

Bridges Top Tracer Bathroom Utilities

BID DATE: March 10, 2022

BID TIME: 10:00AM

PREPARED BY:

HOFFMAN ESTATES PARK DISTRICT
1685 W. Higgins Road
Hoffman Estates IL 60169-2998
Telephone: (847) 885-7500
Facsimile: (847) 885-7523

HOFFMAN ESTATES PARK DISTRICT

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March 1, 2022

Dear Bidder:

Enclosed you will find the plans, specifications and bidding materials for **Bridges Top Tracer Bathroom Utilities**. All pertinent information is included in the attached package. Please copy your proposal and retain one copy for your records.

To schedule a site visit please contact me at the contacts listed below.
I look forward to reviewing your bid proposal and working together with you on these projects. Questions or comments please contact me at (847) 285-5465 or by email at dhugen@heparks.org.

Sincerely,

Dustin Huguen

Dustin Huguen

Dustin Huguen
Director of Parks, Planning & Maintenance

INVITATION TO BID

Sealed bids for **Bridges Top Tracer Bathroom Utilities** will be received by the Hoffman Estates Park District at our office; 1685 West Higgins Road, Hoffman Estates, Illinois 60169 until **exactly 10:00 A.M., March 10, 2022**, and then publicly opened and read. Bids submitted after the closing time will be returned unopened.

The Hoffman Estates Park District Board of Commissioners will make final award.

Proposals shall be submitted on the attached Quotation Form and returned in sealed envelope. No bidder may withdraw his proposal after the hour set for the opening thereof, or before award of the Contract, unless said award is delayed for a period exceeding thirty (30) calendar days.

The Hoffman Estates Park District requires all bidders to comply with all provisions of the Park District Prevailing Wage Ordinance **O18-005**. This ordinance specifies that no less than the general prevailing rate of wages as found by the Park District or Department of Labor or determined by a court on review shall be paid each draft type of worker or mechanic needed to execute the contract or perform the work.

The Hoffman Estates Park District may reject any or all of the bids on any basis and without disclosure of a reason. The failure to make such a disclosure shall not result in accrual of any right, claim, or cause of action by an unsuccessful Bidder against the Hoffman Estates Park District.

Bid results and the award of the bid will be published on the Hoffman Estates Park District website www.heparks.org under General Information/Bid Information.

Sincerely,

Dustin Hugen

Dustin Hugen
Director of Parks, Planning & Maintenance

HOFFMAN ESTATES PARK DISTRICT

INSTRUCTIONS TO BIDDERS

1. Identification of Project

The official name and location of the project shall henceforth be known as:

Bridges Top Tracer Bathroom Utilities

The official name and address of the project owner shall henceforth be known as:

HOFFMAN ESTATES PARK DISTRICT
1685 West Higgins Road
Hoffman Estates, IL 60169-2998

Bid Opening: March 10, 2022

Committee Approval: March 15, 2022

Board Approval: March 22, 2022

Contract Awarded: March 25, 2022

Commencement of Work: Commencement of paperwork shall begin immediately upon notification of award. Construction may begin once permits are received from MWRD and Village of Hoffman Estates.

Completion of Work Based upon when construction starts.

2. Contract Documents

The Notice to Bidders, the Instructions to Bidders, the Drawings, the A.I.A. General Condition (by referral) the Supplementary Conditions, Specifications, the Supplied Proposal Form. The accepted Bid Sheet and certification and the Owner's Purchase Order comprise the Contract Documents. Copies of these documents can be obtained in person from the office of the Hoffman Estates Park District, 1685 W. Higgins Road, Hoffman Estates IL 60169-2998.

3. Explanation to Bidders

Any explanation desired by a bidder regarding the meaning or interpretation of the invitation for bids, drawings, specifications, etc., must be requested in writing and with sufficient time allowed for a reply to reach bidders before the submission of their bids.

Any interpretation made will be in the form of an amendment of the invitation for bids, drawings, specifications, etc., and will be furnished to all prospective bidders. Its receipt by the bidder must be acknowledged in the space provided on the Bid Form or by letter or telegram received before the time

set for opening of bids. Oral explanations or instructions given before the award of the contract will not be binding.

4. Conditions Affecting the Work

Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the Work, the general and local conditions, which can affect the Work or the cost thereof. Failure to do so will not relieve bidders from responsibility for estimating properly the difficulty or cost of successfully performing the Work.

5. Bid Guarantee, Bonds and Required Paperwork

- A. A Bid Guarantee, five percent (5%), is required by the invitation for bids. Failure to furnish a Bid Guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid, in the absolute discretion of the Owner.
- B. The Bid Guarantee shall be in the form of a bid bond, postal money order, certified check, or cashier's check made payable to the Owner. Bid guarantees, other than those stated, will be returned (a) to unsuccessful bidders as soon as practicable after the award of the job; and (b) to the successful bidder upon execution of such further contractual documents and bonds as may be required by the bid as accepted.

6. Preparation and Submission of Bids

Before submitting proposal, each bidder shall carefully examine all documents pertaining to the Work and visit the sites to verify conditions under which Work will be performed.

Submission of bid will be considered presumptive evidence that the Bidder has visited the site and is conversant with local facilities and difficulties, the requirements of the documents and of pertinent State or Local Codes, State of Labor and Material Markets, and has made due allowance in his bid for all contingencies. Include in bid all costs of labor, material, equipment, allowance, fees, permits, guarantees, applicable taxes (sales tax does not apply), insurance and contingencies, with overhead and profit necessary to produce a completed project, or to complete those portions of the Work necessary to produce a completed project, or to complete those portions of the Work covered by the specifications on which proposal is made, including all trades, without further cost to the Owner. Obtain all permits and arrange for all inspections. Pay all fees and costs incurred.

No compensation will be allowed by reason of any difficulties which the Bidder could have discovered reasonably, prior to bidding.

All proposals must be made upon the Proposal Form furnished by the Owner attached hereto and should give the amounts bid for work, in numbers, and must be signed and acknowledged by the contractor. In order to insure consideration, the Proposal should be enclosed in an envelope marked "Bid Proposal for Hoffman Estates Park District – **Bridges Top Tracer Bathroom** to be received until **10:00 A.M., March 10, 2022** showing the return address of the sender and addressed to: Hoffman Estates Park District, 1685 W. Higgins Road, Hoffman Estates, Illinois 60195. Bids must be sealed, marked and addressed as directed above. Failure to do so may result in a premature opening of, or a failure to open, such bid.

The proposal submitted must not contain erasures, inter-lineations, or other corrections unless each correction is suitably authenticated by affixing in the margin immediately opposite the correction the surname or surnames of the person or persons signing the bid.

Modifications of bids already submitted will be considered if received at the office designated in the invitation for bids by the time set for opening of bids. Telegraphic modifications will be considered, but should not reveal the amount of the original or revised bid. Unless called for, alternate bids will not be considered.

7. Prices

The prices are to include the furnishing of all materials, equipment, tools, insurance, bonds, warranties, and all other facilities, and the performance of all labor and services necessary for the proper completion of the Work except as may be otherwise expressly provided in the Contract Documents.

8. Time Schedule

The timely execution of any project is extremely important. As this work's timeliness will have a direct effect with other trade components and ultimately on the project's completion. An important factor in evaluating the bids and awarding the contract is this work's timeliness which will have a direct effect on subsequent trade or Contracts and the ultimate completion of the Project. The successful bidder will have to acknowledge that his price and proposed work will be completed according to the proposed schedule provided as part of this bid process.

9. Late Bids and Modifications or Withdrawals

Bids and modifications or withdrawals thereof received at the office designated in the invitation for bids after the exact time set for opening of bids will not be considered.

10. Withdrawal of Bids

Bids may be withdrawn by written or telegraphic request received from bidders prior to the time set for opening of bids.

11. Public Opening of Bids

Bids will be publicly opened at the time set for opening in the invitation for bids. Their content will be made public for the information of bidders and others interested, who may be present either in person or by representative.

12. Award of Contract

- A. Award of Contract will be made to the lowest responsible bidder, as determined by the Board of Commissioners of the Hoffman Estates Park District, whose bid conforms to the invitation for bid.
- B. The Board of Park Commissioners may reject any or all of the bids on any basis and without disclosure of a reason. The failure to make such a disclosure shall not result in accrual of any right, claim, or cause of action by any unsuccessful bidder against the Hoffman Estates Park District.

13. Authorization to Proceed and Insurance

The accepted bidder shall be issued a Purchase Order from the Owner as authorization to proceed. The Bidder will provide the Owner with a Labor and Material Payment Bond, Performance Bond, and copies of Workman's Compensation and Public Liability Insurance Policies or certificates therefor, within ten (10) calendar days of the "Written Notice to proceed" and prior to the commencement of the work. From this point on, the Bidder will be known as the Contractor.

14. Postponement of Date for Opening Proposals

The Owner reserves the right to postpone the date of presentation and opening of proposals and will give telegraphic notice of any such postponement to each interested party.

SPECIFICATIONS
SUPPLEMENTARY CONDITIONS

SECTION I – GENERAL

1. Application

The General Conditions and Supplementary General Conditions shall be used in conjunction with and are a part of any and all Sections of the Specifications and all Contracts and Subcontracts that may be made for the completion of the work in all its parts as identified and described in the Contract Documents.

2. Definitions

Owner: The Hoffman Estates Park District, Board of Commissioners, Staff and its appointed Owner's Representative.

Contractor: A firm, corporation or individual with whom the Owner makes a direct Contract for the construction of all or any portion of the work.

Engineer: The authorized Representative of the Owner.

The words "approve", "equal to", "as directed", etc., are interpreted and will be taken to mean "to the satisfaction of the Owner." Samples shall be submitted and approvals shall be requested in ample time to avoid any delays should resubmission of an item be necessary.

3. Contract Documents

The Contract Documents shall consist of Invitation and Instructions to Bidders; the proposal, the Owner's Purchase Order, the Drawings, the Supplementary Conditions and the Specifications.

4. Bonds

With proposal, and attached thereto, each Bidder shall furnish Bid Security payable to the Owner in the amount of 5% of bid.

5. Payment

Final Payment will be made only after the delivery and acceptance of the equipment in conformance with the plans and specification and upon proper invoicing along with all waivers, sworn statements, guarantee statements, and other documents set forth in the Contract Documents. Final payment will be made approximately thirty (30) days after invoicing.

6. Preparation of Bids

Before submitting proposal, each bidder shall examine carefully all documents pertaining to the work and visit the sites to verify conditions under which work will be performed.

Submission of bid will be considered presumptive evidence that the Bidder has visited the site and is conversant with local facilities and difficulties, the requirements of the documents and of

pertinent State, County or Local Codes, State of Labor and Material Markets, and has made due allowance in his bid for all contingencies.

Include in bid all costs of labor, material, equipment, allowance, fees, permits, guarantees, applicable taxes (**sales tax does not apply**), insurance and contingencies, with overhead and profit necessary to complete those portions of the work covered by the specifications on which proposal is made, including all trades, without further cost to the Owner. Obtain all permits and arrange for all inspections. Pay all fees, permits and costs incurred.

No compensation will be allowed by reason of any difficulties, which the Bidder could have discovered prior to bidding.

7. Materials

Materials shall conform to the drawings, specifications, manufacturer's specifications for all products incorporated into the work, and all applicable standards and guidelines.

Some specific equipment and materials have been specified for use on this project to establish minimum performance requirements or desired features. To receive consideration of alternate equipment or materials, the Bidder must submit all appropriate product data and receive pre-bid approval from the Owner prior to bid. All materials are subject to the approval by the Owner both before and after incorporation in the project.

All condemned material or work shall be removed from the premises and properly disposed of.

8. Law Compliance

All project construction work shall comply with all State and Municipal Laws and Regulation, and with all Local Ordinances and Rules pertaining to this work. Such Laws, Regulations, Ordinances and Rules shall be considered a part of these specifications.

9. Expediting

Place orders for materials and equipment immediately upon receipt of Contract or Notice to Proceed and follow up vigorously to insure adequate and timely supply to the work. Perform all tracings and expediting actions and arrange to get workmen in the job at the proper time to avoid delays.

10. Guarantee

The Contractor and/or manufacturer shall provide a minimum of one (1) year warranty for all materials and workmanship associated with the project or work performed under the Contract.

11. Insurance

- a. General: The Contractor shall not commence work under the Contract until he has obtained all insurance required, and it has been approved by the Owner, nor shall Contractor allow any Subcontractor to commence work on any portion of the work until all insurance required of the Subcontractor and Sub-subcontractor has been similarly approved by the Owner.

All such insurance shall be purchased only from companies licensed and duly authorized by the Department of Insurance of the State of Illinois to do business in Illinois and to write the types of insurance policies as herein specified. Insurance companies must have a minimum policy holder's rating of A+ and a financial rating of AAAAA as stated in the latest edition of Best's Insurance Guide.

The insurance coverages must be maintained by the Contractor and the Subcontractor until all work is completed by the Contractor and accepted by the Owner. If the policy is written on claims made basis, then the Contractor shall purchase such additional insurance as may be necessary to provide specified coverage to the District for a period of not less than five (5) years from the completion of the work.

- b. Automobile Liability: Contractor shall obtain at his expense and keep in force at all times during the performance of the work, Comprehensive Automobile Liability Insurance providing for bodily injury, personal injury and property damage, limits of an amount not less than \$1,000,000 per occurrence and \$2,000,000 per annual aggregate.
- c. General Liability Insurance: Contractor shall obtain at his expense and keep in force at all times during the performance of the work, Comprehensive General Liability Insurance providing for bodily injury, personal injury and property damage, limits of not less than \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
- d. Worker's Compensation and Employer's Liability Insurance: Contractor shall obtain at his expense and keep in force at all times during the performance of work, worker's compensation and related insurance coverage at amounts required by statute and employer's liability with limits of not less than \$1,000,000 per occurrence
- e. Certificates of Insurance: Within ten (10) calendar days after receipt of the "Written Notice to Proceed", the Contractor shall file with the Owner, a Certificate of Insurance showing complete coverage of all insurance required by this Section signed by the insurance companies or their

authorized agents, certifying to the name and address of the party insured, the description of the work covered by such insurance, the insurance policy numbers, the limits of liability of the policies and the dates of their expirations, with a further certification from said insurance companies that their policies will not be modified, amended, changed, cancelled or terminated without thirty (30) business days prior written notice to the Owner. If any form of umbrella or excess coverage policy is utilized by the Contractor, the Owner reserves the right to require a copy of the entire policy.

12. Indemnification

The Contractor agrees to protect, indemnify, hold and save harmless and defend the Hoffman Estates Park District, its public officials, employees, volunteers, and agents against any and all claims, costs, causes, actions and expenses, including but not limited to attorney's fees incurred by reason of lawsuit or claim for compensation arising in favor of any person, including the employees or officers or independent contractors or subcontractors of the Contractor or Park District, on account of personal injuries or death, or damages to property occurring, growing out of, incident to, or resulting directly or indirectly from the performance by the "Contractor or Subcontractor", hereunder, whether such loss, damage, injury or liability is contributed to by the negligence of the Park District or by the premises themselves or any equipment thereon whether latent or patent, or from any other cause whatsoever, except that the Contractor shall have no liability or damages or the costs incident thereto caused by the sole negligence of the Park District.

13. Labor Law

The Contractor and each and every Subcontractor performing work at the site of the project to which this Contract relates shall comply with applicable and provisions of all pertinent Federal, State, and Local Labor Laws.

14. Time Schedule/Major Repairs

Work under the Contract shall commence within five (5) calendar days after given "Written Notice to Proceed" by Owners (or date specified) and shall continue with due diligence until due completion.

The Contractor shall agree to a time schedule setting up order of procedure and time allowed for each branch of work. Contractor shall make every effort to adhere to these schedules, but reasonable modifications will be permitted from time to time to compensate for delays due to strikes or conditions beyond Contractor's control, exclusive of weather.

15. Assignment

The Contractor or any Subcontractor shall not assign the Contract nor any monies due to become due to him hereunder, to any Person, Firm, or Corporation without previous written consent of the Owner.

16. Extras

No extra work shall be allowed or paid for unless a Change Order is made and accepted by the Owner in writing.

17. Liens

No payment shall become due until the Contractor, if required, shall deliver to Owner a complete release of all liens arising out of this Contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as he has knowledge or information, the releases and receipts include all the labor and material for which a lien could be filed. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

18. Default

In case of default by the Contractor, the Owner may procure the articles or services from other sources and hold the Contractor responsible for any excess cost occasioned thereby.

19. Cancellation of Contract

If the Contractor or any of his Sub-contractors shall, in the judgment of the Hoffman Estates Park District, be unable to carry on the work satisfactorily, or if the Contractor or any of his Sub-contractors shall violate any of the provisions of this contract, or in case of bankruptcy of the Contractor, or failure of the Contractor to pay for supplies or workmen, or a work-stoppage, or a failure by the Contractor to provide sufficient workmen or sufficient material for the job, the Owner may serve written notice upon the Contractor and his Surety of his intention to terminate the Contract, and, if within seven (7) days after the service of such notice, the Contractor or the Sub-contractor or the Surety have not proceeded to carry on the work in accordance with this Contract and to the satisfaction of the Owner, this Contract shall cease and terminate and the Owner shall have the right to take over the work and prosecute the same to completion by Contract for the account and at the expense of the Contractor and the Surety; and the Contractor and Surety shall be liable to the Owner for any excess costs occasioned by the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work such materials, appliances, and

plants as may be on the site of the work and necessary therefore; provided, however, that in the event the Owner determines that the failure of the Contractor, Sub-contractor or Surety to carry on the work in accordance with this Contract has resulted in an emergency which will require that the Owner take over the work immediately, to avoid loss or waste of a substantial part of the work already performed, the Owner may immediately take over the work and prosecute the same at the expense of the Contractor and Surety to the extent necessary to avoid damage, and may prosecute the same at the expense of the Contractor and Surety to the extent necessary to avoid damage, and may prosecute the same to completion at the expense of the Contractor and the Surety unless within seven (7) days after the services of the above described notice, the Contractor, Sub-contractor or Surety has proceeded to carry on the work in accordance with this Contract and to the satisfaction of the Hoffman Estates Park District.

20. Lien Waivers (if applicable)

Neither by partial nor final payment will the Owner be deemed to have waived any remedy for defective work or negligence on the part of the Contractor or any other portion of the Contract which, by its nature, survives after time of payment.

Supporting partial Waivers of Lien for each Subcontractor, supplier and prime contractor must accompany each request for progress payment.

Waivers must spell out exact description of work performed for which Waiver is issued and state whether dollar amount is full amount received or amount of work less retainage, held by prime contractor.

For final payment it is necessary to submit final waivers in the full amount of the Contracts for all Subcontractors, suppliers and prime contractors.

Waivers must be accompanied by a sworn statement listing Subcontractors and suppliers, the amount of their Contracts and the amount requested.

21. Illinois Prevailing Wage Provision

The Contractor and /or supplier doing work on the project and **on the owner's premises** shall comply with the Illinois Prevailing Wage Ordinance adopted by the Hoffman Estates Park District. The provision states that all labor required to complete the project will be paid at no less than the prevailing rate determined by the Illinois Department of Labor.

The Contractor and each subcontractor is required to provide at the time of pay request or at least once monthly, a copy of a certified payroll of labor used in conjunction with the project(s). The certification shall include each worker's name, address, telephone number (when available), Social Security Number, classification(s), and the occupation of all laborers, workers and mechanics employed by the Contractor and each subcontractor in conjunction with the project(s). The records shall also show the actual hourly wages paid in each pay period to each employee and the number of hours worked each day and in each workweek by each employee. While participating on a park project, each contractor's payroll records shall include the starting and ending times of work each day for each employee.

Should there be no request for payment presented to Hoffman Estates Park District, the Contractor shall submit the certified payroll records monthly either by mail or electronically to the Hoffman Estates Park District.

The certified payroll shall be accompanied by a statement by the Contractor or subcontractors which avers: such records are true and accurate; the hours by rate paid to each worker is not less than the general prevailing wages as required by the Prevailing Wage Act; and the Contractor or subcontractor is aware that the filing of a certified payroll that he/she knows to be false is a Class B misdemeanor. The Hoffman Estates Park District shall accept any reasonable submission by the Contractor that meets the requirement of the Prevailing Wage Act.

SPECIFICATIONS

Bid Instructions for Bridges Top Tracer Bathroom Utilities

The Hoffman Estates Park District will receive sealed bids for the Bridges Top Tracer Bathroom Utilities. This bid will include all the work necessary to install the proposed sanitary sewer, sanitary manholes, water service, water service connection, B-box and the installation of the electrical service from the existing adjacent building up to the proposed bathroom building. All spoils created by the installation of these utilities will need to be hauled from the site and shall be included within this bid. The contractor will stub these utilities up through the building slab for continuation by the bathroom building constructor. Refer to the Site Engineering plans dated March 1, 2022 prepared by W-T Group and the architectural drawings dated March 1, 2022 prepared by API Architects for the proposed utility information.

This bid will also include excavation for the bathroom building foundations and slab. The concrete foundations, slab, and concrete sidewalks will be completed by the concrete contractor. However, this bid will include all excavation for the building and foundation slab which will be installed by the concrete contractor. This bid includes all compaction and removal of spoils for the excavation of the building foundation and slab.

The Hoffman Estates Park District will be constructing the proposed bathroom building. Coordination between the successful bidder and Park District will be required. Additionally, note, the park district will be responsible for all seeding, erosion control, silt fencing, and the construction entrance for the project. The Park District will also be excavating the proposed rain garden area and will be installing the proposed storm sewer and trench drain for the bathroom building.

However, all landscape areas disturbed for the installation of the sanitary sewer and water main shall be restored with a minimum of 6" of topsoil upon completion of the trenches.

Note: The Hoffman Estates Park District will be construction managing the overall project.

Additional Special Conditions:

Specification or Information Conflicts

Should any Specifications, Information, Directives, Notes, Tags or Provisions contained in the Construction Documents conflict with any other Specification, Information, Directives, Notes, Tags or Provisions contained in the Construction Documents, then the more stringent Specification, Information, Directive, Note, Tags or Provision shall apply.

Limit of Construction

Construction traffic and material staging shall be permitted only within the Limit of Construction area as shown on the Construction Plans. The Contractor shall repair, at no additional cost to the Owner, any areas disturbed outside of this limit. Turf repairs will be made with sod.

Excess Materials and Debris

All excess materials and debris etc., generated by this work, shall be considered an incidental item to the Bid, and hauled from the site. Large amounts of debris will not be permitted to accumulate on the site and must be hauled from the site on a continuous basis.

Construction Access

Construction access shall be permitted only through the access point as shown on the plan. No other access will be permitted. The Contractor shall be responsible for protection of existing curbs and pavements and for replacement of any damage, at no additional expense to the Owner.

Existing Utility Structures and Utility Lines

The Contractor will be responsible for locating all existing utility structures and utility lines prior to any excavation or demolition. These include but are not limited to water, sanitary, drainage, telephone, fiber optics, cable television, natural gas, and electrical structures and lines. Contact J.U.L.I.E., the Village of Hoffman Estates prior to construction. Private site underground utility locating services shall be provided as specified on the plans.

Traffic Control

The Contractor will be responsible for controlling traffic when construction vehicles are entering or exiting the site. The Contractor will be responsible for the erection and maintenance of barricades, signage and miscellaneous traffic control measures to insure that vehicular traffic flows smoothly and safely within the site and on the streets surrounding the site.

Dust and Noise Control

The Contractor will be responsible for control of dust throughout the duration of the project. The Contractor will also be required to conform with any applicable Village of Hoffman Estates noise ordinances.

Street Cleaning

The Contractor will be responsible for cleaning surrounding streets of any mud or debris at the end of each workday. Street sweeping equipment may be used to fulfill this requirement.

Hold Harmless

The Contractor agrees to indemnify, save harmless and defend the Hoffman Estates Park District its consultants, agents and employees, and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses or expenses, including court costs and attorney's fees, for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to any property, which may arise or which may be alleged to have arisen out of or in connection with the work covered by this contract. The foregoing indemnity shall apply except if such injury, death or damage is caused directly by the negligence or fault of the Hoffman Estates Park District, its consultants, agents, servants, or employees or any other person indemnified hereunder.

Prevailing Wage

In all work performed under this Contract, the Contractor and all of its subcontractors shall comply with the current provisions of the Prevailing Wage Act of the Illinois Revised Statutes, Chapter 48, Sections 39s-1 *et seq.* Certified Payrolls are to be delivered to the Owner with each Application for Payment. Union labor per say is not required by the Park District, however prevailing wage is required. It is the contractor's responsibility to ensure that construction delays are avoided due to union issues.

Sexual Harassment

The Contractor and all of its subcontractors shall comply with the Sexual Harassment provisions of the Illinois Human Rights Act (775 ILCS 5/1-101 *et seq.*). Certified Payrolls are to be delivered to the Owner with each Application for Payment.

Equal Opportunity

In all work performed under this Contract, the Contractor and all of its subcontractors shall certify that they are an "Equal Opportunity Employer" as defined by Section 2000 (e) of Chapter 21, Title 42 of the United States Code, Annotated and Federal Executive Orders #11246 and #11375.

Licenses and Permits

The Contractor will be responsible for obtaining a Contractor's License and all applicable Permits from the Village of Hoffman Estates, and any other regulatory agencies or governmental bodies, prior to beginning any work on this project. Contractor shall contact the village to determine what fees will be required for inspections and the appropriate licenses, and shall include these costs within the bid.

Protection of Existing Trees

The Contractor shall be responsible for protection of all existing trees to remain on the project site. The Contractor may, at his own cost, fence any trees that may be in danger of damage or be near active construction. Any damage to an existing tree will result in a back-charge to the Contract of \$100 per caliper inch of the damaged tree. The caliper of the damaged tree will be measured 1.0' above existing grade.

Concrete Testing

The Contractor will be required to provide samples of all concrete used for this project. One test cylinder will be required from each truckload of concrete delivered to the site. Each test cylinder must be clearly marked with the date of the pour, load ticket number, the name of the concrete supplier and the location where the concrete was used. The Owner, at their own cost, will test these cylinders to determine if concrete meets project specifications. The Contractor will be responsible for disposing of all untested cylinders.

Protection of Existing Features

The Contractor will be responsible for protecting all existing features in the work area including walks, pavements, curbs, site furnishings, and utilities, etc. Damage to any existing features will be repaired or replaced by the Contractor at no additional expense to the Owner. Turf repairs will be made with sod.

Grading and Compaction

All grading performed for this project shall conform to the specifications. Mechanical compacting devices as outlined in the specifications must be utilized to perform the compacting that is necessary for this project.

Employer Liability

The Contractor (and each subcontractor and sub-subcontractor into whose subcontracts this clause shall be incorporated) agrees to assume the entire liability for all personal injury claims suffered by its own employees, including but without limitation claims under the Illinois Structural Work Act, asserted by persons allegedly injured on the Project; waives any limitation of liability defense based upon Worker's Compensation Act, court interpretation of said Act or otherwise; agrees to indemnify and defend Owner, Engineer, Construction Manager and their agents, employees and consultants (the "Indemnitees") from and against all such loss, expense, damage or injury, including reasonable attorney's fees, that the Indemnitees may sustain as a result of such claims, except to the extent that Illinois Law prohibits indemnity for the Indemnitees' own negligence.

Bid Document Review

Bidders are encouraged to review the Bid Documents immediately upon receipt. The Owner and Engineer will be available to make interpretations regarding the Bid Documents and answer any questions that may arise during the Bid process. No inquiries will be accepted by the Engineer

within two (2) working days of the Bid Opening. All questions shall be submitted in writing to the following email address:

dhugen@heparks.com

Reservation of Rights

Hoffman Estates Park District reserves the right to act in its own best interest and award the work to the Contractor, or Contractors it deems best able to complete the work in an appropriate and timely manner.

Construction Layout

All construction staking will be the responsibility of the contractor.

AIA General Conditions and AIA Contract Forms

The General Conditions of this contract are the American Institute of Architects' Standard Document No. A-201, "General Conditions of the Contract for Construction," 2017, as modified by the Supplementary General Conditions. The document is hereby specifically made apart of the contract documents with the same force and effect as though set forth in full. The Contract for this project is the American Institute of Architects' Standard Document No. A-101, "Standard form of Agreement Between Owner and Contractor, where the basis of payment is a Stipulated Sum", 2017. The document is hereby specifically made apart of the contract documents with the same force and effect as though set forth in full.

Copies of these documents are on file at the office of the Engineer and maybe referred to at any time during normal business hours.

The Contractor is directed to the Supplementary Conditions, which modify the General Conditions.

Unit Prices

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

SUMMARY

Section includes administrative and procedural requirements for unit prices.

Related Sections:

Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

Division 01 Section "Quality Requirements" for general testing and inspecting requirements.

DEFINITIONS

Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

PROCEDURES

Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

List of Unit Prices: A schedule of unit prices is included in the bid proposal form. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PRODUCTS (Not Used)

EXECUTION

SCHEDULE OF UNIT PRICES

1. See bid proposal form for the unit prices.

END OF SECTION

Bid Proposal Form – UTILITIES AND EXCAVATION

Base Bid

Bid Price

Utilities and Excavation - Scope includes furnishing and installing all sanitary sewer and water service improvements as well as pavement removal and replacement that is necessary for the proposed sanitary sewer and water service installation as shown on the drawings prepared by WT Group and API Architects dated March 1, 2022. The sanitary sewer and water service shall be stubbed up through the building slab for continuation by the bathroom building contractor (the Park District). The base bid also includes the proposed electrical service from the existing panel within the existing adjacent building (approximately 250 feet) to the new bathroom building. The new electrical service shall be stubbed up through the building slab for continuation by the building contractor (the Park District). The base bid also includes excavation and compaction of soils necessary for the installation of the bathroom building foundations and slab as well as the removal of any spoils necessary for the slab and foundation excavation and utility installation.

\$ _____

The base bid also includes removal of all spoils from the site generated by the base bid and includes the reinstallation of a minimum of 6" of topsoil within all of the landscape areas disturbed for the sanitary sewer and water service installation.

Alternate # 1 - Install a 48" Precast Concrete Sanitary Drop Manhole in Lieu of the proposed riser connection.

\$ _____

Unit Prices

Bid Price

Unit Price #1 – Provide new 6" P.V.C. SDR 26 Piping

\$ _____/Ft.

Unit Price #2 – Provide and install new 2" Type K Copper Piping

\$ _____/Ft.

Unit Price #3 – Remove and replace asphalt pavement as shown on the proposed construction plans

\$ _____/SF.

Unit Price # 4 – Hauling of spoils from the site

\$ _____/C.Y.

HOFFMAN ESTATES PARK DISTRICT
Hoffman Estates, Illinois

FORM OF PROPOSAL

Proposal of _____, hereinafter called the
"BIDDER", (a) / (an) _____,

(Corporation, Partnership,
individual) doing business as _____, to Hoffman Estates
Park District, hereinafter called the "OWNER."

* * *

The Bidder, in response to your advertisement for bids for **Bridges Top Tracer Bathroom Utilities** having examined the Specifications and other Documents and being familiar with all of the conditions surrounding the proposed work (purchase/sale) including availability of materials and labor, hereby proposes to furnish all labor, materials and supplies and to construct the project in accordance with the Contract Documents, within the time set forth therein and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents of which this proposal is a part.

Bidder acknowledges receipt of the following Addenda, which are a part of the Contract

Document: Numbers: _____, _____, _____, _____.

Accompanying this is a _____
(Bid Bond, Certified Check, Bank Draft)

In the amount of _____
(Dollars)

(\$_____) being five percent (5%) of the Base Contract Bid, the same being subject to forfeiture in the event of default by the undersigned.

In submitting this bid, it is understood that the right is reserved by the Owner to reject any and all bids and it is agreed that this bid may not be withdrawn during the period of days in the Contract Documents.

The Bidder hereby certifies:

- A. That this bid is genuine and is not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation.
- B. That he has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid.
- C. That he has not solicited or induced any person, firm, or corporation to refrain from bidding.
- D. That he has not sought by collusion or otherwise to obtain for himself any advantage over any other bidder or over the "Owner."
- E. That he will comply with all provisions of the Prevailing Wage Ordinance #O-(Ordinance number) adopted by the Hoffman Estates Park District.
- F. That he is in compliance with the Criminal Code Act of 1961, Article 33E-11, Public Contracts, and Public Act 85-1295.
- G. That all materials, methods and workmanship shall conform to the drawings, specifications, manufacturer's standards and specifications, and all applicable Codes and Standards.
- H. The bidder understands that the Hoffman Estates Park District looks favorably on minority businesses as sub-contractors for supplies, equipment, labor services and construction.

CERTIFICATION

I, _____ (Officer), having been first duly sworn on Oath, do depose and state that I presently reside at _____ (Address), and that I am the duly authorized principal, officer or agent of _____ (Name of Contractor) and do hereby certify to Hoffman Estates Park District, its Commissioners, Officers and Employees that neither I nor _____ (Name of Contractor) are barred from bidding on the Contract for which this bid is submitted, and as a result of violation of either Section 33E-3 (Bid-rigging") or Section 33E-4 ("Bid-rotating") of Article 33E of the Criminal Code of 1961 of the State of Illinois approved July 28,1961, as amended.

On behalf of Contractor

Subscribed and sworn to before me

this _____ day of _____, 20____

- Notary Public -

My Commission Expires:

REFERENCES

Hoffman Estates IL 60169

References for:

1. Company Name: _____
Address: _____
City-state: _____
Phone Number: _____
Contact Person: _____
2. Company Name: _____
Address: _____
City/State: _____
Phone Number: _____
Contact Person: _____
3. Company Name: _____
Address: _____
City/State: _____
Phone Number: _____
Contact Person: _____
4. Company Name: _____
Address: _____
City/State: _____
Phone Number: _____
Contact Person: _____



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Fax: 847-870-0661
us@soilandmaterialconsultants.com
www.soilandmaterialconsultants.com

February 24, 2022
File No. 25740
Updated

Mr. Todd Abrams, P.E., CFM
WT Group
2675 Pratum Avenue
Hoffman Estates, IL 60192

Re: Geotechnical Investigation
Bridges of Poplar Creek
Driving Range Improvements
Hoffman Estates, Illinois

Dear Mr. Abrams:

The following is our report of findings for the geotechnical investigation completed for the above referenced project in the Village of Hoffman Estates, Illinois.

The investigation was requested to determine current subsurface soil and water conditions at select boring locations. The findings of the field investigation and the results of laboratory testing are intended to assist in the planning, design and construction of proposed site improvements.

PROPOSED IMPROVEMENTS

We understand it is proposed to construct a single-story building supported on shallow depth foundations. The interior is expected to have at-grade slabs supported on prepared subgrade soils. Improvements exterior to the building are expected to include pavement areas, sidewalks and related underground improvements.

SCOPE OF THE INVESTIGATION

The field investigation included obtaining 2 borings at the locations requested and as indicated on the enclosed location sketch. The boring locations were established using field taping methods and accuracy. Surface elevations were estimated to the nearest 0.5 ft. using data presented on the topographic survey.

We auger drilled the borings to depths of 15.0 feet below existing surface elevations. Soil samples were obtained using a split barrel sampler advanced utilizing an automatic SPT hammer. Soil profiles were determined in the field and soil samples returned to our laboratory for additional testing including determination of moisture content. Cohesive soils obtained by split barrel sampling were tested further to determine dry unit weight and unconfined compressive strength.

The results of all field determinations and laboratory testing are included in summary with this report.

8 W. COLLEGE DR. • SUITE C • ARLINGTON HEIGHTS, IL 60004

SOIL BORINGS • SITE INVESTIGATIONS • PAVEMENT INVESTIGATIONS • GEOTECHNICAL ENGINEERING
TESTING OF • SOIL • ASPHALT • CONCRETE • MORTAR • STEEL

RESULTS OF THE INVESTIGATION

Enclosed are boring logs indicating the soil conditions encountered at each location. Site surface conditions include vegetation, topsoil and fill soil conditions. Composition of the fill includes the presence of topsoil, silt/clay, and clay/silt mixtures extending to depths of 3.0 feet at these boring locations. The limits of fill placement were not determined within the scope of this investigation. Larger debris may also be present within the fill but was not encountered during the investigation.

Underlying soil conditions include the presence of cohesive soils. These are classified as tough to hard clay/silt mixtures with lesser portions of sand and gravel. Thinner seams of non-cohesive soils were also encountered as indicated. These include medium dense silt/clay/sand and sand mixtures. The non-cohesive granular soils encountered at boring B-2 were in a saturated condition. Cobbles and boulders may be present within the site soils at any elevation, although none were encountered while drilling.

The following table summarizes depth ranges below existing grade, the magnitude of soil strength within these ranges and other information:

<u>Boring</u>	<u>Surface Elevation (feet)</u>	<u>Depth Range Below Existing Surface (feet)</u>	<u>Soil Strength (lbs./sq.ft.)</u>	<u>Recorded Water Levels, W.D./A.D. (feet)</u>
1	803.5	2.5 to 3.5 3.5 to 6.5 6.5 to 12.0	*3,000 4,000 5,000	dry/dry
2	804.0	1.5 to 3.5 3.5 to 12.0	*3,000 3,000	10.0/7.0

* Not recommended for support of foundations. Deeper foundation depths or foundations supported on coarse crushed stone fill may be needed to reduce the magnitude of long-term total and differential settlement.

It is expected that foundations can be supported on undisturbed natural soils located at any elevation within the depth ranges indicated in the above table, except as noted. Above these depth ranges the soils are not considered able to support foundations, even at reduced design bearing values, due to long-term settlement considerations.

SUBSURFACE WATER

The boring logs and the above table indicate the depth at which subsurface water was encountered in the bore holes at the time of the drilling operations and during the period of these readings. It is expected that fluctuations from the water levels recorded will occur over a period of time due to variations in rainfall, temperature, subsurface soil conditions, soil permeability and other factors not evident at the time of the water level measurements. We would estimate the seasonal high ground water at EL. 798 feet due to the presence of gray clay.

FOUNDATIONS

Based on the results of this investigation it is our opinion that continuous and isolated footing foundations may be considered for support of building loads. These foundations can be supported on undisturbed natural soils located below all topsoil, unsuitable fill soils, low strength soils and other unsuitable conditions which may be encountered. Soil strength values and the depths at which they are expected to be encountered at these boring locations are indicated in the above table. A net allowable bearing value of 3,000 lbs./sq.ft. is available for design. This value can be used to size foundations for support of structure dead and live loads.

All exterior building foundations should extend at least 42.0 inches below exposed surface elevations to provide adequate protection against uplift due to freezing of the supporting soils. Foundations for unprotected improvements should extend at least 48.0 inches below exposed surface elevations. We recommend providing adequate reinforcing steel in foundation walls and piers to minimize the effects of long-term differential settlement.

Weak soil conditions may be discovered locally at design foundation elevations and may require extending the foundation to a deeper elevation. Alternately, removal of the weak soil followed by replacement with properly compacted coarse crushed granular fill (CA01) may be feasible. When removal is approved by the Soil Engineer, the removal of the weak soil should also extend beyond the face of footings and/or piers to a distance at least equal to the depth of fill that will be present beneath the footings and/or piers. A capping layer of finer crushed granular fill (CA06) can be utilized to establish a working surface.

Foundations can be constructed at shallower depths than those indicated in the above table by preparation of the building pad in advance of foundation excavation. This can be accomplished during site grading by the full-depth removal of unsuitable and low strength soils followed by replacement with properly compacted structural fill. Removal should be accomplished over the entire building pad as needed to provide the supplemental benefit of adequate support of interior slabs. Variations in the depth of removal can be anticipated due to naturally changing soil conditions. The removal should extend beyond the face of perimeter footings to a distance at least equal to the depth of fill that will be present beneath the perimeter footings. Preparation of supporting soils should be in accordance with our recommendations for Subgrade Soil Preparation.

FLOOR SLABS

Floor slabs planned for support on the existing soil conditions are expected to undergo some degree of long-term settlement as the soils consolidate under loading and as they shrink due to desiccation. Slabs may be considered for support on suitable natural soils or on properly placed and compacted fill soils. This is feasible when the soils supporting the slabs are prepared in accordance with the recommendations for Subgrade Soil Preparation. These include the removal of topsoil as well as removal or aeration of underlying high moisture content soils.

DEWATERING

Excavations may require dewatering due to subsurface water seepage and/or surface precipitation. This water can likely be removed to depths of several feet by standard sump and pump operations. Soils exposed at foundation, slab or undercut elevations should not be permitted to become saturated. Loss of bearing strength and stability may occur, requiring additional soil excavation.

Fill soils, cohesive soils and others can be unstable when saturated. These soils tend to cave or run when submerged or disturbed. The stability of exposed embankments is minimal to non-existent as confining soil pressures are removed. Proper drainage within excavations is necessary at all times, particularly when excavations extend below anticipated water levels and below saturated soils.

The contractor should be made responsible for designing and constructing stable temporary excavations. Also, the contractor should shore, slope, bench or restrain the sides of the excavations as required to maintain stability of both the excavation sides and bottom. In no case, should the slope, slope heights, or excavation depth exceed those in the local, state, and federal safety regulations.

SUBGRADE SOIL PREPARATION

Subgrade soil preparation should be accomplished where needed within the building area prior to excavation for foundations. The procedure in all areas of subgrade supported improvements should include the removal of unsuitable surface conditions including vegetation, topsoil, unsuitable fill soils, significant debris, weak or unstable soils, and other deleterious conditions which may be encountered. Above grade areas should be cut to design subgrade elevations. Exposed subgrade soils should be leveled, compacted and proof-rolled in the presence of the Soil Engineer.

Proof-rolling may reveal areas of unstable soil conditions. Discing and aeration of high moisture content soils can be effective to depths of up to 1.0 foot, depending upon the equipment utilized. Removal of unstable soils may be necessary if high moisture content conditions extend to depths greater than the effective depth of discing. If the depth of undercut appears to be significant, it may be economical to limit the depth of undercut to that needed to establish adequate support of slabs and remediate weak soil conditions at foundation elevations at the time of foundation construction.

Soft or unstable soil conditions in pavement areas can often be bridged by use of an effective depth of crushed granular material. The placement of the crushed granular bridging material, possibly in conjunction with the use of an appropriate geotextile fabric, should only proceed after review of the proof-roll conditions by the Soil Engineer. Long-term settlement of pavement surfaces may occur locally as the bridged soils desiccate.

Structural fill can be placed on soils prepared to the satisfaction of the Soil Engineer. The fill should be placed in lifts not to exceed 8.0 inches when uncompacted. Each lift should exceed minimum compaction requirements prior to placement of the next lift. We recommend a

Re: Bridges of Poplar Creek
Driving Range Improvements
Hoffman Estates, Illinois

minimum of 95% compaction based on the modified Proctor test, ASTM D-1557, be achieved within building areas. A minimum of 90% compaction should be achieved beneath exterior improvements such as pavements and sidewalks. Compaction requirements also apply to backfill placement around foundations and within trench excavations located below subgrade supported improvements.

The onsite non-organic soils are generally suitable for reuse as fill. Offsite sources may also be used provided they are approved in advance by the Soil Engineer. Aeration may be necessary to reduce soil moisture content prior to compaction. Soil borrowed from near the surface where seasonal fluctuations in soil moisture content occur may require particular attention. The moisture content of fill soils should be within approximately 3.0% of optimum moisture content as determined by the modified Proctor test for the soils to meet or exceed minimum compaction requirements.

CONCLUSION

The information within this report is intended to provide initial information concerning subsurface soil and water conditions on the site. Variations in subsurface conditions are expected to be present between boring locations due to naturally changing and filled soil conditions.

Our understanding of the proposed improvements is based on limited information available to us at the writing of this report. The findings of the investigation and the recommendations presented are not considered applicable to significant changes in the scope of the improvements or applicable to alternate site uses. We recommend that proposed foundation, pavement and grading plans be reviewed by our office to determine if additional considerations are necessary to address anticipated subsurface conditions.

The soils exposed in soil undercut areas should be evaluated for suitability prior to placement of structural fill, as previously indicated in this report. Soils and aggregates placed as structural fill should be tested as the work progresses to verify that minimum compaction requirements have been met. We recommend that soil conditions encountered at foundation elevations be tested to verify the presence of design soil strength prior to concrete placement.

If you have any questions concerning the findings or recommendations presented in this report, please let me know.

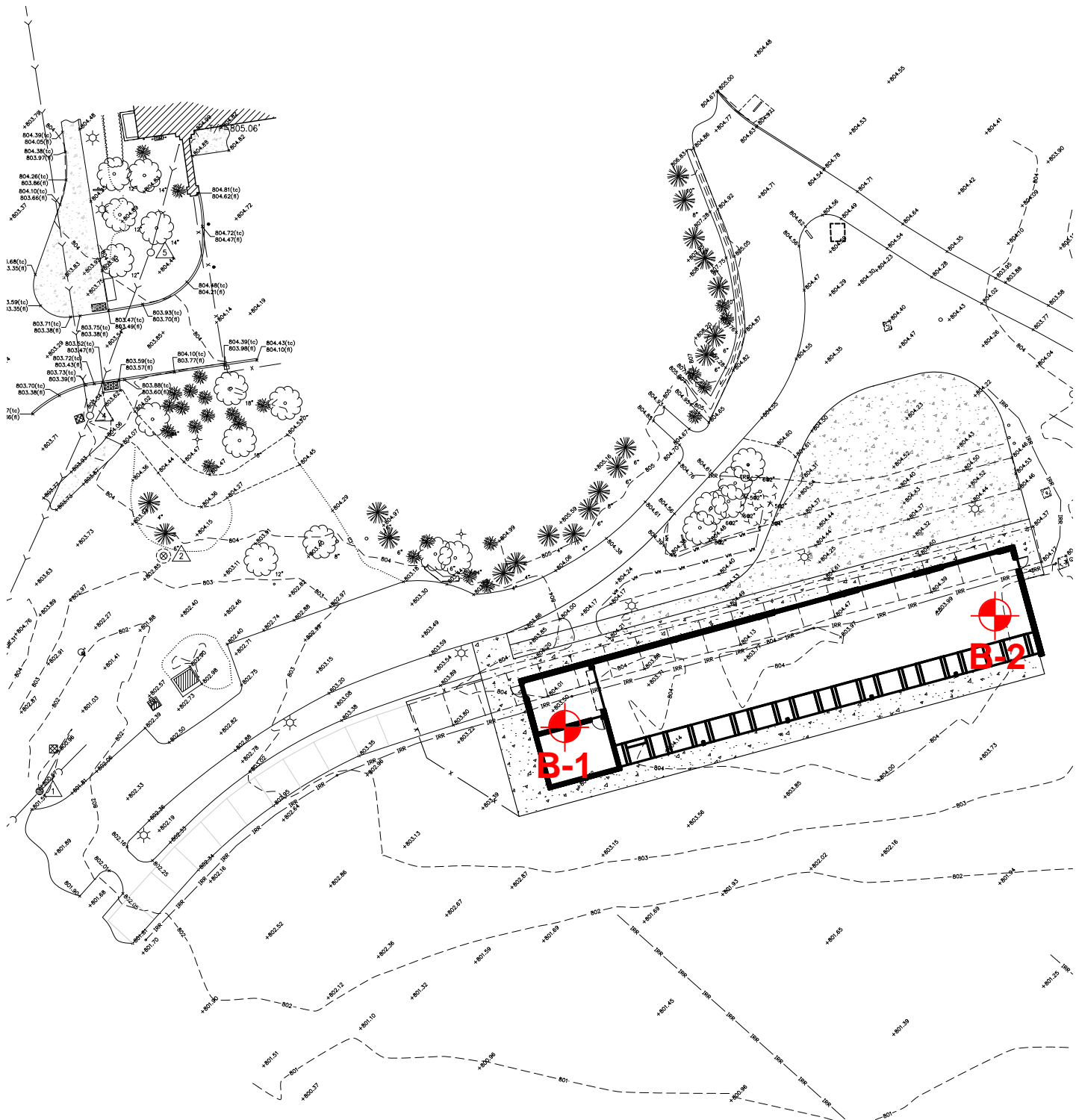
Very truly yours,

SOIL AND MATERIAL CONSULTANTS, INC.



Thomas P. Johnson, P.E.
President

TPJ:ek
Enc.



SMC		SOIL AND MATERIAL CONSULTANTS, INC.	LOCATION SKETCH
Client:	WT GROUP		
Project:	BRIDGES OF POPLAR CREEK DRIVING RANGE IMPROVEMENTS		
Location:	HOFFMAN ESTATES, ILLINOIS		
File No.	25740	Date: 4-5-21	Scale: 1" ≈ 40'

Client: WT Group

File No. 25740 Date Drilled: 4/5/21

Reference: Bridges of Poplar Creek
Driving Range Improvements
Hoffman Estates, Illinois

Comments: D-25

Equipment: ☐ CME 45B ☐ CME 55 ☐ Hand Auger ☒ Other

depth, ft.	CLASSIFICATION	standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	<div> <div>○ unconfined compressive strength, tons/sq. ft.</div> <div>● penetrometer reading, tons/sq. ft.</div> <div>1.0 2.0 3.0 4.0</div> </div>			
						<div> <div>× standard penetration "N", blows/ft.</div> <div>△ moisture content, %</div> <div>10 20 30 40</div> </div>			
	Elevation 804.0' Existing Surface	×	△	8	○				
	(a) see below								
	Brown clay,some silt,trace sand & gravel damp,very tough - Fill	11	20.3	114.2	3.7				
	Brown clay,some silt,trace sand & gravel damp,very tough	19	15.5	127.9	2.6				
5	Gray clay & silt,trace sand & gravel, damp,very tough	11	14.0	128.1	2.8				
	Gray clay & silt,trace sand & gravel, damp,tough	7	10.8	118.2	1.1				
10	(b) see below								
	Gray clay,some silt,trace sand & gravel, damp,very tough to hard	17	15.2	127.0	3.2				
15	End of Boring	19	11.5	140.0	4.8				
	(a) Dark brown-black fine sand,trace silt & roots,damp (topsoil) - Fill								
20	(b) Gray fine-medium sand,some coarse sand,trace gravel,saturated								
25									
30									
35									
40									

Water encountered at 10.0 feet during drilling operations (W.D.)
 Water recorded at 7.0 feet on completion of drilling operations (A.D.)
 Water recorded at feet hours after completion of drilling operations (A.D.)

GENERAL NOTES

SAMPLE CLASSIFICATION

Soil sample classification is based on the Unified Soil Classification System, the Standard Practice for Description and Identification Soils (Visual-Manual Procedure), ASTM D-2488, the Standard Test Method for Classification of Soils for Engineering Purposes, ASTM D-2487 (when applicable), and the modifiers noted below.

CONSISTENCY OF COHESIVE SOILS

Term	Qu-tons/sq.ft.	N (unreliable)
Very soft	0.00 – 0.25	0 – 2
Soft	0.26 – 0.49	3 – 4
Stiff	0.50 – 0.99	5 – 8
Tough	1.00 – 1.99	9 – 15
Very Tough	2.00 – 3.99	16 – 30
Hard	4.00 – 7.99	30 +
Very Hard	8.00 +	

RELATIVE DENSITY OF GRANULAR SOILS

Term	N – blows/foot
Very Loose	0 – 4
Loose	5 – 9
Medium Dense	10 – 29
Dense	30 – 49
Very Dense	50 +

IDENTIFICATION AND TERMINOLOGY

Term	Size Range
Boulder	over 8 in.
Cobble	3 in. to 8 in.
Gravel - coarse	1 in. to 3 in.
- medium	3/8 in. to 1 in.
- fine	#4 sieve to 3/8 in.
Sand - coarse	#10 sieve to #4 sieve
- medium	#40 sieve to #10 sieve
- fine	#200 sieve to #40 sieve
Silt	0.002 mm to #200 sieve
Clay	smaller than 0.002mm

Modifying Term Percent by Weight

Trace	1 – 10
Little	11 – 20
Some	21 – 35
And	36 – 50

Moisture Content

Dry
Damp
Very Damp
Saturated

DRILLING, SAMPLING & SOIL PROPERTY SYMBOLS

CF	- Continuous Flight Auger
HS	- Hollow Stem Auger
HA	- Hand Auger
RD	- Rotary Drilling
AX	- Rock Core, 1-3/16 in. diameter
BX	- Rock Core, 1-5/8 in. diameter
NX	- Rock Core, 2-1/8 in. diameter
S	- Sample Number
T	- Type of Sample
J	- Jar
AS	- Auger Sample
SS	- Split Spoon (2 in. O.D. with 1-3/8 in. I.D.)
ST	- Shelby Tube (2 in. O.D. w/1-7/8 in. I. D.)
R	- Recovery Length, in.
B	- Blows/6 in. interval, Standard Penetration Test (SPT)
N	- Blows/foot to drive 2 in. O.D. split-spoon sampler with 140 lb. hammer falling 30 in., (STP)
Pen.	- Pocket Penetrometer readings, tons/sq.ft.
W	- Water Content, % dry weight
Uw	- Dry Unit Weight of soil, lbs./cu.ft.
Qu	- Unconfined Compressive Strength, tons/sq.ft.
Str	- % Strain at Qu.
WL	- Water Level
WD	- While Drilling
AD	- After Drilling
DCI	- Dry Cave-in.
WCI	- Wet Cave-in.
LL	- Liquid Limit, %
PL	- Plastic Limit, %
PI	- Plasticity Index (LL-PL)
LI	- Liquidity Index [(W-PL)/PI]