

REQUEST FOR PURCHASE IN EXCESS OF \$20,000/CHANGE ORDER



To: MAYOR AND CITY COUNCIL

Agenda Item #: VIII. B.

From: Chad A. Millner, PE, Director of Engineering

The Recommended Bid is

Within Budget

Not Within Budget

Date: June 2, 2015

Subject: Request for Purchase – Authorize Engineering Services for Morningside A and White Oaks C Neighborhood Street Reconstruction Project

Date Bid Opened or Quote Received:
May 26, 2015

Bid or Expiration Date:
NA

Company:

Amount of Quote or Bid:

Short Elliot Hendrickson (SEH), Inc.

\$105,979.00

Recommended Quote or Bid:

Short Elliot Hendrickson, Inc.

\$105,979.00

General Information:

The Morningside A and White Oaks C Neighborhoods are scheduled for reconstruction in 2016. Please recall as part of the STS-406 Storm Water Project, BARR Engineering recently completed a study on flood protection and clean water improvements that were listed in the Comprehensive Water Resources Management Plan for further study. The study contains 95 pages and will not be included with this RFP but can be found on our website using the following path.

http://edinamn.gov/edinfiles/files/City_Offices/Engineering/Construction_Projects/Morningside_A_White_Oaks_C/STS-406_Part_3_-_ProjectArea8_WhiteOaks_FinalReport_03-27-2015.pdf

The study tried to answer the question, are water levels in land-locked wetlands too high for too long? Water levels have potential impacts on flooding, vegetation, and aesthetics. These were some of the concerns we heard from the neighborhood at neighborhood meetings conducted during November 2013 and February 2015. The study confirmed models to predict water levels in these wetlands in relation to precipitation.

In 2000, the City added approximately 3 acres of drainage area to wetland #1 to address structure flooding of homes along Arden Avenue. This increased the drainage area into wetland #1 by 11%. Based on last year's precipitation, that increased drainage area may have increased water levels by 2-5 inches during normal precipitation amounts or as high as 6-7 inches during the larger, more frequent events. There are also two other factors influencing the amount of water entering these wetlands, residential redevelopment and increasing average annual precipitation since approximately 1960.

This project will not only complete our typical review of our road and utility systems but it will also study different implementation scenarios of Living Streets elements, most notable green storm water infrastructure.

We will develop scenarios along with cost impacts ranging from our typical practice to high implementation of green infrastructure. These scenarios will be developed with the neighborhood, along with funding impacts that will ultimately be discussed with the council.

The neighborhood can also implement green infrastructure privately, most commonly in the form of rain gardens or rain barrels. Their actions can also improve the concerns about the amount of water reaching these landlocked wetlands. Staff has met with the Minnehaha Creek Watershed District (MCWD) about this project. Grant funding for public infrastructure is limited due to the distance from the creek. There are opportunities for grants on the private side through engagement and support of the neighborhood for green infrastructure.

The neighborhood association has requested a time to discuss their concerns with the council. A work session has been scheduled with the council for July 7.

The project is funded by a combination of special assessments, City Utility and Pedestrian and Cyclist Safety funds. Staff recommends approving the attached engineering proposal with SEH.

Attachment:

- Engineering Proposal

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Building a Better World
for All of Us®

SUPPLEMENTAL LETTER AGREEMENT

May 26, 2015

RE: City of Edina
2016 Morningside A & White Oaks C
Neighborhood Roadway
Reconstruction BA-422
SEH No. EDINA131823 10.00

Mr. Chad Millner, PE
Director of Engineering
City of Edina
Engineering and Public Works Facility
7450 Metro Boulevard
Edina, MN 55439

Dear Chad:

Short Elliott Hendrickson Inc. (SEH®) thanks you for the opportunity to submit the attached proposal for the engineering study portion up to the public improvement hearing of the referenced project. The project area is shown in Figure 1 attached to this letter.

If accepted, this supplemental letter agreement describes how we will provide these services for a not-to-exceed fee of \$105,979.00. This amount is detailed in the attached Task Hour Budget (THB) and includes our reimbursable expenses and that of our soil boring and laboratory testing subconsultant. We will bill the City monthly for reimbursable expenses and on an hourly basis for labor. We will provide these services in accordance with our Agreement for Professional Engineering Services dated June 4, 2013, herein called the Agreement.

We understand this project proposes to upgrade aging street and utility infrastructure. A component of the preliminary design will include incorporation of the City's Living Streets Plan. Preliminary design will evaluate which existing street widths should be narrowed, whether to maintain or replace existing curb and gutter, how to incorporate the existing sidewalk network already present in the neighborhood, determine if restricting parking to one side of the street is feasible and provide a cost/benefit analysis of multiple stormwater treatment options.

We understand several existing land-locked wetland basins are located in the neighborhood. Under these conditions, there is concern of extended high water levels and flood potential, and what impact this has to existing vegetation and wetland aesthetics. This project presents an opportunity to reduce stormwater volume to the wetlands through the implementation of green infrastructure and reduction of impervious area.

With this in mind, feedback and input from the neighborhood will be essential to ensure a successful project. Residents will have the opportunity to participate throughout the project's preliminary design through two (2) separate project specific questionnaires and two (2) separate

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 10901 Red Circle Drive, Suite 300, Minnetonka, MN 55343-9302
SEH is 100% employee-owned | sehinc.com | 952.912.2600 | 800.734.6757 | 888.908.8166 fax

Mr. Chad Millner, PE
May 26, 2015
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neighborhood meetings where at least 30% and 60% design elements and their associated impacts will be presented.

Our anticipated project production schedule is given in the table below.

| Anticipated Project Schedule | | |
|------------------------------|--|------------------------------|
| Work Item No. | Work Item Description | Work Item Key Milestone Date |
| 1 | Begin Data Collection | June 3, 2015 |
| 2 | Mail general project resident questionnaire | June 8, 2015 |
| 3 | Mail stormwater treatment specific resident questionnaire | June 22, 2015 |
| 4 | Neighborhood work session with City Council | July 7, 2015 |
| 5 | Neighborhood Meeting No. 1 to present overall project and stormwater treatment options | Week of July 27, 2015 |
| 6 | Neighborhood Meeting No. 2 to present refined stormwater treatment options | Week of August 24, 2015 |
| 7 | Edina Transportation Commission Meeting – Present Draft Engineering Study | October 15, 2015 |
| 8 | Public Improvement Hearing | December 8, 2015 |

This Supplemental Letter Agreement, THB, Figure 1 and the Agreement represent the entire understanding between the City of Edina and SEH in respect to the project and may only be modified in writing if signed by both parties.

We sincerely appreciate our continued working relationship with the City. Please contact me at 952.912.2616 or tmuse@sehinc.com with questions regarding this proposal.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.



Toby Muse, PE
Project Manager

Enclosures

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Accepted on this ____ day of _____, 2015

City of Edina, Minnesota

By: _____
Name



2016 Project Area
Morningside A & White Oaks C Neighborhood Roadway Reconstruction
Improvement No: BA-422



Engineering Dept
October, 2013



Task Hour Budget
City of Edina
2016 Morningside A & White Oaks C Neighborhood Roadway
Improvement No: BA-422
May 26, 2015

| | | | | ESTIMATED COST |
|--------------------------------|-----|--------|--|-------------------|
| PROJECT TASKS | | | | |
| ENGINEERING STUDY PHASE | | | | |
| 1.0 | | | Data Collection | |
| | 1.1 | | Collect Data from the City | |
| | | 1.1.1 | Closed Circuit Television (CCTV) Tapes/Disks and Logs (1) | |
| | | 1.1.2 | Verify Utility as-builts from City | |
| | | 1.1.3 | Digital parcel mapping from City | |
| | | 1.1.4 | Hennepin County / City of Minneapolis traffic signal coordination | |
| | | 1.1.5 | Comprehensive Water Resource Management Plan dated 7/03 prepared by BARR Engineering for the project area. | |
| | | 1.1.6 | List of property owner information (2) | |
| | | 1.1.7 | Sanitary sewer manhole structure survey data (3) | |
| | | 1.1.8 | Previous soil boring logs and/or test results | |
| | | 1.1.9 | Topographic survey | |
| | | | 1.1.9.1 3D base drawing file | |
| | | | 1.1.9.2 3D topographic survey point files | |
| | | 1.1.10 | Traffic and pedestrian counts (4) | |
| | | 1.1.11 | Aerial mapping | |
| | | | 1.1.11.1 Photograph | |
| | | | 1.1.11.2 Contours | |
| | | 1.1.12 | Existing driveway photographs | |
| | 1.2 | | Gopher State One Call | |
| | | 1.2.1 | Obtain Ticket No. for Gopher State One Call | |
| | | 1.2.2 | Collect atlases from private utility companies in the project area | |
| | | | Subtotal Labor Cost | \$15,866 |
| 2.0 | | | Geotechnical Investigation (5) | |
| | 2.1 | | Coordinate Subsurface Investigation (6) | |
| | 2.2 | | Provide geotechnical recommendations (7) | |
| | 2.3 | | Provide Geotechnical Memorandum | |
| | | | Subtotal Labor Cost | \$7,112 |
| 3.0 | | | Kick-off Newsletter & Questionnaire | |
| | 3.1 | | Prepare kickoff newsletter text and map (8) (9) | |
| | 3.2 | | Print newsletter, questionnaire and mailing labels (10) | |

| | | | | ESTIMATED COST |
|---------------|------|--------|---|-----------------|
| PROJECT TASKS | | | | |
| | 3.3 | | Prepare draft questionnaires text (11) | |
| | 3.4 | | Tabulate Kick-off Questionnaire Results | |
| | | | Subtotal Labor Cost | \$3,280 |
| 4.0 | | | Field Inspection (12) | |
| | 4.1 | | Inspect storm sewer manholes and storm sewer catch basins (13) (14) | |
| | 4.2 | | Inspect existing curb and gutter for reincorporation into the project (15) | |
| | 4.3 | | Inspect existing pavement for limits of alligator cracking to indicate presence of subgrade soils needing repair (16) | |
| | 4.4 | | Observe storm water runoff during a rain event | |
| | 4.5 | | Inspect potential stormwater BMP locations | |
| | 4.6 | | Traffic signal system at France Avenue | |
| | | | Subtotal Labor Cost | \$2,773 |
| 5.0 | | | Street / Pavement Design (17) (18) | |
| | 5.1 | | Develop street pavement sections (19)(20) | |
| | 5.2 | | Evaluate narrowing of roadways (21) | |
| | 5.3 | | Determine the locations and depths of subgrade repairs (19) (20) | |
| | | | Subtotal Labor Cost | \$3,816 |
| 6.0 | | | Drainage / Storm Sewer Design | |
| | 6.1 | | Prepare layout of proposed storm sewer extensions/new systems (22) | |
| | 6.2 | | Identify tributary areas (23) | |
| | 6.3 | | Calculate runoff coefficient "C" factor (23) | |
| | 6.4 | | Determine time of concentration "Tc" for tributary areas | |
| | 6.5 | | Size proposed storm sewer pipes (24) | |
| | 6.6 | | Prepare approximate layout for proposed sump pump drain pipe network (25) | |
| | 6.7 | | Design layout of drain tile network based on recommended subcuts | |
| | 6.8 | | Size storm water runoff treatment manholes (26) | |
| | 6.9 | | Identify existing manholes, trunk pipes, and catch basins needing reconstruction in the project area (27) | |
| | 6.10 | | Investigate adjustments to the street profile in select locations to improve the flow of storm water runoff to existing and proposed catch basins | |
| | 6.11 | | Treatment/volume control system preliminary design (28) | |
| | | 6.11.1 | Level 1 System | |
| | | 6.11.2 | Level 2 System | |
| | | 6.11.3 | Level 3 System | |
| | | | Subtotal Labor Cost | \$15,251 |
| 8.0 | | | Water Main Design (29) | |
| | 8.1 | | Develop Suggested Staging Plan (30) | |
| | | 8.1.1 | Evaluate Locations of Existing and Proposed Valves and Fire Hydrants | |

| | | | | ESTIMATED COST |
|---------------|------|--------|--|-----------------|
| PROJECT TASKS | | | | |
| | | 8.1.2 | Evaluate Layout of Temporary Water Main and Water Services | |
| | 8.2 | | Trunk Pipe | |
| | | 8.2.1 | Reconstruction Plan (31) | |
| | | 8.2.2 | Relocate Fire Hydrant (32) | |
| | 8.3 | | Service Pipe | |
| | | 8.3.1 | Reconstruction Plan (33) | |
| | | | Subtotal Labor Cost | \$2,734 |
| 9.0 | | | Street Lighting (34) | |
| 10.0 | | | Calculate Quantities | |
| | 10.1 | | Streets | |
| | 10.2 | | Storm Sewer | |
| | 10.3 | | Sanitary sewer | |
| | 10.4 | | Water Main | |
| | | | Subtotal Labor Cost | \$3,749 |
| 11.0 | | | Prepare Engineer's Opinion of Probable Cost (35) (38) | |
| | 11.1 | | Prepare Engineer's Opinion of Probable Cost (36) | |
| | | | Subtotal Labor Cost | \$3,160 |
| 12.0 | | | Preliminary Assessment Roll (37) | |
| | 12.1 | | Count single family/commercial business parcels | |
| | 12.2 | | Input parcel information data into XLSX spreadsheet | |
| | 12.3 | | Prepare preliminary roll (38) | |
| | 12.4 | | Account for special corner lots that received 1/3 or 2/3 rate assessments as part of a previous or future reconstruction project | |
| | 12.5 | | Review preliminary roll with City staff | |
| | | | Subtotal Labor Cost | \$1,443 |
| 13.0 | | | Prepare Engineering Study | |
| | 13.1 | | Write draft engineering study | |
| | 13.2 | | Prepare project area location map figure | |
| | 13.3 | | Prepare preliminary assessment roll figure | |
| | 13.4 | | Review draft study with City staff | |
| | 13.5 | | Prepare final study | |
| | 13.6 | | Prepare and submit hard copies of the study | |
| | 13.7 | | Prepare and submit PDF file of the study | |
| | | | Subtotal Labor Cost | \$14,887 |
| 14.0 | | | Meetings | |
| | 14.1 | | Kick-off meeting with City staff | |
| | 14.2 | | Email Private Utilities (39) | |
| | 14.3 | | Neighborhood Meetings (40) | |
| | | 14.3.1 | Prepare invitation to Neighborhood Meetings | |
| | | 14.3.2 | Prepare preliminary assessment roll graphic | |
| | | 14.3.3 | Prepare plots summarizing improvements for use at the meeting (41) (42) | |
| | | 14.3.4 | Prepare attendance roster sheets and attend Neighborhood Meetings (43) | |

| | | | | ESTIMATED COST |
|----------------------------|--------|--|--|-----------------|
| PROJECT TASKS | | | | |
| 14.4 | | | City Staff, City Boards and Commission Meetings, and other Agency Meetings | |
| | 14.4.1 | | Meeting with City Staff (44) | |
| | 14.4.2 | | Transportation Commission Meeting (45) | |
| | 14.4.3 | | Minnehaha Creek Watershed District Meeting (46) | |
| 14.5 | | | Public Improvement Hearing | |
| | 14.5.1 | | Prepare for Public Improvement Hearing (47) | |
| | 14.5.2 | | Attend Public Improvement Hearing (48) | |
| Subtotal Labor Cost | | | | \$19,432 |

| | | | | ESTIMATED COST |
|--|---|--|--|---------------------|
| PROJECT COST SUMMARY | | | | |
| ENGINEERING STUDY PHASE | | | | |
| | Subtotal Hours | | | 744 |
| | Subtotal Labor Cost | | | \$93,503.81 |
| | Subtotal SEH Expenses (49) | | | \$3,500.19 |
| | Subtotal Subconsultant Expenses (5) (50) | | | \$8,975.00 |
| TOTAL COST ASSOCIATED WITH THIS PROPOSAL: | | | | \$105,979.00 |

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NOTES

- 1 To be completed by the City and submitted to SEH. Data will assist in evaluating the condition of the trunk sanitary sewer pipes in the project area.
- 2 List will be an XLSX file containing at a minimum property address, property owner name, property owner address, and PID number.
- 3 City will provide data as either a XLSX or DOCX file. If SEH determines the data to be insufficient, the scope of the additional surveys needed will be negotiated between the City and SEH and added as a Supplemental Agreement.
- 4 Assumes City will complete and provide data to SEH.
- 5 SEH will contract directly with Braun Intertec for subsurface investigations and laboratory testing.
- 6 Task includes developing drilling / testing scope and coordination with Braun proposal, staking borings, coordinate drilling & surveying, review draft boring logs, review soil samples, assign laboratory tests, and coordination of final boring locations and final boring report.
- 7 Includes a evaluation of roadway subgrades, analysis of soil corrections, recommendation for pavement section based on traffic loads, evaluation of utility excavations and evaluation of site drainage.
- 8 Two (2) questionnaires will be developed - one for the overall project and one that is specific for potential stormwater treatment improvements.
- 9 Includes submitting draft copies to the City and effecting City edits.
- 10 Assumes task is completed by City staff including stuffing envelopes and mailing.

- 11 Questionnaires will be for residents to complete and return to City for tabulation of results. Questionnaire will be sent to all residents of the project area and will cover presence of local drainage problems, pet containment systems and the interest in street lighting. The stormwater treatment questionnaire will include options for residents to consider such as porous pavement, tree trenches and rain gardens.
- 12 Assumes no inspection of sanitary sewer manholes because the City has already done this work.
- 13 We will inspect only structures with insufficient data gathered from the City's storm sewer structure survey project. We will only inspect structures within the street rights-of-ways.
- 14 If additional inspection is needed, inspection results will be compiled on paper structure survey forms. Whenever possible, City supplied manhole and catch basin numbers will be used for identification purposes.
- 15 Complete removal or complete reincorporation of existing curb and gutter in this neighborhood is unknown and won't be determined until the extent of utility reconstruction is better understood. This task won't occur until the utility reconstruction scope is known.
- 16 We will visually field inspect the cracked conditions of the existing streets to estimate the amount of subgrade repair needed.
- 17 Based on preliminary discussions with staff, we assume corridor design will follow City of Edina's Living Streets Plan.
- 18 The street width will likely be 24-foot wide face of curb to face of curb, with parking on one side and reincorporation of the existing 4' wide sidewalks found in the neighborhood.
- 19 Typical sections and subcut locations will be per the geotechnical memorandum prepared for the engineering study.
- 20 Includes evaluating the feasibility of producing reclaim aggregate base and reincorporating it into the proposed street section as base or subgrade backfill.
- 21 This task analyzes the impacts to the boulevard areas by narrowing the roadway equally from both sides or from just one side. 30% design level will be established.
- 22 Scope of this task includes the layout and preliminary sizing of storm sewer trunk line and special structure locations (e.g., treatment manholes, diversion structures to BMPs, etc.)
- 23 Consult Comprehensive Water Resource Management Plan dated 7/03 for the City of Edina prepared by BARR Engineering.
- 24 Based on a 10-year design storm.
- 25 This system will be limited to areas of need. Sump pump drain pipe and sump pump drain service pipe design and quantities will be tabulated under the storm sewer improvement number.
- 26 Involves evaluation and design of City approved style of storm water treatment structures at locations to be determined during engineering study. Assumes SAFL Baffle design with sumps.
- 27 Repairs or replacements of existing storm sewer structures and pipes are based on recommendations from City staff and the structure condition surveys completed by SEH staff during its field inspection operations.
- 28 Includes a green infrastructure assessment of cost-benefit of public BMPs and a listing of the best locations/options for private BMPs (e.g., top 10 locations). Storm water treatment design will include analysis of three different levels of service: Level 1 = 1/2-inch event; Level 2 = 1-inch event; Level 3 = 1 1/2-inch event. The analysis will focus on volume control BMPs that can help to reduce/mitigate stormwater volumes to land-locked wetlands.
- 29 Based on preliminary discussions with the City, we understand the trunk water main system will require rehabilitation on 45th Street, Townes Circle, Curve Avenue and portions of Grimes Avenue and Sunnyside Road.

- 30 Includes evaluation of water main reconstruction and its staging plan since this will likely drive the overall phasing of the project.
- 31 Includes evaluation of open cut vs. pipe bursting as part of the engineering study and providing a recommendation to the City.
- 32 All existing fire hydrants in the project area will be removed and replaced. Hydrants in front of residences will be relocated within the boulevard to be adjacent to the nearest common side-yard property line. Fire hydrants will be inserted to keep the spacing between fire hydrants under 400-feet.
- 33 Includes removing and replacing existing water service pipes from the trunk water main pipe up to and including the existing curb stop.
- 34 An existing street lighting system is present in both neighborhoods. Residents will be asked about the desire to upgrade the street lighting network in the questionnaire. We assume street lighting will not be included in the scope of this project. If the neighborhood does request this system, SEH and the City will negotiate a Supplemental Agreement for these services.
- 35 Includes unit price estimates during development of engineer's opinion of probable cost.
- 36 Costs will feature a 15% contingency factor and be computed in 2016 dollars.
- 37 The assessment to each parcel is per residential equivalent unit (REU) that adheres to the City's assessment policy.
- 38 Includes analysis of preliminary cost estimates and assessment rolls for each neighborhood vs. combining both neighborhoods under one project cost.
- 39 Task will notify CenterPoint Energy, Xcel Energy, Comcast, and CenturyLink of the potential project and inquire whether or not they have any facilities in need of updating. If so, the private utility companies will be instructed to coordinate with the City the timing of this work prior to the start of the project.

- 40 Two meetings will be scheduled for late July and August.
- 41 At the first meeting, SEH will provide meeting graphics that will have as a base the aerial photo of the project area with 1. existing sanitary and storm sewer trunk pipes line work 2. existing watermain trunk pipe line work 3. topographic survey line work 4. property and right-of-way lines 5. street names and addresses, and 6. 30% complete proposed improvements for sidewalks, curb and gutter, storm sewer treatment options, drain tile, sanitary sewer, water main and fire hydrant relocations and replacements.
- 42 At the second meeting, SEH will provide refined design based on input received from the 1st meeting. The 2nd meeting will focus on stormwater treatment options that will include plots with 60% complete proposed improvements.
- 43 Preparations include creating a 10-minute long PPT file for presentation to the residents made by SEH staff. Homeowner comments will be recorded on the meeting graphics.
- 44 Meet with Public Works staff to determine which stormwater treatment system options are viable for consideration on the City's streets and boulevards.
- 45 Present to Transportation Commission at October 2015 meeting.
- 46 Update Minnehaha Creek Watershed District staff on stormwater treatment system options prior to neighborhood meetings.
- 47 Preparations include creating a 10-minute long PPT file for presentation to the Council and residents.
- 48 Tentatively scheduled for December 8, 2015.
- 49 Reimbursable expenses include survey equipment charges, mileage and printing costs for meetings, draft and final study submittals.
- 50 Soil investigation to include the following: 13 soil borings drilled through existing pavement to 15 ft depth, sampling at 2.5 ft intervals in soil borings, assumes up to 2 thin wall samples (if organic soils are encountered), assumed lab budget based on: moisture content tests, 20 sieves, and 10 Atterbergs.