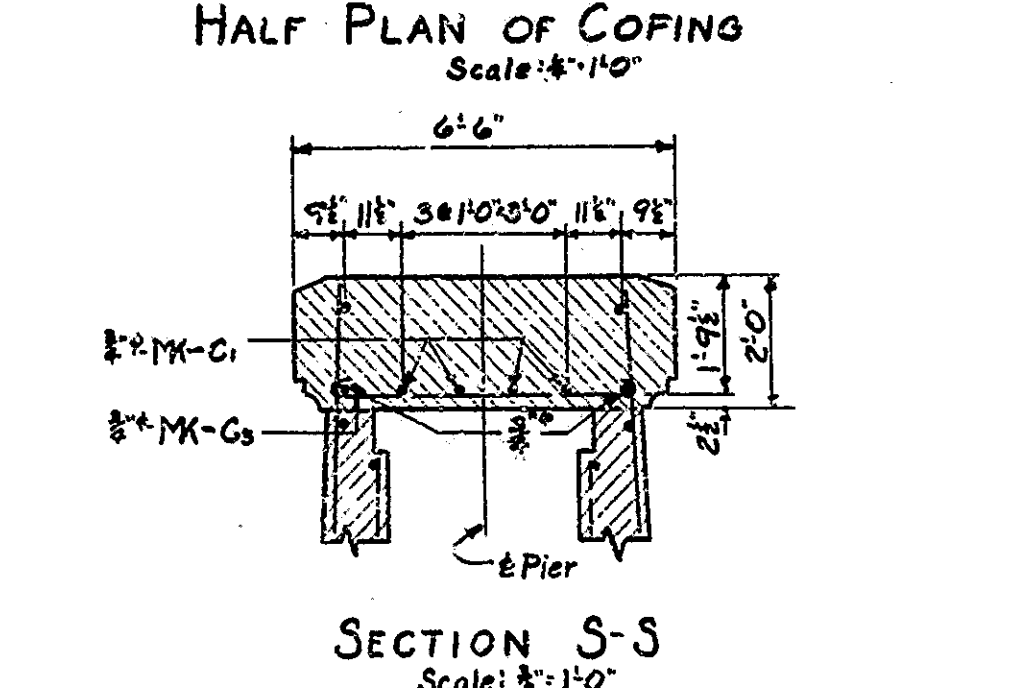
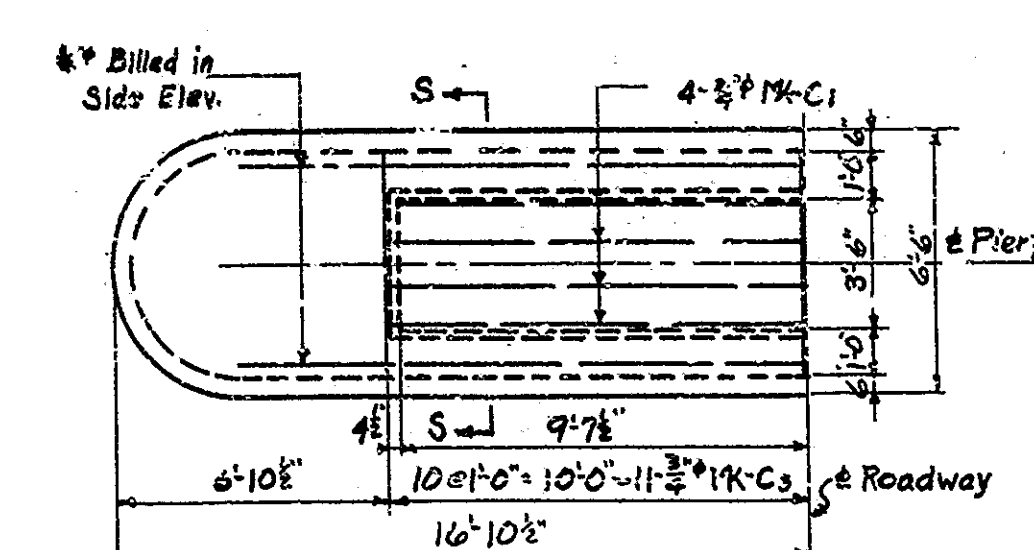
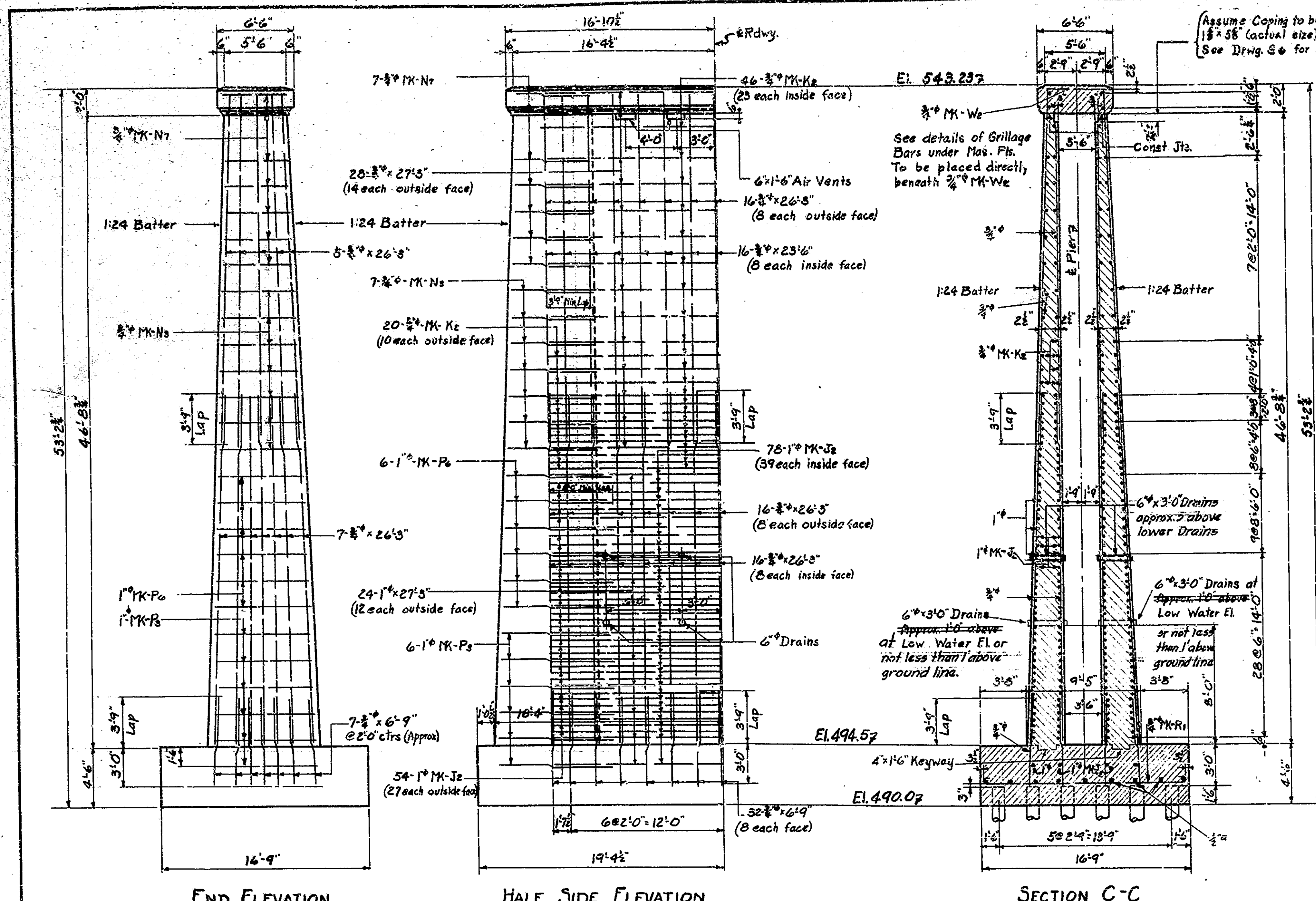
| Mark | Size | d | a | Tot. Lgh. |
|------|------|--------|--------|-----------|
| U2 | 1" | 6" | 27'-3" | 29'-0" |
| K2 | 3/4" | 4 1/2" | 27'-3" | 28'-6" |
| C1 | 3/4" | 4 1/2" | 20'-2" | 21'-6" |
| C3 | 3/4" | 4 1/2" | 5'-0" | 6'-3" |
| R1 | 3/4" | 4 1/2" | 16'-2" | 17'-6" |

Note: 84 Piles Total in Pier
 Drive all Piles to 20 tons.

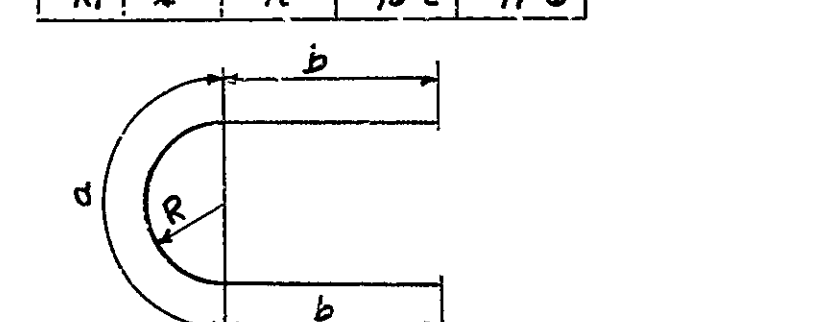
| Mark | Size | R | | a | | b | | Total Length |
|------|------|-----------|-----------|--------|------------|-----------|-----------|--------------|
| | | From | To | From | To | From | To | |
| P2 | 1" | 4'-2 1/2" | 4'-6" | 13'-3" | 14'-3" | 5'-0" | 5'-6" | 24'-3" |
| P5 | 1" | 3'-8 1/2" | 4'-1 1/2" | 11'-6" | 12'-1 1/2" | 5'-0" | 5'-6" | 23'-0" |
| N2 | 3/4" | 3'-2 1/2" | 3'-7 1/2" | 10'-1" | 11'-4 1/2" | 3'-8 1/2" | 4'-1" | 18'-9" |
| N6 | 3/4" | 2'-2 1/2" | 3'-7 1/2" | 8'-9" | 9'-10" | 3'-8 1/2" | 4'-1" | 17'-3" |
| N11 | 3/4" | 2'-2 1/2" | 2'-8 1/2" | 7'-9" | 8'-6" | 3'-9" | 4'-1 1/2" | 16'-0" |

BILL OF MATERIALS

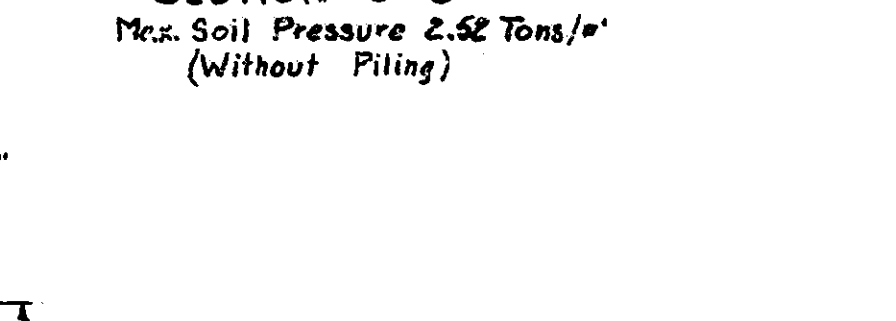
| REINFORCING STEEL | | | | | |
|---|----------|------|--------|------------------------------------|----------------------|
| Mark | No. Pcs. | Size | Length | Location | Total Length Weights |
| J ₂ | 132 | 1" | 29'-0" | Horiz. Wall (37.889 m. each face) | 3826'-0" |
| P ₂ | 12 | 1" | 23'-9" | Nose (6 each end) | 283'-0" |
| P ₂ | 12 | 1" | 22'-6" | " " | 270'-0" |
| P ₂ | 24 | 1" | 27'-3" | Wall (12 each outside face) | 654'-0" |
| Total 1" | | | | | 5037'-0" |
| C ₁ | 4 | 3/8" | 21'-6" | Longitudinal Copping | 86'-0" |
| C ₂ | 2 | 1/2" | 6'-3" | Transverse | 131'-3" |
| K ₂ | 66 | 1/2" | 28'-6" | Horiz. Wall (11.45 m. each face) | 1881'-0" |
| N ₂ | 14 | 1/2" | 18'-6" | Nose (7 each end) | 259'-0" |
| N ₂ | 14 | 1/2" | 16'-6" | " " | 231'-0" |
| R ₂ | 77 | 3/8" | 17'-6" | Transverse Footing | 1347'-6" |
| W ₂ | 4 | 1/2" | 29'-6" | On Seat Under Mas. Pls. | 118'-0" |
| W ₂ | 28 | 1/2" | 27'-3" | Horiz. Wall (14 each outside face) | 763'-0" |
| W ₂ | 114 | 3/8" | 26'-3" | Vert. 90 Walls - 24 Noses. | 2992'-6" |
| W ₂ | 30 | 3/8" | 23'-6" | Walls (15 each inside face) | 708'-0" |
| W ₂ | 74 | 3/8" | 6'-9" | Stub bars footing | 647'-6" |
| W ₂ | 24 | 3/8" | 4'-9" | Grillage bars Under Mas. Pls. | 114'-0" |
| W ₂ | 24 | 3/8" | 3'-9" | " " | 90'-0" |
| W ₂ | 18 | 3/8" | 3'-3" | " " | 59'-6" |
| Total 3/8" | | | | | 9276'-6" |
| Total Steel | | | | | 14100" |
| * Weight for 1930 Stats. | | | | | |
| CONCRETE | | | | | |
| Class "E" Footing | | | | | 108.0 cu. yds. |
| " " Above Footing to Both Copping (El. 541.23) | | | | | 312.5 " |
| " " In Copping (El. 541.23 to El. 543.23) | | | | | 15.0 " |
| Total Class "E" Above Footing | | | | | 327.5 " |
| MISCELLANEOUS | | | | | |
| 16 @ 6" x 3" Drains Steel Boiler Tubing (wt./ft. = 12.75) = 204 @ 612 | | | | | |
| 78 Piles @ 20' (approx) = 1560 Lin. ft. | | | | | |



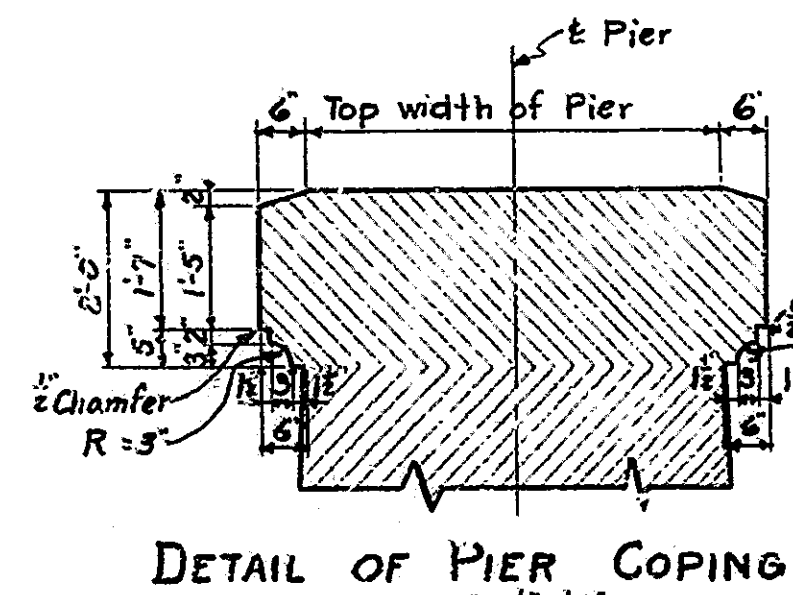
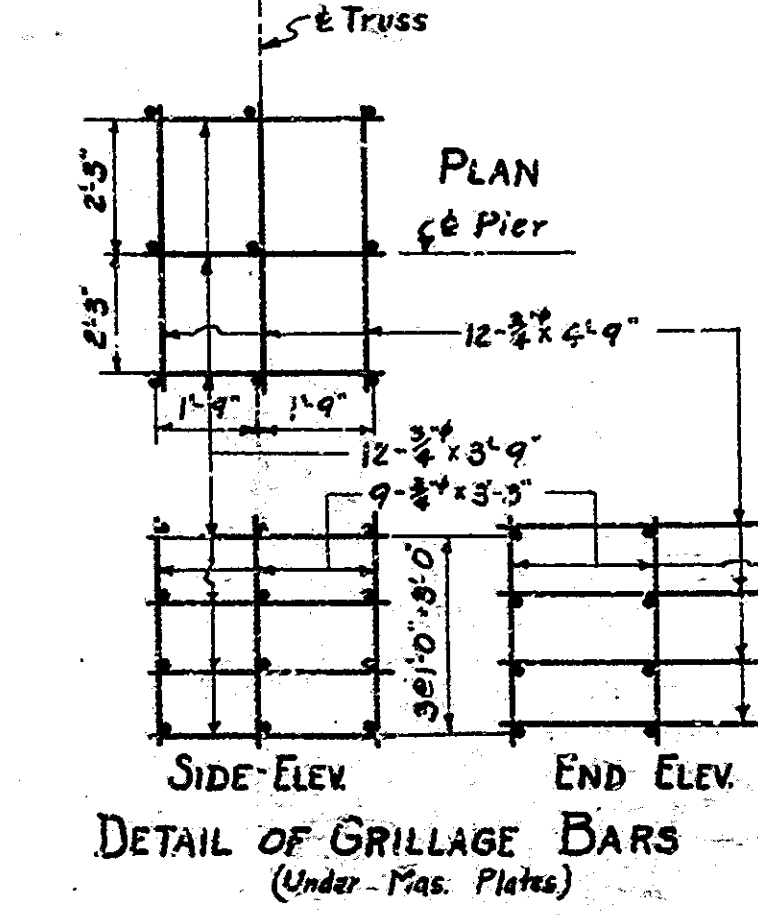
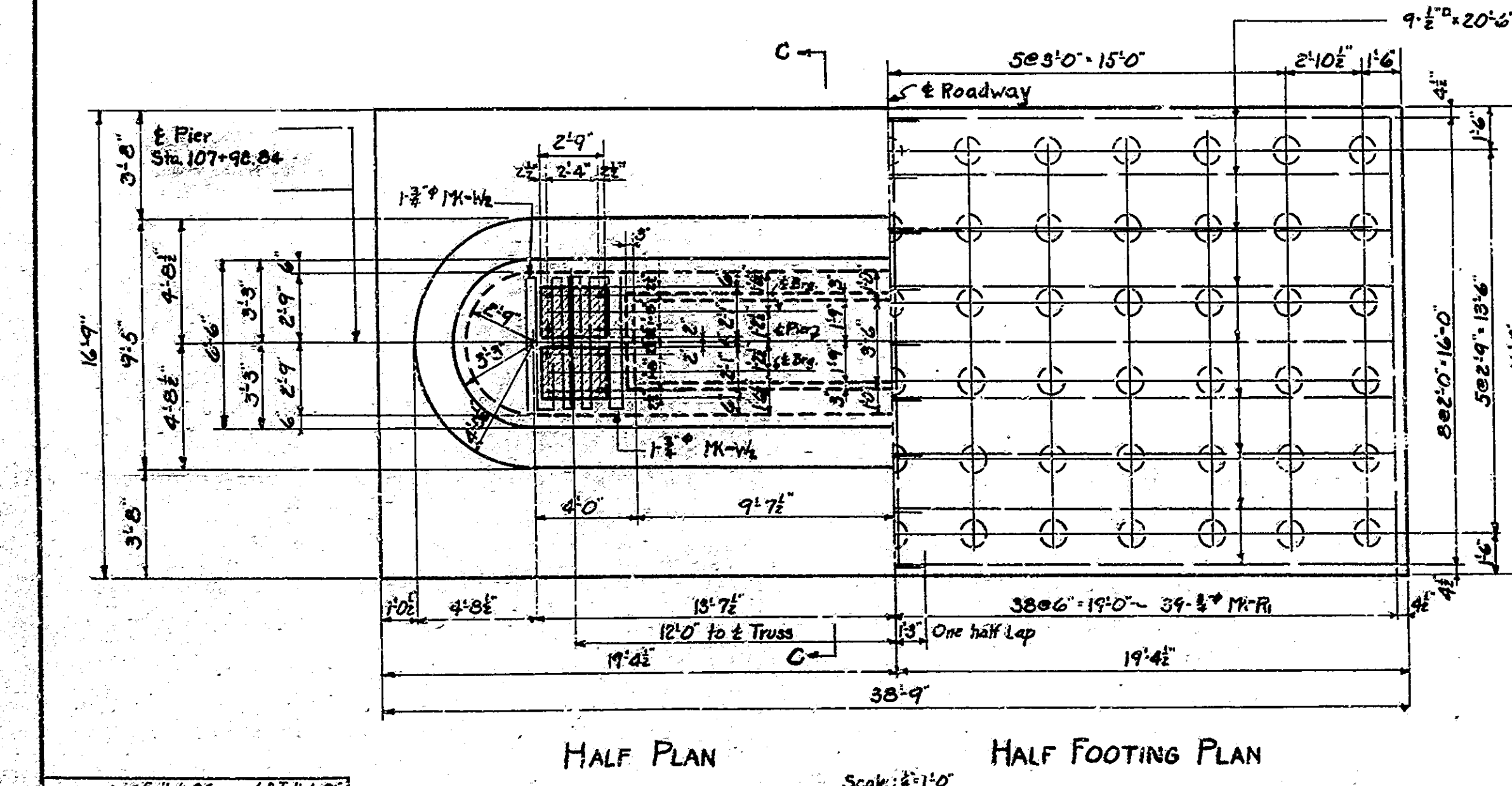
| Mark | Size | d | a | Tot Length |
|----------------|------|--------|--------|------------|
| J ₂ | 1" | 6" | 27'-3" | 29'-0" |
| K ₂ | 3/8" | 4 1/2" | 27'-3" | 28'-6" |
| C ₁ | 3/8" | 4 1/2" | 20'-2" | 21'-6" |
| C ₂ | 3/8" | 4 1/2" | 5'-0" | 6'-3" |
| R ₂ | 3/8" | 4 1/2" | 16'-2" | 17'-6" |



| MARK | SIZE | From | To | From | To | From | To | Total Length |
|----------------|------|--------|--------|------------|-------------|-----------|-------|--------------|
| P ₂ | 1" | 4'-0" | 4'-4" | 12'-8 1/2" | 13'-9" | 5'-6" | 5'-0" | 23'-9" |
| P ₂ | 1" | 3'-6" | 3'-11" | 11'-1 1/2" | 12'-5" | 5'-8 1/2" | 5'-0" | 22'-6" |
| N ₂ | 3/8" | 2'-11" | 3'-3" | 9'-3 1/2" | 10'-10 1/2" | 4'-7" | 3'-9" | 18'-6" |
| N ₂ | 3/8" | 2'-5" | 2'-10" | 7'-8 1/2" | 9'-0" | 4'-4 1/2" | 3'-8" | 16'-6" |



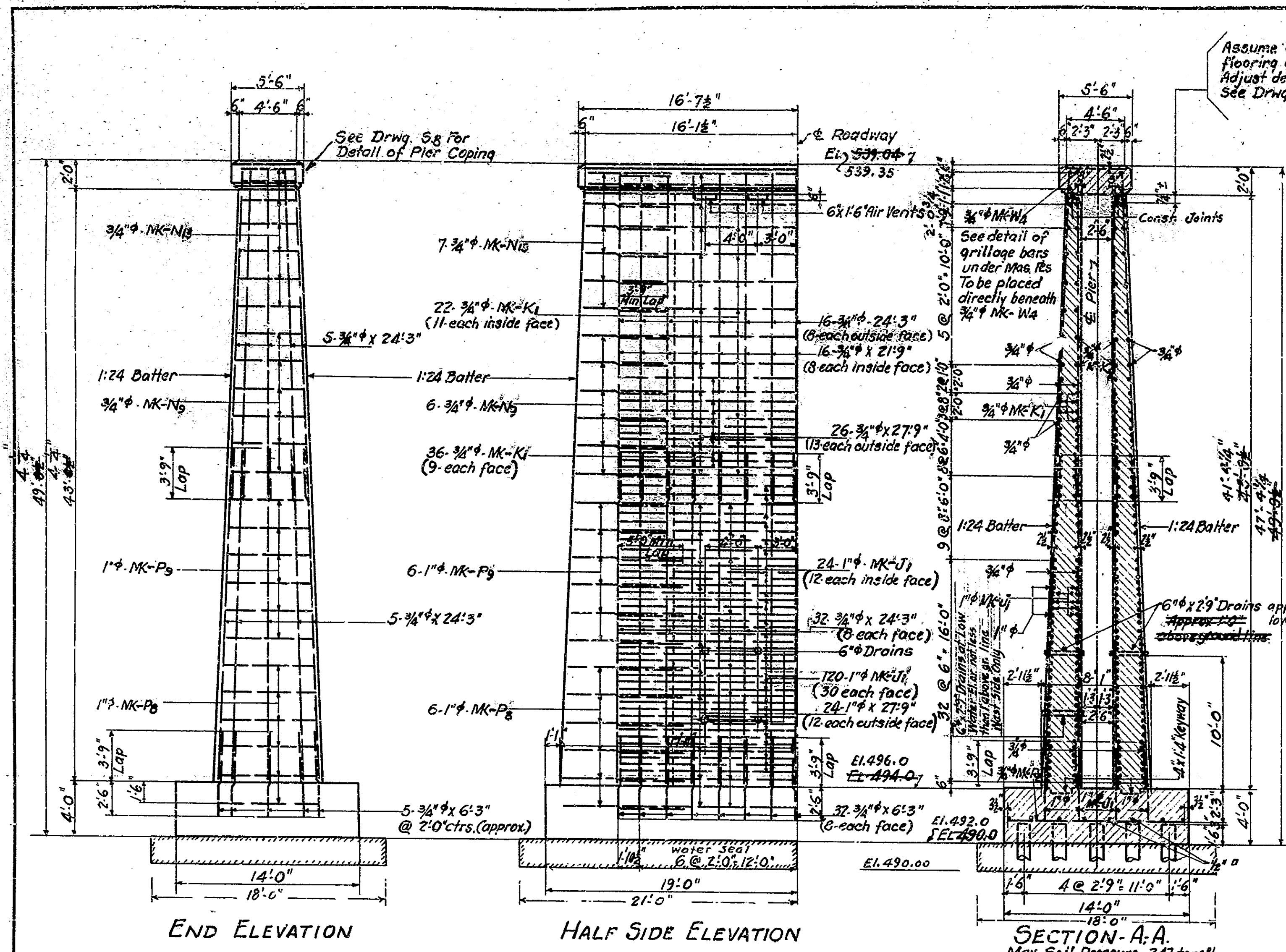
NOTE: 78 Piles Total in Pier
 Drive all piles to 21 tons.



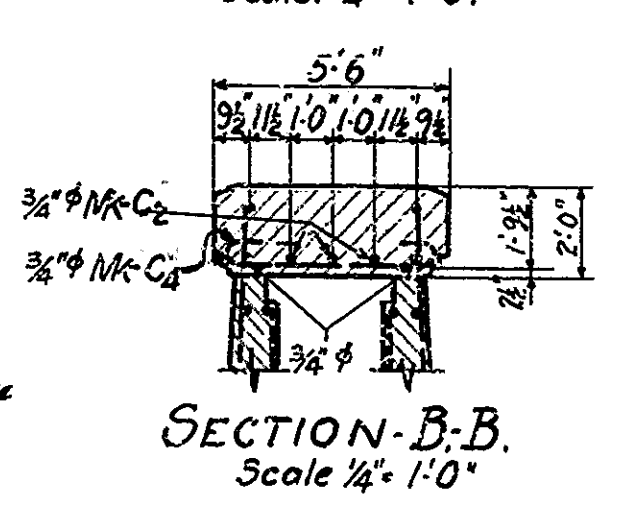
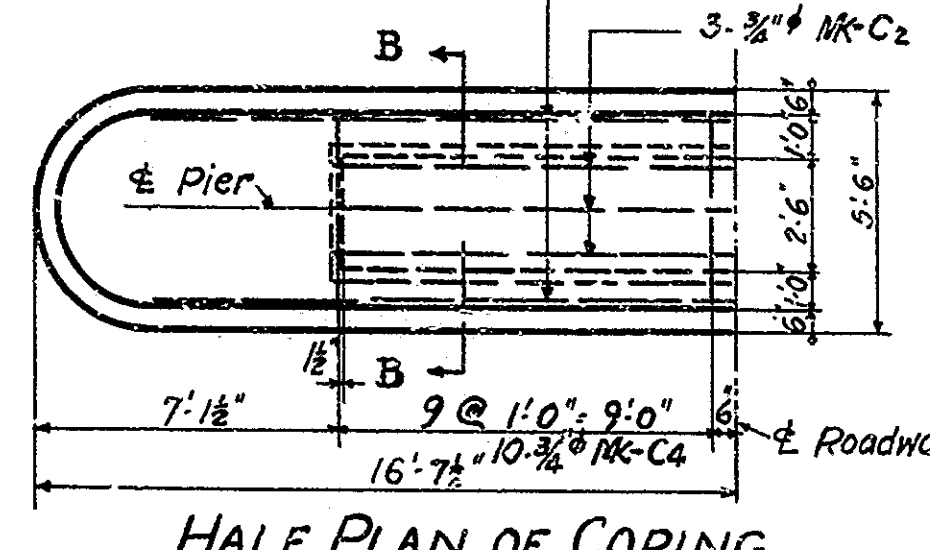
PIER NO. 6 DETAILS & BILL OF MATERIALS
 STATE HIGHWAY COMMISSION OF INDIANA

SCALE: 3/16" = 1'-0" UNLESS NOTED
 DECEMBER 24, 1935
 RECOMMENDED FOR APPROVAL: [Signature]
 PROJECT: W.P.M.H. 74 STATION: 106+46.47
 SECTION: E STRUCTURE NO. 1784
 DRAWING: S8 OF 13 BRIDGE CONTRACT NO. 1311
 BRIDGE FILE 32-P-1784

BRIDGES OVER 20' SPAN
 IND. 74 1935 13 24



Assume coping to be supported by 2" (Nominal Size) 1 1/2" (Actual Size) flooring on 2x6" (Nominal Size) 1 3/4" x 5 3/4" (Actual Size) stringers. Adjust depth if proposed to use different timber sizes. See Drwg. S6 for Detail Showing Support of Pier Coping in Construction.



REINFORCING STEEL

| Mark | No. Pcs | Size | Length | Location | Total Length | Weight |
|-------------|---------|------|--------|-------------------------------|--------------|-----------|
| U1 | 148 | 1" | 29'-6" | Vert. Wall | 4248'-0" | |
| P8 | 12 | " | 21'-9" | " Nose (6 each end) | 261'-0" | |
| P9 | 12 | " | 20'-6" | " " (6 " " " " " " " | 246'-0" | |
| R2 | 24 | " | 27'-9" | " Well (12 each outside face) | 666'-0" | |
| Total 1" | | | | | 5421'-0" | 14637# |
| C2 | 3 | 3/4" | 20'-6" | Longit. Coping | 61'-6" | |
| C4 | 20 | " | 5'-3" | Transit. " | 105'-0" | |
| K1 | 38 | " | 29'-0" | Horiz. Wall | 1682'-0" | |
| N9 | 12 | " | 16'-3" | " Nose (6 each end) | 195'-0" | |
| N13 | 14 | " | 14'-9" | " " " " " | 206'-6" | |
| R2 | 76 | " | 14'-9" | Transit. Footing | 1121'-0" | |
| WA | 4 | " | 24'-9" | Dr. seat under Mas. Plates | 99'-0" | |
| 26 | " | " | 27'-9" | Horiz. Wall | 721'-6" | |
| 110 | " | " | 24'-3" | Vert. Wall | 2667'-6" | |
| 30 | " | " | 21'-9" | " Nose (12 each end) | 652'-6" | |
| 70 | " | " | 6'-3" | Vert. Stud Bars, Footing | 437'-6" | |
| 24 | " | " | 4'-3" | Grillage bars under Mas. Pls. | 102'-0" | |
| 24 | " | " | 3'-9" | " " " " | 90'-0" | |
| 18 | " | " | 3'-3" | " " " " | 58'-6" | |
| Total 3/4" | | | | | 8199'-6" | 12463# |
| 16 | 1/2" | " | 20'-0" | Longit. Footing | 320'-0" | 275# |
| Total Steel | | | | | | * 27,375# |

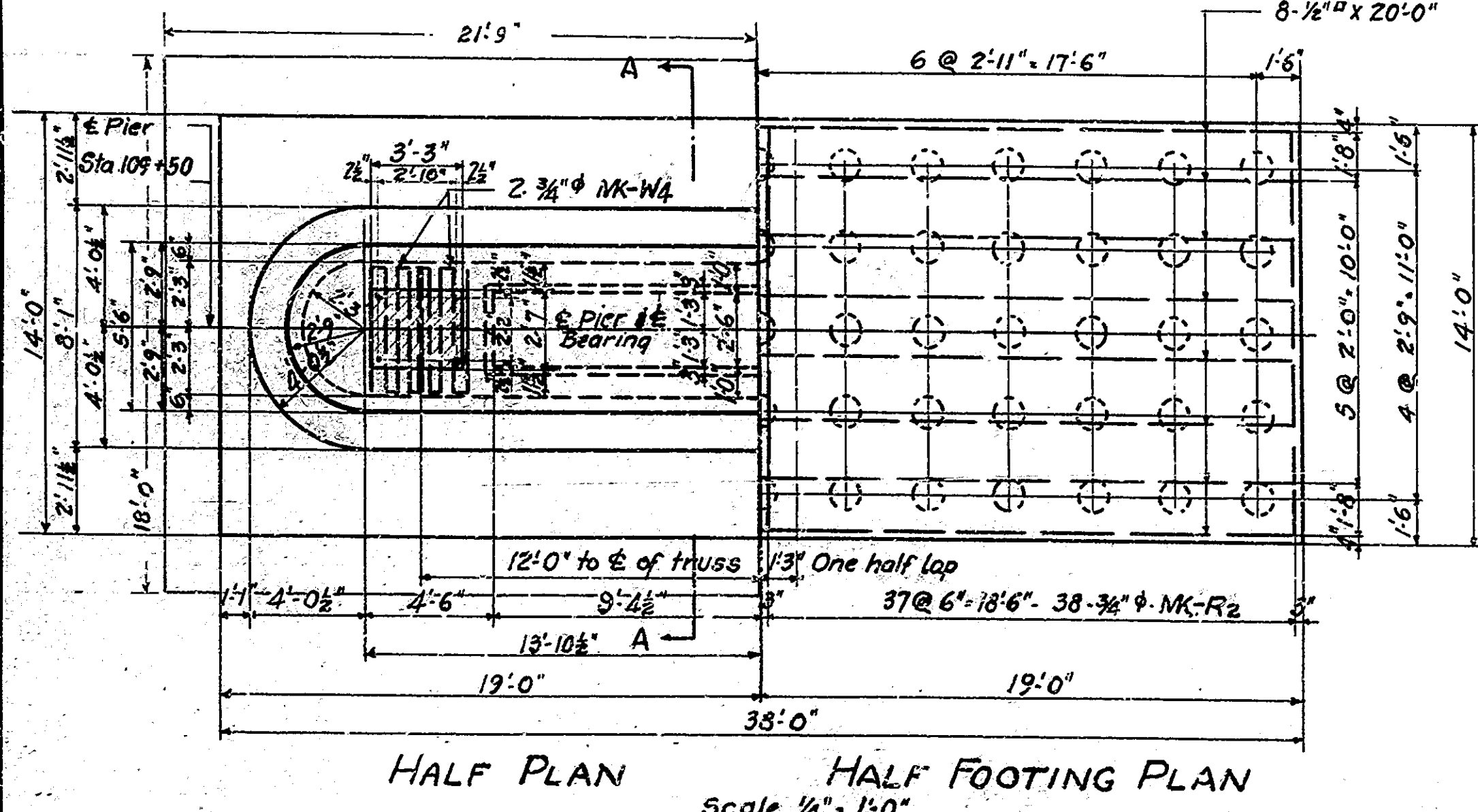
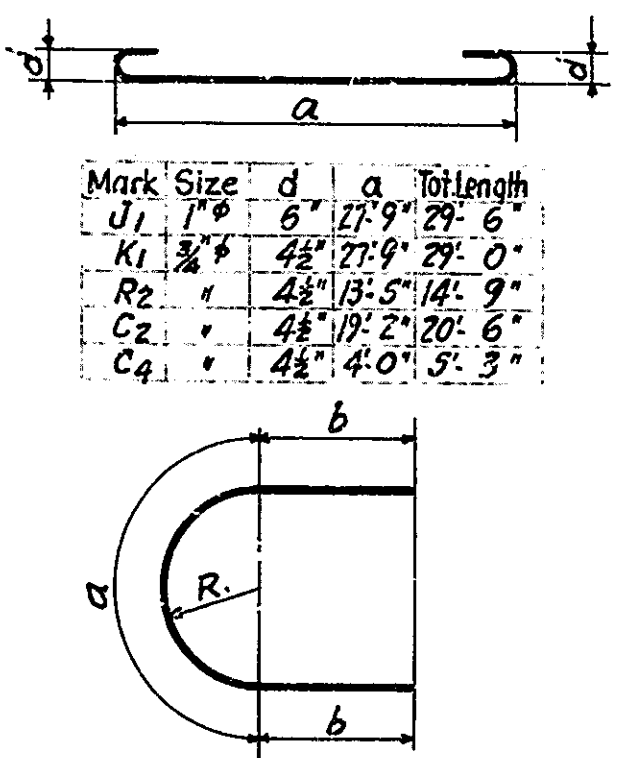
* Weights for 1930 Sds.

CONCRETE

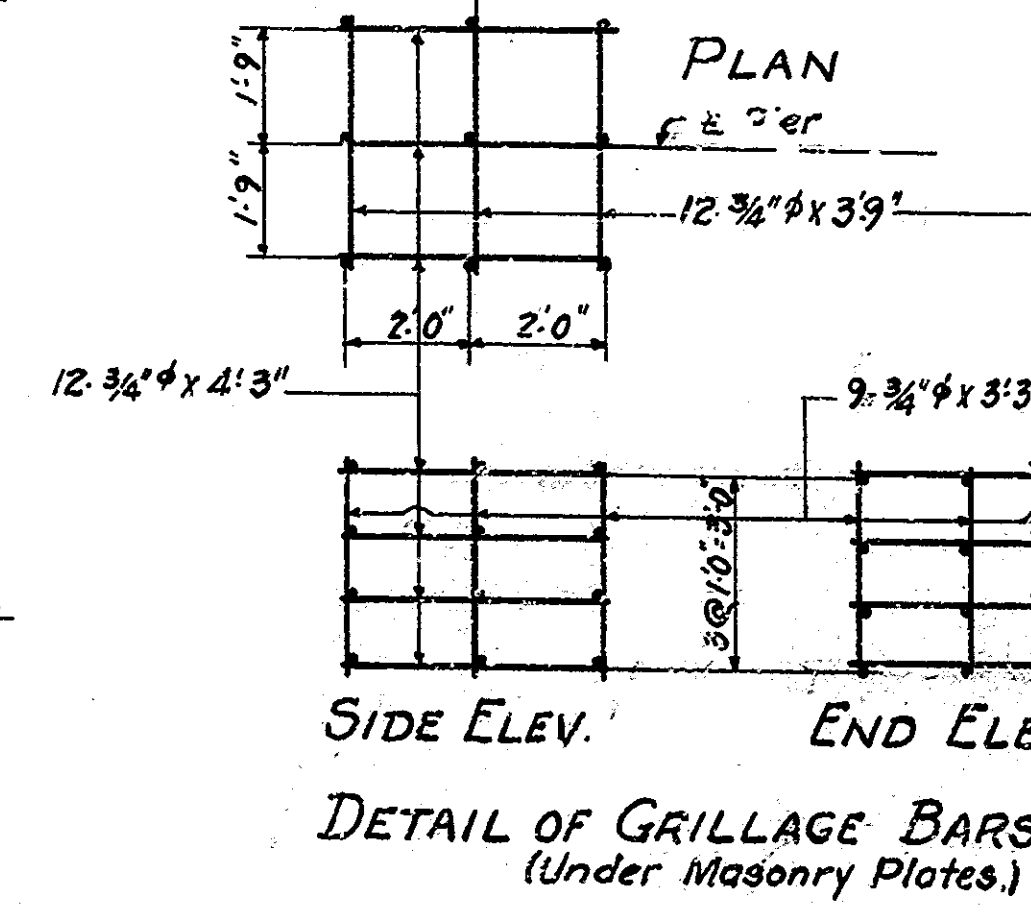
| Class | Volume | Weight |
|-------------------------------|---------------|--------|
| Class "E" Footing | 79.0 cu. yds. | 2575# |
| " " " " " " | 35.0 " " | 1065# |
| " " " " " " | 13.0 " " | 400# |
| Total Class "E" Above Footing | | 2980# |

MISCELLANEOUS

- 6" x 2 1/2" Drains-Steel Boiler Tubing (wt./ft. 12.75#) = 421#
- 65 Piles @ 20'-2" (Approx.) = 1300 Lin. ft.
- Foundation Seal = 74.8 cu. yds.



NOTE:-
 65 Piles Total in Pier.
 Drive all Piles to 20 Tons.



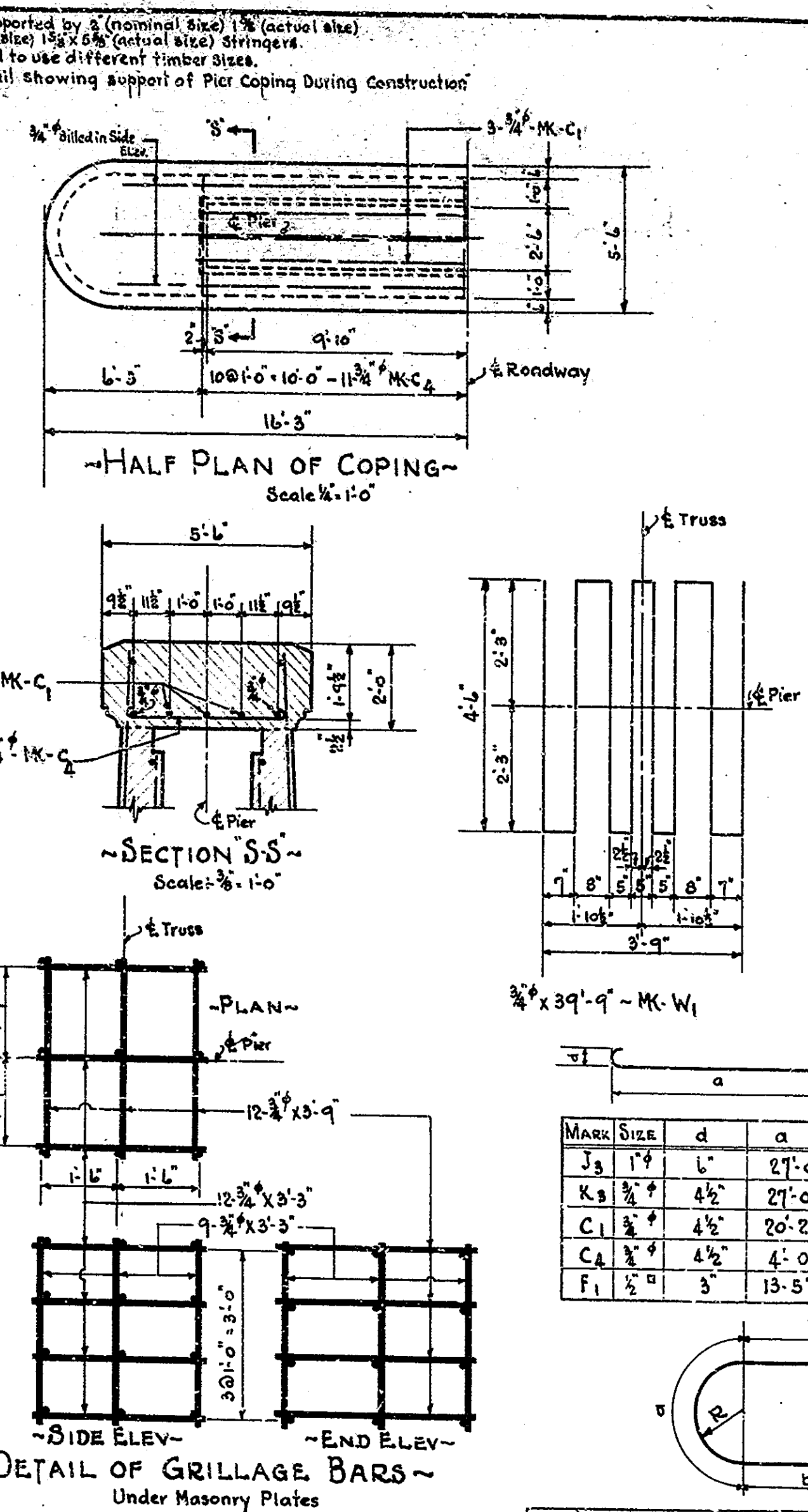
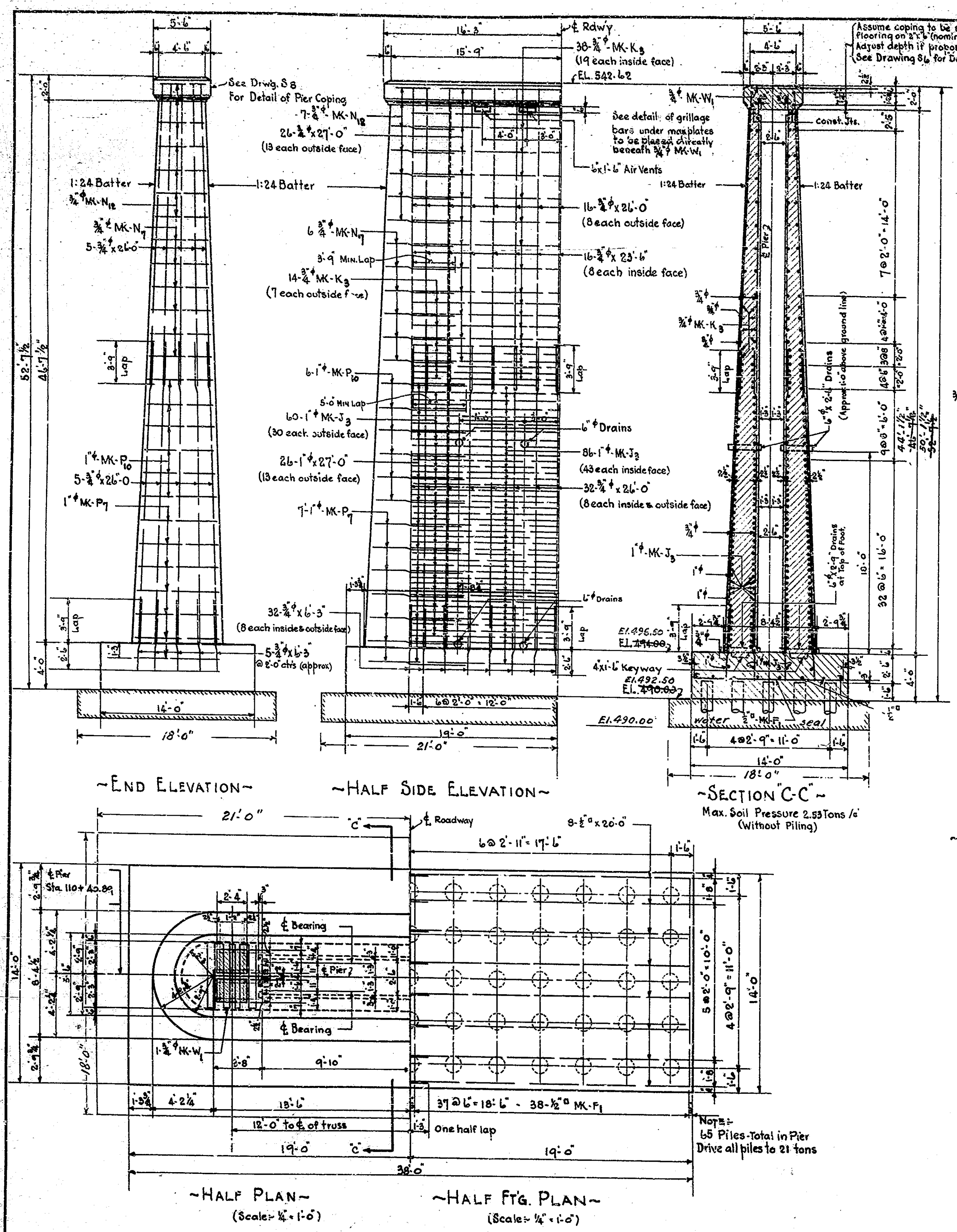
| Mark | Size | From | To | From | To | Total Length |
|------|------|------------|-----------|-----------|------------|--------------|
| P8 | 1" | 3'-4 1/2" | 3'-8 1/2" | 10'-8" | 11'-8 1/2" | 5'-6 1/2" |
| P9 | 1" | 2'-10" | 3'-3 1/2" | 9'-1" | 10'-5" | 5'-8 1/2" |
| N9 | 3/4" | 2'-4 1/2" | 2'-9 1/2" | 7'-6 1/2" | 8'-10" | 3'-8 1/2" |
| N13 | 3/4" | 1'-11 1/2" | 2'-3 3/4" | 6'-2" | 7'-3" | 2'-3 1/2" |

PIER NO. 7 DETAILS & BILL OF MATERIALS
 STATE HIGHWAY COMMISSION OF INDIANA

SCALE: 3/8" = 1'-0" UNLESS NOTED
 RECOMMENDED FOR APPROVAL: [Signature]

PROJECT - W.P.M. H. 74
 SECTION - E
 DRAWING - S9 OF 13

STATION - 106+36.47
 STRUCTURE NO. 1784
 BRIDGE CONTRACT NO. 1311



~BILL OF MATERIALS~
 REINFORCING STEEL

| Mark | Qty | Size | Length | Location | Total Length | Weight |
|------|-----|-------|--------|--------------------------------------|--------------|---------|
| J3 | 14 | 1"φ | 28'-9" | Horizontal Wall - inside | 4197'-0" | |
| P7 | 14 | 1"φ | 22'-3" | Nose (7 each end) | 311'-0" | |
| P10 | 12 | 1"φ | 20'-6" | (6 - - -) | 246'-0" | |
| | 24 | 1"φ | 27'-0" | Wall 12 Each outside face | 1008'-0" | |
| | | | | Total 1"φ | 5457'-0" | 14734# |
| C1 | 3 | 3/4"φ | 21'-0" | Longitudinal Coping | 63'-0" | |
| C2 | 21 | 3/4"φ | 5'-3" | Transverse | 110'-3" | |
| K3 | 32 | 3/4"φ | 28'-3" | Horizontal Wall - outside | 1464'-0" | |
| N7 | 12 | 3/4"φ | 15'-0" | Nose (beachend) | 180'-0" | |
| N8 | 14 | 3/4"φ | 15'-0" | (7 - - -) | 210'-0" | |
| W1 | 2 | 3/4"φ | 39'-9" | Br. Sent Under Masonry Pts. | 79'-0" | |
| | 26 | 3/4"φ | 27'-0" | Horizontal Wall 12 each outside face | 702'-0" | |
| | 110 | 3/4"φ | 23'-6" | Vertical Wall - nose to beachend | 2604'-0" | |
| | 30 | 3/4"φ | 23'-6" | - 15 each inside face | 705'-0" | |
| | 70 | 3/4"φ | 6'-3" | Stub bars Footing | 437'-0" | |
| | 24 | 3/4"φ | 3'-9" | Grillage Under Masonry Pts. | 90'-0" | |
| | 42 | 3/4"φ | 3'-3" | | 138'-0" | |
| | | | | Total 3/4"φ | 7067'-3" | 10,755# |
| E1 | 76 | 1/2"φ | 14'-3" | Transverse Footing | 1088'-0" | |
| E2 | 16 | 1/2"φ | 20'-0" | Longitudinal | 320'-0" | |
| | | | | Total 1/2"φ | 1408'-0" | 1307# |
| | | | | Total Steel | | 22,676# |

CONCRETE

| Class | Description | Quantity |
|---|--|---------------|
| E <td>Footings</td> <td>19,000 cu yds</td> | Footings | 19,000 cu yds |
| E <td>Above Footing to top Coping (EL. 540.42)</td> <td>252.5 cu yds</td> | Above Footing to top Coping (EL. 540.42) | 252.5 cu yds |
| E <td>In Coping (EL. 540.42 to EL. 542.62)</td> <td>218.5 cu yds</td> | In Coping (EL. 540.42 to EL. 542.62) | 218.5 cu yds |
| | Total Class E Above Footing | 206.0 cu yds |

MISCELLANEOUS

| Item | Description | Quantity |
|-----------------------------|---|--------------|
| 8-1/2" x 3-9" | Drains Steel Bolt Tubing (Wt. 11.75) - 50# | 50# |
| 8-1/2" x 2-6" | Drains Steel Bolt Tubing (Wt. 11.75) - 250# | 250# |
| | Total | 300# |
| 6-5 Piles @ 20'-0" (approx) | | 1300 Lin Ft. |
| | Foundation Seal | 76.7 cu yds. |

MARK SIZE d a Tot Lgth

| | | | | |
|----|-------|--------|--------|--------|
| J3 | 1"φ | 6" | 27'-0" | 28'-9" |
| K3 | 3/4"φ | 4 1/2" | 27'-0" | 28'-3" |
| C1 | 3/4"φ | 4 1/2" | 20'-2" | 21'-6" |
| C2 | 3/4"φ | 4 1/2" | 4'-0" | 5'-3" |
| F1 | 1/2"φ | 3" | 13'-5" | 14'-3" |

MARK SIZE R a b Total Length

| | | | | | | | | |
|-----|-------|------------|------------|-------------|-----------|-----------|------------|--------|
| P7 | 1"φ | 3'-5 1/2" | 3'-10 1/2" | 10'-10 1/2" | 12'-2" | 5'-8 1/2" | 5'-0 1/2" | 22'-3" |
| P10 | 1"φ | 2'-11 1/2" | 3'-4 1/2" | 9'-3 1/2" | 10'-7" | 5'-7 1/2" | 4'-11 1/2" | 20'-6" |
| N7 | 3/4"φ | 2'-5 1/2" | 2'-10 1/2" | 7'-8 1/2" | 9'-0 1/2" | 4'-4 1/2" | 3'-8 1/2" | 16'-6" |
| N8 | 3/4"φ | 1'-11 1/2" | 2'-4 1/2" | 6'-2" | 7'-6" | 4'-5" | 3'-9" | 15'-0" |

PIER NO. 8 DETAILS & BILL OF MATERIALS
 STATE HIGHWAY COMMISSION OF INDIANA

SCALE: 3/16" = 1'-0" UNLESS NOTED
 RECOMMENDED FOR APPROVAL: [Signature]
 DECEMBER 24, 1935

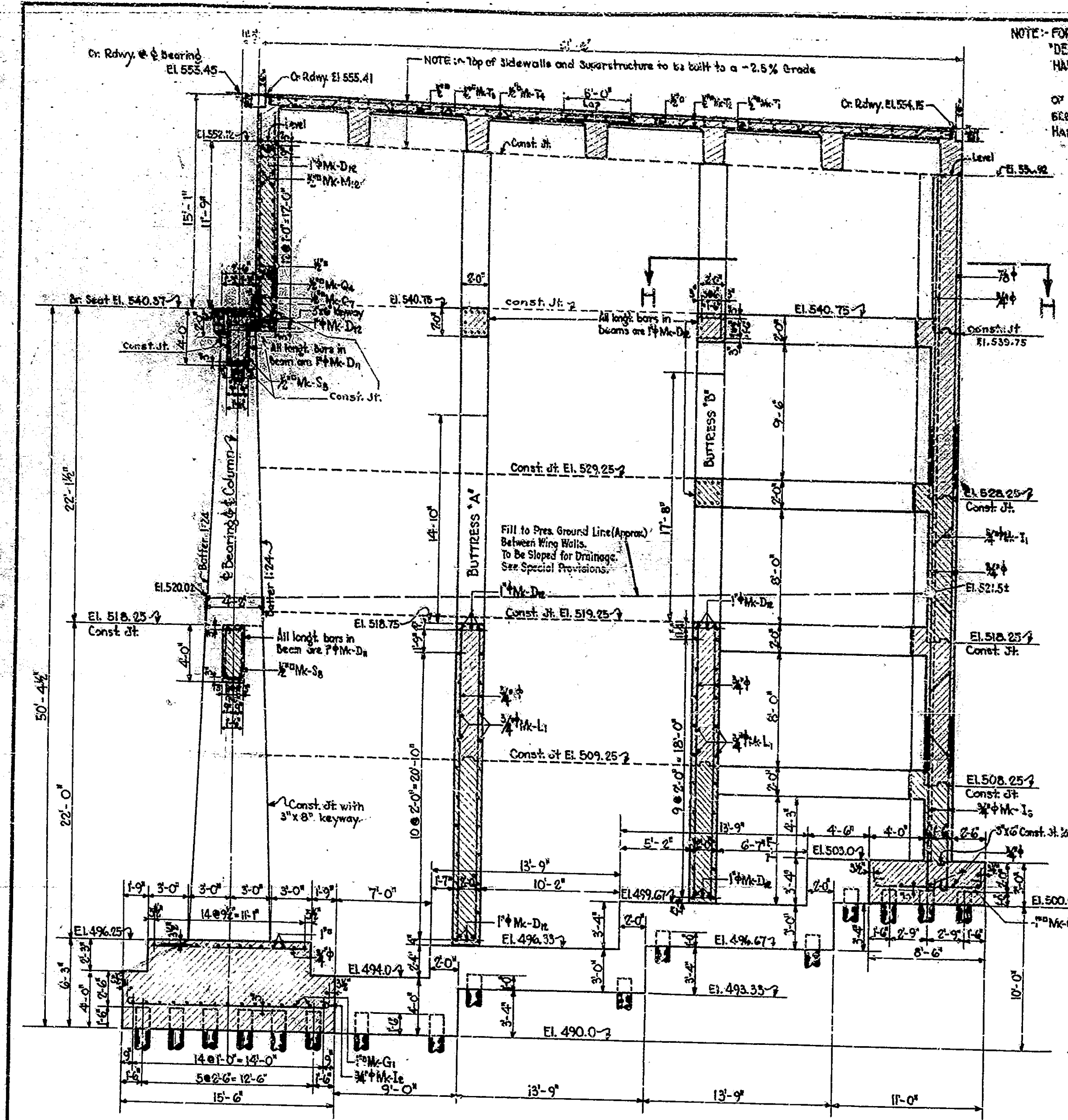
PROJECT: W.P.M.H. 74
 SECTION: E
 DRAWING: 310 OF 13

STATION: 106+46.41
 STRUCTURE NO. 1784

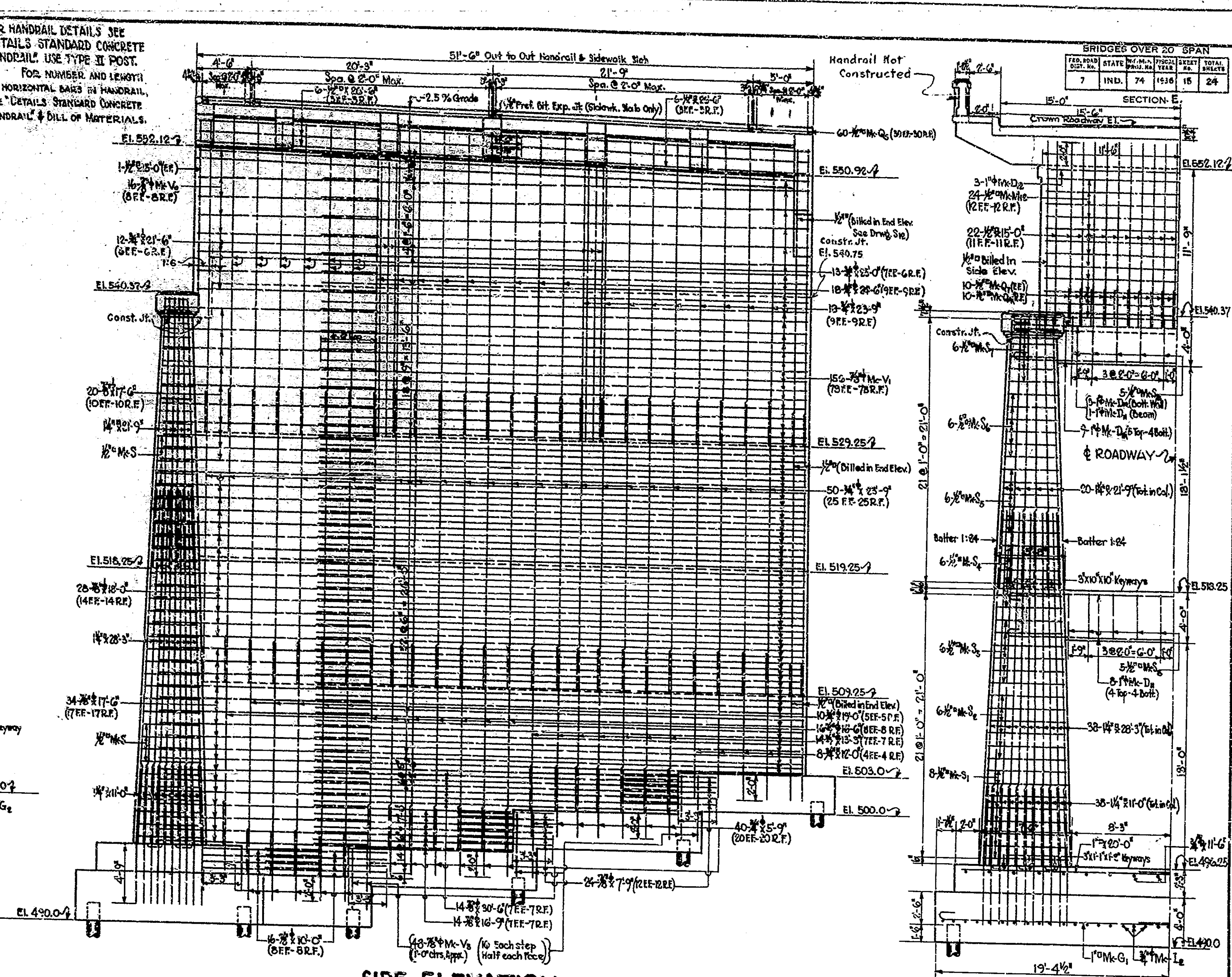
BRIDGE FILE 32-P-1784

BRIDGE CONTRACT NO. 1311

| BRIDGES OVER 20 SPAN | | | | |
|----------------------|-------|-----|------|-------|
| YEAR | STATE | NO. | YEAR | TOTAL |
| 7 | IND. | 74 | 1938 | 24 |

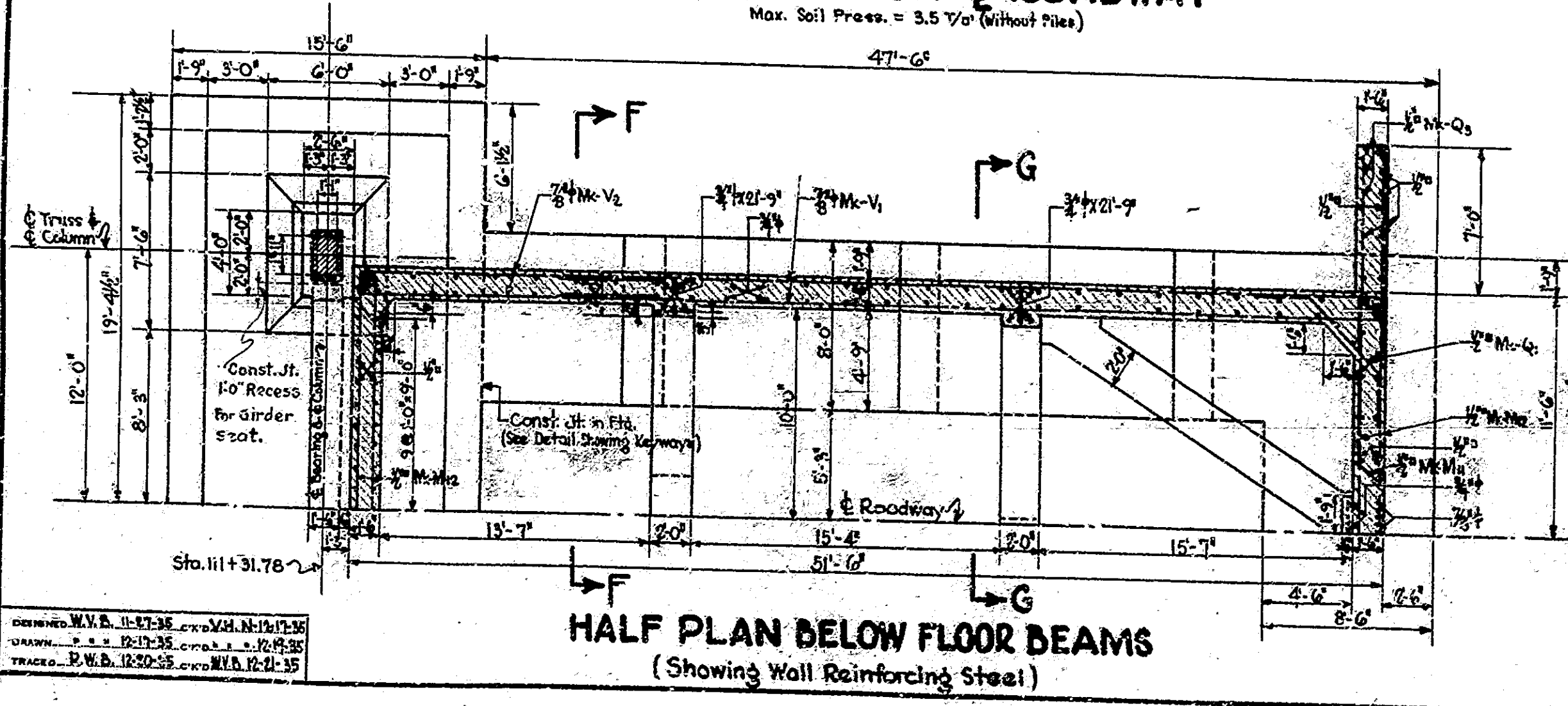


SECTION ON & ROADWAY
Max. Soil Press. = 3.5 V' (Without Piles)

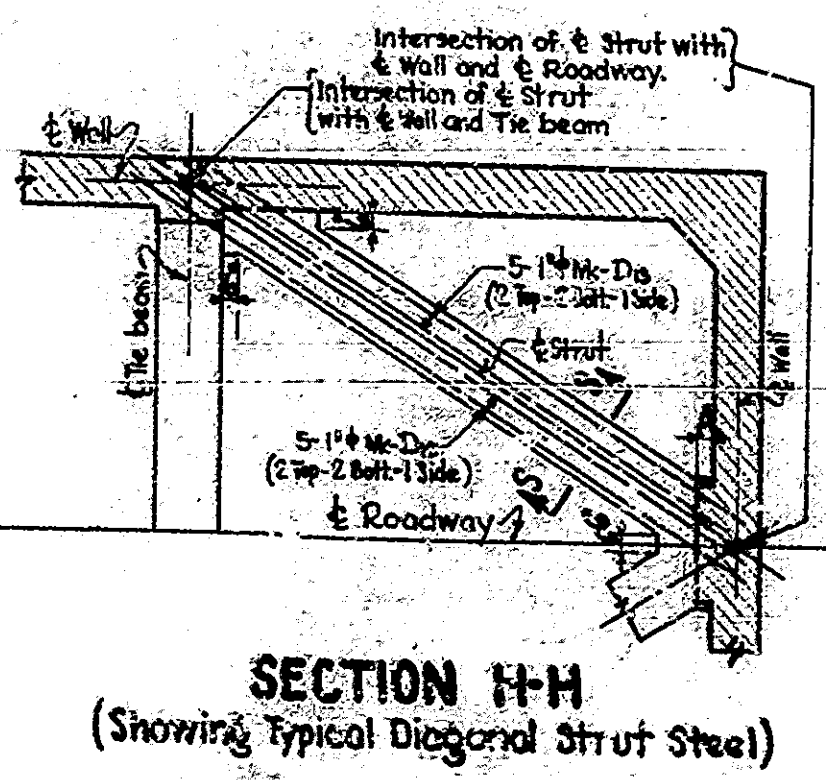


SIDE ELEVATION

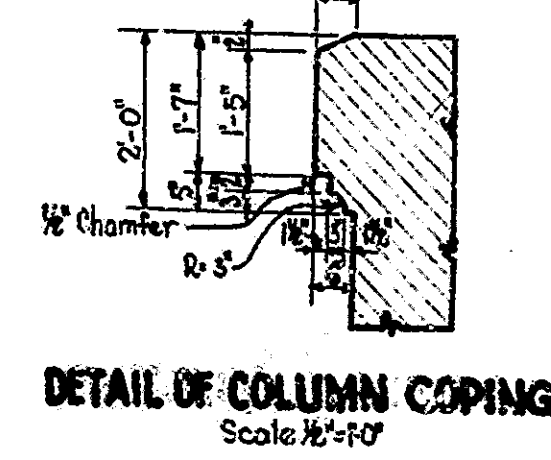
HALF FRONT ELEVATION



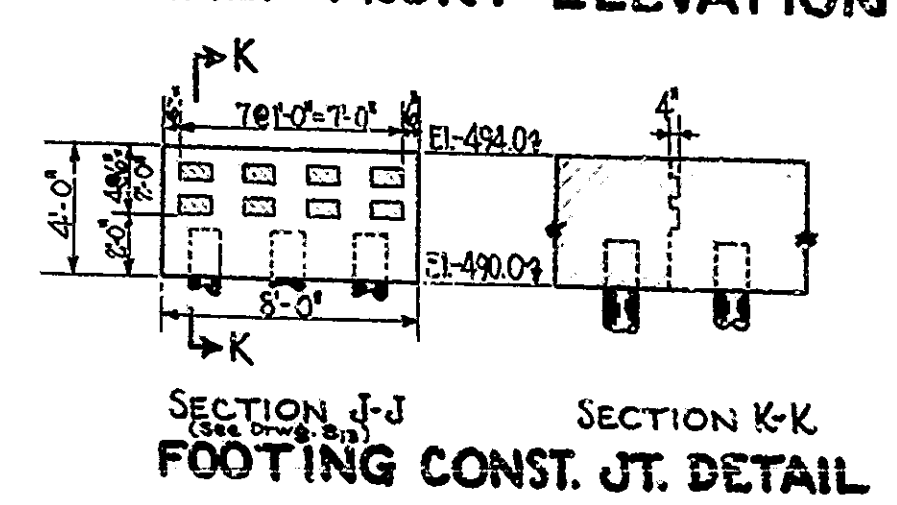
HALF PLAN BELOW FLOOR BEAMS
(Showing Wall Reinforcing Steel)



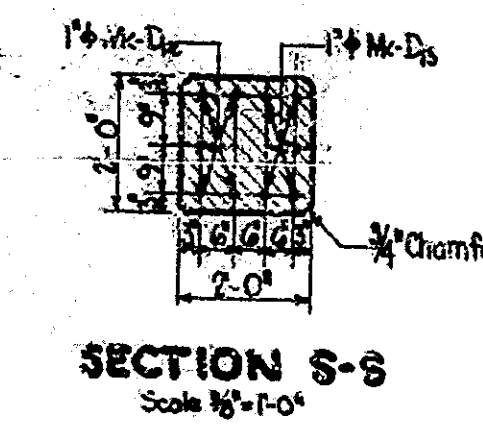
SECTION H-H
(Showing Typical Diagonal Strut Steel)



DETAIL OF COLUMN COPING



SECTION J-J SECTION K-K FOOTING CONST. JT. DETAIL



SECTION S-S

ABUTMENT NO. 9 DETAILS
STATE HIGHWAY COMMISSION OF INDIANA

SCALE: 3/16" = 1'-0" UNLESS NOTED
RECOMMENDED FOR APPROVAL: _____

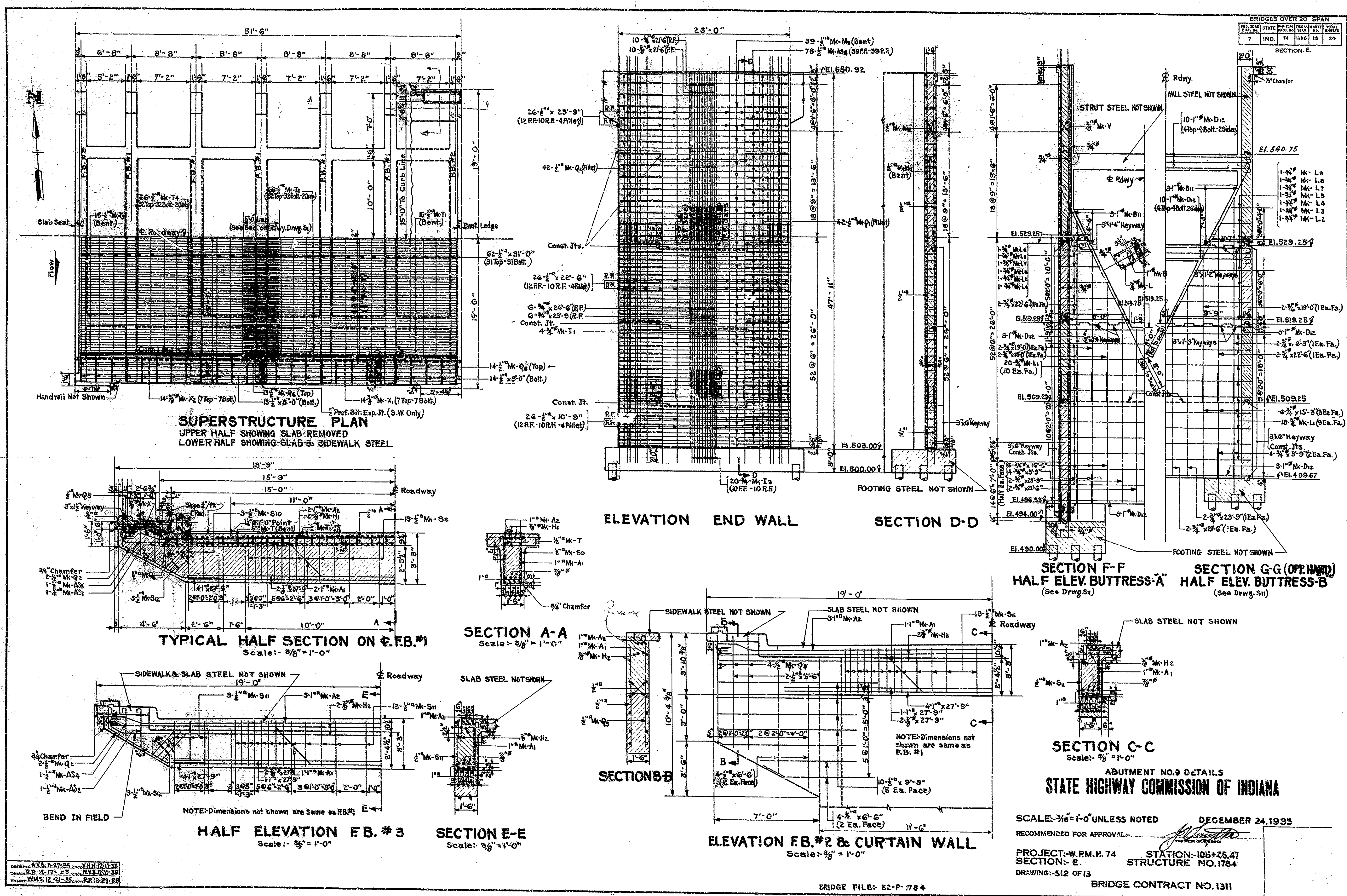
PROJECT: W.P.M.H 74 STATION: 106+88.47
SECTION: E STRUCTURE NO. 1784
DRAWING: S 11 OF 13

BRIDGE CONTRACT NO. 1311

BRIDGE FILE: 52-P-1784

Rev. 6-9-37 for Construction Changes

| BRIDGES OVER 20' SPAN | | | | | | | | | |
|-----------------------|-------|----------|----------|-------------|-----------|--------------|------|----|---------|
| FILE NO. | STATE | ROAD NO. | SPAN NO. | PROJECT NO. | SHEET NO. | TOTAL SHEETS | DATE | BY | CHECKED |
| 7 | IND. | 74 | 1936 | 16 | 24 | | | | |



SCALE: 3/8" = 1'-0" UNLESS NOTED
 DECEMBER 24, 1935
 RECOMMENDED FOR APPROVAL: *[Signature]*
 PROJECT: W.P.M.H. 74 STATION: 106+45.47
 SECTION: E STRUCTURE NO. 1784
 DRAWING: S12 OF 13 BRIDGE CONTRACT NO. 1311

DESIGNED BY: W.M. H. 11-27-35
 DRAWN BY: R.P. 11-17-35
 CHECKED BY: W.M. H. 11-27-35

BRIDGE FILE: 52-P-1784

Rev. 6-9-37 For Construction Changes.

