

**Rock River Water Reclamation District
Rockford, Illinois**

Bidding Requirements and Contract Forms

for

**Rockford Southeast Trunk –
South Branch**

Capital Project No. 1965

Rock River Water Reclamation District Rockford, Illinois

Bidding Requirements and Contract Forms and *General Provisions and Technical Specifications* for *Sanitary Sewer Construction*

for

Rockford Southeast Trunk – South Branch

Capital Project No. 1965

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Section I
Bidding Requirements

Article 1 — Notice to Bidders

The Rock River Water Reclamation District (District) will receive signed and sealed bids for the Rockford Southeast Trunk – South Branch, Capital Project No. 1965, at the District office located at 3501 Kishwaukee Street, Rockford, Illinois until 10:00 a.m. on Tuesday, September 10, 2019 at which time and place responsive / responsible bids will be publicly opened and read aloud.

The Rockford Southeast Trunk – South Branch, Capital Project No. 1965, consists of the construction of approximately 4,177 LF of 30" Dia. PVC sanitary sewer, 12 sanitary manholes, 120 LF of 54" Dia. steel casing pipe jacked in-place, 120 LF of 30" Dia. PVC carrier pipe, dewatering, excavation, stockpiling, and placement of topsoil, storm sewer removal and replacement, aggregate access road construction, including 6" dia. underdrain, aggregate subgrade improvement, and aggregate surface course, pipe culverts, riprap bank stabilization, preparation of agricultural areas, seeding, and all other appurtenances as indicated on the plans and in the specifications.

Bidder's attention is called to Article 2 – Instructions to Bidders 3.8 requirements for Statement of Qualifications. Bidder must have a permanent business office within forty (40) miles of the District office at 3501 Kishwaukee Street in Rockford, IL.

All sanitary sewer construction, including the crossing under the Illinois Railway shall be completed by the interim completion date of December 15, 2019. All access road construction work shall be completed by the interim completion date of April 15, 2020. All remaining final restoration work and cleanup shall be completed by the project completion date of May 15, 2020. Liquidated damages shall be \$300.00 per calendar day and shall apply to all interim and final completion dates.

Bid documents may be obtained at a cost of \$50.00 per set (non-refundable) by contacting the District Engineering Department at 815.387.7660.

Plans and specifications may also be viewed at the offices of the Northern Illinois Building Contractors Association at 1111 S. Alpine Rd, Rockford, IL. For more information, visit the District website at www.rrwrddst.il.us.

All construction will be done in accordance with specifications on file with the District, including the *General Provisions and Technical Specifications for Sanitary Sewer Construction* (Current Edition) of the Rock River Water Reclamation District of Rockford.

Each proposal must be accompanied by the District Bid Bond form with an acceptable Bid Security attached, in the amount of five percent (5%) of the total bid price. This amount is a guarantee that, if the Proposal is accepted, a Contract will be entered into and its performance properly secured.

A Mandatory Pre-Bid Meeting for this project will be held on Thursday, August 29, 2019 at 10:00 a.m. in the District's Board Room, 3501 Kishwaukee Street, Rockford, Illinois. All Contractors intending to bid on this project must attend the pre-bid meeting.

The successful bidder will be required to furnish a satisfactory Performance Bond in the full amount of the Bid or Proposal. No Bid shall be withdrawn without the consent of the District for a period of sixty (60) days after the scheduled time of receiving Bids.

The District, reserves the right to reject any or all bids, or any part thereof, or to accept any bid or any part thereof, or to waive any formalities in any bids, deemed to be in the best interest of the District.

Dated this 19th day of August, 20 19



BY: Chris Black, Business Manager

Not to be used for bidding purposes

Article 2 — Instructions to Bidders

1 General

1.1 Scope and Intent

This section of the contract documents is concerned with furnishing detailed information and requirements for preparing bids to prospective bidders, bidders' responsibility, the preparation and the submission of bids, basis for awarding the contract and other general information concerned with bidding and executing the contract.

1.2 Contradictions

In the case of apparent contradiction between or among the Contract Documents, the Contract Documents shall be consulted in the following order: Addenda, Agreement, Supplementary Drawings, Instructions to Bidders, Detailed Specifications, Plans, District General Provisions and Technical Specifications for Sanitary Sewer Construction. The language in the first such document in which language regarding the conflict, error or discrepancy occurs shall control.

2 Legal Requirements

2.1 Illinois Regulations

1. The undersigned, as Bidder, declares he will comply with prevailing wages in accordance with the Illinois Department of Labor Standards. The State of Illinois requires contractors and subcontractors on public works projects (including Rock River Water Reclamation District) to submit certified payroll records on a monthly basis, along with a statement affirming that such records are true and accurate, that the wages paid to each worker are not less than the required prevailing rate and that the contractor is aware that filing false records is a Class B Misdemeanor.

The certified payroll records must include the name, address, telephone number, social security number, job classification, hourly wages paid in each pay period, the number of hours worked each day, and the starting and ending time of work each day, for every worker employed on the project. Any contractor who fails to submit a certified payroll or knowingly files a false certified payroll is guilty of a Class B Misdemeanor. Certified payroll reports shall be submitted on standard IDOT forms.

2. Public Act 83-1030 entitled "Steel Products Procurement Act" requires that steel products used or supplied in performance of this contract or subcontract shall be manufactured or produced in the United States with three exceptions.

The provisions of this Section shall not apply:

- a. Where the contract involves an expenditure of less than \$500.
 - b. Where the executive head of the public agency certifies in writing that
 - i. the specified products are not manufactured or produced in the United States in sufficient quantities to meet the agency's requirements, or
 - ii. obtaining the specified products, manufactured or produced in the United States would increase the cost of the contract by more than 10%.
 - c. When its application is not in the public interest.
3. Public Act 96-929 (30 ILCS 570) provides that Illinois residents be employed on Illinois public works projects, provided there has been a period of excessive unemployment (5%) in the State of Illinois as defined in the Act; and, further, that Illinois workers are available and capable of performing the particular type work involved.

4. Public Act 99-0933 requires that any party to a contract adopt and promulgate written sexual harassment policies that include, as a minimum, the following information:
 - a. the illegality of sexual harassment
 - b. the definition of sexual harassment under Illinois State law
 - c. a description of sexual harassment, utilizing examples
 - d. my (our) organization's internal complaint process including penalties
 - e. the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Illinois Human Rights Commission
 - f. directions on how to contact the Department and the Commission
 - g. protection against retaliation as provided by Section 6-101 of the Illinois Human Rights Act

Upon request, this information shall be provided to the Illinois Department of Human Rights and the District.

5. With regard to nondiscrimination in employment, the Contractor for this project will be required to comply with the Illinois Fair Employment Practices Commission's Rules and Regulations.
6. The Contractor for this project shall comply with the Occupational Safety and Health Act.
7. The Contractor for this project shall comply with the Federal Drug-Free Workplace Act.
8. Public Act 96-1416 requires the Certification of Clean Construction and Demolition Debris (CCDD) and uncontaminated soil prior to disposal at a CCDD fill site. The Contractor for this project shall comply with Public Act 96-1416 and be responsible for the certifications and any fees associated with the disposal at a CCDD fill site.
 - a. In the event that contaminated soil is uncovered on the project, the Contractor shall notify the District immediately. Any extra costs resulting from the presence of contaminated soil shall be evaluated in accordance with District General Provisions & Technical Specs for Sanitary Sewer Construction; General Conditions: Article 5 – Time Provisions and Article 8 – Changes.

2.2 Americans with Disabilities Act

The Contractor for this project will comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA). The Contractor will hold harmless and indemnify Rock River Water Reclamation District (District) and their representatives from all:

1. suits, claims, or actions
2. costs, either for defense (including but not limited to reasonable attorney's fees and expert witness fees) or for settlement
3. damages of any kind (including but not limited to actual, punitive, and compensatory damages)

relating in any way to or arising out of the ADA, to which said firm is exposed or which it incurs in the execution of the contract.

3 General Instructions

3.1 Bidder's Responsibility

Bidders are cautioned not to submit proposals until having carefully examined the entire site of the proposed work and adjacent premises and the various means of approach and access to the site, and having made all necessary investigations to inform themselves thoroughly as to the facilities for delivering, placing and handling the materials at the site, and having informed themselves thoroughly as to all difficulties involved in the completion of all the work under this Contract in accordance with its requirements.

Bidders must examine the Plans, Specifications and other Contract Documents and shall exercise their own judgment as to the nature and amount of the whole of the work to be done and for the bid prices must assume all risk of variance, by whomsoever made, in any computation or statement of amount or quantities necessary to complete fully the work in strict compliance with the Contract Documents. The Bidder must satisfy himself by making borings or test pits, or by such methods as he may prefer, as to the character and location of the materials to be encountered or work to be performed. No pleas of ignorance of conditions that exist or that may hereafter exist, or of conditions or difficulties that may be encountered in the execution of the work under this Contract, as a result of failure to make the necessary examinations and investigations, will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill, in every detail, all of the requirements of the Contract Documents, or will be accepted as a basis for any claims whatsoever for extra compensation or for an extension of time.

The Contractor is responsible for verifying the location of all existing utilities in the project areas.

The Bidder, therefore, shall satisfy himself by such means as he may deem proper as to the location of all structures that may be encountered in construction of the work.

3.2 Addenda and Interpretations

No interpretation of the meaning of the Plans, Specifications, or other Contract Documents will be made to any bidder orally. Every request for such interpretation must be in writing addressed to the Rock River Water Reclamation District, 3501 Kishwaukee Street, Rockford, Illinois. To be given consideration, such request must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda which, if issued, will be sent by email, fax, or certified mail with acknowledgement of receipt requested, to all prospective bidders, at the respective addresses furnished for such purposes, not later than three (3) days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addenda or interpretation shall not relieve said bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.

3.3 Laws and Regulations

The prospective bidder is warned that he must comply with all laws of the United States Government, State of Illinois, all ordinances and regulations of the District in the performance of the work under this contract. The Bidder's attention is specifically called to that provision of the General Conditions regarding the rate of wage to be paid on the work.

3.4 Quantities Estimated Only

Bidders are warned that the estimate of quantities of the various items of work and materials, as set forth in the proposal form, is approximate only and is given solely to be used as a uniform basis for the comparison of bids. The quantities actually required to complete the contract work may be less

or more than so estimated, and if awarded a contract for the work specified, the Contractor further agrees that he will not make any claim for damages or for loss of profits or for an extension of time because of a difference between the quantities of the various classes of work assumed for comparison of bids and quantities of work actually performed.

3.5 Form, Preparation, and Presentation of Proposals

For particulars as to the quantity and quality of the supplies, materials and equipment to be furnished, and the nature and extent of the work or labor to be done, prospective bidders are referred to the Contract Documents, which may be examined or obtained at the office of the District.

Each bid will be submitted upon the prescribed proposal form. All blank spaces for bid prices must be filled in, in ink, with the unit or total sum or both for which the proposal is made. If the proposal contains any omissions, erasures, alterations, additions or items not called for in the itemized proposal, or contains irregularities of any kind, such may constitute sufficient cause for rejection of bid. In case of any discrepancy in the unit price or amount bid for any item in the proposal, the unit price as expressed in figures will govern. In no case is the agreement form to be filled out or signed by the bidder.

Bidders may opt to contact the District's Engineering Department at 815.387.7660 to obtain an electronic Proposal form. If used, this form must be attached to the hard copy proposal form and appropriately signed and executed with the bid.

The bid must be verified and be presented on the prescribed form in a sealed envelope on or before the time and at the place stated in the Advertisement for Bids, endorsed with the name of the person, firm or corporation presenting it, the date of presentation, and the title of the work for which the bid is made. If forwarded by mail, the sealed envelope containing the proposal and marked as directed above, must be enclosed in another envelope addressed to Clerk of the Rock River Water Reclamation District, 3501 Kishwaukee Street, Rockford, Illinois, 61109 and be sent preferably by certified mail. The District will not accept facsimile generated bids.

3.6 Bid Security

Each proposal must be accompanied by the District Bid Bond form with an acceptable Bid Security attached, in the amount specified in Article One, Notice to Bidders. This sum is a guarantee that, if the Proposal is accepted, a contract will be entered into and its performance properly secured. The District's Bid Bond Form included in the bid packet must be used. No other Bid Bond form may be substituted.

Within ten (10) days after the opening of bids, the deposits of all but the three lowest bidders will be returned. The deposits of the remaining two unsuccessful bidders will be returned within three (3) days after the execution of the contract, or, if no such contract has been executed, within sixty (60) days after the date of opening bids. The deposit of the successful bidder will be returned only after he has duly executed the contract and furnished the required bond and insurance.

3.7 Affidavit of Compliance

Each proposal must be accompanied by an executed Affidavit of Compliance. A separate Affidavit of Compliance form is enclosed with the Proposal packet. Failure to submit an executed Affidavit of Compliance with the proposal may constitute sufficient cause for rejection of the bid.

3.8 Statement of Qualifications

Each proposal must be accompanied by a Statement of Qualifications certifying that the bidder is registered to do business in the State of Illinois, has a permanent business office within forty (40) miles of the District office at 3501 Kishwaukee Street in Rockford, IL, and provides documentation

that the bidder possesses the appropriate financial, material, equipment, facility and personnel resources and expertise necessary to meet all contractual obligations. The bidder shall document no less than three (3) contracts for sanitary sewer system within the past five (5) years having equal or greater value to the bid being submitted. The District reserves the right to request additional information as needed to evaluate bids prior to making an award.

3.9 Comparison of Proposals

Bids on item contracts will be compared on the basis of a total computed price arrived at by taking the sum of the estimated quantities of each item, multiplied by the corresponding unit prices and including any lump sum bids on individual items, in accordance with the estimate of quantities set forth in the proposal form. Bids on lump sum contracts will be considered upon the basis of the lowest sum bid.

3.10 Acceptance of Bids and Basis of Award

No bidder may withdraw his bid after the scheduled closing time for receipt of bids, for at least sixty (60) days.

The contract will be awarded, if at all, to the lowest responsive, responsible bidder. The Rock River Water Reclamation District also reserves the right to reject any or all bids.

The bidder whose proposal is accepted shall enter into a written contract for the performance of the work and furnish the required bonds and insurance certificate within ten (10) days after written notice by the Engineering Manager of the District has been served on such bidder personally or by mailing a postpaid wrapper to such bidder at the address given in his proposal. If the bidder to whom the contract is awarded refuses or neglects to execute it or fails to furnish the required bond and insurance within five (5) days after receipt by him of the notice, the amount of his deposit shall be forfeited and shall be retained by the District as liquidated damage and not as a penalty. It being now agreed that said sum is a fair estimate of the amount of damages that the District will sustain in case said bidder fails to enter into a contract and furnish the required bond and insurance. No plea of mistake in the bid shall be available to the bidder for the recovery of his deposit or as a defense to any action based upon the neglect or refusal to execute a contract.

3.10.1 Evaluation of Responsiveness

The responsiveness of bidders will be judged on the basis of the completeness of bid submittals. To be responsive, a Bid must be submitted on the forms provided as part of the Bid Documents and comply with all the requirements of the Instruction to Bidders.

3.10.2 Evaluation of Responsibility

To qualify as responsible, the bidder shall:

- a. Have adequate financial resources for performance, the necessary experience, organization, technical qualifications, and facilities, or a firm commitment to obtain such by subcontracts;
- b. Be able to comply with the required completion schedule for the project;
- c. Have a satisfactory record of integrity, judgment, and performance, including, in particular, any prior performance on contracts from the District;
- d. Have an adequate financial management system and audit procedures, that provide efficient and effective accountability and control of all property, funds, and assets;
- e. Conform to the civil rights, equal employment opportunity and labor law requirements of the Bid Documents.

- f. Have satisfactorily completed no less than three (3) sanitary sewer system contracts within the past five (5) years of equal or greater value to the bid being submitted.

3.11 The Rejection of Bids

The District reserves the right to reject any bid if the evidence submitted in the statement of the bidder's qualifications, or if investigation of such bidder fails to satisfy the District that such bidder is properly qualified to carry out the obligations and to complete the work contemplated therein. Any or all proposals will be rejected if there is reason to believe that collusion exists among the bidders. Conditional bids will not be accepted. The District reserves the right to reject any and all bids and to accept the bid which they deem most favorable to the interest of the District after all proposals have been examined and canvassed.

3.12 Insurance and Bonding

Contractor shall provide all necessary insurance and bonds required to complete the project. No more than ten (10) calendar days subsequent to the District's issuance of an award letter, the Contractor shall provide documentation to prove that he has obtained all required insurance and bonds. The District shall be the sole judge as to the acceptability of any such proof.

Contractor shall provide and maintain all insurance and bonds as required by the District.

3.12.1 General

The Contractor shall ensure that:

1. All insurance policies shall be specific to the project.
2. The insurance certificate shall state: This certifies that the insurance coverage meets or exceeds that required for Rockford Southeast Trunk – South Branch, Capital Project No. 1965.
3. The District shall be named as Additional Insured in all policies; this shall include the Owners Contractors Protective Policy option.
4. All completed operations coverages and bonds shall remain in force for a period of two (2) years following acceptance of the project and completed operations shall stay in force for two (2) years following completion of the project.

3.12.2 Insurance

The Contractor shall, for the duration of the contract and for two (2) years following project acceptance, maintain the following:

1. General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project or the general aggregate limit shall be twice the required occurrence limit. The Contractor shall provide "XCU" coverage.
2. Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage including coverages for owned, hired or non-owned vehicles, as applicable.
3. Workers' Compensation and Employers Liability: Workers' Compensation limits as required by statute and Employers Liability limits of \$500,000 per accident and \$500,000 per disease.
4. Umbrella: \$2,000,000 per occurrence/aggregate for contracts valued at \$500,000 or over, or \$1,000,000 for contracts below \$500,000. \$10,000 is maximum allowable self-retained limit.

5. Errors and Omissions: If the Contractor performs professional services, he shall maintain errors and omissions insurance with a limit no lower than \$1,000,000 for the duration of the contract.

The policies shall contain, or be endorsed to contain, the following provisions in the General Liability and Automobile Liability Coverage's:

- a. Unless otherwise provided in paragraph "c" of this section, the District, its officers, officials, employees and volunteers shall be covered as additional insureds as respects liability arising out of activities performed by or on insured's general supervision of the Contractor, products and completed operations of the Contractor, premises owned, occupied or used by the Contractor, or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the District, its officers, officials, employees, volunteers, or agents.
- b. Unless otherwise provided in paragraph "c" of this section, the Contractor's insurance coverage shall be primary insurance as respects the District, its officers, officials, employees, volunteers, and agents. Any insurance or self-insurance maintained by the District, its officers, officials, employees, volunteers, or agents shall be excess of the Contractor's insurance and shall not contribute with it.
- c. As an acceptable alternative to provisions "a" and "b" of this section, the Contractor may provide owner's and contractor's protective liability insurance with coverage limits, named insureds, and in conformity with all applicable specifications of this section.
- d. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the District, its officers, officials, employees, volunteers, or agents.
- e. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
- f. All Coverages — Each insurance policy required by this clause shall not be suspended, voided, canceled by either party, reduced in coverage, or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the District.

3.12.3 Best's Ratings

The District shall be the sole judge of whether or not said insurer's ratios are satisfactory. The District's decision shall be final and the District's bidding procedures contain no appeal provision.

1. Alphabetical Rating: For purposes of this Request for Bids, "insurer" shall mean any surety, insurance carrier, or other organization which proposes to provide an insurance policy or bond for the Contractor. No insurer or surety rated lower than "A-, Excellent" in the current *Best's Key Rating Guide* shall be acceptable to the District.
2. Financial Size Rating: Provided an insurer's alphabetical rating is satisfactory, the District will examine said insurer's financial size rating.
 - a. If Best classifies the insurer XII or larger, said insurer shall be acceptable to the District.
 - b. If Best classifies the insurer as smaller than XII, but larger than VI, said insurer shall be submitted to the District's Business Manager and/or the District's insurance consultant for review.

Financial Size ratings less than VII are not acceptable and will disqualify the Bidder.

3.12.4 Performance Bond and Labor & Materials Payment Bond Form

The Contractor shall provide a Performance Bond and Labor & Materials Payment Bond form acceptable to the District. The performance bond shall be for either 100% of the Contract price or for the Contractor's unit price times the estimated number of units, as applicable.

This Request for Bids contains a Performance Bond and a Labor & Material Bond form for the Contractor's use.

If the Contractor fails to provide acceptable bonds within the specified time, he shall be in default.

3.12.5 Correction of Contractor's Insurance or Bond Deficiencies

If the District determines that the Contractor's insurance or bond documentation does not conform to these specifications, the District shall inform said Contractor of the non-conformity. If said Contractor fails to provide conforming insurance or bond documentation within five (5) calendar days of the District's deficiency notice, he shall be in default.

3.12.6 Indemnification Clause

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

The indemnification shall not be limited by a limitation on amount or type of damages payable by or for the Contractor or its subcontractor under any employee benefits act including, but not limited, to the Workers Compensation Act.

No inspection by the District, its employees, or agents shall be deemed a waiver by the District of full compliance with the requirements of the Contract. This indemnification shall not be limited by the required minimum insurance coverages in the Contract.

3.13 Tax Exemption

The District is exempt, by law, from paying bidder Federal Excise Tax and Illinois Retailers' Occupational Tax. Therefore, the bidder shall exclude those taxes from his bid. The District's tax exemption number is E9992-3696-06. The bidder shall include all applicable taxes in his bid price.

Article 3 – Detailed Specifications

1 General

This article contains detailed specifications relating to Proposal items. The work to be done under each item is discussed along with units for payment and measurement for payment. However, the descriptions given do not necessarily outline all the work to be done under any item. All work shall conform to the *Standard Specifications for Water and Sewer Main Construction in Illinois*, current edition, the *Rock River Water Reclamation District (District) General Provisions and Technical Specifications for Sanitary Sewer Construction*, and applicable sections of the current edition of the *Illinois Department of Transportation's Standard Specifications for Road and Bridge Construction (IDOT Standard Specifications)*.

Throughout these specifications, the term “Owner”, “District”, and “Engineer” shall be synonymous.

In case of apparent contradictions between Article 3 - Detailed Specifications and the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction*, these Detailed Specifications shall govern.

The Contractor shall transport all waste material, pipe, pavement, sewer and debris, etc., removed during construction to an approved offsite dumping area and shall pay all tipping fees. When construction is halted due to rain, the Contractor shall clean up all work areas and ensure that proper surface drainage is provided before leaving the site.

This project extends through public sanitary sewer easements located north of Edson Road, adjacent to the Illinois Railway (OmniTRAX), and south of Kilbuck Creek. All easement dimensions, both temporary and permanent, are shown on the construction plans and shall be adhered to by the Contractor at all times.

The Contractor shall confine all work operations strictly within the limits of the temporary and permanent easements as shown on the plans. Minor adjustments to the proposed sewer alignments due to obstructions in the field may be made with prior District approval to facilitate construction.

All removal limits shown on the plans shall be adhered to by the Contractor. Should any appurtenances outside of those limits be damaged, including but not limited to pavements, curbs, drainage pipes/structures, signs, mailboxes, landscaped/turf areas, agricultural areas and/or trees, they shall be restored and/or repaired to the District's satisfaction at no additional cost to the Contract.

Any construction not observed by a District Inspector shall not be accepted.

No work shall be permitted on Sundays without prior approval by the District Engineering Manager.

Suppliers shall warrant their products and product components as suitable and fit for the intended purpose and that they are free from all material, design, and manufacturing defects. Said warranty shall extend to the benefit of the Owner and District and shall apply to all products and product components whether supplied or fabricated as a result of these Specifications.

District will not supervise, direct, control, have authority over or be responsible for Contractor's means, methods, techniques, sequences, procedures of construction, safety precautions and programs incident, thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the furnishing or performance of the Work. The District will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

The Contractor shall be responsible for all tests of materials and final installation required by the District. All deficiencies noted by the inspectors shall be corrected by the Contractor without cost to the District and prior to final payment.

The Contractor shall restore all disturbed areas to near-original contour and state (unless otherwise indicated by the Construction Plans), graded and raked to a neat, well-drained condition. All disturbed turf areas shall be seeded or sodded, as hereinafter noted, after approval of the seed or sod bed by the District. Any damage to pavements, driveways, seeded areas, trees and/or other vegetation, fences, landscaping, structures, fixtures, etc., beyond the easement limits shall be replaced or repaired by the Contractor at no additional cost to the District.

All work in streets, railroads, highways or flood plains shall be subject to the regulations and requirements of the jurisdictional agencies or as identified in these Detailed Specifications. Should conflicts or contradictions arise between the plans, specifications and the roadway, railroad or waterway permits, the permits shall govern.

Excavated or other materials shall not be stored or cast upon the pavement. Upon completion of work within the street, railroad, or highway (or flood plain), the Contractor shall restore the disturbed areas in accordance with the requirements of the governing agency.

The Contractor shall provide traffic control personnel and/or equipment as required by the agency that owns, maintains, or governs said roadways or railroads.

The Contractor's workforce shall include a person competent in ensuring compliance with OSHA trenching and excavation requirements. This person must be present on-site at all times during construction and must be deputized to take any prompt preventative or corrective actions needed to avoid, prevent or mitigate existing and potential hazardous working conditions.

2 Notification, Access, Railroad Coordination and Special Considerations

2.1 General

Utility locations shown on the plans are based on record information available at the time of design and are not guaranteed. The location and/or elevation of existing underground utilities, such as gas mains, water mains, electric lines, storm sewers, field tiles, septic system field lines, etc., shall be determined by the Contractor. The Contractor shall assume full responsibility for

location of all utilities. The Contractor shall notify all utilities forty-eight (48) hours minimum prior to beginning any work by contacting J.U.L.I.E. at (800)-892-0123 and all other utilities not on the J.U.L.I.E. network. All underground utilities shall be located in the field by the utility or duly authorized representative. The Contractor shall exercise special care when excavating near underground and overhead utilities to avoid damage. Any damage done to utilities shall be repaired or replaced to the satisfaction of the Utility owner at the Contractor's sole expense. The Contractor shall be solely responsible for the protection, restraint and support of all utilities.

The Contractor shall notify the Rock River Water Reclamation District (District), all affected property owners, and the public roadway authorities (Village of Davis Junction and City of Rockford) forty-eight (48) hours minimum prior to beginning any work. Said notification shall apply to business days only, not weekends.

The Contractor shall notify the Illinois Railway two (2) weeks in advance of anticipated work beginning in their right-of-way in order to schedule railroad flaggers. The contact for the Illinois Railway is Ruben Camacho (815-503-3514 mobile).

The Contractor shall coordinate any traffic control on Edson Road with either the Village of Davis Junction or the City of Rockford, as necessary.

The Contractor shall be responsible for the temporary maintenance of all roadways, driveways, and field entrances over the course of this project and shall maintain access to residences or businesses at all times during construction (i.e. drives, roadways, ramps, etc., must remain open to vehicular traffic; temporary accesses must be provided, as necessary). All materials, equipment, labor, etc. necessary to assure this shall be considered included in the contract.

Any damage caused by the Contractor's operations to areas outside of the specified project removal and easement limits, including but not limited to roadway pavements, driveway pavements, drainage structures, storm sewer, underground utilities, overhead utilities, turf areas, landscaped areas and agricultural areas shall be repaired and/or replaced by the Contractor at no additional cost.

The Contractor shall clean up areas from which spoil has been removed at the end of each day by sweeping, washing or other approved methods. Any open excavations shall be protected by temporary construction fence at the completion of work each day.

The Contractor is responsible for any damages caused by his operations to existing structures above or below the ground as covered in G.C. 12:1 of the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction*.

The Contractor shall not damage, disturb, remove or otherwise eliminate any survey monument, monument tie, lot pin, right-of-way marker, etc., until the exact locations have been recorded by a Professional Land Surveyor currently licensed in the State of Illinois. The Contractor shall enlist the services of a registered Illinois Professional Land Surveyor to locate, document and restore/reset any and all monuments damaged or disturbed as a result of construction. No separate payment will be made for this work.

The Contractor shall provide, and have available on site at all times, a calibrated level and rod.

Staging for this project shall follow the Staging Plan as outlined on Plan Sheet 6. Any proposed deviations from this plan shall be approved in advance by the District.

All work within the railroad right-of-way shall be done in accordance with Article 107.12 of the *IDOT Standard Specifications* and in accordance with all requirements of the Illinois Railway (OmniTRAX).

There is an existing ComEd transmission line easement immediately south of MH #11 and MH #12. All construction and access that occurs within the ComEd easement shall be in accordance with the Letter of Consent (dated August 5, 2019) that is included in Section VI of this Contract.

This project has interim completion dates. Per Article 1 – Notice to Bidders, the following completion dates shall apply to this Contract:

- December 15, 2019: All sanitary sewer construction to be completed.
- April 15, 2020: All access road construction to be completed.
- May 15, 2020: All remaining final restoration work, including all seeding and preparation of agricultural areas to be completed.

IDOT Highway Standards Included in this Contract:

1. Standard 280001-07: Temporary Erosion Control Systems
2. Standard 542401-03: Metal Flared End Sections for Pipe Culverts
3. Standard 701006-05: Off-Rd Operations, 2L, 2W, 15' to 24" from Pavement Edge
4. Standard 701201-05: Lane Closure, 2L, 2W, Day Only, For Speeds \geq 45 MPH
5. Standard 701301-04: Lane Closure, 2L, 2W, Short Time Operations
6. Standard 701901-08: Traffic Control Devices

Notifications

- Minimum forty-eight (48) hour notification to all residents and/or businesses before beginning work.
- Minimum forty-eight (48) hour notification to Rock River Water Reclamation District prior to beginning any work.
- Minimum forty-eight (48) hour notification to the Village of Davis Junction and City of Rockford prior to any work in their right-of-way.
- Minimum two (2) week notification to the Illinois Railway (OmniTRAX) prior to any work in their right-of-way.

2.2 Required Submittals – Not used.

2.3 Measurement and Payment

No separate payment will be made for costs associated with notification, access, and special considerations.

3 Permit Requirements

3.1 General

All work in streets, highways, railroad right-of-way and utility easements or right-of-way shall be subject to the regulations and requirements of the jurisdictional agencies. Should conflicts or contradictions arise between the plans, specifications and the roadway, railroad, or utility permits, the permits shall govern.

Unless noted otherwise, the Contractor shall be responsible for securing any necessary permits, and for securing all bonds, insurance, right-of-entry, etc., and paying all fees required by any and all permits. Copies of all secured permits shall be provided to the District prior to the start of construction. The Contractor shall comply with all provisions of permits secured or required for this project. Please see **Railroad Liability Insurance and Right-of-Entry** specifications for all railroad permitting requirements.

It shall be the Contractor's responsibility to secure any additional temporary or permanent access, storage or construction easements deemed necessary from property owners prior to performing the work as shown on the plans and outlined in the specifications.

3.2 Required Submittals

1. Copies of signed permits, as applicable.

3.3 Payment

The cost of procurement of and compliance with any and all permit requirements shall be included in the various Contract unit prices and no additional compensation will be awarded.

4 Erosion and Sediment Control

4.1 General

The total disturbed area for this project is estimated to be greater than 1.0 acre. A Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) has been submitted to the Illinois Environmental Protection Agency (IEPA).

The Contractor shall comply with all the requirements of the IEPA's *Illinois Urban Manual*, current edition and Section 280 of the *IDOT Standard Specification*. All disturbed areas shall be restored to near-original contours and seeded in accordance with the "Seeding, Class 2" and "Seeding of Agricultural Areas" Sections of these Detailed Specifications.

The erosion control devices, materials, and procedures specified in these contract documents are to be considered a minimum. Additional devices or materials may be required based on site conditions encountered, at the direction of the Engineer. Any devices, material, or procedures required by the Engineer due to the Contractor's actions or negligence will be provided at no additional cost to the District.

The Contractor shall take whatever measures the District deems necessary to eliminate excessive erosion or siltation, including, but not limited to, inlet protection, seeding, sodding, erosion control blanket, silt fence, etc.

The Contractor shall keep the road right-of-way free from all dirt and construction debris at all times during construction.

The Contractor shall remove and dispose of all temporary erosion control devices within 30 days of final site stabilization and approval by the District.

4.2 Required Submittals – Not used.

4.3 Payment

This work will be paid for as hereafter outlined below under the following pay items: **Perimeter Erosion Barrier, Erosion Control Blanket, Temporary Mulch, Inlet and Pipe Protection, Temporary Ditch Checks, Temporary Erosion Control Seeding, Stabilized Construction Entrance, Seeding Class 2, and Preparation of Agricultural Areas**, installed and/or complete in place. No separate payment shall be made for erosion control beyond these pay items.

5 Sanitary Sewer, PVC PS46, 30" Dia.

5.1 General

The work under this item includes all labor, equipment, materials, permits, mobilization, site preparation, dewatering, trench excavation, utility protection, pipe bedding, backfilling and compaction, furnishing and installing sanitary sewer pipe, as directed or required, on grade and in line according to the plans and specifications. This item shall also include all required sanitary sewer testing, wye or tee fittings, adapters and risers as required, special embedment, power tamping, dust control, supervision, transportation, and any other item necessary to satisfactorily install and test the new sanitary sewer system.

Sanitary sewer pipe that varies ± 0.02 feet from the proposed grade and/or ± 0.15 feet from the proposed line will not be accepted. More stringent tolerances may be required in the field where directed by the District. The Contractor shall be solely responsible for setting and maintaining proper lines and grades for all work. The District shall not be obligated to establish construction grade or alignment.

The Contractor shall provide at least one (1) laser device for setting lines and grades of sub-grade and pipe inverts during all phases of construction. The device(s) shall be of acceptable design and maintained in good working condition for the duration of the project. The Contractor shall employ workers competent in the setup and operation of said device(s). Said device(s) shall be operated at no extra cost to the District.

Sanitary sewer pipe and pipe-laying methods must conform to the requirements of the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction* and as stated elsewhere herein.

5.2 Pipe Bedding and Trench Backfill

Pipe Bedding:

Pipe bedding for PVC pipe shall be Class IA per ASTM Standard D2321. Prior to placement of the pipe bedding, the condition of the trench bottom shall be modified, as necessary, according to the requirements of the **Sanitary Sewer Trench Subbase Improvement** pay item. All trench subbase improvements shall be included in that pay item and no additional compensation for trench subbase improvement shall be considered. The trench bottom shall be bedded with six inches (6") minimum crushed stone foundation. Crushed stone shall be placed to a minimum of twelve inches (12") above the top of the pipe. The pipe manufacturer's bedding recommendations shall be followed; if they are at variance with the above-specified criteria the most stringent requirements shall be met.

Bedding gradation shall be such that the migration of trench wall materials into the bedding layer is prevented; the District shall approve this bedding material after the characteristics of the trench are determined. It is imperative on this project that, due to the soils that are anticipated to be encountered that the width of the trench bottom be kept to the absolute minimum to ensure that bedding material is not lost in the sidewalls. The trench shall be constructed in such a manner that it provides support for bedding material and inhibits movement of bedding material. The trench shall be constructed in such a manner that the bedding material will be fully supported and permanently confined within the bedding envelope.

Trench Backfill:

The Contractor shall backfill the trench according to the details shown on Sheet 7 in the plans (Detail titled "*Typical Section of Access Road and Sanitary Sewer*"). All costs associated with backfilling the material in this manner shall be included in the contract unit price per linear foot of the various sizes and types of sanitary sewer installed.

The Contractor shall use approved select trench backfill to the level of the base under all roads, shoulders, sidewalks, driveways, parking lots or pavements of any kind and beyond such pavements as set forth in the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction* T.S. 2:4–c. Select trench backfill under said structures shall be FA-6, mechanically-compacted in six-inch (6") to eighteen-inch (18") loose lifts to the sub-grade elevation of the road shoulder, sidewalk, driveway, parking lot or other pavement. Materials shall be in accordance with Article 1003.04 and Section 208 of the *IDOT Standard Specifications*.

The Contractor shall exercise care not to disturb any existing utilities during backfilling and compaction operations.

The Contractor shall furnish a backhoe and operator during the testing of the backfill placed during construction. All select trench backfill shall be compacted to ninety-five percent (95%) of Standard Proctor density; all other backfill shall be compacted according to the details shown on the plans. Compaction shall be according to Method 1 of Article 550.07 of the *IDOT Standard Specifications*. All compaction tests, including tests to establish the Standard Proctor density of the material, shall be performed at the Contractor's expense by an approved, independent geotechnical-testing firm. If the tests do not meet the compaction requirements

specified above, the area shall be re-compacted and re-tested at the Contractor's expense until the test requirements are met.

For granular backfill (FA-6), a vibratory plate, or other approved equipment-mounted compaction equipment must be used by the Contractor to compact the backfill in lifts not to exceed eighteen inches (18"). Water-jetting, ponding or flooding will not be permitted as a means of trench compaction on this project.

If initial tests indicate compaction requirements are being met, no further lift testing will be required unless the method, equipment or material changes. The final lift must be tested.

The Contractor shall use reasonable care while backfilling over the sewer. No materials such as rocks or boulders shall be allowed to be dropped directly on the sewer pipe. If these materials are present in the backfill, the Contractor shall bring bedding material to a point 24" above the crown of the pipe. The cost of this additional granular material shall be considered included in the Contract unit price per linear foot of sanitary sewer installed, of the size(s) and type(s) specified.

Contractor shall properly dispose of all spoils at an acceptable offsite location at no additional cost to the District.

The Contractor shall guarantee against trench settlement for a period of three (3) years after final project acceptance.

5.3 Materials

Pipe:

PVC pipe shall be PS46 meeting the requirements of ASTM F-679 with joints conforming to ASTM D-3212. PVC pipe shall be solid wall; exterior ribbed pipe will not be accepted.

Transition Couplings:

Clay to PVC and cast iron or ductile iron to PVC pipe transition couplings shall be Fernco 5000 or LDC series (as required by pipe diameter) or Mission Flex-Seal ARC shear-resistant or District approved repair couplings, made of flexible PVC compound with 316 stainless steel clamps and stainless steel rings. Transition couplings shall conform to ASTM D5926 and C1173, as applicable.

All material tests shall be in accordance with manufacturer and District requirements and shall comply with all applicable ASTM specifications. Manufacturer material specifications and certifications for all castings, pipes, fittings, connectors, adapters, etc., must be furnished, upon request, for all materials to be used under this contract.

5.4 Required Submittals

1. Pipe, fitting, and repair coupling material specifications.
2. Material gradation certifications for proposed bedding material and select trench backfill.

5.5 Measurement and Payment

Measurement for payment shall be horizontal along the centerline of the installed pipe from center-of-manhole to center-of-manhole. Payment will be made at the Contract unit price per Linear Foot of **Sanitary Sewer, PVC PS46, 30" Dia.**, installed, complete in place.

6 Sanitary Sewer, Carrier Pipe, PVC PS46, 30" Dia.

6.1 General

Work under this item includes furnishing and installing the 30" diameter PVC PS46 sanitary sewer carrier pipe within the jacked in-place 54" steel casing pipe as shown on the plans. Carrier pipe shall be installed to the horizontal and vertical tolerances as specified in Section 7.1 of these Detailed Specifications.

This item shall also include the installation of casing spacers as detailed on the District's Standard Detail sheet and in accordance with manufacturer's recommendations. In all cases the following spacing must be met:

1. A minimum of two (2) spacers shall be provided per carrier pipe section.
2. A spacer shall be provided within two (2) feet of each end of a carrier pipe section.
3. The spacers shall have a maximum interval of six (6) feet per carrier pipe section.

6.2 Materials

Carrier pipe shall be PVC PS46 pipe meeting the requirements of ASTM F-679 with joints conforming to ASTM D-3212.

Casing spacers shall have HDPE runners as manufactured by Cascade Mfg., or approved equal.

Casing end seals shall be District-approved pull-on flexible rubber seals.

6.3 Required Submittals

1. Pipe, fitting, and repair coupling material specifications.
2. Material Certifications for the casing spacers.

6.5 Measurement and Payment

This work will be paid for at the contract unit price per Linear Foot of **Sanitary Sewer, Carrier Pipe, PVC PS46, 30" Dia.**, installed, complete in place. The cost of all casing spacers and casing pipe end seals shall be included in this item.

7 Sanitary Manhole, Precast, 5' Dia.

7.1 General

This work shall consist of furnishing and installing all labor, equipment, materials, transportation, excavation, accessories, trench backfill, and performance of all operations required to construct precast concrete sanitary manholes as directed by the District, all in accordance with the District's *Standard Detail Sheet* and Article 6:3 and 7 of the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction*. Work shall also include furnishing and installing a District-approved manhole frame and lid (Neenah R-

1670, R1915J, or EJ E-1117) adjusted to grade as indicated on plans. MH #8 shall have a bolt-down lid. Contractor shall field-verify all proposed rim elevations.

Flat top manholes will not be permitted for this project; eccentric cone sections must be a component of all manholes unless otherwise noted.

All standard manholes shall be successfully vacuum tested per ASTM C-1244 "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test" prior to placing into service.

Shop drawings of all manholes shall be submitted to the District for approval prior to manufacture and delivery to the site. Manhole shop drawings shall include a specific detail for each manhole showing the number and height of barrel sections, height of cone section, number and size of adjusting rings, location and spacing of steps and elevations of all pipes. A plan view shall be provided showing the orientation of pipe openings.

Manhole steps:

District approved manhole steps shall be provided with a maximum spacing of 16". The top of the pre-cast cone section shall be set at an elevation that will allow the frame to be adjusted (12" maximum) without disturbing the cone section.

Manhole Adjustment:

The Contractor shall field verify all proposed rim elevations and shall construct manholes in conformance with manhole adjustment requirements. Manhole frames shall be set at finished grade in paved areas. Concrete adjusting rings shall be standard reinforced concrete pipe type. Minimum ring thickness shall be two inches (2"). Maximum ring thickness shall be twelve inches (12"). Adjustment rings shall conform to ASTM C478 and ASTM C139, latest revision. Concrete for adjusting rings: Class "A" as specified in T.S. 5:3(a) in the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction*. Absorption shall comply with ACI Specification P-I-C and ASTM C139, latest revision.

All adjusting ring joints shall be sealed watertight by means of EZ Stik, Kent-Seal, or equal (including cast iron frame to concrete adjusting ring). Minimum adjusting ring height is four inches (4"). Maximum adjusting ring height is twelve inches (12"). No more than thirty inches (30") from the top of casting to the first step will be allowed. A maximum of one (1) 2" adjusting ring will be allowed.

No adjusting rings are required for manholes in turf areas or in roadways with curb and gutter.

In roadways only: metal or plastic shims will be required if the casting in the roadway must be pitched to match the slope of roadway pavement. Shims must be equally spaced with no more than one-inch (1") of total adjustment. If frame is shimmed, no butyl materials seal (E-Z Stik, Kent-Seal, or equal) will be allowed under the casting. The void area between the casting, and masonry shall be grouted from the outside to the inside face of the adjusting ring, filling the entire void. No trench compaction shall take place until the concrete has cured and hardened to

the District's satisfaction. Final manhole adjustment shall meet additional requirements of the applicable roadway authority.

The Contractor shall install a District-approved external casting seal on all proposed manholes as indicated on the *Standard Detail Sheet* and shall install District-approved external seals on all manhole barrel section joints (Cretex, Mac Wrap or CANUSA Wrapid Seal).

Manhole Connections:

The Contractor shall field verify all materials, sizes, and elevations of all existing pipes to be connected. Pipe connections to new manholes shall be made by means of a watertight flexible pipe to manhole connector meeting the requirements of ASTM C923 entitled "Resilient Connectors between Reinforced Concrete Manhole Structures and Pipes." Integrally cast and expandable gaskets are acceptable. The design shall be in accordance with the manhole and pipe manufacturer requirements and shall receive prior District approval. All sanitary manholes equal to or greater than twenty-two feet (22') deep shall use pipe to manhole gaskets rated to a minimum of 15 psi hydrostatic pressure (A-LOK model X-CEL or District approved equivalent).

New manholes that connect to existing sanitary sewers shall be factory constructed with only the opening for the pipe exiting the manhole cast in place. All other proposed openings shall be core-drilled in the field.

All connections between new manholes and existing sanitary sewer shall be made with a minimum of 5.0' of new PVC Pipe. Connection shall be made to structurally sound pipe. Pipe and transition couplings shall conform to the Section titled "Sanitary Sewer" of this document. Pipe sections used to connect new manholes and existing sanitary sewer shall be included in the Contract unit prices for the various types and sizes of sanitary manholes.

The Contractor shall construct a paved manhole bench in each manhole per the *Standard Detail Sheet* or per the District's direction.

All new manholes shall be vacuum tested per ASTM C1244-93 Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test prior to placing into service.

Manhole Lining

All new precast manholes on this project shall have an internal epoxy lining system installed to the walls, benches, and inverts. This lining shall have a minimum thickness of 125 mils and shall be applied either in the precast facility or in the field.

The following minimum lining product requirements shall be as follows:

1. Minimum Tensile Strength (ASTM D638): 5,600 psi
2. Minimum Flexural Strength (ASTMD790): 7,000 psi

The following lining systems are pre-approved by the District:

1. Warren Environmental, Inc. 301-14 100% Solids Epoxy Lining System
2. Raven Lining Systems 405FS 100% Solids Ultra High Build Epoxy
3. Sherwin Williams Dura-Plate 6100 Epoxy

4. DuraSeal, LLC DuraLine Epoxy
5. Quadex Structure Guard-QS Epoxy
6. Madewell Mainstay DS-5 High Build Epoxy Coating

The Contractor shall prepare surfaces scheduled to be lined in accordance with the lining system manufacturer's recommendations. Prepped surfaces shall be structurally sound and contaminate free. Cleaning may be achieved by high pressure water cleaning, brushing or combination thereof. Any solvents proposed for use in preparation shall be reviewed and approved by the District prior to use.

Any water and electricity required to perform the specified work shall be the responsibility of the Contractor.

Contractor shall adhere to the lining system manufacturer's recommendations for material handling and application. The minimum finished liner thickness shall be 125 mils. Application of the liner may be by spray equipment, trowel, brush or other suitable method in accordance with manufacturer requirements and as field conditions allow.

7.2 Required Submittals

1. Manhole shop drawings including a specific detail for each manhole showing the number and height of barrel sections, height of cone section, number and size of adjusting rings, location and spacing of steps and elevations and sizes of all pipe openings. A plan view shall be provided showing the orientation of pipe openings.
2. Frame and lid material specifications.
3. Chimney seals material specifications.
4. Barrel joint seals material specifications.
5. Manhole to pipe transition couplings material specifications.
6. Manhole steps material specifications.
7. Sealant material specifications.
8. Epoxy lining system technical specifications and material safety data sheets.

7.3 Payment

This work will be paid for at the Contract unit price per Each **Sanitary Manhole, Precast, 5' Dia.** constructed, complete in place.

8 Sanitary Manhole to be Removed (5' Dia.) and Replaced (6' Dia.)

8.1 General

This work shall include removal of existing 5' dia. Sanitary Manhole No. 197-014 and installation of a new 6' dia. precast sanitary manhole (all requirements shall be the same per the Section 7 "Sanitary Manhole, Precast, 6' Dia." unless otherwise noted) at the same location or near-same location, as indicated on the plans.

The Contractor shall field verify all proposed rim elevations and shall construct manholes to be in conformance with manhole adjustment requirements.

The Contractor shall field verify all materials, sizes, and elevations of all existing pipes to be connected.

New manholes that connect to existing sanitary sewers shall be constructed in the factory with only the opening for the pipe exiting the manhole cast in place. All other proposed openings shall be core drilled in the field. The manhole bench shall be constructed or modified in the field as directed by the Inspector. The replacement manhole shall be lined as described in the previous section.

All connections between new manholes and existing sanitary sewer shall be made with a minimum of 5.0' of new pipe. Connection shall be made to sound pipe. Pipe and transition couplings shall conform to the Section titled "*Sanitary Sewer*" of this document. Pipe used to connect new manholes and existing sanitary sewer shall be considered included in this bid item.

A flexible pipe to manhole connector (PSX Positive Seal Gasket System with Power Sleeve Expansion or approve equivalent) shall be installed in the field.

The Contractor shall provide bypass pumping as required and shall be responsible for providing all pumps, conduits, plugs and other equipment to divert the flow of sewage, as required, to complete the proposed manhole removal and replacement. It is the Contractor's sole responsibility to ensure that construction operations do not negatively affect sanitary sewer service to any resident or business for the duration of construction. The Contractor shall furnish all necessary labor, equipment, materials and supervision to set up and operate and maintain the bypass pumping system and shall only pump into sanitary manholes approved by the District. The Contractor shall be responsible for maintaining normal levels of sanitary sewer service to each resident for the duration of construction and shall be responsible for the cleanup, repair, and restoration of damaged property and any costs and claims resulting from sewage backups. Bypass pumping shall be in place and operable prior to the severance or removal of any part of MH #197-014 (Sheet 14). Bypass pumping operations shall accommodate flows from all directions upstream of the proposed point of severance or removal, regardless of the amount of flow or characteristics of flow of each sewer main. The pumping system shall have sufficient capacity to handle the existing flow plus any additional flow that may occur subsequent to rainstorms or during peak flow periods. The Contractor shall provide sufficient inspection personnel to ensure that surcharging and backups do not occur on public or private property. If bypass pumping is required on a 24-hour basis, the equipment supplied shall be restricted to noise levels of ninety decibels (90 dB) or less. All plugs or blocking shall be restrained to ensure that they cannot be washed downstream. All costs associated with the bypass pumping system shall be included in this pay item and no additional compensation will be considered.

8.2 Required Submittals

1. Manhole shop drawings including a specific detail for each manhole showing the number and height of barrel sections, height of cone section, number and size of adjusting rings, location and spacing of steps and elevations of all pipes. A plan view shall be provided showing the orientation of pipe openings.
2. Frame and lid material specifications.
3. Chimney seals material specifications.
4. Barrel joint seals material specifications.
5. Manhole to pipe connection seals material specifications.
6. Manhole steps material specifications.
7. Sealant material specifications.

8. Bypass pumping plan indicating location of pumps, point of discharge, and pump curves for all pumping equipment.
9. Epoxy lining system technical specifications and material safety data sheets.

8.3 Payment

This work will be paid for at the Contract unit price per Each for **Sanitary Manhole to be Removed (5' Dia.) and Replaced (6' Dia.)**, complete.

9 Steel Casing, Jacked In-Place, 54" Dia.

9.1 General

This work pertains to the 54" dia. steel casing pipe to be jacked in-place under the Illinois Railway (OmniTRAX) right-of-way. The steel casing pipe is intended to be installed by boring and jacking, hand mining, or microtunneling; other means and methods for installing the casing pipe must be approved by the District. The work includes mobilization, site preparation, dewatering, exterior void grouting, the material cost of the pipe, as well as all labor, equipment and materials associated with the actual jacking operation.

All rails, guides and jacks must be set securely and exactly to ensure that tolerances of jacking operations and final casing positions are maintained within the following acceptable limits:

<u>Horizontal:</u>	Centerline of far end of finished sleeve shall be within one inch per twenty (20) lineal feet of plan centerline.
<u>Vertical:</u>	Invert of far end of finished sewer pipe shall be within 0.20 feet of plan invert.

The Contractor shall be solely responsible for completing the work within tolerances acceptable to the District.

Contractor is responsible to verify site conditions which may include additional soil borings at no additional cost to the Contract.

Prior to beginning construction adjacent to the Illinois Railway ("Railroad") right-of-way, the Contractor shall notify the railroad at least two (2) weeks in advance to arrange for railroad flagging. Work cannot commence until the Contractor has Railroad Liability Insurance and a Right-of-Entry approved by the Railroad and the District (see **Railroad Liability Insurance and Right-of-Entry** pay item). Railroad flaggers must be present for the entire duration of the jacking operations.

During the mining operations, the material in front of the pipe shall not be removed for more than six inches (6") beyond the pipe heading before the casing pipe is pushed forward, unless otherwise approved (in writing) by the District.

Immediately after installation, the Contractor shall pressure grout the exterior of the steel casing pipe at appropriate intervals to ensure that any voids created during jacking and/or dewatering operations are completely filled. Grouting tubes shall be installed along the casing pipe to facilitate this process. The Contractor shall verify the acceptability of all void elimination materials with the District prior to performing the work.

During the course of the work, the line and grade shall be closely monitored to ensure no deviation from plan alignment or grade occurs.

The Contractor shall be solely responsible for any and all damage occurring as a result of his operations above or below ground, including damage to houses, existing utilities, trees, fences, landscaping, etc.

Monitoring of the Railroad track elevations will be required once daily during jacking operations. All elevations recorded shall be certified by a Professional Land surveyor licensed in the State of Illinois. Elevations shall be provided daily to the District.

9.2 Materials

The steel casing pipe shall be 54" diameter (minimum) Grade B structural steel with a minimum yield strength of 35,000 psi per ASTM A-53, and a minimum wall thicknesses of 0.5". The Contractor shall determine the actual casing grade and thickness needed based on an evaluation of the jacking forces required, as approved by the roadway authority.

Steel casing joints shall be made by continuous weld completely around the perimeter of the pipe done in accordance with AWWA C206, shall be watertight and shall provide a strength through the joint equal to that of the pipe shell. Pipe shall have beveled edges for welding and shall be new, straight pipe.

The carrier pipe shall be 30" PVC PS46 as shown on the plans. Adequate blocking shall be used to maintain the grade shown on the plans. Carrier Pipe will be paid for separately under the **Sanitary Sewer, Carrier Pipe, PVC PS46, 30" Dia.** Pay item.

The casing pipe diameter shown on the plans and described in these specifications is the minimum acceptable size. At his sole expense, the Contractor may use a larger diameter casing pipe if approved in advance by the District. The Contractor assumes all risks associated with the installation of the casing pipe. No additional compensation will be awarded for the use of a larger diameter casing pipe or for any special methods, equipment or materials needed to install the casing pipe. The lengths of steel casing and carrier pipes provided must be short enough to facilitate proper handling and placement in the jacking pit. No additional compensation will be awarded for partial or incomplete push attempts for any reason.

Any changes to push alignments must receive prior approval from the District before push operations can resume. Open cut installation of the steel casing pipe will not be allowed under any circumstances.

9.3 Required Submittals

1. Material certifications for the steel casing pipe.
2. Material certifications for casing spacers and end seals.
3. Work plan depicting means and methods for the jacking operations.
4. Grout material certifications.

9.4 Payment

This work will be paid for at the Contract unit price per Linear Foot of **Steel Casing, Jacked In-Place, 54" Dia.** complete, in place. Said unit price shall include the material cost of the casing pipe and the cost of jacking operations needed to place the casing pipe to the line and grade indicated on the plans, including mining of rock, cobbles, boulders or other obstacles, as necessary, all work necessary to install the carrier pipe, exterior void grouting, all restoration, cleanup and supervision. No additional payment will be made for partial or incomplete push attempts.

10 Trenchless Tunneling Setup

10.1 General

This work shall include all necessary labor, equipment and materials preparatory to the steel casing jacking operation, including, but not limited to, excavation of push and receiving pits, dewatering, shoring, sheeting, setting of rails on line to grade, thrust blocking and backfilling of push and receiving pits.

Under this pay item, the Contractor shall:

1. Open suitable jacking and receiving pits adjacent to the area into which the steel casing will be jacked in place as shown on the plans. Every effort shall be made to minimize the size of jacking and receiving pits without jeopardizing work area safety and suitability.
2. Set and maintain guide timbers or rails accurately in bottom of jacking pit in order to keep steel sleeve on correct line and grade.
3. Furnish and install heavy backstop supports at rear of jacking pit, sufficient to absorb shock of jacking operation without distortion. Any sheeting or shoring needed to provide a safe working area or to comply with permit requirements shall be considered incidental to the cost of this item.
4. Identify, locate and relocate, as necessary, all existing utilities that could be damaged by setup, boring and jacking or other construction activities. Any damage done to utilities due to construction shall be repaired or replaced by the Contractor, at his own expense, to the satisfaction of the utility.

10.2 Required Submittals

1. Shoring drawings and/or calculations.

10.3 Payment

This work will be paid for at the Contract Lump Sum unit price for **Trenchless Tunneling Setup**. A maximum of fifty percent (50%) of the Contract unit price will be paid for the setup, complete, prior to completion of the jacking operation.

11 Sanitary Sewer Trench Subbase Improvement

11.1 General

This work shall consist of the removal of native trench subbase material below the proposed sanitary sewer bedding material and replacement of that material with coarse aggregate in order to provide a compacted uniform, stabilized, level base for the sanitary sewer PVC pipe bedding. The minimum depth of the trench subbase improvement shall be 12" unless otherwise directed by the District.

11.2 Materials

The Subbase Improvement aggregate shall be IDOT Gradation CA-1. Course Aggregates shall be in accordance with Article 1004.04 of the IDOT *Standard Specifications for Road and Bridge Construction*, Current Edition.

11.3 Required Submittals

1. Material gradation certifications for aggregates.

11.4 Measurement and Payment

This work will be paid for at the Contract unit price per Cubic Yard for **Sanitary Sewer Trench Subbase Improvement** complete, in place. Calculation of quantities for payment shall be based on a maximum width of the outside diameter of the pipe plus 18" to the excavated depth as directed by the District.

12 Dewatering

12.1 General

This work shall consist of the establishment, operation, and maintenance of a dewatering system. The Contractor shall use all means at his disposal to maintain dry trenches to the satisfaction of the District.

If necessary, well point permits must be obtained from the Winnebago County Public Health Department (Health Department). Well point installation, maintenance, operation and removal shall be per Health Department requirements. The Health Department shall be notified prior to well placement and removal.

Groundwater will not be allowed to be pumped on existing ground surfaces or pavements where it may cause a traffic nuisance, or into existing sanitary sewers; it shall be discharged to a point acceptable to the District, with appropriate consideration given to erosion control requirements and specifications.

Any permits required to perform dewatering work on this project shall be secured by the Contractor; it shall be his responsibility to provide any bonds, insurance's, guarantees, etc. as required by said permit(s). Abandonment of dewatering facilities shall be performed in accordance with pertinent State and County requirements.

The Contractor shall be responsible for any temporary electrical service installation, metering and consumption and/or fuel costs required for the dewatering system.

If generators are required to run on a twenty-four (24) hour basis, the equipment supplied shall be restricted to a noise level of ninety decibels (90 dB) or less.

Prior to dewatering system installation, the Contractor shall submit to the District a full dewatering plan that includes all proposed materials, systems, and equipment etc., required to ensure the system complies with these requirements. The system shall not be installed until the District approves the plan.

12.2 Required Submittals

1. Dewatering plan.

12.3 Payment

This work will be paid for at the contract unit price per Lump Sum for **Dewatering System**. Fifty percent (50%) of the contract unit price will be paid upon the setup of the system. The remaining fifty percent (50%) will be paid in equal installments each month the dewatering system is installed, with the final ten percent (10%) to be paid upon complete removal of the system.

13 Topsoil Excavation and Stockpiling (Special)

13.1 General

The work shall be done in accordance with Section 211 of the *IDOT Standard Specifications* and shall include the excavation and transportation of suitable topsoil materials to onsite locations shown in the plans (reference the Construction Staging Plan, Sheet 6). Prior to sanitary sewer construction, the topsoil shall be excavated over the sewer alignment to the limits shown on the plans up to a maximum depth of 2' from the existing surface elevation. This work shall be performed such that mixing and transmigration of soil stratigraphy is minimized. The topsoil shall be stockpiled on the easterly limits of the temporary construction easement in accordance with the plans; the stockpile shall be sloped to promote positive drainage and shall be protected against erosion at all times. No excavated topsoil shall leave the site.

13.2 Materials – Not Used.

13.3 Required Submittals – Not Used.

13.4 Measurement and Payment

Payment shall be made at the Contract unit price per Cubic Yard of **Topsoil Excavation and Stockpiling (Special)**. Measurement can be made by agreement to Contract Quantities or Measured Quantities according to Article 211.07 of the *IDOT Standard Specifications*.

14 Topsoil Excavation and Placement (Special)

14.1 General

The work shall be done in accordance with Sections 202 and 211 of the *IDOT Standard Specifications* and shall include the transportation of excavated and stockpiled topsoil to the locations shown on the plans (reference the Construction Staging Plan, Sheet 6). The topsoil placement shall commence once sanitary sewer installation has been completed to STA 110+00, and then proceed in such a manner that the placement operations remain within 500 linear feet of the sanitary sewer installation at all times during construction. All topsoil shall be graded to drain at all times and ponded water will not be allowed on the finished surface.

Any excess topsoil materials remaining upon completion of placement operations shall be transported to other onsite locations as directed by the District. No topsoil materials shall leave the site.

14.2 Materials – Not Used.

14.3 Required Submittals – Not Used.

14.4 Measurement and Payment

Payment shall be made at the contract unit price per Cubic Yard of **Topsoil Excavation and Placement (Special)**. Measurement can be made by agreement to Contract Quantities or Measured Quantities according to Article 202.07 of the *IDOT Standard Specifications*.

15 Exploration Trench (Special)

15.1 General

This work shall include excavation or other methods as proposed by the Contractor that are undertaken in order to verify and ascertain the depths and locations of existing farm field tiles throughout the project limits, in order to identify any conflicts with the sanitary sewer installation. Trenches shall be excavated in order to establish the line and grade of the underdrains. Any tiles that are broken shall be immediately repaired and no surface runoff or debris will be allowed to enter the tile. Tile repairs shall be paid for under the **Storm Sewers (Special), Various Diameter** pay item.

After the trench has been inspected by the District, the excavated material shall be used to backfill the trench.

15.2 Required Submittals – Not used.

15.3 Payment

Payment shall be made at the contract unit price per Linear Foot of **Exploration Trench (Special)**, complete.

16 Storm Sewer Removal – 12”, 15”

16.1 General

This work shall conform to Section 501 of the *IDOT Standard Specifications* and shall include the full or partial removal and disposal of existing 12” and 15” diameter farm field underdrains to the lengths indicated on the plans. The existing field drains are of various material types; no additional compensation shall be granted for removal of differing material types but shall be included in this pay item.

Disposal of the materials shall be done in accordance with Article 202.03 of the *I.D.O.T. Standard Specifications*.

16.2 Materials – Not Used.

16.3 Required Submittals – Not Used.

16.4 Payment

Payment shall be made at the Contract unit price per Linear Foot of **Storm Sewer Removal, 12"** and **Storm Sewer Removal, 15"**.

17 Storm Sewers (Special) – 12" CMP, 15" CMP

17.1 General

This work shall conform to Section 550 of the *IDOT Standard Specifications* and shall include furnishing and installing storm sewers to the line and grade as shown on the plans. All pipe shall be galvanized corrugated steel pipe. Where pipe is to be connected to existing storm sewer, the pipe shall either be joined at an existing joint or secured via an approved coupling and/or fitting (all joints shall be watertight); all costs associated with connecting to the existing storm sewer shall be included in this pay item.

17.2 Materials

Galvanized corrugated steel pipe shall be in accordance with Section 1006.01 of the *IDOT Standard Specifications*.

17.3 Required Submittals

1. Material certification for the galvanized corrugated steel pipe.
2. Material certification for couplings and/or fittings.

17.4 Payment

Payment shall be made at the Contract unit price per Linear Foot of **Storm Sewers (Special), 12"** and **Storm Sewers (Special), 15"**.

18 Storm Sewers (Special), Various Diameter

18.1 General

This work shall consist of repairs to agricultural field tiles that are encountered during the sanitary sewer installation. Locating the existing agricultural field tiles shall be accomplished under the **Exploration Trench** pay item. All work to protect, reconnect, and otherwise preserve the existing field tile systems shall be in accordance with Section 611 of the *IDOT Standard Specifications*. Field tiles may be of various diameters and material types; this pay item shall include all material types and diameters that are needed to replace the tiles where construction impacts them.

18.2 Materials

All replacement field tiles shall be in accordance with Article 601.02 of the *IDOT Standard Specifications*.

18.3 Required Submittals

1. Material certification for the replacement pipe.
2. Material certification for couplings and/or fittings.

18.4 Payment

Payment shall be made at the Contract unit price per Linear Foot of **Storm Sewers (Special), Various Diameter**.

19 Pipe Culverts, Class C, Type 1 Galvanized Corrugated Steel – 12”, 48”

19.1 General

This work shall conform to Section 542 of the *IDOT Standard Specifications* and shall include furnishing and installing pipe culverts to the line and grade as shown on the plans. All pipe shall be galvanized corrugated steel pipe.

19.2 Materials

Galvanized corrugated steel pipe shall be in accordance with Section 1006.01 of the *IDOT Standard Specifications*.

19.3 Required Submittals

1. Material certification for the galvanized corrugated steel pipe.
2. Material certification for couplings and/or fittings.

19.4 Payment

Payment shall be made at the Contract unit price per Linear Foot of **Pipe Culverts, Class C, Type 1 Galvanized Corrugated Steel, 12”** and **Pipe Culverts, Class C, Type 1 Galvanized Corrugated Steel, 48”**.

20 Metal End Sections, 12”

20.1 General

This work shall be done in accordance with Section 542 of the *IDOT Standard Specifications* and shall consist of furnishing and installing all labor, equipment, materials, transportation, excavation, and accessories required to construct the metal end sections at the locations indicated in the plans.

20.2 Materials

Metal flared end sections shall be constructed according to *IDOT Standard 542401-03: Metal Flared End Sections for Pipe Culverts*.

20.3 Required Submittals

1. Material certification and shop drawings for the metal end sections.

20.4 Measurement and Payment

This work will be paid for at the contract unit price per Each for **Metal End Sections, 12”** installed, complete in place.

21 Metal End Sections, Multiple Inlet, 48”

21.1 General

This work shall be done in accordance with Section 542 of the *IDOT Standard Specifications* and shall consist of furnishing and installing all labor, equipment, materials, transportation, excavation, and accessories required to construct the multiple inlet metal end sections at the locations indicated in the plans.

21.2 Materials

The multiple inlet metal end sections shall be one fabricated piece with no joints. They shall be fabricated such that both 4” diameter culvert pipes can be installed with room for placing compacted backfill between the outside diameters.

21.3 Required Submittals

1. Material certification and shop drawings for the multiple inlet metal end sections.

21.4 Measurement and Payment

This work will be paid for at the Contract unit price per Each for **Metal End Sections, Multiple Inlet, 48”** installed, complete in place.

22 Temporary Pipe Culvert

22.1 General

This work shall conform to Section 542 of the *IDOT Standard Specifications* and shall include furnishing and installing a temporary pipe culvert to allow for construction access over the creek crossing at STA 128+60 (Sheet 20) during sanitary sewer construction. This work shall include all excavation, temporary fill, and any other measures required at the creek crossing to allow for the access. It shall also include the removal of the temporary pipe culvert and measures installed prior to the final installation of the double 48” pipe culvert at the creek.

22.2 Materials

Pipe materials shall be in accordance with Article 542.02 of the *IDOT Standard Specifications*.

22.3 Required Submittals

1. Material certification for the culvert pipe.

22.4 Payment

Payment shall be made at the Contract unit price per Linear Foot of **Temporary Pipe Culvert** installed, complete in place.

23 Pipe Underdrains, Type 2, Perforated Corrugated Steel, 6”

23.1 General

This work shall conform to Section 601 of the *IDOT Standard Specifications* and shall include furnishing and installing pipe underdrains to the line and grade as shown on the plans. All pipe

underdrains shall be perforated corrugated steel pipe installed in a fabric lined trench backfilled with coarse aggregate.

23.2 Materials

Perforated corrugated steel pipe shall be in accordance with Article 1006.01 of the *IDOT Standard Specifications*. Geotechnical fabric shall be in accordance with Article 1080.05 of the *IDOT Standard Specifications*. Coarse Aggregate shall be CA-16 gradation in accordance with Article 1004.05 of the *IDOT Standard Specifications*.

23.3 Required Submittals

1. Material certification for the perforated corrugated steel pipe.
2. Material certification for the geotechnical fabric.
3. Material certification for the coarse aggregate.

23.4 Payment

Payment shall be made at the Contract unit price per Linear Foot of **Pipe Underdrains, Type 2, Perforated Corrugated Steel, 6"** installed, complete in place.

24 Geotechnical Fabric for Ground Stabilization

24.1 General

This work shall conform to Section 240 of the *IDOT Standard Specifications* and shall include furnishing and installing geotechnical fabric on the subgrade of the proposed access road. Prior to placement of the fabric, the subgrade shall be prepared according to Section 301 of the *IDOT Standard Specifications*. The District shall approve of the subgrade prior to placement of any fabric. Fabric shall be installed on the prepared subgrade and immediately covered with the Aggregate Subgrade Improvement (as described in Section 25).

24.2 Materials

Geotextile fabric shall be in accordance with Article 1080.02 of the *IDOT Standard Specifications* and may consist of woven or nonwoven filaments.

24.3 Required Submittals

1. Material certification for the geotechnical fabric.

24.4 Payment

Payment shall be made at the Contract unit price per Square Yard of **Geotechnical Fabric for Ground Stabilization** installed, complete in place.

25 Aggregate Subgrade Improvement, 12"

25.1 General

This work shall consist of constructing an aggregate subgrade improvement beneath the aggregate surface course of the access road. The work shall include the subgrade preparation, removal and disposal of excess material, furnishing, placing, installing and compacting aggregate, and grading and shaping the subgrade improvement prior to aggregate surface course placement.

Prior to aggregate subgrade placement, the subgrade area shall be proof-rolled and witnessed by the District Inspector. Proof-rolling shall consist of using a fully loaded tandem axle dump truck to identify locations of structurally unsuitable subgrade. Proof-rolling shall be scheduled and completed so as to avoid a rain event between proof-rolling and aggregate base course placement. At the direction of the District, the subgrade may be required to dry out for a period of time in an attempt to identify areas of unsuitable material prior to fortifying the subgrade with additional aggregate subgrade improvement.

25.2 Materials

Aggregate subgrade improvement shall be 9" of gradation CS-01, CS-02, or RR-1 aggregate capped with 3" of gradation CA-06 coarse aggregate in accordance with Article 1004.04 of the IDOT *Standard Specifications for Road and Bridge Construction*, Current Edition.

25.3 Required Submittals

1. Material gradation certifications for aggregates.

25.4 Measurement and Payment

This work will be paid for at the Contract unit price per Square Yard for **Aggregate Subgrade Improvement, 12"**, compacted, complete in place.

26 Aggregate Surface Course, Type A, 12"

26.1 General

This work shall consist of placing compacted Aggregate Surface Course, Type A, over the completed Aggregate Subgrade Improvement. This work shall be in conformance with Section 402 of the IDOT *Standard Specifications for Road and Bridge Construction*, Current Edition.

26.2 Materials

Aggregate surface course shall consist of 12" of compacted Gradation CA-6 materials. Course Aggregates shall be in accordance with Article 1004.04 of the IDOT *Standard Specifications for Road and Bridge Construction*, Current Edition.

26.3 Required Submittals

1. Material gradation certifications for aggregates.

26.4 Measurement and Payment

This work will be paid for at the Contract unit price per Square Yard for **Aggregate Surface Course, Type A, 12"** compacted, complete, in place.

27 Grading and Shaping Ditches

27.1 General

This work shall consist of grading and shaping ditches on the north side of Edson Road as shown on the Plans. All surplus, unstable, or excess material shall be disposed of according to Article 202.03 of the IDOT *Standard Specifications*.

27.2 Materials – Not Used.

27.3 Required Submittals – Not Used.

27.4 Measurement and Payment

This work will be paid for at the Contract unit price per Linear Foot for **Grading and Shaping Ditches**.

28 Field Entrance Gate

28.1 General

This work shall consist of furnishing and installing all labor, equipment, materials, transportation, excavation, and accessories required to construct the field entrance gate at the location shown on the plans. The field entrance gate shall be galvanized steel and be constructed according to the details as shown on the plans.

28.2 Materials

1. Galvanized steel shall be according to Article 1006.28 of the *IDOT Standard Specifications*.

28.3 Required Submittals

1. Material gradation certifications for all gate components.

28.4 Measurement and Payment

This work will be paid for at the Contract unit price per Each **Field Entrance Gate**, installed complete in place.

29 Stone Riprap, RR 3, 12”

29.1 General

This work shall be done in accordance with Section 281 of the *IDOT Standard Specifications*. Stone riprap shall be installed as shown on the plans or as otherwise directed by the District in the field at the outlets of the 6” perforated pipe underdrains. The riprap shall be IDOT Gradation RR 3 installed to a minimum thickness of 12”.

29.2 Materials

The riprap shall be stone Gradation RR 3 per Section 281 of the *IDOT Standard Specifications for Road and Bridge Construction*, Current Edition. Broken concrete will not be allowed as a substitute for stone.

29.3 Required Submittals

1. Material gradation certifications for proposed riprap.

29.4 Payment

Payment shall be made at the Contract unit price per Square Yard of **Stone Riprap, RR 3, 12”** complete in place.

30 Stone Riprap, RR 5, 30”

30.1 General

This work shall be done in accordance with Section 281 of the *IDOT Standard Specifications* and shall include all excavation necessary to prepare the areas for the riprap and bedding stone. Stone riprap shall be installed as shown on the plans extending continuously from top-of-bank to top-of-bank of the drainage channel at STA 128+60 (Sheet 20), or as otherwise directed by the District in the field. Filter fabric will be required. The riprap shall be IDOT Gradation RR 5 installed to a minimum thickness of 30”; the bedding stone shall be installed to a minimum thickness of 8”. All surplus, unstable, or excess material excavated shall be disposed of in accordance with Article 202.03 of the *IDOT Standard Specifications*.

30.2 Materials

The riprap shall be stone Gradation RR 5 with bedding, per Section 281 of the *IDOT Standard Specifications for Road and Bridge Construction*. Broken concrete will not be allowed as a substitute for stone. Filter fabric shall be in accordance with Article 1080.03 of the *IDOT Standard Specifications*.

30.3 Required Submittals

1. Material gradation certifications for proposed riprap and bedding material.
2. Filter fabric material certifications.

30.4 Payment

Payment shall be made at the Contract unit price per Square Yard of **Stone Riprap, RR 5, 30”** complete in place, which shall include the stone riprap, bedding material, and all excavation and preparatory work required.

31 Filter Fabric

31.1 General

This work shall conform to Section 282 of the *IDOT Standard Specifications* and shall include furnishing and installing filter fabric on the prepared earth surface below the RR 5 riprap and bedding stone. The subgrade shall be prepared and the District shall approve of the subgrade prior to placement of any fabric. Fabric shall be installed on the prepared subgrade and immediately covered with the riprap bedding stone.

31.2 Materials

Geotextile fabric shall be in accordance with Article 1080.03 of the *IDOT Standard Specifications* and may consist of woven or nonwoven filaments.

31.3 Required Submittals

1. Material certification for the filter fabric.

31.4 Payment

Payment shall be made at the Contract unit price per Square Yard of **Filter Fabric** installed, complete in place.

32 Inlet and Pipe Protection

32.1 General

This work shall be in accordance with Section 280 of the *IDOT Standard Specifications* and consist of furnishing, installing, maintaining, and final removal of drainage inlet protection devices.

Inlet protections shall consist of filters that are installed under the grate of the drainage structures. Pipe protections shall consist of straw bales or rolled excelsior logs.

All inlet and pipe protections shall be installed prior to any excavation (exploratory or otherwise) beginning. All measures shall be removed upon final turf restoration.

32.2 Materials

All inlet and pipe protections shall be in accordance with Article 1081.15 of the *IDOT Standard Specifications*.

32.3 Required Submittals

1. Material certifications for the inlet and pipe protections.

32.4 Payment

Payment shall be made at the contract unit price per Each of **Inlet and Pipe Protection**, complete in place.

33 Perimeter Erosion Barrier

33.1 General

This work shall include the installation, maintenance, and eventual removal of silt fence where indicated on the plans. All work shall be in conformance with Section 280 of the *IDOT Standard Specifications*. Silt fence shall be installed prior to excavation or stockpiling of materials. Posts shall be spaced a minimum of 5' on center.

Silt fence shall remain in place until the disturbed areas have been seeded and erosion control blanket is installed, unless otherwise directed by the District.

33.2 Materials

Filter fabric shall be Gradation 4 or 5 in accordance with Article 1080.03 of the *IDOT Standard Specifications*. The wood posts shall be in accordance with Article 1081.15 of the *IDOT Standard Specifications* and be a minimum of 4' long with a nominal size of 2" x 2".

33.3 Required Submittals

1. Material certifications for the silt fence materials.

33.4 Payment

Payment shall be made at the Contract unit price per Linear Foot of **Perimeter Erosion Barrier**, installed, complete in place.

34 Stabilized Construction Entrance

34.1 General

This work shall include the installation of a temporary construction entrance as shown on the Plans (Sheet 8, with access to Edson Road) for construction traffic access to the project site and shall consist of a stabilized pad of coarse aggregate underlain with filter fabric. All work shall conform to the Illinois Urban Manual's Practice Standard "Stabilized Construction Entrance", Code 930. The minimum thickness of the aggregate shall be 6".

Unless otherwise directed by the District, the stabilized entrance shall be installed as shown on the plan sheets.

When necessary, this work shall include installation of a temporary pipe culvert to maintain drainage. The aggregate shall be removed and replaced as needed to effectively contain sediment and other material.

Removal of the stabilized construction entrance upon completion of construction will not be paid for separately but shall be included in this pay item.

34.2 Materials

Coarse Aggregate shall be IDOT Gradation CA-1, CA-2, CA-3, or CA-4 per Section 1004 of the *IDOT Standard Specifications*. Broken concrete will not be allowed as a substitute for stone. Filter fabric shall be in accordance with Article 1080.03 of the Standard Specifications.

34.3 Required Submittals

1. Material gradation certifications for aggregates.
2. Material certifications for the filter fabric.

34.4 Payment

Payment shall be made at the Contract unit price per Square Yard of **Stabilized Construction Entrance** complete in place.

35 Temporary Ditch Checks

35.1 General

This work shall be in accordance with Section 280.04(a) of the *IDOT Standard Specifications* and consist of furnishing, installing, maintaining, and final removal of temporary ditch checks at the locations depicted on the plans or as otherwise directed.

All temporary ditch checks shall be installed prior to any excavation beginning and shall be removed upon completion of final turf restoration. Ditch checks shall be installed such that they extend fully across the ditch cross sections and terminate at the top of the banks.

Removal of the temporary ditch checks upon completion of construction will not be paid for separately but shall be considered included in this pay item.

35.2 Materials

Temporary ditch checks shall be constructed with products from the IDOT qualified product list or excelsior logs. Excelsior logs shall be in accordance with Article 1081.15(f) of the *IDOT Standard Specifications*.

35.3 Required Submittals

1. Material certifications for the temporary ditch checks.

35.4 Payment

Payment shall be made at the Contract unit price per Each of **Temporary Ditch Checks**.

36 Temporary Erosion Control Seeding

36.1 General

This work shall include the installation of temporary erosion control seeding on stockpiles and/or other erodible/bare areas at the direction of the District. All work shall be in accordance with Article 280.04(f) of the *IDOT Standard Specifications*.

36.2 Materials

Temporary erosion control seed mixtures shall be in accordance with Article 1081.15(g) of the *IDOT Standard Specifications*.

36.3 Required Submittals

1. Material certifications for the temporary erosion control seeding.

36.4 Payment

Payment shall be made at the Contract unit price per Pound of **Temporary Erosion Control Seeding**, installed, complete in place.

37 Seeding, Class 2

37.1 General

This work shall include preparing areas to be seeded, seeding, fertilizing, and maintenance until final acceptance.

All restoration shall be completed in accordance with public agency requirements, or on private property, equal to or better than the pre-construction conditions unless otherwise directed by the District. All restoration of public or private property including, but not limited to, fences, sidewalks, driveways, all other slab work, (concrete and asphalt), drainage channels, riprap, fences, turf areas and dry wells, etc., disturbed or damaged as a result of this construction project shall be promptly completed, equal to or better than the pre-construction conditions, as directed by the District. All restoration shall be guaranteed by the Contractor for a period of one (1) year following satisfactory completion and final acceptance of the work. Topsoil shall be as specified

in T.S. 4:2c of the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction*.

Suppliers shall be prepared to certify that their product has been satisfactorily laboratory and field tested and that it meets all of the foregoing requirements based upon such testing.

Guarantee: All seeded areas shall be maintained for at least thirty (30) days after application. Scattered bare spots no larger than two square feet will be allowed up to a maximum of five percent (5%) of any seeded area.

Seeding

This work shall be in accordance with Section 250 of the IDOT *Standard Specifications*. Ground surfaces including right-of-ways that were turf prior to construction shall be seeded according to all applicable specifications and as directed by the District. The Contractor shall make certain that all disturbed areas have the same depth (6" minimum) and quality of approved topsoil at the surface as existed prior to construction.

Seedbed preparation shall be done according to Article 250.05 of the IDOT *Standard Specifications*.

The seeding mixture used shall be IDOT Class 2 Roadside Mixture in all turf restoration areas.

Reference is made to the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction*, T.S. 4:2, for specifications on seeding and sodding and fertilizer, and to Sections 250 and 251 of the IDOT *Standard Specifications*.

Seeding methods shall follow those mentioned in Article 250.06 of the IDOT *Standard Specifications*. Mowing to discourage weed growth will be completed by the Contractor until the project is accepted by the District.

Fertilizing

Fertilizer work shall be done in accordance with Article 250.04 of the IDOT *Standard Specifications* and be applied at the rate of 400 lbs./acre.

Mulch

Mulch Method 2 shall be paid for at the Contract unit price per Square Yard under the **Mulch Method 2** pay item.

37.2 Materials

Seed mixtures shall be IDOT Class 2 seed mixtures in accordance with Article 1081.04 of the IDOT *Standard Specifications*.

Fertilizer shall have 270 lbs. of nutrients per acre with an analysis of 10-10-10 and be in accordance with Article 1081.08 of the IDOT *Standard Specifications*.

37.3 Required Submittals

1. Seed mixtures.
2. Fertilizer specifications and certifications.

37.4 Payment

This work will be paid for at the Contract unit price per Acre for **Seeding, Class 2** which shall include seedbed preparation, seeding and fertilizer application.

38 Preparation of Agricultural Areas

38.1 General

This work shall include preparing the agricultural areas where shown on the plans. Such areas shall not be seeded but shall, upon completion of topsoil placement and grading, be disced and/or ripped to a depth of not less than 18" with a minimum of three (3) passes over the affected areas. This process is intended to alleviate the surface compaction of the topsoil and result in a surface that is ready for agricultural planting. All work shall be completed to the satisfaction of the property Owners.

38.2 Materials – Not used.

38.3 Required Submittals – Not used.

38.4 Payment

This work will be paid for at the Contract unit price per Acre for **Preparation of Agricultural Areas** which shall include all work as described above.

39 Temporary Mulch

39.1 General

This work shall include the installation of temporary mulch on temporary seeded areas at the direction of the District. All work shall be in accordance with Article 280.04(g) of the *IDOT Standard Specifications*. Temporary mulch shall be installed in accordance with the methods outlined in Article 251.3 of the *IDOT Standard Specifications*.

39.2 Materials

Temporary mulch shall be in accordance with Article 1081.06 of the *IDOT Standard Specifications*.

39.3 Required Submittals

1. Material certifications for the temporary mulch.

39.4 Payment

Payment shall be made at the Contract unit price per Square Yard of **Temporary Mulch**, installed, complete in place.

40 Erosion Control Blanket

40.1 General

This work shall be in accordance with Article 251.04 of the *I.D.O.T. Standard Specifications*. Erosion control blanket shall be installed on seeded areas within 24 hours of seed placement.

Erosion control blanket shall be installed on all ditches that are graded under the **Grading and Shaping Ditches** pay item.

40.2 Materials

All erosion control blanket shall be in accordance with Article 1081.10(a) and/or Article 1081.10(c) of the *I.D.O.T. Standard Specifications*.

40.3 Required Submittals

1. Material certifications for the erosion control blanket.

40.4 Payment

Payment shall be made at the Contract unit price per Square Yard of **Erosion Control Blanket**, complete, in place.

41 Mulch, Method 2

41.1 General

This work shall include the installation mulch on permanent seeded areas as identified on the plans and at the direction of the District. All work shall be in accordance with Article 251.03 of the *IDOT Standard Specifications*; mulch shall be installed via Method 2, Procedure 1 of this Article. Mulch shall be placed within 24 hours of seed placement.

41.2 Materials

Mulch shall be in accordance with Article 1081.06 of the *IDOT Standard Specifications*.

41.3 Required Submittals

1. Material certifications for the mulch.

41.4 Payment

Payment shall be made at the Contract unit price per Acre of **Mulch, Method 2** installed, complete in place.

42 Removal and Disposal of Unsuitable Material

42.1 General

The work shall be done in accordance with Section 202 of the *IDOT Standard Specifications* and shall involve the removal from the site and proper disposal of any unsuitable materials that are encountered during sewer excavation and construction or access road construction. If no unsuitable materials are encountered in the opinion of the District then this pay item shall not be used.

42.2 Materials – Not Used.

42.3 Required Submittals – Not Used.

42.4 Measurement and Payment

Payment shall be made at the contract unit price per Cubic Yard of **Removal and Disposal of Unsuitable Material**. Measurement shall be made by Measured Quantities in accordance with Article 202.07 of the *IDOT Standard Specifications*.

43 Temporary Construction Fence

43.1 General

This work involves furnishing and installing temporary construction fence where indicated on the plans for the protection of the work zone within the easements. Maintenance, final removal, and restoration of the areas where the fence was installed shall be considered incidental to this item. All fencing shall be a minimum of 4' high with stakes placed a maximum of 15' apart.

Temporary construction fence protecting the push pit and receiving pit for the jacking operations shall be temporary chain link fence of 4' height.

If the Contractor elects to use temporary construction fence of this type to protect materials, open excavations, or equipment during the construction operations, such fence shall not be paid for under this pay item but shall be considered incidental to the Contract.

43.2 Materials

All temporary fencing shall be either orange plastic snow fence or temporary chain link fence.

43.3 Required Submittals.

1. Material certification for fence.

43.4 Payment

This work will be paid for at the Contract unit price per Linear Foot of **Temporary Construction Fence**, complete, installed in place.

44 Construction Layout

44.1 General

This work shall be in accordance with IDOT *Recurring Special Provision #10: Construction Layout Stakes* as included in Section V of this Contract, and shall consist of the Contractor providing all layout for the construction of this project to the lines and grades contained within the plans.

The District will layout the easement limits and the control points within the plans prior to construction commencing.

44.2 Materials – Not used.

44.3 Required Submittals – Not used.

44.4 Payment

Payment shall be made at the Contract unit price per Lump Sum for **Construction Layout**.

45 Railroad Liability Insurance and Right-of-Entry

45.1 General

In accordance with Article 107.04 of the *IDOT Standard Specifications*, the Contractor shall be required to procure a Contractor's Right-of-Entry Agreement with the Illinois Railway (OmniTRAX). The Contractor shall carry Railroad Protective Liability and Property Damage Liability Insurance in accordance with Article 107.11 of the *IDOT Standard Specifications*. This item shall include all costs associated with procurement of these approvals.

A Right-of-Entry Application and insurance requirements can be found in Section IV of this Contract. The District is entering into a License Agreement with OmniTRAX to allow for the installation of the casing pipe. The Insurance policy shall list the District as an Additional Insured.

Contact information and project location information for the Illinois Railway is listed below:

Illinois Railway, LLC
430 West Madison Street
Ottawa, IL 61350

Mile Post: 15.20
DOT No.: 070-071M

45.2 Materials – Not used.

45.3 Required Submittals

1. Copies of the approved Insurance Policy and Right-of-Entry documents.

45.4 Payment

Payment shall be made at the Contract unit price per Lump Sum for **Railroad Liability Insurance and Right-of-Entry**.

46 Railroad Flaggers

46.1 General

In accordance with Article 107.12 of the *IDOT Standard Specifications*, the Contractor shall be required to employ the services of Railroad Flaggers when performing any work within the Railroad right-of-way, which shall include installation of the steel casing pipe under the tracks. This work shall include all costs associated with the Contractor arranging and scheduling

Railroad Flaggers. As soon as possible, the Contractor shall furnish the Railroad with approximate dates flagging services are needed with the minimum amount of notification time being 2 weeks. Flaggers shall be coordinated through the Illinois Railway:

Illinois Railway, LLC
430 West Madison Street
Ottawa, IL 61350
ATTN: Ruben Camacho, 815-503-3514 (Mobile #)

Current flagger rates through the Illinois Railway is \$1,000 per calendar day for up to ten (10) hours of flagging services. Additional hours beyond this are billed on an hourly basis. These amounts are subject to change and the Contractor shall verify and confirm the amounts with the Illinois Railway.

46.2 Materials – Not used.

46.3 Required Submittals – Not used.

46.4 Payment

Payment shall be made at the Contract unit price per Calendar Day for **Railroad Flaggers**. Payment will only be made for calendar days that flaggers are used; additional hours will not be paid for separately but shall be included in this pay item.

47 Mobilization

47.1 General

This work shall consist of preparatory work and operations necessary for the movement of personnel, equipment, supplies, materials, and other incidentals to the project site and for all other work or operations which must be performed or costs incurred when beginning work on the project.

47.2 Materials – Not used.

47.3 Required Submittals – Not used.

47.4 Payment

Payment shall be made at the Contract unit price per Lump Sum for **Mobilization**. The amount which the Contractor will receive payment for will be according to the below schedule and be limited to six (6) percent of the total contract amount.

1. Upon execution of the Contract, 75% of the pay item will be paid.
2. When 10% of the Contract value has been earned, an additional 15% of the pay item will be paid.
3. When 90% of the Contract value has been earned, the remaining 10% of the pay item will be paid.

48 Traffic Control and Protection, Complete

48.1 General

Contractor shall be solely responsible for the safety of the operations, and shall comply with all state, local and OSHA regulations. Contractor shall retain a person competent in complying with OSHA trenching and excavation requirements on site at all times. The person shall be capable of identifying existing and probable hazards in the surroundings, or working conditions which are unsanitary, hazardous or dangerous to employees, and shall be authorized to take prompt corrective measures to eliminate them. The means and methods to comply with construction site safety are the sole responsibility of the Contractor. District staff is not responsible for the Contractor's compliance procedures.

The Contractor shall obtain all permits required by the governing roadway agencies and shall provide detailed traffic control plans as required and implement and maintain approved traffic control measures, including detour routes, as required. Traffic control and protection shall be in accordance with the *IDOT Standards Specifications* and *IDOT Highway Standards*, current edition.

All work zone traffic control and protection shall be in compliance with the *Manual on Uniform Traffic Control Devices*, current edition.

48.2 Required Submittals

1. Copies of approved traffic control plans.

48.3 Payment

This work will be paid for at the Contract Lump Sum price for **Traffic Control and Protection, Complete**.

49 Quality Control Tests and Certification

49.1 General

All costs of testing, installing, re-installing, backfilling, compaction, and re-testing of sanitary sewers and services shall be borne by the Contractor. All pipe shall be tested in accordance with ASTM and manufacturer's standards. The manufacturer shall furnish certified test reports with each shipment of pipe, run or unit of pipe extrusion.

Final, satisfactory low-pressure air tests, deflection tests and manhole vacuum tests shall be performed no later than sixty (60) days after the installation of each sewer main section (manhole-to-manhole). The 60-day period starts with the completion of the sewer main, not the completion of the sewer services. The District reserves the right to suspend any or all work until the Contractor fully complies with this requirement.

49.2 Tests

The Contractor shall perform pipe deflection testing and pipe low pressure air testing (T.S. 9.1 of the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction*,) upon completion of installation, bedding, backfilling and compaction of each sanitary sewer

main section. The Contractor shall arrange at his expense mandrel (deflection) and low-pressure air tests of the pipe.

Low pressure line testing will be required on the new sanitary sewer mains. All sewer mains from existing manhole to new manhole or new manhole to new manhole shall be mandrel (deflection) tested.

After the final installation, backfilling and compaction have been completed and prior to starting the roadway replacement, low-pressure air tests and deflection tests shall pass on all sewer pipes as stated below.

49.2.1 Low Pressure Air Test

Low-pressure air testing of sanitary sewers shall use an allowable timed pressure drop of 0.5 psig. The allowable air loss rate shall be 0.0015 cu.ft./min. All test times shall be calculated using Ramseier's equation $T = 0.85 DK/Q$, where:

- T = Shortest time, in seconds, allowed for the pressure to drop 0.5 psig
- K = 0.000419 DL, but not less than 1.0
- Q = 0.0015 cu.ft./minute/sq.ft. of internal surface
- D = Nominal pipe diameter, in inches
- L = Length of pipe being tested, in feet

This modifies T.S. 9.4 of the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction*. The following table may be used to determine the minimum test time required:

Minimum Specified Time Required for a 0.5 psig Pressure Drop for Size and Length of Pipe Indicated for Q=0.0015

1 Pipe Diameter (inches)	2 Minimum Tim (min:sec)	3 Length for Minimum Time (ft.)	4 Time for Longer Length (sec.)	Specification Time for Length (L) Shown (min:sec)							
				100 ft.	150 ft.	200 ft.	250 ft.	300 ft.	350 ft.	400 ft.	450 ft.
4	1:53	597	.190 L	1:53	1:53	1:53	1:53	1:53	1:53	1:53	1:53
6	2:50	398	.427 L	2:50	2:50	2:50	2:50	2:50	2:50	2:51	3:12
8	3:37	298	.760 L	3:37	3:37	3:37	3:37	3:38	4:26	5:04	5:42
10	4:43	239	1.187 L	4:43	4:43	4:43	4:57	5:56	6:55	7:54	8:54
12	5:40	199	1.709 L	5:40	5:40	5:42	7:08	8:33	9:58	11:24	12:50
15	7:05	159	2.671 L	7:05	7:05	8:54	11:08	13:21	15:35	17:48	20:02
18	8:30	133	3.846 L	8:30	9:37	12:49	16:01	19:14	22:26	25:38	28:51
21	9:55	114	5.235 L	9:55	13:05	17:27	21:49	26:11	30:32	34:54	39:16
24	11:20	99	6.837 L	11:24	17:57	22:48	28:30	34:11	39:53	45:35	51:17
27	12:45	88	8.653 L	14:25	21:38	28:51	36:04	43:13	50:30	57:42	46:54
30	14:10	80	10.683 L	17:48	26:43	35:37	44:31	53:25	62:19	71:13	80:07
33	15:35	72	12.946 L	21:33	32:19	43:46	53:42	64:38	75:24	86:10	96:57
36	17:00	66	15.384 L	25:39	38:28	51:17	64:06	76:55	89:44	102:34	115:23

49.2.2 Pipe Deflection Test

After sewer installation, backfilling and compaction, all flexible sewer pipe shall be thoroughly cleaned and flushed with water and then, if not previously tested as elsewhere specified herein, the pipe shall be deflection tested by the Contractor at his own expense, in a manner acceptable to the District. Deflection testing shall be performed at least thirty (30) days after the trench has been backfilled.

If the vertical deflection exceeds five percent (5%) of the diameter, the Contractor shall replace the pipe. In the event that this pipe is used for replacement, it will be subject to the same vertical deflection test.

The District reserves the right to make a vertical deflection test within a year of the construction.

If deflection exceeds five percent (5%), the Contractor is responsible for replacing the pipe, as per G.C. 7:4 of the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction*.

In addition to the above and T.S. 8:2(c) of the District's *General Provisions and Technical Specifications for Sanitary Sewer Construction*, use the following deflection test:

Testing of all lines shall be done with a mandrel, pulled through all lines except the house leads. The diameter of the gauge shall be set at ninety-five percent (95%) of the un-deflected inside diameter of the flexible pipe. The Pin-Type Go/No-Go Gauge will stop at any area in a flexible underground pipeline having vertical ring deflection greater than five percent (5%).

All pipe exceeding this deflection shall be considered to have reached the limit of serviceability and shall be re-laid or replaced by the Contractor at no additional cost to the owner, (WPCF Manual of Practice No. 9, page 222).

If possible and practical, the testing shall initiate at the downstream lines and proceed towards the upstream lines. Where deflection is found to be in excess of five percent (5%) of the original pipe diameter, the Contractor shall excavate to the point of excess deflection and carefully compact around the point where excess deflection was found. The line shall then be retested for deflection. However, after the initial testing, should the deflected pipe fail to return to the original site (inside diameter) the line shall be replaced.

49.2.3 Vacuum Testing

All new manholes shall be vacuum tested per ASTM C-1244 *Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test* prior to placing into service.

49.3 Measurement and Payment

No separate measurement or payment will be made for this work. All costs shall be included in the Contract unit price per Linear Foot of **Sanitary Sewer, PVC PS46, 30" Dia.** installed, complete in place.

50 Cleanup

50.1 General

Upon completion of work, the Contractor shall clean up and remove all construction debris, materials, equipment, machines, etc., from the entire project area. All excavations shall be backfilled neatly to near original grade, and any excess materials shall be hauled away to an offsite location acceptable to the District. All roadway surfaces shall be made free and cleaned of all mud and construction debris.

50.2 Payment

No separate payment will be made for Cleanup, complete. All costs associated with this work shall be included in the various Contract pay items.

51 Soil Borings

51.1 General

The soil borings attached in Section III of this Contract are for informational purposes only. The Contractor shall verify the actual soil conditions prior to submitting a bid. No additional compensation will be allowed for subsurface conditions at variance with the borings taken.

Section II
Contract Forms

Proposal

Project: Rockford Southeast Trunk – South Branch
Capital Project No. 1965

Location: This project is located within private easements north of Edson Road, west of 11th Street (IL Route 251), and adjacent to the Illinois Railway in Rockford Township, Winnebago County, IL.

Completion Date: Interim December 15, 2019 (all sanitary sewer work)
Interim April 15, 2020 (all access road work)
Final May 15, 2020 (all restoration work)

Liquidated Damages: \$300/calendar day per each completion date deadline

To: Board of Trustees
Rock River Water Reclamation District
3501 Kishwaukee Street
Rockford, IL 61109

From: _____
(Individual, Partnership or Corporation, as case may be)

(Address of Individual, Partnership or Corporation)

Gentlemen:

I (We), the undersigned, hereby propose to furnish all materials, equipment, tools, services, labor, and whatever else may be required to construct and place in service the above subject Sanitary Sewer for the Rock River Water Reclamation District all in accordance with the plans and specifications, provided by the Rock River Water Reclamation District. The undersigned also affirms and declares:

1. That I (we), have, examined and am (are) familiar with all the related contract documents and found that they are accurate and complete and are approved by the undersigned.
2. That I (we), have carefully examined the site of the work, and that, from my (our) investigation, has satisfied myself (ourselves) as to the nature and location of the work, the character, quality, and quantity of materials and the kind and extent of equipment and other facilities needed for the performance of the work, the general and local conditions and all difficulties to be encountered, and all other items which may, in any way, effect the work or its performance.

3. That this bid is made without any understanding, agreement or connection with any other person, firm, or corporation making a bid for the same purposes, and is in all respects fair and without collusion or fraud; and that I (we) are not barred from bidding as a result of a bid-rigging or bid-rotating conviction.
4. That accompanying the Proposal is a Bidder's Bond in the amount specified in Article 1, Notice to Bidders, payable to the Board of Trustees of the Rock River Water Reclamation District, which it is agreed, shall be retained as liquidated damages by said Rock River Water Reclamation District if the undersigned fails to execute the Contract in conformity with the contract documents incorporated in the contract documents and furnish bond as specified, within ten (10) days after notification of the award of the contract to the undersigned.
5. The Bidder is of lawful age and that no other person, firm or corporation has any interest in this Proposal or in the Contract proposed to be entered into.
6. The Bidder is not in arrears to the Rock River Water Reclamation District, upon debt or contract, and is not a defaulter, as surety or otherwise, upon any obligation to the Rock River Water Reclamation District.
7. No officer or employee or person whose salary is payable in whole or in part by the District is, shall be or become interested, directly or indirectly as a contracting party, partner, stockholder, surety or otherwise, in this Proposal, or in the performance of the Contract, or in the work to which it is relates, or in any portion of the profits thereof.
8. The Bidder which I represent complies with all applicable requirements of the Americans with Disabilities Act (ADA) and the Occupational Safety and Health Act (OSHA) and that if said bidder is awarded a contract, it will complete all OSHA-required or ADA-required employee and customer training, will make available all required information, and will hold harmless and indemnify the District and the District's representatives.
- In regard to participation in an approved Apprenticeship program, upon request, Contractor will be required to provide written proof of participation.
9. The undersigned, as Bidder, declares that he has adopted and promulgated written sexual harassment policies in accordance with Public Act 99-093 and will make this information available upon request.
10. The undersigned, as Bidder, declares he will comply with prevailing wages in accordance with the Illinois Department of Labor Standards. The State of Illinois requires contractors and subcontractors on public works projects (including the Rock River Water Reclamation District) to submit certified payroll records on a monthly basis, along with a statement affirming that such records are true and accurate, that the wages paid to each worker are not less than the required prevailing rate and that the contractor is aware that filing false records is a Class B Misdemeanor. The successful Bidder shall be responsible for verifying the prevailing wages each month and notifying all subcontractors of the appropriate monthly rates. Prevailing wage rates may be found on the Illinois Department of Labor website at www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx.

The certified payroll records must include the name, address, telephone number, social security number, job classification, hourly wages paid in each pay period, the number of hours worked each day, and the starting and ending time of work each day, for every worker

employed on the project. Any contractor who fails to submit a certified payroll or knowingly files a false certified payroll is guilty of a Class B Misdemeanor. Certified payroll reports shall be submitted on industry standard forms such as IDOT Statement of Compliance (SBE 348) or other approved equal.

11. The undersigned, as Bidder, declares he will comply with the Federal Drug Free Workplace Act.
12. The undersigned, as Bidder, declares he will comply with Public Act 83-1030 entitled "Steel Products Procurement Act".
13. The undersigned, as Bidder, declares he will comply with Public Act 96-929 (30 ILCS 570) regarding Illinois residents' employment.
14. The undersigned, as Bidder, declares he will comply with non-discrimination in employment in accordance with the Illinois Fair Employment Practices Commissions Rules & Regulations.
15. The undersigned, as Bidder, declares that he currently participates in an apprenticeship or training program that is registered with the United States Department of Labor's Bureau of Apprenticeship and Training or other acceptable State of Illinois Department of Labor monitored program.

In submitting this bid, it is understood that the right is reserved by the Rock River Water Reclamation District to reject any and all bids. It is agreed that this bid may not be withdrawn for a period of sixty (60) days from the opening thereof.

The undersigned further declares that he (they) has (have) carefully examined the following items of work and that the cost of all the work to complete this project is given in this Proposal.

Item No.	Quantity	Unit	Description	Unit Price (In Writing)	Unit Price (In Figures)	Total Price (In Figures)
1	4,002.0	LF	Sanitary Sewer, PVC PS46, 30" Dia.			
2	120.0	LF	Sanitary Sewer, Carrier Pipe, PVC PS46, 30" Dia.			
3	11.0	EACH	Sanitary Manhole, 5' Dia.			
4	1.0	EACH	Sanitary Manhole To Be Removed (5' Dia.) and Replaced (6' Dia.)			
5	120.0	LF	Steel Casing, Jacked In Place, 54" Dia.			
6	1.0	LS	Trenchless Tunneling Setup			
7	710.0	CY	Sanitary Sewer Trench Subbase Improvement			
8	1.0	LS	Dewatering			
9	15,750.0	CY	Topsoil Excavation and Stockpiling (Special)			
10	12,000.0	CY	Topsoil Excavation and Placement (Special)			
11	500.0	LF	Exploration Trench (Special)			
12	319.0	LF	Storm Sewer Removal, 12"			
13	342.0	LF	Storm Sewer Removal, 15"			
14	319.0	LF	Storm Sewers (Special), 12" CMP			
15	342.0	LF	Storm Sewers (Special), 15" CMP			
16	500.0	LF	Storm Sewers (Special), Various Diameter			
17	23.0	LF	Pipe Culverts, Class C, Ty 1 Galvanized Corrugated Steel, 12"			
18	72.0	LF	Pipe Culverts, Class C, Ty 1 Galvanized Corrugated Steel, 48"			
19	2.0	EACH	Metal End Sections, 12"			
20	2.0	EACH	Metal End Sections, Multiple Inlet, 48"			
21	40.0	LF	Temporary Pipe Culvert 48"			
22	4,132.0	LF	Pipe Underdrains, Type 2, Perforated Corrugated Steel, 6"			
23	5,836.0	SY	Geotechnical Fabric for Ground Stabilization			
24	5,836.0	SY	Aggregate Surface Course, Ty A, 12"			
25	5,836.0	SY	Aggregate Subgrade Improvement, 12"			
26	232.0	LF	Grading and Shaping Ditches			
27	1.0	EACH	Field Entrance Gate			

28	292.0	SY	Stone Riprap, RR3, 12"			
29	413.0	SY	Stone Riprap, RR5, 30"			
30	413.0	SY	Filter Fabric			
31	3.0	EACH	Inlet and Pipe Protection			
32	4,600.0	LF	Perimeter Erosion Barrier			
33	270.0	SY	Stabilized Construction Entrance			
34	40.0	LF	Temporary Ditch Checks			
35	1,130.0	POUND	Temporary Erosion Control Seeding			
36	1.5	ACRE	Seeding Class 2			
37	8.8	ACRE	Preparation of Agricultural Areas			
38	190.0	SY	Erosion Control Blanket			
39	2,500.0	SY	Temporary Mulch			
40	1.0	ACRE	Mulch Method 2			
41	500.0	CY	Removal and Replacement of Unsuitable Material			
42	3,975.0	LF	Temporary Construction Fence			
43	1.0	LS	Construction Layout			
44	1.0	LS	Railroad Liability Insurance and Right of Entry			
45	20.0	CAL DAY	Railroad Flaggers			
46	1.0	LS	Mobilization			
47	1.0	LS	Traffic Control & Protection			
TOTAL BID PRICE:						
				(In Writing)		(In Figures)

The undersigned acknowledges receiving Addendum numbers _____, _____, _____, and realizes that all Addenda are considered part of the contract.

By: _____

Name: _____ Title: _____ Date: _____

Fair Employment Practices Affidavit of Compliance

Project: Rockford Southeast Trunk – South Branch, Capital Project No. 1965

NOTE: THE BIDDER MUST EXECUTE THIS AFFIDAVIT AND SUBMIT IT WITH ITS SIGNED BID. THE ROCK RIVER WATER RECLAMATION DISTRICT CANNOT ACCEPT ANY BID WHICH DOES NOT CONTAIN THIS AFFIDAVIT

_____, being first duly sworn, deposes and says that:
(Name of person making affidavit)

They are: _____ of _____
(Officer's Title) (Company Name)

that said company is and "Equal Opportunity Employer" as defined by Section 2000(e) of Chapter 21, Title 42 of the United States Code annotated and Federal Executive Orders #11375 which are incorporated herein by reference;

and that said company will comply with any and all requirements of Title 44 Admin. Code 750. APPENDIX A – Equal Opportunity Clause, Rules and Regulations, Illinois Department of Human Rights, which read as follows:

"In the event of the contractor's non-compliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act or the Rules and Regulations of the Illinois Department of Human Rights ("Department"), the contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation. During the performance to this contract, the contractor agrees as follows:

1. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, national origin or ancestry, citizen status, age, physical or mental handicap unrelated to ability, sexual orientation, military status or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
2. That, if he or she hires additional employees in order to perform this contract or any portion of this contract, he or she will determine the availability (in accordance with the Department's Rules and Regulations) of minorities and women in the areas from which he or she may reasonably recruit and he or she will hire for each job classification for which employees are hired in a way that minorities and women are not underutilized.
3. That, in all solicitations or advertisements for employees placed by him or her or on his or her behalf, he or she will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, national origin or ancestry, citizenship status, age, physical or mental handicap unrelated to ability, sexual orientation, military status or an unfavorable discharge from military service.
4. That he or she will send to each labor organization or representative of workers with which he or she has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any labor organization or representative fails or refuses to cooperate with the contractor in his or her efforts to comply with such Act and Rules and Regulations, the contractor will promptly so notify the Department and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations under the contract.
5. That he or she will submit reports as required by the Department's Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Departments Rules and Regulations.
6. That he or she will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.
7. That he or she will include verbatim or by reference the provisions of this clause in every subcontract awarded under which any portion of the contract obligations are undertaken or assumed, so that the provisions will be binding upon the subcontractor. In the same manner as with other provisions of this contract, the contractor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the Department in the event any subcontractor fails or refuses to comply with the provisions. In addition, the contractor will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

(Source: Amended at 32 Ill. Reg. 16484, effective September 23, 2008)"

IL Dept of Human Rights Registration No.: _____ Expiration Date: _____

Signature

Subscribed and sworn to before me this _____ day of _____, 20____.

Notary Public

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we:

_____ (hereinafter called the Principal) and

_____ (hereinafter called the Surety)

a Corporation chartered and existing under the laws of the State of _____ with its principal offices in the City of _____ and authorized to do business in the State of Illinois are held and firmly bound onto the Rock River Water Reclamation District of Winnebago County, Illinois (District), in the full and just sum of: **FIVE PERCENT (5%) OF THE TOTAL BID PRICE** good lawful money of the United States of America, to be paid upon demand of the District, to which payment will and truly to be made we bind ourselves, our heirs, executors, administrators, and assigns, jointly and severally and firmly by these presents.

WHEREAS, the Principal is about to submit, or has submitted to the District, a proposal for constructing Sanitary Sewers and Appurtenances.

WHEREAS, the Principal desires to file this bond, in accordance with law, to accompany this Proposal.

NOW THEREFORE, The conditions of this obligation are such that if the Proposal be accepted, the Principal shall, within ten days after the date of receipt of a written notice of award of Contract, execute a Contract in accordance with the Proposal and upon the terms, conditions, and prices set forth therein, in the form and manner required by the District, and execute a sufficient and satisfactory Contract Performance Bond payable to said District in an amount of one hundred percent (100%) of the Contract price (including alternates) in form and with security satisfactory to said District, then this obligation to be void, otherwise to be and remain in full force and virtue in law; and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the aforesaid District, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

IN TESTIMONY THEREOF, the Principal and Surety have caused these presents to be duly signed
and sealed this _____ day of _____, 20_____.

Principal

(Seal)

By _____

Name: _____

Title: _____

Date: _____

Attest:

Secretary

Surety

(Seal)

By _____

Name: _____

Title: _____

Date: _____

Agreement

1. General

THIS AGREEMENT, made and concluded this ____ day of _____, 2019, between the Rock River Water Reclamation District, Rockford, Illinois (District), acting by and through the Board of Trustees, and _____, his/their executors, administrators, successors or assigns:

2. Scope of Work

WITNESSETH: That for and in consideration of the payments and agreements made in the Proposal attached hereto, to be made and performed by the District and according to the terms expressed in the Bond referring to these presents, the Contractor agrees with the District at his/their own proper cost and expense to do all the work, furnish all equipment, materials and all labor necessary to complete the work in accordance with the plans and specifications hereinafter described, and in full compliance with all of the terms of this agreement and the requirements of the District and its representative.

And it is also understood and agreed that the Bidding Requirements, Detailed Specifications, Contract Forms, General Conditions, General Requirements, Technical Specifications, Plans, Addenda, and provisions required by law are all essential documents of the contract, and are a part hereof, as if herein set out verbatim or as if attached, except for titles, subtitles, headings, table of contents and portions specifically excluded.

3. Contract Price

The District shall pay to the Contractor, and the Contractor shall accept, in full payment for the performance of this Contract, subject to any additions or deductions provided for hereby, in current funds, the Total Contract Price of _____ and 00/100 (\$_____).

Payments are to be made to the Contractor in accordance with and subject to the provisions of Section 7 of this Agreement, which is a part of this Contract.

4. Bond

The Contractor has entered into and herewith tenders a bond of even date herewith, in the penal sum of _____ and 00/100 (\$_____) to insure the faithful performance of this Contract, which said bond is hereby made a part of this Contract by reference.

5. Maintenance and Guarantee

The Contractor shall promptly repair, replace, restore or rebuild any imperfections that may arise and shall maintain satisfactory to the District all work for a period three years from the date of final acceptance of the Contract for trench settlement and for a period of two years all other work, except where periods of maintenance and guarantee are provided for. The Contractor shall, for this period, indemnify and save harmless the District, its officers and agents from any injury done to

property or persons as a direct or alleged result of imperfections in the Contractors' work, and shall immediately assume and take charge of the defense of such action or suits in like manner and to all intents and purposes as if said actions and suits had been brought directly against the Contractor.

If the Contractor shall fail to repair, replace, rebuild or restore such defective or damaged work promptly after receiving notice given by the District, the District shall have the right to have the work done by others and to call on the Contractor and his bondsman to pay the costs thereof.

6. Contract Execution

IT IS EXPRESSLY UNDERSTOOD AND AGREED that the entire improvement shall be done in a thorough and workmanlike manner, under the direction and to the satisfaction of the District and in full compliance with all the requirements of its representative under them. All loss or damage arising out of the nature of the work to be done, or from any detention of unforeseen obstruction or difficulty which may be encountered in the prosecution of the work, or from the action of the elements, shall be sustained by the Contractor.

The Contractor will be held responsible for all accidents, and hereby agrees to indemnify and protect the District from all suits, claims, and actions brought against it, and all cost, and damages which the District may be put to by reason of an injury or alleged injury, to the person or property of another in the execution of this contract, or the performance of the work, or in guarding the same, or for any material used in its prosecution or in its construction.

Any person employed on the work who shall refuse or neglect to obey the directions of the District or its representative, or who shall be deemed by the District to be incompetent, or who shall be guilty of any disorderly conduct, or who shall commit any trespass on any public or private property in the vicinity of the work, shall at once be removed from the work by the Contractor when so requested by the District.

Any request to extend the contract completion date must be considered by the Board at the Board meeting prior to the then-existing contract termination date. Any deviation from this action will result in the liquidated damage clause in the contract to be exercised.

7. Payments to Contractor

The District hereby covenants and agrees, in consideration of the covenants and agreements in this Contract, specified to be kept and performed by the Contractor and subject to the conditions herein contained, and if the District receives an acceptable invoice prior to the tenth day of the month and receives approval of the work by the District Engineering Manager, the District shall issue payment before the fifth day of the succeeding month. If the District receives an acceptable invoice on or after the tenth day of the month, the District shall issue payment before the fifth day of the second succeeding month.

The District reserves the right at all times to refuse to issue payment in case the Contractor has neglected or failed to pay any subcontractors, workmen or employee on the work.

8. Subcontracts

No part of the work herein provided for shall be sublet or subcontracted without the express consent of the District, to be entered in the records, and in no case shall consent relieve the Contractor from the obligation herein entered into, or change the terms of this Agreement.

9. Contractor's Responsibility

This Contract shall extend to and be binding upon the successors and assigns, and upon the heirs, administrators, executors, and legal representatives of the Contractor.

In consideration of and to induce the award of this Contract to him, the Contractor represents and warrants: that he is not in arrears to the District upon debt of the Contract and that he is not a defaulter, as surety, contractor or otherwise; that he is financially solvent and sufficiently experienced and competent to perform the work; that the work can be performed as called for by the Contract; that the facts stated in his proposal and the information given by him is true and correct in all respects, and that he is fully informed regarding all the conditions affecting the work to be done and labor and materials to be furnished for the completion of this Contract and that his information was secured by personal investigation and research.

The Contractor shall pay not less than the prevailing wage rate as determined by the Department of Labor, to all laborers, workmen and mechanics performing work under this Contract. Contractor shall comply with current revisions of the wage standards; as required by law. The Contractor shall be responsible for verifying the prevailing wages each month and notifying all subcontractors of the appropriate monthly rates. Certified payroll reports shall be submitted on industry standard forms such as IDOT Statement of Compliance (Form SBE 348).

In regard to nondiscrimination in employment, Contractor will be required to comply with the Illinois Fair Employment Practices Commission's Rules and Regulations as provided herein.

The Contractor shall comply with the American Disabilities Act of 1990 (ADA). The Contractor will hold harmless and indemnify the District and their representatives from all:

- (a) suits, claims, or actions;
- (b) costs, either for defense (including but not limited to reasonable attorney's fees and expert witness fees) or for settlement, and;
- (c) damages of any kind (including but not limited to actual, punitive, and compensatory damages)

relating in any way to or arising out of the ADA, to which said firm is exposed or which it incurs in the execution of the contract.

Contractor shall also comply with Public Act 99-0933, which requires any party to a contract to adopt and enforce a written policy regarding sexual harassment that includes, as a minimum, the following information:

- (a) the illegality of sexual harassment
- (b) the definition of sexual harassment under Illinois State law;
- (c) a description of sexual harassment, utilizing examples;
- (d) my (our) organization's internal complaint process including penalties;
- (e) through the Illinois Department of Human Rights and the Illinois Human Rights Commission;

- (f) directions on how to contact the Department and the Commission; and
- (g) protection against retaliation as provided by Section 6-101 of the Illinois Human Rights Act.

Upon request this information will be provided to the Illinois Department of Human Rights. Upon District award of a contract, the District will be provided this information described no more than ten working days after the District issues its award notification.

The Contractor shall comply with Article 2 of Public Act 83-1472 which provides that Illinois residents be employed on Illinois public works projects, provided there has been a period of excessive unemployment (5%) in the State of Illinois as defined in the Act; and further, that Illinois workers are available and capable of performing the particular type work involved.

The Contractor shall comply with all rules and regulations of OSHA during the execution of this Contract.

The Contractor shall comply with the Federal Drug Free Workplace Act.

The Steel Products Procurement Act, Illinois Public Act 83-1030, requires that steel products used or supplied in performance of this Contract or subcontract shall be manufactured or produced in the United States with three exceptions, as explained in the Instructions to Bidders.

The Contractor shall comply with Public Act 96-1416 regarding the disposal of CCDD and uncontaminated soil at CCDD fill sites as explained in the Instructions to Bidders.

10. Time

Work under this Agreement shall be commenced upon written Notice to Proceed. The final completion date for this project shall be May 15, 2020 (interim completion dates of December 15, 2019 for all sanitary sewer construction and April 15, 2020 for all access road construction).

11. Liquidated Damages

The amount of liquidated damages shall be \$300.00 per calendar day.

12. Counterparts

This Agreement may be executed and recorded in counterparts, each of which shall be deemed an original and all of which, when taken together, shall constitute one and the same instrument. The Parties hereby acknowledge and agree that facsimile signatures or signatures transmitted by electronic mail in so-called "pdf" format shall be legal and binding and shall have the same full force and effect as if an original of this Agreement had been delivered. Each of the parties (a) intend to be bound by the signatures on any document sent by facsimile or electronic mail, (b) are aware that the other party will rely on such signatures, and (c) hereby waive any defenses to the enforcement of the terms of this Agreement based on the foregoing forms of signature.

13. Seals

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals, and such of them as are corporations have caused these presents to be signed by their duly authorized officers.

**Rock River Water Reclamation District
Winnebago County, Illinois**

(Seal)

By _____
President, Board of Trustees

ATTEST: _____
Clerk of the Board

Contractor

(Corporate Seal)

By _____
Contractor's Officer

Name: _____

Title: _____

Date: _____

ATTEST: _____

Labor & Material Payment Bond

TO: _____ Contractor Name

_____ Contractor City, State

KNOW ALL MEN BY THESE PRESENTS

That _____ (Contractor)

as Principal, and _____

a corporation of the State of _____ as Surety, are held and firmly bound unto the Rock River Water Reclamation District, as Obligee, for the use and benefit of claimants as hereinafter defined in the amount of

_____ Dollars (\$ _____), for the payment where of Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____ 20__ Entered into a Contract with Obligee for _____ in accordance with contract documents prepared by the Rock River Water Reclamation District which Contract is by reference made a part hereof, and is hereinafter referred to as "the Contract".

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Principal shall promptly pay for all laborers, workers and mechanics engaged in the work under the Contract, and not less than the general prevailing rate of hourly wages of a similar character in the locality in which the work is performed, as determined by the State of Illinois Department of Labor pursuant to the Illinois Compiled Statutes 280 ILCS 130 / 1-12 et.seq. and for all material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

1. A claimant is deemed as any person, firm, or corporation having contracts with the Principal or with any of Principal's subcontractors for labor or materials furnished in the performance of the Contract on account of which this Bond is given.
2. Nothing in this Bond contained shall be taken to make the Obligee liable to any subcontractor, material man or laborer, or to any other person to any greater extent than it would have been liable prior to the enactment of The Public Construction Bond Act, approved June 20, 1931, as amended; provided further, that any person having a claim for labor and materials furnished in the performance of the Contract shall have no right of action unless he shall have filed a verified notice of such claim with the Obligee within 180 days after the date of the last item of work or the furnishing of the last item of materials, which claim shall have been verified and shall contain the name and address of the claimant, the business address of the claimant within the State of Illinois, if any, or if the claimant be a foreign corporation having no place of business within the State the principal place of business of the corporation, and in all cases of partnership the names and residences of each of the partners, the name of the Contractor

for the Obligee, the name of the person, firm or corporation by whom the claimant was employed or to whom such claimant furnished materials, the amount of the claim and a brief description of the public improvement for the construction or installation of which the contract is to be performed. No defect in the notice herein provided for shall deprive the claimant of its right of action under the terms and provisions of this Bond unless it shall affirmatively appear that such defect has prejudiced the rights of an interested party asserting the same.

3. No action shall be brought on this Bond until the expiration of 120 days after the date of the last item of work or of the furnishing of the last item of material except in cases where the final settlement between Obligee and the Contractor shall have been made prior to the expiration of the 120 day period, in which case action may be taken immediately following such final settlement; nor shall any action of any kind be brought later than 6 months after the acceptance by the Obligee of the work. Such suit shall be brought only in the circuit court of this State in the judicial district in which the Contract is to be performed.
4. Surety hereby waives notice of any changes in the Contract, including extensions of time for the performance thereof.
5. The amount of this Bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder.
6. The Principal and Surety shall be liable for any attorneys' fees, engineering costs, or court costs incurred by the Obligee relative to claims made against this Bond.

Signed and Sealed this _____ day of _____, 2019.

CONTRACTOR

Contractor Firm Name

SURETY

By: _____
Signature

By: _____
Attorney-in-Fact

Title

Resident Agent

ATTEST:

Corporate Secretary (Corporations only)

Performance Bond

KNOW ALL MEN BY THESE PRESENTS, that WHEREAS, the Rock River Water Reclamation District has awarded to: _____ hereinafter designated as the “Principal”, a contract, dated, _____, for the Rock River Water Reclamation District.

WHEREAS, said Principal is required under the terms of said Contract to furnish a bond for the faithful performance of said Contract (the “Bond”);

NOW, THEREFORE, we the Principal and _____, as Surety, are firmly bound unto the Rock River Water Reclamation District in the penal sum of _____ Dollars (\$ _____) lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents for a performance bond. The conditions of this obligation is such that if the said Principal does well and faithfully performs all the conditions and covenants of said Contract, according to the true intent and meaning thereof, upon its part to be kept and performed, then the above obligation is to be null and void, otherwise to remain in full force and effect.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden Principal, its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the said Contract, including the provisions for liquidated damages in the said Contract, any changes, additions or alterations thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the Rock River Water Reclamation District, its officers and agents, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect. And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same and no inadvertent overpayment of progress payments shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications or of any inadvertent overpayment of progress payments. The Rock River Water Reclamation District shall be named as beneficiary on this Performance Bond.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their seal this _____ day of _____, 20_____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

CONTRACTOR

Contractor Firm Name:

SURETY

By: _____

By: _____ Signature
Attorney-in-Fact

Title

Resident Agent

ATTEST:

Corporate Secretary (Corporations only)

Section III
Soil Borings



TESTING SERVICE CORPORATION

Corporate Office

360 S. Main Place, Carol Stream, IL 60188-2404
630.462.2600 • Fax 630.653.2988

Local Offices:

457 E. Gundersen Drive, Carol Stream, IL 60188-2492
630.653.3920 • Fax 630.653.2726

650 N. Peace Road, Suite D, DeKalb, IL 60115-8401
815.748.2100 • Fax 815.748.2110

1350 TriState Parkway, Unit 122, Gurnee, IL 60031-9135
847.249.6040 • Fax 844.767.4721

2235 23RD Avenue, Rockford, IL 61104-7334
815.394.2562 • Fax 815.394.2566

203 Earl Road, Suite A, Shorewood, IL 60404-9446
815.744.1510 • Fax 815.744.1728

Report of Soils Exploration

Proposed Rockford Southeast Trunk Sewer - South Branch Capital Improvement Project #1965

**North of Edson Road and East of
Junction Road
Winnebago County, Illinois**

Geotechnical & Environmental Engineering



Construction Materials Engineering & Testing



Laboratory Testing of Soils, Concrete & Asphalt



Geo-Environmental Drilling & Sampling

Prepared For:

**Rock River Water Reclamation
District
3501 Kishwaukee Street,
P.O. Box 7480
Rockford, Illinois 61126-7480**

GEOTECHNICAL GROUP

May 16, 2019

L-89,574

REPORT OF SUBSURFACE EXPLORATION
PROPOSED ROCKFORD SOUTHEAST TRUNK SEWER - SOUTH BRANCH
CAPITAL IMPROVEMENT PROJECT #1965
ROCK RIVER WATER RECLAMATION DISTRICT
NORTH OF EDSON ROAD AND EAST OF JUNCTION ROAD
WINNEBAGO COUNTY, ILLINOIS

PREPARED FOR:

ROCK RIVER WATER RECLAMATION DISTRICT
3501 KISHWAUKEE STREET, P.O. BOX 7480
ROCKFORD, ILLINOIS 61126-7480

PREPARED BY:

TESTING SERVICE CORPORATION
2235 23RD AVENUE
ROCKFORD, ILLINOIS 61104-7334
815.394.2562

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May 16, 2019

L - 89,574

REPORT OF SUBSURFACE EXPLORATION
PROPOSED ROCKFORD SOUTHEAST TRUNK SEWER - SOUTH BRANCH
CAPITAL IMPROVEMENT PROJECT #1965
NORTH OF EDSON ROAD AND EAST OF JUNCTION ROAD
WINNEBAGO COUNTY, ILLINOIS

1.0 INTRODUCTION

This report presents results of the subsurface exploration performed in connection with the proposed Rockford Southeast Trunk Sewer - South Branch project in southern Winnebago County, Illinois. These geotechnical services are being provided in general accordance with Testing Service Corporation (TSC) Proposal Number (P.N.) 62,536 dated March 15, 2019, the attached TSC General Conditions incorporated herein by reference and Rock River Water Reclamation District's (RRWRD) Purchase Order Number 80654.

It is understood that the proposed trunk sewer will extend from Edson Road north approximately 4,000 feet to near Kilbuck Creek in Winnebago County. For most of the project, the sewer will extend along the east side of the existing B.N./Soo Line railroad tracks. On the north side of Edson Road, the sewer will extend beneath the railroad tracks to the west side of the tracks. According to preliminary information provided by Mr. Tyler Nelson, P.E., of RRWRD, pipe inverts are anticipated to generally range from approximately 12.9 to 24.7 feet below existing grade or between Elevations 687.4 and 693.3 at the test locations. Other details regarding the design and construction of the proposed sewer project were not available/provided to us as yet.

The results of field and laboratory testing and recommendations based upon these data are included in this report. It should be noted that specific means and methods recommendations are not included in the scope of our work.



2.0 SITE DESCRIPTION

The proposed sewer will extend from Edson Road, just east of Junction Road, north along the east side of the B.N./Soo Line railroad tracks to Kilbuck Creek in Rockford Township in Winnebago County, Illinois. The site is located along the edge of an existing farm field. Farmland is generally located in the areas surrounding the project site.

The site generally slopes down from the south end of the project at Edson Road to the north end at Kilbuck Creek. Total relief at the boring locations is on the order of 16 feet.

3.0 FIELD EXPLORATION AND LABORATORY TESTING

A total of seventeen (17) soil borings were performed as part of this exploration at the approximate locations determined by RRWRD. Borings 8 and 9 were offset from their original staked locations due to overhead utility obstructions/conflicts. Reference is made to the Boring Location Plan in the Appendix for the boring locations. The boring offsets for B-8 and B-9 are indicated on the Boring Location Plan. The elevations at the borings were provided by RRWRD, as indicated on the "Soil Boring Exhibit", sheet #1 dated April 24, 2019. TSC estimated the ground surface elevations at Borings 8 and 9 by conventional differential leveling methods using the ground surface elevations provided to us by RRWRD for the original test locations as benchmarks. The ground surface elevation for each boring is shown on the boring logs in the Appendix of this report.

Borings 1-9 were each extended to at or very near a depth of 30 feet below existing grade, as requested. As requested, Borings 10-17 were drilled for the purpose of determining the topsoil thicknesses at the test locations located between planned manholes; as requested, these borings were extended to depths of 4 feet or less below existing grade.

The borings were drilled and samples tested according to currently recommended American Society for Testing and Materials specifications. Soil sampling was generally performed at 5 foot depth intervals in conjunction with the Standard Penetration Test (SPT), for which driving resistance to a 2" split-spoon



sampler ("N" value in blows per foot) provides an indication of the relative density of granular materials and consistency of cohesive soils. Water level readings were taken during and following completion of drilling operations.

Soil samples were examined in the laboratory to verify field descriptions and to classify them in accordance with the Unified Soil Classification System. Laboratory testing included moisture content determinations for all cohesive and intermediate (silt or loamy) soil types. An estimate of unconfined compressive strength was obtained for all inorganic native clay soils using a calibrated pocket penetrometer, with actual measurements of unconfined compressive strength performed on representative cohesive sample(s).

A portion of each split spoon soil sample from Borings 1-9 was collected and placed in a separate sealed jar for headspace analysis only. A total of fifty-four (54) samples were collected from these nine soil borings. Headspace analysis on these samples was performed at the TSC office following completion of the borings. The headspace analysis was conducted using a Mini-RAE photo-ionization detector (PID) equipped with a 10.6 eV probe, similar to the instrument utilized to screen each load of soil for final acceptance at a Clean Construction Demolition Debris (CCDD) facility. The PID was used to check for the presence of volatile organic vapors such as those present in petroleum products and solvents. The headspace analysis was performed by removing the screw lid from each sample jar and inserting the tip of the probe into the jar. The vapors that accumulated in the headspace of the jar were drawn into the probe and ionized by an ultraviolet light source. The concentration of these vapors in parts per million (ppm), relative to a Benzene-equivalent calibration standard, was displayed on the instrument display. The background level (or a 0.0 value noted on the logs) refers to the reading associated with the ambient air located at the test location, which in this case is the TSC office. The PID readings for each soil sample are noted on the attached boring logs in the column labeled "PID"; the readings are in units of parts per million (ppm).

Reference is made to the boring logs in the Appendix which indicate subsurface stratigraphy and soil descriptions, results of field and laboratory tests, as well as water level observations. Definitions of descriptive terminology are also included. While strata changes are shown as a definite line on the boring logs, the actual transition between material layers will probably be more gradual. It should be noted that in the absence of foreign substances it is often nearly impossible to distinguish disturbed samples of native soil from fill materials.

4.0 DISCUSSION OF TEST DATA

The following is a generalized description of the pavement materials and soil conditions found in the borings. The reader should refer to the individual boring logs in the Appendix of this report for more specific details.

Pavement materials were found at the surface of Boring 9. The pavement materials consisted of a bituminous chip and seal coat surface layer overlying granular base course material. The thickness of the bituminous chip and seal surface layer was determined to be approximately 2½ inches. It was underlain by a layer of crushed stone base course, which was found to be approximately 11 inches in thickness. The above pavement thicknesses should be considered approximate as they were estimated from the disturbed sides of the augered hole at B-9. Pavement core(s) should be taken if more exact measurements or detailed pavement material descriptions are required.

Native soils were encountered below the existing ground surface or pavement materials in the borings made at this site. Dark brown or black sandy, clayey topsoil or clayey topsoil was found at the surface of Borings 1-8 and 10-17. No topsoil layer was found below the surficial pavement materials in Boring 9. The thicknesses of the topsoil layer varied from 19 to 36 inches in Borings 1-8 and 12 to 47 inches in Borings 10-17. The greatest thickness of topsoil in the borings was found to be 47 inches in Boring 14. Borings 10-17 were drilled for the specific purpose of determining the topsoil thicknesses at these test locations located between planned manholes. The table below shows the boring numbers, ground surface elevations, topsoil layer thicknesses and depths below existing grade, as well as the bottom elevations of the topsoil layers at Borings 10-17.



BORING NO.	GROUND SURFACE ELEVATION	TOPSOIL		
		Thickness, inches	Depth, feet	Bottom Elevation of Topsoil Layer
10	700.9	12	1.0	699.9
11	703.9	19	1.6	702.3
12	706.4	18	1.5	704.9
13	706.1	19	1.6	704.5
14	707.2	47	3.9	703.3
15	708.8	24	2.0	706.8
16	713.4	18	1.5	711.9
17	713.3	15	1.2	712.1

Layers of very loose to very dense silty or clayey sand, sand/gravel and sand deposits with varying amounts of gravel and occasional cobbles predominated below the surficial pavement or topsoil materials in the deep Borings 1-9. These granular deposits exhibited SPT "N" values ranging from 1 blow per foot (bpf) to 50 blows per 4 inches. Sandy clay seams were found interspersed within the clayey sand deposit in the depth interval of 2.0 to 8.0 feet below existing grade in Boring 7. Layers of tough to very tough very silty or silty clays were encountered below the surficial topsoil or pavement materials in Borings 8 and 9, extending to depths of 3.0 feet and 9.5 feet below existing grade, respectively, as well as at varying depth intervals below a depth of 13.0 feet in Borings 1-4. Layers or seams of clay were noted within the sample of the silty clay deposit encountered from 28.0 feet to the end of the boring at 30.0 feet below existing grade in Boring 3. These clay soils exhibited unconfined compressive strengths of 1.25 to 3.75 tons per square foot (tsf) at moisture contents of between 21 and 28 percent. Also, soft to stiff sandy or silty clays were found below the surficial topsoil layer, extending to the boring termination depths in shallow Borings 10-12, 14, 16 and 17. Silty sands were found directly below the topsoil layer in shallow Borings 13 and 15.

Free water was encountered during drilling operations in Borings 1-9 at depths ranging from 0.0 (at approximate existing ground surface) to 9.5 feet below existing grade or Elevations 695.3 to 711.6. Upon completion of drilling operations and removal of the augers from the boreholes at Borings 1-9, free water was observed at depths varying from 0.0 to 5.0 feet below existing grade or Elevations 696.3 to 713.1.



5.0 ANALYSIS AND RECOMMENDATIONS

Summarized by boring location in the following table are the existing ground surface elevations, the proposed preliminary sewer invert elevations (provided by RRWRD), the corresponding invert depth in feet below existing grade, and a description of the material found at or near the proposed invert elevation/depth. Comments are also provided regarding construction considerations indicated by the findings.

Boring Number	Existing Ground Surface Elevation	Preliminary Proposed Invert		Material at or near Invert Elevation	Comments
		Elevation	Depth in Feet below existing grade		
1	700.3	687.4	12.9	Loose Sand and Gravel, wet over tough silty Clay, very moist	W, CL
2	703.2	688.1	15.1	Loose Sand, little gravel, wet	W
3	705.2	688.8	16.4	Loose Sand, trace to little gravel, wet	W
4	706.1	689.4	16.7	Firm Sand and Gravel, wet	W
5	707.4	690.1	17.3	Loose to very loose Sand, trace gravel, wet	W
6	709.0	691.3	17.7	Firm Sand, trace gravel, wet over firm silty fine-medium Sand, wet	W
7	715.5	692.0	23.5	Firm silty fine-medium Sand, trace gravel, wet	W
8	716.1	693.0	23.1	Firm Sand, some gravel, wet	W
9	718.0	693.3	24.7	Firm Sand, trace gravel, wet	W

Legend

CL Native clay soils found at or near invert depth considered suitable for pipe support.

- W Wet silty sand, sand or sand/gravel soils found at or near pipe invert depth/elevation - may need to place an additional 12 to 24 inches of coarse aggregate below bottom of sewer and provide "tight" excavation support system and/or pre-construction dewatering in order to provide adequate stability and pipe support conditions.

Based on preliminary information provided by RRWRD, it is understood that, generally, the sewer will have invert depths varying between approximately 12 and 25 feet below existing grade at the locations of Borings 1-9. Depending on final grades for the sewer, it is anticipated that the excavations for the sewer pipes will encounter layers of surficial topsoil underlain by mostly very loose to firm saturated sands/gravels and occasional layers of tough to very tough clay soils. While these soils sometimes may be considered stable in a confined state, they may also appear or become unstable in the bottoms of trenches when exposed by excavations. If the trench bottoms are considered unstable, it is recommended that these soils be undercut 12 to 24 inches, as needed, and replaced with additional crushed stone bedding material. This should provide an adequate stable platform for pipe installation.

Relatively thick deposits of saturated sand are present at the site. Groundwater was encountered in Borings 1-9 at relatively shallow depths of 0 to 5.0 feet below existing grade. These groundwater depths correspond to Elevations ranging from 696.3 to 713.1. Sewer inverts are expected to vary between depths of 12 and 25 feet or Elevations 687.4 and 693.3 at the test locations. Accordingly, significant problems with groundwater can be expected for the sewer excavations, as noted in the table above, the excavations are expected to extend into wet sand or gravel deposits. Granular soil types under hydrostatic pressure at the time of construction can lead to a running condition, where the materials in the side walls will rapidly slough or "flow" into the excavation. If allowed to occur, running soil conditions may lead to loss of ground and settlement in surrounding areas. Running soil conditions can be controlled with a "tight" excavation support system, preconstruction dewatering procedures or a combination thereof.

It is understood that the sewer will extend beneath a portion of the existing B.N./Soo Line railroad tracks, located on the north side of Edson Road and just east of Junction Road. Details regarding the sewer crossing under the railroad tracks were not provided/available to us as of the date of this report. However, based on some preliminary information provided by RRWRD, the sewer inverts at B-8 and B-9 are anticipated to be approximately 23 to 25 feet below existing grade. The presence of shallow



groundwater and thick sand/gravel deposits is of concern in this area, as the sewer is expected to extend well into the saturated sand/gravel soils at the railroad tracks crossing in the areas of B-8 and B-9. As noted above, the saturated sand/gravel deposits will tend to flow into excavations. The contractor will need to adapt their procedures to take into account the adverse soil and groundwater conditions present at the site. It may be beneficial to consider utilizing a pipe ramming method for the crossing under the railroad tracks, as the wet sands may flow into the excavation which would be created by a conventional pushing and boring operation. This could cause subsidence of the overlying railroad.

To the extent that laborers will work in the excavations, protection against cave-ins must be provided. It should be noted that sand and gravel deposits were found in the borings. These materials are prone to sloughing and caving into excavations. Protective measures for worker safety and loss-of-ground in surrounding properties should include the use of safety trench boxes, sheeting and bracing, or other appropriate methods. In this regard, the contractor must be responsible for meeting OSHA requirements, local regulations and/or project specifications with respect to the safety of his work force.

The clay and silty/clayey sand soils observed in the borings do not appear to be well-suited for use as backfill material. The inorganic, moist to very moist silty, very silty or sandy clays found in the borings may become unstable under vibratory compaction. Clay backfill is not recommended below settlement sensitive structures, pavements or other features. Also, "loamy" sands containing a significant amount of clay and/or silt may also become unstable under vibratory compaction, particularly if they are or become significantly wet of the optimum moisture content for compaction. Wet silty or clayey sands were encountered in the borings at varying depth intervals. The sands or sands/gravels with trace amounts or less of fines encountered in the borings are likely to be suitable for backfill. Presently, the sands/gravels and silty or clayey sands encountered in the borings were saturated/wet, and it appears that they are generally above their optimum moisture contents for compaction and will likely require drying to effectively compact.

Lateral earth pressures for permanent underground structures will be dependent on the type of backfill used and groundwater levels. Equivalent fluid pressures are given for cohesive and granular backfills, assuming at-rest (K_0) earth pressures. The values shown represent the increase in lateral pressure over a 1.0 foot distance measured in pounds per square foot (psf/ft).



EQUIVALENT FLUID PRESSURE (PSF/FT)		
BACKFILL TYPE	ABOVE WATER TABLE	BELOW WATER TABLE
Granular	50	90
Cohesive	65	100

As previously noted in this report, headspace analysis was performed on each soil sample obtained from the Borings 1-9 using a Mini-RAE photo-ionization detector (PID). The vapors that accumulated in the headspace of each sample jar were measured with the PID probe. The concentration of these vapors in parts per million (ppm), relative to a Benzene-equivalent calibration standard, was displayed on the instrument display; the results are shown on the attached boring logs in the column headed PID. All but one of the samples tested were analyzed to be at or below the background level. The background level (or a 0.0 value noted on the boring logs) refers to the reading associated with the ambient air located at the test location, which in this case is the TSC office. Sample #1 from Boring 4 had a concentration above the background level of 0.5 ppm.

6.0 CLOSURE

This report includes information regarding subsurface conditions and general recommendations and considerations for the proposed sewer system. It should be noted that means and methods of construction are the responsibility of the contractor. It is recommended that testing and observation services be provided by Testing Service Corporation personnel during construction.

The analysis and recommendations submitted in this report are based upon the data obtained from the seventeen (17) soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings, the nature and extent of which may not become evident until during the course of construction. If variations are then



identified, recommendations contained in this report should be re-evaluated after performing on-site observations.

We are available to review this report with you at your convenience.

Prepared by:

Steven R. Koester, P.E.
Vice President

JLM/rb

Jeffrey L. Martin
Registered Professional Engineer
Illinois No. 062-047621



Not to be used for bidding purposes



TESTING SERVICE CORPORATION

GENERAL CONDITIONS

Geotechnical and Construction Services

1. PARTIES AND SCOPE OF WORK: If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Unless otherwise expressly assumed in writing, TSC's services are provided exclusively for Client. TSC shall have no duty or obligation other than those duties and obligations expressly set forth in this Agreement. TSC shall have no duty to any third party. Client shall communicate these General Conditions to each and every party to whom the Client transmits any report prepared by TSC. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement. Unless otherwise agreed in writing, TSC's responsibility with respect to underground utility locations is to contact the Illinois Joint Utility Locating Information for Excavators for the location of public, but not private, utilities.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C. § 6901, et seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to

perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

7. DOCUMENTS AND SAMPLES: Client is granted an exclusive license to use findings and reports prepared and issued by TSC and any sub-consultants pursuant to this Agreement for the purpose set forth in TSC's proposal provided that TSC has received payment in full for its services. TSC and, if applicable, its sub-consultant, retain all copyright and ownership interests in the reports, boring logs, maps, field data, field notes, laboratory test data and similar documents, and the ownership and freedom to use all data generated by it for any purpose. Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

8. TERMINATION: TSC's obligation to provide services may be terminated by either party upon (7) seven days prior written notice. In the event of termination of TSC's services, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. The terms and conditions of these General Conditions shall survive the termination of TSC's obligation to provide services.

9. PAYMENT: Client shall be invoiced periodically for services performed. Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs and reasonable attorney's fees.

10. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

Should TSC or any of its employees be found to have been negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to \$50,000 or the total amount of the fee paid to TSC for its services performed with respect to the project, whichever amount is greater.

In the event Client is unwilling or unable to limit the damages for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to \$500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award of greater damages.

11. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

12. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

13. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence. These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.

APPENDIX

UNIFIED CLASSIFICATION CHART

LEGEND FOR BORING LOGS

BORING LOGS

BORING LOCATION PLAN

Not to be used for bidding purposes

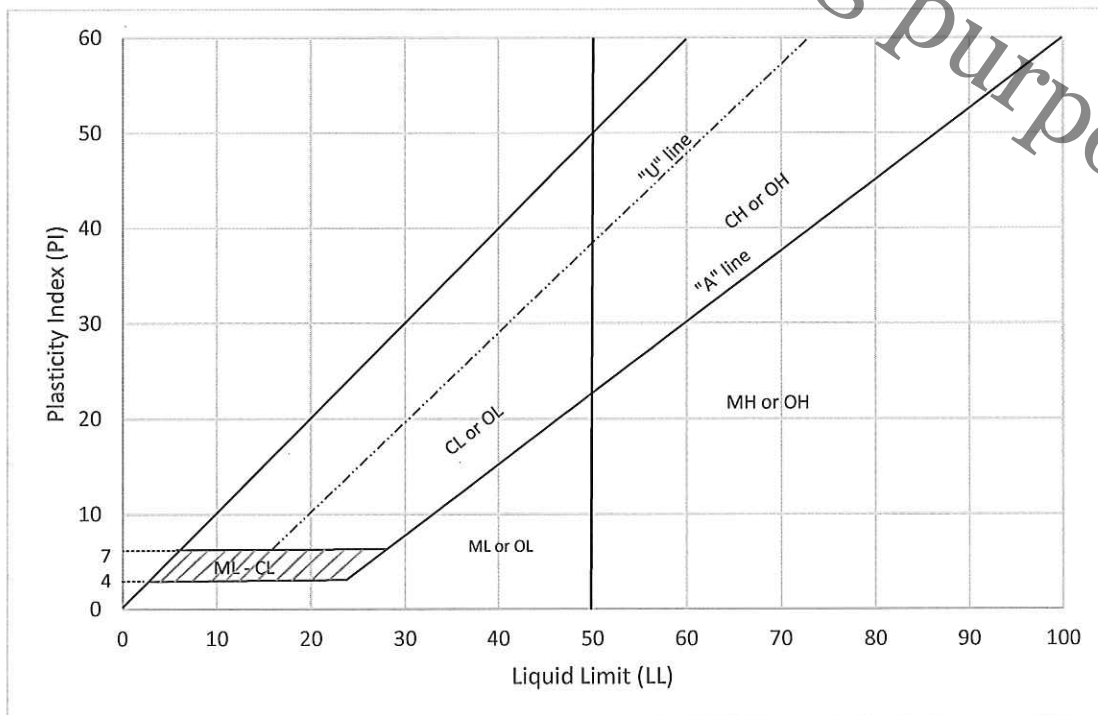
Testing Service Corporation Unified Classification Chart



CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TEST ^a				SOIL CLASSIFICATION	
				Group Symbol	GROUP NAME ^b
COARSE - GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS less than 5% fines ^c	$C_u \geq 4$ and $1 \leq C_c \leq 3$ ^e	GW	Well-graded gravel ^f
			$C_u < 4$ and/or $1 > C_c > 3$ ^e	GP	Poorly-graded gravel ^f
		GRAVELS WITH FINES more than 12% fines ^c	Fines classify as ML or MH	GM	Silty gravel ^{f, g, h}
			Fines classify as CL or CH	GC	Clayey gravel ^{f, g, h}
	SANDS 50% or more of coarse fraction passes No. 4 sieve	CLEAN SANDS less than 5% fines ^d	$C_u \geq 6$ and $1 \leq C_c \leq 3$ ^e	SW	Well-graded sand ⁱ
			$C_u < 6$ and/or $1 > C_c > 3$ ^e	SP	Poorly-graded sand ⁱ
		SANDS WITH FINES more than 12% fines ^d	Fines classify as ML or MH	SM	Silty sand ^{g, h, f}
			Fines classify as CL or CH	SC	Clayey sand ^{g, h, f}
FINE - GRAINED SOILS 50% or more passed the No. 200 sieve	SILTS & CLAYS Liquid limit less than 50%	Inorganic	PI > 7 or plots on or above "A" line j	CL	Lean clay ^{k, l, m}
			PI < 4 or plots below "A" line j	ML	Silt ^{k, l, m}
		Organic	$\frac{\text{Liquid limit} - \text{oven dried}}{\text{Liquid limit} - \text{not dried}} < 0.75$	OL	Organic clay ^{k, l, m, n} Organic silt ^{k, l, m, o}
	SILTS & CLAYS Liquid limit 50% or more	Inorganic	PI plots on or above "A" line	CH	Fat clay ^{k, l, m}
			PI plots below "A" line	MH	Elastic silt ^{k, l, m}
		Organic	$\frac{\text{Liquid limit} - \text{oven dried}}{\text{Liquid limit} - \text{not dried}} < 0.75$	OH	Organic clay ^{k, l, m, p} Organic silt ^{k, l, m, q}
Highly organic soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

- a. Based on the material passing the 3-inch (75-mm) sieve.
b. If field sample contained cobbles and/or boulders, add "with cobbles and/or boulders" to group name
c. Gravels with 5 to 12% fines required dual symbols
GW-GM well graded gravel with silt
GW-GC well graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
d. Sands with 5 to 12% fines require dual symbols
SW-SM well graded sand with silt
SW-SC well graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay
e. $C_u = D_{60}/D_{10}$ $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

- f. If soils contains $\geq 15\%$ sand, add "with sand" to group name.
g. If fines classify as CL-ML, use dual symbol GC-GM, SC-SM
h. If fines are organic, add "with organic fines" to group name
i. If soils contains $\geq 15\%$ gravel, add "with gravel" to group name
j. If Atterberg Limits plot in hatched area, soil is a CL - ML, silty clay
k. If soils contains 15 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant
l. If soil contains $\geq 30\%$ plus No. 200, predominantly sand, add "sandy" to group name
m. If soils contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name
n. PI ≥ 4 and plots on or above "A" line
o. PI ≥ 4 and plots below "A" line
p. PI plots on or above "A" line
q. PI plots below "A" line



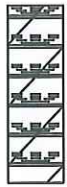


TESTING SERVICE CORPORATION

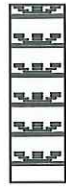
LEGEND FOR BORING LOGS



FILL



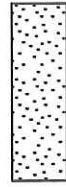
TOPSOIL



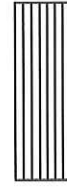
PEAT



GRAVEL



SAND



SILT



CLAY



DOLOMITE

SAMPLE TYPE

SS = Split Spoon
ST = Thin-Walled Tube
A = Auger
MC = Macro-Core (Geo Probe)

WATER LEVELS:

▼ While Drilling
▼ End of Boring
▼ 24 Hours

FIELD AND LABORATORY TEST DATA

N = Standard Penetration Resistance in Blows per Foot
WC = In-Situ Water Content
Qu = Unconfined Compressive Strength in Tons per Square Foot
* Pocket Penetrometer Measurement: Maximum Reading = 4.5 tsf
Y_{DRY} = Dry Unit Weight in Pounds per Cubic Foot

SOIL DESCRIPTION

MATERIAL

BOULDER
COBBLE
Coarse GRAVEL
Small GRAVEL
Coarse SAND
Medium SAND
Fine SAND
SILT and CLAY

PARTICLE SIZE RANGE

Over 12 inches
12 inches to 3 inches
3 inches to $\frac{3}{4}$ inch
 $\frac{3}{4}$ inch to No. 4 Sieve
No. 4 Sieve to No. 10 Sieve
No. 10 Sieve to No. 40 Sieve
No. 40 Sieve to No. 200 Sieve
Passing No. 200 Sieve

COHESIVE SOILS

<u>CONSISTENCY</u>	<u>Qu (tsf)</u>
Very Soft	Less than 0.3
Soft	0.3 to 0.6
Stiff	0.6 to 1.0
Tough	1.0 to 2.0
Very Tough	2.0 to 4.0
Hard	4.0 and over

COHESIONLESS SOILS

<u>RELATIVE DENSITY</u>	<u>N (bpf)</u>
Very Loose	0 - 4
Loose	4 - 10
Firm	10 - 30
Dense	30 - 50
Very Dense	50 and over

MODIFYING TERM

Trace
Little
Some

PERCENT BY WEIGHT

1 - 10
10 - 20
20 - 35

PROJECT **Rockford East Southeast Trunk - South Branch, Winnebago County, Illinois**CLIENT **Rock River Water Reclamation District, Rockford, Illinois**BORING **1** DATE STARTED **4-26-19** DATE COMPLETED **4-26-19** JOB **L-89,574**

ELEVATIONS

GROUND SURFACE **700.3**END OF BORING **671.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **5.0'**▽ AT END OF BORING **4.0'**

▽ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy, clayey TOPSOIL, trace roots, very moist (OL)
3.0									697.3	
5		1	SS	2			0.0			Very loose brown and gray silty SAND, trace clay, wet (SM)
8.0									692.3	
10		2	SS	8			0.0			Loose light brown and grayish-brown SAND and GRAVEL, trace silt, wet (SP-SM/GP-GM)
13.0									687.3	
15		3	SS	15	27.4	1.25*	0.0			Tough to very tough gray silty CLAY, very moist to moist (CL)
20		4	SS	14	22.8	3.75*	0.0			
Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.										
End of Boring at 29.3'										

DRILL RIG NO. **334**

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 1 DATE STARTED 4-26-19 DATE COMPLETED 4-26-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 700.3END OF BORING 671.0

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 5.0'▽ AT END OF BORING 4.0'

▽ 24 HOURS _____

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
20										
25		5	SS	13	22.2	3.25*	0.0			Tough to very tough gray silty CLAY, very moist to moist (CL)
								28.0	672.3	
		6	SS	50/4"			0.0			Very dense light brown SAND and GRAVEL, occasional Cobbles, wet (SP/GP)
30										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
										Note: Split spoon refusal encountered at a depth of 29.3 feet.
35										
40										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 29.3'

DRILL RIG NO. 334

Page 2 of 2

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 2 DATE STARTED 4-26-19 DATE COMPLETED 4-26-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 703.2END OF BORING 673.2

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 4.5'▽ AT END OF BORING 4.0'

▽ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy, clayey TOPSOIL, trace roots, very moist (OL)
3.0									700.2	
5		1	SS	12	8.3		0.0			Firm light brown SAND, some gravel, trace silt, very moist to wet (SP-SM)
8.0									695.2	
10		2	SS	12			0.0			Firm light brown SAND and GRAVEL, wet (SP/GP)
12.0									691.2	
15		3	SS	7			0.0			Loose grayish-brown SAND, little gravel, trace silt, wet (SP-SM)
17.0									686.2	
20		4	SS	13			0.0			Firm gray SAND, some gravel, wet (SP)

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

Page 1 of 2

PROJECT **Rockford East Southeast Trunk - South Branch, Winnebago County, Illinois**CLIENT **Rock River Water Reclamation District, Rockford, Illinois**BORING **2** DATE STARTED **4-26-19** DATE COMPLETED **4-26-19** JOB **L-89,574**

ELEVATIONS

GROUND SURFACE **703.2**END OF BORING **673.2**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **4.5'**▽ AT END OF BORING **4.0'**

▽ 24 HOURS

LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
	NO.	TYPE							
20									Firm gray SAND, some gravel, wet (SP)
25	5 B	SS	19	21.1	3.0*	0.0	24.0	679.2	Very tough pinkish-gray silty CLAY, very moist (CL)
							27.0	676.2	Loose grayish-brown SAND and GRAVEL, occasional Cobbles, wet (SP/GP)
30	6	SS	7			0.0			* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. Driller's Comment" "Pounded on a rock at a depth of 28.5 feet."
35									
40									

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. **334**

Page 2 of 2

TSC_EOB 89574.GPJ TSC_ALL.GDT 5/8/19

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 3 DATE STARTED 4-26-19 DATE COMPLETED 5-1-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 705.2END OF BORING 675.2

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 4.5'▽ AT END OF BORING 4.0'

▽ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy, clayey TOPSOIL, trace roots, very moist (OL)
3.0									702.2	
5		1	SS	12	8.9		0.0			Firm light brown SAND, some gravel, trace silt, very moist to wet (SP-SM)
8.0									697.2	
10		2	SS	10			0.0			Firm grayish-brown SAND, little gravel, trace silt, wet (SP-SM)
13.0									692.2	
15		3	SS	7			0.0			Loose gray SAND, trace to little gravel, wet (SP-SM)
18.0									687.2	
20		4	SS	22			0.0			Firm dark gray to gray SAND, some gravel, wet (SP)

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

Page 1 of 2

TSC_EOB 89574.GPJ TSC_ALL.GDT 5/8/19

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 3 DATE STARTED 4-26-19 DATE COMPLETED 5-1-19 JOB L-89,574

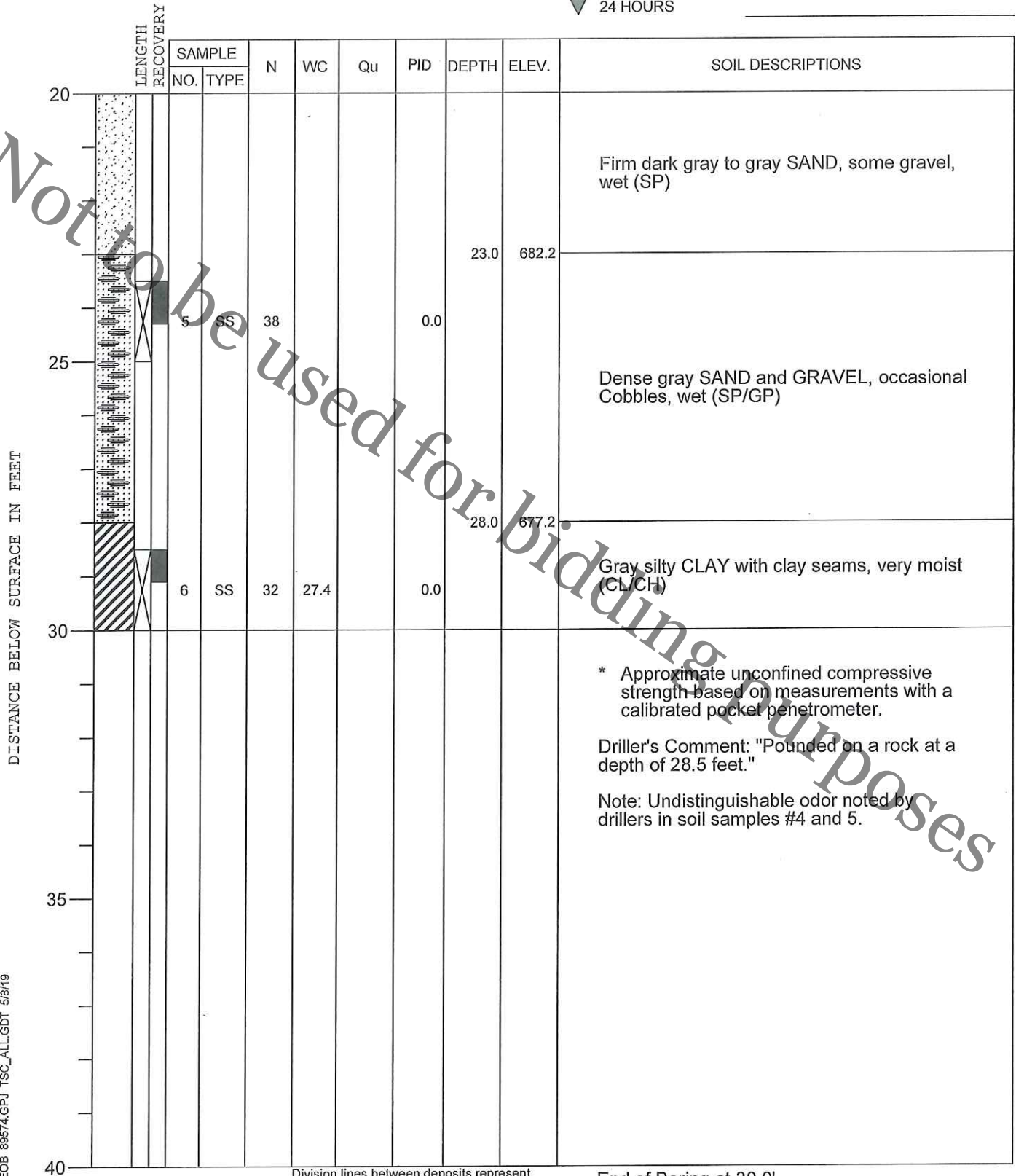
ELEVATIONS

GROUND SURFACE 705.2END OF BORING 675.2

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 4.5'▽ AT END OF BORING 4.0'

▽ 24 HOURS _____



TSC_EOB 89574.GPJ TSC_ALL.GDT 5/8/19

DRILL RIG NO. 334

PROJECT **Rockford East Southeast Trunk - South Branch, Winnebago County, Illinois**CLIENT **Rock River Water Reclamation District, Rockford, Illinois**BORING **4** DATE STARTED **5-1-19** DATE COMPLETED **5-1-19** JOB **L-89,574**

ELEVATIONS

GROUND SURFACE **706.1**END OF BORING **676.1**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **3.0'**▽ AT END OF BORING **2.5'**

▽ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy, clayey TOPSOIL, trace roots. very moist (OL)
		TS	SS	3				1.6	704.5	
								2.1	704.0	Very loose brown silty SAND, trace clay, very moist (SM)
		1	SS	4			0.5			
5										Very loose dark gray clayey SAND, trace gravel and organic, wet (SC)
								8.0	698.1	
		2	SS	17			0.0			
10										Firm gray SAND, trace to little gravel, trace silt, wet (SP-SM)
								12.0	694.1	
		3	SS	15			0.0			
15										Firm gray SAND and GRAVEL, trace silt, wet (SP-SM/GP-GM)
								18.0	688.1	
		4	SS	7	23.1	2.67 2.0*	0.0			
20										Very tough gray and grayish-brown silty CLAY, moist (CL)

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. **334**

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TSC_EOB 89574.GPJ TSC_ALL.GDT 5/13/19

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 4 DATE STARTED 5-1-19 DATE COMPLETED 5-1-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 706.1END OF BORING 676.1

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.0'▽ AT END OF BORING 2.5'

▽ 24 HOURS _____

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
20								22.0	684.1	Very tough gray and grayish-brown silty CLAY, moist (CL)
25		5	SS	1			0.0			Very loose gray SAND, trace gravel and silt, wet (SP-SM)
								27.0	679.1	
30		6	SS	8			0.0			Loose grayish-brown SAND and GRAVEL, trace silt, wet (SP-SM/GP-GM)
35										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
40										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 5 DATE STARTED 5-1-19 DATE COMPLETED 5-1-19 JOB L-89,574

ELEVATIONS
 GROUND SURFACE 707.4
 END OF BORING 677.4

WATER LEVEL OBSERVATIONS
 ▽ WHILE DRILLING 0.0'
 ▽ AT END OF BORING 0.0'
 ▽ 24 HOURS _____

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy, clayey TOPSOIL, trace roots, very moist (OL)
1.6		2	SS						705.8	
5		1	SS	6			0.0			Very loose to loose brown silty SAND, trace clay, wet (SM)
7.0									700.4	
10		2	SS	1			0.0			Very loose brown and dark grayish-brown silty SAND and clayey SAND, wet (SM/SC)
13.0									694.4	
15		3	SS	5			0.0			
20		4	SS	3			0.0			Loose to very loose grayish-brown SAND, trace gravel and silt, wet (SP-SM)

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

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TSC_EOB 88574.GPJ TSC_ALL.GDT 5/8/19

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 5 DATE STARTED 5-1-19 DATE COMPLETED 5-1-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 707.4END OF BORING 677.4

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 0.0'▽ AT END OF BORING 0.0'

▽ 24 HOURS _____

LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
	NO.	TYPE							
20							22.0	685.4	Loose to very loose grayish-brown SAND, trace gravel and silt, wet (SP-SM)
25	5	SS	2			0.0			Very loose gray SAND, trace gravel and silt, wet (SP-SM)
							28.0	679.4	Firm grayish-brown SAND, some gravel, wet (SP)
	6	SS	26			0.0			
30									* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
35									
40									

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

Page 2 of 2

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 6 DATE STARTED 5-3-19 DATE COMPLETED 5-3-19 JOB L-89,574ELEVATIONS
GROUND SURFACE 709.0
END OF BORING 679.0WATER LEVEL OBSERVATIONS
▽ WHILE DRILLING 5.0'
▽ AT END OF BORING 0.5'
▽ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										▽
		TS	SS	3				3.0	706.0	Black sandy, clayey TOPSOIL, trace roots, very moist (OL)
5		1	SS	8			0.0			▽ Loose light grayish-brown silty fine to medium SAND, very moist to wet (SM)
								7.0	702.0	
10		2	SS	5	23.0		0.0			Loose grayish-brown to dark grayish-brown clayey SAND, trace organic, very moist to wet (SC)
15		3	SS	14			0.0			
								13.0	696.0	
										Firm gray SAND, trace gravel and silt, wet (SP-SM)
20		4	SS	13			0.0	18.0	691.0	Firm gray silty fine to medium SAND, wet (SM)

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

Page 1 of 2

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 6 DATE STARTED 5-3-19 DATE COMPLETED 5-3-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 709.0END OF BORING 679.0

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 5.0'▽ AT END OF BORING 0.5'

▽ 24 HOURS _____

LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
	NO.	TYPE							
20									
	5	SS	27			0.0			Firm gray silty fine to medium SAND, wet (SM)
25							27.0	682.0	
	6	SS	18			0.0			Firm gray SAND, little gravel, trace silt, wet (SP-SM)
30									
									* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
35									
40									

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

Page 2 of 2

PROJECT **Rockford East Southeast Trunk - South Branch, Winnebago County, Illinois**CLIENT **Rock River Water Reclamation District, Rockford, Illinois**BORING **7** DATE STARTED **5-3-19** DATE COMPLETED **5-3-19** JOB **L-89,574**

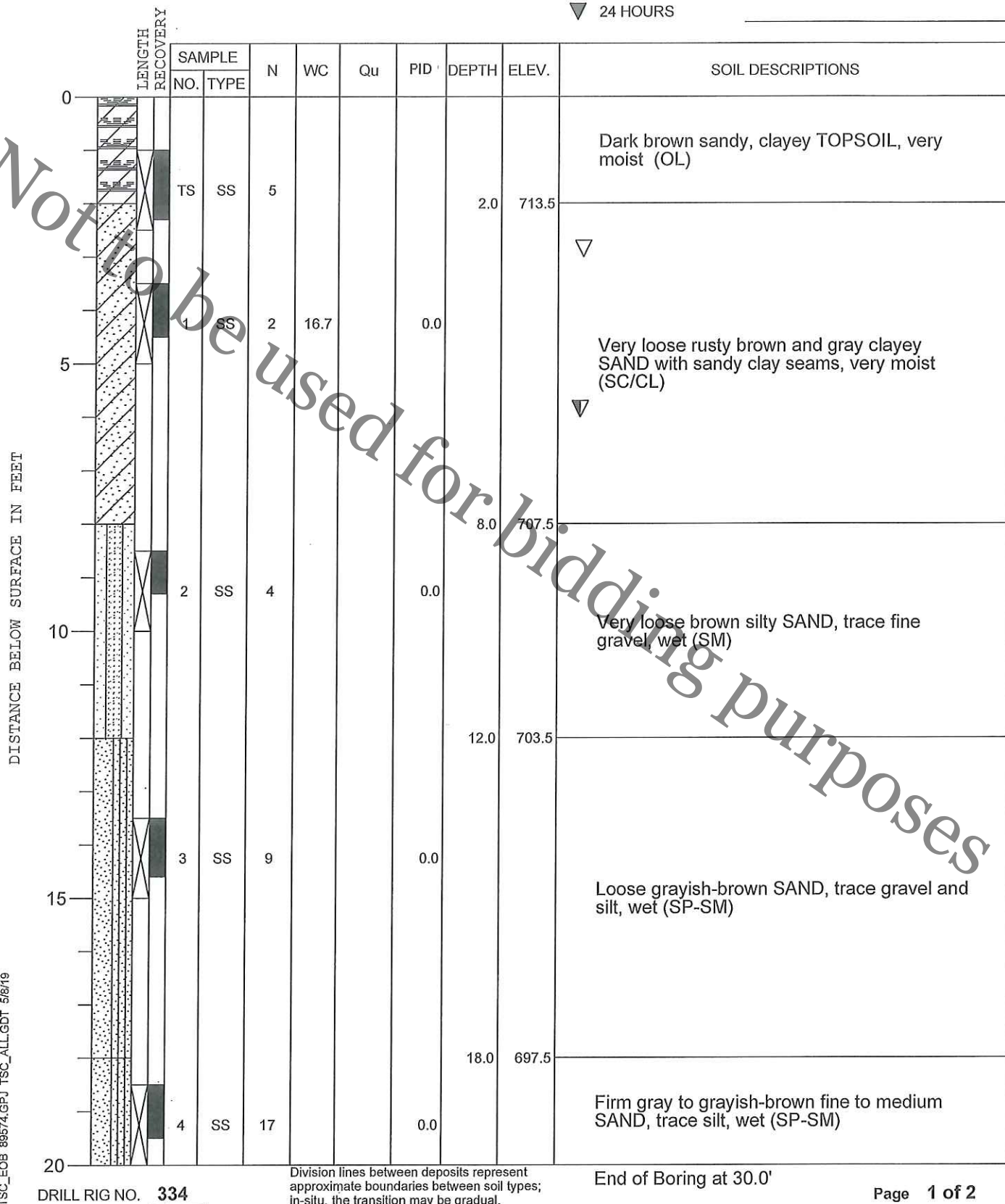
ELEVATIONS

GROUND SURFACE **715.5**END OF BORING **685.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **6.0'**▽ AT END OF BORING **3.0'**

▽ 24 HOURS



PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 7 DATE STARTED 5-3-19 DATE COMPLETED 5-3-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 715.5END OF BORING 685.5

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 6.0'▽ AT END OF BORING 3.0'

▽ 24 HOURS _____

LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
	NO.	TYPE							
20							22.0	693.5	Firm gray to grayish-brown fine to medium SAND, trace silt, wet (SP-SM)
25	5	SS	19			0.0			Firm to dense gray silty fine to medium SAND, trace fine gravel, wet (SM)
30	6	SS	31			0.0			
35									
40									

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

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TSC_EOB 89574.GPJ TSC_ALL.GDT 5/8/19

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 8 DATE STARTED 5-1-19 DATE COMPLETED 5-1-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 716.1END OF BORING 686.1

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 4.5'▽ AT END OF BORING 3.0'

▽ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Dark brown sandy, clayey TOPSOIL, trace roots, very moist (OL)
1.6		TS	SS	5					714.5	
3.0									713.1	▽ Light brown silty CLAY, some sand, very moist (CL)
5		1	SS	5			0.0			▽ Loose brown silty fine to medium SAND, trace clay, wet (SM)
8.0									708.1	
10		2	SS	8			0.0			Loose brown SAND, little gravel, trace silt, wet (SP-SM)
12.0									704.1	
15		3	SS	10			0.0			
20		4	SS	11			0.0			Firm brown SAND, trace gravel and silt, wet (SP-SM)

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

Page 1 of 2

PROJECT **Rockford East Southeast Trunk - South Branch, Winnebago County, Illinois**CLIENT **Rock River Water Reclamation District, Rockford, Illinois**BORING **8** DATE STARTED **5-1-19** DATE COMPLETED **5-1-19** JOB **L-89,574**

ELEVATIONS

GROUND SURFACE **716.1**END OF BORING **686.1**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **4.5'**▽ AT END OF BORING **3.0'**

▽ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
20								22.0	694.1	Firm brown SAND, trace gravel and silt, wet (SP-SM)
25		5	SS	11			0.0			Firm light brown SAND, some gravel, wet (SP)
								27.0	689.1	
30		6	SS	35			0.0			Dense light brown SAND and GRAVEL, occasional Cobbles, wet (SP/GP)
35										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
40										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. **334**

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 9 DATE STARTED 5-3-19 DATE COMPLETED 5-3-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 718.0END OF BORING 688.0

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 9.5'▽ AT END OF BORING 5.0'

▽ 24 HOURS

LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
	NO.	TYPE							
0							0.2	717.8	2 1/2" Bituminous Chip and Seal Surface
							1.1	716.9	11" CRUSHED STONE Base Course
	1	SS	5	24.2	1.26 1.25*	0.0			Tough brown silty CLAY, very moist (CL)
							7.0	711.0	
									Tough gray very silty CLAY, very moist (CL)
	A 2 B	SS	9	20.1	1.25*	0.0	9.5	708.5	
									Loose gray silty fine to medium SAND, trace fine gravel, wet (SM)
							13.0	705.0	
	3	SS	7			0.0			Loose grayish-brown silty SAND, trace fine gravel, wet (SM)
							18.0	700.0	
	4	SS	13			0.0			Firm brown SAND, little gravel, trace silt, wet (SP-SM)
20									

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

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PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 9 DATE STARTED 5-3-19 DATE COMPLETED 5-3-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 718.0END OF BORING 688.0

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 9.5'▽ AT END OF BORING 5.0'

▽ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	PID	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
20										Firm brown SAND, little gravel, trace silt, wet (SP-SM)
23.0								23.0	695.0	
25		5	SS	20			0.0			Firm grayish-brown SAND, trace gravel, wet (SP)
27.0								27.0	691.0	
30		6	SS	32			0.0			Dense light brown SAND and GRAVEL, occasional Cobbles, wet (SP/GP)
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
35										
40										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 30.0'

DRILL RIG NO. 334

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TSC_EOB 89574.GPJ TSC_ALL.GDT 5/13/19



BORING **10** DATE STARTED **4-26-19** DATE COMPLETED **4-26-19** JOB **L-89,574**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING Dry

▼ 24 HOURS

[illegible]

DRILL RIG NO. 334

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 2.0'

TSC_EOB 89574.GPJ TSC_ALL.GDT 5/8/19

PROJECT **Rockford East Southeast Trunk - South Branch, Winnebago County, Illinois**CLIENT **Rock River Water Reclamation District, Rockford, Illinois**BORING **11** DATE STARTED **4-26-19** DATE COMPLETED **4-26-19** JOB **L-89,574**

ELEVATIONS

GROUND SURFACE **703.9**END OF BORING **701.9**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**▼ AT END OF BORING **Dry**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0		1	SS	7	21.4	1.5*		1.6	702.3	Black sandy, clayey TOPSOIL, trace roots, very moist (OL)
										Greenish-brown silty CLAY, trace sand, very moist (CL)
5										
10										
15										
20										

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 2.0'

DRILL RIG NO. **334**

PROJECT **Rockford East Southeast Trunk - South Branch, Winnebago County, Illinois**CLIENT **Rock River Water Reclamation District, Rockford, Illinois**BORING **12** DATE STARTED **5-1-19** DATE COMPLETED **5-1-19** JOB **L-89,574**

ELEVATIONS

GROUND SURFACE **706.4**
END OF BORING **704.4**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**
▼ AT END OF BORING **Dry**
▼ 24 HOURS

LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	NO.	TYPE							
0	1	SS	7	16.7	0.88 0.75*		1.5	704.9	Black sandy, clayey TOPSOIL, trace roots, very moist (OL) Stiff grayish-brown sandy CLAY, very moist (CL)
5									
10									
15									
20									

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 2.0'

DRILL RIG NO. **334**

PROJECT **Rockford East Southeast Trunk - South Branch, Winnebago County, Illinois**CLIENT **Rock River Water Reclamation District, Rockford, Illinois**BORING **13** DATE STARTED **5-1-19** DATE COMPLETED **5-1-19** JOB **L-89,574**

ELEVATIONS

GROUND SURFACE **706.1**END OF BORING **704.1**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **±0.3" Standing Water**▼ AT END OF BORING **±0.5" Standing Water**

▼ 24 HOURS

LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	NO.	TYPE							
0	1	SS	4	23.3			1.6	704.5	Black sandy, clayey TOPSOIL, trace roots, very moist (OL) Loose light brown silty fine SAND, trace clay, very moist (SM) * Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
5									
10									
15									
20									

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 2.0'

DRILL RIG NO. **334**

PROJECT **Rockford East Southeast Trunk - South Branch, Winnebago County, Illinois**CLIENT **Rock River Water Reclamation District, Rockford, Illinois**BORING **14** DATE STARTED **5-1-19** DATE COMPLETED **5-1-19** JOB **L-89,574**

ELEVATIONS

GROUND SURFACE **707.2**END OF BORING **703.2**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**▼ AT END OF BORING **Dry**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0		1	SS	5	38.6	0.5*				Black clayey TOPSOIL, trace sand and roots, very moist (OL/OH)
		2	SS	3	63.6	0.5*				
3.9								3.9	703.3	Soft light brown silty CLAY, trace organic, very moist (CL)
5										
10										
15										
20										

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 4.0'

DRILL RIG NO. **334**

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 15 DATE STARTED 5-1-19 DATE COMPLETED 5-1-19 JOB L-89,574

ELEVATIONS

GROUND SURFACE 708.8END OF BORING 706.3

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING Dry▼ AT END OF BORING Dry

▼ 24 HOURS

LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	NO.	TYPE							
0	1	SS	4	43.8	0.75*		2.0	706.8	Black clayey TOPSOIL, trace sand and roots, very moist (OL)
									Light brown silty fine SAND, very moist (SM)
									* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
5									
10									
15									
20									

DRILL RIG NO. 334

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 2.5'

PROJECT Rockford East Southeast Trunk - South Branch, Winnebago County, IllinoisCLIENT Rock River Water Reclamation District, Rockford, IllinoisBORING 16 DATE STARTED 5-3-19 DATE COMPLETED 5-3-19 JOB L-89,574ELEVATIONS
GROUND SURFACE 713.4
END OF BORING 711.4WATER LEVEL OBSERVATIONS
▼ WHILE DRILLING Dry
▼ AT END OF BORING Dry
▼ 24 HOURS _____

LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
	NO.	TYPE							
0	1	SS	3	17.4	0.5*		1.5	711.9	Dark brown sandy, clayey TOPSOIL, trace roots, very moist (OL) Soft light brown silty CLAY, trace sand, very moist (CL)
5									* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
10									
15									
20									

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 2.0'

DRILL RIG NO. 334



WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING Dry

▼ 24 HOURS

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DRILL RIG NO. 334

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

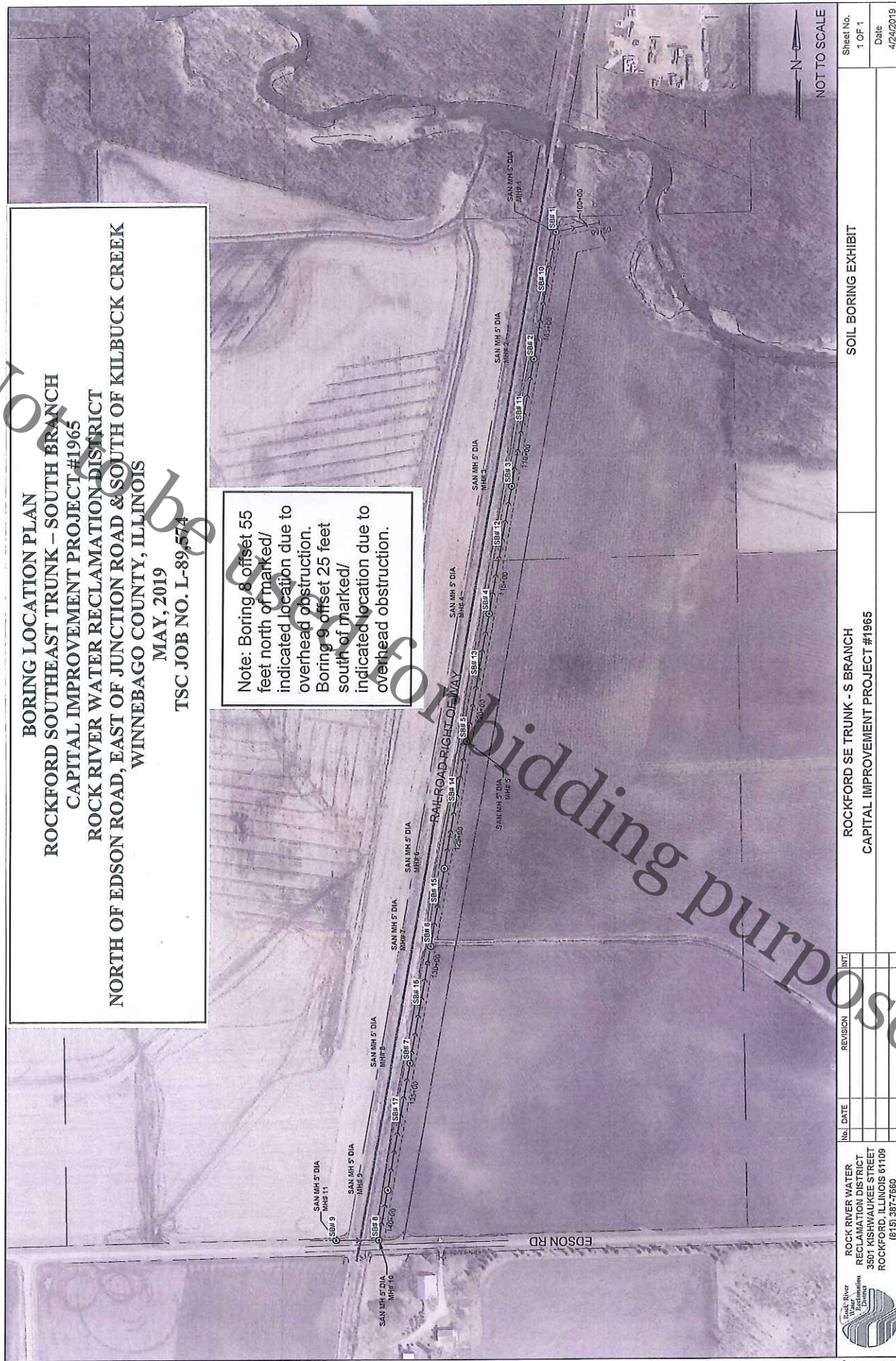
End of Boring at 2.0'

TSC_EOB 89574.GPJ TSC ALL.GDT 5/8/19

JUNCTION
ROAD

BORING LOCATION PLAN
ROCKFORD SOUTHEAST TRUNK - SOUTH BRANCH
CAPITAL IMPROVEMENT PROJECT #1965
ROCK RIVER WATER RECLAMATION DISTRICT
NORTH OF EDSON ROAD, EAST OF JUNCTION ROAD & SOUTH OF KILBUCK CREEK
WINNEBAGO COUNTY, ILLINOIS
MAY, 2019
TSC JOB NO. L-89,574

Note: Boring 8 offset 55 feet north of marked/indicated location due to overhead obstruction.
Boring 9 offset 25 feet south of marked/indicated location due to overhead obstruction.



Rock River Water Reclamation District 3301 KISHWAUKEE STREET ROCKFORD, ILLINOIS 61109 (815) 367-1660		No.	DATE	REVISION	INT.	Sheet No. 1 OF 1	SOIL BORING EXHIBIT	Date 4/24/2019
Rock River Water Reclamation District 3301 KISHWAUKEE STREET ROCKFORD, ILLINOIS 61109 (815) 367-1660							ROCKFORD SE TRUNK - S BRANCH CAPITAL IMPROVEMENT PROJECT #1965	

Section IV

**Illinois Railway Insurance Forms and
Right-of-Entry Documents**

Instructions for
Certificates of Insurance (COI)

Please find the sample Certificate(s) of Insurance (COI) following this instruction page. The sample COI is intended as a guide and outlines the insurance requirements to be evidenced based on the corresponding agreement.

Please submit the sample COI to your insurance agent or broker for review and issuance upon receipt. Your insurance representatives must validate that the insured party is in compliance with all required coverages, limits, and applicable endorsements.

Specifically, your insurance agent or broker must ensure that:

1. The sections titled **Insured** and **Certificate Holder** on the certificate reflect the legal entity names and addresses of the contracting parties. These entities should be the same as those identified in the applicable contract.
2. All lines and limits of coverage match those listed in the sample certificate, if there is a difference in requirements of the contract and the COI, please refer to the lines and limits within the contract.
3. Applicable check boxes are appropriately completed per the sample certificate.
4. All additional language identified by the sample certificate is sufficiently addressed in the **Description of Operations** section or on the **Additional Remarks Schedule** on a subsequent page of the certificate.
5. Any endorsements provided to supplement the certificate of insurance must be sufficiently completed.

Per company policy, please be advised that contracts will not be signed until all relevant insurance documents have been received and approved by Risk Management.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER To be completed by your agent/broker		CONTACT NAME: agent/broker contact PHONE (A/C, No, Ext): XXX-XXX-XXXX E-MAIL ADDRESS: FAX (A/C, No): XXX-XXX-XXXX	
		INSURER(S) AFFORDING COVERAGE	
		INSURER A: Insurer 1	
		INSURER B: Insurer 2	
		INSURER C: Insurer 3	
		INSURER D: Insurer 4	
		INSURER E:	
		INSURER F:	

INSURED Contracting Party Legal Entity Name (Entity must match entity identified in contract) Mailing Address	NAIC #
---	---------------

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC	X	X	Policy #: xxxxxx			EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000	
	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS	X	X	Policy #: xxxxxx			COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$	
	<input checked="" type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> EXCESS LIAB DED <input checked="" type="checkbox"/> RETENTION \$			OCCUR CLAIMS-MADE	X	X	Policy #: xxxxxx	EACH OCCURRENCE \$ 4,000,000 AGGREGATE \$ 4,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y / N <input type="checkbox"/>	N / A		Policy #: xxxxxx			<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Certificate holder and its affiliates are named as an additional insured where required by written contract. If the contract applies to multiple entities identified in an exhibit, the following wording must be included: "All railroad entities listed in Exhibit () of contract between Certificate Holder and Insured are included as additional insureds where required by written contract." Waiver of subrogation applies in favor of certificate holder with respect to all coverage referenced above as required by written contract. The general liability is endorsed with the CG 2417 or equivalent to delete all exclusions for construction or demolition operations on or within 50 feet of a railroad property, bridge, tracks, road-beds, tunnel, underpass or crossing. All insurance of the Insured is primary and not excess over or contributory with any insurance maintained by Certificate Holder or its affiliates. Umbrella is follow form.

CERTIFICATE HOLDER**CANCELLATION**

Contracting Party Legal Entity Name
(Entity must match entity identified in contract)
252 Clayton St., 4th Fl.
Denver, CO 80206

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

☐

Check the box if this is a RUSH? If so include a \$1,500.00 check in addition to the application fee.

RIGHT OF ENTRY LICENSE APPLICATION Non-Environmental

Return the completed application along with a non-refundable fee in the amount of **\$3,500 USD (\$4,375 CAD)** and a print or sketch of the proposed licensed premises with dimensions, coordinates and directions. Also, depict any planned or existing improvements on the licensed premises and include the distance from the nearest track.
(Be sure to list the check number(s) at the bottom of the cover sheet AND application).

Make check(s) payable to:

**OmniTRAX Inc.
C/O AR Real Estate Department
252 Clayton Street
Denver, CO 80206**

(As information, future payments will also be sent to the address listed above.)

If the submitted application and/or plans require review by an environmental (HAZMAT) or other outside consultant, it will solely be at the applicant's expense and in addition to the aforementioned fees. INCOMPLETE applications will result in processing delays and applications without the required fees will not be processed. If you are a Canadian business or resident, this fee is a taxable supply. Include the applicable GST.

REQUESTS FOR RUSH SERVICE: Once a **COMPLETE** application and required fees are received, including the rush fee of **\$1,500 USD (\$1,875 CAD)**, a draft Right of Entry Agreement will be made available for review within **fourteen (14) business days**. Please be sure to mark the box above.

Once an executable Right of Entry Agreement is presented to you, the agreement must be fully negotiated and executed within one hundred twenty (120) days. Thereafter, the application and materials will be archived and resubmission (including fees) will be required.

A Right of Entry is to access property for up to thirty (30) days. Beyond thirty (30) days, you will be responsible for an additional fee of \$3,500 (\$4,375 CAD). You also have the option to purchase a six (6) month Right of Entry for \$20,000 (\$25,000 CAD).

PLEASE INITIAL HERE INDICATING YOUR UNDERSTANDING OF THIS POLICY: _____

RAIL MADE

EASY

1) Complete Legal Name of Applicant: _____

Agreement to be in the name of (if different from above): _____

Type of Applicant (please mark one): Corporation ___ LLC ___ Individual ___ Municipality ___

Partnership ___ (General ___ Limited ___) Other _____

If applicable, state/province of incorporation or organization: _____

Federal Tax Identification number (U.S. Leases): _____

Mailing Address: _____

Billing Name, Address (No PO Box), Email, and Phone Number (REQUIRED):

Overnight Delivery Service Address: _____

Contact Person: _____ Title: _____

Phone No.: () _____ Fax No.: () _____

Email: _____

Time period of your project and use of the Railroad's property?

REQUIRED INDICATE DATE RANGE (30 DAY MAX): from _____ to _____

2) When do you need to receive this agreement from the Railroad? _____
(Please allow 30-45 days for processing of this request)

3) Will there be any activity, material, vehicles or equipment within 50 feet of a railroad track in connection with your project? YES/ NO (If 'YES', Railroad protective liability insurance will be required)
Within 25 feet? YES/ NO (If 'YES', a Railroad Flagman will be required at your sole cost.)

4) Will there be any excavation involved? YES/ NO (If 'YES', include shoring plans)

5) Site Location (City, County & State): _____

Latitude: _____ Longitude: _____

6) Railroad: _____; Railroad Site Location Information: (Railroad Mile Post, Subdivision, or any other pertinent location information) _____



RIGHT OF ENTRY APPLICATION – **NON-ENVIRONMENTAL**

7) Purpose of your request: (This must be detailed and complete; attach engineering plans, shoring plans, if applicable, and details to support) If you need additional room, please attach paper to this form. _____

Date: _____

Check #'s sent: _____

Signature: _____

Name Printed: _____

Title: _____

Phone No.: _____

BE SURE TO RETURN THE COVER SHEET WITH YOUR APPLICATION

Not to be used for bidding purposes

Section V

IDOT Check Sheets

CHECK SHEET #10

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
CONSTRUCTION LAYOUT STAKES

Effective: May 1, 1993
Revised: January 1, 2007

Description. The Contractor shall furnish and place construction layout stakes for this project. The Department will provide adequate reference points to the centerline of survey and bench marks as shown in the plans and listed herein. Any additional control points set by the Department will be identified in the field to the Contractor and all field notes will be kept in the office of the Resident Engineer.

The Contractor shall provide field forces, equipment, and material to set all additional stakes for this project, which are needed to establish offset stakes, reference points, and any other horizontal or vertical controls, including supplementary bench marks, necessary to secure a correct layout of the work. Stakes for line and grade of pavement and/or curb shall be set at sufficient station intervals (not to exceed 50 ft (15 m)) to assure substantial conformance to plan line and grade. The Contractor will not be required to set additional stakes to locate a utility line which is not included as a pay item in the contract nor to determine property lines between private properties.

The Contractor shall be responsible for having the finished work conform to the lines, grades, elevations, and dimensions called for in the plans. Any inspection or checking of the Contractor's layout by the Department Engineer and the acceptance of all or any part of it shall not relieve the Contractor of his/her responsibility to secure the proper dimensions, grades and elevations of the several parts of the work. The Contractor shall exercise care in the preservation of stakes and bench marks and shall have them reset when any are damaged, lost, displaced, removed, or otherwise obliterated.

Responsibility of the Department.

- (a) The Department will locate and reference the centerline of all roads and streets, except interchange ramps. The centerline of private entrances and short street intersection returns may not be located or referenced by the Department.

Locating and referencing the centerline of survey will consist of establishing and referencing the control points of the centerline of surveys such as PC's, PT's and as many POT's as are necessary to provide a line of sight.

- (b) Bench marks will be established along the project outside of construction lines not exceeding 1000 ft (300 m) intervals horizontally and 20 ft (6 m) vertically.

CHECK SHEET #10

- (c) Stakes set for (a) and (b) above will be identified in the field to the Contractor.
- (d) The Department will make random checks of the Contractor's staking to determine if the work is in conformance with the plans. Where the Contractor's work will tie into work that is being or will be done by others, checks will be made to determine if the work is in conformance with the proposed overall grade and horizontal alignment.
- (e) The Department will set all stakes for utility adjustments and for building fences along the right-of-way line by parties other than the Contractor.
- (f) The Department will make all measurements and take all cross sections from which the various pay items will be measured.
- (g) Where the Contractor, in setting construction stakes, discovers discrepancies, the Department will check to determine their nature and make whatever revisions are necessary in the plans, including the recross sectioning of the area involved. Any additional restaking required by the Engineer will be the responsibility of the Contractor. The additional restaking done by the Contractor will be paid for according to Article 109.04 of the Standard Specifications.
- (h) The Department will accept responsibility for the accuracy of the initial control points as provided herein.
- (i) It is not the responsibility of the Department, except as provided herein, to check the correctness of the Contractor's stakes; any errors apparent will be immediately called to the Contractor's attention and s(he) shall make the necessary correction before the stakes are used for construction purposes.
- (j) Where the plan quantities for excavation are to be used as the final pay quantities, the Department will make sufficient checks to determine if the work has been completed in conformance with the plan cross sections.

Responsibility of the Contractor.

- (a) The Contractor shall establish from the given survey points and bench marks all the control points necessary to construct the individual project elements. S(he) shall provide the Engineer adequate control in close proximity to each individual element to allow adequate checking of construction operations. This includes, but is not limited to, line and grade stakes, line and grade nails in form work, and/or filed or etched marks in substantially completed construction work. It is the Contractor's responsibility to tie in centerline control points in order to preserve them during construction operations.
- (b) At the completion of the grading operations, the Contractor shall set stakes at 100 ft (25 m) Station intervals along each profile grade line. These stakes will be used for final cross sectioning by the Department.

CHECK SHEET #10

- (c) The Contractor shall locate the right-of-way points for the installation of right-of-way markers. The Contractor shall set all line stakes for the construction of fences by the Contractor.
- (d) All work shall be according to normally accepted self-checking surveying practices. Field notes shall be kept in standard survey field notebooks and those books shall become the property of the Department at the completion of the project. All notes shall be neat, orderly and in accepted form.
- (e) For highway structure staking, the Contractor shall use diligent care and appropriate accuracy. Points shall be positioned to allow reuse throughout the construction process. Prior to the beginning of construction activities, all structure centerlines and pier lines are to be established by the Contractor and checked by the Engineer. The Contractor shall provide a detailed structure layout drawing showing span dimensions, staking lines and offset distances.

Measurement and Payment. This work will be paid for at the contract lump sum price for CONSTRUCTION LAYOUT.

Section VI
Commonwealth Edison
Letter of Consent

Commonwealth Edison Company www.exeloncorp.com
Real Estate, Facilities & Security
3 Lincoln Center – 4th Floor
Oakbrook Terrace, IL 60181

August 5, 2019

Rock River Water Reclamation District
3333 Kishwaukee Street
Rockford, IL 61109

RE: Letter of Consent for Rock River Water Reclamation to install a sanitary sewer
ComEd's easement R/W known as Dixon-Belvidere R/W, Parcel #62
Along Edison Road east of Route IL 251 at the railroad tracks

Dear Mr. Tyler Nelson:

Commonwealth Edison Company (hereinafter referred to as "ComEd") has reviewed Rock River Water Reclamation District (hereinafter referred to as "RRWR") request concerning the construction, operation and maintenance of a sanitary sewer (hereinafter referred to as "Sewer") upon Dixon-Belvidere R/W, Parcel No. 62, in the SW 1/4, Section 35, Township 43 North, Range 1, East of the Third Principal Meridian, Winnebago County, Illinois, and finds there are no objections to the construction of RRWR providing the following conditions and terms are observed and complied with:

1. RRWR agrees and shall inform its contractor that all necessary and required safety precautions shall be taken when working with equipment under and adjacent to ComEd's energized lines.
2. All installation of lighting, signage, antennas, etc. must be limited to 22' above grade. Any object that will exceed this height must be approved by ComEd Transmission Engineering.
3. RRWR shall cause any stationary objects on the easement to be grounded using the attached ComEd specifications or equivalent to guard against induced voltages.
4. RRWR has been made aware that OSHA laws and regulations apply to work done in the vicinity of electric transmission lines and must be adhered to. RRWR and/or its contractor are responsible for knowing and adhering to all applicable laws, including, without limitation, OSHA, and all environmental laws.
5. OSHA requires that when it is working in the vicinity of ComEd's electric transmission lines during the Sewer installation, RRWR contractor must maintain a minimum clearance distance of twenty (20) foot between its equipment and ComEd's existing 345,000 volt electric transmission conductors. **Under no circumstances should truck beds be raised under ComEd's electric transmission conductors. This note should be added to any construction drawings.**
6. If RRWR and/or its contractor determine the above clearances cannot be met, a line outage will be required to safely work within the vicinity of the existing overhead transmission facilities. Such an outage requires a minimum of a 16-week prior notification. The outage dates cannot be guaranteed due to system concerns and/or weather conditions. However, every reasonable effort will be made to

accommodate the contractor's required date. Outages on the overhead transmission facilities will not be permitted between the dates of May 15th and September 15th.

7. Any damage to ComEd's facilities caused by RRWR and/or RRWR contractor will be repaired at RRWR expense.

8. ComEd will assign a single point of contact for RRWR for the duration of the construction period. RRWR shall contact Tina Kowalczyk 224-244-1826 a minimum of 48 hours prior to the start of the project.

9. RRWR cannot raise grade within the easement area without providing full engineering plan and profiles to Transmission Engineering for review and written approval. RRWR must ensure that the existing drainage is not affected, storm water does not pool on the easement area or adjacent properties and ComEd NESC safety clearances are not violated. Storm water detention shall be avoided beneath ComEd's transmission facilities.

10. RRWR agrees that said Sewer will be installed in ComEd Right-of-way in approximately the location shown on Exhibit "A".

11. RRWR shall obtain at its sole cost and expense such permits, licenses or other authority which may be required from the County of Winnebago, State of Illinois, and any other authorities having jurisdiction, before using said premises for the purposes herein proposed and agrees to comply with and strictly observe any and all laws, rules, statutes and regulations of any such authorities.

12. RRWR shall indemnify and hold ComEd, its officers and employees harmless from all claims, litigation and liability asserted against them or any of them, and any costs and attorneys' fees incidental thereto, on account of injury to or death of any person or persons whomsoever or on account of damage to any property, caused by, connected with, or in any way attributable to the rights herein granted or RRWR failure to comply with any of the terms or conditions hereof. RRWR shall undertake the defense of ComEd, its officers and employees in any litigation, if ComEd requests RRWR to do so.


13. ComEd shall not be liable to RRWR for damage to the RRWR due to construction, operation or maintenance of any present or future facilities of ComEd in said Right-of-Way.

14. Snow shall not be piled on, under or near any of the existing transmission structures on the property. It is requested that any snow piles be located off of ComEd's easement to avoid any clearance issues with the overhead power lines.

If RRWR is in agreement with the terms and conditions herein specified, please indicate by signing both originals and return them to me at the above address. If you have any questions concerning the contents of this letter, please contact Stacey Dahlberg at (630) 437-2377.


Yours truly,

COMMONWEALTH EDISON COMPANY

By 
Joe Gilchrist
Manager of Real Estate & Facilities

Rock River Water Reclamation District

ACCEPTED THIS 19 DAY OF August, 2019.

By: 
Name: Tyler V. Nelson
Title: Project Engineer III

Not to be used for bidding purposes

ADDITIONAL TERMS AND CONDITIONS

1. The permission herein acknowledged is based upon information and assurances you have provided and facts and circumstances as they currently exist or are currently known to ComEd. ComEd reserves the right at any time hereafter to revoke the permission acknowledged herein and to require the immediate removal of the encroaching structure from the easement premises, at your sole cost and expense, in the event (a) that the information and assurances you have provided prove incorrect or unreliable in any respect, (b) there is change in any relevant facts and circumstances, including without limitation any change in ComEd's business needs or operations that may require the installation of additional overhead or underground facilities on the subject easement premises, or (c) ComEd is made aware of additional facts and circumstances of which it has no actual current knowledge. In the event the permission contained herein is so revoked, you shall promptly remove all encroaching structures at your sole cost and expense, provided ComEd reserves the right (but shall have no obligation) to remove the encroaching structure from the easement premises and dispose of the same without liability for any loss or damage to property incurred by you or any third parties as a result thereof. You shall be responsible for reimbursing ComEd for all costs such removal.
2. The permission herein acknowledged is subject to the condition that you shall be liable for all damage to property, including damage to ComEd's facilities, and any injury or death to persons resulting from or in any way related to the construction or continuing presence of the encroaching structure on the easement premises. By constructing or maintaining such encroaching structure, you agree to indemnify, defend and hold harmless ComEd from and against any and all claims, liabilities, losses, proceedings, damages, costs and expenses (including attorney's fees and costs) arising from or in any manner related to the construction or continuing presence of the encroaching structure on the easement premises. Such cost shall include any relocation costs incurred by ComEd (including the cost of acquiring additional easements or other property rights) should ComEd elect to relocate the facilities located on the easement premises due to the subject encroachment.
3. The permission herein acknowledged shall in no way modify, limit, terminate, release, abrogate, nullify or waive any of the rights and interests of ComEd, its successors and assigns, in and to the easement premises.
4. You shall have no right to construct additional structures or improvements upon the easement premises. Prior to any digging upon the easement premises, you shall be responsible for locating all electrical facilities by contacting J.U.L.I.E. at 1-800-892-0123.
5. The permission hereby acknowledged is subject to your obtaining all required approvals from applicable governmental authorities (or third parties having any interest in the easement premises) with respect to the encroaching structure.

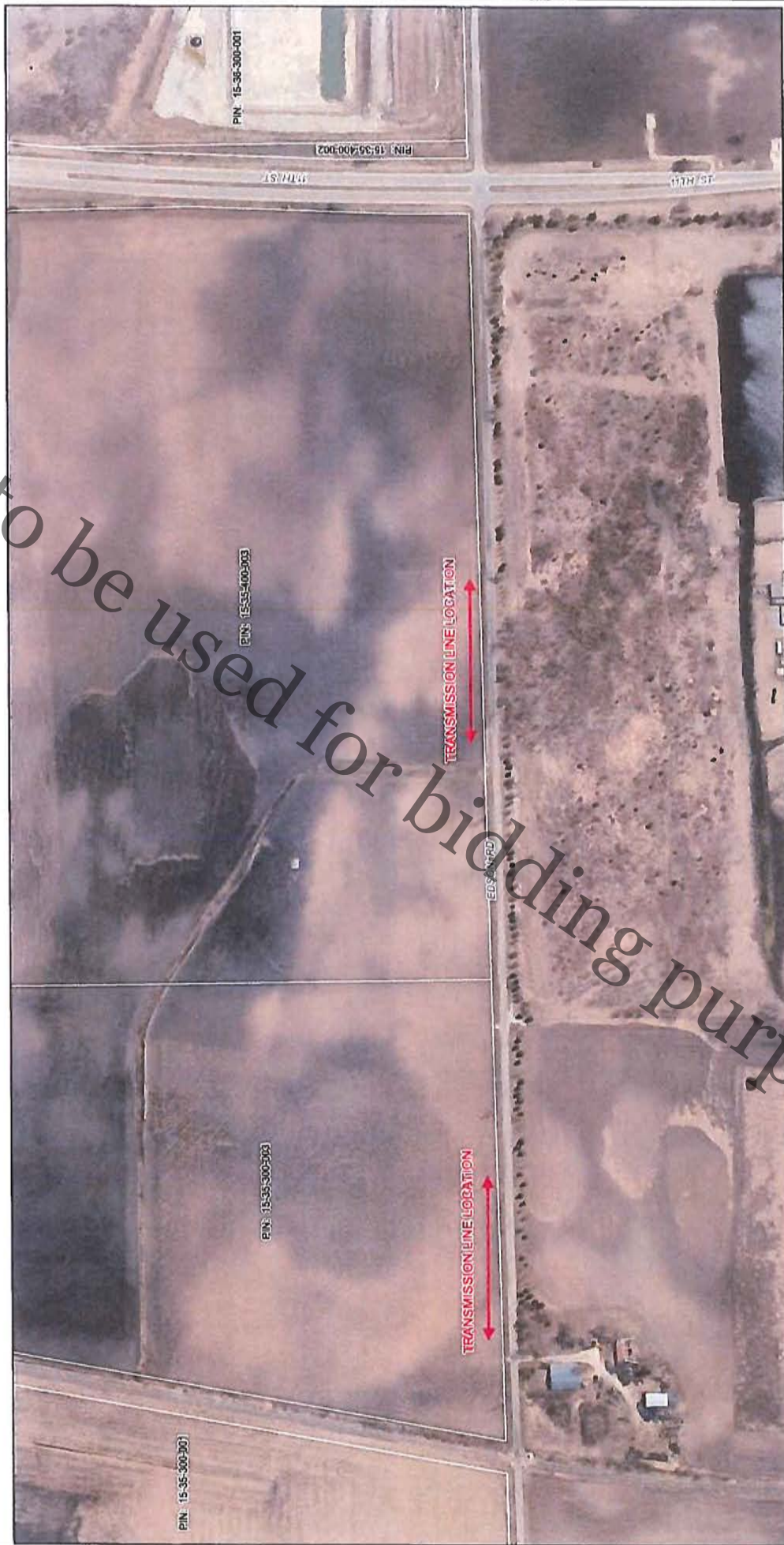
6. The obligations set forth herein above and in the attached letter shall be binding upon you, your heirs, legal representatives, successors and assigns.
7. This letter should be retained with your valuable papers and copies should be furnished to the title company and your successors and/or assigns for future reference.
8. This letter may be recorded at any time by ComEd in its sole discretion.

Not to be used for bidding purposes

EXHIBIT 'A'

LOCATION EXHIBIT

TRANSMISSION LINE ALONG NORTH ROW OF EDSON RD



MAP DRAWN BY: WAYNE DUCKMANN 02-24-2019



1 in = 300 ft

Section VII

General Provisions & Technical Specifications for Sanitary Sewer Construction

(Separate document incorporated by reference)