

Ed R

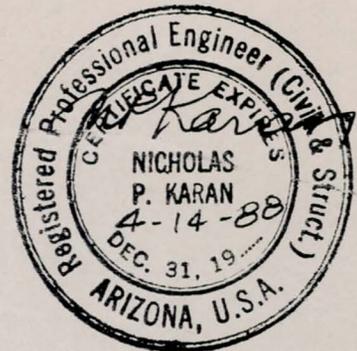
SPECIAL PROVISIONS
FOR
NORTHERN AVENUE BRIDGE
OVER THE
ARIZONA CANAL DIVERSION CHANNEL

Bid Range
\$450 - \$650,000

Sundance Vacant May 1

CONTRACT NO. FCD 87-58

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



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

A118.528

SPECIAL PROVISIONS
FOR
NORTHERN AVENUE BRIDGE
OVER THE
ARIZONA CANAL DIVERSION CHANNEL

CONTRACT NO. FCD 87-58



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

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
CONTRACT FCD 87-58

TABLE OF CONTENTS:

1. Invitation for Bids
2. Bid Form
3. Bid Bond Form
4. No Collusion Affidavit
5. Construction Special Provisions
6. Contract
7. Statutory Payment Bond
8. Statutory Performance Bond
9. Certificate of Insurance
10. Drawings: Northern Avenue Bridge over A.C.D.C.
Plans sheets 1 through 20 of 20

THE WORK SHALL COMMENCE WITHIN SEVEN (7) CALENDAR DAYS AND BE COMPLETED
WITHIN ONE HUNDRED FIFTY (150) CALENDAR DAYS AFTER RECEIPT OF THE
NOTICE TO PROCEED.

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

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

INVITATION FOR BIDS
NO. FCD 87-58

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
INVITATION FOR BIDS, FCD 87-58
INSTRUCTIONS TO BIDDERS

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

If the successful bidder, upon acceptance of his bid by the Flood Control District within the period specified herein for acceptance (sixty days if no period is specified) fails to execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the bid as accepted within the time specified (ten days if no period is specified) after receipt of the forms by him, his contract may be terminated for default. In such event the bid guarantee shall be retained as liquidated damages.

INVITATION FOR BIDS
NO. FCD 87-58

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

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

Unless called for, alternate bids will not be considered.

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

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

INVITATION FOR BIDS
NO. FCD 87-58

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
 INVITATION FOR BIDS, FCD 87-58
 SPECIAL INSTRUCTIONS TO BIDDER

Contract Plans, Special Provisions and Contract Documents: Plans, Special Provisions, and forms for proposal, Bidding Schedule, Contract Agreement and Performance Bond may be obtained from the Flood Control District of Maricopa County, 3335 West Durango Street, Phoenix, Arizona, upon payment of \$15.00 by check payable to the FLOOD CONTROL DISTRICT OF MARICOPA COUNTY. This payment will not be refunded.

APPROXIMATE QUANTITIES FOR PRINCIPAL ITEMS

<u>QUANTITY</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
54.5	c.y.	3000 psi Concrete
328.5	c.y.	4000 psi Concrete
35,904	lbs.	Reinforcing Steel
21	each	Precast Voided Slab
1,370	l.f.	Drilled Shaft, 2' 6" Dia. (Incl. Conc. & Steel)
1,000	Ton	Aggregate Base Course
725	Ton	Asphalt Concrete
6,650	c.y.	Embankment
1	l.s.	Underpass (Incl. Conc. & Steel)

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

Location of Work: The proposed work is located on Northern Avenue at the Arizona Canal, Phoenix, Arizona.

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

INVITATION FOR BIDS
 CONTRACT NO. FCD 87-58

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
(Construction Contract)

BID FORM

Project: Northern Avenue Bridge
Over A.C.D.C.

Invitation FCD 87-58
Date: April 11, 1988

Location: Northern Ave. at the Arizona Canal,
Phoenix, Arizona

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

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

_____ and _____/100 dollars, (in figures)

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

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

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

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

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

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

BIDDING SCHEDULE

CONTRACT: FCD 87-58
 ** NORTHERN AVENUE **

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE (IN WORDS)	UNIT PRICE	EXTENSION
506-1	VOIDED SLAB PRECAST GIRDER	21	EA.			
520-1	PEDESTRIAN HANDRAIL	150	L.F.			
615-1	NEW 10" VCP SEWER	376	L.F.			
615-2	NEW 12" VCP SEWER	409	L.F.			
615-3	NEW 6" AIR JUMPER LINE	152	L.F.			
618-1	NEW 8" CONCRETE PIPE	8	L.F.			
618-2	NEW 15" CATCH BASIN CONNECTOR PIPE	13	L.F.			
618-3	NEW 27" STORM DRAIN PIPE	178	L.F.			
618-4	REPLACE TOP OF TYPE K-14 CATCH BASIN	1	EA.			
625-1	STORM SEWER MANHOLE STD DET 520 & 522	1	EA.			
625-2	SANITARY SEWER MANHOLE (STD DET 420)	4	EA.			
625-3	RESHAPE SANITARY SEWER MANHOLE INVERT	1	EA.			
625-4	ABANDON MANHOLE	1	EA.			

TOTAL

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

BIDDING SCHEDULE

CONTRACT: FCD 87-58
 ** NORTHERN AVENUE **

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE (IN WORDS)	UNIT PRICE	EXTENSION
211-1	FILL CONSTRUCTION	1	L.S.			
310-1	AGGREGATE BASE COURSE	1000	TON			
321-1	ASPHALT CONCRETE A 1-1/2 BASE COURSE	340.2 _v	TON			
321-2	ASPHALT CONCRETE C 3/4 SINGLE COURSE	238.7	TON			
321-3	ASPHALT CONCRETE D 1/2 SURFACE COURSE	145.8 _v	TON			
329-1	TACK COAT	0.36	TON			
336-1	PAVEMENT REPLACEMENT (STD DET 200)	90	S.Y.			
340-1	CONCRETE SIDEWALK (P-1230)	1018	S.F.			
340-2	CURB & GUTTER (STD DET 220 TYPE A, H=6")	534	L.F.			
340-3	DRIVEWAY ENTRANCE (STD DET P-1255)	1693	S.F.			
345-1	ADJUST MANHOLE FRAME & COVER	1	EA.			
350-1	REMOVE CONCRETE CURB AND GUTTER	746	L.F.			
350-2	REMOVE CONCRETE S/W & D/W	3730	S.F.			
350-3	MISC. REMOVALS AND OTHER WORK	1	L.S.			
350-4	REMOVE 48" DIAMETER PIPE	384	L.F.			
350-8	<i>Demolition of C&G w of 12th St</i>	1	L.S.	"		

Page 3a of 5

BIDDING SCHEDULE

CONTRACT: FCD 87-58
 ** NORTHERN AVENUE **

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE (IN WORDS)	UNIT PRICE	EXTENSION
350-5	REMOVE 27" DIAMETER PIPE	28	L.F.			
350-6	REMOVE 15" DIAMETER PIPE	21	L.F.			
350-7	REMOVE 12" DIAMETER PIPE	80	L.F.			
401-1	TRAFFIC CONTROL	1	L.S.			
420-1	INSTALL 4' HIGH CHAIN LINK FENCE	19	L.F.			
420-2	INSTALL 14' DOUBLE GATE	1	EA.			
440-1	RELOCATE & RESTORE IRRIGATION SYSTEM	1	L.S.			
440-2	NEW 4" PVC SLEEVE	176	L.F.			
440-3	NEW 8" PVC SLEEVE	176	L.F.			
505-1	CLASS 'A' CONCRETE - 3000 PSI (BRIDGE)	54.5	C.Y.			
505-2	CLASS 'AA' CONCRETE - 4000 PSI (BRIDGE)	328.5	C.Y.			
505-3	REINFORCING STEEL (BRIDGE)	35904	Lb.			
505-4	DRILLED SHAFT 2'-6" DIA	1370	L.F.			
505-5	UNDERPASS	1	L.S.			

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

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

Date: _____, 19__.

IF BY AN INDIVIDUAL: License No. _____ Classification _____

(Name) (Address)

IF BY A FIRM OR PARTNERSHIP: License No. _____ Classification _____

(Firm Name) (Firm Address)

By: _____

*Name and Address of Each Member:

Date _____, 19__.

IF BY A CORPORATION: License No. _____ Classification _____

(Corporate Name) (Corporation Address)

By: _____

**Incorporated under the Laws of _____

Names and Addresses of Officers:

(President) (Address)

(Secretary) (Address)

(Treasurer) (Address)

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

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

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., 19__.

Principal

Title

Witness:

Surety

Title

Witness:

CONSTRUCTION SPECIAL PROVISIONS
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
FCD CONTRACT NO. 87-58
for
NORTHERN AVENUE BRIDGE
over the
ARIZONA CANAL DIVERSION CHANNEL

PROPOSED WORK: The work includes the construction of a detour, bridge structure and box culvert (underpass), miscellaneous sanitary and storm drainage facilities and reconstruction of approximately 500 lineal feet of a major arterial.

LOCATION OF THE WORK: This project is located in Phoenix, Arizona, on Northern Avenue at the Arizona Canal Diversion Channel between 7th Street and 12th Street.

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

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

The box culvert underpass shall be in accordance with Arizona Department of Transportation (ADOT) Standard Details.

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

CONTRACT TIME: The Contractor shall start work within seven (7) calendar days and complete all work on the project within one hundred fifty (150) calendar days after the date of 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 specification in order to complete the project, the Contractor is reminded that the costs associated with additional testing time, additional test cost, additional Inspection, Survey, Engineering or other work by the Construction Administrator and/or the Flood Control District of Maricopa County shall be borne by the Contractor in accordance with Section 108.5. These costs shall be deducted from the money due to the Contractor by the Flood Control District of Maricopa County. The cost associated with the items above 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 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.

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.

PROJECT TIME AND SEQUENCING SCHEDULE: The Contractor shall prepare and submit to the Engineer for approval, a written schedule covering the general sequencing of the entire work to be performed. The sequencing shall include but not be limited to the following:

- A. Storm Drain Pipe installations (27" & 48").
- B. Sanitary Sewer Pipe Installations (10" & 12").
- C. Work to be coordinated with utilities.
- D. Detours, Construction and Removals.
- E. Underpass Construction.
- F. Bridge Construction.

The schedule shall be submitted to the Engineer before or at the Pre-Construction Conference.

MATERIAL SOURCES: Concrete, Aggregate Base 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 certificates stating that the material produced from commercial sources is in accordance with the Uniform Standard Specifications and these Special Provisions.

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.

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

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

Change the definition of Owner to read as follows: The City of Phoenix, 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 102.4 - EXAMINATION OF SITE: The bidder shall examine the site of the proposed work and all documents pertaining to the work. It is mutually agreed that the submission of a proposal shall be prima facie evidence that the bidder has made such examination and is familiar with the character, quality and quantity of the work to be performed and material to be furnished.

Logs of test holes, ground water levels, and any accompanying soil reports as furnished by the Contracting Agency are furnished for general information only. The field so set forth shall not constitute a representation or warranty, expressed or implied, that such conditions are actually existent. Bidders shall make their own investigations and form their own estimates of the site conditions.

After submission of the proposal, no complaint or claim that there was any misunderstanding as to the quantities, conditions or nature of the work will be entertained.

SECTION 102.5 - PREPARATION OF PROPOSAL: The bidder's Arizona State Contractor's License number and classifications shall be shown on the proposal.

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

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

The Flood Control District of Maricopa County shall be named as coinsured, and a certificate of insurance should be filed with the Flood Control District of Maricopa County.

SECTION 104 - SCOPE OF WORK:

SECTION 104.2 - BORING LOGS AND SOILS REPORT: The soil boring logs are included in the project for the Contractor's information only. No guarantee is made of the accuracy of the boring logs in the soils report. The Contractor shall make his own determination as to soil and subsurface conditions and shall complete his work in whatever material and under whatever condition he may encounter or create, without extra cost (except as modified in MAG). Existing moisture conditions shall be no basis for claim for additional monies or time extensions. The Contractor shall manipulate the existing soil as required to achieve stable soil conditions and the required densities.

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

SUBSECTION 105.2 - PLANS AND SHOP DRAWINGS: Sub-section 105.2 of the MAG Standard Specifications is amended to include the following:

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

- A. Fabricated Pipe and Design Data
- B. Pre-Cast Manhole Risers
- C. Reinforcing Steel
- D. Castings
- E. Precast Concrete Voided Slab Units
- F. Bridge Railing
- G. Field Closures
- H. Concrete Mix Designs
- I. Manhole Covers and Appurtenances
- J. Caulking Materials
- K. Detailed Sequence of Construction for Structures
- L. Bearing Pads
- M. High Strength Grout

Review: 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.

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

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

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

The Contractor, at his own expense, shall make such changes in the drawings as may be necessary to conform to the plans and specifications. Prior to return of such drawings, marked "Furnish as Noted", any work which the Contractor may do on the

fabrications covered by the same shall be at his own risk, as the County 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.

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

SECTION 105.6 - COOPERATION WITH UTILITIES: An attempt has been made to determine the locations of all underground utilities and drainage pipes, culverts, and structures. The Contractor shall comply with the requirements of the ARS 40-360.21 through 40-360.29 in notification to the interested utility owners prior to the start of construction and shall ascertain the approximate locations of the various underground utilities shown on the plans and as may be brought to his attention. The exact locations of these underground utilities shall be determined by excavations made by the Contractor prior to any trenching operations. It shall be the Contractor's responsibility to cooperate with the pertinent utility companies, so that any obstructing utility installation may be adjusted. Should the Contractor's operations result in damage to any utility, the location of which has been brought to his attention, he shall assume full responsibility for such damage.

The Contractor is cautioned to be aware of the presence of overhead power lines adjacent to the construction area and that it is required to maintain a separation of at least ten (10) feet between the power lines and any equipment operating in the area. APS will relocate the existing power line to a location along the south edge of the detour at no cost to the contractor. The contractor shall coordinate with APS.

SWG will temporarily abandon the 4 inch Gas line through the bridge site. The contractor shall coordinate with SWG.

The Contractor is advised that the existing telephone conduit in Northern Avenue is to remain in its present location. Close coordination with Mountain Bell Telephone Company will be necessary to assure location of necessary conduits within the bridge abutments and protection of these facilities during construction.

Any facility or work which may be performed for the accommodation of any utility shall be paid for by the utility owner, unless shown otherwise on the construction documents. 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.

Work requiring bracing, shoring, or unanticipated protection procedures necessitating extra costs to any utility company due to over excavation or any other act on the part of the Contractor, shall be paid at the Contractor's expense.

967
-7815
JWJ
John
Johnson

The following phone numbers, as indicated, should place the Contractor in contact with proper personnel:

Mountain Bell Telephone Company.....Andy Andrade.....842-7250
Salt River Project (Overhead Power).....236-8888 or 273-2202
Salt River Valley Water Users Association....Slavko Jovanovic....
236-5072
Arizona Public Service.....Lois Winkler.....371-6837
Location Staking (APS, Mountain Bell, SRP).....263-1100
City of Phoenix (Water).....Steve Schebler.....268-4709
(Sewer).....Bob Rentfro.....268-1864
(Sewer Maint./Access).....262-6222
(Landscape Maint.)...Terry Mills.....262-1831
Southwest Gas Corporation.....Ronald Morency.....484-5254
Maricopa County Highway Department.....262-3631
Flood Control District of Maricopa County.....262-1501
Metro Mobile CTS of Phoenix.....Glen Carlson.....225-0088

SECTION 105.8 - CONSTRUCTION STAKES, LINES AND GRADES: The project control line and bench mark elevation are shown on the drawings as 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 provide 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.

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.

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 or structures are kept in satisfactory conditions at all times. The Contractor shall maintain drainage from the retention basin south of Northern Avenue to the retention basin north of Northern Avenue.

SECTION 106 - CONTROL OF MATERIALS:

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 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 106.3 - PLANT INSPECTION:

Off-Site Inspection: The Contractor shall be responsible for all expenses, including but not limited to travel and per diem expenses, for inspections by the Engineer and/or the cost of inspection and testing by an independent testing laboratory as required by and at the discretion of the Engineer for any inspection of precast concrete units manufactured outside of a fifty-mile radius from the City limits of Phoenix, Arizona. Precast Manufacturer shall provide certified concrete test results.

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 copy of 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 case by case basis based on the size and type of equipment to be used on the project.
- D. The yard shall be fenced and adequately dust-proofed in a manner such as to preclude tracking of mud onto paved City streets.
- E. Work in yard shall be scheduled so as to comply with the City Noise ordinance.

- F. Equipment, materials, etc., shall be located so as to minimize impact on adjacent properties. A sound barrier may be required if deemed necessary by the Engineer.
- G. The Contractor shall clean up property promptly upon completion of 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 Flood Control Property for these uses, he shall obtain a license from FCDMC.

SECTION 107.2 - PERMITS: The Contractor shall be responsible for obtaining all permits and licenses, paying all charges, fees, taxes, and giving 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. The Contractor shall obtain a "no fee" permit from the City of Phoenix for construction within the City's right-of-way. The Contractor shall also obtain a permit from S.R.P. for operations within their right-of-way.

SECTION 201 - CLEARING AND GRUBBING: The work under this item shall be in accordance with Section 201 of the MAG Standard Specifications. No special payment will be made for removal of trees regardless of size.

SECTION 206 - STRUCTURE EXCAVATION AND BACKFILL: Structure excavation and backfill shall conform to Section 206 of the MAG Uniform Standard Specifications.

The Contractor shall provide sheet piling or other means of support as may be needed due to the proximity of excavations to protect detour roads, underground utilities and private property during construction.

Structure backfill behind the abutments and wing walls shall be compacted in accordance with Table 601-2, Type III and Section 211.4 of the Uniform Standard Specifications.

Structural excavation and structural backfill shall be considered as incidental to Bridge and Underpass construction and no separate payment shall be made for these items.

SECTION 211 - FILL CONSTRUCTION: The work under this item shall conform to Section 211 of the MAG Standard Specifications. The material required for fill construction shall be suitable material which may be obtained from the Arizona Canal Diversion Channel area of excavation and shall be free of all debris and vegetation.

Payment for all work under this section will be made at the lump sum bid for item 211-1 FILL CONSTRUCTION.

SECTION 225 - WATERING: The work under this item shall be in accordance with Section 225 of the MAG Standard Specifications. Maricopa County Highway Department Supplement to the Uniform Standard Specification for Section 225 shall not apply.

SECTION 301 - SUBGRADE PREPARATION: The work under this item shall be in accordance with Section 301 of the MAG Standard Specifications. Subgrade preparation shall be considered incidental to construction and no separate payment shall be made for this item.

SECTION 310 - UNTREATED BASE: The work under this item shall be in accordance with Section 310 of the MAG Standard Specifications.

SECTION 315 - BITUMINOUS PRIME COAT: The work under this item shall conform to section 315 of the MAG Standard Specifications. Prime coat shall be placed as directed by the engineer. There will be no separate payment for bituminous prime coat. The cost for bituminous prime coat shall be considered incidental to related bid items.

SECTION 336 - PAVEMENT MATCHING AND SURFACING REPLACEMENT: The work under this item shall conform to Section 336 of the MAG Standard Specifications. All pavement replacement for trenching shown between Station 22+00 and Station 24+00 is to be temporary pavement replacement.

SECTION 340 - CONCRETE CURB, GUTTER, SIDEWALK, DRIVEWAY AND ALLEY ENTRANCE: The work under this item shall conform in its entirety to Section 340 of the MAG Standard Specifications.

Materials: Portland cement, water, and admixtures shall conform to the requirements of Section 725.

Fine aggregate and coarse aggregate shall conform to the requirements of subsection 725. Coarse aggregate shall conform to the requirements of "Aggregate Base" in Table 702 of the MAG Standard Specifications.

The Contractor may add additional fine aggregate to the aggregate for the curb, in order facilitate finishing. Fine aggregate for this purpose shall be non-plastic and shall conform to the following grading requirements:

Passing No. 4 Sieve	100 per cent
Passing No. 200 Sieve	0-100 per cent

Fine aggregate added for this purpose shall not exceed 25 per cent of the total aggregate for the concrete curb.

Liquid membrane-forming curing compound shall conform to the requirements of AASHTO M148, Type I, Class A.

The minimum cement content per cubic yard of concrete shall be 470 pounds.

The Contractor shall be responsible for furnishing, proportioning, and mixing the various ingredients; however, approval of the proposed materials and proportioning and mixing shall be obtained prior to any concrete operations.

Extruded curb shall be constructed either by the use of conventional fixed forms or by slipform curb placing machines. The surface on which the curbs are to be placed shall be cleaned of all loose dirt and debris prior to placing.

The work shall be performed so as not to mar the paved surface. Concrete placed in fixed forms shall be thoroughly consolidated.

If slipform equipment is used to construct extruded curb, such equipment shall be designed specifically for the work. The slipform machine shall be capable of producing curb equal to, or better than, that produced by the use of fixed forms. If the curb produced by such machines is not acceptable, the use of such machines shall be terminated.

Curbs shall present a neat appearance. The finish normally associated with the use of slipform curb placing machines, including the use of moveable forms, will be considered as acceptable for the finishing of concrete extruded curb. Where bituminous material is being applied to the adjacent roadway, curbs shall be protected so that they are not spattered or discolored.

Extruded curb shall be cured by the application of liquid membrane-forming compound. The time at which it is to be applied and the rate of application shall be approved by the Engineer.

Basis of Payment: The accepted quantities will be paid for at the contract unit price complete in place.

SECTION 350 - REMOVAL OF EXISTING IMPROVEMENTS: The work under this item and in addition to the items listed in the MAG Standard Specifications, shall include the following:

- A. Curb and gutter,, where designated on the plans.
- B. Lawn Restoration: Where new sidewalk or bike paths are constructed adjacent to grass-covered yards, the Contractor, after sidewalk construction is complete, shall grade the area behind the sidewalk and reseed with grass identical to the existing grass. Where existing grass cannot be seeded, it shall be restored with sod of the same type grass, in a method approved by the Engineer.
- C. Any and all items not specifically set forth as a separate pay item.
- D. Sawcutting and matching existing pavements and curbs, gutters, etc.
- E. Relocating positions of existing signs to be staked by the Inspector.
- F. Removal of Guy Ropes Supporting Eucalyptus Trees: Guy ropes supporting the eucalyptus trees and fencing associated therewith are the property of the Flood Control District of Maricopa County. Relocation of the southern guy anchor, if required shall be supervised by Eucalyptus Specialists, (949-9308). Removal of Guy Ropes from trees shall be performed after May 27, 1988, by Eucalyptus Specialists.
- G. All materials to be salvaged are the property of the Flood Control District and shall be disposed of as directed by the District Engineer or his agent.
- H. Abandon Existing Manhole: The Contractor shall plug all pipes entering and exiting the manhole, remove and salvage the frame and covers, fill and compact all manholes with aggregate base up to the frame and cover base.

The aggregate base used shall comply with Table 702 in the MAG Standard Specifications.

Removed frame and covers shall become the property of the City of Phoenix, and the Contractor shall load, haul, and stockpile the frame and cover, as directed, at the City of Phoenix Maintenance Yard, 2301 W. Durango Avenue.

Payment will be included under the lump sum payment for item 625-4 Abandon Manhole.

- I. Supplying installation and removal of 5' chain link fencing for detour.
- J. Remove and reconstruct concrete cut-off walls and grouted river rock.
- K. Adjustment of water meter boxes and water valve boxes to grade.
- L. Bus bench relocation and coordination.
- M. Materials and installation of 8" diameter steel casing for gas line.

SECTION 401 - TRAFFIC CONTROL: Change MAG Subsection 401.7, Payments:

Payment for Traffic Control will be on a lump sum basis.

401.5 General Traffic Regulations:

- A. Northern Avenue shall be considered a major street. The Contractor shall maintain Northern Avenue open to traffic (two lanes in each direction) at all times.

Access to local businesses and existing driveway entrances is required at all times, except that access to Metro Mobile Cell Site from Northern Avenue at the east side of the Arizona Canal may be closed off provided that access is maintained to their facility from the north.
- B. All traffic and/or traffic control devices on this project shall be provided, maintained, and/or controlled as specified in Section III of the Traffic Barricade Manual, latest revision.
- C. Permission to restrict City streets, sidewalks, and alleys (street closure permits) shall be requested as specified in Section III of the Traffic Barricade Manual.

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

SECTION 440.0 - SPRINKLER IRRIGATION SYSTEM INSTALLATION:

All work under this section shall conform to the current MAG Standards and Specifications and the City of Phoenix Supplements.

The scope of work shall consist of furnishing all labor and materials required to relocate the existing sprinkler controls and restore an operational sprinkler irrigation system in the bridge and detour area. Work includes but is not limited to relocation of the sprinkler controller box, valves, vacuum breaker and all related water piping and electrical wiring as indicated on the plans and to provide an operational irrigation system during the period of the contract.

Additionally, the Contractor shall take all necessary precautions to maintain the system in operating condition during the period of the contract.

SECTION 505 - CONCRETE BRIDGE STRUCTURES: The work under this section shall consist of furnishing all labor, materials and equipment for the construction of the cast-in-place concrete portions of the bridge structure, including the approach slabs and bridge sidewalks, in accordance with the plans and Section 505 of the Uniform Standard Specification, except as specified in the Construction Special Provisions.

General: It shall be the Contractor's responsibility to protect the structure and construction site from damage that may occur during the construction period and until final acceptance of the completed bridge by the Flood Control District.

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

No vehicular loads will be permitted on the bridges before the lapse of twenty-one (21) days from the date of the last pour of concrete for the bridge deck, unless approval is obtained in writing from the Engineer. The Contractor shall take special precautions to keep the area around the bridges properly barricaded and marked with flares to prevent automotive traffic from crossing the new bridge structures prior to the project engineer's approval.

The installation of any necessary conduits, brackets, or piping or any other facility or work which may be performed for the accommodation of any utility, other than as shown on the plans,

CONSTRUCTION SPECIAL PROVISIONS

FCD CONTRACT NO. 87-58

Page 14 of 35

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. All conduits, brackets, piping, inserts, etc. installed in the bridge or approaches as shown on the plans are considered incidental items and their costs shall be included in the price bid for related work.

Portland Cement concrete shall conform to Section 725 of the MAG Uniform Standard Specifications.

The following strengths of concrete shall be furnished for Cast-In-Place Elements:

ITEM 505-1 Class 'A' Concrete f'c = 3,000 psi
Sidewalks, Traffic Barriers

ITEM 505-2 Class 'AA' Concrete f'c = 4,000 psi
Deck Slab, Diaphragms, Wingwalls,
Cap Beams, Drilled Shafts, Approach Slabs

The Contractor shall determine the mix proportions and shall furnish concrete which conforms to the requirements of these specifications. All concrete shall be sufficiently workable, at the slump proposed by the Contractor within the specified range, to allow proper placement of the concrete without harmful segregation, bleeding, or incomplete consolidation. It shall be the responsibility of the Contractor to proportion, mix, place, finish, and cure the concrete properly in accordance with the requirements of these specifications.

Admixtures:

The Contractor shall furnish Certificates of Compliance conforming to the requirements of MAG Subsection 106.2 for each type of admixture furnished. Admixtures containing chlorides will not be acceptable for concrete containing uncoated reinforcing steel or embedded metal items.

All concrete admixtures shall be stored in suitable containers in accordance with the manufacturer's recommendations. All liquid admixtures shall be protected from freezing.

Air-entraining admixtures shall conform to the requirements of AASHTO M 154.

Water reducing admixtures shall conform to the requirements of AASHTO M 194.

Fly ash shall conform to the requirements of ASTM C618 for Class F, except that the pozzolanic activity index with lime shall be reduced to a minimum of 650 pounds per square inch at seven days.

The Blaine fineness shall have an average value of at least 2,800 with a minimum value of 2,600 for any one sample. The average value will be determined on the last five consecutive samples. The loss on ignition shall not exceed 3.0 percent.

Design of Concrete Mix:

Portland cement concrete shall comply with Section 725 of the MAG Uniform Standard Specification for Public Works Construction. A fly ash admixture may be used at the option of the Contractor only when portland cement is used. A maximum of 15 percent of the required weight of portland cement may be replaced with a fly ash admixture. A minimum of 1.2 pounds of fly ash shall replace each 1.0 pound of portland cement removed.

Concrete shall have a compressive strength not less than that shown on the project plans. Unless otherwise shown on the project plans, the ($f'c$) of concrete shall be required 28-day compressive strength.

The coarse aggregate size designation for concrete shall be chosen by the Contractor and approved by the Engineer and shall conform to the size designation and grading requirements of AASHTO M 43. In choosing the size designation, the maximum size of coarse aggregate shall not be larger than $1/5$ of the narrowest dimension between sides of adjacent forms, or $2/3$ of the minimum clear spacing between reinforcing bars, or $1/3$ the depth of the slab, whichever is least.

The proposed slump shall be chosen by the Contractor. Concrete at the proposed slumps shall be sufficiently workable to allow proper placement without harmful segregation, bleeding, or incomplete consolidation.

Air-entraining admixtures will be required for all classes of concrete. The amount of entrained air in the concrete mixture shall not be less than four percent nor more than seven percent by volume.

Unless specified otherwise, water reducing admixtures may be used at the option of the Contractor.

At least two weeks prior to the appropriate concreting operation, the Contractor shall furnish a mix design for each strength of concrete for review and approval. More than one mix design for each strength of concrete may be submitted for approval providing specific items and locations of intended uses accompany the mix design. The Contractor shall substantiate each mix design by furnishing test data and providing all details of the mixtures proposed for use.

The complete solid volume mix designs submitted for approval

shall include all weights and volumes of all ingredients. The brand, type, and source of hydraulic cement and admixtures, the coarse aggregate size number designation, source of aggregates, the specific gravities of all ingredients, the proposed slump, a code number to identify the mix design, and the intended use of each mix design shall be an integral part of each mix design.

No changes in the approved mix designs or code numbers shall be made by the Contractor except by the approval of the Engineer. A new mix design shall be submitted for approval any time the Contractor requests a change in materials or proportioning of the materials from that given in each approved mix design. In no case shall the approval of a mix design relieve the Contractor of the responsibility for the results obtained by the use of such approved mix design.

Mix designs from previous or concurrent projects may be submitted for approval. The Engineer may waive trial batches at any time.

The Contractor may obtain concrete for each strength of concrete from an approved commercial source.

For each strength of concrete, the Contractor shall furnish an invoice for each batch of concrete. The minimum items required of each invoice shall be the mix design code number, date, time batched, truck identification or number, and name or identification of batch plant.

Testing for consistency shall be in accordance with the requirements of AASHTO T 119 to determine the consistency in slump. The Contractor shall be responsible for furnishing concrete at the slump shown on the approved mix designs with a permissible variation of ± 1 inch. Concrete that fails to conform to the consistency requirements will be rejected.

Bridge Deck:

The placing of concrete will not be permitted until the Engineer is satisfied that the rate of producing and placing concrete shall be sufficient to complete the proposed pour and finishing operations within the scheduled time, that experienced concrete finishers are available to finish the deck and that all necessary finishing tools and equipment are on hand at the site of the work and are in satisfactory condition for use.

Concrete shall be placed for the full width of the panel to be poured. After the concrete is placed and consolidated, the bridge deck shall be finished using approved power driven finishing machines. Hand finishing methods may be permitted by the Engineer for short bridges 50 feet or less in length and for irregular areas where the use of a machine would be impractical.

When the hand method is permitted, the deck shall be struckoff with a screed which is parallel to the centerline of the roadway, resting on bulkheads or screed strips cut or set to the required cross section of the roadway. This screed shall be so constructed as to have sufficient strength to retain its shape and the cutting edge shall be adjusted to conform to the profile of the roadway. Screeds shall be of sufficient length to finish the full length of spans 50 feet or less in length. Screed strips or headers shall be accurately set to the specified grades, checked, and adjusted as necessary prior to the final screeding operation. The screed shall be worked back and forth over the surface until the proper profile and cross section is obtained.

The deck topping shall be placed using power driven finishing machines. The machines shall be equipped with oscillating transverse or longitudinal screeds and shall be adjusted to conform to the profile or the required cross section of the roadway. Consolidation by a vibratory action of the finishing machine will not be permitted. The screeds shall have sufficient strength to retain their shape after adjustment. The finishing machine shall go over each area of the bridge deck as many times as it is required to obtain the required profile and cross section. A slight excess of concrete shall be kept in front of the cutting edge of the screed at all times. This excess of concrete shall be carried all the way to the edge of the pour or form and shall not be worked into the slab but shall be wasted.

Excess water, laitance, or foreign materials brought to the surface during the course of the finishing operations shall not be reworked into the slab, but shall be removed immediately upon appearance by means of a squeegee or straightedge drawn from the center of the slab towards either edge.

In general, the addition of water to the surface of the concrete to assist in finishing operations will not be permitted. If the application of water to the surface is permitted, it shall be applied as a fog spray by means of approved spray equipment.

Finishing Bridge Deck:

Bridge sidewalks shall be finished to a light broomed texture.

The bridge deck shall be textured with a artificial turf drag in accordance with the requirements of Section 324.3.7 of the City of Phoenix 1987 supplement to the MAG Uniform Standard Specifications.

Hand brooms shall be provided and available at the job site at all times when texturing plastic concrete.

The finishing operation shall be completed before the water sheen

disappears. Water shall not be applied to the deck surface at any time during floating or finishing except in the form of a fog spray.

Fogging equipment shall be capable of applying water to the concrete in the form of a fine fog mist in sufficient quantity to curb the effects of rapid evaporation of mixing water from the concrete on the deck resulting from wind, high temperature, or low humidity, or a combination of these factors.

The finished surface of the concrete shall be tested by means of a ten-foot straightedge placed on the deck surface. The surface plane shall not vary more than 1/8 inch, as measured from the bottom of the straightedge, on deck surfaces exposed directly to traffic.

Areas showing deviations greater than those specified shall be corrected in a manner approved by the Engineer. All corrected areas shall be textured to match the finish of the surrounding deck surface.

All areas corrected shall not show deviations in excess of that specified when tested with a ten-foot straightedge.

Concrete curing shall be accomplished with both white pigmented curing compound and water curing in accordance with Section 505 and 726 of the Standard Specifications.

Dimensional Tolerances:

Construction dimensional tolerances shall be in accordance with Section 601-4, Concrete Structures, Tests on Finished Structures, of the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, Edition of 1987 (revised to date).

Reinforcing Steel:

Reinforcing steel shall be furnished in the sizes, shapes, and lengths shown on the plans and in conformance with the requirements of these Special Provisions. Certificates of Compliance conforming to the requirements of MAG Subsection 106.2 shall be submitted.

When reinforcing steel is delivered to the site of the work, the Contractor shall furnish the Engineer with three copies of all shipping documents. Each shipping document shall show the sizes, lengths and weights of the reinforcing steel separately for each structure.

Steel bars used as reinforcement in concrete shall be deformed and shall conform to the requirements of ASTM A615.

At the Manufacturer's option, steel bars conforming to ASTM A706 may be used in prestressed concrete girders.

Where shown on the plans, the bars shall be Grade 60.

Where Grade 60 is not specified on the plans, Grade 40 shall be used if it is immediately available. If Grade 40 is not immediately available, Grade 60 may be used exclusively or in combination with Grade 40 provided that the conditions under which the grades are used in combination are acceptable to the Engineer and further provided that there is no additional cost to the Owner.

Shop drawings and lists showing the bending of reinforcement bars shall be submitted by the Contractor to the Engineer for approval, but such approval shall not relieve the Contractor of responsibility for the correctness of such drawings and lists.

Any discrepancy or error found by the Contractor in checking a bending diagram shown on the project plans or in preparing shop drawings or lists shall be reported immediately to the Engineer, and the discrepancy or error shall be corrected in advance of fabrication and delivery of materials.

When bending is required, it shall be done without the use of heat, and bars having cracks or splits at the bends will be rejected.

Reinforcement shall be accurately fabricated and placed as shown on the plans and shall be firmly held in place by wire ties at all intersections and splices with 16 gauge or heavier tie wire and by using precast mortar blocks or ferrous metal chairs, spacers, metal hangars, supporting wires or other approved supports. Where reinforcement spacing is less than 12 inches in each direction alternate intersections may be tied. Tack welding or reinforcement will not be permitted unless approved in writing by the Engineer.

Distances from the forms shall be maintained so that the reinforcement does not vary from the position indicated on the plans by more than 1/4 inch. Reinforcement in any member shall be placed, inspected and approved before any concrete is placed.

All reinforcement shall be furnished in the full lengths indicated on the project plans. Splicing for bars, except as shown on the plans, will not be permitted without the Engineer's approval. Splices shall be staggered as far as possible. The type and method of splices or connections shall be approved by the Engineer.

In lapped splices, the bars shall be placed in contact with one another and wired together in such a manner as to maintain a clearance of not less than the minimum clear distance to other bars and the minimum distance to the surface of the concrete, as specified in the AASHTO Standard Specifications for Highway Bridges. Lap lengths shall be as shown on the plans.

Structural steel items embedded in the concrete are incidental to concrete unit prices.

Payment for all work under this section will be made at the unit price bid per cubic yard for ITEMS 505-1 CLASS 'A' CONCRETE through 505-2 CLASS 'AA' CONCRETE and unit price bid per pound for ITEM 505-3 - REINFORCING STEEL.

No separate payment will be made for reinforcing steel Grade 40 and Grade 60.

DRILLED SHAFT FOUNDATIONS: Item 505-4 of the Bidding Schedule shall conform to the following:

Description: The work under this section consists of furnishing all materials and equipment necessary to construct reinforced concrete columns formed within a drilled excavation in reasonably close conformity with the details, dimensions, and locations shown on the project plans and the requirements of these special provisions. These special provisions contain requirements for the use of drilling slurry and metal casing. Neither the slurry nor the casing is required, unless caving of the shaft occurs.

When the terms "caisson" and "shaft" are used hereinafter or on the project plans, they shall be construed to mean drilled shaft foundation and drilled excavation, respectively.

General Requirements: Prior to constructing any caissons, including any test caissons, the Contractor shall submit to the Engineer a list of all major equipment, with respective capacities, that will be used to construct the caissons and the proposed construction procedure. The submission shall indicate, in detail, the techniques to be used in drilling the shaft and inspecting the completed excavation and reinforcing and concreting the caissons.

The Engineer will review the submission. If at any time during the construction of caissons or test caissons, the Engineer determines that the equipment, materials or procedures, either singly or in combination, are such that defects in the work may occur, the Engineer may stop the work until appropriate changes

are made by the Contractor. In no case shall the Contractor be relieved of his responsibility for constructing acceptable caissons.

After constructing one or more caissons or test caissons, the Contractor may make minor modifications to the equipment, materials or procedures, either singly or in combination, and shall advise the Engineer of the changes in writing. The Engineer will review the proposal and may require the Contractor to construct another test caisson in order to test the proposed changes prior to constructing any additional bridge foundation caissons.

An acceptable test caisson (if a test caisson is required) or an acceptable bridge foundation caisson shall be constructed prior to the construction of any other caissons for the bridge foundation.

The decision of the Engineer as to the acceptability of completed caissons is final.

Materials:

Concrete: Concrete shall be Class "AA" conforming to the requirements of Section 725 for the strength of portland cement concrete shown on the project plans. Where concrete is placed in shafts containing bentonite slurry or water, the cement content of the concrete shall be between 658 and 752 pounds per cubic yard and the size of the coarse aggregate shall not exceed one inch. Water reducing and air entraining agents may be used.

Reinforcing Steel: Reinforcing steel shall conform to the requirements of Section 727. No splicing shall be allowed for Vertical Reinforcing Steel in drilled shafts.

Metal Casing: Casing shall be of unit or sectional construction and shall prevent seepage of water. Casing shall be of sufficient strength to withstand handling stresses, the pressure of concrete and of the surrounding earth. Casings are not required except as a temporary measure if caving of the shaft should occur.

Shaft Forms: If the size of the shafts cannot be maintained within 2" of the shaft diameter as shown on the plans for the depth of the proposed channel or if over drilling will narrow the channel width, sonotube or an approved method shall be used to control the shaft diameter and location shown on the plans.

Construction Requirements:

Unless otherwise shown on the project plans, the maximum deviation from plumb shall be not more than .5% (.005) and the maximum variation of the center axis of any shaft at the top shall be one inch from its project plan location.

The anticipated subsurface conditions and depths where satisfactory bearing material may be encountered are indicated on the project plans; however, no warranty of the subsurface conditions and depths where satisfactory bearing material may be encountered shall be inferred.

The bottom elevation of an caisson may be raised or lowered from that shown on the project plans as ordered by the Engineer. No reinforcing steel or concrete shall be placed in a shaft until the final elevation has been determined.

The Contractor shall protect the shaft from caving in at the surface either by constructing a concrete slab or by placing a temporary casing or by other methods as approved by the Engineer.

The Contractor shall either drill or form a circular opening at the center of the slab. The slab shall be broken up and removed at the completion of the caisson construction. If a casing is used, it shall be removed after the concreting of the shaft is completed and while the concrete is still fluid. Casing shall not be left in place except as indicated on the project plans or as approved by the Engineer.

Casing specified on the project plans or approved by the Engineer to remain in place shall be installed in such a manner that there will be no voids between the earth and the casing.

When caving conditions are encountered, drilling shall cease until modifications to the equipment, materials or procedures are made that will prevent such caving. If a steel casing is used, it shall be clean and shall extend to the top of the shaft. The inside diameter of the casing shall not be less than the specified size of the caisson.

Material excavated from shafts and not used elsewhere on the project shall be disposed of as approved by the Engineer.

When the project plans indicate that shafts are to be drilled within embankments, the embankments shall be constructed as shown on the project plans and thoroughly compacted in accordance with the requirements of Section 206 prior to drilling, except as otherwise approved by the Engineer.

Open excavations that are deemed to be potentially hazardous by the Engineer shall be covered at the end of each shift in a manner approved by the Engineer.

Reinforcing Steel: The reinforcing steel cage shall consist of the longitudinal bar and spiral hoop reinforcement. The cage shall be completely assembled and placed into the shaft as a unit.

Unless otherwise indicated on the project plans, or approved by the Engineer, splicing of reinforcing steel will not be permitted. Lap splices in spiral hoop reinforcement shall be in accordance with the details shown on the project plans or as approved by the Engineer and only at locations approved by the Engineer.

The reinforcing steel cage shall not be placed until immediately before concreting operations are to be started and shall be in accordance with the details shown on the project plans or as approved by the Engineer and only at locations approved by the Engineer.

The cage shall be adequately supported and anchored from the top to prevent movement during the concrete placement and for at least four hours thereafter. The exact length of time will be determined by the Engineer. The support shall be concentric and shall support at least one-half of the vertical bars. Spacers shall be at sufficient intervals along the shaft to insure minimum concrete cover for the entire length of the caisson. The type of spacer used shall be approved by the Engineer.

If the shaft is deepened and the project plans indicate full depth reinforcement, the bars in the lower portion of the caisson shall be extended accordingly, as directed by the Engineer, to the bottom of the shaft. These bars shall be spliced by butt welding or by other connecting procedures approved by the Engineer to the proper length in accordance with the requirements of Section 505.5.1. Spiral or tie reinforcement shall also be extended to the bottom of the shaft as directed by the Engineer.

Concrete:

General: Concrete shall be placed as soon as possible after completion of the shaft and the placement of the reinforcing steel cage. Any sloughage or other loose material shall be machine cleaned from the shaft prior to placing reinforcing steel and concrete. An accumulation of loose soils, muck, etc., at the bottom of the shaft will not be allowed at the time of placing steel or concrete. A flight auger shall not be used for cleaning purposes.

Concrete placement shall be continuous in the shaft to the top elevations or to construction joint shown on the project plans and shall be in accordance with the requirements of Section 505 and as specified herein. Concrete in drilled shafts shall be consolidated by vibration unless a drilling slurry is used.

Prior to the placing of concrete, the Contractor shall have made all the necessary arrangements to assure the uninterrupted delivery of concrete so that each caisson will be constructed without cold joints.

The Contractor shall exercise care so that no damage to a completed caisson will occur. The Contractor shall not begin construction of the footings, formed columns or cap beams or remove the concrete pad until at least 48 hours after the concreting of the shaft is completed for the respective pier or abutment caisson.

Placement in Dry Excavations: Concrete shall be placed through a suitable tube or tremie to prevent segregation of materials.

Concrete may be placed by the free-fall method provided that water is not standing in the bottom of the shaft and that the fall does not exceed six feet. The delivery chute shall be positioned so that the concrete does not strike the sides of the shaft or the reinforcing steel.

Casing Removal: During removal of any casing, a sufficient head of not less than five feet of fluid concrete shall be maintained above the bottom of the casing except at the top of the shaft. All contaminated concrete below the top of the caisson shall be removed.

If the removal of the casing causes an upward movement of the concrete and/or reinforcing steel cage of one inch or less, the casing may continue to be pulled provided no further movement occurs and if the concrete is vibrated or rodded to reconsolidate the concrete. Vibration or rodding of the concrete shall not be used to attempt to break the casing loose for extraction.

If the upward movement is greater than one inch, the casing shall be left in place as a permanent sleeve at the Contractor's expense. A load test may be required by the Engineer to determine the adequacy and acceptability of the caisson.

Test Caisson: Unless otherwise directed by the Engineer, a test caisson is not required.

Inspection and Tests: The drilled pier foundations shall be inspected to verify the nature of materials encountered in the pier excavations. After completion of a shaft and prior to placement of the reinforcing steel cage and concrete, the shaft will be inspected by the Engineer. The Contractor shall provide suitable equipment for the Engineer to inspect the completed excavation.

Gamma ray testing will not be required unless it is necessary for the Contractor to use a drilling slurry.

If required each completed caisson will be inspected by means of a gamma ray logging device. The Contractor shall furnish and install two inch inside diameter polyvinyl chloride pipe (Schedule 40) as required. The pipe shall be joined with glued couplers to provide a clean, dry and unobstructed two inch diameter clear opening from the top of the caisson to the tip. The pipe shall be capped top and bottom and shall be securely tied to the reinforcing steel in a straight line in order to prevent displacement during handling and concrete placement and permit the gamma ray logging device to pass top to bottom.

If the inspection indicates the presence of voids or zones of unconsolidated concrete in the caisson, the concrete shall be core drilled or otherwise exposed as directed by the Engineer.

After all inspection has been completed, all holes and conduit in all bridge foundation caissons shall be filled with an approved sand-cement grout.

Caisson Repair: If after inspection the Engineer determines that the integrity of the bridge foundation has been compromised, the Engineer will order the Contractor to make such repairs as are deemed necessary by the Engineer.

Method of Measurement: Caissons will be measured by the linear foot. Measurement will be made from the top of the accepted caisson to the bottom, as indicated on the project plans or as directed by the Engineer.

Basis of Payment: The accepted quantities of caissons, including test caissons, if required, measured as provided above, will be paid for at the contract unit price per linear foot for the diameter designated in the bidding schedule, complete in place, including excavation, drilling slurry, metal casing, steel reinforcing, portland cement concrete slabs, and any needed forming, curing and finishing. No additional payment will be made for metal casing that is to remain in place.

The contract unit price shall also include the cost of exposing, by excavation, the upper length of the test caissons, the drilling and/or backfilling of any additional shafts and the construction of any additional test caissons. Payment will be made only for one accepted test caisson and will be based on the full depth test caisson length required by the Engineer.

The contract unit price shall also include the cost of the core drilling or exposing of concrete and the subsequent repair of caissons as hereinbefore specified under "Caisson Repairs" for caissons which are deemed to be unacceptable.

The contract unit price shall also include the cost of furnishing all materials, equipment and labor necessary for the splicing of reinforcing steel and for the radiographic testing of welds and the testing of butt splices and threaded splices.

The contract unit price shall also include the cost of furnishing and placing conduit and the subsequent filling with a sand-cement grout.

If the Contractor is ordered by the Engineer to core drill or otherwise expose the caisson for inspection and no voids, unconsolidated concrete or other condition that will compromise the integrity of the bridge foundation is determined by the Engineer to exist, the cost of such work and the cost of the subsequent repairs will be paid for in accordance with the requirements of ADOT Standard Specifications Subsection 109.04.

No measurement or direct payment will be made for the reinforcing steel extending from the top of the drilled shaft foundation into the cap, the price being considered as included in the cost of the respective drill shaft foundation.

When load tests are required by the Engineer to determine the adequacy and acceptability of drilled shafts, payment for load tests for drilled shafts determined to be adequate and acceptable will be made in accordance with the provisions of ADOT Standard Specifications Subsection 109.04.

Load tests for drilled shafts determined to be inadequate and unacceptable will be at the Contractor's expense.

UNDERPASS: Item 505-5 of the Bidding Schedule shall include all underpass work and related items including: structural excavation and backfill, reinforcing steel, concrete, inserts, end closures, electrical system, sump and outlet pipe.

Payment will be made at the lump sum price bid.

SECTION 506 - PRECAST PRESTRESSED CONCRETE MEMBERS: The work under this section shall consist of furnishing and erecting the bridge girders as shown on the plans and in accordance with AASHTO Standard Specifications for Highway Bridges dated 1983.

All materials and construction of prestressed bridge girders shall conform to Section 506 of the Uniform Standard Specifications, except as modified by these Construction Special Provisions.

Portland Cement Concrete for Prestressed Girders shall conform to the Uniform Standard Specifications and these Construction Special Provisions.

Concrete $f'c = 5,500$ psi

The elastomeric bearing pads shall meet the requirements of Section 25 - Elastomeric Bearings of the AASHTO Standard Specifications for Highway Bridges dated 1983 (revised to date).

The Contractor shall submit mix designs or Manufacturer's literature for high-strength grout to be used in keyways between deck units and for filling of tie rod pockets to the Engineer for review.

Tie rods shall be tensioned as specified on bridge drawings. The Contractor shall provide properly calibrated equipment for this purpose, and upon completion shall submit certification that proper tension was achieved.

No separate payment will be made for the elastomeric bearing pads, structural steel, anchor bolts, prestressing or post-tensioning steel, reinforcing steel or other embedded items necessary to the furnishing of the girders complete-in-place.

Payment will be made at the unit price bid per each for:

ITEM 506-1 - VOIDED SLAB PRECAST GIRDER

SECTION 520 - PEDESTRIAN HANDRAIL: The work under this section consists of the construction of a pedestrian rail on the bridge decks and abutments as shown on the plans in accordance with Section 520 of the Uniform Standard Specifications. The railing shall be painted with #4 paint after fabrication in accordance with Section 530 and 790 of the Standard Specifications.

Payment for this item will be made at the contract unit price bid per lineal foot for ITEM 520-1 - PEDESTRIAN HANDRAIL.

SECTION 601 - TRENCH EXCAVATION, BACKFILLING, AND COMPACTION:

- A. CITY OF PHOENIX SUPPLEMENT SUBSECTION 601.2.1 GENERAL: is amended to add the following paragraph:

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

- B. SUBSECTION 601.2.2 TRENCH WIDTH: is amended to add the following paragraph:

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

- C. SUBSECTION 601.2.5 OVER EXCAVATION: is amended to add the following paragraph:

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

- D. SUBSECTION 601.2.8 GRADING AND STOCKPILING: Add the following paragraph:

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

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

In either event, the proper compaction shall be obtained.

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

- E. SUBSECTION 601.4.3 BACKFILL: Delete the fourth paragraph in its entirety, and substitute the following:

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

- F. SUBSECTION 601.4.3 BACKFILL: is amended to add the following paragraphs:

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

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

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

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

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

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

SECTION 615 - SEWER LINE CONSTRUCTION: The work under this item shall conform in its entirety to Section 615 of the MAG Standard Specifications.

Prior to connection to the existing siphon facility, the siphon and related piping shall be cleaned by appropriate methods to assure removal of any foreign material.

The existing sewer line system shall be maintained until the new sanitary sewer siphon and connector pipes have been placed into service and accepted by the Engineer. Prior to installation of any plugs, filling in, removing, or abandoning any sewer line, the abandoned sewer lines will be dewatered and aerated by the Contractor in a manner that will not cause damage to public property nor constitute any nuisance or menace to the public.

All vitrified clay pipe shall be extra strength, conforming to MAG Specifications Section 743.

The trenching, bedding and backfilling of the foregoing items shall be in accordance with Section 601 of the Standard Specifications and the amendments in these special provisions.

Air Jumper Line: That portion of the 6" air jumper line suspended beneath the bridge or located under the approach slabs shall be ductile iron water pipe and fittings in accordance with MAG Specifications Section 750. That portion of the 6" air jumper line located outside of the above limits may be constructed of either ductile iron water pipe or P.V.C. (Polyvinylchloride) sewer pipe. Measurement for 6" Air Jumper Line shall be by the linear foot along the pipe centerline. No distinction shall be made for different kinds of pipe materials.

P.V.C. (Polyvinylchloride) Sewer Pipe: P.V.C. pipe and fittings shall meet the requirements of ASTM Specification D 3034 for SDR35.

Prior to installation of the pipe, the Contractor shall obtain and submit a manufacturer's certification that the pipe meets the foregoing specifications and passes the tests described in this section.

Pipe shall be suitable for use as a gravity sewer conduit. Provisions must be made for contraction and expansion at each joint with rubber ring. The bell shall consist of an integral wall section with a solid cross-section rubber ring, factory assembled, securely locked in place to prevent displacement during assembly.

The pipe (6' long section) shall be subjected to impact from a free-falling tup (20-lb. Tup A.) in accordance with ASTM Method of Test D2444. No shattering nor splitting shall be evident when impacted an energy of 220 ft-lbs. (Denting is not a failure.)

All fittings and accessories shall be as manufactured and furnished by the pipe supplier, or approved equal, and have bell and/or spigot configurations compatible with that of the pipe.

One full length of P.V.C. pipe selected from 20 lengths shall be subjected to the following tests, which shall be conducted at 73 degrees F. (+- 3 degrees F.):

a. Pipe Stiffness

Minimum "pipe stiffness" (F y) at 5% deflection shall be 46 psi when tested in accordance with ASTM Method of Test D2411, "External Loading Properties of Plastic Pipe by Parallel-Plate Loading".

b. Joint Tightness

Two sections of pipe shall be assembled in accordance with the manufacturer's recommendation. Joints shall be tested in accordance with ASTM D3212, "Joints for Drain and Sewer Plastic Pipe Using Flexible Elastomeric Seals".

c. Flattening

There shall be no evidence of splitting, cracking, or breaking when the pipe is tested as follows:

Flatten specimen of pipe, six inches long, between parallel plates in a suitable press until the distance between the plates is forty percent of the outside diameter of the pipe. The rate of loading shall be uniform and such that the compression is completed within two to five minutes.

Trenching, bedding, and backfilling of P.V.C. pipe shall be in accordance with Section 601 of the Standard Specifications and the amendments in these special provisions.

PAYMENT for items 615-1 thru 615-3 will be made at the contract unit price bid per linear foot. No measurement or direct payment will be made for furnishing and placing bedding material, fittings, collars, bands, or couplings joining the various sections of pipe.

SECTION 618 - STORM DRAIN CONSTRUCTION WITH CONCRETE PIPE: The work under this item shall conform in its entirety to Section 618 of the MAG Standard Specifications.

SECTION 625 - MANHOLE CONSTRUCTION AND DROP SEWER CONNECTIONS: The work under this item shall conform in their entirety to Section 625 of the MAG Standard Specifications.

GENERAL COMMENTS: The term "or equal" when used in the description of any construction materials, shall be understood to mean "or approved equal", as determined by the Engineer.

The single barrel box culvert underpass shall be constructed in accordance with current Arizona Department of Transportation, Highways Division, Structures Section, Standard Drawings, as shown on project plans. Payment will be made as shown in bidding schedule.

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

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

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

CONTRACT FCD 87-58

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

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

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

ARTICLE I-SCOPE OF WORK: The CONTRACTOR shall furnish any and all labor,
materials, equipment, transportation, utilities, services and facilities
required to perform all work for the construction of Project No. FCD 87-58;
Northern Avenue Bridge Over A.C.D.C.
and to complete and totally construct the same and install the material therein
for the OWNER, in a good and workmanlike and substantial manner and to the
satisfaction of the OWNER through its Engineers and under the direction and
supervision of the Engineer, or his properly authorized agents and strictly
pursuant to and in conformity with the Plans and Specifications prepared by the
Engineers for the OWNER, and with such modifications of the same and other
documents that may be made by the OWNER through the Engineer or his properly
authorized agents, as provided herein.

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

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

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

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

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

PARTY OF THE FIRST PART

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
PARTY OF THE SECOND PART

By: _____
Chairman, Board of Directors

Date: _____

RECOMMENDED BY:

ATTEST:

Chief Engineer and General Manager
Flood Control District
of Maricopa County

Clerk of the Board

Date: _____

LEGAL REVIEW

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

By: _____

Date: _____

CONTRACT NO. FCD 87-58

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

KNOW ALL MEN BY THESE PRESENTS:

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

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

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

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

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

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

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

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

PRINCIPAL SEAL

BY: _____

AGENCY OF RECORD

SURETY SEAL

BY: _____

AGENCY ADDRESS

POWER OF ATTORNEY SEAL

BY: _____

CONTRACT NO. FCD 87-58
PAYMENT BOND

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

KNOW ALL MEN BY THESE PRESENTS:

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

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

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

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

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

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

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

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

AGENCY OF RECORD

AGENCY ADDRESS

CONTRACT NO. FCD 87-58
PERFORMANCE BOND

PRINCIPAL SEAL

BY: _____

SURETY SEAL

BY: _____

POWER OF ATTORNEY SEAL

BY: _____

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

CERTIFICATE OF INSURANCE

CONTRACT FCD 87-58

PROJECT TITLE Northern Avenue Bridge Over A.C.D.C.

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

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

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

DATE ISSUED _____

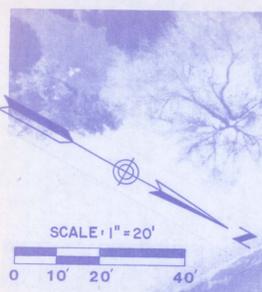
AUTHORIZED REPRESENTATIVE _____

It is further agreed that:

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

Date _____ Contractor _____

CERTIFICATE OF INSURANCE
CONTRACT FCD 87-58



LEGEND

- UNDERGROUND ELECTRIC — E —
- WATER SERVICE TO BE ABANDONED □
- SEWER SERVICE TO BE ABANDONED — S —
- TRANSFORMER ⊙

NOTES:

1. ALL CONCRETE SLABS AND FOOTINGS SHALL BE REMOVED WITH THE STRUCTURES.
2. EXISTING SIDEWALKS WITHIN THE DEMOLITION AREA TO REMAIN IN PLACE. CONTRACTOR SHALL ATTEMPT TO PREVENT DAMAGE TO THESE SIDEWALKS.
3. CONTRACTOR SHALL TAKE REASONABLE MEASURES TO PROTECT EXISTING TREES AND SHRUBS. NO TREES SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
4. DISTURBED AREA SHALL BE CLEARED OF ALL DEBRIS AND GRADED SMOOTH.
5. ALL CONSTRUCTION ACCESS SHALL BE FROM CANAL SIDE OF AREA.
6. CONTRACTOR TO NOTIFY CITY OF PHOENIX WATER & WASTE-WATER FOR WATER SERVICE DISCONNECT - PH. 262-6251.
7. CONTRACTOR SHALL COORDINATE DISCONNECTION OF TELEPHONE AND ELECTRIC SERVICES PRIOR TO COMMENCING DEMOLITION.
8. ENTIRE CONSTRUCTION AREA TO BE FENCED INCORPORATING CONSTRUCTION FENCE SHOWN.





2633 East Indian School Road
Suite 401
Phoenix, Arizona 85016-6741
(602) 957-6191
rga #87026



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY		
NORTHERN AVENUE BRIDGE ARIZONA CANAL DIVERSION CHANNEL DEMOLITION PLANS SUNDANCE CONDOMINIUMS		
DESIGN	BY RJM	DATE 4-88
DESIGN CHK.	RTH	4-88
PLANS	NSS	4-88
PLANS CHK.	RTH	4-88
SUBMITTED BY:	DATE: 6-11-88	
APPROVED BY:		DATE:
CHIEF ENGINEER AND GENERAL MANAGER		C-11 OF



FLOOD CONTROL DISTRICT of Maricopa County

Interoffice Memorandum

CMT. NO.	SUBJECT: ACDC Underpasses at 7th Street & Northern Avenue	<input type="checkbox"/> FILE _____
		<input type="checkbox"/> DESTROY _____

TO: Linda Hannan FROM: Ed Raleigh DATE: 4/4/89

Northern Avenue Underpass (Length = 114', 10' x 10' Box)

Construction Cost = \$ 66,910
(Bid Tabulation is attached)

7th Street Underpass (Length = 88', 10' x 10' Box, Plus wing walls)

Construction Cost = \$ 49,062
(Cost tabulation from the Bid items is attached)

Total Construction Costs = \$115,972 ①

Design costs and construction management costs were not broken down separately for the underpass, but 8% of construction costs for design and 8% of construction costs for construction management would be reasonable.

Design = 8% of 115,972 = \$ 9278 ②

Construction Management = " " " = \$ 9278 ③

Total ① + ② + ③ = \$ 134,528

RECEIVED DATE: _____

Flood Control

MARICOPA COUNTY BOARD OF SUPERVISORS
AGENDA INFORMATION FORM

LOW ORG. NO. 3000 DEPARTMENT: Parks & Recreation CONTROL NUMBER: PR-88-055
 ENCUMBRANCE NO. _____ AGENCY: Public Works CONTROL NUMBER: PW-88-055

1. BRIEF DESCRIPTION OF PROPOSAL AND REQUESTED BOARD ACTION:
 As part of the Arizona Canal Diversion Channel (ACDC) Project, the Flood Control District is planning to construct bridges at Northern Avenue, 7th Street and 16th Street. The Board of Supervisors have previously agreed to share the construction of trail underpasses as part of the bridge construction to maintain the integrity of the Sun Circle Trail. The cost of the underpass phase of the bridge construction is estimated to be \$80,000 for each bridge. A sum of \$186,250 is available from the 1972 Bond Issue. The balance of \$53,750 will be paid from 1986 Bond Funds. The inclusion of the underpasses as part of the Flood Control design and construction process would result in a substantial cost savings to the Parks Department.

It is proposed that the Parks and Recreation Department reimburse the Flood Control District for expenses incurred in the design and construction of the three trail underpasses.

The 1986 Bond project has been approved by Citizens Bond Oversight Committee and Bond Counsel.
 Compliance with Maricopa County Procurement Code _____ article _____ paragraph _____

2. CONTINUED FROM MEETING OF _____ DISCUSSED IN MEETING OF _____
 3. THIS DEPARTMENT WILL CAUSE PUBLICATION _____
 CLERK OF THE BOARD TO CAUSE PUBLICATION _____

4. MOTION: It is moved that the Maricopa County Board of Supervisors ...
 Approve the Parks and Recreation Department reimbursing the Flood Control District for the construction of the ACDC trail underpasses at Northern Avenue, 7th Street and 16th Street at a cost not to exceed \$80,000 each. Source of funding to be \$186,250 from 1972 Bond Issue and the balance of \$53,750 from 1986 Bond Funds.

5. FINANCIAL: _____ Budgeted _____ Contingency Budget Amendment _____ Transfer _____ Grant or other _____
186,250 1972 Bonds
53,750 1986 Bonds
240,000 Total Project
 \$ _____ Fund _____ Financial Officer Ray Harris Date 4-5-88

6. FLOOD CONTROL: DeFagranis 3-21-88
 (Signature) Date
7. DEPARTMENT: Parks & Recreation
William Reckman 3-21-88
 Action Recommended by Date

8. MATERIALS MANAGEMENT: _____ Date _____
 Materials Management Director
9. LEGAL Approved as to form and within the powers and authority granted under the laws of the State of Arizona to the Maricopa County Board of Supervisors.
James Hunter 3-27-88
 Deputy County Attorney Date

10. OTHER: Risk Management
Hal Seagelton 3-25-88
 (Signature) Date
11. APPROVED FOR AGENDA:
AC Esteban 4/2/88
 Approving Official Date

12. BOARD OF SUPERVISORS: Action taken:
 Approved _____ Amended _____ Disapproved _____ Deleted _____
 Continued to: _____
 (Date and type of meeting)
Cherie Pennington 5-2-88
 Clerk of the Board Date
13. RECOMMENDATION OF COUNTY MANAGER:
 _____ Approve _____ Disapprove _____
 Comments: _____
 _____ County Manager Date

7TH ST. UNDERPASS COSTS

12/13/88

1/4

I 3000 PSI CONCRETE ⇒

- ADDT B-18.10 ~ 28' long, H=14' CLASS II
 $(.906 \text{ cy/4F})(28 \text{ 4F}) = 27.05 \text{ cy}$

- RETAINING WALL ~

FOOTING = $(1.33')(8')(88.33') = 939.85 \text{ CF}$

19CY = $(1')(1.5')(88.33') = 132.50 \text{ CF}$

WALL ⇒ HT. AVE. = 13.70'

$(1')(13.70' - 1.33')(88.33') = 1092.64 \text{ CF}$

$(.5')(13.70' - 1.33')(1.5')(88.33') = 273.16 \text{ CF}$

$(1.47')(1')(88.33') = 147.51 \text{ CF}$

$(.33')(1.33')(88.33') = 38.77 \text{ CF}$

TOTAL WALL = 1552.08 CF

TOTAL = 2624.41 CF = 97.20 cy

- SLAB ~ $(.67')(10.33')(88.33') = 611.34 \text{ CF} = 22.64 \text{ cy}$

- ROOF SLAB ~ Δ BETWEEN 9" CONC. PAVE VS 12"

ROOF SLAB

$(.25')(12')(88.33') = 264.99 \text{ CF} = 9.81 \text{ cy}$

- ADD'L BACK WALL ~ Δ BETWEEN 4'-3" (NORTH) AND

7'-3" (SOUTH)

$(.67')(3')(88.33') = 177.54 \text{ CF} = 6.58 \text{ cy}$

TOTAL CONCRETE = 163.28 cy @ \$ 160.00/cy

TOTAL COST = \$ 26,124.80

II. REINFORCING STEEL \Rightarrow

- ADOT (SEE CONC. \bar{E} ABOVE) ~

$$(102.66 \text{ \#}/\text{LF})(28 \text{ LF}) = 2874.48 \text{ \#}$$

- FOOTING ~

$$(\#6)(6')(45) = 405.54 \text{ \#}$$

$$(\#7)(6')(45) = 551.88 \text{ \#}$$

$$(\#6)(4.25')(90) = 574.52 \text{ \#}$$

$$(\#4)(88')(9) = 529.04$$

$$(\#6 \text{ L})(8.5')(90) = 1149.03$$

$$(\#6 \text{ J})(3.58')(76) = 408.66$$

$$(\#6 \text{ J})(6')(90) = 811.08$$

$$\text{TOTAL} = 4429.77 \text{ \#}$$

- WALL ~

$$(\#6)(13.5')(90) = 1824.93 \text{ \#}$$

$$(\#6 \text{ I})(14')(76) = 1598.13$$

$$(\#4)(88')(26) = 1528.38$$

$$(\#5)(88')(4) = 367.14$$

$$(\#4 \text{ I})(4')(90) = 240.48$$

$$\text{TOTAL} = 5559.06 \text{ \#}$$

- SLAB ~

$$(\#5)(10')(90) = 938.70 \text{ \#}$$

$$(\#5)(88')(11) = 1009.62$$

$$\text{TOTAL} = 1948.32 \text{ \#}$$

- ROOF ~

$$(\#4)(11.5')(60) = 460.92\#$$

$$(\#8)(11.5')(125) = 3838.13$$

$$(\#4)(88')(9) = 529.06$$

$$(\#5)(88')(14) = 1284.98$$

$$\text{TOTAL} = 6113.08\#$$

- BASE WALL (ADD'L) ~

$$(\#5)(88')(4) = 367.14\#$$

$$(\#5)(3')(90) = 281.61$$

$$\text{TOTAL} = 648.75\#$$

$$\text{TOTAL} = 21,573.46\# @ \$0.50/\#$$

$$\text{TOTAL COST} = \$10,786.73$$

III. AGGREGATE FILL & DRAINS \Rightarrow
IN CONCRETE COSTS

IV. STRIP DRAINS \Rightarrow

$$\left[(12" \times 124") (0.25") / (1728" / 13) \right] (165 \# / \text{CF})$$

$$= 35.52 \# \Rightarrow 40 \#$$

2 STRAINERS/DRAINS $\cong 40 \#$

TOTAL = 80# @ \$1.00/#

TOTAL COST = \$80.00

V. UNDERPASS LIGHTING \Rightarrow

TOTAL COST = \$4,000.00

TOTAL COST III + IV + V = \$4,080.00

VI. TIMBER CRIBBING \Rightarrow

2x6 - 10'x10'x2 = 200 SF

@ \$2.00/SF

TOTAL COST = \$400.00

VII. EXCAVATION →

- ASSUME 2V-1H SLOPE FOR EXCA.

- ADD'L EXCA. IS FOR U.P. PRISM.

$$(16')(12')(117' + 16') = 25536 \text{ CF}$$

$$(16')(5')(117' + 16') = 10640 \text{ CF}$$

$$\text{TOTAL} = 36176 \text{ CF}$$

$$\text{less} \rightarrow (.5)(8')(3.33')(117' + 16') = 1772 \text{ CF}$$

$$\text{TOTAL} = 34404 \text{ CF} = 1274 \text{ cy} @ \$2.00/\text{cy}$$

$$\text{TOTAL COST} = \$2,548.00$$

VIII. BACKFILL →

FOR SLAB AND ADD'L ROOTING DEPTH →

$$(10.33')(3.5')(88.33') = 3193.57 \text{ CF}$$

AT FUTURE RAMPS →

$$(10.33')(28' + 16')(16') = 7272.32 \text{ CF}$$

$$\text{less} \rightarrow (.5)(8')(3.33')(28' + 16') = 586.08 \text{ CF}$$

$$\text{TOTAL} = 9879.81 \text{ CF} = 365.92 \text{ cy} @ \$14.00/\text{cy}$$

$$\text{TOTAL COST} = \$5,122.86$$

6/6

TOTALS ⇒

- CONCRETE = \$26124.80
- REBAR = \$10786.73
- DRAIN & LIGHTS = \$4080.00
- EXCAVATION = \$2548.00
- BACKFILL = \$5122.84
- CRIBBING = \$400.00

TOTAL = \$49,062.39

% OF TOTAL \$1,371,220.00 \Rightarrow 3.58%

DESIGN CONTRACT = \$99,974.00

3.58% = \$3,579.07

TOTAL COST DESIGN & CONSTRUCTION
OF UNDERPASS \Rightarrow

\$52641.46

Summary

1) Northam Avenue under Pass:
Length = 114'

Total Cost = \$ 83323/-

2) 7th Street Bridge under Pass
Length = 88' + 28'
Box Retain wall

Total Cost = \$ 56023/-

Cont. NO. 87-58

Northern Ave

Bridge Const Cost = \$ 671,912.40

Const. Manag. Cost = \$ 59,586.71

Orig. Contract Amount = \$ 665,481.90

665,481.90

6,430.50 (Change Order)

\$ 671,912.40

underpass Const: \$ 66,910.00

% of uppass Const = $\frac{66910}{671912.40} = 9.958\%$

say 9.96%

a) Const Manag. Cost for uppass = $(\$ 59,586.71) 9.96\% = 5935$

b) Under pass. Const. = \$ 66,910

c) Design Cont. 87-10
9.96% (\$ 105200) = \$ 10,478

\$ 83323/-

Design Cont (87-10)
= \$ 105,200/-

Contract Value Tabulation

Contract Number: 87-C58. Contract Name: Northern Avenue Bridge.

Contract Bid and Base Amount: \$ 665,481.90. Notice To Proceed Date: 06/13/88. Original Contract Completion Date: 11/10/88

Revised Contract Base Amount: \$ 665,481.90.

Contract Cost

665,481.90
6430.50
\$ 671,912.40

Date	Description	Amount	Single Change Order	% of Contract	Cumulative Change Order	% of Contract	Revised Contract Completion Date
07-21-88	Cost, Change Order No. <u>1</u>	= \$ - 10,810.00		- 1.62	- 1.62		11-10-88
10-05-88	Cost, Change Order No. <u>2</u>	= \$ 0.00		0.00	- 1.62		11-10-88
	Cost, Change Order No. <u>3</u>	= \$ 17,240.50		+ 2.59	+ 0.97		11-10-88
	Subtotal, All changes	= \$ + 6,430.50					
	TOTAL COST, NEW CONTRACT	= \$ 654,671.90					

CO/ Bid Item No.	Description	Bid Unit	Bid Quantity	Bid Item Unit Price	CO Contract %	CO Quantity Diff	Cumulative Previous CO Quantity	Cumulative As-Built Quantity	Bid Item Change Order Quantity, %	Bid Item Cost Difference	Bid Item Cost Difference
1/221-2	Fill Constructi	Cu.Yd.	-0-	1.50	0.11	+ 500	-0-	+ 500	+100.00	+ 750.00	+ 750.00
1/310-1	Aggregate Base	Ton	1,000.	17.00	-2.55	-0-	-0-	-0-	-100.00	-17,000.00	-16,250.00
1/321-1	Asphalt Concrete	Ton	340.2	32.00	0.82	+ 170	-0-	+ 510.2	+ 49.97	+ 5,440.00	-10,810.00
2/N/A	Construct. Joint	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/	Misc. minor bid items	N/A	N/A	N/A	N/A	N/A	N/A	N/A	+ N/A	N/A	N/A

Change Order No. 1 involves the following: Materials deleted in detour road due to redesign of detour. Add item 211-2 for new fill area.

Change Order No. 2 involves the following: Documents the inclusion of construction joints by the contractor at no cost to the District.

Change Order No. 3 involves the following: Adjustment of quantities from bid estimates to as-built quantities.

7th Street Bridge; CONTR NO. 88-25

Const. cost: 1,371,220.00

a) Cost of u/pass = 49062.39
% of u/pass cost = 3.58%

b) Design Contract = \$ 99974.00
3.58% (99974) = \$ 3579.07

c) Management Cont. = \$ 94450.00
3.58% (94450) = \$ 3381.31

Total

a)	\$ 49062.39
b)	3579.07
c)	3381.31
	<hr/>
	56022.77

Say \$ 56023.00

Length (7th Street) = 88 + 28 = 116'

Length (Northon) = 114'

88-25

94450 C Maymny
CWS

Contract Value Tabulation

Contract Number: 88-C24. Contract Name: 7th Street Bridge over the AZ Canal Diversion.

Contract Bid and Base Amount: \$ 1,371,220.00 . Notice To Proceed Date: 10/30/88. Original Contract Completion Date: 05/28/89.

Revised Contract Base Amount: \$ 1,371,220.00 .

Date	Description	Amount	Single Change Order % of Contract	Cumulative Change Order % of Contract	Revised Contract Completion Date
10/19/88	Cost, Change Order No. <u>1</u>	= \$ 11,850.00	0.86	0.86	05/28/89
	Cost, Change Order No. <u>2</u>	= \$ 5,494.00	0.40	1.26	05/28/89
	Cost, Change Order No. <u> </u>	= \$			
	Cost, Change Order No. <u> </u>	= \$			
	Subtotal, All changes	= \$ 17,344.00			
TOTAL COST, NEW CONTRACT		= \$ 1,388,564.00			

CO/Bid Item No.	Description	Bid Unit	Bid Quantity	Bid Item Unit Price	Bid Item Contract %	CO Diff + or -	Previous CO Quantity + or -	Cumulative As-Built Quantity + or -	Bid Item Cumulative Change Order Quantity, %	Bid Item Cost Difference + or -, \$	Bid Item Cost Difference Cumulative + or -, \$
1/350-13	Remove Fuel Tanks	L.S.	1.0	8,500.00	0.62	+1.39 Units	-0-	+1.39	+139.41	+11,850.00	+11,850.00
2/350-13	Remove 2 Fuel Tanks	L.S.	1.0	8,500.00	0.62	+0.65 Units	+1.39	2.04	204.05	+ 5,494.00	17,344.00

Change Order No. 1 involves the following: The removal, disposal, and backfilling of seven (7) additional fuel underground tanks at four (4) different locations.

Change Order No. 2 involves the following: The removal, disposal, and backfilling of two (2) fuel storage tanks at Lot T-370, discovered during execution of Change Order No. 1.

FCC 27-52

FLOOD CONTROL DISTRICT of Maricopa County

TABULATION OF BIDS

PROJECT: NORTHERN AVENUE BRIDGE OVER ACDC

DATE OPENED 10-MAY-1988

SH. 1 OF 2

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY & UNIT	ENGINEER'S ESTIMATE		JWS CONTRACTING		NESBITT CONTR.		ROYDEN CONSTR.		MAC CONTRACTING		C.S. CONSTRUCTION	
			UNIT PRICE	BID TOTAL	UNIT PRICE	BID TOTAL	UNIT PRICE	BID TOTAL	UNIT PRICE	BID TOTAL	UNIT PRICE	BID TOTAL	UNIT PRICE	BID TOTAL
211-1	FILL CONSTRUCTION	1 L.S.	25,000.	25,000.00	23,685.	23,685.00	22,000.	22,000.00	15,000.	15,000.00	21,000.	21,000.00	25,000.	25,000.00
310-1	AGGREGATE BASE COURSE	1000 TON	13.50	13,500.00	17.00	17,000.00	10.00	10,000.00	17.00	17,000.00	11.85	11,850.00	13.00	13,000.00
321-1	ASPHALT CONCRETE A 1 1/2" BASE COURSE	340.2 TON	30.00	10,206.00	32.00	10,887.00	29.00	9,865.80	25.00	8,505.00	30.00	10,206.00	35.00	11,907.00
321-2	ASPHALT CONCRETE C 3/4" SINGLE COURSE	238.7 TON	32.00	7,638.40	39.00	9,310.00	35.00	7,877.10	30.00	7,161.00	35.00	8,354.50	35.00	8,354.50
321-3	ASPHALT CONCRETE D 1/2" SURFACE COURSE	145.8 TON	35.00	5,103.00	34.00	4,958.00	31.00	4,519.80	25.00	3,645.00	30.00	4,374.00	45.00	6,561.00
329-1	TACK COAT	0.36 TON	600.00	216.00	900.00	324.00	350.00	126.00	1,000.	360.00	1200.	432.00	1000.	360.00
336-1	PAVEMENT REPLACEMENT (STD DET 200)	90 S.Y.	40.00	3,600.00	25.00	2,250.00	25.00	2,250.00	75.00	6,750.00	50.00	4,500.00	45.00	4,050.00
340-1	CONCRETE SIDEWALK (P-1230)	1018 S.F.	2.50	2,545.00	5.00	5,090.00	2.00	2,036.00	2.50	2,545.00	2.00	2,036.00	3.00	3,054.00
340-2	CURB + GUTTER (STD DET 220 TYPE A, H=6")	534 L.F.	9.00	4,806.00	5.00	2,670.00	7.50	4,005.00	7.00	3,738.00	8.50	4,539.00	7.00	3,738.00
340-3	DRIVEWAY ENTRANCE (STD DET P-1255)	1693 S.F.	4.00	6,772.00	4.00	6,772.00	3.00	5,079.00	2.00	3,386.00	2.50	4,232.50	5.00	8,465.00
345-1	ADJUST MANHOLE FRAME + COVER	1 EA.	276.00	276.00	500.00	500.00	225.00	225.00	350.00	350.00	300.00	300.00	250.00	250.00
350-1	REMOVE CONCRETE CURB + GUTTER	746 L.F.	2.10	1,566.60	1.00	746.00	2.00	1,492.00	1.50	1,119.00	2.50	1,865.00	2.00	1,492.00
350-2	REMOVE CONCRETE S/W + D/W	3730 S.F.	1.20	4,476.00	1.00	3,730.00	1.00	3,730.00	.50	1,865.00	.30	1,119.00	1.00	3,730.00
350-3	MISC. REMOVALS AND OTHER WORK	1 L.S.	15,000.	15,000.00	60,000.	60,000.00	10,000.	10,000.00	15,000.	15,000.00	12,000.	12,000.00	20,000.	20,000.00
350-4	REMOVE 48" DIAMETER PIPE	384 L.F.	16.00	6,144.00	3.00	1,152.00	15.00	5,760.00	15.00	5,760.00	101.00	58,000.00	25.00	9,600.00
350-5	REMOVE 27" DIAMETER PIPE	28 L.F.	20.00	560.00	18.00	504.00	18.00	504.00	50.00	1,400.00	63.00	1,764.00	40.00	1,120.00
350-6	REMOVE 15" DIAMETER PIPE	21 L.F.	20.00	420.00	15.00	315.00	12.00	252.00	50.00	1,050.00	46.00	966.00	20.00	420.00
350-7	REMOVE 12" DIAMETER PIPE	80 L.F.	8.00	640.00	14.00	1,120.00	6.00	480.00	50.00	4,000.00	14.00	1,120.00	3.00	240.00
350-8	APARTMENT DEMOLITION @ 12th STREET	1 L.S.	—	—	35,000.	35,000.00	44,000.	44,000.00	48,000.	48,000.00	58,000.	58,000.00	95,000.	95,000.00
401-1	TRAFFIC CONTROL	1 L.S.	25,000.	25,000.00	18,000.	18,000.00	40,000.	40,000.00	58,725.	58,725.00	42,600.	42,600.00	50,000.	50,000.00
420-1	INSTALL 4' HIGH CHAIN LINK FENCE	19 L.F.	10.00	190.00	10.00	190.00	12.00	228.00	15.00	285.00	16.00	304.00	35.00	665.00
420-2	INSTALL 14' DOUBLE GATE	1 EA.	800.00	800.00	1000.00	1,000.00	500.00	500.00	500.00	500.00	180.00	180.00	550.00	550.00
440-1	RELOCATE + RESTORE IRRIGATION SYSTEM	1 L.S.	4,000.00	4,000.00	1500.00	1,500.00	11,000.	11,000.00	1,500.	1,500.00	6,000.	6,000.00	5,500.	5,500.00
440-2	NEW 4" PVC SLEEVE	176 L.F.	6.00	1,056.00	4.00	704.00	4.00	704.00	4.00	704.00	9.50	1,672.00	5.00	880.00

ADDENDUM #7

ADDENDUM NO. 1
DATE: APRIL 28, 1988

FCD Contract no. 87-58

PAGE 1 OF 1

To Contract Documents

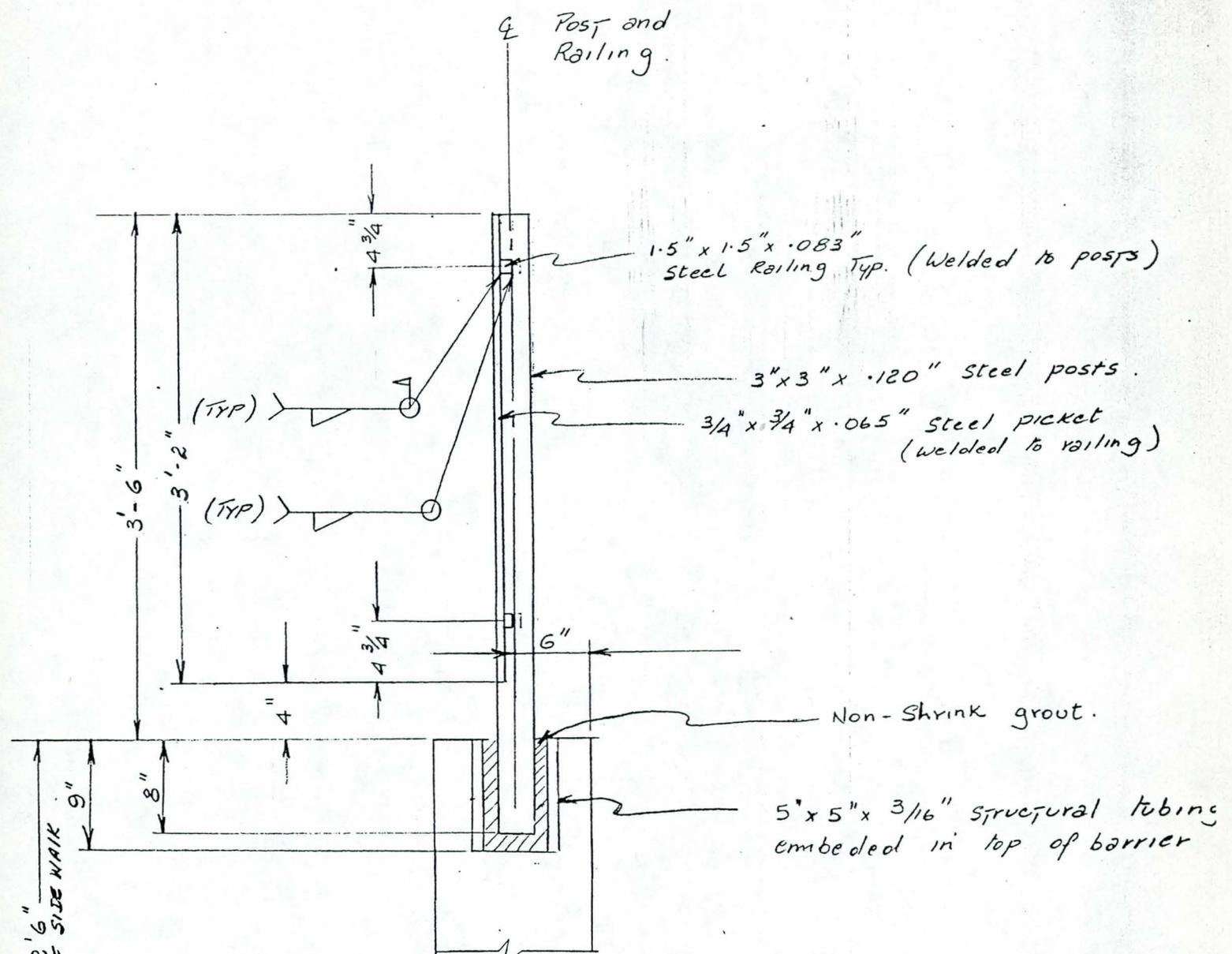
ENTITLED: NORTHERN AVENUE BRIDGE OVER THE ACDC

OWNER: Flood Control District of Maricopa County

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

1. In some copies of the Special Provisions, the Bidding Schedule sheets are out of sequence. Page 3c of 5 is found before page 3a of 5. Sheet 3c of 5 is the summary sheet, and the Bid Total should be listed on sheet 3c.
2. A portion of the apartment complex west of 12th Street and north of the Arizona Canal will be demolished under this contract. The demolition is shown and described on the attached sheet C-11, which is hereby added to and incorporated in the construction documents. The demolition shall commence within 10 days after the Notice to Proceed, and be completed within 30 days after the notice to proceed. Payment for the demolition will be made on a lump sum basis for item 350-8, as described in item 3. below.
3. Bidding Schedule, page 3a of 5, at the bottom of the page, immediately below item 350-4, add the following bid item in writing:

"350-8 Apartment Demolition at 12th St. 1 L.S."
4. Construction Plans sheet S-8, the handrail shown on this sheet will not be used. Substitute the picket railing shown on the attached Exhibit "A", for the handrail shown on sheet S-8. The picket railing will be paid per lineal foot, so Bidding Schedule Item 520-1 remains unaffected.
5. Construction Special Provisions, page 30 of 35, SECTION 520 - PEDESTRIAN HANDRAIL: change "as shown on the plans" to "as shown in Exhibit A of Addendum No. 1".
6. Construction Plans sheet C-4 special notes 1 and 2: both the permanent street lighting described in note 1 and the temporary street lighting described in note 2 will be paid for by others and will be installed by APS, rather than the contractor. The contractor shall coordinate the installation with APS.



NOTES:

1. The contractor shall submit shop drawings of the railing to the engineer for approval. The shop drawings will include details for an expansion joint at each abutment.
2. Steel tubing shall conform to ASTM A 500, grade A for posts, and ASTM A 513 for picket rails.
3. Post spacing shall not exceed 10 feet.
4. Picket spacing shall be 4 3/4" O.C.
5. All steel posts and pickets shall have steel caps welded to the top ends. These caps shall conform to ANSI B 16.3.
6. The railing shall be painted with #4 paint after fabrication in accordance with Sections 530 and 790 of the Standard Specifications.
7. Parapet wall reinforcing is unchanged by this addendum.

E.E. 553,995

BID SUMMARY & CHECKLIST

2:00 P.M.

PROJECT: Northern Ave. Bridge at the ACDC CONTRACT FCD: 87-58 DATE: May 10, 1988

FCD Personnel

Earl Kirby
 Andy Anderson
 Tom Sankot
 Sharil Khan
 Jan Warriner

Item	Name C.S. Construction, Inc.	Police Construction	MAC Contracting, Inc.	JW Contracting Co., Inc.	Royden Construction Co.	Hesbitt Contracting Co., Inc.
Schedule Complete	✓	✓	✓	✓	✓	✓
Addenda Noted	✓	✓	✓	✓	✓	✓
No Exceptions	✓	✓	✓	✓	✓	✓
Changes Initialed	✓	✓	✓	✓	✓	✓
Proposal Signed	✓	✓	✓	✓	✓	✓
License Number	✓	✓	✓	✓	✓	✓
Bid Security	✓	✓	✓	✓	✓	✓
No Collusion Affidavit	✓	✓	✓	✓	✓	✓
1						
2						
3						
TOTAL CONTRACT	801,474. ⁵⁰	889,864. ⁸⁴	762,847. ⁰⁰	665,484. ⁰⁰	724,895. ⁴⁰	673,757. ⁸⁸
	(5)	(6)	(4)	(1)	(3)	(2)

MEETING AT Flood Control District

DATE June 1, 1988

TIME 8:30 a.m.

SUBJECT Northern Avenue Bridge over the ACDC
FCD 87-58 RGA 87026.003

Attendees

PERSON ATTENDING

COMPANY REPRESENTED

TELEPHONE

Lois Winkler

APS

371-6837

Bob Payette

FCD

262-1501

Tom Searke

FCD

262-1501

Earl Kirby

"

"

RON MORENCY

SWG

484-5254

Ellery Biathrow

FCD

262-1501



SALT RIVER PROJECT
LICENSE TO USE RIGHT-OF-WAY

1 OF 2

CSR# B3796-31

LICENSE# _____

SEQ# 8800351

DATE May 4, 1988

The Salt River Valley Water Users' Association (hereinafter referred to as Salt River Project) hereby grants a License to install facilities within the right-of-way of the Salt River Project for the following purpose(s):

Installing temporary sidewalk and traffic barricade.

The Licensee, having read and understood the Special Conditions below (and attached) and the General Conditions on the reverse, agrees to these conditions for the installation at the following location(s):

EASTSIDE OF THE ARIZONA CANAL ON THE SOUTHSIDE OF NORTHERN AVENUE.
(14.2E-12.0N) Approximately 300 feet West of the 16/2 Corner
of Section 4; T-2N, R-3E.

SPECIAL CONDITIONS

A. DRAWINGS:

PROJECT

CONSULTANT

Northern Avenue Bridge
FCD Contract 87-10

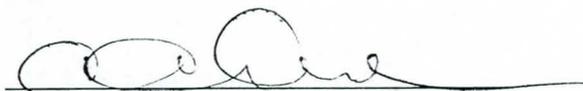
RGA Engineering Corporation

B. SPECIFICATIONS:

1. Licensee may install temporary sidewalk and traffic barricade in accordance with the plans referenced in paragraph (A).
2. Canal right-of-way is to be restored to original condition as determined by Salt River Project's inspector. Care shall be taken to prevent any dirt or debris from falling into the canal.

FLOOD CONTROL DISTRICT
FCD Contract 87-10

APPROVED:


Salt River Valley
Water Users' Association

ACCEPTED:


Licensee

Owner/Agent
3335 W. Durango St.

Address
Phoenix, AZ. 85009

CALL FOR ASSISTANCE:

Inspection	Irrigation
236- 2609	236- 5836

City _____ Telephone _____



SALT RIVER PROJECT
LICENSE CONTINUATION

2 OF 2

CSR# B3796-31
8800351
SEQ# _____
JOB# _____

LICENSE# _____
DATE May 4, 1988

- 3. Salt River Project assumes no responsibility for damage to Licensee's installation in operation and maintenance of irrigation facilities.
- 4. Access to right-of-way shall be available to Salt River Project's personnel at all times.
- 5. The contractor assumes sole responsibility for dust control.

D. CONSTRUCTION CLEARANCE:

Work to be done after securing a construction clearance from TRANSMISSION DIVISION, phone 236-5836, a minimum of 72 hours in advance. A CONSTRUCTION CLEARANCE DOES NOT ASSURE A DRYUP.



SALT RIVER PROJECT

LICENSE TO USE RIGHT-OF-WAY

1 OF 2

CSR# B3796-31

LICENSE# _____

SEQ# 8800351

DATE May 4, 1988

The Salt River Valley Water Users' Association (hereinafter referred to as Salt River Project) hereby grants a License to install facilities within the right-of-way of the Salt River Project for the following purpose(s):

Installing temporary sidewalk and traffic barricade.

The Licensee, having read and understood the Special Conditions below (and attached) and the General Conditions on the reverse, agrees to these conditions for the installation at the following location(s):

EASTSIDE OF THE ARIZONA CANAL ON THE SOUTHSIDE OF NORTHERN AVENUE.
(14.2E-12.0N) Approximately 300 feet West of the 16/2 Corner
of Section 4; T-2N, R-3E.

SPECIAL CONDITIONS

A. DRAWINGS:

PROJECT

CONSULTANT

Northern Avenue Bridge
FCD Contract 87-10

RGA Engineering Corporation

B. SPECIFICATIONS:

1. Licensee may install temporary sidewalk and traffic barricade in accordance with the plans referenced in paragraph (A).
2. Canal right-of-way is to be restored to original condition as determined by Salt River Project's inspector. Care shall be taken to prevent any dirt or debris from falling into the canal.

FLOOD CONTROL DISTRICT
FCD Contract 87-10

APPROVED:

ACCEPTED:

Salt River Valley
Water Users' Association

Owner/Agent
3335 W. Durango St.

Address
Phoenix, AZ. 85009

CALL FOR ASSISTANCE:

Inspection	Irrigation
236- 2609	236- 5836

City _____ Telephone _____

GENERAL CONDITIONS:

1. Licensee warrants and represents that he is qualified to perform, or will contract with qualified parties to perform, the undertaking which is the subject of this license.
2. Licensee agrees to obtain such other licenses, permits and agreements as may be required by other governing bodies having jurisdiction over the location which is the subject hereof.
3. Licensee agrees that any work in the Salt River Project right-of-way shall be completed and maintained in conformity with all applicable safety standards and regulations, and in a manner to avoid the creation of potentially dangerous conditions and harm to others.
4. Failure to obtain a specific construction clearance from the designated Salt River Project department will automatically void this license and subject Licensee to liability for any resulting damage to the property of others, including, though not limited to, that of the Salt River Project. If a construction clearance is not obtained and subsequent damage to Licensee's unauthorized installation occurs, Licensee agrees to waive all rights and claims for such damage and to assume sole responsibility for same. *NOTE: A construction clearance does not necessarily assure a dryup.*
5. In the event that said installation does not comply with the specifications and conditions stated herein or upon revocation of this license, Licensee shall remove at his sole cost, within ninety (90) days after written notice, any improvements or installations placed on said right-of-way pursuant to this license, and restore the irrigation facilities to the satisfaction of Salt River Project. In the event that Salt River Project determines that the irrigation facilities must be restored immediately for operational purposes, or Licensee fails to remove the installations or improvement within the time specified above or restore the irrigation facilities, the Salt River Project may remove the installations from the said right-of-way and/or restore the irrigation facilities, and the cost so incurred (as solely and conclusively determined by the Salt River Project) shall be paid by Licensee within ten (10) days after receipt of a statement of such cost. Licensee hereby releases the United States of America, the Salt River Valley Water Users' Association, and the Salt River Project Agricultural Improvement and Power District from all claims for damages that may result to the Licensee or others by reason of such removal.
6. Should any Salt River Project facilities be damaged by Licensee, such facilities shall be repaired at Licensee's expense, to the satisfaction of Salt River Project. Salt River Project reserves the right, depending upon the nature and extent of the damage, to make such repairs and bill Licensee for all costs associated therewith.
7. Licensee shall be liable for any and all damages to the property of the United States of America, Salt River Project Agricultural Improvement and Power District, or any other party or parties by reason of the exercise of the privilege herein granted to Licensee. Licensee agrees to indemnify and hold harmless the United States of America, the Salt River Valley Water Users' Association and the Salt River Project Agricultural Improvement and Power District, against any claims, actions, costs, expenses, or other liabilities for property damage or personal injuries in any way caused by or related to the exercise of rights herein granted, except those caused solely and exclusively by the negligence of the Salt River Project. Licensee understands and agrees that he enters upon the property of Salt River Project at his own risk.
8. Should Licensee fail to start construction within one (1) year following execution of this license, this license is automatically revoked and terminated, and Licensee shall secure a new license to construct the installation under conditions and specifications then in force.
9. All facilities installed pursuant to this license are subject to inspection and approval by agents of the Salt River Project and must comply with the specifications and conditions listed on both sides of this form (and attached). Said inspection, however, is not intended nor understood to be or constitute more than a determination that the specifications set forth herein have been complied with by Licensee and is not to be considered as an approval or ratification by Salt River Project of the quality or fitness of Licensee's improvements.
10. Licensee agrees to keep in proper maintenance and repair any facilities placed within said right-of-way.
11. This license shall continue in effect so long as it is considered to be expedient as conclusively determined by Salt River Project and shall be revocable within ninety (90) days after written notice is sent to Licensee.
12. Licensee shall move or modify any facility constructed in the Salt River Project right-of-way at its sole expense if at any time the existence of said facility conflicts with the maintenance of, or future installations of Salt River Project's facilities.
13. It is mutually understood that Salt River Project may have only easement rights to the right-of-way covered by this license, and consent by the record owner of the underlying fee title to the land is not to be implied.



SALT RIVER PROJECT
LICENSE CONTINUATION

2 OF 2

CSR# B3796-31
8800351
SEQ# _____
JOB# _____

LICENSE# _____
DATE May 4, 1988

3. Salt River Project assumes no responsibility for damage to Licensee's installation in operation and maintenance of irrigation facilities.
4. Access to right-of-way shall be available to Salt River Project's personnel at all times.
5. The contractor assumes sole responsibility for dust control.

D. CONSTRUCTION CLEARANCE:

Work to be done after securing a construction clearance from TRANSMISSION DIVISION, phone 236-5836, a minimum of 72 hours in advance. A CONSTRUCTION CLEARANCE DOES NOT ASSURE A DRYUP.