

March 6, 2023

Ms. Tracy Homfeld, P.E. Assistant Director of Engineering Collin County Engineering Department 4690 Community Ave., Suite 200 McKinney, TX 75071

Re: FM 2551 (FM 2514 to FM 2170) – Supplemental #5

CP&Y Project No. COLC1201

Dear Ms. Homfeld:

Per previous discussions CP&Y, Inc. requests Supplemental No. 5 pertaining to Contract # 2012523-08-06. The purpose of this Supplemental is request additional fees for the following additional scope of services:

- Detention Basin Analysis, including pre vs post condition analysis using Bentley PondPack to understand impacts of proposed improvements along FM 2551 and preliminary dimensions to show the detention basin modifications.
- Technical memorandum deliverable with the PondPack model findings, the volumetric addition to the detention basin needed to store excess from the proposed FM 2551 roadway improvements and the preliminary detention pond sizing with an exhibit showing preliminary dimensions.

We have attached a scope and fee document which adds to the original Exhibit A "Services to be Provided by the Engineer" and Exhibit B "Summary of Manhours". The total fee for Supplemental No. 5 is \$34,560.00.

We greatly appreciate your assistance concerning this matter. Should there be any questions or additional information needed, I can be reached at AKLOCINSKI@cpyi.com or 214.638.0500.

Respectfully submitted,

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Andrea Klocinski, P.E.

Project Manager

1820 Regal Row, Suite 200 Dallas, Texas 75235 (p) 214.638.0500 · (f) 214.638.3723 www.cpyi.com

SUPPLEMENTAL #5 TO EXHIBIT A

FM 2551 (from FM 2514 to FM 2170) Collin County

Services To Be Provided By Engineer:

The construction will include the widening of FM 2551 from an existing two-lane asphalt roadway to an ultimate six-lane concrete section with curb and gutter, enclosed storm sewers, raised median, and horizontal re-alignment. The re-alignment will eliminate the approximately 2200 ft. offset of FM 2551 at FM 2514 by connecting the two section of FM 2551 with an "S-curve", beginning approximately 760 ft. north of FM 2514 and ending approximately 320 ft. north of Curtis Drive. Additionally, existing storm sewer will be upgraded and pavement cut & restored along FM 2514 at FM 2551 for approximately 2600 ft. to Maxwell Creek to the west. The project will be prepared in conformance with TxDOT Dallas District requirements.

The engineering work for this project will consist of the tasks as outlined below. It is the intent of Exhibit A (TASK OUTLINE) to help clarify the scope of work.

TASK OUTLINE

- 1. Detention Basin Analysis
 - a. Engineer will obtain from Client previous detention pond as-builts and analysis performed to size the existing detention basin in the northeast portion of the project alignment. The Engineer will obtain from the client flume dimensions and details acting as the detention basin outfall. The Engineer will obtain from the Client contributing drainage areas to the basin with calculations showing the flow rates for each drainage area for the existing analysis. For the post condition analysis, drainage calculations from the FM 2551 project will be used.
 - b. Engineer will perform a pre vs. post analysis of the existing detention pond using Bentley PondPack to quantify and understand the impacts of the proposed improvements along FM 2551. Modeling will be completed to show the impacts and recommendations will be made to properly size detention basin improvements to account for the excess stormwater runoff created from the proposed FM 2551 project. The excess volume and flow rate will be obtained, and preliminary dimensions will be provided to show the detention basin modifications needed to store the excess stormwater runoff.
 - c. The deliverable will be in the form of a technical memorandum discussing the findings of the PondPack model, the volumetric addition to the detention basin needed to store the excess stormwater runoff created form the proposed roadway improvements to FM 2551, and preliminary detention pond sizing to account for the runoff with an exhibit showing preliminary dimensions. The PondPack model will also be provided to the Client once complete.

Services Not Provided By Engineer:

- 1. Detention basin design sheets including grading and detention basins plan and profile with a detail sheet.
- 2. 2D modeling with details of sheet flow analysis showing localized ponding, times of concentration, and flows from 2D modeling. All modeling will be completed as a 1D analysis in Bentley Pond Pack.
- 3. Modifications or development of permits.

EXHIBIT B METHOD OF PAYMENT: SPECIFIED RATE

COLLIN COUNTY FM 2551 Detention Basin Analysis 6-Mar-23

Fee Schedule/Budget for CP&Y, Inc.

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Phase	Description	Senior PM	Sr. Project Engineer	Structural Engineer		EIT/Sr. Engg. Tech.		Survey Crew	Utility Crew w/SUE & Truck	Observation Personnel	Project Assistant	Total Hours	Total Engineering	Total Engineering as Percent
		\$215.00	\$175.00	\$200.00	\$135.00	\$105.00	\$150.00	\$150.00	\$235.00	\$110.00	\$90.00		Fees	of Total Fee
1	Detention Basin Analysis													
а	Data Collection	2.00	4.00		4.00	8.00						18.00	\$ 2,510.00	7.3%
b	Detention Basin Modeling and Analysis											-	\$ -	0.0%
	Hydrology Calculations and Model													
	Input with Internal Drainage Areas	4.00	8.00		8.00	8.00						28.00	\$ 4,180.00	12.1%
	Detention Pond Modeling in Bentley													
	PondPack	12.00	24.00		40.00	40.00						116.00	\$ 16,380.00	47.4%
	Detention Pond As-built Detail and													
	Dimensioning	2.00	4.00		8.00	12.00						26.00		10.0%
С	Techincal Memorandum	4.00	8.00		24.00	24.00						60.00	\$ 8,020.00	23.2%
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	HOURS SUB-TOTALS	24.00	48.00	-	84.00	92.00	-	-	-	-	-	248.00		Ì
	FEES SUBTOTAL		\$ 8,400.00	\$ -		\$ 9,660.00	\$ -	\$ -	\$ -	\$ -	\$ -		\$ 34,560.00	100.0%
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