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Maricopa County

ENGINEERING DEPARTMENT *Attn: Mr. John Rodriguez*



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PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS

S-850933

METROCENTER SANITARY SEWERLINE
CHERYL DRIVE TO 29TH AVENUE

MAYOR

TERRY GODDARD

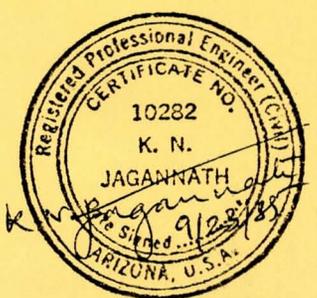
CITY COUNCIL

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DISTRICT NO. 8 - CALVIN C. GOODE

CITY MANAGER
CITY ENGINEER

MARVIN A. ANDREWS
J. E. ATTEBERY, P.E.



A118.555

METROCENTER SANITARY SEWERLINE - CHERYL DR TO 29TH AVE. SPECIFICATIONS

An Important First Step

**FOR ALL CONSTRUCTION CONTRACTORS,
AND THEIR SUB-CONTRACTORS**

Prior to submitting a bid on construction contracts in excess of \$10,000 with the City of Phoenix, all prime contractors, and their sub-contractors, annually must submit after January 2, 1978 three important reports to the Phoenix Human Relations Division, 251 West Washington, Phoenix 85003. Telephone 262-7486. You can pick up the report forms at the office of the Human Relations Division, or call the Division and the reports will be mailed.

The Reports Are:

**An Affirmative Action Plan
An Employers Information Report
An Equal Employment Questionnaire**

The reports are required in a City Ordinance (No. G-1901) enacted by the City Council in the interest of equal employment opportunity. To demonstrate that it provides equal opportunities to minorities, a company should have an Affirmative Action Program. Such a program establishes positive procedures.

Your company's Affirmative Action Program should be designed to achieve equal employment opportunity as a working reality within your employee ranks. The program goal is equal opportunity for Hispanics, Blacks, Asians and Native Americans.

***Don't risk the loss of a contract! For everyone's convenience,
submit your reports now to the Human Relations Division.***

If you have questions, call Human Relations — 262-7486

INDEX NO. S-850933

TABLE OF CONTENTS

	<u>Page</u>
<u>SECTION I - Informative</u>	
(1) Call for Bids	C.B. - 1
(2) Information for Bidders	I.B. - 1 & 2
(3) Affirmative Action Requirements	B.C. - 1 & 2
(4) Supplementary Conditions	S.C. - 1 to 6
(5) Special Provisions	S.P. - 1 to 11
(6) Soils Report	9 pages
<u>SECTION II - Proposal</u>	P - 1 to 5
Surety Bond	1 sheet
Noncollusion Affidavit	ABC-1



S E A L

CALL FOR BIDS

BIDS WILL BE OPENED

TUESDAY, OCTOBER 22, 1985 AT 4:00 P.M.

INDEX NO. S-850933

Sealed bids will be received at the office of the City Engineer, Plaza Municipal Building, 125 East Washington Street, Phoenix, Arizona 85004 until the hour indicated for construction of Metro Center Sanitary Sewer Line from Cheryl Drive to 29th Avenue. The project will consist of approximately 2,890 L.F. 21-inch VCP; 2,970 L.F. 18-inch VCP; 1,218 L.F. 15-inch VCP; 106 L.F. 8-inch VCP; 27 man-holes; 419 L.F. 48-inch jacked casing; 70 L.F. 42-inch jacked casing; 1,500 tons asphalt concrete; 5,500 tons A.B.C. and other miscellaneous items.

Prospective bidders may examine and/or purchase plans, special provisions, and proposal pamphlets at the City Engineer's office. These documents may be purchased for \$10.00 per set.

Pursuant to City of Phoenix Ordinance G-1327, as amended, on Equal Employment Opportunity, all prime contractors and subcontractors are required to take affirmative action toward equal employment opportunity.

Pursuant to ARS 34-253, the lowest and/or best responsible bidder shall provide a noncollusion affidavit.

No proposal will be read unless accompanied by a proposal guarantee of cash, certified check, cashier's check or on the surety bond provided, for an amount not less than 5 percent of the amount bid.

The Council of the City of Phoenix reserves the right to award the contract to the lowest and/or best responsible bidder, or all bids will be rejected, as soon as practicable after the date of opening bids.

MARVIN A. ANDREWS
City Manager

By J. E. Attebery SEP 23 1985
J. E. Attebery, P.E.
City Engineer

Published: Arizona Business Gazette
September 30, 1985
(2)

INFORMATION FOR BIDDERS

.01 REFUNDS FOR PLANS AND SPECIFICATIONS

No refunds will be made for the return of plans and/or specifications by prospective bidders--either before or after the bid opening date.

.02 SUBMITTING BIDS

No proposal will be read unless accompanied by a proposal guarantee of cash, certified check, cashier's check or on the surety bond provided, for an amount not less than 5 percent of the amount bid.

The entire Specification, containing the completed proposal with the 5 percent proposal guarantee shall be submitted in a sealed envelope. The outside, lower righthand corner of which shall be marked as follows:

Bid of (Firm's Name, Address and Phone Number)

For Metro Center Sanitary Sewer Line, Cheryl Drive to 29th Avenue
City of Phoenix Index No. S-850933

Sealed bids shall be delivered to Administrative Section Counter of the Engineering Department for application of a time-date stamp prior to the time and date specified for bid opening.

This project is subject to the City of Phoenix' Ordinance G-1327, as amended, pertaining to Equal Employment Opportunity. The Affirmative Action Requirements are included as a part of the Specification on pages BC-1 and BC-2.

.03 PRE-BID CONFERENCE AND QUESTIONS ON PLANS AND SPECIFICATIONS

A pre-bid conference will be held in the first floor Conference Room, Plaza Municipal Building, 125 East Washington Street, Phoenix, Arizona on thursday, October 10, 1985 at 9:00 a.m.

The purpose of this conference will be to discuss questions you may have on the project and clarify the plans and specifications.

Neither the Engineer/Architect nor the City of Phoenix shall be held responsible for any oral instructions. Any changes to the plans and specifications will be in the form of an addendum which will be furnished to all plan holders.

Should you desire additional information prior to submitting your bid, please call the following for questions on:

Plans, Technical/Special Provisions, or Proposal:
Project Engineer Mr. Ryan (262-4966) or Mr. Jagannath (262-4961)

General Conditions, Bid Bonds, Insurance, Payment and Performance Bonds and Contracts: Specifications, 262-4950.

Equal Employment Opportunities and Affirmative Action Programs:
Human Relations Division, 262-7486.

Certified Minority/Women Business Enterprises (MBE's/WBE's):
Minority Procurement Advisor, 261-8748.

.04 NONCOLLUSION AFFIDAVIT

The lowest and/or best responsible bidder shall provide the attached noncollusion affidavit (page ABC-1), within 24 hours after bid opening.

.05 MBE PARTICIPATION

The successful bidder shall submit a "List of Minority and Non-Minority Subcontractors" pursuant to City of Phoenix Resolution #15629. This listing shall be made on a form provided with the contract documents and returned with the executed documents.

.06 PRE-CONSTRUCTION CONFERENCE

After completion of the Contract Documents, to include bonds, insurance and signatures, and prior to the commencement of any work on the project, the Field Engineering Inspection Section (telephone 257-9599) will schedule a Pre-Construction Conference. Normally, this will be held at the Field Engineering Building, 1034 East Madison, Phoenix, Arizona.

The purpose of this Conference is to establish a working relationship between the Contractor, utility firms and various City agencies. The agenda will include critical elements of the work schedule, submittal schedule, cost breakdown of major lump sum items, payment application and processing, coordination with the involved utility firms, emergency telephone numbers for all representatives involved in the course of construction and establishment of the Notice to Proceed date.

Minimum attendance by the Contractor shall be a responsible company/corporate official, who is authorized to execute and sign documents on behalf of the firm, the job superintendent, and the Contractor's safety officer.

.07 ALLOCATION OF ADD/DEDUCT PROPOSAL ITEM

Determination of proportionate distribution of add or deduct will be calculated as follows and unit prices will be adjusted accordingly. Adjusted unit prices will be used to determine payment for all units of work completed under that item.

- A. Total sum of extended unit bid prices for Item Nos. 2, 3 and 4.
- B. Divide extended unit bid prices for each Item Nos. 2, 3 and 4 by the sum of these items to determine the percentage of the lump sum, add or deduct, adjustment which will be applied to the individual Bid Item Nos. 2, 3 and 4.
- C. The new unit price for each affected item will be determined by adding or subtracting the lump sum adjustment for that item from the total extended amount listed in the bid for that item. This amount will then be divided by the number of "quantity units" listed in the bid proposal for that item to determine the new adjusted unit bid price for that item.
- D. Any minor deviation in total bid cost using new unit prices may be corrected by adjusting any one or more of the items to correct deviation.

**BID CONDITIONS
AFFIRMATIVE ACTION REQUIREMENTS
EQUAL EMPLOYMENT OPPORTUNITY**

PART I: *Policy of the City of Phoenix on nondiscrimination in employment by City contractors and subcontractors.*

Construction contracts involving funds in excess of ten thousand dollars (\$10,000) shall be awarded to contractors, subcontractors, or suppliers who adhere to a policy of equal employment opportunity and demonstrate an affirmative effort to recruit, hire and upgrade the position of employees regardless of race, color, religion, sex or national origin.

PART II: *Bidding Conditions*

The provisions of these bid conditions are such that no contractor, subcontractor or supplier will be eligible for award of a construction contract, his portions of which exceed \$10,000 on a City of Phoenix project unless they have submitted a written affirmative action plan embodying both (1) goals and timetables of minority manpower utilization and (2) specific affirmative action steps directed at increasing minority manpower utilization.

(1) **Goals and Timetables.** The plan must set forth, as minimum, the following ranges of goals for minority manpower utilization in each trade which is to be used:

2-28-77 until further notice - 20%

This percentage applies to man-hours worked by each work class, at all levels.

In no event may a contractor, subcontractor or supplier utilize goals, timetables, or affirmative action steps required by this section in such a manner as to cause or result in discrimination against any person on account of race, color, religion, sex or national origin.

The goals as established in this section may vary when a contractor, subcontractor or supplier recruits his labor force in a well defined labor area. Such variation shall reflect the ethnic composition of the particular area in relation to the State of Arizona ethnic composition.

(2) **Affirmative Action Steps.** The City of Phoenix shall establish standards to be met by contractors, subcontractors or suppliers in order to be eligible for award of City Construction Contracts. Contractors, subcontractors and suppliers shall execute such further forms and documentation at such times and as may be required by the appropriate awarding authority of the City of Phoenix.

(3) **Reporting Requirements.**

(a) All prime contractors and subcontractors bidding on City construction shall submit the following reports:

An EEO-1 or Phoenix Employer Information Report

An Equal Employment Questionnaire

An Affirmative Action Program

Failure to have the above listed reports on file prior to bidding will cause the proposal to be considered irregular and may be grounds for rejection by the City Council.

If, prior to awarding of the project, the prime contractor remedies the irregular submittal of the subcontractor by compliance with the reporting requirements set forth above, the City Council, in its discretion, may waive the original defect and accept the proposal.

(b) The Human Relations Commission shall transmit, to contractors and subcontractors who have submitted bids to the City, notification of their obligation to comply with the reporting requirements of this subsection, by certified mail, on at least an annual basis.

Before the City can invoke the enforcement provision of refusing to award a contract due to failure to comply with the reporting requirements of this subsection, the prime contractor and subcontractor must have received such a notice from the Human Relations Commission prior to the bid opening date.

(c) The contractor and each of the subcontractors and suppliers shall at the request of the City of Phoenix deliver to the City copies of any Affirmative Action Reports required by Federal or state agencies.

(d) In order to promote the effectiveness of meeting these requirements all reports received in compliance with these reporting requirements shall be deemed confidential.

PART III: *Compliance and Enforcement.*

Contractors are responsible for informing their subcontractors (regardless of tier) and suppliers as to their respective obligations under these Bid Conditions. The contractor, subcontractor or supplier shall carry out such sanctions and penalties for violation of the equal opportunity clause including cancellation, termination and suspension of existing subcontracts as may be imposed or ordered by the City, pursuant to Ordinance. Any contractor, subcontractor or supplier who shall fail to carry out such sanctions and penalties shall be deemed to be in noncompliance with these Bid Conditions and City Ordinance.

Violation of any substantial requirement by a contractor, subcontractor or supplier covered by these Bid Conditions including the failure of such contractor, subcontractor or supplier to make a good faith effort to meet its fair share of the trade's goals of minority manpower utilization, shall be deemed to be noncompliance by such contractor, subcontractor or supplier with the Equal Opportunity Clause of the contract, and shall be grounds for imposition of the sanctions and penalties provided in Chapter 18, Article IV, Section 18-18, Code of the City of Phoenix.

The City shall review its contractors', subcontractors' and suppliers' employment practices during the performance of the contract.

PART IV: *Compliance with City Ordinance.*

The contractor agrees to comply with Chapter 18, Article IV of the Code of the City of Phoenix entitled "Nondiscrimination in Employment by City Contractors and Subcontractors", and all applicable amendments thereto.

SUPPLEMENTARY CONDITIONS

.01 STANDARD SPECIFICATIONS AND DETAILS

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 City of Phoenix Supplements, latest revision to the MAG Uniform Standard Specifications and Details.

.02 PRECEDENCE OF CONTRACT DOCUMENTS

The City of Phoenix Supplements will govern over the MAG Standard Specifications and Details. In case of a discrepancy or conflict, plans will govern over both the City of Phoenix Supplements and MAG Standard Specifications and Details; Supplementary Conditions, Technical Provisions, Special Provisions, will govern over the City of Phoenix Supplements, the MAG Standard Specifications and Details and Plans.

.03 SUSPENSIONS OF WORK

The Engineer reserves the right to suspend the work wholly or in part if deemed necessary for the best interest of the City. This suspension will be without compensation to the Contractor, other than to adjust the contract time in accordance with Section 108.

.04 HINDRANCE AND DELAYS

No charge or claim for damages shall be made by the Contractor for any delays or hindrances from any cause during the progress of any portion of the work embraced by this contract. If any delay is caused by any act or omission on the part of the Contracting Agency or by any other Contractor working for the Contracting Agency, or if due to no fault or neglect of the Contractor, the Contractor will be granted an extension of time for the completion of the work sufficient to allow for the delay. The allowable extension of time due to such delays shall be determined by the Engineer, provided the Contractor has given the Engineer immediate notice in writing of the cause of such delay.

.05 PARTIAL PAYMENTS

The Contracting Agency will make a partial payment to the Contractor on the basis of an estimate prepared by the Engineer for work completed and accepted through the preceding month. The Notice to Proceed date, which is designated for the specific project involved, will be used as the closing date of each partial pay period. Payment will be made no later than 20 days after mutual acceptance of the Engineer's Estimate.

Where feasible, quantities may be calculated for 5 days prior to the monthly closing date and projected for the remainder of the pay period.

.06 INDEMNIFICATION OF CITY AGAINST LIABILITY

The Contractor agrees to indemnify and save harmless the City of Phoenix, its officers, agents and employees, and any jurisdiction or agency issuing permits for any work included in the project, their officers, agents and employees, hereinafter referred to as indemnitee, from all suits, including attorneys' fees and cost of litigation, actions, loss, damage, expense, cost or claims, of any character or any nature arising out of the work done in fulfillment of the terms of this contract or on account of any act, claim or amount arising or recovered under Workers' Compensation law, or arising out of the failure of the Contractor or those acting under Contractor to conform to any statutes, ordinances, regulation, law or court decree. It is the intent of the parties to this contract that the indemnitee shall, in all instances, except for loss or damage resulting from the sole negligence of the indemnitee, be indemnified against all liability, loss or damage of any nature whatever for or on account of any injuries to or death of person or damages to or destruction of property belonging to any person arising, out of or in any way connected with the performance of this contract, regardless of whether or not the liability, loss or damage is caused by, or alleged to be caused in part by the negligence, gross negligence or fault of the indemnitee. It is agreed that Contractor will be responsible for primary loss investigation, defense and judgment costs where this contract of indemnity applies.

.07 CONTRACTOR'S INSURANCE REQUIREMENTS

* Concurrently with the execution of the Contract, the Contractor shall furnish the City of Phoenix a Certificate of Insurance on a standard insurance industry ACORD form. The minimum limits of liability shall be \$1,000,000.00 for General Liability and Automobile Liability and \$100,000.00 for Workmen's Compensation. The ACORD form shall be issued by an insurance company authorized to transact business in the State of Arizona, or one that is named on the List of Unauthorized Insurers maintained by the Arizona Department of Insurance.

The Contractor shall maintain during the life of the contract such public liability and property damage insurance, both general and automobile liability, as shall protect him and any subcontractor performing work under the contract from all claims for bodily injury, including accidental death, as well as for property damage arising from operations under the contract - whether such operations be by himself or by any subcontractor or by anyone directly or indirectly employed by either of them. These policies shall not expire until all the work has been completed and the project has been accepted by the City of Phoenix. If a policy does expire during the life of the contract, the Contractor shall provide a renewal certificate of the required insurance coverage to the City of Phoenix not less than five (5) days prior to the expiration date.

The City of Phoenix, a municipal corporation, its officers, agents and employees shall be named as additional insureds on all Public Liability and Property Damage Insurance and Builder's Risk/Course of Construction Insurance, when required, and this shall also be indicated on Certificates of Insurance issued to the City. The Contractor's coverage shall be primary for any and all losses arising out of the performance of this contract.

* 8-23-85

.09 ADDITIONAL INSURANCE REQUIREMENTS

The Flood Control District of Maricopa County, its officers, agents and employees shall be named as additional insureds on all policies issued in conjunction with this contract.

.10 MODIFICATION TO MAG UNIFORM STANDARD DETAIL 240 - VALLEY GUTTER

Reference Note 1 which reads "All Concrete to be Class "B" unless otherwise approved. (Section 725)"

Change this note to read:

1. All concrete to be Class "A" unless otherwise approved. (Section 725).

.11 ALUMINUM MANHOLE COVERS

The Water and Wastewater Department has the following stated policy "MAG Standard Detail 425 - 24" Aluminum Manhole Frame and Cover is not approved by the City of Phoenix."

.12 NEENAH MANHOLE COVERS AND FRAME

The Water and Wastewater Department has approved the use of NEENAH Manhole Covers and Frames for City of Phoenix projects.

.13 DISPOSAL OF SURPLUS MATERIAL

All surplus and/or waste material may be disposed of at the Contractor's discretion subject to the following conditions:

- A. If the City landfills are used, the Contractor shall pay the normal dumping fee.
- B. If private property within the City limits is used, the Contractor shall obtain written permission from the property owner and deliver a copy of this agreement to the Engineer prior to any hauling or dumping. All disposal and grading shall be in strict conformance with the City of Phoenix Grading and Drainage Ordinance. The Contractor shall obtain and pay for the necessary permit(s).
- C. If the surplus material is disposed of outside the City limits, the Contractor shall comply with all applicable laws/ordinances of the agency concerned and be responsible for all cost incurred.

No measurement or direct payment will be made for the hauling and disposal of surplus and/or waste material, the cost shall be incidental to the cost of the project.

.14 CONTRACTOR'S MARSHALING YARDS

Contractors shall obtain approval of the City Engineer when using vacant property to park and service equipment and store material for use on City construction contracts.

- A. The contractor shall notify adjacent property owners/residents of this proposed use.
- B. Any use of vacant property adjacent to or near the project for parking or servicing equipment and/or storing of material will require the contractor to obtain written approval from the property owner. This approval shall contain any requirements which are a condition of this approval.
- C. A copy of the property owner's approval shall be submitted along with the contractor's request to the City Engineer for approval for the use of the marshaling yard in connection with the project. An appropriate distance from adjacent property will be set by the City 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 City Engineer.
- G. The contractor shall clean up property promptly upon completion of use.
- H. Contractor's request for approval shall specify in detail how he or she proposes to comply with D through G above.

- .15 MAG Subsection 104.2.2 Due to Physical Conditions: Paragraph *B). In the first sentence delete the following words:

"backfill or bedding"

- .16 MAG PART 600 WATER AND SEWER and City of Phoenix Supplement PART 600 WATER AND SEWER. Change these titles to read:

"PART 600
UNDERGROUND WORK FOR UTILITIES AND UNDERGROUND FACILITIES"

- .17 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."

- .18 MAG 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."

- .19 MAG 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."

- .20 MAG Subsection 601.2.8 Grading and Stockpiling: Add the following paragraph:

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

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

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

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

- .21 MAG 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."

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

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

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

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

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

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

.23 SEAL COATING

Delete Section 330.

No chip seal will be required.

SPECIAL PROVISIONS

.01 TRAFFIC CONTROL

Add the following to MAG Subsection 401.7 PAYMENTS:

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

.02 TRAFFIC REGULATIONS

A. The following shall be considered major streets:

29th Avenue	Dunlap Avenue
35th Avenue	Metro Center Parkway

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

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

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

.03 SPECIAL TRAFFIC REGULATIONS

29th Avenue - Dunlap Avenue to Metro Center Parkway

29th Avenue can be reduced to one lane northbound weekdays, except 4:00 p.m. to 10:00 p.m. when two lanes (one each way) shall be open.

Friday, Saturday, and Sunday all lanes shall be open.

35th Avenue and Vogel Avenue

35th Avenue can be reduced to four lanes (two each way) when construction requires. At all other times, all lanes shall be open.

.04 SEQUENCE OF CONSTRUCTION

A. General

The right to direct the sequence of the work under this contract is a function vested solely in the Engineer. Prior to commencement of the work, the Contractor shall prepare and submit to the Engineer for approval, a written schedule covering the general sequence of the whole work to be performed. The schedule shall be submitted to the Engineer at the Pre-Construction Conference.

The work schedule, when approved, shall not be subject to change without the written consent of the Engineer. Orderly procedure of all work to be performed under this contract shall be the full responsibility of the Contractor. The work schedule must conform to the contract time requirements.

B. Schedule Restriction

The construction in 29th Avenue shall not be done during the period of November 18, 1985 to January 6, 1986.

.05 MATERIAL AND EQUIPMENT DRAWINGS

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, Including Rubber Gaskets
- B. Pipe Liner
- C. Pre-Cast Manhole Risers
- D. Reinforcing Steel
- E. Castings
- F. Field Closures
- G. Concrete Mix Designs
- H. Tunnel Design Calculations and Details as Required for Jacked Casing or Tunnel Liner
- I. Design of Temporary Bracing for Existing 96-inch Storm Sewer at Manhole B-10

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

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

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

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

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

(c) Review

The Contractor, at his own expense, shall make such changes in the above drawings as may be necessary to conform to the plans and specifications. Prior to return of such drawings, marked "Furnish as Submitted" or "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 City will not be responsible for any expense or delays incurred by the Contractor for changes to make the same conform to the drawings as finally reviewed.

One copy of submitted drawings will be returned to the Contractor 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.

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

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

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

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

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

(d) Off-Site Inspection

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

(e) Corrections required on the shop drawings will not constitute valid reason for delay in the project schedule. The existing contract time provides for 4 weeks for shop drawing preparation and review.

.06 SEWER PIPE SPECIFICATIONS

General

Sewer pipe construction shall conform to MAG 615 and as modified in the project specifications below:

A. P.V.C. Lined R.G.R.C.P.

All 30-inch pipe shall be P.V.C. lined reinforced concrete rubber gasket pipe conforming to MAG 735.

B. Lining

Lining of the pipe shall cover the upper side of the concrete pipe for the number of degrees called for in Table 1. Lining material and placement shall conform to Section 741 of MAG.

C. Vitrified Clay Pipe and Fittings

All sewer pipe and fittings shall be extra strength Vitrified Clay Pipe conforming to Section 743 of MAG.

D. P.V.C. Pipe

All P.V.C. pipe and fittings shall conform to MAG 745.

E. Rubber Gaskets

Rubber gaskets for concrete pipe shall conform to MAG 765.

F. Mortaring Joints

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

G. Measurement and Payment

Measurement and payment for the sewer pipe shall be as outlined in Section 615 of MAG.

.07 TRENCH EXCAVATION, BACKFILLING AND COMPACTION

Trench excavation, backfilling and compaction shall conform to the requirements of MAG 601, except as modified within these specifications.

a. Trench Excavation

Subsection 601.2.3 Trench Grade, the second paragraph is modified to read: For all R.C.P. pipe, the Contractor shall overexcavate the bottom of the trench by a minimum of 8 inches. This overcut shall be filled with ABC or Select Material, Type "B" per Section 702 and placed at a uniform density with minimum possible compaction.

b. Bedding for R.C.P.

Subsection 601.4.2, Bedding, the first paragraph is modified to read: For all RCP pipe, the bedding material from the bottom of the pipe to 1 foot over the top of the pipe shall be ABC or Select Material, Type "B", per Section 702 compacted to a minimum density of 95 percent when tested by AASHTO T-99 (Method "A") with rock correction and T-191.

c. Bedding for V.C.P.

V.C.P. bedding shall conform to MAG details.

All bedding shall be Class A-1 City of Phoenix Details P-1120 through P-1127. The trench width at the top of pipe shall not exceed 4 feet. If the actual soil conditions do not make it possible to keep 4 feet at the top of pipe, then the Contractor shall do the following:

1. Provide testing evidence two weeks prior to pipe delivery that the three-edge bearing strength of the V.C.P. supplied exceeds that of the MAG required minimum. The Engineer will then determine the allowable variations in trench width OR
2. Provide design calculations and details of bedding that will support the soil load. The calculations must be performed by a registered Civil Engineer registered in the State of Arizona and sealed by the same. These are to be submitted to the Engineer for review and consideration.

Special note on Class A-1 Bedding:

The Contractor shall install a 1-inch mastic joint every 20 feet (maximum) fully separating the concrete. The joint shall occur at a VCP joint only.

.08 MANHOLE A-3 (A) STATION 8+03.5

If the Contractor elects to furnish the R.G.R.C.P. alternate, the manhole at Station 8+03.5 will be deleted. The Contractor will make a field connection to the existing 30-inch R.G.R.C.P. Method of connection will be submitted with shop drawings for approval.

.09 30-INCH P.V.C. LINED R.G.R.C.P. ALTERNATE

The Contractor may furnish 30-inch P.V.C. lined R.G.R.C.P. in lieu of the 18-inch and 21-inch V.C.P. in accordance with Table I on S.P.-7.

If the Contractor chooses the R.G.R.C.P. alternate, any changes to the V.C.P. design necessary to install the alternate shall be included in the bid price. This shall include, but not be limited to, larger diameter jacked casing or tunnel liner and special bedding.

.10 LEAKAGE TEST

All costs for testing shall be incidental to the project.

- a. RGRC Pipe - No leakage test will be required of the Contractor on the 30-inch sewer pipe. The liner plate shall be visually inspected and the liner plate and welds shall be tested in accordance with Section 741.2.5 of MAG.

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

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

- b. V.C.P. and P.V.C. Pipe - All V.C.P. and P.V.C. sewer pipe shall be tested in accordance with MAG. Any necessary repairs or corrections shall be made by the contractor at no additional cost to the City.

.11 PERMANENT PIPE SUPPORTS

Pipe supports shall be installed when called for on the plans or as determined by the Engineer. Payment shall be per permanent pipe support complete and in place as directed by the Engineer at the unit price bid.

In lieu of placing permanent pipe supports, the Contractor may install a temporary pipe during trenching operations in place of the existing sewer pipe crossing, install the mainline sewer pipe including backfill up to the crossing pipe and replace the temporary pipe with a new pipe installation matching the existing pipe material. Flexible couplings shall be used to connect the new pipe to the existing pipe at the trench wall interface at both ends. The Contractor shall be paid the unit price bid per permanent pipe supports for each crossing alternate done in this manner in lieu of installing a permanent pipe support.

.12 REGRADE LOTS 450 AND 423

The Contractor shall remove the existing concrete slabs, footings, sidewalks and driveways as shown on the plans and as directed by the Engineer.

After the concrete items have been removed and the new sewer line has been installed, the Contractor shall regrade the lots to a uniform slope. Excess material excavated from the sanitary sewer trench may be used to fill the areas where concrete was removed.

This is a non-pay item. Cost to perform this work shall be included in bid price for the concrete removal.

.13 ADJACENT PROJECT

The Flood Control District of Maricopa County will be constructing a new bridge at 29th Avenue and the future Arizona Canal Diversion Channel in approximately February 1986.

It shall be the Contractor's responsibility to coordinate construction activities, if necessary.

T A B L E I
 PIPE MATERIAL FOR SEWER PIPE
 FOR POSITIVE PROTECTION TRENCH ONLY

STATION		FOOTAGE (FT)	R.C.P. SIZE (ID) (INCHES)	REINF. CONCRETE PIPE ASTM C-76 LATEST REVISION		UPPER WALL LINING DEGREES (MINIMUM)
FROM	TO			MIN. D- LOAD	C-76 WALL	
8+01	10+00	199	30"	3500	B	300°
10+00	14+45	445	30"	3250	B	300°
14+45	15+21	76	30"	3000	B	300°
15+21	20+03	482	30"	3250	B	300°
20+03	27+99	796	30"	3000	B	300°
37+94	39+95	199	30"	3000	B	300°
39+95	41+87	202	30"	3000	B	300°
41+95	46+45	450	30"	2750	B	300°
46+45	51+17	472	30"	2500	B	300°
51+17	54+87	365	30"	2500	B	300°

S.P. - 7

.14 SYSTEM DESIGN REVISION

The new sanitary sewer is designed to be constructed dry, while maintaining flows in the existing systems. If the 39th Avenue sanitary sewer and the sanitary sewer in Malapai are operational when construction begins on this project or during this project, the Engineer may delete the temporary mechanical plugs and substitute MAG 420, 424 and 426 manholes for the MAG 420, 424 and 426 modified manholes shown on the plans.

No additional payment will be made to the Contractor for these revisions.

.15 PAVEMENT REPLACEMENT

A. Malapai Drive, 37th Avenue, Vogel Avenue, 34th Lane, Carol Avenue, 33rd Avenue

The pavement replacement shall consist of 8 inches of aggregate base course and 2 inches of asphalt concrete (C-3/4) as shown on the plans.

The existing pavement outside of the trench width shall remain in place until the Contractor begins the pavement replacement operation. The Contractor then shall remove the existing asphalt and leave the existing base material in place. The Contractor shall scarify and compact the top 6 inches of the existing base material.

Measurement and payment will be by the ton, in place, for asphalt concrete and aggregate base course. The cost of the paving work outside of the trench, as described above, shall be included in the bid prices for the asphalt concrete and aggregate base course.

Upon completion of installation, testing and acceptance of the sewer located in the residential streets, the Contractor shall begin the pavement replacement for the entire length of the effected street.

B. 35th Avenue

The pavement replacement necessary for the manhole construction and abandonments shall consist of Type "B" pavement replacement with a minimum of 8 inches C-3/4 asphalt concrete. This is a non-pay item.

C. 29th Avenue

The pavement replacement shall be Type "B" with 3 inches of C-3/4 asphalt concrete.

Measurement and payment will be by the square yard.

.16 FENCES

Fences to be constructed by the Contractor shall match adjacent fences in color, height and materials.

Measurement and payment shall be by the linear foot and shall be full compensation for all materials, equipment, labor and necessary permits.

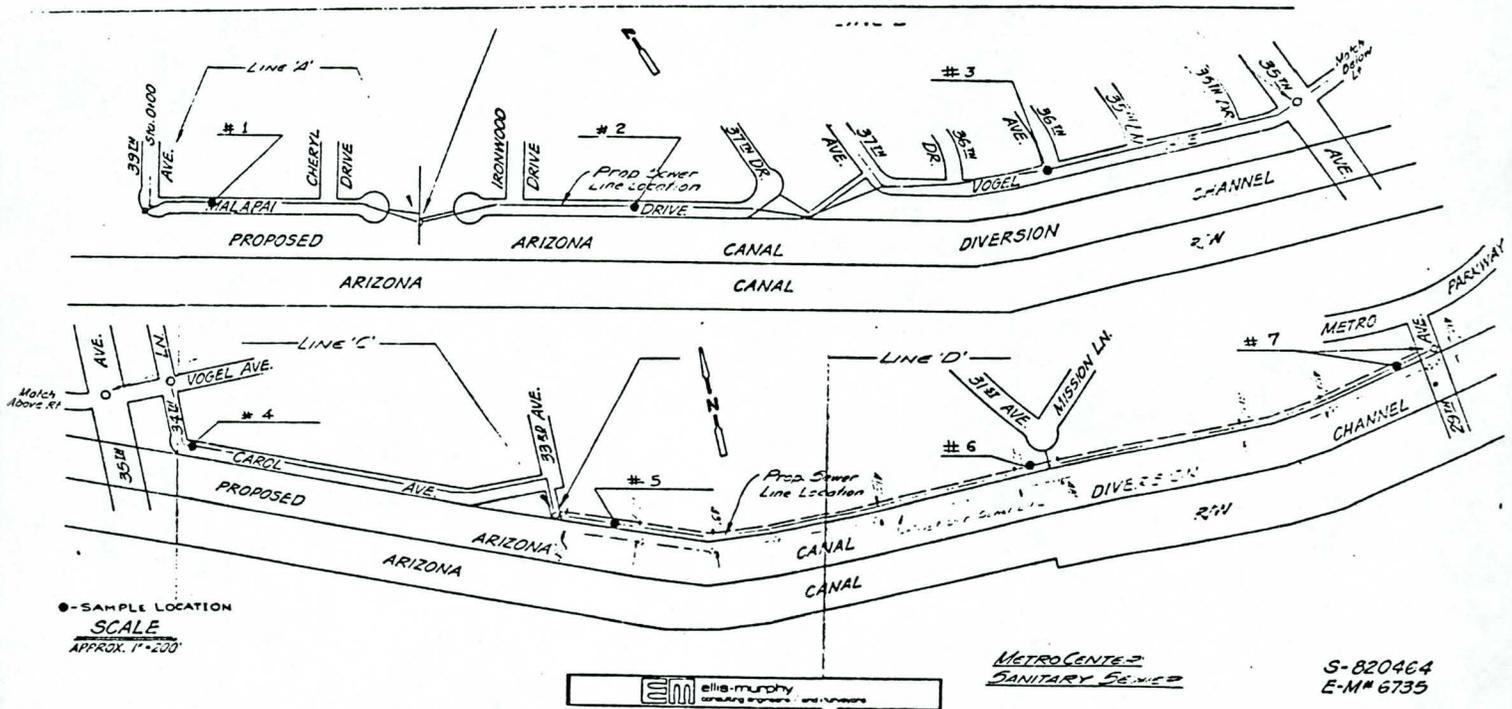
.17 JACKED CASING OR TUNNEL LINER

If the Contractor chooses to furnish and install V.C.P., it shall be installed in a jacked casing where shown and as detailed on the plans.

If the Contractor chooses to furnish and install the 30-inch lined R.G.R.C.P. alternate, he may use either a jacked casing or tunnel liner, in accordance with MAG Section 602.

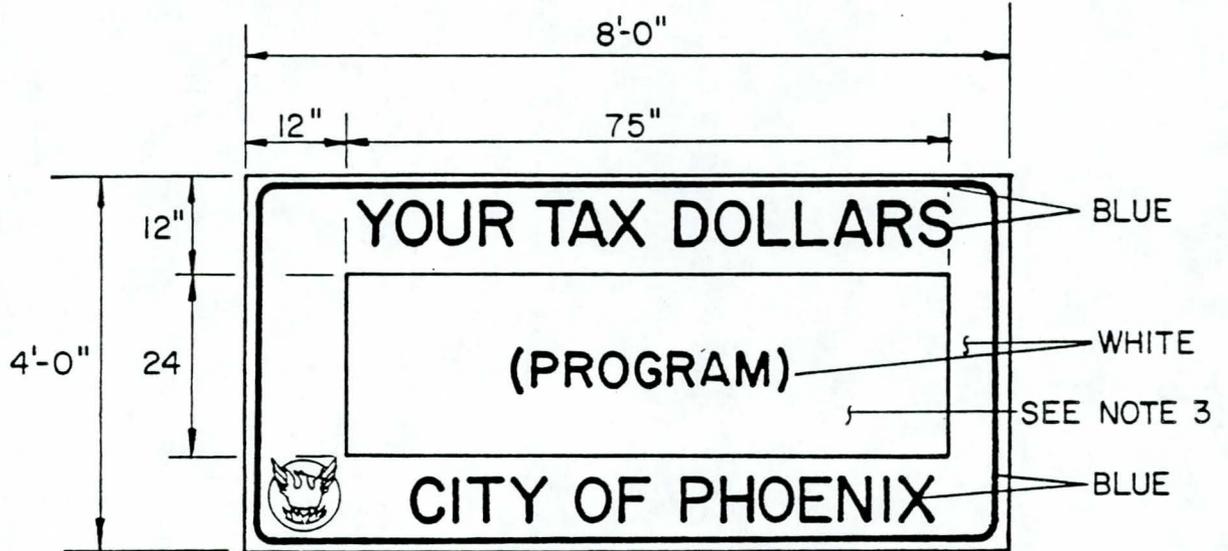
.18 BORING LOGS AND SOILS REPORT

The soil boring logs and a copy of the soils report is included in the project specifications for the Contractor's information only. The City does not guarantee 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 to the City (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.



•19 SIGNS FOR PROJECTS

Project construction sign(s), in accordance with this detail, shall be provided by the Contractor. Installation will be as directed by the Engineer. This is a non-pay item, the cost of which shall be incidental to the bid proposal.



PROGRAMS

BACKGROUND COLORS

- | | | |
|-------------------------------|---|------------|
| 1. WATERLINE IMPROVEMENT | - | LIGHT BLUE |
| 2. STORM SEWER IMPROVEMENT | - | DARK BLUE |
| 3. SANITARY SEWER IMPROVEMENT | - | GREEN |
| 4. PARK IMPROVEMENT | - | ORANGE |

NOTES:

1. FOR LINEAR PROJECTS USE ONE AT EACH END ONLY.
2. FOR AREA PROJECTS USE ONE ONLY.
3. FILL IN WITH APPROPRIATE PROGRAM TITLE AND BACKGROUND COLORS.

ATL TESTING LABORATORIES
LOGS OF BORINGS

For: ELLI-MURPHY, INC.

Date: 12-26-84 Job No. S128455

Project: METRO CENTER SANITARY SEWER Type of Boring: 8" DIA. FLIGHT AUGER

Location of Project: NORTH OF ARIZONA CANAL-29THAVE. TO 39TH AVE. Field Party: ATL/J. COWELL

Boring No. 1

Location LINE A .6' LEFT; STA 2+10

1	10" BASE & SURFACING
2	CLAYEY SILT BROWN VERY MOIST
3	
4	
5	SILTY CLAY
6	BROWN VERY MOIST
7	
8	
9	SANDY SILTY CLAY WITH VERY LIGHT CALCAREOUS CEMENTATION
10	LIGHT BROWN VERY MOIST
11	
12	SILTY CLAY WITH LIGHT CALCAREOUS CEMENTATION
13	BROWN MOIST
14	
15	
16	
17	CLAYEY SAND & GRAVEL TO 3" IN DIAMETER WITH MODERATE CALCAREOUS CEMENTATION
18	CALCAREOUS CEMENTATION BELOW 18' VARIES FROM NONE TO LIGHT
19	GRAY-BROWN MOIST

20	
21	
22	
23	
24	
25	
26	SILTY CLAY WITH VERY LIGHT CALCAREOUS CEMENTATION
27	LIGHT BROWN MOIST
28	
29	
30	
31	BOTTOM OF BORING AT 30' DEPTH
32	
33	
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LOGS OF BORINGS

For: ELLI-MURPHY, INC.

Date: 12-26-84 Job No. S128455

Project: METRO CENTER SANITARY SEWER Type of Boring: 8" DIA. FLIGHT AUGER

Location of Project: NORTH OF ARIZONA CANAL-29TH AVE. TO 39TH AVE. Field Party: ATL/J. COWELL

Boring No. 2

Location LINE B 5' RIGHT; STA 6+80

1	8" BASE & SURFACING
2	SILTY SAND BROWN VERY MOIST
3	CLAYEY SANDY SILT BROWN VERY MOIST
4	
5	
6	SILTY SAND LIGHT BROWN MOIST
7	
8	SILTY GRAVELLY SAND WITH GRAVEL TO 2" IN DIAMETER LIGHT BROWN MOIST
9	
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15	
16	SANDY SILTY CLAY WITH VERY FINE SAND AND LIGHT CALCAREOUS CEMENTATION LIGHT BROWN MOIST
17	
18	
19	

20	
21	SANDY SILTY CLAY WITH LIGHT CALCAREOUS CEMENTA- TION
22	LIGHT BROWN MOIST
23	
24	
25	
26	
27	
28	
29	BOTTOM OF BORING AT 28' DEPTH
30	
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LOGS OF BORINGS

For: ELLI-MURPHY, INC.

Date: 12-26-84 Job No. S128455

Project: METRO CENTER SANITARY SEWER Type of Boring: 8" DIA. FLIGHT AUGER

Location of Project: NORTH OF ARIZONA CANAL-29THAVE. TO 39TH AVE. Field Party: ATL/J. COWELL

Boring No. 3

Location LINE B 5' LEFT; STA 19+70

1	12" BASE & SURFACING
2	CLAYEY SILTY SAND BROWN MOIST
3	
4	
5	SILTY SAND LIGHT BROWN MOIST
6	
7	
8	
9	
10	
11	CLAYEY SILTY SAND BROWN MOIST
12	
13	
14	
15	
16	
17	
18	SANDY SILTY CLAY BROWN VERY MOIST
19	

20	
21	CLAYEY SAND GRAVEL & COBBLES WITH COBBLES TO 5" IN DIAMETER AND MODER- ATE TO HEAVY CALCAREOUS CEMENTATION
22	
23	
24	
25	
26	
27	BOTTOM OF BORING AT 26' DEPTH
28	
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LOGS OF BORINGS

For: ELLI-MURPHY, INC.

Date: 12-26-84 Job No. S128455

Project: METRO CENTER SANITARY SEWER Type of Boring: 8" DIA. FLIGHT AUGER

Location of Project: NORTH OF ARIZONA CANAL-29TH AVE. TO 39TH AVE. Field Party: ATL/J. COWELL

Boring No. 4

Location LINE C 5' LEFT; STA 42+45

1	9 1/2" BASE & SURFACING
2	CLAYEY SILTY SAND BROWN VERY MOIST
3	
4	SILTY SAND LIGHT BROWN MOIST
5	
6	SILTY CLAY BROWN MOIST
7	
8	
9	
10	CLAYEY SILTY SAND BROWN MOIST
11	
12	
13	
14	
15	
16	
17	SILTY SAND BROWN MOIST
18	
19	

20	
21	
22	GRAVELLY CLAY AND SAND BROWN MOIST
23	
24	BOTTOM OF BORING AT 23' DEPTH
25	
26	
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LOGS OF BORINGS

For: ELLIS-MURPHY, INC. Date: 12-26-84 Job No. S128455
 Project: METRO CENTER SANITARY SEWER Type of Boring: 8" DIA. FLIGHT AUGER
 Location of Project: NORTH OF ARIZONA CANAL-29TH AVE. TO 39TH AVE. Field Party: ATL/J. COWELL

Boring No. 5 Boring No. 6
 Location LINE D CENTERLINE; STA 1+70 Location LINE D CENTERLINE; STA 15+61

1	CLAYEY SILTY SAND BROWN VERY MOIST
2	
3	
4	
5	
6	
7	
8	SILTY SAND LIGHT BROWN VERY MOIST
9	
10	
11	
12	CLAYEY SAND & GRAVEL TO 1" IN DIAMETER
13	BROWN
14	SANDY SILTY CLAY
15	BROWN VERY MOIST
16	
17	
18	GRAVELLY SILTY SAND WITH GRAVEL TO 1" IN DIAMETER
19	BROWN MOIST
	BOTTOM OF BORING AT 19' DEPTH

1	CLAYEY SILT
2	TAN SLIGHTLY MOIST
3	
4	
5	SILTY SAND TAN SLIGHTLY MOIST
6	
7	
8	
9	
10	
11	
12	SILTY GRAVELLY SAND TAN SLIGHTLY MOIST
13	
14	
15	
16	
17	BOTTOM OF BORING AT 16' DEPTH
18	
19	

LOGS OF BORINGS

For: ELLIS-MURPHY, INC.

Date: 12-26-84 Job No. S128455

Project: METRO CENTER SANITARY SEWER

Type of Boring: 8" DIA. FLIGHT AUGER

Location of Project: NORTH OF ARIZONA

Field Party: ATL/J. COWELL

CANAL-29TH AVE. TO 39TH AVE.

Boring No. 7

Boring No. _____

Location LINE D 5' RIGHT; STA 16+10

Location _____

1		CLAYEY SILTY SAND
2		LIGHT BROWN MOIST
3		
4		SILTY SAND
5		TAN SLIGHTLY MOIST
6		
7		
8		
9		
10		
11		SILTY SAND
12		TAN MOIST
13		
14		SANDY SILTY CLAY
15		BROWN MOIST
16		BOTTOM OF BORING AT 15' DEPTH
17		
18		
19		

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TABULATION OF TEST RESULTS

JOB NO.: S128455

ATL

Testing Laboratories

PROJECT: METRO CENTER SANITARY SEWER DATE 1-15-85

LOCATION NORTH OF ARIZONA CANAL - 29TH AVE. TO 39TH AVE.

MATERIAL SUBGRADE SOIL DATE OF SAMPLE 12-26-84

SUBMITTED BY _____ REQUESTED BY _____

Hole No.	Station	Depth	Classification	LL	PI	SIEVE ANALYSIS-ACCUM. % PASSING											Lab No.
						200	100	40	16	10	4	3/8	3/4	1	1 1/2		
#1	AS SHOWN ON KEY MAP	10"-4'	ML-CL	27	6	80	90	95	97	98	99	99	99	100			9891
#1		4 1/2'-16'	CL	33	15	72	79	86	92	94	97	98	99	100			9892
#1		16'-25'	GC	39	21	15	17	19	21	23	31	39	52	71	77	87	9893
#1		25'-30'	CL	49	19	56	64	74	86	91	98	99	100				9913
#2		8"-2 1/2'	OL-ML	21	2	53	69	90	96	98	100						9894
#2		2 1/2'-5 1/2'	CL	34	15	87	93	98	100	100	100	100					9895
#2		5 1/2'-7 1/2'	CL	27	10	61	74	87	93	96	100						9896
#2		7 1/2'-15 1/2'	SM-SM	22	6	11	13	17	27	38	62	70	80	89	94	97	9817
#2		20'-28'	CL	37	16	60	67	72	77	82	94	97	99	100			9897
#3		1'-18 1/2'	ML-CL	25	6	80	93	99	99	99	100						9898
#3		16 1/2'-20 1/2'	CL	28	12	72	80	86	93	97	100						9899
#4		9 1/2"-5 1/2'	OL-ML		NP	57	67	80	87	91	97	98	99	100			9900
#4		5 1/2'-9 1/2'	CL	31	11	81	90	95	97	98	100						9901
#4		9 1/2'-21 1/2'	OL-ML		NP	56	71	97	100	100	100						9902
#5		0'-11'	OL-ML	24	4	73	84	90	92	93	93	93	93	93	94	95	9903

TABULATION OF TEST RESULTS

JOB NO.: S128455

ATL

Testing Laboratories

PROJECT: METRO CENTER SANITARY SEWER DATE 1-15-85

LOCATION NORTH OF ARIZONA CANAL - 29TH AVE. TO 39TH AVE.

MATERIAL SUBGRADE SOIL DATE OF SAMPLE 12-26-84

SUBMITTED BY _____ REQUESTED BY _____

Hole No.	Station	Depth	Classification	LL	PI	SIEVE ANALYSIS-ACCUM. % PASSING										Lab No.	
						200	100	40	16	10	4	3/8	3/4	1	1 1/2		
#5	AS SHOWN ON KEY MAP	12'-19'	OL-ML	22	3	61	73	82	88	92	99	99	99	99	100		9904
#6		0'-4'	CL	34	11	94	98	99	99	99	100						9905
#6		4'-11'	SM		NP	39	57	94	99	99	100						9906
#6		11'-16'	SM		NP	15	19	28	39	48	71	80	89	100			9907
#7		0'-10'	CL	26	9	64	72	84	91	93	96	96	97	100			9908
#7		10'-13'	CL	25	7	64	76	89	95	98	100						9909
#7		13'-15'	CL	31	14	67	80	90	96	98	100						9910

8

ATL Testing Laboratories

A Division of R & D Engineering Associates, Inc.

Engineers • Geologists

Boyd Smith, P.E.

Donald E. Green, P.E.

FOR: ELLIS-MURPHY, INC.
2417 WEST COLTER STREET
PHOENIX, ARIZONA 85017

DATE: 1-15-85

LAB NO.: 9891

PROJECT: METRO CENTER SANITARY SEWER
39TH AVE. TO 29TH AVE.

MATERIAL:

SOURCE OF SAMPLE:

SAMPLED BY:

DATE: 1-11-85

SOURCE OF MATERIAL:

TEST RESULTS

SAND EQUIVALENT

<u>BORING NO.</u>	<u>DEPTH</u>	<u>SAND EQUIVALENT</u>	<u>LAB NO.</u>
1	10" - 4½'	4%	9891
1	4½' - 10'	6%	9892
1	16' - 30'	14%	9893
4	5' - 9½'	4%	9901

BOND ISSUE OR BUDGET PROJECT
CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT

PROPOSAL to the City Engineer of the City of Phoenix.

In compliance with the Advertisement for Bids, by the City Engineer, the undersigned Bidder:

Having examined the contract documents, site of work, and being familiar with the conditions to be met, hereby submits the following Proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute the contract documents and furnish the required bonds and certificates of insurance for the completion of said work, at the locations and for the prices set forth on the inside pages of this form.

Understands that 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 City of Phoenix Supplements, latest revision to the MAG Uniform Standard Specifications and Details; except as otherwise required by the project plans and specifications.

Understands that his proposal shall be submitted with a proposal guarantee of cash, certified check, cashier's check or surety bond for an amount not less than 5 percent of the amount bid.

Agrees that upon receipt of Notice of Award, from the City of Phoenix, he will execute the contract documents.

Work shall be completed within 120 calendar days, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completion of the work includes lead time for obtaining the necessary materials and/or equipment.

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

BID SCHEDULE

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY & UNIT			
			UNIT PRICE	AMOUNT	
1.	DELETED				1
2.	Furnish and Install 21-inch VCP Sewer Pipe	2,889 L.F.			2
3.	Furnish and Install 18-inch VCP Sewer Pipe	3,270 L.F.			3
4.	Furnish and Install 15-inch VCP Sewer Pipe	1,218 L.F.			4
5.	Furnish and Install 8-inch VCP Sewer Pipe	106 L.F.			5
6.	Furnish and Install 60-inch Manhole, Detail 420, 424 and 426	4 Ea.			6
7.	Furnish and Install 60-inch Manhole, Detail 420, 424, and 426 Mod.	4 Ea.			7
8.	Furnish and Install 60-inch Manhole, Detail 420 and 424	20 Ea.			8
9.	Furnish and Install 48-inch Diameter Jacked Steel Casing or Tunnel Liner Plate	419 L.F.			9
10.	Furnish and Install 42-inch Diameter Jacked Steel Casing or Tunnel Liner Plate	70 L.F.			10
11.	Furnish and Install 4-inch Sewer Cleanout and 34 L.F. 4-inch VCP	1 Ea.			11
12.	Furnish and Install Pipe Plugs, Various Sizes, Detail 427	21 Ea.			12
13.	Furnish and Install Mechanical Plugs, Various Sizes	4 Ea.			13
14.	Waterline Valve Cut-In	1 Job	L.S.	5,000.00	14
15.	Waterline Replacement	7 Ea.			15
16.	Adjust Existing Manhole Frame and Cover, Contingent Item	16 Ea.			16

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BID SCHEDULE

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY & UNIT			
			UNIT PRICE	AMOUNT	
17.	Connect to Existing Manhole, Reshape Invert Per MAG	3 Ea.			1
18.	Remove Existing Pipe Plug and Connect to Existing 30-inch RGRCP	1 Ea.			2
19.	Permanent Pipe Supports	25 Ea.			3
20.	Remove Existing Manhole	1 Ea.			4
21.	Remove Existing 8-inch VCP Sewer	15 L.F.			5
22.	Abandon Existing Manhole	2 Ea.			6
23.	Remove Existing Block Fence and Footing	105 L.F.			7
24.	Construct Block Fence and Footing	67 L.F.			8
25.	Remove and Replace Wood Fence, Contingent Item	130 L.F.			9
26.	Remove and Replace Chain Link Fence	65 L.F.			10
27.	Sawcut, Remove and Replace Concrete Curb and Gutter, Contingent Item	363 L.F.			11
28.	Sawcut, Remove and Replace Concrete Valley Gutter	384 S.F.			12
29.	Sawcut, Remove and Replace Concrete Sidewalk and Driveway, Contingent Item	1,416 S.F.			13
30.	New Survey Marker	19 Ea.			14
31.	Asphalt Concrete (C-3/4)	1,475 Tons			15
32.	Aggregate Base Course	5,600 Tons			16
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BID SCHEDULE

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY & UNIT	AMOUNT	
			UNIT PRICE	AMOUNT
33.	Asphalt Concrete Preservative Seal, Contingent Item	770 Gal.		
34.	Type "B" Pavement Replacement	17 S.Y.		
35.	Traffic Control Devices	1 Job		
SUB-TOTAL ITEMS <u>1</u> THRU <u>35</u> , INCLUSIVE			\$	
*ADDITION (+) OR DEDUCTION (-)			\$	
<p>*Provision is made for the bidder to include an addition or deduction in his bid, if he wishes, to reflect any last minute adjustment in prices. The addition or deduction, if made, will be proportionately applied to the prices bid for Items Nos. 2, 3 and 4 and payment made therefore. (See Item .07, page I.B.-2)</p>				
TOTAL AMOUNT OF BID, ITEMS <u>1</u> THRU <u>35</u> , INCLUSIVE			\$	
			&	/100 Dollars
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THIS PROPOSAL IS SUBMITTED BY _____,

a corporation organized under the laws of the State of _____, a partnership con-
sisting of _____

or individual trading as _____

of the City of _____

Respectfully submitted,

FIRM _____

ADDRESS _____

BY _____

Officer and Title

Date

ATTEST:

Phone Number

Officer and Title

Witness: If Bidder is an
Individual

*The minimum insurance limit has been increased. (See page S.C.-2, paragraph .07.)

SURETY BOND

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 City of Phoenix as Obligee, in the sum of five percent (5%) of the total amount of the bid of Principal, submitted by him to the City of Phoenix 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, administrators, successors and assigns, jointly and severally, firmly by these presents, and in conformance with A.R.S. #34-201. WHEREAS, the said Principal is herewith submitting its proposal for _____

NOW, THEREFORE, if the City of Phoenix shall accept the proposal of the Principal and the Principal shall enter into a contract with the City of Phoenix 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 Bonds and Certificates of Insurance, if the Principal shall pay to the City of Phoenix 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:
