
Bridge Inspection Records Information System

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State of California
Department of Transportation

**Division of Maintenance
Structures Maintenance & Investigations**


DEPARTMENT OF TRANSPORTATION
 Structure Maintenance & Investigations

 Bridge Number : 55C0097
 Facility Carried: TALBERT/MACARTHUR
 Location : 0.6 MI W HARBOR BLVD
 City :
 Inspection Date : 05-JUN-01
Inspection Type
 Routine ☒ Group A ☐ Underwater ☐ Special ☐ Other ☐
Bridge Inspection Report**Name : SANTA ANA RIVER CHANNEL**CONSTRUCTION INFORMATION

Year Built : 1983

Skew (degrees): 30

Year Widened : N/A

No. of Joints : 0

Length (m) : 110

No. of Hinges : 0

Description of Structure : Continuous 4 span CIP/RC box girder (8 cells) with RC pier walls and RC open end seat abutments, all supported upon concrete piles.

Span Configuration : (W) 24.4 m, 2 @ 29.9 m, 24.4 m (E) c/c

LOAD CAPACITY AND RATINGS

Design Live Load : MS - 18 + MOD OR HS - 20 + MOD

Inventory Rating : 32.6 metric tons

Calculation Method : LOAD FACTOR

Operating Rating : 53.5 metric tons

Calculation Method : LOAD FACTOR

Permit Rating : PPPPP

Posting Load : Type 3 N/A english tons Type 3S2 N/A english tons Type 3-3 N/A english tonsDESCRIPTION ON STRUCTURE

Bridge width : (S) 0.3 m br, 1.5 m sw, 9.8 m, 1.2 m med, 9.8 m, 1.5 m sw, 0.3 m br (N)

Total Width : 24.4 m

Net Width : 20.70 m

No. of Lanes : 4

Rail Description : Type 26 Concrete Railing

Rail Code : 1000

Min. Vertical Clearance : Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description : RC trapezoidal.

CONDITION OF STRUCTURE

The structure is in good condition.

MISCELLANEOUS

Vehicular access into the channel is from the southwest quadrant.

ELEMENT LEVEL INSPECTION RATINGS

F#	Elem No.	Element Description	Env	Total Units Quantity	Qty in each Condition State				
					St. 1	St. 2	St. 3	St. 4	St. 5
01	12	Concrete Deck - Bare	2	2250 sq.m.	2250	0	0	0	0
01	105	Reinforced Concrete Closed Webs/Box Girder	2	110 m.	110	0	0	0	0
01	210	Reinforced Conc Pier Wall	2	84 m.	84	0	0	0	0
01	215	Reinforced Conc Abutment	2	56 m.	56	0	0	0	0
01	256	Slope Protection	2	2 ea.	2	0	0	0	0
01	302	Compression Joint Seal	2	48 m.	48	0	0	0	0
01	312	Enclosed/Concealed Bearing	2	2 ea.	2	0	0	0	0
01	331	Reinforced Conc Bridge Railing	2	222 m.	222	0	0	0	0

WORK RECOMMENDATIONS - NONE

Bridge No.: 55C0097 . Location: 0.6 MI W HARBOR BLVD

Inspection Date: 05-JUN-01

Inspected By : M. Ogata

M. Ogata
Registered Civil Engineer



CC : TMRut
Orange County

Bridge No.: 55C0097

Location: 0.6 MI W HARBOR BLVD

Inspection Date: 05-JUN-01

STRUCTURE INVENTORY AND APPRAISAL REPORT

***** IDENTIFICATION *****

(1) STATE NAME - CALIFORNIA 069
 (8) STRUCTURE NUMBER 55C0097
 (5) INVENTORY ROUTE (ON/UNDER) - ON 1 40 0M034N
 (2) HIGHWAY AGENCY DISTRICT 12
 (3) COUNTY CODE 059 (4) PLACE CODE 00000
 (6) FEATURE INTERSECTED - SANTA ANA RIVER CHANNEL
 (7) FACILITY CARRIED - TALBERT/MACARTHUR
 (9) LOCATION - 0.6 MI W HARBOR BLVD
 (11) MILEPOINT/KILOMETERPOINT 0
 (12) BASE HIGHWAY NETWORK - NOT ON NET 0
 (13) LRS INVENTORY ROUTE & SUBROUTE
 (16) LATITUDE 33 DEG 42 MIN 07 SEC
 (17) LONGITUDE 117 DEG 55 MIN 48 SEC
 (98) BORDER BRIDGE STATE CODE % SHARE %
 (99) BORDER BRIDGE STRUCTURE NUMBER

***** STRUCTURE TYPE AND MATERIAL *****

(43) STRUCTURE TYPE MAIN: MATERIAL - CONCRETE CONT
 TYPE - BOX BEAM OR GDR - MULTIPLE CODE 2 05
 (44) STRUCTURE TYPE APPR: MATERIAL -
 TYPE - CODE
 (45) NUMBER OF SPANS IN MAIN UNIT 4
 (46) NUMBER OF APPROACH SPANS 0
 (107) DECK STRUCTURE TYPE CIP CONCRETE CODE 1
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:
 A) TYPE OF WEARING SURFACE - CONCRETE CODE 1
 B) TYPE OF MEMBRANE - NONE CODE 0
 C) TYPE OF DECK PROTECTION - NONE CODE 0

***** AGE AND SERVICE *****

(27) YEAR BUILT 1983
 (106) YEAR RECONSTRUCTED 0000
 (42) TYPE OF SERVICE: ON - HIGHWAY-PEDESTRIAN 5
 UNDER - WATERWAY 5
 (28) LANES: ON STRUCTURE 04 UNDER STRUCTURE
 (29) AVERAGE DAILY TRAFFIC 33000
 (30) YEAR OF ADT 1999 (109) TRUCK ADT 1%
 (19) BYPASS, DETOUR LENGTH 2 KM

***** GEOMETRIC DATA *****

(48) LENGTH OF MAXIMUM SPAN 29.9 M
 (49) STRUCTURE LENGTH 110 M
 (50) CURB OR SIDEWALK: LEFT 1.5 M RIGHT 1.5 M
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 20.7 M
 (52) DECK WIDTH OUT TO OUT 24.4 M
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 20.7 M
 (33) BRIDGE MEDIAN - CLOSED (NO BARRIER) 2
 (34) SKEW 30 DEG (35) STRUCTURE FLARED NO
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 20.7 M
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M
 (54) MIN VERT UNDERCLEAR REF - NOT H/RR 0 M
 (55) MIN LAT UNDERCLEAR RT REF - NOT H/RR 0 M
 (56) MIN LAT UNDERCLEAR LT 0 M

***** NAVIGATION DATA *****

(38) NAVIGATION CONTROL - NOT APPLICABLE CODE N
 (111) PIER PROTECTION - NOT REQUIRED CODE 1
 (39) NAVIGATION VERTICAL CLEARANCE 0 M
 (116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR 0 M
 (40) NAVIGATION HORIZONTAL CLEARANCE 0

***** SUFFICIENCY RATING = 94.9 *****

STATUS =

HEALTH INDEX = 100

***** CLASSIFICATION ***** CODE

(112) NBIS BRIDGE LENGTH - YES Y
 (104) HIGHWAY SYSTEM - NOT ON NHS 0
 (26) FUNCTIONAL CLASS - MINOR ARTERIAL URBAN 16
 (100) DEFENSE HIGHWAY - NOT STRAHNET 0
 (101) PARALLEL STRUCTURE - NONE EXISTS N
 (102) DIRECTION OF TRAFFIC - 2 WAY 2
 (103) TEMPORARY STRUCTURE -
 (105) FEDERAL LANDS HIGHWAY - NOT APPLICABLE 0
 (110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0
 (20) TOLL - ON FREE ROAD 3
 (21) MAINTAIN - COUNTY HIGHWAY AGENCY 2
 (22) OWNER - COUNTY HIGHWAY AGENCY 2
 (37) HISTORICAL SIGNIFICANCE - NOT ELIGIBLE 5

***** CONDITION ***** CODE

(58) DECK 7
 (59) SUPERSTRUCTURE 7
 (60) SUBSTRUCTURE 7
 (61) CHANNEL & CHANNEL PROTECTION 9
 (62) CULVERTS N

***** LOAD RATING AND POSTING ***** CODE

(31) DESIGN LOAD - MS - 18 + MOD OR HS - 20 + MOD 6
 (63) OPERATING RATING METHOD - LOAD FACTOR 1
 (64) OPERATING RATING - 53.5
 (65) INVENTORY RATING METHOD - LOAD FACTOR 1
 (66) INVENTORY RATING - 32.6
 (70) BRIDGE POSTING - Equal to or above legal loads 5
 (41) STRUCTURE OPEN, POSTED OR CLOSED - A
 DESCRIPTION - OPEN, NO RESTRICTION

***** APPRAISAL ***** CODE

(67) STRUCTURAL EVALUATION 7
 (68) DECK GEOMETRY 9
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
 (71) WATER ADEQUACY 9
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 1000
 (113) SCOUR CRITICAL BRIDGES 8

***** PROPOSED IMPROVEMENTS *****

(75) TYPE OF WORK - CODE
 (76) LENGTH OF STRUCTURE IMPROVEMENT M
 (94) BRIDGE IMPROVEMENT COST
 (95) ROADWAY IMPROVEMENT COST
 (96) TOTAL PROJECT COST
 (97) YEAR OF IMPROVEMENT COST ESTIMATE
 (114) FUTURE ADT 66000
 (115) YEAR OF FUTURE ADT 2019

***** INSPECTIONS *****

(90) INSPECTION DATE 06/01 (91) FREQUENCY 24 MO
 (92) CRITICAL FEATURE INSPECTION: (93) CFI DATE
 A) FRACTURE CRIT DETAIL - NO -1 MO A)
 B) UNDERWATER INSP - NO -1 MO B)
 C) OTHER SPECIAL INSP - NO -1 MO C)

Bridge Number 55C-97

TYPE OF INVESTIGATION/REPORT

BIENNIAL X DAMAGE
CATEGORY A OTHER
UNDERWATER OFFICE

Location 12 - Ora - FAU M034-CR
Dist.-Co.-Rte.-City

Date of Investigation July 14, 1995

Name SANTA ANA RIVER CHANNEL (Talbert Avenue/MacArthur Boulevard, 0.6 mile west of Harbor Boulevard)

CONDITION RATINGS:

Condition ratings of all bridge elements are shown on the PONTIS DATA FORM (Attachment A).

Channel & Channel Protection

9

SCOUR CRITICAL:

A scour rating of A-1 is appropriate.

CONDITION OF STRUCTURE:

Approach of westbound sidewalk has settled by 75 mm and sidewalk has cracked.

There is light vertical cracking in pier walls and abutments.

Concrete portion of miscellaneous bridge railing have light cracks adjacent to post holes of metal portion of railing.

Condition of structure is good.

REVISION:

DESCRIPTION - HYDRAULICS.

Channel: Reinforced concrete bottom trapezoidal with concrete side slopes.

WORK RECOMMENDED:

Overlay sidewalk with AC to avoid tripping of pedestrians.

M. Hadi Behrooz

By

G. P. Balinghasay

GPB:cd

cc: CDHarris
Orange County
WLindsey



INFORMATION ONLY - NOT FOR UPDATE

BRIDGE NUMBER	FRAME	INSPECTION DATE
55C0097	01	071495
1 8	9	11 16

SCOUR CRITICAL	NO
CATEGORY A	NO
FRACTURE CRITICAL	NO
ELIGIBLE FOR RAIL UPGRADE	NO
UNDERWATER INSPECTION	NO

DISTRICT 12
COUNTY ORA
ROUTE
POSTMILE
NAME

[illegible]

08/03/95

BY: _____

SUPPLEMENTARY BRIDGE REPORT

DS-M19 (REV. 8/92)

Bridge Number 55C-97

TYPE OF INVESTIGATION/REPORT

BIENNIAL	<u>X</u>	DAMAGE	___
CATEGORY A	___	OTHER	___
UNDERWATER	___	OFFICE	___

Location 12 - Ora - FAU M034-CR
Dist.-Co.-Rte.-City

Date of Investigation April 12, 1993

Name SANTA ANA RIVER CHANNEL (Talbert Avenue/MacArthur Boulevard, 0.6 mile west of Harbor Boulevard)

CONDITION RATINGS:

Condition ratings of all bridge elements are shown on the PONTIS DATA FORM (Attachment A).

Channel & Channel Protection

9

CONDITION OF STRUCTURE:

Condition of the structure is good.

Henry Ma

HM:cd

cc: INagai (2)
County of Orange



INFORMATION ONLY - NOT FOR UPDATE

BRIDGE NUMBER	FRAME	INSPECTION DATE
55C0097	01	041293
1 8	9	11 16

SCOUR CRITICAL	NO
CATEGORY A	NO
FRACTURE CRITICAL	NO
ELIGIBLE FOR RAIL UPGRADE	NO
UNDERWATER INSPECTION	NO

DISTRICT	12
COUNTY	ORA
ROUTE	***
POSTMILE	*****
NAME	

[illegible]

BY:

BRIDGE REPORT

14W11

Bridge No. 55C - 97

DS-M56 (REV. 1/91)

Location 12 - Ora - FAU M034-CR
Dist Co Rte City

REVISED ORIGINAL REPORT

Date of Investigation April 11, 1991

Name SANTA ANA RIVER CHANNEL (Talbert Avenue/MacArthur Boulevard,
0.6 mile west of Harbor Boulevard)

Lat. 33° - 42.1'N Long. 117° - 55.8'W

Custodian County of Orange Owner County of Orange

STRUCTURAL DATA AND HISTORY

Year Built 1983 By County of Orange Contract No. Unknown

Designed by: County Plans Avail. @ County

Description: 4 span continuous CIP RC box girder (8 cells) supported
on RC pier walls and open end RC seated abutments, all
on concrete piles.

Spans (W) 80', 2 @ 98', 80' (E)

Length 361' NBIS Bridge Length Yes Skew 30° Right

Number Of Intermediate Joints: @Hinges None @Bents None

Maximum Column/Pier Height: (Less than 20') X (20'-29') (30' & Over)

Design Live Load HS20 & Alt & Permit Design Method Load Factor

DESCRIPTION - ON STRUCTURE

Bridge Width (S) 1'br, 5'sw, 32', 4'm, 32', 5'sw, 1'br (N)

Total Width 80' Net Width 68' Lanes 4 Tracks None

Median Painted stripe Rail Type 26 w/tubular handrail 1000

Vert. Clearance over deck Unimpaired Appr. Rdwy. Width 68'

Deck Type 1 Wearing Surface/Prot. Sys. 100 Concrete/none

Alignment Tangent

DESCRIPTION - UNDER STRUCTURE

Roadway Section None

Clearances: Road: Vert. Horiz.Lt. ; Rt.

Lanes Tracks

Facilities Crossed Santa Ana River Channel (E 01)

April 11, 1991

DESCRIPTION - HYDRAULICS

Channel Sandy bottom trapezoidal with concrete sideslopes

Navigable: Yes ☐ No ☒ Clearances: Vert. Horiz.Pier/Abutment Protection (For Navigation) ☐

TRAFFIC INFORMATION

	DECK	YEAR	UNDER	YEAR
Average Daily Traffic & Year :	19,000	1989	N	
Average Daily Traffic (Future) :	20,000 Est	2010	N	
Average Daily Trucks (% OF ADT) :	1% Est		N	
Bypass Detour Length	1 mile		N	
Shell Route:	No		No	
Functional Classification :	14		N	
LOAD RATINGS:	Inventory HS 20	Operating HS 33		
	Permit PPPPP	Computation Method Min. by Design		

CONDITION RATINGS:

Deck	8	Superstructure	8	Substructure	8
Channel & Channel Protection	9	Culvert	N	Widenable	Yes

APPRAISAL RATINGS:

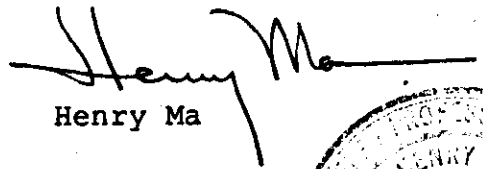
Waterway Adequacy	9	Approach Roadway Alignment	8
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Date of Revisions

CONDITION OF STRUCTURE:

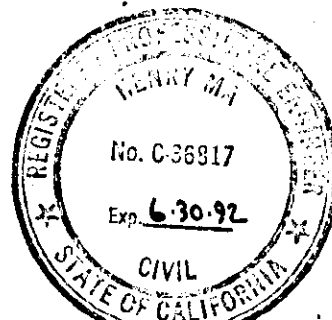
There is light transverse cracking in the concrete bridge deck. Also there are several (10± each) light transverse cracks on underside of south deck overhang in the east end span.

Condition of the structure is good.



Henry Ma

HM:ms

cc: INagai (2)
County of Orange

Bridge No. 55C-97
Location 12-Ora - FAU M034 - CR
Dist. Co. Rte. City
Date of Investigation 4-10-89

Name SANTA ANA RIVER (Talbert Avenue/MacArthur Boulevard, 0.6
mile W. of Harbor Boulevard)

CONDITION RATING:

Deck 7 Superstructure 8 Substr.&Pipes 8
Channel & Channel Protection 8 Culvert N Widenable? Yes

TYPE OF INVESTIGATION/REPORT

BIENNIAL X DAMAGE
CATEGORY A OTHER
UNDERWATER OFFICE

CONDITION OF STRUCTURE:

There is light random cracking in the concrete bridge deck.

Condition of the structure is good.

REVISION:

Location: 12-Ora-FAU M034-CR

Condition Rating: Deck - 7

WORK RECOMMENDED:

None.

RECOMMENDED POSTING:

None.

SUBSTRUCTURE CODING UPDATE:

2 RC open end seated abutments on concrete piles.

3 RC pier walls on concrete piles.

Henry Ma

HM:ms

cc: INagai (2)
County of Orange (2)



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTARY BRIDGE REPORT
DH-OS 119 (REV. 1/74)

Bridge No. 55C-97
Location 7-Oran-FAU M034-CR
Dist - Co - Rte - PM - City

Date of Investigation April 15, 1987

Name SANTA ANA RIVER (Talbert Ave./MacArthur Blvd., 0.6 miles
W. of Harbor Blvd.)

CONDITION RATING:

APPRAISAL RATING:

Deck 8 Superstructure 8 Substr. & Pipes 8 Overall 8
Channel & Channel Protection 8 Retaining Walls N

Widenable? Yes ☒ No ☐ Conditional ☐

Action Required By County Yes ☐ No ☒

PRIORITY

A - Immediate Action
B - Early Scheduling
C - Routine Maint.
O - For Record Only

REVISION:

Condition Rating - Deck 8
Superstructure 8
Substructure & Pipes 8
Appraisal Rating - Overall 8
Average Daily Traffic - 18,000 (1985)

CONDITION OF STRUCTURE:

The structure is in good condition.

RECOMMENDED POSTING:

None

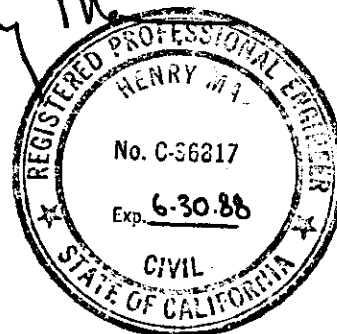
WORK RECOMMENDED:

None

HM:pht

cc: INagai (2)
Orange County (2)

Henry Ma



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTARY BRIDGE REPORT
DH-05 MB (REV. 1/74)

Bridge No. 55C-97
Location 7-Ora-FAU M034-CR
Stat - Co - Rte - Pd - City
Date of Investigation January 7, 1986

Name SANTA ANA RIVER (Talbert Ave./MacArthur Blvd. 0.6 miles W. of Harbor Blvd.)

CONDITION RATING:

APPRAISAL RATING:

Dock 9 Superstructure 9 Substr. & Pipes 9 Overall 9
Channel & Channel Protection 8 Retaining Walls N

Widenable? Yes ☒ No ☐ Conditional ☐

Action Required by County Yes ☐ No ☒

PRIORITY

A - Immediate Action
B - Early Scheduling
C - Routine Maint.
O - For Record Only

CONDITION OF STRUCTURE:

The structure is in good condition.

RECOMMENDED POSTING:

None

WORK RECOMMENDED:

None


Henry Ma
C-36817

HM:pdh
cc: INagai (2)
Orange County (2)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
BRIDGE REPORT
DS-M58 (REV. 1/81)

SEE RE-NOO
ORIGINAL REPORT

Bridge No. 55C-97

Other No. _____

P.U.C. No. _____

Location 7-Ora-FAU MO34-CR
Dist - Co - Rte - PM - City (On Deck)

Date of Investigation September 22, 1983

Name SANTA ANA RIVER (Talbert Ave./Mac Arthur Blvd. 0.6 miles W. of Harbor Blvd.)
Lat. 32° -42.1' Long. 117° - 55.8'

STRUCTURAL DATA AND HISTORY

Year Built 1983 By Orange County Contract No. Unknown

Date of Revisions _____

Designed by: B.D. ☐ Orange County Plans Avail. @ B. D.

Description: 4 span continuous RC box girders (8 cells) on solid RC pier walls and seated abutment, all supported on concrete pile footings.

Spans 1 @ 80', 2 @ 98', 1 @ 80' (C-C)

Length 361' Skew 30° Rt Design LL HS20-Alt-Permit

Ratings: Inventory HS20/LF Min by Design Operating HS33/LF Min by Design Permit PPPPP/By Design

DESCRIPTION - ON STRUCTURE (Shell Rte.: Yes ☐ No ☐)

Bridge Width 1.0'br, 5.0'sw, 32.0', 4.0'M, 32.0', 5.0'sw, 1.0'br

Total Width 80.0' Lanes 4 Tracks None

Median Double doulbe Yellow Stripes Rail Type 26 (1000)

Vert. Clearance over deck Unimpaired Appr. Rdwy. Width 78'

Wearing Surface None Deck Prot. Sys. None

Alignment Tangent

DESCRIPTION - UNDER STRUCTURE (Shell Rte.: Yes ☐ No ☐)

Roadway Section None

Clearances: Vert. N Horiz.: N Lt. N Rt.

Lanes N Tracks N Pumpplant: None ☒ See Br. No.

Facilities Crossed Santa Ana River

cc:

DESCRIPTION - HYDRAULICS

Channel RC lined channel with sandy bottom trapezoidal shape

Navigable: Yes ☐ No ☒ Clearances: Vert. _____ Horiz. _____

MAINTENANCE

Custodian Orange County Owner Orange County

ORIGINAL CONDITION RATING

Deck	<u>9</u>
Superstructure	<u>9</u>
Substructure & Pipes	<u>9</u>
Channel & Channel Protection	<u>8</u>
Retaining Walls	<u>N</u>
Approach Rdwy. Alignment	<u>8</u>
Estimated Remaining Life	<u>50</u>

ORIGINAL APPRAISAL

Overall	<u>9</u>
Deck Geometry	<u>8</u>
Underclearances	Vert. <u>N</u>
	Horiz. <u>N³</u>
Safe Load Capacity	<u>9</u>
Waterway Adequacy	<u>8</u>
Approach Rdwy. Alignment	<u>8</u>

Widenable? Yes ☒ No ☐ Conditional ☐
 Average Daily Traffic & Year 15,000 Est. 1983
 Bypass Detour Length 1 mile

Action Required: Yes ☐ No ☒
 Posting Required: None ☒ Load ☐
 Speed ☐

Seismic Retrofit Not applicable. Restrainers were installed during construction according to the contract plans.

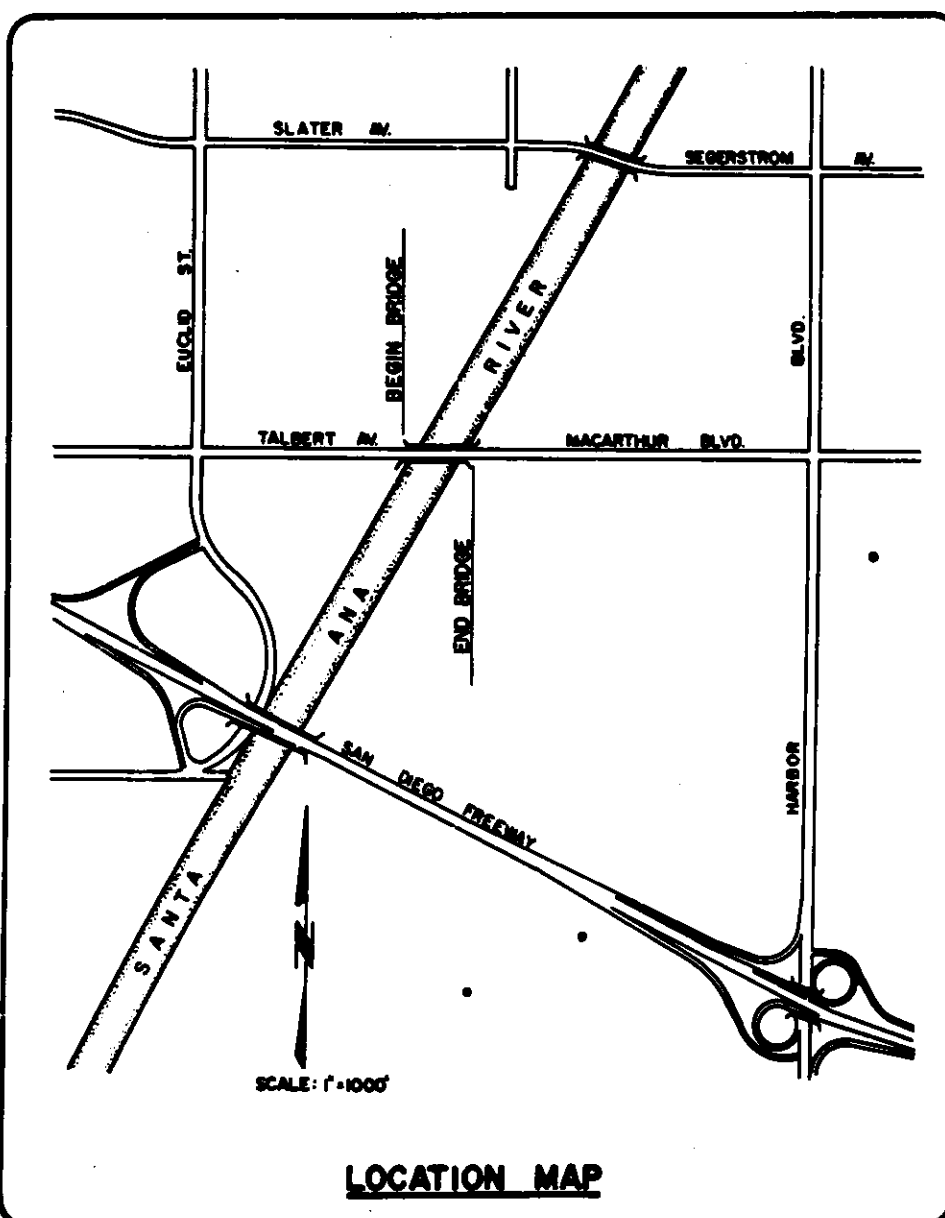
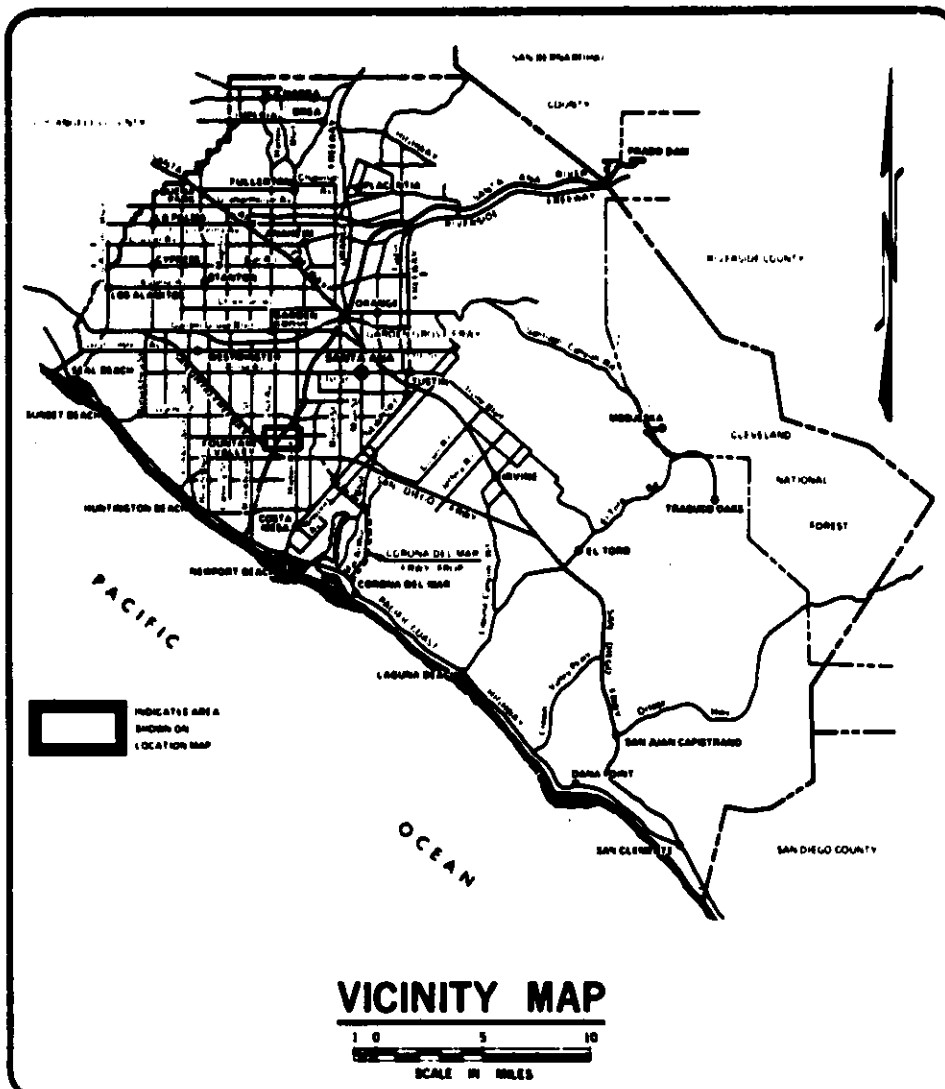
CONDITION OF STRUCTURE: The structure is in good condition.

LOAD CAPACITY: The load ratings shown are the minimum load ratings the structure is designed to carry.

RECOMMENDATION: None

E. L. Neff
 E. L. Neff
 C-28703

ELN:pdh
 cc: DRHiggins (2)
 Orange County (2)



ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY

SANTA ANA, CALIFORNIA
M. STORM, DIRECTOR

PLANS FOR CONSTRUCTION OF

TALBERT - MACARTHUR BRIDGE

SA-32

Across

SANTA ANA RIVER

(Channel E01)

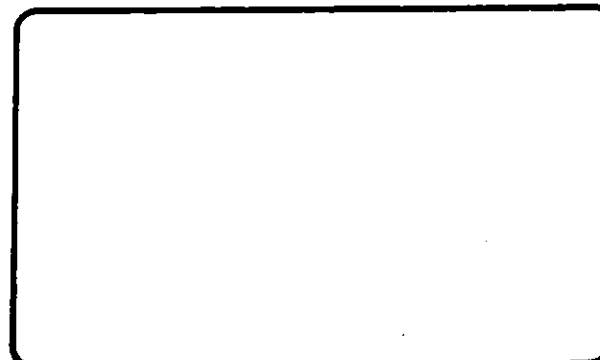
SHEET	INDEX OF SHEETS	DESCRIPTION
1	TITLE SHEET	
2	BRIDGE GENERAL PLAN	
3	FOUNDATION PLAN	
4	ABUTMENT	
5	ABUTMENT DETAILS	
6	TYPICAL PIER	
7	PIER DETAILS	
8	TYPICAL PIER EXTENSION	
9	TYPICAL SECTION	
10	SUPERSTRUCTURE AND REINFORCEMENT	
11	DECK REINFORCEMENT AND PLACING DIAGRAM	
12-13	DECK ELEVATIONS AND CAMBER DIAGRAM - MISCELLANEOUS DETAILS	
14	TYPE 26 PARAPET	
15	TUBULAR HANDRAIL	
16	LIGHTING AND ELECTRICAL DETAILS	
17-18	PIILING DETAILS-LOG OF TEST BORINGS	
19	CHANNEL LINING REMOVAL AND REPLACEMENT DETAILS	
20-24	DEMOLITION DETAILS FOR BRIDGE	

UTILITY	PHONE NO.
PACIFIC TELEPHONE (MR. BILL BADSGARD)	(714) 999-5715
SOUTHERN CALIFORNIA EDISON CO. (MR. JOHN McMANIS)	(714) 835-3833
UNDERGROUND SERVICE ALERT	1-800-422-4133
NATIONAL WEATHER SERVICE 5-DAY FORECAST	(213) 824-7211
COUNTY SANITATION DISTRICTS OF ORANGE COUNTY (MR. BUD FREY)	(714) 962-2411

BENCH MARK: O.C.S. IL-30-69 ABOUT 0.3 OF A MILE EAST ALONG TALBERT-MACARTHUR FROM THE BRIDGE OVER SANTA ANA RIVER; 48 FEET NLY OF THE C. IN THE TOP OF THE SWLY CORNER OF A CONCRETE SLAB AROUND WATER VALVE. ELEVATION 33.723 ADJUSTED 1976	BASIS OF BEARING: IN ACCORDANCE WITH A SURVEY BY SCHUMAKER AND PARTY DATED 10-5-76: THE C. OF TALBERT-MACARTHUR IS TAKEN AS S89°40'28"E AS SHOWN ON O.C.F.C.D. RIGHT-OF-WAY MAP E01-68.
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AS BUILT
WHILE THE PROJECT WAS IN PROGRESS TO BE ACCURATE, THE AGENCY WILL NOT BE RESPONSIBLE FOR OMISSIONS, ERRORS, OR INACCURACIES.

FUNDED BY: HIGHWAY USERS' TAXES



EMA-PUBLIC WORKS

SUBMITTED: *M. H. Talbot* 5/12/81
SECTION CHIEF RCE 16799

RECOMMENDED: *M. H. Talbot* 5/13/81
DIVISION MANAGER RCE 13154

APPROVED: *C. R. Nelson* 5-14-81
DIRECTOR OF PUBLIC WORKS RCE 13142

BASIS OF STATIONING

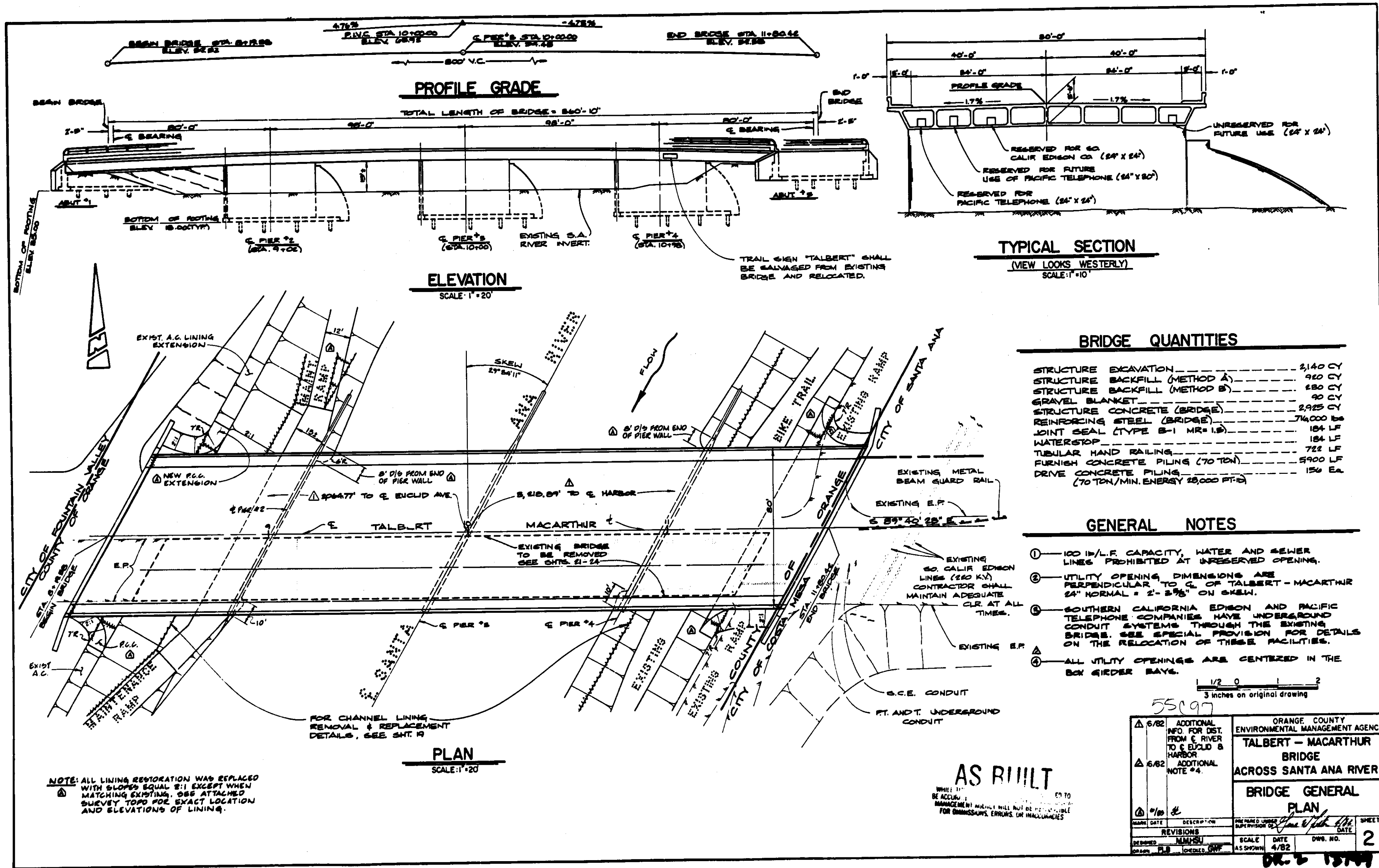
THE BASIS OF STATIONING ALONG THE C. OF THE ROAD AND BRIDGE IS STATION 10+00: TAKEN AS THE C. INTERSECTIONS OF TALBERT-MACARTHUR WITH THE SANTA ANA RIVER. IN A SURVEY BY SCHUMAKER AND PARTY DATED 10-5-76, THIS SAME POINT IS CALLED STATION 20+64.77. (STATIONING INCREASES IN AN EASTERLY DIRECTION)

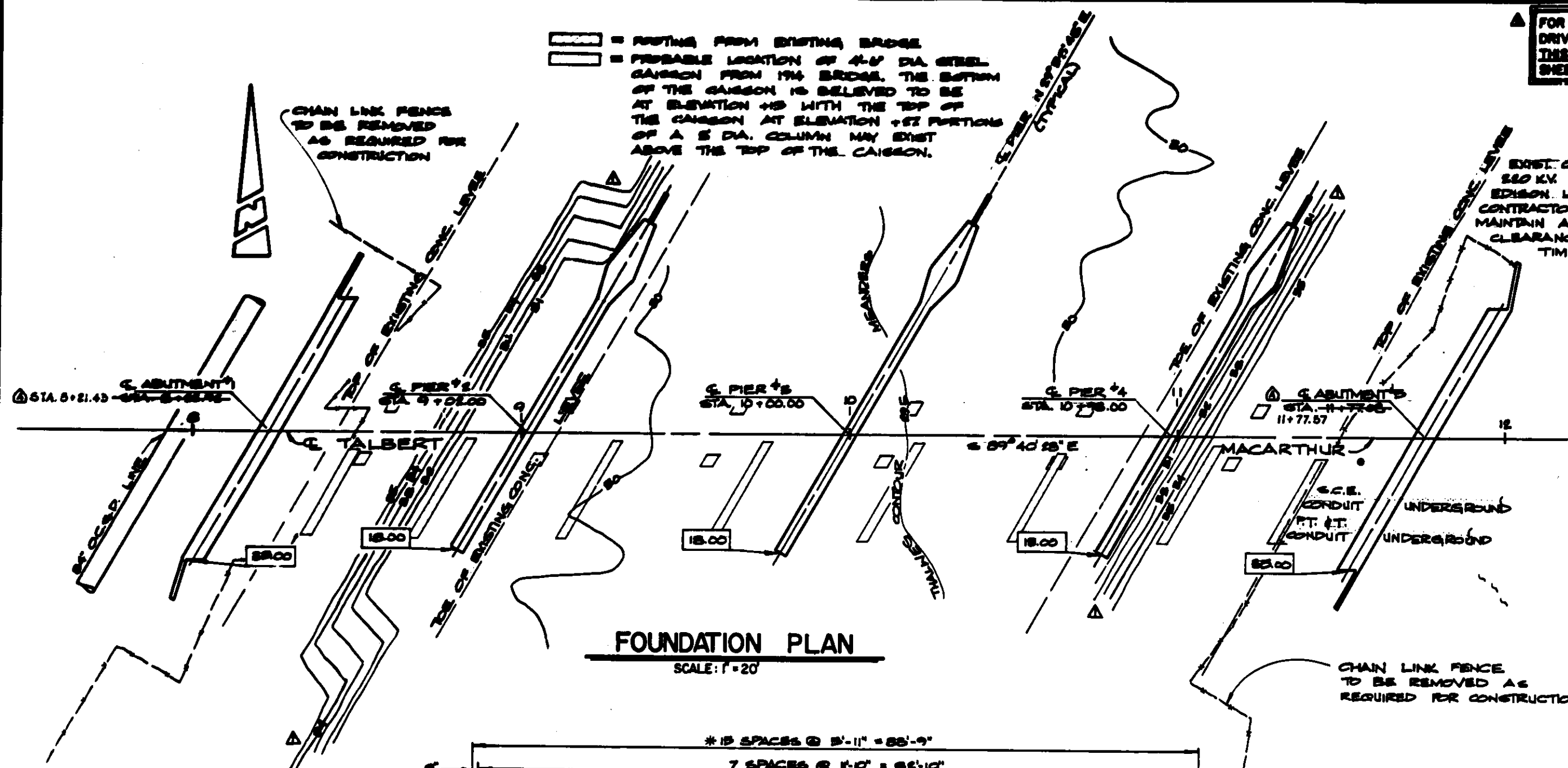
MINOR DRAFTING ADDITIONS		2,3,8	John H. Talbot		5-14-81

W.O. NO. R09274
DWG. NO.

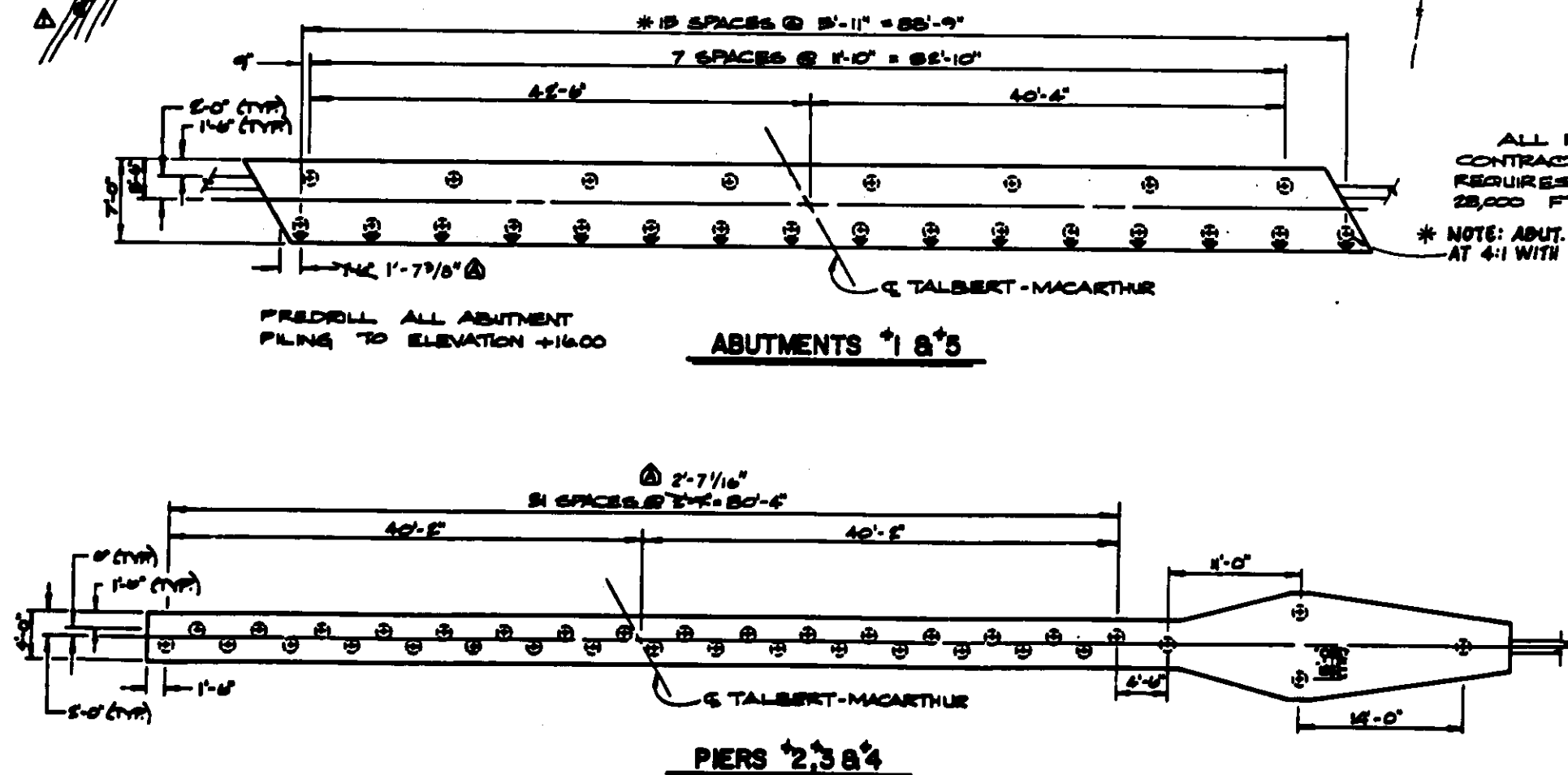
SHEET 1 OF 24

OK. 2-13144





FOUNDATION PLAN
SCALE: 1"=20'



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

FOR "AS-BUILT" PILE DRIVING DATA FROM THE EXISTING BRIDGE SEE SHEET 10

PILE DRIVING DATA FROM THE EXISTING BRIDGE

TEST PILE DATA FROM THE EXISTING BRIDGE, CONSTRUCTED IN 1948, IS SHOWN BELOW AS AN AID TO ESTIMATING PILE DRIVING CHARACTERISTICS OF THE PROJECT SITE. ALTHOUGH THE DATA HAS BEEN CAREFULLY REPRODUCED FROM THE PILE DRIVING LOGS, NO GUARANTEE IS MADE THAT THE DATA WILL EXACTLY REPRESENT PILE DRIVING CONDITIONS ENCOUNTERED IN THIS PROJECT. IN GENERAL, PILING FOR THE EXISTING BRIDGE CONSISTED OF PRECAST CONCRETE PILING DRIVEN TO A BEARING OF 45 TONS WITH VULCAN #1 PILE DRIVER RATED AT 15,000 FT-LB OF ENERGY SPECIFIED PILE TIP ELEVATION FOR THE EXISTING BRIDGE WAS:

BLOWS PER FOOT WITH A VULCAN #1 PILE DRIVER RATED AT 15,000 FT-LB											
DEPTH, FT. BELOW ELEVATION	ABUTMENT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	ABUTMENT 8	ABUTMENT 9	ABUTMENT 10	ABUTMENT 11
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
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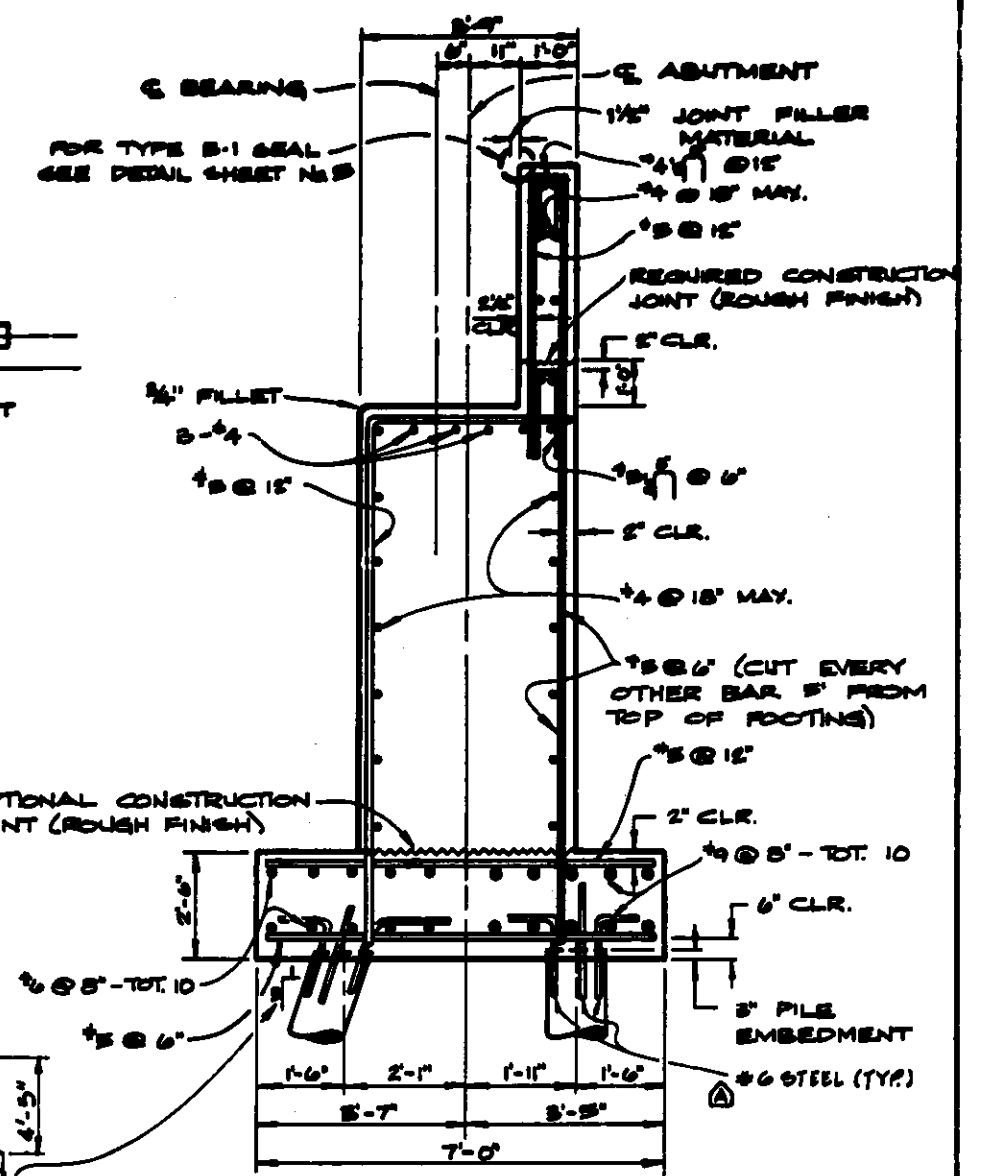
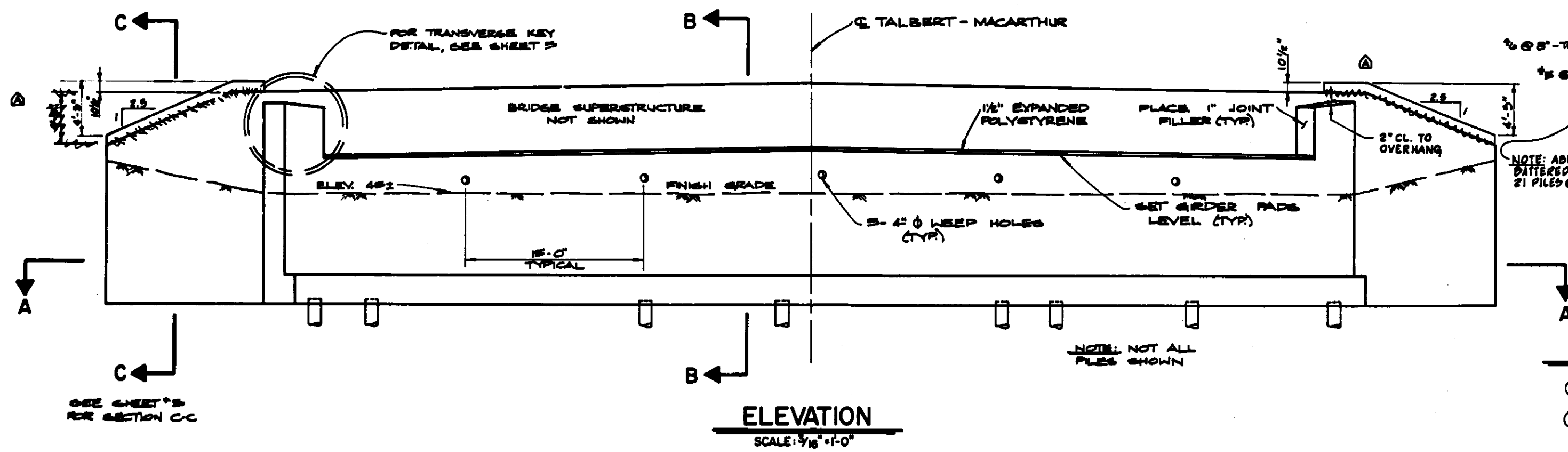
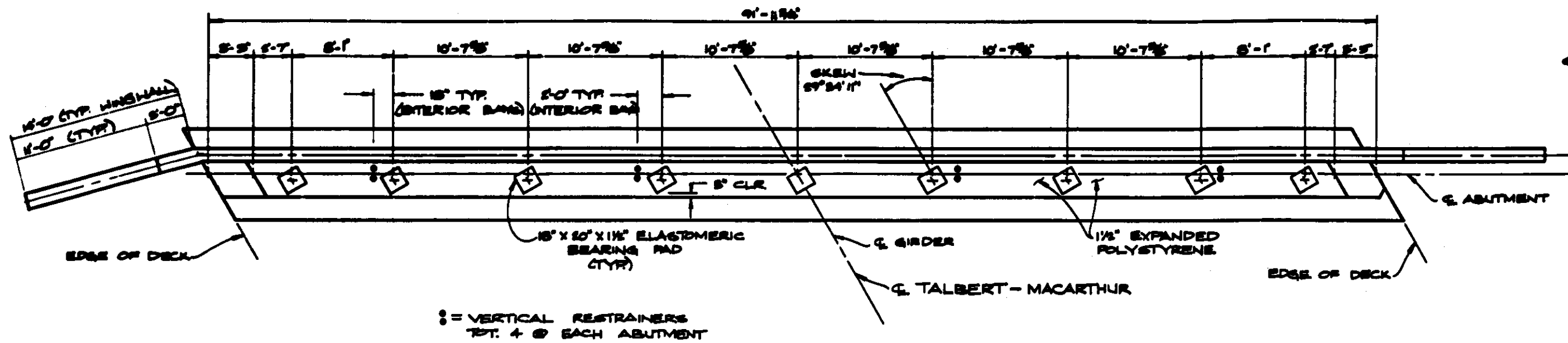
NOTE: MINIMUM PENETRATION FOR ALL PILES UNDER THIS CONTRACT SHALL BE TO ELEVATION -14.00, SPECIFIED TIP IS TO BE DETERMINED BY ENGINEER AFTER DRIVING TEST PILES.

AS BUILT

55097

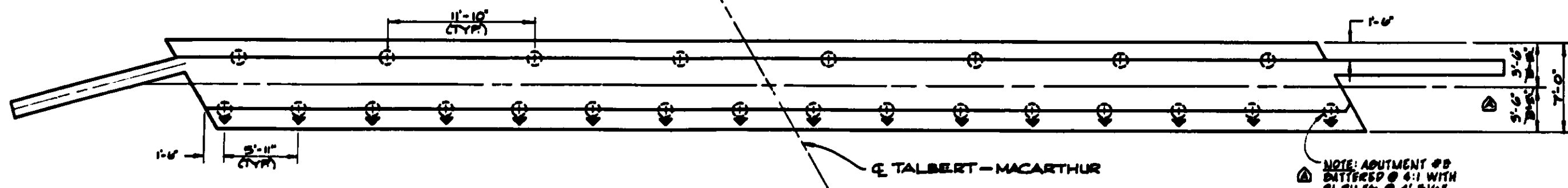
DATE: 5/82	ADDITIONAL TOPO INFO.	ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY
DATE: 1/84	LMW	TALBERT - MACARTHUR BRIDGE
DATE: 4/80	REVISIONS	ACROSS SANTA ANA RIVER
DATE: 4/82	SCALE: AS SHOWN	FOUNDATION PLAN
DATE: 4/82	DATE: 4/82	SHEET 3

DR. 6 15144



GENERAL ABUTMENT NOTES

1. FOR PERVIOUS BACKFILL DETAIL, SEE SHEET 7.
2. CONCRETE ABOVE BACKWALL CONSTRUCTION JOINT TO BE PLACED AFTER COMPLETION OF SUPERSTRUCTURE.
3. ABUTMENT No. 1 SHOWN. ABUTMENT No. 2 SIMILAR, BUT OPPOSITE HAND.
4. FOR ABUTMENT DETAILS, SEE SHEET 5.



AS BUILT

WHILE THE INFORMATION SHOWN IS BELIEVED TO BE ACCURATE, THE ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY WILL NOT BE RESPONSIBLE FOR OMISSIONS, ERRORS, OR INACCURACIES.

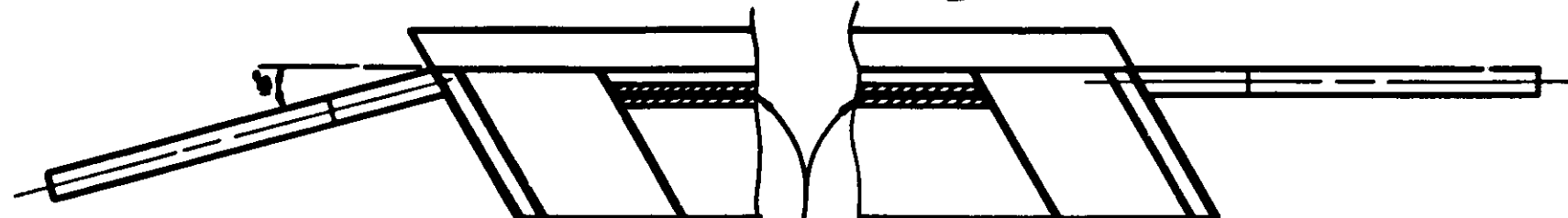
55097

1 1/2 0 1 2
3 inches on original drawing

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY			
TALBERT - MACARTHUR BRIDGE ACROSS SANTA ANA RIVER			
ABUTMENT			
DATE	DESCRIPTION	PREPARED UNDER SUPERVISION OF	SHEET
4/82	REVISIONS	DATE	4
DESIGNED	CHECKED	SCALE	DWG. NO.
DRAWN	CHECKED	AS SHOWN	

DR. 2 18199

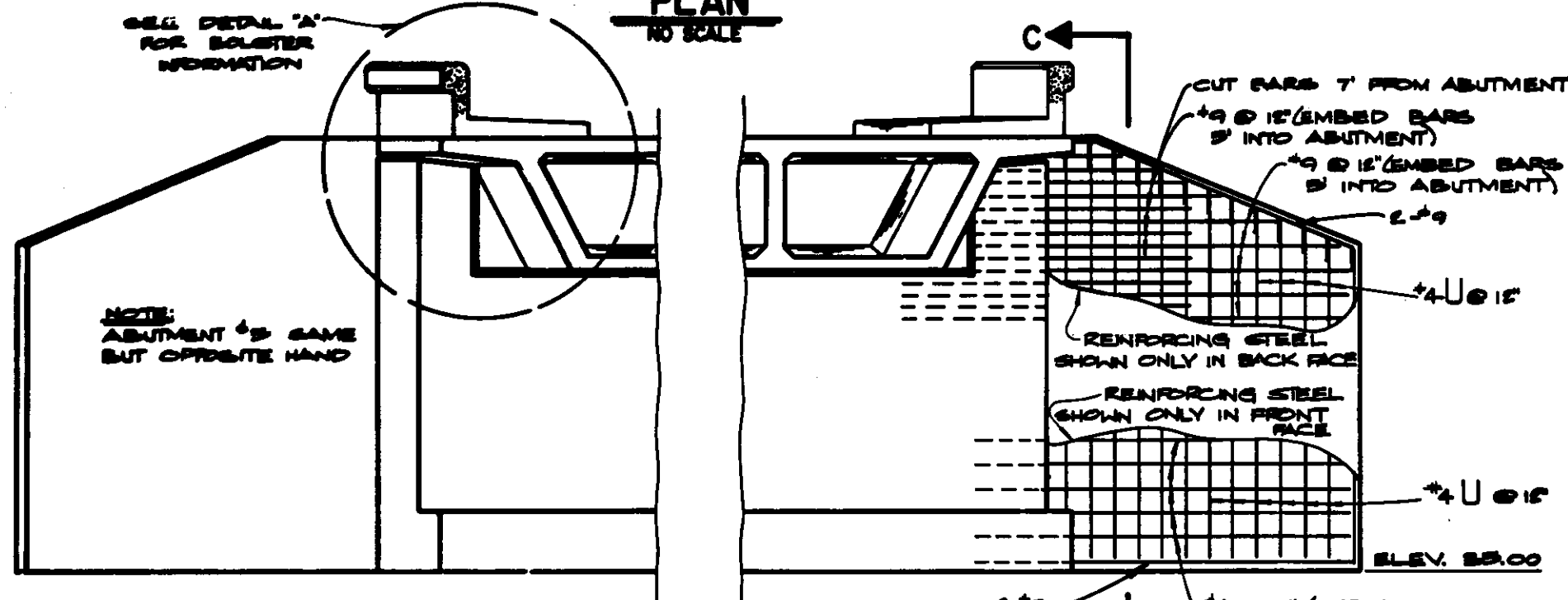
LIMITS OF JOINT ARMOR
LIMITS OF JOINT ARMOR ARE SHOWN
THIS JOINT ARMOR SHALL
BE INSTALLED AT EACH ABUTMENT
FROM SIDEWALK TO SIDEWALK AND
FABRICATED IN ONE PIECE FROM C TO SIDEWALK



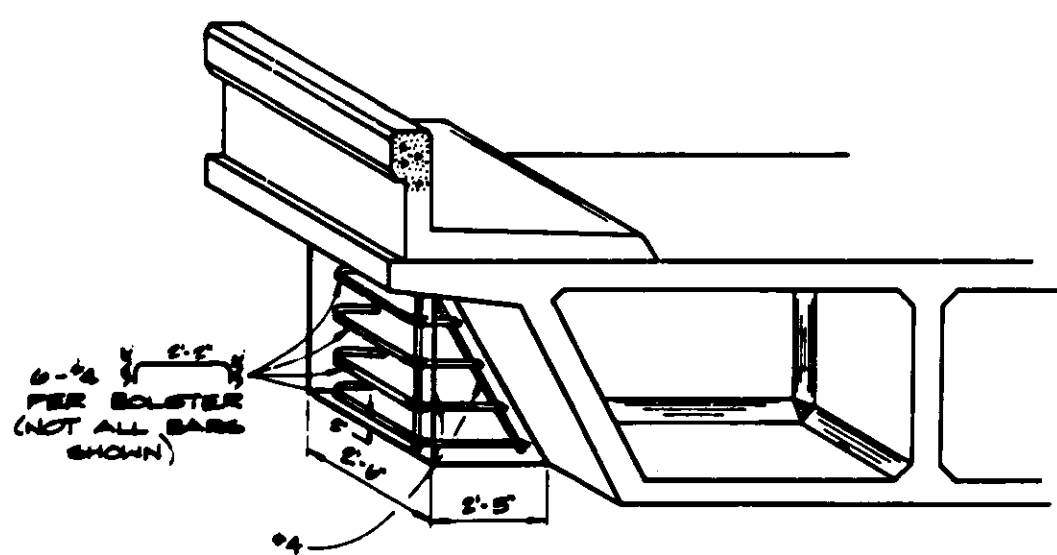
JOINT ARMOR

PLAN
NO SCALE

SEE DETAIL "A"
FOR BOLSTER
INFORMATION



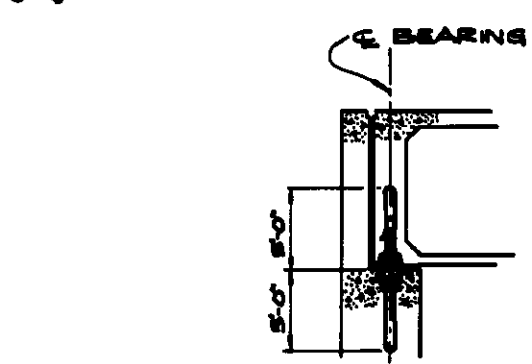
WINGWALL ELEVATION
(ABUTMENT 4)
NO SCALE



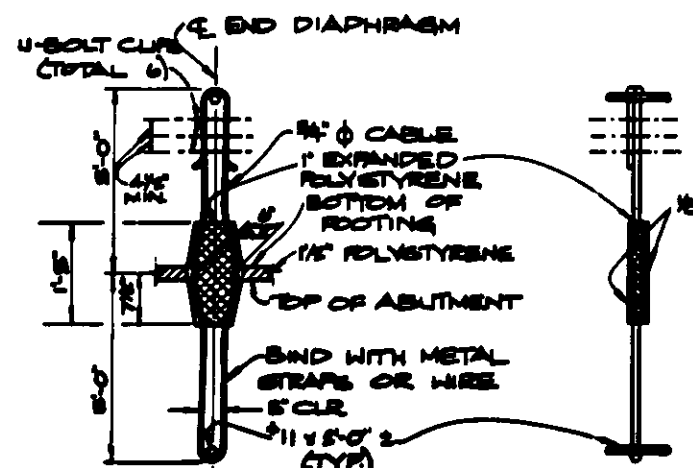
DETAIL "A"
NO SCALE

AS BUILT

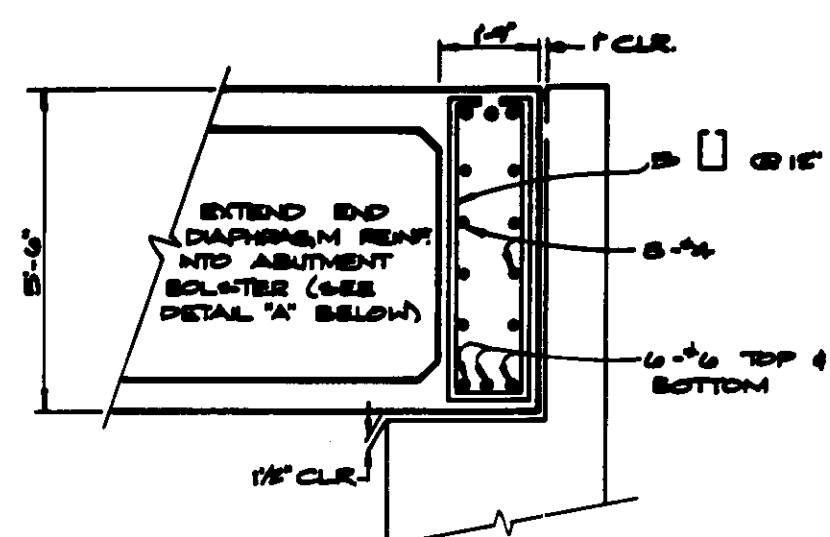
WHILE THE INFORMATION SHOWN IS BELIEVED TO
BE ACCURATE, THE ORANGE COUNTY ENVIRONMENTAL
MANAGEMENT AGENCY WILL NOT BE RESPONSIBLE
FOR OMISSIONS, ERRORS, OR INACCURACIES



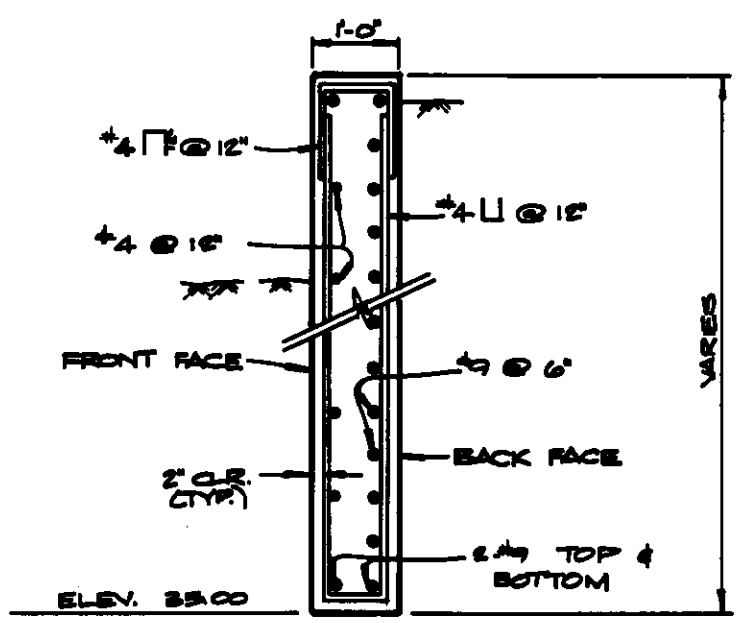
DIAPHRAGM SECTION



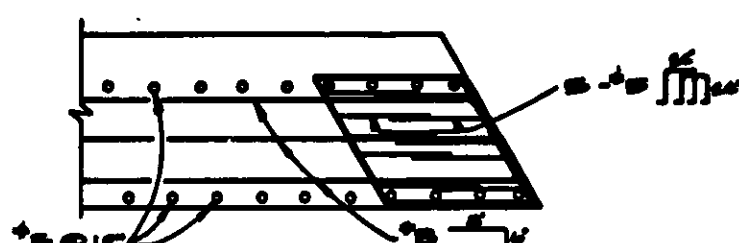
ELEVATION
VERTICAL RESTRAINER
NO SCALE



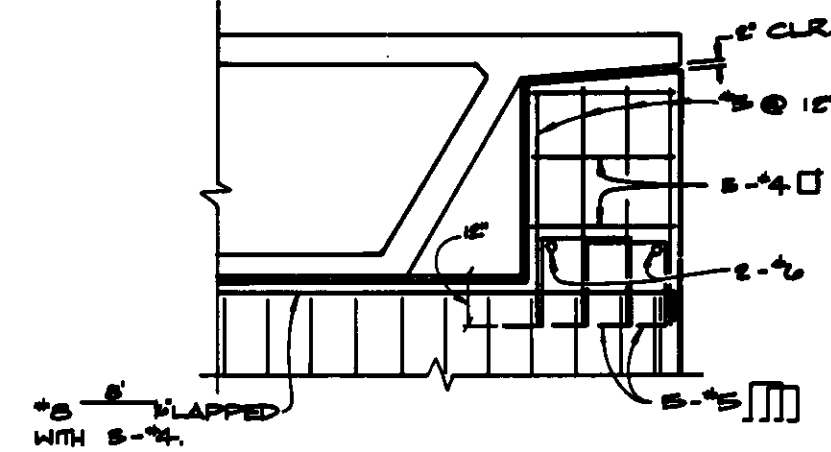
END DIAPHRAGM DETAIL
NO SCALE



SECTION C-C
NO SCALE

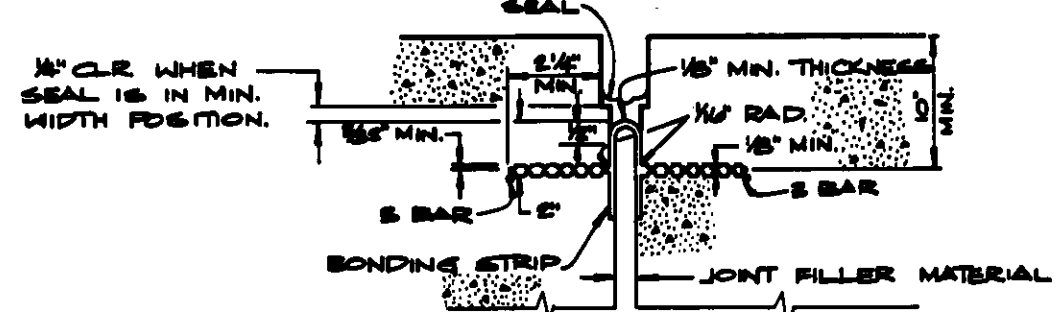


PLAN



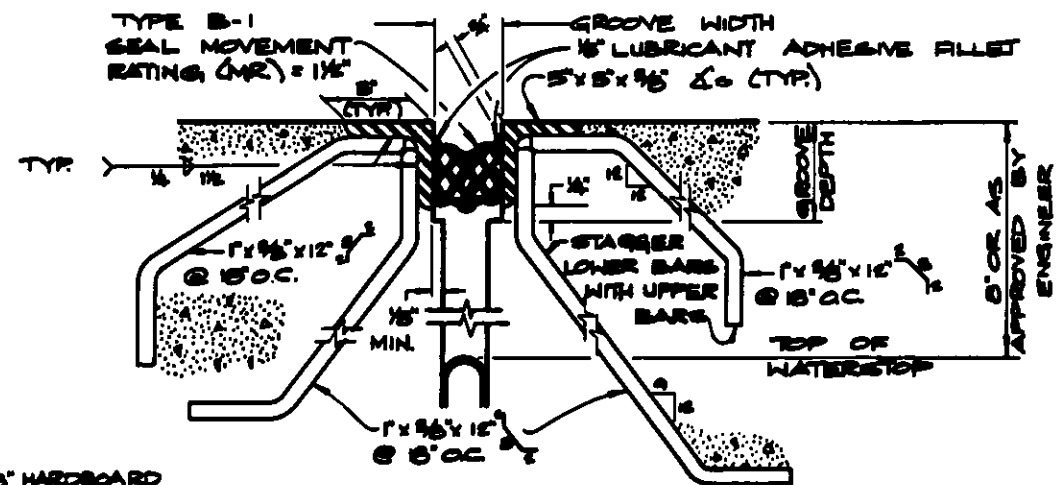
ELEVATION

SHEAR KEY DETAIL
NO SCALE



WATERSTOP DETAIL
NO SCALE

NOTE:
WATERSTOP TO HAVE FIVE (5) OR MORE
PAIRS OF RAISED RIBS TO PROVIDE (1) EQ.
INCH MIN. RIB CROSS-SECTIONAL ON EACH
HALF OF THE WATERSTOP. HEIGHT OF RIBS
TO BE 3/8" MIN. HOLES WILL BE PERMITTED
IN OUTLINE 1/2" OF THE WEB FOR WIRE, WEB,
ETC. TIE WEB TO S BAR @ 12" MAX. TO
SUPPORT THE WATERSTOP IN PROPER
POSITION DURING CONC PLACEMENT.



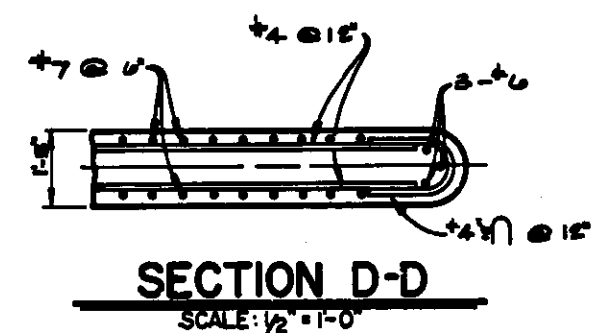
- NOTES:
1. FORMED GROOVE WIDTH SHALL BE ORDERED BY THE ENGINEER.
 2. FORMED GROOVE DEPTH SHALL BE EQUAL TO OR GREATER THAN THE DEPTH OF THE SEAL MEASURED ALONG THE CONTACT SURFACE, WHEN COMPRESSED TO MINIMUM WIDTH POSITION, PLUS 1/8".
 3. MAKE SMOOTH CUTS FROM THE BOTTOM OF SEAL TO 1/4" CLR OF TOP LEAVING AT LEAST ONE COMPLETE CELL BETWEEN THE TOP OF THE CUT AND THE TOP OF THE SEAL WHEN NECESSARY CUT BACK OF SEAL TO CLEAR CONDUIT.

TYPE "B-1" SEAL DETAIL
NO SCALE

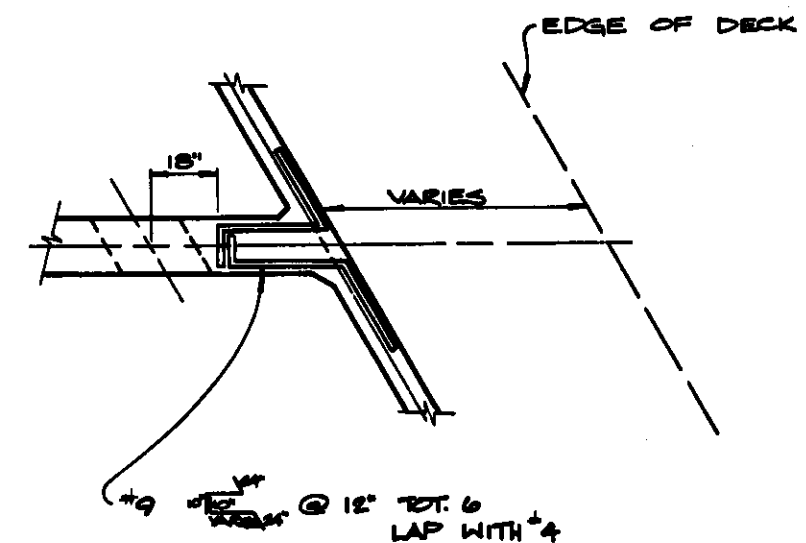
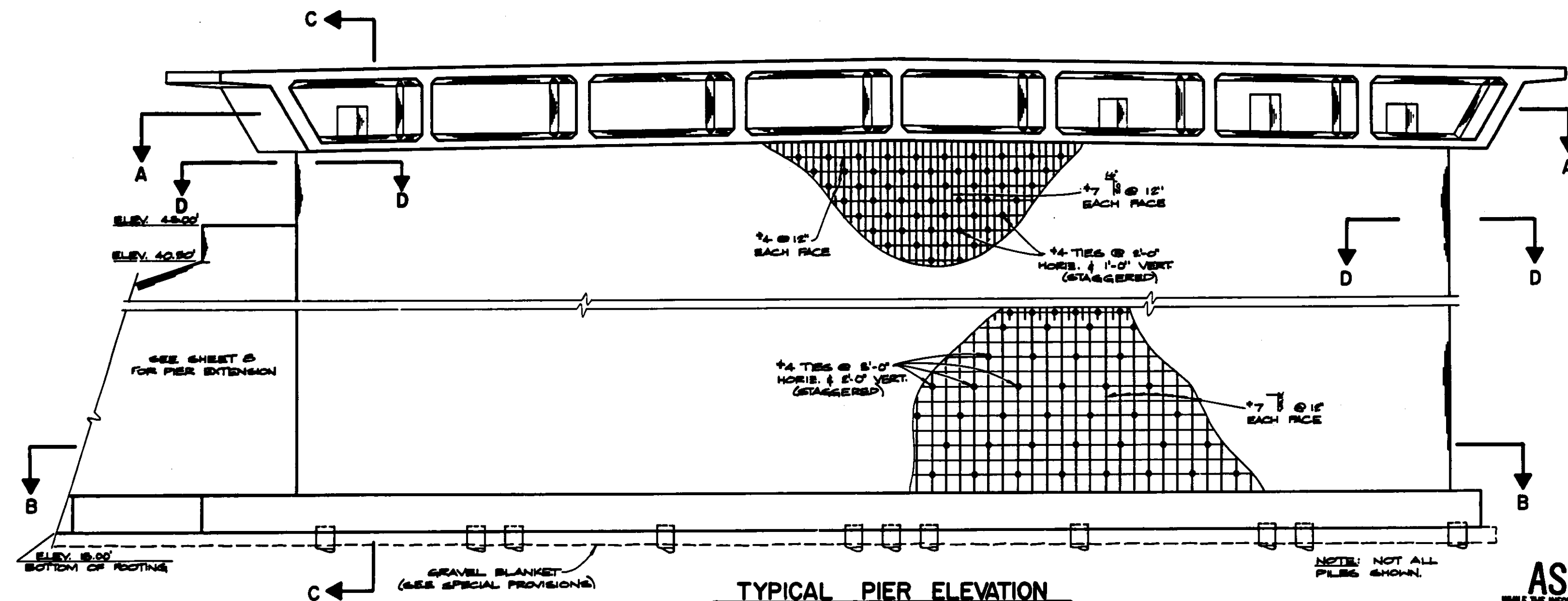
1/2 0 2
3 inches on original drawing

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY		TALBERT - MACARTHUR BRIDGE ACROSS SANTA ANA RIVER	
ABUTMENT DETAILS		5	
DATE	DESCRIPTION	DATE	DATE
4/82	AS SHOWN	4/82	4/82
SCALE	DATE	DWG. NO.	
AS SHOWN	4/82		

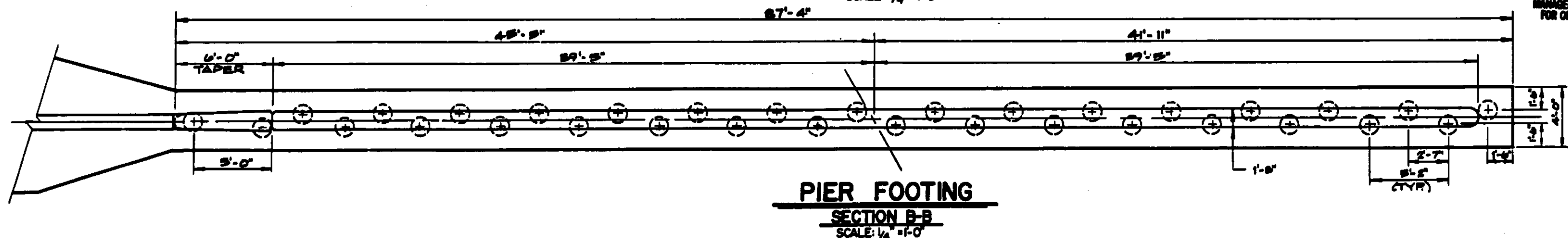
DR. 5 18799



NOTE:
DOWNSTREAM EDGE SHOWN.
UPSTREAM EDGE SIMILAR
BUT OPPOSITE HAND



DETAIL "A"
NO SCALE



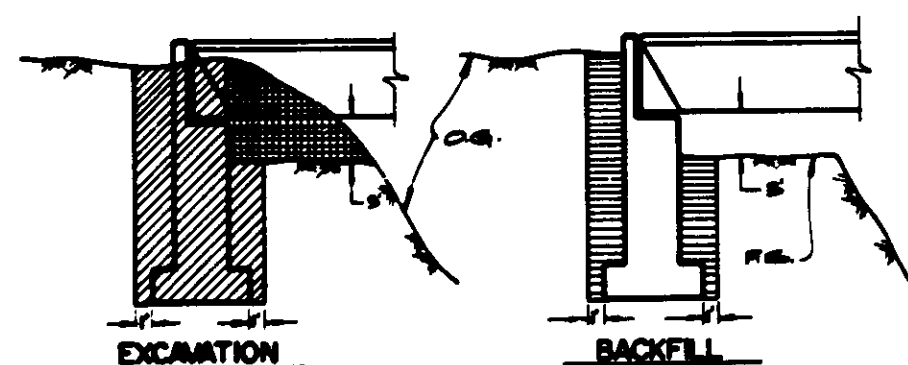
AS BUILT

WHILE THE INFORMATION SHOWN IS BELIEVED TO BE ACCURATE, THE ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY WILL NOT BE RESPONSIBLE FOR OMISSIONS, ERRORS, OR INACCURACIES.

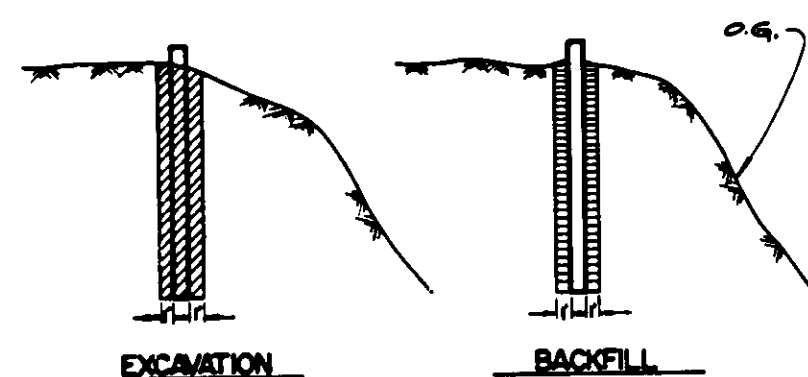
3 inches on original drawing

		ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
		TALBERT — MACARTHUR BRIDGE ACROSS SANTA ANA RIVER	
TYPICAL PIER			
 9/83 K	MARK DATE DESCRIPTION REVISIONS DEBORNED MALHSU DRAWN PJB CHECKED GWF		PREPARED UNDER SUPERVISION OF <i>James A. Smith 4/82</i> SCALE AS SHOWN DATE 4/82 DWS. NO. 6
		SHEET	

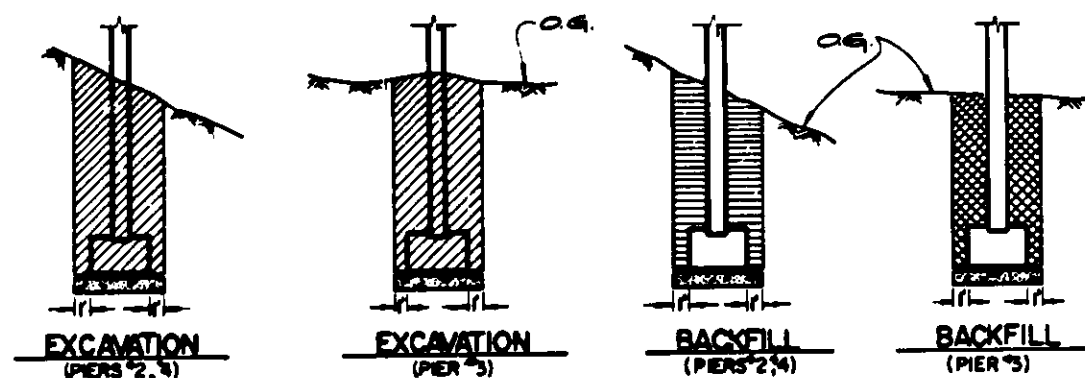
4/82
DR-2 1979



ABUTMENTS



WINGWALLS



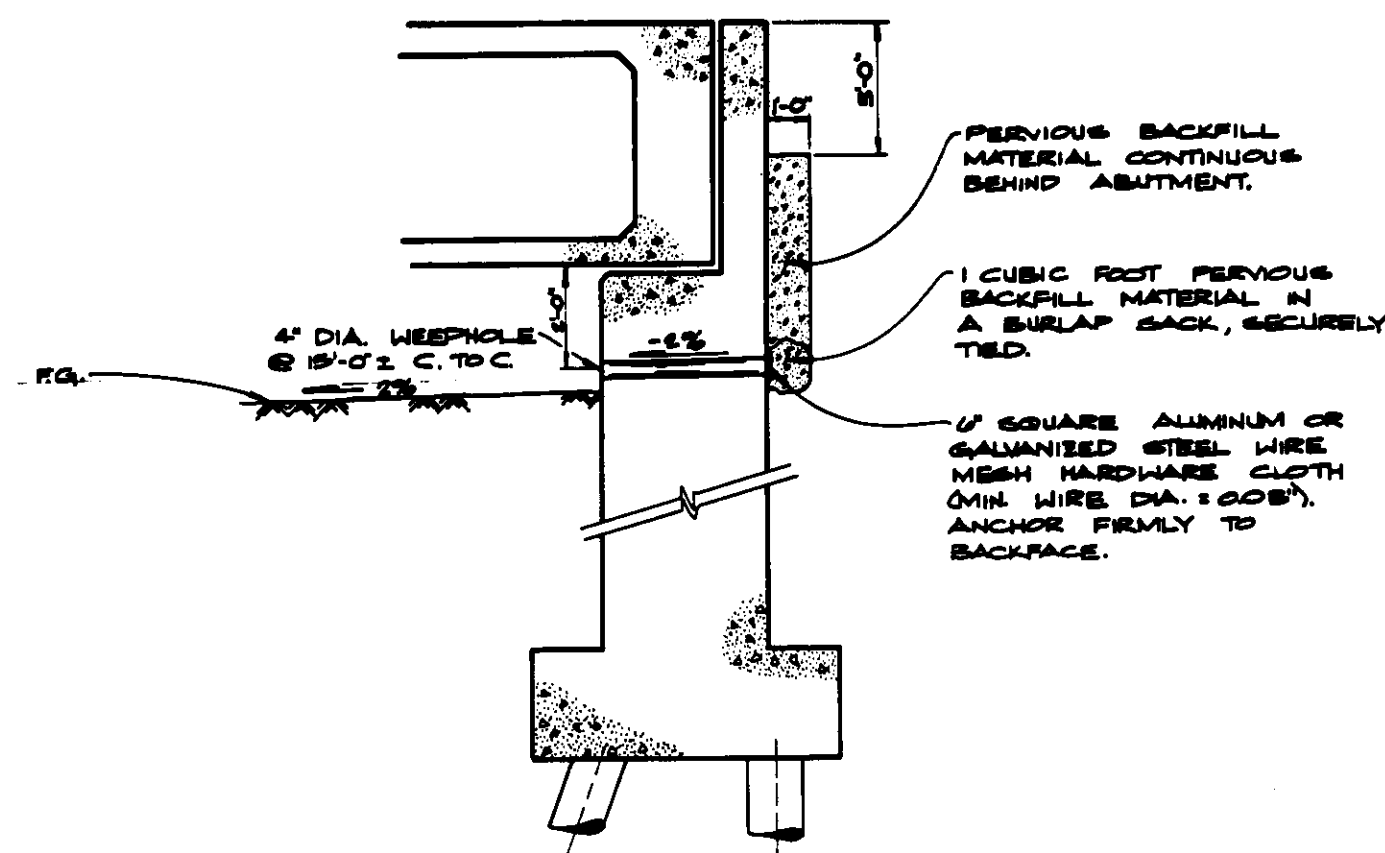
PIERS

LEGEND

- O.G. = ORIGINAL GROUND
- F.S. = FINISHED SURFACE
- [Hatched Box] = STRUCTURE BACKFILL (METHOD "A")
- [Dotted Box] = STRUCTURE BACKFILL (METHOD "B")
- [Cross-hatched Box] = UNCLASSIFIED EXCAVATION
- [Diagonal Lines] = STRUCTURE EXCAVATION
- [Stippled Box] = GRAVEL BLANKET (SEE SPECIAL PROVISIONS)

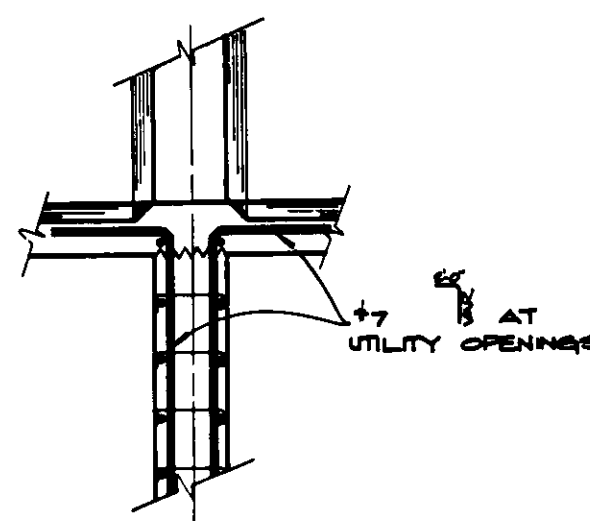
STRUCTURE EXCAVATION AND BACKFILL DETAILS

NO SCALE



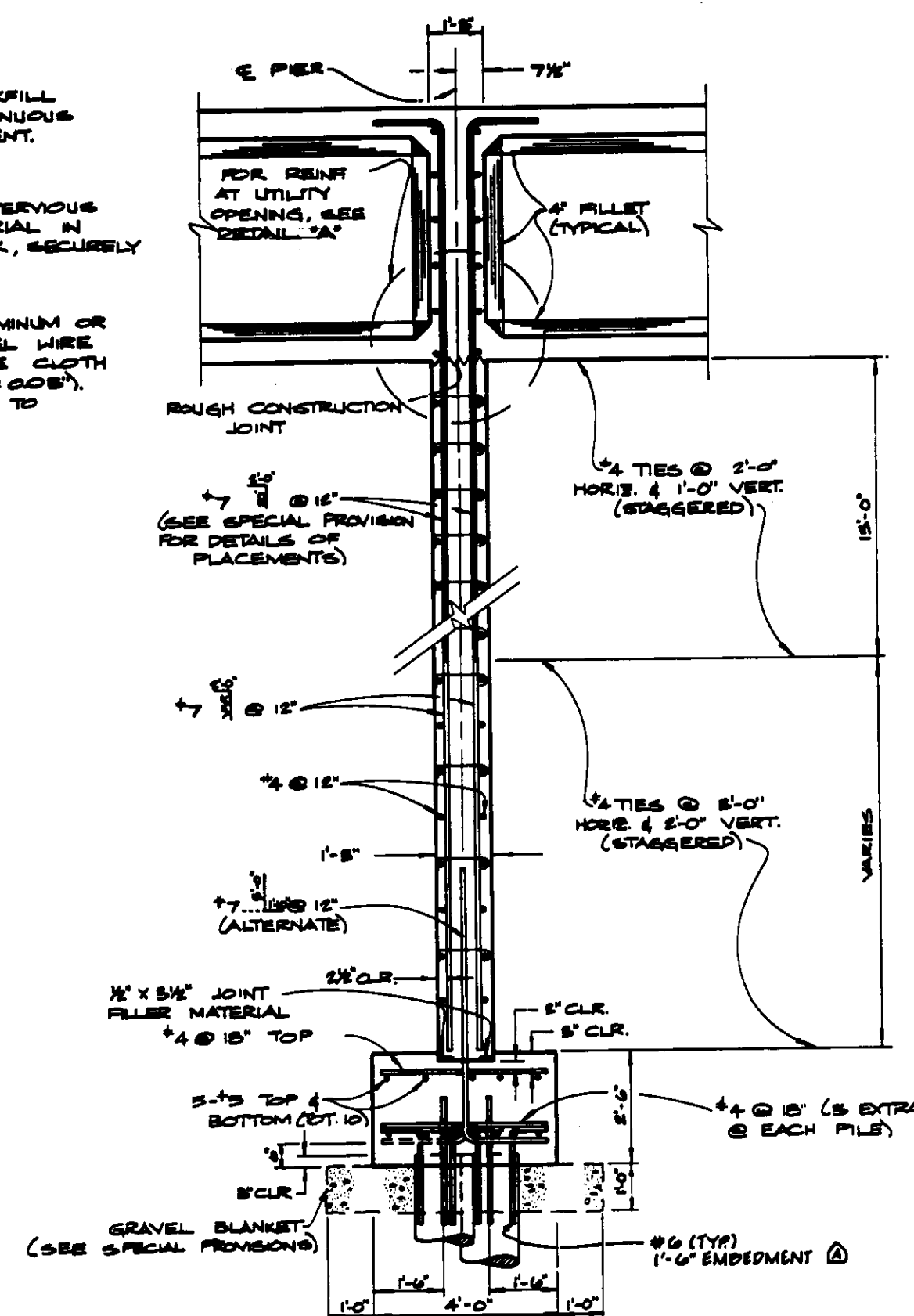
WEEP HOLE AND
PERVIOUS BACKFILL DETAIL

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



DETAIL "A"

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



TYPICAL PIER SECTION

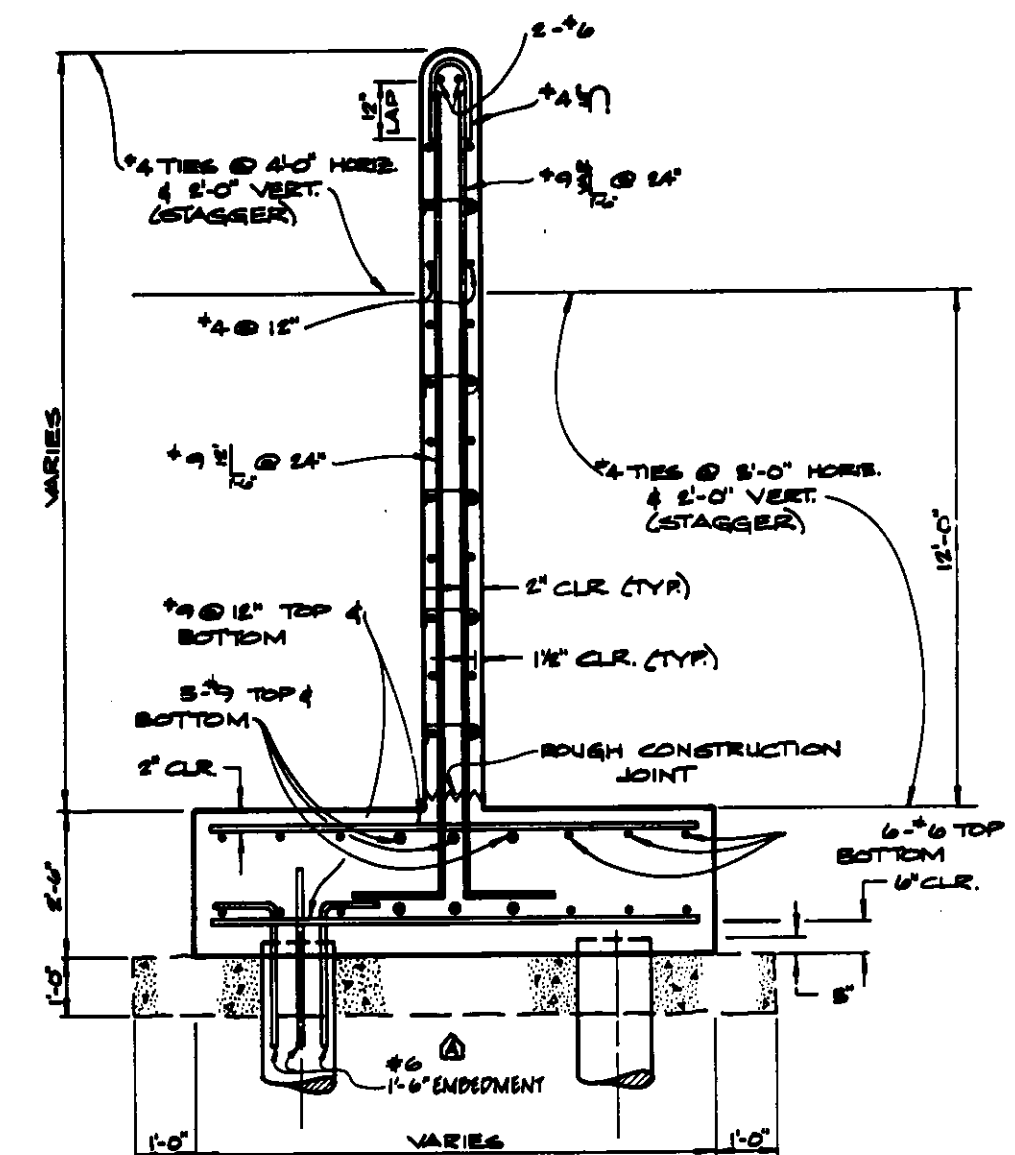
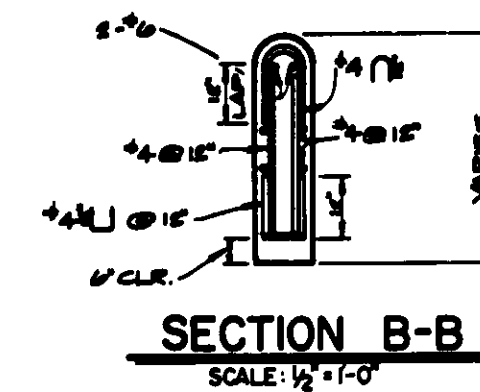
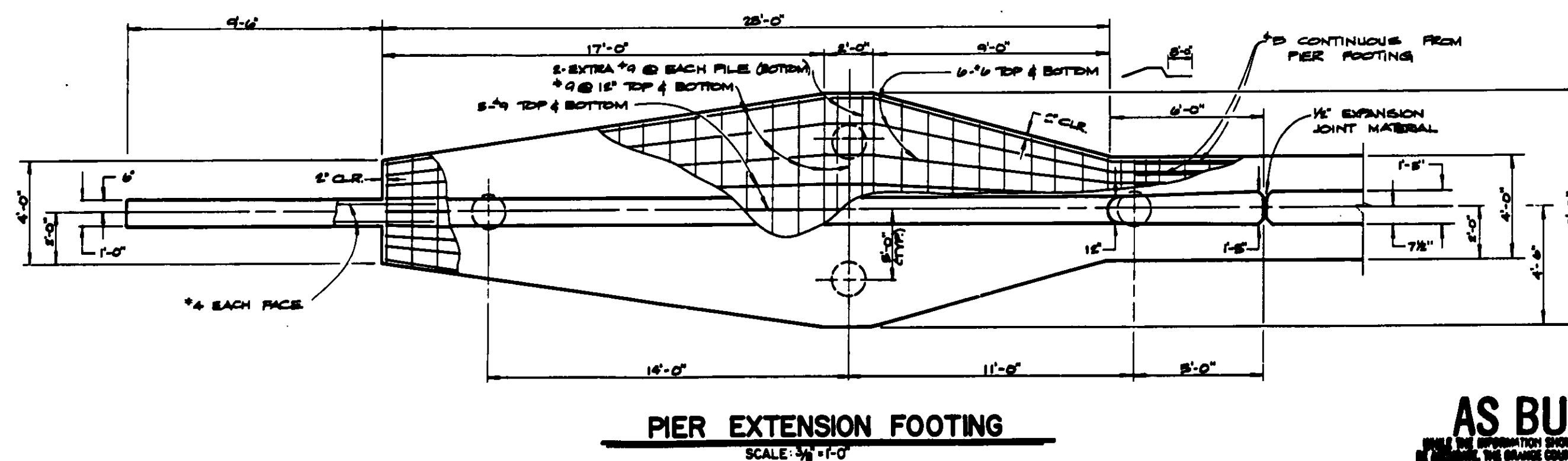
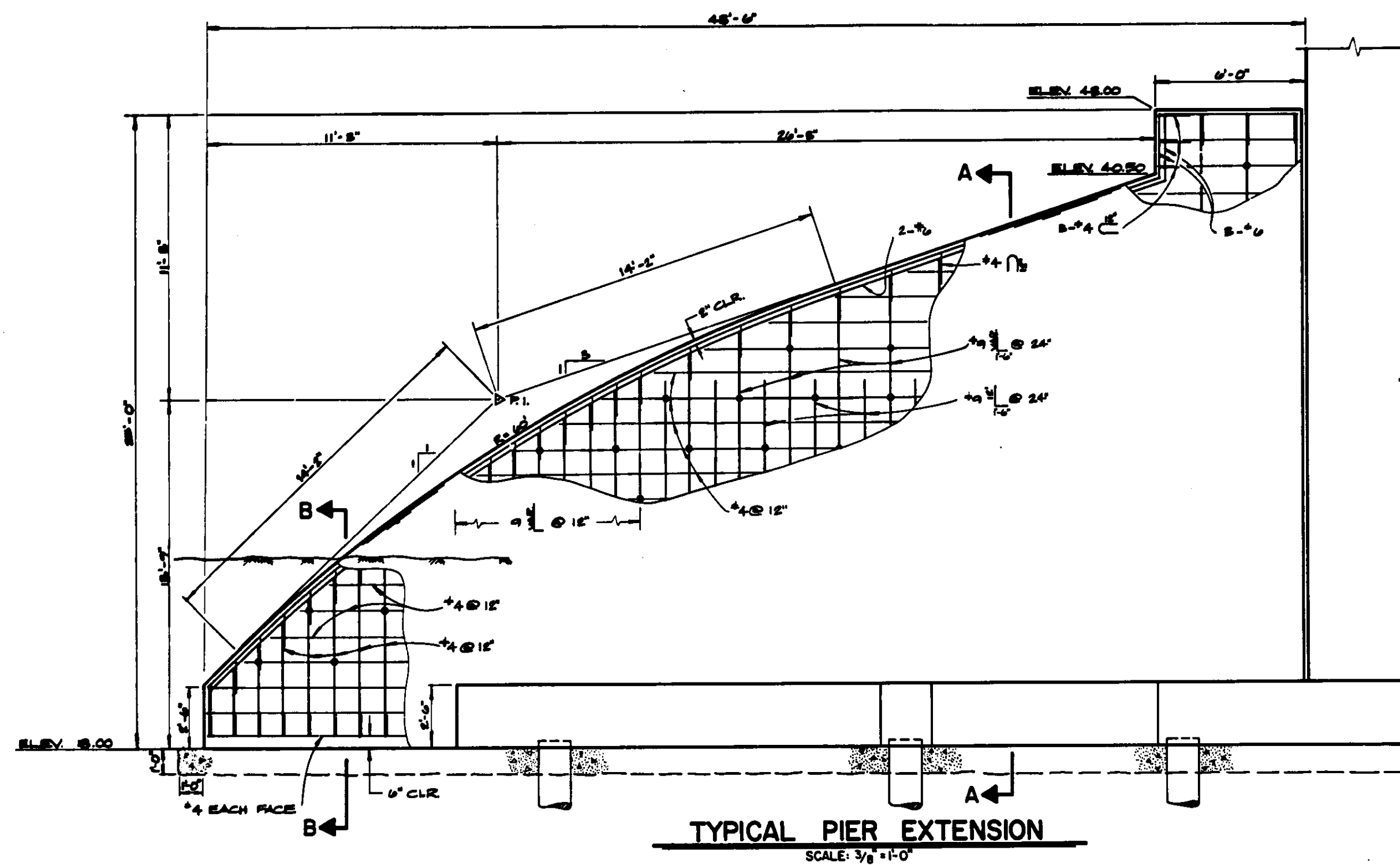
SECTION C-C
SCALE: 1/2" = 1'-0"

1 1/2" 0 1 2
3 inches on original drawing

AS BUILT
WHILE THE INFORMATION SHOWN IS BELIEVED TO BE ACCURATE, THE ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY WILL NOT BE RESPONSIBLE FOR OMISSIONS, ERRORS, OR INACCURACIES.

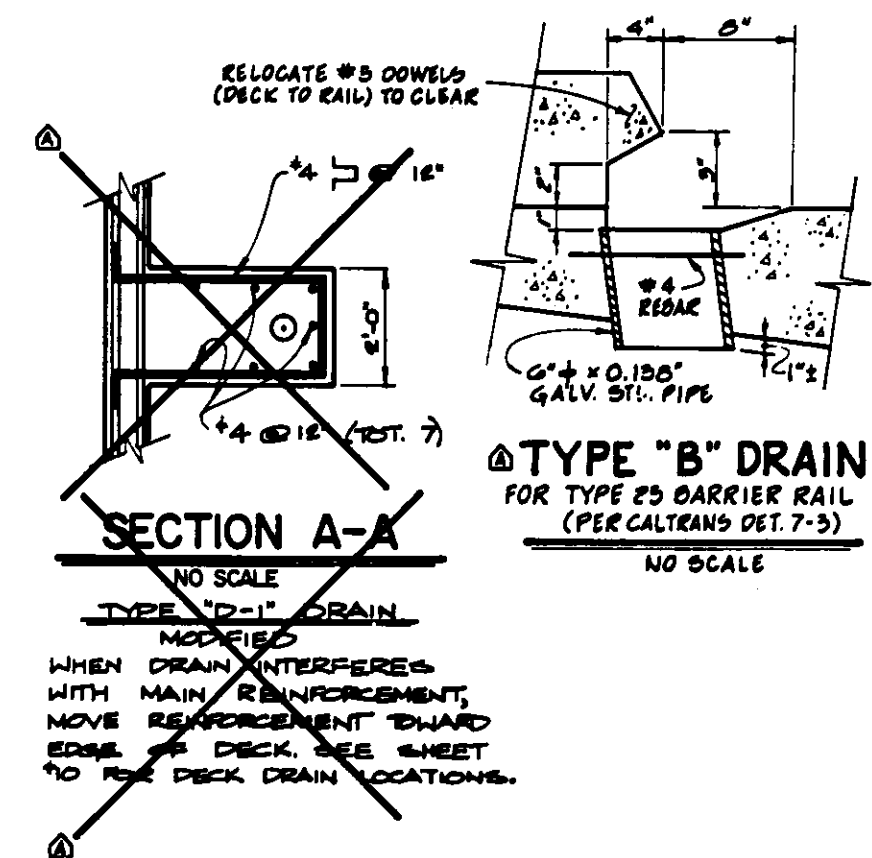
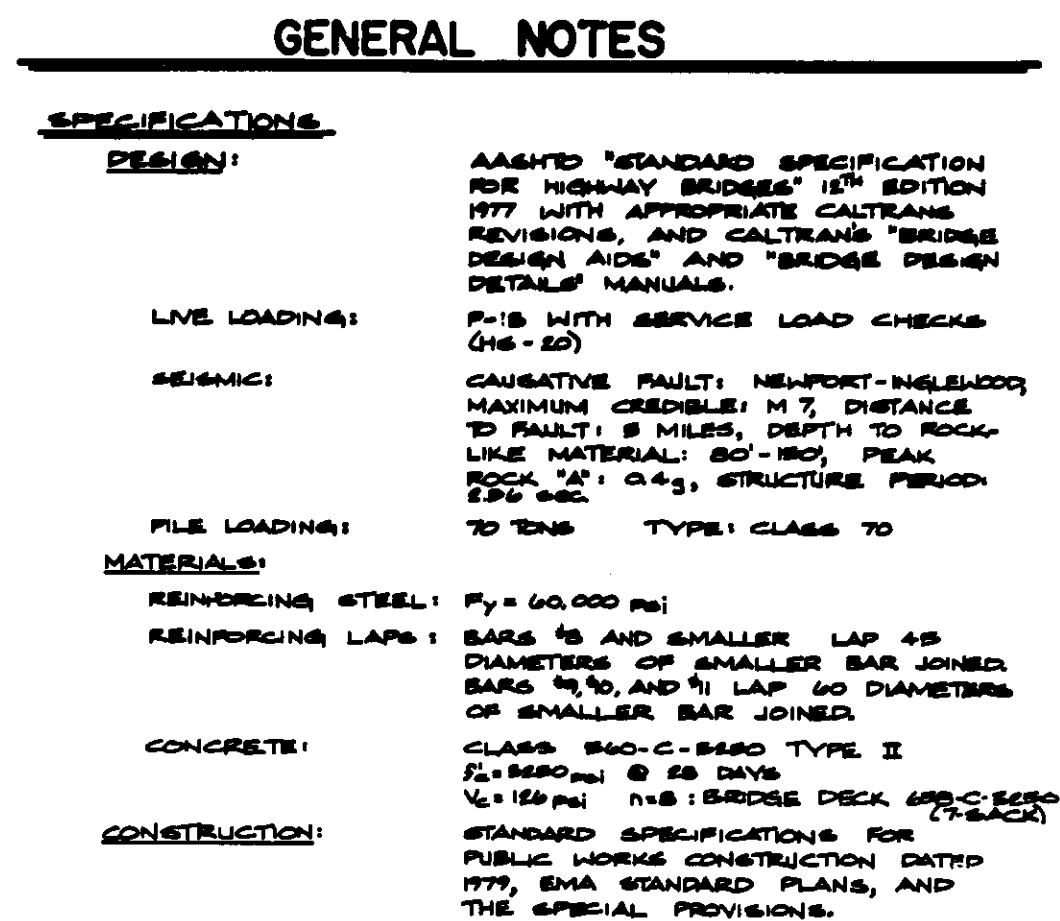
ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY			
TALBERT - MACARTHUR BRIDGE ACROSS SANTA ANA RIVER			
PIER DETAILS			
DATE	DESCRIPTION	PREPARED UNDER	SHEET
4/82	REVISIONS	DATE	7
DESIGNED	SCALE	DATE	DWG. NO.
DRAWN	AS SHOWN	4/82	

PR. 2 13749



AS BUILT

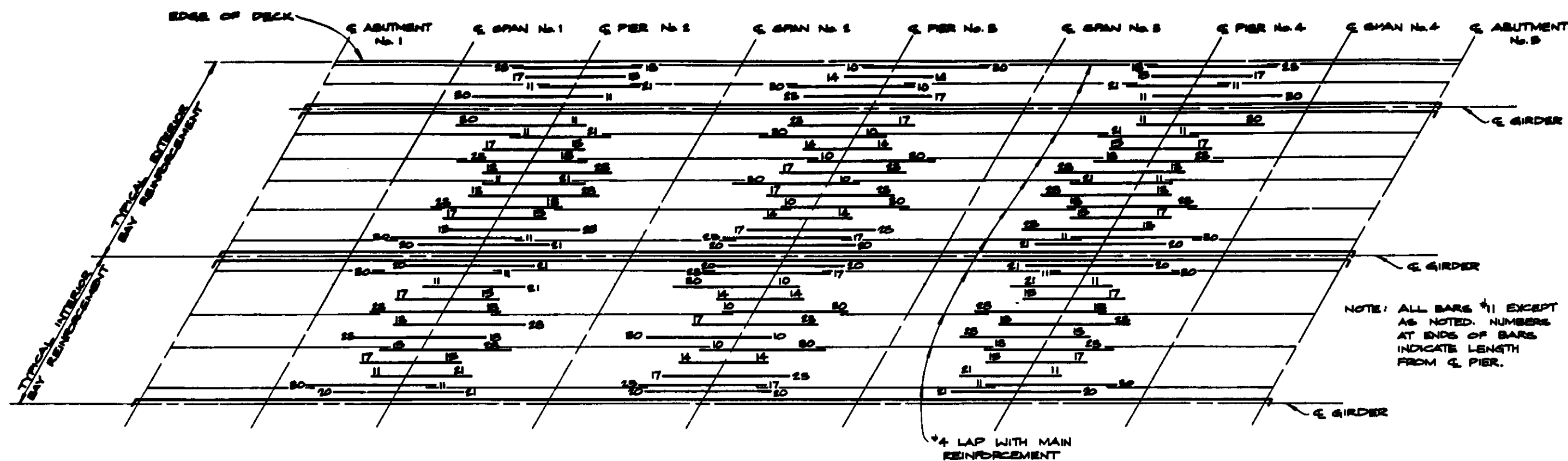
		ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
		TALBERT — MACARTHUR BRIDGE ACROSS SANTA ANA RIVER	
TYPICAL PIER EXTENSION		SHEET 8	
NAME: _____ DATE: <i>4/10/82</i>	DESCRIPTION: _____	PREPARED UNDER SUPERVISION OF: <i>[Signature]</i>	DATE: _____
REVISIONS:		SCALE: _____ AS SHOWN: _____	DATE: <i>4/8/82</i> DWS. NO. _____
DESIGNED: <i>MM HSU</i> PLR: _____ CHECKER: GWF			



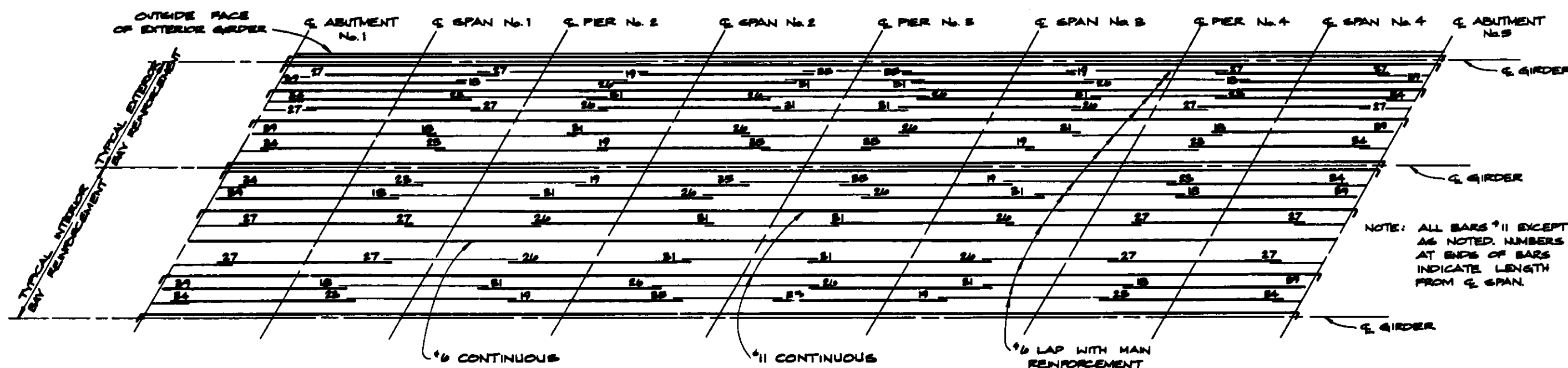
AS BUILT

WHILE THE N. 1. is BELIEVED TO BE ACCURATE, THE U. S. GOVERNMENT EMPLOYMENT AGENCY WILL NOT BE RESPONSIBLE FOR OMISSIONS, ERRORS, OR INACCURACIES

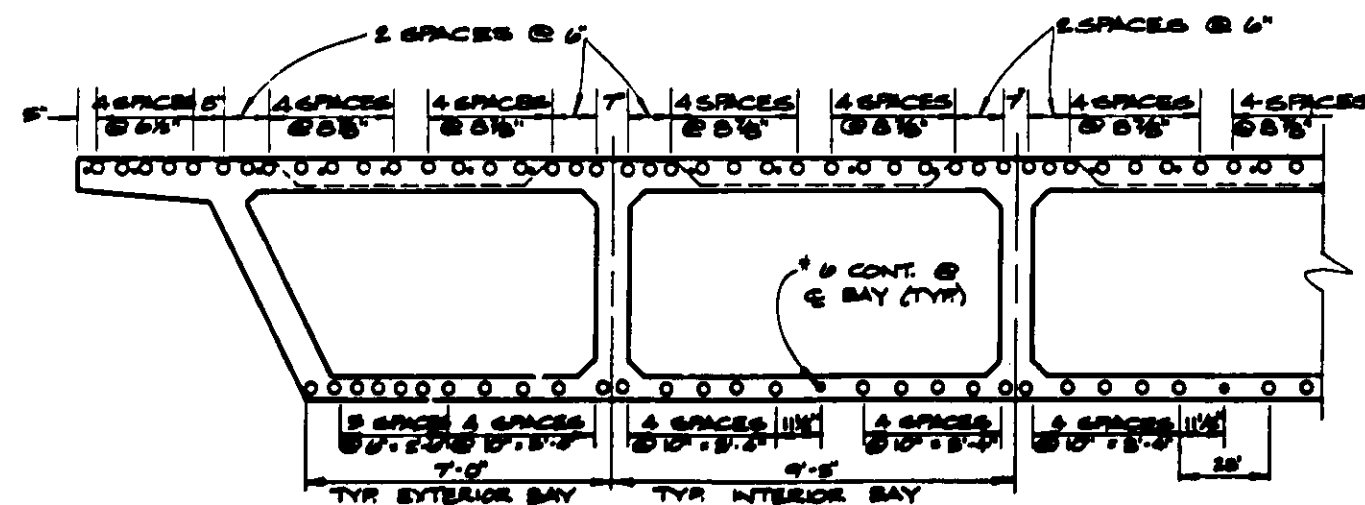
1 1/2" 0 1 2 3 inches on original drawing 35-97	
ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY TALBERT — MACARTHUR BRIDGE ACROSS SANTA ANA RIVER	
TYPICAL SECTION	
DRAWN: <u>W/S</u> <u>W</u> DATE: _____ REVISIONS 1. <u>MM/SS</u> 2. <u>PLB</u> CHECKER: <u>WFF</u>	PREPARED UNDER SUPERVISION OF <u>John E. Smith</u> SCALE: _____ DATE: <u>4/82</u> (AS SHOWN) DWS. NO. _____ SHEET <u>9</u>



TOP REINFORCEMENT
NO SCALE



BOTTOM REINFORCEMENT
NO SCALE



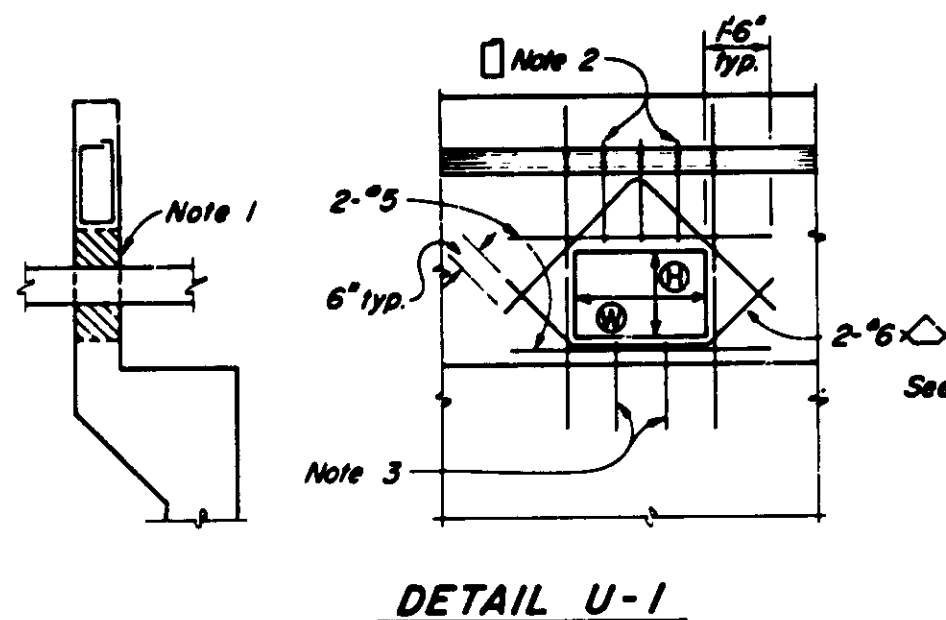
MAIN REINFORCEMENT PLACING DIAGRAM
SCALE: 3/8" = 1'-0"

AS BUILT
NOTE: THE INFORMATION HEREIN IS BASED ON THE AS BUILT CONDITIONS OF THE BRIDGE. THE ENGINEER HAS NOT CONDUCTED A VISUAL INSPECTION OF THE BRIDGE SINCE THE DATE OF THE LAST INSPECTION REPORT.

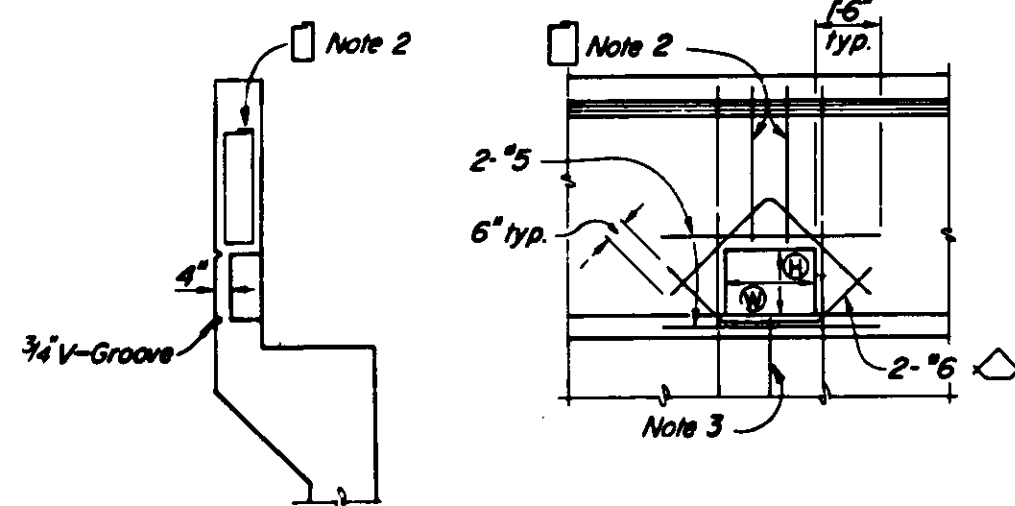
1/2" = 0' 2"
3 inches on original drawing

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
TALBERT - MACARTHUR BRIDGE	
ACROSS SANTA ANA RIVER	
DECK REINFORCEMENT AND PLACING DIAGRAM	
DESIGNED BY M.M.H.S.U.	CHECKED BY P.L.B.
DATE 4/82	DATE 4/82
SCALE AS SHOWN	DWG. NO. 11

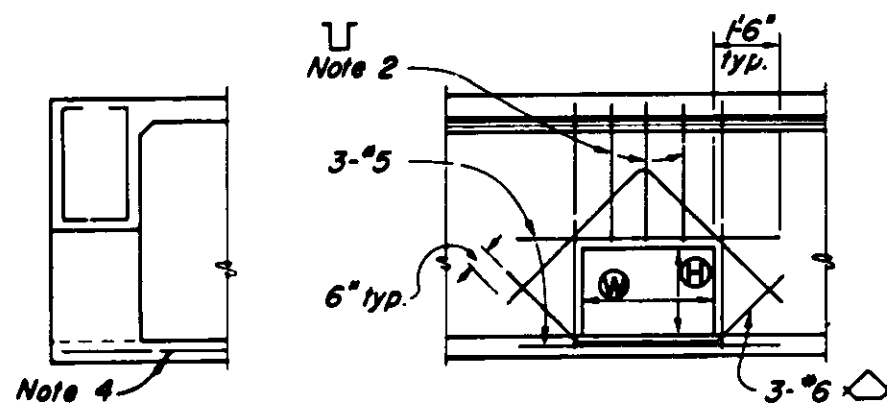
DR. 2 13799



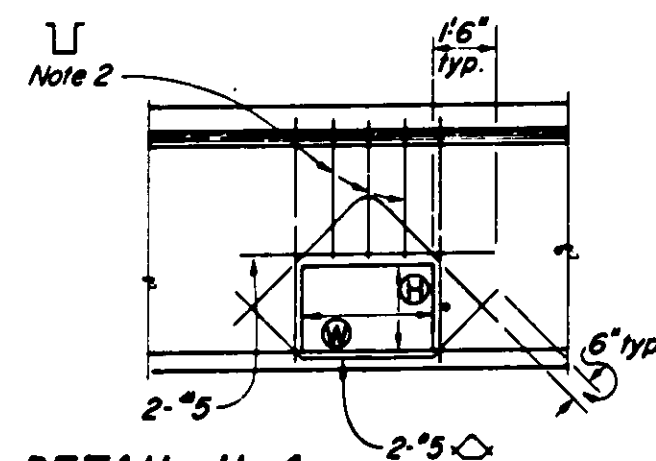
DETAIL U-1



DETAIL U-2

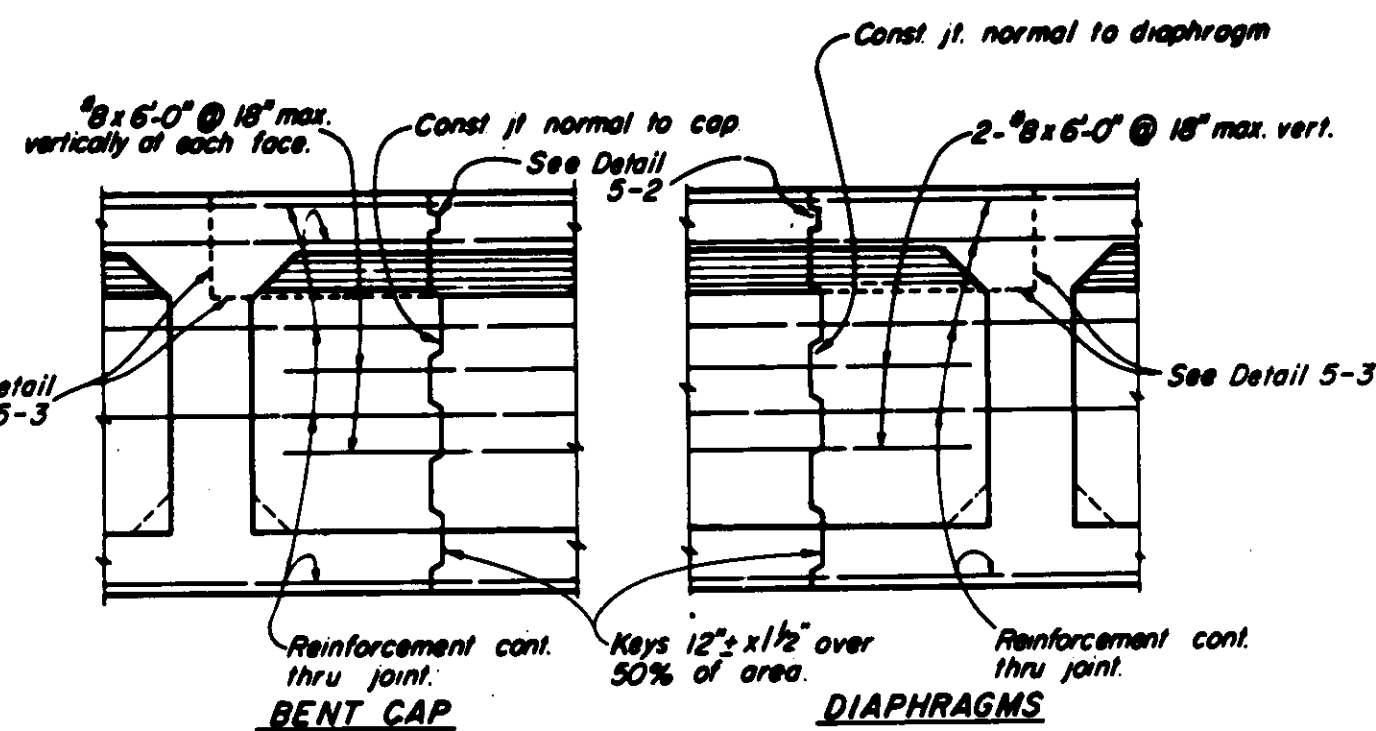


DETAIL U-3

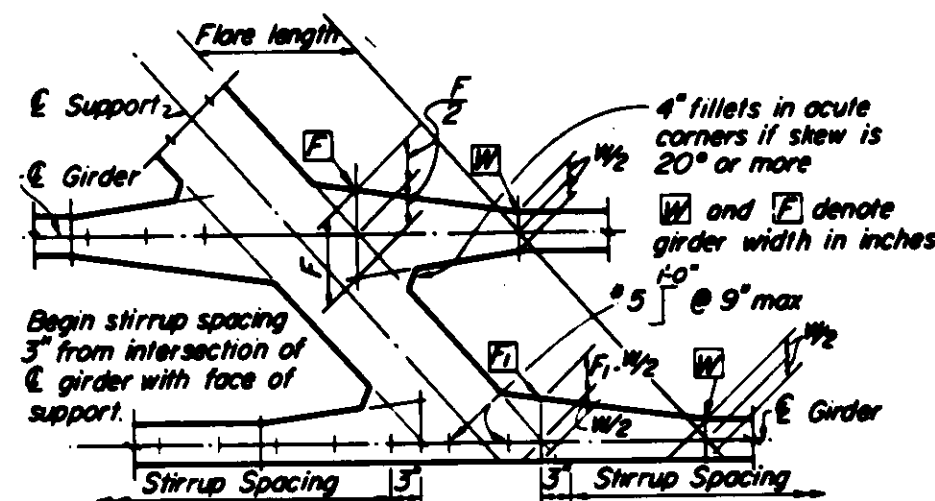


DETAIL U-4

UTILITY OPENINGS



LONGITUDINAL CONSTRUCTION JOINTS



TYPICAL GIRDER FLARE AND STIRRUP SPACING DIAGRAM

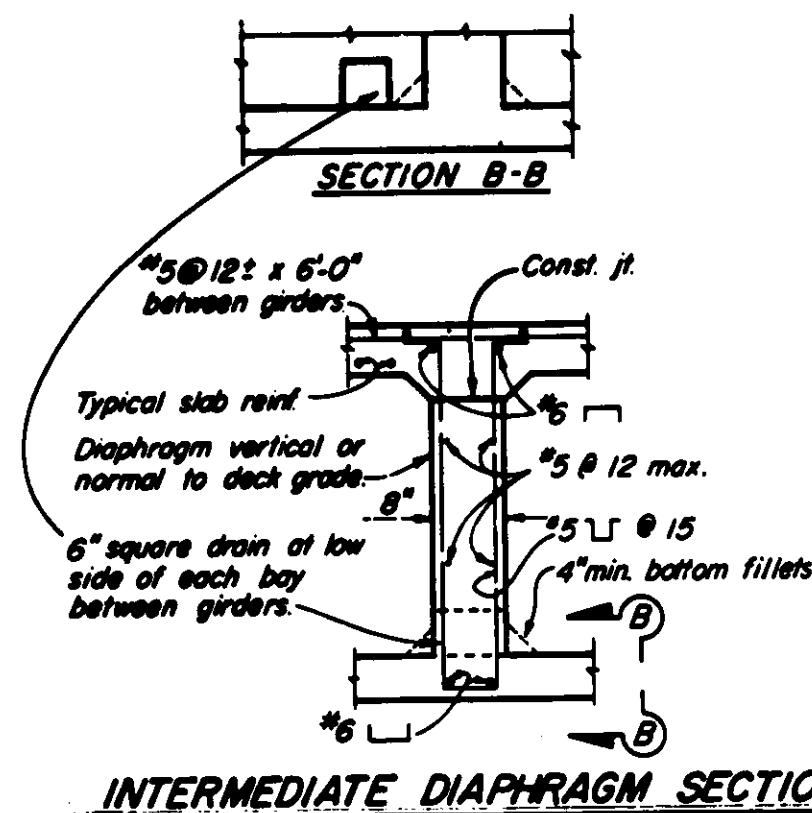
LOCATION	SIZE		DETAIL #	TOTAL
	W	H		
Abutment Backwall	24	24	U-1	2
Abutment Backwall	24	30	U-1	2
Abutment Backwall	24	24	U-2	4
End Diaphragm	24	24	U-3	6
End Diaphragm	24	30	U-3	2
Pier Cap	24	24	U-4	9
Pier Cap	24	30	U-4	3
Int. Diaphragm	24	24	U-4	12
Int. Diaphragm	24	30	U-4	4

(*W & *H measured in inches.)

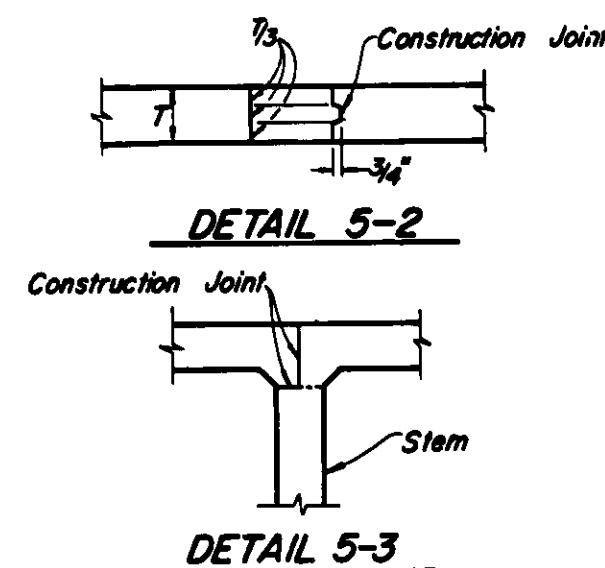
NOTE:

1. Seal utilities of abutments with concrete or mortar, after tightly wrapping utility with 2 layers of 15# building paper.
2. Reinf. to be same bar size and $\frac{2}{3}$ the spacing of adjacent reinf. shown on Project Plans.
3. Reinf. to be same bar size and shape as adjacent reinf. shown on Project Plans.
4. Main reinf. to clear opening.

AS BUILT
WHILE THE PROJECT WAS IN PROGRESS, IT IS BELIEVED TO BE ACCURATE, BUT THE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY WILL NOT BE RESPONSIBLE FOR OMISSIONS, ERRORS, OR INACCURACIES.

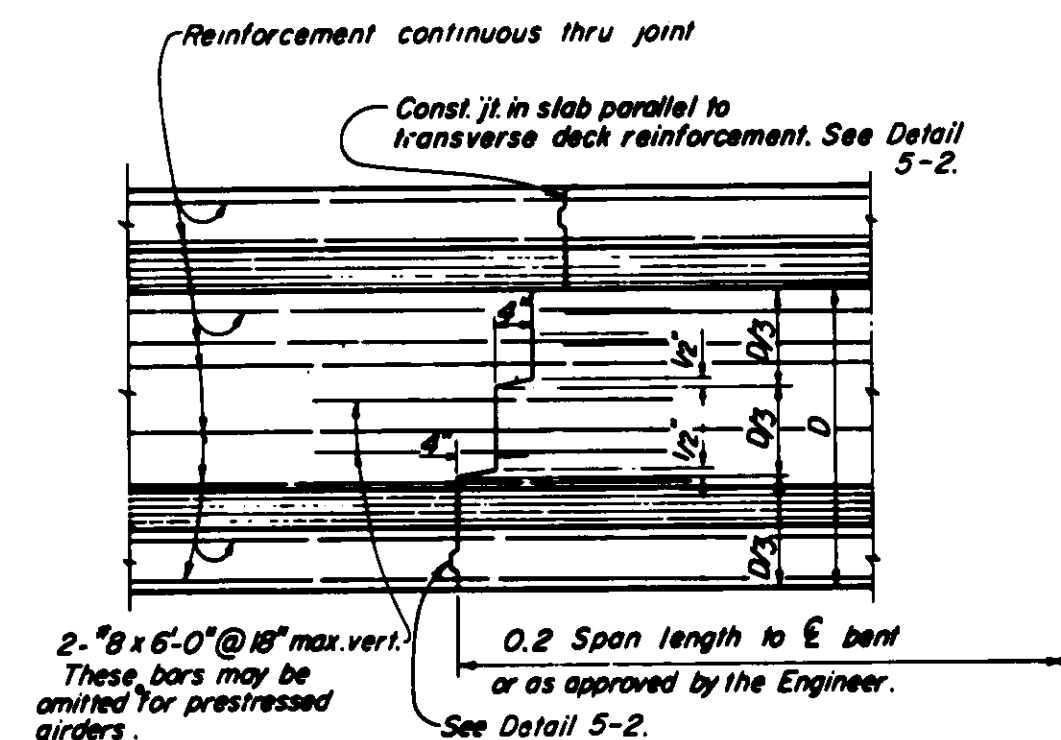


INTERMEDIATE DIAPHRAGM SECTION



DETAIL 5-2

DETAIL 5-3

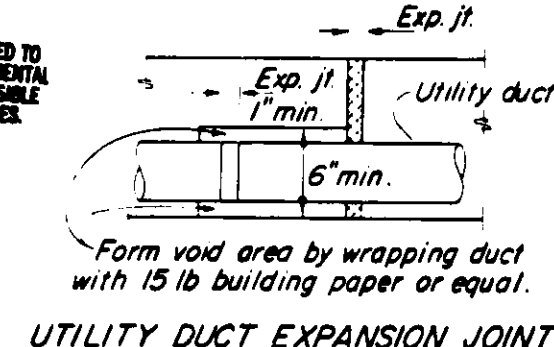
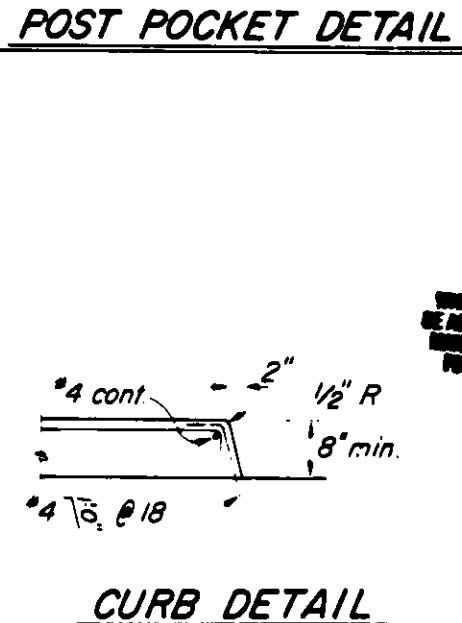
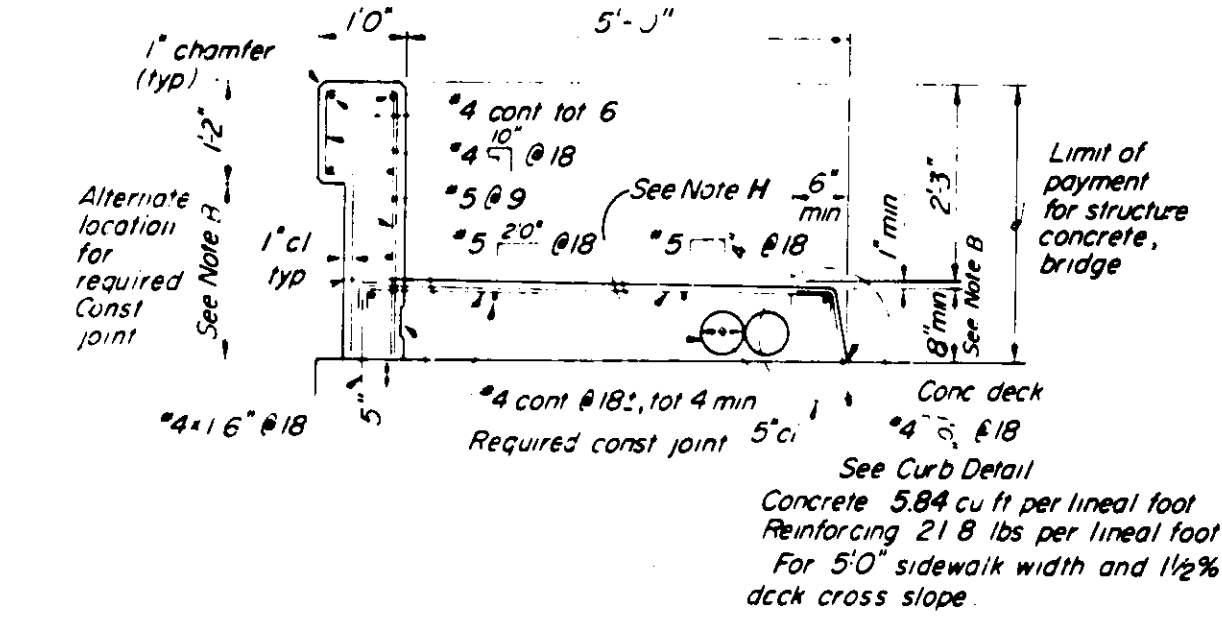
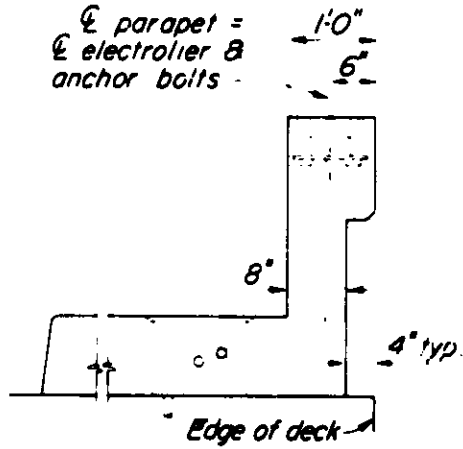
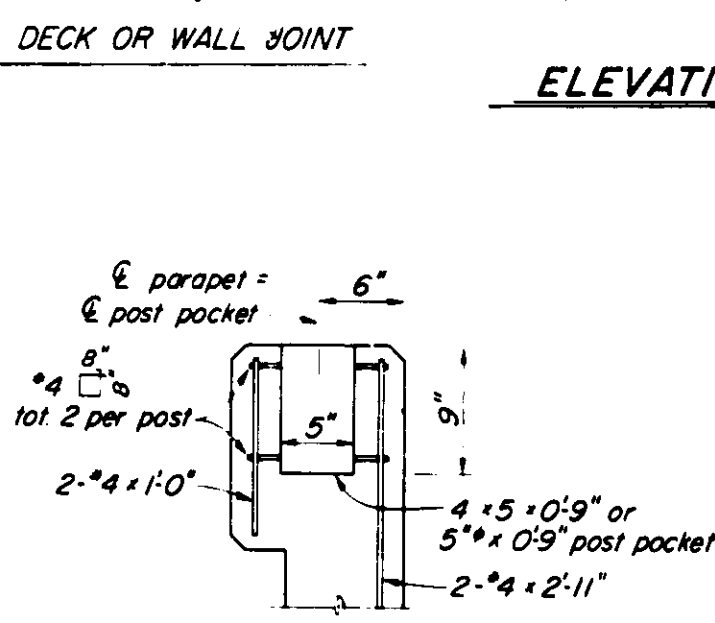
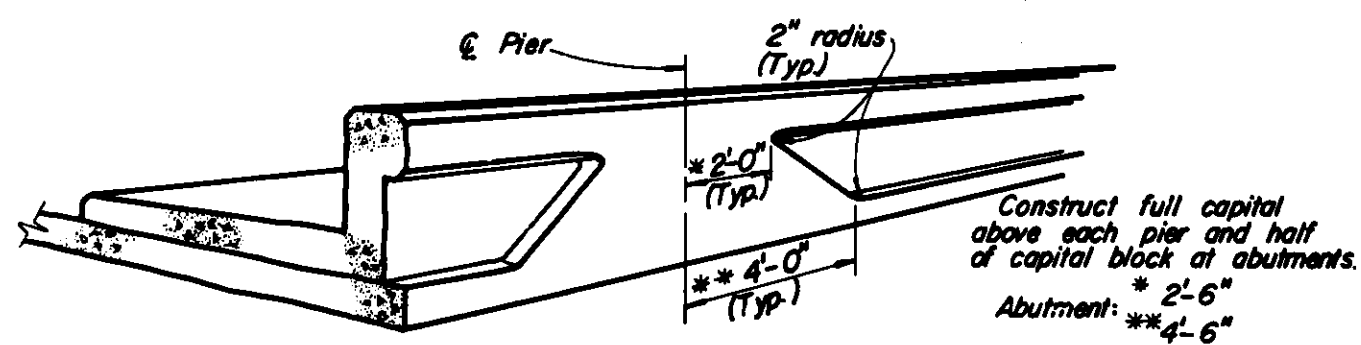
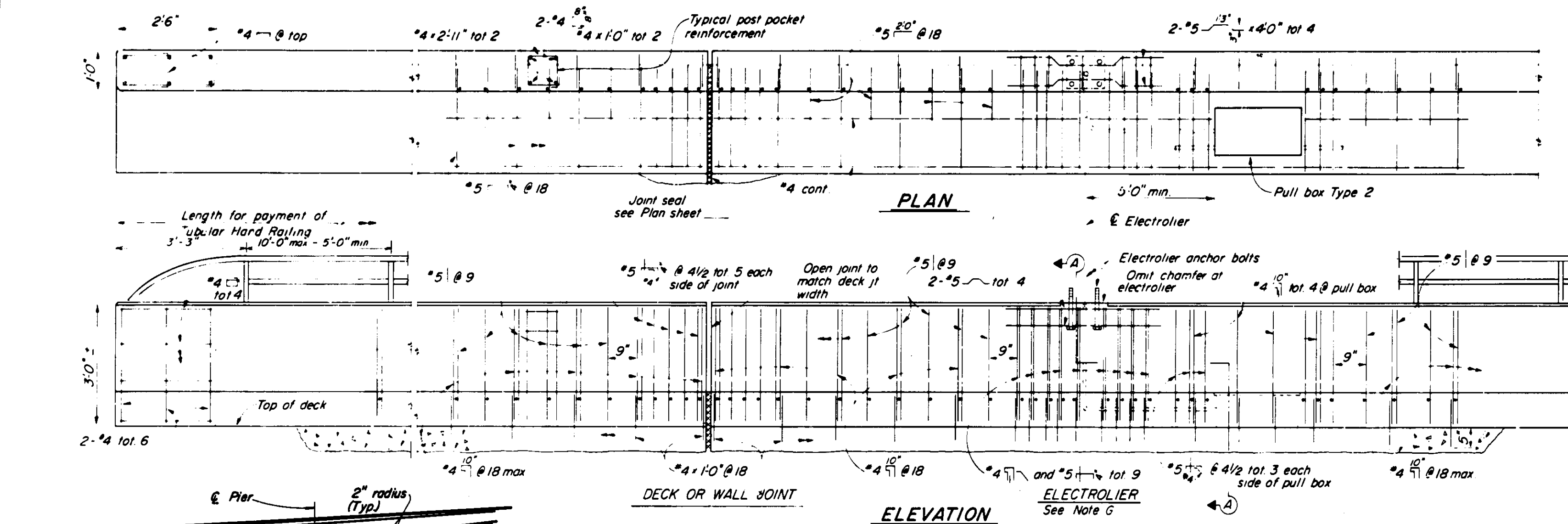


TRANSVERSE GIRDER CONSTRUCTION JOINTS

1 1/2 0 2
3 inches on original drawing
55097

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
TALBERT - MACARTHUR BRIDGE	
ACROSS SANTA ANA RIVER	
MISCELLANEOUS DETAILS	
DATE	DESCRIPTION
REVISIONS	PREPARED UNDER SUPERVISION OF
DESIGNED	SCALE
DRAWN	DATE
CHECKED	DWG. NO.
DATE	SHEET

DR-2 18799



GENERAL NOTES

- A. For hand railing notes and details not shown, see "Tubular Hand Railing" sheet 15.
- B. Dimensions will vary with cross slope and with certain thicknesses of surfacing. See bridge plans.
- C. Walls are to be backfilled before railing is placed.
- D. Clearance to reinforcing steel in curb and railing to be 1" except as noted. Longitudinal reinforcement to stop at all expansion joints.
- E. See Project Plans for electrolier locations sheet 16.
- F. See Bridge Plans for limits of Tubular Hand Railing.
- G. For Electrical Details, see Plan sheets 16.
- H. A minimum of 4-0.5" round openings are required for future or existing utilities. Openings are to be sealed at ends if not used. Duct forms are to be tied down.

1/2" 0 2
3 inches on original drawing

AS BUILT
WHILE THE INFORMATION SHOWN IS BELIEVED TO BE ACCURATE, THE ORANGE COUNTY ENVIRONMENTAL AGENCY WILL NOT BE RESPONSIBLE FOR OMISSIONS, ERRORS, OR UNCLARITIES.

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY			
TALBERT - MACARTHUR BRIDGE ACROSS SANTA ANA RIVER			
TYPE 26 PARAPET			
DATE	DESCRIPTION	PREPARED UNDER SUPERVISION OF	SHEET
4/82	REVISIONS	John A. Pelt	14
DESIGNED	DATE	SCALE	DWG. NO.
DRAWN	4/82	AS SHOWN	
CHECKED	GWF		

DR. 2 13744

2-#4 in parapet over abutment backwall. Tack weld to #4 longitudinal bars in parapet

Standard longitudinal sidewalk bars.

2-#4 in sidewalk over abutment backwall. Tack weld to #4 longitudinal bars in sidewalk.

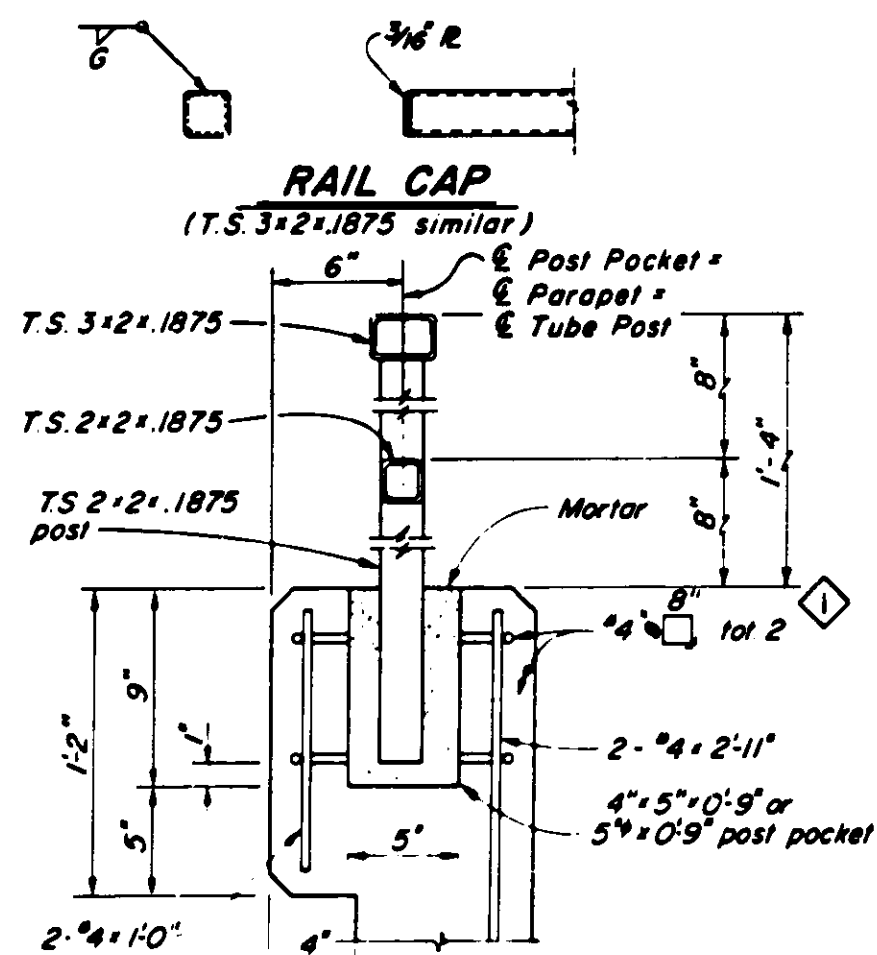
Type "B-I" seal and water stop are continuous from edge of deck to edge of deck.

Sidewalk and parapet monolithic over abutment backwall.

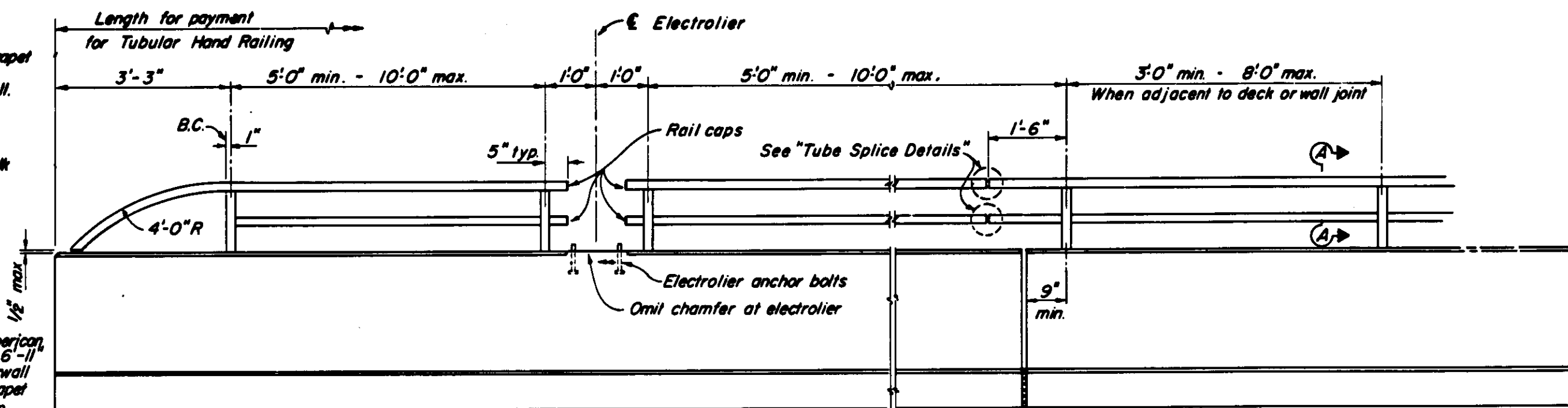
Longitudinal bars in sidewalk

Install C12x25 American Standard Channel 6'-11" long on top of backwall (under sidewalk/parapet overhang). Coat top with heavy grease.

PICTORIAL OF SIDEWALK OVER ABUTMENT



POST ANCHORAGE DETAILS



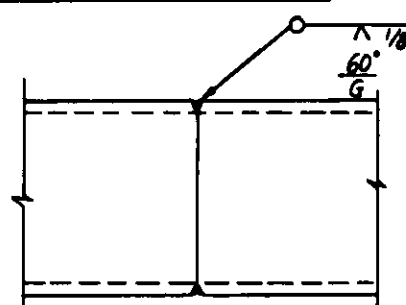
END POST

ELECTROLIER

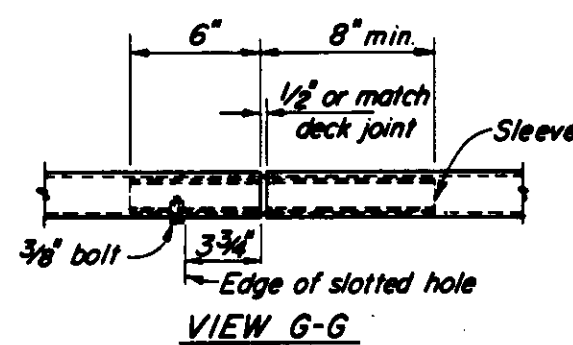
DECK OR WALL JOINT

CHAIN LINK RAILING TYPE 7

ELEVATION



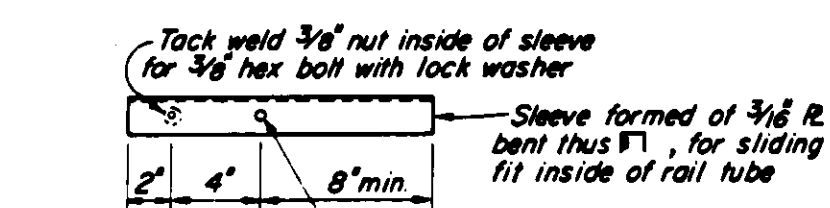
TUBE - WELDED SPLICE



VIEW G-G



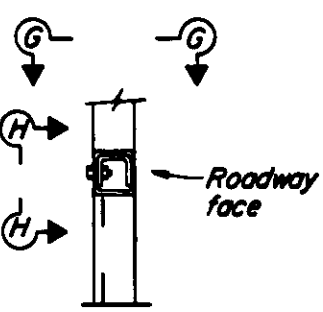
VIEW H-H



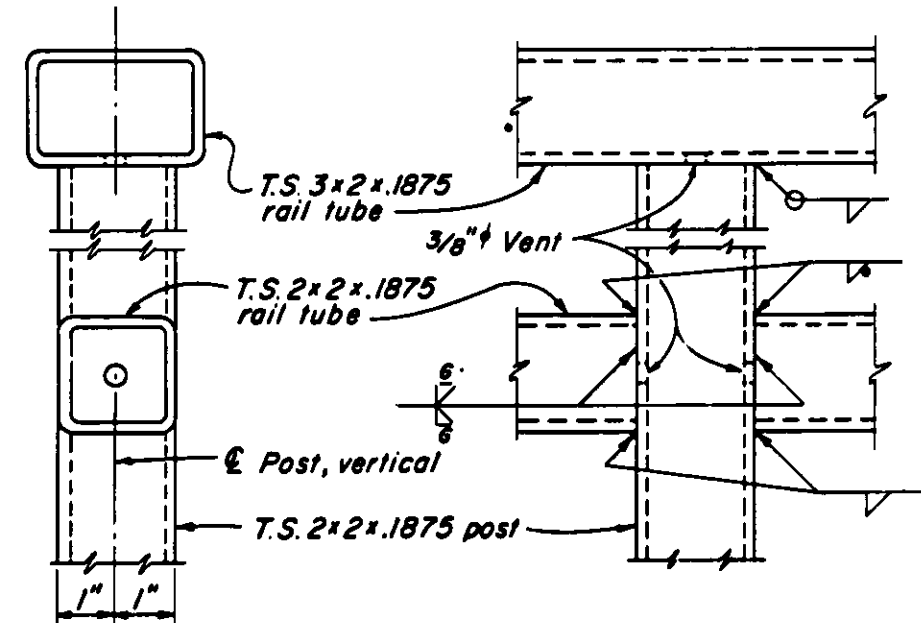
SLEEVE

TUBE SPLICE DETAIL (T.S. 3x2x1875 similar)

Note: 3/8" nut tack welded to sleeve may be replaced by drilled and tapped hole in sleeve.



SECTION



SECTION A-A

ELEVATION

RAIL CONNECTION DETAILS

NOTES:

1. Galvanize rail assembly after fabrication.
2. Posts shall be normal to railing.
3. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 950 ft.
4. Tube splices shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
5. Top rail tube shall be continuous over not less than two posts except a short length is permitted near deck or wall joints, electroliers, or other rail discontinuities.
6. For details and reinforcement not shown see "Type 26 Parapet", sheet 14.
7. See bridge plans for limits of Tubular Hand Railing.

AS BUILT

WHILE THE INTENT OF THIS DRAWING IS BELIEVED TO BE ACCURATE, THE ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY WILL NOT BE RESPONSIBLE FOR OMISSIONS, ERRORS, OR INADJUDICATES.

1/2" = 0' 2" 3 inches on original drawing

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
TALBERT - MACARTHUR BRIDGE ACROSS SANTA ANA RIVER	
TUBULAR HANDRAIL	
DATE	DESCRIPTION
REVISIONS	PREPARED BY
SCALE	DATE
CHECKED	DATE
AS SHOWN	DATE
SHEET 15	

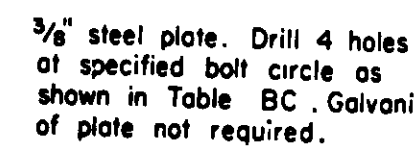
DR. 2 13199



After plumbing standard, grout all around bolts. Finish with 45° slope. Provide 3/4" drain hole at low point. _____



$$\begin{array}{rcl} C & = & 12^{\text{th}} \\ D_1 & = & 11\frac{1}{2}^{\text{th}} \\ D_2 & = & 11^{\text{th}} \end{array}$$



Pole Type	POLE DATA				BASE PLATE DATA						Luminaire Arm
	A Height	Min Base	O D Top	Thickness	C	D 1	D 2	Thickness	Anchor Bolts		
									Size	Bolt Circle	
15	30'-0"	8"	3 3/4"	0.1196"	12"	11 1/2"	11 1/2"	1"	1" x 36" x 4"	11"	12'

- 1 Anchor bolt or stud length shall be such that thread extends $\frac{1}{2}$ " maximum above nut on level base plate after grouting.
- 2 Erector anchor bolts shall be held in position for pouring by means of anchor plates and suitable templates. Deviation from the true position, vertical and height, shall not exceed $\frac{1}{16}$ "



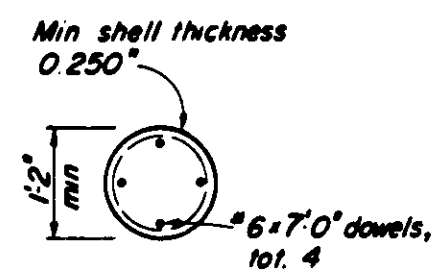
*Pull Box Type 2
Tot. 4 (See sheet 14
for offset from electroliners*

AS BUILT

WHILE THE INFORMATION SHOWN IS BELIEVED TO BE ACCURATE, THE ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY WILL NOT BE RESPONSIBLE FOR ERRORS, OMISSIONS, OR MISREPRESENTATIONS.

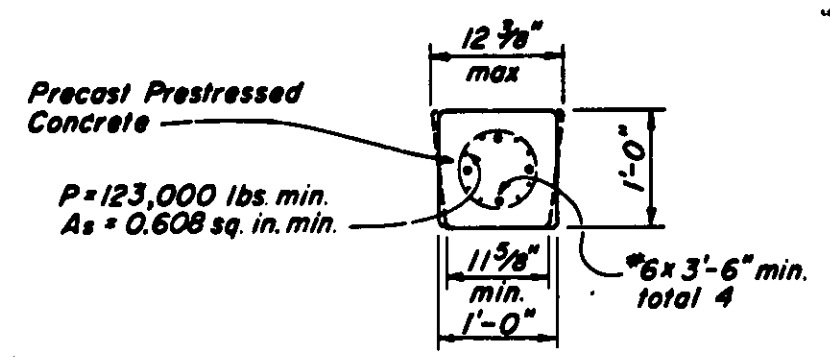
		ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
		TALBERT — MACARTHUR BRIDGE	
		ACROSS SANTA ANA RIVER	
		LIGHTING AND ELECTRICAL DETAILS	
DATE	DESCRIPTION	PREPARED UNDER SUPERVISION OF	SHEET
6/10/82	2	John W. Lee	16
REVISIONS		SCALE	DATE
REVISION	DATE	AS SHOWN	DWG. NO.
1	6/10/82	4/82	16

DR. 2 13799

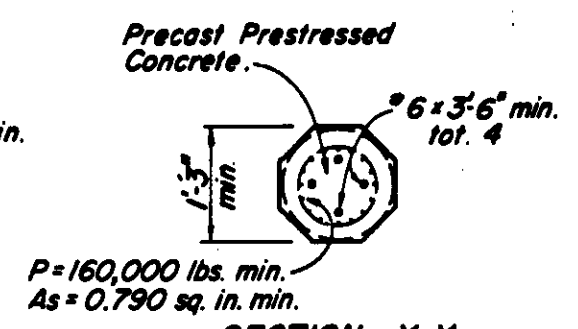


SECTION U-U

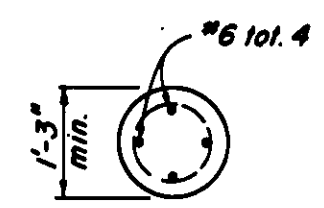
When driven with mandrel, shell thickness may be reduced to 0.134".



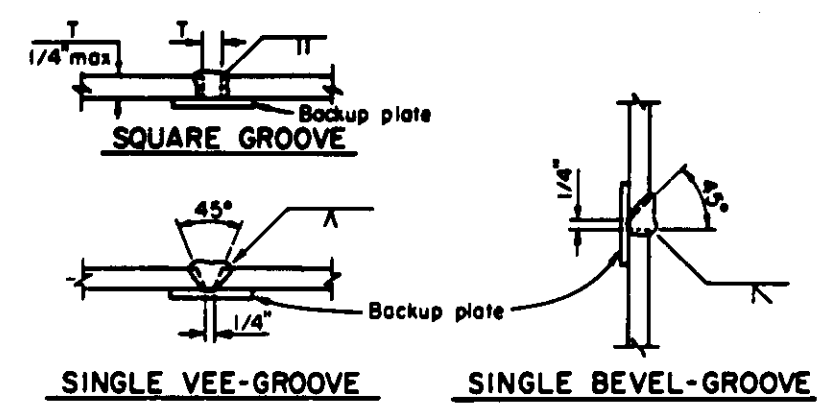
SECTION X-X



SECTION Y-Y

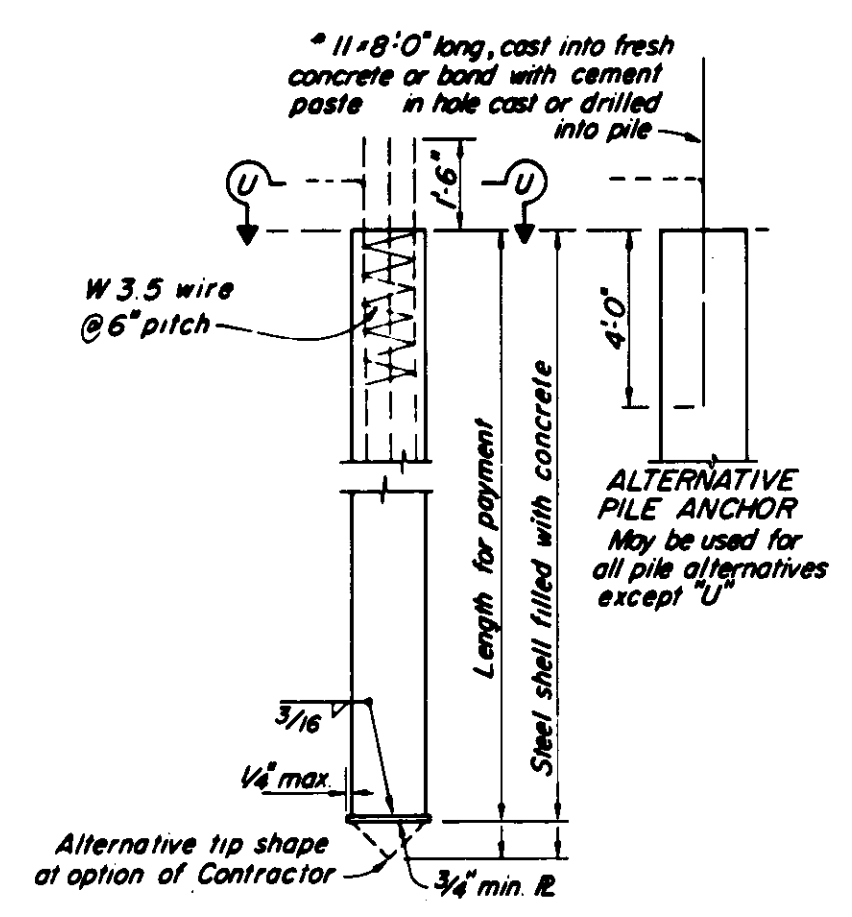


SECTION Z-Z

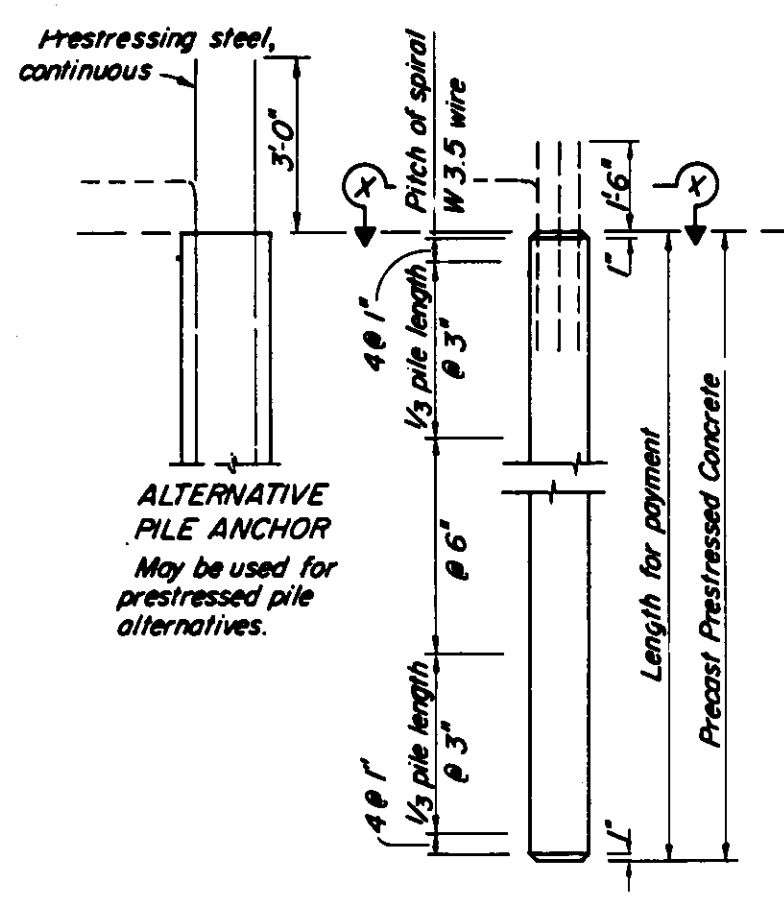


PILE WELDING DETAIL - BUTT JOINTS

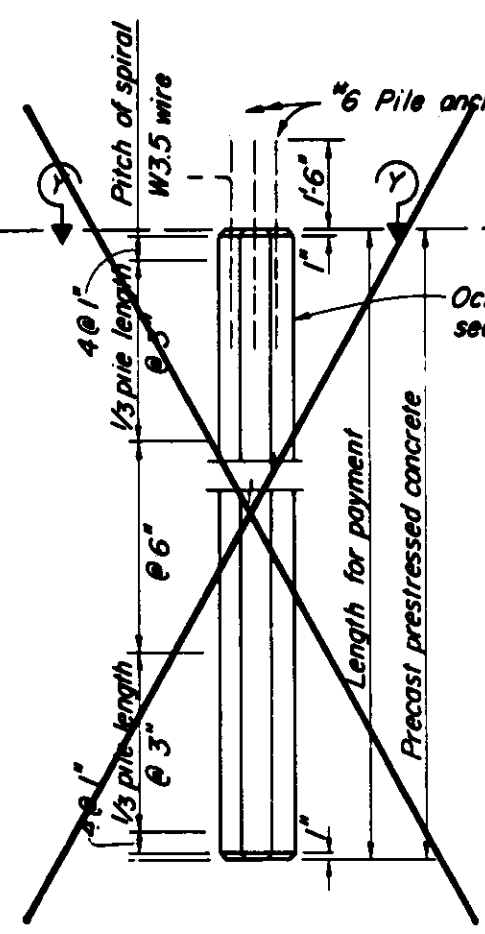
- Notes:
1. Single Vee-Groove and Square Groove permitted for all positions.
 2. Single Bevel-Groove permitted for horizontal joints only



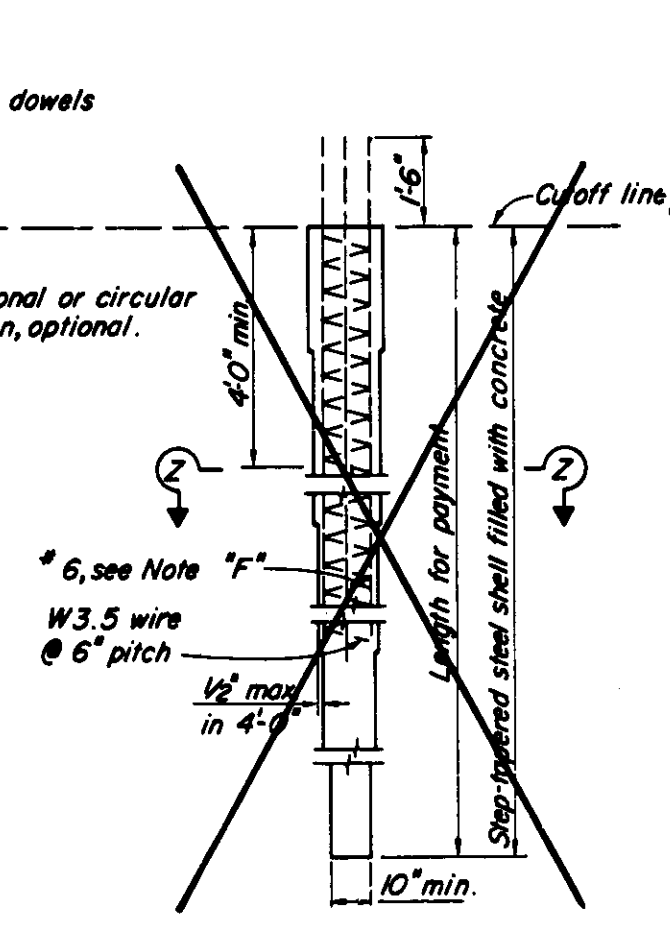
ALTERNATIVE "U"



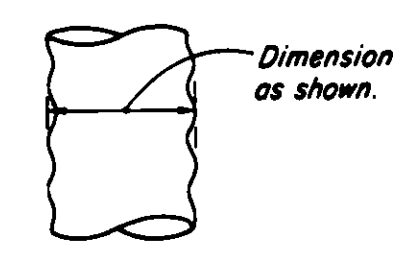
ALTERNATIVE "X"



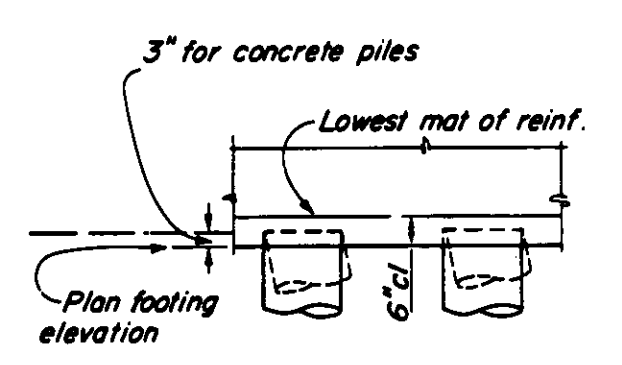
ALTERNATIVE "Y"



ALTERNATIVE "Z"



CORRUGATED ALTERNATIVE "Z"



Pile type to be as designated elsewhere

PILE EMBEDMENT

- Notes:
- A 10" minimum diameter pipe extension (thickness = 0.250" min.) may be used at the tip of Alternative "Z" when taper is 30' or more in length.
 - All dowels or bars extending into a footing having a depth less than 2'-0" shall be hooked.
 - 5 gauge wire may be substituted for W3.5 wire.
 - Piles may not be extended except in accordance with details shown in the Project Plans.

PRECAST PRESTRESSED PILES:

- P = Prestressing Force @ anchorage
- If section used is larger than the min. section shown, then "P" shall provide 860 psi. min.
- As = Minimum Area of prestressing steel required.
- Concrete Strength: f'_c @ 28 days = 6,000 p.s.i. (Alternative "X")
- 5,000 p.s.i. (Alternative "Y")
- f_{ci} @ transfer = 4,000 p.s.i.

DESIGN LOADING = 70 TONS

FOR "AS BUILT" PILE DRIVING DATA FROM THIS CONTRACT SEE SHEET 18

NOTE F

- In Alternative "Z", two #6 bars shall extend to the pile tip and the other two #6 bars and the spiral wrap shall extend, at least, to a point halfway between the pile tip and the lowest of the following:
- a. Bottom of footing.
 - b. Top of final ground surface.
 - c. Top of original ground surface when holes are drilled through embankment constructed by Contractor.
 - d. Bottom of pre-drilled holes greater than pile diameter.

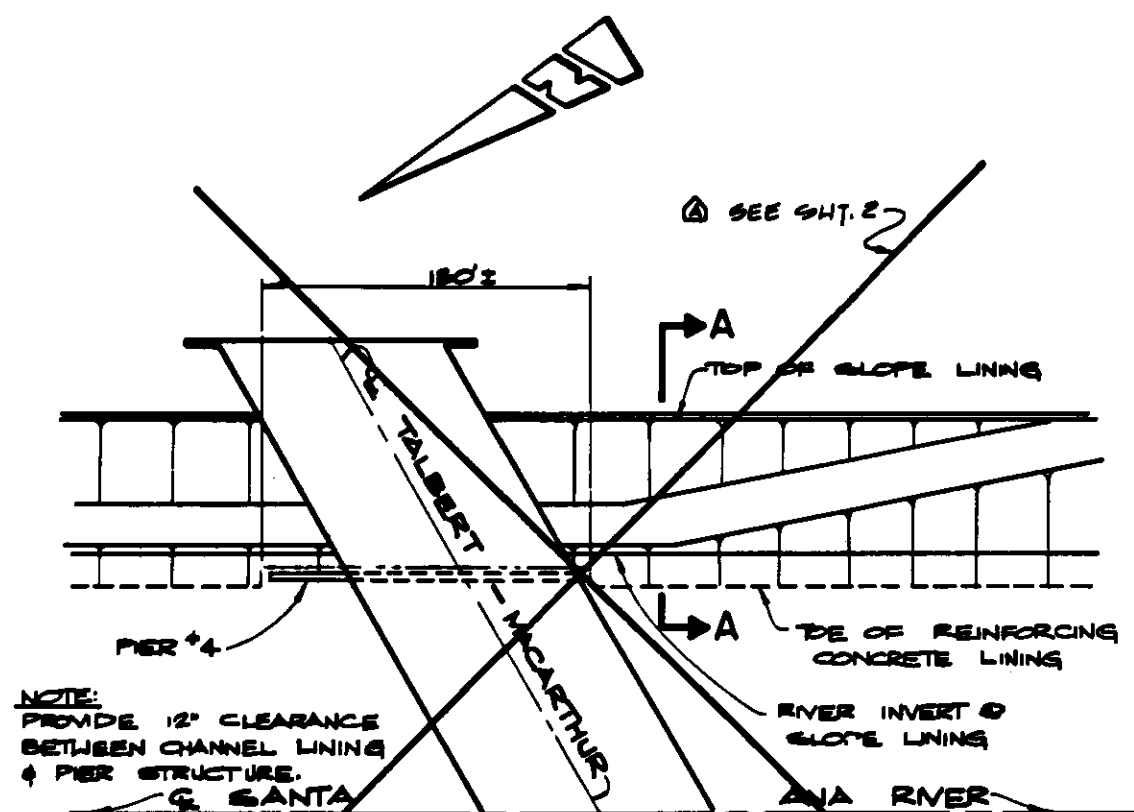
AS BUILT

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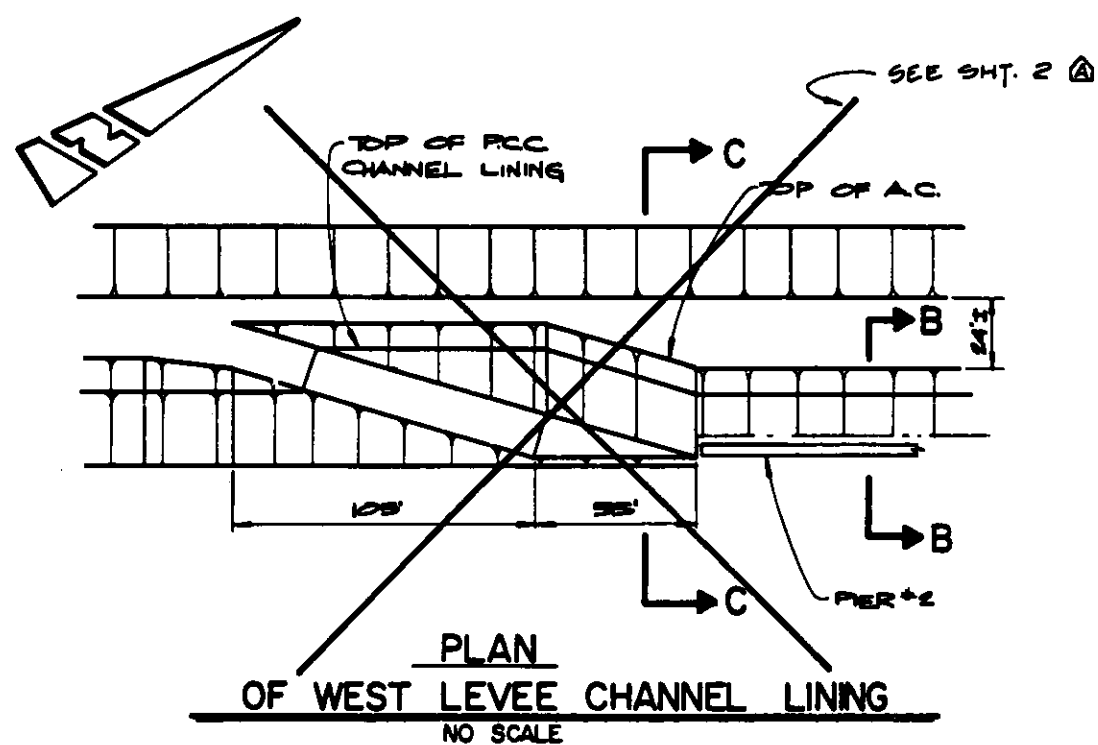
552-97

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
TALBERT - MACARTHUR BRIDGE ACROSS SANTA ANA RIVER	
PILING DETAILS	
DATE: 1/84	LMW
REVISIONS:	DATE:
REVISION: 1	DATE: 4/82
SCALE: AS SHOWN	DWG. NO. 17

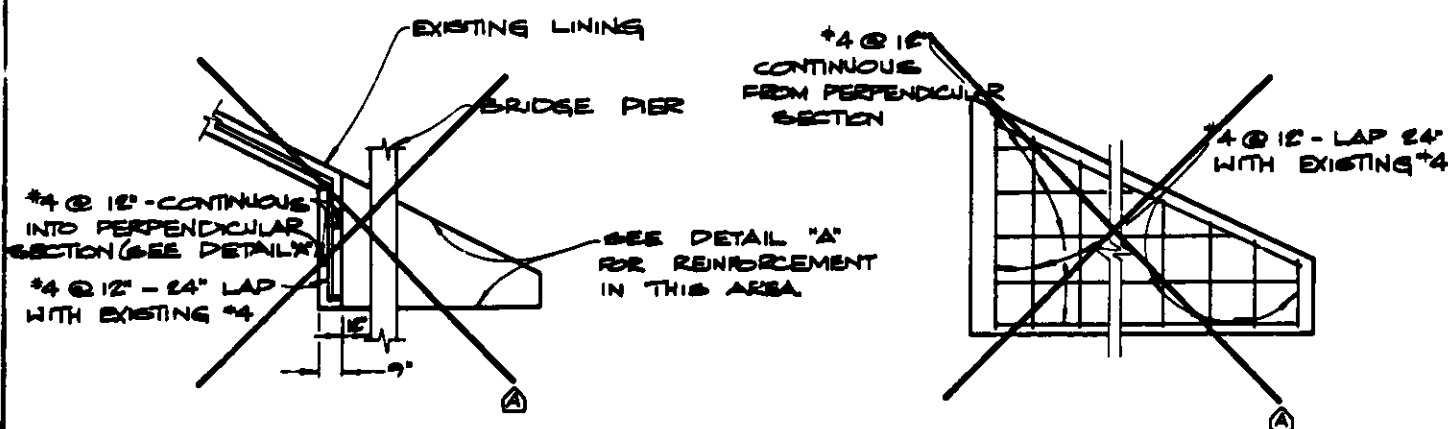
DR. 2 13799



PLAN
OF EAST LEVEE CHANNEL LINING
NO SCALE

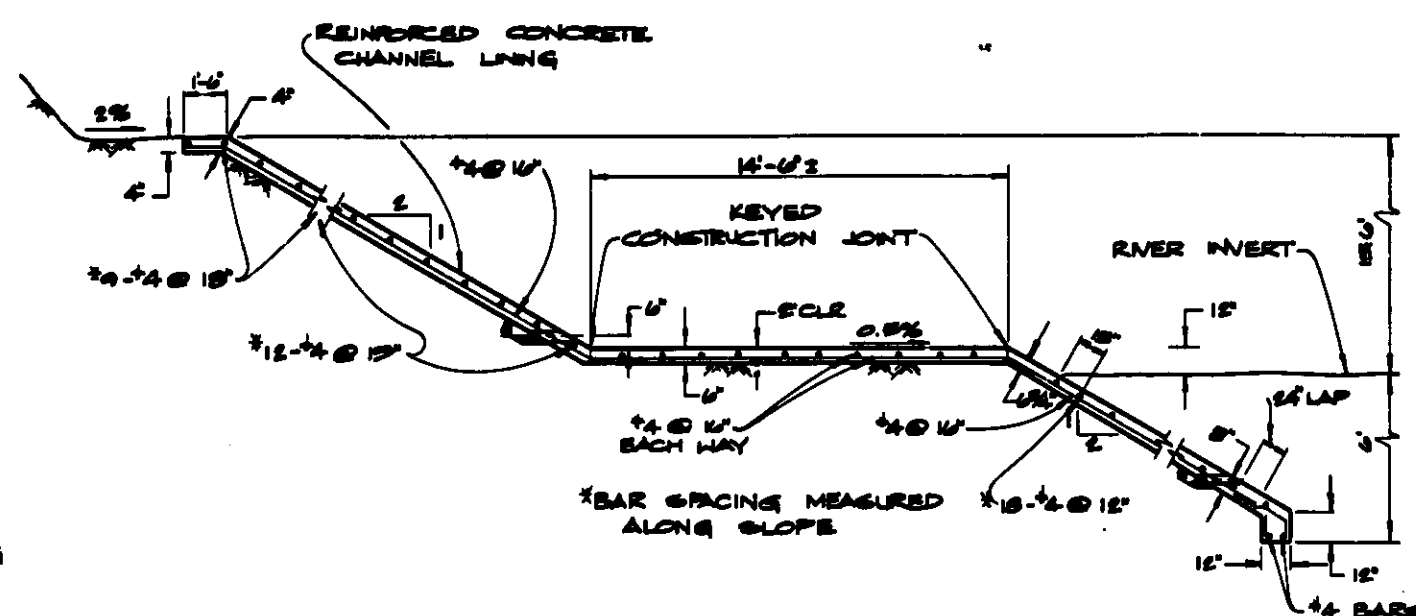


PLAN
OF WEST LEVEE CHANNEL LINING
NO SCALE

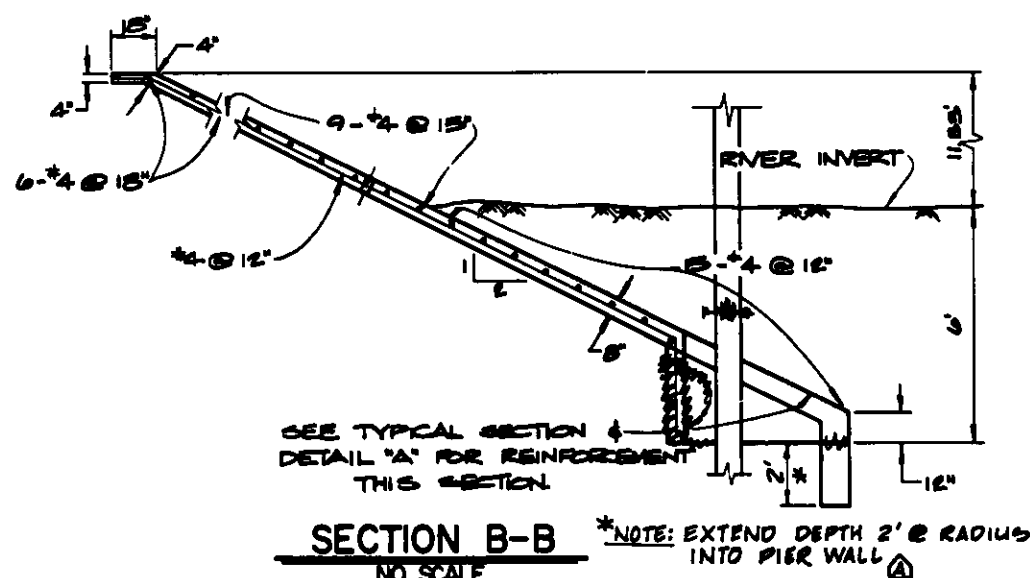


TYPICAL SECTION
OF CHANNEL LINING AT PIERS #28 & 4
NO SCALE

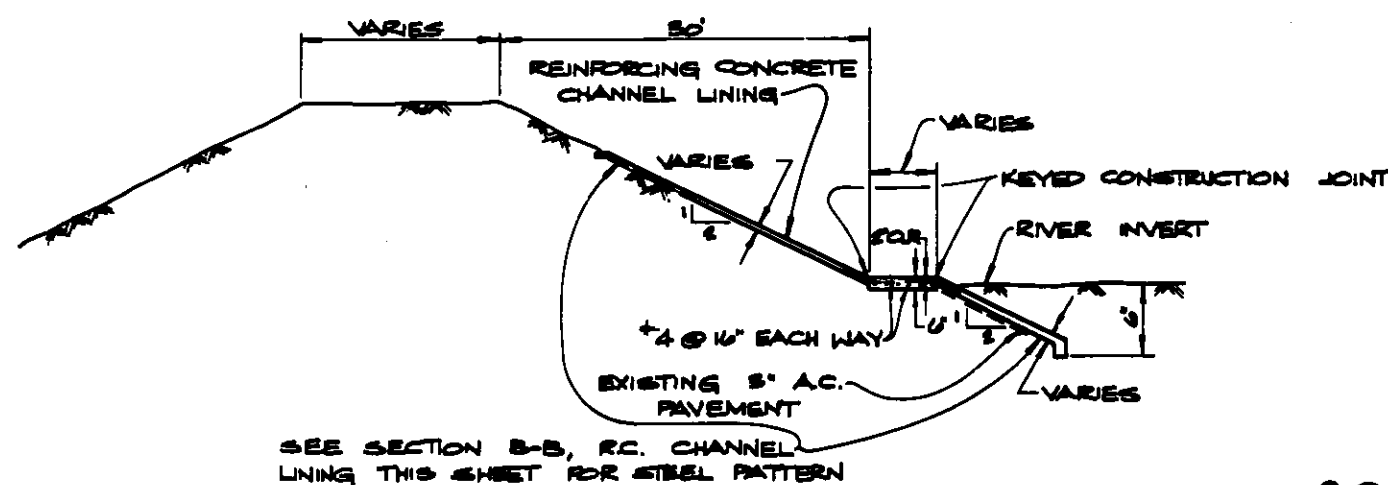
DETAIL "A"
NO SCALE



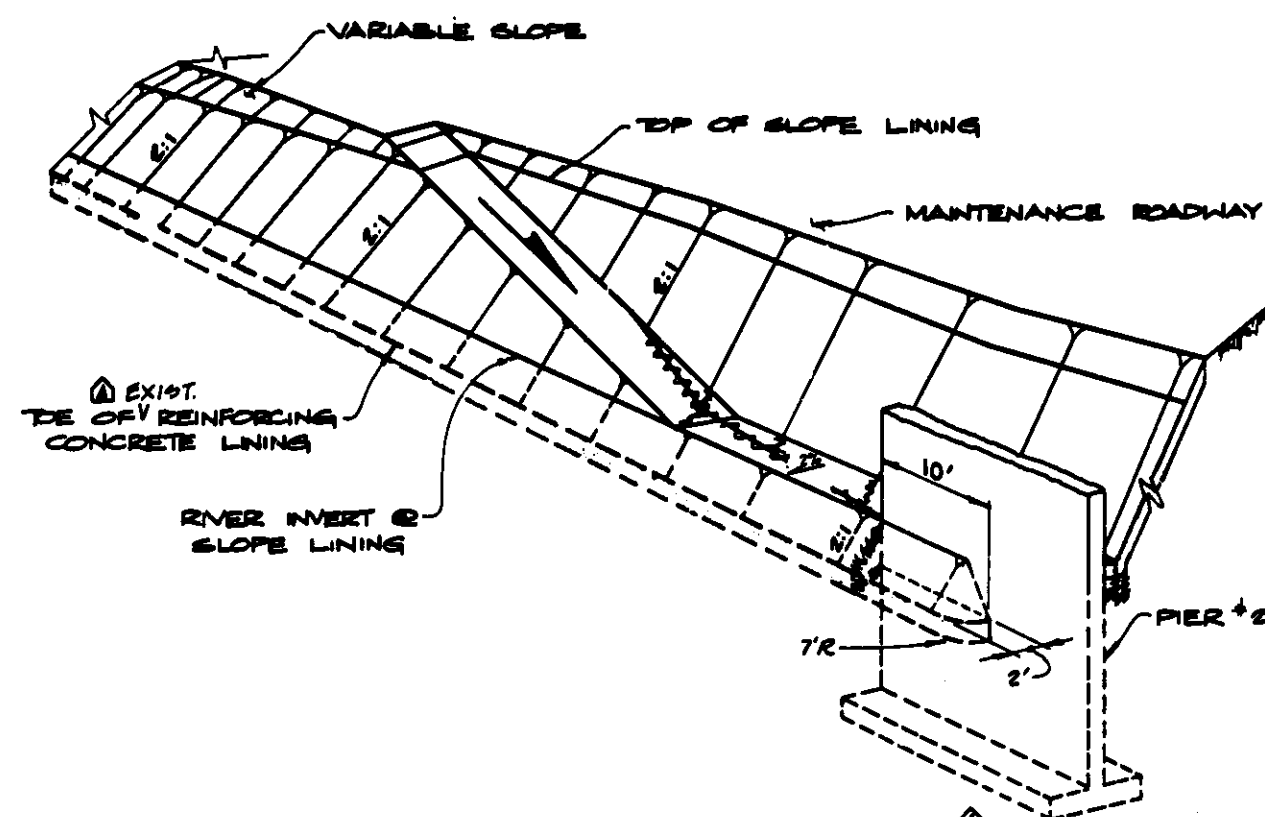
SECTION A-A
NO SCALE



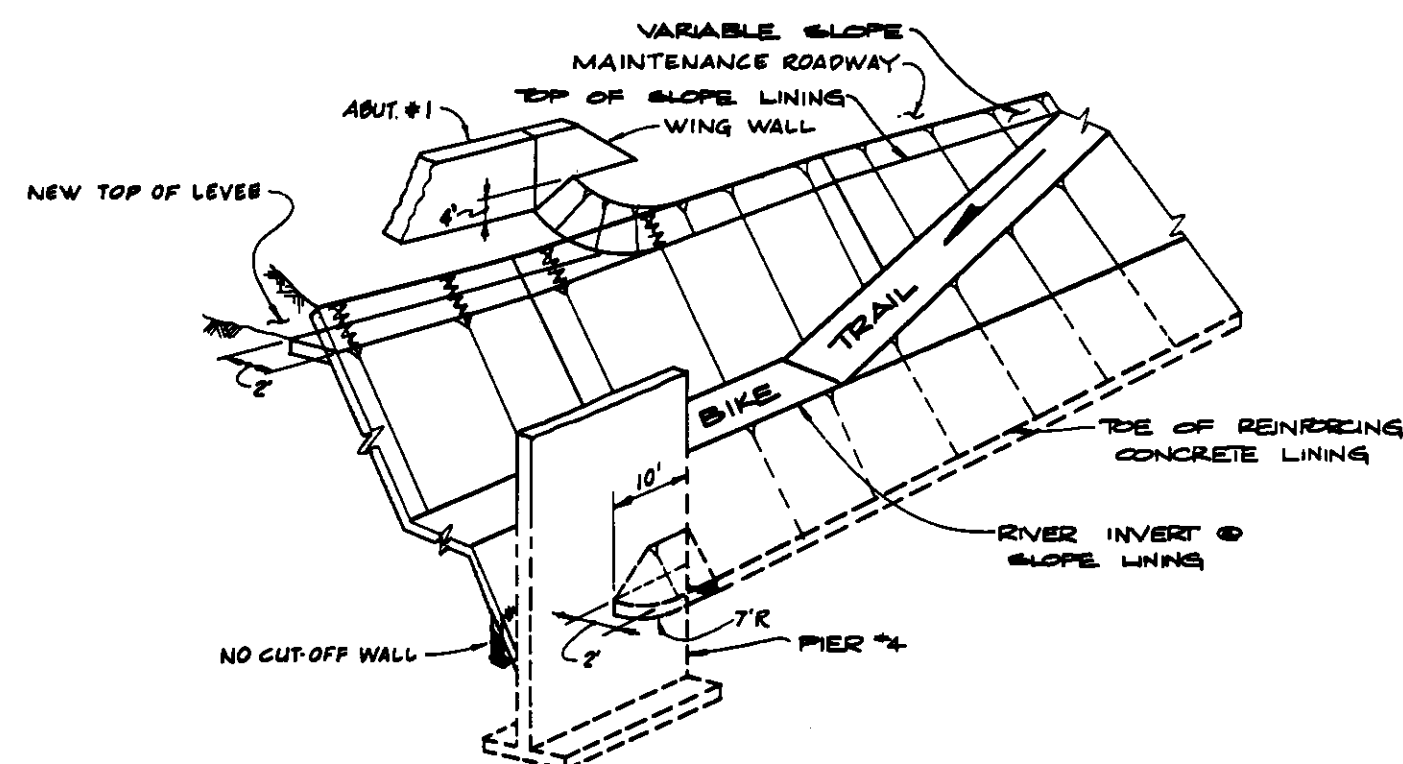
SECTION B-B
NO SCALE



SECTION C-C
NO SCALE



PICTORIAL OF WEST LEVEE
CHANNEL LINING
NO SCALE



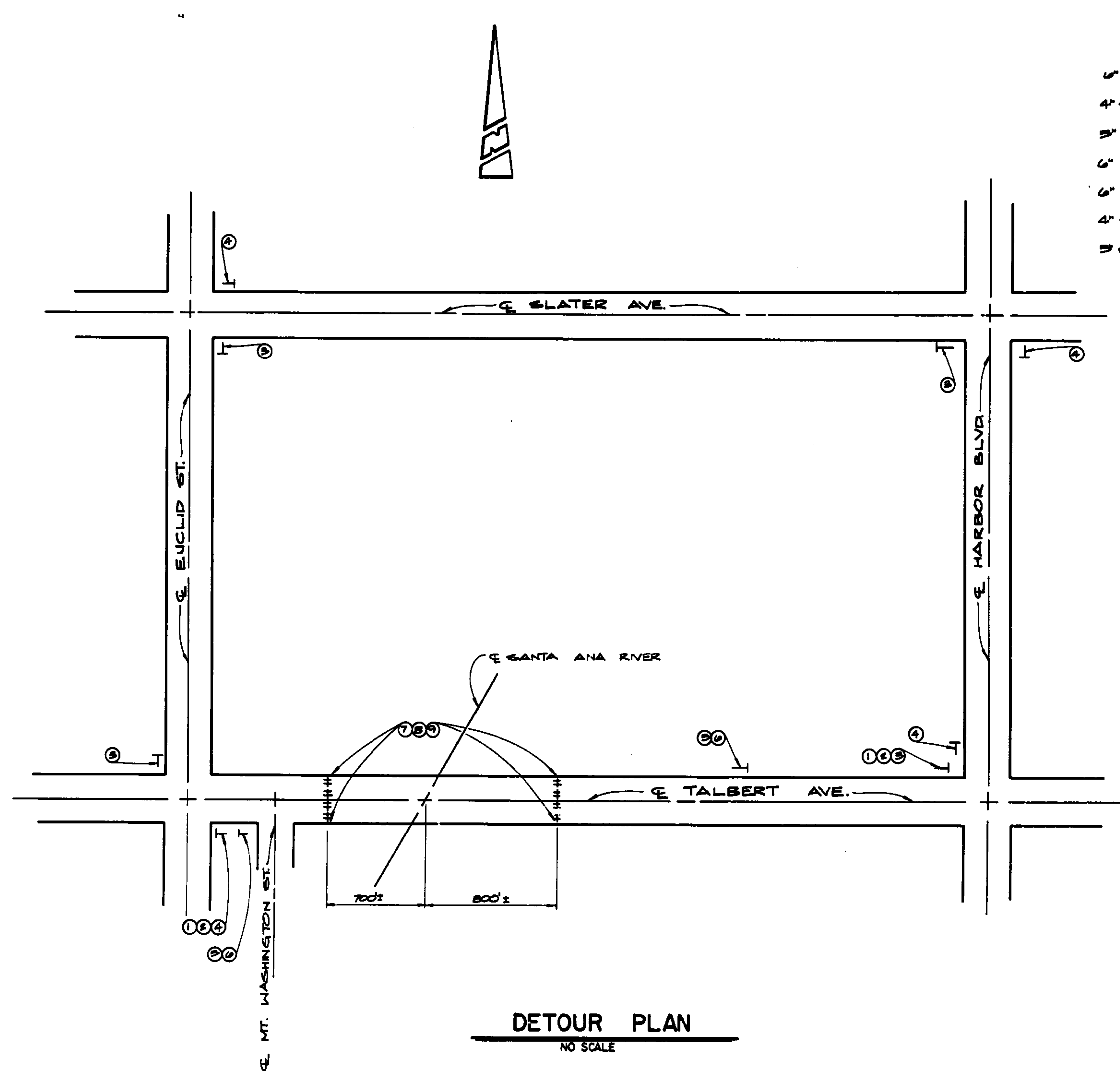
PICTORIAL OF EAST LEVEE
CHANNEL LINING
NO SCALE

1/2 0 1 2
3 inches on original drawing

AS BUILT

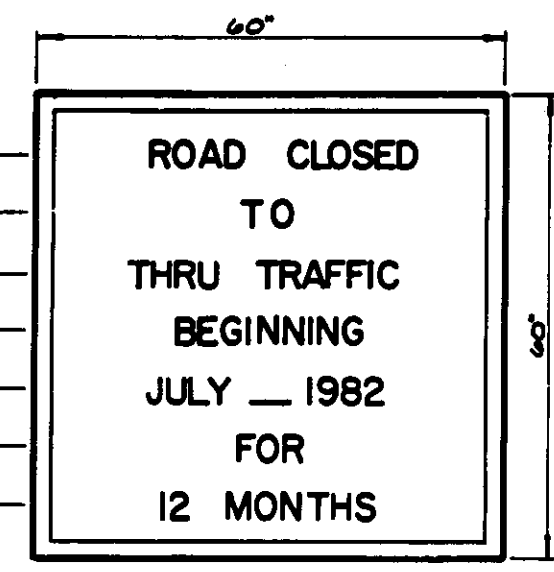
ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY			
TALBERT - MACARTHUR BRIDGE			
ACROSS SANTA ANA RIVER			
CHANNEL LINING REMOVAL & REPLACEMENT DETAILS			
DATE	DESCRIPTION	PREPARED UNDER	SHEET
4/82	REVISIONS	DATE	19
DESIGNED	BY	SCALE	DWG. NO.
DRAWN	CHECKED	AS SHOWN	

DR. 2 18797



DETOUR PLAN
NO SCALE

- 1" SERIES "C" LETTERS
- 4" SERIES "C" LETTERS
- 5" SERIES "C" LETTERS
- 6" SERIES "C" LETTERS
- 6" SERIES "C" LETTERS
- 4" SERIES "C" LETTERS
- 5" SERIES "C" LETTERS



(BLACK LETTERS ON WHITE BASE)

DETAIL "A"
(PROVIDED BY COUNTY OF ORANGE)

SIGN CHART	
SIGN	QUANTITY
NOTICE SIGN	2
C2	8
CSA	2
CB (RT)	4
CB (LT)	4
C18	8
C19	2

DETOUR NOTES

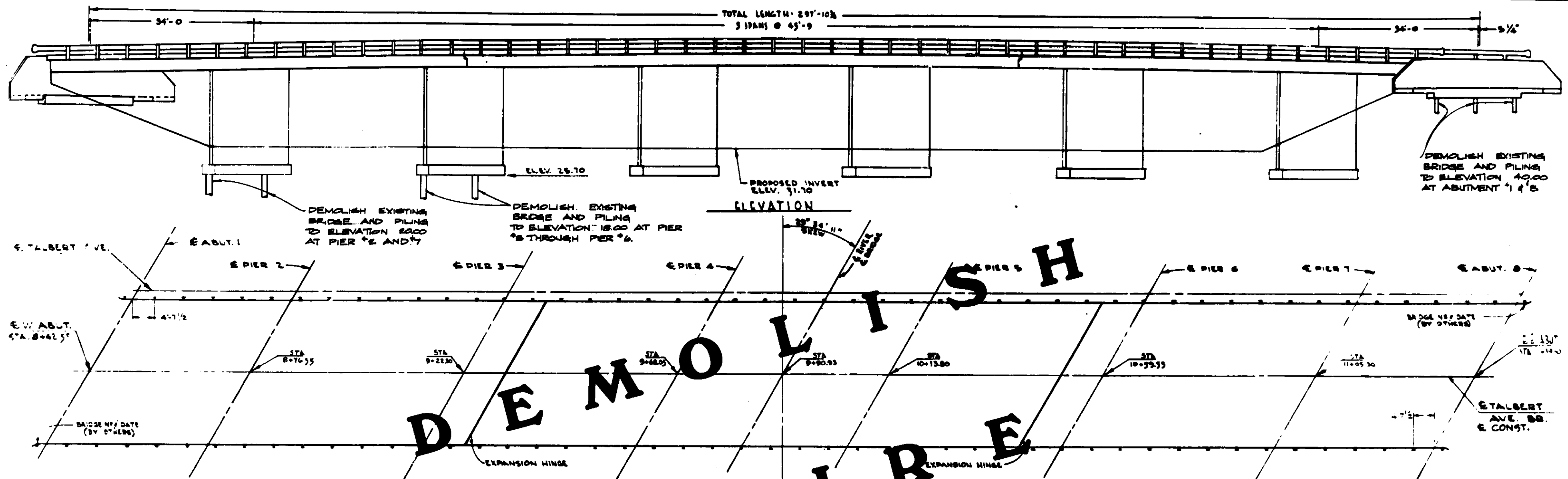
- ① - "NOTICE SIGN" - PROVIDED BY COUNTY OF ORANGE (SEE DETAIL "A")
- ② - CSA - "ROAD CLOSED TO THRU TRAFFIC"
- ③ - CB (RT) - "DETOUR" RIGHT
- ④ - CB (LT) - "DETOUR" LEFT
- ⑤ - C18 - "ROAD CONSTRUCTION AHEAD"
- ⑥ - C19 - "ROAD CLOSED AHEAD"
- ⑦ - C2 - "ROAD CLOSED" MOUNTED ON TYPE III BARRICADE
- ⑧ - C19 - "BRIDGE OUT" MOUNTED ON TYPE III BARRICADE
- ⑨ - TYPE III BARRICADE, O.C.E.M.A. STD. PLAN 404, TOTAL 14.

3 inches on original drawing

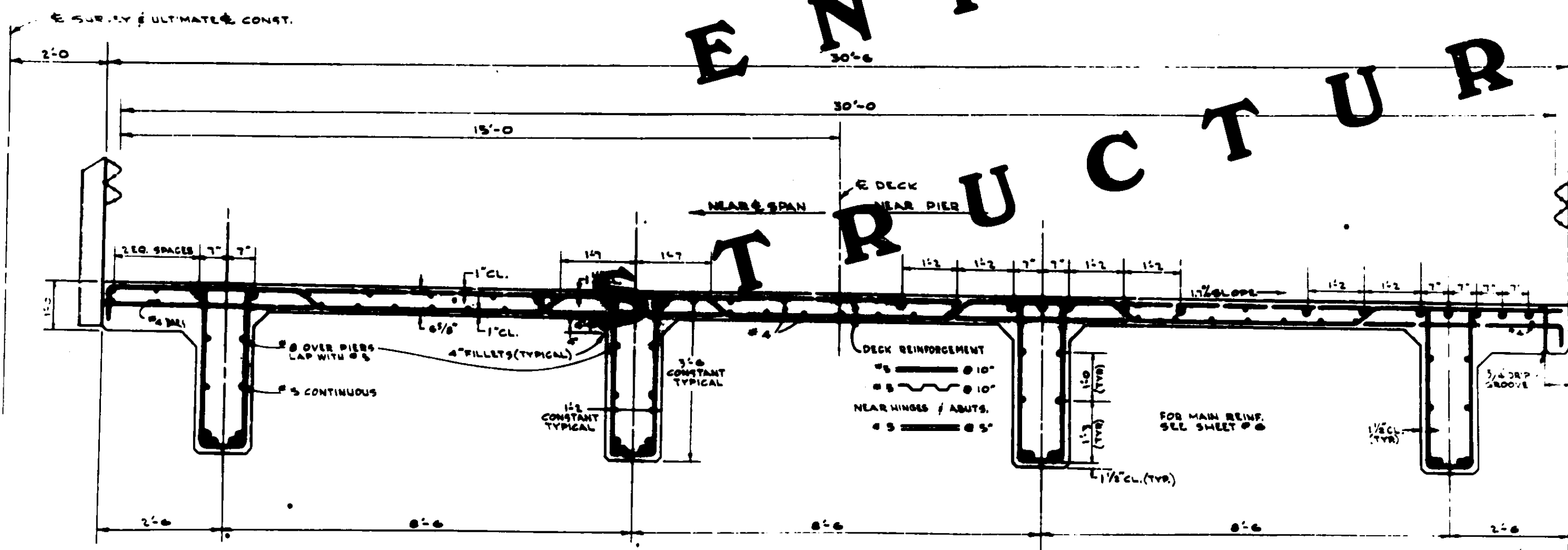
AS BUILT
THIS AS BUILT DRAWING IS TO BE USED FOR RECORD PURPOSES ONLY. IT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.

550-97		ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
		TALBERT - MACARTHUR BRIDGE ACROSS SANTA ANA RIVER	
DETOUR PLAN		SHEET 20	
DATE	DESCRIPTION	PREPARED UNDER SUPERVISOR	DATE
4/82	REVISIONS	DATE	DATE
DRAWN	CHECKED	SCALE	DWG. NO.
PLB	GW	AS SHOWN	4/82

DR. 2 1979



DEMOLISH ENTIRE STRUCTURE



REMOVE AND SALVAGE
BRIDGE GUARD RAIL
(SEE SPECIAL PROVISIONS)

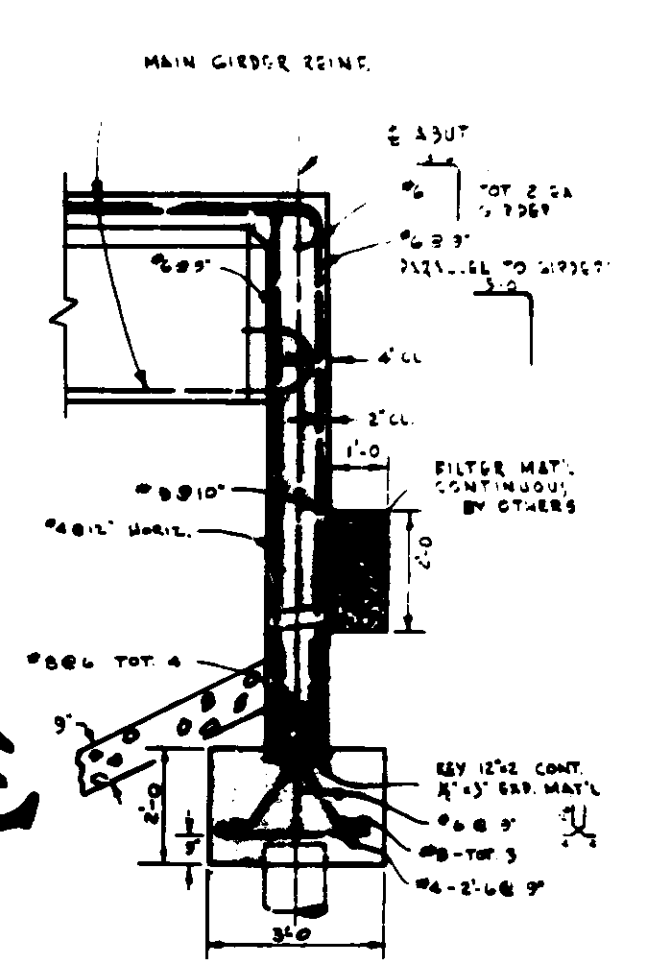
AS BUILT

WHILE THE INFORMATION IS BELIEVED TO
BE ACCURATE, THE ORANGE COUNTY ENVIRONMENTAL
MANAGEMENT AGENCY WILL NOT BE RESPONSIBLE
FOR OMISSIONS, ERRORS, OR INACCURACIES

1/2" = 0' 1" = 2'
3 inches on original drawing

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
TALBERT - MACARTHUR BRIDGE ACROSS SANTA ANA RIVER	
DEMOLITION DETAILS	
DATE: 4/05	DESCRIPTION: AS BUILT
DESIGNED: AS BUILT	CHECKED: [Signature]
SCALE: AS SHOWN	DATE: 7/01
DWG. NO. 55C-97	SHEET 21

DR. 2 1979



TYPICAL ABUTMENT DETAIL
(WEST ABUTMENT LOOKING WEST)

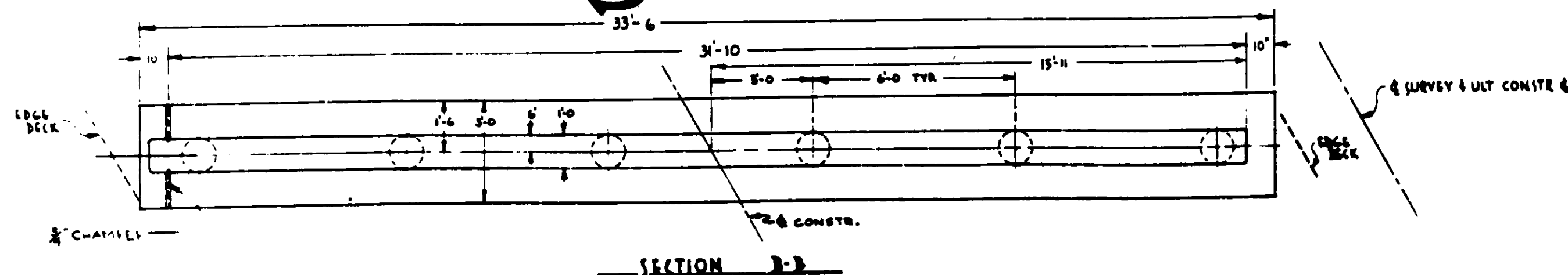
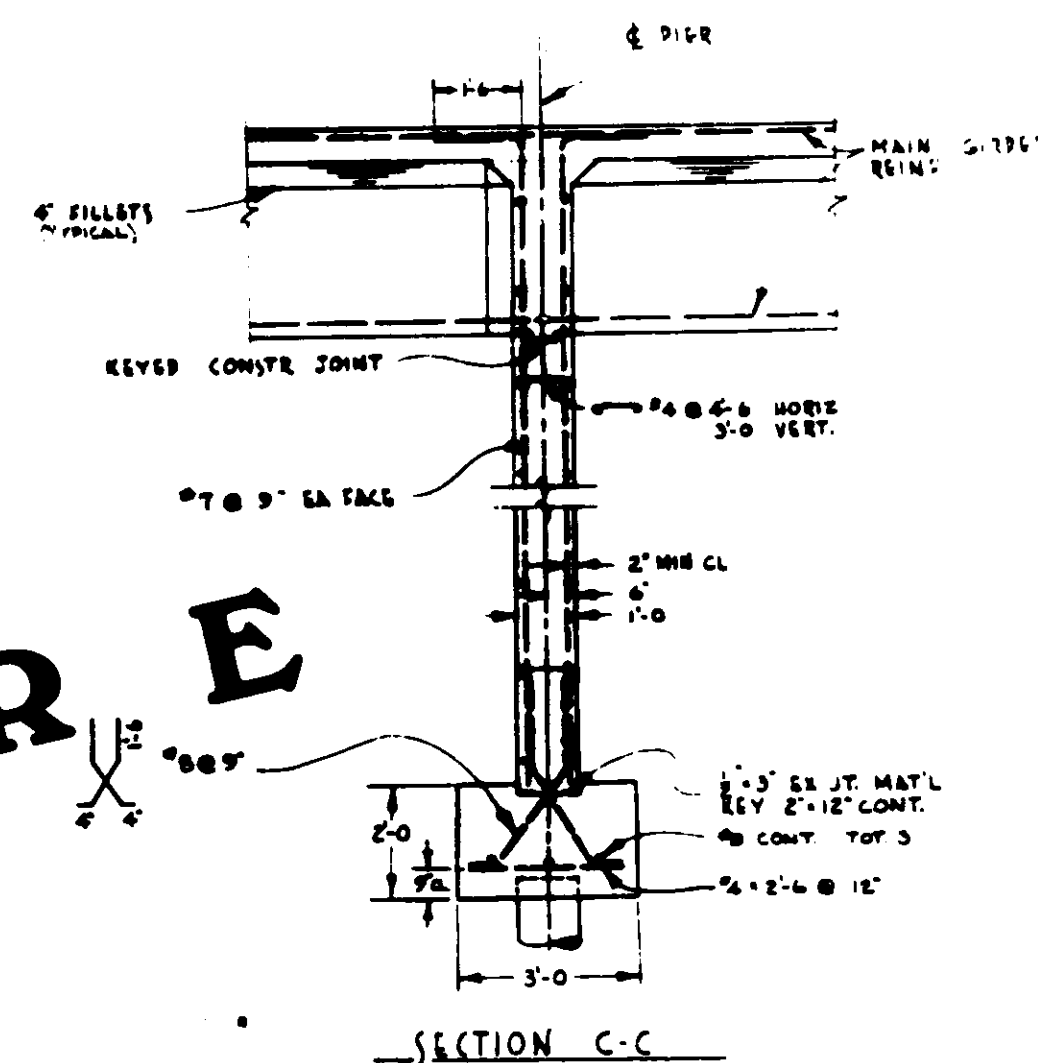
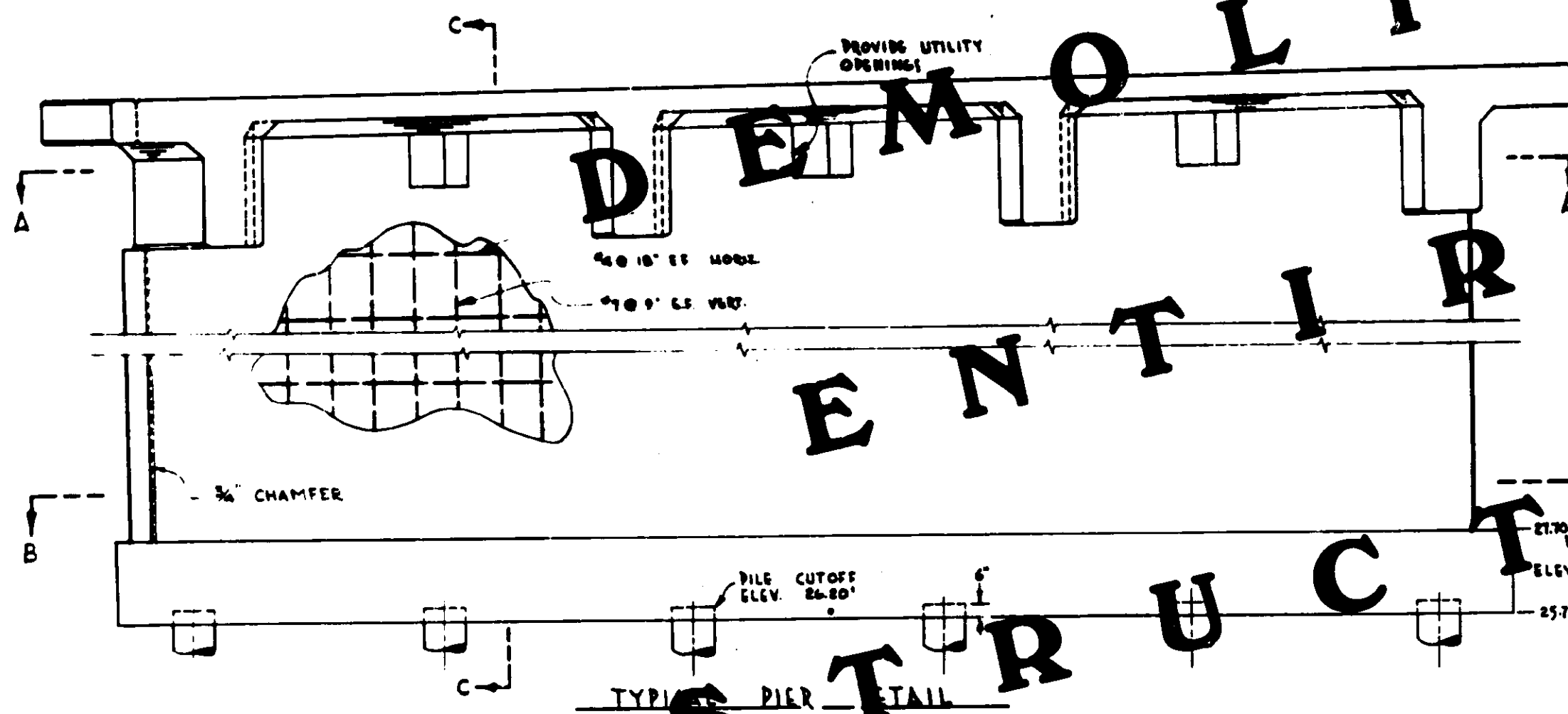
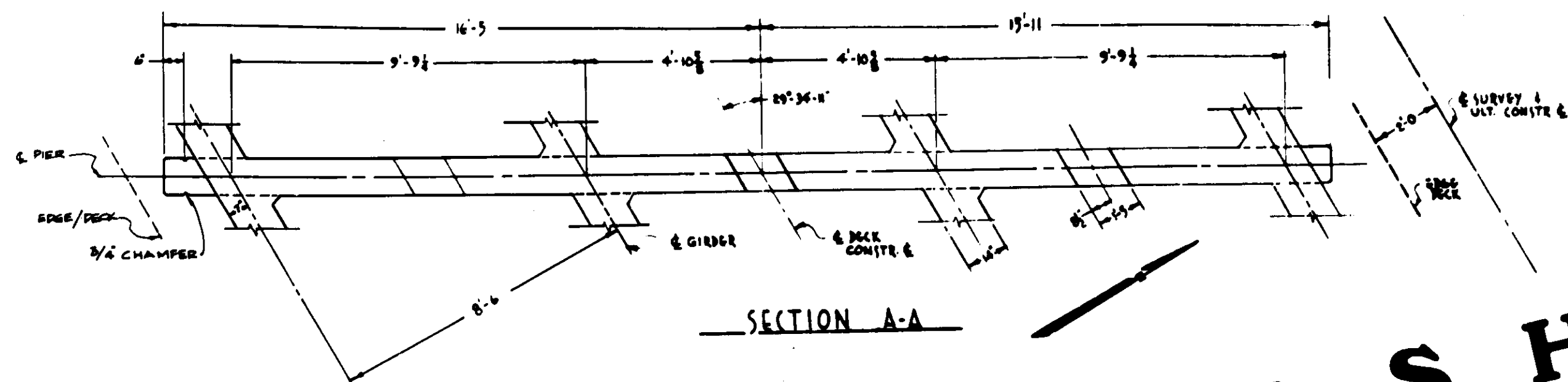


AS BUILT

WHILE THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE ACCURATE, THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WILL NOT BE RESPONSIBLE FOR OMISSIONS, ERRORS, OR INACCURACIES.

		ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY			
		TALBERT — MACARTHUR BRIDGE ACROSS SANTA ANA RIVER			
		DEMOLITION DETAILS			
		PREPARED UNDER SUPERVISION OF <i>[Signature]</i>			
MARK DATE <i>4/85</i> <i>gc</i>	DESCRIPTION		SCALE <i>1" = 10'</i>	DATE <i>4/85</i>	SHEET <i>22</i>
REVISIONS 1. <i>AS BUILT</i>			DWG. NO.		
DRAWN _____	CHECKED _____		AS SHOWN	DATE <i>7/81</i>	DWG. NO.

DR. 2 13799



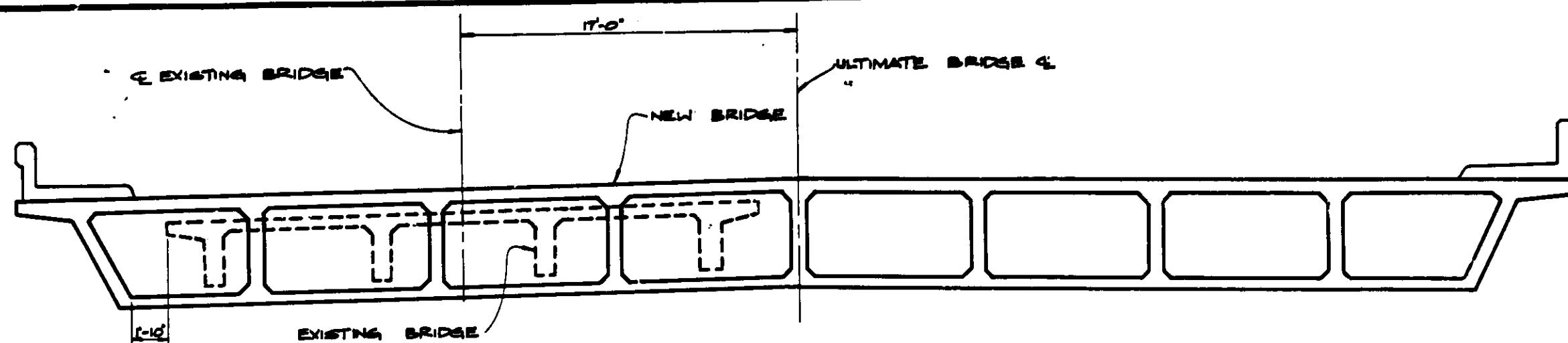
AS BUILT

UNLESS THE INTENT OF THIS DRAWING IS OTHERWISE INDICATED, THE USER SHALL BE RESPONSIBLE FOR OMISSIONS, ERRORS, OR INADEQUACIES.

1/2" = 0' 2"
3 inches on original drawing

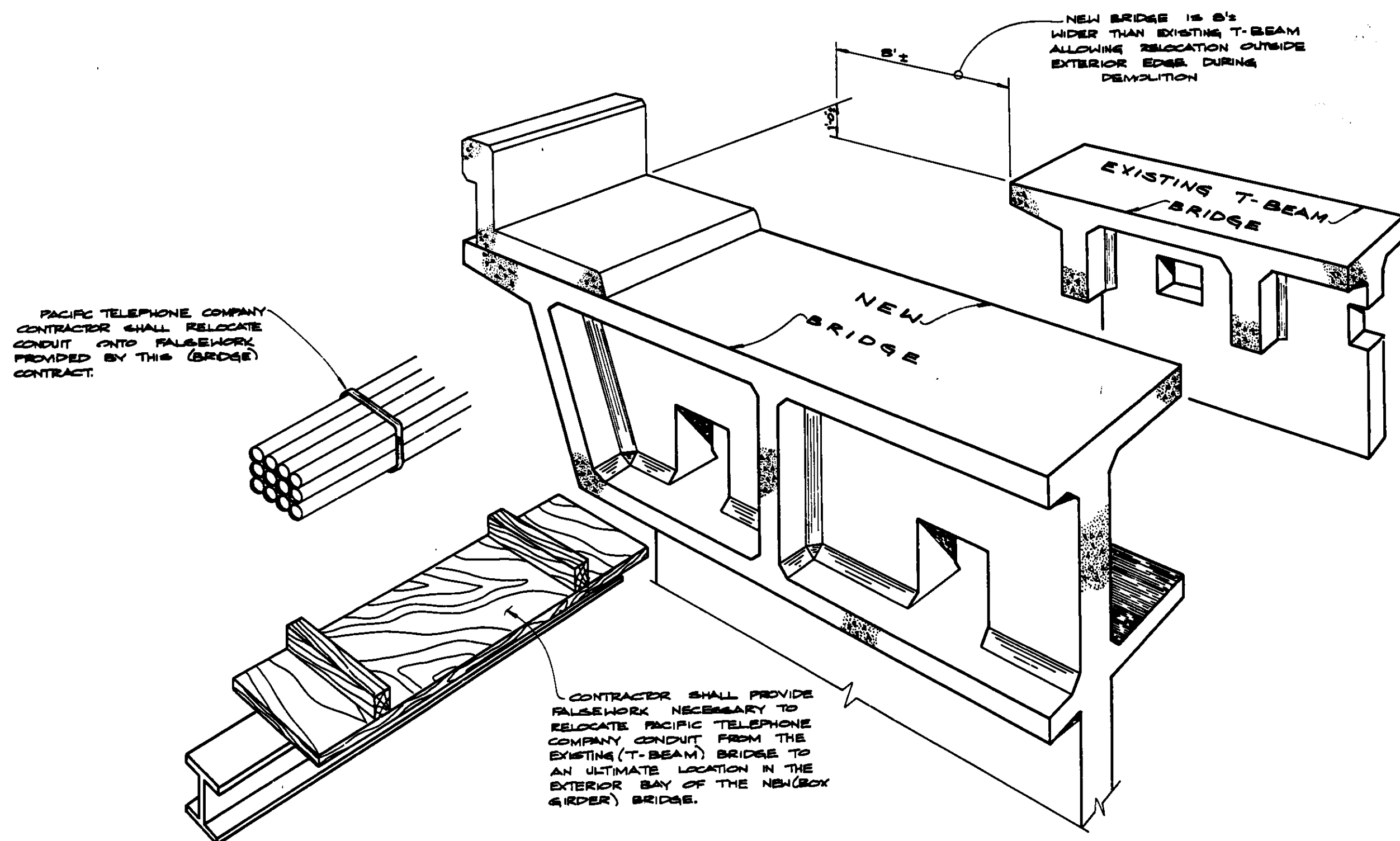
ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
TALBERT - MACARTHUR BRIDGE ACROSS SANTA ANA RIVER	
DEMOLITION DETAILS	
DATE: 7/61	DESCRIPTION: AS BUILT
SCALE: AS SHOWN	DATE: 7/61
DRAWN: [Signature]	CHECKED: [Signature]
SHEET NO. 23	

DR. 2 15779



SUPERSTRUCTURE CLEARANCE SECTION

(VIEW LOOKS WESTERLY)
NO SCALE



RELOCATION OF PACIFIC TELEPHONE FACILITIES

(VIEW LOOKS WESTERLY)
NO SCALE

GENERAL NOTES FOR RELOCATION OF PACIFIC TELEPHONE CONDUITS

THE FOLLOWING SEQUENCE IS GIVEN TO AID THE CONTRACTOR IN PLANNING THE RELOCATION OF PACIFIC TELEPHONE COMPANY'S CONDUIT. IT IS THE INTENT OF THIS PROCEDURE TO PROTECT AND MAINTAIN IN SERVICE PACIFIC TELEPHONE COMPANY'S CONDUIT AT ALL TIMES. THIS PROCEDURE HAS BEEN UTILIZED BY A CONTRACTOR WORKING ON A SIMILAR PROJECT OVER THE SANTA ANA RIVER. NO GUARANTEE IS MADE BY THE COUNTY THAT THE FOLLOWING CONSIDERATIONS FOR RELOCATION REPRESENT THE MOST EFFICIENT METHOD OF RELOCATION OR PROTECTION OF THE CONDUIT. CONTRACTOR SHOULD CONSIDER THE FOLLOWING IN RELOCATING PACIFIC TELEPHONE CONDUIT:

1. PERFORM PORTIONS OF STRUCTURE EXCAVATION AT PIERS TO ALLOW FOR DRIVING THE TWO OUTSIDE-DOWNSTREAM PILES IN EACH PIER.
2. DRIVE 2 (TWO) DOWNSTREAM PILES IN EACH PIER.
3. DRIVE PILING FOR UTILITY FALSEWORK.
4. ERECT UTILITY FALSEWORK INCLUDING PLYWOOD AND BLOCKS NECESSARY TO SET CONDUIT ABOVE BOX GIRDER COFFITT.
5. CUT AND REMOVE DECK IN THE EXISTING T-BEAM BRIDGE OVER P.T. & T. CONDUIT. (CONTRACTOR SHALL PROVIDE ADEQUATE PLATES TO SHIELD THE CONDUIT FROM DEBRIS FROM DECK REMOVAL)
6. ALLOW PACIFIC TELEPHONE COMPANY'S CONTRACTOR TO RELOCATE THE LINE FROM THE EXISTING T-BEAM BRIDGE TO THE FALSEWORK.
7. DEMOLISH THE EXISTING BRIDGE BY MEANS WHICH WILL COLLAPSE ALL SUPERSTRUCTURE AND PIERS AWAY FROM FALSEWORK.

1 1/2 0 1 2
3 inches on original drawing

AS BUILT

WHILE THE CONTRACTOR IS BELIEVED TO BE ACCURATE, THE ORANGE COUNTY ENVIRONMENTAL AGENCY WILL NOT BE RESPONSIBLE FOR DIMENSIONS, ERRORS, OR OMISSIONS.

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
TALBERT MACARTHUR BRIDGE ACROSS SANTA ANA RIVER	
DEMOLITION DETAILS	
DATE: 4/82	DESCRIPTION: DEMOLITION
PREPARED UNDER: [Signature]	SHEET: 24
SCALE: AS SHOWN	DATE: 4/82
DRAWN: PLB	CHECKED: GWT

DR. 2 15799