



**SUBMITTAL TO THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT BOARD
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

923B

FROM: General Manager-Chief Engineer

SUBMITTAL DATE:
March 13, 2012

SUBJECT: Project Award – Day Creek Channel, Stage 6 Phase 2
Project No. 1-0-00250-06
District 2/District 2

RECOMMENDED MOTION:

The Board approve the low bid submitted by the firm of KIP, Incorporated for \$5,138,077.15, for the construction of the above referenced project.

Authorize the Chairman to execute the contract on behalf of the District.

BACKGROUND:

The bid documents have been reviewed and approved for award by County Counsel.

FINANCIAL:

Funds are included in the District's FY 2011-2012 Zone 1 budget for this project.

WARREN D. WILLIAMS
General Manager-Chief Engineer

FINANCIAL DATA	Current F.Y. District Cost:	\$5,138,077.15	In Current Year Budget:	Yes
	Current F.Y. County Cost:	N/A	Budget Adjustment:	No
	Annual Net District Cost:	N/A	For Fiscal Year:	2011-2012

SOURCE OF FUNDS: 25110 947400 527980 Zone 1 Const/Maint/Misc-Contracts	Positions To Be Deleted Per A-30	<input type="checkbox"/>
	Requires 4/5 Vote	<input type="checkbox"/>

C.E.O. RECOMMENDATION:

APPROVE

BY: Michael R. Shetler
Michael R. Shetler

County Executive Office Signature

MINUTES OF THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT

On motion of Supervisor Buster, seconded by Supervisor Tavaglione and duly carried, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Buster, Tavaglione and Ashley
 Nays: None
 Absent: Stone and Benoit
 Date: March 13, 2012
 xc: Flood

Kecia Harper-Ihem
 Clerk of the Board
 By: [Signature]
 Deputy

Prev. Agn. Ref.: 11.4 of 12/20/11 District: 2/2 Agenda Number:

11.4

ATTACHMENTS FILED WITH THE CLERK OF THE BOARD

FISCAL PROCEDURES & APPROVED
 IVAN M. CHAND, FINANCE DIRECTOR
 2/27/2012
 FORM APPROVED COUNTY COUNSEL
 BY: NEAL R. KIPNIS DATE: 3/22/12

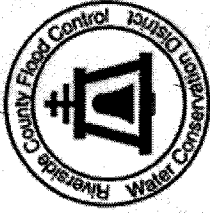
erc

Dept's Recomm.: Consent Policy
 Per Exec. Ofc.: Consent Policy



Riverside County Flood Control & Water Conservation District

1995 Market St. Riverside, CA 92501 Phone: 951.955.1200 Fax: 951.788.9965



Bid Summary

Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

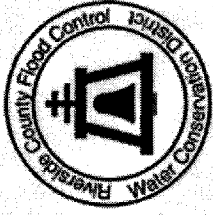
Bid Open Date: 01/19/2012

<i>Total</i>	<i>Contractor Name</i>	<i>Address</i>	<i>Phone</i>
\$5,138,077.15	KIP, INCORPORATED	25740 Washington Avenue Murrieta, CA 92562	
\$5,589,083.15	SUKUT CONSTRUCTION, INC.	4010 West Chandler Avenue Santa Ana, CA 92704	
\$5,813,628.33	KEC ENGINEERING	200 N. Sherman Avenue Corona, CA 92882	951-734-3010
\$5,820,685.10	H & H GENERAL CONTRACTORS, INC.	Post Office Box 536 Highland, CA 92346-0536	909.425.3907
\$6,026,943.76	HARPER CONTRACTING, INC.	Post Office Box 16007 Salt Lake City, UT 84116	801.326.1016
\$6,099,319.34	BELCZAK & SONS, INC.	3510 E. Enterprise Drive Anaheim, CA 92807	714-998-5920
\$6,235,200.10	GRIFFITH COMPANY	3050 E. Birch Street Brea, CA 92821	714.984.5500
\$6,719,891.00	BEDON CONSTRUCTION, INC.	27989 Holland Road Menifee, CA 92584	951.246.9005
\$6,769,236.25	RIVERSIDE CONSTRUCTION COMPANY, INC.	Post Office Box 1146 Riverside, CA 92502-1146	951-682-8308
\$6,943,226.70	UNION ENGINEERING COMPANY, INC.	Post Office Box 1000 Ventura, CA 93002	805.644.3373
\$6,975,010.00	NORDIC INDUSTRIES, INC.	1437 Furneaux Road Olivehurst, CA 95961	530.742.7124
\$7,877,145.15	MIKE BUBALO CONSTRUCTION CO., INC.	5102 Gayhurst Avenue Baldwin Park, CA 91706	626.960.7787
\$8,861,891.00	GARCIA JUAREZ CONSTRUCTION, INC.	Post Office Box 309 Brea, CA 92822-0309	951.657.3535
\$8,360,348.00	RCFC Engineer's Estimate		



Riverside County Flood Control & Water Conservation District

1995 Market St. Riverside, CA 92501 Phone: 951.955.1200 Fax: 951.788.9965



Bid Abstract

Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

Bid Open Date: 01/19/2012

ENGINEER'S ESTIMATE

KIP, INCORPORATED

SUKUT CONSTRUCTION, INC.

Item No. & Description	Unit	Quantity	Unit Bid	Total Bid	Unit Bid	Total Bid	Unit Bid	Total Bid
1 MOBILIZATION	L.S.	1	\$100,000.00	\$100,000.00	\$58,000.00	\$58,000.00	\$370,000.00	\$370,000.00
2 WATER CONTROL	L.S.	1	\$100,000.00	\$100,000.00	\$70,000.00	\$70,000.00	\$150,000.00	\$150,000.00
3 TRAFFIC CONTROL	L.S.	1	\$10,000.00	\$10,000.00	\$44,000.00	\$44,000.00	\$10,000.00	\$10,000.00
4 CLEARING AND MISCELLANEOUS WORK	L.S.	1	\$200,000.00	\$200,000.00	\$140,000.00	\$140,000.00	\$100,000.00	\$100,000.00
5 EXCAVATION	C.Y.	35,464	\$12.00	\$425,568.00	\$5.00	\$177,320.00	\$7.00	\$248,248.00
6 ROCK CHANNEL EXCAVATION	C.Y.	14,257	\$9.00	\$128,313.00	\$9.00	\$128,313.00	\$16.00	\$228,112.00
7 BACKFILL	C.Y.	24,878	\$12.00	\$298,536.00	\$4.50	\$111,951.00	\$9.00	\$223,902.00
8 SLURRY CEMENT BACKFILL	C.Y.	104	\$70.00	\$7,280.00	\$185.00	\$19,240.00	\$85.00	\$8,840.00
9 FILTER MATERIAL	C.Y.	4,224	\$25.00	\$105,600.00	\$42.00	\$177,408.00	\$50.00	\$211,200.00
10 TRENCH SAFETY SYSTEM AND FALSEWORK	L.S.	1	\$10,000.00	\$10,000.00	\$6,000.00	\$6,000.00	\$55,000.00	\$55,000.00
11 CLASS "A" CONCRETE, REINFORCED CONCRETE BOX	C.Y.	270	\$800.00	\$216,000.00	\$500.00	\$135,000.00	\$460.00	\$124,200.00
12 CLASS "A" CONCRETE, L-WALL AND ACCESS RAMP	C.Y.	5,895	\$600.00	\$3,537,000.00	\$260.00	\$1,532,700.00	\$250.00	\$1,473,750.00
13 CLASS "A" CONCRETE, TRANSITION	C.Y.	100	\$800.00	\$80,000.00	\$535.00	\$53,500.00	\$355.00	\$35,500.00
14 CLASS "A" CONCRETE, RETAINING WALL	C.Y.	229	\$800.00	\$183,200.00	\$625.00	\$143,125.00	\$525.00	\$120,225.00
15 CLASS "A" CONCRETE, MINOR STRUCTURES	C.Y.	17	\$750.00	\$12,750.00	\$2,000.00	\$34,000.00	\$185.00	\$3,145.00
16 CLASS "A" CONCRETE, CHANNEL INVERT	C.Y.	1,138	\$500.00	\$569,000.00	\$165.00	\$187,770.00	\$175.00	\$199,150.00
17 CLASS "B" CONCRETE, 10' CUTOFF WALL	C.Y.	33	\$450.00	\$14,850.00	\$750.00	\$24,750.00	\$315.00	\$10,395.00
18 CLASS "B" CONCRETE, 7' CUTOFF WALL	C.Y.	17	\$400.00	\$6,800.00	\$1,400.00	\$23,800.00	\$185.00	\$3,145.00
19 CLASS "B" CONCRETE, MISCELLANEOUS	C.Y.	24	\$500.00	\$12,000.00	\$1,200.00	\$28,800.00	\$450.00	\$10,800.00
20 CLASS "B" CONCRETE, CONCRETED ROCK	C.Y.	189	\$120.00	\$22,680.00	\$100.00	\$18,900.00	\$115.00	\$21,735.00
21 JUNCTION STRUCTURE NO. 1	EACH	1	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$3,000.00	\$3,000.00
22 REINFORCING STEEL, GRADE 60	LBS.	1,007,559	\$1.00	\$1,007,559.00	\$0.85	\$856,425.15	\$0.85	\$856,425.15
23 18" REINFORCED CONCRETE PIPE	L.F.	135	\$95.00	\$12,825.00	\$70.00	\$9,450.00	\$125.00	\$16,875.00
24 48" REINFORCED CONCRETE PIPE	L.F.	8	\$180.00	\$1,440.00	\$150.00	\$1,200.00	\$200.00	\$1,600.00
25 AGGREGATE BASE, CLASS 2	C.Y.	834	\$45.00	\$37,530.00	\$70.00	\$58,380.00	\$40.00	\$33,360.00
26 ASPHALT CONCRETE, TYPE "B"	TONS	216	\$90.00	\$19,440.00	\$120.00	\$25,920.00	\$85.00	\$18,360.00
27 6-FOOT CHAIN LINK FENCE	L.F.	363	\$20.00	\$7,260.00	\$40.00	\$14,520.00	\$35.00	\$12,705.00



Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

Bid Open Date: 01/19/2012

ENGINEER'S ESTIMATE

KIP, INCORPORATED

SUKUT CONSTRUCTION, INC.

Item No. & Description	Unit	Quantity	Unit Bid	Total Bid	Unit Bid	Total Bid	Unit Bid	Total Bid
28 CHAIN LINK RAILING TYPE 7	L.F.	92	\$25.00	\$2,300.00	\$85.00	\$7,820.00	\$80.00	\$7,360.00
29 TEMPORARY FENCING	L.F.	220	\$2.50	\$550.00	\$17.00	\$3,740.00	\$11.00	\$2,420.00
30 3-FOOT CABLE RAILING	L.F.	5,345	\$10.00	\$53,450.00	\$12.50	\$66,812.50	\$10.00	\$53,450.00
31 14-FOOT DOUBLE DRIVE GATES	EACH	3	\$1,250.00	\$3,750.00	\$1,350.00	\$4,050.00	\$1,200.00	\$3,600.00
32 MISCELLANEOUS IRON AND STEEL	LBS.	2,009	\$3.00	\$6,027.00	\$2.50	\$5,022.50	\$5.00	\$10,045.00
33 SUBDRAIN	L.F.	2,712	\$25.00	\$67,800.00	\$15.00	\$40,680.00	\$15.00	\$40,680.00
34 ADJUST VALVE TO GRADE	EACH	2	\$50.00	\$100.00	\$400.00	\$800.00	\$1,600.00	\$3,200.00
35 WOOD POST METAL BEAM GUARD RAILING	L.F.	13	\$50.00	\$650.00	\$100.00	\$1,300.00	\$85.00	\$1,105.00
36 BIORETENTION FACILITY	L.S.	1	\$15,000.00	\$15,000.00	\$48,000.00	\$48,000.00	\$65,000.00	\$65,000.00
37 SAMPLING STATION	L.S.	1	\$20,000.00	\$20,000.00	\$5,500.00	\$5,500.00	\$8,000.00	\$8,000.00
38 STAFF GAUGE	EACH	10	\$200.00	\$2,000.00	\$250.00	\$2,500.00	\$500.00	\$5,000.00
39 SWIFT WATER RESCUE ANCHORING DEVICES	EACH	12	\$300.00	\$3,600.00	\$400.00	\$4,800.00	\$225.00	\$2,700.00
40 REFLECTORIZED RAISED PAVEMENT MARKER ("BLUE DOT")	EACH	6	\$20.00	\$120.00	\$20.00	\$120.00	\$90.00	\$540.00
41 ROCK SLOPE PROTECTION, 1-TON CLASS	C.Y.	12,588	\$55.00	\$692,340.00	\$33.00	\$415,404.00	\$36.00	\$453,168.00
42 FILTER BLANKET, NO. 2 BACKING	C.Y.	2,961	\$50.00	\$148,050.00	\$41.00	\$121,401.00	\$40.00	\$118,440.00
43 ROCK SLOPE PROTECTION FABRIC	S.Y.	10,076	\$5.00	\$50,380.00	\$5.00	\$50,380.00	\$3.00	\$30,228.00
44 GROUTED LOW FLOW CHANNEL	C.Y.	605	\$100.00	\$60,500.00	\$155.00	\$93,775.00	\$155.00	\$93,775.00
45 DUST ABATEMENT	L.S.	1	\$20,000.00	\$20,000.00	\$34,000.00	\$34,000.00	\$15,000.00	\$15,000.00
46 HYDROSEEDING	ACRE	0.2	\$3,000.00	\$600.00	\$10,000.00	\$2,000.00	\$3,500.00	\$700.00
47 STORMWATER AND NON-STORMWATER POLLUTION CONTROL	L.S.	1	\$25,000.00	\$25,000.00	\$60,000.00	\$60,000.00	\$40,000.00	\$40,000.00
48 NON-STORMWATER DISCHARGE OR DEWATERING	L.S.	1	\$10,000.00	\$10,000.00	\$45,000.00	\$45,000.00	\$40,000.00	\$40,000.00
49 RELOCATE 8-INCH WATERLINE	L.S.	1	\$50,000.00	\$50,000.00	\$42,000.00	\$42,000.00	\$45,000.00	\$45,000.00

\$8,360,348.00

\$5,138,077.15

\$5,589,083.15



Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

Bid Open Date: 01/19/2012

KEC ENGINEERING

H & H GENERAL CONTRACTORS, INC.

HARPER CONTRACTING, INC.

Item No. & Description	Unit	Quantity	Unit Bid	Total Bid	Unit Bid	Total Bid	Unit Bid	Total Bid
1 MOBILIZATION	L.S.	1	\$1,000.00	\$1,000.00	\$622,000.00	\$622,000.00	\$290,000.00	\$290,000.00
2 WATER CONTROL	L.S.	1	\$115,000.00	\$115,000.00	\$38,200.00	\$38,200.00	\$220,000.00	\$220,000.00
3 TRAFFIC CONTROL	L.S.	1	\$12,000.00	\$12,000.00	\$5,200.00	\$5,200.00	\$1,000.00	\$1,000.00
4 CLEARING AND MISCELLANEOUS WORK	L.S.	1	\$235,000.00	\$235,000.00	\$528,000.00	\$528,000.00	\$11,800.00	\$11,800.00
5 EXCAVATION	C.Y.	35,464	\$13.00	\$461,032.00	\$8.50	\$301,444.00	\$2.90	\$102,845.60
6 ROCK CHANNEL EXCAVATION	C.Y.	14,257	\$16.00	\$228,112.00	\$16.00	\$228,112.00	\$2.87	\$40,917.59
7 BACKFILL	C.Y.	24,878	\$9.00	\$223,902.00	\$2.50	\$62,195.00	\$5.47	\$136,082.66
8 SLURRY CEMENT BACKFILL	C.Y.	104	\$240.00	\$24,960.00	\$115.00	\$11,960.00	\$71.17	\$7,401.68
9 FILTER MATERIAL	C.Y.	4,224	\$45.00	\$190,080.00	\$38.00	\$160,512.00	\$25.49	\$107,669.76
10 TRENCH SAFETY SYSTEM AND FALSEWORK	L.S.	1	\$45,000.00	\$45,000.00	\$17,000.00	\$17,000.00	\$5,000.00	\$5,000.00
11 CLASS "A" CONCRETE, REINFORCED CONCRETE BOX	C.Y.	270	\$350.00	\$94,500.00	\$406.50	\$109,755.00	\$627.00	\$169,290.00
12 CLASS "A" CONCRETE, L-WALL AND ACCESS RAMP	C.Y.	5,895	\$195.00	\$1,149,525.00	\$184.60	\$1,088,217.00	\$401.00	\$2,363,895.00
13 CLASS "A" CONCRETE, TRANSITION	C.Y.	100	\$390.00	\$39,000.00	\$592.25	\$59,225.00	\$825.00	\$82,500.00
14 CLASS "A" CONCRETE, RETAINING WALL	C.Y.	229	\$500.00	\$114,500.00	\$556.00	\$127,324.00	\$690.00	\$158,010.00
15 CLASS "A" CONCRETE, MINOR STRUCTURES	C.Y.	17	\$820.00	\$13,940.00	\$1,190.00	\$20,230.00	\$1,100.00	\$18,700.00
16 CLASS "A" CONCRETE, CHANNEL INVERT	C.Y.	1,138	\$190.00	\$216,220.00	\$160.00	\$182,080.00	\$336.00	\$382,368.00
17 CLASS "B" CONCRETE, 10' CUTOFF WALL	C.Y.	33	\$600.00	\$19,800.00	\$369.00	\$12,177.00	\$437.00	\$14,421.00
18 CLASS "B" CONCRETE, 7' CUTOFF WALL	C.Y.	17	\$1,100.00	\$18,700.00	\$547.00	\$9,299.00	\$666.00	\$11,322.00
19 CLASS "B" CONCRETE, MISCELLANEOUS	C.Y.	24	\$850.00	\$20,400.00	\$627.00	\$15,048.00	\$925.00	\$22,200.00
20 CLASS "B" CONCRETE, CONCRETED ROCK	C.Y.	189	\$120.00	\$22,680.00	\$170.00	\$32,130.00	\$73.49	\$13,889.61
21 JUNCTION STRUCTURE NO. 1	EACH	1	\$2,000.00	\$2,000.00	\$11,000.00	\$11,000.00	\$3,000.00	\$3,000.00
22 REINFORCING STEEL, GRADE 60	LBS.	1,007,559	\$0.87	\$876,576.33	\$0.90	\$906,803.10	\$0.86	\$866,500.74
23 18" REINFORCED CONCRETE PIPE	L.F.	135	\$100.00	\$13,500.00	\$166.00	\$22,410.00	\$61.00	\$8,235.00
24 48" REINFORCED CONCRETE PIPE	L.F.	8	\$200.00	\$1,600.00	\$517.00	\$4,136.00	\$127.00	\$1,016.00
25 AGGREGATE BASE, CLASS 2	C.Y.	834	\$60.00	\$50,040.00	\$64.00	\$53,376.00	\$47.75	\$39,823.50
26 ASPHALT CONCRETE, TYPE "B"	TONS	216	\$115.00	\$24,840.00	\$129.00	\$27,864.00	\$95.00	\$20,520.00
27 6-FOOT CHAIN LINK FENCE	L.F.	363	\$35.00	\$12,705.00	\$33.00	\$11,979.00	\$29.25	\$10,617.75



Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

Bid Open Date: 01/19/2012

Item No. & Description	Unit	Quantity	KEC ENGINEERING		H & H GENERAL CONTRACTORS, INC.		HARPER CONTRACTING, INC.	
			Unit Bid	Total Bid	Unit Bid	Total Bid	Unit Bid	Total Bid
28 CHAIN LINK RAILING TYPE 7	L.F.	92	\$85.00	\$7,820.00	\$81.00	\$7,452.00	\$72.50	\$6,670.00
29 TEMPORARY FENCING	L.F.	220	\$13.00	\$2,860.00	\$12.00	\$2,640.00	\$5.00	\$1,100.00
30 3-FOOT CABLE RAILING	L.F.	5,345	\$9.00	\$48,105.00	\$9.00	\$48,105.00	\$7.80	\$41,691.00
31 14-FOOT DOUBLE DRIVE GATES	EACH	3	\$1,600.00	\$4,800.00	\$1,555.00	\$4,665.00	\$1,390.00	\$4,170.00
32 MISCELLANEOUS IRON AND STEEL	LBS.	2,009	\$4.00	\$8,036.00	\$2.00	\$4,018.00	\$3.00	\$6,027.00
33 SUBDRAIN	L.F.	2,712	\$25.00	\$67,800.00	\$21.50	\$58,308.00	\$19.00	\$51,528.00
34 ADJUST VALVE TO GRADE	EACH	2	\$370.00	\$740.00	\$345.00	\$690.00	\$286.04	\$572.08
35 WOOD POST METAL BEAM GUARD RAILING	L.F.	13	\$40.00	\$520.00	\$39.00	\$507.00	\$34.00	\$442.00
36 BIORETENTION FACILITY	L.S.	1	\$89,000.00	\$89,000.00	\$57,000.00	\$57,000.00	\$23,180.75	\$23,180.75
37 SAMPLING STATION	L.S.	1	\$10,000.00	\$10,000.00	\$13,900.00	\$13,900.00	\$5,000.00	\$5,000.00
38 STAFF GAUGE	EACH	10	\$2,700.00	\$27,000.00	\$977.00	\$9,770.00	\$385.00	\$3,850.00
39 SWIFT WATER RESCUE ANCHORING DEVICES	EACH	12	\$1,300.00	\$15,600.00	\$900.00	\$10,800.00	\$800.00	\$9,600.00
40 REFLECTORIZED RAISED PAVEMENT MARKER ("BLUE DOT")	EACH	6	\$50.00	\$300.00	\$115.00	\$690.00	\$100.00	\$600.00
41 ROCK SLOPE PROTECTION, 1-TON CLASS	C.Y.	12,588	\$55.00	\$692,340.00	\$47.00	\$591,636.00	\$47.74	\$600,951.12
42 FILTER BLANKET, NO. 2 BACKING	C.Y.	2,961	\$60.00	\$177,660.00	\$52.00	\$153,972.00	\$21.74	\$64,372.14
43 ROCK SLOPE PROTECTION FABRIC	S.Y.	10,076	\$5.00	\$50,380.00	\$3.50	\$35,266.00	\$2.63	\$26,499.88
44 GROUTED LOW FLOW CHANNEL	C.Y.	605	\$130.00	\$78,650.00	\$108.00	\$65,340.00	\$8.66	\$5,239.30
45 DUST ABATEMENT	L.S.	1	\$65,005.00	\$65,005.00	\$7,475.00	\$7,475.00	\$18,000.00	\$18,000.00
46 HYDROSEEDING	ACRE	0.2	\$12,000.00	\$2,400.00	\$14,375.00	\$2,875.00	\$7,623.00	\$1,524.60
47 STORMWATER AND NON-STORMWATER POLLUTION CONTROL	L.S.	1	\$18,000.00	\$18,000.00	\$18,400.00	\$18,400.00	\$5,800.00	\$5,800.00
48 NON-STORMWATER DISCHARGE OR DEWATERING	L.S.	1	\$170,000.00	\$170,000.00	\$11,500.00	\$11,500.00	\$100.00	\$100.00
49 RELOCATE 8-INCH WATERLINE	L.S.	1	\$50,000.00	\$50,000.00	\$48,000.00	\$48,000.00	\$41,000.00	\$41,000.00
				\$5,813,628.33		\$5,820,685.10		\$6,026,943.76



Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

Bid Open Date: 01/19/2012

Item No. & Description	Unit	Quantity	BELCZAK & SONS, INC.		GRIFFITH COMPANY		BEDON CONSTRUCTION, INC.	
			Unit Bid	Total Bid	Unit Bid	Total Bid	Unit Bid	Total Bid
1 MOBILIZATION	L.S.	1	\$200,000.00	\$200,000.00	\$600,000.00	\$600,000.00	\$320,579.00	\$320,579.00
2 WATER CONTROL	L.S.	1	\$100,000.00	\$100,000.00	\$300,000.00	\$300,000.00	\$35,675.00	\$35,675.00
3 TRAFFIC CONTROL	L.S.	1	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$5,000.00	\$5,000.00
4 CLEARING AND MISCELLANEOUS WORK	L.S.	1	\$350,000.00	\$350,000.00	\$300,000.00	\$300,000.00	\$173,000.00	\$173,000.00
5 EXCAVATION	C.Y.	35,464	\$13.00	\$461,032.00	\$5.00	\$177,320.00	\$10.00	\$354,640.00
6 ROCK CHANNEL EXCAVATION	C.Y.	14,257	\$12.00	\$171,084.00	\$9.00	\$128,313.00	\$15.00	\$213,855.00
7 BACKFILL	C.Y.	24,878	\$15.00	\$373,170.00	\$9.00	\$223,902.00	\$13.50	\$335,853.00
8 SLURRY CEMENT BACKFILL	C.Y.	104	\$125.00	\$13,000.00	\$136.65	\$14,211.60	\$134.00	\$13,936.00
9 FILTER MATERIAL	C.Y.	4,224	\$30.00	\$126,720.00	\$35.00	\$147,840.00	\$54.00	\$228,096.00
10 TRENCH SAFETY SYSTEM AND FALSEWORK	L.S.	1	\$330,000.00	\$330,000.00	\$60,000.00	\$60,000.00	\$12,840.00	\$12,840.00
11 CLASS "A" CONCRETE, REINFORCED CONCRETE BOX	C.Y.	270	\$350.00	\$94,500.00	\$270.00	\$72,900.00	\$600.00	\$162,000.00
12 CLASS "A" CONCRETE, L-WALL AND ACCESS RAMP	C.Y.	5,895	\$225.00	\$1,326,375.00	\$219.00	\$1,291,005.00	\$295.00	\$1,739,025.00
13 CLASS "A" CONCRETE, TRANSITION	C.Y.	100	\$190.00	\$19,000.00	\$540.00	\$54,000.00	\$450.00	\$45,000.00
14 CLASS "A" CONCRETE, RETAINING WALL	C.Y.	229	\$215.00	\$49,235.00	\$660.00	\$151,140.00	\$795.00	\$182,055.00
15 CLASS "A" CONCRETE, MINOR STRUCTURES	C.Y.	17	\$500.00	\$8,500.00	\$1,439.50	\$24,471.50	\$1,185.00	\$20,145.00
16 CLASS "A" CONCRETE, CHANNEL INVERT	C.Y.	1,138	\$150.00	\$170,700.00	\$156.00	\$177,528.00	\$155.00	\$176,390.00
17 CLASS "B" CONCRETE, 10' CUTOFF WALL	C.Y.	33	\$600.00	\$19,800.00	\$400.00	\$13,200.00	\$428.00	\$14,124.00
18 CLASS "B" CONCRETE, 7' CUTOFF WALL	C.Y.	17	\$600.00	\$10,200.00	\$400.00	\$6,800.00	\$490.00	\$8,330.00
19 CLASS "B" CONCRETE, MISCELLANEOUS	C.Y.	24	\$450.00	\$10,800.00	\$663.00	\$15,912.00	\$745.00	\$17,880.00
20 CLASS "B" CONCRETE, CONCRETED ROCK	C.Y.	189	\$160.00	\$30,240.00	\$87.00	\$16,443.00	\$105.00	\$19,845.00
21 JUNCTION STRUCTURE NO. 1	EACH	1	\$4,800.00	\$4,800.00	\$5,220.00	\$5,220.00	\$2,103.00	\$2,103.00
22 REINFORCING STEEL, GRADE 60	LBS.	1,007,559	\$0.76	\$765,744.84	\$1.00	\$1,007,559.00	\$1.00	\$1,007,559.00
23 18" REINFORCED CONCRETE PIPE	L.F.	135	\$100.00	\$13,500.00	\$220.00	\$29,700.00	\$41.00	\$5,535.00
24 48" REINFORCED CONCRETE PIPE	L.F.	8	\$150.00	\$1,200.00	\$694.00	\$5,552.00	\$130.00	\$1,040.00
25 AGGREGATE BASE, CLASS 2	C.Y.	834	\$80.00	\$66,720.00	\$115.00	\$95,910.00	\$125.00	\$104,250.00
26 ASPHALT CONCRETE, TYPE "B"	TONS	216	\$135.00	\$29,160.00	\$90.00	\$19,440.00	\$128.50	\$27,756.00
27 6-FOOT CHAIN LINK FENCE	L.F.	363	\$45.00	\$16,335.00	\$35.00	\$12,705.00	\$37.00	\$13,431.00



Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

Bid Open Date: 01/19/2012

Item No. & Description	Unit	Quantity	BELCZAK & SONS, INC.		GRIFFITH COMPANY		BEDON CONSTRUCTION, INC.	
			Unit Bid	Total Bid	Unit Bid	Total Bid	Unit Bid	Total Bid
28 CHAIN LINK RAILING TYPE 7	L.F.	92	\$80.00	\$7,360.00	\$74.00	\$6,808.00	\$94.00	\$8,648.00
29 TEMPORARY FENCING	L.F.	220	\$5.00	\$1,100.00	\$15.00	\$3,300.00	\$14.00	\$3,080.00
30 3-FOOT CABLE RAILING	L.F.	5,345	\$11.00	\$58,795.00	\$9.00	\$48,105.00	\$11.00	\$58,795.00
31 14-FOOT DOUBLE DRIVE GATES	EACH	3	\$1,200.00	\$3,600.00	\$1,200.00	\$3,600.00	\$1,785.00	\$5,355.00
32 MISCELLANEOUS IRON AND STEEL	LBS.	2,009	\$1.50	\$3,013.50	\$3.00	\$6,027.00	\$6.00	\$12,054.00
33 SUBDRAIN	L.F.	2,712	\$25.00	\$67,800.00	\$11.00	\$29,832.00	\$25.00	\$67,800.00
34 ADJUST VALVE TO GRADE	EACH	2	\$250.00	\$500.00	\$250.00	\$500.00	\$192.00	\$384.00
35 WOOD POST METAL BEAM GUARD RAILING	L.F.	13	\$85.00	\$1,105.00	\$84.00	\$1,092.00	\$43.00	\$559.00
36 BIORETENTION FACILITY	L.S.	1	\$85,000.00	\$85,000.00	\$60,000.00	\$60,000.00	\$52,700.00	\$52,700.00
37 SAMPLING STATION	L.S.	1	\$10,000.00	\$10,000.00	\$12,000.00	\$12,000.00	\$3,500.00	\$3,500.00
38 STAFF GAUGE	EACH	10	\$400.00	\$4,000.00	\$1,000.00	\$10,000.00	\$689.00	\$6,890.00
39 SWIFT WATER RESCUE ANCHORING DEVICES	EACH	12	\$800.00	\$9,600.00	\$250.00	\$3,000.00	\$371.00	\$4,452.00
40 REFLECTORIZED RAISED PAVEMENT MARKER ("BLUE DOT")	EACH	6	\$75.00	\$450.00	\$20.00	\$120.00	\$26.00	\$156.00
41 ROCK SLOPE PROTECTION, 1-TON CLASS	C.Y.	12,588	\$50.00	\$629,400.00	\$50.00	\$629,400.00	\$64.00	\$805,632.00
42 FILTER BLANKET, NO. 2 BACKING	C.Y.	2,961	\$50.00	\$148,050.00	\$50.00	\$148,050.00	\$51.00	\$151,011.00
43 ROCK SLOPE PROTECTION FABRIC	S.Y.	10,076	\$5.00	\$50,380.00	\$4.00	\$40,304.00	\$2.25	\$22,671.00
44 GROUTED LOW FLOW CHANNEL	C.Y.	605	\$150.00	\$90,750.00	\$90.00	\$54,450.00	\$118.00	\$71,390.00
45 DUST ABATEMENT	L.S.	1	\$80,000.00	\$80,000.00	\$50,000.00	\$50,000.00	\$100,150.00	\$100,150.00
46 HYDROSEEDING	ACRE	0.2	\$8,000.00	\$1,600.00	\$7,700.00	\$1,540.00	\$9,785.00	\$1,957.00
47 STORMWATER AND NON-STORMWATER POLLUTION CONTROL	L.S.	1	\$20,000.00	\$20,000.00	\$75,000.00	\$75,000.00	\$22,500.00	\$22,500.00
48 NON-STORMWATER DISCHARGE OR DEWATERING	L.S.	1	\$5,000.00	\$5,000.00	\$21,000.00	\$21,000.00	\$38,000.00	\$38,000.00
49 RELOCATE 8-INCH WATERLINE	L.S.	1	\$40,000.00	\$40,000.00	\$60,000.00	\$60,000.00	\$42,265.00	\$42,265.00
				\$6,099,319.34		\$6,235,200.10		\$6,719,891.00



Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

Bid Open Date: 01/19/2012

UNION ENGINEERING COMPANY, INC.

UNION ENGINEERING COMPANY, INC.

RIVERSIDE CONSTRUCTION COMPANY, INC.

NORDIC INDUSTRIES, INC.

Item No. & Description	Unit	Quantity	Unit Bid	Total Bid	Unit Bid	Total Bid	Unit Bid	Total Bid
1 MOBILIZATION	L.S.	1	\$400,000.00	\$400,000.00	\$416,339.00	\$416,339.00	\$631,614.00	\$631,614.00
2 WATER CONTROL	L.S.	1	\$155,000.00	\$155,000.00	\$64,020.00	\$64,020.00	\$75,000.00	\$75,000.00
3 TRAFFIC CONTROL	L.S.	1	\$26,000.00	\$26,000.00	\$22,388.00	\$22,388.00	\$21,000.00	\$21,000.00
4 CLEARING AND MISCELLANEOUS WORK	L.S.	1	\$143,000.00	\$143,000.00	\$54,520.00	\$54,520.00	\$300,000.00	\$300,000.00
5 EXCAVATION	C.Y.	35,464	\$20.00	\$709,280.00	\$16.69	\$591,894.16	\$8.00	\$283,712.00
6 ROCK CHANNEL EXCAVATION	C.Y.	14,257	\$20.00	\$285,140.00	\$23.63	\$336,892.91	\$8.00	\$114,056.00
7 BACKFILL	C.Y.	24,878	\$13.00	\$323,414.00	\$3.28	\$81,599.84	\$20.00	\$497,560.00
8 SLURRY CEMENT BACKFILL	C.Y.	104	\$130.00	\$13,520.00	\$47.00	\$4,888.00	\$200.00	\$20,800.00
9 FILTER MATERIAL	C.Y.	4,224	\$33.00	\$139,392.00	\$5.00	\$21,120.00	\$21.50	\$90,816.00
10 TRENCH SAFETY SYSTEM AND FALSEWORK	L.S.	1	\$24,000.00	\$24,000.00	\$230,015.00	\$230,015.00	\$125,000.00	\$125,000.00
11 CLASS "A" CONCRETE, REINFORCED CONCRETE BOX	C.Y.	270	\$630.00	\$170,100.00	\$7.52	\$2,030.40	\$600.00	\$162,000.00
12 CLASS "A" CONCRETE, L-WALL AND ACCESS RAMP	C.Y.	5,895	\$265.00	\$1,562,175.00	\$275.27	\$1,622,716.65	\$230.00	\$1,355,850.00
13 CLASS "A" CONCRETE, TRANSITION	C.Y.	100	\$765.00	\$76,500.00	\$908.00	\$90,800.00	\$500.00	\$50,000.00
14 CLASS "A" CONCRETE, RETAINING WALL	C.Y.	229	\$780.00	\$178,620.00	\$849.00	\$194,421.00	\$325.00	\$74,425.00
15 CLASS "A" CONCRETE, MINOR STRUCTURES	C.Y.	17	\$1,300.00	\$22,100.00	\$1,638.00	\$27,846.00	\$600.00	\$10,200.00
16 CLASS "A" CONCRETE, CHANNEL INVERT	C.Y.	1,138	\$170.00	\$193,460.00	\$222.00	\$252,636.00	\$240.00	\$273,120.00
17 CLASS "B" CONCRETE, 10' CUTOFF WALL	C.Y.	33	\$440.00	\$14,520.00	\$901.00	\$29,733.00	\$320.00	\$10,560.00
18 CLASS "B" CONCRETE, 7' CUTOFF WALL	C.Y.	17	\$580.00	\$9,860.00	\$89.00	\$1,513.00	\$410.00	\$6,970.00
19 CLASS "B" CONCRETE, MISCELLANEOUS	C.Y.	24	\$550.00	\$13,200.00	\$2,227.00	\$53,448.00	\$650.00	\$15,600.00
20 CLASS "B" CONCRETE, CONCRETED ROCK	C.Y.	189	\$92.00	\$17,388.00	\$92.00	\$17,388.00	\$160.00	\$30,240.00
21 JUNCTION STRUCTURE NO. 1	EACH	1	\$16,000.00	\$16,000.00	\$5,090.00	\$5,090.00	\$5,500.00	\$5,500.00
22 REINFORCING STEEL, GRADE 60	LBS.	1,007,559	\$0.75	\$755,669.25	\$0.99	\$997,483.41	\$1.00	\$1,007,559.00
23 18" REINFORCED CONCRETE PIPE	L.F.	135	\$125.00	\$16,875.00	\$137.00	\$18,495.00	\$135.00	\$18,225.00
24 48" REINFORCED CONCRETE PIPE	L.F.	8	\$430.00	\$3,440.00	\$180.00	\$1,440.00	\$345.00	\$2,760.00
25 AGGREGATE BASE, CLASS 2	C.Y.	834	\$75.00	\$62,550.00	\$39.00	\$32,526.00	\$40.00	\$33,360.00
26 ASPHALT CONCRETE, TYPE "B"	TONS	216	\$105.00	\$22,680.00	\$115.00	\$24,840.00	\$155.00	\$33,480.00
27 6-FOOT CHAIN LINK FENCE	L.F.	363	\$35.00	\$12,705.00	\$41.00	\$14,883.00	\$31.00	\$11,253.00



Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

Bid Open Date: 01/19/2012

RIVERSIDE CONSTRUCTION COMPANY, INC.

UNION ENGINEERING COMPANY, INC.

NORDIC INDUSTRIES, INC.

Item No. & Description	Unit	Quantity	RIVERSIDE CONSTRUCTION COMPANY, INC.		UNION ENGINEERING COMPANY, INC.		NORDIC INDUSTRIES, INC.	
			Unit Bid	Total Bid	Unit Bid	Total Bid	Unit Bid	Total Bid
28 CHAIN LINK RAILING TYPE 7	L.F.	92	\$75.00	\$6,900.00	\$86.00	\$7,912.00	\$35.00	\$3,220.00
29 TEMPORARY FENCING	L.F.	220	\$15.00	\$3,300.00	\$17.00	\$3,740.00	\$15.00	\$3,300.00
30 3-FOOT CABLE RAILING	L.F.	5,345	\$9.00	\$48,105.00	\$10.15	\$54,251.75	\$12.00	\$64,140.00
31 14-FOOT DOUBLE DRIVE GATES	EACH	3	\$1,200.00	\$3,600.00	\$1,340.00	\$4,020.00	\$1,000.00	\$3,000.00
32 MISCELLANEOUS IRON AND STEEL	LBS.	2,009	\$4.00	\$8,036.00	\$1.74	\$3,495.66	\$13.00	\$26,117.00
33 SUBDRAIN	L.F.	2,712	\$18.00	\$48,816.00	\$16.59	\$44,992.08	\$12.50	\$33,900.00
34 ADJUST VALVE TO GRADE	EACH	2	\$705.00	\$1,410.00	\$580.00	\$1,160.00	\$500.00	\$1,000.00
35 WOOD POST METAL BEAM GUARD RAILING	L.F.	13	\$90.00	\$1,170.00	\$97.00	\$1,261.00	\$300.00	\$3,900.00
36 BIORETENTION FACILITY	L.S.	1	\$90,000.00	\$90,000.00	\$126,978.00	\$126,978.00	\$65,000.00	\$65,000.00
37 SAMPLING STATION	L.S.	1	\$16,000.00	\$16,000.00	\$12,745.00	\$12,745.00	\$15,000.00	\$15,000.00
38 STAFF GAUGE	EACH	10	\$510.00	\$5,100.00	\$1,517.00	\$15,170.00	\$1,250.00	\$12,500.00
39 SWIFT WATER RESCUE ANCHORING DEVICES	EACH	12	\$250.00	\$3,000.00	\$910.00	\$10,920.00	\$600.00	\$7,200.00
40 REFLECTORIZED RAISED PAVEMENT MARKER ("BLUE DOT")	EACH	6	\$150.00	\$900.00	\$67.00	\$402.00	\$25.00	\$150.00
41 ROCK SLOPE PROTECTION, 1-TON CLASS	C.Y.	12,588	\$46.00	\$579,048.00	\$64.85	\$816,331.80	\$60.00	\$755,280.00
42 FILTER BLANKET, NO. 2 BACKING	C.Y.	2,961	\$63.00	\$186,543.00	\$71.00	\$210,231.00	\$65.00	\$192,465.00
43 ROCK SLOPE PROTECTION FABRIC	S.Y.	10,076	\$1.25	\$12,595.00	\$2.29	\$23,074.04	\$3.00	\$30,228.00
44 GROUTED LOW FLOW CHANNEL	C.Y.	605	\$105.00	\$63,525.00	\$139.00	\$84,095.00	\$150.00	\$90,750.00
45 DUST ABATEMENT	L.S.	1	\$120,000.00	\$120,000.00	\$26,796.00	\$26,796.00	\$125,000.00	\$125,000.00
46 HYDROSEEDING	ACRE	0.2	\$8,000.00	\$1,600.00	\$8,845.00	\$1,769.00	\$11,000.00	\$2,200.00
47 STORMWATER AND NON-STORMWATER POLLUTION CONTROL	L.S.	1	\$100,000.00	\$100,000.00	\$186,290.00	\$186,290.00	\$60,000.00	\$60,000.00
48 NON-STORMWATER DISCHARGE OR DEWATERING	L.S.	1	\$55,000.00	\$55,000.00	\$11,600.00	\$11,600.00	\$200,000.00	\$200,000.00
49 RELOCATE 8-INCH WATERLINE	L.S.	1	\$48,000.00	\$48,000.00	\$85,026.00	\$85,026.00	\$20,000.00	\$20,000.00
				\$6,769,236.25		\$6,943,226.70		\$6,975,010.00



Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

Bid Open Date: 01/19/2012

**MIKE BUBALO
CONSTRUCTION CO., INC.**

**GARCIA JUAREZ
CONSTRUCTION, INC.**

Item No. & Description	Unit	Quantity	Unit Bid	Total Bid	Unit Bid	Total Bid
1 MOBILIZATION	L.S.	1	\$685,000.00	\$685,000.00	\$300,000.00	\$300,000.00
2 WATER CONTROL	L.S.	1	\$45,000.00	\$45,000.00	\$5,000.00	\$5,000.00
3 TRAFFIC CONTROL	L.S.	1	\$30,000.00	\$30,000.00	\$5,000.00	\$5,000.00
4 CLEARING AND MISCELLANEOUS WORK	L.S.	1	\$200,000.00	\$200,000.00	\$20,000.00	\$20,000.00
5 EXCAVATION	C.Y.	35,464	\$15.00	\$531,960.00	\$12.00	\$425,568.00
6 ROCK CHANNEL EXCAVATION	C.Y.	14,257	\$25.00	\$356,425.00	\$12.00	\$171,084.00
7 BACKFILL	C.Y.	24,878	\$20.00	\$497,560.00	\$18.00	\$447,804.00
8 SLURRY CEMENT BACKFILL	C.Y.	104	\$200.00	\$20,800.00	\$100.00	\$10,400.00
9 FILTER MATERIAL	C.Y.	4,224	\$20.00	\$84,480.00	\$40.00	\$168,960.00
10 TRENCH SAFETY SYSTEM AND FALSEWORK	L.S.	1	\$125,000.00	\$125,000.00	\$300,000.00	\$300,000.00
11 CLASS "A" CONCRETE, REINFORCED CONCRETE BOX	C.Y.	270	\$400.00	\$108,000.00	\$1,000.00	\$270,000.00
12 CLASS "A" CONCRETE, L-WALL AND ACCESS RAMP	C.Y.	5,895	\$380.00	\$2,240,100.00	\$600.00	\$3,537,000.00
13 CLASS "A" CONCRETE, TRANSITION	C.Y.	100	\$400.00	\$40,000.00	\$800.00	\$80,000.00
14 CLASS "A" CONCRETE, RETAINING WALL	C.Y.	229	\$400.00	\$91,600.00	\$600.00	\$137,400.00
15 CLASS "A" CONCRETE, MINOR STRUCTURES	C.Y.	17	\$350.00	\$5,950.00	\$800.00	\$13,600.00
16 CLASS "A" CONCRETE, CHANNEL INVERT	C.Y.	1,138	\$400.00	\$455,200.00	\$300.00	\$341,400.00
17 CLASS "B" CONCRETE, 10' CUTOFF WALL	C.Y.	33	\$350.00	\$11,550.00	\$800.00	\$26,400.00
18 CLASS "B" CONCRETE, 7' CUTOFF WALL	C.Y.	17	\$350.00	\$5,950.00	\$800.00	\$13,600.00
19 CLASS "B" CONCRETE, MISCELLANEOUS	C.Y.	24	\$1,000.00	\$24,000.00	\$1,000.00	\$24,000.00
20 CLASS "B" CONCRETE, CONCRETED ROCK	C.Y.	189	\$200.00	\$37,800.00	\$200.00	\$37,800.00
21 JUNCTION STRUCTURE NO. 1	EACH	1	\$50,000.00	\$50,000.00	\$5,000.00	\$5,000.00
22 REINFORCING STEEL, GRADE 60	LBS.	1,007,559	\$0.85	\$856,425.15	\$1.00	\$1,007,559.00
23 18" REINFORCED CONCRETE PIPE	L.F.	135	\$150.00	\$20,250.00	\$150.00	\$20,250.00
24 48" REINFORCED CONCRETE PIPE	L.F.	8	\$500.00	\$4,000.00	\$200.00	\$1,600.00
25 AGGREGATE BASE, CLASS 2	C.Y.	834	\$25.00	\$20,850.00	\$30.00	\$25,020.00
26 ASPHALT CONCRETE, TYPE "B"	TONS	216	\$125.00	\$27,000.00	\$88.00	\$19,008.00
27 6-FOOT CHAIN LINK FENCE	L.F.	363	\$50.00	\$18,150.00	\$40.00	\$14,520.00



Project Name: DAY CREEK CHANNEL, STAGE 6 PHASE 2

Project Number: 1-0-0250-06

Bid Open Date: 01/19/2012

**MIKE BUBALO
CONSTRUCTION CO., INC.**

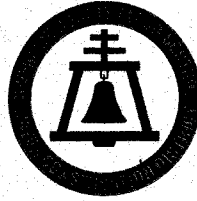
**GARCIA JUAREZ
CONSTRUCTION, INC.**

Item No. & Description	Unit	Quantity	Unit Bid	Total Bid	Unit Bid	Total Bid
28 CHAIN LINK RAILING TYPE 7	L.F.	92	\$80.00	\$7,360.00	\$75.00	\$6,900.00
29 TEMPORARY FENCING	L.F.	220	\$20.00	\$4,400.00	\$2.00	\$440.00
30 3-FOOT CABLE RAILING	L.F.	5,345	\$15.00	\$80,175.00	\$6.00	\$32,070.00
31 14-FOOT DOUBLE DRIVE GATES	EACH	3	\$2,000.00	\$6,000.00	\$2,000.00	\$6,000.00
32 MISCELLANEOUS IRON AND STEEL	LBS.	2,009	\$10.00	\$20,090.00	\$2.00	\$4,018.00
33 SUBDRAIN	L.F.	2,712	\$20.00	\$54,240.00	\$30.00	\$81,360.00
34 ADJUST VALVE TO GRADE	EACH	2	\$1,000.00	\$2,000.00	\$400.00	\$800.00
35 WOOD POST METAL BEAM GUARD RAILING	L.F.	13	\$100.00	\$1,300.00	\$300.00	\$3,900.00
36 BIORETENTION FACILITY	L.S.	1	\$50,000.00	\$50,000.00	\$65,000.00	\$65,000.00
37 SAMPLING STATION	L.S.	1	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00
38 STAFF GAUGE	EACH	10	\$2,000.00	\$20,000.00	\$4,000.00	\$40,000.00
39 SWIFT WATER RESCUE ANCHORING DEVICES	EACH	12	\$200.00	\$2,400.00	\$300.00	\$3,600.00
40 REFLECTORIZED RAISED PAVEMENT MARKER ("BLUE DOT")	EACH	6	\$50.00	\$300.00	\$50.00	\$300.00
41 ROCK SLOPE PROTECTION, 1-TON CLASS	C.Y.	12,588	\$50.00	\$629,400.00	\$70.00	\$881,160.00
42 FILTER BLANKET, NO. 2 BACKING	C.Y.	2,961	\$50.00	\$148,050.00	\$10.00	\$29,610.00
43 ROCK SLOPE PROTECTION FABRIC	S.Y.	10,076	\$5.00	\$50,380.00	\$10.00	\$100,760.00
44 GROUTED LOW FLOW CHANNEL	C.Y.	605	\$200.00	\$121,000.00	\$200.00	\$121,000.00
45 DUST ABATEMENT	L.S.	1	\$20,000.00	\$20,000.00	\$5,000.00	\$5,000.00
46 HYDROSEEDING	ACRE	0.2	\$10,000.00	\$2,000.00	\$10,000.00	\$2,000.00
47 STORMWATER AND NON-STORMWATER POLLUTION CONTROL	L.S.	1	\$20,000.00	\$20,000.00	\$5,000.00	\$5,000.00
48 NON-STORMWATER DISCHARGE OR DEWATERING	L.S.	1	\$20,000.00	\$20,000.00	\$5,000.00	\$5,000.00
49 RELOCATE 8-INCH WATERLINE	L.S.	1	\$20,000.00	\$20,000.00	\$35,000.00	\$35,000.00
				\$7,877,145.15		\$8,861,891.00

11

WARREN D. WILLIAMS
General Manager-Chief Engineer

1995 MARKET STREET
RIVERSIDE, CA 92501
951.955.1200
FAX 951.788.9965
www.rcflood.org



RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

January 9, 2012

ADDENDUM NO. 1
TO
DAY CREEK CHANNEL, STAGE 6
RIVERSIDE COUNTY, CALIFORNIA

Bid Opening Date: Thursday, January 19, 2012 at 11:00 a.m.

PROPOSAL

REPLACE PROPOSAL in its entirety (Pages VIII, VIIIa, and VIIIb) to accommodate:

- Quantity change of Item No. 41 Rock Slope Protection, 1-Ton Class to 12,588 on Page VIIIb;
- Quantity change of Item No. 42 Filter Blanket, No. 2 Backing to 2,961 on Page VIIIb;
- Quantity change of Item No. 44 Grouted Low Flow Channel to 605 on Page VIIIb; and
- The addition of the signature line on the bottom of Page VIIIb for acknowledgment of the addendum.

EXHIBIT

REPLACE EXHIBIT Page XVIIIb to accommodate:

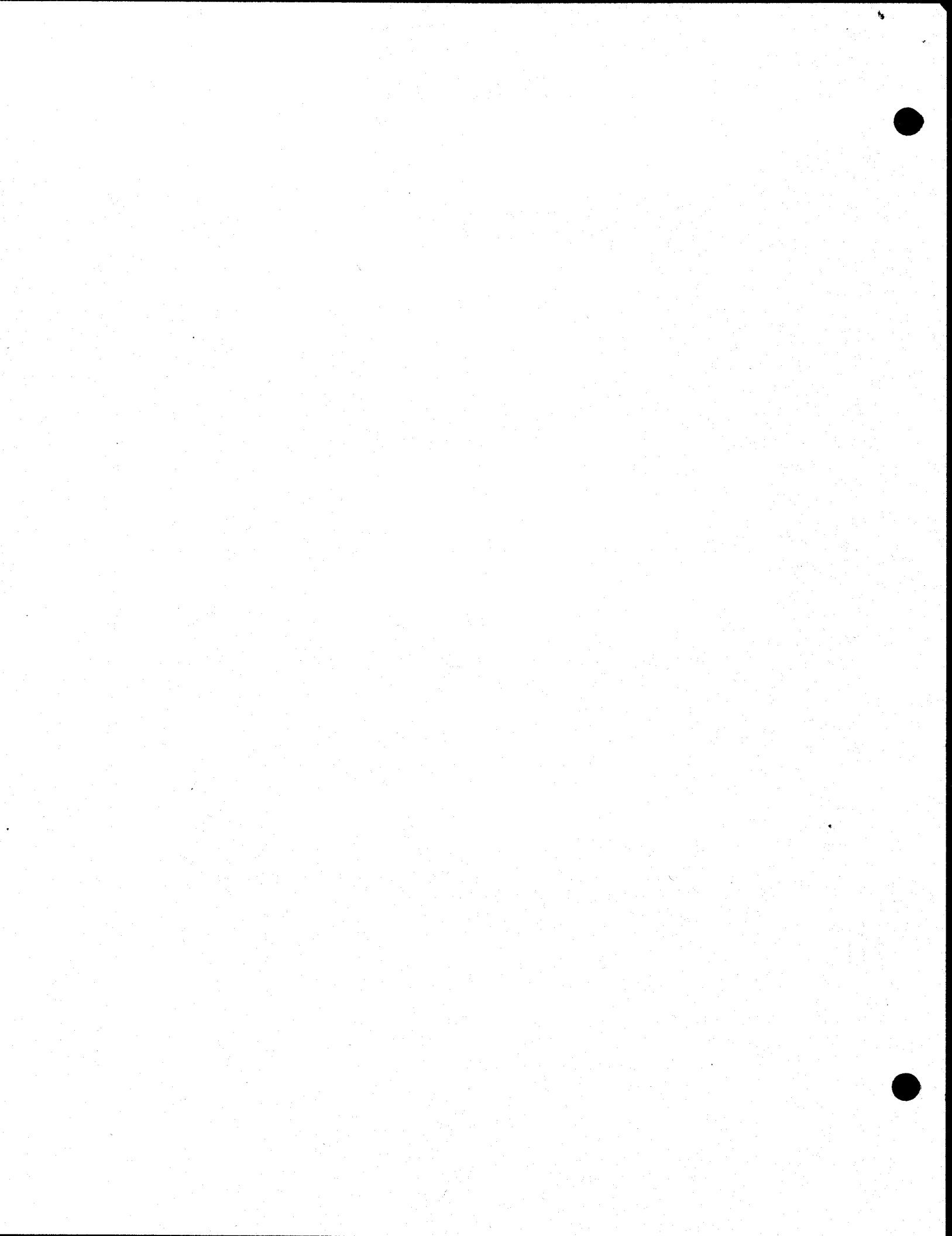
- Quantity change of Item No. 41 Rock Slope Protection, 1-Ton Class to 12,588 on Page XVIIIb;
- Quantity change of Item No. 42 Filter Blanket, No. 2 Backing to 2,961 on Page XVIIIb; and
- Quantity change of Item No. 44 Grouted Low Flow Channel to 605 on Page XVIIIb.

DRAWINGS

REPLACE Drawing No. 1-647 Sheet No. 34 in its entirety with the enclosed Drawing No. 1-647 Sheet No. 34 to reflect the removal of "PRELIMINARY SUBJECT TO REVISION" stamp from the drawing.

NOTE: Bidders are required to acknowledge receipt of all addenda at the bottom of Sheet VIIIb of the PROPOSAL. Failure to acknowledge all addenda on the bid form may cause the bid to be considered not responsive to the invitation, which would require rejection of the bid.

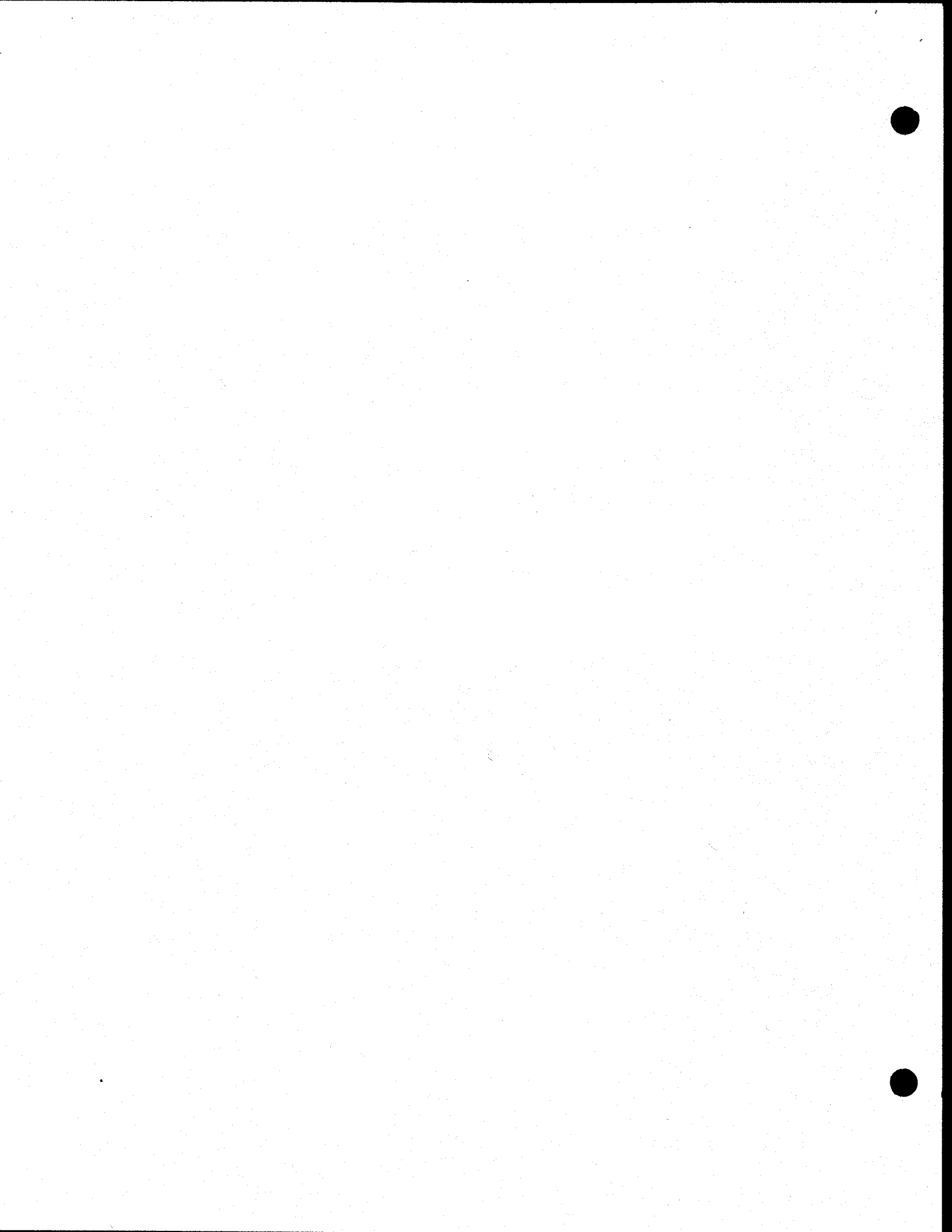
WARREN D. WILLIAMS
General Manager-Chief Engineer



PROPOSAL

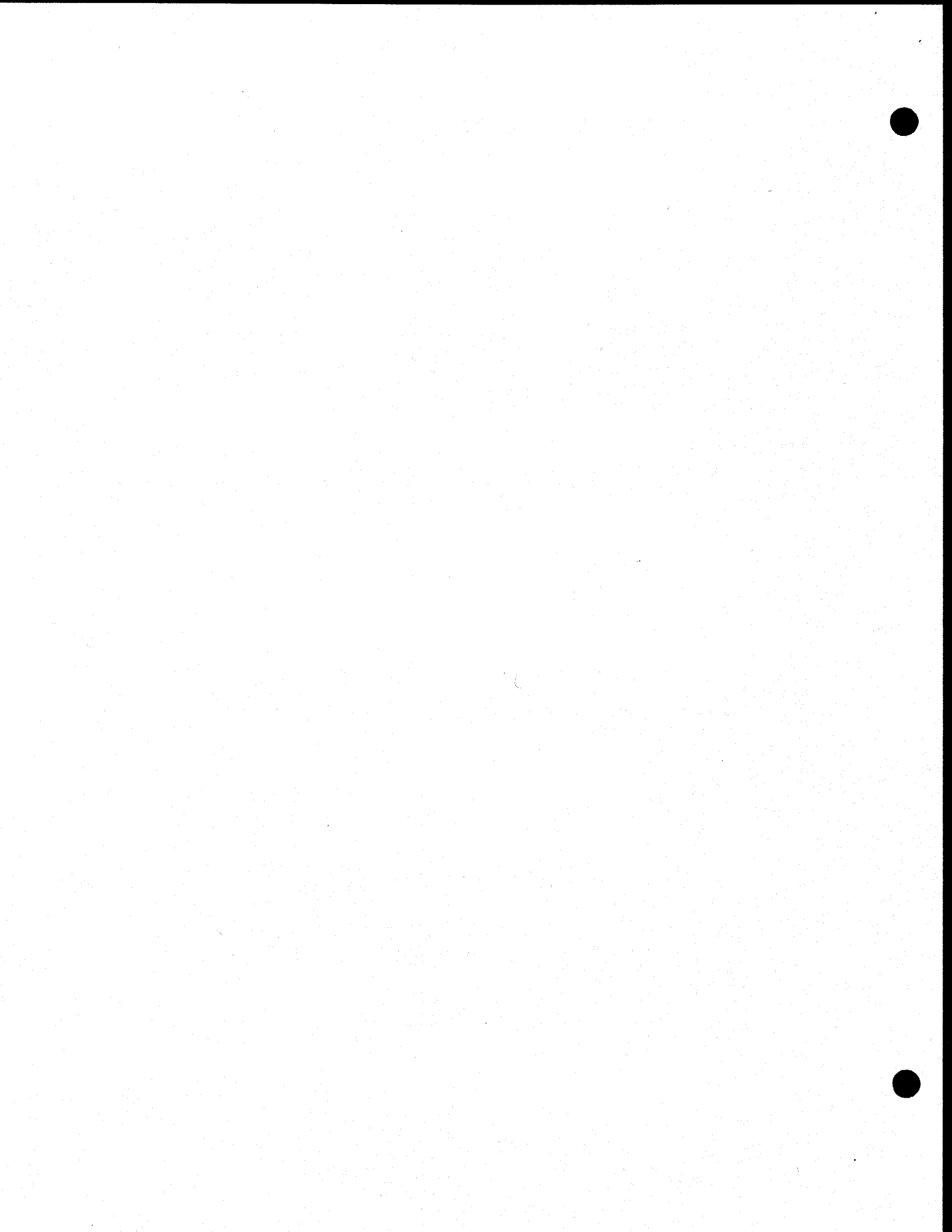
For the Construction of **Day Creek Channel, Stage 6 Phase 2**, located in the city of Jurupa Valley, Riverside County, consisting of the following estimated quantities:

SECT. NO.	ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
10	1.	Mobilization	L.S.	---	---	
11	2.	Water Control	L.S.	---	---	
12	3.	Traffic Control	L.S.	---	---	
13	4.	Clearing and Miscellaneous Work	L.S.	---	---	
14	5.	Excavation	C.Y.	35,464		
14	6.	Rock Channel Excavation	C.Y.	14,257		
14	7.	Backfill	C.Y.	24,878		
14	8.	Slurry Cement Backfill	C.Y.	104		
14	9.	Filter Material	C.Y.	4,224		
15	10.	Trench Safety System and Falsework	L.S.	---	---	
16	11.	Class "A" Concrete, Reinforced Concrete Box	C.Y.	270		
16	12.	Class "A" Concrete, L-Wall and Access Ramp	C.Y.	5,895		
16	13.	Class "A" Concrete, Transition	C.Y.	100		
16	14.	Class "A" Concrete, Retaining Wall	C.Y.	229		
16	15.	Class "A" Concrete, Minor Structures	C.Y.	17		
16	16.	Class "A" Concrete, Channel Invert	C.Y.	1,138		
16	17.	Class "B" Concrete, 10' Cutoff Wall	C.Y.	33		
16	18.	Class "B" Concrete, 7' Cutoff Wall	C.Y.	17		



PROPOSAL contd.

SECT. NO.	ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
16	19.	Class "B" Concrete, Miscellaneous	C.Y.	24		
16	20.	Class "B" Concrete, Concreted Rock	C.Y.	189		
16	21.	Junction Structure No. 1	EACH	1		
16	22.	Reinforcing Steel, Grade 60	LBS.	1,007,559		
17	23.	18" Reinforced Concrete Pipe	L.F.	135		
17	24.	48" Reinforced Concrete Pipe	L.F.	8		
19	25.	Aggregate Base, Class 2	C.Y.	834		
19	26.	Asphalt Concrete, Type "B"	TONS	216		
20	27.	6-Foot Chain Link Fence	L.F.	363		
20	28.	Chain Link Railing Type 7	L.F.	92		
20	29.	Temporary Fencing	L.F.	220		
20	30.	3-Foot Cable Railing	L.F.	5,345		
20	31.	14-Foot Double Drive Gates	EACH	3		
21	32.	Miscellaneous Iron and Steel	LBS.	2,009		
21	33.	Subdrain	L.F.	2,712		
21	34.	Adjust Valve to Grade	EACH	2		
21	35.	Wood Post Metal Beam Guard Railing	L.F.	13		
21	36.	Bioretention Facility	L.S.	---	---	
21	37.	Sampling Station	L.S.	---	---	
21	38.	Staff Gauge	EACH	10		
21	39.	Swift Water Rescue Anchoring Devices	EACH	12		
21	40.	Reflectorized Raised Pavement Marker ("Blue Dot")	EACH	6		



PROPOSAL contd.

SECT. NO.	ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
26	41.	Rock Slope Protection, 1-Ton Class	C.Y.	12,588		
26	42.	Filter Blanket, No. 2 Backing	C.Y.	2,961		
26	43.	Rock Slope Protection Fabric	S.Y.	10,076		
26	44.	Grouted Low Flow Channel	C.Y.	605		
27	45.	Dust Abatement	L.S.	---	---	
28	46.	Hydroseeding	ACRE	0.2		
29	47.	Stormwater and Non-Stormwater Pollution Control	L.S.	---	---	
29	48.	Non-Stormwater Discharge or Dewatering	L.S.	---	---	
31	49.	Relocate 8-Inch Waterline	L.S.	---	---	
				<u>TOTAL</u>		

Name of Company

Signature of Contractor

Address

S.S.N. or E.I.N.

City, State, Zip

Contractor's License No. and Classification

Telephone Number Fax Number

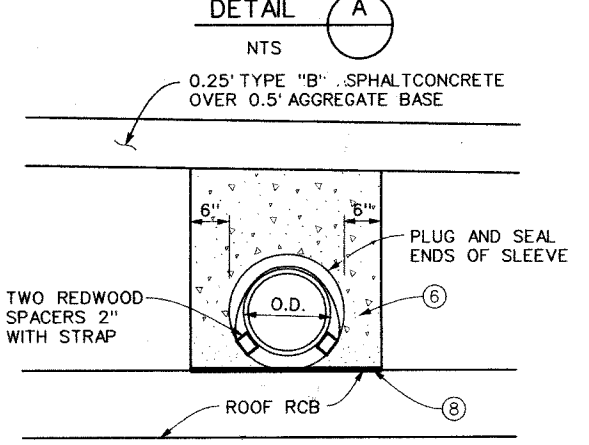
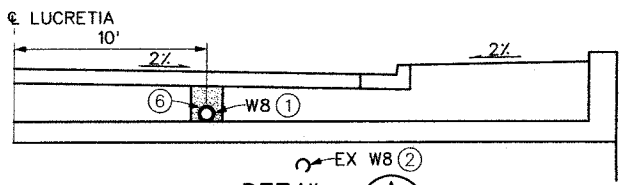
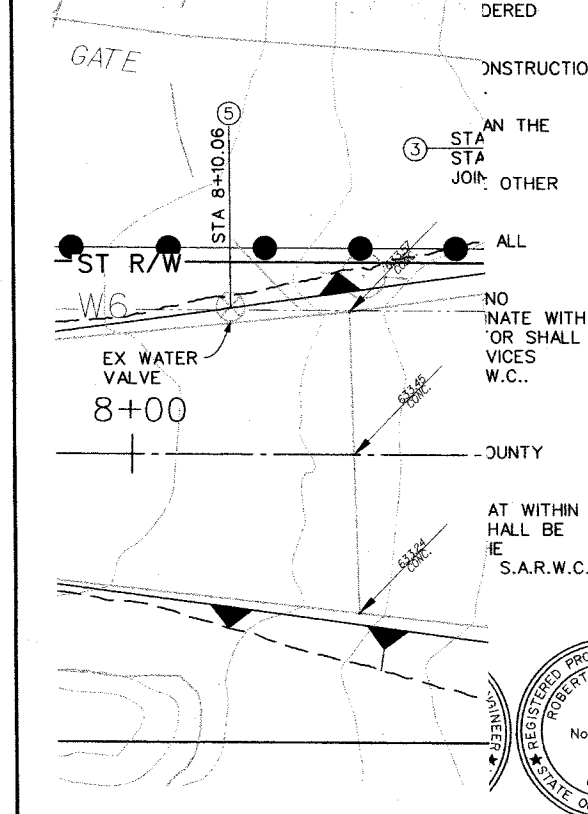
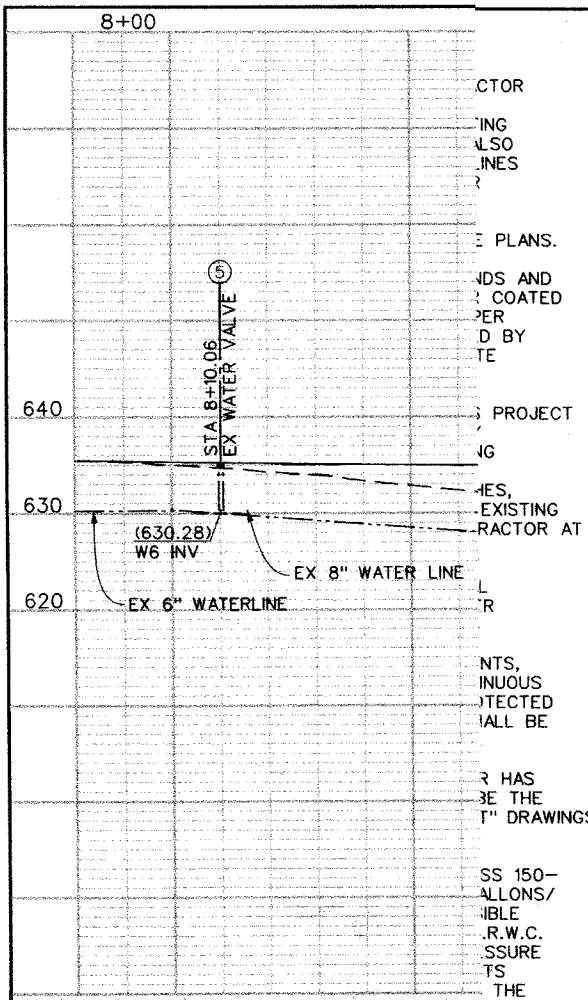
ADDENDUM NO. 1 ACKNOWLEDGED _____



EXHIBIT contd.

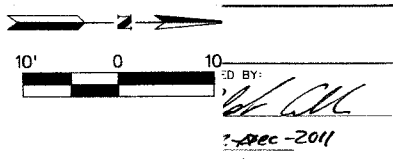
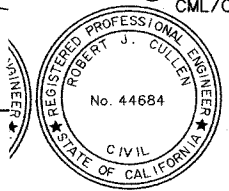
ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
36.	Bioretention Facility	L.S.	---	---	
37.	Sampling Station	L.S.	---	---	
38.	Staff Gauge	EACH	10		
39.	Swift Water Rescue Anchoring Devices	EACH	12		
40.	Reflectorized Raised Pavement Marker ("Blue Dot")	EACH	6		
41.	Rock Slope Protection, 1-Ton Class	C.Y.	12,588		
42.	Filter Blanket, No. 2 Backing	C.Y.	2,961		
43.	Rock Slope Protection Fabric	S.Y.	10,076		
44.	Grouted Low Flow Channel	C.Y.	605		
45.	Dust Abatement	L.S.	---	---	
46.	Hydroseeding	ACRE	0.2		
47.	Stormwater and Non-Stormwater Pollution Control	L.S.	---	---	
48.	Non-Stormwater and Discharge or Dewatering	L.S.	---	---	
49.	Relocate 8-Inch Waterline	L.S.	---	---	
				TOTAL	





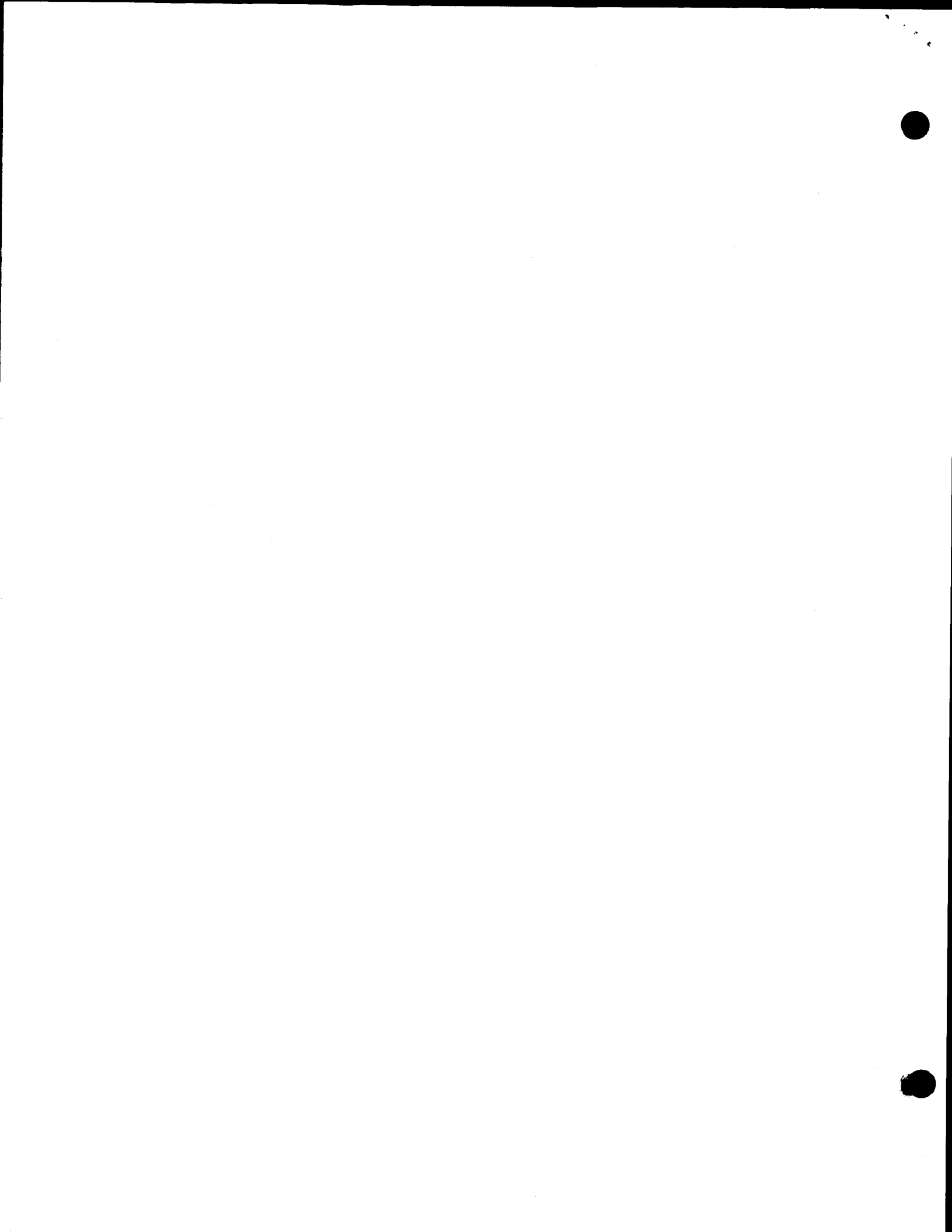
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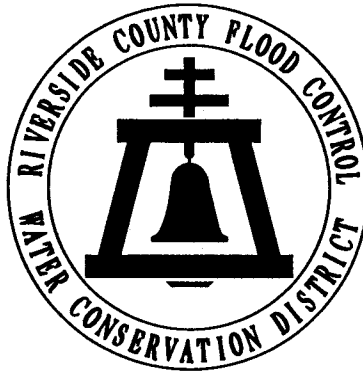
- ① INSTALL APPROX 87 LF 8" DIA CML/CMC W.S.P (STD WT) FULLY WELDED. ALL JOINTS DOUBLE PASS MIN.
- ② CUT AND REMOVE INTERFERING PORTION OF EXISTING 8" WATER LINE. SEE SPECIFICATIONS FOR MANDATORY COORDINATION WITH S.A.R.W.C. PRIOR TO CUTTING OF LINE.
- ③ JOIN EXISTING 8" WATER LINE. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF THE EXISTING 8" WATER LINE. SEE SPECIFICATIONS FOR MANDATORY COORDINATION WITH S.A.R.W.C. PRIOR TO CUTTING OF LINE.
- ④ REGARDING SHUTTING OFF THE 6"/8" WATER LINE THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH SANTA ANA RIVER WATER COMPANY AT (951) 685-6503.
- ⑤ EXTEND VALVE WELL TO MATCH GRADE.
- ⑥ ENCASE 12" DIA STEEL SLEEVE (1/4" THICK MIN.) WITH TWO-SACK SLURRY CEMENT BACKFILL PER DETAIL B.
- ⑦ POT HOLE GAS LINE TO DETERMINE LIMITS AND PROTECT IN-PLACE.
- ⑧ INSTALL CONCRETE BOND BREAKER.
- ⑨ INSTALL 8" DIA GATE VALVE PER S.A.R.W.C. DWG B-1.
- ⑩ INSTALL SPLIT-BUTT STRAP CONNECT TO EXISTING 8" DIA PER S.A.R.W.C. STD DWG C-3 AND C-4.
- ⑪ INSTALL 8" DIA AWWA TEE W/BLIND FLANGE.
- ⑫ INSTALL SHEAR RING W/CONCRETE BLOCK PER S.A.R.W.C. STD DWG Z-1.
- ⑬ INSTALL THRUST BLOCK PER S.A.R.W.C. STD DWG Z-1.
- ⑭ INSTALL 8" DIA AWWA 90° BEND.
- ⑮ REMOVE AND SALVAGE EX WATER VALVE TO S.A.R.W.C.
- ⑯ INSTALL 1" DIA AIR VALVE PER S.A.R.W.C. STD DWG E-1 AND LIMITS HEREON.
- ⑰ INSTALL 8" DIA AWWA 45° BENDS.
- ⑱ INSTALL 12" DIA CML/CMC W.S.P. (STD WT) SLEEVE AROUND 8" DIA CML/CMC W.S.P. LINED WITH 2" REDWOOD SPACER PER DETAIL B.



DAY CREEK CHANNEL
STAGE 6
PHASE 2
8" WATER LINE RELOCATION

PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	34 OF 38





SPECIFICATIONS and CONTRACT DOCUMENTS
for the CONSTRUCTION of
DAY CREEK CHANNEL
STAGE 6
PHASE 2
1-0-0250

These specifications and contract documents have been prepared under the direction of the following Registered Civil Engineers:

Recommended By:

Robert J. Cullen 28-Nov-2011
Chief, Design & Construction Date



Approved By:
Warren D. Williams 11/30/11
Chief Engineer Date





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NOTICE TO CONTRACTORS

Riverside County Flood Control and Water Conservation District hereinafter called "District", invites sealed proposals for construction of:

Day Creek Channel, Stage 6 Phase 2

Project No. 1-0-00250-06

located in the city of Jurupa Valley

Riverside County, California

Specifications and Contract Documents may be examined at the District's office at 1995 Market Street, Riverside, California, and may be obtained upon payment to District of \$60.00 per set, received at the District's office and \$65.00 per set if mailed. The Specifications and Contract Documents are also offered on CD-ROM for \$10.00 received at the District's office and \$15.00 if mailed. No refund.

Each proposal must be accompanied by a certified or cashier's check or bid bond equal to ten percent (10%) of the amount bid, payable to the Riverside County Flood Control and Water Conservation District as a guarantee that the Contractor will, if awarded the contract, execute a satisfactory contract and furnish the required bonds and proof of insurance.

Proposals must be in accordance with the instructions and filed with District by 11:00 a.m. on Thursday, January 19, 2012 at the District office at the above address which time and place are fixed for the public opening of bids.

General prevailing rate per diem wages and general prevailing rate of per diem wages for holiday and overtime work, including employer payments for health and welfare, pension, vacation, apprentices and similar purposes for each craft, classification or type of workman needed for execution of contracts under the jurisdiction of District have been obtained by the Board of Supervisors of the District from the



Director of Industrial Relations of the State of California for the area where the work is to be done. The said determinations are on file in the principal office of the District, and will be made available to any interested person upon request.

Contractors submitting proposals for this project shall have an "A" Contractors license from the State of California in order to be considered eligible for the contract award.

Dated: December 20, 2011

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

KECIA HARPER-IHEM
Clerk of the Board

BY


Deputy



INSTRUCTIONS TO BIDDERS

QUANTITIES: The amount of work to be done or materials to be furnished under the Contract as noted in the proposal, are but estimates and are not to be taken as an expressed or implied statement that the actual amount of work or materials will correspond to the estimate.

The right is reserved to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient.

The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

The Contractor is cautioned against unbalancing of his bid by prorating his overhead into one or two items only when there are a number of items on the schedule. The overhead and indirect charges should be prorated on all items in schedule.

DISCREPANCIES AND OMISSIONS: Discrepancies, omissions, ambiguities, or requirements likely to cause disputes between trades and similar matters shall be promptly brought to the attention of the Engineer. When appropriate, Addenda will be issued by District. No communication by anyone as to such matters except by an Addendum affects the meaning or requirements of the Contract Documents.

WITHDRAWAL OF PROPOSALS: Any proposal may be withdrawn at any time prior to the hour fixed in the Notice to Contractors for the opening of proposals, provided that a request in writing, executed by the bidder or his duly authorized representative, for the withdrawal of such proposal, is filed with the Chief Engineer. The withdrawal of a proposal shall not prejudice the right of a bidder to file a new proposal.

AGREEMENT OF FIGURES: If the unit prices and the total amounts named by the bidder in the proposal do not agree, the unit prices alone will be considered as representing the bidder's intention.

INVALID PROPOSALS: Proposal submitted by telegraph or fax transmission and those which fail to reach the place fixed for opening of proposals prior to the date and hour set for opening same, will not be considered.

INSPECTION OF SITE: Bidders must examine the site and acquaint themselves with all conditions affecting the work.

Information derived from maps, plans or specifications, or from the Chief Engineer or his assistants, will not relieve the successful bidder from properly carrying out all the terms of the written contract.

By the submitting of a proposal, the bidder will be held to have personally examined the site and the drawings, to have carefully read the specifications and to have satisfied himself as to his ability to meet all the difficulties attending the execution of the proposed contract before the delivery of his proposal and agrees that if he is awarded the contract, he will make no claim against the Board of Supervisors based on ignorance or misunderstanding of the contract provisions.



QUALIFICATIONS OF BIDDERS: No proposal will be accepted from a contractor who is not licensed under laws of California, as evidenced by the submittal of the Statement of Licensure. No award will be made to any bidder who cannot give satisfactory assurance to the Board of Supervisors as to his own ability to carry out the contract, both from his financial standing and by reason of his previous experience as a contractor on work of the nature contemplated in the contract. The bidder is required to submit his record of work of similar nature to that proposed under these specifications, and unfamiliarity with the type of work may be sufficient cause for rejection of a proposal.

A bid shall be rejected and a bidder shall be disqualified to bid on a District project if the bidder or any officer, manager, partner or shareholder of the bidder within the eighteen month period prior to the bid date shall have been an officer or employee of the District.

PROPOSAL FORMS: Attention of all bidders is called to the proposal affidavit forms attached hereto and bidders are cautioned that all proposals submitted must be accompanied by the proper affidavit, properly executed. Proposals will be made on forms furnished by District.

REJECTION OF PROPOSALS CONTAINING ALTERATIONS, ERASURES OR IRREGULARITIES: Proposals may be rejected if they show any alterations of form, additions not called for, conditional proposals, incomplete proposals, erasures or irregularities of any kind. Erasures or interlineations in the proposal must be explained or noted over the signature of the bidder.

PUBLIC OPENING OF PROPOSALS: Proposals will be opened and read publicly at the time and place indicated in the Notice to Contractors. Bidders or their authorized agents are invited to be present.

DISQUALIFICATION OF BIDDERS: More than one proposal from an individual, a firm or partnership, a corporation or an association under the same or different names will not be considered. Reasonable ground for believing that any bidder is interested in more than one proposal for the work contemplated will cause the rejection of all proposals in which such bidder is interested. If there is any reason for believing that collusion exists among the bidders, none of the participants in such collusion will be considered in awarding the contract. Proposals in which the prices obviously are unbalanced may be rejected.

ADDENDA: District reserves the right to issue Addenda to the Contract Documents at any time prior to the time set to open bids. Each potential bidder shall leave with the District its name and address for the purpose of receiving Addenda. District will cause copies of Addenda to be mailed or delivered to such names at such addresses. To be considered, a Contractor's proposal must list and take into account all issued Addenda.

AWARD OF CONTRACT: The right is reserved to reject any and all proposals and to waive technical defects as the best interests of the District may require.

The award of the Contract, if it be awarded, will be to the lowest responsible bidder whose proposal complies with the requirements prescribed. The award, if made, will be made within sixty (60) days after the opening of the proposals.

All proposals will be compared on the basis of the Engineer's estimate of the quantities of work to be done.



RETURN OF PROPOSAL GUARANTEES: Within ten (10) days after the award of the contract, the Clerk will return the proposal guarantees accompanying such of the proposals as are not considered in making the award. All other proposal guarantees will be held until the contract has been fully executed, after which they will be returned to the respective bidders whose proposal they accompany.

CONTRACT BONDS: The Contractor shall furnish two (2) surety bonds in duplicate, one as a security for the faithful performance of the contract in the amount equal to one hundred percent (100%) of the contract price, and one as security for the payment of all persons performing labor and furnishing materials in connection with the contract in an amount equal to one hundred percent (100%) of the contract price. All bonds must be submitted on forms provided by the District. Bonds submitted in any other form will not be accepted.

SUBLETTING AND SUBCONTRACTING: Bidders are required, pursuant to the Subletting and Subcontracting Fair Practices Act (commencing with Section 4100 of the Public Contract Code) to list in their proposal the name and location of place of business of each subcontractor who will perform work or labor or render services in or about the construction of the work or improvement or a subcontractor who specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the Plans and Specifications, in excess of one-half ($\frac{1}{2}$) of one percent (1%) of the prime Contractor's total bid. Failure to list a subcontractor for a portion of the work means that the prime contractor will do that portion of the work.



CONTRACTOR'S PROPOSAL

TO THE BOARD OF SUPERVISORS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT:

The undersigned hereby declare:

(a) That the only persons or parties interested in this proposal as principals are the following:

Name of Company (and dba if applicable): KIP, Incorporated

Greg D. Quiring, President Jill C. Christopher, Sec/Treas

Michael C. Kennedy, Vice-Pres _____

(If the Contractor is a corporation, give the name of the corporation and the name of its president, secretary, treasurer, and manager. If a copartnership, give the name under which the copartnership does business, and the names and addresses of all copartners. If an individual, state the name and address under which the contract is to be drawn.)

(b) That this proposal is made without collusion with any other person, firm or corporation.

(c) That he has carefully examined the location of the proposed work, and has familiarized himself with all of the physical and climatic conditions, and makes his proposal solely upon his own knowledge.

(d) That he has carefully examined the attached specifications as referred to, and the plans, and makes this proposal in accordance therewith.

(e) That, if this proposal is accepted, he will enter into a written contract with the Riverside County Flood Control and Water Conservation District, Riverside, State of California.

(f) That he proposes to enter into such contract and to accept in full payment for the work actually done thereunder the prices shown in the attached schedule. It is understood and agreed that the quantities set forth are but estimates, and that the unit prices will apply to the actual quantities whatever they may be.

Accompanying this proposal is a certified or cashier's check or bid bond payable to the order of the Riverside County Flood Control and Water Conservation District, Riverside, California, in the sum of 10% of the amount of bid Dollars (\$ _____)

It is understood and agreed that should the Contractor within ten (10) days after the prescribed forms are presented to him for signature fail to return the contract and furnish acceptable surety bond and insurance, then, at the discretion of the District, the proceeds of said check shall become the property of the District, the Contractor shall be found in default and the project may be awarded to another contractor. The bid bond or check shall be held subject to payment to the District of the difference in money between the amount of the contract with another party to perform the work, together with the cost to the District of redrafting, redrawing and publishing documents and papers necessary to obtain new bids on said work. The bid bond or check shall, in addition, be held subject to all other actual damages suffered by the District. But if the contract is entered into and said bonds and insurance are furnished, or if the proposal is not accepted, then the said check shall be returned to the undersigned.

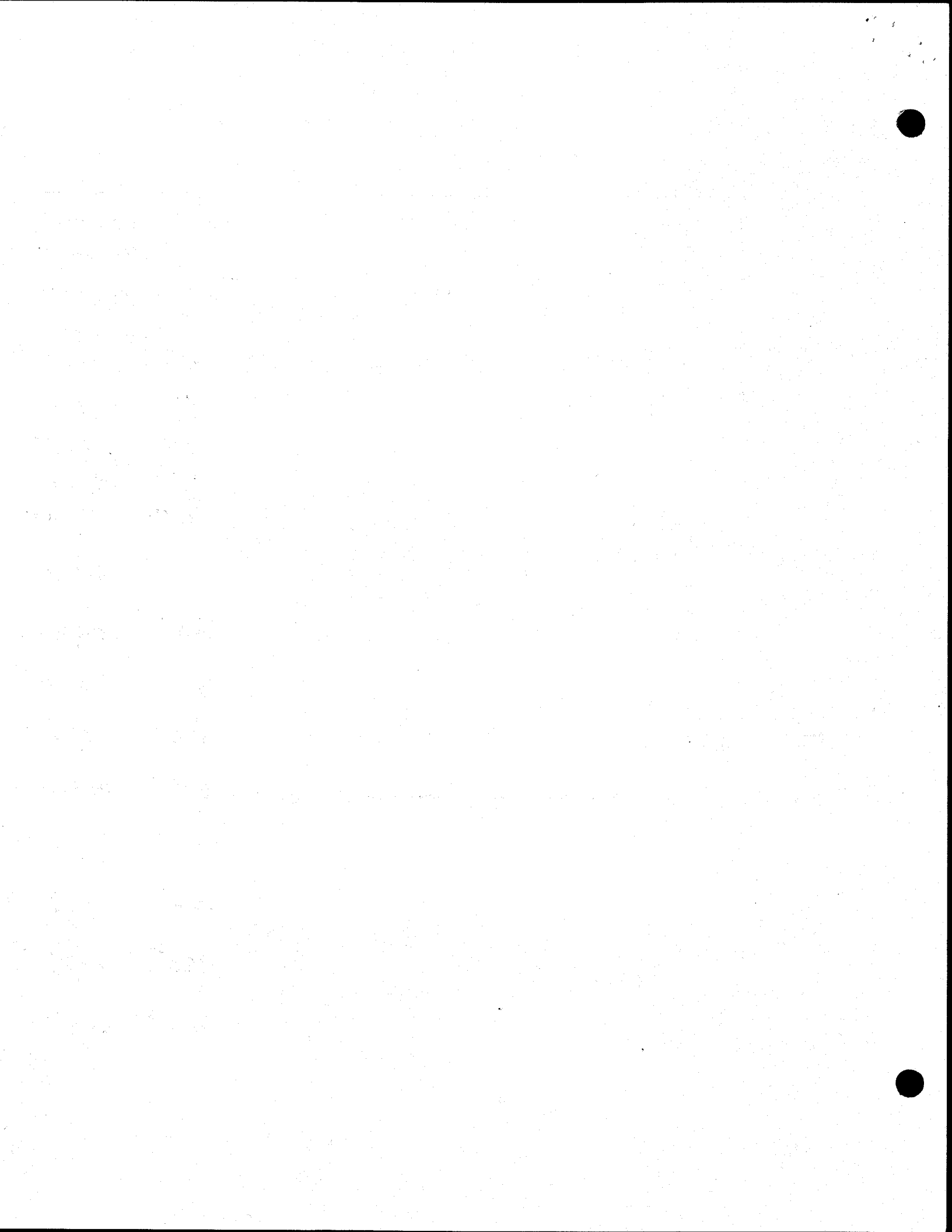
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JAN 19 2012
10:53 a.m.
RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT



PROPOSAL

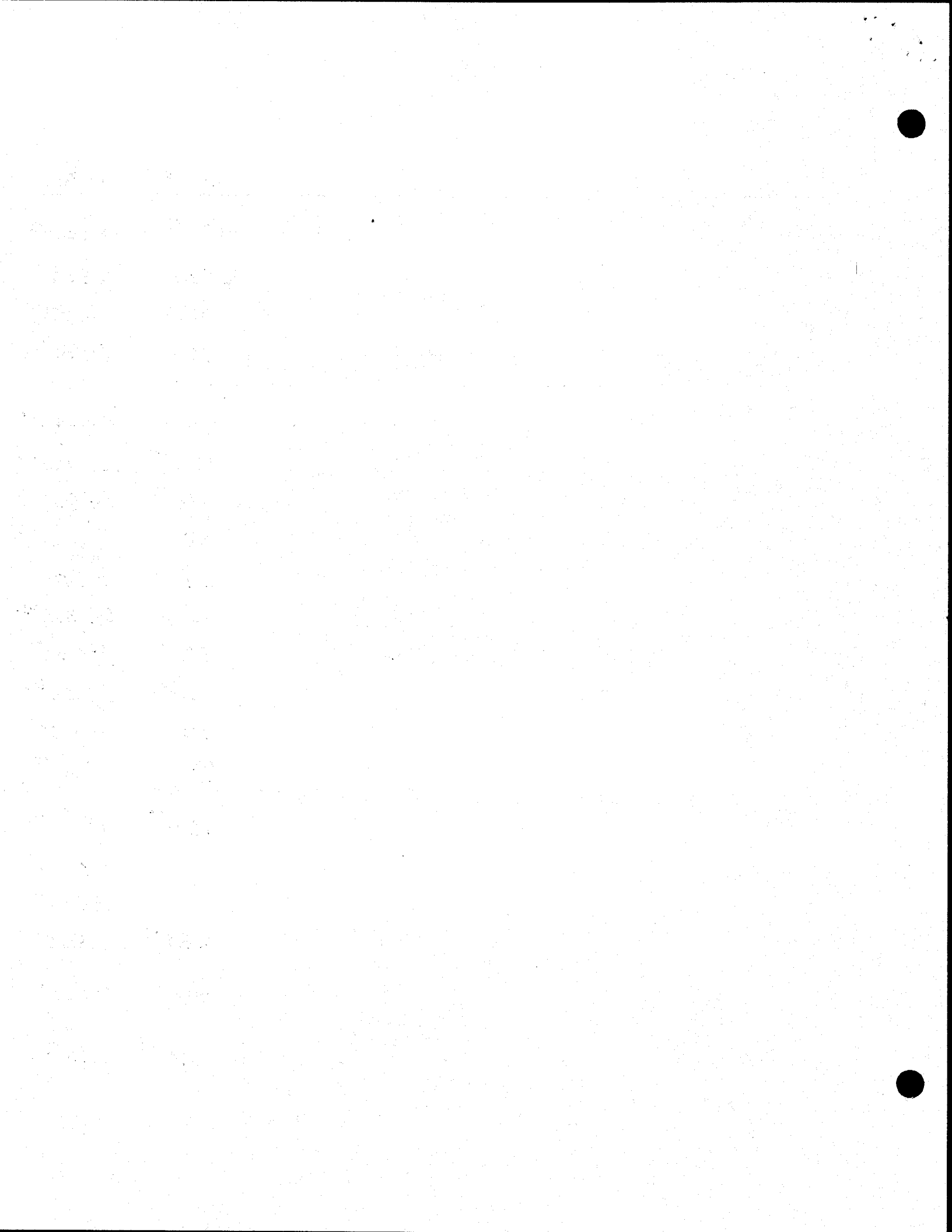
For the Construction of **Day Creek Channel, Stage 6 Phase 2**, located in the city of Jurupa Valley, Riverside County, consisting of the following estimated quantities:

SECT. NO.	ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
10	1.	Mobilization	L.S.	---	---	58,000 ⁰⁰
11	2.	Water Control	L.S.	---	---	70,000 ⁰⁰
12	3.	Traffic Control	L.S.	---	---	44,000 ⁰⁰
13	4.	Clearing and Miscellaneous Work	L.S.	---	---	140,000 ⁰⁰
14	5.	Excavation	C.Y.	35,464	5 ⁰⁰	177,320 ⁰⁰
14	6.	Rock Channel Excavation	C.Y.	14,257	9 ⁰⁰	128,313 ⁰⁰
14	7.	Backfill	C.Y.	24,878	4 ⁵⁰	111,951 ⁰⁰
14	8.	Slurry Cement Backfill	C.Y.	104	185 ⁰⁰	19,240 ⁰⁰
14	9.	Filter Material	C.Y.	4,224	42 ⁰⁰	177,408 ⁰⁰
15	10.	Trench Safety System and Falsework	L.S.	---	---	6,000 ⁰⁰
16	11.	Class "A" Concrete, Reinforced Concrete Box	C.Y.	270	500 ⁰⁰	135,000 ⁰⁰
16	12.	Class "A" Concrete, L-Wall and Access Ramp	C.Y.	5,895	260 ⁰⁰	1,532,700 ⁰⁰
16	13.	Class "A" Concrete, Transition	C.Y.	100	535 ⁰⁰	53,500 ⁰⁰
16	14.	Class "A" Concrete, Retaining Wall	C.Y.	229	625 ⁰⁰	143,125 ⁰⁰
16	15.	Class "A" Concrete, Minor Structures	C.Y.	17	2000 ⁰⁰	34,000 ⁰⁰
16	16.	Class "A" Concrete, Channel Invert	C.Y.	1,138	165 ⁰⁰	187,770 ⁰⁰
16	17.	Class "B" Concrete, 10' Cutoff Wall	C.Y.	33	750 ⁰⁰	24,750 ⁰⁰
16	18.	Class "B" Concrete, 7' Cutoff Wall	C.Y.	17	1400 ⁰⁰	23,800 ⁰⁰



PROPOSAL contd.

SECT. NO.	ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
16	19.	Class "B" Concrete, Miscellaneous	C.Y.	24	1,200 ⁰⁰	28,800 ⁰⁰
16	20.	Class "B" Concrete, Concreted Rock	C.Y.	189	100 ⁰⁰	18,900 ⁰⁰
16	21.	Junction Structure No. 1	EACH	1	2,500 ⁰⁰	2,500 ⁰⁰
16	22.	Reinforcing Steel, Grade 60	LBS.	1,007,559	85 [¢]	856,425 ¹⁵
17	23.	18" Reinforced Concrete Pipe	L.F.	135	70 ⁰⁰	9,450 ⁰⁰
17	24.	48" Reinforced Concrete Pipe	L.F.	8	150 ⁰⁰	1,200 ⁰⁰
19	25.	Aggregate Base, Class 2	C.Y.	834	70 ⁰⁰	58,380 ⁰⁰
19	26.	Asphalt Concrete, Type "B"	TONS	216	120 ⁰⁰	25,920 ⁰⁰
20	27.	6-Foot Chain Link Fence	L.F.	363	40 ⁰⁰	14,520 ⁰⁰
20	28.	Chain Link Railing Type 7	L.F.	92	85 ⁰⁰	7,820 ⁰⁰
20	29.	Temporary Fencing	L.F.	220	17 ⁰⁰	3,740 ⁰⁰
20	30.	3-Foot Cable Railing	L.F.	5,345	12 ⁵⁰	66,812 ⁵⁰
20	31.	14-Foot Double Drive Gates	EACH	3	1,350 ⁰⁰	4,050 ⁰⁰
21	32.	Miscellaneous Iron and Steel	LBS.	2,009	2 ⁵⁰	5,022 ⁵⁰
21	33.	Subdrain	L.F.	2,712	15 ⁰⁰	40,680 ⁰⁰
21	34.	Adjust Valve to Grade	EACH	2	400 ⁰⁰	800 ⁰⁰
21	35.	Wood Post Metal Beam Guard Railing	L.F.	13	100 ⁰⁰	1,300 ⁰⁰
21	36.	Bioretention Facility	L.S.	---	---	48,000 ⁰⁰
21	37.	Sampling Station	L.S.	---	---	5,500 ⁰⁰
21	38.	Staff Gauge	EACH	10	250 ⁰⁰	2,500 ⁰⁰
21	39.	Swift Water Rescue Anchoring Devices	EACH	12	400 ⁰⁰	4,800 ⁰⁰
21	40.	Reflectorized Raised Pavement Marker ("Blue Dot")	EACH	6	20 ⁰⁰	120 ⁰⁰



PROPOSAL contd.

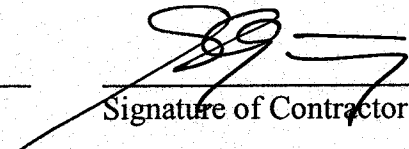
SECT. NO.	ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
26	41.	Rock Slope Protection, 1-Ton Class	C.Y.	12,588	33 ⁰⁰	415,404 ⁰⁰
26	42.	Filter Blanket, No. 2 Backing	C.Y.	2,961	41 ⁰⁰	121,401 ⁰⁰
26	43.	Rock Slope Protection Fabric	S.Y.	10,076	5 ⁰⁰	50,380 ⁰⁰
26	44.	Grouted Low Flow Channel	C.Y.	605	155 ⁰⁰	93,775 ⁰⁰
27	45.	Dust Abatement	L.S.	---	---	34,000 ⁰⁰
28	46.	Hydroseeding	ACRE	0.2	10,000 ⁰⁰	2,000 ⁰⁰
29	47.	Stormwater and Non-Stormwater Pollution Control	L.S.	---	---	60,000 ⁰⁰
29	48.	Non-Stormwater Discharge or Dewatering	L.S.	---	---	45,000 ⁰⁰
31	49.	Relocate 8-Inch Waterline	L.S.	---	---	42,000 ⁰⁰
					TOTAL	5,138,077. ¹⁵

KIP, Incorporated
Name of Company

25740 Washington Avenue
Address

Murrieta, CA 92562
City, State, Zip

(951) 698-7890 (951) 698-7898
Telephone Number Fax Number

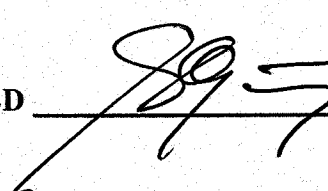


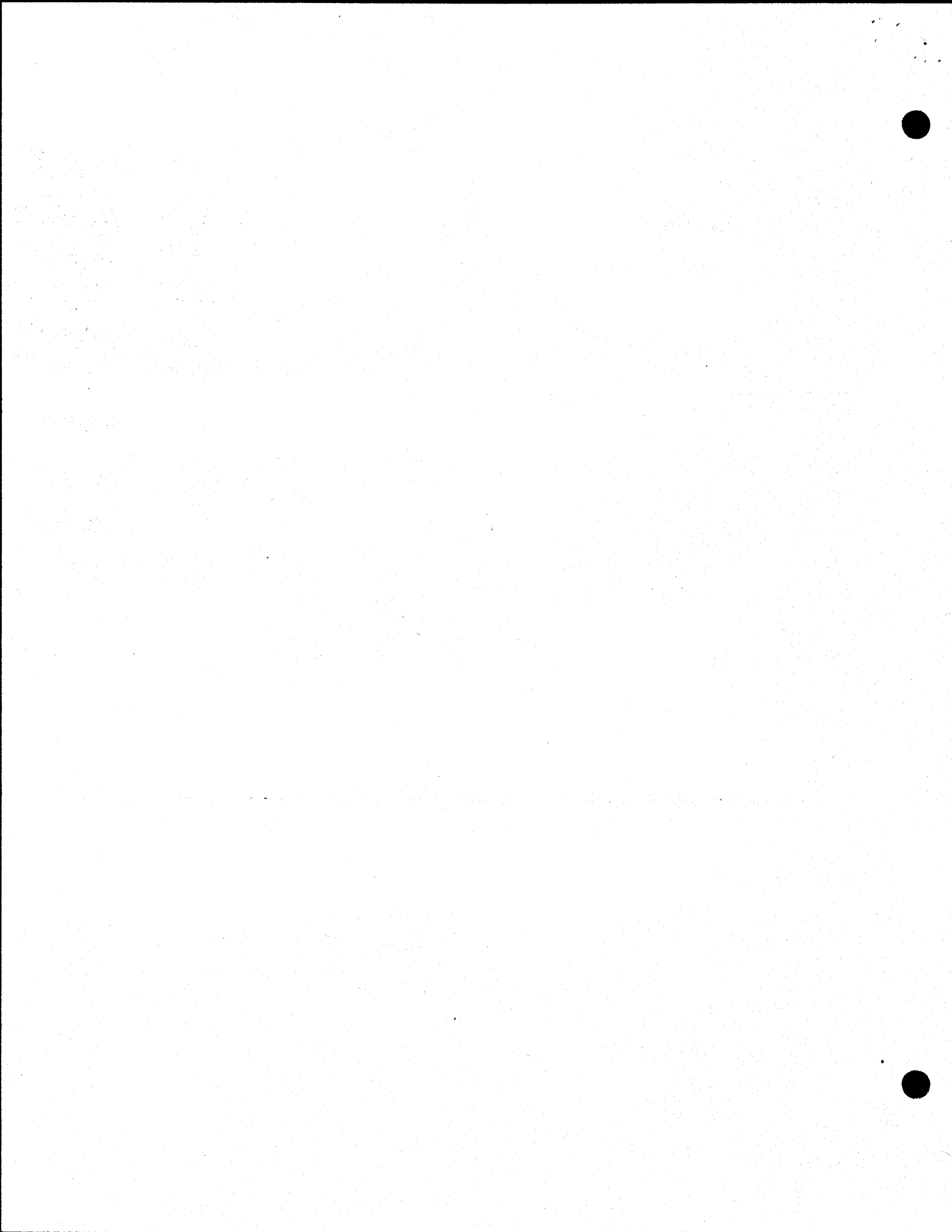
Signature of Contractor

94-2419547
S.S.N. or E.I.N.

344224 A
Contractor's License No. and Classification

ADDENDUM NO. 1 ACKNOWLEDGED _____





LIST OF SUBCONTRACTORS

Contractor KIP, Incorporated

Day Creek Channel, Stage 6 Phase 2
1-0-00250-06

Give the name and the location of the place of business of each Subcontractor who will perform work or labor or render service to the General Contractor in or about the construction of the work or improvement, or a Subcontractor who specially fabricates and installs a portion of the work or improvement, in an amount in excess of one-half (1/2) of one percent (1%) of the General Contractor's total bid. List the bid item numbers of the work each subcontractor will do. If a portion of an item is to be subcontracted, show what percentage of that item is to be subcontracted.

Item No. (s) 17, 18, 22

Name of Subcontractor Amber Steel

Address/City/Phone 312 South Willow Ave Realto Ca 909-874-2213

License No. 268566 C-50

Item No. (s) 27, 28, 29, 30, 31, 35

Name of Subcontractor Area West Fence Company

Address/City/Phone 12566 Vigilante Rd Lake Side 888-568-8919

License No. 737398

Item No. (s) _____

Name of Subcontractor _____

Address/City/Phone _____

License No. _____

Item No. (s) _____

Name of Subcontractor _____

Address/City/Phone _____

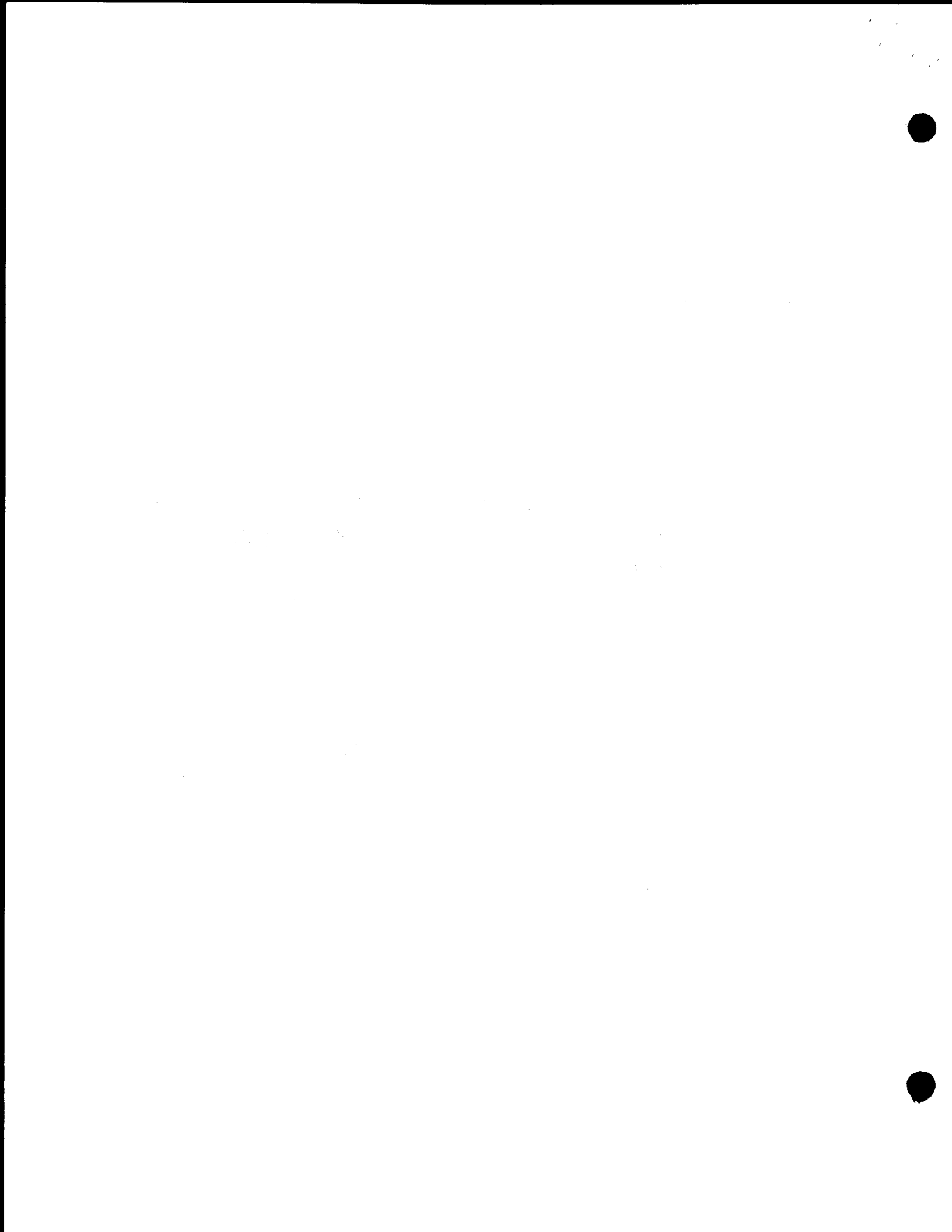
License No. _____

Item No. (s) _____

Name of Subcontractor _____

Address/City/Phone _____

License No. _____



EXPERIENCE STATEMENT

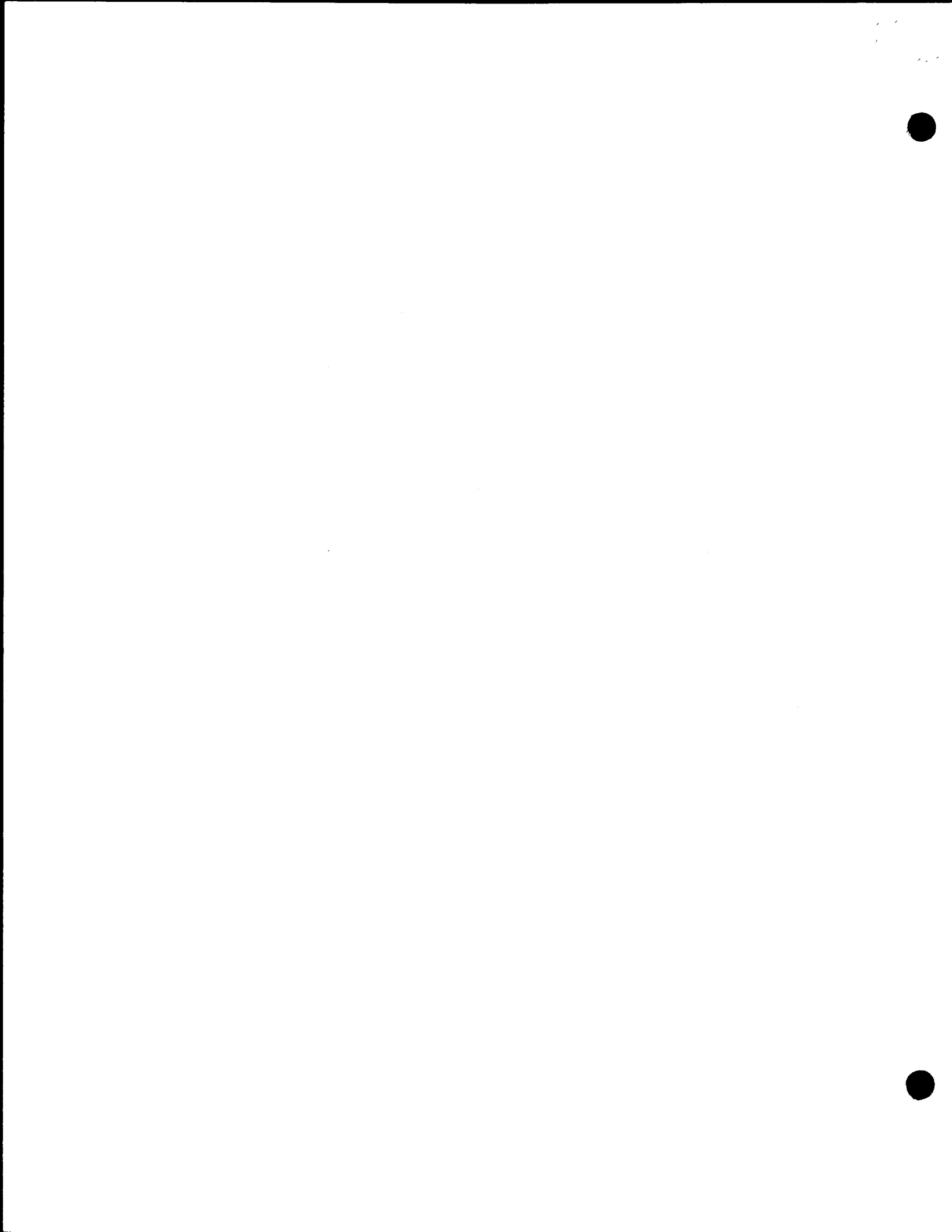
Bidder submits, as part of his bid, the following statements as to his experience qualifications. Bidder certifies that all statements and information set forth below are true and accurate. Bidder hereby authorizes the District to make inquiry as appropriate regarding his experience.

Bidder has been engaged in the contracting business under this present business name for 34 years.

Bidder's experience in work of a nature similar in type and magnitude to that set forth in the Specification extends over a period of 34 years.

Within the last three years, Bidder has satisfactorily completed the following contracts covering work similar in type and magnitude to that set forth in these Specifications for the following owners (name person, firms, or authorities):

Name and Address of Owner/Agency	Representative and Telephone	Type of Work, Year Completed and Dollar Amount
Coachella Vly Water District, PO Box 1058 Coachella, CA 92236	Tessfaye Demissie (760) 398-2661	Installation of Concrete Slope Paving May 2011 \$2,500,850.00
RCFC & WCD 1995 Market St. Riverside, CA 92501	Henry Olivo (951) 955-1288	Constructo Storm Drain February 2011 \$2,638,605.00
City of Indio 100 Civic Center Mall, Indio, CA 92221	Tom Rafferty (760) 391-4017	Waterline Installation and Relocation & Slope Paving August 2009 \$2,900,000.00




STATEMENT OF LICENSURE

Pursuant to California Public Contract Code §3300, the undersigned does certify as follows:

1. That the pocket license/certificate of licensure I have presented to owner as of this date is my own license, being State of California, Contractors License No. 344224; and
2. That said Contractors License is current and valid; and
3. That said Contractors License is of a classification appropriate to the work to be undertaken for owner, a Class A license.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

DATED: January 9, 2012



 Signature Greg D. Quiring

 President

 Title

STATE OF CALIFORNIA) §
COUNTY OF RIVERSIDE)

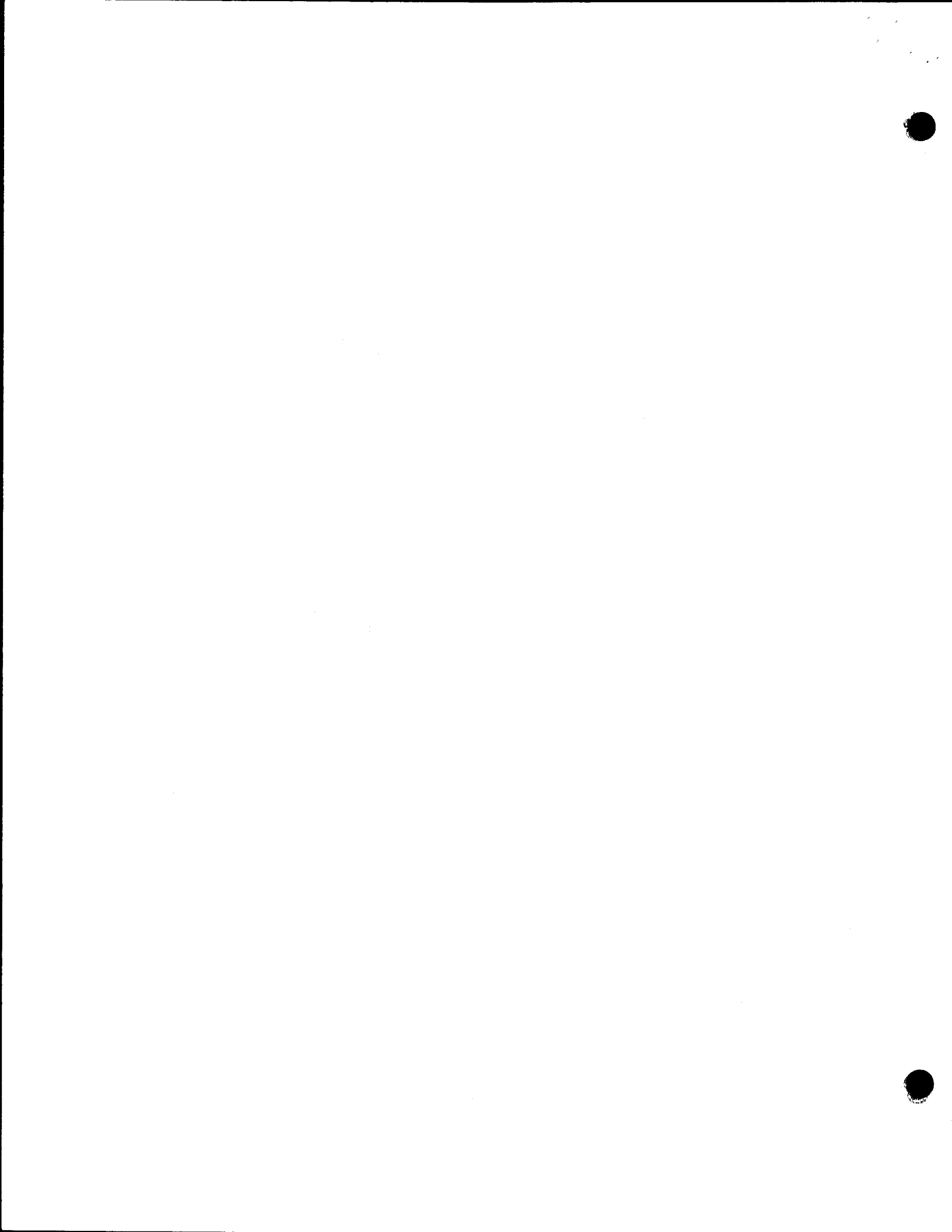
On this the _____ day of _____, 20____, before me

_____ the undersigned Notary Public, personally appeared

- personally known to me
- proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that he/she executed it.

WITNESS my hand and official seal. See Notary Acknowledgement Attached

Notary's Signature



ACKNOWLEDGMENT

State of California
County of Riverside)

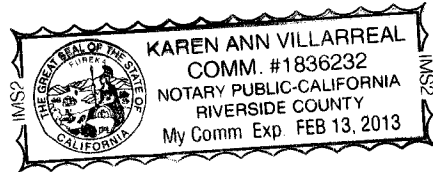
On January 18, 2012 before me, Karen Ann Villarreal, Notary Public
(insert name and title of the officer)

personally appeared Greg D. Quiring, President,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~
subscribed to the within instrument and acknowledged to me that he/~~she~~/~~they~~ executed the same in
his/~~her~~/~~their~~ authorized capacity(~~ies~~), and that by his/~~her~~/~~their~~ signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Signature *Karen Ann Villarreal* (Seal)





NOT APPLICABLE

AFFIDAVIT FOR INDIVIDUAL CONTRACTORS

STATE OF CALIFORNIA) §
COUNTY OF RIVERSIDE)

_____, being first duly sworn, deposes and says:

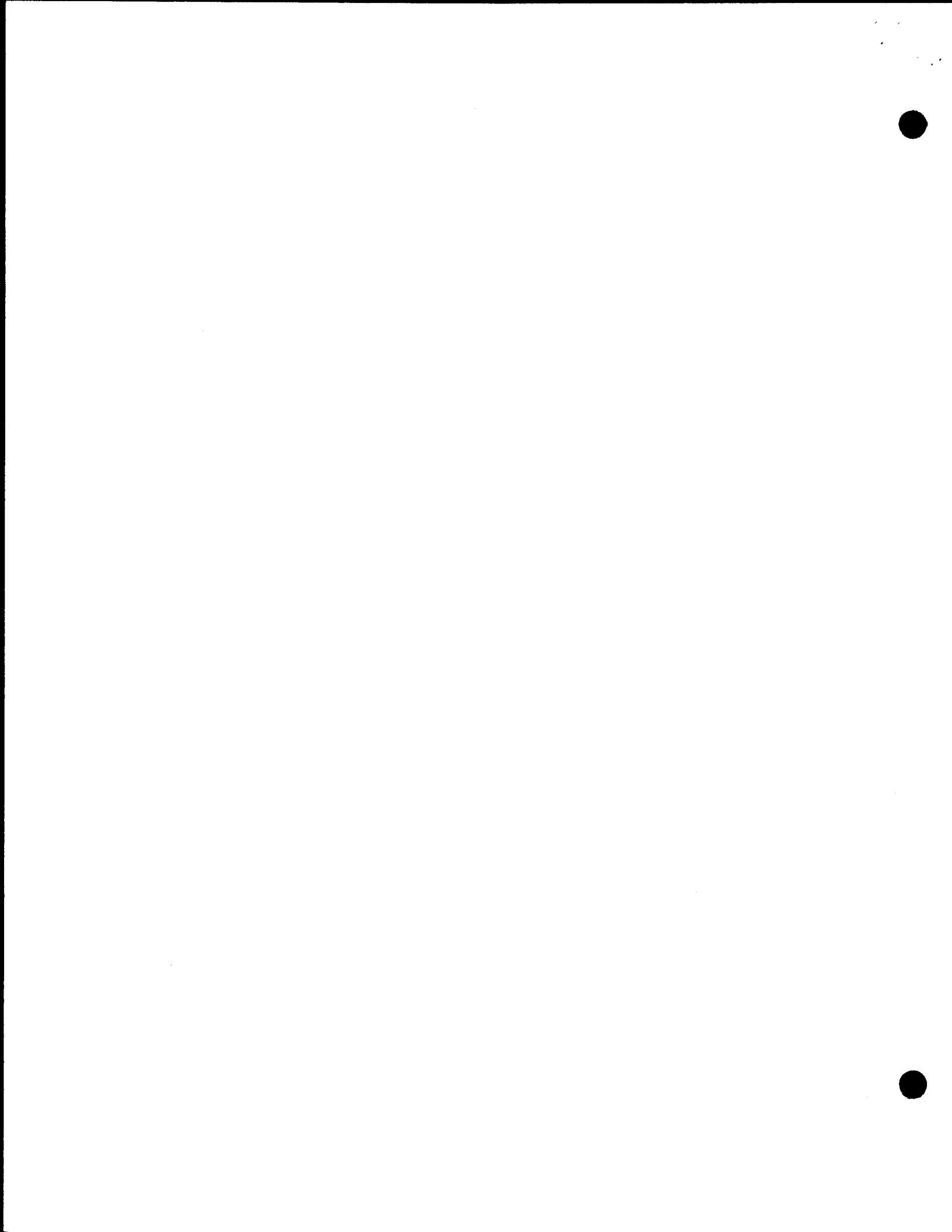
That he or she is the party making the foregoing proposal or bid; that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the Riverside County Flood Control and Water Conservation District or anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

His or Her signature

Subscribed and sworn to before me

this _____ day of _____, 20____.

Signature and stamp of Notary
administering oath



AFFIDAVIT FOR JOINT VENTURE OR COPARTNERSHIP CONTRACTOR

STATE OF CALIFORNIA) §
COUNTY OF RIVERSIDE)

_____, being first duly sworn, deposes and says:

That he or she is a member of the joint venture or copartnership firm designated as

which is the party making the foregoing proposal or bid; that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the Riverside County Flood Control and Water Conservation District or anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

That he has been and is duly vested with authority to make and sign instruments for the joint venture or copartnership by

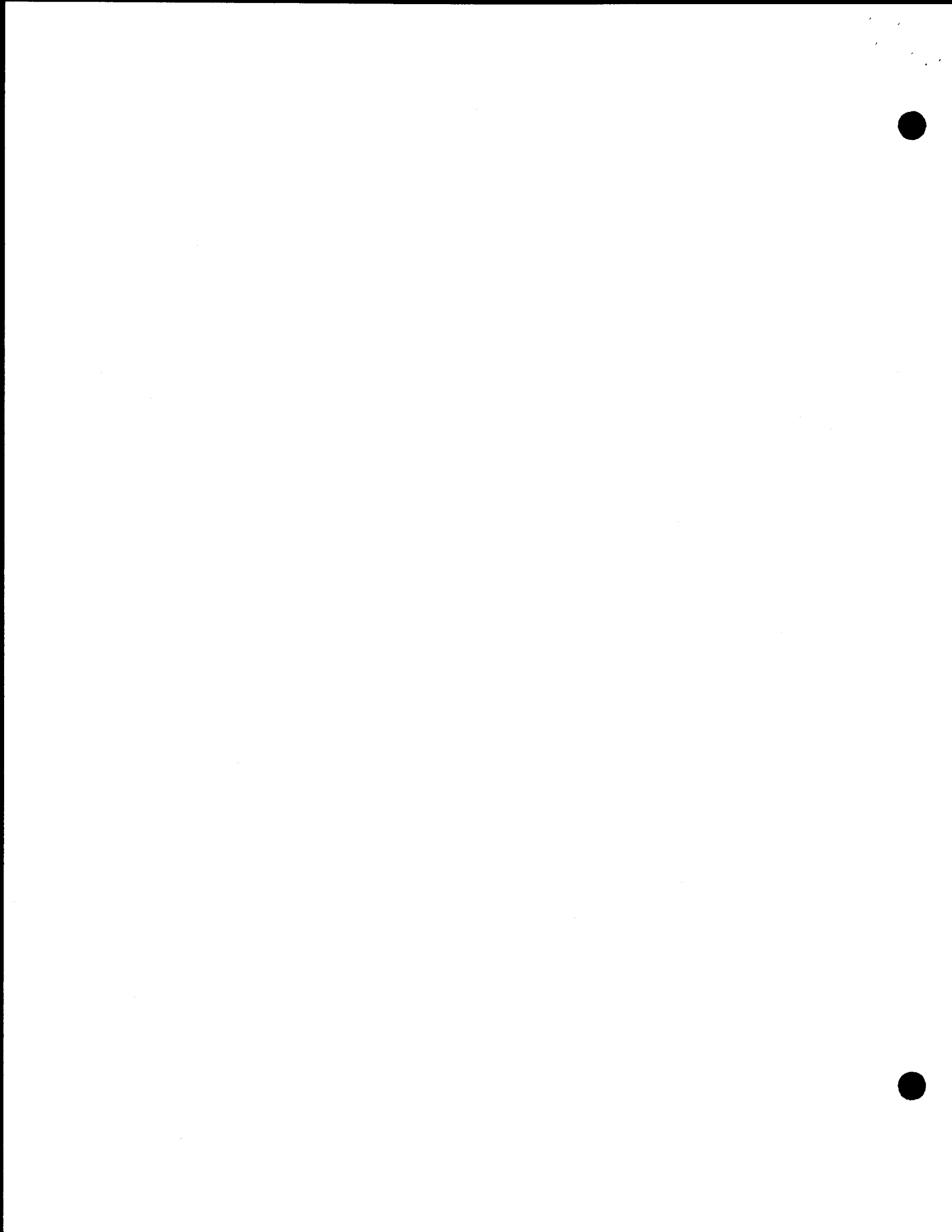
_____ who constitute the other members of the joint venture or copartnership.

His or Her signature

Subscribed and sworn to before me

this _____ day of _____, 20____

Signature and stamp of Notary
administering oath



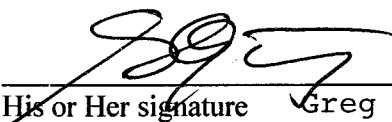
AFFIDAVIT FOR CORPORATE CONTRACTOR

STATE OF CALIFORNIA) §
COUNTY OF RIVERSIDE)

Greg D. Quiring, being first duly sworn, deposes and says:

That he ~~or she~~ is President
of KIP, Incorporated

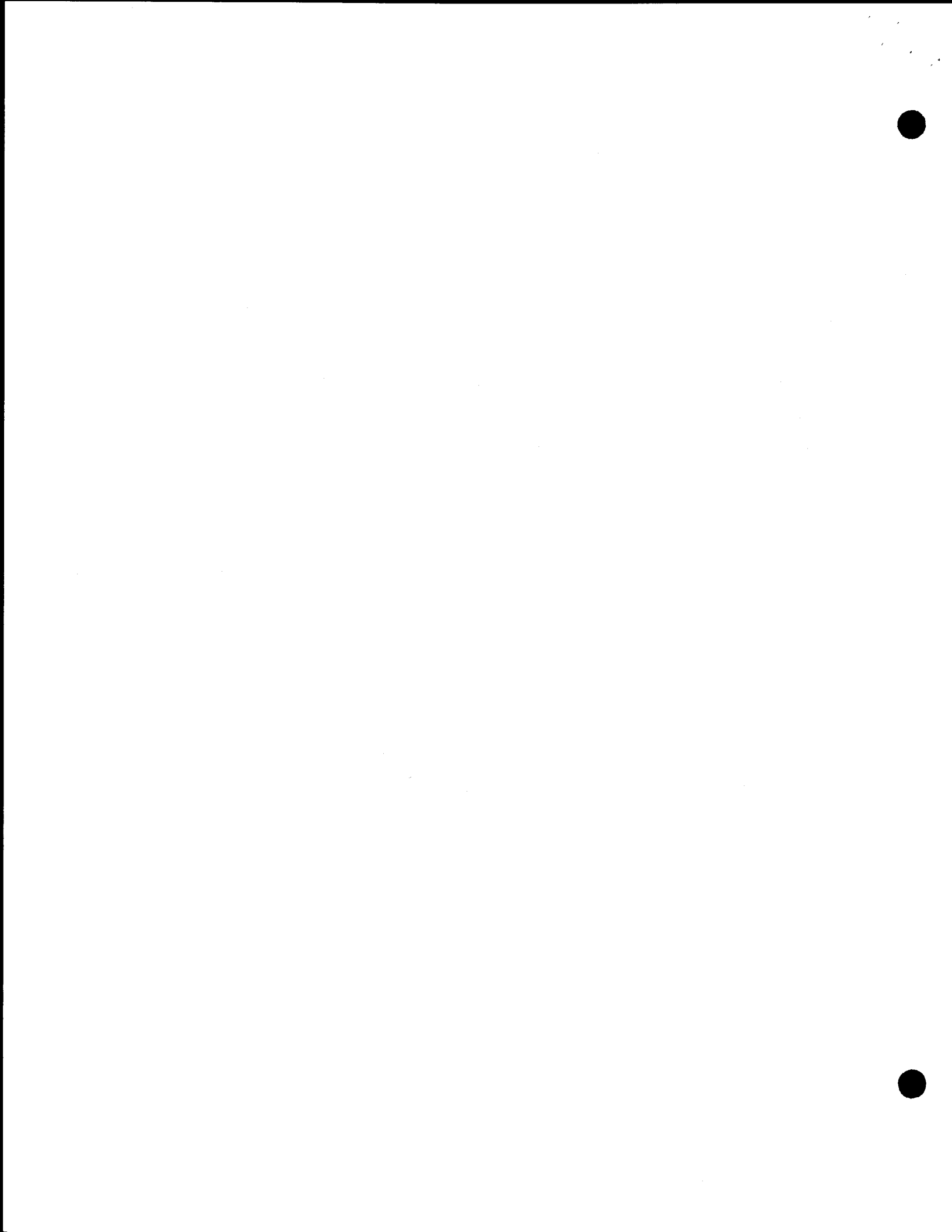
a corporation which is the party making the foregoing proposal or bid; that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the Riverside County Flood Control and Water Conservation District or anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.


His or Her signature Greg D. Quiring, President

Subscribed and sworn to before me this _____ day of _____, 20____.

See Acknowledgement
Attached

Signature and stamp of Notary administering oath



ACKNOWLEDGMENT

State of California
County of Riverside)

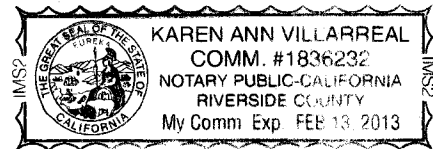
On January 18, 2012 before me, Karen Ann Villarreal, Notary Public
(insert name and title of the officer)

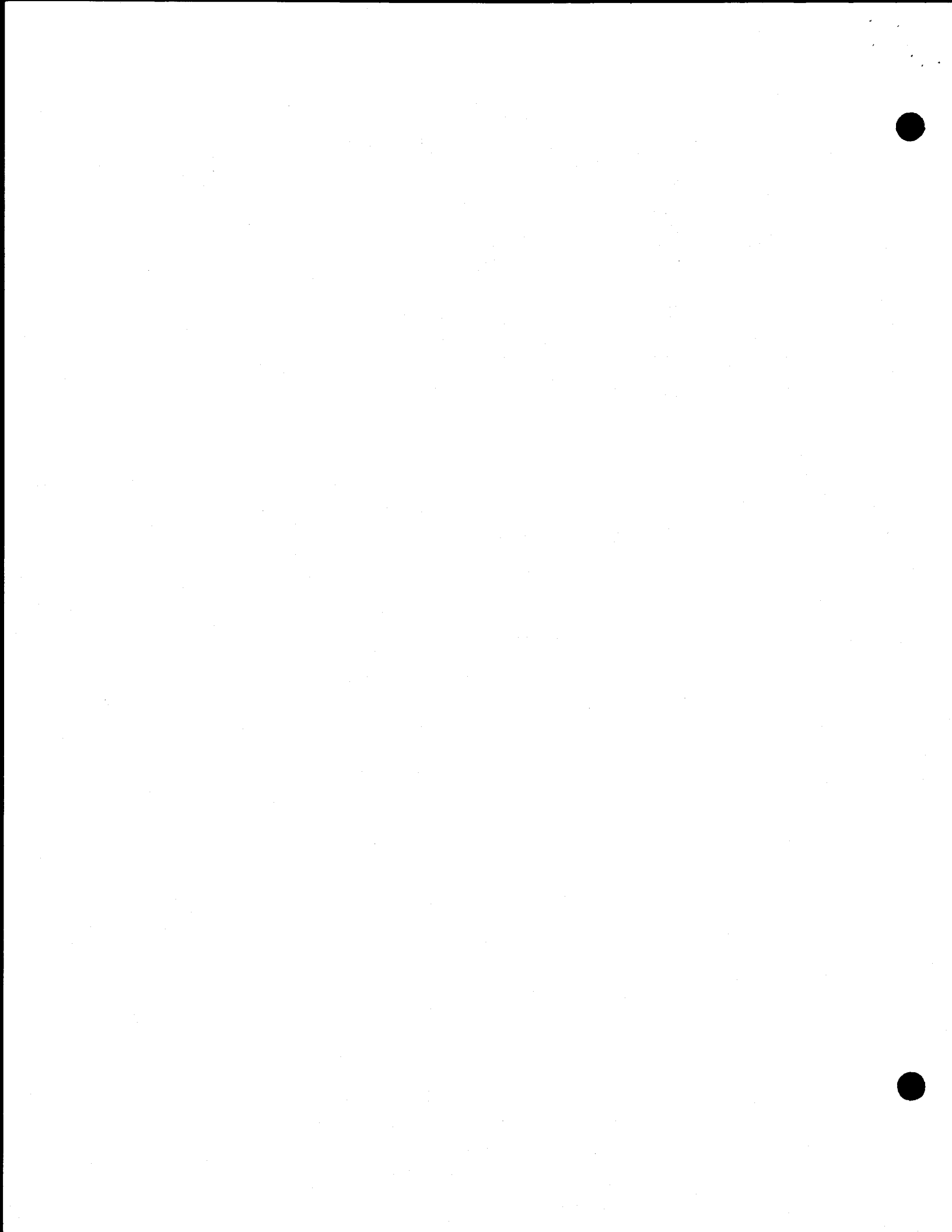
personally appeared Greg D. Quiring, President
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~
subscribed to the within instrument and acknowledged to me that he/~~she~~/~~they~~ executed the same in
his/~~her~~/~~their~~ authorized capacity(~~ies~~), and that by his/~~her~~/~~their~~ signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Signature *Karen Ann Villarreal* (Seal)





BID BOND

Recitals:

1. KIP, Incorporated (Contractor), has submitted its Contractor's Proposal to the Riverside County Flood Control and Water Conservation District, (District), for the construction of public work for Day Creek Channel, Stage 6 Phase 2 in accordance with a Notice to Contractors dated December 20, 2011.

2. First National Insurance Company of America a Washington corporation, hereafter called (Surety), is the surety on this Bond.

Agreement: We, Contractor as principal and Surety as surety, jointly and severally agree and state as follows:

1. The amount of the obligation of this Bond is 10% of the amount of the Contractor's Proposal and inures to the benefit of District.

2. This Bond is exonerated by (1) District rejecting said Proposal or, in the alternate, (2) if said Proposal is accepted, Contractor executes the Agreement and furnishes the Bonds and Insurance as agreed to in its Proposal, otherwise it remains in full force and effect for the recovery of loss, damage and expense of District resulting from failure of Contractor to act as agreed to in its Proposal. Some types of possible loss, damage and expense are specified in the Contractor's Proposal.

3. Surety for value received, stipulates and agrees that its obligations hereunder shall in no way be impaired or affected by any extension of time within which District may accept the Proposal and waives notice of any such extension.

4. This Bond is binding on our heirs, executors, administrators, successors and assigns.

Dated: January 6, 2012

First National Insurance Company of America KIP, Incorporated

By [Signature]

By [Signature]

Robert W. Lagler

Greg D. Quiring

(Printed Name)

(Printed Name)

Title Attorney-In-Fact

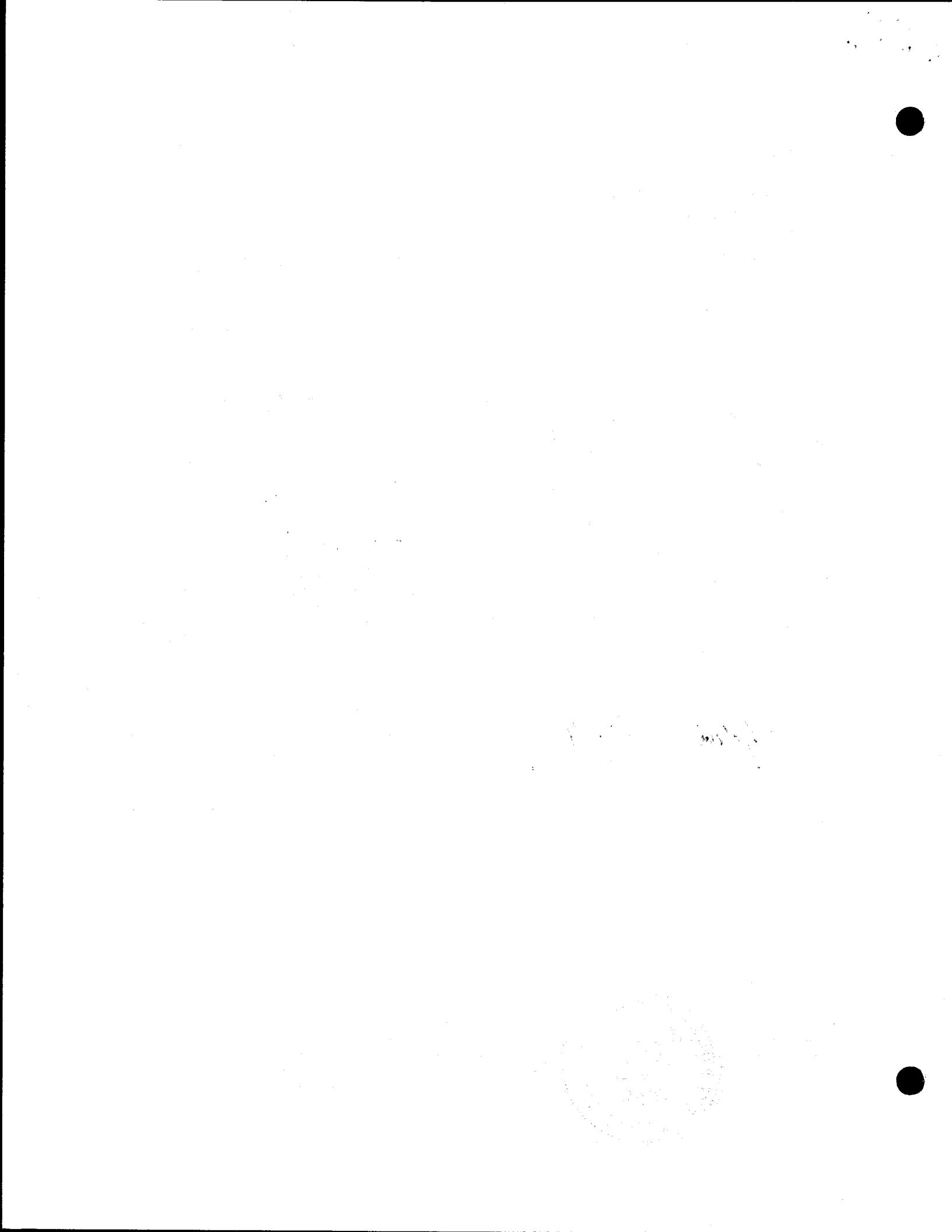
Title President

(Surety)

(Contractor)

NOTARY ACKNOWLEDGEMENT REQUIRED FOR EACH SIGNATURE PLEASE ATTACH SEPARATE FORM

NOTARY ACKNOWLEDGEMENT REQUIRED FOR EACH SIGNATURE PLEASE ATTACH SEPARATE FORM



ACKNOWLEDGMENT

State of California
County of Riverside)

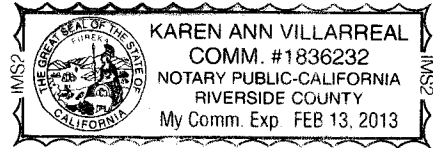
On January 18, 2012 before me, Karen Ann Villarreal, Notary Public
(insert name and title of the officer)

personally appeared Greg D. Quiring, President,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Signature Karen Ann Villarreal (Seal)





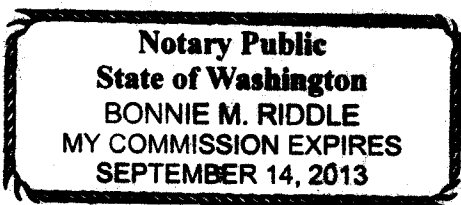
CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF ~~CALIFORNIA~~ Washington

County of Clark }

On 01/06/2012 before me, Bonnie M. Riddle, a Notary Public,
Date Here Insert Name and Title of the Officer

personally appeared Robert W. Lagler
Name(s) of Signer(s)



Place Notary Seal Above

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and official seal.

Signature [Handwritten Signature]
Signature of Notary Public Bonnie M. Riddle

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

Signer Is Representing: _____

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

Signer Is Representing: _____

Notary Public
State of Washington
SUSAN M. RIDDLE
MY COMMISSION EXPIRES
SEPTEMBER 14, 2013

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

FIRST NATIONAL INSURANCE COMPANY OF AMERICA
SEATTLE, WASHINGTON
POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS: That First National Insurance Company of America (the "Company"), a Washington stock insurance company, pursuant to and by authority of the By-law and Authorization hereinafter set forth, does hereby name, constitute and appoint. **ROBERT W. LAGLER, BONNIE RIDDLE, ANNA E. FRESE, ALL OF THE CITY OF VANCOUVER, STATE OF WASHINGTON**

each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations in the penal sum not exceeding **FIFTY MILLION AND 00/100***** DOLLARS (\$ 50,000,000.00*****)** each, and the execution of such undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents, shall be as binding upon the Company as if they had been duly signed by the president and attested by the secretary of the Company in their own proper persons.

That this power is made and executed pursuant to and by authority of the following By-law and Authorization:

ARTICLE IV - Execution of Contracts: Section 12. Surety Bonds and Undertakings.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitations as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the president and attested by the secretary.

By the following instrument the chairman or the president has authorized the officer or other official named therein to appoint attorneys-in-fact:

Pursuant to Article IV, Section 12 of the By-laws, Garnet W. Elliott, Assistant Secretary of First National Insurance Company of America, is authorized to appoint such attorneys-in-fact as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

That the By-law and the Authorization set forth above are true copies thereof and are now in full force and effect.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Company and the corporate seal of First National Insurance Company of America has been affixed thereto in Plymouth Meeting, Pennsylvania this 13th day of October, 2010.



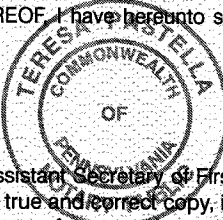
FIRST NATIONAL INSURANCE COMPANY OF AMERICA

By Garnet W. Elliott
Garnet W. Elliott, Assistant Secretary

COMMONWEALTH OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 13th day of October, 2010, before me, a Notary Public, personally came Garnet W. Elliott, to me known, and acknowledged that he is an Assistant Secretary of First National Insurance Company of America; that he knows the seal of said corporation; and that he executed the above Power of Attorney and affixed the corporate seal of First National Insurance Company of America thereto with the authority and at the direction of said corporation.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires Mar. 28, 2013
Member, Pennsylvania Association of Notaries

By Teresa Pastella
Teresa Pastella, Notary Public

CERTIFICATE

I, the undersigned, Assistant Secretary of First National Insurance Company of America, do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy, is in full force and effect on the date of this certificate; and I do further certify that the officer or official who executed the said power of attorney is an Assistant Secretary specially authorized by the chairman or the president to appoint attorneys-in-fact as provided in Article IV, Section 12 of the By-laws of First National Insurance Company of America.

This certificate and the above power of attorney may be signed by facsimile or mechanically reproduced signatures under and by authority of the following vote of the board of directors of First National Insurance Company of America at a meeting duly called and held on the 18th day of September, 2009.

VOTED that the facsimile or mechanically reproduced signature of any assistant secretary of the company, wherever appearing upon a certified copy of any power of attorney issued by the company in connection with surety bonds, shall be valid and binding upon the company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the said company, this 10th day of

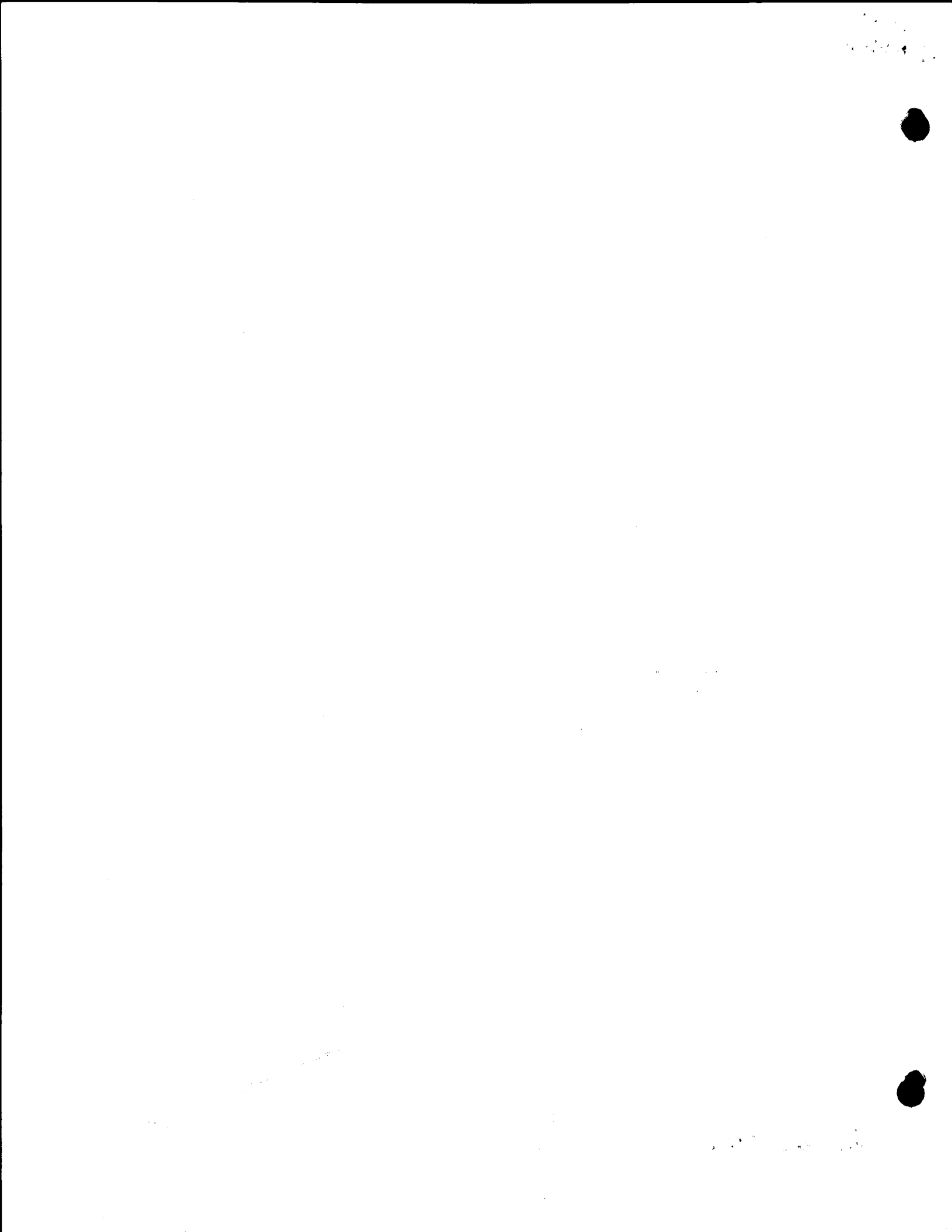
January, 2012



By David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.



AGREEMENT

THIS AGREEMENT is made as of March 13, 2012 and is between RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT (District) and KIP, INCORPORATED (Contractor).

IT IS AGREED BY THE PARTIES AS FOLLOWS:

1. The Work. Contractor shall furnish all tools, equipment, apparatus, facilities, labor and material necessary to perform the work for **Project No. 1-0-00250-06, Day Creek Channel, Stage 6 Phase 2** of District, in exact conformity with the Contract Documents (identified below) for the Project, subject to such inspection as District deems appropriate and pursuant to orders and instructions, drawings, etc., issued by District in accordance with the Contract Documents.

2. Contract Documents. The Contract Documents for **Project No. 1-0-00250-06, Day Creek Channel, Stage 6 Phase 2** of District are: (a) Notice to Contractors; (b) Instructions To Bidders; (c) Contractor's Proposal; (d) Agreement; (e) General Provisions; (f) Special Provisions; (g) Detailed Specifications; (h) Plans; (i) Bid Bond; (j) Performance Bond; (k) Payment Bond; (l) Appendices and any other documents included in or incorporated into the contract documents; (m) Orders, Instructions, Drawings and Plans issued by District during the course of the work in accordance with the provisions of the Contract Documents.

Each of the above-mentioned documents presently in existence are by this reference incorporated herein and each of said documents not now in existence are incorporated herein as of the time of their issuance.

The Bid Bond is exonerated upon execution and delivery to District in a form satisfactory to District, of the following, duly executed by Contractor and also by its Surety as to the Bonds, Agreement, Certificate of Insurance, Payment Bond, and Performance Bond.

3. Bonds - Insurance. Prior to commencement of the work, Contractor must deliver to District and District must approve, a fully executed Performance Bond in the amount of 100% of the estimated contract price, a fully executed Payment Bond in the amount of 100% of the estimated contract price, and fully executed certificates of insurance evidencing the existence of the insurance required by Subsection 8.02 of the General Provisions. The Payment Bond and Performance Bond must be on forms furnished by District.

Should any surety on the Payment Bond or Performance Bond be deemed unsatisfactory by the Board of Supervisors of District, Contractor shall upon notice promptly substitute new Bonds in form satisfactory to District.



4. Contract Price - Payment. Attached hereto, marked Exhibit A and by this reference made a part hereof, is provision for the Contract Price and its payment.

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

By Maureen Asseley
Chairman of its Board of Supervisors

ATTEST:

KECIA HARPER-IHEM
Clerk of the Board

FORM APPROVED COUNTY COUNSEL
BY: [Signature] 2/22/12
HEAL R. KIPNIS DATE

By [Signature]
Deputy

(Seal)

KIP, Incorporated
Contractor

By [Signature]
Title President

(If corporation affix corporate seal)



EXHIBIT A

(To Agreement for Riverside County Flood Control and Water Conservation District's Project No. 1-0-00250-06, Day Creek Channel, Stage 6 Phase 2, located in the city of Jurupa Valley, Riverside County, California.)

Contract Price - Payment - District shall pay Contractor the following sums for the items set forth below in accordance with Contractor's Proposal as accepted by District, which sums shall be paid as provided in the General Provisions and subject to additions and deductions as provided in the Contract Documents.

It is understood that the quantities listed, except for those shown as "Final" or "Lump Sum" are but estimates only and final payment will be based on actual work performed, subject to such adjustments and alterations as elsewhere provided.

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
1.	Mobilization	L.S.	---	---	\$58,000.00
2.	Water Control	L.S.	---	---	70,000.00
3.	Traffic Control	L.S.	---	---	44,000.00
4.	Clearing and Miscellaneous Work	L.S.	---	---	140,000.00
5.	Excavation	C.Y.	35,464	\$5.00	177,320.00
6.	Rock Channel Excavation	C.Y.	14,257	\$9.00	128,313.00
7.	Backfill	C.Y.	24,878	\$4.50	111,951.00
8.	Slurry Cement Backfill	C.Y.	104	\$185.00	19,240.00
9.	Filter Material	C.Y.	4,224	\$42.00	177,408.00
10.	Trench Safety System and Falsework	L.S.	---	---	6,000.00
11.	Class "A" Concrete, Reinforced Concrete Box	C.Y.	270	\$500.00	135,000.00
12.	Class "A" Concrete, L-Wall and Access Ramp	C.Y.	5,895	\$260.00	1,532,700.00
13.	Class "A" Concrete, Transition	C.Y.	100	\$535.00	53,500.00
14.	Class "A" Concrete, Retaining Wall	C.Y.	229	\$625.00	143,125.00



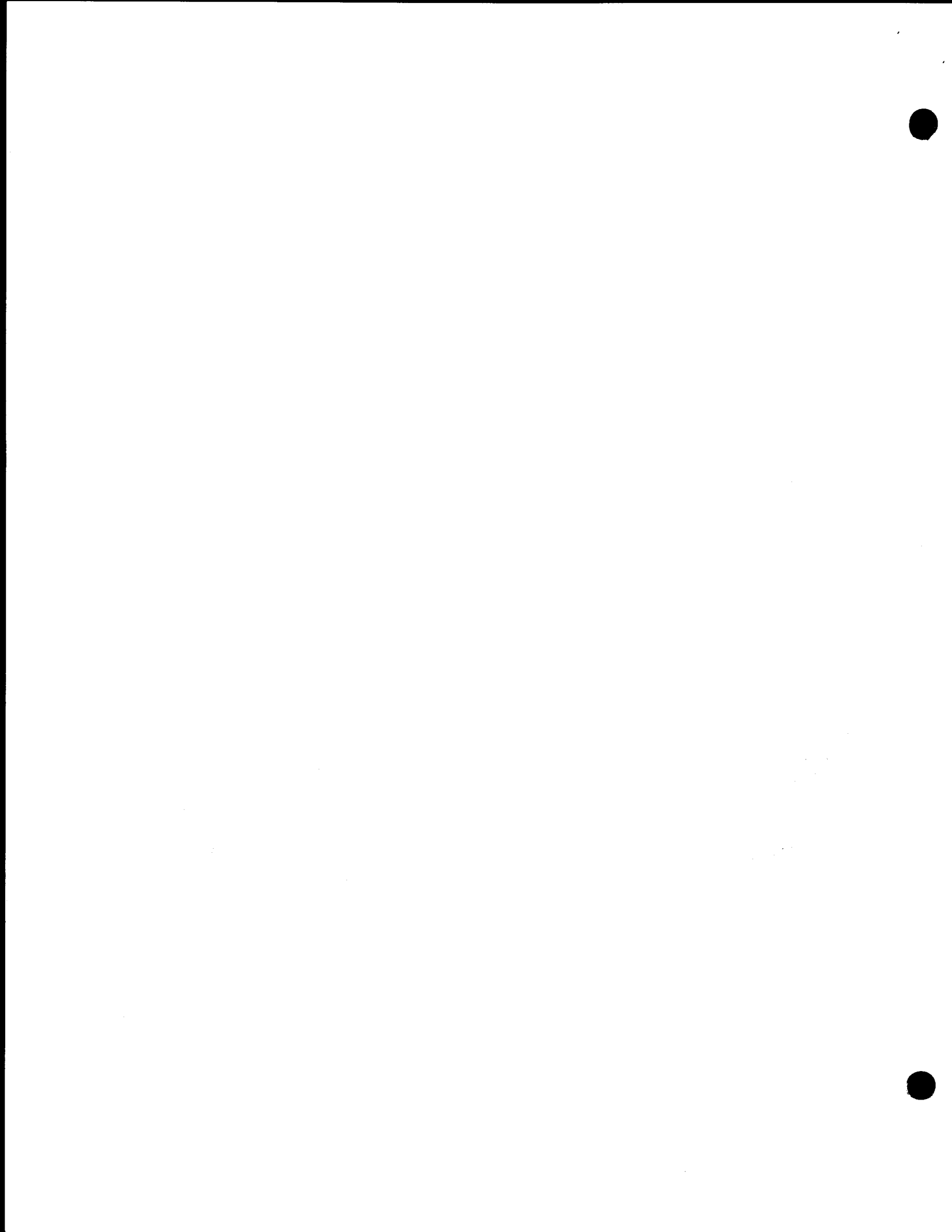
EXHIBIT contd.

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
15.	Class "A" Concrete, Minor Structures	C.Y.	17	\$2,000.00	34,000.00
16.	Class "A" Concrete, Channel Invert	C.Y.	1,138	\$165.00	187,770.00
17.	Class "B" Concrete, 10' Cutoff Wall	C.Y.	33	\$750.00	24,750.00
18.	Class "B" Concrete, 7' Cutoff Wall	C.Y.	17	\$1,400.00	23,800.00
19.	Class "B" Concrete, Miscellaneous	C.Y.	24	\$1,200.00	28,800.00
20.	Class "B" Concrete, Concreted Rock	C.Y.	189	\$100.00	18,900.00
21.	Junction Structure No. 1	EACH	1	\$2,500.00	2,500.00
22.	Reinforcing Steel, Grade 60	LBS.	1,007,559	\$0.85	856,425.15
23.	18" Reinforced Concrete Pipe	L.F.	135	\$70.00	9,450.00
24.	48" Reinforced Concrete Pipe	L.F.	8	\$150.00	1,200.00
25.	Aggregate Base, Class 2	C.Y.	834	\$70.00	58,380.00
26.	Asphalt Concrete, Type "B"	TONS	216	\$120.00	25,920.00
27.	6-Foot Chain Link Fence	L.F.	363	\$40.00	14,520.00
28.	Chain Link Railing Type 7	L.F.	92	\$85.00	7,820.00
29.	Temporary Fencing	L.F.	220	\$17.00	3,740.00
30.	3-Foot Cable Railing	L.F.	5,345	\$12.50	66,812.50
31.	14-Foot Double Drive Gates	EACH	3	\$1,350.00	4,050.00
32.	Miscellaneous Iron and Steel	LBS.	2,009	\$2.50	5,022.50
33.	Subdrain	L.F.	2,712	\$15.00	40,680.00
34.	Adjust Valve to Grade	EACH	2	\$400.00	800.00
35.	Wood Post Metal Beam Guard Railing	L.F.	13	\$100.00	1,300.00



EXHIBIT contd.

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
36.	Bioretention Facility	L.S.	---	---	48,000.00
37.	Sampling Station	L.S.	---	---	5,500.00
38.	Staff Gauge	EACH	10	\$250.00	2,500.00
39.	Swift Water Rescue Anchoring Devices	EACH	12	\$400.00	4,800.00
40.	Reflectorized Raised Pavement Marker ("Blue Dot")	EACH	6	\$20.00	120.00
41.	Rock Slope Protection, 1-Ton Class	C.Y.	12,588	\$33.00	415,404.00
42.	Filter Blanket, No. 2 Backing	C.Y.	2,961	\$41.00	121,401.00
43.	Rock Slope Protection Fabric	S.Y.	10,076	\$5.00	50,380.00
44.	Grouted Low Flow Channel	C.Y.	605	\$155.00	93,775.00
45.	Dust Abatement	L.S.	---	---	34,000.00
46.	Hydroseeding	ACRE	0.2	\$10,000.00	2,000.00
47.	Stormwater and Non-Stormwater Pollution Control	L.S.	---	---	60,000.00
48.	Non-Stormwater and Discharge or Dewatering	L.S.	---	---	45,000.00
49.	Relocate 8-Inch Waterline	L.S.	---	---	42,000.00
				TOTAL	\$5,138,077.15



PERFORMANCE BOND

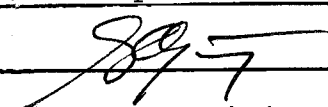
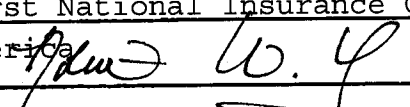
Recitals:

1. KIP, Incorporated _____ (Contractor) has entered into an Agreement dated March 20, 2012 with the Riverside County Flood Control and Water Conservation District (District) for construction of public work known as Project No. 1-0-00250-06, Day Creek Channel, Stage 6 Phase 2.
2. First National Insurance Company of America _____, a Washington corporation (Surety), is the surety under this Bond.

Agreement: We, Contractor as principal, and Surety as surety, jointly and severally agree, state, and are bound unto District, as obligee, as follows:

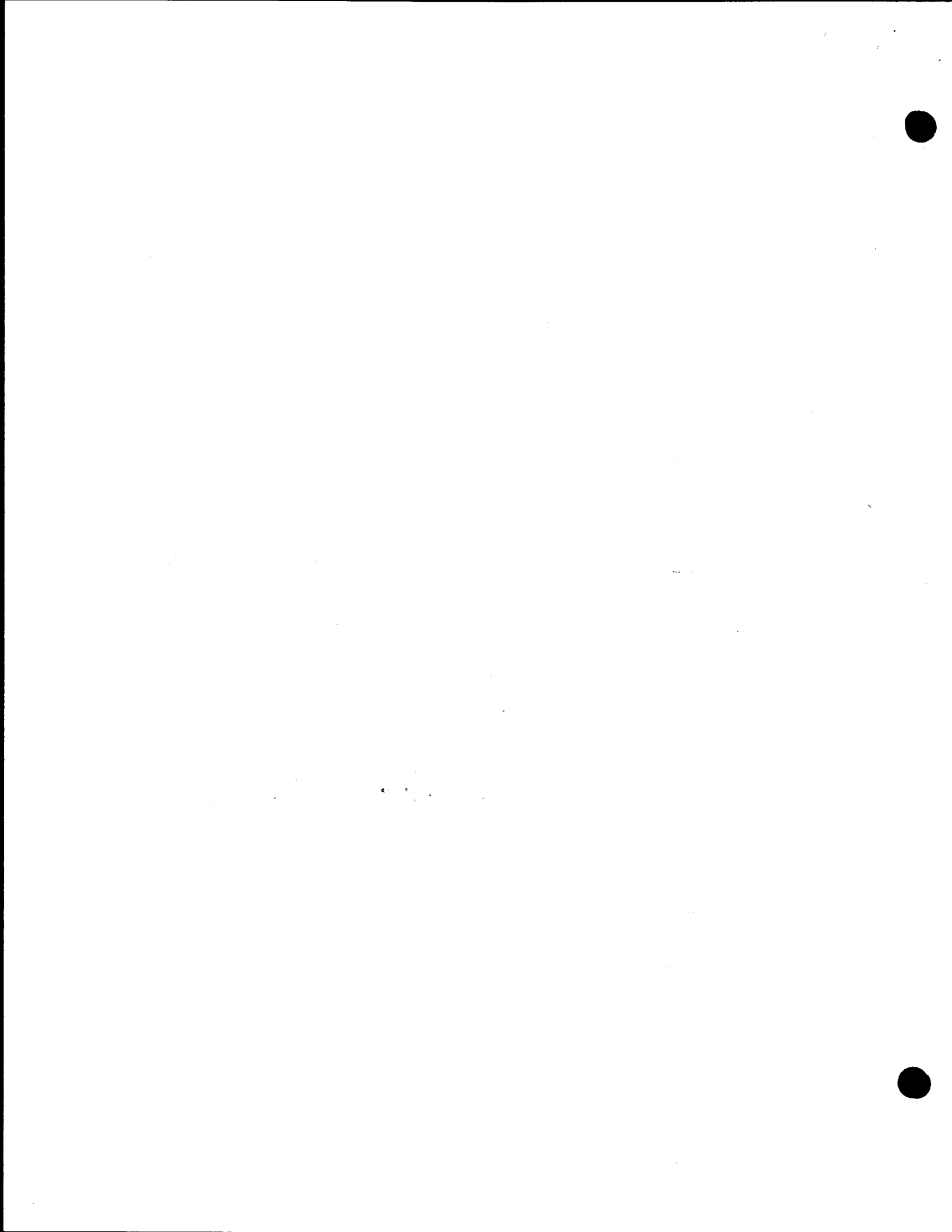
1. The amount of the obligation of this Bond is 100% of the estimated contract price for the Project of \$ 5,138,077.15 and inures to the benefit of District.
2. This Bond is exonerated by Contractor doing all things to be kept and performed by it in strict conformance with the Contract Documents for the Project, otherwise it remains in full force and effect for the recovery of loss, damage and expense of District resulting from failure of Contractor to so act. All of said Contract Documents are incorporated herein.
3. This obligation is binding on our successors and assigns.
4. For value received, Surety stipulates and agrees that no change, time extension, prepayment to Contractor, alteration or addition to the terms and requirements of the Contract Documents or the work to be performed thereunder shall affect its obligations hereunder and waives notice as to such matters, except the total contract price cannot be increased by more than 25% without approval of Surety.

THIS BOND is executed as of February 7, 2012

KIP, Incorporated	_____	First National Insurance Company of	_____
By		By	
By	<u>Greg D. Quiring</u>	Type Name	<u>Robert W. Lagler</u>
			<u>Its Attorney in Fact (Surety)</u>

Title President
(Contractor)

NOTE: This Bond must be executed by both parties with corporate seal affixed. All signatures must be acknowledged (attach acknowledgments).



ACKNOWLEDGMENT

State of California
County of Riverside)

On February 10, 2012 before me, Karen Ann Villarreal, Notary Public
(insert name and title of the officer)

personally appeared Greg D. Quiring, President
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Signature *Karen Ann Villarreal* (Seal)





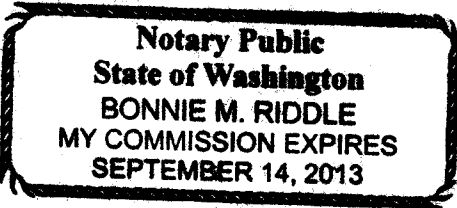
CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF ~~CALIFORNIA~~ Washington

County of Clark }

On 02/07/2012 before me, Bonnie M. Riddle, a Notary Public
Date Here Insert Name and Title of the Officer

personally appeared Robert W. Lagler
Name(s) of Signer(s)



Place Notary Seal Above

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and official seal.
Signature Bonnie M. Riddle

Signature of Notary Public Bonnie M. Riddle

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

Signer Is Representing:

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

Signer Is Representing:

Notary Public
State of Washington
BONNIE M. RIDGLE
MY COMMISSION EXPIRES
SEPTEMBER 14, 2013

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

4176568

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

FIRST NATIONAL INSURANCE COMPANY OF AMERICA
SEATTLE, WASHINGTON
POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS: That First National Insurance Company of America (the "Company"), a Washington stock insurance company, pursuant to and by authority of the By-law and Authorization hereinafter set forth, does hereby name, constitute and appoint. **ROBERT W. LAGLER, BONNIE RIDDLE, ANNA E. FRESE, ALL OF THE CITY OF VANCOUVER, STATE OF WASHINGTON**

.....
.....
..... each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations in the penal sum not exceeding **FIFTY MILLION AND 00/100***** DOLLARS (\$ 50,000,000*****)** each, and the execution of such undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents, shall be as binding upon the Company as if they had been duly signed by the president and attested by the secretary of the Company in their own proper persons.

That this power is made and executed pursuant to and by authority of the following By-law and Authorization:

ARTICLE IV - Execution of Contracts: Section 12. Surety Bonds and Undertakings.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitations as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the president and attested by the secretary.

By the following instrument the chairman or the president has authorized the officer or other official named therein to appoint attorneys-in-fact:

Pursuant to Article IV, Section 12 of the By-laws, Garnet W. Elliott, Assistant Secretary of First National Insurance Company of America, is authorized to appoint such attorneys-in-fact as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

That the By-law and the Authorization set forth above are true copies thereof and are now in full force and effect.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Company and the corporate seal of First National Insurance Company of America has been affixed thereto in Plymouth Meeting, Pennsylvania this 13th day of October, 2010.



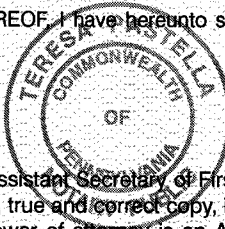
FIRST NATIONAL INSURANCE COMPANY OF AMERICA

By Garnet W. Elliott
Garnet W. Elliott, Assistant Secretary

COMMONWEALTH OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 13th day of October, 2010, before me, a Notary Public, personally came Garnet W. Elliott, to me known, and acknowledged that he is an Assistant Secretary of First National Insurance Company of America; that he knows the seal of said corporation; and that he executed the above Power of Attorney and affixed the corporate seal of First National Insurance Company of America thereto with the authority and at the direction of said corporation.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires Mar. 28, 2013
Member, Pennsylvania Association of Notaries

By Teresa Pastella
Teresa Pastella, Notary Public

CERTIFICATE

I, the undersigned, Assistant Secretary of First National Insurance Company of America, do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy, is in full force and effect on the date of this certificate; and I do further certify that the officer or official who executed the said power of attorney is an Assistant Secretary specially authorized by the chairman or the president to appoint attorneys-in-fact as provided in Article IV, Section 12 of the By-laws of First National Insurance Company of America.

This certificate and the above power of attorney may be signed by facsimile or mechanically reproduced signatures under and by authority of the following vote of the board of directors of First National Insurance Company of America at a meeting duly called and held on the 18th day of September, 2009.

VOTED that the facsimile or mechanically reproduced signature of any assistant secretary of the company, wherever appearing upon a certified copy of any power of attorney issued by the company in connection with surety bonds, shall be valid and binding upon the company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the said company, this 7th day of February, 2012



By David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.



1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It highlights the importance of using reliable sources and ensuring the accuracy of the information gathered.

3. The third part of the document focuses on the interpretation and analysis of the collected data. It discusses the various statistical and analytical tools used to identify trends and patterns in the data.

4. The fourth part of the document provides a detailed overview of the findings and conclusions drawn from the analysis. It discusses the implications of the results and offers recommendations for future research and practice.



PAYMENT BOND

(Public Work - Civil Code, Section 3247 et seq.)

The makers of this Bond are KIP, Incorporated as Principal and Original Contractor and First National Insurance Company of America a corporation, authorized to issue Surety Bonds in California, as Surety, and this Bond is issued in conjunction with that certain public works contract dated March 20, 2012, between Principal and Riverside County Flood Control and Water Conservation District (District), a public entity, as Owner, for \$5,138,077.15, the total amount payable. THE AMOUNT OF THIS BOND IS 100 PERCENT OF SAID SUM. Said contract is for public work generally consisting of the construction of Day Creek Channel, Stage 6 Phase 2 project. The beneficiaries of this Bond are as is stated in Section 3248 of the Civil Code and the requirements and conditions of this Bond are as is set forth in Sections 3248, 3249, 3250 and 3252 of said Code. Without notice, Surety consents to extension of time for performance, change in requirements, amount of compensation, or prepayment under said contract.

DATED: February 7, 2012 KIP, Incorporated
Original Contractor - Principal

First National Insurance Company of America Greg D. Quiring
Surety

By Robert W. Lagler President
Its Attorney in Fact Robert W. Lagler (If corporation, affix seal)

(Corporate Seal)

STATE OF ~~CALIFORNIA~~ WASHINGTON
COUNTY OF CLARK)

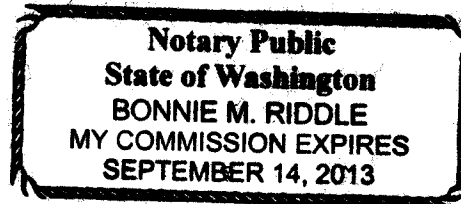
SURETY'S ACKNOWLEDGMENT

On 2/7/12 before me personally appeared Robert W. Lagler known to me to be the person whose name is subscribed to the within instrument as attorney in fact of, First National Insurance Company of America a corporation, and acknowledged that he subscribed the name of said corporation thereto, and his own name as its attorney in fact.

Bonnie M. Riddle
Notary Public (Seal)

Bonnie M. Riddle, Notary Public

- XX -



Notary Public
State of Washington
BONNIE M. RIDGLE
MY COMMISSION EXPIRES
SEPTEMBER 14, 2013

ACKNOWLEDGMENT

State of California
County of Riverside)

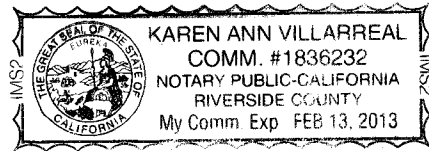
On February 10, 2012 before me, Karen Ann Villarreal, Notary Public
(insert name and title of the officer)

personally appeared Greg D. Quiring, President,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Signature Karen Ann Villarreal (Seal)





THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

4176564

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

FIRST NATIONAL INSURANCE COMPANY OF AMERICA
SEATTLE, WASHINGTON
POWER OF ATTORNEY

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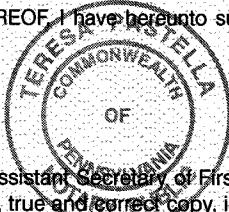
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Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires Mar. 28, 2013
Member, Pennsylvania Association of Notaries

By Teresa Pastella
Teresa Pastella, Notary Public

CERTIFICATE

I, the undersigned, Assistant Secretary of First National Insurance Company of America, do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy, is in full force and effect on the date of this certificate; and I do further certify that the officer or official who executed the said power of attorney is an Assistant Secretary specially authorized by the chairman or the president to appoint attorneys-in-fact as provided in Article IV, Section 12 of the By-laws of First National Insurance Company of America.

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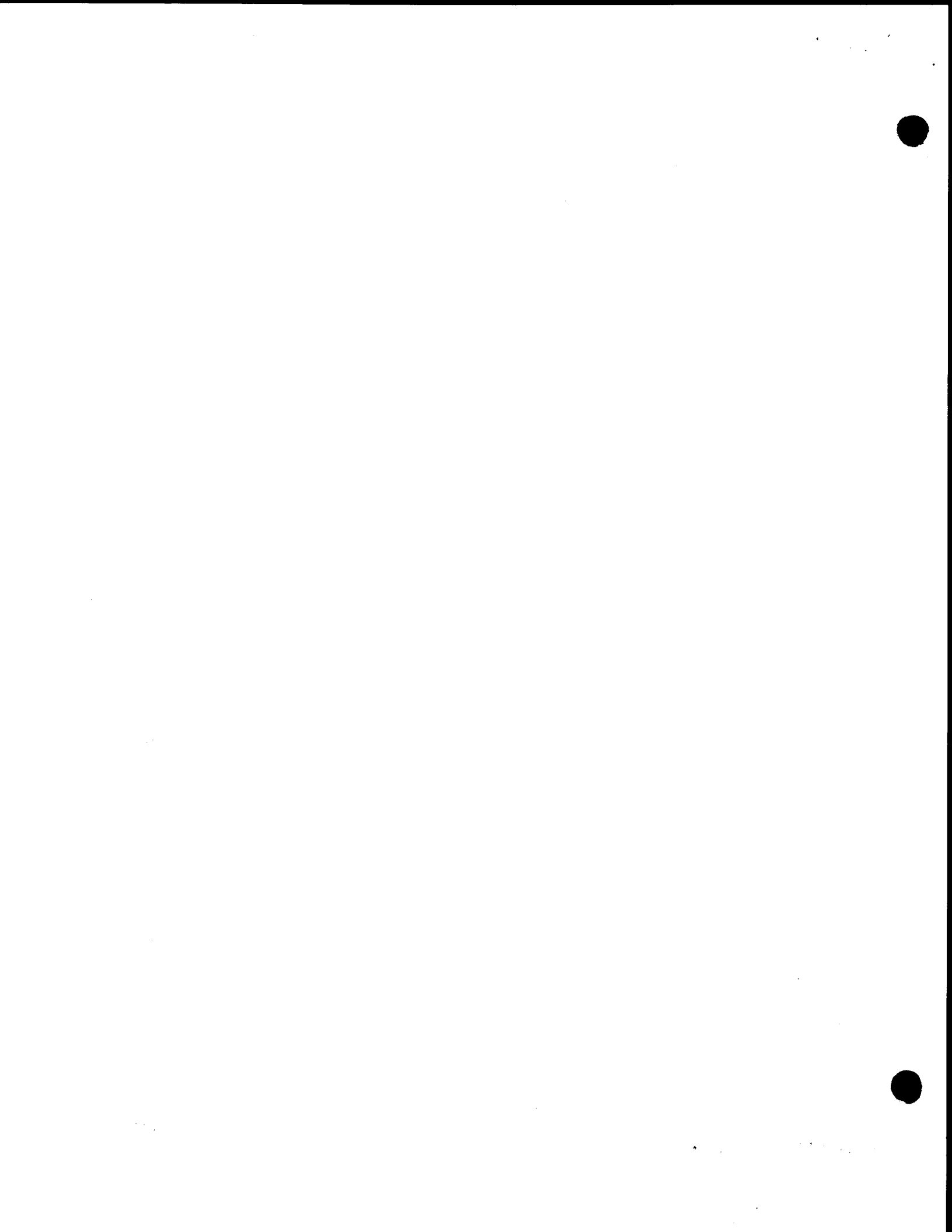
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By David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.





CERTIFICATE OF LIABILITY INSURANCE

OP ID: AD

DATE (MM/DD/YYYY)

02/16/12

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER The Wooditch Company Insurance Services, Inc. 1 Park Plaza, Suite 400 Irvine, CA 92614 Jamie Younger		949-553-9800 949-553-0670	CONTACT NAME: PHONE (A/C No. Ext): E-MAIL ADDRESS: PRODUCER CUSTOMER ID #: KIPIN-1	FAX (A/C No):														
INSURED KIP Incorporated 25740 Washington Avenue Murrieta, CA 92562		<div style="border: 1px solid black; padding: 5px; display: inline-block;"> RECEIVED FEB 22 2012 RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT </div>		INSURER(S) AFFORDING COVERAGE <table border="1"> <thead> <tr> <th>INSURER</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: Old Republic General Ins. Corp</td> <td>24139</td> </tr> <tr> <td>INSURER B: American Guarantee & Liability</td> <td>26247</td> </tr> <tr> <td>INSURER C:</td> <td></td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </tbody> </table>	INSURER	NAIC #	INSURER A: Old Republic General Ins. Corp	24139	INSURER B: American Guarantee & Liability	26247	INSURER C:		INSURER D:		INSURER E:		INSURER F:	
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INSURER C:																		
INSURER D:																		
INSURER E:																		
INSURER F:																		


COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY	X		A1CG92711103	07/15/11	07/15/12	EACH OCCURRENCE \$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> XCU *SEE NOTEPAD* GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
A	AUTOMOBILE LIABILITY			A1CA92711103	07/15/11	07/15/12	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS						HIRE AUTO PHYSICAL DAMAGE LIMIT OF \$50,000
B	UMBRELLA LIAB	X		AUC-9671538-03	07/15/11	07/15/12	EACH OCCURRENCE \$ 1,000,000
	<input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION \$						<input type="checkbox"/> CLAIMS-MADE AGGREGATE \$ 1,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	Y/N	N/A	A1CW92711102	07/15/11	07/15/12	<input checked="" type="checkbox"/> WC STATUTORY LIMITS
	<input type="checkbox"/> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						<input checked="" type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

*Except 10 days notice of cancellation for non payment of premium.
 RE: RCFWCD Project #1-0-00250-06; Day Creek Channel, Stage 6 Phase 2.
 Waiver of Subrogation for Workers' Compensation: See Attached Endorsement.
 SEE NOTES glai/wcww(sched)
 THIS VOIDS AND SUPERSEDES THE PREVIOUS CERTIFICATE DATED 02/07/12

CERTIFICATE HOLDER RIVERSI Riverside County Flood Control and Water Conservation District 1995 Market Street Riverside, CA 92501	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
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NOTEPAD

INSURED'S NAME **KIP Incorporated**

KIPIN-1
OP ID: AD

PAGE 2
DATE **02/16/12**

Should this policy be cancelled before the expiration date, The Wooditch Company will mail 30 (thirty) days written notice to those Certificate Holders which require such action per contract or agreement.

***XCU exclusions do not apply to the General Liability Insurance Policy.**



NOTEPAD:

HOLDER CODE RIVERSI
INSURED'S NAME KIP Incorporated

KIPIN-1
OP ID: AD

PAGE 3
DATE 02/16/12

Riverside County Flood Control and Water Conservation District, County of Riverside, Riverside County Transportation Department, and City of Jurupa Valley are included as Additional Insureds as respects General Liability per attached endorsement.



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED - OWNERS, LESSEES OR CONTRACTORS - COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location And Description Of Completed Operations
<p>Where required by written contract, but only when coverage for Completed Operations is specifically required by that contract.</p> <p>Riverside County Flood Control and Water Conservation District, County of Riverside, Riverside County Transportation Department, and City of Jurupa Valley</p>	<p>RE: RCFWCD Project #1-0-00250-06; Day Creek Channel, Stage 6 Phase 2.</p>
<p>Information required to complete this Schedule, if not shown above, will be shown in the Declarations.</p>	

Section II - Who Is An Insured is amended to include as an additional insured the person(s) or Organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the schedule of this endorsement performed for that additional insured and included in the "products completed operations hazard".



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED — OWNERS, LESSEES OR
CONTRACTORS — SCHEDULED PERSON OR
ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location And Description Of Completed Operations
<p>WHERE REQUIRED BY WRITTEN CONTRACT</p> <p>Riverside County Flood Control and Water Conservation District, County of Riverside, Riverside County Transportation Department, and City of Jurupa Valley</p>	<p>RE: RCFWCD Project #1-0-00250-06; Day Creek Channel, Stage 6 Phase 2.</p>
<p>Information required to complete this Schedule, if not shown above, will be shown in the Declarations.</p>	

A. Section II — Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.



OLD REPUBLIC GENERAL INSURANCE CORPORATION
WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE POLICY
WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

THIS ENDORSEMENT MODIFIES INSURANCE PROVIDED UNDER THE FOLLOWING:

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

WHEN REQUIRED BY WRITTEN CONTRACT.

The premium charge for this endorsement is \$0.00

Named Insured	KIP, Inc.		
Policy Number	A1CW92711102		
Policy Period	07/15/2011 07/15/2012	Endorsement Effective Date:	07/15/2011
Producer's Name:			
Producer Number:			

 AUTHORIZED REPRESENTATIVE

 DATE



GENERAL PROVISIONS



GENERAL PROVISIONS

SECTION I - DEFINITION OF TERMS

1.01 Whenever in these specifications, or in any documents or instruments where these specifications govern, the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

(a) DISTRICT: The Riverside County Flood Control and Water Conservation District of the State of California, as created by law, also sometimes referred to as the Flood Control District, or party of the first part.

(b) BOARD OF SUPERVISORS: The Board of Supervisors of the Riverside County Flood Control and Water Conservation District as created by law, also sometimes referred to as the Board.

(c) ENGINEER: The Chief Engineer of the Riverside County Flood Control and Water Conservation District, also sometimes referred to as the Flood Control Engineer, the Chief Engineer, or the General Manager-Chief Engineer, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

(d) LABORATORY: The established laboratory of the Riverside County Road Department or laboratories authorized by the District to test materials and work involved in the contract.

(e) BIDDER: Any individual, firm or corporation submitting a proposal for the work contemplated, acting directly or through a duly authorized representative.

(f) CONTRACTOR: The person or persons, copartnership or corporation, private or municipal, who have entered into a contract with the District, as party or parties of the second part or his or their legal representatives.

(g) SUPERINTENDENT: The Executive representative of the Contractor, present on the work at all times during progress, authorized to receive and execute instruction from the Engineer.

(h) PLANS: The official plans, profiles, typical cross sections, general cross sections, working drawings, and supplemental drawings, or exact reproductions thereof, approved by the Engineer, which show the location, character, dimensions and details of the work to be done, and which are to be considered as a part of the contract supplementary to these specifications.

(i) SPECIFICATIONS: The directions, provisions, and requirements contained herein as supplemented by such special provisions, as may be necessary, pertaining to the method and manner of performing the work or to the quantities and qualities of materials to be furnished under the contract. The Special Provisions are specific clauses setting forth conditions

or requirements peculiar to the project under consideration and covering work or materials involved in the proposal and estimate but not satisfactorily covered by these General Provisions. Supplemental agreements or contract change orders are written agreements executed by the Contractor and by the District, covering alterations, amendments or extensions to the project, as hereinafter provided.

(j) CONTRACT: The written agreement covering the performance of the work and the furnishing of labor and materials in the construction of the work. The contract shall include the Notice to Contractors, the Proposal, Plans, Specifications, Special Provisions, and Contract Bonds, also, any and all supplemental agreements or contract change orders amending or extending the work contemplated and which may be required to complete the work in a substantial and acceptable manner.

(k) CONTRACT PRICE: Shall mean either the lump sum, unit price, or unit prices to be named in the contract, or the total of all payments under the contract at the lump sum, unit price, or unit prices, as the case may be.

(l) SURETY OR SURETIES: The bondsmen or party or parties, approved by the Engineer, who may guarantee the fulfillment of the contract by bond, and whose signatures are attached to said bond.

(m) RIGHT OF WAY: The whole right of way which is reserved for and secured for use in constructing the improvement.

(n) THE WORK: All the work specified in the Special Provisions, proposal and contract, or indicated on the plans as the contemplated complete improvement covered by the contract.

1.02 Wherever in the specifications or upon the plans the words directed, required, permitted, ordered, designated, prescribed, or words of like import are used, it will be understood that the direction, requirements, permission, order, designation, or prescription of the Flood Control Engineer is intended, and similarly the words approved, acceptable, satisfactory, or words of like import, shall mean approved by, or acceptable to, or satisfactory to, the Flood Control Engineer, unless otherwise expressly stated.

SECTION II - SCOPE OF WORK

2.01 WORK TO BE DONE

It is the intent of these General Provisions, Special Provisions, Detailed Specifications, and the plans herein referred to, to provide for and include all labor, power, light, water, materials, tools, scaffolding, machinery, plant transportation, insurance, permits, bonds, temporary protection, watchmen, and superintendence necessary to construct and complete all work, and to furnish all materials included in the contract, except those furnished by the District and as specifically mentioned in these specifications.

The contract documents are complementary, and the work called for by any one shall be as binding as if called for by all.

2.02 CONSTRUCTION SCHEDULE

The Contractor shall submit at such times as may be requested by the Engineer, a schedule which shall show the order and dates in which the Contractor proposes to carry on the various parts of the work; including estimated completion dates.

2.03 DRAWINGS AND SPECIFICATIONS ON THE WORK

The Contractor shall keep one copy of all drawings and specifications on the work, in good order, available to the Engineer and his representatives.

2.04 ESTIMATE OF QUANTITIES

The quantities of work to be done and the materials to be furnished under this contract are approximate only. The District is not to be held responsible for the accuracy of the estimate of quantities.

The Contractor shall judge for himself, after considering all circumstances and conditions, the costs and quantities of materials involved in the contract. The Contractor shall not at any time assert that there was any misunderstanding in regard to the depth or class of the excavations to be made, or the nature or kind or amount of materials to be furnished for the work.

The Contractor herewith agrees that he will not ask, demand, sue for, or seek to recover, for compensation in excess of the amounts payable for the various unit costs or lump sum charges for the work, as stipulated in the proposal, which he actually performs as specified.

2.05 PROTESTS

If the Contractor considers any work demanded of him to be outside of the requirements of the contract, or considers any record or ruling of the Engineer to be unfair, he shall immediately, upon such work being demanded or such record or ruling being made, ask, in writing, for written instructions covering protested items of work. Immediately on receipt of written instructions from the Engineer he shall proceed without delay to diligently perform the work in conformance with the written record or ruling. Within ten (10) calendar days after date of receipt of the written instructions or ruling, the Contractor shall file a written protest with the Engineer stating clearly and in detail the basis of his protest. Except for such protests as are made of record in the manner herein specified and within the time limit stated, the records, rulings, instructions, or decisions of the Engineer shall be final and conclusive.

2.06 ALTERATIONS

It must be distinctly understood that such reasonable alterations and modifications may be made by the Chief Engineer, as may be deemed desirable, and that this may be done without notices to the Sureties on the Contractor's bonds. If such changes result in increased or decreased quantities under the items specified in the proposal, the Contractor will be paid on the basis of actual quantities as measured by the Engineer, and such changes shall not affect the unit prices bid by the Contractor. If, however, such changes result in delay to the work, the

Contractor will be given such extension of time on the completion of his contract as the Chief Engineer may deem equitable.

2.07 EXTRA WORK

A. General

The District reserves and shall have the right, when confronted with unpredicted conditions, unforeseen events, or emergencies, to revise the details of the contemplated work, or to add work of a different character or function and have the Contractor perform such revised or added work as "Extra Work", when such extra work is considered by the Chief Engineer to be virtually appurtenant to the satisfactory completion of the project.

"Extra Work" is defined as added work of a different character or function and for which no basis for payment is prescribed; or that involving revisions of the details of the work in such manner as to render inequitable payment under items upon which the Contractor bid; or that work which is indeterminate at the time of advertising and is specifically designated as extra work in the plans and Special Provisions.

The signing of the contract by the Contractor will be deemed to be an agreement on his part to perform extra work, as and when ordered by the Chief Engineer. Notice to the Sureties on the Contractor's bonds will not be given unless the estimated total value of the contract, as changed or supplemented, shall exceed the original total bid price by more than 25 percent.

If required extra work results in delay to the work, the Contractor will be given an equivalent extension of time.

Approval of extra work shall be obtained from the Board of Supervisors before such work is authorized to be done, if:

a. For contracts with a total contract price of \$250,000 or less, a change due to extra work exceeds ten percent (10%) of the original contract amount; or

b. For contracts with a total contract price of more than \$250,000, a change due to extra work exceeds \$25,000 plus one percent (1%) of the original contract amount in excess of \$250,000; or

c. An individual change exceeds \$100,000; or

d. Cumulative contract changes exceed ten percent (10%) of the original contract amount.

Extra work specially authorized by the Board of Supervisors shall not be included in the cost limitations above stated.

B.* Procedure for Extra Work

1. Upon decision of the District to have extra work performed, the Chief Engineer will so inform the Contractor, acquainting him with the essential details of the new work. The Contractor shall thereupon prepare a price for said work based upon his estimate of cost and submit said price and estimate to the Chief Engineer whose approval shall be secured before work is started; excepting that the Chief Engineer may, when in the best interest of the District, order the Contractor to proceed with the extra work in advance of the submission of such prices, provided that preliminary estimates, as made by the District, show that the cost will not exceed \$1,000.

2. Prices for extra work shall be prepared by the Contractor on one or both of the following methods, as requested by the District, and submitted to the Chief Engineer for approval:

a. For a stated unit price or lump sum amount based upon current prevailing fair prices for materials, labor, plant, overhead and profit.

b. On a cost basis (force account by the Contractor). The cost of all work done by the Contractor will be computed in the manner described in Section 7.03, and the compensation thus provided shall be accepted as payment in full by the Contractor, and no additional payment will be allowed for the use of small tools, superintendent's services, timekeeper's services, pickup or yard trucks, except as specifically essential to the work, nor any other overhead expenses incurred in the prosecution of the force account work.

3. Upon receipt of the Contractor's price, the Chief Engineer will make an analysis thereof and adopt one of the following procedures:

a. Accept the Contractor's price for lump sum or unit price amount in the original or amended form and direct him to proceed with the work; or direct him to perform the work on a cost plus basis.

b. Have the work performed by District's forces or separate contract, without undue interference or hindrance to the Contractor and without claim or suit by the Contractor for damages on account thereof.

c. Direct the Contractor to proceed with the work and accept payment therefor in the amount as adjudicated later in a court of law.

2.08 PAYMENT FOR EXTRA WORK

At the end of each month the Contractor shall make and deliver to the Chief Engineer a statement of the cost of the extra work completed during the current month, itemized and in a form satisfactory to the Chief Engineer. Upon verification of said statement by the Chief Engineer, the Contractor's claim for the full amount, as shown on said statement, will be added to the monthly partial payment made in accordance with Paragraph 7.06 of the General Provisions.

2.09 RIGHTS OF WAY

The District shall provide the rights of way upon which the work under this contract is to be done, except that the Contractor shall provide land required for the erection of temporary construction facilities and storage of his material, together with right of access to same. The District will not be responsible for any delay in furnishing the rights of way and such delay shall not be made the basis for a claim for additional compensation by the Contractor. However, in case the failure of the District to furnish the required rights of way delays the prosecution of the work, the time allowed for completion will be extended by a period of time equal to that lost by the Contractor due to such delay.

2.10 CLEANING UP

The Contractor shall, as directed by the Engineer, remove from the District's right of way and from all public and private property, at his own expense, all temporary structures, rubbish and waste materials resulting from his operations.

SECTION III - CONTROL OF THE WORK

3.01 AUTHORITY OF THE ENGINEER

The Engineer shall have general supervision and direction of the contract under authority of the Board of Supervisors. He has the authority to stop the work whenever such stoppage may be necessary to ensure the proper execution of the contract. The Engineer shall decide all questions which may arise as to the quality or acceptability of materials furnished, work performed, and rate or progress of the work; all questions which may arise as to the interpretation of the plans and specifications; all questions as to the acceptable fulfillment of the contract on the part of the Contractor; and all questions as to compensation.

His determination and decision thereon shall be final and conclusive; and such determination and decision, in case any question shall arise, shall be a condition precedent to the right of the Contractor to receive any money hereunder.

3.02 DETAIL DRAWINGS

The approved plans shall be supplemented by such working drawings as are necessary to control the work adequately. All authorized alterations affecting the requirements and information given on the approved plans shall be in writing. No changes shall be made of any plan or drawing after the same has been approved by the Engineer, except by his direction.

It is expressly understood, however, that approval by the Engineer of the Contractor's working drawings does not relieve the Contractor of any responsibility for accuracy of dimensions and details. It is mutually agreed that the Contractor shall be responsible for agreement and conformity of his working drawings with the approved plans and specifications.

Full compensation for furnishing all working drawings shall be considered as included in the prices paid for the various contract items of work, and no additional allowance will be made therefor.

3.03 CONFORMITY WITH PLANS AND ALLOWABLE DEVIATIONS

Finished surfaces in all cases shall conform with the lines, grades, cross-sections, and dimensions shown on the approved plans. Deviations from the approved plans and working drawings, as may be required by the exigencies of construction, will in all cases be determined by the Engineer and authorized in writing.

3.04 INTERPRETATION OF PLANS AND SPECIFICATIONS

Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in these specifications and the Special Provisions, the Contractor shall apply to the Engineer for such further explanations as may be necessary and shall conform to the same part of the contract, so far as may be consistent with the original specifications; and in the event of any doubt or questions arising respecting the true meaning of the specifications; reference shall be made to the Engineer, whose decision thereon shall be final.

In the event of any discrepancy between any drawings and the figures written thereon, the figures shall be taken as correct. The Contractor will not be allowed to take advantage of errors and omissions in the drawings and specifications. When errors or omissions are found, they will be corrected or supplied by the Engineer.

3.05 SUPERINTENDENCE

The Contractor shall keep on his work, continually during its progress, a competent Superintendent responsible for the construction of the work, and any necessary assistants; all satisfactory to the Engineer. The Superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor. Important directions shall be confirmed in writing to the Contractor. Other directions shall be so confirmed on written request in each case.

3.06 LINES AND GRADES

The Contractor shall provide reasonable and necessary opportunities and facilities for setting points and making measurements. He shall not proceed until he has made timely demand upon the Engineer for, and has received from him, such lines and grades as may be necessary as the work progresses. The work shall be done in strict conformity with such lines and grades.

The Contractor shall carefully preserve benchmarks, reference points and stakes, and in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

3.07 INSPECTION OF WORK

The Engineer and his representatives shall at all times have access to the work during its construction, and shall be furnished with every reasonable facility for ascertaining that the stock and materials used and employed, and the workmanship, are in accordance with the requirements and intentions of these specifications. All work done and all materials furnished shall be subject to the Engineer's inspection and approval to ensure design objectives.

The inspection of the work shall not relieve the Contractor of any of his obligations to fulfill his contracts as prescribed, and defective work shall be made good and unsuitable materials may be rejected, notwithstanding that such defective work and materials have been previously overlooked by the Engineer and accepted or estimated for payment.

3.08 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

All work which has been rejected shall be remedied, or removed and replaced by the Contractor in an acceptable manner and no compensation will be allowed him for such removal or replacement. Any work done beyond the lines and grades shown on the plans or established by the Engineer, or any extra work done without written authority, will be considered as unauthorized and will not be paid for. Work so done may be ordered removed at the Contractor's expense. Upon failure on the part of the Contractor to comply forthwith with any order of the Engineer made under the provisions of this article, the Engineer shall have authority to cause defective work to be remedied, or removed and replaced, and unauthorized work to be removed and to deduct the costs for this work from any monies due or to become due the Contractor.

3.09 EQUIPMENT AND PLANT

Equipment not suitable to produce the quality of work required will not be permitted to operate on the project. Plants shall be designed and constructed in accordance with general practice for such equipment and shall be of sufficient capacity and of such character to ensure the production of sufficient material to carry the work to completion within the time limit.

The Contractor shall provide adequate and suitable equipment and plants to meet the above requirements and, when ordered by the Engineer, shall remove unsuitable equipment from the work and discontinue the operation of unsatisfactory plants. No worn or obsolete equipment shall be used, and in no case shall the maker's rating of the capacity for any equipment be exceeded.

All vehicles used to haul materials over existing highways shall be equipped with pneumatic tires.

3.10 FINAL INSPECTION

The Engineer will not make the final inspection until the work provided for and contemplated by the contract has been completed and the final cleaning up performed.

SECTION IV - CONTROL OF MATERIAL

4.01 DISTRICT FURNISHED MATERIALS

The Contractor shall furnish all materials required to complete the work, except those specified in the Special Provisions to be furnished by the District. Materials furnished by the District will be delivered to the Contractor at the points specified in the Special Provisions.

The Contractor will be held responsible for all materials so delivered to him, and deductions will be made from any monies due him to make good any shortages and deficiencies,

from any cause whatsoever, which may occur after such delivery, or for any demurrage charges due to delinquency in unloading.

4.02 SOURCE OF SUPPLY AND QUALITY OF MATERIALS

At the option of the Engineer the source of supply of each of the materials shall be approved by him before the delivery is started. Only materials conforming to the requirements of these specifications and approved by the Engineer shall be used in the work. All materials proposed for use may be inspected or tested at any time during their preparation and use. If, after trial, it is found that sources of supply which have been approved do not furnish a uniform product, or if the product from any source proves unacceptable at any time, the Contractor shall furnish approved material from other approved sources. No material which, after approval, subsequently becomes unfit for use shall be used in the work.

4.03 SAMPLES AND TESTS

All tests of materials furnished by the Contractor shall be made by the District in accordance with commonly recognized standards of national organizations, and such special methods and tests as are in use at the District's approved laboratory and described in the Detailed Specifications.

Field tests of materials will also be made by the Engineer when deemed necessary and these tests shall be made in accordance with standard practices of the District.

The Contractor shall furnish such samples of all materials as are requested by the Engineer without charge. No material shall be used until it has been approved by the Engineer. Samples will be secured and tested whenever necessary to determine the quality of the material.

Promptly after the approval of the contract, the Contractor shall notify the Engineer of the proposed sources of supply of all materials to be furnished by him, using a form which will be supplied by the Engineer upon request.

Whenever reference is made in these specifications to standard tests or requirements of the laboratory of the District, the American Society for Testing Materials, the American Railway Engineering Association, or the American Association of State Highway Officials, the reference shall be construed to mean the standards that are in effect at the date of these specifications with subsequent amendments, changes, or additions as thereafter adopted and published by the organization referred to.

4.04 STORAGE OF MATERIALS

Materials shall be so stored as to ensure the preservation of their quality and fitness for the work. When considered necessary by the Engineer, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground. They shall be placed under cover when so directed. Stored materials shall be so located as to facilitate prompt inspection.

4.05 DEFECTIVE MATERIALS

All materials not conforming to the requirements of these specifications shall be considered as defective and all such materials, whether in place or not, shall be rejected and shall be removed immediately from the site of the work unless otherwise permitted by the Engineer. No rejected materials, the defects of which have been subsequently corrected, shall be used until approval in writing has been given by the Engineer. Upon failure on the part of the Contractor to comply forthwith with any order of the Engineer made under the provisions of this article, the Engineer shall have authority to remove and replace defective material and to deduct the cost of removal and replacement from any monies due or to become due the Contractor.

4.06 ASSIGNMENT OF CLAIMS

In submitting a bid on this public works project, or any subcontractor agreeing to supply goods, services, or materials, and entering a contract pursuant thereto, the Contractor and/or subcontractor do offer and agree to assign to the District all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment by the parties.

SECTION V - LEGAL RELATIONS AND RESPONSIBILITY

5.01 LAWS TO BE OBSERVED

(a) Compliance with Applicable Law. Reference to and/or incorporation into the Contract Documents of a particular law, statute, ordinance, rule or regulation is not, nor is it intended to be, a definitive statement of the law applicable to the Contract Documents and the accomplishment of the work. Contractor must keep informed as to all such applicable law - Federal, State, County, Municipal, District - as it affects the conduct of the work and comply with such law, including, but not limited to, having requisite licenses, obtaining necessary permits, paying necessary fees and taxes, posting notices and installing, operating and maintaining safety precautions and facilities. It is likewise Contractor's responsibility to see to it that his subcontractors also fully comply with such applicable law.

If at any time Contractor is of the opinion that there is a discrepancy or inconsistency in the plans, drawings, specifications or other Contract Documents, he shall immediately cease work involving such alleged discrepancies or inconsistencies and report the same in writing to the Chief Engineer and shall not proceed with such work until ordered so to do, and in the manner instructed by the Chief Engineer.

Contractor shall protect and defend District, its officers, agents and employees against any claim or liability arising from or based upon any alleged violation of such applicable law. See also Subsection 8.02.

(b) Labor Code - Reference is made to Chapter 1, Part 7, Division 2 of the California Labor Code (commencing with Section 1720). By this reference said Chapter 1 is incorporated herein with like effect as if it were here set forth in full. The parties recognize that said Chapter 1 deals with, among other things, discrimination, penalties and forfeitures, their disposition and enforcement, wages, working hours and securing workers' compensation insurance and directly affect the method of prosecution of the work by Contractor and subject it under certain conditions to penalties and forfeitures. Execution of the Agreement by the parties constitutes their agreement to abide by said Chapter 1. Their stipulation as to all matters which they are required to stipulate as to by the provisions of said Chapter 1, constitutes Contractor's certification that it is aware of the provisions of said Chapter 1 and will comply with them and further constitutes Contractor's certification as follows: "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this contract." Contractor and its subcontractors shall comply with the provisions of S1777.5 of the Labor Code regarding apprentices.

Contractor shall post at each job site during the course of the work a copy of County's "Determination of Prevailing Wage Rates", copies of said Determination are available from County for this purpose.

(c) Equal Employment Opportunity

General - Contractor shall not discriminate in its recruiting, hiring, promotion, demotion or termination practices on the basis of race, religious creed, color, national origin, ancestry, sex, age or physical handicap in the performance of this Contract and shall comply with the provisions of the Government Code Section (commencing with §12900 et seq.), the Federal Civil Rights Act of 1964 (P.L. 88-352) and all amendments thereto, Executive Order No. 11246 (30 Federal Register 12319), as amended, and all administrative rules and regulations issued pursuant to said Acts and Order. See particularly 41 Code of Federal Regulation (CFR) Chapter 60.

Contractor shall require each of its subcontractors to comply with the preceding paragraph and shall include in each subcontract language similar to the preceding paragraph.

Contractor shall permit access to its records of employment, employment advertisement, application forms and other pertinent data and records by Owner and any state or federal agency having jurisdiction for the purpose of investigation to ascertain compliance with this Section.

Owner may assign an affirmative action representative to monitor Contractor and its subcontractor(s) conduct required by this Section, including the right of entry to the construction site for the purpose of obtaining information from persons performing work on the project providing such inspection does not interfere with the progress of the work.

Elsewhere in the Contract Documents specific requirements may be contained covering the same subject matter of this Section. If so, such specific requirements prevail over this Section in case of conflict.

Transactions of \$10,000 or under - Contracts and subcontracts not exceeding \$10,000 are exempt from the requirements of this Section. No Contractor or subcontractor shall procure supplies and/or services in less than usual quantities to avoid applicability of this Section. With respect to contracts and subcontracts for indefinite quantities, this Section applies unless the amount required in any one year under such contract will reasonably be expected not to exceed \$10,000.

Transactions in Excess of \$10,000 but less than \$50,000 - At Owner's request, Contractor shall certify that it has in effect an affirmative action plan and agrees to comply with all state and federal laws and regulations regarding Fair Employment Practices. Contractor shall maintain a written copy of its affirmative action plan and furnish Owner a copy of the plan upon request. Owner may require Contractor to complete an Affirmative Action Compliance Report, on a form furnished by Owner, setting forth definite goals during the term of this contract.

Transactions of \$50,000 or more - If Contractor has 50 or more employees and a contract for \$50,000 or more, it shall develop and submit to Owner, within 30 days after award, a written affirmative action compliance program providing in detail specific steps to guarantee equal employment opportunity. Contractor shall include in its affirmative action program a table of job classifications, which table shall include but need not be limited to job titles, duties and rates of pay.

Contractor shall in each subcontract let to do a portion of the work covered hereunder, where the subcontractor involved has 50 or more employees and the subcontract is for \$50,000 or more, impose in the subcontract the above requirements.

For the purpose of determining the number of employees, the average of the Contractor's or its subcontractor's employees for the 12 month period immediately prior to award, or the total number of employees Contractor or its subcontractor will have when performing this contract, whichever is higher, shall be used.

Federally Assisted Construction - If this project is a Federally assisted construction project, then the contract provisions contained 41 CFR S60-1.4(b) are incorporated herein and Contractor shall likewise incorporate said provisions in each subcontract entered into by Contractor to perform the work. Federally assisted construction is identified as such in the Notice Inviting Bids.

(d) Registration of Contractors - In order to be considered a prospective bidder must be licensed in accordance with Division 3, Chapter 9 (commencing with Section 7000) of the Business and Professions Code.

(e) Accident Prevention - Particular attention shall be given to relevant Division of Industrial Safety Construction and Electrical Safety Orders. Said Orders are contained in Title 8 of the California Administrative Code, Chapter 4, Subchapters 4 and 5. Specific attention shall be taken of the California Occupational Safety and Health Act of 1973 (commencing with Section 6300 of the Labor Code) and the Federal Occupational Safety and Health Act of 1970 (P.L. 91-596) and rules and regulations issued pursuant to said Acts. Specific reference is made to Article 6 of said Construction Safety Orders. Contractor shall submit to Engineer, who will

accept in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping of the sides of trenches, or other provisions to be made for protection of personnel during earthwork operations. In event the Contractor's plan does not conform with the shoring system requirements of Article 6, the Contractor's proposed shoring design shall be prepared and signed by a civil or structural engineer registered in the State of California.

The Contractor shall also impose the foregoing requirements on all subcontractors involved and enforce compliance therewith.

The duties here set forth are nondelegable by Contractor who shall protect and defend District, its officers, agents and employees in connection therewith. See Subsection 8.02.

5.02 CONTRACTOR'S RESPONSIBILITY

Contractor is under the absolute duty in fulfilling its contractual obligations hereunder to proceed, and cause its subcontractors to proceed, in a safe, workmanlike manner, with adequate safeguards for the protection of the public, the workmen and persons from time to time inspecting the work. If at any time Contractor finds any of its subcontractors are allowing work to proceed in an unsafe manner and contrary to the intent of these Contract Documents, Contractor shall immediately cause such action to stop and immediately take all action necessary to protect workmen, inspectors and the general public and cause the work to proceed in a safe manner.

Contractor shall protect and defend District, its officers, agents and employees in reference to acts or omissions contrary to the above. See particularly Subsection 8.02.

District may withhold funds otherwise due Contractor whenever, in its judgment, this subsection is not being complied with.

5.03 CONTRACTOR'S RESPONSIBILITY FOR WORK

Until the formal acceptance of the work by the District, the Contractor shall have the charge and care thereof and shall bear the risk of injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before its completion and acceptance and shall bear the expense thereof, except for such injuries or damages as are occasioned by acts of the Federal Government and the public enemy. In case of suspension of work from any cause whatever, the Contractor shall be responsible for all materials and shall properly store them if necessary and shall erect temporary structures where necessary.

5.04 PROPERTY RIGHTS IN MATERIALS

Nothing in the contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the work or the soil. All such materials shall become the property of the District upon being so attached or affixed.

5.05 PERMITS AND LICENSES

The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work.

5.06 ROYALTIES AND PATENTS

The Contractor shall assume all costs arising from the use of patented materials, equipment, devices, or processes used on or incorporated on the work, and agrees to indemnify and save harmless the Riverside County Flood Control District, the Board of Supervisors, the Flood Control Engineer, and their duly authorized representatives, from all suits at law, or actions of every nature for, or on account of, the use of any patented materials, equipment, devices, or processes.

5.07 SANITARY PROVISIONS

Necessary conveniences, properly secluded from public observation shall be provided by the Contractor where needed for the use of laborers on the work. Their location, construction and maintenance shall be subject to the approval of the Engineer, and their use shall be strictly enforced. The Contractor shall obey and enforce such sanitary regulations as may be prescribed by the State Department of Health or other authorities having jurisdiction.

5.08 PUBLIC SAFETY

The Contractor at his own expense shall furnish, erect, and maintain such fences, barriers, lights, and signs as are necessary to give adequate warning to the public at all times that the bridges, culverts, and work along public highways are under construction; and of any dangerous conditions to be encountered as a result thereof; and he shall erect such warning and directional signs and employ such flagmen as are required and maintain same throughout the construction period.

Full compensation for the work involved in carrying out the precautionary measures above specified shall be considered as included in the prices paid for the various contract items of work and no additional allowance will be made therefor.

5.09 USE OF EXPLOSIVES

When the use of explosives is necessary for the prosecution of the work, the Contractor shall use the utmost care not to endanger life or property.

All explosives shall be stored in accordance with the provisions of Division II, Part I, Chapter 3, of the Health and Safety Code of the State of California.

5.10 PROVISIONS FOR EMERGENCIES

Unusual conditions may arise on the work which will require that immediate and unusual provisions be made to protect the public from danger or loss or damage to life and property, due directly or indirectly to the prosecution of the work, and it is part of the service required of the Contractor to make such provisions and to furnish such protection.

The Contractor shall use such foresight and shall take such steps and precautions as his operations make necessary to protect the public from danger or damage, or loss of life or property, which would result from the interruption or contamination of public water supply, irrigation or other public service, or from the failure of partly completed work.

Whenever work is undertaken pursuant to the above provisions, Contractor shall promptly file with District a verified report setting forth the nature of the emergency and the action taken by the Contractor by reason of the emergency.

Whenever, in the opinion of the Engineer, an emergency exists against which the Contractor has not taken sufficient precaution for the safety of the public or the protection of utilities or of adjacent structures or property which may be injured by process of construction on account of such neglect; and whenever, in the opinion of the Engineer, immediate action shall be considered necessary in order to protect public or private, personal or real property interests, or prevent likely loss of human life or damage on account of the operations under the contract, then and in that event the Engineer may provide suitable protection to said interests by causing such work to be done and material to be furnished as, in the opinion of the Engineer, may seem reasonable and necessary.

The cost and expense of all such emergency work shall be borne by the Contractor, and if he shall not pay said cost and expense upon presentation of the bills therefor, duly certified by the Engineer, then said cost and expense will be paid by the District and shall thereafter be deducted from any amounts due, or which may become due said Contractor. Failure of the District, however, to take such precautionary measures, shall not relieve the Contractor of his full responsibility for public safety.

5.11 UNFORESEEN DIFFICULTIES

All loss or damages, except as noted in Section 8.03, arising out of the nature of the work to be done under the contract, or from any unforeseen obstructions or difficulties which may be encountered during the progress of the work and in the prosecution of the same, or from the action of the elements, or from encumbrances in the line of work, shall be sustained by the Contractor.

5.12 ACCESS TO THE WORK

Access to the work from existing roads shall be provided by the Contractor at his expense and maintained in a manner so as not to create a public nuisance. The Board of Supervisors, Flood Control District and Engineer assume no responsibility for the condition or maintenance of any existing road or structure thereon that may be used by the Contractor for performing the work under these specifications and for traveling to and from the site of the work. No direct payment will be made to the Contractor for constructing temporary roads used for construction operations or for improving, repairing, or maintaining any existing road or structure thereon that may be used by the Contractor for performance of the work under these specifications. The cost of all work described in this paragraph shall be included in the prices bid in the schedule for other items of construction work.

5.13 GUARANTEE OF WORK

All work is guaranteed by Contractor for a period of three years from the recordation of the Notice of Completion against defects resulting from the use of inferior materials, equipment, or workmanship. Upon notice from District, Contractor shall promptly remedy such defects at his expense, including payment to District of its expenses in connection with remedying such defects, otherwise District shall proceed to remedy such defects and Contractor shall upon demand reimburse District for its expenses in connection therewith.

The above three year guarantee is in addition to any specific guarantee(s) provided for elsewhere in the Contract Documents.

5.14 DAMAGES BY ACT OF GOD

If the construction of the project herein is damaged, which damage is determined to have been proximately caused by an act of God, in excess of 5% of the contract amount, provided that the work damaged is built in accordance with applicable building standards and the plans and specifications, then the District, may, without prejudice to any other right or remedy, terminate the contract.

SECTION VI - PROSECUTION AND PROGRESS

6.01 PROGRESS OF THE WORK

The Contractor shall begin the work within ten (10) calendar days after the date of the receipt by him of notice to proceed from the Chief Engineer and shall diligently prosecute the same to completion within the time limit provided in the Special Provisions.

6.02 OVERTIME WORK AND WORK AT NIGHT

It is intended that the Contractor prosecute the work on a five (5) day, forty (40) hour work week with no work on legal holidays. If the Contractor feels it is necessary to work more than the normal 40 hour work week, he will make a written request for permission from the Engineer, outlining the reasons for such request. The decision of granting permission for overtime work shall be made by the Engineer and shall be final. A condition will be imposed on the granting of a request to work overtime, requiring the Contractor to pay the District the cost incurred at overtime rates for additional inspection and engineering time required in connection with the overtime work.

When any work is performed at night, only such classes of work shall be done as can be properly inspected. Adequate light must be provided for the safety of the men and for proper inspection.

6.03 SUBCONTRACTING

Reference is made to the Subletting and Subcontracting Fair Practice Act contained in the Public Contract Code (commencing §4100). By this reference, said Act is incorporated herein with like effect as if it were here set forth in full and the parties shall abide by its terms and substitution shall be only as allowed by that Act.

Contractor shall be responsible for the acts and omissions of its subcontractors and shall make certain that at all times its subcontractors comply with the terms of the Contract Documents and applicable law insofar as such compliance relates to the work.

District reserves the right to approve all subcontractors whether or not they are required to be listed in the Contractor's Proposal. As used in this Section "subcontractor" includes any person who fabricates or manufactures any article for incorporation into the work whether or not they install or test after installation or contract to install or test after installation, but does not include suppliers of fungible goods for incorporation into the work unless such supplier also installs or tests or contracts to install or test.

The Contractor shall give his personal attention to the fulfillment of the contract and shall keep the work under his control. The Contractor shall perform with his own organization work of a value amounting to not less than 60 percent of the remainder obtained by subtracting from the total original contract value the sum of any item designated herein or in the Special Provisions as Specialty Items. The furnishing and placing of reinforcing steel, when placing is performed by the supplier, will be considered as a Specialty Item for this purpose; however, he shall be designated in the list of subcontractors. The value of the work subcontracted will be based on the contract item bid price. When a portion of an item is subcontracted, the value of work subcontracted will be based on the estimated percentage of the Contract Unit Price. This will be determined from information submitted by the Contractor, and subject to approval by the Engineer.

Where a portion of the work which has been subcontracted by the Contractor is not being prosecuted in a manner satisfactory to the District, the subcontractor shall be removed immediately on the requisition of the Engineer and shall not again be employed on the work.

6.04 CHARACTER OF WORKMEN

If any subcontractor or person employed by the Contractor shall fail or refuse to carry out the directions of the Engineer or shall appear to the Engineer to be incompetent or to act in a disorderly or improper manner, he shall be discharged immediately on the requisition of the Engineer, and such person shall not again be employed on this work.

6.05 TEMPORARY SUSPENSION OF THE WORK

The Engineer shall have the authority to suspend the work wholly or in part, for such period as he may deem necessary, due to unsuitable weather, or to such other conditions as are

considered unfavorable for the suitable prosecution of the work, or for such time as he may deem necessary due to the failure on the part of the Contractor to carry out orders given, or to perform any provision of the contract. The Contractor shall immediately comply with the written order of the Engineer to suspend the work wholly or in part. The work shall be resumed when conditions are favorable and methods are corrected, as ordered or approved in writing by the Engineer.

6.06 TIME OF COMPLETION AND DAMAGES

The Contractor shall complete the work called for under the contract in all parts and requirements within the number of working days specified in the Special Provisions.

A working day is hereby defined as any day; except Saturdays, Sundays, and legal holidays and days on which the Contractor is specifically required by the Special Provisions to suspend construction operations; on which the Contractor is not prevented by inclement weather or conditions resulting immediately therefrom adverse to the current controlling operation or operations, as determined by the Engineer, from proceeding with at least 60 percent of the normal labor and equipment force engaged in such operation or operations for at least five hours toward completion of such operation or operations.

The Engineer will furnish the Contractor a weekly statement showing the number of working days charged to the contract for the preceding week, the number of working days specified for completion of the contract, and the number of working days remaining to complete the contract. The Contractor will be allowed one week in which to file a written protest setting forth in what respects said weekly statement is incorrect, otherwise the statement shall be deemed to have been accepted by the Contractor as correct.

The following holidays will be considered as legal holidays: New Year's Day; Martin Luther King Jr.'s Birthday, Lincoln's Birthday; Washington's Birthday; Memorial Day; Independence Day; Labor Day; Columbus Day; Veteran's Day; Thanksgiving Day; Christmas; and such other days as are declared holidays by ordinance passed by the Board of Supervisors of Riverside County.

Contractor acknowledges that failure to perform in strict accordance with the Contract Documents and within the time limit specified in the Special Provisions will cause District to suffer special damages in addition to cost of completion of the work in accordance with the provisions of the Contract Documents. Such special damage could include, but is not limited to, lease and rental cost, additional salaries and overhead, interest during construction, attorney expense, additional engineering, inspection expense, cost of maintaining or constructing alternate facilities and injury to the property of the District or others. The daily cost to the District for inspection and superintendence by the District shall be the amount specified in the Special Provisions. The District may withhold from any money due or that may become due the Contractor under the contract, such amount as the District may elect to offset the damages incurred and any withholding or failure to withhold shall not in any way limit recovery for damages actually incurred.

It is further agreed that in case the work called for under the contract is not finished and completed in all parts and requirements within the time specified, the Board of Supervisors shall have the right to extend the time for completion or not, as may seem best to serve the interest of the District, and if it decides to extend the time limit for the completion of the contract, it shall further have the right to charge to the Contractor, his heirs, assigns or sureties and to deduct from the final payment for the work all or any part, as it may deem proper, of the actual cost of engineering, inspection, superintendence, and other overhead expenses which are directly chargeable to the contract, and which accrue during the period of such extension, except that cost of final surveys and preparation of final estimate shall not be included in such charges.

The Contractor shall not be assessed damages nor the cost of engineering and inspection during any delay in the completion of the work caused by acts of God or of the public enemy, acts of the District, encountering unknown utility facilities, fire, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather or delays of subcontractors due to such causes, provided that the Contractor shall notify the Engineer in writing of the causes of delay within ten (10) days from the beginning of any such delay, and his findings of the facts thereon shall be final and conclusive. Contractor shall not be assessed damages for delay in the completion of the project, when such delay was caused by the failure of the District or the owner of the utility facilities.

The term "severe weather" shall be construed to mean only such weather as is unreasonable or extraordinary and in the opinion of the Engineer, the work could not be prosecuted by the Contractor during the period throughout which such weather prevailed.

6.07 DELAYS AND EXTENSION OF TIME

If delays are caused by unforeseen causes beyond the control of either the Contractor or the District, such as war, strikes, fire, floods, or other action of the elements, such delays will entitle the Contractor to an equivalent extension of time for the completion of the contract, but the Contractor shall not be entitled to damages or additional payments over and above the contract price due to delay caused by any of the above-mentioned causes. Furthermore, if the Contractor suffers any delay caused by the failure of the District to furnish the necessary right of way or materials agreed to be furnished by it, or by failure to supply necessary plans or instructions concerning the work to be done after written request therefor has been made, the Contractor shall be entitled to an extension of time equivalent to the time lost for any of the above-mentioned reasons, but shall not be entitled to any damages for such delay.

6.08 ASSIGNMENT

The contract may be assigned only upon written consent of the District. Such written consent to sublet, assign or otherwise dispose of any portion of the contract, shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the contract.

6.09 TERMINATION OF CONTRACT

Subject to all applicable provisions of these specifications and/or the contract to be entered into hereunder, the Engineer is hereby empowered to direct the time and rate of delivery of materials at the site of work and to direct the time, rate and sequence of work. If the Contractor fails to begin delivery of material and equipment or to commence work within the

time specified herein, and/or in the contract, or to maintain the rates of delivery of materials, or to execute the work in the manner and at such locations as directed by the Engineer, or fails to maintain a program of work in such a manner as will, in the judgment of the Engineer inure to interests of the District, or, if in the judgment of the Engineer, the Contractor is not carrying out the provisions of the contract in their true intent and meaning, written notice by the Chief Engineer may be served upon him and the Surety on his faithful performance bond demanding a satisfactory compliance with the contract, and with these specifications. If the Contractor and/or his Surety refuses or neglects to comply with such notice within five (5) days after receiving same, or after commencing so to do, fails to continue so to do, or has assigned or sublet the contract without the consent of the District, then the District may exclude him from the premises and take possession thereof, together with all material and equipment thereon, and may complete the work itself, either by force account or by letting the unfinished portion of the work to another Contractor or by a combination of such methods. In any event, the cost of the completion of said work shall be a charge against the Contractor and his Surety and may be deducted from any money due or becoming due from the District, and if the sums due under the contract are insufficient, said Contractor and/or his Surety shall pay to the District within five (5) days after the completion of the work all of such cost in excess of the contract price.

The Surety, in the event that it assumes part of the work, shall take the Contractor's place in this contract in all respects for that part and shall be paid by the District for all work performed by it in accordance with the terms of this contract. If the Surety assumes the entire contract, all monies remaining due the Contractor at the time of his default shall be made payable to the Surety as the work progresses, subject to the terms of the contract.

SECTION VII - PAYMENT

7.01 SCOPE OF PAYMENTS

The Contractor shall accept compensation, as herein provided, in full payment for furnishing all materials, labor, tools, and equipment necessary to the completed work and for performing all work contemplated and embraced under the contract; also for loss or damage arising from the nature of the work, or from the action of the elements, except as hereinbefore provided, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the Board of Supervisors; and for all risks of description connected with the prosecution of the work, also for all expenses incurred in consequence of the suspension or discontinuance of the work as herein specified; and for completing the work according to the plans and specifications. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material.

7.01A Measurement and Computation of Quantities - All items of the work to be paid for at a contract price per unit of measurement will be measured by the Engineer in accordance with United States Standard Measures. A ton shall mean 2,000 pounds, avoirdupois. Except as otherwise expressly provided in the specifications, the methods of measurement and computation of quantities of such items will be determined by the Engineer, taking into account the price of the item relative to its quantity and the costs of measurement.

The weights of metalwork, pipe, and other metal parts to be paid for by weight will be determined by the Engineer on the basis of handbook weights, scale weights, or manufacturer's

catalog weights, or in the absence of any of the foregoing, on the basis of estimated weights; provided, that weights of nonmetallic coatings will be excluded.

7.01B Payment at Contract Prices - The contract price for an item of the work shall include full compensation for all costs of that item, including the costs of any work, materials and equipment incidental to the item but not specifically shown or described in the drawings and specifications, subject only to such express limitations as may be stated in the specifications defining the item or prescribing payment therefor.

The contract prices shall include full compensation for all costs of any work, materials, and equipment required by the drawings and specifications at the time of contract award, but not covered by a contract price or otherwise expressly made the subject of direct payment.

7.02 PAYMENT AND COMPENSATION FOR ALTERED QUANTITIES

When alterations in plans or quantities of work are ordered and performed, the Contractor shall accept payment in full at the contract unit price for the actual quantities of work done and no allowance will be made for anticipated profits. Increased or decreased work involving supplemental agreements will be paid for as stipulated in such agreements.

7.03 FORCE ACCOUNT PAYMENT

When extra work is to be paid for on a force account basis, compensation will be determined as follows:

7.03A Work Performed by Contractor - The Contractor will be paid for labor, materials, and equipment rental as hereinafter provided, except where agreement has been reached to pay in accordance with Section 7.03B. Only materials incorporated in the work will be paid for.

To the total computed as provided in Sections 7.03A(1), 7.03A(2) and 7.03A(3) will be added the following percentages:

Labor	-	24 percent
Materials	-	15 percent
Equipment Rental	-	15 percent

It is understood labor, materials, and equipment may be furnished by the Contractor or by the subcontractor or by others on behalf of the Contractor.

When extra work paid for on a force account basis is performed by forces other than the Contractor's organization, the Contractor shall reach agreement with such other forces as to the distribution of the payment made by the District for such work and no additional payment therefor will be made by the District.

7.03A(1) Labor - The Contractor will be paid the cost of labor for the workmen (including foremen when authorized by the Engineer), used in the actual and direct performance of the work. The cost of labor, whether the employer is the Contractor, subcontractor, or other forces, will be the sum of the following:

7.03A(1a) Actual Wages - The actual wages paid will be as published by the Director of Industrial Relations of the State of California for the region where work is performed and that are in effect at the time of award of the contract. The classification of workmen used shall not be in excess of the industry standard for the region where work is performed. Copies of the published labor rates are on file at the District office.

7.03A(1b) Labor Surcharge - To the actual wages as defined in Section 7.03A(1a), will be added a labor surcharge set forth in the Special Provisions, which labor surcharge shall constitute full compensation for all payments imposed by State and Federal laws and for all other payments made to, or on behalf of, the workmen, other than actual wages as defined in Section 7.03A(1a) and subsistence and travel allowance as specified in Section 7.03A(1c).

7.03A(1c) Subsistence and travel allowance paid to such workmen as required by collective bargaining agreements.

7.03A(2) Materials - The cost of materials incorporated in the work will be the cost to the purchaser, whether Contractor, subcontractor or other forces, from the supplier thereof, except as the following are applicable:

7.03A(2a) If a cash or trade discount by the actual supplier is offered or available to the purchaser, it shall be credited to the District notwithstanding the fact that such discount may not have been taken.

7.03A(2b) If the materials are procured by the purchaser by any method which is not a direct purchase from and a direct billing by the actual supplier to such purchaser, the cost of such materials shall be deemed to be the price paid to the actual supplier as determined by the Engineer. No markup except for actual costs incurred in the handling of such materials will be permitted.

7.03A(2c) If the materials are obtained from a supply or source owned wholly or in part by the purchaser, payment therefor will not exceed the price paid by the purchaser for similar materials furnished from said source on contract items or on the current wholesale price for such materials delivered to the job site whichever price is lower.

7.03A(2d) If the cost of such materials is, in the opinion of the Engineer, excessive, then the cost of such materials shall be deemed to be the lowest current wholesale price at which such materials are available in the quantities concerned delivered to the job site, less any discounts as provided in Section 7.03(2a).

7.03A(2e) If the Contractor does not furnish satisfactory evidence of the cost of such materials from the actual supplier thereof, the cost shall then be determined in accordance with Section 7.03A(2d).

The District reserves the right to furnish such materials as it deems advisable, and the Contractor shall have no claims for costs and profit on such materials.

7.03A(3) Equipment Rental - The Contractor will be paid for the use of equipment at the rental rates listed for such equipment in the Special Provisions, regardless of ownership and any rental or other agreement, if such may exist, for the use of such equipment entered into by the Contractor. If it is deemed necessary by the Engineer to use equipment not listed in the Special Provisions, a suitable rental rate for such equipment will be established by the Engineer. The Contractor may furnish any cost data which might assist the Engineer in the establishment of such rental rate.

The rental rates paid as above provided shall include the cost of fuel, oil, lubrication, supplies, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

Operators of rented equipment will be paid for as provided under Section 7.03A(1).

All equipment shall, in the opinion of the Engineer, be in good working condition and suitable for the purpose for which the equipment is to be used.

Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

Individual pieces of equipment or tools having a replacement value of \$25.00 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefor.

Rental time will not be allowed while equipment is inoperative due to breakdowns.

In computing the rental time of equipment, less than 30 minutes shall be considered ½ hour.

7.03A(3a) Equipment on the Work - The rental time to be paid for equipment on the work shall be the time the equipment is in operation on the extra work being performed, and in addition, shall include the time required to move the equipment to location of the extra work and return it to the original location or to another location requiring no more time than that required to return it to its original location, except that moving time will not be paid for if the equipment is used at the site of the extra work on other than such extra work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made if the equipment is used at the site of the extra work on other than such extra work.

7.03A(3b) Equipment not on the Work - For the use of equipment moved in on the work and used exclusively for extra work paid for on a force account basis, the Contractor will be paid the rental rates listed in the Special Provisions or as agreed to as provided

in Section 7.03A(3) and for the cost of transporting the equipment to the location of the work and its return to its original location, all in accordance with the following provisions:

(1) The original location of the equipment to be hauled to the location of the work shall be agreed to by the Engineer in advance.

(2) The District will pay the costs of loading and unloading such equipment.

(3) The cost of transporting equipment on low bed trailers shall not exceed the hourly rates charged by established haulers.

(4) The cost of transporting equipment shall not exceed the applicable minimum established rates of the Public Utilities Commission.

(5) The rental period shall begin at the time the equipment is unloaded at the site of the extra work, shall include each day that the equipment is at the site of the extra work, excluding Saturdays, Sundays, and legal holidays unless the extra work is performed on such days, and shall terminate at the end of the day on which the Engineer directs the Contractor to discontinue the use of such equipment. The rental time to be paid per day will be in accordance with the following:

<u>Hours Equipment is in Operation</u>	<u>Hours to be Paid</u>
0.....	4
0.5.....	4.25
1.....	4.5
1.5.....	4.75
2.....	5
2.5.....	5.25
3.....	5.5
3.5.....	5.75
4.....	6
4.5.....	6.25
5.....	6.5
5.5.....	6.75
6.....	7
6.5.....	7.25
7.....	7.5
7.5.....	7.75
8.....	8
Over 8.....	hours in operation

When hourly rates are listed, less than 30 minutes of operation shall be considered to be 1/2 hour of operation.

When daily rates are listed, payment for 1/2 day will be made if the equipment is not used. If the equipment is used, payment will be made for one day.

The minimum rental time to be paid for the entire rental period on an hourly basis shall not be less than 8 hours or if on a daily basis shall not be less than one day.

(6) Should the Contractor desire the return of the equipment to a location other than its original location, the District will pay the cost of transportation in accordance with the above provisions, provided such payment shall not exceed the cost of moving the equipment to the work.

(7) Payment for transporting, loading and unloading equipment, as above provided, will not be made if the equipment is used on the work in any other way than upon extra work paid for on a force account basis.

7.03B Work Performed by Special Forces or Other Special Services - When the Engineer and the Contractor, by agreement, determine that a special service or an item of extra work cannot be performed by the forces of the Contractor or those of any of his subcontractors, such service or extra work item may be performed by a specialist. Invoices for such service or item of extra work on the basis of the current market price thereof may be accepted without complete itemization of labor, material, and equipment rental costs when it is impracticable and not in accordance with the established practice of the special service industry to provide such complete itemization. In those instances wherein a Contractor is required to perform extra work necessitating a fabrication or machining process in a fabrication or machine shop facility away from the job site, the charges for that portion of the extra work performed in such facility may, by agreement, be accepted as a specialist billing.

To the specialist invoice price, less a credit to the District for any cash or trade discount offered or available, whether or not such discount may have been taken, will be added 15 percent in lieu of the percentages provided in Section 7.03A.

7.03C Records - The Contractor shall maintain his records in such a manner as to provide a clear distinction between the direct costs of extra work paid for on a force account basis and the costs of other operations.

The Contractor shall furnish the Engineer report sheets in duplicate of each day's extra work paid for on a force account basis no later than the working day following the performance of said work. The daily report sheets shall itemize the materials used, and shall cover the direct cost of labor and the charges for equipment rental, whether furnished by the Contractor, subcontractor, or other forces, except for charges described in Section 7.03B. The daily report sheets shall provide names or identifications and classifications of workmen, the hourly rate of pay and hours worked, and also the size, type and identification number of equipment, and hours operated.

Material charges shall be substantiated by valid copies of vendor's invoices. Such invoices shall be submitted with the daily report sheets, or if not available, they shall be submitted with subsequent daily report sheets. Should said vendor's invoices not be submitted within 15 days after acceptance of the work, the District reserves the right to establish the cost of such materials at the lowest current wholesale prices at which said materials are available in the quantities concerned delivered to the location of the work, less any discounts provided in Section 7.03A(2a).

Said daily report sheets shall be signed by the Contractor or his authorized agent.

The Engineer will compare his records with the daily report sheets furnished by the Contractor, make any necessary adjustments, and compile the costs of work paid for on a force account basis on daily extra work report forms furnished by the District. When these daily extra work reports are agreed upon and signed by both parties, they shall become the basis of payment for the work performed, but shall not preclude subsequent adjustment based on a later audit.

The Contractor's cost records pertaining to work paid for on a force account basis shall be open to inspection or audit by representatives of the District, during the life of the contract and for a period of not less than 18 months after the date of acceptance thereof, and the Contractor shall retain such records for that period. Where payment for materials or labor is based on the cost thereof to forces other than the Contractor, the Contractor expressly guarantees that the cost records of such other forces shall be open to inspection and audit by representatives of the District on the same terms and conditions as the cost records of the Contractor. If an audit is to be commenced more than 60 days after the acceptance date of the contract, the Contractor will be given a reasonable notice of the time when such audit is to begin.

7.03D - Payment as provided above in Sections 7.03A and 7.03B shall constitute full compensation to the Contractor for performance of work paid for on a force account basis and no additional compensation will be allowed therefor.

7.04 ACCEPTANCE

The work shall be inspected for acceptance by the Engineer promptly upon receipt of notice in writing from the Contractor that the work is ready for such inspection.

The structures will not be finally accepted until the completion of the entire work under the contract.

7.05 DEDUCTIONS FROM PAYMENTS

The Riverside County Flood Control and Water Conservation District, by and through the Board of Supervisors or other appropriate District officer or officers, may at its option and at any time retain out of any amounts due the Contractor sums sufficient to cover any unpaid claims, provided that sworn statements of said claims shall have been filed in the office of the District or in the office of any other District officer or officers having jurisdiction thereover.

7.06 PARTIAL PAYMENTS

On or about the last day of each month, the Engineer shall make an estimate in writing of the total amount of work done by the Contractor to the time of such estimate and the value thereof. The District shall retain 10 percent (10%) of such estimated value of the work done as part security for the fulfillment of the contract by the Contractor, except that at any time after 50 percent (50%) of the work has been completed, if the District finds that satisfactory progress is being made, the District may make any of the remaining progress payments in full for actual work completed during such estimate period or may withhold any amount up to 10 percent (10%) thereof as the District may find appropriate based on the Contractor's progress. At no

time shall the amount retained by the District be less than 5 percent (5%) of the total value of the work completed at the time such payments are made.

After deducting all previous payments and all sums to be kept or retained under the provisions of the contract, the District shall make monthly progress payments to the Contractor. No such estimate or payment shall be required to be made when, in the judgment of the Chief Engineer, the work is not proceeding in accordance with the provisions of the contract.

In accordance with Public Contract Code Section 22300 and other applicable law, the Contractor may substitute securities for any monies withheld to ensure performance under the contract. Such substitution shall be made only upon a separate agreement between the District and the Contractor which contains terms and conditions in compliance with all laws applicable to monies withheld under the contract.

7.07 DELAYED PAYMENTS

All the monies due the Contractor under the contract will be paid by demand on the Treasurer of the District, prepared and approved as required by law, and it is understood that any delay in the preparation, approval and payment of these demands will not constitute a breach of contract on the part of the District.

7.08 FINAL PAYMENT

The Engineer, after the completion of the contract, shall make a final estimate in writing to the Board of Supervisors of the amount of work done thereunder, and the value of such work, and the District shall pay the entire sum so found to be due after deducting therefrom all previous payments and all amounts to be kept and all amounts to be retained under the provisions of the contract. All prior partial estimates and payment shall be subject to correction in the final estimate and payment. The final payment shall not be due and payable until the expiration of forty-five (45) days from the date of acceptance of the work by the Board of Supervisors.

It is mutually agreed between the parties to the contract that no certificate given or payments made under the contract, except the final payment, shall be conclusive evidence of the performance of the contract, either wholly or in part against any claim of the party of the first part, and no payment shall be construed to be an acceptance of any defective work or improper materials.

And the Contractor further agrees that the payment of the final amount due under the contract, and the adjustment and payment for any work done in accordance with any alterations of the same, shall release the Riverside County Flood Control and Water Conservation District, the Board of Supervisors, and the Engineer from any and all claims or liability on account of work performed under the contract or any alteration thereof.

7.09 CLAIMS RESOLUTION

In accordance with Public Contract Code Section 20104 - 20104.6 and other applicable law, public works claims of \$375,000 or less which arise between the Contractor and the District shall be resolved following the statutory procedure unless the District has elected to resolve the dispute pursuant to Public Contract Code § 10240 et seq.

1. All claims shall be submitted in writing and accompanied by substantiating documentation. Claims must be filed on or before the date of final payment unless other notice requirements are provided in the contract. "Claim" means a separate demand by the claimant for (1) a time extension, (2) payment of money or damages arising from work done by or on behalf of the claimant and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled, or (3) an amount the payment of which is disputed by the District.

(a) Claims under \$50,000. The District shall respond in writing to the claim within 45 days of receipt of the claim, or, the District may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the District may have. If additional information is needed thereafter, it shall be provided upon mutual agreement of the District and the claimant. The District's written response shall be submitted 15 days after receiving the additional documentation, or within the same period of time taken by the claimant to produce the additional information, whichever is greater.

(b) Claims over \$50,000 but less than or equal to \$375,000. The District shall respond in writing within 60 days of receipt, or, may request in writing within 30 days of receipt of the claim, any additional documents supporting the claim or relating to defenses or claims the District may have against the claimant. If additional information is needed thereafter, it shall be provided pursuant to mutual agreement between the District and the claimant. The District's response shall be submitted within 30 days after receipt of the further documents, or within the same period of time taken by the claimant to produce the additional information or documents, whichever is greater.

2. If the claimant disputes the District's response, or if the District fails to respond within the statutory time period, the claimant may so notify the District within 15 days of the receipt of the response or the failure to respond, and demand an informal conference to meet and confer for settlement. Upon such demand, the District shall schedule a meet and confer conference within 30 days.

3. If following the meet and confer conference, the claim or any portion thereof remains in dispute, the claimant may file a claim pursuant to Government Code § 900 et seq. and Government Code § 910 et seq. For purposes of those provisions, the time within which a claim must be filed shall be tolled from the time the claimant submits the written claim until the time the claim is denied, including any time utilized for the meet and confer conference.

4. If a civil action is filed to resolve any claim, the provisions of Public Contract Code § 20104.4 shall be followed, providing for nonbinding mediation and judicial arbitration.

SECTION VIII - GENERAL

8.01 COOPERATION BETWEEN CONTRACTORS

The Contractor shall be required to cooperate fully with all utility and public agency representatives engaged in construction, relocation, altering or otherwise rearranging any facilities interfering with the progress of the work.

Full compensation for any delay or inconvenience to the Contractor's operation due to such operations as described above shall be considered included in the unit price paid for other items of work and no additional allowance will be made therefor.

8.02 INSURANCE - HOLD HARMLESS

Contractor shall not commence work under this contract until he has obtained the insurance required hereunder and satisfactory proof of said insurance has been submitted to District and has been approved as to form by Riverside County Counsel.

Compensation Insurance - Contractor shall procure and maintain during the life of the contract Workers' Compensation Insurance as required by the State of California. Contractor shall further require each of its subcontractors to procure Workers' Compensation Insurance as required by the State while working on the project.

Liability Insurance - Contractor shall take out and maintain during the course of the work combined single limit liability insurance covering bodily injury and property damage insurance and blanket contractual coverage as to the work and obligations covered hereunder in an amount not less than \$2,000,000, or the equivalent thereof. Said insurance must contain an endorsement that District, County of Riverside, and any municipal corporation in which the work is to be accomplished, are named as an additional insured as respects the work covered hereunder. Said insurance must not contain, as respects the work covered hereunder, any exclusions as to bodily injury or death or property damage arising out of blasting, explosion, or underground damage to wire, pipes, conduits, mains, sewers, tank tunnels or any similar property, i.e., the so-called "x c u" exclusions. The insurance certificate evidencing such insurance must affirmatively state that the insurance carrier(s) will give Owner thirty (30) days written notice prior to cancellation of the insurance or a reduction in coverage; must state that the "x c u" exclusions are waived or do not exist in the policy(s); and that District, County of Riverside, and any municipal corporation in which the work is to be accomplished, are named as an additional insured as respects the work covered hereunder.

In the alternate to naming Owner and County of Riverside, and any municipal corporation in which the work is to be accomplished, as additional insured, Contractor may take out and maintain during the course of the work and until acceptance by Owner, Owner's Protective Liability Insurance amount not less than \$2,000,000 covering District, County of Riverside, and any municipal corporation in which the work is to be accomplished.

The cost of this insurance shall be included in the prices bid for the various items of work and no additional compensation will be made therefor.

Hold Harmless - Contractor shall hold District, County of Riverside and any municipal corporation in which the work is to be accomplished, together with the officers, agents and employees of each, free and harmless from any liability whatsoever, including wrongful death, based or asserted upon any act or omission of Contractor, its officers, agents, employees or subcontractors, relating to or in any way connected with or arising from the accomplishment of the work, whether or not in furtherance of the work; and Contractor agrees to protect and defend, including all attorney fees and other expenses, each of the foregoing bodies and persons in any legal action based or asserted upon any such acts or omissions.

Obligations - The obligations assumed by Contractor cover all obligations set forth in this Subsection and elsewhere in the Contract Documents, such as Subsections 5.01, 5.02, 5.05, 5.06, 5.08, 5.09, 5.10, 10.01, and 10.02.

8.03 PUBLIC UTILITIES

The locations of all pipelines, power lines, communication lines and other utility components known to District to exist within the limits of the work, are indicated on the drawings and may be the subject of a specific Special Provision(s). Size, location and characteristics of such utilities is based upon information made available to District - primarily from the owner of the utility in question. The exactness of such information is not guaranteed but may be assumed to have been accomplished with reasonable accuracy.

In addition to the drawings and any such provision regarding utilities, Contractor is under a duty to take into account the location of service laterals or other appurtenances which can be inferred from the presence of facilities such as buildings, meters and junction boxes in or about the limits of the work.

Unless otherwise directed by the Contract Documents, all existing utilities - where shown or described or not - shall be left in place and Contractor must conduct its operations so that such utilities are protected from damage at all times during the course of the work and the work must be accomplished so as to give such utilities proper protection and support upon completion of the work by Contractor.

If during the course of the work, Contractor discovers underground utility components not indicated in the drawings, the Special Provisions or elsewhere in the Contract Documents, Contractor must immediately notify, in writing, the Engineer and the utility company (public or private) involved, stating with exactness the condition found.

When Contractor encounters a utility not shown or described in the Contract Documents, Contractor shall cease all work which would disturb such utility and its support until given specific instructions as to how to proceed regarding such utility by Engineer. All work done by Contractor to protect existing utilities shown or described in the Contract Documents, or which can be reasonably inferred from the presence of other visible facilities, is at Contractor's expense, the cost of which is deemed included in Contractor's Proposal to do the work.

Contractor's cost of locating, repairing damage not due to the failure of Contractor to exercise reasonable care, and removing or relocating utility components and facilities not indicated in the drawings, specifications or elsewhere in the Contract Documents with reasonable accuracy, shall be paid Contractor as Extra Work as provided in Subsection 2.07 and Subsection 7.03 of the General Provisions. Compensation for idle time of equipment shall be paid as provided in Section 8-1.09, "Right of Way Delays", of the State Standard Specifications. No surcharge rates for equipment will be applied for idled equipment.

District may direct the Contractor to do such repair or relocation work as required. When such repair or relocation work is not elsewhere provided for in these Contract Documents, or reasonably inferred therefrom, a requirement of District that Contractor perform such work shall be compensated for as Extra Work pursuant to Subsections 2.07 and 7.03 of these General Provisions.

Contractor shall not be assessed liquidated damages for delay in completion of the project, if such delay is caused by failure of District, or the owner of the utility in question, to provide for removal or relocation of the utility involved.

8.04 PROTECTION OF EXISTING STREET FACILITIES

The Contractor shall be responsible for the protection of existing signs, fences, concrete curbs, gutters and other facilities which may be encountered. The replacement or repair of any facilities which the District deems necessary as a result of the Contractor's operations shall be done by the Contractor at his own expense and to the satisfaction of the Engineer.

Excavation within the street right of way shall be conducted in a manner to cause the least interruption to traffic. Where traffic must cross open trenches, the Contractor shall provide suitable bridges at street intersections and driveways. Hydrants under pressure, valve pipe covers, valve boxes, curb stop boxes, fire or police call boxes, or other utility controls shall be left unobstructed and accessible during construction.

8.05 DIVERSION AND CONTROL OF WATER

Unless otherwise provided in the Proposal, no separate payment will be made for diversion and control of surface or groundwater. All costs incidental to maintaining dry working areas shall be included in the unit prices paid for other items of work in the schedule.

8.06 DUST ABATEMENT

During the performance of all work included in the contract, the Contractor shall take the necessary precautions to save the District free and harmless from any loss or damage resulting from his operations that raise or produce dust in such amounts that will be objectionable, and/or cause damage to adjacent property or property owners.

The Contractor will be required to have a positive and continuous method of dust control which is satisfactory to the Engineer. The methods to be used for controlling dust in the

construction area and along haul roads shall be approved by the Engineer prior to starting any of the work included in the contract. All costs incidental to dust control shall be included in the unit prices paid for other items of work in the schedule.

8.07 PROJECT SIGNS

The Contractor shall erect project signs at the locations designated by the Engineer.

No separate payment will be made for erecting the project signs and all costs in connection therewith will be considered a subsidiary obligation of the Contractor.

8.08 EXAMINATION OF PLANS, SPECIFICATIONS, CONTRACT, AND SITE OF WORK

The bidder shall examine carefully the site of the work contemplated, the plans and specifications, and the proposal and contract forms therefor. The submission of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of work to be performed, the quantities of materials to be furnished, and as to the requirements of the proposal, plans, specifications, and the contract.

Where the District has made investigations of subsurface conditions in areas where work is to be performed under the contract, or in other areas, some of which may constitute possible local material sources, such investigations are made only for the purpose of study and design. Where such investigations have been made, bidders or Contractors may, upon request, inspect the records of the District as to such investigations subject to and upon the conditions hereinafter set forth. Such inspection of records may be made at the office of the District.

The records of such investigations are not a part of the contract and are shown solely for the convenience of the bidder or Contractor. It is expressly understood and agreed that the District assumes no responsibility whatsoever in respect to the sufficiency or accuracy of the investigations thus made, the records thereof, or of the interpretations set forth therein or made by the District in its use thereof and there is no warranty or guarantee, either expressed or implied, that the conditions indicated by such investigations or records thereof are representative of those existing throughout such areas, or any part thereof, or that unlooked-for developments may not occur, or that materials other than, or in proportions different from those indicated, may not be encountered.

When a log of test borings showing a record of the data obtained by the District's investigation or subsurface conditions is included with the contract plans, it is expressly understood and agreed that said log of test borings does not constitute a part of the contract, represents only the opinion of the District as to the character of the materials encountered by it in its test borings, is included in the plans only for the convenience of bidders and its use is subject to all of the conditions and limitations set forth in this Section 8.08.

No information derived from such inspection of records of investigations or compilation thereof made by the District or from the Engineer, or his assistants, will in any way relieve the bidder or Contractor from any risk or from properly fulfilling the terms of the contract.

SECTION IX - WATERING

9.01 DESCRIPTION

This work shall consist of developing a water supply for all water required for the work. The application of the water shall be under the control of the Engineer at all times and shall be applied in the amounts and at the locations approved by the Engineer.

At least one mobile unit of at least 1,000-gallon capacity for applying water shall be available on the project at all times.

Water for compacting embankment material and for laying dust shall be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses with nozzles that will ensure a uniform application of water.

No separate payment or additional allowances will be made for this work and all costs in connection therewith will be considered as included in other items in the schedule.

SECTION X - PUBLIC CONVENIENCE, TRAFFIC CONTROL AND DETOURS

10.01 GENERAL

The Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to the public and he shall have under construction no greater length or amount of work than he can prosecute properly with due regard to the rights of the public.

Unless otherwise provided in the Special Provisions, all public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible.

Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately at the Contractor's expense.

Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to abutting property owners.

Convenient access to driveways, houses and buildings along the line of work shall be maintained and temporary approaches to crossings or intersecting highways shall be provided and kept in good condition.

10.02 SIGNS

It shall be the responsibility of the Contractor to provide and maintain all lights, barricades and signs, both on and off the site of work, as required by the Engineer, and all such devices shall be of a type approved by him.

If, in any case, the Engineer finds it necessary to replace, add to or erect said barricades, signs, or lights, when the Contractor fails to do so when informed, the Contractor shall be billed for all costs thereof including a daily rental fee for signs.

No separate payment, unless otherwise provided for under the Special Provisions, will be made for traffic control and detour signing and all costs incidental to these items shall be included in the unit prices paid for other items of work.

10.03 MATERIALS STORAGE

Storing or stockpiling of excavated material, imported backfill material or construction materials on any street or highway will not be permitted except as approved in writing by the Engineer.

SPECIAL PROVISIONS
AND
DETAILED SPECIFICATIONS



SPECIAL PROVISIONS

SECTION 1 - GENERAL

1.1 Drawings and Specifications - These documents are for the construction of **Day Creek Channel, Stage 6 Phase 2**, located in the city of Jurupa Valley, Riverside County, California. This work shall conform with the contract drawings indexed on the cover sheet of the drawings included herewith.

Referenced standard drawings are available on the District web site.

The Contractor shall copy any of the referenced District standard drawings from <http://www.rcflood.org>.

The Contractor shall be responsible to obtain referenced standard plans/drawings of various agencies from their respective office or web site.

References made in these Special Provisions or Detailed Specifications to the "Standard Specifications" refer to the "Greenbook" Standard Specifications for Public Works Construction, current edition, including supplements. Standard Specifications of the American Society for Testing and Materials shall be designated by ASTM and the appropriate number of the standard. Unless otherwise specified, wherever the words "State Standard Specifications" are used in these Special Provisions or Detailed Specifications they shall mean the Standard Specifications of the State of California, Department of Transportation, 2006 edition. Whenever the words "Caltrans Standards" are used they shall mean the Standard Plans of the State of California, Department of Transportation, 2006 edition.

In the event that discrepancies are encountered, the option that provides the method, item or material with the greatest strength or utility shall be chosen, as directed by the Engineer.

Requirements on the construction plans for Portland Cement Concrete are modified to the PCC Class designations, as described in Section 90-1.01 of the 2006 State Standard Specifications, as follows:

Class "A" shall mean Class "2"

Class "B" shall mean Class "3"

Class "C" shall mean Class "4"

Class "D" shall mean Class "1"

In case of conflict between the drawings and the specifications, the drawings shall govern; in case of conflict between the referenced specifications and these specifications, the latter shall govern.

SECTION 2 - TIME OF COMPLETION, DAMAGES AND
LEGAL HOLIDAYS

2.1 General - The Contractor shall begin work within ten (10) calendar days after the date of receipt of Notice to Proceed from the Engineer and shall diligently prosecute the same to completion before the expiration of

TWO HUNDRED FIFTY (250) WORKING DAYS

from the date of receipt of Notice to Proceed.

2.2 Damages - The Contractor and the District expressly agree that the cost to the District for inspection and superintendence of the work for this contract is \$800.00 per working day.

2.3 Legal Holidays - The Contractor will not be permitted to work on Legal Holidays (Reference Sections 6.02 and 6.06 of the General Provisions), except in cases of emergency as directed by the Engineer.

SECTION 3 - FORCE ACCOUNT PAYMENT

3.1 Labor Surcharge - Attention is directed to the provisions of Section VII, Article 7.03A (1b) of the General Provisions. The labor surcharge percentage to be applied to the actual wages paid as defined in Paragraph 7.03A (1a) will be twenty-four percent (24%).

3.2 Equipment Rental - Attention is directed to the provisions of Section VII, Article 7.03A (3) of the General Provisions. The equipment rental rates to be applied will be the rates published by the California Department of Transportation and in effect at the time of the award of the contract. A copy of said Equipment Rental Rates is on file at the District Office.

SECTION 4 - PROTECTION OF EXISTING UTILITIES

4.1 General - All existing underground utility lines, power poles and overhead wiring shall be protected in place at all times, except as noted otherwise on the plans. Any damage to utilities caused by the Contractor's operation shall be repaired or replaced at the Contractor's expense.

Prior to the commencement of any construction activities, the Contractor shall contact all utility companies and local municipalities servicing the project area to review as-built utility drawings and determine appropriate means of protecting utilities.

At the discretion of the Engineer, the Contractor may be required to verify, by potholing, the location of potentially affected utilities.

4.2 Cooperation with Utilities Relocated by Others - Some utilities will require relocation by others prior to or during construction as shown on the drawings and as specified in these specifications and Special Provisions.

Supplement to Section 8.01 of the General Provisions. The Contractor shall coordinate and cooperate with the various utilities or their contractors to ensure the work proceeds in an orderly manner.

The Contractor shall stage his work as required to accommodate the following utility construction or relocations:

- (a) Southern California Edison – There is one power pole (Number 4526837E) located near Station 31+89 (Sheet No. 3) to be relocated by Southern California Edison.

Contact Person: Mr. Orestes Bohorques
Southern California Edison
7951 Redwood Avenue
Fontana, CA 92336
909.357.6109

- (b) AT&T California – There is one telephone pole (Number 4178054E) located near Station 31+89 (Sheet No. 3) to be relocated by AT&T California.

Contact Person: Mr. Lee Corby
3073 Adams Street, 2nd Floor
Riverside, CA 92504
951.359.2255

- (c) The Gas Company – There is an existing 2" gas line near Station 41+27 (Sheet No. 4).

Contact Person: Ms. Teresa Roblero
The Gas Company
Post Office Box 3003
Redlands, CA 92373
909.335.7776

- (d) Goose Creek Golf Club – The following utilities will be relocated by Goose Creek Golf Club during construction:

1. A buried 3" force main sewer line, Sheet No. 3;
2. A 2" potable waterline;
3. A buried 8" irrigation mainline;
4. A buried 2" irrigation communication line; and
5. A buried 2" irrigation low voltage power line.

Contact Person: Mr. Ross Fisher
Goose Creek Golf Club
11418 68th Street
Jurupa Valley, CA 91752
951.735.3982

Should any utility relocation result in delays to the Contractor's work schedule, the Contractor shall be entitled only to an equivalent extension of time for the completion of the contract, and shall not be entitled to damages due to downtime and idled equipment or additional payment over and above the agreed upon contract unit prices.

SECTION 5 - PROJECT SITE MAINTENANCE

Through all phases of construction, the Contractor shall comply with the provisions of Section 7-8 of the Standard Specifications. Before final acceptance of the work, the Contractor shall clean the work and the site of the work of all falsework, temporary structures, other construction materials and equipment, excess materials and rubbish, and shall leave the work and the site in a neat and presentable condition. Such final cleanup work shall be performed within the time specified for completion of all of the work.

SECTION 6 - SPECIAL REQUIREMENTS

6.1 National Pollutant Discharge Elimination System (NPDES) – The Contractor shall comply with the requirements of Board Order No. R8-2010-0033 (NPDES No. CAS618033), NPDES Area-Wide Municipal Stormwater Permit, hereafter referred to in this Section as the "Permit", issued by the California Regional Water Quality Control Board (CRWQCB) – Santa Ana Region. This Permit regulates both stormwater and non-stormwater discharges associated with Contractor's construction activities. The Contractor shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) in accordance with Section 29 "Stormwater and Non-Stormwater Pollution Control" of the Detailed Specifications.

The Contractor's attention is directed to: 1) Section 29.2 "General Requirements" which allows the Engineer to withhold progress payments if the Contractor fails to fully implement Section 29 "Stormwater and Non-Stormwater Pollution Control" or is deemed to be in non-compliance with the provisions of the Permit; 2) Section 29.3 "PRDs Preparation and Approval" which requires that the PRDs be prepared and approved prior to the Pre-Construction meeting; and 3) Section 29.6 "SWPPP Implementation" which allows the Engineer to suspend construction operations if the Contractor fails to implement the approved SWPPP and any amendments thereto.

6.2 Sanitation - Sewage flows shall not be interrupted. Should the Contractor disrupt existing sewer facilities, sewage shall be conveyed in closed conduits and disposed of in a sanitary sewer system. If pumping is required it shall be done at the expense of the Contractor. A backup pumping system with equal capacity shall be provided at all times. Sewage shall not be permitted to flow in trenches or be covered by backfill.

6.3 Confined Space Compliance - The Contractor shall comply with all Cal/OSHA safety regulations including regulations concerning confined space and for maintaining a safe working environment for Contractor and District employees on the site. The Contractor shall develop and maintain a confined space procedure specific to this contract that complies with the requirements contained in California Code of Regulations, Title 8, Section 5158, Other Confined Space

Operations and the District Confined Space Procedure, SOM-18. A copy of SOM-18 can be obtained from the District office, 1995 Market Street, Riverside upon request.

Within five (5) days after the award of the contract, the Contractor shall submit three (3) copies of the procedure to the Engineer for review and approval. The Contractor shall allow five (5) working days for the Engineer to review the procedure. If revisions are required as determined by the Engineer, the Contractor shall revise and resubmit the procedure within three (3) working days of receipt of the Engineer's comments and shall allow four (4) working days for the Engineer to review the revisions. The Contractor must submit three (3) copies of the approved procedure to the Engineer prior to the pre-construction meeting.

The procedure shall provide for recording of data to develop a history of acceptable atmosphere within the confined space. That history will include:

1. Daily calibration of a direct reading confined space meter by trained personnel.
2. Daily monitoring and recording of the confined space atmosphere with a calibrated direct reading confined space meter.
3. Records of Items 1 and 2 shall be maintained onsite and copies given to the Engineer.
4. The records shall indicate if readings are of natural or mechanically enhanced ventilation.

In addition, the procedure shall include daily tours of the job site with the Engineer to ensure inlets to the confined space are free of obstruction or substances that might affect the atmosphere of the confined space.

The Contractor will be required to keep a direct reading confined space meter onsite for the duration of the contract. The meter shall be calibrated daily and shall be made available for the Engineer's use upon request.

6.4 Heavy Equipment Working Hours - To minimize potential noise impacts near residences, heavy construction equipment use shall not occur beyond the hours of 7:00 a.m. – 5:00 p.m. on normal working days, unless otherwise approved by the Engineer.

6.5 Encroachment Permits – The Contractor is required to obtain an encroachment permit from the City of Jurupa Valley for work within City right of way. The City of Jurupa Valley will not require the Contractor to pay a fee for the encroachment permit. A copy of the encroachment permit shall be provided to the Engineer prior to commencement of work.

6.6 Toxic Material Disposal - Toxic materials including oil, fuel oil, gasoline, coolant, fluid filters and other contaminants shall not be discharged within the project site. All such materials shall be transported offsite and disposed of at a County approved facility.

6.7 Fire Hazards – The Contractor shall minimize the potential for human-caused wildfires. If any work is conducted adjacent to flammable vegetation, appropriate fire-fighting equipment (e.g. extinguishers, shovels, and water trucks) shall be available onsite. Shields, protective mats, and/or other fire preventative methods shall be used during grinding, welding and other spark-inducing activities.

6.8 Survey Crew - The Contractor shall notify the Engineer in writing at least 48 hours prior to new construction staking.

Survey Crews will be available Monday through Thursday from 7:00 a.m. to 3:30 p.m., with a half-hour off for lunch. If the Contractor requires the Survey Crew to work beyond the specified time mentioned above, it shall be considered as overtime and shall be paid by the Contractor at 1.5 times the Survey Crew's hourly rates.

6.9 Survey Monuments - The Contractor shall salvage and give to the District all survey monuments and wells removed during construction. The District will reset monuments after construction.

6.10 Job Trailer Site - The Contractor is required to provide a site and install an office trailer for District personnel. This trailer shall be in good condition and located in a place acceptable to the District. The trailer shall be for the sole use of the District and shall not be used by the Contractor for any activity, including storage. The Contractor shall make provisions for the privacy and security of the office, and provide air conditioning, drinking water and electrical service. The Contractor shall also provide two office chairs and a desk suitable for reviewing plans. The Contractor shall pay the monthly billings for these services. The trailer shall be fully operational and available to District personnel on the first day of work. Should the trailer or office not be available and in working condition, it is agreed by both parties at the time of entering this contract that damages in the amount of \$3,000 per month shall be assessed. It is agreed that this amount may be prorated and shall be deducted from the first contract payment and any successive payments covering any period that the facilities are unavailable.

6.11 Construction Tolerances – Variation in alignment, grade and dimensions of the structures and structural components from the established alignment, grade and dimensions shown on the drawings shall be within the tolerances specified in the following:

Table A – Tolerances for Grading Unlined Channels, Levees and Access Roads		
Departure from established alignment		2 inches on tangents 4 inches on curves
Departure from established profile grade	Channel bottoms, channel sideslopes in cut and fill, levee and access road sideslopes in cut	Zero <u>above</u> and 3 inches <u>below</u> the specified grade
	Top surfaces of levees and access roads in both cut and fill, levee and access road sideslopes in fill	Zero <u>below</u> and 3 inches <u>above</u> the specified grade

Regardless of the construction tolerances specified, the excavation and grading shall be performed so that the finished surfaces are in uniform planes with no abrupt breaks in the surface.

Departure from established alignment		2 inches on tangents 4 inches on curves
Departure from established profile grade		1 inch
Variation in thickness of lining, sideslopes and invert		5 percent of specified thickness provided average thickness is maintained
Variation from specified width of section at any height		0.0025 times specified width W plus 1 inch. 0.0025W + 1 inch
Variation from specified height of lining		0.005 times specified height H plus 1 inch. 0.005H + 1 inch
Variation in surfaces (gradual)	Invert Sideslopes	¼ inch in 10 feet ½ inch in 10 feet
Variation in surfaces (abrupt)		¼ inch

Gradual Variation tolerance shall be measured by placing a 10-foot straightedge anywhere on the finished concrete structure within 72 hours after concrete placement. The gap at any point between the straightedge and the concrete shall not exceed the specified amount.

Departure from established alignment		1 inch on tangents 2 inches on curves
Departure from established profile grade		1 inch
Inside dimensions		0.005 times specified dimension
Variation from the plumb or the specified batter in the lines and surfaces of walls, piers and in arises	Exposed, in 10 feet Backfilled, in 10 feet	½ inch 1 inch
Variation in cross-sectional dimensions		Minus ¼ inch Plus ½ inch
Variation in surfaces (gradual)	Invert Soffits, Walls, Sideslopes	¼ inch in 10 feet ½ inch in 10 feet
Variation in surfaces (abrupt)		¼ inch

Variance from indicated position	Spacing between adjacent bars and the distance between layers of bars	one bar diameter nor more than one inch
Concrete cover measured perpendicular to steel in the direction of tolerance		¼ inch

6.12 Surplus Excavated Material - Any stockpiling, grading or disposal of material outside of the project limits is not covered under the District's permits and is the sole responsibility of the Contractor. Regulatory permits that may be required include, but are not limited to, Federal Clean Water Act (Sections 401 and 404), California Fish and Game Code (Section 1602) and Federal/State Endangered Species Acts. All costs to obtain these Regulatory Permits shall be borne by the Contractor.

6.13 Sewer Line Inspection - Prior to the commencement of construction, the Contractor is required to video record all sewer mains (8" diameter and larger) within the project limits. Additionally, the Contractor shall video record the sewer mains after the backfilling of the storm drain has been completed. All costs associated with this requirement shall be included in the contract price bid for Clearing and Miscellaneous Work. The Contractor is required to replace and/or repair at his own expense, any sewers damaged or misaligned as a result of his construction activities.

6.14 Pipe Order Notification - The Contractor shall submit to the District the invoice from the pipe company stating, (1) pipe order date, (2) pipe quantity, and (3) estimated date of pipe delivery within five (5) calendar days of the award of the contract.

6.15 Project Signs - Supplementing Section 8.07 of the General Provisions, the Contractor shall be required to provide two new project signs. The Contractor shall install and maintain the project signs at locations specified by the Engineer, with painting and lettering as shown in Appendix "B" of these Special Provisions. The signs shall be installed as directed by the Engineer within five (5) days after District issuance of the Notice to Proceed. Upon completion of construction, the signs shall be removed.

6.16 Liability Insurance - The Contractor's attention is directed to Section 8.02, Insurance Hold Harmless, of the General Provisions. The City of Jurupa Valley and Riverside County Transportation Department shall also be named as additional insured with the liability insurance coverage required to be maintained by the Contractor.

6.17 Accidental Discovery - In the event that any hazardous materials, historical, archaeological, or paleontological resources are accidentally discovered within project limits, the Contractor shall immediately cease all construction or ground disturbance activity in the vicinity of find and notify the Engineer. District will provide the appropriate professional to assess the significance of the discovery and, if necessary, develop appropriate management and treatment measures. **The Contractor shall not resume construction in the affected area without Engineer's approval.**

Should any of the above mentioned discoveries result in delays to the Contractor's work schedule, the Contractor shall be entitled only to an equivalent extension of time for the completion of the contract, and shall not be entitled to damages due to down-time and idle equipment or additional payments over and above the agreed upon contract prices.

6.18 Accidental Cultural Resource and Hazardous Materials Discovery – In the event that any hazardous materials, historical, archaeological, or paleontological resources are uncovered within the project limits, the Contractor shall immediately cease all construction or ground disturbance activity in the vicinity of the find and notify the Engineer. The District will provide the appropriate professional to assess the significance of the discovery, notify the necessary agencies and, if necessary, develop appropriate management and treatment measures. The Contractor's attention is directed to Appendix "D" Section 404 Permit General Condition 3, and Cultural Resources Condition 1, which would require the District to notify and coordinate with the U.S. Army Corps of Engineers regarding certain cultural resource discoveries, if they occur during construction. **The Contractor shall not resume construction in the affected area until the District has notified the necessary agencies and the Engineer has approved resumption of construction.**

Should any of the above mentioned discoveries result in delays to the Contractor's work schedule, the Contractor shall be entitled only to an equivalent extension of time for the completion of the contract, and shall not be entitled to damages due to down-time and idle equipment or additional payments over and above the agreed upon contract prices.

6.19 Clean Water Act Section 404 Permit – A Clean Water Act Section 404 Permit has been issued to the District by the U.S. Army Corps of Engineers. The Contractor's attention is directed to Section 6.18 of these specifications regarding cultural resource discoveries. The Contractor's attention is also directed to Section 404 permit Special Condition 7. The Contractor's work shall not extend beyond the Corps' approved construction footprint unless the Contractor provides all necessary regulatory permits (e.g. Sections 404, 401, 1602, Endangered Species Act) for such work. The Contractor shall be responsible for all costs and any liability imposed by law as a result of the Contractor's failure to comply with the above conditions. The permit conditions pertaining to compensatory mitigation and reporting will be the responsibility of the District. A copy of the Section 404 Permit is included in Appendix "D" of these specifications.

6.20 Clean Water Act Section 401 Water Quality Certification Waiver – A Section 401 Water Quality Certification has been issued to the District by the Santa Ana Regional Water Quality Control Board. The Section 401 Water Quality Certification requires the District to comply with NPDES requirements by incorporating necessary stormwater pollution prevention BMPs. The Contractor's attention is directed to Section 29 of these specifications regarding Stormwater and Non-Stormwater Pollution Control provisions. A copy of the Section 401 Certification is included in Appendix "E" of these specifications.

6.21 Federal Endangered Species Act Section 7 Consultation – The U.S. Fish and Wildlife Service (USFWS) has completed a formal Endangered Species Act Section 7 consultation with the U.S. Army Corps of Engineers. The USFWS biological opinion requires the District to conduct a burrowing owl survey within thirty (30) days prior to ground disturbance. The District will complete the burrowing owl survey prior to authorizing the Contractor to proceed with ground disturbing activities. The Contractor's attention is directed to Section 6.23 regarding the Burrowing Owl Pre-Construction Survey. A copy of the USFWS biological opinion is included in Appendix "F" of these specifications.

6.22 California Fish and Game Code Section 1602 – The California Department of Fish and Game (CDFG) authorized the District to proceed with the project by issuing an operation of law letter based on the District's Section 1602 Streambed Alteration Agreement (SAA) Application. As required by the CDFG Letter, the Contractor shall, at all times, keep a copy of the CDFG Letter, SAA Application and its attachments at the project site. A copy of the CDFG Letter and the District's application package are included in Appendix "G" of these Specifications.

6.23 Burrowing Owl Pre-Construction Survey – The District must conduct a burrowing owl survey within thirty (30) days prior to clearing or ground disturbance. Burrowing owls are not known to currently occupy the project area, and there is low potential for burrowing owls. The prior burrowing owl survey report (Dudek, May 28, 2008) is available for review at the District upon request. In addition, the District completed a burrowing owl survey of the project area downstream of Lucretia Avenue on October 13, 2011, and the results were negative.

Prior to any clearing or soil disturbance activities by the Contractor, the District will conduct a pre-construction presence/absence survey for burrowing owls. Once the District determines that the burrowing owl is absent from the project site, the Contractor shall begin construction within thirty (30) days of said determination or notify the Engineer that another pre-construction survey is needed. If burrowing owl(s) is found within the project site, the Contractor shall not conduct any construction activities within 250 feet of occupied burrows during the breeding season (February 1st through August 31st). Any burrowing owls found within the project site that cannot be avoided will be relocated by the District during non-breeding season (September 1st through January 31st).

Should burrowing owls result in delays to the Contractor's work schedule, the Contractor shall be entitled only to an equivalent extension of time for the completion of the contract, and shall not be entitled to damages due to down-time and idle equipment or additional payments over and above the agreed upon contract prices.

SECTION 7 - SOILS REPORT

In conjunction with the soils investigation report prepared by C.H.J., Incorporated dated January 2006, the Contractor's attention is directed to Article 8.08 of the General Provisions. The logs of the soil borings for this report are included for the convenience of the bidders, in conformance with Section 8.08 of the General Provisions, as Appendix "C" of these specifications. The soils report is on file in the District office, 1995 Market Street, Riverside and is available for review upon request.

SECTION 8 - NOT USED

SECTION 9 - PAYMENT

The contract prices shall include full compensation for all costs incurred under these Special Provisions and Detailed Specifications.

DETAILED SPECIFICATIONS

SECTION 10 - MOBILIZATION

10.1 Description - The contract item Mobilization shall consist of expenditures for all preparatory work and operations, including but not limited to, those costs necessary for the movement of personnel, equipment, supplies and incidentals to the project site; for the establishment of all offices, buildings, construction yards and other facilities necessary for work on the project; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site as well as the related demobilization costs anticipated at the completion of the project.

10.2 Payment - The amount credited for Mobilization on each monthly progress payment shall be equal to the total of the amounts credited for work on all the other contract items for that monthly progress payment, up to a cumulative limit of eighty percent (80%) of the lump sum price bid for Mobilization. The remaining twenty percent (20%) of the lump sum price bid for Mobilization will be paid with the final payment.

Payment of the lump sum contract price for Mobilization shall constitute full compensation for all labor, materials, equipment, and all other items necessary and incidental to completion of this item of work.

The deletion of work or the addition of extra work as provided for herein shall not affect the price paid for Mobilization.

SECTION 11 - WATER CONTROL

11.1 Description - This section covers the contract item Water Control. Watersheds and/or urban runoff areas are tributary to the project site at various locations, and follow the alignment of the project under current conditions. Surface water in varying quantities unrelated to rainfall events can be expected at any time of the year, and substantial runoff can be expected during periods of rainfall. Groundwater was indicated at the time of the soils investigation for this project. All bidders shall make their own determination regarding what the surface and/or groundwater conditions will be at the time of construction, and their impact on the bidder's operations and construction phasing.

11.2 Water Control - The contract item Water Control includes the control and/or diversion of surface runoff as well as groundwater within the work area as required to complete the work. All work shall be carried on in areas free of water. Care should be exercised so that runoff or diversion flows do not erode, undermine or otherwise damage either facilities which have been constructed or adjacent private properties. The responsibility for the protection of all existing and proposed improvements lies with the Contractor.

11.3 Measurement and Payment - The methods of controlling both surface and groundwater will be the responsibility of the Contractor. The contract lump sum price paid for Water Control shall include full compensation for all direct and indirect costs incurred under this section, and

for doing all the work involved in controlling surface runoff and groundwater within the construction area, as specified in these Detailed Specifications, and as directed by the Engineer.

Payment will be made on a basis of the percentage of the work completed on the entire project.

SECTION 12 - TRAFFIC CONTROL

12.1 Description - The contract item Traffic Control shall include labor, flagmen, lights, barricades, signs, materials, temporary bridges and equipment necessary to ensure that the vehicular and pedestrian traffic conforms to requirements as set forth in this section and as shown on the drawings.

12.2 Notification of Agencies - The Contractor shall notify the following agencies a minimum of 48 hours in advance of start of any street work and inform them of the proposed construction schedule and provide any additional pertinent information they may request:

Riverside County Transportation Department	951.955.6800
Riverside County Sheriff's Department (Jurupa Valley Office)	951.955.2600
City of Jurupa Valley Public Works	951.332.6464
Southern California Edison (Orestes Bohorques)	909.357.6109
The Gas Company (Teresa Roblero)	909.335.7716
AT&T California (Lee Corby)	951.359.2255
United States Postal Service	800.275.8777
Riverside Transit Agency	951.565.5002
Burrtec Waste Industries, Inc.	951.786.0639
Santa Ana River Water Company (Arnold Rodriquez)	951.685.6503
Jurupa Unified School District	951.360.4100
Cal Fire/Riverside County Fire Department	951.940.6910
Jurupa Community Services District	951.685.7434
Underground Service Alert	800.227.2600

The Contractor is not relieved of his responsibility of notifying the various departments and agencies mentioned above, even if their telephone numbers may have changed without notice.

The above agencies shall also be advised by the Contractor of any major change in the construction schedule that could restrict pedestrian or vehicular traffic.

The Contractor shall notify the public a minimum of ten (10) working days prior to start of road closure. The Contractor is also required to notify, in writing, the following as applicable: Fire Department, Sheriff, CHP, local newspaper, Trash pickup, School Districts, RTA, Post Master, UPS, Colleges, Local businesses, Local residents, State and local agencies involved, if affected.

12.3 Public Convenience and Access - The Contractor shall comply with the requirements of Section X of the General Provisions and shall provide continuous access to all private property. Additional provisions shall be made as necessary to protect the public and accommodate traffic with a minimum of inconvenience.

Closures or partial closures of the traveled way implemented by the Contractor shall be related to actual work being performed at the time. Closures shall not be maintained if work is not being performed. If the existing closure is not essential to the type of work being performed at the time, the traveled way shall immediately be restored to a safe condition for public use.

The Contractor shall provide temporary bridge crossings for all driveway entrances to be closed to vehicular access for any period exceeding 4 hours.

Temporary bridges shall have a minimum width of 12 feet for residential driveways and 24 feet for business driveways, and shall be designed for an AASHTO H20 truck loading. Steel plates placed over the trench shall have a minimum thickness of 1.25" and the surface shall be roughened or coated to provide a non-skid surface. For spans greater than 4 feet, a structural design shall be prepared by a Registered Civil Engineer and submitted to the District for review and approval.

The Contractor shall notify each resident in writing 3 days in advance of excavating past the affected driveway entrance. Such notice shall contain the expected day and period of time (not to exceed 4 hours) that the driveway is to be out of service. A copy of each letter shall be submitted to the Engineer.

12.4 Construction Signs and Traffic Control Plans - All construction signs, barricades, delineators, etc., shall conform with the U.S. Department of Transportation, Federal Highway Administration, "Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), Part 6, latest edition", and the MUTCD California Supplement, Part 6 along with the Uniform Sign Chart as shown on the drawing.

12.5 Flaggers - All personnel utilized as flaggers must be trained in the proper fundamentals of flagging and signaling.

12.6 Striping and Pavement Marking - Temporary and permanent striping shall be performed by the Contractor at his expense as directed by the Engineer. The Contractor shall restore the permanent striping immediately after resurfacing of the streets is completed. The Contractor shall notify the Riverside County Transportation Department, Telephone: 951.955.6800 and City of Jurupa Valley, Telephone: 951.332.6464 at least 48 hours prior to restriping.

All temporary traffic striping and pavement markings shall conform to Section 84 of the State Standard Specifications and shall be acceptable to the Riverside County Transportation Department.

All pavement markings such as arrows, "STOP", "ONLY", reflectors, etc., shall be replaced by the Contractor using thermoplastic. Thermoplastic crosswalk, traffic stripes and

pavement markings shall conform to the provisions in Section 84-1, "General" and 84-2, "Thermoplastic Traffic Stripes and Pavement Markings" of the State Standard Specifications and these Detailed Specifications.

12.7 Payment - The contract prices paid for Traffic Control shall include full compensation for all material and labor costs incurred under this section. Contractor is advised that traffic plans as shown on the drawings may be modified as field conditions require. No additional payment shall be made for modifications to the traffic plan.

This payment will be made on a basis of the percentage of work completed on the entire project.

SECTION 13 - CLEARING AND MISCELLANEOUS WORK

13.1 Description - This section covers the contract item Clearing and Miscellaneous Work as required for construction of the work. All objectionable materials shall be removed and disposed of outside of the limits of the construction easements and permanent rights of way.

13.2 Clearing and Miscellaneous Work - The contract item Clearing and Miscellaneous Work includes the removal and disposal of all vegetation, trees, roots, stumps, fences, pipes, all abandoned facilities, culverts, rocks, structures, concrete and asphalt excluding those items defined specifically as excavation in the appropriate section.

Included in this item are the following:

1. The Contractor shall leave all improved parkways undisturbed where possible. When this is impractical he shall turf in kind, areas disturbed in the parkways including removing and replacing interfering portions of sprinkler systems. Sod shall be used to restore disturbed grass. All work is to be done to the satisfaction of the Engineer.
2. The temporary relocation of signs and mailboxes, and their reinstallation. Work involving mailboxes shall be coordinated with the Postal Service.
3. The stenciling and signage on top of all catch basins and drop inlets. Stenciling and signage will be provided by the District.
4. The removal and disposal of the existing chain link fence and gate (Sheet Nos. 3 and 4).
5. The removal and disposal of the existing 72" CMP culverts and concrete street section (Sheet No. 3).
6. The removal and disposal of the existing concrete lined trapezoidal channel (Sheet Nos. 4 and 5).

7. The removal and disposal of the interfering portion of existing CMP/RCP as required to install the new 18" RCP connector (Sheet Nos. 3 through 6).
8. The removal and disposal of the interfering portions of existing retaining wall (Sheet No. 6).
9. The removal and disposal of existing rock riprap, concrete slabs, root systems and debris (Sheet Nos. 2 through 6).

Finally, included in this item are those types of work as shown on the drawings not specified for pay under any other individual contract item.

13.3 Payment - The contract price paid for Clearing and Miscellaneous Work shall be full compensation for all costs incurred under this section.

This payment will be made on a basis of the percentage of work completed on the entire project.

SECTION 14 - EARTHWORK

14.1 Description - This section covers the contract items Excavation; Rock Channel Excavation; Backfill; Slurry Cement Backfill; and Filter Material.

14.2 General Excavation Requirements - Pipe Excavation shall be in conformance with Section 306 of the Standard Specifications. Channel Excavation shall be in conformance with Section 300-7. Structure Excavation shall be in conformance with Section 300-3 of the Standard Specifications. Access to trenches shall be in conformance with Section 306-1.1.4 and the manner of bracing excavations shall be in conformance with Section 306-1.1.6 of the Standard Specifications.

Excavation shall be kept to the minimum widths required for efficient placing of the pipe or structure and the construction of the various other concrete structures. However, for pipe placement the minimum width of trench shall be 24 inches greater than the outside diameter of the pipe. The maximum length of open trench shall be in conformance with Section 306-1.1.2 of the Standard Specifications.

In excavating for surfaces against which concrete is to be placed, care shall be exercised in removing the final lift. Upon completion of excavation for structures and pipe, surfaces against which concrete is to be placed shall be free of debris, mud or ponded water.

The foundation for all concrete structures including concrete channels and sideslopes will be inspected and tested after excavation. The subgrade shall be compacted to ninety percent (90%) relative compaction prior to the placement of concrete.

Material which will not provide a suitable foundation shall be removed and replaced with compacted select material as directed by the Engineer.

Any overexcavation shall be filled with select material compacted to ninety percent (90%) relative compaction and meeting the material requirements for backfill.

The Contractor shall remove slides and materials eroding into the work, and the slopes and grades refinished to original grades as specified.

The Contractor shall dispose of all surplus excavated material outside of the limits of the construction easements and permanent rights of way.

The removal of rock material from within the excavation paylines which requires the use of blasting or equipment beyond that normally necessary to accomplish the excavation (as determined by the Engineer) shall be paid for in accordance with Section VII, Article 7.03 of the General Provisions. The cost of removal and disposal (including trucking) of rock away from the jobsite will be paid for under the contract item Excavation and no additional compensation will be allowed.

Blasting, when necessary, as approved by the Engineer shall be in accordance with Section 19-2.03 of the State Standard Specifications.

The Contractor's attention is directed to the General Provisions, Section V, Article 5.09 on the use of explosives and Article 5.11 in regard to unforeseen difficulties.

14.3 Excavation - The contract item Excavation covers the removal of all material including asphalt, aggregate base, abandoned pipelines, rock and concrete from within the excavation paylines as specified and as required for the construction and installation of the rectangular channel, reinforced concrete box, junction structures, headwalls, street improvements, and transitions as shown on plans and the disposal of all surplus material. Pipe construction and installation shall adhere to M815 of the standard drawings. All A.C. and P.C.C. shall be sawcut unless otherwise specified.

14.4 Rock Channel Excavation - The contract item Rock Channel Excavation covers all excavation and fill required to obtain the channel sections as shown on the drawings. All excess material shall be disposed of away from the site of the work.

Before placing any fill the subgrade shall be cleared of all vegetation and debris. All fill material placed shall be moistened and shall be free from sod, roots, brush, debris, trash and other objectionable material and shall be placed in horizontal layers not over 8 inches in depth before being compacted to ninety percent (90%) relative density. Vibratory compaction equipment shall be used to ensure the voids between rocks are filled and compacted.

14.5 General Backfill Requirements - Whenever fill is specified or required (except for pipe backfill) the work shall be performed as set forth in Sections 300-4.1 to 300-4.8 of the Standard Specifications. Backfill for pipe and box shall conform to Section 306-1.3 of the Standard Specifications.

No backfill materials shall be placed against the outside walls of cast-in-place concrete structures until the concrete has developed eighty percent (80%) of its design strength. No fill or traffic will be permitted on the top of any cast-in-place concrete structure until the concrete in the structure has attained its design strength. Compressive strength will be determined by test cylinders taken by the Engineer.

Regardless of the method of densification, backfill material shall not be placed against any reinforced concrete structure until the structure has been inspected and approved for backfilling by the Engineer.

Densification of backfill will be accomplished by either mechanical methods or water densification methods as described in (1) and (2) below. All relative compaction tests will be made by the Engineer in conformance with California Test 216. Whenever relative compaction is specified to be determined by California Test 216, the in-place density may be determined by California Test 231. The wet weight or dry weight basis and English units of measurement may be used at the option of the Engineer.

- (1) Mechanical Compaction - Backfill shall be mechanically compacted by means of tamping rollers or other mechanical tampers. Impact-type pavement breakers (stompers) will not be permitted unless otherwise approved by the Engineer.

All backfill material for structures shall be placed in uniform layers and shall be brought up uniformly on each side of the structure. The thickness of each layer of backfill shall not exceed 8 inches before compaction unless otherwise approved by the Engineer. For hand directed mechanical compactors, the thickness of each layer shall not exceed 4 inches before compaction.

- (2) Water Densification - Water Densification of bedding and backfill shall be by jetting and shall be used when approved by the Engineer. Jetting for bedding and backfill shall conform to Section 306-1.3.3 of the Standard Specifications except as modified as follows:
 - a. Jetting may be allowed for bedding, when approved by the Engineer, in conditions where soils of the trench walls have a sand equivalent less than 15, provided the Contractor takes appropriate action to drain the water.
 - b. Undensified lifts shall not exceed 4 feet.
 - c. Suitable backfill material to be jetted shall have a sand equivalent of 30 or greater.
 - d. If cast-in-place concrete pipe is used, jetting will not be permitted.
 - e. Jetting of the top 4 feet of backfill measured from the subgrade plane will not be permitted in roadway areas.

The work shall be performed in such a manner that water will not be impounded. Backfill shall be brought up uniformly on each side of the structure. Jetting methods shall be supplemented by the use of vibratory or other compaction equipment when necessary to obtain the required compaction.

Tongue and groove concrete pipe joints shall be mortared in conformance with Section 306-1.2.4 of the Standard Specifications prior to jetting.

Approval to use specific methods and compaction equipment shall not be construed as guaranteeing or implying that the use of such methods and equipment will not result in damage to adjacent ground, existing improvements or improvements installed under the contract, nor shall it be construed as guaranteeing proper compaction. The Contractor shall make his own determination in this regard.

All backfill and bedding around structures and pipe shall be compacted to not less than ninety percent (90%) relative compaction. Where such material is placed under existing or proposed paved roadways, the top 3 feet, measured from the subgrade plane, shall be compacted to ninety-five percent (95%) and shall be compacted by Method (1).

Trench bottoms for structures and pipe shall be graded to provide firm and uniform bearing throughout the entire length of the structures and pipe.

Pipe and box bedding shall consist of well graded granular material having a sand equivalent value of not less than 30 and be capable of being readily consolidated by jetting and vibrating. Jetting shall be as described by Method (2) Water Densification and the jet pipe shall be inserted at intervals of three (3) feet maximum continuous along each side of the pipe. Gravel of crushed aggregate shall not be used for bedding materials. Pipe and box bedding shall be placed to one foot above the top of the reinforced concrete pipe or box as shown on the drawings. The Contractor may use onsite material for pipe and box bedding subject to the approval of the Engineer and provided it meets the requirements as set forth above.

The Contractor's attention is directed to Section 7 – Soil Report. The Contractor may use onsite material for pipe and box bedding subject to the approval of the Engineer and provided it meets the requirements as set forth above. The Contractor shall make his own determination as to the availability of suitable onsite material. Should onsite material be unsatisfactory, the Contractor will be required to import suitable material.

Backfill material placed above the bedding shall consist of either select material from the excavation or imported material, as approved by the Engineer.

14.6 Testing – District personnel shall perform compaction tests as described below. These tests represent the minimum required. Additional tests may be taken at the Engineer's discretion.

1. Mainline Trenches – A complete series of compaction tests will be taken for each 4-foot thickness of backfill placed. Each series will consist of tests taken at

approximate maximum intervals of 300 feet. Each series will begin at the top of the bedding zone.

2. Connector Pipe Trenches – Compaction tests will be taken on 50% of the laterals, one test for each 4-foot of depth.
3. Any failed test will result in a retest.

When water densification is requested, sand equivalent tests representing foundation soils and proposed backfill material shall be obtained at approximate maximum intervals of 1,000 feet. Additional tests may be necessary to define limits of suitable backfill material.

14.7 Backfill - The contract item Backfill includes all backfill, and pipe and box bedding material compacted as specified around the rectangular channel, retaining wall, pipe, transition structures, overexcavation, access roads, street improvements, and other concrete structures within the paylines as shown on drawings. Pipe and box backfill shall adhere to M815 of the standard drawings.

14.8 Slurry Cement Backfill – The contract item Slurry Cement Backfill shall be the placement of slurry backfill as specified around the pipe or structure or as directed by the Engineer.

Slurry Cement Backfill shall be in conformance with Section 19-3.062 of the State Standard Specifications.

A minimum of two (2) sacks of cement shall be used for each cubic yard of Slurry Cement Backfill produced.

14.9 Filter Material - The contract item Filter Material includes all filter material to be placed below the reinforced concrete pipe, box and various other structures but exclusive of connector pipes and catch basins.

The Contractor should note that the placing of filter material will be determined from field conditions as directed by the Engineer.

The materials for filter material shall conform to Sections 90-2.02 and 90-3.01 of the State Standard Specifications. Grading shall meet the requirements for 1" x No. 4 coarse aggregate as per Section 90-3.02 of the State Standard Specifications. The filter material shall be consolidated and the surface trimmed to final grade as directed by the Engineer.

14.10 Measurement - Excavation; Rock Channel Excavation; and Backfill beyond the limits established by the drawings, unless ordered in writing by the Engineer, will not be measured for payment.

The excavated material shall be measured from the ground surface existing at the start of excavation, as determined from surveyed cross sections taken by the District, to the lines, grades

and dimensions shown on the drawings. Longitudinal limits of the excavations as shown on the profile drawings terminate at a vertical plane at the limits of the structure, measured along the longitudinal axis of the various structures.

Measurement for payment for the contract item Rock Channel Excavation will be the number of cubic yards excavated as shown on the drawings or as directed by the Engineer. No separate measurement or payment of the fill required to obtain the rock channel cross section will be made.

Measurement for payment for the contract item Excavation will be based on number of cubic yards excavated as shown on the drawings or as directed by the Engineer. The excavation limits will also be the lower limit for Backfill measurement with the upper limit being the finished surfaces as shown on the drawings.

Measurement for payment for the contract item Backfill will be the number of cubic yards of material placed in final position as specified and within the limits of the payment lines shown on the drawings. The longitudinal limits shall terminate at a vertical plane at the limits of the pipe or structure, measured along the longitudinal axis of the various pipe or structures. Volumes occupied by structures, aggregate base, asphalt concrete and other feature for which a separate payment is made will be deducted from the gross volume.

Measurement for payment for the contract item Slurry Cement Backfill will be the number of cubic yards of material placed in final position as specified and within the limits of the payment lines as shown on the drawings. The longitudinal limits for Slurry Cement Backfill shall terminate at a vertical plane at the limits of the pipe or structure, measured along the longitudinal axis of the various pipe or structures. Volume occupied by structures, aggregate base, asphalt concrete and other features for which a separate payment is made will be deducted from the gross volume.

Measurement for payment for the contract item Filter Material will be the number of cubic yards of material placed in final position as specified to the lines, grades and dimensions as shown on the drawings or as directed by the Engineer.

14.11 Payment - The contract prices paid for Excavation; Rock Channel Excavation; Backfill; Slurry Cement Backfill and Filter Material shall include full compensation for all costs incurred under this section.

SECTION 15 - TRENCH SAFETY SYSTEM AND FALSEWORK

15.1 Description - This section covers the contract item Trench Safety System and Falsework. This item is defined as a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Trench safety systems include support systems, sloping and benching systems, shield systems and other systems that will provide necessary protection. The item includes the furnishing and implementation of the safety system as required by Section 306-1.1.6 of the Standard Specifications or as directed by the Engineer.

15.2 Trench Safety System - Excavation for any trench five (5) feet or more in depth shall not begin until the Contractor has provided to the Engineer, a detailed plan for worker protection from the hazards of caving ground during the excavation of the trench. The plan shall show the details of the design of shoring, bracing, sloping or other provisions to be made for worker protection including any design calculations done in the preparation of the plan. No such plan shall allow the use of shoring, sloping or a protective system less effective than that required by the Construction Safety Orders of the California Department of Industrial Relations, Division of Occupational Safety and Health Administration (Cal-OSHA). The plan shall be prepared and signed by an engineer who is registered as a civil engineer in the State of California, and the plan and design calculations shall be submitted for review at least two (2) weeks before the Contractor intends to begin trenching operations.

All safety plans shall reflect surcharge loadings imparted to the side of the trench by equipment and stored materials. Surcharge loads shall be monitored to verify that such loads do not exceed the design assumptions for the system.

The Contractor should not assume that only one type of trench safety system such as a shield or "trench box" will be adequate for all trenching situations encountered on a given project. The Contractor should be prepared with alternative safety system designs (such as solid sheeting) should construction circumstances dictate the use of such.

Trench safety system designs for support systems, shield systems or other protective systems whether drawn from manufacturers' data, other tabulated data or designed for this particular project must be signed by a civil engineer registered in the State of California prior to submittal to the District for review. A shoring plan for the specific use of a shield shall be prepared. Catalogs or engineering data for a product should be identified in the plan as supporting data. All specific items or applicable conditions must be outlined on the submittal.

The State of California Department of Transportation "Trenching and Shoring Manual" will be used as a guide for plan review and approval.

Also included in this item is the fencing and barricading of the open trench as required for the safety of pedestrians and vehicular traffic as directed by the Engineer.

15.3 Falsework - Falsework for the construction of bridges and reinforced concrete boxes shall conform with Section 51-1.06 Falsework of the State Standard Specifications.

The Falsework plan shall be prepared and signed by an engineer who is registered as a civil engineer in the State of California, and the plan and design calculations shall be submitted for review at least 4 weeks before the Contractor intends to begin Falsework construction.

The State of California Department of Transportation "Falsework Manual" will be used as a guide for plan preparation and review.

15.4 Measurement and Payment - The contract price paid for the item Trench Safety System and Falsework shall include full compensation for all costs incurred under this section.

This payment will be made on a basis of the percentage of the work completed on the items related to trenching operations.

SECTION 16 - CONCRETE CONSTRUCTION

16.1 Description - This section includes the contract items Reinforcing Steel and the various classes of Concrete.

16.2 General Requirements - Concrete for all purposes shall be composed of Portland Cement, aggregates and water of the quantities and qualities herein specified, and in the required proportions. The ingredients are to be well mixed and brought to the proper consistency and to have a compressive strength at the age of 28 days of not less than the amount shown in the following tabulation for each type of work listed:

<u>CONCRETE CLASS</u>	<u>MINIMUM SACKS CEMENT/C.Y.</u>	<u>TYPE OF WORK</u>	<u>POUNDS PER SQUARE INCH</u>
A	6	Walls, Boxes, Rectangular Channel, Transition Channel, Concrete Bulkhead, Concrete Barrier and Pier Extension	4000*
A	6	Slope Paving, Catch Basins, Drop Inlets, Drainage Inlets, Junction Structure Nos. 1 and 3, Concrete Collars and Headwalls	3250*
B	5	Local Depressions, Cutoff Walls, Encasements, Curb and Gutter, V-Ditch, Sidewalk, Concreted Rock and Miscellaneous Concrete not otherwise specified	3000*

*Note: Concrete for use in structures constructed from State of California, Department of Transportation Standard Plans shall have compressive strengths as called for on those plans.

16.3 Material and Methods - All concrete materials, methods, forms and proportioning shall conform to Sections 51 and 90, and additionally, curb construction shall conform to Section 73 of the State Standard Specifications. Concrete test specimens will be made in accordance with ASTM Designation: C-31 and C172. Test for concrete compressive strengths will be performed in accordance with ASTM Designation: C-39. Combined aggregate grading for all concrete

shall be in conformance with Section 90-3.04 of the State Standard Specifications and the following tabulation for each type of work listed:

TYPE OF WORK

COMBINED AGGREGATE
GRADING

The inverts of: Trapezoidal Channels, Reinforced Concrete Box, Rectangular Channels, Junction Structures, Transition Structures, Pier Extensions, V-Ditch and Manholes.

1-1/2" Maximum

Retaining Walls, Slope Paving, Box Deck and Walls, Rectangular Channel Walls, Headwalls, Catch Basins, Drop Inlets, Local Depressions, Curb and Gutter, Sidewalk, Cutoff Walls, Bulkheads, Concrete Barrier, Collars, Encasements, Parapet, Concreted Rock and other Miscellaneous Concrete not otherwise specified. All other concrete structures.

1" Maximum

Fly Ash, Class F may be substituted for cement, up to a maximum of 15 percent by weight for all concrete. Fly Ash shall meet the standards of ASTM Designation: C-618. Water reducing agents meeting ASTM Designation: C-494 will be permitted in amounts recommended by the supplier and approved by the Engineer in writing.

No other admixture shall be used in any class of concrete without written permission from the Engineer.

Supplementing Section 90-1.01 of the State Standard Specifications, prior to placement of any concrete the Contractor shall submit mix designs, for all types of concrete to be placed, to the Engineer for approval. Supplementing Section 90-6.03 of the State Standard Specifications, concrete delivered to the job site shall be accompanied by a ticket containing the weight of each of the individual ingredients in the mix.

16.4 General Reinforcing Steel Requirements - Reinforcing steel for all reinforced concrete structures shall be Grade 60 Low-Alloy or Grade 60 Billet-Steel. The reinforcing steel for use in structures constructed from State of California, Department of Transportation Standard Plans shall be of Grade 60 or as called for on those plans. Cleaning, bending, placing and spacing of reinforcement shall conform to the applicable provisions of Section 52 of the State Standard Specifications and to the drawings. The Contractor shall furnish a "Certificate of Compliance" with the specification of ASTM Designation: A-706/A or A-615/A. All splices shall conform to the requirements of A.C.I. Manual, Standard 318, latest edition. Splices requested by the Contractor for his convenience shall be subject to approval by the Engineer. Longitudinal lap shall be 16 inches minimum for #4 bars and 19 inches minimum for #5 bars.

16.5 Consistency - The consistency of the concrete shall be such as to allow it to be worked into place without segregation. Unless otherwise specified, the slump shall be 3 inches plus or

minus 1 inch for all concrete, except the concrete for the cast-in-place concrete pipe which shall have a slump of 2 inches plus or minus 1 inch.

The slump test shall be performed in accordance with the requirements of ASTM Designation: C-143. Slumps greater than those specified may be cause for rejection of the concrete by the Engineer.

16.6 Placing - Supplementing Section 51-1.09 of the State Standard Specifications, concrete shall not be placed except in the presence of the Engineer. The Contractor shall give reasonable notice to the Engineer each time he intends to place concrete. Such notice shall be far enough in advance to give the Engineer adequate time to inspect the subgrade, forms, steel reinforcement and other preparations for compliance with the specifications before concrete is delivered for placing.

Formed concrete shall be placed in horizontal layers in lifts of not more than 20 inches. Hoppers and chutes, pipes and "elephant trunks" shall be used as necessary to prevent segregation of the concrete.

16.7 Form Removal and Finish - Forms shall be removed only when the Engineer has given his approval. Forms shall be removed in such a way as to prevent damage to the concrete. Supports shall be removed in a manner that will permit the concrete to take stresses due to its own weight uniformly.

Forms shall not be removed sooner than the following minimum time or strength after the concrete is placed. These times represent cumulative number of days and fractions of days, not necessarily consecutive, during which the temperature of the air adjacent to the concrete is above 50 degrees Fahrenheit. If the temperature falls below 50 degrees Fahrenheit at any time after the concrete is placed in the forms, the Engineer will advise the Contractor of additional time required before forms can be removed.

<u>Element</u>	<u>Strength or Time</u>
Bridge deck slabs, loaded bridge abutments or retaining walls - supporting forms and shoring, and reinforced concrete boxes with spans equal to or greater than 14 feet	3000 psi or 7 days
Reinforced Concrete Boxes at pavement grade.	3000 psi or 7 days
Reinforced Concrete Boxes with spans less than 14 feet, and not at pavement grade, Transition Structure Nos. 1, 2 & 4	1600 psi
All other structures	16 hours

The finish on all exposed formed surfaces shall conform to Section 51-1.18B Class 1 Surface Finish of the State Standard Specifications. A tight wood float finish will be required on the surface of trapezoidal channels and bridge decks and excessive surface working will not be

permitted. The exposed concrete surfaces shall be broomed in a transverse direction with a fine textured hair push broom to produce a uniform surface and eliminate float marks. Brooming shall be done when the surface is sufficiently set to prevent deep scarring. If directed by the Engineer, a fine spray of water shall be applied to the surface immediately in advance of brooming.

Exposed corners of all concrete structures shall be finished with a 3/4" chamfer.

Concrete flatwork shall match adjacent surfaces. The concrete shall be struck off and tamped or vibrated until a layer of mortar has been brought to the surface. The top surface and face of curbs, gutters, catch basins and sidewalks shall be finished to match adjacent surfaces.

16.8 Curing - All concrete shall be prevented from drying for a curing period of at least seven (7) days after it is placed. Surfaces exposed to air during the curing process shall be kept continuously moist for the entire period or until curing compound is applied.

Formed surfaces shall be thoroughly wetted immediately after forms are removed and shall be kept wet until patching and repairs are completed. Water or covering shall be applied in such a way that the concrete surface is not eroded or otherwise damaged. Water for curing shall be clean and free from any substances that will cause discoloration of the concrete.

Concrete may be coated with curing compound in lieu of the continued application of moisture. The curing compound shall comply with the requirements of Section 90-7.01B of the State Standard Specifications. The curing compound shall be No. 5 White Pigmented Curing Compound conforming to the requirements of ASTM Designation: C-309, Type 2, Class B for all concrete surfaces other than for flatwork which shall be coated with a clear or translucent curing compound containing a red fugitive dye.

The curing compound shall be sprayed on the moist concrete surfaces as soon as free water has disappeared, but shall not be applied to any surface until patching, repairs and finishing of that surface are completed. The curing compound shall be thoroughly mixed immediately before applying, and shall be applied at a uniform rate of not less than one gallon per 150 square feet of surface. No separate payment will be made for the curing compound or its application.

16.9 Joints - Joints shall be made at the locations shown on the drawings, or as approved by the Engineer.

The Contractor shall construct, in one continuous concrete placing operation, all work comprised between such joints. Joints shall be kept moist until adjacent concrete is placed.

Transverse construction joints for Reinforced Concrete Boxes, Rectangular Channels and L-Wall Channels shall be keyed construction joints. Joints shall be in a vertical plane and not exceed 50 feet or be less than 10 feet in the invert, walls and deck. Transverse construction joints shall be constructed per the Standard Drawings unless otherwise shown on the drawings.

Surfaces of construction joints shall be cleaned prior to the placement of the adjacent concrete as set forth in Section 51-1.13 of the State Standard Specifications.

16.10 Weepholes - Weepholes shall be constructed in accordance with the drawings and at locations directed by the Engineer. All weepholes shall be 2-1/2 inches in diameter unless noted otherwise on the drawings.

Weepholes may be formed by removable round wooden dowels, Schedule 40 PVC Pipe or greater, or by other methods acceptable to the Engineer.

All weepholes shall have a rodent screen consisting of 1/4-inch mesh, 16-gauge galvanized hardware cloth securely and permanently attached over the drain opening in a manner approved by the Engineer.

Filter material for the weepholes shall be one inch (1") nominal size crushed rock conforming to the gradation of Section 200-1.2 of the Standard Specifications. Filter material shall also meet the quality requirements of Sections 200-1.1 and 200-1.2 of the Standard Specifications.

Filter material shall be wrapped in a single layer of filter fabric as shown on the drawings or approved by the Engineer. Filter fabric shall conform to that specified for underdrains per Section 88-1.03 of the State Standard Specifications.

Filter fabric shall be furnished in protective wrapping which shall protect the fabric from ultraviolet radiation and from abrasion due to shipping and handling. The fabric shall also be ultraviolet stabilized.

The fabric shall be placed in the manner and at the locations shown on the drawings. The surface to receive the fabric shall be prepared to a smooth condition free of obstructions and debris.

The fabric shall be covered within 72 hours of its placement. Should the fabric be damaged during construction, the torn or punctured section shall be repaired or replaced as directed by the Engineer.

No separate payment will be made for the installation of the weephole, hardware cloth, filter material or filter fabric.

16.11 Use of the Channel Invert - Dump trucks, concrete trucks and earth moving equipment (whether full or empty) will not be allowed to operate on the invert of the concrete channel.

A small crane with capacity not to exceed 10 tons will be permitted to operate on the concrete channel invert for the purpose of setting and moving forms, and erecting the steel reinforcement for the walls. Wheel loading types and amounts will be subject to the approval of the Engineer. Vehicles of 3/4 ton capacity (or less) will also be permitted access to the invert.

The speed of any vehicle using the invert will be limited to 10 m.p.h. maximum to avoid impact loading.

No other category of equipment, except that specifically approved by the Engineer in writing will be permitted to use the invert of the channel for access to the work area.

In any event, vehicular access to the invert will not be permitted until the concrete has achieved its design strength. Approval for access to use the invert shall not relieve the Contractor of the responsibility to avoid damage to the concrete. Cracking, displacement or other damage which occurs to the invert will be cause to restrict some or all of the categories of equipment allowed access to the channel. Repair or replacement of damaged concrete will be required.

16.12 Class "A" Concrete, Reinforced Concrete Box - The contract item Class "A" Concrete, Reinforced Concrete Box covers the concrete incorporated in the construction of all reinforced concrete boxes.

Reinforced concrete box walls shall be constructed by placing the concrete directly against timber or steel sheeting used as the outside form and shoring. Sheeting shall be closely fitted and extend a minimum of 12 inches above the ground surface. Unless otherwise directed, all sheeting shall be removed and the void created shall be immediately backfilled with a well graded sand and thoroughly jetted to the relative densities specified in Backfill.

The Contractor has an option of forming both sides of the reinforced concrete box walls, however, due to additional loads on the box structure resulting from this trench condition, the Contractor will be required to submit an alternate box design prepared by a civil engineer registered in the State of California. All alternate box designs are subject to the approval of the Engineer and no additional payment will be made for the alternate box if approved.

If the box is constructed from State of California, Department of Transportation Standard Plans, either method of forming noted in the above paragraphs may be used without an alternate box design being submitted.

Loading and vehicular use of box deck slab shall comply with the requirements of Section 51-1.11 of the State Standard Specifications (also apply to bridge deck slab).

Also included in this item of work will be the construction of the weepholes if required in the invert slab or sides of the reinforced concrete box.

16.13 Class "A" Concrete, L-Wall and Access Ramp - The contract item Class "A" Concrete, L-Wall and Access Ramp covers the concrete to be used in the construction of the walls and footings of the L-Wall and Access Ramp.

16.14 Class "A" Concrete, Transition - The contract item Class "A" Concrete, Transition covers the concrete to be used in the construction of the channel transition downstream of Lucretia Avenue.

16.15 Class "A" Concrete, Retaining Wall – The contract item Class "A" Concrete, Retaining Wall covers the concrete to be used in the construction of the retaining wall for the bioretention facility, pier extensions, parapet walls and Caltrans' concrete barrier wall.

16.16 Class "A" Concrete, Minor Structures - The contract item Class "A" Concrete, Minor Structures includes the complete construction of the drainage inlet, collars, concrete bulkhead, and drop inlets. Included in the pay item is all earthwork and reinforcing steel required for these structures, but exclusive of the required miscellaneous iron and steel.

16.17 Class "A" Concrete, Channel Invert – The contract item Class "A" Concrete, Channel Invert includes the concrete paving of the floater slab.

Finish surface of the channel shall be true to line and grade and concrete shall be not less than the minimum thickness indicated on the drawings, and as specified in Section 6.11 Construction Tolerances of these Special Provisions.

16.18 Class "B" Concrete, 10' Cutoff Wall – The contract item Class "B" Concrete, 10' Cutoff Wall covers the concrete to be used in the construction of the transverse cutoff wall. Included in the pay item is all earthwork and reinforcing steel required.

16.19 Class "B" Concrete, 7' Cutoff Wall – The contract item Class "B" Concrete, 7' Cutoff Wall covers the concrete to be used in the construction of the transverse cutoff wall. Included in the pay item is all earthwork and reinforcing steel.

16.20 Class "B" Concrete, Miscellaneous - The contract item Class "B" Concrete, Miscellaneous includes the complete construction of the curb and gutters, v-ditch, sidewalks, local depressions, pipe plugs, 2' cutoff wall, concrete pad, and any other concrete not specified. Included in the pay item is all earthwork and reinforcing steel required.

16.21 Class "B" Concrete, Concreted Rock – The contract item Class "B" Concrete, Concreted Rock covers the concrete to be used to "grout" or concrete the invert rock and rock slope protection between Station 28+00 and Station 28+75 as shown on the drawings.

Concrete for concreted rock shall be Class "B", and shall have a slump sufficient to allow gravity flow into the interstices of the rock with rodding and vibration. Concrete for concreted rock shall be placed in accordance with Section 72-5.04 of the State Standard Specifications except that total penetration of the rock blanket by the concrete will be required, and the outer rocks of the finished rock surface shall project as shown on the drawings.

16.22 Junction Structure No. 1 - The contract item Junction Structure No. 1 covers the complete construction of this structure, including reinforcing steel, exclusive of earthwork.

No separate payment will be made for Junction Structure No. 3 or Junction Structure No. 4.

16.23 Reinforcing Steel, Grade 60 – The contract item Reinforcing Steel, Grade 60 includes all reinforcing steel, with accessories, required for the construction of the reinforced concrete structures described in Sections 16.12 through 16.15 and 16.17.

16.24 Measurement - Measurement for payment for the contract items Class "A" Concrete, Reinforced Concrete Box; Class "A" Concrete, L-Wall and Access Ramp; Class "A" Concrete, Transition; Class "A" Concrete, Retaining Wall; Class "A" Concrete, Minor Structures; Class "A" Concrete, Channel Invert; Class "B" Concrete, 10' Cutoff Wall; Class "B" Concrete, 7' Cutoff Wall; Class "B" Concrete, Miscellaneous, and Class "B" Concrete, Concreted Rock will be the number of cubic yards placed as specified, measured to the neat lines as shown on the drawings.

Measurement for payment for the contract item Junction Structure No. 1 will be the number of each constructed as specified.

No measurement or payment will be made for Junction Structure No. 3.

Measurement for payment for the contract item Reinforcing Steel required for the construction of the reinforced concrete structures described in the appropriate sections will be in conformance with Section 52-1.10 of the State Standard Specifications. Steel used for longitudinal laps or splices will not be measured for payment. Transverse laps or splices shown on the plans but not used, and laps or splices used for the convenience of the Contractor will not be measured for payment.

No measurement or payment will be made for dowels, tie bars, tie wires, blocks, chairs and other accessories.

16.25 Payment - The contract prices paid for the various Concrete items and reinforcing steel items shall include full compensation for all costs incurred under this section.

SECTION 17 - CONCRETE PIPE

17.1 Description - This section covers the contract item Reinforced Concrete Pipe of the various sizes as required for the work.

17.2 General Pipe Requirement - Pipe materials, manufacture and quality, shall conform to ASTM Designation: C-76 or C-655. The Engineer shall be furnished a "Certificate of Compliance" signed by the manufacturer of the pipe certifying that the pipe conforms to the ASTM requirements. All pipe and pipe material supplied by the Contractor shall be new.

The District will also require the D-load bearing strength test conforming to ASTM Designation: C-497 for new pipe 48" or greater, in conformance with Sections 207-2.9.1(1) and 207-2.9.2 of the Standard Specifications as a basis for acceptance of the pipe. The test shall be performed in the presence of the Engineer.

Pipe shall be laid in a trench free of ponded water in conformance with Section 306-1.2.2, with joints in conformance with Section 306-1.2.4 of the Standard Specifications.

Pipe ends shall be cleaned and moistened prior to making up joint.

17.3 Reinforced Concrete Pipe - The contract items for the various Reinforced Concrete Pipe include the furnishing and installing of the various pipe as specified, exclusive of earthwork.

17.4 Pipe on Curves - Unsymmetrical closure of pipe joints shall not exceed 1 inch pull on the outside of the curve when pull is measured at the springline on the inside of the pipe. Mortar joints on curves shall conform in strength, texture of mortar finish and tightness to the joints for straight ended pipe.

When beveled pipe is used the maximum deflection angle shall not exceed 6 degrees unless shown on the plans or approved by the Engineer.

17.5 Video Inspection - All concrete pipe (cast-in-place and reinforced) with inside diameters of 30 inches or less shall be videotaped prior to final inspection. Copies of the videotapes shall be provided to the Engineer. For pipe placed within roadway area, video inspection shall be performed and the results approved by the Engineer prior to paving.

17.6 Measurement - Measurement for payment of the contract items Reinforced Concrete Pipe of the various sizes and classes will be the number of lineal feet of each class installed as specified measured along the centerline of the pipe in place including curves.

17.7 Payment - The contract prices paid for the Reinforced Concrete Pipe shall include full compensation for all costs incurred under this section.

SECTION 18 - NOT USED

SECTION 19 - ASPHALT CONCRETE CONSTRUCTION

19.1 Description - This section covers the contract items Aggregate Base, Class 2; and Asphalt Concrete Type "B".

19.2 Aggregate Base, Class 2 - The contract item Aggregate Base, Class 2 includes furnishing and placing such material as indicated on the drawings. Aggregate Base, Class 2 shall be clean and free from roots, vegetable matter and other deleterious substances, and be of such character that when wet it will compact to form a firm stable base. Material and placing shall be in accordance with Section 26 of the State Standard Specifications using 3/4-inch maximum size.

The aggregate base shall also have a sand equivalent value of not less than 35 when tested in conformance with California Test Method 217.

The aggregate base material shall be spread as specified in Sections 26-1.035 and 26-1.04 of the State Standard Specifications. The aggregate base material shall be compacted as specified in Section 26-1.05 of the State Standard Specifications.

19.3 Asphalt Concrete, Type "B" - The contract item Asphalt Concrete, Type "B" covers the asphalt concrete necessary for the repair and resurfacing of streets damaged or removed due to construction operations.

The Contractor shall not pave any or start paving asphalt concrete until all compaction on the aggregate base are tested and approved by the Engineer.

The Asphalt Concrete shall be Type "B" and shall be proportioned, mixed, spread and compacted in accordance with the applicable provisions in Section 39 of the State Standard Specifications and these Detailed Specifications. The gradation of the mineral aggregate shall be one-half inch (1/2-inch) maximum, medium for final course and three-quarter inch (3/4-inch) maximum, coarse for base course.

The Contractor shall furnish and place the asphalt concrete with all asphaltic emulsions required. The asphalt binder to be mixed with aggregate shall conform to these Detailed Specifications and shall be of the Performance Grade (PG) designated below or as determined by the Engineer:

- Grade PG 64-10 (Inland Valleys)

The amount of asphalt binder to be mixed with the mineral aggregate shall be between three percent (3%) and seven percent (7%) by weight, of the dry mineral aggregate. The exact amount of asphalt binder to be mixed with the mineral aggregate will be determined by a special mix design.

Liquid asphalt for prime coat shall conform to the provisions in Section 93, "Liquid Asphalts", of the State Standard Specifications and shall be Grade PG 64-10.

Asphalt emulsion for paint binder (tack coat) shall conform to the provisions in Section 94, "Asphaltic Emulsions", of the State Standard Specifications for the rapid-setting or slow-setting type and shall be grade PG 64-10.

Asphalt shall consist of refined petroleum or a mixture of refined liquid asphalt and refined solid asphalt, prepared from crude petroleum. Asphalt shall be:

- A. Free from residues caused by the artificial distillation of coal, coal tar or paraffin.
- B. Free from water.
- C. Homogeneous.

The Contractor shall furnish asphalt in conformance with the State of California Department of Transportation's "Certification Program for Suppliers of Asphalt". The

Department maintains the program requirements, procedures, and a list of approved suppliers at: <http://www.dot.ca.gov/hq/esc/Translab/ofpm/fpmcoc.htm>.

The Contractor shall ensure the safe transportation, storage, use and disposal of asphalt.

The Contractor shall prevent the formation of carbonized particles caused by overheating asphalt during manufacturing or construction.

Performance grade paving asphalt shall conform to the testing requirements in the table below:

Performance Graded Asphalt Binder

Property	AASHTO Test Method	Specification Grade		
		PG 64-10	PG 64-16	PG 70-10
Original Binder				
Flash Point, Minimum °C	T48	230	230	230
Solubility, Minimum %	T44	99	99	99
Viscosity at 135°C, Maximum, Pa's	T316	3.0	3.0	3.0
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(Delta), kPa	T315	64 1.00	64 1.00	70 1.00
Rolling Thin Film Oven (RTFO) Test, or ASTM D2827 Mass Loss, Maximum, %	T240	1.00	1.00	1.00
RTFO Test Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T315	64 2.20	64 2.20	70 2.20
Ductility at 25°C Minimum, cm	T51	75	75	75
Pressurized Aging Vessel (PAV) Aging, Temperature, °C	R28	100	100	110
RTFO Test and PAV Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G* sin(delta), kPa	T315	31 5000	28 5000	34 5000
Creep Stiffness, Test Temperature, °C Maximum S-value, MPa Minimum M-value	T313	0 300 0.300	-6 300 0.300	0 300 0.300

Certificates of compliance shall be furnished to the Engineer certifying that the asphaltic emulsions and paving asphalts conform to the referenced standard specifications.

In lieu of the table of Section 39-6.01, asphalt concrete shall be spread and compacted in the number of layers as outlined in the table below:

Total Thickness Shown on Plans	Minimum No. of Layers	Top Layer Thickness		Next Lower Layer Thickness		All Other Lower Layer Thickness	
		Min.	Max.	Min.	Max.	Min.	Max.
0.23' or less	1	-	-	-	-	-	-
0.24' through 0.44'	2	0.10'	0.21'	0.14'	0.23'	-	-
0.45' or more	3 or more	0.10'	0.20'	0.15'	0.23'	0.20'	0.23'

Finished surfaces shall conform to the straightedge provisions in Section 39-6.03, "Compacting", of the State Standard Specifications.

Areas of the top surface of the uppermost layer of asphalt concrete pavement that do not meet the specified surface tolerances shall be brought within tolerance by abrasive grinding. Areas which have been subjected to abrasive grinding shall receive a seal coat. Areas which cannot be brought into specified tolerance by abrasive grinding shall be corrected by removal and replacement.

19.4 Measurement - Measurement for payment of the contract item Aggregate Base, Class 2 will be the number of cubic yards placed to the lines, grades and dimensions shown on the drawings. **No allowance will be made for aggregate base placed outside said dimensions unless otherwise ordered by the Engineer.**

Measurement for payment of the contract item Asphalt Concrete, Type "B" will be the number of tons placed to the lines, grades and dimensions shown on the drawings. The Asphalt Concrete pay quantity shall be determined by using a conversion factor of 144 pounds per cubic foot for all asphalt concrete placed within standard paylines. No measurement will be made for paint binder required for this portion of the work. All charges for asphalt emulsions are included in the price paid for Asphalt Concrete. **No allowance will be made for asphalt concrete placed outside said dimensions unless otherwise ordered by the Engineer.**

19.5 Payment - The contract prices paid for Aggregate Base, Class 2; and Asphalt Concrete, Type "B" shall include full compensation for all costs incurred under this section.

SECTION 20 - FENCES AND GATES

20.1 Description - This section covers the contract items 6-Foot Chain Link Fence; Chain Link Railing Type 7; Temporary Fencing; 3-Foot Cable Railing; and 14-Foot Double Drive Gates.

20.2 6-Foot Chain Link Fence - The contract item 6-Foot Chain Link Fence includes furnishing and installing the material required for this portion of the work as shown on the

drawings and as directed by the Engineer. Included in this item is all hardware parts, posts and fittings. Also included in this item of work will be the removal and relocation, if required, of chain link fence as noted on the drawings and as directed by the Engineer.

All materials shall be new except that specified for removal and relocation and shall conform to Section 206-6 of the Standard Specifications and the drawings, with installation in conformance with Section 304-3.2. Materials salvaged shall be subject to the Engineer's approval prior to reinstallation. All posts shall be set in commercial plant quality, 4 sack per cubic yard concrete.

20.3 Chain Link Railing Type 7 - The contract item Chain Link Railing Type 7 includes furnishing and installing the material required for this portion of the work as shown on the drawings and as directed by the Engineer. Included in this item are all hardware parts, posts and fittings.

All materials shall be new and shall conform with the provisions of Section 83-1.02I, "Chain Link Railing", of the State Standard Specifications.

20.4 Temporary Fencing - The contract item Temporary Fencing shall include all labor, materials and equipment necessary for installing and removing the temporary fencing along the golf course property line fences as shown on the drawings. The temporary fencing shall be a 6-foot high chain link fence. Fencing materials need not be new and fence posts need not be set in concrete.

20.5 3-Foot Cable Railing - The contract item 3-Foot Cable Railing includes furnishing and installing the material required for this portion of the work. Included in this item is all hardware, parts, posts, grab bars and fitting in conformance with Section 83-1.02E of the State Standard Specifications.

20.6 14-Foot Double Drive Gates - The contract item 14-Foot Double Drive Gates includes furnishing and installing the various gates as shown on the drawings, complete with all gate posts set in concrete and in conformance with Section 304-3.3 of the Standard Specifications. Padlocks are not included in this item. On completion, gates shall operate freely without wedging or binding.

20.7 Measurement - Measurement for payment for the contract item 6-Foot Chain Link Fence will be the number of lineal feet of new and relocated fence installed measured along the top of the fence parallel to the ground.

Measurement for payment for the contract item Chain Link Railing Type 7 will be the number of lineal feet of new and relocated fence installed measured along the top of the fence parallel to the ground.

Measurement for payment for the contract item Temporary Fencing will be the number of lineal feet of fencing installed for the temporary fencing and relocations.

Measurement for payment for the contract item 3-Foot Cable Railing will be the number of lineal feet of new cable railing installed along the top of the railing parallel to the ground.

Measurement for payment for the contract item 14-Foot Double Drive Gate will be the number of pairs installed. Excavation and concrete required for fence or gate posts will not be measured for payment.

20.8 Payment - The contract price paid for 6-Foot Chain Link Fence; Chain Link Railing Type 7; Temporary Fencing; 3-Foot Cable Railing; and 14-Foot Double Drive Gates shall include full compensation for all costs incurred under this section.

SECTION 21 - MISCELLANEOUS

21.1 Description - This section covers the contract items Miscellaneous Iron and Steel; Subdrain; Adjust Valve to Grade; Wood Post Metal Beam Guard Railing; Bioretention Facility; Sampling Station; Staff Gauge; Swift Water Rescue Anchoring Devices; and Reflectorized Raised Pavement Marker ("Blue Dot").

21.2 Miscellaneous Iron and Steel - The contract item Miscellaneous Iron and Steel covers all ferrous metal used in the various hydraulic structures. Materials, parts and fittings shall conform with the following:

- (a) Manhole Frames and Covers - Per ASTM Designation: A-48, Class 35B. Manhole frames and covers shall be minimum weight as shown on the plans, and the weight of each frame and cover shall be indicated thereon in white paint. Style and markings shall be approved by the Engineer. The castings shall be free from cracks, blowholes or other imperfections, straight, true to pattern and have a uniform finish. The castings for manholes in streets shall be thoroughly cleaned and coated with asphaltum paint of approved composition; all other castings for frames and covers shall be cleaned and galvanized. The cover shall fit firmly into the frame without rocking, with the frame accurately placed so that cover is flush with finish paving.
- (b) All other Miscellaneous Metal - Per ASTM Designation: A-36.
- (c) Galvanizing - Except for manhole frames and covers described above, all exposed ferrous metal shall be galvanized per Section 210.3 of the Standard Specifications.

21.3 Subdrain - The contract item Subdrain covers trenching and the furnishing of the subdrain pipe, all fittings, galvanized screen, filter material and filter fabric.

The filter material shall be wrapped in filter fabric as shown on the drawings. Filter material and filter fabric shall conform to the material specifications as specified in Section 16.10, Weepholes, of these Detailed Specifications.

Filter Fabric shall be furnished in a protective wrapping which shall protect the fabric from ultraviolet radiation and from abrasion due to shipping and handling. The fabric shall also be ultraviolet stabilized.

The fabric shall be placed in the manner and at the locations shown on the drawings. The surface to receive the fabric shall be prepared to a smooth condition free of obstructions and debris.

The fabric shall be covered within 72 hours of its placement. Should the fabric be damaged during construction, the torn or punctured section shall be repaired by placing a piece of fabric that is large enough to cover the damaged area and to meet the overlap requirement. Adjacent borders of the fabric shall be overlapped a minimum of twelve (12) inches or sewn. Upstream sections of fabric shall overlap downstream sections.

Perforated subdrain pipe shall be vitrified clay pipe, concrete pipe, ABS Pipe or PVC Pipe, at the option of the Contractor. Vitrified clay pipe shall meet the requirements of ASTM Designation: C-700, for extra strength pipe. Concrete pipe shall meet the requirements of ASTM Designation: C-14 Class 3 and C-444 Type I. ABS pipe shall meet the requirements of ASTM Designation: D-2751, SDR 23.5, and PVC pipe shall meet the requirements of ASTM Designation: D2665, and perforations shall be that as described in ASTM Designation: C-700.

21.4 Adjust Valve to Grade - The contract item Adjust Valve to Grade covers all labor, equipment, materials and incidentals required for the complete adjustment of all valves within the limits of the street improvements to meet the finished street grade.

21.5 Wood Post Metal Beam Guard Railing - The contract item Wood Post Metal Beam Guard Railing includes furnishing and installing the Wood Post Metal Beam Guard Railing as shown on the drawings and in conformance with the provisions of Section 83-1 "Railing", of the State Standard Specifications.

21.6 Bioretention Facility - The contract item Bioretention Facility includes furnishing and installing the 6-inch perforated and 8-inch non-perforated subdrains, all subdrain fittings, engineered soil media, pea gravel layer, gravel layer, stone, and signs as shown on the drawings.

Included in this pay item is all earthwork required.

Excluded from this pay item are drainage inlets, reinforced concrete pipe, hydroseed and all concrete and reinforcing steel required for the perimeter retaining wall and v-ditch.

Perforated and non-perforated subdrain pipe shall be ABS pipe or PVC pipe. ABS pipe shall meet the requirements of ASTM Designation: D-2751, SDR 23.5, and PVC pipe shall meet the requirements of ASTM Designation: D-2655. Perforations shall be as described in ASTM Designation: C-700. Perforated pipe shall be placed such that the perforations are oriented upward to maximize infiltration in unlined BMP's with underdrains.

Gravel layer shall be in conformance with the provisions of Section 72-4 "Small-Rock Slope Protection", of the 2010 State Standard Specifications.

Engineered soil media shall be comprised of 85 percent mineral component and 15 percent organic component, by volume, drum mixed prior to placement. The mineral component shall be a Class "A" sandy loam topsoil that meets the range specified in Table E below. The organic component shall be nitrogen stabilized compost. The trip ticket, or certificate of compliance, shall be made available to the inspector to prove the engineered mix meets this specification.

Engineered soil media shall be flooded to consolidate and then refilled to match drawing neat lines prior to placement of gravel pads at inlet locations.

Percent Range	Component
70-80	Sand
15-20	Silt
5-10	Clay

Pipe joints and storm drain structure connections must be adequately sealed to avoid piping conditions (water seeping through pipe or structure joints). Pipe sections shall be coupled using suitable connection rings and flanges. Field connections to storm drain structures and pipes shall be sealed with polymer grout material that is capable of adhering to surfaces. Underdrain pipe shall be capped (at structure) until completion of site construction.

Gravel bed materials are used to protect the underdrain pipe and to reduce clogging potential. Placement of gravel over the underdrain must be done with care. Avoid dropping the gravel from excessive heights from a backhoe or front-end loader bucket. Spill directly over underdrain and spread manually. Underdrain gravel shall be AASHTO #57 stone. A 3-inch thick layer of "pea gravel" shall be placed between the gravel bed materials and engineered soil media to reduce migration into the underdrain.

Clean-outs for underdrains shall be non-perforated ABS pipe or PVC pipe and should extend 6 inches above the media and have a lockable screw cap for easy access.

21.7 Sampling Station – The contract item Sampling Station includes furnishing and installing the 6-inch non-perforated PVC pipe, all pipe fittings, reinforcing steel, concrete, steel plates, hardware, parts and fittings for the reach from Station 39+98 to Station 40+02 as shown on the drawings.

Excluded from this pay item are earthwork and Class "B" concrete pad.

21.8 Staff Gauge – The contract item Staff Gauge includes furnishing and installing the Stevens Staff Gauge Style "C", or equivalent. Included in this item is all hardware, parts and fittings required for the installation of the staff gauge as shown on the drawings.

21.9 Swift Water Rescue Anchoring Devices - The contract item Swift Water Rescue Anchoring Devices includes furnishing and installing the anchors as shown on the drawings. Included in this item is all hardware, parts and fitting in.

21.10 Reflectorized Raised Pavement Marker ("Blue Dot") - The contract item Reflectorized Raised Pavement Marker ("Blue Dot") shall involve furnishing and installing a "Blue Dot" at each anchoring device. Included in this item is all materials, labor, equipment, and securing the "Blue Dot" to the channel structure with epoxy adhesive.

21.11 Measurement - Measurement for payment for the contract item Miscellaneous Iron and Steel will be the number of pounds used in the work as specified. Should manhole frames and covers exceed the minimum weights as shown on the drawings by more than two percent (2%) that weight in excess of the allowable two percent (2%) increase will not be measured for payment. Manhole frames and covers to be salvaged and reused will not be measured for payment.

Measurement for payment for the contract item Subdrain will be the number of lineal feet installed as specified. No measurement will be made of the gravel filter material required for this portion of the work.

Measurement for payment for the contract item Adjust Valve to Grade shall be the number of valves that are adjusted to meet the finished street grade.

Measurement for payment for the contract item Wood Post Metal Beam Guard Railing will be the number of lineal feet of railing furnished and installed as specified, measured along the centerline of the railing including curves.

Measurement for payment for the contract item Bioretention Basin will be lump sum.

Measurement for payment for the contract item Sampling Station will be lump sum.

Measurement for payment for the contract item Staff Gauge will be the number of staff gauges installed.

Measurement for payment for the contract item Swift Water Rescue Anchoring Devices will be the number of anchors installed.

Measurement for payment for the contract item Reflectorized Raised Pavement Marker ("Blue Dot") will be the number of "Blue Dots" installed.

21.12 Payment - The contract prices paid for Miscellaneous Iron and Steel; Subdrain; Adjust Valve to Grade; Wood Post Metal Beam Guard Railing; Bioretention Facility; Sampling Station; Staff Gauge; Swift Water Rescue Anchoring Devices; and Reflectorized Raised Pavement Marker ("Blue Dot") shall include full compensation for all costs incurred under this section.

SECTION 22 THROUGH SECTION 25 – NOT USED

SECTION 26 - STONEWORK

26.1 Description - This section covers the contract items Rock Slope Protection of various classes; Concreted Rock; Filter Blanket, No. 2 Backing; Rock Slope Protection Fabric; and Grouted Low Flow Channel.

26.2 General - All rock materials shall meet the quality requirements of Section 72-2.02 of the State Standard Specifications.

Rock materials shall be blocky and predominantly angular in shape. Not more than 25% of the rock shall have a length more than 2.5 times the breadth or thickness. No rock shall have a length exceeding 3.0 times its breadth or thickness. All oversize rocks, as determined by the Engineer, shall be removed.

Rock materials shall be placed on a firm dry foundation in conformance with Method B of Section 72-2.03 of the State Standard Specifications, however, additional placement effort shall be required to meet the lines and grades as shown on the drawings and to fill and chink oversize voids with selected rock to establish a stable interlock. Chinking of voids will not be required for rock specified to be concreted.

Permeable materials such as filter blankets shall be consolidated and the surface trimmed to final grade as directed by the Engineer.

Concrete for concreted (grouted) rock shall be Class "B", and shall have a slump sufficient to allow gravity flow into the interstices of the rock with rodding and vibration. Concrete for concreted rock shall be placed in accordance with Section 72-5.04 of the State Standard Specifications except that total penetration of the rock blanket by the concrete will be required, and the outer rocks of the finished rock surface shall project from the concrete surface as shown on the drawings.

26.3 Rock Slope Protection, 1-Ton Class - The contract item Rock Slope Protection, 1-Ton Class covers the rock furnished and placed as shown on the drawings as specified. Rock shall conform to 1-Ton Class for Method B placement per Section 72-2.02 of the State Standard Specifications.

26.4 Filter Blanket, No. 2 Backing - The contract item Filter Blanket, No. 2 Backing covers the filter blanket installed under the Rock Slope Protection.

The filter blanket shall be permeable material conforming to Section 72-2.01 of the State Standard Specifications for No. 2 Backing, and shall be placed to the lines and grades as shown on the plans. Material shall be placed on firm, dry foundation. Soft, spongy material shall be removed and replaced with acceptable compacted material as directed by the Engineer. The cost of foundation preparation shall be included in the price bid for excavation and no additional

allowance will be made for such work. The permeable material shall be consolidated and the surface trimmed to final grade as shown on the drawings or as directed by the Engineer.

26.5 Rock Slope Protection Fabric – Rock Protection Fabric placed beneath rock shall be as specified on the drawings.

26.6 Grouted Low Flow Channel - The contract item Grouted Low Flow Channel includes the Facing Class RSP and grout required to construct the Grouted Low Flow Channel as shown on the drawings.

The amount of Facing Class RSP shall be sufficient to chink the surface of the 1-Ton RSP sufficiently to enable grouting of the surface to meet the penetration shown in the table entitled "Grading of Concreted-Rock Slope Protection" in Section 72-5.02 of the State Standard Specifications.

Concrete for concreted low flow channel rock shall be Class "B", and shall have a slump sufficient to allow gravity flow into the interstices of the rock. Concrete for concreted rock shall be placed in accordance with Section 72-5.04 of the State Standard Specifications.

26.7 Measurement - Measurement for payment for the contract item Rock Slope Protection, 1-Ton Class; and Filter Blanket, No. 2 Backing, including all rock to be concreted, shall be the number of cubic yards placed as specified.

Measurement for payment for the contract item Rock Slope Protection Fabric shall be the number of square yards placed as specified. No measurement for payment will be made for laps required for installation or for convenience to the Contractor.

Measurement for payment for the contract item Grouted Low Flow Channel shall be the number of cubic yards placed to the lines, grades and dimensions shown on the drawings and shall be inclusive of Facing Class RSP and concrete grout. No separate measurement or payment will be made for grout volume required to meet the penetration specification.

Measurement for payment for the contract item Concrete for concreted rock shall be measured and paid for as specified under Section 16 of these Specifications, and no additional payment for labor, equipment, materials or incidentals for concreting rock will be made.

26.8 Payment - The contract prices paid for Rock Slope Protection, 1-Ton Class; Filter Blanket, No. 2 Backing; Rock Slope Protection Fabric; and Grouted Low Flow Channel shall include full compensation for all costs incurred under this section with the exception of concrete for concreted rock which shall be measured and paid for as specified under the Concrete Construction Section of these Specifications.

SECTION 27 – DUST ABATEMENT

27.1 Description - This section covers the implementation of dust control measures necessary to prevent harm and nuisance from dust. Supplementing Section 8.06 of the General Provisions,

the Contractor shall comply with all the provisions of the South Coast Air Quality Management District (SCAQMD) Rule 403 as described in Appendix "A".

27.2 Dust Abatement - The contract item Dust Abatement includes the action necessary to prevent, reduce or control dust within the work area as required to complete the work. The Contractor shall carry out proper and efficient measures to prevent his operations from producing dust in amounts damaging to property or causing a nuisance, or harm to persons living nearby or occupying buildings in the vicinity of the work. The methods to be used for controlling dust in the construction area and along haul roads shall be approved by the Engineer prior to starting any work included in this contract. The Rule 403 Implementation Handbook published by the SCAQMD contains a detailed listing of reasonably available dust control measures and is available for inspection at the District office.

27.3 Payment - The contract lump sum price paid for Dust Abatement shall include full compensation for all direct and indirect costs incurred under this section.

This payment will be made on a basis of the percentage of work completed on the entire project.

SECTION 28 – HYDROSEEDING

28.1 Description - This section covers the contract item Hydroseeding as directed by the Engineer. The bioretention facility within the limits shown on the drawings shall be hydroseeded.

28.2 Hydroseeding - This item includes the furnishing of all materials, incidentals, labor and equipment necessary to complete the work as specified herein, and as directed by the Engineer. All hydroseeding work shall be done by fully qualified and experienced personnel.

The hydroseeding materials shall not be stored onsite without prior approval of the Engineer as to location, duration and method of storage. All debris and excess materials shall be removed on a daily basis, unless otherwise authorized by the Engineer. The Contractor shall leave the work area in a clean and finished appearance upon completion of hydroseeding.

28.3 Equipment and Materials - The equipment shall be a mobile mounted unit in a fully operational and well maintained condition, meeting the requirements of Section 20-3.04B of the State Standard Specifications. Fiber shall be produced from natural or recycled (pulp) fiber and shall meet the requirements of Section 20-2.07 of the State Standard Specifications. Stabilizing binder upon drying shall allow water and air penetration, shall be non-flammable, shall have an effective life of at least 1 year, and shall not be toxic to plants and animals.

All seed shall be delivered to the site tagged and labeled in accordance with the California Agricultural Code. Seed shall be of a quality which has a minimum pure live seed content (% of purity x % germination) as specified and weed seed shall not exceed 0.5% of the aggregate of pure live seed and other material.

A commercial Ammonium Phosphate fertilizer shall be used containing a minimum of 16% nitrogen, 20% available phosphoric acid and 0% water soluble potash, uniform in composition, dry and free flowing, pelleted or granular. All fertilizer shall be delivered in unbroken or unopened containers, labeled in accordance with applicable State regulations and bearing the warranty of the producer for the grade furnished.

Straw mulch shall be new straw derived from rice, wheat, oats or barley and be free of mold and noxious weed seed. Straw shall be furnished in air dry bales. The Contractor shall furnish evidence that clearance has been obtained from the County Agricultural Commissioner, as required by law, before straw obtained from outside the county in which it is to be used is delivered to the site of the work.

A mulch covering shall be distributed uniformly over the surface of the seeded area. Mulching shall follow immediately after seeding. The straw mulch shall be applied at a rate of two (2) tons per acre. The mulch shall be applied by hand, blower or other suitable equipment. If straw is applied with a blower, it shall not be chopped in lengths less than six (6) inches.

28.4 Application - The Engineer shall review and approve completion of all construction and grading prior to any section being approved as ready for hydroseeding application.

The Contractor shall provide a written per load mix tabulation, ratioed to the tank capacity of the equipment to be used on the project, for review and approval by the Engineer well in advance of anticipated start of hydroseeding.

The Contractor shall provide a sample demonstration area for application by preparing one load of hydroseed mix. The demonstration areas shall be wet down thoroughly prior to application. The Engineer shall review and approve the sample section for compliance and workmanship. Upon approval, this area shall become the sample for all remaining application. No hydroseeding shall take place during high winds or during periods of rainfall.

Areas designated for hydroseeding shall receive an application made with an overlapping fan motion to provide a full and even spread throughout the coverage area.

The hydroseed mix, per acre of coverage, shall be as follows:

- 2,000 lbs./acre Fiber Mulch
- 250 lbs./acre 16-20-0 Commercial Fertilizer
- 120 lbs./acre Stabilizing binder
- 33 lbs./acre Seed Mix as follows:

Species	Lbs/ac	P/G
Bromus carinatus "cucamonga"	20	99/85
Trifolium tridentatum	4	99/85
Vulpia microstachys	8	99/85
Eschscholzia californica	4	98/80
Lupinus sparsiflorus	6	98/75

28.5 Measurement - Measurement for the contract item Hydroseeding will be made on the basis of the actual area treated to the nearest one hundredth (0.01) acre as measured by the Engineer.

28.6 Payment - The contract price paid for Hydroseeding shall include full compensation for all costs incurred under this section.

SECTION 29 – STORMWATER AND NON-STORMWATER POLLUTION CONTROL

29.1 Description – This section covers the contract items Stormwater and Non-Stormwater Pollution Control; and Non-Stormwater Discharge or Dewatering. The contract item Stormwater and Non-Stormwater Pollution Control shall include preparing, obtaining approval of, amending and implementing the Permit Registration Documents (PRDs) as required by the State Water Resources Control Board (SWRCB) and the California Regional Water Quality Control Board (CRWQCB) - Santa Ana Region. The contract item Non-Stormwater Discharge or Dewatering shall include compliance with Santa Ana Regional Water Quality Board Order No. R8-2009-0003.

29.2 General Requirements – All activities performed by the Contractor for this project shall conform to the requirements of the State-wide National Pollutant Discharge Elimination System (NPDES) General Permit (Board Order No. 2009-0009-DWQ, NPDES No. CAS000002 as amended by Board Order No. 2010-0014-DWQ) for Stormwater Discharges Associated with Construction and Land Disturbance Activities, hereafter referred to as the "General Permit", issued by the SWRCB. This General Permit regulates both stormwater and non-stormwater discharges associated with Contractor's construction activities. This General Permit can be downloaded at http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

The PRDs mentioned above consist of:

1. Notice of Intent
2. Risk Assessment (Section VIII of the General Permit)
3. Site Map
4. Stormwater Pollution Prevention Plan (SWPPP) (Section XIV of the General Permit)
5. Annual Fee
6. Signed Certification Statement

Notice of Intent - The District will complete and submit the Notice of Intent.

Risk Assessment - Using the methodology in Appendix 1 of the General Permit, the District has calculated the preliminary Risk Level to be 1.

Site Map – The Contractor shall revise District provided site map of the project area if Contractor's Qualified SWPPP Developer (QSD) deems necessary. Site Map shall conform to requirements of General Permit Attachment B, Section J.

SWPPP – For the convenience of the Contractor and to expedite the SWPPP preparation and approval, a "90%" SWPPP Template has been prepared by the District. This SWPPP Template has been tailored to the referenced project and can be downloaded from http://rcflood.org/Documents/SWPPP_Template_1000250 or obtained from the District in CD form. Winning bidder will be provided two (2) hard copies and a Word document of the "90%" SWPPP Template to amend. The Contractor shall review and amend this SWPPP Template based on the requirements of the General Permit and per the construction schedule and work plan proposed by the Contractor. The Contractor shall then submit a SWPPP certified by the Contractor's QSD which conforms to Section 29.3 for District review and approval.

The Contractor shall amend and finalize the complete "90%" SWPPP Template referenced above. The Contractor shall, at a minimum, provide and/or prepare the following:

1. Name and contact information for the Contractor's Qualified SWPPP Practitioner (QSP) and QSD
2. Contractor name and contact information
3. Contractor site contact person and emergency contact person information
4. Verification of disturbance area due to construction
5. Construction commencement date
6. Anticipated construction completion date
7. Construction Activity Schedule/Best Management Practices (BMPs) Installation Schedule
8. Name and contact information for personnel responsible for pre-storm, post-storm and storm event BMP inspections – this should be the project's QSP
9. Name of the lab responsible for testing any stormwater samples for non-visible pollutants
10. Verification of project risk level and permit type (Linear Underground/Overhead Project (LUP) or Traditional)
11. List of all subcontractors that will be working on the project
12. Review and finalize water pollution control drawings

The SWPPP shall be certified by the Contractor's QSD and implemented by the Contractor's QSP. The SWPPP shall be developed using the format outlined in the CASQA SWPPP Template located in the California Stormwater Quality Association (CASQA) Construction BMP Handbook Portal. The portal can be found on the CASQA Website: www.casqa.org. The SWPPP shall identify site specific BMPs to be implemented during and after construction to minimize the potential pollution of stormwater runoff and downstream receiving waters. The identified BMPs shall be practices designed to minimize or eliminate the discharge of pollutants from the construction site and Contractor's construction activities, including, but not limited to:

1. Good housekeeping practices for solid and sanitary/septic waste management, vehicle and equipment cleaning/maintenance, and material handling and storage.

2. Construction procedures such as stabilized construction access points, scheduling/phasing to minimize areas of soil disturbance, soil stabilization and erosion/sediment control.

The SWPPP shall also stipulate an ongoing program for monitoring and maintenance of all BMPs.

The SWPPP shall be designed to address the following objectives:

1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;
2. Where not otherwise required to be under a Regional Water Board permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
3. Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Conventional Technology (BAT/BCT) standard;
4. Calculations and design details as well as BMP controls for site run-on are complete and correct; and
5. Stabilization BMPs, installed to reduce or eliminate pollutants after construction, are completed.

To demonstrate compliance with requirements of the General Permit, the QSD shall include information in the SWPPP that supports the conclusions, selections, use, and maintenance of BMPs.

The Contractor shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Regional Board inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

Annual Fee – The District will pay any necessary fees.

Signed Certification Statement – The Contractor's QSD shall submit a signed certification certifying the SWPPP is a true, accurate and complete representation of the proposed project and mitigation measures.

In the event the District incurs any Administrative Civil Liability or Mandatory Minimum (fine) imposed by the CRWQCB - Santa Ana Region, as a result of Contractor's failure to fully implement the provisions of this section and permit requirements, "Stormwater and Non-Stormwater Pollution Control", the Engineer may, in the exercise of his sole judgment and discretion, withhold from payments otherwise due Contractor a

sufficient amount to cover the Civil Liability. Liability for "Negligent Violations" may be in an amount up to \$50,000 per day per deemed occurrence while "Knowing Violations" can result in fines as high as \$250,000 and imprisonment.

Stormwater and Non-Stormwater Pollution Control work shall conform to the requirements in the latest version of the CASQA Handbook, entitled "**California Stormwater BMP Handbook – Construction" updated November 2009**. A copy of the "California Stormwater BMP Handbook – Construction", updated November 2009, hereafter referred to as the "CASQA Handbook", may be obtained from CASQA, Post Office Box 2105, Menlo Park, California 94026-2105. Telephone: 650.366.1042. Copies of the CASQA Handbook can also be downloaded from the CASQA Construction BMP Handbook Portal.

The Contractor shall be responsible for all costs and for any liability imposed by law as a result of the Contractor's failure to comply with the requirements set forth in this section, "Stormwater and Non-Stormwater Pollution Control", including but not limited to, compliance with the applicable provisions of the CASQA Handbook, General Permit, General De Minimus Permit, Federal, State and local regulations. For the purpose of this paragraph, costs and liabilities include, but are not limited to, fines, penalties and damages whether assessed against the District or the Contractor, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Act.

The Contractor shall become fully informed of and comply with the applicable provisions of the CASQA Handbook, General Permit, General De Minimus Permit, and Federal, State and local regulations that govern the Contractor's activities and operation pertaining to both stormwater and non-stormwater discharges from both the project site and areas of disturbance outside the project limits during construction. The Contractor shall, at all times, keep copies of the General Permit, General De Minimus Permit, approved SWPPP and all amendments at the project site. The SWPPP shall be made available upon request of a representative of the SWRCB, CRWQCB, United States Environmental Protection Agency (USEPA) or local stormwater management agency. Requests by the public shall be directed to the Engineer.

The Contractor is solely and exclusively responsible for any arrangements made between the Contractor and other property owners or entities that result in disturbance of areas or construction activities being conducted outside limits of the designated rights-of-way and temporary construction easements as shown on the project drawings.

The Contractor shall, during work hours, allow authorized agents of the CRWQCB, SWRCB, USEPA or local stormwater management agency, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the construction site and the Contractor's facilities pertinent to the work;
2. Have access to and copy any records required to be kept as specified in the General Permit;

3. Inspect the construction site, including any offsite staging areas or material storage areas, and related soil stabilization practices and sediment control BMPs; and
4. Sample or monitor for the purpose of ensuring compliance with the General Permit.

The Contractor shall notify the Engineer immediately upon request from regulatory agencies to enter, inspect, sample, monitor or otherwise access the project site or the Contractor's records.

29.3 PRDs Preparation and Approval - The Contractor shall prepare and obtain approval of the PRDs as part of the Stormwater and Non-Stormwater Pollution Control work for this contract. The SWPPP shall include an appropriate Construction Site Monitoring Program (CSMP) as required by Section I, "Monitoring and Reporting Requirements" of Attachment C of the General Permit. A guidance document titled "Field Monitoring and Analysis Guidance" is available from the CASQA internet site in their Construction BMP Handbook Portal. The Contractor shall prepare and implement the SWPPP in accordance with the CASQA Handbook and CSMP, the General Permit and these Detailed Specifications.

In case of conflict between the CASQA Handbook and these Detailed Specifications, the Detailed Specifications shall govern; in case of conflict between these Detailed Specifications and the General Permit, the latter shall govern.

Within five (5) working days after the award of the contract, the Contractor shall submit two (2) copies of the PRDs to the Engineer for review and approval. The Contractor shall allow ten (10) working days for the Engineer to review the PRDs. If revisions are required as determined by the Engineer, the Contractor shall revise and resubmit the PRDs within three (3) working days of receipt of the Engineer's comments and shall allow ten (10) working days for the Engineer to review the revisions. The Contractor shall submit four (4) hard copies and one (1) pdf copy of the approved SWPPP to the Engineer prior to the pre-construction meeting. **The Contractor must have approved PRDs prior to the pre-construction meeting.**

The SWPPP shall incorporate BMPs in each of the following categories:

1. Soil stabilization practices;
2. Sediment control practices;
3. Sediment tracking control practices;
4. Wind erosion control practices; and
5. Non-stormwater management, and waste management and disposal control practices.

Specific objectives and minimum requirements for each category of BMPs are described in the CASQA Handbook. The Contractor shall consider the objectives and minimum requirements presented in the CASQA Handbook for each of the above categories. When minimum requirements are listed for any category, the Contractor shall incorporate one or more of the listed minimum BMPs required into the SWPPP and implement them on the project to

meet the pollution control objectives for the category. In addition, the Contractor shall consider other BMPs presented in the CASQA Handbook to supplement the minimum BMPs required when necessary to meet the objectives of the SWPPP and maintain compliance with the General Permit. The Contractor shall document the selection process in accordance with the procedure specified in the CASQA Handbook.

The Contractor should not assume that the minimum BMPs required for each category presented in the CASQA Handbook are adequate to meet the pollution control objectives. The Contractor may use other effective BMPs, as approved by the Engineer, in addition to the minimum as required in the CASQA Handbook to achieve the pollution control objectives.

The SWPPP shall include the following items as described in the CASQA Handbook, CSMP and General Permit:

Section 1 - SWPPP Requirements:

- 1.1 Introduction
- 1.2 PRDs
- 1.3 SWPPP Availability and Implementation
- 1.4 SWPPP Amendments
- 1.5 Retention of Records
- 1.6 Required Non-Compliance Reporting
- 1.7 Annual Report
- 1.8 Changes to Permit Coverage
- 1.9 Notice of Termination

Section 2 - Project Information:

- 2.1 Project and Site Description
- 2.2 Permits and Governing Documents
- 2.3 Stormwater Run-on from Offsite Areas
- 2.4 Findings of the Construction Site Sediment and Receiving Water Risk Determination
- 2.5 Construction Schedule
- 2.6 Potential Construction Site Pollutant Sources
- 2.7 Identification of Non-Stormwater Discharges
- 2.8 Required Site Map Information

Section 3 - Best Management Practices:

- 3.1 Schedule for BMP Implementation
- 3.2 Erosion Control and Sediment Control
- 3.3 Non-Stormwater and Material Management
- 3.4 Post-Construction Stormwater Management Measures

Section 4 - BMP Inspection, Maintenance, and Rain Event Action Plans:

- 4.1 BMP Inspection and Maintenance
- 4.2 Rain Event Action Plans

Section 5 - Training

Section 6 - Responsible Parties and Operators:

- 6.1 Responsible Parties
- 6.2 Contractor List

Section 7 - Construction Site Monitoring Program:

- 7.1 Purpose
- 7.2 Applicability of Permit Requirements
- 7.3 Weather and Rain Event Tracking
- 7.4 Monitoring Locations
- 7.5 Safety and Monitoring Exemptions
- 7.6 Visual Monitoring (Inspections)
- 7.7 Water Quality Sampling and Analysis
- 7.8 Watershed Monitoring Option
- 7.9 Quality Assurance and Quality Control
- 7.10 Reporting Requirements and Records Retention

To ensure that the preparation, implementation, and oversight of the SWPPP is sufficient for effective pollution prevention, individuals responsible for creating, revising, overseeing, and implementing the SWPPP should participate in applicable training programs and document such training in the SWPPP. A copy of the SWPPP should be located at the construction site.

The following notes (or notes of substantially similar intent) that address pollution prevention to the Maximum Extent Practicable during the construction phase of a project on a year-round basis need to be placed on the Stormwater and Non-Stormwater Pollution Control Drawings:

- ◆ Erosion control BMPs shall be implemented and maintained to minimize and/or prevent the entrainment of soil in runoff from disturbed soil areas on construction sites.
- ◆ Sediment control BMPs shall be implemented and maintained to prevent and/or minimize the transport of soil from the construction site.
- ◆ Stockpiles of soil shall be properly contained to eliminate or reduce sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking or wind.
- ◆ Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented to eliminate or reduce transport from the site to streets, drainage facilities or adjoining properties by wind or runoff.

- ◆ Runoff from equipment and vehicle washing shall be contained at construction sites and must not be discharged to receiving waters or the local storm drain system. Washwaters or rinsate from ready mix, concrete, or cement vehicles must be handled appropriately and may not be discharged to receiving waters or any storm drain system.
- ◆ All construction contractor and subcontractor personnel are to be made aware of the required BMPs and good housekeeping measures for the project site and any associated construction staging areas.
- ◆ At the end of each day of construction activity all construction debris and waste materials shall be collected and properly disposed in trash or recycle bins.
- ◆ Construction sites shall be maintained in such a condition that a storm does not carry wastes or pollutants off the site. Discharges other than stormwater (non-stormwater discharges) are prohibited, except as authorized by an individual NPDES Permit or the State-wide General Permit for Stormwater Discharges Associated with Construction Activity. Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, solvents, detergents, glues, lime, pesticides, herbicides, fertilizers, wood preservatives and asbestos fibers; paint flakes or stucco fragments; fuels, oils, lubricants and hydraulic, radiator or battery fluids; concrete and related cutting or curing residues; floatable wastes; wastes from engine/equipment steam cleaning or chemical degreasing; wastes from street cleaning; and super-chlorinated potable water from line flushing and testing. During construction, disposal of such materials should occur in a specified and controlled temporary area onsite physically separated from potential stormwater runoff, with ultimate disposal in accordance with local, State and Federal requirements.
- ◆ Discharging contaminated groundwater produced by dewatering groundwater that has infiltrated into the construction site is prohibited. Discharging of contaminated soils via surface erosion is also prohibited.
- ◆ The Contractor is required to notify and obtain approval from the District ten (10) days prior to any non-stormwater discharge or dewatering associated with Contractor's construction activities.
- ◆ Construction sites shall be managed to minimize the exposure time of disturbed soil areas through phasing and scheduling of grading to the extent feasible and the use of temporary and permanent soil stabilization.
- ◆ BMPs shall be maintained at all times. In addition, BMPs shall be inspected prior to predicted storm events and following storm events.

29.4 PRD and Rain Event Action Plan (REAP) Amendments - If the scope or schedule of the project changes, the Contractor shall immediately notify the Engineer. The Engineer will determine if the Contractor will be required to recalculate the Risk Assessment. If it is determined by the Engineer that a new Risk Assessment is required, the Engineer will notify the Contractor to resubmit amended PRDs and in the case that the risk level increases, the Contractor shall comply with additional applicable requirements of the General Permit, including preparation and implementation of REAPs, CSMP, Numeric Action Level (NAL) Exceedance Reports, and annual reporting requirements. The Contractor shall also prepare amendments to

the PRDs, both graphically and in narrative form, whenever there is a change in Contractor's construction activities or operations which may result in the discharge of pollutants to surface waters, groundwaters, municipal storm drain systems, or as deemed necessary by the Engineer. The Contractor shall also amend the PRDs if they are in violation of any condition of the General Permit, or has not effectively achieved the objective of reducing pollutants in stormwater discharges. Amendments shall show additional BMPs, revised Contractor's construction activities or operations, including those in areas not shown in the initially approved SWPPP, which are required on the project to effectively control water pollution.

Amendments to the PRDs shall be submitted for review and approval by the Engineer in the same manner specified for the initial approval of the PRDs. The Contractor shall date and attach all approved amendments to any of the PRDs. Upon approval of the amendment, the Contractor shall implement the approved changes, revised construction activities or operations.

29.5 Non-Compliance Reporting - If the project is in non-compliance at any time, the Contractor shall make a written report to the Engineer within two (2) calendar days of identification of non-compliance activities.

29.6 SWPPP Implementation - Upon approval of the SWPPP, the Contractor shall be responsible throughout the duration of the project for placing, installing, constructing, inspecting and maintaining the BMPs as well as conducting the CSMP as included in the SWPPP and any amendments thereto, and for removing and disposing of temporary BMPs. All SWPPP implementation shall be performed or supervised by a QSP. Unless otherwise directed by the Engineer or specified in these Detailed Specifications, the Contractor's responsibility for SWPPP implementation shall continue throughout any temporary suspension of work ordered in accordance with Section 6.05, "TEMPORARY SUSPENSION OF THE WORK", of the General Provisions. Requirements for installation, construction, inspection, maintenance, removal and disposal of BMPs are specified in the CASQA Construction BMP Handbook Portal and these Detailed Specifications.

The Engineer may order the suspension of construction operations if the Contractor fails to comply with the requirements of this section, "Stormwater and Non-Stormwater Pollution Control", as determined by the Engineer.

The Contractor will not be compensated for sampling and analysis work because of the Contractor's failure to properly implement, inspect, maintain and repair BMPs in the approved SWPPP and any amendments thereto, or for failing to store construction materials or wastes in watertight containers.

- (a) **Stormwater Pollution Control** - The Contractor shall implement soil stabilization practices and sediment control BMPs, including minimum requirements as presented in the CASQA Construction BMP Handbook Portal, on all disturbed areas of the project site throughout the duration of the project.

Implementation of soil stabilization practices and sediment control BMPs for soil-disturbed areas, including but not limited to, rough graded access roads, slopes, channel inverts, operational inlets and outlets of the project shall be completed prior to soil disturbance. The General Permit requires BMPs to be deployed throughout the duration of the project.

The Engineer may require the Contractor, on a case-by-case basis, to reduce the active, soil-disturbed area limit of the project. The Contractor shall demonstrate the ability and preparedness to fully deploy soil stabilization practices and sediment control BMPs to protect soil-disturbed areas of the project site by maintaining an adequate quantity of soil stabilization and sediment control materials onsite to protect exposed, soil-disturbed areas and a detailed plan for the mobilization of sufficient labor and equipment to fully deploy the required BMPs prior to the onset of precipitation and for the duration of the project.

Throughout the duration of the project, soil-disturbed areas of the project site shall be considered to be inactive whenever soil disturbing activities are expected to be discontinued for a period of fourteen (14) calendar days or more. Areas that will become inactive shall be fully protected with soil stabilization practices such as covering with mulch, temporary seeding, fiber rolls, blankets, etc., within ten (10) calendar days of the discontinuance of soil disturbing activities or two (2) calendar days prior to the onset of precipitation, whichever is first to occur. Areas that will become inactive shall be fully protected with sediment control BMPs within ten (10) calendar days of the discontinuance of soil disturbing activities or two (2) calendar days prior to the onset of precipitation, whichever is first to occur.

Throughout the duration of the project, the project site shall be fully protected with soil stabilization practices and sediment control BMPs. The Contractor shall monitor the weather forecast on a daily basis. The National Weather Service forecast shall be used.

- (b) **Non-Stormwater Pollution Control** - The Contractor shall implement, year-round and throughout the duration of the project, BMPs included in the SWPPP for sediment tracking, wind erosion, non-stormwater management, and waste management and disposal.
- (c) **Inspections and Reporting** - The Contractor shall ensure that a QSP regularly inspects the construction site for BMPs identified in the SWPPP to ensure the proper implementation and functioning of BMPs. The QSP shall identify corrective actions and time frames to address any damaged BMPs or reinitiate any BMPs that have been discontinued. All repairs and design changes shall begin to be implemented within 72 hours of identification.

At a minimum, the Contractor shall inspect the construction site as follows:

1. Prior to a forecast storm;
2. After any precipitation which causes runoff capable of carrying sediment from the construction site;
3. At 24-hour intervals during extended precipitation events; and
4. At a regular interval of once every week.

The construction site inspection checklist provided in the CASQA SWPPP Template shall be used to ensure that the necessary BMPs are being properly implemented and are functioning adequately. The Contractor shall submit one copy of each site inspection record to the Engineer.

- (d) Maintenance - The Contractor's QSP shall maintain construction site BMPs identified in the SWPPP to ensure the proper implementation and functioning of BMPs. If the QSP or the Engineer identifies a deficiency in the deployment or functioning of an identified BMP, the QSP shall begin implementing repairs or design changes within 72 hours of identification and complete as soon as possible. The correction of deficiencies shall be at no additional cost to the District.
- (e) Training - The Contractor shall ensure that all persons responsible for implementing requirements of the General Permit shall be appropriately trained in accordance with Section VII "Training Qualifications and Certification Requirements" of the General Permit. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. All training shall be documented and included in the SWPPP as an appendix.

The Contractor shall ensure that SWPPPs are written, amended and certified by a QSD. The Contractor shall also ensure that all inspection, maintenance, repair and sampling activities shall be performed or supervised by a QSP. A QSP is a person responsible for non-stormwater and stormwater visual observations, sampling and analysis.

29.7 REAP - The REAP is applicable to Risk Level 2 construction sites only. The Contractor shall ensure a QSP develop a REAP and submit a copy to the Engineer for review 48 hours prior to any likely precipitation event. The Contractor shall amend and implement the REAP as directed by the Engineer. If no comments are received prior to the precipitation event, the REAP shall be implemented as proposed. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The discharger shall ensure a QSP obtain a printed copy of the precipitation forecast information from the National Weather Service Forecast Office (e.g., enter the zip code of the project's location at <http://www.srh.noaa.gov/forecast>).

The Contractor's QSP shall ensure that the REAP include, at a minimum, the following site information:

- a. Site Address
- b. Calculated Risk Level
- c. Site Stormwater Manager information including the name, company and 24-hour emergency telephone number
- d. Erosion and Sediment Control Provider information including the name, company and 24-hour emergency telephone number
- e. Stormwater Sampling Agent information including the name, company and 24-hour emergency telephone number

29.8 Water Quality Monitoring, Sampling and Analysis – The Water Quality Monitoring, Sampling and Analysis is applicable to Risk Level 2 construction sites only. The Contractor's QSD shall be responsible for preparing a CSMP and implementing the monitoring, sampling and analysis requirements as described in Attachment D of the General Permit. Records of all visual observations and sampling results required by the General Permit shall be kept using the forms contained in CSMP, Attachment 3 of the CASQA Construction BMP Handbook Portal. Copies of the forms shall be maintained in the SWPPP and submitted to the Engineer within 24 hours of the visual observation or sampling event.

29.9 NAL Exceedance Report - The NAL Exceedance Report is applicable to Risk Level 2 construction sites only. The Contractor shall be responsible for submitting a NAL Exceedance Report to the Engineer in the event that any effluent sample exceeds an applicable NAL.

- a. The Contractor shall submit all storm event sampling results for each discharge point to the Engineer no later than 24 hours after the conclusion of the storm event.
- b. The Contractor shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.
- c. The Contractor shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three (3) years after the date the annual report is filed.
- d. The Contractor shall include in the NAL Exceedance Report:
 - i. The analytical method(s), method reporting unit(s) and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit").

- ii. The date, place, time of sampling, visual observation (inspections) and/or measurements, including precipitation.
- iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

29.10 Non-Stormwater Discharge or Dewatering - Dewatering activity should only be considered after other methods have been determined to be inadequate for storm drain construction by the Engineer. If groundwater will be encountered during the project activities, the dewatering activity must be covered by the General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant Threat to Water Quality (De Minimus Permit), Santa Ana Regional Water Quality Control Board Order No. R8-2009-0003. The Contractor shall comply with this Order, and notify and obtain approval from the Engineer fifteen (15) days prior to any non-stormwater discharging of groundwater dewatering. If an emergency or unforeseen dewatering activity that will discharge to Waters of the United States occurs, the Contractor shall contact the Engineer immediately.

When discharging groundwater from dewatering activities to surface waters, the Contractor shall comply with and implement the Monitoring and Reporting Program required under Order No. R8-2009-0003. This Order can be downloaded from http://www.waterboards.ca.gov/santaana/board_decisions/adopted_orders/orders/2009_orders.shtml. Under the Monitoring and Reporting Program, the Contractor shall prepare the monitoring report in accordance with Attachment E of the Order. The Contractor must submit the Monitoring Reports to the Engineer by the 15th day of each month following the monitoring period. The District will submit the Monitoring Reports to the Santa Ana Regional Water Quality Control Board. The Monitoring Reports shall cover the previous month's monitoring activities.

If there is any other form of non-stormwater discharge from the project to surface waters, the Contractor shall immediately contact the Engineer to determine appropriate actions required for coverage under the De Minimus Permit.

Failure of the Contractor to fully comply with this requirement may result in the suspension of construction operations and liability for any associated monitoring, fines, penalties and remediation activities related to the discharge.

29.11 Reports -

- (a) **Annual Report** - The Contractor shall be responsible for preparing an Annual Report to meet the requirements of Section XVI of the General Permit covering the preceding period of construction from July 1st to June 30th. The Annual Report shall be structured in accordance with the CASQA Construction BMP Handbook Portal Section 1.7. The Contractor shall submit two (2) copies of the Annual Report to the Engineer by July 15th of each year for review and approval. The Contractor shall allow ten (10) working days for the Engineer to review the Annual Report. If revisions are required as determined by the Engineer, the

Contractor shall revise and resubmit the Annual Report within three (3) working days of receipt of the Engineer's comments. The Contractor shall submit four (4) copies of the approved Annual Report to the Engineer prior to August 15th of each year. **The Contractor shall be responsible for providing an Annual Report to the Engineer for any construction occurring for part of the year after July 1st prior to receiving final payment on the project.**

(b) Monthly Report – The Contractor shall prepare and submit to the Engineer a Monthly Report within five (5) working days of the end of the month including:

1. All visual observation reports;
2. All sampling and analysis reports;
3. All NAL Exceedance Reports; and
4. Summary of changes to the SWPPP and or REAP based on inspection results for the preceding month.

29.12 Payment - The contract lump sum price paid for Stormwater and Non-Stormwater Pollution Control work shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all the work involved in developing, preparing, obtaining approval of, revising and amending the PRDs, and installing, constructing, maintaining, removing and disposing of BMPs as shown in the SWPPP, as specified in the CASQA Handbook and Sample Contractor's Water Quality CSMP, General Permit and these Detailed Specifications, and as directed by the Engineer.

The contract lump sum price paid for Non-Stormwater Discharge or Dewatering shall include full compensation for compliance of Section 29.10, "Non-Stormwater Discharge or Dewatering". **Contractor shall not be paid any portion of the contract lump sum if discharge of groundwater from dewatering activities to surface waters is avoided.**

Monthly payment will be made on a basis of the percentage of work completed on the entire project and subject to the submittal of a complete Monthly Report as specified in Section 29.11(b). Failure to complete or report required visual inspections, monitoring, sampling and analysis requirements, NAL Exceedance Reports, and/or other necessary follow-up actions to ensure that the project stays in compliance with the General Permit can be the basis for reducing monthly progress payments for the project. Monthly progress payments will be reduced by the amount of direct costs, overhead costs and engineering costs incurred by the Engineer to address compliance deficiencies, including costs to conduct inspections, monitoring, reporting and supplemental BMP implementation necessary to comply with the General Permit and costs incurred by the Engineer to address complaints, additional State inspections and violations and/or fines issued by the State or USEPA associated with failure to properly comply with the General Permit. Progress payment reductions can exceed the monthly percentage or total contract lump sum price for Stormwater and Non-Stormwater Pollution Control work.

Payment will be made on a basis of the percentage of work completed on the entire project.

SECTION 30 – NOT USED

SECTION 31 - UTILITIES

31.1 Description - This section covers the contract item Relocate 8-Inch Waterline.

31.2 Relocate 8-Inch Waterline - The contract item Relocate 8-Inch Waterline covers all labor, equipment, materials, testing, earthwork, removal of existing waterline and incidentals required for the construction and installation of the 8-inch cement mortar lined and cement mortar coated steel waterline, as shown on the drawings and as required by the "Santa Ana River Water Company Specifications" and these Specifications.

The Contractor may obtain the "Santa Ana River Water Company Specifications" from the Santa Ana River Water Company at 10530 54th Street, Jurupa Valley, CA 91752.

The Contractor will install 8-inch valves to isolate and depressurize the 8-inch waterline prior to relocation. The Contractor shall coordinate with the Santa Ana River Water Company regarding the scheduling and relocation of the existing 8-inch waterline. Contractor shall perform the required pressure test as required by "205 Specifications". The Contractor will complete the disinfection and final connection, and the Contractor shall perform all required earthwork.

The Contractor is required to closely coordinate and cooperate with the Santa Ana River Water Company to ensure that the work proceeds in an orderly manner and that the waterline is out of service for a minimum period of time.

The Contractor shall notify the Santa Ana River Water Company (Arnold Rodriquez, 951.685.6503) in writing at least ten (10) working days before relocation is started.

31.3 Measurement and Payment - The contract lump sum price paid for Relocate 8-Inch Waterline shall include full compensation for all costs incurred under this section except that Aggregate Base, and Asphalt Concrete used for resurfacing the street will be measured and paid for under the contract items Aggregate Base, Class 2 and Asphalt Concrete, Type B.

SECTION 32 – NOT USED



APPENDIX "A"

SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT

RULE 403



(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

- (1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.
- (2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.
- (3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.
- (4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.
- (5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

- (6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.
- (7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.
- (8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.
- (9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.
- (10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.
- (11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.
- (12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.
- (13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

- (14) **DISTURBED SURFACE AREA** means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:
- (A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;
 - (B) been paved or otherwise covered by a permanent structure; or
 - (C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.
- (15) **DUST SUPPRESSANTS** are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.
- (16) **EARTH-MOVING ACTIVITIES** means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.
- (17) **DUST CONTROL SUPERVISOR** means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.
- (18) **FUGITIVE DUST** means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.
- (19) **HIGH WIND CONDITIONS** means that instantaneous wind speeds exceed 25 miles per hour.
- (20) **INACTIVE DISTURBED SURFACE AREA** means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.
- (21) **LARGE OPERATIONS** means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

- (22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.
- (23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.
- (24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.
- (25) PM₁₀ means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.
- (26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.
- (27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.
- (28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.
- (29) SIMULTANEOUS SAMPLING means the operation of two PM₁₀ samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.
- (30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

- (31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.
 - (32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.
 - (33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.
 - (34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.
 - (35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.
 - (36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.
 - (37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.
- (d) Requirements
- (1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

- (A) the dust remains visible in the atmosphere beyond the property line of the emission source; or
 - (B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.
- (2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.
- (3) No person shall cause or allow PM₁₀ levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM₁₀ monitoring. If sampling is conducted, samplers shall be:
- (A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM₁₀.
 - (B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.
- (4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.
- (5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.
- (A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

- (B) Pave the surface extending at least 100 feet and at least 20 feet wide.
 - (C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
 - (D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
 - (E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).
- (6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

- (1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:
 - (A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;
 - (B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;
 - (C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

- (D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;
- (E) identify a dust control supervisor that:
 - (i) is employed by or contracted with the property owner or developer;
 - (ii) is on the site or available on-site within 30 minutes during working hours;
 - (iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;
 - (iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and
- (F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

- (1) The provisions of this Rule shall not apply to:
 - (A) Dairy farms.
 - (B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.
 - (C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.
 - (D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:
 - (i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;
 - (ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and
 - (iii) makes the completed self-monitoring form available to the Executive Officer upon request.
 - (E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:
 - (i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and
 - (ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and
 - (iii) makes the completed self-monitoring form available to the Executive Officer upon request.

- (F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.
 - (G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.
 - (H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.
 - (I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.
 - (J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:
 - (i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and
 - (ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.
 - (K) sandblasting operations.
- (2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:
- (A) When wind gusts exceed 25 miles per hour, provided that:

- (i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;
 - (ii) records are maintained in accordance with subparagraph (e)(1)(C).
 - (B) To unpaved roads, provided such roads:
 - (i) are used solely for the maintenance of wind-generating equipment; or
 - (ii) are unpaved public alleys as defined in Rule 1186; or
 - (iii) are service roads that meet all of the following criteria:
 - (a) are less than 50 feet in width at all points along the road;
 - (b) are within 25 feet of the property line; and
 - (c) have a traffic volume less than 20 vehicle-trips per day.
 - (C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.
- (3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.
 - (4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:
 - (A) Blasting operations which have been permitted by the California Division of Industrial Safety; and
 - (B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.
 - (5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

- (6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.
- (7) The provisions of subdivision (e) shall not apply to:
 - (A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.
 - (B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.
 - (C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.
- (8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM₁₀ pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
 (Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and	✓ Mix backfill soil with water prior to moving
	01-2 Stabilize backfill material during handling; and	✓ Dedicate water truck or high capacity hose to backfilling equipment
	01-3 Stabilize soil at completion of activity.	✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and	✓ Maintain live perennial vegetation where possible
	02-2 Stabilize soil during clearing and grubbing activities; and	✓ Apply water in sufficient quantity to prevent generation of dust plumes
	02-3 Stabilize soil immediately after clearing and grubbing activities.	
Clearing forms	03-1 Use water spray to clear forms; or	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
	03-2 Use sweeping and water spray to clear forms; or	
	03-3 Use vacuum system to clear forms.	
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and	✓ Follow permit conditions for crushing equipment
	04-2 Stabilize material after crushing.	✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
 (Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration
	05-2 Stabilize soil during and after cut and fill activities.	✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
	06-2 Stabilize surface soil where support equipment and vehicles will operate; and	
	06-3 Stabilize loose soil and demolition debris; and	
	06-4 Comply with AQMD Rule 1403.	
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and	✓ Limit vehicular traffic and disturbances on soils where possible
	07-2 Stabilize disturbed soil between structures	✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and	✓ Grade each project phase separately, timed to coincide with construction phase
	08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and	✓ Upwind fencing can prevent material movement on site
	08-3 Stabilize soils once earth-moving activities are complete.	✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	<ul style="list-style-type: none"> ✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	<ul style="list-style-type: none"> ✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	<ul style="list-style-type: none"> ✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
 (Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	<ul style="list-style-type: none"> ✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	<ul style="list-style-type: none"> ✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	<ul style="list-style-type: none"> ✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	<ul style="list-style-type: none"> ✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	<ul style="list-style-type: none"> ✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	<ul style="list-style-type: none"> ✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	<ul style="list-style-type: none"> ✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
 (Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Unpaved roads/parking lots	19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
Vacant land	20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	<p>(1a) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR</p> <p>(1a-1) For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.</p>
Earth-moving: Construction fill areas:	<p>(1b) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.</p>

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS
Earth-moving: Construction cut areas and mining operations:	(1c) Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b) Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c) Apply chemical stabilizers within five working days of grading completion; OR (2d) Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a) Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR (3b) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (3c) Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR (3d) Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS
Unpaved Roads	(4a) Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR (4b) Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR (4c) Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a) Apply chemical stabilizers; OR (5b) Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR (5c) Install temporary coverings; OR (5d) Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

**TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS**

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling (Only applicable to Commercial Poultry Ranches)	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

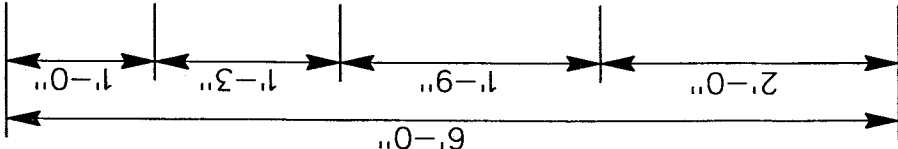


APPENDIX "B"

PROJECT SIGNS



8'-0"



RIVERSIDE COUNTY FLOOD CONTROL ^①
 AND
 WATER CONSERVATION DISTRICT

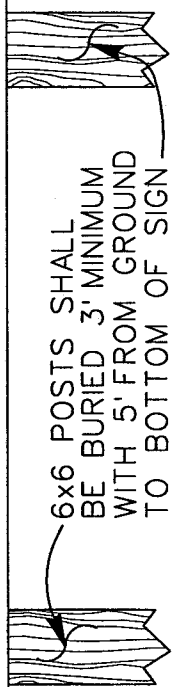
**DAY CREEK CHANNEL
 STAGE 6 PHASE 2 ^②**

TOTAL CONSTRUCTION COST: \$ ^③ * * ^④
 FUNDED BY RIVERSIDE COUNTY FLOOD CONTROL AND
 WATER CONSERVATION DISTRICT ^④

START DATE: * ^④ APPROX. COMPLETION DATE: * ^④

ENGINEER:
 WARREN D. WILLIAMS
 GENERAL MANAGER-CHIEF ENGINEER ^⑤
 RIVERSIDE COUNTY FLOOD CONTROL
 AND WATER CONSERVATION DISTRICT
 RIVERSIDE, CALIFORNIA
 (951) 955-1200

^④ CONTRACTOR: * ^④



6x6 POSTS SHALL
 BE BURIED 3' MINIMUM
 WITH 5' FROM GROUND
 TO BOTTOM OF SIGN

³/₄" CDX GRADE
 PLYWOOD

LETTER SCHEDULE

	<u>SIZE</u>	<u>COLOR</u>
①	2"	BLACK
②	4"	ROYAL
③	3"	ROYAL
④	2"	ROYAL
⑤	2"	BLACK

NOTES:

1. MINIMUM SPACING BETWEEN LINES 1".
2. * -INFO. FURNISHED BY ENGINEER
3. ALL LETTERS FILLED AND CENTERED
4. THE STRIPES ARE GOLD AND BLACK ON WHITE BACKGROUND.

APPENDIX "B" PROJECT SIGN



APPENDIX "C"

LOG OF SOIL BORINGS



EXPLORATORY BORING NO. 1



Date Drilled: 7/28/05

Client: Riverside County Flood Control

Equipment: CME 55 Drill Rig

Driving Weight / Drop: 140 lbs/30 in

Surface Elevation(ft): 634±

Logged by: J.R.

Measured Depth to Water(ft): 31.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES		BLOWS/FOOT (Equiv. SPT)	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS	
				DRIVE	BULK					
5		(ML) Sandy Silt, fine to medium, olive brown	Fill				5.3		DS, MDC, SA	
5.5		(SM) Silty Sand, fine to medium, olive brown	Native			23	5.3		SPT	
6		(SM) Silty Sand, fine to medium with coarse and clay, red brown						2.5		
10		(SM) Silty Sand, fine to medium with coarse and gravel to 1/2", yellow brown				92	6.4			SPT
15						49	5.8			SPT
20		(SP-SM) Sand, fine to medium with coarse and gravel to 2", olive brown				73	4.2			SPT
25						70/3"	5.3			SPT
30			▼ Groundwater			81	8.7		SPT	
35										
40		(ML) Sandy Silt, fine to medium, olive brown				38	12.7 25.9		SPT SA	
40		(CL) Sandy Clay, fine with silt, brown				28	19.0		SPT	
45		(ML) Sandy Silt, fine with clay, olive gray								
50		(SM) Silty Sand, fine to medium with clay, brown				38	25.0		SPT	
55		END OF BORING				34	21.2		SPT	
55		NO REFUSAL NO BEDROCK FILL TO 5.5' SLIGHT CAVING GROUNDWATER AT 31.0'								

LOG 75 FT 05618-3 GP J CHJ GDT 9/1/05



C.H.J.

DAY CREEK CHANNEL
MIRA LOMA AREA, CALIFORNIA

Job No.
05618-3

Enclosure
B-1

EXPLORATORY BORING NO. 2



Date Drilled: 7/28/05

Client: Riverside County Flood Control

Equipment: CME 55 Drill Rig

Driving Weight / Drop: 140 lbs/30 in

Surface Elevation(ft): 633±

Logged by: J.R.

Measured Depth to Water(ft): 35.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES		BLOWS/FOOT (Equiv. SPT)	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
				DRIVE	BULK				
5		(SM) Silty Sand, fine to medium with coarse and gravel to 3", olive brown	Fill				3.9		Cor
10		(SM) Silty Sand, fine to medium with coarse and gravel to 3", olive brown	Native						
15		(SM) Sand, fine to medium, olive gray				40	5.7 2.9	Dist	Ring
20		(SP) Sand, fine to medium with coarse, olive gray				27	3.6 3.9	119	Ring, DS, SA
25		(SW-SM) Sand, fine to coarse with silt and gravel to 2 1/2", olive gray				21	1.7 6.5	111	Ring, SA
30		(SP-SM) Sand, fine to medium, olive gray					13.0 20.5		
35		(SM) Silty Sand, fine, olive gray				10	18.4	107	Ring, DS
40		(ML) Sandy Silt, fine to medium, dark blue gray		Groundwater		40	23.0	105	Ring
45		(SP) Sand, fine to medium with silt, blue gray				20	33.2 21.3	92	Ring, DS
50		(SM) Silty Sand, fine to medium with coarse, gravel to 2 1/2", and clay, olive gray				30/6"	11.7	125	Ring
55		END OF BORING				54	4.3 10.6	122	Ring, DS
60		NO REFUSAL NO BEDROCK FILL TO 9.0' SLIGHT CAVING GROUNDWATER AT 35.0'							

BORING LOG 75 FT 05618-3.GPJ CHJ.GDT 9/1/05



C.H.J.

DAY CREEK CHANNEL
MIRA LOMA AREA, CALIFORNIA

Job No.
05618-3

Enclosure
B-2

EXPLORATORY BORING NO. 3



Date Drilled: 7/28/05

Client: Riverside County Flood Control

Equipment: CME 55 Drill Rig

Driving Weight / Drop: 140 lbs/30 in

Surface Elevation(ft): 634±

Logged by: J.R.

Measured Depth to Water(ft): 29.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES		BLOWS/FOOT (Equiv. SPT)	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
				DRIVE	BULK				
		(SM) Silty Sand, fine with medium, olive brown	Fill				8.1		
		(SM) Silty Sand, fine with medium, olive brown	Native	X		10	7.4	106	Ring
5				X		4	14.9	97	Ring
10				X		10	7.8	105	Ring
15				X		15	11.6	108	Ring, Consol
20		(SP) Sand, fine to medium with coarse, gravel to 1 1/2", and silt, olive gray		X		47	3.4	116	Ring
25				X		44	3.1	126	Ring
30			▽ Groundwater	X		8.2	8.2	126	Ring
35		END OF BORING							
40		NO REFUSAL NO BEDROCK FILL TO 1.5' SLIGHT CAVING GROUNDWATER AT 29.0'							
45									
50									
55									
60									
65									
70									

BORING LOG 75 FT 05618-3.GPJ CHJ.GDT 9/1/05



C.H.J.

DAY CREEK CHANNEL
MIRA LOMA AREA, CALIFORNIA

Job No. 05618-3 Enclosure B-3

EXPLORATORY BORING NO. 4



Date Drilled: 7/28/05

Client: Riverside County Flood Control

Equipment: CME 55 Drill Rig

Driving Weight / Drop: 140 lbs/30 in

Surface Elevation(ft): 636±

Logged by: J.R.

Measured Depth to Water(ft): 28.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES		BLOWS/FOOT (Equiv. SPT)	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
				DRIVE	BULK				
		(SM) Silty Sand, fine to medium with coarse and gravel to 1/2", olive brown	Fill				5.7		
5		(ML) Sandy Silt, fine, olive gray	Native			47	9.7 1.1	122	
10		(SM) Silty Sand, fine to medium with coarse and gravel to 1/2", light olive gray				27	4.2 3.7	108	
15		(SP) Sand, fine to medium with silt, olive gray				26	4.2 3.5	103	
20		(SP) Sand, fine to coarse with gravel to 1", olive gray				13	2.8 22.0	101	
25		(ML) Sandy Silt, fine, olive brown				30/6"	2.6 3.3	117	
30		(SP) Sand, fine with medium and silt, blue gray	Groundwater			10	32.5	82	
		(ML) Sandy Silt, fine, blue gray							
		END OF BORING							
35		NO REFUSAL							
40		NO BEDROCK							
45		FILL TO 3.0'							
50		SLIGHT CAVING							
55		GROUNDWATER AT 28.0'							
60									
65									
70									

BORING LOG 75 FT 05618-3.GPJ CHJ.GDT 9/1/05



C.H.J.

DAY CREEK CHANNEL
MIRA LOMA AREA, CALIFORNIA

Job No.
05618-3

Enclosure
B-4

EXPLORATORY BORING NO. 5



Date Drilled: 7/28/05

Client: Riverside County Flood Control

Equipment: CME 55 Drill Rig

Driving Weight / Drop: .140 lbs/30 in

Surface Elevation(ft): 644±

Logged by: J.R.

Measured Depth to Water(ft): N/A

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES		BLOWS/FOOT (Equiv. SPT)	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
				DRIVE	BULK				
5		(SM) Silty Sand, fine to medium with coarse and gravel to 2", olive gray	Fill			30/4"	6.8	122	Ring
		(SM) Silty Sand, fine to medium, olive gray	Native				6.7	9.3	Cor
10						7	12.7	107	Ring
15		(SP) Sand, fine to medium with coarse and gravel to 1/2", light olive gray				20	9.2	116	Ring
20		(SM) Silty Sand, fine with medium, olive gray				24	3.1	115	Ring
25		(ML) Sandy Silt, fine with medium, olive gray				17	2.7	111	Ring, Consol
30		(SP-SM) Sand, fine to medium, olive gray				14	12.4	107	Ring
30		(SM) Silty Sand, fine to medium, olive gray				17	12.9	102	Ring, Consol
35		END OF BORING					17.8		
40		NO REFUSAL NO BEDROCK FILL TO 3.0' SLIGHT CAVING NO FREE GROUNDWATER					20.0		
45									
50									
55									
60									
65									
70									

BORING LOG 75 FT. 05618-3.GPJ CHJ.GDT 9/1/05



C.H.J.

DAY CREEK CHANNEL
MIRA LOMA AREA, CALIFORNIA

Job No.
05618-3

Enclosure
B-5

EXPLORATORY BORING NO. 6

Date Drilled: 7/28/05

Client: Riverside County Flood Control

Equipment: CME 55 Drill Rig

Driving Weight / Drop: 140 lbs/30 in

Surface Elevation(ft): 650±

Logged by: J.R.

Measured Depth to Water(ft): N/A



DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES		BLOWS/FOOT (Equiv. SPT)	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
				DRIVE	BULK				
5		(SM) Silty Sand, fine to medium with coarse and gravel to 2", olive brown	Fill				6.1		
		(SM) Silty Sand, fine to medium, olive gray	Native			30/6"	7.8 7.7	124	Ring DS, MDC, SA
10		(SP) Sand, fine to medium, light brown				37	0.6 2.2	108	Ring
		(SM) Silty Sand, fine to medium, olive gray				19	4.1	101	Ring
15		(SP) Sand, fine to coarse with gravel to 2", olive gray				27	2.0 3.4	109	Ring
		(SM) Silty Sand, fine to medium, olive gray				23	13.3 12.8	99	Ring
20									
25									
30		END OF BORING				13	N.R.	N.R.	Ring
35		NO REFUSAL NO BEDROCK FILL TO 3.0'							
40		SLIGHT CAVING NO FREE GROUNDWATER							
45									
50									
55									
60									
65									
70									

BORING LOG 75 FT. 05618-3.GPJ CHJ.GDT 9/1/05



C.H.J.

DAY CREEK CHANNEL
MIRA LOMA AREA, CALIFORNIA

Job No.
05618-3

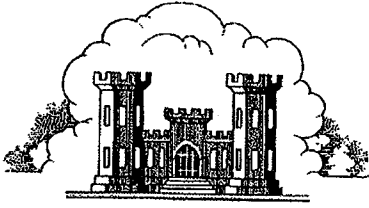
Enclosure
B-6

APPENDIX "D"

U.S. ARMY CORPS OF ENGINEERS

SECTION 404 PERMIT





LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

DEPARTMENT OF THE ARMY PERMIT

Permittee: Riverside County Flood Control and Water Conservation District; Warren Williams

Permit Number: SPL-2009-00882-CLD

Issuing Office: Los Angeles District

Note: The term "you" and its derivatives, as used in this permit, means the Permittee or any future transferee. The term "this office" refers to the appropriate district, or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The proposed Day Creek Channel Stage 6 Phase 2 project entails the construction and subsequent maintenance of an improved flood control channel extension consisting of a combination of rock-lined and concrete lined channel within approximately 3,800 lineal feet of existing interim earthen channel. The proposed project consists of approximately 2,700 linear feet of concrete lined rectangular channel and approximately 1,100 linear feet of un-grouted riprap/rock lined trapezoidal channel. A 15-foot wide access road with base material would be constructed on each side of the rectangular channel upstream of Lucretia Avenue. A multi-cell reinforced concrete box is proposed to replace the existing corrugated metal pipes at Lucretia Avenue. Reconstruction of existing connector pipes would also be a part of the proposed channel project.

Specifically, you are authorized to:

1. To permanently discharge fill onto 3.09 acres of non-wetland waters of the U.S. and 0.01 acre of wetland waters of the U.S., in association with the Day Creek Channel, Stage 6 Phase 2 project.

Project Location: The project site is located within Day Creek Channel generally bound by Dana Avenue to the west, Charles Avenue to the east, Limonite Avenue to the north, and Goose Creek Golf Club to the South, in the City of Jurupa Valley, Riverside County, California (latitude 33.96945, longitude -117.53222).

Permit Conditions:

General Conditions:

1. The time limit for completing the authorized activity ends on August 12, 2016. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. The Permittee shall implement and abide by the Section 401 Water Quality Certification dated March 14, 2011 as prepared by the Santa Ana Water Quality Control Board. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

Special Conditions:

1. The Permittee shall mitigate for permanent impacts to 3.1 acre(s) of waters of the U. S., through 2.1 acre(s) of riverine preservation and management, and establishment of 2 acres of riparian habitat creation and management as described in the final, approved mitigation plan: "Final Habitat Mitigation and Monitoring Plan for Day Creek Channel Stage 6 Phase 2 Project" (dated March 2011, and prepared by Inland Empire Resource Conservation District). The Permittee shall complete site preparation and planting and initiate monitoring as described in the final, approved mitigation plan within 60 days of project completion. The Permittee retains ultimate legal responsibility for meeting the requirements of the final, approved mitigation plan. Detailed mitigation objectives, performance standards, and monitoring requirements are described in the above final, approved mitigation plan. Any requirements for financial assurances and/or long-term management provisions are also described in the above final, approved mitigation plan, as well as in special condition 4 below. Your responsibility to complete the required compensatory mitigation will not be considered fulfilled until you have demonstrated compensatory mitigation project success and have received written verification of that success from the U.S. Army Corps of Engineers Regulatory Division.

2. GIS DATA: Within 60 days following permit issuance for Standard Individual Permits or within 60 days following written Corps approval of the mitigation plan for General Permits, you shall provide to this office GIS data (polygons only) depicting the boundaries of all compensatory mitigation sites, as authorized in the above, final mitigation plan. All GIS data and associated metadata shall be provided on a digital medium (CD or DVD) or via file transfer protocol (FTP), preferably using the Environmental Systems Research Institute (ESRI) shapefile format. GIS data for mitigation sites shall conform to the data dictionary, as specified in the current Map and Drawing Standards for the Los Angeles District Regulatory Division, and shall include a text file of metadata, including datum, projection, and mapper contact information.
3. Within 60 days following completion of compensatory mitigation construction activities, if any deviations have occurred, you shall submit as-built GIS data (polygons only) accompanied by a narrative description listing and explaining each deviation.
4. The Permittee and/or its agent shall record a Conservation Easement (CE in a form approved by the Corps Regulatory Division, which shall run with the land, obligating the Permittee, its successors and assigns to protect and maintain the 4.1-acre(s) (2.1 acres of riverine preservation and 2.0 acres of riparian creation) mitigation area as natural open space in perpetuity. The CE must include a 3rd party easement holder qualified to hold easements pursuant to California Civil Code 815.3 and Government Code section 65965. The Permittee must provide monies in the form of an endowment (endowment amount to be determined by Property Analysis Record or similar methodology) for the purposes of fulfilling the 3rd party easement holder's responsibilities under the CE. The CE shall preclude establishment of fuel modification zones, paved public trails, drainage facilities, walls, maintenance access roads and/or future easements, except as provided in the Project Description (described herein). Further, to the extent practicable, any such facilities outside the CE shall be sited to minimize indirect impacts on the avoided, created, restored and enhanced wetland and non-wetland waters of the U.S. Prior to its execution and within six months of issuance of this permit, the Permittee shall submit a draft CE to the Corps Regulatory Division for review. The Permittee shall receive written approval (by letter or e-mail) from the Corps Regulatory Division of this CE prior to it being executed and recorded. No later than 30 calendar days after receiving Corps Regulatory Division approval of the final draft CE, the CE shall be executed and recorded and a recorded copy furnished to the Corps Regulatory Division.
5. GIS DATA: Within 60 days following recordation, you shall provide to this office GIS data (polygons only) depicting the CE boundaries, as authorized by the Corps. All GIS data and associated metadata shall be provided on a digital medium (CD or DVD) or via file transfer protocol (FTP), preferably using the Environmental Systems Research Institute (ESRI) shapefile format. GIS data for CE sites shall conform to the data dictionary, as specified in the current Map and Drawing Standards for the Los Angeles District Regulatory Division, and shall include a text file of metadata, including datum, projection, and mapper contact information.
6. Prior to initiating construction in waters of the U.S., the Permittee shall submit to the Corps Regulatory Division a complete set of final detailed grading/construction plans showing all work and structures in waters of the U.S. All plans shall be in compliance with the Final Map and Drawing Standards for the Los Angeles District Regulatory Division dated September 21, 2009 (http://www.spl.usace.army.mil/regulatory/pn/SPL-RG_map-drawing-standard_final_w-fig.pdf). All plan sheets shall be signed, dated, and submitted on paper no larger than 11 x 17 inches. No work in waters of the U.S. is authorized until the Permittee receives, in writing (by letter or e-mail),

Corps Regulatory Division approval of the final detailed grading/construction plans. The Permittee shall ensure that the project is built in accordance with the Corps-approved plans.

7. The Permittee shall clearly mark the limits of the workspace with flagging or similar means to ensure mechanized equipment does not enter preserved waters of the U.S. and riparian wetland/habitat areas. Adverse impacts to waters of the U.S. beyond the Corps-approved construction footprint are not authorized. Such impacts could result in permit suspension and revocation, administrative, civil or criminal penalties, and/or substantial, additional, compensatory mitigation requirements.
8. Within 45 calendar days of completion of authorized work in waters of the U.S., the Permittee shall submit to the Corps Regulatory Division a post-project implementation memo indicating the date authorized impacts to waters of the U.S. ceased.
9. Within 45 calendar days of complete installation of all mitigation, the Permittee shall submit to the Corps Regulatory Division two copies of a memo indicating the following:
 - A) Date(s) all mitigation was installed and monitoring was initiated;
 - B) Schedule for future mitigation monitoring, implementation and reporting pursuant to final, Corps-approved HMMP;
 - C) Summary of compliance status with each special condition of this permit (including any noncompliance previously occurred or currently occurring and corrective actions taken to achieve compliance);
 - D) Color photographs taken at the project site before and after construction or those aspects directly associated with impacts to waters of the U.S.; and
 - E) One copy of "as built" drawings for the entire project, including all mitigation sites (all sheets must be signed, dated, to-scale, and no larger than 11 x 17 inches).

Endangered Species Act:

1. This Corps permit does not authorize you to take any threatened or endangered species, in particular the least Bell's vireo (*Vireo belli pusillus*) or adversely modify its designated critical habitat. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g. ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply). The enclosed Fish and Wildlife Service Biological Opinion (FWS-WRIV-08B0492-11F0446) contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit.

Cultural Resources:

1. Pursuant to 36 C.F.R. section 800.13, in the event of any discoveries during construction of either human remains, archeological deposits, or any other type of historic property, the Permittee shall notify the Corps' Archeology Staff within 24 hours (Steve Dibble at 213-452-3849 or John Killeen at 213-452-3861). The Permittee shall immediately suspend all work in any area(s) where potential cultural resources are discovered. The Permittee shall not resume construction in the area surrounding the potential cultural

resources until the Corps Regulatory Division re-authorizes project construction, per 36 C.F.R. section 800.13.

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403).

Section 404 of the Clean Water Act (33 U.S.C. 1344).

Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.


5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.


6. Extensions. General condition I establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give you favorable consideration to a request for an extension of this time limit.

Your signature below, as Permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.


PERMITTEE

10/3/11
DATE

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.


James L. Mace
Senior Project Manager
Riverside-Orange Counties Section
Regulatory Division

10/3/11
DATE

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

TRANSFEREE

DATE

LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

NOTIFICATION OF COMMENCEMENT OF WORK
FOR
DEPARTMENT OF THE ARMY PERMIT

Permit Number: *SPL-2009-00882-CLD*

Name of Permittee: *Riverside County Flood Control and Water Conservation District; Warren Williams*

Date of Issuance: *August 12, 2011*

Date work in waters of the U.S. will commence: _____

Estimated construction period (in weeks): _____

Name & phone of contractor (if any): _____

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

I hereby certify that I, and the contractor (if applicable), have read and agree to comply with the terms and conditions of the above referenced permit.

Signature of Permittee

Date

At least ten (10) days prior to the commencement of the activity authorized by this permit, sign this certification and return it using any ONE of the following three (3) methods:

OR (1) E-MAIL a statement including all the above information to: Crystel.L.Doyle@usace.army.mil

OR (2) FAX this certification, after signing, to: 951-276-6641

OR (3) MAIL to the following address:
U.S. Army Corps of Engineers
Regulatory Division
ATTN: CESPL-RG-SPL-2009-00882-CLD
1451 Research Park Drive, Suite 100
Riverside, CA 92507-2154

LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

NOTIFICATION OF COMPLETION OF WORK AND
CERTIFICATION OF COMPLIANCE WITH
DEPARTMENT OF THE ARMY PERMIT

Permit Number: *SPL-2009-00882-CLD*

Name of Permittee: *Riverside County Flood Control and Water Conservation District; Warren Williams*

Date of Issuance: *August 12, 2011*

Date work in waters of the U.S. completed: _____

Construction period (in weeks): _____

Name & phone of contractor (if any): _____

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of said permit.

Signature of Permittee

Date

Upon completion of the activity authorized by this permit, sign this certification and return it using any ONE of the following three (3) methods:

OR (1) E-MAIL a statement including all the above information to: Crystel.L.Doyle@usace.army.mil

OR

(2) FAX this certification, after signing, to: 951-276-6641

OR

(3) MAIL to the following address:

U.S. Army Corps of Engineers
Regulatory Division
ATTN: CESPL-RG-SPL-2009-00882-CLD
1451 Research Park Drive, Suite 100
Riverside, CA 92507-2154



APPENDIX "E"

SANTA ANA REGIONAL
WATER QUALITY CONTROL BOARD

SECTION 401 CERTIFICATION





California Regional Water Quality Control Board Santa Ana Region



Linda S. Adams
Acting Secretary for
Environmental Protection

3737 Main Street, Suite 500, Riverside, California 92501-3348
Phone (951) 782-4130 • FAX (951) 781-6288
www.waterboards.ca.gov/santaana

Edmund G. Brown, Jr.
Governor

March 14, 2011

Warren D. Williams
Riverside County Flood Control and
Water Conservation District
1995 Market Street
Riverside, CA 92501

**CLEAN WATER ACT SECTION 401 WATER QUALITY STANDARDS
CERTIFICATION FOR THE DAY CREEK CHANNEL STAGE 6, PHASE 2 PROJECT,
MIRA LOMA, COUNTY OF RIVERSIDE, CALIFORNIA (ACOE REFERENCE NO.
SPL-2009-00882-FBV) (SARWQCB PROJECT NO. 332010-15)**

Dear Mr. Williams:

On April 15, 2010, we received an application for Clean Water Act Section 401 Water Quality Standards Certification ("Certification") from the Riverside County Flood Control and Water Conservation District for the reconstruction of the interim earthen/riprap channel as a lined channel, with subsequent operations and maintenance (O & M). This letter responds to your request for certification that the proposed project, described in your application and summarized below, will comply with State water quality standards outlined in the Water Quality Control Plan for the Santa Ana River Basin (1995) (Basin Plan) and subsequent Basin Plan amendments:

Project Description:

The project consists of the construction, operation, and maintenance of approximately 1,100 linear feet of rock lined, trapezoidal channel and 52 linear feet of concrete transition structure downstream of Lucretia Avenue, as shown on District Drawing No. 1-647 submitted with the District's letter dated January 18, 2011. Pending final Section 404 and Section 1602 permit approvals, the rock lined trapezoidal channel, downstream of the drop structure, will feature either ungrouted rock riprap (Sheet 8A) or concreted ¼ ton rock/cobble/gravel substrate (Sheet 8B). The project also includes the construction, operation, and maintenance of approximately 2,600 linear feet of concrete-lined rectangular channel upstream of Lucretia Avenue.

California Environmental Protection Agency



A 15-ft wide access road with base material will be constructed on each side of the rectangular channel upstream of Lucretia Avenue. Additional construction includes a double, reinforced concrete box culvert (each cell will be 19.5'W x 13'H) to replace four existing 72-inch diameter corrugated metal culvert pipes at Lucretia Avenue. Reconstruction of existing connector pipes and the relocation of any interfering utility lines within the same jurisdictional area that would be disturbed by the project are also be part of the proposed channel project. The work will take place within Section 29 of Township 2 South, Range 6 West, of the U.S. Geological Survey *Corona North* quadrangle map (33.97° N/ 117.533° W).

Receiving water: Day Creek Channel

Fill area: 1.0 acre of permanent impact to riparian habitat (1,152 linear feet), and 2.10 acres of permanent impact to streambed habitat (2,600 linear feet)

Dredge/Fill volume: Fill: 6700 cubic yards (cy) of concrete and 9,300 cy rock rip rap

Federal permit: USACOE Section 404 Individual Permit No. SPL-2009-00882-FBV

You have proposed to mitigate water quality impacts as described in your Certification application. The proposed mitigation is summarized below:

Onsite Water Quality Standards Mitigation Proposed:

- None

Offsite Water Quality Standards Mitigation Proposed:

- The applicant will provide a total of 4.1 acres of compensatory mitigation acreage, at predetermined locations, as stated within application documents.
- The proposed mitigation acreage consists of providing 2.1 acres of riverine habitat enhancement and management by removing non-native vegetation to allow for natural re-colonization.

- The remaining 2.0 acres will be constructed riparian habitat, comprised of Southern Willow Scrub and Mulefat Scrub.
- The applicant will contract with the Inland Empire Resources Conservation District to maintain and manage the designated area in perpetuity.

Should the proposed project impact state- or federally-listed endangered species or their habitat, implementation of measures identified in consultation with U.S. Fish and Wildlife Service and the California Department of Fish and Game will ensure those impacts are mitigated to an acceptable level. Appropriate BMPs will be implemented to reduce construction-related impacts to Waters of the State according to the requirements of Order No. R8-2010-0033 (NPDES Permit No. CAS618033), commonly known as the Riverside County Municipal Storm Water Permit, and subsequent iterations thereof. Order No. R8-2010-0033 requires that you substantially comply with the requirements of State Water Resources Control Board's General Permit for Storm Water Discharges Associated with Construction Activity, including the preparation of a SWPPP.

The proposed project is subject to an Individual Permit from the U.S. Army Corps of Engineers in compliance with Section 404 of the Clean Water Act. Pursuant to the California Environmental Quality Act (CEQA), the Riverside County Flood Control and Water Conservation District (District) adopted a Mitigated Negative Declaration for the project on May 18, 2010. Pursuant to California Code of Regulations, Title 14, Section 15096, subdivision (f), the Regional Board must consider the environmental effects of the project as shown in the associated negative declaration prior to reaching a decision on the project. The Regional Board has considered the District's Mitigated Negative Declaration in the issuance of this Certification and independently finds that changes or alterations have been required, or incorporated into the proposed project, which avoid or mitigate impacts to water quality to a less than significant level.

This 401 Certification is contingent upon the execution of the following conditions:

- 1) The applicant must comply with the requirements of the applicable Clean Water Act section 404 permit.
- 2) All materials generated from construction activities associated with this project shall be managed appropriately. This shall include identifying all potential pollution sources within the scope of work of this project, and incorporating all necessary pollution prevention BMPs as they relate to each potential pollution source identified.

- 3) The project proponent shall utilize Best Management Practices during project construction to minimize the controllable discharges of sediment and other wastes to drainage systems or other waters of the state and of the United States.
- 4) Substances resulting from project-related activities that could be harmful to aquatic life, including, but not limited to, petroleum lubricants and fuels, cured and uncured cements, epoxies, paints and other protective coating materials, portland cement concrete or asphalt concrete, and washings and cuttings thereof, shall not be discharged to soils or waters of the state. All waste concrete shall be removed.
- 5) Motorized equipment shall not be maintained or parked within or near any stream crossing, channel or lake margin in such a manner that petroleum products or other pollutants from the equipment may enter these areas under any flow conditions. Vehicles shall not be driven or equipment operated in waters of the state on-site, except as necessary to complete the proposed project. No equipment shall be operated in areas of flowing water.
- 6) Damage to vegetation within Day Creek and its tributaries must be minimized to the maximum extent practicable.
- 7) Rip rap and other similar non-native fill material which has been placed within waters of the State as an interim measure to address the channel erosion, must be removed from the work area and disposed of. In lieu of removal of the material, inert material may be buried in incidental excavations made during the course of the work or utilized in the repair, if suitable.
- 8) All vehicles and equipment entering the work area must be free of viable propagules of non-native plant species that could be discharged to waters of the State or to land where they may eventually be discharged to waters of the State.
- 9) A copy of this Certification and any subsequent amendments must be maintained on site as a denoted element of the project's storm water pollution prevention program.
- 10) Proposed mitigation shall be timely implemented. Materials documenting that the applicant has entered into an agreement for perpetual management of the project's off-site mitigation areas shall be provided to this office prior to the discharge of fill to, or the dredging or excavation of material from, waters of the state.

- 11) Applicant shall follow all procedures and policies specified for this project in the project's HMMP dated January 2011.
- 12) Applicant shall ensure compliance with all procedures and policies described and illustrated in the project's Operation and Maintenance Plan.

Under California Water Code, Section 1058, and Pursuant to 23 CCR §3860, the following shall be included as conditions of all water quality certification actions:

- (a) Every certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section §13330 of the Water Code and Article 6 (commencing with Section 3867) of this Chapter.
- (b) Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a FERC license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to Subsection §3855(b) of this Chapter and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
- (c) Certification is conditioned upon total payment of any fee required under this Chapter and owed by the applicant.

If the above stated conditions are changed, any of the criteria or conditions as previously described are not met, or new information becomes available that indicates a water quality problem, the Regional Board may require the applicant to submit a report of waste discharge and obtain Waste Discharge Requirements.

In the event of any violation or threatened violation of the conditions of this certification, the holder of any permit or license subject to this certification shall be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification. Violations of the conditions of this certification may subject the applicant to civil liability pursuant to Water Code section 13350 and/or 13385.

This letter constitutes a Water Quality Standards Certification issued pursuant to Clean Water Act Section 401. I hereby issue an order certifying that any discharge from the referenced project will comply with the applicable provisions of Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and

California Environmental Protection Agency

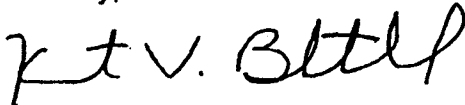
March 14, 2011

307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law.

This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ (Order No. 2003-0017-DWQ), "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received Water Quality Certification" which requires compliance with all conditions of this Water Quality Standards Certification. Order No. 2003-0017-DWQ is available at: www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo_2003-0017.pdf

Should there be any questions, please contact Marc Brown at (951) 321-4584, or Mark Adelson at (951) 782-3234.

Sincerely,



Kurt V. Berchtold
Executive Officer

cc (via electronic mail):

U. S. Army Corps of Engineers, Prado Office – Crystal Doyle
Department of Fish and Game – Michael Flores
State Water Resources Control Board, Office of Chief Counsel – David Rice
State Water Resources Control Board DWQ – Water Quality Certification Unit
U.S. EPA – Supervisor of the Wetlands Regulatory Office WTR- 8

x:\401\certifications\day creek channel stage 6_final_14mar11.doc

APPENDIX "F"

U.S. FISH AND WILDLIFE SERVICE

BIOLOGICAL OPINION





United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

In Reply Refer To:
FWS-WRIV-08B0492-11F0446

Colonel R. Mark Toy
District Commander, Los Angeles
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, California 90053-2325

JUN 21 2011

Attention: James E. Mace, Regulatory Division (File No. SPL -2009-00882)

Subject: Formal Section 7 Consultation for the Day Creek Channel, Stage 6,
Riverside County, California

Dear Colonel Toy:

This document transmits our biological opinion based on our review of the proposed Day Creek flood control project located within the County of Riverside, California, and its potential effects on the federally listed least Bell's vireo (*Vireo bellii pusillus*; "vireo"), and its designated critical habitat in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). We initiated formal consultation with your agency, the U.S. Army Corps of Engineers (Corps), on October 20, 2010, the date we received your request.

On June 22, 2004, we issued a section 10(a)(1)(B) permit for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP establishes a multiple species conservation program to minimize and mitigate habitat loss and the incidental take of covered species in association with activities covered under the permit. The proposed project is located within the plan area boundary of the MSHCP.

The project applicant, the Riverside County Flood Control and Water Conservation District (District), proposes to seek authorization for project-related incidental take through the MSHCP. In order for the applicant to receive incidental take through the MSHCP, the proposed action must be consistent with the MSHCP and its associated implementation agreement and permit. The proposed project is located within Existing Core A of the Jurupa Area Plan. The proposed project is not within an MSHCP Criteria Cell and is therefore not subject to the Joint Project Review process. However, MSHCP policies and procedures, such as the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (MSHCP section 6.1.2; "Riparian

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Policy”), Guidelines Pertaining to the Urban Wildlands Interface (MSHCP section 6.1.4), and Additional Survey Needs and Procedures (MSHCP section 6.3.2) apply to the subject project.

This biological opinion is based on information provided in the following documents:

1) *MSHCP Compliance Report Day Creek Channel, Stage 6 Phase 2 Flood Control Project*, dated March 2008; 2) *Regional Conservation Authority Joint Project Review Case (JPR # 08-04-01-01 dated June 2, 2009)*; 3) *Public Notice SPL-2009-00882, Day Creek Flood Control Project*; 4) *Final CEQA Initial Study, Day Creek Channel, Stage 6 Phase 2 Project*, dated May 2010; 5) Letter report addressed to Randy Sheppard, providing the 2010 least Bell’s vireo survey results for the Day Creek Stage 6, Phase 2 Project dated August 19, 2010; 6) Letter addressed to Crystal Doyle, Regulatory Division, dated January 18, 2011, summarizing proposed changes to the project and providing information to finalize the District’s permit action for the proposed project; 7) *Habitat Mitigation and Monitoring Program for Day Creek Channel Stage 6, Phase 2 Project* dated January 2011; 8) Draft *Day Creek Channel Stage 6, Phase 2 Maintenance Plan* dated December 2010; 9) *Intra-Service Formal Section 7 Consultation/Conference for Issuance of Endangered Species Act Section 10(a)(1)(B) Permit TE-088609-0 for the Western Riverside County Multiple Species Habitat Conservation Plan* dated June 22, 2004 (FWS-WRIV-870.19); and 10) other information available in our files. The complete project file addressing this consultation is maintained at the Carlsbad Fish and Wildlife Office.

The originally proposed project included the following elements: 1) extension of the existing concrete-lined rectangular channel from near 63rd Street, down 2,700 linear feet to Lucretia Avenue; 2) replacement of existing culverts under Lucretia Avenue with a double reinforced concrete box; 3) installation of 15-foot wide access roads on either side of the channel upstream from Lucretia Avenue; and 4) installation of 1,100 linear feet of ungrouted riprap/rock-lined channel within Goose Creek Golf Course, downstream from Lucretia Avenue.

At the request of the U.S. Fish and Wildlife Service (Service) the design of the proposed project was modified to provide suitable substrate for the Santa Ana sucker (*Catostomus santaanae*). The District modified the rock-lined trapezoidal channel design downstream of Lucretia Avenue as follows: 1) The location of the proposed drop structure was moved 300 feet upstream; 2) Downstream of the drop structure, the channel base width was increased from 20 feet to 30 feet; 3) A flow feature was incorporated at the bottom of the channel to increase the depth of low flows; and 4) An alternative configuration for the rock trapezoidal section of the channel downstream of the drop structure was developed (Alternative 2).

The Service prefers Alternative 2 because it would make surface flows available to the Santa Ana sucker, should they be present. The design of Alternative 2 was provided to the Corps in District’s letter of January 18, 2011. Santa Ana suckers do not currently occupy Day Creek. However, Day Creek is one of only five or six remaining tributaries to the portion of the Santa Ana River that is occupied by the Santa Ana sucker. Tributary streams are important to Santa Ana sucker because they can provide refuge during storm events. We appreciated the Districts

willingness to modify the Day Creek project to benefit the Santa Ana sucker even though the proposed project will not result in "incidental take" of the Santa Ana sucker.

Your agency, the Corps, proposes to authorize the action that includes the discharge of fill into 3.09 acres of non-wetland of waters of the United States and 0.01 acres of wetland waters of the United States. A total of 3.10 acres of impacts are proposed. All of the proposed impacts would be permanent. The proposed project includes maintenance of the constructed facilities, including sediment and vegetation removal to protect channel capacity.

To address the MSHCP Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools policy, a Determination of Biologically Equivalent or Superior Preservation and a Habitat Mitigation and Monitoring Plan was submitted to our office. There will be no removal of riparian vegetation during the period between March 15 and September 15. The project will provide for the restoration and management of 4.1 acres of riparian and riverine habitat (2.1 acres of riverine preservation and management and 2.1 acres of riparian restoration and management). The land will be placed under a conservation easement and managed by the Inland Empire Resource Conservation District. The Conservation easement will be recorded prior to the removal of riparian vegetation on the proposed project site.

In accordance with the Additional Survey Needs and Procedures of the MSHCP, focused surveys were conducted for burrowing owls and the results were negative. However, pre-construction burrowing owl surveys will need to be conducted within 30 days prior to ground disturbance per the MSHCP. The project site is within the MSHCP Narrow Endemic Plant Survey Area for *Ambrosia pumila* (San Diego ambrosia), *Phacelia stellaris* (Brand's phacelia), and *Satureja chandleri* (San Miguel Savory). No suitable habitat for these species is present on the project site.

Based on our review of the information provided to us we have determined that the proposed project is consistent with the relevant MSHCP policies and procedures. The status of the vireo and the vireo's designated critical habitat along with the effects of implementing the MSHCP were previously addressed in our biological opinion (FWS-WRIV-870.19) dated June 22, 2004, in which we concluded that the level of anticipated take in the MSHCP plan area was not likely to result in jeopardy to these species or adversely modify vireo critical habitat. We do not anticipate any adverse effects to these species or critical habitat that were not previously evaluated in the biological opinion for the MSHCP. Therefore, it is our conclusion that implementation of the proposed project will not result in jeopardy to the vireo.

This concludes formal consultation on the proposed action. As provided in 50 CFR 5402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the proposed action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the agency action is subsequently modified in a manner that causes an effect to listed species

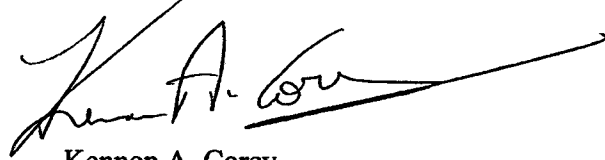
Colonel Toy (FWS-WRIV-08B0492-11F0446)

4

or critical habitat that was not considered in this opinion; or 4) a new species is listed or critical habitat is designated that may be affected by the proposed action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this biological opinion, please contact Karin Cleary-Rose of this office at (760) 431-9440, extension 228.

Sincerely,

A handwritten signature in black ink, appearing to read "Kennon A. Corey", with a long horizontal flourish extending to the right.

Kennon A. Corey
Assistant Field Supervisor

cc

Art Diaz, Riverside County Flood Control and Water Conservation District
Marc Brown, Santa Ana Regional Water Quality Control Board
Jeff Brandt, California Department of Fish and Game

APPENDIX "G"

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

1602 AGREEMENT





California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, CA 91764
(909) 484-0459
www.dfg.ca.gov

EDMUND G. BROWN, Jr., Governor

JOHN McCAMMAN, Director

RECEIVED
MAY 24 2011

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

May 13, 2011

Mr. Warren D. Williams, General Manager-Chief Engineer
Riverside County Flood Control and Water Conservation District
1995 Market Street
Riverside, CA 92501

Attn: Teresa Tung

Subject: Notification of Lake or Streambed Alteration No. 1600-2010-0075-R6
Day Creek Channel, Stage 6 Phase 2, Project No. 1-0-00250-06

Dear Mr. Williams:

The Department of Fish and Game (Department) had until April 18, 2011 to submit a draft Lake or Streambed Alteration Agreement (Agreement) to you or inform you that an Agreement is not required for your project. The Department did not meet that date. As a result, by law, you may now complete the project described in your notification without an Agreement.

Please note that pursuant to Fish and Game Code section 1602(a)(4)(D), if you proceed with this project, it must be the same as described and conducted in the same manner as specified in the notification and any modifications to that notification received by the Department in writing. This includes completing the project within the proposed term and seasonal work period and implementing all avoidance and mitigation measures to protect fish and wildlife resources specified in the notification. If the term proposed in your notification has expired, you will need to re-notify the Department before you may begin your project. Beginning or completing a project that differs in any way from the one described in the notification may constitute a violation of Fish and Game Code section 1602.

Your notification proposes work within Day Creek, tributary to the Santa Ana River, from Limonite Avenue south to the Goose Creek Golf Course, extending 1,100 feet downstream of Lucretia Avenue, northwest of the confluence of Day Creek and the Santa Ana River, near the community of Mira Loma, County of Riverside. Your project consists of: (1) extending the existing concrete-lined rectangular channel within Day Creek from near 63rd Street downstream to Lucretia Avenue for an approximate length of 2,700 linear feet; (2) replacing the existing culverts under Lucretia Avenue with a double reinforced concrete box culvert; (3) installing 15-foot wide access roads on both sides of the Day Creek channel upstream of Lucretia Avenue; (4) installing a 3-foot drop structure and 1,100 linear feet of rock trapezoidal channel within Goose Creek Golf

Conserving California's Wildlife Since 1870

Mr. Warren D. Williams, Riverside Co. Flood Control and Water Conservation District
May 13, 2011
Page 2 of 2

Course downstream of Lucretia Avenue; and (5) post-construction maintenance within Reach 1 of the project footprint (600 linear feet downstream of Limonite Avenue to approximately 55 linear feet downstream of Lucretia Avenue). The proposed project term is July 1, 2010 through July 31, 2015. The project will permanently impact a total of 3.07 acres of open channel, 0.02 acres of open water, and 0.01 acres of southern willow scrub habitat. You have proposed the following avoidance and minimization measures during project construction: vegetation removal activities downstream of Lucretia Avenue will be conducted outside of the bird nesting season, and an erosion and water quality control plan will be implemented throughout the entire project area during construction. You have proposed to mitigate project impacts by providing 2.1 acres of riverine preservation management and 2.0 acres of riparian habitat creation and management within the Inland Empire Conservation District's (IERCD) adjacent Goose Creek conservation easement site. You will provide funding to the IERCD to maintain and manage the designated mitigation area in perpetuity.

Also note that while you are entitled to complete the project without an Agreement, you are still responsible for complying with other applicable local, state, and federal laws. These include, but are not limited to, the state and federal Endangered Species Acts and Fish and Game Code sections 5650 (water pollution) and 5901 (fish passage).

Finally, if you decide to proceed with your project without an Agreement, you must have a copy of this letter and your notification with all attachments available at all times at the work site. If you have any questions regarding this matter, please contact Joanna Gibson, Environmental Scientist, at (909) 987-7449 or JGibson@dfq.ca.gov.

Sincerely,



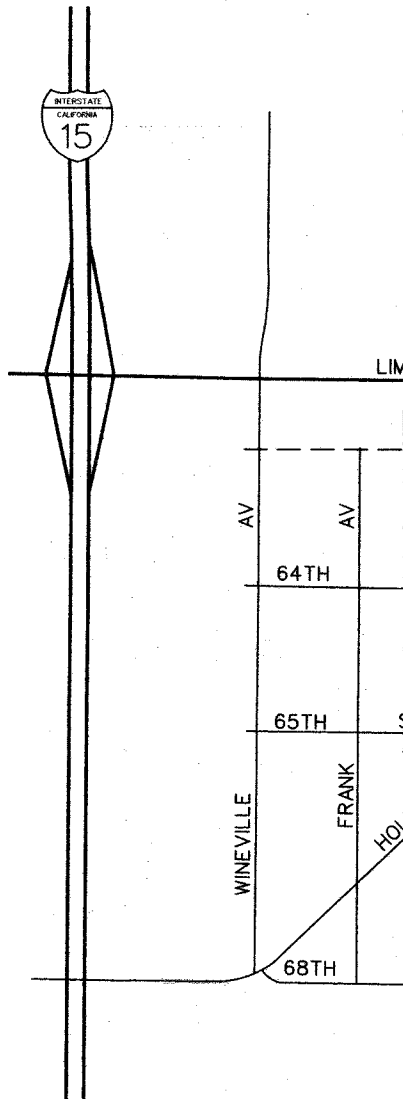
for Michael Flores
Senior Environmental Scientist
Habitat Conservation Planning

DISTRICT

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

CB110	CONCRETE DROP INLET
CH326	TRAPEZOIDAL CHANNEL STRUCTURAL DETAILS
CH332	SUBDRAINS LAYOUT SECTIONS AND DETAILS
JS228	JUNCTION STRUCTURE NO. 3
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W814	ABBREVIATIONS AND SYMBOLS
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WH259	STANDARD DROP STEPS
W827	VEHICULAR TURN AROUND AREA

CALTRANS STANDARD DRAWINGS

477C	METAL BEAM GUARD RAILING POSTS AND BLOCKS
477D	GUARD RAIL FLARES
477F	METAL BEAM GUARD RAILING MISCELLANEOUS DETAILS
477H	GUARD RAIL END ANCHORS
477J	GUARD RAIL CONNECTIONS TO BRIDGE RAILS, RETAINING WALLS AND ABUTMENTS
33-3	RETAINING WALL TYPE 1A
311-47	CABLE RAILING
311-52	CHAIN LINK RAILING TYPE 7
311-55	CONCRETE BARRIER TYPE 732
773	DRAINAGE INLETS
781	CAST-IN-PLACE REINF CONCRETE DOUBLE BOX CULVERT
782	CAST-IN-PLACE REINF CONCRETE BOX CULVERT MISC. DETAILS
786A	BOX CULVERT WARPED WING WALLS

COUNTY OF RIVERSIDE TRANSPORTATION

100	TYPE A-6 CURB
104	TYPE "D" CURB
101	SIDEWALK AND CURB

LOCASANTA ANA RIVER WATER COMPANY

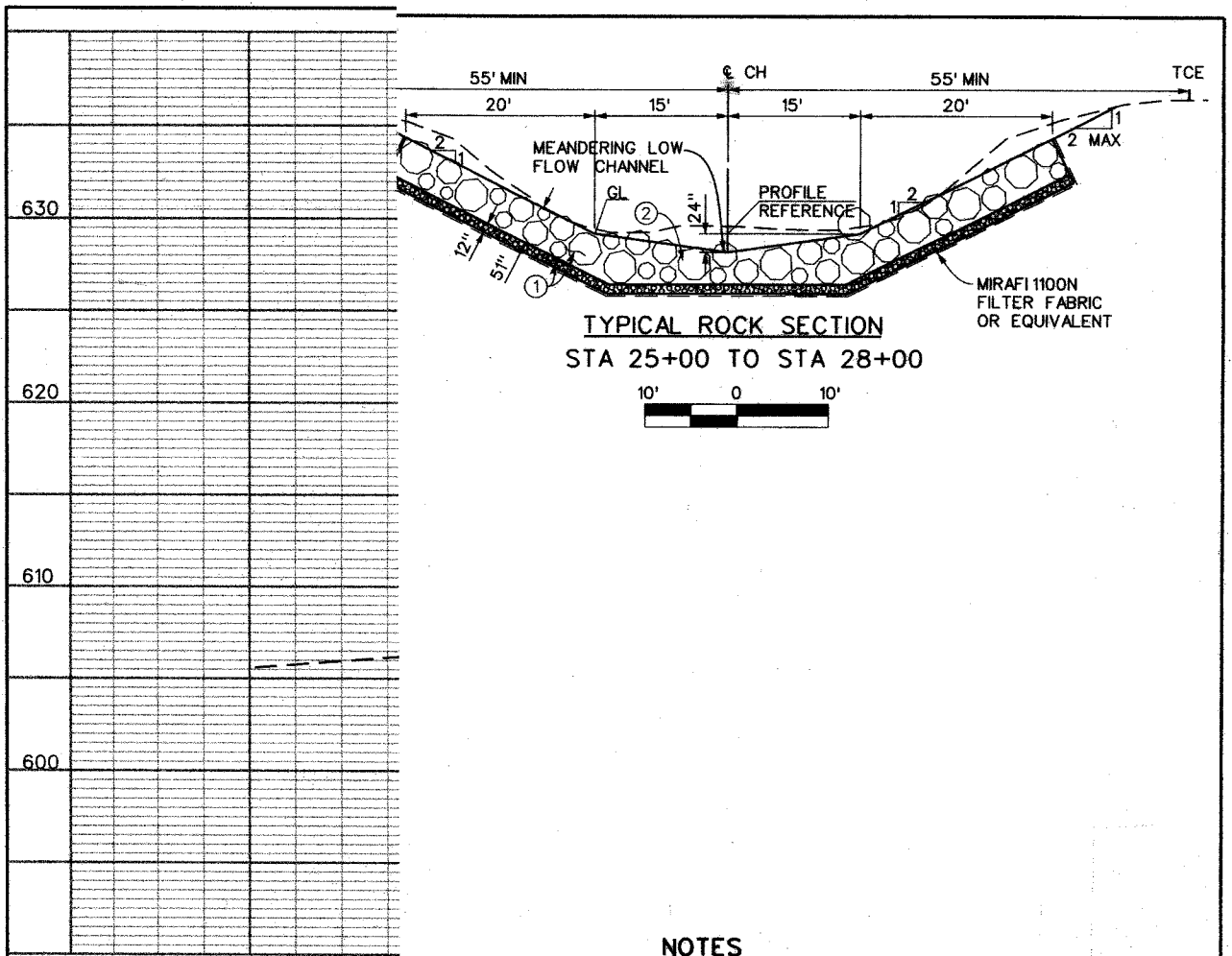
V-1	TYPICAL TRENCH DETAIL
V-3	STANDARD VALVE MARKER INSTALLATION
V-1	GATE VALVE INSTALLATION
V-8	FORMED BELL AND SPIGOT RUBBER GASKET JOINT FOR C.M.L AND C.M.C PIPE
V-9	LAP WELDED SLIP JOINT BELLED-END C.M.L AND C.M.C PIPE
V-10	CARNEGIE TYPE RUBBER GASKET JOINT FOR C.M.L AND C.M.C PIPE
V-1	AIR VALVE INSTALLATION 1" OR 2" DIA
V-1	4" DIA BLOW-OFF INSTALLATION

COUNTY OF RIVERSIDE TRANSPORTATION
 APPROVED BY: *[Signature]*
 DEPUTY DIRECTOR
 DATE: 11-11-11
 APPROVED BY: *[Signature]*
 CHIEF ENGINEER
 DATE: 11/20/11 R.E. NO. 32336

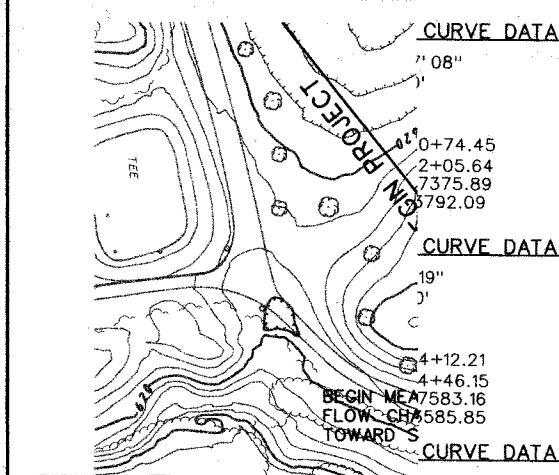
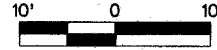
DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 TITLE SHEET

PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	1 OF 38





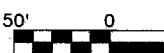
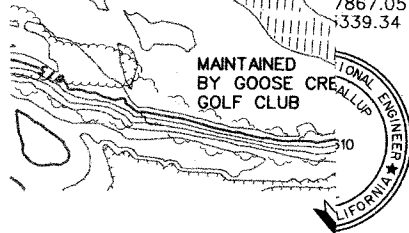
TYPICAL ROCK SECTION
STA 25+00 TO STA 28+00



NOTES

- ① PLACE 51" THICK 1 TON ROCK SLOPE PROTECTION AND 12" FILTER BLANKET NO. 2 BACKING CLASS WITH MIRAFI 1100N FILTER FABRIC OR EQUIVALENT PER DETAIL AND GRADATION ON SHEET 8.
- ② CHINK 1-TON ROCK WITH FACING CLASS TO CREATE MEANDERING LOW FLOW CHANNEL PER PLAN, PROFILE AND DETAILS HEREON. CONCRETE FACING CLASS ROCK SLOPE PROTECTION WITH 8" GROUT PENETRATION FOR "NATURAL" STREAM APPEARANCE AS DIRECTED BY ENGINEER.
- ③ PLACE 1-TON BOULDER RANDOMLY IN CHANNEL INVERT APPROXIMATELY EVERY 100 FEET. PLACE BOULDER OPPOSITE BANK OF LOW FLOW CHANNEL F.L.
- ④ REMOVE AND REPLACE INTERFERING IRRIGATION SPRINKLER HEADS.
- ⑤ PROTECT IN-PLACE THE GOLF COURSE TEES AND SAND TRAPS LOCATED WITHIN THE TCE.
- ⑥ REMOVE AND DISPOSE OF ALL EXISTING ROCKS, CONCRETE SLABS, ROOT SYSTEMS AND DEBRIS PER LIMITS ON SHEET 8.

NOTE:
 TOPOGRAPHIC MAPPING DATED
 11-30-2004 SHOWN IN PLAN.
 EXISTING GROUND IN PROFILE
 FROM SURVEY DATED 07-01-2010.

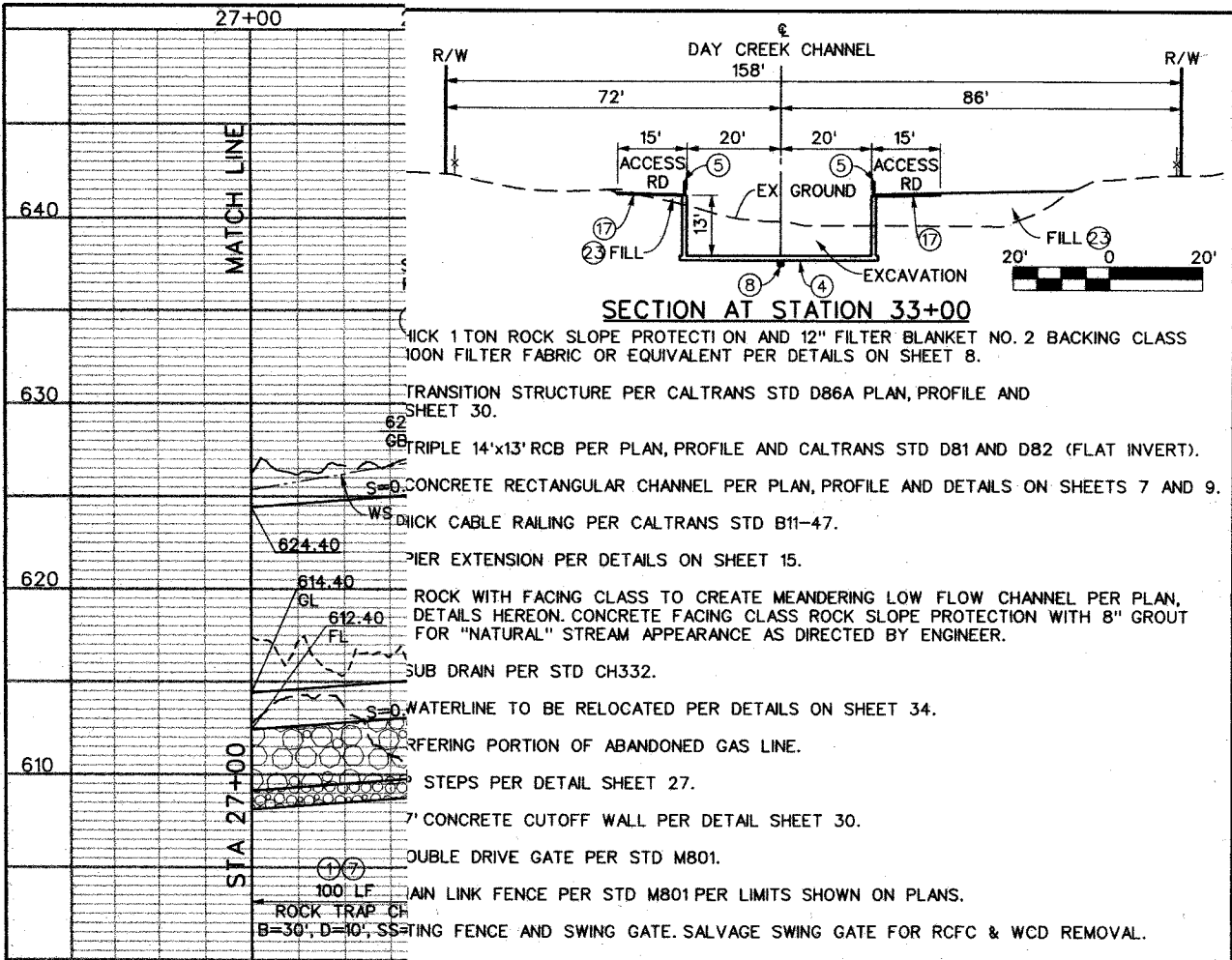


APPROVED BY:
[Signature]
 DATE: 28-Nov-2011

DAY CREEK CHANNEL
STAGE 6
 PHASE 2
 STA 19+90 TO STA 27+00

PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
 2 OF 38



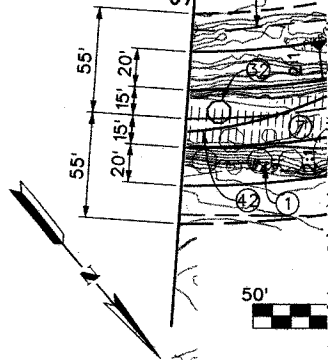


SECTION AT STATION 33+00

- 1 TON ROCK SLOPE PROTECTION AND 12" FILTER BLANKET NO. 2 BACKING CLASS 1000 FILTER FABRIC OR EQUIVALENT PER DETAILS ON SHEET 8.
- TRANSITION STRUCTURE PER CALTRANS STD D86A PLAN, PROFILE AND SHEET 30.
- TRIPLE 14'x13' RCB PER PLAN, PROFILE AND CALTRANS STD D81 AND D82 (FLAT INVERT).
- CONCRETE RECTANGULAR CHANNEL PER PLAN, PROFILE AND DETAILS ON SHEETS 7 AND 9.
- THICK CABLE RAILING PER CALTRANS STD B11-47.
- PIER EXTENSION PER DETAILS ON SHEET 15.
- ROCK WITH FACING CLASS TO CREATE MEANDERING LOW FLOW CHANNEL PER PLAN, DETAILS HEREON. CONCRETE FACING CLASS ROCK SLOPE PROTECTION WITH 8" GROUT FOR "NATURAL" STREAM APPEARANCE AS DIRECTED BY ENGINEER.
- SUB DRAIN PER STD CH332.
- WATERLINE TO BE RELOCATED PER DETAILS ON SHEET 34.
- INTERFERING PORTION OF ABANDONED GAS LINE.
- STEPS PER DETAIL SHEET 27.
- 7' CONCRETE CUTOFF WALL PER DETAIL SHEET 30.
- DOUBLE DRIVE GATE PER STD M801.
- 100' LF MAIN LINK FENCE PER STD M801 PER LIMITS SHOWN ON PLANS.
- ROCK TRAP CH B=30', D=10', SS=
- SETTING FENCE AND SWING GATE. SALVAGE SWING GATE FOR RCFC & WCD REMOVAL.
- IS NO.1 PER STD JS226 A=47° 18'9.48", B=48", C=34.39', ELEV R=618.96, R=78, SEE PROFILE ON SHEET 25.
- CLASS 2 AGGREGATE BASE ACCESS ROAD.
- PLANTING TREE.
- SETTING CULVERTS AND STREET SECTION PER DETAIL ON SHEET 28.
- IS NO. 3 PER STD JS228, A=93° 09'4.82", S=620.46. SEE PROFILE ON SHEET 25.
- CONCRETE DROP INLET W/WESTERLY AND EASTERLY SIDES OPEN PER STD CB110. V=4', ON SHEET 25.
- MAIN.
- LIMITS, SHOWN ON PLAN, PROFILE AND DETAILS ON SHEET 7.
- DISPOSE OF ALL EXISTING RIP-RAP.
- OPEN IN-PLACE AND KEEP OPEN OR PROVIDE TEMPORARY CART PATH ACCESS. PROTECT UTILITIES NEAR ABUTMENT.
- POWER POLE #4526837E TO BE RELOCATED BY OTHERS.
- CONCRETE BULKHEAD PER STD M816.
- AL BEAM GUARD RAIL PER DETAIL ON SHEET 27.
- CUTOFF WALL PER DETAIL ON SHEET 24.
- 1 TON CONCRETED ROCK PER DETAIL ON SHEET 7.
- REPLACE THE GOLF COURSE TEES AND SAND TRAPS LOCATED WITHIN TCE.
- SPIN BOULDER RANDOMLY IN CHANNEL INVERT APPROXIMATELY EVERY 100 FEET.
- CONCRETE RECTANGULAR CHANNEL TRANSITION, BASE WIDTH VARIES 43.3' TO 40". SEE DETAILS ON SHEET 9 AND 15.
- AS LINE TO DETERMINE LIMITS AND PROTECT IN-PLACE.
- REPLACE INTERFERING IRRIGATION SPRINKLER HEADS.

NOTES

- 36 PROTECT IN-PLACE EX WATER AND SEWER LINES THAT HANG ON BOTH SIDES OF BRIDGE.
- 37 EX. 8" WATER TO BE RELOCATED BY OTHERS AND ABANDONED IN-PLACE.
- 38 INSTALL STAFF GAUGE PER DETAIL ON SHEET 27.
- 39 EXISTING TELEPHONE POLE #4178054E TO BE RELOCATED BY OTHERS.
- 40 STA 27+00-30+90.44 REMOVE AND DISPOSE OF ALL EXISTING ROCKS, CONCRETE SLABS, ROOT SYSTEMS AND DEBRIS PER LIMITS ON SHEET 8.
- 41 CUT AND PLUG INTERFERING ABANDONED UTILITIES.
- 42 APPROXIMATE LOCATION OF MEANDERING LOW FLOW CHANNEL



MATCH LINE



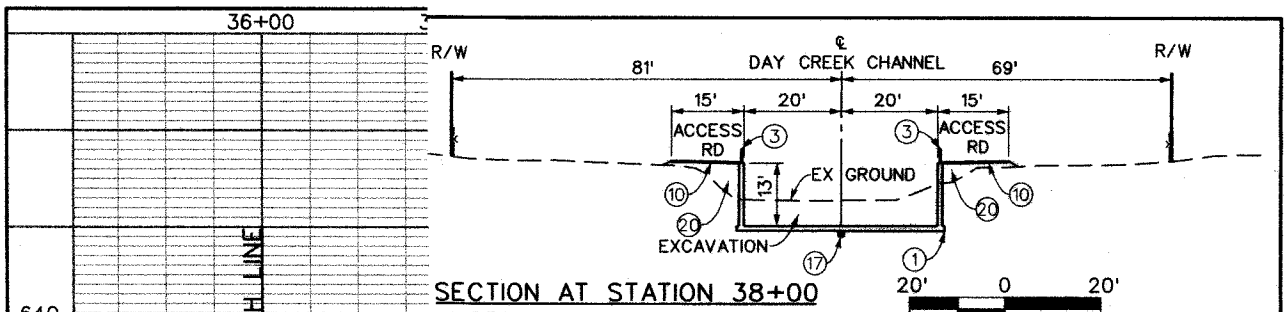
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- REPLACE THE GOLF COURSE TEES AND SAND TRAPS LOCATED WITHIN TCE.
- SPIN BOULDER RANDOMLY IN CHANNEL INVERT APPROXIMATELY EVERY 100 FEET.
- CONCRETE RECTANGULAR CHANNEL TRANSITION, BASE WIDTH VARIES 43.3' TO 40". SEE DETAILS ON SHEET 9 AND 15.
- AS LINE TO DETERMINE LIMITS AND PROTECT IN-PLACE.
- REPLACE INTERFERING IRRIGATION SPRINKLER HEADS.

APPROVED BY: *[Signature]*
DATE: 20 Nov 2011

DAY CREEK CHANNEL
STAGE 6
PHASE 2
STA 27+00 TO STA 36+00

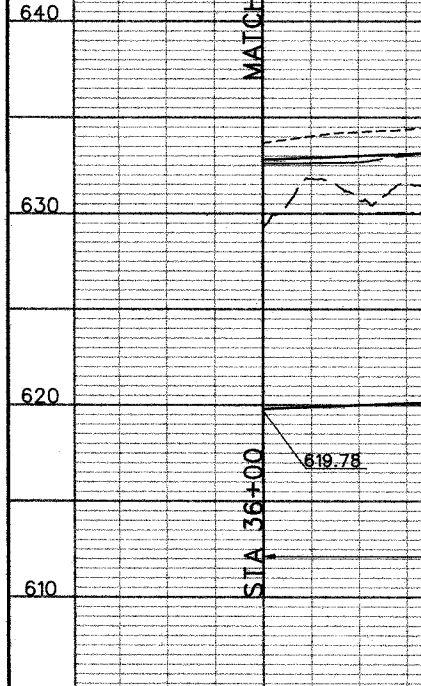
PROJECT NO. 1-0-0250
DRAWING NO. 1-647
SHEET NO. 3 OF 38



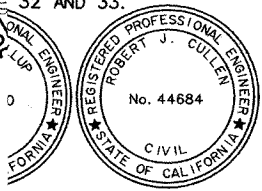
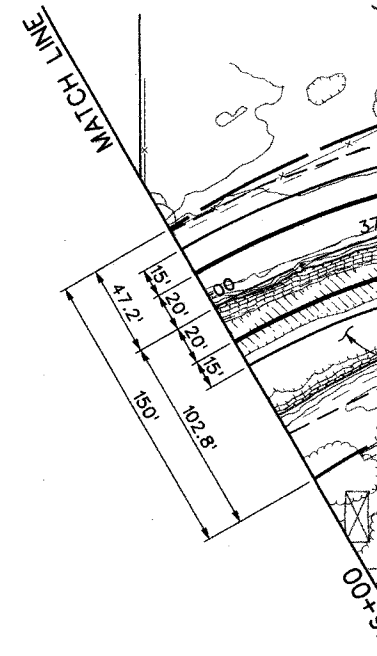


SECTION AT STATION 38+00

NOTES

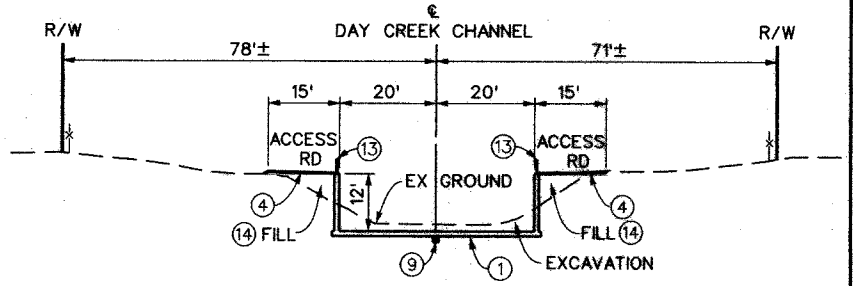
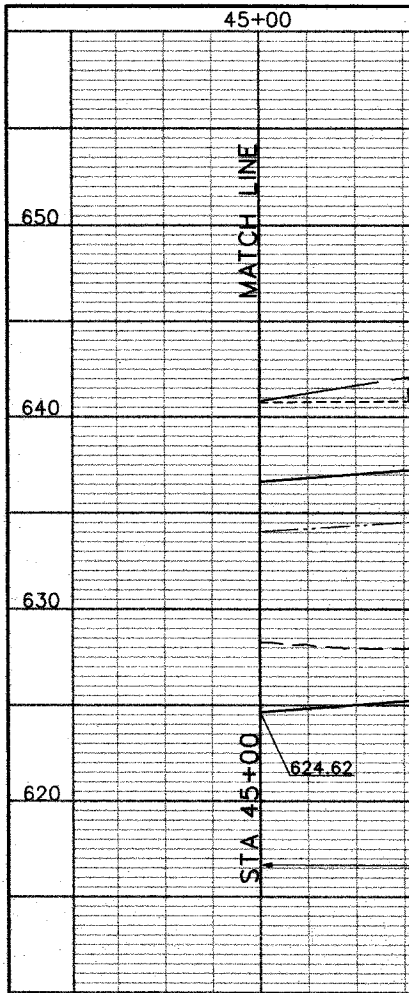


- 1) CONSTRUCT RECTANGULAR CONCRETE CHANNEL PER PLAN, PROFILE AND ON DETAIL SHEETS 7, 9 AND 10.
- 2) REMOVE EXISTING TRAPEZOIDAL CHANNEL & DEBRIS. PROTECT EXISTING BRIDGE AND WING WALLS IN PLACE.
- 3) INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.
- 4) CONSTRUCT RECTANGULAR CONCRETE CHANNEL PER DETAILS SHEETS 11, 13 AND 14.
- 5) INSTALL DROP STEPS PER DETAIL SHEET 27.
- 6) CONSTRUCT MAINTENANCE ACCESS RAMP PER DETAILS ON SHEETS 17-20.
- 7) CONSTRUCT JUNCTION STRUCTURE NO. 3 PER STD JS228 AND DETAILS SHEET 25. A=90°, S=624.50
- 8) CONSTRUCT JUNCTION STRUCTURE NO. 3 PER STD JS228 AND DETAILS ON SHEET 25. A=80° 23' 38", S=624.50
- 9) CONSTRUCT CONCRETE COLLAR PER STD M803. THE CONTRACTOR SHALL VERIFY THE ELEVATION AND LOCATION OF THE EXISTING RCP AT POINT OF CONNECTION. REMOVE INTERFERING PORTION OF EXISTING RCP AS REQUIRED TO INSTALL NEW 18" RCP CONNECTOR.
- 10) PLACE 3" THICK CLASS 2 AGGREGATE BASE ACCESS ROAD.
- 11) PROTECT EXISTING TREE IN PLACE, TRIM BRANCHES AS NEEDED.
- 12) PROTECT EXISTING GATES IN PLACE.
- 13) CONSTRUCT PIER EXTENSION PER DETAILS SHEET 16.
- 14) INSTALL 14' DOUBLE DRIVE GATE PER STD M801.
- 15) INSTALL 6' CHAIN LINK FENCE PER STD M801.
- 16) RELOCATE EXISTING STOCK PILE OF SELECTED MATERIAL.
- 17) CONSTRUCT SUB DRAIN PER STD CH332.
- 18) CHANGE LEFT WALL AND RIGHT WALL HEIGHT PER DETAILS SHEET 11 AND 14.
- 19) EXISTING 3" GAS LINE TO BE RELOCATED BY OTHERS AND ABANDONED IN-PLACE.
- 20) BACKFILL PER LIMITS SHOWN ON PLAN, PROFILE AND DETAILS ON SHEET 7.
- 21) REMOVE AND DISPOSE OF ALL EXISTING RIP-RAP.
- 22) CONSTRUCT TURNAROUND PER STD M827.
- 23) INSTALL STAFF GAUGE PER DETAIL ON SHEET 27.
- 24) CONSTRUCT 6'x6' CONCRETE PAD FOR SAMPLING STATION PER DETAIL ON SHEET 36.
- 25) INSTALL CONCRETE V-DITCH WITH NOTCHED OVERPOUR AT ACCESS RAMP WALL, PER PLAN, PROFILE AND DETAILS ON SHEET 17 AND 27.
- 26) PROTECT EXISTING PAC BELL POLE AND LINES IN-PLACE.
- 27) FILL EXISTING V-DITCH TO DRAIN, REMOVE INTERFERING PORTIONS.
- 28) INSTALL SAMPLING STATION PER DETAILS ON SHEET 36 AND 37.
- 29) REMOVE AND PLUG EX. RISER INLET & OUTLET PIPE. REMOVE INTERFERING PORTION OF EXISTING 18" SD.
- 30) CONSTRUCT CONCRETE V-DITCH PER LIMITS SHOWN AND DETAIL ON SHEET 27, 32 AND 33.
- 31) CONSTRUCT BIORETENTION FACILITY PER LIMITS SHOWN AND DETAIL ON SHEET 32.
- 32) CONSTRUCT DRAINAGE INLET PER CALTRANS STD D73 G1 AND DETAILS ON SHEET 25 AND 32.
- 33) RELOCATE INTERFERING MAILBOX.
- 34) REMOVE REDUNDANT C.L. FENCE AND GATE.

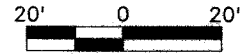


APPROVED BY: DATE: 28-Nov-2011	DAY CREEK CHANNEL STAGE 6 PHASE 2 STA 36+00 TO STA 45+00	PROJECT NO. 1-0-0250 DRAWING NO. 1-647 SHEET NO. 4 OF 38



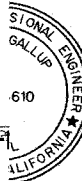
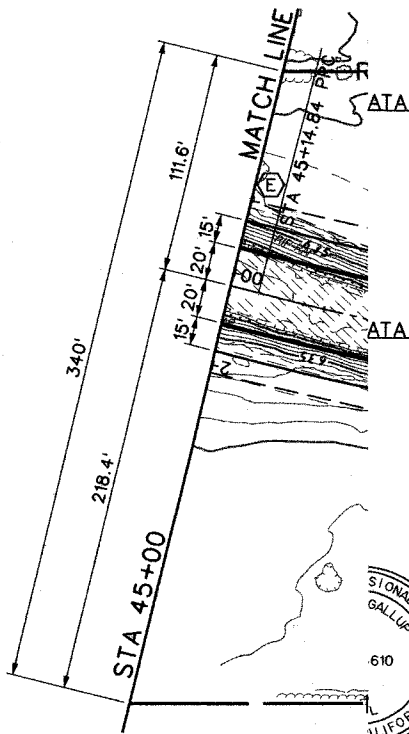


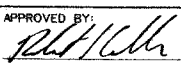
SECTION AT STATION 48+00



NOTES

- ① CONSTRUCT CONCRETE RECTANGULAR CHANNEL PER DETAIL SHEETS 7 AND 10.
- ② REMOVE EXISTING TRAPEZOIDAL CHANNEL AND PROTECT EXISTING BRIDGE WALLS IN PLACE.
- ③ CONSTRUCT CONCRETE RECTANGULAR CHANNEL PER DETAILS SHEETS 12-14.
- ④ PLACE 3" THICK CLASS 2 AGGREGATE BASE ACCESS ROAD.
- ⑤ CONSTRUCT JUNCTION STRUCTURE NO. 3 PER STD JS228 , A=77° 6' 50", S=629.50 AND DETAILS ON SHEET 26.
- ⑥ CONSTRUCT CONCRETE COLLAR PER STD M803. THE CONTRACTOR SHALL VERIFY THE ELEVATION AND LOCATION OF THE EXISTING RCP AT POINT OF CONNECTION.
- ⑦ REMOVE INTERFERING PORTION OF EXISTING CMP/RCP AS REQUIRED TO INSTALL NEW 18" RCP CONNECTOR.
- ⑧ PROTECT EXISTING GATES IN PLACE.
- ⑨ CONSTRUCT SUB DRAIN PER STD CH332.
- ⑩ INSTALL DROP STEPS PER DETAILS SHEET 27.
- ⑪ CHANGE WALL HEIGHTS PER DETAILS SHEET 12 AND 14.
- ⑫ CONSTRUCT PIER EXTENSION PER DETAILS SHEET 16.
- ⑬ INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.
- ⑭ BACKFILL PER LIMITS SHOWN ON PLAN, PROFILE AND DETAILS ON SHEET 7.
- ⑮ REMOVE AND DISPOSE OF ALL EXISTING RIP-RAP.
- ⑯ INSTALL STAFF GAUGE PER DETAIL ON SHEET 27.

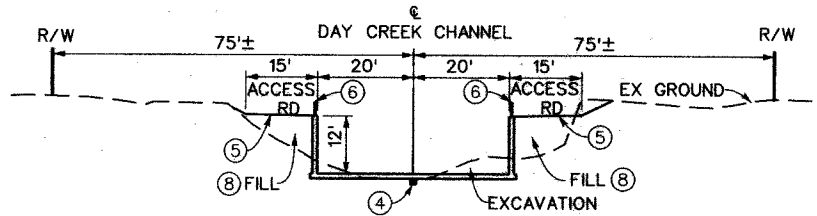
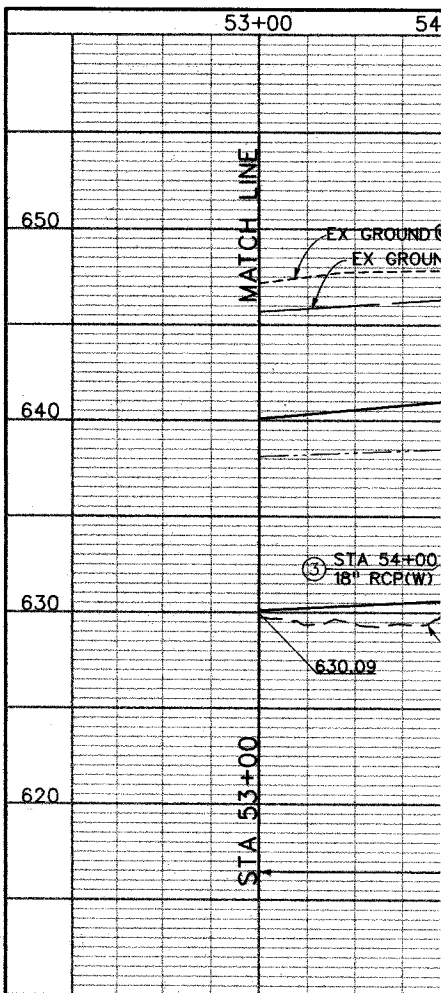


APPROVED BY:

 DATE: 28-Nov-2011

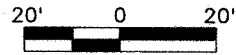
DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 STA 45+00 TO STA 53+00

PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
 5 OF 38



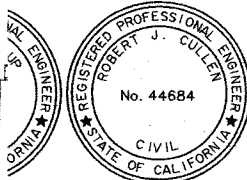
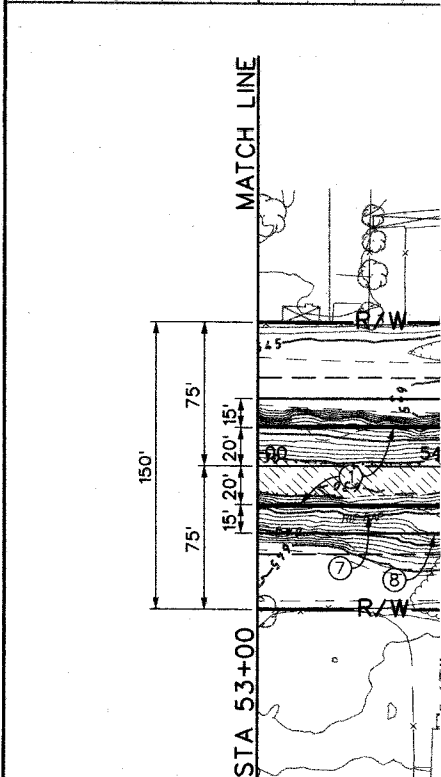


SECTION AT STATION 56+00



NOTES

- ① CONSTRUCT CONCRETE RECTANGULAR CHANNEL PER DETAIL SHEETS 7 AND 10.
- ② CONSTRUCT CONCRETE RECTANGULAR CHANNEL TRANSITION. TRANSITION INVERT FLOATER SLAB FROM CROSS SLOPE ON SHEET 7 AND 10 TO FLAT INVERT.
- ③ CONSTRUCT JUNCTION STRUCTURE NO. 3 PER STD JS228 AND DETAIL SHEET 26. A=90°, S=633.0
- ④ CONSTRUCT SUB DRAIN PER STD CH332.
- ⑤ PLACE 3" CLASS 2 BASE AGGREGATE ACCESS ROAD.
- ⑥ INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.
- ⑦ REMOVE AND DISPOSE OF ALL EXISTING RIP-RAP.
- ⑧ BACK FILL PER LIMITS SHOWN ON PLAN, PROFILE AND DETAILS ON SHEET 7.
- ⑨ REMOVE INTERFERING PORTIONS OF EXISTING RETAINING WALL.
- ⑩ REMOVE AND DISPOSE EXISTING BARRICADE FROM WINGWALL.
- ⑪ CONSTRUCT ACCESS ROAD TO JOIN EXISTING AT STA 59+00.
- ⑫ REMOVE AND REPLACE EXISTING DRAINAGE APRON FOR ACCESS ROAD PER STD PLAN CH333.
- ⑬ REMOVE AND DISPOSE OF NONFUNCTIONAL CMP AND ABANDONE PIPE.



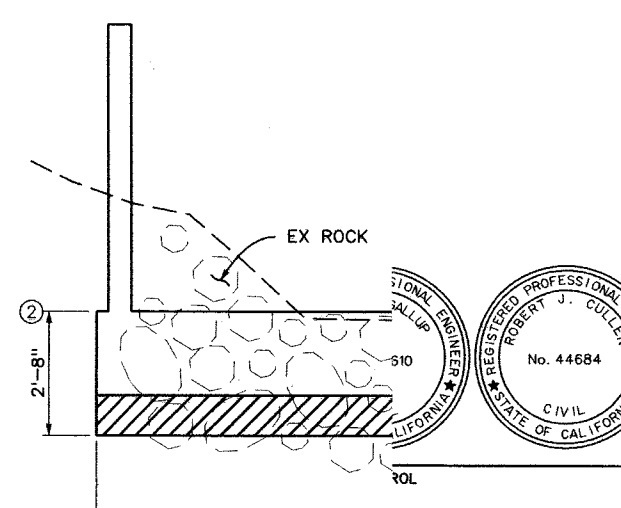
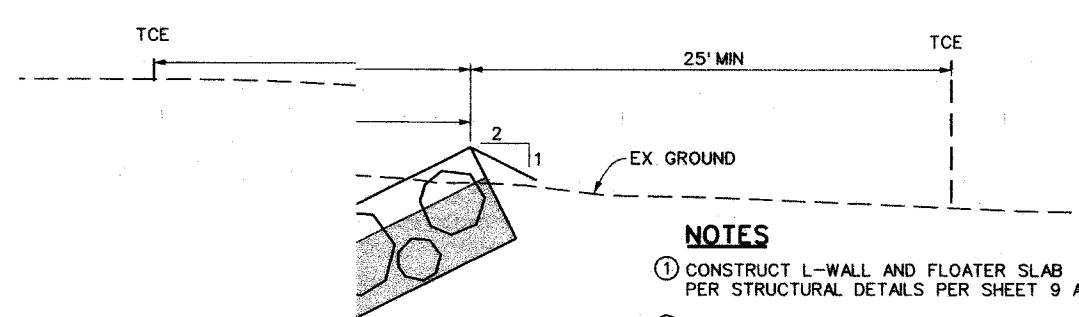
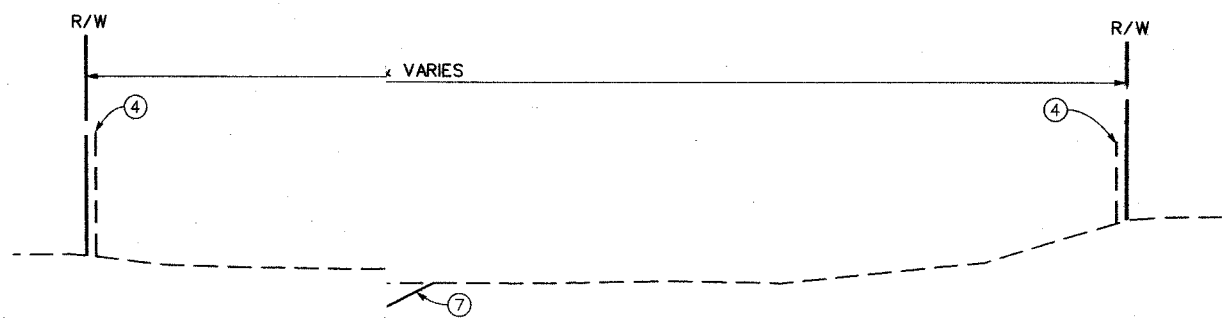
APPROVED BY:
[Signature]
 DATE: 28 Nov 2011

DAY CREEK CHANNEL
 STAGE 6
 PHASE 2

STA 53+00 TO END PROJECT

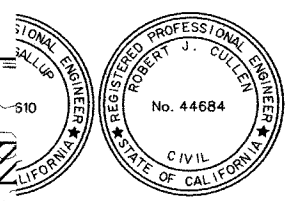
PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
 6 OF 38





NOTES

- ① CONSTRUCT L-WALL AND FLOATER SLAB PER STRUCTURAL DETAILS PER SHEET 9 AND 10.
- ② REMOVE AND DISPOSE OF EXISTING ROCKS TO 2'-8" BELOW CHANNEL INVERT, SEE DETAIL "A" AND BACK FILL THE AREA WITH SELECT MATERIAL.
- ③ CONSTRUCT SUB DRAIN FROM STA 30+90.44 TO STA 58+00 PER STD CH332.
- ④ INSTALL 6' CHAIN LINK FENCE PER STD M801 OR PROTECT EXISTING FENCE AS DIRECTED BY THE ENGINEER.
- ⑤ INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.
- ⑥ PLACE 3" CLASS 2 AGGREGATE BASE ACCESS ROAD.
- ⑦ CUT/FILL SLOPE SHALL BE 2:1 OR AS DIRECTED BY ENGINEER.
- ⑧ EXCAVATION AND BACK FILL PAY LIMITS.
- ⑨ PLACE 51" THICK 1 TON CONCRETED ROCK.
- ⑩ REMOVE AND DISPOSE OF EXISTING ROCK AND BROKEN CONCRETE.
- ⑪ PREPARE SUBGRADE AS DIRECTED BY ENGINEER.

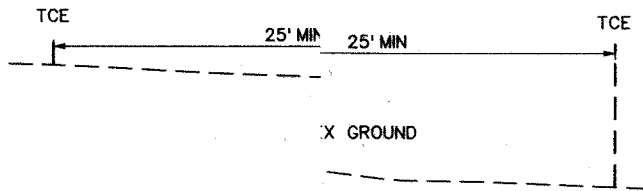


APPROVED BY:
Robert J. Cullen
 DATE: 28-Nov-2011

DAY CREEK CHANNEL
STAGE 6
 PHASE 2
 TYPICAL CHANNEL SECTION
 TYPICAL ROCK SECTION

PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
 7 OF 38



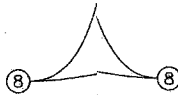
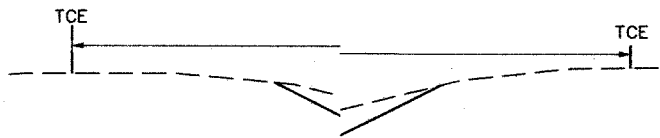


STA 19+90 TO STA
STA 28+75 TO STA

1 TON RIP-RAP (LOOSE)

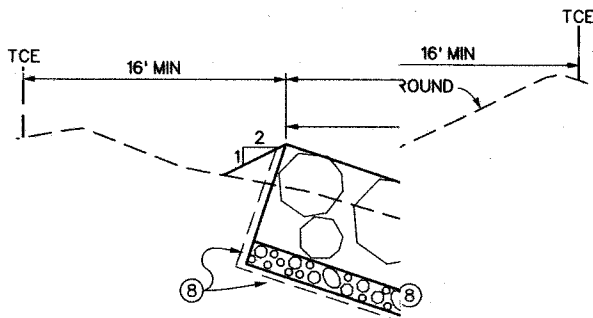
STONE WEIGHT	% LAR THAN
2 TON	0-
1 TON	50-
1/2 TON	95-

(THICKNESS= 51")



NOTES

- ① PLACE 51" THICK 1 TON ROCK SLOPE PROTECTION AND 12" FILTER BLANKET NO. 2 BACKING CLASS WITH MIRAF1100N FILTER FABRIC OR EQUIVALENT.
- ② CHINK 1-TON ROCK WITH FACING CLASS TO CREATE MEANDERING LOW FLOW CHANNEL PER PLAN, PROFILE AND SECTION HEREON. CONCRETE FACING CLASS ROCK SLOPE PROTECTION WITH 8" GROUT PENETRATION FOR "NATURAL" STREAM APPEARANCE AS DIRECTED BY ENGINEER.
- ③ PREPARE SUBGRADE AS DIRECTED BY ENGINEER.
- ④ PLACE 1-TON BOULDER RANDOMLY IN CHANNEL INVERT APPROXIMATELY EVERY 100 FEET. PLACE BOULDER OPPOSITE BANK OF LOW FLOW CHANNEL F.L.
- ⑤ REMOVE AND DISPOSE OF EXISTING ROCKS, BROKEN CONCRETE, ROOT SYSTEM AND DEBRIS.
- ⑥ STA 23+00 TO STA 25+00 TRANSITION SECTION, SEE PLAN VIEW.
- ⑦ STA 28+00 TO STA 28+75 CONCRETED ROCK SECTION PER DETAIL ON SHT 7.
- ⑧ ROCK CHANNEL EXCAVATION LIMITS.

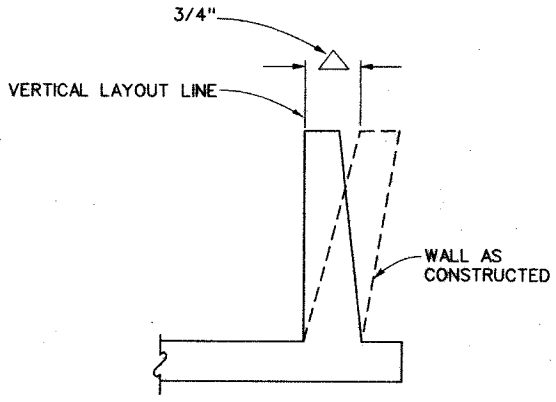
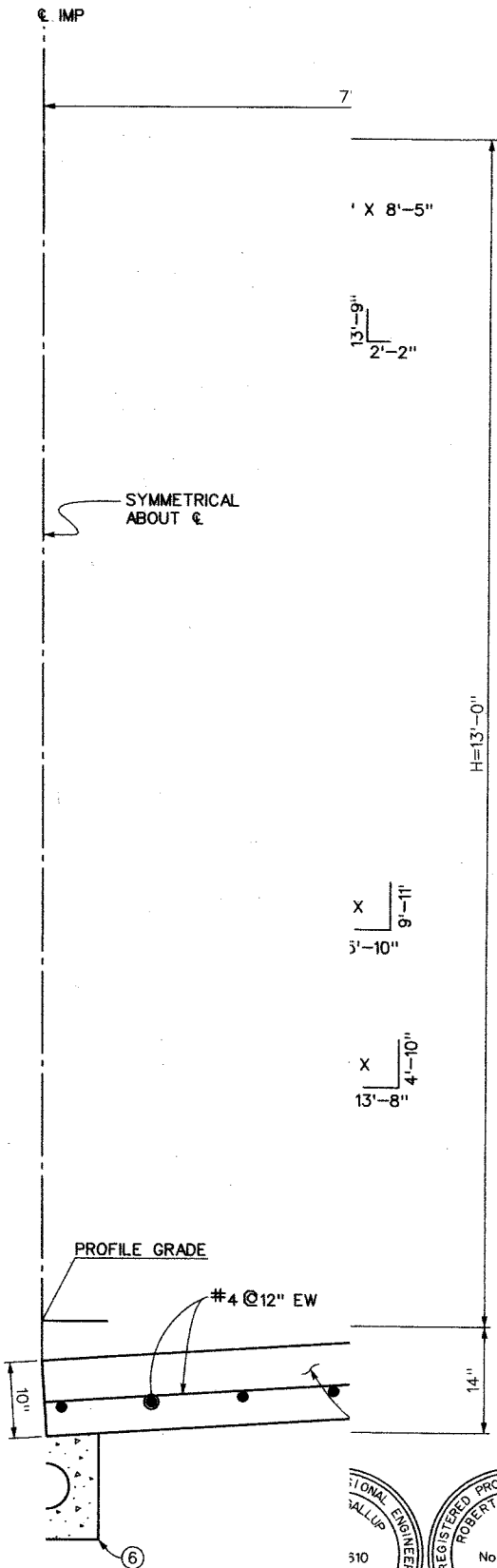


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DATE: 28-Nov-2011

DAY CREEK CHANNEL
STAGE 6
PHASE 2
TYPICAL ROCK SECTION

PROJECT NO.
1-0-0250
DRAWING NO.
1-647
SHEET NO.
8 OF 38





WALL CONSTRUCTION OFFSET
NTS

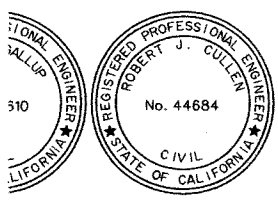
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 SOIL DENSITY=124 PCF
 LATERAL LOAD=52.5 PSF

ALLOWABLE STRESSES
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 $f_c = 1600$ psi
 $f_s = 24,000$ psi
 $f_y = 60,000$ psi

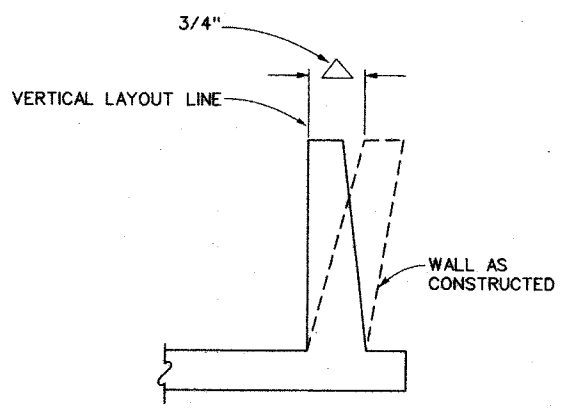
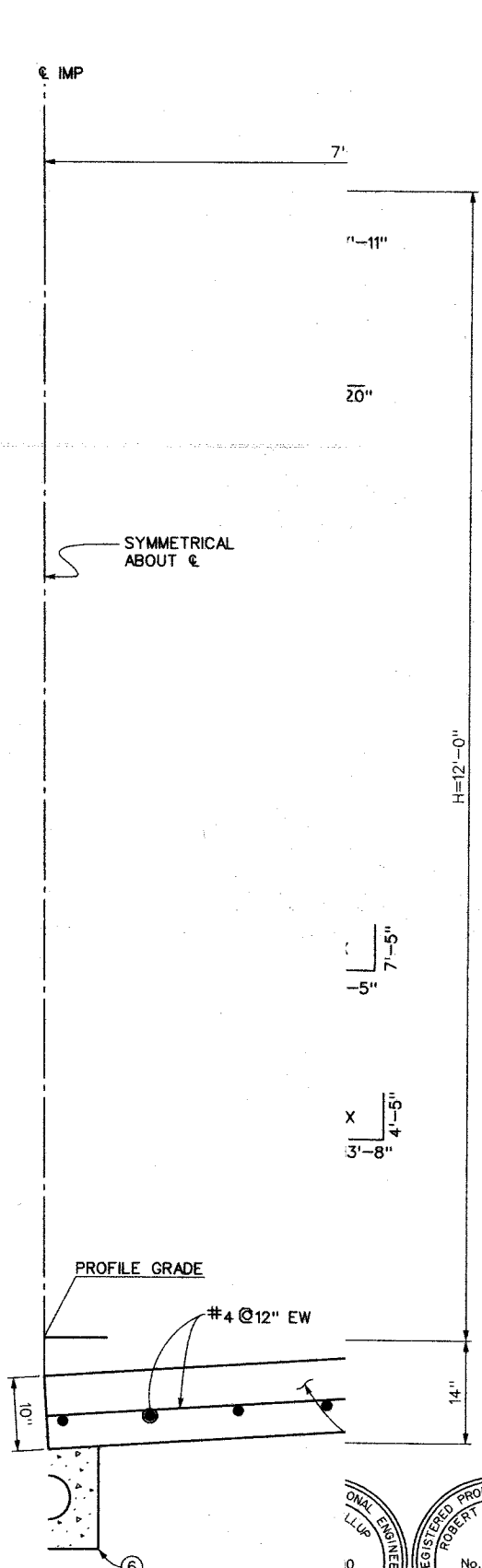
NOTES

1. TRANSVERSE CONSTRUCTION JOINTS ARE REQUIRED IN WALLS AND WALL FOOTING AT A MAX SPACING OF 50' AND A MIN OF 10', AND ALSO REQUIRED AT ALL GRADE BREAKS, BC'S AND EC'S. TRANSVERSE JOINTS IN WALL FOOTING SHALL BE KEYPED. TRANSVERSE JOINTS IN WALLS MAY BE EITHER SMOOTH WITH DOWELS OR KEYPED. A COMPLETE CURTAIN OF TRANSVERSE STEEL SHALL BE PLACED 3 INCHES FROM EACH FACE OF THE JOINTS AND LONGITUDINAL STEEL SHALL NOT BE CONTINUOUS THROUGH THE JOINTS. WEAKENED PLANE JOINTS ARE REQUIRED BETWEEN CONSTRUCTION JOINTS AT A MAX SPACING OF 25'.
2. INSTALL 2 1/2" Ø WEEP HOLE WITH FILTER MATERIAL @ 10' OC PER STD CH326.
3. INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.
4. SEE SHEET 13 FOR WALL HEIGHT CHANGE DETAILS.
5. CONSTRUCT KEYPED AND DOWELED CONSTRUCTION JOINT PER DETAILS ON SHEET 27.
6. CONSTRUCT SUB DRAIN PER STD CH332.
7. CROSS SLOPE ON SLAB TYPICAL. TRANSITION TO FLAT INVERT TO JOIN AT STA 31+97.22 AND 58+00.



APPROVED BY: DATE: 28-Mar-2011	DAY CREEK CHANNEL STAGE 6 PHASE 2 13'L-WALL & FLOATER SLAB DETAILS	PROJECT NO. 1-0-0250
		DRAWING NO. 1-647
		SHEET NO. 9 OF 38





WALL CONSTRUCTION OFFSET
NTS

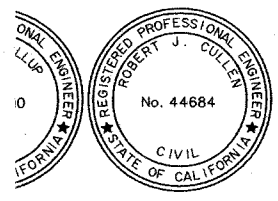
DESIGN DATA

LIVE LOAD= 2' SURCHARGE
 SOIL DENSITY= 124 PCF
 LATERAL LOAD= 52.5 PSF

ALLOWABLE STRESSES
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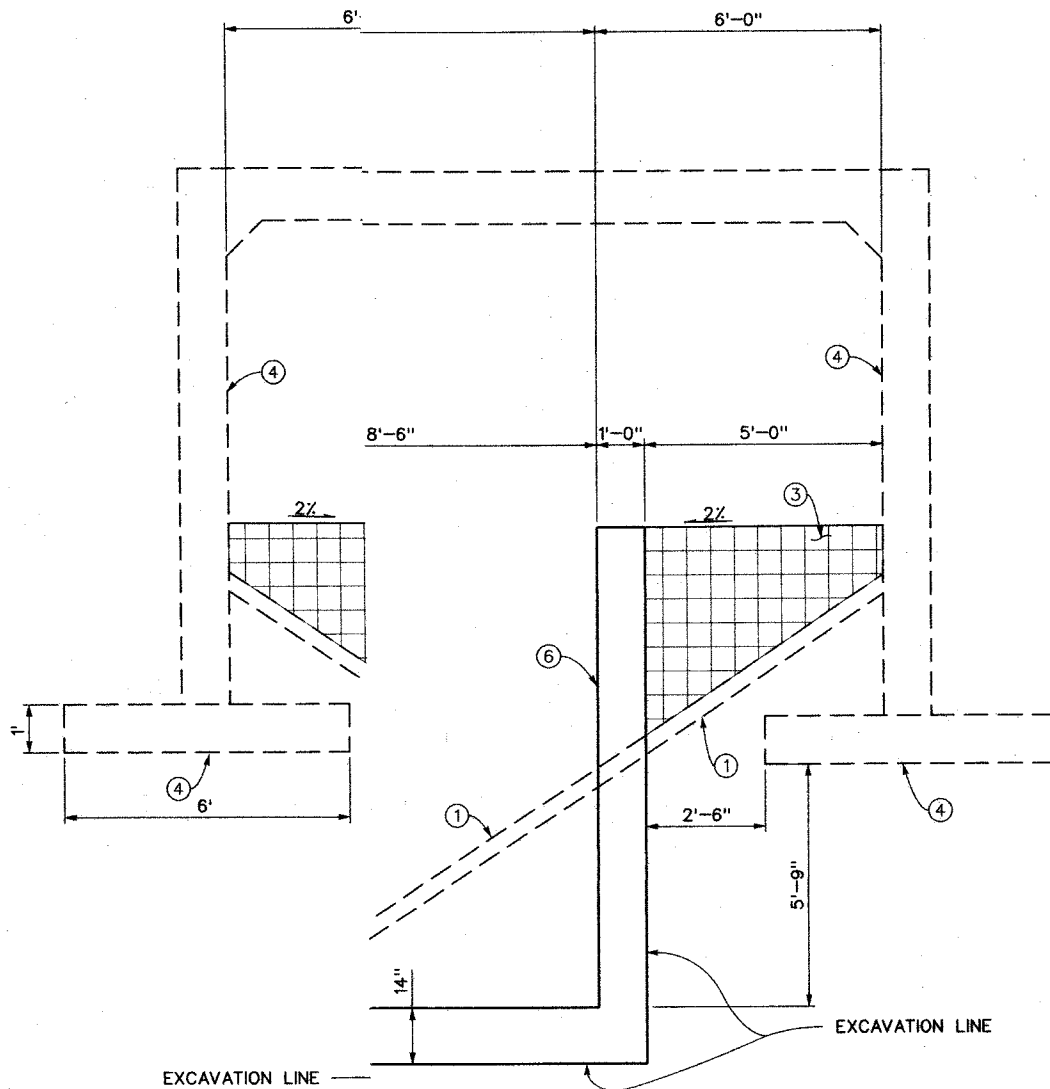
NOTES

1. TRANSVERSE CONSTRUCTION JOINTS ARE REQUIRED IN WALLS AND WALL FOOTING AT A MAX SPACING OF 50' AND A MIN OF 10', AND ALSO REQUIRED AT ALL GRADE BREAKS, BC'S AND EC'S. TRANSVERSE JOINTS IN WALL FOOTING SHALL BE KEYED. TRANSVERSE JOINTS IN WALLS MAY BE EITHER SMOOTH WITH DOWELS OR KEYED. A COMPLETE CURTAIN OF TRANSVERSE STEEL SHALL BE PLACED 3 INCHES FROM EACH FACE OF THE JOINTS AND LONGITUDINAL STEEL SHALL NOT BE CONTINUOUS THROUGH THE JOINTS. WEAKENED PLANE JOINTS ARE REQUIRED BETWEEN CONSTRUCTION JOINTS AT A MAX SPACING OF 25'.
2. INSTALL 2 1/2" Ø WEEP HOLE WITH FILTER MATERIAL @ 10' OC PER STD CH326.
3. INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.
4. SEE SHEET 13 FOR WALL HEIGHT CHANGE DETAILS.
5. CONSTRUCT KEYED AND DOWELED CONSTRUCTION JOINT PER DETAILS ON SHEET 27.
6. CONSTRUCT SUB DRAIN PER STD CH332.
7. CROSS SLOPE ON SLAB TYPICAL. TRANSITION TO FLAT INVERT TO JOIN AT STA 31+97.22 AND 58+00.



APPROVED BY: DATE: 28-Nov-2011	DAY CREEK CHANNEL STAGE 6 PHASE 2 12' L-WALL & FLOATER SLAB DETAILS	PROJECT NO. 1-0-0250
		DRAWING NO. 1-647
		SHEET NO. 10 OF 38





NOTES

- ① REMOVE INTERFERING PORTION OF THE EXISTING CONCRETE TRAPEZOIDAL CHANNEL.
- ② CONSTRUCT FLOATER SLAB UNDER HOLMES AVE BRIDGE.
- ③ SLURRY CLSM BACK FILL UNDER THE BRIDGE FROM STA 41+90 TO STA 42+43.43.
- ④ PROTECT EXISTING BRIDGE.
- ⑤ INSTALL 1/2" PRE MOLDED EXP JT FILLER.
- ⑥ CONSTRUCT L-WALL PER DETAIL SHEET 13.
- ⑦ CONSTRUCT SUB DRAIN PER STD CH332.
- ⑧ INSTALL SMOOTH DOWELS PER DETAIL ON SHEET 27.

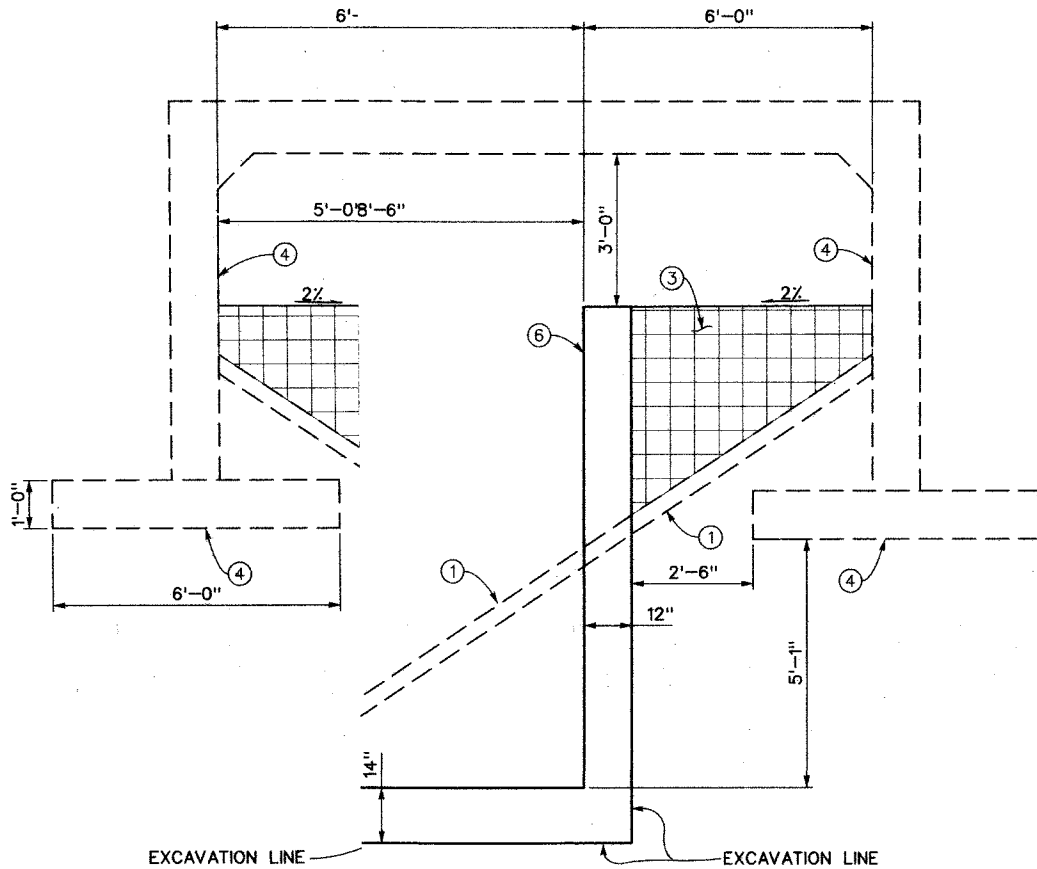


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 DATE: 20-11-2011

DAY CREEK CHANNEL
STAGE 6
 PHASE 2
 HOLMES AVE BRIDGE SECTION

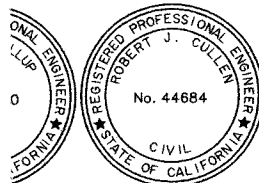
PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
 11 OF 38





NOTES

- ① REMOVE INTERFERING PORTION OF THE EXISTING CONCRETE TRAPEZOIDAL CHANNEL.
- ② CONSTRUCT FLOATER SLAB UNDER 64th STREET BRIDGE.
- ③ SLURRY CLSM BACK FILL UNDER THE BRIDGE FROM STA 50+08.46 TO STA 50+56.29.
- ④ PROTECT EXISTING BRIDGE.
- ⑤ INSTALL 1/2" PRE MOLDED EXP JT FILLER.
- ⑥ CONSTRUCT L-WALL PER DETAIL SHEET 13.
- ⑦ CONSTRUCT SUB DRAIN PER STD CH332.
- ⑧ INSTALL SMOOTH DOWELS PER DETAIL ON SHEET 27.

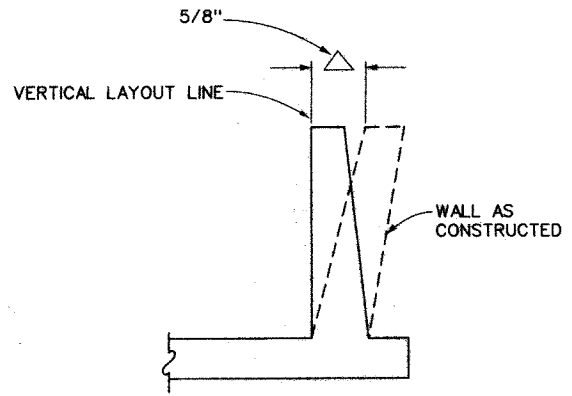
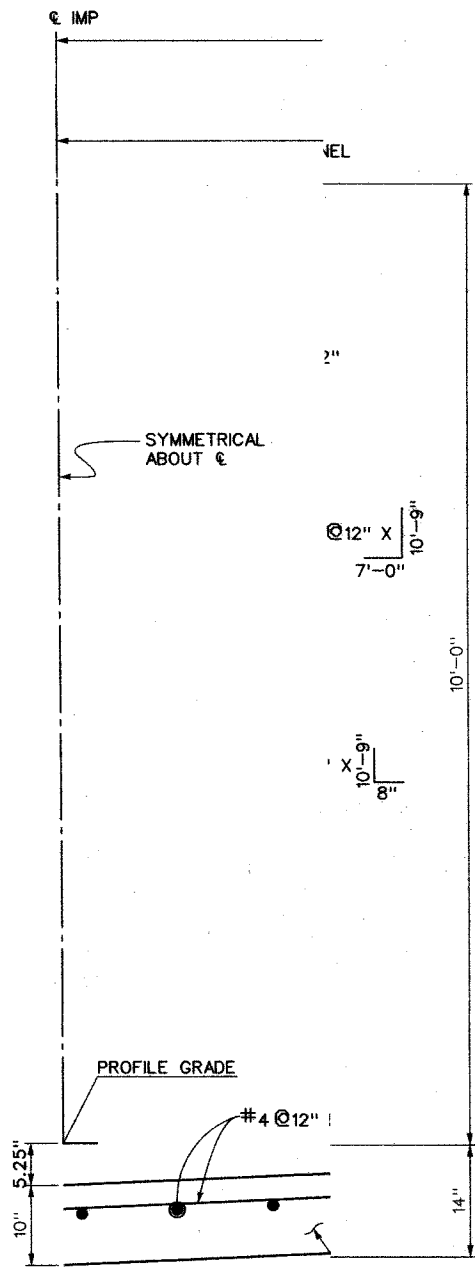


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 DATE: 29-Nov-2011

DAY CREEK CHANNEL
STAGE 6
 PHASE 2
 64th ST BRIDGE SECTION

PROJECT NO.
1-0-0250
 DRAWING NO.
1-647
 SHEET NO.
12 OF 38





WALL CONSTRUCTION OFFSET
NTS

DESIGN DATA

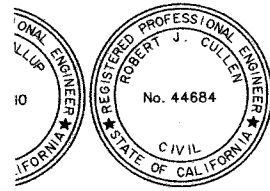
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SOIL DENSITY= 124 PCF
LATERAL LOAD= 35 PSF

ALLOWABLE STRESSES

$f'_c = 4000$ psi
 $f_c = 1600$ psi
 $f_s = 24,000$ psi
 $f_y = 60,000$ psi

NOTES

1. TRANSVERSE CONSTRUCTION JOINTS ARE REQUIRED IN WALLS AND WALL FOOTING AT A MAX SPACING OF 50' AND A MIN OF 10', AND ALSO REQUIRED AT ALL GRADE BREAKS, BC'S AND EC'S. TRANSVERSE JOINTS IN WALL FOOTING SHALL BE KEYPED. TRANSVERSE JOINTS IN WALLS MAY BE EITHER SMOOTH WITH DOWELS OR KEYPED. A COMPLETE CURTAIN OF TRANSVERSE STEEL SHALL BE PLACED 3 INCHES FROM EACH FACE OF THE JOINTS AND LONGITUDINAL STEEL SHALL NOT BE CONTINUOUS THROUGH THE JOINTS. WEAKENED PLANE JOINTS ARE REQUIRED BETWEEN CONSTRUCTION JOINTS AT A MAX SPACING OF 25'.
- ② INSTALL 2 1/2" Ø WEEP HOLE WITH FILTER MATERIAL @ 10' OC PER STD CH326.
- ③ INSTALL 1/2" PRE MOLDED EXPANSION JOINT FILLER.
- ④ INSTALL SMOOTH DOWELS PER DETAIL ON SHEET 27.

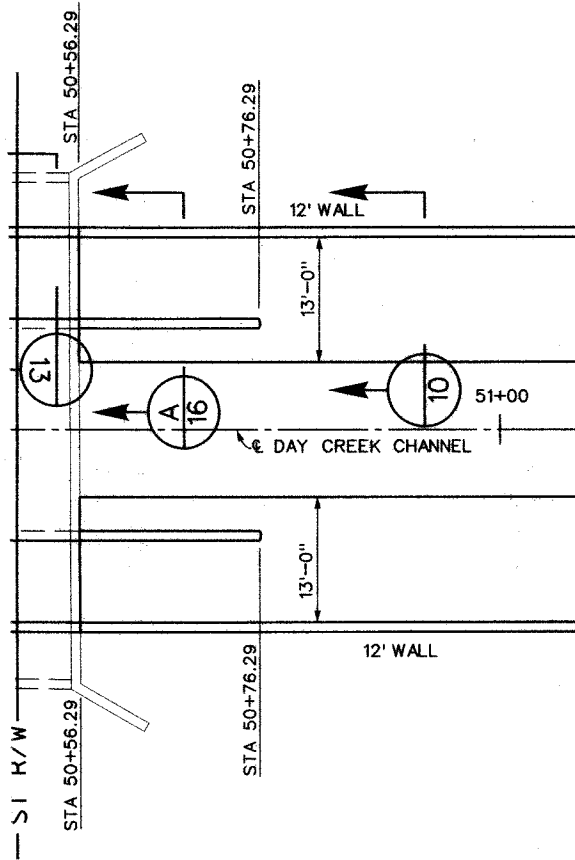


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DATE: 20-Nov-2011

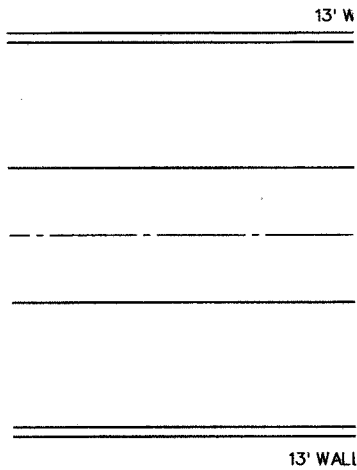
DAY CREEK CHANNEL
STAGE 6
PHASE 2
L-WALL & FLOATER SLAB DETAILS
UNDER BRIDGES

PROJECT NO.
1-0-0250
DRAWING NO.
1-647
SHEET NO.
13 OF 38





TH ST BRIDGE



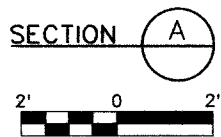
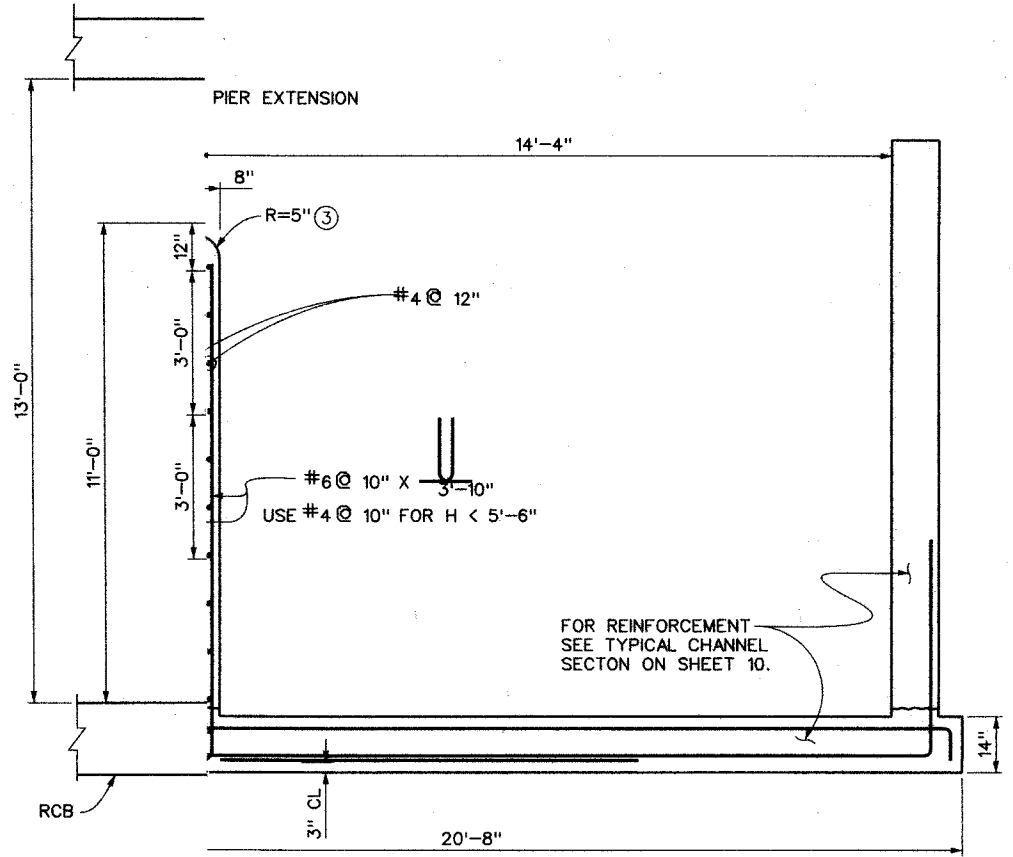
APPROVED BY: *[Signature]*
 DATE: 28-Nov-2011

DAY CREEK CHANNEL
STAGE 6
 PHASE 2
 WALL HEIGHT CHANGE DETAILS

PROJECT NO.
1-0-0250
 DRAWING NO.
1-647
 SHEET NO.
14 OF 38

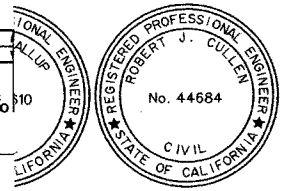
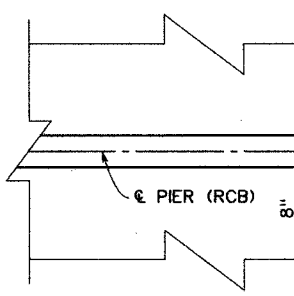


CONDITION	
VERTICAL PIER EXTENSION	
96.20	ELV A=618.12
12.70	
18.20	ELV C=618.21



NOTES

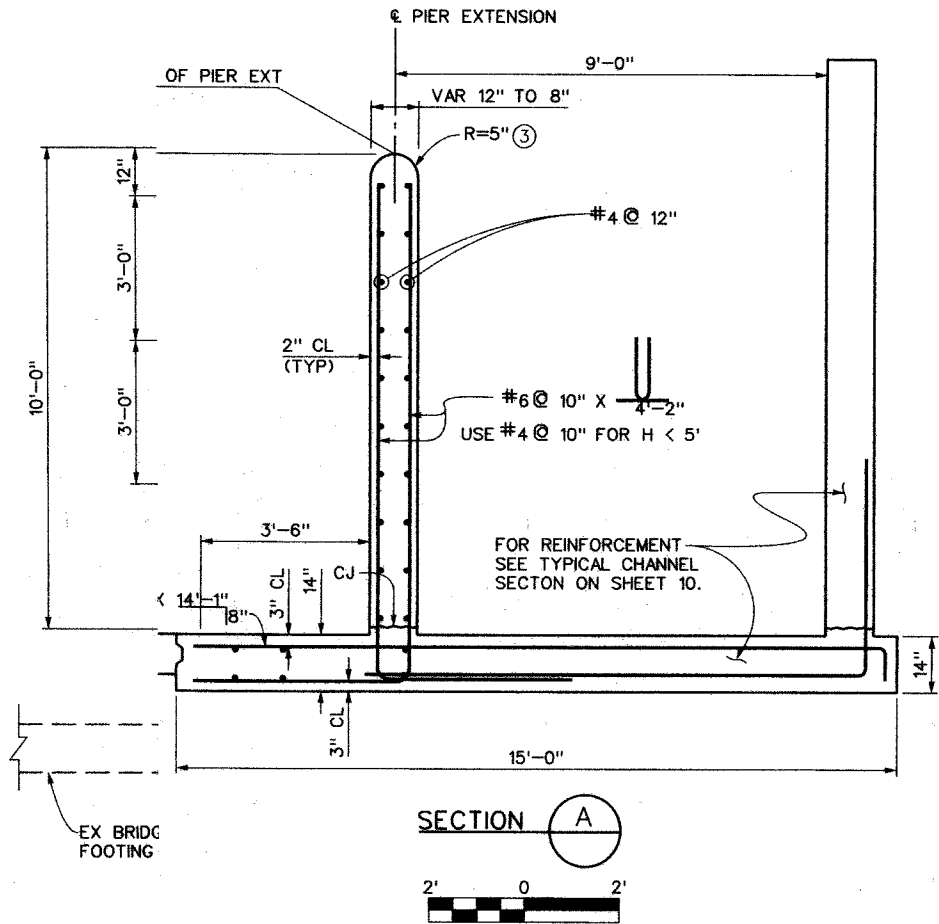
- ① KEYED AND DOWELED CONSTRUCTION JOINT PER DETAIL ON SHEET 27.
- ② INSTALL SMOOTH DOWELS PER DETAIL ON SHEET 27.
- ③ TOP OF PIER EXTENSION SHALL BE ROUNDED.



APPROVED BY: DATE: 28-Nov-2011	DAY CREEK CHANNEL STAGE 6 PHASE 2 LUCRETIA AVE PIER EXTENSION DETAILS	PROJECT NO. 1-0-0250 DRAWING NO. 1-647 SHEET NO. 15 OF 38
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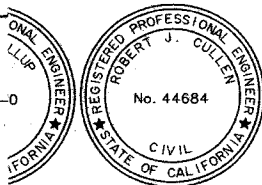
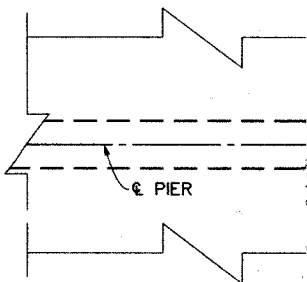


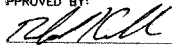
64TH ST PIER EXTENSION		
PIER EXTENSION	WESTERLY & EASTERLY PIER EXTENSION	
ELV A=622.66	STA A=50+56.29	ELV A=628.80
	STA B=50+71.29	
ELV C=622.82	STA C=50+76.29	ELV C=628.91



NOTES

- ① KEYED AND DOWELED CONSTRUCTION JOINT PER DETAIL ON SHEET 27.
- ② INSTALL SMOOTH DOWELS PER DETAIL ON SHEET 27.
- ③ TOP OF PIER EXTENSION SHALL BE ROUNDED.



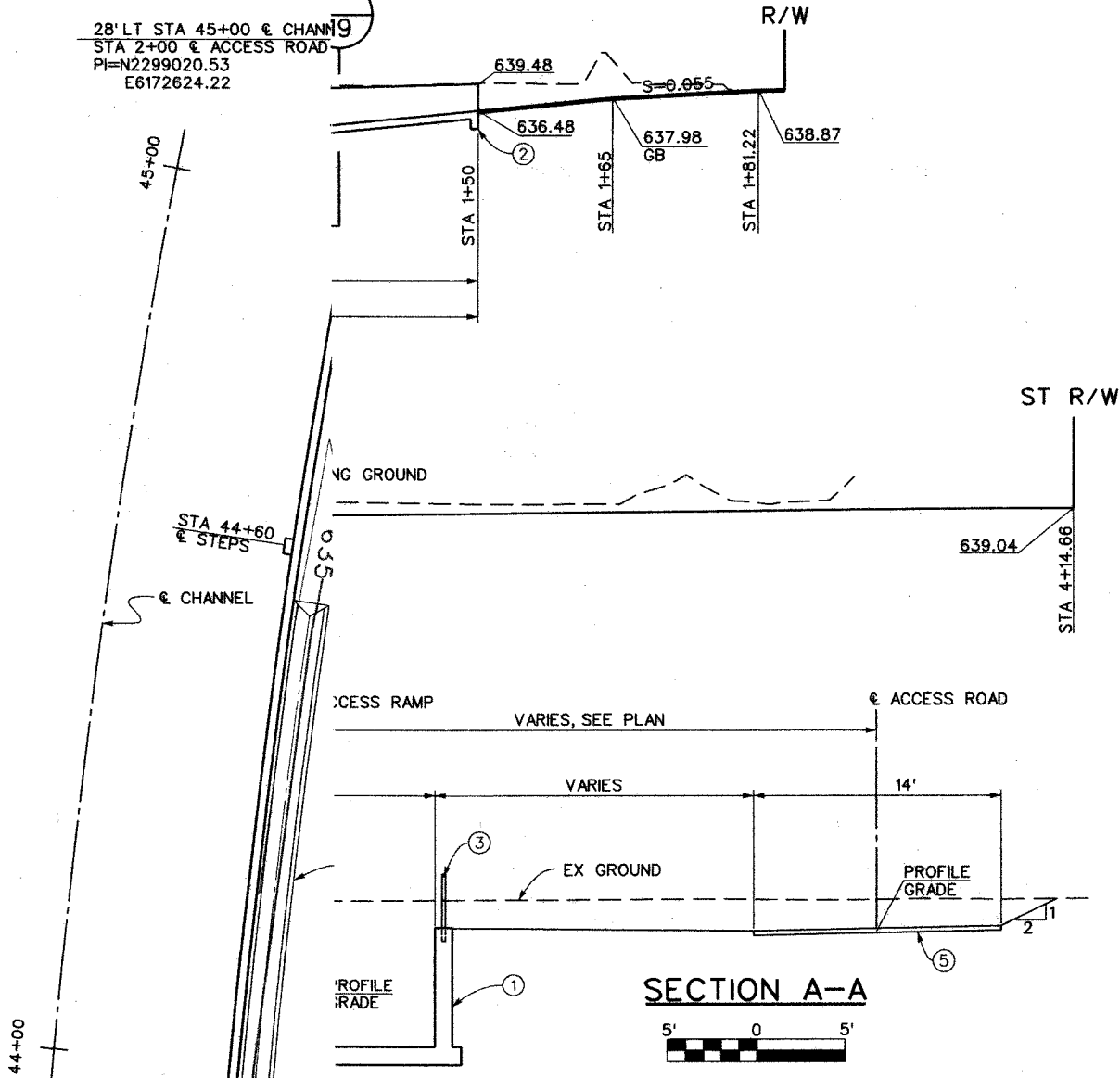
APPROVED BY:

 DATE: 28-Nov-2011

DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 HOLMES AVE & 64TH ST
 PIER EXTENSION DETAILS

PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
 16 OF 38

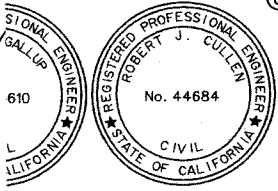


28' LT STA 45+00 & CHANNEL
 STA 2+00 & ACCESS ROAD
 PI=N2299020.53
 E6172624.22



NOTES

- ① CONSTRUCT MAINTENANCE ACCESS RAMP PER DETAILS THIS SHEET AND SHEETS 18-20.
- ② CONSTRUCT 2' CUTOFF WALL PER STD CH326.
- ③ INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.
- ④ INSTALL 14' DOUBLE DRIVE GATE PER STD M801.
- ⑤ PLACE 3" CLASS 2 AGGREGATE BASE ON ACCESS ROAD AND TURNAROUND.
- ⑥ INSTALL CONCRETE V-DITCH WITH NOTCHED OVERPOUR AT ACCESS RAMP WALL PER PLAN, PROFILE AND DETAILS ON SHEET 27.
- ⑦ CONSTRUCT ANCHOR DEVICE PER DETAILS ON SHEET 35.
- ⑧ CONSTRUCT KEYED AND DOWELED CONSTRUCTION JOINT PER DETAILS SHEET 27.

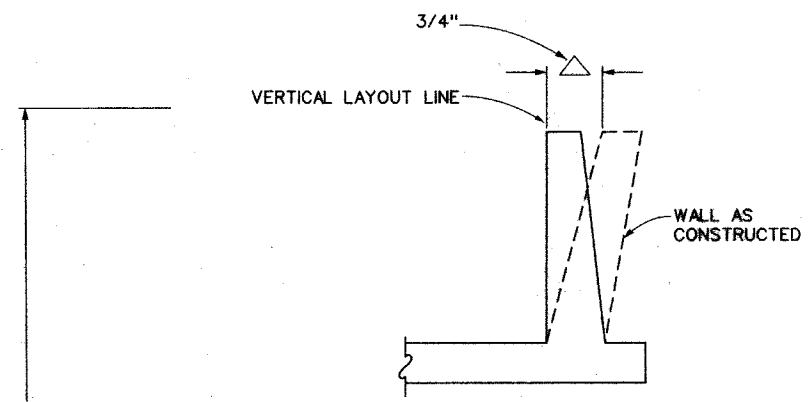


APPROVED BY:
[Signature]
 DATE: 28-NOV-2011

DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 MAINTENANCE RAMP DETAILS

PROJECT NO. 1-0-0250
 DRAWING NO. 1-647
 SHEET NO. 17 OF 38





WALL CONSTRUCTION OFFSET

NTS

DESIGN DATA

LIVE LOAD= 2' SURCHARGE
 SOIL DENSITY= 124 PCF
 LATERAL LOAD= 35 PSF

ALLOWABLE STRESSES

$f_c = 4000$ psi
 $f_c = 1600$ psi
 $f_s = 24,000$ psi
 $f_y = 60,000$ psi

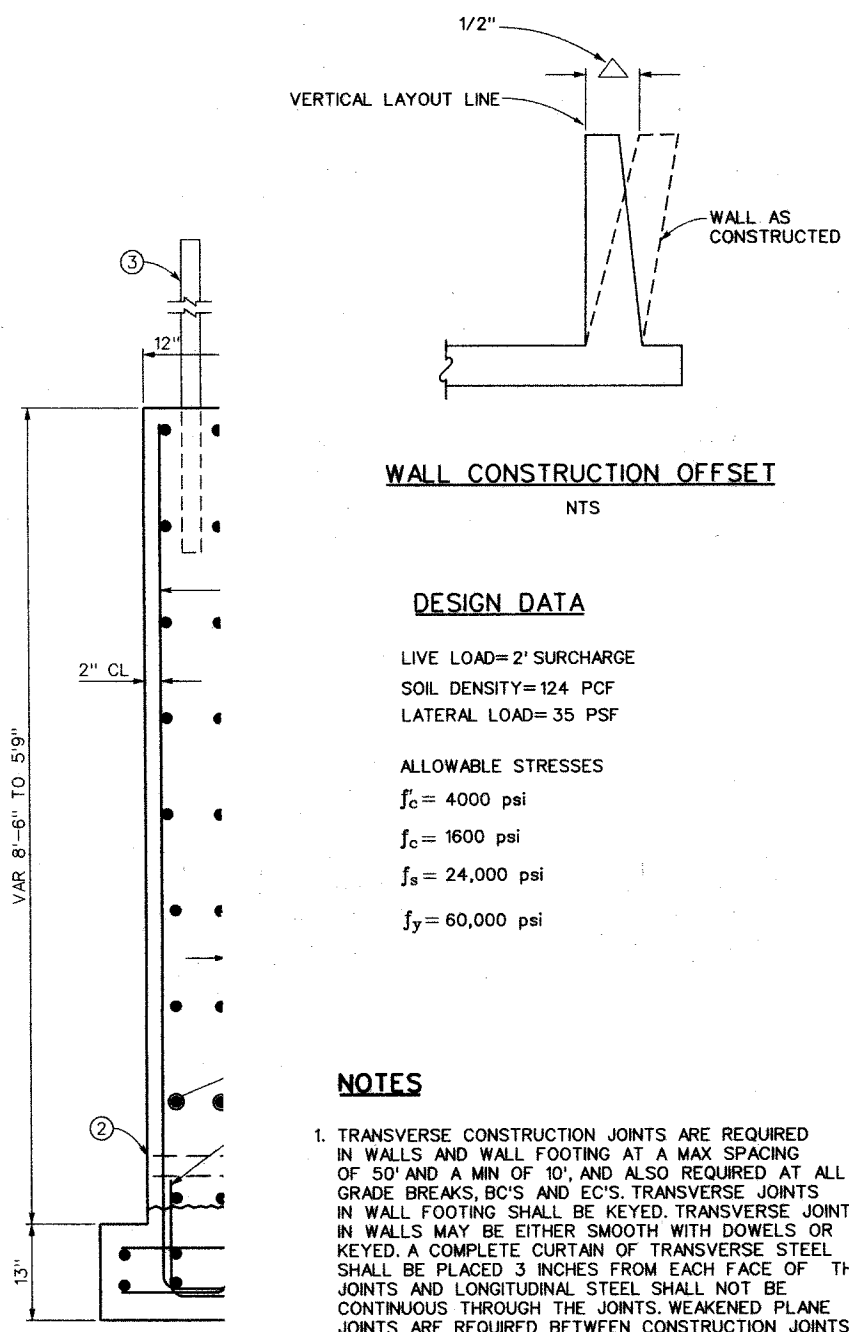
NOTES

1. TRANSVERSE CONSTRUCTION JOINTS ARE REQUIRED IN WALLS AND WALL FOOTING AT A MAX SPACING OF 50' AND A MIN OF 10', AND ALSO REQUIRED AT ALL GRADE BREAKS, BC'S AND EC'S. TRANSVERSE JOINTS IN WALL FOOTING SHALL BE KEYED. TRANSVERSE JOINTS IN WALLS MAY BE EITHER SMOOTH WITH DOWELS OR KEYED. A COMPLETE CURTAIN OF TRANSVERSE STEEL SHALL BE PLACED 3 INCHES FROM EACH FACE OF THE JOINTS AND LONGITUDINAL STEEL SHALL NOT BE CONTINUOUS THROUGH THE JOINTS. WEAKENED PLANE JOINTS ARE REQUIRED BETWEEN CONSTRUCTION JOINTS AT A MAX SPACING OF 25'.
- ② INSTALL 2 1/2" Ø WEEP HOLE WITH FILTER MATERIAL @ 10' OC PER STD CH326.
- ③ INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.



APPROVED BY: DATE: 28-Nov-2011	DAY CREEK CHANNEL STAGE 6 PHASE 2 ACCESS RAMP DETAILS STA 0+21 TO STA 0+71	PROJECT NO. 1-0-0250
		DRAWING NO. 1-647
		SHEET NO. 18 OF 38





WALL CONSTRUCTION OFFSET
NTS

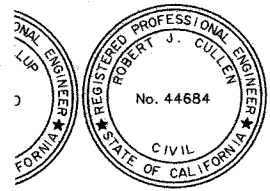
DESIGN DATA

LIVE LOAD= 2' SURCHARGE
SOIL DENSITY= 124 PCF
LATERAL LOAD= 35 PSF

ALLOWABLE STRESSES
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 $f_c = 1600$ psi
 $f_s = 24,000$ psi
 $f_y = 60,000$ psi

NOTES

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- ② INSTALL 2 1/2" Ø WEEP HOLE WITH FILTER MATERIAL @ 10' OC PER STD CH326.
- ③ INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.

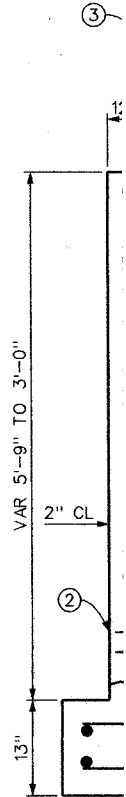
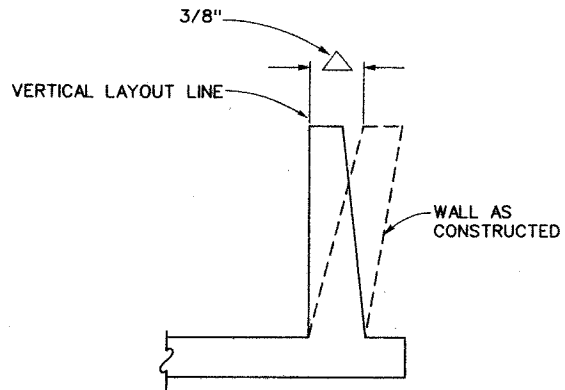


APPROVED BY:
Robert J. Cullen
DATE: 28-Nov-201

DAY CREEK CHANNEL
STAGE 6
PHASE 2
ACCESS RAMP DETAILS
STA 0+71 TO STA 1+10

PROJECT NO.
1-0-0250
DRAWING NO.
1-647
SHEET NO.
19 OF 38





WALL CONSTRUCTION OFFSET

NTS

DESIGN DATA

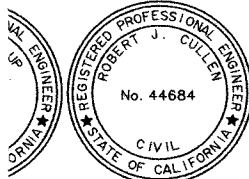
LIVE LOAD= 2' SURCHARGE
 SOIL DENSITY= 124 PCF
 LATERAL LOAD= 35 PSF

ALLOWABLE STRESSES

$f'_c = 4000$ psi
 $f'_c = 1600$ psi
 $f_s = 24,000$ psi
 $f_y = 60,000$ psi

NOTES

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- 2) INSTALL 2 1/2" Ø WEEP HOLE WITH FILTER MATERIAL @ 10' OC PER STD CH326.
- 3) INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.

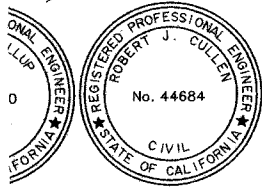
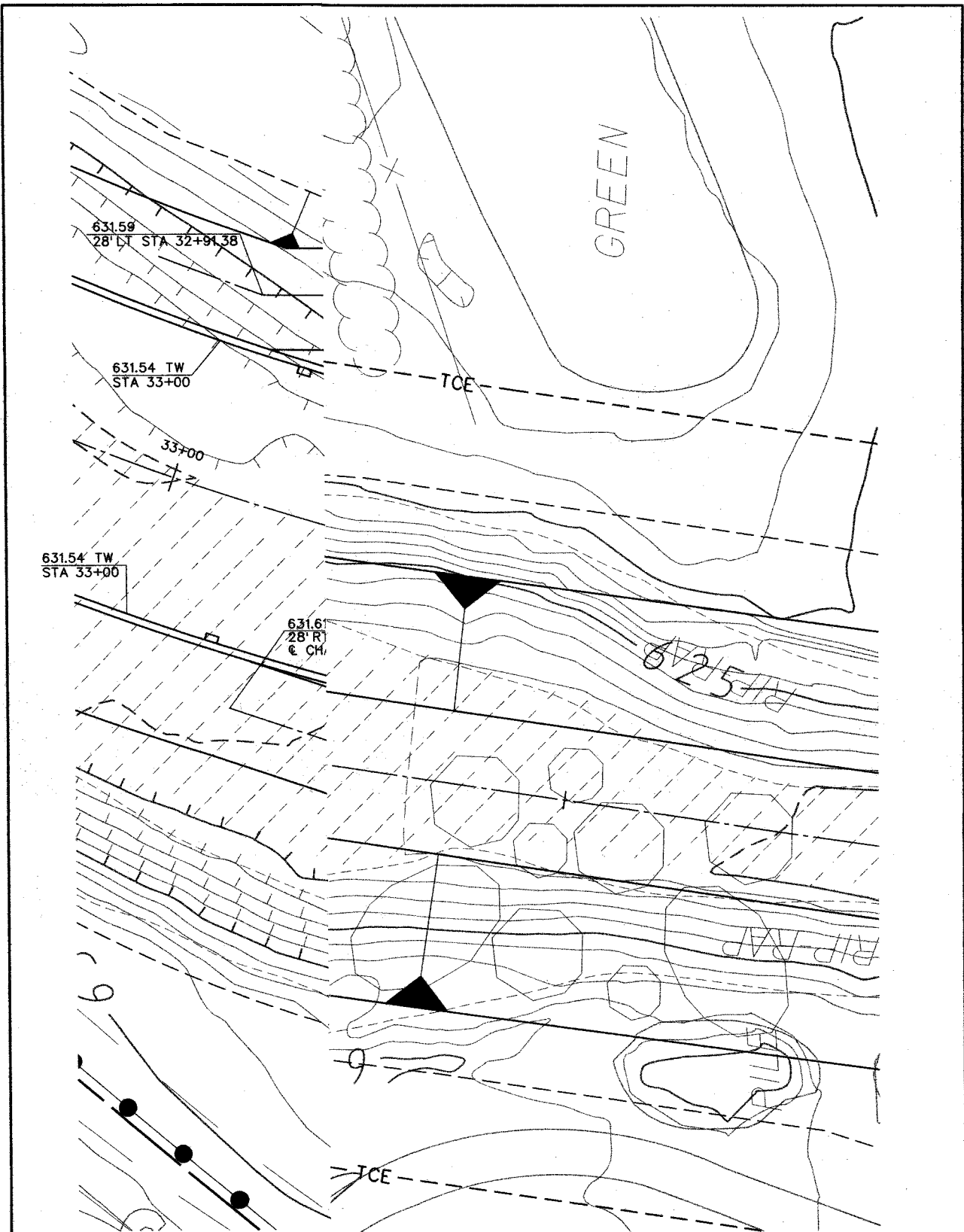


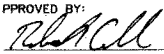
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 DATE: 2/26/2011

DAY CREEK CHANNEL
STAGE 6
 PHASE 2
 ACCESS RAMP DETAILS
 STA 1+10 TO STA 1+50

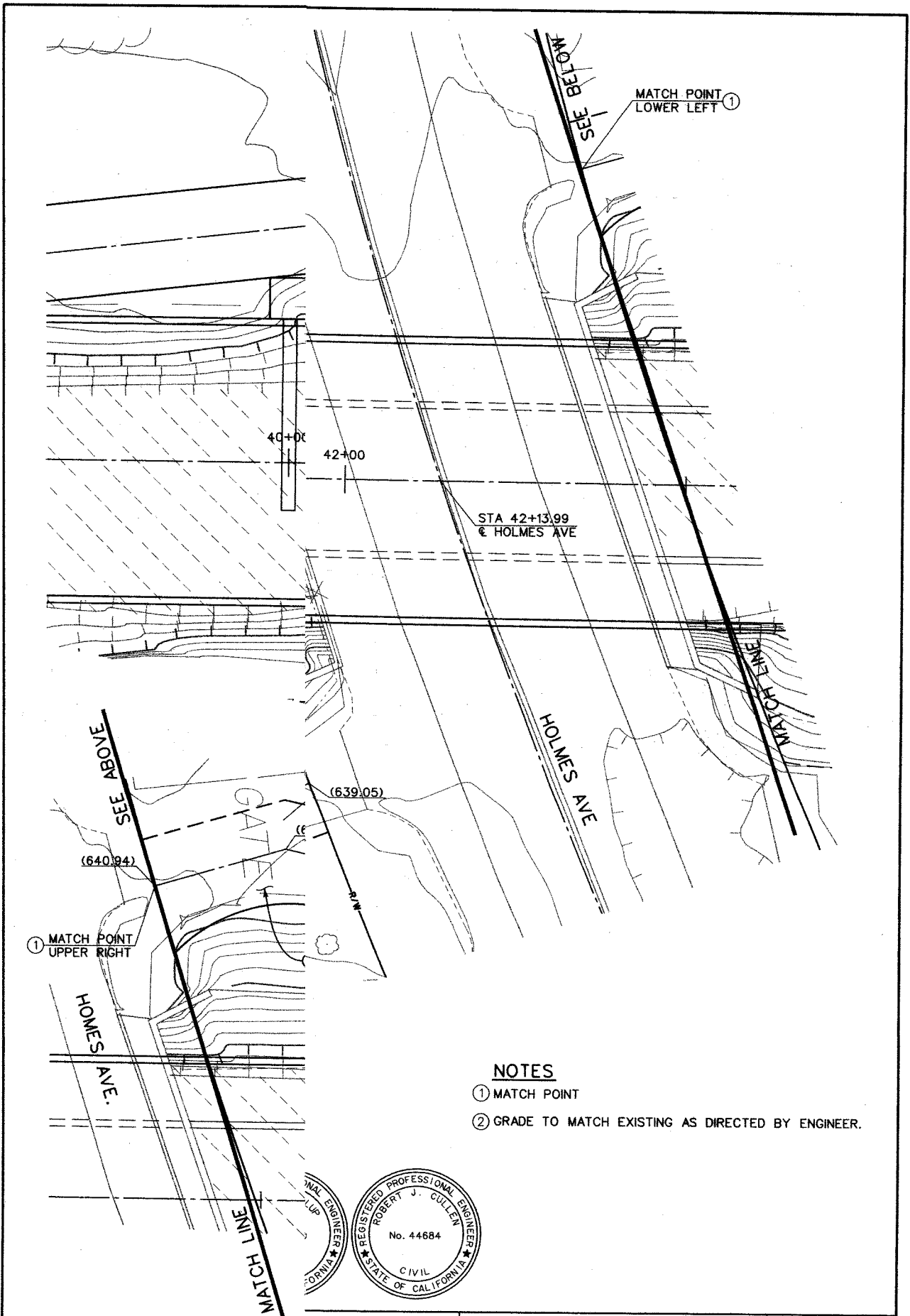
PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	20 OF 38





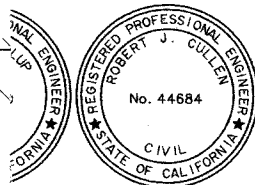
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		DRAWING NO. 1-647
		SHEET NO. 21 OF 38





NOTES

- ① MATCH POINT
- ② GRADE TO MATCH EXISTING AS DIRECTED BY ENGINEER.



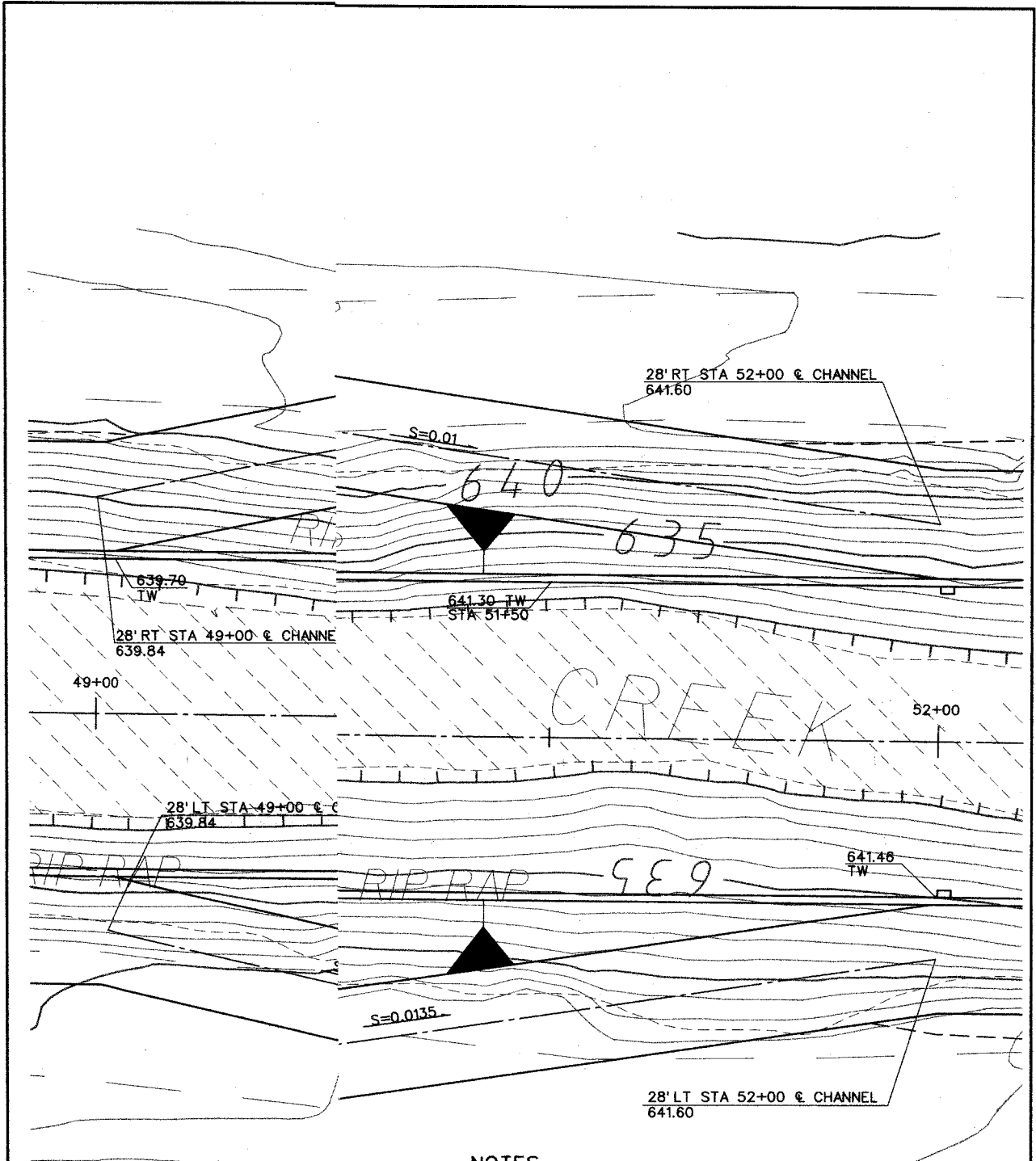
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 DATE: 28-Nov-2011

DAY CREEK CHANNEL
STAGE 6
PHASE 2

MAINTENANCE RAMP DETAILS

PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	22 OF 38





NOTES

- ① GRADE TO MATCH EXISTING AS DIRECTED BY ENGINEER.

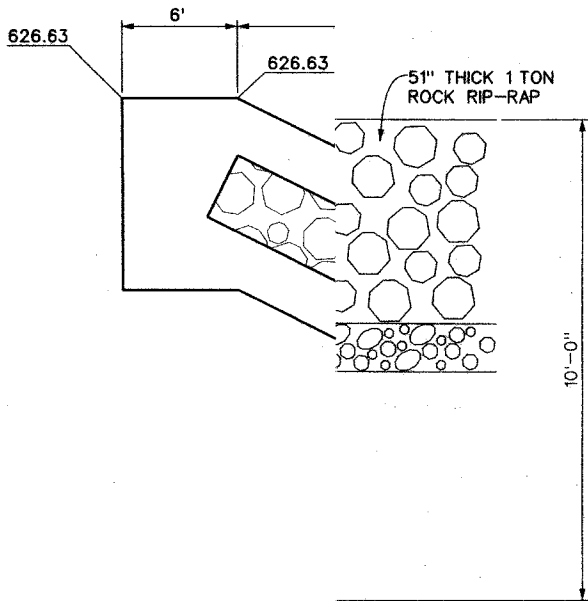


APPROVED BY:
[Signature]
 DATE: 28 Nov 2011

DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 MAINTENANCE RAMP DETAILS

PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
 23 OF 38





ON A

NOTES

- ① CONSTRUCT 10' CUTOFF WALL.

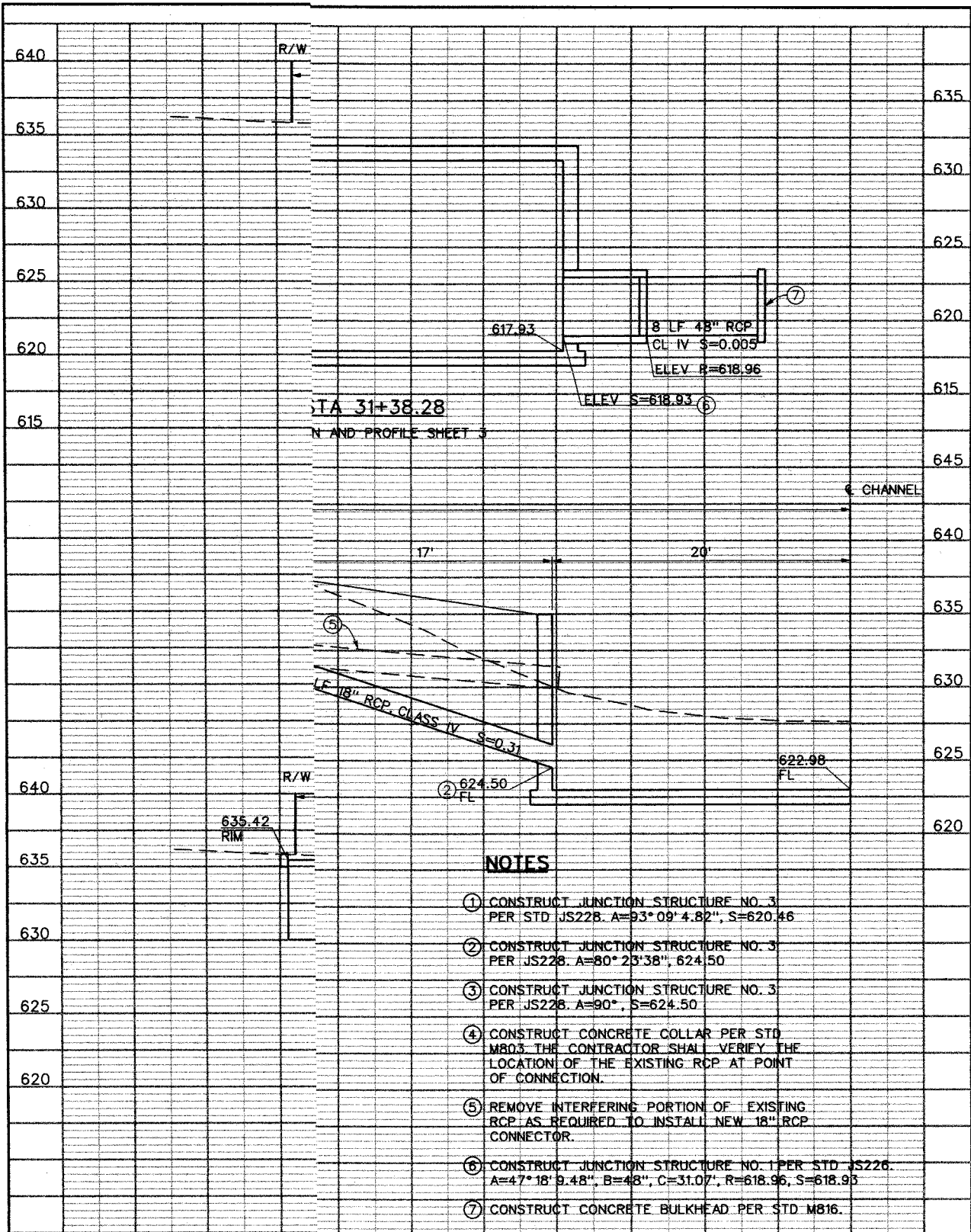


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 APPROVED BY:
[Signature]
 DATE: 28-Nov-2011

DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 CUTOFF WALL DETAILS

PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	24 OF 38





NOTES

- ① CONSTRUCT JUNCTION STRUCTURE NO. 3 PER STD JS22B. A=93° 09' 4.82", S=620.46
- ② CONSTRUCT JUNCTION STRUCTURE NO. 3 PER JS22B. A=80° 23' 38", S=624.50
- ③ CONSTRUCT JUNCTION STRUCTURE NO. 3 PER JS22B. A=90°, S=624.50
- ④ CONSTRUCT CONCRETE COLLAR PER STD M803. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING RCP AT POINT OF CONNECTION.
- ⑤ REMOVE INTERFERING PORTION OF EXISTING RCP AS REQUIRED TO INSTALL NEW 18" RCP CONNECTOR.
- ⑥ CONSTRUCT JUNCTION STRUCTURE NO. 1 PER STD JS226. A=47° 18' 9.48", B=48", C=31.07', R=618.96, S=618.93
- ⑦ CONSTRUCT CONCRETE BULKHEAD PER STD M816.

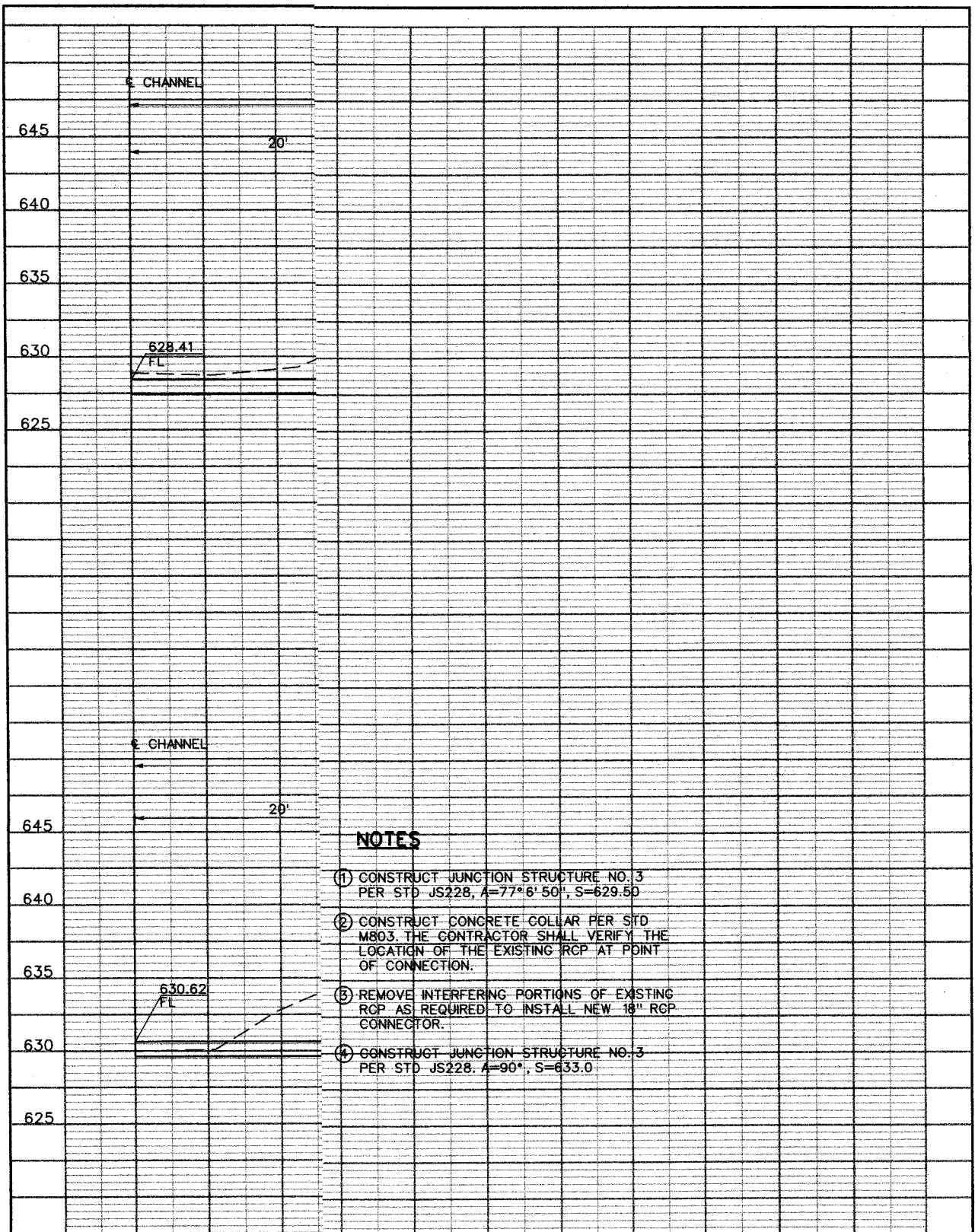


ROL
 APPROVED BY: *[Signature]*
 DATE: 28-Nov-2014

DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 CONNECTOR PIPE PROFILES

PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
 25 OF 38






NOTES

- ① CONSTRUCT JUNCTION STRUCTURE NO. 3 PER STD JS228, A=77°6'50", S=629.50
- ② CONSTRUCT CONCRETE COLLAR PER STD M803. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING RCP AT POINT OF CONNECTION.
- ③ REMOVE INTERFERING PORTIONS OF EXISTING RCP AS REQUIRED TO INSTALL NEW 18" RCP CONNECTOR.
- ④ CONSTRUCT JUNCTION STRUCTURE NO. 3 PER STD JS228, A=90°, S=633.0



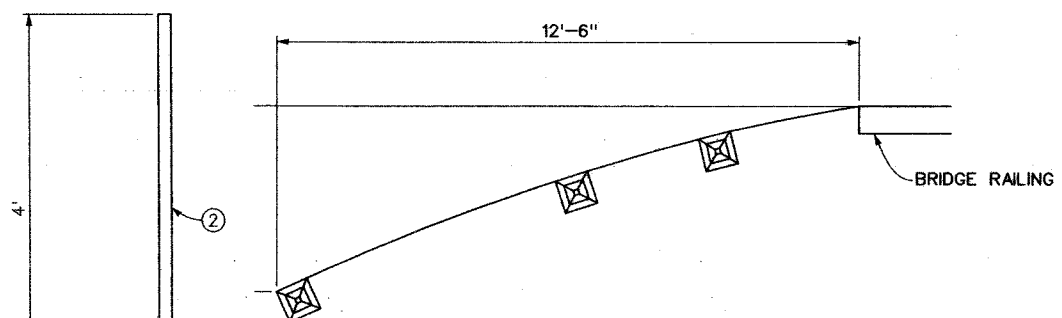
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APPROVED BY:

 DATE: 26 Nov 2011

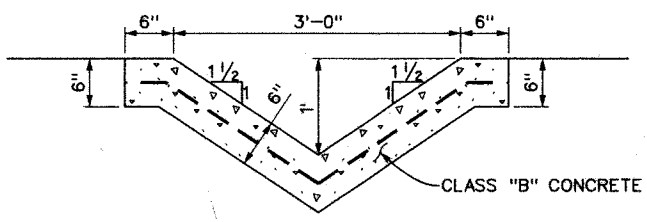
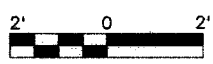
DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 CONNECTOR PIPE PROFILES

PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
 26 OF 38





GUARD RAIL DETAIL ④



DETAIL B

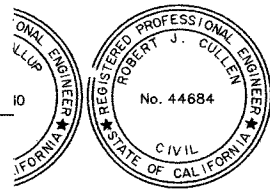
NOTES

- ① TRANSVERSE CONSTRUCTION JOINTS ARE REQUIRED IN WALLS AND WALL FOOTING AT A MAX SPACING OF 50' AND MIN OF 10', AND ALSO REQUIRED AT ALL GRADE BREAKS, BC'S AND EC'S. TRANSVERSE JOINTS IN WALL FOOTING SHALL BE KEYED. TRANSVERSE JOINTS IN WALLS MAY BE EITHER SMOOTH WITH DOWELS OR KEYED. A COMPLETE CURTAIN OF TRANSVERSE STEEL SHALL BE PLACED 3 INCHES FROM EACH FACE OF THE JOINTS AND LONGITUDINAL STEEL SHALL NOT BE CONTINUOUS THROUGH THE JOINTS. WEAKENED PLANE JOINTS ARE REQUIRED BETWEEN CONSTRUCTION JOINTS AT A MAX SPACING OF 25'.
- ② INSTALL 2 GRAB BARS (1 1/2 " DIA STD PIPE X 6'-0" LONG) WITH CAP ON TOP AT EACH DROP STEP LOCATION.
- ③ INSTALL DROP STEP PER STD MH259. STEPS SHALL BE 3/4" ROUND GALVANIZED STEEL AND ANCHORED NOT LESS THAN 4 INCHES IN WALLS. STEPS SHALL BE SPACED 16" OC THE LOWEST STEP SHALL BE NO MORE THAN 2 FEET ABOVE THE INVERT.
- ④ INSTALL 12'-6" METAL BEAM GUARD RAIL PER CALTRANS STD A77A1.
- ⑤ STAFF GAUGE SHALL BE STEVENS, OR EQUIVALENT, PORCELAIN ENAMEL OVER IRON, STYLE "C" 2.5"X3.3' LONG. EACH 3.3' SECTION OF STAFF GAUGE IS ATTACHED WITH THREE (3 EA) NO. 8 STAINLESS STEEL SCREWS.

RECT CHANN

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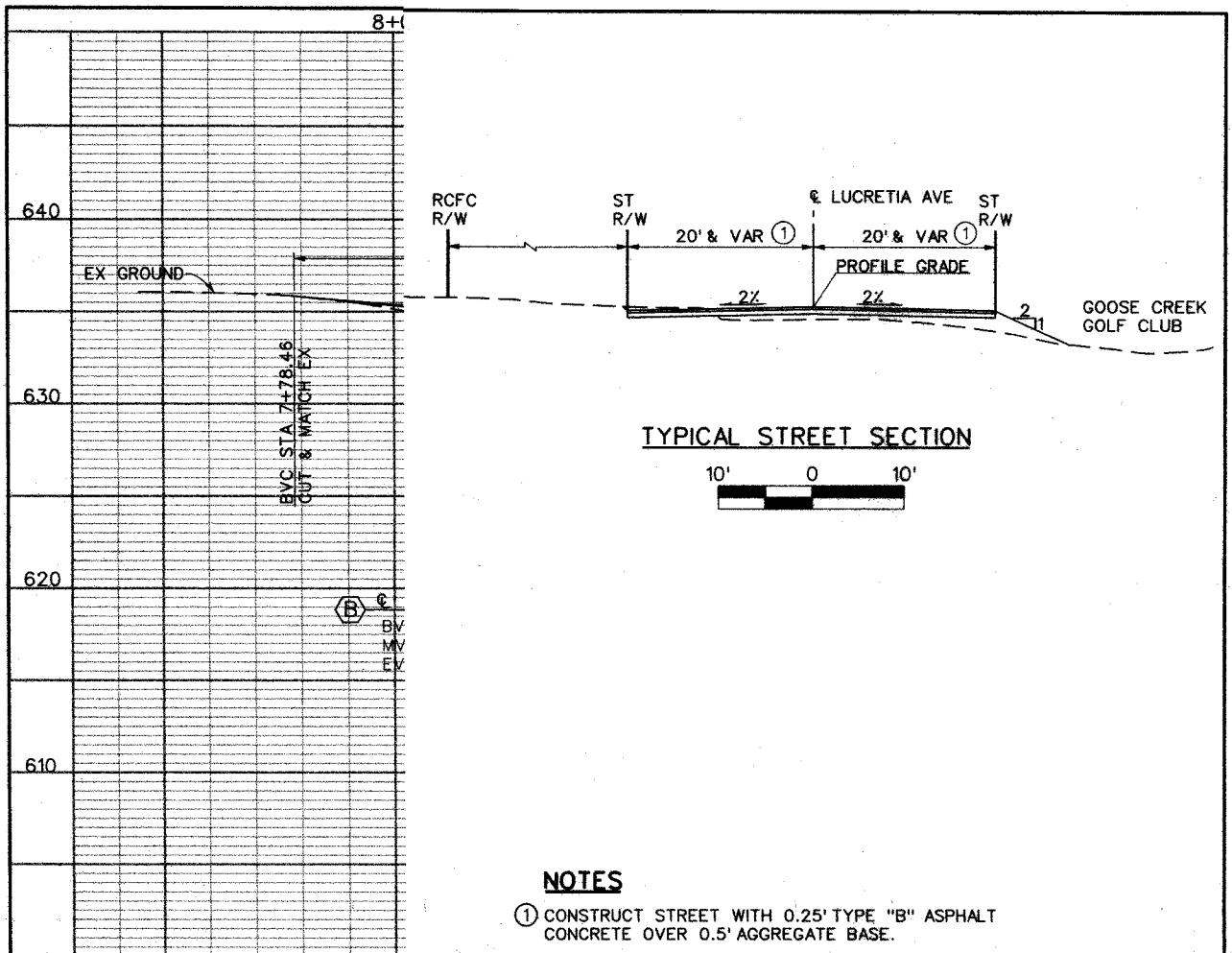
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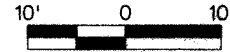
DAY CREEK CHANNEL
STAGE 6
 PHASE 2
 JOINT & MISCELLANEOUS DETAILS

PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	27 OF 38



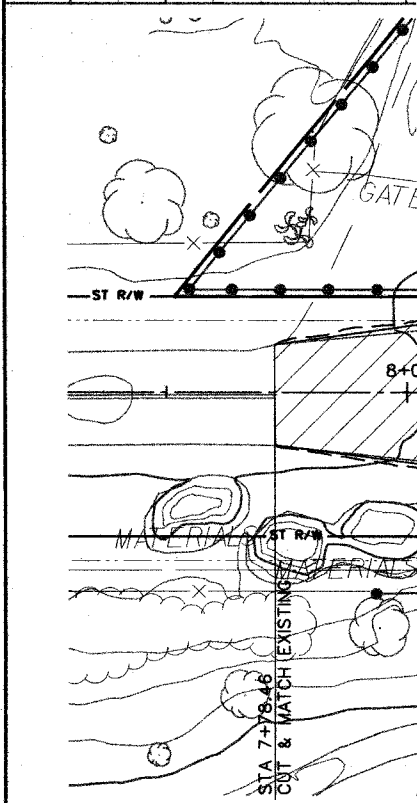


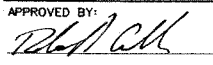
TYPICAL STREET SECTION



NOTES

- ① CONSTRUCT STREET WITH 0.25' TYPE "B" ASPHALT CONCRETE OVER 0.5' AGGREGATE BASE.
- ② CONSTRUCT TRIPLE 14' x 13' RCB PER PLAN, PROFILE AND CALTRANS STD DB1 AND DB2. (FLAT INVERT)
- ③ THE 3" SEWER LINE TO BE RELOCATED BY OTHERS AND ABANDONED IN-PLACE.
- ④ THE 8" WATER LINE TO BE RELOCATED BY OTHERS AND ABANDONED IN-PLACE.
- ⑤ RELOCATE 8" WATER LINE PER DETAILS SHEET 34.
- ⑥ EXISTING 2" GAS LINE TO BE PROTECTED IN-PLACE.
- ⑦ GRADE DRIVEWAY WITHIN STREET R/W TO MATCH NEW ROADWAY SURFACE.
- ⑧ EXISTING POWER POLE #4526837E TO BE RELOCATED BY OTHERS.
- ⑨ EXISTING TELEPHONE POLE #4178054E TO BE RELOCATED BY OTHERS.
- ⑩ INSTALL 12.5' METAL BEAM GUARD RAILING PER DETAILS SHEET 27.
- ⑪ REMOVE EXISTING CONCRETE AND AC PAVEMENT.
- ⑫ REMOVE AND REPLACE 6' CHAIN LINK FENCE PER STD MB01 PER LIMITS SHOWN ON PLANS.
- ⑬ REMOVE AND DISPOSE OF EXISTING 4-72" CMP CULVERTS.



APPROVED BY:

 DATE: 28-Nov-2011

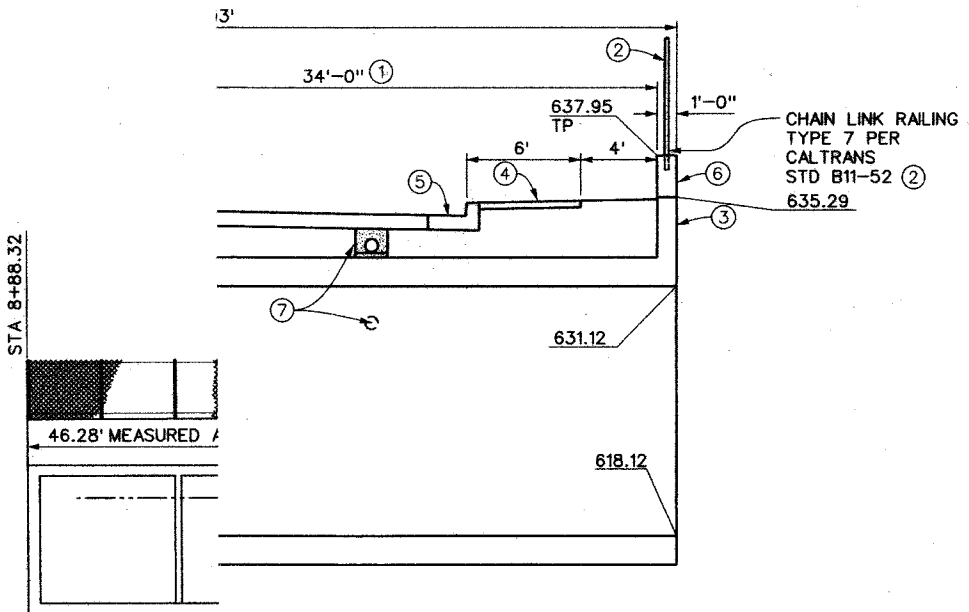
DAY CREEK CHANNEL
STAGE 6
 PHASE 2
 LUCRETIA AVE IMPROVEMENT

PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
 28 OF 38



STA 8+88.32
634.82 EL

PROF



ELEVATION AT RCB

5'

STA 8+91.9'
BEGIN CURB

NOTES

CONSTRUCT STREET WITH 0.25' TYPE "B" ASPHALT
CONCRETE OVER 0.5' AGGREGATE BASE.

CONSTRUCT CHAIN LINK RAILING TYPE 7 PER
CALTRANS STD B11-52.

STA 31+65.91 @ DAY CREEK
STA 9+11.46 @ LUCRETIA AVE
CONSTRUCT PARAPET WALL PER DETAIL SHEET 31.

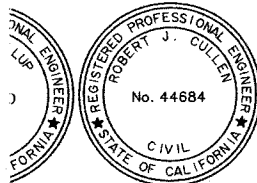
CONSTRUCT SIDEWALK ADJACENT TO CURB PER
COUNTY OF RIVERSIDE TRANSPORTATION STD NO. 401.

CONSTRUCT TYPE A-6 CURB PER COUNTY OF RIVERSIDE
TRANSPORTATION STD NO. 200.

CONSTRUCT CONCRETE BARRIER TYPE 732B PER CALTRANS
STD B11-55.

LOCATE 8" WATERLINE PER DETAILS ON SHEET 34.

STA 8+81

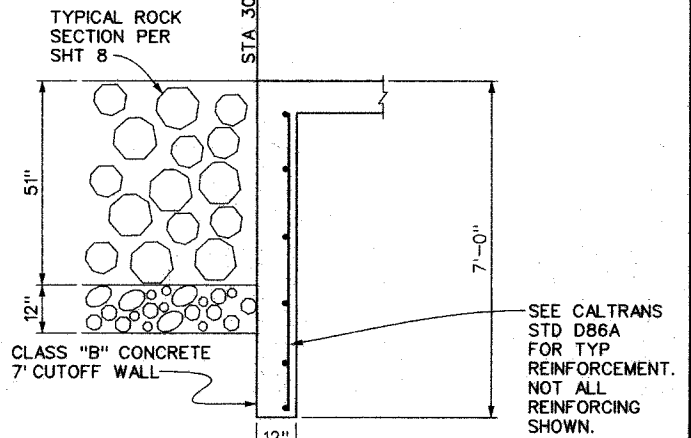
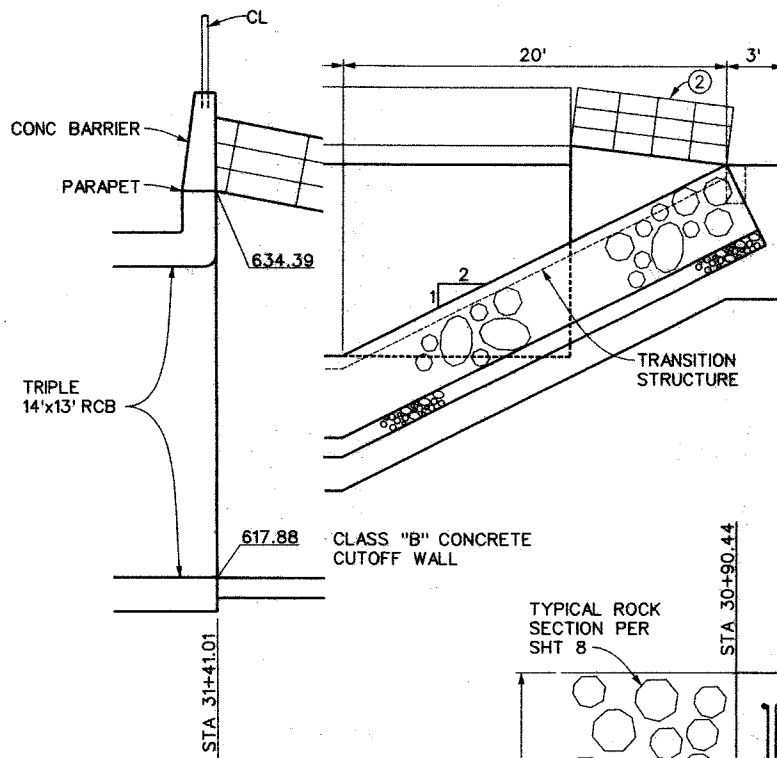


APPROVED BY:
[Signature]
DATE: 28-Nov-2011

DAY CREEK CHANNEL
STAGE 6
PHASE 2
LUCRETIA AVE DETAILS

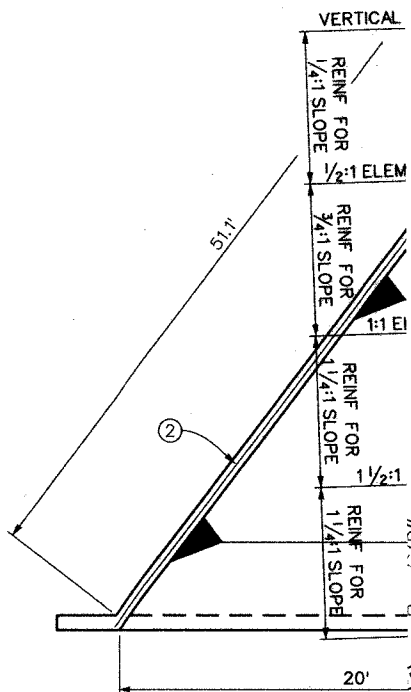
PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	29 OF 38





SECTION ① B

NTS



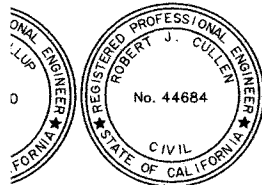
NOTES

- ① CONSTRUCT BOX CULVERT WARPED WINGWALL AND 7'-0" CUTOFF WALL PER MODIFIED CALTRANS STD D86A.
- ② INSTALL 3' CABLE RAILING PER CALTRANS STD B11-47.



APPROVED BY: DATE: 2/2 Nov 2011	DAY CREEK CHANNEL STAGE 6 PHASE 2 TRANSITION STRUCTURE DETAILS	PROJECT NO. 1-0-0250
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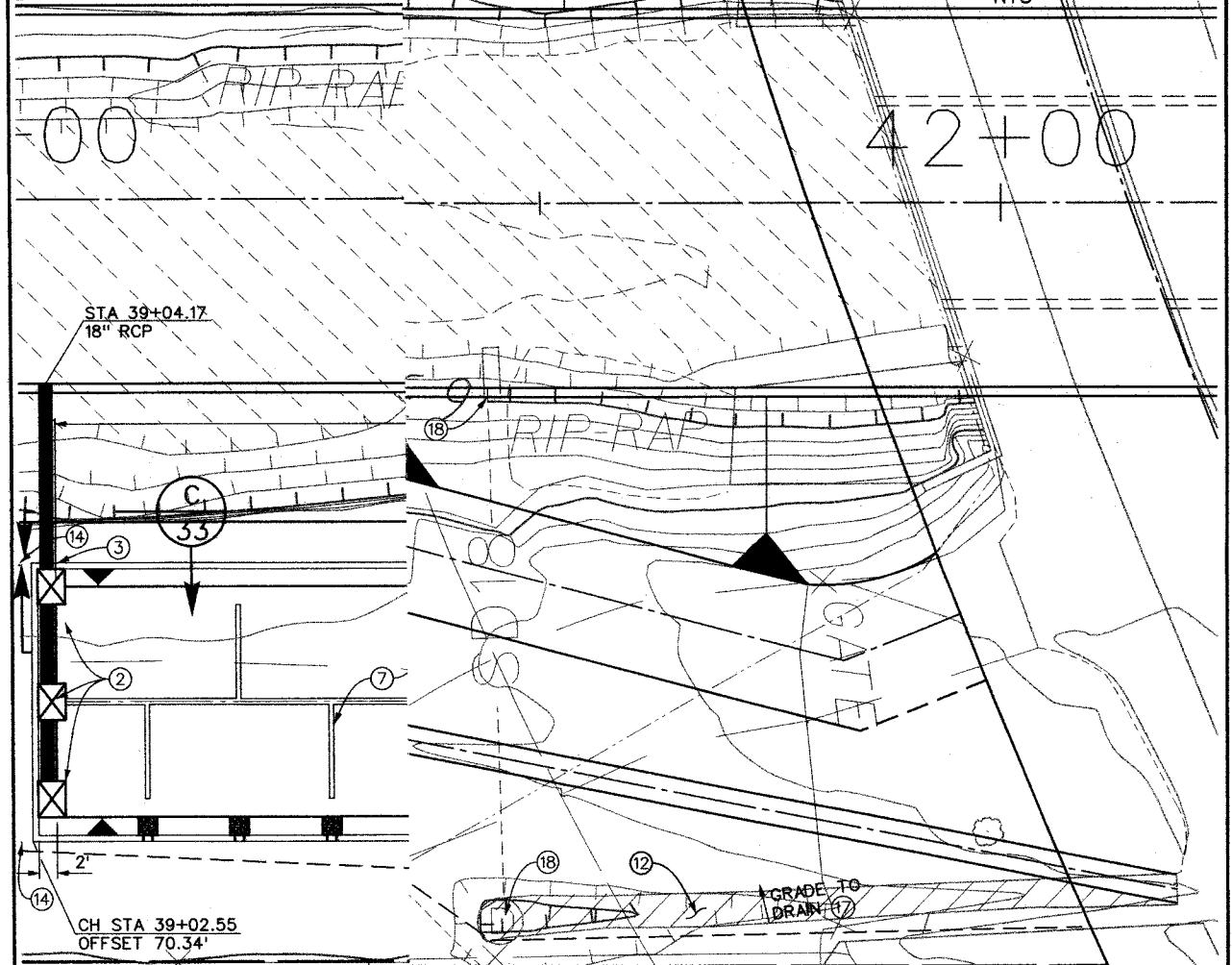
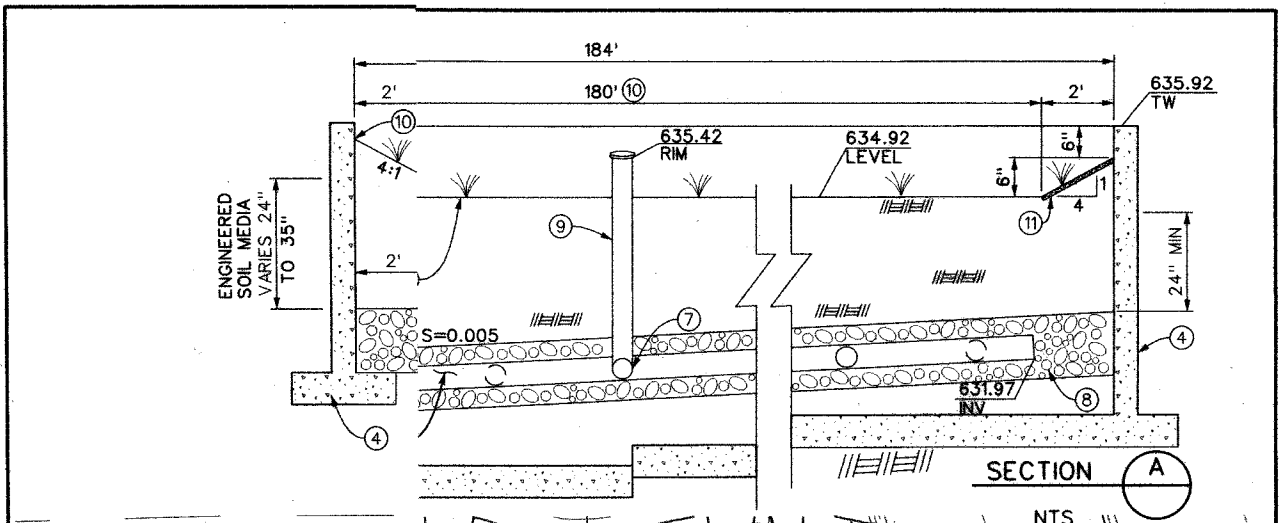


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DATE: *28-Nov-2011*

DAY CREEK CHANNEL
STAGE 6
PHASE 2
PARAPET WALL DETAILS

PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	31 OF 38





NOTES

- ① GRADE BIORETENTION FACILITY - RAIN.
- ② CONSTRUCT DRAINAGE INLET PLUG EX. RISER INLET. 5.0' AND 6.0' RESPECTIVELY. REFER TO PORTION OF 18" SD.
- ③ CONSTRUCT 6" TYPE D CURB.
- ④ CONSTRUCT RETAINING WALL PROVIDE 3' BREAK IN WALL.
- ⑤ INSTALL 24" TO 35" ENGINEERED SOIL MEDIA.
- ⑥ INSTALL 8" PVC SUBDRAIN.
- ⑦ INSTALL 6" PERFORATED PVC CLEANOUT CAP AT OUTSIDE END.
- ⑧ INSTALL 3" LAYER OF PEA GRADE.
- ⑨ INSTALL 6" PVC CLEANOUT PLUG EX. RISER INLET.
- ⑩ HYDROSEED AND MULCH BIORETENTION FACILITY.

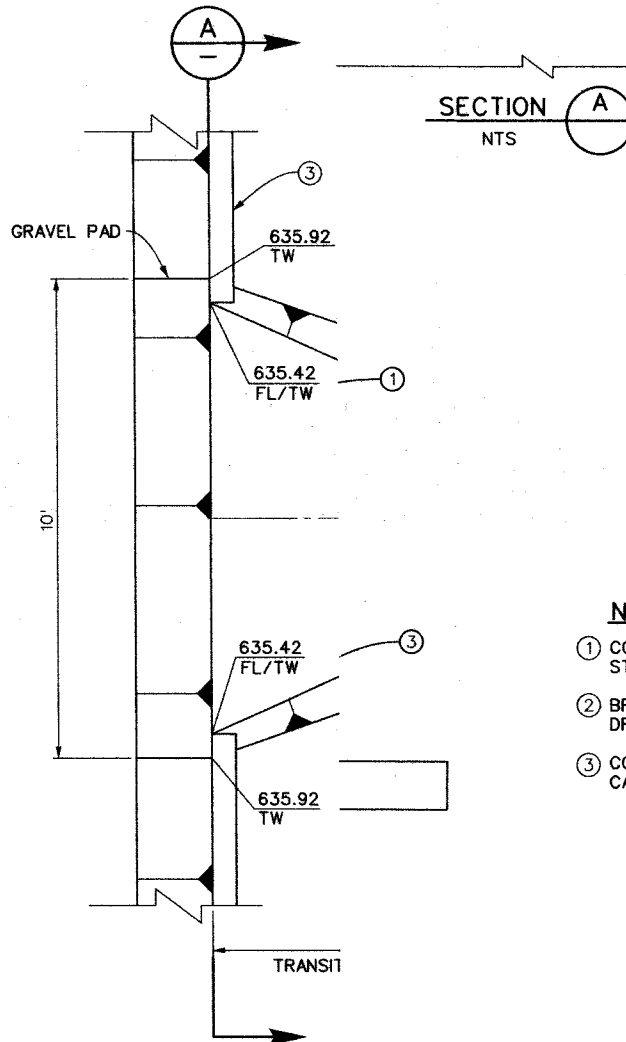
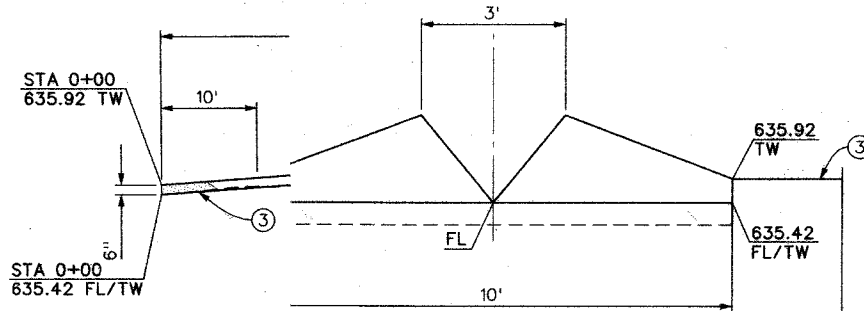


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 DATE: 20-Nov-201

DAY CREEK CHANNEL
STAGE 6
PHASE 2
BIORETENTION FACILITY

PROJECT NO. 1-0-0250
 DRAWING NO. 1-647
 SHEET NO. 32 OF 38





NOTES

- ① CONSTRUCT DRAINAGE INLET PER CALTRANS STD D73 TYPE G1.
- ② BRIDGE GAP TO MATCH TOP OF WALL AT DROP INLET WITH CLASS "B" CONCRETE.
- ③ CONSTRUCT RETAINING WALL TYPE 1A PER CALTRANS STD B3-3.

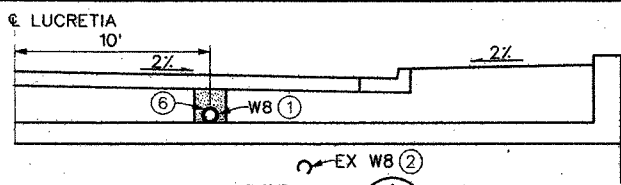
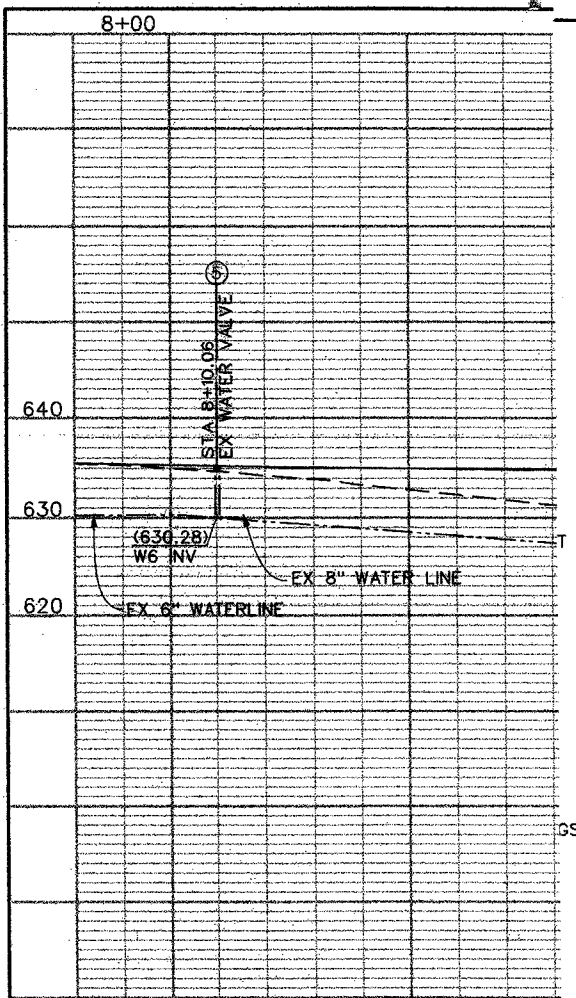


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 DATE: 28 Nov 2014

DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 V-DITCH DETAILS

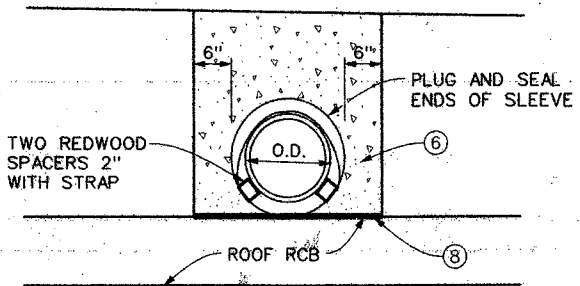
PROJECT NO. 1-0-0250
 DRAWING NO. 1-647
 SHEET NO. 33 OF 38





DETAIL A
NTS

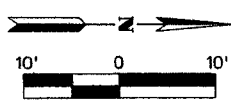
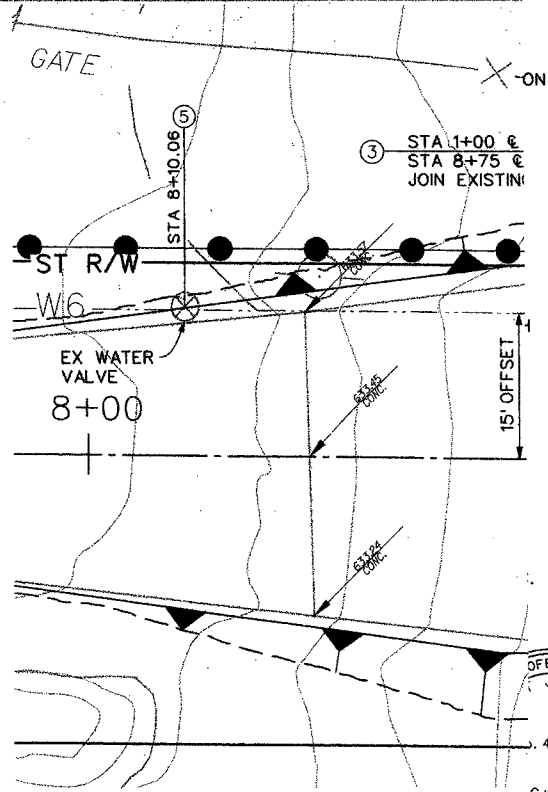
0.25' TYPE "B" ASPHALT CONCRETE OVER 0.5' AGGREGATE BASE



DETAIL B
NTS

NOTES

- ① INSTALL APPROX 87 LF 8" DIA CML/CMC W.S.P. (STD WT) FULLY WELDED. ALL JOINTS DOUBLE PASS MIN.
- ② CUT AND REMOVE INTERFERING PORTION OF EXISTING 8" WATER LINE. SEE SPECIFICATIONS FOR MANDATORY COORDINATION WITH S.A.R.W.C. PRIOR TO CUTTING OF LINE.
- ③ JOIN EXISTING 8" WATER LINE. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF THE EXISTING 8" WATER LINE. SEE SPECIFICATIONS FOR MANDATORY COORDINATION WITH S.A.R.W.C. PRIOR TO CUTTING OF LINE.
- 4 REGARDING SHUTTING OFF THE 6"/8" WATER LINE THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH SANTA ANA RIVER WATER COMPANY AT (951) 685-6503.
- ⑤ EXTEND VALVE WELL TO MATCH GRADE.
- ⑥ ENCASE 12" DIA STEEL SLEEVE (1/4" THICK MIN.) WITH TWO-SACK SLURRY CEMENT BACKFILL PER DETAIL B.
- ⑦ POT HOLE GAS LINE TO DETERMINE LIMITS AND PROTECT IN-PLACE.
- ⑧ INSTALL CONCRETE BOND BREAKER.
- ⑨ INSTALL 8" DIA GATE VALVE PER S.A.R.W.C. DWG B-1.
- ⑩ INSTALL SPLIT-BUTT STRAP CONNECT TO EXISTING 8" DIA PER S.A.R.W.C. STD DWG C-3 AND C-4.
- ⑪ INSTALL 8" DIA AWWA TEE W/BLIND FLANGE.
- ⑫ INSTALL SHEAR RING W/CONCRETE BLOCK PER S.A.R.W.C. STD DWG Z-1.
- ⑬ INSTALL THRUST BLOCK PER S.A.R.W.C. STD DWG Z-1.
- ⑭ INSTALL 8" DIA AWWA 90° BEND.
- ⑮ REMOVE AND SALVAGE EX WATER VALVE TO S.A.R.W.C.
- ⑯ INSTALL 1" DIA AIR VALVE PER S.A.R.W.C. STD DWG E-1 AND LIMITS HEREON.
- ⑰ INSTALL 8" DIA AWWA 45° BENDS.
- ⑱ INSTALL 12" DIA CML/CMC W.S.P. (STD WT) SLEEVE AROUND 8" DIA CML/CMC W.S.P. LINED WITH 2" REDWOOD SPACER PER DETAIL B.



★ PRELIMINARY ★
SUBJECT TO REVISION

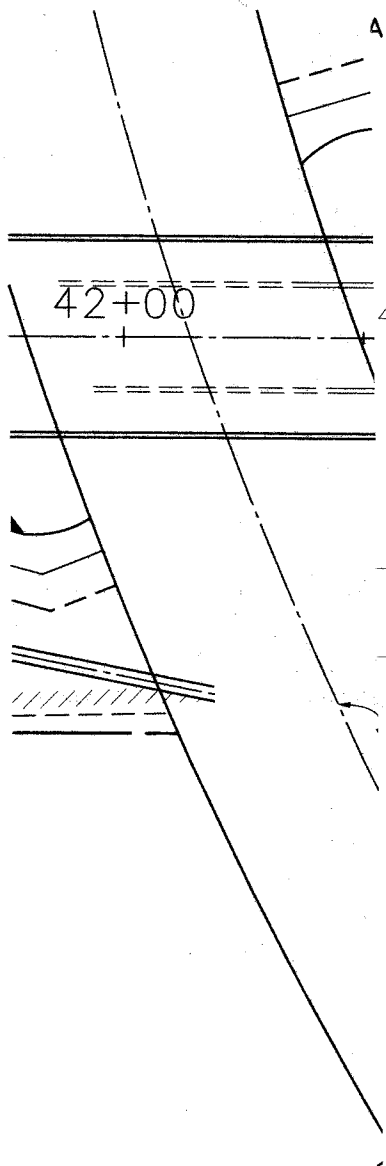
DAY CREEK CHANNEL
STAGE 6
PHASE 2
8" WATER LINE RELOCATION

PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	34 OF 38

SET FILES.DGN 12/12/2011 8:57:36 AM




LOCATION DESCRIPTION	
CHANNEL STA 44+04 (WEST BANK)	OF WALL
RAMP STA 0+30	(SOUTH WALL
RAMP STA 0+55	(BOTH WALLS
RAMP STA 0+80	(BOTH WALLS



NOTES

- ① CONSTRUCT ANCHOR DEVICE PER LIMITS SHOWN ON PLAN, PROFILE DETAILS HEREON.
- ② THE REFLECTORIZED RAISED PAVEMENT MARKERS (STIMSONITE HYDRANT SPOTTERS) COMMONLY CALLED "BLUE DOTS", SHALL BE LOCATED AT THE EDGE OF THE CHANNEL SERVICE ROAD, CENTERED 6 INCHES FROM THE TOP OF THE CHANNEL SLOPE SO AS TO BE EASILY VISIBLE FROM THE SERVICE ROAD AND BRIDGE. THE "BLUE DOT" SHALL BE 2-WAY BLUE AND SECURED TO THE PAVEMENT WITH A TWO PART EPOXY ADHESIVE THAT MEETS THE REQUIREMENTS OF 214-6.2.2 OF THE PUBLIC WORKS STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION "GREEN BOOK" (LATEST EDITION).
- ③ 36-INCH DIAMETER SOLID YELLOW CIRCLE SHALL BE PAINTED AT EACH ANCHOR DEVICE FOR EXISTING CONCRETE CHANNEL LINING. THE ANCHORING DEVICE SHALL BE LOCATED AT THE CENTER OF THE CIRCLE. THE PAINT SHALL BE IN ACCORDANCE WITH SECTION 84 (SUBSECTIONS 84-3.06 AND 84-3.07 EXCLUDED). TRAFFIC STRIPES AND PAVEMENT MARKING, OF STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (LATEST EDITION).
- ④ INSTALL DROP STEPS PER DETAIL ON SHEET 27.
5. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE.
6. ALL CONCRETE SHALL BE READY MIXED, REGULAR WEIGHT HARD ROCK CONCRETE CONFORMING TO ASTM C-94 AND MADE WITH TYPE 1 OR 2 PORTLAND CEMENT CONFORMING TO ASTM C-150.
7. AGGREGATES SHALL BE NATURAL SAND AND ROCK CONFORMING TO ASTM C-33.
8. ALL REINFORCED CONCRETE SHALL ATTAIN THE ULTIMATE COMPRESSIVE STRENGTH $f'_c=3,250$ PSI MINIMUM AT 28 DAYS U.N.O.
9. CONCRETE SHALL CURE BY KEEPING CONTINUOUSLY WET FOR 7 DAYS OR BY APPROVED CURING COMPOUND.
10. ALL WELDING SHALL COMPLY WITH AMERICAN WELDING SOCIETY (A.W.S.) SPECIFICATIONS AND SHALL BE DONE BY WELDERS CERTIFIED FOR THE TYPE OF WELDING TO BE PERFORMED.
11. ALL STRUCTURAL ALUMINUM WELDING SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY SPECIFICATIONS FOR WELDED ALUMINUM STRUCTURES.
12. ALL STRUCTURAL STEEL SHALL COMPLY WITH ASTM A-36.
13. GALVANIZE ALL STEEL PARTS AFTER FABRICATION.
14. ALL STRUCTURAL ALUMINUM TUBE AND PLATE SHALL CONFORM TO ALUMINUM ALLOY AND TEMPER OF THE LATEST EDITION OF THE AMERICAN ALUMINUM ASSOCIATION.



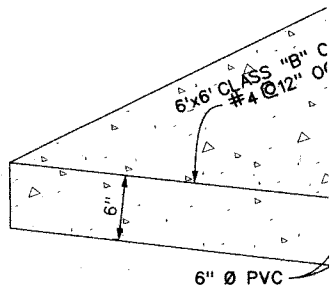
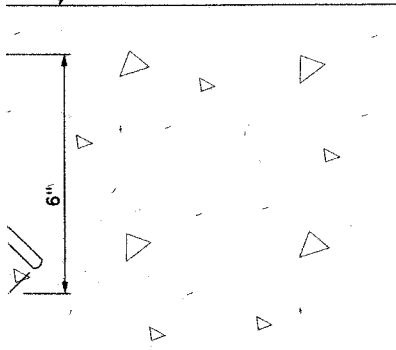
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DAY CREEK CHANNEL
STAGE 6
 PHASE 2
 SWIFT WATER RESCUE
 ANCHORING DEVICES

PROJECT NO.
 1-0-0250
 DRAWING NO.
 1-647
 SHEET NO.
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CONC CH INVERT

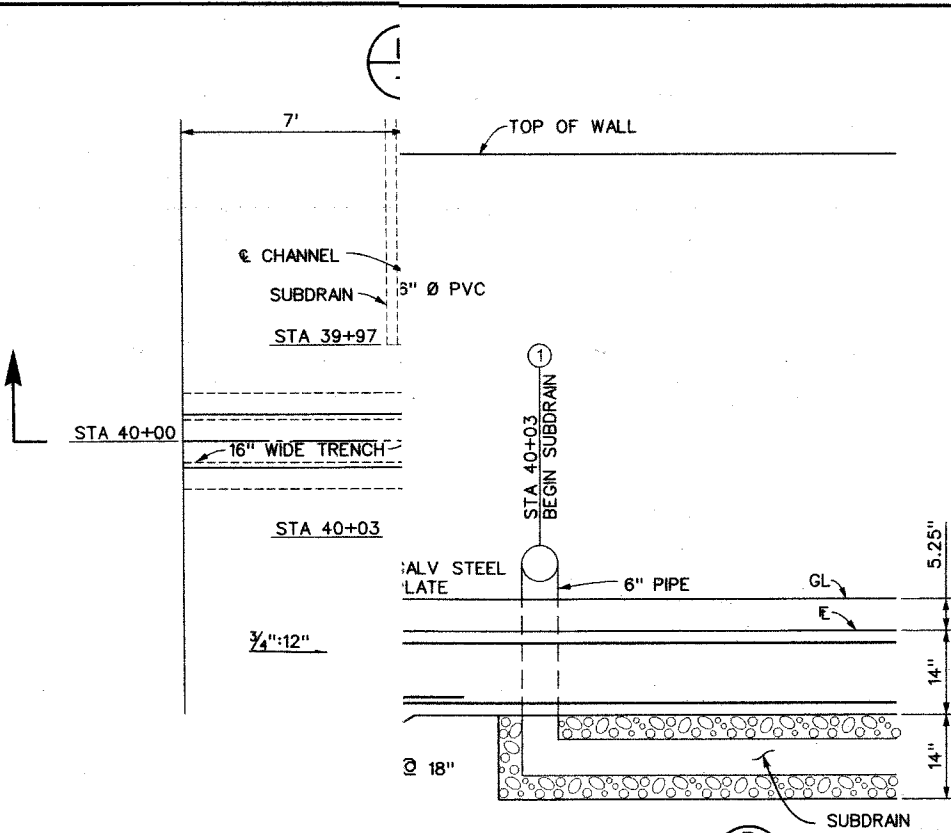


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DATE: 28-Nov-2011

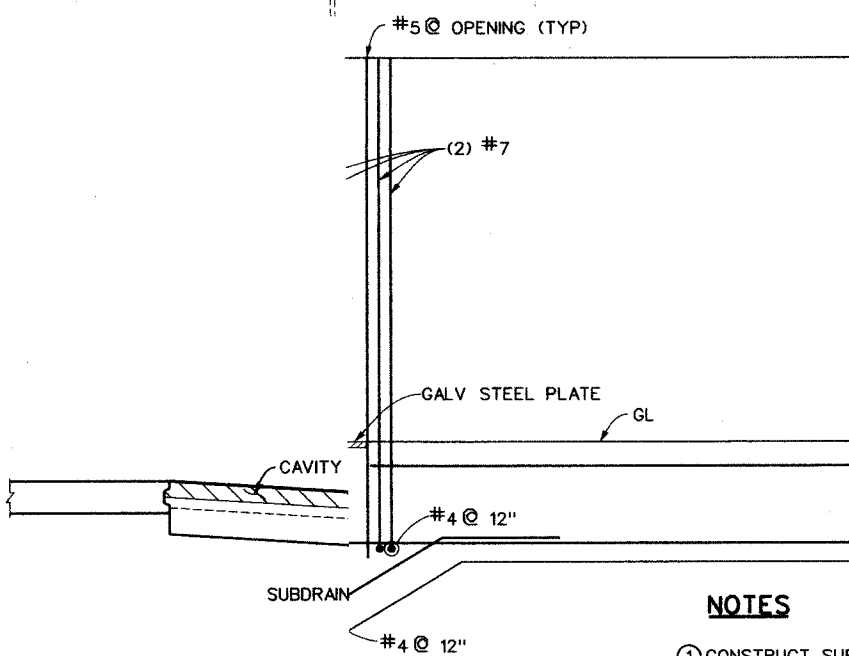
DAY CREEK CHANNEL
STAGE 6
PHASE 2
SAMPLING STATION DETAILS

PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	36 OF 38



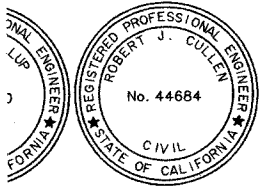


SECTION B



NOTES

① CONSTRUCT SUBDRAIN PER STD CH332.

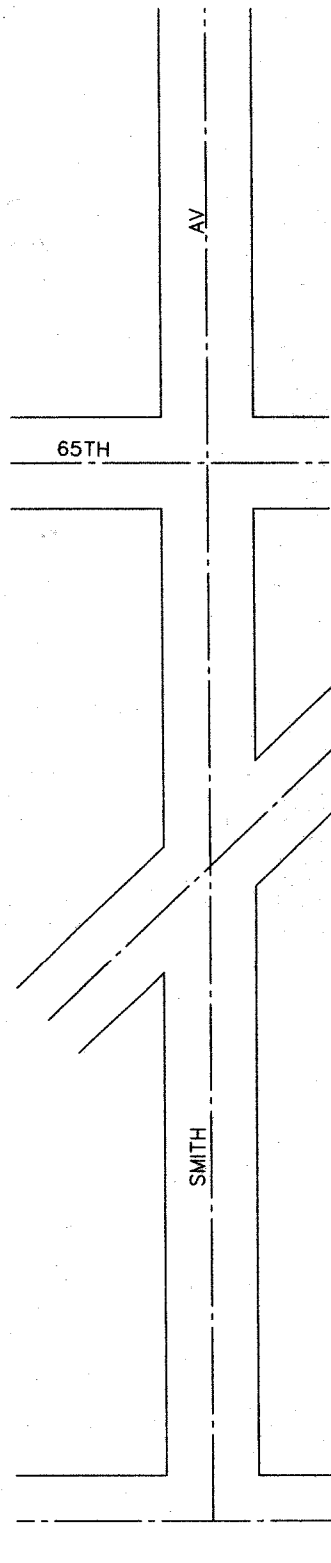


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DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 SAMPLING STATION DETAILS

PROJECT NO.	1-0-0250
DRAWING NO.	1-647
SHEET NO.	37 OF 38





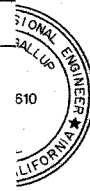
LEGEND

- CONSTRUCTION SIGNS
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- CONSTRUCTION AREA
- TYPE K RAILING

- R11-2 ROAD CLOSED
- R11-4 ROAD CLOSED TO THRU TRAFFIC
- M4-10(RT) DETOUR
- M4-10(LT) DETOUR
- W20-1 ROAD WORK AHEAD
- W20-3 ROAD CLOSED AHEAD
- R3-2 NO LEFT TURN

NOTES

1. THESE ARE THE MINIMUM TRAFFIC CONTROL REQUIREMENTS. ADDITIONAL TRAFFIC CONTROL MAY BE REQUIRED TO FACILITATE PUBLIC SAFETY AND TRAFFIC FLOW IF DEEMED NECESSARY BY THE ENGINEER OR RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT.
2. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE FHWA'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2010 AND THE MUTCD 2010 CALIFORNIA SUPPLEMENT, LATEST ADDITION AND WITH ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL LAWS.
3. FLASHING YELLOW BEACONS, TYPE B, SHALL ILLUMINATE ALL W20-1 SIGNS AND TYPE III BARRICADES USED AT THE WORK AREA DURING HOURS OF DARKNESS.
4. PRIVATE PROPERTY AND EMERGENCY ACCESS SHALL BE MAINTAINED AT ALL TIMES.



APPROVED BY:

 DATE: 29-Nov-2011

DAY CREEK CHANNEL
 STAGE 6
 PHASE 2
 TRAFFIC CONTROL PLAN

PROJECT NO. 1-0-0250
DRAWING NO. 1-647
SHEET NO. 38 OF 38

