

Ed Raleigh

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SPECIAL PROVISIONS
FOR

SEWER RELOCATION - 47TH AVENUE TO
PECRIA AVENUE FOR THE ADCG

CONTRACT NO. FCD 95-44



SUPPLEMENTARY TO MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM STANDARD
SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION EDITION OF 1970 AND REVISIONS
AND SUPPLEMENTS THERETO.

A118.537

BENSON & GERDIN, INC.

CONSULTING ENGINEERS

3150 NORTH SEVENTH STREET

PHOENIX, ARIZONA 85014

PHONE (602) 264-0136

ROGER D. BENSON, P.E.
WILLIAM B. CREAGER, P.E.

HAROLD E. GERDIN, P.E.
RANDY L. HARREL, P.E.

May 28, 1986

Mr. Bob Payette
Maricopa County Flood Control District
3335 W. Durango
Phoenix, Arizona 85009

Attention: Mr. Bill Poppe

Reference: Sewer Relocations, 47th Avenue to Peoria Avenue for the ACDC
Sewer Realignment, MH A-6.1 to MH A-7.1

Gentlemen:

On Thursday, May 22nd, it became apparent in the field that the proposed sewer alignment from MH A-6.1 to MH A-7 of 21 feet left (south) of the survey baseline could not be maintained due to the proximity of an APS underground electric line. The sewer alignment had been set at a minimum possible offset of 4 feet from the plan location of the electric line to minimize any possible conflict with the future channel backslope, as had been directed by Ed Raleigh of the Maricopa County Flood Control District. Excavation and potholing in the field have shown the electric line to wander 1.5 feet toward the sewer. Temporary shutdown and/or temporary relocation of the electric line was discussed with APS and determined not to be a viable option, leaving no option but to realign the sewer.

The proposed realignment, as follows, has been discussed with and verbally approved by Ed Raleigh and Bill Poppe, Fred Moore of Tanner, and Jerry Arakaki of Phoenix Water and Wastewater Department:

<u>Item</u>	<u>New Location</u>	<u>Change</u>
MH A-6.1	Sta. 12+23, 21' left	no change
end of currently laid pipe	Sta. 12+48±, 21' left	no change
MH A-6.2	Sta. 13+11±, 23.5' left	manhole added back into contract
MH A-7	Sta. 17+50±, 23.5' left	shifted 2.5' left
MH A-7.1	Sta. 19+60, 6' Right	no change

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Maricopa County Flood Control District
Attn: Mr. Bob Payette
May 28, 1986
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This realignment remains just barely outside of the Corps proposed 3/4:1 channel backslope.

From the end of the currently laid pipe to MH A-6.2, the pipe will be laid on approximately a 700' radius to accomplish the new alignment. The station of MH A-6.2 and MH A-7 will be adjusted as required in the field to utilize the pipe lengths delivered; any correction will be accomplished at MHA-7.1.

This change will be made at the request of the Contractor as a no-cost and no time extension field change. However, the work quantities will be adjusted as occurs. Principally, this will be the re-inclusion of MH A-6.2, and minor adjustment of the 30" pipe and sewer service pipe lengths.

Yours very truly,

BENSON & GERDIN, INC.
CONSULTING ENGINEERS



Randy L. Harrel, P.E.

RLH:pw

cc: ✓ Ed Raleigh/MCFCD
Jerry Arakaki/City of Phoenix
Bill Gibson/City of Phoenix
Fred Moore/Tanner

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FLOOD CONTROL DISTRICT
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APR 01 86

March 31, 1986

CI ENG	HYDRO
ASST	IMR
ADMIN	SUSP
C & O	FILE
FINANCE	DESTROY
REMARKS	EAGER

PRECONSTRUCTION CONFERENCE FOR
SEWER RELOCATIONS - 47TH AVENUE TO PEORIA AVENUE
FOR THE ARIZONA CANAL DIVERSION CHANNEL
PROJECT #85-44

Held March 25, 1986, at 10:00 a.m. in Flood Control District Conference Room.

Attendees:

Randy Harrel	Benson & Gerdin	264-0136
David Jeffers	Benson & Gerdin	264-0136
Earl Kirby	FCD	262-1501
Bob Payette	FCD	262-1501
Ed Frieberg	SRP (Water)	236-2586
Fred Moore	Tanner	437-7866
David T. Diaz	Tanner	437-7866
R. K. Keele	Tanner	437-7866
David Nuttall	ECS	233-0667
Daniel P. Matthews	C.O.P. (Inspection)	257-9599
Gary Suthers	C.O.P. (Traffic)	262-6566
Ernie Cota	APS	371-3964
Ann Miller	Mountain Bell	842-7418
W. C. "Andy" Anderson	FCD	262-1501
William "Bill" Poppe	FCD	262-1501
Gerald Arakaki	C.O.P.	261-8229
John Rodriguez	FCD	262-1501

1. Randy Harrel of Benson & Gerdin was introduced as Project Engineer, David Jeffers as Inspector. Benson & Gerdin was designated as the Flood Control District's Representative.
2. The Tanner Companies will be the Contractor. Fred Moore introduced himself as General Superintendent, Ken Keele as Project Superintendent.



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CONSULTING ENGINEERS

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3. Notice to proceed date was established as March 13, 1986. The Contractor will have 135 calendar days from this date to complete the project.
4. A weekly construction meeting time and day was set for 8:00 a.m. on Thursdays. The meetings will be held at the job site.
5. Ann Miller of Mountain Bell indicated that the cable servicing 43rd Avenue Center (Shts. 4 & 5) will have to be located in the field as will the cable running along the south side of Peoria Avenue (Sht. 11).
6. Ernie Cota of APS alerted the Contractor to follow standard procedures for working around overhead electric lines. He requested the Contractor call for inspection while working in the vicinity of underground cables. He noted that the underground electric cable south of 46th Avenue had been removed.
7. Ed Frieberg of SRP Water presented the Contractor with a copy of License 25098. He asked that SRP be informed prior to work in the canal access road. He noted that if the access road were blocked by construction activities, SRP would require barricading of the other end of the road.
8. Dan Matthews of C.O.P. Inspection informed the Contractor of the need of a R.O.W. Permit. He requested the Contractor give the Inspection Department (Warren Land, Supervisor), 24 hours notice prior to commencing work.
9. Gary Suthers of C.O.P. Traffic notified the Contractor of a need for a Street Closure Permit. He informed the Contractor special attention should be given to barricade layout in the street.
10. Contractor submitted the following:
 - Phone numbers and names of key personnel
 - Letter of intent to use an escrow account in lieu of retainage
 - A tentative progress schedule showing:
 - Begin Mobilization: 5-5-86 and Sell (Job): 8-11-86
 - A list of suppliers and subcontractors



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11. Fred Moore noted that the progress schedule would possibly be revised to show a sooner begin date, but that pipe delivery may be a problem.
12. Randy Harrel requested the submittal of the following:
 - Utility Protection Plan
 - Traffic Control Plan
 - Sequence of Construction
13. Randy Harrel informed the Contractor that all submittals should be submitted through Benson & Gerdin. Shop drawings would have to be approved by the City of Phoenix and there would not be additional lag time as reviewing would proceed concurrently. Dan Matthews indicated that the City typically has a one-week turnaround on submittals.
14. Randy Harrel reminded the Contractor that liquidated damages would be charged for time overruns. Costs to be determined per M.A.G. Specifications, plus Flood Control District (FCD) incurred costs, not determined at this time. Contractor to pay costs associated with required retesting of failed material tests.
15. Monthly Pay Requests are to be in to FCD offices by Tuesday afternoons. Typically, checks to be issued 10 days later (Fridays). First payment check will be delayed an additional week. Fred Moore indicated he would like to sign request form at weekly meetings (Thursdays). Inspector to have generated form and obtained Superintendent's agreement by Wednesdays.
16. The Contractor was informed that extra work must be authorized. Benson & Gerdin would recommend; the FCD would authorize. Inspector is not authorized to direct Contractor to perform work contrary to plans.
17. Randy Harrel expressed a concern for safety and noted that safety is the Contractor's responsibility. Fred Moore concurred with this concern and indicated that a safety advisor would make regular site visits.
18. A construction yard site had not as yet been selected.
19. Superintendent and Inspector to determine extent and will perform photo survey.



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20. Fred Moore of Tanner and David Nuttall of ECS indicated they had no questions.
21. Gerald Arakaki of C.O.P. indicated that a week turnaround on shop drawings would be reasonable.
22. Superintendent, Inspector, and School Principal to coordinate location of temporary chain link fence in school yard.
23. Inspector and C.O.P. Inspection Department to coordinate in-place material testing and lab suitability. C.O.P. to provide inspection at precast pipe plant, clay pipe plant, and concrete mix plant.
24. Fred Moore indicated a new schedule may be submitted, showing work starting with the siphon. Excavation will have a combination of shored and sloped banks.
25. David Jeffers anticipated developing a close working relationship with the Contractor. Of major concern was being informed of Contractor's anticipated activities to best schedule testing operations. He requested weekly schedules be submitted at the job meetings. He is to file a Daily Log outlining Contractor's equipment, workers, operations, and pay items. Contractor is requested to acknowledge the Log with his signature, a copy to be provided for his reference. Contractor was requested to provide his survey notes prior to major work. Contractor was informed of a 3-foot stationing error of sewer line 'B,' appearing on Sheet 10. Consultant will coordinate with Contractor's surveyors. Contractor indicated that he intended to work 16-hour days, no weekends or holidays at this time.
26. Gary Suthers was informed by Contractor that Traffic Control Plan would be submitted within 3 to 5 days.

DSJ:tr

cc: Attendees

ADDENDUM NO. 1
DATE: January 31, 1986

FCD Contract No. 85-44

Page 1 of 4

To Contract Documents

ENTITLED: Sewer Relocation - 47th Ave. to Peoria Ave. for the ACDC

OWNER: Flood Control District of Maricopa County

The above documents are herein modified. The provisions of said documents applicable to these modifications remain unchanged unless specifically indicated otherwise herein. This Addendum forms a part of the contract Documents and modifies them as follows:

1. Underground telephone cables, which are not shown on the plans, are located as follows:

Sheet 4 and Sheet 5. Telco cable is located in joint trench with underground electric line shown.

Sheet 11. Telco cable is located 26 feet south of the Peoria Avenue monument line, east from the junction box at Station 15+10, Peoria Avenue.

2. Plans Sheet 8 and Sheet 9, approximately station 38+60 to station 42+00. Construct a temporary six-foot high chain link fence as directed by the Engineer. The fence shall be located to the right (northeast) of the construction area. Remove the temporary fence after completion of the work in this area. This work shall be included in Bid Item 350-3, Miscellaneous Removal and Other Work.

3. Manholes on the 30" sewer line shall have a fully poured concrete base section; the alternate base with knockouts for pipes shown in MAG Std. Detail 420 shall not be permitted.

4. Modify the first sentence on page 2 of the Invitation for Bids to read: "The work shall commence within seven (7) calendar days and be completed within one hundred thirty-five (135) calendar days after receipt of the Notice to Proceed."

5. ACP waterlines undercrossed by the trenching operations shall be replaced by ductile iron pipe as specified in Subsection 601.2.1 of the Phoenix Supplement. The 12" waterline undercrossed at Station 20+82 (Plans Sheet 3), Station 9+56 (Sheet 4), and Station 1+26 (Sheet 11) is ACP. Sheet 3a of the Bidding Schedule has been revised, and is attached. The Schedule now includes Bid Item No. 601-1, "Waterline Replacement", 3 each; and an allowance of \$5000.00 for Bid Item No. 601-2, "Waterline Valve Cut-in". Payment for Item 601-2, "Waterline Valve Cut-in", shall be for the actual costs incurred by the Contractor as verified by invoice, in accordance with the Phoenix Supplement to the MAG Specifications, and may be greater than or lesser than \$5000.00.

6. The work under Bid Item No. 615-10, "Abandon Manhole," includes all work necessary for the abandonment of the manhole as specified, except that asphaltic concrete pavement replacement shall be measured and paid for under Bid Item No. 336-3, "Asphaltic Concrete Pavement Replacement."
7. In locations where the trench width at the top of the pipe cannot be maintained as specified in MAG Subsection 601.2.2, the R.C.P. and D.I.P. specified have adequate load-bearing capacity without additional measures.
8. A coal tar epoxy lining, as specified below, is an acceptable alternate lining for the ductile iron pipe specified on pages 14 and 15 of the Construction Special Provisions:

a. MATERIALS:

The material shall be a catalyzed coal tar epoxy supplied by a reputable manufacturer having a proven history in water and waste service.

All materials shall be delivered to the application plant in the original unopened containers. Handling and storage shall be in accordance with the manufacturer's recommendations and adequate to prevent damage or deterioration.

The material supplier shall supply test results and certification that the delivered materials meet the manufacturer's specifications.

Any material found to be non-conforming, damaged or deteriorated shall be immediately removed from the application plant.

The manufacturer's recommendations and specifications for this material shall be furnished to the Engineer by the contractor.

b. APPLICATION:

All interior barrel and joint surfaces which will be exposed to the sewer liquids and gases shall be prepared for lining so as to remove all loose foreign materials which would adversely affect the bond of the compound to the pipe surface. Since some oxides present after the manufacture of the ductile iron pipe are tightly adhering to the surface and thus become an integral part of the surface, the intent of this specification is that these tightly adhering oxides be left on the surface and only loose oxides be sand blasted away. Specifically, surface preparation shall consist of sand blasting to the extent that the entire surface is struck by the blast media. All prepared surfaces shall receive at least one coat of the specified protective compound prior to any deterioration of the prepared surface.

The lining compound shall be applied by a competent firm with a demonstrated ability of lining ductile iron. The workmen employed by the applicator shall be experienced and competent in the application of pipe lining and shall have been trained in the application and inspection of the lining compound.

All application equipment, including a special high speed centrifugal airless device shall be as recommended by the supplier of the lining compound. Suitable spray equipment or brush shall be utilized to coat the joint surfaces and the exterior of the pipe. All equipment used shall be maintained in good working condition. Materials and brushes shall be delivered to the job site for field application of lining sections damaged during installation.

The pipe surface areas to be lined shall be blown off with air to remove all abrasive, dust, or other contaminants. Any grease or oil shall be removed by solvent cleaning. The lining shall not be applied under adverse atmospheric conditions that would cause loss of integrity of the applied coating, and in no event when the ambient temperature is less than 40 degrees F.

c. LINING THICKNESS:

The lining compound shall be thoroughly mixed in accordance with the manufacturer's instructions. After blasting and cleaning, the lining compound shall be applied to all barrel surface areas which will be exposed to sewer liquids and gases. The lining compound shall be applied to the barrel of the pipe utilizing a suitable application device so as to obtain a continuous and relatively uniform and smooth integral lining in two or more coats. The first coat shall consist of (20 mils wet) 16 mils minimum dry film thickness and the finish coat(s) shall be applied to yield a total minimum dry film thickness of 40 mils for the complete system. The material supplier's recoat instructions shall be strictly followed. After coating the barrel surfaces, special care shall be given to assure that all joint surfaces exposed to sewer liquids and gases are given a prime and finish coat resulting in a minimum dry film thickness of 30 mils. Because of the extremely rough profile of ductile iron pipe and to insure adequate protection, the amount of material required to achieve the desired film thickness shall be calculated and that amount shall be applied to the surface. When measured with a properly calibrated magnetic film thickness gauge, the cured coating shall not read less than 36 mils for the barrel surfaces and joint surfaces.

Each day's production shall be marked with the date that the lining system is completed and inspected using a suitable, permanent marker.

Holiday detection on the cured coating shall be performed using a low voltage, wet sponge detector similar to Tinker and Razor Model M-1 for each pipe section and fitting.

All damaged areas, holidays and insufficient millage shall be repaired in accordance with the manufacturer's recommendations so that the repaired area is equal to the undamaged areas in all respects.

Equipment used to handle and transport the lined pipe shall be suitable designed and operated so as to not damage the coating. Should damage occur, the damaged areas shall be repaired so that the repaired area is equal to the undamaged areas in all respects.

Lined surfaces of the pipe shall be permitted as long as drying time as practicable but in any event until the finished coating has dried at least 5 days at 70 degrees F. All phases of the lining process and repair procedure shall conform to the manufacturer's recommendations.

9. Payment for Bid Item 401, Uniformed, Off-duty Law Enforcement Officer shall be made in accordance with Section 401 of the M.A.G. Specifications. The Unit Cost and Extended Amount in the attached revised page 3a of the Bidding Schedule have been filled in with Phoenix' current rate of \$17.75 per hour.

BIDDING SCHEDULE

Project: Sewer Relocation-47th Avenue to Peoria Avenue for the ACDC.

Contract: FCD 85-44

Item No.	Approximate Quantity	Unit	Description	Unit Cost (in writing) and /100 dollars	Unit Cost	Extended Amount
340-4	100	LF	Extruded Concrete Curb			
340-5	240	SF	Concrete Channel			
350-1	6094	SF	Remove Concrete Side-walk, Driveway, Valley Gutter, and Slab			
350-2	1243	LF	Remove Concrete Curb and Gutter			
350-3	1	L.S.	Miscellaneous Removal and other work			
401	200	HR	Uniformed, Off-duty Law Enforcement Officer	seventeen and 75/100 dollars	17.75	3550.00
601-1	3	Ea.	Waterline Replacement			
601-2	1	Allowance	Waterline Valve Cut-in	five thousand and no/100 dollars	5000.00	5000.00
615-1	37	LF	36" Pipe			
615-2	3731	LF	30" Pipe			

BID SUMMARY & CHECKLIST

PROJECT: Sewer Relocation - 47th Ave
to Peoria Ave for the ACDC

CONTRACT FCD: 85-44

DATE: Feb. 12, 1986

Name
The Tanner
Companies ①

Westcon ③

Swengel-Robbins ④

Lloyd Brothers ②

Triangle Construction ⑤

Item						
Schedule Complete						
Addenda Noted						
No Exceptions						
Changes Initialed						
Proposal Signed						
Evidence of Qualifications	—	—	—	—	—	—
Bid Security						
No Collusion Affidavit						
1						
2						
3						
TOTAL CONTRACT	845,045.55	1,027,935.00	1,372,807.84	895,171.00	1,460,715.54	

Pre bid Conference

10:00 A.M., Jan. 28, 1986

Sewer Relocation - 47 Ave to Peoria Ave

Name	Organization	Phone
Randy Harrel	Benson & Gerdin	264-0136
Ed Raleigh	FCD	262-1501
John E. Rodriguez	"	"
RON KINNISON	Triangle Const.	243-1224
J.A. MASON	Tiffany Const Co	276-2414
Earl Kirby	Flood Control	262-1501

FLOOD CONTROL DISTRICT of Maricopa County
(TABULATION OF BIDS)

PROJECT: **SEWER Relocation-4TH AVE to Peoria for the ACP** PROJECT NO: **FCD-85-44** DATE OPENED: **2-12-86** SHEET: **1**

ITEM NO.	DESCRIPTION	The Tanner Co				Lloyd Broth		WESTCON		SWENGEI Robbins		TRIANGLE Construct.		UNIT PRICE	\$ AMOUNT
		QUANTITY	UNIT	UNIT PRICE	\$ AMOUNT	UNIT PRICE	\$ AMOUNT	UNIT PRICE	\$ AMOUNT	UNIT PRICE	\$ AMOUNT	UNIT PRICE	\$ AMOUNT		
336-1	Backfill, Det 200, Type A.	758	SY	1500	1137000	1800	1364400	1000	758000	1800	1364400	875	665525		
336-2	Backfill, Det 200, Type B.	84	SY	650	54600	650	54600	2000	168000	8700	747600	600	50400		
336-3	Asphaltic Concrete Pavement Pk	289	TONS	600	173400	570	165660	950	274550	1150	332350	780	225200		
336-4	Precoated Chip Seal with Flush Coat (MAG Sec. 31)	6255	SY	200	1251000	160	100800	200	1251000	180	1125900	207	129785		
340-1	COMBINED CONCRETE CURB & GUTTER, STD DET 220, TYPE A 11-1/2"	75	LF	800	60000	1200	96000	1100	82500	1050	78750	1160	87000		
340-2	CONCRETE ROLL CURB & GUTTER STD, DET 220, TYPE C	1068	LF	600	640800	700	747600	800	854000	550	581400	580	619440		
340-3	CONCRETE VALLEY GUTTER, STD DET 240	21	SF	1400	29400	800	15800	1600	33600	500	10500	1160	24360		
340-4	EXTRUDED CONCRETE CURB	100	LF	950	95000	1200	120000	1000	100000	425	42500	470	47000		
340-5	CONCRETE CHANNEL	240	SF	500	120000	400	96000	1000	240000	1500	360000	410	98400		
350-1	REMOVE CONCRETE SIDEWALK DRIVEWAY, VALLEY GUTTER & SLAB	6094	SF	100	609400	100	60940	100	609400	60	365640	26	153444		
350-2	REMOVE CONCRETE CURB & GUTTER	1243	LF	150	186450	100	124300	600	745800	157	186450	133	165319		
350-3	MISC. REMOVAL AND OTHER WORK	1	LS	20,000	20,000.00	4000	4,000.00	30,000	30,000.00	20,000	20,000.00	43,100	43,100.00		
401	UNIFORMED OFF DUTY LAW ENFORCEMENT OFFICER	200	HR	1775	355000	1775	355000	1775	355000	1775	355000	1775	355000		
601-1	WATERLINE REPLACEMENT	3	EA.	1,500	450000	3800	1140000	2700	810000	2100	630000	3350	1005000		
601-2	WATERLINE VALVE CUT-IN	1	ALLOW	5,000	500000	5000	500000	5000	500000	5000	500000	5000	500000		
615-1	36" PIPE	37	LF	2850	1054500	3000	1110000	1980	732600	1750	647500	1809	649663		
615-2	30" PIPE	3731	LF	1000	3731000	10200	3805600	10400	3802400	19550	72963436	1287	4806777		
615-3	15" PIPE	22	LF	3000	66000	1000	22000	3800	83600	11000	242000	7557	1662574		
615-4	10" PIPE	236	LF	4000	944000	8000	1888000	6200	1462000	9800	2312800	3745	883820		
615-5	SEWER SERVICE (4" to 8" PIPE)	57	LF	300	171000	1000	590000	11500	678500	2000	118000	2640	155760		
615-6	36" D.I.P.	9	LF	3000	27000	4000	36000	2280	20920	2000	18000	25904	233136		
615-7	24" M.V. D.I.P.	726	LF	2250	1633500	2200	1597200	1880	1364880	2240	1626820	8047	58422472		
615-8	SEWER CLEANOUT, STD DET 44	4	EA.	6000	24000	6000	24000	7000	28000	3000	12000	4100	16400		
615-9	CONCRETE ENCASUREMENT	90	LF	600	54000	2250	202500	1630	146700	620	55800	1890	170100		
615-10	Abandon MANHOLE	19	EA.	10000	190000	4500	85500	3000	57000	4900	93100	3600	68400		
615-11	Cut & Plug SERVICES WATER & SEWER PIPES	19	EA.	4000	76000	2000	38000	2600	49400	2000	38000	900	17100		
625-1	SEWER MANHOLE, 5' DIAM. STD. DET 420 & 424	20	EA.	3000	60000	3900	78000	6000	120000	35100	702000	3350	67000		
625-2	SEWER MANHOLE, 4' DIAM. STD. DET 420 & 424	2	EA.	1500	30000	3800	76000	2100	42000	1361	27220	1520	30400		
625-3	DRIP SEWER CONNECTION, TYPE B	3	EA.	1000	30000	1500	45000	8500	25500	1,3000	39000	5700	17100		
625-4	SEWER Siphon INLET STRUCTURE	1	EA.	15000	150000	28000	280000	68000	680000	70000	700000	53000	530000		
625-5	SEWER Siphon Outlet STRUCTURE	1	EA.	35000	350000	29000	290000	58000	580000	69000	690000	45000	450000		
625-6	SEWER Junction STRUCTURE	3	EA.	10,000	300000	14800	444000	22800	684000	31,000	930000	19000	570000		
				845,045.50		895,171.00		1,027,935.00		1,372,000.00		1,460,715.54			

ENGINEER'S ESTIMATE

Sewer Relocation for the A.C.D.C.
47th Avenue to Peoria Avenue

Maricopa County Flood Control District

336-1	Backfill, Det 200, Type A	758 SY	20.00	15,160
336-2	Backfill, Det 200, Type B	84 SY	40.00	3,360
336-3	Asphaltic Concrete Pavement Replacement	289 Tons	30.00	8,670
336-4	Precoated Chip Seal with Flush Coat (MAG Sec 331)	6255 SY	1.60	10,008
340-1	Combined Concrete Curb and Gutter, Std. Det 220, Type A, H=6"	75 LF	10.00	750
340-2	Concrete Roll Curb and Gutter, Std. Det 220, Type C	1068 LF	7.00	7,476
340-3	Concrete Valley Gutter, Std. Det 240	21 SF	4.00	84
340-4	Extruded Concrete Curb	100 LF	6.00	600
340-5	Concrete Channel	240 SF	3.00	720
350-1	Remove Concrete Sidewalk, Driveway, Valley Gutter, and Slab	6094 SF	1.00	6,094
350-2	Remove Concrete Curb and Gutter	1243 LF	2.00	2,486
350-3	Miscellaneous Removal and other work	Lump Sum	12,000	12,000
401	Uniformed, Off-Duty Law Enforcement Officer	200 HR	17.75	3,550
601-1	Waterline Replacement	3 EA	1,200	3,600
601-2	Waterline Valve Cut-in	1 Allowance	5,000	5,000

ENGINEER'S ESTIMATE (Continued)

615-1	36" Pipe	37 LF	120	4,440
615-2	30" Pipe	3731 LF	115	429,065
615-3	15" Pipe	22 LF	40	880
615-4	10" Pipe	236 LF	25	5,900
615-5	Sewer Service (4" to 8" Pipe)	59 LF	20	1,180
615-6	36" D.I.P.	9 LF	100	900
615-7	24" M.J.D.I.P.	726 LF	160	116,160
615-8	Sewer Cleanout, Std. Det 441	4 EA	400	1,600
615-9	Concrete Encasement	90 LF	250	22,500
615-10	Abandon Manhole	19 EA	500	9,500
615-11	Cut and Plug Services	19 PR	150	2,850
625-1	Sewer Manhole, 5' Diameter, Std. Det 420 and 424	20 EA	3,800	76,000
625-2	Sewer Manhole, 4' Diameter, Std. Det 420 and 424	2 EA	2,000	4,000
625-3	Drop Sewer Connection, Type B	3 EA	800	2,400
625-4	Sewer Siphon Inlet Structure	1 EA	34,000	34,000
625-5	Sewer Siphon Outlet Structure	1 EA	23,000	23,000
625-6	Sewer Juntion Structure	3 EA	12,000	<u>36,000</u>
			TOTAL	\$ <u>849,933</u>

The Tanner Companies
P.O. Box 20128
Phoenix, Arizona 85036

F.W. Dodge
5225 N. Central, Ste. 202
Phoenix, Arizona 85012

Tiffany Construction Co., Inc.
P.O. Box 85005
Phoenix, Arizona 85005

Engineering Construction Supply
P.O. Box 6702
Phoenix, Arizona 85005

Cadre Contracting, Inc.
21639 N. 12th Ave., Ste. 100
Phoenix, Arizona 85027

Swengel-Robbins
7418 E. Helm Drive
Scottsdale, Arizona 85260-2382

Western Sun Contractors
P.O. Box 32866
Phoenix, Arizona 85064

Eichman Excavation, Inc.
1053 Black Canyon Stage
Phoenix, Arizona 85029

Hydro Conduit Corp.
P.O. Box 2670
Phoenix, Arizona 85002

Blue Streak Constuction News
537 W. Lynwood Street
Phoenix, Arizona 85003

Construction Week
2050 E. University Dr. #3
Phoenix, Arizona 85034

Mingus Constructors, Inc.
P.O. Box 1999
Cottonwood, Arizona 86326

Waterworks Equipment Co.
1703 West 10th Place
Tempe, Arizona 85281

Kokosing Construction Co., Inc.
P.O. Box 8
Avondale, Arizona 85323

CAAZ
Cave Creek Stage
Box 5918
Cave Creek, Arizona 85331

Triangle Construction Co.

Ameron Concrete Pipe Group
P.O. Box 20505
Phoenix, Arizona 85036

Kiewit Western Co.
P.O. Box 1209
Peoria, AZ 85345

Ray Larson
Larson Construction
202 5th Street
Safford, Arizona 85546

SALT RIVER PROJECT
LICENSE TO USE PROJECT RIGHT OF WAY

C.S.R. B1787-31

NOT ASSURE A DRYUP.

LICENSE NO. 25098

86290

Phoenix, Arizona December 13, 1985

The Salt River Project hereby gives and the undersigned hereby accepts, pursuant to the terms and conditions appearing below and upon the reverse side hereof, a revocable license to enter upon and use right of way of the Salt River Project at the following location:

Approximately the Southwest Corner of Section 22; T-3N; R-2E. 43rd Avenue and Peoria. (9.0E-14.0N)

Said use to be for the sole and express purpose of:

Installing sewer siphon manhole and sewer outlet lines in canal right-of-way.

In the use of said right of way, the following specifications and conditions must be followed:

- (a) Siphon manhole and sewer outlet lines (3) to be installed as specified by Benson & Gerdin Consulting Engineers plans for Maricopa County Flood Control District's Project "Arizona Canal Diversion Channel Sewer Relocation".
- (b) Backfill to be in compliance with M.A.G. specifications or the governing municipality's supplement to M.A.G.
- (c) Licensee will move at own expense if installation conflicts with maintenance of, or future installations in, Salt River Project's facilities.
- (d) The Salt River Project assumes no responsibility for damage to Licensee's installation in operation and maintenance of Salt River Project facilities and access to right-of-way shall be available to Salt River Project's personnel at all times.
- (e) Should the Salt River Project irrigation facilities be damaged during construction of this project by the Licensee, such facilities shall be repaired by the Licensee to the satisfaction of the Salt River Project; provided that depending upon the nature and extent of the damage caused by the Licensee, the Salt River Project reserves the right to effectuate such repairs and bill the Licensee for all costs incurred in the repairs.
- (f) Work to be done only after securing a construction clearance from TRANSMISSION WATERMASTER, phone 236-5461, a minimum of 72 hours in advance.

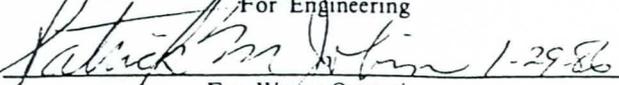
The Licensee, whose signature or that of any authorized representative, appears below, having read and understood the terms and conditions of this license appearing below and upon the reverse side hereof, agrees to all of the terms and conditions set forth:

1. The Licensee warrants and represents that he is qualified to perform or will contract with qualified parties to perform the undertaking which is the subject of this license, to enter upon and use the right of way of the Salt River Project and agrees to obtain such other license, permits and agreements as may be required by other governing bodies having jurisdiction over the location which is the subject hereof.
2. The Licensee further agrees that any changes in the existing Project right of way or construction and improvements thereon, or both, shall be completed and maintained in conformity with all applicable safety standards, regulations and the like and specifically in a manner so as to avoid the creation of potentially dangerous conditions and harm to others.
3. The Licensee shall be liable for any and all damages to the property of the United States of America, the Salt River Valley Water Users' Association and the Salt River Project Agricultural Improvement and Power District, or to the property of any other party or parties by reason of the exercise of the privilege herein given to the Licensee. The Licensee further agrees to and by these presents does indemnify and hold harmless the United States of America, the Salt River Valley Water Users' Association and the Salt River Project Agricultural Improvement and Power District, against any claims, actions, costs, expenses, and causes of actions for property damages or personal injuries in any way caused by or related to the rights herein granted, save and except those caused solely and exclusively by the negligence of the Salt River Project. The Licensee specifically agrees to indemnify and save harmless the Salt River Project, its agents, successors and assigns from any and all liability arising out of the presence, maintenance or use of the Licensee's undertaking which is the subject of this license, or any changes thereon or improvements thereto. The Licensee understands and agrees that he enters upon the property of the Salt River Project at his own risk.
4. It is understood and agreed by Licensee that this license shall not become finally effective until said use has been inspected by agents of the Salt River Project and finally approved as complying with the specifications and conditions listed on both sides of this form. Said inspection, however, is not intended nor understood to be or constitute more than a determination that the specifications set forth herein have been complied with by Licensee and is not to be considered as an approval or ratification by Licensor of the quality or fitness of Licensee's improvements.
5. Failure to obtain a specific construction clearance from the designated office will automatically void this license and subject the Licensee to all liability for damage, as a result of this failure, to his works and the works and property of others, including those of the Association.
6. In the event that said use does not comply with the above specifications and conditions stated herein or upon revocation of this license, the Licensee shall remove at his own cost, within ten (10) days after written notice, any improvements or installations placed on said right of way by virtue of this license. In case of the failure of the Licensee to remove the aforesaid installations within the time specified above, the authorized agents of the Salt River Project, or its successors or assigns, may thereupon remove the installations from the said right of way and the cost and expense so incurred (as conclusively determined by the Project) shall be chargeable to and payable by the said Licensee within ten (10) days after a statement of such expense and cost has been mailed to Licensee at the address designated beneath his signature hereunder. The Licensee hereby releases the said United States of America, the Salt River Valley Water Users' Association, and the Salt River Project Agricultural Improvement and Power District from all claims for damages that might result to the Licensee by reason of such removal.
7. The Licensee further agrees to keep in proper maintenance and repair any improvements, structures or other installations erected within said right of way.
8. This license shall continue so long as it is considered to be expedient as conclusively determined by a proper officer of the Salt River Project and shall be revocable by said officer upon ten (10) days written notice to the Licensee.

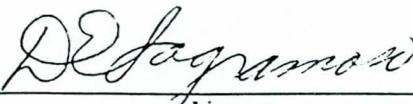
APPROVED
SALT RIVER PROJECT

MARICOPA COUNTY FLOOD CONTROL DISTRICT
ACDC Sewer Relocation



For Engineering


For Water Operations



Licensee
3335 West Durango

Address
Phoenix, AZ. 85009

City

Telephone

CALL FOR ASSISTANCE

236-2609
Inspection Division

236-5461
Irrigation Division

FLOOD CONTROL DISTRICT of Maricopa County
(TABULATION OF BIDS)

PROJECT

SEWER RELOCATION - 4TH AVE to PEORIA for the A.M. FCD - 85-44

PROJECT NO.

DATE OPENED

SHEET

2-12-86

1

ITEM NO.	DESCRIPTION	The TANNER Co				Lloyd Broth.		WESTCON		SWENGEI Robbins		TRIANGLE Construct.		UNIT PRICE	\$ AMOUNT
		QUANTITY	UNIT	UNIT PRICE	\$ AMOUNT	UNIT PRICE	\$ AMOUNT	UNIT PRICE	\$ AMOUNT	UNIT PRICE	\$ AMOUNT	UNIT PRICE	\$ AMOUNT		
336-1	Backfill, Det 200, Type A.	758	SY	1500	1137000	1800	1364400	1000	758000	1800	1364400	875	665524		
336-2	Backfill, Det 200, Type B.	84	SY	650	54600	650	54600	2000	168000	800	747600	600	504000		
336-3	Asphaltic Concrete Pavement Pk	289	TONS	600	173400	5400	1560600	900	274500	11500	3323500	7800	2254200		
336-4	Precoated Chip Seal with Flush Coat (MAD Sec. 311)	6255	SY	200	1251000	160	1010800	200	1251000	180	1125900	209	1294785		
340-1	COMBINED CONCRETE CURB & GUTTER, STD DET 220, TYPE A H=6"	75	LF	800	60000	1200	96000	1100	82500	1050	78750	1160	87000		
340-2	CONCRETE ROLL CURB & GUTTER, STD, DET 220, TYPE C	1068	LF	600	640800	700	747600	800	854400	550	587400	580	619440		
340-3	CONCRETE VALLEY GUTTER, STD DET 240	21	SF	1400	29400	800	15800	1600	33600	500	10500	1160	24360		
340-4	EXTRUDED CONCRETE CURB	100	LF	950	95000	1200	120000	1000	100000	425	42500	470	47000		
340-5	CONCRETE CHANNEL	240	SF	500	120000	400	96000	1000	240000	1500	360000	410	98400		
350-1	REMOVE CONCRETE SIDEWALK, DRIVEWAY, VALLEY GUTTER & SLAB	6094	SF	100	609400	100	60940	100	609400	60	365640	26	158444		
350-2	REMOVE CONCRETE CURB & GUTTER	1243	LF	150	186450	100	12430	600	745800	150	186450	133	165319		
350-3	MISC. REMOVE AND OTHER WORK	1	LS	20,000	20,000	4000	4000	30,000	30,000	20,000	20,000	43,100	43,100		
401	UNIFORMED OFF DUTY LAW ENFORCEMENT OFFICER	200	HR	1775	355000	1775	355000	1775	355000	1775	355000	1775	355000		
601-1	WATERLINE REPLACEMENT	3	Eq.	1,500	4500	3800	11400	2700	8100	2100	6300	3350	10050		
601-2	WATERLINE VALVE CUT-IN	1	Allow	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000		
615-1	36" PIPE	37	LF	2850	105450	3000	111000	1950	73260	1750	64750	1800	64963		
615-2	30" PIPE	3731	LF	100	373100	10200	3806200	10400	3802400	19550	72963436	12867	4806777		
615-3	15" PIPE	22	LF	3000	66000	1000	22000	3800	83600	11000	242000	7557	166254		
615-4	10" PIPE	236	LF	400	94400	800	188000	6200	1463200	9800	2412800	3745	883820		
615-5	SEWER SERVICE (4" to 8" PIPE)	57	LF	300	17700	1000	59000	11500	678500	2000	118000	2640	155760		
615-6	36" D.I.P.	9	LF	3000	27000	4000	36000	23800	209200	20000	180000	25704	233136		
615-7	24" M.V. D.I.P.	726	LF	2250	1633500	2200	1597200	1800	1364880	22408	16268200	80472	58422672		
615-8	SEWER CLEANOUT, STD DET 44	4	EA.	6000	24000	6000	24000	7000	28000	3000	12000	4100	16400		
615-9	CONCRETE ENCASEMENT	90	LF	600	54000	2250	202500	16300	1467000	6200	558000	18900	1701000		
615-10	ABANDON MANHOLE	19	EA.	10000	190000	4500	85500	3000	57000	4900	93100	3600	68400		
615-11	CUT & Plug SERVICES WATER & SEWER TRENCHES	19	EA.	4000	76000	2000	38000	2600	49400	2000	38000	9000	171000		
625-1	SEWER MANHOLE, 5' DIAM. STD. DET. 420 & 424	20	EA.	30000	600000	39000	780000	60000	1200000	357000	7020000	33500	670000		
625-2	SEWER MANHOLE, 4' DIAM. STD. DET. 420 & 424	2	EA.	15000	30000	38000	76000	21000	42000	136100	272200	152000	304000		
625-3	DRAP SEWER CONNECTION, TYPE B	3	EA.	10000	30000	15000	45000	85000	255000	1,30000	390000	57000	171000		
625-4	SEWER Siphon INLET STRUCTURE	1	EA.	150000	150000	280000	280000	680000	680000	70,0000	700000	53,0000	530000		
625-5	SEWER Siphon OUTLET STRUCTURE	1	EA.	350000	350000	290000	290000	580000	580000	69,0000	690000	45,0000	450000		
625-6	SEWER JUNCTION STRUCTURE	3	EA.	10,000	30000	148000	444000	228000	684000	31,0000	930000	19000	570000		
					845,045.50		895,171.00		1,029,935.00		1,378,800.00		1,460,715.54		

RBACPOST
VCPentha X
slough X
MJDIP
class 54
epoxy
lined X

SPECIAL PROVISIONS
FOR
SEWER RELOCATION - 47TH AVENUE TO
PEORIA AVENUE FOR THE ACDC

CONTRACT NO. FCD 85-44



SUPPLEMENTARY TO MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION EDITION OF 1979 AND REVISIONS AND SUPPLEMENTS THERETO.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
CONTRACT FCD 85-44

TABLE OF CONTENTS:

1. Invitation for Bids
2. Bid Form
3. No Collusion Affidavit
4. Construction Special Provisions
5. Contract
6. Statutory Payment Bond
7. Statutory Performance Bond
8. Certificate of Insurance
9. Drawings: Sewer Relocation - 47th Avenue to Peoria Avenue
for the ACDC
Sheets one through eighteen of eighteen.

INVITATION FOR BIDS
(Construction Contract)

Ref. Invitation FCD 85-44
Date: January 13, 1986
Issued by: Flood Control District
of Maricopa County

Vicinity: 47th Ave. to Peoria Ave.
along the north side of the
Arizona Canal, Phoenix, Arizona

SEALED BIDS, IN SINGLE COPY FOR THE WORK DESCRIBED HEREIN WILL BE RECEIVED UNTIL 2:00 PM, LOCAL TIME AT THE PLACE OF THE BID OPENING, FEBRUARY 12, 1986, IN THE OFFICE OF THE FLOOD CONTROL DISTRICT OF MARICOPA COUNTY, 3335 WEST DURANGO STREET, PHOENIX, ARIZONA, 85009, AND AT THAT TIME PUBLICLY OPENED.

A PRE-BID CONFERENCE WILL BE HELD ON JANUARY 28, 1986, AT 10:00 AM IN THE FLOOD CONTROL DISTRICT OF MARICOPA COUNTY CONFERENCE ROOM, 3335 WEST DURANGO STREET. IT IS IN THE BEST INTEREST OF PROSPECTIVE BIDDERS TO ATTEND THE PRE-BID CONFERENCE.

BID SECURITY IN AN AMOUNT OF NOT LESS THAN FIVE PERCENT (5%) OF THE TOTAL BID PRICE MUST BE SUBMITTED WITH EACH BID. THE BID SECURITY MAY BE IN THE FORM OF A BID BOND, CASHIER'S CHECK, POSTAL MONEY ORDER, OR CASH. THE BID SECURITY WILL BE MADE PAYABLE TO THE FLOOD CONTROL DISTRICT OF MARICOPA COUNTY AS A GUARANTEE THAT IF THE WORK IS AWARDED TO THE BIDDER, HE WILL WITHIN TEN (10) DAYS FROM THE DATE OF SUCH AWARD, ENTER INTO PROPER CONTRACT AND BOND CONDITIONS FOR THE FAITHFUL PERFORMANCE OF THE WORK. OTHERWISE, SAID AMOUNT WILL BE FORFEITED TO THE FLOOD CONTROL DISTRICT. BID SECURITY WILL BE RETURNED AS PRESCRIBED BY MAG 103.

THE SUCCESSFUL BIDDER SHALL BE REQUIRED TO FURNISH PERFORMANCE AND PAYMENT BONDS IN PENAL SUMS NOT LESS THAN ONE HUNDRED PERCENT (100%) RESPECTIVELY, OF THE ORIGINAL AMOUNT OF THE CONTRACT.

DESCRIPTION OF WORK: Construction of approximately 3,800 ft. of 30" and 36" RCP or VCP main line sewer, three 24" MJDIP inverted siphon barrels, approximately 260 ft. of 10" and 15" sewer, manholes, junction structures and other incidental work.

INVITATION FOR BIDS
NO. FCD 85-44

THE WORK SHALL COMMENCE WITHIN SEVEN (7) CALENDAR DAYS AND BE COMPLETED
WITHIN NINETY (90) CALENDAR DAYS AFTER RECEIPT OF THE
NOTICE TO PROCEED.

NOTICE: THE BID SCHEDULE, SPECIAL PROVISIONS, INSTRUCTIONS TO BIDDERS,
UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, EDITION OF
1979 (MAG) AND CITY OF PHOENIX SUPPLEMENT, AND DRAWINGS LISTED UNDER THE
CONTENTS WILL BE INCORPORATED IN AND BECOME A PART OF THE RESULTANT
CONTRACT.

CHERIE ELLIG, CLERK
BOARD OF DIRECTORS
FLOOD CONTROL DISTRICT OF
MARICOPA COUNTY

INVITATION FOR BIDS
NO. FCD 85-44

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
INVITATION FOR BIDS, FCD 85-44
INSTRUCTIONS TO BIDDERS

1. Explanation to Bidders. Any explanations desired by the bidder, questions, or items for clarification regarding the meaning or interpretation of the invitation for bids, drawings, specifications, etc., may be addressed to the Chief Engineer and General Manager, preferably in writing, prior to the pre-bid conference. Any answers, interpretations, or clarifications affecting the cost will be addressed to all bidders in an addendum to the invitation. The receipt of an addendum by the bidder must be acknowledged in the space provided on the bid form or by letter or telegram received before the time set for the bid opening. Oral explanations or instructions given before the award of the contract will not be binding.
2. Conditions Affecting the Work. It is in the best interest of the bidders to attend the pre-bid conference. Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and the location of the work, the general and local conditions which can affect the work and the cost thereof. Failure to do so will not relieve bidders from responsibility for estimating properly the difficulty or cost of successfully performing the work. [See MAG 102.4]
3. Bidder's Qualifications. Before a bid is considered for award, a bidder may be requested by the Chief Engineer and General Manager of the Flood Control District to submit a statement regarding his previous experience in performing comparable work, his business and technical organization, financial resources, and plant available to be used in performing the work.
4. Bid Guarantee. Where a bid guarantee is required by the invitation for bids, failure to furnish a bid guarantee in the proper form and amount by the time set for opening of bids, may be cause for rejection of the bid.

If the successful bidder, upon acceptance of his bid by the Flood Control District with the period specified herein for acceptance (sixty days if no period is specified) fails to execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the bid as accepted within the time specified (ten days if no period is specified) after receipt of the forms by him, his contract may be terminated for default. In such event he shall be liable for any cost of procuring the work which exceeds the amount of his bid, and the bid guarantee shall be available toward offsetting such difference.

INVITATION FOR BIDS
NO. FCD 85-44

5. Preparation of Bids. Bids shall be submitted on the forms furnished, or copies thereof, and must be manually signed. If erasures or other changes appear on the forms, each erasure or change must be initialed by the person signing the bid. Unless specifically authorized in the invitation for bids, telegraphic bids will not be considered.

No bid will be considered unless all items in the bid schedule are priced. In case of an error in the extension of price, the unit price shall govern. The quantities listed on the bid schedule on which unit prices are requested are estimates only.

Unless called for, alternate bids will not be considered.

Modifications of bids already submitted will be considered if received at the office designated in the invitation for bids by the time set for opening bids.

6. Submission of Bids. Bids must be sealed, addressed to the Chief Engineer and General Manager, Flood Control District of Maricopa County, 3335 West Durango, Phoenix, Arizona 85009, and marked to identify the bid to the referenced Contract FCD Number. Failure to appropriately identify the bid may result in a premature opening of, or a failure to open, such bid. The name of the bidder shall be on the outside of the envelope. [See MAG 102.9]
7. Withdrawal of Bids or Modifications. Bids may be withdrawn by written request received from the bidder prior to the time set for opening of bids.
8. Public Opening of Bids. Bids will be publicly opened at the time and place set for the opening in the invitation for bids. Their content will be made public for the information of bidders and others interested, who may be present either in person or by representative.
9. Award of Contract. Award and execution of a contract shall be in accordance with MAG Section 103.
10. Specifications. Specifications referred to herein shall include all revisions and amendments in effect on the date of issuance of the invitation for bids. These instructions, Special Instructions to Bidders, and the herein contained Construction Special Provisions supplement the Uniform Standard Specifications herein referred to by "MAG" section number or paragraph number; however, in case of conflict, these instructions and Special Provisions supersede the Uniform Standard Specifications (MAG).

INVITATION FOR BIDS
NO. FCD 85-44

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
INVITATION FOR BIDS, FCD 85-44
SPECIAL INSTRUCTIONS TO BIDDER

Contract Plans, Special Provisions and Contract Documents: Plans, Special Provisions, and forms for proposal, Bidding Schedule, Contract Agreement and Performance Bond may be obtained from the Flood Control District of Maricopa County, 3335 West Durango Street, Phoenix, Arizona, upon payment of \$14.00 by check payable to the FLOOD CONTROL DISTRICT OF MARICOPA COUNTY. This payment will not be refunded. The plan sheets may be purchased separately for charge of \$9.00, not refundable.

APPROXIMATE QUANTITIES FOR PRINCIPAL ITEMS

<u>QUANTITY</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
1	Ea.	Sewer Siphon Inlet Structure
1	Ea.	Sewer Siphon Outlet Structure
3	Ea.	Sewer Junction Structure
20	Ea.	Manhole, 5' Dia.
90	L.F.	Concrete Encasement
3731	L.F.	30" Pipe
726	L.F.	24" M.J.D.I.P.

and such other pertinent items as are necessary for the completion of the project as shown on the plans or as called for in the Special Provisions or in the Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction.

Location of Work: The proposed work is located along the north side of the Arizona Canal, from 47th Ave. to Peoria Ave., Phoenix, Arizona.

INVITATION FOR BIDS
CONTRACT NO. FCD 85-44

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
(Construction Contract)

BID FORM

Project: Sewer Relocation - 47th Ave.
to Peoria Ave. for the ACDC.

Invitation FCD 85-44
Date: January 13, 1986

Location: 47th Ave. to Peoria Ave. along the
north side of the Arizona Canal,
Phoenix, Arizona.

To: Chief Engineer and General Manager
Flood Control District of Maricopa County
3335 West Durango Street
Phoenix, Arizona 85009

The following Proposal is made on behalf of _____
_____ and no others. The Total Contract amount of
this proposal is (in words) _____
_____ and _____/100 dollars, (in figures).

_____, this amount being the sum total of the extended
amount for each pay item on the Bidding Schedule.

Evidence of authority to submit the Proposal is herewith furnished. The
Proposal is in all respects fair and is made without collusion on the part of
any person, firm, or corporation mentioned above, and no member or employee of
the Flood Control District Board of Directors is personally or financially
interested, directly or indirectly in the Proposal, or in any purchase or sale
of any materials or supplies for the work in which it relates or in any portion
of the profits thereof.

The Undersigned certifies that the approved Plans, Uniform Standard
Specifications for Public Works Construction, 1979 Edition (MAG) and revisions
and supplements thereto, together with the Special Provisions, forms of
Contract and Bond authorized by the Board of Directors and constituting
essential parts of this Proposal, have been carefully examined, and also that
the site of the work has been personally inspected.

The Undersigned declares that the amount and nature of the work to be done is
understood and that at no time will misunderstanding of the Plans,
Specifications, Special Provisions, or conditions to be overcome, be pled. On
the basis of the Plans, Specifications, Special Provisions, the forms of
Contract, and the Bond proposed for use, the Undersigned proposes to furnish

all the necessary machinery, equipment, tools, apparatus, and other means of construction, to do all the work and to furnish all the materials in the manner specified and to finish the entire project within the time hereinafter proposed and to accept, as full compensation therefor, the sum of various products obtained by multiplying each unit price, herein bid for work or materials, by the quantity thereof actually incorporated in the completed project, as determined by the Chief Engineer and General Manager, Flood Control District of Maricopa County.

The Undersigned understands that the quantities mentioned herein are approximate and are subject to increase or decrease and hereby proposes to perform all quantities of work, as either increased or decreased, in accordance with the provisions of the Specifications, at the unit price bid in the Bidding Schedule.

BIDDING SCHEDULE

Project: Sewer Relocation-47th Avenue to Peoria Avenue for the ACDC.

Contract: FCD 85-44

Item No.	Approximate Quantity	Unit	Description	Unit Cost (in writing) and /100 dollars	Unit Cost	Extended Amount
336-1	758	SY	Backfill, Det 200, Type A			
336-2	84	SY	Backfill, Det 200, Type B			
336-3	289	Tons	Asphaltic Concrete Pavement Replacement			
336-4	6255	SY	Precoated Chip Seal with Flush Coat (MAG Sec 331)			
340-1	75	LF	Combined Concrete Curb & Gutter, Std. Det 220, Type A, H=6"			
340-2	1068	LF	Concrete Roll Curb and Gutter, Std. Det 220, Type C.			
340-3	21	SF	Concrete Valley Gutter, Std. Det 240			

BIDDING SCHEDULE

Project: Sewer Relocation-47th Avenue to Peoria Avenue for the ACDC:

Contract: FCD 85-44

Item No.	Approximate Quantity	Unit	Description	Unit Cost (in writing) and /100 dollars	Unit Cost	Extended Amount
340-4	100	LF	Extruded Concrete Curb			
340-5	240	SF	Concrete Channel			
350-1	6094	SF	Remove Concrete Side-walk, Driveway, Valley Gutter, and Slab			
350-2	1243	LF	Remove Concrete Curb and Gutter			
350-3	1	L.S.	Miscellaneous Removal and other work			
401	200	HR	Uniformed, Off-duty Law Enforcement Officer	<i>Seventeen and 75/100</i>	<i>17.75</i>	<i>3550.00</i>
615-1	37	LF	36" Pipe			
615-2	3731	LF	30" Pipe			

BIDDING SCHEDULE

Project: Sewer Relocation-47th Avenue to Peoria Avenue for the ACDC.

Contract: FCD 85-44

Item No:	Approximate Quantity	Unit	Description	Unit Cost (in writing) and /100 dollars	Unit Cost	Extended Amount
615-3	22	LF	15" Pipe			
615-4	236	LF	10" Pipe			
615-5	59	LF	Sewer Service (4" to 8" Pipe)			
615-6	9	LF	36" D.I.P.			
615-7	726	LF	24" M.J.D.I.P.			
615-8	4	EA	Sewer Cleanout, Std. Det 441			
615-9	90	LF	Concrete Encasement			
615-10	19	EA	Abandon Manhole			
615-11	19	EA	Cut & Plug Services, Water & Sewer Pairs			
625-1	20	EA	Sewer Manhole, 5' Diam. Std. Det 420 & 424			

BIDDING SCHEDULE

Project: Sewer Relocation-47th Avenue to Peoria Avenue for the ACDC.

Contract: FCD 85-44

Item No.	Approximate Quantity	Unit	Description	Unit Cost (in writing) and /100 dollars	Unit Cost	Extended Amount
625-2	2	EA	Sewer Manhole, 4' Diam. Std. Det 420 and 424			
625-3	3	EA	Drop Sewer Connection, Type B			
625-4	1	EA	Sewer Siphon Inlet Structure			
625-5	1	EA	Sewer Siphon Outlet Structure			
625-6	3	EA	Sewer Junction Structure			

The Bidder hereby acknowledges receipt of and agrees his proposal is based on the following Addenda

Total _____

The Undersigned further proposes to execute the Contract Agreement and furnish satisfactory Bonds within ten (10) days from the date of award, time being of the essence. The undersigned further proposes to begin the work as specified in the Contract attached hereto, and to complete the work within the time limits as specified in the Special Provisions and maintain at all times a Contract Bond, approved by the Board of Directors, in an amount equal to one hundred percent (100%) of the total bid. This bond shall serve not only to guarantee the completion of the work on the part of the Undersigned, but also to guarantee the excellence of both workmanship and material and the payment of all obligations incurred, said Bond to be in full force and effect until the work is finally accepted and the provisions of the Plans, Specifications and Special Provisions are fulfilled.

A Proposal guaranty in the amount and character named in the Invitation for Bids is enclosed amounting to not less than five percent (5%) of the total bid, which Proposal guaranty is submitted as a guaranty of the good faith of the Bidder and that the Bidder will enter into written contract, as provided, to do the work, if successful in securing the award thereof; and it is hereby agreed that if at any time other than as provided in the Proposal requirements and conditions the Undersigned should withdraw this Proposal, or if the Proposal is accepted and there should be failure on the part of the Undersigned to execute the Contract and furnish satisfactory Bond as herein provided, the Flood Control District of Maricopa County in either of such events, shall be entitled and is hereby given the right to retain the said Proposal guaranty as liquidated damages.

Date: _____, 19__.

IF BY AN INDIVIDUAL:

(Name)

(Address)

IF BY A FIRM OR PARTNERSHIP:

(Firm Name)

(Firm Address)

By: _____

*Name and Address of Each Member:

Date _____, 19__.

IF BY A CORPORATION:

_____ [Corporate Name] _____ [Corporation Address]

By: _____

**Incorporated under the Laws of _____

Names and Addresses of Officers:

_____ [President] _____ [Address]

_____ [Secretary] _____ [Address]

_____ [Treasurer] _____ [Address]

*The name and post office address of each member of the firm or partnership must be shown.

**The name of the State under which the Corporation was chartered and names, title, and business address of the President, Secretary, and Treasurer must be shown.

CONSTRUCTION SPECIAL PROVISIONS
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
FCD CONTRACT NO. 85-44
for
SEWER RELOCATION FOR THE A.C.D.C.
47TH AVENUE TO PEORIA AVENUE

PROPOSED WORK: The work consists generally of construction of 3800 feet of 30" and 36" RCP or VCP main line sewer pipe, three 24" MJDIP inverted siphon barrels, 10" and 15" VCP sewer pipe, junction and special reinforced concrete structures, manholes, tie-over to and abandonment of existing sewers, and restoration of existing construction.

LOCATION OF WORK: This project is located in Phoenix, Arizona, between Peoria Avenue and 47th Avenue along the Arizona Canal Diversion Channel right of way, approximately 140 feet north of the Arizona Canal right of way.

SPECIFICATIONS: Except as otherwise required in these Construction Special Provisions, construction of this project shall be in accordance with all applicable Maricopa Association of Governments (MAG) Uniform Standard Specifications and Uniform Standard Details, latest revision, and the latest revision of the City of Phoenix Supplements to the MAG Uniform Standard Specifications and Details.

PRECEDENCE OF CONTRACT DOCUMENTS: The City of Phoenix Supplements to MAG Specifications and Details will govern over the MAG Standard Specifications and Details. In case of a discrepancy or conflict, Project Plans will govern over both the City of Phoenix Supplements and MAG Standard Specifications and Details. These Construction Special Provisions will govern over the City of Phoenix Supplements and MAG Standard Specifications and Details and the Project Plans.

PAYMENT: Payment will be for only those items listed in the proposal and will not be made in accordance with the measurement and payment provisions of the Standard Specifications. All materials and work necessary for completion of this project are included in proposal items. Any work or material not specifically referred to in these items is considered incidental to the item and included in the unit price.

WORK STANDARDS: The Contractor shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor Regulations (29 CFR Part 5).

CONTRACT TIME: The Contractor shall start work within seven (7) calendar days and complete all work on the project within ninety (90) calendar days after the date of Notice to Proceed.

WATER, LIGHT, POWER, HEAT, TELEPHONE: All water for construction purposes, drinking water, lighting, electric power, heat and telephone service shall be arranged for and provided for the requirements of the work by the Contractor at his expense.

PROGRESS SCHEDULE: The Contractor shall submit his proposed work progress schedule to the Engineer for approval before starting the work.

MATERIAL SOURCES: Select Material, Aggregate Base and Mineral Aggregate shall be obtained from commercial sources. The Contractor shall pay all royalties, or any other charges or expenses, incurred in connection with the securing and hauling of the material. The Contractor will be required to furnish the Engineer with a list of his proposed commercial sources prior to use, and shall present certificates stating that the material produced from commercial sources is in accordance with the Uniform Standard Specifications and these Special Provisions.

SUBSECTION 101.2 - DEFINITIONS AND TERMS: Change the definition of Budget Project to read as follows: A project financed by funds set aside in the annual budget or otherwise approved by the Board of Directors of the Flood Control District of Maricopa County.

Change the definition of Engineer to read as follows: The Chief Engineer and General Manager of the Flood Control District of Maricopa County acting directly or through his authorized representative.

Change the definition of Owner to read as follows: The Flood Control District of Maricopa County, acting through its legally constituted officials, officers or employees.

SECTION 102 - ADDENDA & SUBMISSION OF BIDDING SCHEDULE: It shall be the responsibility of prospective bidders to determine, prior to submission of a bid, if any addenda have been issued. This may be accomplished by calling 602-262-1501. Any addendum issued, if not already bound into the Special Provisions, must be included as a part of the Special Provisions, and any quantities on the Bidding Schedule requiring change shall be adjusted by pen and ink to the new figure.

Bids that do not include appropriate addenda and show appropriate changes to the Bidding Schedule shall be invalid.

SECTION 102.5 - PREPARATION OF PROPOSAL: The bidder's Arizona State Contractor's License number and classifications need not be shown on the proposal. The possession of such a license is no longer a bidding requirement; however, the Contractor may be required to provide certification of prior satisfactory completion for similar construction.

SECTION 103.6 - CONTRACTOR'S INSURANCE: Concurrently with the execution of the contract, the Contractor shall furnish a Certificate of Insurance. The types of insurance and the limits of liability shall be as indicated thereon, i.e.

\$1,000,000	bodily injury per person
\$5,000,000	bodily injury each occurrence
\$1,000,000	property damage

SECTION 104.1.2 - TRAFFIC REGULATIONS

A. The following shall be considered major streets:

43rd Avenue
Peoria Avenue

B. All traffic and/or traffic control devices on this project shall be provided, maintained and/or controlled as specified in the City of Phoenix Traffic Barricade Manual, latest revision.

C. Permission to restrict City streets, sidewalks, and alleys (street closure permits) shall be requested as specified in Section III of the Traffic Barricade Manual.

D. Unless otherwise provided for in the following "Special Traffic Regulations" all traffic on this project shall be regulated as specified in Section IV of the Traffic Barricade Manual.

E. SPECIAL TRAFFIC REGULATIONS

43rd Avenue from Mt. View Road to Cholla Street and
Peoria Avenue from 43rd Avenue to 39th Avenue

43rd Avenue and Peoria can be reduced to 3 lanes on each street (2 lanes peak directional) weekdays from 7:00 a.m. to 8:30 a.m. and 4:00 p.m. to 6:00 p.m. During other times, 43rd Avenue and Peoria can both be reduced to 2 lanes (one each way) when construction requires.

F. Police Officer Requirement

Contractor shall provide one off-duty police officer at 43rd Avenue and Peoria weekdays from 7:00 a.m. to 6:00 p.m. when traffic is restricted through the intersection.

SECTION 104.2 - BORING LOGS AND SOILS REPORT: The soil boring logs are included in the project for the Contractor's information only. No guarantee is made of the accuracy of the boring logs in the soils report. The Contractor shall make his own determination as to soil and subsurface conditions and shall complete his work in whatever material

and under whatever condition he may encounter or create, without extra cost (except as modified in MAG). Existing moisture conditions shall be no basis for claim for additional monies or time extensions. The Contractor shall manipulate the existing soil as required to achieve stable soil conditions and the required densities.

SECTION 104.2.2: Due to Physical Conditions: Paragraph *B). In the first sentence delete the following words:

"backfill or bedding"

SECTION 105.2 - PLANS AND SHOP DRAWINGS:

A. The Contractor shall furnish the Engineer with six (6) copies of shop drawings, pipe layout diagrams, manufacturer's catalog data, and detailed information, in sufficient detail to show complete compliance with all specified requirements, covering but not limited to the following items:

1. Fabricated Pipe and Design Data, Including Rubber Gaskets
2. Pipe Liner
3. Pre-Cast Manhole Risers
4. Reinforcing Steel
5. Castings
6. Field Closures
7. Concrete Mix Designs
8. PVC Structure Lining
9. Caulking Materials
10. Coating Materials
11. In-Line Bulkheads and Plates
12. Grating Design Calculations and Details
13. All Special Fabricated Fiberglass; Stop Logs
14. Hatch Covers and Appurtenances
15. Detailed Sequence of Construction for Structures
16. Traffic Control Plan
17. Utility Protection Plan

B. Prior to fabrication of pipe, the Contractor shall obtain and submit to the Engineer, manufacturer's drawings and pertinent data as required above.

Data submitted shall include layout drawings and schedules, with references to the stationing and grades shown on the plans. The schedules shall show D-loads and the point of change from one D-load to the next shall be clearly indicated by the station number. Invert elevations of the pipeline shall be shown on the layout drawings.

Drawings showing full details of reinforcement, concrete, lining, and joint dimensions for the straight pipe, specials and connections, shall be furnished.

The diameter of pipe, lining, thickness of pipe wall, and the area of steel reinforcing shall be listed for each design D-load of the pipeline.

C. Drawings of minor or incidental fabricated material and/or equipment may not be required by the Engineer. The Contractor shall furnish the Engineer tabulated lists of such fabrications, showing the names of the manufacturers and catalog numbers, together with samples or general data as may be required to permit determination by the Engineer as to their acceptability for incorporation in the work.

D. Review

The Contractor, at his own expense, shall make such changes in the above drawings as may be necessary to conform to the plans and specifications. Prior to return of such drawings, any work which the Contractor may do on the fabrications covered by the same shall be at his own risk, and the Contractor shall be responsible for any expense or delays incurred by the Contractor for changes to make the same conform to the drawings as finally reviewed.

One copy of submitted drawings will be returned to the Contractor. If the submittal is marked "Revise and Resubmit" or "Rejected," a new submittal shall be made in the same manner as the original submittal.

When submitted for the Engineer's review, shop drawings, line layouts, etc., shall bear the Contractor's certification that he has reviewed, checked and approved the shop drawings, etc., and that they are in conformance with the requirements of the Contract Documents. The Engineer will not review any submittals which do not bear the Contractor's certification.

After the review has been completed, the above drawings, lists, samples, design calculations, and other data, shall become a part of the Contract Documents and the fabrications furnished shall conform to the submittal.

Review of material and layout drawings consists of review for general conformity to plans and specifications and in no way relieves the Contractor or the supplier from responsibility for the correctness of the drawings.

Deviations or changes from plans or specifications must be called out as such and will require review by the Engineer for approval or rejection.

SECTION 105.6 - COOPERATION WITH UTILITIES: An attempt has been made to determine the location of all underground utilities and drainage pipes, culverts and structures; however, it shall be the Contractor's responsibility to cooperate with the pertinent utility companies so that any obstructing utility installation may be adjusted. Should the Contractor's operations result in damage to any utility the location of which has been brought to his attention, he shall assume full responsibility for such damage.

The following phone numbers should put the Contractor in contact with the proper personnel:

Flood Control District	262-1501
Mountain Bell Telephone Company	842-7755
Salt River Project	273-2202
Arizona Public Service	271-7014
Location Staking (A.P.S., Mtn. Bell, S.R.P.)	263-1100
City of Phoenix Streets and Traffic	262-6565
City of Phoenix Water and Wastewater	261-8229

SECTION 105.8 - CONSTRUCTION STAKES, LINES AND GRADES: The Contractor shall furnish all materials, personnel and equipment necessary to perform all surveying, staking, laying out of control lines, and verification of the accuracy of all existing control points which have been provided by the Engineer. The work shall be done under the direction of a registered professional engineer or a registered Land Surveyor employed by the Contractor. The work shall conform to the City of Phoenix Manual of Standard Requirements for Staking.

The Contractor shall furnish field books to be used for recording survey data and field notes. These books shall be available for inspection by the Engineer at any time and shall become the property of the Engineer upon completion of the work.

The Engineer reserves the right to make inspections and random checks of any portion of the staking and layout work. If, in the Engineer's opinion, the work is not being performed in a manner that will assure proper control and accuracy of the work, he will order any or all of the staking and layout work redone at no additional cost.

SECTION 105.10 - INSPECTION OF WORK: Work will be subject to City of Phoenix inspection and acceptance prior to final acceptance by the Engineer.

SECTION 105.12 - MAINTENANCE DURING CONSTRUCTION: Continuous sewer service shall be provided at all times. The Contractor shall provide all labor, material and equipment necessary to maintain continuous sewer service.

SECTION 106.3 - PLANT INSPECTION:

A. Off-Site Inspection

The Contractor shall be responsible for all expenses, including but not limited to travel and per diem expenses, for required inspections by the Engineer and/or the cost of inspection and testing by an independent testing laboratory as required by and at the discretion of the Engineer for any inspection of reinforced concrete pipe manufactured outside of a fifty-mile radius from the City limits of Phoenix, Arizona.

SECTION 106.5 - CONTRACTOR'S MARSHALING YARDS: Contractors shall obtain approval of the Engineer when using vacant property to park and service equipment and store material for use.

- A. The Contractor shall notify adjacent property owners/residents of this proposed use.
- B. Any use of vacant property adjacent to or near the project for parking or servicing equipment and/or storing of material will require the Contractor to obtain written approval from the property owner. This approval shall contain any requirements which are a condition of this approval.
- C. A copy of the property owner's approval shall be submitted along with the Contractor's request to the Engineer for approval for the use of the marshaling yard in connection with the project. An appropriate distance from adjacent property will be set by the Engineer on a case by case basis based on the size and type of equipment to be used on the project.
- D. The yard shall be fenced and adequately dust-proofed in a manner such as to preclude tracking of mud onto paved City streets.
- E. Work in yard shall be scheduled so as to comply with the City Noise Ordinance.
- F. Equipment, materials, etc., shall be located so as to minimize impact on adjacent properties. A sound barrier may be required if deemed necessary by the Engineer.
- G. The Contractor shall clean up property promptly upon completion of use.
- H. Contractor's request for approval shall specify in detail how he or she proposes to comply with D through G above.

SECTION 107.2 - PERMITS: The Contractor shall be responsible for obtaining all permits and licenses, pay all charges, fees, taxes and give all notices necessary and incidental to the due and lawful prosecution of the work. Permits for earth moving may be obtained from the Bureau of Air Pollution Control, Maricopa County Department of Health Services, 1845 East Roosevelt, telephone number 258-6381.

A no charge permit is required from the City of Phoenix.

A permit is required from Salt River Valley Water Users Association for work in their right of way.

SECTION 107.10 - CONTRACTOR'S RESPONSIBILITY FOR WORK: The Contractor shall properly guard, protect, and take every precaution necessary against injury or damage to all finished or partially finished work, by the action of the elements or from any other cause until the entire project is completed and accepted by the Engineer. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work before final acceptance at no cost to the Contracting Agency. Partial payment for completed portions of the work shall not release the Contractor from such responsibility.

In case of suspension of the work for any cause whatever, the Contractor shall be responsible for the project and shall take such precautions as may be necessary to prevent damage to the project and shall erect any necessary temporary structures, signs, or other facilities at no cost to the Contracting Agency.

SECTION 108 - SUGGESTED SEQUENCE OF SEWER TIE-OVERS:

A. The following sequence is illustrative only. The Contractor shall determine the methods, procedures, and sequence to be used to tie-over to the existing sewer and shall submit the description for review. Continuous sewer flow shall be maintained at all times.

1. Construct and test all sewer mains and all structures except MH B-5 and MH C-1. Cut and plug existing sewer and water services (Line A, Sta 25+15 to Sta 37+23) at north side of trench during trench backfilling.

2. After acceptance of all completed sewers, install temporary plug in 30" sewer on Peoria Ave. at any structure west of MH B-5. Sawcut and remove 30" pipe as required and construct MH B-5 and MH C-1.

3. Sawcut and remove pipe, make tie-overs and plug existing pipes where shown at MH B-4 (service), MH C-2, Line C Sta 3+10 (service), and MH C-4.

4. Remove all stop gates and stop logs from siphon inlet and outlet structures.

5. Sawcut and remove existing pipe at junction structure A-1. Do not plug 30" pipe to the west at this time.

6. Sawcut and remove pipe, make tie-overs and plug existing pipes where shown at structures A-5, A-6.1 (service), A-7 (service), A-10, A-14, and A-15.

7. Make night-time plugging at structure A-1, as follows: Install stop gate and all stop logs at siphon inlet structure (A-3) to divert flow from siphon barrels to 30" line. Plug 30" pipe to west in junction structure (A-1). Plug 2-18" pipes and 15" pipe at existing structures east of junction structure A-1. Remove stop gate and stop logs as directed by City of Phoenix.

8. Pump out any sewage remaining in existing pipes or structures to be abandoned. Abandon existing structures shown in accordance with Section as follows: Remove frame and cover, and concrete cone or flat top. Plug pipe entrances into existing structure with concrete. Backfill existing structure with ABC to existing grade, compacting to 95% density.

B. Measurement and Payment: Sawcutting and removing pipe, plugs, pumping, temporary pipe, and all other work necessary for tie-over to the new sewer will not be measured for payment, but shall be considered incidental to the pipe construction. Abandoning existing manholes and structures will be paid for at the unit price bid for each structure.

SECTION 108.5 - LIMITATION OF OPERATIONS: Should the Contractor elect to perform any work after regular working hours, on weekends, or legal holidays, any charges incurred by the District for inspection of the work, surveys, or tests of materials will be deducted from monies due or to become due to the Contractor.

SECTION 108.9 - FAILURE TO COMPLETE ON TIME: The actual cost per calendar day incurred by the District for Consultant Administrative and Inspection Services on this project will be added to the daily charges as indicated by Table 108, LIQUIDATED DAMAGES, and will be deducted from monies due or to become due to the Contractor for each and every calendar day that work shall remain uncompleted after the time specified for the completion of the work in the proposal, or as adjusted by the Engineer. Nothing contained in this provision shall prohibit the District from deducting from monies due or to become due to the Contractor any other costs incurred by the District directly attributable to the delay in completing this contract.

SECTION 336 - PAVEMENT REPLACEMENT

A. The asphaltic concrete thickness shall match the existing pavement thickness, but shall not be less than 4 inches thick on 43rd Avenue and Peoria Avenue.

B. Seal coat shall be placed in the following locations:

46th Avenue - Chip seal entire width of street.

43rd Avenue Shopping Center Parking Lot - Chip seal entire easement width. This area may be modified by the Engineer, subject to approval by the property owner.

BID ITEM 340-4 - EXTRUDED CONCRETE CURB:

Item shall be constructed using machine or forms to match the existing extruded concrete curb, in dimensions, shape, texture, and color to the satisfaction of the Engineer.

BID ITEM 340-5 - CONCRETE CHANNEL:

Item shall consist of reinforced concrete drainage channel. Concrete channel shall have the same nominal dimensions and reinforcement as the existing channel. Concrete shall be Class "B." Subgrade shall be compacted to 95% relative density.

Concrete channel will be measured and paid at the contract unit price bid per square foot.

SECTION 345 - ADJUSTING FRAMES, COVERS, WATER METER BOXES AND VALVE

BOXES: Any frames, covers, water meter boxes and valve boxes which are disturbed or removed during construction shall be adjusted or replaced according to Section 345. There will be no direct payment for this item, the cost will be included in the price for the sewer pipe except as noted in Bid Proposal.

SECTION 350 - MISCELLANEOUS REMOVAL AND OTHER WORK

In addition to the work included in MAG Section 350 and Phoenix Supplement Subsection 350.3, the following work shall be included in this bid item:

A. Remove and Replace Chain Link Fence and Masonry Wall: The work shall conform to MAG Sections 420 and 772 for chain-link fence, and to MAG Sections 510, 511, 775, and 776 as applicable for concrete block and brick masonry.

B. Remove and Replace Pipe.

C. Remove and Replace Grouted Riprap.

- D. Remove and Replace Pipe Railing.
- E. Remove and Replace Concrete Sign Base; Remove and Reinstall Sign.
- F. Remove and Replace Desert Landscaping, Lawn, and Trees.
- G. Remove and Replace Traffic Signal wire and conduit. Maintain continuous traffic signal service.

The extent of the removals and replacements shall be that required to construct the proposed work.

The work shall be neatly joined, coursed, connected, attached or butted (as applicable) to the existing construction and shall match the color, texture, and appearance of the existing construction to the satisfaction of the Engineer. Existing undamaged materials may be reused, subject to the approval of the Engineer. Contractor shall provide a sample replacement material prior to any replacement work.

The Engineer reserves the right to reject any replacements that do not meet the criteria for this item. The Contractor shall remove and replace any such rejected work to the Engineer's satisfaction at no additional expense.

The Contractor shall adequately photograph all existing conditions in the construction areas prior to beginning construction. The photographs shall be dated and marked with the corresponding project stationing.

SECTION 401.5 - TEMPORARY CONCRETE BARRIERS: Temporary concrete barriers shall be furnished and placed to protect traffic from the construction excavation in the siphon area (from Structure A-1 to A-4). This protection shall be provided along Peoria Avenue, 43rd Avenue, and in shopping center parking stalls adjacent to the excavation. The temporary concrete barriers and attenuation devices shall conform to ADOT standards, details, and layout diagrams. The Contractor shall submit a plan for these barriers as a part of his traffic control plan for review by the Engineer and by the City of Phoenix Streets and Traffic Department. Temporary concrete barriers will not be measured for payment, but shall be considered incidental to the major items of work.

SECTION 405 - SURVEY MONUMENTS: Any monument disturbed by the construction shall be replaced in conformance to Section 405. Where monuments are called for on the plans to be removed and replaced, the payment will be made for the item each as called for in the Proposal. There will be no direct payment for the replacement of monuments not specifically called for on the plans, the cost of this work shall be included in the price for sewer pipe.

SECTION 601 - TRENCH EXCAVATION, BACKFILLING, AND COMPACTION:

A. City of Phoenix Supplement Subsection 601.2.1 General: is amended to add the following paragraph:

"No extra compensation or additional time will be authorized for claims that soil conditions differ from those anticipated or those indicated by soils logs and/or reports. It is the Contractor's responsibility to make his own determination as to actual existing conditions."

B. Subsection 601.2.2 Trench Width: is amended to add the following paragraph:

"If the Contractor elects to slope the trench walls in lieu of shoring, sheeting or other wall support measures, he shall be responsible for any and all problems encountered and costs incurred as a result of the increased trench width. Furthermore, no increases in contract time will be allowed as a result of sloping trench walls."

C. Subsection 601.2.5 Over Excavation: is amended to add the following paragraph:

"When the Engineer determines that over excavation and backfilling, below the normal foundation and bedding depth, are required as a result of unsuitable material, it will be considered extra work. Payment and construction time extension will be negotiated with the Contractor or as otherwise provided for in these contract documents. As a condition of the Contractor receiving payment, agreement on method of payment and construction time extension shall be reached prior to start of work unless otherwise authorized in writing by the Engineer."

D. Subsection 601.2.8 Grading and Stockpiling: Add the following paragraph:

"Excavated material shall not be considered as unsuitable due to an excessive moisture content or an inadequate moisture content for proper compaction. The Contractor shall take whatever measures are required, at his own expense, to add or remove moisture from material to be used as backfill in order that proper compaction can be obtained within the limits set in Section 601.4.

The Contractor may elect, at no cost to the Contracting Agency, to haul off and dispose of excessively wet or dry material and replace it with material conforming to the specifications for backfill.

In either event, the proper compaction and stability shall be obtained.

There will be no additional payment or time extension for this work."

E. Subsection 601.4.3 Backfill: Delete the fourth paragraph in its entirety and substitute the following:

"When mechanical compaction is to be used, the Contractor will provide a test section demonstrating his proposed method and equipment to be used. Upon agreement with the Engineer as to the acceptability of the Contractor's proposed method and equipment, they shall not be changed without the prior approval of the Engineer. Mechanical compacted lifts in excess of one foot will not be allowed without the express written consent of the Engineer."

F. Subsection 601.4.3 Backfill: is amended to add the following paragraphs:

"Backfill material shall be within the range of +2% to -4% of the optimum moisture content, prior to placing the material in the trench. The moisture content shall be uniform throughout the backfill material. Material not meeting these requirements may be required to be removed from the trench and moisture added or removed to correct the deficiencies prior to replacement, all at no increase in cost to the contract.

It shall be the Contractor's responsibility to blend excavated material, removing or adding moisture as may be necessary to meet the requirements of the specifications, all at no increase in cost to the contract.

Excavated material when used for backfill shall meet the requirements of the preceding paragraph.

The moisture content requirements contained herein are waived when granular material is used and water settled.

The Engineer may require all or any part of the trench to be load tested for stability with Contractor's equipment prior to placement of asphalt or Portland cement concrete pavement. Unstable areas as determined by the Engineer shall be corrected by the Contractor at no increase in cost to the contract."

G. Submittal: The Contractor shall submit his plan, methods, and procedures for protecting existing utilities prior to beginning construction. Approval of the plan does not limit the Contractor's responsibility for utility protection, and the Contractor shall implement all additional utility protection measures as determined to be necessary in the field.

SECTION 615 - SEWER LINE CONSTRUCTION:

A. Mainline Sewer Pipe

All 30" and 36" pipe shall be considered mainline sewer pipe and shall be either reinforced concrete pipe or vitrified clay pipe (except where noted to be ductile iron pipe).

1. Alternate 1 - Reinforced Concrete Pipe shall be P.V.C. lined reinforced concrete rubber gasket pipe conforming to MAG Section 735. R.C.P. shall have a minimum D-load of 3000.

P.V.C. lining of the pipe shall cover the upper 300 degrees of the concrete pipe and shall conform to Section 741 of MAG.

Rubber gaskets for concrete pipe shall conform to MAG Section 765.

The interior portion of all concrete pipe joints shall be mortared prior to welding the joints of the lining. Mortar shall conform to MAG Subsection 736.3.1.

2. Alternate 2 - Vitrified Clay Pipe shall be extra strength vitrified clay pipe conforming to MAG Section 743. Trenching, bedding, and backfill shall conform to MAG Section 601 and to standard details P-1120 through P-1126.

B. Siphon Pipe

1. Sewer pipe in the inverted siphon and adjacent to the siphon inlet and outlet structures shall be mechanical joint ductile iron pipe, as indicated on the plans. Mechanical joint ductile iron pipe shall be Class 54, conforming to MAG Section 750. All ductile iron pipe shall be fully lined with a polyethylene lining.

2. Lining Materials: The lining material for pipe and fittings shall be polyethylene complying with ANSI/ASTM D1248, compounded with an inert filler and with sufficient carbon black to resist ultraviolet rays during above ground storage of the pipe and fittings. Prior to pre-heating, the high temperature oxide film shall be removed by sand-blasting through proper preparation of pipe interior surface. Fittings shall be sandblasted. Pipe and fittings shall be uniformly preheated to a temperature adequate to provide uniform fusing of the polyethylene powders and proper bonding to the pipe and fittings.

3. Lining Application: Polyethylene linings shall cover the inner surface of the pipe or fitting from the plain or beveled end to the rear of the gasket socket.

4. Lining Thickness: Lining in pipe and in fittings shall be 40 mils nominal thickness. Minimum lining thickness shall be 30 mils, except for areas not to exceed 12 inches in any direction, minimum thickness shall be 25 mils. At ends of pipe and fittings, lining thickness may taper for a distance of 4" to a minimum of 10 mils thickness.

The lining at the ends shall be hermetically sealed and every pipe and fitting shall be subjected to and pass a 400 volt wet sponge, or equivalent, spark test.

5. The pipe joints shall be caulked utilizing a single component, polyurethane base sealant, Grove International, Inc., Mono-Caulk 100", or approved equal.

The pipe shall be coated by encasement in a polyethylene protective wrapping in conformance with MAG Specification Section 610.5.

A sealant material that can be brush applied in the field shall be provided and applied in the field for lining damage caused during pipe installation.

6. Bedding for ductile iron sewer pipe shall be in accordance with MAG Section 601, and the details shown in the plans.

7. Measurement for ductile iron pipe will be made horizontally from the inside face of the structures.

SECTION 615.3 - PIPE BULKHEADS: The Contractor shall install and/or remove permanent pipe bulkheads as called for on the plans. At the close of each day's work and at other such times when pipe is not being laid, the end of the pipe shall be closed with a temporary stopper. Temporary stoppers shall be incidental to the project.

SECTION 615.9 - LEAKAGE TEST: All costs for testing shall be incidental to the project.

A. RGRCP Pipe - No leakage test will be required of the Contractor on RGRCP sewer pipe. The liner plate shall be visually inspected and the liner plate and welds shall be tested in accordance with Section 741.2.5 of MAG.

The Contractor will be required to use a feeler gauge (supplied by the pipe manufacturer) on each pipe joint to ensure that the rubber gasket has not been damaged or unseated. All damaged rubber gaskets shall be removed and replaced with new rubber gaskets. The Engineer will check the joints with the same feeler gauge used by the Contractor prior to the joints being mortared at his discretion. Any necessary repairs or corrections shall be made by the Contractor at no additional cost to the City.

Exception - A water leakage test done in accordance with MAG will be required on each pipe joint connecting to a structure.

B. VCP & DIP - Low pressure air testing, as specified in MAG Section 615.9, will be required of the Contractor.

BID ITEM 615.11 - CUT AND PLUG SEWER AND WATER SERVICES:

This item shall consist of cutting and plugging existing sewer services, cutting and plugging existing water services, removal of water meter boxes and filling and compacting meter box holes. Water meter boxes shall be salvaged and stockpiled for pickup by City of Phoenix forces. Contractor shall make every attempt to locate water service corporation stop and shall turn off valve, to the satisfaction of the Engineer.

Payment shall be for each pair of water and sewer service cut and plugged. No payment will be made for cutting and plugging sewer services to be connected to the new sewer or new manholes.

SECTION 625 - MANHOLE CONSTRUCTION: Manholes consisting of manhole structures and manhole shafts, frames and covers shall be constructed at the locations called for on the plans.

1. Manhole Structure and Shaft

Manhole bases, shafts, frames and covers shall be constructed as detailed on the plans and on MAG Details 420 and 424. Material and construction methods shall conform to MAG Section 625.

2. Lining of Manholes

Manhole shafts located on the 30" and 36" mainline sewer pipe shall be lined on the inside with P.V.C. liner plate per MAG 741. The lining shall extend fully around the interior circumference from the bottom of the manhole shaft up through the cone excluding the adjustment rings. All joints in the lining shall be covered with a weld strip. The lining shall also conform to the details on the plans. All costs for lining shall be included in the cost of the manhole.

3. Measurement and Payment

Manholes will be measured and paid for at the unit price bid each for 5' diameter and 4' diameter manholes complete. No measurement and payment will be made for PVC lining, plugs, and connection and tie-overs to existing sewers.

SECTION 625 - SPECIAL STRUCTURES:

A. Description

The work described in this Section of the Special Provisions involves the general requirements for furnishing and installing the following special structures:

1. Siphon Inlet Structure (A-3)
2. Siphon Outlet Structure (A-2)
3. Junction Structure (A-1, A-5, and A-15)

B. Site Work

1. Excavation, Backfill and Compaction

All excavation, backfill, and compaction for special structures shall meet the requirements of applicable portions of MAG Section 206, with the following specific exceptions:

- a. On structures where the connecting pipe does not continue through the structure, the top six inches of the subgrade under the base slab shall be compacted to a minimum of 95% of maximum density prior to placement of the slab.
- b. Backfilling around special structures shall be done in accordance with the requirements for trench backfilling as stated in MAG Section 601, except that water consolidation will not be permitted.
- c. Site work for special structures shall include any sheeting, shoring, bracing or dewatering required during construction, or for the safety and protection of personnel.

2. Utility Supports

Except where utility supports are specifically included as a contract pay item, the site work for each special structure shall include the temporary support or relocation of utilities which are disturbed as a part of the work for the special structure. Work done to protect existing utilities shall be in conformance with applicable MAG Specifications and Details, and shall be done to the satisfaction of the affected utility.

3. Site Protection

Open excavations, equipment, and material stored on-site shall be protected from access by the public at all times, by means of temporary fencing, traffic detours, and/or other approved measures.

Costs of site protection shall be included as site work for each of the special structures.

4. Surface Restoration

The site work for each special structure shall include the restoration of all existing surfaces in kind, including street pavement, curbs and gutters, sidewalks, and landscaping.

Restoration of surfaces other than street pavement shall match the existing surface in detail, appearance, and material quality, to the greatest extent possible. Street pavement restoration over and above the amounts allowed above shall be the same as the adjacent replaced pavements. All costs for surface restorations shall be included in the cost of the structure.

C. Structural Work

1. Except where noted otherwise, all structural concrete shall be cast-in-place with Class 'A' reinforced concrete meeting the requirements of MAG Section 725. Cement shall be Type II, low alkali, or Portland Pozzolan Cement.

2. Placement, curing, and finishing of concrete shall conform to the requirements of MAG Section 505. Concrete surfaces exposed to view above ground shall receive a Class III finish to a point six (6) inches below finished grade. All other surfaces shall receive a Class I finish.

3. Concrete curing materials shall conform to the requirements of MAG Section 726.

4. Reinforcing steel shall be deformed intermediate grade 40 billet steel, in accordance with MAG Section 727, for #6 bars and smaller and Grade 60 for #7 bars and larger.

5. Where new concrete is poured against existing concrete surfaces, the existing surface (including concrete bricks and pipe walls) shall be sandblasted to remove all earth and foreign material. The existing surface shall then be coated with a bonding agent, applied in accordance with the manufacturer's recommendations. Bonding agents shall be Epoxy Adhesive Engineering Concessive No. 1 LPL, Hunts Process HB 100 or 151, or equal.

6. Bond breaker for concrete form surfaces shall be white pigmented curing compound, conforming to AASHTO M-148, Type 2.

7. Grout used for the repair of imperfect concrete work, filling of holes left by form bolts or ties, the filling of voids around items through the concrete and in setting machinery and anchor bolts shall be five star, non-metallic, non-shrink grout such as POR-ROK, Hallenite Manufacturing Company; Burke Stone, Burke Concrete Accessories, Inc.; or equal.

8. Caulking, where indicated on the Plans, shall be done with a synthetic rubber sealing compound. The rubber sealing compound shall be a multi-part polyurethane designed to cure at room temperature to a firm, highly resilient rubber. Application shall be in strict accordance with the manufacturer's instructions and by means of a pneumatic caulking tool or other acceptable method.

9. Fillets shall be furnished and installed in each special structure, in accordance with the general flow lines shown on the Plans. Fillets shall be constructed of Class C concrete, in accordance with MAG Section 725, or Course Brick in Mortar. Fillets shall be hand shaped and trowel finished to create a smooth, even flow line which is free of obstructions to the flow.

D. PVC Liner Plates

Liner plate material shall conform to Section 741 of MAG, and shall be installed on all interior surfaces where shown on the drawings. Section 741 shall be amended to include the following paragraphs:

741.3 Application to Cast-In-Place Concrete Structures:
Special Requirements

741.3.1 Liner plate sheets shall be closely fitted and properly secured to the inner forms. Sheets shall be cut to fit curved and warped surfaces using a minimum number of separate pieces. If liner plate joints are to be Type C-3 joints, as described below, the adjacent sheets shall be butted with not more than 1/8-inch opening between the sheets. A welding strip shall be fusion welded on the back of butt joints to prevent wet concrete from flowing around edges.

Unless otherwise shown on the plans, liner plate shall be returned 4 inches at the surface of contact between the concrete structure and items not of concrete. The same procedure shall be followed at joints where the type of protective lining is changed. At each return, the returned liner plate shall be sealed to the adjacent surface in contact with the plastic lined concrete, using Amercoat No. 19Y adhesive, or equal. If the joint space is too wide or the joint surfaces too rough to allow satisfactory sealing with this adhesive, the joint space shall be filled with 2 inches of densely caulked lead wool or other approved caulking material.

741.3.2 Joint in Liner Plate for Cast-In-Place Concrete Structures

Liner plate at joints shall be free of all mortar and other foreign material and shall be clean and dry before joints are made.

Field joints in the liner plate shall be of the following described types, used as prescribed:

Type C-1: The joint shall be made with a separate 4-inch joint strip and two welding strips. The width of the space between adjacent liner plate sheets shall not exceed 2 inches. The 4-inch joint strip shall lap over each liner plate a minimum of one inch. It may be used at any transverse or longitudinal joint.

Type C-2: The joint shall be made by lapping sheets not less than one inch. One welding strip is required. The upstream sheet shall overlap the one downstream.

Type C-3: The joint consists of one welding strip applied to the face of the liner plate sheets butted together with one welding strip applied on the back of the joint. It will not be permitted if the gap between the sheets exceeds 1/8-inch.

All welding to be in strict conformance with liner plate manufacturer's specifications.

E. Painting and Coating

1. Aluminum surfaces to be placed in contact with concrete, wood or masonry shall be given a two-coat application of zinc chromate primer before installation.

2. Coal tar epoxy shall be Koppers 300M, Tnemec, or equal, applied in two or more coats for a total dry film thickness of 16 mils in accordance with manufacturer's application instructions. Metal surfaces shall be prepared in accordance with Steel Structures Painting Council (SSPC) Specifications SP-10, not more than 12 hours before painting.

3. Iron and steel products to be galvanized shall be hot-dipped after fabrication in accordance with ASTM Designation A-123 and A-153, or A-386, as may be applicable. Zinc coating shall weigh not less than 2.0 ounces per square foot. Where possible, units shall be fabricated complete or in the largest practicable sections before galvanizing. Surfaces on which the zinc coating has been damaged during delivery or installation shall be repaired by a thorough wire brushing of the damaged area and removal of all loose and cracked zinc coating, after which the cleaned area shall be painted with two coats of zinc-dust, zinc-oxide primer.

4. Exposed aluminum surfaces not in contact with other materials shall be left uncoated. Any painting or coating material applied to exposed surfaces which are not required to be painted or coated shall be thoroughly cleaned after installation and restored to its natural, uncoated condition.

5. Painted Staff Gauge: The staff gauge shall be a red painted pattern and white background of epoxy polyamide paint on a PVC lining base material. The epoxy polyamide paint shall be Series 66 Epoxyline as manufactured by Tnemec, or equal, and shall be applied in two coats by brush or spray with a minimum thickness of 5 mils each coat.

6. Bituminous Mastic: MAG Section 729.2.

7. Epoxy Adhesive: Commercial grade, compatible with materials to be bonded-neoprene to steel or F.R.P.

F. Precast Manhole Shafts

Where required to complete the installation of a junction structure, furnish and install a 48-inch diameter precast manhole shaft and top sections meeting the applicable requirements of MAG Detail 420 (Type 'A'), and the details shown in the Plans. Materials and construction methods shall conform to MAG Section 625.

All manhole shafts shall be lined on the inside with PVC liner plate per these specifications. The lining shall extend fully around the interior circumference from the bottom of the manhole shaft up through the cone excluding the adjustment rings. All joints in the lining shall be covered with a weld strip. The lining shall also conform to the details on the Plans.

G. Miscellaneous Metals and Materials

1. Grating

Where shown on the Plans, furnish and install fiberglass grating of the size and material type shown, in accordance with applicable Plan details and the following requirements:

Fiberglass grating shall be constructed of straight parallel bearing bars composed of a glass fiber and thermosetting resin composite. Grating shall sustain a maximum deflection of no more than 1% of the span with a uniform distributed load of 250 pounds per square foot.

Fiberglass grating shall be secured in place with stainless steel saddle clips at 12 inches on center at each end. The fiberglass grating shall be as fabricated by Imco, or approved equal.

Any additional supports required to meet the above deflection requirements shall be furnished and installed as a part of the grating works, at no additional cost to the Owner.

The grating manufacturer shall submit detailed calculations verifying that the proposed fiberglass grating system conforms to the deflection criteria as listed above.

2. Manhole Steps shall be as specified in MAG Section 625, except that unencapsulated cast-iron manhole steps shall not be used.

3. Miscellaneous Fiberglass

Stop gate grooves and stop logs shall be manufactured by the pultrusion process with materials and fabrication conforming to National Bureau of Standards BS 15-69. Ultimate flexural strength shall be a

minimum of 30000 psi and modulus of elasticity a minimum of 2,000,000 psi.

4. Neoprene Pads: Neoprene rubber, ozone resistant, Shore A hardness 30±5.

5. Aluminum Hatch: Flush mount, locking hatch, torsion assisted as manufactured by Bilco (Type J-5, Al.) or approved equal. Hardware shall be stainless steel.

6. Wedge Anchors: Stainless steel as manufactured by Red Head, or approved equal.

7. Other Miscellaneous Metal Items

Where required to complete the installation of each of the Special Structures, furnish and install any other miscellaneous metal items as required, such as fasteners, supports, anchors, bolts and nuts, etc.

Miscellaneous metal items shall generally conform to the requirements shown on the plans and details. Except where specifically noted otherwise, the following shall apply:

- a. Clamps, supports, and straps shall be of stainless steel, Type 304 or 316.
- b. Fasteners, anchor bolts, nuts, and expansion anchors shall be stainless steel, Type 304 or 316.
- c. Metal parts in direct contact with the PVC lining material shall be installed with a neoprene washer or gasket between the metal and the PVC lining.

H. Payment

Payment for each of the Special Structures shall be based on the price bid for each structure, as noted below:

Siphon Inlet Structure
Siphon Outlet Structure
Junction Structure

The price bid for each structure shall include all necessary excavation, backfill, and compaction to install each structure, concrete, reinforcing steel, PVC lining, coatings as specified, pipe stubs where noted, fillets and grout, and all other miscellaneous items necessary to complete the work on each structure.

GENERAL COMMENTS: The Contractor shall exercise care to prevent damage to any existing facilities.

Upon completion of the construction, the Contractor shall clear the work area of all debris to the satisfaction of the Engineer.

An attempt has been made to determine the location of all underground utilities and to design the location and elevation of all sewer facilities so as to provide minimal interference with the existing utilities, however, it shall be the Contractor's responsibility to cooperate with the utility companies so that any obstructing utility installation may be adjusted.

The Flood Control District of Maricopa County reserves the right to adjust design grades or the location of the sewer lines and structures prior to construction, if it should become necessary in the opinion of the Engineer, without additional cost to the Flood Control District of Maricopa County.

GUARANTEE: The Contractor shall guarantee the construction work for one year against faulty materials, faulty workmanship and failure to meet the requirements of the specifications. Said guarantee by the Contractor shall not apply to damage caused by earthquakes or other acts of God, land subsidence or faulty operations or any abuse of the structures by others.

CONTRACT FCD 85-44

THIS AGREEMENT, made and entered into this _____ day of _____, 19____,
by and between _____

of the City of _____, County of _____, State of _____,
party of the first part, hereinafter designated the CONTRACTOR, and the FLOOD
CONTROL DISTRICT OF MARICOPA COUNTY, acting by and through its BOARD OF
DIRECTORS, a political subdivision of the State of Arizona, a body politic with
corporate power, party of the second part, hereinafter designated OWNER.

WITNESSETH: That the said CONTRACTOR, for and in consideration of the sum
to be paid him by the said OWNER, in the manner and at the time hereinafter
provided, and of the other covenants and agreements hereincontained, and under
the penalties expressed in the bonds provided, hereby agrees, for himself, his
heirs, executors, administrators, successors, and assigns to as follows:

ARTICLE I-SCOPE OF WORK: The CONTRACTOR shall furnish any and all labor,
materials, equipment, transportation, utilities, services and facilities
required to perform all work for the construction of Project No. FCD 85-44;
Sewer Relocation - 47th Ave. to Peoria Ave. for the ACDC,
and to complete and totally construct the same and install the material therein
for the OWNER, in a good and workmanlike and substantial manner and to the
satisfaction of the OWNER through its Engineers and under the direction and
supervision of the Engineer, or his properly authorized agents and strictly
pursuant to and in conformity with the Plans and Specifications prepared by the
Engineers for the OWNER, and with such modifications of the same and other
documents that may be made by the OWNER through the Engineer or his properly
authorized agents, as provided herein.

ARTICLE II-CONTRACT DOCUMENTS: The Invitation for Bids, Plans, Standard
Specifications and Details, Special Provisions, Addenda, if any, and Proposal,
as accepted by the BOARD OF DIRECTORS, Performance Bond, Payment Bond,
Certificates of Insurance, and Change Orders, if any, are by this reference
made a part of this Contract to the same extent as if set forth herein in full.

ARTICLE III-TIME OF COMPLETION: The CONTRACTOR further covenants and agrees
at his own proper cost and expense, to do all work as aforesaid for the con-
struction of said improvements and to completely construct the same and install
the material therein, as called for by this agreement free and clear of all
claims, liens, and charges whatsoever, in the manner and under the conditions
specified within the time, or times, stated in the proposal pamphlet.

ARTICLE IV-PAYMENTS: For and in consideration of the faithful performance
of the work herein embraced as set forth in the Contract Documents, which are a
part hereof and in accordance with the directions of the OWNER, through its
Engineer and to his satisfaction, the OWNER agrees to pay the said CONTRACTOR
the amount earned, computed from actual quantities of work performed and
accepted or materials furnished at the unit bid price on the Proposal made a
part hereof, and to make such payment within forty (40) days after final
inspection and acceptance of the work.

IN WITNESS WHEREOF: Four (4) identical counterparts of this Contract each of which shall for all purposes be deemed an original thereof, have been duly executed by the parties hereinabove named, on the date and year first above written.

The CONTRACTOR agrees that this Contract, as awarded, is for the stated work, and understands that payment for the total work will be made on the basis of the indicated amount(s), as bid in the Proposal.

PARTY OF THE FIRST PART

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
PARTY OF THE SECOND PART

By: _____
Chairman, Board of Directors

Date: _____

RECOMMENDED BY:

ATTEST:

Chief Engineer and General Manager
Flood Control District
of Maricopa County

Clerk of the Board

Date: _____

LEGAL REVIEW

Approved as to form and within the powers and authority granted under the laws of the State of Arizona to the Flood Control District of Maricopa County.

By: _____

Date: _____

CONTRACT NO. FCD 85-44

STATUTORY PAYMENT BOND PURSUANT TO TITLE 34
CHAPTER 2, ARTICLE 2, OF THE ARIZONA REVISED STATUTES
(Penalty of this bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS:

That, _____
(hereinafter called the Principal), as Principal, and

_____ a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____, (hereinafter called the Surety), as Surety, are held and firmly bound unto the Flood Control District of Maricopa County, State of Arizona (hereinafter called the Obligee) in the amount of _____ dollars (\$ _____), for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____ day of _____, 19____, for _____

_____ which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall promptly pay all moneys due to all persons supplying labor or materials to him or his subcontractors in the prosecution of the work provided for in said contract, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, of the Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions, of said Title, Chapter, and Article, to the extent as if it were copied at length herein.

The prevailing party or any party which recovers judgment on this bond shall be entitled to such reasonable attorney's fees as may be fixed by the court or a judge thereof.

Witness our hands this _____ day of _____, 19____.

AGENCY OF RECORD

AGENCY ADDRESS

CONTRACT NO. FCD 85-44
PAYMENT BOND

PRINCIPAL SEAL

BY: _____

SURETY SEAL

BY: _____

POWER OF ATTORNEY SEAL

BY: _____

STATUTORY PERFORMANCE BOND PURSUANT TO TITLE 34
CHAPTER 2, ARTICLE 2, OF THE ARIZONA REVISED STATUTES
(Penalty of this bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS:

That, _____
(hereinafter called the Principal), as Principal, and

_____ a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ (hereinafter called the Surety), as Surety, are held and firmly bound unto the Flood Control District of Maricopa County, in the County of Maricopa, State of Arizona, in the amount of _____ dollars (\$ _____), for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Flood Control District of Maricopa County, dated the _____ day of _____, 19____, for _____

_____ which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extension thereof, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety being hereby waived; then the above obligation shall be void, otherwise to remain in full force and effect;

PROVIDED, HOWEVER; that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, of the Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of said Title, Chapter, and Article, to the extent as if it were copied at length herein.

The prevailing party in a suit on this bond shall be entitled to such reasonable attorney's fees as may be fixed by a judge of the court.

Witness our hands this _____ day of _____, 19____.

AGENCY OF RECORD

AGENCY ADDRESS

CONTRACT NO. FCD 85-44
PERFORMANCE BOND

PRINCIPAL SEAL

BY: _____

SURETY SEAL

BY: _____

POWER OF ATTORNEY SEAL

BY: _____

CERTIFICATE OF INSURANCE

CONTRACT FCD 85-44

PROJECT TITLE Sewer Relocation - 47th Ave. to Peoria Ave. for the ACDC

NAME AND ADDRESS OF INSURANCE AGENCY	INSURANCE COMPANIES AFFORDING COVERAGES
	Company Letter A
	Company Letter B
	Company Letter C
	Company Letter D
	Company Letter E
	Company Letter F
NAME AND ADDRESS OF INSURED	Company Letter G

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE AND ARE IN FORCE AT THIS TIME.

COMPANY LETTER	TYPE OF INSURANCE	POLICY NUMBER	EXPIRATION DATE	LIMITS OF LIABILITY IN \$1,000 MINIMUM each occurrence	
	<input checked="" type="checkbox"/> COMPREHENSIVE GENERAL LIABILITY FORM <input checked="" type="checkbox"/> PREMISES OPERATIONS <input checked="" type="checkbox"/> CONTRACTUAL <input checked="" type="checkbox"/> BROAD FORM PROPERTY DAMAGE <input checked="" type="checkbox"/> EXPLOSION & COLLAPSE <input checked="" type="checkbox"/> PRODUCTS/COMPLETED OPERATIONS HAZARD <input checked="" type="checkbox"/> UNDERGROUND HAZARD <input checked="" type="checkbox"/> INDEPENDENT CONTRACTORS <input checked="" type="checkbox"/> PERSONAL INJURY			BODILY INJURY per person \$1,000 each occurrence \$5,000 PROPERTY DAMAGE \$1,000 OR BODILY INJURY AND PROPERTY DAMAGE Combined \$5,000	
	<input checked="" type="checkbox"/> COMPREHENSIVE AUTO LIABILITY & NON-OWNED			SAME AS ABOVE	
	<input type="checkbox"/> EXCESS LIABILITY			NECESSARY IF UNDERLYING NOT ABOVE MINIMUM	
	<input checked="" type="checkbox"/> WORKERS' COMPENSATION and EMPLOYERS' LIABILITY			STATUTORY	each accident \$100
	<input type="checkbox"/> OTHER				

The Flood Control District of Maricopa County is added as an additional insured as respects work done for the District by the named insured as required by statute, contract, purchase order or otherwise requested. It is agreed that any insurance available to the named insured shall be primary of other sources that may be available. It is further agreed that no policy shall expire, be cancelled or materially changed to effect the coverage available to the District without fifteen days written notice to the District. THIS CERTIFICATE IS NOT VALID UNLESS COUNTERSIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE INSURANCE COMPANY.

NAME AND ADDRESS OF CERTIFICATE HOLDER
 FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
 3335 West Durango Street
 Phoenix, Arizona 85009

DATE ISSUED _____

AUTHORIZED REPRESENTATIVE _____

It is further agreed that:

The Contractor hereby agrees to indemnify and save harmless the FLOOD CONTROL DISTRICT OF MARICOPA COUNTY, or any of its departments, agencies, officers or employees, from and against all loss, expense, damage or claim of any nature whatsoever which is caused by any activity, condition or event arising out of the performance or nonperformance of any of the provisions of this Agreement. The Flood Control District of Maricopa County shall in all instances be indemnified against all liability, losses and damages of any nature for or on account of any injuries to or death of persons or damages to or destruction of property arising out of or in any way connected with the performance or nonperformance of this Agreement, except such injury or damage as shall have been occasioned by the sole negligence of the Flood Control District of Maricopa County. The above cost of damages incurred by the Flood Control District of Maricopa County or any of its departments, agencies, officers or employees shall include in the event of an action, court costs, expenses for litigation and reasonable attorney's fees.

Date _____ Contractor _____

CERTIFICATE OF INSURANCE
CONTRACT FCD 85-44