
Bridge Inspection Records Information System

The requested documents have been generated by the BIRIS.

The documents provided are considered confidential and may only be released outside of the department of transportation upon proper execution of the confidentiality agreement.

State of California
Department of Transportation

**Division of Maintenance
Structures Maintenance & Investigations**



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0283
Facility Carried: BROADWAY
Location : 100' N/E PACIFIC CST HWY
City :
Inspection Date : 31-OCT-01

Bridge Inspection Report

Inspection Type

Routine	Group A	Underwater	Special	Other
☐	☐	☐	☐	☒

Name : SUNSET CHANNEL

CONSTRUCTION INFORMATION

Year Built : 1959	Skew (degrees): 0
Year Widened : N/A	No. of Joints : 0
Length (m) : 29.3	No. of Hinges : 0

Description of Structure : Simply supported 4-span CIP/RC deck slab with RC pile bents and pile bent abutments.

Span Configuration : (S) 4 @ 7.0 m (N) c/c

LOAD CAPACITY AND RATINGS

Design Live Load : MS - 18	OR	HS - 20	
Inventory Rating : 19	metric tons	Calculation Method : LOAD FACTOR	
Operating Rating : 30.8	metric tons	Calculation Method : LOAD FACTOR	
Permit Rating : 00000			
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 : (W) 0.3 m br, 0.9 m sw, 2 @ 4.3 m, 0.9 m sw, 0.3 m br (E)	
Total Width : 11.0 m	Net Width : 8.50 m
Rail Description : Metal Railing	No. of Lanes : 2
Min. Vertical Clearance : Unimpaired	Rail Code : 1000

DESCRIPTION UNDER STRUCTURE

Channel Description : Tidal basin.

HISTORY

There is no history of scour for this structure. The previous Underwater Investigations report all footings were adequately covered and not visible. Also, the structure underwater is in good condition and as of May 14, 1996, there were no changes to report in the overall good condition.

REVISIONS

The National Bridge Inventory Item 113 Code has been revised from 6 to T.

SCOUR

This report addresses hydraulic issues only. The structure's scour potential has been assessed in accordance with the Federal Highway Administration Technical Advisory T5140.23, "Evaluating Scour at Bridges". The National Bridge Inventory Item 113 Code, "Vulnerability to Scour", has been changed to T: "Bridge over 'tidal' waters that has not been evaluated for scour, but considered low risk. Bridge will be monitored with regular inspection cycle and with appropriate underwater inspections until an evaluation is performed."

This evaluation is based on an office review of maintenance records and as built plans. A channel cross-section was not measured during the writing of this report.

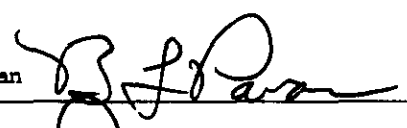
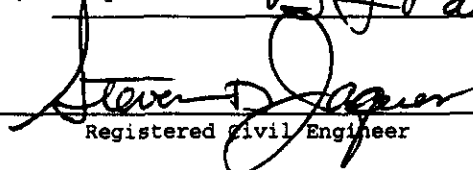
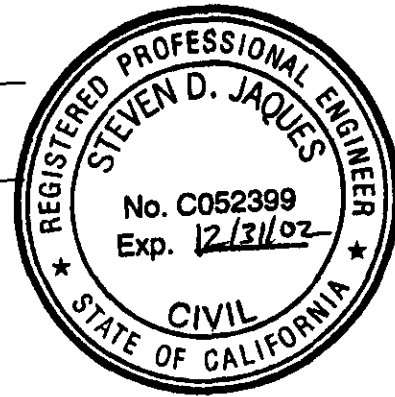
There is tidal influence to the channel spanned by this structure. However, since there is no history of scour as determined by the underwater investigations, this bridge is considered low risk for scour.

Bridge No.: 55C0283

Location: 100' N/E PACIFIC CST HWY

Inspection Date: 31-OCT-01

Inspected By : Barry L. Pavan



Registered Civil Engineer

CC : TMRut, DSM&I
Steve Jaques, Hydraulics
Ben Phan, ABME - South
Orange County



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0283
Facility Carried: BROADWAY
Location : 100' N/E PACIFIC CST HWY
City :
Inspection Date : 24-JUL-01
Inspection Type
Routine Group A Underwater Special Other
X

Bridge Inspection Report

Name : SUNSET CHANNEL

CONSTRUCTION INFORMATION

Year Built : 1959 Skew (degrees): 0
Year Widened : N/A No. of Joints : 0
Length (m) : 29.3 No. of Hinges : 0
Description of Structure : Simply supported 4-span CIP/RC deck slab with RC pile bents and pile bent abutments.

Span Configuration : (S) 4 x 7.0 m (N) c/c

LOAD CAPACITY AND RATINGS

Design Live Load : MS - 18 OR HS - 20
Inventory Rating : 19 metric tons Calculation Method : LOAD FACTOR
Operating Rating : 30.8 metric tons Calculation Method : LOAD FACTOR
Permit Rating : 00000
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 : (W) 0.3 m br, 0.9 m sw, 2 x 4.3 m, 0.9 m sw, 0.3 m br (E)
Total Width : 11.0 m Net Width : 8.50 m No. of Lanes : 2
Rail Description : Metal Railing Rail Code : 1000
Min. Vertical Clearance : Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description : Tidal basin.

CONDITION OF STRUCTURE

The concrete deck, adjacent to middle expansion joint, has spalled (0.1 m2).
Otherwise, the structure is in good condition.

UNDERWATER INVESTIGATION

An underwater investigation was performed in May, 1996.

ELEMENT LEVEL INSPECTION RATINGS

F#	Elem	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	3	240 sq.m.	0	240	0	0	0	0
01 205		Reinforced Conc Column or Pile Extension	4	15 ea.	15	0	0	0	0	0
01 215		Reinforced Conc Abutment	3	22 m.	22	0	0	0	0	0
01 234		Reinforced Conc Cap	3	33 m.	33	0	0	0	0	0
01 301		Pourable Joint Seal	3	33 m.	33	0	0	0	0	0
01 330		Metal Bridge Railing - Uncoated	2	56 m.	56	0	0	0	0	0

WORK RECOMMENDATIONS

Repair the deck spall (0.1 m2) adjacent to the middle expansion joint.

Item#	Rec. Date	Work By	Work Id.	Prog. Method	Cost
1	20-JUL-1995	County Agency	40283X95201X		

Bridge No.: 55C0283 Location: 100' N/E PACIFIC CST HWY Inspection Date: 24-JUL-01

Inspected By : M. Ogata

m. Ogata

Registered Civil Engineer



cc : TMRut
Orange County

Bridge No.: 55C0283 Location: 100' N/E PACIFIC CST HWY Inspection Date: 24-JUL-01

STRUCTURE INVENTORY AND APPRAISAL REPORT

***** IDENTIFICATION *****

(1) STATE NAME - CALIFORNIA 069
 (8) STRUCTURE NUMBER 55C0283
 (5) INVENTORY ROUTE (ON/UNDER) - ON 149 00000N
 (2) HIGHWAY AGENCY DISTRICT 12
 (3) COUNTY CODE 059 (4) PLACE CODE 00000
 (6) FEATURE INTERSECTED - SUNSET CHANNEL
 (7) FACILITY CARRIED - BROADWAY
 (9) LOCATION - 100' N/E PACIFIC CST HWY
 (11) MILEPOINT/KILOMETERPOINT 0
 (12) BASE HIGHWAY NETWORK - NOT ON NET 0
 (13) LRS INVENTORY ROUTE & SUBROUTE
 (16) LATITUDE 33 DEG 43 MIN 04 SEC
 (17) LONGITUDE 118 DEG 04 MIN 12 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 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 1959
 (106) YEAR RECONSTRUCTED 0000
 (42) TYPE OF SERVICE: ON - HIGHWAY-PEDESTRIAN 5
 UNDER - WATERWAY 5
 (28) LANES: ON STRUCTURE 02 UNDER STRUCTURE
 (29) AVERAGE DAILY TRAFFIC 1500
 (30) YEAR OF ADT 1998 (109) TRUCK ADT 14
 (19) BYPASS, DETOUR LENGTH 199 KM

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

(48) LENGTH OF MAXIMUM SPAN 7 M
 (49) STRUCTURE LENGTH 29.3 M
 (50) CURB OR SIDEWALK: LEFT .9 M RIGHT .1 M
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 8.5 M
 (52) DECK WIDTH OUT TO OUT 11 M
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 8.5 M
 (33) BRIDGE MEDIAN - CLOSED (NO BARRIER) 2
 (34) SKEW 0 DEG (35) STRUCTURE FLARED NO
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 8.5 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 - NO CONTROL CODE 0
 (111) PIER PROTECTION - NONE - REEVALUATE CODE 5
 (39) NAVIGATION VERTICAL CLEARANCE 0 M
 (116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR 0 M
 (40) NAVIGATION HORIZONTAL CLEARANCE 0

***** SUFFICIENCY RATING = 52.5 *****

STATUS =

HEALTH INDEX = 93.41

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

(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 ***** CODE

(58) DECK 6
 (59) SUPERSTRUCTURE 6
 (60) SUBSTRUCTURE 7
 (61) CHANNEL & CHANNEL PROTECTION 9
 (62) CULVERTS N

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

(31) DESIGN LOAD - MS - 18 OR HS - 20 5
 (63) OPERATING RATING METHOD - LOAD FACTOR 1
 (64) OPERATING RATING - 30.8
 (65) INVENTORY RATING METHOD - LOAD FACTOR 1
 (66) INVENTORY RATING - 19
 (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 5
 (68) DECK GEOMETRY 5
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
 (71) WATER ADEQUACY 9
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 1000
 (113) SCOUR CRITICAL BRIDGES 6

***** 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 1500
 (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 - YES 60 MO B) 05/96
 C) OTHER SPECIAL INSP - NO -1 MO C)

Bridge Number 55C-283

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

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

Date of Investigation August 13, 1997

Name SUNSET CHANNEL (Broadway, 100' northeast of Pacific Coast Highway)

CONDITION RATINGS:

Element Level Inspection (ELI) form attached.

Channel & Channel Protection

9

SCOUR CRITICAL:

A scour rating of A1 is appropriate.

MISCELLANEOUS DISCUSSION:

The inspection team consisted of Makoto Ogata and Faye Kirchhoff.

An underwater investigation was performed in May, 1996.

CONDITION OF STRUCTURE:

The concrete deck, adjacent to middle expansion joint, has started to spall. (O)

Otherwise, the condition of structure is good.

REVISIONS (RAIL RATINGS):

The rail posts are anchored onto the deck.

Rail Rating - (New) 1000 (Old) 0000

WORK NOT DONE:

Repair the deck spall.

7-20-95

WORK RECOMMENDED:

Do WORK NOT DONE.

Bridge No. 55C-283

Date August 13, 1997

Page 2

ENCROACHMENT:

One 0.20 m diameter wrapped steel pipe supported on east exterior.

M. Ogata
M. Ogata



MO:cd

c: TMRut
Orange County

DISTRICT	12
COUNTY	ORA
ROUTE	
POSTMILE	
NAME	

55C SHAWN ZANGANEH

ClibPDF - www.fastio.com

Bridge No. 55C-0283

SUPPLEMENTARY BRIDGE REPORT

DS-M19(REV.1-90)

Location 12-Ora-Ci.St.-HntB
Dist.,Co.,Rte.,FM,City

Date of Investigation 5/14/96

Name SUNSET CHANNEL (Broadway at PCH)

RATINGS:

⁷¹ Waterway Adequacy N ⁶¹ Channel & Channel Protection N ⁷² Approach Rdwy Align. N

TYPE OF INVESTIGATION/REPORT

Biennial Group A Other
Damage Underwater X Office

UNDERWATER INVESTIGATION, TYPE "B"

Divers: Hunt, Traina, Sahs, Keller
Water Type: Salt
Visability: 3 m

Substructure Investigated:

<u>Location</u>	<u>Depth m</u>	<u>Velocity m/s</u>	<u>Channel</u>	<u>Pier Type</u>
P2/3/4	2	0	Silt	RC Piles

NEXT INVESTIGATION:

"60" months

CONDITION OF STRUCTURE

No change since the last Supplemental bridge report.

Richard M. Hunt

Richard M. Hunt
Registered Civil Engineer

RMH:zbt

cc: Richard Dills



SUPPLEMENTARY BRIDGE REPORT

DS-M19 (REV. 2/93)

Bridge Number 55C-283

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

Date of Investigation July 20, 1995

TYPE OF INVESTIGATION/REPORT

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

Name SUNSET CHANNEL (Broadway, 100' northeast of Pacific Coast Highway)

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 A1 is appropriate.

UNDERWATER INVESTIGATION:

Last underwater investigation done - August 3, 1988.

CONDITION OF STRUCTURE:

Concrete deck, adjacent to middle expansion joint, has started to spall.

Condition of structure is good.

WORK RECOMMENDED:

1. Repair deck spall.
2. Underwater investigation needs to be performed.

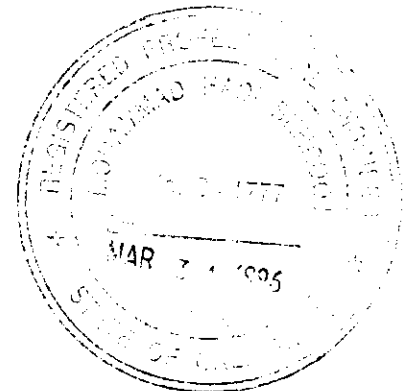
ENCROACHMENT:

One 0.20 m diameter wrapped steel pipe supported on east exterior.

By

M. Hadi Behrooj

G. P. Balinghasay



GPB:ms

cc: CDHarris
Orange County
WLindsey

INFORMATION ONLY - NOT FOR UPDATE

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

DISTRICT	12
COUNTY	ORA
ROUTE	
POSTMILE	
NAME	

[illegible]

BY:

Bridge No. 55C-283

Name SUNSET CHANNEL (Broadway, 100'
northeast of Pacific Coast
Highway)

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

SUMMARY OF ENCROACHMENTS

Permit No. and Permittee	Date	Description & Location on Bridge
	Prior to 7-20-95	One 0.20 m diameter wrapped steel pipe supported on east exterior.

SUPPLEMENTARY BRIDGE REPORT
DS-M19 (REV. 8/92)

Bridge Number 55C-283

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

Date of Investigation April 14, 1993

TYPE OF INVESTIGATION/REPORT

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

Name SUNSET CHANNEL (Broadway, 100' northeast of Pacific Coast Highway)

CONDITION RATINGS:

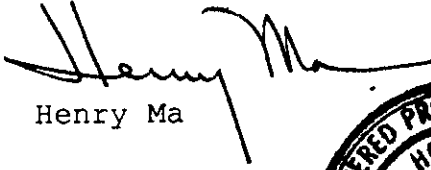
Condition ratings of all bridge elements are shown on the PONTIS DATA FORM (Attachment A).

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
55C0283	01	041493
1	8	9
		11
		16

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

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

[illegible]

H. MA

BY:

BRIDGE REPORT

13W15

Bridge No. 55C - 283

DS-MSB (REV. 1/91)

Location 12 - Ora - CR
Dist Co Rte City

REVISED ORIGINAL REPORT

Date of Investigation April 25, 1991

SUNSET CHANNEL
Name (Broadway, 100' northeast of Pacific Coast Highway)

Lat. 33° - 43.1'N Long. 118° - 04.1'W

Custodian County of Orange Owner County of Orange

STRUCTURAL DATA AND HISTORY

Year Built 1959 By County of Orange Contract No. Unknown

Designed by: County Plans Avail. @ County

Description: 4 span simply supported CIP RC slab supported by RC pile bents and pile bent abutments.

Spans (S) 4 @ 23' (N)

Length 96' NBIS Bridge Length Yes Skew None

Number Of Intermediate Joints: @Hinges None @Bents 3

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

Design Live Load H20-S16-44 Design Method Unknown

DESCRIPTION - ON STRUCTURE

Bridge Width (W) 1'br, 3'sw, 28', 3'sw, 1'br (E)

Total Width 36' Net Width 28' Lanes 2 Tracks None

Median None Rail Type Aluminum pipe 0000

Vert. Clearance over deck Unimpaired Appr. Rdwy. Width 28'

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 Small boat channel

April 25, 1991

DESCRIPTION - HYDRAULICS

Channel Tidal boat basin

Navigable: Yes ☐ No ☒ Clearances: Vert.

Horiz.

Pier/Abutment Protection (For Navigation) ☐

TRAFFIC INFORMATION

	DECK	YEAR	UNDER	YEAR
Average Daily Traffic & Year :	1,500 Est	1991	N	
Average Daily Traffic (Future) :	1,500 Est	2010	N	
Average Daily Trucks (% OF ADT) :	1% Est		N	
Bypass Detour Length	99 mile		N	
Shell Route:	No		No	
Functional Classification :	19		N	
LOAD RATINGS:	Inventory HS 12	Operating	HS 19	
	Permit 00000	Computation Method	Load Factor	

CONDITION RATINGS:

Deck	7	Superstructure	8	Substructure	8
Channel & Channel Protection	9	Culvert	N	Widenable	Yes

APPRAISAL RATINGS:

Waterway Adequacy	9	Approach Roadway Alignment	8
-------------------	---	----------------------------	---

Date of Revisions

CONDITION OF STRUCTURE:

Condition of the structure is good.

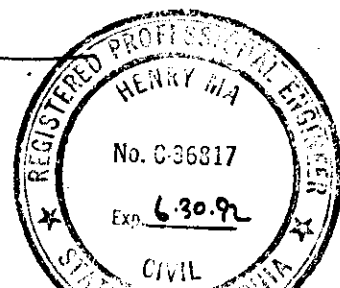
WORK DONE:

Extensive repairs have been made to superstructure and substructure and brought this bridge to a state of good maintenance. PCC sidewalk on both sides has been removed and replaced; all concrete deck surface has been patched and cracks sealed; all deck joints have been re-sealed; spalled areas in bent cap and exterior of deck slab previously noted have been repaired.

ENCROACHMENT:

8" wrapped steel pipe supported on east exterior.

Henry Ma



HM:ms

cc: INagai (2)
County of Orange

SUPPLEMENTARY BRIDGE REPORT

DS-M19 (REV. 8/88)

Bridge No. 55C-283

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

Date of Investigation 4-10-89

Name SUNSET CHANNEL (Broadway at Pacific Coast Highway)

CONDITION RATING:

Deck 6 Superstructure 7 Substr.&Pipes 7

Channel & Channel Protection 8 Culvert N Widenable? Yes

TYPE OF INVESTIGATION/REPORT

BIENNIAL X DAMAGE

CATEGORY A OTHER

UNDERWATER OFFICE

CONDITION OF STRUCTURE:

This structure is located in a marine environment. Deteriorated condition of spalled concrete and exposed reinforcing steel at various locations previously reported is continuing.

Condition of the structure is fair.

REVISION:

Location: 12-Ora-CR

WORK RECOMMENDED:

Repair spalled concrete to cover reinforcing steel at all locations stated in the previous reports. SUPM

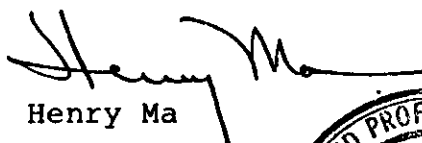
RECOMMENDED POSTING:

None.

SUBSTRUCTURE CODING UPDATE:

2 RC pile bent abutments.

3 RC pile bents.


Henry Ma

HM/cd

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



Bridge No. 55G-283
Location 12-Ora-CS-HntB
Dist - Co - Rte - PM - City

UNDERWATER INVESTIGATION REPORT

Date of Investigation August 3, 1988

Name SUNSET CHANNEL (Broadway at Pacific Coast Highway)

UNDERWATER INVESTIGATION:

An underwater inspection was made on this date by contract divers.

Contract No. 56G616

Contractor's Name: A-PAC Marine, Inc.

Divers' Name: Gary McMurray and Chris Provost

Diving Mode: Surface air supply

Next Inspection: ~~1990~~ ¹⁹⁹³ PER IN'S MEMO OF 11/22/88
11/28/88 T.H.

SUBSTRUCTURE DESCRIPTION:

Abutments 1 and 5 - Abutment is in the dry and not visible behind steel sheet piling channel wall, which exists in the two end spans.

Piers 2, 3 and 4 - 5 round RC pile extension bent cap with exterior battered piles.

DIVING CONDITION:

Access - Via bank

Visibility - Fair, 1' to 2'

Water depth - 4' to 6' at piers

Water type - Salt sea water

Water velocity - Tidal and negligible

Seabed - Soft silt and sea shells

Hazard - None

Bridge No. 55C-283
Sheet 2
August 3, 1988

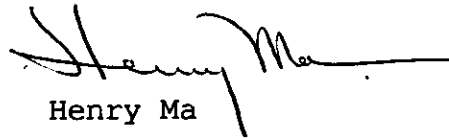
CONDITION OF STRUCTURE:

All piles under water were investigated.

There is hard marine growth on all piles with soft growth near bottom

Random scraping revealed no cracks in the concrete piling.

The structure under water is in good condition



Henry Ma

HM/cd
cc: INagai (2)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTARY BRIDGE REPORT
DH-OS M19 (REV. 1/74)

Bridge No. 55C-283
Location 7-Ora-CR
Dist - Co - Rte - PM - City
Date of Investigation April 28, 1987

SUNSET CHANNEL (Broadway at Pacific Coast Highway)

Name

CONDITION RATING:

Deck 6 Superstructure 7 Substr. & Pipes 7 Overall 3
Channel & Channel Protection 8 Retaining Walls N

APPRAISAL RATING:

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:

Deteriorating condition (cracks, spalls, and exposed reinforcing steel in sidewalk, deck and bent cap) of concrete previously reported remains the same. There has been no maintenance repairs made since last inspected.

Overall condition of the structure is good.

RECOMMENDED POSTING:

None

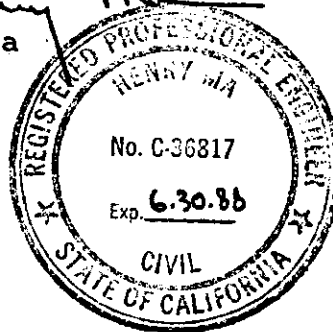
WORK RECOMMENDED:

Perform maintenance repairs as recommended in Supplementary Bridge Report dated January 15, 1986.

HM:pht

cc: INagai (2)
Orange County (2)

Henry Ma



C

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

Bridge No. 55C-283
Location 7-Ora-CR
Sta - Co - Pk - City
Date of Investigation January 15, 1986

Name SUNSET CHANNEL (Broadway at Pacific Coast Highway)

CONDITION RATING:

APPRAISAL RATING:

Deck (6) Superstructure (7) Substr. & Pipes (7) Overall 3
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

WORK NOT DONE:

Previously recommended work (Item 2) to repair north cracked fascia soffit corner has not been done.

WORK DONE:

Portions of previously recommended work has been done, i.e., Item 1 (repair sidewalk surface) and Item 3 (repair southeast corner bridge rail post anchor.)

REVISION:

Condition Rating - Deck 6
Superstructure - 7
Substructure & Pipes - 7

CONDITION OF STRUCTURE:

Corrosion of sidewalk reinforcing steel is still progressing and spalling the concrete, although some of the spalls have been previously repaired. Presently, there are sidewalk rebars exposed on the south side of structure near east end.

The deck concrete has spalls and exposed rebars at the second deck joint from the west in both the eastbound and westbound lanes.

CONDITION OF STRUCTURE: (Con't)

In Span 2 (from the west) at the north fascia soffit corner, concrete has spalled and fallen off for a distance of about 10 feet exposing reinforcing steel.

There is a concrete spall near the top of the north end of Bent 4 (from the west) cap.

Concrete piles are in good condition above waterline.

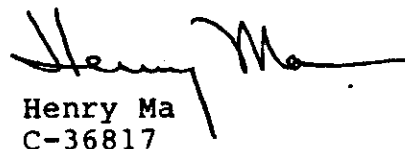
Otherwise, the overall condition of structure is fair.

RECOMMENDED POSTING:

None

WORK RECOMMENDED:

1. Chip and patch top of south sidewalk concrete near the east end to cover bar reinforcing steel. C
2. At the 2nd deck joint from the west on eastbound roadway, sawcut and remove unsound concrete (1.5' x 5') east side of joint and patch with epoxy bonded concrete. Also at the same joint on westbound roadway, remove and patch both sides of deck joint (1' x 7' and 2' x 3'). Replace deck joint seal after deck concrete has been repaired and cured. C
3. At the north fascia soffit corner of Span 2 (from the west), sawcut and remove spalled and unsound concrete, patch with epoxy bonded concrete. C
4. Chip and patch to cover rebar at top of north bent cap of Bent 4 from the west. C


Henry Ma
C-36817

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTARY BRIDGE REPORT
DH-OS M19 (REV. 1/74)

12W15

Bridge No. 55C-283
Location 7-Ora-CR
Dist - Co - Rte - PM - City
Date of Investigation May 25, 1983

Name SUNSET CHANNEL (Broadway at Pacific Coast Highway)

CONDITION RATING:

APPRAISAL RATING:

Deck 7 Superstructure 8 Substr. & Pipes 8 Overall 3
Channel & Channel Protection 8 Retaining Walls N

Widenable? Yes ☒ No ☐ Conditional ☐
County
Action Required by DIMMEX Yes ☒ No ☐

PRIORITY

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

WORK DONE:

The previously recommended work items No. 1 and 2 have been done.
Item No. 3 will be restated.

CONDITION OF STRUCTURE:

The cracks in the sidewalk are allowing water to enter and reach the reinforcing steel. The steel in the sidewalks is continuing to rust and is spalling the sidewalk concrete.

There is a horizontal crack 1/8" wide approximately 4" above the soffit in span 2 (from the west end) on the north side of the structure. The length of the crack is more than 1/2 the span length and includes a spall 4" X 4" X 2' long on the girder fascia with rusty rebar exposed.

STRUCTURE DAMAGE:

The aluminum bridge rail post has been hit at the southeast corner of the structure and has caused the bridge sidewalk 3' X 3' area to break up into small concrete pieces. The aluminum railing does not appear to be damaged but the base plate will require new anchor bolts to be cast in new concrete, and to reset the post and rail.

RECOMMENDED POSTING:

None

RECOMMENDATION:

1. Repair sidewalk surface to prevent future spalling. C
2. Saw cut to neat line, remove the cracked concrete on the north girder fascia, and patch with epoxy bonded cement mortar. B
3. Repair the sidewalk at the southeast corner and reset the bridge rail. A

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

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

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

Bridge No. 55C-283
Location 07-Ora-CR
Dist - Co - Rte - PM - City
Date of Investigation August 20, 1981

Name SUNSET CHANNEL (Broadway at Pacific Coast Highway)

CONDITION RATING:

APPRAISAL RATING:

Deck 7 Superstructure 8 Substr. & Pipes 8 Overall 3
Channel & Channel Protection 8 Retaining Walls N

Widenable? Yes ☒ No ☐ Conditional ☐

County:
Action Required by District: Yes ☒ No ☐

CONDITION OF STRUCTURE:

There is extensive spalling continuing on the top of both sidewalks. Concrete spalls in the deck at second joint from the southwesterly abutment. The bottom edge of the northerly girder fascia is cracked and spalled with rusty rebar exposed. The top edges of the bent caps are cracked.

REVISIONS:

Location - 07-Ora-CR
Custodian - Orange County EMA
Owner - Orange County EMA

RECOMMENDED POSTING:

None.

RECOMMENDATIONS:

1. Repair the sidewalk spalling and patch with epoxy bonded mortar, or set 45 concrete.
2. Repair concrete spalls in the bridge deck with set 45 concrete.
3. Saw cut to neat lines and patch the northerly girder spall with epoxy bonded mortar.

E. L. Neff
E. L. Neff **
C 28703

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
BRIDGE REPORT
DS-M58 (REV. 1/75)

SEE REVISED
ORIGINAL REPORT

Bridge No. 550 - 283

Other No. AN - 2

P.U.C. No.

Location 07-ORA-HUNTINGTON BEACH
Dist - Co - Rte - PM - City

Date of Investigation September 28, 1978
October 4, 1978

Name SUNSET CHANNEL (Broadway at Pacific Coast Highway)

Lat. 33° - 43.1' Long. 118° - 04.1'

STRUCTURAL DATA AND HISTORY

Year Built 1959 By Orange County Highway Dept. Contract No. Unknown

Date of Revisions

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

Description: 4 span simply supported RC slab, RC seated abutments supported on piles and RC 5 column pile bents.

Spans 4 @ 23'

Length 96' Skew None Design LL H20-S16-44

Ratings: Inventory HS 11.8/LF Operating HS 19.4/LF Permit 00000/LF

DESCRIPTION - ON STRUCTURE

Bridge Width 3' sw, 28.0, 3' sw

Total Width 36.0' Lanes 2 Tracks None

Median None Rail Type Steel Pipe (0000)

Vert. Clearance over deck Unimpaired Appr. Rdwy. Width 28'

Wearing Surface None Deck Seal None

Alignment Tangent

DESCRIPTION - UNDER STRUCTURE

Roadway Section None

Clearances: Vert. Horiz.; Lt. Rt.

Lanes Tracks Pumpplant: None ☐ See Br. No.

Facilities Crossed Sunset Channel

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
BRIDGE REPORT
DS-M58A (REV 1/75)

Bridge No. 55C - 283

Date September 28, 1978
October 4, 1978

DESCRIPTION - HYDRAULICS

Channel Private Boat Access - Tidal Fluctuations

Navigable: Yes ☒ No ☐ Clearances: Vert. LW 10, HW 5 Horiz. 21

MAINTENANCE

Custodian City of Huntington Beach Owner City of Huntington Beach

**ORIGINAL
CONDITION RATING**

Deck	<u>7</u>
Superstructure	<u>8</u>
Substructure & Pipes	<u>8</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>3</u>
Deck Geometry	<u>4</u>
Underclearances	Vert. <u>N</u>
	Horiz. <u>N</u>
Safe Load Capacity	<u>5</u>
Waterway Adequacy	<u>8</u>
Approach Rdwy. Alignment	<u>9</u>

Widenable? Yes ☒ No ☐ Conditional ☐

City
Action Required by ~~OWNER~~: Yes ☐ No ☐

AVERAGE DAILY TRAFFIC: 750* (1978)

BYPASS DETOUR LENGTH: 99

ENCROACHMENTS: 8" gas line attached to southerly side.

CONDITION OF STRUCTURES: Extensive spalling on top of both sidewalks.
Concrete spalls in deck at 2nd bent joint from westerly abutment.
Bottom edge of northerly fascia is cracked and spalled exposing rusty rebar. Top edges of bent caps are cracked.

BRIDGE No. 55C - 283
SHEET 3 of 3
DATE September 28, 1978
October 4, 1978

LOAD CAPACITY: The load ratings have been calculated in accordance with the "Manual of Maintenance Inspection of Bridges" - 197
The structure is safe for legal loads and Orange overloads.

D. B. JENNINGS

and: Original signed by

C. E. BROUSSARD

DBJ/CEB/sgr

cc: District 07 - Local Assist.
City of Huntington Beach (2)

INDEX OF SHEETS

SHEET NO	TITLE SHEET
" 2	GENERAL PLAN
" 3	FOUNDATION PLAN
" 4	ABUTMENT, BENT, & BULKHEAD DETAILS
" 5	SUPERSTRUCTURE
" 6	STRUCTURAL EXCAVATION & BACKFILL
" 7	LOG OF TEST BORINGS

HIGHWAY DEPARTMENT COUNTY OF ORANGE

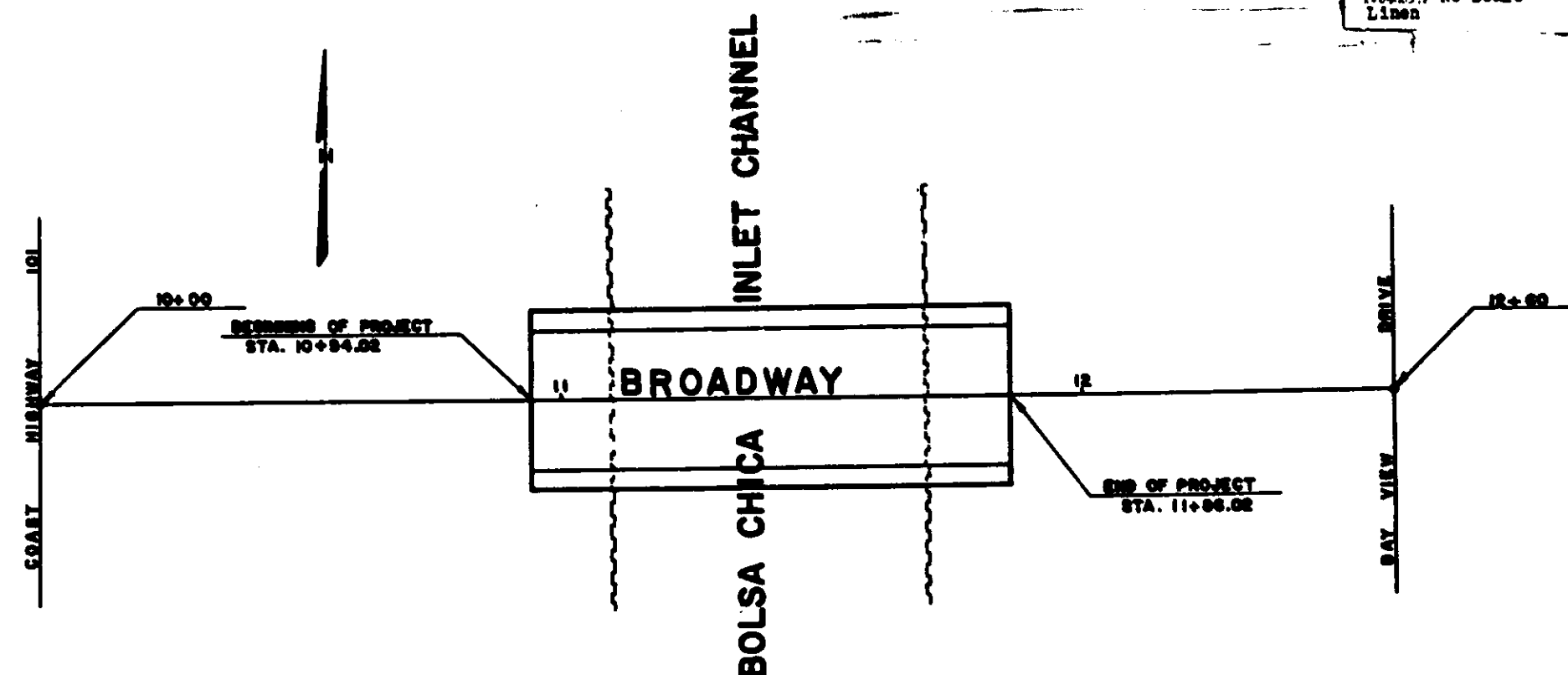
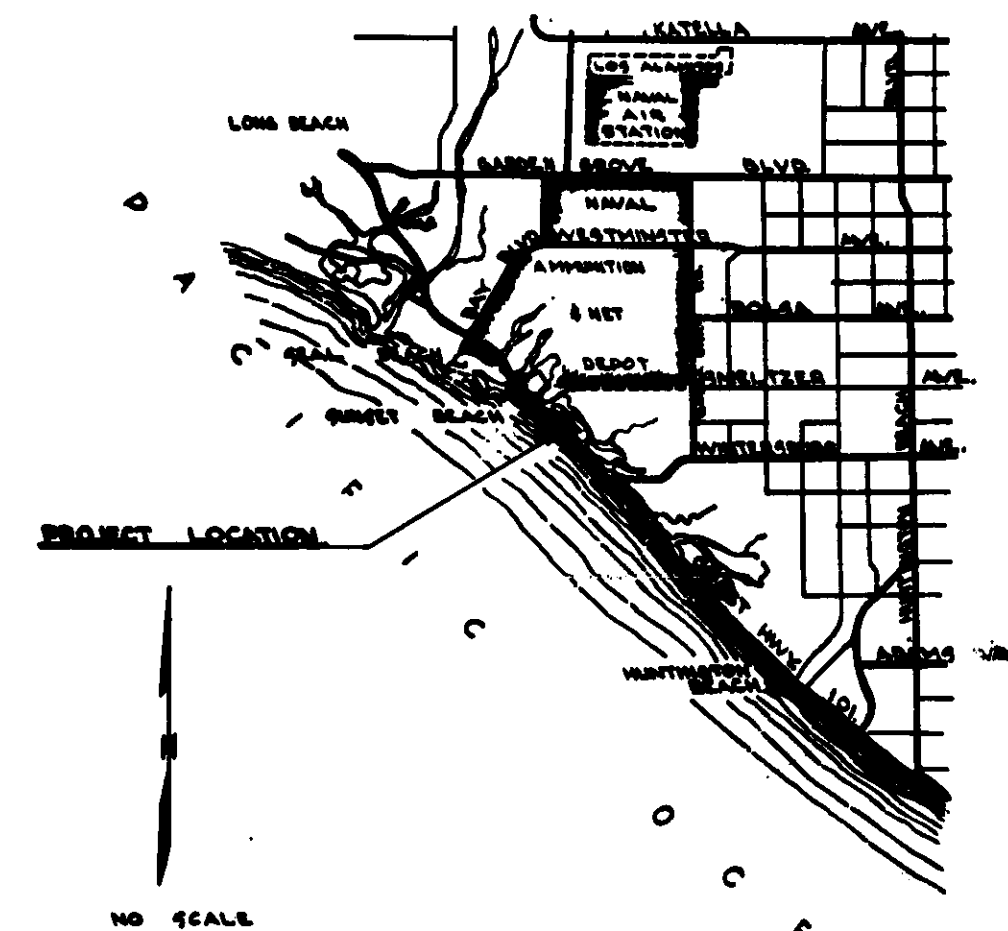
PLAN

BROADWAY BRIDGE AN-2

ACROSS BOLSA CHICA INLET
CHANNEL
IN SUNSET BEACH

FROM STATION 10+94.02 TO STATION 11+86.02

TOTAL LENGTH 0.0174 MILES



Bridge #AN-2
Broadway Bridge
Across Bolsa Chica Inlet
Channel
Sheet 1 of 7
Plans / No Scale
Linen

COUNTY OF ORANGE
ROAD COMMISSIONER
CIVIL ENGINEER LICENSE NO. 7872

HARBOR ENGINEER
CIVIL ENGINEER LICENSE NO. 7887

CONVENTIONAL SIGNS

COUNTY LINE	BANK-RETAINING WALL
CITY-TOWN LIMITS	LEVEE
TOWNSHIP LINE	CULVERTS
SECTION LINE	DROP BULETS
GRANT LINE	TROLLEY POLE
FENCE	POWER POLE
GUARD RAIL	POWER TOWER
UNFENCED PROPERTY	TELEGRAPH POLE
R/W LINE	TELEPHONE POLE
BASE OR SURVEY LINE	MARSH
TRAVELLED WAY	
RAILROAD TRACKS	

LAYOUT PLAN



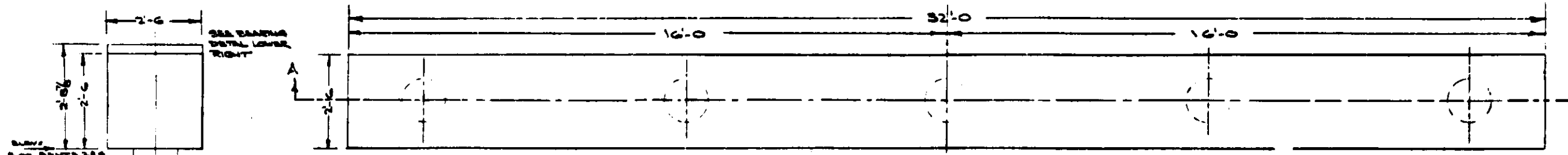
AN-2

Broadway Bridge

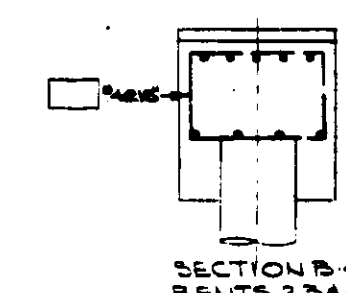
AN-2

BR# 55C-283

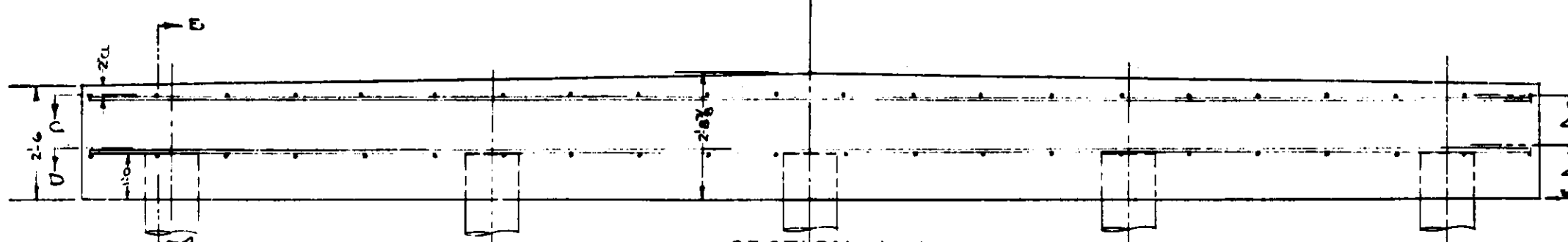
1959



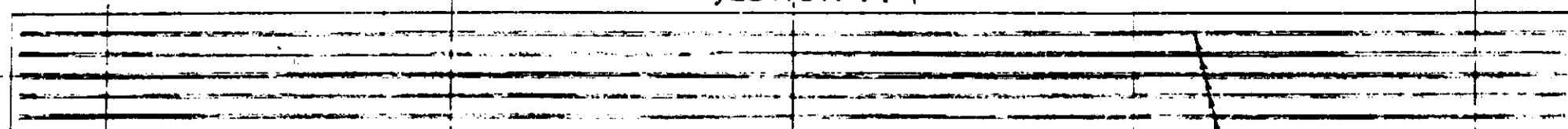
PLAN BENTS 2,3&4
SCALE 1/4"=1'-0"



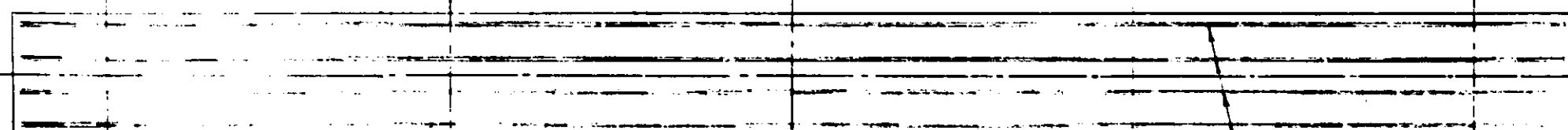
SECTION B-4
BENTS 2,3&4



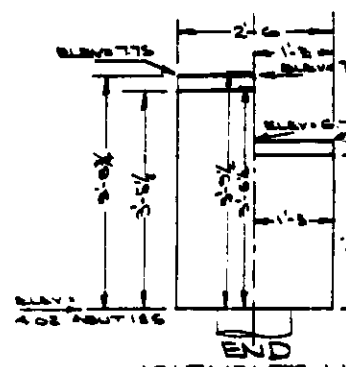
SECTION A-4



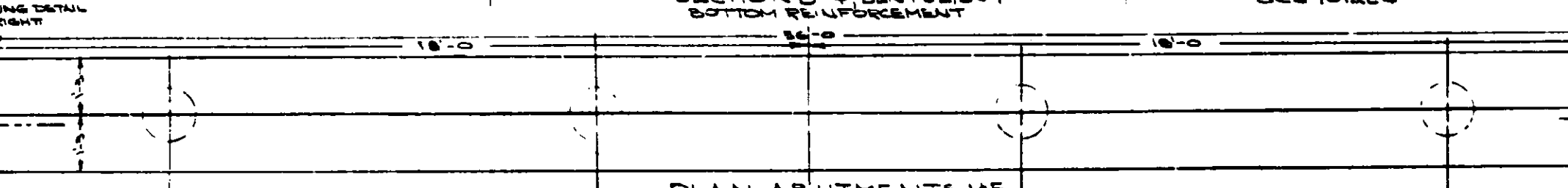
SECTION C-4 BENTS 2,3&4
TOP REINFORCEMENT



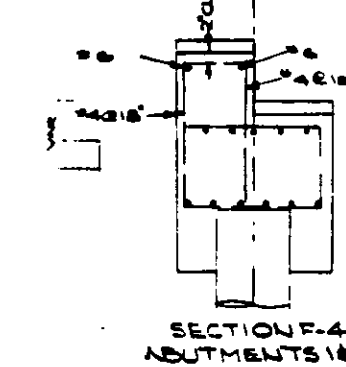
SECTION D-4 BENTS 2,3&4
BOTTOM REINFORCEMENT



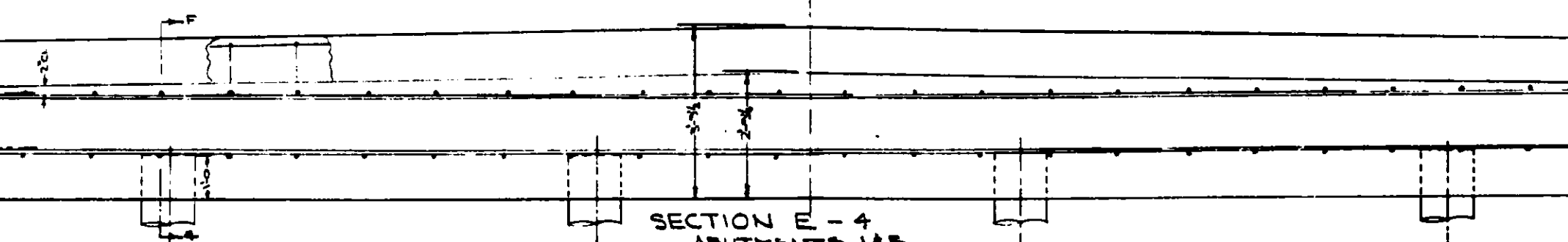
END
ABUTMENTS 1&5



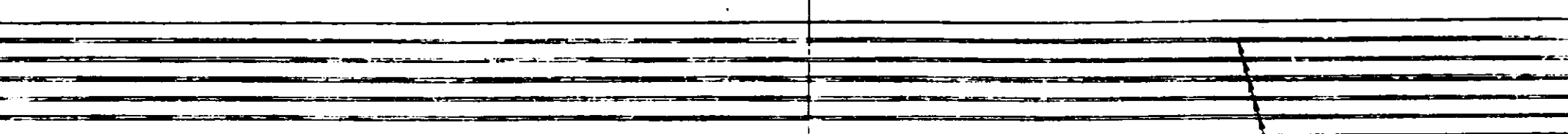
PLAN ABUTMENTS 1&5
SCALE 1/4"=1'-0"



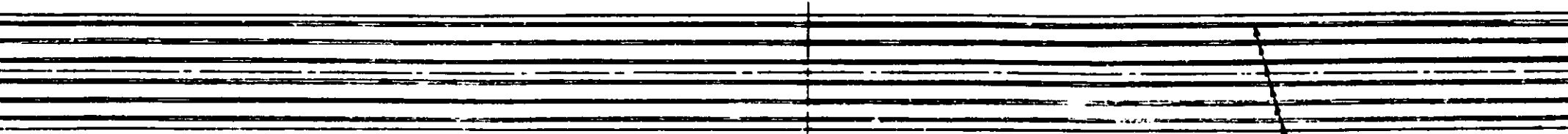
SECTION F-4
ABUTMENTS 1&5



SECTION E-4
ABUTMENTS 1&5

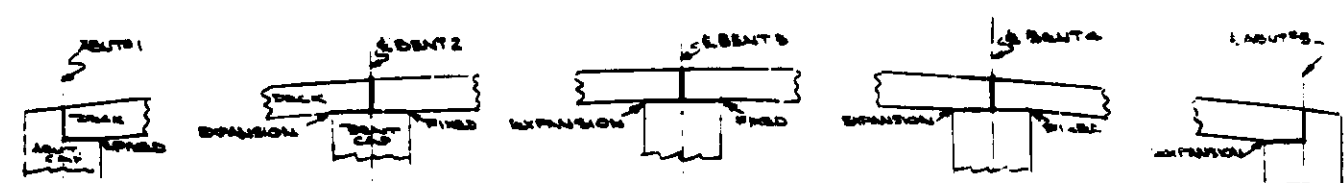


SECTION G-4 ABUTMENTS 1&5
TOP REINFORCEMENT

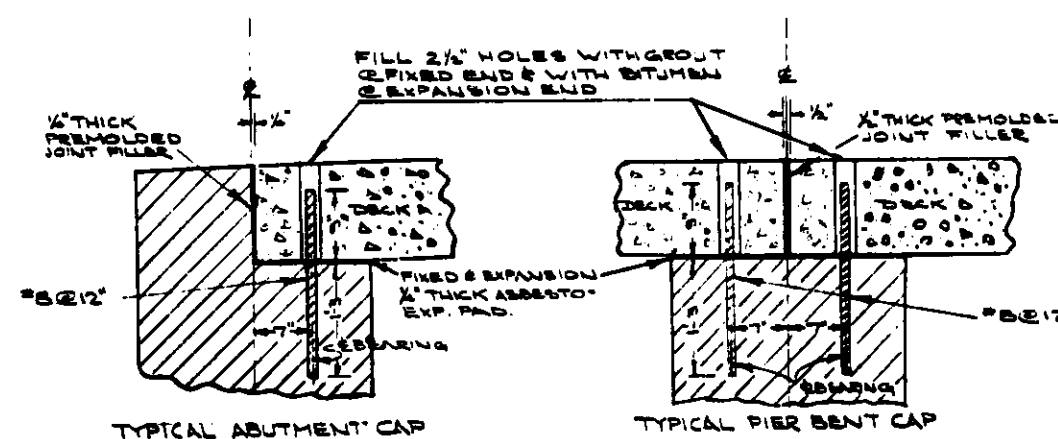


SECTION H-4 ABUTMENTS 1&5
BOTTOM REINFORCEMENT

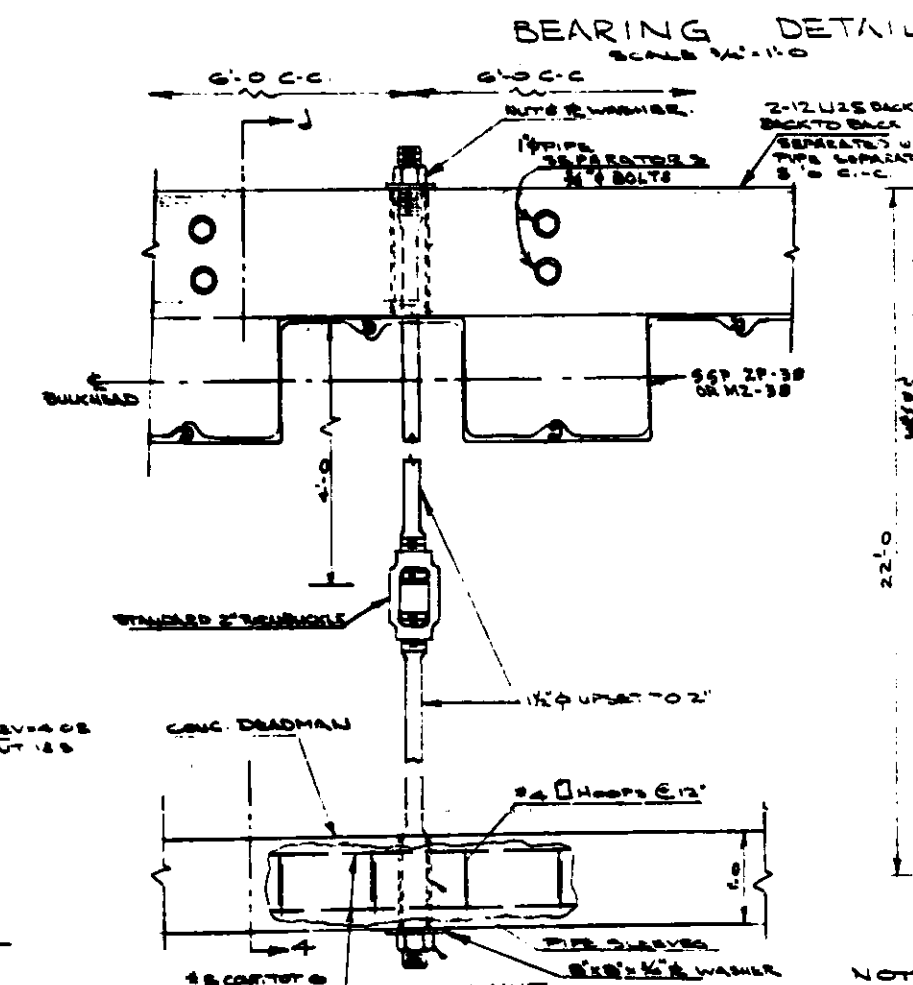
Bridge #AN-2
Broadway Bridge
Across Bolsa Chica
Inlet Channel
Sheet 4 of 7
Rd 22.5' Scale as shown
Penell sketch



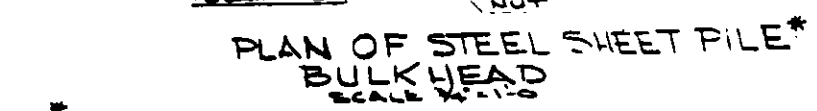
SCHEMATIC BEARING LAYOUT
NOT TO SCALE



TYPICAL ABUTMENT CAP
TYPICAL PIER BENT CAP



BEARING DETAIL
SCALE 1/4"=1'-0"



PLAN OF STEEL SHEET PILE
BULK HEAD
SCALE 1/4"=1'-0"

- NOTES:
1. APPLY 2 COATS TIT. CHEM. AS MANUFACTURED BY PITTSBURGH COKE & CHEMICAL CO. OR EQUIVALENT AT A RATE OF 100 LBS PER SQ. YD. TO BE APPLIED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
 2. TIE-BACK METAL TO HAVE SHOP COAT OR A CUTBACK NO. 20 COAT-TAR.
 3. AFTER INSTALLATION TIE-BACK METAL IS TO BE THOROUGHLY WRAPPED WITH TWO (2) SUCCESSIVE LAYERS OF 18 OUNCE INCH OIL OR OIL-RESISTANT FABRIC. EACH LAYER TO HAVE ONE HEAVY COAT OF NO. 20 COAT-TAR.
 4. ALL PARTS WHICH CANNOT BE SUCCESSFULLY WRAPPED SHALL HAVE THREE (3) COATS OF NO. 20 COAT-TAR APPLIED OVER THE SHOP COAT.
 5. EACH COAT SHALL BE THOROUGHLY DRY BEFORE ANY SUCCEEDING COAT IS APPLIED.

SECTION J-4
SCALE 1/4"=1'-0"

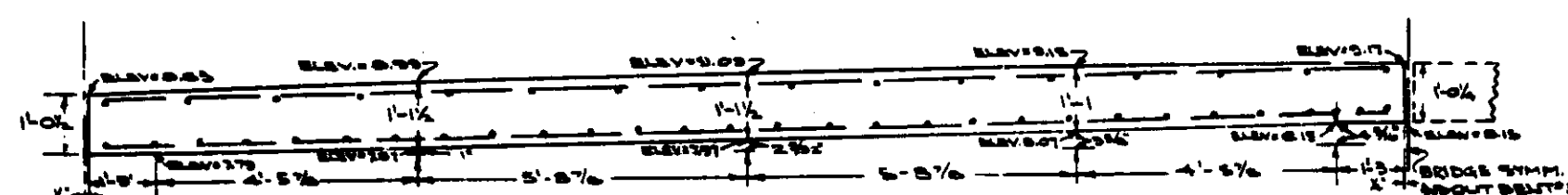
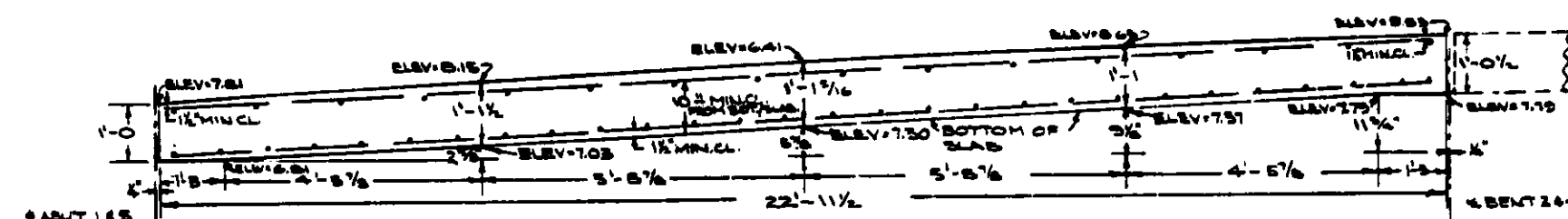
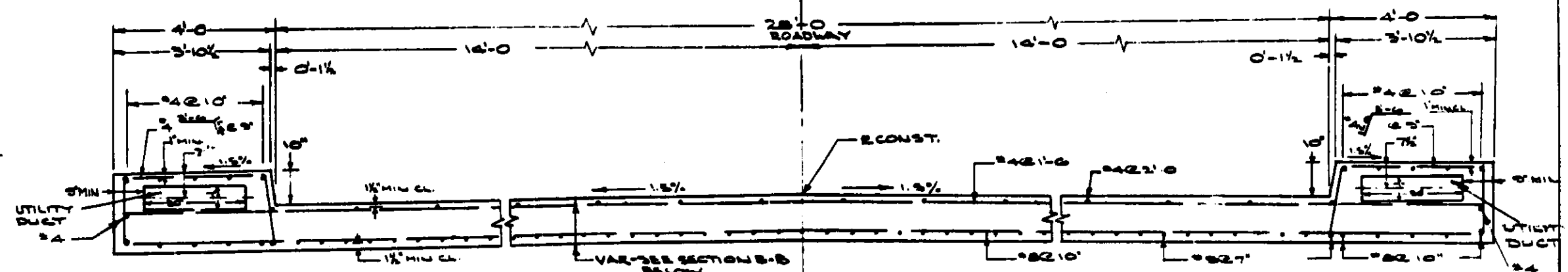
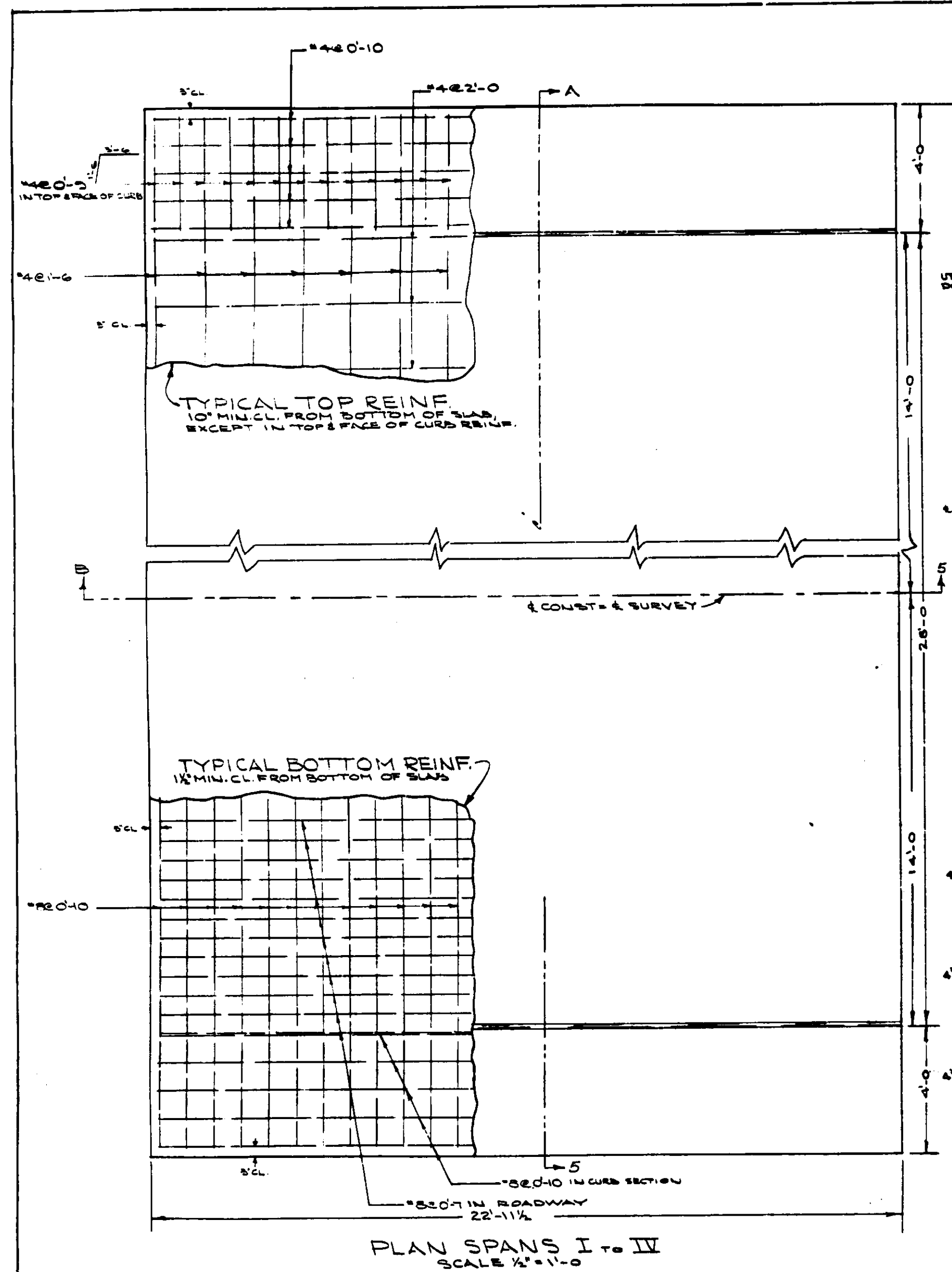
NOTES (CONT.)
ALL TIE-BACK METAL SHALL BE PROTECTED BEFORE & AFTER COATING. NOTWITHSTANDING THE COATING, TIE-BACK METAL SHALL BE CORRODED BY ALL CONCRETE. TIE-BACK METAL SHALL BE CLASS "A" (6) BULKHEAD P.C.C.

ORANGE COUNTY HIGHWAY DEPARTMENT	
BROADWAY BRIDGE ABUTMENT, BENT & BULK HEAD	
55C-283	
SCALE AS SHOWN	SHEET 4 OF 7

AN-2

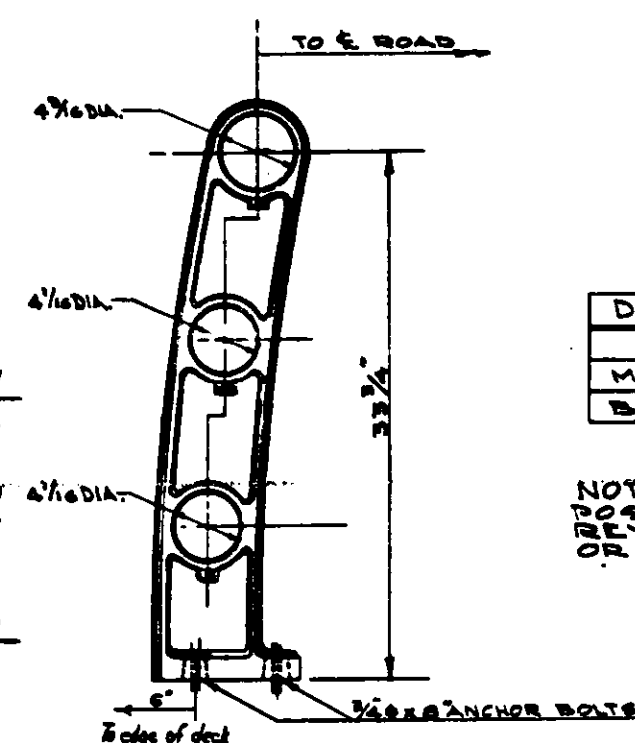
AN-2

MICROFILMED
JUN 30



NOTE:

- 1- RAILINGS NOT SHOWN
- 2- SET ANCHOR BOLTS TO MATCH FABRICATED RAILING.



DESCRIPTION	SIZE
TOP RAIL	4 1/2" O.D. x 1/8" WALL
MIDDLE RAIL	4" O.D. x 3/8" WALL
BOTTOM RAIL	4" O.D. x 1/8" WALL

NOTE:
POST TO BE PERM. MOLD CASTING.
REYNOLDS #381, ALCOA #3001
OR EQUAL.

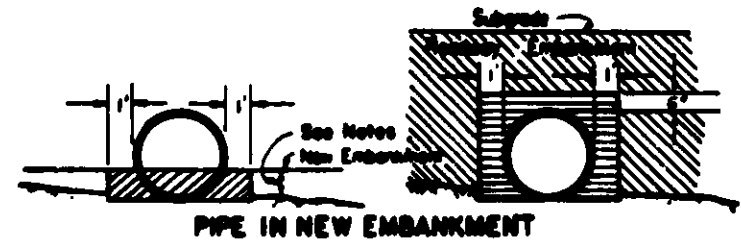
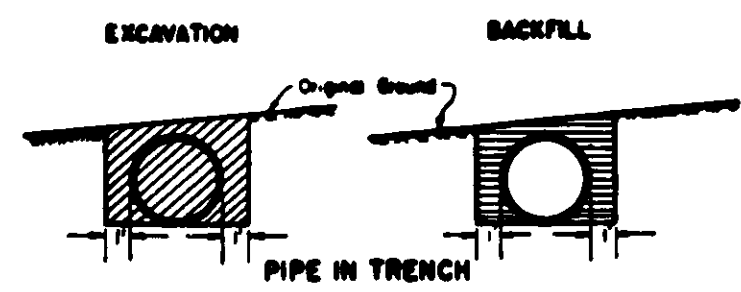
Bridge #AN-2
Broadway Bridge
Across Bolsa Chica
inlet Channel
Sheet 5 of 7
RCD 215-1 Scale as shown
Pencil Sketch

55C-283

COUNTY OF ORANGE ENGINEERED BY CHECKED BY APPROVED BY DATE	ORANGE COUNTY HIGHWAY DEPARTMENT	
	BROADWAY BRIDGE	
	SLAB & MISCELLANEOUS	
	DETAILS	
	SUPERSTRUCTURE	
	SCALE: AS SHOWN	SHEET 5

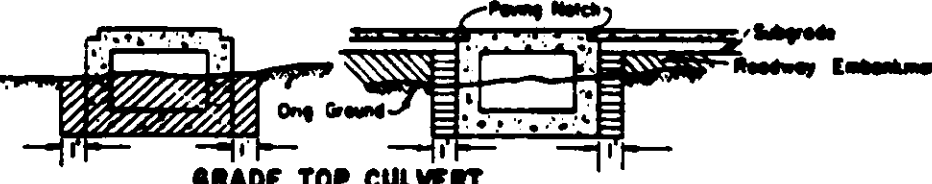
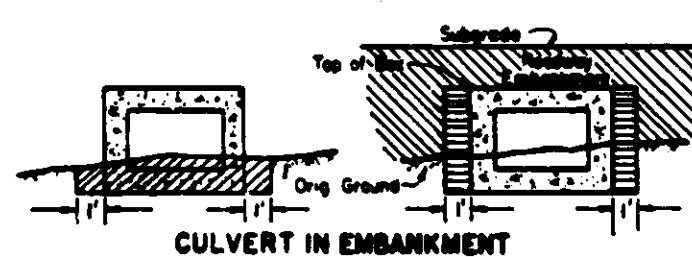
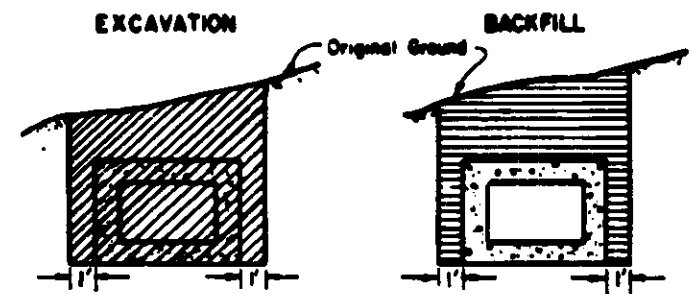
MICROFILMED
JUN 30 1966

AN-2

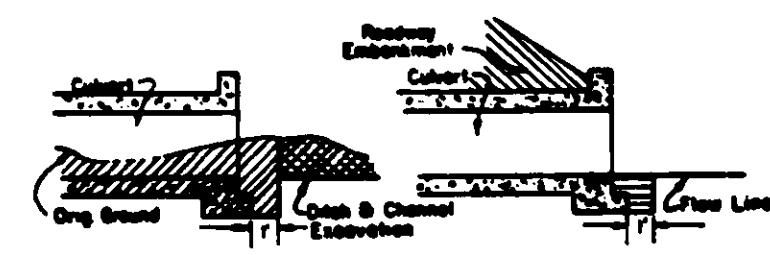
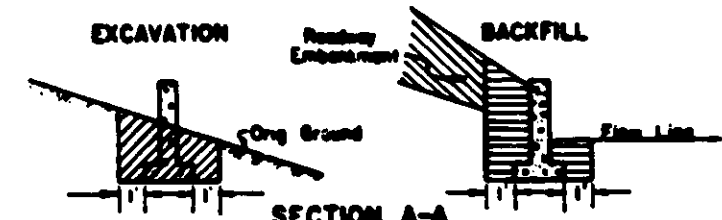
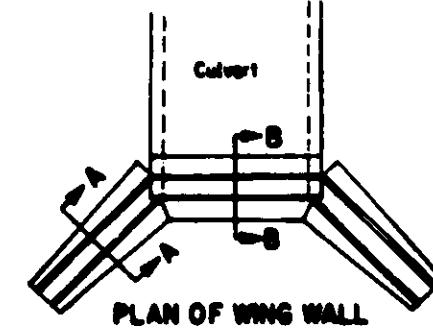
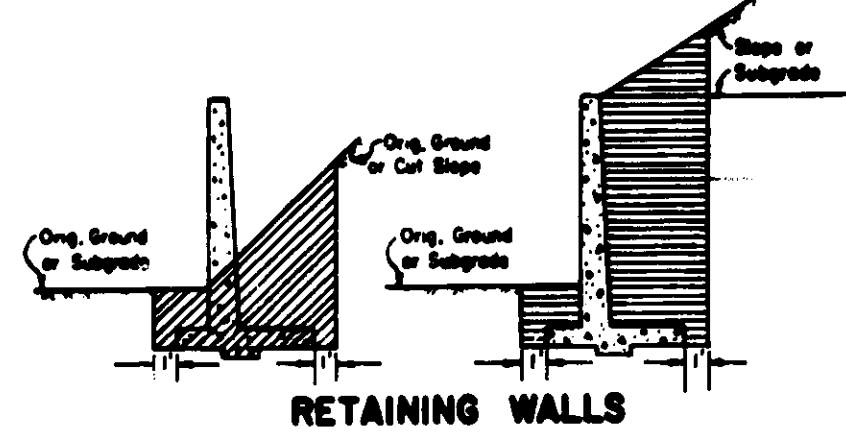
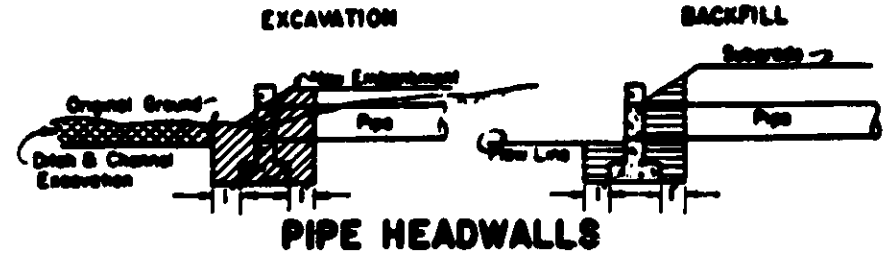


Height of Top of Embankment Before Excavating For Pipe
 Shall Be As Follows:-
 For pipe 24" or less dia. 6" above top of pipe
 For C.M.P. over 24" to 30" dia. 30" above bottom of pipe
 For C.M.P. over 30" dia. 1/3 point of dia. above bottom of pipe
 For R.C.P. over 24" dia. 30" above bottom of pipe
 For hand excavated pipe culvert 1/3 point of dia. above bottom of pipe
 Structure Backfill 6" Above Top of Pipe

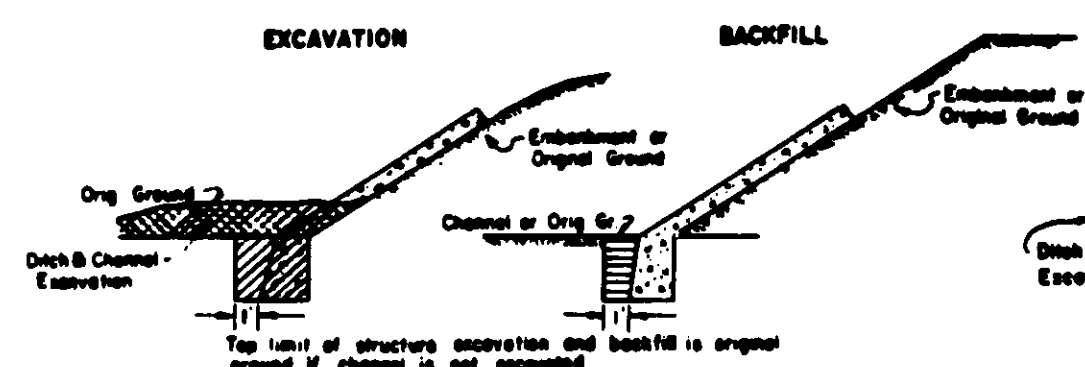
PIPES, RODS & DEADMEN
 Except Underdrains & Dose-drains



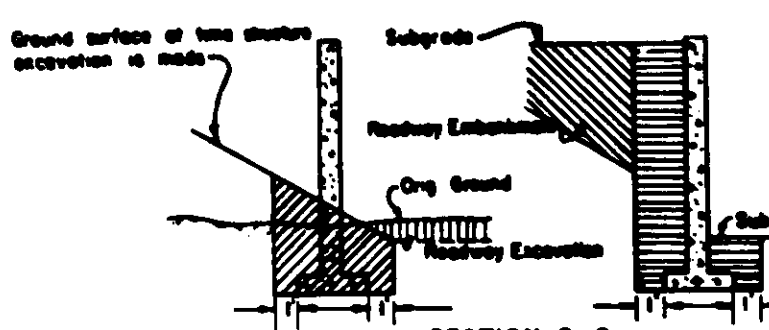
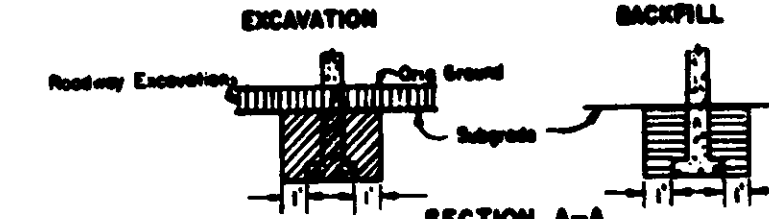
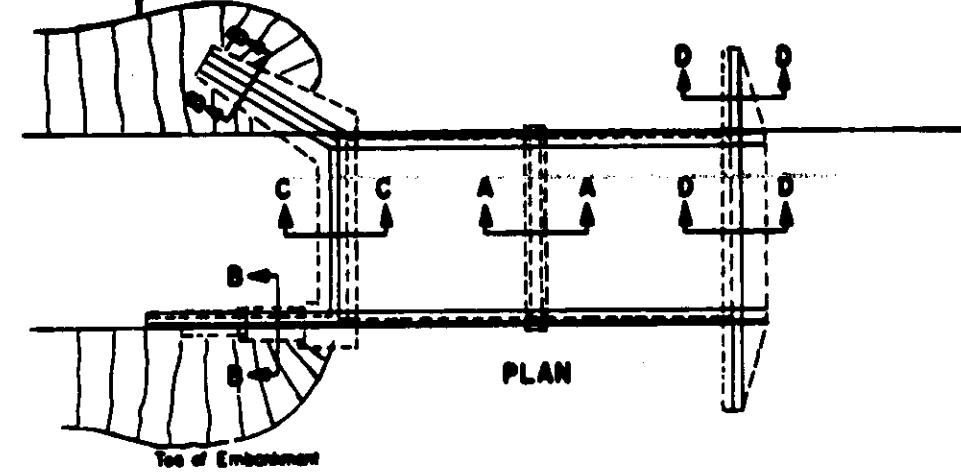
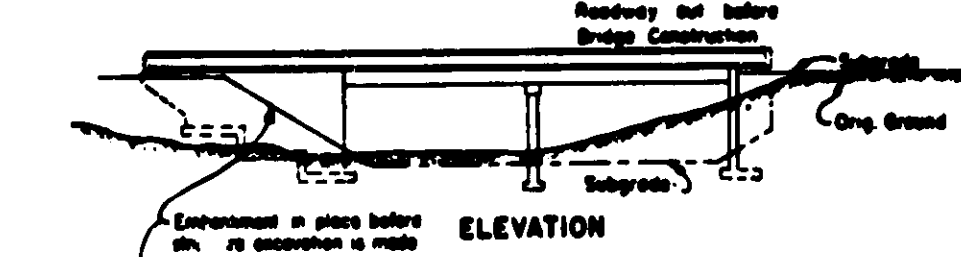
BOX CULVERTS



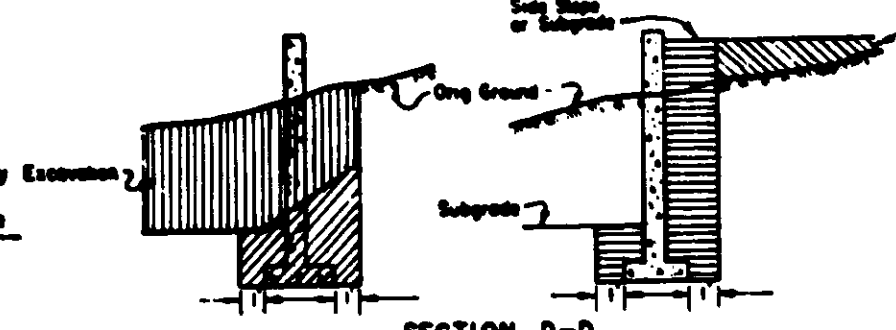
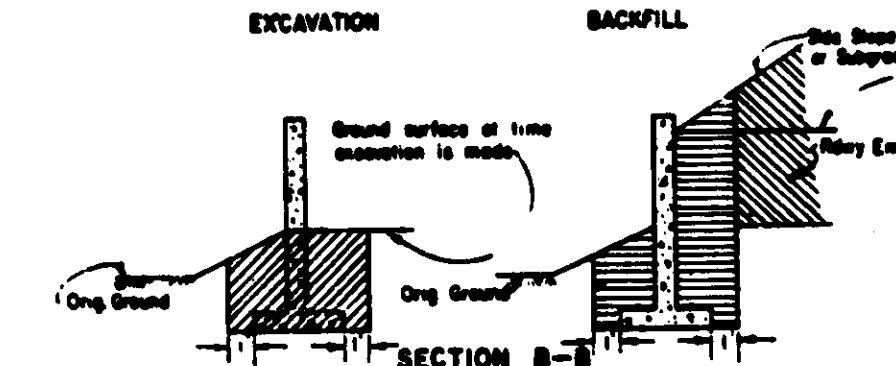
WING WALLS



MONOLITHIC CONCRETE SLOPE PAVING; RIPRAP



BRIDGE ABUTMENTS & ADJOINING WING WALLS



LEGEND

- Structure Excavation
- Structure Backfill
- Ditch & Channel Excavation
- Roadway Embankment
- Roadway Excavation

Note: Subgrade shall be lowest subgrade as defined in the Standard Specifications.

NOTE: THESE PLANS ADOPTED FROM THE STANDARD PLANS, STATE OF CALIFORNIA, DEPARTMENT OF PUBLIC WORKS, DIVISION OF HIGHWAYS

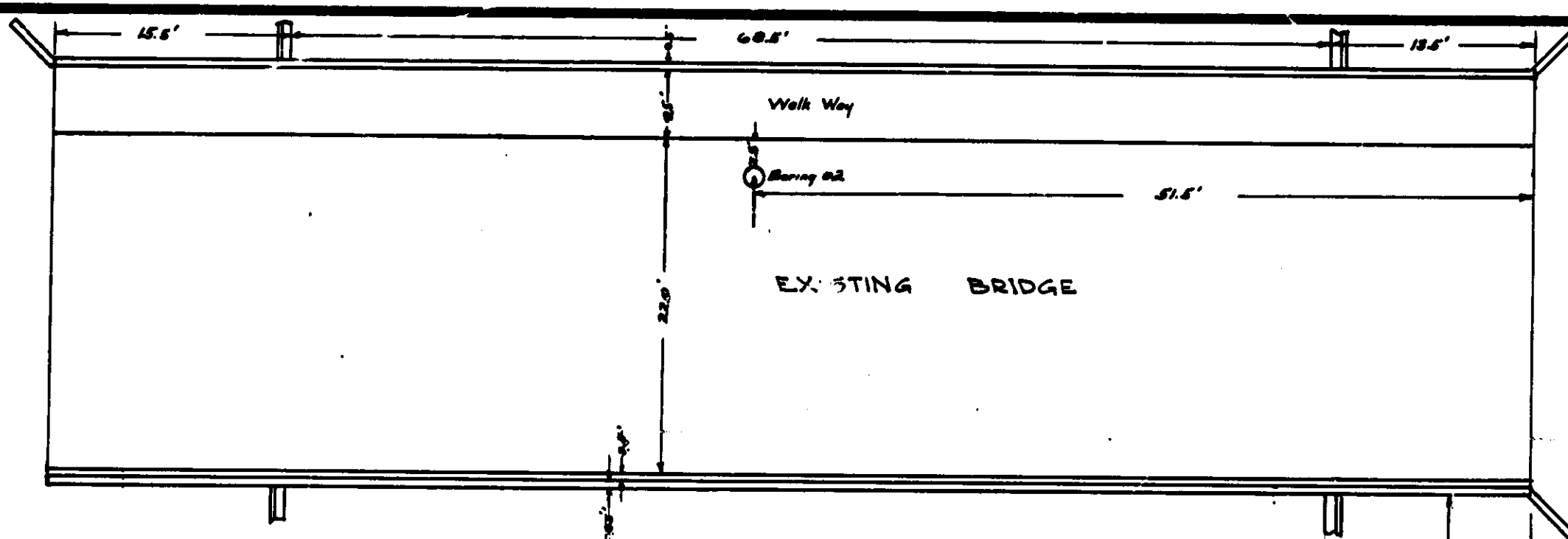
APPROVED
 JUN 8 1950

ORANGE COUNTY HIGHWAY DEPARTMENT	
BROADWAY BRIDGE	
STRUCTURAL EXCAVATION & BACKFILL	
SSC-283	
DESIGNED BY S. C. J. C.	CHECKED BY S. C. J. C.
SCALE AS SHOWN	

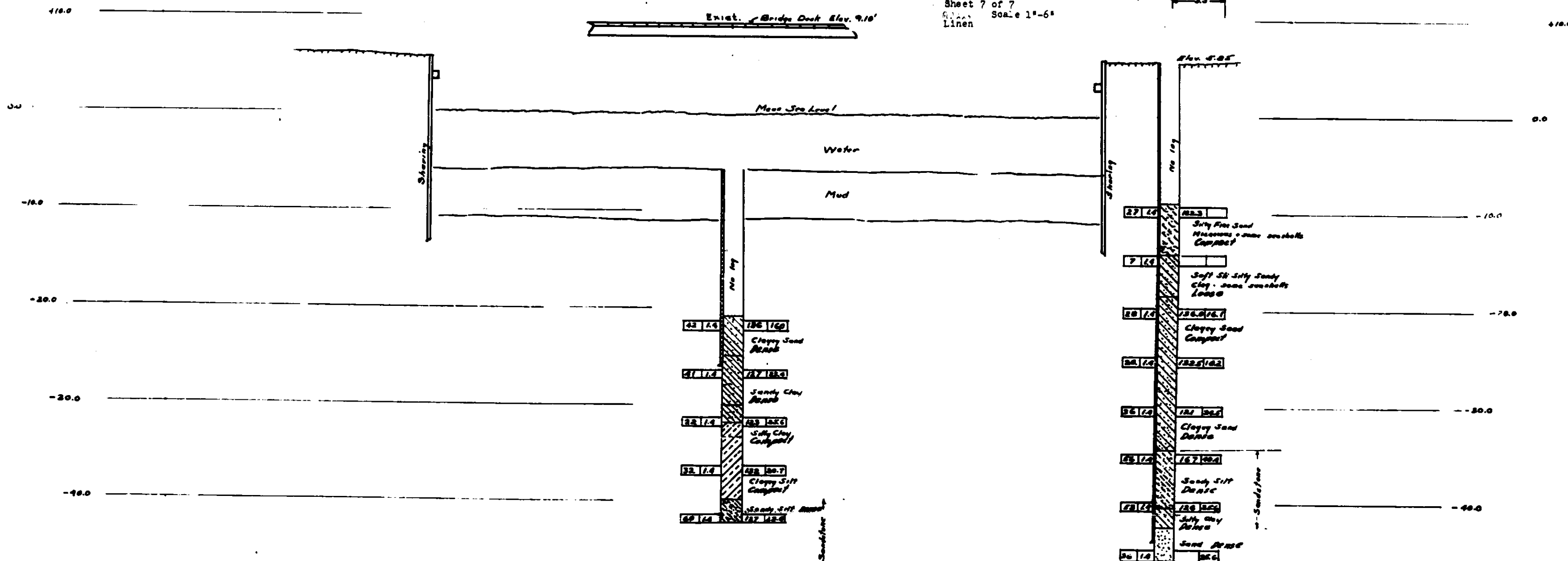
AN-2

AN-2

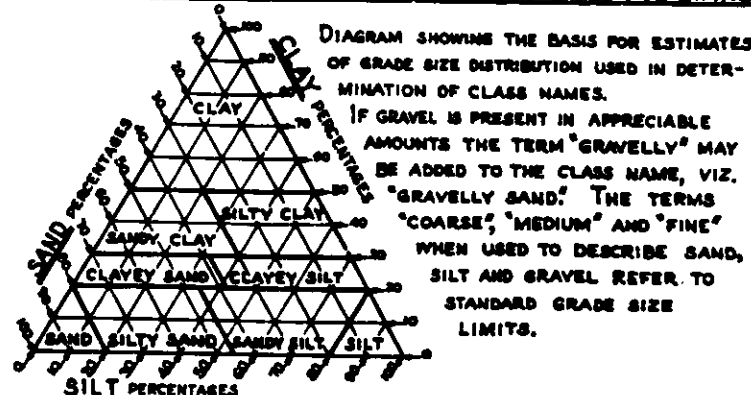
Bench Mark Int. Hwy 101 & Broadway, E. Signal
Light Base, 30' NE & Hwy 101, 30' SE & Broadway
Elevation 6.13'



Bridge #AN-2
Broadway Bridge
Across Bolsa Chica
Inlet Channel
Sheet 7 of 7
Scale 1" = 6'



CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS



LEGEND OF EARTH MATERIALS

- | | |
|---------------------------|----------------------------|
| GRAVEL | SILTY CLAY OR CLAYEY SILT |
| SAND | PEAT AND/OR ORGANIC MATTER |
| SILT | FILL MATERIAL |
| CLAY | IGNEOUS ROCK |
| SANDY CLAY OR CLAYEY SAND | SEDIMENTARY ROCK |
| SANDY SILT OR SILTY SAND | METAMORPHIC ROCK |

LEGEND OF BORING OPERATIONS

- PLAN OF ANY BORING
 - PENETROMETER
 - 2 1/2" CONE PENETROMETER
 - SAMPLER BORING (DRY)
 - ROTARY BORING (WET)
 - AUGER BORING (DRY)
 - JET BORING
 - CORE BORING
 - TEST PIT
- 1" SOIL TUBE
- ROTARY BORING
- PENETRATION BORING

NOTES

The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans. Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

BROADWAY STREET BRIDGE

SUNSET BEACH SSC-283

LOG OF TEST BORINGS

SCALE 1" = 6" BRIDGE AN-2 FILE DRAWING SHEET 7 OF 7 SHEETS

AN-2

AN-2

7