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**B**ridge  
**I**nspection  
**R**ecords  
**I**nformation  
**S**ystem

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The requested documents have been generated by the BIRIS.

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State of California  
Department of Transportation

**Division of Maintenance  
Structures Maintenance & Investigations**



**DEPARTMENT OF TRANSPORTATION**  
Structure Maintenance & Investigations

Bridge Number : 55C0534  
 Facility Carried: MEADS AVE  
 Location : 0.3 MI E ORANGE PARK BLVD  
 City :  
 Inspection Date : 24-JUL-01

**Bridge Inspection Report**

**Inspection Type**  
 Routine  Group A  Underwater  Special  Other

**Name : HANDY CREEK**

CONSTRUCTION INFORMATION

Year Built : 1985 Skew (degrees): 99  
 Year Widened : 1990 No. of Joints : 0  
 Length (m) : 8.5 No. of Hinges : 0

Description of Structure : Single span CIP/RC deck slab with RC open end diaphragm abutments, all supported upon concrete piles.

Span Configuration : (W) 1 @ 7.3 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 : P P P P P  
 Posting Load : Type 3 N/A english tons Type 3S2 N/A english tons Type 3-3 N/A english tons

DESCRIPTION ON STRUCTURE

Bridge width : (S) 0.1 m br, 2 \* 4.4 m, 0.6 m br, 2.2 m sw, 0.1 m br (N)  
 Total Width : 11.9 m Net Width : 8.80 m No. of Lanes : 2  
 Rail Description : MBGR Rail Code : 0000  
 Min. Vertical Clearance : Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description : Natural earth trapezoidal.

CONDITION OF STRUCTURE

The structure is in good condition.

SCOUR

At the time of the inspection, the vertical clearance from the bottom of the channel to the bottom of the soffit was 1 meter.

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	38	Concrete Slab - Bare	2	70 sq.m.	70	0	0	0	0
01	215	Reinforced Conc Abutment	3	30m.	30	0	0	0	0
01	252	Cast-In-Drilled Hole Concrete Pile	2	12 ea.	12	0	0	0	0
01	336	Metal Railing (pipe or picket)	2	30m.	30	0	0	0	0

WORK RECOMMENDATIONS - NONE

Bridge No.: 55C0534

Location: 0.3 MI E ORANGE PARK BLVD Inspection Date: 24-JUL-01

Inspected By : M. Ogata

*M. Ogata*  
Registered Civil Engineer



CC : TMRut  
Orange County

Bridge No.: 55C0534 Location: 0.3 MI E ORANGE PARK BLVD Inspection Date: 24-JUL-01

STRUCTURE INVENTORY AND APPRAISAL REPORT

IDENTIFICATION

(1) STATE NAME - CALIFORNIA 069
(8) STRUCTURE NUMBER 55C0534
(5) INVENTORY ROUTE(ON/UNDER) - ON 1 40 00000N
(2) HIGHWAY AGENCY DISTRICT 12
(3) COUNTY CODE 059 (4) PLACE CODE 00000
(6) FEATURE INTERSECTED - HANDY CREEK
(7) FACILITY CARRIED - MEADS AVE
(9) LOCATION - 0.3 MI E ORANGE PARK BLVD
(11) MILEPOINT/KILOMETERPOINT 0
(12) BASE HIGHWAY NETWORK - NOT ON NET 0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 33 DEG 48 MIN 28 SEC
(17) LONGITUDE 117 DEG 46 MIN 44 SEC
(98) BORDER BRIDGE STATE CODE % SHARE %
(99) BORDER BRIDGE STRUCTURE NUMBER

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN: MATERIAL - CONCRETE
TYPE - SLAB CODE 1 01
(44) STRUCTURE TYPE APPR: MATERIAL -
TYPE - CODE
(45) NUMBER OF SPANS IN MAIN UNIT 1
(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 1985
(106) YEAR RECONSTRUCTED 1990
(42) TYPE OF SERVICE: ON - HIGHWAY-PEDESTRIAN 5
UNDER - WATERWAY 5
(28) LANES: ON STRUCTURE 02 UNDER STRUCTURE
(29) AVERAGE DAILY TRAFFIC 1000
(30) YEAR OF ADT 1999 (109) TRUCK ADT 1%
(19) BYPASS, DETOUR LENGTH 2 KM

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN 7.3 M
(49) STRUCTURE LENGTH 8.5 M
(50) CURB OR SIDEWALK: LEFT 3 M RIGHT 0 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 8.9 M
(52) DECK WIDTH OUT TO OUT 11.9 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 6.1 M
(33) BRIDGE MEDIAN - CLOSED (NO BARRIER) 2
(34) SKEW 99 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 8.8 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 = 88.6

STATUS =
HEALTH INDEX = 100
CLASSIFICATION
(112) NBIS BRIDGE LENGTH - YES Y
(104) HIGHWAY SYSTEM - NOT ON NHS 0
(26) FUNCTIONAL CLASS - LOCAL URBAN 19
(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

(58) DECK 7
(59) SUPERSTRUCTURE 7
(60) SUBSTRUCTURE 7
(61) CHANNEL & CHANNEL PROTECTION 8
(62) CULVERTS N

LOAD RATING AND POSTING

(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

(67) STRUCTURAL EVALUATION 7
(68) DECK GEOMETRY 5
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 8
(72) APPROACH ROADWAY ALIGNMENT 5
(36) TRAFFIC SAFETY FEATURES 0000
(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 1000
(115) YEAR OF FUTURE ADT 2015

INSPECTIONS

(90) INSPECTION DATE 07/01 (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-534

**TYPE OF INVESTIGATION/REPORT**

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

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

Date of Investigation July 26, 1995

Name HANDY CREEK (Meads Avenue, 0.3 mile east of Orange Park Boulevard)

**CONDITION RATINGS:-**

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

Channel & Channel Protection

8

SCOUR CRITICAL:

A scour rating of A1 is appropriate.

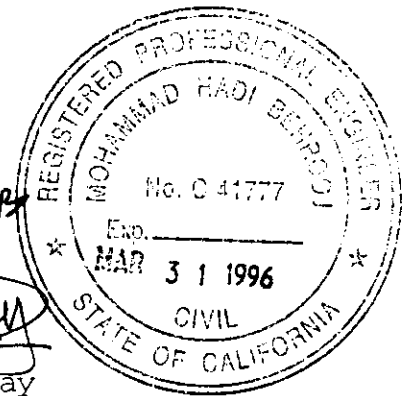
CONDITION OF STRUCTURE:

At time of inspection, bottom of channel to bottom of deck is 1 meter. Water, 0.15 m deep, is flowing in the west third of the channel width. Condition of structure is good.

WORK RECOMMENDED:

None.

By M. H. Behrooj  
S. P. Balinghasay



GPB:ms  
cc: CDHarris  
Orange County  
WLindsey

PONTIS DATA FORM - PIA

BRIDGE NUMBER	FRAME	INSPECTION DATE																														
<table border="1" style="width: 100%;"> <tr> <td style="width: 20px;">5</td><td style="width: 20px;">5</td><td style="width: 20px;">C</td><td style="width: 20px;">0</td><td style="width: 20px;">5</td><td style="width: 20px;">3</td><td style="width: 20px;">4</td> </tr> <tr> <td style="font-size: 8px;">1</td><td style="font-size: 8px;">8</td><td style="font-size: 8px;">9</td><td style="font-size: 8px;">11</td><td style="font-size: 8px;">16</td><td style="font-size: 8px;"></td><td style="font-size: 8px;"></td> </tr> </table>	5	5	C	0	5	3	4	1	8	9	11	16			<table border="1" style="width: 100%;"> <tr> <td style="width: 20px;">0</td><td style="width: 20px;">1</td> </tr> <tr> <td style="font-size: 8px;">9</td><td style="font-size: 8px;"></td> </tr> </table>	0	1	9		<table border="1" style="width: 100%;"> <tr> <td style="width: 20px;">0</td><td style="width: 20px;">7</td><td style="width: 20px;">2</td><td style="width: 20px;">6</td><td style="width: 20px;">9</td><td style="width: 20px;">5</td> </tr> <tr> <td style="font-size: 8px;">11</td><td style="font-size: 8px;">16</td><td style="font-size: 8px;"></td><td style="font-size: 8px;"></td><td style="font-size: 8px;"></td><td style="font-size: 8px;"></td> </tr> </table>	0	7	2	6	9	5	11	16				
5	5	C	0	5	3	4																										
1	8	9	11	16																												
0	1																															
9																																
0	7	2	6	9	5																											
11	16																															

INFORMATION ONLY - NOT FOR UPDATE	
SCOUR CRITICAL	NO
CATEGORY A	NO
FRACTURE CRITICAL	NO
ELIGIBLE FOR RAIL UPGRADE	NO
UNDERWATER INSPECTION	NO

DISTRICT \_\_\_\_\_ 12

COUNTY \_\_\_\_\_ ORA

ROUTE \_\_\_\_\_

POSTMILE \_\_\_\_\_

NAME \_\_\_\_\_

D E L	ELE #	ELEMENT DESCRIPTION	E N V	TOTAL QUANTITY	UNITS	QUANT	QUANT	QUANT	QUANT	QUANT	
						CONDITION	CONDITION	CONDITION	CONDITION	CONDITION	
						STATE 1	STATE 2	STATE 3	STATE 4	STATE 5	
	5 1	CONCRETE ABUTMENT	3	3 0	M	3 0					
	1 0 1	METAL BRIDGE RAILING	2	3 0	M	3 0					
	1 0 4	MISCELLANEOUS BRIDGE RAILING	2	2 4	M	2 4					
	1 3 8	CONCRETE SLAB - BARE	2	1	EA	1					
	2 0 4	CIDH PILES	2	1 2	EA	X					
18 19						22 23	28	33	38	43	48

BY:

Bridge Number 55C-534

TYPE OF INVESTIGATION/REPORT			
BIENNIAL	<u>X</u>	DAMAGE	___
CATEGORY A	___	OTHER	___
UNDERWATER	___	OFFICE	___

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

Date of Investigation April 15, 1993

Name HANDY CREEK (Meads Avenue, 0.3 mile east of Orange Park Boulevard)

**CONDITION RATINGS:**

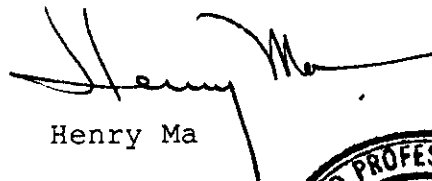
Condition ratings of all bridge elements are shown on the PONTIS DATA FORM (Attachment A).

Channel & Channel Protection

8

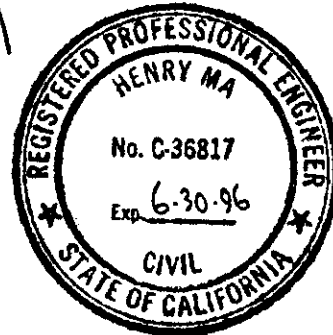
CONDITION OF STRUCTURE:

Condition of the structure is good.



Henry Ma

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



PONTIS DATA FORM - PIA

BRIDGE NUMBER	FRAME	INSPECTION DATE
5 5 C 0 5 3 4	0 1	0 4 1 5 9 3
1	8	9 11 16

INFORMATION ONLY - NOT FOR UPDATE

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

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

D E L	ELE #	ELEMENT DESCRIPTION	E N V	TOTAL QUANTITY	UNITS	QUANT				
						CONDITION STATE 1	CONDITION STATE 2	CONDITION STATE 3	CONDITION STATE 4	CONDITION STATE 5
	6 2	CONCRETE ABUTMENT; MET	2	2	EA	2				
	1 0 1	METAL BRIDGE RAILING	2	<del>1 0 3</del> 9 8	LF	9 8				
	1 0 4	MISCELLANEOUS BRIDGE RAILING	2	7 9	LF	7 9				
	1 3 8	CONCRETE SLAB - BARE	2	1	EA	1				
	2 0 4	CIDH PILES	2	1 2	EA	X				
18 19			22 23			28	33	38	43	48

H. MA

BY: S.M.



BRIDGE REPORT

14V53

Bridge No. 55C - 534

DS-M58 (REV. 1/91)

Location 12 - Ora - CR  
Dist Co Rte City

REVISED ORIGINAL REPORT

Date of Investigation April 17, 1991

Name HANDY CREEK (Meads Avenue, 0.3 mile east of Orange Park Blvd.)

Lat. 33° - 48.5'N Long. 117° - 46.6'W

Custodian County of Orange Owner County of Orange

STRUCTURAL DATA AND HISTORY

Year Built 1985 By County of Orange Contract No. Unknown  
See Page 2

Designed by: County Plans Avail. @ DOS

Description: Single span CIP RC slab supported by open end RC diaphragm abutments on concrete piles.

Spans (W) 24' (E)

Length 28' NBIS Bridge Length Yes Skew Var. 15° to 22° Rt.

Number Of Intermediate Joints: @Hinges None @Bents None

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

Design Live Load HS20-44 & Alt & Permit Design Method Load Factor

DESCRIPTION - ON STRUCTURE

Bridge Width (S) 0.3'br. 29', 2'br. 7.3'PCC, 0.3'br (N)

Total Width 39' Net Width 29' Lanes 2 Tracks None

Median None Rail Type Metal beam 0000

Vert. Clearance over deck Telephone cable 25'± Appr. Rdwy. Width 20'

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

Alignment R = 200'

DESCRIPTION - UNDER STRUCTURE

Roadway Section None

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

Lanes Tracks

Facilities Crossed Handy Creek Storm Channel (E08S06)

April 17, 1991

**DESCRIPTION - HYDRAULICS**

Channel Natural earth channel

Navigable: Yes  No  Clearances: Vert. \_\_\_\_\_ Horiz. \_\_\_\_\_

Pier/Abutment Protection (For Navigation)

**TRAFFIC INFORMATION**

	DECK	YEAR	UNDER	YEAR
Average Daily Traffic & Year :	1,000 Est	1991	N	
Average Daily Traffic (Future) :	1,000 Est	2010	N	
Average Daily Trucks ( % OF ADT ) :	1% Est		N	
Bypass Detour Length	1 mile		N	
Shell Route:	No		No	
Functional Classification :	<input type="text" value="19"/>		<input type="text" value="N"/>	
LOAD RATINGS:	Inventory HS 20	Operating HS 33		
	Permit PPPPP	Computation Method	Min By Design	

**CONDITION RATINGS:**

Deck  Superstructure  Substructure   
 Channel & Channel Protection  Culvert  Widenable

**APPRAISAL RATINGS:**

Waterway Adequacy  Approach Roadway Alignment

Date of Revisions \_\_\_\_\_

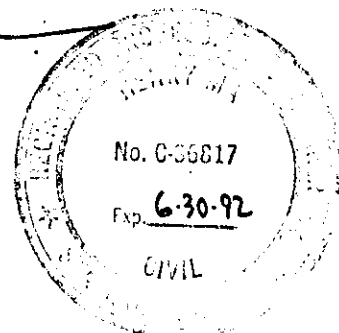
**STRUCTURAL DATA AND HISTORY (Con't.)**

Date of Revision - 1990, widened north side 10' by County.

**CONDITION OF STRUCTURE:**

Condition of the structure is good.

*Henry Ma*  
Henry Ma



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

**SUPPLEMENTARY BRIDGE REPORT**  
DS-M19 (REV. 8/88)

Bridge No. 55C-534

Location 12-Ora-CR  
Dist. Co. Rte. FM. City

Date of Investigation 4-13-89

Name HANDY CREEK (Meads Avenue, 0.3 mile east of Orange Park Blvd.)

**CONDITION RATING:**

Deck 8 Superstructure 8 Substr.&Pipes 8

Channel & Channel Protection 6 Culvert N Widenable? Yes

**TYPE OF INVESTIGATION/REPORT**

BIENNIAL X DAMAGE \_\_\_\_\_  
CATEGORY A \_\_\_\_\_ OTHER \_\_\_\_\_  
UNDERWATER \_\_\_\_\_ OFFICE \_\_\_\_\_

**CONDITION OF STRUCTURE:**

Condition of the structure is good.

**REVISION:**

Location: 12-Ora-CR

**WORK RECOMMENDED:**

None.

**RECOMMENDED POSTING:**

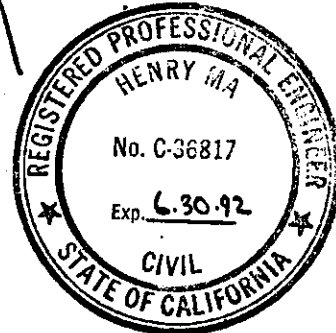
None.

**SUBSTRUCTURE CODING UPDATE:**

Single span structure.

2 RC open end diaphragm abutments on concrete piles.

*Henry Ma*  
Henry Ma



HM/cd  
cc: INagai (2)  
County of Orange (2)

Bridge No. 55C-534

Other No. \_\_\_\_\_

SEE REVISED  
ORIGINAL REPORT

P.U.C. No. \_\_\_\_\_

Location 7-Ora-CR  
Dist - Co - Rte - PM - City

Date of Investigation April 14, 1987

Name HANDY CREEK (Meads Ave., 0.3 mile E. of Orange Park Blvd.)

Lat. 33°-48.5'N Long. 117°-46.6'W

**STRUCTURAL DATA AND HISTORY**

Year Built 1985 By County of Orange Contract No. Unknown

Date of Revisions \_\_\_\_\_

Designed by: B.D.  County of Orange Plans Avail. e B.D.

Description: Single span RC slab on diaphragm abutments supported by 45 T CIDH piles.

Spans 24' clear

Length 28' Skew Var. 15° to 22° Rt. Design LL HS20-44 & Alt. & Permit Design Load (P-13)

Ratings: Inventory HS20/LF Min Operating HS33/LF Min Permit P P P P P / L F  
By Design By Design By Design

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

Bridge Width 30'

Total Width 30' Lanes 2 Tracks None

Median None Rail Type Metal Beam (0000)

Vert. Clearance over deck 19'-11" (Telephone Cable) Appr. Rdwy. Width 21'

Wearing Surface None Deck Prot. Sys. None

Alignment R= 200'

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

Roadway Section None

Clearances: Vert. \_\_\_\_\_ Horiz.: \_\_\_\_\_ Lt. \_\_\_\_\_ Rt. \_\_\_\_\_

Lanes \_\_\_\_\_ Tracks \_\_\_\_\_ Pumpplant: None  See Br. No. \_\_\_\_\_

Facilities Crossed Handy Creek (E08 S06)

cc:

**DESCRIPTION - HYDRAULICS**

Channel Unimproved natural earth

Navigable: Yes  No  Clearances: Vert. \_\_\_\_\_ Horiz. \_\_\_\_\_

**MAINTENANCE**

Custodian County of Orange Owner County of Orange

**ORIGINAL  
CONDITION RATING**

Deck	<u>8</u>
Superstructure	<u>8</u>
Substructure & Pipes	<u>8</u>
Channel & Channel Protection	<u>6</u>
Retaining Walls	<u>N</u>
Approach Rdwy. Alignment	<u>5</u>
Estimated Remaining Life	<u>50</u>

**ORIGINAL  
APPRAISAL**

Overall	<u>8</u>
Deck Geometry	<u>7</u>
Underclearances	Vert. <u>N</u>
	Horiz. <u>N</u>
Safe Load Capacity	<u>9</u>
Waterway Adequacy	<u>6</u>
Approach Rdwy. Alignment	<u>5</u>

Widenable? Yes  No  Conditional

Average Daily Traffic & Year 1,000 (Est. 1987)

Bypass Detour Length 2 miles

Seismic Retrofit Not applicable

Action Required: Yes  No

Posting Required: None  Load

Speed

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

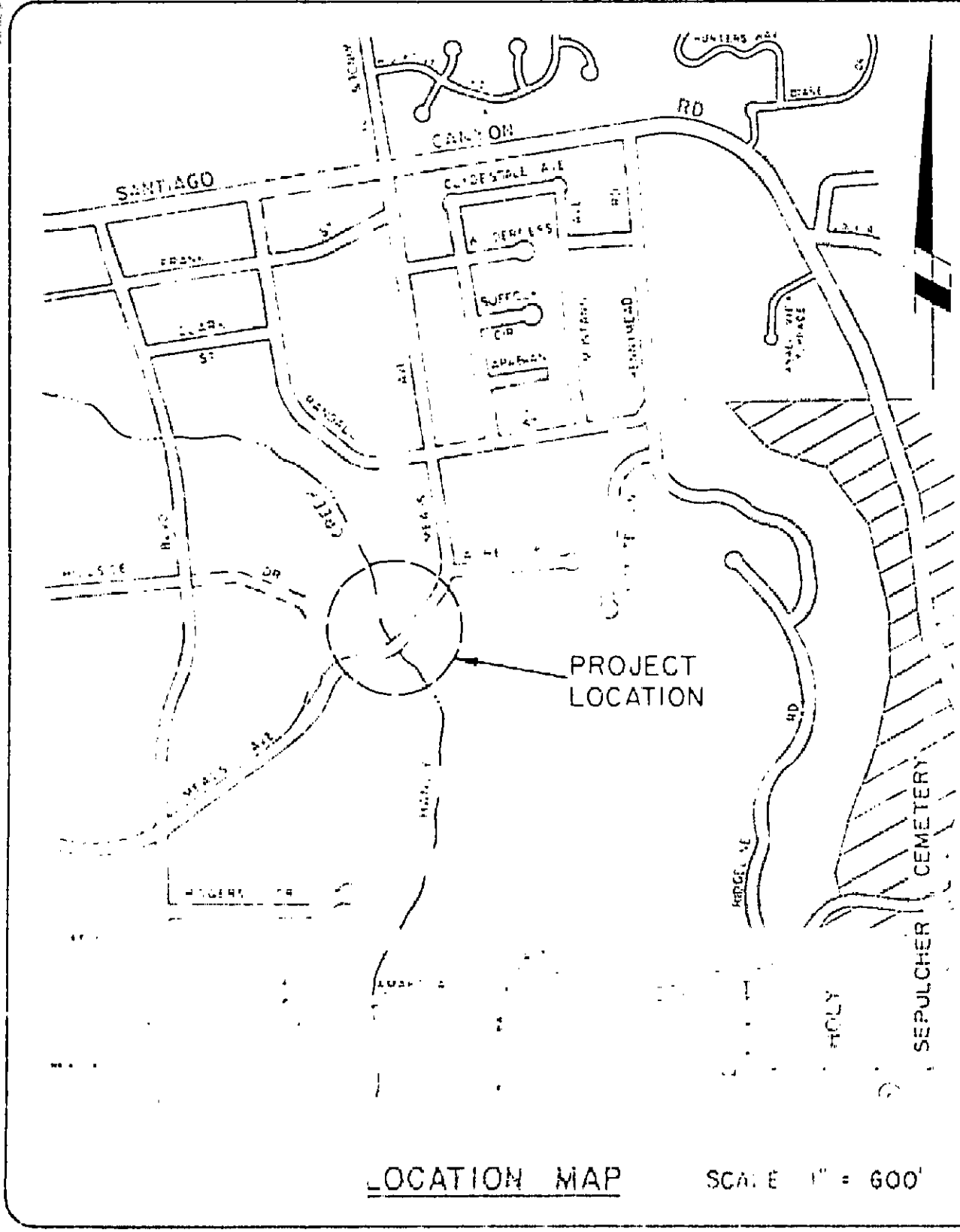
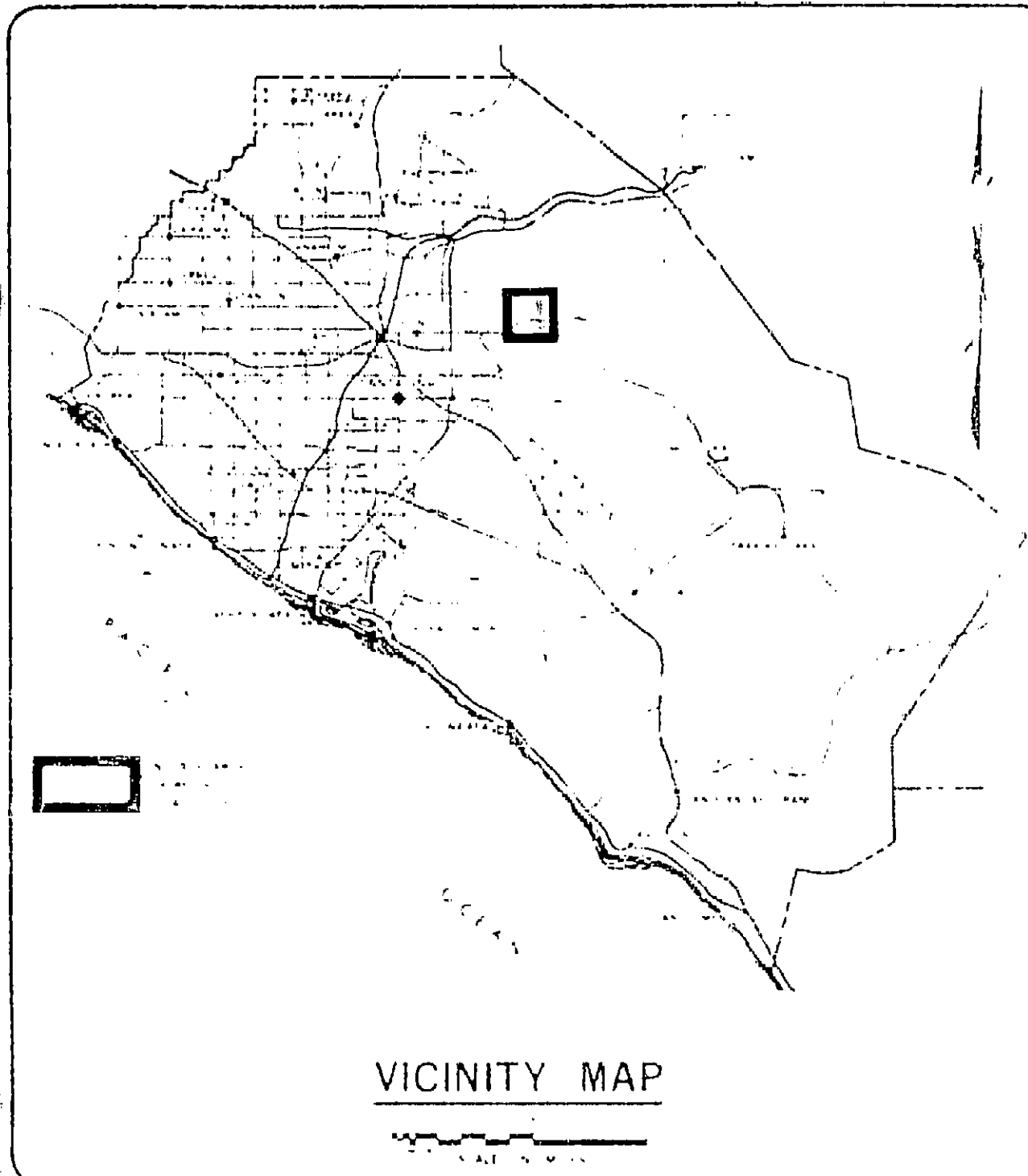
**CONDITION OF STRUCTURE:** The structure is in good condition.

**WORK RECOMMENDED:** None

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

*Henry Ma*  
Henry Ma

REGISTERED PROFESSIONAL ENGINEER  
HENRY MA  
No. C-36317  
Exp. 6-30-88  
CIVIL  
STATE OF CALIFORNIA (2)



# ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY

SANTA ANA, CALIFORNIA  
M. STORM, DIRECTOR

PLANS FOR CONSTRUCTION OF

## MEADS AVE. BRIDGE

ACROSS

## HANDY CREEK

FACILITY NO. E08S06

MAY 1985

AS BUILT

CONTRACTOR: UNITED M. CONSTRUCTION  
R.C.E.: G. SCHUBERT  
INSPECTOR: R. HART  
COMPLETED: 10-17-85 55C-534

FUNDED BY ROAD FUND

INDEX OF SHEETS	
SHEET	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE
3	BRIDGE LAYOUT AND ABUT. DETAILS
4	SLAB DETAILS
5	DETOUR PLAN AND MISC. DETAILS
6	MISCELLANEOUS DETAILS
7-9	X-SECTIONS

UTILITY	CONTACT	PHONE NO.
CITY OF ORANGE PUBLIC WORKS	GARY JOHNSON	(714) 532-0458
PACIFIC BELL	CARL DUVEL	(714) 966-6226
SOUTHERN CALIFORNIA GAS CO.	JOYCE BURGER	(714) 634-3122
SOUTHERN CALIFORNIA EDISON	ARCHIE BARRY	(213) 973-5456
COUNTY SANITATION DIST. OF ORG.	TOM DAWES	(714) 540-2910
ORANGE PARK ACRES MUTUAL WATER CO.	MIKE BULL	(714) 538-4201
UNDERGROUND SERVICE ALERT (USA)*		1-800-422-4133

\*CONTACT USA A MINIMUM 2 DAYS PRIOR TO STARTING WORK.

**BENCH MARK** O.C.S. 31-45-79  
ABOUT 0.1 MI. W. OF ORANGE PARK BLVD., 48.2' N. OF E. SANTIAGO CYN. RD., DIRECTLY N. OF SALEM LUTHERAN CHURCH, 99' E. OF PP# 2145624E, ON A CONC. POST 4" ABOVE GROUND, WITH PADDLE BOARD SET 1.6' TO THE N.  
ELEVATION: 437.712, ADJUSTED 1976

**BASIS OF BEARING**  
IN ACCORDANCE WITH THE SURVEY BY HAYES AND PARTY, DATED 8-29-83, THE C. OF MEADS AVE, AS MEASURED FROM THE INTERSECTION OF E. RANDALL ST. IS N 8° 45' 30" W, VERIFIED BY O.C. TRACT MAP # 7238, DATED 4-4-73.

NO.	DESCRIPTION	REVISIONS	APPROVED	DATE
1	AS BUILT			4-21-86
2	BRIDGE WIDENING 24' TO 30'	ALL		7-24-85

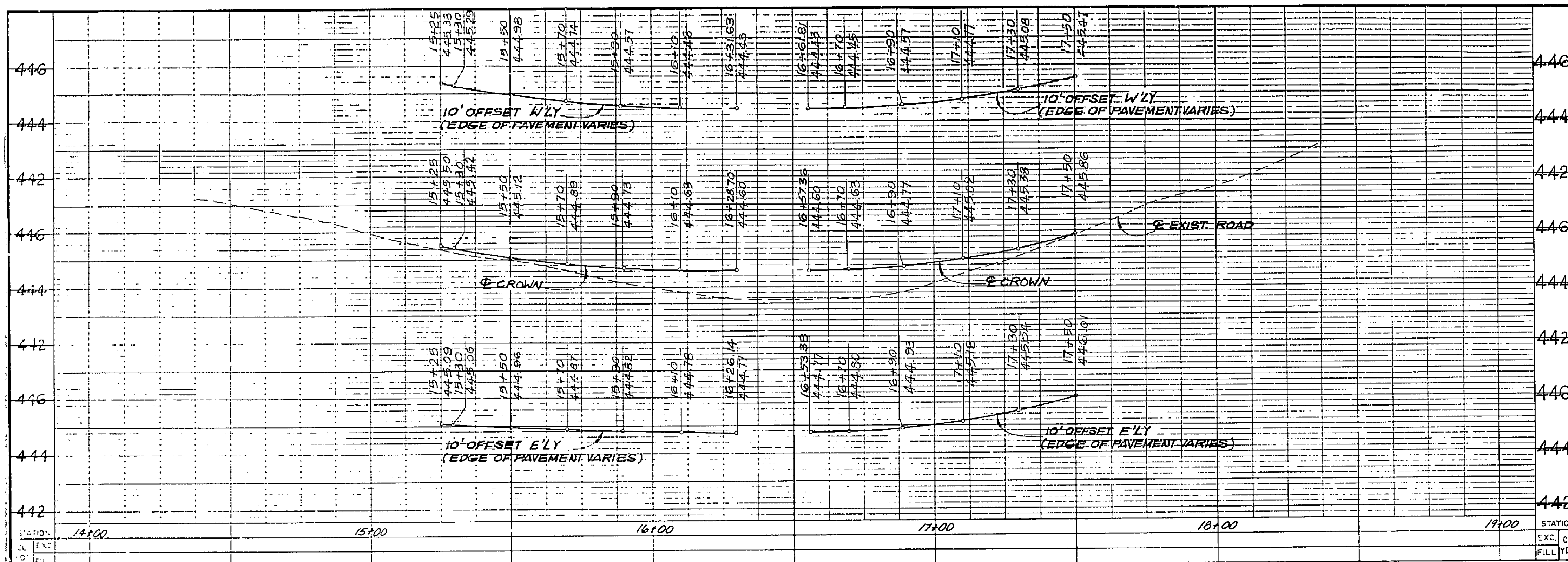
NO. R09034 SHEET 1 OF 9

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORITY GRANTED BY THE DIRECTOR OF TRANSPORTATION.  
1-6-88 Donald Blackford SUPERVISOR OF MICROFILM SERVICES



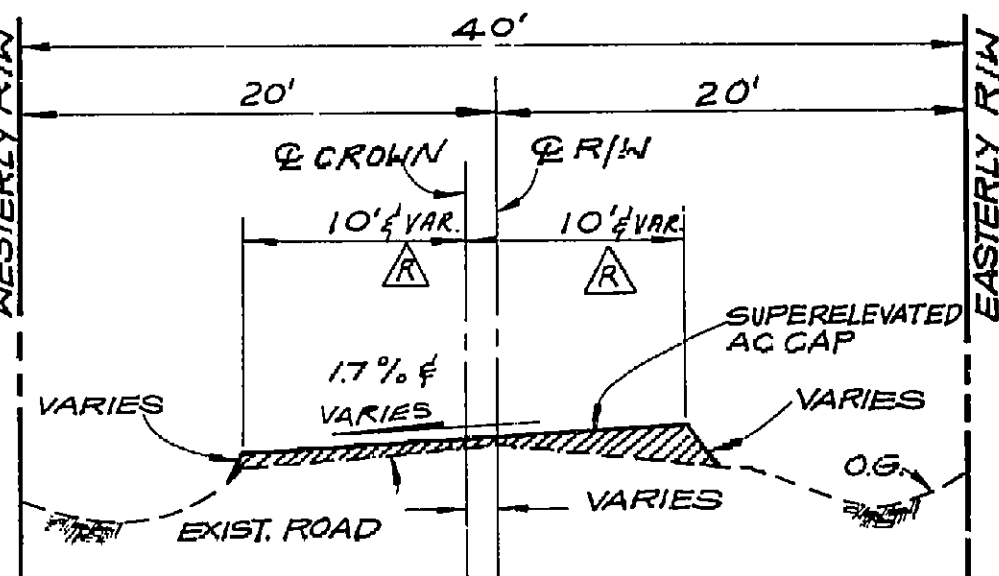
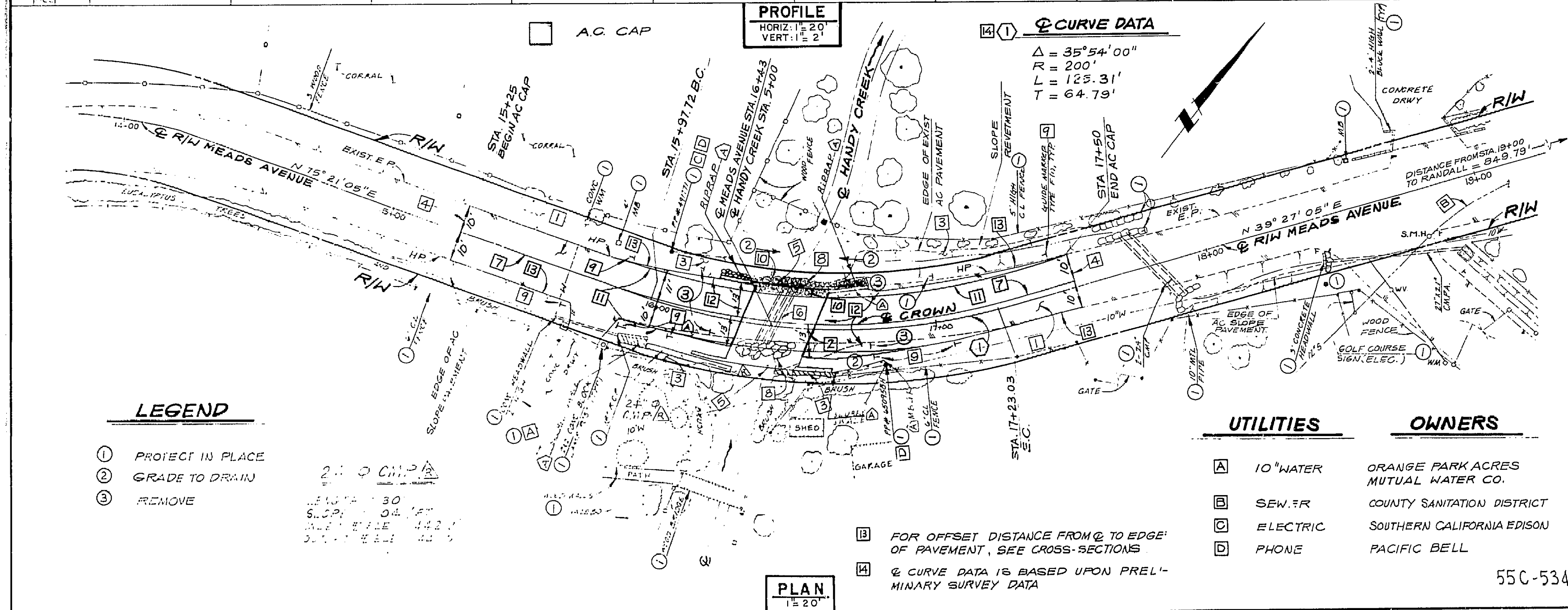
55C-534 (9 sheets)

DR. 12 (15007)



**CONSTRUCTION NOTES**

- 1 CONSTRUCT VARIABLE THICKNESS SUPER-ELEVATED A.C. CAP OVER EXISTING A.C. PAVEMENT, WITH ASPHALT EMULSION. WHERE A.C. CAPS OVER NATIVE SOIL, COMPACT TO 95%.
- 2 CONSTRUCT 26' R.C. SLAB BRIDGE PER PLAN AND PROFILE AND DETAILS SHEETS 3-6.
- 3 CONSTRUCT SIDE SLOPE PER PLAN AND PROFILE AND CROSS SECTIONS.
- 4 FEATHER A.C. FOR SMOOTH JOIN
- 5 INSTALL 10' TOT. L.F. OF METAL BEAM GUARD RAIL PER DETAILS SHEETS 2, 3 AND 6.
- 6 REMOVE THREE EXISTING C.S.P. (19"x25")
- 7 STRIPE 4" DASH YELLOW LINE AT CENTERLINE OF CONSTRUCTION. ( @ CROWN ) (BYOCEMA)
- 8 REMOVE SAND BAGS, CONCRETE AND OTHER INTERFERING MATERIAL AS DIRECTED BY ENGINEER.
- 9 FURNISH AND INSTALL GUIDE MARKER, TYPE L(2), PER EMA STANDARD PLAN # 402 AND AS DIRECTED BY ENGINEER.
- 10 CONSTRUCT GRADE STABILIZER PER DETAIL ON SHEET # 6.
- 11 STRIPE 4" SOLID WHITE LINE AT 10' OUT RIGHT AND LEFT OF @ CROWN. (BYOCEMA)
- 12 MINIMUM STRUCTURAL SECTION 6" A.C.



**TYPICAL SECTION**  
NO SCALE  
STA. 15+25 TO STA. 16+17 AND STA. 16+69 TO STA. 17+50  
1/2 0 2  
3 inches on original drawing

- LEGEND**
- 1 PROJECT IN PLACE
  - 2 GRADE TO DRAIN
  - 3 REMOVE

UTILITIES	OWNERS
A 10" WATER	ORANGE PARK ACRES MUTUAL WATER CO.
B SEW. ER	COUNTY SANITATION DISTRICT
C ELECTRIC	SOUTHERN CALIFORNIA EDISON
D PHONE	PACIFIC BELL

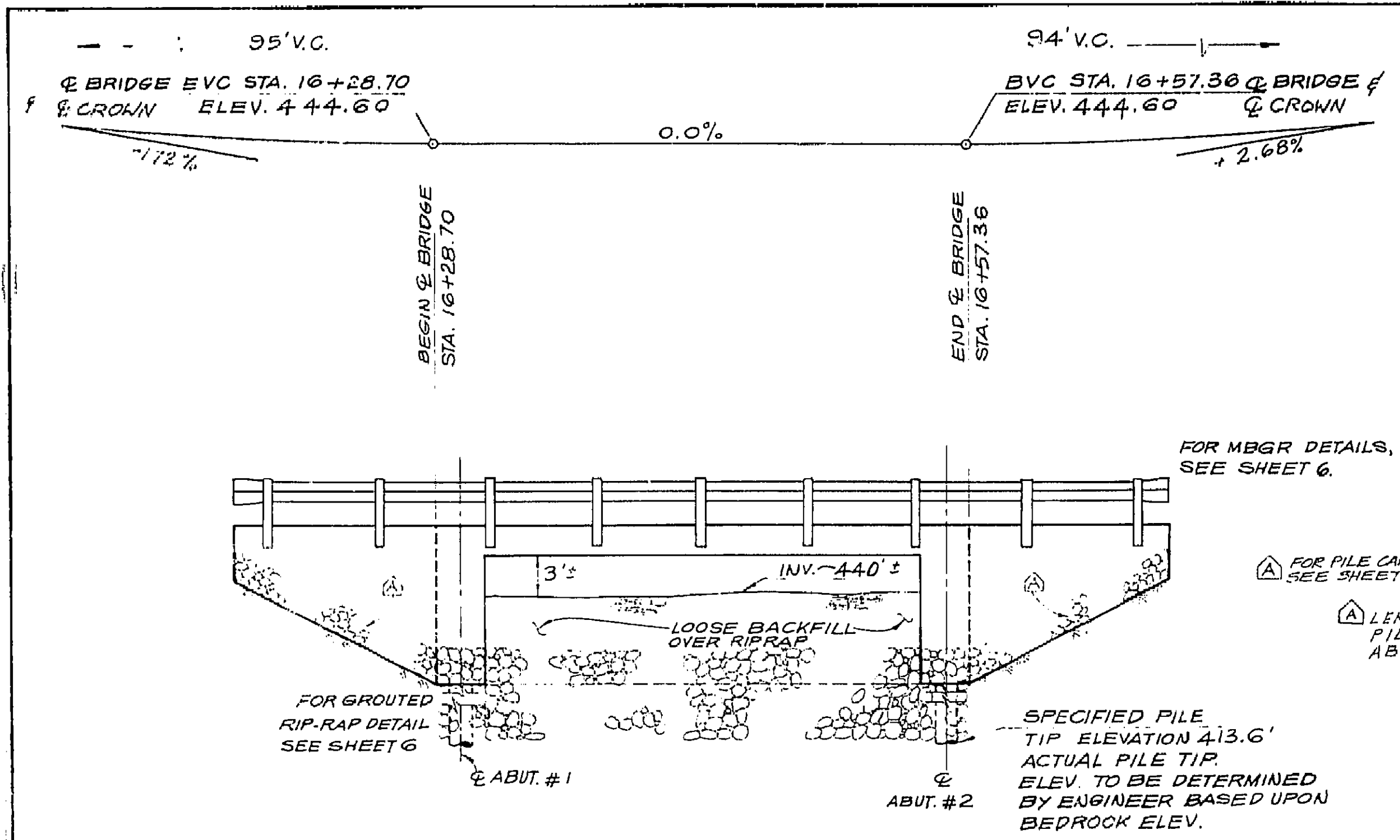
B FOR OFFSET DISTANCE FROM @ TO EDGE OF PAVEMENT, SEE CROSS-SECTIONS  
 C @ CURVE DATA IS BASED UPON PRELIMINARY SURVEY DATA

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
MEADS AVENUE BRIDGE ACROSS HANDY CREEK CHANNEL (E08S06)	
PLAN AND PROFILE STA. 14+00 TO STA. 19+00	
4-21-88 AS BUILT	7-22-88 BRIDGE WIDENING
REVISIONS	DATE
DESIGNER: J.D.S.	SCALE: AS SHOWN
CHECKER: V.P.R.	DATE: 7/11/88
DRAWN: H.P.	SHEET NO. 2 OF 9

55C-534

DR 12 (15007)

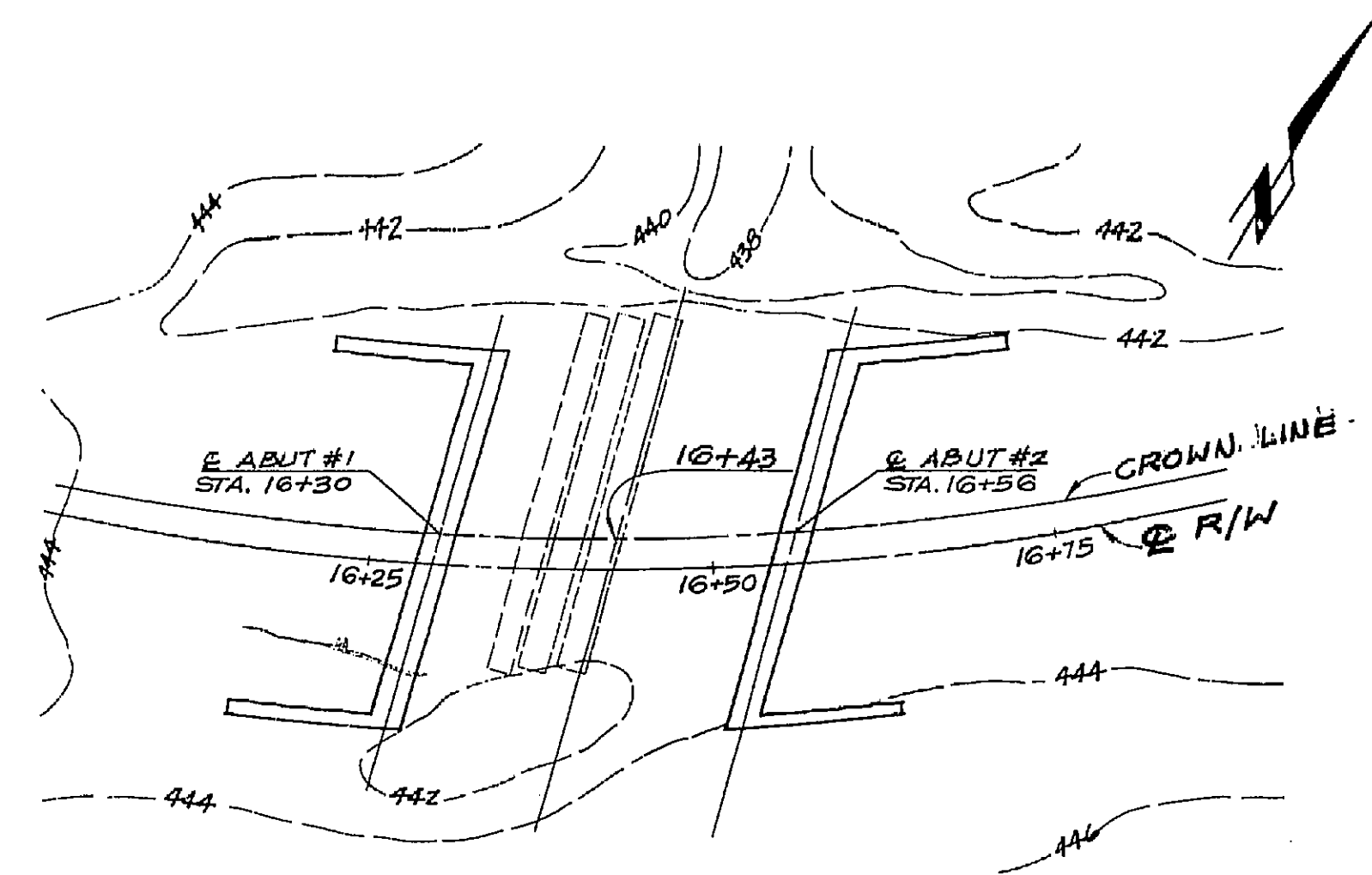
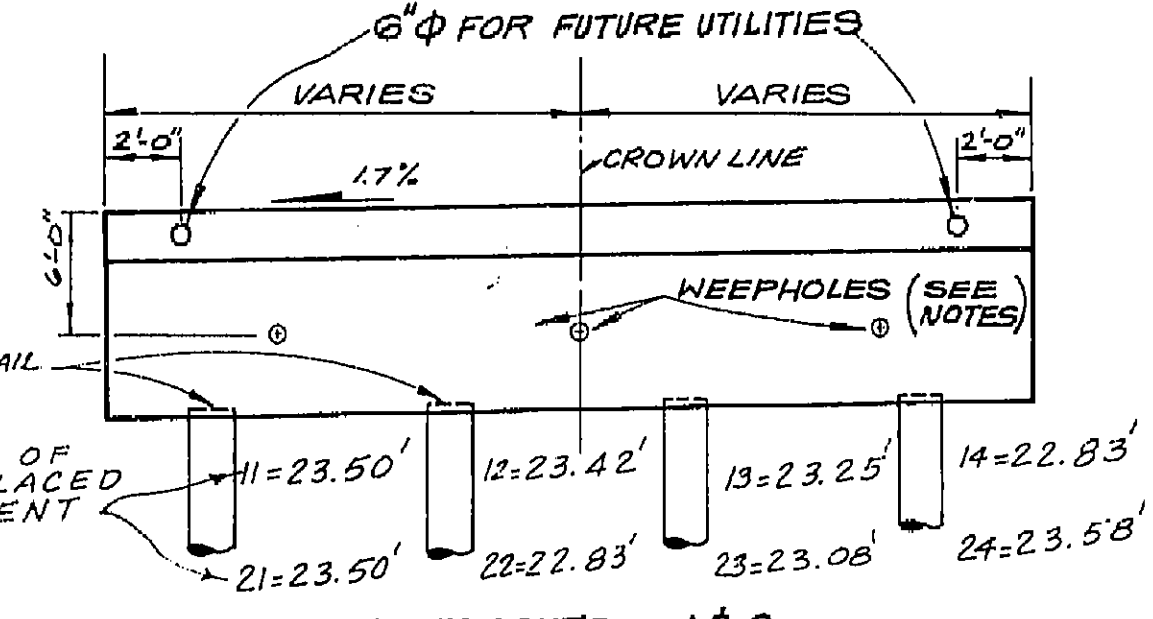
1-6-88 Donald Blackford  
 MICHAEL BAKER CORP.  
 ENGINEERS AND ARCHITECTS



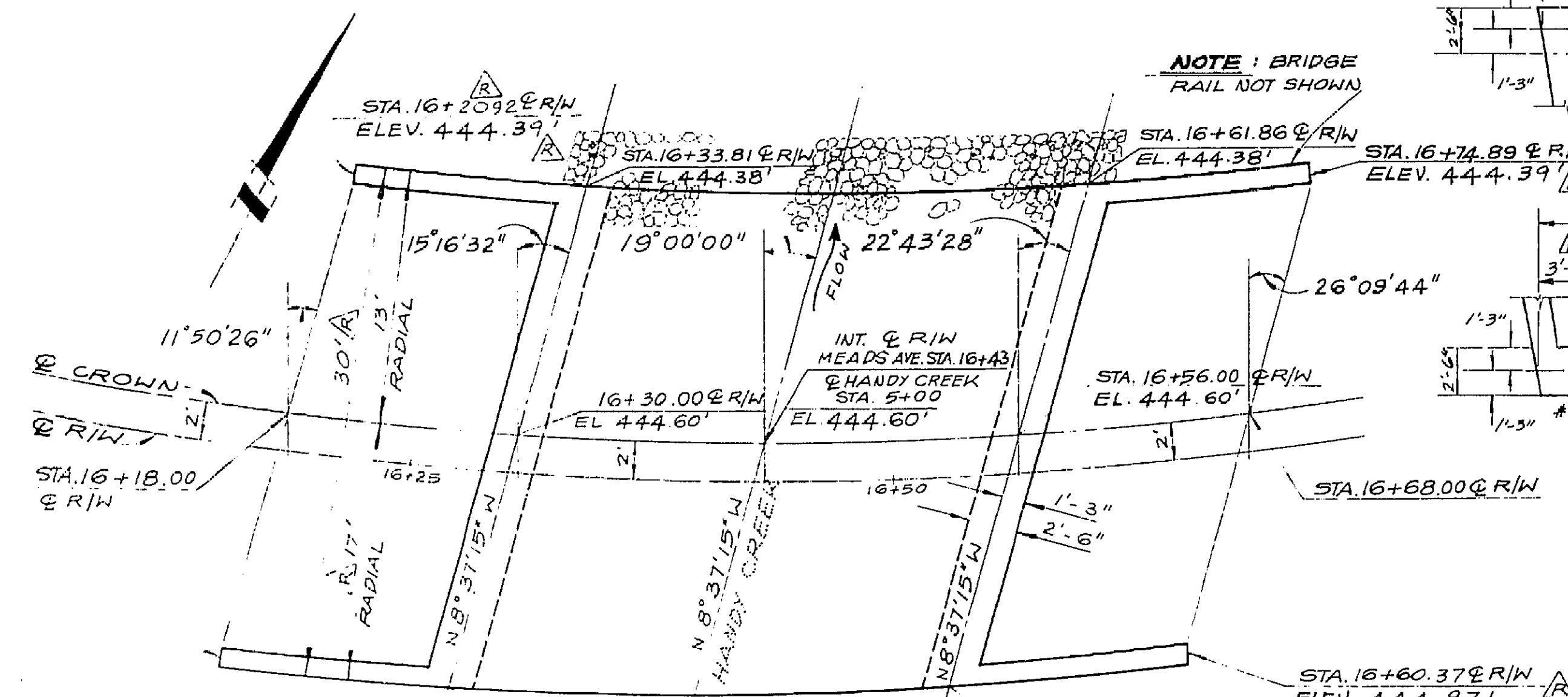
**ELEVATION**  
SCALE 1" = 5'

**NOTES FOR PVC DRAINS**

- A. 4" PVC DRAINS - 3 @ 10'-0" TO CROWN SPACING, LOCATE 6" ± BELOW FINISH GRADE.
- B. 6" SQUARE ALUMINUM OR GALVANIZED STEEL WIRE 1/4" MESH HARDWARE CLOTH (MIN. WIRE DIAMETER 0.025") ANCHOR FIRMLY TO BACKFACE.
- C. PERVIOUS BACKFILL MATERIAL CONTINUOUS BEHIND RETAINING WALL OR ABUTMENT.
- D. WEEP HOLE PER CAL TRANS STD BO-3 BR. DETAIL 3-1

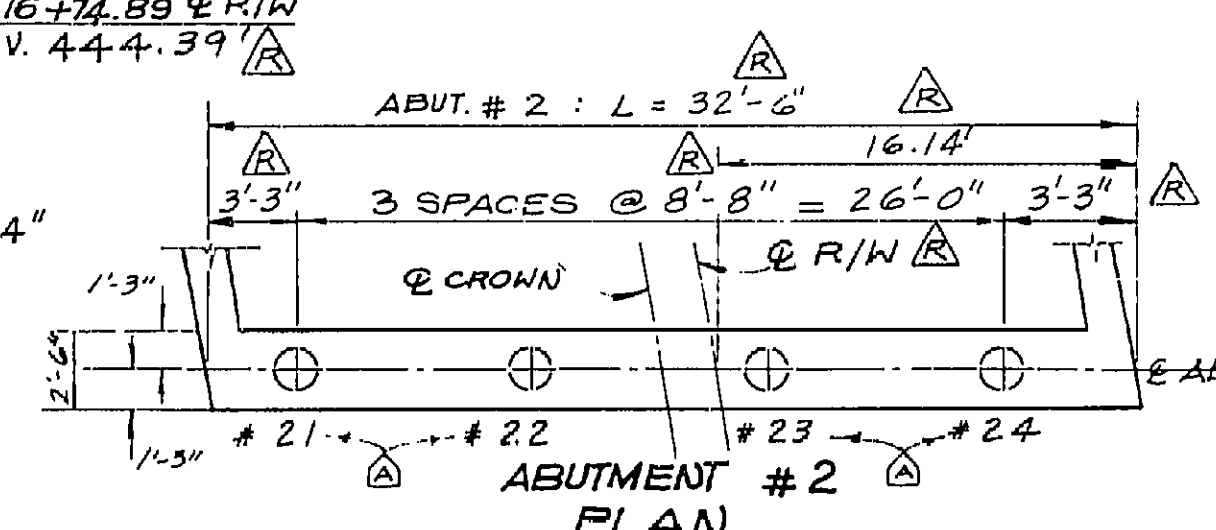
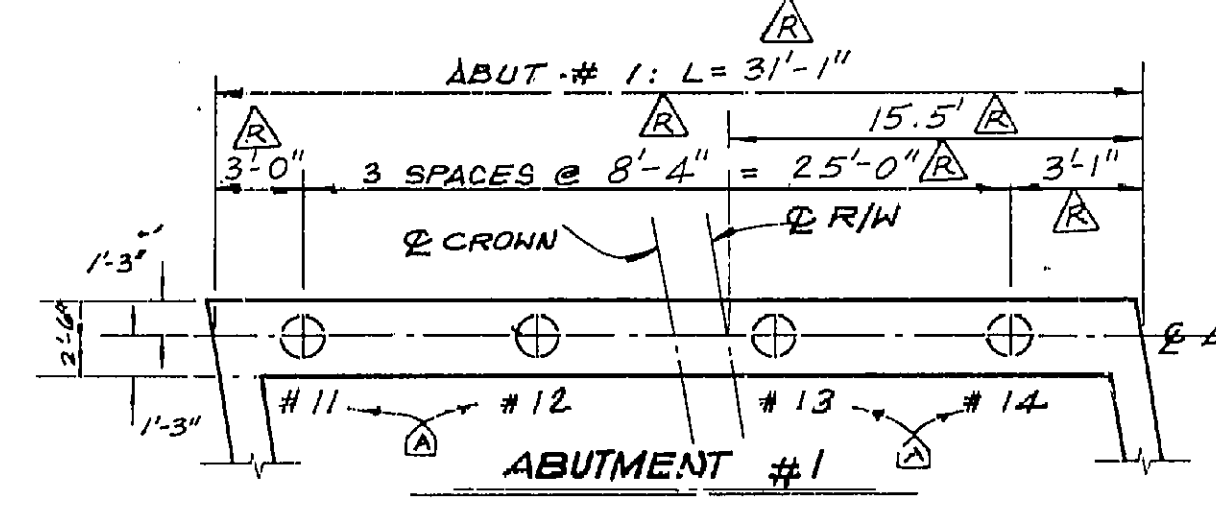


**FOUNDATION PLAN**  
NO SCALE

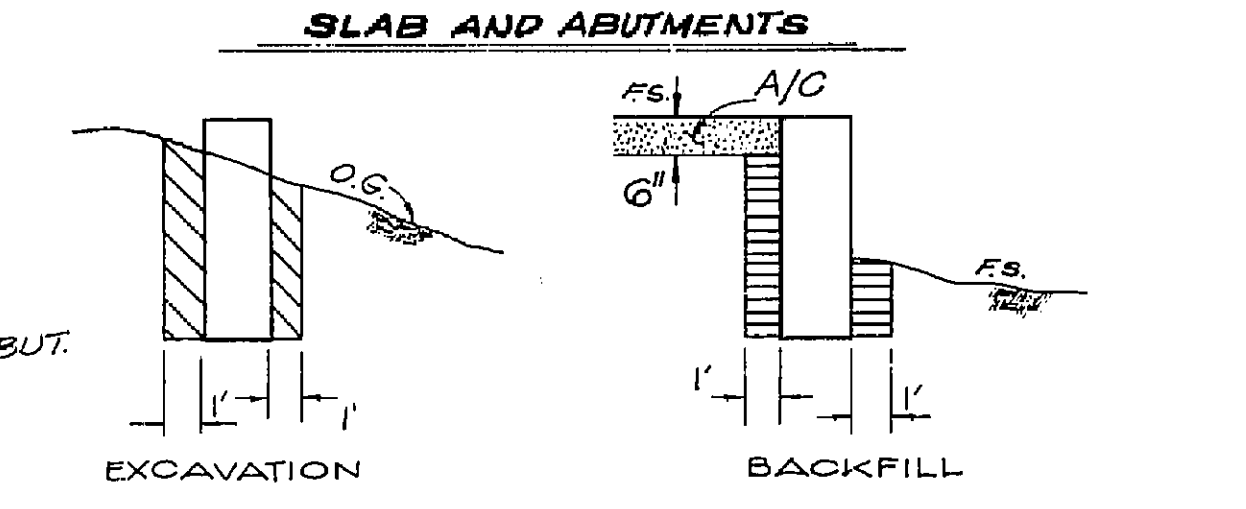
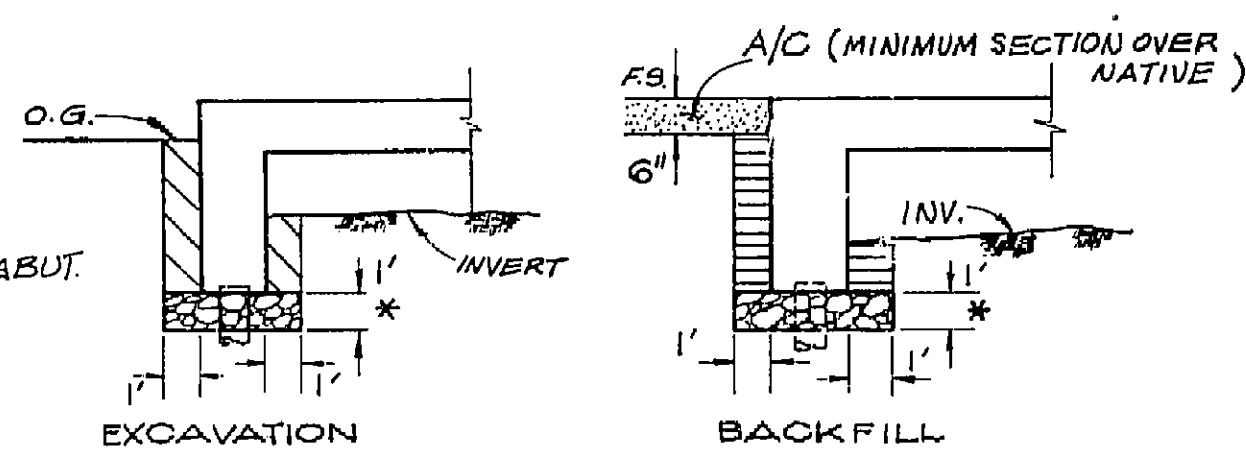


**PLAN**  
SCALE 1" = 5'

- NOTES:**
1. ALL STATIONS REFERENCED FROM CROWN
  2. ALL ELEVATIONS ARE BRIDGE DECK ELEVATIONS
  3. DIMENSIONS FOR WIDTH OF BRIDGE ARE DETERMINED FROM RADIAL LINES



**TYPICAL PILE LAYOUT**  
NO SCALE



**SLAB AND ABUTMENTS**  
**WINGWALLS**  
**STRUCTURE EXCAVATION & BACKFILL DETAILS**  
NO SCALE

- LEGEND**
- STRUCTURAL EXCAVATION
  - STRUCTURAL BACKFILL
  - GRAVEL BLANKET \* (SEE SPECIAL PROVISIONS)

**BRIDGE QUANTITIES**

STRUCTURE EXCAVATION	170	CY
STRUCTURE BACKFILL	42	TONS
(D) GRAVEL BLANKET	35	TONS
STRUCTURE CONCRETE	102	CY
REINFORCING STEEL	10600	LBS
C.I.P. PILES	180	L.F.
BRIDGE RAILING (EMA TO FURNISH BRIDGE RAILING)	107	L.F.

55C-534

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY

MEADS AVENUE BRIDGE ACROSS HANDY CREEK CHANNEL (E08S06)

BRIDGE LAYOUT AND ABUTMENT DETAILS

4-21-86 AS BUILT  
7-12-85 BRIDGE WIDENING

REVISIONS: 3

DATE: 7/27/85

SCALE: DATE: DWG NO: 3

OF 9

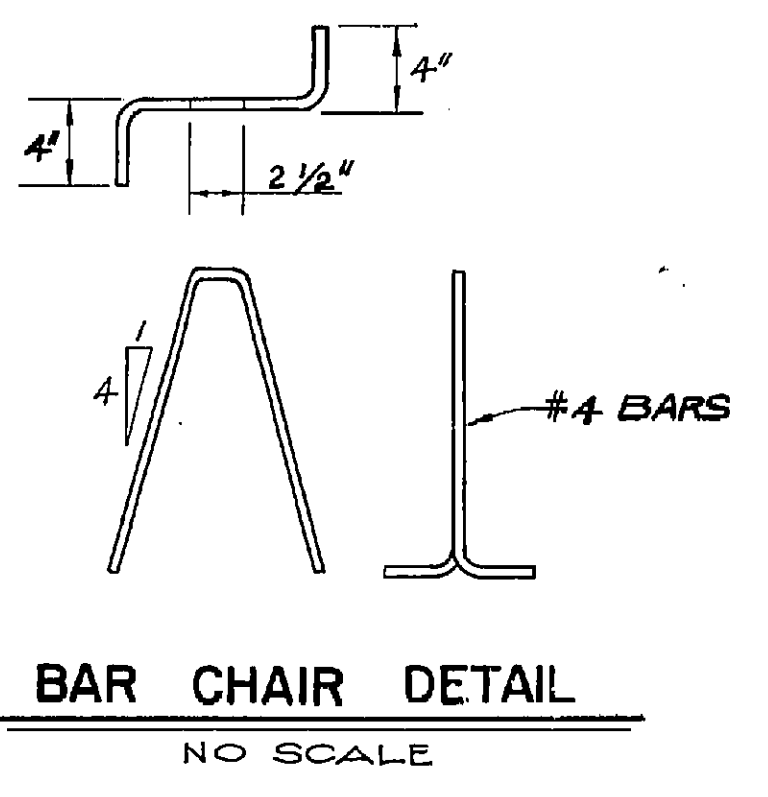
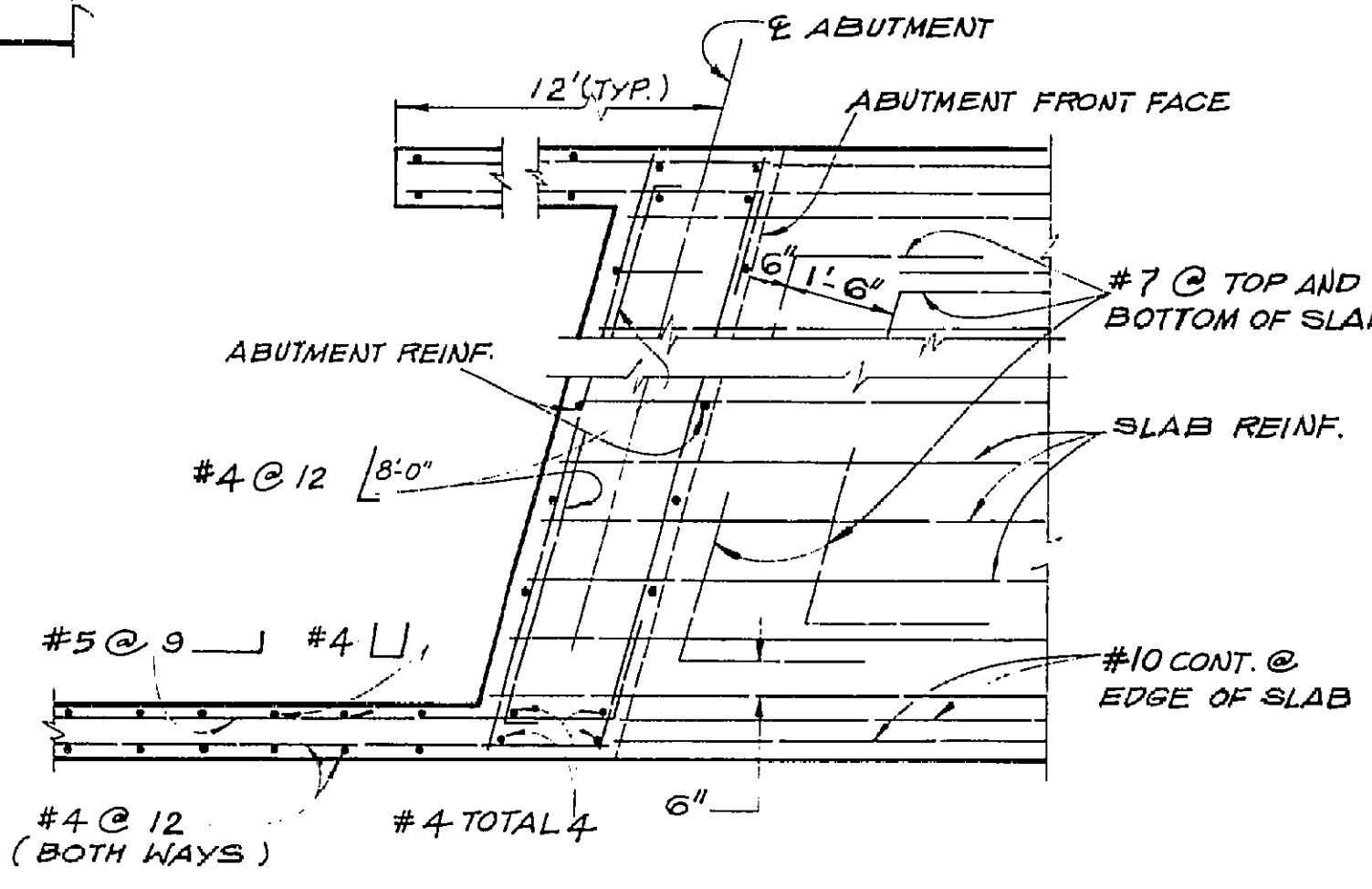
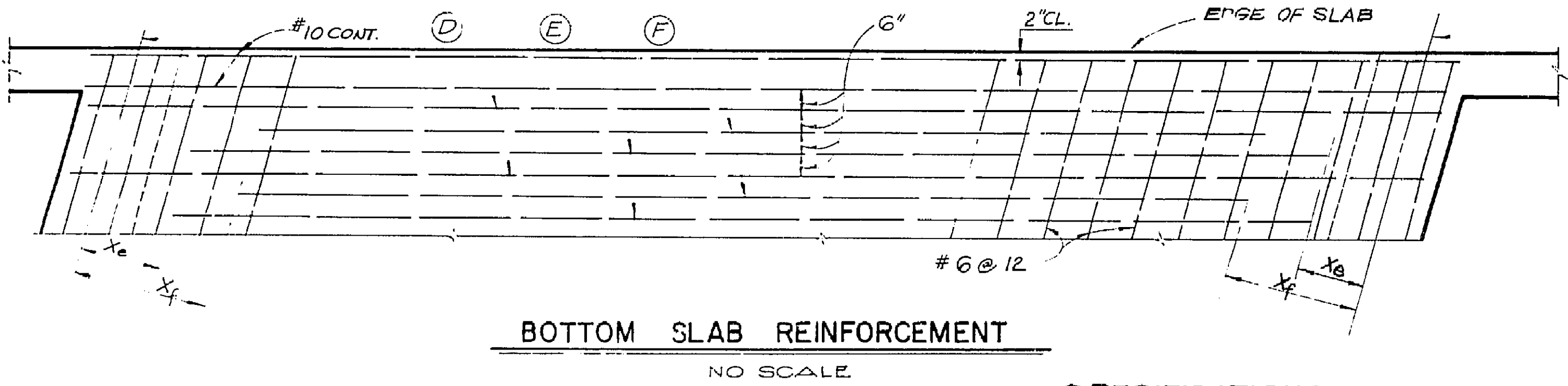
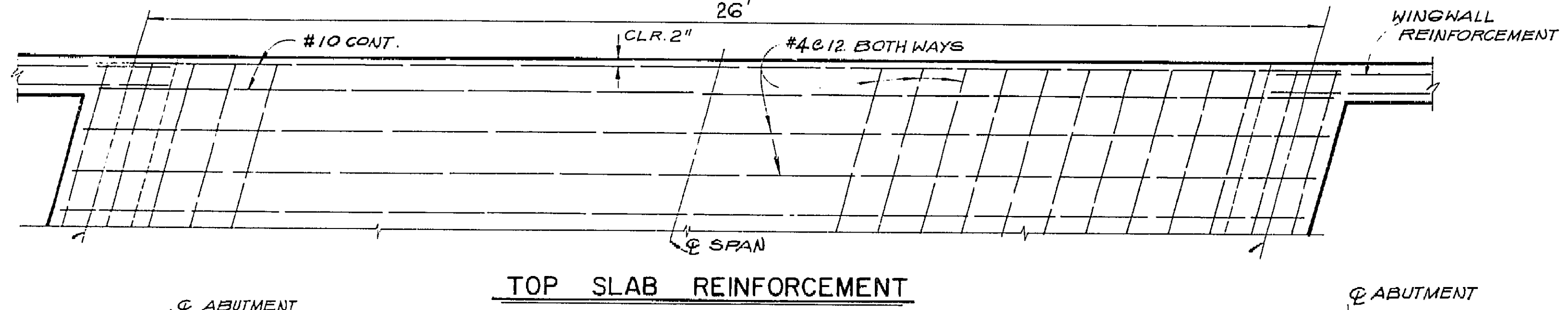
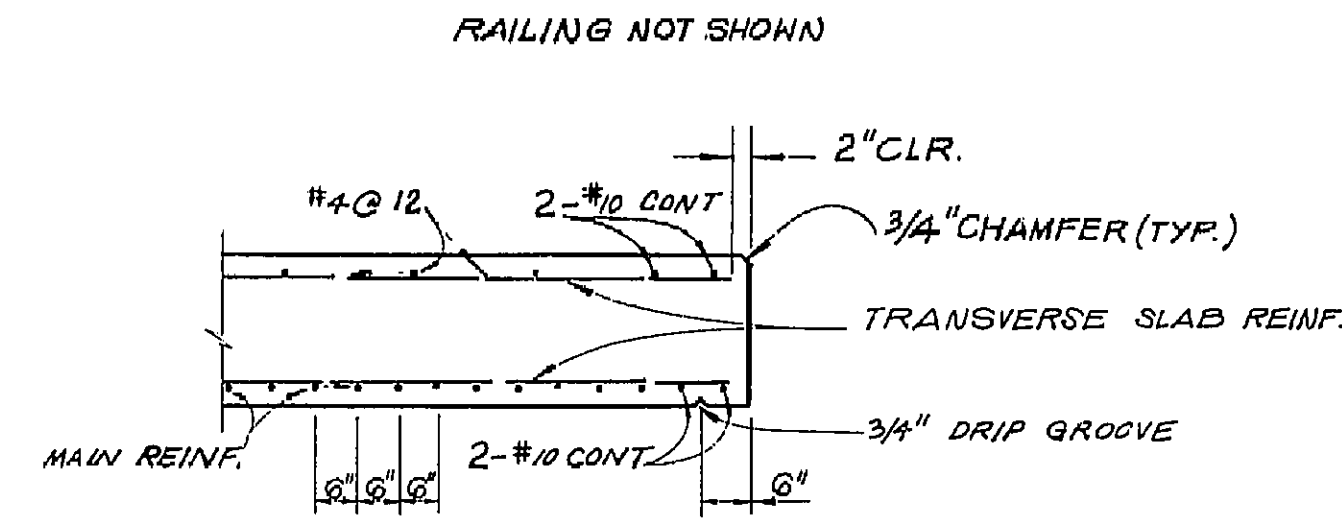
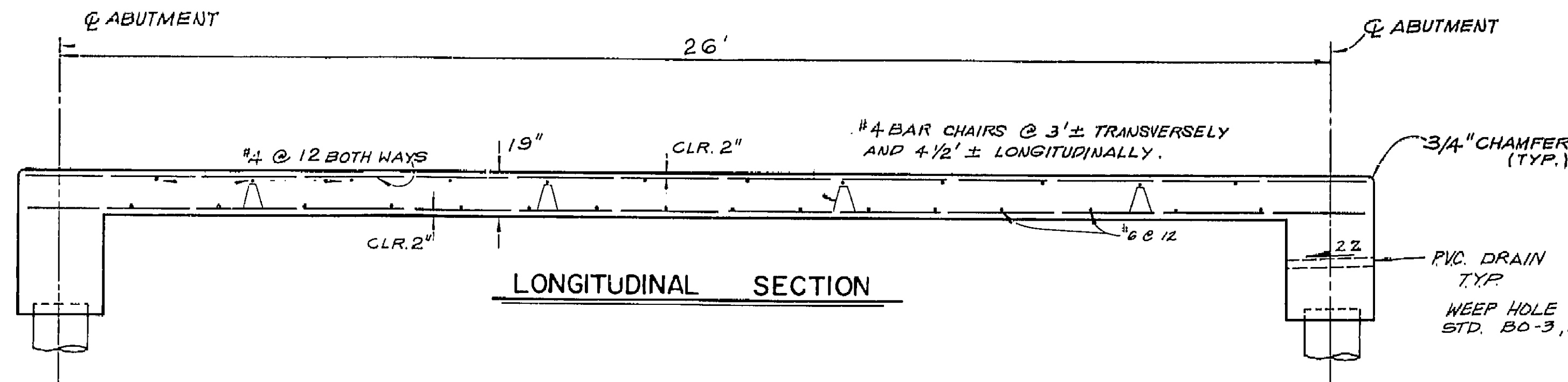
DR. 12 (15007)

1-6-88

Donald B. Blackford

SUPPLIER OF MICROFILM SERVICES





**SPECIFICATIONS**

**DESIGN**  
A.A.S.H.T.O. STD. SPECS. DATED 1977 WITH SUBSEQUENT REVISIONS BY CALIFORNIA DEPT. OF TRANSPORTATION

**CONSTRUCTION**  
STANDARD SPECIFICATIONS CALIFORNIA DEPT. OF TRANSPORTATION DATED JULY 1984 AND SPECIAL PROVISIONS.

**LIVE LOADING**  
H.S. 20-44 AND ALTERNATIVE 6 CALIFORNIA PERMIT DESIGN LOADS (P-13)

**PILE LOADING**  
45 TONS TYPE : CLASS 45 (CIDH)

**REINFORCEMENTS**  
EMBEDMENT IS CLEAR TO OUTSIDE OF BAR AND IS 2" TO MAIN REINFORCEMENT EXCEPT AS SHOWN. BACKING FOR HOOKS IS FOUR DIAMETERS EXCEPT AS NOTED WHERE REINFORCEMENT BARS ARE SPICED, BARS # 8 AND SMALLER LAP 45 DIAMETERS OF SMALLER BAR JOINED, BAR 9, 10 & 11 LAP 60 DIAMETERS OF SMALLER BAR JOINED.

**CONCRETE**  
BRIDGE DECK - CLASS A, ABUTMENT - CLASS A  
WINGWALL - CLASS A

**UNIT STRESSES**  
PILE CAP & ABUT.  $f'_c = 3250$  P.S.I. @ 28 DAYS,  $f_y = 60,000$  P.S.I.  
PILES  $f'_c = 6,000$  P.S.I.,  $f_y = 270,000$  P.S.I. STRANDS,  $f_y = 60,000$  P.S.I.

**NOTES :**

- PLACE ALL TRANSVERSE BARS PERPENDICULAR TO LONGITUDINAL BARS.
- THE CAMBER AT THE MID-SPAN OF THE BRIDGE IS .04'

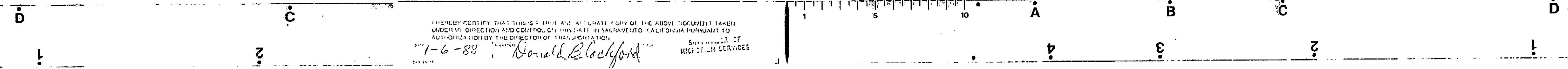
LENGTH OF SLAB		26'	
BOTTOM OF SLAB	D BARS	SIZE #9	CONT
	E BARS	SIZE #9	LENGTH 24'-0"
	F BARS	SIZE #9	LENGTH 17'-0"
SLAB THICKNESS		19"	
ULT. DEF. @ MIDSPAN		0.04'	
APPROX. QUANTITIES PER FT. OF WIDTH		CONC. FT. <sup>3</sup>	42.8
		STEEL LB.	210

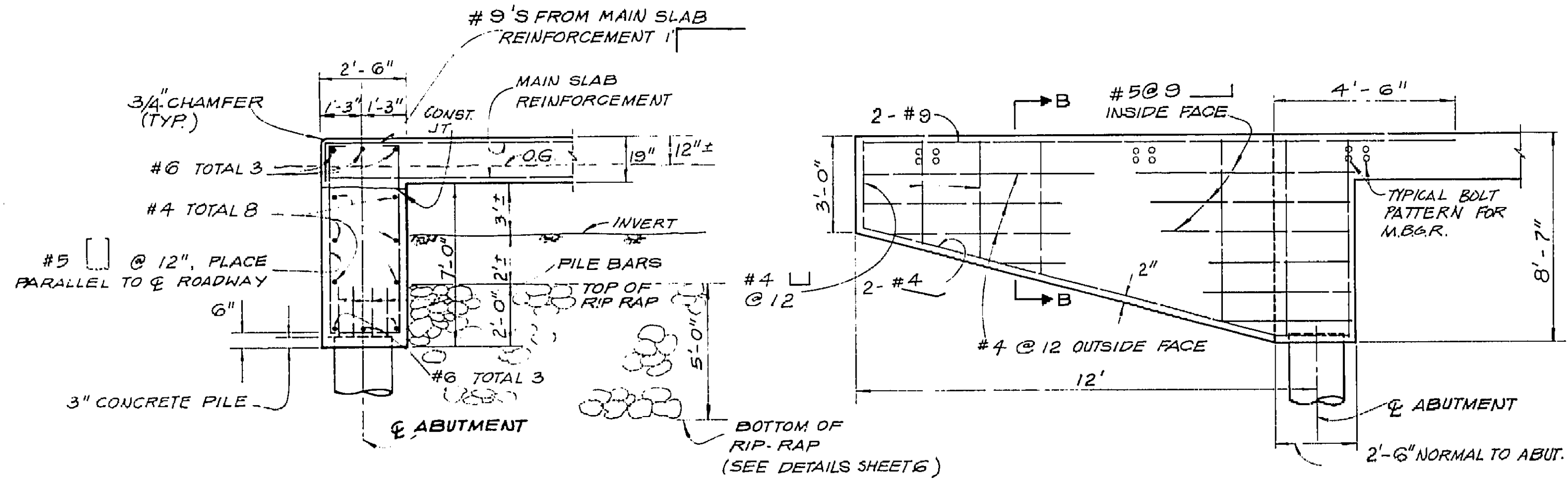
ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
MEADS AVENUE BRIDGE ACROSS HANDY CREEK CHANNEL (E08S06)	
SLAB DETAILS	
REVISIONS	DATE
J.D.S.	3/17/86
HP, T.C.R.	V.P.R.
SCALE	DATE
1/2" = 1'-0"	NO. NO.
	OF 9

55C-534

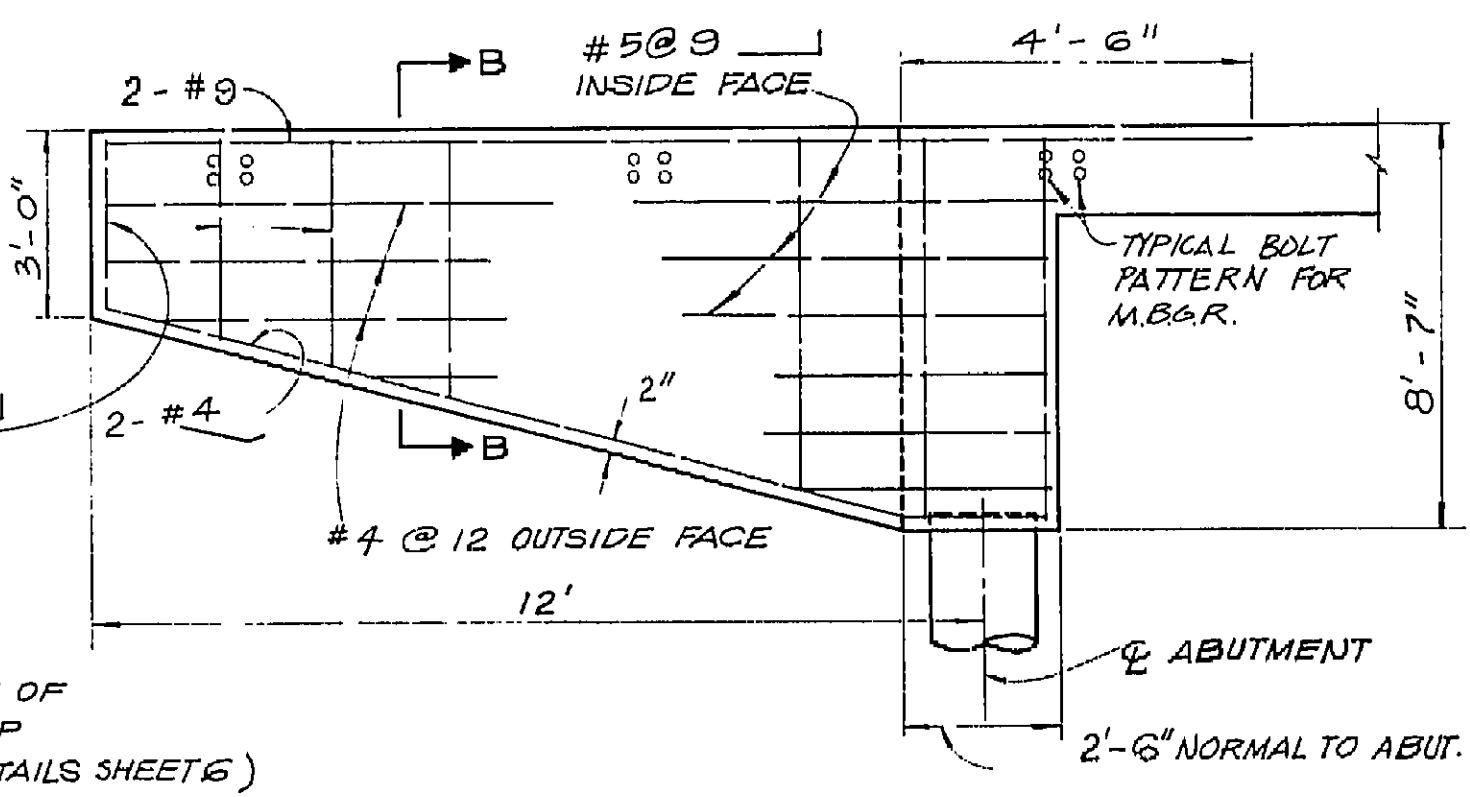
I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

1-6-88 Donald B. Blackford

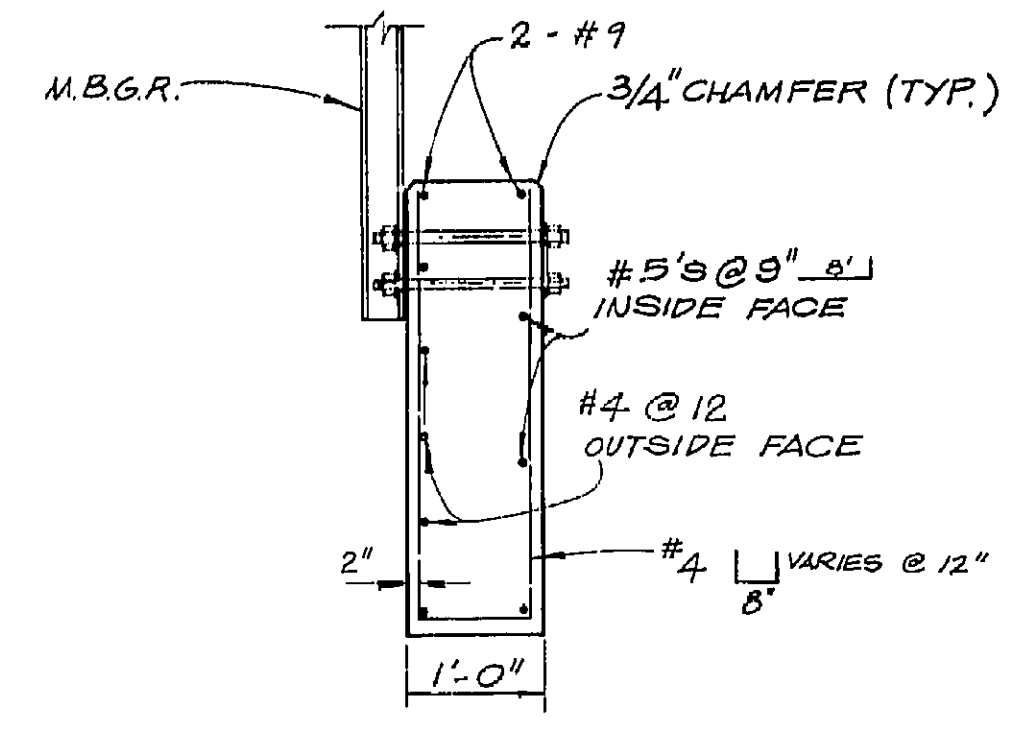




**ABUTMENT SECTION**  
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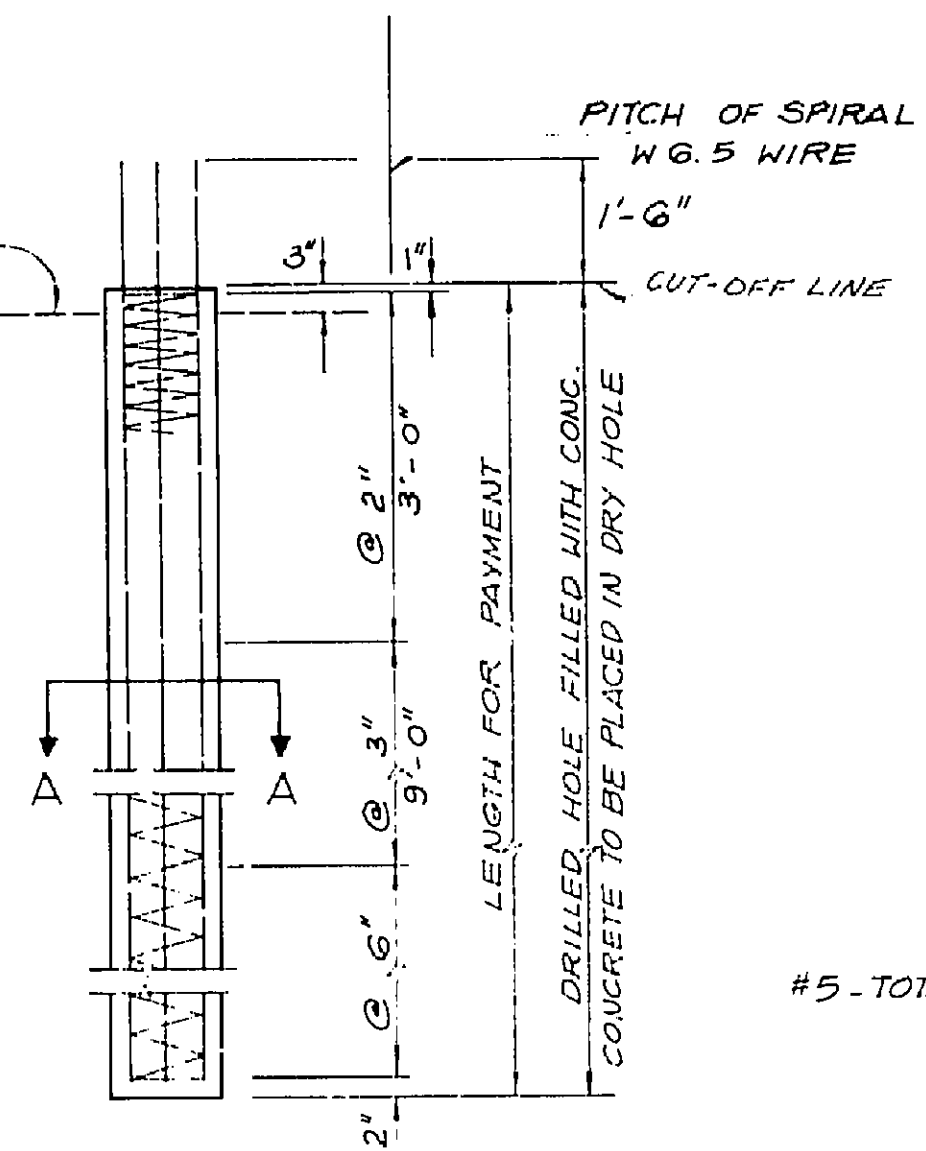


**WINGWALL ELEVATION**  
NO SCALE

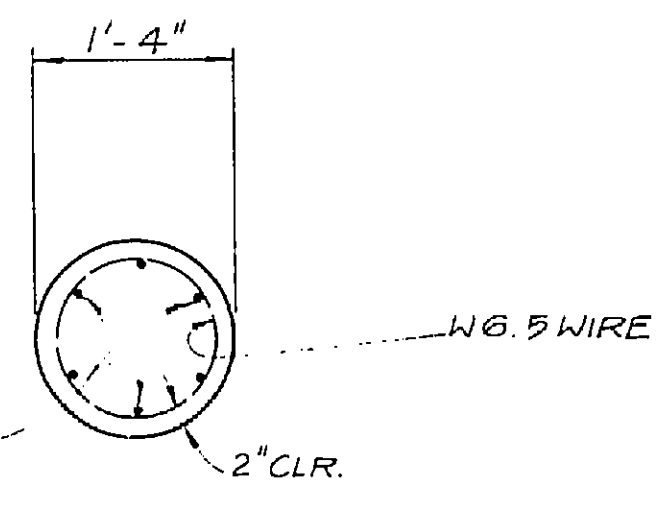


**SECTION B-B**  
NO SCALE

**NOTES:**  
REINFORCEMENT EXTENDING INTO FOOTING SHALL BE HOOKED AS REQUIRED TO PROVIDE CLEARANCE TO TOP OF FOOTING.  
LAPPED SPLICES IN SPIRAL PILE REINFORCEMENT SHALL BE LAPPED AT LEAST 80 WIRE DIAMETERS. SPIRAL PILE REINFORCEMENT AT SPLICES AND AT ENDS SHALL BE TERMINATED WITH A 135° HOOK WITH A 6 INCH TAIL HOOKED AROUND A LONGITUDINAL BAR.  
PILES SHALL BE EXTENDED ONLY IN ACCORDANCE WITH DETAILS SHOWN IN THE PROJECT PLANS.

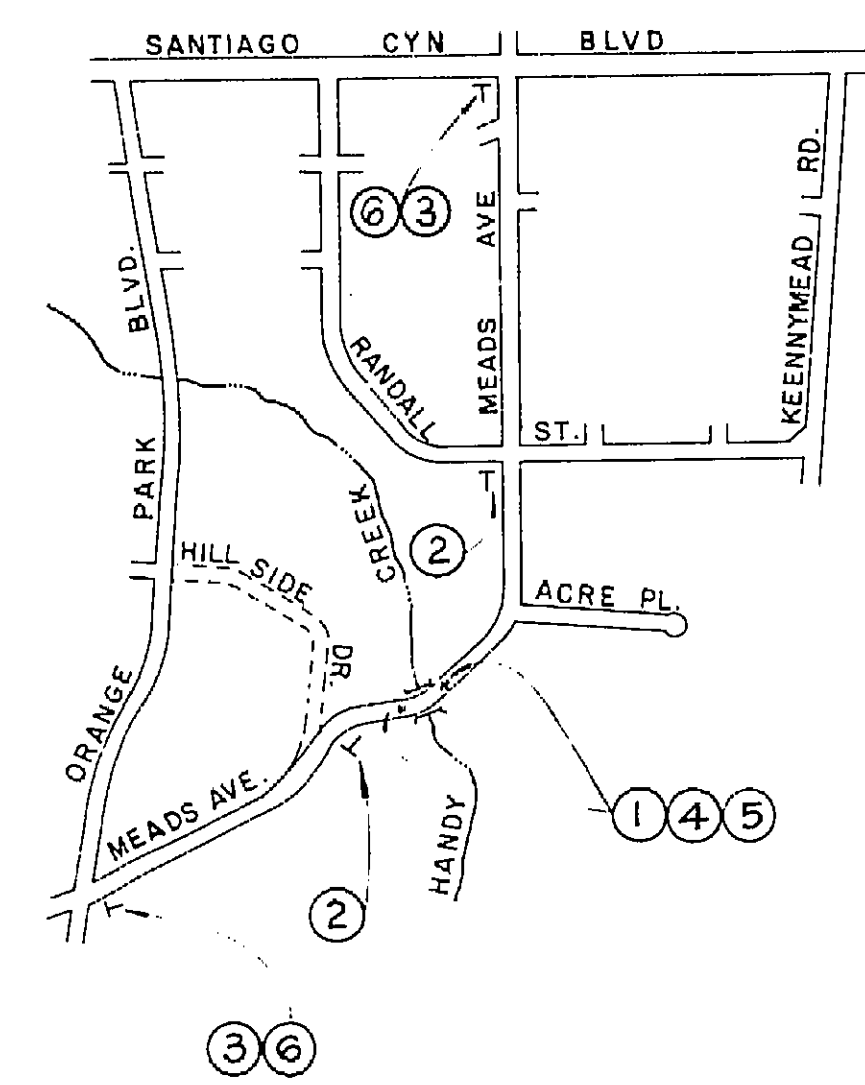


**ELEVATION**



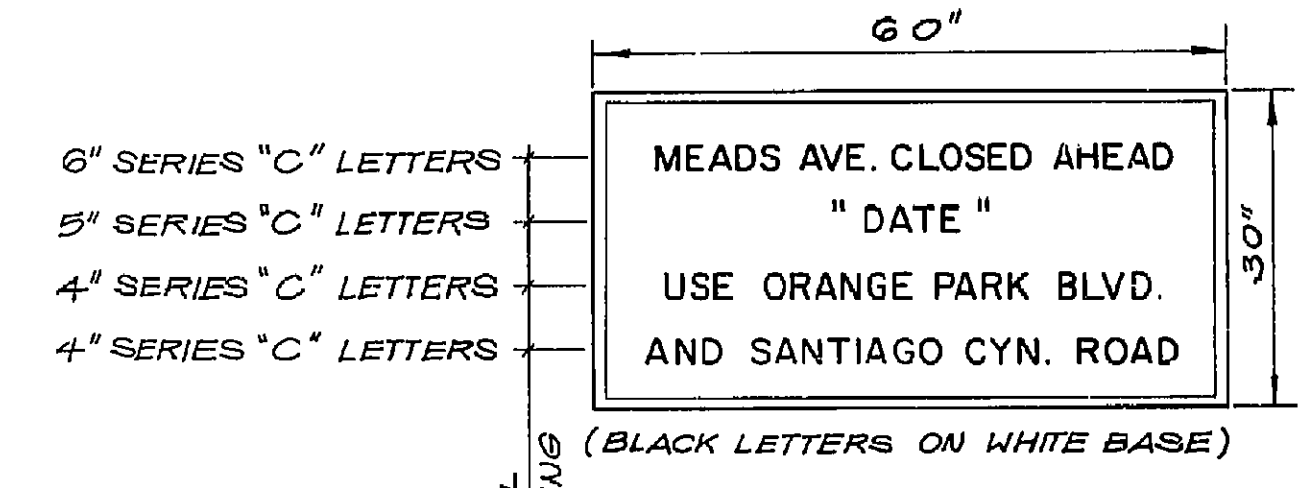
**SECTION A-A**

**16" CAST-IN-DRILLED HOLE CONCRETE PILE**  
NO SCALE



**DETOUR PLAN**  
NO SCALE

- DETOUR NOTES**
- ① — C2 — "ROAD CLOSED"
  - ② — C3 — "ROAD CLOSED AHEAD LOCAL TRAFFIC ONLY"
  - ③ — C5 — "DETOUR"
  - ④ — TYPE III BARRICADE, O.C.E.M.A. STD. PLAN 404, TOTAL 4.
  - ⑤ — TYPE N REFLECTORS, O.C.E.M.A. STD. PLAN 401, TOTAL 4.
  - ⑥ — "NOTICE SIGN" (SEE DETAIL A)



**DETAIL "A"**  
NO SCALE

SIGN CHART	
SIGN	QUANTITY
NOTICE SIGN	2
C2	2
C3	2
C5	2

1:2.0  
3 inches on original drawing

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
MEADS AVENUE BRIDGE ACROSS HANDY CREEK CHANNEL (E08S06)	
DETOUR PLAN AND MISCELLANEOUS DETAILS	
DATE: 1/27/95	SCALE: DATE: 1/27/95
REVISIONS: RCE 30829	DATE: 5
DRAWN: H.P.TCR	CHECKED: VPR
DWG NO. OF 9	

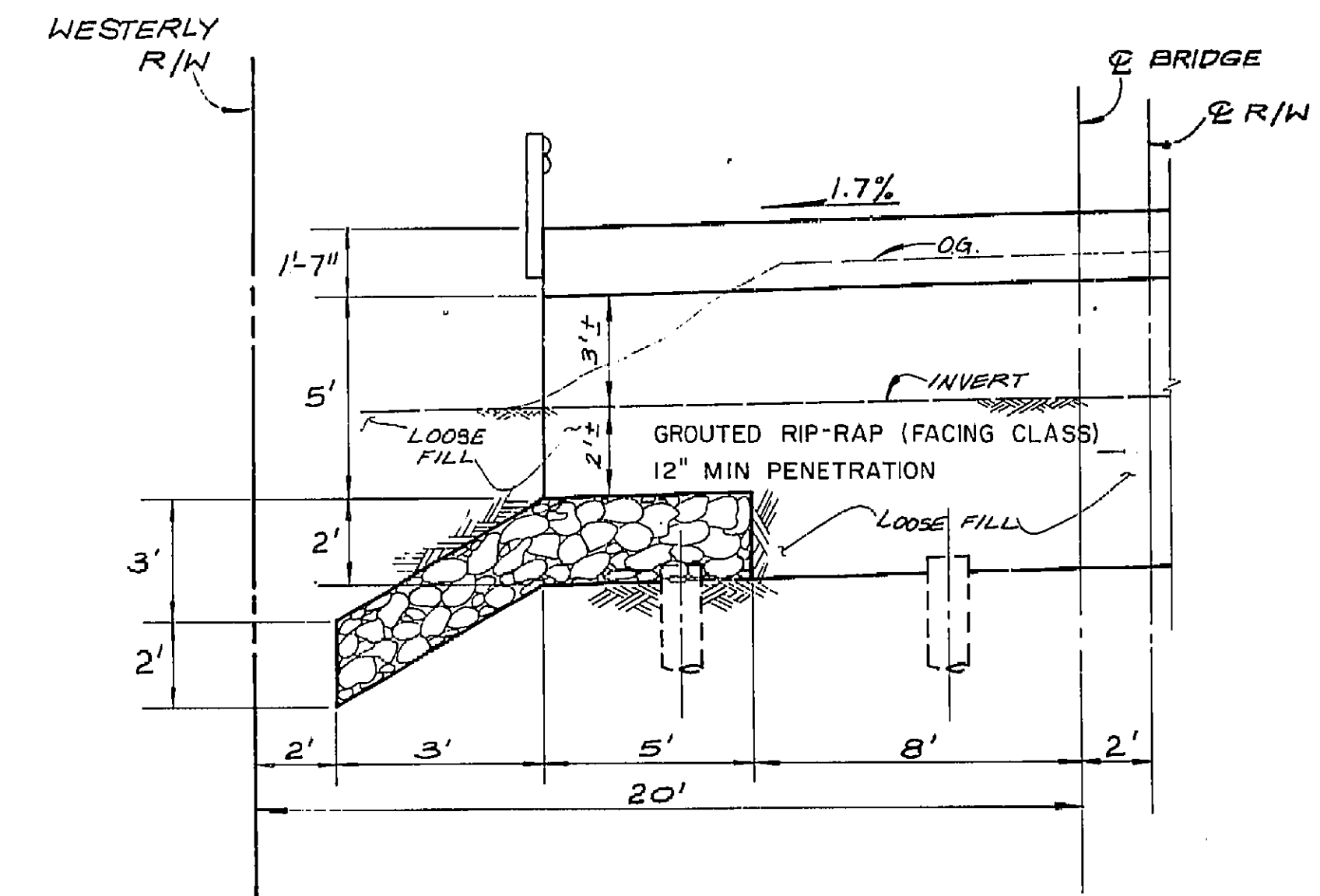
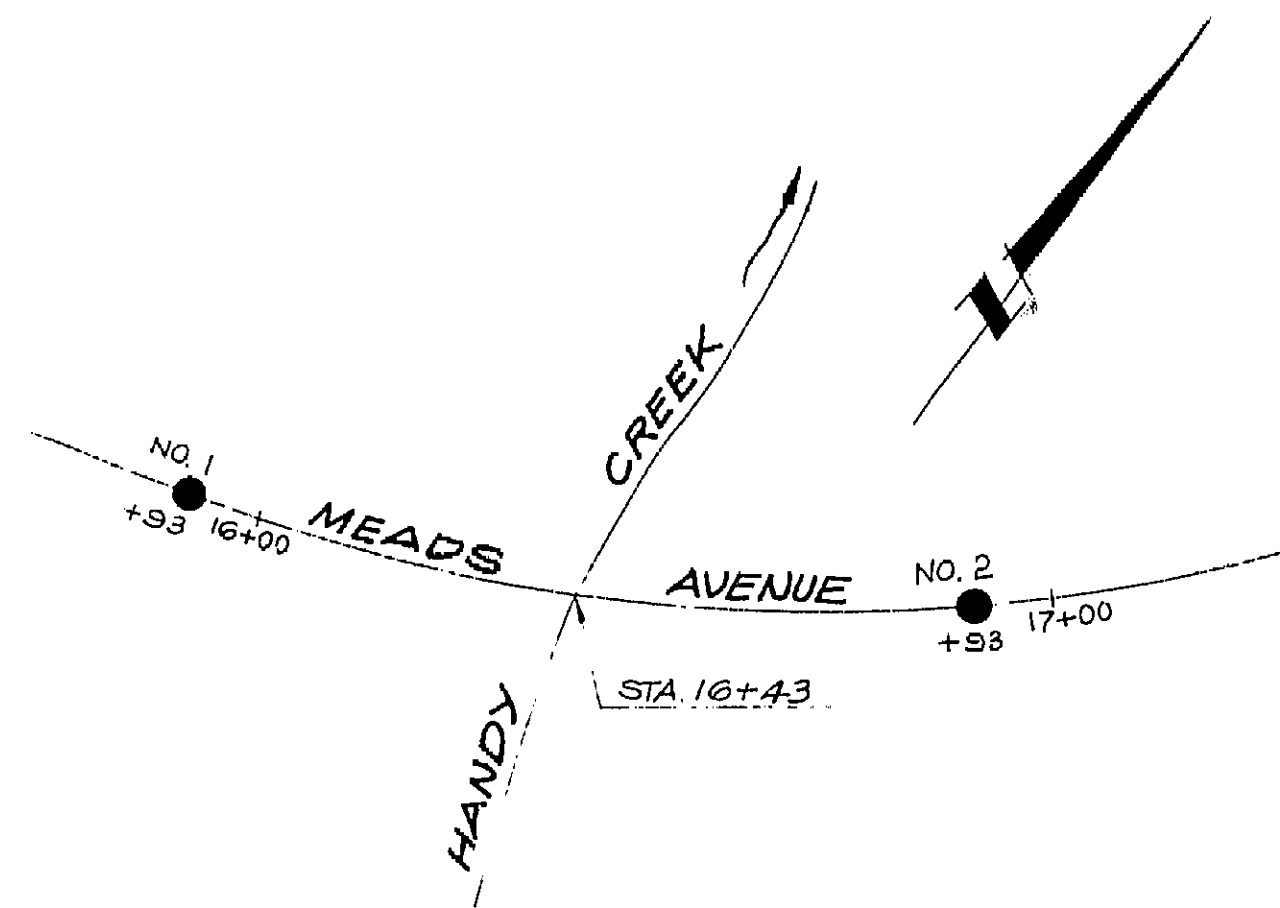
55C-534

DR. 12 (15007)

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1-6-88 Donald Blackford SUPERVISOR OF MICROFILM SERVICES

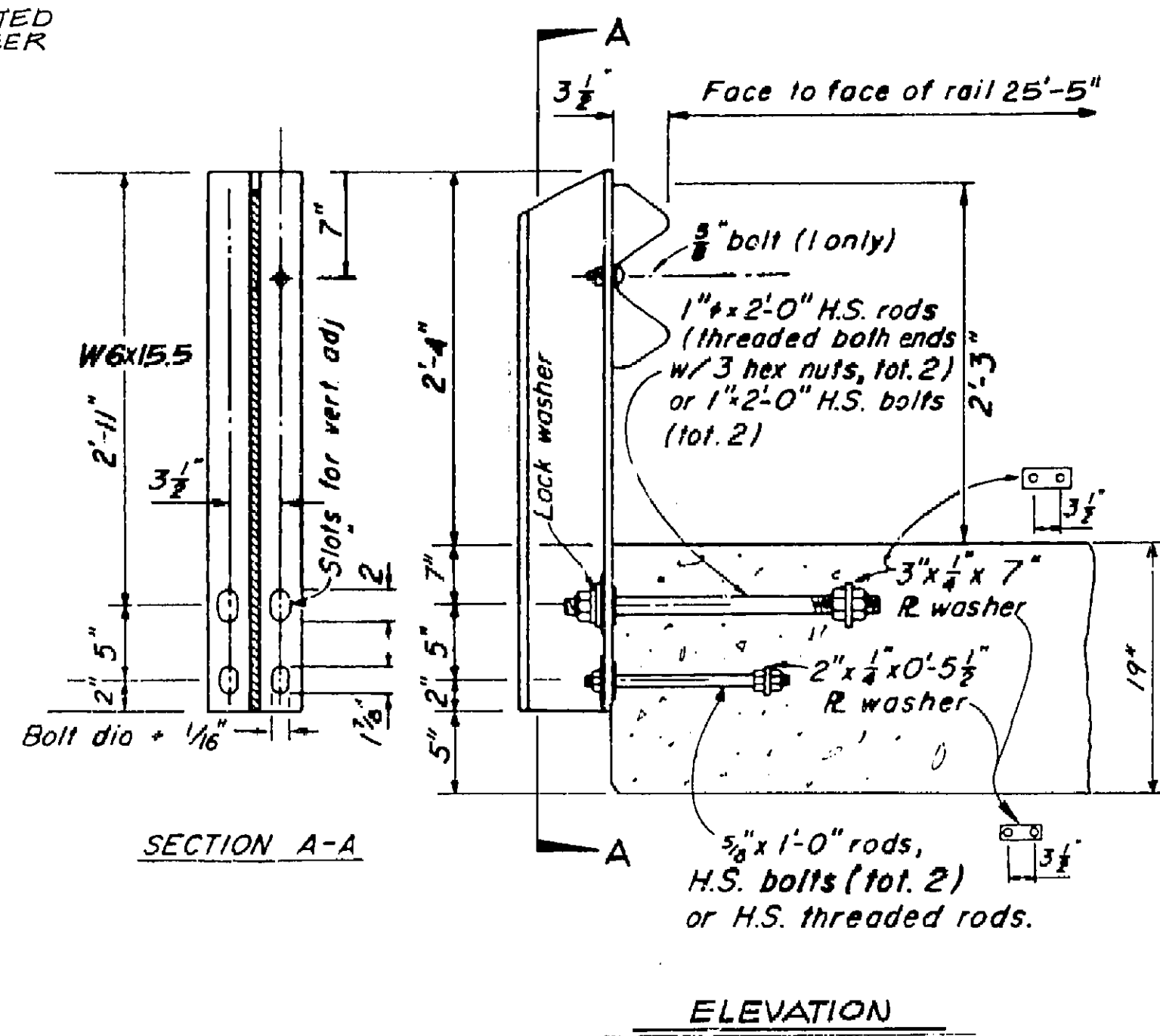
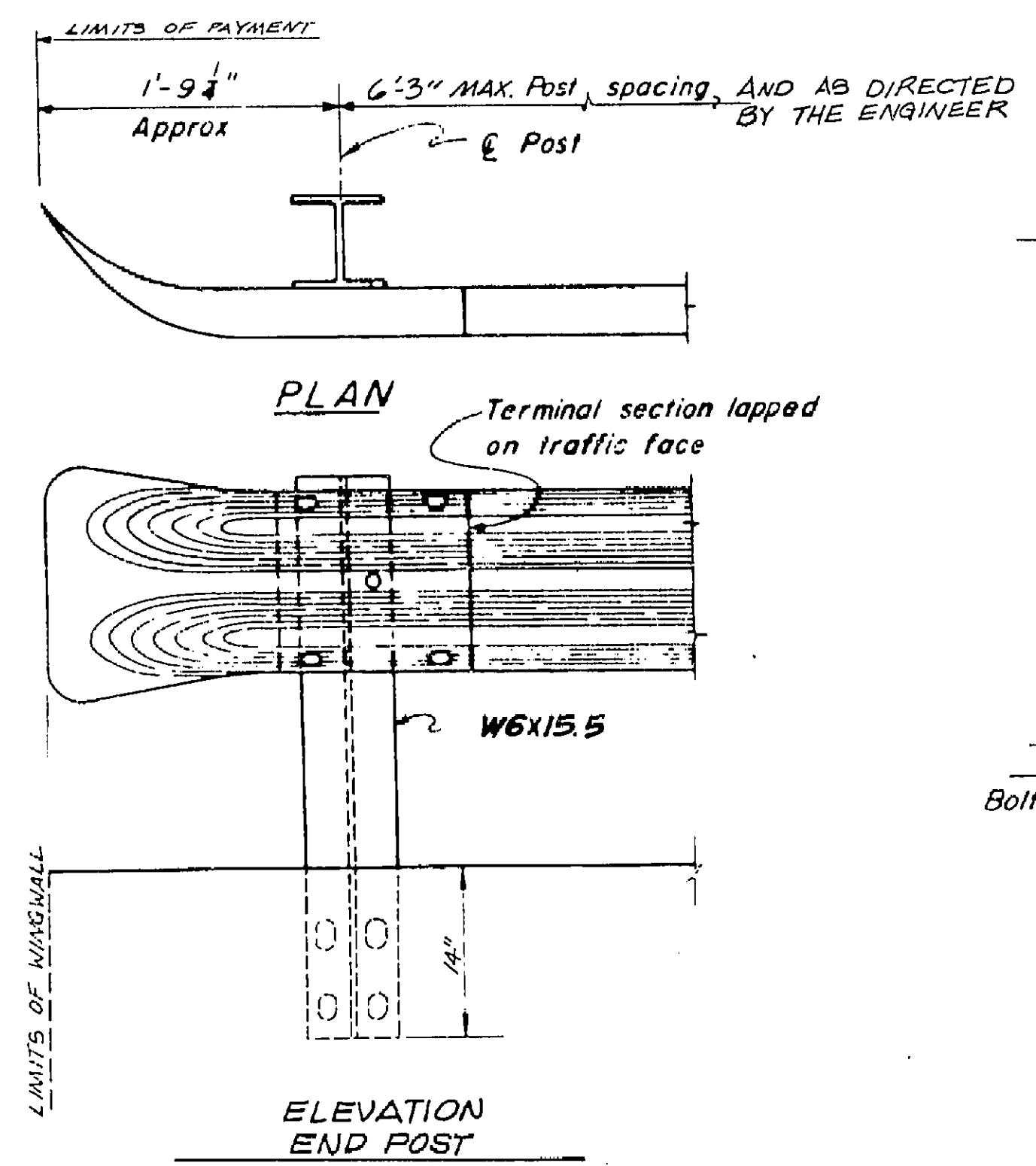
COUNTY OF ORANGE MATERIALS LAB  
 PROJECT Meads Ave. Handy Creek Bridge  
 DATE 1-21-88  
 SUP. EL. STREET GRADE

Lab No	DEPTH (ft)	SAMPLE LOG	TEST BORING NO.	DESCRIPTION	MOIST. %	SO <sub>2</sub> (ppm)	SE	DRY DENSITY	
507	0-5	SILTY SAND and SAND brown	1						
508	5-10	CLAYEY SAND $\rho = 17, \rho_w = 10$ pcf	1		11.2	<2000	116.0 pcf		
509	10-15	$\rho = 16, \rho_w = 10$ pcf	1		13.4		116.5 pcf		
510	15-20	GRAVELLY SILTY SAND, $\rho = 30, \rho_w = 20$ pcf	1		19.0		111.0 pcf		
Total depth = 20'									
Groundwater at 11.5'									
Undisturbed tests made									
Groundwater									



COUNTY OF ORANGE MATERIALS LAB  
 PROJECT Meads Ave. Handy Creek Bridge  
 DATE 1-21-88  
 SUP. EL. STREET GRADE

Lab No	DEPTH (ft)	SAMPLE LOG	TEST BORING NO.	DESCRIPTION	MOIST. %	SO <sub>2</sub> (ppm)	SE	DRY DENSITY	
552	0-5	SANDY CLAY black; SO <sub>2</sub> < 2000 ppm	2						
553	5-10	CLAYEY SAND brown; SO <sub>2</sub> < 2000 ppm	2						
554	10-15		2						
555	15-20		2						
Total depth = 20'									
Groundwater at 11.5'									
Undisturbed tests made									
Groundwater									



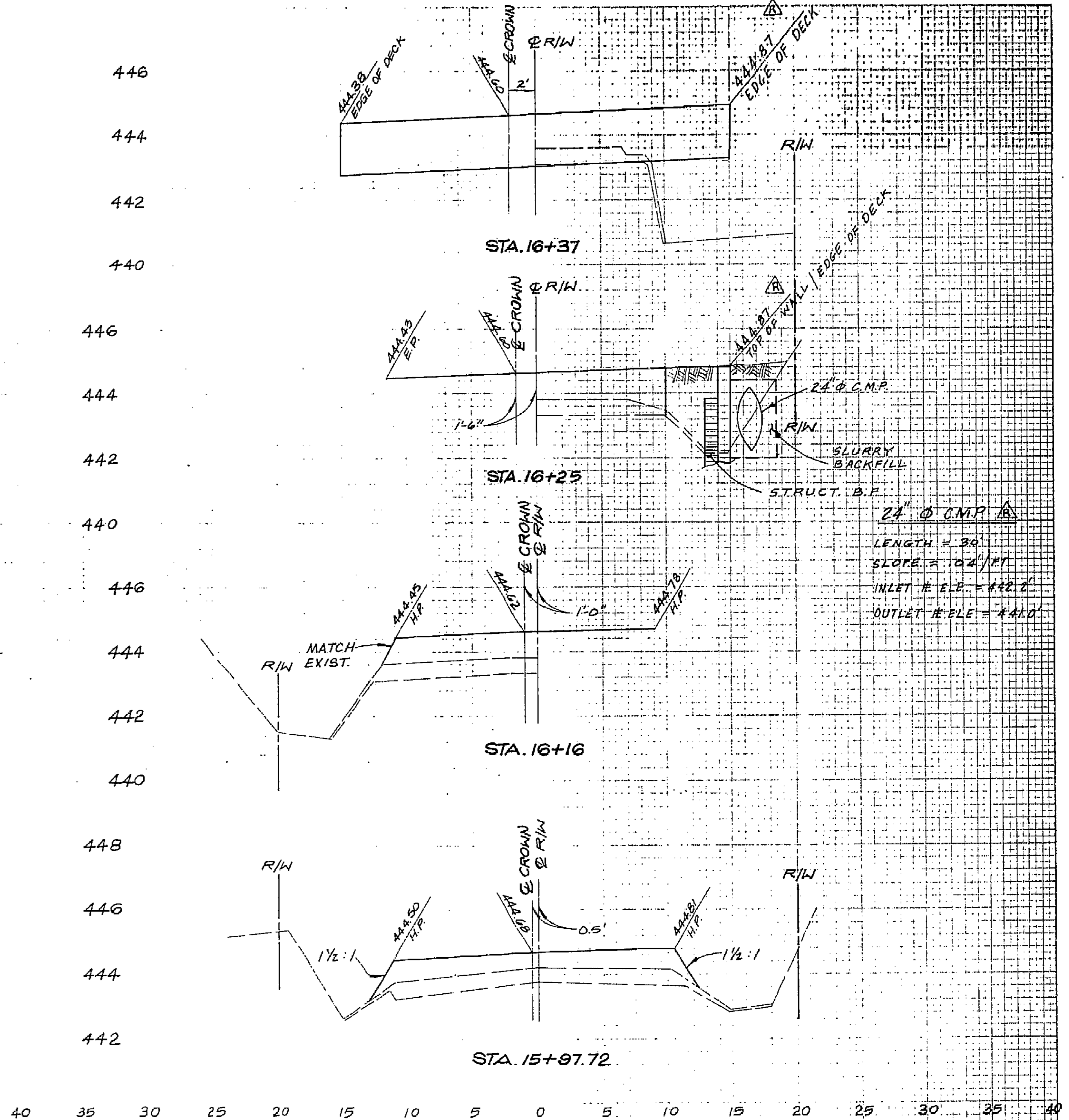
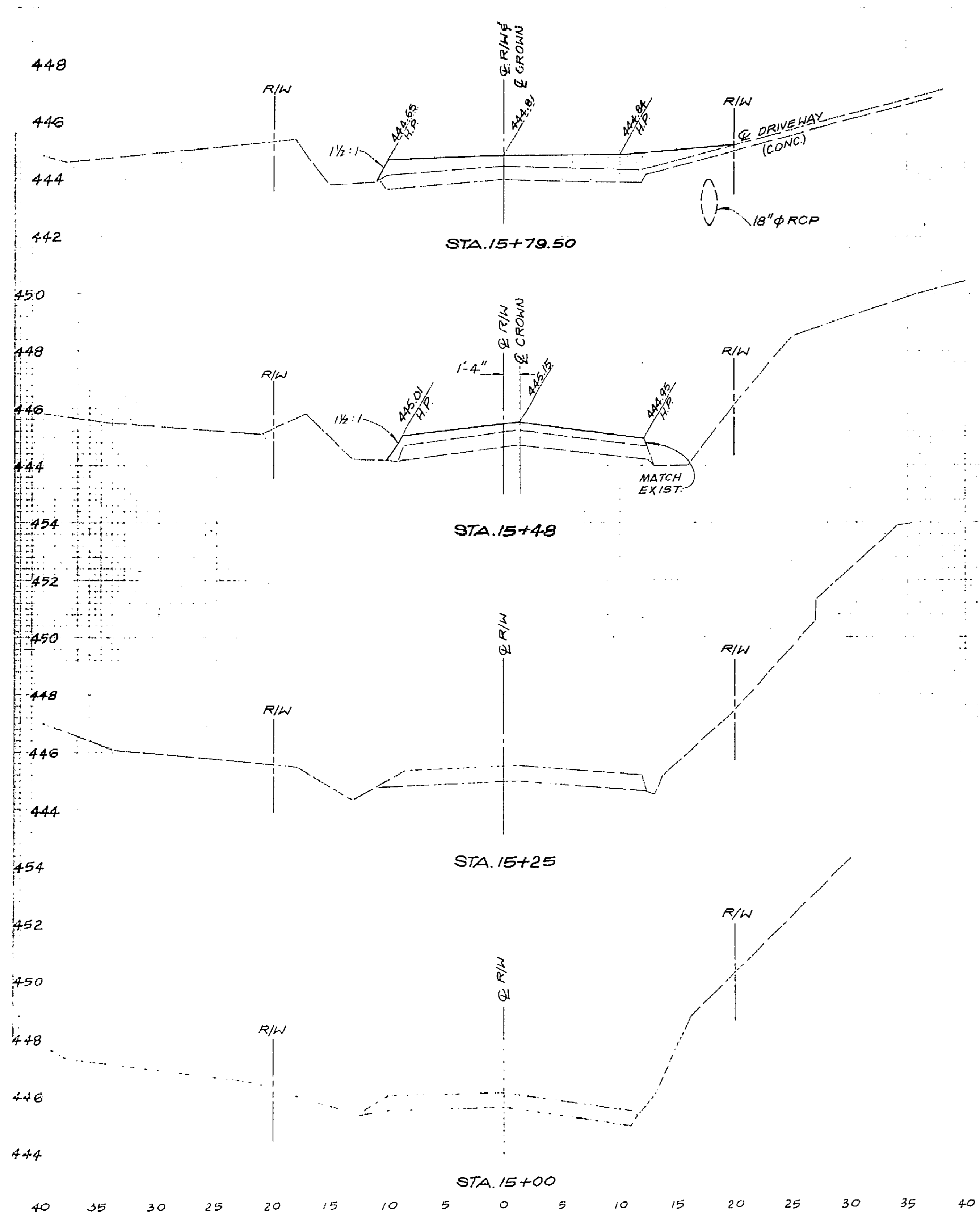
- NOTES:
- POSTS SHALL BE VERTICAL.
  - RAILING SHALL BE PARALLEL TO VERT. ALIGNMENT.
  - MAX. POST SPACING PER CAL TRANS STD. PLANS A79D AND AS DIRECTED BY THE ENGINEER.
  - RAILINGS ON BRIDGE WINGWALLS TO BE PLACED AFTER WALLS ARE BACKFILLED.
  - 3/4" STUD BOLTS SHALL BE TORQUED TO 175 FT.LBS
  - 3/8" STUD BOLT NUTS SHALL BE WRENCH TIGHT.
  - ANCHOR BOLT NUTS SHALL BE WRENCH TIGHT.
  - DESIGNED BY AASHTO, DATED 1973, AND INTERIM SPECS. DATED 1974, 1975 AND 1976. MODIFIED BY CAL TRANS.
  - DESIGN HEIGHT OF RAIL IS BASED ON A FUTURE OVERLAY OF 3" MAXIMUM.
  - METAL BEAM GUARD RAILING (POST & RAILING ONLY) TO BE SUPPLIED BY EMA
  - CURVE METAL BEAM GUARD RAIL TO MATCH EDGE OF DECK
- 1/2" 0 1 2  
3 inches on original drawing

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
MEADS AVENUE BRIDGE ACROSS HANDY CREEK CHANNEL (E08S06)	
MISCELLANEOUS DETAILS	
DATE: 1-21-88	REVISIONS: 1. RCE 30829 DATE 1/21/88
DESIGNER: J.D.S.	SCALE: DATE: DWG NO: 6
CHECKED: T.C.R., H.P., CHECKED: V.B.R.	DATE: 1/21/88

1-6-88  
 I - Donald Blackford  
 SUPERVISOR OF MICROFILM SERVICES

55C-534

DR. 12 (15007)



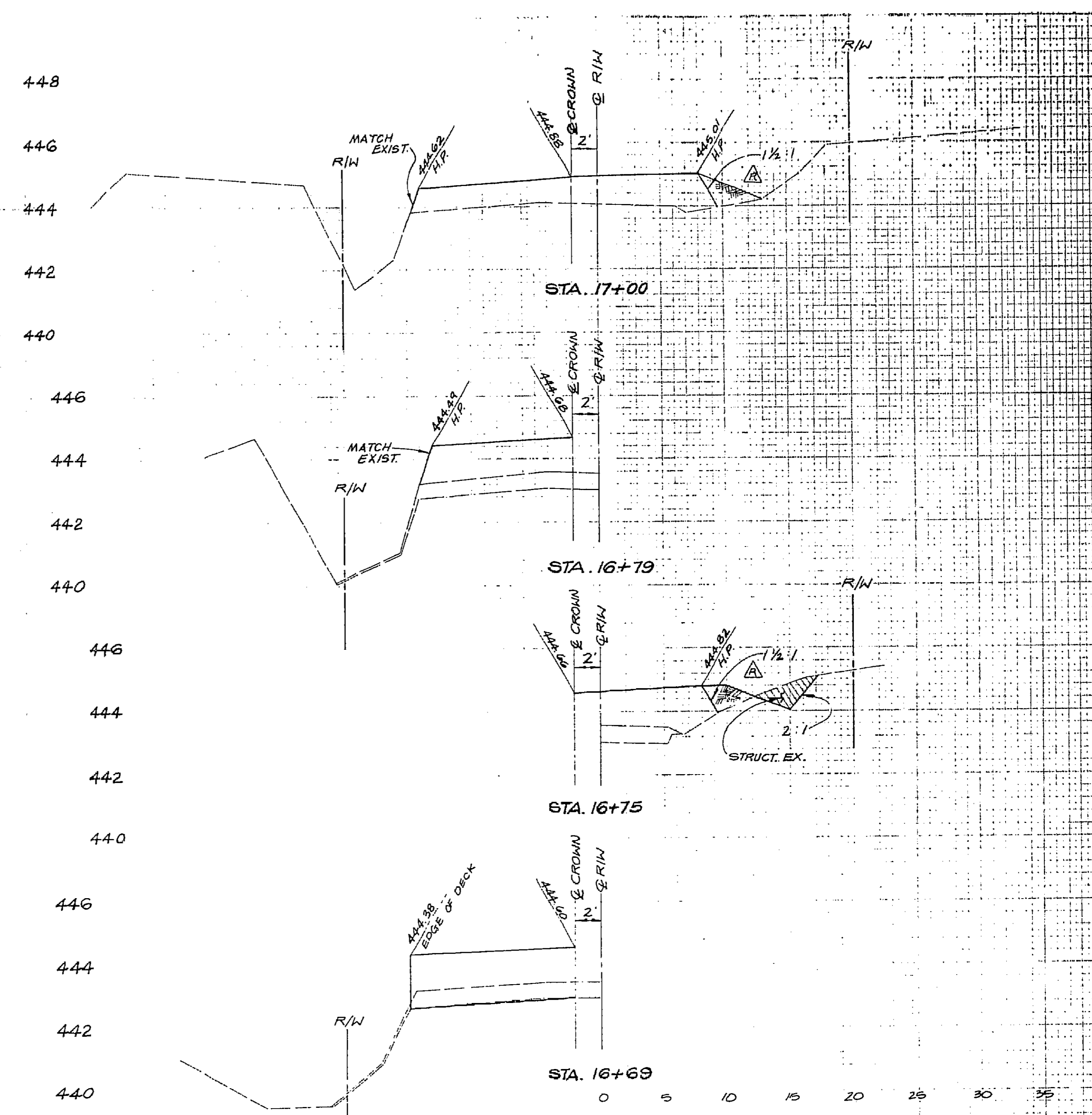
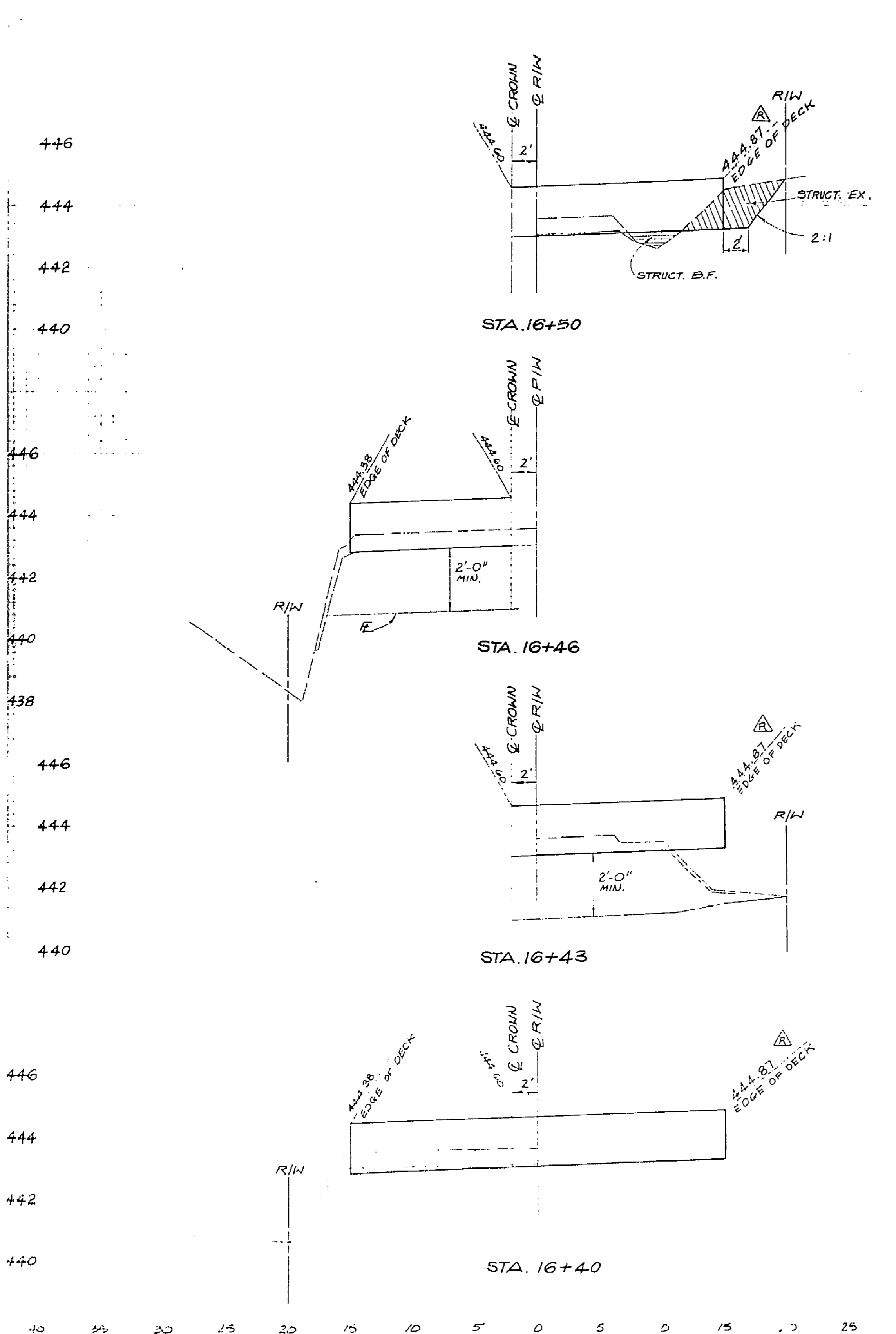
SCALE  
 H: 1"=5'  
 V: 1"=2'

55C-534

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
MEADS AVENUE BRIDGE ACROSS HANDY CREEK CHANNEL (EO 8806)	
X - SECTIONS	
STA. 15+00 TO STA. 16+37	
7-22-85 BRIDGE WIDENING	DATE 7
HELVISONG	R.C.E. 30829
J.D.S.	DATE 7
HP, TCR	OF 9

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1-6-88 Donald Blackford SUPERVISOR OF MICROFILM SERVICES



SCALE  
 H: 1"=5'  
 V: 1"=2'

OF YUBA COUNTY  
 ENVIRONMENTAL MANAGEMENT AGENCY

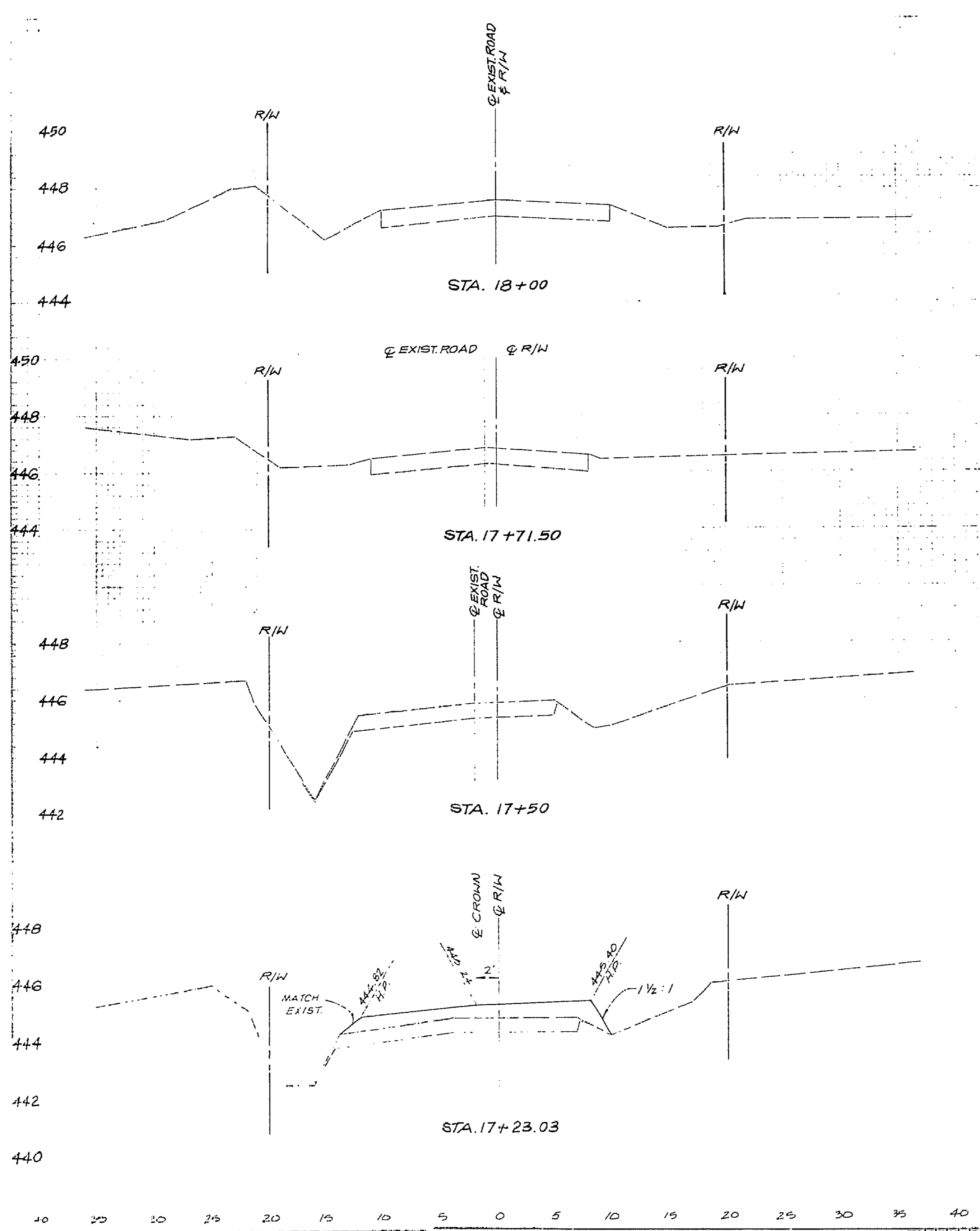
**MEADS AVENUE BRIDGE**  
 ACROSS  
 HANDY CREEK CHANNEL (EOBSOG)

**X - SECTIONS**  
 STA. 16+40 TO STA. 17+00

7-22-85 BRIDGE WIDENING  
 R.C.E. 30829 DATE 8  
 J.D.S. HP, TCR V.P.R. 8  
 OF 9

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 UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO  
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1-6-88 *Donald Blackford* SUPERVISOR OF  
 MICROFILM SERVICES



SCALE  
 H: 1" = 5'  
 V: 1" = 2'

55C-534

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
MEADS AVENUE BRIDGE ACROSS HANDY CREEK CHANNEL (E08906)	
X - SECTION	
STA. 17+23.03 TO STA. 18+00	
DATE	9
R.C.E. 30829	DATE
J.D.S.	DATE
HP, TCR, VPR	DATE
SHEET 9 OF 9	

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.  
 1-6-88  
 Donald Blackford  
 SUPERVISOR OF MICROFILM SERVICES