

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

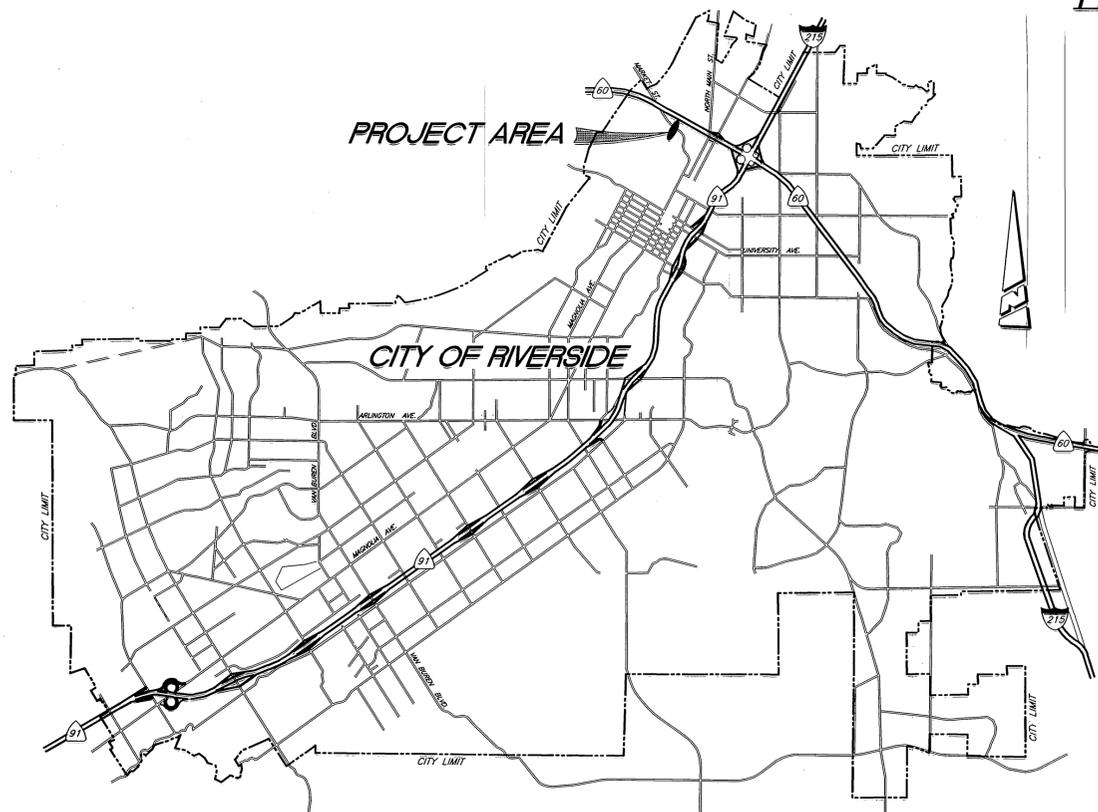
UNIVERSITY WASH CHANNEL STAGE 4

STATE ROUTE 60 TO BOWLING GREEN DRIVE

EDA AWARD #07-01-04897

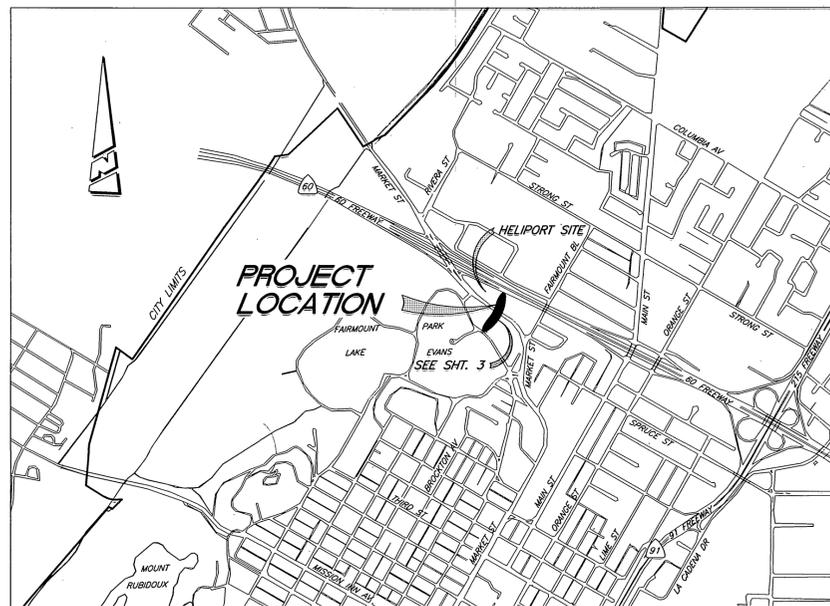
GENERAL CONSTRUCTION NOTES

- 1 THE CONTRACTOR SHALL CONSTRUCT THE FLOOD CONTROL IMPROVEMENTS SHOWN ON THESE PLANS IN CONFORMANCE WITH THE REQUIREMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT'S M.O.U., STANDARD SPECIFICATIONS, DATED SEPTEMBER 1984, AND DESIGN MANUAL STANDARD DRAWINGS, RECENT EDITION.
- 2 EXISTING UTILITIES SHOWN ON THIS PLAN ARE PLOTTED FROM UTILITY RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO LOCATE AND PROTECT ALL UTILITIES WHETHER OR NOT SHOWN ON THIS PLAN. IF THE COVER OF A UTILITY IS KNOWN, IT IS SHOWN IN THE PROFILE. UTILITIES SHOWN IN THE PROFILE AS INDICATES THAT THE COVER IS UNKNOWN, BUT THE UTILITY IS NOT EXPECTED TO CONFLICT WITH THE PROPOSED IMPROVEMENTS.
- 3 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAR THE RIGHT OF WAY IN ACCORDANCE WITH THE PROVISIONS OF LAW AS IT AFFECTS EACH UTILITY INCLUDING IRRIGATION LINES AND APPURTENANCES.
- 4 ALL FLAGGED ELEVATIONS SHOWN ON THE PLANS SHALL BE STAKED IN THE FIELD.
- 5 CONFLICTING UTILITIES SHOWN WITHIN CONSTRUCTION AREA WILL BE RELOCATED PRIOR TO CONSTRUCTION.
- 6 THE CONTRACTOR SHALL OVER-EXCAVATE THE BOTTOM OF THE CHANNEL TO A DEPTH OF 4 FEET BELOW THE PROPOSED R.C.B. FLOWLINE. A 3 FOOT DEEP AGGREGATE FOUNDATION WITH GEO-GRID REINFORCEMENT SHALL BE CONSTRUCTED TO SUPPORT THE R.C.B. SEE SHEET 2 FOR DETAILS.
- 7 ALL ELEVATIONS ARE IN FEET, BASED ON U.S.C. & G.S. DATA.
- 8 ALL CHANNEL REFERENCES & CROSS SECTIONS ARE TAKEN LOOKING DOWNSTREAM.
- 9 STANDARD DRAWINGS CALLED FOR ON THE PLAN AND/OR PROFILE SHALL CONFORM TO EITHER THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT STANDARD DRAWINGS OR THE CITY OF RIVERSIDE STANDARD DRAWINGS OR THE CALIFORNIA DEPT. OF TRANSPORTATION (CALTRANS) STANDARD PLANS DATED JULY, 1999.
- 10 THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (U.S.A.), PHONE # 1-800-227-2600, TWO WORKING DAYS BEFORE DIGGING. NO CONSTRUCTION PERMIT WILL BE ISSUED BY THE PUBLIC WORKS DEPT. INVOLVING EXCAVATION FOR UNDERGROUND FACILITIES UNLESS THE APPLICANT HAS BEEN PROVIDED AN INQUIRY IDENTIFICATION NUMBER BY U.S.A.
- 11 CHAMFER EXPOSED CORNERS AND EDGES OF ALL CONCRETE STRUCTURES 3/4" TYP.
- 12 CONSTRUCTION OF THE REINFORCED CONCRETE BOX SHALL BE STAGED IN SUCH A WAY THAT THE TRAFFIC ON MARKET STREET SHALL BE DETOURED OVER A PORTION OF THE NEWLY CONSTRUCTED BOX. SEE R-3663 FOR DETOUR PLANS.
- 13 THE CONTRACTOR WILL BE ALLOWED TO STORE MATERIAL AND EQUIPMENT ON THE CITY OWNED FORMER HELIPORT SITE, LOCATED ADJACENT TO THE WESTERLY SIDE OF THE CONSTRUCTION SITE.
- 14 NOTICE: THE CONTRACTOR SHALL NOTIFY THE DISTRICT IN WRITING A MINIMUM OF 20 DAYS BEFORE BEGINNING CONSTRUCTION, AND SHALL NOT BEGIN CONSTRUCTION BEFORE OBTAINING AUTHORIZATION TO PROCEED.
- 15 CONSTRUCTION INSPECTION WILL BE PERFORMED BY RIVERSIDE COUNTY FLOOD CONTROL. CONTACT DALE ANDERSON AT (909) 955-1288.
- 16 THE CONTRACTOR SHALL SECURE ALL REQUIRED ENCROACHMENT AND/OR STATE AND FEDERAL REGULATORY PERMITS PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN THEIR JURISDICTION.
- 17 APPROVAL OF THESE PLANS BY THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT DOES NOT RELIEVE THE ENGINEER OF RECORD OF THE RESPONSIBILITY FOR THE ENGINEER'S DESIGN. IN THE EVENT OF DISCREPANCIES ARISING DURING CONSTRUCTION, IT WILL BE THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO DETERMINE AN ACCEPTABLE SOLUTION AND REVISE THE PLANS FOR APPROVAL BY THE DISTRICT.
- 18 DURING ROUGH GRADING OPERATIONS AND PRIOR TO CONSTRUCTION OF PERMANENT DRAINAGE STRUCTURES, TEMPORARY DRAINAGE CONTROL SHOULD BE PROVIDED TO PREVENT PONDING WATER AND DAMAGE TO ADJACENT PROPERTIES.
- 19 ALL STATIONING REFERS TO CENTERLINE OF CONSTRUCTION UNLESS OTHERWISE NOTED.
- 20 STATIONING FOR LATERALS AND CONNECTOR PIPE REFER TO THE CENTERLINE INTERSECTION STATIONS.



VICINITY MAP

NOT TO SCALE



LOCATION MAP

NOT TO SCALE

R.C.F.C. & W.C.D. STD. DRAWINGS

JS226 JUNCTION STRUCTURE NO. 1
TS302 TRANSITION STRUCTURE NO. 2
CH326 TRAPEZOIDAL CHANNEL DETAILS
CH330 MAINTENANCE RAMP FOR TRAPEZOIDAL WALL CHANNEL
CH332 SUBDRAINS

CITY OF RIVERSIDE STD. DRAWINGS

380 CHAIN LINK FENCE
424 CONCRETE COLLAR

CALTRANS STD. PLANS

DB1 CAST-IN-PLACE REINFORCED CONCRETE DOUBLE BOX CULVERT
DB2 CAST-IN-PLACE REINFORCED CONCRETE BOX CULVERT
MISCELLANEOUS DETAILS
DB4 BOX CULVERT WINGWALLS TYPES A, B AND C

NOTICE: THE CONTRACTOR SHALL NOTIFY THE DISTRICT, IN WRITING, A MINIMUM OF TWO WEEKS BEFORE BEGINNING CONSTRUCTION, AND SHALL NOT BEGIN CONSTRUCTION BEFORE OBTAINING AUTHORIZATION TO PROCEED.

THE FOLLOWING ITEMS ARE TO BE INSPECTED AND MAINTAINED BY THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT:

4 CELL, 14'W x 8'H, R.C.B. FROM STATION 13+52 TO STATION 17+51 AS SHOWN ON SHEET 3.

AND OTHER STRUCTURES REQUIRED TO COMPLETE THE CONSTRUCTION OF THE 4 CELL, 14'W x 8'H R.C.B.

PLAN SHEET INDEX

TITLE SHEET	SHEET NO.
CHANNEL SECTIONS	1
MAIN LINE PLAN & PROFILE SHEET	2
CONNECTOR PIPE PROFILES AND DETAILS	3
	4

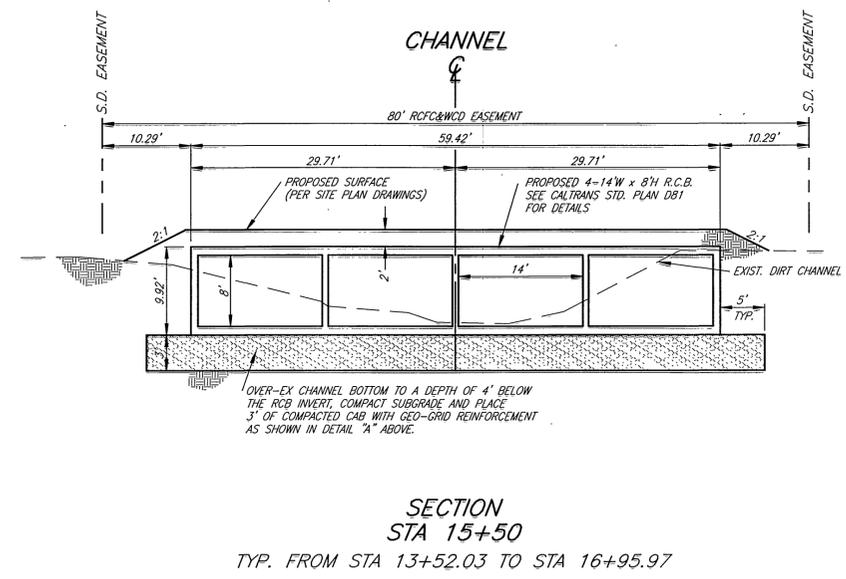
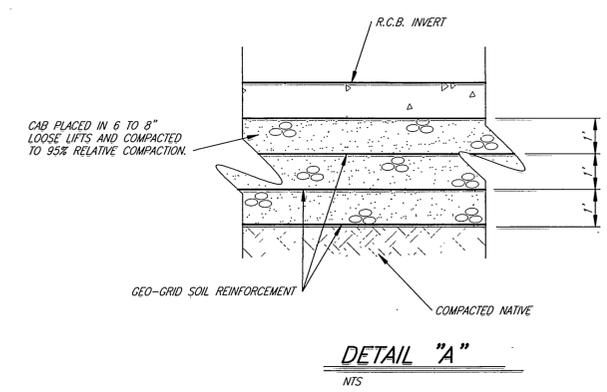
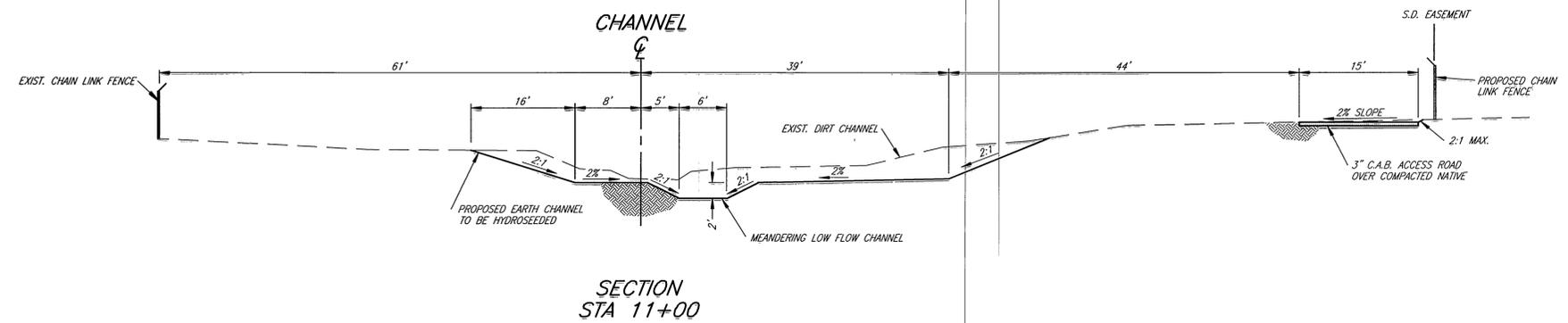
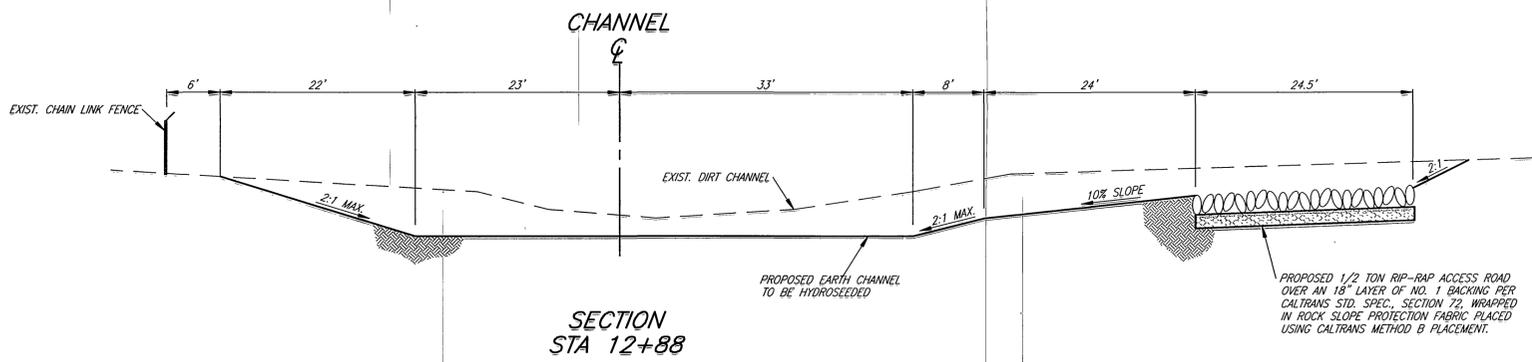
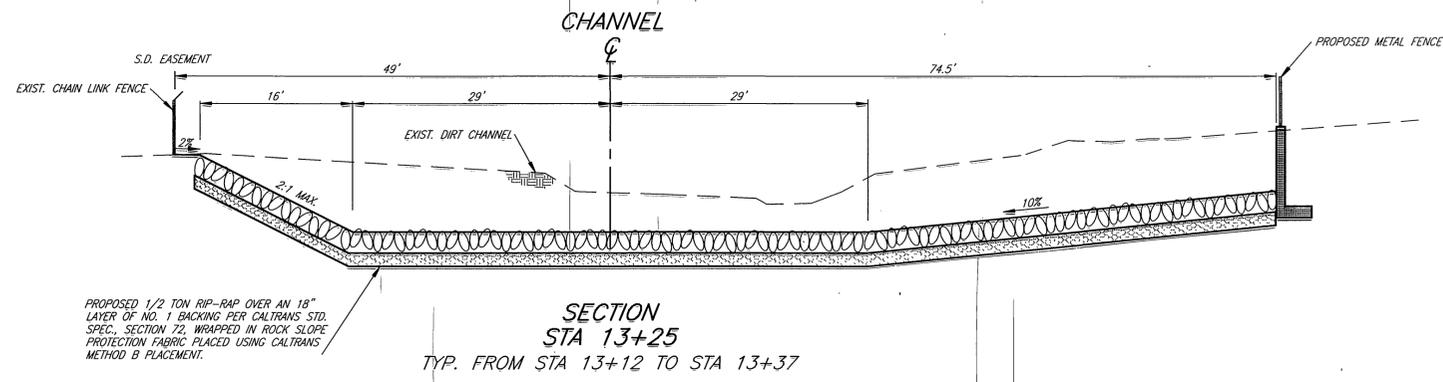
DUPLICATE OF ORIGINAL - DO NOT REVISE

*AS-BUILT PER PLANS 9-30-05 LHM

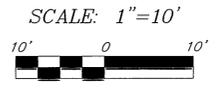
INDEXED 7-28-03 LHM

DB

<p>IMPORTANT NOTICE Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert ID Number CALL TOLL FREE 48 HOURS BEFORE YOU DIG UNDERGROUND SERVICE ALERT 1-800-227-2600</p>	<p>ENGINEER IN RESPONSIBLE CHARGE <i>Philip L. Hannawi</i> PHILIP L. HANNAWI R.C.E. No. 44747 expires 3/31/06 DATE 5-6-03</p>		<p>CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT APPROVED BY: <i>Tom Boyd</i> CITY ENGINEER R.C.E. No. 36170 expires 6/30/04 DATE 5/6/03</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>REF.</th> <th>DESCRIPTION</th> <th>APPR.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REF.	DESCRIPTION	APPR.	DATE					<p>RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT RECOMMENDED FOR APPROVAL BY: <i>Karl</i> DESIGNED BY: KARL DRAWN BY: KARL DATE DRAWN: 5/2003 CHECKED BY: DATE: 8 May 03</p>	<p>APPROVED BY: <i>David Smith</i> PLANNING ENGINEER DATE: 5-8-03</p>	<p>UNIVERSITY WASH CHANNEL STAGE 4 TITLE SHEET</p>	<p>PROJECT NO. 1-0-0120-04</p>
					REF.	DESCRIPTION	APPR.	DATE								
<p>DRAWING NO. 1-610</p>																
							<p>SHEET NO. 1 of 4</p>									



UNIVERSITY WASH CHANNEL CROSS SECTIONS



*AS-BUILT PER PLANS 9-30-05 4H
INDEXED 7-28-03 4H

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ENGINEER IN RESPONSIBLE CHARGE
Philip L. Haninawi
PHILIP L. HANINAWI
R.C.E. No. 44747 expires 3/31/06
DATE 5-6-03



CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
APPROVED BY:
Philip L. Haninawi
CITY ENGINEER
R.C.E. No. 36170 expires 6/30/04
DATE 5/6/03

REF.	DESCRIPTION	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
DESIGNED BY: KARL
DRAWN BY: KARL
DATE DRAWN: 5/2003
CHECKED BY:
RECOMMENDED FOR APPROVAL BY: [Signature]
DATE: 8 May 03
APPROVED BY: [Signature]
DATE: 5-8-07

UNIVERSITY WASH CHANNEL
STAGE 4
CROSS SECTIONS

PROJECT NO. 1-0-0120
DRAWING NO. 1-610
SHEET NO. 2 OF 4

SURVEY CONTROL	
SURVEY CONTROL LINE	S.D. @ STA.
9+08.30 @ 3.44' RT.	9+02.91
9+79.11 @ 5.90' LT.	9+74.34 B.C.
10+07.17 @ 6.96' LT.	10+02.46 E.C.
13+56.19 @ 12.68' RT.	13+52.03 B.C.
14+96.08 @ 10.20' RT.	14+98.82 E.C.
16+13.84 @ 3.99' RT.	16+14.00 B.C.
16+48.74 @ 3.37' RT.	16+48.91 E.C.
17+50.97 ON LINE	17+50.97 Δ

STORM DRAIN DATA				
BEARING/CURVE	BEARING/Delta	RADIUS	LENGTH	TAN
①	N50°45'13"E	71.43'	71.43'	
②	10°44'24"	150.00'	28.12'	14.10'
③	N61°29'37"E	—	349.57'	—
④	S2°29'37"	160.00'	146.59'	78.89'
⑤	N9°00'00"E	—	117.93'	—
⑥	4°00'00"	500.00'	34.91'	17.46'
⑦	N13°00'00"E	—	102.06'	—
⑧	N87°35'01"E	—	34.81'	—
⑨	S55°34'52"E	—	33.08'	—

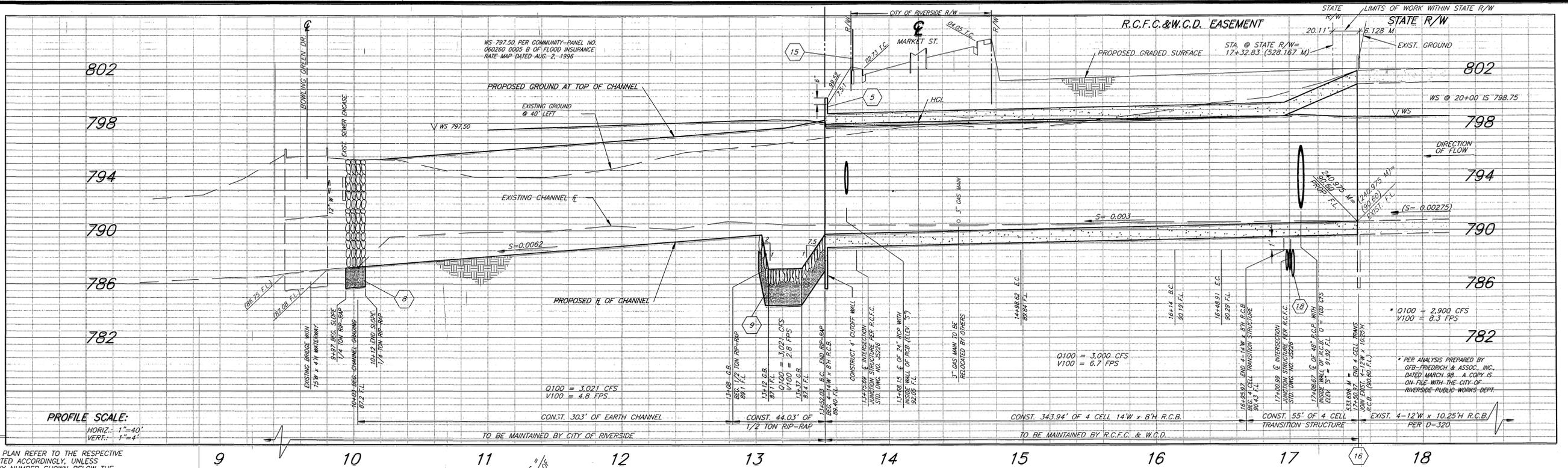
TREE REMOVAL CLASS

CLASS I 1 EA.
 CLASS II 2 EA.
 CLASS III 1 EA.

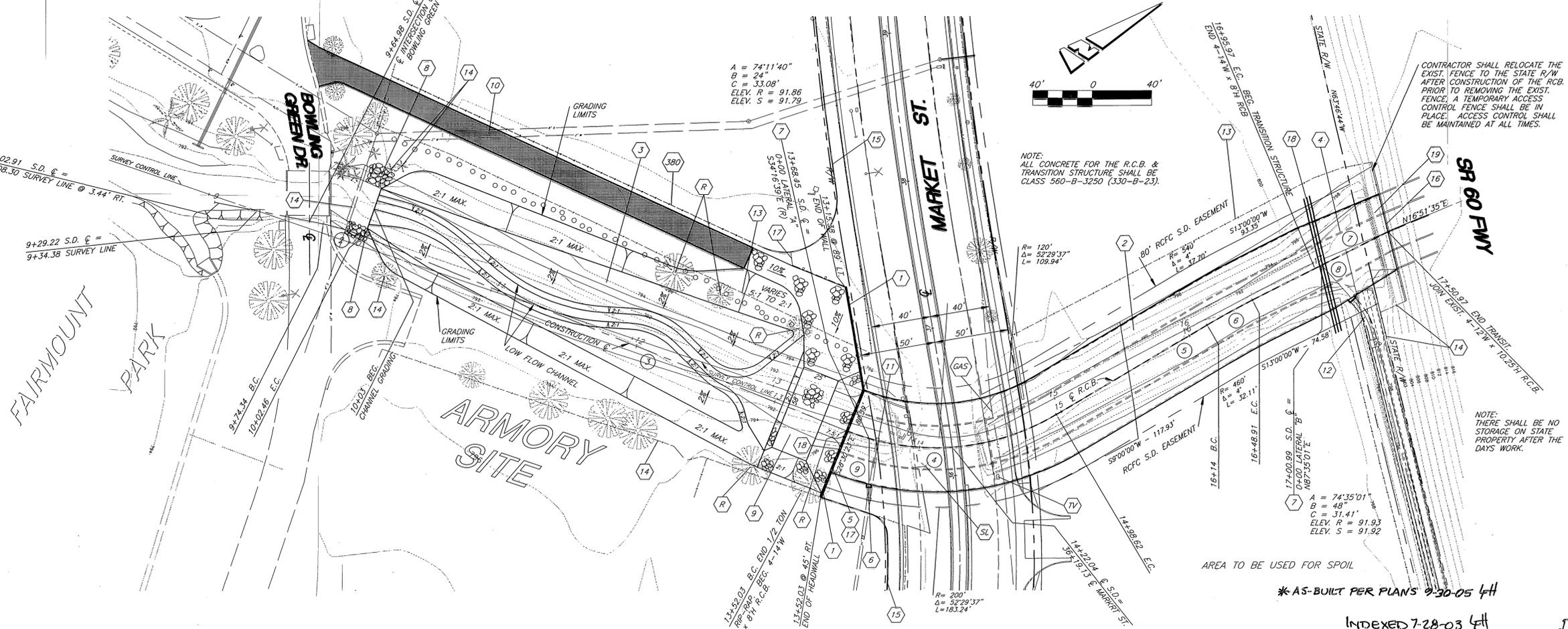
PERMANENT BENCH MARK:
 B.M. NO. J7-J2
 P.K. NAIL IN THE NORTH "CB" OF STRONG STREET, 90 FEET EASTERLY OF THE CENTERLINE OF MAIN STREET.
 ELEV: 807.185

SPECIFIC CONSTRUCTION NOTES

- NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE RESPECTIVE STANDARD DRAWING AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.
- R REMOVE EXISTING TREE. SEE ABOVE FOR CLASS AND NUMBERS.
- SL STREET LIGHT TO BE RELOCATED.
- TV CABLE TV PULL BOX TO BE RELOCATED BY OWNER PRIOR TO CONSTRUCTION.
- GAS GAS LINE TO BE RELOCATED BY OWNER PRIOR TO CONSTRUCTION.
- 1 CONSTRUCT BOX CULVERT WARPPED WINGWALL TYPE "B" PER CALIFORNIA DEPT. OF TRANSPORTATION, STANDARD PLAN DB4, DATED JULY 1999.
- 2 CONSTRUCT QUADRUPLE CELL R.C.B., 14' WIDE x 8' HIGH WITH FLAT INVERT, PER CALIFORNIA DEPT. OF TRANSPORTATION, STANDARD PLAN DB1, DATED JULY 1999.
- 3 CONSTRUCT AN EARTH CHANNEL PER SECTIONS SHOWN ON SHEET 2, ALL GRADED SURFACES TO BE HYDROSEEDED.
- 4 CONSTRUCT QUADRUPLE CELL R.C.B. TRANSITION STRUCTURE PER RIVERSIDE COUNTY FLOOD CONTROL, STD. DWG. TS302. THE CONCRETE THICKNESS, REINFORCING STEEL BAR SIZE, SPACING AND OUTSIDE COVER SHALL BE THE SAME AS THE 14' x 8' R.C.B.
- 5 CONSTRUCT PARAPET PER CALIFORNIA DEPT. OF TRANSPORTATION, STANDARD PLAN DB2, DATED JULY 1999.
- 6 LATERAL "A". CONSTRUCT 8 L.F. OF 24" R.C.P., D-2000. SEE SHEET 4 FOR PROFILE.
- 7 LATERAL "B". CONSTRUCT JUNCTION STRUCTURE NO. 1 PER RIVERSIDE COUNTY FLOOD CONTROL STD. DWG. NO. JS226.
- 8 PLACE A SINGLE LAYER OF 1/4 TON RIP-RAP WITH 18" THICK NO.1 BACKING MATERIAL PER CALIFORNIA DEPT. OF TRANSPORTATION, STANDARD SPECIFICATIONS, SECTION 72, METHOD "B" PLACEMENT, FROM TOE TO TOP OF CHANNEL, 15' LONG, TO PROTECT EXISTING CONC. ENCASED SEWER LINE.
- 9 PLACE A SINGLE LAYER OF 1/2 TON RIP-RAP WITH 18" THICK NO.1 BACKING MATERIAL PER CALIFORNIA DEPT. OF TRANSPORTATION, STANDARD SPECIFICATIONS, SECTION 72, METHOD "B" PLACEMENT.
- 10 CONSTRUCT 3" C.A.B. OVER COMPACTED NATIVE ACCESS ROAD, 15' WIDE.
- 11 REMOVE INTERFERING PORTION OF EXISTING 24" PIPE.
- 12 LATERAL "B". CONSTRUCT 48" R.C.P., D-1400, STORM DRAIN PER CITY OF RIVERSIDE STORM DRAIN PLAN D-711.
- 13 REMOVE EXISTING.
- 14 PROTECT IN PLACE.
- 15 CONSTRUCT 6' SPLIT FACE CONC. BLOCK WALL. SEE CITY OF RIVERSIDE STREET IMPROVEMENT PLAN R-3663 FOR DETAILS.
- 16 CONNECT PROPOSED RCB TO EXISTING RCB PER CALIFORNIA DEPT. OF TRANSPORTATION, STANDARD PLAN DB2, CULVERT EXTENSION DETAIL A, DATED JULY 1999.
- 17 CONSTRUCT METAL FENCE PER DETAIL SHOWN ON SHT. 4.
- 18 INSTALL 1-24" x 90" x 0.344" WALL AND 2-18" x 90" x 0.250" WALL STEEL CASINGS. EXACT LOCATION TO BE DETERMINED AT TIME OF CONSTRUCTION. EACH CASING SHALL BE BULKHEADED AT EACH END.
- 19 BACKFILL WITHIN CALTRANS RIGHT-OF-WAY, BACKFILL SHALL BE COMPACTED TO 95% RELATIVE COMPACTION IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATIONS DATED 1999. COMPACTION REPORTS SHALL BE SUBMITTED TO THE CALTRANS PERMIT OFFICE.



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



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ENGINEER IN RESPONSIBLE CHARGE
 PHILIP L. HANNAWAY
 R.C.E. No. 44747 expires 3/31/06
 DATE 5-6-03

REGISTERED PROFESSIONAL ENGINEER
 PHILIP L. HANNAWAY
 No. 44747
 Exp. 3-31-2006
 CIVIL
 STATE OF CALIFORNIA

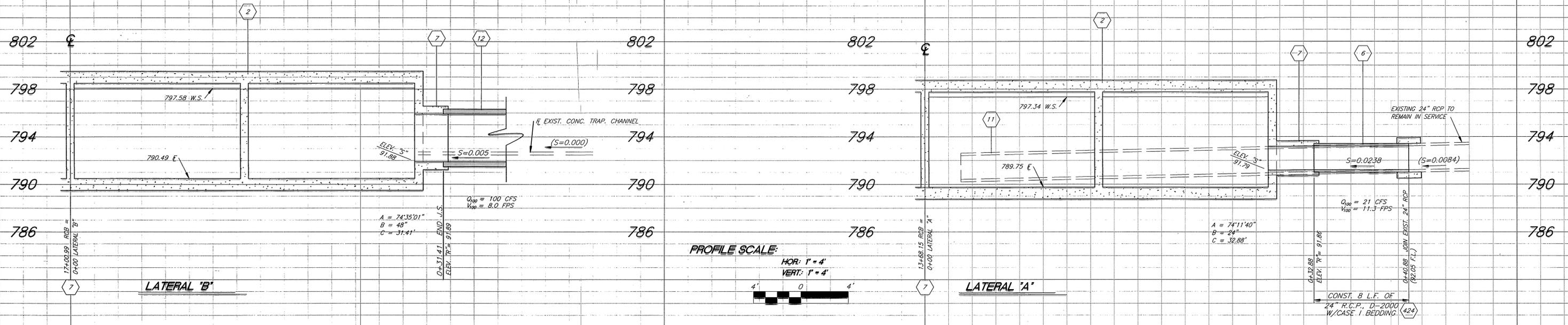
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
 APPROVED BY:
 Thom Boyd
 CITY ENGINEER
 R.C.E. No. 36170 expires 6/30/04
 DATE 5/6/03

REF.	DESCRIPTION	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
 DESIGNED BY: KARL
 DRAWN BY: KARL
 DATE DRAWN: 5/2003
 CHECKED BY:
 RECOMMENDED FOR APPROVAL BY: [Signature]
 PLANNING ENGINEER
 DATE: 8 May 2003
 APPROVED BY: [Signature]
 CHIEF ENGINEER
 DATE: 5-8-03

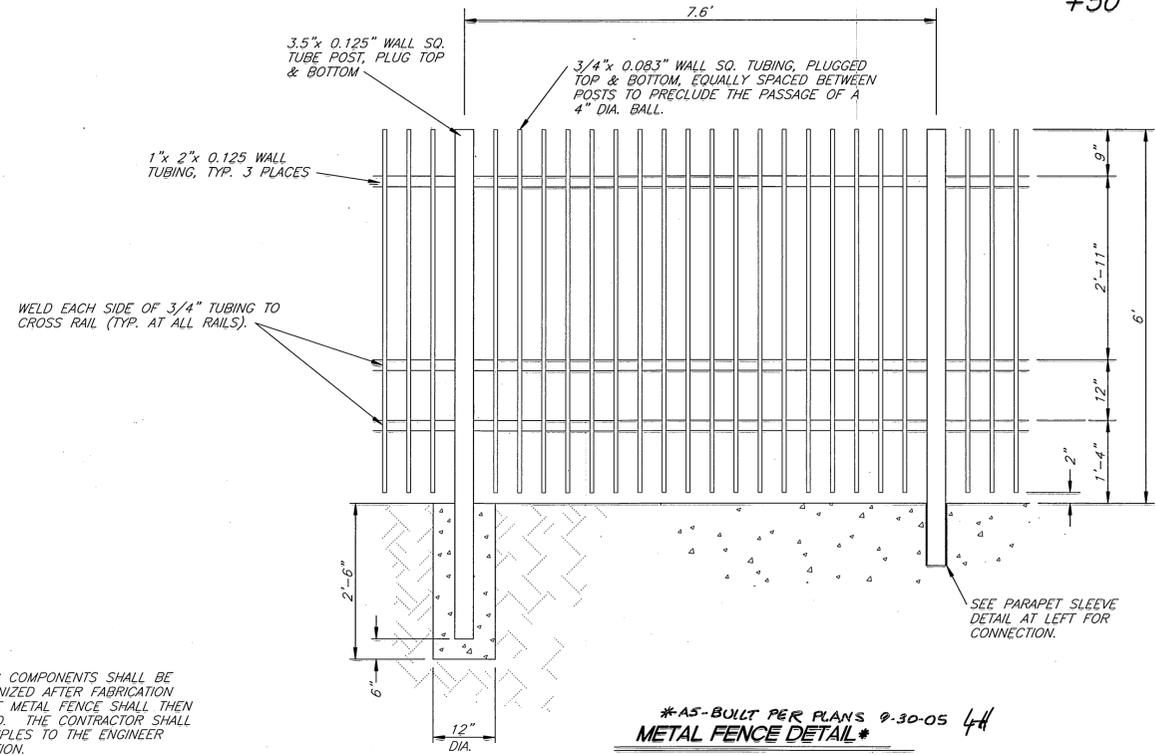
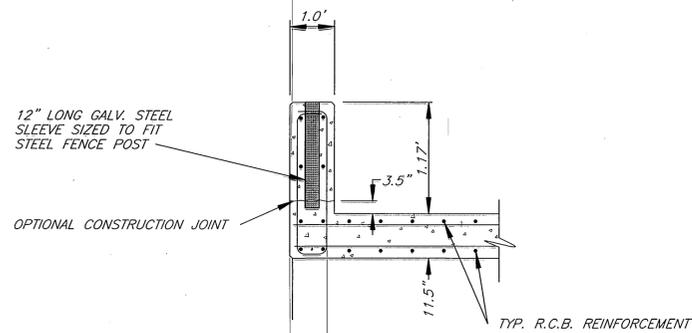
UNIVERSITY WASH CHANNEL
 STAGE 4
 STATE HIGHWAY 60 S'LY TO BOWLING GREEN DR.

PROJECT NO. 1-0-0120
 DRAWING NO. 1-610
 SHEET NO. 3 OF 4



SPECIFIC CONSTRUCTION NOTES

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- 2 CONSTRUCT QUADRUPLE CELL R.C.B., 14' WIDE x 9' HIGH WITH FLAT INVERT, PER CALIFORNIA DEPT. OF TRANSPORTATION, STANDARD PLAN D81, DATED JULY 1999.
- 6 LATERAL "A". CONSTRUCT 8 L.F. OF 24" R.C.P., D-2000.
- 7 CONSTRUCT JUNCTION STRUCTURE NO. 1 PER RIVERSIDE COUNTY FLOOD CONTROL STD. DWG. NO. JS226.
- 11 REMOVE INTERFERING PORTION OF EXISTING 24" PIPE.
- 12 LATERAL "B" CONSTRUCT 48" R.C.P., D-1400, STORM DRAIN PER CITY OF RIVERSIDE STORM DRAIN PLAN D-711.



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DATE 5-6-03

REGISTERED PROFESSIONAL ENGINEER
PHILIP L. HANNAWI
No. 44747
Exp. 3-31-2006
CIVIL
STATE OF CALIFORNIA

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT
APPROVED BY: Philip Busel
CITY ENGINEER
R.C.E. No. 36170 expires 6/30/04
DATE 5/6/02

REF.	DESCRIPTION	APPR.	DATE

DESIGNED BY: KARL
DRAWN BY: KARL
DATE DRAWN: 5/2003

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: [Signature]
PLANNING ENGINEER
DATE: 8 May 03
APPROVED BY: [Signature]
CHIEF ENGINEER
DATE: 5-8-03

UNIVERSITY WASH CHANNEL STAGE 4
LATERALS "A" & "B" AND DETAILS

PROJECT NO. 1-0-0120
DRAWING NO. 1-610
SHEET NO. 4 OF 4