Exhibit A

Service Authorization

Service Authorization No. NA
CORE Project No. 15-036

This Service Authorization identifies the Scope of Services, and related Compensation and Schedule, to be provided by CORE Consultants, Inc. (CORE) for the Tower Road Widening Support Services, and T88 Drainage Basin Analysis and Construction Plans. This Service Authorization, once executed by the Client and CORE, becomes a part of the Agreement for Professional Services between CORE and Client, dated September 24, 2015. All terms and conditions of the Agreement for Professional Services are incorporated herein by reference.

SCOPE OF SERVICES

The following Scope of Services and Compensation represent the remaining tasks necessary for the completion of the design, reports, construction plans, and specifications associated with the T88 North and South storm drainage systems, as further represented by the Bid Set No. 1 dated December 22, 2016 and previously submitted to the City. Also included are the final services performed for the Tower Road Widening project, through February, 2017.

1. Final Design

1.1. Hydrologic and Hydraulic Modeling – T88 North System

Perform final storm drainage system modeling and facility designs, including the development of alternatives, as further defined below.

1.1.1. Alternatives Analysis

1.1.1.1. Discharge into Pond 105.

Consider the elimination of the 90-inch RCP storm sewer along E. 104th Ave. and Pond 105 by discharging the Biscay St. storm sewer directly into Pond 105 just north of E. 104th Ave. Coordinate with JR Engineering (engineering company responsible for the design of Pond 105) with respect to said alternative discharge into Pond 105, and the associated CUHP/SWMM modeling revisions.

1.1.1.2. Outfall Channel

Based upon the redesign of Pond 105 (by JR Engineering), coordinate with JR with respect to the new pond discharge design that incorporates a minor storm release under the existing Aurora 60-inch waterline, and a major storm release via a spillway over said waterline. This alternative pond release would require a re-design of the outfall channel, and updated hydraulic modeling of the channel from the Pond 105 release point to the channel terminus at the E-470 crossing.

1.1.1.3. 100th and Biscay Storm Sewers

Perform updated hydraulic analyses for the storm sewers in 100th Ave. and Biscay St. based upon the following:

- An equitable release rate from each contributing property (that is currently un-developed). Input rates from each property to the storm sewers would be determined based upon an equitable percentage of its historic release rate, providing over-detention within the tributary area that serves to optimize the size of the subject storm sewers.
- The alternative storm sewer system release point into Pond 105.

1.1.1.4. Tower Road Storm Sewer – T88 South System

Analyze alternative release rates from the Diversion Area of the Prime Sites property that correspond to alternative, smaller storm sewer pipes along the easterly side of Tower Road. Consider pipe sizes of 60" up to the current design size of 84".

1.2. Gramma Gulch Proposed Sanitary Sewer Trunk Line Maintenance Access

A sanitary sewer trunk line is proposed from Tower Road to an interceptor line in Second Creek along the Gramma Gulch channel. The proposed sanitary sewer trunk line would be a part of the South Adams County Water and Sanitation District (SACWSD). As such, the SACWSD has asked the City to consider in the design of channel improvements for Gramma Gulch a bench within the channel cross section that would facilitate a maintenance access road.

1.2.1. Utilizing CORE's CUHP/SWMM model developed for this project, perform an alternate analysis to determine the major storm design flow for fully developed, non-detained conditions for the basin tributary to the T88 South System at Gramma Gulch and Tower Road. This analysis would assume that conveyance elements upstream of the Gramma Gulch crossing at Tower Road allow for the conveyance of the fully developed, major storm design flows. This analysis would determine the major storm, design discharge rate in Gramma Gulch, and its associated Water Surface profile, from Tower Road to Second Creek, based upon the current improvements shown on the design plans for Gramma Gulch.

1.2.2. Utilizing the Water Surface profile developed above for fully developed conditions (worst case scenario), and as previously determined for historic conditions, layout an access road alignment within the channel cross-section that provides a minimum of 2-feet of freeboard above said Water Surface. The general horizontal alignment of the proposed trunk line would be provided by others, together with approximate invert elevations at both tie-in locations (Tower Road and Second Creek).

1.2.3. The width of the proposed maintenance access road would be provided by SACWSD, and incorporated into the grading analysis and plan for the Gramma Gulch channel improvements from Tower Road to future Telluride Road. Said reach represents the extent of channel improvements included on the current plan set.

1.3. <u>Final Drainage Study</u>

Finalize the Drainage Report and Plans that present the basis for the design of the storm drainage facilities within the T88 North and South Systems, and as represented by the T88 Construction Plans, including the storm sewers in 100th Ave., Biscay St., across 104th Ave., and along Tower

Rd., and the channel outfalls in Gramma Gulch and along the westerly side of E-470.

1.4. T88 South System Outfall

Review the South System outfall design with the City to confirm the completeness of the South System outfall facilities and improvements included in the subject Bid Set No. 1, dated December 22, 2016. This review would also address the remaining items of service that would be necessary outside of this Agreement, for the South System diversion to Second Creek.

2. Construction Plans

The following keys tasks are necessary to finalize the construction plan set:

2.1. Structural Design and Plans

Complete the structural design, preparation of construction drawings and details for the special transition structures associated with the storm sewer system. Revise the design, plans and details subject to the finalization of the selected alternative pipe sizes. Said structural design, plan and detail revisions would be performed for the pipe size changes and associated transition structures for both the North and South T88 Systems.

2.2. Finalize the Construction Plan Set

2.2.1. Revise the previously submitted construction plans to incorporate the City-selected North and South System alternatives.

2.2.2. Incorporate the revised structural drawings and details (by FHU) into the plan set.

2.2.3. Address City comments from previous review submittal.

2.2.4. Submit for final review and address comments.

2.2.5. Assemble final bid package and submit to City.

3. Utility Crossing Permits

Finalize discussions, coordination and the preparation of necessary permitting documents associated with the crossing of other agency utilities by the Project storm sewers and related improvements.

4. Technical Specifications and Contract Documents

4.1. Technical Specifications

Assemble technical specifications for materials and installation utilizing CDOT standard specifications. The specifications (in pdf format) would be provided to the City for its inclusion in the Project's bid documents.

4.2. Contract Documents

Assist the City's personnel in assembling the City's standard General, Special and Supplementary Conditions, providing specific project input to the City's personnel for its inclusion.

5. Engineer's Opinion of Probable Construction Costs (EOPCC)

Prepare an updated EOPCC based upon the previously provided EOPCC and the updated construction plans.

6. Project Administration

6.1. Meetings and Coordination

Meetings, presentations, project coordination, and site visits with the Client, project team, and stakeholders.

6.2. Reimbursable Expenses
Reimbursable expenses shall include reproduction, courier services, postage, shipping, and mileage.

7. Tower Road Widening Support Services

7.1. Final support services, and transition of project documents and information to Huitt-Zollars for the period of January-February, 2017.
7.2. Subconsultant services for services through January 31, 2017, as provided on invoice 17023229 dated March 6, 2017.
7.3. Additional services requested by the City and performed by FHU for the Tower Road Widening project.

ASSUMPTIONS AND CLARIFICATIONS

The following Assumptions and Clarifications are provided relative to the Scope of Services and Compensation herein:

1. The alternate storm sewer discharge into Pond 105 is accepted by the City
2. The over-detention concept, and resulting, designated pond discharge rates for the contributing properties tributary to the 100th Ave. and Biscay St. is accepted by the property owners and the City
3. City does, or will, control the legal conveyance of storm flows discharging onto the surface within the Gramma Gulch conveyance to Second Creek.
4. City acknowledges that the channel improvements proposed within Gramma Gulch may not be eligible for maintenance by the Urban Drainage & Flood Control District.
5. The preliminary horizontal alignment of the proposed Gramma Gulch Sanitary Sewer Trunk Line between Tower Road and the existing Second Creek Sanitary Interceptor Line would be provided by others. Also, the approximately invert elevations at the Tower Road and Second Creek tie-in points would be provided by the SACWSD as-built information.

SPECIFIC EXCLUSIONS

This Agreement specifically excludes the following items, and all items not listed in the Scope of Services presented herein:

1. Planning, design and processing for the proposed Second Creek Regional Detention facility.
2. Conditional Letter of Map Revision (CLOMR) preparation and processing for Second Creek.
3. Letter of Map Revision (LOMR) preparation and processing for Second Creek.
4. Bidding Phase services.
5. Construction Phase services.
6. Permanent and temporary construction easements; legal descriptions and exhibits

CLIENT RESPONSIBILITIES

The following items will be provided by Client:

1. Selection of the T88 North System alternative developed via the scope of services herein.
2. Easement legal descriptions and exhibits to be prepared by others for any permanent and temporary construction easements necessary for the T88 System.

COMPENSATION

The Scope of Services provided herein will be provided on a Fixed Fee (FF) basis and invoiced on a percent complete basis as the project and services progress.

Item	Task Description	Fee	Type
1	Final Design	$49,500	FF
2	Construction Plans	$71,000	FF
3	Utility Crossing Permits	$5,000	FF
4	Technical Specifications and Contract Documents	$4,000	FF
5	EOPCC	$1,500	FF
6	Project Administration	$3,000	FF
7	Tower Road Widening Support Services:		
	CORE	$8,435	FF
	SSG MEP	$248	FF
	FHU	$7,000	FF
	Total Fixed Fee:	**$149,683**	FF

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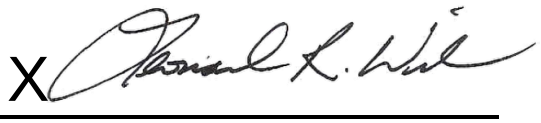
SCHEDULE

As mutually determined.

CORE is hereby authorized by Client to proceed with the Scope of Services as set forth herein.

CORE Consultants, Inc.

X 

Accepted By:

Name: Leonard R. Wilson

Title: Senior Vice President

Date: March 14, 2017

Client: City of Commerce City

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Accepted By:

Name: Click or tap here to enter text.

Title: Click or tap here to enter text.

Date: Click or tap to enter a date.