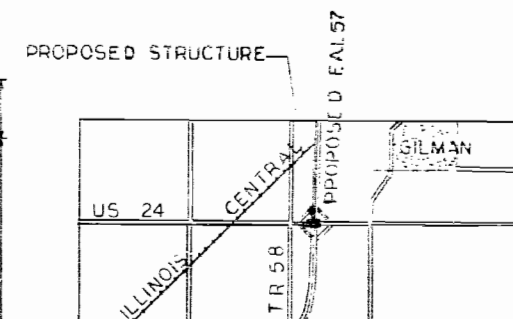


B.M. 24-D  
 CUT IN W. HEADWALL OF CULVERT  
 STA. 647+07 F.A.I. RT. 57 - 83 LT.  
 ELEV. 661.03

| FED. AID                                            | SEC  | COUNTY   | TOTAL SHEETS | SHEET NO. |
|-----------------------------------------------------|------|----------|--------------|-----------|
| 57                                                  | 5B-2 | IROQUOIS | 48           | 23        |
| S.P.R. REG. NO. 4 ILLINOIS PROJECT: I-57-6 (72) 234 |      |          |              |           |

# INDEX OF SHEETS-SECTION 38-5 HB-2 STRUCTURE

| SHEET NO. | TITLE                                    |
|-----------|------------------------------------------|
| 1         | GENERAL PLAN AND ELEVATION               |
| 2         | GENERAL NOTES, QUANTITIES AND EXCAVATION |
| 3         | BORINGS AND NAME PLATES                  |
| 4         | DECK PLAN AND REINFORCEMENT              |
| 5         | ELEVATIONS                               |
| 6         | STEEL FRAMING PLAN AND DETAILS           |
| 7         | TA HANDRAIL PLAN AND DETAILS             |
| 8         | PIER 1, 2, AND 3                         |
| 9         | ABUTMENTS AND WING WALLS - PART I        |
| 10        | ABUTMENTS AND WING WALLS - PART II       |
| 11        | PILES FOR ABUTMENTS                      |



LOCATION SKETCH

MAX. SOIL PRESS. LIKE 35' 1/2"

ROAD CLASSIFICATION: C

DESIGN SPEED: 70 M.P.H.

DESIGN LOAD

LIVE LOAD: HS-20 - 14'  
 FUTURE DEAD LOAD: 12" WEARING SURFACE

DESIGN STRESSES

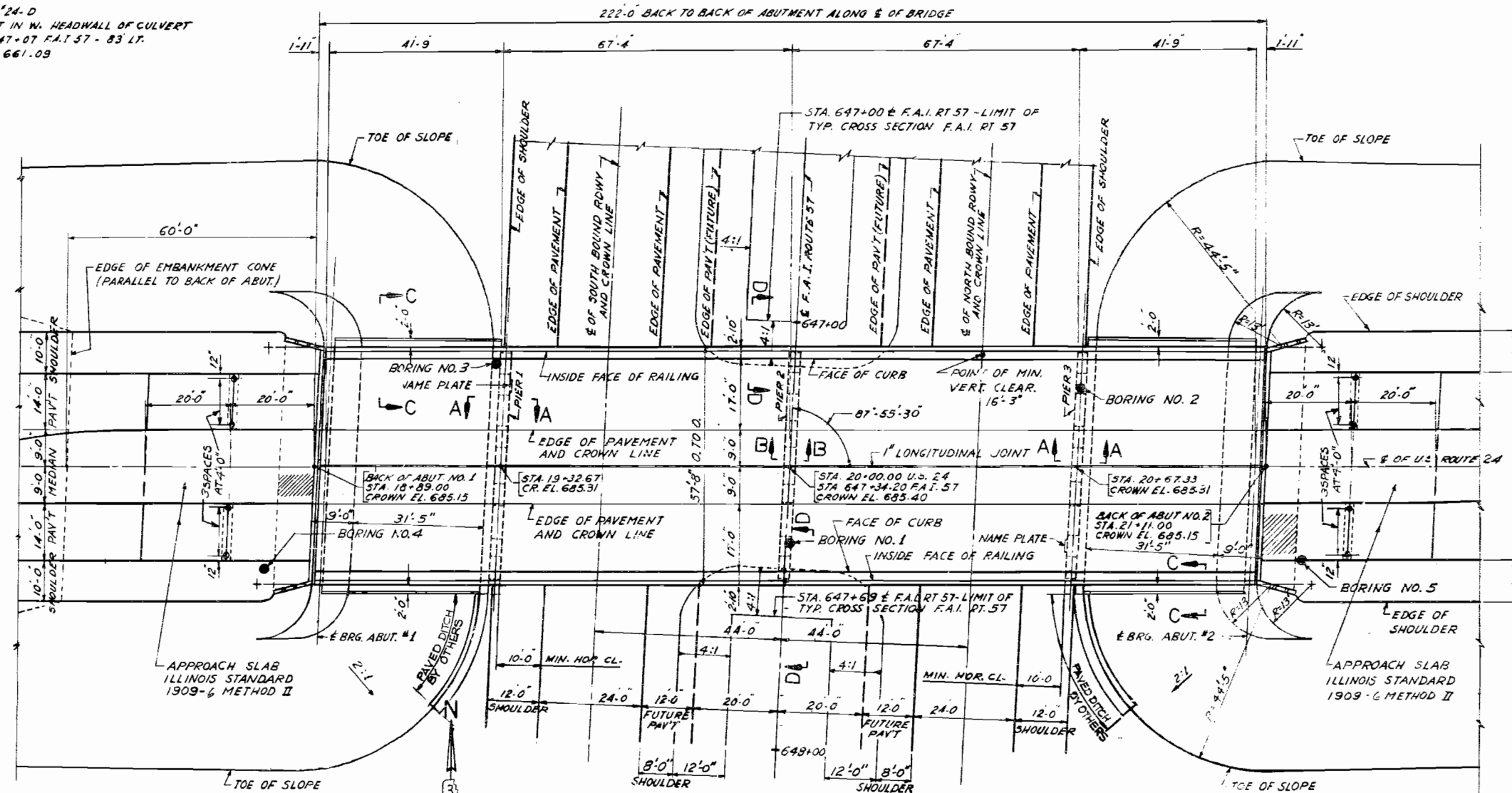
$f_c = 1400$  P.S.I. SUPERSTRUCTURE AND SUBSTRUCTURE  
 $f_s = 20,000$  P.S.I. REINFORCING  
 $f_s = 20,000$  P.S.I. STRUCTURAL  
 $n = 10$   
 $V = 75$  P.S.I. FOOTING  
 STRUCTURAL STEEL: ASTM A-36  
 AASHTO - 61 SPECIFICATIONS AND DESIGN POL. CY. 57  
 BRIDGE OFFICE, STATE OF ILLINOIS.

PILE LOADS

ABUTMENTS: 30 TONS CONCRETE PILES  
 WING WALLS:

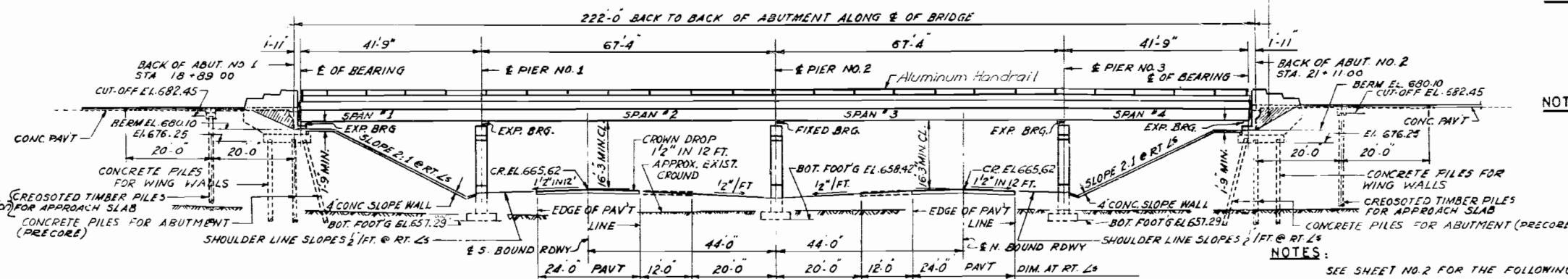
NOTE FOR SLOPEWALL

4" CONCRETE SLOPEWALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6" X 6" MESH NO. 4 WIRE WEIGHING APPROXIMATELY 33/100 SQ. FT.



PLAN  
 SCALE 1" = 15'-0"

NOTE: CONSTRUCTION METHOD FOR LAYOUT OF SLOPE WALL AND EMBANKMENT SHALL BE THE SAME AS FOR ABUTMENT #2



ELEVATION  
 SCALE 1" = 15'-0"

APPROACH SLAB PILE SCHEDULE

|              | WEST SLAB | EAST SLAB |
|--------------|-----------|-----------|
| NO. REQUIRED | 8         | 8         |
| 240' LENGTH  | 15'       | 15'       |

CREOSOTED TIMBER PILES  
 240 FT. (2 APPROACH SLABS)

NOTES:

- SEE SHEET NO. 2 FOR THE FOLLOWING ITEMS:
- ALIGNMENT FOR F.A.I. ROUTE 57
- LIMITS OF EXCAVATION FOR STRUCTURES AT PIERS,
- SECTIONS A-A, B-B, AND VIEW D-D
- SECTION AT ABUTMENT
- DETAIL OF THE EDGE OF THE SLOPEWALL (SEE C.C.)
- PROFILE FOR U.S. 24

DESIGNED BY: P.X.  
 DRAWN BY: A.M.  
 CHECKED BY: P.X.  
 IN CHARGE: P.X.

GENERAL PLAN AND ELEVATION  
 GRADE SEPARATION  
 U.S. ROUTE 24  
 OVER F.A.I. ROUTE 57  
 FA. PROJECT I-57-6 (72) 234  
 F.A.I. ROUTE 57 SECTION 38-5 HB-2  
 IROQUOIS COUNTY  
 STATION 647+34.20

# GENERAL NOTES

CLASS "X" CONCRETE SHALL BE USED THROUGHOUT.

THE CONCRETE FLOOR SLAB SHALL BE FINISHED IN ACCORDANCE WITH ART. 51.19 OF THE STANDARD SPECIFICATIONS.

COST OF FLOOR BRANS IN THE DECK SLAB AND COST OF ALUMINUM PLATES FOR CONSTRUCTION JOINTS IN CURBS SHALL BE INCIDENTAL TO THE COST OF CLASS "X" CONCRETE IN THE SUPERSTRUCTURE.

THE CONCRETE FLOOR SLAB SHALL BE POURED IN ONE CONTINUOUS OPERATION BETWEEN LONGITUDINAL CONSTRUCTION JOINTS SHOWN ON THE PLANS AND IN ACCORDANCE WITH ART. 51.11 OF THE STANDARD SPECIFICATIONS.

RIVETS 3/4" DIA., OPEN HOLES 13/16" DIA., UNLESS OTHERWISE NOTED.

*Coarse aggregate which is to be used in the Piers and Parapets shall be absolutely free of chert, limonite, lignite and soft sand stone.*

ALL ~~STEEL~~ HANDRAIL POSTS SHALL BE VERTICAL.

ALL ROCKERS, BEARING PLATES, LEAD PLATES, SHIM PLATES, PINTLES, AND ANCHOR BOLTS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ART. 51.15 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN QUANTITY FOR STRUCTURAL STEEL.

ANCHOR BOLTS SHALL BE SET BEFORE RIVETING DIAPHRAGMS OVER SUPPORTS.

THE FOLLOWING SURFACES OF THE EXPANSION GUARDS SHALL BE GIVEN TWO SHOP COATS OF RED LEAD PAINT: ALL SURFACES INACCESSIBLE AFTER ERECTION. OMIT PAINT ON STODS.

EXPANSION GUARDS ARE INCLUDED IN QUANTITY OF STRUCTURAL STEEL.

EXCEPT AS OTHERWISE PROVIDED, ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT. SEE ARTICLES 56.1 TO 56.5 INCLUSIVE OF THE STANDARD SPECIFICATIONS.

ALL PAINT SHALL BE FURNISHED AND APPLIED BY THE CONTRACTOR.

*PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE FLOOR.*

THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT ~~East~~ ABUTMENT AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.

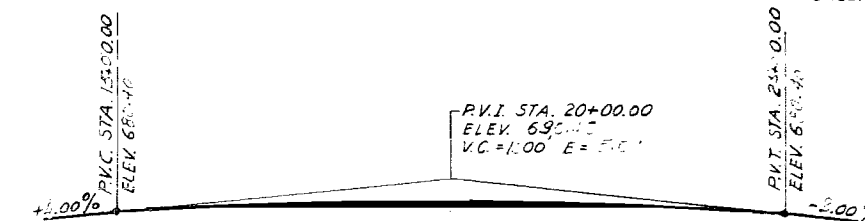
CONCRETE PILES THROUGH EMBANKMENT SHALL BE DRIVEN IN PRECURED HOLES IN ACCORDANCE WITH ART. 60.9(c) OF THE STANDARD SPECIFICATIONS.

EXCAVATION FOR PORTIONS OF STRUCTURE TO BE SET IN EMBANKMENT SHALL NOT BE PERMITTED.

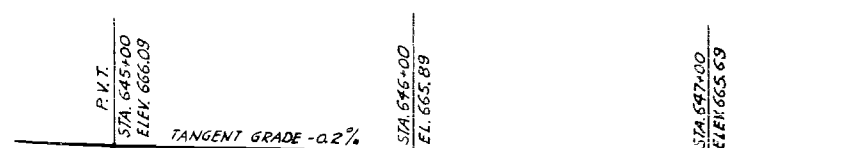
FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF 1' OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

| SUMMARY OF QUANTITIES SECTION 38-5 HB-2 |          |        |         |         |  |
|-----------------------------------------|----------|--------|---------|---------|--|
| PAY ITEM                                | UNIT     | SUPER. | SUBSTR. | TOTAL   |  |
| CLASS "A" EXCAVATION FOR STRUCTURES     | CU. YDS. | -      | 147     | 147     |  |
| CLASS "X" CONCRETE                      | CU. YDS. | 397.6  | 384.7   | 782.3   |  |
| FURNISHING AND ERECTING STRUCT. STEEL   | LBS      | 333000 | -       | 333000  |  |
| Aluminum Handrail                       | LIN. FT. | 440    | -       | 440     |  |
| REINFORCEMENT BARS                      | LBS      | 87,060 | 49,710  | 136,770 |  |
| FURNISHING CROSDOTED PILES UP TO 20 FT. | LIN. FT. | -      | 240     | 240     |  |
| DRIVING TIMBER PILES                    | LIN. FT. | -      | 240     | 240     |  |
| DRIVING CONCRETE PILES                  | LIN. FT. | -      | 875     | 875     |  |
| FURNISHING CONCRETE PILES               | LIN. FT. | -      | 875     | 875     |  |
| TEST PILES CONCRETE                     | EACH     | -      | 1       | 1       |  |
| NAME PLATES                             | EACH     | -      | 2       | 2       |  |
| SLOPE WALL 4"                           | SQ. YDS. | -      | 666     | 666     |  |
| PROTECTIVE COAT                         | SQ. YDS. | 1490   | -       | 1490    |  |
| *BRIDGE SEAT SEALANT                    | L.SUM    | -      | -       | -       |  |

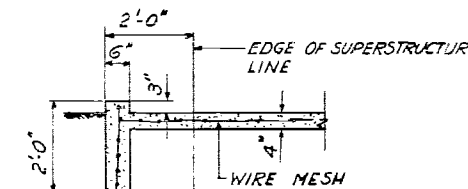
\* At Abutments only



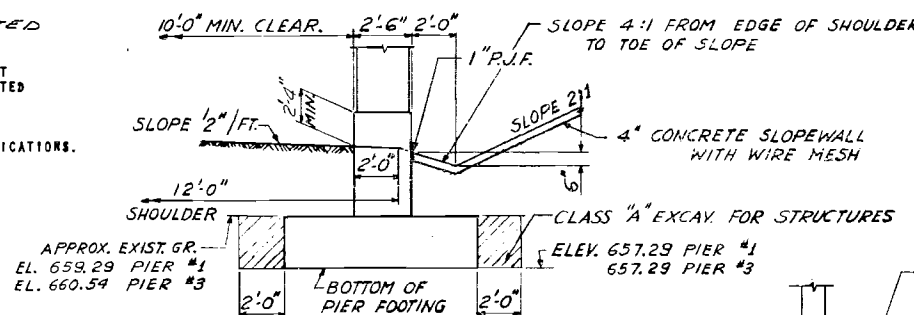
PROFILE OF CROWN OF U.S. 24 OVER F.A.I. ROUTE 57



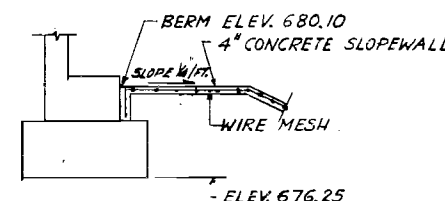
PROFILE OF CROWN OF F.A.I. ROUTE 57 UNDER U.S. ROUTE 24



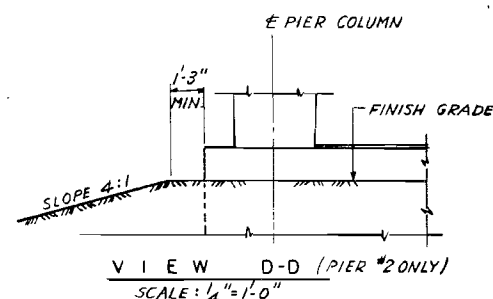
SECTION C-C  
SCALE: 1/2" = 1'-0"  
(SHOWING DETAIL OF THE EDGE OF THE SLOPE WALL SEE SHEET #1)



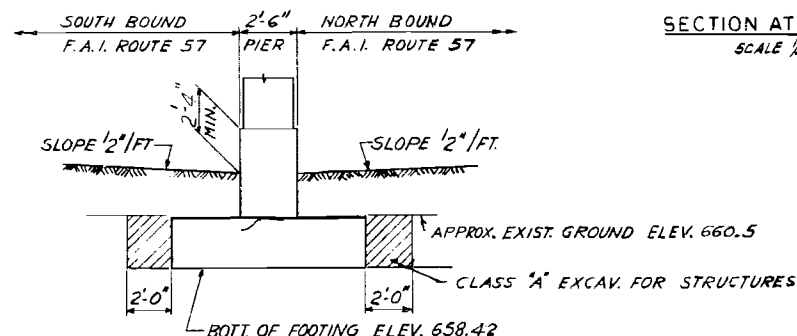
SECTION A-A  
(PIERS #1 AND #3)  
SCALE: 1/4" = 1'-0"



SECTION AT ABUTMENT  
SCALE: 1/4" = 1'-0"



VIEW D-D (PIER #2 ONLY)  
SCALE: 1/4" = 1'-0"



SECTION B-B  
(PIER #2 ONLY)  
SCALE: 1/4" = 1'-0"

DESIGNED BY: P.X.  
DRAWN BY: P.X.  
CHECKED BY: A.M.  
IN CHARGE: P.X.

GENERAL NOTES-QUANTITIES AND EXCAVATION  
GRADE SEPARATION  
U.S. ROUTE 24  
OVER F.A.I. ROUTE 57  
F.A. PROJECT I-57-61  
F.A.I. ROUTE 57 SECTION 38-5 HB-2  
IROQUOIS COUNTY  
STATION 647+34.20

Rev: Class X Conc. from 385.0 to 397.6 Cu Yds. & from 779.5 to 775.1 Cu Yds., Reinf. Bars from 72,560 to 71,480 lbs. & from 128,939 to 129,190 lbs., Slope Wall from 497 to 616 Sq. Yds. A.A. Rev. Class X Conc. Sub from 371.5 to 384.7 Cu Yds. Total from 775.1 to 782.3 Cu Yds. Reinf. Super. from 79,480 to 87,060. Total from 129,190 to 136,770. 11-27-68 A.M.

BORING NO. 1 (PIER NO. 2)  
STA. 20+00  
OFFSET 20 RT.

BORING NO. 2 (PIER NO. 3)  
STA. 20+68  
OFFSET 18.5 LT.

BORING NO. 3 (PIER NO. 1)  
STA. 19+32  
OFFSET 23.5 LT.

BORING NO. 4 (ABUT. NO. 1)  
STA. 18+79  
OFFSET 24 RT.

BORING NO. 5 (ABUT. NO. 2)  
STA. 21+21  
OFFSET 23 RT.

| FEDERAL AID ROUTE NO.                      | SEC.      | COUNTY   | TOTAL SHEETS | SHEET NO. |
|--------------------------------------------|-----------|----------|--------------|-----------|
| 57                                         | 38-5 HB-2 | IROQUOIS | 48           | 30        |
| B.P.R. REG. 04 ILLINOIS PROJECT: I-57-6( ) |           |          |              |           |

SHEET NO. 3 OF 11

NOTE:  
N - STANDARD PENETRATION TEST - CLONS PER FOOT TO DRIVE 2" O.D. SPLIT SPOON SAMPLER 12 WITH 140 HAMMER FALLING 30".  
QU - UNCONFINED COMPRESSIVE STRENGTH - T/SF  
W - WATER CONTENT - PERCENTAGE OF OPEN DRY WEIGHT %

TYPE OF FAILURE  
B - BULGE FAILURE  
S - SHEAR FAILURE

NOTE:  
BORING DATA ARE SHOWN ONLY AS A GUIDE FOR BIDDERS IN ESTIMATING SOIL CONDITIONS WHICH MAY BE ENCOUNTERED IN THE FIELD. FOR LOCATION OF BORINGS SEE SHEET NO. 1

GROUND WATER ELEVATIONS:  
SURFACE WATER EL. NONE  
GROUND WATER EL. AT COMPLETION: NONE  
GROUND WATER EL. AFTER 24 HRS.: NONE

STATION 647+34.20  
BUILT 196 BY  
STATE OF ILLINOIS  
F.A.I. RT 57 SECTION 38-5 HB-2  
F.A. PROJ. I-57-6 (72)  
LOADING - S37

SEE STATE OF ILLINOIS STANDARD 2113-

LETTERING FOR NAME PLATES  
(2 REQUIRED)

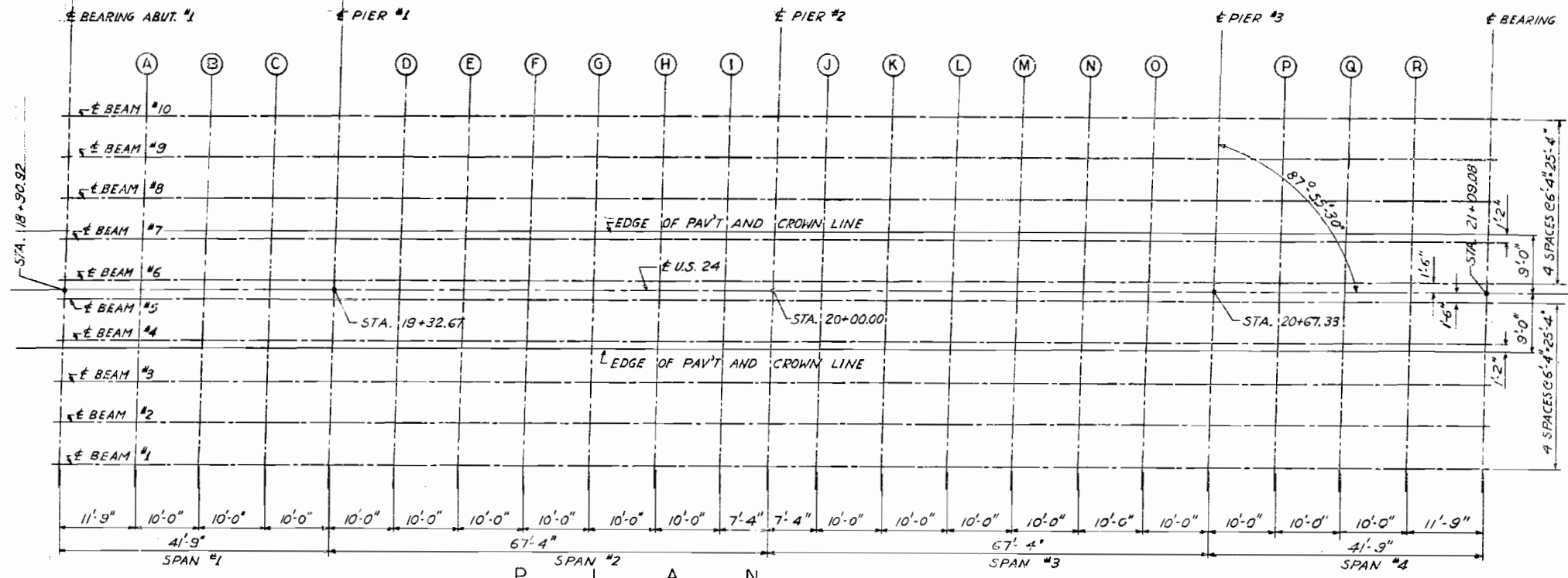
FOR LOCATION OF NAME PLATES SEE SHEET NO. 8

BORINGS AND NAME PLATES  
GRADE SEPARATION  
U.S. ROUTE 24  
OVER F.A.I. ROUTE 57  
F.A. PROJECT I-57-6( )  
F.A.I. ROUTE 57 SECTION 38-5 HB-2  
IROQUOIS COUNTY  
STATION 647+34.20

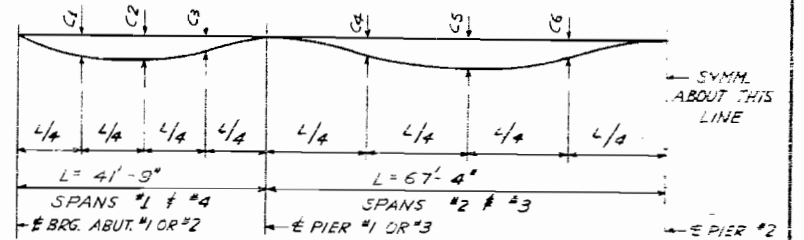
VERTICAL SCALE 1"=5'-0"

DESIGNED BY: -  
DRAWN BY: A.M.  
CHECKED BY: P.X.  
IN CHARGE: P.X.





NOTE: ALL DEFLECTIONS SHOWN BELOW SHALL NOT BE USED IN THE FIELD IF THE ENGINEER WORKS FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS.



DEAD LOAD DEFLECTION DIAGRAM (INCLUDES WEIGHT OF CONCRETE ONLY)  
FOR VALUES C1-C6 SEE TABLE BELOW

| TABLE OF DEAD LOAD DEFLECTIONS |       |       |    |       |       |       |
|--------------------------------|-------|-------|----|-------|-------|-------|
| BEAM                           | C1    | C2    | C3 | C4    | C5    | C6    |
| *1 AND *10                     | 3/32" | 3/32" | 0" | 7/16" | 3/4"  | 5/16" |
| *2, *3, *8 AND *9              | 1/16" | 1/16" | 0" | 1/32" | 3/16" | 1/4"  |
| *4 AND *7                      | 1/16" | 1/16" | 0" | 5/16" | 1/2"  | 1/4"  |
| *5 AND *6                      | 1/16" | 1/16" | 0" | 5/16" | 1/2"  | 1/4"  |

(INCLUDES WEIGHT OF CONCRETE ONLY)

| TABLE OF ELEVATIONS          |    |          |                    | TABLE OF ELEVATIONS  |    |          |                    | TABLE OF ELEVATIONS  |    |           |                    | TABLE OF ELEVATIONS          |    |          |                    |                              |    |          |                    |
|------------------------------|----|----------|--------------------|----------------------|----|----------|--------------------|----------------------|----|-----------|--------------------|------------------------------|----|----------|--------------------|------------------------------|----|----------|--------------------|
| L                            | B  | STATION  | TGE<br>TGE DLD     | L                    | B  | STATION  | TGE<br>TGE DLD     | L                    | B  | STATION   | TGE<br>TGE DLD     | L                            | B  | STATION  | TGE<br>TGE DLD     |                              |    |          |                    |
| LINE "A"<br>BEARING ABUT. #1 | 1  | 18+89.95 | 684.980<br>684.980 | LINE "G"<br>LINE "E" | 1  | 19+31.70 | 685.129<br>685.129 | LINE "K"<br>LINE "I" | 1  | 19+71.70  | 685.206<br>685.256 | LINE "M"<br>LINE "C"         | 1  | 20+46.36 | 685.179<br>685.225 | LINE "Q"<br>BEARING ABUT. #2 | 1  | 20+86.36 | 685.073<br>685.080 |
|                              | 2  | 18+90.17 | 685.044<br>685.044 |                      | 2  | 19+31.92 | 685.192<br>685.192 |                      | 2  | 19+71.92  | 685.269<br>685.306 |                              | 2  | 20+46.59 | 685.242<br>685.277 |                              | 2  | 20+86.59 | 685.135<br>685.140 |
|                              | 3  | 18+90.41 | 685.108<br>685.108 |                      | 3  | 19+32.16 | 685.256<br>685.256 |                      | 3  | 19+72.16  | 685.332<br>685.369 |                              | 3  | 20+46.82 | 685.304<br>685.339 |                              | 3  | 20+86.82 | 685.197<br>685.202 |
|                              | 4  | 18+90.64 | 685.173<br>685.173 |                      | 4  | 19+32.39 | 685.321<br>685.321 |                      | 4  | 19+72.39  | 685.397<br>685.431 |                              | 4  | 20+47.05 | 685.368<br>685.401 |                              | 4  | 20+87.05 | 685.260<br>685.265 |
|                              | 5  | 18+90.86 | 685.237<br>685.237 |                      | 5  | 19+32.61 | 686.134<br>686.134 |                      | 5  | 19+72.61  | 686.210<br>686.244 |                              | 5  | 20+47.28 | 686.224<br>686.230 |                              | 5  | 20+87.28 | 686.073<br>686.078 |
|                              | 6  | 18+90.98 | 685.297<br>685.297 |                      | 6  | 19+32.73 | 686.134<br>686.134 |                      | 6  | 19+72.73  | 686.210<br>686.244 |                              | 6  | 20+47.39 | 686.224<br>686.230 |                              | 6  | 20+87.39 | 686.073<br>686.078 |
|                              | 7  | 18+91.21 | 685.361<br>685.361 |                      | 7  | 19+32.96 | 685.322<br>685.322 |                      | 7  | 19+72.96  | 685.397<br>685.431 |                              | 7  | 20+47.63 | 685.367<br>685.400 |                              | 7  | 20+87.63 | 685.258<br>685.263 |
|                              | 8  | 18+91.43 | 685.425<br>685.425 |                      | 8  | 19+33.18 | 685.259<br>685.259 |                      | 8  | 19+73.18  | 685.334<br>685.371 |                              | 8  | 20+47.85 | 685.302<br>685.337 |                              | 8  | 20+87.85 | 685.194<br>685.199 |
|                              | 9  | 18+91.66 | 685.500<br>685.500 |                      | 9  | 19+33.41 | 685.196<br>685.196 |                      | 9  | 19+73.41  | 685.271<br>685.280 |                              | 9  | 20+48.08 | 685.239<br>685.274 |                              | 9  | 20+88.08 | 685.130<br>685.135 |
|                              | 10 | 18+91.89 | 684.988<br>684.988 |                      | 10 | 19+33.64 | 685.134<br>685.134 |                      | 10 | 19+73.64  | 685.208<br>685.256 |                              | 10 | 20+48.31 | 685.175<br>685.221 |                              | 10 | 20+88.31 | 685.066<br>685.073 |
| LINE "B"<br>BEARING ABUT. #1 | 1  | 19+01.70 | 685.029<br>685.036 | LINE "H"<br>LINE "F" | 1  | 19+41.70 | 685.154<br>685.167 | LINE "J"<br>LINE "D" | 1  | 19+81.70  | 685.215<br>685.245 | LINE "N"<br>LINE "P"         | 1  | 20+56.36 | 685.159<br>685.172 | LINE "R"<br>BEARING ABUT. #2 | 1  | 20+96.36 | 685.036<br>685.043 |
|                              | 2  | 19+01.92 | 685.093<br>685.038 |                      | 2  | 19+41.92 | 685.217<br>685.227 |                      | 2  | 19+81.92  | 685.285<br>685.300 |                              | 2  | 20+56.59 | 685.221<br>685.231 |                              | 2  | 20+96.59 | 685.099<br>685.104 |
|                              | 3  | 19+02.16 | 685.157<br>685.162 |                      | 3  | 19+42.16 | 685.281<br>685.291 |                      | 3  | 19+82.16  | 685.342<br>685.364 |                              | 3  | 20+56.82 | 685.283<br>685.293 |                              | 3  | 20+96.82 | 685.161<br>685.166 |
|                              | 4  | 19+02.39 | 685.221<br>685.226 |                      | 4  | 19+42.39 | 685.346<br>685.355 |                      | 4  | 19+82.39  | 685.406<br>685.427 |                              | 4  | 20+57.05 | 685.347<br>685.356 |                              | 4  | 20+97.05 | 685.224<br>685.229 |
|                              | 5  | 19+02.61 | 686.035<br>686.040 |                      | 5  | 19+42.61 | 686.159<br>686.168 |                      | 5  | 19+82.61  | 686.219<br>686.240 |                              | 5  | 20+57.28 | 686.159<br>686.168 |                              | 5  | 20+97.28 | 686.036<br>686.041 |
|                              | 6  | 19+02.73 | 686.036<br>686.041 |                      | 6  | 19+42.73 | 686.159<br>686.168 |                      | 6  | 19+82.73  | 686.219<br>686.240 |                              | 6  | 20+57.39 | 686.159<br>686.168 |                              | 6  | 20+97.39 | 686.036<br>686.041 |
|                              | 7  | 19+02.96 | 686.224<br>685.229 |                      | 7  | 19+42.96 | 685.347<br>685.356 |                      | 7  | 19+82.96  | 685.406<br>685.427 |                              | 7  | 20+57.63 | 685.346<br>685.355 |                              | 7  | 20+97.63 | 685.221<br>686.226 |
|                              | 8  | 19+03.18 | 685.161<br>685.166 |                      | 8  | 19+43.18 | 685.283<br>685.293 |                      | 8  | 19+83.18  | 685.342<br>685.364 |                              | 8  | 20+57.85 | 685.281<br>685.291 |                              | 8  | 20+97.85 | 685.157<br>685.162 |
|                              | 9  | 19+03.41 | 685.099<br>685.104 |                      | 9  | 19+43.41 | 685.221<br>685.231 |                      | 9  | 19+83.41  | 685.280<br>685.302 |                              | 9  | 20+58.08 | 685.217<br>685.227 |                              | 9  | 20+98.08 | 685.093<br>685.098 |
|                              | 10 | 19+03.64 | 685.036<br>685.043 |                      | 10 | 19+43.64 | 685.159<br>685.172 |                      | 10 | 19+83.64  | 685.217<br>685.247 |                              | 10 | 20+58.31 | 685.154<br>685.167 |                              | 10 | 20+98.31 | 685.029<br>685.036 |
| LINE "C"<br>BEARING ABUT. #1 | 1  | 19+11.70 | 685.066<br>685.073 | LINE "I"<br>LINE "G" | 1  | 19+51.70 | 685.175<br>685.221 | LINE "L"<br>LINE "J" | 1  | 19+91.70  | 685.221<br>685.230 | LINE "O"<br>LINE "M"         | 1  | 20+66.36 | 685.134<br>685.134 | LINE "S"<br>BEARING ABUT. #2 | 1  | 21+08.11 | 684.988<br>684.988 |
|                              | 2  | 19+11.92 | 685.130<br>685.135 |                      | 2  | 19+51.92 | 685.239<br>685.274 |                      | 2  | 19+91.92  | 685.284<br>685.290 |                              | 2  | 20+66.59 | 685.196<br>685.196 |                              | 2  | 21+08.34 | 685.050<br>685.050 |
|                              | 3  | 19+12.16 | 685.194<br>685.199 |                      | 3  | 19+52.16 | 685.302<br>685.337 |                      | 3  | 19+92.16  | 685.347<br>685.353 |                              | 3  | 20+66.82 | 685.259<br>685.259 |                              | 3  | 21+08.57 | 685.112<br>685.112 |
|                              | 4  | 19+12.39 | 685.258<br>685.263 |                      | 4  | 19+52.39 | 685.367<br>685.400 |                      | 4  | 19+92.39  | 685.411<br>685.417 |                              | 4  | 20+67.05 | 685.322<br>685.332 |                              | 4  | 21+08.80 | 685.175<br>685.175 |
|                              | 5  | 19+12.61 | 686.072<br>685.077 |                      | 5  | 19+52.61 | 686.180<br>686.213 |                      | 5  | 19+92.61  | 685.224<br>686.230 |                              | 5  | 20+67.28 | 686.134<br>686.134 |                              | 5  | 21+09.03 | 685.987<br>685.987 |
|                              | 6  | 19+12.73 | 686.073<br>686.078 |                      | 6  | 19+52.73 | 686.180<br>686.213 |                      | 6  | 19+92.73  | 686.224<br>686.230 |                              | 6  | 20+67.39 | 686.134<br>686.134 |                              | 6  | 21+09.14 | 685.987<br>685.987 |
|                              | 7  | 19+12.96 | 685.260<br>685.265 |                      | 7  | 19+52.96 | 685.368<br>685.401 |                      | 7  | 19+92.96  | 685.411<br>685.417 |                              | 7  | 20+67.63 | 685.321<br>685.321 |                              | 7  | 21+09.36 | 685.173<br>685.173 |
|                              | 8  | 19+13.18 | 685.197<br>685.202 |                      | 8  | 19+53.18 | 685.304<br>685.339 |                      | 8  | 19+93.18  | 685.347<br>685.353 |                              | 8  | 20+67.85 | 685.256<br>685.256 |                              | 8  | 21+09.60 | 685.108<br>685.108 |
|                              | 9  | 19+13.41 | 685.135<br>685.140 |                      | 9  | 19+53.41 | 685.242<br>685.277 |                      | 9  | 19+93.41  | 685.284<br>685.290 |                              | 9  | 20+68.08 | 685.192<br>685.192 |                              | 9  | 21+09.83 | 685.044<br>685.044 |
|                              | 10 | 19+13.64 | 685.073<br>685.080 |                      | 10 | 19+53.64 | 685.179<br>685.225 |                      | 10 | 19+93.64  | 685.221<br>685.230 |                              | 10 | 20+68.31 | 685.129<br>685.129 |                              | 10 | 21+10.06 | 684.988<br>684.988 |
| LINE "D"<br>BEARING ABUT. #1 | 1  | 19+21.70 | 685.099<br>685.099 | LINE "F"<br>LINE "H" | 1  | 19+61.70 | 685.193<br>685.257 | LINE "N"<br>LINE "P" | 1  | 19+101.70 | 685.206<br>685.256 | LINE "R"<br>BEARING ABUT. #2 | 1  | 20+76.36 | 685.106<br>685.106 | LINE "T"<br>BEARING ABUT. #2 | 1  | 20+86.36 | 685.073<br>685.080 |
|                              | 2  | 19+21.92 | 685.163<br>685.163 |                      | 2  | 19+61.92 | 685.256<br>685.305 |                      | 2  | 19+101.92 | 685.269<br>685.306 |                              | 2  | 20+76.59 | 685.168<br>685.168 |                              | 2  | 20+86.59 | 685.135<br>685.140 |
|                              | 3  | 19+22.16 | 685.227<br>685.227 |                      | 3  | 19+62.16 | 685.319<br>685.368 |                      | 3  | 19+102.16 | 685.332<br>685.369 |                              | 3  | 20+76.82 | 685.230<br>685.230 |                              | 3  | 20+86.82 | 685.197<br>685.202 |
|                              | 4  | 19+22.39 | 685.291<br>685.291 |                      | 4  | 19+62.39 | 685.384<br>685.429 |                      | 4  | 19+102.39 | 685.397<br>685.431 |                              | 4  | 20+77.05 | 685.293<br>685.293 |                              | 4  | 20+87.05 | 685.260<br>685.265 |
|                              | 5  | 19+22.61 | 686.105<br>686.105 |                      | 5  | 19+62.61 | 686.197<br>686.242 |                      | 5  | 19+102.61 | 686.210<br>686.244 |                              | 5  | 20+77.28 | 686.106<br>686.106 |                              | 5  | 20+87.28 | 686.073<br>686.078 |
|                              | 6  | 19+22.73 | 686.106<br>686.106 |                      | 6  | 19+62.73 | 686.197<br>686.242 |                      | 6  | 19+102.73 | 686.210<br>686.244 |                              | 6  | 20+77.39 | 686.106<br>686.106 |                              | 6  | 20+87.39 | 686.073<br>686.078 |
|                              | 7  | 19+22.96 | 685.293<br>685.293 |                      | 7  | 19+62.96 | 685.385<br>685.430 |                      | 7  | 19+102.96 | 686.197<br>686.242 |                              | 7  | 20+77.63 | 685.291<br>685.291 |                              | 7  | 20+87.63 | 685.258<br>685.263 |
|                              | 8  | 19+23.18 | 685.230<br>685.230 |                      | 8  | 19+63.18 | 685.321<br>685.370 |                      | 8  | 19+103.18 | 685.347<br>685.353 |                              | 8  | 20+77.85 | 685.227<br>685.227 |                              | 8  | 20+87.85 | 685.194<br>685.199 |
|                              | 9  | 19+23.41 | 685.168<br>685.168 |                      | 9  | 19+63.41 | 685.258<br>685.307 |                      | 9  | 19+103.41 | 685.280<br>685.302 |                              | 9  | 20+78.08 | 685.163<br>685.163 |                              | 9  | 20+88.08 | 685.093<br>685.098 |
|                              | 10 | 19+23.64 | 685.106<br>685.106 |                      | 10 | 19+63.64 | 685.196<br>685.260 |                      | 10 | 19+103.64 | 685.221<br>685.230 |                              | 10 | 20+78.31 | 685.099<br>685.099 |                              | 10 | 20+88.31 | 685.066<br>685.073 |

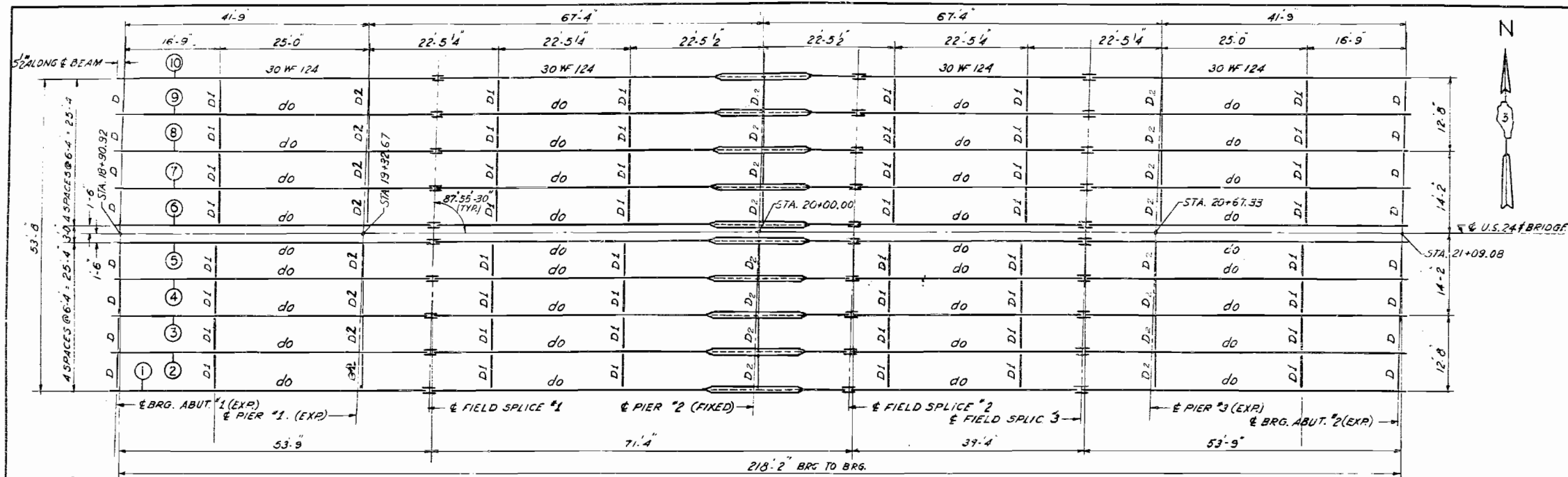
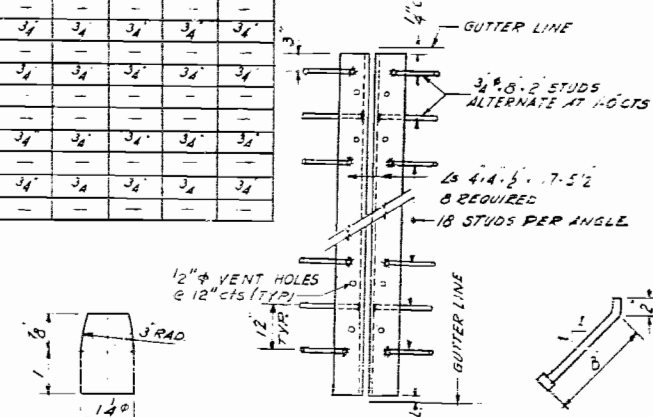


TABLE OF SHIM PLATES

| BEAM NO. | ABUT. 1 | PIER 1 | PIER 2 | PIER 3 | ABUT. 2 |
|----------|---------|--------|--------|--------|---------|
| 1        | -       | -      | -      | -      | -       |
| 2        | 3/4     | 3/4    | 3/4    | 3/4    | 3/4     |
| 3        | -       | -      | -      | -      | -       |
| 4        | 3/4     | 3/4    | 3/4    | 3/4    | 3/4     |
| 5        | -       | -      | -      | -      | -       |
| 6        | -       | -      | -      | -      | -       |
| 7        | 3/4     | 3/4    | 3/4    | 3/4    | 3/4     |
| 8        | -       | -      | -      | -      | -       |
| 9        | 3/4     | 3/4    | 3/4    | 3/4    | 3/4     |
| 10       | -       | -      | -      | -      | -       |

PINTLE DETAIL

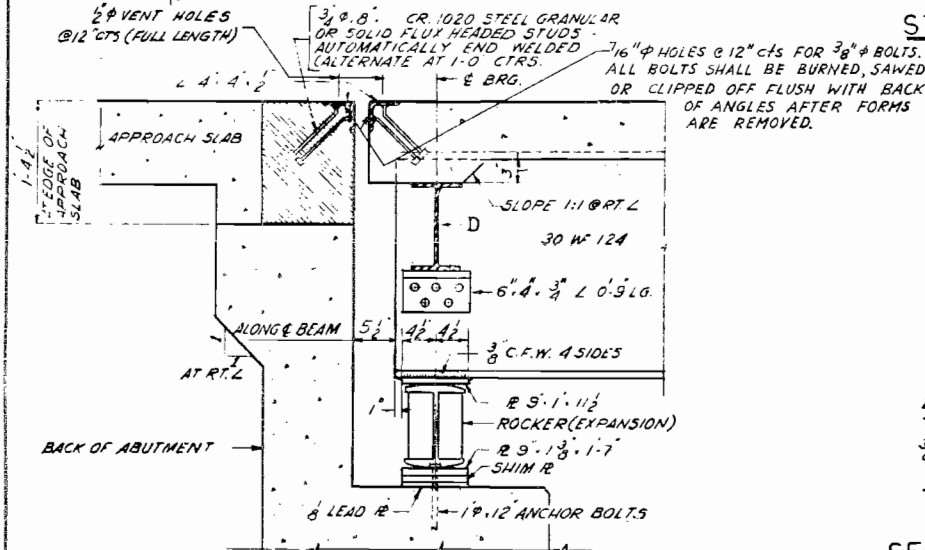
EXPANSION DETAIL



STEEL FRAMING PLAN

SCALE 3/32" = 1'-0"

NOTE: FOR ELEVATIONS (TOP OF STEEL) SEE SHEET NO. 5



SECTION AT ABUTMENT

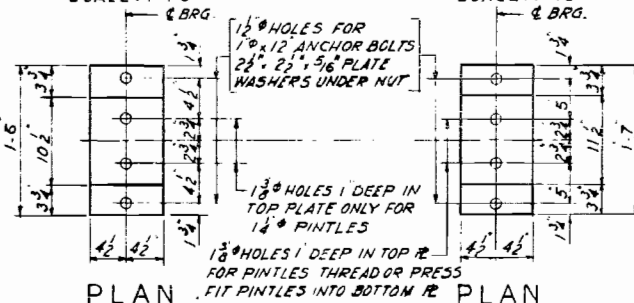
SCALE 1" = 1'-0"

SECTION AT FIXED PIER

SCALE 1" = 1'-0"

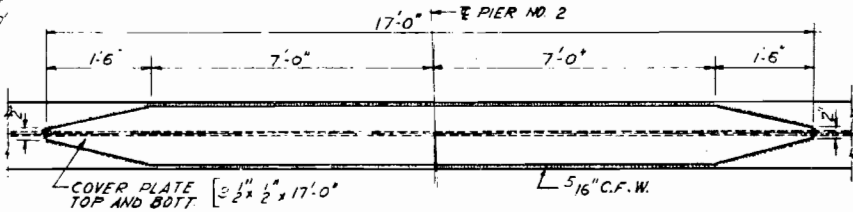
SECTION AT EXPANSION PIER

SCALE 1" = 1'-0"



PLAN

PLAN



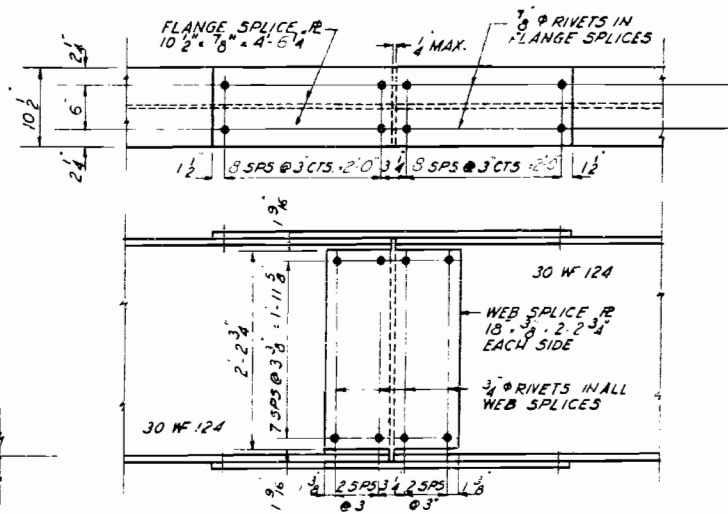
DETAIL OF COVER PLATES

END DIAPHRAGM-D

16 REQUIRED

INT. DIAPHRAGM-D1 & D2

72 REQUIRED

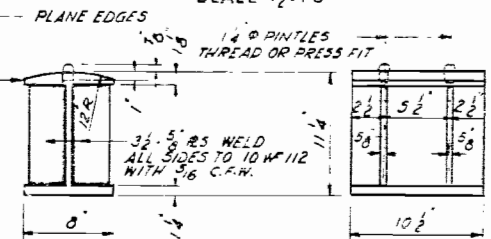


SPICE DETAIL

SCALE 1" = 1'-0"

ROCKER DETAIL AT EXP. BEARING

SCALE 1/2" = 1'-0"



BOLSTER DETAIL AT FIXED BEARING

Bearings and Anchorage

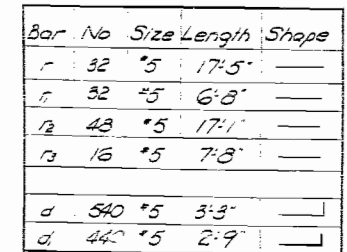
The location of the anchor bolts and vertical alignment of the expansion bearings shall be adjusted to the temperature of the time of erection. See Art. 54.9(f).

Anchor Bolts shall be grouted into drilled holes after badmms are in place, or bolts at fixed pier may be built into the masonry.

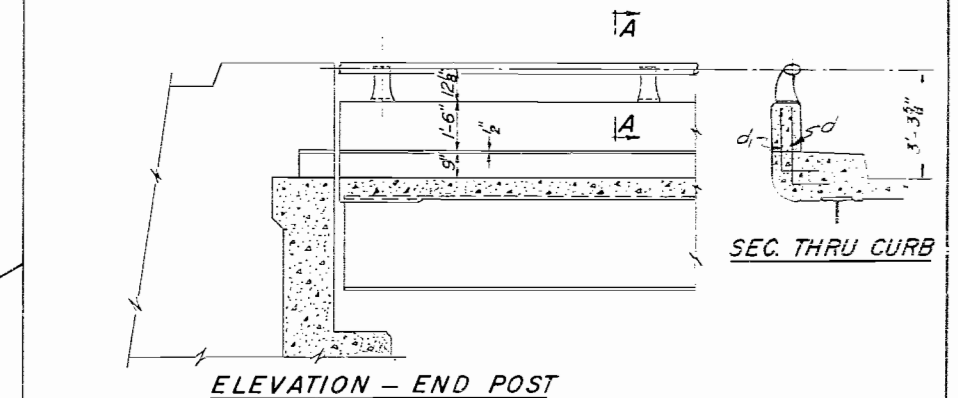
STEEL FRAMING PLAN & DETAILS  
GRADE SEPARATION  
U.S. ROUTE 24  
OVER F.A.I. ROUTE 57  
F.A. PROJECT 1-57-61  
IROQUOIS COUNTY  
STATION 647+3420

DESIGNED BY: A.M.  
DRAWN BY: A.M.  
CHECKED BY: P.X.  
IN CHARGE: P.X.

|                       |              |                  |              |           |             |
|-----------------------|--------------|------------------|--------------|-----------|-------------|
| ROUTE NO.             | SECTION      | COUNTY           | TOTAL SHEETS | SHEET NO. | SHEET NO. 7 |
| 157                   | 38-5<br>28-2 | IROQUOIS         | 43           | 34        | 11 SHEETS   |
| FED. ROAD DIST. NO. 9 | ILLINOIS     | FED. AID PROJECT |              |           |             |



Note: For Rail Post Details see Sheet No. 26A of 38.



**NOTES:**

*All Posts shall be normal to parapet.*

*All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-235 alloy 6061-T6, or 6062-T6, and shall extend a minimum of 2 panel lengths (attached to minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.*

*See Special Provisions for following Material Specifications:*  
*Cast Aluminum Alloy Bridge Post—Alloy 344-T4.*  
*Stainless Steel Welded Stud Bolts, Washers, and Locknuts*

*For material composition of Prefabricated Pad, see Article 54.9(f), (Bearing and Anchorage), of the Standard Specifications.*

*METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.*

~~BASIS of PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.~~

*Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.*

*Provide 1- $\frac{1}{8}$ " and 2- $\frac{1}{16}$ " Aluminum Shims for 25% of the Posts.  
Rail element shall be parallel to Grade — high spots shall be  
ground, and low spots shimmed.*

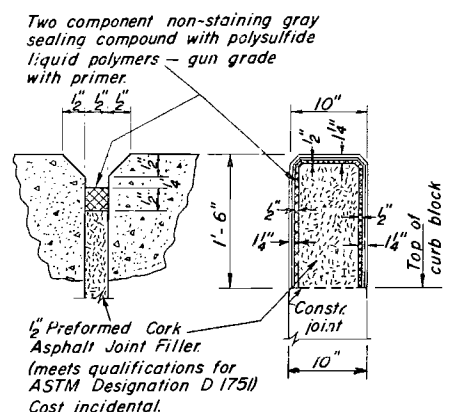
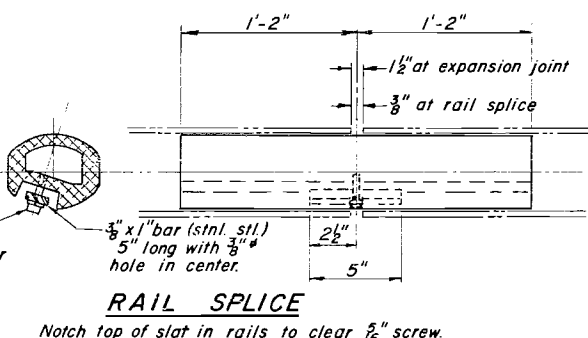
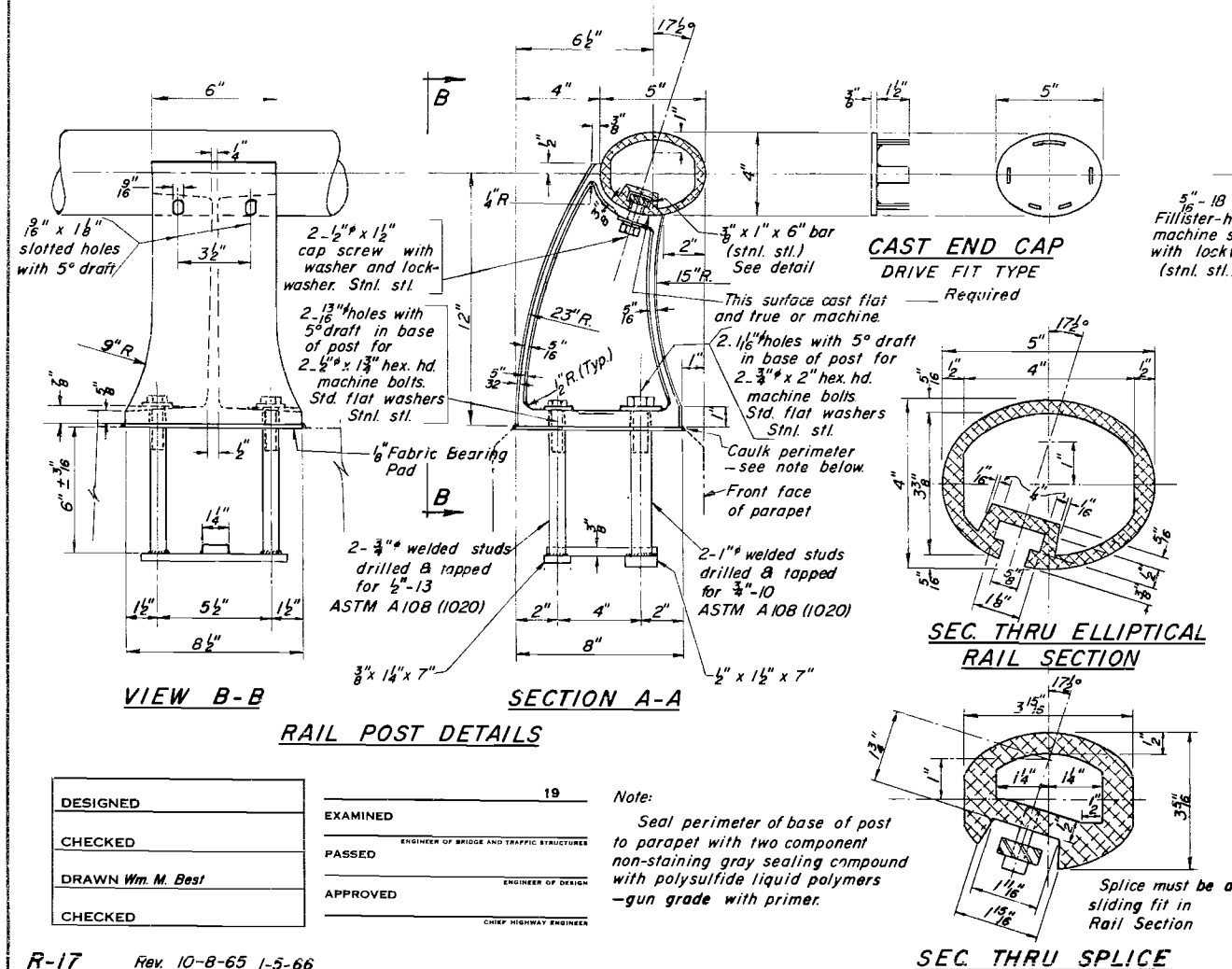
| Item               | Unit     | Quantity |
|--------------------|----------|----------|
| ALUMINUM HANDRAIL  | Lin. Ft. | 4305     |
| Class X Concrete   | Cu. Yds. | 22.3     |
| Reinforcement Bars | Lbs.     | 4870     |

ALUMINUM HANDRAIL  
U.S. ROUTE 24  
OVER F.A.I. ROUTE 57  
SECTION 38-54B2  
IROQUOIS COUNTY

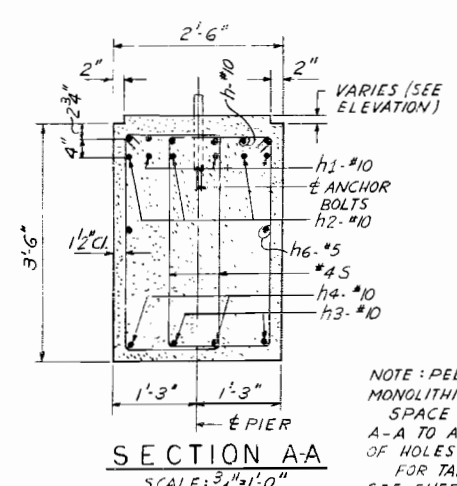
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

| ROUTE NO.             | SECTION  | COUNTY           | TOTAL SHEETS | SHEET NO. | SHEET NO. |
|-----------------------|----------|------------------|--------------|-----------|-----------|
| 38-5                  | 48-2     | Iroquois         | 48           | 34A       | 11 SHEETS |
| F.A.I. 57             |          |                  |              |           |           |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT |              |           |           |

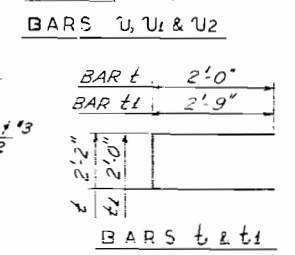
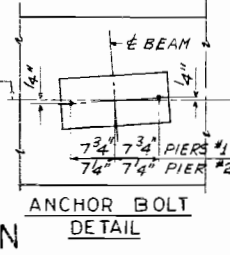
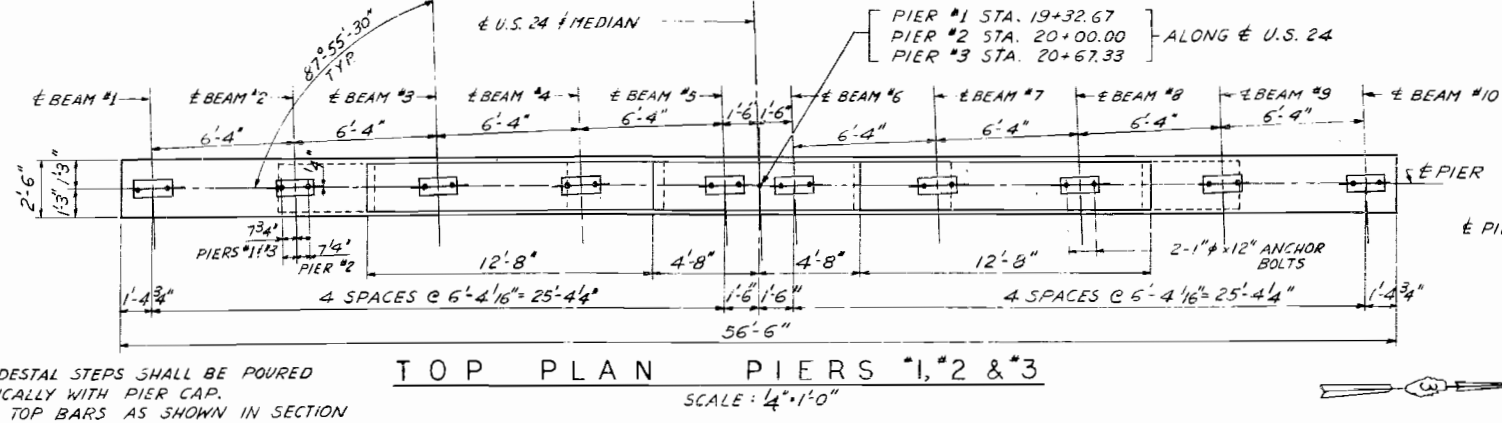
Note: For Parapet Elevation see Sheet No 26 of 38.



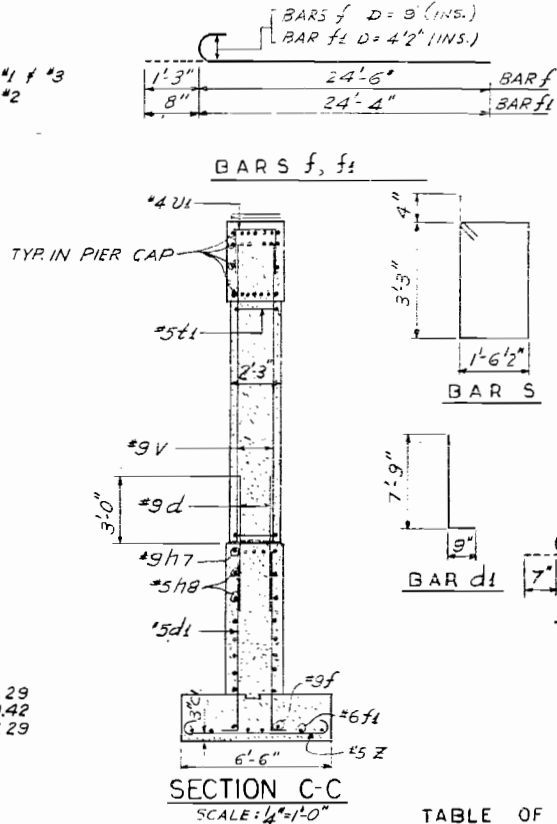
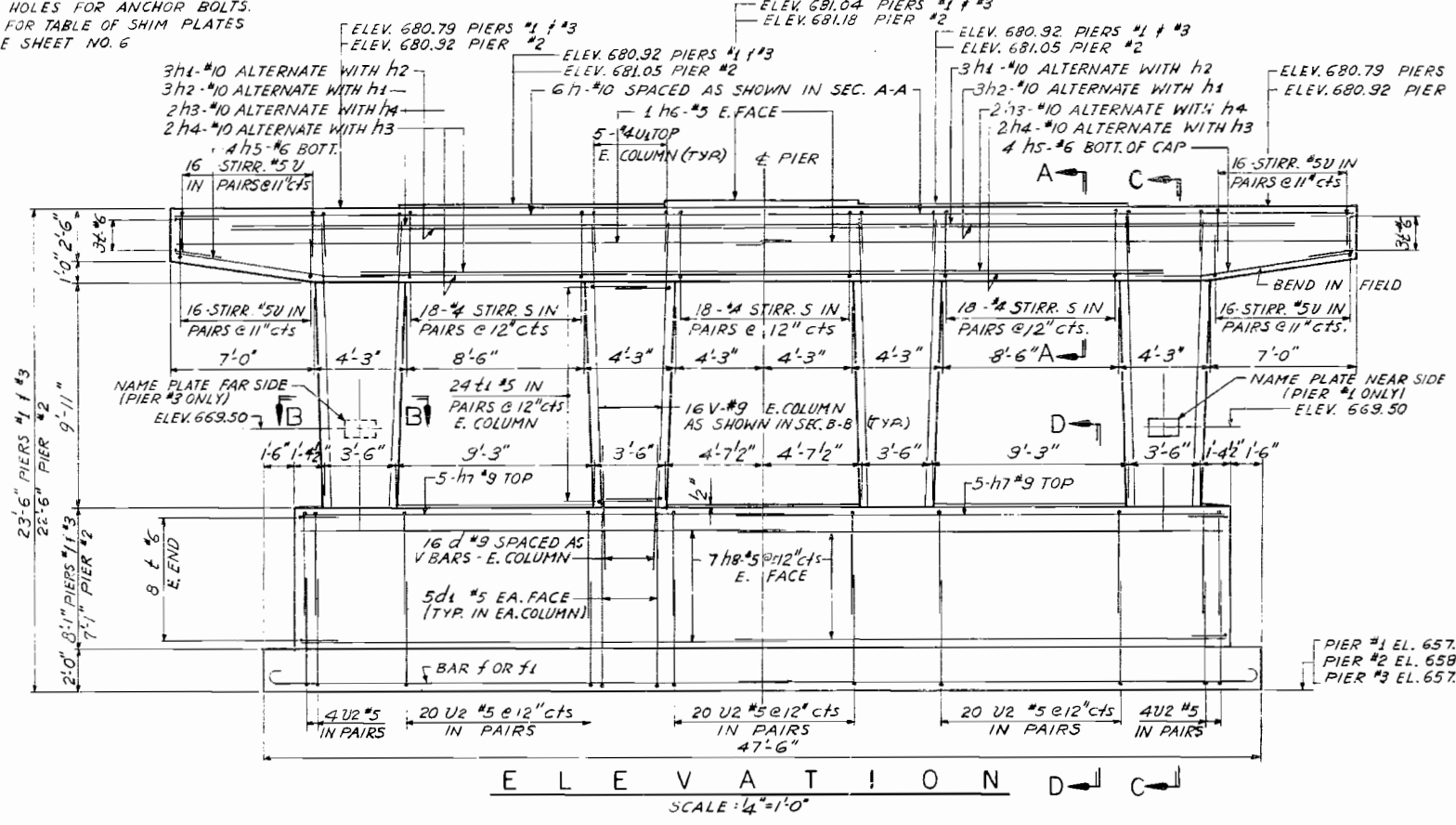
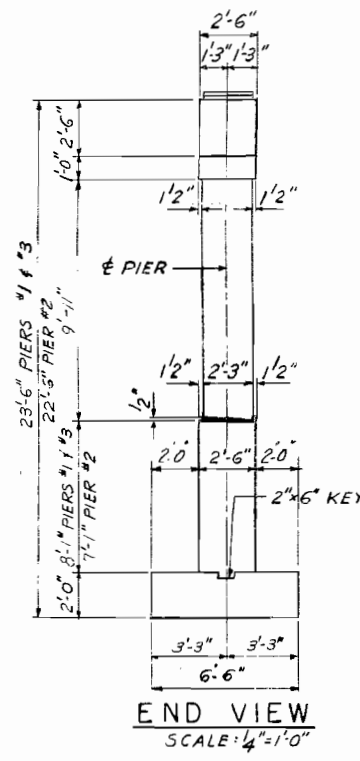
**NOTES:**  
All Posts shall be normal to parapet.  
All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-221 alloy 6061-T6 and shall extend a minimum of 2 panel lengths (attached to a minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.  
See Special Provisions for following Material Specifications:  
Cast Aluminum Alloy Bridge Post—Alloy A344-T4  
Stainless Steel Bars, Cap Screws, Washers and Lockwashers.  
Fabric Bearing Pad  
**METHOD of MEASUREMENT:** Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.  
**BASIS of PAYMENT:** Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.  
Cost of rail splice, end caps, and hardware to be incident' to item ALUMINUM HANDRAIL.  
Provide 1- $\frac{1}{4}$ " and 2- $\frac{1}{4}$ " Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade—high spots shall be ground, and low spots shimmed.



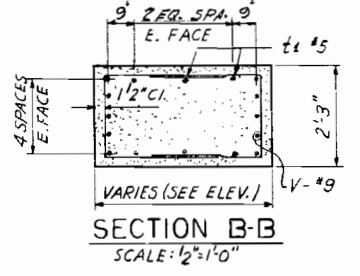
NOTE: PEDESTAL STEPS SHALL BE POURED MONOLITHICALLY WITH PIER CAP. SPACE TOP BARS AS SHOWN IN SECTION A-A TO AVOID INTERFERENCE WITH DRILLING OF HOLES FOR ANCHOR BOLTS. FOR TABLE OF SHIM PLATES SEE SHEET NO. 6



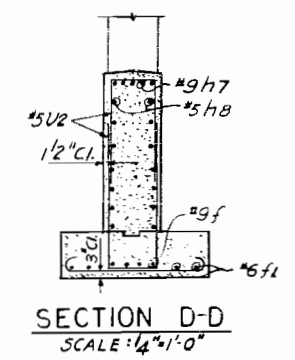
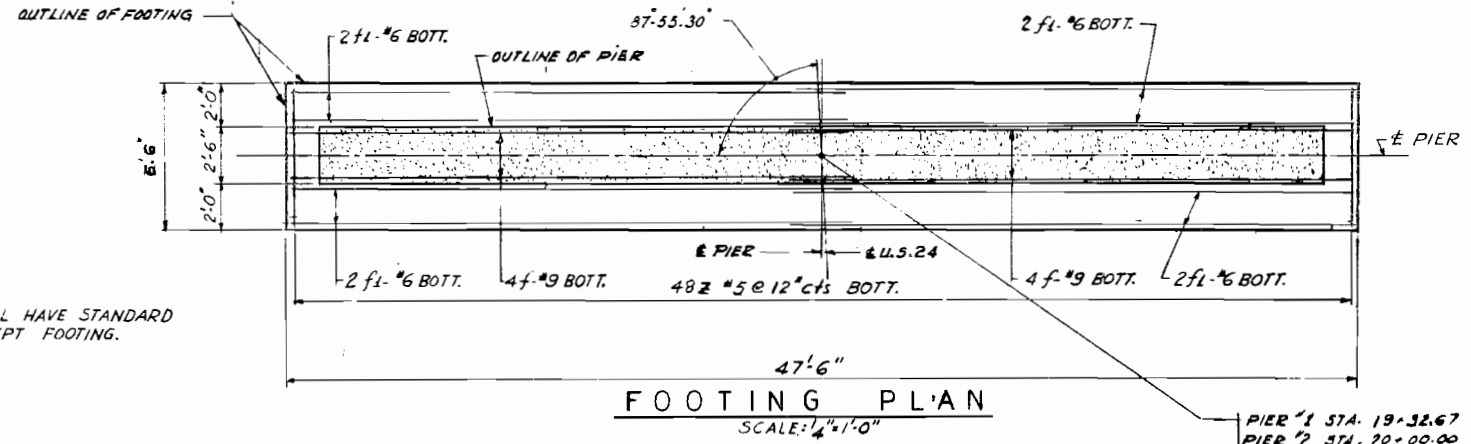
| BAR SCHEDULE FOR ONE PIER |     |      |        |       |
|---------------------------|-----|------|--------|-------|
| MARK                      | NO. | SIZE | LENGTH | SHAPE |
| U                         | 12  | #10  | 28'-0" | STR.  |
| U1                        | 6   | #10  | 31'-9" | "     |
| U2                        | 6   | #10  | 18'-9" | "     |
| h1                        | 4   | #10  | 12'-9" | "     |
| h2                        | 4   | #10  | 25'-6" | "     |
| h3                        | 8   | #6   | 10'-6" | "     |
| h4                        | 4   | #5   | 29'-0" | "     |
| h5                        | 10  | #9   | 23'-6" | "     |
| h6                        | 28  | #5   | 23'-0" | "     |
| U                         | 64  | #5   | 5'-6"  | "     |
| U1                        | 20  | #4   | 6'-0"  | "     |
| U2                        | 68  | #5   | 13'-6" | "     |
| h                         | 22  | #6   | 6'-3"  | "     |
| h1                        | 36  | #5   | 7'-6"  | "     |
| h2                        | 54  | #4   | 10'-3" | "     |
| V                         | 64  | #9   | 13'-0" | STR.  |
| d                         | 64  | #9   | 6'-0"  | "     |
| d1                        | 40  | #5   | 8'-6"  | "     |
| f                         | 8   | #9   | 25'-9" | "     |
| f1                        | 8   | #6   | 25'-0" | "     |
| Z                         | 48  | #5   | 7'-3"  | "     |



| TABLE OF QUANTITIES |          |          |         |               |
|---------------------|----------|----------|---------|---------------|
| ITEM                | UNIT     | QUANTITY |         |               |
|                     |          | PIER #1  | PIER #2 | PIER #3 TOTAL |
| CLASS "X" CONCRETE  | CU. YDS. | 85.7     | 84.9    | 85.4          |
| REINFORCEMENT BARS  | LBS.     | 13550    | 13550   | 40650         |



NOTE: ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT FOOTING.



PIERS #1, 2 & 3  
 GRADE SEPARATION  
 U.S. ROUTE 24  
 OVER F.A.I. ROUTE 57  
 F.A.I. PROJECT I-57-61  
 F.A.I. ROUTE 57 SECTION 38-5HB-2  
 IROQUOIS COUNTY  
 STATION 647+34.20

DESIGNED BY: P.X.  
 DRAWN BY: P.X.  
 CHECKED BY: A.M.  
 IN CHARGE: P.X.

Rev. Raised Crash Walls 10" Class X Conc. Pier 1 from 85.5 to 83.9 Cu. Yds. Pier 2 from 82.5 to 84.9 Cu. Yds. Pier 3 from 86.5 to 83.9 Cu. Yds. Total from 255.5 to 252.7 Cu. Yds. 11-29-66 N.R.F.

Rev. 3-26-65: Removed Class A Excavation from Piers #1, 2 & 3

WING WALL NO. 1

WING WALL NO. 2

ABUTMENT NO. 1

ABUTMENT NO. 2

THIS LINE: INSIDE FACE OF RAIL IN SUPERSTRUCTURE (PARALLEL TO U.S. 24)

INSIDE FACE

BACK OF ABUTMENT

FACE OF ABUTMENT

OPTIONAL CONST. JOINTS

NOTE: SHADED AREA OF CONCRETE SHALL BE POURED AFTER FORMS FOR SUPERSTRUCTURE HAVE BEEN REMOVED. QUANTITIES ARE INCLUDED WITH SUPERSTRUCTURE.

CONFORMS TO CROWN OF ADJACENT ROADWAY

FEDERAL AID ROUTE NO. 37

SEC. 283 HB-2

COUNTY: ROGERS

TOTAL SHEETS: 48

SHEET NO. 36

B.P.R. PROJ. 4

ILLINOIS PROJECT 1-57-6

SHEET NO. 9 OF 11

COMFORMS TO CROWN OF  
ADJACENT ROADWAY

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

Technical drawing of a bridge cross-section, showing various structural components, dimensions, and elevations.

**Plan View (Top):**

- Overall width: 56'-0"
- Dimensions from left to right: 2'-0", 3'-0", 14'-0", 9'-0", 9'-0", 14'-0", 3'-0", 2'-0".
- Centerline: U.S. 24
- Median: 17' V.I. @ 12" CTRS EACH FACE
- Reinforcement: 18 V.I. @ 12" CTRS EACH FACE
- Reinforcement: 18 V.I. @ 12" CTRS EACH FACE
- Reinforcement: 57 L.I. @ 12" CTRS
- Reinforcement: 6 V.I. @ 12" CTRS EACH FACE
- Reinforcement: 3 V.I. @ 12" CTRS EACH FACE

**Section View (Bottom):**

- Overall width: 56'-0"
- Dimensions from left to right: 2'-0", 3'-0", 14'-0", 9'-0", 9'-0", 14'-0", 3'-0", 2'-0".
- Centerline: U.S. 24
- Median: 17' V.I. @ 12" CTRS EACH FACE
- Reinforcement: 18 V.I. @ 12" CTRS EACH FACE
- Reinforcement: 18 V.I. @ 12" CTRS EACH FACE
- Reinforcement: 57 L.I. @ 12" CTRS
- Reinforcement: 6 V.I. @ 12" CTRS EACH FACE
- Reinforcement: 3 V.I. @ 12" CTRS EACH FACE

**Notes:**

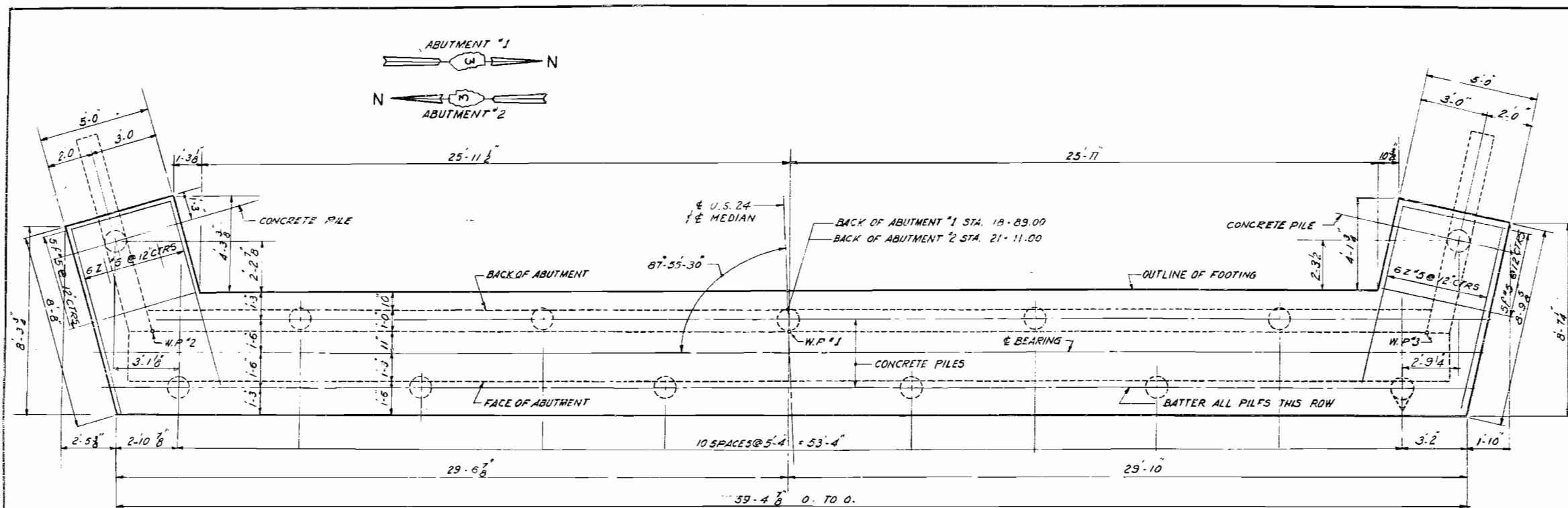
- THIS LINE: INSIDE FACE OF RAIL IN SUPER-STRUCTURE.
- EDGE OF PAVEMENT
- PARALLEL TO & BRG. @ RT. L.S. TO & RDWY PARALLEL TO & BRG. @ RT. L.S. TO & RDWY
- THIS LINE: INSIDE FACE OF RAIL IN SUPERSTRUCTURE
- CONCRETE PILES FOR PILE DATA SEE SHEET FOR DETAIL SEE SHEET NO.

SECTION B-B  
SCALE 3" = 1'-0"

SECTION C-C  
SCALE 3" = 1'-0"

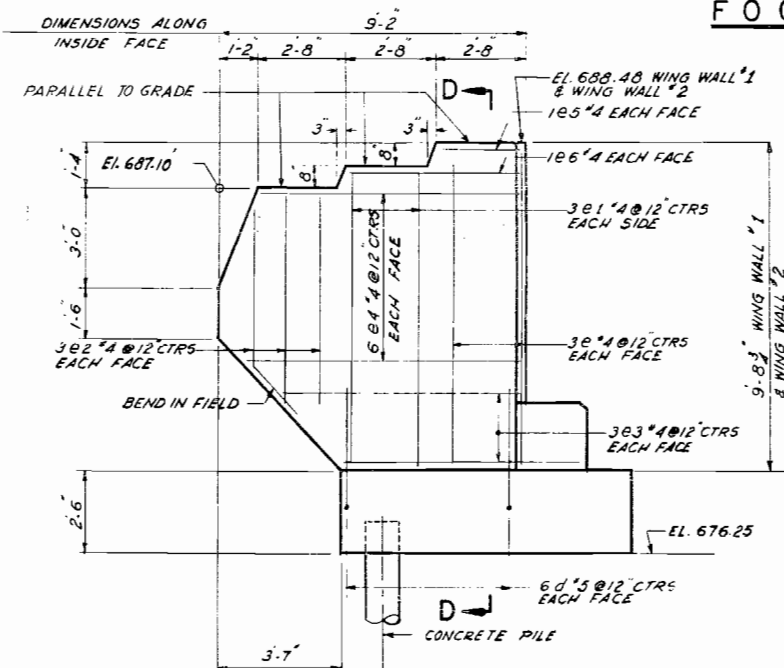
|              |      |
|--------------|------|
| DESIGNED BY: | P.X. |
| DRAWN BY:    | A.M. |
| CHECKED BY:  | P.X. |
| IN CHARGE :  | P.X. |

ABUTMENTS & WING WALLS-PART I  
GRADE SEPARATION  
U.S. ROUTE 24  
OVER F.A.I. ROUTE 57  
FA. PROJECT I-57-61  
F.A.I. ROUTE 57 SECTION 38\_5 HB\_2  
IROQUOIS COUNTY  
STATION 647+34.20



FOOTING AND PILE PLAN

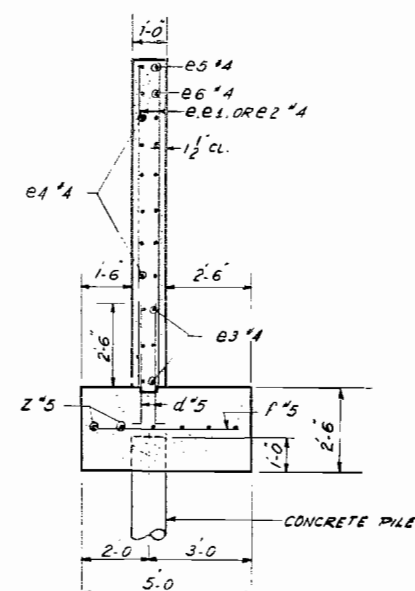
SCALE  $\frac{3}{8}'' = 1'-0''$



ELEVATION W1-W1

SCALE  $\frac{3}{8}'' = 1'-0''$

NOTE: ELEVATION W2-W2 SIMILAR  
AT OPPOSITE HAND.



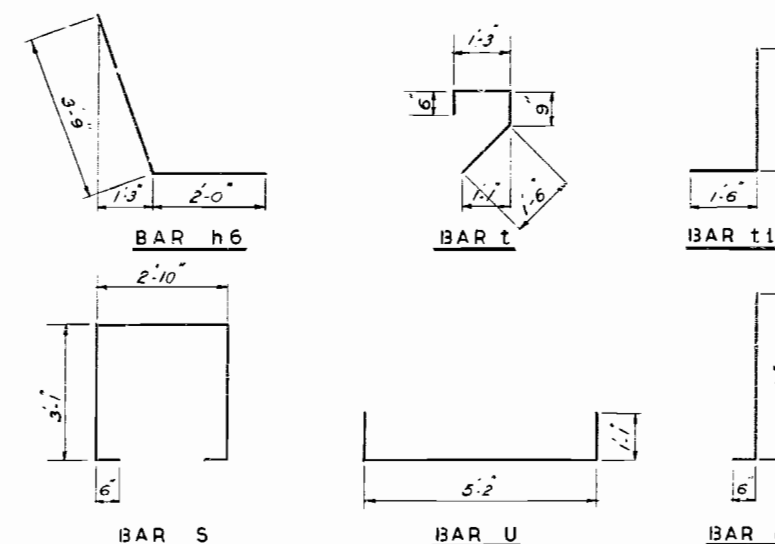
SECTION D-D

SCALE  $\frac{3}{8}'' = 1'-0''$

PILE SCHEDULE FOR ONE ABUTMENT

| PILES        | CONCRETE |
|--------------|----------|
| CAPACITY     | 30 TONS  |
| NO. REQUIRED | 13*      |
| EST. LENGTH  | 35 FT    |

\* INCLUDES 1 CONCRETE TEST PILE @ Abut. # 2



QUANTITIES FOR ABUTMENTS

| ITEM                  | UNIT     | QUANTITY |          |       |
|-----------------------|----------|----------|----------|-------|
|                       |          | ABUT. #1 | ABUT. #2 | TOTAL |
| CLASS 'X' CONCRETE    | CU. YDS. | 61       | 61       | 122   |
| REINFORCEMENT BARS    | LB.      | 4530     | 4530     | 9060  |
| CONCRETE PILES        | LIN. FT. | 455      | 420      | 875   |
| TEST PILES (CONCRETE) | EACH     |          | 1        | 1     |

| BAR SCHEDULE FOR ONE ABUTMENT |     |      |        |          |
|-------------------------------|-----|------|--------|----------|
| MARK                          | NO. | SIZE | LENGTH | SHAPE    |
| h                             | 8   | "4   | 26-9   | STRAIGHT |
| h1                            | 16  | "4   | 28-9   | "        |
| h2                            | 8   | "7   | 28-9   | "        |
| h3                            | 8   | "5   | 29-9   | "        |
| h4                            | 16  | "5   | 30-3   | "        |
| h5                            | 4   | "8   | 30-3   | "        |
| h6                            | 24  | "5   | 5-9    | "        |
| h7                            | 2   | "4   | 15-3   | STRAIGHT |
|                               |     |      |        |          |
| v                             | 72  | "4   | 6'-0"  | STRAIGHT |
| v1                            | 46  | "4   | 7'-0"  | "        |
|                               |     |      |        |          |
| l                             | 57  | "4   | 4'-0"  | "        |
| l1                            | 6   | "4   | 5'-0"  | "        |
|                               |     |      |        |          |
| s                             | 59  | "5   | 10'-0" | "        |
|                               |     |      |        |          |
| u                             | 53  | "5   | 7-3    | "        |
|                               |     |      |        |          |
| z                             | 12  | "5   | 8-6    | STRAIGHT |
|                               |     |      |        |          |
| f                             | 10  | "5   | 4-9    | STRAIGHT |
|                               |     |      |        |          |
| d                             | 24  | "5   | 4-3    | "        |
|                               |     |      |        |          |
| e                             | 12  | "4   | 9-6    | STRAIGHT |
| e1                            | 12  | "4   | 8-9    | "        |
| e2                            | 12  | "4   | 6-3    | "        |
| e3                            | 12  | "4   | 7-5    | "        |
| e4                            | 24  | "4   | 7-9    | "        |
| e5                            | 4   | "4   | 2-6    | "        |
| e6                            | 4   | "4   | 5-0    | "        |

NOTE:  
FOR DETAIL OF CONCRETE PILES  
SEE SHEET NO. 11  
WORK THIS DRAWING WITH SHEET NO. 9

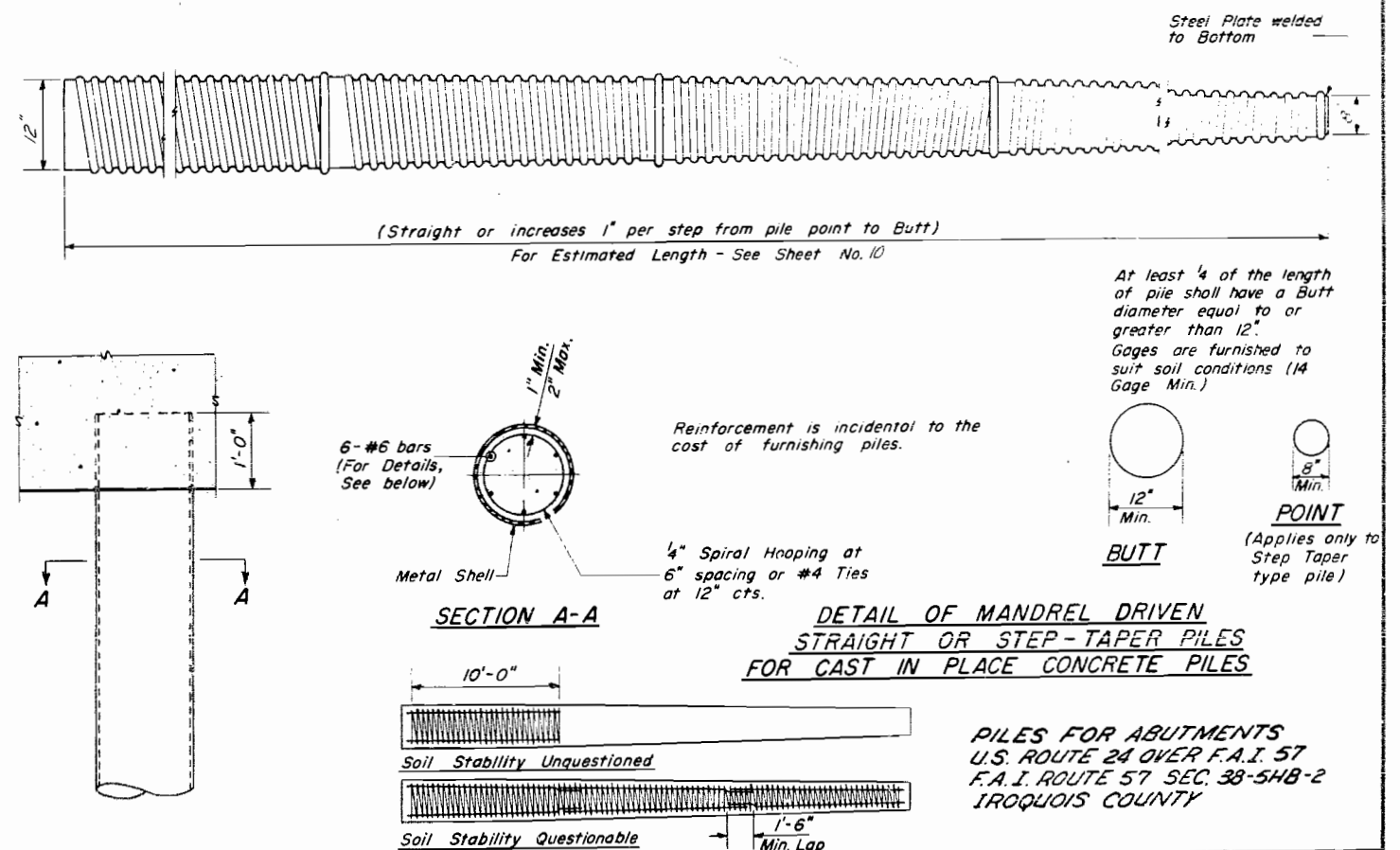
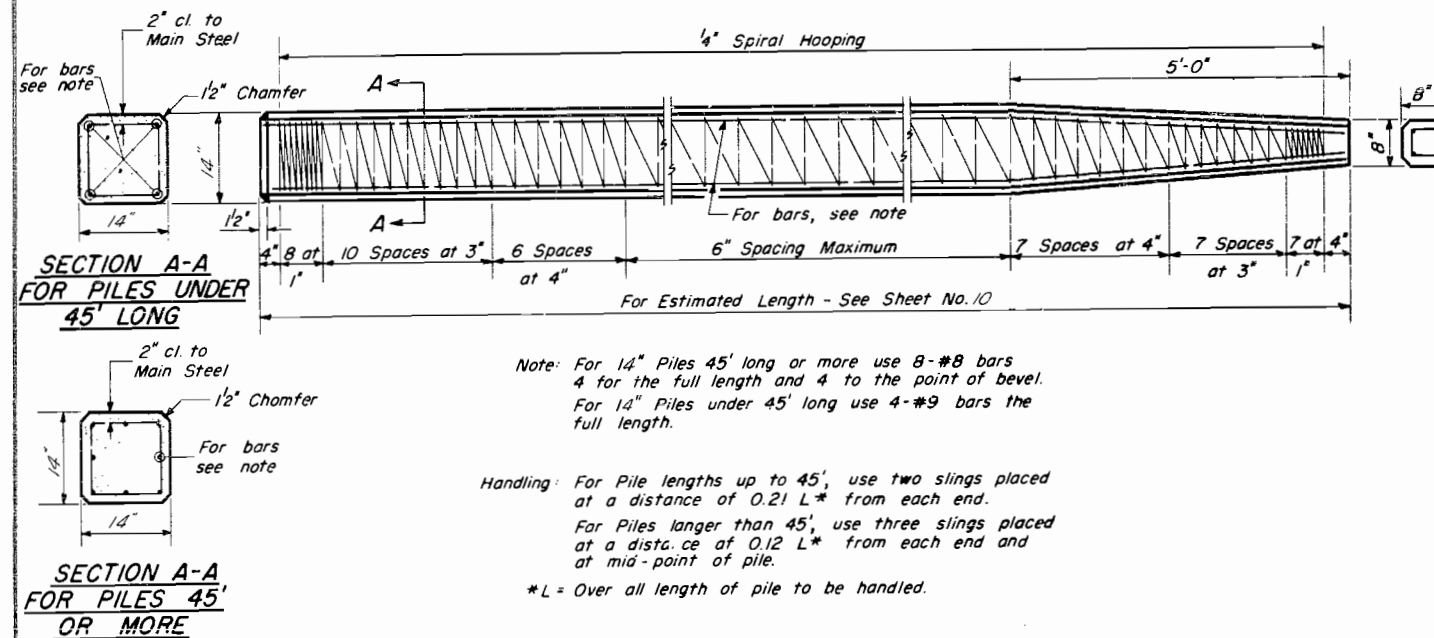
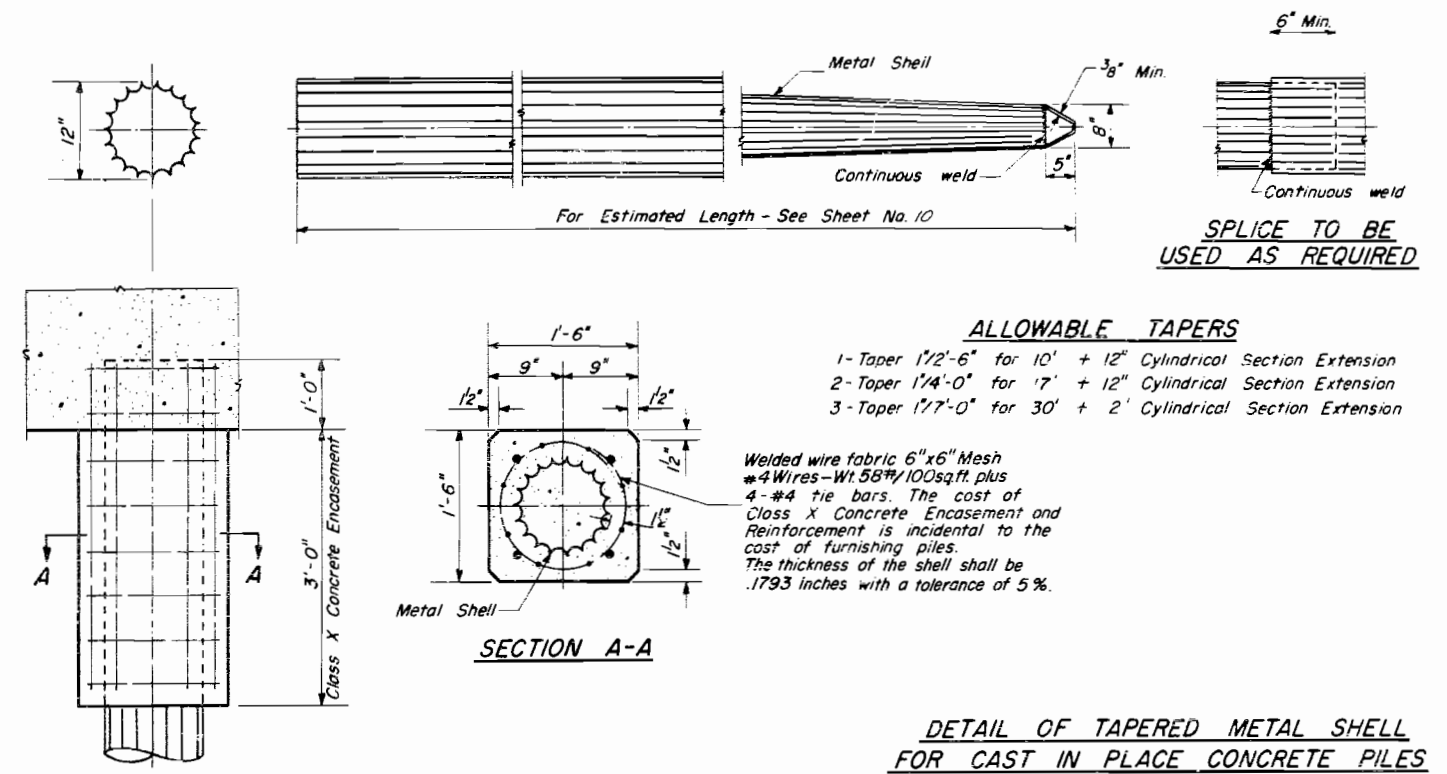
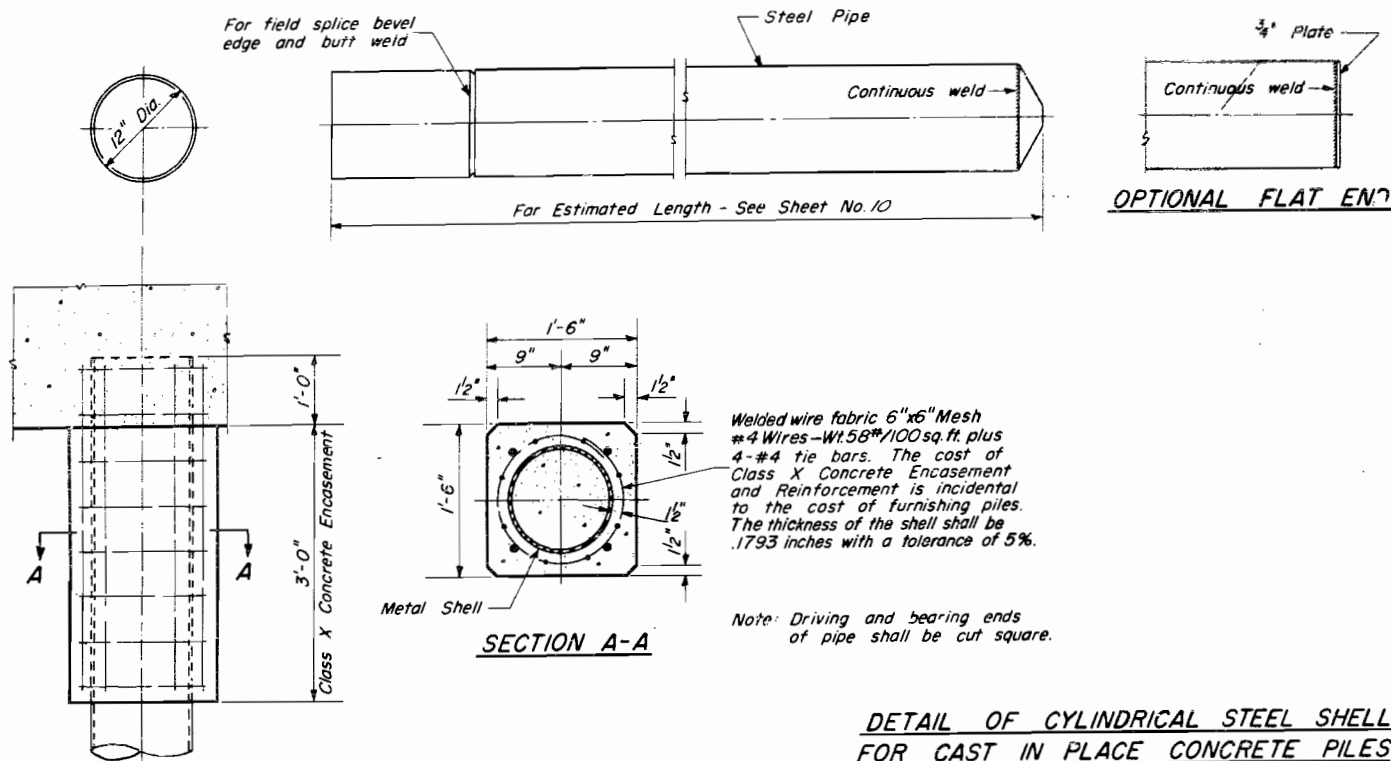
DESIGNED BY: P.X.  
DRAWN BY: A.M.  
CHECKED BY: P.X.  
IN CHARGE: P.X.

ABUTMENTS & WING WALLS - PART II  
GRADE SEPARATION  
U.S. ROUTE 24  
OVER F.A.I. ROUTE 57  
F.A. PROJECT 1-57-61  
F.A.I. ROUTE 57 SECTION 38-5 HB-2  
IROQUOIS COUNTY  
STATION 647+34.20

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

| ROUTE NO.              | SECTION  | COUNTY   | TOTAL SHEETS     | SHEET NO. |
|------------------------|----------|----------|------------------|-----------|
| U.S. 57                | 38-5     | Iroquois | 48               | 38        |
| PROJ. ROAD DIST. NO. 1 | ALUMINUM | FEA.     | PROJECT: I-57-67 |           |

SHEET NO. 11  
11 SHEETS



|                      |                                            |
|----------------------|--------------------------------------------|
| DESIGNED             | 19                                         |
| CHECKED              | EXAMINED                                   |
| P.G. Barnett         | ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES |
| DRAWN W. A. Sausaman | PASSED                                     |
| CHECKED              | APPROVED                                   |
|                      | ENGINEER OF DESIGN                         |
|                      | CHIEF HIGHWAY ENGINEER                     |