



Harris & Associates®

October 18, 2024

Art Cervantes
Engineering Manager
Capital Improvement Program
City of Rialto
150 S. Palm Avenue
Rialto, CA 92376

PROPOSAL FOR STORMWATER CONDITION ASSESSMENT

Dear Mr. Cervantes:

Per your request, and in accordance with the Professional Services Agreement, Contract #1210635000, Harris & Associates (Harris) is proposing to provide civil engineering services for the preparation of a stormwater condition assessment for the City of Rialto (City). Harris is honored to partner with the City on this critical infrastructure project.

PROJECT UNDERSTANDING

An asset management system is crucial for streamlining and reducing life cycle costs to operate and maintain critical infrastructure. The first step in developing an asset management system is to conduct an inventory of the existing infrastructure assets, followed by an evaluation of the condition of the assets. The condition assessment is a critical step needed for asset management which determines and documents the condition of existing assets. The information gathered will be used to determine the remaining useful life and rehabilitation and replacement options.

In September 2024, Harris completed an asset inventory of the City's existing stormwater drainage infrastructure. We are pleased to present this proposal for the next critical phase: the condition assessment. Once completed, the stormwater condition assessment will identify, cost and prioritize critical components needing immediate capital improvement attention. This proactive approach will help prevent costly maintenance and capital investment due to asset failure, thereby preserving the City's limited resources.

Harris will complete an assessment of the recommended assets and prepare a condition assessment report detailing the findings. The report will include a background of the inspection types and methods, a rating system for defects based on National Association of Sewer Service Companies (NASSCO) standards, and a narrative of the types and characteristics of defects found. It will also provide an explanation of potential repair types, prioritized recommendations for pipe and structure rehabilitation, replacement, and/or maintenance, and a cost estimate for the recommended repairs. Additionally, the report will feature a tabular list of all pipe segments and storm drain structures reviewed in the assessment, including condition ratings, defects, and other system attributes, as well as maps showing the condition assessment findings and recommended repairs.

As documented in the stormwater asset inventory, the City maintains approximately 40 miles of storm drain conveyance, with the following breakdown:

- 80% are reinforced concrete pipe (RCP) or reinforced concrete box (RCB)
- 8% are corrugated metal pipes (CMP)
- 4% are concrete channels
- The remainder consists of clay, corrugated high density poly ethylene (HDPE), and polyvinyl chloride (PVC) pipes

During the preliminary engineering phase, Harris reviewed record drawings, GIS inventory data, and available history of inspection. Based on this review, Harris provided the City with a list of recommendations for which storm drain assets should be investigated. The criteria for these recommendations is based on risk and consequence of potential failure due to size, material, age, and any known condition issues with the asset. Harris used the GIS information gathered in the asset inventory phase to prepare maps broken down by maintenance zones showing what will be assessed.

Harris recommends assessing the following, as shown in the attached maps and tables:

- Corrugated Metal Pipes (CMP) with a diameter of 8" and larger (which equate to 16,115 lineal feet)
- All Pipes with a diameter of 36" and larger (which equate to 132,515 lineal feet)
- All Pipes older than 50 years (which equate to 1,107 lineal feet)

In total, the proposed assessment covers nearly 150,000 lineal feet, representing about 70% of the City's storm drain system. The pipes to be assessed range in diameter from 8 inches to 120 inches.

The following outlines our proposed scope of services and estimated fee and schedule to deliver the Stormwater Condition Assessment. The proposal is informed by our team's proven methods and successful experience in conducting similar projects. It has been developed in collaboration with our subconsultant, who possesses significant expertise in stormwater pipeline inspection.

SCOPE OF SERVICES

TASK 1 – Kickoff and Field Work

Task 1.1 – Kick-off Meeting

The project will commence with a kick-off meeting with City staff. The purpose of the project and the desired objectives will be discussed / confirmed. The project schedule will be reviewed, and lines of communication will be established.

Task 1.2 – Pipe Inspection and Assessment

Harris will assess the condition of pipes identified in the priority list and collaborate with our subconsultant, National Plant Services (NPS), to conduct in-line CCTV inspection to capture 360-degree images of the walls of the pipelines. The condition assessment will be completed using NASSCO Pipeline Assessment and Certification Program (PACP) methods.

Pipelines will be inspected without pre-cleaning. If any pipes cannot be properly assessed due to heavy debris or obstructions, they will be flagged and documented in the assessment report. In such cases, the City will have the option to engage the Harris team to perform cleaning, followed by remobilization and re-televising, utilizing City-approved additional services.

The NASSCO PACP Quick Rating System (QRS) consolidates structural and operational/maintenance (O&M) defects within a pipe into a simplified score, helping to streamline the interpretation of data. Defects are typically graded on a scale from 1 to 5, with higher numbers indicating greater severity. A grade of 1 reflects minor defects, while a grade of 5 signals the most significant issues. These grades are determined by factors such as the seriousness of the defect, the extent of pipe damage, the percentage of restriction to flow capacity, or the amount of wall loss due to deterioration. The QRS score is presented in a CCTV report along with a pipe graphic that illustrates key information: the defect's position, distance from a reference point, rating severity, and its continuity along the pipe. This system provides a clear and concise way to prioritize maintenance or repair actions based on defect severity and location.

The Harris team will analyze the CCTV video and inspection reports for those pipes identified to have a QRS rating of 3 or greater, identify any defects, and provide the rehabilitation method recommended for each pipe segment. This information will be transferred into the City's GIS database in order to create exhibits to include in the condition assessment report.

TASK 2 – Condition Assessment Report

Task 2.1 – Draft Condition Assessment Report

Harris will prepare a draft condition assessment report of the findings which shall include:

- Background of the inspection types and methods
- Rating system for defects (using NASSCO standards)
- A narrative of the types and characteristics of defects found
- Explanation of potential repair types
- Prioritized recommendations for pipe rehabilitation, replacement and/or maintenance
- Cost estimate for recommended repairs
- Tabular list of all pipe segments reviewed in the assessment. List shall include condition rating, defects, and other system attributes.
- Maps showing condition assessment findings and recommended repairs

Task 2.2 – City Review Meeting

Harris will meet with the City’s operations and engineering staff to discuss the review of the draft report and incorporate any comments.

Task 2.3 – Final Condition Assessment Report

Harris will prepare the final condition assessment report, incorporating comments from City staff.

Task 2.4 GIS Integration

Data gathered during the assessment will be incorporated into the City’s GIS database, including:

- QRS Rating
- Reference to location of CCTV files

Task 3 – Program & Project Management

Task 3.1 – Program & Project Management

Program and Project Management Services (by Harris) include: Overseeing project coordination, providing general consultation with the City and related stakeholders, overall On-Call contract management, coordination with the City, subconsultants, and other stakeholders, performing scope management, cost and budget management, schedule management, overseeing subconsultants, as-needed internal progress meetings, administrative duties (i.e. correspondence, invoicing, etc.) and other miscellaneous activities required to execute this task.

Deliverables

- Final condition assessment report with recommendations, costs, tables, and maps
- Copies of NASSCO’s PACP reports and videos of storm drains prepared to NASSCO standards
- Presentation on findings to the Operations and Engineering Divisions

Assumptions and Exclusions

- The goal of pipe rehabilitation is to address the condition of the pipelines, and not capacity issues.
- The storm drain repair plan for each pipe segment will include the least intrusive rehabilitation method using trenchless technologies. Based on our previous storm drain lining project experience and extensive experience utilizing trenchless technologies we will analyze and propose repair methodologies for the City’s consideration that are not intrusive and will maintain the existing facilities.
- Approximately 150,000 linear feet of pipe will be inspected.

- Harris assumes 65% of the total linear feet of pipes that are inspected will have a QRS of 3 or greater and will be analyzed in the assessment report.
- During CCTV inspection, pipes will be televised only, not cleaned. Pipes that cannot be properly assessed due to heavy debris and/or obstructions will be flagged and documented in the assessment report with a recommendation for cleaning.
- High-definition video will be provided for pipes 36" and larger.

Additional Services

An additional services budget of \$65,000 has been allocated for cleaning, which may only be used with prior approval from the City. While this allowance is available for cleaning and remobilization, this estimate may not cover all associated costs. The full scope of cleaning requirements will be determined once the list of flagged pipes is finalized, and any cleaning activities will proceed only at the City's direction.

PROJECT SCHEDULE

Upon Notice to Proceed (NTP), we anticipate completing the pipe inspection and assessment within six months, followed by the condition assessment report within four months. The total anticipated duration for the project is ten months, assuming no unforeseen circumstances impacting the project schedule.

PROPOSED FEES

Fee – Time and Materials, Not to Exceed Cost.

The following are a summary of the not-to-exceed fee to provide the previously detailed scope. A detailed Fee Chart is included on a separate page for your information and use in evaluating this proposal and shows the hourly breakdown of all of the major tasks. In accordance with the Professional Services Agreement, Contract #1210635000, all subconsultant charges are subject to a 10% markup.

TASK 1 – Kickoff and Field Work	\$790,537
TASK 2 – Condition Assessment Report	\$82,894
TASK 3 – Program & Project Management	\$19,000
Additional Services Allowance*	\$65,000
TOTAL	<u>\$957,431</u>

*All work performed under additional services allowance will require authorization by City of Rialto.

We appreciate the opportunity to assist the City with the implementation of this very important and monumental project. If you have any questions or concerns regarding this proposal, please feel free to contact me or Jennifer Scott (619.273.3780, Jennifer.Scott@WeAreHarris.com) at your convenience.

Sincerely,
Harris & Associates, Inc.



Mark Nassar, PE
 Vice President, Program Management
 (619) 200-6442 ■ Mark.Nassar@WeAreHarris.com

Attachment: Fee Breakdown
 Cc: Amparo Corona

CITY OF RIALTO
STORMWATER CONDITION ASSESSMENT
TASK / HOUR BREAKDOWN

October 18, 2024



TASK NO.	Work Task or Item Description	SR PROJECT MANAGER		DESIGN SUPPORT								PROGRAM MANAGER		HARRIS TOTALS		Subconsultant			GRAND TOTAL FEE		
		Jennifer Scott / Elizabeth Reyes		Senior Project Engineer		Project Engineer		GIS Specialist		Admin		QA/QC Manager				Mark Nassar		NPS		10% Sub Markup	TOTAL SUB FEES
		HOURS	FEE	HOURS	FEE	HOURS	FEE	HOURS	FEE	HOURS	FEE	HOURS	FEE	HOURS	FEE	HOURS	FEE				
TASK 1 - KICKOFF AND FIELD WORK																					
1.1	Kick-off Meeting	4	\$1,120	1	\$219	0	\$0	0	\$0	0	\$0	0	\$0	1	\$320	6	\$1,659	\$0	\$0	\$0	\$1,659
1.2	Pipe Inspection and Assessment	32	\$8,960	116	\$25,404	60	\$8,760	30	\$5,220	0	\$0	24	\$7,680	6	\$1,920	268	\$57,944	\$664,485	\$66,449	\$730,934	\$788,878
Sub Total - Phase 1		36	\$10,080	117	\$25,623	60	\$8,760	30	\$5,220	0	\$0	24	\$7,680	7	\$2,240	274	\$59,603	\$664,485	\$66,449	\$730,934	\$790,537
TASK 2 - CONDITION ASSESSMENT REPORT																					
2.1	Draft Condition Assessment Report	32	\$8,960	64	\$14,016	48	\$7,008	24	\$4,176	8	\$992	16	\$5,120	4	\$1,280	196	\$41,552	\$0	\$0	\$0	\$41,552
2.2	City Review Meeting	4	\$1,120	2	\$438	0	\$0	0	\$0	0	\$0	0	\$0	1	\$320	7	\$1,878	\$0	\$0	\$0	\$1,878
2.3	Final Condition Assessment Report	24	\$6,720	32	\$7,008	24	\$3,504	16	\$2,784	4	\$496	8	\$2,560	2	\$640	110	\$23,712	\$0	\$0	\$0	\$23,712
2.4	GIS Integration	24	\$6,720	8	\$1,752	0	\$0	40	\$6,960	0	\$0	0	\$0	1	\$320	73	\$15,752	\$0	\$0	\$0	\$15,752
Sub Total - Phase 2		84	\$23,520	106	\$23,214	72	\$10,512	80	\$13,920	12	\$1,488	24	\$7,680	8	\$2,560	386	\$82,894	\$0	\$0	\$0	\$82,894
TASK 3 - PROGRAM AND PROJECT MANAGEMENT																					
3.1	Program & Project Management	45	\$12,600	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	20	\$6,400	65	\$19,000	\$0	\$0	\$0	\$19,000
Sub Total - Phase 3		45	\$12,600	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	20	\$6,400	65	\$19,000	\$0	\$0	\$0	\$19,000
TOTAL HOURS AND BUDGETS																					
ADDITIONAL SERVICES ALLOWANCE																		\$65,000		\$65,000	
Total		165	\$46,200	223	\$48,837	132	\$19,272	110	\$19,140	12	\$1,488	48	\$15,360	35	\$11,200	725	\$161,497	\$664,485	\$66,449	\$730,934	\$957,431