



April 5, 2023

Mr. Jim Shoberg, PLA  
Senior Parks Planner  
City of Duluth | Property and Facilities Management  
1532 W. Michigan Street  
Duluth, MN 55860

Re: **Revised**--Proposal for Engineering Services  
Final Design and Construction Services for Marten Trail Segments 0, 1, & 2

Dear Mr. Shoberg:

In response to our recent discussion, we are providing a **revised** Proposal to provide Engineering Services in connection with the final design and construction of Segments 0, 1, & 2 of the Marten Trail, hereinafter called the Project. This Proposal supersedes our previous Proposal for this Project dated February 27, 2023. Our services will be provided in the manner described in this Proposal subject to execution of a mutually agreeable contract consistent with those previously executed with the City of Duluth. Hereinafter, the City of Duluth is referred to as the City.

## **I. PROJECT DESCRIPTION**

The City is seeking Professional Engineering Services to assist with the final design, permitting, and construction for Segments 0, 1 and 2 of the Marten Trail. The proposed trail route along the Lake Superior shoreline was summarized in concept in a mini-master plan prepared for the City in 2019.

Our Professional Engineering Services will focus on developing final layouts for these segments of the Marten Trail using field topographic surveys to create an alignment for trail routes, as well as evaluating any necessary stream/stormwater crossings. For Segments 0 and 1, our team will develop conceptual alignment and grading plans in accordance with DNR Trail design guidelines. Project work tasks will include schematic engineering design drawing and developing a schematic construction cost estimate. We will also utilize Rob Peterson with GEI, Inc., to perform field delineation for identification of potential wetland impacts on Segment 0 and to assist with the permitting all three of the projects.

Our Project Team has extensive experience in delivering this type of project and is committed to delivering this project on the schedule established by the City. Our team has trail experience with the City on the Western Waterfront Trail Renewal Project, Western Waterfront Vegetation Restoration Projects, Clyde Connector Trail, and Fairmount Snowmobile Trail which demonstrates our ability to listen to City staff, provide support where needed, and provide Engineering solutions tailored to match the City's budget for a project of this type.

## **II. SERVICES TO BE PROVIDED BY TKDA**

Based on TKDA's understanding of the Project, we propose to provide the following services:

### **TASK A • FINAL DESIGN--SEGMENT 0 REGRADING STRYKER BAY SECTION AND TATE & LYLE REROUTE**

A kick-off meeting with the City will set expectations and confirm the work scope the City desires for this trail segment. The Project work essentially involves shifting trail alignment to the west away from the Tate & Lyle facility, and grading the Stryker Bay portion of Segment 0 to meet Architectural Barriers Act (ABA) requirements. We anticipate that the kick-off meeting will address trail locations, stream crossings, and timing of the Project. TKDA will meet with City representatives to review Project scope and complexity, design criteria, and existing conditions. From our previous work in 2015 to 2019, our team is familiar with the project site and has made a preparatory review of the Project.

#### **TKDA Work Tasks & Responsibilities:**

- Kickoff Meeting--Review Scope, Timing

- Review 2015 Alignment, Culvert Crossings, Grades from 2015 Project Design for ABA on Stryker Section. **Obtain topographic survey where required for grading purposes, as the entire route was not surveyed in detail as part of the 2015 project (initial 2015 scope was rehabilitation of surfacing only and not grading of the trail base).**
- Review Alignment and Grades from the 2019 Predesign Report completed for the Tate & Lyle Section. Obtain topographic survey where required for grading purposes (pre-design was based on MnTOPO which should be supplemented with field data).
- Review hydraulic requirements for passing stormwater through the trail corridor. Conduct a field assessment of the 2015 Segment 0 and Stryker Bay segments to inventory, assess, and mark frost-heaved or damaged culverts needing replacement (15 estimated). Based on review notes from City staff, approximately 12 existing culverts will need confirmation of size and will be resized or reset at their existing locations by a Contractor. Three (3) other culverts will be removed as part of the construction work.
- Develop final ADA-compliant grading for access trail to fishing pier from Indian Point Campground. The City provided TKDA with a concept design, which will be the starting point for final design.
- Provide for wetland delineation and permitting on these segments through our sub-consultant (Rob Peterson, GEI).
- Design and create construction plan for at-grade rail crossing for the trail in Tate and Lyle segment. We will develop an easement drawing and legal description for recording the location of the crossing. We have assumed that the crossing design will need review by rail Project Management for approval and that the railroad would provide final design and installation of mats/crossing material on the tracks. We have also assumed that the crossing will use passive warning devices to provide warning to trail users.
- Complete preliminary layouts and grading for the two segments. Review with City staff to determine final scope for construction documents.
- Complete final design and construction documents for Segment 0 (Stryker Bay area) and the Tate and Lyle (Riverside relocation) section of the trail.
- Provide City with final construction documents in AutoCAD Civil 3D, Adobe (pdf), Word, and Excel formats with an estimate of probable construction costs. TKDA will assist the City with bidding the project by hosting a pre-bid meeting and answering Contractor questions during the bidding process.
- TKDA will assist with construction staking, construction observation (8 hrs/week, estimated 5 weeks), construction administration, and project closeout. We have estimated time for these tasks in our worksheet (attached).

**City Responsibilities:**

- Attend the kick-off meeting; assist in providing background information relevant to Project, review updated design plans and estimates, and advertise the project for bidding.
- Administer contractor agreements and payments for completed work.

**TASK B • FINAL DESIGN OF SEGMENT 2 CLYDE AVENUE TO BLACKMER PARK**

After holding a kickoff meeting our team will focus on the final design of Segment 2 with major work tasks including final design for a separated grade crossing of the BNSF track, grading associated with the crossing and trail layouts, permitting wetland impacts, and design of pedestrian bridge abutments for placement of the City's 66-ft span bridge.

**TKDA Work Tasks & Responsibilities:**

- Finalize design drawings for grade-separated crossing of the BNSF single track for use with permitting the crossing. TKDA previously produced 60% drawings for the City's use in permitting/review with BNSF. We understand that the City of Duluth has submitted the 60% level drawings to BNSF and is currently awaiting a final decision on the ability to move forward with final design of this option. TKDA will not begin work on final design for Segment 2 until such time the City and BNSF have reached final agreement on the approach and design requirements for the rail crossing.



- Provide for wetland permitting through our sub-consultant, GEI (Rob Peterson). Wetland delineation completed under Predesign contract scope.
- Provide design for pedestrian bridge abutments utilizing the geotechnical data obtained during the 2022 predesign work. We recommend one additional soil boring at the north abutment of the proposed pedestrian bridge and the south side of the grade-separated crossing of the BNSF track. Due to difficulty in determining access to these points in winter, we recommend that the City get quotes for the borings once snow has melted. TKDA will assist by providing the City with locations for proposed borings at these structures.
- Provide City with final construction documents in AutoCAD Civil 3D, Adobe (pdf), Word, and Excel formats with an estimate of probable construction costs. TKDA will assist the City with bidding the project by hosting a pre-bid meeting and answering Contractor questions during the bidding process.
- TKDA will assist with construction staking, construction observation (8 hrs/week, estimated 6 weeks), construction administration, and project closeout. We have estimated time for these tasks in our worksheet (attached).

**City Responsibilities:**

- Attend the kick-off meeting; assist in providing background information relevant to Project, review updated predesign reports and construction plans, and submit funding applications.
- Provide TKDA with access to the site as necessary to perform site observations.

**TASK C • FINAL DESIGN THROUGH CONSTRUCTION--SEGMENT 1 SPRING STREET TO CLYDE AVENUE**

TKDA's team will prepare preliminary and final design, construction plans, specifications, and cost estimates as necessary for the grading and construction of Segment 1 of the Marten Trail in the area of Spring Street to Clyde Avenue. TKDA previously developed a high-level pre-design report for the trail construction, and we will refine it during the final design stage as follows:

- Perform topographic survey of the project area and review existing railroad track configuration and available space for siting the trail in proximity to Lake Superior shoreline.
- Our team has provided time in our proposal for track design necessary to create a shift in the track alignment for approximately 800 feet to facilitate trail grading near Lake Superior. We will do a concept layout and will meet with City staff to evaluate this option and confirm our final design scope. TKDA will not begin work on a track shift and the final design for Segment 1 until such time the City and BNSF have reached final agreement on the ability to shift the track within the railroad right of way.
- We previously performed wetland delineation and will complete project permitting for the project limits using our sub-consultant, GEI (Rob Peterson).
- Review and update the original initial alignment and cross sections for the trail along the proposed route to determine estimated grades and construction quantities for constructing a new trail alignment meeting DNR trail standards.
- We will review hydraulic requirements for passing stormwater flow through the trail corridor.
- Work to create refined design details for permitting and discuss with review agencies before moving to final design. Our team will review the use of shoreline armoring or living-shoreline protection zones in the narrowest sections along the lake to prevent loss of granular materials into the water resource. We will assess these options where necessary and if the railroad track cannot be shifted away from lake.
- We will meet with City staff to finalize the elements of work to be included in the project and to review construction cost estimates.
- TKDA will develop final design for the project as well as construction documents and specifications for construction of the trail and stormwater elements.
- TKDA will assist the City with seeking contractor pricing, hosting a pre-bid meeting and answering questions during the bidding process.



- TKDA will provide for part-time onsite construction observation (included 8 hrs/week, estimated 6 weeks of construction), construction administration (review submittals, prepare change orders, and review pay applications). We have estimated time for these tasks in our worksheet (attached).

**TKDA Responsibilities:**

- Prepare documentation of the project kick-off meeting and the data provided by the City to the TKDA Team. We will prepare and maintain a detailed project schedule.
- Review record plans and determine public and private utility relocation needs.
- Develop preliminary level construction plans using topographic survey information and in conformance with DNR design standards. Meet with review agencies to confirm and refine design in narrow areas.
- Evaluate stormwater hydraulics and prepare concept designs in accordance with Federal, State and Local rules.
- Develop estimates of probable cost of construction for the City with final construction documents.
- Provide for part-time onsite construction inspection, staking, and contract administration as noted above and hours as shown in our fee worksheet.

**City Responsibilities:**

- Provide any additional background/record drawing information that may be required to complete the design work.
- Attend pre-design review meeting and provide plan reviews and feedback promptly to maintain the project schedule.

**III. ADDITIONAL SERVICES**

If authorized in writing by the City, we will furnish or obtain from others Additional Services of the types listed below which are not considered as basic services under this Proposal. Additional Services shall be billable on an Hourly Time and Materials basis and such billings shall be over and above any maximum amounts set forth in this Proposal.

- A. Assist the City in obtaining proposals for additional Geotechnical evaluation for the proposed bridge, railroad underpass, or the trail alignment. Due to the difficulty for contractors of determining access with current snow cover, we have not included the additional borings in this work scope but can assist the City in obtaining pricing in spring.
- B. Additional field wetland delineation and permitting or banking/replacement plan development.
- C. Additional time for construction observation over the requested 8 hours per week.
- D. Preliminary and Final Design plans and specifications for construction of additional segments of the trail.
- E. Design of railroad crossing gates, warnings, and electrical systems. We have assumed in our proposal that the Tate and Lyle at-grade crossing can be accomplished using passive warning devices (i.e. signage, clear zone, crossing geometry) and that these elements would be additional work if required by the railroad.
- F. Field survey of topographic information on additional routes or segments beyond those identified in our fee estimate or property boundaries.
- G. Trail easement descriptions or exhibits beyond the railroad crossing locations identified in the proposal.

**IV. CITY RESPONSIBILITIES**

These responsibilities include, but are not limited to, the following:

- A. Designate one individual to act as a representative with respect to the work to be performed, and such person shall have complete authority to transmit instructions, receive information, interpret and define policies, and make decisions with respect to critical elements pertinent to the Project.
- B. Provide TKDA with access to the site as required to perform services listed in SECTION II.



C. Provide reviews of materials furnished by TKDA in a reasonable and prompt manner so that the Project schedule can be maintained.

**V. PERIOD OF SERVICE**

We would expect to start our services promptly upon receipt of your written acceptance of this Proposal and estimate to complete SECTION II services providing construction documents to the City by December 1, 2023 to begin the bidding process. We understand that work on final design for Segments 1 and 2 cannot begin until the City has reached agreement with BNSF on the approval to shift track alignment (Segment 1) within BNSF right of way and approval for the tunnel crossing (Segment 2). These are both underway and TKDA will work with the City to establish the design schedule once these approvals are obtained.

**VI. COMPENSATION**

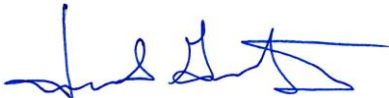
Compensation to TKDA for services provided as described in SECTION II of this Proposal shall be on an Hourly Time and Materials basis in an amount not to exceed \$143,734 for the total of all three (3) segments and project scope identified in our proposal. We have shown the work scope and costs for each trail segment in the detailed Project Fee Estimate Hourly Rate attached to this proposal.

The level of effort required to accomplish SECTION II services can be affected by factors which are beyond our control. Therefore, if it appears at any time charges for services rendered under SECTION II will exceed the above, we agree we will not perform services or incur costs which will result in billings in excess of such amount until we have been advised by you additional funds are available and our work can proceed.

**VII. CONTRACTUAL INTENT**

We thank you for the opportunity to submit this Proposal. We agree that your issuance of a mutually agreeable contract in our previously negotiated format will be our notice to proceed. This Proposal will be open for acceptance for 30 days, unless the provisions herein are changed by us in writing prior to that time. Please feel free to contact Jeff Goetzman directly at 218.390.9295 or [jeff.goetzman@tkda.com](mailto:jeff.goetzman@tkda.com) if you have any questions.

Sincerely,



Jeff Goetzman, PE  
Project Manager



Douglas W. Fischer, PE  
Vice President—Municipal, Utility and Planning Division

Attachment: Project Fee Estimate







**Project Fee Estimate**

Client:		City of Duluth Parks and Recreation Department										Date:	4/5/2023	
Project:		Marten Trail Segments 0, 1 & 2 Final Design										By:	JSG	
Project	Task	Est. Person Hours										Total Hours	Total Dollars	
		Sr Reg Eng	Reg Eng	Reg Eng	Specialist II	Sr Reg Eng	Reg Eng	Grad Eng (ST)	Tech II	PLS	Tech III			
<b>A</b>	<b>Final Design thru Construction--Segment 0 Regrading Stryker Bay &amp; Tate/Lyle Reroute</b>													
	1	Kickoff Meeting--Review Scope, Timing	2	2						1			5	\$ 708
	2a	Review Alignment, Grades from 2015 Project Design for ABA on Striker Section	2	6									8	\$ 1,068
	2b	Review Alignment, Grades from 2019 Predesign on Tate & Lyle Section	2	6									8	\$ 1,068
	3	Update Survey Information for Grades on Stryker and Tate/Lyle (not previously graded/surveyed)	2	4								16	22	\$ 2,414
	4	Culvert Inventory--Heaved or Broken--Needing Replacement (12 estimated)	2	18								4	24	\$ 2,792
	4a	Wetland Delineation/Permitting (GEI)	1	2									3	\$ 4,500
	5	Preliminary Regrading of Trail from 63rd Avenue West Trailhead (Stryker Bay Segment)	4	30									34	\$ 4,134
	6	Indian Point Campground/Fishing Pier ADA Trail Grading	2	16								4	22	\$ 2,570
	7	Preliminary Tate & Lyle Reroute Regrading for Trail/Alignment	3	24									27	\$ 3,267
	8	Railroad Crossing Easement/Exhibit	2	2							3	8	15	\$ 2,002
	8a	Design for At-Grade Crossing (Passive warnings assumed)	1	4	2	8							15	\$ 2,047
	9	Review Meetings--Concept Layout Review with City Staff to Set Final Scope	3	4									7	\$ 1,047
	10	Final Trail Alignments/Grading for Stryker & Tate/Lyle.	4	40									44	\$ 5,244
	11	Specifications	2	6	4		1			4			17	\$ 2,044
	12	Final Construction Documents	2	4									6	\$ 846
	13	Bidding Assistance	4	4									8	\$ 1,248
	14	Construction Staking	1	4								16	21	\$ 2,213
	15	Construction Observation (8 hrs/week)	2	40									42	\$ 4,842
	16	Construction Administration	2	8									10	\$ 1,290
	17	Project Closeout	2	8									10	\$ 1,290
		<b>Segment 0 Subtotals:</b>	<b>45</b>	<b>232</b>	<b>6</b>	<b>8</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>3</b>	<b>48</b>	<b>348</b>	<b>46,634</b>
<b>B</b>	<b>Final Design thru Construction--Segment 2--Clyde Avenue to Blackmer Park</b>													
	1	Kickoff Meeting--Review Past Work, Scope, Timing	1	2						1			4	\$ 507
	2	Update Predesign Alignment & Culvert Crossing Inventory	2	4								12	18	\$ 2,022
	3	Spur Trail/Connection Easement	1	4							3	8	16	\$ 2,023
	4	Wetland Permitting (Rob Peterson, GEI Subconsultant)												\$ 3,000
	5	Trail Grading/End Treatments at Tunnel Crossing	2	16									18	\$ 2,178
	6	Final Trail Grading and Culverts/Drainage Plan	4	40									44	\$ 5,244
	7	SWPPP	1	8									9	\$ 1,089
	8	Details, Specifications, Cost Estimate for Trail and Tunnel	3	24						4			31	\$ 3,603
	9	Finalize Tunnel Plan/Details for BN Review (per BN Grade Crossing Guidelines)	2	12									14	\$ 1,734
	10	Bridge Abutments/Footing Design for Salvaged 66-ft Span Continental Bridge												
		Abutment Geometric Details	2	4				32	20				58	\$ 7,258
		Abutment Design	3					24					27	\$ 3,987
		Abutment Reinforcement Details	1					8	24				33	\$ 3,609
		Specifications for Structure	1	2				8	24				35	\$ 3,831
		Construction Observation	2	20									22	\$ 2,622
	11	Review Meetings with City Staff	3	2				8					13	\$ 1,953
	12	Bidding Assistance	4	4				1					9	\$ 1,389
	13	Construction Staking		2				1				16	19	\$ 1,931
	14	Construction Observation (8 hrs/week) plus Administration	4	60									64	\$ 7,464
	15	Construction Closeout (record drawings, archiving, final pay application)	2	12									14	\$ 1,734
		<b>Segment 2 Subtotals:</b>	<b>38</b>	<b>216</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>82</b>	<b>68</b>	<b>5</b>	<b>3</b>	<b>36</b>	<b>448</b>	<b>\$ 57,178</b>
<b>C</b>	<b>Final Design through Construction--Segment 1--Spring Street to Clyde Avenue</b>													
	1	Kickoff Meeting--Review Scope, Timing	2	2						1			5	\$ 708
	2	Update Predesign Alignment & Layout	2	8									10	\$ 1,290
	3	Design for Shift in Railroad Track Alignment (to west/from lake)	6	2	2	24	2						36	\$ 5,654
	3	Refine Concept (shore armoring, track shift)	2	28									30	\$ 3,510
	4	Develop Detailed Layout for Permitting Evaluation/Meet with City Reviewers	2	16									18	\$ 2,178
	5	Preliminary Construction Cost Estimate	2	8									10	\$ 1,290
	6	Wetland Permitting (Rob Peterson, GEI Subconsultant)												\$ 3,200
	7	Construction Documents (Final Plans with Details, Utility Coordination)	4	48									52	\$ 6,132
	8	Specifications	3	8						4			15	\$ 1,827
	9	Final P/S/E Submittal to City	2	8									10	\$ 1,290
	10	Bidding Assistance	4	4									8	\$ 1,248
	11	Construction Staking	1	2								20	23	\$ 2,383
	12	Part-time Onsite Construction Observation	4	48									52	\$ 6,132
	13	Construction Administration (weekly meetings, submittals, pay applications)	4	16									20	\$ 2,580
		<b>Segment 1 Subtotals:</b>	<b>38</b>	<b>198</b>	<b>2</b>	<b>24</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>5</b>	<b>-</b>	<b>20</b>	<b>289</b>	<b>\$ 39,422</b>
<b>Total Person Hours</b>			<b>121</b>	<b>646</b>	<b>8</b>	<b>32</b>	<b>3</b>	<b>82</b>	<b>68</b>	<b>15</b>	<b>6</b>	<b>104</b>	<b>1,085</b>	
<b>Billing Rate/Hr x Multiplier</b>			<b>\$ 201</b>	<b>\$ 111</b>	<b>\$ 105</b>	<b>\$ 149</b>	<b>\$ 220</b>	<b>\$ 141</b>	<b>\$ 95</b>	<b>\$ 84</b>	<b>\$ 198</b>	<b>\$ 98</b>		
<b>Total Billable for Charged Time for 3 Trail Segments</b>			<b>\$ 24,321</b>	<b>\$ 71,706</b>	<b>\$ 840</b>	<b>\$ 4,768</b>	<b>\$ 660</b>	<b>\$ 11,562</b>	<b>\$ 6,460</b>	<b>\$ 1,260</b>	<b>\$ 1,188</b>	<b>\$ 10,192</b>		<b>\$ 143,234</b>
<b>Wetland Sub-consultant:</b>														\$ 10,700
<b>TKDA Engineering Services:</b>														\$ 132,534
<b>Expenses:</b>														\$ 500
<b>Project Total Estimated Total Fees (Rounded)</b>														<b>\$ 143,734</b>