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| Local Public Agency City of Aurora | L O C A L A G E N C Y |  Illinois Department of Transportation Preliminary Engineering Services Agreement For Federal Participation | C O N S U L T A N T | Consultant HR Green, Inc. |
| County Kane | | | | Address 420 N. Front Street |
| Section 16-00315-00-BR | | | | City McHenry |
| Project No. XGNX (598) | | | | State Illinois |
| Job No. D 91-081-19 | | | | Zip Code 60050 |
| Contact Name/Phone/E-mail Address Chris Lirot 630-256-3200 clirot@aurora-il.org | Contact Name/Phone/E-mail Address Akram Chaudhry 815-759-8310 achaudhrv@hrgreen.com | | | |

THIS AGREEMENT is made and entered into this _____ day of _____, 2019 between the above Local Public Agency (LPA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the PROJECT. Federal-aid funds allotted to the LPA by the state of Illinois under the general supervision of the Illinois Department of Transportation (STATE) will be used entirely or in part to finance engineering services as described under AGREEMENT PROVISIONS.

Project Description

Name Montgomery Road over Waubonsie Creek Route MS 1110 Length 0.2 mi. Structure No. 045-6015

Termini Kautz Road to Walcott Road

Description Phase II Engineering for the improvements to Montgomery Road over Waubonsie Creek.

Agreement Provisions

I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance, in accordance with STATE approved design standards and policies, of engineering services for the LPA for the proposed improvement herein described.
2. To attend any and all meetings and visit the site of the proposed improvement at any reasonable time when requested by representatives of the LPA or STATE.
3. To complete the services herein described within 240 calendar days from the date of the Notice to Proceed from the LPA, excluding from consideration periods of delay caused by circumstances beyond the control of the ENGINEER.
4. The classifications of the employees used in the work should be consistent with the employee classifications and estimated man-hours shown in EXHIBIT A. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are indicated in Exhibit A to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
5. That the ENGINEER is qualified technically and is entirely conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated herein.
6. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections resulting from the ENGINEER's errors, omissions or negligent acts without additional compensation. Acceptance of work by the STATE will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or for clarification of any ambiguities.
7. That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by the ENGINEER and will affix the ENGINEER's professional seal when such seal is required by law. Plans for structures to be built as a part of the improvement will be prepared under the supervision of a registered structural engineer and will affix structural engineer seal when such seal is required by law. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the STATE.
8. That the ENGINEER will comply with applicable federal statutes, state of Illinois statutes, and local laws or ordinances of the LPA.

9. The undersigned certifies neither the ENGINEER nor I have:
 - a. employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for me or the above ENGINEER) to solicit or secure this AGREEMENT,
 - b. agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
 - c. paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for me or the above ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
 - d. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
 - e. have not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,
 - f. are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (e) and
 - g. have not within a three-year period preceding this AGREEMENT had one or more public transactions (Federal, State or local) terminated for cause or default.

10. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LPA.

11. To submit all invoices to the LPA within one year of the completion of the work called for in this AGREEMENT or any subsequent Amendment or Supplement.

12. To submit BLR 05613, Engineering Payment Report, to the STATE upon completion of the project (Exhibit B).

13. Scope of Services to be provided by the ENGINEER:
 - Make such detailed surveys as are necessary for the planning and design of the PROJECT.
 - Make stream and flood plain hydraulic surveys and gather both existing bridge upstream and downstream high water data and flood flow histories.
 - Prepare applications for U.S. Army Corps of Engineers Permit, Illinois Department of Natural Resources Office of Water Resources Permit and Illinois Environmental Protection Agency Section 404 Water Quality Certification.
 - Design and/or approve cofferdams and superstructure shop drawings.
 - Prepare Bridge Condition Report and Preliminary Bridge Design and Hydraulic Report, (including economic analysis of bridge or culvert types and high water effects on roadway overflows and bridge approaches).
 - Prepare the necessary environmental and planning documents including the Project Development Report or Environmental Assessment, State Clearinghouse, Substate Clearinghouse and all necessary environmental clearances.
 - Make such soil surveys or subsurface investigations including borings and soil profiles as may be required to furnish sufficient data for the design of the proposed improvement. Such investigations to be made in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE.
 - Analyze and evaluate the soil surveys and structure borings to determine the roadway structural design and bridge foundation.
 - Prepare preliminary roadway and drainage structure plans and meet with representatives of the LPA and STATE at the site of the improvement for review of plans prior to the establishment of final vertical and horizontal alignment, location and size of drainage structures, and compliance with applicable design requirements and policies.
 - Make or cause to be made such traffic studies and counts and special intersection studies as may be required to furnish sufficient data for the design of the proposed improvement.
 - Complete the general and detailed plans, special provisions and estimate of cost. Contract plans shall be prepared in accordance with the guidelines contained in the Bureau of Local Roads and Streets manual. The special provisions and detailed estimate of cost shall be furnished in quadruplicate.
 - Furnish the LPA with survey and drafts in quadruplicate all necessary right-of-way dedications, construction easements and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.

II. THE LPA AGREES,

1. To furnish the ENGINEER all presently available survey data and information
2. To pay the ENGINEER as compensation for all services rendered in accordance with this AGREEMENT, on the basis of the following compensation formulas:

Cost Plus Fixed Fee CPFF = 14.5%[DL + R(DL) + OH(DL) + IHDC], or
 CPFF = 14.5%[DL + R(DL) + 1.4(DL) + IHDC], or
 CPFF = 14.5%[(2.3 + R)DL + IHDC]

Where: DL = Direct Labor
 IHDC = In House Direct Costs
 OH = Consultant Firm's Actual Overhead Factor
 R = Complexity Factor

Specific Rate (Pay per element)

Lump Sum _____

3. To pay the ENGINEER using one of the following methods as required by 49 CFR part 26 and 605 ILCS 5/5-409:

With Retainage

- a) **For the first 50% of completed work**, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to 90% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) **After 50% of the work is completed**, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments covering work performed shall be due and payable to the ENGINEER, such payments to be equal to 95% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- c) **Final Payment** – Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and the STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

Without Retainage

- a) **For progressive payments** – Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) **Final Payment** – Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

4. The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31U.S.C. 3801 et seq.).
5. To certify by execution of this AGREEMENT that the selection of the ENGINEER was performed in accordance with the Local Government Professional Services Selection Act 50 ILCS 510, the Brooks Act 40USC 11, and Procurement, Management, and Administration of Engineering and Design related Services (23 CFR part 172). Exhibit C is required to be completed with this agreement.

III. IT IS MUTALLY AGREED,

1. That no work shall be commenced by the ENGINEER prior to issuance by the LPA of a written Notice to Proceed.
2. That tracings, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LPA and that basic survey notes, sketches, charts and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request, to the LPA or to the STATE, without restriction or limitation as to their use.

3. That all reports, plans, estimates and special provisions furnished by the ENGINEER shall be in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE, it being understood that all such furnished documents shall be approved by the LPA and the STATE before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.
4. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LPA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall not be construed to relieve the ENGINEER of any responsibility for the fulfillment of this agreement.
5. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amounts, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General and the STATE; and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the STATE for the recovery of any funds paid by the STATE under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
6. The payment by the LPA in accordance with numbered paragraph 3 of Section II will be considered payment in full for all services rendered in accordance with this AGREEMENT whether or not they be actually enumerated in this AGREEMENT.
7. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LPA, the STATE, and their officers, agents and employees from all suits, claims, actions or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.
8. This AGREEMENT may be terminated by the LPA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LPA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such material becomes the property of the LPA. The LPA will be responsible for reimbursement of all eligible expenses to date of the written notice of termination.
9. This certification is required by the Drug Free Workplace Act (30ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the State unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to, suspension of contract or grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the State for at least one (1) year but no more than five (5) years.

For the purpose of this certification, "grantee" or "contractor" means a corporation, partnership or other entity with twenty-five (25) or more employees at the time of issuing the grant, or a department, division or other unit thereof, directly responsible for the specific performance under a contract or grant of \$5,000 or more from the State, as defined in the Act.

The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

- a. Publishing a statement:
 - (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
 - (2) Specifying the actions that will be taken against employees for violations of such prohibition.
 - (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
 - (a) abide by the terms of the statement; and
 - (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.
- b. Establishing a drug free awareness program to inform employees about:
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's or contractor's policy of maintaining a drug free workplace;
 - (3) Any available drug counseling, rehabilitation and employee assistance program; and
 - (4) The penalties that may be imposed upon an employee for drug violations.
- c. Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.
- d. Notifying the contracting or granting agency within ten (10) days after receiving notice under part (B) of paragraph (3) of subsection (a) above from an employee or otherwise receiving actual notice of such conviction.
- e. Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by,
- f. Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.
- g. Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

Exhibit A

COST PLUS FIXED FEE COST ESTIMATE OF CONSULTANT SERVICES

FIRM
Project
PRIME/SUPPLEMENT

HR Green Inc.
Montgomery Road
Prime

OVERHEAD RATE 1.6941
COMPLEXITY FACTOR 0

DATE 02/12/19

| ITEM | MANHOURS (A) | PAYROLL (B) | OVERHEAD & FRINGE BENF (C) | IN-HOUSE DIRECT COSTS (D) | FIXED FEE (E) | SERVICES BY OTHERS (G) | DBE TOTAL (H) | TOTAL (B-G) | % OF GRAND TOTAL |
|-----------------------------|-----------------|----------------|----------------------------------|------------------------------------|---------------------|---------------------------------|---------------------|----------------|------------------------|
| Phase II Engineering | | | | | | | | | |
| Utility Coordination | 12 | 374.18 | 633.90 | | 123.48 | | | 1,131.00 | 1.12% |
| Land Surveying | 14 | 576.51 | 976.67 | 27.25 | 190.25 | | | 1,771.00 | 1.75% |
| Contract Plans | 509 | 21,804.78 | 36,939.48 | 905.40 | 7,195.58 | 1,741.29 | | 68,586.00 | 67.84% |
| Cost Estimates | 20 | 1,035.87 | 1,754.87 | | 341.84 | | | 3,133.00 | 3.10% |
| Special Provisions | 33 | 1,789.95 | 3,032.36 | | 590.68 | | | 5,413.00 | 5.35% |
| Estimate of Time | 10 | 494.04 | 836.95 | | 163.03 | | | 1,494.00 | 1.48% |
| Meetings | 70 | 4,135.88 | 7,006.59 | 250.70 | 1,364.84 | | | 12,759.00 | 12.62% |
| Project Admin. & Management | 19 | 970.67 | 1,644.40 | | 320.32 | | | 2,935.00 | 2.90% |
| QA/QC | 20 | 1,280.65 | 2,169.55 | | 422.62 | | | 3,874.00 | 3.83% |
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| Subconsultant DL | | | | | | | | | |
| TOTALS | 707 | 32,462.53 | 54,994.77 | 1,183.35 | 10,712.63 | 1,741.29 | 0.00 | 101,096.00 | 100.00% |

EXHIBIT E
 PHASE II ENGINEERING
 DIRECT COSTS AND SERVICES BY OTHERS
 MONTGOMERY ROAD OVER WAUBONSIE CREEK

Land Surveying

In-House Direct Costs

Field Visits

| | | | | | | |
|---|---------|----|---------|---------|------------|---------|
| 2 | trips x | 25 | miles x | \$0.545 | per mile = | \$27.25 |
|---|---------|----|---------|---------|------------|---------|

| | | |
|--|------------------|----------------|
| | Sub-Total | \$27.25 |
|--|------------------|----------------|

Contract Plans

Services by Others - Geotechnical Subconsultant

Chicago Testing Laboratory, Inc.

| | | |
|--|------------------|-------------------|
| | Sub-Total | \$1,741.29 |
|--|------------------|-------------------|

In-House Direct Costs

Printing

Prefinal Plans

Plans to City - Bond Copies

| | | | | | | |
|----|----------|---|-------------|--------|------------------------|---------|
| 36 | sheets x | 2 | copy(ies) x | \$1.35 | 11"x17" per sheet = | \$97.20 |
|----|----------|---|-------------|--------|------------------------|---------|

Plans to IDOT - Bond Copies

| | | | | | | |
|----|----------|---|-------------|--------|------------------------|----------|
| 36 | sheets x | 8 | copy(ies) x | \$1.35 | 11"x17" per sheet = | \$388.80 |
|----|----------|---|-------------|--------|------------------------|----------|

Prefinal Specifications to the City and IDOT

| | | | | | | |
|----|---------|----|-------------|--------|-------------|----------|
| 90 | pages x | 10 | copy(ies) x | \$0.15 | per sheet = | \$135.00 |
|----|---------|----|-------------|--------|-------------|----------|

Initial Final Plans

Plans to IDOT - Bond Copies

| | | | | | | |
|----|----------|---|-------------|--------|------------------------|---------|
| 36 | sheets x | 2 | copy(ies) x | \$1.35 | 11"x17" per sheet = | \$97.20 |
|----|----------|---|-------------|--------|------------------------|---------|

Final Specifications to the City and IDOT

| | | | | | | |
|----|---------|---|-------------|--------|-------------|---------|
| 90 | pages x | 2 | copy(ies) x | \$0.15 | per sheet = | \$27.00 |
|----|---------|---|-------------|--------|-------------|---------|

Final Plans

Final Plans to City - Bond Copies

| | | | | | | |
|----|----------|---|-------------|--------|------------------------|---------|
| 36 | sheets x | 2 | copy(ies) x | \$1.35 | 11"x17" per sheet = | \$97.20 |
|----|----------|---|-------------|--------|------------------------|---------|

Final Specifications to the City and IDOT

| | | | | | | |
|-----|---------|---|-------------|--------|-------------|---------|
| 140 | pages x | 3 | copy(ies) x | \$0.15 | per sheet = | \$63.00 |
|-----|---------|---|-------------|--------|-------------|---------|

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| | Sub-Total | \$905.40 |
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Meetings

In-House Direct Costs

Meeting(s) with City

| | | | | | | |
|---|---------|----|---------|---------|------------|----------|
| 4 | trips x | 90 | miles x | \$0.545 | per mile = | \$196.20 |
|---|---------|----|---------|---------|------------|----------|

Meeting(s) with IDOT

| | | | | | | |
|---|---------|----|---------|---------|------------|---------|
| 2 | trips x | 50 | miles x | \$0.545 | per mile = | \$54.50 |
|---|---------|----|---------|---------|------------|---------|

| | | |
|--|------------------|-----------------|
| | Sub-Total | \$250.70 |
|--|------------------|-----------------|

Total In-House Direct Costs

\$1,183.35

Total Services by Others

\$1,741.29

Attachment F

1.0 PROJECT UNDERSTANDING

HR Green understands that the City of Aurora intends to complete bridge and roadway improvements where Montgomery Road crosses over Waubonsie Creek in the southwest part of the City of Aurora, Kane County, Illinois. The improvements at the crossings will consist of removing and replacing the existing bridge superstructure. Similar to the existing bridge, the new superstructure will consist of Precast Prestress Concrete Deck Beams (PPC Deck Beams), a concrete wearing surface, curb and gutter, sidewalk on each side of the bridge and concrete parapets. The new superstructure will consist of two (2) 12-foot traffic lanes (one in each direction), a 12-foot striped median, curb and gutter, 15'-2 ½" sidewalks on each side of the bridge, and concrete parapets with aesthetic railing. The out-to-out width of the bridge will match the existing bridge. Repairs to abutments and wingwalls per the Phase I project development report will also be completed. Concrete parapets and aesthetic railing similar to that being employed at Farnsworth Avenue over Indian Creek will be detailed for the bridge parapets.

Staged construction will be required to keep one travel lane open in each direction during construction and a temporary detour of the adjacent Waubonsie Creek Trail will be required to direct pedestrian traffic around the construction site. Coordination with the CLIENT and the Fox Valley Park District to incorporate a detour route for the Waubonsie Creek Trail and improve connectivity to existing trail points and a sidewalk addition by the City of Aurora (to be completed as a separate project) adjacent to the bridge are key aspects of the project. A temporary easement, agreed to in Phase I by the Fox Valley Park District, needs to be documented and processed in Phase II so that a temporary path on Park District property can be constructed as part of the proposed trail detour.

Improvements to Montgomery Road between the bridge location and Walcott Road to the south will add curb and gutter and striping improvements to Montgomery Road, which will include striping of a left turn lane and a cross-walk at the intersection with Walcott Road. Immediately north of the bridge, striping improvements and curb and gutter where needed will also be completed. Where two existing cross-walks are present (Waubonsie Creek Trail crossings of Montgomery Road north and south of the bridge), pedestrian curb ramps will be added. Within the existing right-of-way, portions of the existing Waubonsie Creek Trail will be replaced and re-graded to provide improved connectivity with the bridge sidewalks. Roadway pavement, utilizing hot-mix asphalt, will consist of a pavement design section consistent with IDOT and CLIENT standards.

Drainage inlets, laterals and outlet to existing drainage ditches will be detailed in the roadway plans for the section of Montgomery Road where curb and gutter is being added.

Topographic surveying will consist of a site visit by HR Green surveyors to gather supplemental survey information to be combined with the Phase I survey data, including survey on Park District property for the proposed temporary path location and easement. HR Green surveyors will also collect as-built survey information on the City's sidewalk improvements between Walcott Road and the bridge location (it is understood that the City sidewalk improvement in this area are likely to be completed in the Spring/Summer of 2019). Up to two site visits for the supplemental survey and the as-built survey of the City sidewalk improvements are planned.

Existing utility companies in the area of the proposed improvements will be contacted and copied on plan submittals to review potential conflicts and identify locations where utility relocations may be required.

1.1 SCOPE OF WORK

Design Guidelines

The Phase II Engineer and Contract Documents will be developed according to applicable IDOT and City of Aurora requirements. These include the following design guidelines:

- Approved Phase I Engineering
- Bureau of Local Roads (BLR) Manual
- IDOT Bridge Manual and 2017 AASHTO LRFD Bridge Design Specifications (8th Edition)
- City of Aurora Standards.

HR Green has made the following assumption associated with the Phase II engineering:

- No lighting will be proposed
- No detailed landscaping, monument type signage or enhancement plans will be required
- Separate sidewalk improvements by the City between the bridge and Walcott Road will be constructed prior to Fall of 2019.

Geotechnical Services

HR Green will retain the services of a geotechnical sub-consultant for obtaining two pavement cores in the portion of Montgomery Road that is to have the pavement section reconstructed. The pavement cores will identify existing pavement depth(s) and clarify quantities of pavement removal for the pavement reconstruction limits.

Utility Coordination

At this time we do not anticipate utility adjustments and/or relocation prior to construction in order to accommodate the proposed bridge and roadway improvements. However, the HR Green Team will continue the utility coordination process started in Phase I by sending electronic plans to private utility companies and the Fox-Metro Water Reclamation District. This coordination will allow the utilities to notify the design team of any potential conflicts.

Land Surveying

Pick-up Topographic Survey (East Side)

HR Green will perform a topographic survey of an approximate 60 foot by 350 feet strip, from the said easterly right-of-way line of Montgomery Road to 60 feet easterly of said right-of-way line and between the westerly right-of-way line of Walcott Road and the southerly branch of the Waubonsie Creek Trail. Survey will include visible existing features and improvements. Existing utilities will be surveyed from visible flags or markings. Storm, sanitary sewer and watermain structures will be surveyed including rim elevation, invert pipe size, direction and elevation as observed at unlocked manholes. Individual trees greater than 6" diameter will be located with size and type (coniferous or deciduous) noted. Topographic Survey will be supplemental to the previous topographic survey performed by the HR Green. Survey will reference the previously established control points and benchmarks and be added to the exiting MicroStation Topographic Survey Base Map.

Pick-up Topographic Survey (West Side)

Once construction of a new sidewalk is completed (by others and assumed to occur by summer of 2019) on the westerly side of Montgomery Road, connecting the southerly branch of the Waubonsie Creek Trail to the Walcott Road, HR Green will perform a topographic survey of said newly constructed sidewalk and any changes to the surrounding grading. Topographic Survey will be supplemental to the previous topographic survey performed by HR Green. Survey will reference the previously established control points and benchmarks and be added to the exiting MicroStation Topographic Survey Base Map.

Easement Exhibit & Legal Description

HR Green will prepare an Easement Exhibit and Legal Description of a temporary easement for the construction of a temporary bike path on the easterly side of Montgomery Road, lying between the westerly right-of-way line of Walcott Road and the southerly branch of the Waubonsie Creek Trail. Exact location of temporary easement will be coordinated with the engineering design team.

Structural Engineering

HR Green will prepare structural plans, details and specifications consistent with IDOT and City of Aurora standards for the proposed bridge improvements. IDOT standard details for PPC Deck Beams will be incorporated into the structural plans along with the list of structural plan sheets listed below. HR Green understands that the bridge superstructure will be replaced utilizing staged construction. The drawings will include the detailed quantity and pay item breakdowns associated with a set of bid documents consistent with IDOT standards, including IDOT style reinforcement bar fabrication lengths and quantities.

Demolition limits of the existing superstructure and appurtenances will be noted on the bridge General Plan and Elevation sheet.

Aesthetic Details for this project are limited to the proposed concrete parapet and railing on the bridge which will be based on City preferred railings described in the Phase I Project Development Report.

No bank or stream bed stabilization analysis will be performed

Roadway Improvements

The roadway plans will be prepared consistent with IDOT and City of Aurora standards and the proposed roadway sections described in the Phase I Project Development Report.

It is anticipated that construction activities will require multiple stages of construction in order to keep travel lanes open in each direction on Montgomery Road during construction. Contract plans will show the construction staging sequence on the Maintenance of Traffic Plans and Bridge Typical Sections for Staging. It is assumed that IDOT Highway Standards will be used for traffic control and protection through the project area. The contract plans, specifications and notes will identify and detail the allowable contractor operations, and required traffic control devices. For the Waubonsie Creek Trail detour, again, IDOT Highway Standards will be used for traffic control and protection through the project area, and the trail detour plan, notes and specifications will identify the required traffic control devices.

Construction Cost Estimates

Contractor pay items will be developed using current IDOT pay items and code numbers. The quantities will be calculated and checked for accuracy. From these quantities, HR Green will develop Opinions of Probable Construction Cost for the project.

Opinions of probable construction costs will be developed and refined throughout the process so that the City is aware of project costs. These costs will be determined using IDOT pay items and the latest contractor unit prices available for the area. HR Green understands that accurate opinions of probable construction costs are required to avoid possible funding related issues.

HR Green will also prepare lump sum breakdowns for each pay item to be paid as a lump sum item. The breakdown will detail how the lump sum cost has been estimated.

Special Provisions

HR Green will prepare contract special provisions for the project. The document will include Supplemental, Recurring, BDE, District 1, and project specific special provisions. The project

special provisions will be written to cover project items not covered by the Standard Specification for Road and Bridge Construction.

Estimate of Time

The estimate of time will be developed based upon pay items and quantities and will be used to develop the number of working days or completion date for the project.

Meetings

Multiple coordination meetings will be required during Phase II of the project. Anticipated meetings will be with the City of Aurora, the Fox Valley Park District, and IDOT. HR Green will coordinate the meeting times and locations with the attendees, provide required exhibits, and include preparation of meeting minutes. The coordination and meetings are estimated below:

- a) At IDOT;
 - i. Phase II Kick-off meeting at IDOT with the City of Aurora, Bureau of Local Roads, and KKCOM (1);
 - ii. Review Final plans with IDOT (1).
- b) At City of Aurora;
 - i. Kick-off meeting with City (1);
 - ii. Review Temporary Easement and Legal with Park District and City (1);
 - iii. Review Pre-Final plans with City (1);
 - iv. Review Final plans with City (1);
- c) Meeting Requirements:
 - i. HR Green will have two (2) representative at meetings held at the City;
 - ii. HR Green will have two (2) representatives at meetings held at IDOT;
 - iii. HR Green will prepare the meeting minutes;

Project Administration & Management

For the duration of this project, this task will involve the management oversight of the project which will include the on-going review of the project execution, work product, document control scope, schedule and budget, contract file management and preparation of monthly progress reports. As the Phase II engineering phase of the project will be federally funded, the Project Program Information Form (PPI) will be updated and submitted to the Kane / Kendall County Council of Mayors (KKCOM) for coordination with IDOT Local Roads. Additionally, the Local Agency Agreement for Federal Participation form (BLR 5310) will be prepared and coordinated with IDOT.

QA/QC

Building upon the HR Green QA/QC Manual, project team members will be informed on the project and QA/QC requirements for this project. Prior to all milestone submittals to the City and IDOT, peer reviews will be performed.

1.2 Project Schedule

Based on an anticipated IDOT Notice to Proceed date of March 2019 from the State, it is estimated that the contract documents will be prepared to meet a January 2020 state letting. Anticipated milestone dates for the project are listed below:

| | |
|-----------------------------------|--------------|
| Notice to Proceed | March, 2019 |
| IDOT Kick-off Meeting | April, 2019 |
| City of Aurora Kick-off Meeting | April, 2019 |
| Pickup Survey Site Visit | April, 2019 |
| Temporary Easement Review Meeting | May, 2019 |
| 30% Plan Submittal | May, 2019 |
| 60% Plan Submittal | June, 2019 |
| Pre-Final Plan Meeting with City | July, 2019 |
| Pre-Final Plan Submittal to IDOT | July, 2019 |
| Comments received from IDOT | August, 2019 |

| | |
|---------------------------------|-----------------|
| Initial Final Submittal to IDOT | September, 2019 |
| Review Final Plans with City | October, 2019 |
| Review Final Plans with IDOT | October, 2019 |
| Final PS&E Submittal to IDOT | October, 2019 |
| Project Letting Through IDOT | January, 2020 |

1.3 Contract Document Submittals

During the development of the contract plans and specification, interim submittals of 30% and 60% plans will be made to the City of Aurora, the Fox Valley Park District and Utility companies. For each interim submittal, one (1) 11" x 17" paper copy of the plans will be submitted to the City and one (1) electronic PDF copy of the plans will be submitted to the City, Fox Valley Park District and Utility companies. These interim submittals will consist of the following plans:

30% Interim Submittal – Plans

- Cover Sheet
- Typical Sections
- Existing Condition & Removal Plans
- Maintenance of Traffic Plan
- Waubonsie Creek Trail Detour Plan
- Proposed Roadway Plan and Profile
- Proposed Striping Plan
- Bridge General Plan and Elevation
- Bridge Typical Section and Staging Details
- Parapet and Railing Details
- Concept Easement Exhibit for Temporary Trail

60% Interim Submittal (with 30% review comments incorporated)

- Cover Sheet
- Typical Sections
- Existing Condition & Removal Plans
- Maintenance of Traffic Plan
- Waubonsie Creek Trail Detour Plan
- Proposed Roadway Plan and Profile
- Proposed Striping Plan
- Bridge General Plan and Elevation
- Bridge Typical Section and Staging Details
- Parapet and Railing Details
- Easement Exhibit and Legal Description for Temporary Trail (Final Easement to be documented and ready to record prior to Final PS&E Submittal).

Pre-final submittal (95%)

i. Contract Plans

- a.) Cover Sheet
- b.) Index/General Notes/Standards
- c.) Summary of Quantities
- d.) Typical Sections
- e.) Alignment, Ties and Benchmarks
- f.) Existing Condition & Removal Plans (20 scale)
- g.) Maintenance of Traffic Plan (20 scale)
- h.) Waubonsie Creek Trail Detour Plan
- i.) Proposed Roadway Plan and Profile (20 scale)
- j.) Proposed Striping Plan (20 scale)
- k.) Erosion Control and Restoration Plan (20 scale)

- l.) Erosion Control Details
- m.) Drainage Details
- n.) Miscellaneous Details
- o.) IDOT District 1 Details
- p.) Bridge General Plan and Elevation sheet for the Bridge}
- q.) General Structural Notes and Bill of Materials
- r.) Bridge Typical Section and Staging Details
- s.) Approach Pavement Details
- t.) Deck Plan and Cross-Section
- u.) PPC Deck Beam Details
- v.) Parapet and Railing Details
- w.) Abutment and Wingwall Repair Details
- x.) Soil boring logs
- 1. Special Provisions
- 2. Estimate of Time; and
- 3. Opinion of Probable Construction Cost.
- ii. The following will be submitted to IDOT for review and comment:
 - 1. Eight (8) 11" x 17" paper copies of the contract plans;
 - 2. Eight (8) copies of the special provisions;
 - 3. One (1) copy of the opinion of probable construction cost;
 - 4. One (1) copy of the estimate of time.
- iii. The following will be submitted to Utilities for review
 - 1. One (1) electronic PDF copy of the contract plans.
- iv. The following will be submitted to the City of Aurora for review and comment:
 - 1. Two (2) 11" x 17" paper copies of the contract plans;
 - 2. Two (2) copies of the special provisions;
 - 3. One (1) copy of the opinion of probable construction cost;
 - 4. One (1) copy of the estimate of time.
- v. The following will be submitted to the Fox Valley Park District for review and comment:
 - 1. One (1) electronic PDF copy of the contract plans.
- vi. Submittal to IDOT and the City of Aurora will occur concurrently

Initial Final Check Set Submittal (99%)

- i. Contract Plans
 - a.) Cover Sheet
 - b.) Index/General Notes/Standards
 - c.) Summary of Quantities
 - d.) Typical Sections
 - e.) Alignment, Ties and Benchmarks
 - f.) Existing Condition & Removal Plans (20 scale)
 - g.) Maintenance of Traffic Plan (20 scale)
 - h.) Waubonsie Creek Trail Detour Plan
 - i.) Proposed Roadway Plan and Profile (20 scale)
 - j.) Proposed Striping Plan (20 scale)
 - k.) Erosion Control and Landscape Plan (20 scale)
 - l.) Erosion Control Details
 - m.) Drainage Details
 - n.) Miscellaneous Details
 - o.) IDOT District 1 Details
 - p.) Bridge General Plan and Elevation sheet for the Bridge}
 - q.) General Structural Notes and Bill of Materials
 - r.) Bridge Typical Section and Staging Details
 - s.) Approach Pavement Details
 - t.) Deck Plan and Cross-Section
 - u.) PPC Deck Beam Details
 - v.) Parapet and Railing Details

- w.) Abutment and Wingwall Repair Details
- x.) Soil boring logs
- 1. Special Provisions
- 2. Estimate of Time
- 3. Lump Sum Breakdowns and;
- 4. Opinion of Probable Construction Cost.
- ii. The following will be submitted to IDOT for review and comment:
 - 1. One (1) 11" x 17" cover sheet signed by the City of Aurora and sealed by the Engineer;
 - 2. Two (2) 11" x 17" paper copies of the contract plans;
 - 3. Two (2) copies of the special provisions;
 - 4. Three (3) copies of the estimate of cost with prices;
 - 5. Two (2) copies of the estimate of cost without prices;
 - 6. Two (2) copies of the lump sum breakdowns;
 - 7. Two (2) copies of the estimate of time;
 - 8. One (1) copy of all utility correspondence letters;
 - 9. One (1) copy of the Phase I approval page with design approval signatures;
 - 10. One (1) disposition of comments.

Final PS&E Submittal (100%)

- i. Contract Plans
 - a.) Cover Sheet
 - b.) Index/General Notes/Standards
 - c.) Summary of Quantities
 - d.) Typical Sections
 - e.) Alignment, Ties and Benchmarks
 - f.) Existing Condition & Removal Plans (20 scale)
 - g.) Maintenance of Traffic Plan (20 scale)
 - h.) Waubonsie Creek Trail Detour Plan
 - i.) Proposed Roadway Plan and Profile (20 scale)
 - j.) Proposed Striping Plan (20 scale)
 - k.) Erosion Control and Landscape Plan (20 scale)
 - l.) Erosion Control Details
 - m.) Drainage Details
 - n.) Miscellaneous Details
 - o.) IDOT District 1 Details
 - p.) Bridge General Plan and Elevation sheet for the Bridge}
 - q.) General Structural Notes and Bill of Materials
 - r.) Bridge Typical Section and Staging Details
 - s.) Approach Pavement Details
 - t.) Deck Plan and Cross-Section
 - u.) PPC Deck Beam Details
 - v.) Parapet and Railing Details
 - w.) Abutment and Wingwall Repair Details
 - x.) Soil boring logs
 - 1. Special Provisions
 - 2. Estimate of Time
 - 3. Lump Sum Breakdowns and;
 - 4. Opinion of Probable Construction Cost.
- ii. The submittal to the City of Aurora will include:
 - 1. Two (2) 11" x 17" paper copies of the contract plans;
 - 2. Two (2) copies of the special provisions;
 - 3. One (1) copy of the opinion of probable construction cost;
 - 4. One (1) copy of the lump sum breakdowns;
 - 5. One (1) copy of the estimate of time;
 - 6. One (1) final complete disposition of review comments.

- iii. The submittal to the Utility Companies will include:
 - 1. One (1) electronic PDF copy of the contract plans.
- iv. The submittal to the Fox Valley Park District will include:
 - 1. One (1) electronic PDF copy of the contract plans.
- v. The submittal to the IDOT will include:
 - 1. One (1) CD containing the electronic files including the contract plans;
 - 2. One (1) copy of the special provisions
 - 3. Three (3) copies of the estimate of cost with prices;
 - 4. Two (2) copies of the estimate of cost without prices;
 - 5. Two (2) copies of the lump sum breakdowns;
 - 6. Two (2) copies of the estimate of time;
 - 7. One (1) final complete disposition of review comments.
- vi. Submittals to IDOT and the City of Aurora will occur concurrently.
- vii. The project will be placed on a State letting.