



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CA08-124**

1. Agenda Item Number: 33
2. Council Meeting Date: December 13, 2007

TO: MAYOR & COUNCIL

3. Date Prepared: November 26, 2007

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Award a project agreement to Carollo Engineers for the Sewer Assessment Study - Phase 3 project, WW0808-101, in an amount not to exceed \$461,941.

6. RECOMMENDATION: Staff recommends that Council award a project agreement to Carollo Engineers for the Sewer Assessment Study - Phase 3 project, WW0808-101, in an amount not to exceed \$461,941.

7. BACKGROUND/DISCUSSION: The Wastewater Master Plan identified an on-going need to evaluate, prioritize, and repair sewer lines and manholes within the City's collection system. A Sewer Evaluation Study was conducted in November 2005 as part of the Master Plan project, which resulted in a multi-year sewer management program. This is the third project to be completed under this on-going program.

This project provides for the continuation of the sewer system assessment, which will identify the structural condition of the sewer collection system at various locations throughout the City of Chandler so that a prioritized program of rehabilitation, repair, and replacement can be enacted and structural failures can be prevented.

8. EVALUATION PROCESS: The consultant selection process was conducted in accordance with established City policies and procedures. Staff has reviewed the scope of work, billing rates, and total fee for this project, compared them to historical costs, and has determined that they are acceptable.

9. FINANCIAL IMPLICATIONS:

Cost: \$461,941
Savings: None
Long Term Costs: None
Fund Source:

<u>Acct. No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
611.3910.0000.6817.8WW266	Wastewater Bond Fund	Sewer Assessment and Rehabilitation	FY 07/08	\$461,941

10. PROPOSED MOTION: Move that Council award a award a project agreement to Carollo Engineers for the Sewer Assessment Study - Phase 3 project, WW0808-101, in an amount not to exceed \$461,941, and authorize the Mayor to sign the contract documents.

ATTACHMENTS: Contract and Map

APPROVALS

11. Requesting Department

13. Department Head

Robert Mulvey, Assistant Municipal Utilities Director

Dave Siegel, Municipal Utilities Director

12. City Engineer

14. City Manager

Sheina Hughes, Assistant Public Works Director/City Engineer

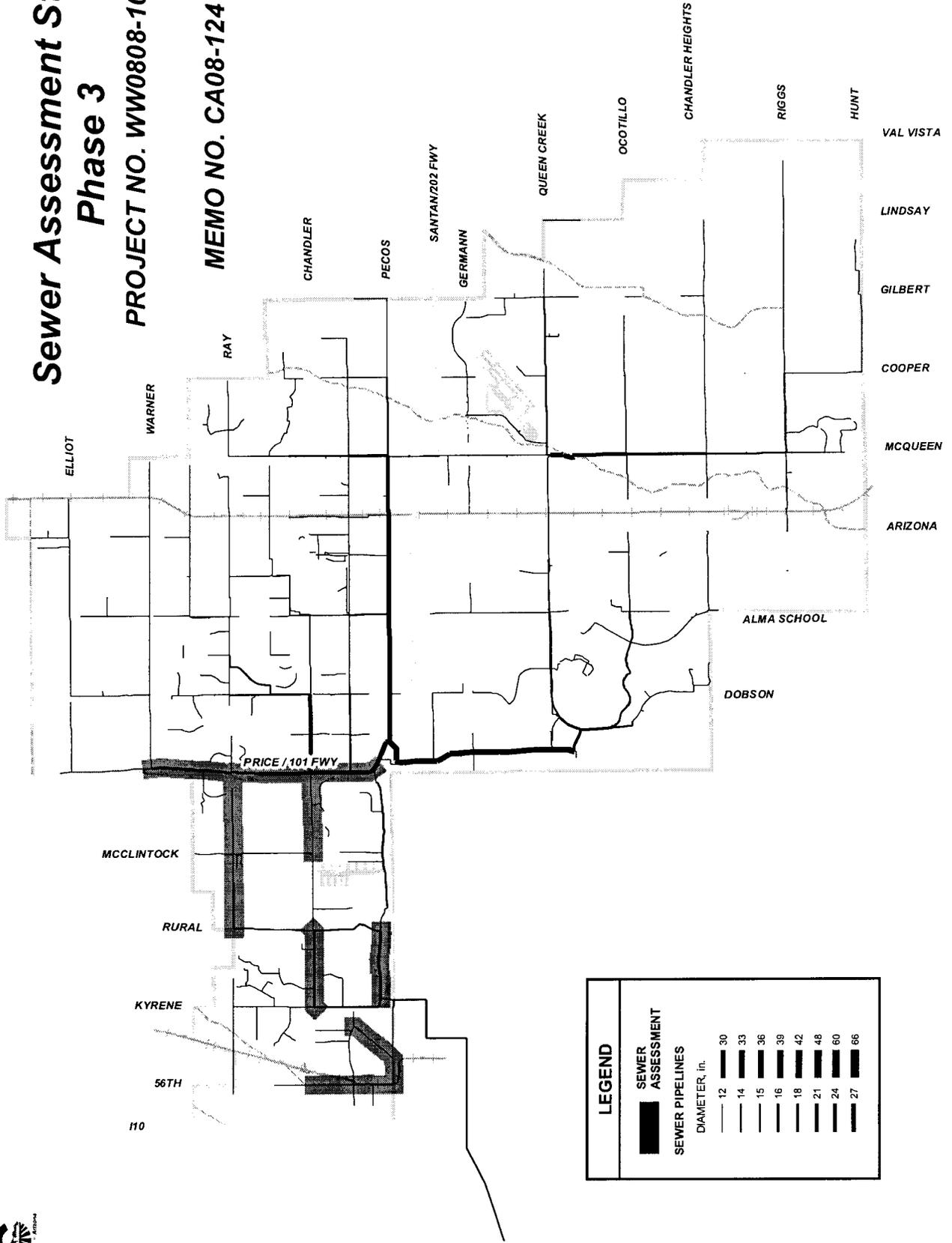
W. Mark Pentz



Sewer Assessment Study Phase 3

PROJECT NO. WW0808-101

MEMO NO. CA08-124



LEGEND	
	SEWER ASSESSMENT
	SEWER PIPELINES
	DIAMETER, in.
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**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN0718-101**

AGREEMENT NO: WW0808-101

This AGREEMENT is made this _____ day of _____, 2007, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and **Carollo Engineers, a corporation in the State of Arizona** (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN0718-101.

CITY and **Carollo Engineers**, in consideration of the mutual covenants herein set forth, agree as follows:

ARTICLE 1. DESCRIPTION OF WORK

This project is Sewer Assessment Study – Phase 3, Project Number WW0808-101. The scope of work consists of identifying the structural condition of the sewer collection system, all as more particularly set forth in Exhibit A attached hereto and incorporated herein by reference.

The Annual Consultant shall not accept any change of scope, or change in contract provisions, unless issued in writing, as a contract amendment and signed by the Contract Administrator.

ARTICLE 2. CONTRACT PRICE

CITY shall pay Annual Consultant for completion of the Work in accordance with the Contract Documents a fee not to exceed Four Hundred Sixty One Thousand Nine Hundred Forty One Dollars (\$461,941) determined and payable as set forth in Annual Contract EN0718-101 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3. CONTRACT TIME

The contract time is _____ days and Annual Consultant agrees to complete all work within _____ days of the date CITY issues a Notice to Proceed.

ARTICLE 4. GENERAL

This Project Agreement is entered into pursuant to Annual Contract No. EN0718-101 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first written above.

This Agreement will be effective on this _____ day of _____, 2007.

CITY OF CHANDLER

FOR THE ANNUAL:

DEPARTMENT HEAD/DESIGNEE DATE:

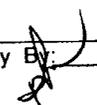
By: _____
Title: _____

ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
480-782-3307

ADDRESS FOR NOTICE
Mr. Rob Buss
Carollo Engineers
3033 N. 44th St., Ste. 101
Phoenix, AZ 85018

APPROVED AS TO FORM:

Phone: 602-263-9500
Fax: 602-265-1422

ATTEST: _____
City Attorney By: 

City Clerk

**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN0718-101**

AGREEMENT NO: WW0808-101

This AGREEMENT is made this 30th day of November 2007, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and **Carollo Engineers, a corporation in the State of Arizona** (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN0718-101.

CITY and **Carollo Engineers**, in consideration of the mutual covenants herein set forth, agree as follows:

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ARTICLE 3. CONTRACT TIME

The contract time is Three Hundred Sixty days and Annual Consultant agrees to complete all work within Three Hundred Sixty (360) days of the date CITY issues a Notice to Proceed.

ARTICLE 4. GENERAL

This Project Agreement is entered into pursuant to Annual Contract No. EN0718-101 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first written above.

This Agreement will be effective on this 30th day of November, 2007.

CITY OF CHANDLER

FOR THE ANNUAL:

DEPARTMENT HEAD/DESIGNEE DATE:

By: Rob Buss 11-30-07
Title: PARTNER

ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
480-782-3307

ADDRESS FOR NOTICE
Mr. Rob Buss
Carollo Engineers
3033 N. 44th St., Ste. 101
Phoenix, AZ 85018

APPROVED AS TO FORM:

Phone: 602-263-9500
Fax: 602-265-1422

City Attorney By: _____
ATTEST:

BY: [Signature] 11/30/07

City Clerk

TITLE: PARTNER

EXHIBIT A SCOPE OF WORK

GENERAL PROJECT DESCRIPTION

The City of Chandler (City) proposes to continue with a program to inventory and evaluate their existing sewer collection system. The main purpose of this assessment study is to identify the structural condition of the sewer collection system so that a prioritized program of rehabilitation, repair, and replacement can be enacted and structural failures can be prevented. This will be accomplished through closed circuit television (CCTV) inspection of pipelines and manholes.

Estimate of Engineering Labor and Cost spreadsheet is found on Exhibit A attached to this Scope of Work.

ANNUAL CONSULTANT shall provide the following services:

- The first pipeline and manholes to be included in this phase of the assessment program will be those identified under the Phase 2 study, but not inspected.
- The City desires to achieve a 5 year inspection cycle of its 15-inch and larger diameter pipelines and associated manholes, therefore this study, Phase 3, will inspect a target goal of 40 miles of pipelines and their associated manholes. This will require a significant field CCTV effort and should return the City to a 5-year inspection cycle.
- ANNUAL CONSULTANT shall utilize the City's existing GIS for project mapping and sewer information.
- The field CCTV subcontractors will arrange for all required traffic control. The City will not provide assistance for traffic control.
- There will be no monitoring of flow as part of this project.
- Site-specific engineering geotechnical information will not be required for this study.
- Phase 3 does not include preliminary or detailed design of pipeline and manhole rehabilitation.
- Additional H2S investigations and / or Pilot testing will be identified and conducted under a separate Task Order outside of this Phase 3 study scope of work.

I - SEWER ASSESSMENT STUDY - PHASE 3

Project Management

ANNUAL CONSULTANT shall provide project management services to include preparing progress and activity reports, meeting with and collaborating with the City staff on technical issues and problems encountered, schedule updates, proposed changes in scope or schedule, and other management activities. This task also includes coordinating the activities of the ANNUAL CONSULTANT project team through progress meetings, as well as interaction with reviewing agencies and the City. Included under this task are project progress meetings. It is assumed there will be a total of 9 project progress meetings to be held at the Municipal Utilities Department (MUD) offices on McQueen Road north of Germann Road.

Develop Inspection Priority

Pipes and manholes will be selected for further evaluation by CCTV inspection based on discussions with City staff and from the recommendations of the Sewer Assessment Study - Phase 2. The goal of this task is to develop a prioritization for the physical inspection work plan, and to allocate the CCTV and manhole inspection budgets to the areas of highest priority.

During the Phase 1 and 2 field inspection efforts, approximately 20.3 percent of the sewer pipelines over 15-inches in diameter were inspected and 42.5 percent of the associated manholes. It is assumed that during the Phase 3 Study more effort is allocated to the inspection of sewer pipelines in order to be on an approximate 5-year inspection cycle for the City's sewer collection system.

Sewer System Inspections

Develop GIS maps for field inspections

ANNUAL CONSULTANT shall develop GIS based maps to show the manhole/pipe configuration and intersection details for each proposed inspection. These maps will be used by our subcontractors to develop their site-specific inspection plans and need for traffic control measures. ANNUAL CONSULTANT shall provide coordination for the inspection program, making arrangements for meetings as necessary, and keep City staff informed of the work progress.

3.2 Coordinate field inspection activities

ANNUAL CONSULTANT shall identify the pipe segments to be televised and will prepare information packets for the field crews. Inspection data will be recorded on the forms using the defect condition codes identified in the previous study. The subcontractor will provide all equipment required for the CCTV inspections, including pan and tilt cameras and digital recording of the inspection on the CD-ROM. Where manholes are located in easements or residential yards, City assistance in the form of in-person notification may be necessary.

3.3 Conduct CCTV pipeline inspections

The pipeline inspection program will consist of the physical inspection of the pipelines using current CCTV technology without manned entry. Cleaning of sewer pipelines, if required, and subsequent disposal of debris at the designated landfill, is included in the subcontractors allowance amount. Continuous recording of the interior to the pipelines will be performed by CCTV equipment and software compatible with the City of Chandler's Wastewater Department equipment and software.

3.4 Conduct CCTV manholes inspections

The manhole inspection program will consist of the physical inspection of the manhole. Current technology will be used to conduct manhole inspections using manned entry and video recording.

Field analyses for H₂S of the wastewater will be conducted as part of this effort in conjunction with atmospheric testing of the ambient air in the manholes, and this data will be recorded on the Manhole Inspection Form.

A Manhole Inspection Form will be completed for each inspected manhole. This information will then be entered into the project database.

The subcontractors will provide all traffic control required to inspect the sewer pipelines and manholes identified under this work.

3.5 Prepare report

The deliverables for Task 5.0 will include completed inspection forms, and a visual record (video tape, or digital image) of each manhole and sewer segment inspected.

Sewer System Evaluation Prioritize Rehab or Replacement

ANNUAL CONSULTANT shall utilize the rating and prioritization approach developed during the previous Sewer Assessment Study - Phase 2.

For sewer pipes, based on the condition assessment of the pipe during the CCTV phase, a numerical score will be developed for each pipe segment using the database. The individual pipe segments will then be prioritized for rehabilitation or replacement in descending order of pipe score.

Manholes will be assessed with a slightly different score method, but the process will be similar. The manholes will also be organized by action and descending score.

4.2 Identify Rehabilitation projects

After developing a prioritized list of sewer pipelines and manholes requiring rehabilitation, ANNUAL CONSULTANT shall group the pipelines and manholes into projects. This grouping will be based on the estimated construction cost of rehabilitation, and in conjunction with City staff recommendations.

4.3 Prepare report

The deliverables for Task 5.0 will include completed inspection forms, and a visual record (video tape, or digital image) of each manhole and sewer segment inspected.

DELIVERABLES

Sewer Assessment Study - Phase 3

The deliverables for the Sewer Assessment Study will be both a Draft and Final Report, a total of 10 copies for each report version. The Report will include tables, maps, figures and narrative describing the work performed and the recommendations made. Included in each version of the Report will be the following, as a minimum:

- Summary plan for pipeline and manhole condition rating and prioritization.
- Numerical score for each pipe segment and manhole inspected.
- List of pipe segments and manholes in order of descending score.
- Pipe segment and manhole lists in condition categories.
- Recommendations for future action.

III - PRELIMINARY PROJECT SCHEDULE

The preliminary project schedule duration is 9 months. ANNUAL CONSULTANT shall provide a graphical display of the schedule utilizing the critical path method that is acceptable and agreed upon by the City.

**EXHIBIT B
FEE SCHEDULE**

DESIGN AND STUDY PHASE TASKS		Categories					Subtotals
		Sr. Professional	Project Professional	Assist. Professional	Sr. Technician	Clerical	
Hourly Rates		\$ 199.08	\$ 170.65	\$ 129.56	\$ 94.80	\$ 66.36	
Task 1	Project Management						
1.1	Project Management	8	56	48	0	12	124
	Subtotal Task 1.0	8	56	48	0	12	124
Task 2	Develop Inspection Priority						
2.1	Develop Inspection Priority	3	16	24	8	0	51
	Subtotal Task 2.0	3	16	24	8	0	51
Task 3	Sewer System Inspections						
3.1	Develop GIS maps for field inspections	0	8	36	56	0	100
3.2	Coordinate field inspection activities	0	16	64	0	0	80
3.3	Conduct CCTV pipeline inspections	0	32	88	0	0	120
3.4	Conduct CCTV manhole inspections	0	32	72	0	0	104
3.5	Prepare Report	4	12	32	48	24	120
	Subtotal Task 3.0	4	100	292	104	24	524
Task 4	Sewer System Evaluation						
4.1	Prioritize Rehab / Replacement	0	24	20	0	0	44
4.2	Identify Rehab projects	0	16	20	0	0	36
4.3	Prepare Report	4	32	48	32	24	140
	Subtotal Task 4.0	4	72	88	32	24	220
Task 5	Deliverables						
5.1	Sewer Assessment Study - Phase 3	6	28	96	40	32	202
	Subtask 5.0	6	28	96	40	32	202
Total Labor		25	272	548	184	92	1121
Total Labor Cost (Lump Sum)		\$ 4,977	\$ 46,417	\$ 70,999	\$ 17,443	\$ 6,105	\$ 145,941
DIRECT COST ALLOWANCES							\$ 4,000
1.) Mileage, printing / reproduction / Misc.							\$ 80,000
2.) AZ Manhole Renewal subcontractor (Approximate)							\$ 232,000
3.) Pipeline Video Inspection subcontractor (Approximate)							
Total Direct Cost Allowances							\$ 316,000
NOTES							
1.)	No H2S investigation is part of the Phase 3 study. To be done under separate Task Order.						
TOTAL SEWER STUDY PROJECT COSTS						\$ 461,941	
TOTAL CONTRACT AMOUNT						\$ 461,941	