



City of Hutto

Agenda

City Council Meeting

Thursday, February 24, 2022 at 6:00 PM

City Council Chambers

In accordance with the Texas Open Meetings Act this meeting agenda is posted for public information, continuously, for at least 72 hours prior to the scheduled time of the meeting on the bulletin board located on the exterior wall of the City Hall building at 500 West Live Oak, Hutto, Texas. This meeting agenda is also accessible via the Internet at huttotx.gov

1. **CALL SESSION TO ORDER**
2. **ROLL CALL**
3. **INVOCATION**
4. **PLEDGE OF ALLEGIANCE**
5. **CITY MANAGER COMMENTS**
6. **CITY COUNCIL COMMENTS**

Pursuant to Texas Government Code Sec. 551.0415, a member of the governing body may make an announcement about items of community interest during a meeting of the governing body without given notice of the subject of the announcement. Items of Community Interests include: (1) expressions of thanks, congratulations, or condolence; (2) information regarding holiday schedule; (3) an honorary or salutary recognition of public official, public employee, or other citizen, except that a discussion regarding a change in the status of a person's public office or public employment is not an honorary or salutary recognition of the subdivision; (4) a reminder regarding social, ceremonial, or community event organized or sponsored by an entity other than the governing body that was attended or is scheduled to be attended by a member of the governing body or an official or employee of the political subdivision; and (5) announcements involving imminent threat to the public health and safety of people in the political subdivision that has arisen after the posting of the agenda.

7. **PUBLIC COMMENT**

Any citizen wishing to speak during public comment may do so after completing the required registration form. The purpose of this item is to allow the residents of Hutto and other interested persons an opportunity to address the City Council on agenda issues and on non-agenda issues that are a matter of the jurisdiction of the City Council (i.e., City policy or legislative issues). Non-agenda issues regarding daily operational or administrative matters should be first dealt with at the administrative level by calling City Hall at (512) 759-4839 during business hours. Each person providing public comment will be limited to 3 minutes. Any citizen wishing to speak during public comment may do so after completing the required registration form. Written comments for this meeting may also be sent to comments@huttotx.gov PRIOR to 4:00 pm on 2/24/22. The email must include name, address, phone # and email to be recognized properly. Written comments will be provided to Council.

8. **OTHER BUSINESS**

- 8.1. Discussion and possible action to approve engineering services contract with Garver related to development of wastewater utility master plan. (Wade Benton)

- 8.2. Discussion and possible action to approve engineering services contract with Freese and Nichols related to development of water utility master plan. (Wade Benton)

9. EXECUTIVE SESSION

The City Council for the City of Hutto reserves the right to adjourn into executive session at any time during the course of this meeting to discuss any of the matters listed above as authorized by the Texas Government Code Sections 551.071 (Litigation/Consultation with Attorney), 551.072 (Deliberations regarding real property), 551.073 (Deliberations regarding gifts and donations), 551.074 (Deliberations regarding personnel matters) or 551.076 (Deliberations regarding deployment/implementation of security personnel or devices) and 551.087 (Deliberations regarding Economic Development negotiations).

- 9.1. Receive legal advice pursuant to Texas Government Code Sec. 551.071 related to Pending Legal Requests, Potential Claims and City Council Legal Requests.

10. ACTION RELATIVE TO EXECUTIVE SESSION

- 10.1. Consideration and possible action related to legal advice received pursuant to Texas Government Code Sec. 551.071 related to Pending Legal Requests, Potential Claims and City Council Legal Requests.

11. ADJOURNMENT

12. CERTIFICATION

I certify that this notice of the Hutto City Council meeting was posted on the City of Hutto website and the City Hall bulletin board of the City of Hutto on February 18, 2022 at 5:00 P.M.



Angela Walton

The City of Hutto is committed to comply with the Americans Disability Act. The Hutto City Council Chamber is wheelchair accessible. Request for reasonable special accommodations must be made 48 hours prior to the meeting. Please email the City Secretary's office at Gracie.Perez@huttotx.gov or call (512) 759-4033 for assistance.

AGENDA ITEM REPORT

8.1.



To: City Council
Subject: Discussion and possible action to approve engineering services contract with Garver related to development of wastewater utility master plans. (Wade Benton)

Meeting: Thursday, February 24, 2022
Department: Engineering /
Staff Contact: Wade Benton

BACKGROUND INFORMATION:

City's current wastewater master plan update was completed in 2018. Due to high growth rate, staff recommends initiation of an update to the current master plan.

SUMMARY OF REQUEST:

The engineering scope of work includes short term development of dynamic system model to be used to evaluate current requests for wastewater service from planned developments. In addition, the scope will include long range system planning and development of capital improvement plan (CIP) for implementation.

STAFF REVIEW:

FINANCIAL IMPACT:

POLICY IMPLICATIONS:

ATTACHMENTS:

1. Garver Wastewater Task Order 2022-004 - Signed



TASK ORDER #2022-04

2022 Comprehensive Wastewater Master Plan

In accordance with Agreement for On Demand Services between the City of Hutto (Owner) and Vendor, the parties agree as follows:

1. Background Data

- a. Effective Date of Task Order #2022-04: February 24, 2022
- b. Owner: City of Hutto
- c. Vendor: Garver, LLC
- d. Specific Project (title): Short-term Wastewater System Analysis and Master Plan
- e. Specific Project (description): Services to be provided under this Task Order include a short-term wastewater analysis to help identify existing system deficiencies and short-term water system improvements. After the completion of the short-term analysis, Garver will conduct a comprehensive wastewater master plan. The master plan includes long-term growth assumptions, water model calibration, future wastewater system modeling, and the development of a Wastewater Capital Improvements Plan.
- f. Specific Project Time of Completion (schedule): Garver is authorized to commence work on the project upon execution of this Task Order and agrees to perform the services in accordance with Attachment B - Schedule. If Garver's services are delayed through no fault of Garver, Garver shall be entitled to equitable adjustment of rates and amounts of compensation and Garver shall be entitled to adjust contract schedule consistent with the number of days of delay.

2. Basic Services:

The Basic Services to be provided or furnished by Vendor under this Task Order are:
See Attachment A – Scope of Services

3. Proposal deliverables: See Attachment A – Scope of Services

4. Fee:

Garver proposes to furnish services as described herein for the not-to-exceed fee of three hundred thirty-nine thousand one hundred ninety-two dollars (\$339,192.00) for Basic Services as further described in Attachment C.

TASK ORDER #2022-004

2022 Comprehensive Wastewater Master Plan

Vendor agrees to provide the services within this Task Order and Vendor is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

The Effective Date of this Task Order (#2021-004) is February 24, 2022.

OWNER:
By: _____

Print Name: _____

Title: _____

VENDOR: 
By: _____

Print Name: Daniel N. Olson, P.E.

Title: Vice President

ATTACHMENT A – SCOPE OF SERVICES

General

Generally, the scope of services includes model development, development and load projections, hydraulic modeling, and capital planning for the **Hutto Wastewater Collection System Master Plan** project. This effort is broken into two main phases. The first phase is specifically intended to quickly develop a hydraulic modeling tool that can be used to assess the impact of new and planned developments on the existing wastewater collection system, given known information about loadings and peaking factors in the system.

Phase 1 services will consist of development of a wastewater collection system hydraulic model in InfoWorks ICM software. The hydraulic model will be based on information contained in GIS shapefiles and supplemented with information from record drawings. The model will include all gravity pipes 10-inch and larger, significant lift station and force main facilities, and select smaller-diameter gravity pipes as necessary for network connectivity. A final technical memorandum will be provided summarizing the model development process and existing capacity assessment findings.

The second phase is a comprehensive wastewater master plan that includes development and load projections, facility performance testing, dry and wet weather model calibration, and development of wastewater capital improvements to address existing system issues and accommodate future growth.

1. PHASE 1 – MODEL CONSTRUCTION

1.1. Data Request and Review

Garver will submit a data request and review all provided files related to development and loading of a wastewater collection system model for Hutto. The data request may include but is not limited to:

- Prior wastewater capacity assessment or modeling information for the Hutto wastewater collection system, including existing Living Unity Equivalent (LUE) allocations, wet weather information, existing infrastructure characteristics, etc.
- All available GIS data and shapefiles for the main Hutto wastewater collection system
 - Sewer Lines (Gravity/FM)
 - Manholes
 - Lift Stations
 - Treatment Facilities
- Elevation information for the service area (contours shapefiles, LiDAR data, etc.)
- Any existing Master Planning-type data, flow forecasts, existing model data, etc. for the Hutto wastewater collection system
- As-built information covering collection system
 - Gravity mains
 - Diversion structures
 - Lift stations and force mains
 - Lift station pump data, where available, including manufacturer pump curves and pump test results
- Any available flow data including:
 - Flow data from the WWTP
 - Flow data from lift stations
 - Flow data from collection system flow monitoring
- Maps/Plats of any known existing development in the wastewater service area
- Geocoded water meter shapefile, water meter data, and/or customer usage data for customers within the wastewater service area

- Records of known sanitary sewer overflows (SSOs) within the system.
- Wastewater treatment plant process performance data including:
 - Essential data required to begin investigation. Previous three years operating data including:
 1. Daily and 2-hr flows
 2. Influent and effluent BOD, TSS, NH3
 3. Effluent DO
 4. Influent and effluent alkalinity (as available)
 5. WAS rates
 6. MLSS Data (for each aeration basin, if available)
 7. Plant AS-Built Drawings
 - Additional requested information, not required to start investigation:
 1. DO Profile of aeration basins using hand held DO probes
 2. Blower Performance Curves
 3. Short interval flow and DO data pulled from SCADA for all available recent weeks/months. As much data as can reasonably be provided is requested.

1.2. Model Development

Following review of available data, Garver will create a hydraulic model of the Hutto wastewater collection system using InfoWorks ICM software. This model will include significant lift station and force main facilities, all gravity pipes 10-inch and larger, hydraulic structures (diversions, siphons, etc.), and smaller-diameter gravity pipes necessary for system connectivity. Garver will use information in the GIS shapefiles, as-built drawings, and pump information provided by the City to identify physical parameters for the system.

1.3. Model Loading

Following model construction as described in Task 1.2, Garver will evaluate available flow information, customer connection information, and City development standards to estimate existing wastewater loadings. Garver will confirm design criteria with the City to be used in model scenarios, including the following:

- Estimated persons/LUE for various development types (e.g. single-family (SF) and multi-family (MF) residential)
- Estimated gpcd for various development types.
- Estimated wet weather peaking factor.

Garver will develop scenarios for average dry weather and peak wet weather flows for existing conditions and for additional developments currently under construction. This scope is not anticipated to include planned or future developments; to conserve time, the analysis of those developments will be performed in Phase 2.

Garver will conduct model calibration limited to what existing information is available from prior capacity assessments and spreadsheet-model information, as well as wastewater plant flow data, provided by the City. This information will be reviewed for accuracy and completeness based on the current development and LUE saturation information provided by the City. More detailed calibration using direct-observation methods (e.g., facility performance testing) will be conducted under Phase 2.

1.4. Capacity Assessment

Prior to evaluating the system's capacity, Garver will confirm design criteria with the City to be used in evaluating model scenarios, including the following:

- Allowable system percent full or surcharge levels.
- Allowable force main velocity.

Garver will then complete hydraulic simulations using the wastewater collection system hydraulic model to evaluate the hydraulic capacity of the existing City wastewater collection system. This evaluation will be limited to system elements included in the hydraulic model. Garver will evaluate the system's capacity under the below scenarios:

- Existing development
 - Average Dry Weather Flows
 - Peak Wet Weather Flows

Garver will then determine an estimated remaining capacity in each sub-basin within the collection system in terms of number of LUE, which can assist in evaluating future additional loadings.

1.5. Technical Memorandum

Garver will develop a Technical Memorandum to document the model development process and summarize the capacity assessment findings. Garver will submit a DRAFT technical memorandum to the Owner. Garver will incorporate Owner's comments on the DRAFT memorandum into a FINAL Technical Memorandum.

2. **PHASE 2 – COMPREHENSIVE WASTEWATER MASTER PLAN**

2.1. Population and Flow Projections

A. Review Historical Wastewater Flow Data

Garver will review available geo-located water meter data for all sewer connections. Non-sewer connections and irrigation meters will be removed from the data set by Garver. Garver will review available winter water demand information as provided by Freese and Nichols Inc (FNI) and use that to estimate historical wastewater flow data by residential, commercial, and industrial usage over the last 5 years, including the top 10 large users.

B. Wastewater Flow Projections

Garver will review land use assumptions and population projections to be provided by FNI. Based on the selected design criteria and land use assumptions, Garver will calculate and spatially distribute projected wastewater flows for the proposed planning horizons. Planning horizons include the 5-year, 10-year, 25-year, and buildout conditions, to be confirmed upon discussion with the City. Wastewater flow projections for average daily and peak wet weather flow will be developed. Garver will provide distributed population projections incorporating land uses and acreage in a GIS shapefile format. Garver will distribute projected non-residential wastewater flows using land uses, acreage and peaking factors utilizing these population projections.

C. Sewer Basin Delineation and Sub-catchment Generation

Garver will complete sewer basin delineations using GIS shapefiles and ground contour mapping. Garver will develop sewer sub-basin delineation representing geographical areas

within each sewer basin. Garver will identify the sub-basins associated with each of the lift stations in the system. Garver will generate sub-catchments for each sewer sub-basin showing which areas feed into each sewer manhole within their respective flow meter basins.

D. Distribute Updated Wastewater Flow in the Model

Geocoded water billing data, population and commercial flow projections, and flow data analysis (See Task 2.2) will be used to assign flows to the sub-catchments for wastewater system analysis. Garver will assign residential and commercial diurnal patterns to each sub-catchment based on the available flow data for the system.

2.2. Facility Performance Testing and Flow Analysis

Garver will conduct facility performance testing at up to six (6) lift stations:

A. Collect SCADA Data

Garver will work with City staff to collect and analyze all available SCADA data related to the wastewater collection system. The data will be utilized for updating information including, but not limited to pump on/off levels at lift stations, pump run times (if available), diversion structure controls, etc. The SCADA data will also be used during the dry weather and wet weather calibration to ensure that the model reflects the existing wastewater collection system.

B. Develop Field Data Collection Plan

Garver will review record drawings and complete site visits, as necessary, to develop a Facility Performance Testing plan. Garver will review this Facility Performance Testing plan with the City.

C. Facility Performance Testing

Garver will assist and coordinate with the City in performing Facility Performance Testing at up to six (6) lift stations. The goal of the Facility Performance Testing is to determine flow rate and pressure during pump operations, including multiple pumps operating simultaneous (if applicable). Flow rates will be determined via direct flow measurement with existing flow meters and/or calculated based on wet well fill and drawdown. Discharge pressure will be collected using existing pressure gauges or pressure gauges provided by Garver. If possible, suction pressure will be collected using existing pressure gauges or pressure gauges provided by Garver. It may be necessary for the City to install connections for installation of pressure gauges.

D. Field Data Analysis and Evaluation

Garver will evaluate the data collected in the field during the Facility Performance Testing. Garver will determine the flow and total head for each pump and compare to manufacturer pump curves to assess the mechanical fitness of each pump. Garver will utilize flow and discharge pressure information to determine the current condition of the force main for each lift station.

E. Flow Data and SCADA Evaluation

Garver will assess system flow data and SCADA data for each of the lift stations to develop diurnal flow patterns and identify peak wet weather flows. SCADA and flow data for the last two (2) years will be analyzed. Dry weather data will be used to calibrate flow magnitude and flow patterns. Wet weather data will be used to identify representative wet weather peaking factors.

2.3. Update Wastewater Hydraulic Model

Garver will utilize the model constructed in Task 1 in InfoWorks ICM SE software by Innovyze as the base for updates in this task.

A. Field Investigation and Verification

Garver will identify areas for the City survey staff to investigate any missing information as identified during the model building process completed in Task 1. Garver will locate areas where verification of flow direction is necessary and as-built information is not available. The City's staff will perform the investigations and provide the requested information to Garver.

B. Dry Weather Model Calibration:

Garver will perform a dry weather calibration of a selected dry weather flow event using calibrated flow volume by adjusting antecedent conditions, per-capita flows, diurnal curves, and dry weather infiltration. Garver will prepare figures and exhibits to illustrate the field vs. model calibration results.

C. Wet Weather Model Calibration:

Garver will review historical wet weather flow data and identify up to three (3) storm events. Garver will perform wet weather calibration on the InfoWorks ICM SE model using EPA approved RTK methodology on selected wet weather flow events using I/I hydrographs and publicly-available rain gauge and NEXRAD radar rainfall information. Garver will adjust lift station parameters based on system response observed during calibration events using SCADA records. Garver will prepare figures and exhibits to illustrate the field vs. model calibration results.

D. Wastewater Model Update and Calibration Workshop

Garver will meet with the City to review the results of the wastewater model update and calibration and to document the design criteria identified in the following Section 2.4. Garver will prepare and distribute meeting minutes.

2.4. Develop Design Criteria for System Improvements

Garver will evaluate and recommend wastewater system planning criteria, including design flows, design storm, minimum and maximum pipeline velocities, TCEQ requirements, and surcharging guidelines for project initiation and design of improvements. The criteria will be based on level of service and will determine what surcharging, if any, is allowed, minimum and maximum velocity constraints, etc. are acceptable under different conditions.

2.5. Hydraulic Evaluation

A. Existing System

Garver will model the existing collection system using the calibrated wastewater model with selected design storm(s) and identify existing surcharging and overflow locations and other capacity/restriction issues. Garver will prepare mapping and model results showing all modeled surcharging and overflow locations.

B. Future Systems

Using the buildout model peak wet weather scenario results, Garver will develop and size improvements to eliminate excessive surcharging and overflows in the collection system resulting from increased wastewater flow from projected future growth, development, and

redevelopment. Garver will develop improvement alternatives for gravity lines, lift stations, force mains, special structures, and treatment facilities.

C. Determine Phasing of Wastewater System Improvements

Garver will use the existing, 5-year, 10-year, 25-year, and buildout (subject to adjustment based on confirmation with City) model scenarios to determine phasing of wastewater system improvements. System improvements will include conveyance, storage, pumping, and wastewater treatment related needs.

D. WWTP Capacity Evaluation

Garver will identify, evaluate, and provide recommendations regarding the City's ability to meet existing and projected wastewater treatment needs. Garver will provide charts and graphs identifying future wastewater treatment plant flow projections and develop a proposed timeline for expansion(s). Garver will provide recommendations for phasing of future expansions over the buildout horizon for that facility.

2.6. Wastewater Plant Evaluation

Garver will perform an inside-the-fence evaluation of the existing wastewater treatment plants. Based on the findings from Task 2.5, Garver will evaluate (i) the processes and potential phased buildout capacity of the City's two existing WWTPs (Central and South), including conceptual site plans for those facilities, and (ii) the sizing and potential locations of up to two conceptual new treatment plants, as needed to meet ultimate wastewater flows identified in Task 2.5. The study will include unit process phasing and equipment sizing optimization for potential future buildout at the two existing WWTPs.

It is intended that the findings from Task 2.6 will be incorporated as a section into the Wastewater Master Plan Report being delivered in PHASE 2 of the project. The Task 2.6 findings will include:

- a. A description of existing treatment processes, capacities and constraints;
- b. Recommendations for the phased expansion of the Central and South WWTPs to their ultimate permit-limited capacities;
- c. Proposed locations for potential new WWTPs (up to two), and high-level process recommendations for those conceptual plants;
- d. A summary of potential future regulatory changes and process improvements that may be considered to meet those regulations and/or optimize existing WWTP capacity;
- e. A list of recommended improvements with planning level budgetary costs for each phase.

It is anticipated that this effort will include two (2) site visit days, one to cover the two existing WWTPs, and a second to investigate potential siting locations for conceptual feasibility.

2.7. Capital Improvements Plan and Master Plan Report

A. Develop Draft Capital Improvement Plan (CIP) Costs, Schedule, and Mapping

Garver will develop a comprehensive Wastewater Capital Improvements Plan based on capacity needs for existing, 5-year, 10-year, 25-year and buildout (subject to adjustment based on confirmation with City) planning periods. Planning level cost estimates for each proposed project will be developed in Year 2022 dollars. One (1) large scale (22"x34") map will be produced showing proposed projects and phasing through the buildout scenario. Garver will also prepare one-page quick reference guides for the recommended capital projects, including an exhibit, detailed description, and justification for each project.

B. Wastewater Capital Improvements Workshop

Garver will conduct a workshop with the City to review and discuss proposed wastewater capital improvements.

C. Prepare Draft Master Plan Report

Garver will prepare a draft Wastewater Master Plan Report summarizing wastewater flow projections, model calibration, existing and future system analysis, and CIP development.

D. Prepare Final Master Plan Report

Garver will revise the wastewater portions of report based on comments from the City.

3. Project Deliverables

The following will be submitted to the Owner, or others as indicated, by Garver:

A. PHASE 1

- a. DRAFT Technical Memorandum (Electronic PDF)
- b. FINAL Technical Memorandum (Electronic PDF)
- c. One (1) copy of large-scale (22"x34") map exhibit of estimated available LUE capacity by sub-basin.

B. PHASE 2

- a. Facility Performance Testing Plan (Electronic PDF)
- b. DRAFT Capital Improvements Plan (Electronic PDF)
- c. DRAFT Wastewater Master Plan Report (Electronic PDF)
- d. FINAL Wastewater Master Plan Report (Electronic PDF)
- e. One (1) copy of large-scale (22"x34") map exhibit of proposed Wastewater Capital Improvements Plan.

4. Extra Work

The following items are not included under this agreement but will be considered as extra work:

- A. Wastewater hydraulic model development beyond that described above.
- B. Smoke testing, CCTV collection, or other condition assessment.
- C. Survey or field-verification of existing facilities beyond that specifically identified for the Facility Performance Testing. It is assumed that City of Hutto staff will review and verify all facility-related information provided in Task 1, and that such data will be ready for direct incorporation into the model. It is assumed that City of Hutto staff will collect survey and field-verification information necessary for the collection system.
- D. Transient analysis for lift station and force main systems.
- E. Temporary flow and rainfall monitoring.
- F. Risk-based planning evaluations incorporating condition likelihood of failure and consequence of failure scores.
- G. Wire-to-water pump tests at facilities, including electrical data monitoring.
- H. Comparison of lift stations to Hydraulic Institute (HI) standards.
- I. Detailed hydraulic and treatment capacity evaluation of individual WWTP processes.
- J. TPDES permit amendment.

Extra Work will be as directed by the Owner in writing for an addition fee as agreed upon by the Owner and Garver.

ATTACHMENT B - SCHEDULE

Garver shall begin work under this Agreement within ten (10) days of a Notice to Proceed and shall complete the work in accordance with the schedule below:

Phase Description	Calendar Days
PHASE 1 – Model Development (Two Months Total)	
Task 1.1 Data Request and Review	15 days from Notice to Proceed
Task 1.2 Model Development	30 days from Task 1.1 completion
Task 1.3 Model Loading	30 days from Task 1.1 completion
Task 1.4 Capacity Assessment	Concurrent with Task 1.3
Task 1.5 Technical Memorandum	15 days from Task 1.4 completion
PHASE 2 – Comprehensive WWMP (Five Months Total)	
Task 2.1 Population and Flow Projections	15 days from Phase 1 completion
Task 2.2 Facility Performance Testing	30 days from Task 2.1 completion
Task 2.3 Update WW Model	30 days from Task 2.2 completion
Task 2.4 Develop Design Criteria	Concurrent with Task 2.3
Task 2.5 Hydraulic Evaluations	60 days from Task 2.4 completion
Task 2.6 Wastewater Plant Evaluation	120 days from Task 1.1 completion*
Task 2.7 CIP and WWMP Report	15 days from Task 2.5 completion
DRAFT WWMP Report	7 months from Phase 1 NTP
FINAL WWMP Report	9 months from Phase 1 NTP

**Note: Task 2.6 – Wastewater Plant Evaluation is anticipated to initiate during Phase 1 and proceed concurrently to the earlier Phase 2 tasks.*

Project Schedule	2022																							
	Feb.		March			April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.		
Notice to Proceed																								
Phase 1 - Model Development																								
Task 1.1 Data Request and Review																								
Task 1.2 Model Development																								
Task 1.3 Model Loading																								
Task 1.4 Capacity Assessment																								
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Task 2.6 Wastewater Plant Evaluation																								
Task 2.7 CIP and WWMP Report																								
DRAFT WWMP Report																								
FINAL WWMP Report																								

ATTACHMENT C – PAYMENT

For the work described in this Scope of Services, the Owner will pay Garver on a contract not to exceed basis. The estimated fee for the scope of services described above is **\$339,192** in accordance with the labor breakdown presented below. The Owner will pay Garver on a monthly basis, based upon statements submitted by Garver to the Owner indicating the estimated proportion of the work accomplished.

The Owner represents that funding sources are in place with the available funds necessary to pay Garver. If any payment due Garver under this agreement is not received within 60 days from date of invoice, Garver may elect to suspend services under this agreement without penalty or liquidated damages assessed from the Owner.

Attachment C

City of Hutto
Comprehensive Wastewater Master Plan

All Tasks

WORK TASK DESCRIPTION		E-5	E-3	E-5	E-3	E-1	E-6	E-2	GARVER	GARVER	TOTAL
		\$238.00	\$167.00	\$238.00	\$167.00	\$119.00	\$292.00	\$138.00	LABOR	TOTAL	
		hr.	hr.	hr.	hr.	hr.	hr.	hr.			
Basic Services Section											
1.	TASK 1 - Model Construction										
	1.1 Data Request and Review	2	8		16				\$4,484	\$4,484	\$4,484
	1.2 Model Development	4	16	2	80	20			\$19,840	\$19,840	\$19,840
	1.3 Model Loading	2	16	2	80	20			\$19,364	\$19,364	\$19,364
	1.4 Capacity Assessment	2	16		80	20			\$18,888	\$18,888	\$18,888
	1.5 Technical Memorandum	4	8	4	40	10			\$11,110	\$11,110	\$11,110
	Quality Control Review	8		24					\$7,616	\$7,616	\$7,616
	Subtotal - TASK 1 - Model Construction	22	64	32	296	70	0	0	\$81,302	\$81,302	\$81,302
2.	TASK 2.1 - Population and Flow Projections										
	A. Review Historical Wastewater Flow Data		8		32				\$6,680	\$6,680	\$6,680
	B. Wastewater Flow Projections		12	2	40				\$9,160	\$9,160	\$9,160
	C. Sewer Basin Delineation and Sub-catchment Generation		12		80				\$15,364	\$15,364	\$15,364
	D. Distribute Updated Wastewater Flow in the Model		8	2	60				\$11,832	\$11,832	\$11,832
	Quality Control Review	8		8					\$3,808	\$3,808	\$3,808
	Subtotal - TASK 2.1 - Population and Flow Projections	8	40	12	212	0	0	0	\$46,844	\$46,844	\$46,844
3.	TASK 2.2 - Facility Performance Testing and Flow Analysis										
	A. Collect SCADA Data		8		40				\$8,016	\$8,016	\$8,016
	B. Develop Field Data Collection Plan	2	4	2	16				\$4,292	\$4,292	\$4,292
	C. Facility Performance Testing	4	8	2	16				\$5,436	\$5,436	\$5,436
	D. Field Data Analysis and Evaluation		8	2	40				\$8,492	\$8,492	\$8,492
	E. Flow Data and SCADA Evaluation		8	2	40				\$8,492	\$8,492	\$8,492
	Quality Control Review	4		8					\$2,856	\$2,856	\$2,856
	Subtotal - TASK 2.2 - Facility Performance Testing and Flow Analysis	10	36	16	152	0	0	0	\$37,584	\$37,584	\$37,584
4.	TASK 2.3 - Update Wastewater Hydraulic Model										
	A. Field Investigation and Verification	2	4		8				\$2,480	\$2,480	\$2,480
	B. Dry Weather Model Calibration		8	2	24				\$5,820	\$5,820	\$5,820
	C. Wet Weather Model Calibration		12	2	48				\$10,496	\$10,496	\$10,496
	D. Wastewater Model Update and Calibration Workshop	4	8		16				\$4,960	\$4,960	\$4,960
	Quality Control Review	4		8					\$2,856	\$2,856	\$2,856
	Subtotal - TASK 2.3 - Update Wastewater Hydraulic Model	10	32	12	96	0	0	0	\$26,612	\$26,612	\$26,612
5.	TASK 2.4 - Develop Design Criteria for System Improvements										
	A. Develop Design Criteria	2	8		16				\$4,484	\$4,484	\$4,484
	Quality Control Review	2		2					\$952	\$952	\$952
	Subtotal - TASK 2.4 - Develop Design Criteria for System Improvements	4	8	2	16	0	0	0	\$5,436	\$5,436	\$5,436
6.	TASK 2.5 - Hydraulic Evaluation										
	A. Existing System	2	4	2	16	8			\$5,244	\$5,244	\$5,244
	B. Future Systems	4	12	4	60	20			\$16,308	\$16,308	\$16,308
	C. Determine Phasing of Wastewater System Improvements	2	12	4	60	20			\$15,832	\$15,832	\$15,832
	D. WWTP Capacity Evaluation	2	8	2	16	8	4		\$7,080	\$7,080	\$7,080
	Quality Control Review	12		12			4		\$6,880	\$6,880	\$6,880
	Subtotal - TASK 2.5 - Hydraulic Evaluation	22	36	24	152	56	8	0	\$51,344	\$51,344	\$51,344
7.	TASK 2.6 - Wastewater Plant Evaluation										
	A. Plant Process and Buildout Phasing Evaluation	4	16		24	16	40	80	\$32,256	\$32,256	\$32,256
	Quality Control Review	8		8			12		\$7,312	\$7,312	\$7,312
	Subtotal - TASK 2.6 - Wastewater Plant Evaluation	12	16	8	24	16	52	80	\$39,568	\$39,568	\$39,568
8.	TASK 2.7 - Capital Improvements Plan and Master Plan Report										
	A. Develop CIP Costs, Schedule, and Mapping	2	16	4	40	20	12	20	\$19,424	\$19,424	\$19,424
	B. Wastewater Capital Improvements Workshop	4	8		12	8	8		\$7,580	\$7,580	\$7,580
	C. Prepare Draft Master Plan Report		12		40	16			\$10,588	\$10,588	\$10,588
	D. Prepare Final Master Plan Report		6		20	8			\$5,294	\$5,294	\$5,294
	Quality Control Review	16		16					\$7,616	\$7,616	\$7,616
	Subtotal - TASK 2.7 - Capital Improvements Plan and Master Plan Report	22	42	20	112	52	20	20	\$50,502	\$50,502	\$50,502
Project Totals		110	274	126	1060	194	80	100	\$339,192	\$339,192	\$339,192
Project Totals (Cost)		\$26,180.00	\$45,758.00	\$29,988.00	\$177,020.00	\$23,086.00	\$23,360.00	\$13,800.00			

AGENDA ITEM REPORT

8.2.



To: City Council
Subject: Discussion and possible action to approve engineering services contract with Freese and Nichols related to development of water utility master plans. (Wade Benton)

Meeting: Thursday, February 24, 2022
Department: Development Services /
Staff Contact: Wade Benton

BACKGROUND INFORMATION:

City's current water master plan update was completed in 2016. Due to high growth rate, staff recommends initiation of an update to the current master plan.

SUMMARY OF REQUEST:

The engineering scope of work includes short term system model calibration and updates to evaluate current requests for wastewater service from planned developments. In addition, the scope will include long range system planning and development of capital improvement plan (CIP) for implementation.

STAFF REVIEW:

FINANCIAL IMPACT:

Budget amendments for this contract were presented at the February 17, 2022, City Council meeting for first reading. The budget amendments will need to be approved on second reading at the March 3, 2022, City Council meeting in order to have funding for this project.

POLICY IMPLICATIONS:

ATTACHMENTS:

1. TASK ORDER 2022-004 - Water Master Plan



TASK ORDER #2022-004

Short-term Water System Analysis and Master Plan

In accordance with Agreement for On Demand Services between the City of Hutto (Owner) and Vendor, the parties agree as follows:

1. Background Data
 - a. Effective Date of Task Order #2022-004: February 24, 2022
 - b. Owner: City of Hutto
 - c. Vendor: Freese and Nichols
 - d. Specific Project (title): Short-term Water System Analysis and Master Plan
 - e. Specific Project (description): Services to be provided under this Task Order include a short-term water analysis to help identify existing system deficiencies and short-term water system improvements. After the completion of the short-term analysis, FNI will conduct a comprehensive water master plan. The master plan includes long-term growth assumptions, water model calibration, future water system modeling, and the development of a Water Capital Improvements Plan.
 - f. Specific Project Time of Completion (schedule): FNI is authorized to commence work on the project upon execution of this Task Order and agrees to perform the services in accordance with Attachment B - Schedule. If FNI's services are delayed through no fault of FNI, FNI shall be entitled to equitable adjustment of rates and amounts of compensation and FNI shall be entitled to adjust contract schedule consistent with the number of days of delay.
2. Basic Services:

The Basic Services to be provided or furnished by Vendor under this Task Order are: See Attachment A – Scope of Services
3. Proposal deliverables: See Attachment A – Scope of Services

4. Fee:

FNI proposes to furnish services as described herein for the not-to-exceed fee of two hundred ninety-eight thousand four hundred forty-eight dollars (\$298,448.00) for Basic Services. If FNI sees the Scope of Services changing so that additional services are needed, FNI will notify the City before proceeding. Additional services shall be based on the rates in Attachment C.

Point of Contact: Padma Patla, Director of Public Works

Email Address: padma.patla@huttotx.gov

Phone Number: 512.759.4025

TASK ORDER #2021-004

Short-term Water System Analysis and Master Plan

Vendor agrees to provide the services within this Task Order and Vendor is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

The Effective Date of this Task Order (#2022-004) is February 24, 2022.

OWNER:

By: _____

Print Name: _____

Title: _____

VENDOR:

By: _____

Print Name: _____

Title: _____

Scope of Services

Short-term Water System Analysis and Master Plan

PROJECT UNDERSTANDING

Services to be provided under this Task Order include a short-term water analysis to help identify existing system deficiencies and short-term water system improvements. After the completion of the short-term analysis, FNI will conduct a comprehensive water master plan. The master plan includes long-term growth assumptions, water model calibration, future water system modeling, and the development of a Water Capital Improvements Plan.

PHASE 1 – SHORT-TERM WATER SYSTEM ANALYSIS

A1. Estimate Existing Water Demand

FNI will utilize data provided by the City on historical water production and water consumption (customer billing data) to expected average day and maximum day water demand for 2022.

A2. Review Service Extension Requests (SERs)

FNI will review the City's current water SERs to determine the location of the proposed development and calculate water demand associated. FNI will utilize typical water usage factors for the City to determine the design per-capita and peaking factor to estimate water demands for each development.

A3. Analyze Existing Capacity of Water System

FNI will collect information on existing production, pumping, and storage capacities for the existing water system. FNI will also review the City's existing water model to assist in the assessment of the water system capacity. FNI will document current capacities and identify any existing system deficiencies based on the estimated existing water demand. TCEQ minimum system requirements will be evaluated to determine excess capacity for growth.

A4. Identify Short-term System Improvements

FNI will identify recommended water system improvements to address short-term water service requests. High-level cost estimates will be developed.

A5. Progress Meetings

FNI will attend up to three meetings to discuss progress and results of the water system analysis.

PHASE 2 – WATER MASTER PLAN

Task B: Water Demand Projections

B1. Workshop: Proposed Land Use Assumptions and Projections

FNI will meet with the City to discuss the existing and future water service area, proposed developments, and anticipated growth rates.

B2. Update Land Use Assumptions for 5-year, 10-year and 25-year Conditions

FNI will utilize data from the City's ongoing Comprehensive Plan and other resources to develop land use assumptions for 5-year, 10-year and 25-year planning periods within the water service area.

B3. Develop and Distribute Water Demand Projections

FNI will develop water demand projections for 5-year, 10-year, and 25-year conditions using the land use assumptions developed as part of this study and selected design criteria. FNI will distribute water demands throughout the service area based on the future population distribution.

B4. Water Supply Integration Alternatives

FNI will review the current water supply plan and compare to updated water demand projections. FNI will evaluate integration alternatives to identify water distribution system improvements needed to integrate new water supplies and/or identify gaps in future water supply.

B5. Progress Meeting: Water Demand Projections

FNI will conduct a meeting with the City to present assumptions, methodology, and water demand projections for 5-year, 10-year and 25-year planning periods within the water service area.

Task C: Water Model Update**C1. Update Water Model Network**

FNI will convert the existing model to InfoWater software and update it using current water system GIS data. Recently constructed pipelines and new facility information will be entered in the model based on available as-built drawings.

C2. Water Demand Allocation

FNI will utilize data from the City's billing system database to allocate existing demands throughout the service area to the water model. The data shall consist of metered usage fields for active customer accounts. The meters will be spatially located in GIS so that the associated water usage can be assigned to the appropriate model node.

C3. Develop Diurnal Demand Curves for Each Pressure Plane

FNI will utilize SCADA records and operator logs to update diurnal demand curves representing existing 24-hour water usage patterns within each pressure plane.

C4. Conduct Temporary Pressure Testing

FNI will identify locations for field testing based on model calibration needs and areas of concern from City. Up to twelve (12) temporary pressure recorders will be provided by FNI. Procedures for field testing will be prepared showing proposed location of testing, duration of testing, required SCADA data during testing period, and assistance from water utility department.

C5. Conduct EPS Model Calibration

FNI will conduct a 24-hour extended period simulation (EPS) model calibration by adjusting C-factors, demand peaking factors, diurnal curves, and demand distribution until modeling results match the field pressure measurements and pump/tank operation. FNI will provide comparison graphs and mapping to document model calibration results.

Task D: Hydraulic Analyses and CIP Development

D1. Perform Modeling of Existing Water System

FNI will conduct extended period simulation (EPS) modeling of the existing water system for maximum day operating conditions to determine capacity and deficiencies within the existing water system. FNI will conduct a steady-state fire flow model run under existing maximum day demand conditions. Mapping and model results showing minimum pressures and available fire flow will be prepared to document the analyses.

D2. Develop Future Water Model Scenarios

FNI will develop model scenarios for 5-year, 10-year, and 25-year planning periods. Extended period simulations with average day and maximum day demand conditions will be modeled. Operational controls for pump stations will be developed and input in the model. A steady-state fire flow run with 25-year projected maximum day demand and improvements will be conducted for comparison with existing available fire flow results.

D3. Identify Future Water System Improvements

Utilizing model results from the future planning period scenarios, FNI will develop improvements to adequately serve existing and future water demands. Improvements required to resolve existing system deficiencies and to provide service to undeveloped portions of the water service area will be included. FNI will develop mapping showing improvements required for 5-year, 10-year and 25-year planning periods.

D4. Conduct Facility Site Visits

FNI will conduct site visits at water system facilities to perform a visual inspection of the equipment. Facilities to be inspected include: eight groundwater wells, Shiloh Pump Station, Frameswitch Pump Station, and the Carl Stem Pump Station. FNI will document condition of each facility and identify critical issues that may impact the immediate functionality.

D5. Develop Capital Improvements Plan

FNI will prepare a capital improvements plan with prioritization list of growth-related system improvements. FNI will develop costs for each proposed water system CIP project in Year 2022 dollars including engineering and contingencies. Large scale city-wide maps will be produced showing proposed projects and recommended in-service dates of proposed projects. Project write-ups for recommended improvements will also be prepared.

D6. Progress Meetings

FNI will attend up to three meetings to discuss progress and results of the existing and future water system analysis. FNI will solicit comments from City staff and address any required changes to the water system analysis.

Task E: Revenue Sufficiency Analysis and Master Plan Report

E1. Analyze Historical Expenses and Revenue

FNI will analyze historical trends of expenses and revenue considering historical data including number of connections and customers, metered water sales, and historical water rates based on financial data provided by the City.

E2. Project Expenses and Revenue

Utilizing the growth projections, the FNI team will develop future operating expenses and revenue for water funds at current rates over the next five fiscal years. FNI will provide the projected operating expenses and revenue at current rates to City staff for review.

E3. Determine Test Year and Estimated Revenue Requirements

FNI will develop test year revenue requirements for the water utility using the cash needs approach. FNI will develop a five-year revenue requirement forecast through coordination with City staff on preferred method of financing future capital improvements (e.g. cash, debt, grants) and the financing methods' impact on retail rates. Additional considerations include contractual obligations, operating and capital reserve targets, debt coverage requirements, past studies, ordinances and relevant contracts. This revenue requirement will determine the level of required revenue to fund utility operations, meet target reserve balances, comply with debt service coverage ratios, anticipate operational and/or staffing changes and consider overall long-term financial sustainability of the utility. The revenue requirement will serve as the basis for the development of the financing plan to meet projected capital improvement expenses.

E4. Determine Revenue Sufficiency and Alternative Revenue Requirement Scenarios

FNI will develop test year pro-formas for the water utility comparing the revenues under existing rates against the projected revenue requirements of the system. FNI will also develop alternative revenue requirement and capital program scenarios to match the City's revenue assumptions.

E5. Draft Water Master Plan Report

FNI will prepare a Draft Water Master Plan report that summarizes the methodology and results of the study. FNI will submit an electronic PDF file of the draft report to the City for review.

E6. Final Water Master Plan Report and Presentation

FNI will address City comments and submit five (5) hard copies and a PDF file of the Final Water Master Plan Report to the City. FNI will also prepare a PowerPoint presentation summarizing the results of the Water Master Plan. FNI will conduct up to two (2) City Council presentations related to the Water Master Plan.

E7. Progress Meetings

FNI will attend up to three meetings to discuss Capital Improvements Plan and Master Plan Report progress. FNI will solicit comments from City staff and address any required changes.

Attachment B - Schedule

Project Schedule	2022																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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City of Hutto Short-term Water System Analysis and Master Plan 2/22/2022 Detailed Cost Breakdown		Project Fee Summary	
		Basic Services	\$ 298,448
		Special Services	\$ -
		Total Project	\$ 298,448

Tasks				Labor										Total	
Phase	Task	Basic or Special	Task Description	Stephanie Neises	Dave Christiansen	Aaron Kams	Richard Campbell	Mazen Kawasmi	Anne Hoskins	Robert Harrison	Total Hours	Total Labor Effort	Total Expense Effort	Total Effort	
				Project Manager	Asst. Project Manager	Project Engineer	Financial Analyst	Quality Control	Design Engineer	Electrical Engineer					
				\$263	\$196	\$119	\$327	\$291	\$257	\$195					
	A1	Basic	Estimate Existing Water Demand	8	12	24		2			46	\$ 7,902	\$ 391	\$ 8,293	
	A2	Basic	Review Service Extension Requests (SERs)	12	16	40		2			70	\$ 11,647	\$ 595	\$ 12,242	
	A3	Basic	Analyze Existing Capacity of Water System	8	16	24		2			50	\$ 8,687	\$ 425	\$ 9,112	
	A4	Basic	Identify Short-term System Improvements	24	40	40		8			112	\$ 21,258	\$ 952	\$ 22,210	
	A5	Basic	Progress Meetings	12	12	12					36	\$ 6,941	\$ 394	\$ 7,335	
PHASE 1 SUB-TOTAL													\$ -	\$ -	\$ 59,193
	B1	Basic	Workshop: Proposed Land Use Assumptions and Projections	8	8	16					32	\$ 5,582	\$ 301	\$ 5,883	
	B2	Basic	Update Land Use Assumptions for 5-year, 10-year and 25-year Conditions	8	16	32					56	\$ 9,060	\$ 476	\$ 9,536	
	B3	Basic	Develop and Distribute Water Demand Projections	4	12	24		4			44	\$ 7,432	\$ 374	\$ 7,806	
	B4	Basic	Water Supply Integration Alternatives	12	24	32					68	\$ 11,682	\$ 578	\$ 12,260	
	B5	Basic	Progress Meeting: Water Demand Projections	4	4	4					12	\$ 2,314	\$ 131	\$ 2,445	
	C1	Basic	Update Water Model Network	4	8	24					36	\$ 5,484	\$ 306	\$ 5,790	
	C2	Basic	Water Demand Allocation	2	4	16					22	\$ 3,219	\$ 187	\$ 3,406	
	C3	Basic	Develop Diurnal Demand Curves for Each Pressure Plane	4	8	24					36	\$ 5,484	\$ 306	\$ 5,790	
	C4	Basic	Conduct Temporary Pressure Testing	2	2	12					16	\$ 2,349	\$ 2,776	\$ 5,125	
	C5	Basic	Conduct EPS Model Calibration	12	24	40					76	\$ 12,636	\$ 646	\$ 13,282	
	D1	Basic	Perform Modeling of Existing Water System	4	12	24					40	\$ 6,269	\$ 340	\$ 6,609	
	D2	Basic	Develop Future Water Model Scenarios	4	8	16					28	\$ 4,530	\$ 238	\$ 4,768	
	D3	Basic	Identify Future Water System Improvements	20	40	60		4			124	\$ 21,428	\$ 1,054	\$ 22,482	
	D4	Basic	Conduct Facility Site Visits	4		24			16	24	68	\$ 12,708	\$ 864	\$ 13,572	
	D5	Basic	Develop Capital Improvements Plan	16	24	40		4	40		124	\$ 25,116	\$ 1,054	\$ 26,170	
	D6	Basic	Progress Meetings	12	12	12					36	\$ 6,941	\$ 394	\$ 7,335	
	E1	Basic	Analyze Historical Expenses and Revenue	2			12				14	\$ 4,444	\$ 119	\$ 4,563	
	E2	Basic	Project Expenses and Revenue	2			16				18	\$ 5,751	\$ 153	\$ 5,904	
	E3	Basic	Determine Test Year and Estimated Revenue Requirements	4			60				64	\$ 20,645	\$ 544	\$ 21,189	
	E4	Basic	Determine Revenue Sufficiency and Alternative Revenue Requirement Scenarios	4			40				44	\$ 14,114	\$ 374	\$ 14,488	
	E5	Basic	Draft Water Master Plan Report	12	16	32	8	8			76	\$ 15,050	\$ 646	\$ 15,696	
	E6	Basic	Final Water Master Plan Report and Presentation	24	24	24	4				76	\$ 15,189	\$ 1,094	\$ 16,283	
	E6	Basic	Progress Meetings	12	12	12	4				40	\$ 8,248	\$ 627	\$ 8,874	
PHASE 2 SUB-TOTAL													\$ -	\$ -	\$ 239,255
Total Hours / Quantity				244	354	608	144	34	56	24	1,464				
Total Effort				\$ 64,152	\$ 69,483	\$ 72,504	\$ 47,023	\$ 9,888	\$ 14,371	\$ 4,689		\$ 282,110	\$ 16,338	\$ 298,448	

COMPENSATION

ATTACHMENT C

Compensation to FNI for Basic Services in Attachment A shall be computed on the basis of the following Schedule of Charges, but shall not exceed Two Hundred Ninety Eight Thousand Four Hundred Forty Eight Dollars (\$298,448).

If FNI sees the Scope of Services changing so that Additional Services are needed, including but not limited to those services described as Additional Services in Attachment A, FNI will notify OWNER for OWNER's approval before proceeding. Additional Services shall be computed based on the following Schedule of Charges.

<u>Position</u>	<u>Hourly Rate</u>	
	<u>Min</u>	<u>Max</u>
Professional 1	80	148
Professional 2	100	157
Professional 3	122	228
Professional 4	152	244
Professional 5	185	350
Professional 6	197	398
Construction Manager 1	89	176
Construction Manager 2	109	190
Construction Manager 3	167	224
Construction Manager 4	205	289
CAD Technician/Designer 1	71	147
CAD Technician/Designer 2	104	158
CAD Technician/Designer 3	133	208
Corporate Project Support 1	52	126
Corporate Project Support 2	73	175
Corporate Project Support 3	105	266
Intern / Coop	42	107

Rates for In-House Services and Equipment

<u>Mileage</u>	<u>Bulk Printing and Reproduction</u>		<u>Equipment</u>	
Standard IRS Rates		<u>B&W</u>	<u>Color</u>	Valve Crew Vehicle (hour) \$75
	Small Format (per copy)	\$0.10	\$0.25	Pressure Data Logger (each) \$200
<u>Technology Charge</u>	Large Format (per sq. ft.)			Water Quality Meter (per day) \$100
\$8.50 per hour	Bond	\$0.25	\$0.75	Microscope (each) \$150
	Glossy / Mylar	\$0.75	\$1.25	Pressure Recorder (per day) \$100
	Vinyl / Adhesive	\$1.50	\$2.00	Ultrasonic Thickness Gauge (per day) \$275
				Coating Inspection Kit (per day) \$275
	Mounting (per sq. ft.)	\$2.00		Flushing / Cfactor (each) \$500
	Binding (per binding)	\$0.25		Backpack Electrofisher (each) \$1,000
				<u>Survey Grade</u> <u>Standard</u>
				Drone (per day) \$200 \$100
				GPS (per day) \$150 \$50

OTHER DIRECT EXPENSES:

Other direct expenses are reimbursed at actual cost times a multiplier of 1.10. They include outside printing and reproduction expense, communication expense, travel, transportation and subsistence away from the FNI office. For other miscellaneous expenses directly related to the work, including costs of laboratory analysis, test, and other work required to be done by independent persons other than staff members, these services will be billed at a cost times a multiplier of 1.10. For Resident Representative services performed by non-FNI employees and CAD services performed In-house by non-FNI employees where FNI provides workspace and equipment to perform such services, these services will be billed at cost times a multiplier of 2.0. This markup approximates the cost to FNI if an FNI employee was performing the same or similar services.

These ranges and/or rates will be adjusted annually in February. Last updated 2021.

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