

\$1,746,842.44

BID OF SPEEDWAY SAND & GRAVEL, INC.

2024

PROPOSAL, CONTRACT, BOND AND SPECIFICATIONS

FOR

BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN  
ASSESSMENT DISTRICT - 2023

CONTRACT NO. 8317

MUNIS NO. 13893

IN

MADISON, DANE COUNTY, WISCONSIN

AWARDED BY THE COMMON COUNCIL  
MADISON, WISCONSIN ON MAY 21, 2024

CITY ENGINEERING DIVISION  
1600 EMIL STREET  
MADISON, WISCONSIN 53713

<https://bidexpress.com/login>

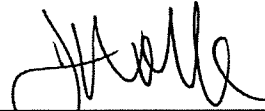
**BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN  
ASSESSMENT DISTRICT - 2023  
CONTRACT NO. 8317**

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This Proposal, and Agreement have  
been prepared by:

**CITY ENGINEERING DIVISION  
CITY OF MADISON  
MADISON, DANE COUNTY, WISCONSIN**



James M. Wolfe, P.E., City Engineer

JMW: rs

# SECTION A: ADVERTISEMENT FOR BIDS AND INSTRUCTIONS TO BIDDERS

## REQUEST FOR BID FOR PUBLIC WORKS CONSTRUCTION CITY OF MADISON, WISCONSIN

### A BEST VALUE CONTRACTING MUNICIPALITY

PROJECT NAME:	BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN ASSESSMENT DISTRICT - 2023
CONTRACT NO.:	8317
SBE GOAL	8%
BID BOND	5%
SBE PRE BID MEETING (2:00 P.M.)	04/16/2024
PREQUALIFICATION APPLICATION DUE (2:00 P.M.)	04/18/2024
BID SUBMISSION (2:00 P.M.)	04/25/2024
BID OPEN (2:30 P.M.)	04/25/2024
PUBLISHED IN WSJ	04/11/2024 & 04/18/2024

**SBE PRE BID MEETING:** Pre-Bid Meetings are being held virtually. Advance registration is required. Visit the SBE Meeting web page on Engineering's web site:  
<https://www.cityofmadison.com/engineering/developers-contractors/contractors/how-to-bid-public-works-contracts/small-business>.

Questions regarding SBE Program requirements may be directed to Tracy Lomax, Affirmative Action Division. Tracy may be reached at (608) 267-8634, or by email, [TLomax@cityofmadison.com](mailto:TLomax@cityofmadison.com).

**PREQUALIFICATION APPLICATION:** Forms are available on our website, [www.cityofmadison.com/engineering/developers-contractors/contractors/how-to-get-prequalified](http://www.cityofmadison.com/engineering/developers-contractors/contractors/how-to-get-prequalified). If not currently prequalified in the categories listed in Section A, an amendment to your Prequalification will need to be submitted prior to the same due date. Postmark is not applicable.

**BIDS TO BE SUBMITTED:** by hand to 1600 EMIL ST., MADISON, WI 53713 or online at [www.bidexpress.com](http://www.bidexpress.com).

Bids may be submitted on line through Bid Express or in person at 1600 Emil St. The bids will be posted on line after the bid opening. If you have any questions, please call Alane Boutelle at (608) 267-1197, or John Fahrney at (608) 266-9091.

### STANDARD SPECIFICATIONS

The City of Madison's Standard Specifications for Public Works Construction - 2024 Edition, as supplemented and amended from time to time, forms a part of these contract documents as if attached hereto.

These standard specifications are available on the City of Madison Public Works website, [www.cityofmadison.com/engineering/developers-contractors/standard-specifications](http://www.cityofmadison.com/engineering/developers-contractors/standard-specifications).

The Contractor shall review these Specifications prior to preparation of proposals for the work to be done under this contract, with specific attention to Article 102, "BIDDING REQUIREMENTS AND CONDITIONS" and Article 103, "AWARD AND EXECUTION OF THE CONTRACT." For the convenience of the bidder, below are highlights of three subsections of the specifications.

### SECTION 102.1: PRE-QUALIFICATION OF BIDDERS

In accordance with Wisconsin State Statutes 66.0901 (2) and (3), all bidders must submit to the Board of Public Works proof of responsibility on forms furnished by the City. The City requires that all bidders be qualified on a biennial basis.

Bidders must present satisfactory evidence that they have been regularly engaged in the type of work specified herein and they are fully prepared with necessary capital, materials, machinery and supervisory personnel to conduct the work to be contracted for to the satisfaction of the City. All bidders must be pre-qualified by the Board of Public Works for the type of construction on which they are bidding prior to the opening of the bid.

In accordance with Section 39.02(9)(a)l. of the General Ordinances, all bidders shall submit in writing to the Affirmative Action Division Manager of the City of Madison, a Certificate of Compliance or an Affirmative Action Plan at the same time or prior to the submission of the proof of responsibility forms.

The bidder shall be disqualified if the bidder fails to or refuses to, prior to opening of the bid, submit a Certificate of compliance, Affirmative Action Plan or Affirmative Action Data Update, as applicable, as defined by Section 39.02 of the General Ordinances (entitled Affirmative Action) and as required by Section 102.11 of the Standard Specifications.

#### SECTION 102.4 PROPOSAL

No bid will be accepted that does not contain an adequate or reasonable price for each and every item named in the Schedule of Unit Prices.

A lump sum bid for the work in accordance with the plans and specifications is required. The lump sum bid must be the same as the total amounts bid for the various items and it shall be inserted in the space provided.

All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. The plans, specifications and other documents designated in the proposal form will be considered a part of the proposal whether attached or not.

A proposal submitted by an individual shall be signed by the bidder or by a duly authorized agent. A proposal submitted by a partnership shall be signed by a member/partner or by a duly authorized agent thereof. A proposal submitted by a corporation shall be signed by an authorized officer or duly authorized registered agent of such corporation, and the proposal shall show the name of the State under the laws of which such corporation was chartered. The required signatures shall in all cases appear in the space provided thereof on the proposal.

Each proposal shall be placed, together with the proposal guaranty, in a sealed envelope, so marked as to indicate name of project, the contract number or option to which it applies, and the name and address of the Contractor or submitted electronically through Bid Express ([www.bidexpress.com](http://www.bidexpress.com)). Proposals will be accepted at the location, the time and the date designated in the advertisement. Proposals received after the time and date designated will be returned to the bidder unopened.

#### SECTION 102.5: BID DEPOSIT (PROPOSAL GUARANTY)

All bids, sealed or electronic, must be accompanied with a Bid Bond (City of Madison form) equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer. Bid deposit of the successful bidders shall be returned within forty-eight (48) hours following execution of the contract and bond as required.

#### MINOR DISCREPENCIES

Bidder is responsible for submitting all forms necessary for the City to determine compliance with State and City bidding requirements. Notwithstanding any language to the contrary contained herein, the City may exercise its discretion to allow bidders to correct or supplement submissions after bid opening, if the minor discrepancy, bid irregularity or omission is insignificant and not one related to price, quality, quantity, time of completion or performance of the contract.

**Bidders for this Contract(s) must be Pre-Qualified for at least one of the following type(s) of construction denoted by an**

Building Demolition

- 101  Asbestos Removal
- 120  House Mover

- 110  Building Demolition

Street, Utility and Site Construction

- 201  Asphalt Paving
- 205  Blasting
- 210  Boring/Pipe Jacking
- 215  Concrete Paving
- 220  Con. Sidewalk/Curb & Gutter/Misc. Flat Work
- 221  Concrete Bases and Other Concrete Work
- 222  Concrete Removal
- 225  Dredging
- 230  Fencing
- 235  Fiber Optic Cable/Conduit Installation
- 240  Grading and Earthwork
- 241  Horizontal Saw Cutting of Sidewalk
- 242  Hydro Excavating
- 243  Infrared Seamless Patching
- 245  Landscaping, Maintenance
- 246  Ecological Restoration
- 250  Landscaping, Site and Street
- 251  Parking Ramp Maintenance
- 252  Pavement Marking
- 255  Pavement Sealcoating and Crack Sealing
- 260  Petroleum Above/Below Ground Storage Tank Removal/Installation
- 262  Playground Installer

- 265  Retaining Walls, Precast Modular Units
- 270  Retaining Walls, Reinforced Concrete
- 275  Sanitary, Storm Sewer and Water Main Construction
- 276  Sawcutting
- 280  Sewer Lateral Drain Cleaning/Internal TV Insp.
- 285  Sewer Lining
- 290  Sewer Pipe Bursting
- 295  Soil Borings
- 300  Soil Nailing
- 305  Storm & Sanitary Sewer Laterals & Water Svc.
- 310  Street Construction
- 315  Street Lighting
- 318  Tennis Court Resurfacing
- 320  Traffic Signals
- 325  Traffic Signing & Marking
- 332  Tree pruning/removal
- 333  Tree, pesticide treatment of
- 335  Trucking
- 340  Utility Transmission Lines including Natural Gas, Electrical & Communications
- 399  Other \_\_\_\_\_

Bridge Construction

- 501  Bridge Construction and/or Repair

Building Construction

- 401  Floor Covering (including carpet, ceramic tile installation, rubber, VCT)
- 402  Building Automation Systems
- 403  Concrete
- 404  Doors and Windows
- 405  Electrical - Power, Lighting & Communications
- 410  Elevator - Lifts
- 412  Fire Suppression
- 413  Furnishings - Furniture and Window Treatments
- 415  General Building Construction, Equal or Less than \$250,000
- 420  General Building Construction, \$250,000 to \$1,500,000
- 425  General Building Construction, Over \$1,500,000
- 428  Glass and/or Glazing
- 429  Hazardous Material Removal
- 430  Heating, Ventilating and Air Conditioning (HVAC)
- 433  Insulation - Thermal
- 435  Masonry/Tuck pointing

- 437  Metals
- 440  Painting and Wallcovering
- 445  Plumbing
- 450  Pump Repair
- 455  Pump Systems
- 460  Roofing and Moisture Protection
- 464  Tower Crane Operator
- 461  Solar Photovoltaic/Hot Water Systems
- 465  Soil/Groundwater Remediation
- 466  Warning Sirens
- 470  Water Supply Elevated Tanks
- 475  Water Supply Wells
- 480  Wood, Plastics & Composites - Structural & Architectural
- 499  Other \_\_\_\_\_

State of Wisconsin Certifications

- 1  Class 5 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for quarries, open pits and road cuts.
- 2  Class 6 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for trenches, site excavations, basements, underwater demolition, underground excavations, or structures 15 feet or less in height.
- 3  Class 7 Blaster - Blasting Operations and Activities for structures greater than 15 ' in height, bridges, towers, and any of the objects or purposes listed as "Class 5 Blaster or Class 6 Blaster".
- 4  Petroleum Above/Below Ground Storage Tank Removal and Installation (Attach copies of State Certifications.)
- 5  Hazardous Material Removal (Contractor to be certified for asbestos and lead abatement per the Wisconsin Department of Health Services, Asbestos and Lead Section (A&LS).) See the following link for application: [www.dhs.wisconsin.gov/Asbestos/Cert](http://www.dhs.wisconsin.gov/Asbestos/Cert). State of Wisconsin Performance of Asbestos Abatement Certificate must be attached.
- 6  Certification number as a Certified Arborist or Certified Tree Worker as administered by the International Society of Arboriculture
- 7  Pesticide application (Certification for Commercial Applicator For Hire with the certification in the category of turf and landscape (3.0) and possess a current license issued by the DATCP)
- 8  State of Wisconsin Master Plumbers License.

## SECTION B: PROPOSAL

Please refer to the  
Bid Express Website  
at <https://bidexpress.com>  
look up contract number  
and go to  
Section B: Proposal Page

You can access all City of Madison bid solicitations for FREE at [www.bidexpress.com](http://www.bidexpress.com)

Click on the "Register for Free" button and follow the instructions to register your company and yourself. You will be asked for a payment subscription preference, since you may wish to bid online someday. Simply choose the method to pay on a 'per bid' basis. This requires no payment until / unless you actually bid online. You can also choose the monthly subscription plan at this time. You will, however, be asked to provide payment information. Remember, you can change your preference at anytime. You will then be able to complete your free registration and have full access to the site. Your free access does not require completion of the 'Digital ID' process, so you will have instant access for viewing and downloading. To be prepared in case you ever do wish to bid online, you may wish to establish your digital ID also, since you cannot bid without a Digital ID.

If you have any problems with the free registration process, you can call the bidexpress help team, toll free at 1-888-352-2439 (option 1, option1).

## **SECTION C: SMALL BUSINESS ENTERPRISE**

### **Instructions to Bidders City of Madison SBE Program Information**

#### **2 Small Business Enterprise (SBE) Program Information**

##### **2.1 Policy and Goal**

The City of Madison reaffirms its policy of nondiscrimination in the conduct of City business by maintaining a procurement process which remains open to all who have the potential and ability to sell goods and services to the City. It is the policy of the City of Madison to allow Small Business Enterprises (SBE) maximum feasible opportunity to participate in City of Madison contracting. The bidder acknowledges that its bid has been submitted in accordance with the SBE program and is for the public's protection and welfare.

Please refer to the "ADVERTISEMENT FOR BIDS" for the goal for the utilization of SBEs on this project. SBEs may participate as subcontractors, vendors and/or suppliers, which provide a commercially useful function. The dollar value for SBE suppliers or 'materials only' vendors shall be discounted to 60% for purposes of meeting SBE goals.

A bidder which achieves or exceeds the SBE goal will be in compliance with the SBE requirements of this project. In the event that the bidder is unable to achieve the SBE goal, the bidder must demonstrate that a good faith effort to do so was made. Failure to either achieve the goal or demonstrate a good faith effort to do so will be grounds for the bidder being deemed a non-responsible contractor ineligible for award of this contract.

A bidder may count towards its attainment of the SBE goal only those expenditures to SBEs that perform a commercially useful function. For purposes of evaluating a bidder's responsiveness to the attainment of the SBE goal, the contract participation by an SBE is based on the percentage of the total base bid proposed by the Contractor. The total base bid price is inclusive of all addenda.

Work performed by an SBE firm in a particular transaction can be counted toward the goal only if it involves a commercially useful function. That is, in light of industry practices and other relevant considerations, does the SBE firm have a necessary and useful role in the transaction, of a kind for which there is a market outside the context of the SBE Program, or is the firm's role a superfluous step added in an attempt to obtain credit towards goals? If, in the judgment of the Affirmative Action Division, the SBE firm will not perform a commercially useful function in the transaction, no credit towards goals will be awarded.

The question of whether a firm is performing a commercially useful function is completely separate from the question of whether the firm is an eligible SBE. A firm is eligible if it meets the definitional criteria and ownership and control requirements, as set forth in the City of Madison's SBE Program.

If the City of Madison determines that the SBE firm is performing a commercially useful function, then the City of Madison must then decide what that function is. If the commercially useful function is that of an SBE vendor / supplier that regularly transacts business with the respective product, then the City of Madison will count 60% of the value of the product supplied toward SBE goals.

To be counted, the SBE vendor / supplier must be engaged in selling the product in question to the public. This is important in distinguishing an SBE vendor / supplier, which has a regular trade with a variety of customers, from a firm which performs supplier-like functions on an ad hoc basis or for only one or two contractors with whom it has a special relationship.

A supplier of bulk goods may qualify as an eligible SBE vendor / supplier if it either maintains an inventory or owns or operates distribution equipment. With respect to the distribution equipment; e.g., a fleet of trucks, the term "operates" is intended to cover a situation in which the supplier leases the equipment on a regular basis for its entire business. It is not intended to cover a situation in which the firm simply provides drivers for trucks owned or leased by another party; e.g., a prime contractor, or leases such a party's trucks on an ad hoc basis for a specific job.

If the commercially useful function being performed is not that of a qualified SBE vendor / supplier, but rather that of delivery of products, obtaining bonding or insurance, procurement of personnel, acting as a broker or manufacturer's representative in the procurement of supplies, facilities, or materials, etc., only the fees or commissions will apply towards the goal.

For example, a business that simply transfers title of a product from manufacturer to ultimate purchaser; e. g., a sales representative who re-invoices a steel product from the steel company to the Contractor, or a firm that puts a product into a container for delivery would not be considered a qualified SBE vendor / supplier. The Contractor would not receive credit based on a percentage of the cost of the product for working with such firms.

Concerning the use of services that help the Contractor obtain needed supplies, personnel, materials or equipment to perform a contract: only the fee received by the service provider will be counted toward the goal. For example, use of a SBE sales representative or distributor for a steel company, if performing a commercially useful function at all, would entitle the Contractor receiving the steel to count only the fee paid to the representative or distributor toward the goal. This provision would also govern fees for professional and other services obtained expressly and solely to perform work relating to a specific contract.

Concerning transportation or delivery services: if an SBE trucking company picks up a product from a manufacturer or a qualified vendor / supplier and delivers the product to the Contractor, the commercially useful function it is performing is not that of a supplier, but simply that of a transporter of goods. Unless the trucking company is itself the manufacturer or a qualified vendor / supplier in the product, credit cannot be given based on a percentage of the cost of the product. Rather, credit would be allowed for the cost of the transportation service.

The City is aware that the rule's language does not explicitly mention every kind of business that may contribute work on this project. In administering these programs, the City would, on a case-by-case basis, determine the appropriate counting formula to apply in a particular situation.

## **2.2 Contract Compliance**

Questions concerning the SBE Program shall be directed to the Contract Compliance Officer of the City of Madison Department of Civil Rights, Affirmative Action Division, 210 Martin Luther King, Jr. Blvd., Room 523, Madison, WI 53703; telephone (608) 266-4910.



## 2.3 Certification of SBE by City of Madison

The Affirmative Action Division maintains a directory of SBEs which are currently certified as such by the City of Madison. Contact the Contract Compliance Officer as indicated in Section 2.2 to receive a copy of the SBE Directory or you may access the SBE Directory online at [www.cityofmadison.com/civil-rights/contract-compliance/targeted-business-enterprise-programs/targeted-business-enterprise](http://www.cityofmadison.com/civil-rights/contract-compliance/targeted-business-enterprise-programs/targeted-business-enterprise).

All contractors, subcontractors, vendors and suppliers seeking SBE status must complete and submit the **Targeted Business Certification Application** to the City of Madison Affirmative Action Division by the time and date established for receipt of bids. A copy of the Targeted Business Certification Application is available by contacting the Contract Compliance Officer at the address and telephone indicated in Section 2.2 or you may access the Targeted Business Certification Application online at [www.cityofmadison.com/civil-rights/contract-compliance/targeted-business-enterprise-programs/targeted-business-enterprise](http://www.cityofmadison.com/civil-rights/contract-compliance/targeted-business-enterprise-programs/targeted-business-enterprise). Submittal of the Targeted Business Certification Application by the time specified does not guarantee that the applicant will be certified as a SBE eligible to be utilized towards meeting the SBE goal for this project.

## 2.4 Small Business Enterprise Compliance Report

### 2.4.1 Good Faith Efforts

Bidders shall take all necessary affirmative steps to assure that SBEs are utilized when possible and that the established SBE goal for this project is achieved. A contractor who self performs a portion of the work, and is pre-qualified to perform that category of work, may subcontract that portion of the work, but shall not be required to do so. When a bidder is unable to achieve the established SBE goal, the bidder must demonstrate that a good faith effort to do so was made. Such a good faith effort should include the following:

- 2.4.1.1 Attendance at the pre-bid meeting.
- 2.4.1.2 Using the City of Madison's directory of certified SBEs to identify SBEs from which to solicit bids.
- 2.4.1.3 Assuring that SBEs are solicited whenever they are potential sources.
- 2.4.1.4 Referring prospective SBEs to the City of Madison Affirmative Action Division for certification.
- 2.4.1.5 Dividing total project requirements into smaller tasks and/or quantities, where economically feasible, to permit maximum feasible SBE participation.
- 2.4.1.6 Establishing delivery schedules, where requirements permit, which will encourage participation by SBEs.
- 2.4.1.7 Providing SBEs with specific information regarding the work to be performed.
- 2.4.1.8 Contacting SBEs in advance of the deadline to allow such businesses sufficient time to prepare a bid.
- 2.4.1.9 Utilizing the bid of a qualified and competent SBE when the bid of such a business is deemed reasonable (i.e. 5% above the lowest bidder), although not necessarily low.
- 2.4.1.10 Contacting SBEs which submit a bid, to inquire about the details of the bid and confirm that the scope of the work was interpreted as intended.
- 2.4.1.11 Completion of Cover Page (page C-6), Summary Sheet (page C-7) and SBE Contact Reports (pages C-8 and C9) if applicable.

## 2.4.2 Reporting SBE Utilization and Good Faith Efforts

The Small Business Enterprise Compliance Report is to be submitted by the bidder with the bid: This report is due by the specified bid closing time and date. Bids submitted without a completed SBE Compliance Report as outlined below may be deemed non-responsible and the bidder ineligible for award of this contract. Notwithstanding any language to the contrary contained herein, the City may exercise its discretion to allow bidders to correct or supplement submissions after bid opening, if the minor discrepancy, bid irregularity or omission is insignificant and not one related to price, quality, quantity, time of completion, performance of the contract, or percentage of SBE utilization.

2.4.2.1 If the Bidder meets or exceeds the goal established for SBE utilization, the Small Business Enterprise Compliance Report shall consist of the following:

2.4.2.1.1 **Cover Page**, Page C-6; and

2.4.2.1.2 **Summary Sheet**, C-7.

2.4.2.2 If the bidder does not meet the goal established for SBE utilization, the Small Business Enterprise Compliance Report shall consist of the following:

2.4.2.2.1 **Cover Page**, Page C-6;

2.4.2.2.2 **Summary Sheet**, C-7; and

2.4.2.2.3 **SBE Contact Report**, C-8 and C-9. (A separate Contact Report must be completed for each applicable SBE which is not utilized.)

## 2.5 Appeal Procedure

A bidder which does not achieve the established goal and is found non-responsible for failure to demonstrate a good faith effort to achieve such goal and subsequently denied eligibility for award of contract may appeal that decision to the Small Business Enterprises Appeals Committee. All appeals shall be made in writing, and shall be delivered to and received by the City Engineer no later than 4:30 PM on the third business day following the bidder's receipt of the written notification of ineligibility by the Affirmative Action Division Manager. Postmark not acceptable. The notice of appeal shall state the basis for the appeal of the decision of the Affirmative Action Division Manager. The Appeal shall take place in accordance with Madison General Ordinance 33.54.

## 2.6 SBE Requirements After Award of the Contract

The successful bidder shall identify SBE subcontractors, suppliers and vendors on the subcontractor list in accordance with the specifications. The Contractor shall submit a detailed explanation of any variances between the listing of SBE subcontractors, vendors and/or suppliers on the subcontractor list and the Contractor's SBE Compliance Report for SBE participation.

No change in SBE subcontractors, vendors and/or suppliers from those SBEs indicated in the SBE Compliance Report will be allowed without prior approval from the Engineer and the Affirmative Action Division. The contractor shall submit in writing to the City of Madison Affirmative Action Division a request to change any SBE citing specific reasons which necessitate such a change. The Affirmative Action Division will use a general test of reasonableness in approving or rejecting the contractor's request for change. If the request is approved, the Contractor will make every effort to utilize another SBE if available.

The City will monitor the project to ensure that the actual percentage commitment to SBE firms is carried out.

## **2.7 SBE Definition and Eligibility Guidelines**

A Small Business Enterprise is a business concern awarded certification by the City of Madison. For the purposes of this program a Small Business Enterprise is defined as:

- A. An independent business operated under a single management. The business may not be a subsidiary of any other business and the stock or ownership may not be held by any individual or any business operating in the same or a similar field. In determining whether an entity qualifies as a SBE, the City shall consider all factors relevant to being an independent business including, but not limited to, the date the business was established, adequacy of its resources for the work in which it proposes to involve itself, the degree to which financial, equipment leasing and other relationships exist with other ineligible firms in the same or similar lines of work. SBE owner(s) shall enjoy the customary incidents of ownership and shall share in the risks and profits commensurate with their enjoyment interests, as demonstrated by an examination of the substance rather than form or arrangements that may be reflected in its ownership documents.
- B. A business that has averaged no more than \$4.0 million in annual gross receipts over the prior three year period and the principal owner(s) do not have a personal net worth in excess of \$1.32 million.

Firm and/or individuals that submit fraudulent documents/testimony may be barred from doing business with the City and/or forfeit existing contracts.

SBE certification is valid for one (1) year unless revoked.

## SECTION D: SPECIAL PROVISIONS

### BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN ASSESSMENT DISTRICT - 2023 CONTRACT NO. 8317

It is the intent of these Special Provisions to set forth the final contractual intent as to the matter involved and shall prevail over the Standard Specifications and plans whenever in conflict therewith. In order that comparisons between the Special Provisions can be readily made, the numbering system for the Special Provisions is equivalent to that of the Specifications.

Whenever in these Specifications the term "Standard Specifications" appears, it shall be taken to refer to the City of Madison Standard Specifications for Public Works Construction and Supplements thereto.

#### **SECTION 102.11: BEST VALUE CONTRACTING**

This Contract shall be considered a Best Value Contract if the Contractor's bid is equal to or greater than \$75,500 for a single trade contract; or equal to or greater than \$369,500 for a multi-trade contract pursuant to MGO 33.07(7).

#### **SECTION 104 SCOPE OF WORK**

The work under this contract shall include, but is not limited to, installation sanitary sewer main, laterals, water main and services, storm sewer structures and pipes, culverts, earthwork, base preparation, curb and gutter, asphalt pavement, sidewalk, shared-use path, driveway aprons, pavement marking, and restoration.

#### **SECTION 104.4 INCREASED OR DECREASED QUANTITIES**

The Contractor shall note that some bid item quantities may increase or decrease based on what is encountered in the field. If the actual field conditions vary from the plan quantity, no additional compensation shall be given for increasing or decreasing quantities. Any overruns shall be paid for under the appropriate bid item(s) without any penalty or change to the bid price for the associated bid item. The Contractor shall not be reimbursed for any deletions to the contract. No change to the unit bid price will be allowed for changes to the quantities.

#### **SECTION 105.12 COOPERATION BY THE CONTRACTOR**

It is anticipated that the Contractor will need to use multiple crews in order to complete the work under this contract within contract duration. It is also expected that certain items of work, especially the concrete work and asphalt paving, will require multiple mobilizations.

It will be the responsibility of the Contractor to work with the utilities located in the right of way to resolve conflicts during the construction process and provide working area for installation of new facilities.

The City has a separate contract to perform site restoration work starting in the spring of 2024 around recently constructed retention ponds adjacent to the grading limits of this contract. The restoration will occur along on the north and south sides of Blue Harvest Ln (STA 100+40 to STA 107+40), along the east and west sides of Shared-Use Path 1 (STA 20+90 to STA 28+23), and along the west side of Shared-Use Path 1 (STA 28+91 to STA 41+93). See Erosion Control plans for details. The Contractor shall not perform work or store materials outside the proposed grading limits in these areas without prior approval from the City's Field Engineer. Any damage to restoration outside of the silt fencing limits shall be repaired at the expense of the Contractor by a prequalified ecological restoration contractor. The Contractor shall coordinate their work with the City's ecological restoration contractor, contact Sarah Lerner, 608-261-8592.

Notify City Traffic Engineering Electrical Shop (266-4767) once conduit and bases are installed and cured. City Traffic Engineering crews will be installing the streetlight cabinet and permanent streetlight units. The Contractor shall coordinate their work with City crews as shown in the plans and defined in these special provisions.

**Existing Items to Remain**

The Contractor shall use care around existing trees, plantings, fences, walls, steps and driveways that are indicated on the plans to remain. Damage to these items during construction shall be repaired or replaced at the Contractor's expense. No trees, other than those shown on the plan to be removed, shall be cut without the approval of the Construction Engineer and the City Forester; the abutting property owners shall be notified in accordance with the City's Administrative Procedure Memorandum No. 6-2.

**Access to Properties**

The Contractor shall maintain pedestrian access to all properties within the project limits and shall maintain vehicle access to all commercial driveways within the project limits. All means necessary to maintain this access shall be considered incidental.

**Coordination with Utilities**

This project will require close coordination with private utility companies. There are existing utilities located within the project limits that are to remain. The Contractor will be responsible for coordination and providing work space for any conflict resolution work that will need to be performed by the private utility companies. The Contractor shall coordinate with all utilities for any structure adjustments. Provide a minimum of 1 week notice prior to needing structure adjustments.

Alliant Energy will be installing street lighting including conduit, wiring, and poles/fixtures near the end, or after construction is complete. The Contractor shall contact Josh Lobenstein, [JoshuaLobenstein@alliantenergy.com](mailto:JoshuaLobenstein@alliantenergy.com), 608-963-5519, of Alliant Energy to coordinate street lighting installation.

There are existing underground TDS Telecom communication lines on Soaring Sky Run that may conflict with water utility installations at STA 301+38. See sheet W-1 for ULO. The Contractor shall contact Jerry Myers, [jerry.myers@tdstelecom.com](mailto:jerry.myers@tdstelecom.com), 608-279-7104 to coordinate.

MG&E Gas is not planning to install new gas main facilities as part of this contract.

**SECTION 107.6            DUST PROOFING**

The Contractor shall take all necessary steps to control dust arising from operations connected with this contract. When ordered by the Engineer, the Contractor shall dust proof the construction area by using power sweepers and water. Dust proofing shall be incidental with operations connected with this contract.

**SECTION 107.7            MAINTENANCE OF TRAFFIC**

During construction, the Town of Middleton will have a spring weight restriction of 10 tons in place on all Town roads, including Meadow Road. Any questions for the Town pertaining to these restrictions shall be sent to the City and the City will coordinate having questions answered. Between March 10 and May 10 restrictions equivalent to Wisconsin Department of Transportation Class II restrictions (<https://wisconsin.gov/Pages/dmv/com-driv-vehs/mtr-car-trkr/ssnl-wt-rsrtns/default.aspx>) will apply on Mid Town Road. This restriction applies to vehicles exceeding legal axle weights or 40 tons during spring thaw.

The Contractor shall submit an acceptable Traffic Control Plan to the office of the City Traffic Engineer, at 215 Martin Luther King Jr. Blvd, Madison, WI 53703, prior to the pre-construction meeting. The Traffic Control Plan shall address all requirements of this section of the Special Provisions. The successful bidder shall work with the City Traffic Engineering Division to develop an approved Traffic Control Plan. The Contractor shall not start work on this project until the Traffic Engineering Division has approved a traffic control plan and traffic control devices have been installed, in accordance with the approved plan.

Failure of the Contractor to obtain approval of a Traffic Control Plan, as specified above, may prevent the Contractor from starting work and shall be considered a delay of the project, caused by the Contractor.

All signing and barricading shall conform to Part VI of the Federal Highways Administrations "Manual on Uniform Traffic Control Devices" (MUTCD), the State of Wisconsin Standard Facilities Development Manual (including Chapter 16 – Standard Detail Drawings) and the City of Madison Standards for sidewalk and bikeway closures.

Maintain access for all services to properties including, but not limited to, mail delivery, garbage and recycling pick-up, and emergency vehicle access.

Two-way traffic on Meadow Rd shall be maintained at all times. Meadow Rd may be reduced to one lane provided a flagger is present at all times to direct two way traffic through the work zone.

Contractor is responsible for obtaining and installing temporary no parking signs to facilitate traffic control plan or as necessary to complete the work within the contract. The contractor shall contact John Villareal with the City of Madison Parking Utility (608-267-8756) at least 3 working days prior to needing the signs. Contractor shall post signs in accordance with the City of Madison Police Department Guidelines for temporary no parking restrictions for construction or special events. The guidelines can be found at the link listed below. This shall be considered incidental to the traffic control lump sum bid item.  
[http://www.cityofmadison.com/business/pw/documents/guidelines\\_temporarynoparkingrestrictions.pdf](http://www.cityofmadison.com/business/pw/documents/guidelines_temporarynoparkingrestrictions.pdf)

The Contractor shall not remove traffic signs. For removal or replacement of traffic and parking signs, contact the City of Madison Traffic Engineering Field Operations, 1120 Sayle Street, 266-4767, 8:00 a.m. to 4:00 p.m., a minimum of 2 working days in advance of when any existing signs need to be removed. This service is provided free of charge. If the contractor removes the signs, the contractor will be billed for the reinstallation of, and any damage to, the signing equipment. The contractor shall notify The City of Madison Traffic Engineering Field Operations, 1120 Sayle Street, 266-4767 upon completion of final landscaping to have permanent signs reinstalled. The contractor shall expect a minimum of seven working days to have permanent signs reinstalled. The contractor shall leave in place all necessary traffic control until given notice by the construction engineer that permanent signing is in place and temporary traffic control may be removed.

Contact Alexandra Heinritz, Traffic Engineering Division, [aheinritz@cityofmadison.com](mailto:aheinritz@cityofmadison.com), 608-267-1102, with any questions concerning these traffic control specifications.

## **SECTION 108.2      PERMITS**

The City of Madison has obtained a City of Madison Erosion Control Permit, has submitted a DNR Notice of Intent (NOI) to obtain coverage under a Construction Site General permit, has obtained a DNR Wetland and Waterway Statewide General Permit, and has submitted a DNR Sanitary Sewer Submittal.

The Contractor shall meet the conditions of the permits by properly installing and maintaining the erosion control measures shown on the plans, specified in these Special Provisions, or as directed by the Construction Engineer or his designees. This work will be paid for under the appropriate contract bid items or, if appropriate items are not included in the contract, shall be paid for as Extra Work. A copy of the permit is available at the City of Madison, Engineering Division office.

This permit covers trench dewatering to a maximum of 70 gallons/minute from the project, provided appropriate control measures are in place. The City's obtaining this permit is not intended to be exhaustive of all permits that may be required to be obtained by the Contractor for construction of this project. It shall be the responsibility of the Contractor to identify and obtain any other permits needed for construction.

## **SECTION 109.2      PROSECUTION OF WORK**

The Contractor may begin work as early as **July 8, 2024**.

Work shall begin only after the start work letter is received. If it is desirable to begin work before or after the above-mentioned date, the Contractor shall establish a mutually acceptable date with the City Engineer, and the agreed upon date must be determined prior to the preconstruction meeting, and a minimum of 3 weeks prior to the anticipated start date.

The Contractor shall limit workdays to 7:00 a.m. to 7:00 p.m. Monday – Saturday within the roadway, greenway, or pond, unless approved by the Engineer in writing.

The City expects that all permits applied for by the City listed in Section 108.2 will be obtained prior to the named start date. If elements of work critical to the schedule are delayed beyond the agreed start date due solely to the City's failure to obtain the permits listed in Section 108.2, the Completion Date will be adjusted accordingly. However, such delays shall not be grounds for any compensation from the City or adjustment in unit prices.

In locations in excess of 1 foot of fill, which is approximate STA 107+25 to 116+55 on Blue Harvest Lane and Feather Edge Drive, STA 301+35 to STA 303+85 on Soaring Sky Run, STA 0+66 to STA 41+93 on Path 1, and STA 0+02 to STA 6+35 on Path 3, shall be rough graded with approved fill materials and methods, have base course materials installed per the plans and specifications, and then be allowed to settle in place for no less than 60 days. At a minimum, all work up to and including installation of underground utilities, rough grading, placement of fill materials, and placement of base course shall be completed by **November 15, 2024**. Remaining work, including final grading, placement of concrete curb & gutter and sidewalk, and installation of asphalt pavement, pavement markings, landscape restoration, and other miscellaneous items connected to this type of work may be completed when weather allows in Spring of 2025. All work must be completed on or prior to **July 3, 2025**.

If all work, including restoration and stabilization is not completed prior to November 15, the Contractor shall coordinate with the Engineer to install temporary erosion control measures for over winter. Temporary erosion control measures will be paid under the appropriate items.

#### **SECTION 109.9 LIQUIDATED DAMAGES**

The fixed, agreed, and liquidated damages due the City of Madison from the Contractor for failure to complete installation of utilities and placement of fill and base course by November 15, 2024 shall be \$500 per calendar day, up to a maximum amount of \$10,500.

The fixed, agreed, and liquidated damages due the City of Madison from the Contractor for failure to complete all work by the specified completion date will be determined in accordance with the Standard Specifications.

#### **BID ITEM 20101 – EXCAVATION CUT**

#### **BID ITEM 20202 – FILL BORROW**

#### **BID ITEM 20204 – SELECT FILL**

#### **BID ITEM 20219 – BREAKER RUN**

Work under these items shall include all excavation and fill required for the street shown on the cross sections as well as within the grading limits shown on the plans.

In locations that will involve filling, it is assumed that suitable fill material will be found from excavation areas within the limits of the project or hauled in from an off-site location, and the Contractor shall use these materials as necessary to establish the grade in fill areas.

Suitable material, as determined by the Construction Engineer, from the cut shall be used on site in appropriate locations. Placing, grading and compaction of excavated materials will be incidental to this bid item.

The Contractor shall be responsible for determining a suitable off-site disposal location for excess or unsuitable material. Contractor shall comply with all laws and permit conditions for off-site disposal and any off-site disposal costs or fees are considered incidental to this bid item. The disposal site for clean excess material shall meet the performance requirements in NR 504.04(4). The disposal site may not cause:

- (a) A significant adverse impact on wetlands
- (b) A take of an endangered or threatened species
- (c) A detrimental effect on any surface water
- (d) A detrimental effect on groundwater quality

The quantities of Excavation Cut, Fill Borrow, Select Fill, and Breaker Run as shown on the plans will not be measured in the field and will be assumed to be the Plan Quantity as shown on the Plans. The Plan Quantity for Excavation Cut includes Excavation below Subgrade (EBS) and topsoil stripping. Unless otherwise indicated in these special provisions, or there is a significant change approved by the Engineer, the plan quantity shall be the final amount for payment.

No bulking/expansion or shrink factors were used in determining earthwork quantities for this project. A detailed summary of the earthwork quantities (unadjusted) is as follows:

Excavation Cut (Blue Harvest Ln, Feather Edge Dr, Soaring Sky Rn, & Shared-Use Paths)

- Estimated usable cut material: 840 CY
- Estimated EBS (Assumed 12 inches for 20% EBS): 880 CY
- Estimated Topsoil Stripping for streets & paths: 4,380 CY
- Total Unclassified Excavation (paid under item 20101): 6,100 CY

Fill Borrow (Blue Harvest Ln, Feather Edge Dr, Soaring Sky Rn, & Shared-Use Paths)

- Estimated Fill Borrow (paid under item 20202): 10,400 CY
- Placed in fill areas under terraces, sidewalk, and side slopes when above existing ground.
- The bid item shall pay for fill brought in from offsite.

Select Fill (Blue Harvest Ln, Feather Edge Dr, Soaring Sky Rn, & Shared-Use Paths)

- Estimated Select Fill (paid under item 20204): 19,560 TON
- Assumed 1.6 TON/CY
- Placed in fill areas where base course is above existing ground.
- On-site soil excavated under this contract is expected to be used for fill areas.
- If on-site excavated material is not usable, select fill from offsite will be required.

Breaker Run (Blue Harvest Ln, Feather Edge Dr, Soaring Sky Rn, & Shared-Use Paths)

- Estimated Breaker Run (paid under item 20219): 1,540 TON
- Assumed 1.75 TON/CY
- The Contractor shall place Geosynthetic Reinforcement Fabric (paid under 90018) and Breaker Run (paid under 20219) in the undercut areas.

If loose sands are discovered beneath the topsoil, vibratory compactive effort/densification and subsequent evaluation shall be required for stability prior to placing select fill.

Select fill shall be completed per article 202(c)). Representative samples of proposed fill shall be submitted to the City's Geotechnical Consultant for optimum moisture-maximum density determination (ASTM D1557) prior to the start of fill placement. The sample size shall be approximately 30 lb. The City's Geotechnical Consultant shall be retained to perform field density tests to determine the level of compaction being achieved in the fill. The tests shall generally be conducted on each lift at the beginning of fill placement and at a frequency mutually agreed upon by the project team for the remainder of the project.

Testing rolling shall be completed per article 201.29(c) of the standard specifications.

**BID ITEM 20109 – FINISH GRADING**



The intended use of this item is to confirm the grade of and to do any final grading, re-compaction, and preparation of the final surface of fill areas that were required to settle in place. The base course shall be recompacted and grade confirmed prior to installation of concrete curb and gutter, sidewalk, and installation of asphalt pavement. Proof roll the surface in accordance with the standard specs. If additional base course material is required in order achieve the plan grades, the Contractor shall place the additional material, which will be paid under the appropriate bid item.

## **BID ITEM 20221 – TOPSOIL**

### **DESCRIPTION**

Work under this item shall include all work, materials, labor and incidentals necessary to provide and place topsoil as necessary throughout the project. Topsoil shall be installed at the locations indicated on the plans and details per the Standard Specifications, except as described in this special provision.

The Contractor may reuse stripped topsoil from on site for restoration of disturbed areas as indicated on the plans or as directed by the Construction Engineer. All topsoil material must meet the requirements of the Standard Specifications, including topsoil that is reused from on site, and it shall be free of noxious/ invasive weeds, stones, debris, and vegetable material, and free of excess peat, sand, or clay. Topsoil used in street terraces and on the property side of sidewalk shall be shredded.

In locations where topsoil is to be placed, the Contractor shall install a minimum of six (6) inches of topsoil. Any additional excavation necessary to place topsoil to the required depth shall be considered incidental to the bid item.

The contractor shall contact the City's Field Engineer to approve final topsoil grading prior to placement of erosion matting.

Excess topsoil shall be trucked off site. City of Madison Parks Department has an existing stockpile located at Elver Park, by the baseball diamonds, where excess topsoil can be disposed. Contact Richard Bergmann – Parks Department at 608-266-6289 or rbergmann@cityofmadison.com to coordinate disposal of excess topsoil at this site.

The property owner of 1802 Shady Point Drive has also expressed interest in excess topsoil and is another potential disposal site. Contact Guy Dreger at 608-845-8365 or gldreger@tds.net to negotiate disposal of excess topsoil at this site.

### **METHOD OF MEASUREMENT**

Topsoil shall be measured by the Square Yard at the top surface, regardless of the placement depth of the topsoil.

### **BASIS OF PAYMENT**

Topsoil, measured as provided above, will be paid at by the contract Square Yard, which price shall be payment in full compensation for furnishing, hauling, placing, and compacting the specified material, including all equipment, tools, labor and incidentals necessary to complete the work as specified.

The City of Madison Parks Department will accept all excess topsoil from the project and has a location available near the project site. The topsoil site is located within Elver Park, and the exact location is north of the softball diamonds. The Contractor has the option to utilize this site for the placement of excess topsoil from the project. If the Contractor chooses to utilize this site, all erosion control permits and materials are the Contractors responsibility and a bulldozer with an operator needs to be provided to pile the topsoil on the site once it is delivered. The City of Madison Parks Department has the right to refuse the topsoil material if it contains vegetation, large rocks or gravel, fill material, concrete and asphalt. All associated costs of hauling, piling and protecting the topsoil at the Elver Park site will be considered

incidental to this item. Contact Richard Bergmann, City of Madison Parks Department, at 266-6289 or rbergmann@cityofmadison.com to coordinate utilizing the site.

## **BID ITEMS 20404 AND 20409 – CLEARING AND GRUBBING**

### **Description**

These bid items are to be used for Clearing and Grubbing trees and brush that are part of a tree or brush line as shown on the plans. Existing stumps from trees/brush and logs previously cut down inside the right-of-way shall be removed under this item. All work for clearing and grubbing the tree and brush lines shall be completed per Article 204 of the Standard Specifications except the Contractor shall be paid for the removal of trees/brush under 3 inches. All trees/brush shall be removed inside the slope intercept as shown on the plans.

### **Method of Measurement**

Clearing and Grubbing will be measured by the lump sum as the contract indicates.

### **Basis of Payment**

Clearing and Grubbing, measured as provided above, will be paid at the lump sum contract price, which shall be full payment for all work to complete this item in accordance with the Standard Specifications.

## **SECTION 210.1(d) STREET SWEEPING**

When required, either by the erosion control plan or the Construction Engineer, the Contractor shall perform mechanical street sweeping on all streets or paved surfaces affected by construction equipment, hauling or related construction activities that result in mud tracking or siltation. Mechanical street sweeping shall be completed as directed by the Construction Engineer and shall remove all loose material to the satisfaction of the Construction Engineer. Depending on site conditions, construction activities, and hauling methods utilized by the Contractor mechanical street sweeping may be required multiple times throughout the day with an absolute minimum that all streets are clean at the end of the work day. Areas not accessible by mechanical street sweepers may require hand scraping with shovels.

## **SECTION 500 SEWER AND SEWER STRUCTURES GENERAL**

The sewer designer for the project is Kyle Frank. He may be contacted at (608) 266-4098 or [kfrank@cityofmadison.com](mailto:kfrank@cityofmadison.com).

### **SANITARY SEWER GENERAL**

This project shall include installing approximately 120 feet of new 8" PVC SDR-26 sewer main and one (1) new sewer access structure feet of new sanitary lateral. Work will also include exposing, adjusting, and wrapping barrel joints on 12 manholes.

ASTM D3034 SDR-35 sewer main and lateral as called for on the plan set shall be payable under Sanitary Sewer Main (Bid Item 50301). No additional compensation will be granted for ASTM D3034 SDR-26 pipe material.

All new sanitary sewer access structures shall include Neenah R-1550 castings with the new City of Madison casting detail (see S.D.D. 5.7.16) of the City of Madison Standard Specifications for Public Works Construction Latest Edition. All new sewer main connections may be factory cored and shall be included in the structure. All existing main connections shall be field cored to accommodate existing conditions and shall be compensated under BID ITEM 50791 SANITARY SEWER TAP. All sewer main and/or laterals not slated for replacement that are damaged during the installation of a structure shall be replaced by the Contractor and shall be considered incidental to the project. All benches and flowlines shall have a smooth trowel finish.

It is advised that the Contractor visit the site prior to bidding to determine the type of trench protection that will be necessary for the sanitary sewer main installation.

## **STORM SEWER GENERAL**

Storm sewer pipe work shall include installing approximately 944 feet of new storm sewer main of various sizes ranging from 12" to 24" circular diameter pipe and 97 feet of 6'x3' box culvert.

Reconnection of existing pipes at new or existing structures, or new pipes at new or existing structures, shall be considered to be part of the work required to construct the new structure or to construct the new sewer pipe and shall not be rewarded with additional compensation. However, if the structure being removed is larger than the new structure, thus requiring additional pipe, the new pipe shall be paid under the appropriate bid item and the connection of the old pipe to the new pipe shall be accomplished with a concrete collar.

Where a new structure is to be constructed at an existing pipe, it is expected that the Contractor shall saw cut the existing pipe in the required location to accommodate the placement of the new structure. If the Contractor for his or her convenience deems it more suitable to remove the existing pipe to a full joint, the additional pipe and concrete collar required to reconnect to the new structure shall be the Contractor's responsibility and shall not be compensated.

Connection of new pipes to existing structures shall be accommodated with a Storm Sewer Tap – Bid Item 50792.

Precast structures are only allowed where field poured structures are not specifically called for, and no precast structures are allowed until ULO's are completed and approval of the design engineer has been received.

### **BID ITEM 50801 – UTILITY LINE OPENING (ULO)**

The work under this item shall be completed in accordance with Article 508 of the Standard Specifications for Public Works Construction Latest Edition. It is the discretion of the Contractor to locate utilities by either a trench excavation or by a pothole technique. However, the Contractor shall not be compensated more than once for multiple utilities located within a maximum distance of five (5) feet long.

This contract includes 5 additional undistributed ULOs to be performed at the direction of the Engineer.

## **SECTION 601 ELECTRICAL GENERAL REQUIREMENTS**

Any existing communications and lighting poles, conduits, handholes, and manholes not scheduled for removal or abandonment shall be protected during construction. If the contractor believes that damage to such facilities is unavoidable, the contractor shall not damage or remove any facilities until the City Traffic Engineering electrical inspector has reviewed and approved such actions. Any damage or removal of City electrical conduit, wire, fiber, or structures, without the specific approval by the City Traffic Engineering electrical inspector shall be promptly repaired or replaced by and at the expense of the contractor. The City may elect to do repair work with City crews. The cost for any repair work done by the City will be billed to the contractor.

Any damage or removal of City street lighting facilities shall be repaired or replaced within 24 hours, but any resulting street light outage resulting from such damage or removal shall be confined to as few numbers of street lights as possible. The City streetlight circuits shall remain operational each and every night. If any street light outage continues beyond 24 hours, the City shall have the right to make temporary or permanent repairs, with the full cost of such work, including engineering time, billed to the general contractor.

Unless a street light pole or base is specifically designated for removal, it shall be saved. Unless a manhole, handhole or conduit is specifically designated for removal, it shall be saved.

The City will install new streetlight poles and streetlight cabinet where shown on the plan sheets.

**SECTION 601.10      MATERIALS FURNISHED BY THE CITY OF MADISON**

The following electrical materials will be furnished to the Contractor at the Traffic Operations Shop, 1120 Sayle Street. The Contractor shall notify the Traffic Operations Shop (Ed Smith at 266-9034) twenty-four (24) hours prior to picking up any materials.

<b>ITEM</b>	<b>Quantity</b>
3/4" x 24" Anchor Bolts	25 sets of 4      for LB-2 bases

**SECTION 602.3(d)      ELECTRICAL CONDUCTORS**

Existing street light conductors shall be saved and reused whenever possible. Any existing wire that is damaged or removed by the contractor when it could have been reused shall be replaced by the contractor at no expense to the City. All work associated with saving and reusing existing wire or removing existing wire from conduit is incidental to associated conduit and base construction items.

**SECTION 602.4(b)      ELECTRICAL CONDUIT**

Item 60241, Gopher Raceway, shall include any and all work associated with determining locations of existing utilities, such as underground locates. Item 60241 shall include raceways created by pushing, gophering or boring. The measured quantity will only include distances installed directly underneath curb and gutter, roadway, and sidewalk sections that are not removed or constructed with this project. Minor alterations in conduit location may be made by the City Traffic Engineering Electrical Inspector to avoid gopher installation.

New conduit to be installed parallel to the edge of path shall be placed according to the Typical Conduit Installation detail. When existing utilities preclude placing conduit as shown in the detail, the conduit shall be placed under the as close to the edge of path as possible and as approved by the City Traffic Engineering Electrical Inspector.

Entering existing manholes shall be made by watertight methods. The cost for drilling holes in manholes and resealing such openings after the conduit is installed shall be considered incidental to the electrical conduit bid item.

When a concrete cap is required and authorized by the City Traffic Engineering Inspector, each (1) cubic foot of concrete cap placed shall be paid for as 2.5 square feet of 5-inch sidewalk.

**SECTION 701      PROVISIONS FOR WATER INSTALLATION AND ABANDONMENT**

The water designer for this project is Tim Pearson. He may be contacted at (608) 206-3956 or tpearson@madisonwater.org.

The project consists of furnishing and installing primarily 6-inch and 8-inch ductile iron water main and fittings on Soaring Sky Run within the project limits.

Take all necessary precautions to protect newly installed main as well as the existing Madison Water Utility system and ensure its proper functioning during construction.

View the sites prior to bidding and become familiar with existing conditions and utilities.

**SECTION 702      MATERIALS**

Furnish all materials, labor and equipment necessary to complete this project except the tapping sleeves, tapping valves and tapping valve boxes. Water Utility will furnish the tapping sleeves, tapping valves, tapping valve boxes, and the crew to perform the taps.

## **SECTION 703 CONSTRUCTION METHODS**

Perform all work in accordance with these provisions and the City of Madison Standard Specifications, current edition. Keep all valves accessible and functioning throughout the duration of the work or as directed otherwise by the Water Utility representative.

### **Water Services Outages Restrictions & Notifications**

Contact affected business owners and/or managers before planning water service outages and schedule outages to accommodate their needs within allowable working hours including scheduling service outages on weekends. Sequence water main operations to minimize outages to affected business owners and residents.

Be aware of traffic control requirements while performing any work that closes or partially closes any intersection. Refer to traffic control specifications and these special provisions for details.

## **BID ITEM 90001 – PAVEMENT MARKING EPOXY, SPEED HUMP ARROW (6'X6')**

### **DESCRIPTION**

Work under this item shall include the furnishing and application of speed hump arrow epoxy markings as shown on the plans. The pavement markings shall conform to all aspects of the current edition of the Wisconsin Department of Transportation Standard Specifications, Part 6 Section 646 & Section 647 as they pertain to the bid items within this section, except for the measurement of items described in the following section, shall apply.

### **METHOD OF MEASUREMENT**

PAVEMENT MARKING EPOXY, SPEED HUMP ARROW (6'X6') Shall be measured by Each 6 foot x 6 foot pavement marking, acceptably installed, as shown on the plan.

## **BID ITEM 90002 – FURNISH & INSTALL METERED ELECTRIC SERVICE & BREAKER PANEL**

### **DESCRIPTION**

This special provision describes furnishing, installing and obtaining necessary permits required by the utility company for a metered electrical service at the streetlight cabinet base.

### **MATERIALS**

The Contractor shall furnish and install a single phase 200A or less, 120/208V Cold-Sequence (Switch-Fuse-Meter) approved by Alliant Energy; and an outdoor rated electrical disconnect box. Utility company requirements for all equipment shall be met.

### **CONSTRUCTION METHODS**

The Contractor shall obtain the electrical permits necessary for completing this work, including but not limited to the permits required by Building Inspection & Rehabilitation Unit of the City Department of Planning and Development.

The Contractor shall install two 5/8" x 8' copper ground rods, with 6' minimum horizontal spacing, connecting them with a No. 4 copper wire using ground clamps. Ground rods and connection wire shall have 30" minimum ground cover. No. 4 wire shall be continuous and extend up the outside of 2" G.S. conduit to control panel and connect to the ground buss on the main disconnect.

### **METHOD OF MEASUREMENT**

FURNISH & INSTALL METERED ELECTRIC SERVICE & BREAKER PANEL shall be measured as each unit, completed in place, operational and accepted in accordance with the contract.

**BASIS OF PAYMENT**

Furnish & Install Metered Electric Service & Breaker Panel, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for furnishing and installing wire, ground rods, ground clamps, metered service, permits, meter, disconnect box, galvanized steel conduit and all labor, tools, equipment and incidentals necessary to complete this item and comply with all requirements by the electrical company.

**BID ITEM 90003 – LOW GROWING ROW NATIVE SEED MIX**

**DESCRIPTION**

Work under this bid item includes seeding all areas within the right of way as identified on the plans for LOW GROWING ROW NATIVE SEED MIX. Seeding shall be completed in accordance with these special provisions and Article 207 of the latest edition of the City of Madison Standard Specifications for Public Works Construction.

This seeding shall be completed at two different times.

1. In February 2024, the contractor shall dormant seed all areas called out for Low Growing ROW Native Seed Mix, except for areas within the Phase Three Limits shown on plans and in Attachment C.
2. Once Phase Three is complete in 2024, the contractor shall seed the areas within the Phase Three Limits.

All other sections of Part Two of the City of Madison Standard Specifications for Public Works Construction shall be applicable. Watering shall be incidental to this bid item per BID ITEM 207.2(e).

**The Engineer shall inspect and approve the seed prior to placement.** The Contractor shall submit photos of seed bag labels and seed mix composition to Construction Engineering for approval prior to seeding

Substitution requests shall be submitted to City Engineering for review and approval. Contractor is notified that if an alternate is allowed, the rate of seed may be altered as a condition of approval, and seed shall be native ecotypes. No improved varieties are allowed. Seed source shall be native ecotypes from Southeastern Minnesota, Eastern Iowa, Southern Wisconsin or Northern Illinois.

The native seed mix shall be as listed below. Seed mix shall be applied at 65 seeds per sq/ft.

<b>FORBS</b>						
<b>Botanical Name</b>	<b>Common Name</b>	<b>Quantity</b>	<b># Seeds</b>	<b>/SQFT</b>	<b>%Ct</b>	<b>% Wt</b>
Achillea millefolium	Yarrow	.5 OZ	89,000	2.0	3.12	0.30
Anemone canadensis	Canada anemone	2.0 OZ	16,000	0.4	0.56	1.21
Asclepias tuberosa	Butterfly weed	6.0 OZ	25,800	0.6	0.90	3.62
Baptisia bracteata	Cream wild indigo	.25 OZ	425	0.0	0.01	0.15
Coreopsis lanceolata	Lance-leaf coreopsis	9.0 OZ	126,000	2.9	4.42	5.43
Coreopsis palmata	Prairie coreopsis	.5 OZ	4,000	0.1	0.14	0.30
Dalea candida	White prairie clover	8.0 OZ	176,000	4.0	6.17	4.83

Dalea purpurea	Purple prairie coneflower	8.0 OZ	136,000	3.1	4.77	4.83
Echinacea pallida	Pale purple coneflower	8.0 OZ	38,400	0.9	1.35	4.83
Ruellia humilis	Wild petunia	3.0 OZ	15,600	0.4	0.55	1.81
Solidago nemoralis	Old field goldenrod	1.25 OZ	312,500	7.2	10.95	0.75
Symphotrichum sericeum	Silky aster	3.0 OZ	96,000	2.2	3.37	1.81
<i>Subtotal</i>			1,035,725		36.31	29.86
<b>GRASSES, SEDGES &amp; RUSHES</b>						
<b>Botanical Name</b>	<b>Common Name</b>	<b>Quantity</b>	<b># Seeds</b>	<b>/SQFT</b>	<b>%Ct</b>	<b>% Wt</b>
Bouteloua curtipendula	Side-oats Gramma	3.00 LB	192,000	4.4	6.73	28.96
Carex bicknellii	Copper- shouldered Oval Sedge	1.0 OZ	35,000	0.8	1.23	0.6
Eragrostis spectabilis	Purple love grass	1.0 OZ	280,000	6.4	9.82	0.6
Koeleria macrantha	June grass	.25 OZ	50,000	1.1	1.75	0.15
Schizachyrium compositus	Rough dropseed	1.0 LB	720,0000	16.5	25.24	28.96
Sporobolus heterolepsis	Prairie dropseed	2.0 OZ	28,000	0.6	0.98	1.21
<i>Subtotal</i>			1,817,000		63.69	70.14
<b>Grand Total</b>		<b>165.75 OZ</b>	<b>2,852,725</b>			

For Contractor's information, a custom seed mix meeting this specification is available at Prairie Moon Nursery, Winona MN phone (866) 417-8156.

#### **METHOD OF MEASUREMENT**

LOW GROWING ROW NATIVE SEED MIX shall be measured by plan square yard as listed on the proposal page.

#### **BASIS OF PAYMENT**

LOW GROWING ROW NATIVE SEED MIX shall be measured as described above and shall be paid for at the contract unit prices which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement and incidentals required to complete the work as set forth in the description.

#### **BID ITEM 90004 – CONCRETE PAVEMENT APPROACH SLAB**

#### **DESCRIPTION**

Work under this item shall include furnishing all materials, incidentals, equipment and labor required to complete the installation of CONCRETE PAVEMENT APPROACH SLAB as shown in the plan.

All work under this item shall be completed in accordance with the Wisconsin Department of Transportation Facilities Development Manual Specifications and Standard Detail Drawings for CONCRETE PAVEMENT APPROACH SLAB.

#### **MATERIALS**

This item includes all materials, incidentals, and labor required to complete the work as described above and as shown in the plan.

All reinforcing steel required to install CONCRETE PAVEMENT APPROACH SLAB as shown in Wisconsin Department of Transportation Facilities Development Manual Standard Detail Drawing 13B02 shall be incidental to CONCRETE PAVEMENT APPROACH SLAB.

#### **METHOD OF MEASUREMENT**

CONCRETE PAVEMENT APPROACH SLAB shall be measured per square yard installed as described above as shown in the plan.

#### **BASIS OF PAYMENT**

CONCRETE PAVEMENT APPROACH SLAB shall be measured as described above and paid at the contract price which shall be full compensation for all work, materials, and incidentals to complete the work as outlined in the description.

#### **BID ITEM 90005 – REMOBILIZATION**

##### **DESCRIPTION**

The bid item shall be used if the Contractor completes some work in 2024 and must return to complete the remaining work in 2025.

This bid item shall be completed in accordance with Section 109.14 of the Standard Specifications and per the following.

This bid item shall include all work, hauling, equipment, and incidentals required to remove all equipment and materials from the project prior to shutting down for the winter season.

Prior to removing all equipment, the Contractor shall restore the site to a condition that is suitable for the winter season, as determined by the Field Engineer. This includes all work and material to stabilize the site for erosion control, per Section 210 of the Standard Specifications and as determined by the Field Engineer.

##### **METHOD OF MEASUREMENT**

Remobilization shall be measured by Lump Sum, acceptably completed.

##### **BASIS OF PAYMENT**

Remobilization, as measured above, will be paid at the contract unit price which is full compensation set forth in the description.

#### **BID ITEM 90030 – CHANNEL GRADING**

##### **DESCRIPTION**

Work under this item shall include all labor, materials, and incidentals necessary to grade a new channel from the existing channel to culvert pipes running under the new proposed bike path. This item shall include labor and materials needed to grade to proposed grades and slopes shown on the plan set. Topsoil and matting shall be paid under separate bid items. Seeding is to be performed by others.

##### **METHOD OF MEASUREMENT**

CHANNEL GRADING shall be measured as LUMP SUM for work completed as shown in the plan set.



## **BASIS OF PAYMENT**

CHANNEL GRADING shall be paid for at the contract unit price, which shall be full compensation for all excavation, rough and fine grading, disposal of material, preparation of subgrade, furnishing materials, and for all labor, tools, equipment, and incidentals necessary to complete the work in accordance with the City of Madison Standard Specifications for Public Works Construction, Latest Edition, the plan set, and these special provisions.

## **BID ITEM 90031 – GRADING FOR SOARING SKY STORMWATER POND**

### **DESCRIPTION**

Work under this item shall include all labor, materials, and incidentals necessary to grade a new stormwater pond north of the Soaring Sky Run in the location as shown in the plan set. This item shall include the excavation and grading of the pond as well as the placement of a 6" clay liner layer. Topsoil, matting, and 8" PVC outlet pipe shall be paid under separate bid items. Seeding is to be performed by others.

The clay liner layer shall be constructed of low permeable clay. For each source of the clay to be used, Contractor shall submit results of the laboratory tests described in Table 1. The laboratory testing shall document that each clay type from each source meets or exceeds the requirements.

The sample for the hydraulic conductivity test shall be remolded clay at a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test ASTM D698 and at a moisture content required to achieve the required hydraulic conductivity, but with a minimum moisture content at or above the optimum moisture content as determined in the Standard Proctor test ASTM D698. Submit the test results to ENGINEER for review, two weeks prior to construction.

Table 1

Reference	Number	Test Title	Requirements	Testing Frequency		
				Screening	QA/QC <sup>3</sup>	
					Top Cover	Sideslopes
ASTM <sup>1</sup>	D698	Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort	NA <sup>2</sup>	1/source	1/source	1/source
ASTM	D1140	Standard Test Methods for Amount of Material in Soils Finer Than the No. 200 (75-um) Sieve	Per NR 538 <sup>4</sup>	2/source	1/2,220 cy per lift <sup>5</sup>	1/3,330 cy per lift
ASTM	D422	Standard Test Method for Particle-Size Analysis of Soils	Per NR 538	2/source	1/2,220 cy per lift	1/3,330 cy per lift
ASTM	D4318	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.	Per NR 538	2/source	1/2,220 cy per lift	1/3,330 cy per lift
ASTM	D2487	Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)	Per NR 538	2/source	1/2,220 cy per lift	1/3,330 cy per lift
ASTM	D2922	Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)	Per NR 538	NA	200'x200' Grid/lift	240'x240' Grid/lift
ASTM	D5084	Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter	Per NR 538	1/source <sup>6</sup>	1/6,660 cy per lift <sup>7</sup>	1/10,000 cy per lift <sup>7</sup>

## Notes:

1. ASTM = American Society of Testing and Materials.
2. NA = Not applicable.
3. QA/QC = Quality Assurance / Quality Control. One QA/QC test for the project quantity required.
4. NR 538 = Wisconsin Department of Natural Resources regulations Chapter NR 538 Beneficial Use of Industrial Byproducts.
5. A lift shall not exceed 8-inches.
6. The sample for the test shall be remolded at a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test and at a moisture content required to achieve the required hydraulic conductivity, but with a minimum moisture content at or above the optimum moisture content as determined in the Standard Proctor test.
7. An undisturbed sample from a thinned walled sampler (Shelby tube).

Place and compact low permeable clay in 6-inch lifts. Place each lift of low permeable clay in one continuous lift. The thickness of the low permeable clay shown on the plan set should be measured perpendicular to the surface.

Compact the low permeable clay to a minimum of 95% Standard Proctor ASTM D698 Maximum Dry Density. Break up clods greater than 4-inches in diameter prior to compaction. Provide all equipment necessary to adjust low permeable clay to the proper moisture content for compaction. Do not proceed with placement of additional lifts until all required low permeable clay testing and documentation has been

completed for the previous lift. During placement of the low permeable clay the minimum moisture content shall be as defined by the testing performed in the source evaluation and with the following limits:

- No drier than the optimum moisture content as determined by the Standard Proctor test ASTM D698.

Low permeable clay not meeting the above requirements will be removed as directed by ENGINEER and removing, replacing, and/or reworking low permeable clay not meeting the above requirements will be completed at no cost to the City.

#### **METHOD OF MEASUREMENT**

GRADING FOR SOARING SKY STORMWATER POND shall be measured as LUMP SUM for work completed as shown in the plan set.

#### **BASIS OF PAYMENT**

GRADING FOR SOARING SKY STORMWATER POND shall be paid for at the contract unit price, which shall be full compensation for all excavation, rough and fine grading, disposal of material, preparation of subgrade, furnishing materials, and for all labor, tools, equipment, and incidentals necessary to complete the work in accordance with the City of Madison Standard Specifications for Public Works Construction, Latest Edition, the plan set, and these special provisions..

#### **BID ITEM 90070 – EXCAVATE AND BACKFILL AT EXISTING SAS TO INSTALL SAS JOINT SEAL**

##### **DESCRIPTION**

Work under this item shall include all labor, materials, and incidentals necessary to excavation around existing SAS to expose existing structure joints and install external joint seals in accordance with section 507.3(e) of the City of Madison Standard Specifications for Public Works Construction, Latest Edition. After installation of external joint seal, Contractor shall backfill excavation with select fill to existing surface grade and restore with topsoil, seed, and matting (to be paid under separate bid items).

##### **METHOD OF MEASUREMENT**

EXCAVATE AND BACKFILL AT EXISTING SAS TO INSTALL SAS JOINT SEAL shall be measured as EACH structure location for work completed at locations shown in the plan set.

##### **BASIS OF PAYMENT**

EXCAVATE AND BACKFILL AT EXISTING SAS TO INSTALL SAS JOINT SEAL shall be paid for at the contract unit price, which shall be full compensation for all excavation, select fill backfill, disposal of material, preparation of subgrade, furnishing materials, and for all labor, tools, equipment, and incidentals necessary to complete the work in accordance with the City of Madison Standard Specifications for Public Works Construction, Latest Edition, the plan set, and these special provisions..

#### **BID ITEM 90071 – REBUILD SEWER ACCESS STRUCTURE**

##### **DESCRIPTION**

Work under this item shall include all labor, materials, and incidentals needed to remove and salvage structure casting and cone section, installing a new barrel section, reinstalling cone, adjustment rings, and casting to the proposed elevations shown on the plan set.

##### **METHOD OF MEASUREMENT**

REBUILD SEWER ACCESS STRUCTURE shall be measured as EACH structure rebuild completed.

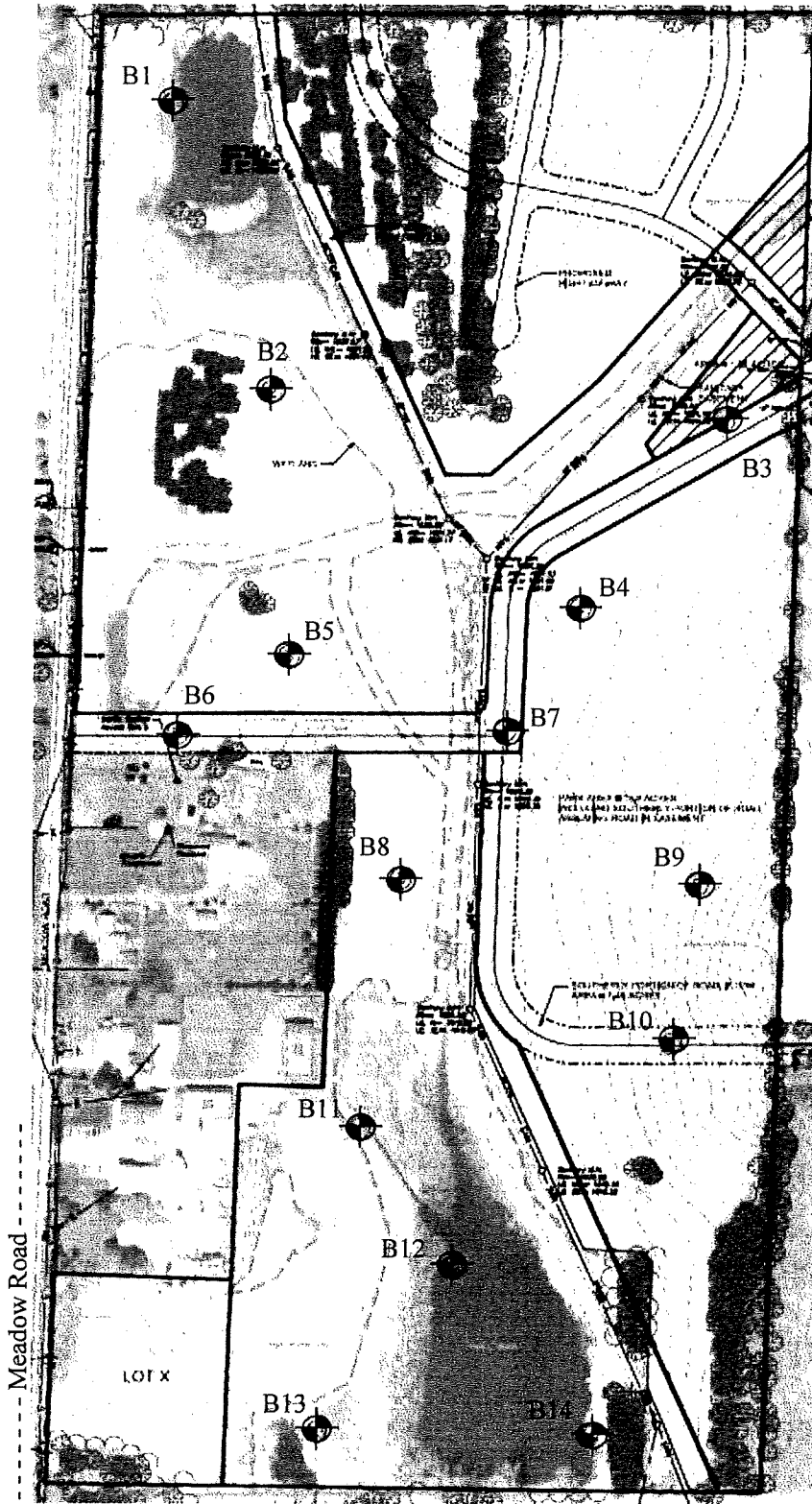
**BASIS OF PAYMENT**

REBUILD SEWER ACCESS STRUCTURE shall be paid for at the contract unit price, which shall be full compensation for all labor, tools, equipment, materials, and incidentals necessary to complete the work in accordance with the City of Madison Standard Specifications for Public Works Construction, Latest Edition, the plan set, and these special provisions.

**APPENDIX B**

**SOIL BORING LOCATION MAP  
LOGS OF TEST BORINGS (14)  
LOG OF TEST BORING - GENERAL NOTES  
UNIFIED SOIL CLASSIFICATION SYSTEM**

To Valley View Road ↑



**Legend**

⊙ Denotes Boring Location

Scale: Reduced



**Notes**

- 1. Soil borings performed by Badger State Drilling on December 11-12, 2018
- 2. Boring locations are approximate.

Job No.  
C17051-19

Date:  
12/22/17

CGC, Inc.

**SOIL BORING LOCATION MAP**  
Lower Badger Mill Creek Ponds  
Madison, Wisconsin



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N470806 E772426  
 Location Madison, Wisconsin

Boring No. 1  
 Surface Elevation (ft) 1033.3  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL
					14 in. Dark Brown to Black TOPSOIL					
1		8	M	6	Loose, Light Brown to Gray SILT (ML)					
2		18	M	4	Medium Stiff, Brown Lean CLAY (CL)	(0.75)	22.2			
3		18	W	2	Very Loose, Brown Fine to Coarse SAND, Some Silt and Gravel, Trace CLAY (SM)					
4		18	W	3	Very Loose to Loose, Brown Fine to Medium SAND, Little to Some Silt (SP-SM/SM)					
5		16	W	8						
6		18	W	16	Medium Dense to Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
7		18	W	19						
8		14	W	34						
					End Boring at 25 ft					
					Borehole backfilled with bentonite chips					

WATER LEVEL OBSERVATIONS					GENERAL NOTES		
While Drilling	$\nabla$ 6.0'	Upon Completion of Drilling	10.8'	Start	12/12/17	End	12/12/17
Time After Drilling			30 min.	Driller	BSD	Chief	DB
Depth to Water			8.3'	Logger	DC	Editor	ESF
Depth to Cave in			11'	Drill Method	2.25 HSA; Autohammer		
<small>The stratification lines represent the approximate boundary between soil types and the transition may be gradual.</small>							



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N470291 E772609  
 Location Madison, Wisconsin

Boring No. 2  
 Surface Elevation (ft) 1035.0  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	W	LL	PL	LI
					12 in. Brown Sandy TOPSOIL					
1	18	M	13		Medium Dense to Loose, Brown Fine to Coarse SAND, Some Silt and Gravel (SM)					
2	18	M	6							
3	18	M	8		Occasional Seams of Sandy Silt Near 7 ft					
4	18	M/W	2		Soft to Stiff, Gray Silty CLAY (CL-ML)	(0.5-1.0)	24.8	30	22	
5	18	M/W	4			(0.5-1.0)	25.1			
6	18	M/W	20		Medium Dense, Dark Brown to Gray SILT, Occasional Seams of Laminated Silt and Clay (ML)					
					Medium Dense to Very Dense, Brown Fine to Coarse SAND and GRAVEL, Trace Silt, Scattered Cobbles (SP/GP)					
7	14	W	23							
8	2	W	50/3"		End Boring at 23.9 ft					
					Borehole backfilled with bentonite chips					

### WATER LEVEL OBSERVATIONS

While Drilling  $\nabla$  16.0'      Upon Completion of Drilling 15.8'  
 Time After Drilling \_\_\_\_\_ 2 hrs  
 Depth to Water \_\_\_\_\_ 15.1'  $\nabla$   
 Depth to Cave in \_\_\_\_\_ 17.3'

### GENERAL NOTES

Start 12/12/17 End 12/12/17  
 Driller BSD Chief DB Rig D-50  
 Logger DC Editor ESF  
 Drill Method 2.25 HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.





# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N470240 E773420  
 Location Madison, Wisconsin

Boring No. 3  
 Surface Elevation (ft) 1042.1  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	W	LL	PL	LI
				0	8 in. TOPSOIL					
1	10	M	6	6	Stiff, Brown Lean CLAY (CL)	(1.25)	26.2			
2	8	M	7	7	Loose, Brown Fine to Medium SAND, Little to Some Silt (SP-SM/SM)					
3	12	M	24	24	Medium Dense, Light Brown Fine SAND, Trace Silt (SP)					
4	14	M	12	12	Medium Dense, Light Brown to Gray SILT (ML)					
				10	End Boring at 10 ft					
				10	Borehole backfilled with bentonite chips					
				15						
				20						
				25						
				30						

### WATER LEVEL OBSERVATIONS

While Drilling  NW Upon Completion of Drilling \_\_\_\_\_  
 Time After Drilling \_\_\_\_\_  
 Depth to Water \_\_\_\_\_  
 Depth to Cave in \_\_\_\_\_

### GENERAL NOTES

Start 12/12/17 End 12/12/17  
 Driller BSD Chief MC Rig CME-55  
 Logger MG Editor ESF  
 Drill Method 2.25 HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



## LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N469904 E773164  
 Location Madison, Wisconsin

Boring No. 4  
 Surface Elevation (ft) 1041.3  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL
					0	8 in. TOPSOIL				
1	█	10	M	7	7	Stiff, Brown Lean CLAY (CL)				
					5	Loose to Medium Dense, Light Brown to Gray Sandy SILT (ML)				
2	█	10	M	5	5					
3	█	16	M	12	12					
4	█	16	M	18	18	Medium Dense, Light Brown Silty Fine SAND (SM)				
					10	End Boring at 10 ft				
					15	Borehole backfilled with bentonite chips				
					20					
					25					
					30					

WATER LEVEL OBSERVATIONS					GENERAL NOTES				
While Drilling	∇	NW	Upon Completion of Drilling	_____	Start	12/12/17	End	12/12/17	
Time After Drilling	_____	_____		_____	Driller	BSD	Chief	MC	Rig <b>CME-55</b>
Depth to Water	_____	_____		_____	Logger	MG	Editor	ESF	
Depth to Cave in	_____	_____		_____	Drill Method	2.25 HSA; Autohammer			
The stratification lines represent the approximate boundary between soil types and the transition may be gradual.									



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N469819 E772638  
 Location Madison, Wisconsin

Boring No. 5  
 Surface Elevation (ft) 1036.1  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	DEPTH (ft)	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL
					8 in. Topsoil					
1		10	M	7	Soft to Stiff, Brown Lean CLAY, Some Sand (CL)	(0.5-1.0)	18.4			
2		16	M	9	Loose, Gray to Light Brown Fine to Medium SAND, Little to Some Silt (SP-SM/SM)					
3		18	M	7	Loose to Medium Dense, Light Brown to Gray SILT, Some Sand, Occasional Seams of Gray Silty Clay (ML/ML-CL)	(1.25)				
4		12	M	13		(0.5)				
5		10	M	14						
6		16	M	34	Medium Dense to Dense, Brown Fine to Coarse SAND and GRAVEL, Trace Silt, Scattered Cobbles (SP/GP)					
7		10	W	26						
					Dense, Brown Sandy SILT (ML)					
8		18	W	40						
					End Boring at 25 ft					
					Borehole backfilled with bentonite chips					

### WATER LEVEL OBSERVATIONS

While Drilling  $\nabla$  18.5' Upon Completion of Drilling \_\_\_\_\_  
 Time After Drilling \_\_\_\_\_ 5 hrs  
 Depth to Water \_\_\_\_\_  
 Depth to Cave in \_\_\_\_\_ 16.5'

### GENERAL NOTES

Start 12/12/17 End 12/12/17  
 Driller BSD Chief MC Rig CME-55  
 Logger MG Editor ESF  
 Drill Method 2.25 HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N469680 E772440  
 Location Madison, Wisconsin

Boring No. 6  
 Surface Elevation (ft) 1034.8  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	W	LL	PL	LI
					8 in. TOPSOIL					
1	10	M	11		Very Stiff to Hard, Brown Silty CLAY (CL-ML)	(3.0-4.5)	16.0			
2	10	M	6		Medium Stiff To Stiff, Brown Lean CLAY (CL)	(0.75-1.25)	23.8			
3	16	M	4		Soft to Medium Stiff Near 7 ft	(0.5)	26.8			
4	12	M	7		Loose, Brown Fine to Coarse SAND, Some Silt and Gravel, Trace CLAY (SM)					
5	8	M	52		Very Dense, Brown Fine to Coarse SAND and GRAVEL, Some Silt, Scattered Cobbles (SM/GM)					
6	16	M	31		Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
7	18	M	40		End Boring at 20 ft					
					Borehole backfilled with bentonite chips					

WATER LEVEL OBSERVATIONS					GENERAL NOTES				
While Drilling	<input checked="" type="checkbox"/>	NW	Upon Completion of Drilling	_____	Start	12/12/17	End	12/12/17	
Time After Drilling	_____			_____	Driller	BSD	Chief	MC	Rig CME-55
Depth to Water	_____			_____	Logger	MG	Editor	ESF	
Depth to Cave in	_____			_____	Drill Method	2.25 HSA; Autohammer			
<small>The stratification lines represent the approximate boundary between soil types and the transition may be gradual.</small>									



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N469684 E773031  
 Location Madison, Wisconsin

Boring No. 7  
 Surface Elevation (ft) 1037.1  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL
					0	8 in. TOPSOIL				
1	█	12	M	6	0	Stiff, Brown Lean CLAY (CL)				
2	█	6	M	7	5	Loose, Light Brown Silty Fine to Medium SAND, Trace to Little Clay (SM)				
3	█	16	M	28	5	Medium Dense, Brown Fine SAND, Trace to Little Silt (SP/SP-SM)				
4	█	16	M	62	10	Very Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)				
5	█	18	M	58	10					
6	█	16	M	62	15					
7	█	10	M/W65/11'		20	End Boring at 19.5 ft				
					20	Borehole backfilled with bentonite chips				
					25					
					30					

### WATER LEVEL OBSERVATIONS

While Drilling  NW Upon Completion of Drilling \_\_\_\_\_  
 Time After Drilling \_\_\_\_\_  
 Depth to Water \_\_\_\_\_  
 Depth to Cave in \_\_\_\_\_

### GENERAL NOTES

Start 12/12/17 End 12/12/17  
 Driller BSD Chief MC Rig CME-55  
 Logger MG Editor ESF  
 Drill Method 2.25 HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N469421 E772843  
 Location Madison, Wisconsin

Boring No. 8  
 Surface Elevation (ft) 1035.8  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES									
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI				
					0	13 in. Black Silty TOPSOIL									
1	■	8	M	14	1	Soft to Medium Stiff, Brown to Gray Mottled Lean CLAY, Trace Sand (CL)					(0.75)	21.4			
2	■	12	M	24	5	Soft to Medium Stiff, Brown to Gray Silty CLAY, Trace to Little Sand (CL-ML)					(0.5)	15.7			
3	■	18	M	11	10	Medium Dense, Light Brown to Gray SILT, Occasional Seams of Brown Sandy Silt (ML)									
4	■	18	M	12	15	Soft to Medium Stiff, Brown to Gray Mottled Lean CLAY, Trace Sand (CL)					(0.75)				
5	■	18	W	5	20	Dense, Light Brown Fine to Coarse SAND, Trace Silt (SP)									
6	■	18	M	12	25	Very Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)									
7	■	14	W	41	30	End Boring at 25 ft  Borehole backfilled with bentonite chips									
8	■	14	W	66											

## WATER LEVEL OBSERVATIONS

While Drilling  $\nabla$  12.3'      Upon Completion of Drilling 19.3'  
 Time After Drilling \_\_\_\_\_ 4 hrs  
 Depth to Water \_\_\_\_\_ 12'  $\nabla$   
 Depth to Cave in \_\_\_\_\_ 20'

## GENERAL NOTES

Start 12/12/17 End 12/12/17  
 Driller BSD Chief DB Rig D-50  
 Logger DC Editor ESF  
 Drill Method 2.25 HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N469409 E773375  
 Location Madison, Wisconsin

Boring No. 9  
 Surface Elevation (ft) 1048.2  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	W	LL	PL	LI
				0	8 in. TOPSOIL					
1	10	M	7	7	Stiff, Brown Lean CLAY (CL)	(1.75)	27.6			
2	14	M	8	8						
3	12	M	17	17	Medium Dense, Brown Fine to Medium SAND, Little to Some Silt and Gravel(SP-SM/SM)					
4	12	M	40	40	Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
				10	End Boring at 10 ft					
				15	Borehole backfilled with bentonite chips					
				20						
				25						
				30						

### WATER LEVEL OBSERVATIONS

While Drilling  NW Upon Completion of Drilling \_\_\_\_\_  
 Time After Drilling \_\_\_\_\_  
 Depth to Water \_\_\_\_\_  
 Depth to Cave in \_\_\_\_\_

### GENERAL NOTES

Start 12/12/17 End 12/12/17  
 Driller BSD Chief MC Rig CME-55  
 Logger MG Editor ESF  
 Drill Method 2.25 HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N469124 E773319  
 Location Madison, Wisconsin

Boring No. 10  
 Surface Elevation (ft) 1044.1  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	W	LL	PL	LI
				0	8 in. TOPSOIL					
1	10	M	6	6	Meduim Stiff to Stiff, Brown Lean CLAY, Some Sand (CL)	(1.0)	23.6			
2	10	M	6	6	Thin (<2 in.) Seam of Clayey Sand with Trace Gravel Near 5 ft	(1.0)	20.3			
3	8	M	8	8	Loose to Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
4	16	M	20	20	End Boring at 10 ft  Borehole backfilled with bentonite chips					

WATER LEVEL OBSERVATIONS	GENERAL NOTES
While Drilling <input checked="" type="checkbox"/> NW      Upon Completion of Drilling _____ Time After Drilling _____ Depth to Water _____ Depth to Cave in _____	Start <u>12/12/17</u> End <u>12/12/17</u> Driller <u>BSD</u> Chief <u>MC</u> Rig <u>CME-55</u> Logger <u>MG</u> Editor <u>ESF</u> Drill Method <u>2.25 HSA; Autohammer</u>
The stratification lines represent the approximate boundary between soil types and the transition may be gradual.	





# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N468971 E772759  
 Location Madison, Wisconsin

Boring No. 11  
 Surface Elevation (ft) 1032.0  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)			qu (qa) (tsf)	W	LL	PL	LI
					0	3 ft Black Clayey TOPSOIL					
1	18	M	6		1		(1.75)	35.6			
2	18	M	14		5	Medium Dense, Gray SILT (ML)					
3	18	M	5		5	Stiff Brown to Gray Mottled Lean CLAY, Trace Sand (CL)	(1.25)	29.1			
4	18	W	2		10	Very Loose, Dark Brown Clayey Fine SAND, Trace Gravel (SC)					
5	0	W	2		15						
6	16	W	2		15						
7	14	W	27		20	Medium Dense to Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
8	18	W	33		25						
					25	End Boring at 25 ft					
					30	Borehole backfilled with bentonite chips					

## WATER LEVEL OBSERVATIONS

While Drilling  8.6' Upon Completion of Drilling 10'  
 Time After Drilling \_\_\_\_\_ 6 hrs  
 Depth to Water \_\_\_\_\_ 7.3' ▼  
 Depth to Cave in \_\_\_\_\_ 16.4'

## GENERAL NOTES

Start 12/12/17 End 12/12/17  
 Driller BSD Chief DB Rig D-50  
 Logger DC Editor ESF  
 Drill Method 2.25 HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N468724 E772926  
 Location Madison, Wisconsin

Boring No. 12  
 Surface Elevation (ft) 1030.7  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	w	LL	PL	LI
					13 in. Black Silty TOPSOIL					
1	14	M	6		Stiff Brown Lean CLAY (CL)	(1.75)	23.1			
2	18	M	3		Medium Stiff to Stiff, Brown to Gray Mottled Lean CLAY, Trace Sand (CL)	(1.0)	29.0			
3	18	M/W	2	▼	Very Soft, Gray Silty CLAY, Trace to Little Sand (CL-ML)	(<0.2)	34.3			
4	18	M/W	3			(<0.2)				
5	18	M/W	2			(<0.2)				
6	18	M	9		Stiff, Gray Silty CLAY (CL-ML)	(1.5)				
7	16	M/W	23	▼	Medium Dense to Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
8	14	W	42		End Boring at 25 ft					
					Borehole backfilled with bentonite chips					

WATER LEVEL OBSERVATIONS	GENERAL NOTES
While Drilling <u>▼ 20.6'</u> Upon Completion of Drilling <u>9'</u> Time After Drilling _____ <u>24 hrs</u> Depth to Water _____ <u>6.8'</u> ▼ Depth to Cave in _____ <u>21'</u>	Start <u>12/11/17</u> End <u>12/11/17</u> Driller <u>BSD</u> Chief <u>DB</u> Rig <u>D-50</u> Logger <u>DC</u> Editor <u>ESF</u> Drill Method <u>2.25 HSA; Autohammer</u>
The stratification lines represent the approximate boundary between soil types and the transition may be gradual.	



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N468431 E772683  
 Location Madison, Wisconsin

Boring No. 13  
 Surface Elevation (ft) 1033.7  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)			q <sub>u</sub> (qa) (tsf)	W	LL	PL	LI
1	18	M	3	0-12	12 in. Black Silty TOPSOIL Soft to Medium Stiff, Brown Lean CLAY (CL)	(0.5)	40.6				
2	8	M	9	12-20	Stiff, Brown to Gray Mottled Lean CLAY, Trace Sand (CL)	(1.75)	31.1				
3	14	M	6	20-27	Becoming Soft to Medium Stiff Near 9 ft	(1.75)	30.2				
4	18	W	2	27-35	Medium Dense to Very Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)	(0.5)	27.6				
5	18	W	3	35-38		(0.75)					
6	14	M	27	38-40							
7	15	M	35								
8	14	M	58								
End Boring at 25 ft											
Borehole backfilled with bentonite chips											

## WATER LEVEL OBSERVATIONS

While Drilling  NW Upon Completion of Drilling 15.4'  
 Time After Drilling \_\_\_\_\_ 24 hrs  
 Depth to Water \_\_\_\_\_ 5.9' ▼  
 Depth to Cave in \_\_\_\_\_ 21.3'

## GENERAL NOTES

Start 12/11/17 End 12/11/17  
 Driller BSD Chief DB Rig D-50  
 Logger DC Editor ESF  
 Drill Method 2.25 HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Lower Badger Mill Creek Ponds  
N468424 E773171  
 Location Madison, Wisconsin

Boring No. 14  
 Surface Elevation (ft) 1030.3  
 Job No. C17051-19  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	W	LL	PL	LI
1	18	M	5	0-3	3 ft Black Silty TOPSOIL		33.8			
2	18	M	10	3-5	Loose to Medium Dense, Dark Brown to Gray SILT (ML)		27.1			
3	18	M	12	5-12	Very Stiff to Very Soft, Brown to Gray Mottled Lean CLAY, Trace Sand (CL)	(2.5)	23.1			
4	18	M/W	2	12-14		(<0.2)	31.7			
5	18	M/W	2	14-15		(<0.2)				
6	18	M/W	6	15-20	Loose, Brown Fine to Coarse SAND, Some Silt and Gravel, Trace CLAY (SM) Gravelly Layer with Cobbles Noted by Drillers from 17.6' to 18'					
7	10	M/W	15	20-25	Soft to Medium Stiff, Gray Silty CLAY, Little to Some Sand and Gravel (CL-ML)	(0.5)				
8	12	M/W	65	25-25.6	Very Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
					End Boring at 25 ft					
					Borehole backfilled with bentonite chips					

WATER LEVEL OBSERVATIONS	GENERAL NOTES
While Drilling <input checked="" type="checkbox"/> NW      Upon Completion of Drilling <u>14.5'</u> Time After Drilling _____ <u>24 hrs</u> Depth to Water _____ <u>11.2'</u> ▼ Depth to Cave in _____ <u>18.6'</u>	Start <u>12/11/17</u> End <u>12/11/17</u> Driller <u>BSD</u> Chief <u>DB</u> Rig <u>D-50</u> Logger <u>DC</u> Editor <u>ESF</u> Drill Method <u>2.25 HSA; Autohammer</u>
The stratification lines represent the approximate boundary between soil types and the transition may be gradual.	

**LOG OF TEST BORING**  
General Notes

**DESCRIPTIVE SOIL CLASSIFICATION**

Grain Size Terminology

Soil Fraction	Particle Size	U.S. Standard Sieve Size
Boulders .....	Larger than 12" .....	Larger than 12"
Cobbles .....	3" to 12" .....	3" to 12"
Gravel: Coarse.....	¾" to 3" .....	¾" to 3"
Fine .....	4.76 mm to ¾" .....	#4 to ¾"
Sand: Coarse.....	2.00 mm to 4.76 mm.....	#10 to #4
Medium .....	0.42 to mm to 2.00 mm .....	#40 to #10
Fine .....	0.074 mm to 0.42 mm.....	#200 to #40
Silt.....	0.005 mm to 0.074 mm.....	Smaller than #200
Clay.....	Smaller than 0.005 mm.....	Smaller than #200

Plasticity characteristics differentiate between silt and clay.

General Terminology

**Physical Characteristics**  
Color, moisture, grain shape, fineness, etc.  
**Major Constituents**  
Clay, silt, sand, gravel  
**Structure**  
Laminated, varved, fibrous, stratified, cemented, fissured, etc.  
**Geologic Origin**  
Glacial, alluvial, eolian, residual, etc.

Relative Density

**Term** "N" Value  
Very Loose..... 0 - 4  
Loose..... 4 - 10  
Medium Dense.....10 - 30  
Dense.....30 - 50  
Very Dense.....Over 50

Relative Proportions Of Cohesionless Soils

Proportional Term	Defining Range by Percentage of Weight
Trace.....	0% - 5%
Little.....	5% - 12%
Some.....	12% - 35%
And .....	35% - 50%

Consistency

Term	q <sub>a</sub> -tons/sq. ft
Very Soft.....	0.0 to 0.25
Soft.....	0.25 to 0.50
Medium.....	0.50 to 1.0
Stiff.....	1.0 to 2.0
Very Stiff.....	2.0 to 4.0
Hard.....	Over 4.0

Organic Content by Combustion Method

Soil Description	Loss on Ignition
Non Organic.....	Less than 4%
Organic Silt/Clay.....	4 - 12%
Sedimentary Peat.....	12% - 50%
Fibrous and Woody Peat...	More than 50%

Plasticity

Term	Plastic Index
None to Slight.....	0 - 4
Slight.....	5 - 7
Medium.....	8 - 22
High to Very High ..	Over 22

The penetration resistance, N, is the summation of the number of blows required to effect two successive 6" penetrations of the 2" split-barrel sampler. The sampler is driven with a 140 lb. weight falling 30" and is seated to a depth of 6" before commencing the standard penetration test.

**SYMBOLS**

Drilling and Sampling

- CS – Continuous Sampling
- RC – Rock Coring: Size AW, BW, NW, 2"W
- RQD – Rock Quality Designation
- RB – Rock Bit/Roller Bit
- FT – Fish Tail
- DC – Drove Casing
- C – Casing: Size 2 ½", NW, 4", HW
- CW – Clear Water
- DM – Drilling Mud
- HSA – Hollow Stem Auger
- FA – Flight Auger
- HA – Hand Auger
- COA – Clean-Out Auger
- SS - 2" Dia. Split-Barrel Sample
- 2ST – 2" Dia. Thin-Walled Tube Sample
- 3ST – 3" Dia. Thin-Walled Tube Sample
- PT – 3" Dia. Piston Tube Sample
- AS – Auger Sample
- WS – Wash Sample
- PTS – Peat Sample
- PS – Pitcher Sample
- NR – No Recovery
- S – Sounding
- PMT – Borehole Pressuremeter Test
- VS – Vane Shear Test
- WPT – Water Pressure Test

Laboratory Tests

- q<sub>a</sub> – Penetrometer Reading, tons/sq ft
- q<sub>a</sub> – Unconfined Strength, tons/sq ft
- W – Moisture Content, %
- LL – Liquid Limit, %
- PL – Plastic Limit, %
- SL – Shrinkage Limit, %
- LI – Loss on Ignition
- D – Dry Unit Weight, lbs/cu ft
- pH – Measure of Soil Alkalinity or Acidity
- FS – Free Swell, %

Water Level Measurement
















- ▽ - Water Level at Time Shown
- NW – No Water Encountered
- WD – While Drilling
- BCR – Before Casing Removal
- ACR – After Casing Removal
- CW – Cave and Wet
- CM – Caved and Moist

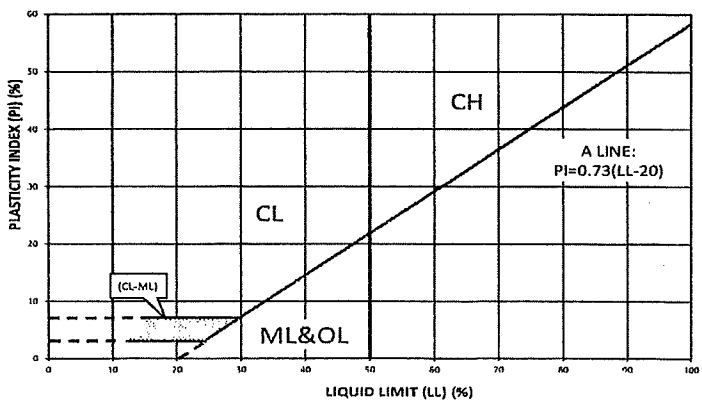
Note: Water level measurements shown on the boring logs represent conditions at the time indicated and may not reflect static levels, especially in cohesive soils.

# CGC, Inc.

Madison - Milwaukee

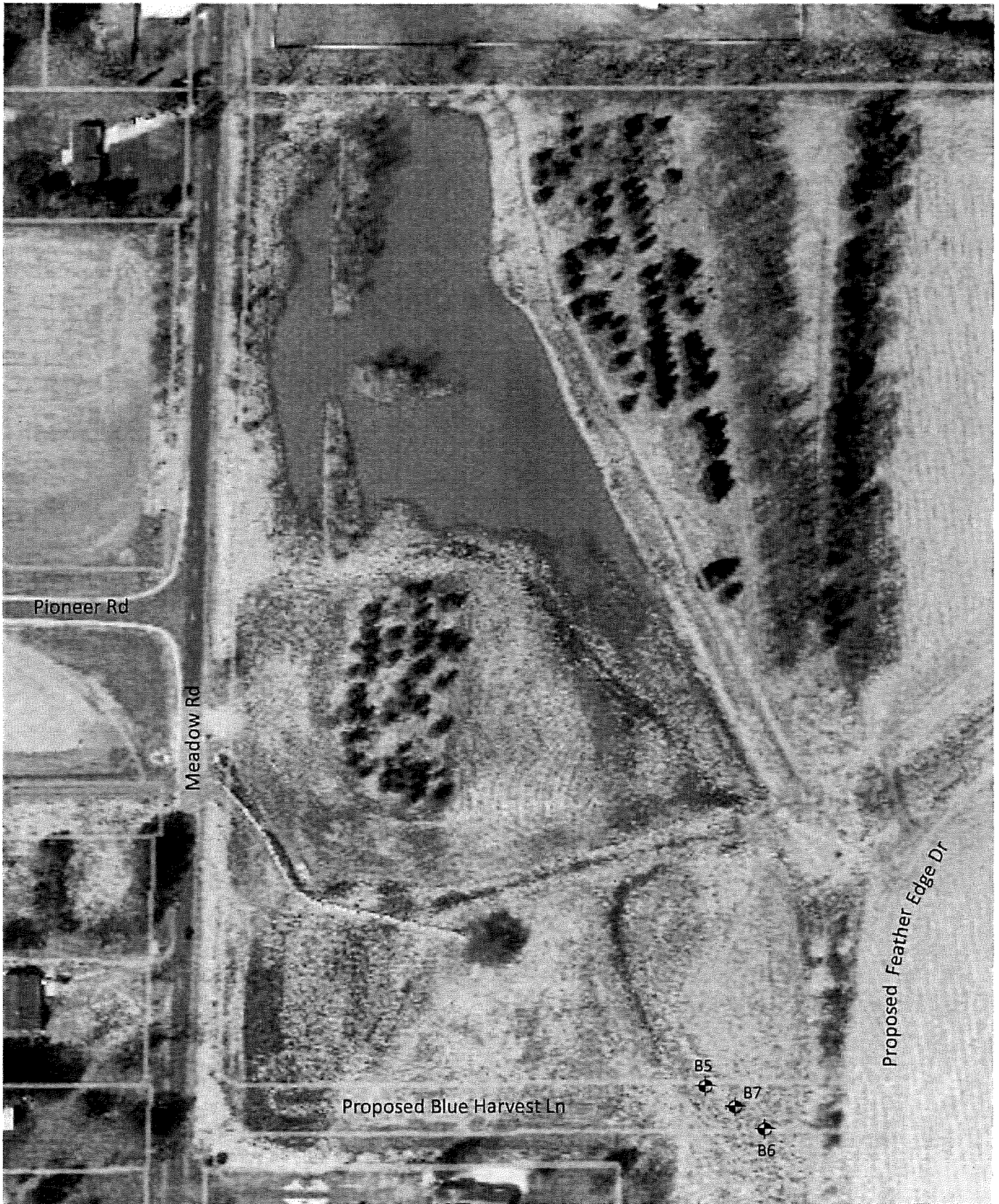
# Unified Soil Classification System

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART		
<b>COARSE-GRAINED SOILS</b> (more than 50% of material is larger than No. 200 sieve size)		
Clean Gravels (Less than 5% fines)		
<b>GRAVELS</b> More than 50% of coarse fraction larger than No. 4 sieve size		GW Well-graded gravels, gravel-sand mixtures, little or no fines
		GP Poorly-graded gravels, gravel-sand mixtures, little or no fines
	Gravels with fines (More than 12% fines)	
		GM Silty gravels, gravel-sand-silt mixtures
		GC Clayey gravels, gravel-sand-clay mixtures
Clean Sands (Less than 5% fines)		
<b>SANDS</b> 50% or more of coarse fraction smaller than No. 4 sieve size		SW Well-graded sands, gravelly sands, little or no fines
		SP Poorly graded sands, gravelly sands, little or no fines
	Sands with fines (More than 12% fines)	
		SM Silty sands, sand-silt mixtures
		SC Clayey sands, sand-clay mixtures
<b>FINE-GRAINED SOILS</b> (50% or more of material is smaller than No. 200 sieve size.)		
<b>SILTS AND CLAYS</b> Liquid limit less than 50%		ML Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL Organic silts and organic silty clays of low plasticity
<b>SILTS AND CLAYS</b> Liquid limit 50% or greater		MH Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH Inorganic clays of high plasticity, fat clays
		OH Organic clays of medium to high plasticity, organic silts
<b>HIGHLY ORGANIC SOILS</b>		PT Peat and other highly organic soils

LABORATORY CLASSIFICATION CRITERIA		
GW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3	
GP	Not meeting all gradation requirements for GW	
GM	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
GC	Atterberg limits above "A" line or P.I. greater than 7	
SW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3	
SP	Not meeting all gradation requirements for GW	
SM	Atterberg limits below "A" line or P.I. less than 4	Limits plotting in shaded zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
SC	Atterberg limits above "A" line with P.I. greater than 7	
Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:		
Less than 5 percent ..... GW, GP, SW, SP		
More than 12 percent ..... GM, GC, SM, SC		
5 to 12 percent ..... Borderline cases requiring dual symbols		
<b>PLASTICITY CHART</b>		
 <p>The Plasticity Chart plots Plasticity Index (PI) on the y-axis (0 to 60) against Liquid Limit (LL) on the x-axis (0 to 100). A diagonal A-line is defined by the equation PI = 0.73(LL - 20). A horizontal U-line is shown at PI = 4. The chart is divided into regions for soil classification: CH (Clay with high plasticity), CL (Clay with low plasticity), ML (Silt with low plasticity), and ML&amp;OL (Silt with low plasticity and organic clays with low plasticity). A shaded region between the A-line and U-line is also indicated.</p>		

**APPENDIX B**

**SOIL BORING LOCATION EXHIBIT  
LOGS OF TEST BORINGS (3)  
LOG OF TEST BORING – GENERAL NOTES  
UNIFIED SOIL CLASSIFICATION SYSTEM**



**Legend**

⊕ Denotes Boring Location

**Notes**

1. Soil Borings performed by Soil Essentials in August 2022 (B5, B6) or America's Drilling Co. in September 2022 (B7)
2. Boring locations are approximate



Scale: Reduced

Job No. C21051-31		<b>SOIL BORING LOCATION MAP</b> <b>Blue Harvest Ln Bridge</b> <b>Madison, Wisconsin</b>
Date: 10/2022		





# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 5  
 Surface Elevation (ft) 1033.1  
 Job No. C21051-31  
 Sheet 1 of 2

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		q <sub>u</sub> (qa) (tsf)	W	LL	PL	LOI
1	16	M	4	0-1	9 in. Dark Brown Clayey TOPSOIL					
2	17	M/W	2	1-2	Stiff to Soft, Brown Lean CLAY, Trace Sand (CL - Possible Fill)	(1.5)				
3	16	M	2	2-3						
4	14	M/W	3	3-4	Very Soft, Stratified Brown, Dark Brown and Gray Lean to Silty CLAY, Trace Sand (CL/CL-ML)	(<0.2)				
5	4	M	85	4-5	Very Loose, Brown Silty Fine SAND, Some Gravel, Trace Clay (SM)					
6	6	M	20	5-11	Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM) (Rough drilling/cobbles/very dense conditions from 11'-13')					
7	15	M	21	11-12						
8	14	M	17	12-13						
9	7	M	26	13-14						
10	15	W	11	14-15	Medium Dense, Brown Fine to Coarse SAND, Some Silt and Gravel, Scattered Cobbles (SM)					
11	17	M/W	16	15-17	Medium Dense, Brown Sandy SILT, Trace Gravel and Clay, Scattered Cobbles (ML)					

### WATER LEVEL OBSERVATIONS

### GENERAL NOTES

While Drilling  $\nabla$  33.5' Upon Completion of Drilling 34.5'  
 Time After Drilling \_\_\_\_\_ 24 Hours \_\_\_\_\_  
 Depth to Water \_\_\_\_\_ 20.8' \_\_\_\_\_  
 Depth to Cave in \_\_\_\_\_ 25.1' \_\_\_\_\_

Start 8/22/22 End 8/22/22  
 Driller SE Chief CRJ Rig 7822DT  
 Logger AR Editor ESF  
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 5  
 Surface Elevation 1033.1  
 Job No. C21051-31  
 Sheet 2 of 2

2921 PERRY STREET, MADISON, WIS. 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					
No.	EXAM	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
12		15	M/W	11		Medium Dense, Brown Sandy SILT, Trace Gravel and Clay, Scattered Cobbles (ML)					
					45						
13		16	M/W	27							
					50						
14		15	W	28		Medium Dense, Brown Fine to Coarse SAND, Some Silt and Gravel, Scattered Cobbles (SM)					
					55						
15		0	-	11		Medium Dense, Brown Sandy SILT, Trace Gravel and Clay, Scattered Cobbles (ML)					
					60						
16		16	W	11							
17		11	W	32		Dense, Brown Fine to Coarse SAND, Some Silt and Gravel, Scattered Cobbles (SM)					
					65	End of Boring at 63 ft					
						Backfilled with Bentonite Chips					
					70						
					75						
					80						
					85						



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 6  
 Surface Elevation (ft) 1033.1  
 Job No. C21051-31  
 Sheet 1 of 2

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		q <sub>u</sub> (qa) (tsf)	W	LL	PL	LOI
1	16	M	6	0	9 in. Brown Clayey TOPSOIL Stiff to Very Soft, Stratified Brown, Dark Brown and Gray Lean to Silty CLAY, Trace Sand with thin (<1") Sandy Seams and Lenses (CL - Possible Fill to 5')	(1.5)				
2	15	M	4	5		(0.5)				
3	17	M/W	0	10		(<0.2)				
4	16	M/W	0	15		(<0.2)				
5	15	M	14	15	Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
6	17	M	19	20						
7	15	M	23	25	Medium Dense, Brown Sandy SILT to Silty Fine SAND, Some Gravel, Scattered Cobbles (ML/SM)					
8	16	M	24	30						
9	17	W	18	35	Medium Dense, Brown Silty Fine SAND, Some Gravel, Trace Clay (SM)					
10	16	M/W	12	40	Very Stiff, Brownish-Gray Lean CLAY, Scattered Sand, Gravel and Cobbles (CL)	(2.5)				

## WATER LEVEL OBSERVATIONS

## GENERAL NOTES

While Drilling ∇ 33.5' Upon Completion of Drilling 39.8'  
 Time After Drilling \_\_\_\_\_  
 Depth to Water \_\_\_\_\_  
 Depth to Cave in \_\_\_\_\_ 48.1'

Start 8/22/22 End 8/22/22  
 Driller SE Chief CRJ Rig 7822DT  
 Logger AR Editor ESF  
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 6  
 Surface Elevation 1033.1  
 Job No. C21051-31  
 Sheet 2 of 2

2921 FERRY STREET, MADISON, WIS. 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		q <sub>u</sub> (qa) (tsf)	W	LL	PL	LI
				40	Very Stiff, Brownish-Gray Lean CLAY, Scattered Sand, Gravel and Cobbles (CL)					
11	15	M/W	9	45	Loose, Grayish-Brown SILT (ML)					
				50	Dense to Medium Dense, Brown Fine to Coarse SAND, Some Silt and Gravel, Scattered Cobbles (SM)					
12	16	W	31	55						
13	0	-	11	60	Stiff, Grayish-Brown Lean CLAY, Trace Sand, Scattered Gravel and Cobbles (CL)	(1.5)				
14	12	M/W	16	60	End of Boring at 60 ft  Backfilled with Bentonite Chips					
				65						
				70						
				75						
				80						
				85						
				90						
				95						



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 7  
 Surface Elevation (ft) 1033.1  
 Job No. C21051-31  
 Sheet 1 of 3

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL
					0	7 in. TOPSOIL				
1	█	10	M	9	0	Stiff to Soft Brown Lean Clay, Trace Sand (CL - Possible Fill to 3')				
2	█	16	M	4	5	Numerous Sand Partings Beginning Near 4'				
3	█	10	M/W	4	5					
4	█	14	M	3	10	Loose to Very Loose, Brown Silty Fine SAND, Trace Gravel and Clay (SM) Increasing Clay Content with Depth				
5	█	14	M	42	15	Dense to Very Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)				
6	█	18	M	45	20					
7	█	12	M	64	25					
8	█	8	W	65	30					
9	█	8	W	42	35	Very Dense, Brown Fine to Coarse SAND, Some Silt and Gravel, Scattered Cobbles (SM)				
10	█	8	W	19	40	Stiff, Brown Lean CLAY, Trace to Little Sand and Gravel (CL)				
						(1.25)				

### WATER LEVEL OBSERVATIONS

### GENERAL NOTES

While Drilling  $\nabla$  33.5' Upon Completion of Drilling \_\_\_\_\_  
 Time After Drilling \_\_\_\_\_  
 Depth to Water \_\_\_\_\_  
 Depth to Cave in \_\_\_\_\_

Start 9/8/22 End 9/9/22  
 Driller ADC Chief KD Rig CME  
 Logger DB Editor ESF 55  
 Drill Method 4.25" HSA to 10 ft; 3-7/8  
in. RB with Mud to 92.5'

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 7  
 Surface Elevation 1033.1  
 Job No. C21051-31  
 Sheet 2 of 3

2921 PERRY STREET, MADISON, WIS. 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	REPS (in.)	Rec (in.)	Moist	N			qu (qa) (tsf)	W	LL	PL	LI
						Stiff, Brown Lean CLAY, Trace to Little Sand and Gravel (CL)					
11		18	W	11	45	Medium Dense, Stratified Brown and Light Brown Sandy SILT and Silty Fine SAND, Trace Clay (ML/SM)					
12		10	W	88	50	Very Dense, Brown Fine to Coarse Sand, Some Silt and Gravel, Trace Clay (SM)					
13		12	W	73	55						
14		18	W	12	60	Very Soft, Brown Lean CLAY, Trace Sand (CL)	<0.2				
15		6	W	61/9"	65	Very Dense, Brown Fine to Coarse SAND and GRAVEL, Some Silt (SM/GM)					
16		6	W	24	70	(Medium Dense with Scattered Clay Lenses Near 69')					
17		10	W	31	75						
18		10	W	36	80						
19		8	W	82 /10"	85						



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 7  
 Surface Elevation 1033.1  
 Job No. C21051-31  
 Sheet 3 of 3

2921 FERRY STREET, MADISON, WIS. 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	W	LL	PL	LI
				85	Very Dense, Brown Fine to Coarse SAND and GRAVEL, Some Silt (SM/GM)					
20	4	W	98	90						
			/11"							
21	10	W	70	90						
			/10"		92.5					
				95	End of Boring at 92.5 ft Backfilled with Bentonite Slurry and Chips					
				100						
				105						
				110						
				115						
				120						
				125						

**LOG OF TEST BORING**  
**General Notes**

**DESCRIPTIVE SOIL CLASSIFICATION**

Grain Size Terminology

Soil Fraction	Particle Size	U.S. Standard Sieve Size
Boulders .....	Larger than 12" .....	Larger than 12"
Cobbles .....	3" to 12" .....	3" to 12"
Gravel: Coarse.....	¾" to 3" .....	¾" to 3"
Fine .....	4.76 mm to ¾" .....	#4 to ¾"
Sand: Coarse.....	2.00 mm to 4.76 mm.....	#10 to #4
Medium .....	0.42 to mm to 2.00 mm .....	#40 to #10
Fine .....	0.074 mm to 0.42 mm.....	#200 to #40
Silt.....	0.005 mm to 0.074 mm.....	Smaller than #200
Clay.....	Smaller than 0.005 mm.....	Smaller than #200

Plasticity characteristics differentiate between silt and clay.

General Terminology

Physical Characteristics  
 Color, moisture, grain shape, fineness, etc.  
 Major Constituents  
 Clay, silt, sand, gravel  
 Structure  
 Laminated, varved, fibrous, stratified,  
 cemented, fissured, etc.  
 Geologic Origin  
 Glacial, alluvial, eolian, residual, etc.

Relative Density

Term	"N" Value
Very Loose.....	0 - 4
Loose.....	4 - 10
Medium Dense.....	10 - 30
Dense.....	30 - 50
Very Dense.....	Over 50

Relative Proportions  
 Of Cohesionless Soils

Proportional Term	Defining Range by Percentage of Weight
Trace.....	0% - 5%
Little.....	5% - 12%
Some.....	12% - 35%
And .....	35% - 50%

Consistency

Term	q <sub>u</sub> -tons/sq. ft
Very Soft.....	0.0 to 0.25
Soft.....	0.25 to 0.50
Medium.....	0.50 to 1.0
Stiff.....	1.0 to 2.0
Very Stiff.....	2.0 to 4.0
Hard.....	Over 4.0

Organic Content by  
 Combustion Method

Soil Description	Loss on Ignition
Non Organic.....	Less than 4%
Organic Silt/Clay.....	4 - 12%
Sedimentary Peat.....	12% - 50%
Fibrous and Woody Peat...	More than 50%

Plasticity

Term	Plastic Index
None to Slight.....	0 - 4
Slight.....	5 - 7
Medium.....	8 - 22
High to Very High ..	Over 22

The penetration resistance, N, is the summation of the number of blows required to effect two successive 6" penetrations of the 2" split-barrel sampler. The sampler is driven with a 140 lb. weight falling 30" and is seated to a depth of 6" before commencing the standard penetration test.

**SYMBOLS**

Drilling and Sampling

- CS – Continuous Sampling
- RC – Rock Coring: Size AW, BW, NW, 2"W
- RQD – Rock Quality Designation
- RB – Rock Bit/Roller Bit
- FT – Fish Tail
- DC – Drove Casing
- C – Casing: Size 2 ½", NW, 4", HW
- CW – Clear Water
- DM – Drilling Mud
- HSA – Hollow Stem Auger
- FA – Flight Auger
- HA – Hand Auger
- COA – Clean-Out Auger
- SS - 2" Dia. Split-Barrel Sample
- 2ST – 2" Dia. Thin-Walled Tube Sample
- 3ST – 3" Dia. Thin-Walled Tube Sample
- PT – 3" Dia. Piston Tube Sample
- AS – Auger Sample
- WS – Wash Sample
- PTS – Peat Sample
- PS – Pitcher Sample
- NR – No Recovery
- S – Sounding
- PMT – Borehole Pressuremeter Test
- VS – Vane Shear Test
- WPT – Water Pressure Test

Laboratory Tests

- q<sub>a</sub> – Penetrometer Reading, tons/sq ft
- q<sub>u</sub> – Unconfined Strength, tons/sq ft
- W – Moisture Content, %
- LL – Liquid Limit, %
- PL – Plastic Limit, %
- SL – Shrinkage Limit, %
- LI – Loss on Ignition
- D – Dry Unit Weight, lbs/cu ft
- pH – Measure of Soil Alkalinity or Acidity
- FS – Free Swell, %

Water Level Measurement

- ▽ - Water Level at Time Shown
- NW – No Water Encountered
- WD – While Drilling
- BCR – Before Casing Removal
- ACR – After Casing Removal
- CW – Cave and Wet
- CM – Caved and Moist

Note: Water level measurements shown on the boring logs represent conditions at the time indicated and may not reflect static levels, especially in cohesive soils.



# CGC, Inc.

Madison - Milwaukee

# Unified Soil Classification System

## UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

### COARSE-GRAINED SOILS

(more than 50% of material is larger than No. 200 sieve size)

#### Clean Gravels (Less than 5% fines)



GW

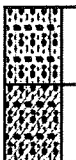
Well-graded gravels, gravel-sand mixtures, little or no fines



GP

Poorly-graded gravels, gravel-sand mixtures, little or no fines

#### Gravels with fines (More than 12% fines)



GM

Silty gravels, gravel-sand-silt mixtures



GC

Clayey gravels, gravel-sand-clay mixtures

**GRAVELS**  
More than 50% of coarse fraction larger than No. 4 sieve size

#### Clean Sands (Less than 5% fines)



SW

Well-graded sands, gravelly sands, little or no fines



SP

Poorly graded sands, gravelly sands, little or no fines

#### Sands with fines (More than 12% fines)



SM

Silty sands, sand-silt mixtures



SC

Clayey sands, sand-clay mixtures

**SANDS**  
50% or more of coarse fraction smaller than No. 4 sieve size

### FINE-GRAINED SOILS

(50% or more of material is smaller than No. 200 sieve size.)



ML

Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity



CL

Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays



OL

Organic silts and organic silty clays of low plasticity



MH

Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts



CH

Inorganic clays of high plasticity, fat clays



OH

Organic clays of medium to high plasticity, organic silts



PT

Peat and other highly organic soils

**SILTS AND CLAYS**  
Liquid limit less than 50%

**SILTS AND CLAYS**  
Liquid limit 50% or greater

**HIGHLY ORGANIC SOILS**

## LABORATORY CLASSIFICATION CRITERIA

GW  $C_u = \frac{D_{60}}{D_{10}}$  greater than 4;  $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$  between 1 and 3

GP Not meeting all gradation requirements for GW

GM Atterberg limits below "A" line or P.I. less than 4  
Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols

GC Atterberg limits above "A" line or P.I. greater than 7

SW  $C_u = \frac{D_{60}}{D_{10}}$  greater than 4;  $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$  between 1 and 3

SP Not meeting all gradation requirements for GW

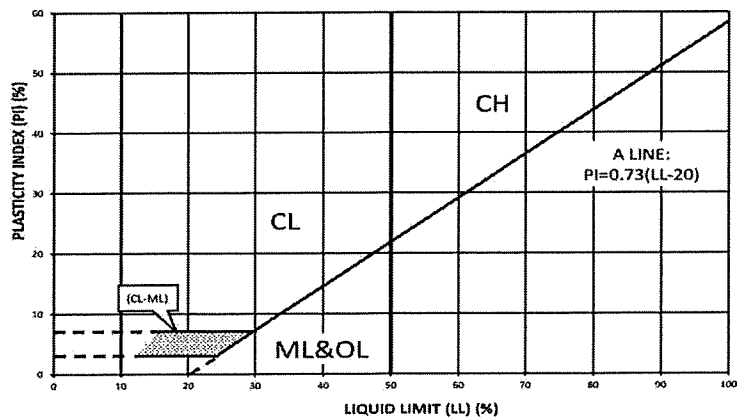
SM Atterberg limits below "A" line or P.I. less than 4  
Limits plotting in shaded zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols

SC Atterberg limits above "A" line with P.I. greater than 7

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

Less than 5 percent ..... GW, GP, SW, SP  
More than 12 percent ..... GM, GC, SM, SC  
5 to 12 percent ..... Borderline cases requiring dual symbols

## PLASTICITY CHART



**APPENDIX A**

**SOIL BORING LOCATION EXHIBITS (2)  
LOGS OF TEST BORINGS (7)  
LOG OF TEST BORING – GENERAL NOTES  
UNIFIED SOIL CLASSIFICATION SYSTEM**



**Legend**

⊕ Denotes Boring Location

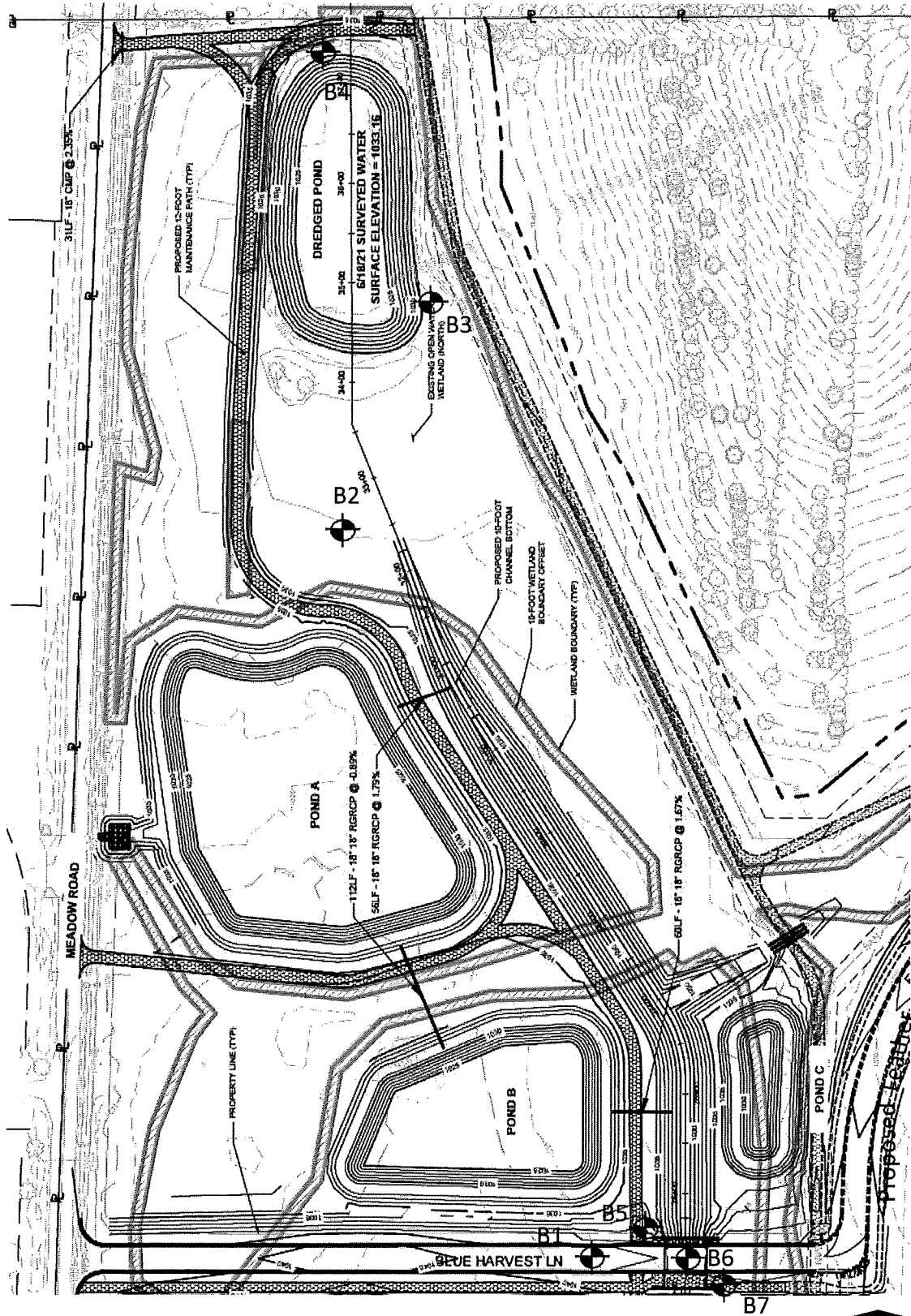
**Notes**

1. Soil borings B1 through B4 performed by Badger State Drilling in February 2022.
2. Soil borings B5 and B6 performed by Soil Essentials in August 2022, and B7 performed by B in September 2022.
3. Boring locations are approximate

Scale: Reduced

Job No. C21051-31	
Date: 10/2022	

**SOIL BORING LOCATION MAP**  
**Feather Edge Pond**  
**Madison, Wisconsin**



**Legend**

⊕ Denotes Boring Location

**Notes**

1. Soil borings B1 through B4 performed by Badger State Drilling in February 2022.
2. Soil borings B5 and B6 performed by Soil Essentials in August 2022, and B7 performed by B in September 2022.
3. Boring locations are approximate

Scale: Reduced

Job No. C21051-31	
Date: 10/2022	

**SOIL BORING LOCATION MAP**  
**Feather Edge Pond**  
**Madison, Wisconsin**



# LOG OF TEST BORING

Project Feather Edge Pond  
N469744.5 E772822.3  
 Location Madison, WI

Boring No. 1  
 Surface Elevation (ft) 1033.4  
 Job No. C21051-31  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	W	LL	PL	LOI
				0	12 in. TOPSOIL					
1	18	M	7	0	FILL: Stiff Brown Clay to 3'					
2	18	M	7	0	Loose Brown Silty Sand with Clay and Gravel to 5'					
3	12	M/W	5	5	Loose, Brown Fine to Medium SAND, Some Silt, Trace Gravel, Scattered Thin (<1/2 in.) Clay Seams (SM)					
4	14	M	5	10						
5	18	M	20	10	Medium Dense to Very Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
6	14	M	7 7/8"	15	Hard Drilling Noted Near 14'					
7	18	M	45	20	End of Boring at 20 ft					
				25	Backfilled with Bentonite Chips					
				30						
				35						
				40						

### WATER LEVEL OBSERVATIONS

### GENERAL NOTES

While Drilling  NW      Upon Completion of Drilling  NW  
 Time After Drilling \_\_\_\_\_  
 Depth to Water \_\_\_\_\_  
 Depth to Cave in \_\_\_\_\_

Start 2/17/22 End 2/17/22  
 Driller BSD Chief KD Rig D-50  
 Logger GB Editor ESF  
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Feather Edge Pond  
N470419.5 E772526.1  
 Location Madison, WI

Boring No. 2  
 Surface Elevation (ft) 1033.6  
 Job No. C21051-31  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL
					12 in. TOPSOIL					
1		16	M	9	FILL: Loose Brown Silt with Clay and Sand					
2		18	M	10	Medium Stiff to Stiff, Brown and Gray (Mottled) Lean CLAY, Trace Sand (CL)					
3		18	M	10	Loose to Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
4		18	M	45						
5		0		50/1"		Large Cobble/Possible Boulder Noted Near 11'				
6		29	M/W	29						
7		31	M	31						
					End of Boring at 20 ft					
					Backfilled with Bentonite Chips					

## WATER LEVEL OBSERVATIONS

While Drilling  NW Upon Completion of Drilling NW  
 Time After Drilling \_\_\_\_\_  
 Depth to Water \_\_\_\_\_  
 Depth to Cave in \_\_\_\_\_

## GENERAL NOTES

Start 2/17/22 End 2/17/22  
 Driller BSD Chief KD Rig D-50  
 Logger GB Editor ESF  
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Feather Edge Pond  
N470654.2 E772620.2  
 Location Madison, WI

Boring No. 3  
 Surface Elevation (ft) 1031.3  
 Job No. C21051-31  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	q <sub>u</sub> (qa) (tsf)	W	LL	PL
1	█	18	M	10	8 in. TOPSOIL Medium Stiff, Brown Silty CLAY, Scattered Sand Partings (CL-ML) (Possible Fill)	(0.75)				
2	█	18	M/W	9	Loose, Brown SILT, Trace Sand and Clay (ML)					
3	█	18	M/W	8	Medium Stiff, Brown Silty CLAY, Scattered Sand Partings (CL-ML)	(0.75)				
4	█	18	M/W	9						
5	█	18	M/W	13	Stratified Medium Dense, Brown Silty SAND and Sandy SILT, Trace Clay (SM/ML)					
6	█	18	M/W	70	Very Dense to Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
7	█	18	M	37	End of Boring at 20 ft  Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS	GENERAL NOTES
While Drilling <input checked="" type="checkbox"/> <u>NW</u> Upon Completion of Drilling <input type="checkbox"/> <u>NW</u> Time After Drilling _____ Depth to Water _____ Depth to Cave in _____	Start <u>2/17/22</u> End <u>2/17/22</u> Driller <u>BSD</u> Chief <u>KD</u> Rig <u>D-50</u> Logger <u>GB</u> Editor <u>ESF</u> Drill Method <u>2.25" HSA; Autohammer</u>
The stratification lines represent the approximate boundary between soil types and the transition may be gradual.	



# LOG OF TEST BORING

Project Feather Edge Pond  
N470949.2 E772501.7  
 Location Madison, WI

Boring No. 4  
 Surface Elevation (ft) 1035.6  
 Job No. C21051-31  
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL
1		8	M/W	7	8 in. TOPSOIL					
					FILL: Loose Brown Silt with Clay and Sand					
2		18	M	7	Stiff, Brown and Gray (Mottled) Lean CLAY, Trace Sand (CL)	(1.5)				
3		12	M	9	Loose to Medium Dense, Brown Fine to Coarse SAND, Some Silt and Gravel (SM)					
4		10	M	17						
5		18	M	13	Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
6		18	M	27						
7		18	M	21						
					End of Boring at 20 ft					
					Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS					GENERAL NOTES				
While Drilling	<input checked="" type="checkbox"/>	NW	Upon Completion of Drilling	<input type="checkbox"/>	NW	Start	2/16/22	End	2/16/22
Time After Drilling						Driller	BSD	Chief	KD Rig D-50
Depth to Water						Logger	GB	Editor	ESF
Depth to Cave in						Drill Method	2.25" HSA; Autohammer		
<small>The stratification lines represent the approximate boundary between soil types and the transition may be gradual.</small>									





# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 5  
 Surface Elevation (ft) 1033.1  
 Job No. C21051-31  
 Sheet 1 of 2

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	W	LL	PL	LOI
1	16	M	4	9	9 in. Dark Brown Clayey TOPSOIL Stiff to Soft, Brown Lean CLAY, Trace Sand (CL - Possible Fill)	(1.5)				
2	17	M/W	2	11	Very Soft, Stratified Brown, Dark Brown and Gray Lean to Silty CLAY, Trace Sand (CL/CL-ML)	(0.5)				
3	16	M	2	13			(<0.2)			
4	14	M/W	3	14	Very Loose, Brown Silty Fine SAND, Some Gravel, Trace Clay (SM)					
5	4	M	85	11-13	Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM) (Rough drilling/cobbles/very dense conditions from 11'-13')					
6	6	M	20	13						
7	15	M	21	21						
8	14	M	17	26						
9	7	M	26	33.5						
10	15	W	11	34.5	Medium Dense, Brown Fine to Coarse SAND, Some Silt and Gravel, Scattered Cobbles (SM)					
11	17	M/W	16	40	Medium Dense, Brown Sandy SILT, Trace Gravel and Clay, Scattered Cobbles (ML)					

### WATER LEVEL OBSERVATIONS

While Drilling  $\nabla$  33.5' Upon Completion of Drilling 34.5'  
 Time After Drilling 24 Hours  
 Depth to Water 20.8'  
 Depth to Cave in 25.1'

### GENERAL NOTES

Start 8/22/22 End 8/22/22  
 Driller SE Chief CRJ Rig 7822DT  
 Logger AR Editor ESF  
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 5  
 Surface Elevation 1033.1  
 Job No. C21051-31  
 Sheet 2 of 2

2921 PERRY STREET, MADISON, WIS. 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N			qu (qa) (tsf)	W	LL	PL	LI
						Medium Dense, Brown Sandy SILT, Trace Gravel and Clay, Scattered Cobbles (ML)					
12		15	M/W	11	45						
13		16	M/W	27	50						
14		15	W	28	55	Medium Dense, Brown Fine to Coarse SAND, Some Silt and Gravel, Scattered Cobbles (SM)					
15		0	-	11	60	Medium Dense, Brown Sandy SILT, Trace Gravel and Clay, Scattered Cobbles (ML)					
16		16	W	11							
17		11	W	32							
					65	Dense, Brown Fine to Coarse SAND, Some Silt and Gravel, Scattered Cobbles (SM)					
						End of Boring at 63 ft					
						Backfilled with Bentonite Chips					
					70						
					75						
					80						
					85						



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 6  
 Surface Elevation (ft) 1033.1  
 Job No. C21051-31  
 Sheet 1 of 2

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	REV REV	Rec (in.)	Moist	N		Depth (ft)	q <sub>u</sub> (qa) (tsf)	W	LL	PL
					9 in. Brown Clayey TOPSOIL					
1		16	M	6	Stiff to Very Soft, Stratified Brown, Dark Brown and Gray Lean to Silty CLAY, Trace Sand with thin (<1") Sandy Seams and Lenses (CL - Possible Fill to 5')	(1.5)				
2		15	M	4		(0.5)				
3		17	M/W	0		(<0.2)				
4		16	M/W	0		(<0.2)				
					Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
5		15	M	14	Medium Dense, Brown Sandy SILT to Silty Fine SAND, Some Gravel, Scattered Cobbles (ML/SM)					
6		17	M	19						
7		15	M	23						
					Medium Dense, Brown Silty Fine SAND, Some Gravel, Trace Clay (SM)					
8		16	M	24	Medium Dense, Brown Silty Fine SAND, Some Gravel, Trace Clay (SM)					
9		17	W	18						
					Very Stiff, Brownish-Gray Lean CLAY, Scattered Sand, Gravel and Cobbles (CL)					
10		16	M/W	12		(2.5)				
<b>WATER LEVEL OBSERVATIONS</b>						<b>GENERAL NOTES</b>				
While Drilling $\nabla$ <u>33.5'</u> Upon Completion of Drilling <u>39.8'</u> Time After Drilling _____ Depth to Water _____ Depth to Cave in <u>48.1'</u>						Start <u>8/22/22</u> End <u>8/22/22</u> Driller <u>SE</u> Chief <u>CRJ</u> Rig <u>7822DT</u> Logger <u>AR</u> Editor <u>ESF</u> Drill Method <u>2.25" HSA; Autohammer</u>				
The stratification lines represent the approximate boundary between soil types and the transition may be gradual.										



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 6  
 Surface Elevation 1033.1  
 Job No. C21051-31  
 Sheet 2 of 2

2921 PERRY STREET, MADISON, WIS. 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL
					0	Very Stiff, Brownish-Gray Lean CLAY, Scattered Sand, Gravel and Cobbles (CL)				
11	█	15	M/W	9	45	Loose, Grayish-Brown SILT (ML)				
					50	Dense to Medium Dense, Brown Fine to Coarse SAND, Some Silt and Gravel, Scattered Cobbles (SM)				
12	█	16	W	31						
13	█	0	-	11	55					
					60	Stiff, Grayish-Brown Lean CLAY, Trace Sand, Scattered Gravel and Cobbles (CL)	(1.5)			
14	█	12	M/W	16						
					65	End of Boring at 60 ft				
					70	Backfilled with Bentonite Chips				
					75					
					80					
					85					



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 7  
 Surface Elevation (ft) 1033.1  
 Job No. C21051-31  
 Sheet 1 of 3

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					
No.	EM Elev (in.)	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL	LOI
					0	7 in. TOPSOIL					
1		10	M	9	1	Stiff to Soft Brown Lean Clay, Trace Sand (CL - Possible Fill to 3') Numerous Sand Partings Beginning Near 4'	(1.0)				
2		16	M	4	2		(0.5)				
3		10	M/W	4	3	Loose to Very Loose, Brown Silty Fine SAND, Trace Gravel and Clay (SM) Increasing Clay Content with Depth					
4		14	M	3	4						
					5	Dense to Very Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles and Boulders (SM)					
5		14	M	42	6						
6		18	M	45	7						
					8						
7		12	M	64	9						
					10						
8		8	W	65	11	Very Dense, Brown Fine to Coarse SAND, Some Silt and Gravel, Scattered Cobbles (SM)					
					12						
9		8	W	42	13	Stiff, Brown Lean CLAY, Trace to Little Sand and Gravel (CL)					
					14						
10		8	W	19	15		(1.25)				

### WATER LEVEL OBSERVATIONS

While Drilling  $\nabla$  33.5' Upon Completion of Drilling \_\_\_\_\_  
 Time After Drilling \_\_\_\_\_  
 Depth to Water \_\_\_\_\_  
 Depth to Cave in \_\_\_\_\_

### GENERAL NOTES

Start 9/8/22 End 9/9/22  
 Driller ADC Chief KD Rig CME  
 Logger DB Editor ESF 55  
 Drill Method 4.25" HSA to 10 ft; 3-7/8  
in. RB with Mud to 92.5'

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# LOG OF TEST BORING

Project Feather Edge Pond  
 (Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 7  
 Surface Elevation 1033.1  
 Job No. C21051-31  
 Sheet 2 of 3

2921 PERRY STREET, MADISON, WIS. 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL
					45	Stiff, Brown Lean CLAY, Trace to Little Sand and Gravel (CL)				
11	█	18	W	11		Medium Dense, Stratified Brown and Light Brown Sandy SILT and Silty Fine SAND, Trace Clay (ML/SM)				
					50	Very Dense, Brown Fine to Coarse Sand, Some Silt and Gravel, Trace Clay (SM)				
12	█	10	W	88						
13	█	12	W	73						
					55					
					60	Very Soft, Brown Lean CLAY, Trace Sand (CL)				
14	█	18	W	12			(<0.2)			
					65	Very Dense, Brown Fine to Coarse SAND and GRAVEL, Some Silt (SM/GM)				
15	█	6	W	61/9"						
					70	(Medium Dense with Scattered Clay Lenses Near 69')				
16	█	6	W	24						
					75					
17	█	10	W	31						
					80					
18	█	10	W	36						
					85					
19	█	8	W	82/10"						



# LOG OF TEST BORING

Project Feather Edge Pond  
(Blue Harvest Lane Bridge)  
 Location Madison, WI

Boring No. 7  
 Surface Elevation 1033.1  
 Job No. C21051-31  
 Sheet 3 of 3

2921 PERRY STREET, MADISON, WIS. 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	DEPTH (ft)	Rec (in.)	Moist	N		qu (qa) (tsf)	W	LL	PL	LI
					Very Dense, Brown Fine to Coarse SAND and GRAVEL, Some Silt (SM/GM)					
20		4	W	98 /11"						
21		10	W	70 /10"						
					End of Boring at 92.5 ft					
					Backfilled with Bentonite Slurry and Chips					

**LOG OF TEST BORING**  
General Notes

**DESCRIPTIVE SOIL CLASSIFICATION**

Grain Size Terminology

Soil Fraction	Particle Size	U.S. Standard Sieve Size
Boulders .....	Larger than 12" .....	Larger than 12"
Cobbles .....	3" to 12" .....	3" to 12"
Gravel: Coarse.....	¾" to 3" .....	¾" to 3"
Fine .....	4.76 mm to ¾" .....	#4 to ¾"
Sand: Coarse.....	2.00 mm to 4.76 mm.....	#10 to #4
Medium .....	0.42 to mm to 2.00 mm .....	#40 to #10
Fine .....	0.074 mm to 0.42 mm.....	#200 to #40
Silt.....	0.005 mm to 0.074 mm.....	Smaller than #200
Clay.....	Smaller than 0.005 mm.....	Smaller than #200

Plasticity characteristics differentiate between silt and clay.

General Terminology

Physical Characteristics  
Color, moisture, grain shape, fineness, etc.  
Major Constituents  
Clay, silt, sand, gravel  
Structure  
Laminated, varved, fibrous, stratified, cemented, fissured, etc.  
Geologic Origin  
Glacial, alluvial, eolian, residual, etc.

Relative Density

Term	"N" Value
Very Loose.....	0 - 4
Loose.....	4 - 10
Medium Dense.....	10 - 30
Dense.....	30 - 50
Very Dense.....	Over 50

Relative Proportions Of Cohesionless Soils

Proportional Term	Defining Range by Percentage of Weight
Trace.....	0% - 5%
Little.....	5% - 12%
Some.....	12% - 35%
And .....	35% - 50%

Consistency

Term	q <sub>u</sub> -tons/sq. ft
Very Soft.....	0.0 to 0.25
Soft.....	0.25 to 0.50
Medium.....	0.50 to 1.0
Stiff.....	1.0 to 2.0
Very Stiff.....	2.0 to 4.0
Hard.....	Over 4.0

Organic Content by Combustion Method

Soil Description	Loss on Ignition
Non Organic.....	Less than 4%
Organic Silt/Clay.....	4 - 12%
Sedimentary Peat.....	12% - 50%
Fibrous and Woody Peat...	More than 50%

Plasticity

Term	Plastic Index
None to Slight.....	0 - 4
Slight.....	5 - 7
Medium.....	8 - 22
High to Very High ..	Over 22

The penetration resistance, N, is the summation of the number of blows required to effect two successive 6" penetrations of the 2" split-barrel sampler. The sampler is driven with a 140 lb. weight falling 30" and is seated to a depth of 6" before commencing the standard penetration test.

**SYMBOLS**

Drilling and Sampling

- CS – Continuous Sampling
- RC – Rock Coring: Size AW, BW, NW, 2"W
- RQD – Rock Quality Designation
- RB – Rock Bit/Roller Bit
- FT – Fish Tail
- DC – Drove Casing
- C – Casing: Size 2 ½", NW, 4", HW
- CW – Clear Water
- DM – Drilling Mud
- HSA – Hollow Stem Auger
- FA – Flight Auger
- HA – Hand Auger
- COA – Clean-Out Auger
- SS - 2" Dia. Split-Barrel Sample
- 2ST – 2" Dia. Thin-Walled Tube Sample
- 3ST – 3" Dia. Thin-Walled Tube Sample
- PT – 3" Dia. Piston Tube Sample
- AS – Auger Sample
- WS – Wash Sample
- PTS – Peat Sample
- PS – Pitcher Sample
- NR – No Recovery
- S – Sounding
- PMT – Borehole Pressuremeter Test
- VS – Vane Shear Test
- WPT – Water Pressure Test

Laboratory Tests

- q<sub>a</sub> – Penetrometer Reading, tons/sq ft
- q<sub>u</sub> – Unconfined Strength, tons/sq ft
- W – Moisture Content, %
- LL – Liquid Limit, %
- PL – Plastic Limit, %
- SL – Shrinkage Limit, %
- LI – Loss on Ignition
- D – Dry Unit Weight, lbs/cu ft
- pH – Measure of Soil Alkalinity or Acidity
- FS – Free Swell, %

Water Level Measurement

- ▽ - Water Level at Time Shown
- NW – No Water Encountered
- WD – While Drilling
- BCR – Before Casing Removal
- ACR – After Casing Removal
- CW – Cave and Wet
- CM – Caved and Moist

Note: Water level measurements shown on the boring logs represent conditions at the time indicated and may not reflect static levels, especially in cohesive soils.



# CGC, Inc.

Madison - Milwaukee

# Unified Soil Classification System

## UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

### COARSE-GRAINED SOILS

(more than 50% of material is larger than No. 200 sieve size)

#### Clean Gravels (Less than 5% fines)



GW

Well-graded gravels, gravel-sand mixtures, little or no fines



GP

Poorly-graded gravels, gravel-sand mixtures, little or no fines

#### Gravels with fines (More than 12% fines)



GM

Silty gravels, gravel-sand-silt mixtures



GC

Clayey gravels, gravel-sand-clay mixtures

**GRAVELS**  
More than 50% of coarse fraction larger than No. 4 sieve size

#### Clean Sands (Less than 5% fines)



SW

Well-graded sands, gravelly sands, little or no fines



SP

Poorly graded sands, gravelly sands, little or no fines

**SANDS**  
50% or more of coarse fraction smaller than No. 4 sieve size

#### Sands with fines (More than 12% fines)



SM

Silty sands, sand-silt mixtures



SC

Clayey sands, sand-clay mixtures

### FINE-GRAINED SOILS

(50% or more of material is smaller than No. 200 sieve size.)

#### SILTS AND CLAYS

Liquid limit less than 50%



ML

Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity



CL

Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays



OL

Organic silts and organic silty clays of low plasticity

#### SILTS AND CLAYS

Liquid limit 50% or greater



MH

Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts



CH

Inorganic clays of high plasticity, fat clays



OH

Organic clays of medium to high plasticity, organic silts

#### HIGHLY ORGANIC SOILS



PT

Peat and other highly organic soils

## LABORATORY CLASSIFICATION CRITERIA

GW  $C_u = \frac{D_{60}}{D_{10}}$  greater than 4;  $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$  between 1 and 3

GP Not meeting all gradation requirements for GW

GM Atterberg limits below "A" line or P.I. less than 4

Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols

GC Atterberg limits above "A" line or P.I. greater than 7

SW  $C_u = \frac{D_{60}}{D_{10}}$  greater than 4;  $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$  between 1 and 3

SP Not meeting all gradation requirements for GW

SM Atterberg limits below "A" line or P.I. less than 4

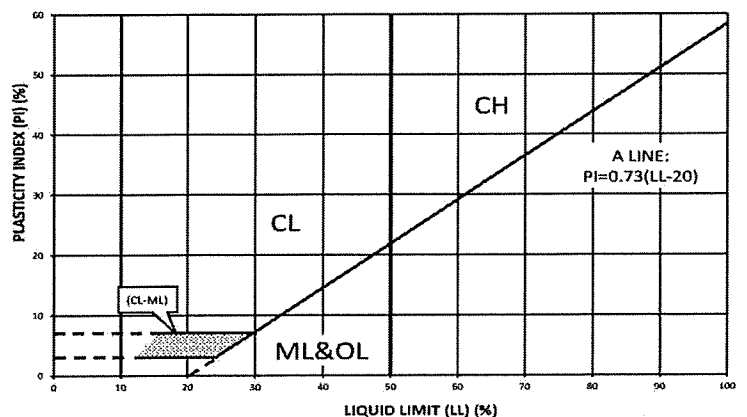
Limits plotting in shaded zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols

SC Atterberg limits above "A" line with P.I. greater than 7

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

Less than 5 percent ..... GW, GP, SW, SP  
More than 12 percent ..... GM, GC, SM, SC  
5 to 12 percent ..... Borderline cases requiring dual symbols

## PLASTICITY CHART





Department of Public Works  
**Engineering Division**  
 James M. Wolfe, P.E., City Engineer  
 City-County Building, Room 115  
 210 Martin Luther King, Jr. Boulevard  
 Madison, Wisconsin 53703  
 Phone: (608) 266-4751  
 Fax: (608) 264-9275  
[engineering@cityofmadison.com](mailto:engineering@cityofmadison.com)  
[www.cityofmadison.com/engineering](http://www.cityofmadison.com/engineering)

**Assistant City Engineer**  
 Bryan Cooper, AIA  
 Gregory T. Fries, P.E.  
 Chris Petykowski, P.E.

**Deputy Division Manager**  
 Kathleen M. Cryan

**Principal Engineer 2**  
 John S. Fahrney, P.E.  
 Janet Schmidt, P.E.

**Principal Engineer 1**  
 Mark D. Moder, P.E.  
 Andrew J. Zwiag, P.E.

**Financial Manager**  
 Steven B. Danner-Rivers

April 23, 2024

**NOTICE OF ADDENDUM  
 ADDENDUM 1  
 CONTRACT NO. 8317**

**Blue Harvest Lane, Feather Edge Drive, & Soaring Sky Run Assessment District – 2023**

Revise and amend the contract document(s) for the above project as stated in this addendum, otherwise, the original document shall remain in effect.

**PROPOSAL:**

ITEMS HAVE BEEN REVISED IN THE PROPOSAL. SEE BID EXPRESS.

<b>ACTION</b>	<b>BID ITEM</b>	<b>DESCRIPTION</b>
REMOVE	10702	TRAFFIC CONTROL FOR STORM SEWER INSTALLATION
REMOVE	10703	TRAFFIC CONTROL FOR WATER MAIN INSTALLATION
REMOVE	10704	TRAFFIC CONTROL FOR SANITARY SEWER INSTALLATION
REMOVE	10912	MOBILIZATION FOR STORM SEWER INSTALLATION
REMOVE	10913	MOBILIZATION FOR WATER MAIN INSTALLATION
REMOVE	10914	MOBILIZATION FOR SANITARY SEWER INSTALLATION
REVISE	20101	EXCAVATION CUT
REMOVE DUPLICATE	20101	EXCAVATION CUT
REMOVE DUPLICATE	20109	FINISH GRADING
REVISE	20141	GEOSYNTHETIC REINFORCEMENT FABRIC
REMOVE DUPLICATE	20141	GEOSYNTHETIC REINFORCEMENT FABRIC
REVISE	20202	FILL BORROW
REMOVE DUPLICATE	20202	FILL BORROW
REVISE	20204	SELECT FILL
REMOVE DUPLICATE	20204	SELECT FILL
REVISE	20219	BREAKER RUN (UNSDISTRIBUTED)

REMOVE DUPLICATE	20219	BREAKER RUN (UNSDISTRIBUTED)
REVISE	20221	TOPSOIL
REMOVE DUPLICATE	20221	TOPSOIL
REMOVE DUPLICATE	20221	TOPSOIL
REVISE	20303	SAWCUT ASPHALT PAVEMENT
REMOVE DUPLICATE	20303	SAWCUT ASPHALT PAVEMENT
REVISE	21063	EROSION MATTING, CLASS I, TYPE A - ORGANIC
REMOVE DUPLICATE	21063	EROSION MATTING, CLASS I, TYPE A - ORGANIC
REVISE	30304	7 INCH CONCRETE SIDEWALK & DRIVE
REMOVE DUPLICATE	30304	7 INCH CONCRETE SIDEWALK & DRIVE
REVISE	40102	CRUSHED AGGREGATE BASE COURSE GRADATION NO. 2
REMOVE DUPLICATE	40102	CRUSHED AGGREGATE BASE COURSE GRADATION NO. 2
REVISE	40202	HMA PAVEMENT 4 LT 58-28 S
REMOVE DUPLICATE	40202	HMA PAVEMENT 4 LT 58-28 S
REVISE ITEM DESCRIPTION	50701	4' DIA. SANITARY SAS
REVISE	50801	UTILITY LINE OPENING (ULO)
REMOVE DUPLICATE	50801	UTILITY LINE OPENING (ULO)

**PLANS:**

Sheet U-15: Added existing ground elevations for Soaring Sky Run Pond.

Sheet U-16: Added SAS diameter notes.

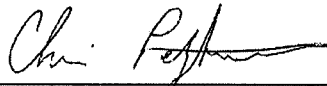
Please acknowledge this addendum on page E1 of the contract documents and/or in Section E: Bidder's Acknowledgement on Bid Express.

Electronic version of these documents can be found on the Bid Express web site at:

<http://www.bidexpress.com>

If you are unable to download plan revisions associated with the addendum, please contact the Engineering office at 608-266-4751 receive the material by another route.

Sincerely,

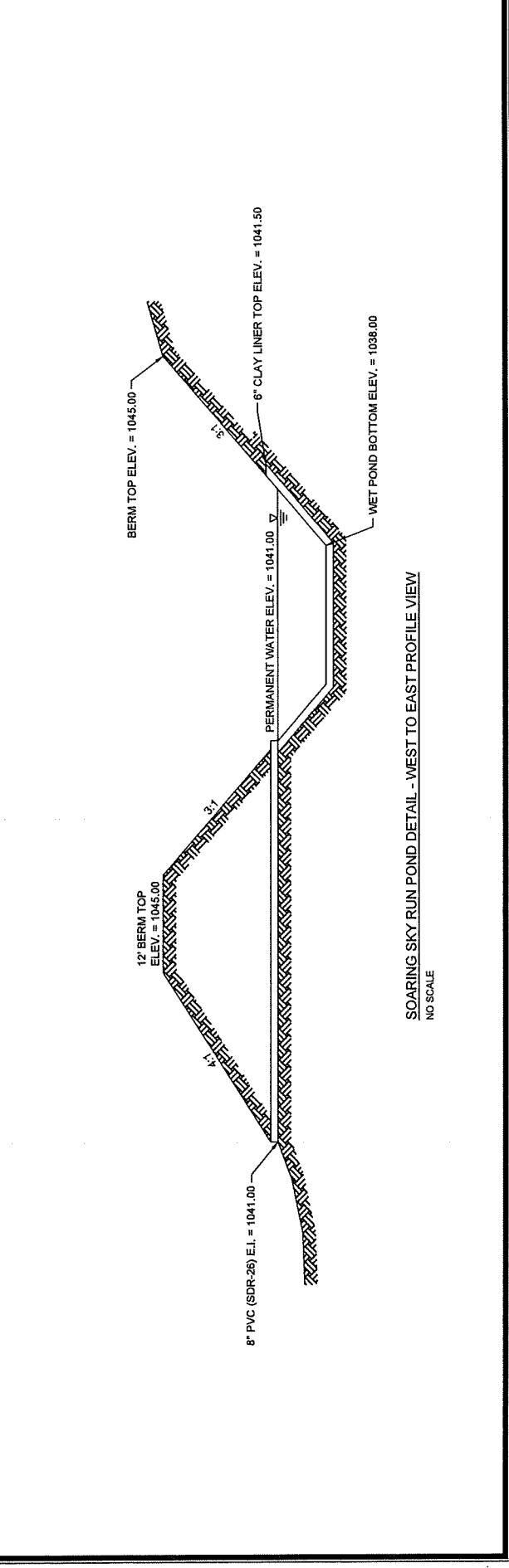
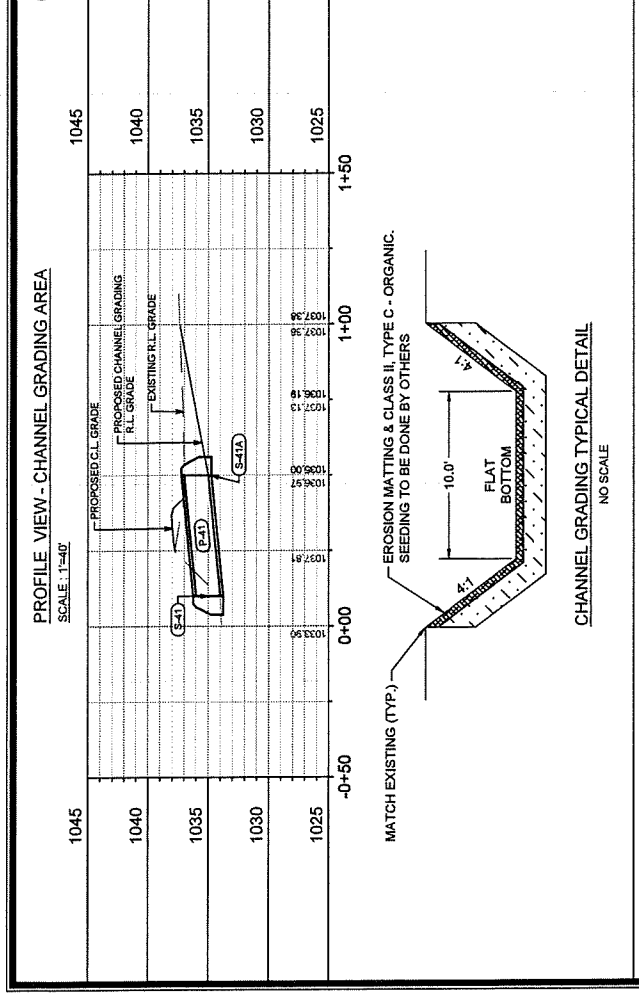
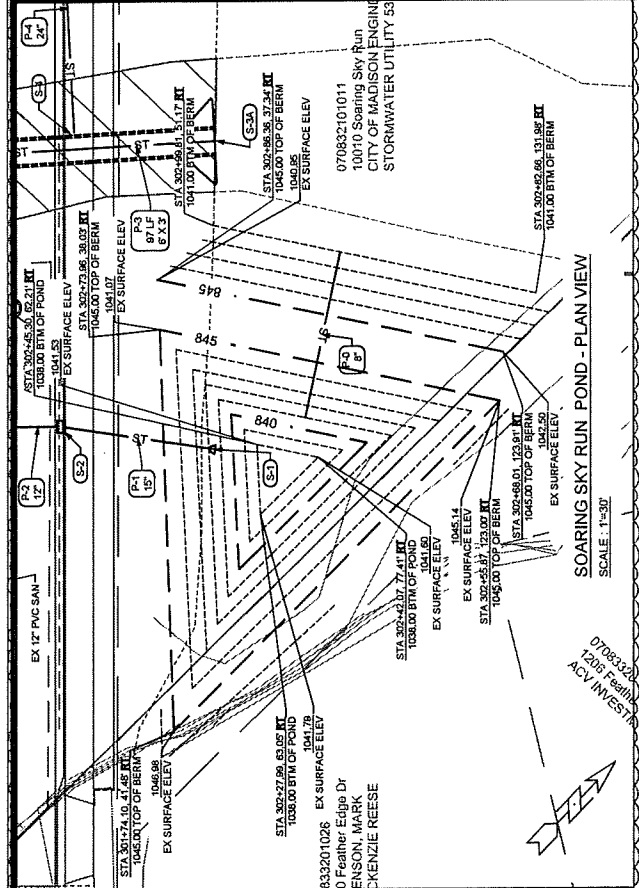
  
 \_\_\_\_\_ for  
 James M. Wolfe, P.E., City Engineer

DATE	1/15/24	BY	JLS
SCALE	1" = 40'	DATE	4/22/24
PROJECT	ESSTING CHANGES ADDED	SCALE	1" = 40'
DRAWN	JLS	DATE	4/22/24
CHECKED	JLS	DATE	4/22/24
APPROVED	JLS	DATE	4/22/24

13893  
 8317 CONTRACT NO: 2023 MADISON, WI  
 BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN ASSESSMENT DISTRICT - 2023 MADISON, WI  
 MADEKINPROJECT\13893\CAD\DWG\13893\WR-PipeNetwork.dwg  
 13893 STORM WATER DETAILS



13893  
U-15



REVISION

BLUE HARVEST, FEATHER EDGE, & SOARING SKY ASSESSMENT DIST - 2023 PROJECT NO. 13893 SANITARY SEWER SCHEDULE CITY OF MADISON

→ ADDENDUM KDF 412214

PROPOSED SANITARY PIPES

FROM (DNSTM) TO (UPSTM) PLAN (PAY) SLOPE LGTH (FT) (%) PIPE SIZE PVC TYPE NOTES

SOARING SKY RUN SAS #1464-006 SAS #1 1029.00 1030.20 120 1.00% 8" SDR-26

SANITARY SEWER SCHEDULE

PROPOSED SANITARY STRUCTURES

SAS NO. STATION LOCATION (OFFSET) TOP OF CASTING E.I. DEPTH NOTES

SOARING SKY RUN SAS #1 304+00.00 CL 1044.5 1030.20 14.30 [1], [2]

SANITARY STRUCTURES ADJUSTMENTS

STRUCTURE ID NO. STATION LOCATION (OFFSET) EX. TOC ELEV. PROP ELEV. ADJUST DIFF. NOTES

SOARING SKY RUN SAS #1464-006 302+79.60 RT-1.06 1043.88 1046.17 2.29 [3]
PATH 1 SAS #1465-001 14+88.22 LT-9.94 1034.70 1036.08 1.38 [3]
SAS #1465-001 19+87.99 LT-10.00 1032.88 1035.48 2.60 [3]
SAS #1465-002 22+82.17 LT-14.98 1032.33 1034.90 2.57 [3]
SAS #1465-003 26+82.33 LT-8.57 1034.38 1036.53 4.15 [3]
SAS #1464-002 30+83.49 RT-9.72 1037.34 1037.85 0.51

SANITARY STRUCTURES EXCAVATE, BACKFILL, INSTALL SAS JOINT SEAL

STRUCTURE ID NO. STATION LOCATION (OFFSET) NOTES

SOARING SKY RUN SAS #1464-006 302+79.60 RT-1.06 [2]

PATH 1 SAS #1567-020 0+42.82 RT-16.10 [2], 5-FT DIA
SAS #1567-025 5+39.50 LT-40.26 [2], 5-FT DIA
SAS #1566-010 9+77.33 LT-28.10 [2], 5-FT DIA
SAS #1465-001 14+88.22 LT-9.94 [2], 5-FT DIA
SAS #1465-001 19+87.99 LT-10.00 [2], 5-FT DIA
SAS #1465-002 22+82.17 LT-14.98 [2], 5-FT DIA
SAS #1465-003 26+82.33 LT-8.57 [2], 5-FT DIA
SAS #1464-002 30+83.49 RT-9.72 [2], 5-FT DIA
SAS #1464-003 31+78.86 LT-16.15 [2], 5-FT DIA
SAS #1464-004 35+38.81 LT-9.16 [2], 5-FT DIA
SAS #1463-001 39+06.43 LT-12.15 [2], 5-FT DIA

SPECIFIC NOTES

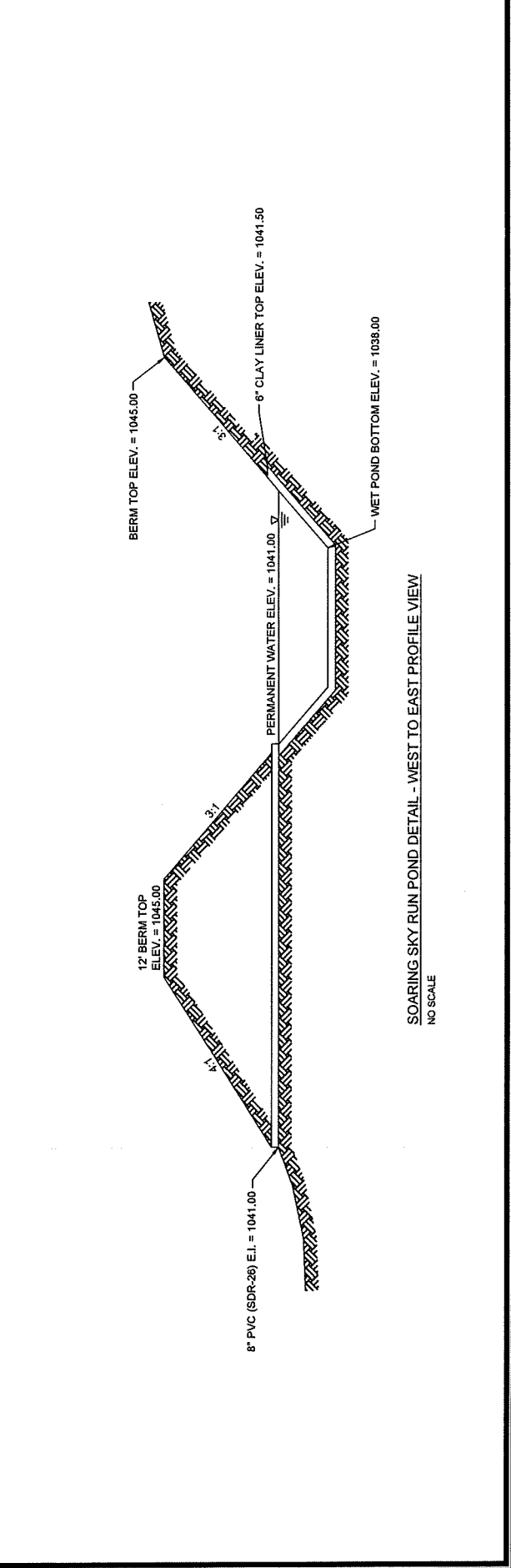
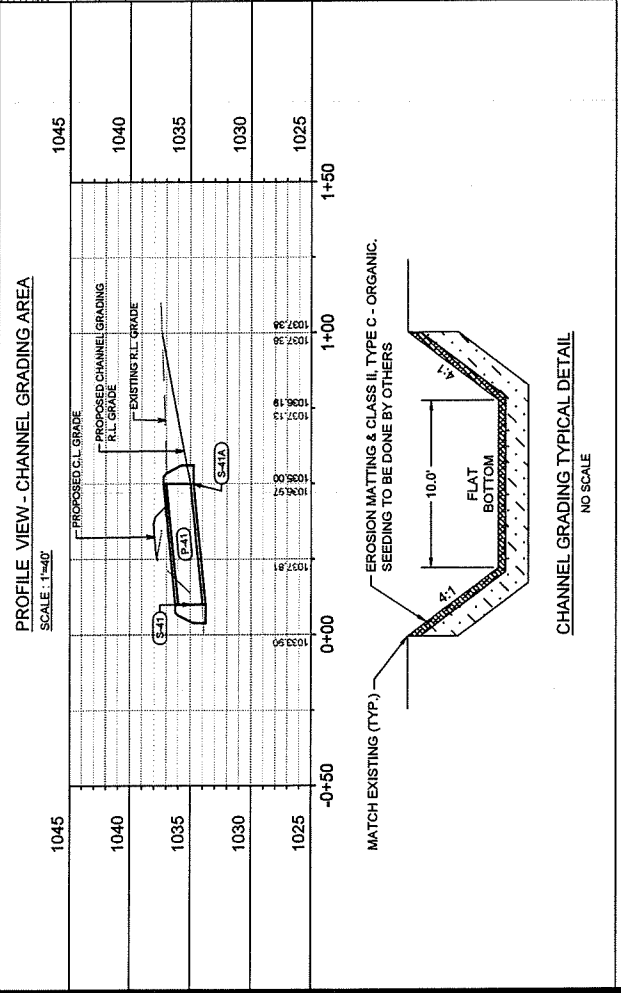
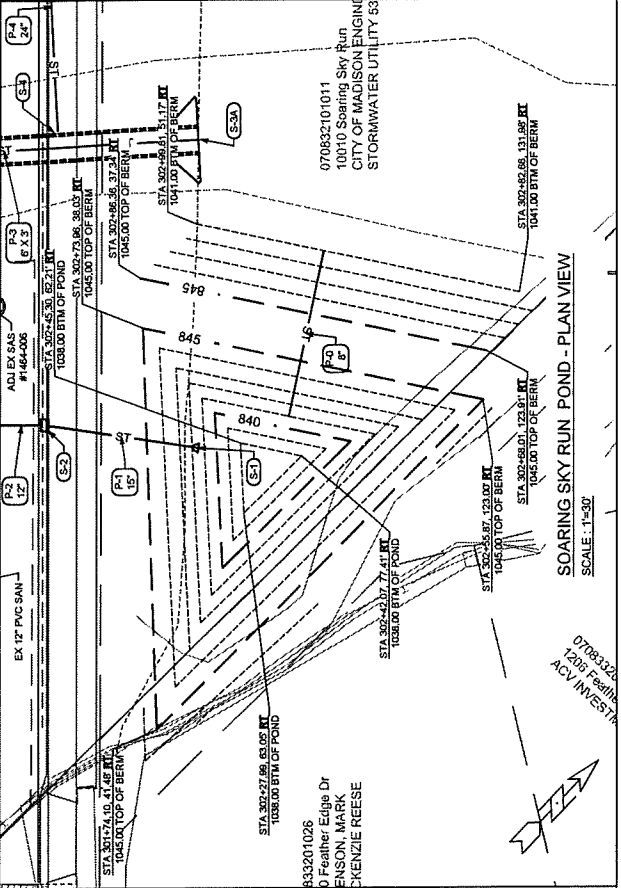
- [1] INSTALL RIGID INTERNAL CHIMNEY SEAL IN ACCORDANCE WITH SDD 5.7.17
[2] INSTALL EXTERNAL SAS WRAP IN ACCORDANCE WITH CITY S.D.D. 5.7.2
[3] ADJUSTMENT OF CASTING WILL BE PAID UNDER BID ITEM 90071 - REBUILD SEWER ACCESS STRUCTURE

DATE	BY	REVISION
12/15/2021	MS	13893

CONTRACT NO: 13893  
 BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN ASSESSMENT DISTRICT - 2022 MADISON, WI  
 DESIGN PROJECT: 13893\CD\SW\0113893\SWR-Fip\Network.dwg  
 U-15



13893  
 U-15



Original

# SANITARY SEWER SCHEDULE

BLUE HARVEST, FEATHER EDGE, &  
SOARING SKY ASSESSMENT DIST - 2023  
PROJECT NO. 13893  
SANITARY SEWER SCHEDULE  
CITY OF MADISON

SHEET NO.  
U-16

## PROPOSED SANITARY PIPES

FROM (DNSTM)	TO (UPSTM)	SAS #1	DWNSTRM E.I.	UPSTRM E.I.	PLAN LGTH (FT)	SLOPE (%)	PIPE SIZE	PVC TYPE	NOTES
SOARING SKY RUN SAS #1464-006	SAS #1		1029.00	1030.20	120	1.00%	8"	SDR-26	-

## PROPOSED SANITARY STRUCTURES

SAS NO.	STATION	LOCATION (OFFSET)	TOP OF CASTING	E.I.	DEPTH	NOTES
SOARING SKY RUN SAS #1	304+00.00	CL	1044.5	1030.20	14.30	[1], [2]

## SANITARY STRUCTURES ADJUSTMENTS

STRUCTURE ID NO.	STATION	LOCATION (OFFSET)	EX. TOC ELEV.	PROP ELEV.	ADJUST DIFF.	NOTES
SOARING SKY RUN SAS #1464-006	302+79.60	RT-1.06	1043.88	1046.17	2.29	[3]
PATH 1 SAS #1466-001	14+68.22	LT-9.94	1034.70	1035.08	1.38	[3]
SAS #1465-001	19+67.99	LT-10.00	1032.88	1035.48	2.60	[3]
SAS #1465-002	22+82.17	LT-14.98	1032.33	1034.90	2.57	[3]
SAS #1465-003	26+82.33	LT-8.57	1034.38	1036.53	4.15	[3]
SAS #1464-002	30+83.49	RT-9.72	1037.34	1037.85	0.51	-

## SANITARY STRUCTURES EXCAVATE, BACKFILL, INSTALL SAS JOINT SEAL

STRUCTURE ID NO.	STATION	LOCATION (OFFSET)	NOTES
SOARING SKY RUN SAS #1464-006	302+79.60	RT-1.06	[2]
PATH 1 SAS #1567-020	0+42.82	RT-16.10	[2]
SAS #1567-025	5+38.50	LT-40.26	[2]
SAS #1566-010	9+77.33	LT-28.10	[2]
SAS #1466-001	14+68.22	LT-9.94	[2]
SAS #1465-001	19+67.99	LT-10.00	[2]
SAS #1465-002	22+82.17	LT-14.98	[2]
SAS #1465-003	26+82.33	LT-8.57	[2]
SAS #1464-002	30+83.49	RT-9.72	[2]
SAS #1464-003	31+78.86	LT-16.15	[2]
SAS #1464-004	35+38.81	LT-9.16	[2]
SAS #1463-001	39+06.43	LT-12.15	[2]

## SPECIFIC NOTES

- INSTALL RIGID INTERNAL CHIMNEY SEAL IN ACCORDANCE WITH SDD 5.7.17
- INSTALL EXTERNAL SAS WRAP IN ACCORDANCE WITH CITY S.O.D. 5.7.2
- ADJUSTMENT OF CASTING WILL BE PAID UNDER BID ITEM 90071 - REBUILD SEWER ACCESS STRUCTURE

**SECTION E: BIDDERS ACKNOWLEDGEMENT**

**BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN  
ASSESSMENT DISTRICT - 2023  
CONTRACT NO. 8317**

Bidder must state a Unit Price and Total Bid for each item. The Total Bid for each item must be the product of quantity, by Unit Price. The Grand Total must be the sum of the Total Bids for the various items. In case of multiplication errors or addition errors, the Grand Total with corrected multiplication and/or addition shall determine the Grand Total bid for each contract. The Unit Price and Total Bid must be entered numerically in the spaces provided. All words and numbers shall be written in ink.

1. The undersigned having familiarized himself/herself with the Contract documents, including Advertisement for Bids, Instructions to Bidders, Form of Proposal, City of Madison Standard Specifications for Public Works Construction - 2024 Edition thereto, Form of Agreement, Form of Bond, and Addenda issued and attached to the plans and specifications on file in the office of the City Engineer, hereby proposes to provide and furnish all the labor, materials, tools, and expendable equipment necessary to perform and complete in a workmanlike manner the specified construction on this project for the City of Madison; all in accordance with the plans and specifications as prepared by the City Engineer, including Addenda Nos. 1 through 1 to the Contract, at the prices for said work as contained in this proposal. (Electronic bids submittals shall acknowledge addendum under Section E and shall not acknowledge here)
2. If awarded the Contract, we will initiate action within seven (7) days after notification or in accordance with the date specified in the contract to begin work and will proceed with diligence to bring the project to full completion within the number of work days allowed in the Contract or by the calendar date stated in the Contract.
3. The undersigned Bidder or Contractor certifies that he/she is not a party to any contract, combination in form of trust or otherwise, or conspiracy in restraint of trade or commerce or any other violation of the anti-trust laws of the State of Wisconsin or of the United States, with respect to this bid or contract or otherwise.
4. I hereby certify that I have met the Bid Bond Requirements as specified in Section 102.5. (IF BID BOND IS USED, IT SHALL BE SUBMITTED ON THE FORMS PROVIDED BY THE CITY. FAILURE TO DO SO MAY RESULT IN REJECTION OF THE BID).
5. I hereby certify that all statements herein are made on behalf of Speedway Sand & Gravel (name of corporation, partnership, or person submitting bid) a corporation organized and existing under the laws of the State of WI; a partnership consisting of \_\_\_\_\_; an individual trading as \_\_\_\_\_; of the City of \_\_\_\_\_ State of \_\_\_\_\_; that I have examined and carefully prepared this Proposal, from the plans and specifications and have checked the same in detail before submitting this Proposal; that I have fully authority to make such statements and submit this Proposal in (its, their) behalf; and that the said statements are true and correct.

[Signature]

SIGNATURE

V.P.

TITLE, IF ANY

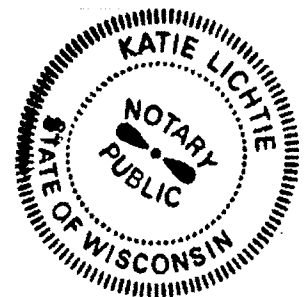
Sworn and subscribed to before me this

24 day of April, 2024.

[Signature]  
(Notary Public or other officer authorized to administer oaths)

My Commission Expires 01-06-27

Bidders shall not add any conditions or qualifying statements to this Proposal.





**Best Value Contracting**

**1. The Contractor shall indicate the non-apprenticeable trades used on this contract.**

2. Madison General Ordinance (M.G.O.), 33.07(7), does provide for some exemptions from the active apprentice requirement. Apprenticeable trades are those trades considered apprenticeable by the State of Wisconsin. Please check applicable box if you are seeking an exemption.

Contractor has a total skilled workforce of four or less individuals in all apprenticeable trades combined.

No available trade training program; The Contractor has been rejected by the only available trade training program, or there is no trade training program within 90 miles.

Contractor is not using an apprentice due to having a journey worker on layoff status, provided the journey worker was employed by the contractor in the past six months.

First time contractor on City of Madison Public Works contract requests a onetime exemption but intends to comply on all future contracts and is taking steps typical of a "good faith" effort.

Contractor has been in business less than one year.

Contractor doesn't have enough journeyman trade workers to qualify for a trade training program in that respective trade.

An exemption is granted in accordance with a time period of a "Documented Depression" as defined by the State of Wisconsin.

3. The Contractor shall indicate on the following section which apprenticeable trades are to be used on this contract. Compliance with active apprenticeship, to the extent required by M.G.O. 33.07(7), shall be satisfied by documentation from an applicable trade training body; an apprenticeship contract with the Wisconsin Department of Workforce Development or a similar agency in another state; or the U.S Department of Labor. This documentation is required prior to the Contractor beginning work on the project site.

The Contractor has reviewed the list and shall not use any apprenticeable trades on this project.

LIST APPRENTICABLE TRADES (check all that apply to your work to be performed on this contract)

BRICKLAYER

CARPENTER

CEMENT MASON / CONCRETE FINISHER

CEMENT MASON (HEAVY HIGHWAY)

CONSTRUCTION CRAFT LABORER

DATA COMMUNICATION INSTALLER

ELECTRICIAN

ENVIRONMENTAL SYSTEMS TECHNICIAN / HVAC SERVICE TECH/HVAC INSTALL / SERVICE

GLAZIER

HEAVY EQUIPMENT OPERATOR / OPERATING ENGINEER

INSULATION WORKER (HEAT and FROST)

IRON WORKER

IRON WORKER (ASSEMBLER, METAL BLDGS)

PAINTER and DECORATOR

PLASTERER

PLUMBER

RESIDENTIAL ELECTRICIAN

ROOFER and WATER PROOFER

SHEET METAL WORKER

SPRINKLER FITTER

STEAMFITTER

STEAMFITTER (REFRIGERATION)

STEAMFITTER (SERVICE)

TAPER and FINISHER

TELECOMMUNICATIONS (VOICE, DATA and VIDEO) INSTALLER-TECHNICIAN

TILE SETTER

**BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN  
ASSESSMENT DISTRICT - 2023  
CONTRACT NO. 8317**

**Small Business Enterprise Compliance Report**

This information may be submitted electronically through  
Bid Express or submitted with bid in sealed envelope.

**Cover Sheet**

Prime Bidder Information

Company: SPEEDWAY SAND & GRAVEL, INC.

Address: 8500 GREENWAY BLVD, SUITE 202 | MIDDLETON, WI 53562

Telephone Number: (608) 836-1071 Fax Number: (608) 836-7485

Contact Person/Title: KATIE LICHTIE / PROJECT MANAGER

Prime Bidder Certification

I, KATIE LICHTIE, PROJECT MANAGER of

Name

Title

SPEEDWAY SAND & GRAVEL, INC. certify that the information  
Company

contained in this SBE Compliance Report is true and correct to the best of my knowledge and belief.

Matt C Jensen  
Witness' Signature

[Handwritten Signature]  
Bidder's Signature

APRIL 25, 2024  
Date

**BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN  
ASSESSMENT DISTRICT - 2023  
CONTRACT NO. 8317**

**Small Business Enterprise Compliance Report**

**Summary Sheet**

SBE Subcontractors Who Are NOT Suppliers

Name(s) of SBEs Utilized	Type of Work	% of Total Bid Amount
<b>SCHLOBOHM TRUCKING</b>	<b>TRUCKING</b>	<b>3.87 %</b>
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
		%
<b>Subtotal SBE who are NOT suppliers:</b>		<b>3.87 %</b>

SBE Subcontractors Who Are Suppliers

Name(s) of SBEs Utilized	Type of Work	% of Total Bid Amount
		%
		%
		%
		%
		%
		%
<b>Subtotal Contractors who are suppliers:</b>	_____ % x 0.6 = _____	% (discounted to 60%)
<b>Total Percentage of SBE Utilization:</b>	_____	<b>3.87 %</b>

**BLUE HARVEST, FEATHER RIDGE, & SOARING SKY RUN ASSESSMENT DISTRICT - 2023**

CONTRACT NO. 8317

DATE: 4/25/24

**Speedway Sand & Gravel,  
Inc.**

Item	Quantity	Price	Extension
<b>Section B: Proposal Page</b>			
10701 - TRAFFIC CONTROL - LUMP SUM	1.00	\$1,500.00	\$1,500.00
10911 - MOBILIZATION - LUMP SUM	1.00	\$64,000.00	\$64,000.00
20101 - EXCAVATION CUT- C.Y.	6100.00	\$3.00	\$18,300.00
20109 - FINISH GRADING - LUMP SUM	1.00	\$8,000.00	\$8,000.00
20130 - UNDERDRAIN - L.F.	700.00	\$13.00	\$9,100.00
20140 - GEOTEXTILE FABRIC TYPE SAS (NON-WOVEN) - S.Y.	1340.00	\$2.50	\$3,350.00
20141 - GEOSYNTHETIC REINFORCEMENT FABRIC - S.Y.	2520.00	\$5.50	\$13,860.00
20202 - FILL BORROW - C.Y.	10400.00	\$7.00	\$72,800.00
20204 - SELECT FILL - TON	19560.00	\$14.25	\$278,730.00
20217 - CLEAR STONE - TON	400.00	\$19.60	\$7,840.00
20219 - BREAKER RUN (UNDISTRIBUTED) - TON	1540.00	\$20.50	\$31,570.00
20221 - TOPSOIL - S.Y.	23245.00	\$1.51	\$35,099.95
20303 - SAWCUT ASPHALT PAVEMENT - L.F.	80.00	\$5.00	\$400.00
20322 - REMOVE CONCRETE CURB & GUTTER - L.F.	40.00	\$10.00	\$400.00
20323 - REMOVE CONCRETE SIDEWALK & DRIVE - S.F.	140.00	\$5.00	\$700.00
20326 - REMOVE FENCE - L.F.	50.00	\$12.00	\$600.00
20404 - CLEARING - LUMP SUM	1.00	\$7,000.00	\$7,000.00
20409 - GRUBBING - LUMP SUM	1.00	\$2,000.00	\$2,000.00
20501 - ADJUST SEWER ACCESS STRUCTURE - EACH	1.00	\$1,400.00	\$1,400.00
20705 - DETENTION BASIN SEEDING - S.Y.	1125.00	\$2.95	\$3,318.75
21002 - EROSION CONTROL INSPECTION - EACH	5.00	\$400.00	\$2,000.00
21011 - CONSTRUCTION ENTRANCE - EACH	3.00	\$1,500.00	\$4,500.00
21013 - STREET SWEEPING - LUMP SUM	1.00	\$10,000.00	\$10,000.00
21022 - SILT FENCE - PROVIDE, INSTALL & MAINTAIN - L.F.	12570.00	\$1.95	\$24,511.50
21023 - SILT FENCE - REMOVE AND RESTORE - L.F.	12570.00	\$0.10	\$1,257.00
21049 - INLET PROTECTION, RIGID FRAME - PROVIDE & INSTALL - EACH	15.00	\$275.00	\$4,125.00
21050 - INLET PROTECTION, RIGID FRAME - MAINTAIN - EACH	25.00	\$35.00	\$875.00
21051 - INLET PROTECTION, RIGID FRAME - REMOVE - EACH	15.00	\$15.00	\$225.00
21063 - EROSION MATTING, CLASS I, TYPE A - ORGANIC - S.Y.	22120.00	\$1.80	\$39,816.00
21073 - EROSION MATTING, CLASS II, TYPE C - ORGANIC - S.Y.	1125.00	\$4.75	\$5,343.75
30201 - TYPE "A" CONCRETE CURB & GUTTER - L.F.	3686.00	\$25.34	\$93,403.24
30203 - TYPE "X" CONCRETE CURB & GUTTER - L.F.	52.00	\$39.14	\$2,035.28
30302 - 5 INCH CONCRETE SIDEWALK - S.F.	5685.00	\$5.90	\$33,541.50
30304 - 7 INCH CONCRETE SIDEWALK & DRIVE - S.F.	930.00	\$10.33	\$9,606.90
30340 - CURB RAMP DETECTABLE WARNING FIELDS - S.F.	120.00	\$51.00	\$6,120.00
40101 - CRUSHED AGGREGATE BASE COURSE GRADATION NO. 1 - TON	2055.00	\$20.50	\$42,127.50
40102 - CRUSHED AGGREGATE BASE COURSE GRADATION NO. 2 - TON	6880.00	\$21.00	\$144,480.00
40202 - HMA PAVEMENT 4 LT 58-28 S - TON	2225.00	\$93.00	\$206,925.00
40218 - TACK COAT - GAL	380.00	\$2.75	\$1,045.00
40301 - FULL WIDTH GRINDING - S.Y.	330.00	\$16.00	\$5,280.00
40410 - CONCRETE SPEED HUMP - S.Y.	70.00	\$96.31	\$6,741.70
50202 - DEWATERING TYPE II - LUMP SUM	1.00	\$500.00	\$500.00
50211 - SELECT BACKFILL FOR STORM SEWER - T.F.	1121.00	\$1.00	\$1,121.00
50212 - SELECT BACKFILL SANITARY SEWER - T.F.	120.00	\$1.00	\$120.00

**BLUE HARVEST, FEATHER RIDGE, & SOARING SKY RUN ASSESSMENT DISTRICT - 2023**

CONTRACT NO. 8317

DATE: 4/25/24

**Speedway Sand & Gravel,  
Inc.**

Item	Quantity	Price	Extension
50225 - UTILITY TRENCH PATCH TYPE III - T.F.	35.00	\$57.70	\$2,019.50
50301 - 8" PVC SEWER PIPE (SDR 26) - L.F.	120.00	\$75.49	\$9,058.80
50401 - 12 INCH TYPE I RCP STORM SEWER PIPE - L.F.	573.00	\$74.87	\$42,900.51
50402 - 15 INCH TYPE I RCP STORM SEWER PIPE - L.F.	141.50	\$82.40	\$11,659.60
50403 - 18 INCH TYPE I RCP STORM SEWER PIPE - L.F.	83.00	\$88.15	\$7,316.45
50405 - 24 INCH TYPE I RCP STORM SEWER PIPE - L.F.	184.50	\$101.66	\$18,756.27
50441 - 8 INCH TYPE III STORM SEWER PIPE - L.F.	42.00	\$68.75	\$2,887.50
50461 - 12 INCH RCP AE - EACH	4.00	\$1,190.00	\$4,760.00
50462 - 15 INCH RCP AE - EACH	1.00	\$1,265.00	\$1,265.00
50463 - 18 INCH RCP AE - EACH	3.00	\$1,320.00	\$3,960.00
50465 - 24 INCH RCP AE - EACH	6.00	\$1,525.00	\$9,150.00
50501 - PRECAST REINFORCED CONCRETE BOX CULVERT (6' SPAN X 3' RISE) - L.F.	97.00	\$662.46	\$64,258.62
50511 - REINFORCED CONCRETE BOX CULVERT WINGWALLS (6' SPAN X 3' RISE) - EACH	2.00	\$19,173.00	\$38,346.00
50701 - 4' DIA. SANITARY SAS - EACH	1.00	\$5,160.00	\$5,160.00
50723 - 3'X3' STORM SAS - EACH	3.00	\$4,035.00	\$12,105.00
50741 - TYPE H INLET - EACH	13.00	\$2,724.00	\$35,412.00
50771 - INTERNAL CHIMNEY SEAL - EACH	1.00	\$417.80	\$417.80
50791 - SANITARY SEWER TAP - EACH	1.00	\$1,000.00	\$1,000.00
50792 - STORM SEWER TAP - EACH	1.00	\$3,000.00	\$3,000.00
50797 - EXTERNAL SEWER ACCESS STRUCTURE JOINT SEAL - EACH	1.00	\$675.00	\$675.00
50801 - UTILITY LINE OPENING (ULO) - EACH	6.00	\$500.00	\$3,000.00
60232 - FURNISH & INSTALL 2 INCH PVC (SCHEDULE 40) CONDUIT - L.F.	4975.00	\$8.00	\$39,800.00
60241 - GOPHER RACEWAY FOR ELECTRICAL CONDUIT - L.F.	10.00	\$35.00	\$350.00
60255 - FURNISH & INSTALL 3 #6 AND 1 #8 WIRES IN EXISTING OR CONTRACTORINSTALLED CONDUIT - L.F.	5100.00	\$8.00	\$40,800.00
60261 - ELECTRICAL TRENCH - L.F.	2750.00	\$4.00	\$11,000.00
60402 - CONSTRUCT LB-2 BASE - EACH	25.00	\$900.00	\$22,500.00
60413 - CONSTRUCT TYPE "P" BASE - EACH	1.00	\$1,500.00	\$1,500.00
60702 - CONSTRUCT ELECTRICAL HANDHOLE TYPE 1 - EACH	3.00	\$1,400.00	\$4,200.00
60704 - CONSTRUCT ELECTRICAL HANDHOLE TYPE 3 - EACH	8.00	\$725.00	\$5,800.00
60800 - PAVEMENT MARKING EPOXY, LINE, 4-INCH - L.F.	5000.00	\$1.90	\$9,500.00
60812 - PAVEMENT MARKING EPOXY, CROSSWALK, 6-INCH - L.F.	150.00	\$10.50	\$1,575.00
60818 - PAVEMENT MARKING EPOXY, STOP LINE, 24-INCH - L.F.	30.00	\$17.00	\$510.00
60894 - SKID/SLIP RESISTANT PREFORMED THERMOPLASTIC PAVEMENT MARKING, BIKE LANE GREEN - S.F.	400.00	\$12.00	\$4,800.00
70002 - FURNISH AND INSTALL 6 INCH PIPE & FITTINGS - L.F.	20.00	\$94.81	\$1,896.20
70003 - FURNISH AND INSTALL 8 INCH PIPE & FITTINGS - L.F.	300.00	\$98.10	\$29,430.00
70031 - FURNISH AND INSTALL 6-INCH WATER VALVE - EACH	1.00	\$3,000.39	\$3,000.39
70032 - FURNISH AND INSTALL 8-INCH WATER VALVE - EACH	2.00	\$3,443.96	\$6,887.92
70040 - FURNISH, INSTALL AND SALVAGE HYDRANT - EACH	1.00	\$7,999.19	\$7,999.19
70080 - CUT-IN OR CONNECT TO EXISTING WATER SYSTEM - EACH	1.00	\$1,800.00	\$1,800.00
70082 - CUT OFF EXISTING WATER MAIN - EACH	1.00	\$981.82	\$981.82
70101 - FURNISH AND INSTALL STYROFOAM - EACH	3.00	\$400.00	\$1,200.00

**BLUE HARVEST, FEATHER RIDGE, & SOARING SKY RUN ASSESSMENT DISTRICT - 2023**

CONTRACT NO. 8317

DATE: 4/25/24

**Speedway Sand & Gravel,  
Inc.**

Item	Quantity	Price	Extension
70104 - ADJUST WATER VALVE BOX - EACH	1.00	\$600.00	\$600.00
90001 - PAVEMENT MARKING EPOXY, SPEED HUMP ARROW (6'X6') - EACH	2.00	\$325.00	\$650.00
90002 - FURNISH & INSTALL METERED ELECTRIC SERVICE & BREAKER PANEL - EACH	1.00	\$2,500.00	\$2,500.00
90003 - LOW GROWING ROW NATIVE SEED MIX - S.Y.	5380.00	\$1.80	\$9,684.00
90004 - CONCRETE PAVEMENT APPROACH SLAB - S.Y.	80.00	\$278.76	\$22,300.80
90005 - REMOBILIZATION - LUMP SUM	1.00	\$2,800.00	\$2,800.00
90030 - CHANNEL GRADING - LUMP SUM	1.00	\$2,000.00	\$2,000.00
90031 - GRADING FOR SOARING SKY STORMWATER POND - LUMP SUM	1.00	\$6,000.00	\$6,000.00
90070 - EXCAVATE AND BACKFILL AT EXISTING SAS TO INSTALL SAS JOINT SEAL - EACH	12.00	\$1,000.00	\$12,000.00
90071 - REBUILD SEWER ACCESS STRUCTURE - EACH	5.00	\$2,000.00	\$10,000.00
<b>95 Items</b>	<b>Totals</b>		<b>\$1,746,842.44</b>





Department of Public Works  
**Engineering Division**  
James M. Wolfe, P.E. City Engineer  
City-County Building, Room 115  
210 Martin Luther King, Jr. Boulevard  
Madison, Wisconsin 53703  
Phone: (608) 266-4751  
Fax: (608) 264-9275  
[engineering@cityofmadison.com](mailto:engineering@cityofmadison.com)  
[www.cityofmadison.com/engineering](http://www.cityofmadison.com/engineering)

**Deputy City Engineer**  
Bryan Cooper, AIA  
Gregory T. Fries, P.E.  
Chris J. Petykowski, P.E.  
**Deputy City Engineer**  
Kathleen M. Cryan  
**Principal Engineer 2**  
John S. Fahrney, P.E.  
Janet Schmidt, P.E.  
**Principal Engineer 1**  
Mark D. Moder, P.E.  
Andrew J. Zwieg, P.E.  
**Financial Manager**  
Steven B. Danner-Rivers

## BIENNIAL BID BOND

Speedway Sand & Gravel, Inc.

(a corporation of the State of Wisconsin )  
(individual), (partnership), (hereinafter referred to as the "Principal") and  
Fidelity and Deposit Company of Maryland

a corporation of the State of Maryland (hereinafter referred to as the "Surety") and licensed to do business in the State of Wisconsin, are held and firmly bound unto the City of Madison, Wisconsin (hereinafter referred to as the "City"), in the sum equal to the individual proposal guaranty amounts of the total bid or bids of the Principal herein accepted by the City, for the payment of which the Principal and the Surety hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of this obligation is that the Principal has submitted to the City certain bids for projects from the time period of February 1, 2024 through January 31, 2026.

If the Principal is awarded the contract(s) by the City and, within the time and manner required by law after the prescribed forms are presented for its signature, the Principal enters into (a) written contract(s) in accordance with the bid(s), and files with the City its bond(s) guaranteeing faithful performance and payment for all labor and materials, as required by law, or if the City rejects all bids for the work described, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

In the event the Principal shall fail to execute and deliver the contract(s) or the performance and payment bond(s), all within the time specified or any extension thereof, the Principal and Surety agree jointly and severally to pay to the City within ten (10) calendar days of written demand a total equal to the sum of the individual proposal guaranty amounts of the total bid(s) as liquidated damages.

The Surety, for value received, hereby agrees that the obligations of it and its bond shall be in no way impaired or affected by any extension of time within which the City may accept a bid, and the Surety does hereby waive notice of any such extension.

This bond may be terminated by the Surety upon giving thirty (30) days written notice to the City of its intent to terminate this bond and to be released and discharged therefrom, but such termination shall not operate to relieve or discharge the Surety from any liability already accrued or which shall accrue before the expiration of such thirty (30) day period.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year set forth below.

**PRINCIPAL**

Speedway Sand & Gravel Inc.  
COMPANY NAME AFFIX SEAL

Jan 2, 2024  
DATE

By: Janice Ryan  
SIGNATURE AND TITLE

**SURETY**

Fidelity and Deposit Company of Maryland  
COMPANY NAME AFFIX SEAL

January 2, 2024  
DATE

By: Maureen Stutz  
SIGNATURE AND TITLE  
Attorney-in-fact

This certifies that I have been duly licensed as an agent for the Surety in Wisconsin under National Provider No. 6966174 for the year 2024 and appointed as attorney in fact with authority to execute this bid bond, which power of attorney has not been revoked.

January 2, 2024  
DATE

Maureen Stutz  
AGENT SIGNATURE

1818 Parmenter Street, Suite 240  
ADDRESS

Middleton, WI 53562  
CITY, STATE AND ZIP CODE

608-242-2551  
TELEPHONE NUMBER

Note to Surety and Principal: Any bid submitted which this bond guarantees may be rejected if the Power of Attorney form showing that the Agent of Surety is currently authorized to execute bonds on behalf of Surety is not attached to this bond.

**CERTIFICATE OF BIENNIAL BID BOND**

TIME PERIOD- VALID (FROM/TO) February 1, 2024 to January 31, 2026
NAME OF SURETY Fidelity and Deposit Company of Maryland
NAME OF CONTRACTOR Speedway Sand & Gravel, Inc.
CERTIFICATE HOLDER City of Madison, Wisconsin

This is to certify that a biennial bid bond issued by the above-named Surety is currently on file with the City of Madison.

This certificate is issued as a matter of information and conveys no rights upon the certificate holder and does not amend, extend or alter the coverage of the biennial bid bond.

Cancellation: Should the above policy be cancelled before the expiration date, the issuing Surety will give thirty (30) days written notice to the certificate holder indicated above.

  
SIGNATURE OF AUTHORIZED CONTRACTOR REPRESENTATIVE

1-2-2024  
DATE

**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by Robert D. Murray, Vice President, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint Nicole STILLINGS, Ross S. SQUIRES, Tina L. DOMASK of Middleton, Wisconsin, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 20th day of September, A.D. 2023.



**ATTEST:**  
ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: *Robert D. Murray*  
Vice President

By: *Dawn E. Brown*  
Secretary

State of Maryland  
County of Baltimore

On this 20th day of September, A.D. 2023, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Robert D. Murray, Vice President and Dawn E. Brown, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

*Genevieve M. Maison*

GENEVIEVE M. MAISON  
NOTARY PUBLIC  
BALTIMORE COUNTY, MD  
My Commission Expires JANUARY 27, 2025



**EXTRACT FROM BY-LAWS OF THE COMPANIES**

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

**CERTIFICATE**

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 2nd day of January, 2024.



A handwritten signature in cursive script, appearing to read "Thomas O. McClellan".

Thomas O. McClellan  
Vice President

**TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:**

Zurich Surety Claims  
1299 Zurich Way  
Schaumburg, IL 60196-1056  
[reportsfclaims@zurichna.com](mailto:reportsfclaims@zurichna.com)  
800-626-4577

Authenticity of this bond can be confirmed at [bondvalidator.zurichna.com](http://bondvalidator.zurichna.com) or 410-559-8790

## SECTION H: AGREEMENT

THIS AGREEMENT made this 4th day of May in the year Two Thousand and Twenty Four between **SPEEDWAY SAND & GRAVEL, INC.** hereinafter called the Contractor, and the City of Madison, a Wisconsin municipal corporation, hereinafter called the City.

WHEREAS, the Common Council of the City of Madison ("Council") under the provisions of a resolution adopted on **MAY 21, 2024**, and by virtue of authority vested in the Council, has awarded to the Contractor the work of performing certain public construction.

NOW, THEREFORE, the Contractor and the City, for the consideration hereinafter named, agree as follows:

1. **Scope of Work.** The Contractor shall, perform the construction, execution and completion of the following listed complete work or improvement in full compliance with the Plans, Specifications, Standard Specifications, Supplemental Specifications, Special Provisions and Agreement; perform all items of work covered or stipulated in the Proposal; perform all altered or extra work; and shall furnish, unless otherwise provided in the contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to the prosecution and completion of the work or improvements:

### **BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN ASSESSMENT DISTRICT - 2023 CONTRACT NO. 8317**

2. **Completion Date/Contract Time.** Construction work must begin within seven (7) calendar days after the date appearing on mailed written notice to do so shall have been sent to the Contractor and shall be carried on at a rate so as to secure full completion SEE SPECIAL PROVISIONS, the rate of progress and the time of completion being essential conditions of this Agreement.
3. **Contract Price.** The City shall pay to the Contractor at the times, in the manner and on the conditions set forth in said specifications, the sum of **ONE MILLION SEVEN HUNDRED FORTY-SIX THOUSAND EIGHT HUNDRED FORTY-TWO AND 44/100 (\$1,746,842.44)** Dollars being the amount bid by such Contractor and which was awarded as provided by law.
4. **A. Non-Discrimination.** During the term of this Agreement, the Contractor agrees not to discriminate against any employee or applicant because of race, religion, marital status, age, color, sex, disability, national origin or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, gender identity, political beliefs, or student status. The Contractor further agrees not to discriminate against any subcontractor or person who offers to subcontract on this contract because of race, religion, color, age, disability, sex, sexual orientation, gender identity or national origin.

**B. Affirmative Action.** The Contractor agrees that within thirty (30) days after the effective date of this agreement, the Contractor will provide to the City Affirmative Action Division certain workforce utilization statistics, using a form to be furnished by the City.

If the contract is still in effect, or if the City enters into a new agreement with the Contractor, within one year after the date on which the form was required to be provided, the Contractor will provide updated workforce information using a second form, also to be furnished by the City. The second form will be submitted to the City Affirmative Action Division no later than one year after the date on which the first form was required to be provided.

The Contractor further agrees that, for at least twelve (12) months after the effective date of this contract, it will notify the City Affirmative Action Division of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered.

The notice will include a job description, classification, qualifications and application procedures and deadlines, shall be provided to the City by the opening date of advertisement and with sufficient time for the City to notify candidates and make a timely referral. The Contractor agrees to interview and consider candidates referred by the Affirmative Action Division, or an organization designated by the Division, if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date started in the notice.

Articles of Agreement  
Article I

The Contractor shall take affirmative action in accordance with the provisions of this contract to insure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin and that the employer shall provide harassment free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this contract.

Article II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the Contractors state that all qualified or qualifiable applicants will be employed without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin.

Article III

The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice to be provided by the City advising the labor union or worker's representative of the Contractor's equal employment opportunity and affirmative action commitments. Such notices shall be posted in conspicuous places available to employees and applicants for employment.

Article V

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison, including the contract compliance requirements. The Contractor agrees to submit the model affirmative action plan for public works contractors in a form approved by the Affirmative Action Division Manager.

Article VI

The Contractor will maintain records as required by Section 39.02(9)(f) of the Madison General Ordinances and will provide the City Affirmative Action Division with access to such records and to persons who have relevant and necessary information, as provided in Section 39.02(9)(f). The City agrees to keep all such records confidential, except to the extent that public inspection is required by law.

## Article VII

In the event of the Contractor's or subcontractor's failure to comply with the Equal Employment Opportunity and Affirmative Action Provisions of this contract or Section 39.03 and 39.02 of the Madison General Ordinances, it is agreed that the City at its option may do any or all of the following:

1. Cancel, terminate or suspend this Contract in whole or in part.
2. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.
3. Recover on behalf of the City from the prime Contractor 0.5 percent of the contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the contract price, or ten thousand dollars (\$10,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the non-complying subcontractor.

## Article VIII

The Contractor shall include the above provisions of this contract in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor shall take such action with respect to any subcontractor as necessary to enforce such provisions, including sanctions provided for noncompliance.

## Article IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this contract. (In federally funded contracts the terms "DBE, MBE and WBE" shall be substituted for the term "small business" in this Article.)

5. **Substance Abuse Prevention Program Required.** Prior to commencing work on the Contract, the Contractor, and any Subcontractor, shall have in place a written program for the prevention of substance abuse among its employees as required under Wis. Stat. Sec. 103.503.
6. **Contractor Hiring Practices.**

### **Ban the Box - Arrest and Criminal Background Checks. (Sec. 39.08, MGO)**

This provision applies to all prime contractors on contracts entered into on or after January 1, 2016, and all subcontractors who are required to meet prequalification requirements under MGO 33.07(7)(I), MGO as of the first time they seek or renew pre-qualification status on or after January 1, 2016. The City will monitor compliance of subcontractors through the pre-qualification process.

- a. **Definitions.** For purposes of this section, "Arrest and Conviction Record" includes, but is not limited to, information indicating that a person has been questioned, apprehended, taken into custody or detention, held for investigation, arrested, charged with, indicted or tried for any felony, misdemeanor or other offense pursuant to any law enforcement or military authority.

"Conviction record" includes, but is not limited to, information indicating that a person has been convicted of a felony, misdemeanor or other offense, placed on probation, fined, imprisoned or paroled pursuant to any law enforcement or military authority.



“Background Check” means the process of checking an applicant’s arrest and conviction record, through any means.

**b. Requirements.** For the duration of this Contract, the Contractor shall:

1. Remove from all job application forms any questions, check boxes, or other inquiries regarding an applicant’s arrest and conviction record, as defined herein.
2. Refrain from asking an applicant in any manner about their arrest or conviction record until after conditional offer of employment is made to the applicant in question.
3. Refrain from conducting a formal or informal background check or making any other inquiry using any privately or publicly available means of obtaining the arrest or conviction record of an applicant until after a conditional offer of employment is made to the applicant in question.
4. Make information about this ordinance available to applicants and existing employees, and post notices in prominent locations at the workplace with information about the ordinance and complaint procedure using language provided by the City.
5. Comply with all other provisions of Sec. 39.08, MGO.

**c. Exemptions:** This section shall not apply when:

1. Hiring for a position where certain convictions or violations are a bar to employment in that position under applicable law, or
2. Hiring a position for which information about criminal or arrest record, or a background check is required by law to be performed at a time or in a manner that would otherwise be prohibited by this ordinance, including a licensed trade or profession where the licensing authority explicitly authorizes or requires the inquiry in question.



To be exempt, Contractor has the burden of demonstrating that there is an applicable law or regulation that requires the hiring practice in question, if so, the contractor is exempt from all of the requirements of this ordinance for the position(s) in question.

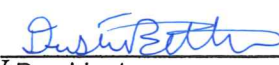
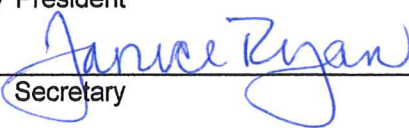
7. **Choice of Law and Forum Selection.** This Contract shall be governed by and construed, interpreted and enforced in accordance with the laws of the State of Wisconsin. The parties agree, for any claim or suit or other dispute relating to this Contract that cannot be mutually resolved, the venue shall be a court of competent jurisdiction within the State of Wisconsin and the parties agree to submit themselves to the jurisdiction of said court, to the exclusion of any other judicial district that may have jurisdiction over such a dispute according to any law.
8. **Counterparts, Electronic Signature and Delivery.** This Contract may be signed in counterparts, each of which shall be taken together as a whole to comprise a single document. Signatures on this Contract may be exchanged between the parties by facsimile, electronic scanned copy (.pdf) or similar technology and shall be as valid as original; and this Contract may be converted into electronic format and signed or given effect with one or more electronic signature(s) if the electronic signature(s) meets all requirements of Wis. Stat. ch. 137 or other applicable Wisconsin or Federal law. Executed copies or counterparts of this Contract may be delivered by facsimile or email and upon receipt will be deemed original and binding upon the parties hereto, whether or not a hard copy is also delivered. Copies of this Contract, fully executed, shall be as valid as an original.

**BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN  
ASSESSMENT DISTRICT - 2023  
CONTRACT NO. 8317**

IN WITNESS WHEREOF, the Contractor has hereunto set his/her hand and seal and the City has caused this contract to be executed by its Mayor and City Clerk on the dates written below.

Countersigned:

	5/22/2024
Witness	Date
	5/22/2024
Witness	Date

<u>SPEEDWAY SAND &amp; GRAVEL, INC.</u>	
Company Name	
	5/22/2024
V President	Date
	5/22/2024
Secretary	Date

CITY OF MADISON

  
\_\_\_\_\_  
Satya Rhodes-Conway, Mayor

06/04/2024


\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Maribeth Witzel-Behl, City Clerk

05/28/2024

\_\_\_\_\_  
Date

Provisions have been made to pay the liability that will accrue under this contract.

  
\_\_\_\_\_  
David P. Schmiedicke, Finance Director

6/4/2024

\_\_\_\_\_  
Date

Approved as to form:

  
\_\_\_\_\_  
Michael Haas, City Attorney

6/4/2024

\_\_\_\_\_  
Date

Execution of this Agreement by City was authorized by Resolution Enactment No. RES -24-00334, ID No. 83188, adopted by the Common Council of the City of Madison on May 21, 2024.

**SECTION I: PAYMENT AND PERFORMANCE BOND**

LET ALL KNOW BY THESE DOCUMENTS PRESENTED, that we **SPEEDWAY SAND & GRAVEL, INC.**, as principal, and Fidelity and Deposit Company of Maryland Company of Schaumburg, IL as surety, are held and firmly bound unto the City of Madison, Wisconsin, in the sum of **ONE MILLION SEVEN HUNDRED FORTY-SIX THOUSAND EIGHT HUNDRED FORTY-TWO AND 44/100 (\$1,746,842.44)** Dollars, lawful money of the United States, for the payment of which sum to the City of Madison, we hereby bind ourselves and our respective executors and administrators firmly by these presents.

The condition of this Bond is such that if the above bounden shall on his/her part fully and faithfully perform all of the terms of the Contract entered into between him/herself and the City of Madison for the construction of:

**BLUE HARVEST LANE, FEATHER EDGE DRIVE, & SOARING SKY RUN  
ASSESSMENT DISTRICT - 2023  
CONTRACT NO. 8317**

in Madison, Wisconsin, and shall pay all claims for labor performed and material furnished in the prosecution of said work, and save the City harmless from all claims for damages because of negligence in the prosecution of said work, and shall save harmless the said City from all claims for compensation (under Chapter 102, Wisconsin Statutes) of employees and employees of subcontractor, then this Bond is to be void, otherwise of full force, virtue and effect.

Signed and sealed this 22nd day of May

Countersigned:

[Signature]  
Witness

[Signature]  
Secretary

**SPEEDWAY SAND & GRAVEL, INC.**  
Company Name (Principal)

[Signature]  
President

Seal NA

Fidelity and Deposit Company of Maryland  
Surety Seal

Salary Employee  Commission

By [Signature]  
Attorney-in-Fact Nicole Stillings

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under National Producer Number 6966174 for the year 2024, and appointed as attorney-in-fact with authority to execute this payment and performance bond which power of attorney has not been revoked.

May 22, 2024  
Date

[Signature]  
Agent Signature

The foregoing Bond has been approved as to form:

Michael Haas  
Date

6/4/2024  
City Attorney

**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by Robert D. Murray, Vice President, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint Nicole STILLINGS, Ross S. SQUIRES, Tina L. DOMASK of Middleton, Wisconsin, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 20th day of September, A.D. 2023.



**ATTEST:**  
ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: *Robert D. Murray*  
Vice President

By: *Dawn E. Brown*  
Secretary

**State of Maryland  
County of Baltimore**

On this 20th day of September, A.D. 2023, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Robert D. Murray, Vice President and Dawn E. Brown, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

*Genevieve M. Maison*

GENEVIEVE M. MAISON  
NOTARY PUBLIC  
BALTIMORE COUNTY, MD  
My Commission Expires JANUARY 27, 2025



Authenticity of this bond can be confirmed at [bondvalidator.zurichna.com](http://bondvalidator.zurichna.com) or 410-559-8790

**EXTRACT FROM BY-LAWS OF THE COMPANIES**

"Article V, Section 8. Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

**CERTIFICATE**

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 22nd day of May, 2024.



Thomas O. McClellan  
Vice President

**TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:**

Zurich Surety Claims  
1299 Zurich Way  
Schaumburg, IL 60196-1056  
[reportsfclaims@zurichna.com](mailto:reportsfclaims@zurichna.com)  
800-626-4577

**Authenticity of this bond can be confirmed at [bondvalidator.zurichna.com](http://bondvalidator.zurichna.com) or 410-559-8790**