

**CONTRACT DOCUMENTS**

**FOR**

**CITY OF SEDONA**

**PUBLIC WORKS DEPARTMENT  
Wastewater Division**

***Pipeline Cleaning And CCTV Inspection Of  
Sewer Lines Services Contract***

April 2013

**REQUEST FOR BIDS**  
**CITY OF SEDONA**  
**PUBLIC WORKS DEPARTMENT**  
**WASTEWATER DIVISION**

**PIPELINE CLEANING AND CCTV INSPECTION OF SEWER LINES**  
**SERVICES CONTRACT**

**DUE DATE: Tuesday, April 9, 2013**  
**BID OPENING TIME AND DATE: 2:00 p.m. on Tuesday, April 9, 2013**

The City of Sedona is soliciting bids for pipeline cleaning and CCTV inspection of approximately 110,000 feet of gravity sewer lines. The bid consists of a base bid for the various services required.

The Request for Bids (excluding Maps and Quarter Section Sheets) is available on the City of Sedona website at [www.SedonaAz.gov](http://www.SedonaAz.gov). Specifications, including the map section, may be obtained by contacting Susan Beale at the Administrative Office of the City of Sedona Wastewater Treatment Plant at (928) 204-2234 or [sbeale@SedonaAz.gov](mailto:sbeale@SedonaAz.gov).

Addendums will be posted on the City of Sedona's website at [www.SedonaAz.gov](http://www.SedonaAz.gov) under the Bid/RFP Opportunities. The City retains the right to reject any bid not acknowledging all issued addendums. Addendums may be posted to within 24 hours of the time of bid opening.

Contract Documents with completed Bid Proposals must be enclosed in a sealed envelope addressed to:

**HAND DELIVERED:** City of Sedona  
Todd Carpenter  
Public Works Department  
104 Roadrunner Drive  
Sedona, AZ 86336

**U.S. MAIL:** City of Sedona  
Todd Carpenter  
Public Works Department  
102 Roadrunner Drive  
Sedona, AZ 86336

**AND CLEARLY MARKED:** Bid Proposal for Pipeline Cleaning and CCTV Inspection of Sewer Lines

**AND RECEIVED:** **At the Public Works Department until 2:00 p.m. local time, Tuesday, April 9, 2013**  
**(as determined by reference to the official time.)**

Bids will be opened in the Public Works Department. Bid will be awarded to the lowest, responsive, responsible bidder. The City of Sedona reserves the right to reject any or all proposals and withhold the award if deemed in the best interest of the city.

A \$1000 bid guarantee shall be provided with each bid. The guarantee shall be in the form of a bid bond or cashier's check payable to the city.

By: \_\_\_\_\_  
Charles Mosley, Director of Public Works/City Engineer

First Advertisement: Wednesday, 3/20/13  
Second Advertisement: Friday, 3/22/13  
RED ROCK NEWS

## **Instructions to Bidders**

1. Each bid shall be submitted on the form provided, to the locations specified in these specifications, at or prior to the date and time specified. All sections of the form must be completed. If information does not apply state "Not applicable". Mailing and location addresses must be provided.
2. Bid prices submitted shall be considered to have included all local, state and federal taxes, and no additional allowance will be allowed for such. The City reserves the right to consider the value to it of warranties exceeding the minimum requirements in determining the lowest, responsible, responsive bidder.
3. Exceptions taken to any aspect of the specifications in submitting the bid shall be clearly noted in a written attachment to the Bid Form. The attachment shall identify the aspect of the specifications affected by the exception and the proposal instead of the specification. The City of Sedona reserves the right to consider the value to it of any exceptions or the lack of exceptions in determining the lowest, responsible, responsive bidder. Attachments identifying exceptions shall be signed by the bidder.
4. No Bidder may withdraw his Bid for forty-five (45) days after the time established for receiving Bids or before the successful bidder has returned the Letter of Award signed, unless a period exceeding forty-five (45) calendar days after the time established for receiving Bids has passed. The sending of the Letter of Award by the City of Sedona to one party does not constitute a waiver of this condition.
5. Each bid must be accompanied by either a certified check made payable to the City of Sedona, a cashier's check made payable to the City of Sedona or a bid bond, duly executed by the Bidder as principal and having as surety thereon a surety company licensed to do business in Arizona, in the amount of \$1000. The City may retain such checks or bid bonds, of the three (3) apparent lowest Bidders, for a period of forty-five (45) days after the bid opening.
6. In the event the successful Bidder fails to deliver to the City of Sedona all items, training and services, as bid and awarded, within the time frame specified to the satisfaction of the City the bid deposit or bond for this bid shall be forfeited to the City.
7. Each bidder acknowledges and agrees award of the contract shall require issuance of a Letter of Award by the City to the successful bidder and issuance of a Purchase Order. The City reserves the right to award the Base Bid only, or the Base Bid plus the Additive Alternate Bid, or to reject all bids, at its sole discretion.
8. In evaluating Bids, City will consider the qualifications of Bidders; whether or not the Bids comply with the prescribed requirements; the alternatives, if any; the time or times for completion as stated in the Bid Form; and the lump sum and unit prices, if requested in the Bid Form.
9. City may conduct such investigation as it deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to do the work in accordance with the Contract Documents. City reserves the right to reject the Bid of any

Bidder who does not pass any such evaluation to City's satisfaction.

10. Subject to existing law, and regulations, illegal or undocumented aliens will not be employed by the Contractor for any work or services to be performed pursuant to this contract. The Contractor will ensure that this provision is expressly incorporated into any and all subcontracts or subordinate agreements issued in support of this contract. Contractor agrees to comply with the provisions of section 274A(a)(1)(A) and 274A(a)(2) of the Immigration and Nationality Act (8 U.S.C. 1324a(a)(1)(A), 1324a(a)(2)) (the "INA employment provisions"), and any amendments thereto, prohibiting the unlawful employment of illegal or undocumented aliens. Under the terms of this agreement, the contractor shall not knowingly hire or employ for any work performed pursuant to this contract any workers or employees not lawfully authorized to work under the provisions of the Immigration and Nationality Act or any other applicable federal or state laws. Violation of the provisions of this section shall be deemed a material breach of this contract.
11. Modification of a Bid already received will be considered only if the modification is received prior to the time established for receiving Bids. Modifications shall be made in writing, executed, and submitted in the same form and manner as the original Bid. The communication should not reveal the Bid Price, but should provide the addition or subtraction or other modifications so that the final price or terms will not be shown until the sealed Bids are opened.

**BID FORM**  
**CITY OF SEDONA**  
**PIPELINE CLEANING AND CCTV INSPECTION OF SEWER LINES**  
**SERVICES CONTRACT**

**Base Bid**

ITEM Projects below are typical in scope of work desired annually, but actual work to be performed may be less, greater, or on an as needed basis.	SIZE	ESTIMATED QUANTITY	UNIT COST	EXTENDED COST
1. Routine sewer cleaning in street with hydro cleaning equipment including root removal, if required. Debris removed with vacuum.	A.) 6" lines	30,000	LF	
	B.) 8" and 10"	65,000	LF	
	C.) 12" to 16"	10,000	LF	
	D.) 18" to 24"	5,000	LF	
2. Routine sewer cleaning in easements with hydro cleaning equipment including root removal equipment, if required. Debris removed.	A.) 6" lines	10,000	LF	
	B.) 8" and 10"	10,000	LF	
3. Routine sewer cleaning on Hwy. 89A and Hwy. 179 with ADOT permit and traffic control	A.) 8" lines	25,000	LF	
	B.) 18" lines	4,000	LF	
	C.) 24" lines	1,000	LF	
4. CCTV Inspection of Sanitary Sewer Pipe, 360 degree Digital Panoramic, GIS Delivery-(Layered per NASSCO)	A.) 6" lines	30,000	LF	
	B.) 8" and 10"	65,000	LF	
	C.) 12" to 16"	10,000	LF	
	D.) 18" to 24"	5,000	LF	
5. Cleaning of Pump Station Wet Wells, on-site hourly rate	Per Person	17 sites	Hourly	
6. Mobilization for Cleaning per project	Per Trip	1	LS	
7. Mobilization for CCTV inspection per project	Per Trip	1	LS	
8. Traffic Control Permits per project	Per Project	1	LS	
9. Traffic Control per project	Per Project	1	LS	
<b>Total Base Bid</b>				

## Bid Form (continued)

Bid prices submitted shall be considered to have included all local, state and federal taxes, and no additional allowance will be allowed therefore. The City shall incur no obligations regarding payment of any amount until the contract has been executed by both the City and the bidder and the work has been performed and properly billed in accordance with the contract documents.

In case of discrepancy between unit price extension and total price provided, the unit price extension shall govern.

**Bidders not evidencing receipt of the complete set of maps and quarter section sheets will not be deemed responsible bidders.**

Bids which appear, in the opinion of the City, to be unbalanced shall be considered unresponsive and subject to rejection.

A \$1000 bid guarantee must accompany this bid. It may be a bond or cashier's check.

**Company Name** \_\_\_\_\_

**Complete and attach Bidder's Affidavit to bid form.**

Bidder's mailing address

Bidder's Location

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, ZIP

\_\_\_\_\_  
City, State, ZIP

Disputes related to this bid and contract shall be considered as within Yavapai County, Arizona and subject to jurisdiction of courts therein. The provisions of Article 3-7 of the City Code shall apply to this contract as a precedent to proceeding with other actions against the City.

# BIDDER'S AFFIDAVIT

The undersigned, as \_\_\_\_\_  
(President, Officer of Corporation, Member of Firm) of the prospective bidder, hereby certifies that the foregoing information is, to the best of his/her knowledge and belief, true and accurate as of the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_. Bidder, by his signature hereon, authorized the obtaining of reference information and hereby releases the party providing such information and the City of Sedona from any and all liability to Bidder as a result of such reference information being provided. Bidder further waives any right to receive copies if information so provided.

Corporate Seal  
(If Corporation)

Bidder

BY: \_\_\_\_\_  
Position (must be President, Officer of Corporation or

NOTARY

STATE OF \_\_\_\_\_)

COUNTY OF \_\_\_\_\_)

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by

\_\_\_\_\_ as \_\_\_\_\_ for the  
\_\_\_\_\_.

WITNESS my hand and official seal.

My commission expires: \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

The Letter of Award will be in substantially the following form:

**LETTER OF AWARD**

Date

Successful Bidder Name (The name of the successful bidder will be substituted where the term “Contractor” appears.)

Street or PO Box

City, State Zip

**SUBJECT: LETTER OF AWARD – PIPELINE CLEANING AND CCTV INSPECTION OF SEWER LINES**

The City of Sedona, having duly considered the bid submitted on \_\_\_\_\_, 2013 for the City of Sedona Pipeline Cleaning and CCTV Inspection of Sewer Lines as outlined in the Contract Documents therefore, and it appearing that your proposal for performing the work is fair, equitable and in the City’s best interest, your proposal as contained in the bid schedule in the estimated total amount of \$ \_\_\_\_\_, is hereby accepted at the unit prices contained therein, and in accordance with all provisions set forth in the Contract Documents.

In accordance with the terms of the Contract Documents, you are required to sign below acknowledging that you will furnish related services as specified in the Contract Documents for Pipeline Cleaning and CCTV Inspection of Sewer Lines.

The Bid Bond submitted with your proposal will be retained until the contract has been executed to the City’s satisfaction by both the City and the Contractor. In the event that you should fail to sign and return this letter, the City of Sedona may cash the Bid Bond and proceed with steps that are in the City's best interest.

You are advised that evidence of insurance as specified in the contract documents is required prior to the start of work.

RECEIVED AND ACCEPTED:

CITY OF SEDONA, ARIZONA

Contractor

Sincerely,

By:

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Enclosures (2) copies

\_\_\_\_\_  
Charles Mosley, P.E.,

Director of Public Works/City Engineer

cc: Tim Ernster, City Manager



**CONTRACT FOR MAINTENANCE SERVICES  
FOR THE CITY OF SEDONA**

This contract is made and entered into on this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the City of Sedona ("CITY") and \_\_\_\_\_("SERVICE PROVIDER").

1. *Maintenance Services.* The SERVICE PROVIDER agrees to perform certain services and maintenance for CITY, at the rates as set forth in Exhibit "A" (attached), **on an "as needed" or "on call" basis. This is not an exclusive contract, and the CITY may hire other providers.** The need for service may depend on weather conditions, system repairs, capital improvement schedules, or budget constraints. CITY agrees to pay the SERVICE PROVIDER as compensation for services on a time and materials basis in accordance with the process and fee schedule set forth in Exhibit "A." If deemed necessary by CITY, the SERVICE PROVIDER and CITY will confer to further define specific tasks in the scope of work and expertise of the SERVICE PROVIDER, and estimate the amount of time to be spent on those tasks.
2. *Confidential Information.* All correspondence, reports and other documentation of SERVICE PROVIDER'S work shall be considered confidential information and will be distributed only to those persons, organizations or agencies specifically designated by CITY or its authorized representative, or as specifically required for completion of SERVICE PROVIDER'S task.
3. *Billing and Payment.* Except as otherwise set forth in this contract, billing and payment will be in accordance with the conditions set forth in Exhibit "A." Invoices are due and payable upon receipt and are delinquent only thirty (30) days after the date received by CITY. Each invoice shall set forth a general description of the work performed, in accordance with the scope of work, for the hours billed.
4. *Conflicts.* In the event any term or provision of this contract is held to be illegal or in conflict with any law of the United States or Arizona or any local law, the validity of the remaining provisions shall not be affected, and this contract shall be construed and enforced as if it did not contain the particular term or provision.
5. *Certification.* SERVICE PROVIDER hereby warrants that it is qualified to assume the responsibilities and render the services described herein and has all requisite corporate authority and professional licenses in good standing, required by law. **SERVICE PROVIDER shall execute the required affidavit of lawful presence as set forth in ARS 1-502/8 USC § 1621 [Exhibit B]**
6. *Compliance with Local Rules and Regulations.* It is contemplated that the work and services to be performed by SERVICE PROVIDER hereunder shall be done in compliance with applicable laws, ordinances, rules and regulations that are in effect on the date of this contract. Any subsequent changes in applicable laws, ordinances, rules

or regulations that necessitate additional work shall constitute a change in the scope of work. In that SERVICE PROVIDER is doing business within the Sedona City limits, SERVICE PROVIDER will be required to obtain an annual Sedona Business License for every year that the SERVICE PROVIDER does business with Sedona or within the City limits.

7. *Indemnification.* With respect to its professional services hereunder, SERVICE PROVIDER agrees to indemnify and hold harmless CITY, its officials and its employees from and against all liability claims, demands and expenses, including court costs and reasonable attorney's fees, in an amount not to exceed the total compensation under this contract, on account of any injury, loss or damage that arise out of, or are in any manner connected with, the work negligently performed under this contract, or on account of any injury, loss or damage that arise out of, or are in any manner connected with, any omission or professional error of the SERVICE PROVIDER, or any officer, employee or agent of the SERVICE PROVIDER. For other than its professional services hereunder, SERVICE PROVIDER agrees to indemnify and hold harmless CITY, its officials and its employees from and against all liability claims, demands and expenses, including court costs and reasonable attorney's fees, in an amount not to exceed the total compensation under this contract, on account of any injury, loss or damage that arise out of, or are in any manner connected with, the work negligently performed under this contract, or on account of any injury, loss or damage that arise out of, or are in any manner connected with, any other fault or negligence of the SERVICE PROVIDER, or any officer, employee or agent of the SERVICE PROVIDER.
8. *Insurance.* The SERVICE PROVIDER agrees to procure and maintain in force during the term of this contract, at its own cost, the following coverage, **as may be requested by the CITY, either in the initial bid, or prior to commencement of particular tasks. In some instances, the CITY may request to be named an additional insured on the SERVICE PROVIDER's policies.**
  - a. Worker's Compensation Insurance as required by the Labor Code of the State of Arizona and Employers' Liability Insurance.
  - b. Commercial General or Business Liability Insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000.00) each occurrence and TWO MILLION DOLLARS (\$2,000,000.00) general aggregate.
  - c. Automobile Liability Insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000.00) for any one occurrence, with respect to each of the SERVICE PROVIDER'S owned, hired or non-owned automobiles assigned to or used in performance of the services.
  - d. Professional Liability coverage with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000.00) each claim and ONE MILLION DOLLARS (\$1,000,000.00) general aggregate. If approved by CITY, evidence of qualified self-insured status may be substituted for one or more of the foregoing insurance coverages.
9. *Non-Assignability.* Neither this contract, nor any of the rights or obligations of the parties hereto, shall be assigned by either party without the written consent of the other.

10. *Termination.* This contract shall terminate at such time as the work in the scope of work is completed or upon CITY providing SERVICE PROVIDER with seven (7) days advance written notice, whichever occurs first. In the event the contract is terminated by CITY's issuance of said written notice of intent to terminate, CITY shall pay SERVICE PROVIDER for all work previously authorized and performed prior to the date of termination. If, however, SERVICE PROVIDER has substantially or materially breached the standards and terms of this contract, CITY shall have any remedy or right of set-off available at law and equity. CITY shall owe no other payments, including any payment for lost profit or business opportunity, and no penalty, to SERVICE PROVIDER in the event of termination upon notice.
11. *Venue.* The laws of the State of Arizona shall govern this contract, and any legal action concerning the provisions hereof shall be brought in the County of Coconino, State of Arizona.
12. *Independent Contractor.* SERVICE PROVIDER is an independent contractor. Notwithstanding any provision appearing in this contract, and any exhibits and/or addenda, all personnel assigned by SERVICE PROVIDER to perform work under the terms of this contract shall be, and remain at all times, employees or agents of SERVICE PROVIDER for all purposes. SERVICE PROVIDER shall make no representation that it is the employee of CITY for any purpose.
13. *Performance Standards.* SERVICE PROVIDER shall perform the services in Exhibit A in a good and workmanlike manner and in conformity with the best standards of its industry. The CITY in its sole discretion may cancel this agreement if the SERVICE PROVIDER fails to meet the specifications for the materials and timely complete assigned tasks.
14. *Entire Agreement.* This contract, together with the attached Exhibit "A," is the entire agreement between SERVICE PROVIDER and CITY, superseding all prior oral or written communications. None of the provisions of this contract may be amended, modified or changed except by written amendment executed by both parties.
15. *Non-Discrimination.* SERVICE PROVIDER, its agents, employees, contractors and subcontractors shall not discriminate on the basis of race, color, creed, national origin, ancestry, age, sex, religion or disability in any employment policy or practice.

16. ***Compliance With State and Federal Laws:***

SERVICE PROVIDER understands and acknowledges the applicability to it of the Americans with Disabilities Act, the Immigration Reform and Control Act of 1986 and the Drug Free Workplace Act of 1989. The following is only applicable to construction contracts: SERVICE PROVIDER must also comply with A.R.S. § 34-301, "Employment of Aliens on Public Works Prohibited," and A.R.S. § 34-302, as amended, "Residence Requirements for Employees."

- a. Under the provisions of A.R.S. § 41-4401, SERVICE PROVIDER hereby warrants to CITY that SERVICE PROVIDER and each of its subcontractors will comply with, and are contractually obligated to comply with, all Federal Immigration laws and regulations that relate to their employees and A.R.S. § 23-

214(A) (hereinafter "Contractor Immigration Warranty").

- b. A breach of the Contractor Immigration Warranty shall constitute a material breach of this contract and shall subject SERVICE PROVIDER to penalties up to and including termination of this contract at the sole discretion of CITY.
  - c. CITY retains the legal right to inspect the papers of any contractor or subcontractor employee who works on this contract to ensure that the contractor or subcontractor is complying with the Contractor Immigration Warranty. SERVICE PROVIDER agrees to assist CITY in regard to any such inspections.
  - d. CITY may, at its sole discretion, conduct random verification of the employment records of SERVICE PROVIDER and any subcontractors to ensure compliance with Contractor's Immigration Warranty. SERVICE PROVIDER agrees to assist CITY in regard to any random verifications performed.
  - e. Neither SERVICE PROVIDER nor any subcontractor shall be deemed to have materially breached the Contractor Immigration Warranty if SERVICE PROVIDER or any subcontractor establishes that it has complied with the employment verification provisions prescribed by sections 274A and 274B of the Federal Immigration and Nationality Act and the E-Verify requirements prescribed by A.R.S. § 23-214, Subsection A.
  - f. The provisions of this article must be included in any contract that SERVICE PROVIDER enters into with any and all of its subcontractors who provide services under this contract or any subcontract. "Services" are defined as furnishing labor, time or effort in the State of Arizona by a contractor or subcontractor. Services include construction or maintenance of any structure, building or transportation facility or improvement to real property.
17. *Dispute Resolution.* The parties agree in good faith to attempt to resolve amicably, without litigation, any dispute arising out of or relating to this contract. In the event that any dispute cannot be resolved through direct discussions, the parties agree to endeavor to settle the dispute by mediation. Either party may make a written demand for mediation, upon which demand the matter shall be submitted to a mediation firm mutually selected by the parties. The mediator shall hear the matter and provide an informal opinion and advise within twenty (20) days following written demand for mediation. Said informal opinion and advice shall not be binding on the parties, but shall be intended to help resolve the dispute. The parties shall share the mediator's fee equally. If the dispute has not been resolved, the matter may then be submitted to the judicial system.
18. *Delays.* SERVICE PROVIDER shall not be responsible for delays that are due to causes beyond SERVICE PROVIDER'S reasonable control. In case of any such delay, any deadline established as part of the scope of work shall be extended accordingly.
19. *Attorneys' Fees and Costs.* Should any legal action, including arbitration, be necessary to enforce any term of provision of this contract or to collect any portion of the amount payable hereunder, then all expenses of such legal action or collection, including witness fees, costs of the proceedings and attorneys' fees, shall be awarded to the substantially prevailing party.

20. *Conflict of Interest.* From the date of this contract through the termination of its service to Sedona, SERVICE PROVIDER shall not accept, negotiate or enter into any contract or agreements for services with any other party that may create a substantial interest, or the appearance of a substantial interest in conflict with the timely performance of the work or ultimate outcome of this contract and/or adversely impact the quality of the work under this contract without the express approval of the City Manager and the City Attorney. Whether such approval is granted shall be in the sole discretion of the City Manager and the City Attorney. The parties hereto acknowledge that this Contract is subject to cancellation pursuant to the provisions of ARS § 38-511.

21. *Notice.* Any notice or communication between SERVICE PROVIDER and CITY that may be required, or that may be given, under the terms of this contract shall be in writing, and shall be deemed to have been sufficiently given when directly presented or sent pre-paid, first class United States Mail, addressed as follows:

CITY: City of Sedona  
Attn: City Manager  
102 Roadrunner Drive  
Sedona, AZ 86336

SERVICE PROVIDER: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

22. *Notice to Proceed.* Unless otherwise noted by CITY, acceptance of this contract is official notice to proceed with the work.

CITY OF SEDONA, ARIZONA

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

ATTEST:  
\_\_\_\_\_  
City Clerk

APPROVED AS TO LEGAL FORM:  
\_\_\_\_\_  
City Attorney

\_\_\_\_\_  
SERVICE PROVIDER

By: \_\_\_\_\_  
Title: \_\_\_\_\_

I hereby affirm that I am authorized to enter into and sign this contract on behalf of SERVICE PROVIDER  
\_\_\_\_\_  
\_\_\_\_\_

**PIPELINE CLEANING AND CCTV INSPECTION OF SEWER LINES -**  
**GENERAL COMMENTS and SPECIFICATIONS**

**General Scope of Work.** All work activities shall be performed in a workmanlike manner and be acceptable to the Contract Administrator. Work shall comply with all applicable Federal, State, and local laws and rules. The work under this contract consists generally of cleaning public gravity sewer mains and, after cleaning, inspecting by color television camera the conditions of the sewer main. The results of the inspection by television shall be provided to the city in digital video and hard copy formats. It is the intent of the project that the inspection documentation shall be such that they may be used as records showing the condition of sewer pipes and also as a basis for identifying locations where repair work may need to be performed. The quality and detail of the results provided shall be sufficient for these purposes, at minimum. Contractor will supply supervision, labor, materials, and equipment to accomplish the work as required. The City of Sedona reserves the right to request the removal of workers, materials, or equipment that is not suitable to producing the quality and quantity of work required by the contract. Any person employed by the Contractor or any Subcontractor who, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed from the work by the Contractor or Subcontractor employing such person, and shall not be employed again in any portion of the work without the approval of the Engineer.

During the course of the Contract, the Contractor may engage such additional Subcontractors as may be required for the timely completion of this Contract. The addition of any Subcontractors shall be subject to the approval of the City. In the event of subcontracting, the sole responsibility for fulfillment of all terms and conditions of this Contract rests with the Contractor.

**Contract Period.** The contract shall be for the period from April 22, 2013 and terminating February 28, 2014. The City of Sedona reserves the right to extend the contract period for two (2) years based on the initial bid submitted, should an extension be mutually agreeable to the City and the contractor.

**Insurance.** The Contractor, at Contractor's own expense, shall purchase and maintain the herein stipulated minimum insurance with companies duly licensed, possessing a current A.M. Best, Inc. Rating of B+6, as minimum and approved and licensed to do business in the State of Arizona with policies and forms satisfactory to the City. All required insurance herein shall be maintained in full force and effect until all work required to be performed under the terms of the Contract is satisfactorily completed and finally accepted - failure to do so may, at the sole direction of the City, constitute a material breach of this Contract. The Contractor's insurance shall be primary insurance, and any insurance or self-insurance maintained by the City shall not contribute to it. Any failure to Comply with the claim reporting provisions of the policies or any breach of an insurance policy warranty shall not affect coverage afforded under the policy to protect the City.

The policies, except Workers' Compensation, shall contain a waiver of transfer rights of recovery (subrogation) against the City, its agents, officers, officials and employees for any claims arising out of the Contractor's work or service.

The insurance policies may provide coverage, which contains deductibles or self-insured retentions. Such deductible and/or self-insured retentions shall not be applicable with respect to the coverage provided to the City under such policies. The Contractor shall be solely responsible for deductible and/or self-insured retention and the City, at its option, may require the Contractor to secure the payment of such deductible or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit.

The City reserves the right to request and to receive, within 10 working days, certified copies of any or all of the herein required insurance policies and/or endorsements. The City shall not be obligated; however,

to review same or to advise Contractor of any deficiencies in such policies and endorsements, and such receipt shall not relieve Contractor from, or be deemed a waiver of, the City's right to insist on strict fulfillment of Contractor's obligations under this Contract. The insurance policies, except Workers' Compensation, required by this Contract shall name the City, its agents, officers, officials and employees as Additional insured's.

The making of progress payments to the Contractor shall not be construed as creating an insurable interest by or for the City or be construed as relieving the Contractor or his Subcontractors of responsibility for direct physical loss, damage or destruction occurring prior to final acceptance.

Any insured loss under the policies of insurance required by this Agreement shall be adjusted with the City and made payable to City for the insured, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph K of this Article of these General Conditions. City shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged work shall be repaired or replaced, the moneys so received shall be applied on account thereof, and the work and the cost thereof shall be covered by an appropriate Change Order. City shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen (15) days after the occurrence of loss to City's exercise of this power. If such objection were made, City shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If required in writing by any party in interest, City shall upon the occurrence of an insured loss, give bond for the proper performance of these duties

**Required Coverage.** The Contractor shall obtain for itself and provide the City with Certificates of Insurance indicating the scope and extent of coverage as set forth below. Required coverage's may be modified by an amendment to the Contract Documents. The Contractor shall provide evidence of coverage prior to proceeding with the work. Provision of evidence however shall not prohibit issuance of the notice to proceed.

#### 1. GENERAL LIABILITY

Contractor shall maintain Commercial General Liability insurance with a limit of not less than \$3,000,000 for each occurrence with a \$3,000,000 Products and Completed Operations Aggregate and \$3,000,000 General Aggregate Limit. The policy shall include coverage for bodily injury, broad form property damage, personal injury, products/completed operations and blanket contractual coverage including, but not limited to, the liability assumed under the indemnification provisions of this Contract, which coverage will be at least as broad as Insurance Service Office, Inc. Policy Form CG 000211093 or a1y replacement thereof. The coverage shall not exclude X, C, U.

Such policy shall contain a severability of interest provision, and shall not contain a sunset provision or commutation clause, or any provision, which would serve to limit third party action over claims.

The Commercial General Liability additional insured endorsement shall be at least as broad as the Insurance Service Office, Inc.'s, Additional Insured, Form B, CG2010I185, and shall include coverage for Contractor's operations and products and completed operations.

If required by this Contract, the Contractor subletting any part of the work, services or operations awarded to the Contractor shall purchase and maintain, at all times during prosecution of the work, services or operations under this Contract, an Owner and Contractor's Protective Liability insurance policy for bodily injury and property damage, including death, which may arise in the prosecution of the Contractor's work, service or operations under this Contract. Coverage shall be on an occurrence basis with a limit not less than \$3,000,000 per occurrence, and the policy shall be issued by the same insurance company that issues the Contractor's Commercial General Liability Insurance.

#### 2. AUTOMOBILE LIABILITY

Contractor shall maintain Commercial Business Automobile Liability insurance with a combined single limit for bodily injury and property damage of not less than \$1,000,000 each occurrence and \$2,000,000 for more than one person and property damage in the sum of not less than \$1,000,000 resulting from anyone accident which may arise from the operation, actions or omissions of the Contractor or any Subcontractor in the performance of the project, and with respect to the Contractor's owned, hired, and non- owned vehicles assigned to or used in performance of the Contractor's work. Coverage will be at least as broad as coverage code 1, "any auto", (Insurance Service Office, Inc. Policy Form CA 00011293, or any replacements thereof). Such insurance shall include coverage for loading and off-loading hazards. If hazardous substances, materials or wastes are to be transported, MCS 90 endorsement shall be included and \$5,000,000 per accident limits for bodily injury and property damage shall apply.

### 3. WORKERS' COMPENSATION

The Contractor shall carry Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction of Contractor's employees engaged in the performance of the work; and, Employer's Liability insurance of not less than \$1,000,000 for each accident, \$1,000,000 disease for each employee, and \$1,000,000 disease policy limit.

In case any work is subcontracted, the Contractor will require the Subcontractor to provide Workers' Compensation and Employer's Liability to at least the same extent as required of the Contractor.

**The Contractor shall furnish the City with a Certificate of Waiver of Subrogation under the terms of the Workmen's Compensation insurance. The Contractor shall defend, protect, and save harmless the City from and against all claims, suits, and actions arising from failure of the Contractor or the Subcontractor to maintain such insurance.**

**Work Locations.** A staging area at the Wastewater Reclamation Plant will be provided to the Contractor. This staging area is for work equipment and a work trailer if necessary. It shall not be used for living quarters. The contractor shall provide its own potable water supply and toilet facilities.

The approximate locations of the sewer lines to be cleaned and inspected are shown on the maps attached as part of these specifications. The contractor shall be responsible to clean public gravity main lines. Pressure, force main, effluent return line, and private lines are not part of the work under this contract. The lineal footage of line indicated in the bid and on the drawings is for comparison of responding bids. **The actual footages of the various sizes of lines shall be determined as part of the work.**

The contractor shall assign identification labels to the manholes and cleanouts used and or encountered during the work. The location of each point identified shall be shown and labeled on copies of the maps provided as part of the specific projects. Copies of these maps shall be provided to the City as part of the schedule for work in an area. They shall also be provided with the reports regarding work accomplished. The identification label shall be used on work forms and on the video. The format of the identification shall be: page number 2xxx M for manholes and Page number 3xxx C for cleanouts. Identification on each page of the map shall consist of the last 5 figures of the label. In order to provide gaps the numbering for manholes and cleanouts originally shown on the map shall end in either "0" or "5". Manholes or cleanouts found but not shown on the map shall be labeled using a number ending in "2" or "6". (sample number 5G2055M. The map label would be 2055M) The label portion of the numbering starts over on each page.

**Schedule.** This time frame for specific Quarter Sections (Exhibit B) to be completed as projects under this contract shall be agreed upon by the awarded vendor and the City. The bid sheet contains estimated footage of lines for the purpose of comparing bids. If it is determined that the total linear footage of lines will exceed the total estimated footage by 15% or more, the contractor may request an extension of 15 days for each increment of 15% in excess of the total estimated footage.



The contractor shall notify the City in writing when it believes the work to be complete. The City shall provide a written confirmation to the contractor when the City finds that the work is complete. If the City finds the work is not complete it shall identify within 8 calendar days what deficiencies it has noted. Upon correction of the deficiencies the Contractor shall submit a new written notification of completion to the City. If during implementation of the project, the Contractor determines that the estimated footage of lines to be cleaned will exceed the estimated footage by more than 10%, the Contractor may request an extension of the time period. Any request for an extension must be submitted in writing to the City.

The contractor shall prepare a schedule for the work showing the sequence and approximate time to complete the various phases of the work. The tasks shall be detailed such that no task shall be longer than 5 working days in duration. The sewer cleaning schedule shall show approximately equal amounts of footage per week over the period of the contract unless specifically directed or approved otherwise by the Contract Administrator or his designee. The contractor shall provide this schedule at least two weeks prior to beginning the cleaning or TV work. The schedule shall be reaffirmed as current, or updated weekly to reflect anticipated work progress through completion of the work.

Contractor will provide one week's written notice to property owners prior to entering on private property or easements to conduct a work activity. Each notice shall indicate the anticipated time that the property will need to be encroached upon. A notice is required each time a new activity is started on a property.

Work shall typically be limited to Monday thru Friday 7:00am to 4:30pm, except for City Holidays. These hours are considered the normal work hours. No work will be performed in residential areas prior to 8:00am unless emergency conditions exist that require immediate attention. Work outside of normal work hours must be approved in writing by the City at least two working days in advance of the work.

Heavily traveled streets shall not have lanes blocked between 6:00am to 9:00am, and 2:00pm to 5:00pm.

Night work shall be limited to the hours of 7:00PM to 1 AM unless specifically approved otherwise. Night work may start Monday through Thursday. Night work shall be considered work outside the normal work hour.

The City shall be reimbursed for overtime pay related to inspection or other involvement related to out of normal work hours work not required by this contract. The City shall decide if it will direct its personnel work overtime.

**Safety.** Work shall be conducted with regard for the safety of the public, workers, and any others that may be in or near the work area. The condition of the work area and equipment shall be maintained with regard for the public, workers, and any others that could be impacted by the work or equipment. These requirements shall apply during all hours of the day or night.

All pertinent OSHA regulations and local traffic control laws will be followed. The contractor shall provide the City with a copy of its confined space plan and provide a letter on company letter head from the company safety officer stating that it meets applicable laws and regulations relevant to this work, and that the company shall adhere to it and any relevant updates to it. The Contractor will be responsible for providing traffic control and will adhere to City policy. A traffic control plan showing control measures on a street-by-street basis must be submitted and approved by the City prior to cleaning and TV inspecting of sewer lines. The plan shall be submitted at least five working days prior to the need for the traffic control.

Every attempt must be made by the Contractor to replace all manhole and cleanout lids securely after performing maintenance to ensure pedestrian and traffic safety including the removal of all debris prior to re-setting the manhole cover. Any manhole lids with traffic striping shall be re-aligned to the original placement. The Contractor will provide immediate verbal notification to the City followed by written notice of any defective manhole lids or rings that Contractor encounters that may present a hazard to the public safety. This shall be included in the written report.

**Spills and Overflows.** The contractor shall provide a Spill/Overflow Management Plan for City review as part of this contract, and prior to the start of work if site conditions warrant. Care shall be taken at all times to avoid spills and overflows of sewerage. If a spill or overflow shall occur the Contractor shall immediately notify the City regardless of the size of the spill or overflow. The City's spill response steps shall be followed in the appropriate order. A containment area for the spill or overflow shall first be established. Procedures shall be implemented to minimize the public coming into contact with sewerage. Sewerage shall not be washed into the storm drainage system as a means of disposal. Any sewerage that enters the storm drainage system (roadside ditch, pipe, lined channel, washes, or other stormwater conveyance) shall be trapped and removed from the drainage system. Areas affected by sewerage shall be appropriately decontaminated. Although the contractor shall be responsible to manage any size spill it may cause, the contractor shall have immediately available material to respond to at least 500 gallons of sewerage spill or overflow.

### **SEWER LINE AND LIFT STATION CLEANING**

**General.** The contractor shall clean gravity sewer lines and lift station-wet wells as part of this contract. Cleaning operations shall typically start at the highest point in each quarter section and working down to the lowest point, thus collecting and removing all debris that is generated. The Contractor shall be responsible for using the proper equipment necessary to perform the work without damage to City facilities or private property or Contractor equipment. This shall include the use of mandrels to determine the ability of equipment to pass through pipes. Care shall be taken to not adversely impact laterals. The Contractor shall be responsible to repair or resolve damage caused by negligent Contractor operations. Debris resulting from cleaning shall be trapped and removed from the sewer system at no greater than 1000-foot intervals and immediately upstream of pump stations. This shall be done prior to CCTV inspecting lines to prepare the inspection reports required by these specifications.

The intent of sewer line cleaning is to remove foreign materials and grease from the lines and restore the sewer to a minimum of 95% of the original carrying capacity. The lineal foot bid price for sewer cleaning is the full price to restore/achieve a minimum of 95% of the line's carrying capacity. If any line or section of line cannot be restored to 95% of the original capacity, the contractor shall report to the City the location and the reason the cleaning cannot be accomplished. The City reserves the right to reduce the unit price payment for cleaning that does not restore 95% of the original carrying capacity if it is determined that the failure is due to contractor's equipment or procedures.

It is recognized that there are some conditions, such as broken pipe and major blockages that prevent cleaning from being accomplished or where additional damage would result if cleaning were attempted or continued. Should such conditions or the indication of such conditions be encountered, the Contractor shall contact the Project Administrator prior to proceeding. Upon request the Contractor shall provide the Project Administrator with the location of the conditions, a written description of the condition, and a record of the TV video of the condition. The Project Administrator will decide whether the Contractor should proceed with the cleaning and/or inspection. If the Administrator says to proceed, then the City of Sedona shall be responsible for damage to the pipe, resultant spills, point repairs of the pipe, and/or clearing the line. If in the course of proper cleaning operations, unforeseeable damage to the pipe does result, the Contractor will not be held responsible. However, the Contractor shall provide evidence that it was unforeseeable.

The intent of wet well cleaning is to prevent the build-up of excessive debris in the wet wells of downstream pump stations throughout the system. The intention is to have the wet wells cleaned on a quarterly basis if no upstream pipe system has been cleaned and videoed. Depending on the debris capture discovered in the system, this frequency may be increased or decreased based on an as needed basis.

If the contractor believes he will be unable to clean or TV inspect any section of pipe for any reason, he must notify the City's representative immediately or the Contractor will be responsible for the consequences of proceeding.

**Reports.** Contractor will furnish the City with the daily work report of his operations on a weekly basis. Reports will include a summary of the linear feet of lines cleaned and video inspected with a breakdown of standard cleaning, root removal and work in easements. It will identify the map quarter section the work was conducted in and the number and location of any manholes. The report will identify any deviance from the work schedule, and of necessary, an updated schedule will be submitted.

**Night Work.** Contractor shall anticipate scheduling night work for any section being cleaned under State Route 89A. The Contractor shall be responsible to obtain permits from Arizona Department of Transportation for work within its right-of-way. Night work for these purposes shall subject the contractor to overtime charges for City personnel. The contractor may request other night work however such work may be subject to overtime charges for City personnel.

**Sewer Lift Stations.** The Carroll Canyon, El Camino, and Brewer sewer lift stations are the major lift stations within the system cleaning area. Carroll Canyon is located on Shelby Drive, just South of Stanley Steamer Drive and has a wet well approximately 27 feet in depth. El Camino is located at the southern end of El Camino Road and has a wet well approximately 22 feet in depth. Brewer is located at the intersection of Ranger and Brewer Roads and has a wet well approximately 31 feet in depth. There are 14 other minor lift stations that on occasion may need cleaning services. Vacuum equipment will be required to clean the wet wells and must have vacuum capabilities of removing material from wet wells 35 feet deep at an elevation of 5300 feet above sea level. The lift station wet wells will be cleaned on an as needed basis and, at a minimum, on a bi-weekly basis during contract cleaning operations and at the end of the contract cleaning operation. Cleaning of wet wells will occur during periods of low flow between the hours of 12:00am to 5:00am. This night work will not be subject to overtime charges. The station will be cleaned of any debris, including tag lines, that collects in the wet well and may require the Contractor to physically enter the wet well. If wet well entry is required, Contractor must have an appropriate confined space entry program in place and provide OSHA-compliant equipment, trained personnel and rescue procedures. Emergency response time for vacuum equipment should be no more than 4 hours.

Contractor should be aware that construction work may be on-going at any of the pump stations during the cleaning projects. The construction work should be accommodated by the contractor in his work and may require changes in scheduling the line cleaning and/or cleaning of the wet wells. Such schedule changes will not be considered interference with the cleaning work unless the contractor is requested to halt or slow the progress of cleaning by more than two days. The sole remedy for such delay shall be an extension of time to complete the project provided the delay shall have affected the then existing critical path of the project schedule presented to the City prior to the delay.

**Damaged Pipe Management.** Contractor will at all times carry inflatable plugs of the following sizes: four (4) inches, six (6) inches, and eight (8) inches, and have the equipment required to install them. Contractor must have TV camera equipment available to video sewer lines in case blockages, excessive mud, or other indications of problems are encountered while cleaning the pipe. The results of the video must be captured in a motion picture format and on the reporting form.

**High-Velocity Jet (hydro-cleaning) Equipment.** The equipment shall have a minimum 500 feet of  $\frac{3}{4}$ " hose. The equipment shall have a minimum of 1500 psi to be maintained when using hydro for cleaning. The equipment shall have an appropriate selection of nozzles for scouring, and removing grease and roots from sewer lines. The nozzles shall be capable of producing a scouring action from 15 degrees to 45 degrees in all size lines designated to be cleaned. Equipment shall also include a high velocity gun for washing and scouring manhole walls and floors. The equipment shall carry its own water tank, auxiliary engines, pumps, and hydraulically driven hose reel. All controls shall be located so that the equipment can be operated above ground.

**Equipment Section.** The sewer line between manholes and/or cleanouts and the manholes shall be

cleaned using high velocity jet powered equipment. The equipment and methods selected shall be satisfactory to the City's representative. The equipment shall be capable of removing dirt, grease, rocks, sand, roots and other materials, including rock and mud backwashing from the sewer lines and manholes. If cleaning of an entire section cannot be successfully performed from one manhole, the equipment shall be reset on the other manhole and cleaning again attempted. If again, successful cleaning cannot be performed or the equipment fails to traverse the entire segment of sewer between manholes, it will be assumed that a major blockage exists. A CCTV inspection will be required to determine the cause of the stoppage.

The City shall not be charged downtime, either by way of cost or request for extension of time to perform the work, as a result of lack of preventive maintenance for any and all equipment necessary to perform this contract. The Contractor at no cost to the City shall repair sewer lines, lift stations or other City infrastructures (and/or other property, public or private) that are damaged by the improper use of cleaning equipment. This includes dig-ups resulting from tools and/or cameras getting stuck in sewer lines where project administrator has not directed Contractor to proceed pursuant to "General" under this section.

**Protection of sewer pipe, manholes, and cleanouts.** During all sewer-cleaning operations, satisfactory precautions shall be taken to protect the sewer lines, cleanouts, and manholes from damage that might be inflicted by the improper use of cleaning equipment. Equipment recommended by the manufacturer for use with the type of sewer facility material encountered shall be used. It will be the responsibility of the contractor to identify pipe type and material, typically City sewer consists of PVC, but ABS, ductile iron and other pipe material may be encountered. The equipment used must be appropriate to the pipe size and type and shall be used with care to avoid damage to the pipe wall. Whenever any tools that restrict the flow of water in the sewer lines are used precautions shall be taken to ensure that the water pressure created does not cause any damage or flooding to public or private property being served by the facility being cleaned. Settling of the ground or street above the area being cleaned shall be sufficient reason to stop the cleaning and investigate by TV inspection the condition of the pipe.

**Root, Grease, and debris Removal.** Roots, grease and debris shall be removed as necessary to adequately inspect the pipe walls.

**Debris Capture and Removal.** All sludge, dirt, sand, rocks, grease, and other solid or semi-solid material resulting from the cleaning operation shall be removed at the downstream manhole of the section being cleaned. Passing material from manhole section to manhole section that could cause line stoppages, accumulations of sand in wet wells, or damage pumping equipment shall not be permitted. If debris has passed through downstream manholes into a wet well, then Contractor will be required to remove debris from the affected wet well. All wet wells will be cleaned upon completion of sewer cleaning of lines above the wet well.

**Disposal of Debris and Fluids.** The City will provide a location for the disposal of all solid debris removed from the sewer as a result of the cleaning operation. Drying beds at the Wastewater Reclamation Plant will be provided for the Contractor. All debris collected from the sewer lines and wet wells will be properly disposed of at the Wastewater Reclamation Plant under the direction of the Wastewater Superintendent in the facility drying beds. Drying beds at the wastewater treatment plant will be available for disposal of solid debris, and liquid waste will be drained and disposed of in the facility headworks between the hours of 8:00am and 3:00pm. The Contractor will be responsible for any damage to the wastewater facilities as a result of the disposal of waste materials from the cleaning of City sewer lines.

Fluids may be disposed of into a manhole designated by the City or at the plant. The contractor shall gain prior approval in order to use a manhole to dispose of fluids. This may be accomplished at the time the contractor submits a schedule for the work.

**Water Source.** Contractor will be responsible for obtaining water from local supplier(s).

## **DATA REVIEW and REPORTING for Sewer Line and Lift Station Cleaning**

Contractor shall deliver daily cleaning logs identifying the method of cleaning, type of debris extracted and the hours performed. Logs shall include crew members.

Disposal tickets or indication of disposal location (if disposal haul is performed by a separate company).

Map of pipelines cleaned with notations summarizing method and conditions.

## **Qualifications for Sewer Line and Lift Station Cleaning**

Contractor shall have a minimum of 5years experience and 500,000 feet pipeline cleaning experience within the same diameter range as provided on the applicable project.

Contractor's cleaning crews shall be confined space entry certified and trained applicable safety regulations and in First Aid.

## **CCTV INSPECTION**

### **General**

Television inspection of sewer lines shall be conducted using a Digital Panoramic 360 degree pipeline scan. The intent of the inspection is to provide an internal visual inspection of sewer lines and a permanent written record made of the findings. The written record shall note various items including but not limited to pipe type, pipe diameter, length of segments, structural deficiencies, joint conditions, root intrusions, infiltration; and service lateral connections location, condition and type.

**Equipment and CCTV Picture Quality.** Digital 360 pipeline inspection is a means of scanning a pipeline in a continuous, non-stop run between start and end points. The scanner shall utilize two (2) high definition cameras with a minimum of 185-degree field of view for each camera with one camera located at the forward position of the scanner and one camera at the aft position of the scanner. Digital 360 scanning system are designed to travel at a rate of 70 feet per minute.

The raw data collected within the scan may be coded by either the contractor, the facility owner (customer), or by a third party consultant provided the coding shall be performed by a NASSCO certified technician.

The data collection system and software reader shall be capable of scanning in three (3) dimensional objects and producing three dimensional images. Scanning systems and software that convert captured images/graphics to a two-dimensional plate and then graphically re-wrap into a tubular form to provide a three-dimensional impression shall not be allowed.

Images and software shall be capable of capturing all features including hairline cracks and producing accurate locations of defects and features as specified by the owner.

Inspection equipment shall be 100% digital and utilize a fiber optic cable for transmission of binary data. The inspection camera system must have two independently or simultaneously controlled digital cameras, one facing in the forward direction and one facing in the rear direction. Each camera must have a minimum of 185 degree field of view.

The inspection camera system must illuminate the interior of the pipeline using either xenon strobe light or strobing LED lights. The light shall be positioned 360 degrees around the camera lens to distribute the light evenly onto the pipe walls. The lighting must be able to illuminate pipeline from 6" to 24" in diameter without the need of any auxiliary lighting. Any systems not using strobe light technology will be deem unacceptable due to motion blur during imaging recording.

The inspection system shall produce individual images or frames with no more than 0.001 inches of tractor movement during image or frame exposure to produce crisp, clear images.

The inspection camera system must provide a minimum of 3000 line of vertical resolution in the side view and a minimum of 500 lines in the perspective view.

Inspection speeds must be no more than 70 feet per minute and no less than 35 feet per minute to ensure maximum production per day with each inspection system and to minimize the time at each location to reduce the chance of backups from plugging, maintain traffic flow, and reduce safety concerns of contractor's employees.

The inspection robot shall have a remotely controlled camera elevating device to center the camera in pipeline from 8" to 24" in diameter.

The inspection system must be able to collect all necessary data in either the forward or reverse tractor direction. Systems collecting data only in a single direction will be deemed unacceptable.

Pipeline inspection shall be conducted in accordance with owner's safety procedures and manufacturer's recommendations. Inspection shall be conducted by personnel certified by NASSCO for pipeline inspection and OSHA certified for confined space entry.

**CCTV Inspection Procedures.** After cleaning, the pipe line segments ending with either a manhole or cleanout at either end shall be visually inspected by means of a closed-circuit television. Prior to inserting a camera, the contractor shall be responsible to verify the ability of the camera to pass through the pipe. If the contractor's verification process determines that the camera may not pass through the pipe, then the contractor may request permission not to CCTV the segment of line, however, the segment shall be reported as having the defect identified through the verification process. If the City insists that the segment be videoed in spite of verification process, then the City shall be responsible for the reasonable cost incurred by the contractor to recover the camera if required. If the contractor passes the camera through the pipe without an approved verification process then the contractor shall be responsible for recovery of the camera, overflows, and other damage related to the camera not being able to pass through the pipe, in a segment of pipe, a mandrel of a size larger than the camera diameter may be used to determine the ability of equipment to pass through pipes. The inspection will be done in clean segments not exceeding 1000 feet. The Contractor will suitably control the flow in the segment to be inspected. The camera shall be moved through the line in either direction at a moderate rate, stopping when necessary to permit proper documentation of the sewer's condition. Manual winches, power winches, TV cable, powered rewinds, or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. When non-remote controlled winches are used to pull the television through the line, suitable means of communication shall be set up between the two manholes of the section being inspected to insure good communication between members of the crew. If, during the inspection operation, the television camera will not pass through the entire manhole section, the Contractor shall set up his equipment so that the inspection can be performed from the opposite manhole. If again, the camera fails to pass through the entire manhole section, the inspection shall be considered complete and no additional inspection work will be required until repairs are made.

In the event that the TV camera encounters broken pipe and there is a possibility that continuation of the inspection could cause the TV camera to become stuck or result in additional pipe damage or collapse, either the Contractor with the approval of the City, or the City upon its sole discretion may elect to discontinue the inspection or attempt to insert the camera from another direction in order to complete the inspection.

The Contractor shall be fully responsible for the impact of the camera and associated equipment becoming lodged in the pipe should the above procedure, including use of a mandrel not be followed. The aforementioned responsibility includes costs to remove the camera and associated equipment from the pipe.

## **DATA REVIEW and REPORTING for CCTV Inspections**

Unless otherwise stated, the contractor is responsible for reviewing collected data, coding observations, and completing a full PACP evaluation of each inspected pipeline. The owner must have the ability to view the digital film file in the way that the contractor can view them, including full control of the virtual pan and tilt. The owner may designate a certified operator or consultant to provide the full PACP evaluation, however in that event, the Contractor still shall have the capability of performing the full evaluation has specified herein.

The digital film files must include an unfolded view of the pipeline with a minimum of 3000 lines of vertical resolution.

The digital film files must include an unfolded view overview of the entire pipeline to view entire pipe segment at one time.

The digital file files must include a distortion-free virtual pan and tilt allowing the review and the Owner to view 100% of the pipe wall from any perspective. The virtual pan and tilt must be able to view 360 degrees in any direction while maintaining an always-upright image. The virtual pan and tilt must consist of views from the front and rear camera, any virtual pan and tilts that artificially create this view from a single camera will be deemed unacceptable due to distorted images on the direct side viewing and inability to view into laterals and other observations.

The virtual pan and tilt and forward / reverse direction of the images must be able to be controlled from a computer mouse.

The virtual pan and tilt and unfolded views must be able to be viewable by the Owner without the need of purchasing addition software. Film files must be able to be integrated into Owner's other databases.

The Contractor must use digital panoramic compatible software with PACP or other owner-specified templates for feature and defect coding. The panoramic module must also be used to ensure that film files are properly reviewed with the highest accuracy possible. The contractor must review the files using PACP certified personnel.

The contractor must supply the Owner with single or dual layer DVD's, a removable hard drive, or other pre-approved media supporting panoramic film files and displaying the panoramic module. The Owner must have access and the ability to control the unfolded view, the front or rear view of the cameras, an overview of the entire pipeline, and the distortion free virtual pan and tilt.

## **Qualifications for CCTV Inspections**

Contractor shall demonstrate a minimum of 100-miles past experience in pipeline inspection utilizing the system described herein and in full accordance with all specifications herein.

Contractor shall have a minimum two years experience in pipeline inspection utilizing the system described herein and in full accordance with all specifications herein.

Provide Project list showing the accumulation of a minimum of 100-miles of pipeline inspection utilizing the system described herein in full accordance with all specifications herein.

Minimum of three (3) references in which the contractor has performed inspection services with the system described herein in full accordance with all specifications herein.

Manufacturer's certification for contractor utilizing the system described herein indicating a minimum of

two (2) years experience.

Example deliverable in full accordance with all specifications herein performed by the contractor on a previous project

## **PAYMENT**

Contractor will provide a copy of each completed Quarter Section map indicating lines that were inspected. This must be turned in with each invoice for payment.

The Contractor may request payment for the work performed once each calendar month, with no closer than 15 calendars between requests. There shall only be one payment request for this contract per month.

Payment for cleaning shall include cleaning, TV inspection related to cleaning, preparation of reports related to cleaning, disposal of debris, cleaning of wet wells, except the Brewer station, and any other work specified related to cleaning sewer lines and manholes. Payment per lineal foot shall include the distance through manholes and cleanouts actually passed through on the main. The payment for the various size lines cleaned shall be at the unit prices bid, and shall include full compensation for the work specified as cleaning. The measurement for cleaning shall be based on the ground surface distance between line entry and exit points. In cases where the line could not be fully traversed payment will be based on the City estimate of the ground surface distance for the segment of line through which the cleaning device passed.

The City shall be entitled to withhold 15 percent of each payment until delivery of the all reports in final form as specified under "**Data Review and Reporting**" sections upon completion of the whole work.