March 16, 2025

Duncan Schwensohn, P.E.
Senior Engineer, City of Duluth
411 West 1st St, Room 240 City Hall
Duluth, MN 55802
dschwensohn@duluthmn.gov

PROPOSAL FOR PROFESSIONAL SERVICES
EKLUND AVENUE RECONSTRUCTION
AMENDMENT 02 – CONSTRUCTION OBSERVATION

Thank you for the opportunity to provide Professional Construction Observation Services for the Eklund Avenue Reconstruction project. Together with our material testing partner, Braun Intertec, we are looking forward to continuing our work with you and the City's team through construction.

Project Understanding

The City of Duluth plans to reconstruct Eklund Avenue with a new urban residential street section from Maple Grove Road to Swan Lake Road. The project will include the construction of new curb and gutter, bituminous roadway, driveways with concrete aprons, concrete sidewalk, ADA pedestrian ramps, drainage structures and piping, a new stormwater filtration basin and watermain. LHB and Braun have been involved from preliminary engineering through final design documents and have a thorough understanding of the project. The City has requested our continued involvement through construction to observe and document the contractor's work and ensure conformance to the construction documents. The scope of these construction services is summarized below and in the attached fee estimate.

Scope of Services

Task 1 – Preconstruction

LHB Services

- Attend preconstruction meeting hosted by City of Duluth (Engineer and Inspectors).
- Review and approve shop drawings and submittals.
- Project management, invoicing, etc.

Deliverables

- Timely review and approval of shop drawings and submittals.
- Project correspondence.
- Project invoicing.

Provided by City

- Set up and run preconstruction meeting.
- Collaborate and provide input on submittals, etc.

Task 2 – On Site Construction Observation

We assume that on site construction observation services will be needed for 22 weeks at 60 hours per week. This inspection time will be shared between a lead inspector and an assistant inspector to ensure that the project is covered in case of time out of the office or illness.

LHB Services
- Full time construction observation.
- Periodic site visits by Project Manager if/as needed.
- Realtime problem solving and troubleshooting.
- Coordination of materials testing, sampling, and reporting.
- Attend weekly on-site construction meetings (Inspection staff in attendance at each meeting, Anticipating Engineer of Record attendance at up to 11 meetings).

Deliverables
- See Task 3 for documentation.

Provided by City
- Set up and run weekly construction meetings.
- Collaboration and input on construction issues.

Task 3 – Documentation & Recordkeeping

LHB Services
- Full project documentation in accordance with City requirements and standards.
- Prepare draft pay estimates in One Office for review and approval by City.
- Prepare required change orders for review and approval by City.
- Prepare record drawings.

Deliverables
- Record Drawings accurately depicting the as-constructed state of the project.
- All required documentation of the project in accordance with City standards.

Provided by City
- Review and approve periodic and final pay estimates.
- Review and approve change orders.

Task 4 – Survey Staking

LHB Services
- Establish control.
- Prepare staking files.
- Provide construction staking.
- Provide as-built survey.

Deliverables
- Staking Files
- Accurately and efficiently staked project.

Assumptions
- 1 trip for setting control
- 21 trips for survey staking

Task 5 – Project Coordination & Closeout

LHB Services

- Schedule post-construction walk through with the Contractor and prepare and track punch list.
- Assemble and submit complete project closeout in accordance with City standards.
- Final materials certification.

Deliverables

- Documented/completed punch list.
- Complete closeout finals package, indexed, bound and neatly organized.
- Signed final materials certification form.

Provided by City.

- Attend final walk through.
- Review and comment on various closeout materials.
- Assist with contractor issues.

Construction Material Testing

Construction material testing will be completed by Braun Intertec. Please find detailed material testing proposal attached.

Proposed Fee

The proposed fee to complete the construction observation is $341,705, including material testing and reimbursable expenses. See attached fee worksheet for a breakdown of the costs. We are nearing the completion of the final design phase of our contract and will have budget remaining. We will reserve $5,000 of our existing contract for bidding services and to finalize wetland permitting. That leaves $88,367 in our contract to put towards construction observation.

The total amount of additional services we are requesting in this Amendment is $253,338.

We appreciate the opportunity to provide you with our services through project completion. Please contact Megan Goplin at 218.249.7152 if you have any questions.

LHB, INC.

MEGAN GOPLIN, PE
CIVIL ENGINEERING MANAGER

MATT J. SETTERGREN, PE
VICE PRESIDENT

Attachments:
LHB Fee Estimate Worksheet dated March 17, 2025
Braun Intertec Material Testing Proposal dated February 25, 2025

c: LHB Project No. 230610

LHB

2025 FEE ESTIMATE WORKSHEET

Project Name	**Eklund Avenue Reconstruction**	**Project Number**	**230610**
Client	**City of Duluth**	**Date**	**March 17, 2025**
Preparer	**Megan Goplin**		

Project Breakdown Task Description	P1 Project Principal $ 265	P5 Profess. Eng. $ 208	P11 Lead Insp. $ 132	T5 Lead. Insp. $ 130	P13 Assist. Insp. $ 117	P5 Profess. Surveyor $ 204	T3 Survey Tech. $ 110	T7 Survey Tech. $ 100			Total Labor Costs ($)
Task 1 - Preconstruction											$ -
Preconstruction Conference		2	2	2	2						$ 1,174.00
Review Shop Drawings and Submittals		8			16						$ 3,536.00
Project Management	2	24				7					$ 6,950.00
											$ -
Task 2 - On Site Construction Observation											$ -
Est.22 Weeks at 60 Hrs./Wk				660	660						$ 163,020.00
Travel Time				66	66						$ 16,302.00
Supplemental Insp. Assistance During Paving etc.			60								$ 7,920.00
Engineer Site Visits (10 Trips)		8	8								$ 2,550.00
Weekly Meetings (22)		17	33								$ 7,788.00
Coordination and Engineering Consultation		20	20								$ 6,800.00
											$ -
Task 3 - Documentation & Recordkeeping											$ -
Daily & Weekly Diary - Concurrent w/ Insp. Time											$ -
Materials Certification		4	8		8						$ 2,824.00
Pay Estimates (Est. 11)					22						$ 2,574.00
IRA Entry - Concurrent w/ Insp. Time											$ -
Change in Const.Status Forms			2								$ 264.00
Change Orders	1		12		12						$ 3,253.00
Record Drawings				20	30						$ 6,110.00
											$ -
Task 4 - Survey Staking											$ -
Staking Control		1				2	13				$ 2,046.00
Staking Files						6	8	27			$ 4,804.00
Erosion Control & Sawcut Staking						2	14				$ 1,948.00
Storm Sewer & Culvert Staking						3	31				$ 4,022.00
Water Main Staking						1	24				$ 2,844.00
Reference, Blue Tops and Curb Stakes						8	115				$ 14,282.00
											$ -
Task 5 - Project Coord. & Closeout											$ -
Punch List/Walk Through				8	8						$ 1,976.00
Assemble Final Documentation			20	40	60						$ 14,860.00
Materials Certification			4	12							$ 2,088.00
											$ -
											$ -
Total Hours	3	83	169	808	884	29	205	27	-	-	

Travel & Equipment Expenses	Qty	Rate	Cost
Mileage	328	0.66	216.48
4WD Survey Truck (includes 124 miles in a day)	132	125.00	16,500.00
RoboticTotal Station	11	175.00	1,925.00
GPS Unit	11	200.00	2,200.00
Total Travel Costs			20,841.48

Other Direct Expenses	Cost
Mail / Delivery	
Printing	
Other	
Survey Supplies	500.00
Total Direct Costs	500.00

Labor Cost	$ 279,935.00
Travel Costs	$ 20,841.48
Direct Costs	$ 500.00
Braun CME	$ 40,429.00
Total Estimated Cost	**$ 341,705.48**

BRAUN INTERTEC
The Science You Build On.

Braun Intertec Corporation
4511 West First Street, Suite 4
Duluth, MN 55807

Phone: 218.624.4967
Fax: 952.995.2020
Web: braunintertec.com

February 25, 2025 Proposal QTB211044

Megan Goplin, PE
LHB, Inc.
21 West Superior Street, Suite 500
Duluth, MN 55802

Re: Proposal for Construction Materials Testing Services
Eklund Avenue Reconstruction - CP 2091
Eklund Avenue, from Maple Grove Road to Swan Lake Road
Duluth, Minnesota

Dear Ms. Goplin:

Braun Intertec Corporation is pleased to submit this proposal to provide construction materials testing services for Eklund Avenue Reconstruction in Duluth, Minnesota.

We have completed the geotechnical evaluation, so we have a unique understanding of the site and construction challenges. We can aid the construction team by applying this experience and transferring our knowledge developed during the design phase which will provide professional continuity to the construction. Our work on the project to date gives us familiarity with the project team and design development which allows us to understand some of the considerations used when developing the project's design.

Since our inception in 1957, we have grown into one of the largest employee owned engineering firms in the nation. With more than 1,000 employee owners, retaining our firm gives you access to a diverse range of services and professionals you can consult with if the unforeseen occurs. The size of our company also allows us to respond quickly when schedule constraints occur.

Our Understanding of Project

We understand this project will include the construction of pavement subgrade preparation, aggregate base placement, new concrete curb and gutter, sidewalk, and driveways along with new bituminous pavements. Improvements to the sanitary, and water main utilities will also be part of this project.

This project is a City of Duluth funded project. City of Duluth projects are required to perform Quality Control and Quality Assurance (QC/QA) testing in accordance with the City of Duluth's 2019 Construction Standards and the City of Duluth's Schedule of Materials Control. Braun Intertec will perform the QA field testing and plant monitoring on the project as listed in our scope of services and as shown on our attached cost estimate table. The contractor will be responsible for performing all of the required QC testing and submitting all the documentation upon completion of the project.

Available Project Information

This proposal was prepared using the following documents and information.

- 90% plans prepared by LHB, Inc., not dated.
- Geotechnical Evaluation Report prepared by Braun Intertec Corporation, for project B2400565 and dated April 9, 2024.
- Discussions with Ms. Megan Goplin with LHB, Inc.

We were not provided with any specifications or other quality control documents for this project.

Scope of Services

Testing services will be performed on an on-call, as-needed basis as requested and scheduled by you or your on-site project personnel. Based on our understanding of the project, we propose the following services.

Soil Related Services

- Perform nuclear gauge density tests on utility support and backfill materials, select granular borrow, aggregate base, and aggregate surfacing materials.
- Perform gradation tests on coarse filter aggregate, fine filter aggregate, granular bedding, granular backfill, select granular borrow, aggregate base and surfacing materials.
- Perform laboratory standard Proctor tests on backfill and fill materials.

Concrete Field Testing Related Services

- Sample and test the plastic concrete for slump, air content, temperature prior to placement. We assume that we will be able to appropriately dispose of excess concrete (and associated wash water) on site at no additional cost to us.
- Prepare 4-inch by 8-inch cylinders for compressive strength testing. A set of three cylinders will be tested at 28 days for each set cast. If field cure cylinders are requested, each additional cylinder will be charged at the unit price listed in our cost estimate.
- Laboratory compressive strength testing of cylinders.
- Perform concrete ready-mix batch plant inspections which includes observations of plant operations, collecting and submitting aggregate samples, cement samples and admixture samples for testing. Review and periodically observe contractor's quality control gradation and moisture testing of coarse and fine aggregates. Perform concrete plant monitoring per MnDOT 2461 specification and the City of Duluth specifications.

- Perform coarse and fine aggregate verification gradation tests. Compare agency test results with contractor's test results for compliance with MnDOT 2461 specification and the City of Duluth specifications.

Bituminous Related Services

- Perform bituminous plant inspections which includes periodically observing the contractor's quality control testing, observing one set of contractor tests per day and collecting companion samples for quality assurance tests. Perform bituminous plant monitoring per MnDOT's 2360 specification and the City of Duluth specifications.

- Collect verification samples per MnDOT's 2360 specification and randomly select one sample per day per mix to run quality assurance tests on. Perform quality assurance tests on the verification samples which include the following tests: Rice specific gravity, asphalt content, extracted aggregate gradation, gyratory density, coarse aggregate angularity, and fine aggregate angularity. Compare agency test results with contractor's test results for compliance with MnDOT 2360 specification and the City of Duluth's specifications.

- Randomly determine bituminous core locations by using MnDOT's random core worksheet and mark pavement core locations.

- Observe the contractor coring and core testing in accordance with MnDOT 2360 specification and the City of Duluth specifications, which include watching quality control personnel weigh the cores at their laboratory.

- Collect companion cores and test for thickness and density of pavement cores. Compare agency test results with contractor's test results for compliance with MnDOT 2360 specification and the City of Duluth specifications.

Reporting and Project Management

Test results will be issued weekly for the project as the various tasks are performed. If, at any time, there are failing tests which do not appear to be in accordance with the plans and specifications or the City of Duluth's Schedule of Materials Control, we will notify the engineer's representative and any others that we are directed to notify.

Before the final project closeout, we will issue a final report. The report will include the following:

- Braun Intertec technician roster for technicians that conducted testing on the project.

- Completed MnDOT Materials Certification Exceptions Summary for items tested by Braun Intertec.

- Completed Preliminary and Final Grading and Base Report.

- Moisture, Density, Proctor and Gradation tests.

- Concrete mix designs.
- Concrete compressive strength results.
- Concrete contractor's gradation, moisture and #200 wash test results.
- Concrete contractor's copies of cement and fly-ash bill of ladings.
- Bituminous mix designs.
- Bituminous batch plant inspection field forms.
- Bituminous verification test results.
- Bituminous contractor's summary sheets.
- Random core log location worksheets.
- Copies of concrete and bituminous plant certifications.

Basis of Scope of Work

The costs associated with the proposed scope of services were estimated using the following assumptions. If the construction schedule is modified or the contractor completes the various phases of the project at different frequencies or durations than shown in this proposal, we may need to adjust the overall cost accordingly. The scope of work and number of trips required to perform these services are as shown in the attached table. Notable assumptions in developing our estimate include:

- We assume it will take forty-eight trips to complete the nuclear density gauge testing on this project; this assumes thirty-six trips for testing of utility support and backfill, six trips for testing select granular borrow, and six trips for testing aggregate base.
- We assume nineteen sets of concrete tests will be required to complete the project.
- We assume the rebar observations before concrete placements will be completed by the project representative's construction oversight manager.
- We assume one coarse aggregate and one fine aggregate in the ready mix concrete.
- We assume bituminous paving will be completed in two days for this project.
- We assume your full time on-site construction observer will observe the test rolling for this project.

- We assume the project engineer of record will review and approve the contractor's quality control submittals and test results.

- You, or others you may designate, will provide us with current and approved plans and specifications for the project. Modification to these plans must also be sent to us so we can review their incorporation into the work.

- We will require a minimum of 24 hours' notice for scheduling inspections for a specific time. Shorter than 24 hours' notice may impact our ability to perform the requested services, and the associated impacts will be the responsibility of others.

If the work is completed at different rates than described above, this proposal should be revised.

Cost and Invoicing

We will furnish the services described herein for an estimated fee of **$40,429**. **Our estimated costs are based on industry averages for construction production. Depending on the contractor's performance, our costs may be significantly reduced or slightly higher than estimated.** A tabulation showing our estimated hourly and/or unit rates associated with our proposed scope of services is also attached. The actual cost of our services will be based on the actual units or hours expended to meet the requirements of the project documents.

This cost estimate was developed with the understanding that the scope of services defined herein will be required and requested during our normal work hours of 6:00 a.m. to 4:00 p.m., Monday through Friday. Services that we are asked to provide to meet the project requirements or the contractor's construction schedule **outside** our normal business hours will be invoiced using an overtime rate factor. The factor for services provided outside our normal work hours or on Saturday will be 1.25 times the listed hourly rate for the service provided. The factor for services provided on Sunday or legal holidays will be 1.5 times the listed hourly rate for the service provided. We have not included premiums for overtime in our cost estimate; however, we recommend that allowances and contingencies be made for overtime charges based on conversations with the contractor. You will be billed only for services provided on a time and materials basis.

Because our services are directly controlled by the schedule and performance of others, the actual cost may vary from our estimate. It is difficult to project all of the services and the quantity of services that may be required for any project. If services are required that are not discussed above, we will provide them at the rates shown in the attached table or, if not shown, at our current Schedule of Charges. We will invoice you on a monthly basis.

General Remarks

We will be happy to meet with you to discuss our proposed scope of services further and clarify the various scope components.

We appreciate the opportunity to present this proposal to you. After reviewing this proposal, **please sign and return one copy to our office as notification of acceptance and authorization to proceed**. If anything in this proposal is not consistent with your requirements, please let us know immediately. Braun Intertec will not release any written reports until we have received a signed agreement. Also, ordering services from Braun Intertec constitutes acceptance of the terms of this proposal.

The proposed fee is based on the scope of services described and the assumption that our services will be authorized within 30 days and that others will not delay us beyond our proposed schedule.

Our services will be provided under the terms of the Master Agreement Between LHB and Subconsultant for Professional Services, between LHB, Inc., and Braun Intertec Corporation, dated June 26, 2012.

To have questions answered or schedule a time to meet and discuss our approach to this project further, please contact Mickale Endres at 507.514.0514 (or MEndres@braunintertec.com).

Sincerely,

BRAUN INTERTEC CORPORATION

Mickale L. Endres, PE
Senior Manager, Senior Engineer

Joseph C. Butler, PE
Director, Senior Engineer

Attachments:
Project Proposal

The proposal is accepted. We will reimburse you in accordance with this agreement, and you are authorized to proceed:

Authorizer's Firm

Authorizer's Signature

Authorizer's Name (please print or type)

Authorizer's Title

Date

BRAUN INTERTEC
The Science You Build On.

Project Proposal

QTB211044

Eklund Avenue Reconstruction

Client:	Work Site Address:	Service Description:
LHB, Inc. Megan Goplin 21 West Superior St., Suite 500 Duluth, MN 55802 (218) 727-8446	Eklund Avenue, from Maple Grove Road to Swan Lake Road Duluth, MN 55811	Construction Materials Testing

	Description	Quantity	Units	Unit Price	Extension
Phase 1	**MnDOT Testing**				
Activity 1.1	**Soil Testing**				**$19,826.00**
207	**Compaction Testing - Nuclear**	120.00	Hour	92.00	$11,040.00
	Work Activity Detail ***Qty*** ***Units*** ***Hrs/Unit*** ***Extension***				
	Granular Bedding *8.00* *Trips* *2.50* *20.00*				
	Granular Backfill *8.00* *Trips* *2.50* *20.00*				
	Utilities, Storm and Water Main *20.00* *Trips* *2.50* *50.00*				
	Select Granular Borrow *6.00* *Trips* *2.50* *15.00*				
	Aggregate Base *6.00* *Trips* *2.50* *15.00*				
1308	**Nuclear moisture-density meter charge, per hour**	120.00	Each	25.00	$3,000.00
217	**Compaction Testing - Sandcone & DCP's**		Hour	92.00	$.00
1530AG	**Asphalt Content of Aggregate Base, per sample**		Each	156.00	$.00
209	**Sample pick-up**	12.00	Hour	92.00	$1,104.00
	Work Activity Detail ***Qty*** ***Units*** ***Hrs/Unit*** ***Extension***				
	Sample Pick-up *6.00* *Trips* *2.00* *12.00*				
1318	**Moisture Density Relationship (Proctor)**	10.00	Each	195.00	$1,950.00
126	**Project Engineer**	3.00	Hour	175.00	$525.00
1162	**Sieve Analysis with 200 wash, per sample**	7.00	Each	161.00	$1,127.00
1861	**CMT Trip Charge**	54.00	Each	20.00	$1,080.00
Activity 1.2	**Concrete Testing**				**$10,035.00**
261	**Concrete Testing**	47.50	Hour	92.00	$4,370.00
	Work Activity Detail ***Qty*** ***Units*** ***Hrs/Unit*** ***Extension***				
	Sidewalks *5.00* *Trips* *2.50* *12.50*				
	Curb & Gutter *14.00* *Trips* *2.50* *35.00*				
1364	**Compressive strength of concrete cylinders, per specimen**	57.00	Each	32.00	$1,824.00
	Work Activity Detail ***Qty*** ***Units*** ***Hrs/Unit*** ***Extension***				
	Sidewalks *5.00* *Sets* *3.00* *15.00*				
	Curb & Gutter *14.00* *Sets* *3.00* *42.00*				
1162CO	**Sieve Analysis, per sample**	2.00	Each	161.00	$322.00
215	**Concrete Ready Mix Plant Monitoring**	8.00	Hour	102.00	$816.00
	Work Activity Detail ***Qty*** ***Units*** ***Hrs/Unit*** ***Extension***				
	Ready Mix Plant Monitoring *1.00* *Trip* *8.00* *8.00*				
278	**Concrete Cylinder Pick up**	19.00	Hour	92.00	$1,748.00
	Work Activity Detail ***Qty*** ***Units*** ***Hrs/Unit*** ***Extension***				
	Cylinder Pickup *19.00* *Trips* *1.00* *19.00*				
1861	**CMT Trip Charge**	39.00	Each	20.00	$780.00
226	**Project Manager**	1.00	Hour	175.00	$175.00
Activity 1.3	**Pavement Testing**				**$4,168.00**
2689	**MnDOT Bituminous Verification, per sample**	2.00	Each	700.00	$1,400.00

	222	**Bituminous Verification Testing**			8.00	Hour	102.00	$816.00
		Work Activity Detail	***Qty***	***Units***	***Hrs/Unit***		***Extension***	
		Obtain Sample of Mixture	*2.00*	*Trips*	*4.00*		*8.00*	
	221	**Mark and Observe Contractor Coring**			16.00	Hour	102.00	$1,632.00
		Work Activity Detail	***Qty***	***Units***	***Hrs/Unit***		***Extension***	
		Mark & Observe Contractor Coring & Testing	*2.00*	*Trips*	*8.00*		*16.00*	
	1542	**Thickness and Density of Bituminous Core**			4.00	Each	60.00	$240.00
	1861	**CMT Trip Charge**			4.00	Each	20.00	$80.00
Activity 1.4		**Project Management**						**$6,400.00**
	226	**Project Manager**			20.00	Hour	175.00	$3,500.00
	1230	**Final Testing Summary Report**			1.00	Each	1,000.00	$1,000.00
	228	**Senior Project Manager**			3.00	Hour	225.00	$675.00
	238	**Project Assistant**			10.00	Hour	85.00	$850.00
	125	**Project Control Specialist**			3.00	Hour	125.00	$375.00
							Phase 1 Total:	**$40,429.00**

Proposal Total:	**$40,429.00**