

CONSTRUCTION SPECIFICATIONS
FOR
24TH STREET SANITARY SEWER AT ARIZONA CANAL

FCD CONTRACT NO. 90-29

CONSTRUCTION SPECIAL PROVISIONS

Prepared By:

BOYLE ENGINEERING CORPORATION
7600 North 16th Street, Suite 223
Phoenix, Arizona 85020



Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

(Engineer's
Seal)

Recommended By: Nick Karan Date: 6-28-90
Nicholas P. Karan, P.E., Chief
Engineering Division

Approved By: D.E. Sagramoso Date: 6-28-90
D.E. Sagramoso, P.E.
Chief Engineer and General Manager

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

A118.515

Pay Item No.	Description	Unit	Bid Qty	Engineers Estimate		Pulice Construction		Unit Price	Bid Total	Unit Price	Bid Total
				Unit	Bid	Unit	Bid				
				Price	Total	Price	Total				
336-1	Replace Pavement - Type A T-Top	SY	50	25.00	1,250.00	50.00	2,500.00				
340-1	Remove and Replace Sidewalk	SF	2,496	4.00	9,984.00	4.00	9,984.00				
340-2	Remove and Replace Concrete Curb	LF	1,179	8.00	9,432.00	15.00	17,685.00				
350-1	Removal & Rest. of Decortive Wall (or prtection in place of decortive wall)	LS	1	2,000.00	2,000.00	3,500.00	3,500.00				
401-1	Traffic Control	LS	1	20,000.00	20,000.00	12,000.00	12,000.00				
430-1	Remove/Restore Landscaping, Irrig. Systems, Complete to Original Cond.	LS	1	10,000.00	10,000.00	50,000.00	50,000.00				
430-2	Furnish and Install 10-36" Box Eucalyptus Trees	EA	10	800.00	8,000.00	600.00	6,000.00				
452-1	Furnish, Install, Backfill, Encase, 4" Telephone Conduit	LF	3,300	8.00	26,400.00	6.50	21,450.00				
602-1	Furnish, Jack, Bore 42" Casing, Install Carrier Pipe and Grout	LF	103	600.00	61,800.00	2,400.00	247,200.00				
615-1	Furnish, Install, Backfill and Com- pact 12" Class 52 Epoxy Lined, Poly- wrap Encapsulated DIP	LF	1,099	152.50	167,597.50	365.00	401,135.00				
615-2	Furnish, Install, Backfill and Com- pact 16" Class 52 Epoxy Lined, Poly- wrap Encapsulated DIP	LF	192	180.00	34,560.00	475.00	91,200.00				
615-3	Furnish, Install, Backfill and Com- pact 15" Sanitary Sewer Stubout	LF	8	100.00	800.00	425.00	3,400.00				
625-1	Furnish, Install, Backfill and Com- pact Sanitary Sewer Manhole No. 2 & No. 3 MAG Std. Det. 420 and 424	EA	2	3,000.00	6,000.00	2,500.00	5,000.00				
625-2	Furnish, Install, Backfill and Com- pact Sanitary Sewer MH No. 1 & No. 6 MAG Std. Det. 420 and 424 and Maintain Sewer Service	EA	2	4,000.00	8,000.00	3,100.00	6,200.00				
625-3	Furnish, Install, Backfill and Com- pact Sanitary Sewer MH No. 4 - MAG Std. Det. No. 420 & 424 with Special Base	EA	1	5,000.00	5,000.00	6,000.00	6,000.00				

ADDENDUM NO. 2

JULY 25, 1990

FCD Contract No. 90-29

To Contract Documents

Title: 24th STREET SANITARY SEWER AT ARIZONA CA

Owner: Flood Control District of Maricopa County

The above documents are herein modified. The provision applicable to these modifications remain unchanged unless indicated otherwise herein. This Addendum No. 2 forms Documents and modifies them as follows:

TO INVITATION TO BID

Bid Opening is postponed. New bid date will be provided in an Addendum No. 3.

F.Y.I.

To: CAK

90-29; add. 2

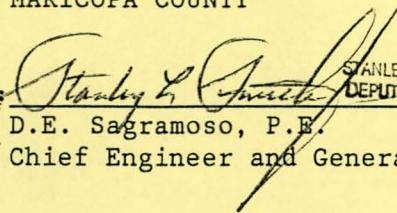
From: Contracting

Return

Keep or toss

Post-it™ F.Y.I. pad 7668

FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY

By: 

STANLEY L. SMITH JR., P.E.
DEPUTY CHIEF ENGINEER

D.E. Sagramoso, P.E.

Chief Engineer and General Manager

ADDENDUM NO. 1
July 16, 1990

FCD Contract No. 90-29

To Contract Documents

Title: 24th STREET SANITARY SEWER AT ARIZONA CANAL

Owner: Flood Control District of Maricopa County

The above documents are herein modified. The provisions of said documents and these modifications remain unchanged unless specifically indicated otherwise. This Addendum No. 1 forms a part of the Contract Documents and modifies them.

TO INVITATION TO BID

Change bid opening date to: "July 25, 1990."

TO BIDDING SCHEDULE

Remove page 6 of 24 and replace with the attached page 6R of 24. The quantity of Item No. 340-2 has changed. Item No. 350-1 is deleted. The description and quantity of Item No. 430-2 has changed. The description and quantity of Item No. 340-1 has changed.

TO CONSTRUCTION SPECIAL PROVISIONS

Subsection 107.8 - Use of Explosives

Add the following sentence to Subsection 107.8 of the MAG Uniform Standard Specifications:

"Use of explosives will not be allowed between Station 139+22 to Station 140+25."

MAG SECTION 201.2.3 - EXISTING MASONRY WALL

Delete the first paragraph of MAG Subsection 201.2.3 and add the following paragraph:

"The Contractor shall sawcut and remove the masonry wall at Station 141+63 after the decorative facing is removed by others. The wall will be reconstructed by others. The cost for demolition of this wall shall be considered to be incidental to Bid Item No. 615-1."

MAG SECTION 401 - TRAFFIC CONTROL

Delete the first paragraph in this section and insert the following paragraph:

F.Y.I.

Michael Abraham
To: C/O EAR
Addendum 1 - 90-29

From: CB

Return

Keep or toss

Post-it™ FY.I. pad 7668

"The Contractor shall maintain a minimum of two (2) lanes northbound along 24th Street during non-working hours and during weekday peak traffic hours of 4 p.m. to 7 p.m. 24th Street can be reduced to one lane northbound from 6 a.m. to 4 p.m. on weekdays and 24 hours on weekends."

"The Contractor shall maintain two (2) southbound lanes open to traffic at all times. All traffic barricading shall be in accordance with the Manual on Uniform Traffic Control Devices and the City of Phoenix Traffic Barricade Manual."

"The Contractor shall provide one off-duty police officer during all hours of restriction to less than four lanes (two each way)."

MAG SECTION 430 - LANDSCAPING AND PLANTING

Delete the third paragraph of this section and insert the following paragraph in its place:

"Add the following to MAG Section 430.5. Replace existing Eucalyptus trees with ten (10) Eucalyptus microtheca 36" box size. Planting location for the Eucalyptus trees will be approved by the Engineer."

MAG SECTION 452 - ELECTRICAL CONDUIT

Delete the second and third sentences of the first paragraph on page 13 and add the following:

"The conduit exiting from the 42-inch casing shall be swept downward to where the conduits will be routed along side of the 16-inch sewer line as the duct bank and sewer line pass below the future ACDC box culvert. The conduit shall be routed on the north side of the new 12-inch sewer line between Manhole No. 5 and No. 6 to its terminus point. The conduit located between the north end of the 42-inch casing and Manhole No. 5 shall be encased in Class A concrete. All other conduit shall be encased in a minimum one sack cement slurry."

MAG SECTION 601 - TRENCH EXCAVATION, BACKFILL AND COMPACTION

Add the following sentence to MAG Section 601:

"All backfill material from bottom to top of trench shall be select material or aggregate base course material in accordance with MAG Section 310 of these Specifications."

TO THE CONSTRUCTION PLANS (By Reference Only)

Sheet 3:

Delete reference to protect trees in place and add "Remove and Replace Trees."

Add note  on plan view with arrow pointed to existing curb and gutter.

Add note  and description as follows:

"Note 6: Remove and replace existing curb and gutter damaged by construction. Patch pavement adjacent to gutter to the satisfaction of the Engineer."

Sheet 4:

Change reference to remove trees to "Remove and Replace Trees."

Add note 6 to plan view with arrow pointed to curb and gutter.

Add note 7 to plan view with arrow pointed to bus bay pad.

Add note 6 and description as follows:

"Note 6: Remove and replace existing curb and gutter damaged by construction. Patch pavement adjacent to gutter to the satisfaction of the Engineer."

Add note 7 and description as follows:

"Note 7: Remove and replace bus bay pad (8-inch thick Class A concrete) damaged by construction. Patch pavement to the satisfaction of the Engineer."

Sheet 6:

Delete reference to protect tree and add:

"Remove and Replace Tree."

Add to reference Remove Tree: "and Replace."

Delete note 12.

Change reference to Note 12 on plan view to: " 11 ."

Note 8 shall be modified to read "Decorative facing of masonry wall shall be removed by others".

Revise conduit routing along sewer line between Manhole No. 5 and Manhole No. 6 to north side of sewer line.

Add note 19 to plan view with arrow pointed to curb and gutter.

Add note 19 and description as follows:

"Note 19: Remove and replace existing curb and gutter damaged by construction. Patch pavement adjacent to gutter."

Sheet 8:

On skid detail, change reference of 12" CL 52 D.I.P. polyethylene lined. To: "16" CL 52 D.I.P. polyethylene lined."

FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY

BOYLE ENGINEERING CORPORATION

By: *D. E. Sagramoso*
D. E. Sagramoso, P.E.
Chief Engineer and General Manager

By: _____
Kendall R. Kennedy, P.E.



BIDDING SCHEDULE

PROJECT: 24th Street Sanitary Sewer

CONTRACT: FCD 90-29

ITEM NO.	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT COST (IN WRITING) AND /100 DOLLARS	UNIT COST (NUMBERS)	EXTENDED AMOUNT
336-1	Replace Pavement - Type A T-Top	50.0	SY			
340-1	Remove and Replace Sidewalk	2,496.0	SF			
340-2	Remove and Replace Concrete Curb	1,179.0	LF			
401-1	Traffic Control	1.0	LS			
430-1	Remove/Restore Landscaping, Irrigation Systems, Complete to Original Condition	1.0	LS			
430-2	Furnish and Install 10-36" Box Eucalyptus Trees	10.0	EA			
452-1	Furnish, Install, Backfill, Encase, 4" Telephone Conduit	3,300.0	LF			
602-1	Furnish, Jack, Bore 42" Casing, Install Carrier Pipe and Grout	103.0	LF			
615-1	Furnish, Install, Backfill and Compact 12" Class 52 Epoxy Lined, Polywrap Encapsulated Ductile Iron Pipe	1,099.0	LF			
615-2	Furnish, Install, Backfill and Compact 16" Class 52 Epoxy Lined, Polywrap Encapsulated Ductile Iron Pipe	192.0	LF			
615-3	Furnish, Install, Backfill and Compact 15" Sanitary Sewer Stubout	8.0	LF			
625-1	Furnish, Install, Backfill and Compact Sanitary Sewer Manhole No. 2 & No. 3 MAG Std. Det. 420 and 424	2.0	EA			

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
AMENDED INVITATION TO BID

BID OPENING DATE: July 25, 1990

LOCATION:

The work is located in the City of Phoenix in the vicinity of 24th Street and Arizona Canal.

PROPOSED WORK:

The 24th Street Sewer Project consists of furnishing and installing approximately 1,099 linear feet of 12-inch and 192 linear feet of 16-inch Class 52 epoxy lined poly-wrapped encapsulated ductile iron pipe, associated manholes, including drop manholes, an 8-foot stubout of 15-inch VCP sewer line, approximately 103 linear feet of 42-inch jacked casing under the Arizona Canal, miscellaneous concrete sidewalk, curb, and asphalt pavement removal and replacement, and miscellaneous landscaping restoration including replanting of existing or new trees.

BIDS:

SEALED BIDS for the proposed work will be received by the Flood Control District of Maricopa County, 3335 West Durango Street, Phoenix, Arizona 85009 until 2:00 p.m. (Phoenix time) on the above date and then publicly opened and read at 3335 W. Durango St., Phoenix, AZ 85009. No bids will be received after the time specified for bid opening. All bids must be submitted on proposal forms furnished by the Flood Control District and included in the Proposal Pamphlet. The Board of Directors reserves the right to reject any and all bids and to waive any informality in any bid received.

ELIGIBILITY OF CONTRACTOR:

It is the policy of Flood Control District of Maricopa County to endeavor to ensure in every way possible that minority and women-owned business enterprises have every opportunity to participate in providing professional services, purchased goods, and contractual services without being discriminated against on the grounds of race, religion, sex, age, or national origin.

The bidder shall be required to certify that it is appropriately licensed as a Contractor in the State of Arizona for performing the before-mentioned type of work. Verification shall be on the form provided herein.

The bidder may be required to furnish an affidavit as evidence of previous satisfactory performance in the above-mentioned type of work.

CONTRACT TIME:

All work on this Contract is to be completed within ninety (90) calendar days after date of Notice to Proceed.

MBE/WBE PARTICIPATION:

For this project, a goal of fifteen (15) percent is desired for Minority/Women-Owned Business Enterprises. Instructions and required forms are included in the Minority and Women-Owned Business Enterprise Program Section.

PRE-BID CONFERENCE:

A pre-bid conference was held on July 11, 1990 at 10:00 a.m. in the Flood Control District conference room, 3335 W. Durango Street, Phoenix, Arizona 85009.

Questions or items for clarification may be addressed to the Chief, Contracts Branch, in writing, at least ten (10) days prior to bid opening date. Where appropriate, any answers or clarifications affecting the cost may be addressed to all bidders in an addendum. Under no circumstances will verbal interpretations or clarifications be given to individual contractors.

PROJECT PLANS, SPECIAL PROVISIONS AND CONTRACT DOCUMENTS:

Plans and Construction Specifications may be obtained from Flood Control District of Maricopa County, 3335 West Durango Street, Phoenix, Arizona 85009 upon payment of \$12.00 by check, payable to the FLOOD CONTROL DISTRICT of MARICOPA COUNTY. This payment will not be refunded. Mail orders for project documents must include an additional \$7.50 for first class U.S. postage and handling. The total \$19.50 will not be refunded. Regardless of circumstances, we cannot guarantee mail delivery. Each bid must be accompanied by a Bid Bond, cashier's or certified check or postal money Order equal to 5 percent (5%) of the bid, made payable to the FLOOD CONTROL DISTRICT OF MARICOPA COUNTY as a guarantee that if the work is awarded to the bidder, the bidder will within ten (10) days of receipt of the Proposal Acceptance, enter into proper contract and bond condition for the faithful performance of the work, otherwise, said amount may be forfeited to the said BOARD OF DIRECTORS as liquidated damages.

All bids are to be marked in accordance with Section 102.9 of the Uniform Standard Specifications and addressed to the Chief Engineer and General Manager, Flood Control District of Maricopa County, 3335 West Durango Street, Phoenix, Arizona 85009.

As provided for in the Agenda Information Form authorizing the Invitation to Bid.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
24th STREET SANITARY SEWER
MINUTES OF PRE-BID CONFERENCE
JULY 11, 1990

A roster of those in attendance is attached to these minutes.

The meeting commenced at 1014 hours.

Flood Control District and Boyle Engineering briefly explained the major items of work for the project, as identified in the Invitation to Bid of the Contract Documents.

The Contractors present had several questions relative to the project which are as follows:

1. Sun-Air Contractors asked if blasting (the use of explosives) would be permissible. Boyle indicated that due to the nature of the adjacent area of the work that blasting would not be permitted. Sun-Air indicated that they had constructed two (2) existing pipelines (the 12-inch sewer on the east side of 24th Street and the 66-inch water line on the west side of 24th Street) and indicated they had encountered material that could not be removed by ripping and trenching, and that blasting was allowed. Boyle and Flood Control indicated they would investigate the possibility of blasting and address it in Addendum No. 1.
2. Mingus Construction questioned whether compaction could be achieved using native material above the pipe zone of the sewer. It was indicated by Sun-Air that consideration might be given to require backfill material to be aggregate base course to the top of trench. The native excavated material would be hauled off the job site. Boyle indicated they would review this and address in the Addendum.
3. Mingus Construction questioned the requirement of keeping two lanes of traffic on northbound 24th Street open at all times. It was indicated that in order to trench for the sewer line that haul trucks would have to be located in the east traffic lane in order for the contractor get rid of the excavated material. Flood Control District will contact the City of Phoenix to find out if a lane closure at off peak hours is possible.
4. Several trees in the parkway are identified as to be protected in place. It was indicated by the contractors that most of these trees would have to be removed due to the proximity of them and the sewer line trench. It was indicated that those trees should be identified as to remove and replaced.
5. The wall thickness of deep manhole sections was discussed. It was indicated that manholes sections of a depth of 15 feet or deeper are required to have a thicker wall section. Boyle indicated they would check on this.

6. Flood Control District indicated that the conduits being constructed for U.S. West Communications need to be located on the north side of the 12-inch sewer line located on the north side of the Arizona Canal. Boyle indicated this requirement would be addressed in the addendum. Boyle also reviewed the routing of conduit through the 42-inch casing and the requirement that the conduits be swept down to be located adjacent to the new 16-inch sewer line where the future ACDC box culvert construction passes. Sweeping of the conduits would have to occur before the conduit exits the north end of the casing. It was indicated by the contractors that U.S. West would have no problem with installing the conduit loose in the casing (i.e. no unistrut and brackets). It was indicated that U.S. West required their conduits to be encased with a minimum one-sack cement slurry. Boyle indicated the encasement would be handled in the addendum.
7. The decorative wall of Western Savings was discussed. It was indicated by the contractors that they could not find a masonry subcontractor to do the work of removing and replacing a portion of the wall which encroaches in the 12-inch sewer line alignment. Tunnelling under the wall might be an option.
8. The reference in Note 12 of Sheet No. 6 where landscaping replacement in front of Western Savings will be performed by Western Savings personnel is to be deleted. The note is to read "The contractor shall re place landscaping in-kind."

The meeting adjourned at 1120 hours.

FCD Contract 90-29
24th Street Sanitary Sewer
Bid Opening: July 25, 1990 - 2:00 P.M.
Cost: \$12:00

NAME/ADDRESS/PHONE	SET #	AMT. PD.
1. Global Van Lines/ T.J.G. Custom Moving 520 S. 6th St. Phoenix, Az. 850 248-6890 Michael A. Hannan	4	12.00
2. R. G. Johnson Contracting, Inc. 500 W. First St. P.O. Box 1500 Tempe, Az.85280 894-0946 894-1421 FAX Harry Thompson	10	12.00
3. Hard Rock Construction Co., Inc. 1910 W. Deer Valley Rd., No. 2-353 Phoenix, Az. 85027 252-2530 780-9795 FAX Buzz	12	12.00
4. SunAir Contractors P.O. Box 11364 Phoenix, Arizona 85071 246-0099 NO FAX NUMBER Bill McDermott	13	12.00
5. Sun Devil Construction P.O. Box 2439 Glendale, Arizona 85311 437-0733 437-8479 Fax Dave Nuttall	14	12.00
6. Mingus Construction P.O. Box 1999 Cottonwood, Arizona 86326 253-2557 634-0206 FAX Ray Bluff	15	12.00

7.	Bentson Contracting Co. 2525 W. Beryl Ste. 100 Phoenix, Arizona 85021 944-8880 944-0458 FAX Tosh M.	16	12.00
8.	WesternSun Contractors P.O. Box 32866 Phoenix, Arizona 85064 470-1340 470-1012 FAX Dan Lebsack	17	12.00
9.	WEI/Urban, Inc. 6303 E. Tanque Verde Ste. 300 Tucson, Arizona 85715 1 West Deer Valley Rd. Phoenix, Arizona 85027 254-1418 780-0825 FAX Tom Service	18	12.00
10.	Breinholt Contracting Co., Inc. 5303 E. Fairview Chandler, Arizona 85226 961-0001 961-3946 FAX	19	12.00
11.	Sundt Corp. Field Account No. 019 P.O. Box 26685 Tucson, Arizona 85726 750-6613 FAX Sundt Corp.	21	12.00
12.	Gilbert Pump & Equipment Co. P.O. Box 20216 Phoenix, Arizona 85036 276-5599 276-5592 FAX Byron Poretta	22	12.00
13.	F. W. Dodge	23, 24	NO CHARGE

14.	Lundell Construction Co., Inc. 6100 South Maple Suite 114 Tempe, Arizona 85283 831-9179 831-0125 FAX Robert Stephanie	25	12.00
15.	Arizona Boring Company 4052 West Wier Phoenix, Arizona 85041 237-2755 Spencer Shumway	29	12.00
16.	Construction, Inc. 115 South 48th Street Tempe, Arizona 85231 784-2910 968-7580 FAX	30,31	24.00
17.	Yellow Rose Development & Construction, Inc. 3409 E. Pennsylvania Tucson, Arizona 85714 741-1673 741-7156 FAX Doug	32	12.00

CONSTRUCTION SPECIFICATIONS

FOR

24TH STREET SANITARY SEWER AT ARIZONA CANAL

FCD CONTRACT NO. 90-29

CONSTRUCTION SPECIAL PROVISIONS

Prepared By:

BOYLE ENGINEERING CORPORATION
7600 North 16th Street, Suite 223
Phoenix, Arizona 85020



(Engineer's
Seal)

Recommended By: Nick Karan Date: 6-28-90
Nicholas P. Karan, P.E., Chief
Engineering Division

Approved By: D.E. Sagramoso Date: 6-28-90
D.E. Sagramoso, P.E.
Chief Engineer and General Manager

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

ATTENTION

ALL PROSPECTIVE BIDDERS

Some of the Bid Bonds previously received with bids for construction projects have not been in complete compliance with Arizona Revised Statutes (A.R.S.).

A.R.S. Sec. 34-201(A)(3) requires that every bid be accompanied by a certified check, cashier's check or surety bond for five percent (5%) of the amount of the bid.

In some cases the bond limit the five percent (5%) to the difference between the low bid and that of the next lowest responsible bidder, to whom a contract could be awarded, in the event that the low bidder failed to enter into contract within the specified time.

Bids received with limitation on the five percent (5%) will be considered as nonresponsive bids and will not be accepted or considered for award of contract.

Please take note and submit your bids accordingly.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
FCD CONTRACT 90-29

24TH STREET SANITARY SEWER AT ARIZONA CANAL

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(Area to left
reserved for
Engineer's Seal)

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
INVITATION TO BID

BID OPENING DATE: July 19, 1990

LOCATION:

The work is located in the City of Phoenix in the vicinity of 24th Street and Arizona Canal.

PROPOSED WORK:

The 24th Street Sewer Project consists of furnishing and installing approximately 1,099 linear feet of 12-inch and 192 linear feet of 16-inch Class 52 epoxy lined poly-wrapped encapsulated ductile iron pipe, associated manholes, including drop manholes, an 8-foot stubout of 15-inch VCP sewer line, approximately 103 linear feet of 42-inch jacked casing under the Arizona Canal, miscellaneous concrete sidewalk, curb, and asphalt pavement removal and replacement, and miscellaneous landscaping restoration including replanting of existing or new trees.

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ELIGIBILITY OF CONTRACTOR:

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The bidder may be required to furnish an affidavit as evidence of previous satisfactory performance in the above-mentioned type of work.

CONTRACT TIME:

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MBE/WBE PARTICIPATION:

For this project, a goal of fifteen (15) percent is desired for Minority/Women-Owned Business Enterprises. Instructions and required forms are included in the Minority and Women-Owned Business Enterprise Program Section.

PRE-BID CONFERENCE:

A pre-bid conference will be held on July 11, 1990 at 10:00 a.m. in the Flood Control District conference room, 3335 W. Durango Street, Phoenix, Arizona 85009. It is in the best interest of prospective bidders to attend the Pre-bid Conference.

Questions or items for clarification may be addressed to the Chief, Contracts Branch, in writing, at least ten (10) days prior to bid opening date. Where appropriate, any answers or clarifications affecting the cost may be addressed to all bidders in an addendum. Under no circumstances will verbal interpretations or clarifications be given to individual contractors.

PROJECT PLANS, SPECIAL PROVISIONS AND CONTRACT DOCUMENTS:

Plans and Construction Specifications may be obtained from Flood Control District of Maricopa County, 3335 West Durango Street, Phoenix, Arizona 85009 upon payment of \$12.00 by check, payable to the FLOOD CONTROL DISTRICT of MARICOPA COUNTY. This payment will not be refunded. Mail orders for project documents must include an additional \$7.50 for first class U.S. postage and handling. The total \$19.50 will not be refunded. Regardless of circumstances, we cannot guarantee mail delivery. Each bid must be accompanied by a Bid Bond, cashier's or certified check or postal money Order equal to 5 percent (5%) of the bid, made payable to the FLOOD CONTROL DISTRICT OF MARICOPA COUNTY as a guarantee that if the work is awarded to the bidder, the bidder will within ten (10) days of receipt of the Proposal Acceptance, enter into proper contract and bond condition for the faithful performance of the work, otherwise, said amount may be forfeited to the said BOARD OF DIRECTORS as liquidated damages.

All bids are to be marked in accordance with Section 102.9 of the Uniform Standard Specifications and addressed to the Chief Engineer and General Manager, Flood Control District of Maricopa County, 3335 West Durango Street, Phoenix, Arizona 85009.

As provided for in the Agenda Information Form authorizing the Invitation to Bid.

PRINCIPLE ITEMS AND APPROXIMATE QUANTITIES

<u>QUANTITY</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
192	LF	16" Class 52 Epoxy Lined Ductile Iron Pipe
1,099	LF	12" Class 52 Epoxy Lined Ductile Iron Pipe
103	LF	42" Steel Casing (bore or jack)
6	EA	Sanitary Sewer Manholes
3,300	LF	4" Telephone Conduit

PROPOSAL

TO THE BOARD OF DIRECTORS
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
PHOENIX, ARIZONA

Gentlemen:

The following Proposal is made for constructing the 24th Street Sanitary Sewer at Arizona Canal in the County of Maricopa, State of Arizona.

The following Proposal is made on behalf of

and no others. 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 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, Special Provisions, Forms of Contract, Bonds, and Sureties 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, Construction Specifications, Special Provisions, or conditions to be overcome, be pled. On the basis of the Plans, Construction Specifications, Special Provisions, the Forms of Contract, Bonds, and Sureties 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 therefore, the sum of various products obtained by multiplying each unit price, herein bid for the work or materials, by the quantity thereof actually incorporated in the complete project, as determined by the Engineer or Architect.

The Undersigned understands that the quantities mentioned herein are approximate only 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.

The Undersigned further proposes to perform all extra work that may be required on the basis provided in the Specifications and to give such work personal attention and to secure economical performance.

The Undersigned further proposes to execute the Contract Agreement and furnish satisfactory Bonds and Sureties within ten (10) days of receipt of Notice of Proposal acceptance, **TIME BEING OF THE ESSENCE**. The Undersigned further proposes to begin work as specified in the Contract attached hereto, and to complete the work within 90 calendar days from the effective date specified in the Notice to Proceed, and maintain at all times a Payment and Performance Bond, approved by the Board of Directors, each in an amount equal to one hundred percent of the contract amount. 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 Bonds and Sureties to be in full force and effect until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions fulfilled.

A Proposal Guaranty in the amount and character named in the Invitation to Bid is enclosed amounting to not less than five (5) percent of the total bid, which Proposal Guaranty is submitted as a guaranty of the good faith of the Bidder and 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 his Proposal, if the Proposal is accepted and there should be failure on the part of the Undersigned to execute the Contract and furnish satisfactory Bonds and Sureties 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.

The Undersigned acknowledges receipt of the following addenda and has included their provisions in the proposal:

Addendum No. _____	Dated _____

The Undersigned has enclosed the required bid security to this Proposal.

BIDDING SCHEDULE

PROJECT: 24th Street Sanitary Sewer

CONTRACT: FCD 90-29

ITEM NO.	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT COST (IN WRITING) AND /100 DOLLARS	UNIT COST (NUMBERS)	EXTENDED AMOUNT
336-1	Replace Pavement - Type A T-Top	50.0	SY			
340-1	Remove and Replace Sidewalk	756.0	SF			
340-2	Remove and Replace Concrete Curb	75.0	LF			
350-1	Sawcut, Remove, Store Masonry Wall	1.0	LS			
401-1	Traffic Control	1.0	LS			
430-1	Remove/Restore Landscaping, Irrigation Systems, Complete to Original Condition	1.0	LS			
430-2	Furnish and Install 5, 36" Box Eucalyptus Trees	5.0	EA			
452-1	Furnish, Install, Backfill, Encase, 4" Telephone Conduit	3,300.0	LF			
602-1	Furnish, Jack, Bore 42" Casing, Install Carrier Pipe and Grout	103.0	LF			
615-1	Furnish, Install, Backfill and Compact 12" Class 52 Epoxy Lined, Polywrap Encapsulated Ductile Iron Pipe	1,099.0	LF			
615-2	Furnish, Install, Backfill and Compact 16" Class 52 Epoxy Lined, Polywrap Encapsulated Ductile Iron Pipe	192.0	LF			
615-3	Furnish, Install, Backfill and Compact 15" Sanitary Sewer Stubout	8.0	LF			
625-1	Furnish, Install, Backfill and Compact Sanitary Sewer Manhole No. 2 & No. 3 MAG Std. Det. 420 and 424	2.0	EA			

IF BY AN INDIVIDUAL:

(NAME - TITLE) (ADDRESS)
DATE _____
(PHONE)

IF BY A FIRM OR PARTNERSHIP:

(FIRM NAME) (FIRM ADDRESS)

BY: _____ DATE _____
(NAME - TITLE) (PHONE)

** Name and Address of Each Member:

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

IF BY A CORPORATION:

(CORPORATE NAME) (CORPORATION ADDRESS)

BY: _____ DATE: _____
(PHONE)

TITLE: _____

* Incorporated under the Laws of _____

Names and Addresses of Officers:

(PRESIDENT) (ADDRESS)

(SECRETARY) (ADDRESS)

(TREASURER) (ADDRESS)

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

SUBCONTRACTOR LISTING

Following is a listing of Subcontractors and material suppliers that are to be used in the event the undersigned should enter into contract with the Owner. This is not an exhaustive or inclusive list.

(Signature) _____

SURETY BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, (hereinafter called the Principal), and the _____, a corporation duly organized under the laws of the State of _____, as Surety, (hereinafter called the Surety), are held and firmly bound unto the Flood Control District of Maricopa County as Obligee, in the sum of ___ percent (___%) of the total amount of the bid of Principal, submitted by him to the Flood Control District of Maricopa County, for the work described below, for the payment of which sum, well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, and administrators, successors and assigns, jointly and severally, firmly by these presents, and in conformance with A.R.S. Sec. 34-201(A)(3).

WHEREAS, the said Principal is herewith submitting its proposal for the 24th Street Sanitary Sewer at Arizona Canal in the County of Maricopa, State of Arizona.

NOW, THEREFORE, if the Flood Control District of Maricopa County shall accept the proposal of the Principal and the Principal shall enter into a contract with the Flood Control District of Maricopa County in accordance with the terms of such proposal and give such Bonds and Certificates of Insurance as specified in the Standard Specifications with good and sufficient Surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter into such contract and give such Bond and Certificates of Insurance, if the Principal shall pay to the Flood Control District of Maricopa County the sum of money set forth above as liquidated damages for failure of the Principal to enter into the contract, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____, A.D., 1990.

Principal

Title

Witness:

Surety

Title

Witness:

VERIFICATION OF LICENSE

Pursuant to A.R.S. Sec. 32-1169, I hereby state that I hold a current contractor's license, duly issued by the office of the Registrar of Contractors for the State of Arizona, said license has not been revoked, that the license number is: _____; that my privilege license number (as required by A.R.S. Sec. 42-1305) is: _____; and that, if any exemption to the above licensing requirements is claimed;

(1) The basis for the claimed exemption is: _____ and;

(2) The names(s) and license number(s) of any general, mechanical, electrical, or plumbing contractor(s) to be employed on the work are:

IT IS UNDERSTOOD THAT THE FILING OF AN APPLICATION CONTAINING FALSE OR INCORRECT INFORMATION CONCERNING AN APPLICANT'S CONTRACTOR'S LICENSE OR PRIVILEGE LICENSE WITH THE INTENT TO VOID SUCH LICENSING REQUIREMENTS IS UNSWORN FALSIFICATION PUNISHABLE ACCORDING TO A.R.S. SEC. 13-2704.

DATE: _____ SIGNATURE OF LICENSEE: _____

COMPANY: _____

MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISE PROGRAM

- A. The following conditions will apply in the calculation of the percentage attainment:
1. All MBE/WBE firms used in attainment of the goal must be certified with the Maricopa County Minority Business Office which is located in the Maricopa County Highway Department building, 3325 West Durango Street, Phoenix. In addition, only those firms certified at least seven calendar days prior to the bid opening will be considered in the attainment of the goal.
 2. Prime contractor subcontracts to MBE or WBE:
The MBE/WBE amount to be applied to the goal will be based on that portion (dollar value) of the contract that the MBE/WBE performs. For example, if a prime contractor subcontracts work amounting to \$100,000 of a contract for which the total project cost is \$1,000,000. the MBE/WBE participation will be credited as 10 percent.
 3. Prime Minority Contractor:
An MBE/WBE prime contractor will be credited with the MBE/WBE participation for that portion of the contract which they themselves perform plus that portions subcontracted to other MBE/WBE firms. For example, if an MBE/WBE prime contractor proposes to perform 50 percent of a project quoted at \$1,000,000 and subcontracts 25 percent to an MBE firm and 25 percent to a non-MBE/WBE firm, MBE/WBE participation will be credited as 75 Percent, or \$750,000.
 4. Minority-Non-Minority Joint Venture:
A joint venture consisting of MBE/WBE participation and non-MBE/WBE business enterprises, functioning as a prime contractor, will be credited with minority participation on the basis of the percentage of profit accruing to the MBE/WBE firm. For example, if a MBE/WBE and non-MBE/WBE joint venture proposes to perform 50 percent of a \$1,000,000 project and 50 percent of the joint venture profits (\$500,000) are to accrue to the MBE/WBE partner in the joint venture, MBE/WBE participation will be credited at 25 percent or \$250,000.
 5. Lower Tier Non-MBE/WBE Participation:
MBE/WBE subcontractors proposing to further subcontract to non-MBE/WBE contractors shall not have that portion of subcontracting activity considered when determining the percentage of MBE/WBE participation.

6. MBE/WBE Suppliers:

Any MBE/WBE supplier that manufactures or substantially alters the material or product it supplies will have that portion of activity considered when determining the percentage of MBE/WBE participation. Any MBE/WBE Wholesaler, Distributor, or Jobber that does not manufacture or substantially alter the materials or product it sells will be limited to 20 percent of the sale price when determining the percentage of MBE/WBE participation.

B. Required forms:

An affidavit is included as part of this section. The form must be completed within seven calendar days after the Notice of Award of Contract. The low bidder is required to submit a Minority/Women-Owned Business Enterprise Program MBE/WBE Participation Affidavit listing the MBE/WBE participation by MBE/WBE firm and the related dollar value of the MBE/WBE contract.

C. Requests for Pay:

Each Request for Pay must be accompanied by a Maricopa County Minority/Women-Owned Business Enterprise Program MBE/WBE Participation Report. The final pay request shall include a listing of total contract MBE/WBE participation.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
MINORITY/WOMEN-OWNED BUSINESS ENTERPRISE PROGRAM

MBE/WBE PARTICIPATION ASSURANCES
AFFIDAVIT

The undersigned, fully cognizant of the Flood Control District of Maricopa County MBE/WBE Program requirements and of the goal established, hereby certifies that in the preparation of this bid,

(the entity submitting the bid)

(CHECK ONE)

_____ Will meet the established goal for participation by
Minority/Women-Owned Business Enterprises.

_____ Will provide the necessary documentation to Minority Business
Office to establish that a good faith effort was made.

_____ Will not participate in the MBE/WBE Program.

The bidder will specify its MBE/WBE participation on the Intended Participation Affidavit or provide documentation of its good faith efforts not later than 4:00 p.m., the seventh calendar day following the bid opening. The required affidavit shall be obtained by the apparent first and second low bidders from the Minority Business Office, Maricopa County Highway Department Building, 3325 West Durango Street, Phoenix, Arizona 85009, following the opening and reading of bids; a sample affidavit form for reference purposes follows.

Name of Firm

Signature

Title

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
MINORITY/WOMEN-OWNED BUSINESS ENTERPRISE PROGRAM
Actual Minority/Women-owned Participation

Name of Prime Contractor

FCD
Project Number

Contact Person

Total Amount of Contract

Street No.

City State Zip

<u>Minority/Women-owned Firm</u>	<u>Principal</u>	<u>Address</u>	<u>Type of Work</u>	<u>Subcontract Amount</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

The undersigned has entered into a formal agreement with the minority contractors/suppliers listed above in the execution of this contract with the Flood Control District of Maricopa County.

Signature

Title

Date

Copy to: Minority Business Office
Maricopa County Highway Department
3325 West Durango Street
Phoenix, Arizona 85009
FCD Contract No. 90-29

MARICOPA COUNTY
MINORITY/WOMEN-OWNED BUSINESS ENTERPRISES PROGRAM

MBE/WBE PARTICIPATION REPORT
(To be attached with Request for Pay)

Date: _____

Contractor: _____

Contact Person: _____

Address: _____

Telephone: _____

Project: 24th Street Sanitary Sewer at

Arizona Canal

Contract Number: 90-29

For Pay Period of: _____

Subcontractor: _____

Person to Contact: _____

Address: _____

Telephone Number: _____

Type of Firm: _____

Class of Work: _____

Subcontract Amount: _____

Amount Earned _____

(Commission) This Period: _____

Total Earned by This Subcontractor: _____

Total MBE/WBE Contract Goal, %: 15

Total Cumulative MBE/WBE

Participation on This Contract, %: _____

MBE/WBE subcontract payment made
during this reporting period (yes or no): _____

cc: Minority Business Office
Maricopa County Highway Building
3325 West Durango Street
Phoenix, Arizona 85009

CONTRACT AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 1990, by and between FLOOD CONTROL DISTRICT OF MARICOPA COUNTY, hereinafter called the OWNER, acting by and through its BOARD OF DIRECTORS, and

_____ hereinafter called the CONTRACTOR.

WITNESSTH: That the said CONTRACTOR, for and in the consideration of the sum of _____ to be paid to him by the OWNER, in the manner and at the times hereinafter provided, and of the other covenants and agreements herein contained, hereby agrees for himself, heirs, executors, administrators, successors, and assigns as follows:

ARTICLE I - SCOPE OF WORK: The CONTRACTOR shall construct, and complete in a workmanlike and substantial manner and to the satisfaction of the Chief Engineer and General Manager, a project for the Flood Control District of Maricopa County, designated as FCD Contract 90-29; 24th Street Sanitary Sewer at Arizona Canal, and furnish at his own cost and expense all necessary machinery, equipment, tools, apparatus, materials, and labor to complete the work in the most substantial and workmanlike manner according to the Plans and Construction Specifications on file with the Flood Control District of Maricopa County, 3335 West Durango Street, Phoenix, Arizona, and such modifications of the same and other directions that may be made by the Flood Control District of Maricopa County as provided herein.

ARTICLE II - CONTRACT DOCUMENTS: The Construction Specifications (Invitation to Bid, Plans, Standard Specifications and Details, Special Provisions, Addenda, if any, Proposal, Affidavits, Performance Bond, Payment Bond, Certificates of Insurance, and Change Orders, if any,) are by this reference made a part of this Contract and shall have the same effect as though all of the same were fully inserted herein.

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 construction 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 in accordance with the requirements of A.R.S. Sec. 34-221, as amended. The CONTRACTOR agrees to discharge its obligations and make payments to its subcontractors and suppliers in accordance with A.R.S. Sec. 32-1129.

ARTICLE V - TERMINATION: The OWNER hereby gives notice that pursuant to A.R.S. Sec. 38-511(A) this contract may be cancelled without penalty or further obligation within three years after execution if any person significantly involved in initiation, negotiation, securing, drafting or creating a contract on behalf of the OWNER is, at any time while the contract or any extension of the contract is in effect, an employer agent of any other party to the contract in any capacity or a consultant to any other party of the contract with respect to the subject matter of the contract. Cancellation under this section shall be effective when written notice from the Chief Engineer and General Manager of the OWNER is received by all of the parties to the contract. In addition, the OWNER may recoup any fee for commission paid or due to any person significantly involved in initiation, negotiation, securing, drafting or creating the contract on behalf of the OWNER from any other party to the contract arising as a result of the contract.

ARTICLE VI - NEGOTIATION CLAUSE: Recovery of damages related to expenses incurred by the CONTRACTOR for a delay for which the OWNER is responsible, which is unreasonable under the circumstances and which was not within the contemplation of the parties to the contract, shall be negotiated between the CONTRACTOR and the OWNER. This provision shall be construed so as to give full effect to any provision in the contract which requires notice of delays, provides for arbitration or other procedure for settlement or provides for liquidated damages.

ARTICLE VII - COMPLIANCE WITH LAWS: The CONTRACTOR is required to comply with all Federal, State and local ordinances and regulation. The CONTRACTOR's signature on this contract certifies compliance with the provisions of the I-9 requirements of the Immigration Reform Control Act of 1986 for all personnel that the CONTRACTOR and any subcontractors employ to complete this project. It is understood that the OWNER shall conduct itself in accordance with the provisions of the Maricopa County Procurement Code.

ARTICLE VIII - MBE/WBE PROGRAM: Flood Control District of Maricopa County will endeavor to ensure in every way possible that minority and women-owned business enterprises shall have every opportunity to participate in providing professional services, purchased goods, and contractual services to the Flood Control District of Maricopa County without being discriminated against on the grounds of race, religion, sex, age, or national origin.

ARTICLE IX - ANTI-DISCRIMINATION PROVISION: The CONTRACTOR agrees not to discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, or handicap and further agrees not to engage in any unlawful employment practices. The CONTRACTOR further agrees to insert the foregoing provision in all subcontracts hereunder.

IN WITNESS WHEREOF: Five (5) 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.

PARTY OF THE FIRST PART

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
PARTY OF THE SECOND PART

BY: _____
Printed Name

BY: _____
CHAIRMAN, BOARD OF DIRECTORS

BY: _____
Signature

DATE: _____

Title
DATE: _____

Tax Identification Number

RECOMMENDED BY:

CHIEF ENGINEER AND GENERAL MANAGER
FLOOD CONTROL DISTRICT OF
MARICOPA COUNTY

ATTEST:

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: _____
GENERAL COUNSEL, FLOOD CONTROL
DISTRICT OF MARICOPA COUNTY

DATE: _____

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, in the County of Maricopa, 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 Flood Control District of Maricopa County, dated the ____ day of _____, 1990, for FCD Contract 90-29; 24th Street Sanitary Sewer at Arizona Canal, 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 monies 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 was copied at length herein.

The prevailing party or any party which recovers judgement 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 _____, 1990.

PRINCIPAL SEAL

BY: _____

AGENCY OF RECORD

SURETY SEAL

BY: _____

BOND NUMBER.

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 Flood Control District of Maricopa County, dated the ____ day of _____, 1990, for FCD Contract 90-29; 24th Street Sanitary Sewer at Arizona Canal, 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 was 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 _____, 1990.

AGENCY OF RECORD

AGENCY ADDRESS

BOND NUMBER

POWER OF ATTORNEY

BY: _____

PRINCIPAL SEAL

BY: _____

SURETY SEAL

BY: _____

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

CERTIFICATE OF INSURANCE

CONTRACT FCD **90-29**

PROJECT TITLE **24th Street Sanitary Sewers**

NAME AND ADDRESS OF INSURANCE AGENCY	INSURANCE COMPANIES AFFORDING COVERAGES
	Company Letter A
	Company Letter B
NAME AND ADDRESS OF INSURED	Company Letter C
	Company Letter D
	Company Letter E
	Company Letter F
	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	
	COMMERCIAL GENERAL <input checked="" type="checkbox"/> 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 PROPERTY DAMAGE each occurrence	Combined Single Limit 2,000
	COMPREHENSIVE AUTO <input checked="" type="checkbox"/> 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 checked="" type="checkbox"/> ENGINEERS PROFESSIONAL LIABILITY			EACH CLAIM AND ANNUAL AGGREGATE	
	<input checked="" type="checkbox"/> OTHER In addition to the Flood Control District of Maricopa County, Maricopa County, and Boyle Engineering Corporation shall be named as additional insureds.				

Except for Professional Liability Insurance and Workers' Compensation Insurance, the Flood Control District of Maricopa County is added as an additional insured in respect to liability arising in any manner out of the performance of any contract entered into between the insured and the Flood Control District or liability arising out of any services provided or duty performed by any party as required by statute, law, purchase order, or otherwise required. 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 thirty (30) days written notice to the District. THIS CERTIFICATE IS NOT VALID UNLESS COUNTERSIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE INSURANCE COMPANY.

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, MARICOPA COUNTY, and BOYLE ENGINEERING CORPORATION, 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, Maricopa County, and Boyle Engineering Corporation 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 negligence of the Flood Control District of Maricopa County, Maricopa County, and Boyle Engineering Corporation. The above cost of damages incurred by the Flood Control District of Maricopa County, Maricopa County, and Boyle Engineering Corporation or any of its departments, agencies, officers or employees, or others aforesaid shall include in the event of an action, court costs, expenses for litigation and reasonable attorney's fees.

Firm

Date

Principal

Title

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
MARICOPA COUNTY, ARIZONA

24TH STREET SEWER
PROJECT NO. FCD 90-29

CONSTRUCTION SPECIAL PROVISIONS



1. GENERAL

1.1 Proposed Work

The 24th Street Sewer Project consists of furnishing and installing approximately 1,300 linear feet of 12-Inch Class 52 epoxy lined poly wrapped encapsulated ductile iron pipe, associated manholes, including drop manholes, an 8-foot stubout of 15 inch VCP sewer line, approximately 103 linear feet of 42-inch jacked casing under the Arizona Canal, miscellaneous concrete sidewalk, curb, and asphalt pavement removal and replacement, and miscellaneous landscaping restoration including replanting of existing or new trees.

1.2 Location of Work

The work is located in the City of Phoenix in the vicinity of 24th Street and the Arizona Canal.

1.3 Specifications

The proposed work included herein and as shown on the plans for the construction of this project shall be done in accordance with the Maricopa Association of Governments (MAG) Uniform Standard Specifications for Public Works Construction dated 1979, together with the current supplements thereto, the City of Phoenix supplements, current revisions, to the Uniform Standard Specifications, and the Construction Special Provisions contained herein.

1.4 Precedence of Contract Documents

In case of a discrepancy or conflict, the project plans will govern over both the MAG Uniform Standard Specifications and City of Phoenix Supplement. These Special Provisions will govern over the MAG Uniform Standard Specifications and the City of Phoenix Supplement.

1.5 Payment

The cost of all work, as shown on the plans for which there are no specific items shown on the Bidding Schedule, shall be included in the prices bid for related items at no additional cost to the Owner.

2. STANDARD DETAILS

Where specified on the contract drawings, work will be performed in accordance with the following Uniform Standard Details for Public Works Construction by the Maricopa Association of Governments 1979 (MAG).

<u>Detail</u>	<u>Description</u>
200	Backfill, Pavement and Surface Replacement
220	Curb and Gutter - Type "A"
222	Single Curb - Type "A"
230	Sidewalks
270	Frame and Cover Grade Adjustment
403-1	Pipe Supports Across Trenches
403-2	Pipe Supports Across Trenches
403-3	Alternate to Pipe Support
420	Precast Concrete Sewer Manhole
422	Sewer Manhole and Cover Frame Adjustment
424	24" and 30" Manhole Frame and Cover
426	Drop Sewer Connections
427	Stubout and Plugs
428	Manhole Steps

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 DURATION: The Contractor shall commence work within 7 (seven) calendar days after the date of the Notice to Proceed and complete all work within 90 (ninety) days after the date of the Notice to Proceed.

In the event the Contractor elects to schedule overtime, second shifts, weekend work and generally all work as specified in Section 108.5 of these specifications in order to complete the project, the Contractor is reminded that the costs associated with additional testing, additional inspection, survey, engineering or other work by the construction administrator and/or the Flood Control District of Maricopa County (FCDMC), shall be deducted from the monies due to the Contractor by the FCDMC. The cost associated with the above items shall be incidental to the unit price of items in the bid schedule.

NEGOTIATION CLAUSE: Recovery of damages related to expenses incurred by the Contractor for a delay for which the FCDMC is responsible, which is unreasonable under the circumstances and which was not within the contemplation of the parties to the contract, shall be negotiated between the Contractor and the FCDMC. This provision shall not be construed to void any provision in the contract which requires notice of delays, provides for arbitration or other procedure for settlement or provides for liquidated damages.

WATER, LIGHT, POWER, HEAT, TELEPHONE: All water for construction purposes, drinking water, lighting, temporary 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. Weekly updates to the schedule shall be submitted to the inspector at the weekly coordination meeting.

MATERIAL SOURCES: Concrete, Aggregate Base, Steel Products and Pipe 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 produces from commercial sources is in accordance with the MAG Standard Specifications and these Special Provisions.

SECTION 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 FCDMC.

Change the definition of Engineer to read as follows: The Chief Engineer and General Manager of the FCDMC 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 shall be shown on the proposal. The Contractor shall be appropriately licensed as a Contractor in the State of Arizona while performing the work for this project.

SECTION 103.6 - CONTRACTOR'S INSURANCE: Concurrently with the execution of the Contract, the Contractor shall furnish a Certificate of Insurance using the included Certificate or one of equal wording that names the additional insureds as set out in the included Certificate and in 103.6.1(D) below. The certificate shall also name the additional insureds as Certificate Holders. The types of insurance and the limits of liability shall be as indicated on the included form.

103.6.1(D) - Add Boyle Engineering Corporation, City of Phoenix and Flood Control District of Maricopa County as additional insureds.

103.6.2 - The Contractor shall also indemnify and hold harmless the Owner, the Consultant, the Owner's Representative, any jurisdiction or agency issuing permits for any work involved in the project, and their consultants, and each of their directors, officers, employees and agents from and against all losses, expenses, damages (including damages to the work itself), attorneys' fees and other costs, including costs of defense which any of them may incur with respect to the failure, neglect or refusal of Contractor to faithfully perform the work and all of the Contractor's obligations under the contract. Such costs, expenses and damages shall include all cost, including attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party.

SECTION 104 - SCOPE OF WORK:

SECTION 104.1.2 - MAINTENANCE OF TRAFFIC:

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

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 by the MAG Standard Specifications). 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.

MAG Section 105.2 - Plan and Shop Drawings

The MAG Standard Specifications are amended to include the following:
The Contractor shall furnish six (6) copies of detailed shop drawings, manufacturer's catalog data and detailed information covering, but not limited to, the following items:

1. Precast Manhole Risers
2. Reinforcing Steel
3. Castings
4. Concrete Mix Designs
5. Polyethylene/Coal Tar Lined Ductile Iron Pipe
6. Vitrified Clay Pipe (for 15 inch stubout)
7. Utility Protection Plan
8. Asphalt Mix Designs
9. Traffic Control Plan

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 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 shall be identified as such and will require review by the Engineer for approval or rejection.

Construction of this project shall not begin until the shop drawings and line layouts have been reviewed and approved.

Corrections required on the shop drawings will not constitute a valid reason for delay in the project schedule.

Review: The Contractor, at his own expense, shall make such changes in the shop drawings as may be necessary to conform to the plans and specifications. Prior to return of such drawings, marked "Approved" or "Approved as noted", any work which the Contractor may do on the fabrications covered by the same shall be at his own risk, as the FCDMC will not be responsible for any expense or delays incurred by the Contractor for changes required to make the same conform to the drawings as finally reviewed.

One copy of submitted drawings will be returned to the Contractor marked "Approved" or "Approved as Noted". If the submittal is marked "Not Approved", a new submittal shall be made in the same manner as the original submittal.

The District's Representative shall return two (2) copies to the Contractor within 14 calendar days after the Contractor's submittal date.

MAG Section 105.6 - Cooperation With Utilities

An attempt has been made to determine the location of all underground facilities and drainage pipes, culverts and structures; however, it shall be the Contractor's responsibility to cooperate with the pertinent utility company so that any obstructing facility 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 telephone numbers should be used by the Contractor to contact proper personnel at the organizations below:

Flood Control District of Maricopa County.....	262-1501
Maricopa County Highway Department (Permits).....	233-8791
City of Phoenix Streets and Traffic.....	262-6565
City of Phoenix Water and Wastewater.....	261-8229
Southwest Gas Company.....	484-5306
U.S. West Communications.....	831-4737
Salt River Project (Electrical Division).....	236-2090
Salt River Project (Irrigation).....	236-2459

SECTION 105.8 - CONSTRUCTION STAKES, LINES AND GRADES: The project control line and bench mark elevations are shown on the drawings and will be established by the Engineer. The Contractor shall establish offset stakes and temporary bench marks for referencing the designated construction lines and grades. The Contractor shall establish all rough grade, fine grade, and structural reference lines and shall be responsible for their conformance to the plans and specifications.

Survey work shall be performed by a qualified and experienced surveyor under the supervision of a licensed land surveyor or licensed Civil Engineer and/or their bona fide employees working under their direct supervision.

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.

No separate payment will be made for construction surveying, and the cost thereof shall be included in the price bid for related items of work.

SECTION 105.10 - INSPECTION OF WORK: Work will be subject to City of Phoenix inspection and acceptance prior to final acceptance by the Engineer. City inspectors have the right to visit the site at any time, without notice. All requests or comments from the City will be made to the Engineer and the Contractor will then be notified by the Engineer.

SECTION 105.12 - MAINTENANCE DURING CONSTRUCTION: The Contractor shall maintain the work during construction and until the project is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces to the end so that the roadway and structures are kept in satisfactory conditions at all times.

SECTION 106 - CONTROL OF MATERIALS:

SECTION 106.1 - SOURCE OF MATERIALS AND QUALITY: The Contractor shall guarantee the construction work for one year against faulty materials, faulty workmanship and failure to meet the requirements of the plans and 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.

SECTION 106.5 - CONTRACTOR'S MARSHALING YARDS: Contractor 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 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 signed letter with the property owner's approval shall be submitted along with the Contractor's request to the Engineer for approval for use of the marshaling yard in connection with the project. An appropriate distance from adjacent property will be set by the Engineer on a cases-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 as to preclude tracking of mud onto paved City streets.
- E. Work in yard shall be scheduled so as to comply with 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 the use.
- H. Contractor's request for approval shall specify in detail how he or she proposes to comply with D through G above.

In the event the Contractor uses FCDMC property for these uses, he shall obtain a license from the FCDMC. There is no cost for a FCDMC license.

SECTION 107.2 - PERMITS: The Contractor shall be responsible for obtaining all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution 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 from the Salt River Valley Water Users Association for work in their right-of-way will be supplied by the FCDMC.

MAG Section 107.3 - Right Of Way

The District will provide rights-of-way and easements as shown on the plans for all work specified in this Contract. The Contractor shall not enter or occupy with persons, tools, equipment or materials any private ground outside the property of the District without the written consent of the Owner.

MAG Section 107.5 - Safety, Health and Sanitation Provisions

Add the following to Section 107.5:

COMPLIANCE WITH THE ARIZONA HAZARD COMMUNICATION STANDARD.

The Owner will provide the Contractor with Material Safety Data Sheets (MSDS) for any products known to exist on the site that have physical hazards or are deemed health hazards.

The Contractor will provide a copy of Owner-provided MSDS to all subcontractors.

The Contractor will provide the Owner and all subcontractors with MSDS for any products that have physical hazards or are deemed health hazards that will be brought onto the site or created on the site by either the Contractor or by any subcontractors.

The Contractor will provide the Owner with a statement certifying that all personnel (Contractor and subcontractor) employed by the Contractor or by a subcontractor on the job site have received the required Hazard Communication Standard training.

MAG Section 107.11 - Contractors Responsibility for Utility Property and Services

Add the following MAG Section 107.11:

The Consultant has endeavored to determine the existence of utilities at the site of the work from the records of the owners of known utilities in the vicinity of the work. The positions of these utilities as derived from such records are shown on the plans. The service connections to these utilities are not shown on the plans. Notwithstanding anything above, Contractor shall strictly comply with all of the requirements set forth in A.R.S. 40-360.21-29 relating to underground facilities.

The Contractor shall make his own investigations to determine the locations and type of existing service laterals or appurtenances when their presence can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of the work. If the Contractor discovers utility facilities not identified in the plans or specifications, he shall immediately notify in writing the Owner's Representative and the Owner of the utility facility.

For the purpose of this section, "Utilities" are defined as including water, sewer, gas, electric, telephone, cable television, signalization, storm drain and irrigation. Unless otherwise shown on the plans or these specifications, all utilities, both underground and overhead, shall be maintained in continuous service throughout the entire contract period.

A portion of the work associated with this project is being performed for U.S. West Communications. The Contractor shall contact U.S. West at the phone number above before commencing with installation of the conduits/duct banks.

MAG Section 108.4 - Contractors Construction Schedule

Continuous water and sewer service shall be provided at all times. The Contractor shall provide all labor, equipment and material necessary to maintain continuous sewer and water service.

SECTION 108.5 - LIMITATION OF OPERATIONS: Should the Contractor or subcontractor elect to perform any work before or after regular working hours, on weekends, or legal holidays, any charges incurred by the FCDMC for inspection of the work, surveys, or tests of materials will be deducted from monies due or to become due to the Contractor, including cost included in SECTION 106.3.

SECTION 108.9 - FAILURE TO COMPLETE ON TIME: The actual cost per calendar day incurred by the FCDMC for Consultant Administrative and Inspection Services on this project will be added to the daily charges as indicated by TABLE 108, LIQUIDATED DAMAGES, as shown in the MAG Standard Specifications (not in the Phoenix Supplement), and will be deducted from monies due or to become due to the Contractor for each and every calendar day that work shall remain incomplete 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 FCDMC from deducting from monies due or to become due to the Contractor for any other costs incurred by the FCDMC directly attributable to the delay in completing this contract.

MAG Section 201.2.2 - Existing Landscaping and Irrigation Systems

The Contractor shall protect existing landscaping and irrigation systems adjacent to the work area.

If existing irrigation lines are cut due to interference with the work, the Contractor shall temporarily re-route the affected irrigation lines in order to maintain irrigation of the adjacent landscaping.

Landscaping and irrigation facilities removed during construction of the sewer line shall be restored to original condition.

MAG 201.2.2 - Existing Pavement, Curb, Sidewalk

The Contractor shall sawcut and remove that portion of the pavement, curb and sidewalk shown on the plans. Upon completion and backfilling of the sewer line and manholes, pavement, curb and sidewalk shall be reconstructed.

MAG 201.2.3 - Existing Masonry Wall

The Contractor shall sawcut and remove that portion of the masonry wall interfering with the sewer line installation at Station 141+63. The Contractor shall replace the masonry wall in-kind.

CATV, Telephone, Gas, Electric Lines - These underground facilities shall be adequately supported by the Contractor. Supporting plans shall be coordinated with the affected utility.

MAG Section 206.4 - Structure Backfill

All structural backfill placed around the sewer manholes shall be Type A Select granular material conforming to Table 702 of the MAG Uniform Standard Specifications and shall be compacted to a minimum density of 95% when tested and determined by ASTM D-698. Backfill of the manholes shall be made uniformly around the manhole risers. Coordinate manhole riser installation with backfilling operations. No more than two (2) manhole risers shall be above backfilling operations.

MAG Section 310 - Untreated Base

Add the following:

Select material and aggregate base shall conform to the requirements of Section 702 of the MAG Uniform Standard Specifications. Select material and aggregate base shall be crushed in accordance with Section 702.2. Select materials shall be "Type A."

MAG Section 321 - Bituminous Prime Coat

Add the following:

The bituminous material shall be Grade MC-70 or MC-250 liquid asphalt. Prime coat shall be applied at the rate of 0.4 gallons per square yard unless otherwise specified by the Engineer.

MAG Section 321 - Asphalt Concrete Pavement

Add the following:

Asphalt concrete pavement shall consist of furnishing and placing plant-mixed asphalt concrete of the types shown on the plans to the compacted thickness shown and in accordance with Section 321 of the MAG Uniform Standard Specifications. The Contractor shall submit asphalt concrete mix designs for review before commencing with pavement work.

MAG Section 336 - Pavement Matching and Surfacing Replacement

Add the following:

Pavement matching of existing pavements of the Western Savings parking lot shall comply with Section 336 of the MAG Uniform Standard Specifications.

MAG Section 340 - Concrete Curb, Gutter and Sidewalk

Add the following:

Reconstructed curb, gutter and sidewalk shall comply with the requirements of Section 340 of the MAG Uniform Standard Specifications. Portland Cement Concrete shall be Class A as defined in Table 725 of the MAG Uniform Standard Specifications and shall comply with Section 725 of the MAG Uniform Standard Specifications.

MAG Section 345 - Adjusting Frames, Covers, Valve Boxes and Water Meter Boxes

Work under this section shall consist of adjusting existing and new manhole frames, covers, water valve boxes as indicated on the plans or as designated by the Engineer. All work shall be in accordance with Section 345 of the MAG Uniform Standard Specifications and the applicable MAG Standard Details.

MAG Section 345.1 - Description

Add the following:

All frames, covers and valve boxes shall be adjusted to finished grade. Water valve box adjustments shall be in accordance with MAG Detail 270. Sanitary Sewer manhole frame and cover adjustment shall conform to MAG Detail 422. The Contractor shall coordinate adjustment of valve boxes and access manholes with private utilities.

MAG Section 401 - Traffic Control

The Contractor shall maintain two (2) lanes of traffic along northbound 24th Street at all times, unless specifically allowed by the City of Phoenix Traffic Department and the District. All traffic barricading shall be in accordance with the Uniform Traffic Control Manual.

The Contractor shall also maintain the access to Western Savings parking lot.

MAG Section 424 - Parkway Grading

The work under this section consists of grading along the east side of 24th Street throughout the project limits, and shall consist of installation of top soil and landscaping in the areas along public rights-of-way. The work shall be in accordance with Section 424 of the MAG Uniform Standard Specifications.

MAG Section 425 - Top Soils

Work under this section consists of furnishing and placing topsoil in the areas to be relandscaped within the public rights-of-way along 24th Street, all in accordance with Section 425 of the MAG Uniform Standard Specifications.

MAG Section 430 - Landscaping and Planting

Work under this section consists of furnishing and installing landscaping in the parkways of 24th Street once the sewer line is completed and backfilled. Planting material shall be the same as is removed from the parkway.

Replacement of landscaping shall conform to MAG Section 430 - Landscaping and Planting.

Add the following to MAG Section 430.5

Replace existing Eucalyptus trees with five (5) Eucalyptus microtheca 36" box size. Planting location for the Eucalyptus trees will be approved by the Engineer.

Delete the following from MAG Section 430.2

All landscape and planting areas, except those intended for lawns, shall be treated with a pre-emergence control, such as "Dacthal" or equal, applied in accordance with the manufacturer's recommendations.

MAG Section 440 - Sprinkler Irrigation System Installation

All reconstruction of sprinkler irrigation systems shall be in accordance with Section 440 of the MAG Uniform Standard Specifications. Sprinkler system configurations and controls shall be in-kind as is existing.

MAG Section 452 - Electrical Conduit

The work under this section shall consist of furnishing and installing underground PVC conduit, including excavation, backfill, compaction and landscaping necessary to complete the work at the locations specified on the plans or as directed by the Engineer of his representative.

All PVC conduit and fitting shall be of the size indicated on the project plans and be rigid polyvinyl chloride (PVC) non-metallic type, conforming to the requirement of UL 651 for rigid non-metallic conduit. PVC conduit and fittings shall be Schedule 40 heavy wall and rated for use at 90 degrees centigrade.

Conduit shall have a minimum depth of 30 inches at the end points or as established by the District's Representative. The conduit exiting from the 42-inch casing shall be swept downward to where the conduits will be routed along side of the 12-inch sewer line as the duct bank and sewer line pass below the future ACDC box culvert. The conduit in this area shall be concrete encased from the northerly end of the steel casing to Manhole #5.

Field PVC conduit bends shall be made without crimping or flattening, using the longest radius practical but not less than specified by the National Electric Code Article 347-13. Collapsed conduit, no matter how small, is not acceptable and shall be replaced by the Contractor. The number of bends shall not contain more than three quarter bends (270° total), Article 347-14 of the National Electrical Code. Sweeps shall be a minimum of 15-foot radius. All conduit cuts shall be square and trimmed after cutting to remove all rough edges. All connections shall be of the solvent weld type or approved equal.

Each run of conduit, where it terminates, shall be capped (not glued) with PVC caps.

Each run of conduit shall be installed containing a continuous run of one No. 8 AWG bare copper wire to be used as a pull wire. The wire shall be at least two feet longer than the run of conduit. Each run of the wire shall be spring coiled and inserted into the conduit so as to be recoverable at a later date. Nylon rope 1/4-inch in size shall be acceptable in lieu of No. 8 AWG bare copper pull wire and the extra length fastened to the inside of the cap.

The Contractor shall place warning tape in all open trenches in which conduit is placed. All warning tape shall be buried at a depth of 6 to 8 inches below final grade.

Conduit warning tape shall be 4 mil inert plastic film specially formulated for prolonged use underground and shall be a minimum of 3 inches wide. All tape shall be highly resistant to alkalis, acids and other destructive agents found in the soil.

The tape shall have a continuous printed message warning of the location of underground conduit. The message shall be in permanent ink formulated for prolonged underground use and shall bear the words CAUTION - ELECTRIC LINE BURIED BELOW in black letters on a yellow or red background.

Conduit will be measured by the linear foot from end to end.

Payment for electrical conduit shall be made at the contract unit price bid per lineal foot for the sizes shown on the plans and the Bid Schedule and shall be full compensation for the item, complete in place, including all necessary excavation, backfill, including encasement, labor, materials and miscellaneous incidents including unistrut channels, pipe clamps, welding, bolting necessary to complete the work.

MAG Section 601 - Trench Excavation, Backfill and Compaction

Sewer line trench excavations, backfill and compaction shall conform to Section 601 of the MAG Uniform Standard Specifications. Trench widths as identified in Section 601 must be adhered to with exception of the trench section which is encased with the conduit duct bank and sewer line.

MAG Section 602

MAG Section 602.1 - Description

The work under this section consists of jacking and boring the 42-inch casing under the Arizona Canal as shown on the plans. The jacking and boring operation shall comply with Section 602 of the MAG Uniform Standard Specifications.

MAG Section 602.2 - Encasement Size and Thickness

The minimum inside diameter for the jacked casing shall be 42 inches. The minimum plate thickness shall be 0.625 inches.

MAG Section 602.3 - Boring Head and Intermediate Jacking Stations

For jacked casing, the longitudinal jacking force shall be limited to 500 tons from the jacking pit or 400 tons from an intermediate jacking station.

Steel casing shall be installed using a boring head (shield) and intermediate jacking stations to limit the longitudinal force exerted on the steel casing to the forces noted above. The boring head shall incorporate a cutting head flush with the leading edge of the shield. The front portion of the boring head shall be articulated to permit steering of the shield to maintain the casing on the required line and grade. The number and location of intermediate jacking stations shall be as required to limit the jacking forces to the values listed above and as required for the type or types of soil encountered.

MAG Section 615 - Sewer Line Construction

Sewer line construction, both temporary and permanent, shall conform to Section 615 of the MAG Uniform Standard Specifications.

MAG Section 615.1.1 - Description

Pipe for the sanitary sewer line along 24th Street shall be 12-inch diameter Class 52 epoxy lined ductile iron pipe. The 15-inch diameter stubout from Manhole No. 5 for future connection to the ACDC sanitary sewer shall be extra strong vitrified clay pipe with a reinforced concrete cap. Vitrified clay pipe shall conform to Section 743 of the MAG Uniform Standard Specifications. Ductile iron pipe shall conform to Section 750 of the MAG Uniform Standard Specifications.

All ductile iron pipe shall be encapsulated in polyethylene protective wrapping in accordance with Subsection 610.5 of the MAG Uniform Standard Specifications.

MAG Section 615.1.2 - Linings for Ductile Iron Pipe Used for Sewer Lines

Ductile iron pipe used for sewer pipe shall be lined with polyethylene or coat tar epoxy.

MAG Section 615.1.2.1 - Polyethylene Lining

Polyethylene lining material shall comply with ASTM D 1248 and shall be bonded to the interior of the pipe and fittings with heat, and shall cover all inner surfaces of the pipe and fittings. All polyethylene lining shall be installed by the pipe manufacturer at the location of manufacture. Thickness of polyethylene lining shall be 40 mils minimum.

MAG Section 615.1.2.2 - Coal Tar Epoxy Lining

Coal tar epoxy lining shall be a catalyzed two-component coal tar epoxy compound capable of at least 40 mils dry film thickness.

All lining shall be holiday tested and all pinholes, voids or blisters repaired. All coal tar lining shall be applied by the pipe manufacturer at the place of manufacture. No field applications of linings is permissible.

MAG Section 615.1.2.3 - General

The Contractor shall submit data sheets and certifications from the pipe manufacturer stating that the linings are minimum 40 mils thick in the barrel area and 10 mils thick in the bell and exterior spigot area, and that each piece of pipe shipped has been holiday tested and free from pinholes and other defects.

MAG Section 615.1.2.4 - Field Repair of Linings

Repair of damaged sections of either coal tar epoxy or polyethylene linings shall be in strict conformance with the manufacturer's recommendations. The Contractor shall holiday test the repaired areas, utilizing a 67.5 volt wet sponge holiday tester in the presence of the Engineer.