



**Council Meeting: April 27, 2010**

**SUBJECT: Award a Sunnyvale Works! Contract for the Design and Construction Support Services for Citywide Sanitary Sewer Main Replacements 2011 (F0904-92)**

### **BACKGROUND**

Approval is requested to award a contract to Wreco, of Walnut Creek in an amount not to exceed \$169,805, to design and provide construction support services for the 2011 Citywide Sanitary Sewer Main Replacements project, and to approve a 10% project contingency in the amount of \$16,980. The proposed contract also includes video inspections of all sewer lines included in the project.

This proposed contract was developed in conjunction with the pre-qualification process established at the outset of the **Sunnyvale Works!** program. Wreco was selected from among six prequalified firms who submitted proposals on the project.

### **DISCUSSION**

The Fiscal year 2009/2010 Budget includes Capital project 825331, Replacement/Rehabilitation of Sewer Pipes. This project provides funding in each of the years of the Twenty Year Resource Allocation Plan for the prioritized replacement or rehabilitation of sewer mains as they are identified. The project allows for the investigation of alternative replacement technologies, including lining and “pipe bursting” and replacement on a location by location basis to generate cost savings.

The sewer main replacements scheduled for 2011 include approximately 6,071 lineal feet of piping at the following locations:

- Columbia Avenue between Fair Oaks and Roosevelt, replace 6” mainline of approximately 960 feet.
- Cypress Avenue between Fair Oaks and Britton, replace 6” mainline of approximately 705 feet.
- Madrone Avenue between Arbor and Beechnut, replace 6” mainline of approximately 417 feet.
- Gascoigne Avenue between Newsom and Barnhard, replace 6” mainline of approximately 1,429 feet.

- Borregas Avenue between Ahwanee and Persian, replace or reline 27” mainline of approximately 2,560 feet.

This contract is recommended for approval in order to design the plans and specifications necessary for construction, and to provide construction support services. As part of their design evaluation, the engineering consulting firm will review every job location for the possibility of using replacement technologies less expensive than the conventional open cut pipe replacement. The Wreco proposal includes \$151,885 for the scope of work specified, and \$17,920 for the optional Closed Circuit Television (CCTV) videoing of the project locations as requested by PW/Engineering.

**FISCAL IMPACT**

Expenditures are budgeted in Project 825331, funded through the Wastewater Management Fund.

**PUBLIC CONTACT**

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's Web site.

**RECOMMENDATION**

It is recommended that Council:

1. Award a contract to Wreco, in substantially the same form as the attached draft Consultant Services Agreement and in an amount not to exceed \$169,805, for design and construction support services (including optional CCTV video) for the Citywide Sanitary Sewer Main Replacements 2011; and
2. Approve a project contingency in the amount of \$ 16,980.

Reviewed by:

Mary J. Bradley, Director of Finance  
Prepared by: Pete Gonda, Senior Management Analyst

Reviewed by:

Marvin Rose, Director of Public Works

Approved by:

Gary M. Luebbers, City Manager

**Attachments**

A. Draft Consultant Services Agreement

**DRAFT**

**CONSULTANT SERVICES AGREEMENT BETWEEN CITY OF SUNNYVALE  
AND WRECO FOR DESIGN AND CONSTRUCTION SUPPORT SERVICES  
FOR CITYWIDE SANITARY SEWER MAIN REPLACEMENT 2011**

THIS AGREEMENT dated \_\_\_\_\_ is by and between the CITY OF SUNNYVALE, a municipal corporation ("CITY"), and WRECO ("CONSULTANT").

WHEREAS, CITY desires to secure professional services necessary for investigation, analysis, design, preparation of construction drawings and contract specifications, consultation, services during construction and other services for a project known as Citywide Sanitary Sewer Main Replacement 2011 (Project No. SVW-009); and

WHEREAS, CONSULTANT represents that it, and its sub-consultants, if any, possess the professional qualifications and expertise to provide the required services and are licensed by the State of California to practice engineering in the required disciplines;

NOW, THEREFORE, THE PARTIES ENTER INTO THIS AGREEMENT.

1. Services by CONSULTANT

CONSULTANT shall provide services in accordance with Exhibit "A" entitled "Scope of Work." All exhibits referenced in this Agreement are attached hereto and are incorporated herein by reference. To accomplish that end, CONSULTANT agrees to assign Ulysses Hillard, P.E. to this project, to act in the capacity of Project Manager and personally direct the professional services to be provided by CONSULTANT.

Except as specified in this Agreement, CONSULTANT shall furnish all technical and professional services, including labor, material, equipment, transportation, supervision and expertise to perform all operations necessary and required to satisfactorily complete the services required in this Agreement.

2. Notice to Proceed/Completion of Services

(a) CONSULTANT shall commence services upon receipt of a Notice to Proceed from CITY. Notice shall be deemed to have occurred three (3) calendar days after deposit in the regular course of the United States mail.

(b) When CITY determines that CONSULTANT has satisfactorily completed the services defined in Exhibit "A," CITY shall give CONSULTANT written Notice of Final Acceptance, and CONSULTANT shall not incur any further costs hereunder. CONSULTANT may request this determination of completion when, in its opinion, it has satisfactorily completed the Scope of Work (Exhibit "A"), and if so requested, CITY shall make this determination within fourteen (14) days of such request.

3. Project Schedule

The Project Schedule is set forth in the attached Exhibit "A-1."

4. Payment of Fees and Expenses

Payments shall be made to CONSULTANT on a monthly basis as set forth in the attached Exhibit "B" entitled "Compensation Schedule." All compensation will be based on monthly billings as provided in Exhibit "B." Compensation will not be due until said detailed billing is submitted to CITY within a reasonable time before payment is expected to allow for normal CITY processing. An estimate of the percent of total completion

associated with the various categories of the services shall be furnished by CONSULTANT with said billing. When applicable, copies of pertinent financial records will be included with the submission of billing(s) for all direct reimbursables. Compensation shall not exceed the amounts set forth in Exhibit "B" for each phase. In no event shall the total amount of compensation payable under this agreement exceed the sum of One Hundred Sixty Nine Thousand Eight Hundred Five and No/100 Dollars (\$169,805.00) unless upon written modification of this Agreement. All invoices, including detailed backup, shall be sent to City of Sunnyvale, attention Accounts Payable, P.O. Box 3707, Sunnyvale, CA 94088-3707.

5. No Assignment of Agreement

CONSULTANT bind themselves, their partners, successors, assigns, executors, and administrators to all covenants of this Agreement. Except as otherwise set forth in this Agreement, no interest in this Agreement or any of the work provided for under this Agreement shall be assigned or transferred, either voluntarily or by operation of law, without the prior written approval of CITY. However, claims for money due to or to become due to CONSULTANT from CITY under this Agreement may be assigned to a bank, trust company or other financial institutions, or to a trustee in bankruptcy, provided that written notice of any such assignment or transfer shall be first furnished to CITY. In case of the death of one or more members of CONSULTANT's firm, the surviving member or members shall complete the services covered by this Agreement. Any such assignment shall not relieve CONSULTANT from any liability under the terms of this Agreement.

6. Consultant is an Independent Contractor

CONSULTANT is not an agent or employee of CITY but is an independent contractor with full rights to manage its employees subject to the requirements of the law. All persons employed by CONSULTANT in connection with this Agreement will be employees of CONSULTANT and not employees of CITY in any respect. CONSULTANT is responsible for obtaining statutory Workers' Compensation coverage for its employees.

7. Consultant's Services to be Approved by a Registered Professional

All reports, costs estimates, plans and other documents which may be submitted or furnished by CONSULTANT shall be approved and signed by a qualified registered professional in the State of California. The title sheet for calculations, specifications and reports, and each sheet of plans, shall bear the professional seal, certificate number, registration classification, expiration date of certificate and signature of the professional responsible for their preparation.

8. Standard of Workmanship

CONSULTANT represents and maintains that it is skilled in the professional calling necessary to perform the services and its duties and obligations, expressed and implied, contained herein, and CITY expressly relies upon CONSULTANT's representations regarding its skills and knowledge. CONSULTANT shall perform such services and duties in conformance to and consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California.

The plans, designs, specifications, estimates, calculations reports and other documents furnished under the Scope of Work (Exhibit "A") shall be of a quality acceptable to CITY. The criteria for acceptance of the work provided under this Agreement shall be a product of neat appearance, well-organized, technically and grammatically correct, checked and having the maker and checker identified. The minimum standard of appearance, organization and content of the drawings shall be that used by CITY for similar projects.

9. Responsibility of CONSULTANT

CONSULTANT shall be responsible for the professional quality, technical accuracy and the coordination of the services furnished by it under this Agreement. Neither CITY's review, acceptance nor payment for any of the services required under this Agreement shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement and CONSULTANT shall be and remain liable to CITY in accordance with applicable law for all damages to CITY caused by CONSULTANT's negligent performance of any of the services furnished under this Agreement.

Any acceptance by CITY of plans, specifications, calculations, construction contract documents, reports, diagrams, maps and other material prepared by CONSULTANT shall not, in any respect, absolve CONSULTANT for the responsibility CONSULTANT has in accordance with customary standards of good engineering practice in compliance with applicable Federal, State, County and/or municipal laws, ordinances, regulations, rules and orders.

10. Right of CITY to Inspect Records of CONSULTANT

CITY, through its authorized employees, representatives, or agents, shall have the right, at any and all reasonable times, to audit the books and records including, but not limited to, invoices, vouchers, canceled checks, time cards of CONSULTANT for the purpose of verifying any and all charges made by CONSULTANT in connection with this Agreement. CONSULTANT shall maintain for a minimum period of three (3) years from the date of final payment to CONSULTANT or for any longer period required by law, sufficient books and records in accordance with generally accepted accounting practices to establish the correctness of all charges submitted to CITY by CONSULTANT. Any expenses not so recorded shall be disallowed by CITY.

11. Confidentiality of Material

All ideas, memoranda, specifications, plans, calculations, manufacturing procedures, data, drawings, descriptions, documents, discussions or other information developed or received by or for CONSULTANT and all other written information submitted to CONSULTANT in connection with the performance of this Agreement shall be held confidential by CONSULTANT and shall not, without the prior written consent of CITY be used for any purposes other than the performance of the Project services, nor be disclosed to an entity not connected with the performance of the Project services. Nothing furnished to CONSULTANT which is otherwise known to CONSULTANT or is or becomes generally known to the related industry shall be deemed confidential. CONSULTANT shall not use CITY's name, insignia or distribute exploitative publicity pertaining to the services rendered under this Agreement in any magazine, trade paper, newspaper or other medium without the express written consent of CITY.

12. No Pledging of CITY's Credit

Under no circumstances shall CONSULTANT have the authority or power to pledge the credit of CITY or incur any obligation in the name of CITY.

13. Ownership of Material

All material, including information developed on computer(s), which shall include, but not be limited to, data, sketches, tracings, drawings, plans, diagrams, quantities, estimates, specifications, proposals, tests, maps, calculations, photographs, reports and other material developed, collected, prepared or caused to be prepared, under this Agreement shall be the property of CITY, but CONSULTANT may retain and use copies thereof.

CITY shall not be limited, in any way, in its use of said material, at any time, for work associated with Project. However, CONSULTANT shall not be responsible for damages resulting from the use of said material for work other than Project, including, but not limited to the release of this material to third parties for work other than on Project.

14. Hold Harmless/Indemnification

To the extent permitted by law, CONSULTANT agrees to indemnify, defend and hold harmless CITY, its officers and employees from any and all claims, demands, actions, causes of action, losses, damages, liabilities, known or unknown, and all costs and expenses, including reasonable attorneys' fees in connection with any injury or damage to persons or property to the extent arising out of any negligent act, error, omission or negligence of CONSULTANT, its officers, employees, agents, contractor, subcontractors or any officer, agent or employee thereof in relation to CONSULTANT's performance under this Agreement. Such defense and indemnification shall not apply in any instance of and to the extent caused by the sole negligence or willful misconduct of CITY, its officers, employees, agents or representatives.

15. Insurance Requirements

CONSULTANT shall take out and maintain during the life of this Agreement policies of insurance as specified in Exhibit "C" attached and incorporated by reference, and shall provide all certificates and/or endorsements as specified in Exhibit "C."

16. No Third Party Beneficiary

This Agreement shall not be construed or deemed to be an agreement for the benefit of any third party or parties and no third party or parties shall have any claim or right of action hereunder for any cause whatsoever.

17. Notices

All notices required by this Agreement, other than invoices for payment which shall be sent directly to Accounts Payable, shall be in writing, and shall be personally delivered, sent by first class with postage prepaid, or sent by commercial courier, addressed as follows:

To CITY:                      Chuck Neumayer, Senior Engineer  
   Department of Public Works  
   CITY OF SUNNYVALE  
   P. O. Box 3707  
   Sunnyvale, CA 94088-3707

To CONSULTANT:        WRECO  
   Attn: Ulysses Hillard, P.E.  
   1243 Alpine Road, Suite 108  
   Walnut Creek, CA 94596

Nothing in this provision shall be construed to prohibit communication by more expedient means, such as by telephone or facsimile transmission, to accomplish timely communication. However, to constitute effective notice, written confirmation of a telephone conversation or an original of a facsimile transmission must be sent by first class mail, by commercial carrier, or hand-delivered. Each party may change the address by written notice in accordance with this paragraph. Notices delivered personally shall be deemed communicated as of actual receipt; mailed notices shall be deemed communicated as of three days after mailing, unless such date is a date on which there is no mail service. In that event communication is deemed to occur on the next mail service day.

18. Waiver

CONSULTANT agrees that waiver by CITY of any one or more of the conditions of performance under this Agreement shall not be construed as waiver(s) of any other condition of performance under this Agreement.

19. Amendments

No alterations or changes to the terms of this Agreement shall be valid unless made in writing and signed by both parties.

20. Integrated Agreement

This Agreement embodies the agreement between CITY and CONSULTANT and its terms and conditions. No verbal agreements or conversation with any officer, agent or employee of CITY prior to execution of this Agreement shall affect or modify any of the terms or obligations contained in any documents comprising this Agreement. Any such verbal agreement shall be considered as unofficial information and in no way binding upon CITY.

21. Conflict of Interest

CONSULTANT certifies that to the best of its knowledge, no CITY employee or officer of any public agency interested in this Agreement has any pecuniary interest in the business of CONSULTANT and that no person associated with CONSULTANT has any interest that would conflict in any manner or degree with the performance of this Agreement.

22. California Agreement

This Agreement has been entered into in the State of California and this Agreement shall be governed by California law.

23. Records, Reports and Documentation

CONSULTANT shall maintain complete and accurate records of its operation, including any and all additional records required by CITY in writing. CONSULTANT shall submit to CITY any and all reports concerning its performance under this Agreement that may be requested by CITY in writing. CONSULTANT agrees to assist CITY in meeting CITY's reporting requirements to the state and other agencies with respect to CONSULTANT's work hereunder. All records, reports and documentation relating to the work performed under this Agreement shall be made available to City during the term of this Agreement.

24. Termination of Agreement

If CONSULTANT defaults in the performance of this Agreement, or materially breaches any of its provisions, CITY at its option may terminate this Agreement by giving written notice to CONSULTANT. If CITY fails to pay CONSULTANT, CONSULTANT at its option may terminate this Agreement if the failure is not remedied by CITY within thirty (30) days after written notification of failure to pay.

Without limitation to such rights or remedies as CITY shall otherwise have by law, CITY also shall have the right to terminate this Agreement for any reason upon ten (10) days' written notice to CONSULTANT. In the event of such termination, CONSULTANT shall be compensated in proportion to the percentage of services performed or materials furnished (in relation to the total which would have been performed or furnished) through the date of receipt of notification from CITY to terminate. CONSULTANT shall present CITY with any work product completed at that point in time.

25. Subcontracting

None of the services covered by this Agreement shall be subcontracted without the prior written consent of CITY. Such consent may be issued with notice to proceed if subcontract consultants are listed in the project work plan.

26. Fair Employment

CONSULTANT shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, condition of physical handicap, religion, ethnic background or marital status, in violation of state or federal law.

27. Changes

CITY or CONSULTANT may, from time to time, request changes in the terms and conditions of this Agreement. Such changes, which are mutually agreed upon by CITY and CONSULTANT, shall be incorporated in amendments to this Agreement.

28. Other Agreements

This Agreement shall not prevent either Party from entering into similar agreements with others.

29. Severability Clause

In case any one or more of the provisions contained herein shall, for any reason, be held invalid, illegal or unenforceable in any respect, it shall not affect the validity of the other provisions which shall remain in full force and effect.

30. Captions

The captions of the various sections, paragraphs and subparagraphs, of the contract are for convenience only and shall not be considered nor referred to for resolving questions of interpretation.

31. Entire Agreement; Amendment

This writing constitutes the entire agreement between the parties relating to the services to be performed or materials to be furnished hereunder. No modification of this Agreement shall be effective unless and until such modification is evidenced by writing signed by all parties.

32. Miscellaneous

Time shall be of the essence in this Agreement. Failure on the part of either party to enforce any provision of this Agreement shall not be construed as a waiver of the right to compel enforcement of such provision or any other provision. This Agreement shall be governed and construed in accordance with the laws of the State of California.

IN WITNESS WHEREOF, the parties have executed this Agreement.

ATTEST:

CITY OF SUNNYVALE ("CITY")

By \_\_\_\_\_  
City Clerk

By \_\_\_\_\_  
City Manager

WRECO ("CONSULTANT")

By \_\_\_\_\_

APPROVED AS TO FORM:

\_\_\_\_\_  
Name/Title

\_\_\_\_\_  
City Attorney

By \_\_\_\_\_

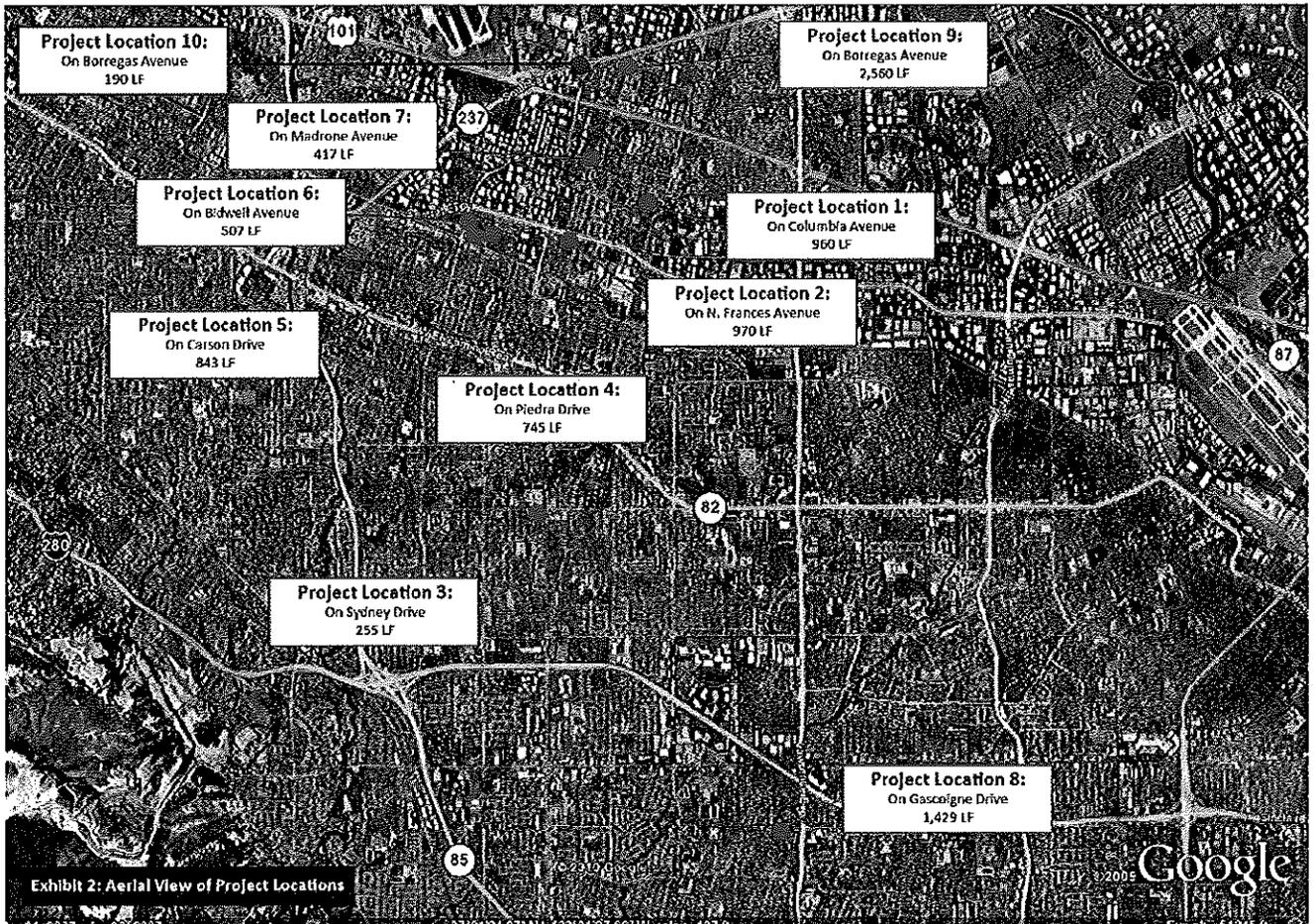
\_\_\_\_\_  
Name/Title

SECTION D: PROJECT APPROACH



PROJECT UPDATES

Per the request of the City of Sunnyvale (City), the WRECO Project Team has updated our scope of services, schedule and cost proposal to reflect the the requested changes. We have also provided optional scope items, specifically for Geotechnical Investigation to include potential changes that will alter the scope, schedule and cost. Our discussion in Task 2. will further explain the options available to the City.



### Project Locations

1. Replace 6" main on Columbia Ave. between N. Fair Oaks Ave. and Roosevelt Ave., approximate 960 LF
2. Replace 6" main on N. Frances Ave. between W. Hendy Ave. and W. California Ave., approximate 970 LF
3. Replace 8" main on Sydney Dr. between Cascade Dr. and mid-block, approximate 255 LF
4. Replace 8" main on Piedra Dr. between Matadero Dr. and Bidwell Dr., approximate 745 LF
5. Replace 8" main on Carson Dr. between S. Mary Ave. and Piedra Dr., approximate 843 LF
6. Replace 8" main on Bidwell Ave. between S. Mary Ave. and Piedra Dr., approximate 507 LF
7. Replace 6" main on Madrone Ave. between W. Arbor Ave. and Beechnut Ave., 417 LF
8. Replace 6" main on Gascoigne Dr. between Newsom Ave. and Barnhart Ave., 1,429 LF
9. Line or replace 27" main on Borregas Ave. between Ahwanee Ave. and Persian Dr., 2,560 LF
10. Line or replace 27" main on Borregas Ave. between Persian Dr. and Moffet Park Dr. (under Hwy-237), 190 LF

### DETAILED WORK PLAN

#### Task 1. Project Management and Meetings

WRECO will ultimately be responsible for the overall management of the Project. WRECO will review all products submitted by the Team. Quality Assurance and Quality Control plans specific to each task will be implemented to ensure that the deliverables will meet or exceed the stated or implied expectations of the City. The collective resources of the Principal-In-Charge, Project Manager and the QA/QC Manager ensure the well-coordinated execution of multiple, simultaneous tasks.

WRECO will coordinate and attend meetings with the City and other agencies, as necessary, to obtain records or prepare documents to complete permits.

#### Task 2. Preliminary Design

#### GEOTECHNICAL INVESTIGATION

GeoEngineers (GEO) will provide the appropriate subsurface data to serve as the basis for geotechnical engineering recommendations for design and construction of the replacement sewer mains.

#### *Permits, Boring Locations and Utility Notifications*

GEO will obtain an encroachment permit from the City. As part of the encroachment permit process, submit a traffic control plan to direct traffic safely around drill sites. This scope of work assumes that the City will waive any encroachment permit fees, and that Caltrans permits will not be required (i.e., no test borings will be located in the Caltrans right-of-way).

A single test boring site will be identified along each of the nine project alignments, with the exception of the Borregas Avenue and Gascoigne Drive alignments. Three test boring sites will be located along the Borregas Avenue alignment, and two test boring sites will be located on the Gascoigne Drive alignment, for a total of 12 project test boring sites. GEO will field mark the 12 test boring sites and notify Underground Service Alert (USA) prior to beginning field work so that public and private underground utilities can be identified and proposed boring locations are cleared. GEO is not responsible for damage to any USA member utilities not identified and/or not properly marked by USA at the ground surface.

## SECTION D: PROJECT APPROACH



### *Subsurface Investigation*

Drill test borings will be performed at each of the 12 test boring sites. A total of two test borings will be completed at each test boring site for a total of 24 test borings. One test boring will be completed outside the backfill zone for the existing sewer main pipeline to evaluate the native soil profile. This "native soil" test boring will be drilled to a minimum of 10 feet below the invert of the existing/replacement sanitary sewer. A second test boring will be completed within the backfill zone for the existing sewer main to evaluate the composition and consistency/density of the existing trench backfill materials (a key factor in evaluating pipe bursting cavity expansion). This "backfill" test boring will be drilled no deeper than 2 feet above the existing sewer obvert (based on review of record drawings and field verification/measurement within nearest manholes).

A continuous log of soil and groundwater conditions will be maintained by GeoEngineers' field engineer. The thickness of pavement sections will also be recorded at each test boring site. Disturbed and "undisturbed" soil samples will be taken at a maximum of 5-foot vertical intervals. Test borings will be backfilled with grout in accordance with the City encroachment permit requirements and capped with a minimum of 6 inches of cold patch asphalt or quick-set concrete. Soil cuttings will be disposed of off-site. This scope of work and budget assumes that contaminated soil and/or groundwater will not be encountered. If any unusual vapors, odors or visual contamination are noticed during drilling of any test boring, the boring will be stopped, backfilled with grout and the suspected drill cuttings will be bagged, labeled for future source reference and provided to the City for disposal. This scope of work and budget also assumes that geotechnical drilling and sampling at the test boring sites will be permitted between the hours of 8:00 a.m. and 5:00 p.m.

### *Laboratory Testing*

GEO will complete the following laboratory tests on representative disturbed and "undisturbed" soil samples: Moisture Content, Unit Weight, Atterberg Limits, Grain Size Distribution, Unconfined Compression and Direct Shear.

### *Geotechnical Analysis and Report*

GEO will prepare a geotechnical engineering analysis of the data gathered in the previous geotechnical subtasks with specific conclusions and recommendations for design and construction of the following:

1. General: Describe geologic and seismic setting, and engineering properties (i.e., composition and consistency) of soils sampled along the alignments. Describe groundwater conditions. Describe geologic hazards such as liquefaction, fault rupture, ground shaking, and provide 2006 IBC/2007 CBC seismic design parameters.
2. Open-Cut Trenching/Excavation: Provide conclusions and recommendations for trenching excavation, anticipated ground behavior, preliminary Cal-OSHA soil classification, clearance from existing utilities and protection of existing utilities, shoring guidelines including preliminary shoring pressure and surcharge pressure diagrams, construction vibration impacts on adjacent utilities and structures, construction design groundwater level and construction dewatering criteria, pipe foundation, bedding, embedment and trench backfill materials and compaction specifications, backfill at existing utility crossings and the use of CLSM as pipe embedment and trench backfill, flexible and rigid pipeline external loading, E'c for flexible pipe design, anticipated differential pipeline settlement and trench backfill settlement, ground improvement, if needed, and street repaving.
3. Pipe bursting and Pipe Lining: Pertinent recommendations described above for open-cut trenching (e.g., those applicable to pipe bursting/lining access pit excavation, shoring, dewatering, backfilling etc.). Provide conclusions, recommendations and geotechnical engineering analysis for pipe bursting, slip lining and CIPP, E'c values for design of flexible pipe/pipe liners, estimated cavity expansion and ground heave estimates for pipe bursting, pipe

bursting ground deformation and vibration impacts on overlying pavement and adjacent utilities, and countermeasures for protection of overlying pavement and adjacent utilities and mitigation of ground heave. Provide guideline specifications for pipe bursting.

4. **Permanent Below-Grade Structures (Manholes):** Pertinent recommendations described above for open-cut trenching (e.g., those applicable to excavation, shoring, dewatering, backfilling, etc.). Provide conclusions and recommendations for allowable soil bearing capacity, total and differential foundation settlement estimates, anticipated differential pipeline settlement at manhole connections, below grade structure buoyancy, allowable foundation uplift capacity, static lateral earth pressures, coefficient of base friction, and permanent structure design groundwater level, and asphalt pavement structural section.

GEO will submit the Geotechnical Investigation Report which will include scaled alignment drawing with boring locations, geotechnical data (boring logs, lab tests) and geotechnical design summary (conclusions and recommendations as summarized above).

**Key Assumption:** The work on the line under Highway 237 will be accomplished by a method that will require no excavation or pipe-bursting.

***Deliverables:***

- Geotechnical Investigation Report

### **SURVEY**

#### Utility Surveys

Ruggeri-Jensen-Azar & Associates (RJA) will obtain utility surveys with detailed ground surveys. Base maps will be prepared at an appropriate engineering scale and CAD files will be provided to the City. Benchmark descriptions and the datum of elevations will be shown along with the horizontal coordinate system used for the field survey control. Utility Surveys will establish the position of sewer manholes, inlets, cleanouts, valves, and the invert, alignment and size of pipes where visible. Surveys will include research of the available As-Built drawings, Improvement Plans and other pertinent documents for preparing a base.

***Deliverables:***

- Utility Survey, CAD files, As-Built Record Information

#### Control Surveys

RJA will employ differential GPS methods for ties to horizontal and vertical control monuments. The horizontal control will be based upon the North American Datum of 1983 (NAD83), California State Plane Coordinate System, Zone II, U.S. Survey Feet, and the vertical control will be based upon the North American Vertical Datum of 1988 (NAVD88) from ties to NGS vertical control monumentation.

***Deliverables:***

- A comma-delimited ASCII point file in Point, Northing, Easting, Elevation, Description format of points gathered in the field together with an accompanying control diagram. Control monuments set during the course of the topographic survey will later serve as the control for the construction of the Project.

### Topographic Surveys/Base Mapping

RJA survey crews will conduct topographic field surveys of the area for the proposed sanitary sewer main replacement locations. Information gathered will include underground, surface and overhead but not be limited to: the existing ground features; roadway features; existing structures; fences; walls; driveways; control systems; surface evidence of utilities; storm drain manhole and catch basin pipe sizes and invert elevations; sanitary sewer manhole pipe sizes and invert elevations; drainage structures; signs; poles; streetlights; and other pertinent improvements that may play into the replacement of the pipe.

### ***Deliverables:***

- Topographic mapping with planimetrics at a scale of 1" = 40' and 1-foot contour interval of the project corridor on CD-ROM in Civil 3D AutoCAD 2008 formats.

### Field Investigations

In addition to coordinating the topographic surveys of the site, WRECO will perform a field survey to examine the site characteristics. We will examine the physical features of the area, noting anything that may impact the design and/or construction process.

**Updated Scope:** RJA will survey the additional 10th Location.

### **AGENCY COORDINATION**

WRECO will coordinate with all agencies with utilities located within the project site areas. Some agencies included are Pacific Gas & Electric (PG&E), City of Sunnyvale, Telecommunication Companies, Comcast Cable, Santa Clara Water District and any other underground utility companies. WRECO will obtain all available record information of existing utilities located in the streets where the sanitary sewer pipelines will be replaced or rehabilitated.

WRECO will also coordinate with the Santa Clara Valley Transportation Authority (VTA) and the United States Postal Service (USPS) to determine if existing Bus or Delivery routes may be impacted during the construction process.

### **INCORPORATE DRY UTILITIES INFORMATION ONTO BASE MAP**

WRECO will map all the existing utilities within the subject Project pipelines. The location of all the known utilities along with USA alert markings surveyed, WRECO will be able to determine the best option for replacing or rehabilitating the pipelines.

### **VIDEO INSPECTION REVIEW**

WRECO will review the CCTV video of each subject pipeline in the City's Scope of Work (SOW) to confirm the design option or change the method due to its structural integrity. The sanitary sewer laterals that are in service will also be recorded with their station and condition to be reconnected to the new or rehabilitated pipe.

**Updated Scope:** The WRECO Project Team has been asked to provide an estimate to inspect the sanitary sewer lines in the Scope of Services (10 locations) via CCTV.

### **CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) DOCUMENTATION**

#### Literature Review

WRECO will gather and review existing maps, plans and information regarding Project scope and extent. Based upon our literature review we will provide our recommendation regarding an appropriate approach to completing CEQA documents.

## SECTION D: PROJECT APPROACH



### Development of Project CEQA Documents

WRECO anticipates based on Section 21084 of the Public Resources Code that the Project will fall into a class of projects which have been determined not to have a significant effect on the environment and which shall, WRECO anticipates based on Section 21084 of the Public Resources Code that the project will fall into a class of therefore, be exempt from the provisions of CEQA (Categorically Exempt).

This class of projects consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination, such as existing publicly-owned utilities used to provide electric power, natural gas, sewerage, or other public utility services.

#### ***Deliverables:***

- Filing CEQA Determination with the County of Santa Clara.
- Categorical Exemption Memo.

### **DESIGN REPORT**

WRECO will submit a Design Report to include the description of the proposed Project, locations of each pipeline, condition of the pipeline, existing utilities and features that may pose problems in certain pipe replacement options, traffic conditions (especially at busy intersections), location of manhole entry near property and possible challenges and issues that may arise during construction. WRECO will make recommendations of the most cost effective option of replacing or rehabilitating the subject pipelines for cost efficiency of the City.

#### ***Deliverables:***

- Design Report.

### ***OTHER PRELIMINARY ENGINEERING DESIGN LEVEL DELIVERABLES:***

- Preliminary Plans, Specifications, Recommended Revisions to Special Provisions.

### Task 3. Design

#### **60% and 99% DESIGN**

The Contractor, in coordination with the City and WRECO, will develop traffic control plans to enable businesses to remain in operation with minimal disruption and residents to access their homes at all times during the construction phase. Lane closures and re-routing of traffic may be necessary in some areas of the Project, especially when the sewer alignment runs inside the lane.

Sanitary sewer pipelines often run through intersections and depending on their horizontal location, the alignment may cross under traffic loops which may be destroyed during trenching. The existing electrical layout will be shown on the plans and new ones replaced per Electrical plans. YEI Engineers (YEI) will prepare these plans to design the replacement traffic loops or new electrical conduits.

WRECO will prepare demolition plans to show what items that may be damaged and need to be replaced during construction. Traffic Control Plans will be necessary to re-route or close lanes, if necessary.

GEO will have the soil tested to determine if there is soil contamination and if can be reused or off-hauled to an approved location, per the City Engineer.

## SECTION D: PROJECT APPROACH



WRECO will obtain approval and required permits by other agencies for the design and have the permits ready to be pulled by the contractor to start construction.

**Updated Scope:** Based on the CCTV inspection data, the WRECO Project Team will prepare two bid packages.

**60% and 99% DESIGN LEVEL DELIVERABLES:**

- Five (5) copies and one (1) digital copy of all Constructions Documents (Plans), Specifications and Cost Estimates.

**Task 4. Bid Package (Final Design)**

**BID PACKAGE (FINAL DESIGN) LEVEL DELIVERABLES:**

- One (1) digital copy of the following: Complete approved Plans signed by the Engineer of Record, Complete Specifications signed by the Engineer of Record, Complete Revised Special Provisions, Reviewed City's Standard Construction Contract and Signed Certification of Peer Review.

**Updated Scope:** Based on the CCTV inspection data, the WRECO Project Team will prepare two bid packages.

**Task 5. Bid Services**

Per direction of the City, WRECO will respond to all necessary Requests for Information, attend a pre-bid meeting, prepare addenda and inform prospective Contractors of significant responses to Request for Information (RFIs).

**Updated Scope:** The WRECO Project Team will provide Bid Services for two bid packages.

**Deliverables:**

- Pre-Bid Meeting Minutes.
- Addenda, as needed.

**Task 6. Construction Services**

The City will have the primary responsibility for construction management and inspection, however, WRECO will be ready to answer any questions via phone, email or in person to the City. The Contractor will contact the City for any questions or send out RFI's to obtain additional details for clarification. WRECO will respond to Request for Information (RFIs), promptly, clarifying the plans and specifications with revisions or additional details. All submittals will be reviewed and responded with comments.

WRECO will attend pre-construction meetings and one (1) periodic construction meeting and one (1) field review. WRECO will submit the meeting minutes from the construction meeting.

If there any substitutions to be made, WRECO will review them for conformance to drawings and technical specifications.

After all construction is complete and field reviewed, WRECO will prepare as-built drawings from changes made in the field, marked red on the Contractor's plan set. WRECO will review all "as-builts" to determine if they are in conformance with the approved drawings and technical specifications.

**Updated Scope:** The WRECO Project Team will include Construction Services for the additional 10th Location.

## SECTION D: PROJECT APPROACH



Additionally, we have increased our Construction Services hours to provide comprehensive support to the selected Contractor and the City during this process.

### ***Deliverables:***

- Submittal Response
- Construction Meeting Minutes
- As-Built Drawings

### **ADDITIONAL SERVICES**

#### **CCTV Inspection**

As requested by the City, WRECO proposes to conduct CCTV Inspection services for all ten locations. Assuming none of the sites require confined space entry, as described by CalOSHA, to perform the service, WRECO will CCTV each sewer line during non-peak flow hours, potentially in the evening. We will stop at each lateral to view the condition of the pipe, which will also make it possible to record the location of the tie-in point. We will stop and record any damages, sags or collapses in the pipe, as well as any pipe replacements, non-standard pipe repairs, concrete casings or couplings and any unusual occurrences in the pipe alignment.

Based on WRECO's final assessment of the CCTV inspection of the pipes, the selected methodology will determine the number of borings necessary.

Based on the CCTV inspection data, WRECO will prepare Traffic Control/Management Plans that will outline cones and signs, directing traffic in vicinity of each Project location.

**Key Assumption:** The City will be responsible for cleaning and removing obstructions from pipes to be inspected and all pipes will be clear of obstructions prior to the beginning of the video inspection. WRECO will be responsible for filing encroachment permits and traffic control and the City will be responsible for the fees for submitting the permits.

### **PROJECT SCHEDULE and COST PROPOSAL**

Please see the following pages that include an updated Project Schedule and Cost Proposal incorporating the updated, additional and optional scope items listed in the preceding pages.

Based on direction from the City, we assume a Notice-to-Proceed date of May 3, 2010.



**EXHIBIT "B"**

Citywide Sanitary Sewer Main Replacements 2011 SVW-009

Man-Hour and Fee Estimate for the WRECO Project Team Tasks  
Prepared for City of Sunnyside Public Works Department  
Prepared by WRECO

April 15, 2010

Man-Hours

Task / Task Description	WRECO								GeoEngineers						Ruggeri-Jensen-Azar & Associates					Project Team			
	Principal Engineer	Senior Engineer	Senior Engineer	Geotechnical Engineer	Associate Engineer	Staff Engineer	Senior Technician	Subtotal Fee	Subtotal Hours	Principal Engineer	Senior Engineer	Engineer	Drill Rig & Crew	Drafting Technician	Subtotal Fee	Subtotal Hours	Surveyor	1-Person Crew	2-Person Crew	Subtotal Fee	Subtotal Hours	Subtotal Fee	Subtotal Hours
<b>1 PROJECT MANAGEMENT/MEETINGS</b>	4	4	24		16	0	0	\$ 5,960.00	48		4				\$ 800.00	4				\$ -	0	\$ 6,760.00	52
<b>2 PRELIMINARY DESIGN</b>	4	4	24	0	16	0	0	\$ 5,960.00	48	0	4	0	0	0	\$ 800.00	4	0	0	0	\$ -	0	\$ 6,760.00	52
Geotechnical Investigation																							
Permits, Boring Locations and Utility Notifications				2				\$ 260.00	2		2	10			\$ 1,950.00	12				\$ -	0	\$ 2,210.00	14
Subsurface Investigation				4				\$ 520.00	4		2	36	36		\$ 11,740.00	74				\$ -	0	\$ 12,260.00	78
Laboratory Testing				2				\$ 260.00	2						\$ 6,790.00	0				\$ -	0	\$ 7,050.00	2
Geotechnical Analysis and Report				8				\$ 1,040.00	8	4	8	30		12	\$ 8,430.00	54				\$ -	0	\$ 9,470.00	62
Survey																							
Field/Topographic Survey/Control			4					\$ 520.00	4						\$ -	0	7	18	6.4	\$ 16,790.00	63	\$ 17,310.00	57
Base Map			2					\$ 260.00	2						\$ -	0	44			\$ 5,060.00	44	\$ 5,320.00	46
Pathing As-Needed			2					\$ 260.00	2						\$ -	0	1		2	\$ 555.00	3	\$ 825.00	5
Agency Coordination	2	4			4			\$ 1,200.00	10						\$ -	0				\$ -	0	\$ 1,200.00	10
Incorporate Dry Utility Info onto Base Map	2	4				24		\$ 3,120.00	34						\$ -	0				\$ -	0	\$ 3,120.00	34
Video Inspection Review	2	2	2			8		\$ 1,680.00	14						\$ -	0				\$ -	0	\$ 1,680.00	14
CEQA																							
CATX Determination Assistance			6					\$ 900.00	6						\$ -	0				\$ -	0	\$ 900.00	6
CATX Filing			8					\$ 1,200.00	8						\$ -	0				\$ -	0	\$ 1,200.00	8
Design Report	2	4			8	16		\$ 3,140.00	32						\$ -	0				\$ -	0	\$ 3,140.00	32
Subtotal	4	22	22	16	24	16	24	\$ 18,360.00	178	4	12	76	36	12	\$ 28,415.00	140	47	18	65	\$ 22,405.00	130	\$ 65,185.00	798
<b>3 DESIGN</b>																							
90% Design																							
Civil Layouts	4	4	8		8	64	144	\$ 21,240.00	75.6						\$ -	0				\$ -	0	\$ 21,240.00	75.6
Specifications				8	4	40		\$ 4,420.00	52						\$ -	0				\$ -	0	\$ 4,420.00	52
Estimates			2			8		\$ 860.00	10						\$ -	0				\$ -	0	\$ 860.00	10
Permitting (other agencies)	1	4						\$ 780.00	5						\$ -	0				\$ -	0	\$ 780.00	5
Review Present	2	4			2			\$ 1,150.00	8						\$ -	0				\$ -	0	\$ 1,150.00	8
99% Design																							
Civil Layouts	2	4	12		4	44	174	\$ 16,440.00	194						\$ -	0				\$ -	0	\$ 16,440.00	194
Specifications			2	8	2	24		\$ 3,330.00	36						\$ -	0				\$ -	0	\$ 3,330.00	36
Estimates			1			4		\$ 430.00	5						\$ -	0				\$ -	0	\$ 430.00	5
Permitting (other agencies)	1	2						\$ 480.00	3						\$ -	0				\$ -	0	\$ 480.00	3
Review Present	2	4			2			\$ 1,150.00	8						\$ -	0				\$ -	0	\$ 1,150.00	8
Subtotal	12	24	39	0	22	204	276	\$ 10,300.00	577	0	0	0	0	0	\$ -	0	0	0	0	\$ -	0	\$ 10,300.00	577
<b>4 BID PACKAGE (FINAL DESIGN)</b>																							
Civil Layouts	2		4		8	16	40	\$ 6,040.00	70						\$ -	0				\$ -	0	\$ 6,040.00	70
Specifications			4		2	8		\$ 1,310.00	14						\$ -	0				\$ -	0	\$ 1,310.00	14
Estimates			1		1	2		\$ 375.00	4						\$ -	0				\$ -	0	\$ 375.00	4
Permitting (other agencies)		2						\$ 300.00	2						\$ -	0				\$ -	0	\$ 300.00	2
Subtotal	2	2	9	0	11	26	40	\$ 8,025.00	90	0	0	0	0	0	\$ -	0	0	0	0	\$ -	0	\$ 8,025.00	90
<b>5 BIDDING SERVICES (2)</b>																							
Subtotal	2	0	8	0	12	0	8	\$ 3,180.00	30	0	0	0	0	0	\$ -	0	0	0	0	\$ -	0	\$ 3,180.00	30
<b>6 CONSTRUCTION SERVICES</b>																							
Subtotal	4	4	40	8	40	32	32	\$ 16,320.00	160	0	0	0	0	0	\$ -	0	0	0	0	\$ -	0	\$ 16,320.00	160
<b>OTHER DIRECT COST</b>																							
Travel								\$ 500.00	0						\$ 260.00	0				\$ -	0	\$ 760.00	0
Office Misc. + Reproduction								\$ 1,000.00	0						\$ 360.00	0				\$ -	0	\$ 1,360.00	0
Subtotal	0	0	0	0	0	0	0	\$ 1,500.00	0	0	0	0	0	0	\$ 620.00	0	0	0	0	\$ -	0	\$ 2,120.00	0
<b>Subtotal</b>	28	56	162	24	174	278	380	\$ 29,665.00	1033	4	16	76	36	12	\$ 29,835.00	144	47	18	65	\$ 22,405.00	130	\$ 151,885.00	1107

**Grand Total**      \$ **152,885.00**

<b>ADDITIONAL SERVICES</b>																							
CCV Services (52,440 per day + 6 days + traffic ctrl)			10		16			\$ 17,970.00	0						\$ -	0				\$ -	0	\$ 17,970.00	0
Subtotal	0	0	10	0	16	0	0	\$ 17,970.00	0	0	0	0	0	0	\$ -	0	0	0	0	\$ -	0	\$ 17,970.00	0

**Additional Services**      \$ **17,970.00**

**Grand Total with Add'l Svcs**      \$ **169,855.00**

## Exhibit C

### INSURANCE REQUIREMENTS FOR CONSULTANTS

Consultant shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work by the Consultant, his agents, representatives, or employees.

**Minimum Scope and Limits of Insurance:** Consultant shall maintain limits no less than:

1. **Commercial General Liability:** \$1,000,000 per occurrence and \$2,000,000 aggregate for bodily injury, personal injury and property damage. ISO Occurrence Form CG 0001 is required.
2. **Automobile Liability:** \$1,000,000 per accident for bodily injury and property damage. ISO Form CA 0001 is required.
3. **Workers' Compensation** and **Employer's Liability:** \$1,000,000 per accident for bodily injury or disease.
4. **Errors and Omissions** Liability Insurance appropriate to the Consultants Profession: \$1,000,000 per occurrence and \$2,000,000 aggregate.

#### **Deductibles and Self-Insured Retentions**

Any deductibles or self-insured retentions must be declared and approved by the City of Sunnyvale. The consultant shall guarantee payment of any losses and related investigations, claim administration and defense expenses within the deductible or self-insured retention.

#### **Other Insurance Provisions**

The **general liability** and **automobile liability** policies are to contain, or be endorsed to contain, the following provisions:

1. The City of Sunnyvale, its officials, employees, agents and volunteers are to be covered as additional insureds with respects to liability arising out of activities performed by or on behalf of the Consultant; products and completed operations of the Consultant; premises owned, occupied or used by the Consultant; or automobiles owned, leased, hired or borrowed by the Consultant. The coverage shall contain no special limitations on the scope of protection afforded to the City of Sunnyvale, its officers, employees, agents or volunteers.
2. For any claims related to this project, the Consultant's insurance shall be primary. Any insurance or self-insurance maintained by the City of Sunnyvale, its officers, officials, employees, agents and volunteers shall be excess of the Consultant's insurance and shall not contribute with it.
3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the City of Sunnyvale, its officers, officials, employees, agents or volunteers.
4. The Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, cancelled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the City of Sunnyvale.

#### **Claims Made Coverage**

If the General Liability and/or Errors & Omissions coverages are written on a claims-made form:

1. The retroactive date must be shown, and must be before the date of the contract or the beginning of contract work.

2. Insurance must be maintained and evidence of insurance must be provided for at least five years after completion of the contract work.
3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, the Consultant must purchase an extended period coverage for a minimum of five years after completion of contract work.
4. A copy of the claims reporting requirements must be submitted to the City of Sunnyvale for review.

**Acceptability of Insurers**

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to the City of Sunnyvale.

**Verification of Coverage**

Consultant shall furnish the City of Sunnyvale with original a Certificate of Insurance effecting the coverage required. The certificates are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates are to be received and approved by the City of Sunnyvale prior to commencement of work.