



June 6, 2024

Ms. Tracy Anderson
Project Manager
City of Ann Arbor
301 East Huron Street
Ann Arbor, Michigan 48104

RE: High-Level Trunkline Sewer Capacity Improvements
Detailed Design Proposal

Dear Ms. Anderson:

In response to the City of Ann Arbor's (City) request for engineering assistance with the design of the proposed High-Level Trunkline Capacity Improvements, OHM Advisors (OHM) is pleased to submit this proposal to provide engineering and design services. The following proposal includes our Project Understanding, Scope of Services, Deliverables, Assumptions, Schedule, and Fee related to this work.

PROJECT UNDERSTANDING

It is our understanding that the City would like to proceed with detailed design for the proposed installation of a 36-inch sanitary relief sewer from Washington Street between First and Third Streets, to the intersection of Miller and First Street. The proposed sewer will convey flows from existing 18-inch and 24-inch sewers along Washington Street and allow for the elimination of the existing siphon on Washington Street under the Allen Creek Drain that connects to the existing High-Level Trunkline sewer along First Street. The proposed relief sewer will be installed to address capacity constraints within the High-Level Trunkline sewer on First Street.

The proposed sanitary sewer route is identified in the attached layout map. Due to depths exceeding over 30 feet, the proposed sanitary sewer is planned to be installed by the microtunneling trenchless construction methodology.

OHM previously provided a proposal for topographic survey and design kickoff services and is currently completing that initial scope of work. This phased approach was utilized to expedite overall project design while the trenchless sewer design scope for the project was developed by OHM.

SCOPE OF SERVICES

The following is a summary of necessary tasks to be provided for each of the main phases of work related to preliminary engineering, design, construction documents, and bidding assistance. For the purposes of scoping the project, it is assumed that microtunneling will be the methodology used for the trenchless construction, however construction methodology will be reviewed and confirmed during the preliminary design stage.

Project Management

Throughout the duration of this project, OHM will perform the overall contract management and coordination with key stakeholders. Specific work tasks would include the following:

- ▶ Coordinate bi-weekly virtual project management coordination meetings with the City and University of Michigan. Prepare meeting agendas and minutes.
- ▶ Provide monthly written project status updates via email to the larger project team.



- ▶ Coordinate quarterly project status meetings with the City, University of Michigan, and other key stakeholders. Prepare meeting agendas and minutes.
- ▶ Coordinate with the City to develop a communication plan for external messaging to the public.

Preliminary Review and Design Confirmation

Under this phase of work, OHM Advisors will perform preliminary engineering to confirm the proposed conceptual sanitary sewer alignment and construction methodology. This will include gathering additional field data to supplement information previously gathered in preparation for this project. Specific work tasks would include the following:

- ▶ Review the Geotechnical Consultant's Geotechnical Data Report (GDR), any field and utility surveys, and other available information to determine adequacy to complete the detailed design phase tasks.
- ▶ In coordination with the microtunneling subconsultant, identify additional geotechnical investigation and laboratory testing requirements. The following have been incorporated into the proposed scope:
 - 4 Additional Soil Borings up to 55 feet in depth for a total boring depth of 220 feet.
 - Environmental testing of 8 soil samples and 6 groundwater samples.
 - 2 Monitoring Wells and 2 Piezometers for groundwater sampling and dewatering analysis.
- ▶ Meet with the City to review the limits of the project and confirm the scope of work.
- ▶ Review available information from the City's GIS data and utility as-builts.
- ▶ Conduct one Utility Coordination Meeting for further coordination with utilities that may be in conflict including DTE Electric, DTE Gas, WCWRC and other private utilities.
- ▶ Utilize previously collected detailed topographic survey along the project corridor for design of proposed sanitary sewer.
- ▶ Evaluate trenchless construction methods and prepare a technical memo summarizing trenchless construction recommendations.
- ▶ Prepare an AACE Class 4 Opinion of Probable Construction Cost based on the updated preliminary design of the proposed sanitary sewer.
- ▶ Review the City's existing condition and master plan models for sanitary system flow optimization associated with installation of the new interceptor. Develop a technical memorandum summarizing the recommended accompanying improvements. The following areas will be reviewed within the model and for potential sanitary layout modifications:
 - Potential abandonment of existing 15" sewer between Washington Street and Huron Street, immediately west of the YMCA.
 - Diversion of flow from the existing 30" high-level interceptor sewer at First Street & Washington Street to the lower elevation proposed 36" relief sewer proposed for construction under this project.
 - Reconfiguration of the sanitary sewer connections at the First Street & Miller Avenue intersection to optimize flow between the low level and high level outlet interceptor sewers.
 - Potential abandonment or reconfiguration of sections of the original early 1900's "Main Sanitary Sewer Interceptor" that generally runs cross-lot between the Ann Arbor Railroad and First Street.
- ▶ Meet with the City over two workshops to review the proposed preliminary horizontal alignment, vertical alignment, shaft locations, construction methodology, flow optimization, and the preliminary cost estimate.



30% Design Documents

Under this phase of work, OHM Advisors will provide a streamlined work effort to address challenges early in the project and provide for an efficient timeline into further stages of the design. Specific work tasks would include the following:

- ▶ Prepare an initial risk register for microtunnel trenchless construction.
- ▶ Review additional data gathered by the Geotechnical Consultant's Geotechnical Data Report (GDR), any field and utility surveys, and other available information to determine adequacy to complete the detailed design phase tasks.
- ▶ Coordinate with key corridor utility and rights-of-way entities including the Washtenaw County Water Resources Commissioner, Ann Arbor Railroad (Watco) and MDOT (W Huron Street).
- ▶ Meet with the City to review the limits of the project and confirm the scope of work.
- ▶ Prepare an AACE Class 3 Opinion of Probable Construction Cost based on the updated 30% design documents.
- ▶ Prepare 30% drawings (plan view only) of proposed local sewer optimization, trenchless alignment, shafts, and staging areas.
- ▶ Develop a list of detailed specifications required in the Contract Documents.
- ▶ Submit 30% design documents to the City and U of M for review. Schedule assumes a two-week review period.

60% Design Documents

Under this phase of work, OHM Advisors will develop 60% design drawings, draft technical specifications, and initiate permitting for this project. Specific work tasks would include the following:

- ▶ Hold a design review meeting with the City and U of M to review comments on the 30% design documents. Provide written responses to 30% submittal comments.
- ▶ Develop initial trenchless design calculation package.
- ▶ Update Risk Register for microtunnel-related items.
- ▶ Develop drawings and specifications based on the City's current engineering standards. Incorporate standard pay items, specifications, and details.
- ▶ Prepare structural drawings associated with proposed diversion structures at First/Washington and First/Miller.
- ▶ Prepare initial MOT plans.
- ▶ Develop detailed design drawings of proposed sanitary sewer plan and profile, shafts, diversion structures, details, and staging areas.
- ▶ Draft technical specifications required to supplement the City's current standard specifications.
- ▶ Provide design plans for permit submittals with necessary permit application and plans/attachments to relevant agencies for the project. The following permits are anticipated:
 - City of Ann Arbor Soil Erosion and Sedimentation Control Permit (application(s) to be completed by Contractor).
 - City of Ann Arbor Right-of-way Permit (application(s) to be completed by Contractor).
 - EGLE Part 41 Wastewater System Construction Permit.
 - Ann Arbor Railroad (Watco) Occupancy Permit.
 - WCWRC Drain Use Permit.



- MDOT Right-of-Way Construction Permit.
- ▼ Develop a draft list of pay items and approximate quantities.
- ▼ Prepare an AACE Class 2 Opinion of Probable Construction Cost based on the 60% design documents.

90% Design Documents

Under this phase of work, OHM Advisors will develop 90% design drawings, technical specification and draft contract documents for this project. Specific work tasks would include the following:

- ▼ Hold a design review meeting with the City and U of M to review comments on the 60% design documents. Provide written responses to 60% submittal comments.
- ▼ Update trenchless design calculation package.
- ▼ Update Risk Register for microtunnel-related items.
- ▼ Draft a project Geotechnical Baseline Report (GBR).
- ▼ Update technical specifications required to supplement the City's current standard specifications.
- ▼ Update the AACE Class 2 Opinion of Probable Construction Cost based on the 90% design documents.
- ▼ Coordinate with the City and the Downtown Development Authority (DDA) to obtain recent project as-builts that overlap the proposed sewer limits including the First and Ashley Street Project.

Final Construction Documents

Under this phase of work, OHM Advisors will provide final construction documents for this project. Specific work tasks would include the following:

- ▼ Hold a design review meeting with the City and U of M to review comments on the 90% design documents. Provide written responses to 90% submittal comments.
- ▼ Prepare Final Risk Register for microtunnel-related items.
- ▼ Prepare final contract documents including drawings and detailed specifications for issuance by the City.
- ▼ Prepare a Final AACE Class 1 Opinion of Probable Construction Cost for the project.

Bidding Assistance

In this phase of work, OHM Advisors would aid with issuing a construction request for proposal. Specific work tasks include the following:

- ▼ Coordinate with City purchasing to issue the Construction Request for Proposals and provide an electronic version of the final plans and specifications for bidding purposes to the City.
- ▼ Lead a pre-proposal meeting for contractors.
- ▼ Answer contractor questions as necessary.
- ▼ Prepare and distribute addenda to prospective bidders, if necessary.
- ▼ Attend the proposal opening and provide an initial review of the construction proposals. Final review and scoring of the proposals will be conducted by the City.



PROJECT DELIVERABLES

OHM Advisors will provide the City with the following deliverables consistent with the scope of work:

- ▼ Technical memo summarizing trenchless construction recommendations.
- ▼ Geotechnical Design Basis Report
- ▼ Microtunneling Risk Register
- ▼ 30% horizontal alignment plans and technical specification list for City review.
- ▼ 60% sanitary plan/profile drawings and technical specifications for permitting and City review.
- ▼ 90% plans and contract documents for City review.
- ▼ Bid Set plans and contract documents at the bidding stage of the project.
- ▼ Opinions of Probable Construction Cost at each stage of the project.
- ▼ Monthly project status updates via email.
- ▼ Bi-weekly coordination meeting agendas and minutes.
- ▼ Quarterly project status meeting agendas and minutes.
- ▼ Communication plan for external messaging to the public

CLARIFICATIONS AND ASSUMPTIONS

The following assumptions are part of our proposal, in addition to any assumptions noted within our scope of work section:

- ▼ No scope has been incorporated for permanent controls or monitoring associated with the proposed improvements.
- ▼ No fee markup will apply to work performed by subconsultants working under OHM Advisors.
- ▼ As-built drawings for the Ann Arbor Railroad bridge foundations and building foundations along the alignment will be provided by others.
- ▼ Environmental scope will be limited to developing technical specifications to handle known contaminated soil/groundwater and an associated EGLE approved Due Care Plan for submission with the Part 41 Permit Application. Proper disposal of contaminants is the responsibility of others.
- ▼ Work efforts are based on the depiction of tasks described in this proposal. Tasks not specifically described herein will not be performed by OHM Advisors.
- ▼ All deliverables will be provided electronically.

FEE & SCHEDULE

We will perform engineering services consistent with our scope of work and assumptions outlined above, for a Total Not-to-Exceed Fee of **\$900,000**. The terms of the contract will be in accordance with the Professional Services Agreement with the City for Civil Engineering and Surveying Services dated August 18, 2023. It is assumed that estimated budget can be transferred between tasks. Engineering contingency will not be utilized unless agreed in writing by the City.



This fee includes the following scope for OHM Advisors:

Engineering Scope	Estimated Fee
OHM Advisors Scope	
Preliminary Review and Design Confirmation	\$115,000
30% Design Documents	\$95,000
60% Design Documents	\$124,000
90% Design Documents	\$46,000
Final Construction Documents	\$38,000
Bidding Assistance	\$17,000
Subconsultant Scope	
Microtunneling Specific Design	\$247,720
Additional Geotechnical Investigation*	\$42,000
Environmental Analysis and Specifications*	\$22,000
Estimated Fee Subtotal	\$747,000
Engineering Contingency (20%)	\$153,000
Total Not-to-Exceed Fee	\$900,000

*Final scope to be determined during preliminary design. Fee based on assumptions identified in the detailed scope.

Assuming OHM Advisors receives an initial written authorization to begin work on the project by July 16, 2024, and formal agreement to proceed by the City prior to July 26, 2024, the project schedule would follow the milestone dates for completion of the topographic survey as outlined below:

- City Council Approval – July 15, 2024
- Preliminary Engineering and 30% Design – December 20, 2024
- 60% Design – June 13, 2025
- 90% Design – August 15, 2025
- 100% Design – September 18, 2025
- RFP Due – October 21, 2025

Chris Elenbaas will serve as Project Manager on behalf of OHM for the duration of the project with assistance from a team of civil engineers/designers consistent with the staffing identified in the Professional Services Agreement.

If you find this proposal acceptable, please provide us written authorization to proceed. Should you have any questions related to this proposal, please do not hesitate to contact me at 734-466-4405. We thank you for this opportunity to provide professional engineering services to the City of Ann Arbor.

Sincerely,
 OHM Advisors

Chris Elenbaas, PE
 Senior Project Manager

George Tsakoff, PE
 Principal

Encl: Proposed Conceptual Sewer Alignment
 cc: Nicholas Hutchinson, City of Ann Arbor

City of Ann Arbor High-Level Trunkline Sewer Capacity Improvements

