

- SYMBOLS**
- INDICATES EXISTING BUILDINGS.
  - INDICATES FUTURE WORK NOT IN CONTRACT.
  - INDICATES NEW WORK.

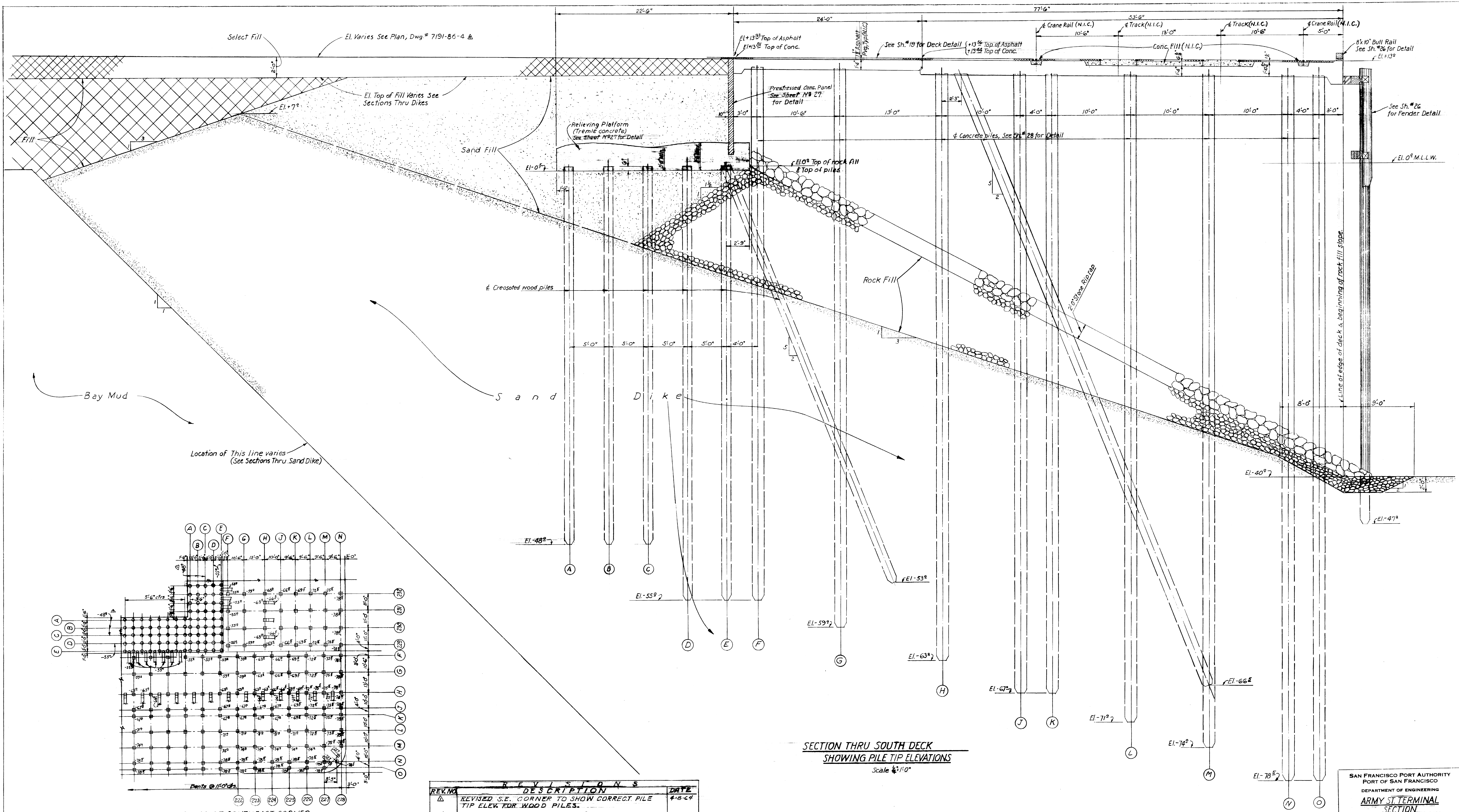
**NOTE:**  
 THIS DRAWING INCLUDED TO SHOW FUTURE TERMINAL AND FOR REFERENCE ONLY.  
 ALL ELEVATIONS ON THESE DRAWINGS ARE BASED ON ELEVATION 0.0 = M.L.L.W.

REV. NO.	DESCRIPTION	DATE
1	General revision of alignment of railroad tracks.	4-6-64
2	Changed future fence line from E of Maryland St to west E of Maryland St.	11-25-64
3	ADDED EXTENSION TO SOUTH WHARF	8-10-65

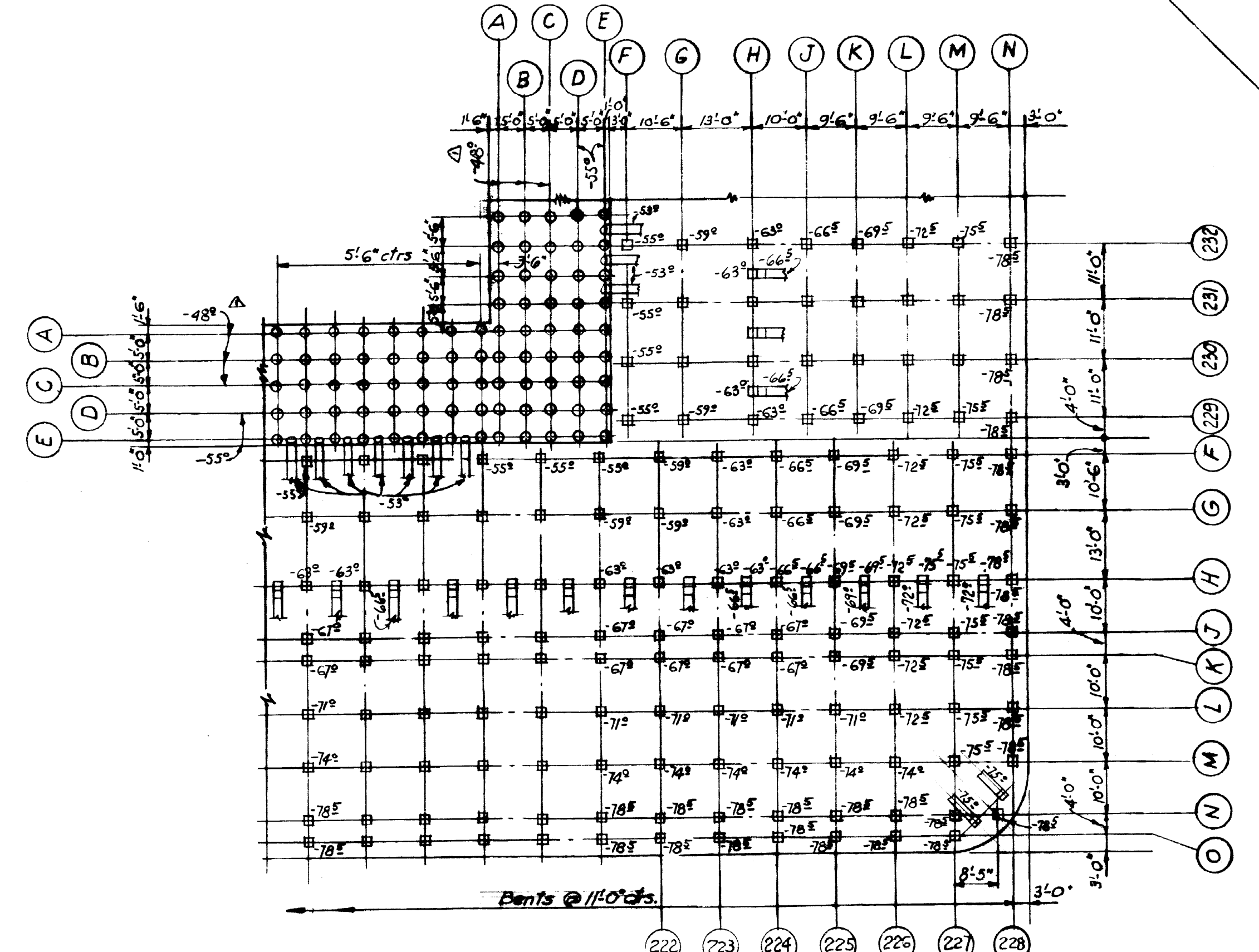
APR 13 7-10-63  
 Supt. of Terminal  
 S. S. Thomas

ARMY ST. TERMINAL  
 GENERAL PLAN  
 7-8-63  
 1/100-0  
 6932-86-1





SECTION THRU SOUTH DECK  
SHOWING PILE TIP ELEVATIONS  
Scale 1/2"=1'-0"



PLAN OF SOUTHEAST CORNER  
SHOWING PILE TIP ELEVATIONS FOR BENTS 222 TO 228  
Scale 1/2"=1'-0"

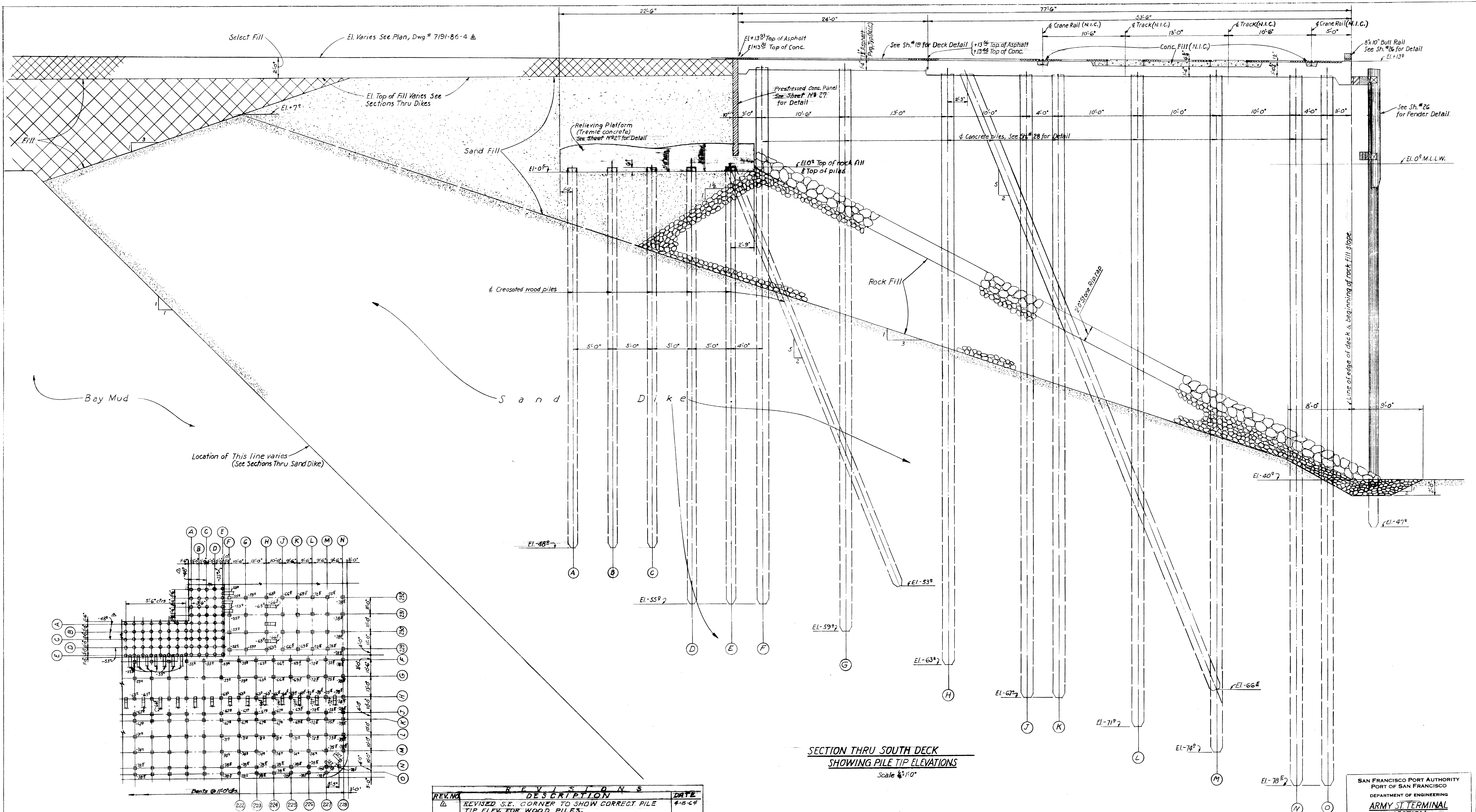
REV. NO.	DESCRIPTION	DATE
1	REVISED S.E. CORNER TO SHOW CORRECT PILE TIP ELEV. FOR WOOD PILES.	4-8-64
2	FINISH GRADES REVISED PER DWG # 7191-86-4	11-4-65

SAN FRANCISCO PORT AUTHORITY  
PORT OF SAN FRANCISCO  
DEPARTMENT OF ENGINEERING  
ARMY ST. TERMINAL  
SECTION  
THRU SOUTH DECK

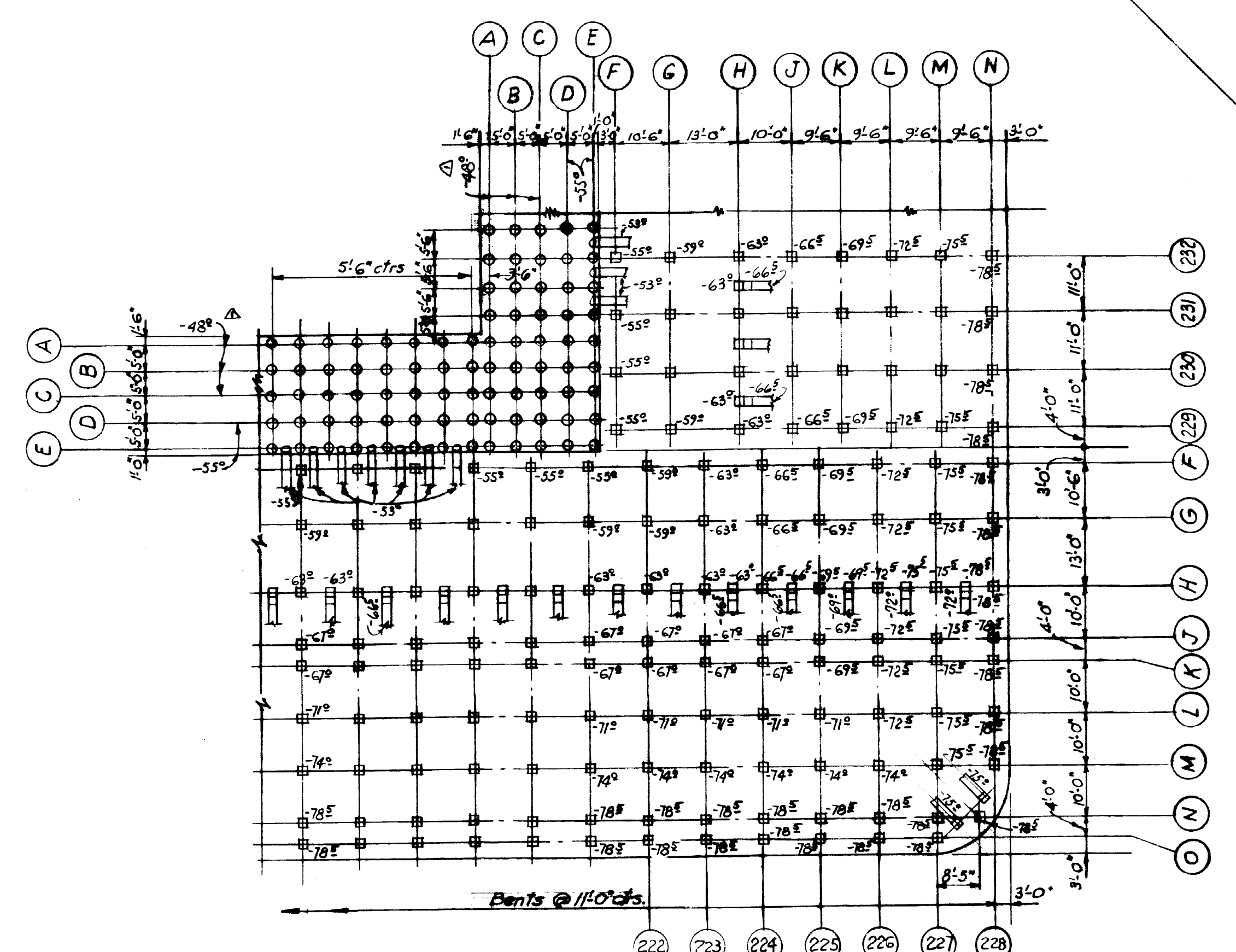
IN CHARGE OF: W.F.M. CHECKED BY: W.F.P.  
MADE BY: R.V.S. DATE: 7-8-63  
TRACED BY: G.K. SCALE AS SHOWN  
DRAWING NO. 6946-86-1 SHEET NO. 15 OF 33

Approved 7-10-63  
San Francisco Port Authority  
Port of San Francisco  
S. J. Gorman  
Chief Engineer





SECTION THRU SOUTH DECK  
SHOWING PILE TIP ELEVATIONS  
Scale 1/2" = 1'-0"



PLAN OF SOUTHEAST CORNER  
SHOWING PILE TIP ELEVATIONS FOR BENTS 222 TO 228  
Scale 1/2" = 1'-0"

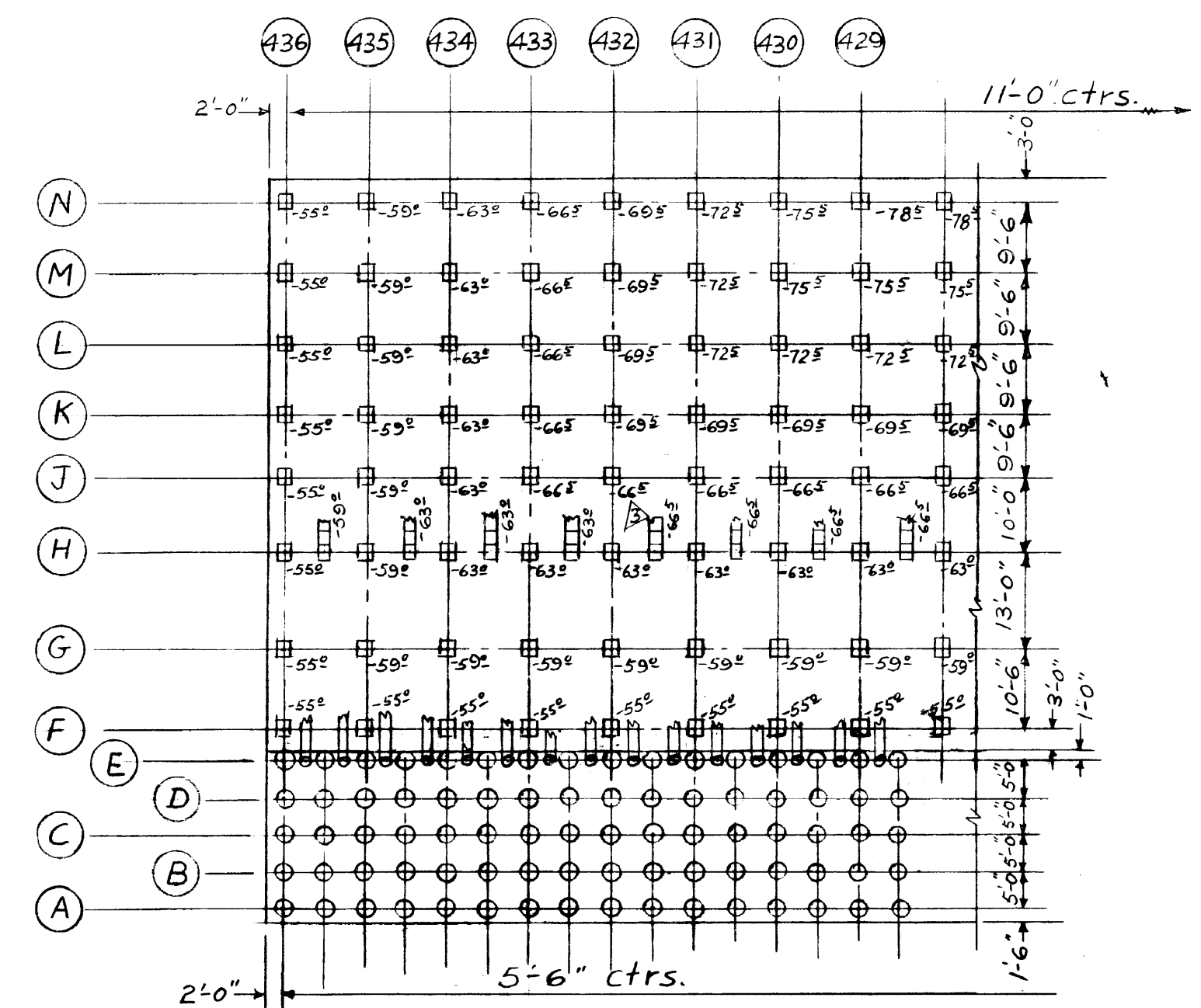
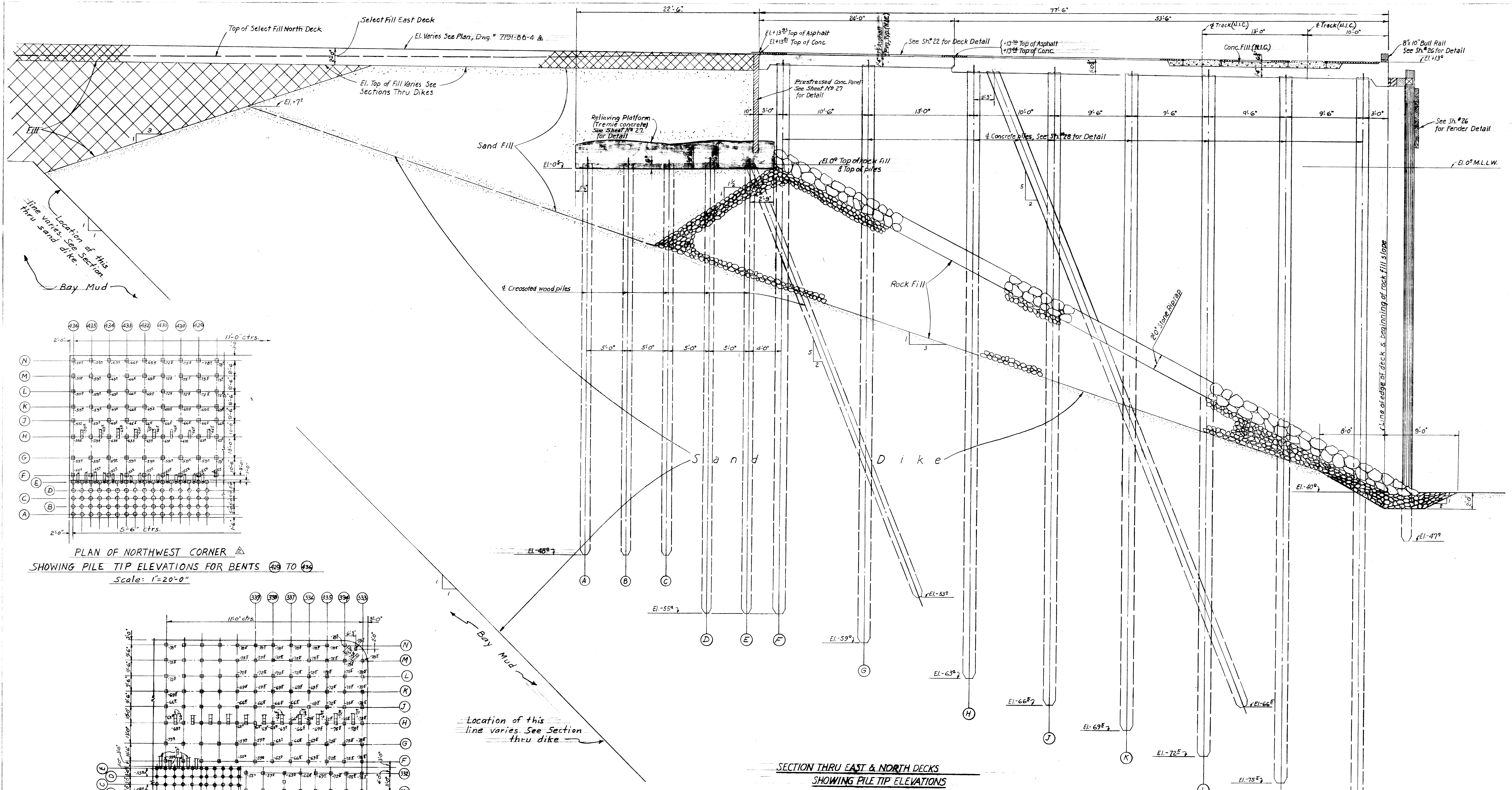
REV. NO.	DESCRIPTION	DATE
1	REVISED S.E. CORNER TO SHOW CORRECT PILE TIP ELEV. FOR WOOD PILES.	4-8-64
2	FINISH GRADES REVISED PER DWG # 7191-86-4	11-4-65

SAN FRANCISCO PORT AUTHORITY  
PORT OF SAN FRANCISCO  
DEPARTMENT OF ENGINEERING  
**ARMY ST. TERMINAL**  
SECTION  
**THRU SOUTH DECK**

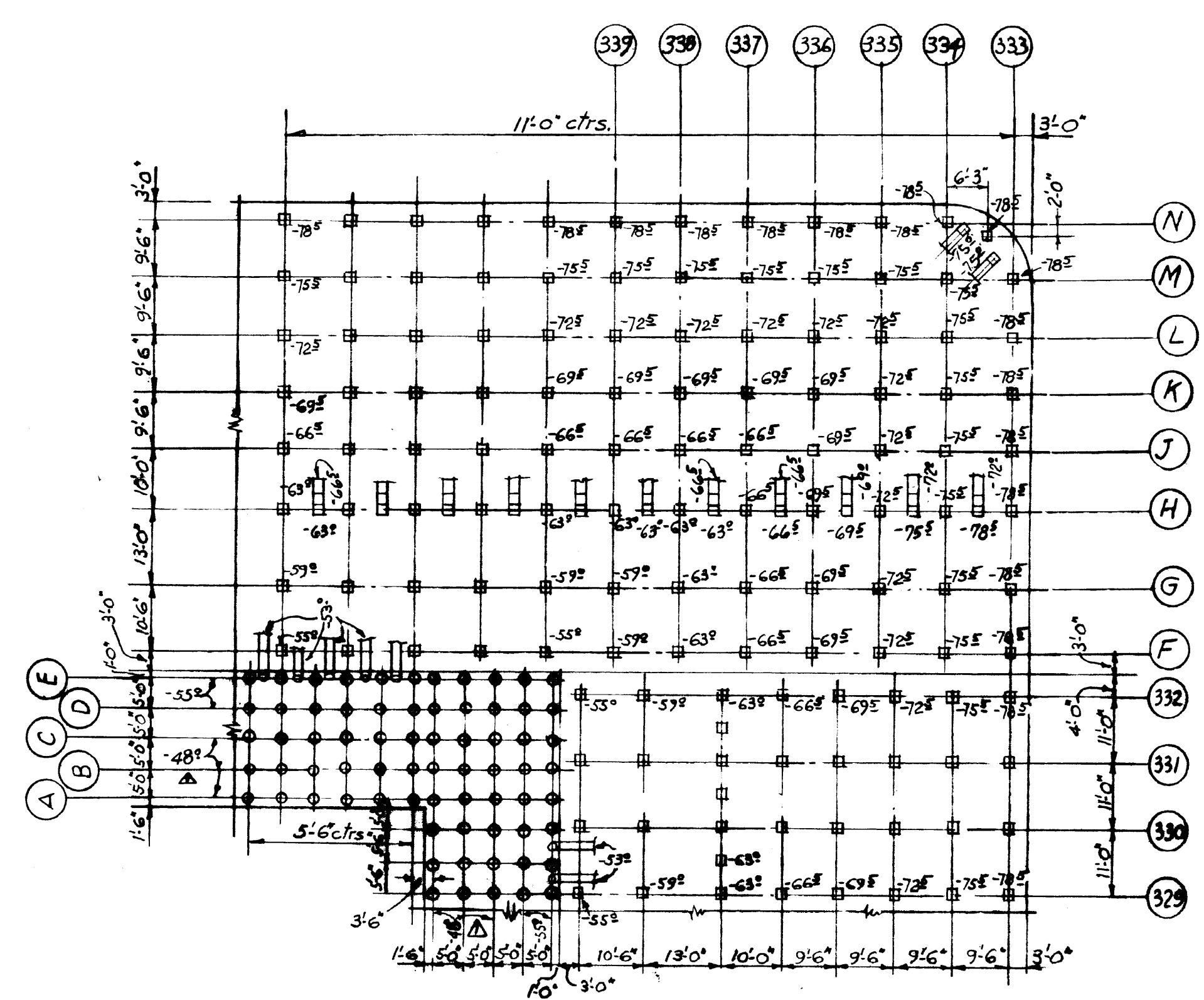
IN CHARGE OF: W.F.M. CHECKED BY: W.F.P.  
MADE BY: R.V.S. DATE: 7-8-63  
TRACED BY: G.K. SCALE AS SHOWN  
DRAWING NO. 6946-86-1 SHEET NO. 15 OF 33

Approved 7-10-63  
San Francisco Port Authority  
Port of San Francisco  
*S. J. Gorman*  
Chief Engineer





PLAN OF NORTHWEST CORNER  
SHOWING PILE TIP ELEVATIONS FOR BENTS 429 TO 434  
Scale: 1"=20'-0"



PLAN OF NORTHEAST CORNER  
SHOWING PILE TIP ELEVATIONS FOR BENTS 333 TO 339  
Scale: 1"=20'

REV. NO.	DESCRIPTION	DATE
1	REVISED N.E. CORNER TO SHOW CORRECT PILE TIP ELEV. FOR WOOD PILES.	4-8-64
2	REVISED CONC. PILE TIP ELEV. AT NORTHWEST CORNER.	9-21-64
3	REVISED TIP ELEV. FOR BATTERED PILES BETWEEN BENTS 429 TO 432 ON LINE H	10-9-64
4	FINISH GRADES REVISED. PER DWG # 7191-86-4	11-4-65

SECTION THRU EAST & NORTH DECKS  
SHOWING PILE TIP ELEVATIONS  
Scale: 1/4"=1'-0"

Approved 7-10-63  
San Francisco Port Authority  
Port of San Francisco  
*S. J. Gorman*  
Chief Engineer

SAN FRANCISCO PORT AUTHORITY  
PORT OF SAN FRANCISCO  
DEPARTMENT OF ENGINEERING  
**ARMY ST. TERMINAL**  
**SECTION THRU EAST & NORTH DECKS**  
IN CHARGE OF P.E.M. CHECKED BY P.M.R.  
MADE BY R.V.L. DATE 7-8-63  
TRACED BY S.K. SCALE AS SHOWN  
DRAWING NO. SHEET NO.  
**6947-86-1** 16  
OF 38



# LOADING FOR THE DESIGN OF ARMY ST. TERMINAL

WESTERN PACIFIC FREIGHT CAR 40% OVER LOAD (TOTAL 280,000 LBS.) 70 TON FREIGHT CAR 40% OVER LOAD (TOTAL 212,000 LBS.)		UNIFORM LIVE LOAD - 1000 P.S.F.	CLARK 500 STRADDLE CARRIER (25 TON CONTAINER)																																																																								
<table border="1"> <tr> <th colspan="2">FREIGHT CAR</th> <th colspan="2">FREIGHT CAR</th> </tr> <tr> <td>9'-0"</td><td>22'-0"</td> <td>9'-0"</td><td>22'-0"</td> </tr> <tr> <td>10.0</td><td>70.0</td> <td>10.0</td><td>70.0</td> </tr> <tr> <td>35.0</td><td>35.0</td> <td>35.0</td><td>35.0</td> </tr> <tr> <td>45.5</td><td>45.5</td> <td>45.5</td><td>45.5</td> </tr> <tr> <td>5.6</td><td>25'-0"</td> <td>5.6</td><td>25'-0"</td> </tr> <tr> <td>53.0</td><td>53.0</td> <td>53.0</td><td>53.0</td> </tr> <tr> <td>26.5</td><td>26.5</td> <td>26.5</td><td>26.5</td> </tr> <tr> <td>34.4</td><td>34.4</td> <td>34.4</td><td>34.4</td> </tr> </table>		FREIGHT CAR		FREIGHT CAR		9'-0"	22'-0"	9'-0"	22'-0"	10.0	70.0	10.0	70.0	35.0	35.0	35.0	35.0	45.5	45.5	45.5	45.5	5.6	25'-0"	5.6	25'-0"	53.0	53.0	53.0	53.0	26.5	26.5	26.5	26.5	34.4	34.4	34.4	34.4	<table border="1"> <tr> <th colspan="2">H2O-S16 TRUCK LOAD</th> <th colspan="2">Alternate Loading For Rear Axle</th> </tr> <tr> <td>12K</td><td>12K</td> <td>12K</td><td>12K</td> </tr> <tr> <td>14'-0"</td><td>14'-0"</td> <td>14'-0"</td><td>14'-0"</td> </tr> <tr> <td>18.0</td><td>32.0</td> <td>32.0</td><td>34.0</td> </tr> <tr> <td>4.8</td><td>18.0</td> <td>16.0</td><td>12.0</td> </tr> <tr> <td>6.6</td><td>18.4</td> <td>18.4</td><td>13.6</td> </tr> </table>	H2O-S16 TRUCK LOAD		Alternate Loading For Rear Axle		12K	12K	12K	12K	14'-0"	14'-0"	14'-0"	14'-0"	18.0	32.0	32.0	34.0	4.8	18.0	16.0	12.0	6.6	18.4	18.4	13.6	<table border="1"> <tr> <td>40.0</td><td>38.0</td><td>34.0</td><td>Axle Load</td> </tr> <tr> <td>20.0</td><td>19.0</td><td>17.0</td><td>wheel Load</td> </tr> <tr> <td>33.0</td><td>21.85</td><td>19.25</td><td>wheel Load +15% Impact</td> </tr> </table>	40.0	38.0	34.0	Axle Load	20.0	19.0	17.0	wheel Load	33.0	21.85	19.25	wheel Load +15% Impact
FREIGHT CAR		FREIGHT CAR																																																																									
9'-0"	22'-0"	9'-0"	22'-0"																																																																								
10.0	70.0	10.0	70.0																																																																								
35.0	35.0	35.0	35.0																																																																								
45.5	45.5	45.5	45.5																																																																								
5.6	25'-0"	5.6	25'-0"																																																																								
53.0	53.0	53.0	53.0																																																																								
26.5	26.5	26.5	26.5																																																																								
34.4	34.4	34.4	34.4																																																																								
H2O-S16 TRUCK LOAD		Alternate Loading For Rear Axle																																																																									
12K	12K	12K	12K																																																																								
14'-0"	14'-0"	14'-0"	14'-0"																																																																								
18.0	32.0	32.0	34.0																																																																								
4.8	18.0	16.0	12.0																																																																								
6.6	18.4	18.4	13.6																																																																								
40.0	38.0	34.0	Axle Load																																																																								
20.0	19.0	17.0	wheel Load																																																																								
33.0	21.85	19.25	wheel Load +15% Impact																																																																								

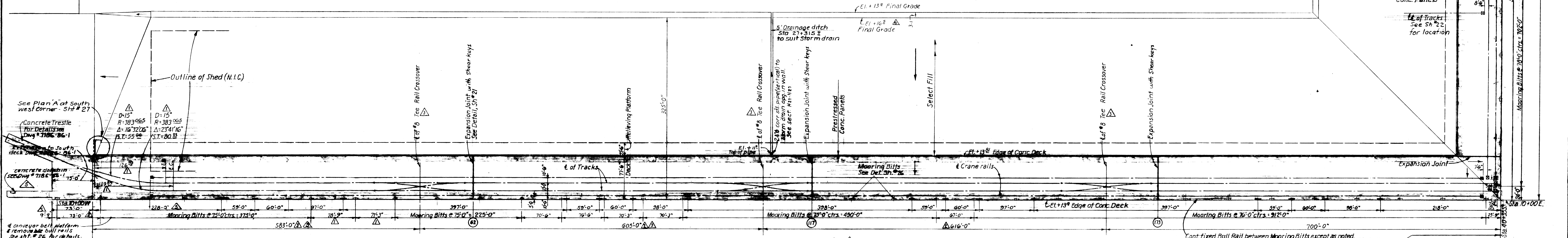
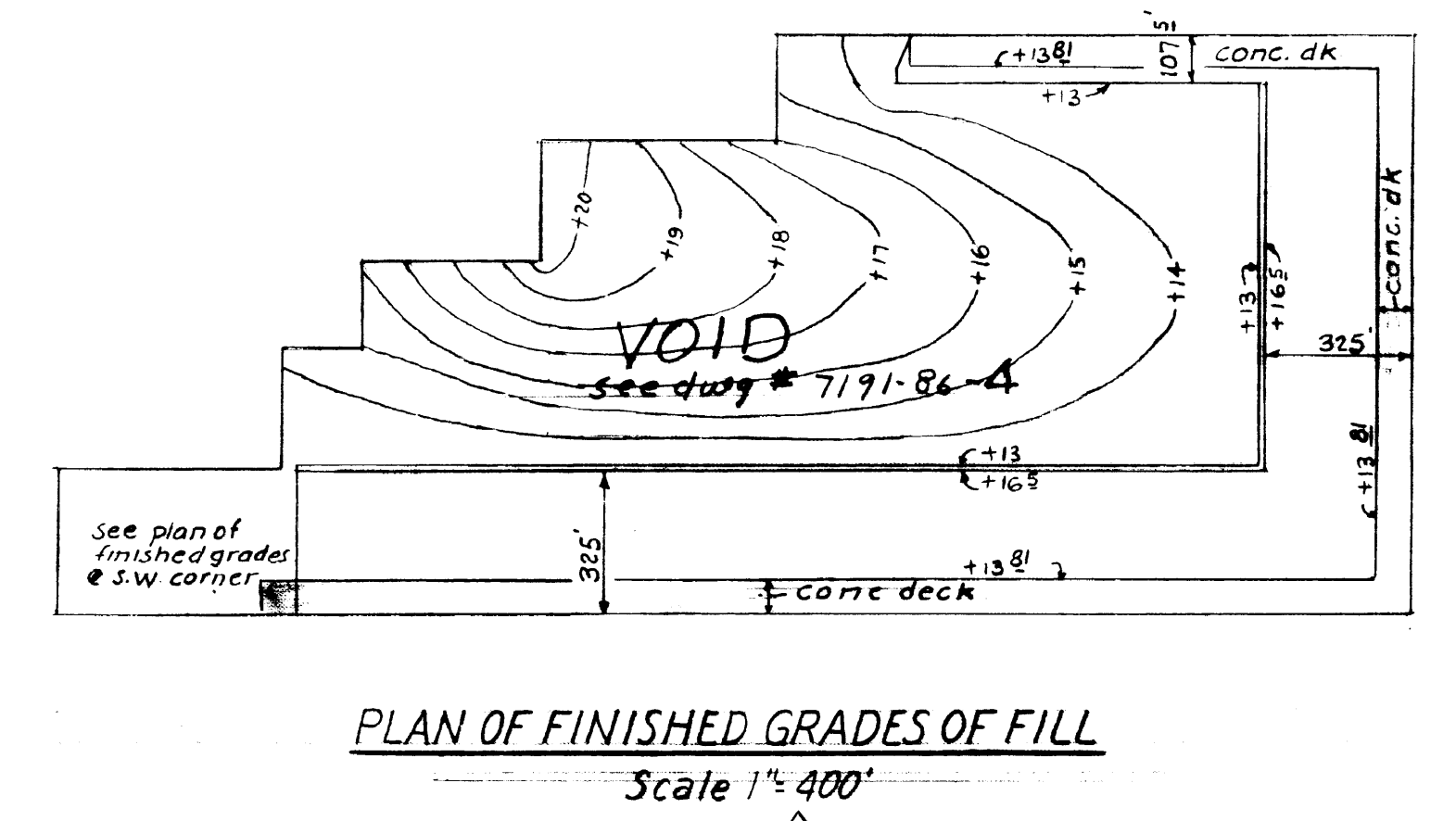
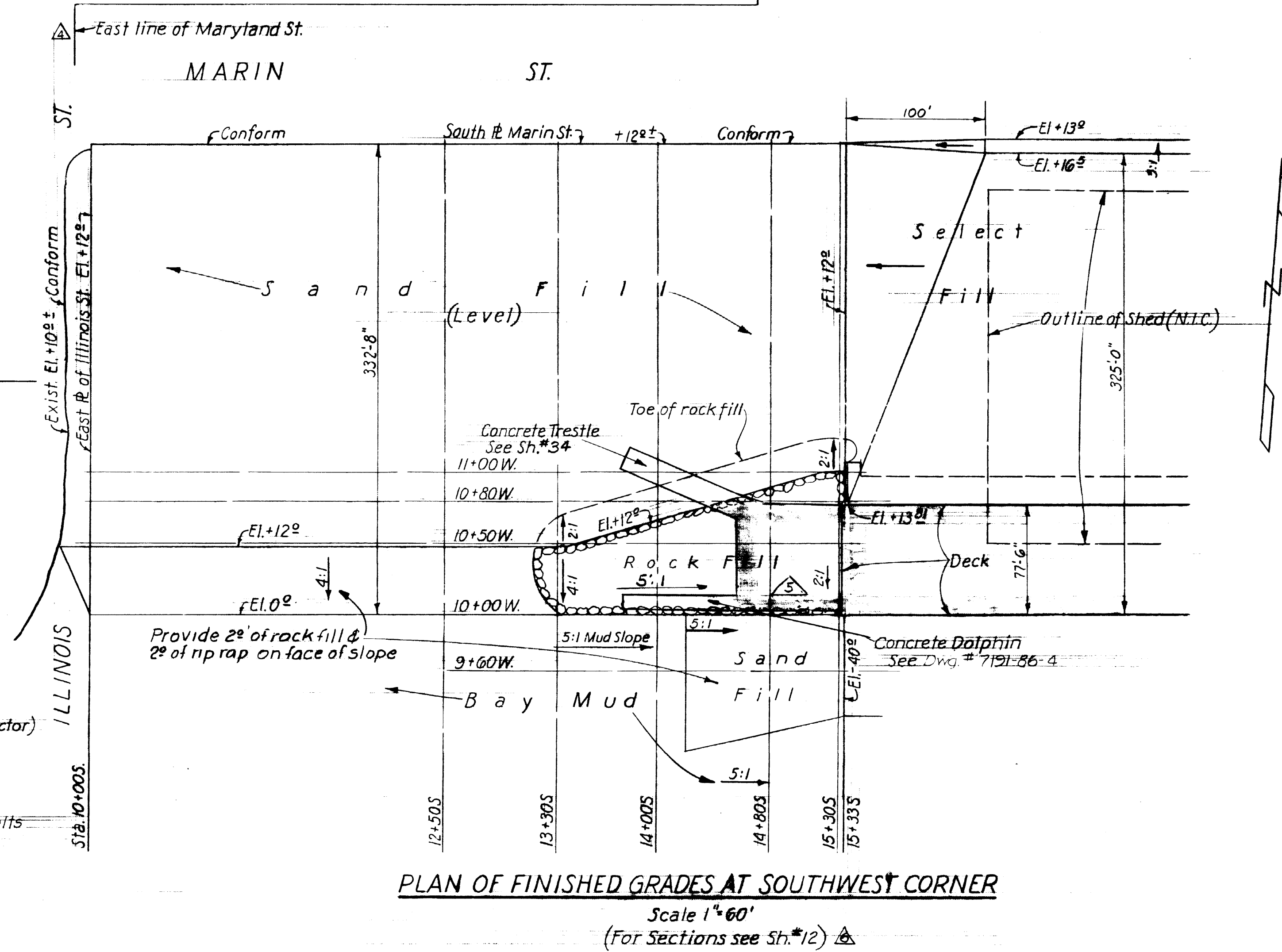
W.P. DIESEL ENGINE	
9'-0"	22'-0"
65.0	65.0
32.5	32.5
42.3	42.3

34 TON CONTAINER CRANE						
12'-0"	9'-0"	12'-0"	20'-0"	20'-0"	9'-0"	12'-0"
19.8	19.8	19.8	19.8	19.8	19.8	19.8
89.3	89.3	89.3	89.3	89.3	89.3	89.3
92.0	92.0	92.0	92.0	92.0	92.0	92.0
61.1	61.1	61.1	61.1	61.1	61.1	61.1
86.5	86.5	86.5	86.5	86.5	86.5	86.5
10.0	10.0	10.0	10.0	10.0	10.0	10.0
65.0	65.0	65.0	65.0	65.0	65.0	65.0
15.0	15.0	15.0	15.0	15.0	15.0	15.0

Concrete  $f_c = 3000$  psi  $f_t = 28$  Days  
 Steel Bent Bars  $f_s = 10000$  psi  
 Straight Bars  $f_s = 20000$  psi

Loading used for design, in Klips.



REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	Railroad Tracks & Mooring Bits revised, Location of Expansion Joint on North Deck Revised	4-6-64	1	All El. to top of fill are void. See Dwg. # 7191-86-4 for new grades.	
2	Revised dimensions to E of Crossovers on South Deck, relocated single crossover on North Deck, relocated Expansion Joints on North & East Decks	4-17-64			
3	Revised dimensions, changed 'tee rail' to 'tee rail, changed 60" to 7'-0" at east end of North & South Decks	7-6-64			
4	Moved property line to east line of Maryland St.	7-10-65			
5	Added extension to South deck & voided finished grade plan	8-10-65			

## PLAN

Notes  
 See Sh. #30 for location of Openings thru Concrete Slab, for Downspouts, Fire Water Service Hatches, Manholes and miscellaneous Pipes.

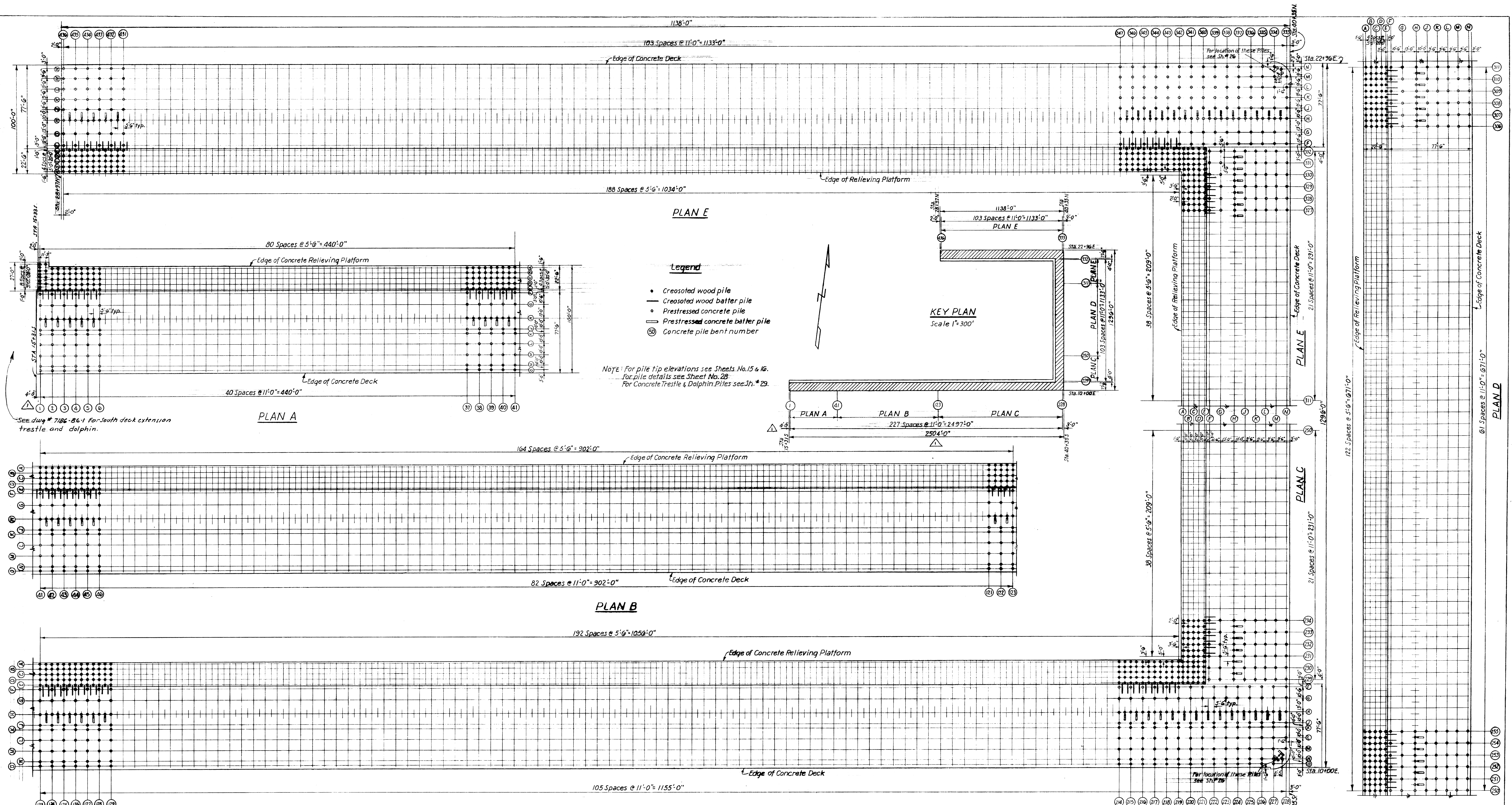
Approved 7-10-63  
 San Francisco Port Authority  
 Port of San Francisco  
 Chief Engineer

SAN FRANCISCO PORT AUTHORITY  
 PORT OF SAN FRANCISCO  
 DEPARTMENT OF ENGINEERING

**ARMY ST. TERMINAL**  
**DECK & FINISHED GRADE PLAN**

IN CHARGE OF: W.F.M. CHECKED BY: P.F.M.  
 MADE BY: K.A.B. REV. BY: DATE: T.B. 6-63  
 TRACED BY: R.V.S. SCALE: 1"=60'  
 DRAWING NO. SHEET NO.  
 6948-86-1 17  
 OF 33





**PLAN E**

**PLAN A**

**PLAN B**

**PLAN C**

**PLAN D**

**PLAN E**

- Legend**
- Creosoted wood pile
  - Creosoted wood batter pile
  - Prestressed concrete pile
  - Prestressed concrete batter pile
  - ⊙ Concrete pile bent number

**KEY PLAN**  
Scale 1"=300'

NOTE: For pile tip elevations see Sheets No. 15 & 16.  
For pile details see Sheet No. 28.  
For Concrete Trestle & Dolphin Piles see Jfr. # 29.

See dwg # 7186-B-1 for south deck extension trestle and dolphin.

Note  
See Manson General & S.F.P.A. as built dwgs.  
for as built pile locations.

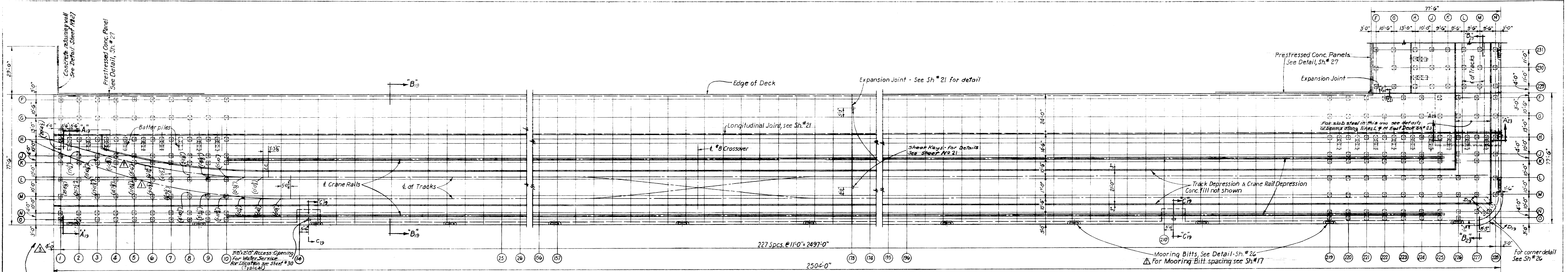
REV. NO.	DESCRIPTION	DATE
1	Added extension to South deck.	8-10-63

Approved 7-10-63  
San Francisco Port Authority  
Port of San Francisco  
*[Signature]*  
Chief Engineer

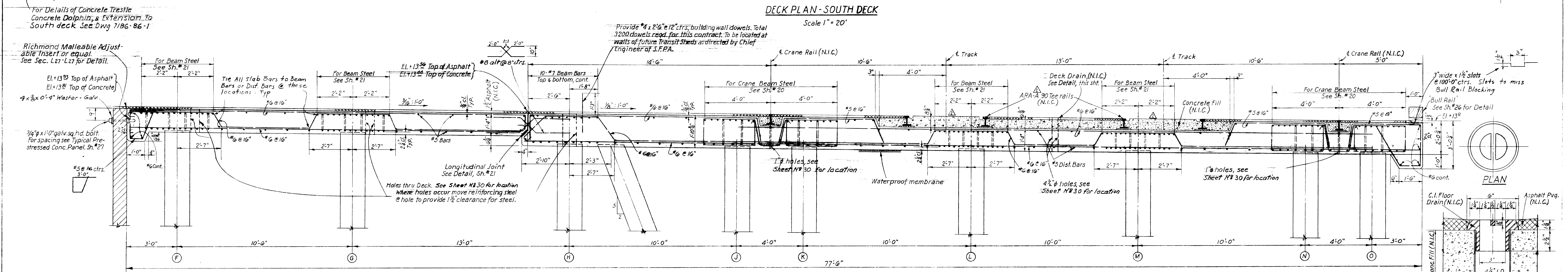
SAN FRANCISCO PORT AUTHORITY  
PORT OF SAN FRANCISCO  
DEPARTMENT OF ENGINEERING  
**ARMY ST. TERMINAL**  
**PILE PLAN**

IN CHARGE OF W.F.M.	CHECKED BY P.T.W.
MADE BY R.S.	DATE 7-8-63
TRACED BY R.S.	SCALE 1"=300'
DRAWING NO. 6949-86-1	SHEET NO. 18
	OF 33



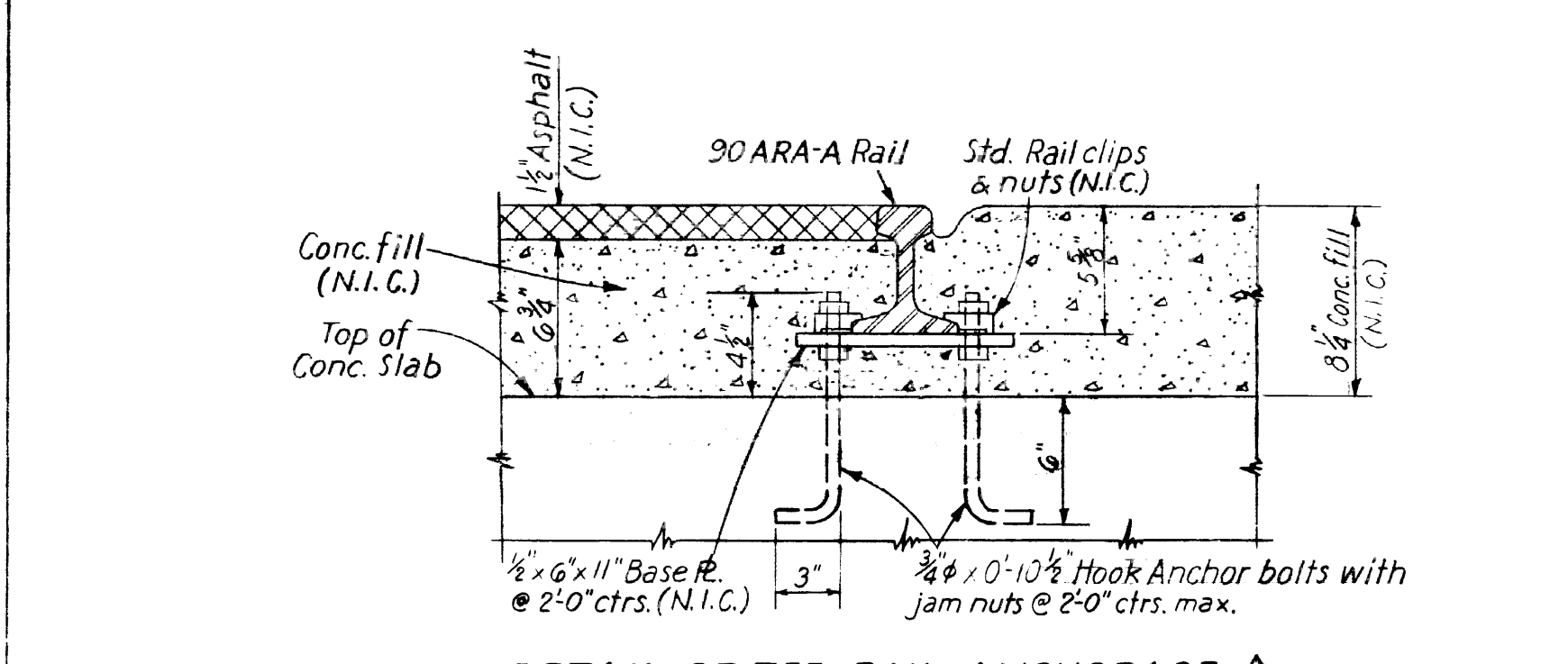


DECK PLAN - SOUTH DECK  
Scale 1" = 20"

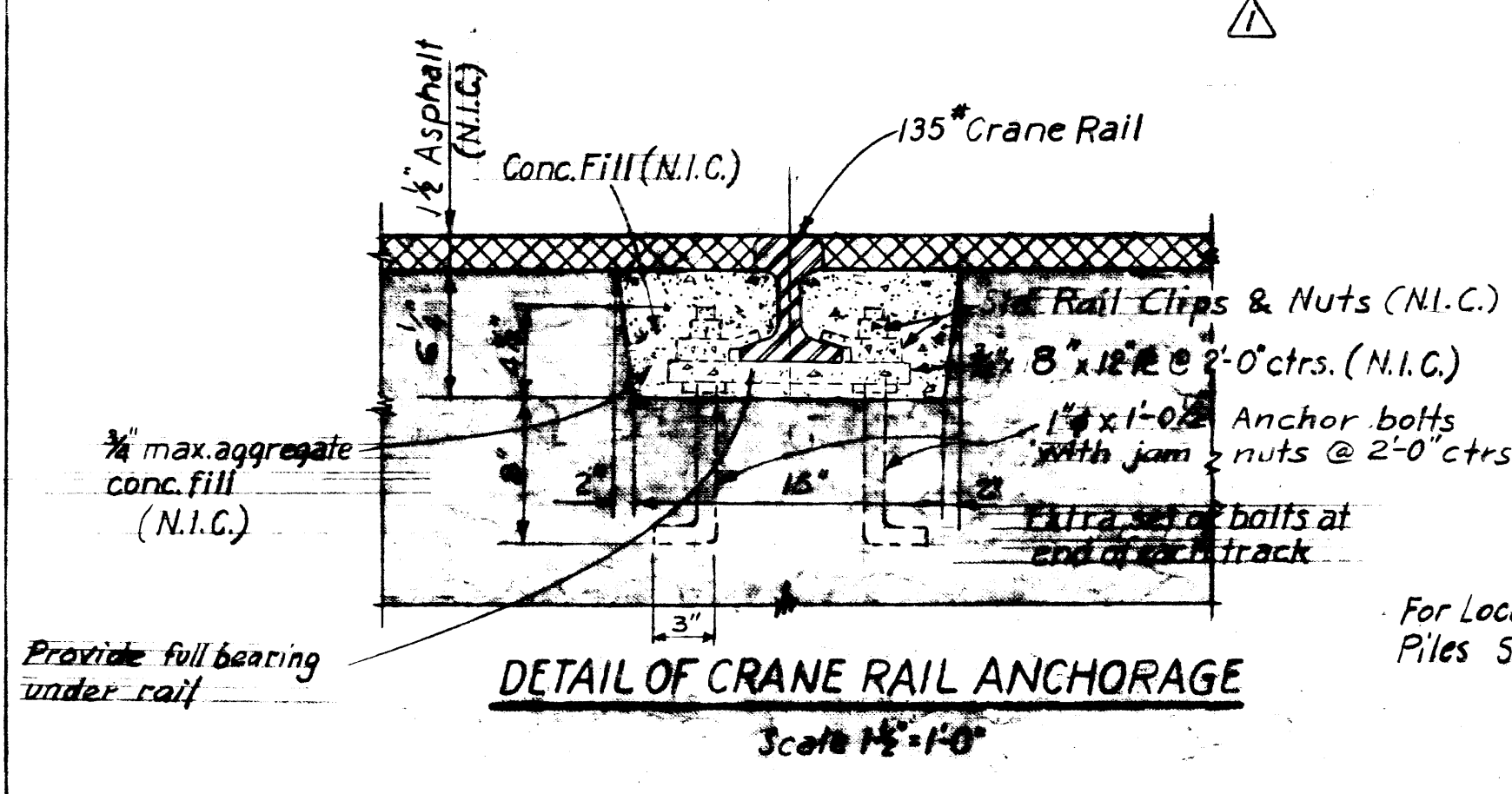


SECTION B0-B0 TYPICAL SECTION  
Scale 1/2" = 1'-0"

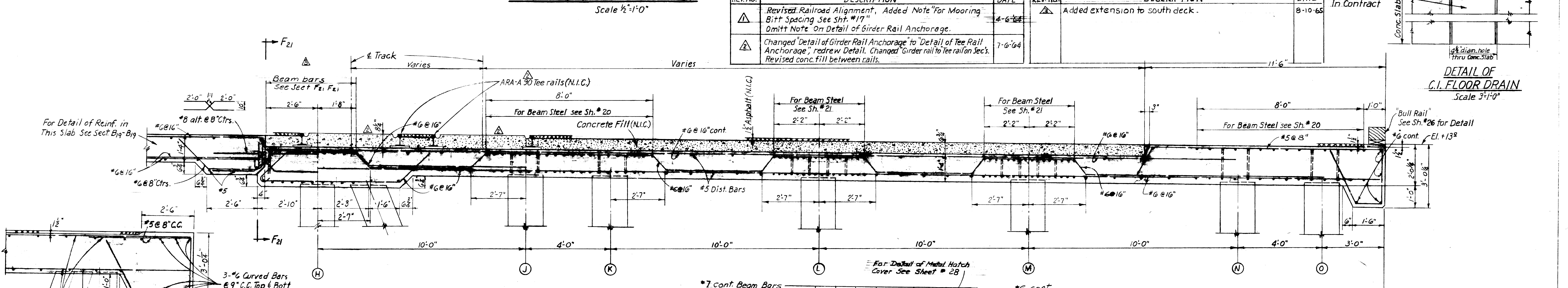
REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	Revised Railroad Alignment, Added Note "For Mooring Bitt Spacing See Sht. #17". Omit Note on Detail of Girder Rail Anchorage.	4-6-63	1	Added extension to south deck.	8-10-65
2	Changed "Detail of Girder Rail Anchorage" to "Detail of Tee Rail Anchorage", redrew Detail. Changed "Girder rail to Tee rail" sec's. Revised conc. fill between rails.	7-6-64			



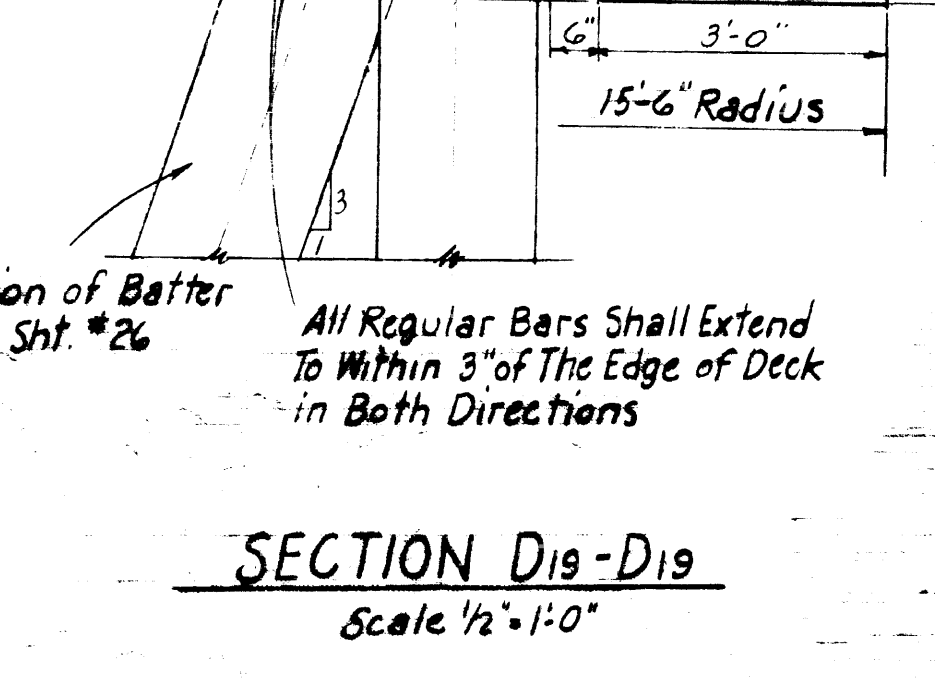
DETAIL OF TEE RAIL ANCHORAGE  
Scale 1 1/2" = 1'-0"



DETAIL OF CRANE RAIL ANCHORAGE  
Scale 1 1/2" = 1'-0"



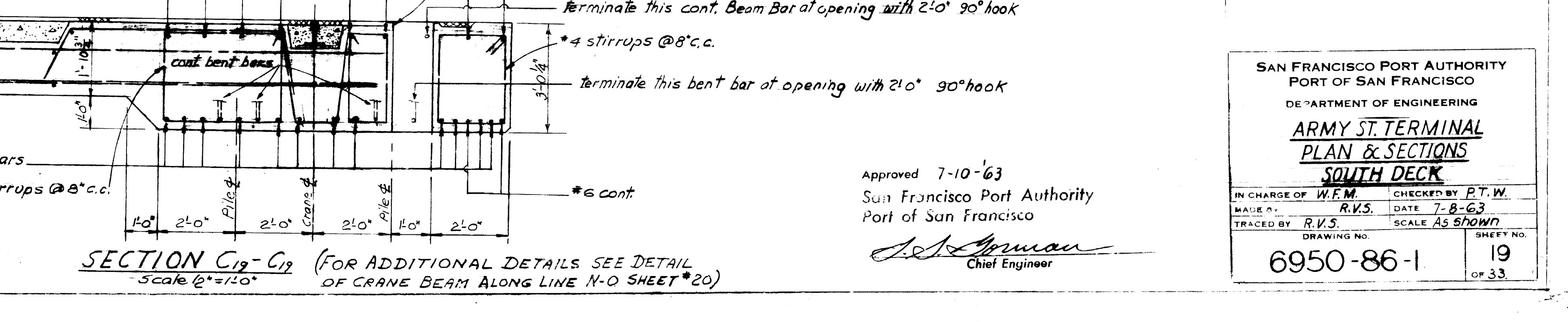
SECTION A0-A0  
Scale 1/2" = 1'-0"



SECTION D19-D19  
Scale 1/2" = 1'-0"

**Notes**  
These notes apply to Sheets #19 thru 25 incl. for location of Expansion Joints & Mooring Bitts see Sheet #17. For openings thru Deck, see Sheet #30. For Waterproof Membrane on bottom of slab, see Specifications. All sections showing Beam Details are looking inshore. Bull Rails, R.R. Rails, & Ballast Asphalt Paving & Concrete Fill not shown on all sections. Top & bottom reinforcing bars are all in one layer in each direction. Bars are shown in several layers for clarity of detail. All reinforcing steel bends not noted, to be 45°. Chamfer all 90° corners 3/4" on under side of concrete deck. Round off all exposed 90° corners @ top of concrete deck. N.I.C. = Not in This Contract. Figure in parenthesis (1'-0") denotes tangent offset of & of curved track to be used as reference for deck construction only. Not to be used for setting anchor bolts.

For additional detail due to complex piles, see Manson General & S.F.P.A. As built dwgs. This note applies to shts. 19 thru 25.



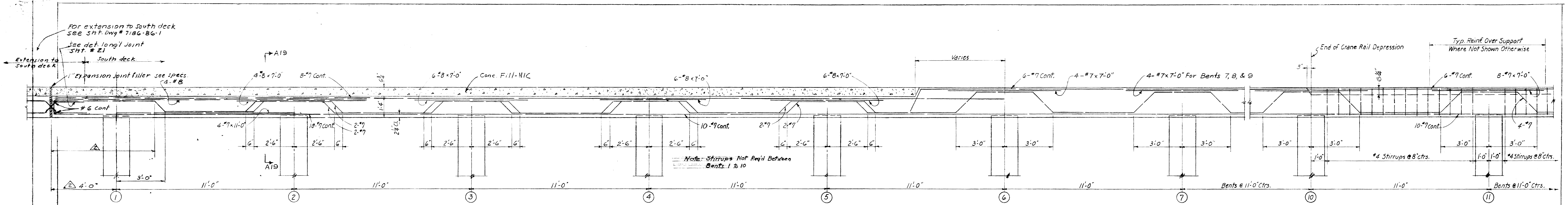
SECTION C19-C19 (FOR ADDITIONAL DETAILS SEE DETAIL OF CRANE BEAM ALONG LINE N-O SHEET #20)  
Scale 1/2" = 1'-0"

SAN FRANCISCO PORT AUTHORITY  
PORT OF SAN FRANCISCO  
DEPARTMENT OF ENGINEERING  
**ARMY ST. TERMINAL**  
**PLAN & SECTIONS**  
**SOUTH DECK**

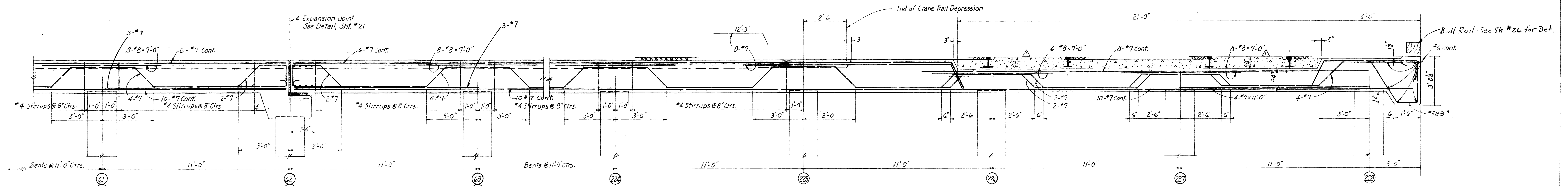
IN CHARGE OF W.F.M. CHECKED BY P.T.W.  
MAILED BY R.V.S. DATE 7-8-63  
DRAWN BY R.V.S. SCALE AS SHOWN  
DRAWING NO. 6950-86-1 SHEET NO. 19  
OF 33

Approved 7-10-63  
San Francisco Port Authority  
Port of San Francisco  
Chief Engineer



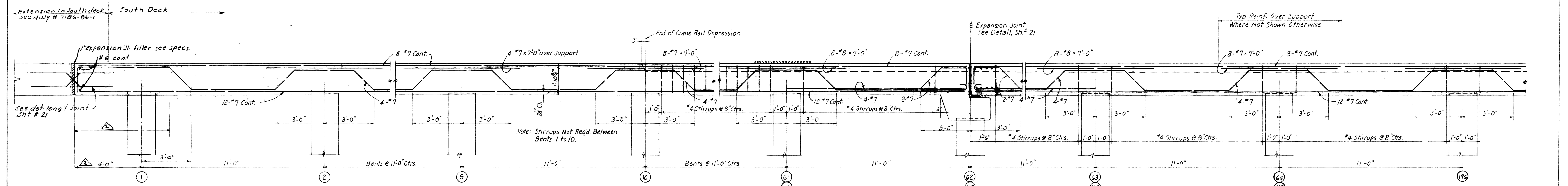


DETAIL OF CRANE BEAM ALONG LINES J-K SOUTH DECK

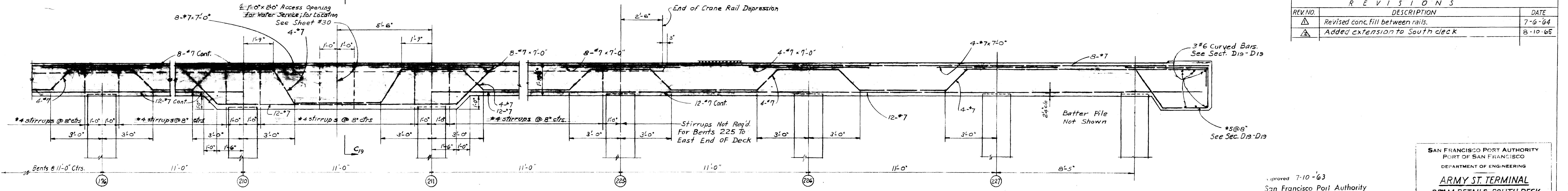


DETAIL OF CRANE BEAM ALONG LINES J-K SOUTH DECK CONT'D

SCALE 1/2" = 1'-0"



DETAIL OF CRANE BEAM ALONG LINES N-O SOUTH DECK



DETAIL OF CRANE BEAM ALONG LINES N-O SOUTH DECK - CONT'D

SCALE 1/2" = 1'-0"

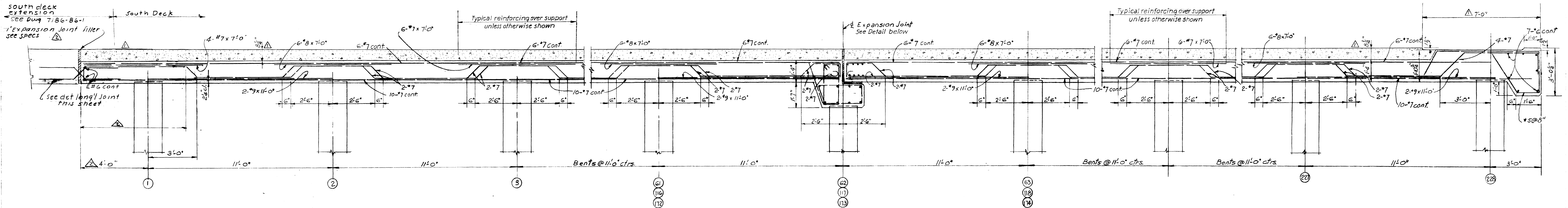
REVISIONS		
REV. NO.	DESCRIPTION	DATE
Δ	Revised conc. fill between rails.	7-6-64
Δ	Added extension to South deck	8-10-65

SAN FRANCISCO PORT AUTHORITY  
 PORT OF SAN FRANCISCO  
 DEPARTMENT OF ENGINEERING  
**ARMY ST. TERMINAL**  
**BEAM DETAILS - SOUTH DECK**

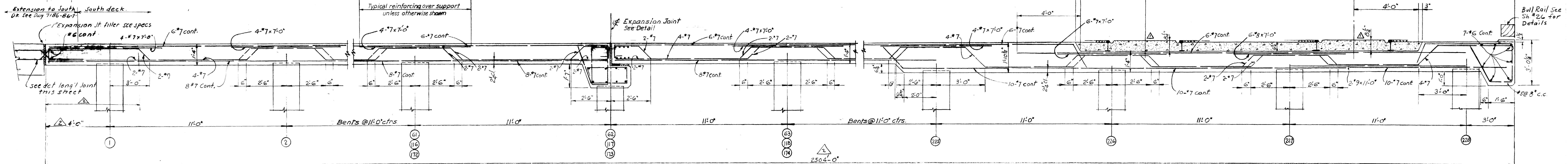
IN CHARGE OF: W.F.M. CHECKED BY: P.T.W.  
 MADE BY: K.B.G.K. SCALE: 1/2" = 1'-0"  
 TRACED BY: K.B.G.K. SHEET NO. 20  
 OF 33

6951-86-1

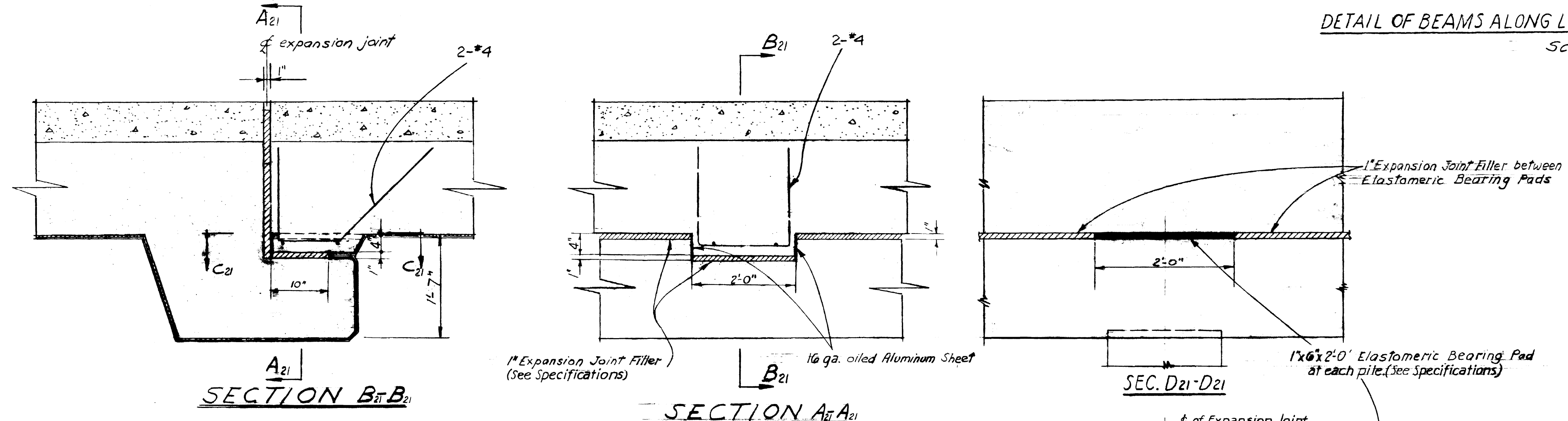




DETAIL OF RAIL ROAD BEAMS ALONG LINES (L) & (M) - SOUTH DECK  
Scale 1/2"=1'-0"



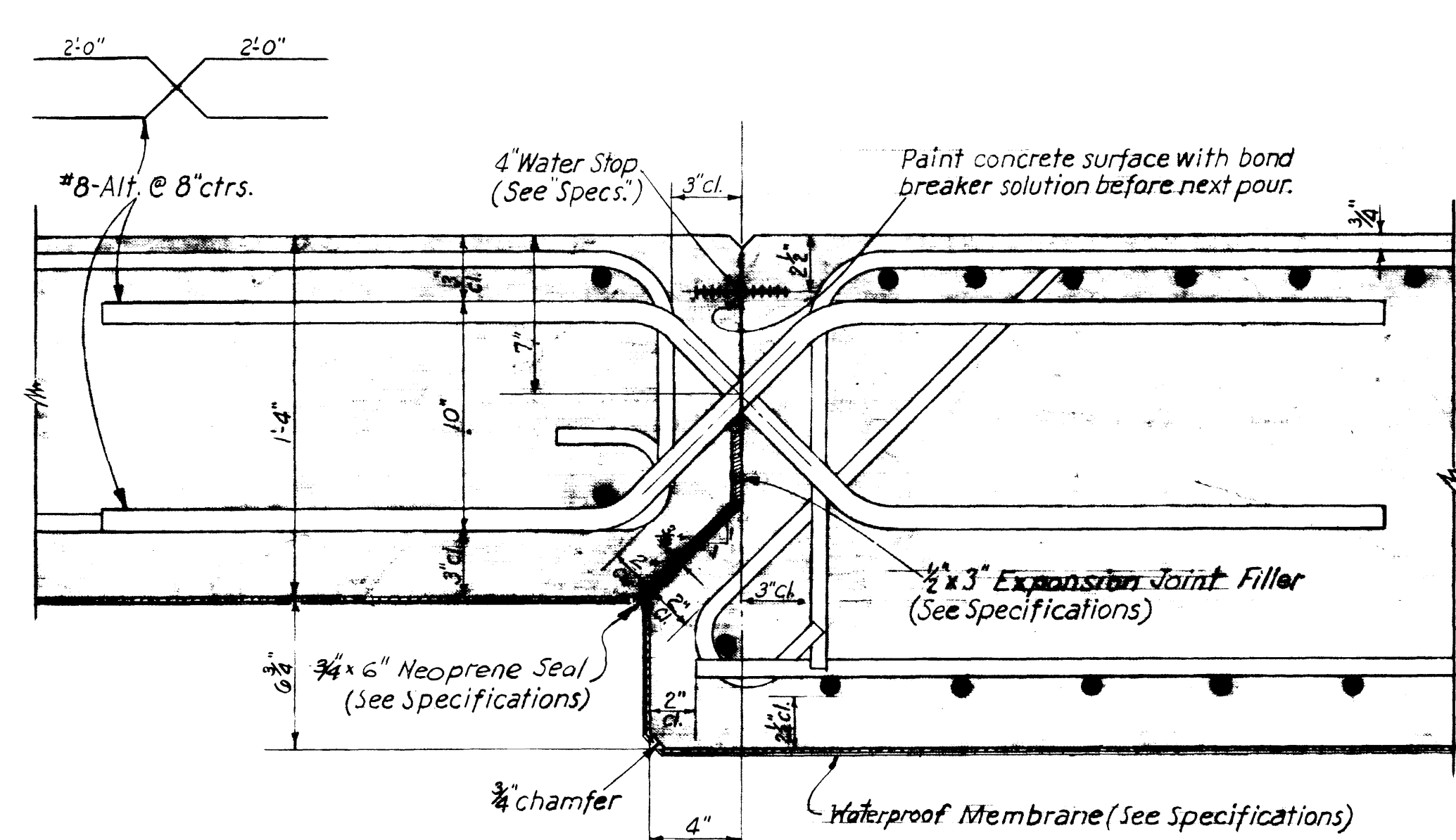
DETAIL OF BEAMS ALONG LINES (P) & (Q) - SOUTH DECK  
Scale 1/2"=1'-0"



SECTION A21-B21

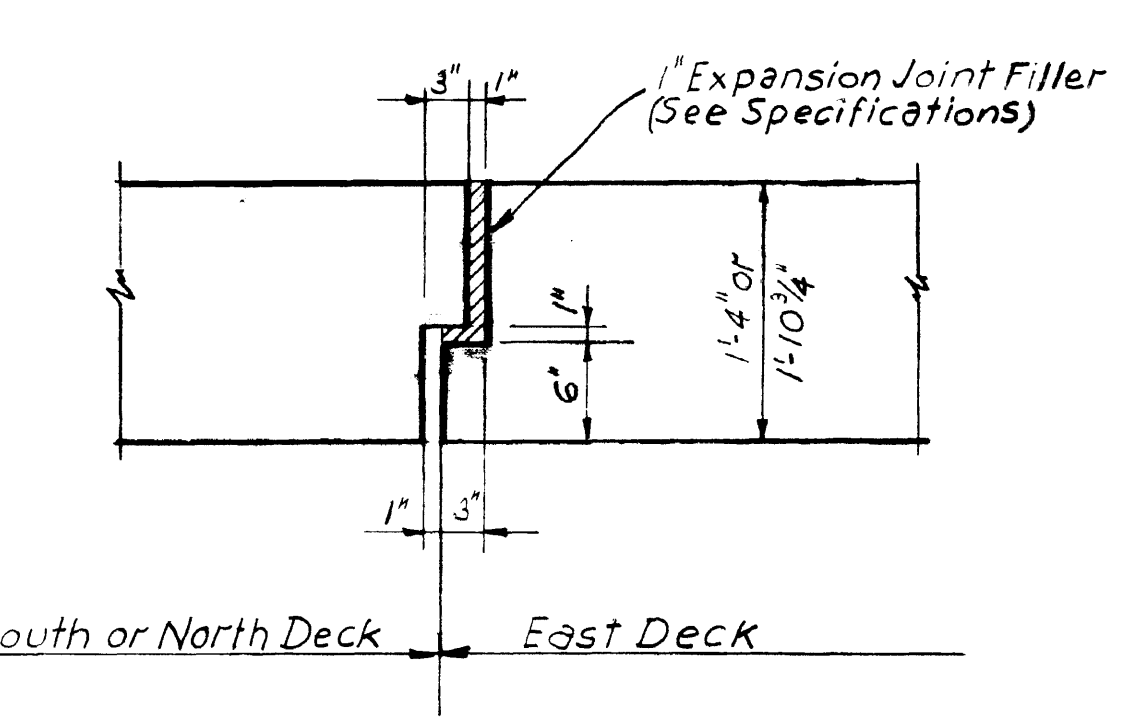
SECTION A1-A1

SECTION D21-D21

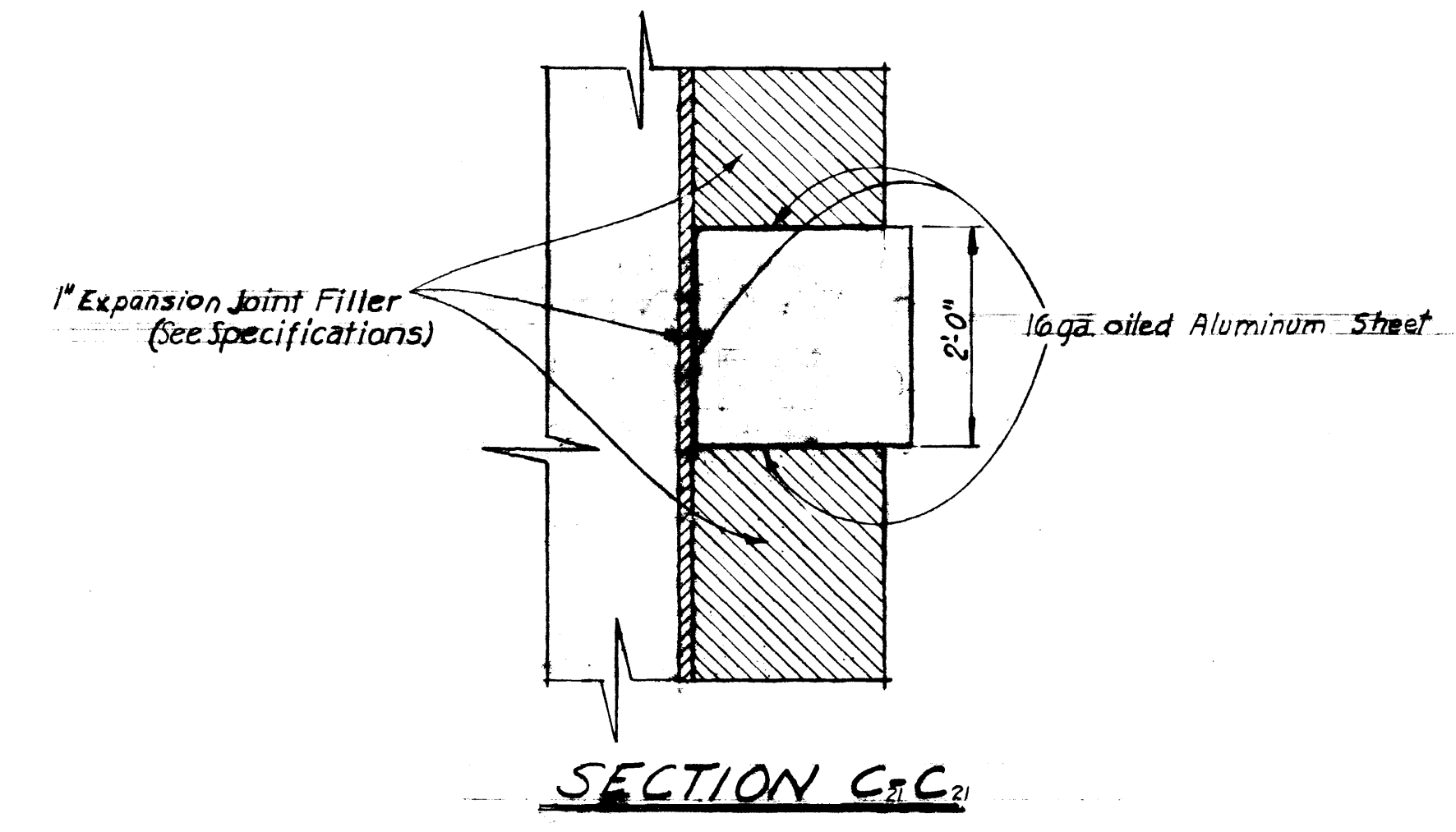


DETAIL AT LONGITUDINAL JOINT  
Scale 2"=1'-0"

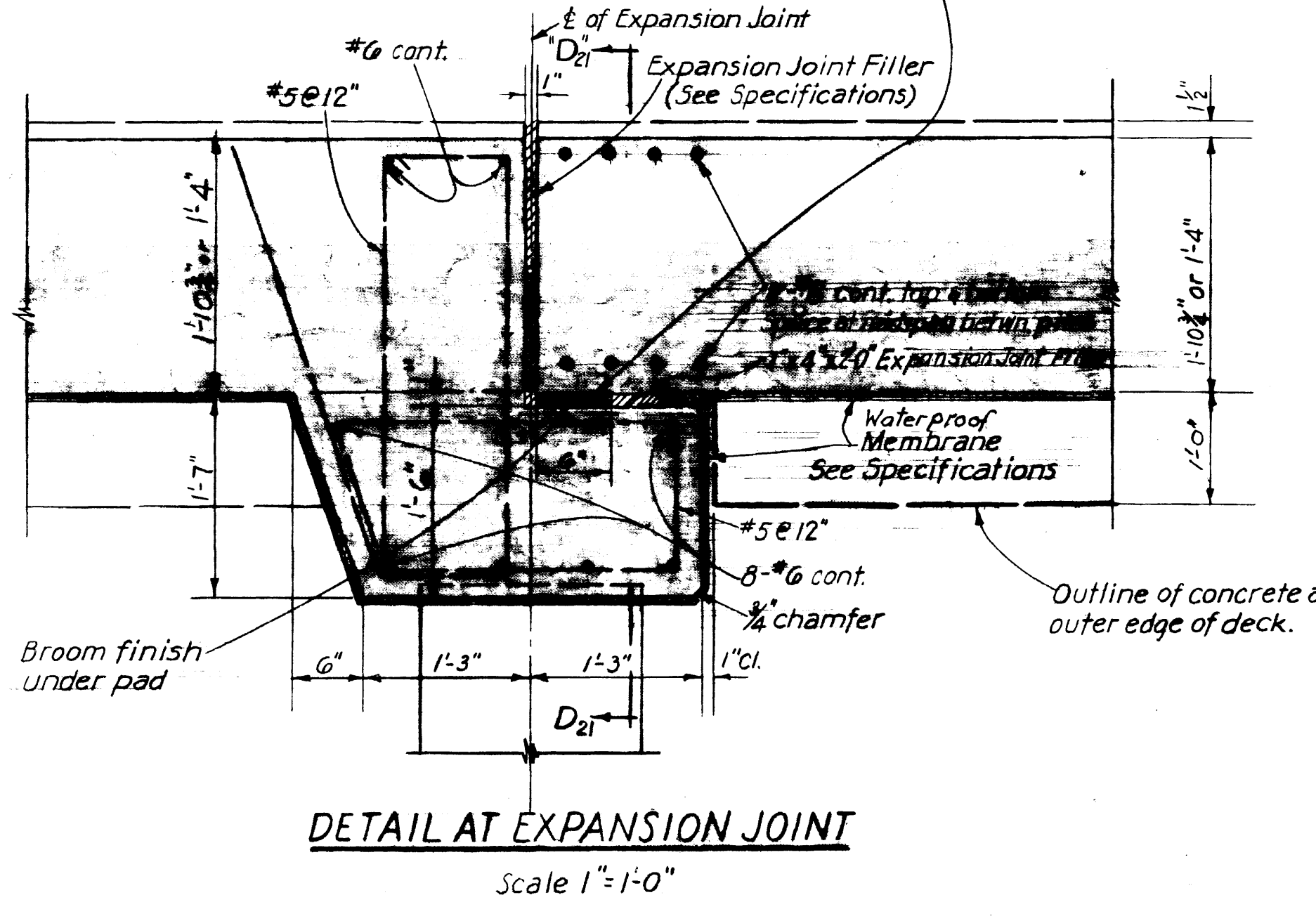
REVISIONS		
REV. NO.	DESCRIPTION	DATE
1	Revised conc. fill between rails, Lines (L) & (M), revised conc. fill along Lines (P) & (Q)	7-6-64
2	Added extension to South deck	8-10-65



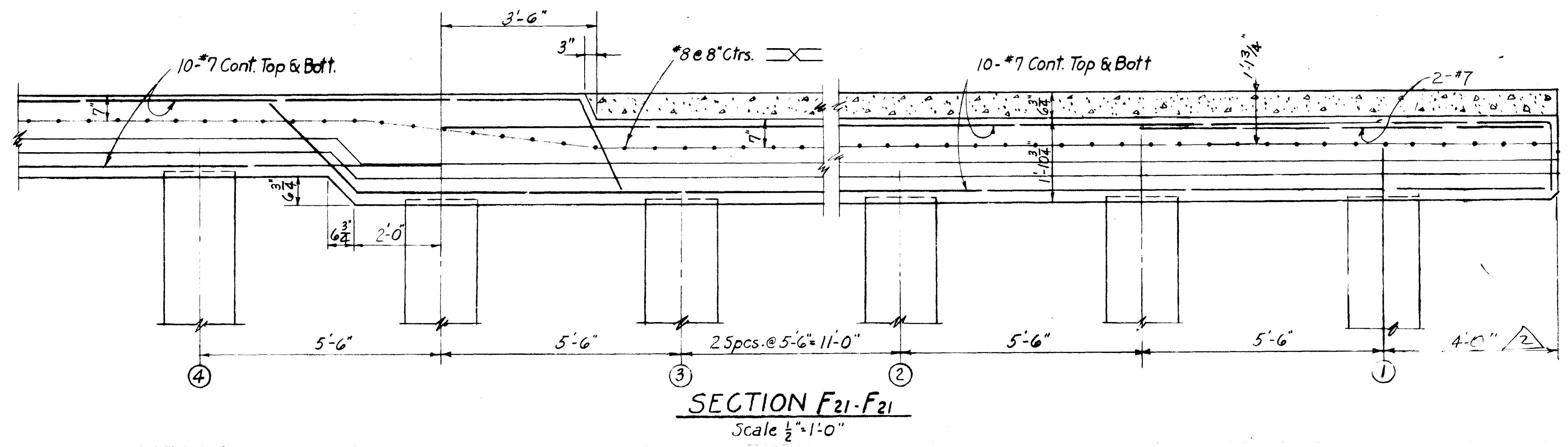
SECTION E21-E21  
EXPANSION JOINT BETWEEN EAST & NORTH DECKS  
& BETWEEN EAST & SOUTH DECKS  
Scale 1"=1'-0"



SECTION C-C



DETAIL AT EXPANSION JOINT  
Scale 1"=1'-0"



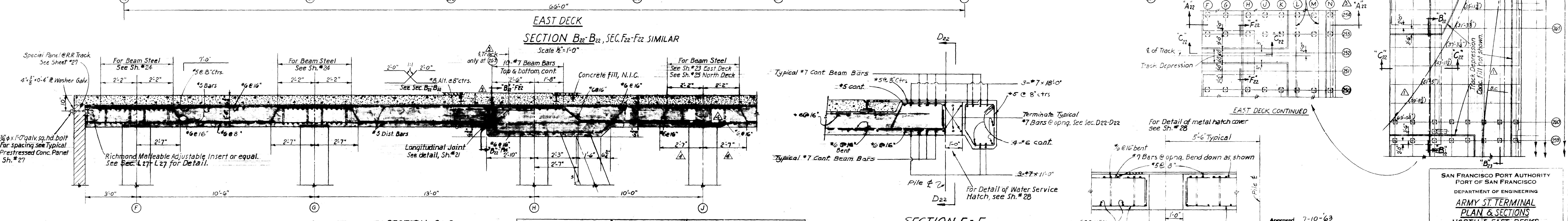
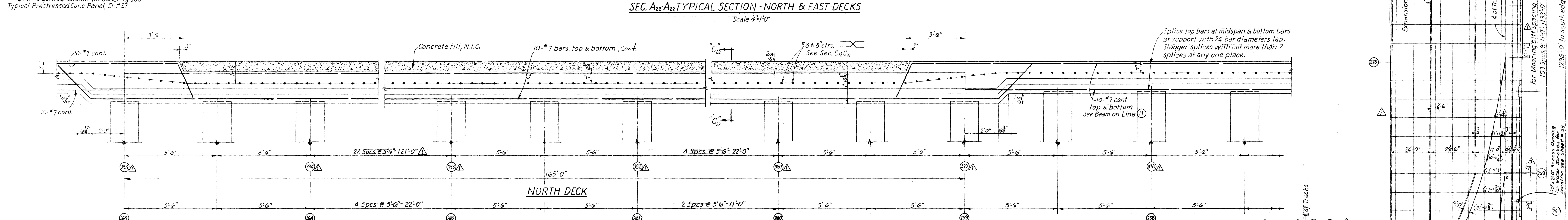
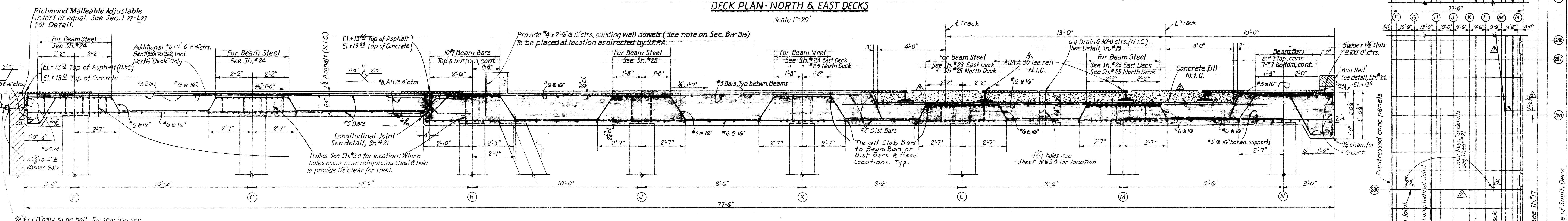
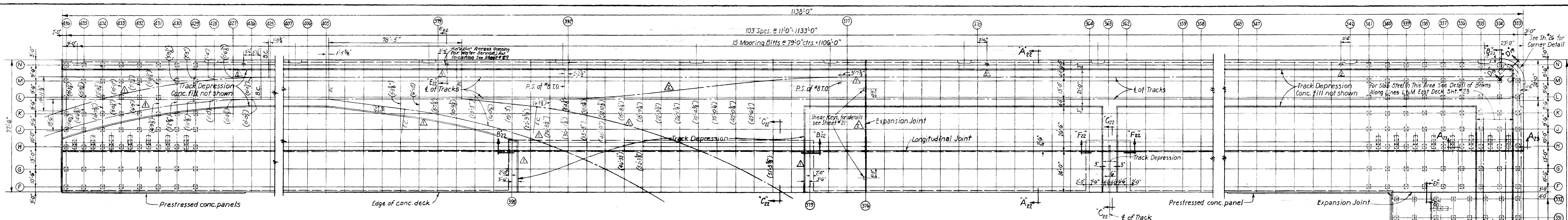
SECTION F21-F21  
Scale 1/2"=1'-0"

SHEAR KEY DETAILS - FOR EXPANSION JOINTS  
SEE SHEETS #17 - FOR LOCATION  
Scale 1"=1'-0"

Approved 7-10-63  
San Francisco Port Authority  
Port of San Francisco  
Chief Engineer

SAN FRANCISCO PORT AUTHORITY  
PORT OF SAN FRANCISCO  
DEPARTMENT OF ENGINEERING  
**ARMY ST. TERMINAL**  
**BEAM DETAILS-SOUTH DECK**  
IN CHARGE OF: W.F.M. CHECKED BY: P.T.W.  
MADE BY: K.B. RVS DATE: 7-8-63  
TRACED BY: G.K. RVS SCALE AS SHOWN  
DRAWING NO. SHEET NO.  
6952-86-1 21  
of 33





REV. NO.	DESCRIPTION	DATE
1	Revised railroad alignment on North and East Decks Changed Mooring Bitt Spacing on East Deck Revised Location of Expansion Joint on North Deck, Corrected Shear Key Placement on North Deck	4-6-64
2	Relocated Crossover on North Deck, relocated Expansion Joints on North & East Decks, changed dim'n 2'-4" to 2'-2 1/2" at Bent 284, corrected Plan to agree with Sec. E22-E22	4-20-64
3	Revised dimensions, changed girder rail, 1/2" Tee rail, rev. conc fill details. Moved Sec. A22 on plan, added rails Sec. C22	7-6-64

Approved 7-10-63  
 San Francisco Port Authority  
 Port of San Francisco  
 Chief Engineer

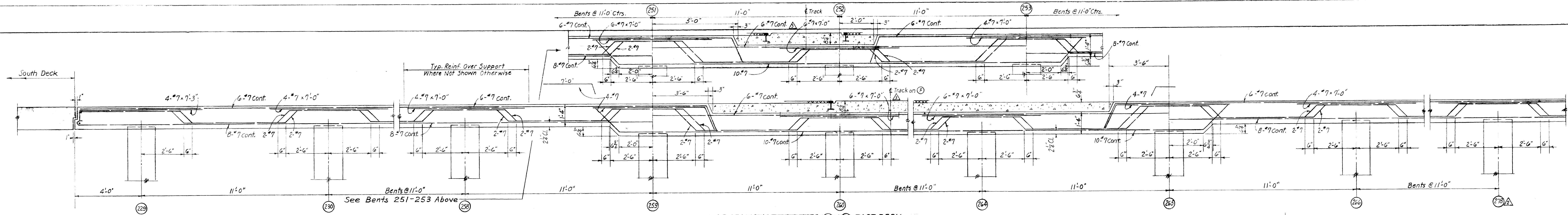
SAN FRANCISCO PORT AUTHORITY  
 PORT OF SAN FRANCISCO  
 DEPARTMENT OF ENGINEERING  
**ARMY ST. TERMINAL**  
**PLAN & SECTIONS**  
**NORTH & EAST DECKS**  
 IN CHARGE OF W.F.M. CHECKED BY B.T.W.  
 MADE BY R.V.S. DATE 7-8-63  
 TRACED BY R.V.S. SCALE AS SHOWN  
 DRAWING NO. 6953-86-1 SHEET 22 OF 33

6953 86 1

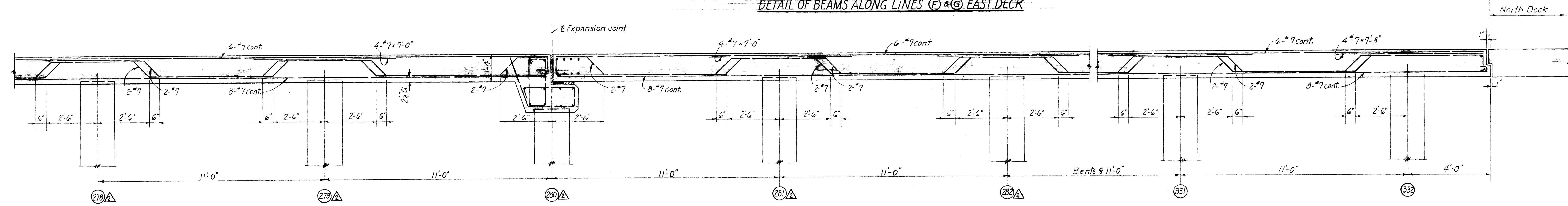




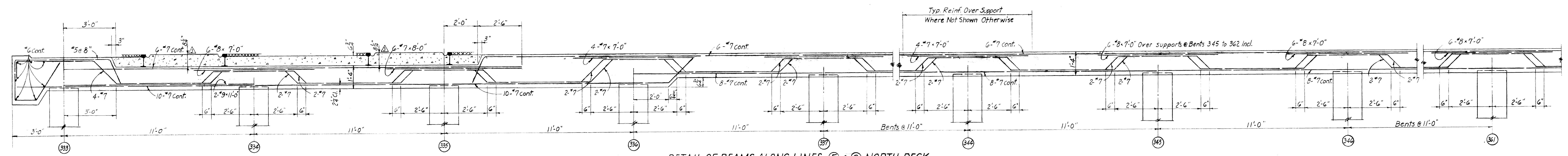




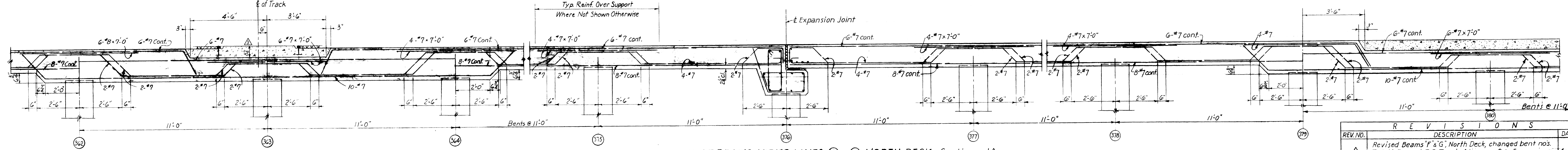
DETAIL OF BEAMS ALONG LINES F & G EAST DECK



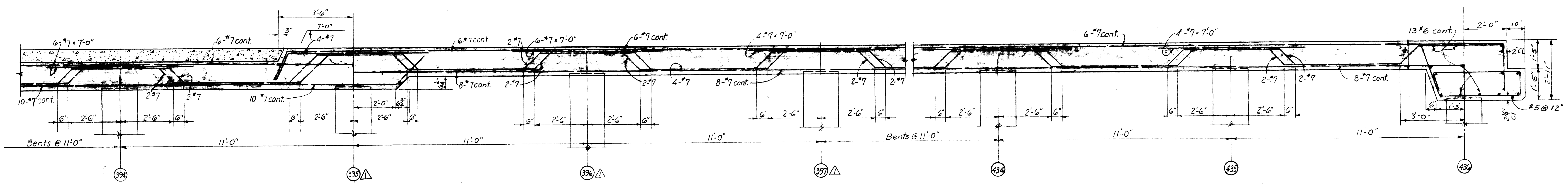
DETAIL OF BEAMS ALONG LINES F & G EAST DECK, Continued



DETAIL OF BEAMS ALONG LINES F & G NORTH DECK



DETAIL OF BEAMS ALONG LINES F & G NORTH DECK, Continued



DETAIL OF BEAMS ALONG LINES F & G NORTH DECK, Continued

Scale 1/2"=1'-0"

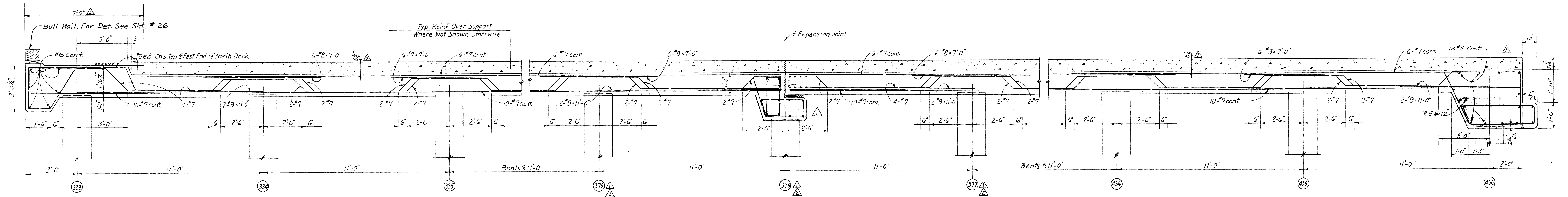
R E V I S I O N S		
REV. NO.	DESCRIPTION	DATE
Δ	Revised Beams F & G, North Deck, changed bent nos. to suit Revised R.R. Track Alignment & Expansion Joint Location.	4-6-64
Δ	Revised Beam F & G, North Deck, changed Bent Nos. Beam F & G, East Deck, to suit change in Expansion Joint location.	4-20-64
Δ	Revised conc fill between rails, added rails at (255) & (260) Lines (F) & (G) East Deck and at (335) & (340) Lines (F) & (G) North Deck	7-6-64

SAN FRANCISCO PORT AUTHORITY  
 PORT OF SAN FRANCISCO  
 DEPARTMENT OF ENGINEERING  
**ARMY ST. TERMINAL  
 BEAM DETAILS - EAST  
 AND NORTH DECK**

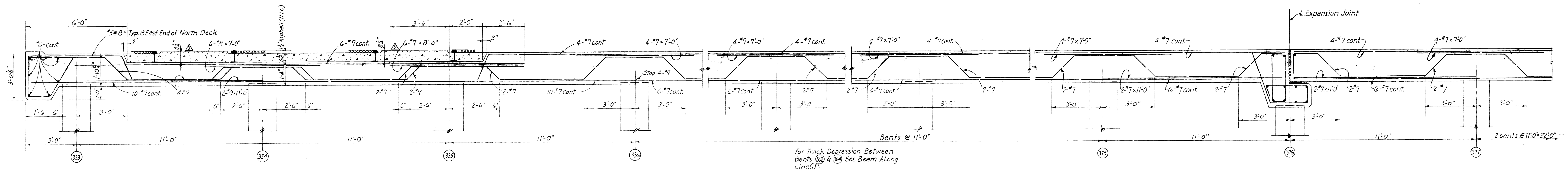
IN CHARGE OF: W.F.M. CHECKED BY: P.T.W.  
 DRAWN BY: K.A.B. DATE: 7-8-63  
 TRACED BY: K.A.B. SCALE: 1/2"=1'-0"  
 DRAWING NO.: 6955-86-1 SHEET NO.: 24  
 OF 33

Approved 7-10-63  
 San Francisco Port Authority  
 Port of San Francisco  
*S. J. Spawson*  
 Chief Engineer

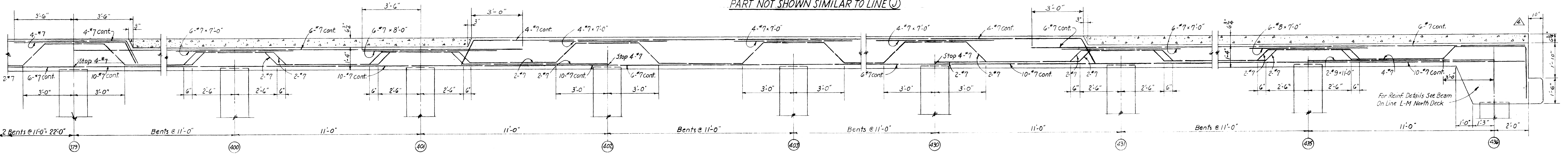




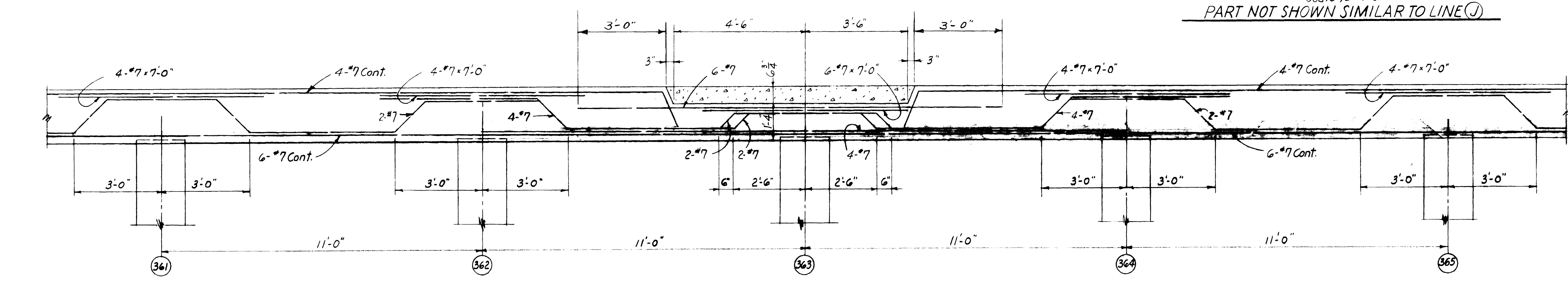
DETAIL OF RAILROAD BEAMS ALONG LINES (L) & (M) NORTH DECK  
Scale 1/2"=1'-0"



DETAIL OF BEAM ALONG LINE (K) NORTH DECK  
Scale 1/2"=1'-0"



DETAIL OF BEAM ALONG LINE (K) - NORTH DECK, Continued  
Scale 1/2"=1'-0"



PARTIAL DETAIL OF BEAM ALONG LINE (J) NORTH DECK  
PART NOT SHOWN SIMILAR TO LINE (K)  
Scale 1/2"=1'-0"

REV. NO.	DESCRIPTION	DATE
△	Changed bent Numbers To Suit Revised R.R. Track Alignment & Expansion Joint Location.	4-6-64
△	Revised Beam along Line K* to suit relocation of Expansion Joint, changed Beam Nos. along Beam L & M.	4-20-64
△	Revised conc. fill between rails Line (K), revised conc. fill along Lines (L) & (M).	7-6-64
△	Revised Conc. Fill on Beam (K).	3-30-65

SAN FRANCISCO PORT AUTHORITY  
PORT OF SAN FRANCISCO  
DEPARTMENT OF ENGINEERING

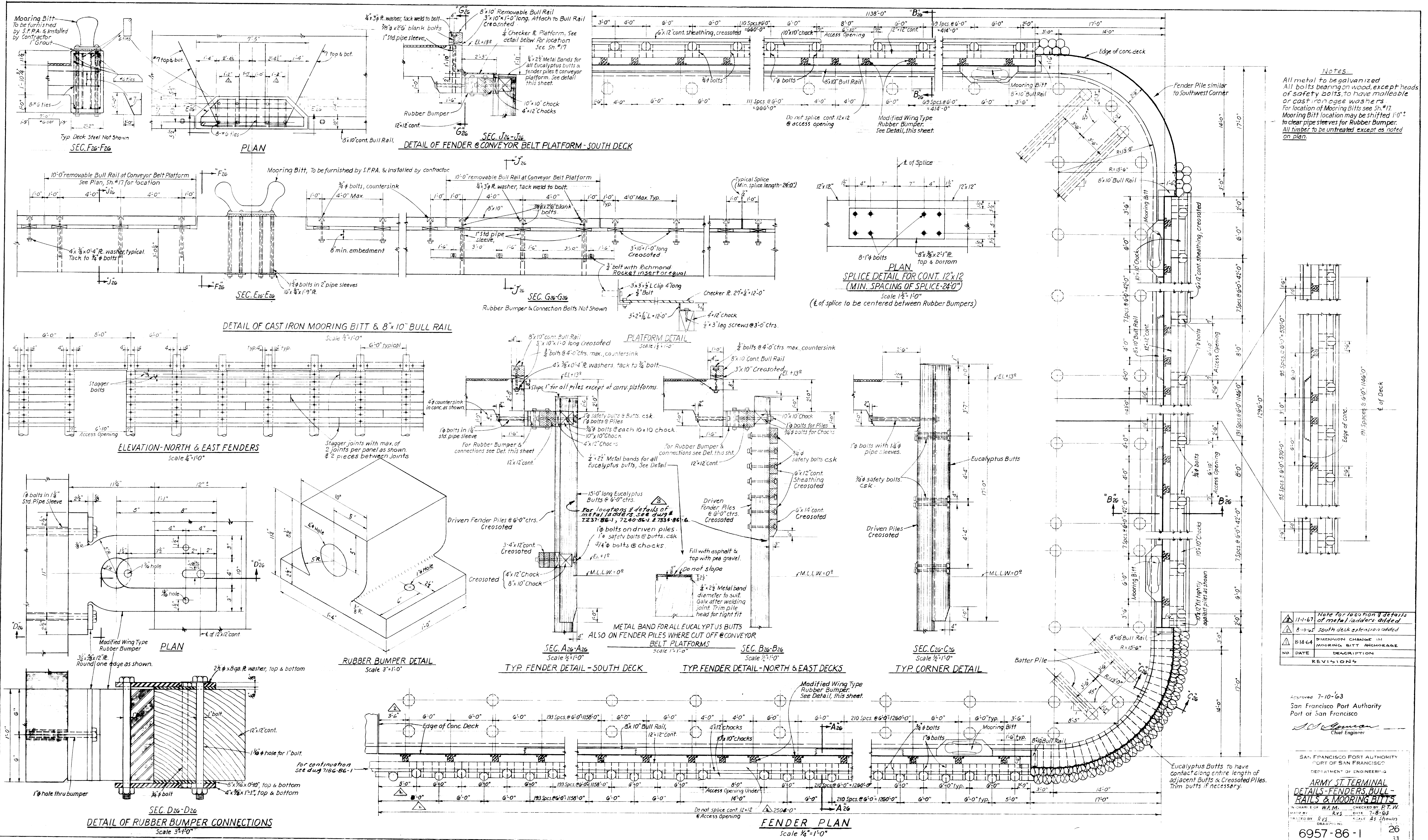
**ARMY ST. TERMINAL  
BEAM DETAILS-NORTH DECK**

IN CHARGE OF W.F.M. CHECKED BY P.T.W.  
MADE BY K.A.B. DATE 7-8-63  
DRAWING BY K.A.B. SCALE 1/2"=1'-0"  
SHEET NO. 25  
OF 33

6956-86-1

Approved 7-10-63  
San Francisco Port Authority  
Port of San Francisco  
*[Signature]*  
Chief Engineer





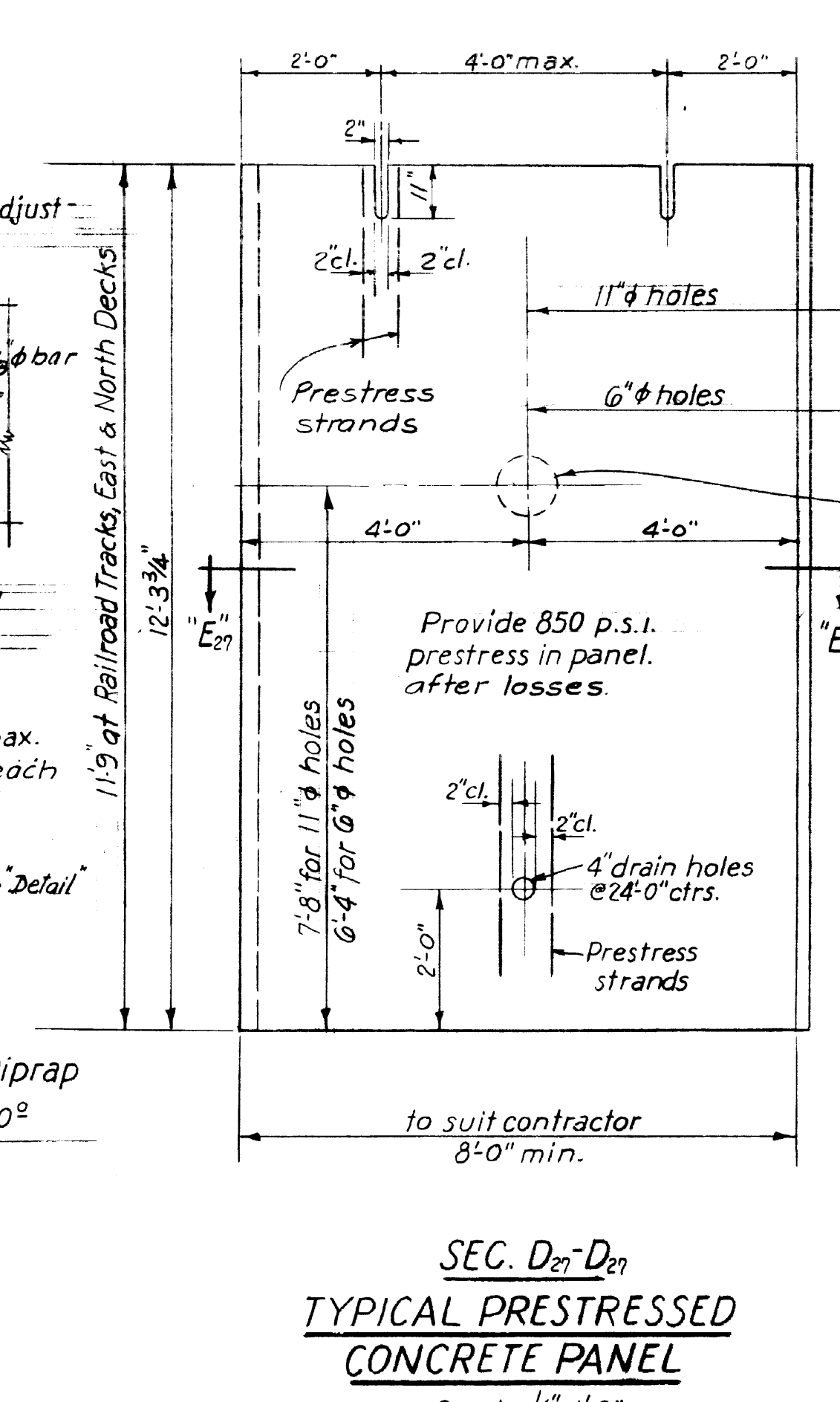
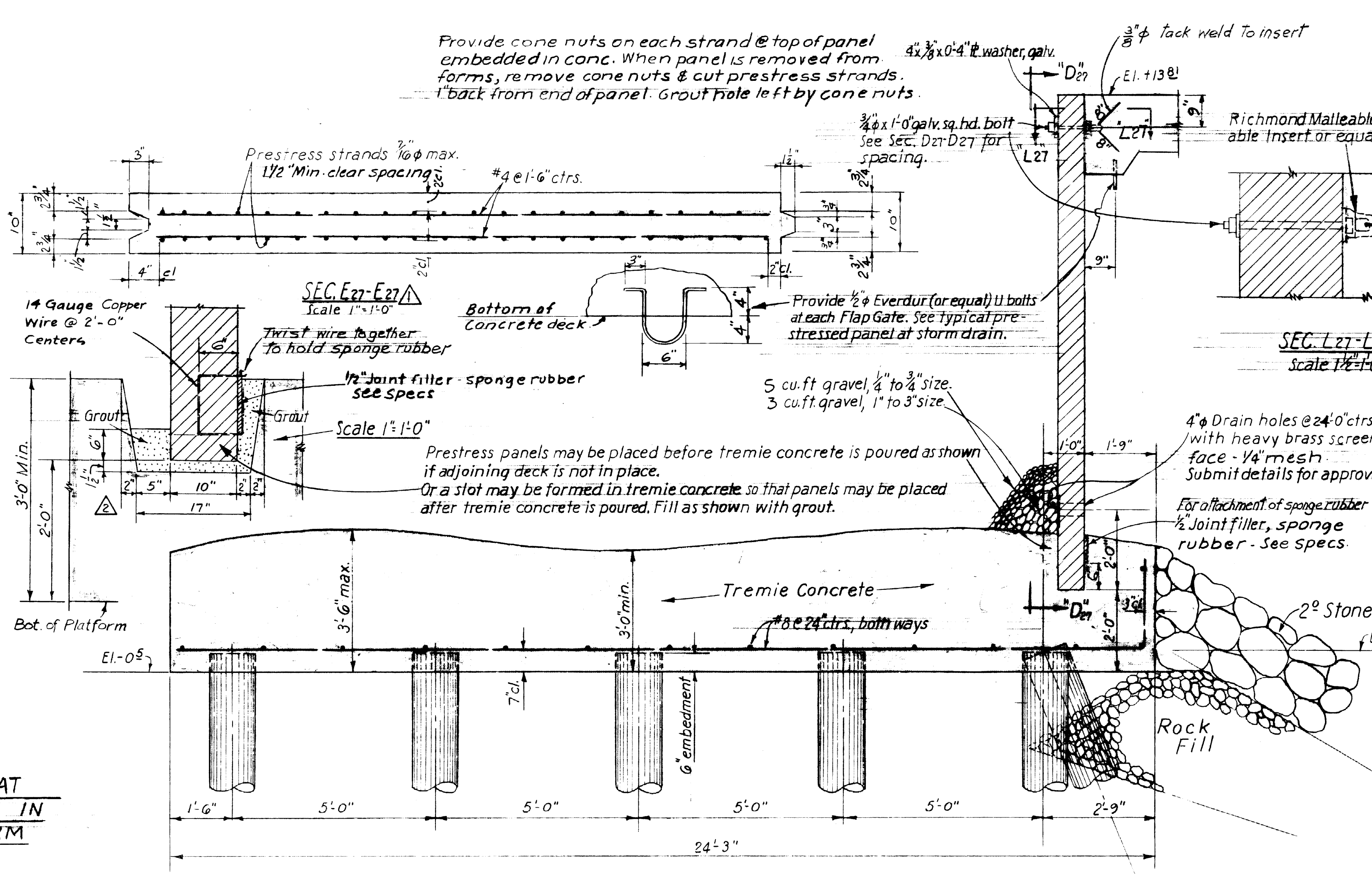
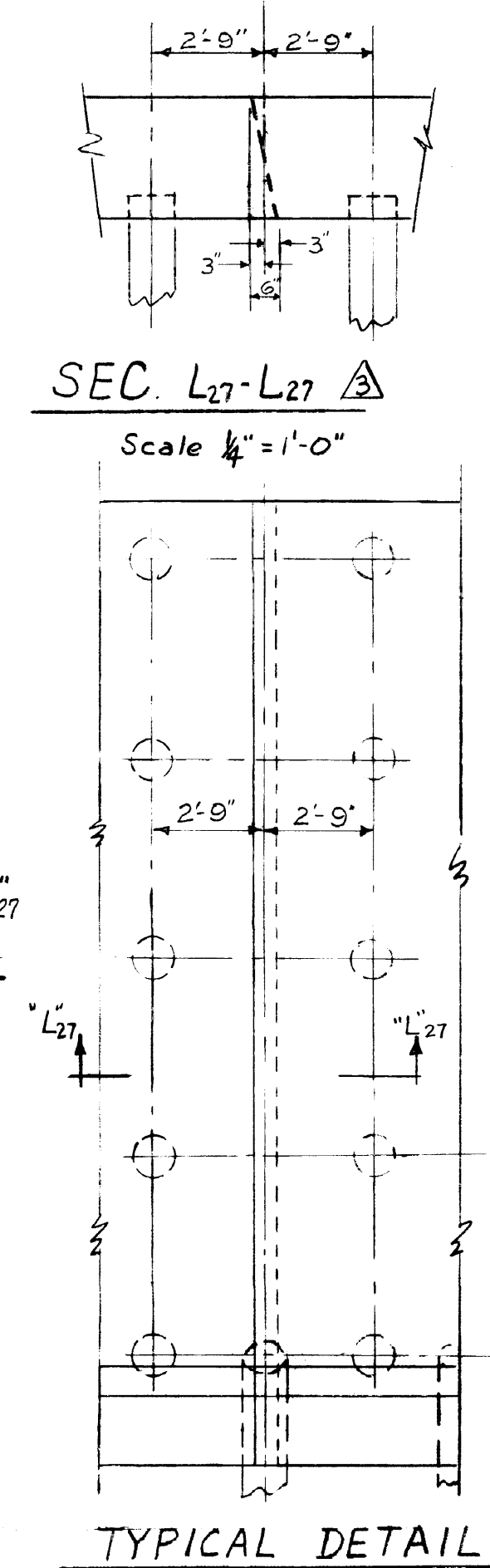
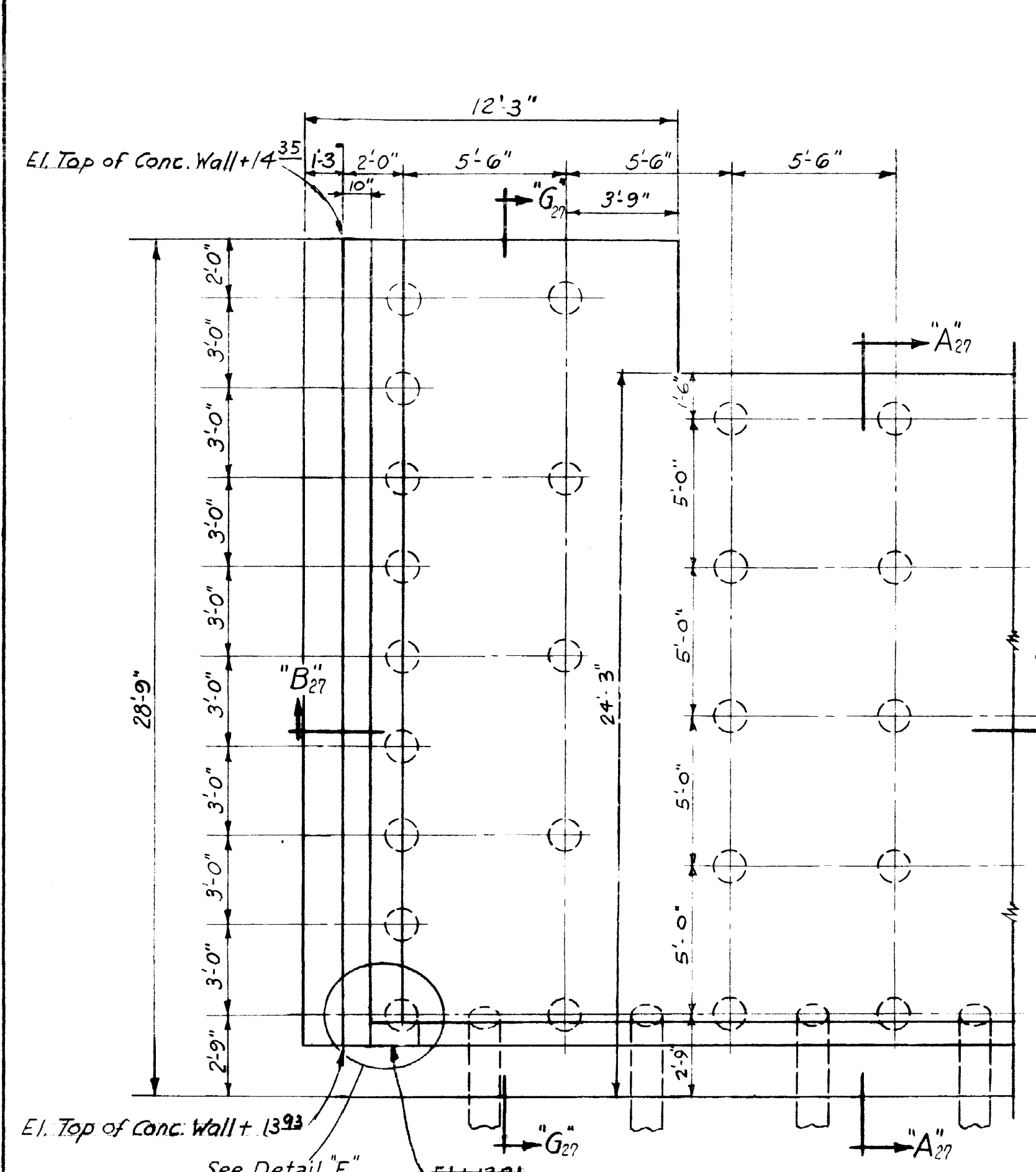
**NOTES**  
 All metal to be galvanized  
 All bolts bearing on wood, except heads of safety bolts, to have malleable or cast iron edge washers  
 For location of Mooring Bits see Sh. #17  
 Mooring Bit location may be shifted 1'-0" to clear pipe sleeves for Rubber Bumper.  
 All timber to be untreated except as noted on plan.

NO	DATE	DESCRIPTION
1	11-1-67	Note for location & details of metal ladders added
2	8-10-65	South deck extension added
3	8-14-64	DIMENSION CHANGE IN MOORING BITT ANCHORAGE
NO	DATE	DESCRIPTION

Approved 7-10-63  
 San Francisco Port Authority  
 Port of San Francisco  
 J.C. Coleman  
 Chief Engineer

SAN FRANCISCO PORT AUTHORITY  
 PORT OF SAN FRANCISCO  
 DEPARTMENT OF ENGINEERING  
**ARMY ST. TERMINAL**  
**DETAILS-FENDERS, BULL**  
**RAILS & MOORING BITTS**  
 DRAWING NO. 6957-86-1  
 DATE 7-8-63  
 SCALE AS SHOWN  
 26  
 33





These Stations may be ±5'0" to locate hole @ 1/2 of panel & to clear concrete piles.

Prestress strands to run thru holes with cone nuts on each strand embedded in concrete. When panel is removed from forms, remove cone nuts & cut prestress strands back 1" from face of conc. Grout hole left by cone nut.

Provide 850 p.s.i. prestress in panel after losses.

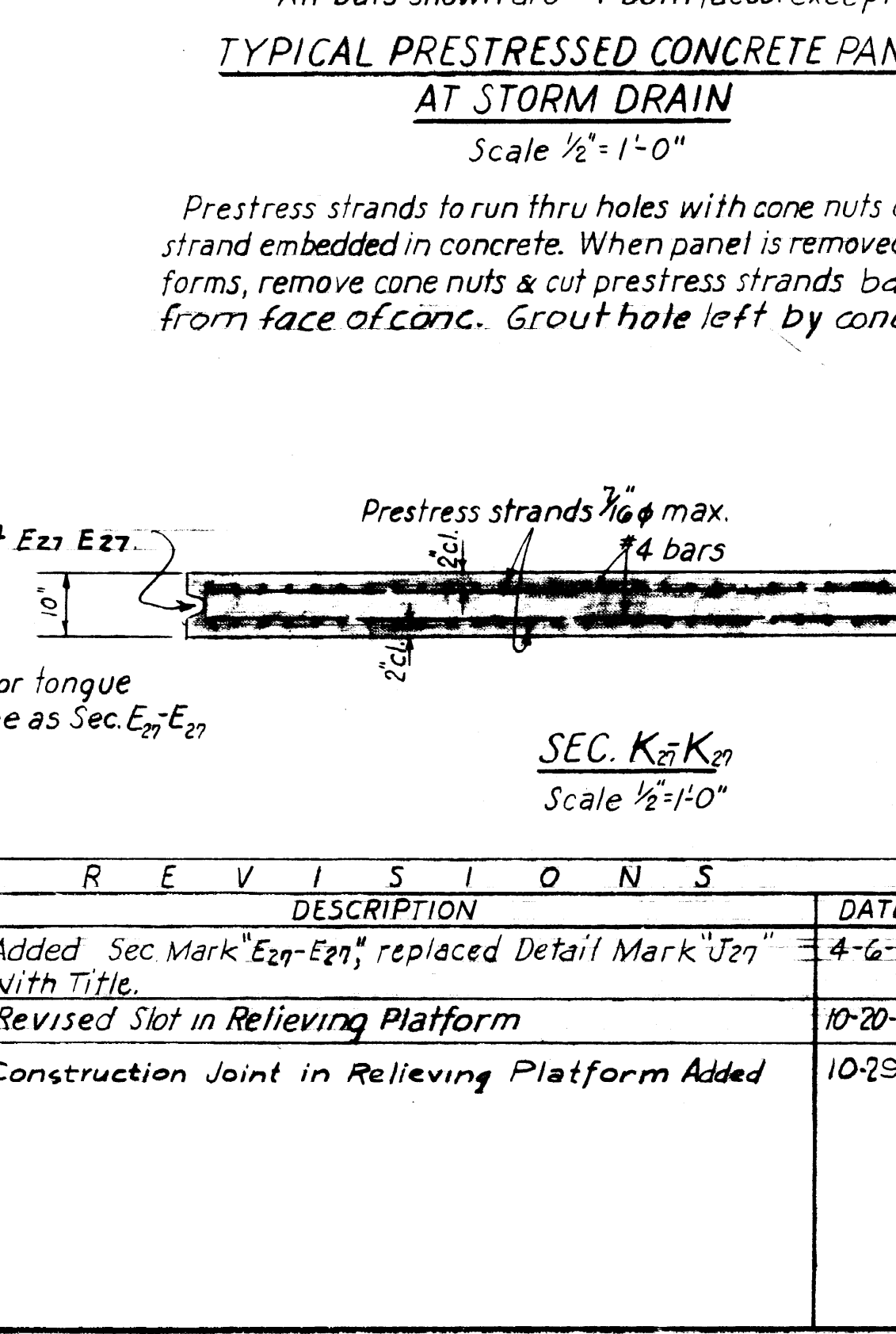
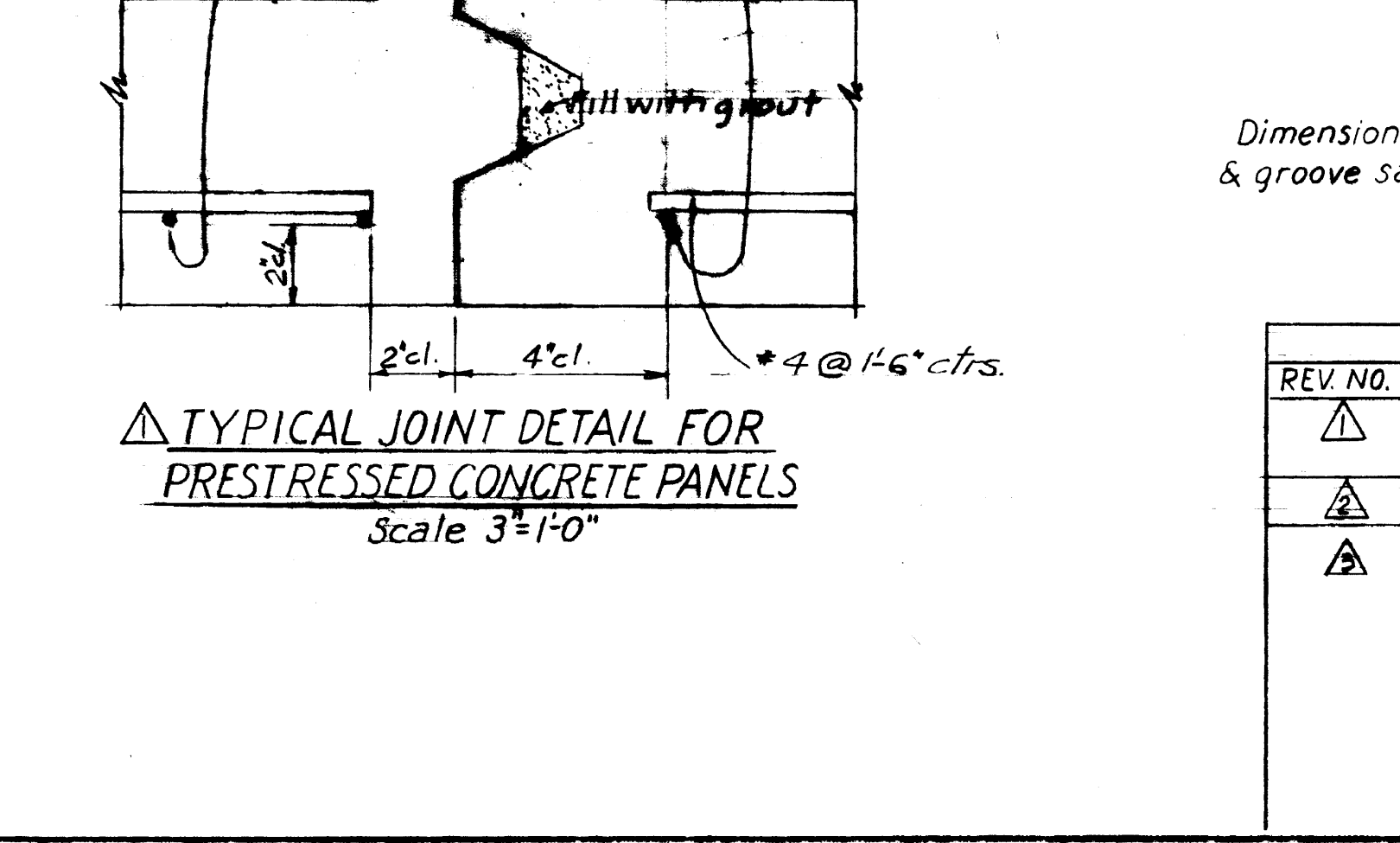
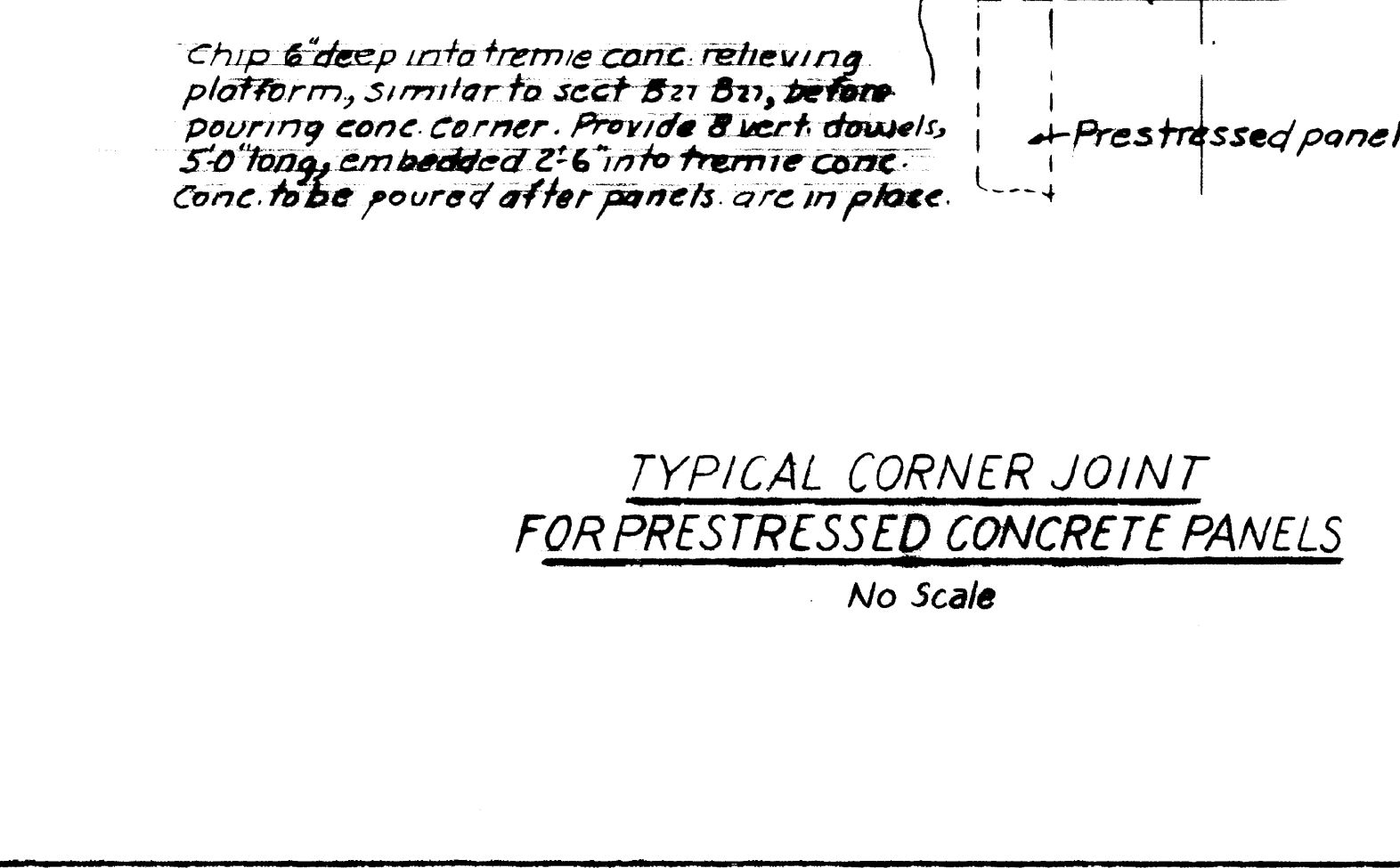
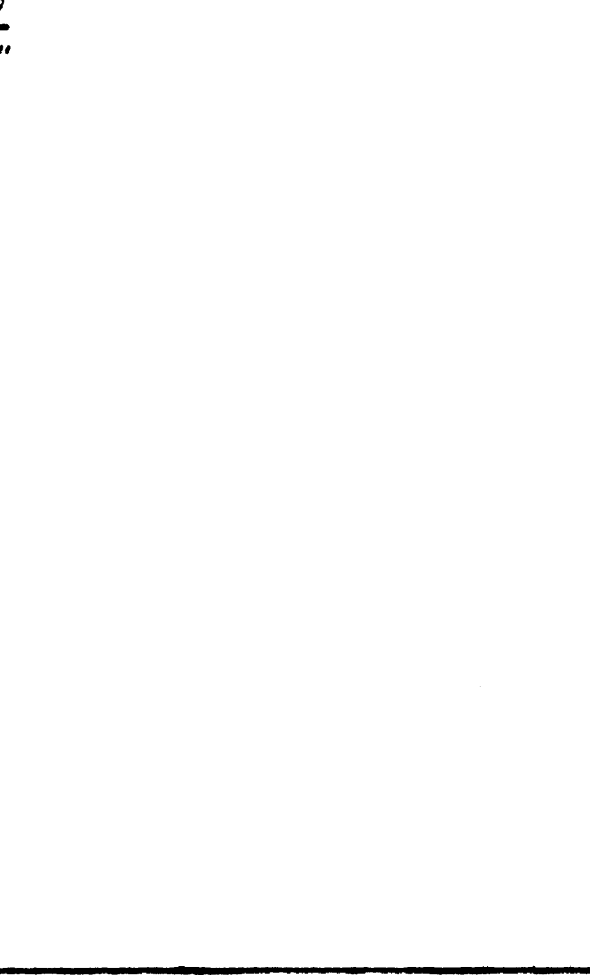
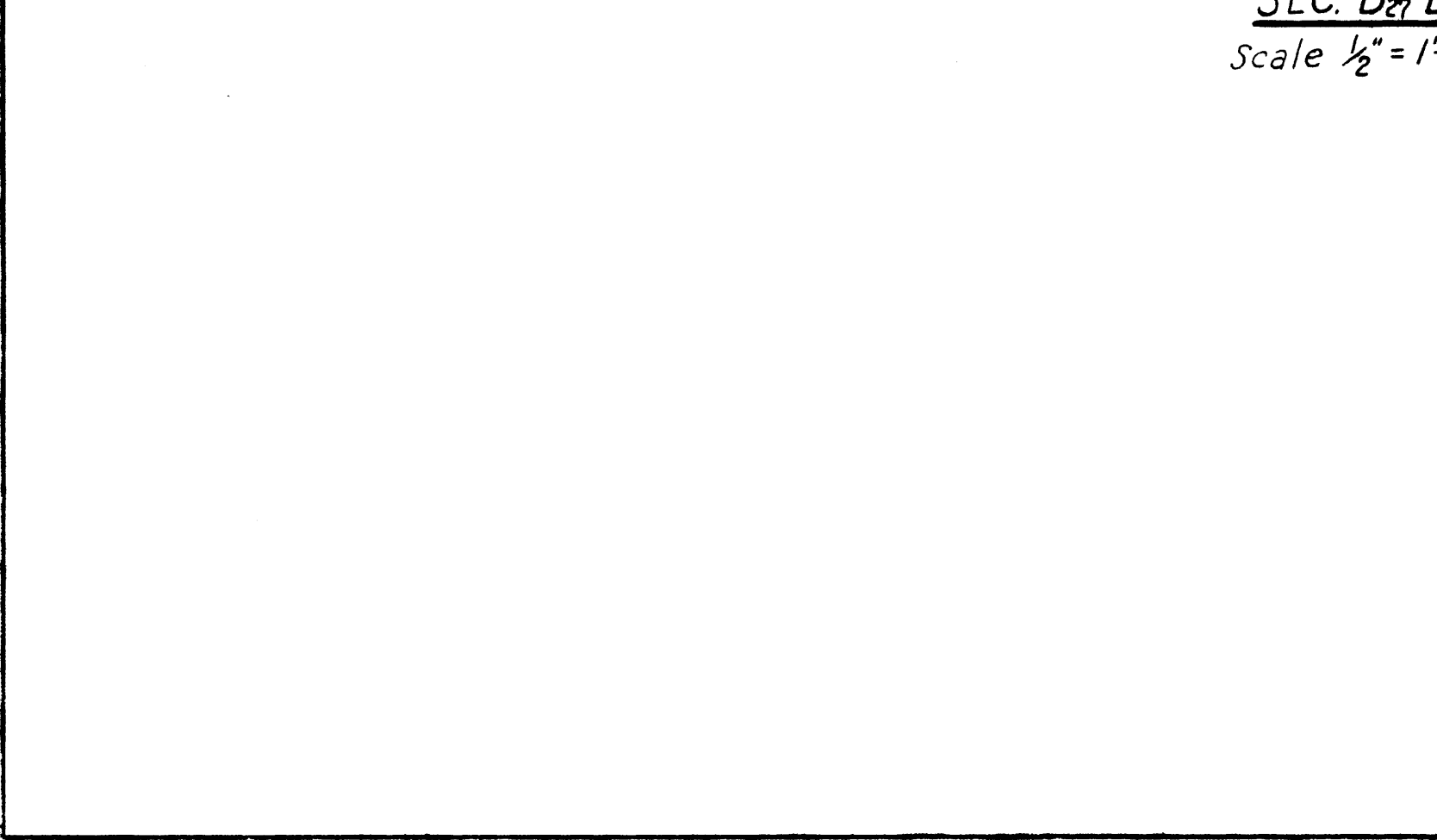
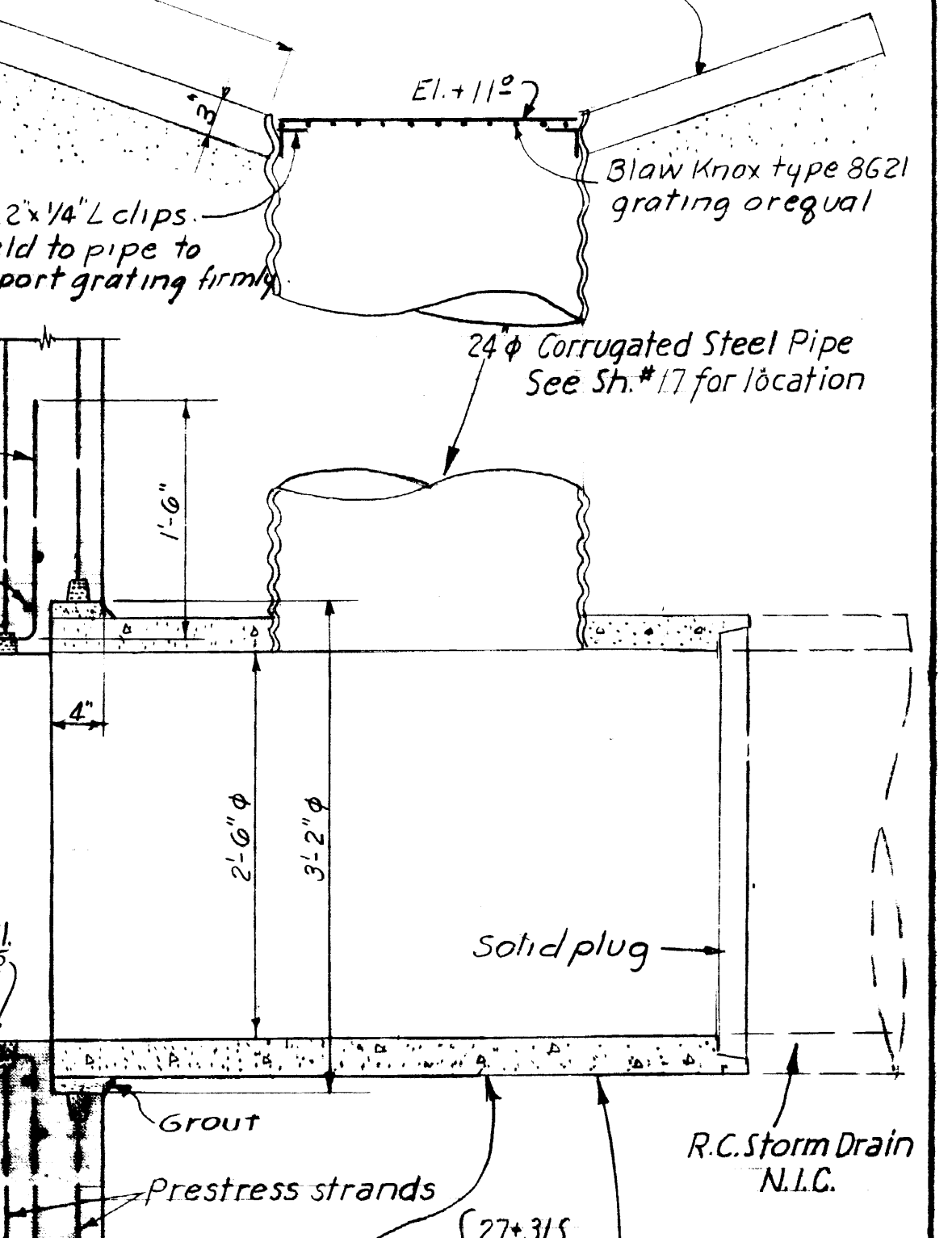
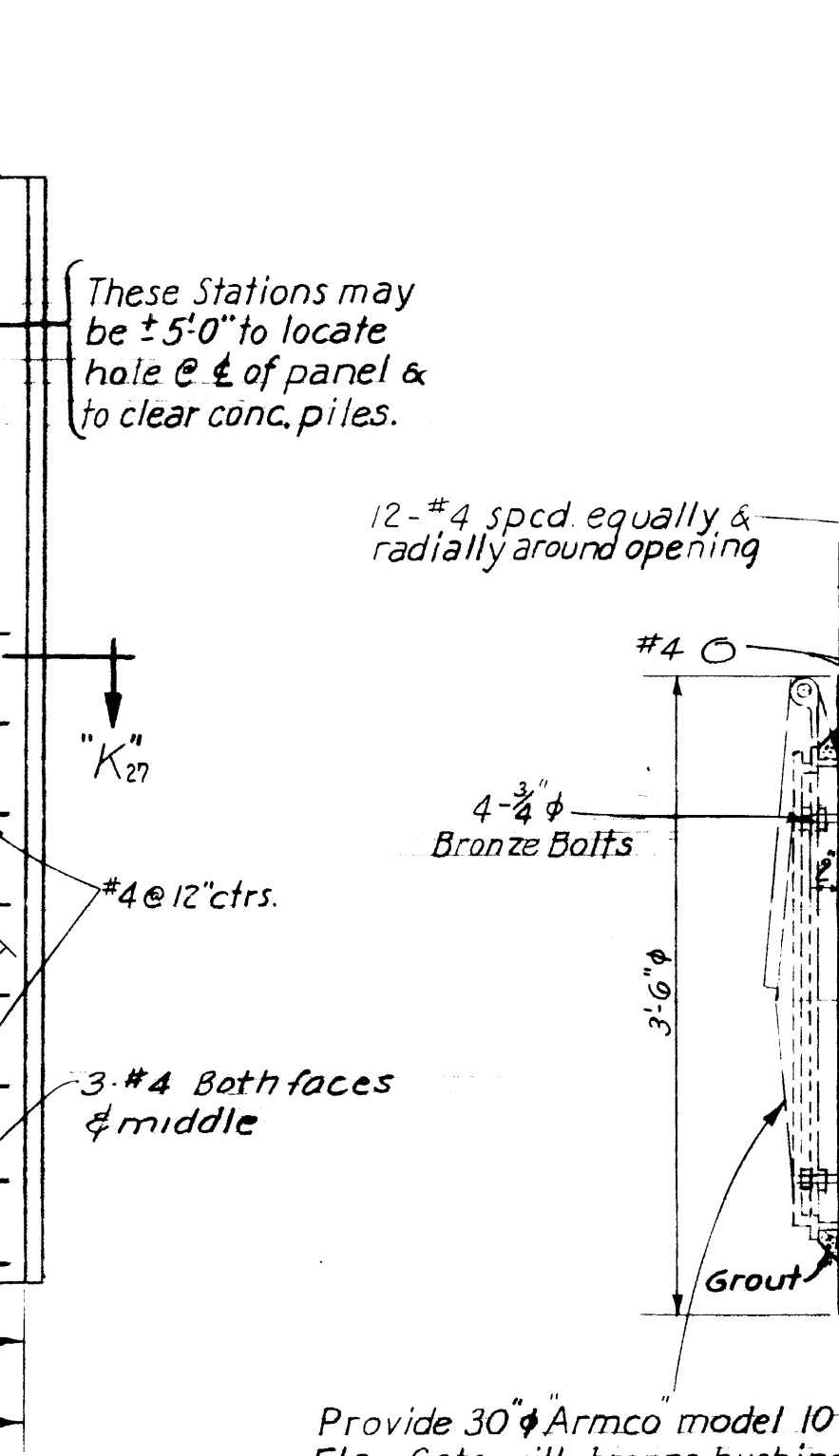
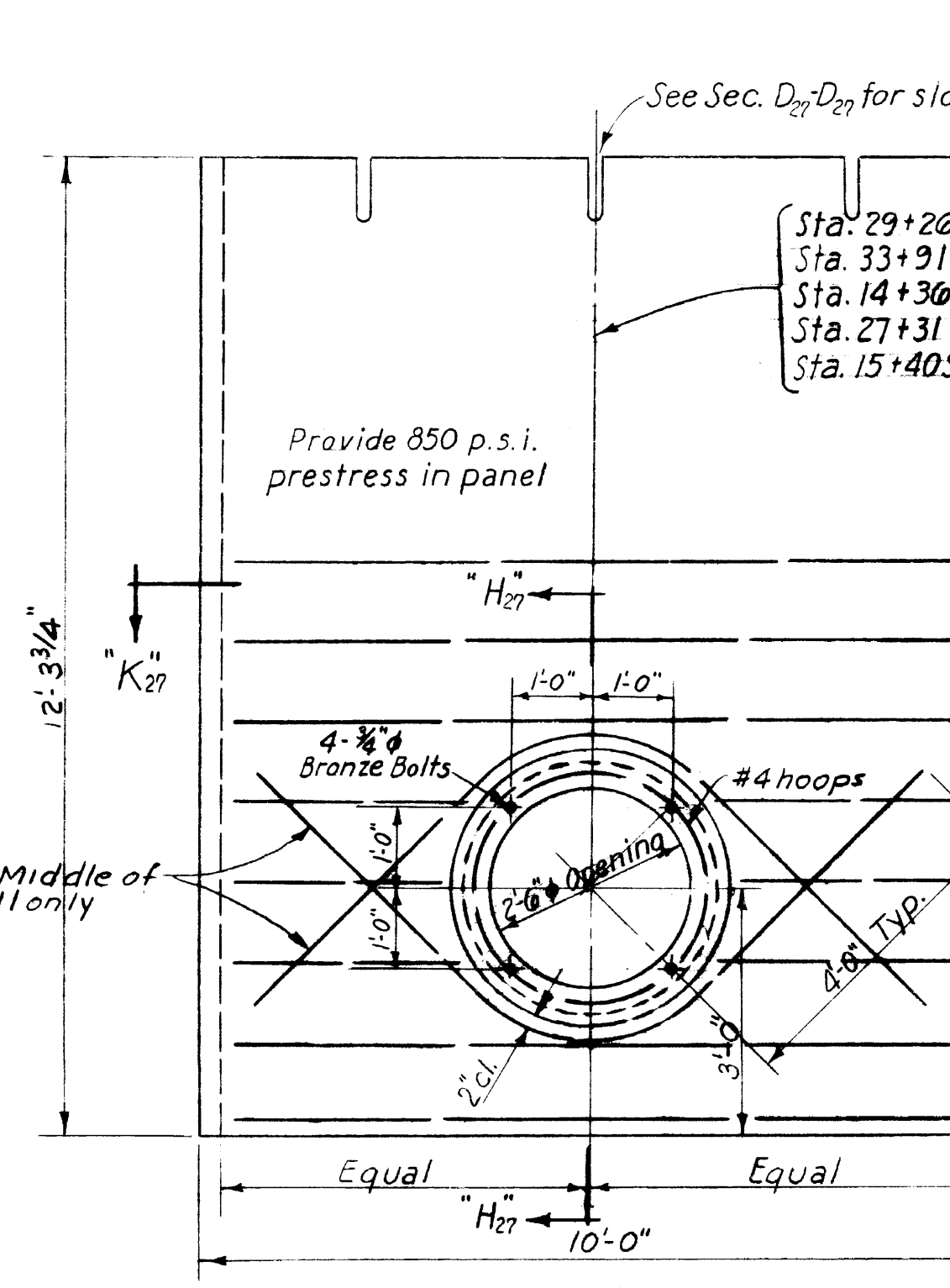
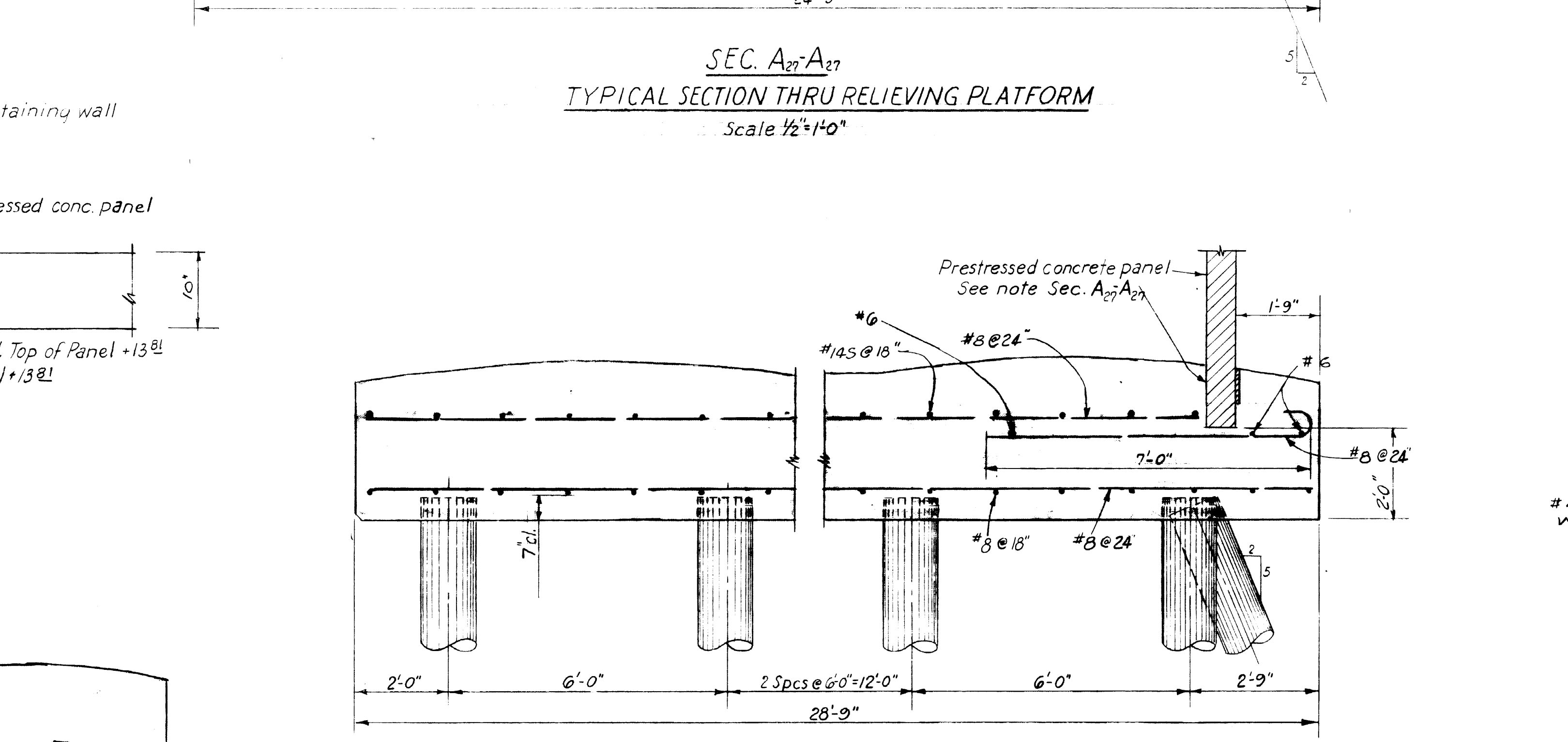
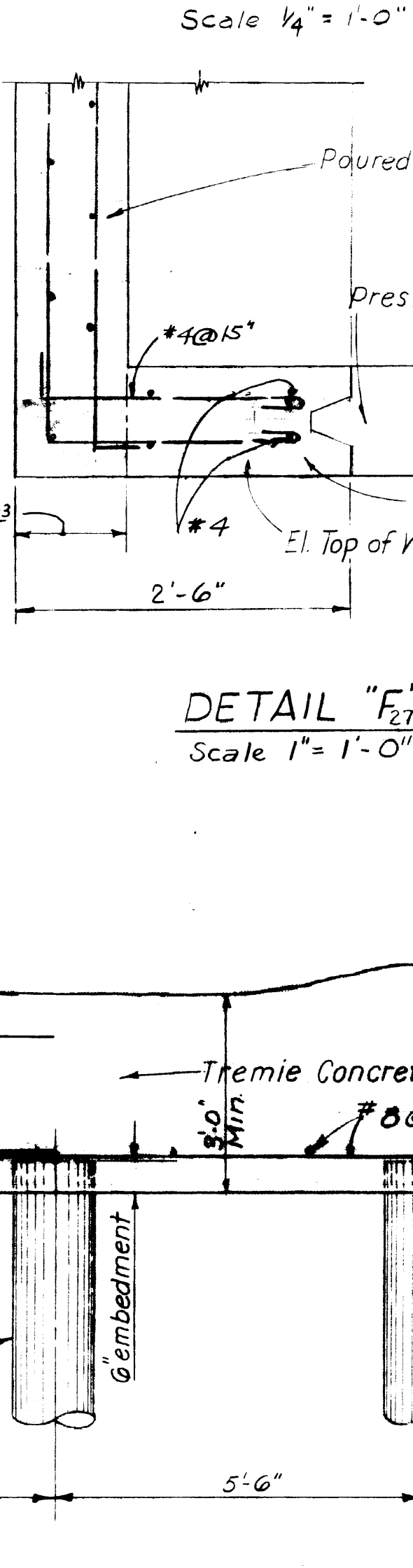
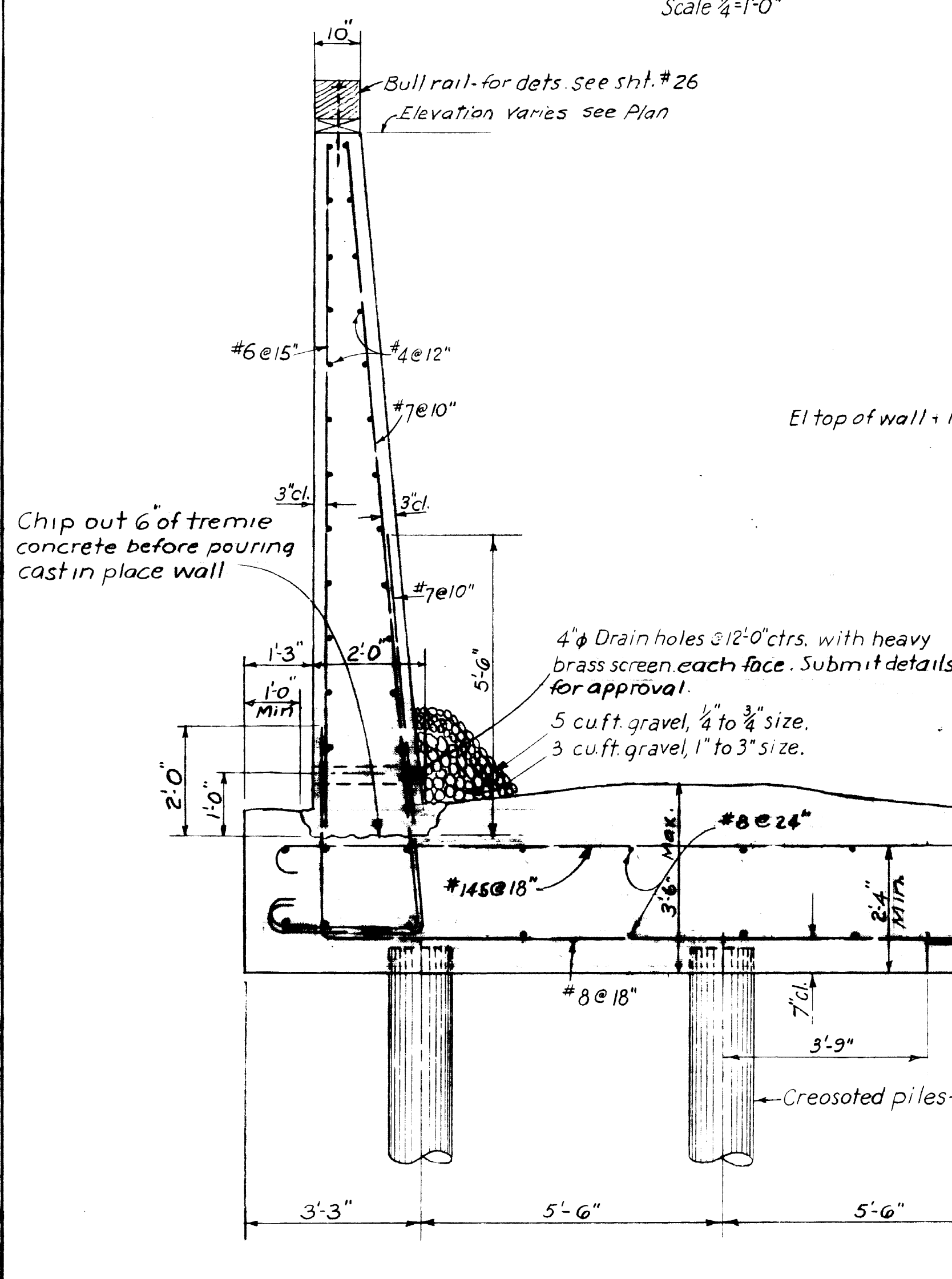
4" Drain holes @ 24" ctrs. max. with heavy brass screen each face - 1/4" mesh. Submit details for approval.

For attachment of sponge rubber - See Detail 'F' Joint filler, sponge rubber - See Specs

11.5' of Railroad Tracks, East & North Decks

to suit contractor 8'-0" min.

**Notes**  
All openings thru Panel except 4" drain holes shall be plugged before sand is deposited. Plugs to be approved by the Chief Engineer of S.F.R.A.



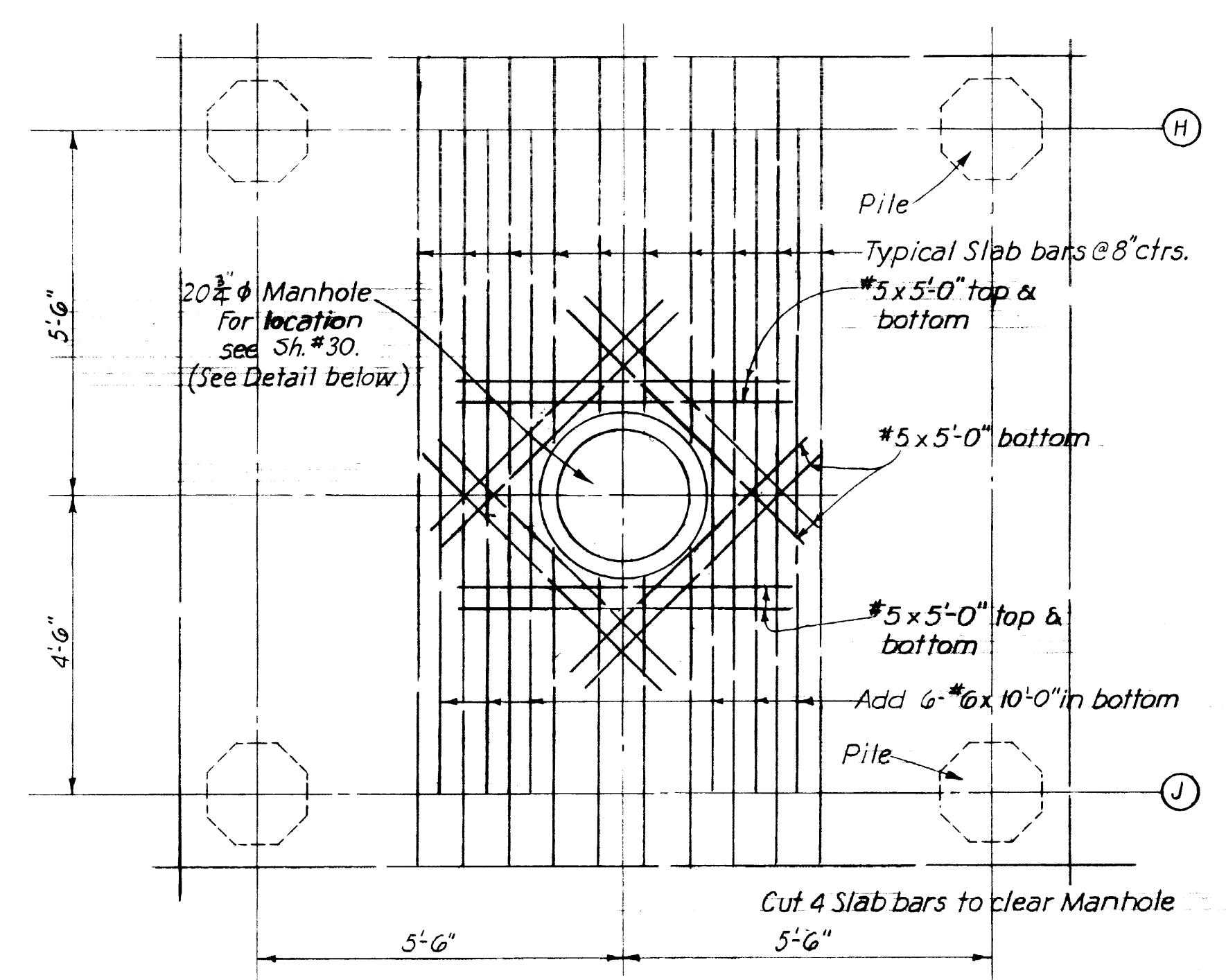
REV. NO.	DESCRIPTION	DATE
△	Added Sec Mark 'E27-E27' replaced Detail Mark 'J27' With Title	4-6-64
△	Revised Slot in Relieving Platform	10-20-64
△	Construction Joint in Relieving Platform Added	10-29-64

Approved 7-10-63  
San Francisco Port Authority  
Port of San Francisco  
Chief Engineer

SAN FRANCISCO PORT AUTHORITY  
PORT OF SAN FRANCISCO  
DEPARTMENT OF ENGINEERING  
ARMY ST. TERMINAL  
DETAILS OF RELIEVING PLATFORM, RETAINING WALL & PRECAST WALL

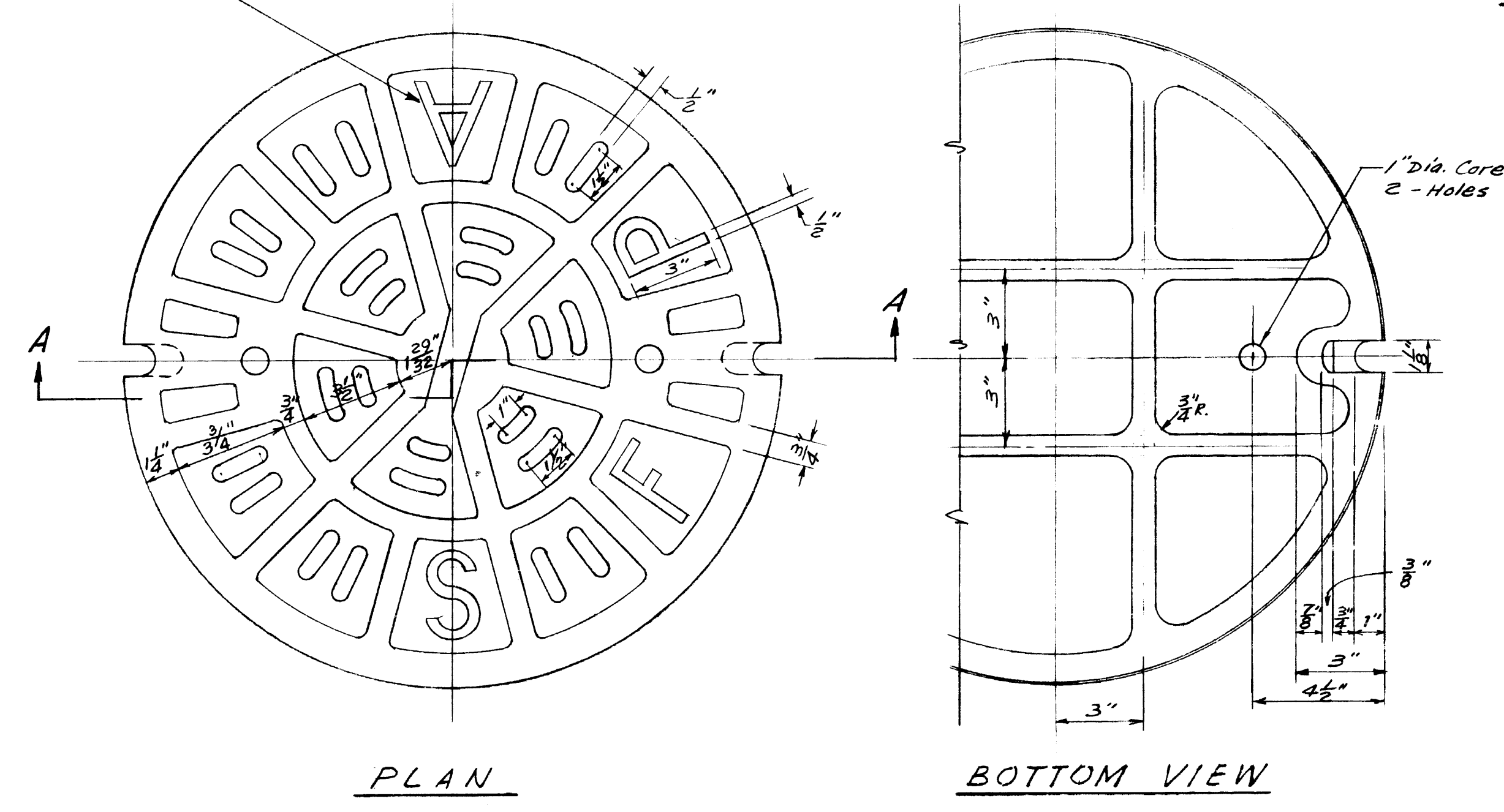
IN CHARGE OF W.F.M. CHECKED BY B.T.W.  
MADE BY W.F.M. DATE 7-8-63  
TRACED BY R.V.S. SCALE AS SHOWN  
DRAWING NO. SHEET NO.  
6958-86-1 27  
OF 33





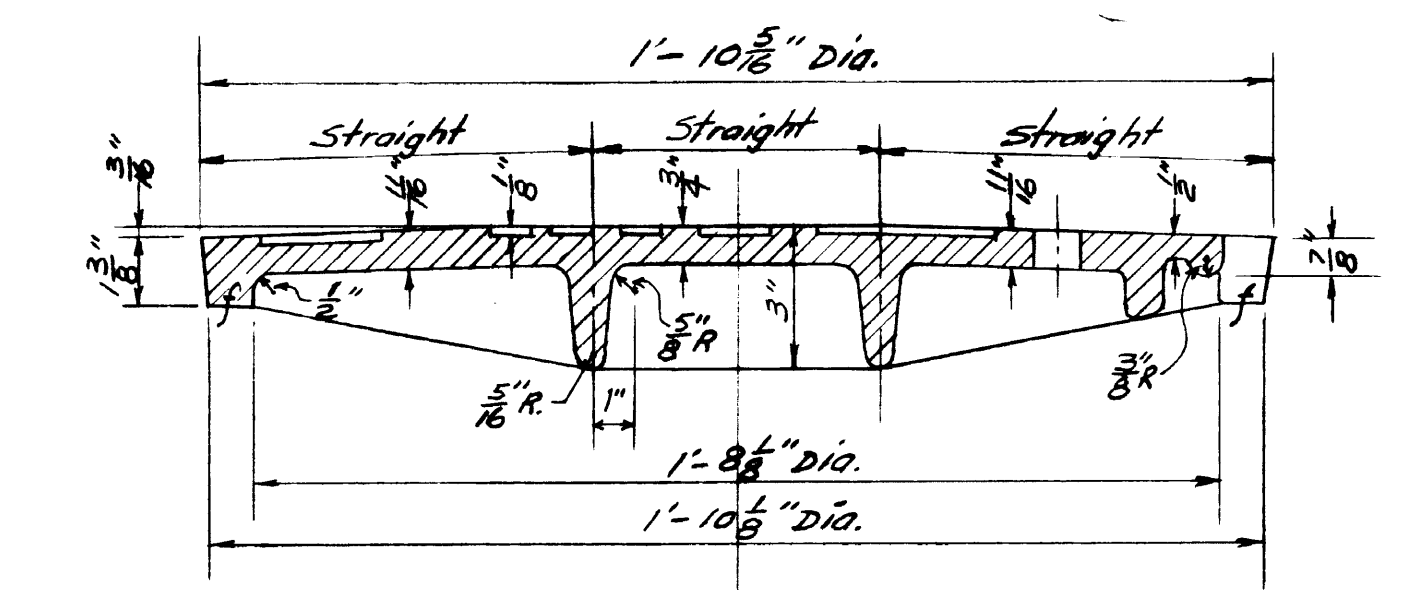
DETAIL OF REINFORCING AT MANHOLE  
Scale 1/2"=1'-0"

Cast letters as dimensioned  
2 in 3/16" dia relief, flush  
with surface

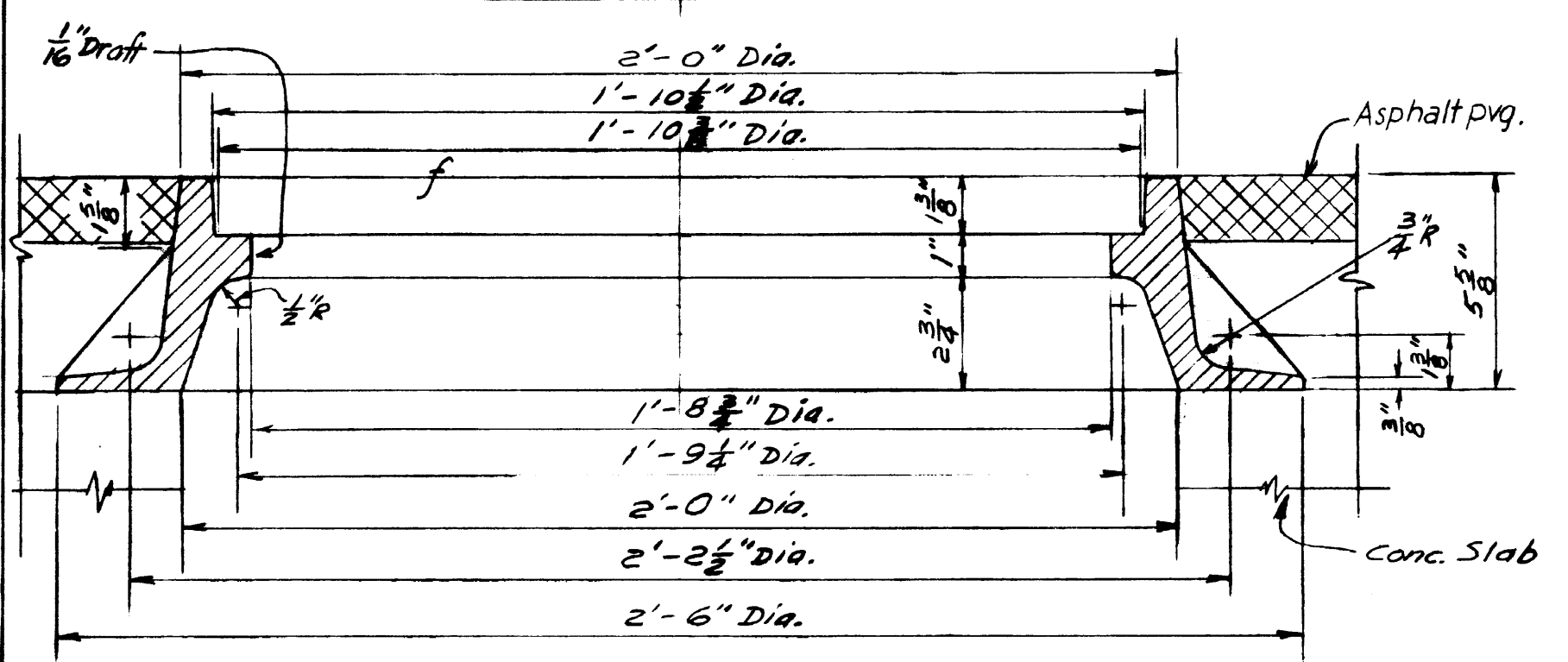


PLAN

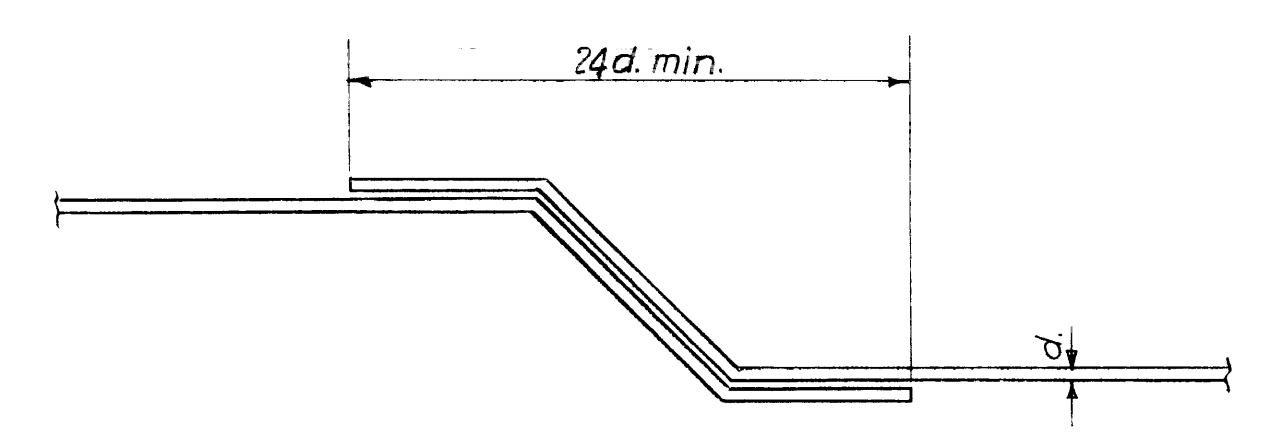
BOTTOM VIEW



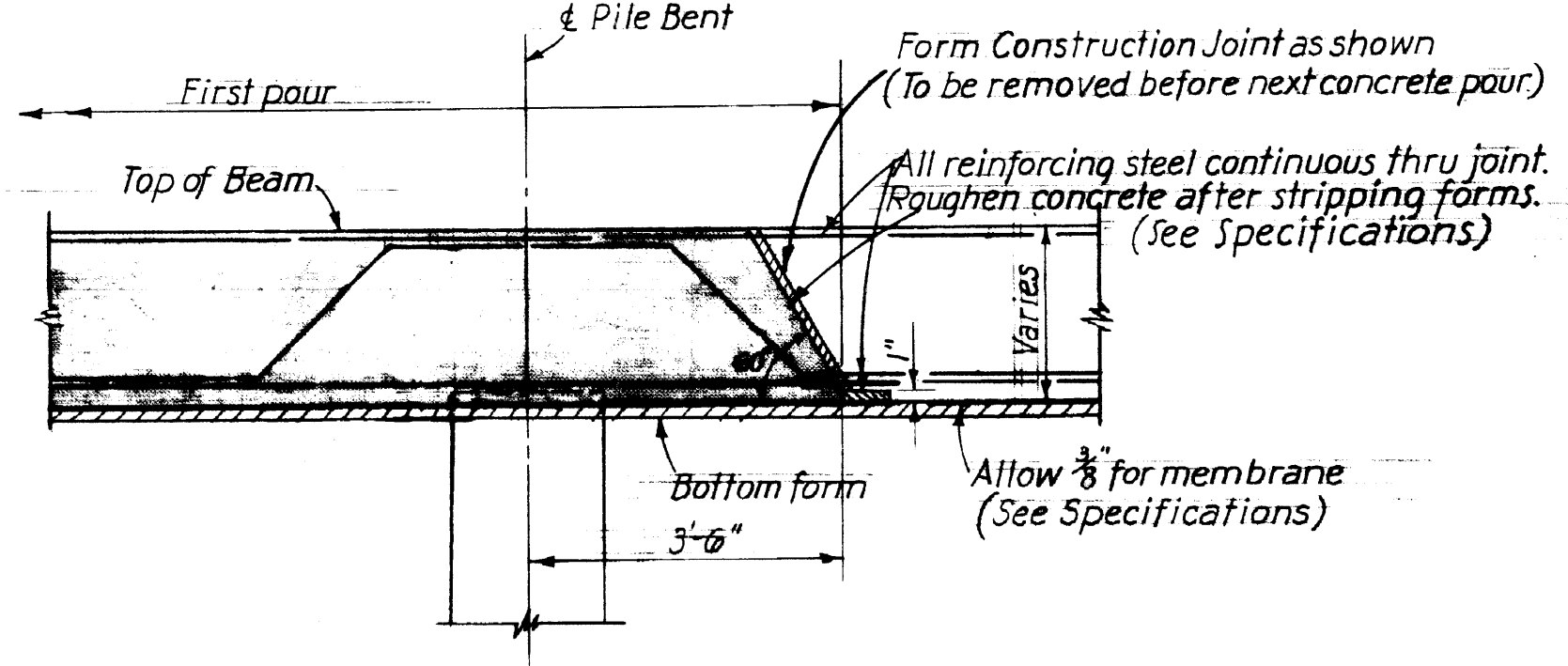
SECTION A-A



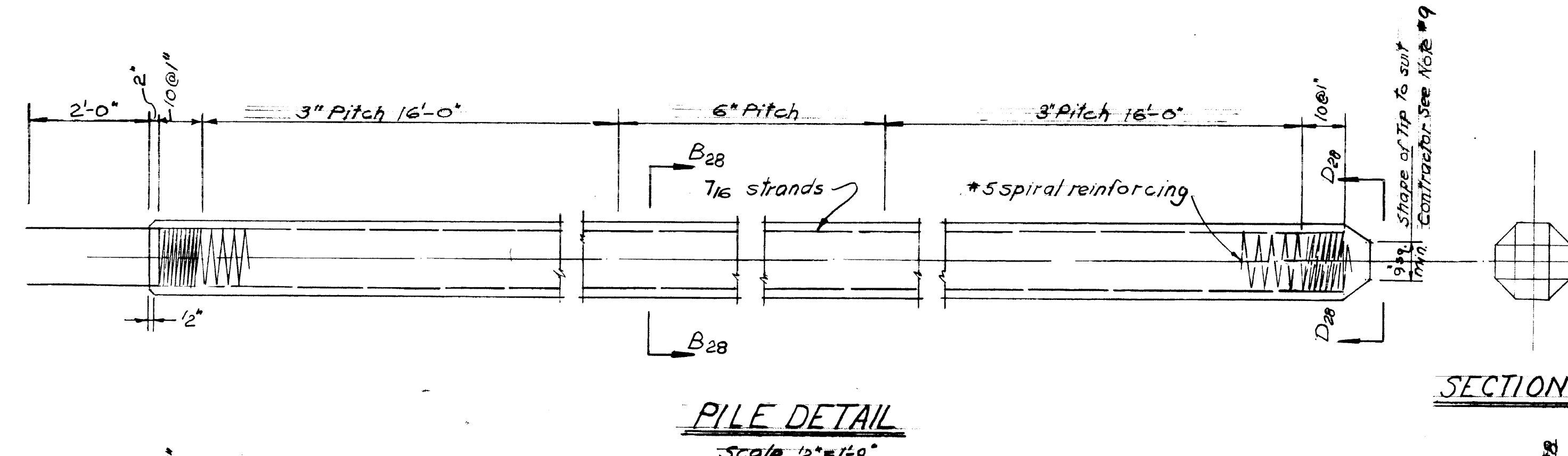
MANHOLE DETAILS  
Scale: 3/4"=1'-0"



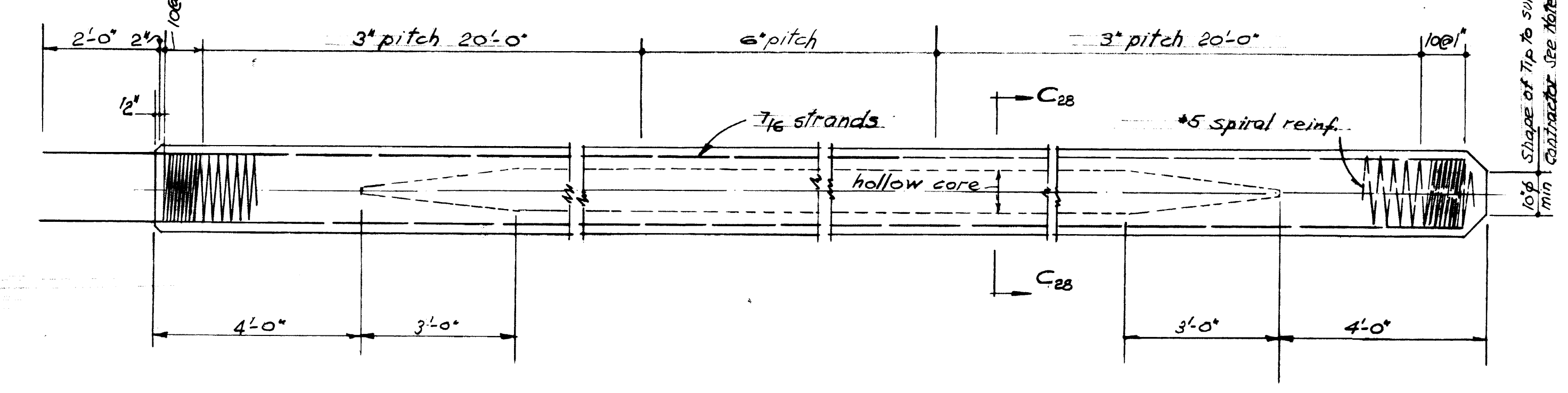
TYPICAL SPLICE FOR ALL BENT BARS  
No Scale



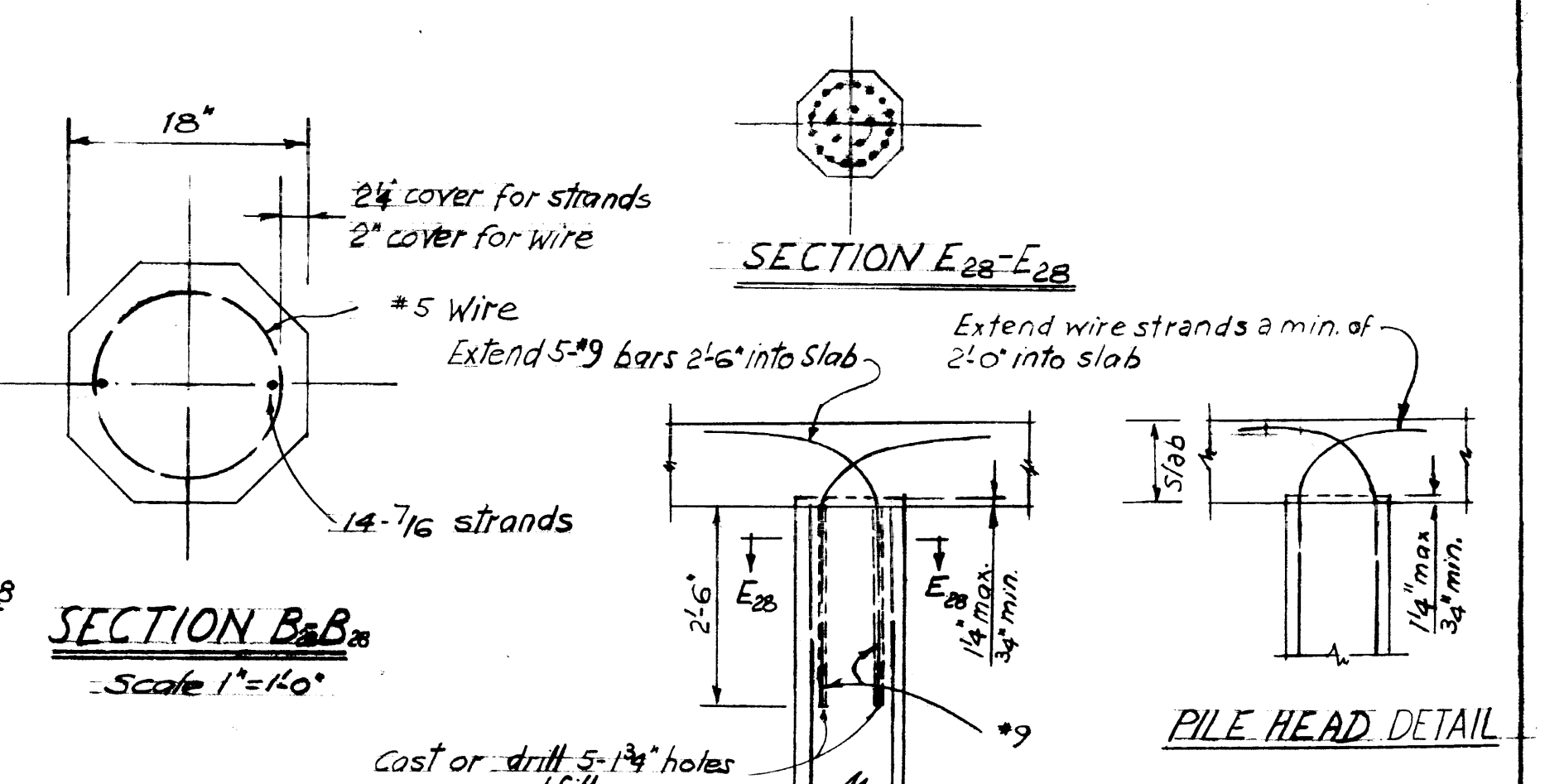
TYPICAL TRANSVERSE CONSTRUCTION JOINT  
Scale 1/2"=1'-0"



PILE DETAIL  
Scale 1/2"=1'-0"

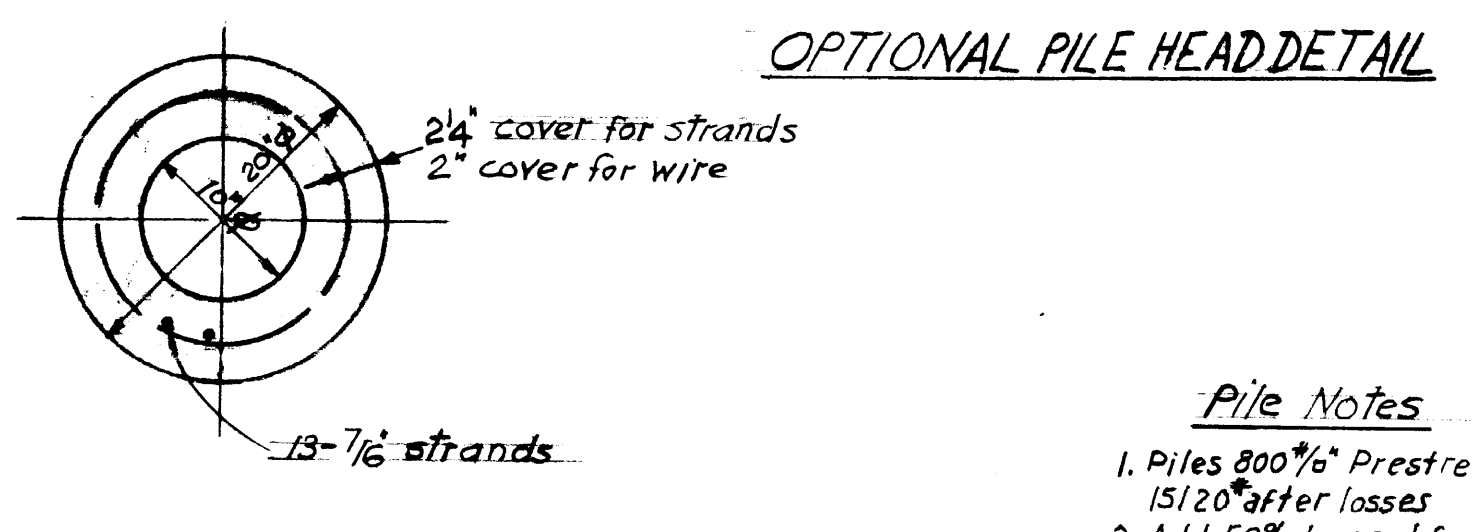


PILE DETAIL ALTERNATE  
Scale 1/2"=1'-0"



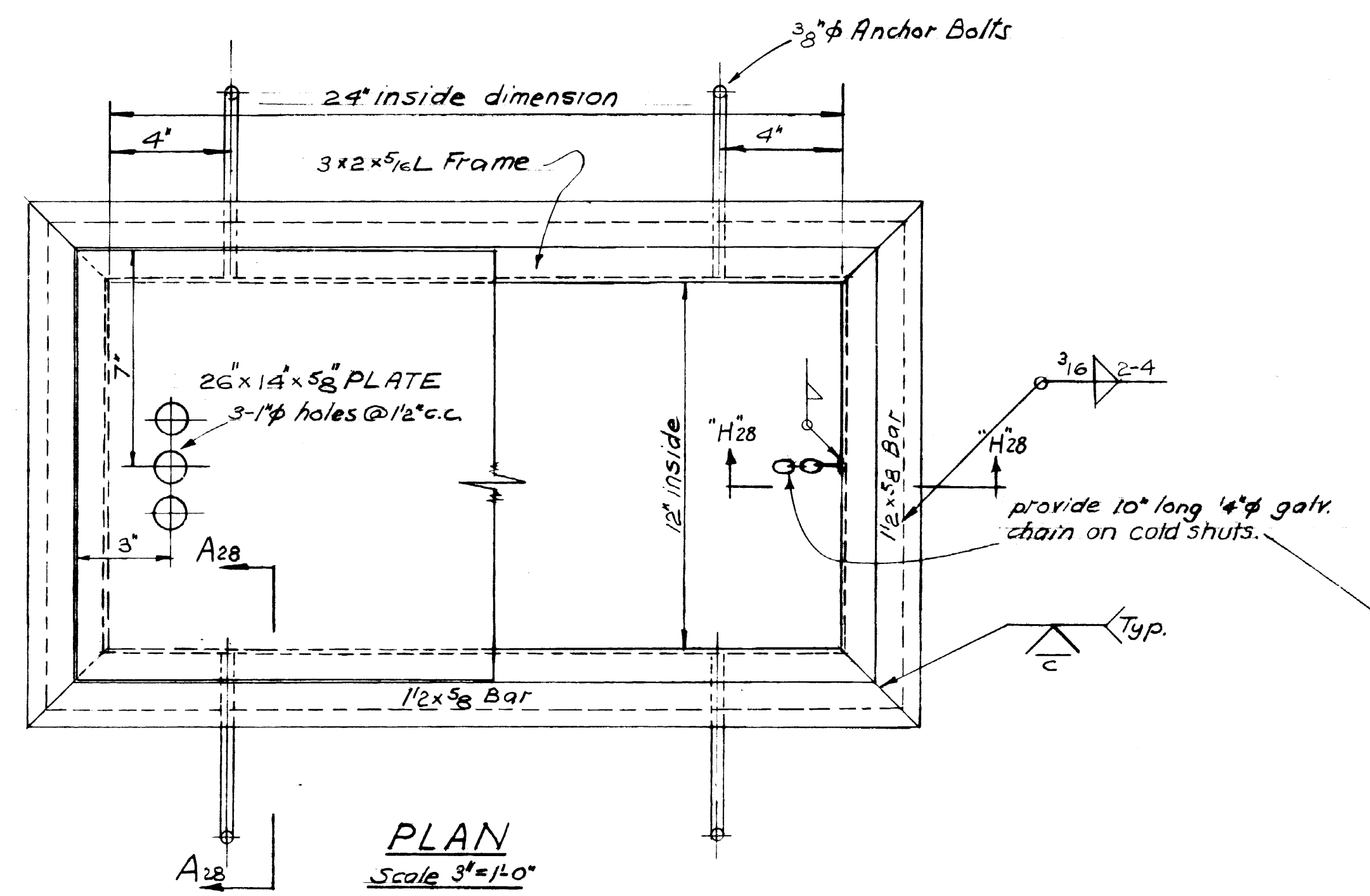
SECTION E28-E28  
Scale 1"=1'-0"

PILE HEAD DETAIL

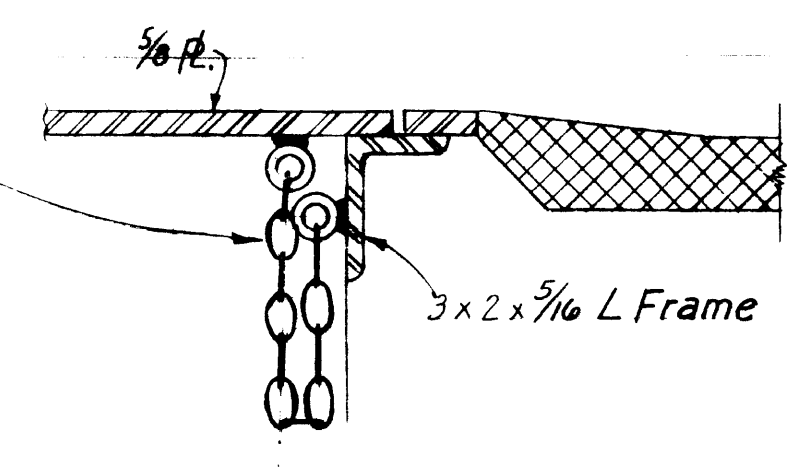


SECTION C28-C28  
Scale 1"=1'-0"

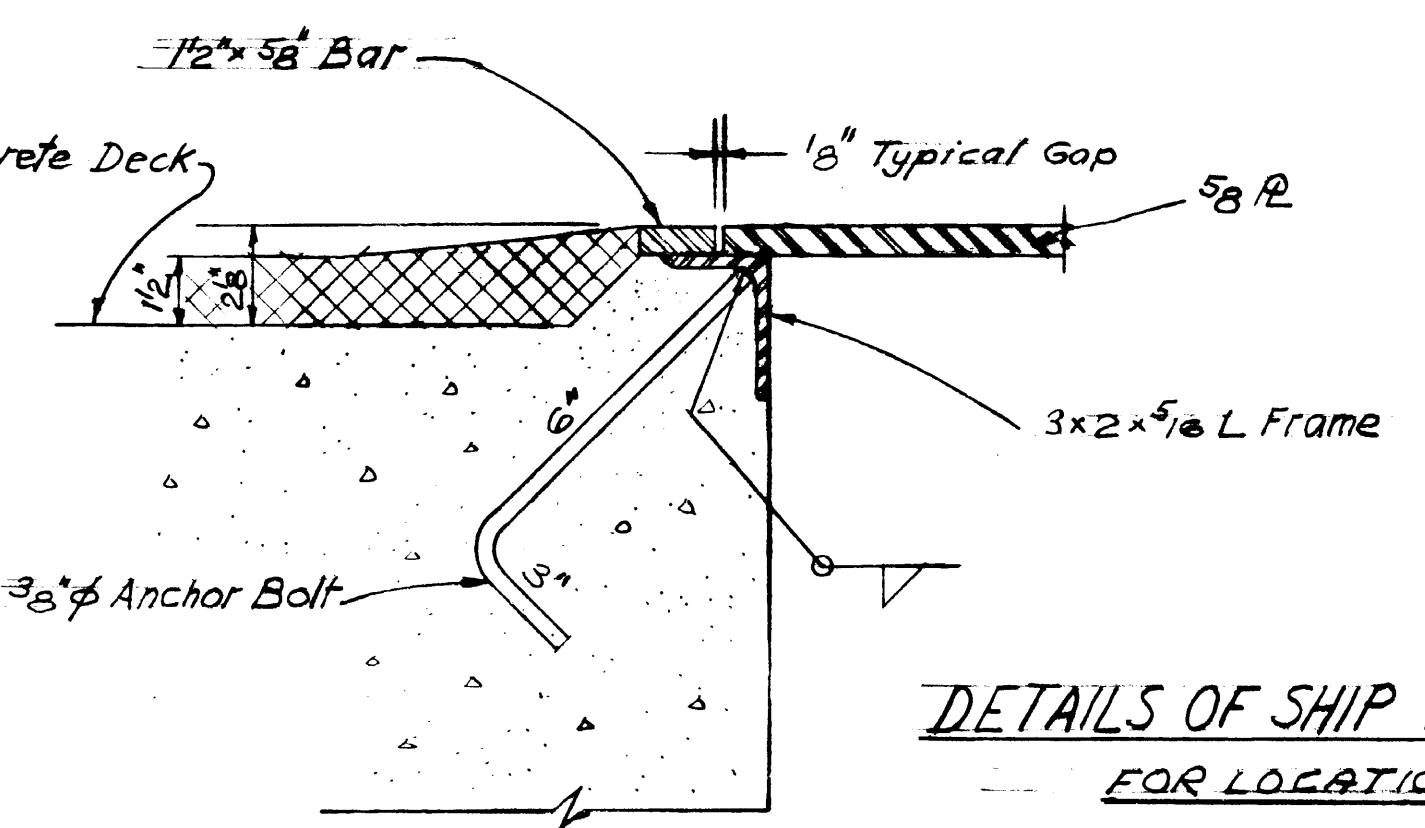
- Pile Notes**
1. Piles 800' Prestressed 7/16 Strands 15/20 after losses
  2. Add 50% Impact for pick up
  3. Piles to have pickup & blocking points clearly marked
  4. Pick up to be within 3' of point marked
  5. Contractor to submit pickup & blocking points for approval of Chief Engineer
  6. Contractor to submit full details of pick up & calculations showing stresses
  7. No tension stress in conc. allowed in piles during pickup & handling
  8. Min. cover for strands shall be 2 1/2"
  9. Shape & type of pile tip to be submitted to S.F.P.A. for approval.



PLAN  
Scale 3/4"=1'-0"



SEC. H28-H28  
Scale 3/4"=1'-0"



SECTION A28-A28  
Scale 3/4"=1'-0"

DETAILS OF SHIP WATER SERVICE HATCH  
FOR LOCATIONS SEE SHEET #29

NOTE: Frame & Cover to be galvanized after fabrication

REV. NO.	REVISION	DATE
1	Increased size of Manhole, revised reinforcing bars	4-27-64

Approved 7-10-63  
San Francisco Port Authority  
Port of San Francisco  
Chief Engineer

SAN FRANCISCO PORT AUTHORITY  
PORT OF SAN FRANCISCO  
DEPARTMENT OF ENGINEERING  
**ARMY ST. TERMINAL  
PRESTRESSED PILES &  
MISCELLANEOUS DETAILS**

IN CHARGE OF W.F.M. CHECKED BY W.F.P.  
MADE BY R.V.S., G.K. DATE 7-8-63  
TRACED BY R.V.S., G.K. SCALE As shown SHEET NO. 28  
6959-86-1 of 33