



April 7, 2023

Via Email Only: jshoberg@duluthmn.gov

Mr. Jim Shoberg, PLA
Senior Parks Planner
City of Duluth | Property and Facilities Management
1532 W. Michigan Street
Duluth, MN 55806

Re: **Revised** Proposal for Engineering Services
Lower Spirit Nordic Center Cross Country Ski Trails Design and Construction Services

Dear Mr. Shoberg:

In response to our recent discussion, we are providing a **revised** Proposal to provide Engineering Services related to the design of Cross Country Ski Trails at the Lower Spirit Nordic Center, hereinafter call 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 has been working to develop 5.4 km of new cross-country ski trails at the Lower Nordic Center which includes lighted ski loops and snow-making capabilities. The City is seeking Professional Engineering Services to assist with developing the following portions of the Project:

- Design and construction assistance with grading and drainage for the final proposed 0.8 km ski loop trail and modifications to one (1) corner on the middle loop constructed in 2019 to soften the horizontal curve at approximately Station 37+00.
- Value engineering design for the 2.0 km connection to top of Spirit Mountain as previously designed by our Team in 2019.
- Design and construction assistance for lighting system on the entire 3.3 km looped system.

The Project will include developing a biddable set of construction documents for the grading of the proposed cross-country ski trails. These construction documents will consist mainly of plan and profile sheets necessary to grade the trail, an updated stormwater plan with erosion control measures, and SWPPP. Plans will also need to coordinate the electrical supply, lighting, and surface drainage requirements.

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. TKDA performed grading, drainage, and construction oversight for the 2019 phase of the project.

II. SERVICES TO BE PROVIDED BY TKDA

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

TASK 1 • PROJECT KICK-OFF AND SCOPING MEETING

A kick-off meeting with the City of Duluth will clarify expectations and introduce key Team members. TKDA will meet on site with City representatives to review Project scope and complexity, design criteria, and existing conditions.

The Project involves updating the construction documents for grading out the last 0.8 km of new cross-country ski trails and lighting for all 3.3 km of trails at the Lower Nordic Center. TKDA developed grading plans for three (3) ski loops in 2019, with the 0.8 km loop not being constructed due to a shortage of available funding. Our initial step for updating construction documents for this loop will be to walk the original trail alignment with City staff and Gary Larson, Trail Designer, who has been hired by the City to verify and flag the proposed trail alignment for design. Our team will obtain topographic survey on any proposed shifts in trail alignment as well as the curve on Loop 2, for design purposes. Major items of work are anticipated to include developing final alignments and

updating grading plans for the trail, reviewing culvert size requirements, and developing updated erosion control plans. As with the 2019 project, the ski trails will be designed following guidelines for cross-country ski trail development which call for a 30-foot width on the up-hills and a 24-foot width on down-hills. The trail is intended only for winter ski use and will be created by removing trees and stumps, grading/filling holes, and smoothing the terrain to accommodate grooming of cross-country ski trails. We will finalize the schedule and discuss the best means of communication for those involved in the Project.

TASK 2 • SITE OBSERVATIONS & SITE SURVEY

Once the kick-off meeting has occurred, our Team will walk the site with City staff and the City's trail consultant to confirm alignment and obtain missing topographic survey information for both the 0.8 km loop and the corner re-alignment on Loop 2. We will review existing erosion and stormwater issues as well as the connection points for electrical utilities as constructed back in the 2019-20 project. We will utilize the survey data available from our previous plan/design and will supplement that with additional field measurements by our Team. We will generate conceptual drawings for the trail and then meet with City staff and other stakeholders to discuss and set the final design scope.

We propose to complete the following design tasks as part of our work:

- Verify and update trail alignment and grading for the 0.8 km ski loop located to the west side of the facility and below the DWP Trail as well as re-alignment for curve at Station 37+00 of Loop 2.
- Evaluate the trail alignment and grading for connector ski trail located above the DWP Trail. We will revisit the 2019 design of the connector trail to economize trail width, slopes, and surface finish (i.e. clear, grub, fill holes) where possible to bring the project into line with the City's construction budget. The connector trail shall be designed in compliance with DNR Trail standards.
- Review concept trail plans for the new 0.8 km loop and the connector trail with stakeholders (City and its XC trail consultant) to determine the final design locations and scope prior to our team engaging in final design.
- Perform review of previous wetland delineation work and proposed areas of impact, delineate any areas of concern, and prepare an updated delineation report (through Rob Peterson, GEI). GEI will also support the delineation through the TEP review process.
- Prepare Joint Application for permitting the project and assist the City with wetland mitigation if necessary (Rob Peterson, GEI).
- TKDA has teamed with CMTA to review and update the design of electrical infrastructure to provide for trail lighting for the entire 3.3 km looped system per the City's request. CMTA performed the original design for these components of the 2019 project.

TASKS 3, 4, & 5 • REVIEW AS-BUILT INFORMATION, TOPOGRAPHIC SURVEY, AND PLANS AND SPECIFICATIONS

Construction plans bring together a Project's many elements to produce a coherent product to be used for construction of planned improvements. Our work will include finalizing the trail location and alignment, review and updating proposed culverts (2019 plan), Stormwater Pollution Prevention Plan (SWPPP), and details necessary for constructing the trail. Our construction plans will provide the contractor with the route, grades, and typical sections needed to construct the ski trail as intended.

Our Team will perform a brief review of existing drainage patterns and proposed culverts to confirm that the proposed storm drainage is sized appropriately and will function as intended. TKDA's Quality Assurance process plays a major role in controlling Project costs. We dedicate time within our schedule for senior TKDA professionals to carefully review construction documents for omissions, errors and clarity prior to issuing. Once approved, we review the documents with our client sheet by sheet. This two-step process minimizes errors and reduces the potential need for change orders, saving the City construction costs. The end product will provide the plans and technical specifications that the City needs to assemble the complete bid package for contractor bidding.



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 any Record Plans and determine public and private utility relocation needs.
- Develop construction plans including all disciplines in conformance with design standards. We will be updating wetland delineations as part of our Work and the limits will be included in grading plans for the project.
- Evaluate storm culverts, recommend re-evaluation (if needed) to reflect changes in proposed trail alignments or grades, and prepare SWPPP.
- Provide City with regular updates on design progress via email or teleconference.
- Submit 30%, 60%, and final design Plans to City staff for review/approval. We will review the concept layouts early in the design process so the Team can then finalize the construction elements which have the highest priority going forward for final design.
- Develop and maintain construction cost estimates for 60% and final design stages.
- TKDA will provide design files in CAD, PDF, and/or paper format as needed. Special provisions and final plans will be provided to City by December 31, 2023, to allow time to prepare the bid package and advertisement.

City Responsibilities:

- Attend on-site scoping meeting; assist in providing background information relevant to Project.
- Provide any additional background/record drawing information that may be required to complete the design work. City has indicated its trail design consultant will flag any new trail alignments prior to TKDA engaging in survey and design tasks.
- Perform plan reviews and provide feedback as required to maintain the Project schedule.
- Submit permit applications for stormwater and any changed wetland impacts and handle public involvement as necessary for the Project.

TASK 6 • BIDDING ASSISTANCE

TKDA will provide the City with construction plans and special provisions necessary for contractor bidding and award. We have included time in our Proposal for responding to Contractor questions during the bidding process, and to attend a pre-bid meeting after the advertisement for construction bids has been placed. This meeting often brings clarity to potential bidders, resulting in better construction pricing for the City.

TKDA Responsibilities:

- Final construction plans and special provisions needed to obtain contractor bids on the trail grading and lighting portions of the project.
- Assist in responding to Contractor questions during Project's bidding phase.
- Host/attend a pre-bid meeting to explain the Project details and answer bidder questions.

City Responsibilities:

- Prepare the contractor bidding package, advertise Project, sell/deliver plans/specifications.
- Set time/date/location for pre-bid meeting.

TASK 7 • CONSTRUCTION OBSERVATION

TKDA has included 8 hours per week for field observation of contractor methods and performance of the grading and drainage work shown in the construction plans and to verify compliance with those plans per the City's request. Our approach is to offer assistance which supplements the work efforts of City staff assigned to the Project. We anticipate the construction of the project to take eight (8) weeks. CMTA has also included field time



for electrical engineering staff to two (2) site visits to attend to those specific needs as they arise when contractors are onsite.

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. Geotechnical evaluation for the trail alignment.
- B. Additional field wetland delineation and permitting or banking/replacement plan development.
- C. Preliminary and Final Design plans and specifications for construction of additional segments of the trail.
- D. Preliminary or final design for additional lighting, snowmaking, or other mechanical equipment for the facility. TKDA, CMTA and Torrent Engineering are all aware of the potential for the City being awarded additional funding for snowmaking capabilities and we can add this scope at the appropriate time.
- E. Field survey of topographic information on additional routes or segments beyond those identified in our fee estimate or property boundaries.
- F. Trail easement descriptions or exhibits.

IV. CLIENT 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 to provide preliminary layouts to the City by June of 2023 and will complete final design by December of 2023 for City review and approval and to begin advertising for bids at a favorable time. Please refer to the schedule outlined below. This schedule is contingent upon timely acceptance of this Proposal as well as reasonable and prompt reviews by the City during the design process.

The TKDA Team understands that work associated with this Project must be completed in time to facilitate advertising the Project for bids early in 2024 and we have the resources, available personnel, expertise and enthusiasm to immediately begin work on your Project. We have estimated the following schedule for completion of the Lower Spirit Nordic Center Trail Project:

April 7, 2023	Proposal Submitted to City
May 15-19, 2023	Kick-off/Onsite Scoping Meeting w/City
May 2023	Obtain Topographic Survey Information/Field Review
June 2023	Plans (30%) Submitted to City for Concept Concurrence
August 2023	Plans (60%) Submitted to City for Review
November 2023	Final Plan/Special Provision Revisions Made
December 31, 2023	Approved P/S/E to City for Bidding
May–September 2024	Project Construction



TKDA will advise the City if circumstances develop beyond our control that will impact the schedule outlined above.

VI. COMPENSATION

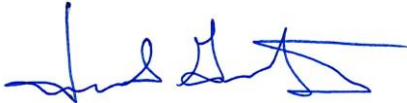
Compensation to TKDA for services provided as described in SECTION II of this Proposal shall be on an Hourly Time and Materials basis in an amount not to exceed \$59,100 for the project scope identified in our proposal. We have shown the work scope and costs for each trail segment in the detailed Project 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 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

JSG:DWF:slv:ayo





Project Fee Estimate

Client:		City of Duluth				Date:	4/7/2023
Project:		Lower Spirit Nordic Center Cross Country Ski Trail Design				By:	JSG
Task	Task Description	Estimated Person Hours				Total Hours	Total Dollars
		Sr Reg Eng	Tech III	Tech II	Reg Eng		
1	Project Kick-off Meeting	2		1	3	6	\$ 819
2	Site Visit/Observations	4			8	12	\$ 1,692
3	Review As-Built Information--Grading, Culverts, Electrical from 2019	4			4	8	\$ 1,248
4	Site Survey/Topographic Information (connections, missing data points)	2	16		4	22	\$ 2,414
5	Plans and Specifications						
	Create Concept Plan for Trail Grading 0.8 km loop	2			24	26	\$ 3,066
	Create Concept Plan for Curve Realignment Station 37+00	2	2		8	12	\$ 1,486
	Value Engineering/Rework for Connector Trail	4	2		36	42	\$ 4,996
	Coordination with Trail Designer Gary Larsen for field QA/QC/flagging	3			8	11	\$ 1,491
	Create Preliminary Electrical Supply Layout/Details (Coord. With CMTA)	2			4	6	\$ 846
	Review Concepts with City Staff, Finalize Scope	2			4	6	\$ 846
	Details (Coord. w/CMTA Electrical, Lighting and Poles)	1			4	5	\$ 645
	Final Design/Construction Documents for Trail Grading	2			40	42	\$ 4,842
	Details--Grading, Rock Embankments, Culverts	3			12	15	\$ 1,935
	Review Proposed Culverts/Design Drainage Comps	4			24	28	\$ 3,468
	Specifications-Grading, Coord. w/CMTA Electrical	4		4	8	16	\$ 2,028
	Opinion of Probable Costs	2			4	6	\$ 846
6	Bidding Assistance	4			6	10	\$ 1,470
7	Construction Observation/Admin. (8 hrs/week for trail, addtl for utilities)	2			64	66	\$ 7,506
	Staking	1	16		4	21	\$ 2,213
	Construction Admin/Submittals/Pay Applications	4			12	16	\$ 2,136
Total Person Hours		54	36	5	281	376	
Billing Rate/Hr x Multiplier		\$ 201	\$ 98	\$ 84	\$ 111		
Total Billable for Charged Time		\$ 10,854	\$ 3,528	\$ 420	\$ 31,191		\$ 45,993
Expenses:							
Mileage		Mileage at:	450				\$ 306
Survey Equipment		Hours at:	8				\$ 320
SubConsultant--CMTA (electrical, lighting)							\$ 7,500
SubConsultant--GEI (Rob Peterson, wetlands/permitting)							\$ 5,000
Total Project Fees							\$ 59,119
Total Not to Exceed							\$ 59,100