



NAPA SANITATION DISTRICT
Amendment No. 02 to Task Order No. 50

GHD - TASK ORDER No. 50
Browns Valley Trunk Project – Design (CIP #14703)

Whereas, the NAPA SANITATION DISTRICT (District), and GHD (Consultant), entered into a Professional Services Agreement (Agreement), dated August 5, 2014; and

Whereas, Task Order No. 50 was executed by District on April 11, 2016, to provide Professional Design Services. The authorized Not-to-Exceed fee for providing the services set forth in Task Order No. 50 was \$980,278.00; and

Whereas, Amendment No. 01 to Task Order No. 50 in the amount of \$29,485.00 was executed on March 27, 2018 to provide Additional Environmental and SRF Loan Assistance. The authorized total Not-to-Exceed fee for Task Order No. 50 and Amendment No. 01 increased to \$1,009,763.00; and

Whereas, it is necessary to Amend said Task Order to provide for additional professional services not included in the original Task Order and Amendment No. 01, as set forth below:

- Scope of Services: See Attachment 'A'
- Deliverables: See Attachment 'A'
- Schedule for Performance of Work including Milestone Dates: See Attachment 'A'
- Task-Cost Budget Summary: See Attachment 'B'

All terms and conditions of the original underlying Agreement, Task Order No. 50 and any Amendments thereto, shall remain in effect, except to increase the amount the Consultant may be paid by \$99,568.00, to a new Not-to-Exceed total amount of \$1,109,331.00.

IN WITNESS WHEREOF, DISTRICT and CONSULTANT have executed this Amendment this _____ day of _____, 20____.

"DISTRICT"
NAPA SANITATION DISTRICT

"CONSULTANT"
GHD

By: _____

By: _____

Title: Purchasing Agent

Title: _____

ATTACHMENTS: A & B



Attachment 'A'

Scope of Work

Task 1 – Project Management

GHD will provide project management services during the extended portion of the project, from February 2017 through October 2018. This includes continuation of the tasks from our original scope of work, with the exception of the project kickoff meeting and work plan, which were completed in April 2016.

Task 2 – Field Investigations

This task includes additional positive utility verification (potholing) and geotechnical services associated with recommendations made and project direction taken from the 90% submittal constructability review.

2.3 Positive Utility Verification

This task includes positive utility verification (a.k.a., potholing) of targeted utilities at the Laurel/Kilburn/Freeway intersection for the revised alignment of the proposed sewer that intercepts flows from the existing sewer collection system at the intersection (this proposed sewer conveys flows to the proposed trunk sewer). GHD will contract with Exaro Technologies (Exaro) to complete the planning, permitting, and field work activities for approximately seven potholes. Pothole information will be used in the development of the revised plans. The assumed budget for this effort is within Exaro's remaining budget.

2.4 Geotechnical Investigation and Reporting

This task includes geotechnical work to support proposed changes in the project to 1) deepen the trenchless crossing at the Laurel/Kilburn/Freeway intersection; and 2) change the method of construction from open cut to trenchless construction in Old Sonoma Road. GHD will contract with MJA for additional geotechnical exploration and evaluation and update of pertinent recommendations provided in the draft geotechnical report and the trenchless TM. The budget estimate provided by MJA for this effort is \$43,020 and is within MJA's remaining budget.

Laurel/Kilburn/Freeway Intersection

MJA will evaluate and update pertinent recommendations provided in the draft geotechnical report and the trenchless TM relative to deepening of the trunk sewer at this location. The trunk sewer may be deepened to provide two feet of vertical clearance below the existing 12-inch sanitary sewer. Deepening of the trenchless crossing will result in the following risks to be evaluated:

- A mixed-reach tunnel zone that includes granular deposits.
- Systemic settlement of the existing 12-inch sanitary sewer (i.e., related to overcut during installation of the casing).

Old Sonoma Road

The new project approach is to install the trunk sewer within Old Sonoma Road by the microtunneling method (MTBM). The extent of additional trenchless construction in Old Sonoma Road is from Oran Court, at the current eastern limit of the Highway 29 trenchless crossing, to either Montgomery Street (~1,024 LF) or South Jefferson Street (~1,832 LF). MJA will perform additional geotechnical exploration and evaluate and update



pertinent recommendations provided in the draft geotechnical report and the trenchless TM. Existing geotechnical information acquired by MJA for this portion of the project is summarized in the following table.

Potential Additional Trenchless Reach – Existing Geotechnical Information ¹

Item	Projected Station	Boring/ Piezo Depth	Invert Depth	GW Depth at Boring/ Piezo/Well	GW Head at Invert	Tunnel Zone Soils; Nearest SPT Blow Count (N)
Start of Potential Additional Trenchless	49+42		14	-	-	-
MJA Test Boring B-7	53+30	25	16	7 (5/2/2016)	9	clay; N=5
Montgomery St.	56+50		19	-	-	-
GHD Piezometer PZ5	58+50	24	22	10.75 (9/19/2017)	11.25	clay
MJA Test Boring B-8	63+80	30	22	20.5 (5/24/2016)	1.5	clay; N=18
MJA Test Boring B-9	66+30	50	20	21.5 (5/17/2016)	-	clay, silt, sand, and gravel; N=17
End of Potential Additional Trenchless	66+74		21	-	-	-
MJA Test Boring/ Well B-10	70+75	50	18	6.95 (9/19/2017)	11.05	clay and silt; N=4

¹ Depths are in feet below ground surface. Based on 90% project plans by GHD and in-progress geotechnical report by McMillen Jacobs Associates (MJA). Except on date of piezometer and well measurements, the depth to groundwater (GW) and groundwater head is at time of drilling, and does not reflect static groundwater levels. The static groundwater level will likely be shallower, and the groundwater head will likely be more than indicated in the borings that were not completed as a piezometer or well.

Geotechnical test borings will be performed to 1.5 times the depth of planned shafts (shaft depths are typically the invert depth plus 3 feet) at each shaft location, and heavily sampled within depths of the projected tunnel zone depth and to one pipeline diameter both above and below the tunnel zone depth. There is anticipated to be four (4) shafts over the maximum length of 1,832 feet of additional trenchless installation. Consequently, and based on the planned invert depths provided in the table above, at least 4 geotechnical test borings should be performed along the possible additional trenchless reach (at the shaft locations), to depths on the order of 30 to 35-feet below ground surface. There will be a shared shaft location at Station 66+74 (will serve as the receiving shaft for the State Highway 29 trenchless crossing), the planned location of the other 4 shafts will be near the manhole locations shown on the 90% drawings.

MJA will use the information provided in its draft project geotechnical report and from the additional test borings, to evaluate and update pertinent recommendations in our final geotechnical project report and in the trenchless TM. Depending on the findings of the additional exploration, performing the additional trenchless construction in Old Sonoma Road will have similar risks to the Laurel/Kilburn/Freeway intersection.

MJA will begin its work by verifying proposed drilling locations. Then, MJA will submit permit applications for drilling and encroachment to the City and County of Napa. Timing for processing of permit applications may take one to several weeks. MJA will mark the proposed boring locations and perform additional research while waiting for permit approvals. Drilling is anticipated to take three weeks, which would be followed by approximately two weeks for laboratory testing and two weeks for MJA to finalize the project geotechnical report and trenchless TM.

Task 3 – Permitting and Community Outreach

No additional scope of work for this task.



Task 4 – Prepare 50% Contract Documents

No additional scope of work for this task.

Task 5 – Detailed Design

5.1 Prepare 90% Contract Documents

At the request of NapaSan following City review of the 50% submittal, GHD prepared traffic control plans and related plan sheets, along with technical specifications, and opinion of probable construction cost for the 90% submittal.

5.2 Prepare 99% Contract Documents

GHD revised the traffic control documents per comments received for the 90% submittal. Additional effort for the 99% submittal also included revision of the plans to incorporate changes to the alignment in Old Sonoma Road and at the Laurel/Kilburn/Freeway intersection.

5.3 Prepare 100% Contract Documents

This task includes effort associated with the additional deliverables described in Task 5.2, as well as revision for the alignment in South Coombs Street for coordination with planned design for the West Napa Pump Station improvements.

5.4 Prepare Final Contract Documents

This task includes effort associated with the additional deliverables described in Task 5.2 and 5.3.

Task 6 – Bidding Phase Assistance

No additional scope of work for this task.

Task 7 – SRF Loan Assistance

Additional work items have been required by the Water Board for NapaSan's SRF loan application. GHD has assisted NapaSan in the preparation of various cultural and biological tasks, including: Street tree cultural review, Archaeological Resources Study, Section 106 Findings of No Effect Letter, Environmental Alternatives Analysis, Biological Resources Assessment Update, and correspondence with the Water Board and NapaSan throughout the preparation of the additional documents.

Task 8 – Additional Traffic Control and Field Work Activities

A portion of the budget assigned to this task is allotted to the tasks described above. The remaining portion of the budget is retained in this phase for potential use with the planned field work activities in Task 2. The result is a negative amount shown in the attached fee estimate.



Schedule

The following provides a tentative schedule for the remainder of the project's design phase and incorporates the additional tasks included in this contract amendment. All timeframes are in year 2018.

Task	Start Date	End Date
Notice to Proceed	April 23, 2018	
Sub-contracting (1 week)	Late April	Late April
Determine geotech drilling locations (1 week)	Early May	Early May
Encroachment and drilling permitting (4 weeks)	Mid-May	Mid-June
Geotech drilling in Old Sonoma Road / potholing at Laurel/Kilburn/Freeway (3 weeks) ¹	Mid-June	Mid-July
Laboratory Testing (2 weeks)	Mid-July	Early August
Final Geotech Report and Trenchless TM (2 weeks)	Early August	Mid-August
Prepare 100% submittal (3 weeks)	Late August	Mid-September
NapaSan and City review for 100% submittal (5 weeks)	Late September	Early November
Prepare final submittal (2 weeks)	Early November	Mid-November

¹ Additional days added to account for July 4th holiday

Engineering Fee

Compensation for services shall be on a time and materials basis for \$99,568. See the attached detailed fee estimate.

Closing

It is assumed that upon approval of the scope of work for the engineering services provided herein, NapaSan will prepare a contract amendment for signature by GHD. Please don't hesitate to contact me if you have any questions regarding the scope of work. Thank you for the opportunity to serve the Napa Sanitation District.

Sincerely,

GHD Inc.

Matt Winkelman, P.E.

Project Manager

707) 236-1546

matt.winkelman@ghd.com

Attachments: Fee Estimate Spreadsheet

GHD - PROJECT FEE ESTIMATING SHEET

Project Name: Browns Valley Trunk Project - Design Phase
Prepared by: M. Winkelman
Reviewed by: T.Whiton
Job Number: 11121534

Client: Napa Sanitation District
Date: April 5, 2018

		LABOR COSTS																FEE COMPUTATION			
Task / Item	LABOR CATEGORY > RATE >	Principal \$265 /Hr	QA/QC \$235 /Hr	Project Manager \$225 /Hr	Sr. Proj. Engr. \$225 /Hr	Proj. Engr. \$160 /Hr	Tunnel Engr. \$200 /Hr	Transp. Engr. \$150 /Hr	Staff Engr. Transp. \$115 /Hr	Senior Scientist \$160 /Hr	Sr. Biologist \$135 /Hr	Biologist \$120 /Hr	GIS (Env.) \$100 /Hr	CAD / Graphics \$140 /Hr	CAD (Transp.) \$95 /Hr	Admin \$110 /Hr	TOTAL HOURS	*OTHER DIRECT COSTS	SUB SSU (Arch)	SUB Interactive Resources (Hist. Pres.)	TOTAL FEE
Task 1 Project Management (Phase 10)																					
1.1 Project Management				42		8											50	\$300			\$11,030
Subtotal Task 1		0	0	42	0	8	0	0	0	0	0	0	0	0	0	0	50	\$300	\$0	\$0	\$11,030
Task 5 Detailed Design (Phase 50)																					
5.1 Prepare 90% CDs								64	80						42		186	\$1,116			\$23,906
5.2 Prepare 99% CDs		2	4		8	32	11	12	24						24		117	\$702			\$18,132
5.3 Prepare 100% CDs		2	2	4	12	24	16	8	16					20	20		124	\$744			\$20,124
5.4 Prepare Final CDs		1	2	2	8	16	8	4	12						12		65	\$390			\$10,655
Subtotal Task 5		5	8	6	28	72	35	88	132	0	0	0	0	20	98	0	492	\$2,952	\$0	\$0	\$72,817
Task 7 SRF Loan Assistance																					
7.1 Prepare Additional SRF Documents				4	8					24	32	36	4			2	110	\$660	\$10,107	\$1,313	\$27,880
Subtotal Task 7		0	0	4	8	0	0	0	0	24	32	36	4	0	0	2	110	\$660	\$10,107	\$1,313	\$27,880
Task 8 Additional Traffic Control and Field Work Activities																					
8.1 Additional Traffic Control and Field Work Activities																					-\$12,159
Subtotal Contingency		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	-\$12,159
SUBTOTAL - BASIC SCOPE OF SERVICES		5	8	52	36	80	35	88	132	24	32	36	4	20	98	2	652	\$ 3,912	\$ 10,107	\$ 1,313	\$ 99,568

*OTHER DIRECT COSTS include telephone, mileage, printing, photocopies and other miscellaneous direct expenses.