

CONSTRUCTION SPECIFICATIONS

FOR

DRAINAGE IMPROVEMENTS - 67TH AVENUE
BELL ROAD TO ARIZONA CANAL DIVERSION CHANNEL

FCD CONTRACT NO. 89-02

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

Construction Special Provisions
Prepared By:

GREINER, INC.
7310 N. 16th Street, Suite 160
Phoenix, Arizona 85020



(Engineer's
Seal)

Prepared for:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

and

Recommended By: Nick Karan Date: 4-13-89
Nick Karan, P.E., Chief
Engineering Division

Approved By: D. E. Sagramoso Date: 4-13-89
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.

A118.535

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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 (ARS).

ARS 34-201-A3 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 89-02

DRAINAGE IMPROVEMENTS - 67TH AVENUE
BELL ROAD TO ARIZONA CANAL DIVERSION CHANNEL

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
INVITATION TO BID

BID OPENING DATE: May 11, 1989

LOCATION:

The project is located in Glendale, Maricopa County, Arizona approximately 14 miles northwest of downtown Phoenix, along 67th Avenue from one-quarter mile south of Greenway Road (ACDC) and running northerly to Bell Road.

PROPOSED WORK:

The construction of approximately 1 1/4 miles of stormdrain.

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.

In order to determine if bidder is entitled to the provisions of A.R.S. Section 34-241, all bidders shall submit, as a part of their proposal, an affidavit stating whether or not taxes have been paid for two successive years as provided in A.R.S. Section 34-241. The affidavit shall be in the form provided herein.

In the event a bidder challenges compliance with the tax provision, the successful bidder will be required to provide proof of compliance.

CONTRACT TIME:

All work on this Contract is to be completed within one-hundred twenty (120) 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 will be held on May 2, 1989 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.

PRINCIPLE ITEMS AND APPROXIMATE QUANTITIES

<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
1.	816	LF	84" Stormdrain Pipe
2.	2,629	LF	60" Stormdrain Pipe
3.	1,529	LF	36" Stormdrain Pipe
4.	4,967	SY	Pavement Replacement

PROPOSAL

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

Gentlemen:

The following Proposal is made for constructing _____
_____ 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, and Bond authorized by the Board of Directors and constituting essential parts of this Proposal, have been carefully examined and also that the site of the work has been personally inspected.

The Undersigned declares that the amount and nature of the work to be done is understood and that at no time will misunderstanding of the Plans, 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, and the Bond proposed for use, the Undersigned proposes to furnish all the necessary machinery, equipment, tools, apparatus, and other means of construction, to do all the work and to furnish all the materials in the manner specified and to finish the entire project within the time hereinafter proposed and to accept, as full compensation 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 Bond 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 the time limits as specified in the Construction Specifications and maintain at all times a Contract Bond, approved by the Board of Directors, in an amount equal to one hundred percent of the total bid. This Bond shall serve not only to guarantee the completion of the work on the part of the Undersigned, but also to guarantee the excellence of both workmanship and material and the payment of all obligations incurred, said Bond to be in full force and effect until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions 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 Bond as herein provided, the Flood Control District of Maricopa County in either of such events, shall be entitled and is hereby given the right to retain the said Proposal Guaranty as liquidated damages.

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 and subcontractor listing to this Proposal.

BIDDING SCHEDULE

PROJECT: 67th Avenue Stormdrain
Bell Road to ACDC

CONTRACT: FCD 89-02

ITEM NO.	APPROXIMATE QUANTITY	UNIT	DESCRIPTION	UNIT COST (IN WRITING) AND /100 DOLLARS	UNIT COST	EXTENDED AMOUNT
1	816	LF	84-inch Stormdrain Pipe			
2	89	LF	66-inch Stormdrain Pipe			
3	2,629	LF	60-inch Stormdrain Pipe			
4	40	LF	54-inch Stormdrain Pipe			
5	685	LF	42-inch Stormdrain Pipe			
6	1,529	LF	36-inch Stormdrain Pipe			
7	162	LF	24-inch Stormdrain Pipe			
8	414	LF	18-inch Catch Basin Connector Pipe			
9	4	EA	Stormdrain Manhole Std. Dt1. 520 & 522			
10	2	EA	Stormdrain Manhole Std. Dt1. 521 & 522			
11	5	EA	Stormdrain Manhole Modified P-1560			
12	7	EA	Concrete Catch Basin Det P-1569 M1, L=17			

BIDDING SCHEDULE

PROJECT: 67th Avenue Stormdrain
Bell Road to ACDC

CONTRACT: FCD 89-02

ITEM NO.	APPROXIMATE QUANTITY	UNIT	DESCRIPTION	UNIT COST (IN WRITING) AND /100 DOLLARS	UNIT COST	EXTENDED AMOUNT
13	1	EA	Concrete Catch Basin Det P-1569 M1, L=10			
14	2	EA	Concrete Catch Basin Det P-1569 M2, L=10			
15	3	EA	Concrete Catch Basin Det P-1570, Type N			
16	1	EA	Concrete Catch Basin Det P-1570, TripleN			
17	2	EA	Concrete Headwall Std. 502-1			
18	100	SF	Remove and Replace Sidewalk			
19	1	EA	66" x 66" x 42" Wye			
20	1	EA	42" x 42" x 36" Tee			
21	4	EA	36" x 36" x 18" Tee			
22		LS	Replace Water and Sewer Lines			
23	1	EA	Install 84-inch Pipe Plug Std. Dt1. 427			
24	1	EA	Install 66-inch Pipe Plug Std. Dt1. 427			

BIDDING SCHEDULE

PROJECT: 67th Avenue Stormdrain
Bell Road to ACDC

CONTRACT: FCD 89-02

ITEM NO.	APPROXIMATE QUANTITY	UNIT	DESCRIPTION	UNIT COST (IN WRITING) AND /100 DOLLARS	UNIT COST	EXTENDED AMOUNT
25	1	EA	Install 54-inch Pipe Plug Std. Dt1. 427			
26	1	EA	Install 36-inch Pipe Plug Std. Dt1. 427			
27	24	EA	Install 18-inch Pipe Plug Std. Dt1. 427			
28	2	EA	Install 42-inch Pipe Collar Std. Dt1.505			
29	4,967	SY	Pavement Replacement Std. Dt1.200, Type A			
30	675	SY	Pavement Replacement Std. Dt1. 200" T" Top			
31	2	EA	Survey Marker Std. Dt1. 120-1, Type "A"			
32	6	EA	Survey Marker Std. Dt1. 120-1, Type "B"			
33		LS	Miscellaneous Removal and Other Work			
34	80	HRS	Uniformed, Off-Duty Law Enforcement Offi			
			TOTAL			

IF BY AN INDIVIDUAL:

(NAME - TITLE)

(ADDRESS)

Date: _____
(PHONE)

IF BY A FIRM OR PARTNERSHIP:

(FIRM NAME)

(FIRM ADDRESS)

BY: _____
(NAME - TITLE)

DATE: _____
(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: _____
(PHONE)

DATE: _____

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.

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.

WHEREAS, the said Principal is herewith submitting its proposal for _____

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., 1989.

Principal

Title

Witness:

Surety

Title

Witness:

VERIFICATION OF LICENSE

Pursuant to Arizona Revised Statutes Section 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 Arizona Revised Statutes Section 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 ARIZONA REVISED STATUTES SECTION 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 Notice Of Award. 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-OWNED BUSINESS ENTERPRISE PROGRAM

MBE/WBE PARTICIPATION AFFIDAVIT

(To be submitted within seven calendar days of Notice of Award)

Flood Control District of Maricopa County Contract No. FCD 89-02

1. Intended Minority/Women-Owned Business Enterprise Participation (attach additional papers, if necessary.)

Name of Firm	Principal	Address	Item Number(s) or Work Description	Dollar Value of Subcontract
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

MBE/WBE Contract Goal 15% Total Dollar Value of Proposed Subcontract(s) _____
Contract Bid Total _____
Percent of Contract Bid to be Subcontracted _____

2. Substitution

I understand that if a Maricopa County certified MBE/WBE (sub)contractor is unable to perform for any part of the intended work, my company should make sufficient efforts to (sub)contract either the same, or other work to an alternative Maricopa County certified MBE/WBE equal to the amount to attain the MBE/WBE goal and that I must document such efforts.

SAMPLE
Name of Firm _____
Signature _____
Title _____

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

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: _____

Contract Number: FCD 89-02

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, %: _____

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 _____, 1989, 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 89-02; Drainage Improvements - 67th Avenue Bell Road to Arizona Canal Diversion Channel, 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 MAG, Section 109.

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

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: _____

RECOMMENDED BY:

ATTEST:

CHIEF ENGINEER AND GENERAL MANAGER
FLOOD CONTROL DISTRICT OF
MARICOPA COUNTY

CLERK OF THE BOARD

DATE: _____

LEGAL REVIEW

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

BY: _____
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 _____, 1989, for Drainage Improvements - 67th Avenue Bell Road to Arizona Canal Diversion Channel, 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 _____, 1989.

PRINCIPAL SEAL

AGENCY OF RECORD

BY: _____

AGENCY ADDRESS

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 _____, 1989, for Drainage Improvements - 67th Avenue Bell Road To Arizona Canal Diversion Channel, 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 _____, 1989.

AGENCY OF RECORD

PRINCIPAL SEAL

BY: _____
AGENCY ADDRESS

BOND NUMBER _____

SURETY SEAL

POWER OF ATTORNEY SEAL

BY: _____

BY: _____

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

CERTIFICATE OF INSURANCE

67th Avenue Stormdrain Bell Road to ACDC

CONTRACT FCD

89-02

PROJECT TITLE

NAME AND ADDRESS OF INSURANCE AGENCY	INSURANCE COMPANIES AFFORDING COVERAGES	
	Company Letter	A
	Company Letter	B
	Company Letter	C
	Company Letter	D
	Company Letter	E
	Company Letter	F
NAME AND ADDRESS OF INSURED	Company Letter	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	1,000
	<input checked="" type="checkbox"/> LIABILITY & NON-OWNED			SAME AS ABOVE	
	<input checked="" type="checkbox"/> EXCESS LIABILITY			NECESSARY IF UNDERLYING NOT ABOVE MINIMUM aggregate	5,000
	<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	Pursuant to IGA, City of Glendale shall also be listed as an additional insured with the Flood Control District.			

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

Firm

Date

Principal

Title

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) _____

**CONSTRUCTION SPECIAL PROVISIONS
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
FOR
DRAINAGE IMPROVEMENTS - 67TH AVENUE
BELL ROAD TO ARIZONA CANAL DIVERSION CHANNEL**

Proposed Work: The work includes the construction of a storm drain, appurtenances and other miscellaneous items of work shown on the construction drawings required for the completion of the project.

Location of Work: The work is located at 67th Avenue - Bell Road to Arizona Canal Diversion Channel.

Specifications: The work embraced herein and as shown on the plans for the construction of this project shall be done in accordance with the Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction dated 1979; together with the current revisions thereto; together with the Maricopa County Highway Department Supplements to the Uniform Standard Specifications and the Construction Special Provisions contained herein.

Precedence of Contract Documents: In case of a discrepancy or conflict, the Project Plans will govern over both the MAG Uniform Standard Specifications and the MCHD Supplement. These Construction Special Provisions will govern over the MAG Uniform Standard Specifications, the MCHD Supplement and the Project Plans.

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 the Department of Labor Regulations (29 CFR, Part 5).

Contract Time: The Contractor shall start work within seven (7) calendar days after receipt of the Notice to Proceed and complete all work on the project within one hundred twenty (120) calendar days.

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 Chief Engineer and General Manager for approval no later than the time of the preconstruction conference and before starting the work.

Coordination With Other Projects: The Contractor shall commence trench excavation, pipe laying and backfilling at the downstream project limit and progress

upgradient. The Contractor shall be responsible to complete all work, remove all equipment and material and complete final site clean-up within the Flood Control District right-of-way for the Arizona Canal Diversion Channel (ACDC) within 45 calendar days after receipt of the Notice to Proceed.

Negotiation Clause: Recovery of damages related to expenses incurred by the Contractor for a delay for which the Flood Control District of Maricopa County 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 Flood Control District of Maricopa County. 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.

General Comment: The cost of all work required under this contract 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.

Section 101 - Definitions and Terms: The following terms, as used in or pertaining to the Contract Documents, are defined as follows:

District: The word "District" refers to the Flood Control District of Maricopa County. The official representative of said District in these proceedings shall be the Chief Engineer and General Manager.

City: The word "City" refers to the City of Glendale, Arizona. The official representative of said City in these proceedings shall be the City Engineer.

Contractor: The word "Contractor" means the person, firm or corporation with whom the construction contract is made by the District.

Materials: The term "Materials" includes, in addition to materials incorporated in the project, the equipment and other material used and/or consumed in the performance of the work.

Subcontractor: The word "Subcontractor" includes those having a direct contract with the Contractor and those who furnish material worked to a special design according to the plans and/or specifications for this work, but does not include those who merely furnish materials not so worked.

Engineer: The word "Engineer" refers to the Chief Engineer and General Manager of the Flood Control District of Maricopa County, acting directly or through his authorized representatives.

Owner: The word "Owner" refers to the Flood Control District of Maricopa County, acting through its legally constituted officials, officers or employees.

Section 102 - Addenda to 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 from 8:00 a.m. to 4:00 p.m., Monday through Friday, holidays excluded. 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 Contractor shall be appropriately licensed as a contractor in the State of Arizona for performing the work in this project. The Contractor's Arizona license must be valid at the time of bid opening for the work.

Section 103.6 - Contractor's Insurance: Concurrently with the execution of the Contract, the Contractor shall furnish Certificates of Insurance. The types of insurance shall include Public Liability, Property Damage and Auto with the limits of liability as specified in the form of certificate in these Specifications.

Both the District and the City shall be named in the certificates as additional insured.

Section 105.2 - Plan and Shop Drawings: The number of copies of plans/shop drawings/brochures required for review and/or approval shall be as follows:

Initial Submittal: Three (3) copies. One (1) copy will be returned to the Contractor.

Final Submittal: Five (5) copies. Two (2) copies will be returned to the Contractor.

A "turnaround" time of three (3) days should be allowed for all submittals.

Section 105.6 - Cooperation with Utilities: An attempt has been made to determine the location of all underground utilities and drainage pipes, culverts and structures; however, it shall be the Contractor's responsibility to cooperate with the pertinent utility companies so that any obstructing 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 the proper personnel at the organizations below:

Cable Arizona Corporation	253-4099
Flood Control District	262-1501
Mountain Bell Telephone Company	235-3219
Salt River Project	273-2202
Arizona Public Service	371-7014
Location Staking (APS, Mountain Bell, SRP, Southwest Gas)	263-1000
Maricopa County Highway Department (Permits)	233-8791
Maricopa County Utilities Engineer	233-8649
Maricopa County Traffic Division	233-8676
Southwest Gas Company	271-4277
El Paso Natural Gas Company	839-4607

Section 105.8 - Construction Stakes, Lines and Grades: The project control line and benchmark elevations are shown on the drawings and will be established or verified by the Engineer. The District or its consultant shall establish offset stakes and temporary benchmarks for referencing the designated construction lines and grades. The Contractor shall provide all rough grade, fine grade and structural reference lines and shall be responsible for their conformance with the plans and specifications.

Survey work shall be performed by qualified and experienced surveyors under the supervision of an Arizona registered surveyor. No separate payment shall be made for construction surveying and the cost thereof shall be included in the price bid for related items of work at no additional cost to the Owner.

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 survey work is not being performed in a manner that will assure proper control and accuracy of the construction work, he may order any or all of the staking and layout work redone at no additional cost to the Owner.

Section 105.10 - Inspection of Work: Work will be subject to District and City inspection and acceptance prior to the final acceptance by the Engineer. The Contractor shall allow the City access to the work at all times for the purpose of inspection. The City will direct all comments regarding inspection of the work to the District in order to provide a single line of communication to the Contractor for inspection and acceptance.

Section 107.2 - Permits: The Contractor shall be responsible for obtaining all permits and licenses, pay all charges, fees, taxes and give all notices necessary and incidental to the due and lawful prosecution of the work. Permits for earth moving may be obtained from the Bureau of Air Pollution Control, Maricopa County Department of Health Services, 1845 E. Roosevelt, Telephone Number 258-6381. The Contractor shall obtain a no fee permit for work within the

District right-of-way. The Contractor shall obtain a no fee permit for work in the City right-of-way.

Section 107.3 - Rights-of-Way: The City will provide rights-of-way and easements for all work along City streets specified in this Contract and the Contractor shall not enter or occupy with man, tools, equipment or materials any private ground outside the property of the City of Glendale, Maricopa County, Arizona, or of the District without the consent of the Owner.

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

Section 108.9 - Failure to Complete on Time: The actual cost per calendar day incurred by the District for Consultant Administrative and Inspection Services on this project will be added to the daily charges as indicated by Table 108, LIQUIDATED DAMAGES, as shown in the MAG Uniform 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 uncompleted after the time specified for the completion of the work in the proposal or as adjusted by the Engineer. Nothing contained in this provision shall prohibit the District from deducting from monies due or to become due to the Contractor any other costs incurred by the District directly attributable to the delay in completing this contract.

Section 109 - Protection of Finished or Partially Finished Work: The Contractor shall properly guard and protect all finished or partially finished work and shall be responsible for the same until the entire Contract is completed and accepted, in writing, by the District. The Contractor shall turn over the entire work in full accordance with the specifications before final settlement shall be made.

Section 110 - Removal of Excess Material and Clean-Up

Excess Material: Excess material shall be removed from the work site and wasted at a location approved by the Engineer. Broken concrete and asphalt may be delivered to the Glendale Sanitary Landfill located at 115th Avenue and Glendale Avenue. The prevailing regulations and fee schedule will not be waived for work under this project. All materials, to be disposed of at the landfill, shall be weighed and disposed of at the prevailing rate.

Clean-Up. After all work under this Contract is completed, the Contractor shall remove all loose concrete, lumber, wire, reinforcing, debris and other materials not incorporated in the work, from the site of the work. Clean-up shall include the removal of all excess pointing mortar materials within pipes and removal of

oversize rocks and boulders and other debris left after finish grading. The Contractor shall provide for the legal disposal of all waste products, debris, etc., and shall make necessary arrangements and payments for such disposal.

Section 206 - Trench Excavation, Backfilling and Compaction

General. Reference to a specification section on the plans or in these specifications shall mean a Section of the Uniform Standard Specifications for Public Works Construction, sponsored and distributed by Maricopa Association of Governments (MAG), latest revision. Section 601 shall be deleted in its entirety and replaced with Section 206, Trench Excavation, Backfilling and Compaction herein.

Section 206.1 - Description: The work covered by this specification consists of furnishing all plant, labor, equipment, appliances and materials and performing all operations in connection with the excavation and backfilling of trenches in accordance with the plans and Special Provisions.

Excavation for appurtenant structures, such as manholes, inlets, transition structures, junction structures, catch basins, etc., shall be deemed to be in the category of trench excavation.

Section 206.2 - Excavation

General: The Contractor shall perform all excavation of every description and of whatever substances encountered, to the depths indicated on the plans and including excavation ordered by the Engineer of compacted backfill for the purpose of making density tests on any portion of the lift. All excavation shall be open cut unless otherwise shown on the plans or approved by the Engineer. No extra monetary compensation or additional time will be authorized for claims that soil conditions differ from those anticipated or those indicated by soils logs and/or reports. It is the Contractor's responsibility to make his own determination as to actual existing conditions.

Trench Widths: Trenches shall conform to the following dimension, unless otherwise specified in these Special Provisions, indicated on the plans and/or approved by the Engineer.

<u>Size of Pipe I.D.</u>	<u>Maximum Width at Top of Pipe Greater Than O.D. of Barrel</u>	<u>Minimum Width at Springline Each Side of Pipe</u>
Less than 18"	16"	6"
18" to 24" inclusive	19"	7-1/2"
27" to 39" inclusive	22"	9"
42" to 60" inclusive	1/2 O.D.	12"
Over 60"	36"	12"

The width of the trench shall not be greater than the maximum indicated above, at and below the level of the top of the pipe. The width of the trench above that level may be made as wide as necessary for sheeting and bracing and for proper installation of the work. If the Contractor elects to slope the trench walls in lieu of sheeting, shoring or other wall support measures, he shall be responsible for any and all problems encountered and all costs incurred as a result of his decision.

No increases in contract time will be allowed as a result of sloping trench walls. The MAG Trench Pay Width (Section 336) shall be used in computing payment, in any and all cases.

If the maximum trench width as specified above is exceeded at the top of the pipe, the Contractor shall provide, at no additional cost to the District, the necessary additional load bearing capacity by means of bedding, having a higher bedding factor than that specified, higher strength pipe, a concrete cradle, cap or encasement, or by other means. Any additional load bearing capacity means shall be submitted in writing to the Engineer for approval, accompanied by calculations signed and sealed by an Arizona registered Professional Engineer.

Trench Grade: Alignment and elevation stakes shall be furnished and set by the District or its consultant at 50-foot intervals, at grade and alignment changes or as deemed necessary by the Engineer.

For all pipe, the Contractor shall excavate for and provide an initial granular bedding at least 4 inches thick or 1/12 the O.D. of the pipe whichever is greater. This bedding material shall be placed at a uniform density and fine graded as specified herein.

Bell or coupling holes shall be dug after the trench bottom has been graded, shaped and compacted. Holes shall be excavated only as necessary to permit accurate work in the making of the joints and to ensure that the pipe will rest upon the prepared bottom of the trench and not be supported by any portion of the joint. Depressions for joints, other than bell and spigot, shall be made in accordance with the recommendations of the joint manufacturer for the particular joint used and as approved by the Engineer.

Over-Excavation: Except at locations where excavation of rock from the bottom of the trench is required, care shall be taken not to excavate below the depth required without approval from the Engineer.

Excavation below the specified grade line not approved by the Engineer shall be backfilled at the Contractor's expense with ABC material compacted to a uniform density of not less than 95 percent of the maximum density as determined by ASTM D1557 or AASHTO T-180 (Modified Proctor).

Whenever rock or cobbles are encountered in the trench bottom, it shall be over-excavated to a minimum depth of six inches below the O.D. of the pipe. This over-excavation shall be filled with ABC compacted to a density of not less than 95 percent of the maximum density as determined by ASTM D1557 or AASHTO T-180, at no additional cost to the District.

Whenever unsuitable soil incapable of supporting the pipe is encountered, the Contractor will notify the Engineer. A field determination will be made as to the depth of over-excavation and the granular fill required, which will be considered extra work.

Structure Excavation and Backfill: Structure excavation consists of the removal of material for construction of the junction manholes, headwalls, catch basins and other accessories as indicated on the plans and shall be in accordance with Section 206 of the Uniform Standard Specifications.

Structure backfill consists of furnishing, placing and compacting of special backfill material for junction manholes, headwalls, catch basins and other accessories as shown on the plans and shall be in accordance with Section 206 of the Uniform Standard Specifications.

Special backfill shall be Type "A" select material in accordance with Table 702 of the Uniform Standard Specifications, compacted to a minimum of 95 percent of the maximum density as determined by AASHTO T-180 & ASTM D1557 (modified proctor). Only hand-operated compaction equipment shall be used within two (2) feet of any newly installed structure or pipe. No payment will be made for special backfill and therefore shall be incidental to and included in the price bid for the related structure.

Any excavation below the elevation indicated for the foundation of any structure shall be filled with ABC and compacted to at least 95 percent of the maximum density as determined by ASTM D1557 or AASHTO T-180 at the expense of the Contractor.

No backfill material shall be deposited against the back of cast-in-place concrete structures until the concrete has developed a strength of not less than 2,500 psi in compression, as specified in Section 725 of the Uniform Standard Specifications.

Pavement Cutting and Removal: Where trenches lie within the portland cement concrete section of streets, alleys, driveways or sidewalks, etc. such concrete shall be sawcut to neat, vertical true lines in such a manner that the adjoining surface will not be damaged. The minimum depth of cut shall be 1-1/2 inches or 1/4 of the thickness, whichever is greater.

Asphalt pavement shall be sawcut, with approved equipment and by approved methods, in accordance with the requirements of Section 336.

No ripping or rooting will be permitted outside limits of cuts. Surfacing materials removed shall be hauled from the job site immediately and will not be permitted in the backfill.

Grading and Stockpiling: All grading in the vicinity of trench excavation shall be controlled to prevent surface water from flowing into the trenches. Any water accumulated in the trenches shall be removed by pumping or by other method approved by the Engineer at no additional cost to the District. Any silt or other unsuitable materials left in the trenches shall be removed as required by the Engineer.

During excavation, material suitable for backfilling shall be piled in an orderly manner, a sufficient distance back from the edges of trenches, to avoid overloading and to prevent slides or cave-ins. Material unsuitable for backfilling or excess material shall be hauled from the job site and legally disposed of by the Contractor at his own expense.

The Contractor, prior to placing any material on private land for storage and disposal, shall submit a letter from the property owner to the District stating the location of each disposal and/or storage site for all materials and certifying that the property owner permits such storage or disposal.

Where the plans and/or Special Provisions provide for segregation of top soil from underlying material for purposes of backfill, the material shall not be mixed.

Shoring and Sheathing: The Contractor shall do all trench bracing, sheathing or shoring necessary to perform the work and protect the excavation and the Contractor, District and City personnel as required for safety and conformance to governing laws. The bracing, sheathing or shoring shall not be removed in one operation but shall be done in successive stages to prevent overloading of the pipe during backfilling operations. The cost of the bracing, sheathing or shoring and the removal of same, shall be included in the unit price bid per foot for the pipe.

Open Trench: Except where otherwise noted in these Special Provisions, or approved in writing by the Engineer, the maximum length of open trench, where the construction is in any stage of completion (excavation, pipe laying or backfilling), shall not exceed 660 feet in the aggregate at any one location.

Any excavated area shall be considered open trench until all ABC for pavement replacement has been placed and compacted. With the approval of the Engineer, pipe laying may be carried on at more than one separate location, the restrictions on open trench applying to each location.

Trenches across streets shall be completely backfilled as soon as possible after pipe laying.

Substantial steel plates with adequate trench bracing shall be placed across trenches, spike anchored and surrounded with temporary asphalt ramps at least one foot wide, where trench backfill and temporary patches have not been completed during regular work hours, and where directed at no additional cost to the Owner. Safe and convenient passage for pedestrians shall be provided at all times. The Engineer may designate a passage to be provided at any point he deems reasonably necessary. Access to hospitals, fire stations and fire hydrants must be maintained at all times.

Section 206.3 - Protection of Existing Utilities

Utilities: Unless otherwise shown on the plans or stated in the specifications, all utilities, both underground and overhead, shall be maintained in continuous service throughout the entire contract period. The Contractor shall be responsible and liable for any damages to or interruption of service caused by the construction.

If the Contractor desires to simplify his operation by temporarily or permanently relocating or shutting down any utility or appurtenance, he shall make the necessary arrangements and agreements with the owner of the utility and shall be completely responsible for all costs concerned with the relocation or shutdown and reconstruction. All property shall be reconstructed in its original or new location as soon as possible and to a condition at least as good as its previous condition. This cycle of relocation or shutdown and reconstruction shall be subject to inspection and approval by the Engineer, the City and owner of the utility.

Irrigation Ditches, Pipes, Structures and Sprinklers: The Contractor shall contact the owners of all irrigation facilities and make arrangements for necessary construction clearances and/or dry-up periods.

All irrigation ditches, dikes, headgates, pipe, valves, checks, etc., damaged or removed by the Contractor, shall be restored to their original condition or better, by the Contractor at no additional cost to the District.

Building, Foundations and Structures: Where trenches are located adjacent to building, foundation and structures, the Contractor shall take all necessary precaution against damage to them. The Contractor shall be liable for any damage caused by the construction.

Water and Sewer Pipe Replacement: Sections of active water and sewer lines crossing the storm drain trench shall be replaced with ductile iron pipe at the locations indicated on the plans in accordance with M.A.G. Standard Detail 403-3. A permanent pipe support alternative per M.A.G. Standard Detail 403-2 may be accepted at no additional cost to the District.

Ductile iron pipe shall be Class 52 and per M.A.G. Uniform Specifications, Section 750. All pipe and fittings shall be enclosed in polywrap per M.A.G. Specification 610.5. All sewer lines and fittings shall have a 40 mil polybond lining in compliance with ASTM D1248.

Electronic, Telephonic, Telegraphic, Electrical, Oil and Gas Lines: These underground facilities shall be adequately supported by the Contractor. Support for plastic pipes shall be continuous along the bottom of the pipe. Support for metal pipe and electrical conduit may be continuous or nylon webbing may be used for suspension at no greater than 10-foot intervals.

The Contractor shall avoid damaging the plastic pipe, pipeways or conduits during trench backfilling and during foundation and bedding placement.

There will be no measurement or payment for this work. The Contractor will include all associated costs in the unit bid price for the conduit installation.

Section 206.4 - Foundation, Bedding and Backfilling

Foundation: The material upon which the pipe or structure is to be placed shall be accurately finished to the grade, alignment and dimensions shown on the plans and as directed by the Engineer. The bottom portion of the trench shall be brought to grade and shaped to fit the pipe such that it will be in continuous contact with the pipe.

Bedding: Bedding shall consist of granular material not containing pieces larger than one and one-half inches and free of broken concrete, broken pavement, wood or any other organic matter. Granular material shall mean material for which the sum of the plasticity index and the percent of the material passing the No. 200 sieve shall not exceed 23. Plasticity index shall be tested in accordance with AASHTO T-90.

Backfill: Backfill shall be native or imported material with no piece larger than 8 inches, select material, or aggregate base course as indicated on the plans and Special Provisions herein. Backfill material shall be free from broken concrete, broken pavement, debris, wood or any other organic matter. Pieces larger than 3 inches shall not be used in the final 12 inches below the pavement or structure subgrade.

Backfill around utilities which are exposed during trench excavation shall be aggregate base course compacted to a uniform density of not less than 95 percent of the maximum density as determined by ASTM D1557 or AASHTO T-180.

Section 206.5 - Compaction

Compaction Densities: Backfill shall be thoroughly compacted to no less than the following densities when tested in accordance with ASTM D1557 or AASHTO T-180: (Modified Proctor).

Type A: One hundred percent of maximum density from surface to two feet below surface. Ninety-five percent of maximum density from two feet below surface to bottom of trench including bedding.

Type B: Ninety percent of maximum density from surface to bottom of trench including bedding.

The type of compaction density required shall be as indicated on the plans and details and/or these Special Provisions.

Compaction Methods

- A. Water Consolidation: Jetting shall be permitted if approved, in writing, by the Engineer. This method shall only be allowed to consolidate granular material, select material and aggregate base course, provided that the required compaction density can be obtained with this method. Should it be determined by the Engineer that this method is not obtaining the required compaction density, the Contractor shall abandon the use of this method and use mechanical compaction as specified herein, at no additional cost to the District.

Consolidation by jetting shall be accomplished with a one and one-half inch diameter pipe of sufficient length to reach the bottom of the lift being consolidated, with adequate hose attached and a water pressure of not less than 30 psi. All jetting shall be accomplished transversely across the trench at intervals of not more than six feet with the jetting locations on one side of the trench offset to the jetting locations on the other side of the trench. The entire lift shall be leveled and completely saturated working from the top to the bottom.

The Contractor shall be solely responsible for establishing each lift depth so as to avoid floating the pipe or structure and obtaining the required compaction density. However, for pipe larger than 24 inches I.D., the first lift shall not exceed the springline of the pipe.

The Contractor shall be solely responsible for making his own determination that this consolidation method will obtain the required compaction and not result in damage to existing structures, utilities or adjacent excavations. The Contractor shall provide, at no expense to the District, all necessary labor, materials and equipment to remove accumulated water in the trench to the satisfaction of the Engineer. The Contractor shall be responsible for

repairing to the satisfaction of the Engineer any damages caused by the Contractor's operations at no additional cost to the District. Jetting shall not be used to compact pipe backfill, trench backfill or any material placed one foot above the top of pipe.

- B. Mechanical Compaction: Mechanical compaction shall be used to consolidate native and imported backfill material and it may be used to consolidate granular material, select material or aggregate base course.

The Contractor shall, at his own expense, remove or add moisture to the backfill material to maintain it within the range of +2 to -4 percent of the optimum moisture content. Backfill material outside these moisture limits shall be considered as unsuitable.

The backfill material shall be placed in uniform lifts not exceeding a loose thickness of eight inches and compacted uniformly with mechanical work methods approved by the Engineer utilizing equipment such as rollers, pneumatic tamps, hydro-hammers or other devices which provide the required uniform compaction density without causing damages to the pipe, excavation and adjacent structures or utilities. There will be no additional payment or time extension for this work.

Section 206.6 - Soils Report and Test Holes: Boring logs shown on the plans and/or the Soils Report do not constitute a part of the contract and are included for the Contractor's convenience only. It is not intended to imply that the character of the material is the same as that shown on the logs at any point other than that where the boring was made. It shall be the Contractor's responsibility to determine the character and amount of rock, gravel, sand, silt clay and water to be encountered in the work to be performed and to reflect such determination in the contract unit prices.

Section 202.7 - Pavement Replacement and Surface Restoration

Grading: The Contractor shall do such grading in the area adjacent to back-filled trenches and structures as may be necessary to leave the area in a neat and satisfactory condition approved by the Engineer at no additional cost to the District.

Restoring Surface: All streets, alleys, driveways, sidewalks, curbs or other surfaces, in which the surface is broken into or damaged by the installation of the new work, shall be resurfaced in kind or as specified to the satisfaction of the Engineer in accordance with Section 336 of the Uniform Specifications.

Clean-Up: The job site shall be left in a neat and acceptable condition. Excess soil, concrete, etc., shall be removed from the premises in accordance with Section 110 of these Special Provisions.

Pavement Replacement: The Contractor shall install temporary asphalt pavement or the first course of permanent pavement replacement in accordance with Section 336 of the Uniform Specifications immediately following backfilling and compaction of trenches that have been cut through existing pavement. Except as otherwise provided in Section 336 of the Uniform Specifications,, this preliminary pavement shall be maintained in a safe and reasonably smooth condition until required backfill compaction is obtained and final pavement replacement is ordered by the Engineer. Temporary paving removed shall be hauled from the job site and disposed of by the Contractor at no additional cost to the District.

The use of a spreader box, self-propelled or otherwise, shall not be permitted unless approved by the Engineer.

Section 350 - Removal of Existing Improvements: The work under this section shall consist of the removal and disposal of existing pavement, and any other obstacle to construction, whether shown on the plans or not, unless specifically called out on the plans to be removed or relocated by other agencies.

Arrangements for disposal of all waste material shall be the responsibility of the Contractor.

No separate payment will be made for "removal of existing improvements" and the cost of this item shall be included in contract price bid for Removal and Miscellaneous Work.

Section 401 - Traffic Control: Traffic control shall conform to the Manual on Uniform Traffic Control Devices (MUTCD), 1978 and the City of Phoenix Traffic Barricade Manual, 1980, and these Special Provisions. The City Traffic Engineer or his representative shall approve the Contractor's written barricade and traffic routing plan prior to the start of any work in the barricaded or bypassed area.

The number and kind of barricades, signs, delineators, barriers and all other traffic control devices and the approval of the Contractor's method of application of all traffic control measures, shall not relieve the Contractor of the responsibility of protecting the workmen, the traveling public and the job-site area.

All advance warning construction signs shall be mounted on channels driven into the ground. Each mile and one-half mile point of the project shall be signed with construction and speed limit signs mounted on channels driven into the ground. Contractor must provide flashing arrowboards when reducing the number of lanes or redirecting traffic.

At the time of the preconstruction conference, the Contractor shall submit for review and approval a traffic control plan for the construction project. The

plan shall show all measures to include types of signs, barricades, flashing arrowboards, jersey barriers and sand berms with their placement and spacing.

The Contractor shall provide and maintain all necessary signs, barricades and centerline vertical panels for five working days beyond any construction concrete cure time or acceptance of the project by the District and the City, whichever is greater.

Uniformed City of Glendale police officers shall be used for traffic control.

Section 405 - Survey Control Points and Monuments: Existing survey monuments indicated on the plans or found during construction shall be protected by the Contractor and in the event removal is necessary, removal and replacement shall be performed only by permission of the Engineer and under direct supervision of the Engineer or his authorized representative. Survey monuments shall be constructed to conform to the requirements of MAG Specifications, Section 405, and Standard Details.

Section 505 - Concrete Structures: The work under this section consists of construction in place of the concrete junction structure at 67th Avenue and Greenway Road as well as headwalls and catch basins at other locations in accordance with the plans and Sections 206 and 505 of the Uniform Standard Specification.

The concrete shall conform to Section 725 of the Uniform Specifications. The reinforcing steel shall be Grade 60 and shall conform to Section 727 of the Uniform Standard Specifications.

Section 625 - Manhole Construction: Manhole construction consists of furnishing all materials and labor required to construct manholes as indicated on the plans and in accordance with Section 625 of the Uniform Standard Specifications.

Frames and covers shall be set flat and flush with the replacement pavement grade. Any frame and cover which creates any noise when passed over by automobiles, shall be replaced. Manhole covers shall be marked "Glendale Storm Sewer" per M.A.G. Standard Detail 424.

Section 630 - Temporary Blocking of Catch Basin Inlets: All catch basin inlets shall be blocked by the Contractor at the time of their construction. The inlets shall be blocked so as to effectively prevent water or debris from entering the storm drain. The Contractor may use wood, masonry or sandbags. The pipe inlets will be blocked in a manner that does not constitute a hazard to traffic, pedestrians or adjacent properties or in a manner that damages or scars the catch basin finish work. The Contractor's proposed method for blocking shall be approved by the Engineer or his consultant. The Contractor shall subsequently remove the blocks at the time directed by the Engineer or his consultant. There will be no additional payment for this work.

General Comment: The costs of all work required under this contract, 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.

An attempt has been made to determine the location of all underground utilities and to design the location and elevation of all structures so as not to interfere with the existing utilities; however, it shall be the Contractor's responsibility to cooperate with the pertinent utility companies so that any obstructing utility installation may be adjusted.

Any facility or work which may be performed for the accommodation of any utility shall be paid for by the utility owner. The Contractor shall make all arrangements that may be necessary for the construction and any financial agreement shall be solely between the Contractor and the utility owner.

The Flood Control District reserves the right to make minor adjustments in design grades or the location of structures prior to construction, if it should become necessary in the opinion of the Engineer, without additional cost to the District.