HUBBELL, ROTH & CLARK, INC
CONSULTING ENGINEERS SINCE 1915

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March 31, 2023

City of Ann Arbor
301 E Huron Street
PO Box 8647
Ann Arbor, MI 48107

Attn: Mr. Cyrus Naheedy, PE, Transportation Engineer

Re: Quick Build Year Two (2) Design Proposal — HRC Job No. 20230236
City of Ann Arbor – As Needed Transportation Engineering Services

Dear Mr. Naheedy:

Hubbell, Roth & Clark, Inc. (HRC) is pleased to provide this proposal to provide design engineering services to deploy various quick build projects throughout the city. An example of a quick build design would be adding city posts between the travel and bike lane to provide added separation rather than curbed medians. This type of design allows for a much faster deployment than traditional methods. The city is currently using quick build designs to create safer conditions for all road users including bicyclists and pedestrians. HRC understands the quick build projects to be somewhat permanent and withstand seasonal (winter) conditions. However, quick build projects do allow for flexibility in modifying the final design after obtaining feedback from the community and evaluating the impact.

HRC understands the city is also looking to perform multimodal traffic counts and speed data at various study locations before and after deployment. The city plans to evaluate the counts and data to determine if the quick build designs have any impact on vehicular behavior, such as reducing speeds. Locations involving traffic counts or speed data will be of priority.

HRC recognizes the city is looking to construct these quick build projects within the calendar year (2023). HRC will focus on developing bid documents for deployment. HRC will overlay the design on high-resolution aerials unless the city provides supplemental survey files. HRC will include any preferred materials (city posts) from the city into the bid documents. HRC will also consider potential conflicts, such as transit stops, fire hydrants, and on-street parking, during the design. HRC's scope of work is outlined below.

Scope of Work

HRC proposes to undertake the following tasks for each program to complete the design engineering services of the Quick Build Year Two (2) Project:

Buffered Bike Lane Facilities (approximately 11.4 miles)

- Develop construction drawings, specifications, and a cost estimate to add city posts (manufacturer provided by city) in existing pavement markings for the buffered bike lanes between the travel and bike lane at the following locations:
  1. S Main St between Stadium Blvd and Scio Church Rd (northbound only)
  2. S Main St between Ann Arbor-Saline Rd and Fieldcrest St (northbound only)
  3. S Main St between William St and Stadium Blvd (both directions)
  4. Pauline Blvd between S Seventh St and W Stadium Blvd (both directions)
  5. N Maple Rd between Foss Ct and Dexter Avenue (both directions)
  6. Plymouth Rd between Nixon Rd and Upland Dr/Murfin Ave (both directions)
  7. Plymouth Rd between Moore/Maiden Ln and Upland Dr/Murfin Ave (southbound only)
  8. S Seventh St between Stadium and Scio Church (both directions)
  9. S Seventh St between Stadium and Washington (both directions)

- Develop maintenance of traffic typical to deploy city posts at all locations.
- Develop countermeasures to accommodate transit stops, fire hydrants, and on-street parking.

Hardened Centerlines

- Develop construction drawings, specifications, and a cost estimate to add city posts (manufacturer provided by city) and/or modular curbs on the major approaches at the following intersections (major road listed first unless otherwise noted):
  1. S Main St at Pauline Blvd
  2. Pauline Blvd and S Seventh St (major road to be determined)
  3. Pauline Blvd and W Stadium Blvd (major road to be determined)
  4. Plymouth Rd at Huron Pkwy
  5. Plymouth Rd at Nixon Rd
  6. Plymouth Rd at Traverwood Dr
  7. Plymouth Rd at Barton Dr
  8. S Seventh St and Madison (major road to be determined)
  9. S Seventh St and Liberty St (major road to be determined)
  10. S Seventh St and Stadium Blvd (major road to be determined)
  11. Geddes Ave at Arlington Blvd
      a. Centerline hardening on double yellow lines between Arlington and Appleway
      b. City posts on north side of Geddes between travel and bike lane
- Develop maintenance of traffic typical to deploy hardened centerline at all locations.
- Review last three (3) years of crash data within a 250-foot radius at the following intersecting streets for patterns that are susceptible to correction or reduction in severity (pedestrian and head-on left-turn crashes) by the installation of hardened centerlines.
  1. Pauline Blvd and S Seventh St
  2. Pauline Blvd and W Stadium Blvd
  3. S Seventh St and Madison
  4. S Seventh St and Liberty St
  5. S Seventh St and Stadium Blvd

Traffic Counts

- Collect multimodal traffic count data using Miovision cameras at the following 11 locations before and after deployment, totaling 22 counts all together. Each count includes 8 hours (7:00AM-9:00AM, 11:00AM-1:00PM, 2:00PM-6:00PM) of collection (video will be collected for 24 hours).
  1. S Main St and Pauline Blvd
  2. Pauline Blvd and S Seventh St
  3. Pauline Blvd and Stadium Blvd
  4. Plymouth Rd and Huron Pkwy
  5. Plymouth Rd and Nixon Rd
  6. Plymouth Rd and Traverwood Dr
  7. Plymouth Rd and Barton Dr
  8. S Seventh St and W Madison St
  9. S Seventh St and W Liberty St
  10. S Seventh St and W Stadium Blvd
  11. Geddes Ave and Arlington Blvd

- Collect speed data using radar counters at the following eight (8) locations before and after deployment in both directions, totaling 16 sets of speed data. Each data set includes 24 hours of speed and volume counts.
  1. S Main St between Stadium Blvd and Scio Church Rd
  2. S Main St between William St and Stadium Blvd
  3. Pauline Blvd between S Seventh St and W Stadium Blvd
  4. N Maple Rd between Foss Ct and Dexter Ave
  5. Plymouth Rd between Nixon Rd and Upland Dr/Murfin Ave
  6. Plymouth Rd between Moore/Maiden Ln and Upland Dr/Murfin Ave
  7. S Seventh St between Stadium and Scio Church
  8. S Seventh St between Stadium and Washington
- Apply for individual right-of-way permits through the city (STREAM portal) at each traffic count location (19 locations total).

The scope of work outlined in this proposal does not include the following tasks:

- Additional pavement marking, signs, or other geometric design for the buffered bike lane sections
- MDOT permits as all roads are owned by City
- Capacity analysis
- Crash analysis for bike lane locations
- Assistance during construction/implementation
- Public engagement
- Right-of-way acquisitions
- Technical report of findings
- Survey
- Field inspections during deployment

HRC is ready to begin the design engineering services upon approval. Based on the scope of work and staff hours, HRC estimates the cost to be $148,810.00 ($105,530.00 design; $43,280.00 traffic counts), which would not be exceeded without prior authorization. HRC will invoice the city per the terms of our existing contract, and the final invoice amount will be based on actual time spent.

Since the city is targeting a construction date of Fall 2023, it is necessary to begin the engineering services as soon as a contract is received. As indicated by your signature below, the city's approval will constitute an agreement between us for the above services. Thank you for considering HRC for this work. Should the city have any questions or require any additional information, please do not hesitate to contact Lia Michaels at (248) 454-6812 or lmichaels@hrcengr.com.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Charles E. Hart, PE
Vice President

Lia Michaels, PE, PTOE, RSP$_1$
Associate

pc: City of Ann Arbor; S. Flowers, L. Liu
HRC; N. Nicita, File