



City of Saginaw

City of Saginaw

Meeting Date: 10/06/2015

Staff Contact:

Mark White

Director of Public Works

Agenda Item: 6
(CC-1015-05)

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817-230-0500

SUBJECT: Consideration and Action regarding 2015 Infiltration and Inflow Study Phase 1 Individual Project Order

BACKGROUND/DISCUSSION:

This project is included in the 2011-2016 Capital Improvements Plan. The purpose of the project is to evaluate the current wastewater system to locate and identify possible infiltration and inflow problems. Details of the project are included in the attachments. This project is included in the current fiscal year budget.

FINANCIAL IMPACT:

The financial impact will be \$50,000. Funds for this expenditure are included in the Water and Wastewater Budget, Account 05-7004-55-00, I&I Study.

RECOMMENDATION:

Staff recommends approval of the 2015 Infiltration and Inflow Study Phase 1 Individual Project Order.

Attachments

Proposed Individual Project Order

Budget Information

INDIVIDUAL PROJECT ORDER NUMBER – 2015 I&I Study Phase 1

Describing a specific agreement between Kimley-Horn and Associates, Inc. (the Consultant), and The City of Saginaw, Texas (the Client) in accordance with the terms of the Master Agreement for Continuing Professional Services dated April 17, 2012, which is incorporated herein by reference.

Identification of Project: 2015 I&I Study Phase 1

Project Understanding:

This project is identified in the 2011-2016 Wastewater System CIP and the 2015-2016 Budget. The Client desires to use underground inspection methods within the Little Fossil Creek basin study area as shown on Exhibit 1 in an effort to evaluate the condition of the existing system and identify possible inflow/infiltration problems. The data collected in this study will be used for further evaluation or future projects.

Specific Scope of Basic Services:

Task 1 – Data Collection

The following items will be included in the Data Collection task and will be performed by KHA's subconsultant.

Manhole Inspection

Each manhole within the study area will be inspected. The data gathered during this phase of the project will be used to establish the condition and prioritize manholes for rehabilitation and establish the base data necessary to accurately determine mainline sewer rehabilitation alternatives and costs. Other important deliverables resulting from this work task are determination of debris levels in pipes and verification of pipe sizes.

Inspection personnel will use digital cameras during the inspection of all manholes on this project. All photographs will be included in the field inspection report. During inspection, each of the following types of information will be obtained to establish the condition and prioritize least cost repairs:

1. Basin Designation
2. Manhole/Cleanout ID
3. Inspection Status
4. Address
5. Surface cover, grade, type of cover (paved, yard, etc.)
6. Material of construction – brick, concrete, etc.
7. Area and Internal photo of manhole
8. All incoming and outgoing pipe depths from rim to invert
9. All incoming and outgoing pipe digital photographs
10. All incoming and outgoing pipe diameters and material of construction
11. Outgoing pipe length
12. Debris depth
13. Defects – Active, Evidence or No Infiltration/Inflow with digital photographs
14. Field corrections to collection system map

Upon completion of the manhole inspection, a prioritized preliminary manhole rehabilitation summary will be prepared that will include:

- Documentation with database summary of field observations
- List of manholes/lines requiring repair/rehabilitation
- Digital photos
- Documentation for preparing manhole rehabilitation quantities
- Field updated map(s)
- Prioritized Preliminary Manhole Repair Recommendations and Cost Estimates

Inspection of the gravity sewers from approximately Southern Avenue (at the railroad tracks) east to Sansom Blvd will be performed during the manhole inspection by photographing and/or using zoom camera to internally inspect the condition of this portion of the sewer pipelines. Based on the field inspections, the condition of the pipeline will be assessed and/or recommendations made to further assess the pipeline condition.

Smoke Testing

Smoke testing will provide detailed information on wet weather inflow sources for the study area. In order to identify defects in the lines, a non-toxic smoke will be forced into the sewer by high capacity blowers. Data documentation includes measurements from two permanent points and will be sufficient to establish the location of each defect and determine the best repair method and priority. In addition, sub-meter GPS coordinates are obtained for smoke defects where possible. Color digital photographs will be taken to document each defect during the smoke test.

Forty-eight (48) hours prior to testing, door hangers will be used to notify residents. A toll free telephone number will be provided for those individuals with questions or for anyone requiring special assistance. Each day the fire department will be notified of the crew location since smoke may enter homes through defective plumbing. Pipeline Analysis, Kimley-Horn's subconsultant, will be responsible for public awareness, distribution of smoke notices, field questions from residents, coordinating with City staff for residents requiring special assistance and mapping associated with this phase of field testing.

Deliverables:

1. Inventory of each manhole inspected
2. Rim to invert distance to 0.01 feet for each pipe entering and exiting the manhole.
3. Condition assessment detailing observed defects
4. Ranking of each defect by priority
5. Compilation of study results including report narrative, all field data, photographs, updated maps
6. Preliminary estimated manhole rehabilitation method and cost
7. Assessment of the gravity sewer from Southern Avenue to Sansom Blvd.
8. Defects listing and spreadsheets
9. Defect location sketches
10. Digital photographs
11. Smoke Notification Flyers and Notification of Residents

Task 2 – Final Report

Consultant will submit a letter report summarizing the following:

- Executive Summary
- Description of all tasks
- Map update for assets inspected
- Manhole defect summary
- Pipeline defect summary from smoke testing
- Preliminary Recommendations and Cost Estimates for repairs
- Three (3) copies of Final Report and three (3) copies of the CD-ROM Final Report.
- Project data will be provided electronically on each CD-ROM to include Excel spreadsheets, jpg photos,
- MSWord documents, pdf documents, etc.

Services/Deliverables provided by the Client:

- Access (if requested) to manholes that are buried could not be opened
- Replacement manholes covers at no cost should a cover be broken while attempting to open
- Access for placement of equipment and personnel
- Review and approval of door hanger Notice to Residents

Schedule:

- Work will begin on Notice to Proceed from Client.
- Consultant will provide the services within a reasonable length of time.

Terms of compensation:

KHA will perform the services in Tasks 1 through 2 for the total lump sum fee of \$50,000. Lump sum fees will be invoiced monthly based upon the overall percentage of services performed.

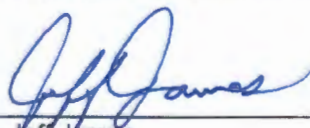
Payment will be due within 25 days of your receipt of the invoice.

ACCEPTED:

CITY OF SAGINAW, TEXAS

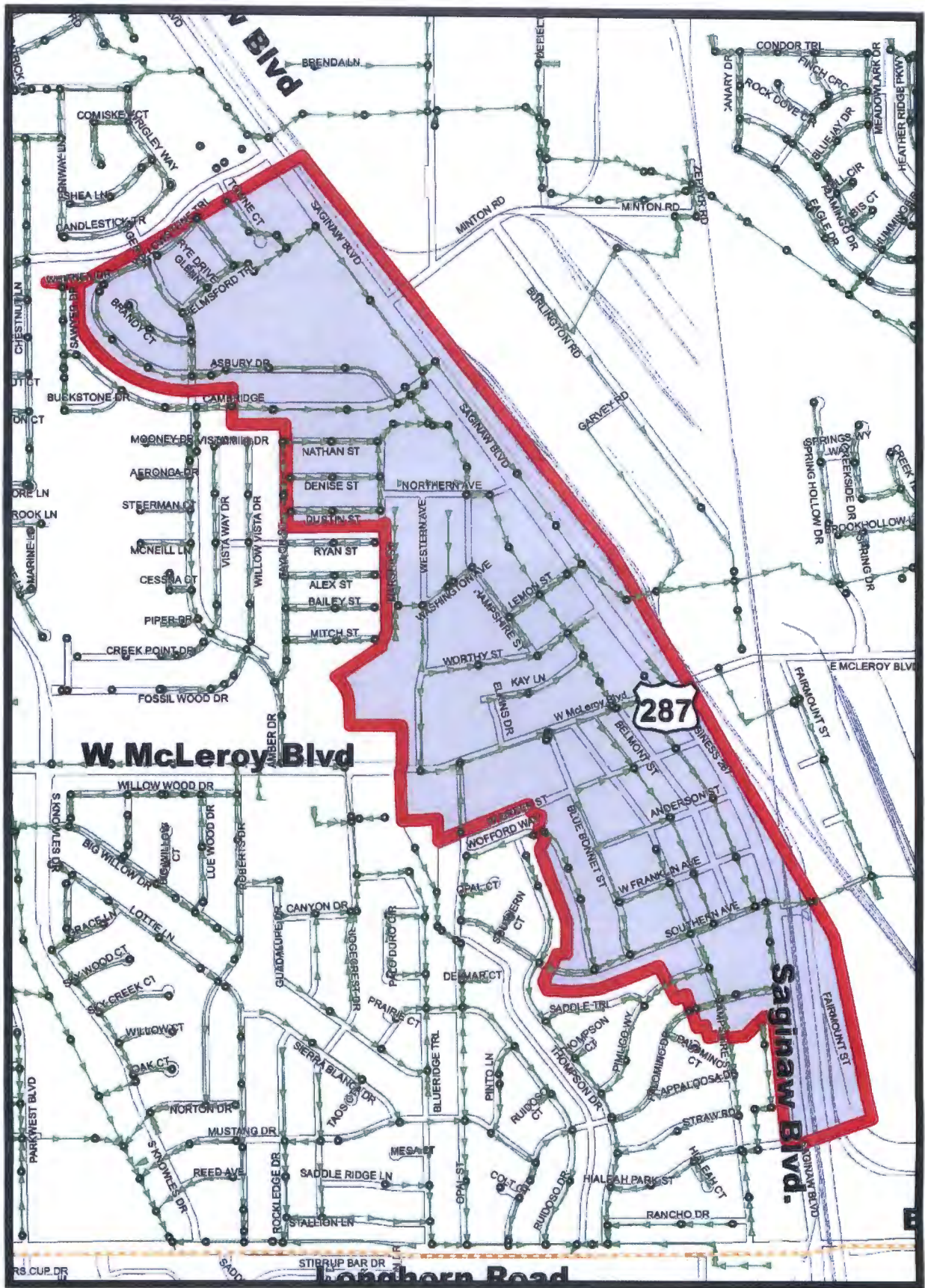
KIMLEY-HORN AND ASSOCIATES, INC.

BY: _____
Nan Stanford
City Manager


BY:  _____
Jeff James
Senior Vice President

DATE: _____

DATE: 9/30/15



City Map of
Saginaw, Texas
EXHIBIT 1 STUDY AREA

Kimley  **Horn** SEPTEMBER 2015



Map Data
Map based on GIS
data as of February 2015.

Map Disclaimer
This map product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

**CITY OF SAGINAW
BUDGET SUPPLEMENT
2015-2016**

WATER & WASTEWATER

05-XXXX-55-00 EF CAPITAL PROJECTS \$ 2,328,000

05-7004-55-00	I & I Study	\$	50,000
05-7006-55-00	SF 24" Trunk Main wastewater - (impact fees \$150,000 and \$525,000 FB)	\$	675,000
05-7013-55-00	Saginaw Blvd 12" water line - impact fees	\$	250,000
05-7014-55-00	Lawson Watson water line - FB	\$	513,000
05-7015-55-00	Jarvis Rd 15" Sewer Upgrade - (developer \$200,000, escrow \$136,935, FB \$308,065)	\$	645,000
05-7016-55-00	FM 156 12" Water Line (escrow \$118,065 and FB \$76,935)	\$	195,000

fund balance	1,473,000
escrow transfer	255,000
developer cont.	200,000
impact fees	400,000

\$ 2,328,000

\$ 10,391,095