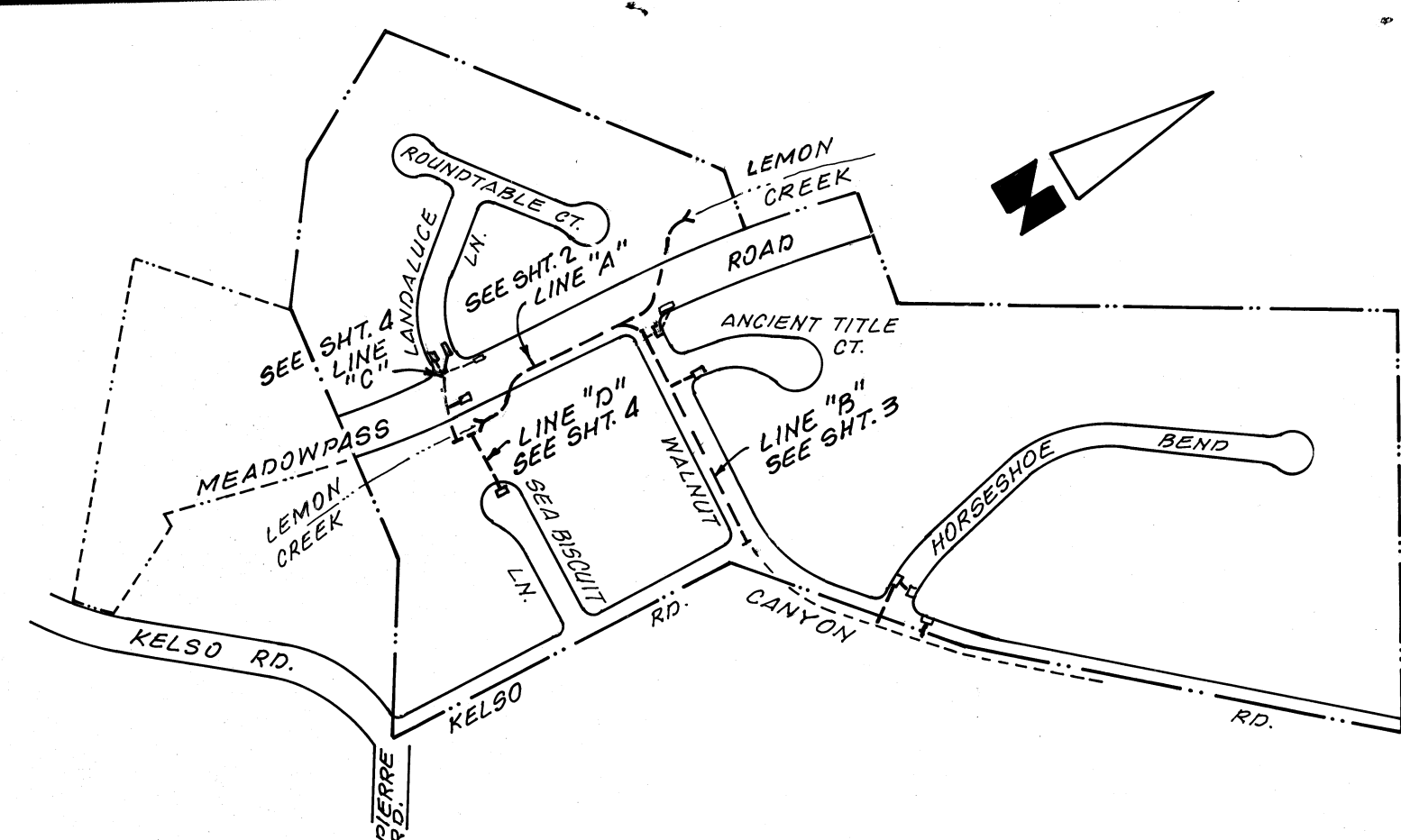
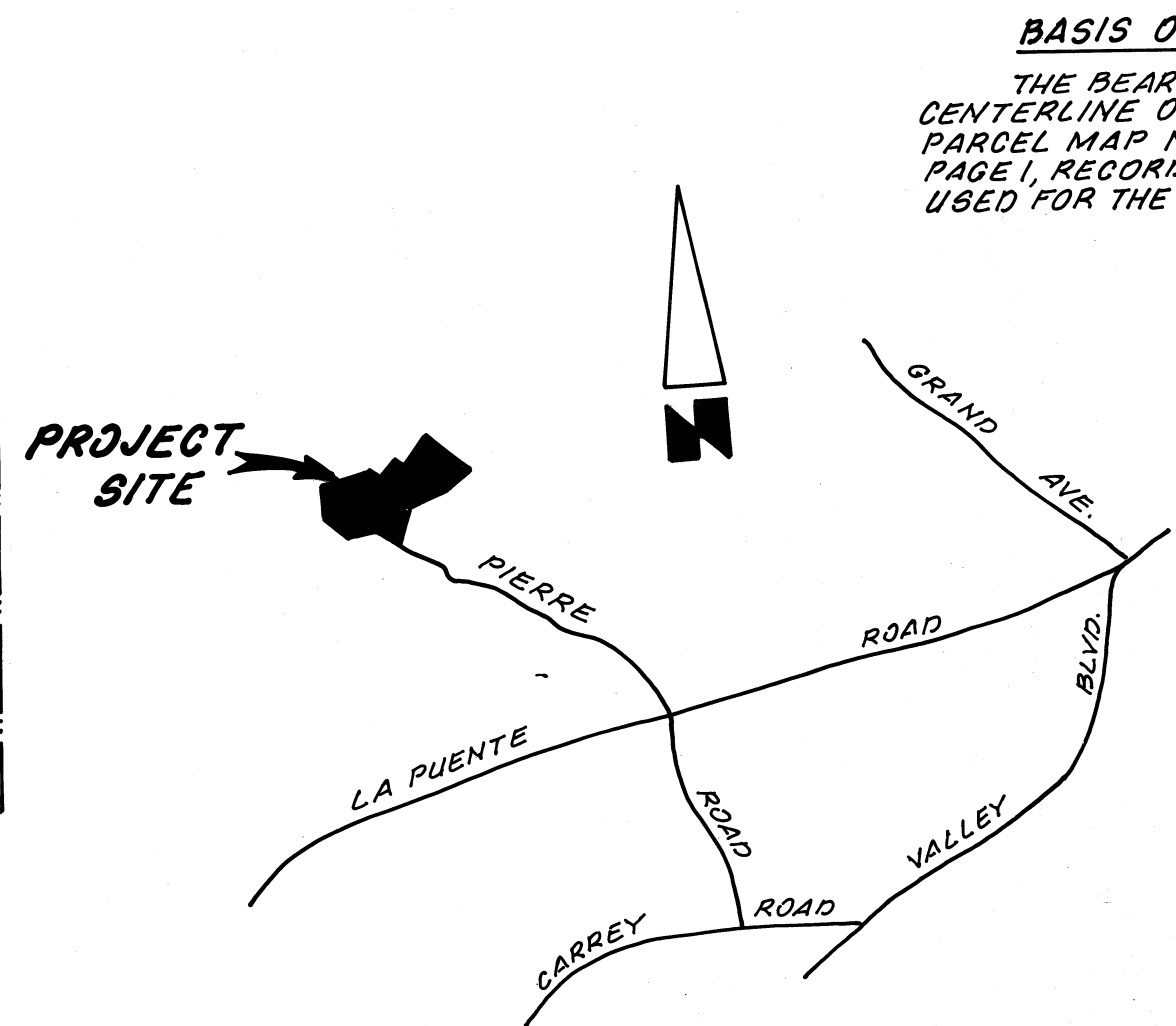


**STORM DRAIN PLANS IN  
TRACT No. 42892 P.D. No.**

**BENCH MARK: CG 1774 ELEV. 577.92**  
 L & T IN CONC. HEADWALL @ NW COR.  
 LA PUENTE RD. & PIERRE RD.  
 25' NORTH & 30' EAST & INT.  
 MARKED "BM"



**INDEX MAP**  
SCALE: 1" = 300'



**VICINITY MAP**  
NO SCALE

**BASIS OF BEARINGS**  
 THE BEARING OF N 46° 10' 00" W FOR THE CENTERLINE OF PIERRE ROAD AS SHOWN ON PARCEL MAP No. 5182 FILED IN P.M. BOOK 56, PAGE 1, RECORDS OF LOS ANGELES COUNTY WAS USED FOR THE BASIS OF BEARINGS.

**GENERAL NOTES (Cont'd)**

23. A SOILS ENGINEER SHALL CERTIFY THAT ALL FILLS AND BACKFILLS OVER UNDERGROUND STORM DRAINS OUTSIDE OF ST. R/W HAVE BEEN COMPACTED OR CONSOLIDATED TO A 90% DENSITY. THIS CERTIFICATION SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THE WORK BY THE CITY. INCLUDING 1983 SUPPLEMENT AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE CITY ENGINEER.
24. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7-10. 41 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION IN REGARD TO SAFETY ORDERS.
25. THE CONTRACTOR SHALL CONFORM TO THE "MINIMUM PUBLIC SAFETY REQUIREMENTS" AS SHOWN ON LOS ANGELES COUNTY ENGINEER STANDARD 5-2.
26. ALL PIPE SHALL BE PLACED IN A TRENCH IN NATURAL GROUND AND/OR COMPACTED FILL. THE GROUND LEVEL BEFORE THE TRENCHING SHALL BE AT LEAST 3 FEET ABOVE TOP OF PIPE ELEVATION, OR AT FINISH SURFACE ELEVATION, WHICHEVER IS LESS. ALL BACKFILL IN EASEMENTS SHALL BE COMPACTED TO THE DENSITY REQUIRED BY THE GRADING PLAN.
27. THE INSPECTOR MAY HAVE THE OPTION TO REQUIRE CONCRETE BACKFILL DURING CONSTRUCTION WHEN THE PIPE HAS LESS THAN ONE FOOT OF COVER AND IS SUBJECTED TO HEAVY EQUIPMENT TRAFFIC. THE CONCRETE BACKFILL SHALL CONSIST OF 1:3:5 MIX CEMENT CONCRETE POURED FROM WALL TO WALL OF TRENCH AND FROM BOTTOM OF TRENCH TO A MINIMUM DEPTH OF 4 INCHES OVER TOP OF PIPE.

**GENERAL NOTES:**

1. ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. MEAN SEA LEVEL DATUM OF 1929. ALL WORK SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1982 EDITION," INCLUDING 1983 SUPPLEMENT AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE CITY ENGINEER.
2. APPROVAL OF THIS PLAN BY THE CITY OF WALNUT DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF THE LOCATION, OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY, PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL SHEETS.
3. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER BY TELEPHONE 594-9702 AT LEAST 48 HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT. THE CONTRACTOR SHALL SUBMIT A DEPOSIT FOR CONSTRUCTION INSPECTION TO THE CITY OF WALNUT PRIOR TO APPROVAL OF THESE PLANS.
4. ALL CONSTRUCTION JOINTS IN THE FOOTING OF SLABS AND WALLS SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED.
5. NO CONCRETE SHALL BE PLACED UNTIL THE FORMS AND REINFORCING STEEL HAS BEEN PLACED, INSPECTED AND APPROVED.
6. TRANSVERSE REINFORCEMENT AND TRANSVERSE JOINTS SHALL BE PLACED AT RIGHT ANGLES (OR RADIAL) TO CONDUIT CENTERLINE EXCEPT AS OTHERWISE SHOWN ON THE DRAWINGS.
7. ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE WITH AN ULTIMATE 28 DAYS COMPRESSIVE STRENGTH OF 3000 P.S.I.
8. ALL EXPOSED EDGES SHALL BE FINISHED WITH A 3/4" CHAMFER.
9. ALL STEEL ADJACENT TO FACE OF CONCRETE SHALL HAVE 2" CLEARANCE UNLESS OTHERWISE SPECIFIED.
10. REINFORCEMENT SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE STEEL AS PER A.S.T.M. A-615.
11. ALL BAR BENDS AND HOOKS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE "MANUAL OF STANDARD PRACTICE".
12. DIMENSIONS FROM FACE OF CONCRETE TO STEEL ARE TO CENTERLINE OF STEEL UNLESS OTHERWISE NOTED.
13. ALL BACKFILLS AND FILLS TO BE USED AS SUBGRADE SHALL BE COMPACTED TO A RELATIVE DENSITY OF 90% UNLESS OTHERWISE SPECIFIED.
14. ALL STEEL THAT IS TO BE CONTINUOUS SHALL HAVE A MINIMUM LAP OF 30 BAR DIAMETERS OR 18", WHICHEVER IS GREATER.
15. ALL CATCH BASINS AND CONNECTOR PIPES BETWEEN CATCH BASINS TO BE INSPECTED BY THE CITY OF WALNUT.
16. PIPE SHALL BE EMBEDDED 5 INCHES INTO ALL STRUCTURES INCLUDING INLET & HEADWALLS, UNLESS OTHERWISE SPECIFIED.
17. WHERE PIPE IS TO BE PLACED IN FILL, THE FILL SHALL BE COMPACTED TO A MINIMUM DEPTH OF 3 FEET ABOVE THE TOP OF PIPE PRIOR TO TRENCHING.
18. ALL BACKFILL AND FILL AROUND CLOSED CONDUIT IN STREET RIGHTS OF WAY SHALL BE BROUGHT UP TO SUBGRADE OF THE ROAD OR TO 2 FEET ABOVE THE TOP OF THE CONDUIT, WHICHEVER IS LESS. THE CITY ENGINEER SHALL INSPECT ALL BACKFILL AND FILL ABOVE AFOREMENTIONED LIMITS. APPLICATION FOR AN ENGINEER OR INSPECTOR IN CONNECTION WITH THE WORK, SHALL BE MADE BY THE CONTRACTOR AT LEAST 48 HOURS BEFORE HIS SERVICE IS REQUIRED. CALL 594-9702.
19. A PERMIT SHALL BE OBTAINED FROM THE CITY OF WALNUT AND SHALL BE SUBMITTED TO THE INSPECTOR PRIOR TO COMMENCING CONSTRUCTION WITHIN THEIR RIGHTS OF WAY.
20. ALL REINFORCED CONCRETE PIPE SHALL BE BEDDED IN ACCORDANCE WITH LOS ANGELES COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING 2-D117 UNLESS OTHERWISE NOTED.
21. UNLESS OTHERWISE SHOWN, CONCRETE DIMENSIONS SHALL BE MEASURED VERTICALLY OR HORIZONTALLY AND PARALLEL OR AT RIGHT ANGLES (OR RADIAL) TO THE CENTER LINE OF CONSTRUCTION.
22. THIS STORM DRAIN WILL NOT BE ACCEPTED FOR MAINTENANCE UNTIL THE STREETS HAVE BEEN PAVED, MANHOLES BROUGHT TO GRADE, AND THE SYSTEM IS CLEANED TO THE SATISFACTION OF THE CITY ENGINEER.

**ESTIMATES OF QUANTITIES**

NO.	DESCRIPTION	QUANTITY
1	8'X10' R.C. BOX	256 L.F.
2	6'X10' R.C. BOX	263 L.F.
3	JUNCTION STRUCT. NO. 1 - LACFCO STD. 2-D189	1 EA.
4	JUNCTION STRUCT. NO. 2 - LACFCO STD. 2-D112	3 EA.
5	JUNCTION STRUCT. NO. 4 - LACFCO STD. 2-D193	4 EA.
6	CHANNEL ENTRY/EXIT STRUCT.	2 EA.
7	RIP RAP 1/4 TON	800 TON
8	CHAIN LINK FENCE (5' HIGH)	125 L.F.
9	HEADWALL - CHANNEL ENTRY	2 EA.
10	18" R.C.P. (2400-D)	35 L.F.
11	18" R.C.P. (2200-D)	60 L.F.
12	18" R.C.P. (2000-D)	206 L.F.
13	18" R.C.P. (1600-D)	143 L.F.
14	24" R.C.P. (1600-D)	168 L.F.
15	60" R.C.P. (1700-D)	485 L.F.
16	CATCH BASIN W/LOC. DEP. - W=7.0'	3 EA.
17	CATCH BASIN W/LOC. DEP. - W=10.0'	1 EA.
18	CATCH BASIN W/LOC. DEP. - W=14.0'	7 EA.

**LOS ANGELES COUNTY FLOOD CONTROL DIST. STANDARD DWGS.**

NO.	DESCRIPTION	STD. DWG. NO.
1	LOCAL DEPRESSION (L.D.) NO. 2	2-D88
2	LOCAL DEPRESSION (L.D.) NO. 4	2-D415
3	CATCH BASIN NO. 2	2-D162
4	CATCH BASIN NO. 3	2-D163
5	JUNCTION STRUCTURE NO. 1	2-D189
6	JUNCTION STRUCTURE NO. 2	2-D112
7	JUNCTION STRUCTURE NO. 4	2-D193
8	TRANSITION STRUCTURE NO. 2	2-D239
9	PIPE BEDDING IN TRENCHES	2-D177

**LOS ANGELES COUNTY ROAD DEPARTMENT STANDARD DWG.**

NO.	DESCRIPTION	STD. DWG. NO.
1.	LOCAL DEPRESSION (L.D.) NO. 2	68-02

**RIPRAP NOTES**

1. ROCKS FOR GROUTED RIPRAP SHALL BE GOOD QUALITY BROKEN CONCRETE AND/OR RIVER RUN ROCK. THE SMALLEST DIMENSION SHALL EXCEED 3 INCHES AND THE LARGEST DIMENSION SHALL NOT EXCEED 18 INCHES. THE LARGEST DIMENSION SHALL NOT EXCEED 4 TIMES THE SMALLEST DIMENSION.
2. THERE SHALL BE A GROUT BED OF AT LEAST 2 INCHES BENEATH THE FIRST LAYER OF ROCK. ALL THE VOIDS BETWEEN THE ROCKS SHALL BE FILLED WITH GROUT. MAXIMUM SPACING BETWEEN ROCKS SHALL BE 2 INCHES.
3. SURFACE ROCKS SHALL BE IMBEDDED FROM 1/2 TO 2/3 OF THEIR MAXIMUM DIMENSION.
4. RIP RAP WEIGHING 1/4 TON OR MORE NEED NOT BE GROUTED.

NOTE: CONCRETE MAY BE SUBSTITUTED FOR THE GROUT.

**PRIVATE ENGINEERS NOTICE TO CONTRACTORS**

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THIS MAP. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THIS DRAWING.

*James O'Malley*  
 REGISTERED CIVIL ENGINEER No. 27127

9-10-83  
 DATE

IF CONSTRUCTION OF IMPROVEMENTS AS SHOWN HEREON ARE NOT COMMENCED WITHIN 18 MONTHS OF APPROVAL DATE, THESE PLANS ARE SUBJECT TO REVIEW BY THE CITY.

**CITY OF WALNUT, CALIFORNIA**

APPROVED:  
 CITY ENGINEER

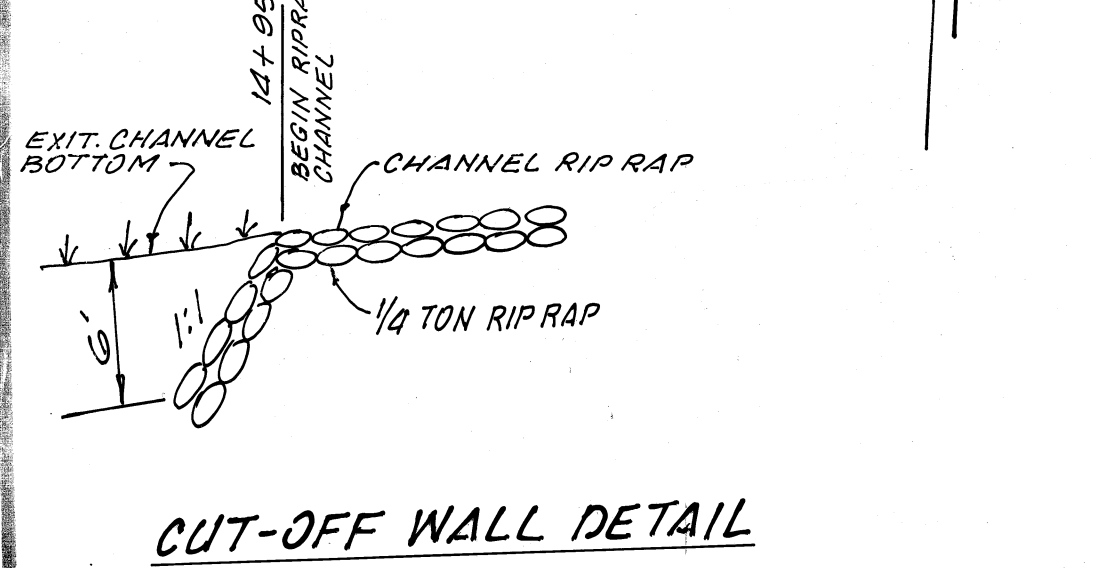
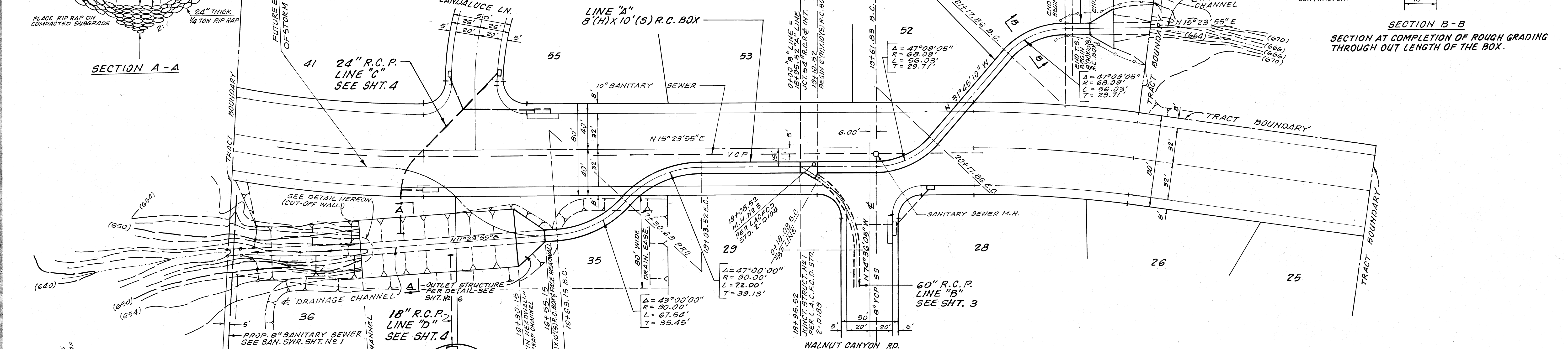
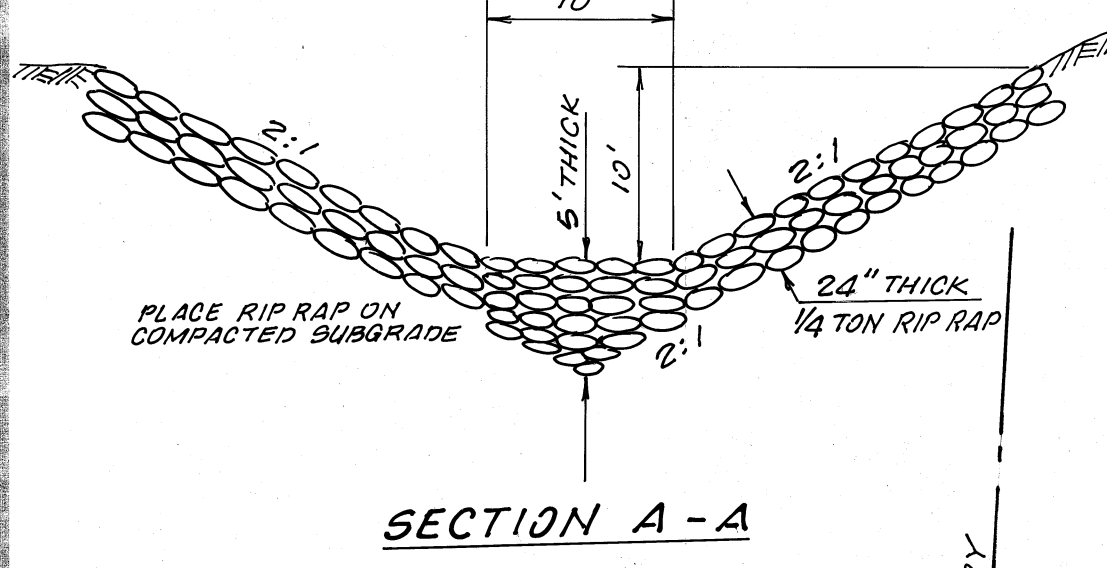
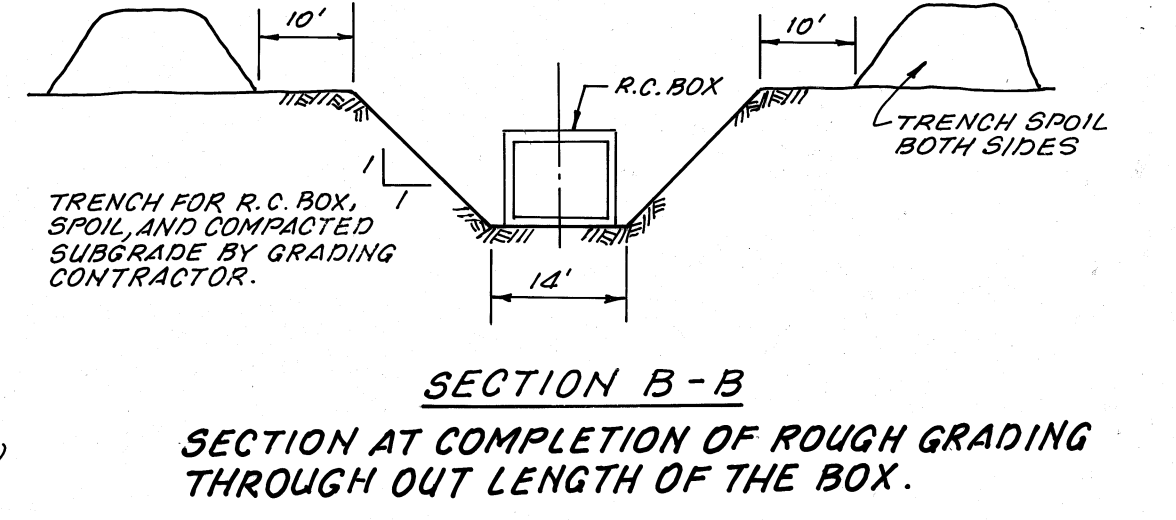
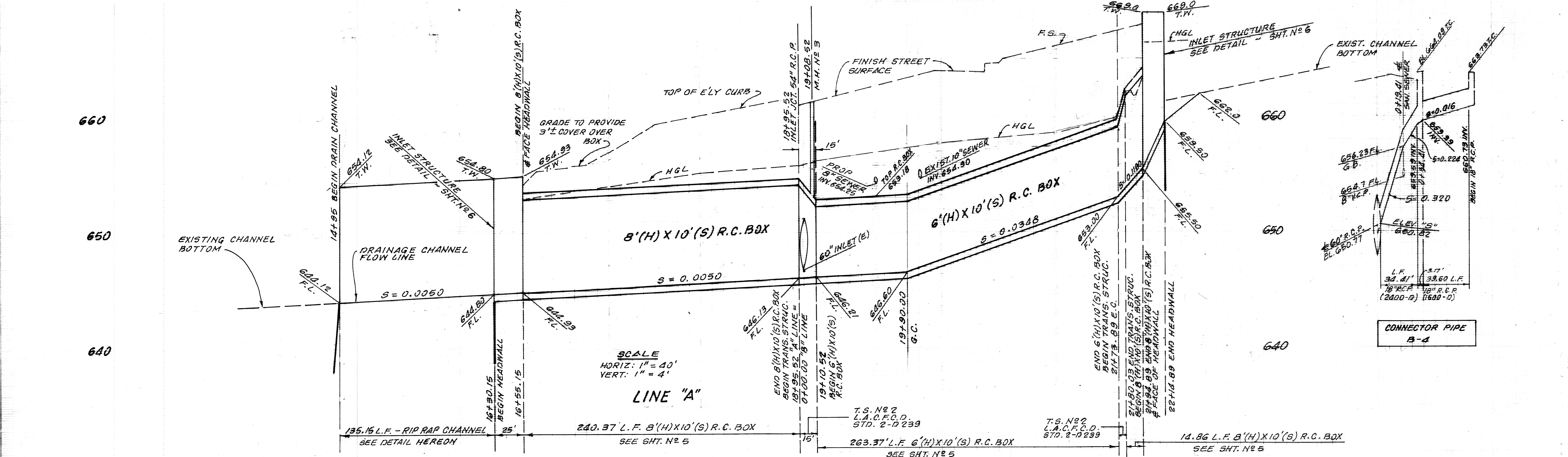
*Ronald L. Kranzer*  
 RONALD L. KRANZER R.C.E. 18503

6-4-84  
 DATE

**O'MALLEY ENGINEERING CORPORATION**  
 1215 POMONA RD., SUITE E  
 CORONA, CAL. 91720  
 (714) 734-0633

APPROVED:  
*James O'Malley* 9-10-83  
 JAMES O'MALLEY R.C.E. 27127 DATE

NO.	REVISION	REVISED BY	APPROVED BY	DATE



APPROVED: *[Signature]* 9-10-83  
 JAMES O'MALLEY P.E. 27127 DATE

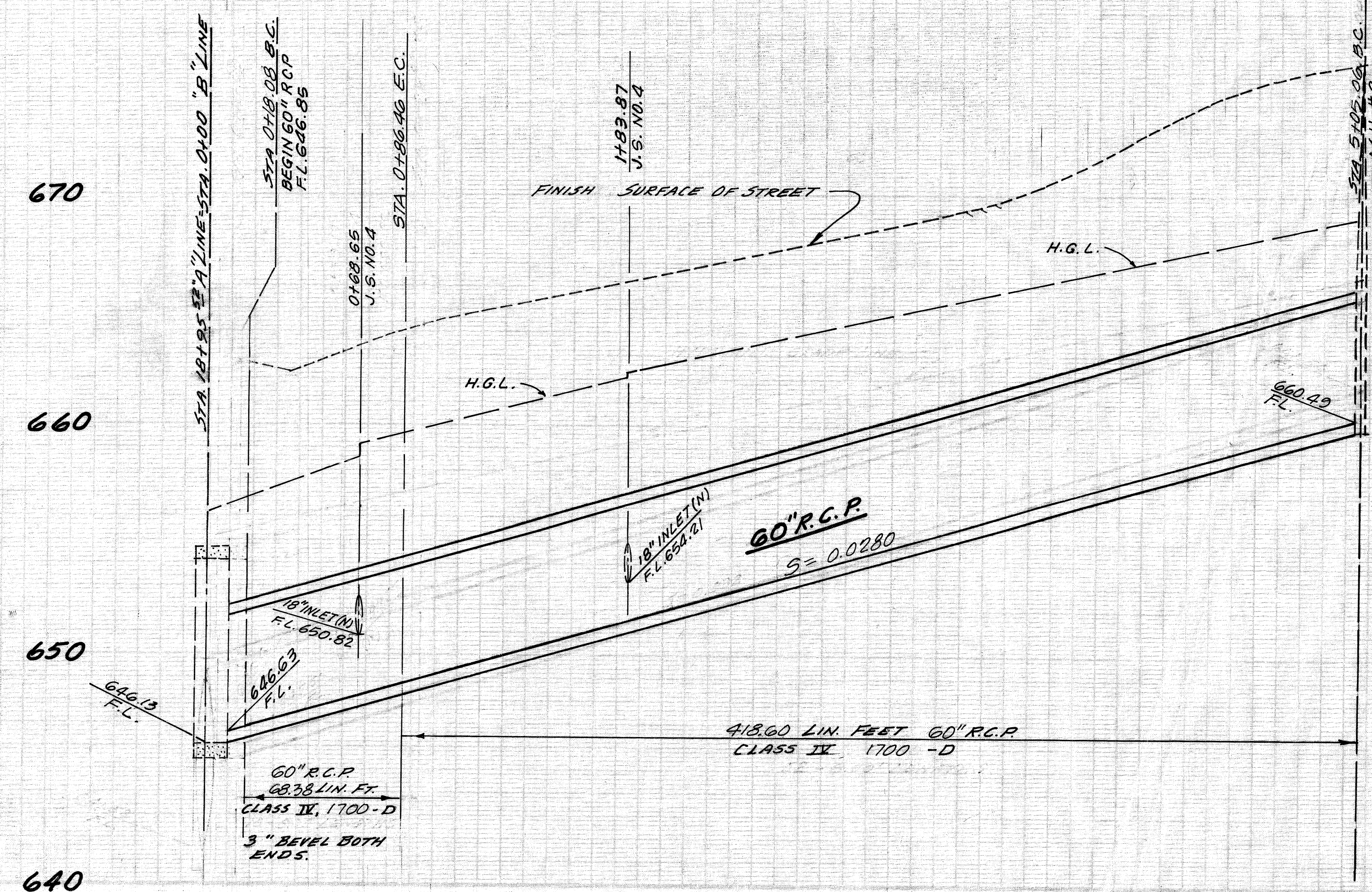
APPROVED: *[Signature]* 6-4-84  
 RONALD L. KRANZER R.O.E. 18503 DATE

**O'MALLEY ENGINEERING CORPORATION**  
 1215 POMONA RD., SUITE E  
 CORONA, CAL. 91720  
 (714) 734-0633

TRACT NO. 42892  
 CITY OF WALNUT  
**STORM DRAIN**  
**144B**

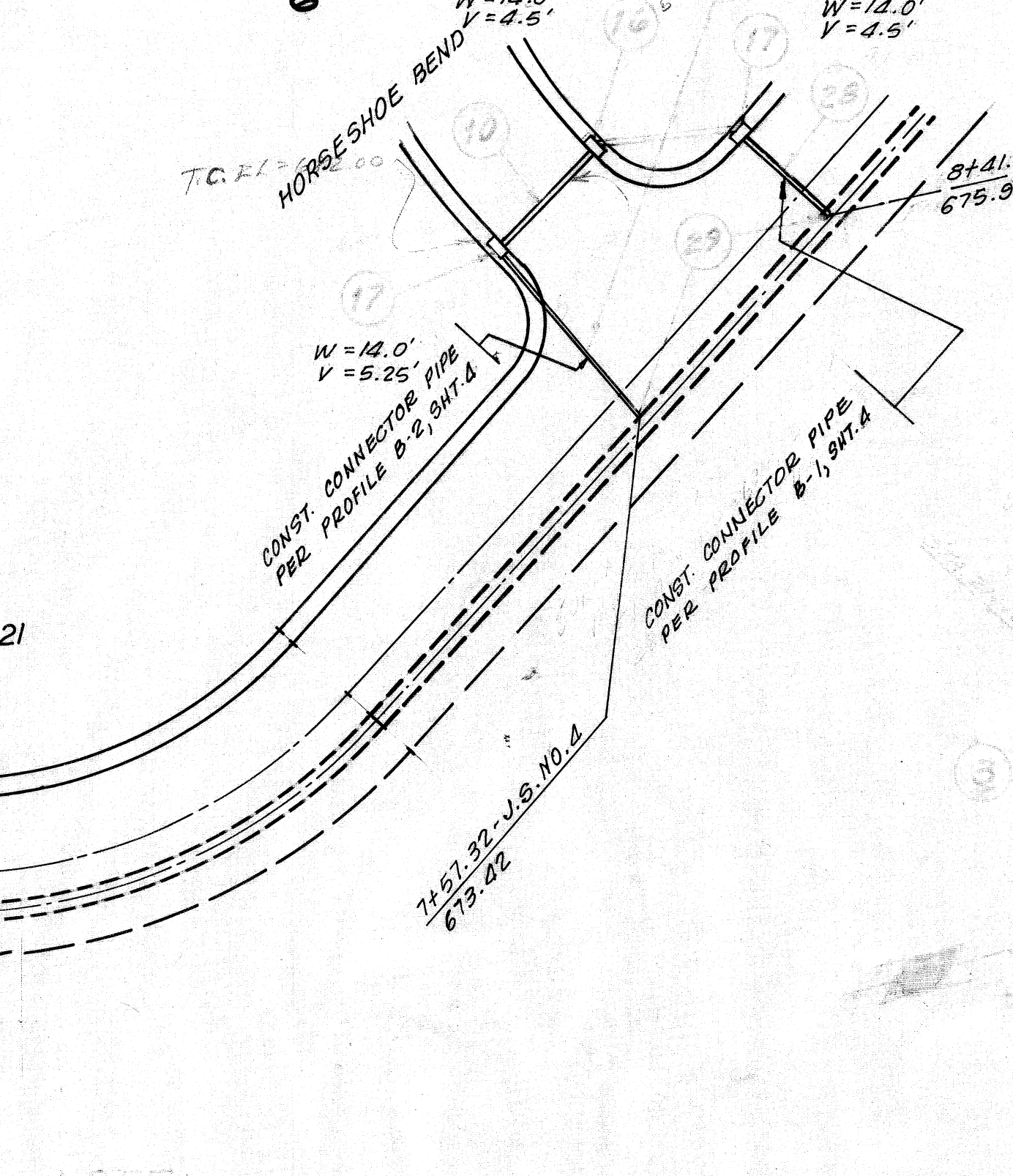
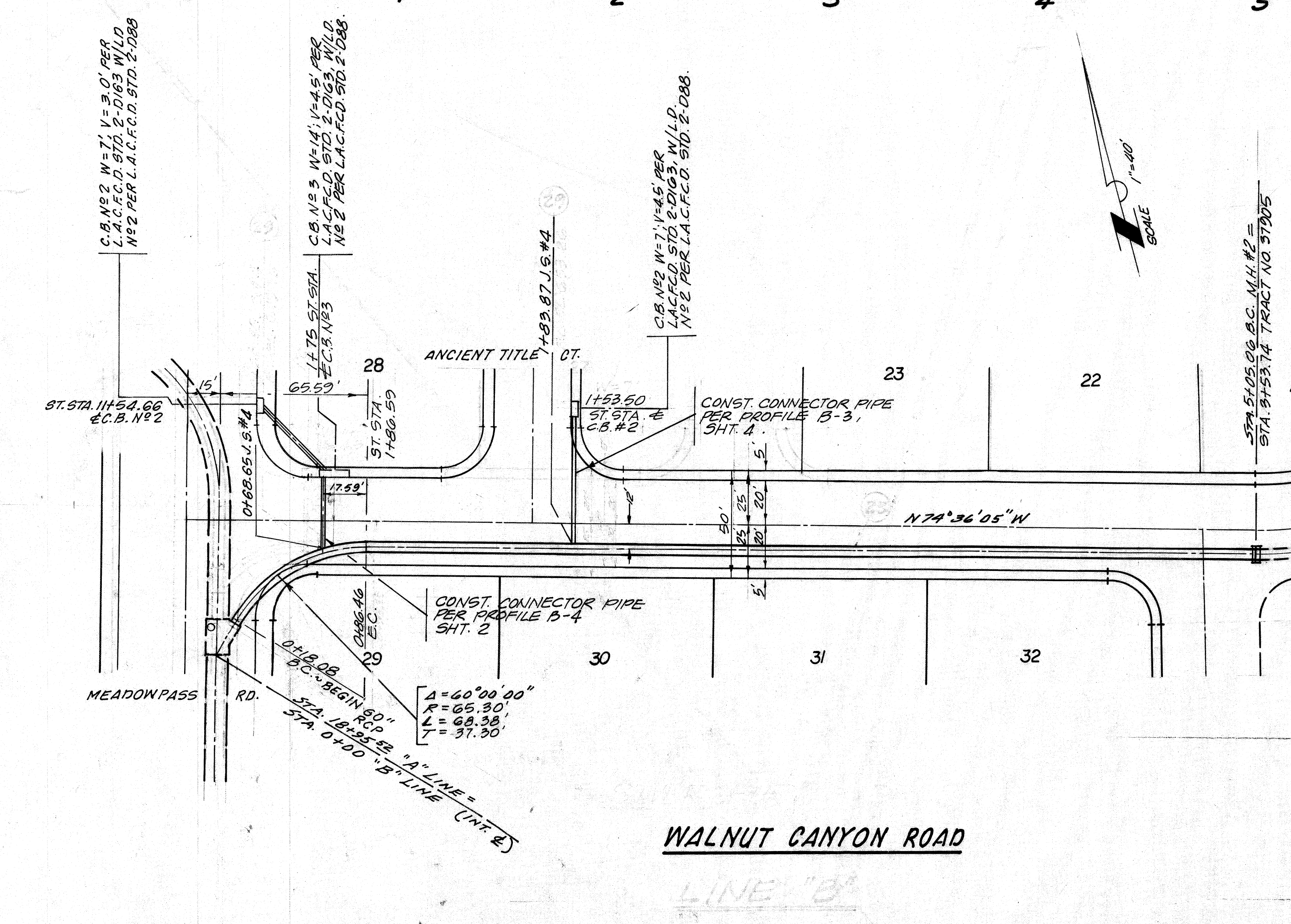
2  
 OF 6 SHEETS

STORM DRAIN PLANS IN  
TRACT No. 42892 P.D. No.



NOTE: THE APPROVAL OF THIS PLAN IS CONTINGENT UPON THE CONSTRUCTION OF THE STORM DRAIN SHOWN HEREON BEGINNING AT STA 3+08.16 WHICH IS TO BE CONSTRUCTED AS PART OF TRACT NO. 37905. IN THE EVENT SAID STORM DRAIN FOR TRACT 37905 IS NOT CONSTRUCTED OR UNDER CONSTRUCTION AT THE TIME OF CONSTRUCTION OF STORM DRAIN FACILITIES FOR TR. NO. 42892 A PROPER INLET FACILITY FOR THE STORM DRAIN OF TR. 42892 SHALL BE DESIGNED, APPROVED AND CONSTRUCTED AS A PART OF THIS PLAN.

NOTE: SEE STORM DRAIN PLANS FOR TRACT NO. 37905 FOR THE CONTINUATION OF THIS STORM DRAIN



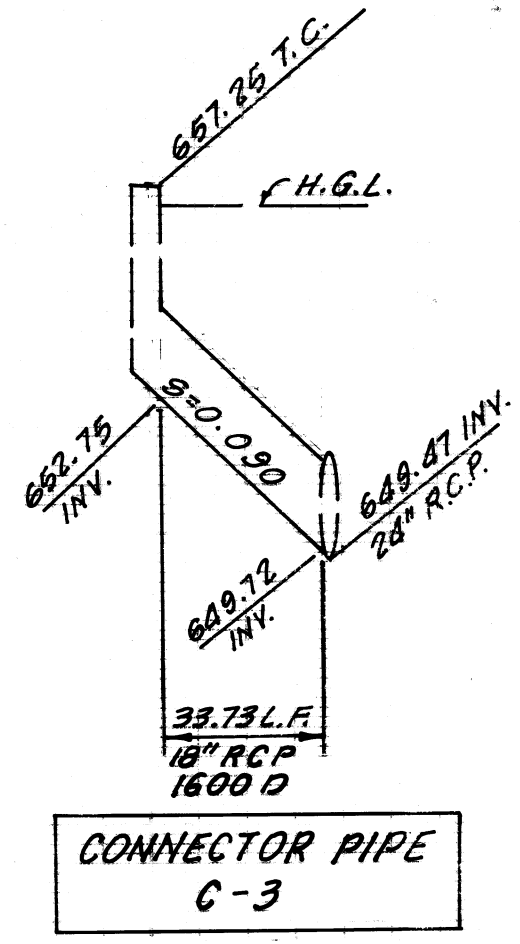
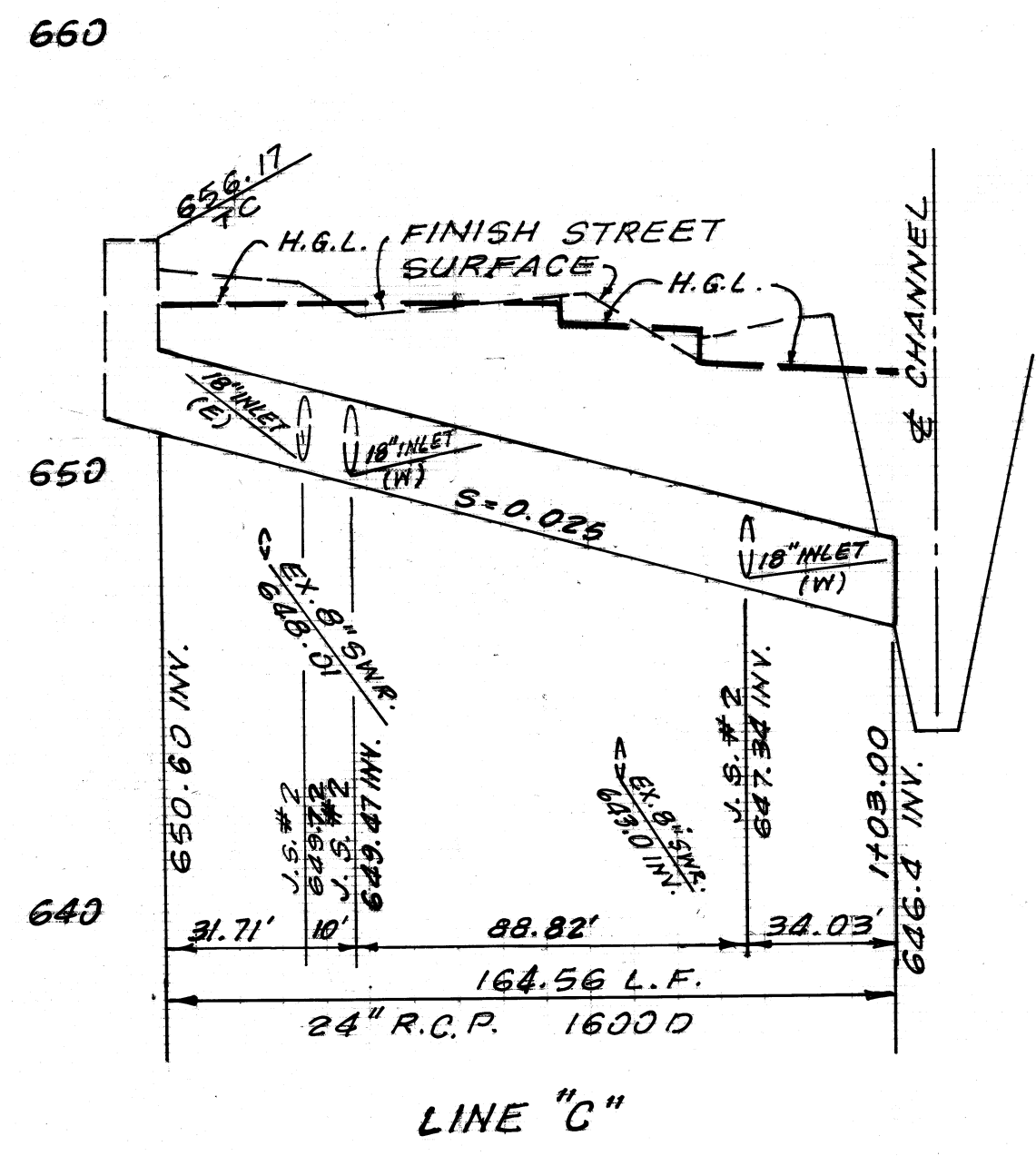
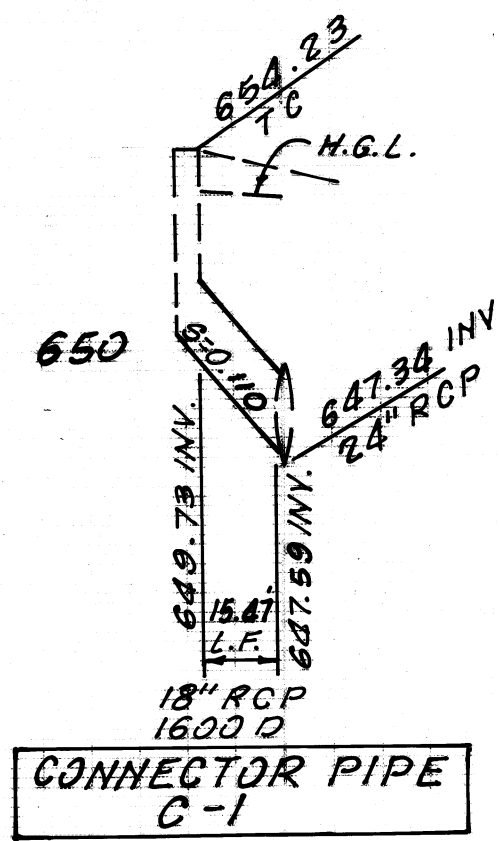
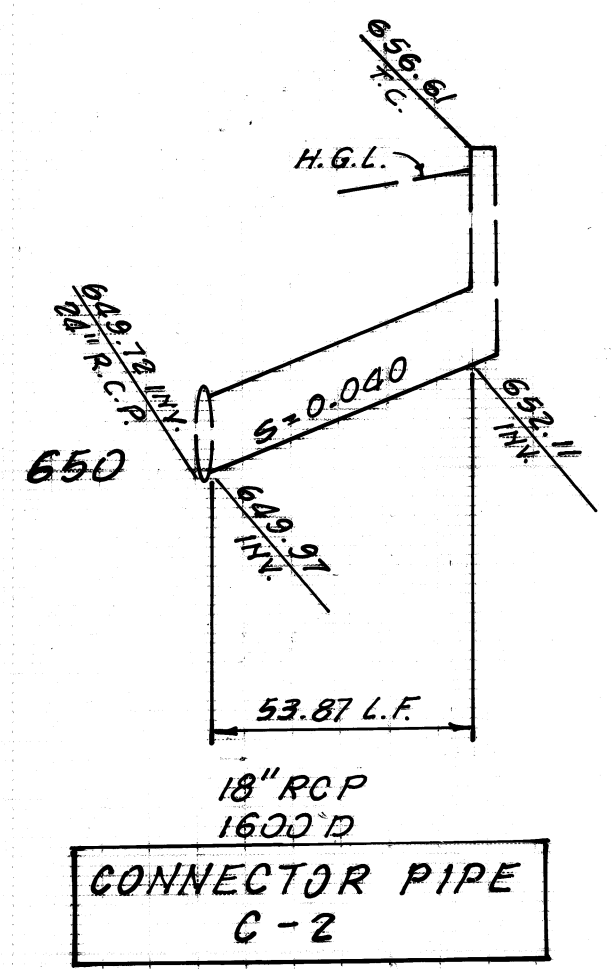
NOTE: APPROVAL OF THIS PLAN IS CONTINGENT UPON THE CONSTRUCTION OF THE STORM DRAIN SHOWN HEREON BEGINNING AT STA 3+08.16 WHICH IS TO BE CONSTRUCTED AS PART OF TRACT NO. 37905. IN THE EVENT SAID STORM DRAIN FOR TR. 37905 IS NOT CONSTRUCTED OR UNDER CONSTRUCTION AT THE TIME OF CONSTRUCTION OF STORM DRAIN FACILITIES FOR TR. NO. 42892 A PROPER INLET FACILITY FOR THE STORM DRAIN OF TR. 42892 SHALL BE DESIGNED, APPROVED AND CONSTRUCTED AS A PART OF THIS PLAN.

IF CONSTRUCTION OF IMPROVEMENTS AS SHOWN HEREON ARE NOT COMMENCED WITHIN 18 MONTHS OF APPROVAL DATE, THESE PLANS ARE SUBJECT TO REVIEW BY THE CITY.

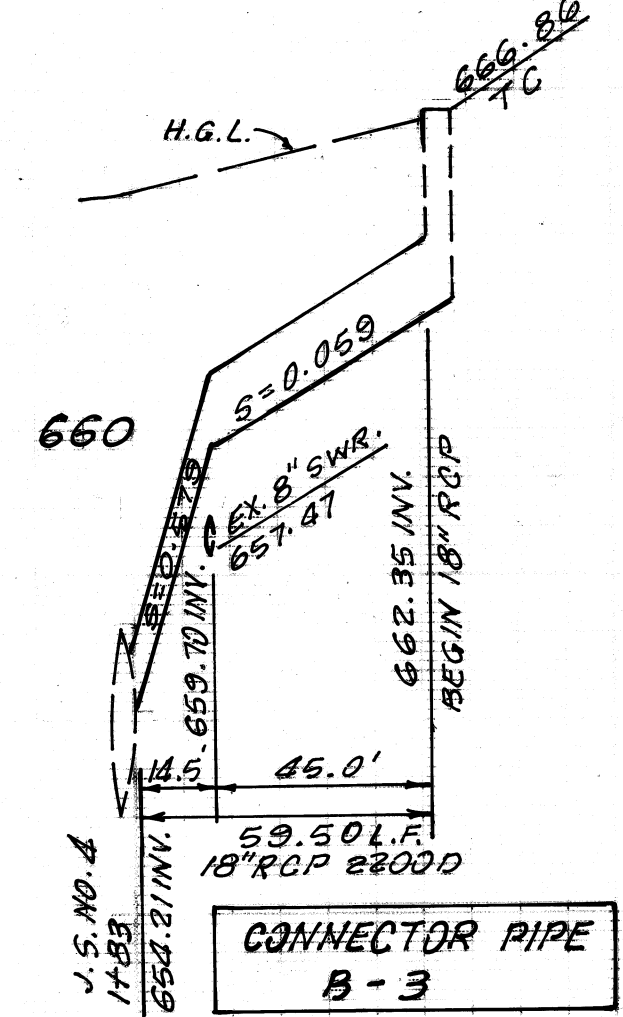
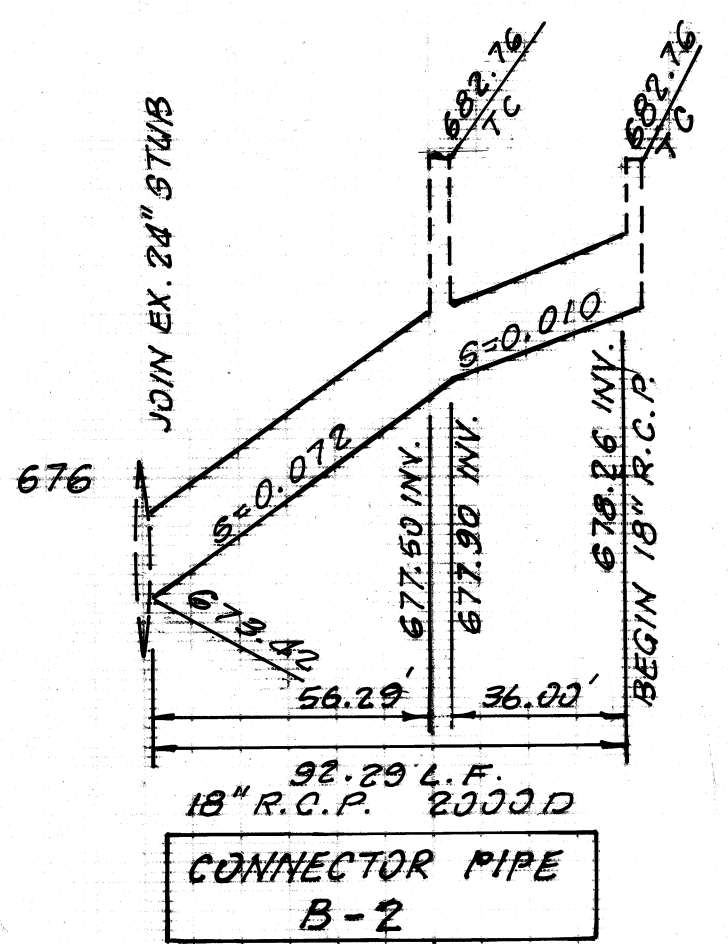
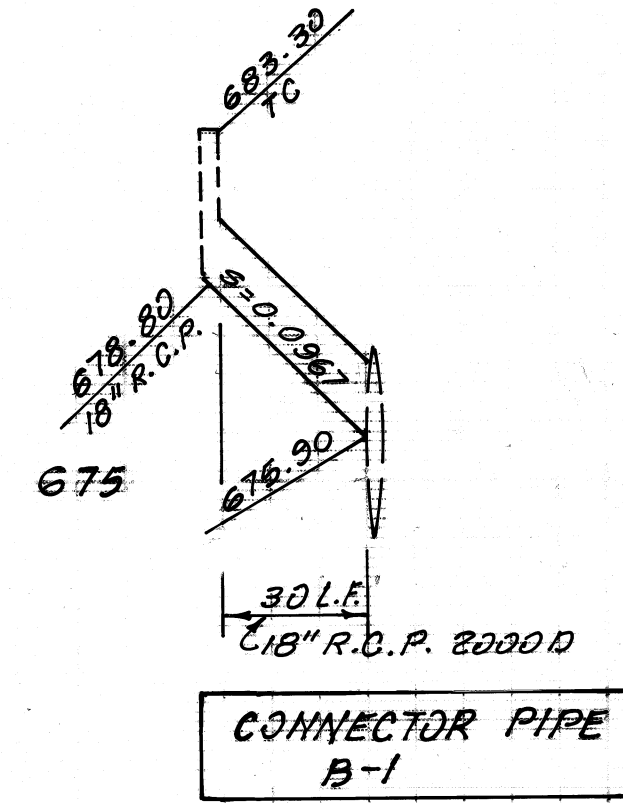
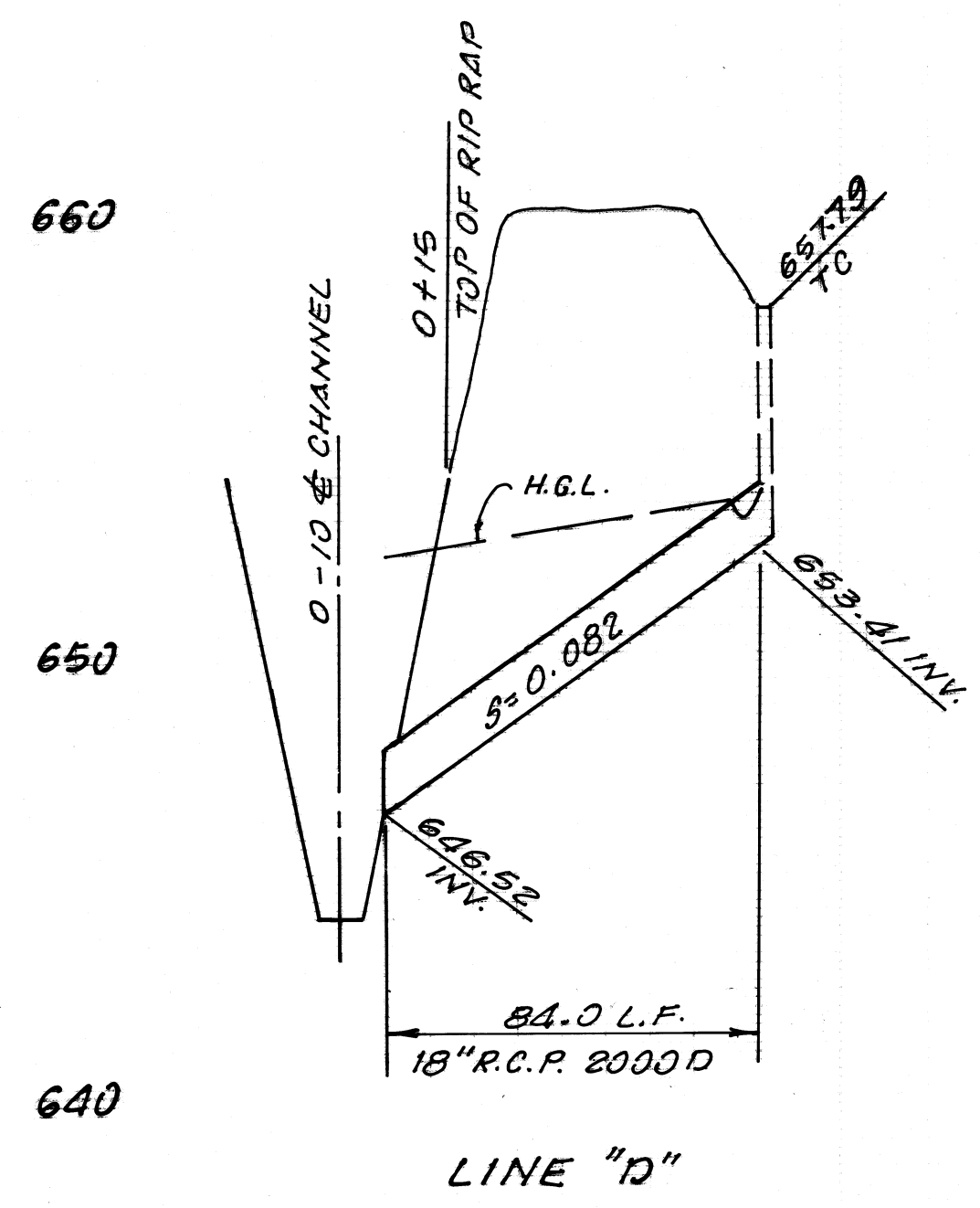
WALNUT CANYON ROAD

**O'MALLEY ENGINEERING CORPORATION**  
1215 POMONA RD., SUITE E  
CORONA, CAL. 91720  
(714) 734-0633  
SIGNATURE: *David O'Malley* R.C.E. NO. 21217  
DATE: 6-4-84

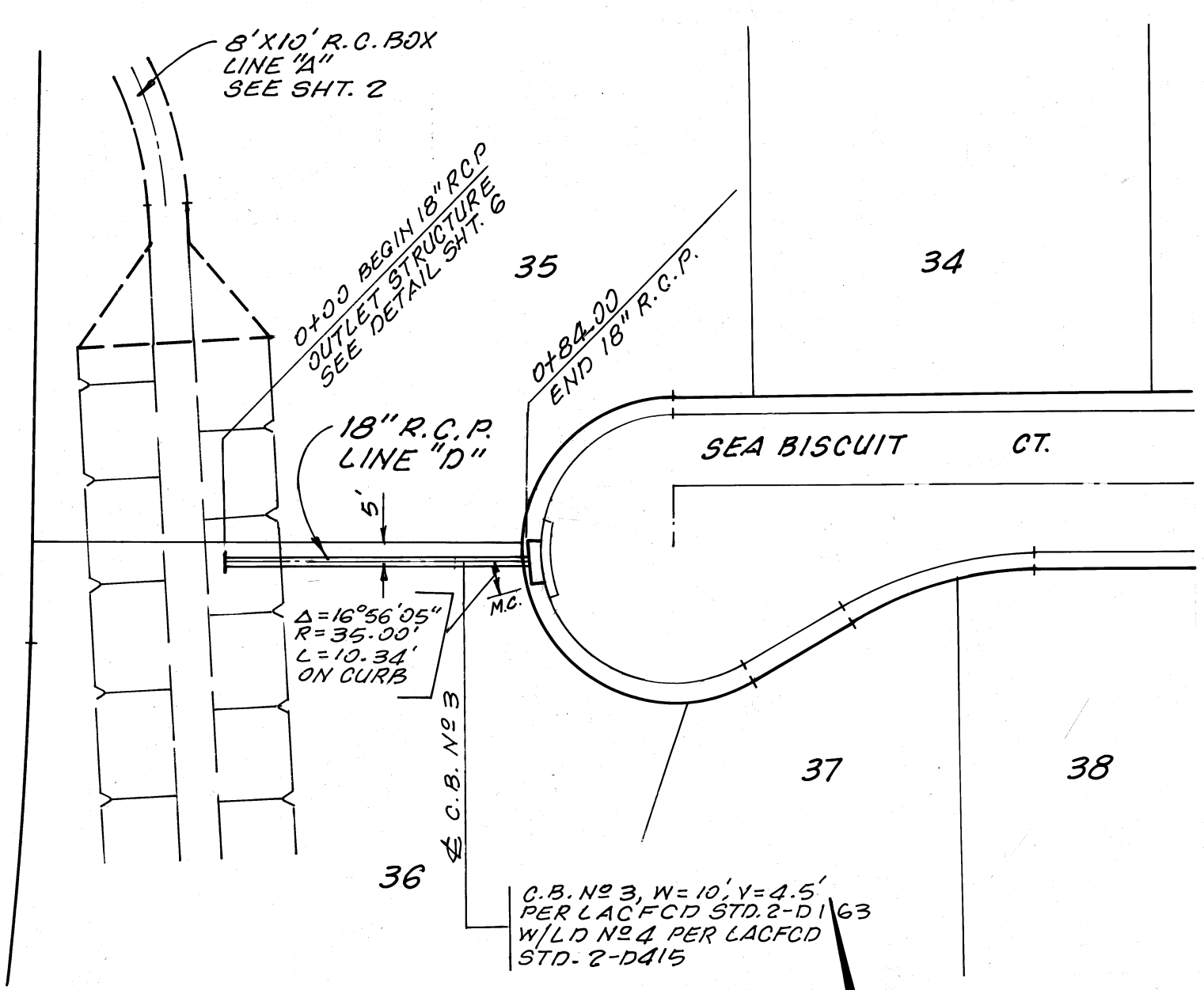
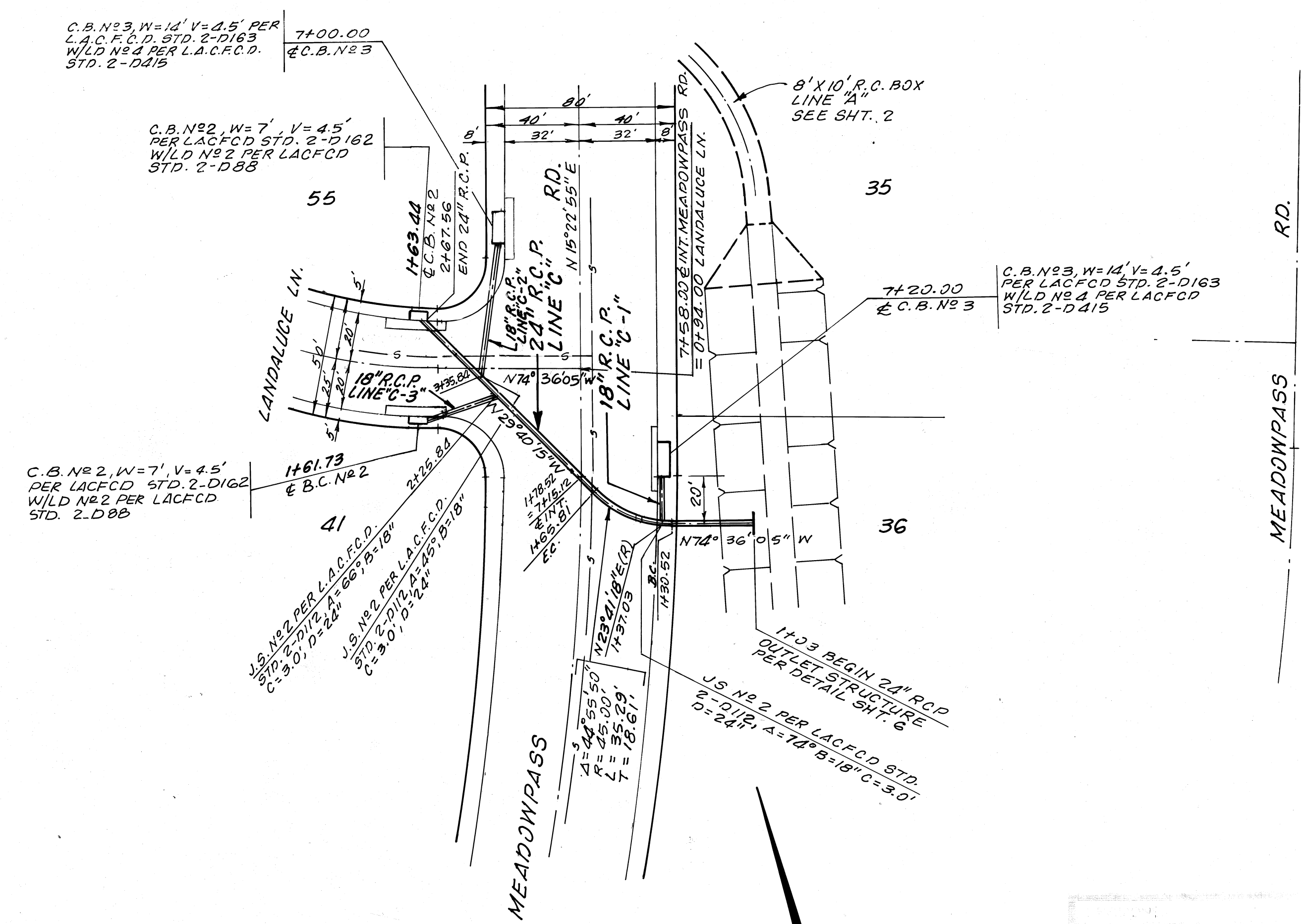
**CITY OF WALNUT, CALIFORNIA**  
APPROVED: *Ronald L. Kranzer*  
RONALD L. KRANZER, R.C.E. 18503  
DATE: 6-4-84



SCALE  
HORIZ: 1"=40'  
VERT: 1"=4'



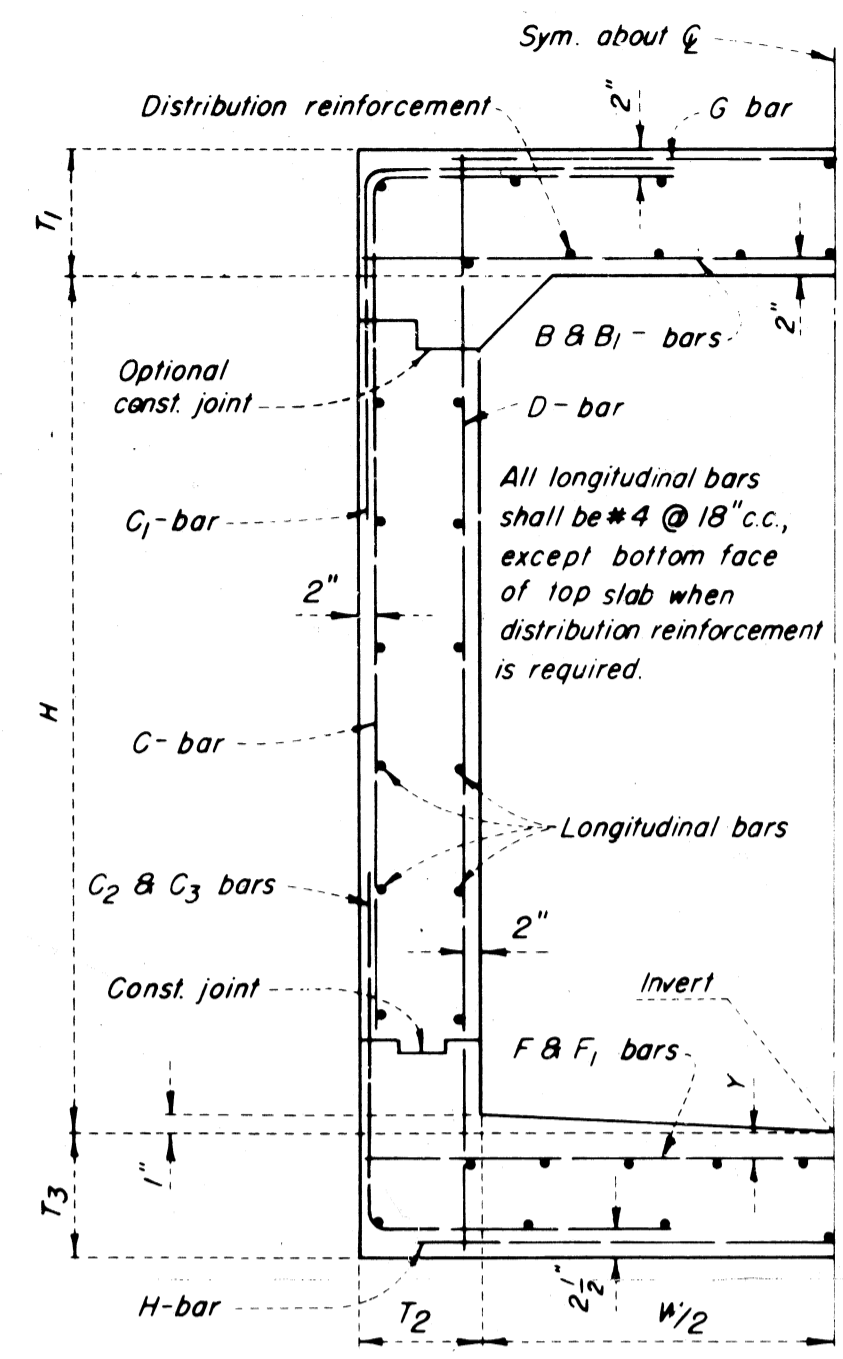
NOTE:  
FOR PROFILE CONNECTOR PIPE B-4 SEE SHEET 2



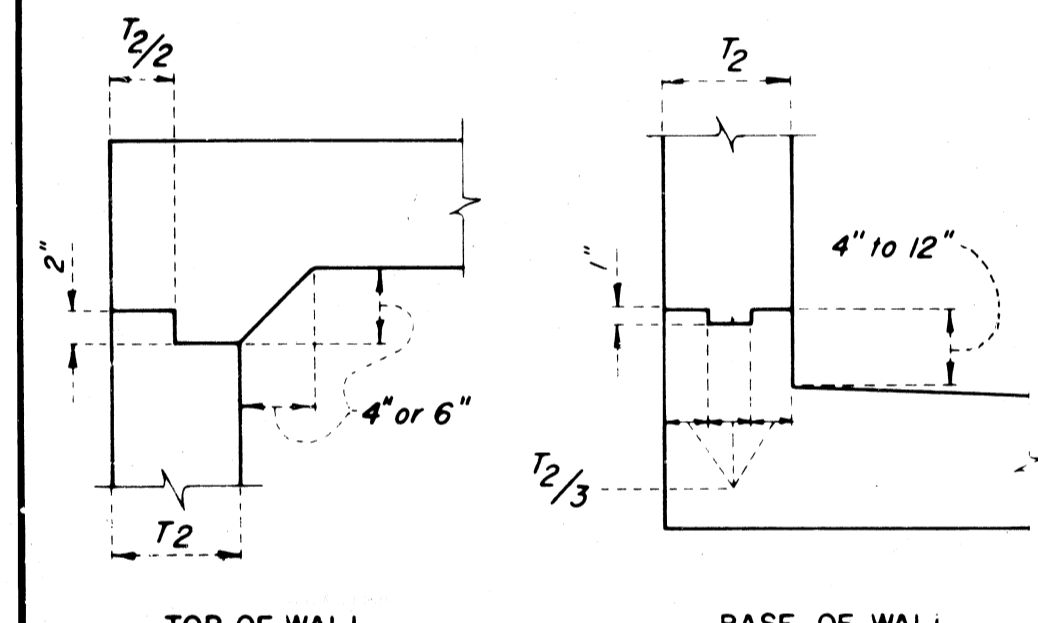
IF CONSTRUCTION OF IMPROVEMENTS AS SHOWN HEREON ARE NOT COMMENCED WITHIN 18 MONTHS OF APPROVAL DATE, THESE PLANS ARE SUBJECT TO REVIEW BY THE CITY.

7-10-83  
CITY ENGINEER  
Ronald L. Kranzer R.C.E. 18503  
16-4-84  
DATE  
O'MALLEY ENGINEERING CORPORATION  
1215 POMONA RD., SUITE E  
CORONA, CAL. 91720  
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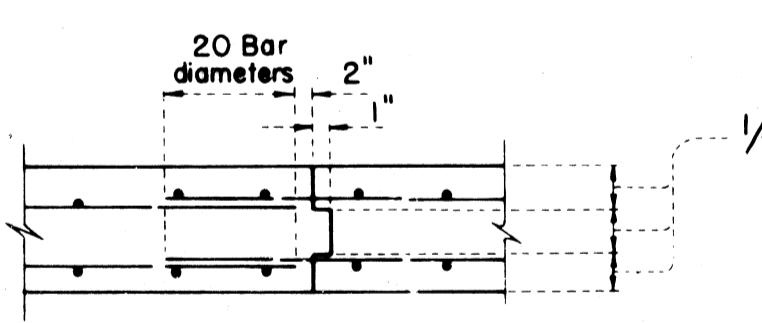
TRACT NO. 42892  
CITY OF WALNUT  
STORM DRAIN  
4  
OF 6 SHEETS  
FILE NO.  
144D  
579



TYPICAL R C BOX SECTION  
NOT TO SCALE



LONGITUDINAL JOINT



TRANSVERSE JOINT

CONSTRUCTION JOINT DETAILS  
NOT TO SCALE

STRUCTURAL NOTES

1. DIMENSIONS FROM FACE OF CONCRETE TO STEEL ARE TO CENTER OF BAR, UNLESS OTHERWISE SHOWN.
2. CONCRETE DIMENSIONS SHALL BE MEASURED HORIZONTALLY OR VERTICALLY ON THE PROFILE, AND PARALLEL TO OR AT RIGHT ANGLES (OR RADially) TO CENTERLINE OF CONDUIT ON THE PLAN EXCEPT AS OTHERWISE SHOWN.
3. ALL BAR BENDS AND HOOKS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE'S "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", 1971 EDITION, SECTION 7-1.
4. PLACING OF REINFORCEMENT SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE'S "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", 1971 EDITION, SECTION 7-3.
5. TRANSVERSE CONSTRUCTION JOINTS SHALL NOT BE PLACED WITHIN 30 INCHES OF MANHOLE OR JUNCTION STRUCTURE OPENINGS.
6. TRANSVERSE CONSTRUCTION JOINTS IN WALLS AND SLABS SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED. TRANSVERSE CONSTRUCTION JOINTS SHALL BE NORMAL OR RADIAL TO THE CENTERLINE OF CONSTRUCTION.
7. THE TRANSVERSE REINFORCING STEEL SHALL TERMINATE ONE AND ONE-HALF INCHES FROM THE CONCRETE SURFACES UNLESS OTHERWISE SHOWN ON THE STRUCTURAL DETAILS.
8. EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE ROUNDED OR BEVELED.
9. NO SPLICES IN TRANSVERSE STEEL REINFORCEMENT WILL BE PERMITTED OTHER THAN SHOWN ON THE DRAWING WITHOUT APPROVAL OF THE ENGINEER. NO MORE THAN TWO SPLICES WILL BE PERMITTED IN ANY LONGITUDINAL BAR BETWEEN TRANSVERSE JOINTS. SPLICES SHALL BE STAGGERED.
10. LONGITUDINAL STEEL SHALL BE LAPPED 20 BAR DIAMETERS AT SPLICES. TRANSVERSE STEEL SHALL BE LAPPED 30 BAR DIAMETERS AT SPLICES.
11. LONGITUDINAL STEEL SHALL BE CONTINUOUS AND EXTEND THROUGH ALL CONSTRUCTION JOINTS.
12. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, TRANSVERSE CONSTRUCTION JOINTS (IN SLABS AND WALLS) SHALL BE PLACED AT THE END OF EACH POUR, BUT THE SPACING THEREOF SHALL NOT EXCEED 50 FEET OR BE LESS THAN 10 FEET.
13. UNLESS OTHERWISE SHOWN ON THE DETAILS, IN CURVED SECTIONS TRANSVERSE BARS SHALL BE PLACED RADially. THE SPACING OF STRAIGHT TRANSVERSE BARS IN TOP AND BOTTOM SLABS SHALL BE MEASURED AT THE CENTERLINE OF CONSTRUCTION. THE SPACING OF STRAIGHT BARS AND L-BARS IN WALLS SHALL BE MEASURED BETWEEN THE VERTICAL LEGS OF BARS.
14. AT THE BEGINNING AND ENDING OF ALL POURS, A CURTAIN OF REINFORCEMENT COMPOSED OF B, C, C2, D, F, G, AND H BARS SHALL BE PLACED THREE INCHES FROM THE TRANSVERSE CONSTRUCTION JOINT.
15. D-BARS MAY BE SPLICED 20 BAR DIAMETERS AT THE LOWER LONGITUDINAL CONSTRUCTION JOINT, AT CONTRACTOR'S OPTION.
16. IN ALL SECTIONS LAP C AND C2 BARS. THE VERTICAL LENGTH OF C AND C2 HAS BEEN CALCULATED FOR A FOUR INCH STARTER WALL. IF THE HEIGHT OF THE STARTER WALL IS VARIOUS, THE VERTICAL LENGTH OF THE C AND C2 BARS SHALL BE VARIED CORRESPONDINGLY SO AS TO MAINTAIN A 30 DIAMETER LAP BETWEEN THE TWO BARS. THE LAPS SHALL BE BASED ON THE SMALLER BAR.
17. CONCRETE QUANTITIES ARE BASED ON A SIX-BY-SIX INCH FILLET AND THE STEEL QUANTITIES DO NOT INCLUDE ANY OPTIONAL SPLICES.
18. IF WALL THICKNESS IS SIX INCHES, PLACE REINFORCEMENT AT THE CENTERLINE OF THE WALL.
19. THE DESIGN OF BOX SECTIONS IDENTIFIED BY A NUMERICAL VALUE ONLY IS BASED ON A WIDTH OF TRENCH EQUAL TO THE OUTSIDE WIDTH OF THE CONDUIT PLUS 3 FEET. WHEN THE COVER IS EQUAL TO 10 FEET OR LESS THE TRENCH WIDTH IS UNRESTRICTED. WHEN THE COVER IS GREATER THAN 10 FEET AND THE TRENCH WIDTH IS GREATER THAN THE OUTSIDE WIDTH OF THE CONDUIT PLUS 3 FEET FOR A DISTANCE IN EXCESS OF 10 FEET AN ALTERNATE SECTION SHALL BE USED AS INDICATED BELOW:
  - a. WHEN THE DEPTH OF COVER IS LESS THAN 18 FEET, SECTIONS WITH THE SUFFIX "B" SHALL BE USED.
  - b. WHEN THE DEPTH COVER IS GREATER THAN 18 FEET AND:
    1. THE TRENCH WIDTH IS LESS THAN THE OUTSIDE WIDTH OF THE CONDUIT PLUS 6 FEET, SECTIONS WITH SUFFIX "A" SHALL BE USED.
    2. THE TRENCH WIDTH IS GREATER THAN THE OUTSIDE WIDTH OF CONDUIT PLUS 6 FEET, SECTIONS WITH THE SUFFIX "B" SHALL BE USED.

BOX SECTION		6'X10'	8'X10'
Design	Cover	10'-0"	7'-0"
Width	W	10'-0"	10'-0"
Height	H	6'-0"	8'-0"
Top Slab Thickness	T1	10 3/4"	8 3/4"
Side Wall Thickness	T2	8 1/4"	8"
Bottom Slab Thickness	T3	11 1/4"	9 1/2"
B	Bar No. & Spacing	#4@11"	#4@10"
Bars	Length	11'-1 1/2"	11'-1"
B1	Bar No. & Spacing	#4@11"	#4@10"
Bars	Length	6'-0 1/2"	5'-10 1/2"
C	Bar No. & Spacing	#4@10"	#4@9"
Bars	Hor. Length	4'-3"	4'-1"
	Vert. Length	6'-4"	5'-2"
C1	Bar No. & Spacing	#4@10"	#4@9"
Bars	Hor. Length	1'-6 1/2"	1'-7 1/2"
	Vert. Length	3'-10"	3'-7 1/2"
C2	Bar No. & Spacing	#4@10"	#4@9"
Bars	Hor. Length	4'-3"	4'-2 1/2"
	Vert. Length	2'-4 1/2"	2'-2 1/2"
C3	Bar No. & Spacing	#4@10"	#4@9"
Bars	Hor. Length	1'-5"	1'-6 1/2"
	Vert. Length	3'-3 1/2"	3'-0 1/2"
D	Bar No. & Spacing	#4@15"	#4@15"
Bars	Length	7'-7"	9'-3"
F	Bar No. & Spacing	#4@10"	#4@15"
Bars	Length	11'-1 1/4"	11'-1"
F1	Bar No. & Spacing	#4@10"	#4@15"
Bars	Length	6'-3"	6'-3"
G	Bar No. & Spacing	#4@10"	—
Bars	Length	5'-0"	—
H	Bar No. & Spacing	#4@10"	#4@9"
Bars	Length	5'-0"	5'-0"
NUMBER OF LONGITUDINAL REINFORCEMENT #4 BARS			
Top Slab (includes distribution reinforcement)		17	16
Bottom Slab		17	17
Side Walls		16	20
TOTAL		50	53
QUANTITIES			
Concrete Cu.Yds./Lin. Ft.		1.10	1.06
Steel Lbs./Lin. Ft.		169	166.5

STRUCTURAL DESIGN CRITERIA  
L.A.C.F.C.D. STRUCTURAL DESIGN MANUAL  
DATED APRIL 1982

- LIVE LOAD**  
H20-S16-44 unless otherwise noted
- DEAD LOAD**  
Earth load per Marston's formula:  $w = 110 p c f$   
 $K_u = K_v = 0.150$   
 $B_d =$  Outside width of box plus 3 feet  
 Side earth p s f per foot of depth  
 Internal water pressure: 62.4 p s f per foot of depth  
 Weight of concrete: 150 p c f
- ALLOWABLE STRESSES**  
 $f_c = 4000$  p s i at 28 days  
 $f_c = 1800$  p s i  
 $f_s = 24,000$  p s i  
 $n = 8$   
 Shear and bond stresses per A.C.I. 318-63

R C BOX LOCATION SCHEDULE				
Box Sect.	Station From	Station To	Box Sect.	Station From To
6'X10'	18+10.62	21+73.89		
8'X10'	18+55.15	18+95.52		
8'X10'	21+80.03	21+94.89		

IF CONSTRUCTION OF IMPROVEMENTS AS SHOWN HEREON ARE NOT COMMENCED WITHIN 18 MONTHS OF APPROVAL DATE THESE PLANS ARE SUBJECT TO REVIEW BY THE CITY.

APPROVED: *[Signature]* 9-10-83  
JAMES O'MALLEY RCE 27127 DATE

APPROVED: *[Signature]*  
RONALD L. KRANZER RCE 18503 DATE

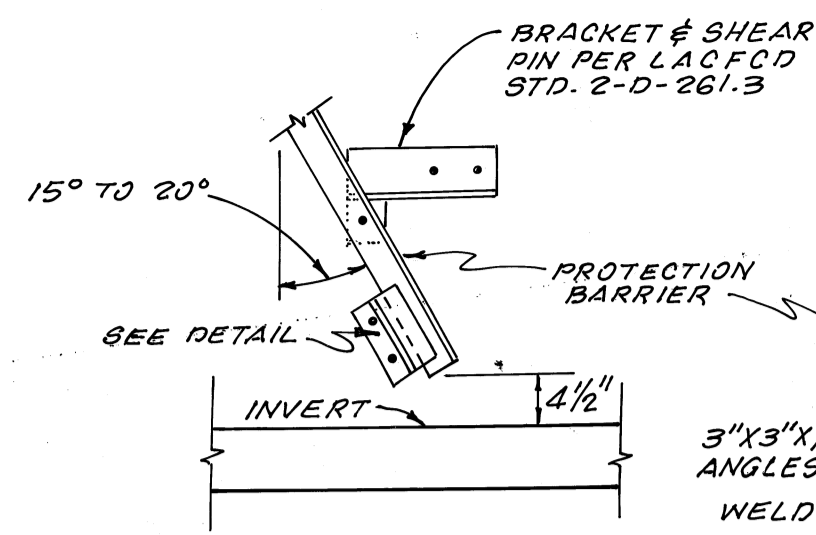
TRACT NO. 42892  
CITY OF WALNUT

SINGLE R. C. BOX  
STRUCTURAL SCHEDULE NOTES & DETAILS

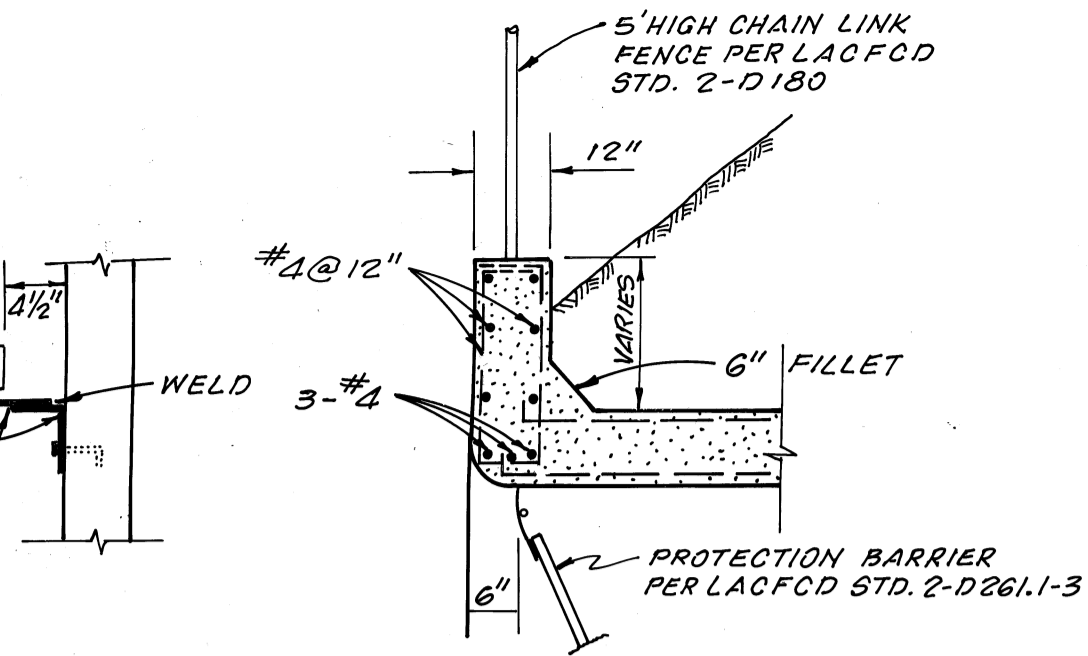
**O'MALLEY ENGINEERING CORPORATION**  
1215 POMONA RD., SUITE E  
CORONA, CAL. 91720  
(714) 734-0633

CALL N.T.S.  
BY ENGR. J.O.M.  
DATE 2/12/82  
JOB NO. FEB. 10, 1982  
JOB NO. 18379

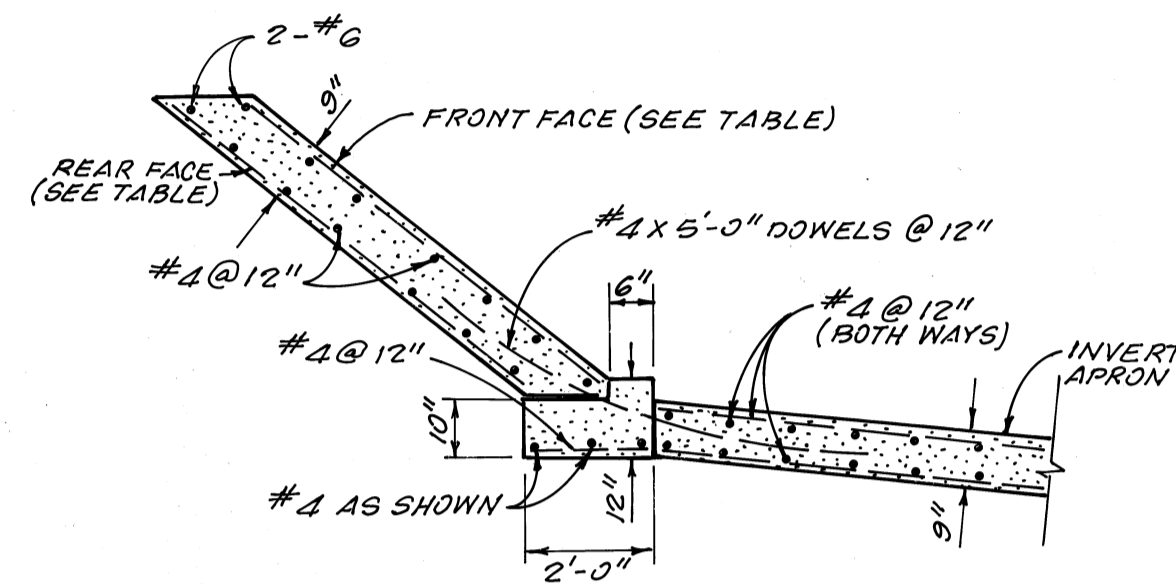
5HT. 5  
OF  
6 SHTS.



SHEAR PIN DETAIL



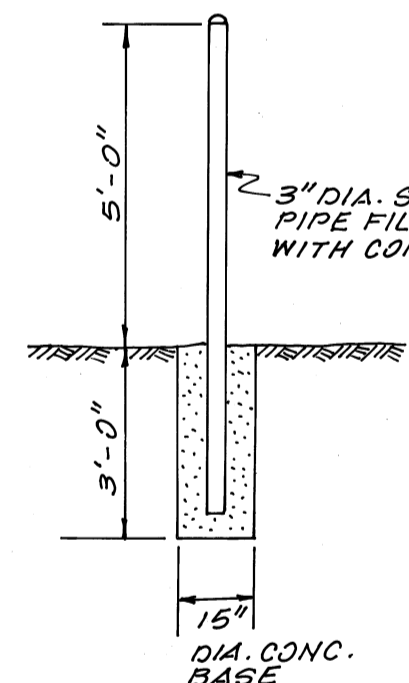
PARAPET DETAIL



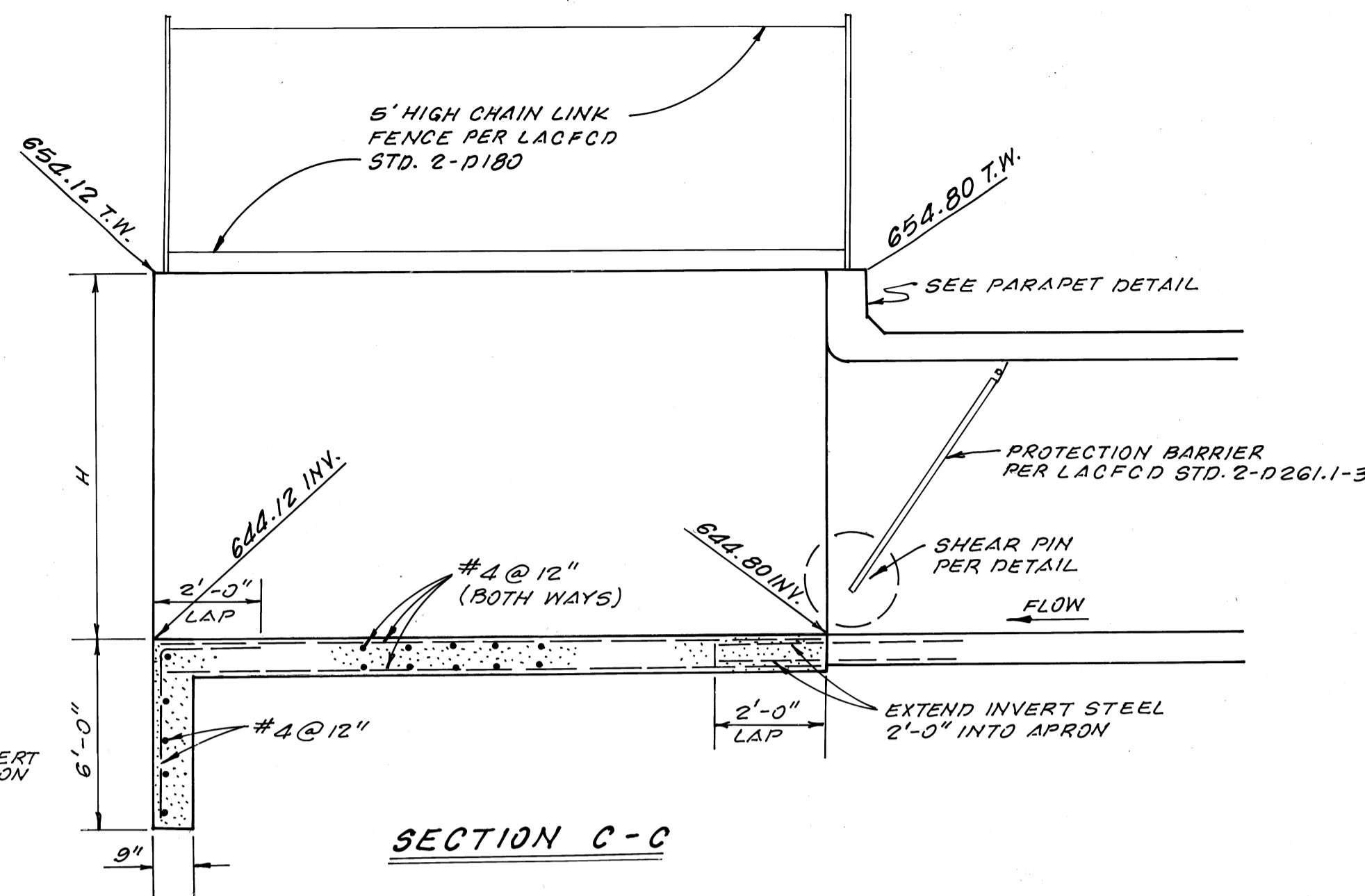
SECTION B-B

WARPED WINGWALL REINFORCEMENT

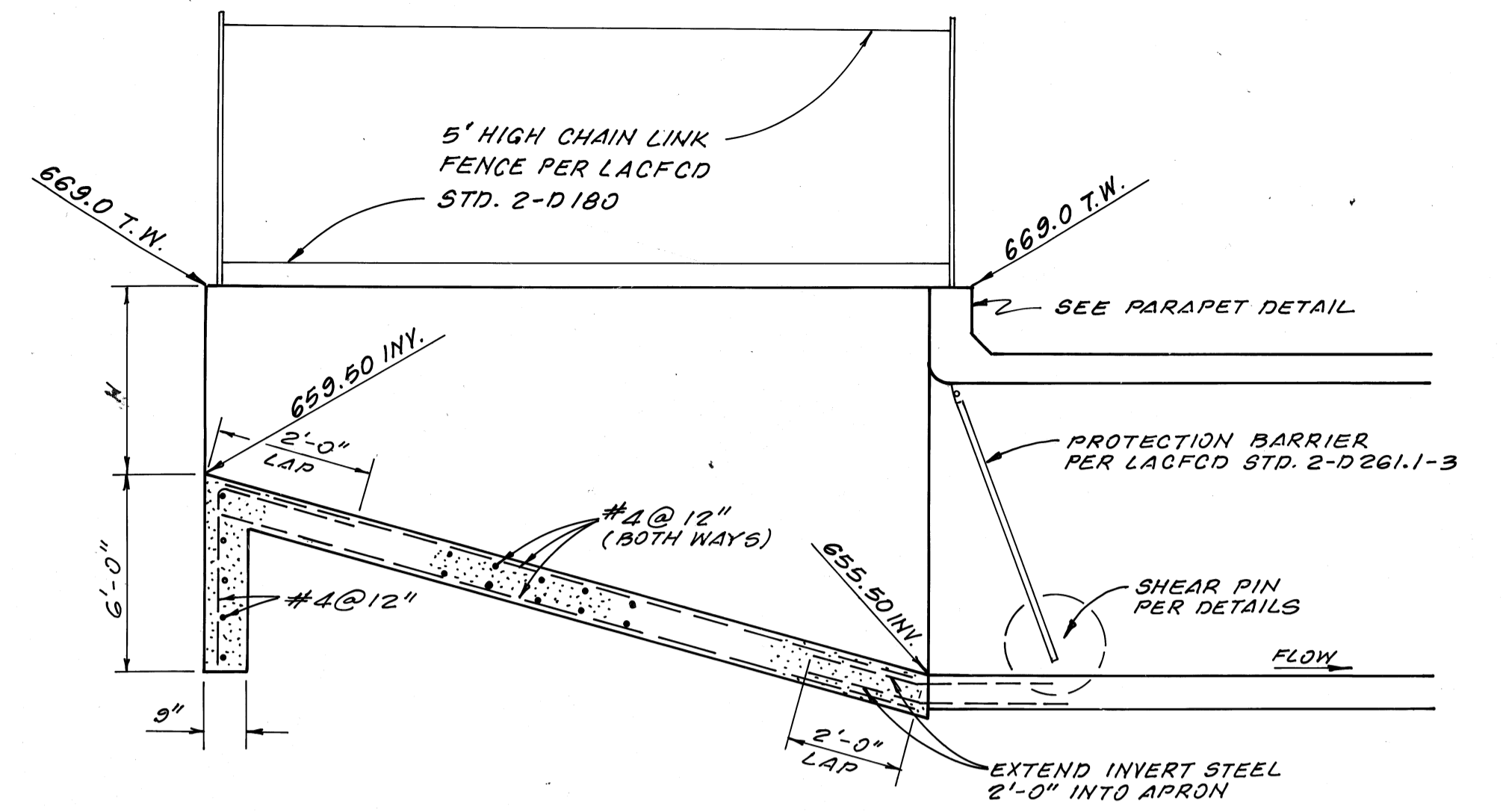
ELEMENT SLOPE	HEIGHT	8' OR LESS	10'	12'
1/4:1	FRONT FACE	#4 @ 12"	#4 @ 7"	#5 @ 7"
	REAR FACE	#4 @ 12"	#4 @ 12"	#4 @ 12"
3/4:1	FRONT FACE	#4 @ 12"	#4 @ 12"	#4 @ 12"
	REAR FACE	#4 @ 12"	#4 @ 12"	#4 @ 12"
1 1/4:1	FRONT FACE	#4 @ 12"	#4 @ 12"	#4 @ 12"
	REAR FACE	#4 @ 8"	#4 @ 8"	#4 @ 5"



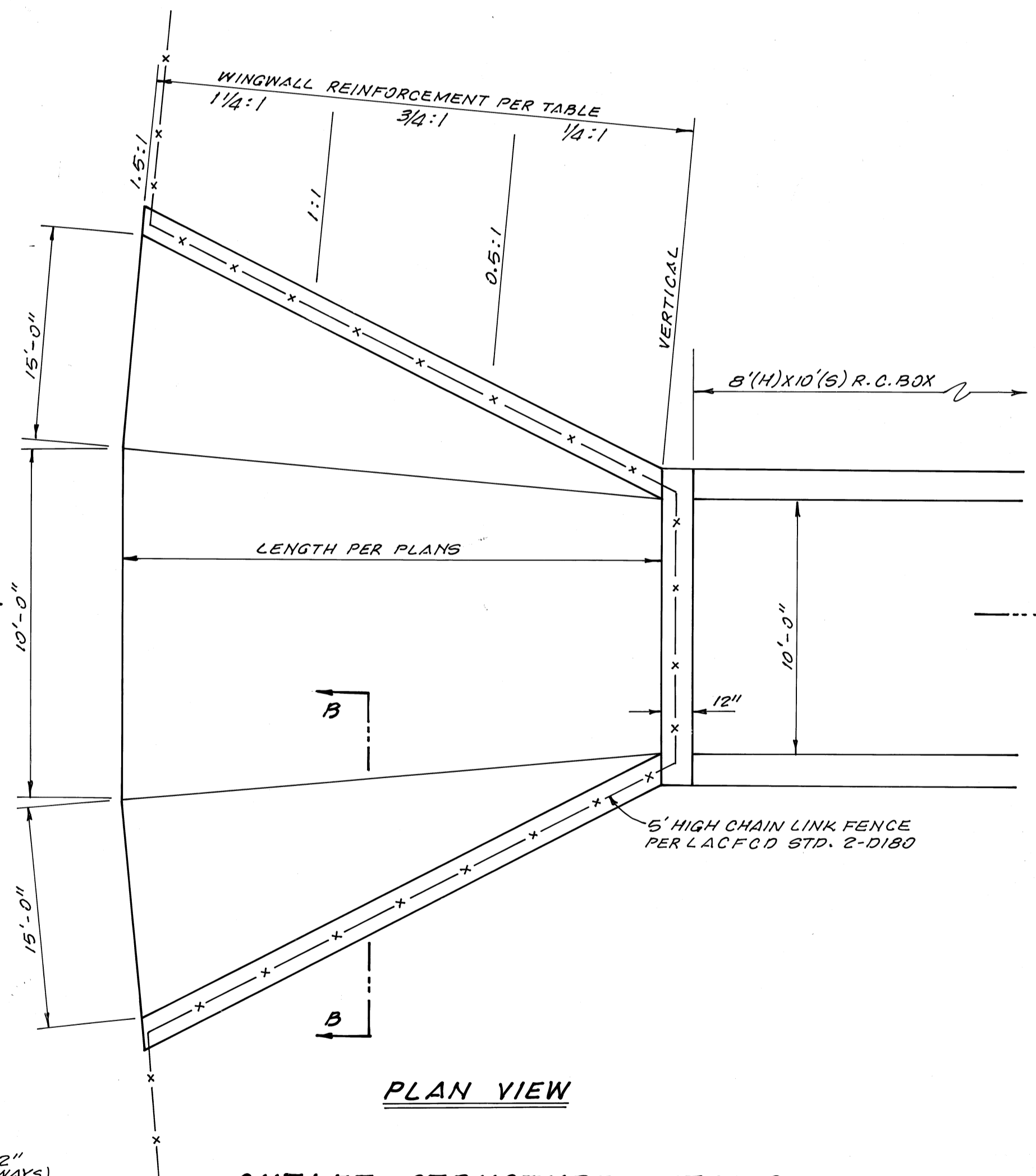
DEBRIS POST DETAIL



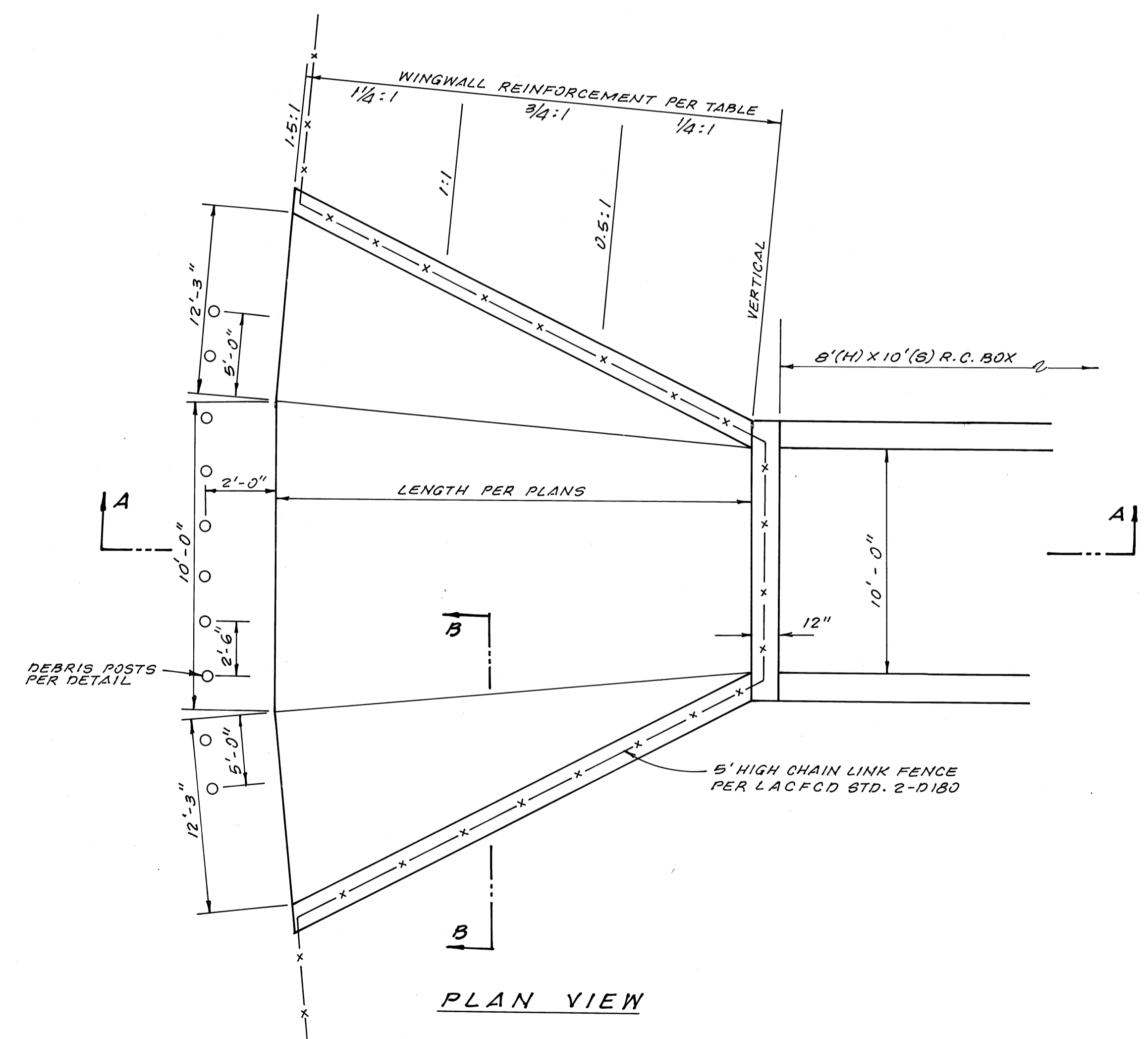
SECTION C-C



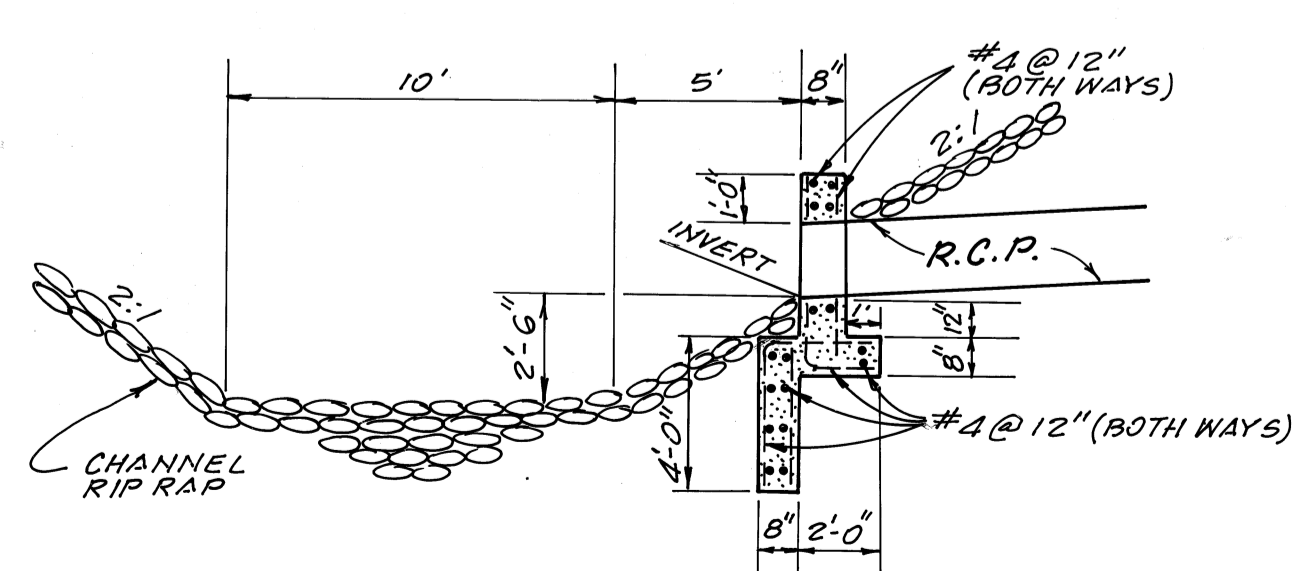
SECTION A-A



PLAN VIEW



PLAN VIEW



HEADWALL DETAIL  
LINE "C" & "D"

OUTLET STRUCTURE DETAILS  
LINE "A"

INLET STRUCTURE DETAILS  
LINE "A"

IF CONSTRUCTION OF IMPROVEMENTS AS SHOWN HEREON ARE NOT COMMENCED WITHIN 18 MONTHS OF APPROVAL DATE, THESE PLANS ARE SUBJECT TO REVIEW BY THE CITY.

REVISIONS:	APPROVED BY:
	<i>M. J. Malley</i>
	REGISTERED CIVIL ENGINEER NO. 27127
	DATE: 9-10-83
	APPROVED BY:
	CITY ENGINEER
	<i>Ronald L. Kranzer</i>
	RONALD L. KRANZER R.O.E. 18503
	DATE: 6-7-84

APPROVED BY:	DATE:
<i>M. J. Malley</i>	9-10-83
<i>Ronald L. Kranzer</i>	6-7-84

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CORONA, CAL. 91720  
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TRACT NO. 42892  
CITY OF WALNUT  
**STORM DRAIN DETAILS**  
144F

6  
OF 6 SHEETS  
FILE NO.