

VILLAGE OF SOUTH HOLLAND
COOK COUNTY

THORN DITCH FLOOD MITIGATION PROJECT

Project 23-R0646

VILLAGE OF SOUTH HOLLAND
COOK COUNTY, ILLINOIS
NOTICE TO CONTRACTORS

The Village will receive sealed proposals for the following improvements at the Clerk's office, 16226 Wausau Avenue, South Holland, IL 60473, until **10:00 A.M. on May 27, 2025**.

THORN DITCH FLOOD MITIGATION PROJECT

All proposals shall be sealed in an envelope, addressed to the Village of South Holland, Attention: Village Clerk, and shall be marked with large bold letters "**SEALED BID – THORN DITCH FLOOD MITIGATION PROJECT**". The name and address of the bidder shall also appear on the outside of the envelope.

Proposals will be publicly read aloud after **10:01 AM on May 27, 2025**. No bid shall be withdrawn after the opening of the proposals without the consent of the President and Board of Trustees for a period of sixty (60) days after the scheduled time of closing bids.

The Bid Documents, including specifications, are on file at the office of the Engineer, Robinson Engineering, Ltd., 16133 LaSalle Street, South Holland, IL 60473 (phone 708-331-6700), Email: reladministrative@reltd.com, and may only be obtained electronically via email upon review of prequalification information. The bid documents will be issued until **4:00 PM on, May 23, 2025**.

A certified check/bank draft drawn on a solvent bank, cashier's check or bid bond, payable without condition to the Village of South Holland in an amount not less than ten percent (10%) of the bid shall be submitted with each proposal, as a guarantee that, if the proposal is accepted, a contract will be entered into and the performance of the contract is properly secured.

A performance bond in a sum equal to one hundred percent (100%) of the amount of the bid, with sureties to be approved by the President and Board of Trustees for the faithful performance of the contract, must be furnished by the successful bidder. All bids or proposals shall contain an offer to furnish a bond upon acceptance of such bid or proposal.

The right is reserved to reject any or all proposals, to waive technicalities, to postpone the bid opening, or to advertise for new proposals, if in the judgment of the President and Board of Trustees their best interests will be promoted thereby. All Bids shall remain subject to acceptance for sixty (60) days after the time set for opening bids. The Contractor is advised that no work can begin on the project until all required permits are obtained.

The Contractor will be required to pay not less than the prevailing wage rates on this project as established by the United States Department of Labor. The Contractor shall also comply with all applicable Federal, State and local regulations.

Bidder qualifications and experience will also be included in the basis for determining the lowest responsible bidder.

Prequalification will be required to be submitted to the Engineer by all potential bidders prior to receiving a bid book. If in the opinion of the Engineer and the President and Board of Trustees, an applicant would not be able to serve the best interest of the Village, a proposal will not be issued to the applicant.

Mayor and Board of Trustees
Village of South Holland
Cook County, Illinois

PROPOSAL and CONTRACT

PROPOSAL

TO THE OWNER, _____

1. Proposal of _____
(name and address of bidder)

(email address of bidder)

for the improvement described in the NOTICE TO CONTRACTORS.

2. In submitting this proposal, the undersigned declares that the only persons or parties interested in the proposal as principals are those named herein; and that proposal is made without collusion with any other person, firm or corporation.
3. The undersigned further declares that he has carefully examined the proposal, plans, specifications, form of contract and contract bond, and special provisions (if any), and that he has inspected in detail the site of the proposed work, and that he has familiarized himself with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this proposal he waives all right to plead any misunderstanding regarding the same.
4. The undersigned further understands and agrees that if this proposal is accepted, he is to furnish and provide all necessary machinery, tools, apparatus and other means of construction, and to do all of the work, and to furnish all of the materials specified in the contract, except such materials as are to be furnished by the Owner, in the manner and at the time therein prescribed, and in accordance with the requirements therein set forth, and is fully responsible for the construction means, methods, techniques, sequences and safety procedures and programs incident thereto.
5. The undersigned declares that he understands that the quantities mentioned are approximate only and that they are subject to increase or decrease; that he will take in full payment therefore the amount and the summation of the actual quantities, as finally determined, multiplied by the unit prices shown in the schedule of prices contained herein.
6. The undersigned further agrees that the unit prices submitted herewith are for the purpose of obtaining a gross sum, and for use in computing the value of extras and deductions; if there is a discrepancy between the gross sum bid and that resulting from the summation of the quantities multiplied by their respective unit prices, the latter shall apply.
7. The undersigned further agrees that if the Owner decides to extend or shorten the improvement, or otherwise alter it by extras or deductions, including the elimination of any one or more of the items, as provided in the specifications, he will perform the work as altered, increased or decreased at the contract unit prices.

8. The undersigned further agrees that the Owner may at any time during the progress of work covered by this contract order other work or materials incidental thereto and that all such work and materials as do not appear in the proposal or contract as a specific item accompanied by a unit price, and which are not included under the bid price for other items in this contract, shall be performed as extra work, and that he will accept as full compensation therefore the actual cost plus fifteen per cent (15%), the actual cost to be determined as provided in the specifications.
9. The undersigned further agrees to execute a contract for this work and present the same to the Owner within fifteen (15) days after the date of notice of the award of the contract to him.
10. The undersigned further agrees that he and his surety will execute and present within fifteen (15) days after the date of notice of the award of contract, a contract bond satisfactory to and in the form prescribed by the Owner, in the penal sum of the full amount of the contract, guaranteeing the faithful performance of the work in accordance with the terms of the contract.
11. The undersigned further agrees to begin work not later than ten (10) days after the execution and approval of the contract and contract bond, unless otherwise provided, and to prosecute the work in such manner and with sufficient materials, equipment, labor and safety precautions as will insure its completion within the time limit specified herein, it being understood and agreed that the completion within the time limit is an essential part of the contract. The undersigned agrees to complete the work within _____ calendar days after the date of the execution of the contract by both parties, or by 10/01/2026 if this is a completion day contract, unless additional time shall be granted by the Engineer in accordance with the provisions of the specifications. In case of failure to complete the work within the time names herein or within such extra time as may have been allowed by extensions, the undersigned agrees that the Owner shall withhold from such sums as may be due him under the terms of this contract, the costs set forth in the specifications, which cost shall be considered and treated not as a penalty, but as damages due the Owner from the undersigned by reason of inconvenience to the public, added cost of engineering and construction observation, maintenance of detours, and other items which have caused an expenditure of public funds resulting from the failure of the undersigned to complete the work within the time specified in the contract.
12. Accompanying this proposal is a bank draft, bank cashier's check, certified check or bid bond, complying with the requirements of the specifications, made payable to: _____

The amount of the bond, check or draft is _____

_____ (\$ _____).

If the proposal and the undersigned shall fail to execute a contract and contract bond as required herein, it is hereby agreed that the amount of the check or draft substituted in lieu thereof, shall become the property of the Owner, and shall be considered as payment of damages due to delay and other causes suffered by the Owner because of the failure to execute said contract and contract bond; otherwise said check or draft substituted in lieu thereof shall be returned to the undersigned.

ATTACH BANK DRAFT, BID BOND, BANK CASHIER'S
CHECK OR CERTIFIED CHECK HERE

In the event that one check, bond, or draft is intended to cover two or more proposals, the amount must be equal to the sum of the proposal guarantees of the individual sections covered.

13. The undersigned submits herewith his schedule of prices covering the work to be performed under this contract; he understands that he must show in the schedule the unit prices for which he proposes to perform each item of work; that the extensions must be made by him; and that if not so done, his proposal may be rejected as irregular.
14. The undersigned firm certifies that it is not barred from bidding on this contract as a result of a conviction for the violation of State laws prohibiting bid-rigging or bid-rotating.

CONTRACTOR'S STATEMENT

1. Do you have sufficient knowledge of Drawings and Specifications of the work covered by this Contract to warrant submitting a Proposal for this work?

2. (a) Have you done work of this nature? _____
(b) To what extent? (Dollar value) _____
(c) For whom? _____

3. Do you have sufficient equipment to perform this work? _____
If so, list major items: _____

4. Give Bank reference: _____
Address: _____

5. List names and addresses of major suppliers:

6. Have you ever had, or do you now have, funds withheld for non-completion of work to the satisfaction of any municipality? _____
(a) If so where? _____
(b) For what reason? _____
7. Have you ever been disqualified by a Governmental Agency for failure to satisfactorily complete a public improvement? _____

CONTRACTOR'S STATEMENT (cont.)

8. Have you ever been cited for failing to withhold or report payroll deductions for Federal Income Tax? _____
9. Have you ever been cited by the Federal Government for any violation of the Copeland Act (Anti-kick-back Law)? _____
10. If awarded contract, work will begin in _____ calendar days.

CERTIFICATE OF ELIGIBILITY TO BID

I, _____ (contractor), pursuant to section 33E-11 of the Illinois Criminal Code of 1961 as amended, hereby certifies that neither (he, she, it) nor any of (his, her, its) partners, officers, or owners of (his, her, its) business has been convicted in the past five (5) years of the offense of bid-rigging under section 33E-3 of the Illinois Criminal Code of 1961 as amended and that neither (he , she, it) nor any of (his, her, its) business has ever been convicted of the offense of bid-rotating under section 33E-4 of the Illinois Criminal Code of 1961 as amended.

Date: _____

By: _____
(Name of Contractor)

(Title)

SCHEDULE OF PRICES

Local Agency Village of South Holland

Location Thorn Ditch

Description Thorn Ditch Flood Mitigation Project

The undersigned submits herewith his schedule of prices covering the work to be performed under this contract; he understands that he must show in the schedule the unit prices for which he proposes to perform each item of work; that the extensions must be made by him, and if not so done, his proposal may be rejected as irregular.

Schedule for Single Bid

(For complete information covering these items, see plans and specifications.)

| Bidder's Proposal for making Entire Improvements | | | | | |
|--|--|-------|----------|------------|-------|
| Item No. | Items | Unit | Quantity | Unit Price | Total |
| 1 | MOBILIZATION | LSUM | 1 | | |
| 2 | TREE REMOVAL (6 TO 15 UNITS DIAMETER) | UNIT | 617 | | |
| 3 | TREE REMOVAL (OVER 15 UNITS DIAMETER) | UNIT | 986 | | |
| 4 | TREE TRUNK PROTECTION | EACH | 20 | | |
| 5 | EARTH EXCAVATION | CU YD | 38,800 | | |
| 6 | AGGREGATE SUBGRADE IMPROVEMENT | CU YD | 50 | | |
| 7 | REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL | CU YD | 50 | | |
| 8 | EXPLORATION TRENCH 84" DEPTH | FOOT | 90 | | |
| 9 | PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH | SQ FT | 1,420 | | |
| 10 | PAVEMENT REMOVAL | SQ YD | 610 | | |
| 11 | COMBINATION CURB AND GUTTER REMOVAL | FOOT | 350 | | |
| 12 | SIDEWALK REMOVAL | SQ FT | 1,580 | | |
| 13 | REMOVAL OF EXISTING STRUCTURES | L SUM | 1 | | |
| 14 | REMOVAL OF EXISTING STRUCTURES NO. 1 | EACH | 1 | | |
| 15 | REMOVAL OF EXISTING STRUCTURES NO. 2 | EACH | 1 | | |
| 16 | REMOVAL OF EXISTING STRUCTURES NO. 3 | EACH | 1 | | |
| 17 | REMOVAL OF EXISTING STRUCTURES NO. 4 | EACH | 1 | | |
| 18 | PRECAST CONCRETE BOX CULVERTS 7' X 7' | FOOT | 856 | | |
| 19 | PRECAST CONCRETE BOX CULVERTS 10' X 7' | FOOT | 184 | | |
| 20 | STRUCTURE EXCAVATION | CU YD | 4,329 | | |
| 21 | REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES | CU YD | 1,709 | | |
| 22 | CONCRETE STRUCTURES | CU YD | 24.8 | | |
| 23 | GRANULAR BACKFILL FOR STRUCTURES | CU YD | 8 | | |
| 24 | CONCRETE SEALER | SQ FT | 332 | | |

| Item No. | Items | Unit | Quantity | Unit Price | Total |
|----------|---|-------|----------|------------|-------|
| 25 | REINFORCEMENT BARS, EPOXY COATED | POUND | 2,320 | | |
| 26 | BOX CULVERT END SECTIONS, CULVERT NO. 1 | EACH | 3 | | |
| 27 | BOX CULVERT END SECTIONS, CULVERT NO. 2 | EACH | 1 | | |
| 28 | BOX CULVERT END SECTIONS, CULVERT NO. 3 | EACH | 4 | | |
| 29 | STORM SEWERS, CLASS A, TYPE 1 12" | FOOT | 31 | | |
| 30 | STORM SEWERS, CLASS A, TYPE 2 18" | FOOT | 41 | | |
| 31 | STORM SEWERS, CLASS A, TYPE 1 24" | FOOT | 397 | | |
| 32 | STORM SEWERS, CLASS A, TYPE 2 36" | FOOT | 150 | | |
| 33 | PIPE UNDERDRAINS, TYPE 1, 4" | FOOT | 486 | | |
| 34 | MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID | EACH | 1 | | |
| 35 | MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID | EACH | 2 | | |
| 36 | MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, CLOSED LID | EACH | 2 | | |
| 37 | INLETS, TYPE A, TYPE 1 FRAME, CLOSED LID | EACH | 1 | | |
| 38 | PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12" | EACH | 1 | | |
| 39 | PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24" | EACH | 1 | | |
| 40 | PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36" | EACH | 1 | | |
| 41 | STORM SEWER REMOVAL 6" | FOOT | 5 | | |
| 42 | STORM SEWER REMOVAL 8" | FOOT | 15 | | |
| 43 | STORM SEWER REMOVAL 33" | FOOT | 68 | | |
| 44 | REMOVING MANHOLES | EACH | 1 | | |
| 45 | REMOVING CATCH BASINS | EACH | 4 | | |
| 46 | REMOVING INLETS | EACH | 6 | | |
| 47 | VALVE BOXES TO BE ADJUSTED | EACH | 1 | | |
| 48 | MANHOLES TO BE ADJUSTED | EACH | 1 | | |
| 49 | ADJUSTING WATER MAIN 6" | FOOT | 150 | | |
| 50 | 20" DIAMETER STEEL SLEEVE, 0.344" WALL THICKNESS, OPEN CUT INSTALLATION | FOOT | 130 | | |
| 51 | COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.12 | FOOT | 350 | | |
| 52 | AGGREGATE BASE COURSE, TYPE B 4" | SQ YD | 160 | | |
| 53 | AGGREGATE BASE COURSE, TYPE B 5" | SQ YD | 100 | | |
| 54 | AGGREGATE BASE COURSE, TYPE B 8" | SQ YD | 640 | | |
| 55 | AGGREGATE SURFACE COURSE, TYPE A 6" | SQ YD | 1,710 | | |
| 56 | BITUMINOUS MATERIALS (PRIME COAT) | POUND | 1,330 | | |
| 57 | BITUMINOUS MATERIALS (TACK COAT) | POUND | 270 | | |

| Item No. | Items | Unit | Quantity | Unit Price | Total |
|----------|--|-------|----------|------------|-------|
| 58 | HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 | TON | 140 | | |
| 59 | HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50 | TON | 70 | | |
| 60 | TOPSOIL EXCAVATION AND PLACEMENT | CU YD | 5,872 | | |
| 61 | SEEDING, CLASS 2A | ACRE | 2.8 | | |
| 62 | SEEDING, MESIC PRAIRIE | ACRE | 1.05 | | |
| 63 | SEEDING, SEDGE MEADOW MIX | ACRE | 1 | | |
| 64 | EROSION CONTROL BLANKET | SQ YD | 24,200 | | |
| 65 | PERENNIAL PLANTS, WETLAND EMERGENT | ACRE | 0.34 | | |
| 66 | TEMPORARY EROSION CONTROL SEEDING | POUND | 280 | | |
| 67 | TEMPORARY DITCH CHECKS | FOOT | 240 | | |
| 68 | PERIMETER EROSION BARRIER | FOOT | 5,030 | | |
| 69 | INLET FILTERS | EACH | 19 | | |
| 70 | TEMPORARY EROSION CONTROL BLANKET | SQ YD | 13,170 | | |
| 71 | STONE RIPRAP, CLASS A3 | SQ YD | 10 | | |
| 72 | STONE RIPRAP, CLASS A4 | SQ YD | 30 | | |
| 73 | STONE RIPRAP, CLASS A5 | SQ YD | 1,260 | | |
| 74 | FILTER FABRIC | SQ YD | 1,300 | | |
| 75 | PILLAR RELOCATION | EACH | 6 | | |
| 76 | CONNECTION TO EXISTING SEWER | EACH | 5 | | |
| 77 | BIAXIAL GEOGRID | SQ YD | 1,607 | | |
| 78 | TRENCH BACKFILL | CU YD | 137 | | |
| 79 | POROUS GRANULAR EMBANKMENT | CU YD | 4,606 | | |
| 80 | POROUS GRANULAR EMBANKMENT, SPECIAL | CU YD | 589 | | |
| 81 | PLUG EXISTING STORM SEWERS | EACH | 1 | | |
| 82 | FENCE REMOVAL AND REINSTALLATION | FOOT | 480 | | |
| 83 | WOOD FENCE | FOOT | 85 | | |
| 84 | MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES | SQ YD | 1,296 | | |
| 85 | CLEANOUTS | EACH | 1 | | |
| 86 | WATER MAIN LINE STOP 6" | EACH | 5 | | |
| 87 | SANITARY SEWER MAIN LINE REPAIR 10" | FOOT | 25 | | |
| 88 | SANITARY SEWER MAIN LINE REPAIR 8" | FOOT | 32 | | |
| 89 | SANITARY SEWER POINT REPAIRS, 10" | LF | 40 | | |
| 90 | CURED-IN-PLACE PIPE LINER, 10" | FOOT | 187 | | |

| Item No. | Items | Unit | Quantity | Unit Price | Total |
|----------|---|--------|----------|------------|--------------|
| 91 | CUT PROTRUDING TAPS | EACH | 1 | | |
| 92 | SERVICE LATERALS TO BE REINSTATED | EACH | 2 | | |
| 93 | DYE TESTING OF PROPERTIES | EACH | 1 | | |
| 94 | MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE | EACH | 1 | | |
| 95 | PROPOSED MANHOLE/CATCH BASIN CONNECTION OVER EXISTING STORM SEWER | EACH | 2 | | |
| 96 | TRAFFIC CONTROL AND PROTECTION, (SPECIAL) | L SUM | 1 | | |
| 97 | CHANGEABLE MESSAGE SIGN | CAL DA | 500 | | |
| 98 | STORM SEWER BACKFLOW PREVENTER, 18" | EACH | 1 | | |
| 99 | HELICAL PIER | EACH | 172 | | |
| 100 | TREE, ACER SACCHARUM (SUGAR MAPLE), 3" CALIPER, BALLED AND BURLAPPED | EACH | 14 | | |
| 101 | TREE, ULMUS CARPINIFOLIA NEW HORIZON (NEW HORIZON SMOOTHLEAF ELM), 3" CALIPER, BALLED AND BURLAPPED | EACH | 14 | | |
| 102 | TREE, QUERCUS RUBRA (RED OAK), 3" CALIPER, BALLED AND BURLAPPED | EACH | 14 | | |
| 103 | STABILIZED CONSTRUCTION ENTRANCE | SQ YD | 280 | | |
| 104 | ROCK FILL | CU YD | 1,110 | | |
| 105 | PLAYGROUND EQUIPMENT REMOVAL | LSUM | 1 | | |
| 106 | PRECAST CONCRETE RISER, T1F, OL | EACH | 10 | | |
| 107 | POND AERATING FOUNTAIN | EACH | 3 | | |
| 108 | REMOVE EXISTING OUTLET | EACH | 1 | | |
| 109 | CONTRACT EXTRA WORK | UNIT | 150,000 | \$1.00 | \$150,000.00 |
| 110 | REMOVAL AND RELOCATION OF EXISTING PEDESTRIAN BRIDGE | L SUM | 1 | | |
| 111 | WOOD DECKING SPECIAL | SQ FT | 210 | | |
| 112 | PEDESTRIAN TRUSS SUPERSTRUCTURE | SQ FT | 210 | | |
| 113 | ELECTRIC SERVICE INSTALLATION | EACH | 3 | | |
| 114 | ELECTRIC UTILITY SERVICE CONNECTION | L SUM | 1 | \$6000.00 | \$6000.00 |

SIGNATURES

(If an individual)

Signature of Bidder

Business Address

(If a co-partnership)

Firm Name (SEAL)

Signed by (SEAL)

Business Address

Insert
Names and
Addresses of
All Members
of the Firm
.....
.....
.....
.....

(If a corporation)

Corporate Name

Signed By
President

Business Address

(Corporate Seal)

Insert
Names of
Officers
President
Secretary
Treasurer

Attest:

Attestor's Title: _____

Phone Number _____

BIDDER'S CERTIFICATE

The undersigned, having executed the attached bid for the construction of:

Name of Project

for the Village/City/Town of _____, County of _____,

State of _____ hereby certifies that he has read all of the Contract Documents, including the Notice to Bidders, Instructions to Bidders, Proposal Forms, General conditions of the contract, Detail Specifications, Forms of contract, Form of Performance Bond and Form of Maintenance Bond, and that he has examined the plans and that his proposal for the work is based on the conditions and requirements therein; and should the contract be awarded to him, he agrees to execute the work in strict accordance therewith, including compliance with the Insurance Requirements of the General Conditions.

Name of Bidder

By: _____
Company Name

Date: _____

DIVISION I

GENERAL REQUIREMENTS AND COVENANTS

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SECTION 1. DEFINITION OF TERMS

1-1 DESCRIPTION

When a standard specification number is used in the Specifications it shall be taken to mean the latest revision of that Standard Specification at the time of the Bid.

Whenever in the specifications and Contract the following terms, or pronouns in place of them, are used, the intent and meaning shall be interpreted as follows:

1-2 ABBREVIATIONS

The following organizations are referred to in this specification by abbreviations of the titles. Additional information noted but not detailed can be obtained from these organizations by writing to them.

| | |
|--------|---|
| ASTM | American Society for Testing and Materials 1916 Race Street Philadelphia, Pennsylvania 19103 |
| ASSHTO | The American Association of State Highway and Transportation Officials 917 National Press Building Washington, D.C. 20004 |
| AWWA | American Water Works Association 6666 West Quincy Avenue Denver, Colorado 80235 |
| NSF | National Sanitation Test Laboratory Foundation Box 1478 Ann Arbor, Michigan |
| ANSI | American National Standards Institute 1430 Broadway New York, New York 10018 |
| IDOT | Illinois Department of Transportation 2300 South Dirksen Parkway Springfield, Illinois 62764 |
| FHWA | Federal Highway Administration DOT Building, 400 Seventh St., S.W. Washington, D.C. 20590 |
| OSHA | Occupational Safety and Health Act |
| MWRDGC | The Metropolitan Water Reclamation District of Greater Chicago 100 East Erie Street Chicago, Illinois 60611 |

REL Robinson Engineering, Ltd

ISO Insurance Services Office

1-3 ADDENDA

Written or graphic instruments issued prior to the execution of the Agreement, which modify or interpret the Contract Documents, Drawings, and Specifications by additions, deletions, clarifications or corrections.

1-4 AWARD

The decision of the Owner to accept the proposal of the lowest responsive, responsible bidder for the work, subject to the execution of and approval of a satisfactory Contract therefore, and bond to secure the performance thereof, and to such other conditions as may be specified or otherwise required by law.

1-5 BASE COURSE

The layer or layers of specified or selected material of designed thickness placed on a sub-base or a subgrade to support the surface course.

1-6 BITUMINOUS PAVEMENT

A pavement structure which maintains intimate contact and distributes loads to the subgrade and depends upon aggregate interlock particle friction and cohesion for stability, and a pavement structure which includes a bituminous concrete surface course over a bituminous concrete base course or a portland cement concrete base course.

1-7 BIDDER

Any individual, firm, partnership or corporation submitting a proposal for the Work contemplated, acting directly or through a duly authorized representative.

1-8 CONTRACT

The written agreement between the Owner and the Contractor setting forth the obligations of the parties thereunder, including, but not limited to, the performance of the Work (the furnishing of labor and materials, and the basis of payment).

The Contract includes such of the following document parts as may be utilized. These document parts so utilized will be as fully part of the Contract as if therein set out verbatim, or, if not attached, as if attached thereto. The controlling order of priority for these documents on the project is as follows (e.g., A is controlling over B-N, etc.):

- A. Supplemental Agreements (Change Order)
- B. Addenda
- C. Special Conditions of Contract
- D. General Conditions of Contract
- E. Special Provisions to the Specifications
- F. Detailed Specifications
- G. Complete Project Plans or Drawings
- H. General Specifications
- I. Contract
- J. Contractor's Contract Bond
- K. Contractor's Proposal
- L. Notice to Proceed
- M. Notice of Award
- N. Notice to Bidders

1-9 CONTRACTOR

The Bidder awarded the Contract for the Work.

1-10 CONTRACT BOND

The approved form of security furnished by the Contractor and his surety as a guaranty that he will execute the Work in accordance with the terms of the Contract.

1-11 CORPORATION

With respect to the execution and performance of the Contract, a corporate body authorized or licensed to do business in the State of Illinois for projects in Illinois and in the State of Indiana for projects in Indiana.

1-12 CULVERT

A drainage structure extending across and beneath a traveled way and having a tubular or box-type cross-section open on both ends.

1-13 ENGINEER

ROBINSON ENGINEERING, LTD. or an engineer of a municipality, including such assistants as are authorized to represent them, who represents the Owner during the construction phase activities of the Work.

1-14 FORCE MAIN

A pipe constructed or used to carry sewage under pressure.

1-15 ENGINEERING OBSERVER

The authorized representative of the Owner or of the Engineer assigned to observe the progress of the Work to determine only if the Work is proceeding in accordance with the technical plans and specifications.

1-16 LABORATORY

An established testing laboratory approved by the Engineer.

1-17 MANHOLE

A vertical enclosed structure providing access to a pipe line or other structure.

1-18 NOTICE TO BIDDERS

The official notice, included in the proposal form, inviting bids for the proposed improvement, including a brief description of the Work.

1-19 OWNER

The Village, City, Town, Sanitary District, or other governmental body, corporation, partnership or individual initiating the project, acting through its legally constituted officials, officers or employees. The Department as referenced in the State Specifications.

1-20 PAVEMENT STRUCTURE

The combination of sub-base, base course and surface course placed on a sub-grade to support the traffic load and distribute it to the roadbed.

1-21 PLANS

All official drawings or reproductions of drawings pertaining to the Work provided for in the contract.

1-22 PLUMBING

Plumbing shall be as defined in the latest adopted Illinois State Plumbing Code, copies of which are available from the Illinois Department of Public Health, Division of Engineering and Sanitation, 535 West Jefferson Street, Springfield, Illinois 62706.

1-23 PROPOSAL (BID)

The written offer of the Bidder to perform the proposed Work.

1-24 PROPOSAL GUARANTY

The security designated in the proposal to be furnished by the Bidder as a guaranty that said Bidder will enter into a Contract with the Owner for the acceptable performance of the Work and will furnish the required Contract Bond, if the Work is awarded to him.

1-25 RAILROAD

The Railroad or Railway Company whose property is involved in the Work.

1-26 RIGHT-OF-WAY AND EASEMENTS

The areas owned, or acquired by permanent easement; also, the areas acquired by temporary easement during the time the easement is in effect.

1-27 SEWER, COMBINED

Any sewer constructed or used for the purpose of carrying both storm water and waterborne wastes to a treatment facility.

1-28 SEWER, SANITARY

Any sewer constructed or used for the purpose of carrying waterborne wastes to a treatment facility.

1-29 SEWER, SERVICE

A branch sanitary sewer line constructed from the main sanitary sewer line to a point described in the Special Provisions or Plans or to a point established by the Engineer.

1-30 SEWER, STORM

A sewer constructed or used for carrying storm water or sub-surface water to a storm water outlet.

1-31 SPECIAL PROVISIONS

Specific directions, provisions, requirements and revisions of the Specifications peculiar to the Work under consideration which are not satisfactorily provided for in the Specifications. The Special Provisions set forth the final contractual intent as to the matter involved. The Special Provisions included in the Contract shall not operate to annul those portions of the Specifications with which they are not in conflict.

1-32 SPECIFICATIONS

The body of directions, provisions and requirements contained herein, or in any supplement to this document referred to in the Special Provisions, together with written agreements and all documents of any description made or to be made pertaining to the method or manner of performing the Work, the quantities or the quality of materials to be furnished under the contract.

1-33 STATE SPECIFICATIONS

IDOT, Standard Specifications for Road and Bridge Construction, latest edition at the time of Bid. This book outlines the general requirements and covenants to all improvements, as well as provisions relating to materials, equipment and construction requirements for individual items of work.

1-34 SUBCONTRACTOR

The individual, firm, partnership or corporation to whom the Contractor, with the written consent of the Engineer, sublets, assigns, or otherwise disposes of any part of the Work covered by the contract.

1-35 SUB-BASE

The layer or layers of specified or selected material of designed thickness placed on a sub-grade to support a base course.

1-36 SUB-GRADE

The top of surface of a roadbed upon which the pavement structure and shoulders are constructed.

1-37 SUPPLEMENTAL AGREEMENT

The written agreement executed by the Owner and the Contractor, with the assent of the Contractor's surety, covering modifications or alterations of the terms of the original Contract.

1-38 SUPPLIER

Any person or organization who supplies materials or equipment for the Work including that fabricated to a special design.

1-39 SURETY

The corporate body, individual or individuals which engage to be responsible for the Bidder's acts in the execution of the Contract in the event of its being awarded to him; or, which are bound with and for the Contractor to insure his acceptable performance of the Contract, his payment of all obligations pertaining to the Work, and his fulfillment of such other conditions as may be specified or otherwise required by law.

1-40 SURFACE COURSE

One or more layers of a pavement structure designed to accommodate the traffic load, the top layer of which resists skidding, traffic abrasion, and the disintegrating effects of climate. The top layer is sometimes called "wearing course".

1-41 WATER MAIN

A pipe constructed or used to carry potable water under pressure.

1-42 WATER SERVICE LINE

That line connected to the water main, which delivers potable water to the user's facilities.

1-43 THE WORK

The improvement advertised for bids, described in the Proposal form, indicated on the Plans and covered in the Specifications, Special Provisions, Contract, authorized alterations, extensions and deductions, and supplementary agreements, or any part or parts thereof.

SECTION 2. PROPOSAL REQUIREMENTS AND CONDITIONS

2-1 CONTENTS OF THE PROPOSAL FORM

Bidders will be furnished with forms stating the location and description of the Work contemplated, the approximate quantities of Work to be performed, the amount of the Proposal Guarantee, requirements pertaining to labor, and the date, time and place of filing and opening Proposals. All documents bound with or attached to the proposal shall be considered a part thereof, and shall not be detached or altered.

2-2 INTERPRETATION OF ESTIMATE OF QUANTITIES

An estimate of quantities of Work to be done and materials to be furnished under the Specifications is given in the Proposal. It is given as a basis for comparison of Proposals and the award of the Contract. The Owner and Engineer do not expressly or by implication agree that the actual quantities involved will correspond therewith; nor shall the Bidder plead misunderstanding or deception because of such estimate of quantities pertaining to the Work.

Payment will be based on the actual quantities of Work performed in accordance with Contract, at the Contract unit prices specified. No allowance will be made for any change in anticipated profits due to an increase or decrease in the original estimate of quantities. The Owner reserves the right to omit any item entirely, or to increase or decrease any or all items as provided in Section 4-3.

2-3 EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK

The bidder shall, before submitting his bid, carefully examine the Proposal, Plans, Specifications, Special Provisions, and form of Contract and bond. He shall inspect in detail the site of the proposed Work and familiarize himself with all the local conditions affecting the Contract and the detailed requirements of construction. If his Bid is accepted, he will be responsible for all errors in his Proposal resulting from his failure or neglect to comply with these instructions. The Owner or Engineer will, in no case, be responsible for any change in anticipated profits resulting from such failure or neglect.

When the Plans or Special Provisions include information pertaining to sub-surface exploration, borings, test pits, and other preliminary investigations, such information is included only for the convenience of the Bidder. The Owner or Engineer assumes no responsibility whatever in respect to the sufficiency of the information, and there is no guaranty, either expressed or implied, that the conditions indicated are representative of those existing throughout the Work, or that unanticipated developments may not occur.

When the Plans or Special Provisions include information pertaining to the location of underground utility facilities, such information is only included for the convenience of the Bidder. The Owner or Engineer assumes no responsibility whatever in respect to the sufficiency or accuracy of the information, or lack of information, shown on the Plans relative to the location of underground utility

facilities. It shall be the Contractor's responsibility to obtain from the respective utility companies detailed information relative to the location of their facilities and the work schedules of the utility companies for removing or adjusting them.

2-4 *ENGINEER'S ESTIMATE*

The Engineer's "Estimate of Cost" as prepared for the Owner for the work to be completed under this contract may or may not be available to the Bidders at the discretion of the Owner or the Engineer. If the "Estimate of Cost" is available, it shall be given to all prospective bidders upon request.

2-5 *PREPARATION OF THE PROPOSAL*

The Bidder shall submit his Proposal on the form furnished by the Owner. The Proposal shall be executed properly, and Bids shall be made for all items indicated in the proposal form, except that when alternate bids are asked, a Bid on more than one alternate for each item is not required, unless the Special Provisions provide otherwise. The Bidder shall indicate, in figures, a unit price or lump sum for each of the separate items called for in the Proposal; he shall show the products of respective quantities and unit prices in the column provided for that purpose, and the gross sum shown in the place indicated in the Proposal shall be the summation of said products. All writing shall be with ink or typewriter, except the signature of the bidder, which shall be written with ink.

If the Proposal is made by an individual, his name and post office address shall be shown. If made by a firm, joint venture, or partnership, the name and post office address of each member of the firm, joint venture, or partnership shall be shown. If made by a corporation, the Proposal shall show the names, titles, and business addresses of the president, secretary, and treasurer, certified to by the secretary.

2-6 *MULTIPLE BIDS*

If multiple Bids are to be received, bidding shall be in accordance with the instructions in the Special Provisions.

2-7 *REJECTION OF PROPOSALS*

Proposals that contain omissions, erasures, alterations, additions not called for, conditional or alternate bids unless called for, irregularities of any kind, or proposals otherwise regular which are not accompanied by the proper proposal guaranty shall be rejected as informal or insufficient. However, the Owners reserve the right to reject any or all Proposals and to waive such technical error as may be deemed best for the interest of the Owner.

2-8 *PROPOSAL GUARANTY*

Each proposal shall be accompanied by a bid bond, bank draft, bank cashier's check, or properly certified check for not less than ten per cent (10%) of the amount Bid unless otherwise specified in the Special Provisions.

If a multiple Bid is submitted, the bid bond, bank draft, bank cashier's check, or certified checks, which accompany the individual Proposals making up the combination, will be considered as also covering the multiple Bid.

See Paragraph 3-3 regarding return of Proposal Guaranty.

The bid bond, bank draft, cashier's checks, or certified checks accompanying Proposals shall be made payable to the Owner.

2-9 *DELIVERY OF PROPOSALS*

Proposals shall be delivered prior to the time and at the place indicated in the notice to bidders. Each Proposal shall be placed in an envelope sealed and plainly marked to indicate its contents. Only sealed Proposals will be accepted.

Proposals will not be opened unless received at the place of letting and prior to the time stated in the Notice to Bidders.

2-10 *WITHDRAWAL OF PROPOSALS*

Permission will be given a Bidder to withdraw a Proposal if he makes his request in writing before the time for opening Proposals. If a Proposal is withdrawn, the Bidder will not be permitted to submit another Proposal for the same Work at the same letting.

2-11 *WITHDRAWAL OF PROPOSAL GUARANTY*

See Paragraphs 3-2 and 3-3 on award of Contract and return of Proposal Guaranty.

2-12 *PUBLIC OPENING OF PROPOSALS*

Unless otherwise specified, Proposals will be opened and read publicly at the time and place specified in the Notice to Bidders. Bidders, their authorized agents, and other interested parties are invited to be present.

2-13 DISQUALIFICATION OF BIDDERS

Any one or more of the following causes may be considered as sufficient for the disqualification of a Bidder and rejection of his Proposal.

- A. More than one Proposal for the same Work from an individual, firm, partnership, or corporation under the same or different names.
- B. Evidence of collusion among bidders.
- C. Unbalanced Proposals in which the prices for some items are substantially out of proportion to the prices for other items.
- D. Failure to submit a unit price for each item of Work listed in the Proposal.
- E. If the Proposal form is other than that furnished by the Engineer or if the form is altered or any part thereof is detached.
- F. If there are omissions, erasures, alterations, unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the Proposal incomplete, indefinite or ambiguous as to its meaning.
- G. If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
- H. If the Proposal is not accompanied by the proper proposal guaranty.
- I. If the Proposal is prepared with other than ink or typewriter.
- J. Lack of competency as revealed by financial statement or experience questionnaire.
- K. Unsatisfactory performance record as shown by past work judged from the standpoint of workmanship and progress.
- L. Uncompleted work, which, in the judgment of the Owner, might hinder or prevent the prompt completion of additional work.
- M. False information provided on a Bidder's "Contractor's Statement."
- N. Failure to comply with any prequalification regulations of the Owner.
- O. Default under previous contracts.

2-14 COMPETENCY OF BIDDERS

The Bidder, if a corporation, shall show the name of the State in which the corporation is chartered. Each Bidder shall furnish the Owner within two (2) weeks after request, with satisfactory evidence of his competency to perform the Work contemplated. When requested, he shall submit to the Owner a

financial statement prepared by a Certified Public Accountant showing his financial condition at the end of his past fiscal year. The accountant who prepares the statement shall certify that he holds a valid and unrevoked certificate as a Certified Public Accountant, issued in accordance with the laws of the State in which he is licensed. The Bidder, if requested, shall also answer and submit questionnaires relating to his experience and available equipment for performing construction work similar to that for which he is offering a proposal, and shall do so within the same two weeks from the time of request.

Before an award is made, the Bidder may, at the option of the Owner be required to furnish a statement showing the value of all uncompleted work for which he has entered into contracts.

2-15 MATERIAL SUBSTITUTIONS

If restrictions of any governmental authority prohibit the use of certain items that are required by the Plans and Specifications, substitution for such items will be determined by the Owner.

Each Bidder shall base his bid on the furnishing of all items exactly as shown on the Plans and as described in the Specifications. The successful Bidder will not be authorized to make any substitutions on his own volition, but in each and every case must obtain a properly authorized change order from the Owner on his Contract before installing any work in variance with the Contract requirements.

2-16 CONTRACTOR'S UNDERSTANDING

It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the Work, the general and local conditions, and all other matters which can in any way affect the Work under this Contract. No verbal agreement or conversation with any officer, agent, or employee of the Owner and Engineer, either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.

2-17 STATUS OF RIGHT-OF-WAY, EASEMENT AND CONSTRUCTION EASEMENT ACQUISITION

Each bidder is instructed to fully acquaint himself with the status of the right-of-way, easement and construction easement acquisition at the time of submission of his proposal and the possibility of the acquisition of the parcels remaining to be acquired, if any, in time so as not to interfere with the progress of his work under this contract, and the owner shall not be liable to any damage that may occur to him for any and all delay through delay of the owner in securing the necessary right-of-way, easement and construction easement.

The owner agrees that it will make every effort to acquire any right-of-way, easement and construction easement with all speed and diligence possible.

SECTION 3. AWARD AND EXECUTION OF CONTRACT

3-1 CONSIDERATION OF PROPOSALS

The proposals received will be compared on the basis of the summation of the products of the items of Work listed and the unit prices offered. In case of discrepancy between the gross sum shown in the Proposal prices, the unit prices shall govern, and any errors found in said products shall be corrected. In awarding Contracts, the Owner will, in addition to considering the amounts stated in the Proposals, take into consideration the responsibility of the various Bidders as determined from a study of the data required under the previous article and from other investigations, which the Owner may elect to make.

3-2 AWARD OF CONTRACT

Except in cases where the Owner exercises the right reserved to reject any or all Proposals, the Contract will be awarded by the Owner, as soon as practicable after the opening of Proposals.

Unless otherwise specified, if a Contract is not awarded within forty- five (45) days after the opening of Proposals, a Bidder may file a written request with the Owner for the withdrawal of his bid or award date may be extended by mutual consent of the Owner and Bidder. The Owner will have a maximum of ten (10) days after the receipt of such request to award the Contract or release the Bidder from further obligation by return of the Bidder's Proposal Guaranty.

3-3 RETURN OF PROPOSAL GUARANTY

The Proposal Guaranties of all except the two lowest Bidders will be returned promptly after the Proposals have been checked. Proposal Guaranties of the two lowest Bidders will be returned as soon as the Contract and Bond of the successful bidder have been properly executed and approved.

If Contracts cannot be awarded promptly, the Owner shall permit the two (2) lowest Bidders to substitute for the bank cashier's checks, or certified checks which they may have submitted with their Proposals as Proposal Guaranties, a bid bond executed by a corporate surety company satisfactory to the Owner, but such substitutions shall not be made until a period of three (3) days has elapsed after the date of opening Proposals.

3-4 REQUIREMENT OF CONTRACT BOND

The successful Bidder, at the time of the execution of the Contract, shall deposit with the Owner a surety bond for the full amount of the Contract. The form of bond shall be that furnished by the Owner, and the surety shall be acceptable to the Owner.

3-5 *EXECUTION OF THE CONTRACT*

The contract shall be executed by the successful Bidder. The bond, when required, shall be executed by the principal and the sureties, and executed Contract and Contract Bond shall be presented to the Owner within fifteen (15) days after the date of notice of the award of the Contract.

Each Contract must be executed in three (3) original counterparts, and there shall be executed original counterparts of the Contract Bond in equal number to the executed original counterparts of the Contract. One (1) copy each of such executed documents will be retained by the Owner and the Engineer, the third will be delivered to the Contractor.

3-6 *FAILURE TO EXECUTE CONTRACT*

Failure on the part of the successful Bidder to execute a Contract and an acceptable Contract Bond and acceptable insurance certificates as provided herein, within fifteen (15) days from the date of receipt of Contract documents from the Owner will be considered as just cause for the annulment of the award and the forfeiture of the proposal guaranty to the Owner, not as a penalty but in payment of liquidated damages sustained as a result of such failure.

SECTION 4. SCOPE OF WORK

4-1 INTENT OF THE PLANS AND SPECIFICATIONS

The intent of the contract is to prescribe a complete outline of work which the Contractor undertakes to do in full compliance with the contract, plans and specifications. The Contractor shall furnish all required materials, equipment, tools, labor, and incidentals, unless otherwise provided in the contract, and shall include the cost of these items in the unit prices bid for the several units of work. Contractor shall be solely responsible for all safety procedures and safety violations. The quantities appearing in the bid schedule of prices are estimates prepared for the establishment of pay item prices and the comparison of bids. Payment to the Contractor will be made for the actual measured quantities performed and accepted or material furnished and accepted according to the contract, and the scheduled quantities may be increased, decreased, or omitted as herein provided.

Under no circumstances shall the Contractor exceed any established pay item quantity without notification to the Engineer and receipt of written authorization as provided herein.

The latest edition of the State Specifications and Standard Specifications for Water and Sewer Construction in Illinois shall be the basis and govern this contract unless otherwise provided by special provision or exception.

4-2 SPECIAL WORK

Should any construction or requirement not covered by the Specifications be anticipated on any proposed Work, Special Provisions for the same will be prepared and included in the Proposal form, which Special Provisions shall be considered as a part of the Specifications the same as though contained fully herein.

4-3 CHANGES

The Owner reserves the right to make, in writing, at any time during work, changes in quantities, alterations in work, and the performance of extra work to satisfactorily complete the project. Such changes in quantities, alterations, and extra work shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of the work under the contract, whether or not changed by any such different quantities or alterations, an adjustment, excluding loss of anticipated profits, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the Contractor in such amount as the Owner may determine to be fair and equitable.

If alterations or changes in quantities do not significantly change the character of the work to be performed under contract, the altered work will be paid for as provided elsewhere in the contract.

The term "significant change" shall be construed to apply only when the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction or when a major item, defined as an item whose total original contract costs exceeds ten percent of the total original contract amount, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity.

All alterations, cancellations, extensions, and deductions shall be authorized in writing by the Owner before work is started. Such authorizations shall set up the items of work involved and the method of payment for each item.

The Contractor shall accept payment for alterations which result in an increase or decrease in the quantities of work to be performed according to the following:

- A. All increases in work of the type which appear in the contract as pay items accompanied by unit prices will, except as provided under paragraph (C) herein, be paid for at the contract unit prices. Decreases in quantities included in the contract will be deducted from the contract at the unit bid prices. No allowance will be made for delays or anticipated profits.
- B. Major items of work for which the quantities are increased by not more than 125 percent or reduced to not less than 75 percent of the original contract quantities will be paid for as specified in paragraph (a) above. Any adjustments for increased quantities for major items of work increased more than 125 percent shall only apply to that portion in excess of 125 percent of original contract quantities. Any adjustments made for major items of work which are decreased to less than 75 percent of the original contract quantities shall apply to the actual amount of work performed.
- C. Extra work which is not included in the contract as pay items at unit prices and is not included in other items of the contract will be paid for according to Section 9-4.

4-4 PERIODIC AND FINAL CLEANUP

From time to time or as may be ordered by the Owner and immediately after completion of the Work, the Contractor shall at his own expense clean up and remove all refuse and unused materials of any kind resulting from the Work. Upon failure to do so within five (5) working days after receipt of written request from the Owner, the Work may be done by the Owner and the cost thereof be charged to the Contractor and be deducted from his Contract price. Upon completion of the Work, the Contractor shall remove all his equipment and put the area of the Work in a neat and clean condition and do all other cleaning required to complete the Work in a workmanlike manner, ready for use and satisfactory to the Owner.

All Cleanup shall be performed as specified in the various sections of these Specifications or in the Special Provisions.

4-5 LUMP SUM CONTRACTS

On lump sum Contract, when specified in Special Provisions, or Contracts containing lump sum items, the lump sum contract price shall include the furnishing and installation of all Work described in the Specifications and/or shown on the Plans.

4-6 LOCAL ORDINANCES AND REGULATIONS

The Contractor shall keep himself fully informed of all existing laws, ordinances, and regulations of the municipality affecting the work and/or material of this Contract. If any inconsistency is discovered between the Plans, Specifications and those covered by local municipal laws, ordinances, or regulations, it shall be reported to the Owner and Engineer.

4-7 PREFERENCE TO VETERANS

Attention is called to assure compliance with Illinois Revised State Chapter 126 Section 23. Preference to veterans upon public works: "In the employment and appointment to fill positions in the construction, addition to, or alteration of all public works undertaken or contracted for by the state, or by any political subdivision thereof, preference shall be given to persons who were engaged in the military or naval service of the United States in time of war".

SECTION 5. CONTROL OF THE WORK

5-1 PLANS AND WORKING DRAWINGS

The Contractor shall submit to the Engineer such shop, working, or layout drawings pertaining to the construction of the Work, as may be required. These drawings shall be reviewed by Engineer for general conformance with the design concept only. This review by the Engineer does not relieve the Contractor and/or fabricator/vendor of responsibility for conformance with the Contract documents (see 1-8) and applicable codes, all of which have priority over these shop, working and layout drawings. Corrections or comments made on the shop drawings by the Engineer during this review process do not relieve the Contractor from compliance with the requirements of the Contract documents (1-8) and applicable codes.

When the Contract includes Work adjacent to a railroad and false work, cofferdams, or sheeting is required, the Contractor shall submit to the Engineer for his approval and the Railroad Engineer's approval, plans for the false work, cofferdams, or sheeting by a Registered Structural Engineer. It shall be the responsibility of the Contractor to contact the railroad to determine how to meet their requirements. The cost of meeting those requirements shall be borne by the Contractor. The plans shall be submitted sufficiently in advance of the time the Contractor intends to start work to permit checking. No such work shall be started prior to receipt by the Contractor of approval of the Plans for the false work, cofferdams, or sheeting.

The cost of furnishing such Drawings shall be incidental to the contract and no additional compensation will be allowed the Contractor for any delays resulting therefrom.

5-2 CONFORMITY WITH PLANS AND SPECIFICATIONS

It is the intent of the Specifications that all Work performed and all materials furnished shall be in conformity with the lines, grades, cross section, dimensions and material requirements shown on the Plans or indicated in the Specifications.

In the event the Engineer finds the materials or the finished product in which the materials are used or the Work performed are not in conformity with the Engineering Plans and technical Specifications including tolerances and have resulted in an inferior or unsatisfactory product, the Work or material shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

5-3 COORDINATION OF COMPONENT PARTS OF THE CONTRACT

The Specifications, the accompanying Plans, the Proposal, the Special Provisions, and all other contract documents are intended to describe a complete Work and are essential parts of the Contract. A requirement occurring in any of them is binding. In case of discrepancy, figured dimensions shall govern over scaled dimensions, Plans shall govern over Specifications, Special Provisions shall govern over both Specifications and Plans, and quantities shown on the plans shall govern over those shown in the

Proposal. Neither the Owner, Engineer, nor the Contractor shall take advantage of any apparent error or omission in the Plans or Specifications, and the Owner shall be permitted to make such minor changes or alterations as may be deemed necessary for the fulfillment of the intent of the Plans and Specifications. Any corrections or alterations so made shall be subject to the provisions of Section 4-3.

5-4 COOPERATION BY CONTRACTOR

The Contractor will be furnished necessary copies of the Plans and Special Provisions, and he shall have one copy of each available on the work at all times during its prosecution. He shall give the work his constant attention to facilitate the progress thereof, and shall cooperate with the Owner and Engineer in every way possible. He shall have on the Work site at all times a competent, English-speaking representative authorized to receive orders and act for him and shall not replace him without prior written notification to the Owner.

5-5 UTILITIES

Not all of the gas, power, telephone or cable television lines, whether above or below ground, have been shown on the drawings. The location of existing underground utilities, such as water mains, sewers gas mains, etc., as shown on the drawings, have been determined from the best available information and are given for the convenience of the Contractor. The Contractor must assume responsibility for location and protection of all utilities, whether shown or not, and must realize that the actual locations of the utilities shown on the drawings may be different from the location indicated.

It is the responsibility of the Contractor to phone the Joint Utility Locating Information for Excavators (J.U.L.I.E.) at least 48 hours before excavation starts (except Saturday, Sunday and Holidays) phone toll free 1-800-892-0123. The Contractor shall also be responsible for having the "Dig Number" assigned as a result of the phone request available at the construction site and at his office.

It is understood and agreed that the Contractor has considered in his Proposal all of the permanent and temporary utility appurtenances shown or otherwise indicated on the Plans in their present positions and that no additional compensation will be allowed for any delays, inconvenience, or damage sustained by him due to any interference from the said utility appurtenances of the operation of moving them either by the utilities company or by the Contractor; or on account of any special construction methods required in prosecuting his work due to the existence of said appurtenances.

5-6 COOPERATION BETWEEN CONTRACTORS

If separate contracts are let for Work comprising an entire improvement, each Contractor shall conduct his Work so as not to interfere with or hinder the progress or completion of the Work being performed by other Contractors.

The Contractor shall as far as possible arrange his Work, and place and dispose of the materials being used so as not to interfere with the operations of the other contractors within the limits of the same improvement. He shall join his work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others. In case of dispute, the latest approved progress schedule shall govern.

5-7 CONSTRUCTION STAKES

Construction stakes and/or paint will be furnished and set by the Engineer to mark the general location, alignment, elevation and grade of the Work. The Contractor shall exercise proper care in the preservation of stakes set for his use or the use of the Engineer. The Contractor shall pay for the cost of replacing stakes damaged by his operation or those stolen by others.

5-8 AUTHORITY AND DUTIES OF OBSERVERS

Observers employed by the Owner or by the Engineer shall be authorized to observe the progress of the Work to determine if the Work is proceeding in accordance with the technical Plans and Specifications, and to perform such other duties as may be designated by the Engineer. However, the Engineer shall not be responsible for the construction means, methods, techniques, sequences or safety procedures and precautions in connection with the work by the contractors.

5-9 ENGINEER'S FIELD OFFICE AND/OR LABORATORY

When required by the Special Provisions, the Contractor shall furnish a field office and laboratory. The field office and/or laboratory shall be a weatherproof building for the exclusive use of the Engineer. It shall be independent of any building used by the Contractor. All keys to the building shall be turned over to the Engineer. The Engineer shall designate the location of the building and it shall remain on the site until released by the Engineer.

The building shall conform to the following requirements:

| | |
|--|-----------------|
| Floor space, not less than | 120 square feet |
| Height of ceiling, not less than..... | 8 feet |
| Windows, not less than | 3 |
| Door, with lock approved by the Engineer | 1 |
| Instrument locker, 2 feet x 3 feet x 4 feet, with adjustable shelves | |
| Hinged wall table | 3 feet x 6 feet |

The Contractor shall provide lights, heat, and when electric power is available, summer air conditioning for the building. The conditions shall be acceptable to the Engineer.

When shown on the plans or specified in the Special Provisions, the Contractor shall furnish two (2) buildings conforming to the above requirements, one to be used as a field laboratory, and each to be located where designated by the Engineer.

With the approval of the Engineer, a mobile building or buildings of approximately the same dimensions and having similar facilities may be substituted for the above described building or buildings.

The cost of furnishing the building or buildings, light, heat, and air conditioning shall be paid for at the contract lump sum price for "FIELD OFFICE AND/OR LABORATORY". The office and/or laboratory shall remain the property of the Contractor when the Work is completed.

5-10 CONSTRUCTION OBSERVATION

All materials and each part or detail of the Work may be subject at all times to observation by the Engineer and the Owner, or their authorized representatives, and the Contractor will be held strictly to the true intent of the Contract documents in regard to quality of materials, workmanship and the diligent execution of the Contract. Observations may be made at the site or at the source of material supply whether mill, plant or shop. The Engineer, or his representatives, shall be allowed access to all parts of the Work and shall be furnished with such information and assistance by the Contractor as is required to make his observations and construction review. The duty of the Engineer to conduct observations and construction review of the Contractor's performance shall not include review of the adequacy of the Contractor's safety measures in, on, or near the construction site.

Engineer shall not at any time supervise, direct, or have control over any contractors' work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, nor for safety precautions and programs in connection with the contractors' work, nor for any failure of any Contractor to comply with laws and regulations applicable to contractors' work. Engineer neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform its work. Engineer shall have no authority to stop the work of any contractor on the Project. The Engineer's efforts will be directed toward providing assurance for the Owner that the completed project will conform to the Plans and Specifications as prepared by the Engineer, to safeguard the Owner against variances and deviations from the Plans and Specifications, and to assist in a correct interpretation of the Plans and Specifications.

The Engineer shall not have control of the construction and does not have a right, duty or responsibility to stop work for any reason including any contractor's failure to follow proper safety precautions or any acts or omissions. The Engineer shall not be responsible for the acts, errors or omissions of any contractor or any of their agents or employees or any other person performing any of the Work under the Contract.

The Contractor shall, upon written notice from the Owner, remove or uncover such portions of the finished Work as he may direct, before the final acceptance of the same. After examination, the Contractor shall restore said portion of the Work to the standard required by the Contract documents. If the Work thus exposed or examined proves acceptable, the expenses of uncovering or removing and the replacing of the parts removed shall be paid for as Extra work, unless otherwise provided in the Contract documents, but if the Work so exposed or examined is unacceptable, the expense of uncovering or removing and the replacing of the same in accordance with the Contract documents shall be borne by the Contractor.

The Contractor shall supervise and direct the Work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction.

Any reference to "supervision" by the Engineer in the Illinois Department of Transportation, Standard Specifications for Road and Bridge Construction or any other referenced documents shall be changed to "observation."

When the State and/or Federal Government is to pay a portion of the cost of the Work covered by the Contract, the Work shall be subject to the observation of the representatives of those Governments, but such observation shall in no sense make those Governments a part of the Contract.

5-11 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

Work done without lines and grades being given, or beyond the lines shown on the Plans or as given, except as herein provided, or any extra work done without authority will be considered as unauthorized and at the expense of the Contractor, and will not be measured or paid for. Work so done may be ordered by the Owner to be removed or replaced at the Contractor's expense.

All work, which has been rejected, shall be remedied or removed and replaced so as to comply with the Plans and Specifications by the Contractor at his own expense. Upon failure on the part of the Contractor to comply promptly with any order of the Owner made under the provisions of this article, the Owner shall, after giving written notice to the Contractor, have the authority to cause defective work to be remedied, or removed and replaced, or to cause unauthorized work to be removed, and to deduct the cost thereof from the contract price due or become due to the Contractor.

5-12 FINAL ACCEPTANCE

The Engineer shall make final acceptance of all Work included in the Contract, as soon as practicable after notification by the Contractor that the Work is completed. If the Work is not acceptable to the Engineer, he shall inform the Contractor in writing as to the particular defects to be remedied before final acceptance can be made.

The Contractor shall be relieved of normal maintenance responsibilities for any sections of the work, which are completed and accepted by the Owner prior to project completion. For the remainder of the Work, the guarantee period shall be as stated in Section 7-16.

When the Contract includes work for which the County, State and/or Federal Government is to pay a portion of the cost thereof, such work shall also be subject to the inspection and approval of the representatives of those governments.

5-13 PUBLIC CONSTRUCTION BID ACT, 30 ILCS 557/1

It is agreed that the Public Construction Bid Act, 30 ILCS 557/1, shall not be applicable to this contract pursuant to the home rule powers of the community.

SECTION 6. CONTROL OF MATERIAL

6-1 QUALITY OF MATERIALS

It is the intent of the Specifications that first-class materials shall be used throughout the Work, and that they shall be incorporated as to produce completed construction, which is workmanlike and acceptable in every detail. The cost of collecting and furnishing of samples of all test material shall be borne by the Contractor. The cost of all testing shall be borne by the Owner. Only materials, which conform to the requirements of these Specifications, shall be incorporated in the Work.

6-2 DEFECTIVE MATERIALS

All materials not conforming to the requirements of the Specifications shall be considered as defective and shall be removed from the Work; if in place, they shall be removed by the Contractor at his expense and replaced with acceptable materials. No defective materials, the defects of which have been subsequently corrected, shall be used until approval has been given. Upon failure of the Contractor to comply forthwith with any written order of the Owner pursuant to the provisions of this article, the Owner shall have authority to remove and replace defective materials and to deduct the cost of removal and replacement from any monies due to become due the Contractor.

6-3 TESTING MATERIALS

All materials should be tested and approved by the Engineer before incorporation in the Work. The Contractor shall give sufficient advance notice of placing orders to permit tests to be completed before the materials are incorporated in the Work and the Contractor shall afford such facilities as the Engineer may require for collecting and forwarding samples and making observations.

6-4 SAND, GRAVEL AND CRUSHED STONE

The source of sand, gravel and crushed stone construction shall be approved by the Engineer prior to usage. The approval shall be based upon testing of samples furnished by the Contractor and tested by the Engineer for conformance with Specifications. Approval shall be contingent upon the Contractor using materials on the job, which conform with the samples satisfactorily tested.

6-5 CONCRETE

Samples of concrete used in construction shall be taken by the Contractor and made into test cylinders in conformance with ASTM C31. The Owner shall provide the services of an independent testing laboratory to collect and test the cylinders in conformance with ASTM C39, and furnish a copy of test results to the Engineer. Any concrete, which tests indicate failed to conform to the Specifications, shall be removed and replaced at Contractor's expense. At the option of the Owner, the concrete may be accepted and agreed upon adjustment in payment.

6-6 MISCELLANEOUS MATERIALS

Fittings, valves, castings, hydrants, house service pipes, masonry blocks, bricks, manhole sections or other miscellaneous manufactured materials used in water and sewer construction shall be furnished with the implied guarantee that such materials conform with the requirements of the Specifications. The Engineer reserves the right to require a certified statement from the manufacturer of such materials that the specific materials have been inspected and tested and conform with the Specifications.

6-7 JOB SITE OBSERVATION

Regardless of any tests of materials made at the source, the Contractor shall carefully inspect all materials before installation and reject any materials, which have been damaged or have visible flaws. The Engineer also reserves the right to make such observation, but failure to detect irregularities does not relieve the Contractor of responsibility to remove and replace materials, which are found to be defective after installation.

6-8 STORED MATERIALS

If it is necessary to store materials, they shall be protected in such a manner as to insure the preservation of their quality and fitness for the Work. All stored materials shall be inspected at the time of use in the Work, even though they may have been inspected and approved before being placed in storage. The Contractor may use the right-of-way for storage of materials. If stockpiling is done outside the right-of-way, the additional space required shall be provided by the Contractor at his expense.

6-9 "OR EQUAL" CLAUSE

Whenever, in any of the Contract Documents, an article, material or equipment is defined by describing a proprietary product, or by using the name of a manufacturer, or vendor, the term "or equal", if not inserted shall be implied except where the Proposal provides for alternate bids. The specific article, materials, or equipment mentioned shall be understood as indication of the type function, minimum standard or design, efficiency and quality desired and shall not be construed in such a manner as to exclude manufacturer's products of comparable quality, design and efficiency. The Contractor shall comply with the requirements of the Contract Documents relative to an Owner's approval of materials and equipment before they are incorporated in the project.

SECTION 7. LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

7-1 LAWS TO BE OBSERVED

The Contractor shall at all times observe and comply with all Federal laws, State laws, County laws, local laws, ordinances, and regulations which in any manner affect the conduct of the Work, and all such orders or decrees as exist at the time Bids are advertised, of legislative bodies or tribunals having legal jurisdiction or authority over the work and no plea of misunderstanding or ignorance thereof will be considered. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these laws, ordinances and regulations.

The Contractor shall indemnify and save harmless the Owner, the Engineer, and all of their officers, agents, employees and servants against any claim or liability, including legal fees, arising from or based on the violation of such law, ordinance, regulation, order or decree, whether by themselves or their employees.

7-1.01 INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless Owner and REL and their respective officers, agents and employees, from and against all claims, damages, losses, costs, expenses, judgments and liabilities, including but not limited to attorney's fees, costs and expenses, arising out of or in connection with Contractor's performance of or failure to perform this Agreement, provided that any such claim, damage, loss, costs, expenses, judgments or liabilities are attributable to bodily injury, sickness, disease or death, or to injury or destruction of tangible personal property, including the loss of use resulting therefrom, that is caused in whole or in part by any act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by any party indemnified hereunder.

Contractor shall defend, indemnify and hold harmless Owner, REL, and their respective officers, agents and employees from and against all claims, damages, losses, costs and expenses arising out of, relating to, or incurred in connection with the use by Contractor, its officers, agents, subcontractors and employees of any equipment, materials, tools, construction equipment, machinery, and/or motor vehicles owned or leased by Owner. The indemnification provided by this Section shall apply regardless of whether Owner consents to the use of equipment by Contractor.

In the event such indemnity as described above is prohibited by law, then said indemnity shall only be to the extent caused by the negligent acts or omissions of the Contractor, subcontractors, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, or to the extent allowed by applicable law.

The indemnification obligation under this paragraph shall not be limited in any way by any limitations on the amount or type of damages, compensation or benefits payable by or for the benefit of Contractor or any indemnities under any Worker's Compensation Act, Occupational Disease Act, Disability Benefits Act, or any other employee benefits act. The Contractor further agrees to waive any and all liability limitations based upon the Worker's Compensation Act court interpretations or otherwise.

Contractor agrees that a similar waiver of liability limitation will be incorporated in its agreements with subcontractors or anyone directly or indirectly employed by them. Contractor agrees that in the event it fails to incorporate such a waiver of liability limitation in its agreements with said subcontractors and others, then it will be responsible for any additional liability arising out of said failure. The defense and indemnification obligations set forth in this provision shall survive the termination or expiration of this Agreement.

Contractor further agrees that all future contracts in furtherance of this contract between Contractor and any of its subcontractors will designate Owner and REL as intended third party beneficiaries of that contract. Contractor hereby agrees to specifically label Owner and REL as an "intended third party beneficiaries" in all contracts entered in furtherance of this contract.

7-2 INSURANCE REQUIREMENTS

7-2.01 GENERAL

The Contractor and any Subcontractors shall obtain and thereafter keep in force for the term of the contract the insurance coverage specified in 7-2.02 MINIMUM INSURANCE REQUIREMENTS.

The Contractor shall not commence work under the Contract until all the insurance required by this section or any Special Provisions has been obtained. The insurance companies must be authorized to do business in the State of Illinois for Work in Illinois and the State of Indiana for Work in Indiana.

The insurance companies providing coverage shall be rated in the Best's Key Rating Guide with a rating not lower than A- and shall have a financial size category of not less than VII.

The Contractor shall be solely responsible for enforcing compliance with these insurance requirements by all Subcontractors of any tier.

A. PRIMARY INSURANCE

All insurance required of the Contractor shall be specifically endorsed so that it is Primary Insurance as to all additional insureds with respect to all claims arising out of operations by or on their behalf. If additional insureds have other applicable insurance coverage, those coverages shall be deemed to be on an excess or contingent basis.

B. NO WAIVER OF INSURANCE REQUIREMENT BY OWNER

Under no circumstances shall the Owner be deemed to have waived any of the insurance requirements of this Contract by any act or omission, including, but not limited to:

1. Allowing work by Contractor or any Subcontractor of any tier to start before receipt of certificates of insurance, endorsements, and other required insurance documents; or
2. Failure to examine, or to demand correction of any deficiency of, any certificate of insurance received.

The Contractor agrees that the obligation to provide insurance is solely the Contractor's responsibility and cannot be waived by any act or omission of the Owner.

C. INSURANCE DOES NOT LIMIT LIABILITY

The purchase of insurance by the Contractor under this Contract shall not be deemed to limit the liability of the Contractor in any way for damages suffered by Owner (e.g., in excess of policy limits, because of deductibles, or not covered by the policies purchased).

D. NOTIFICATION OF PERSONAL INJURY/PROPERTY DAMAGE

The Contractor shall notify the Owner, in writing, of any possible or potential claim for personal injury or property damage arising out of the work of this Contract promptly whenever the occurrence giving rise to such a potential claim becomes known to the Contractor.

7-2.02 MINIMUM INSURANCE REQUIREMENTS

The insurance coverage required of the Contractor and any Subcontractors shall be written for not less than the following, or greater if required by law:

- A. Workers' Compensation and Occupational Disease Insurance** in accordance with applicable state and federal laws, and Employer's Liability Insurance with a bodily injury per accident limit of liability of at least \$ 500,000, bodily injury by disease limit each employee of \$500,000 and bodily injury by disease policy limit of \$500,000 or such greater sum as may be reasonably required by Owner.

B. *Commercial General Liability Insurance* provided by ISO form CG 0001 with a combined Bodily Injury and Property Damage limit of at least \$1,000,000 per occurrence, \$2,000,000 products and completed operations aggregate and \$2,000,000 general aggregate, or such greater sum as may be reasonably required by Owner.

1. Completed Operations and Products liability insurance shall be maintained for a period of 2-years after completion and acceptance of the Project by Owner, or such longer period as may be reasonably required by the Owner.
2. The above policy shall include an endorsement identifying Owner, Robinson Engineering, Ltd, and any other parties as may be reasonably required by Owner or REL as Additional Insured. ISO endorsements CG 2010 and CG 2037 any edition, or equivalent forms, must be used to provide this coverage. Copies of the endorsements must be included with the certificate of insurance as required in paragraph L.
3. Claims-Made coverage triggers are not acceptable to Owner.
4. ISO form CG2503, Designated Construction Project(s) General Aggregate Limit or an equivalent form must be endorsed to the policy and identified on the certificate of insurance. An Owners and Contractors Protective Liability policy can be utilized in lieu of aggregate limits per project, (see 7-2.02O for OCP requirements)
5. The policy shall not contain a sunset provision, commutation clause or any other provision which would prohibit the reporting of a claim and the subsequent defense and indemnity that would normally be provided by the policy.
6. The policy shall not contain any provision, definition or endorsement which would serve to eliminate third party action over claims.
7. Residential Work exclusions or limitations, in any form, are not acceptable to Contractor.

C. *Comprehensive Automobile Liability Insurance* covering use of all owned, non-owned and hired vehicles with Bodily Injury and Property Damage limit of at least \$1,000,000 Combined Single Limit, or such greater sum as may be reasonably required by the Owner. This policy shall include coverage for Owner, REL, and any other parties as may be reasonably required by Owner, for liability arising out of the actions of Contractor, whether by endorsement or otherwise.

- D. *Excess or Umbrella Liability Insurance*** limits of no less than \$5,000,000 per occurrence for Employer's Liability, Commercial General Liability and Comprehensive Automobile Liability, in excess of the minimum policy limits stated below:

| | |
|------------------------------|--|
| Employer's Liability | \$500,000 / \$500,000 / \$500,000 |
| Commercial General Liability | \$1,000,000 per occurrence |
| Commercial General Liability | \$2,000,000 general aggregate |
| Commercial General Liability | \$2,000,000 completed operations aggregate |
| Comprehensive Auto Liability | \$1,000,000 combined single limit |

Excess/Umbrella coverage shall be provided as no less than Follow Form and shall name Owner, REL, and any other parties as may be reasonably required by Owner, as Additional Insured on a Primary and Non-Contributory basis.

- E. *Pollution Liability*** in the amount of \$1,000,000 per occurrence and in the aggregate or such sum as may be reasonably required by the Owner. This requirement covers the Contractor's use of, transportation, removal and/or disposal of hazardous materials and/or pollutants. Additionally, this requirement must apply to any disposal site receiving hazardous materials and/or pollutants. Pollution means the actual or alleged discharge, dispersal, release, seepage, migration, growth, or escape of smoke, soot, fumes, acids, alkalis, toxic chemicals, mold, mildew, spores, fungi, microbes, bacterial matter, legionella pneumophila, asbestos, lead, silica, liquids or gases, waste materials, contaminants, or other irritants, into or upon land, the atmosphere, any structure on land, the atmosphere contained within that structure, or any watercourse or body of water, including groundwater. Radioactive matter shall also be considered a pollutant, except as otherwise covered or protected by insurance or protections provided pursuant to 42 U.S.C. § 2014(w), as amended, or Section 170 of the Atomic Energy Act of 1954, as amended.

- F. *Professional Liability*** in the amount of \$2,000,000 per occurrence and in the aggregate or such sum as may be reasonably required by the Owner. This requirement covers the Contractor's duties that involve professional architectural, engineering, design or consultation work. Any applicable deductibles and/or retention's must be noted on the Certificate of Insurance. Policy exclusions are not allowed for pollution, including mold, fungi or bacteria including the vapor produced or arising therefrom. Please see the project *Special Provisions* for the project specific needs of this policy.

- G. *Property and Equipment*** Contractor shall purchase and maintain at its own discretion and expense, Builder's Risk/Installation Floater Insurance in an amount equal to the insurable value of the Contractor's property, whether off site or in transit, to cover any equipment, tools or tangible personal property. Contractor assumes all liability and risks, and agrees to waive all claims against Owner and REL for damage to or loss of equipment, machinery, tools, supplies and other tangible personal property owned or supplied by Contractor and utilized or intended to be utilized during the course of Contractor's Work. Any insurance carried by Contractor covering such damage or loss shall be endorsed with a waiver of subrogation in favor of Owner and REL. Any and all subcontractors agree to assume the same liabilities and risks as Contractor.
- H. *Each of Contractor's*** General Liability, Auto Liability, Pollution Liability, Professional Liability and Excess/Umbrella Liability policies must be endorsed as Primary and Non-Contributory as to any insurance maintained by the Additional Insured(s) and shown on the certificate of insurance.
- I. *An endorsement*** in favor of the Additional Insured(s) waiving the Contractor's and its insurer's rights of subrogation shall be issued with respect to the Commercial General Liability, Comprehensive Auto Liability, Pollution Liability, Professional Liability and Workers' Compensation and Employers Liability policies. Evidence of this endorsement must be noted on the certificate of insurance.
- J. *Self-funded*** or other non-risk transfer insurance mechanisms or deductibles/self-insured retentions greater than \$25,000 per occurrence are not acceptable to Owner on any insurance coverage required in this agreement. If the Contractor has such a program, full disclosure must be made to Owner and REL prior to any consideration being given.
- K. *Any subcontractor*** employed by Contractor shall have equivalent coverage.
- L. *A Certificate of Insurance***, including copies of the Additional Insured endorsements, shall be sent to REL prior to the commencement of any Work (please see the sample attached at the end of Section 7). All Certificates of Insurance and Endorsements verifying the existence of the above required insurance shall be in form and content satisfactory and acceptable to Owner and REL and shall be submitted to REL in a timely manner so as to confirm Contractor's full compliance with these insurance requirements stated herein, throughout the entire term of this Agreement.

Certificates must be sent to: robinsoneng@trustlayer.io

M. Contractor shall provide written notice via email to robinsoneng@trustlayer.io of any cancellation notice received by Contractor from any insurer providing insurance as required in this Agreement within two (2) business days of Contractor's receipt of such notice.

N. Permitting Contractor to commence Work prior to RELs receipt of the required certificate shall not be a waiver of the Contractor's obligation to provide all of the above insurance. Acceptance by Owner or REL of insurance submitted by Contractor shall not relieve or decrease in any manner the liability of the Contractor for its performance under this Agreement.

In the event Contractor fails to obtain or maintain any of the foregoing required coverage, the Owner may purchase such coverage and charge the expense thereof to the Contractor, or may terminate this Agreement.

These Insurance provisions are intended to be a separate and distinct obligation on the part of Contractor. Therefore, these provisions shall be enforceable and Contractor shall be bound thereby regardless of whether or not the Indemnity provisions of this Agreement are determined at any time to be enforceable in the jurisdiction in which the Work covered by this Agreement is performed. The obligation of the Contractor to provide the insurance herein specified shall not limit in any way the liability or obligations assumed by the Contractor elsewhere in this Agreement.

In the event Contractor or its insurance carrier(s) defaults on any obligations under this Insurance provision, Contractor agrees that it will be liable for all reasonable expenses and attorneys' fees incurred by Owner in the enforcement of the terms of this provision.

O. Owner's And Contractor's Protective Liability Insurance

If the Contractor is unable or unwilling to provide the required General Liability Additional Insured forms, an Owner's and Contractor's Protective Policy can be purchased as an acceptable alternate; Required limits of insurance;

1. Bodily Injury and Property Damage Combined

\$5,000,000 Each Occurrence

\$10,000,000 Annual Aggregate

2. The Contractor will furnish and maintain during the entire period of construction an Owner's and Contractor's Protective Liability policy written in the name of the Owner and REL with not less than the limits indicated. The named insureds shall be:

- a. Owner
- b. Robinson Engineering, Ltd.

- 3. Proof of insurance for the coverages required to be purchased by the Contractor, including the Owner's and Contractor's Protective Policy shall be submitted to REL for transmittal to the Owner for his approval prior to the start of construction. Proof of the Owner's Protective Policy shall consist of providing an entire copy of that policy to REL. With respect to all other coverages required to be purchased by the Contractor, proof of insurance shall consist of a Certificate of Insurance issued by the Contractor's insurance agency.
- 4. It is further understood that any insurance maintained or carried by Owner and Robinson Engineering, Ltd. shall be in excess of any coverage provided by any Contractor or Subcontractor.

P. Railroad Protective Insurance will be required by Special Provisions if needed.

Q. Builder's Risk Insurance is not provided by the Owner. The Contractor is responsible for any loss that would be insured by such coverage. On Contracts for construction of buildings, bridges, or other structures, all Builder's Risk coverage may be required by Special Provisions. Such coverage shall name the Owner, Contractor, subcontractors, and suppliers, as their interests may appear as named insureds.

7-3 PERMITS AND LICENSES

The Contractor, prior to commencing work, shall at his own expense procure all permits, licenses, and bonds necessary for the prosecution of the work, required by Municipal, County, State and Federal regulations, unless specifically provided otherwise in the Special Conditions of the Contract.

The Contractor shall also give all notice, pay all fees, and comply with all Federal, State, County and Municipal laws, ordinances, rules and regulations and building and construction codes bearing on the conduct of the Work.

7-4 PATENTS AND ROYALTIES

If any design, device, material or process covered by letters patent or copyright is used by the Contractor, he shall provide for such use by legal agreement with the owner of the patent or a duly authorized licensee of such owner, and shall save harmless the Owner and the Engineer from any and all loss or expense on account thereof, including its use by the Owner.

7-5 STATE AND FEDERAL PARTICIPATION

When the County, State, and/or the Federal Government pays all or any portion of the cost of the Work, the Work shall be subject to the inspection of the appropriate agency.

7-6 SANITARY PROVISIONS

The Contractor shall comply with all rules and regulations of the Federal, State, County, and local health departments, and shall take precautions to avoid creating unsanitary conditions. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these rules and regulations.

7-7 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall notify the Owner at least five (5) days in advance of the starting of Work, which might in any way inconvenience or endanger traffic, so that arrangements may be made, if necessary, for closing the road and providing suitable detours. The Contractor shall at all times conduct the Work as to insure the least obstruction to vehicular and pedestrian traffic. The convenience of the general public and of residents along the roadway shall be provided for in an adequate and satisfactory manner. (See also 7-9, 7-14 and 8-6.)

If a temporary road is required for the convenience of the general public and/or residents along the roadway, temporary road requirements will not be paid for separately, but will be incidental to the Contract and no extra compensation will be allowed.

7-8 BARRICADES AND WARNING SIGNS

When any section of road is closed to traffic, the Contractor shall provide, erect, and maintain barricades, red flags, signs and lights at each end of the closed section and at all intersecting roads in accordance with the Illinois Manual of Uniform Traffic Control Devices.

If during the progress of the work, it is necessary to provide access to private property along the road, the Contractor shall provide, erect, and maintain within the closed portion of the road, such barricades, signs, flags and lights as may be necessary to protect the Work and to safeguard local traffic.

When traffic is to be permitted to use the road during construction, the Contractor shall protect the work and provide for safe and convenient public travel by providing, erecting, and maintaining such barricades, red flags, and lights as are necessary.

The Contractor's responsibility for the work, as provided in Section 7-15, shall apply, even though barricades, signs, red flags, and lights are installed as required above.

The cost of furnishing and maintaining barricades, warning signs, red flags, and lights as required herein shall be incidental to the Contract and no extra compensation will be allowed. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these rules and regulations.

7-9 DEBRIS ON TRAVELED SURFACE OR STRUCTURES

Where the Contractor's equipment is operated on any portion of the traveled surface or structures used by traffic on or adjacent to the section under construction, the Contractor shall clean the traveled surface of all dirt and debris at the end of each day's operation.

The cost of this work shall be included in the unit prices bid and no additional compensation will be allowed. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these rules and regulations.

7-10 EQUIPMENT ON TRAVELED SURFACE AND STRUCTURES

The traveled surface and structures on or adjacent to the work shall be protected, from damage by lugs or cleats on treads or wheels of equipment.

All equipment used in the prosecution of the work shall comply with the legal loading limits established by the statutes of the State of Illinois or local regulations when moved over or operated on any traveled surface or structure unless permission in writing has been issued by the Owner. Before using any equipment, which may exceed the legal loading, the Contractor shall secure a permit, allowing ample time for making an analysis of stresses to determine whether or not the proposed loading would be within safe limits. The Owner will not be responsible for any delay in construction operations or for any costs incurred by the Contractor as a result of compliance with the above requirements. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these rules and regulations.

7-11 USE OF EXPLOSIVES

When the use of explosives is necessary for the prosecution of the Work, the Contractor shall be governed by the rules and regulations of the Department of Mines and Minerals of the State of Illinois and any local regulations, which govern the use of explosives. The Engineer shall not be responsible for determining whether the Contractor is in compliance with these rules and regulations.

7-12 USE OF FIRE HYDRANTS

If the Contractor desires to use water from hydrants, he shall make application to the proper authorities, and shall conform to the municipal ordinances, rules or regulations concerning their use. Water from

hydrants or other sources shall be at the Contractor's expense unless otherwise provided in the Special Provisions.

Fire hydrants shall be accessible at all times to the Fire Department. No material or other obstructions shall be placed closer to a fire hydrant than permitted by municipal ordinances, rules or regulations, or within ten feet (10') of a fire hydrant, in the absence of such ordinances, rules or regulations.

7-13 PROTECTION AND RESTORATION OF PROPERTY

If corporate or private property interferes with the Work, the Contractor shall notify, in writing, the owners of such property, advising them of the nature or disposition of such property. The Contractor shall furnish the Owner with copies of such notifications and with copies of any agreements between him and the property owners concerning such protection or disposition.

The Contractor shall take all necessary precautions for the protection of corporate or private property, such as walls and foundations of buildings, vaults, underground structures of public utilities, underground drainage facilities, overhead structures of public utilities, trees, shrubbery, crops and fences contiguous to the Work, of which the Contract does not provide for removal. The Contractor shall protect and carefully preserve all official survey monuments, property marks, section markers, and Geological Survey monuments, or other similar monuments, until the Owner or an authorized surveyor or agent has witnessed or otherwise referenced their location or relocation. The Contractor shall take reasonable precautions to avoid disturbing any archeological and other historic remains encountered during construction. The Contractor shall notify the Owner of the presence of an such survey or property monuments or archeological and other historic remains as soon as they are discovered.

The Contractor shall be responsible for the damage or destruction of property of any character resulting from error, neglect, misconduct or omission in his manner or method of execution or non-execution of the Work, or caused by defective Work or the use of unsatisfactory materials, and such responsibility shall not be released until the Work shall have been completed and accepted and the requirements of the Specifications complied with.

Whenever public or private property is so damaged or destroyed, the Contractor shall at his own expense, restore such property to a condition equal to that existing before such damage or injury was done by repairing, rebuilding, or replacing it as may be directed, or he shall otherwise make good such damage or destruction in an acceptable manner. If he fails to do so, the Owner may, after the expiration of a period of forty-eight (48) hours after giving him notice in writing, proceed to repair, rebuild, or otherwise restore such property as may be deemed necessary, and the cost thereof shall be deducted from any compensation due, or which may become due the Contractor under his contract.

The Contractor shall remove all mailboxes within the limits of construction, which interfere with construction operations and shall erect them at temporary locations. As soon as construction

operations permit, he shall set the mailboxes at their permanent locations. The Contractor shall replace at his own expense any mailbox or post which has been damaged by his operations.

The cost of all materials required and all labor necessary to comply with the above provisions will not be paid for separately, but shall be considered as incidental to the Contract, unless otherwise specified in the Special Provisions.

7-14 PROTECTION AND RESTORATION OF TRAFFIC SIGNS

Any traffic sign within the limits of construction, which interferes with construction operations, may be removed by the Contractor when authorized by the traffic sign owner. Any traffic sign, which has been removed, shall be re-erected immediately by the Contractor at the temporary location designated by the traffic sign owner, and as soon as construction operations permit, the sign shall be set at its permanent location. The cost of all materials required and all labor necessary to comply with this provision will not be paid for separately, but shall be considered as incidental to the contract.

The Contractor shall replace at his own expense any traffic sign or post which has been damaged due to his operations.

Any traffic sign designated as critical by the traffic sign owner shall not be disturbed and no additional compensation will be allowed the Contractor for any delays, inconvenience, or damage sustained by him due to any special construction methods required in prosecuting his work due to the existence of such traffic signs.

7-15 CONTRACTOR'S RESPONSIBILITY FOR WORK

The Work shall be under the control and care of the Contractor until final acceptance or use or occupancy by the Owner. The Contractor shall assume all responsibility for injury or damage to the Work by action of the elements or from any other cause whatsoever, and shall rebuild, repair, restore, and make good, at his expense, all injuries or damages to the Work, except that when the Work is opened to usage by written order of the Owner, the provisions of this article shall not apply to damage caused by such use and not due to the Contractor's fault or negligence.

When materials are furnished to the Contractor by the Owner for inclusion in the work, the Contractor's responsibility for handling and installation of all such materials shall be the same as for materials furnished by him.

In case of suspension of Work by the Contractor, the Contractor shall be responsible for the Work and shall take such precautions as may be necessary to prevent damage to the Work, provide for normal drainage and shall erect any necessary temporary structures, signs, or other facilities at his expense.

7-16 GUARANTEE PERIOD

The Contractor shall warrant all Work performed for a period of one (1) year from the date of final acceptance in writing by the Engineer. In case of acceptance of a part of the work for use or occupancy prior to final acceptance of the entire Work, the guarantee for the part so accepted shall be for a period of one year from the date of such partial acceptance, in writing, by the Engineer.

In placing orders for equipment, the Contractor shall purchase same only under a written guarantee from the respective manufacturers that the equipment supplied will function satisfactorily as an integral part of the completed Work in accordance with the Plans and Specifications, and that the manufacturer will repair or otherwise make good any defects in workmanship or materials which may develop within a period of one (1) year from the date of final acceptance. Furthermore, the Contractor shall require that the manufacturer agree in writing at the time the order for equipment is placed that he will be responsible for the proper functioning of the equipment in cooperation with the Contractor, and that whenever necessary during the installation period or tuning up period following construction period, the manufacturer will supply without additional cost to the Owner, such superintendence and mechanical labor and any adjustments and additional parts and labor needed to make the equipment function satisfactorily, even if same was not shown on the approved shop drawings.

7-17 PERSONAL LIABILITY OF OWNER'S AGENTS

In carrying out the provisions of this contract, or in exercising any power or authority granted to the Owner, there shall be no personal liability upon any officer or authorized agent of the Owner provided the Owner is a governmental body, it being understood that all such persons act as agents and representatives of the Owner.

7-18 NO WAIVER OF LEGAL RIGHTS

The Owner and the Engineer shall not be precluded by any measurement, estimate, or certificate made either before or after the completion and acceptance of the Work and payment therefor, from showing the true amount and character of the Work performed and materials furnished by the Contractor, or from showing that any such measurement, estimate, or certificate is untrue or incorrectly made, or that the Work or materials do not conform in fact to the Contract. The Owner shall not be precluded, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor and his sureties such damages as if it may sustain by reason of his failure to comply with the terms of the Contract. Neither the acceptance by the Owner, nor any representative of the Owner, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, nor any possession taken by the Owner, shall operate as a waiver of any portion of the Contract, or of any power herein reserved, or any right to damages herein provided. A waiver of any breach of the Contract shall not be held to be a waiver of any other or subsequent breach.

7-19 SAFETY

Contractor shall comply with State and Federal Safety regulations as outlined in latest revision of Federal Construction Safety Standards (Series 1926) and with applicable provisions and regulation of Occupation Safety and Health Administration (OSHA) Standards of the Williams-Steiger Occupational Health and Safety Act of 1970 (rev.). The Engineer shall not be responsible for determining the Contractor's compliance with these regulations.

The Contractor is solely responsible for the safety procedures, programs and methods of its employees, subcontractors of every tier, and agents. Contractor shall hold the Owner and the Engineer harmless for any and all damages resulting from violations thereof.

7-20 USE OF PRIVATE LAND

The Contractor shall not use any vacant lot or private land as a plant site, depository for materials, or as a spoil site without the written authorization of the owner of the land (or his agent), a copy of which authorization shall be filed with the Owner.

7-21 USE OF WATER

Contractors desiring to use water furnished by the Owner will be required to make application for extension to the proper authorities and conform to the rules and regulations provided in such cases by the municipal ordinances and pay the usual water rates.

7-22 COST OF SERVICES

The Contractor will be required to pay the established water rates for water obtained from the Owner. Large quantities of water for flushing trenches, filling mains, testing or other operations shall be drawn only at night or at times specifically authorized by the Owner.

The cost of all power, lighting and heating required during construction shall be paid by the Contractor and its costs merged in the contract price.

7-23 WORK IN BAD WEATHER

No construction work shall be done during stormy, freezing or inclement weather, except such as can be done satisfactorily, and to secure first-class construction throughout, and then only subject to permission of the Owner.

7-24 SUNDAY WORK

No work shall be performed under these specifications at night or on Sunday and legal holidays without the approval of the Owner. If it is found necessary to continue the work at night or on Sunday or on a legal holiday, the Contractor will be charged for the Engineering and observation at such times at the rate of Seven Hundred Fifty Dollars (\$750.00) per day of eight (8) working hours for each person doing such work on the job, and the amount will be deducted from money due to the Contractor at the time of settlement.

7-25 WATCHMEN

Watchmen are to be provided by the Contractor at the site of the project to prevent loss, damage to property, or accidents.

7-26 CONSTRUCTION DEBRIS

The Contractor shall not conduct any generation, transportation, or recycling of construction or demolition debris, clean or general or uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and roads that is not commingled with any waste, without the maintenance of documentation identifying the hauler, generator, place of origin of the debris or soil, the weight or volume of the debris or soil, and the location, owner, and operator of the facility where the debris or soil was transferred, disposed, recycled or treated. This documentation must be maintained by the Contractor for 3 years.

7-27 SAMPLE INSURANCE CERTIFICATE

EMAIL ALL CERTIFICATES TO: robinsoneng@trustlayer.io

| ACORD | | CERTIFICATE OF LIABILITY INSURANCE | | DATE (MM/DD/YYYY) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>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.</p> <p>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).</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRODUCER YOUR INSURANCE AGENT | | CONTACT NAME: PHONE (A/C, No, Ext): E-MAIL: ADDRESS: | | FAX (A/C, No): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INSURED YOUR NAME AND ADDRESS | | INSURER(S) AFFORDING COVERAGE | | NAIC # | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | INSURER A: CARRIERS MUST BE RATED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | INSURER B: A- VII OR BETTER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | INSURER C: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | INSURER E: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:</p> <p>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.</p> <table border="1"> <thead> <tr> <th>INSR LTR</th> <th>TYPE OF INSURANCE</th> <th>ADD. SUBR. INSR. WVD</th> <th>POLICY NUMBER</th> <th>POLICY EFF (MM/DD/YYYY)</th> <th>POLICY EXP (MM/DD/YYYY)</th> <th>LIMITS</th> </tr> </thead> <tbody> <tr> <td></td> <td>GENERAL LIABILITY</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY</td> <td></td> <td></td> <td></td> <td></td> <td>EACH OCCURRENCE \$ 1,000,000</td> </tr> <tr> <td></td> <td><input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR</td> <td><input type="checkbox"/> Y <input type="checkbox"/> Y</td> <td>POLICY NUMBER</td> <td>EFF DATE</td> <td>EXP DATE</td> <td>DAMAGE TO RENTED PREMISES (EA OCCURRENCE) \$ ANY LIMIT</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>MED EXP (Any one person) \$ ANY LIMIT</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>PERSONAL & ADV INJURY \$ 1,000,000</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>GENERAL AGGREGATE \$ 2,000,000</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>PRODUCTS - COMP/OP AGG \$ 2,000,000</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>AUTOMOBILE LIABILITY</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> ANY AUTO</td> <td></td> <td></td> <td></td> <td></td> <td>COMBINED SINGLE LIMIT (EA accident) \$ 1,000,000</td> </tr> <tr> <td></td> <td><input type="checkbox"/> ALL OWNED AUTOS</td> <td></td> <td>POLICY NUMBER</td> <td>EFF DATE</td> <td>EXP DATE</td> <td>BODILY INJURY (Per person) \$</td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> HIRED AUTOS</td> <td></td> <td></td> <td></td> <td></td> <td>BODILY INJURY (Per person) \$</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>PROPERTY DAMAGE (Per accident) \$</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> UMBRELLA LIAB</td> <td></td> <td></td> <td></td> <td></td> <td>EACH OCCURRENCE \$ 5,000,000</td> </tr> <tr> <td></td> <td><input type="checkbox"/> EXCESS LIAB</td> <td></td> <td>POLICY NUMBER</td> <td>EFF DATE</td> <td>EFF DATE</td> <td>AGGREGATE \$ 5,000,000</td> </tr> <tr> <td></td> <td><input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE</td> <td><input type="checkbox"/> Y <input type="checkbox"/> Y</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/> CDD <input type="checkbox"/> RETENTION \$</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/ MEMBER EXCLUDED?</td> <td><input type="checkbox"/> Y <input checked="" type="checkbox"/> N</td> <td>POLICY NUMBER</td> <td>EFF DTE</td> <td>EFF DATE</td> <td><input checked="" type="checkbox"/> WC STAT - TORY LIMITS <input type="checkbox"/> OTHER</td> </tr> <tr> <td></td> <td>(Mandatory in NH)</td> <td></td> <td></td> <td></td> <td></td> <td>E.L. EACH ACCIDENT \$ 500,000</td> </tr> <tr> <td></td> <td>If yes, describe under DESCRIPTION OF OPERATIONS below</td> <td></td> <td></td> <td></td> <td></td> <td>E.L. DISEASE - EA EMPLOYEE \$ 500,000</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>E.L. DISEASE - POLICY LIMIT \$ 500,000</td> </tr> <tr> <td></td> <td>POLLUTION</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>PROFESSIONAL</td> <td></td> <td>POLICY NUMBER</td> <td>EFF DATE</td> <td>EFF DATE</td> <td>\$1,000,000/1,000,000 AGG</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>\$1,000,000/2,000,000 AGG</td> </tr> </tbody> </table> | | | | | | INSR LTR | TYPE OF INSURANCE | ADD. SUBR. INSR. WVD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS | | GENERAL LIABILITY | | | | | | | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY | | | | | EACH OCCURRENCE \$ 1,000,000 | | <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR | <input type="checkbox"/> Y <input type="checkbox"/> Y | POLICY NUMBER | EFF DATE | EXP DATE | DAMAGE TO RENTED PREMISES (EA OCCURRENCE) \$ ANY LIMIT | | | | | | | MED EXP (Any one person) \$ ANY LIMIT | | | | | | | 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 | | | | | COMBINED SINGLE LIMIT (EA accident) \$ 1,000,000 | | <input type="checkbox"/> ALL OWNED AUTOS | | POLICY NUMBER | EFF DATE | EXP DATE | BODILY INJURY (Per person) \$ | | <input checked="" type="checkbox"/> HIRED AUTOS | | | | | BODILY INJURY (Per person) \$ | | | | | | | PROPERTY DAMAGE (Per accident) \$ | | | | | | | | | <input checked="" type="checkbox"/> UMBRELLA LIAB | | | | | EACH OCCURRENCE \$ 5,000,000 | | <input type="checkbox"/> EXCESS LIAB | | POLICY NUMBER | EFF DATE | EFF DATE | AGGREGATE \$ 5,000,000 | | <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE | <input type="checkbox"/> Y <input type="checkbox"/> Y | | | | | | <input type="checkbox"/> CDD <input type="checkbox"/> RETENTION \$ | | | | | | | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY | | | | | | | ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/ MEMBER EXCLUDED? | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | POLICY NUMBER | EFF DTE | EFF DATE | <input checked="" type="checkbox"/> WC STAT - TORY LIMITS <input type="checkbox"/> OTHER | | (Mandatory in NH) | | | | | E.L. EACH ACCIDENT \$ 500,000 | | If yes, describe under DESCRIPTION OF OPERATIONS below | | | | | E.L. DISEASE - EA EMPLOYEE \$ 500,000 | | | | | | | E.L. DISEASE - POLICY LIMIT \$ 500,000 | | POLLUTION | | | | | | | PROFESSIONAL | | POLICY NUMBER | EFF DATE | EFF DATE | \$1,000,000/1,000,000 AGG | | | | | | | \$1,000,000/2,000,000 AGG |
| INSR LTR | TYPE OF INSURANCE | ADD. SUBR. INSR. WVD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | GENERAL LIABILITY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY | | | | | EACH OCCURRENCE \$ 1,000,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR | <input type="checkbox"/> Y <input type="checkbox"/> Y | POLICY NUMBER | EFF DATE | EXP DATE | DAMAGE TO RENTED PREMISES (EA OCCURRENCE) \$ ANY LIMIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | MED EXP (Any one person) \$ ANY LIMIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | PERSONAL & ADV INJURY \$ 1,000,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | GENERAL AGGREGATE \$ 2,000,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | PRODUCTS - COMP/OP AGG \$ 2,000,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | AUTOMOBILE LIABILITY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input checked="" type="checkbox"/> ANY AUTO | | | | | COMBINED SINGLE LIMIT (EA accident) \$ 1,000,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input type="checkbox"/> ALL OWNED AUTOS | | POLICY NUMBER | EFF DATE | EXP DATE | BODILY INJURY (Per person) \$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input checked="" type="checkbox"/> HIRED AUTOS | | | | | BODILY INJURY (Per person) \$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | PROPERTY DAMAGE (Per accident) \$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | <input checked="" type="checkbox"/> UMBRELLA LIAB | | | | | EACH OCCURRENCE \$ 5,000,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input type="checkbox"/> EXCESS LIAB | | POLICY NUMBER | EFF DATE | EFF DATE | AGGREGATE \$ 5,000,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE | <input type="checkbox"/> Y <input type="checkbox"/> Y | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <input type="checkbox"/> CDD <input type="checkbox"/> RETENTION \$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/ MEMBER EXCLUDED? | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | POLICY NUMBER | EFF DTE | EFF DATE | <input checked="" type="checkbox"/> WC STAT - TORY LIMITS <input type="checkbox"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | (Mandatory in NH) | | | | | E.L. EACH ACCIDENT \$ 500,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | If yes, describe under DESCRIPTION OF OPERATIONS below | | | | | E.L. DISEASE - EA EMPLOYEE \$ 500,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | E.L. DISEASE - POLICY LIMIT \$ 500,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | POLLUTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PROFESSIONAL | | POLICY NUMBER | EFF DATE | EFF DATE | \$1,000,000/1,000,000 AGG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)</p> <p>REL. JOB NUMBER AND PROJECT NAME AND ADDRESS:</p> <p>Additional Insured with respect to General Liability, Auto Liability and Umbrella/Excess Liability on a primary and noncontributory basis when required by written contract (Owner and Robinson Engineering Ltd) Owner is Certificate Holder. Waiver of Subrogation in favor of listed additional insureds with respect to General Liability, Auto Liability, Umbrella/Excess Liability and Workers' Compensation policies. Additional Insured with respect to General Liability coverage per ISO forms CG2010 and CG2037 or equivalent forms. Umbrella/Excess is on a follow form basis and is primary and non-contributory.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CERTIFICATE HOLDER | | | CANCELLATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OWNER | | | <p>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.</p> <p>AUTHORIZED REPRESENTATIVE</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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ACORD 25 (2010/05)

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SECTION 8. PROSECUTION AND PROGRESS

8-1 SUBLETTING OR ASSIGNMENT OF CONTRACT

The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the Contract or Contracts or any portion thereof, or of his right, title, or interest therein, without written consent of the Owner. In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with his own organization, Work amounting to not less than 50 per cent of the total Contract, except that any items designated in the Contract as "specialty items" may be performed by subcontract and may be deducted from the total Contract price before computing the amount of work required to be performed by the Contractor with his own organization. No subcontracts, or transfer of Contract, shall in any case release the Contractor of his liability under the Contract. All transactions of the Owner shall be with the Contractor; subcontractors shall be recognized only in the capacity of employees or workmen and shall be subject to the same requirements as to character and competence.

8-2 PROGRESS SCHEDULE

Promptly after the award of the contract, if requested, the Contractor shall submit to the Owner a satisfactory progress schedule, which shall show the proposed sequence of work, and how the Contractor proposes to complete the various items of work within the number of days set up on the contract. The progress schedule shall be reviewed and revised periodically as working conditions warrant. The Contractor shall confer with the Owner in regard to the prosecution of the Work in accordance with this schedule. This schedule shall be used as a basis for establishing major construction operations, and for checking progress of the Work.

8-3 PRE-CONSTRUCTION CONFERENCE

Unless the need for a preconstruction conference is waived by the Engineer, the Contractor shall make himself and his representatives available to meet with the Engineer and other representatives of the Owner, prior to the start of construction to discuss scheduling, handling of materials, payments, etc.

8-4 PROSECUTION OF THE WORK

The Contractor shall begin the Work to be performed under the contract not later than ten (10) days after the execution and acceptance of the Contract, unless otherwise provided, but not prior to the execution of the Contract.

8-5 COMPLETION DATE

The Contractor shall complete all Work on or before the stipulated completion date, or on or before a later date determined as specified herein; otherwise, the Owner may proceed to collect liquidated damages described hereinafter.

When a delay occurs due to unforeseen causes beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of the public enemy, governmental acts, fires, floods, epidemics, strikes, extraordinary delays in delivery of materials caused by strikes, lockouts, wrecks, freight embargoes, governmental acts, or acts of God, the time of completion shall be extended in whatever amount is determined by the Owner.

An "Act of God" means an earthquake, flood, cloudburst, cyclone, or other cataclysmic phenomena of nature beyond the power of the Contractor to foresee or make preparation in defense against. A rain, windstorm or other natural phenomenon of normal intensity, based on U.S. Weather Bureau reports, for the particular locality and for the particular season of the year in which the work is being prosecuted, shall not be construed as an "Act of God", and no extension of time will be granted for the delays resulting therefrom.

8-6 *LIMITATIONS OF OPERATIONS*

The Contractor shall conduct his work so as to create a minimum amount of inconvenience to vehicular and pedestrian traffic. At any time when, in the judgment of the Owner, the Contractor has obstructed or closed the road or is carrying on operations on a greater portion of a street than is necessary for the proper prosecution of the Work, the Owner may require the Contractor to finish the section on which Work is in progress before the Work is started on any additional section. (See also Section 7-7).

8-7 *SUSPENSION OF WORK*

The Owner shall have authority to suspend the Work wholly or in part, for such period of time as he may deem necessary, due to conditions unfavorable for the satisfactory prosecution of the Work, or to conditions which in his opinion warrant such action; or for such time as is necessary by reason of failure on the part of the Contractor to carry out orders given, or to perform any or all provisions of the Contract. No additional compensation will be paid the Contractor because of any costs caused by such suspension, except when the suspension is ordered for reasons not resulting from any act or omission on the part of the Contractor. If it becomes necessary to stop Work for an indefinite period of time, the Contractor shall store all material in such manner that they will not obstruct or impede the traveling public unnecessarily or become damaged in any way, take every precaution to prevent damage or deterioration of the Work performed, provided suitable drainage of the roadway, and erect temporary structures where necessary. The Contractor shall not suspend Work without written authority from the Owner. (See also Section 7-15).

8-8 *DETERMINATION AND EXTENSION OF CONTRACT TIME FOR COMPLETION*

When the time for completion of the Work contemplated is specified in the Contract, it is understood that the completion of the Work within the time specified is an essential part of the Contract. If the Contractor finds it impossible to complete the Work within the time specified in the Contract, he may, at

any time prior to the last thirty (30) days of the Contract time specified, make written request to the Owner for an extension of Contract time. He shall set forth in full in his request the reasons, which he believes justify the granting of his request. If the Owner finds that the Work is delayed because of conditions beyond the control of the Contractor, or that the quantities of work done, or to be done, are in excess, he shall promptly grant an extension of time for completion, which appears reasonable and proper. The extended time for completion shall then be considered as in effect the same as if it were the original Contract time for completion.

8-9 FAILURE TO COMPLETE THE WORK ON TIME

Should the Contractor fail to complete the Work within the Contract time the Contractor shall be liable to the Owner in the amount shown in the following schedule of deductions, as liquidated damages, and not as a penalty, for each day of overrun in the Contract time or such extended time as may have been allowed.

SCHEDULE OF DEDUCTIONS FOR EACH DAY OF OVERRUN IN CONTRACT TIME

| Original Contract Amount | | Daily Charge | |
|--------------------------|---------------------|---------------------|-----------------|
| From more than | To and Including | <u>Calendar Day</u> | <u>Work Day</u> |
| \$ 0 | 100,000 | \$ 475 | \$ 675 |
| 100,000 | 500,000 | 750 | 1,050 |
| 500,000 | 1,000,000 | 1,025 | 1,425 |
| 1,000,000 | 3,000,000 | 1,275 | 1,725 |
| 3,000,000 | 6,000,000 | 1,425 | 2,000 |
| 6,000,000 | 12,000,000 | 2,300 | 3,450 |
| 12,000,000 | And over | 5,800 | 8,125 |

8-10 DEFAULT ON CONTRACT

If the Contractor fails to begin the Work under Contract within the time specified, or fails to perform the Work with sufficient workmen and equipment or with sufficient materials to insure the completion of said Work within the Contract time, or shall perform the Work unsuitable, or shall neglect or refuse to remove materials or perform anew such Work as shall be rejected as defective and unsuitable, or shall discontinue the prosecution of the Work, or if the Contractor shall become insolvent or be declared bankrupt, or shall commit any act of bankruptcy or insolvency, or shall make an assignment for the benefit of creditors, the Owner shall give notice in writing to the Contractor and his surety of such delinquency, said notice to specify the corrective measures required.

If the Contractor, within a period of ten (10) days after said notice, shall not proceed in accordance therewith, the Owner shall have full power and authority to forfeit the rights of the Contractor and at its

option to call upon the surety to complete the Work in accordance with the terms of the contract, or it may take over the Work, including any or all materials and equipment on the ground as may be suitable and acceptable, and may complete the Work with his own forces, or may enter into a new agreement for the completion of said Contract according to the terms and provisions thereof, or use such other methods as, in its opinion, shall be required for the completion of said Contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under Contract, shall be deducted from the Contract amount. In case the expense so incurred by the Owner shall be less than the sum which would have been payable under the Contract if it had been completed by the Contractor, the Contractor shall be entitled to receive the difference subject to any claims for liens thereon in case such expense shall exceed the sum which would have been payable under the Contract, the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

8-11 *TERMINATION OF THE CONTRACTOR'S RESPONSIBILITY*

Whenever the Work called for by the Contract shall have been completely performed on the part of the Contractor and all parts of the Work have been approved and deemed to be in compliance with the Technical Plans and Specifications by the Engineer, according to the Contract, and the final estimate paid, the Contractor's obligations shall be considered fulfilled, except as set forth in his Bond, in Section 7-18 and his one-year guarantee, in Section 7-16.

SECTION 9. MEASUREMENT AND PAYMENT

9-1 MEASUREMENT OF QUANTITIES

All Work completed under the Contract will be measured by the Engineer according to United States Standard Measures. The method of measurement shall be described in the Specifications or the Special Provisions.

9-2 SCOPE OF PAYMENT

The Contractor shall receive and accept the compensation as herein provided, in full payment for furnishing all materials, labor, tools and equipment; for performing all Work contemplated and embraced under the Contract; for all loss or damage arising out of the nature of the Work or from action of the elements; for any unforeseen difficulties or obstructions which may arise or be encountered during the prosecution of the Work until its final acceptance by the Owner; for all risks of every description connected with the prosecution of the Work; also, for all such expenses incurred by or in consequence of suspension or discontinuance of such prosecution of the work as herein specified, or for any infringement of patents, trademarks, or copyrights, and for completing the Work in an acceptable manner according to the Contract Documents.

Contractor will be paid in cash and/or negotiable warrants at intervals, and in accord with the terms of the Contract. Except for subdivision contracts, the Owner will retain ten percent (10%) of each periodic payment until final completion and acceptance by the Owner of all Work included in the Contract.

The payment of any current estimate prior to final acceptance of the Work by the Owner shall in no way constitute an acknowledgment of the acceptance of the Work, nor in any way prejudice or affect the obligation of the Contractor, at his expense, to repair, correct, renew, or replace any defects or imperfections in the construction or in the strength or quality of the materials used in or about the construction of the Work under Contract and its appurtenances, nor any damage due or attributable to such defects, which defects, imperfections, or damage shall have been discovered on or before the final inspection and acceptance of the Work. Defects, imperfections, or damage, shall be determined by the Engineer observing the work for compliance with the Plans and Specifications, and the Contractor shall be liable to the Owner for failure to correct the same as provided herein.

9-3 INCREASED OR DECREASED QUANTITIES

Whenever the quantity of any item of Work as given in the Proposal shall be increased or decreased, payment shall be made on the basis of the actual quantity completed at the unit price for such item named in the Proposal, except as otherwise provided in Sections 4-3 or in the detailed specifications for each class of Work.

9-4 PAYMENT FOR EXTRA WORK

Extra Work which results from any of the changes as specified in Section 4-3 shall not be started, except in case of an emergency, until receipt of a written authorization or Work order from the Owner, which authorization shall state the items of work to be performed and the method of payment for each item. Work performed without such order will not be paid for.

Extra work will be paid for:

- A. Either at a lump sum price or at unit prices agreed upon by the Contractor and the Owner. (In case a Supplemental Agreement is signed between the Contractor and the Owner, the agreed prices pertaining thereto shall prevail).
- B. If acceptable to the Engineer, on the following force account basis:
 - 1. Labor. The Contractor will be paid the actual amount of wages for all labor and foreman in direct charge of the specific Work for each hour that said labor and foreman are actually engaged in such Work, to which cost shall be added twenty percent (20%) of the sum thereof.
 - 2. Bond, Insurance, Tax, Welfare Fund and other Payments. The Contractor will receive the actual cost of Contractor's bond, public liability and property damage insurance, workmen's compensation insurance, social security tax, welfare fund and other payments, if any, in accordance with agreements applicable to the Contract, required for force account work, to which no percentage shall be added. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond, insurance tax, welfare fund and other payments.
 - 3. Materials. The Contractor will receive the actual cost for all materials which are an integral part of the finished Work, including freight charges as shown by the original receipted bills, to which shall be added fifteen percent (15%) of the sum thereof.

The Contractor will be reimbursed for any materials used in the construction of the Work, such as sheeting, false work, form lumber, curing materials, etc., which are not an integral part of the finished Work. The amount of reimbursement shall be agreed upon in writing before such Work is begun, and no percent shall be added. The salvage value of such materials shall be taken into consideration in the reimbursement agreed upon.

4. Equipment. Machinery and equipment, which the Contractor has on the job for use on contract items, shall be used on extra Work as deemed necessary or desirable. The Contractor will be paid for all machinery and equipment used on extra work in accordance with the latest revision of "SCHEDULE OF AVERAGE ANNUAL EQUIPMENT OWNERSHIP EXPENSE WITH OPERATING COST" as issued by the Department of Transportation, State of Illinois, for the period that said machinery and equipment are in use on such Work, to which no percent shall be added. In the event that equipment is used which is not included in aforesaid publication, the latest edition of the "Compilation of Nationally Averaged Rental Rates for Construction Equipment" compiled by Equipment Distributors, 615 West 22nd Street, Oak Brook, Illinois 60521, shall be used to determine equipment rental rates and no percent shall be added to the rates indicated in such publication.

9-5 PAYMENT FOR SUBCONTRACTING, EXTRA WORK

Where an authorized subcontractor performs some or all of the Work qualifying as an Extra Work item and compensation is to be based on the terms of paragraph 9-4 (2), the cost of labor, bonds, material and equipment shall be the cost to the subcontractor on these items and an additional allowance to the prime Contractor of five percent (5%) of all costs as determined in paragraph 9-4 (2) shall be made in such instances.

9-6 PARTIAL PAYMENTS

Once each month, the Contractor will make an approximate estimate, in writing, of the materials in place complete, the amount of Work performed, and the value thereof, at the contract unit prices. From the amount so determined of completed work there shall be deducted ten percent (10%) to be retained until after the completion of the entire Work to the satisfaction of the Owner, and the balance certified to the Owner for payment.

In addition, an estimate may, at the discretion of the Owner and upon presentation of receipted bills and freight bills, be made for payment of the value of acceptable non-perishable materials delivered at the Work site or in acceptable storage places and not used at the time of such estimate. The care and storage of such material shall be the Contractor's responsibility. In the absence of receipted bills, an estimate may, at the request of the Contractor and at the discretion of the Owner, be made for payment of the value of materials in acceptable storage places and not used at the time of the estimate, but in such an event payment shall be made of such amounts by a check requiring the endorsement of both the Contractor and materials supplier. Endorsement of such a check by the material supplier shall be construed a waiver of lien for the cost of materials covered by the check. Such materials, when so paid for by the Owner, shall become the property of the Owner, and in the event of default on the part of the Contractor, the Owner may use or cause to be used such materials in the construction of the Work

provided for in the Contract. The amount thus paid by the Owner shall be deducted from estimates due the Contractor as the material is used in the Work.

9-7 ACCEPTANCE AND FINAL PAYMENT

Whenever the Work provided for by the Contract shall have been completely performed on the part of the Contractor, and all parts of the Work have been deemed to be in substantial compliance with the Plans and Specifications by the Engineer and accepted by the Owner, a final estimate showing the value of the Work will be prepared by the Engineer as soon as the necessary measurements and computations can be made, all prior estimates upon which payments have been made being approximate only and subject to correction in the final payment. The amount of this estimate, less any sums that have been deducted or retained under the provisions of the Contract, will be paid to the Contractor as soon as practicable after the final acceptance, provided the Contractor has furnished to the Owner satisfactory evidence that all sums of money due for any labor, materials, apparatus, fixtures, or machinery furnished for the purpose of such Work have been paid or that the person or persons to whom the same may be due have consented to such final payment.

Neither the final payment on this contract by the Owner nor any provisions in the contract documents shall relieve the Contractor of the responsibility for negligence in the furnishing and installation of faulty materials or for faulty workmanship which shows up within the extent and period provided by law or within the guarantee period of one (1) year from final acceptance of the work performed under this Contract, whichever is greater, nor of the responsibility of remedying such faulty workmanship and materials.

The acceptance by the Contractor of the final payment shall constitute a release and waiver of all claims by the Contractor except those previously made and still unsettled.

9-8 OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS

The Owner may withhold, in addition to retained percentages, from payment to the Contractor, such an amount or amounts as may be necessary to cover:

- A. Payments that may be earned or due for just claims for labor and materials furnished in and about the Work.
- B. For defective Work not remedied.
- C. For failure of the Contractor to make proper payments to his subcontractors.
- D. For reasonable doubt that the contract can be completed for the balance then unpaid.

The Owner will disburse and shall have the right to act as agent for the Contractor in disbursing such funds as have been withheld pursuant to this paragraph to the party or parties who are entitled to payment therefrom. The Owner will render to the Contractor a proper accounting of all such funds disbursed in behalf of the Contractor.

The Owner also reserves the right, even after full completion and acceptance of the Work, to refuse payment of the final ten percent (10%) due the Contractor, until it is satisfied that all subcontractors, material suppliers, and employees of the Contractor have been paid in full.

9-9 *RELEASE OF CLAIMS AND LIENS*

Neither the final payment nor any part of the retained percentage shall become due until the Contractor shall deliver to the Owner a complete release of all claims or liens arising out of this contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as he has knowledge or information the release and receipts include all the labor and materials for which a lien or claim could be filed; but the Contractor may, if a subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Owner to indemnify the Owner against any claim or lien (in cases where such payment is not already guaranteed by surety bond). If any claim or lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

DIVISION II

Technical Specifications

EXCAVATION AND CLEANUP

| | | |
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SECTION 1. EXCAVATION AND BACKFILL FOR UNDERGROUND CONDUITS

1-1 DESCRIPTION

For the purpose of this section, underground conduits shall be considered sewer pipe, water main or any other pipe conduit indicated on the Plans. Wherever the term "pipe" or "pipe line" is used, it shall mean underground conduit.

Excavation and backfill shall include all excavation, backfilling, compacting, disposal of surplus material, restoration of all disturbed surface, and all other work incidental to the construction of trenches, including any additional excavation which may be required for manholes or other structures forming a part of the pipe line.

1-2 CONSTRUCTION DETAILS

1-2.01 SURFACE REMOVAL AND TOPSOIL PRESERVATION

Along the proposed pipe lines as indicated on the Plans, the Contractor shall remove the surface materials only to such widths as will permit a trench to be excavated which will afford sufficient room for proper efficiency and proper construction. Where sidewalks, driveways, pavements and curb and gutter are encountered, care shall be taken to protect such against fracture or disturbance beyond reasonable working limits. In areas specified on the Plans, topsoil suitable for final grading and landscaping shall be piled separately in locations approved by the Owner and preserved so that it may be restored after the remainder of the backfill is replaced.

1-2.02 WIDTH OF EXCAVATION

- A. The bottom width of the trench at and below the top of the pipe and inside the sheeting and bracing, if used, shall be in accordance with Section 550.04 of the Standard Specifications, unless otherwise noted.

Note: The strength or class of pipe shall be as indicated on the Plans.

- B. Trench sheeting and bracing or a trench shield shall be used as required by the rules and regulations of O.S.H.A. The Engineer shall not be responsible for determining whether the contractor is in compliance with this provision. The bottom of the trench excavation shall conform to the details shown on the Plan.
- C. If these trench widths are exceeded without the written permission of the Engineer, the pipe shall be installed with a concrete cradle or with concrete encasement or a stronger pipe than originally specified shall be used as approved by the Engineer.

1-2.03 EXCAVATION BELOW GRADE

In cases where the excavation is carried beyond or below the lines and grades given by the Engineer, the Contractor shall, at his own expense, refill all such excavated space with suitable granular material.

1-2.04 ROCK EXCAVATION

A. GENERAL

Wherever "rock" is used as the name of an excavated material, it shall mean boulders or pieces of rock, concrete, or masonry measuring one-half (1/2) cubic yard or more, hard shale or solid ledge rock and masonry which requires for its removal the continuous use of pneumatic tools or drilling and blasting.

Before payment is allowed for "Rock Excavation", the Contractor shall be required to demonstrate the material cannot be removed "by hand pick" or by power operated excavator or shovel. No payment will be made for Rock Excavation unless air tools or explosives were used by the Contractor. No payment will be made for "Rock Excavation" unless the Engineer approves such payment in writing in advance upon being satisfied that the material meets the above criteria.

B. MEASUREMENT FOR PAYMENT

Where "Rock Excavation" is to be measured for payment, quantities will be determined by the Engineer. Rock required to be removed shall be computed by the cubic yard. Width for pay purposes shall be the measured width of rock removed, but shall not exceed the width specified in Section 550.04 of the Standard Specifications, plus any sheeting and bracing if required. Depth for pay purposes shall be the difference in elevation between the top and bottom of the rock as determined by the Engineer. Where rock is encountered in the bottom of the trench, the maximum depth for payment purposes will be six inches (6") below the bottom of the pipe. Where the proposal does not contain a pay item for "Rock Excavation", the additional cost of rock removal as defined by the specifications shall be paid on extra work basis. (Division I, Section 9-4).

C. PAYMENT

Payment shall be made at the Contract unit price per cubic yard of "Rock Excavation". These prices shall be full compensation for furnishing all materials; for all preparation, excavation and disposal of rock; and for all labor, equipment, tools and incidentals necessary to complete the item.

1-2.05 SUBSURFACE EXPLORATION

All information available to the Owner, if any, on subsurface exploration will be made available for examination by prospective Bidders. However, it is understood and agreed that the Owner shall in no way be held responsible for interpretation of this information, its accuracy or its thoroughness. Prospective Bidders shall make such subsurface explorations as they believe necessary to verify and supplement information received from the Owner.

1-2.06 EXPLORATORY EXCAVATION

A. GENERAL

Whenever, in the opinion of the Engineer, it is necessary to explore an excavate in advance of the Work to determine the best line and grade for the construction of the proposed pipe line, the Contractor shall make explorations and excavations for such purposes.

B. PAYMENT

The cost of such excavation will be paid at the contract unit price per foot for "Exploration Trench", or if no Bid Item is included, on an extra work basis.

1-2.07 BRACED AND SHEETED TRENCHES

A. GENERAL

Open-cut trenches shall be sheeted and braced or otherwise protected as required by any governing Federal or State laws and municipal ordinances, and as may be necessary to protect life, property, or the Work. In any event, the minimum protection shall conform to the recommendations in the Occupational Safety and Health Act Standards for Construction (OSHA). A sand box or trench shield may be used in lieu of sheeting as permitted by OSHA. When close-sheeting is used, it shall be so driven as to prevent adjacent soil from entering the trench either below or through such sheeting. Tight sheeting shall be used in that portion of the excavation in or along state and county highways below the intersection of a 1 to 1 slope line from the nearest face of the excavation to the edge of the pavement.

Where sheeting and bracing are used, the trench width shall be increased accordingly. The sheeting will be driven to the full depth of work, or to a depth where the soil has the stability necessary to meet the OSHA standards, whichever is lower. The shallower depth of required sheeting may be established by soil boring and analysis, to be performed at the Contractor's sole cost. The owner shall have the right of consent in the selection of the soils engineer for the sampling and analysis. This provision shall not relieve the contractor, in any degree, from his responsibilities under the contract.

Sheeting and bracing, which are required to be left in place shall be cut off at the specified elevation. Trench bracing, except that specified to be left in place, may be removed when the backfilling reaches the said bracing's level. All sheeting except that required to be left in place may be removed as the excavation is refilled, in such a manner as to avoid bank cave-in(s) or disturbance to the adjacent area(s) or structure(s). The voids left by the withdrawal of the sheeting shall be carefully filled by jetting, vibrating, ramming or other satisfactory means.

B. PAYMENT

Payment for sheeting and bracing, and all other Work incidental to sheeting and bracing, shall not be made separately but shall be included in the Contract price for the pipe size, except when ordered left in place.

Payment for timber sheeting left in place when shown on the plans or directed by the Engineer shall be made at the Contract unit price per 1,000 board feet of "Timber Sheeting Left in Place."

Payment for steel sheet piling when specified shall be made at the Contract unit price per square foot for "Steel Sheet Piling."

Payment for steel sheet piling left in place when shown on the plans or directed by the Engineer shall be made at the Contract unit price per square foot for "Steel Sheet Piling Left in Place."

1-2.08 TRENCHES WITH SLOPING SIDES, LIMITED

The Contractor may, at his option, where working conditions and right-of-way permit, excavate pipe line trenches with sloping sides, but with the following limitations:

- A. In general, only braced and vertical trenches will be permitted in traveled streets, alleys or narrow easements.
- B. Where trenches with sloping sides are permitted, the slopes shall not extend below the top of the pipe, and trench excavations below this point shall be made with vertical sides with widths not exceeding those specified hereinbefore for the various sizes of pipe.

1-2.09 SHORT TUNNELS

In some instances, trees, fire hydrants, sidewalks and other obstructions may be encountered, the proximity of which may be a hindrance to open-cut excavation. In such cases, the Contractor shall excavate by means of short tunnels in order to protect such obstructions against damage. Where such obstructions are shown on the Plans, short tunnel work shall be considered incidental to the construction of the pipe line and shall not be grounds for extra payment or payment for tunnel work. Where such obstructions are not shown on the Plans, payment will be at the Contract unit price or as extra work in accordance with Division I, Section 9-4.

1-2.10 PILING EXCAVATION MATERIAL

All excavated material shall be stockpiled to avoid obstructing streets, sidewalks and driveways. Excavated material suitable for backfilling shall be stockpiled separately on the site. No material shall be placed closer than 2'0" to the edge of an excavation. Fire hydrants under pressure, valve pit covers, valve boxes, curb top boxes, or other utility controls shall be left unobstructed and accessible until the Work is completed. Gutters shall be kept clear or other satisfactory provisions made for street drainage. Natural watercourses shall not be obstructed or polluted. Surplus material and excavated material unsuitable for backfilling shall be transported and disposed of off the site in disposal areas obtained by the Contractor.

1-2.11 REMOVAL OF WATER

The Contractor shall at all times during construction provide and maintain ample means and devices with which to promptly remove and properly dispose of all water entering the excavations or other parts of the Work until all Work to be performed therein has been completed. No sanitary sewer shall be used for disposal of trench water, unless specifically approved by the Engineer and then only if the trench water does not ultimately arrive at existing pumping or sewage treatment facilities. No water containing settle able solids shall be discharged into storm sewers.

1-2.12 BLASTING

Blasting for excavation will be permitted only after securing the approval of the Owner and only when proper precautions are taken for the protections of persons and property. The hours of blasting will be reviewed by the Owner. Any damage caused by blasting shall be repaired by the Contractor at his expense. The Contractor's methods of procedure in blasting shall conform to Federal and State laws and municipal ordinances and O.S.H.A. rules and regulations. The Engineer shall not be responsible for determining whether the contractor is in compliance with these rules and regulations.

1-2.13 SAFETY

A. BARRICADES, GUARDS AND SAFETY PROVISIONS

To protect persons from injury and to avoid property damage, adequate barricades, construction signs, lights and guards as required shall be placed and maintained by the Contractor at his expense during the progress of the construction Work and until it is safe for traffic to use the roads and streets. All material piles, equipment and pipe which may serve as obstructions to traffic shall be enclosed by fences or barricades and shall be protected by proper lights when the visibility is poor. The rules and regulations of O.S.H.A. and appropriate authorities respecting safety provisions shall be observed. The Engineer shall not be responsible for determining whether the contractor is in compliance with these rules and regulations.

B. STRUCTURE PROTECTION

Temporary support, adequate protection and maintenance of all underground and surface structures, drains, sewers and other obstructions encountered in the progress of the Work shall be furnished to the Contractor at his expense. Any structures which may have been disturbed shall be restored upon completion of the Work.

C. PROTECTION OF PROPERTY AND SURFACE STRUCTURES

Trees, shrubbery, fences, poles and all other property and surface structures shall be protected during construction operations unless their removal for purposes of construction is authorized by the Engineer. Any fences, poles, or other man-made surface improvements which are moved or disturbed by the Contractor shall be restored to the original conditions, after construction is completed, at the Contractor's expense. Any trees, shrubbery or other vegetation which are approved for removal or ordered for removal by the Engineer in order to facilitate construction operations shall be removed completely, including stumps and roots, by the Contractor. Responsibility for any damage or claims for damage caused by construction operations to shrubbery or other landscape improvements which were not authorized for removal by the Engineer shall be assumed by the Contractor.

1-2.14 DEVIATIONS OCCASIONED BY STRUCTURES OR UTILITIES

Wherever obstructions are encountered during the progress of the Work and interfere to such an extent that an alteration in the plan is required, the Engineer shall have the authority to change the Plans and order a deviation from the line and grade or arrange with the owners of the structures for the removal, relocation or reconstruction of the obstructions. Where gas, water, telephone, electrical, hot water, steam, or other existing utilities are an impediment to the vertical or horizontal alignment of the proposed pipe line, the Engineer shall order a change in grade or alignment or shall direct the Contractor to arrange with the owners of the utilities for their removal.

1-2.15 INTERRUPTION TO UTILITIES

The Contractor shall proceed with caution in the excavation and preparation of the trench so that the exact location of underground structures may be determined. Prior to proceeding with trench excavation, the Contractor shall contact all utility companies in the area to aid in locating their underground services.

The Contractor shall take all reasonable precautions against damage to existing utilities. However, in the event of a break in an existing water main, gas main, sewer or underground cable, he shall immediately notify the responsible official of the organization operating the utility interrupted. The Contractor shall lend all possible assistance in restoring services and shall assume all cost, charges, or claims connected with the interruption and repair of such services if the location of said utility was marked by the owner thereof prior to excavation.

1-2.16 MAINTENANCE OF TRAFFIC AND CLOSING OF STREETS

The Contractor shall carry on the Work in a manner which will cause a minimum of interruption to traffic, and may close to through travel not more than two consecutive blocks, including the cross street intersected. Where traffic must cross open trenches, the Contractor shall provide suitable bridges at street intersections and driveways. The Contractor shall post suitable signs indicating that a street is closed and necessary detour signs for the proper maintenance of traffic. Prior to closing of any streets, the Contractor shall notify responsible municipal authorities at least five (5) days in advance of the starting of the Work, unless otherwise approved by the municipality.

1-2.17 CONSTRUCTION IN EASEMENTS

In easements across private property, the Contractor shall confine all operations in the easement area and shall be responsible and liable for all damage outside of the easement area. Trees, fences, shrubbery or other type of surface improvements located in the easements will require protection during construction. The provisions of Section 1-2.14C above shall apply to all easement areas as well as to public right-of-way. Precautions shall be taken by adequate sheeting or other approved method to prevent any cave-in or subsidence beyond the easement limits or damage to improvements within the easement. In general, the easement area is intended to provide reasonable access and working area for efficient operation by the Contractor. Where easement space for efficient operation is not provided, the Contractor shall be responsible for organizing his operations to perform within the restrictions shown on the Plans. The Owner shall make available to the Contractor a copy of the construction easements.

1-2.18 UNDERGROUND CONDUIT CONSTRUCTED IN TUNNEL

A. GENERAL

Where shown on the plans or where specifically authorized by the Engineer, pipe lines shall be constructed in tunnel. This work will be made in accordance with requirements of any permits obtained by the Owner from railroads or state or county highway departments for tunnel work or in accordance with the following paragraph.

B. MATERIALS

Pipe materials shall be as shown on the Plans or as described in the Special Provisions.

C. EXCAVATION AND LAYING

Requirements for excavation and laying and for joints shall be those applicable for the type of pipe line involved, unless otherwise specified.

Before starting excavations for tunnel shafts or jacking or augering pits, the Contractor shall submit drawings of proposed sheeting and bracing arrangements which have been prepared, signed and sealed by a structural Engineer registered in the State of Illinois for Work in Illinois and by a structural Engineer registered in the State of Indiana for Work in Indiana.

An adequate ventilation system shall be provided to properly ventilate all parts of the tunnel.

D. METHODS OF CONSTRUCTION

1. The tunnel shall be only of sufficient width and height to provide free working space. The sides and roof of the tunnel shall be braced sufficiently to support the external loads and to prevent caving, bulging, and settlement of the earth.
2. The Contractor shall backfill all tunnels with well compacted sand, fine gravel or stone screenings as rapidly as the conditions permit.
3. The backfill material shall be deposited in the tunnel in such a manner as not to injure or disturb the pipe. The filling of the tunnel shall be carried on simultaneously on both sides of the pipe in such a manner that injurious side pressures do not occur. Special care shall be taken to compact the backfill under the haunches of the pipe. The remainder of the tunnel, or such portion of the remainder as may be possible, shall then be backfilled by one of the following methods, at the option of the Contractor.
 - a. The material shall be deposited in uniform layers not to exceed twelve inches (12") thick (loose measure) and such layer either inundated or deposited in water.

- b. The tunnel shall be backfilled with loose material or only partly backfilled at a time, if necessary, and settlement secured in either case by introducing water through holes jetted into the material to a point approximately two feet (2') above the top of the pipe.
4. If neither of the above methods is practicable or can be used for only a portion of the backfill, the remainder of the tunnel shall be completely backfilled with material carefully deposited in uniform layers and each layer compacted by ramming or tamping with appropriate tools.
5. When sheeting and bracing have been used, sufficient bracing shall be left across the trench as the backfilling progresses to hold the sides and top firmly in place without caving or settlement before the backfilling has been placed. This bracing may be removed as soon as practicable.
6. Any depressions which may develop within the area involved in the construction operations due to settlement of the backfilling material shall be filled.

E. *USE OF CASING PIPE*

The Contractor may use metal casing pipe as a tunnel liner in place of timber shoring for tunnel sections. The design data for such pipe, including, but not necessarily limited to, the diameter, gauge, type of pipe, method of placing and installation will be submitted for the owner's review. The void space between tunnel liners or casing pipe and the carrier pipe shall be filled with compacted sand or other approved material.

F. *JACKING OR BORING OF PIPE*

The Contractor may, subject to the approval of the Owner, use special cast iron or specially designed reinforced concrete jacking pipe jacked and/or bored into position with or without tunnel liners, for tunneled sections pipe.

G. *MEASUREMENT AND PAYMENT*

Underground conduit constructed in tunnel will be paid for at the unit prices Bid for "Underground Conduit Constructed in Tunnel" for the various type and sizes for the actual length of tunnel Work. Payment shall include all labor, materials and equipment necessary to construct the conduit and tunnel, complete in place, including excavation and backfill, shoring and bracing, furnishing and laying casing pipe where required and carrier pipe, and all other Work necessary for a complete installation.

1-2-19 SANITARY SEWERS

A. GENERAL

The methods of excavating and backfilling sanitary sewer pipe shall be in compliance with the latest edition of the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction", and the Metropolitan Water Reclamation District of Greater Chicago, "Manual of Procedure", latest revision. Where there is a conflict of these specifications, the MWRDGC, "Manual of Procedure" shall be used.

B. MATERIAL

Pipe material shall be as shown on the Plans or as described in the Special Provisions. No substitution of material shall be made without written approval from the Owner.

C. EXCAVATION AND BEDDING

The trench shall be excavated to an elevation to allow for the following bedding.

Bedding, other than concrete embedment, shall consist of gravel, crushed gravel, crushed stone or crushed slag, 1/4" to 1" in size. As a minimum, the material shall conform to the requirements of Article 1004.01 of the State Specifications or ASTM Designation C-33. The gradation shall conform to Section 1004, gradation CA 11 or CA 13 or to ASTM Gradation No. 67. The pipe shall be laid so that it will be uniformly supported and the entire length of the pipe barrel will have full bearing. No blocking of any kind shall be used to adjust the pipe to grade except when used with embedment concrete. Bedding shall be required for all sewer construction, except ductile iron pipe, and shall be of a thickness equal to 1/4 of the outside diameter of the sewer pipe with a maximum thickness of eight inches (8") but shall not be less than four inches (4").

Where unsuitable material is encountered at the grade established, all such unsuitable soil shall be removed under the pipe and for the width of the trench, and shall be replaced with well compacted bedding material, to the satisfaction of the Engineer.

Where rock is encountered, it shall be removed below grade and replaced with a cushion of well compacted bedding material having a thickness under the pipe of not less than eight inches (8").

The cost of furnishing, placing and compacting bedding material will be considered as incidental work and no additional compensation will be allowed.

D. BACKFILLING

The backfilling of the sanitary sewer pipe trench shall be the same as for storm sewer pipe described in Section 550.07 of the Standard Specifications.

E. METHOD OF MEASUREMENT

The method of measurement shall be the same as for storm sewer pipe described in Section 550.09 of the Standard Specifications except measurements will be made to the center of manholes.

F. BASIS OF PAYMENT

This work will be paid for at the Contract unit price per foot for "Sanitary Sewer" of the type and diameter specified and measured as specified.

"Trench Backfill", when specified, will be measured and paid for at the Contract unit price per foot unless otherwise stated in the Special Provisions or contract documents.

1-2.20 WATER MAINS

A. GENERAL

The method of excavating and backfilling water mains shall be in compliance with the latest edition of the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction," and those below.

B. MATERIAL

Pipe material shall be as shown on the Plans or as described in the Special Provisions. No substitution of material shall be made without written approval of the Owner.

C. EXCAVATION AND BEDDING

The trench shall be excavated to an elevation to allow the minimum cover over the pipe as called for on the plans. Provision must be made by the Contractor to allow for any future cuts to be made to the ground over the pipe to assure that the minimum cover is maintained.

Bedding as described in Section 1-2.21C for sanitary sewers shall be required for all water mains, except ductile iron pipe that requires no bedding. The method of bedding for unsuitable material and where rock is encountered shall also comply with the conditions of that Section.

The cost of furnishing, placing and compacting bedding material will be considered as incidental work and no additional compensation will be allowed.

D. BACKFILLING

The backfilling of the water main pipe shall be the same as for storm sewer pipe as described in Section 550.07 of the Standard Specifications except that the moist fine aggregate backfill to the elevation of the center of the pipe will not be required for ductile iron pipe. For PVC or any other type of pipe, the moist fine aggregate shall be

brought to a level 12" above the top of the pipe and it shall be compacted as described in that Section.

E. METHOD OF MEASUREMENT

"Water main" pipe of the different types and diameters will be measured by the lineal foot in place.

Unless they are listed as separate Bid items, the water main item shall include all fittings required and all other material, except trench backfill within the specified trench.

F. BASIS OF PAYMENT

This work will be paid for at the Contract unit price per lineal foot for "Water main" of the type and diameter specified and measured as specified.

"Trench Backfill", when specified, will be measured and paid for at the Contract unit price per foot, unless otherwise specified in the special provisions or contract documents.

SECTION 2. RESTORATION OF SURFACES

2-1 GENERAL

Restoration of surfaces shall include the removal of the existing surface, the disposal of surplus material, and the construction of new surfaces as indicated on the plans or Special Provisions. The type of surface restoration required shall be shown on the Plans or described in the Special Provisions.

2-2 CONSTRUCTION DETAILS

2-2.01 TEMPORARY SURFACE OVER TRENCH

Wherever conduits are constructed under traveled roadways, driveways, sidewalks, or other traveled surfaces, a temporary surface shall be placed over the top of the trench as soon as possible after compaction, as specified above, has been satisfactorily completed. The temporary surface shall consist of a minimum of six inches (6") of coarse aggregate conforming to the current specifications of the State Specifications for Grade No. CA-9 or CA-10. The top of the temporary surface shall be smooth and meet the grade of the adjacent undisturbed surface. The temporary surface shall be maintained at the Contractor's expense until final restoration of the street surface is completed, unless specific items for temporary aggregate is specified. No permanent restoration of street surface shall be initiated until authorized by the Engineer.

2-2.02 REMOVAL OF PAVEMENT, SIDEWALK, DRIVEWAY AND CURB

Wherever the pipe is located along or across an improved surface, the width of the trench shall be held as nearly as possible to the maximum width specified in Section 1-2.02. Where brick or concrete pavement, sidewalk, driveway or curbing is cut, the width of the cut shall exceed the actual width of the top of the trench by twelve inches (12") on each side or a total of two feet (2'). Exposed surfaces of portland cement or asphaltic concrete shall be cut with a pavement saw before breaking. Care shall be taken in cutting to insure that a straight joint is sawed.

2-2.03 REPLACEMENT OF PERMANENT TYPE PAVEMENT, SIDEWALKS, DRIVEWAYS, CURBS, GUTTERS AND STRUCTURES.

The Contractor shall restore (unless otherwise specified or ordered by the Engineer) all permanent type pavements, sidewalks, driveways, curbs, gutters, shrubbery, fences, poles and other property and surface structures removed or disturbed during or as a result of construction operations to a condition which is equal in appearance and quality to the condition that existed before the Work began. The surface of all improvements shall be constructed of the same material and match in appearance the surface of the improvement which was removed. Where trench backfill is used, the restoration shall be made as soon as possible after jetting of the backfill has been completed.

2-2.04 REPLACING EXISTING TEMPORARY STREET AND ALLEY SURFACES

A. GENERAL

For the purpose of this specification, all existing street and alley surfaces shall be considered temporary except:

(1) concrete or brick pavements; (2) an asphaltic concrete or a bituminous treated surface over a soil cement, concrete, crushed stone or selected gravel base. Specifically included as temporary street surfaces, shall be compacted earth, cinders, shale, mixtures of gravel and earth or crushed stone and earth, whether or not these respective materials are further stabilized by road oil or bituminous surface treatment. This work should not be confused with Temporary Surface Over Trench as specified in Section 2-2.01.

Where conduits are constructed under temporary street or alley surfaces, or where such surfaces are used for the placement of backfill material or are disturbed by construction operations, the Contractor shall reconstruct, by grading and shaping, the entire width of roadway, and any drainage facilities which may have existed, to the original condition at the Contractor's expense, including that portion within the specified trench width where removal and restoration is paid for under a separate payment item.

Where, in the opinion of the Engineer, the conduit is located in the traveled portion of the temporary street or alley traveled surface, a new temporary surface shall be constructed over the trench, as specified in Section 2-2.01 of this Division. After this surface has been placed, it shall be maintained by the Contractor until final restoration is authorized. Just prior to final restoration, the entire width of the street to be restored shall be scarified. For final surface restoration, the Contractor shall apply a bituminous treatment to the entire width of the traveled surface, as ordered by the Engineer. The bituminous treatment shall consist of the application of a bituminous prime coat and a bituminous surface treatment corresponding to the materials and construction methods described in the State Specifications for bituminous surface treatment, Class A-1, A-2, or A-3 as specified, or shown in the bid items.

The Engineer reserves the right to order the omission of Bituminous Surface Treatment in any locations where such omission may be, in his opinion, in the public interest.

B. MEASUREMENT

Measurement for purposes of payment shall be computed by using the actual length and width of surface to which treatment is applied, in accordance with these Specifications.

C. PAYMENT

The cost of final restoration of the surface shall be paid for at the contract unit price per foot, unless so stated in the Special Provisions or for all State of Illinois projects, for "Bituminous Surface Treatment", of the type specified. Such price shall include the cost of all labor and materials necessary to provide the bituminous treatment as specified.

2-2.05 DISPOSAL OF SURPLUS EXCAVATED MATERIAL

Surplus excavated material not needed for backfill shall be promptly removed from the site to locations provided by the Contractor. The cost of removal and disposal of surplus excavated materials will be included in the respective unit prices for pipeline or conduit construction and no additional payment will be allowed therefor.

2-2.06 CLEANING UP

All surplus materials and all tools and temporary structures shall be removed from the site by the Contractor. All dirt, rubbish and excess earth from the excavation shall be hauled to a dump provided by the Contractor and the construction site left clean and acceptable to the Owner at the earliest possible date.

SECTION 3. FINISHING AND CLEAN UP FOR UNDERGROUND CONDUITS

3-1 CLEAN UP

Before acceptance of underground conduits construction, all pipes, manholes, catch basins, fire hydrants and other appurtenances shall be cleaned of all debris and foreign material.

After all backfill has been completed, the ground surface shall be shaped to conform to the contour of adjacent surfaces. General clean up of the entire construction area shall otherwise conform to applicable requirements specified.

DIVISION II

Technical Specifications

WATER DISTRIBUTION

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SECTION 1. PIPE FOR WATER MAINS AND SERVICE CONNECTIONS

1-1 GENERAL

These Specifications cover the pipe fittings and accessory items normally used for water distribution systems. Special considerations will be covered in the Plans and Special Provisions.

Specification references made herein for manufactured materials such as pipe, hydrants, valve and fittings refer to designations for American Water Works Association (AWWA) or to American National Standards Institute (ANSI), as they are effective on the date of call for bids.

Copies of these publications may be obtained at nominal cost from the American Water Works Association, 6666 West Quincy Avenue, Denver, Colorado 80235 and from the American National Standards Institute, 1430 Broadway, New York, New York 10018.

1-2 PIPE MATERIALS

The type of pipe and fittings to be used in water mains will be stated in the Special Provisions, Plans or Bid items.

Where new water main is proposed to be constructed in the vicinity of an existing non potable force main, the water main shall be identified as a potable water line in a manner approved by the Engineer.

The Contractor shall be responsible for all material furnished by him and shall replace at his own expense all such material found defective in manufacture or damaged in handling after delivery by the manufacturer. This shall include the furnishing of all material and labor required for the replacement of installed material discovered defective prior to the final acceptance of the Work.

The Contractor shall be responsible for the safe storage of material furnished by or to him, and accepted by him, and intended for the Work, until it has been incorporated in the completed project. The interior of all pipe fittings and other accessories shall be kept free from dirt and foreign matter at all times. Valves and hydrants shall be drained and stored in a manner that will protect them from damage by freezing.

Any material furnished by the Owner that becomes damaged after acceptance by the Contractor shall be replaced by the Contractor at his own expense.

1-2.01 CONCRETE CYLINDER PIPE

Reinforced concrete water pipe, steel cylinder type prestressed, shall conform to the latest AWWA Standard C 301. Size, class marking, specials, lengths, etc., shall be as specified on the Plans or in the Special Provisions.

1-2.02 DUCTILE IRON PIPE

Ductile Iron Pipe shall conform to ANSI A 21.51 (AWWA C151), class to thickness designed per ANSI A 21.50 (AWWA C150), tar (seal) coated and/or cement lined per ANSI A 21.4 (AWWA C104), with mechanical or rubber ring (slip seal or push on) joints. Plans or Special Provisions shall indicate standard designation, thickness, class, coating and/or lining, and joint type.

1.2.03 CAST IRON OR DUCTILE IRON PIPE FITTINGS

All cast iron or ductile iron fittings, 3 inch through 48 inch shall conform to the latest ANSI/AWWA C110. Cast or ductile iron, coatings or linings or other items shall be specified in the Special Provisions.

1-2.04 SERVICE PIPE, STOPS, FITTINGS, AND BOXES

A. SERVICE PIPE

All service pipe shall be copper water tube, Type K, soft temper, for underground service, conforming to ASTM B-88 and B251. The pipe shall be marked with the manufacturer's name or trade mark indicative of the type of pipe. The outside diameter of the pipe shall conform to ASTM B251 Table 2.

B. STOPS AND FITTINGS

All corporation stops and curb stops shall be fabricated of brass and shall be provided with outlets suitable for copper connections. Curb stops shall be of the round-way type. Fittings for service pipe shall be copper and of the compression type.

1-2.05 SPECIALTY VALVES

Specialty valves and fittings such as cutting-in valves, tapping sleeves and valves, inserting valves, and air release valves shall conform to the requirements of the Special Provisions and shall be installed at locations indicated on the Plans.

1-2.06 SERVICE METERS AND APPURTENANCES

Service meters and appurtenances shall be located, furnished and installed in accordance with the requirements of the Special Provisions and the Plans. Appurtenances where required may include meter box, meter box cover, meter yoke, corporation cock, curb stop and incidental fittings.

SECTION 2. PIPE INSTALLATION FOR WATER MAINS

2-1 GENERAL

Pipe shall be installed in accordance with the manufacturer's specifications and instructions for the type of pipe used and applicable AWWA standards, such as C600 and C603, unless modified or changed in the Special Provisions.

2-2 CONSTRUCTION

2-2.01 PROTECTION OF WATER MAINS

A. GENERAL

Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

B. HORIZONTAL SEPARATION-WATER MAINS AND SEWERS

1. Water mains shall be located at least ten feet horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.
2. Water mains may be located closer than ten feet to a sewer line when
 - a. local conditions prevent a lateral separation of ten feet; and
 - b. the water main invert is at least 18 inches above the crown of the sewer; and
 - c. the water main invert is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
3. When it is impossible to meet (1) or (2) above, both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe or prestressed concrete pipe, equivalent to water main standards of construction. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling.

C. VERTICAL SEPARATION-WATER MAINS AND SEWERS

1. A water main shall be separated from a sewer so that its invert is a minimum of 18 inches above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main located within ten feet horizontally of any sewer or drain crossed. A length of water main pipe

shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.

2. Both the water main and sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, equivalent to water main standards of construction when:
 - a. it is impossible to obtain the proper vertical separation as described in (1) above; or
 - b. the water main passes under a sewer or drain.
3. A vertical separation of 18 inches between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support the sewer or drain lines to prevent settling and breaking the water main, as shown on the Plans or as approved by the Engineer.
4. Construction shall extend on each side of the crossing until the perpendicular distance from the water main to the sewer or drain line is at least ten feet.

D. WATER SERVICE LINES

1. The horizontal and vertical separation between water service lines and all storm sewers, sanitary sewers, combined sewers or any drain or sewer service connection shall be the same as water main separation described in Sections 2-2.02B and 2-2.01C above.
2. Water pipe described in Sections 2-2.01B, 2-2.01C and 2-2.01D shall be met unless special considerations are covered in the Plans and Special Provisions.

E. SPECIAL CONDITIONS

Conditions in Sections 2-2.01B, 2-2.01C and 2-2.01D shall be met unless special considerations are covered in the Plans and Special Provisions.

F. SEWER MANHOLES

No water pipe shall pass through or come into contact with any part of a sewer or sewer manhole.

2-2.02 EXCAVATION AND BACKFILL

Excavation and backfill for water mains shall conform to the provisions of Division II, Sections 1, 2 and 3 of the Excavation and Cleanup Specifications and the requirements below.

A. DEPTH OF PIPE COVER

Unless otherwise shown on the plans or indicated in the Special Provisions, all pipe shall be laid to a minimum depth of five (5') feet measured from the existing ground surface

or established grade to the top of the barrel of the pipe. In areas subject to subsequent excavation or fill, the mains shall be laid to assure a minimum depth of five (5') feet or to grades shown on the Plans.

B. TRENCH WIDTH

The trench width may vary and depend upon the size of pipe, depth of trench and the nature of the excavated material encountered. In any case, the trench width shall be ample to permit the pipe to be laid and jointed properly and the backfill to be placed and compacted.

C. PIPE FOUNDATIONS

The trench, unless otherwise specified, shall have flat bottom conforming to the grade to which the pipe is to be laid. The pipe shall be laid on sound soil cut true and even so that the barrel of the pipe will have a bearing for its full length. Bell holes shall be excavated for joints. Any part of the trench excavated below grade shall be corrected with an approved material and thoroughly compacted.

D. DEWATERING OF TRENCH

Where water is encountered in the trench, it shall be removed during pipe-laying and jointing operation. Provisions shall be made to prevent floating of the pipe. Trench water shall not be allowed to enter the pipe at any time.

2-2.03 HANDLING OF THE PIPE

All types of pipe shall be handled in such manner as will prevent damage to the pipe or coating. Accidental damage to pipe or coating shall be repaired to the satisfaction of the Engineer or be removed from the job and methods of handling shall be corrected to prevent further damage when called to the attention to the Contractor.

Threaded pipe ends shall be protected by couplings or other means until laid.

The pipe and fittings shall be inspected by the Contractor for defects while suspended above grade.

Dirt or other foreign material shall be prevented from entering the pipe or pipe joint during handling or laying operations and any pipe or fitting that has been installed with dirt or foreign material in it shall be removed, cleaned and re-laid. At times when pipe laying is not in progress, the open ends of the pipe shall be closed by a watertight plug or by other means approved by the Engineer to ensure absolute cleanliness inside of the pipe.

2-2.04 LAYING OF PIPE ON CURVES

Long radius curves, either horizontal or vertical, may be laid with standard pipe by deflections at the joints. If the pipe is shown curved on the Plans and no special fittings are shown, the Contractor can assume that the curves can be made by deflection of the joints with standard lengths of pipe.

Where field conditions require deflections of curves not anticipated by the Plans, the Engineer will determine the methods to be used. No additional payment will be made for laying pipe on curves as shown on the Plans, nor for field changes involving standard lengths of pipe deflected at the joints.

Maximum deflections at pipe joints and laying radius for the various pipe lengths are as found in the following standards:

| | |
|---|---------------------------------------|
| Ductile Iron Pipe Bell and Spigot Joints only Required for Special Conditions | ANSI/AWWA C600 |
| Ductile Iron Pipe Mechanical Joints | ANSI/AWWA C600 |
| Ductile Iron Pipe Push on Joints | NSI/AWWA C-600 |
| Concrete Cylinder Pipe | See Manufacturer's Recommendations |

When rubber gasketed pipe is laid on a curve, the pipe shall be jointed in a straight alignment and then deflected to the curve alignment. Trenches shall be made wider on curves for this purpose.

2-2.05 DUCTILE IRON PIPE

A. JOINTS FOR DUCTILE IRON PIPE

Joints for ductile iron pipe shall be in accordance with the following applicable specifications unless otherwise noted:

1. Mechanical Joints - AWWA C111 and C600
2. Push-On Joints - AWWA C111 and C600

B. JOINTING MECHANICAL JOINT PIPE

The outside of the spigot and inside of the bell of mechanical joint pipe shall be thoroughly cleaned to remove all foreign matter from the joint. The cast iron gland shall then be slipped on to the spigot end of the pipe with the lip extension of the gland toward the socked or bell end. The rubber gasket shall be placed on the spigot end with

the thick edge toward the gland. The pipe shall be pushed forward to completely seat the spigot end in the bell. The gasket shall then be pressed into place within the bell, being careful to have the gasket evenly located around the entire joint. The cast iron gland shall then be moved along the pipe into position and bolted.

Nuts spaced 180 degrees shall be tightened alternately to AWWA C600 Standards in order to produce an equal pressure on all parts of the gland.

C. JOINTING RUBBER GASKET JOINT PIPE (AWWA C111)

The inside of the bell shall be thoroughly cleaned to remove all foreign material from the joints. The circular rubber gasket shall be inserted in the gasket seat provided.

A thin film of gasket lubricant shall be applied to the inside surface of the gasket. Gasket lubricant shall be a solution of vegetable soap or other solution supplied by the pipe manufacturer and approved by the Engineer.

The spigot end of the pipe shall be cleaned and entered into the rubber gasket in the bell, using care to keep the joint from contacting the ground. The joint shall then be completed by forcing the plain end into the seat of the bell. Pipe which is not furnished with depth mark shall be marked before assembly to assure that the spigot end is inserted to the full depth of the joint.

Field-cut pipe lengths shall be bevelled to avoid damage to the gasket and facilitate making the joint.

To insure electrical conductivity on ductile iron pipe water mains, brass wedges shall be installed as follows:

| <u>Pipe Size</u> | <u>Wedges Required</u> |
|------------------|-------------------------------|
| 2" thru 12" | 2 each (180° apart) |
| Above 12" | 2 pair of 2 each (180" apart) |

Caldweld bonding, as approved or specified by Engineer, may also be utilized.

2-2.06 CONCRETE PRESSURE PIPE

A. LAYING CONCRETE PRESSURE PIPE

Pipe shall be laid and jointed in accordance with manufacturer's recommendations and these Specifications. In the absence of manufacturer's recommendations, the AWWA installation manual M-9 shall be used.

B. JOINTING CONCRETE PRESSURE PIPE

All joint surfaces of the bell and spigot (tongue and groove) shall be thoroughly cleaned to remove all dirt and foreign material. The spigot or tongue end of the pipe with the gasket in place and with all surfaces lubricated as recommended by the pipe manufacturer shall be inserted in the bell or groove. The pipe shall then be shoved or pulled home.

The outside annular space at the joint shall be filled with cement mortar or with a preformed joint filler when approved by the Engineer.

The grouting of the outside joints shall be made by wrapping the joint with two bands of strong waterproof Sisalkraft paper or other approved material. The band of paper shall then be tightly strapped to the pipe using tools recommended by the manufacturer. The joints shall then be filled with mortar from one side only, until the mortar appears on the other side of the pipe. Mortar shall be mixed with the least amount of water that will permit placing by the method described. Flexible wires shall be worked around the joint to assist grouting and ensure proper filling of the joint. The top of the pipe shall then be grouted and the paper band laid over the entire joint to protect it while curing.

The inside annular space in pipe 42 inches and larger in diameter shall also be filled with cement mortar and troweled flush. Mortar shall consist of one (1) part portland cement and two (2) parts of plaster sand. Mortar for inside joints shall be mixed with only enough water for "dry packing".

No grouting of joints will be allowed within two joints of laying operations. A representative of the Engineer will be present when joints are being poured.

2-2.07 THRUST BLOCKING

Blocking to prevent movement of lines under pressure shall be placed at all bends, tees, caps, valve and hydrants with Portland Cement Concrete, a minimum of 12" thick, placed between solid ground and the fittings, and shall be anchored in such a manner that pipe and fitting joints will be accessible for repairs.

All bends of 11-1/4 degrees or greater, and all tees and plugs shall be thrust protected to prevent movement of the lines under pressure as shown on the Plans.

Where conditions prevent the use of concrete thrust blocks, tied joints or restrained joints of a type approved by the Engineer shall be used.

2-2.08 CONNECTIONS TO EXISTING MAINS

All connections to water mains in use shall be made by the Contractor unless otherwise provided in the Special Provisions. All crosses or other specials required to be inserted in an existing main shall be furnished and set by the Contractor.

Where the connection of new work to old requires interruption of service and notification of customers affected, the superintendent of the Municipality, and the Contractor shall mutually agree upon a date and time for connections which will allow ample time to assemble labor and materials, and to notify all customers affected.

2-2.09 WATER SERVICE PIPING

A. GENERAL

Water service pipe shall be installed in accordance with provisions in Section 2.

B. EXCAVATION AND BACKFILL

The Contractor shall open side trenches and construct services from the main to such depth and lengths as directed by the Engineer. Unless otherwise directed, depths shall not be less than specified for water mains. Excavation and backfill of side trenches shall be as specified in Division II, Excavation and Cleanup Specifications.

C. LAYING WATER SERVICE PIPE

1. Underground water service pipe shall be laid not less than ten (10') feet horizontally from the building drain, and shall be separated there from by undisturbed or compacted earth.
2. Where conditions in paragraph (1) cannot be met, the water service pipe shall be installed in accordance with the following provisions:
 - a. The bottom of the water service pipe, at all points, shall be at least eighteen (18") inches above the top of the building drain line at its highest point.
 - b. The water service pipe shall be placed on a solid shelf excavated to one side of the common trench.
3. Where both the water service pipe and building drain line are installed with less separation than in paragraph (2) or in the same trench, the building drain line shall be constructed of cast iron soil pipe with push-on joints, type K hard-tempered copper pipe with sweated joints, or rigid plastic pipe as specified in the Illinois State Plumbing Code. The trench shall not be backfilled until the installation is approved by the Engineer.

2-2.10 WATER SERVICE CONNECTION

The Contractor shall make all taps for service connections and install the service pipe, unless otherwise provided on the Plans and in the Special Provisions.

Each water service pipe shall be connected to the water main through a brass corporation stop. The main shall be tapped at an angle of forty-five degrees (45°), with the vertical, and the stop must be turned so that the T-handle will be on top.

The service pipe shall be laid in the trench sufficiently weaving to allow not less than one (1') foot extra length in its entire length.

A curb stop shall be furnished and installed for each service at a location shown on the Plans, specified or as directed by the Engineer. A cast iron service box shall be furnished and installed over the curb stop and held in a truly vertical position, until sufficient backfill has been placed to insure permanent vertical alignment of the box. The top of the box shall be adjusted and set flush with the established ground surface grade.

2-2.11 PRESSURE TESTING OF WATER MAINS

A. PRESSURE TEST

After the pipe has been laid and partly backfilled as specified herein, all newly laid pipe or any valved sections of it shall, unless otherwise expressly specified, be subjected to a hydrostatic pressure equal to 50 per cent more than the operating pressure at the lowest elevation of the pipe section, but not to exceed the pressure rating of the type of pipe specified. The duration of each pressure test shall be for a period of not less than one hour and not more than six hours. The basis provisions of AWWA C603 and C600 shall be applicable, if specified.

B. PROCEDURE FOR TEST

Each section of pipe to be tested, as determined by the Engineer, shall be slowly filled with water and the specified test pressure shall be applied by means of a pump connected to the pipe in a satisfactory manner. The pump pipe shall be furnished by the Contractor. Before applying the specified test pressure, all air shall be expelled from the pipe. To accomplish this, taps shall be made, if necessary, at points of highest elevation and afterwards tightly plugged. Any cracked or defective pipes, fittings, valves, or hydrants discovered in consequence of this pressure test shall be removed and replaced by the Contractor with sound material and the test shall be repeated until satisfactory to the Engineer. Provisions of AWWA C600 and C603, where applicable, shall apply.

C. LEAKAGE TEST

1. After completion of the pressure test, a leakage test shall be conducted to determine the quantity of water lost by leakage under the specified test pressure. Test pressure is defined as the maximum operating pressure of the section under test and is based on the elevation of the lowest point in the line or section under test corrected to the elevation of the test gauge. Applicable provisions of AWWA C-600 and C603 shall apply. Duration of each leakage test shall be a minimum of one (1) hour in addition to the pressure test period.

2. Allowable leakage in gallons per hour for pipeline shall not be greater than that determined by the formula:

$$L = NDP^{1/2}/7400$$

Note: L = Allowable leakage in gallons per hour

N = Number of joints in length of pipeline tested.

D = Nominal diameter of the pipe in inches.

P = Average test pressure during leakage test in pounds per square inch gauge.

3. Leakage is defined as the quantity of water to be supplied in the newly laid pipe or any valved section under test, which is necessary to maintain the specified leakage test pressure after the pipe has been filled with water and the air expelled.
4. Flanged pipe shall be "bottle tight".

2-2.12 DISINFECTION OF WATER MAINS

A. FLUSHING

Sections of pipe to be disinfected shall first be flushed to remove any solids or contaminated material that may have become lodged in the pipe. If no hydrant is installed at the end of the main, then a tap should be provided large enough to develop a velocity of at least two and five-tenths feet (2.5') per second in the main. One two and one-half inch (2-1/2") hydrant openings will, under normal pressures, provide this velocity in pipe sizes up to and including twelve-inch (12").

All taps 2" size and smaller required for chlorination or flushing purposes, or for temporary or permanent release of air shall be provided for by the Contractor as a part of the construction of water mains. Taps larger than 2" shall be paid for as a bid item or as an extra.

B. REQUIREMENT OF CHLORINE

Before being placed into service, all new mains and repaired portions of, or extensions to existing mains shall be chlorinated so that the initial chlorine residual is not less than 50 mg/1 and that a chlorine residual of not less than twenty-five (25 mg/1) remains in the water after standing twenty-four (24) hours in the pipe.

See Division I, Section 7-12 "Use of Fire Hydrants" regarding use of water for flushing and disinfection.

C. FORM OF APPLIED CHLORINE

Chlorine shall be applied by one of the methods which follow subject to approval by the Engineer.

1. LIQUID CHLORINE

A chlorine gas-water mixture shall be applied by means of a solution-feed chlorinating device, or the dry gas may be fed directly through proper devices for regulating the rate of flow and providing effective diffusion of the gas into the water within the pipe being treated. Chlorinating devices for feeding solutions of the chlorine gas, or the gas itself, must provide means for preventing the backflow of water into the chlorine.

2. CHLORINE-BEARING COMPOUNDS IN WATER

A mixture of water and high-test calcium hypochlorite (65-70%Cl₂) may be substituted for the chlorine gas water mixture. The dry powder shall first be mixed as a paste and then thinned to a one per cent (1%) chlorine solution by adding water to give a total quantity of seven and five-tenths (7.5) gallons of water per pounds of dry powder. This solution shall be injected in one end of the section of main to be disinfected while filling the main with water in the amounts as shown in the table which follows:

| Chlorine Requirements to Produce 50 mg/1 Concentration in 100 Foot of Pipe - By Diameter | | |
|---|------------------------------|---------------------------------------|
| Pipe Size <u>Inches</u> | 100% <u>Chlorine, Lb.</u> | 1% Chlorine <u>Solution, Gals.</u> |
| 4 | 0.027 | 0.33 |
| 6 | 0.061 | 0.73 |
| 8 | 0.108 | 1.30 |
| 10 | 0.170 | 2.04 |
| 12 | 0.240 | 2.88 |

3. ***TABLET DISINFECTION***

Tablet disinfection is best suited to short extensions (up to 2500 ft.) and smaller diameter mains (up to 12-inches). Since preliminary flushing must be eliminated in using this method, it should be utilized only when scrupulous cleanliness has been used in construction. It shall not be used if trench water or foreign material has entered the main or if the water is below 41°F.

Tablets should be placed in each section of pipe, hydrants, hydrant branches and other appurtenances. Tablets must be at the top of the main and shall be attached by an adhesive, such as Permatex No. 1 or any alternative approved by the Engineer. Tablets in joints between pipe sections, hydrants, hydrant branches or appurtenances are to be crushed and placed inside the annular space, rubbed like chalk in butt ends of sections to coat them if the type of assembly does not permit crushing.

In filling a section of piping with water when using the tablet method, water velocity shall be less than one foot (1') per second.

Number of 5-Grain Hypochlorite Tablets Required
For a Dosage of 50 mg/1 per Length of Pipe Section

| <u>Pipe Size,</u> <u>Inches</u> | <u>Length of Pipe Section</u> <u>Foot</u> | | | | |
|------------------------------------|--|-----------|-----------|-----------|-----------|
| | <u>Up to 13</u> | <u>18</u> | <u>20</u> | <u>30</u> | <u>40</u> |
| 2 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 2 | 2 | 2 |
| 6 | 2 | 2 | 3 | 3 | 4 |
| 8 | 2 | 3 | 4 | 5 | 6 |
| 10 | 3 | 5 | 7 | 7 | 9 |
| 12 | 5 | 6 | 10 | 10 | 14 |

D. ***POINT OF APPLICATION***

The preferred point of application of the chlorinating agent is at the beginning of the pipe line extensions or any valved section of it, and through a corporation stop inserted in the pipe. The water injector for delivering the chlorine-bearing water into the pipe should be supplied from a tap made on the pressure side of the gate valve controlling the flow into the pipe line extension. Alternate points of application may be used when approved by the Engineer.

E. ***PREVENTING REVERSE FLOW***

Valve shall be manipulated so that the strong chlorine solution in the line being treated will not flow back into the line supplying the water. Check valves may be used if desired.

F. RETENTION PERIOD

Treated water shall be retained in the pipe at least twenty-four (24) hours. After this period, the chlorine residual at pipe extremities and at other representative points shall be at least twenty-five (25) mg/1.

G. CHLORINATING VALVES AND HYDRANTS

In the process of chlorinating newly laid pipe, all valves or other appurtenances shall be operated while the pipe line is filled with the chlorinating agent and under normal operating pressure.

H. FINAL FLUSHING AND TESTING

Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipe at its extremity until the replacement water throughout its length shows upon test, a chlorine residual of less than 1 mg/1. In the event chlorine is normally used in the source of supply, then the test shall show a residual of not in excess of that carried in the system.

After flushing, water samples collected on two (2) successive days from the treated piping system, as directed by the Engineer, shall show satisfactory bacteriological results. Bacteriological analyses must be performed by a laboratory approved by the Illinois Department of Public Health.

I. REPETITION OF FLUSHING AND TESTING

Should the initial treatment result in an unsatisfactory bacterial test, the original chlorination procedure shall be repeated by the Contractor until satisfactory results are obtained.

2-2.13 MEASUREMENT

In addition to the items listed for separate measurement and payment in Division II, Excavation and Backfill for Underground Conduits, and Restoration of Surfaces, the following items shall be measured for payment when required for water main construction:

WATER MAIN:

Water main shall be listed in the bid items by size and type, and shall be measured in lineal feet, slope measurement, along the center line without deduction for valves and fittings. However, when the water main terminates in a hydrant valve or other main connection, measurement shall be from the center of the hydrant valve or other main connection.

GATE VALVES AND VALVE BOXES OR VAULTS

Gate valves and valve boxes of the size required shall be measured for payment as an installed unit.

BUTTERFLY VALVES

Butterfly valves of the type and size required shall be measured for payment as an installed unit.

CAST OR DUCTILE IRON FITTINGS

Cast or Ductile iron fittings shall be measured for payment by the pound, or by units as shown on the Proposal Form. The weight of accessories shall be included as part of the weight of the fittings. Shipper's invoice weight shall be taken as the weight for payment purposes, subject to confirmation by actual weighing near the site if there is reason to doubt the accuracy of invoice weights.

SERVICE PIPE

Service pipe of the size and type required shall be measured by the lineal foot for installed length, or by units (Long Tap or Short Tap) as shown as a Bid item.

FIRE HYDRANTS

Fire hydrants by size and type required shall be measured for payment as an installed unit complete with accessories and thrust blocking. Where a gate valve is required on the connection between the water main and the fire hydrant, the gate valve shall be included with the payment for fire hydrant.

SPECIALTY VALVES

Specialty valves shall be measured as an installed unit by size and type required.

WATER MAIN IN TUNNEL

Water Main in Tunnel, Water Main Jacked or Water Main in Casing of the size and type indicated shall be measured in lineal feet installed in accordance with requirements of the Plans.

CONNECTIONS TO EXISTING MAINS

Where shown as a separate pay item, this work will be measured for separate payment. If not shown as a separate bid item, this work will be included as an incidental expense in the unit price for water main. In no event will payment be made when separate payment is provided for a tapping sleeve and a tapping valve.

THRUST BLOCKING AND RESTRAINED JOINTS

Unless otherwise provided in the Special Provisions, thrust blocking, restrained joints or ties as specified shall be included as an incidental expense in the payment for water mains and shall not be measured for separate payment.

SECTION 3. GATE VALVES FOR WATER MAINS

3-1 DESCRIPTION

The valves shall be suitable for ordinary waterworks service, intended to be installed in a normal position on buried pipe lines for water distribution systems.

The minimum requirements for all gate valves shall, in design, material and workmanship, conform to the standards of the latest AWWA C500. All materials used in the manufacture of waterworks gate valves shall conform to the AWWA standards designed for each material listed.

3-2 MATERIALS

3-2.01 MANUFACTURE AND MARKING

The gate valves shall be standard pattern and shall have the name or mark of the manufacturer, size and working pressure plainly cast in raised letters on the valve body.

3-2.02 TYPE AND MOUNTING

The valve bodies shall be cast iron, mounted with approved non-corrosive metals. All wearing surfaces shall be bronze or other approved non-corrosive material and there shall be no moving bearing or contact surfaces of iron in contact with iron. Contact surfaces shall be machined and finished in the best workmanlike manner, and all wearing surfaces shall be easily renewable.

All gate valves shall be two-faced, non-rising stem, double disc, with parallel sets of bronze or other approved wedging devices placed between them. The stem shall be of high tensile strength bronze or other approved non-corrosive metal. All nonferrous bushings shall be of substantial thickness tightly fitted and pressed into machined seats. All valves shall open by turning to the left counter-clockwise, unless otherwise specified. Consideration shall be given to types of bronze used where high galvanic waters (high pH or specific conductance) are present. See AWWA C500. Paragraph 2.2.3.4.

3-2.03 END CONNECTIONS

End connections of gate valves shall consist of one of the following types unless otherwise provided in the Special Provisions or shown on the Plans:

- A. Mechanical Joints
- B. Push-On (Rubber-gasket) Joints
- C. Bell End Joints, lead (only where required for special conditions)
- D. Flange Joints
- E. Screwed or Threaded Joints.

3-2.04 GATE VALVES 16-INCH AND LARGER

Gate valves sixteen (16") inch and larger to be installed in a horizontal position in a horizontal pipeline shall be of the double-disc type and shall be equipped with solid-bronze (Grade I or IV) or 300 series stainless steel tracks securely fastened in body and bonnet. The weight of the gates shall be carried on rollers throughout their entire length of travel. For double-disc valves of the rolling-disc type, the discs shall serve as rollers. For double disc valves or other than the roller disc type, the discs shall be carried on solid-bronze) Grade I, II, III, or IV) rollers securely attached to them. All valves shall be equipped with bronze scrapers to traverse the tracks ahead of the rollers.

Valves sixteen (16") inch and larger installed in a vertical or inclined lines shall be equipped with tracks manufactured of an acceptable grade of bronze or 300 series stainless steel secured to the valve body and bonnet to support the lower disc during operation, and equipped with slides to assist the travel of the gate assembly.

They shall be non-rising stem type and shall be equipped with approved rugged gate position indicators. The valves shall be provided with handwheels of ample proportion.

All gears on gate valves shall be cut tooth steel gears housed in heavy cast iron grease cases or approved design.

When manually operated gate valve sixteen (16") inches and larger are required, they shall be equipped with a by-pass and by-pass valve. By-pass valve shall be of the same type as the main valve, shall be equipped with handwheel and shall have the stem in a vertical position unless otherwise indicated. Sizes shall be as follows:

| <u>Valve Diameter (Inches)</u> | <u>By-Pass Diameter (Inches)</u> |
|--------------------------------|----------------------------------|
| 16 to 20 | 3 |
| 24 and 30 | 4 |
| 36 and 42 | 6 |
| 48 and larger | 8 |

All gate valves sixteen (16") and larger shall be geared with gearing designed for handwheel operation. Gear ratios shall not be less than as follows:

| <u>Valve Diameter (Inches)</u> | <u>Gear Ratio</u> |
|--------------------------------|-------------------|
| 16 | 2:1 |
| 20 | 2:1 |
| 24 | 2:1 |
| 30 | 3:1 |
| 36 | 3:1 |
| 42 | 4:1 |
| 48 | 4:1 |

3-2.05 GATE VALVE STEM SEALS

All gate valves of size twelve (12") inches shall be furnished with two (2) pressure actuated O-ring stem seals, with one (1) O-ring below the stem thrust collar and bearing surfaces and one (1) O-ring above. The area between the O-rings shall be filled with a lubricant to give continuous lubrication to the stem collar and bearing surfaces so as to provide long-term ease of operation. An upper and lower stem collar bushing of an acceptable grade of bronze shall be acceptable in lieu of the above if the stem collar and bearing surfaces are exposed to internal water pressure.

Valves larger than twelve (12") inches shall be as described above unless they are required to be furnished with extended stems with gear cases, in which case they shall be furnished with adjustable stuffing boxes so that they may be repacked without the need to disassemble and remove the gear case.

3-2.06 WRENCH NUTS

Wrench nuts shall be made of cast iron and shall be one and fifteen-sixteenths (1-15/16") inches square at the top, two (2") inches square at the base, one and three-fourths (1-3/4") inches high, unless otherwise designated in the Special Provisions. Nuts shall have a flanged base upon which shall be cast an arrow at least two (2") inches long showing the direction of opening. The word "Open" in one-half (1/2") inch or larger letters shall be cast on the nut to clearly indicate the direction of opening the valve.

3-2.07 TAPPING VALVES

Tapping valves shall be furnished with flanged inlet end connections having a machined projection on the flanges to mate with a machined recess on the outlet flanges of the tapping sleeves and crosses. The outlet ends shall conform in dimensions to the AWWA Standards for hub or mechanical joint conditions, except that the outside of the hub shall have a large flange of attaching a drilling machine. The seat opening of the valves shall be larger than normal size to permit full diameter cuts. Tapping sleeve or cross shall be of the same manufacturer as the tapping valve.

3-2.08 HYDROSTATIC TEST PRESSURE AT FACTORY

Each gate valve shall be tested at the factory for performance and operation prior to painting and shall be subjected to the following hydrostatic pressure tests: each three (3") inch to twelve (12") inch valve, inclusive, shall be subject to hydrostatic pressure test under pressures of both three hundred (300) psi and one hundred seventy-five (175) psi, and each sixteen (16") inch to forty-eight (48") inch valve, inclusive, shall be subject to test pressures of three hundred (300) psi and one hundred fifty (150) psi. These tests shall be conducted in accordance with provisions of AWWA C500. Tests for special valves shall be made as provided in the Special Provisions.

3-2.09 PAINTING AT THE FACTORY

After the factory test and inspection and before leaving the factory, all ferrous parts of the valves except finished or bearing surfaces shall be painted inside and out with a rust preventative compound.

3-3 *INSTALLATION OF GATE VALVES*

All gate valves shall be inspected upon delivery in the field to insure proper working order before installation. They shall be set and jointed to the pipe in the manner as set forth in the AWWA Standards for the type of connection ends furnished.

Valves twelve (12") inch and under shall be installed in a vertical position and be provided with a standard valve vault or case iron valve box so arranged that no shock will be transmitted to the valve. The box shall be centered over the operating nut, and the cast iron box cover shall be set flush with the road bed or finished surface.

After installation, all valves shall be subjected to the field test for piping as outlined in Section 2. of these specifications. Should any defects in materials or workmanship appear during these tests, the Contractor shall correct such defects with the least possible delay and to the satisfaction of the Engineer. Should the Contractor fail to do this within a reasonable period of time in the judgment of the Owner, he may cause such defects to be corrected and deduct the cost thereof from any money or payments due or to become due the Contractor.

SECTION 4. BUTTERFLY VALVES FOR WATER MAINS

4-1 DESCRIPTION

Butterfly valves to be installed in water main distribution systems shall conform to AWWA C504-70 specifications. As specified, a valve may be one of the following type or classes as designated by Plans or Special Provisions.

- A. Wafer Valves - Class 150B, in sizes through 20 inches
- B. Short-Body Valves - All classes, in 3 to 72 inch sizes
- C. Long Body Valves - Class 75A, 75B, 150A and 150B in 3 to 72 inch sizes.
- D. Mechanical Joint End Valves - Class 150B in size 3 through 20 inch diameter and all classes in 30 inch through 48 inch diameter sizes.

End connections shall consist of one of the following types as provided in the Special Provisions or as shown on the Plans:

- A. Mechanical Joints
- B. Push-On (Rubber-gasket) Joints
- C. Flange Joints
- D. Screw or Threaded Joints

4-2 DATA TO BE FURNISHED BY CONTRACTOR

If required, the Contractor shall submit for approval by the Engineer drawings showing the principal dimensions, general construction and materials used for all parts of the valves and operator. All work shall be done and all valves shall be furnished in accordance with these drawings after they have been approved by the Engineer.

4-3 WORKMANSHIP

Valve parts shall be designated, and manufacturing tolerances set, to provide interchangeability of parts between units of the same size and produced by any one manufacturer. When assembled, valves manufactured in accordance with this standard shall be well-fitted and smooth running, and body and shaft seal shall be watertight. All equipment shall be guaranteed against defects in workmanship or materials for one (1) year after installation or two (2) years after shipment, whichever time elapses first.

4-4 MARKINGS

Markings for other than wafer valves shall be cast on the body or shall be on cast plates with raised letters, attached to the valve body. The markings shall show the valve size, manufacturer, class and year of manufacture. The minimum size of letters shall be 1/4 inch for valves 3 to 12 inches in diameter, and

1/2 inch for valves larger than 12 inches in diameter. Corrosion- resistant plates attached to the body and with 1/8 inch etched or engraved letters may be used for markings on wafer valves.

4-5 PAINTING

Unless otherwise specified, all internal steel or cast iron surfaces of each valve, except finished or bearing surfaces, shall be shop painted with two (2) coats of asphalt varnish conforming to Federal Specification TT-V-51f, and exterior steel or cast iron surfaces of each valve, except finished or bearing surfaces, shall be shop painted with two (2) coats of zinc chromate conforming to Federal Specification TT-P-645A; or, in the case of valves for buried service, with two (2) coats of asphalt varnish conforming to Federal Specification TT-V-51f.

4-6 TESTS

Each butterfly valve shall be tested for leakage in the manufacturer's shop and such leakage shall conform to AWWA C504.

SECTION 5. VALVE VAULTS AND BOXES FOR WATER MAINS AND WATER SERVICES

5-1 GENERAL

This section shall apply to the construction of standard valve vaults or chambers, special valve vaults or changers, cast iron valve boxes, curb boxes and meter boxes, all in accordance with the Standard Drawings.

Deep valves shall be provided with cast iron valves boxes set over the operating stem, except where otherwise specified or shown on the Plan.

5-2 MATERIALS

5-2.01 RING AND COVER AND VALVE BOX CASTINGS

Castings for cast iron ring and cover and for cast iron parts of valve boxes shall conform to the requirements of Standard Specifications for Gray Iron Castings, ASTM. Designation A-48.

5-3 CONSTRUCTION DETAILS

5-3.01 VALVE VAULT (OR BASINS)

Valve vaults (or basins) may be either pre-cast or cast-in-place only, according to the details shown on the drawings. Applicable provisions of Division II, Sanitary Sewers and Storm Sewers, Section 4 shall govern construction of valve vaults and chambers.

5-3.02 CAST IRON VALVE BOXES

Cast iron valve boxes as shown on the drawing are placed for enclosing gate valves of small size in lieu of gate valve chambers.

Adjustable cast iron valve boxes shall be set to position during backfilling operations so they will be in a vertical alignment to the gate valve operating stem. The lower casting of the unit shall be installed first in such a manner as to be cushioned and to not rest directly upon the body of the gate valve or upon the water main. The upper casting of the unit shall then be placed in proper alignment into such an elevation that its top will be a final grade. Backfilling around both units shall be placed and compacted to the satisfaction of the Engineer.

5-3.03 CURB BOXES

Curb boxes shall be screwed type, with the base threaded to attach to the curb stop or shall be Buffalo or "arch" type, and of such construction that it shall be capable of extension to finished grade. The type of curb box shall be shown on the Plans, or indicated in the Special Provisions.

SECTION 6. FIRE HYDRANTS

6-1 DESCRIPTION

These specifications are to be used in conjunction with the AWWA Standard C502 for dry barrel fire hydrants for ordinary water works service.

6-2 MATERIALS

6-2.01 MATERIALS FOR HYDRANTS AND APPURTENANCES

Hydrants shall be of a manufacture and pattern approved by the Owner. The name or mark of the manufacturer, size of valve opening, and year of manufacturer shall be clearly cast in raised letters on the upper barrel section above finished grade.

Hydrants shall be designed for a working pressure of 150 psi, and equipped with not less than two (2) O-ring stem seals. Hydrant body castings shall be manufactured of cast iron or ductile iron. The lower barrel section, elbow (shoe) casting, and flanges below grade shall be either cast iron or ductile iron.

Hydrants shall be internally mounted with approved non-corrodible metals and in such a way that parts working together shall not both be iron or steel. Consideration shall be given to type of bronze used where high galvanic waters (high pH or specific conductance) is present. See AWWA C502, paragraph 2.8.

All wearing and working internal parts shall be accurately machined, easily renewable, and shall be removable through the top of the hydrant.

Lugs, if required for harnessing the hydrant to the connecting pipe from the main in the street, shall be provided on the bell of the elbow or on the hydrant bottom casting. A drawing of the lug construction shall be submitted for approval on request of the Engineer.

The hydrant barrel shall be provided with a clearly marked circumferential rib to denote the intended ground line. There shall be a flange above this point at a sufficient height to permit access to the flange. Unless indicated otherwise on the Plans, hydrants shall be of the "traffic" or "break-away" design with easily replaceable breaking devices for the gradeline flange and operating stem that prevent damage to barrel sections upon impact.

6-2.02 HYDRANT DETAILS

Unless required otherwise to conform to the Owner's existing equipment and specifications, the following hydrant details shall be provided:

Bury (trench) depth shall be as shown on the Plans.

When tested in accordance with AWWA C502, friction losses through the hydrant shall not exceed the maximum permissible losses listed in Table 3, AWWA C502.

Hydrants with six (6") inch inlet connections shall be furnished with two (2) 2-1/2 inch hose nozzles and one (1) 4-1/2 inch pumper nozzle. Hydrants with 4 inch inlet connections shall be furnished with two (2) 2-1/2 inch hose nozzles.

All nozzles shall be manufactured of an acceptable grade of bronze, properly secured to the barrel section to prevent blowing out, and accurately threaded in accordance with National Standard Hose Coupling Thread Specifications, or to match Owner's existing or as indicated in the Special Provisions.

All nozzles shall be furnished with inside threaded cast iron caps fitted with suitable gaskets for positive water tightness under test pressure. Operating nut and nozzle cap wrench nuts shall be 1-1/2 inch pentagon, measured from point to opposite flat at the base, tapering uniformly to 1-7/16 inch at the top, and the height of the nut shall be not less than 1 inch. Nozzle caps shall be securely chained to the upper barrel section.

The hydrant shall open by turning to the left (counter-clockwise) and the direction of opening shall be permanently and clearly marked on the bonnet assembly near the operating nut.

6-2.03 FACTORY HYDROSTATIC TEST

Before the hydrant is painted at the factory, it shall be subjected to an internal hydrostatic test of 300 pound per square inch with the hydrant valve in a closed position and again with the hydrant valve in an open position.

6-2.04 PAINTING

All iron parts of the hydrant both inside and outside shall be thoroughly cleaned and painted. All inside surfaces and the outside surfaces below the ground line shall be coated with asphalt varnish. They shall be covered with two coats, the first having dried thoroughly before the second is applied.

The outside of the hydrant above the finished ground line shall be thoroughly cleaned and thereafter painted with one coat of paint of a durable composition, and one additional coat of a color specified by the Owner.

6-3 CONSTRUCTION DETAILS

Hydrants shall be installed at the locations as shown on the Plans. They shall be plumb and shall be set so that the lowest hose connection is at least twenty-four (24") inches above the surrounding finished grade. All hydrants shall be inspected in the field upon delivery to the job to insure proper operation before installation. A minimum of 1/4 cubic yard of coarse stone, broken concrete, or like material shall be placed at and around the base of the hydrant to insure proper drainage of the hydrant after use. The

blocking of the hydrant shall consist of a wedge of P.C. Concrete of not less than 1/4 cubic yard extending from the hydrant to undisturbed soil and shall be so placed to form a solid barrier adjacent to the hydrant base to counteract the pressure of water exerted thereon. Care shall be taken to insure that weep holes are not covered by concrete. The hydrant shall be set on a concrete block to insure a firm bearing for the hydrant base. The hydrant, valve and tee shall be interconnected by steel rods if required by Special Provision. The resetting of existing hydrants and moving and reconnecting of existing hydrants shall be handled in a manner similar to a new installation.

SECTION 7. PRESSURE CONNECTION

7-1 GENERAL

These Specifications cover the installation of fittings and valves on water mains while the mains are under operating pressure. Special Considerations will be covered in the Plans and Special Provisions.

Specification references made herein for manufactured material such as valves, saddles, tees, and fittings refer to designations for American Water Works Association (AWWA), or to American National Standards Institute (ANSI), as they are effective on the date of call for bids.

Copies of these publications may be obtained at nominal cost from The American Water Works Association, 6666 West Quincy Avenue, Denver, Colorado 80235, and from the American National Standards Institute, 1430 Broadway, New York, New York 10018.

7-2 DEFINITION OF TERMS

The following definitions shall apply to the terms used in this section.

PRESSURE TAPPING

A procedure by which a hole is cut into a water main under pressure, without taking the main out of service. A Tapping Fitting is attached, pressure tight, around the main. A Tapping Valve is then attached to the outlet of the Tapping Fitting, and a Tapping Machine is attached to the Tapping Valve, allowing the pressure tapping operation to begin.

TAPPING MACHINE

Any one of several machines designed and constructed for pressure tapping ductile iron, cast iron, steel, plastic, asbestos cement, or concrete water main. The Tapping Machine has a means of rotating and advancing a Shell Cutter through the side wall of the main being tapped. The Machine is pressure tight when bolted to the tapping valve. This allows the cut to be made without taking the main out of service, or losing pressure.

PILOT DRILL

The forward part of the Tapping Machine Boring Bar, which first penetrates the main. The Pilot Drill provides alignment for the Shell Cutter. The Pilot Drill must have latches, clips, or other approved means of retaining the Coupon as it is severed from the body of the main.

SHELL CUTTER

A hollow, cylindrical cutter, with teeth on its periphery; resembling a hole saw. The Shell Cutter is concentric with the Pilot Drill. The Shell Cutter removes the portion of the main called the Coupon, completing access to the main.

COUPON

That portion of the existing main removed by the Shell Cutter and held by the Pilot Drill, to be subsequently removed as the Pilot Drill-Shell Cutter assembly is withdrawn into the Tapping Machine adaptor.

TAPPING VALVE

Any full ported gate valve, which will allow the Shell Cutter to pass through it and effect the pressure tap.

TAPPING FITTING

Also called Sleeve, Saddle, or Tapping Tee; a two or three-piece bolted fitting, split to allow placement over the main to be pressure tapped.

7-3 MATERIALS

The type of valves and fittings to be used in the Pressure Connection will be specified in the Plans and Special Provisions.

7-4 VALVES

Valves shall conform to AWWA C500. All valves over 16" diameter should generally be provided with by-passes. Horizontal Valves shall have tracks, rollers, scrapers, and enclosed steel cut bevel gears.

7-5 TAPPING FITTINGS

Cast Iron Material shall conform to AWWA C110. Steel fittings shall have a factory-applied epoxy coating. All bolts and other fastening devices shall be stainless steel or other corrosion resistant material.

7-6 INSTALLATION PROCEDURE

The existing water main shall be uncovered and exposed to allow calipering of the pipe in advance of the pressure connection. If the main is reinforced concrete, or reinforced concrete cylinder pipe, the manufacturer shall be consulted for specifications, procedures, and design data.

Sufficient length of main shall be exposed to allow for operation of the tapping machinery. The main shall be supported on concrete pedestals, as detailed on the Project Plans, at sufficient intervals to properly carry its own weight, plus the weight of the tapping machinery and fitting. Any damage to the main due to improper or insufficient supports shall be repaired at the Contractor's expense.

After the tapping saddle or tee has been mounted on the main the tapping valve shall be bolted to the outlet flange, making a pressure tight connection.

The tapping machine, by means of a special adaptor shall then be bolted to the outlet flange of the tapping valve, also making a pressure tight connection. After the tapping machine is in place the installation shall be pressure tested at operating pressure plus 50%, to insure the integrity of the installation. Water under pressure can be introduced through a port in the tapping machine. The

tapping machine and the fitting shall be externally supported, so that no additional weight is placed upon the main.

The tapping valve shall then be opened; allowing the shell cutter-pilot drill assembly to advance through the valve body unit contact is made with the wall of the main. With the tapping machine's feed set, power shall be supplied, starting rotation of the cutter-pilot drill assembly.

The minimum diameter cut permitted shall be specified by the Design Engineer. For pressure taps through 12" diameter the minimum diameter shall be 1/2" less than the nominal diameter of the pipe to be attached. For 14" through 20" installations the minimum diameter shall be 1-1/2" less; for larger taps the allowable minimum diameter shall be 2" - 3" less than the nominal diameter of the pipe being attached.

When the pilot drill penetrates the wall of the main, the nozzle, valve body, and tapping machine will be filled with water. The bleeder valve on the tapping machine will indicate the presence of water. The cut shall be continued for a sufficient period of time after this indication to allow the coupon to be completely severed from the wall of the main.

The coupon shall be retained on the pilot drill by means of latches, spring detents, wire clips, or threads on the pilot drill; depending upon the make of the tapping machine. As the boring bar is retracted the coupon, pilot drill, and shell cutter return back into the tapping machine adaptor.

At this time the tapping valve shall be closed, sealing the main. The tapping machine shall be removed, and the valve shall be opened to flush any foreign material.

The same procedure shall be followed for the insertion of other fittings.

7-7 EXCAVATION AND BACKFILL

Excavation and Backfill for pressure connections shall conform to the provisions of Division II, Section 1, 2 and 3.

Poured concrete thrust blocks shall be provided to prevent movement of the installation when main pressure is applied.

SPECIAL PROVISIONS

**SPECIAL PROVISIONS
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**VILLAGE OF SOUTH HOLLAND
THORN DITCH FLOOD MITIGATION PROJECT
SPECIAL PROVISIONS**

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2022 (referred to as "Standard Specifications"); the latest editions of the "Supplemental Specifications and Interim Special Provisions" and the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways"; the "Manual of Test Procedures for Materials" in effect on the date of the invitation for bids; the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois"; the Division I General Requirements and Covenants, which apply to and govern the proposed improvement designated as Village of South Holland, Thorn Ditch Flood Mitigation Project, and in case of conflict with any part, or parts, of said specifications, the said special provisions shall take precedence and shall govern.

However, in all cases, the Division I General Requirement and Covenants of the specifications shall take precedence over the Division 100 General Requirements and Covenants of the Standard Specifications for Road and Bridge Construction and shall govern, unless specifically noted herein.

LOCATION OF PROJECT

This project is located in the Village of South Holland, IL along Thorn Ditch from west of Dobson Avenue to east of Kenwood Avenue and within the property limits of Maicach Park and Pioneer Park. The limits of the project include the Village park properties, existing drainage and utility easements along the ditch and right-of-way on Dobson Avenue, Greenwood Avenue, Woodlawn Avenue, Kimbark Avenue, and Kenwood Avenue.

DESCRIPTION OF PROJECT

This project consists of removing the existing corrugated metal pipe culverts along Thorn Ditch within the project limits and replacing the pipes with new concrete box culverts. Additional drainage improvements include the construction of new stormwater management areas and associated storm sewer within Pioneer Park and Maicach Park. Site improvements include new aggregate walking paths within the park areas and relocation of an existing Steel Truss Pedestrian Bridge and construction of a new Pedestrian Bridge at Maicach Park. Work will include excavation, aggregate base, asphalt pavement, concrete sidewalks, catch basins, storm manholes and inlet structures, storm sewer pipe, curb and gutter, restoration and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

PREQUALIFICATION

The Contractor shall have sufficient experience, as determined by the Village and its representatives, in the field of earthwork and underground utility construction to warrant release of the bid documents. Prequalifications will be required to be submitted to the Engineer by all potential bidders prior to receiving a bid book. The Contractor shall have completed a minimum of 5 utility projects for an Illinois or Indiana municipality within the last 10 years, of which the total utility work performed by the Contractor represented at least \$1,000,000 of each contract. If in the opinion of the President and Board of Trustees, an applicant would not be able to serve the best interest of the Village of South Holland, a proposal will not be issued to the applicant.

The Contractor shall provide such documentation as is deemed necessary upon request. If this information is not satisfactorily completed, the bid documents shall be withheld and/or the proposal returned unopened.

MWRDGC & COUNTY ARPA FUNDING REQUIREMENTS

This project is funded via an Intergovernmental Agreement (IGA) between the Village of South Holland and the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC or MWRD). The Contractor shall comply with the applicable portions of MWRD's Purchasing Policy, Multi-Project Labor Agreement, and the Affirmative Action Ordinance and Diversity Policies. These documents are included within the bid and contract documents.

The MWRD and Cook County have executed a Subrecipient Agreement in which Cook County agreed to provide County ARPA funding to the MWRD for construction of specific preapproved stormwater management projects, one of which is the South Holland Thorn Ditch Flood Mitigation Project. Therefore, this Contract and all Subcontracts for this Project shall comply with all the provisions stipulated in the ARPA Subrecipient Agreement including but not limited to 2 CFR 200.303, 2 CFR 200.331-333, 2 CFR Part 200, Subpart E, and 2 CFR Part 200 Subpart F (Exhibit 1, Section 10.2).

MWRD is providing five million eight hundred and sixty thousand and 00/100 dollars (\$5,860,000.00) in funding for the project, also known as the total amount of reimbursement. This contract must meet the following participation goals for the construction phase. At least 20% of the total amount of reimbursement provided by the MWRD for the Project shall be applied to work performed by Minority-owned Business Enterprises ("MBE") and at least 10% of the total amount of reimbursement provided by the MWRD for the project shall be applied to work performed by Women-owned Business Enterprises ("WBE"). The MWRDGC IGA for this project has set a goal of 3% of the total reimbursement amount for Veteran-owned Business Enterprises (VBE). The Contractor shall make every possible effort to meet this goal.

The successful bidder shall assist the Village in the completion of a Utilization Plan for MBE/WBE participation and a VBE Commitment Form and the Affirmative Action Status Report, and furnish to the Village a current letter from a certifying agency that verifies the MBE/WBE/VBE status of each vendor listed as a subcontractor on the MBE/WBE Utilization Plan and VBE Commitment Form. A certification letter will be deemed current so long as its expiration date is after the date of the Utilization Plan or Commitment Form. This shall be completed after award and prior to beginning construction.

With each payment request, the Contractor must include the following: (1) a MBE/WBE and VBE Status Report on the enclosed form; (2) full or partial lien waivers from the participating MBE/WBE/VBE vendors, as applicable; and (3) proof of payment to the participating MBE/WBE/VBE vendors (e.g., canceled checks), as applicable.

Compliance with this special provision will not be paid for separately and shall be included in the cost of various contract items. See the MWRDGC Requirements Section included in this bid book for additional information.

PERMITS AND LICENSURE

The Contractor shall be responsible for completing all work in accordance with the requirements set forth in the USACOE permit, NPDES permit, as well as the provisions of this contract.

The contractor and all subcontractors must be licensed and bonded with the Village of South Holland Department of Planning, Development, and Code Enforcement (16220 Wausau Avenue, Phone No. 708-210-2900) and also provide proof of insurance, including workman's compensation insurance prior

to the commencement of any work. Contractors and subcontractors who begin work that have not been licensed, bonded and provided proof of insurance to the Department of Planning, Development and Code Enforcement shall cease work and have the cost of any outstanding fees doubled. Monetary penalties may also be applied to the cost of the license.

INSURANCE COVERAGE

The Insurance Requirements can be found in Section 7 of the General Requirements "Legal Relations and Responsibility to the Public". The Contractor and any Subcontractors shall obtain and thereafter keep in force for the term of the contract the insurance coverage specified in this section. The Contractor shall not commence work under the Contract until all the insurance required by this section or any Special Provision has been obtained.

Section 7-2.02E Pollution Liability **WILL** be required as part of this project.

Section 7-2.02F Professional Liability **WILL** be required as part of this project.

GUARANTEE

All materials and equipment shall be guaranteed for a period of two (2) years from the date of written acceptance by the Village. Upon receipt of notice from the Village of failure of any part of the system during the guarantee period, new replacement parts shall be furnished and installed by the Contractor at no additional cost to the Village of South Holland.

FUNDING LIMITS

The Village has budgeted a specific amount of funds for the construction of this project. It is recognized that the cost to complete the work at all locations listed within these special provisions and the contract drawings may vary from the budgeted amount. The quantities called for in this contract indicate the estimated amount of work to be expected. The actual amounts for the various items may vary depending upon actual field conditions. Bidders are hereby notified that the Village reserves the right to reduce or increase the scope of project quantities and to delete entire line items at its sole discretion. It shall be understood and agreed that the contract unit prices shall prevail regardless of changes to the contract quantities which may be made subsequent to the contract award and that no additional compensation per unit price or otherwise will be allowed for any increase or decrease in the quantities including, but not limited to, decreases due to the deletion of an entire location/section of the improvement. No increase in unit price will be allowed if the method of construction changes due to increased or decreased quantity. By submitting a bid, the successful bidder agrees to be bound by said unit prices and will not make claims for adjustments due to work which may be added or deleted from the project.

PARTIAL PAYMENTS

Division 1 GENERAL REQUIREMENTS AND COVENANTS Section 9-6 PARTIAL PAYMENTS shall be modified as follows: Once each month, the Contractor will make an approximate estimate, in writing, of the materials in place complete, the amount of Work performed, and the value thereof, at the contract unit prices. From the amount so determined of completed work there shall be an amount retained until after the completion of the entire Work to the satisfaction of the Owner, and the balance certified to the Owner for payment. The amount retained will be in accordance with 30ILCS 550/1.

COMPLETION SCHEDULE

The contractor is advised that work shall be substantially completed on or before June 1, 2026. Final Completion of all work items, punchlist items, stabilization and seeding shall be on or before October 1,

2026. Should the Contractor fail to comply with the listed dates, the provisions of Section 108.09 shall be applied.

TIME RESTRICTIONS

The contractor shall be allowed to close Dobson Ave, Greenwood Ave, Woodlawn Avenue, Kimbark Avenue, and Kenwood Avenue to all traffic in the area of the proposed culvert replacement under the following conditions.

Access for Local Traffic to residents on these streets shall be maintained at all times from either north or south of the active construction zone.

The contract is prohibited from closing two (2) adjacent streets at the same time and shall alternate the road closures to provide access around the active construction zone for local traffic.

Failure to obey this work time restriction will be subject to liquidated damages of \$1500 for each Calendar Day that two (2) adjacent streets remain closed at the same time. If no work is taking place, no street closure shall be allowed.

WINTER WORK OR HIATUS REQUIREMENTS

If the culvert installation and associated work cannot be completed and restored prior to the construction season end in 2025, the Contractor is allowed to continue culvert installation over the winter as applicable. When actively working on a respective culvert installation outside the limits of the roadway crossing, and when all excavations are backfilled and the project area is in a safe condition to open the roadway to traffic, the Contractor shall at a minimum provide temporary access of the cross street(s) associated with that culvert in accordance with the AGGREGATE FOR TEMPORARY ACCESS special provision included herein. Upon notice from the Village for required aggregate maintenance, the Contractor shall maintain, furnish, and re-grade the temporary aggregate within 12 hours to the satisfaction of the owner to allow for snow plowing or vehicular ingress/egress.

If the Contractor completes culvert installation at a roadway crossing and moves onto another location, or leaves the site, the roadway shall be opened to traffic. If the roadway is open to traffic during winter months, the pavement shall be temporarily patched with cold patch until such time that the asphalt plants open, and the roadway can be reconstructed with hot-mix asphalt in accordance with the plans and specifications.

The cost for cold patch to maintain traffic shall not be measured for payment and shall be included in the cost of the culvert installation. The cost of any winter escalation or winter protection shall not be measured for payment and shall be included in the cost of various contract items with no additional expense to the Village.

MATERIAL INSPECTION REPORTS

All materials incorporated in this contract are to be inspected according to the Project Procedures Guidelines (PPG) and the process and frequency of testing under the QC/QA specifications.

The Contractor shall be responsible for QC testing of these materials with the Engineer being notified at least forty-eight (48) hours in advance of the placement of any of these materials. The Local Agency shall be responsible for the QA testing of these materials on the job and at the plant per article 1030 of the Standard Specifications. Please note that the Contractor is required to submit a QC plan to the Engineer for approval per the referenced specifications.

**Village of South Holland
Thorn Ditch Flood Mitigation Project**

All concrete materials incorporated in this contract are to be inspected according to the Recurring Special Provision, "Quality Control/Quality Assurance of Concrete Mixtures". Please note that the Contractor is required to submit a QC plan to the Engineer for approval per the referenced specifications.

The Contractor shall coordinate his work operations with the Engineer to assure that the testing agencies can provide proper and sufficient notice to schedule their work. Also, all QC documentation is to be submitted to the Engineer, immediately following completion of this project. Five percent (5%) of the final contract amount due the Contractor will be withheld pending receipt of all documentation and approval of the Engineer's Payment Estimate.

AS-BUILT DRAWINGS

The Contractor will be responsible for providing two copies of red-lined drawings showing field lengths, rim and invert elevations and locations for all storm sewer system appurtenances installed as part of this contract, traffic including manholes, inlets/catch basins, pipes, and crossing locations. Distances should be given to each utility item from existing visible landmarks (surface or edge of pavement) identified on the design plans for this project.

Retention from final payment due Contractor shall be withheld until these drawings are reviewed and approved by the Village/Engineer. This work shall not be paid for separately but shall be included in the cost of various pay items.

WORK HOURS

The Contractor may perform work between the hours of 7:00 a.m. and 7:00 p.m. each workday. However, no work will be permitted between 7:00 p.m. and 7:00 a.m., on Saturdays or Sundays, or on holidays, without prior written permission of the Village.

PERSONAL OR PROPERTY DAMAGE

Any and all claims of personal or property damage caused by the Contractor in the course of performing the work shall be reported to the Village immediately.

Any property damaged in any manner or in any way by the Contractor, in the course of performing the work, shall be repaired to equal or better than the original condition solely at the expense of the Contractor. Under no circumstances shall the Village or Village Engineer be held responsible for such damages or the repair or payment thereof.

Any and all claims of property damage caused by the Contractor in the course of performing the work shall be corrected immediately and expeditiously so as not to place an undue burden upon the claimant nor upon the Village.

Any irrigation systems, brick pavers, mailboxes, etc., within the ROW disturbed during construction will be the Contractor's responsibility to repair and shall be included in the unit price for the various removal items.

PUBLIC AND RESIDENT NOTIFICATION

If the Contractor is required to shutoff existing utility service (i.e., water, sanitary, power, communications, and gas) for any reason during the course of this project, or impede access to any driveways, the Contractor shall provide 24-hour advance written notice to: 1) the Village of South Holland of the scheduled work, 2) those residents/businesses with connections to the utility sections,

and/or driveways affected by the work via door hangers, and 3) any other residents that may potentially be adversely affected by the construction operations via door hangers.

WAIVERS OF LIEN

The Contractor, and all subcontractors, shall submit waivers of lien to the Engineer for all work performed for the 30 days prior to the pay request.

MAINTENANCE OF ROADWAYS, ALLEYS, AND DRIVEWAYS

Beginning on the date that the Contractor begins work on this project, he shall assume responsibility for the normal maintenance of all existing roadways, alleys, and driveways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the Engineer but shall not include snow removal operations. Traffic control and protection for this work shall be provided by the Contractor.

Access to driveways and alleys shall be maintained at all times by means of placing temporary aggregate. All driveways and curb and gutter removed shall be replaced within five (5) days of removal. Temporary aggregate will be required to allow residents access for all driveways and alleys that are determined to be removed and replaced. The temporary aggregate used to maintain alleys, and driveways shall not be paid separately but shall be included in the cost of the various removal items.

AGGREGATE FOR TEMPORARY ACCESS

This work shall consist of providing temporary driveway/roadway access during construction in accordance with Article 107.09 and 402.10 of the Standard Specifications.

This work will not be paid for separately and shall be included in the unit cost of various contract items.

COORDINATION/SCHEDULING OF WORK

The Contractor shall be advised that the work of all Subcontractors will be coordinated by the General Contractor and not by the Village or their authorized representative.

All equipment must be removed off the Village streets during all holiday weekends at the request of the Village.

In addition, all equipment parking and work in general must be coordinated with the Village.

This project's construction area may be adjacent to separate construction contracts over the duration of this contract. Therefore, the Contractor is advised that certain operations may involve cooperation with Village personnel and other contractors performing work on or adjacent to this contract for the Village. The Contractor shall fully cooperate with the Village and other Contractors working within or adjacent to the project area in compliance with section 105 of the Standard Specifications.

PUBLIC UTILITIES

There are existing underground and above ground public and private, municipal and non-municipal utilities at the site, such as, but not necessarily limited to electrical and telephone cables, natural gas pipes, sewers, and water main, etc. All due notifications, vertical/horizontal separations, and other safety precautions required by the owners/operators of the facilities being crossed shall be observed by the Contractor and/or all Sub-contractors at all times. Any damage caused by the construction to

any of the existing facilities on-site shall be promptly repaired to the satisfaction of the owners/operators of the facility involved, at no additional compensation.

The Engineer has attempted to indicate the presence of various public utility lines along the construction route. These locations are from information supplied by the utility companies, and the Engineer, does not warrant their accuracy or completeness. It remains the contractor's responsibility to contact the utility companies in order to obtain the definite locations prior to construction.

It shall be the contractor's responsibility to very carefully inspect the site, identify and locate both horizontally and vertically all existing facilities, contact their owner/operators for their notification, separation, and safety requirements, and follow such requirements very carefully. It shall be the Contractor's responsibility to notify J.U.L.I.E. at least 48 hours prior to excavation to verify locations of all utilities.

The Contractor shall protect and save harmless the Village of South Holland and Robinson Engineering, Ltd from any claim(s) of damage resulting from his/her activities at the site or from failing to undertake due and proper safety measures to avoid such damage to any utilities during the construction.

The Contractor shall repair any damage to any of the utilities, caused by his/her work, to the satisfaction of the involved utility and the Village of South Holland at no additional compensation. The cost of compliance with this provision shall be considered included in the cost of various contract items and will not be compensated for separately.

STATUS OF UTILITIES

The below represents the best information available prior to letting is included for the convenience of the bidder. The applicable portions of Section 105 of the Standard Specifications shall apply.

(a) Utilities

The facilities of Nicor Gas exist within the project limits. They will relocate their facilities for construction. Prior to the project beginning in either July or August 2025 they will relocate their facilities. The permanent relocations shall be completed within 90 days after work begins. For bidding purposes, the target date for Utility to be out of conflict is June 30, 2025. If questions arise, Karey Johnson of the utility may be contacted at 630-388-2923.

The facilities of ComEd exist within the project limits. Their facilities are not anticipated to be in conflict with the proposed improvements for the project. Facilities relocates, if determined necessary during construction, shall be relocated as part of the contract. If questions arise, Simone Harris of the utility may be contacted at 779-231-2671.

The facilities of Comcast exist within the project limits. Their facilities are not anticipated to be in conflict with the proposed improvements for the project. Facilities relocates, if determined necessary during construction, shall be relocated as part of the contract. If questions arise, Thomas Munar of the utility may be contacted at 630-600-6316.

The facilities of AT&T exist within the project limits. Their facilities are not anticipated to be in conflict with the proposed improvements for the project. Facilities relocates, if determined necessary during construction, shall be relocated as part of the contract. If questions arise, Tom Laskowski of the utility may be contacted at 630-573-5643.

The facilities of Astound Broadband exist within the project limits. Their facilities are not anticipated to be in conflict with the proposed improvements for the project. Facilities relocates, if determined

necessary during construction, shall be relocated as part of the contract. If questions arise, William Ng of the utility may be contacted at 312-955-2256.

(b) Preconstruction Conference Notification

At the preconstruction conference, the Contractor will be notified of any known corrections to changes to the information presented in (a) above.

SAW CUT JOINTS

The removal and/or replacement of any driveways, pavement, curb, sidewalk, etc. shall be accomplished by means of a saw cut joint. This work will not be paid for separately but shall be included in the unit price bid for the various removal items.

WAGE RATES

This contract calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 *et seq.* ("the Act"). The Act requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the "prevailing rate of wages" (hourly cash wages plus fringe benefits) in the county where the work is performed. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website.

All contractors and subcontractors rendering services under this contract must comply with all requirements of the Act, *including but not limited to*, all wage, notice and record keeping duties.

VIDEO RECORDING CONSTRUCTION SITE

Prior to the start of any construction or excavation, the contractor shall video record the existing conditions in the area of the construction site. The video recording shall be provided on a flash drive. The contractor shall supply the engineer with two copies of the video recording prior to starting construction and shall include, but not limited to the following:

- | | | |
|---|-----------------------|------------------------|
| 1. Full right-of-way and easement areas | 2. Parkway condition | 3. Pavement conditions |
| 4. Curb condition | 5. Driveway condition | 6. Existing manholes |
| 7. Fire hydrants | 8. Fences | 9. Trees |
| 10. Sidewalk condition | | |

THE VIDEO RECORDINGS SHALL ALSO SUPPLY A CONTINUOUS AUDIO RECORD OF THE LOCATION (PREFERABLY WITH ADDRESS), ALL ANTICIPATED PROBLEM AREAS, ITEMS, AND FEATURES FOR THE COMPLETE AREA TO BE AFFECTED BY THE CONSTRUCTION.

The format of recording shall remain the same throughout the project. When the recorded video information is replayed and reviewed, it shall be free of electrical interference.

The audio portion of the composite signal shall be sufficiently free of electrical interference, background noise, and heavy foreign or regional accents to provide an oral report that is clear and complete and easily discernible. The audio portion of the video report shall be recorded by the operating technician as they are being produced and shall include references to the street address and type of construction to be performed at the site as specified in the plans. Audio comments pertaining to special

circumstances, which may arise during the excavation, shall also be included. Dubbing the audio information onto the video tract after the video recording is completed will not be permitted.

Video recordings shall clearly indicate the date the video was taken, the designated section(s) of construction contained on the flash drive, and the label “**VILLAGE SOUTH HOLLAND – THORN DITCH FLOOD MITIGATION PROJECT (Project #23-R0646)**”. One (1) copy of the finished video recording shall be delivered to the Engineer prior to commencing improvements.

The cost of this work shall be included in the unit cost of various contract items and no additional compensation will be allowed.

DEWATERING AND BYPASS PUMPING OF SEWERS AND EXCAVATIONS

The Contractor shall be responsible for dewatering all trenches and bypass pumping required to maintain the water level below the bottom of the pipe or culvert until the pipe or culvert has been backfilled in order to preserve the line and grade of the pipe or culvert. This dewatering and bypass pumping shall include all surface water from rainfall, snowmelt, etc. including but not limited to ground water and surface flow within the Thorn Ditch.

Requirements:

- A. The Contractor shall design, install, and maintain dewatering equipment (wells, screens, pumps, portable power equipment, etc.) sufficient to remove and minimize water from entering excavations.
- B. Surface water shall be diverted from the excavation areas. Any bypass pumping required to allow for the construction of the proposed improvements shall be included.
- C. Bypass pumping shall meet the requirements of the Illinois Urban Manual.
- D. The groundwater level shall be lowered sufficiently below the bottom of the deepest excavation prior to and during the installation of subgrade; during testing of the subgrade; and after the installation of structures or piping until no displacement or damage will result when the dewatering is discontinued.
- E. Dewatering water shall be discharged to the surface or other location as approved by the Owner and Engineer, in accordance with the plans and specifications, and conforming to the permitting requirements of all applicable regulatory agencies.
- F. Any dewatering required shall be done in accordance with IEPA standards and shall be in compliance with the Illinois Urban Manual and the NPDES permit. Dewatering shall not be discharged directly to any creeks, streams, or wetlands. At minimum, a Dandy Dewatering Bag (or equal) shall be used at all dewatering locations.
- G. Prior to construction, the Contractor shall design and submit for review, construction plans and detailed narrative to the Engineer that disclose the contractor's preferred dewatering method.

All such dewatering and bypass pumping expenses including pumps and additional drain rock shall not be compensated for separately but shall be considered included in the cost of the various contract pay items.

EXISTING DRAINAGE FACILITIES

When existing drainage facilities are disturbed, the Contractor shall provide and maintain temporary outlets and connection for all private or public drains, sewers or catch basins. The Contractor shall provide facilities to take all storm water which will be received by these drains and sewers and discharge same. The Contractor shall provide and maintain an efficient pumping plant, if necessary, and a temporary outlet, and be prepared at all times to dispose of the water received from the temporary

sewer connections until such time as the permanent connections with sewers are built and in service. **The cost of this work shall be included in the unit prices bid and no additional compensation will be allowed.**

STOCKPILING OF MATERIALS AND END OF DAY CLEAN UP

The Contractor shall coordinate with the Village on specific locations for stockpiling of materials prior to the start of construction. Stockpiles shall not impede traffic, parking or access at any time. Any areas disturbed by stockpiles shall be restored to existing conditions and shall be considered included in the cost of the earthwork pay items in the contract.

At the end of each working day, the Contractor shall provide a steel plate, barricades, warning tape and any other safety measures as directed by the Engineer. Pedestrian access to the property shall be maintained at all times. Street clean up and sweeping is also required at the end of each working day. **The cost for materials and traffic control items necessary to meet these requirements shall be considered included in the cost of the various contract pay items.**

DUST CONTROL

The contractor shall be responsible for controlling the dust and air-borne dirt generated by his/her construction activities.

The implementation of dust control procedures shall be required if wind and dry soil conditions reduce visibility on adjacent roads and property. Concerns for health and safety to the public using adjacent facilities will be grounds for the implementation of a dust control plan. When circumstances warrant, a specific dust control plan shall be developed. The contractor and the engineer shall review the nature and extent of dust generating activities and cooperatively develop specific types of control techniques appropriated to that specific situation. Sample techniques that may warrant consideration include such measures as:

1. Minimize track out of soil onto nearby publicly traveled roads.
2. Reduce vehicle speed on unpaved surfaces.
3. Cover haul vehicles.
4. Apply chemical dust suppressants or water to exposed surfaces, particularly to surfaces on which construction vehicles travel.

The cost of this work shall be included in the unit prices bid and no additional compensation will be allowed.

CLEAN CONSTRUCTION OR DEMOLITION DEBRIS (CCDD) REQUIREMENTS

If the Contractor is planning on disposing of uncontaminated soils at an Illinois Environmental Protection Agency (IEPA) permitted CCDD facility, the work shall be conducted in accordance with the criteria set forth in 35 Illinois Administrative Code (IAC) 1100 as amended on August 27, 2012. The following protocol must be followed:

1. The Contractor must identify in writing the name, location and phone number of the Contractor's intended CCDD facility or non-CCDD private disposal facility to the Owner (or Engineer) at the pre-construction meeting prior to the commencement of any construction activities.
2. The Owner (or Engineer) will conduct the Potentially Impacted Property (PIP) evaluation to identify nearby regulated facilities and properties that have potential or known subsurface contamination to determine if an IEPA LPC-662 (Source Site Certification by Owner or

Operator) and/or an IEPA LPC-663 (Uncontaminated Soil Certification by a Licensed Professional Engineer or Licensed Professional Geologist) certification is required for the project.

3. If requested, the Contractor must assist the Owner (or Engineer) in obtaining the sample(s) through the use of the Contractor's equipment. The Contractor shall expose soils at one or more distinct locations as directed by the Owner (or Engineer). The Owner (or Engineer) will determine the number, location and depth of the samples that will need to be collected for characterization of the excess soil that will be generated during the construction project.
4. The Owner (or Engineer) will be responsible for sampling / testing of the soil and preparation of the required certification form. The Contractor is prohibited from conducting the sampling and testing of the soil unless specially authorized by the Owner (or Engineer).
5. The samples will be analyzed at an IEPA accredited laboratory with a standard 5 to 7 working day turnaround time unless a rush is required by the Contractor. If requested, the Contractor will be responsible for additional fees associated with fast-tracking the samples.
6. The soil testing results will be summarized in a tabular format with comparison to the IEPA *Summary of Maximum Allowable Concentrations of Chemical Constituents In Uncontaminated Soil Used as Fill Material At Regulated Fill Operations 35 IAC 1100.Subpart F revised August 27, 2012*.
7. Once the appropriate certification(s) has been prepared by the Owner (or Engineer), the Contractor will be responsible for all hauling/disposal of material to the CCDD facility or private clean fill disposal site.
8. Rejection of truck loads of soil at the gate of the CCDD facility, for any reason as determined by the CCDD facility, shall be handled in accordance with the requirements of the CCDD regulation.

For a project that warrants a LPC-663 Certification, at a minimum, the Owner (or Engineer) will test the soil at one or more locations for the following parameters: VOC's, SVOC's, RCRA 8 Total Metals and pH. If necessary, TCLP or SPLP RCRA Metals testing and/or other contaminant testing may be performed on the sample(s) as deemed appropriate by the Owner (or Engineer). For a LPC-663 Certification, if the Contractor elects to utilize a CCDD facility or non-CCDD private disposal facility that requires additional testing beyond what is deemed appropriate by the Owner (or Engineer), the Contractor will be responsible for paying additional laboratory testing costs.

The work contained within this special provision shall be considered included in the cost of the various removal items contained within this contract.

If any contaminated soil is encountered that requires landfill disposal as a non-special waste, special waste or hazardous waste, it will be paid for per Article 109.04 of the Standard Specifications.

WATER USE

The Contractor desiring to use water from municipal hydrants will be required to make an application to the Village, and if the request is granted, shall conform with the ordinances of the municipality, as well as with the rules and regulations of the Public Works Department, and will be held responsible for all damages to hydrants and water pipe used for the purposes of securing water. Pipe wrenches approved by the Public Works Department shall be utilized for opening and closing hydrants and other appurtenances.

When additional water from fire hydrants is necessary to avoid delay in normal work procedures, the water shall be conserved and not used unnecessarily. No fire hydrant shall be obstructed in case of a fire in the area served by the hydrant.

The Village wishes to keep accurate records of the amount of water used for the construction purposes. Any water used on this project shall be metered through meters provided by the Village. The Contractor will not be charged for water use but is required to make cash deposits prior to obtaining meters. The Contractor shall report the total water used to the Superintendent at the end of each working day.

CONCRETE WASHOUT

This item of work shall be constructed at a location(s) determined by the Contractor and approved by the Village/Engineer in accordance with the details of the Illinois Urban Manual. The Contractor must use the concrete truck washout and shall be responsible for constructing, maintaining, and removing the concrete truck washout(s) as part of this item. The cost for all work required, including installation of the concrete truck washout, maintenance and removal shall be included in cost of the concrete items included in this contract.

SOIL CONDITIONS

Soils borings have been obtained for the design portion of this project and are included in these bid documents for informational purposes only. The Village and Authorized Representative assumes no responsibility regarding the nature of the subsurface conditions which may be encountered during construction. The Bidder must satisfy himself prior to bidding, by such methods as he may prefer, including his own borings with the Owner's consent, as to the nature of the subsurface conditions, including any obstructions, which may be encountered during construction. Failure to make such borings shall not relieve him of the responsibility for carrying out to successful completion the work contemplated by the Project Documents for the price specified in the Bid. The quantity, location, depth, or analysis of the soil borings or any other detail of the subsurface conditions contained in the report provided shall not be used by the Contractor as a justification for a change order and they shall not be accepted as such.

Stability of the side walls and base of the excavation is the responsibility of the Contractor and shall be considered included in the cost of various contract pay items. Similarly, dewatering and/or shoring shall be the responsibility of the Contractor and they shall be held responsible for any damage to nearby structures or utilities due to lateral movement of the supporting soils.

WORK IN CONFINED SPACES

The Contractor's attention is directed to the nature of the working environment for the work required in this contract. Working in confined spaces, such as manholes, is inherently dangerous and must be done only with certain equipment, procedures, and precautions. Properly functioning equipment, including but not necessarily limited to a ventilator of adequate capacity, gas detectors, respiratory masks, winch, harness etc. and support personnel on the ground for the worker(s) in the manhole may be necessary at each work site.

This contract's means and methods for performing the required work, including safety provisions, are and remain the Contractor's responsibility. The Owner and the Engineer have neither any responsibility to monitor and/or inspect the Contractor's means and methods, including the safety equipment and/or practices, for performing the work required in this contract nor shall they assume any responsibility and/or liability whatsoever resulting from the Contractor's means and methods during this contract.

The cost of compliance with this requirement shall not be compensated for separately but shall be considered included in the price bid for various contract items.

EARTH EXCAVATION

This work shall consist of earth excavation, topsoil excavation and the removal of the existing roadway pavement, aggregate paths, aggregate shoulders, aggregate driveways and common items outside the limits defined within the PAVEMENT REMOVAL and TOPSOIL PLACEMENT special provisions, within the project area and any additional earth to the depth necessary to reconstruct the road and stormwater management areas per the plans. This work will also include disposal of all excavated materials located in the ROW, easement and parks, including existing material which conflict with the proposed improvement such as but not limited to planters, landscape timbers, landscape block walls, etc. which are not called out by a specific pay item. This work shall be in accordance with applicable Sections 202 and 440 of the Standard Specifications and performed as directed by the Engineer.

This work shall be paid for at the contract unit price per CUBIC YARD for EARTH EXCAVATION.

Topsoil excavation which will be reserved, stockpile and respread in restoration areas shall be paid per CUBIC YARD for TOPSOIL EXCAVATION AND PLACEMENT

QUANTITIES FOR AGGREGATE SUBGRADE IMPROVEMENT

The quantities and locations for REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL and AGGREGATE SUBGRADE IMPROVEMENT called for in this contract indicate the approximate amount of subgrade improvement to be expected. The actual amounts for the various removal and replacement items shall be determined in the field at the time of construction as marked out by the Engineer in the field. Measurement and Payment for REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL will only be paid for excavation outside and below the limits defined in the EARTH EXCAVATION. It shall be understood and agreed upon that the unit price for these items shall prevail throughout the period of the contract and that no additional compensation per unit price will be allowed for any increase or decrease in the aggregate subgrade improvement quantity.

EXPLORATION TRENCH, 84" DEPTH

This work shall consist of exploratory digging at various locations as directed by the Engineer or noted in the plans for the purpose of identifying the depths or locations of existing underground utilities within the construction limits of the project. For this Contract, the words "underground utilities" shall be extended to include water services, storm and sanitary sewers, gas lines, IBT cable and ductworks and other utilities not listed here. Areas shall be backfilled with excavated material in accordance with Section 213, Section 212 and Article 202.03 of the Standard Specifications. Any damages to utilities that occur during exploration trenching shall be repaired or replaced at no cost to the contract.

This item shall be used for exploratory excavations to confirm existing storm sewer diameters and inverts at proposed culvert connections to existing storm sewer. These investigations shall be completed prior to manufacturing the respective box culverts sections.

All work will be paid for at the contract unit price per FOOT for EXPLORATION TRENCH, 84" DEPTH which price shall be full compensation for all equipment, labor and materials needed to backfill the trench and the replacement of broken "underground utilities" damaged by the contractor, regardless of the depth that the trench is excavated to. Contractor shall notify J.U.L.I.E. at least 48 hours before start of trenching operation.

PORTLAND CEMENT CONCRETE SIDEWALK , 5 INCH

This work shall include the installation of a new concrete sidewalk on a prepared subgrade. Sidewalk installation shall be 5 inch concrete thickness over 4 inch aggregate base, type B (CA-6) and 7 inch concrete thickness over 4 inch aggregate base (CA-6) through driveway sections as indicated on the drawings.

This work shall be paid for at the contract unit price per SQUARE FOOT of PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH regardless of thickness and shall include all labor, materials, equipment, and any excavation required for the construction of the sidewalk. The aggregate base shall be paid for separately as AGGREGATE BASE COURSE, TYPE B, 4 INCH.

PAVEMENT REMOVAL

This work shall include all labor, equipment and material to remove all existing HMA pavement, reinforced or unreinforced PCC Pavement, and or aggregate in accordance with applicable portions of Sections 202 and 440 as described below.

Existing pavement depths are anticipated between 4" to 8" in depth. Pavement removal limits will include the existing HMA, PCCP, and/or aggregate to a depth of 6 inches.

Removal of any material including reinforced or unreinforced PCCP below the depths listed above will be paid as EARTH EXCAVATION.

Pavement removal will be measured by the square yard of the area removed.

This work will be paid for at the contract unit price per SQUARE YARD for PAVEMENT REMOVAL.

COMBINATION CURB AND GUTTER REMOVAL

This item shall consist of the removal of combination concrete curb and gutter in accordance with Section 440 of the Standard Specifications, and as detailed in the plans by means of a straight sawed joint at locations as designated by the Engineer.

This work shall be measured along the face of the concrete curb, be paid for at the contract unit price per FOOT for COMBINATION CURB AND GUTTER REMOVAL and shall include the cost of all labor, equipment, materials, excavation and haul-off, saw cutting, and any other appurtenances required to complete the work as specified herein and on the plans.

SIDEWALK REMOVAL

This work shall include removal and disposal of the existing concrete sidewalk as shown on the plans or as directed by the Engineer. All work shall be in accordance with Section 440 of the Standard Specifications. Sidewalk shall be removed between joints. Saw cutting of the joints prior to removal will be required so as not to damage any adjacent concrete during removal.

Additional earth excavation and tree root removal and pruning required to provide a minimum four inches (4") of Aggregate Base Course, Type B under the proposed sidewalk will not be measured for payment and is included in the cost of this item.

All materials, equipment and labor required to complete the work as specified above, including saw cutting, removal and disposal of the existing sidewalk and earth excavation shall be paid for at the contract unit price bid per SQUARE FOOT for SIDEWALK REMOVAL.

REMOVAL OF EXISTING STRUCTURES

This item shall consist of the removal of the existing pipe culverts and pedestrian bridge foundations in accordance with applicable portions of Section 501 of the Standard Specifications.

The culvert shall be removed as indicated on the plans or at the direction of the Engineer.

The removal of any headwalls associated with the removed pipe culvert will be considered included in the cost of the pay item. Any silt or debris that may be inside the removed section of pipe shall be disposed of properly by the Contractor and is considered included in the cost of the pay item.

The cost of this work including labor, materials, and equipment shall be paid for at the contract unit price per EACH for REMOVAL OF EXISTING STRUCTURES NO. [SPECIFIED] for the four crossroad culverts.

The removal of the existing culvert pipe and associated pedestrian bridge foundations in Maicach Park shall be paid for at the contract unit price per LSUM for REMOVAL OF EXISTING STRUCTURES.

PRECAST CONCRETE BOX CULVERTS

This work shall be accordance with section 540 and 1042 of the Standard Specifications

General: Precast concrete products shall be according to the Bureau of Materials Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products".

Design Criteria. Precast Concrete Box Culverts (Section 540). Precast concrete box culverts shall be according to Articles 1042.03(c)(d)(e) and the following additional requirements.

(a) The concrete shall be Class PC according to Section 1020 and shall have a minimum compressive strength per ASTM C 1577.

(b) Precast concrete box culvert sections and end sections shall be according to the requirements of ASTM C 1577 for the design cover specified but limited to maximum design covers shown in the tables.

Construction. The Contractor shall verify locations of all underground utilities before designing or installing Precast Box Culvert Units.

Water main quality joints with rubber gaskets, in accordance with ASTM C1677, shall be provided for all joints within 20' of water main which crosses below the proposed box culvert per IEPA requirements.

Basis of Payment. This work, as herein specified, will be paid for at the contract unit price per FOOT for PRECAST CONCRETE BOX CULVERTS [SPECIFIED SIZE]. End sections will be paid for at the contract unit price per EACH for BOX CULVERT END SECTIONS of the culvert number specified. Box Culvert End Section No. 1 is used at three (3) different locations as shown on the plans. Box Culvert End Section No. 2 is used at one location as shown on the plans. Box Culvert End Section No. 3 is used at two (2) different locations as shown on the plans. Box Culvert End Section No. 4 is used at two (2) different locations as shown on the plans.

STORM SEWERS

All storm sewer construction shall conform to the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and in accordance with Section 550 of the Standard Specifications.

The trenches for pipe installation shall be kept dry at all times during pipe placement. Appropriate Facilities to maintain the dry trench shall be provided by the contractor and the cost of such shall be included in the unit price bid and approved by the engineer prior to implementation.

All STORM SEWER, CLASS A, TYPE 1 or TYPE 2 sewer shall be Reinforced Concrete Sewer Pipe.

Reinforced Concrete Pipe shall conform to ASTM C76 with ASTM C443 flat gasket joints or ASTM C361 "O-ring" joints.

STORM SEWER REMOVAL [SPECIFIED SIZE]

This work consists of removal of existing storm sewer as shown on the plan or as directed by the Engineer in accordance with Section 551 of the Standard Specifications. The sewer shall be removed in its entirety, and the resulting trench shall be backfilled with CA-6 granular trench backfill to the top of subgrade in accordance with section 208 of the Standard Specifications. The surface shall be restored and paid for in accordance with provisions for that work included in the contract.

Trench backfill shall be provided in accordance with the TRENCH BACKFILL special provision. Trench backfill shall be included in the cost of the storm sewer removal.

All materials, equipment and labor required to complete the work as specified above, including saw cutting, trench backfill, removal and disposal shall be paid for at the unit price bid per FOOT for STORM SEWER REMOVAL, [SPECIFIED SIZE].

ADJUSTING WATER MAIN

This item shall include the adjustment of existing water mains to avoid proposed culverts called for in the contract plans and as encountered during construction. This work shall be completed in accordance with Section 561 of the Standard Specifications except as modified herein.

The water main shall be "Ductile Iron," ANSI thickness Class 52, Clow "Super Bell-Tite", "Push-On" Joint, and must meet all applicable requirements of ANSI A21.51, AWWA C151 (AWWA Standard for Ductile-Iron Pipe, Centrifugally Cast for Water), ANSI A21.10, AWWA C110 (AWWA Standard for Ductile Iron and Grey Iron fittings for Water), AWWA C153 (AWWA Standard for Ductile-Iron Compact Fittings For Water Service), ANSI A21.11, AWWA C111 (AWWA Standard for Ductile-Iron and Grey-Iron Fittings For Water), ANSI A21.4, AWWA C104 (AWWA Standard for Cement Water Lining for Ductile Iron Pipe and Fitting for Water) specifications. All water mains shall be wrapped in 8-mil thick polyethylene encasement (V-bio polywrap) in accordance with ANSI A21.5 and AWWA C105 (AWWA Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems) Method B, with pipe and joints wrapped separately.

All fittings shall be made from gray-iron or ductile iron and furnished with mechanical joint ends. All fittings shall have a pressure rating of 250 psi and shall be wrapped with an 8-mil thick polyethylene material (V-bio polywrap) per AWWA Standard C105 (AWWA Standard Polyethylene Encasement for Ductile-Iron Pipe Systems). At locations indicated on the plans or as directed by the Engineer, the water main shall be constructed around existing utility structures or other obstacles by use of tees, bends or other appropriate fittings. Gasket material identical to that described in the AWWA Standards shall be utilized at all joints and fittings. See mechanical joint restraints.

All mechanical joint restraints shall be incorporated in the design of a follower gland. The gland shall be manufactured of ductile iron conforming to ASTM A 536. Dimensions of the gland shall be such that it can be used with the standardized mechanical joint bell and tee-head bolts conforming to AWWA C111 and C153.

The restraint mechanism shall consist of numerous individually activated gripping surfaces to maximize restraint capability. The gripping surfaces shall be sedges designed to spread the bearing surfaces on the pipe. Twist-off nuts, sized same as tee-head bolts, shall be used to insure proper actuating of restraining devices. When the nut is sheared off, a standard hex nut shall remain. The mechanical joint restraint device for ductile iron pipe shall have a working pressure of at least 250 psi with a minimum safety factor of 2. Gasket material identical to that described in the AWWA standards above shall be utilized at all joints and fittings.

The mechanical joint restraint devices shall be EBAA Iron, Inc. MegaLug 1100 series, Uni-Flange Series 1400.

All design associated with mechanical joint restraints shall be completed by the Contractor and his supplier. Design calculations shall be submitted to the Engineer for review and approval prior to the ordering of materials. The cost for designing, materials, and labor for furnishing, installing, adjusting, and testing of mechanical joint restraints will not be compensated for separately but shall be considered included in the price per foot cost of the water main.

Trench backfill shall be provided in accordance with the TRENCH BACKFILL special provision. Trench backfill shall be included in the cost of the water main adjustment.

The cost for the materials, excavation, trench backfill and the adjustment of the water main shall all be included for at the contract unit price per FOOT of ADJUSTING WATER MAIN [SPECIFIED SIZE].

STEEL SLEEVE- OPEN CUT INSTALLATION

This work shall consist of furnishing spiral welded, steel casing of the thickness listed in the table below and of the outer diameter specified on the plans or as directed by the Engineer. The sleeve shall meet ASTM A139 and ANSI/AWWA C200 (AWWA Standard for Steel Water Pipe—6 in. (150 mm) and Larger), Grade B, minimum yield strength of 35,000 psi. Sleeves shall extend at least ten feet (10') beyond the outer edge of the existing pavement or sewer pipe, as indicated in the detail drawings, unless otherwise approved by the Engineer. All work shall be done in accordance with Section 552 of the Standard Specifications.

After installation of the steel sleeve is completed, the proposed water main shall be constructed in place within the sleeve. The water main shall be inserted and centered by use of model CCS stainless steel casing spacers as manufactured by Cascade Waterworks Mfg. Co. of Yorkville, IL or approved equal at a maximum spacing of 10 feet. Casing spacers shall be bolt on style with a two-piece shell made from T-304 stainless steel of a minimum 14-gauge thickness. Each shell section shall have bolt flanges formed with ribs for added strength. Each connecting flange shall have a minimum of three (3) 5/16" T-304 bolts. The shell shall be lined with a ribbed PVC extrusion with a retaining section that overlaps the edge of the shell and prevents slippage. Bearing surfaces (runners) made from UHMW polymer with a static coefficient of friction of 0.11-0.13 shall be attached to support structures (risers) at appropriate positions to properly support the carrier within the casing and to ease installation. The runners shall be attached mechanically by T-304 threaded fasteners inserted through the punched riser section and TIG welded for strength. Risers shall be made of T-304 14 gauge stainless steel. All risers over two inches (2") in height shall be reinforced. Risers shall be MIG welded to the shell. All metal surfaces shall be fully passivated. The ends of the sleeve shall be sealed as shown on the plans.

The cost for casing spacers, filling of the annular space (if required), and furnishing and installing the steel sleeve shall be incidental to the contract unit price for the steel sleeve. Unless otherwise shown on the plans, steel sleeves [casings] shall be of the size and thickness shown in the table below:

Standard Sizes of Steel Sleeves Used As Casings*

| <u>Carrier Pipe ID in Inches</u> | <u>Casing Wall Thickness in Inches</u> | <u>Casing Outside Diameter in Inches</u> |
|----------------------------------|--|--|
| 6 | 0.344 | 20 |
| 8 | 0.344 | 20 |
| 12 | 0.375 | 24 |
| 16 | 0.469 | 30 |
| 20 | 0.563 | 36 |
| 24 | 0.625 | 42 |
| 30 | 0.719 | 48 |
| 36 | 0.781 | 54 |
| 42 | 0.875, 0.938 | 60, 66 |
| 48 | 1.000 | 72 |

The cost of furnishing and installation of the steel sleeve, and all incidental work necessary for its installation, including casing spacers, will be paid for at the contract unit price per FOOT for 20" DIAMETER STEEL SLEEVE, 0.344" WALL THICKNESS, OPEN CUT INSTALLATION. The installation cost for water main constructed within the sleeves will be paid for at its unit price.

COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.12

This item shall consist of the construction of combination concrete curb and gutter in accordance with Sections 606 of the Standard Specifications, and as detailed in the plans by means of a straight sawed joint at locations as designated by the Engineer. All combination concrete curb and gutter that is instructed to be removed and replaced by Engineer shall be paid for by this item, regardless of the type of curb and gutter found in place. The Contractor shall replace curb and gutter to match the type that is existing in the field unless specifically instructed otherwise by the Engineer.

All curb and gutter shall have a 5 inch aggregate base, type B. The aggregate base shall extend 1 foot beyond the back of curb location. The aggregate base shall be paid for separately under the AGGREGATE BASE COURSE, TYPE B, 5" pay item.

The thickness of the flag of the combination curb and gutter shall be a minimum of 9 inches.

All new sections shall have saw cut contraction joints 2 inches deep at 15 foot intervals. This saw cutting shall be completed no later than 24 hours after pouring. The abutting street in front of the curb and all driveways, carriage walks and sidewalks behind the curb shall be restored to their original condition with like material. The surfaces shall be removed by sawed joints and one ½ inch preformed joint filler shall be used between new concrete and existing concrete; where concrete driveways, walks, etc. meet curbs; and between the curb and all steel castings.

This work shall be measured along the face of the concrete curb, be paid for at the contract unit price per FOOT for COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.12, and shall include the cost of all labor, equipment, materials, excavation and haul-off required for construction, saw cutting, reinforcing bars, dowel rods, expansion material, and any other appurtenances required to complete the work as specified herein and on the plans.

TOPSOIL PLACEMENT (6") AND SEEDING, CLASS 2A

This work shall consist of placing six inches (6") of pulverized topsoil from stockpiled topsoil; placing fertilizer nutrients; seeding, Class 2A; erosion control blanket; and watering of the areas disturbed by the construction. All work shall be done in accordance with Sections 211 and 250 of the Standard Specifications.

Existing topsoil from the disturbed area during construction may be reused. Existing topsoil shall be stockpiled, pulverized, and redistributed to provide the specified topsoil thickness following construction.

Subsequent to the backfilling, grading and top soiling of the disturbed areas, and where directed by the Engineer, areas are to be fertilized and seeded where indicated.

Prior to the seeding, the Contractor shall first spread and blend in fertilizer at the rate of 270 pounds per acre at a 1:11 ratio.

The seeding operation shall conform basically to Section 250 and Article 1081.03 of the Standard Specifications.

The Contractor will be responsible for watering the area sufficiently for conditions. The water can be obtained from a metered hydrant near the work undertaken, but prior Village Water Department notification is required. The contractor shall remain responsible for the growth of the seeding including watering as specified in section 252.09 of the Standard Specifications, until the entire seeded area develops a full stand of grass regardless of the number of waterings required. **The Contractor will NOT be billed for water used.**

The Contractor will be responsible for the removal and disposal of surplus topsoil from the site.

This work, including the pulverized topsoil, erosion control blanket, fertilizer, seed, and proper disposal of surplus topsoil shall be paid for per appropriate work at the contract unit price per CUBIC YARD for TOPSOIL EXCAVATION AND PLACEMENT, per SQUARE YARD for EROSION CONTROL BLANKET, and per ACRE for SEEDING, CLASS 2A.

TOPSOIL PLACEMENT (12") AND SEEDING, MESIC PRAIRIE

This work shall consist of placing twelve inches (12") of pulverized topsoil from stockpiled topsoil; seeding, Mesic Prairie Seed Mix; erosion control blanket; and watering of the areas disturbed by the construction. All work shall be done in accordance with Sections 211 and 250 of the Standard Specifications and the Native Planting Summary and Management & Monitoring Plan prepared by V3 Companies. The mesic zone area is specified on the plans and shall be planted and monitored in accordance with the Native Planting Summary.

Mesic Prairie Seed Mix shall be installed in the mesic zone as shown on the plans. Specifications for the seed species types and ratios can be found in the Native Planting Summary Appendix.

Existing topsoil from the disturbed area during construction may be reused. Existing topsoil shall be stockpiled, pulverized and redistributed to provide the specified topsoil thickness following construction.

Subsequent to the backfilling, grading and topsoiling of the disturbed areas, and where directed by the Engineer, areas are to be seeded where indicated.

The seeding operation shall conform basically to Section 250 and Article 1081.03 of the Standard Specifications.

The Contractor will be responsible for watering the area sufficiently for conditions per nursery specifications. The water can be obtained from a metered hydrant near the work undertaken, but prior Village Water Department notification is required. **The Contractor will NOT be billed for water used.**

The Contractor will be responsible for the removal and disposal of surplus topsoil from the site.

This work, including furnishing and placing pulverized topsoil, seed, and proper disposal of surplus topsoil. as specified above shall be paid for at the contract unit price per CUBIC YARD for TOPSOIL EXCAVATION AND PLACEMENT, per SQUARE YARD for EROSION CONTROL BLANKET, and per ACRE for SEEDING, MESIC PRAIRIE.

TOPSOIL PLACEMENT (12") AND SEEDING, SEDGE MEADOW MIX

This work shall consist of placing twelve inches (12") of pulverized topsoil from stockpiled topsoil; seeding, Sedge Meadow Seed Mix; erosion control blanket; and watering of the areas disturbed by the construction. All work shall be done in accordance with Sections 211 and 250 of the Standard Specifications and the Native Planting Summary and Management & Monitoring Plan prepared by V3 Companies. The sedge meadow zone area is specified on the plans and shall be planted and monitored in accordance with the Native Planting Summary.

Sedge Meadow Seed Mix shall be installed in the sedge meadow zone as shown on the plans. Specifications for the seed species types and ratios can be found in the Native Planting Summary Appendix.

Existing topsoil from the disturbed area during construction may be reused. Existing topsoil shall be stockpiled, pulverized and redistributed to provide the specified topsoil thickness following construction.

Subsequent to the backfilling, grading and topsoiling of the disturbed areas, and where directed by the Engineer, areas are to be seeded where indicated.

The seeding operation shall conform basically to Section 250 and Article 1081.03 of the Standard Specifications.

The Contractor will be responsible for watering the area sufficiently for conditions per nursery specifications. The water can be obtained from a metered hydrant near the work undertaken, but prior Village Water Department notification is required. **The Contractor will NOT be billed for water used.**

The Contractor will be responsible for the removal and disposal of surplus topsoil from the site.

This work, including furnishing and placing pulverized topsoil, seed, and proper disposal of surplus topsoil. as specified above shall be paid for at the contract unit price per CUBIC YARD for TOPSOIL EXCAVATION AND PLACEMENT, per SQUARE YARD for EROSION CONTROL BLANKET, and per ACRE for SEEDING, SEDGE MEADOW MIX.

TOPSOIL PLACEMENT (12") AND PERENNIAL PLANTS, WETLAND EMERGENT

This work shall consist of placing twelve inches (12") of pulverized topsoil from stockpiled topsoil; furnishing and placing emergent wetland plugs, at locations shown on the plans or at the direction of the Engineer. The wetland plugs shall be installed per nursery specifications. The quantities and/or ratios of each plant species to be used shall be as specified by the Deep Emergent Plug Mix as detailed in the Native Planting Summary and Management & Monitoring Plan prepared by V3 Companies. The emergent zone area is specified on the plans and shall be planted and monitored in accordance with the Native Planting Summary.

Predator control fencing shall be installed to protect planted plugs.

Existing topsoil from the disturbed area during construction may be reused. Existing topsoil shall be stockpiled, pulverized and redistributed to provide the specified topsoil thickness following construction.

The Contractor will be responsible for watering the area sufficiently for conditions per nursery specifications. The water can be obtained from a metered hydrant near the work undertaken, but prior Village Water Department notification is required. **The Contractor will NOT be billed for water used.**

The Contractor will be responsible for the removal and disposal of surplus topsoil from the site.

The cost for furnishing all labor, materials, wetland plugs, predator control fencing, excavation, construction equipment, and all appurtenances necessary for the complete installation of the perennial plants shall be paid for at the contract unit price per CUBIC YARD for TOPSOIL EXCAVATION AND PLACEMENT and per ACRE for PERENNIAL PLANTS, WETLAND EMERGENT.

PILLAR RELOCATION

This item shall consist of the complete relocation of existing masonry pillars that conflict with the proposed improvement on Woodlawn Avenue or as directed by the Engineer. The existing pillars shall be relocated off existing foundations, stored and protected, and reinstalled on new concrete foundations at locations shown on the plans or as specified by the Engineer. Decorative fencing associated with the existing masonry pillars shall be relocated and paid for under the FENCE REMOVAL AND REINSTALLATION pay item.

Any damage done to the masonry pillars shall be repaired to the Owner's satisfaction. Repairs may include tuckpointing or reconstruction to return the masonry pillar to the pre-construction condition or better.

This work will be paid for at the contract unit price per EACH for PILLAR RELOCATION, which shall include all necessary equipment, materials and labor to completely remove and relocate the masonry pillars.

CONNECTION TO EXISTING SEWER

This work shall consist of connecting the existing storm sewer pipe to the proposed box culvert in accordance with the Existing Pipe Connection to Proposed Structure and Structural Drawing details provided in the plans. The proposed structure shall be precast with the opening or mechanically cored in the field once the invert elevations are verified to provide an opening for the existing storm sewer. Extreme care shall be taken so that minimal structural damage is done to the existing pipe or new structure. The connection shall be sealed using non-shrink concrete mortar or grout.

The existing sewer pipe shall be sawcut and removed and/or extended as necessary to fit the proposed structure or box culvert. Additional storm sewer pipe shall be provided as necessary to make the required connection. The cost of any additional storm sewer pipe to make this connection shall be included in the cost of this item.

Trench backfill shall be provided in accordance with the TRENCH BACKFILL special provision. Trench backfill will not be measured for payment, and shall be included in the cost of this item.

In order to confirm existing pipe sizes and inverts prior to manufacturing the structures or culvert sections, each location shall be potholed or excavated by the contractor. Exploratory excavations shall be paid in accordance with the EXPLORATION TRENCH, 84" DEPTH special provision.

This work shall be paid for at the unit price bid per EACH for CONNECTION TO EXISTING SEWER for the work described herein.

BIAXIAL GEOGRID

This work shall consist of furnishing and installing geogrid.

General. This work shall be completed in accordance with applicable portions of Section 210 of the Standard Specifications.

Materials. Materials shall meet the requirements as shown below. Shop drawings shall be submitted to the Engineer for approval prior to construction.

- Aperture Dimensions: 1.0 X 1.3 in.
- Ultimate Tensile Strength: 1310 X 1970 lbs/ft
- Resistance to Long Term Degradation: 100%
- Junction Efficiency: 93%
- Flexural Stiffness: 750,000 (mg-cm)
- Resistance to UV Degradation: 100%

Installation. It shall be the Contractor's responsibility to inspect the geogrid to ensure it is free from any flaws or damage that may have occurred during shipping and handling. Prior to installation, the undercut surface shall be compacted, cleared of debris and shall be graded smooth. Before unrolling, the Contractor shall anchor the beginning of the roll at the center and the corners to the underlying surface using pins or anchors. The geogrid shall be manually unrolled over the prepared surface. As it is unrolled, the geogrid shall be aligned, and pulled taut with hand tension to remove wrinkles and laydown slack. Adjacent rolls shall have 3-foot overlap. The geogrid shall be manually cut where necessary. All material placed over the grid shall be done so in a manner to prevent tearing. Any geogrid damaged during installation shall be replaced by the Contractor with no additional compensation for labor or materials.

This work will be measured and paid for at the contract unit price per SQUARE YARD for BIAXIAL GEOGRID, which price shall include all labor, materials, and equipment necessary to complete the work as specified herein. Any overlap of geogrid will not be measured for payment.

POROUS GRANULAR EMBANKMENT, SPECIAL

The unit price bid per cubic yard for Porous Granular Embankment, Special shall include all labor, material and equipment required to place the CA-18 material and geotextile filter fabric under the proposed box culvert to the limits shown in the plans. This work shall be done in accordance with Sections 207 & 282 of the Standard Specifications and the details shown on the plans. This work shall be paid for at the contract unit price per CUBIC YARD for POROUS GRANULAR EMBANKMENT, SPECIAL.

PLUG EXISTING STORM SEWERS

This item shall consist of the sealing of existing sewer pipes with 2-foot long non-shrink mortar plug to create a permanent seal as called out on the plans or at the direction of the Engineer.

The cost for furnishing all labor, materials and equipment necessary for plugging the existing storm sewers, and disposal of surplus material, shall be paid for at the contract unit price per EACH for PLUG EXISTING STORM SEWER.

FENCE REMOVAL AND REINSTALLATION

This item shall consist of removal and replacement of existing fencing including concrete foundations for existing fence posts, at locations shown on the plans or as directed by the Engineer. Existing fences shall be carefully removed and placed at a safe location(s) to prevent damage. If the fence is damaged in any manner or in any way by the Contractor, in the course of performing the work, it shall be repaired to equal or better than the original condition solely at the expense of the Contractor. Existing fence posts and concrete foundations may be salvaged and utilized in the relocated fence. New fence posts and concrete foundations shall be provided as needed.

Where permissible by property owners, fencing may remain on the same property where temporarily removed. Temporary construction fencing shall be provided to control access to construction areas as necessary. Upon completion of construction activities, fencing shall be re-installed.

The relocated fence shall not be installed over the new box culvert. Locations for the relocated fence are shown on the plans and are placed a minimum of four (4) feet from edge of the box culvert to provide sufficient clearance.

This work will be paid for at the contract unit price per FOOT for FENCE REMOVAL AND REINSTALLATION, which shall include all necessary equipment and labor to completely remove and reinstall fencing, fence posts, and concrete foundations. The cost for temporary fencing to control construction access shall be considered included in the cost of this pay item.

WOOD FENCE

This item shall consist of the furnishing and installation of a new 6-foot tall, wood fence, wood fence posts, and 42" deep (min.) concrete footings, fence hardware and appurtenances at locations shown on the plans or as directed by the Engineer. The fence shall be installed per manufacturer's specifications and the details on the plans. The wood fence shall be in a style and color chosen and approved by the Village and have a minimum 25-year warranty. Maximum spacing of fence footings shall be 8 feet.

This work shall be paid for at the contract unit price per FOOT for WOOD FENCE, which shall include all necessary equipment, materials, and labor to complete installation of the new fence.

MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES

Effective: October 4, 2016

Revised: March 1, 2019

Description. This work shall consist of furnishing and placing a membrane waterproofing system on the top slab and sidewalls, or portions thereof, for buried structures as detailed on the contract plans.

All membrane waterproofing systems shall be supplied by qualified producers. The Department will maintain a list of qualified producers.

Materials. The materials used in the waterproofing system shall consist of the following.

- (a) Cold-applied, self-adhering rubberized asphalt/polyethylene membrane sheet with the following properties:

| Physical Properties | |
|--|--|
| Thickness ASTM D 1777 or D 3767 | 60 mils (1.500 mm) min. |
| Width | 36 inches (914 mm) min. |
| Tensile Strength, Film ASTM D 882 | 5000 lb./in ² (34.5 MPa) min. |
| Pliability [180° bend over 1" inch (25 mm) mandrel @ -20 °F (-29 °C)] ASTM D 146 (Modified) or D1970 | No Effect |
| Puncture Resistance-Membrane ASTM E 154 | 40 lb. (178 N) min. |
| Permeability (Perms) ASTM E 96, Method B | 0.1 max. |
| Water Absorption (% by Weight) ASTM D 570 | 0.2 max. |
| Peel Strength ASTM D 903 | 9 lb./in (1576 N/m) min. |

- (b) Ancillary Materials: Adhesives, Conditioners, Primers, Mastic, Two-Part Liquid Membranes, and Sealing Tapes as required by the manufacturer of the membrane and film for use with the respective membrane waterproofing system.

Construction. The areas requiring waterproofing shall be prepared and the waterproofing shall be installed in accordance with the manufacturer's instructions. The Contractor shall not install any part of a membrane waterproofing system in wet conditions, or if the ambient or concrete surface temperature is below 40° (4° C), unless allowed by the Engineer.

Surfaces to be waterproofed shall be smooth and free from projections which might damage the membrane sheet. Projections or depressions on the surface that may cause damage to the membrane shall be removed or filled as directed by the Engineer. The surface shall be power washed and cleaned of dust, dirt, grease, and loose particles, and shall be dry before the waterproofing is applied.

The Contractor shall uniformly apply primer to the entire area to be waterproofed, at the rate stated in the manufacturer's instructions, by brush, or roller. The Contractor shall brush out primer that tends to puddle in low spots to allow complete drying. The primer shall be cured according to the manufacturer's instructions. Primed areas shall not stand uncovered overnight. If membrane sheets are not placed over primer within the time recommended by the manufacturer, the Contractor shall recoat the surfaces at no additional cost to the Department.

The installation of the membrane sheet to primed surfaces shall be such that all joints are shingled to shed water by commencing from the lowest elevation of the buried structure's top slab and progress towards the highest elevation. The membrane sheets shall be overlapped as required by the manufacturer. The Contractor shall seal with mastic any laps that were not thoroughly sealed. The membrane shall be smooth and free of wrinkles and there shall be no depressions in horizontal surfaces of the finished waterproofing. After placement, exposed edges of membrane sheets shall be

sealed with a troweled bead of a manufacturer's recommended mastic, or two-part liquid membrane, or with sealing tape.

Sealing bands at joints between precast segments shall be installed prior to the waterproofing system being applied. Where the waterproofing system and sealing band overlap, the installation shall be planned such that water will not be trapped or directed underneath the membrane or sealing band.

Care shall be taken to protect and to prevent damage to the waterproofing system prior to and during backfilling operations. The waterproofing system shall be removed as required for the installation of slab mounted guardrails and other appurtenances. After the installation is complete, the system shall be repaired and sealed against water intrusion according to the manufacturer's instructions and to the satisfaction of the Engineer.

Replace the last paragraph of Article 540.06 Precast Concrete Box Culverts and replace with:

Handling holes shall be filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation nor project above the outside surface to the extent that may cause damage to the membrane. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar compatible with the membrane.

Method of Measurement. The waterproofing system will be measured in place, in square yards (square meters) of the concrete surface to be waterproofed.

Basis of Payment. This work will be paid for at the contract unit price, per square yard (square meter) for MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES.

CLEANOUTS

This work shall consist of furnishing and installing cleanouts for the stormwater management area underdrain system in accordance the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and Sections 550 and 601 of the Standard Specifications.

The clean outs shall be 4" PVC SDR 26 pipe including a 4"x4"x4" WYE installed per plan details at the locations noted in the plans.

This work will be paid for at the contract unit price per EACH for CLEANOUTS which price shall include all excavation, materials, trench backfill, equipment, and labor required to complete work specified above.

WATER MAIN LINE STOP

Under this item Contractor shall furnish all materials, labor and equipment to properly install and set linestops into the existing water mains, in parkway or pavement locations, where determined by the Engineer as being necessary to facilitate the installation of the new water main.

Description of procedure

The linestopping procedure is a means of temporarily plugging a water or sewer force main without disrupting pressure or service upstream of the linestop. A pressure tap is first made into the main, allowing insertion of the linestop-plugging device into the main under pressure. By using a special linestop fitting, the tapping valve can be recovered after the linestop-plugging head has been removed from the main.

Interruption of flow

The existing water mains, upstream of the linestop(s), cannot be shut down or taken out of service.

To ensure that the entire operation shall be accomplished without interruption of upstream water service of flow, the installation shall be accomplished by Contractor personnel skilled and experienced in the procedures specified to linestops of this size on cast iron or ductile iron water main.

Linestop fittings:

The linestop fitting shall consist of a two (2) part, full encirclement stainless steel saddle with a stainless steel nozzle MIG welded to the upper saddle half. Accessories shall include all fasteners and gaskets noted below.

The stainless steel used in the saddle halves shall be Type 304, a minimum of 16 gauge (.0598") thick.

The linestop nozzle shall be machined from seamless pipe or tubing and shall have an external pipe thread to receive a screwed pipe cap at the end of the work. The interior shall be threaded to receive the completion plug.

The full encirclement saddle gasket shall be molded from an elastomer compound that will resist compression set and is compatible with drinking water in the temperature range of -40 to 150 degrees F.

The gasket shall have molded grid pattern on the surface that seals against the main. The longitudinal ends of the gasket shall be tapered to allow sealing at the lap joint.

Materials for bolts and nuts shall be Type 304 stainless steel.

If applicable, the linestop fittings shall be compatible with the end users existing Hydra-Stop equipment.

Diameter and condition of mains:

Sizes of mains shown on plans have been taken from records and were not verified in the field. The class of iron pipe is not known.

Before any excavation is started, the Contractor must have available at the job site linestop fittings that will fit both Class AB and Class CD pipe, and that he further has fittings on the job to fit pipe a nominal size larger and smaller than the proposed linestop.

Heavy tuberculation can be anticipated in the existing mains.

Material drawings

At request of the Engineer, the Contractor shall submit three (3) sets of drawings, furnished by the manufacturers, fully and distinctly illustrating and describing the linestop fitting proposed to be furnished.

Installation of linestop fitting

Contractor shall first wire brush and grind the exterior of the main to remove any debris, corrosion, or other surface irregularities that might interfere with the proper sealing of the linestop-fitting gasket.

Under no circumstances shall the Contractor attempt to reshape or bend a linestop saddle in order to obtain greater gasket compression.

All gasket-sealing surfaces shall be thoroughly coated with Permatex No. 2 sealing compound, or approved equal, prior to assembly around the main. Fasteners shall be tightened in accordance with manufacturer's instructions.

Pressure test

The assembled linestop fitting and valve assembly shall be pressure tested.

Thrust and support blocking

If the existing main is to be cut in the same excavation as the linestop, the Contractor will be responsible for bracing or restraining the water main clamp snugly against the linestop fitting and bracing with timbers against undisturbed soil in the excavation.

The Contractor will install any permanent concrete support or reaction blocking or other restraint as necessary.

Cutting operation

Drilling equipment shall be in good condition, and equipped with a power drive to insure smooth cutting and to minimize shock and vibration.

The shell cutter shall have carbide teeth to insure adequate performance if the existing main contains chill spots, sand inclusions or has cement lining.

Cutting equipment is to be chlorinated prior to starting the pressure tap.

Linestop operation

The resilient plugging (sealing) elements shall be free from cuts, nick or other surface defects that could prevent a satisfactory shutdown. The sealing elements shall be inserted into the main by self-contained hydraulic or jackscrew actuators.

Linestop Units are to be lightweight so they can be handled by manpower alone (no crane necessary).

The units furnished will be able to shut down heavily tuberculated lines through the expansion of the Stopper Rubber itself. Stationary (nonexpendable) stoppers needing a brushing technique are not acceptable.

No two holing (line-up), or knowledge of direction of flow will be necessary.

In the event that a satisfactory initial shutdown cannot be obtained by a linestop, Contractor shall repeatedly insert and remove the plugging head in an effort to break up tuberculation or other debris that interferes with a good shutdown.

If a satisfactory shutdown cannot be made at that location, the Contractor will, at his own expense, install a new linestop fitting upstream of the first, and continue repeating the process until a satisfactory shutdown is accomplished.

Linestop Equipment is to be chlorinated prior to inserting into the main.

Extent of shutdowns

Shutdowns will be accomplished using linestops alone, or in combination with existing valves. Because of the interior condition of the mains and/or the age of the valves, "bottle-tight" shutdowns are not anticipated. A satisfactory shutdown is one which allows the required work (i.e. valve replacements, etc.) using drainage pumps to de-water the excavation, with workmen wearing boots and rain gear, if necessary.

If leakage is excessive, Contractor and municipal personnel will cooperate in using "geophones" or other listening devices to determine where the leakage is occurring. If excessive leakage is flowing

through the municipal water valves, the municipality will determine whether to close additional valves or to authorize a Contract Extra to install more linestops.

In the event that a linestop location is abandoned, through no fault of the Contractor, he shall be entitled to payment for that linestop.

Restoration

The linestop work will generally be performed in either a parkway or a pavement area. It is the intent of the contract to replace any area disturbed by means of construction with a condition that is equal to, or better than, that which existed prior to the construction work. Subsequently, the Contractor shall perform the restoration in accordance with the restoration special provision.

Basis of payment

This work will be paid for at the contract unit price per EACH for WATER MAIN LINE STOP 6", which price shall include all materials, equipment and labor necessary to perform the work as herein specified.

SANITARY SEWER MAIN LINE REPAIR, 10"

This work shall consist of the removal and replacement of existing sanitary sewer utilizing open cut methods at locations shown on the plans or at the direction of the Engineer. The existing sanitary sewer shall be removed and disposed of properly.

The ductile iron sanitary sewer main line shall be constructed as shown on the plans or at the direction of the Engineer, passing beneath the proposed concrete box culvert. Trench backfill shall be used to fill the space between the sanitary sewer and the concrete box culvert in accordance with the TRENCH BACKFILL section of the Special Provisions. The new pipe shall be arranged such that no push-on joints are located under the concrete box culvert.

Ductile Iron Pipe shall be Class 52 (minimum) meeting the latest requirements of AWWA C105, C-111, C-150, C-151, and C-151. All pipe shall be furnished with asphaltic exterior coating and ceramic epoxy interior lining (Protecto 401 as manufactured by Induron Coatings, Inc or approved equal) and installed with eight mil (8 mil) polyethylene encasement (V-bio polywrap). Ductile iron pipe shall be with Push-On joints meeting the requirements of AWWA C-111, latest edition.

Measurement shall be made along the centerline of sanitary sewer installed. The cost for furnishing all labor, materials and equipment necessary for excavation, existing sanitary sewer removal, construction of the new sanitary sewer, backfilling, trench backfill, and connection to existing manholes, will be paid for at the contract unit price per FOOT for SANITARY SEWER MAIN LINE REPAIR, 10".

SANITARY SEWER MAIN LINE REPAIR, 8"

This work shall consist of the removal and replacement of existing sanitary sewer utilizing open cut methods at locations shown on the plans or at the direction of the Engineer. The existing sanitary sewer shall be removed and disposed of properly.

Upon completion of the installation of the concrete box culvert, the ductile iron sanitary sewer main line shall be constructed as shown on the plans or at the direction of the Engineer, passing through the proposed concrete box culvert. The concrete box culvert shall have openings core drilled through each side wall at the location of the sanitary sewer. The pipe shall be installed to pass through the

concrete box culvert such that no pipe joints are located within the concrete box culvert. Once the pipe is in place through the openings in the concrete box culvert, the space around the sanitary sewer at the openings shall be sealed neatly with concrete mortar.

Ductile Iron Pipe shall be Class 52 (minimum) meeting the latest requirements of AWWA C105, C-111, C-150, C-151, and C-151. All pipe shall be furnished with asphaltic exterior coating and ceramic epoxy interior lining (Protecto 401 as manufactured by Induron Coatings, Inc or approved equal) and installed with eight mil (8 mil) polyethylene encasement (V-bio polywrap). Ductile iron pipe shall be with Push-On joints meeting the requirements of AWWA C-111, latest edition.

Measurement shall be made along the centerline of sanitary sewer installed. The cost for furnishing all labor, materials and equipment necessary for excavation, existing sanitary sewer removal, construction of the new sanitary sewer, backfilling, trench backfill, connection to existing manholes, and concrete mortar required will be paid for at the contract unit price per FOOT for SANITARY SEWER MAIN LINE REPAIR, 8".

SANITARY SEWER POINT REPAIR

A. Description: This work shall consist of performing a sanitary sewer point repair on the existing sanitary sewer along the south side of 16439 Greenwood Avenue in preparation for Cured-in-Place Pipe Lining. This work shall consist of the removal and replacement of the existing sanitary sewer section to the line and grade as directed by the Engineer. Connections with existing pipes shall be made by means of non-shear mission couplings or approved equal. Connections to existing manholes is defined in the special provisions under Connections at Manholes. The Contractor shall take care to disturb the least amount of surface area possible during the excavation. Existing service connections within the limits of the repair shall be replaced with a new wye or tee section. The cost for wyes or tees shall be considered included in the cost of the Sanitary Sewer Point Repair.

B. Materials: All replacement sanitary sewers located in areas where proper horizontal and vertical separation from existing water main is achieved shall be semi-rigid PVC SDR 26 conforming to ASTM D3034 with elastomeric gasketed joints meeting the requirements of ASTM D3212. In areas where proper separation from existing water main does not exist, or other areas as directed by the Engineer, the replacement sewer pipe shall be Ductile Iron Sanitary Pipe (DISP) conforming to ANSI 21.51 with joints meeting the requirements of ANSI 21.11.

C. Construction Requirements: The sewer section to be replaced shall be exposed by excavation in accordance with "EXCAVATION AND BACKFILL FOR UNDERGROUND CONDUITS" of the Division II Technical Specifications of this contract. The Contractor shall provide and operate all necessary trench dewatering equipment, sheeting, and trench boxes to sufficiently keep the trench dry and safe during all sewer replacement operations. The trench width shall be kept to a minimum at all times, in accordance with the limits specified in Section 1-2.03 of the Division II Technical Specifications - Excavation and Backfill for Underground Conduits.

It is the intent of this contract to disturb the least amount of surface area possible. Therefore, the Contractor shall take great care not to unnecessarily disturb or destroy trees, shrubs, additional pavement, etc. during the sewer replacement operations. If the Contractor unnecessarily disturbs additional surface area, trees, sodding, etc., all such items shall be replaced in kind by the Contractor without additional compensation.

Following excavation and verification of the damaged pipe location and size, **approximately 15' of the existing sewer shall be removed**. Then, the trench bottom shall be reshaped so that the replacement pipe shall be at the line and grade of the existing pipe or otherwise installed at a minimum slope, or as directed by the Engineer. The existing material at the bottom of the trench shall be removed and

replaced with Grade CA-7 coarse aggregate. All sewer pipes shall be installed in accordance with the provisions of "SANITARY SEWER AND FORCE MAIN" of the Division II Technical Specifications of this contract, and ASTM D3034. Material added to the trench bottom as a pipe bedding shall be tamped to the Engineer's satisfaction. All sewers, including building services, shall have a Grade CA-7 stone bedding of a minimum thickness of four inches (4"). The Contractor shall ensure that the bedding is properly placed under the pipe haunches and is in full contact with the new pipe.

PVC SDR 26 Joint Assembly: The bell and spigot areas of PVC pipe joints shall be thoroughly cleaned, making certain that the gasket is properly seated. Once seated, a sufficient amount of gasket lubricant shall be applied to the gasket and the spigot end.

Care shall be taken to ensure that the outer edge of the spigot is well lubricated. Once lubricated, the gasket shall not be removed from the bell. The joint shall be aligned, and the spigot pushed to the home mark using a bar and wood block from the back end. The Contractor shall take great care to ensure that the wood block protects the pipe end from the bar. All burrs and rough spots shall then be removed from the outer pipe wall and spigot ends with a file or other appropriate device.

The Contractor shall also take great care not to scratch, indent, puncture or otherwise damage the PVC pipe during installation. All pipe materials used during the sewer replacement shall be inspected and approved by the Engineer before and during installation. If a pipe section has been damaged in any way before or during installation, it shall be removed and replaced to the satisfaction of the Engineer.

Connections at Manholes: At all connections to existing and/or proposed manholes, a watertight field cast connection shall be made by means of a Contech Manhole Water Stop or equal. The stop shall be placed on the pipe near the center of the manhole wall with gasket fingers pointing to the outside of the manhole. The steel band shall then be tightened by means of a socket wrench to assure a positive watertight seal against the outside pipe.

Connections with Existing Pipes (Band-Seal Coupling Installation): The existing exposed sewer shall be cut at the ends within the limits of removal as directed by the Engineer. The following equipment or equal shall be used to cut the pipe:

- a. Rigid No. 246 Soil Pipe Cutter with extension chain.
- b. Wheeler Model 490-12 Pipe Cutter.
- c. Quickie gasoline powered cut-off saw.

The replacement pipe shall also be cut using the above equipment, as required for abutting plain square ends at the points of connection. The length of the replacement pipe after cutting shall be one-half inch to one inch (1/2" to 1") less than the length of the removed pipe. Temporary blocking should be provided as required or as directed by the Engineer. The Band Coupling shall be centered over each joint and clamp bolts and shear ring shall be tightened using a hex bolt wrench or socket device. All surfaces and couplings must be clean. The temporary blocking shall be removed, and the excavated area filled in and tamped. The Contractor shall follow the method or guidelines for installation of the Band Coupling specified by the manufacturer during installation.

After installation of the replacement pipe, the trench shall be properly backfilled in accordance with Section 1-2.19D of the Division II Technical Specifications - Excavation and Backfill for Underground Conduits of this contract, except that the height of Grade CA-7 stone backfill shall be placed twelve inches (12"), uniformly placed in two (2) six-inch (6") lifts, above PVC Pipe. Again, the Contractor shall take great care to assure that bedding and backfill material is in full contact with the new pipe. The cost for stone back-fill shall not be paid for separately, but shall be considered included in the cost of the point repair.

At all locations where a sewer pipe replacement is required, the flow of sewage shall be maintained at all times possible during the construction by by-pass pumping in accordance with the Special Provision for SEWER FLOW CONTROL. Sewer services to buildings shall not be interrupted unless approved in writing, in advance by the Engineer.

The Contractor shall have sole responsibility for locating all sewer service laterals within the limits of the SANITARY SEWER POINT REPAIRS. Any building service connections existing within the limits of the sewer replaced shall be provided with a wye or tee section, regardless of the type of the existing connection. Connection of new 6" PVC SDR 26 to existing service laterals shall be made by means of mission couplings or other fittings approved by the Engineer. The cost for this work, including couplings, fittings and 6-inch SDR 26 pipe necessary for connections to the existing services shall be included in the contract unit price bid per EACH for SANITARY SEWER POINT REPAIRS, [DIAMETER].

D. Testing and Inspection of Sewers: In all cases where a point repair is made, the full length of sewer main, (manhole to manhole) shall be inspected by means of closed-circuit television inspection after the repair has been finished. Any replaced sections, which do not pass the inspection(s), shall be repaired at the Contractor's expense. The cost for all sewer televising shall be considered included in the cost of various contract pay items.

E. Measurement and Payment: The contract unit prices bid for the point repair shall include the cost for all excavation, trench dewatering and maintenance, bypass pumping, removal and disposal of existing sewer pipe and unfit materials, trench bottom reshaping, bedding, haunching, installation of replacement sewer pipe, mission couplings and related fittings, 12" of stone backfill over the pipe, pavement restoration, specialty restoration items such as gardens, decorative stone, etc. sewer testing and inspection, and all other work necessary for a complete job.

No extra compensation shall be made to the Contractor for by-passing of sewage flow to continue service, dewatering of trenches, sheeting, protection of existing underground service laterals, the removal, disposal and replacement of unstable material, removal of the existing sewer, specialty restoration and surface items and/or filling of voided areas with appropriate material. Instead, this work shall be considered included in the cost of various contract pay items.

The cost for all work associated with the sewer replacement, including but not limited to excavation, removal and disposal of deleterious materials, bypass pumping, replacement sewer, backfilling and surface restoration will be paid for at the contract unit price bid per FOOT for SANITARY SEWER POINT REPAIRS, [DIAMETER].

MANHOLE ACCESS

The Contractor shall be solely responsible for accessing the facilities. The Owner will assist in locating all facilities but shall not be responsible for providing additional access to the facilities, other than identifying roadways and easements to access the project site.

SEWER FLOW CONTROL

The Contractor shall be responsible for maintaining sewer flow necessary for the continuation of sewer service during construction and/or inspection. The cost for the sewer flow control shall not be paid for separately but shall be merged into the unit price for the cleaning, internal inspection or repair activity being performed.

During sewer cleaning operations, the flows shall be reduced to a maximum of twenty five percent (25%) of the pipe diameter by manual operation of pump stations, plugging/blocking of the flows or by

pumping/bypassing of the flows, as specified. During sewer repair operations, no sewer flows will be permitted.

Any sewer plugs utilized during bypass pumping shall be designed so that all or any portion of the sewage flow can be released. During the cleaning, inspection or repair portion of the operation, flows shall be controlled as described above. After these tasks have been completed, flows shall be restored to normal.

The Contractor shall not backup or flood existing services or buildings. This may require that the Contractor provide by-pass pumping capabilities. Any by-pass pumping that may be required will be considered included in the contract. Whenever flows in a sewer line are blocked, plugged or bypassed, sufficient precautions must be taken to protect the sewer lines from damage that might be inflicted by excessive sewer surcharging. The Contractor shall be solely responsible and liable for any property damages resulting from the work.

When pumping/bypassing is required, the Contractor shall supply the necessary pumps, conduits and other equipment to divert the flow of sewage around the sewer section in which work is to be performed. The bypass system shall be of sufficient capacity to handle existing flows plus additional flow that may occur during periods of a rain event. The Contractor will be responsible for furnishing the necessary labor and supervision to set up and operate the pumping and bypassing of the flow. If pumping is required on a twenty-four (24) hour basis, all engines shall be equipped in a manner to keep the pump noise at a minimum.

The cost of compliance with this requirement shall not be compensated for separately but shall be considered included in the cost of various contract pay items.

GENERAL CLEANING REQUIREMENTS

A. Description: This item of work shall consist of sewer and adjacent structures, i.e., manhole cleaning with high velocity hydro-cleaning equipment, done in preparation of internal television inspection and sewer pipelining so that an optimum viewing of the condition of the sewer, i.e., cracked pipe, pipe sags, changes in sewer line grades, tree root penetration, etc. can be attained.

Cleaning shall be performed on the entire sewer section between structures. The Contractor will be required to clean, and then televise the sewers to the industry standard of 95% clean, to provide a satisfactory preparatory cleaning of the sewer. In addition, if cleaning of an entire section cannot be successfully performed from one structure, then the equipment shall be set up on the other structure and cleaning again attempted without additional compensation.

This work shall also include the cleaning, by means of the high velocity hydro-cleaning equipment, of the upstream, downstream and any intermittent structures within the sewer section. The cleaning of the manhole structures must be completed as the sewers are cleaned from upstream manhole to downstream manhole. If a manhole is found with debris still on the bench, walls or invert after cleaning has been completed then the Contractor will be required to clean the said manhole and the adjacent downstream section of sewer again at no additional charge. **All cleaning of manholes shall not be compensated for separately but shall be considered included in the cost of various contract pay items.**

Cleaning Precautions: During sewer cleaning operations, satisfactory precautions shall be taken in the use of cleaning equipment. Precautions shall be taken to ensure that the water pressure created does not damage or cause flooding of public or private property being served by the sewer. When possible, the flow of sewage in the sewer shall be utilized to provide the necessary pressure for hydraulic cleaning devices.

Debris Removal and Disposal: All sludge, dirt, sand, rocks, grease, roots, corroded or broken pipe pieces, and other solid or semisolid material resulting from the cleaning operation shall be removed at the downstream structure of the section being cleaned. To ensure that the debris is removed from each section of sewer and not passed to an adjacent section of sewer during cleaning or lining operations, it is mandatory that a "Vactor" or similar type vacuum truck be present onsite every day for each section of sewer being cleaned or lined. In addition to having a vactor present the use of debris catching baskets will also be required whenever a sewer is being jetted, cleaned or during any operation in which debris may pass from one sewer segment to an adjacent sewer segment. Passing material from structure section to structure section, which could cause line stoppages, accumulations of sand in wet wells or damage to pumping equipment, shall not be permitted.

All solids or semisolids resulting from the cleaning operations shall be removed from the site and disposed. All materials shall be removed from the site no less often than at the end of each workday. Under no circumstances will the Contractor be allowed to accumulate debris, etc., on the site of work. The Owner will provide an accessible staging area within the limits for the temporary placement of a debris box. Nevertheless, the debris shall be removed at the end of each working day.

It is the sole responsibility of the Contractor to properly dispose of sewer debris daily. **This work shall be done at the Contractor's own expense and considered included in the contract.** All requirements of the Illinois Environmental Protection Agency and all other regulating agencies shall be followed. The Contractor shall be required to provide all necessary documentation for the proper, and lawful, disposal of debris. The Owner shall not be responsible for the disposal of the debris.

B. Cleaning Equipment: The Contractor shall provide all equipment necessary to meet the intent of the specification, including but not limited to high velocity water-jetting equipment, vacuum machines, hydraulically propelled equipment or mechanically powered equipment. Whatever equipment is used, any necessary pulleys and/or supports shall be installed in structures so as not to restrict the cleaning operation or damage existing structures.

Preparatory Cleaning Equipment: Preparatory cleaning equipment shall include high velocity water-jetting equipment, vacuum machines or hydraulically propelled equipment.

Hydraulic Cleaning Equipment:

The equipment used shall be of the movable dam type and be constructed such that a portion of the dam may be collapsed at any time during the cleaning operation to protect against flooding of the upstream sewer lines. The movable dam shall be of an external diameter equal to the internal diameter of the sewer being cleaned and shall be provided with a flexible scraper around the outer periphery to ensure total grease removal. If sewer cleaning balls, or other such equipment which

cannot be collapsed instantly are used, precautions against flooding of upstream sewers (public or private) shall be taken.

High Velocity Hydrocleaning Equipment:

All high velocity sewer cleaning equipment shall be constructed for ease and safety of operation. The equipment shall have a selection of two (2) or more high velocity nozzles. The nozzles shall be capable of producing a scouring action from 15 degrees to 45 degrees in all size lines designated to be cleaned. Equipment shall also include a high velocity gun for washing and scouring structure walls and bench. The high velocity gun for washing manholes shall be capable of producing flows from a fine spray to a long-distance solid stream. The equipment shall carry its own water tank, auxiliary engines, pumps, and hydraulically driven hose reel. All controls shall be located so that the equipment is operated above ground.

Heavy Cleaning Equipment: Heavy cleaning equipment shall include mechanically powered equipment as outlined below.

Mechanical Cleaning Equipment:

Bucket machines shall be in pairs with sufficient power to perform the work in an efficient manner. Machines shall be belt operated or have an overload device. Machines with direct drive that could cause damage to the pipe will not be allowed. Where bucket machines and buckets are to be used, caution should be taken that a properly sized flexible cable be used so that breakage will not occur, hanging the cleaning equipment within the sewer.

A power rodding machine shall be of the continuous type capable of holding a minimum of one thousand feet (1000') of rod without joints, couplings, fittings or connectors. The rodding equipment shall be provided with a minimum rated 25 Hp motor drive unit. The rod shall be 4.0-gauge specifically treated steel. To ensure safe operations, the machine shall have a fully enclosed body and an automatic safety throw-out clutch or relief valve. The rodding unit shall be able to pull brushes, swabs, and other cleaning equipment as well as the television camera. It shall also have a footage meter attached so that the location of the cleaning tools and/or television camera will be known at all times.

Lumberjacks and impact & drill cutters are multipurpose cutters running off water pressure designed to cut roots and also used to remove grease, mineral deposits and protruding laterals. Since lumberjacks can rotate at up to 50,000 rpm, extreme caution is required to ensure that the existing sewer pipes are not damaged while utilizing this type of equipment.

Impact & drill cutters typically rotate at about 200 rpm with impacts of up to 1,000 blows per minute. Three modes for impact & drill cutter types usually include Impact and drill simultaneously, impact only and drill only. Extreme caution is required to ensure that the existing sewer pipes are not damaged while utilizing this type of equipment.

CLEANING OF SEWER (PRIOR TO LINING)

A. Description: The purpose of the sewer cleaning operation is to remove accumulation of sediment, debris, blockage, mineral deposits, internal deposits, rocks, roots, bricks, grease, etc. in order to permit

pipelining of the designated sewer sections with the minimum number of indentations or imperfections to the cured liner.

Since the final pipelining product depends a great deal on the cleanliness of the lines, the importance of this phase of the operation cannot be stressed too strongly. It is recognized that there are some conditions such as badly broken, collapsed pipe, eroded pipe or major blockages that may prevent cleaning from being accomplished or where additional sewer line damage would be done if cleaning is attempted or continued. Should conditions of this nature be encountered, the Contractor shall notify the Engineer and Owner immediately. The Engineer shall then determine an appropriate cleaning method or whether to not clean that specific sewer section. The Owner shall complete excavated sewer point repairs prior to the commencement of cured-in-place pipe installations. A sewer section is defined as the sewer between two (2) designated structures.

The equipment used for sewer cleaning shall be capable of removing all dirt, grease, rocks, roots and other deleterious materials including internal deposits from dumped asphalt or concrete. The equipment shall be selected by the Contractor to prevent damage to the pipe. Cleaning equipment capable of cleaning lengths up to one thousand feet (1,000') shall be provided. Equipment must be able to clean this length with vehicular access to one structure only.

Cleaning shall be of the entire reach between structures. If cleaning of an entire section cannot be successfully performed from one structure, the equipment shall be set up on the other structure and cleaning again attempted without additional compensation. Generally, cleaning should be performed from upstream to downstream.

The Contractor will be required to clean, and then televise, the sewers to the industry standard of 95% clean. This means that only five percent (5%) of the internal diameter is not required to be cleaned or televised. The sewer need not be plugged if the 95% standard is met. It is the Contractor's responsibility to determine if it will be necessary to plug, dam or otherwise restrict the flow from upstream pipes. The method of sewer cleaning shall be one of those herein specified which, upon completion of the cleaning operations, meets this required level of cleanliness.

B. Acceptance of Sewer Cleaning: Acceptance of sewer line cleaning shall be made upon the successful completion of the televising inspection and shall be to the satisfaction of the Engineer. If TV inspection shows the cleaning to be unsatisfactory, the Contractor shall be required to re-clean and re-inspect the sewer line until the cleaning is shown to be satisfactory, at no additional cost to the municipality.

The cost of this work, regardless of the number of set-ups or passes with the high velocity hydro-cleaning equipment, heavy cleaning of sewers and including structure cleaning, will be included in the contract unit price per FOOT for CURED-IN-PLACE PIPE LINER, [DIAMETER] where applicable.

Cleaning shall not be paid for separately but shall be considered included in the CURED-IN-PLACE PIPE LINER, [DIAMETER], pay item and no additional compensation shall be allowed.

HEAVY CLEANING OF SEWER

Heavy cleaning shall be deemed necessary, when in the opinion of the Engineer, continued use of high velocity hydro-cleaning does not meet the industry standard of 95% clean and cannot be satisfactorily utilized due to obstructions present in the sewer, i.e., heavy root penetrations, mineral deposits, built up debris in the line, etc.; that would prevent optimal viewing of the pipeline.

The Contractor shall then select such appropriate heavy cleaning equipment as listed under "Mechanical Cleaning Equipment" that would be capable of removing all dirt, grease, rocks, roots, mineral deposits, internal deposits, and other deleterious materials from the sewer line while preventing damage to that line.

It shall be understood that the cost for heavy cleaning, if necessary, shall be included in the CURED-IN-PLACE PIPE LINER, [DIAMETER], pay item and no additional compensation shall be allowed.

OWNER OBLIGATION

The Owner shall provide the Contractor with the following items at the Owner's expense:

1. Structures located, exposed and ready for access.
2. Provide access to all structure locations.
3. Engineer will provide plans for those areas where sewers will be cleaned, televised/lined.

SEWER TELEVISION

A. Description: The Contractor shall furnish the mobile television inspection studio, all television and other necessary types of equipment, and all materials, electricity, labor, technicians, etc., as may be needed to perform the closed-circuit television inspection of the sewers as shown on the plans or as directed by the Owner or Engineer. Televising will need to be performed both before and after CIPP lining operations, as well as after each of the sanitary sewer point repairs are completed.

The television inspection shall be performed in one section of sewer at a time between adjacent structures. The inspection shall be performed by pulling the television camera or crawling through the section of the sewer along the axis of the pipe. The inspection may be performed in a forward or backward direction as dictated by the sewer line conditions at the time of the inspection.

The television inspection shall be conducted in such manner that the television control technician or supervisor, and the Owner or Engineer, can determine that the sewer line is thoroughly cleaned, and so that all leaking joints, pipe breaks, line sags or dips, service lines, roots, etc. can be accurately seen and located within and along the sewer line.

The operation of the television equipment shall be controlled by a skilled certified technician or supervisor who shall be located at the control panel in the mobile television inspection studio. The operator must be certified by NASSCO for PACP. The control of the television equipment may be accomplished by means of remote-control winches or by telephone or other suitable means of communications between the television control technician or supervisor in the mobile television inspection studio and the technicians operating the winches at either end of the sewer section being inspected.

The television control technician in the mobile television inspection studio shall, always, be able to move the television camera through the sewer in either direction without loss of quality in the video presentation on the television monitor. The television image on the monitor shall, always, be free of

electrical interference and shall provide a clear, stable image and picture. If for any reason the television inspection image becomes unclear, out of focus, too dark or too light to see the condition of the sewer being televised, the Contractor will be directed to re-televising that section of sewer at no additional cost. When directed to do so by the Owner or Engineer, or television control technician, the television camera shall be stopped and/or backed up as required so either can view, analyze, and photograph when so desired any features or conditions that appear unusual or uncommon in a good sound sewer.

The travel speed of the television camera through the sewer shall be uniform and shall not exceed the maximum speed of 30 feet per minute, under normal conditions. Any means of propelling the camera through the sewer which produces non-uniform rates of speed, or which results in a speed faster than that specified by the Owner or Engineer will not be acceptable.

The television control technician shall be able to adjust the brightness of the lighting system built into the television camera and be able to change the focus of the television camera by remote control. The television image shall continuously be recorded with proper lighting. Services or sections of sewer that appear too dark or too light to see the condition of the sewer or the connected service shall be re-televised at no additional cost.

Television inspection of the sewer is required to start from the center of the manhole whether it is upstream or downstream and shall finish at the center of the manhole at the other end of the sewer section being televised. No preset measurements or starting the camera inside the pipe any distance will be allowed. This means that from the center of the manhole when the camera starts moving the footage counter shall be set at zero and increase accurately through the sewer pipe being televised. Every service connection shall be viewed to confirm whether it is active or capped.

Measurement of the exact location of any sewer line defects (i.e., breaks, sags, leaks, etc.) shall be at the ground level by means of a metering device. Markings on a cable, or the like, which would require interpolation for the structure depth, will not be allowed. Measurement meters shall be accurate to two-tenths of a foot (0.20'). A measuring target in front of the television camera shall be used as an exact measurement reference point, and the meter reading shall show the exact location of this measurement reference point.

Where obstructions within the sewer line prevent the passage of televising equipment, the Contractor shall reset his equipment to pass through the sewer line section from the other end and thereby complete the inspection of the section.

To facilitate the television inspection of various sections of sewer lines having sags or depressed areas filled with water, a high-pressure jet cleaner shall be utilized to dewater the settled or sagged section of the sewer line. The high-pressure jet cleaner shall be used to pull the water away from the front of the television camera thereby exposing 95% of the pipe interior for internal television inspection. The television inspection of these sags or depressed areas is most important since these depressed areas are frequently caused by broken pipe, poor service line connections, or open pipe joints and are usually locations of probable infiltration and trouble. The Owner or Engineer shall determine when the high-pressure jet cleaner shall be utilized for this type of work.

B. Televising Equipment: The television camera used for the sewer line inspection shall be one specifically designed and constructed for such inspection work. Lighting for the camera shall be adequate and suitable, and adjustable to allow a clear picture of the entire periphery of the pipe. The camera shall be capable of rotating three hundred and sixty (360) degrees about its axis. The camera shall be waterproof and shall be operative in 100 percent humidity conditions.

The camera shall be small enough to pass through and clearly televise the interior of a six-inch (6") diameter sewer and all other larger sewer sizes up to and including the largest diameter sewer as bid

on this project. The camera focal length or distance shall be adjustable through a range of six inches (6") to infinity. The television camera shall be capable of transmitting a picture having not less than 600 lines of resolution and in color. The picture shall be free at all times of electrical interference and shall provide a clear stable image having the number of lines of resolution specified.

To ensure optimum or peak picture quality throughout all conditions that may be encountered during the sewer inspection work, the variable intensity control of the camera lighting and the adjustments for focal length and iris control shall be under the direct control of the television control technician at the central control panel in the television inspection studio. The camera speed and direction of movement shall also be controlled by the television control technician in the television inspection studio.

The view seen by the television camera shall be transmitted to a monitor of not less than twelve inches (12") diagonally in size. The television monitor shall be located inside the mobile television studio. The monitor character generator shall be capable of creating the precise numeric manhole identification number with no truncation allowed regardless of the number of digits that make up the manhole identification number.

The mobile television studio shall be large enough to accommodate up to four people for the purpose of viewing the monitor while the inspection is in progress. The Owner or Engineer shall have access to view the television screen at all times.

The video recording equipment shall be the type on which both audio and video information can be recorded. This equipment shall be continuously connected to the television inspection or monitoring equipment in such a manner that it can easily be turned on or off as the Owner or Engineer determines that a video or audio recording is or is not needed.

The video recording and monitoring equipment shall have the built-in capability to allow the Owner or Engineer, or television control technician, to instantly review both the audio and video quality of the video productions at all times during the television survey. Playback speed shall be continuously adjustable from 1/3 normal speed (for slow-motion viewing) to normal playback speed.

The central control panel, television camera controls, video recording equipment, etc. shall all be located in the mobile television studio. The television studio shall be mounted on a mobile device (truck or trailer) which will allow safe and orderly movement of the inspection equipment throughout the job site.

C. Digital Video Format: Digital Video Format (i.e., mpeg or avi) delivered one file per sewer line section shall be provided on two separate external USB 3.0 Portable Solid-State Drives (SSD) in digital format. All digital video and PDF report files shall be named in a manner such that the "to manhole" and "from manhole" is precisely defined for linkage to GIS. For example, a pipe segment with an upstream manhole number of 123 and a downstream manhole number of 456 shall be named "123-456.mpg" and "123-465.pdf". **Two (2) copies of the finished video recordings on external hard drives and PDF reports shall be delivered to the Engineer, the cost of which shall not be paid for separately but shall be included in the cost of various contract pay items.**

A video recording of the inspection view as it appears on the television monitor shall be taken for the complete length of all sewer lines that are television inspected or as may be directed by the Owner or Engineer. The video recording shall be made whenever television inspection is in process. However, the video recording shall be stopped after a short duration whenever the television camera movement is stopped or backed up to examine a defect for a length of time. Whenever the camera movement is restarted, the video recording should be restarted prior to any camera movement.

The video recording of the sewer line inspection shall produce a video image equal to or better than the quality of the picture on the television monitor. When the recorded video information is replayed and

reviewed on the monitor/receiver, it shall be free of electrical interference and shall produce a clear, stable image with a resolution of not less than 600 lines.

The video recordings shall also supply a continuous audio record of all observations for the complete length of all sewer lines television inspected. The audio portion of the composite signal shall be sufficiently free of electrical interference, background noise, and heavy foreign or regional accents to provide an oral report that is clear and complete and easily discernible. The audio portion of the video reporting shall be recorded by the operating technician on the video as they are being produced and shall include the following:

1. Sewer line location (street name and address, structure to structure numbers, etc.)
2. Description and location of defects observed in the sewer line
3. Description and location of service laterals
4. Length of each sewer line section televised
5. All other information as encountered during inspection such as obstructions to camera passage and sags in the pipe which require dewatering

Dubbing the audio information onto the video tract after the internal television inspection is completed will not be permitted.

Video recordings shall be one file per sewer line section and shall be included on the external hard drives submitted. Two (2) hard drives containing all the video and report files shall be delivered to the Engineer. The hard drives shall be labeled **“VILLAGE OF SOUTH HOLLAND – THORN DITCH SANITARY SEWER CIPP – 23-R0646”**.

D. Spreadsheet: Also included on each hard drive should be a master spreadsheet that has a record for each line segment televised. The spreadsheet shall be in MS Excel format and shall have hyperlinks to both the pre- and post- video files and the associated PDF of the digital pipeline report for each section of sewer televised. The spreadsheet shall include the following information for each record:

- Pre- or Post- Inspection
- Date Televised
- Length Surveyed
- Pipe Segment Reference (Pipe ID)
- Upstream Manhole ID
- Upstream Manhole Rim to Invert
- Downstream Manhole ID
- Downstream Manhole Rim to Invert
- MPEG Video
- PDF Report
- Data Folder Location
- City, Village or Town
- Street Name
- Pipe Height (Diameter)
- Pipe Width
- Pipe Shape
- Pipe Material
- Additional Information
- Structural Quick
- Structural Index
- O&M Quick
- O&M Index
- Overall Quick

- Overall Index
- REL Project Number

E. Television Inspection Reports: The Contractor shall keep an electronic log or record covering the television inspection work and the information acquired for each sewer line section inspected. A sewer line section is defined here as the length of sewer which connects two (2) adjacent structures. Specialized forms shall be used for this log or record, and they must meet the approval of the Owner or Engineer prior to initiation of work for the project. After the televising is complete, the detailed observations from each final television inspection segment need to be submitted in a digital MS Access Database format as well as in PDF report format that includes the following information:

- Date and Time televised
- Name of Inspection company
- Name of TV control technician
- NASSCO certification number of TV control technician
- REL Project Number
- Sewer pipe ID (non-abbreviated structure-to-structure numbers in their entirety)
- Sewer line section location (street name, address nearest to each manhole)
- Sewer pipe size
- Sewer pipe material
- Sewer pipe length
- Depth of sewer in each manhole to within plus or minus 0.1 feet
- Sewer section joint length
- Upstream Manhole ID (provided by the Engineer)
- Downstream Manhole ID (provided by the Engineer)
- Name of the inspection video file for the sewer pipe
- Direction of flow and direction of camera movement in sewer line
- Root intrusion and mineral deposit locations and descriptions
- Notes on changes in sewer line grades, sewer dips, sags, etc.
- Sewer service line locations (distance from the upstream manhole)
- Sewer service line connection type (Y or T)
- Sewer service line location on the periphery of the sewer pipe (clock position)
- Sewer service line status (active/capped)
- Pipe damage and character, type, and location of such damage
- NASSCO structural, O+M and Overall pipe severity ranking
- NASSCO Quick Rating
- Other problems or remarks

The submittal of the MS Access database containing all television inspection observations as well as the PDF copies of the report shall be submitted on the two (2) hard drives and shall be considered included in the contract and must be submitted on or before the completion dates specified in the contract documents.

F. Final Project Reports: Two (2) hard copies of the final project reports shall be prepared by the Contractor and submitted to the Engineer prior to the completion deadline specified herein, as soon as possible after completion of cleaning and television inspection of all sewer lines. This report shall include as a minimum the following information:

1. Sewer line section television inspection logs or records and a summary of information on the logs or records.
2. Field maps showing field notes and the correct address location of each manhole shall be shown in addition to its identifying manhole number. The correct locations of all

manholes should be marked on the plan sheets and submitted with the report and marked "AS FIELD LOCATED."

3. An index of all video segments recorded and an identification record for each of those segments.

There shall be no separate or extra compensation for preparation and submittal of the final project reports. All the Contractor's costs for preparation and submittal of the final project reports shall be considered included in the cost of various contract pay items.

G. Measurement and Payment: The cost for televising sewers for sewer lining including both pre- and post-television inspection for sewer lining, will not be paid for separately, but shall be considered included in the contract unit price bid per FOOT for CURED-IN-PLACE PIPE LINER, [DIAMETER].

CUT PROTRUDING TAPS

During cleaning and televising prior to lining, when the camera is prevented from proceeding because of a protruding tap, the Contractor, with the approval of the Engineer shall remove the protruding portion of the tap to allow the camera to pass for the televising and lining of the entire sewer segment. Any protruding taps cut on the way up to the one tap approved for cutting shall be considered included in the cutting of the one approved tap. The approved tap being cut must be recorded on the video from the cleaning and televising prior to lining in order to be approved for final payment. The protruding tap shall be cut using a method that prevents damage to the sewer service or sewer main. Any damage to the sewer service or sewer main that results from the cutting of a protruding tap shall be corrected at the expense of the Contractor. Cutting of protruding taps will be measured for payment by count of approved taps cut. The cost for cutting protruding taps will be paid for at the contract unit price per EACH for CUT PROTRUDING TAPS.

CURED IN-PLACE PIPE LINER [DIAMETER]

A. Description: This work shall consist of reconstructing existing sewer pipes with a resin-impregnated flexible pipe liner that is cured-in-place upon circulation of hot water or steam. Locations where the proposed liner installation method is "air inversion/steam cure" shall be provided in advance to the Engineer for approval. All work shall be performed at locations indicated on the plans or as directed by the Engineer. The steam curing process will not be allowed for sewers that are greater than 15 feet deep. These locations will be required to be cured using the hot water/boiler method.

B. Materials: The sewer section shall be lined with an approved cured-in-place pipe liner. Contractors using a "NEW" pipelining product must furnish specifications as to the structural strength and flexibility of the liner to conform to the existing sewer diameter so that the liner does not cause a restriction in sewer capacity. A list of references of previous installations in the Chicagoland area shall be required. The Owner's decision concerning the acceptability of a "NEW" pipe liner shall be final.

The Contractor shall sufficiently clean the sewer section to be lined to the industry standard of 95% clean in accordance with the Special Provisions contained herein. After cleaning, the Contractor shall make sure the sewer section is sufficiently dry prior to lining to prevent loss of resins during the insertion phase.

The tube shall consist of one or more layers of absorbent fabric capable of carrying resin and shall be capable of withstanding installation pressures and curing temperatures. The tube material shall be able to stretch to fit irregular pipe sections and negotiate bends up to 90°. The outside layer shall be plastic coated with a material compatible with the resin system used. If the air inversion/steam cure installation

method is approved, a coated felt tube compatible with a steam cure such as polypropylene coated tubes or an approved equal shall be utilized.

The resin shall be a thermo-set resin system that is compatible with the cured-in-place pipe installation. The resin shall be curable in the presence of water and the initiation temperature for curing shall be less than 180°F. If approved by the Engineer, the resin shall be compatible with the steam curing process. The bond between all CIPP layers shall be strong and uniform, with no part of the tube left unsaturated by resin. The installed liner shall conform to the minimum structural standards as listed below.

CURED-IN-PLACE PIPE LINER STANDARD RESULTS

| | |
|--|-------------|
| Tensile Stress ASTM D-638 | 3,000 psi |
| Flexural Stress ASTM D-790 | 4,500 psi |
| Short-Term Flexural Modulus ASTM D-790 | 250,000 psi |

Estimates of the long-term flexural modulus shall be based on a 10,000-hour test or other appropriate method approved by the Engineer and verified by independent third-party testing if required by the Owner.

The Contractor shall verify soil depths and characteristics and shall include these factors into the liner thickness design. The required structural CIPP wall thickness shall be based on the guidelines in the appendix of ASTM F1216 and ASTM F1743, and with the design parameters and physical properties listed on the "Design Parameters Summary" provided with the bid proposal. For partially deteriorated pipe designs, Equations X1.1 and X1.2 from ASTM F1216 shall be used. For fully deteriorated pipe designs, wall thickness shall be calculated based on Equations X1.3 and X1.4. Any layers of the tube not fully saturated with resin prior to insertion into the existing pipe shall not be included in the structural CIPP wall thickness calculation. The design lifetime of all pipelining products shall be a minimum of 50 years, in accordance with all applicable ASTM F1216 and ASTM F1743 design equations.

After curing is complete, the liner for the sewer shall have a minimum thickness of 6 mm plus or minus 10%.

As part of the proposal, the Contractor shall complete the Sewer Lining Design Worksheet containing the proposed liner design parameters and thickness for each sewer section to be lined during this project. All proposals will be reviewed for technical viability prior to award of the contract.

If the Engineer believes that liner thickness proposed by the Contractor is insufficient to meet the specified site conditions and/or design parameters, the Contractor shall provide detailed calculations justifying his/her proposed liner design. If upon review of this information the Engineer concludes that the proposed liner thickness is in fact insufficient, resolution shall occur by one of the following two methods:

1. The Contractor shall agree in writing to construct the liner(s) in question at the minimum required liner thickness, as determined by the Engineer, with no adjustment to the unit price(s) submitted with the Contractor's proposal, or
2. The proposal shall be rejected as unresponsive and dismissed from consideration for the contract award.

The liner shall be fabricated to a size that when installed will neatly fit the internal circumference of the conduit. Circumferential stretching during insertion shall not exceed 3% of the tube's original size.

The finished liner in place shall be fabricated from materials which when cured will be chemically resistant to withstand internal exposure to domestic sewage. The minimum length shall be that deemed

necessary by the Contractor to effectively span the distance from the inlet to the outlet of the respective manholes unless otherwise specified. The Contractor shall verify the lengths and internal pipe diameters in the field before installation.

C. Construction Requirements: The Contractor shall be responsible for maintaining uninterrupted sanitary/combination sewer and water service to all affected residences. Sewer flow control shall be as specified elsewhere in these Special Provisions. Any shut-down time which affects service to any residences, businesses, etc. will require notice to such owners at least forty-eight (48) hours in advance indicating the date and time of the interruption and length of time for interrupted service. This requirement, if necessary, shall be coordinated with the Owner.

Preparation of existing sewer section: Prior to any lining of a sewer, the Contractor shall remove protruding taps, debris and internal deposits, mineral deposits, tree roots, etc. from the pipeline and clean the pipe to the Engineer's satisfaction in accordance with the applicable sewer cleaning specifications within these Special Provisions.

Experienced personnel trained in locating pipe breaks, cracks, obstacles, and service connections by closed circuit television shall perform inspection of pipelines. The interior of the pipeline shall be carefully inspected before lining to determine the location and extent of any structural failures. The location of any conditions that may prevent proper installation of lining materials into the pipeline shall be noted so that these conditions can be corrected. The Contractor for later reference by the Owner and Engineer shall keep a video and suitable log. The Owner and/or Engineer will make reports of previous internal inspections of the sewer, if any, available for reference to the Contractor, at his request.

It shall be the Contractor's responsibility to clear the line of all obstructions such as solids, corrosion on inner pipe walls, dropped joints, protruding branch connections or broken pipe that will prevent the insertion of the liner. The Owner intends to perform all necessary point repairs prior to the start of this project. If inspection reveals an obstruction that cannot be removed by conventional cleaning or internal cutting equipment, then the Contractor shall inform the Owner and Engineer of the need for a point repair excavation. Such excavation shall be approved in writing by the Owner's representative prior to the commencement of the work and shall be considered a change order to the contract. Only qualified contractors approved by the Owner and Engineer shall be allowed to perform point repairs or the Owner may choose to perform the repairs. If inspection of the sewer indicates one or more point repairs are needed, the Engineer, upon approval by the Owner, may delete pipe lining of the affected sewer section from the contract.

Wetting out procedure: The tube should be vacuum-impregnated with resin (wet-out) under controlled conditions. The volume of resin should be sufficient to fill all voids in the tube material at nominal thickness and diameter. The volume should be adjusted by adding excess resin for the change in resin volume due to polymerization and to allow for any migration of resin into the cracks and joints in the original pipe. A roller system or other approved method shall be used to uniformly distribute the resin throughout the tube. Use of a catalyst or additive(s) compatible with resin and tube may be used as per the manufacturer's recommendations. The Contractor shall keep the wetted-out tube properly refrigerated during transportation to the project site, and until the time of installation.

Liner installation: The pipe liner shall be inserted through an existing sewer manhole, unless otherwise approved and authorized prior to construction by the Owner and the Engineer. Tube installation forces or pressures shall be limited so as not to longitudinally stretch the tube by more than 3% of its original length. The finished liner shall be continuous over the entire length of the section of sewer and be free from visual defects including but not limited to foreign inclusions, dry spots, pinholes, bubbles, wrinkles and delaminating. The liner shall be impervious and free from any leakage from the pipe to the surrounding ground or from the ground to the inside of the lined pipe. Any defects that will affect the

integrity or strength of the lining or detrimentally affect the flow conditions within the newly lined pipe, in the foreseeable future or warranty period, shall be repaired at the Contractor's expense, in a manner determined by the Owner/Engineer.

After installation, suitable heat source and water (or steam if so approved), recirculation equipment shall be utilized to circulate heated water (or steam if so approved), throughout the pipe. This equipment shall be capable of delivering hot water (or steam if so approved) and controlling temperatures such that a uniform cure of the resin is achieved. The curing process shall be as recommended by the resin manufacturer, including strict adherence to recommended initial cure and post-cure temperatures. The Contractor shall make suitable gages available to monitor the temperatures of the incoming and outgoing water (or steam if so approved) supply as well as the skin temperatures of the liner itself.

If hot water is used for the inversion and curing process, the cured liner shall be cooled to a temperature below 100°F before relieving the hydrostatic head, by the introduction of cool water into the line. If the Engineer approves steam for the curing process the cured liner shall be cooled to a temperature below 113°F before relieving the steam pressure in the line.

The Contractor shall not release positive static head within the newly installed liner during the inflation and inversion processes. Once the inversion or inflation sequence of the CIPP installation process is started into the host pipe, it is not acceptable for the installation's internal pressure to be less than the submitted minimum pressure for that size tube. If the pressure is lower than the minimum pressure, the tube may be required to be removed from the host pipe at the discretion of the Owner or its Representative and disposed of in an approved manner as referenced in ASTM F 1216-06.4.3. Positive pressure shall be maintained on the liner until the liner is cured.

Seal at manholes: The Contractor shall ensure that a watertight seal is achieved at pipe connections with existing manhole walls and inverts. All pipes shall be fitted with a hydrophilic gasket, the "Insignia" as manufactured by LMK or equivalent, at both ends of each segment prior to installation of the liner. In addition, the top half of the finished CIPP shall be neatly cut at least four inches (4") from the manhole wall. Shearing or breaking off of CIPP sections shall not be allowed. At wall and invert openings in the manhole, the Contractor shall fill the annular space with a resin mixture compatible with the CIPP. A hand brushed Portland Cement finish or other method approved by the Engineer shall also be applied to completely seal the connection of the installed pipe liner to the interior walls and bench of the manhole. The cost for this work shall be included in the pipelining.

Immediate inspection and testing: For each inversion length installed during the project, the Contractor shall cut one sample from a section of cured CIPP at an intermediate manhole or termination point. The sample should be large enough to provide a minimum of three specimens for flexural testing. The full CIPP sample wall thickness shall be tested. If the sample is irregular or distorted such that proper testing is inhibited, wall thickness shall be machined away from the inside pipe face of the sample.

Test specimens shall be oriented on the testing machine with the interior surface of the CIPP in tension. The initial tangent flexural modulus of elasticity and flexural stress should be measured for gravity pipe applications in accordance with Test Method D790, Test Method 1 - Procedure A, and shall meet the requirements specified above in Section B - Materials. Sample testing results shall be certified by a Registered Professional Engineer and provided to the Engineer prior to the Owner's final acceptance of the project. The Owner will withhold a minimum of 10% payment retention until receipt of all required testing results.

If testing demonstrates that the installed liner fails to meet the design thickness, or any of flexural modulus specifications herein, the faulty installation shall be remedied by one of the following two methods:

1. The Contractor shall remove the faulty liner at his expense and re-install a properly designed liner that meets the required specifications. The Contractor shall be responsible for providing testing verification for the replacement liner as described above.
2. To account for the estimated reduction in design lifetime caused by installation of an inferior liner, liquidated damages shall be deducted from the final contract amount due the Contractor. This deduction shall be calculated by reducing the total cost of the installed sewer liner by a percentage, which is double the percentage of design lifetime less than 50 years lost as a result of the inferior installation. In summary, for each year of design lifetime less than 50 years, a total of 2% of the cost of that liner shall be deducted from the contract. Price deductions due to estimated reductions in design lifetimes shall be calculated based upon the following equation:

$$PR = (2.0) (50 \text{ yrs}) (1 - E_{\text{sample}} / E_{\text{design}})$$

Where: PR = % price reduction for estimated design lifetime reduction

E_{sample} = Flexural Modulus of Tested Sample

E_{design} = Product Design Flexural Modulus submitted by Contractor

No cost credits shall be given for exceeding the 50-year design lifetime. The method of remediation shall be the sole decision of the Owner and shall be final.

D. Measurement and Payment: Sewer lining work shall be measured from the center of manhole to center of manhole for each sewer section lined. The cost for all labor, materials and equipment required to install the finished liner, including preparatory cleaning, heavy cleaning and televising of sewers, manhole cleaning, removal and disposal of debris, manufacture and transport of the flexible liner and resin impregnation system, installation of the liner, sealing at manhole walls, leakage testing, CIPP sample testing, post-insertion televising, and restoration of disturbed areas will be paid for at the contract unit price bid per FOOT for CURED-IN-PLACE PIPE LINER, [DIAMETER].

SERVICE LATERALS TO BE REINSTATED

A. Description: After the liner has been installed and cured, the Contractor shall reconnect the existing active service connections by means of a remotely controlled cutter. Inactive service laterals shall be identified by appropriate methods during the pre-insertion videotaping and shall not be reinstated. A maximum of one lateral per property shall be reinstated, unless otherwise directed by the Engineer. Service reinstatements made by excavation shall not be permitted. The Contractor shall verify the location of all active service laterals to be reinstated by careful review of the pre-insertion video.

Properties with more than one lateral shall be dye tested by the Contractor in advance of CIPP lining operations to verify if the services are active or not. If a dye test is not possible, the Contractor shall perform a laterally launched CCTV inspection of the service lateral for verification purposes. Additionally, the Contractor is required to layout the service lateral location along the pipeline segment with a measuring wheel and paint, to aid in identification of active service laterals for reinstatement as described elsewhere in these provisions.

The remote cut shall be smooth, circular, wire brushed and shall be verified with inspection by a 360-degree closed circuit television camera. All finished holes shall be a minimum of 90%, and a maximum of 100%, of the service pipe diameter. Excess holes, wrong holes or trial cuts shall not be allowed. Defective reinstatements shall be repaired to the Engineer's satisfaction at the Contractor's expense.

If additional holes or cuts are made which lessen the installed liner's structural integrity, or allow visible infiltration, the Engineer may require removal and replacement of the liner for an entire sewer section.

In this case, the Contractor shall cause the entire length of the liner to be removed and shall install a new liner at no additional expense to the Owner.

After the work is completed, the Contractor shall provide the Engineer with a video file showing both the before lined and after lined conditions including the restored connections. Any surface area damaged (sod, sidewalk, etc.) during the televising and/or pipelining process shall be repaired or replaced to their original condition. The cost for any surface restoration and cleanup shall be considered included in the cost of the pipe lining.

B. Measurement and Payment: Reinstatement of service laterals will be measured for payment by count of laterals reconnected. The cost for reinstatement of active laterals by remote cutter, and post-cutting internal inspection by a 360-degree rotating camera will be paid for at the contract unit price bid per EACH for SERVICE LATERALS TO BE REINSTATED.

DYE TESTING OF PROPERTIES

A. Description: This specification covers the work necessary to conduct dye testing of properties at locations indicated on the plans or as otherwise determined by the Engineer or Owner to make the appropriate reinstatement of active services during cured-in-place pipelining projects.

This work shall be conducted only after layout of services has been completed as indicated in the Sewer Televising section of these special provisions, and after the locations of laterals have been field verified by wheel walking and painting service lateral connection locations on the ground surface with a visible marking paint, based on the initial pre- CCTV inspection results. Dye testing of properties shall be conducted where more than one lateral appears active on a single parcel and where the determination of which service lateral should be reinstated is unclear to the Contractor. With approval from the Engineer, those parcels presented by the Contractor shall be dye tested and/or televised with a lateral launch CCTV inspection.

B. Procedure: This test is performed by flushing water and a brightly colored liquid sewer dye down interior building drains, toilets, and plumbing fixtures throughout a building or through building cleanouts and then identifying the locations of the dyed water at the connection points to the sewer main using a sanitary sewer closed circuit television camera in conjunction with the test.

1) Products:

- a. Dye used shall be non-toxic, water soluble, biodegradable, and EPA-approved for this purpose. ANSI/NSF Standard 60 certification is preferred.
- b. Liquid, powder, or solid products must be pre-dissolved and/or pre-diluted prior to bringing them onto a site.
- c. The Contractor's crew shall have a minimum of three (3) colors of dye present onsite and available for use to check multiple services and locations at a time without having to wait for previously introduced dye to dissipate completely. These colors shall be Norlab Liquid Powder - Yellow Green, Violet or Red or approved equal.
- d. Dyes must be capable of being color-neutralized with ordinary materials such as chlorine bleach, which shall be present when the dye is introduced into the source.

- 2) Notification:** For properties where a dye test is required, the property owner shall be notified by means of door notices that an inspection/dye test will be required for verification of active service lateral location. The Contractor shall notify the property owner a minimum of two business days before the testing is expected to begin. The Contractor shall place the door hanger notifications on properties where a dye test is required to inform the residents, to schedule a dye testing appointment and to coordinate for the work that is expected to be conducted at each property.

If the property owner or tenant is non-responsive then, in lieu of a dye test, the Contractor may request to conduct a lateral launch CCTV inspection from the mainline sewer to determine if a service lateral is active or not. Payment for lateral launch CCTV inspections will be covered by the DYE TESTING OF PROPERTIES pay item and will not be considered for additional payment.

3) Release of Dye:

- a. Liquid dye is to be introduced only into the properties being tested through plumbing fixtures and/or cleanout locations to determine the locations where the dyed property service laterals connect at the sewer main.
- b. Care shall be taken to avoid spilling or splashing dye onto adjacent surfaces. Any accidental spillage or staining shall be immediately neutralized by the Contractor.

4) Internal Television Inspection of Sewer: When dye is introduced into the property being dye tested, a member of the Contractor's crew shall watch the flow from the mainline sanitary sewer via the CCTV camera positioned in the sewer just downstream of the property whose connections are being tested. If the dyed water is visually seen flowing through the sewer main, the CCTV technician shall press record on the video, then advance the sewer camera to the location of the service where the dye is entering the sanitary sewer main, pan around this service location per PACP standards and this recording shall become the record of the live service lateral location for reinstatement.

C. Documentation:

1) Field Records:

- a. During the televising of the sanitary sewer, the specific location of each dye introduction shall be recorded and shall be carefully noted on the Plans for the subject property. It shall also be noted where the dye was entered and where the dye was observed on the pdf pipeline report or at the location in the sanitary sewer system where it is confirmed.
- b. The measurements of the location(s) of the dyed water entering the sanitary sewer, as recorded on the video, shall be measured, and marked on the ground. A photograph shall be taken that clearly shows the location of the dye introduction in the context of its surroundings, so that the particular location is unmistakable.
- c. The record for the subject property may reference multiple dye test locations and their results.
- d. To be eligible for payment, all digital photos, including layout of services for each location tested, and any videos from a positive dye test and/or lateral launch shall be presented to the engineer along with pdf report documentation. If after presentation of all the above-mentioned investigation data a determination for which service to be reinstated still cannot be made, this information shall be presented to the owner/engineer for a decision regarding lateral location reinstatement at least two weeks in advance of scheduled cured-in-place pipelining work.

D. Digital Deliverable: The results of dye testing shall be recorded in the digital database established for this project. The video recordings shall be submitted on either a USB storage device or an external hard drive and shall clearly indicate the date the video was made, the designated section(s) of sewer line(s), property locations, manhole(s), etc., all contained on the hard drive, and with the label **"VILLAGE OF SOUTH HOLLAND – THORN DITCH SANITARY SEWER CIPP – 23-R0646"**. Two (2) copies of the finished video shall be delivered to the Engineer prior to cured-in-place pipelining.

E. Measurement and Payment: Measurement for payment shall include all material, labor, equipment, services necessary to conduct the dye testing for each property, including, but not limited to, preparations, the testing itself, and documentation. Dye testing of properties will be paid at the contract

unit price bid per EACH for DYE TESTING OF PROPERTIES where a parcel was approved for dye testing and/or lateral launching with a CCTV inspection to determine active vs. abandoned service lateral connections to the sewer main for determination of lateral reinstatements.

MANHOLES, TYPE A, 6'-DIAMETER, WITH 2 TYPE 1 FRAMES, CLOSED LID, RESTRICTOR PLATE

This work shall consist of constructing restrictor plate manholes at locations and in accordance with the details shown on the plans or as directed by the Engineer, in accordance with Section 602 of the Standard Specifications.

The manholes shall be based on a Type A manhole. Frames and lids shall be Type 1, Closed Lid with the word 'RESTRICTOR' cast onto the lids with 1 inch high letters, unless otherwise noted.

This work will be paid for at the contract unit price per EACH for MANHOLE, TYPE A, 6'-DIAMETER, WITH 2 TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE which price will be payment in full for all work and materials including restrictor plate, concrete wall, frames and lids, excavation, backfill, and labor.

PROPOSED MANHOLE/CATCH BASIN CONNECTION OVER EXISTING STORM SEWER

This work shall include the installation of a new manhole or catch basin over an existing storm sewer at locations shown on the plans or as directed by the Engineer.

The existing sewer pipe shall be sawcut and removed and/or extended as necessary to fit the proposed manhole or catch basin structure. The existing pipes shall be extended such that the pipes may be grouted into openings in the new structure with non-shrink mortar. All pipe joints shall be grouted in accordance with Section 550 of the Standard Specifications.

The cost of the drainage structure shall be paid separately under the respective structure pay item.

Any additional storm sewer pipe required to make the connection to the proposed drainage structure shall be included in the cost of this pay item.

This work shall be paid for at the contract unit price per EACH for PROPOSED MANHOLE/CATCH BASIN CONNECTION OVER EXISTING STORM SEWER and shall include all excavation, storm sewer pipe, materials, equipment, and labor, etc. required to complete the work as specified herein. The manhole or catch basin structure shall be paid for separately.

TRAFFIC CONTROL AND PROTECTION, (SPECIAL)

Traffic Control shall be in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, the applicable guidelines contained in the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways, these Special Provisions and any special details and Highway Standards contained herein and in the plans and the Standard Specifications for Traffic Control Items.

Special attention is called to Articles 107.09 and 107.14 and Section 701 of the Standard Specifications for Road and Bridge Construction and the following Highway Standards relating to traffic control standards listed on the plan set and the latest edition of the standard incorporated by reference.

The Contractor shall obtain, erect, maintain and remove all signs, barricades, temporary pavement markings, flaggers and other traffic control devices as may be necessary for the purpose of regulating,

warning or guiding traffic through or around the construction zone throughout the duration of the project. The Contractor shall be solely responsible for ensuring that all traffic control devices are installed and maintained in accordance with the Standard Specifications. Traffic control signs and barricades shall have working lights to provide additional safety to motorists and pedestrians.

The Contractor shall provide traffic control for the duration of the project. The Contractor shall maintain access to all driveways at all times.

The contractor shall be allowed to close Dobson Ave, Greenwood Ave, Woodlawn Avenue, Kimbark Avenue, and Kenwood Avenue to all traffic in the area of the proposed culvert replacement in accordance with the conditions defined in the TIME RESTRICTIONS special provision. The contractor shall erect and maintain detour signage for local traffic in accordance with IDOT District 1 Standard TC-21.

The Contractor shall contact the Engineer at least 48 hours in advance of beginning work.

STANDARDS: 701006-05, 701301-04, 701501-06, 701901-10

DISTRICT 1 DETAILS

TC-21 DETOUR SIGNING FOR CLOSING STATE HIGHWAYS

SPECIAL PROVISIONS:

TIME RESTRICTIONS
MAINTENANCE OF ROADWAYS, ALLEYS AND DRIVEWAYS
AGGREGATE FOR TEMPORARY ACCESS
VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)
WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

All traffic control for all anticipated stages of construction including construction signage, barricades, detour signage, temporary pavement markings, temporary concrete barrier and flagging operations will be measured for payment on a lump sum basis.

This work will be paid for at the contract LUMP SUM price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

STORM SEWER BACKFLOW PREVENTER, 18"

This item shall include the furnishing and installation of a CheckMate inline check valve by Red Valve, or approved equal, in accordance with manufacturer's specifications, at locations shown on the plans or at the direction of the Engineer. The backflow preventer shall be installed in the pipe leaving the control structure in Pioneer Park and shall fit a 18" diameter pipe. The Contractor shall submit shop drawings for approval by the Engineer.

The cost for furnishing all labor, materials and equipment necessary for installing the backflow preventer, will be paid for at the contract unit price per EACH for STORM SEWER BACKFLOW PREVENTER, 18".

HELICAL PIER

This work shall consist of furnishing the design, shop drawings, materials, anchorage, and construction of steel round shaft helical piers with galvanized pile cap in accordance with the plans and this special provision.

General: The quantity, capacity and spacing of piers shall be as indicated in the contract plans.

Materials and Procedures. The helical piers shall be a round shaft type. The piers shall be installed in compliance with the manufacturer's submitted installation procedures.

Submittal. Submittals shall include all details, dimensions, quantities and cross sections necessary will include but not be limited to manufacturer recommended installation requirements, a sequence of construction and a detailed bill of materials shall be included.

Design Criteria. The helical piers shall be designed to support vertical loads as indicated on the plans.

Construction. The Contractor shall verify locations of all underground utilities before designing or installing any helical piers. The Contractor shall inform the Engineer in writing of any conflicts before designing or installing the helical piers; such notification does not relieve the Contractor "of the responsibility to adhere to contract requirements. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Village.

The Contractor shall be responsible for determining the appropriate equipment necessary to install the helical piers to the elevations according to the Contractor's approved design. The helical piers shall be installed, as a minimum, to the elevations specified prior to commencing any related construction. If unable to reach the minimum elevation, the adequacy of the helical pier design will require re-evaluation and resubmittal by the Contractor prior to allowing construction.

The Contractor shall obtain technical assistance from the supplier to demonstrate proper construction procedures and shall include any costs related to this technical assistance in the contract unit price for Helical Piers.

Basis of Payment. This work, as herein specified, will be paid for at the contract unit price EACH for HELICAL PIER

TREE, SUGAR MAPLE, NEW HORIZON SMOOTHLEAF ELM, RED OAK, 3" CALIPER

This work shall be for all labor, material and equipment to install new trees at the locations shown on the plans or at the direction of the Engineer. This work will be completed in accordance with Section 253 of the Standard Specifications, and as described below.

New trees planted as part of this project shall be 1/3 Sugar Maple, 1/3 New Horizon Smoothleaf Elm, and 1/3 Red Oak. All new trees shall be 3" caliper trunk, with roots balled and burlapped.

Once the trees have been approved by the Village Representative for planting all ribbons, tags and broken branches shall be removed.

Avoid placing any soil on top of the root ball, maintain exposure of top flare. If root flare is not exposed carefully remove excess soil.

Set root ball so that base of root flare is 3"-6" higher than adjacent finish grade.

Cut and remove all cords, twine, rope, wire, burlap and plastic wrap from around the top half of root ball and trunk. If root ball is enclosed in a wire basket remove top half of wire basket and fold remaining points down into the planting hole. Trees shall be spaced per nursery recommendations

Shredded hardwood mulch, 3" depth, 2' offset from the edge of the root ball shall be placed around the tree.

The finished ground around the tree will have a 3" height saucer around pit for watering installed.

Watering of all trees shall be the Contractor's responsibility to guarantee root growth into the surrounding soil regardless of the number of waterings required. All watering shall be considered included in the contract unit price for this item.

The accepted quantities for trees will be measured by Each complete in place.

This work will be paid for at the contract unit price of EACH for TREE, ACER SACCHARUM (SUGAR MAPLE), 3" CALIPER, BALLED AND BURLAPPED, and TREE, ULMUS CARPINIFOLIA NEW HORIZON (NEW HORIZON SMOOTHLEAF ELM), 3" CALIPER, BALLED AND BURAPPED, and TREE, QUERCUS RUBRA (RED OAK), 3" CALIPER, BALLED AND BURLAPPED.

STABILIZED CONSTRUCTION ENTRANCE

This item of work shall be constructed at a location(s) shown in the plans or as determined by the Engineer and approved by the Village in accordance with the details of the Illinois Urban Manual. A temporary construction entrance/exit shall be constructed in accordance with NRCS Detail IL-630 "Stabilized Contraction Entrance Plan" located in the plans. Upon completion of the project, the construction entrance shall be removed.

This work will be paid for at the contract unit price per SQUARE YARD for STABILIZED CONSTRUCTION ENTRANCE, which shall include all necessary equipment, materials and labor to complete installation and removal of the temporary construction entrance.

ROCK FILL

Description. This work shall consist of the furnishing and placement of rockfill where unstable and/or unsuitable materials have been removed below the plan bedding grade of proposed Precast concrete box culverts. This work shall be done as shown on the plans and as directed by the Engineer.

Materials. Materials shall meet the following requirements of the Standard Specifications:

Item Section
Rockfill 1005

The gradation of rockfill shall be selected based on the following table:

Materials: Crushed Stone, Crushed Gravel, and Crushed Concrete

| Sieve Size | <u>Option 1</u> Percent Passing | <u>Option 2</u> Percent Passing |
|--------------------|------------------------------------|------------------------------------|
| 3 inches (75 mm) | 100 | |
| 2 ½ inches (63 mm) | 95 ± 5 | 100 |
| 2 inches (50 mm) | 60 ± 15 | 93 ± 7 |

| | | |
|----------------------|---------|---------|
| 1 ½ inches (37.5 mm) | 15 ± 15 | 55 ± 20 |
| 1 inch (25 mm) | 3 ± 3 | 8 ± 8 |
| ½ inch (12.5 mm) | | 3 ± 3 |

Geotechnical fabric for ground stabilization shall be nonwoven and meeting the requirements of Article 1080.02 of the Standard Specifications may be necessary dependent upon subgrade soil conditions. The Engineer shall make the determination if Geotechnical fabric utilization is necessary.

Construction Requirements. Unstable and/or unsuitable soil shall be excavated according to Article 502.11 of the Standard Specifications. Rockfill shall be placed following the excavation of the unstable and/or unsuitable material. The maximum nominal thickness when compacted shall be 24 in. (600 mm). Each lift of aggregate shall be compacted to the satisfaction of the Engineer.

The rockfill shall be capped with 6 in. (150 mm) of PGE (paid for separately). The fabric, if required, shall be installed according to the applicable portions of Section 210 of the Standard Specifications.

Method of Measurement. Rockfill will be measured for payment in cubic yards (cubic meters). Capping stone will be measured and paid for separately as PGE. Geotechnical fabric for ground stabilization will be measured for payment according to Article 210.05 of the Standard Specifications.

Basis of Payment. Rockfill will be paid for at the contract unit price per cubic yard for ROCK FILL.

PLAYGROUND EQUIPMENT REMOVAL

Existing playground equipment and mulch surface and borders as indicated on the plans or as directed by the Engineer shall be removed, delivered and/or disposed of properly.

All existing playground equipment noted for removal in the plans shall be returned to the Public Works Building at 155 W 162nd Street.

The cost of this work including labor, materials, and equipment shall be paid for at the contract unit price per L SUM for PLAYGROUND EQUIPMENT REMOVAL.

PRECAST CONCRETE RISER, T1F, OL

This item shall consist of the installation of precast concrete riser, Type 1 Frames with a open lid as well as the required adjustment rings on top of the box culvert at locations shown on the plans or as directed by the Engineer. The work shall be in accordance with the applicable portions of Section 602 of the Standard Specifications, at locations detailed in the plans.

This work will be paid for at the contract unit price per EACH for PRECAST CONCRETE RISER, T1F, OL and will include all equipment, labor, and material required to complete the work as specified above.

POND AERATING FOUNTAIN

This item shall consist of the installation of a new pond aerator and all associated appurtenances, at locations shown on the plans or as directed by the Engineer. The pond aerator assembly shall be Kasco Model No. 2400VFX Aerating Floating Fountain by Kasco Marine or equivalent approved by the

Village. The pond aerator, control panel, lighting package and all associated appurtenances shall be installed per manufacturer's specifications. The Contractor shall coordinate with the electric company for all work to install any required wiring or conduit and to make a connection to a power source. The service shall be paid in accordance with the ELECTRIC SERVICE INSTALLATION and ELECTRIC UTILITY SERVICE CONNECTION (COMED) special provision contained herein.

This work will be paid for at the contract unit price per EACH for POND AERATING FOUNTAIN, which shall include all necessary materials, equipment and labor, any required excavation, wiring and conduit to completely install the pond aerator assembly.

REMOVE EXISTING OUTLET

This item shall consist of removal and disposal of existing outlet, at locations shown on the plans or as directed by the Engineer.

The conduit shall be removed within the limits of the proposed stormwater management area excavation. The balance of the service conduit shall be abandoned in place. All wiring shall be disconnected from the service location and removed from the conduit or unit-duct between outlet to the service connection.

This work will be paid for at the contract unit price per EACH for REMOVE EXISTING OUTLET and will include all equipment, labor, and material required to completely remove and dispose of the existing outlet, conduit and wiring.

CONTRACT EXTRA WORK

Due to the nature of the project, the Village may require extra work consisting of various items to be completed by the Contractor where the exact scope of work could not be determined at time of submittal of the bid. In order to avoid project delays or issues related to payment for such extra work, the schedule of quantities includes a Contract Extra Work item.

All work to be performed under this item shall be as directed by the Engineer and approved by the Village.

Contractor's payment requests for Contract Extra Work shall be processed in accordance with Article 109.05 of the Standard Specifications and the following additional procedures:

- 1) Contractor shall invoice the Village for such Contract Extra Work in accordance with the force account as agreed to by the Engineer and Contractor.
- 2) Force account billing for equipment expense shall follow the applicable volume of the Equipment Watch Rental Rate Blue Book (Blue Book). Also, a copy of the Blue Book calculation for each piece of equipment shall be included with the force account billing.
- 3) Contractor shall submit invoice for such Contract Extra Work after the Contract Extra Work has been fully completed by Contractor and within sixty (60) days of completion of the work.
- 4) Within sixty (60) days after receipt of the invoice, the Engineer will review the Contractor's invoice and determine whether the invoice complies with the above. If the Engineer disapproves the invoice, the Engineer shall give Contractor notice of the reasons for such disapproval and the Contractor shall resubmit a corrected invoice for the Engineer's review. The Village shall have an additional thirty (30) days to review and determine whether that the corrected invoice complies with the above.

- 5) Once the Engineer determines that the invoice complies with the above, the Engineer shall present a recommendation for change in plan for the specific items of extra work to the Village for approval.
- 6) Within thirty (30) days of the Village's approval of the change order, payment shall be reflected under the specific items of extra work completed by the Contractor and the corresponding amount shall be deleted from the Contract Extra Work item.

Each one dollar of extra work value will be measured as one UNIT.

Payment for this work will be made as specified in Article 109.05 of the Standard Specifications and paid as CONTRACT EXTRA WORK in accordance with the requirements set forth in the above requirements.

An allowance has been included in this contract and is for the sole use of the Owner to cover unanticipated costs processed through change orders, which the Contractor shall enter as 150,000 UNIT on his proposal.

REMOVAL AND RELOCATION OF EXISTING PEDESTRIAN BRIDGE

Work under this item must be performed in accordance with the requirements of Section 501 of the Standard Specification except as herein modified.

Description. This Work consists of removal and relocation of the existing pedestrian bridge over the Thorn Ditch in Village of South Holland. The contractor will be required to relocate the existing superstructure in one (1) segment with no damage to the structure. The contractor will be required to relocate the bridge span at the new foundations 30' West of the existing structure.

General Requirements. The Contractor shall be responsible for all coordination required to gain access to the site.

Method of Measurement. The work under this item will be measured for payment on a Lump Sum basis.

Basis of Payment. The work described herein will be paid for at the contract L SUM price for REMOVAL AND RELOCATION OF EXISTING PEDESTRIAN BRIDGE.

WOOD DECKING SPECIAL

This work shall be according to Section 1007 of the Standard Specifications and follow the plans and this special provision.

Materials and Procedures. The wood decking shall be preservative treated timber that is equivalent to 3"x12" Select Structural Douglas Fir, or 3"x10" Southern Yellow Pine.

Submittals. The Contractor shall prepare shop drawings, including samples of the wood decking and fastening method, which shall be submitted to the Village for review and approval. No material shall be ordered until written correspondence is received from the Village.

Construction Requirements. Wood decking shall be installed as indicated in the detail. The wood decking shall be fastened to the PED TRUSS SUPERSTRUCTURE as approved by the shop drawings. This work will be measured for payment in place per square foot.

Basis of Payment. This work will be paid for at the contract unit price per SQUARE FOOT for WOOD DECKING SPECIAL

PEDESTRIAN TRUSS SUPERSTRUCTURE

Description: This work shall consist of the design, fabrication, storage, delivery and erection of a welded steel, pedestrian truss superstructure. Also included in this work shall be the furnishing and installation of a deck, all bearings, anchors and/or retainers, railings, fencing and miscellaneous items as indicated on the plans.

Materials:

Truss. Structural steel shall conform to the requirements of Section 1006 of the Standard Specifications, ASTM A847 for cold formed welded square and rectangular tubing, AASHTO M270 Grade 50W (M270M 345W) for atmospheric corrosion resistant structural steel, as applicable, unless otherwise shown on the plans or approved by the Engineer. All structural steel field connections shall be bolted with high strength bolts. High strength bolts for unpainted weathering steel shall conform to ASTM F 3125 Grade A 325 (F 3125M Grade A 325M) (Type 3). For painted structures, the high strength bolts shall be mechanically galvanized according to the requirements of Article 1006.08(a) of the Standard Specifications.

Deck. The deck type shall be as specified on the plans. The materials shall comply with the applicable portions of the materials section of the Standard Specifications.

Railing. The railing shall consist of a smooth rub rail, a toe plate and misc. elements, all located on the inside face of the truss.

Bearings. The bearing shall be designed and furnished as detailed in the plans, in the absence of details, the bearings details shall be as specified by the bridge manufacturer.

When specified for use, elastomeric bearings shall be according to Article 1083 of the Standard Specifications. Teflon surfaces shall be per Article 1083.02(b) of the Standard Specification and shall be bonded to the bearing plate..

Suppliers. The Illinois Department of Transportation (Department) maintains a pre-qualified list of proprietary structural systems allowed for pedestrian truss superstructures. This list can be found on the Departments web site under Prequalified Structural Systems. The Contractor's options are limited to those systems pre-qualified by the Department on the date that the project is bid. These systems have been reviewed for structural feasibility and adequacy only. Presence on this list shall in no case relieve the Contractor of the site-specific design or QC/QA requirements stated herein.

The manufacturer shall provide evidence of current certification by AISC according to Article 106.08(b) of the Standard Specifications.

Design. The superstructure shall conform to the clear span, clear width, and railing configuration shown on the contract plans. The design shall be according to the LRFD Guide Specifications for the Design of Pedestrian Bridges. The design loads shall be as specified by the Guide Specification except as follows:

| Design Wind Loads (Pz) for Pedestrian Trusses in Illinois | | |
|---|-----------|-----------------------------------|
| Application | psf (kPa) | Applied to: |
| Circular Members | 35 (1.68) | Projected vertical area of member |

| | | |
|--------------------|-----------|--|
| Flat Members | 55 (2.63) | Projected vertical area of member |
| Signs | 35 (1.68) | Projected vertical area of sign |
| Chain Link Fencing | 10 (0.48) | Full projected area of fencing as if solid |

The railings shall be designed per the appropriate Bridge Design Specifications for bicycle railings as shown on the plans. Smooth rub rails shall be attached to the bicycle railing and located at a bicycle handlebar height of 3.5 ft. (1.1 m) above the top of the deck.

The shop drawings shall include all support reactions for each load type. The following certification shall be placed on the first sheet of the bridge shop plans adjacent to the seal and signature of the Structural Engineer:

“I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans and complies with the requirements of the Contract and the current ‘Guide Specifications for Design of Pedestrian Bridges’.”

Construction. Truss erection procedures shall be according to the manufacturer’s instructions. The deck shall be placed according to the applicable Sections of the Standard Specifications.

When weathering steel is used, all structural steel shall be prepared according to Article 506.07, except as follows. All visible surfaces shall be cleaned to a minimum SSPC-SP7 Brush Off Blast Cleaning. Visible surfaces include any surface that is visible from the deck or outside of the structure. When weathering steel is used, no additional painting is required at the ends of the truss.

When painting is specified, all structural steel shall be cleaned and painted according to Section 506. The paint system shall be the Organic Zinc-Rich/Epoxy/Urethane System according to Article 506.08(b). The color of the finish coat shall be as specified in the plans.

The shop qualifications found in Article 506.06(a) of AISC Sophisticated Paint Endorsement or SSPC QP-3 qualifications need not be required for shop painting of pedestrian truss superstructures.

Method of Measurement. The pedestrian truss superstructure will be measured in Square Foot (Sq. Ft.) of completed and accepted Structure.

Basis of Payment. The pedestrian superstructure will be paid for at the contract unit price SQUARE FOOT price for PEDESTRIAN TRUSS SUPERSTRUCTURE.

ELECTRIC SERVICE INSTALLATION

This item shall consist of all material and labor required to extend, connect or modify the electric services, as indicated or specified, which is over and above the work performed by the utility. Unless otherwise indicated, the cost for the utility work, if any, will be reimbursed to the Contractor separately under ELECTRIC UTILITY SERVICE CONNECTION. This item may apply to the work at more than one service location and each will be paid separately.

Materials. Materials shall be in accordance with the Standard Specifications.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall ascertain the work being provided by the electric utility and shall provide all additional material and work not included by other contract pay items required to complete the electric service work in complete compliance with the requirements of the utility.

No additional compensation will be allowed for work required for the electric service, even though not explicitly shown on the Drawings or specified herein

Method of Measurement. Electric Service Installation shall be counted, each.

Basis of Payment. This work will be paid for at the contract unit price EACH for ELECTRIC SERVICE INSTALLATION which shall be payment in full for the work specified herein.

ELECTRIC UTILITY SERVICE CONNECTION (COMED)

This item shall consist of payment for work performed by ComEd in providing or modifying electric service as indicated. THIS MAY INVOLVE WORK AT MORE THAN ONE ELECTRIC SERVICE. For summary of the Electrical Service Drop Locations see the schedule contained elsewhere herein.

CONSTRUCTION REQUIREMENTS

General. It shall be the Contractor's responsibility to contact ComEd. The Contractor shall coordinate his work fully with the ComEd both as to the work required and the timing of the installation. No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement. Please contact ComEd, New Business Center Call Center, at 866 NEW ELECTRIC (1-866-639-3532) to begin the service connection process. The Call Center Representatives will create a work order for the service connection. The representative will ask the requestor for information specific to the request. The representative will assign the request based upon the location of project.

The Contractor should make particular note of the need for the earliest attention to arrangements with ComEd for service. In the event of delay by ComEd, no extension of time will be considered applicable for the delay unless the Contractor can produce written evidence of a request for electric service within 30 days of execution.

Method of Payment. The Contractor will be reimbursed to the exact amount of money as billed by ComEd for its services. Work provided by the Contractor for electric service will be paid separately as described under ELECTRIC SERVICE INSTALLATION. No extra compensation shall be paid to the Contractor for any incidental materials and labor required to fulfill the requirements as shown on the plans and specified herein.

For bidding purposes, this item shall be estimated as \$6,000.00.

Basis of Payment. This work will be paid for at the contract lump sum price for ELECTRIC UTILITY SERVICE CONNECTION which shall be reimbursement in full for electric utility service charges.

FRICTION AGGREGATE (DISTRICT 1)

Effective: January 1, 2011

Revised: December 1, 2021

Revise Article 1004.03(a) of the Standard Specifications to read:

“1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA). The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

| Use | Mixture | Aggregates Allowed |
|------------------------------|--|--|
| Class A | Seal or Cover | <u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete |
| HMA Low ESAL | Stabilized Subbase or Shoulders | <u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{1/} Crushed Concrete |
| HMA High ESAL Low ESAL | Binder IL-19.0 or IL-19.0L SMA Binder | <u>Allowed Alone or in Combination</u> ^{5/ 6/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete ^{3/} |
| HMA High ESAL Low ESAL | C Surface and Binder IL-9.5 IL-9.5FG or IL-9.5L | <u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/} |

**Village of South Holland
Thorn Ditch Flood Mitigation Project**

| Use | Mixture | Aggregates Allowed | |
|------------------------------------|--|---|---|
| HMA High ESAL | D Surface and Binder IL-9.5 or IL-9.5FG | <u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone (other than Limestone) ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} | |
| | | <u>Other Combinations Allowed:</u> | |
| | | <i>Up to...</i> | <i>With...</i> |
| | | 25% Limestone | Dolomite |
| | | 50% Limestone | Any Mixture D aggregate other than Dolomite |
| | | 75% Limestone | Crushed Slag (ACBF) or Crushed Sandstone |
| | | HMA High ESAL | E Surface IL-9.5 SMA Ndesign 80 Surface |
| <u>Other Combinations Allowed:</u> | | | |
| <i>Up to...</i> | <i>With...</i> | | |
| 50% Dolomite ^{2/} | Any Mixture E aggregate | | |
| 75% Dolomite ^{2/} | Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone | | |
| 75% Crushed Gravel ^{2/} | Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag | | |
| HMA High ESAL | F Surface IL-9.5 SMA Ndesign 80 Surface | | |

**Village of South Holland
Thorn Ditch Flood Mitigation Project**

| Use | Mixture | Aggregates Allowed | |
|-----|---------|--|--|
| | | <u>Other Combinations Allowed:</u> | |
| | | <i>Up to...</i> | <i>With...</i> |
| | | 50% Crushed Gravel ^{2/} or Dolomite ^{2/} | Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone |

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone (limestone) and/or crushed gravel shall not be used in SMA Ndesign 80.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as binder.
- 5/ When combinations of aggregates are used, the blend percent measurements shall be by volume."
- 6/ Combining different types of aggregate will not be permitted in SMA Ndesign 80."

HOT-MIX ASPHALT BINDER AND SURFACE COURSE (D-1)

Effective: November 1, 2019

Revised: December 1, 2021

Revise Article 1004.03(c) to read:

“(c) Gradation. The coarse aggregate gradations shall be as listed in the following table.

| Use | Size/Application | Gradation No. |
|-----------------------|--|--|
| Class A-1, A-2, & A-3 | 3/8 in. (10 mm) Seal | CA 16 or CA 20 |
| Class A-1 | 1/2 in. (13 mm) Seal | CA 15 |
| Class A-2 & A-3 | Cover Coat | CA 14 |
| HMA High ESAL | IL-19.0; Stabilized Subbase IL-19.0 | CA 11 ^{1/} |
| | SMA 12.5 ^{2/} | CA 13 ^{4/} , CA 14, or CA 16 |
| | SMA 9.5 ^{2/} | CA 13 ^{3/4/} or CA 16 ^{3/} |
| | IL-9.5 | CA 16, CM 13 ^{4/} |
| | IL-9.5FG | CA 16 |
| HMA Low ESAL | IL-19.0L | CA 11 ^{1/} |
| | IL-9.5L | CA 16 |

1/ CA 16 or CA 13 may be blended with the CA 11.

2/ The coarse aggregates used shall be capable of being combined with the fine aggregates and mineral filler to meet the approved mix design and the mix requirements noted herein.

3/ The specified coarse aggregate gradations may be blended.

4/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.”

Revise Article 1004.03(e) of the Supplemental Specifications to read:

“(e) Absorption. For SMA the coarse aggregate shall also have water absorption
≤ 2.0 percent.”

Revise the “High ESAL” portion of the table in Article 1030.01 to read:

| | | |
|------------|-----------------|--|
| “High ESAL | Binder Courses | IL-19.0, IL-9.5, IL-9.5FG, IL-4.75, SMA 12.5, Stabilized Subbase IL-19.0 |
| | Surface Courses | IL-9.5, IL-9.5FG, SMA 12.5, SMA 9.5” |

Revise Note 2. and add Note 6 to Article 1030.02 of the Standard Specifications to read:

| “Item | Article/Section |
|---|-----------------|
| (g)Performance Graded Asphalt Binder (Note 6) | 1032 |

(h)Fibers (Note 2)

Note 2. A stabilizing additive such as cellulose or mineral fiber shall be added to the SMA mixture according to Illinois Modified AASHTO M 325. The stabilizing additive shall meet the Fiber Quality Requirements listed in Illinois Modified AASHTO M 325. Prior to approval and use of fibers, the Contractor shall submit a notarized certification by the producer of these materials stating they meet these requirements. Reclaimed Asphalt Shingles (RAS) may be used in Stone Matrix Asphalt (SMA) mixtures designed with an SBA polymer modifier as a fiber additive if the mix design with RAS included meets AASHTO T305 requirements. The RAS shall be from a certified source that produces either Type I or Type 2. Material shall meet requirements noted herein and the actual dosage rate will be determined by the Engineer.

Note 6. The asphalt binder shall be an SBS PG 76-28 when the SMA is used on a full-depth asphalt pavement and SBS PG 76-22 when used as an overlay, except where modified herein. The asphalt binder shall be a SBS PG 76-22 for IL-4.75, except where modified herein..”

Revise table in Article 1030.05(a) of the Standard Specifications to read:

| “MIXTURE COMPOSITION (% PASSING)” ^{1/} | | | | | | | | | | | | |
|---|------------|-----|----------|-------------------|---------|-------------------|------------------|------------------|----------|------------------|------------|-------------------|
| Sieve Size | IL-19.0 mm | | SMA 12.5 | | SMA 9.5 | | IL-9.5mm | | IL-9.5FG | | IL-4.75 mm | |
| | min | max | min | max | min | max | min | max | min | max | min | max |
| 1 1/2 in (37.5 mm) | | | | | | | | | | | | |
| 1 in. (25 mm) | | 100 | | | | | | | | | | |
| 3/4 in. (19 mm) | 90 | 100 | | 100 | | | | | | | | |
| 1/2 in. (12.5 mm) | 75 | 89 | 80 | 100 | | 100 | | 100 | | 100 | | 100 |
| 3/8 in. (9.5 mm) | | | | 65 | 90 | 100 | 90 | 100 | 90 | 100 | | 100 |
| #4 (4.75 mm) | 40 | 60 | 20 | 30 | 36 | 50 | 34 | 69 | 60 | 75 ^{6/} | 90 | 100 |
| #8 (2.36 mm) | 20 | 42 | 16 | 24 ^{4/} | 16 | 32 ^{4/} | 34 ^{5/} | 52 ^{2/} | 45 | 60 ^{6/} | 70 | 90 |
| #16 (1.18 mm) | 15 | 30 | | | | | 10 | 32 | 25 | 40 | 50 | 65 |
| #30 (600 μm) | | | 12 | 16 | 12 | 18 | | | 15 | 30 | | |
| #50 (300 μm) | 6 | 15 | | | | | 4 | 15 | 8 | 15 | 15 | 30 |
| #100 (150 μm) | 4 | 9 | | | | | 3 | 10 | 6 | 10 | 10 | 18 |
| #200 (75 μm) | 3.0 | 6.0 | 7.0 | 9.0 ^{3/} | 7.5 | 9.5 ^{3/} | 4.0 | 6.0 | 4.0 | 6.5 | 7.0 | 9.0 ^{3/} |
| #635 (20 μm) | | | ≤ 3.0 | | ≤ 3.0 | | | | | | | |
| Ratio Dust/Asphalt Binder | | 1.0 | | 1.5 | | 1.5 | | 1.0 | | 1.0 | | 1.0 |

1/ Based on percent of total aggregate weight.

- 2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign = 90.
- 3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.
- 4/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above the percentage stated on the table.

- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted below 34 percent.
- 6/ When the mixture is used as a binder, the maximum shall be increased by 0.5 percent passing.”

Revise Article 1030.05(b) of the Standard Specifications to read:

- (b) Volumetric Requirements. The target value for the air voids of the HMA shall be 4.0 percent, for IL-4.75 and SMA mixtures it shall be 3.5 percent and for Stabilized Subbase it shall be 3.0 percent at the design number of gyrations. The voids in the mineral aggregate (VMA) and voids filled with asphalt binder (VFA) of the HMA design shall be based on the nominal maximum size of the aggregate in the mix and shall conform to the following requirements.

| Mix Design | Voids in the Mineral Aggregate (VMA), % Minimum for Ndesign | | | | |
|----------------------------|--|------|------|--|------|
| | 30 | 50 | 70 | 80 | 90 |
| IL-19.0 | | 13.5 | 13.5 | | 13.5 |
| IL-9.5 | | 15.0 | 15.0 | | |
| IL-9.5FG | | 15.0 | 15.0 | | |
| IL-4.75 ^{1/} | | 18.5 | | | |
| SMA-12.5 ^{1/2/5/} | | | | 17.0 ^{3/} /16.0 ^{4/} | |
| SMA-9.5 ^{1/2/5/} | | | | 17.0 ^{3/} /16.0 ^{4/} | |
| IL-19.0L | 13.5 | | | | |
| IL-9.5L | 15.0 | | | | |

- 1/ Maximum draindown shall be 0.3 percent according to Illinois Modified AASHTO T 305.
- 2/ The draindown shall be determined at the JMF asphalt binder content at the mixing temperature plus 30°F.
- 3/ Applies when specific gravity of coarse aggregate is ≥ 2.760 .
- 4/ Applies when specific gravity of coarse aggregate is < 2.760 .
- 5/ For surface course, the coarse aggregate can be crushed steel slag, crystalline crushed stone or crushed sandstone. For binder course, coarse aggregate shall be crushed stone (dolomite), crushed gravel, crystalline crushed stone, or crushed sandstone”

Revise the last paragraph of Article 1102.01 (a) (5) of the Standard Specifications to read:

“IL-4.75 and Stone Matrix Asphalt (SMA) mixtures which contain aggregate having absorptions greater than or equal to 2.0 percent, or which contain steel slag sand, shall have minimum surge bin storage plus haul time of 1.5 hours.”

Add after third sentence of Article 1030.09(b) to read:

“If the Contractor and Engineer agree the nuclear density test method is not appropriate for the mixture, cores shall be taken at random locations determined according to the QC/QA document "Determination of Random Density Test Site Locations". Core densities shall be determined using the Illinois Modified AASHTO T 166 or T 275 procedure.”

Revise Table 1 and Note 4/ of Table 1 in Article 406.07(a) of the Standard Specifications to read:

| | Breakdown/Intermediate Roller (one of the following) | Final Roller (one or more of the following) | Density Requirement |
|---|--|---|---|
| IL-9.5, IL-9.5FG, IL-19.0 ^{1/} | V _D , P, T _B , 3W, O _T , O _B | V _S , T _B , T _F , O _T | As specified in Section 1030 |
| IL-4.75 and SMA ^{3/ 4/} | T _B , 3W, O _T | T _F , 3W | As specified in Section 1030 |
| Mixtures on Bridge Decks ^{2/} | T _B | T _F | As specified in Articles 582.05 and 582.06. |

“4/ The Contractor shall provide a minimum of two steel-wheeled tandem rollers (T_B), and/or three-wheel (3W) rollers for breakdown, except one of the (T_B) or (3W) rollers shall be 84 inches (2.14 m) wide and a weight of 315 pound per linear inch (PLI) (5.63 kg/mm) and one of the (T_B) or (3W) rollers can be substituted for an oscillatory roller (O_T). T_F rollers shall be a minimum of 280 lb/in. (50 N/mm). The 3W and T_B rollers shall be operated at a uniform speed not to exceed 3 mph (5 km/h), with the drive roll for T_B rollers nearest the paver and maintain an effective rolling distance of not more than 150 ft (45 m) behind the paver.”

Add the following after the fourth paragraph of Article 406.13 (b):

“The plan quantities of SMA mixtures shall be adjusted using the actual approved binder and surface Mix Design’s G_{mb}.”

Revise first paragraph of Article 1030.10 of the Standard Specifications to read:

“A test strip of 300 ton (275 metric tons), except for SMA mixtures it will be 400 ton (363 metric ton), will be required for each mixture on each contract at the beginning of HMA production for each construction year according to the Manual of Test Procedures for Materials “Hot Mix Asphalt Test Strip Procedures”. At the request of the Producer, the Engineer may waive the test strip if previous construction during the current construction year has demonstrated the constructability of the mix using Department test results.”

Revise third paragraph of Article 1030.10 of the Standard Specifications to read:

“When a test strip is constructed, the Contractor shall collect and split the mixture according to the document “Hot-Mix Asphalt Test Strip Procedures”. The Engineer, or a representative, shall deliver split sample to the District Laboratory for verification testing. The Contractor shall complete mixture tests stated in Article 1030.09(a). Mixture sampled shall include enough material for the Department to conduct mixture tests detailed in Article 1030.09(a) and in the document “Hot-Mix Asphalt Mixture Design Verification Procedure” Section 3.3. The mixture test results shall meet the requirements of Articles 1030.05(b) and 1030.05(d), except Hamburg wheel tests will only be conducted on High ESAL mixtures during production.”

PREQUALIFICATION OF PIPELINING PRODUCTS

The Village of South Holland "Owner" invites and encourages competition on all pipeline rehabilitation projects. However, the Owner must be assured that all pipeline rehabilitation products installed in the Owner's system are of good quality and are in general use for this purpose, manufacturers of such products are reputable and financially sound, and installers of such products are competent and experienced. Therefore, standards have been established for product quality, manufacturer soundness and integrity, and installer expertise and experience.

Bid proposals shall be clearly marked on the outside of the envelope containing the bid, defining the manufacturer, installer and product being proposed. Only bids from prequalified manufacturers and installers using prequalified products will be opened and read. Bids submitted for products or installers that have not been prequalified will be returned unopened.

All pipeline reconstruction products (Product), manufacturers of major Product components (Manufacturer) and installers of such Products (Installer) must be qualified as "Commercially Acceptable" or "New". To be considered Commercially Acceptable, the Product, Manufacturer, and Installer must demonstrate full compliance with the requirements of Section 1, Requirements for Qualification as Commercially Acceptable. Products, Manufacturers, and Installers deemed Commercially Acceptable would be allowed to bid as specified.

If a Product, Manufacturer, and/or Installer cannot qualify as Commercially Acceptable, consideration for bidding may be allowed provided that such Product, Manufacturer, and/or Installer qualifies as New. In order to qualify for this status, such Product, Manufacturer, or Installer must demonstrate full compliance with Section II, Requirements for Qualification as New Product, New Manufacturer, or New Installer.

The Owner recognizes that certain combinations of Product, Manufacturer, and Installer may result in varying degrees of acceptability. For example, a Commercially Acceptable Manufacturer and Installer may propose a New Product, or a New Installer may propose a commercially Acceptable Product and Manufacturer. Such situations may be accommodated by these pre-qualification requirements upon submittal of appropriate documentation to the Owner. It shall be understood that the requirements stated herein will be used as typical guidelines for establishing the qualifications of a particular Product, Manufacturer or Installer, and that the Owner reserves the right to modify or waive any or all of these requirements without notice.

PREQUALIFICATION OF BIDDERS in accordance with Section 102.01 of the IDOT Standard Specifications will be required of all bidders on this project. Under no circumstances will a Product, Manufacturer, or Installer be allowed to bid unless each is deemed by the Owner to be Commercially Acceptable or New as defined herein. All data submitted for the Qualification process must demonstrate, to the satisfaction of the Owner, full compliance with all applicable items.

I. REQUIREMENTS FOR QUALIFICATION AS COMMERCIALLY ACCEPTABLE

In order to be considered Commercially Acceptable, the Product, Manufacturer, and Installer must each demonstrate, to the Owner's satisfaction, compliance with the following requirements:

- A. For a Product to be considered as Commercially Acceptable, a minimum of 250,000 feet or 1000 line sections of successful wastewater collection system installation in North America must be documented to assure commercial viability. Such documentation must be provided using an installation reference form available from the Engineer. The Product must be shown to comply with the requirements listed in Sections III, IV, V, and VI.

- B. For a manufacturer to be considered Commercially Acceptable, that Manufacturer must have continuously provided the materials for a Commercially Acceptable Product (as defined in A above) for at least five years. For purposes of determining Manufacturer qualification, the Commercially Acceptable Product may be the proposed rehabilitation materials for this project, or it may be some other pipeline rehabilitation method using a Commercially Acceptable Product. The Manufacturer must be able to demonstrate sufficient in-house engineering support and manufacturing quality control. Furthermore, to insure the long-term protection of the Owner, the Manufacturer shall, upon request, submit three years' audited financial data and must be financially sound by generally accepted accounting principles. In addition, the Manufacturer must be shown to comply with the requirements as listed in Section V.
- C. For an Installer to be approved as Commercially Acceptable, the Installer must satisfy all insurance, financial, and bonding requirements of this contract, and must have had at least 3 years active experience in the commercial installation of the Product. In addition, the installer must have successfully installed at least 50,000 feet of the Product in wastewater collection system installations. These installations must have had a combined total of 1,000 successful internally reinstated lateral connections.

Prior to construction, the Installer must provide written certification to the Owner that the Installation of the Product will be done in accordance with Manufacturer's recommended procedures as detailed in Section VI.

- D. The Manufacturer and/or Installer has submitted, upon request by the Owner, responses to the information required in Section VI which are, in the opinion of the Owner, acceptable, responsive and provide satisfactory proof of these qualification requirements.

II. REQUIREMENTS FOR QUALIFICATION AS NEW

If a Product, Manufacturer or Installer cannot qualify as Commercially Acceptable (as defined in Section I above), that Product, Manufacturer, or Installer may still qualify as "NEW", and as such, may still be allowed to participate in pipeline reconstruction projects for the Owner. In order to be qualified as "NEW", the following requirements must be met:

- A. In order for a new product to be considered for qualification, a minimum of 50,000 feet or 200 line sections of successful wastewater collection system installation in the U.S. must be documented to assure product viability. Such documentation must be provided using the installation reference form available from the Engineer. In order for any Product that is not Commercially Acceptable to be qualified as a New Product, the Manufacturer and/or Installer of that Product must be willing to install a minimum test section of 300 feet, under the supervision of the Owner's inspector for review by the appropriate Owner officials. This test section will be at no charge to the Owner and will be used to evaluate installation, trauma, product performance, public disruption and compatibility with the Owner's current standards and requirements. This requirement may be waived by the Owner, at the Owner's sole discretion, in the event the Product is offered by a Commercially Acceptable Manufacturer and a Commercially Acceptable Installer, or for any other reason(s) deemed appropriate by the Owner.

Evaluation of the test section shall consist of, but not be limited to, the following criteria:

- 1) The post-installation video will be reviewed to ensure that the finished pipe has no flat spots or other shape irregularities that were not present in the host pipe. An evaluation of the liner's tightness to the existing pipe, structural appearance, and its ability to prevent infiltration, shall also be made.
 - 2) Visibility of dimples for internal reinstatement of services.
 - 3) A leakage test in accordance with ASTM F1216 or ASTM F1417 shall be conducted at the Installer's expense, in the presence of the Engineer.
 - 4) Level of disruption (installation time, surface disturbance, etc.) experienced during the process.
 - 5) If required by the Owner, a section of the pipe shall be excavated and removed with the following tests performed:
 - Verify design thickness in accordance with ASTM D3567
 - Verify design physical properties in accordance with ASTM D790
 - Measure pipe stiffness (minimum of three (3) samples) in accordance with ASTM D2412 and compare to calculations for pipe stiffness
 - Evaluate chemical resistance in accordance with ASTM F1216
 - For fiberglass reinforced products, conduct strain - corrosion testing in accordance with ASTM D3681.
- B. In order for any Manufacturer that is not Commercially Acceptable to be qualified as a New Manufacturer, it must be able to demonstrate sufficient in-house engineering support and manufacturing quality control. To insure long-term protection of the Owner, the Manufacturer shall submit the past three years of audited financial statements as proof that it is financially sound by generally accepted accounting principles. The Manufacturer must also comply with the requirements listed in Section V.
- C. In order for any Installer that is not Commercially Acceptable to be qualified as a New Installer, the Installer must be able to satisfy all insurance, financial and bonding requirements of the Owner. In addition, the Installer must have had at least three years of active experience in the municipal sewer rehabilitation field or related fields, and must comply with the requirements listed in Section VI. A New Installer shall have installed at least 50,000 lineal feet, or 250 line sections, of the Product proposed for this project, and have successfully reinstated at least 250 service laterals.
- D. The following general requirements shall be met by all bidders proposing the use of an approved New Product, New Manufacturer, and/or New Installer:
- A 3-year maintenance bond, approved by the Owner, shall be provided by the Contractor as a guarantee of the liner's ability to satisfactorily perform as a sanitary sewage conveyance medium, the product's structural integrity, and its ability to withstand groundwater infiltration. This 3-yr bond guarantee shall be provided in addition to the regular performance bond required to enter into this contract.

- The 3-year bond shall commence and be considered in place immediately following the final acceptance of the installed liner(s) by the Owner. The bond shall be provided in accordance with all applicable articles of Section 108 of the Standard Specifications. Default on the provisions of the maintenance bond during the 3-year period shall, even if all contractor's invoices have been paid in full, be considered a default of the contract and shall be addressed in accordance with Article 108.11 of the Standard Specifications.
- The maintenance bond shall hold the present and future agents, successors or assigns of the Owner and the Engineer harmless in the event of the liner's failure within three years from the date of installation and guarantee that the present and future agents of the Contractor shall be solely responsible for the cost of repairs and all indirect costs associated with such repairs in the event of any liner failure. An installed liner shall be considered a failure if it fails to meet any of the criteria established in the Special Provision for CURED-IN-PLACE PIPE LINER, [DIAMETER].
- The cost for providing the 3-year maintenance bond will not be paid for separately, but instead shall be considered incidental to the contract unit price bid per FOOT for CURED-IN-PLACE PIPE LINER, [DIAMETER].

III. PRODUCT PERFORMANCE (NEW AND COMMERCIALY ACCEPTABLE PRODUCTS)

No product will be allowed to be installed without submittal of test data supporting the following product performance requirements. Product samples used for testing shall be similar to those proposed for installation. Test samples shall be prepared so as to simulate installation methods and trauma of the product.

- A. Chemical resistance - Tests shall be conducted in accordance with ASTM F1216, and meet the minimum guidelines listed therein.
- B. Long-term properties - Tests to confirm 50-year design values shall be conducted in accordance with ASTM D2990. Alternatively, third party testing of a 10,000-hour external-loading test, conducted in a wet environment to simulate field conditions, can be used to verify long-term design values.
- C. Flow characteristics - The in-service Product shall provide full flow capacity equal to at least 100% of the host pipe's original capacity. The Manufacturer or Installer shall provide at least one in-ground flow test, verified by a third party, which measures flow characteristics of the product in uncleaned, in-service sewers.
- D. Strain-corrosion testing - Glass fiber reinforced products shall submit strain corrosion test data performed in accordance with ASTM D3681 without failure in 18 samples when exposed to 1.0-N sulfuric acid at the following strain levels for the time periods shown:

| HOURS | # OF SAMPLES | MIN STRAIN % |
|--------|--------------|--------------|
| 10 | 4 | 0.72 |
| 100 | 5 | 0.69 |
| 1,000 | 5 | 0.67 |
| 10,000 | 4 | 0.64 |

- E. Results from third party testing of external hydrostatic loading capacity of at least ten (10) restrained pipe samples to verify design techniques, and soil cell testing to demonstrate structural capacity and verify design techniques, shall be submitted.

IV. DESIGN ANALYSIS

The design method used for the product must be submitted for review and approval. Physical properties used in design equations must be validated by independent testing of product samples from ten (10) previous projects. Physical values derived from laboratory samples will not be allowed.

V. MANUFACTURING AND QUALITY CONTROL

- A. Detailed information describing the method of manufacturing and the final composition of the rehabilitation materials shall be provided upon request. This information must also include descriptions of any major components not directly provided by the Manufacturer.
- B. Detailed quality control procedures for rehabilitation materials, manufacturing and installation shall be submitted. This shall include inspection requirements, testing procedures, and allowable manufacturing tolerance levels.
- C. All related ASTM standards, or any nationally recognized standards, for product manufacturing must be submitted.

VI. INSTALLATION

- A. An itemized list detailing the installation procedures shall be submitted. This shall include estimated times for each task, lateral reinstatement methods, the number of required excavations and any other items unique to each process.
- B. Installer shall submit evidence of being trained to install the Product, as well as any ASTM or other nationally recognized standards pertaining to installation of the Product.
- C. Detailed procedures shall be submitted for repairing the product in the event of failure or future damage, as well as for tapping of future sewer service connections. These procedures should not require specialized training and/or equipment for the owners' maintenance crews.

VILLAGE OF SOUTH HOLLAND

THORN DITCH FLOOD MITIGATION PROJECT SANITARY SEWER CURED-IN-PLACE PIPELINING

PREQUALIFICATION SUMMARY

In accordance with the Special Provision for Prequalification of Pipelining Products, all bidders shall notify the Owner of the type of Product, Manufacturer and Installer proposed for use on this project by checking the appropriate boxes below.

Pre-qualifications demonstrating the ability to meet the requirements specified on pages PQ-1 thru PQ-5 must be submitted to the Engineer with the bid.

SANITARY SEWER LINING:

| <u>Item</u> | <u>Name</u> | <u>"Commercially Acceptable"</u> | <u>"New"</u> |
|--------------|-------------|--------------------------------------|--------------|
| PRODUCT | _____ | _____ | _____ |
| MANUFACTURER | _____ | _____ | _____ |
| INSTALLER | _____ | _____ | _____ |

DESIGN PARAMETERS:

Flexural Strength: _____ psi Short-term Flexural Modulus: _____ psi
Enhancement Factor: _____ Long-term Flexural Modulus: _____ psi

| Village of South Holland | | SEWER LINING DESIGN WORKSHEET | | | | | | 23-R0646 | |
|---|------------------------------|-------------------------------|--|--|--|--|--|----------|--|
| SECTION TO BE LINED | | | | | | | | | |
| UPSTREAM MANHOLE | | MH1591 | | | | | | | |
| DOWNSTREAM MANHOLE | | MH1554 | | | | | | | |
| SEWER PIPE ID | | | | | | | | | |
| STREET NAME | | GREENWOOD AVENUE | | | | | | | |
| LENGTH (ft) | | 187 | | | | | | | |
| VIDEOTAPE NUMBER | | | | | | | | | |
| SITE INFORMATION (provided with proposal documents, and to be verified by Contractor prior to bid) | | | | | | | | | |
| DESIGN CONDITION | [partial/full deterioration] | FULL | | | | | | | |
| SOIL MODULUS | [700-1500 psi] | 1000 | | | | | | | |
| SOIL UNIT WEIGHT | [110-130 lb/cu.ft.] | 120 | | | | | | | |
| LIVE LOAD | [Hwy, RR, other] | Highway | | | | | | | |
| OVALITY | [1-10%] | 2% | | | | | | | |
| MEAN INSIDE DIAMETER | [inches] | 10" | | | | | | | |
| SOIL DEPTH (over pipe) | [in feet] | 9.0 | | | | | | | |
| GROUNDWATER (above inv.) | [assume 5' min] | 5.00 | | | | | | | |
| DESIGN SAFETY FACTOR | [min. 1.50] | 2.0 | | | | | | | |
| DESIGN PARAMETERS (to be provided by Contractor with bid proposal) | | | | | | | | | |
| CURING PROCESS | [WATER or STEAM] | | | | | | | | |
| FLEXURAL STRENGTH | [min. 4,000 psi] | | | | | | | | |
| ENHANCEMENT FACTOR | [K] [max = 7.0] | | | | | | | | |
| SHORT-TERM FLEX MOD. | [min. 250,000 psi] | | | | | | | | |
| CREEP RET. FACTOR (C) | [67% max.] | | | | | | | | |
| LONG-TERM FLEX. MOD. | [C x Short-term mod.] | | | | | | | | |
| LINER THICKNESS (mm) | [ASTM F1216-93] | | | | | | | | |
| PROPOSED LINER THICKNESS (mm) | | | | | | | | | |



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Source Site Certification by Owner or Operator for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-662

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by source site owners and operators to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1) (A), that soil (i) was removed from a site that is not potentially impacted property and is presumed to be uncontaminated soil and (ii) is within a pH range of 6.25 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Village of South Thorn Ditch Flood Mitigation Office Phone Number, if available: 708-210-2900

Physical Site Location (Street, Road): Along Thorn Ditch; from the vicinity of Maryland Avenue to Prince Drive

City: South Holland State: IL Zip Code: 60473 County: Cook

Township: Thornton

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.59603 Longitude: - 87.59085

(Decimal Degrees)

(-Decimal Degrees)

Identify how the lat/long data were determined:

☐ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☒ Other

Coordinates for Thorn Ditch were obtained from the attached ERIS database report.

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): Mar 7, 2025 Approximate End Date (mm/dd/yyyy): May 30, 2025

Estimated Volume of debris (cu. Yd.): 500

II. Owner/Operator Information for Source Site

Site Owner

Name: Village of South Holland

Street Address: 16226 Wausau Avenue

PO Box: _____

City: South Holland State: IL

Zip Code: 60473 Phone: 708-210-2900

Contact: Michael Cramer- Director of PW

Email, if available: mcramer@southholland.org

Site Operator

Name: _____

Street Address: _____

PO Box: _____

City: _____ State: _____

Zip Code: _____ Phone: _____

Contact: _____

Email, if available: _____

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Source Site Certification

III. Descriptions of Current and Past Uses of Source Site

Describe the current and past uses of the site and nearby properties.* Attach additional information as needed. The description must take into account, at a minimum, the following for the source site and for nearby property: (1) use of the properties for commercial or industrial purposes; (2) the use, storage or disposal of chemical or petroleum products in individual containers greater than 5 gallons or collectively more than 50 gallons; (3) the current or past presence of any storage tanks (above ground or underground); (4) any waste storage, treatment or disposal at the properties; (5) any reported releases or any environmental cleanup or removal of contaminants; (6) any environmental liens or governmental notification of environmental violations; (7) any contamination in a well that exceeds the Board's groundwater quality standards; (8) the use, storage, or disposal of transformers or capacitors manufactured before 1979; and (9) any fill dirt brought to the properties from an unknown source or site.

Number of pages attached: 80

The project area of Thorn Ditch is located in a residential setting. REL purchased an ERIS database and determined that there are no PIPs within 250' of where excavation will occur along Thorn Ditch for the flood mitigation improvements. The items listed in Section III 1 through 9 listed above are not present in the project area of Thorn Ditch.

*The description must be sufficient to demonstrate that the source site is not potentially impacted property, thereby allowing the source site owner or operator to provide this certification.

IV. Soil pH Testing Results

Describe the results of soil pH testing showing that the soil pH is within the range of 6.25 to 9.0 and attach any supporting documentation.

Number of pages attached: 6

Grab soil samples, identified as S1 0-1' and S2 0-1', were collected along Thorn Ditch at locations where excavation will occur for the flood mitigation improvements. The sample locations are illustrated on the attached aerial map and draft site plans. The pH of the soil samples were reported by an accredited laboratory to be in acceptable range of 6.25 to 9.0 as follows:

S1 0-1': 7.37 S2 0-1': 7.68

V. Source Site Owner, Operator or Authorized Representative's Certification Statement and Signature

In accordance with the Illinois Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I Michael Cramer - Director of Public Works (owner, operator or authorized representative of source site) certify that this site is not a potentially impacted property and the soil is presumed to be uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. I further certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. Additionally, I certify that I am either the site owner or operator or a duly authorized representative of the site owner or site operator and am authorized to sign this form. Furthermore, I certify that all information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

☐ Owner

☐ Operator

Michael Cramer

Printed Name

Michael Cramer

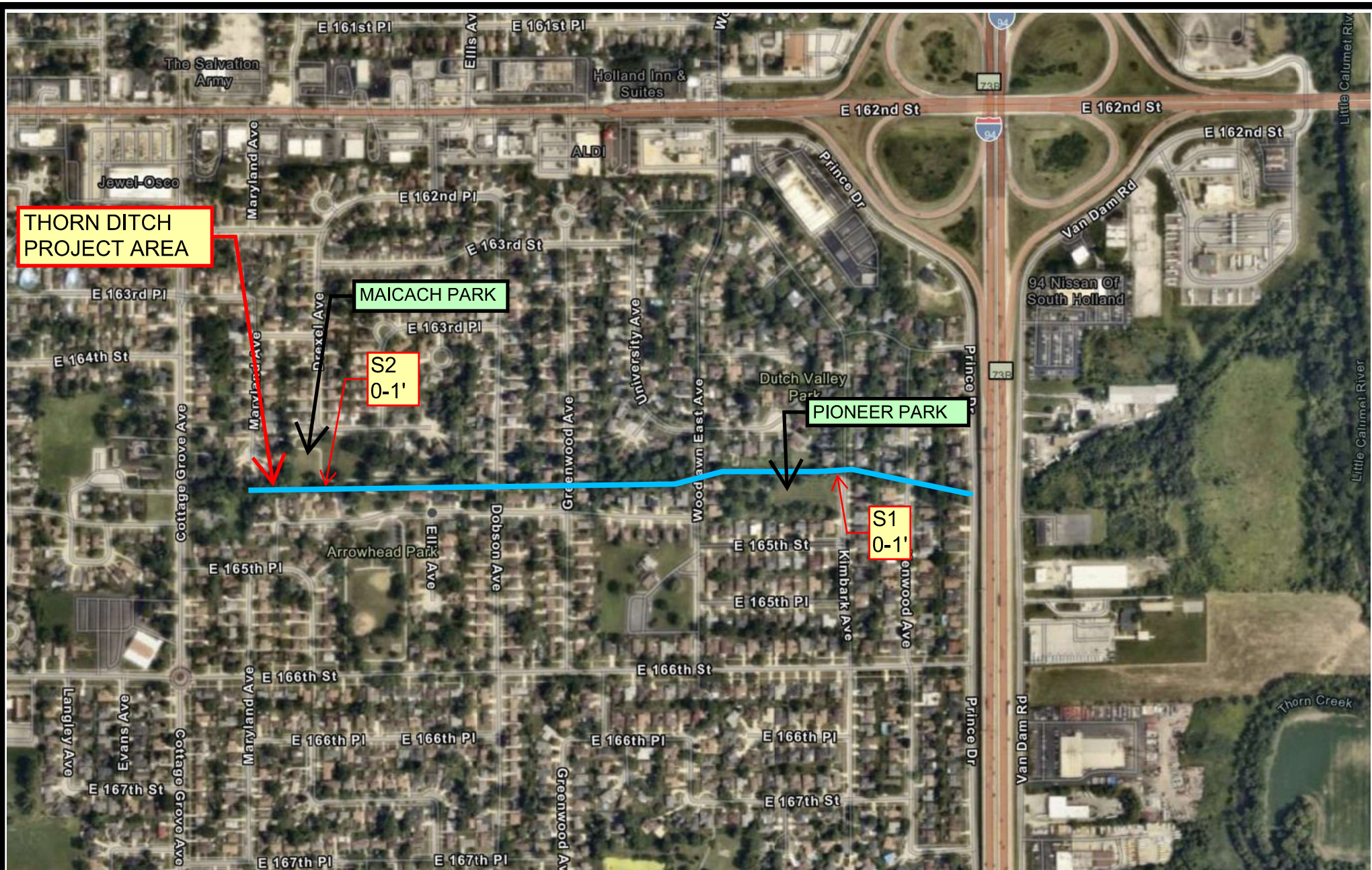
Signature

☒ Owner's Duly Authorized Representative

☐ Operator's Duly Authorized Representative

Sep 24, 2024

Date



PROJECT AREA AERIAL MAP
 Village of South Holland
 Thorn Ditch Flood Mitigation Project
 South Holland, Cook County, Illinois 60473



PROJECT NUMBER: 23-R0646

DATE: September 2024

ESRI Online
 Aerial Map



Check Sheet for Recurring Special Provisions

Local Public Agency

County

Section Number

SOUTH HOLLAND

Cook

☐ Check this box for lettings prior to 01/01/2025

The Following Recurring Special Provisions Indicated By An "X" Are Applicable To This Contract And Are Included By Reference:

Recurring Special Provisions

| Check Sheet # | | Page No. |
|---------------|---|----------|
| 1 | <input type="checkbox"/> Additional State Requirements for Federal-Aid Construction Contracts | 79 |
| 2 | <input type="checkbox"/> Subletting of Contracts (Federal-Aid Contracts) | 82 |
| 3 | <input type="checkbox"/> EEO | 83 |
| 4 | <input type="checkbox"/> Specific EEO Responsibilities Non Federal-Aid Contracts | 93 |
| 5 | <input type="checkbox"/> Required Provisions - State Contracts | 98 |
| 6 | <input type="checkbox"/> Asbestos Bearing Pad Removal | 104 |
| 7 | <input type="checkbox"/> Asbestos Waterproofing Membrane and Asbestos HMA Surface Removal | 105 |
| 8 | <input type="checkbox"/> Temporary Stream Crossings and In-Stream Work Pads | 106 |
| 9 | <input type="checkbox"/> Construction Layout Stakes | 107 |
| 10 | <input type="checkbox"/> Use of Geotextile Fabric for Railroad Crossing | 110 |
| 11 | <input type="checkbox"/> Subsealing of Concrete Pavements | 112 |
| 12 | <input type="checkbox"/> Hot-Mix Asphalt Surface Correction | 116 |
| 13 | <input type="checkbox"/> Pavement and Shoulder Resurfacing | 118 |
| 14 | <input type="checkbox"/> Patching with Hot-Mix Asphalt Overlay Removal | 119 |
| 15 | <input type="checkbox"/> Polymer Concrete | 121 |
| 16 | <input type="checkbox"/> Reserved | 123 |
| 17 | <input type="checkbox"/> Bicycle Racks | 124 |
| 18 | <input type="checkbox"/> Temporary Portable Bridge Traffic Signals | 126 |
| 19 | <input type="checkbox"/> Nighttime Inspection of Roadway Lighting | 128 |
| 20 | <input type="checkbox"/> English Substitution of Metric Bolts | 129 |
| 21 | <input type="checkbox"/> Calcium Chloride Accelerator for Portland Cement Concrete | 130 |
| 22 | <input checked="" type="checkbox"/> Quality Control of Concrete Mixtures at the Plant | 131 |
| 23 | <input type="checkbox"/> Quality Control/Quality Assurance of Concrete Mixtures | 139 |
| 24 | <input type="checkbox"/> Reserved | 155 |
| 25 | <input type="checkbox"/> Reserved | 156 |
| 26 | <input type="checkbox"/> Temporary Raised Pavement Markers | 157 |
| 27 | <input type="checkbox"/> Restoring Bridge Approach Pavements Using High-Density Foam | 158 |
| 28 | <input type="checkbox"/> Portland Cement Concrete Inlay or Overlay | 161 |
| 29 | <input type="checkbox"/> Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching | 165 |
| 30 | <input type="checkbox"/> Longitudinal Joint and Crack Patching | 168 |
| 31 | <input type="checkbox"/> Concrete Mix Design - Department Provided | 170 |
| 32 | <input type="checkbox"/> Station Numbers in Pavements or Overlays | 171 |

Local Public Agency

County

Section Number

SOUTH HOLLAND

Cook

The Following Local Roads And Streets Recurring Special Provisions Indicated By An "X" Are Applicable To This Contract And Are Included By Reference:

Local Roads And Streets Recurring Special Provisions

| <u>Check Sheet #</u> | | <u>Page No.</u> |
|----------------------|---|-----------------|
| LRS 1 | Reserved | 173 |
| LRS 2 | <input type="checkbox"/> Furnished Excavation | 174 |
| LRS 3 | <input type="checkbox"/> Work Zone Traffic Control Surveillance | 175 |
| LRS 4 | <input type="checkbox"/> Flaggers in Work Zones | 176 |
| LRS 5 | <input type="checkbox"/> Contract Claims | 177 |
| LRS 6 | <input type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals | 178 |
| LRS 7 | <input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals | 184 |
| LRS 8 | Reserved | 190 |
| LRS 9 | <input type="checkbox"/> Bituminous Surface Treatments | 191 |
| LRS 10 | Reserved | 195 |
| LRS 11 | <input type="checkbox"/> Employment Practices | 196 |
| LRS 12 | <input type="checkbox"/> Wages of Employees on Public Works | 198 |
| LRS 13 | <input type="checkbox"/> Selection of Labor | 200 |
| LRS 14 | <input type="checkbox"/> Paving Brick and Concrete Paver Pavements and Sidewalks | 201 |
| LRS 15 | <input type="checkbox"/> Partial Payments | 204 |
| LRS 16 | <input type="checkbox"/> Protests on Local Lettings | 205 |
| LRS 17 | <input type="checkbox"/> Substance Abuse Prevention Program | 206 |
| LRS 18 | <input type="checkbox"/> Multigrade Cold Mix Asphalt | 207 |
| LRS 19 | <input type="checkbox"/> Reflective Crack Control Treatment | 208 |

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
QUALITY CONTROL OF CONCRETE MIXTURES AT THE PLANT

Effective: August 1, 2000
Revised: January 1, 2022

Description. This Special Provision specifies the quality control responsibilities of the Contractor at the plant, for portland cement concrete mixtures, cement aggregate mixture II, and controlled low-strength material incorporated in the project, and defines the quality assurance and acceptance responsibilities of the Engineer.

A list of quality control/quality assurance (QC/QA) documents is provided in Schedule C.

Equipment/Laboratory. The Contractor shall provide a laboratory and test equipment to perform their quality control testing, as required in Schedule A.

The laboratory shall be of sufficient size and be furnished with the necessary equipment, supplies, and current published test methods for adequately and safely performing all required tests. The laboratory will be approved by the Engineer at the beginning of each construction season or each 12 month period. Production of a mixture shall not begin until the Engineer provides written approval of the laboratory. The Contractor shall refer to the Department's "Required Sampling and Testing Equipment for Concrete" for equipment requirements.

Test equipment shall be maintained and calibrated as required by the appropriate test method, and when required by the Engineer. This information shall be documented on the Department's "Calibration of Concrete Testing Equipment" forms BMPR PCCQ01 through BMPR PCCQ09.

The Engineer shall have unrestricted access to the plant and laboratory at any time to inspect measuring and testing equipment, and will notify the Contractor of any deficiencies. Defective equipment shall be immediately repaired or replaced by the Contractor.

Plant/Delivery Trucks. The concrete plant and delivery trucks shall be approved according to the Department's Policy Memorandum "Approval of Concrete Plants and Delivery Trucks".

Quality Control Plan. The Contractor shall submit, in writing, a proposed Quality Control (QC) Plan, Part 2, to the Engineer. The QC Plan shall be submitted a minimum of 45 calendar days prior to the production of a mixture. The QC Plan shall address the quality control of the concrete, cement aggregate mixture II, and controlled low-strength material at the plant. The Contractor shall refer to the Department's "Model Quality Control Plan for Concrete Production" to prepare a QC Plan. The Engineer will respond in writing to the Contractor's proposed QC Plan within 15 calendar days of receipt.

CHECK SHEET #22

Production of a mixture shall not begin until the Engineer provides written approval of the QC Plan. The approved QC Plan shall become a part of the contract between the Department and the Contractor, but shall not be construed as acceptance of any mixture produced.

The QC Plan may be amended during the progress of the work, by either party, subject to mutual agreement. The Engineer will respond in writing to a Contractor's proposed QC Plan amendment within 15 calendar days of receipt. The response will indicate the approval or denial of the Contractor's proposed QC Plan amendment.

Plant Quality Control by Contractor. At the plant, the Contractor shall perform quality control inspection, sampling, testing, and documentation to meet contract requirements. Quality control includes the recognition of obvious defects and their immediate correction. Quality control also includes appropriate action when passing test results are near specification limits. Quality control may require increased testing, communication of test results to the plant or the jobsite, modification of operations, suspension of mixture production, rejection of material, or other actions as appropriate. The Engineer shall be immediately notified of any failing tests and subsequent remedial action. Passing tests shall be reported no later than the start of the next work day.

When a mixture does not comply with specifications, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work, according to Article 105.03 of the Standard Specifications.

- (a) Personnel Requirements. The Contractor shall provide personnel to perform the required inspections, sampling, testing, and documentation in a timely manner. A Quality Control (QC) Manager will not be required. The Contractor shall refer to the Department's "Qualifications and Duties of Concrete Quality Control Personnel" document.

A Level II PCC Technician shall be provided at the plant, or shall be available, during mixture production and placement. A Level II PCC Technician may supervise a maximum of three plants. Whenever the Level II PCC Technician is not at the plant during mixture production and placement, a Concrete Tester or Level I PCC Technician shall be present at the plant to perform any necessary concrete tests. The Concrete Tester, Level I PCC Technician, or other individual shall also be trained to perform any necessary aggregate moisture tests, if the Level II PCC Technician is not at the plant during mixture production and placement. The Concrete Tester, Level I PCC Technician, plant personnel, and jobsite personnel shall have the ability to contact the Level II PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer.

A Concrete Tester may provide assistance with sampling and testing, and shall be supervised by a Level I or Level II PCC Technician.

- (b) Required Plant Tests. Sampling and testing shall be performed at the plant, or at a location approved by the Engineer, to control the production of a mixture. The required minimum Contractor plant sampling and testing is indicated in Schedule A.

Plant Quality Assurance by Engineer. The Engineer will perform quality assurance tests on independent samples and split samples at the plant. An independent sample is a field sample obtained and tested by only one party. A split sample is one of two equal portions of a field sample, where two parties each receive one portion for testing. The Engineer may request the Contractor to obtain a split sample. Aggregate split samples and any failing strength specimen shall be retained until permission is given by the Engineer for disposal. The results of all quality assurance tests by the Engineer will be made available to the Contractor. However, Contractor split sample test results shall be provided to the Engineer before Department test results are revealed. The Engineer's quality assurance independent sample and split sample testing is indicated in Schedule B.

- (a) Comparing Test Results. Differences between the Engineer's and the Contractor's split sample test results will not be considered extreme if within the following limits:

| Test Parameter | Acceptable Limits of Precision |
|---------------------|---|
| Slump | 0.75 in. (20 mm) |
| Air Content | 0.9% |
| Aggregate Gradation | See "Guideline for Sample Comparison" in Appendix "A" of the Manual of Test Procedures for Materials. |

When acceptable limits of precision have been met, but only one party is within specification limits, the failing test shall be resolved before the material may be considered for acceptance.

- (b) Test Results and Specification Limits. Split sample and independent sample testing shall be as follows.
- (1) Split Sample Testing. If either the Engineer's or the Contractor's split sample test result is not within specification limits, and the other party is within specifications limits; immediate retests on a split sample shall be performed for slump, air content, or aggregate gradation. A passing retest result by each party will require no further action. If either the Engineer's or Contractor's slump, air content, or aggregate gradation split sample retest result is a failure; or if either the Engineer's or Contractor's strength test result is a failure, and the other party is within specification limits; the following actions shall be initiated to investigate the test failure:
- The Engineer and the Contractor shall investigate the sampling method, test procedure, equipment condition, equipment calibration, and other factors.
 - The Engineer or the Contractor shall replace test equipment, as determined by the Engineer.
 - The Engineer and the Contractor shall perform additional testing on split samples, as determined by the Engineer.

CHECK SHEET #22

For aggregate gradation, plant slump, and plant air content: if the failing split sample test result is not resolved according to a., b., or c., and the mixture has not been placed, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work according to Article 105.03 of the Standard Specifications. If the mixture has already been placed, the material will be considered unacceptable.

If a continued trend of difference exists between the Engineer's and the Contractor's split sample test results, or if split sample test results exceed the acceptable limits of precision, the Engineer and the Contractor shall investigate according to a., b., or c.

- (2) Independent Sample Testing. For aggregate gradation, plant slump, and plant air content, if the result of a quality assurance test on a sample independently obtained by the Engineer is not within specification limits and the mixture has not been placed, the Contractor shall reject the material, unless the Engineer accepts the material for incorporation in the work according to Article 105.03 of the Standard Specifications. If the mixture has already been placed, the material will be considered unacceptable.

Jobsite Acceptance Testing by the Engineer. The Engineer will perform acceptance testing at the jobsite for slump, air content, and strength.

Acceptance by the Engineer. Final acceptance will be based on the Standard Specifications and the following:

- (a) The Contractor's compliance with all contract documents for quality control.
- (b) Comparison of the Engineer's jobsite acceptance test results with specification limits, using samples independently obtained by the Engineer.
- (c) Validation of Contractor plant quality control test results by comparison with the Engineer's quality assurance test results using split samples. Any quality control or quality assurance test determined to be flawed may be declared invalid only when reviewed and approved by the Engineer. The Engineer will declare a test result invalid only if it is proven that improper sampling or testing occurred. The test result is to be recorded and the reason for declaring the test invalid will be provided by the Engineer.
- (d) Comparison of the Engineer's plant quality assurance test results with specification limits using samples independently obtained by the Engineer.

The Engineer may suspend mixture production, reject materials, or take other appropriate action if the Contractor does not control the quality of concrete, cement aggregate mixture II, or controlled low-strength material for acceptance. The decision will be determined according to (a), (b), (c), and (d).

Documentation. The Contractor shall be responsible for documenting all observations, inspections, adjustments to the mix design, test results, retest results, and corrective actions in a bound hardback field book, bound hardback diary, or

appropriate Department form, which shall become the property of the Department. The documentation shall include a method to compare the Engineer's test results with the Contractor's results. The Contractor shall be responsible for the maintenance of all permanent records whether obtained by the Contractor, the consultants, subcontractors, or the producer of the mixture. The Contractor shall provide the Engineer full access to all documentation throughout the progress of the work.

The Department's form BMPR MI504 shall be completed by the Contractor, and shall be submitted to the Engineer weekly or as required by the Engineer. A correctly completed Form BMPR MI504 is required to authorize payment by the Engineer, for applicable pay items.

The Engineer will be responsible for completing form BMPR MI654 and form BMPR MI655.

Basis of Payment. Quality Control of Concrete Mixtures at the Plant will not be paid for separately, but shall be considered as included in the cost of the various types of concrete mixtures required to construct the work items included in the contract.

CHECK SHEET #22

SCHEDULE A

| CONTRACTOR PLANT SAMPLING AND TESTING - DOUBLE A | | | |
|--|---|--|---|
| Item | Test | Frequency | Illinois Modified AASHTO, Illinois Modified ASTM, or Illinois Test Procedure ^{1/} |
| Aggregates (Arriving at Plant) | Gradation ^{2/} | As needed to check source for each gradation number | Illinois Modified AASHTO R 90, Illinois Modified AASHTO T 11, Illinois Modified AASHTO T 27, and Illinois Modified AASHTO R 76 |
| Aggregates (Stored at Plant in Stockpiles or Bins) | Gradation ^{2/} | 2500 cu yd (1900 cu m) for each gradation number ^{3/} | Illinois Modified AASHTO R 90, Illinois Modified AASHTO T 11, Illinois Modified AASHTO T 27, and Illinois Modified AASHTO R 76 |
| Aggregates (Stored at Plant in Stockpiles or Bins) | Moisture ^{4/} : Fine Aggregate | Once per week for moisture sensor, otherwise daily for each gradation number | Flask, Dunagan, Pycnometer Jar, or Illinois Modified AASHTO T 255 |
| | Moisture ^{4/} : Coarse Aggregate | As needed to control production for each gradation number | Dunagan, Pycnometer Jar, or Illinois Modified AASHTO T 255 |
| Mixture ^{5/} | Slump Air Content Unit Weight / Yield Slump Flow (SCC) Visual Stability Index (SCC) J-Ring (SCC) ^{6/} L-Box (SCC) ^{6/} Temperature | As needed to control production | R60 and T 119 R60 and T 152 or T 196 R60 and T 121 ITP SCC-1 and ITP SCC-2 ITP SCC-1 and ITP SCC-2 ITP SCC-1 and ITP SCC-3 ITP SCC-1 and ITP SCC-4 R60 and ASTM C 1064 |
| Mixture (CLSM) ^{7/} | Flow Air Content Temperature | As needed to control production | ITP 307 |

1/ Refer to the Department's "Manual of Test Procedures for Materials".

2/ All gradation tests shall be washed. Testing shall be completed no later than 24 hours after the aggregate has been sampled.

3/ One per week (Sunday through Saturday) minimum, unless the stockpile has not received additional aggregate material since the previous test.

One per day minimum for a bridge deck pour, unless the stockpile has not received additional aggregate material since the previous test. The sample shall be taken and testing completed prior to the pour. The bridge deck aggregate sample may be taken the day before the pour or as approved by the Engineer.

- 4/ If the moisture test and moisture sensor disagree by more than 0.5 percent, retest. If the difference remains, adjust the moisture sensor to an average of two or more moisture tests. The Department's "Water/Cement Ratio Worksheet" form (BMPR PCCW01) shall be completed, when applicable.
- 5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO R 60, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318.

The Contractor may also perform other available self-consolidating concrete (SCC) tests at the plant to control mixture production.

- 6/ The Contractor shall select the J-Ring or L-Box test for plant sampling and testing.
- 7/ The Contractor may also perform strength testing according to ITP 307.

SCHEDULE B

| ENGINEER QUALITY ASSURANCE INDEPENDENT SAMPLE TESTING | | |
|--|--|--|
| Location | Measured Property | Testing Frequency ^{1/} |
| Plant | Gradation of aggregates stored in stockpiles or bins, Slump, and Air Content | As determined by the Engineer. |

| ENGINEER QUALITY ASSURANCE SPLIT SAMPLE TESTING ^{2/} | | |
|--|---|---|
| Location | Measured Property | Testing Frequency ^{1/} |
| Plant | Gradation of aggregates stored in stockpiles or bins | At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 10% of total tests required of the Contractor will be performed per aggregate gradation number and per plant. |
| | Slump, Air Content, Slump Flow (SCC), Visual Stability Index (SCC), J-Ring (SCC), and L-Box (SCC) | As determined by the Engineer. |

- 1/ The Engineer will perform the testing throughout the period of quality control testing by the Contractor.
- 2/ The Engineer will witness and take immediate possession of or otherwise secure the Department's split sample obtained by the Contractor.

CHECK SHEET #22

SCHEDULE C

IDOT CONCRETE QUALITY CONTROL AND QUALITY ASSURANCE DOCUMENTS

- (a) Model Quality Control Plan for Concrete Production (*)
- (b) Qualifications and Duties of Concrete Quality Control Personnel (*)
- (c) Development of Gradation Bands on Incoming Aggregate at Mix Plants (*)
- (d) Required Sampling and Testing Equipment for Concrete (*)
- (e) Calibration of Concrete Testing Equipment (BMPR PCCQ01 through BMPR PCCQ09)(*)
- (f) Water/Cement Ratio Worksheet (BMPR PCCW01) (*)
- (g) Field/Lab Gradations (BMPR MI504) (*)
- (h) Aggregate Technician Course or Mixture Aggregate Technician Course (*)
- (i) Portland Cement Concrete Tester Course (*)
- (j) Portland Cement Concrete Level I Technician Course – Manual of Instructions for Concrete Testing (*)
- (k) Portland Cement Concrete Level II Technician Course – Manual of Instructions for Concrete Proportioning (*)
- (l) Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures (*)
- (m) Manual of Test Procedures for Materials

* Refer to the Department's "Manual of Test Procedures for Materials" for more information.

BDE SPECIAL PROVISIONS
For the April 25 and June 13, 2025 Lettings

The following special provisions indicated by a “check mark” are applicable to this contract and will be included by the Project Coordination and Implementation Section of the Bureau of Design & Environment (BDE).

| File Name | # | | Special Provision Title | Effective | Revised |
|-----------|-------|----|--|----------------|---------------|
| | 80099 | 1 | <input type="checkbox"/> Accessible Pedestrian Signals (APS) | April 1, 2003 | Jan. 1, 2022 |
| | 80274 | 2 | <input checked="" type="checkbox"/> Aggregate Subgrade Improvement | April 1, 2012 | April 1, 2022 |
| | 80192 | 3 | <input type="checkbox"/> Automated Flagger Assistance Devices | Jan. 1, 2008 | April 1, 2023 |
| | 80173 | 4 | <input type="checkbox"/> Bituminous Materials Cost Adjustments | Nov. 2, 2006 | Aug. 1, 2017 |
| | 80426 | 5 | <input type="checkbox"/> Bituminous Surface Treatment with Fog Seal | Jan. 1, 2020 | Jan. 1, 2022 |
| * | 80241 | 6 | <input type="checkbox"/> Bridge Demolition Debris | July 1, 2009 | |
| * | 50531 | 7 | <input type="checkbox"/> Building Removal | Sept. 1, 1990 | Aug. 1, 2022 |
| * | 50261 | 8 | <input type="checkbox"/> Building Removal with Asbestos Abatement | Sept. 1, 1990 | Aug. 1, 2022 |
| | 80460 | 9 | <input type="checkbox"/> Cement, Finely Divided Minerals, Admixtures, Concrete, and Mortar | Jan. 1, 2025 | |
| | 80384 | 10 | <input type="checkbox"/> Compensable Delay Costs | June 2, 2017 | April 1, 2019 |
| * | 80198 | 11 | <input type="checkbox"/> Completion Date (via calendar days) | April 1, 2008 | |
| * | 80199 | 12 | <input type="checkbox"/> Completion Date (via calendar days) Plus Working Days | April 1, 2008 | |
| | 80461 | 13 | <input type="checkbox"/> Concrete Barrier | Jan. 1, 2025 | |
| | 80453 | 14 | <input type="checkbox"/> Concrete Sealer | Nov. 1, 2023 | |
| | 80261 | 15 | <input type="checkbox"/> Construction Air Quality – Diesel Retrofit | June 1, 2010 | Jan. 1, 2025 |
| * | 80029 | 16 | <input type="checkbox"/> Disadvantaged Business Enterprise Participation | Sept. 1, 2000 | Jan. 2, 2025 |
| | 80229 | 17 | <input type="checkbox"/> Fuel Cost Adjustment | April 1, 2009 | Aug. 1, 2017 |
| | 80452 | 18 | <input type="checkbox"/> Full Lane Sealant Waterproofing System | Nov. 1, 2023 | |
| | 80447 | 19 | <input type="checkbox"/> Grading and Shaping Ditches | Jan. 1, 2023 | |
| | 80433 | 20 | <input type="checkbox"/> Green Preformed Thermoplastic Pavement Markings | Jan. 1, 2021 | Jan. 1, 2022 |
| | 80456 | 21 | <input type="checkbox"/> Hot-Mix Asphalt | Jan. 1, 2024 | Jan. 1, 2025 |
| | 80446 | 22 | <input type="checkbox"/> Hot-Mix Asphalt - Longitudinal Joint Sealant | Nov. 1, 2022 | Aug. 1, 2023 |
| | 80438 | 23 | <input type="checkbox"/> Illinois Works Apprenticeship Initiative – State Funded Contracts | June 2, 2021 | April 2, 2024 |
| | 80450 | 24 | <input type="checkbox"/> Mechanically Stabilized Earth Retaining Walls | Aug. 1, 2023 | |
| | 80464 | 25 | <input type="checkbox"/> Pavement Marking Inspection | April. 1, 2025 | |
| | 80441 | 26 | <input type="checkbox"/> Performance Graded Asphalt Binder | Jan. 1, 2023 | |
| | 80459 | 27 | <input type="checkbox"/> Preformed Plastic Pavement Marking | June 2, 2024 | |
| * | 34261 | 28 | <input type="checkbox"/> Railroad Protective Liability Insurance | Dec. 1, 1986 | Jan. 1, 2022 |
| | 80455 | 29 | <input type="checkbox"/> Removal and Disposal of Regulated Substances | Jan. 1, 2024 | April 1, 2024 |
| | 80445 | 30 | <input type="checkbox"/> Seeding | Nov. 1, 2022 | |
| | 80457 | 31 | <input type="checkbox"/> Short Term and Temporary Pavement Markings | April 1, 2024 | April 2, 2024 |
| | 80462 | 32 | <input type="checkbox"/> Sign Panels and Appurtenances | Jan. 1, 2025 | April 1, 2025 |
| | 80448 | 33 | <input type="checkbox"/> Source of Supply and Quality Requirements | Jan. 2, 2023 | |
| | 80340 | 34 | <input type="checkbox"/> Speed Display Trailer | April 2, 2014 | Jan. 1, 2022 |
| | 80127 | 35 | <input type="checkbox"/> Steel Cost Adjustment | April 2, 2004 | Jan. 1, 2022 |
| | 80397 | 36 | <input type="checkbox"/> Subcontractor and DBE Payment Reporting | April 2, 2018 | |
| | 80391 | 37 | <input type="checkbox"/> Subcontractor Mobilization Payments | Nov. 2, 2017 | April 1, 2019 |
| | 80463 | 38 | <input type="checkbox"/> Submission of Bidders List Information | Jan. 2, 2025 | |
| | 80437 | 39 | <input type="checkbox"/> Submission of Payroll Records | April 1, 2021 | Nov. 2, 2023 |
| | 80435 | 40 | <input type="checkbox"/> Surface Testing of Pavements – IRI | Jan. 1, 2021 | Jan. 1, 2023 |
| | 80465 | 41 | <input type="checkbox"/> Surveying Services | April 1, 2025 | |
| | 80466 | 42 | <input type="checkbox"/> Temporary Rumble Strips | April 1, 2025 | |
| * | 20338 | 43 | <input type="checkbox"/> Training Special Provisions | Oct. 15, 1975 | Sept. 2, 2021 |
| | 80429 | 44 | <input type="checkbox"/> Ultra-Thin Bonded Wearing Course | April 1, 2020 | Jan. 1, 2022 |
| | 80439 | 45 | <input checked="" type="checkbox"/> Vehicle and Equipment Warning Lights | Nov. 1, 2021 | Nov. 1, 2022 |
| | 80458 | 46 | <input type="checkbox"/> Waterproofing Membrane System | Aug. 1, 2024 | |
| | 80302 | 47 | <input type="checkbox"/> Weekly DBE Trucking Reports | June 2, 2012 | Jan. 2, 2025 |
| | 80454 | 48 | <input type="checkbox"/> Wood Sign Support | Nov. 1, 2023 | |
| | 80427 | 49 | <input checked="" type="checkbox"/> Work Zone Traffic Control Devices | Mar. 2, 2020 | Jan. 1, 2025 |
| * | 80071 | 50 | <input type="checkbox"/> Working Days | Jan. 1, 2002 | |

Highlighted items indicate a new or revised special provision for the letting.

An * indicates the special provision requires additional information from the designer, which needs to be submitted separately. The Project Coordination and Implementation Section will then include the information in the applicable special provision.

The following special provisions are in the 2025 Supplemental Specifications and Recurring Special Provisions.

| <u>File Name</u> | <u>Special Provision Title</u> | <u>New Location(s)</u> | <u>Effective</u> | <u>Revised</u> |
|------------------|---|--|------------------|----------------|
| 80434 | Corrugated Plastic Pipe (Culvert and Storm Sewer) | Articles 542.03, 550.03, 1040.03, 1040.04(b), 1040.04(d) & 1040.08 | Jan. 1, 2021 | |
| 80443 | High Tension Cable Median Barrier Removal | Section 632 | April 1, 2022 | |
| 80045 | Material Transfer Device | Articles 406.03, 406.06(f), 406.13(b), 406.14 & 1102.02 | Nov 15, 1999 | Jan. 1, 2022 |
| 80410 | Traffic Spotters | Article 701.13 | Jan. 1, 2019 | |

AGGREGATE SUBGRADE IMPROVEMENT (BDE)

Effective: April 1, 2012

Revised: April 1, 2022

Add the following Section to the Standard Specifications:

“SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

303.01 Description. This work shall consist of constructing an aggregate subgrade improvement (ASI).

303.02 Materials. Materials shall be according to the following.

| Item | Article/Section |
|--|-----------------|
| (a) Coarse Aggregate | 1004.07 |
| (b) Reclaimed Asphalt Pavement (RAP) | 1031.09 |

303.03 Equipment. The vibratory roller shall be according to Article 1101.01, or as approved by the Engineer. Vibratory machines, such as tampers, shall be used in areas where rollers do not fit.

303.04 Soil Preparation. The minimum immediate bearing value (IBV) of the soil below the improved subgrade shall be according to the Department’s “Subgrade Stability Manual” for the aggregate thickness specified.

303.05 Placing and Compacting. The maximum nominal lift thickness of aggregate gradations CA 2, CA 6, and CA 10 when compacted shall be 9 in. (225 mm). The maximum nominal lift thickness of aggregate gradations CS 1, CS 2, and RR 1 when compacted shall be 24 in. (600 mm).

The top surface of the aggregate subgrade improvement shall consist of a layer of capping aggregate gradations CA 6 or CA 10 that is 3 in. (75 mm) thick after compaction. Capping aggregate will not be required when aggregate subgrade improvement is used as a cubic yard pay item for undercut applications.

Each lift of aggregate shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

303.06 Finishing and Maintenance. The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.

303.07 Method of Measurement. This work will be measured for payment according to Article 311.08.

303.08 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) or ton (metric ton) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.”

Add the following to Section 1004 of the Standard Specifications:

“1004.07 Coarse Aggregate for Aggregate Subgrade Improvement (ASI). The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete. In applications where greater than 24 in. (600 mm) of ASI material is required, gravel may be used below the top 12 in (300 mm) of ASI.

(b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.

(c) Gradation.

(1) The coarse aggregate gradation for total ASI thickness less than or equal to 12 in. (300 mm) shall be CA 2, CA 6, CA 10, or CS 1.

The coarse aggregate gradation for total ASI thickness greater than 12 in. (300 mm) shall be CS 1 or CS 2 as shown below or RR 1 according to Article 1005.01(c).

| | COARSE AGGREGATE SUBGRADE GRADATIONS | | | | |
|----------|--------------------------------------|--------|---------|---------|---------|
| Grad No. | Sieve Size and Percent Passing | | | | |
| | 8” | 6” | 4” | 2” | #4 |
| CS 1 | 100 | 97 ± 3 | 90 ± 10 | 45 ± 25 | 20 ± 20 |
| CS 2 | | 100 | 80 ± 10 | 25 ± 15 | |

| | COARSE AGGREGATE SUBGRADE GRADATIONS (Metric) | | | | |
|----------|---|--------|---------|---------|---------|
| Grad No. | Sieve Size and Percent Passing | | | | |
| | 200 mm | 150 mm | 100 mm | 50 mm | 4.75 mm |
| CS 1 | 100 | 97 ± 3 | 90 ± 10 | 45 ± 25 | 20 ± 20 |
| CS 2 | | 100 | 80 ± 10 | 25 ± 15 | |

(2) Capping aggregate shall be gradation CA 6 or CA 10.”

Add the following to Article 1031.09 of the Standard Specifications:

“(b) RAP in Aggregate Subgrade Improvement (ASI). RAP in ASI shall be according to Articles 1031.01(a), 1031.02(a), 1031.06(a)(1), and 1031.06(a)(2), and the following.

- (1) The testing requirements of Article 1031.03 shall not apply.
- (2) Crushed RAP used for the lower lift may be mechanically blended with aggregate gradations CS 1, CS 2, and RR 1 but it shall be no greater than 40 percent of the total product volume. RAP agglomerations shall be no greater than 4 in. (100 mm).
- (3) For capping aggregate, well graded RAP having 100 percent passing the 1 1/2 in. (38 mm) sieve may be used when aggregate gradations CS 1, CS 2, CA 2, or RR 1 are used in the lower lift. FRAP will not be permitted as capping material.

Blending shall be through calibrated interlocked feeders or a calibrated blending plant such that the prescribed blending percentage is maintained throughout the blending process. The calibration shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered."

VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)

Effective: November 1, 2021

Revised: November 1, 2022

Add the following paragraph after the first paragraph of Article 701.08 of the Standard Specifications:

“The Contractor shall equip all vehicles and equipment with high-intensity oscillating, rotating, or flashing, amber or amber-and-white, warning lights which are visible from all directions. In accordance with 625 ILCS 5/12-215, the lights may only be in operation while the vehicle or equipment is engaged in construction operations.”

80439

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020

Revised: January 1, 2025

Add the following to Article 701.03 of the Standard Specifications:

“(q) Temporary Sign Supports 1106.02”

Revise the third paragraph of Article 701.14 of the Standard Specifications to read:

“For temporary sign supports, the Contractor shall provide a FHWA eligibility letter for each device used on the contract. The letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device. The signs shall be supported within 20 degrees of vertical. Weights used to stabilize signs shall be attached to the sign support per the manufacturer’s specifications.”

Revise the first paragraph of Article 701.15 of the Standard Specifications to read:

“**701.15 Traffic Control Devices.** For devices that must meet crashworthiness standards, the Contractor shall provide a manufacturer’s self-certification or a FHWA eligibility letter for each Category 1 device and a FHWA eligibility letter for each Category 2 and Category 3 device used on the contract. The self-certification or letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device.”

Revise the first six paragraphs of Article 1106.02 of the Standard Specifications to read:

“**1106.02 Devices.** Work zone traffic control devices and combinations of devices shall meet crashworthiness standards for their respective categories. The categories are as follows.

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, plastic drums, and delineators, with no attachments (e.g. lights). Category 1 devices shall be MASH compliant.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include vertical panels with lights, barricades, temporary sign supports, and Category 1 devices with attachments (e.g. drums with lights). Category 2 devices shall be MASH compliant.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions (impact attenuators), truck mounted attenuators, and other devices not meeting the definitions of Category 1 or 2. Category 3 devices manufactured after December 31, 2019 shall be MASH compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant

with NCHRP 350, may be used on contracts let before December 31, 2029. Category 3 devices shall be crash tested for Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as sign supports, speed feedback displays, arrow boards, changeable message signs, temporary traffic signals, and area lighting supports. It is preferable for Category 4 devices manufactured after December 31, 2019 to be MASH-16 compliant; however, there are currently no crash tested devices in this category, so it remains exempt from the NCHRP 350 or MASH compliance requirement.

For each type of device, when no more than one MASH compliant is available, an NCHRP 350 compliant device may be used, even if manufactured after December 31, 2019.”

Revise Articles 1106.02(g), 1106.02(k), and 1106.02(l) to read:

“(g) Truck Mounted/Trailer Mounted Attenuators. The attenuator shall be approved for use at Test Level 3. Test Level 2 may be used for normal posted speeds less than or equal to 45 mph.

(k) Temporary Water Filled Barrier. The water filled barrier shall be a lightweight plastic shell designed to accept water ballast and be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings.

(l) Movable Traffic Barrier. The movable traffic barrier shall be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings. The barrier shall be capable of being moved on and off the roadway on a daily basis.”

PREVAILING WAGES

Cook County Prevailing Wage Rates posted on 4/15/2025

| | | | | | | Overtime | | | | | | | | | | |
|------------------------------|-----|------|---|-------|---------|----------|-----|-----|-----|-------|---------|------|------|--------------|---------------------|---------------------|
| Trade Title | Rg | Type | C | Base | Foreman | M-F | Sa | Su | Hol | H/W | Pension | Vac | Trng | Other Ins | Add OT 1.5x owed | Add OT 2.0x owed |
| ASBESTOS ABT-GEN | All | ALL | | 50.15 | 51.15 | 1.5 | 1.5 | 2.0 | 2.0 | 17.71 | 16.92 | 0.00 | 0.91 | | 0.00 | 0.00 |
| ASBESTOS ABT-MEC | All | BLD | | 41.27 | 44.57 | 1.5 | 1.5 | 2.0 | 2.0 | 15.84 | 16.02 | 0.00 | 0.90 | | 3.11 | 6.21 |
| BOILERMAKER | All | BLD | | 55.76 | 60.77 | 2.0 | 2.0 | 2.0 | 2.0 | 6.97 | 26.44 | 0.00 | 3.34 | 1.95 | 0.00 | 38.26 |
| BRICK MASON | All | BLD | | 52.06 | 57.27 | 1.5 | 1.5 | 2.0 | 2.0 | 12.70 | 24.54 | 0.00 | 1.24 | 0.00 | 3.99 | 7.98 |
| CARPENTER | All | ALL | | 55.11 | 57.11 | 1.5 | 1.5 | 2.0 | 2.0 | 12.89 | 26.26 | 2.15 | 0.93 | 0.00 | 0.00 | 0.00 |
| CEMENT MASON | All | ALL | | 52.00 | 54.00 | 2.0 | 1.5 | 2.0 | 2.0 | 17.81 | 23.00 | 0.00 | 1.15 | | 2.00 | 4.00 |
| CERAMIC TILE FINISHER | All | BLD | | 47.09 | 47.09 | 1.5 | 1.5 | 2.0 | 2.0 | 13.00 | 16.82 | 0.00 | 1.09 | 0.00 | 5.17 | 10.34 |
| CERAMIC TILE LAYER | All | BLD | | 54.84 | 59.84 | 1.5 | 1.5 | 2.0 | 2.0 | 13.00 | 20.68 | 0.00 | 1.17 | 0.00 | 7.15 | 14.30 |
| COMMUNICATION ELECTRICIAN | All | BLD | | 49.86 | 54.85 | 1.5 | 1.5 | 2.0 | 2.0 | 15.60 | 14.43 | 1.25 | 1.22 | 0.15 | 0.00 | 0.00 |
| ELECTRIC PWR EQMT OP | All | ALL | | 62.10 | 68.14 | 1.5 | 1.5 | 2.0 | 2.0 | 13.08 | 20.88 | 0.00 | 3.32 | 0.00 | 18.64 | 37.28 |
| ELECTRIC PWR GRNDMAN | All | ALL | | 48.44 | 68.14 | 1.5 | 1.5 | 2.0 | 2.0 | 10.20 | 16.29 | 0.00 | 2.60 | 0.00 | 14.55 | 29.09 |
| ELECTRIC PWR LINEMAN | All | ALL | | 62.10 | 68.14 | 1.5 | 1.5 | 2.0 | 2.0 | 13.08 | 20.88 | 0.00 | 3.32 | 0.00 | 18.64 | 37.28 |
| ELECTRICIAN | All | ALL | | 55.55 | 61.11 | 1.5 | 1.5 | 2.0 | 2.0 | 19.06 | 20.61 | 1.50 | 1.78 | 0.40 | 0.00 | 0.00 |
| ELEVATOR CONSTRUCTOR | All | BLD | | 67.84 | 76.32 | 2.0 | 2.0 | 2.0 | 2.0 | 16.18 | 20.96 | 5.42 | 0.75 | | 0.00 | 0.00 |
| FENCE ERECTOR | All | ALL | | 51.00 | 53.00 | 1.5 | 1.5 | 2.0 | 2.0 | 13.74 | 18.32 | 0.00 | 0.75 | | 0.00 | 0.00 |
| GLAZIER | All | BLD | | 51.55 | 53.05 | 1.5 | 2.0 | 2.0 | 2.0 | 15.64 | 26.18 | 0.00 | 2.27 | 0.00 | 0.00 | 0.00 |
| HEAT/FROST INSULATOR | All | BLD | | 55.02 | 58.32 | 1.5 | 1.5 | 2.0 | 2.0 | 15.84 | 19.01 | 0.00 | 0.90 | | 4.60 | 9.20 |
| IRON WORKER | All | ALL | | 59.26 | 62.76 | 2.0 | 2.0 | 2.0 | 2.0 | 18.30 | 26.31 | 0.00 | 0.49 | 0.00 | 0.00 | 0.00 |
| LABORER | All | ALL | | 50.15 | 50.90 | 1.5 | 1.5 | 2.0 | 2.0 | 17.71 | 16.92 | 0.00 | 0.91 | | 0.00 | 0.00 |
| LATHER | All | ALL | | 55.11 | 57.11 | 1.5 | 1.5 | 2.0 | 2.0 | 12.89 | 26.26 | 2.15 | 0.93 | 0.00 | 0.00 | 0.00 |
| MACHINIST | All | BLD | | 58.39 | 62.39 | 1.5 | 1.5 | 2.0 | 2.0 | 9.93 | 8.95 | 1.85 | 1.47 | | 0.00 | 0.00 |
| MARBLE FINISHER | All | ALL | | 39.50 | 53.55 | 1.5 | 1.5 | 2.0 | 2.0 | 12.70 | 22.32 | 0.00 | 0.73 | 0.00 | 2.88 | 5.76 |
| MARBLE SETTER | All | BLD | | 51.00 | 56.10 | 1.5 | 1.5 | 2.0 | 2.0 | 12.70 | 24.01 | 0.00 | 0.92 | 0.00 | 3.73 | 7.45 |
| MATERIAL TESTER I | All | ALL | | 40.15 | | 1.5 | 1.5 | 2.0 | 2.0 | 17.71 | 16.92 | 0.00 | 0.91 | | 0.00 | 0.00 |
| MATERIALS TESTER II | All | ALL | | 45.15 | | 1.5 | 1.5 | 2.0 | 2.0 | 17.71 | 16.92 | 0.00 | 0.91 | | 0.00 | 0.00 |
| MILLWRIGHT | All | ALL | | 55.11 | 57.11 | 1.5 | 1.5 | 2.0 | 2.0 | 12.89 | 26.26 | 2.15 | 0.93 | 0.00 | 0.00 | 0.00 |

Cook County Prevailing Wage Rates posted on 4/15/2025

| | | | | | | | | | | | | | | | | |
|------------------------|-----|-----|---|-------|-------|-----|-----|-----|-----|-------|-------|------|------|------|------|------|
| OPERATING ENGINEER | All | BLD | 1 | 60.80 | 64.80 | 2.0 | 2.0 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | BLD | 2 | 59.50 | 64.80 | 2.0 | 2.0 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | BLD | 3 | 56.95 | 64.80 | 2.0 | 2.0 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | BLD | 4 | 55.20 | 64.80 | 2.0 | 2.0 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | BLD | 5 | 64.55 | 64.80 | 2.0 | 2.0 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | BLD | 6 | 61.80 | 64.80 | 2.0 | 2.0 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | BLD | 7 | 63.80 | 64.80 | 2.0 | 2.0 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | FLT | 1 | 69.35 | 69.35 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | FLT | 2 | 67.85 | 69.35 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | FLT | 3 | 63.35 | 69.35 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | FLT | 4 | 58.85 | 69.35 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | FLT | 5 | 70.85 | 69.35 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | FLT | 6 | 58.85 | 69.35 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | HWY | 1 | 59.00 | 63.00 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | HWY | 2 | 58.45 | 63.00 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | HWY | 3 | 56.40 | 63.00 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | HWY | 4 | 55.00 | 63.00 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | HWY | 5 | 53.80 | 63.00 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | HWY | 6 | 62.00 | 63.00 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| OPERATING ENGINEER | All | HWY | 7 | 60.00 | 63.00 | 1.5 | 1.5 | 2.0 | 2.0 | 23.70 | 20.80 | 2.00 | 2.70 | 0.00 | 0.00 | 0.00 |
| ORNAMENTAL IRON WORKER | All | ALL | | 57.51 | 60.51 | 2.0 | 2.0 | 2.0 | 2.0 | 14.31 | 26.50 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 |
| PAINTER | All | ALL | | 53.05 | 59.68 | 1.5 | 1.5 | 1.5 | 2.0 | 15.76 | 16.19 | 0.00 | 1.86 | 0.00 | 0.00 | 0.00 |
| PAINTER - SIGNS | All | BLD | | 46.76 | 52.53 | 1.5 | 1.5 | 2.0 | 2.0 | 8.20 | 16.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PILEDRIIVER | All | ALL | | 55.11 | 57.11 | 1.5 | 1.5 | 2.0 | 2.0 | 12.89 | 26.26 | 2.15 | 0.93 | 0.00 | 0.00 | 0.00 |
| PIPEFITTER | All | BLD | | 57.00 | 60.00 | 1.5 | 1.5 | 2.0 | 2.0 | 13.65 | 22.85 | 0.00 | 3.12 | 0.00 | 0.00 | 0.00 |
| PLASTERER | All | BLD | | 50.00 | 53.00 | 1.5 | 1.5 | 2.0 | 2.0 | 17.81 | 21.22 | 0.00 | 1.15 | | 0.00 | 0.00 |
| PLUMBER | All | BLD | | 58.55 | 62.05 | 1.5 | 1.5 | 2.0 | 2.0 | 17.75 | 17.74 | 0.00 | 1.83 | | 0.00 | 0.00 |
| ROOFER | All | BLD | | 50.25 | 55.25 | 1.5 | 1.5 | 2.0 | 2.0 | 11.98 | 17.34 | 0.00 | 1.11 | 0.00 | 0.00 | 0.00 |
| SHEETMETAL WORKER | All | BLD | | 53.05 | 57.29 | 1.5 | 1.5 | 2.0 | 2.0 | 14.88 | 28.65 | 0.00 | 1.15 | 0.00 | 0.00 | 0.00 |

Cook County Prevailing Wage Rates posted on 4/15/2025

| | | | | | | | | | | | | | | | | |
|--------------------------|-----|-----|---|-------|-------|-----|-----|-----|-----|-------|-------|------|------|------|------|------|
| SIGN HANGER | All | BLD | | 36.72 | 39.66 | 1.5 | 1.5 | 2.0 | 2.0 | 7.45 | 4.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SPRINKLER FITTER | All | BLD | | 60.00 | 62.75 | 1.5 | 1.5 | 2.0 | 2.0 | 14.95 | 19.40 | 0.00 | 1.10 | 0.00 | 0.00 | 0.00 |
| STEEL ERECTOR | All | ALL | | 59.26 | 62.76 | 2.0 | 2.0 | 2.0 | 2.0 | 18.30 | 26.31 | 0.00 | 0.49 | 0.00 | 0.00 | 0.00 |
| STONE MASON | All | BLD | | 52.06 | 57.27 | 1.5 | 1.5 | 2.0 | 2.0 | 12.70 | 24.54 | 0.00 | 1.24 | 0.00 | 3.99 | 7.98 |
| SURVEY WORKER | All | BLD | | 56.50 | 57.50 | 1.5 | 1.5 | 2.0 | 2.0 | 17.75 | 14.15 | 0.00 | 1.49 | | 0.00 | 0.00 |
| SURVEY WORKER | All | HWY | | 56.50 | 57.50 | 1.5 | 1.5 | 2.0 | 2.0 | 17.75 | 14.15 | 0.00 | 1.49 | | 0.00 | 0.00 |
| TERRAZZO FINISHER | All | BLD | | 48.94 | 48.94 | 1.5 | 1.5 | 2.0 | 2.0 | 13.00 | 18.42 | 0.00 | 1.11 | 0.00 | 4.22 | 8.44 |
| TERRAZZO MECHANIC | All | BLD | | 52.85 | 56.35 | 1.5 | 1.5 | 2.0 | 2.0 | 13.00 | 19.81 | 0.00 | 1.15 | 0.00 | 4.47 | 8.94 |
| TRAFFIC SAFETY WORKER I | All | HWY | | 42.10 | 43.70 | 1.5 | 1.5 | 2.0 | 2.0 | 11.11 | 9.81 | 0.00 | 1.05 | 0.00 | 0.00 | 0.00 |
| TRAFFIC SAFETY WORKER II | ALL | HWY | | 43.10 | 44.70 | 1.5 | 1.5 | 2.0 | 2.0 | 11.11 | 9.81 | 0.00 | 1.05 | 0.00 | 0.00 | 0.00 |
| TRUCK DRIVER | E | ALL | 1 | 43.45 | | 1.5 | 1.5 | 2.0 | 2.0 | 13.15 | 16.09 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| TRUCK DRIVER | E | ALL | 2 | 43.70 | | 1.5 | 1.5 | 2.0 | 2.0 | 13.15 | 16.09 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| TRUCK DRIVER | E | ALL | 3 | 43.90 | | 1.5 | 1.5 | 2.0 | 2.0 | 13.15 | 16.09 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| TRUCK DRIVER | E | ALL | 4 | 44.10 | | 1.5 | 1.5 | 2.0 | 2.0 | 13.15 | 16.09 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| TRUCK DRIVER | W | ALL | 1 | 43.43 | | 1.5 | 1.5 | 2.0 | 2.0 | 11.70 | 16.11 | 0.00 | 0.25 | | 0.00 | 0.00 |
| TRUCK DRIVER | W | ALL | 2 | 43.58 | | 1.5 | 1.5 | 2.0 | 2.0 | 11.70 | 16.11 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| TRUCK DRIVER | W | ALL | 3 | 43.78 | | 1.5 | 1.5 | 2.0 | 2.0 | 11.70 | 16.11 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| TRUCK DRIVER | W | ALL | 4 | 43.98 | | 1.5 | 1.5 | 2.0 | 2.0 | 11.70 | 16.11 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| TUCKPOINTER | All | BLD | | 51.53 | 52.53 | 1.5 | 1.5 | 2.0 | 2.0 | 10.05 | 22.66 | 0.00 | 1.15 | 0.00 | 0.00 | 0.00 |

Legend

Rg Region

Type Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers

C Class

Base Base Wage Rate

OT M-F Unless otherwise noted, OT pay is required for any hour greater than 8 worked each day, Mon through Fri. The number listed is the multiple of the base wage.

OT Sa Overtime pay required for every hour worked on Saturdays

OT Su Overtime pay required for every hour worked on Sundays

OT Hol Overtime pay required for every hour worked on Holidays

H/W Health/Welfare benefit

Vac Vacation

Trng Training

Cook County Prevailing Wage Rates posted on 4/15/2025

Other Ins Employer hourly cost for any other type(s) of insurance provided for benefit of worker.

Explanations COOK COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

TRUCK DRIVERS (WEST) - That part of the county West of Barrington Road.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date. ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS ELECTRICIAN

Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice sound vision production and reproduction, telephone and telephone interconnect, facsimile, data apparatus, coaxial, fibre optic and wireless equipment, appliances and systems used for the transmission and reception of signals of any nature, business, domestic, commercial,

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education, entertainment, and residential purposes, including but not limited to, communication and telephone, electronic and sound equipment, fibre optic and data communication systems, and the performance of any task directly related to such installation or service whether at new or existing sites, such tasks to include the placing of wire and cable and electrical power conduit or other raceway work within the equipment room and pulling wire and/or cable through conduit and the installation of any incidental conduit, such that the employees covered hereby can complete any job in full.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

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Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types: Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators, Outside type Rack & Pinion and Similar Machines; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine; Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro

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Excavating (excluding hose work); Laser Screed; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

OPERATING ENGINEER - FLOATING

Class 1. Craft Foreman; Master Mechanic; Diver/Wet Tender; Engineer; Engineer (Hydraulic Dredge).

Class 2. Crane/Backhoe Operator; Boat Operator with towing endorsement; Mechanic/Welder; Assistant Engineer (Hydraulic Dredge); Leverman (Hydraulic Dredge); Diver Tender.

Class 3. Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more); Tug/Launch Operator; Loader/Dozer and like equipment on Barge, Breakwater Wall, Slip/Dock, or Scow, Deck Machinery, etc.

Class 4. Deck Equipment Operator, Machineryman/Fireman (4 Equipment Units or More); Off Road Trucks; Deck Hand, Tug Engineer, Crane Maintenance (50 Ton Capacity and Under) or Backhoe Weighing (115,000 pounds or less); Assistant Tug Operator.

Class 5. Friction or Lattice Boom Cranes.

Class 6. ROV Pilot, ROV Tender

SURVEY WORKER

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Operates survey equipment (such as levels, transits, data collectors, GPS and robotic total stations) for the purpose of performing construction layout and/or grade checking.

SURVEY FOREMAN

Operates survey equipment (such as levels, transits, data collectors, GPS and robotic total stations) for the purpose of performing construction layout and/or grade checking; oversees survey crew operations; and/or coordinates work of survey crews.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

TRAFFIC SAFETY Worker I

Traffic Safety Worker I - work associated with the delivery, installation, pick-up and servicing of safety devices during periods of roadway construction, including such work as set-up and maintenance of barricades, barrier wall reflectors, drums, cones, delineators, signs, crash attenuators, glare screen and other such items, and the layout and application or removal of conflicting and/or temporary roadway markings utilized to control traffic in construction zones, as well as flagging for these operations.

TRAFFIC SAFETY WORKER II

Work associated with the installation and removal of permanent pavement markings and/or pavement markers including both installations performed by hand and installations performed by truck.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION - EAST & WEST

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch

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trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

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MWRDGC REQUIREMENTS

EXHIBIT 2

MWRDGC'S PURCHASING ACT

(70 ILCS 2605/11.1) (from Ch. 42, par. 331.1)

Sec. 11.1. Sections 11.1 through 11.24 of this amendatory Act of 1963 shall be known and may be cited as the "Purchasing Act for the Metropolitan Sanitary District of Greater Chicago."

(Source: P.A. 82-1046.)

(70 ILCS 2605/11.2) (from Ch. 42, par. 331.2)

Sec. 11.2. In addition to all the rights, powers, privileges, duties and obligations conferred thereon in "An Act to create sanitary districts and to remove obstructions in the Des Plaines and Illinois rivers", approved May 29, 1889, as amended, the Metropolitan Sanitary District of Greater Chicago shall have the rights, powers and privileges and shall be subject to the duties and obligations conferred thereon by this amendatory Act of 1963.

(Source: Laws 1963, p. 2498.)

(70 ILCS 2605/11.3) (from Ch. 42, par. 331.3)

Sec. 11.3. Except as provided in Sections 11.4 and 11.5, all purchase orders or contracts involving amounts in excess of the mandatory competitive bid threshold and made by or on behalf of the sanitary district for labor, services or work, the purchase, lease or sale of personal property, materials, equipment or supplies, or the granting of any concession, shall be let by free and open competitive bidding after advertisement, to the lowest responsible bidder or to the highest responsible bidder, as the case may be, depending upon whether the sanitary district is to expend or receive money.

All such purchase orders or contracts which shall involve amounts that will not exceed the mandatory competitive bid threshold, shall also be let in the manner prescribed above whenever practicable, except that after solicitation of bids, such purchase orders or contracts may be let in the open market, in a manner calculated to insure the best interests of the public. The provisions of this section are subject to any contrary provisions contained in "An Act concerning the use of Illinois mined coal in certain plants and institutions", filed July 13, 1937, as heretofore and hereafter amended. For purposes of this Section, the "mandatory competitive bid threshold" is a dollar amount equal to 0.1% of the total general fixed assets of the district as reported in the most recent required audit report. In no event, however, shall the mandatory competitive bid threshold dollar amount be less than \$10,000 or more than \$40,000.

Notwithstanding the provisions of this Section, the sanitary district is expressly authorized to establish such procedures as it deems appropriate to comply with state or federal regulations as to affirmative action and the utilization of small and minority businesses in construction

and procurement contracts.
(Source: P.A. 92-195, eff. 1-1-02.)

(70 ILCS 2605/11.4) (from Ch. 42, par. 331.4)

Sec. 11.4. Contracts which by their nature are not adapted to award by competitive bidding, such as, but not only, contracts for the services of individuals possessing a high degree of professional skill where the ability or fitness of the individual plays an important part, contracts for the purchase or sale of utilities and contracts for materials economically procurable only from a single source of supply and leases of real property where the sanitary district is the lessee shall not be subject to the competitive bidding requirements of this Act. The sanitary district is expressly authorized to procure from any federal, state or local governmental unit or agency such surplus materials, as may be made available without conforming to the competitive bidding requirements of this Act. Regular employment contracts, whether classified in civil service or not, shall not be subject to the competitive bidding requirements of this Act.
(Source: Laws 1963, p. 2498.)

(70 ILCS 2605/11.5) (from Ch. 42, par. 331.5)

Sec. 11.5. In the event of an emergency affecting the public health or safety, so declared by action of the board of trustees, which declaration shall describe the nature of the injurious effect upon the public health or safety, contracts may be let to the extent necessary to resolve such emergency without public advertisement. The declaration shall fix the date upon which such emergency shall terminate. The date may be extended or abridged by the board of trustees as in its judgment the circumstances require.

The executive director appointed in accordance with Section 4 of this Act shall authorize in writing and certify to the director of procurement and materials management those officials or employees of the several departments of the sanitary district who may purchase in the open market without filing a requisition or estimate therefor, and without advertisement, any supplies, materials, equipment or services, for immediate delivery to meet bona fide operating emergencies where the amount thereof is not in excess of \$50,000; provided, that the director of procurement and materials management shall be notified of such emergency. A full written account of any such emergency together with a requisition for the materials, supplies, equipment or services required therefor shall be submitted immediately by the requisitioning agent to the executive director and such report and requisition shall be submitted to the director of procurement and materials management and shall be open to public inspection for a period of at least one year subsequent to the

date of such emergency purchase. The exercise of authority in respect to purchases for such bona fide operating emergencies shall not be dependent upon a declaration of emergency by the board of trustees under the first paragraph of this Section. (Source: P.A. 95-923, eff. 1-1-09; 96-165, eff. 8-10-09.)

(70 ILCS 2605/11.6) (from Ch. 42, par. 331.6)

Sec. 11.6. The head of each department shall notify the director of procurement and materials management of those officers and employees authorized to sign requests for purchases. Requests for purchases shall be void unless executed by an authorized officer or employee and approved by the director of procurement and materials management. Requests for purchases may be executed, approved and signed manually or electronically.

Officials and employees making requests for purchases shall not split or otherwise partition for the purpose of evading the competitive bidding requirements of this Act, any undertaking involving amounts in excess of the mandatory competitive bid threshold.

(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.7) (from Ch. 42, par. 331.7)

Sec. 11.7. All proposals to award purchase orders or contracts involving amounts in excess of the mandatory competitive bid threshold shall be published at least 12 calendar days in advance of the date announced for the receiving of bids, in a secular English language newspaper of general circulation in said sanitary district and shall be posted simultaneously on readily accessible bulletin boards in the principal office of the sanitary district. Nothing contained in this section shall be construed to prohibit the placing of additional advertisements in recognized trade journals. Advertisements for bids shall describe the character of the proposed contract or agreement in sufficient detail either in the advertisement itself or by reference to plans, specifications or other detail on file at the time of publication of the first announcement, to enable the bidders to know what their obligation will be. The advertisement shall also state the date, time and place assigned for the opening of bids. No bids shall be received at any time subsequent to the time indicated in the announcement; however, an extension of time may be granted for the opening of such bids upon publication in the same newspaper of general circulation in said sanitary district stating the date to which bid opening has been extended. The time of the extended bid opening shall not be less than 5 days after publication, Sundays and legal holidays excluded.

Cash, cashier's check or a certified check payable to the clerk and drawn upon a bank, as a deposit of good faith, in a

reasonable amount not in excess of 10% of the contract amount, may be required of each bidder by the director of procurement and materials management on all bids involving amounts in excess of the mandatory competitive bid threshold. If a deposit is required, the advertisement for bids shall so specify. Instead of a deposit, the director of procurement and materials management may allow the use of a bid bond if the bond is issued by a surety company that is listed in the Federal Register and is authorized to do business in the State of Illinois.

(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.8) (from Ch. 42, par. 331.8)

Sec. 11.8. Any agreement or collusion among bidders or prospective bidders in restraint of freedom of competition by agreement to bid a fixed price, or otherwise, shall render the bids of such bidder void. Each bidder shall accompany his bid with a sworn statement, or otherwise swear or affirm, that he has not been a party to any such agreement or collusion. Any disclosure in advance of the opening of bids, on the terms of the bids submitted in response to an advertisement, made or permitted by the director of procurement and materials management or any officer or employee of said sanitary district shall render the proceedings void and shall require re-advertisement and re-award.

(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.9) (from Ch. 42, par. 331.9)

Sec. 11.9. All sealed bids shall be publicly opened by the director of procurement and materials management, or his designee, and such bids shall be open to public inspection for a period of at least 48 hours before award is made; provided, this provision shall not apply to the sale of bonds, tax anticipation warrants or other financial obligations of the sanitary district.

(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.10) (from Ch. 42, par. 331.10)

Sec. 11.10. Every contract or purchase order involving amounts in excess of the mandatory competitive bid threshold shall be signed by the president or other duly authorized officer of the board of commissioners, by the executive director, by the clerk and by the director of procurement and materials management. Each bid with the name of the bidder shall be entered upon a record which shall be open to public inspection in the office of the director of procurement and

materials management. After the award is made, the bids shall be entered in the official records of the board of commissioners.

All purchase orders or contracts involving amounts that will not exceed the mandatory competitive bid threshold shall be let by the director of procurement and materials management. They shall be signed by the director of procurement and materials management and the clerk. All records pertaining to such awards shall be open to public inspection for a period of at least one year subsequent to the date of the award.

An official copy of each awarded purchase order or contract together with all necessary attachments thereto, including assignments and written consent of the director of procurement and materials management shall be retained by the director of procurement and materials management in an appropriate file open to the public for such period of time after termination of contract during which action against the municipality might ensue under applicable laws of limitation. Certified copies of all completed contracts and purchase orders shall be filed with the clerk. After the appropriate period, purchase orders, contracts and attachments in the clerk's possession may be destroyed by direction of the director of procurement and materials management.

The provisions of this Act are not applicable to joint purchases of personal property, supplies and services made by governmental units in accordance with Sections 1 through 5 of "An Act authorizing certain governmental units to purchase personal property, supplies and services jointly," approved August 15, 1961.

(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.11) (from Ch. 42, par. 331.11)

Sec. 11.11. In determining the responsibility of any bidder, the director of procurement and materials management may take into account, in addition to financial responsibility, past records of transactions with the bidder, experience, adequacy of equipment, ability to complete performance within a specific time and other pertinent factors, including but not limited to whether the equipment or material is manufactured in North America.

(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.12) (from Ch. 42, par. 331.12)

Sec. 11.12. Any and all bids received in response to an advertisement may be rejected by the director of procurement and materials management if the bidders are not deemed responsible, or the character or quality of the services, supplies, materials, equipment or labor do not conform to requirements, or if the public interest may be better served

thereby.
(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.13) (from Ch. 42, par. 331.13)

Sec. 11.13. Bond, with sufficient sureties, in such amount as shall be deemed adequate by the director of procurement and materials management not only to insure performance of the contract in the time and manner specified in said contract but also to save, indemnify and keep harmless the sanitary district against all liabilities, judgments, costs and expenses which may in anywise accrue against said sanitary district in consequence of the granting of the contract or execution thereof shall be required for all contracts relative to construction, rehabilitation or repair of any of the works of the sanitary district and may be required of each bidder upon all other contracts in excess of the mandatory competitive bid threshold when, in the opinion of the director of procurement and materials management, the public interest will be better served thereby.

In accordance with the provisions of "An Act in relation to bonds of contractors entering into contracts for public construction", approved June 20, 1931, as amended, all contracts for construction work, to which the sanitary district is a party, shall require that the contractor furnish bond guaranteeing payment for materials and labor utilized in the contract.

(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.14) (from Ch. 42, par. 331.14)

Sec. 11.14. No contract to which the sanitary district is a party shall be assigned by the successful bidder without the written consent of the director of procurement and materials management. In no event shall a contract or any part thereof be assigned to a bidder who has been declared not to be a responsible bidder in the consideration of bids submitted upon the particular contract.

(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.15) (from Ch. 42, par. 331.15)

Sec. 11.15. No person shall be employed upon contracts for work to be done by any such sanitary district unless he or she is a citizen of the United States, a national of the United States under Section 1401 of Title 8 of the United States Code, an alien lawfully admitted for permanent residence under Section 1101 of Title 8 of the United States Code, an individual who has been granted asylum under Section 1158 of

Title 8 of the United States Code, or an individual who is otherwise legally authorized to work in the United States. (Source: P.A. 98-280, eff. 8-9-13; 99-231, eff. 8-3-15.)

(70 ILCS 2605/11.16) (from Ch. 42, par. 331.16)

Sec. 11.16. The executive director, with the advice and consent of the board of trustees, shall appoint the director of procurement and materials management. Any person appointed as the director of procurement and materials management must have served at least 5 years in a responsible executive capacity requiring knowledge and experience in large scale purchasing activities.

In making the appointment, the president shall appoint an advisory committee consisting of 5 persons, one of whom shall be the executive director, which advisory board shall submit not fewer than 3 names to the general superintendent for the appointment. The executive director shall make the appointment from nominees submitted by the Advisory Committee after giving due consideration to each nominee's executive experience and his ability to properly and effectively discharge the duties of the director of procurement and materials management.

The director of procurement and materials management may be removed for cause by the executive director. He is entitled to a public hearing before the executive director prior to such anticipated removal. The director of procurement and materials management is entitled to counsel of his own choice. The executive director shall notify the board of trustees of the date, time, place and nature of each hearing and he shall invite the board to appear at each hearing. (Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.17) (from Ch. 42, par. 331.17)

Sec. 11.17. Powers of director of procurement and materials management. The director of procurement and materials management shall: (a) adopt, promulgate and from time to time revise rules and regulations for the proper conduct of his office; (b) constitute the agent of the sanitary district in contracting for labor, materials, services, or work, the purchase, lease or sale of personal property, materials, equipment or supplies in conformity with this Act; (c) open all sealed bids; (d) determine the lowest or highest responsible bidder, as the case may be; (e) enforce written specifications describing standards established pursuant to this Act; (f) operate or require such physical, chemical or other tests as may be necessary to insure conformity to such specifications with respect to quality of materials; (g) exercise or require such control as may be necessary to insure conformity to contract provisions with respect to quantity; (h) distribute or cause to be distributed, to the various requisitioning agencies of such

sanitary district such supplies, materials or equipment, as may be purchased by him; (i) transfer materials, supplies, and equipment to or between the various requisitioning agencies and to trade in, sell, donate, or dispose of any materials, supplies, or equipment that may become surplus, obsolete, or unusable; except that materials, supplies, and equipment may be donated only to not-for-profit institutions; (j) control and maintain adequate inventories and inventory records of all stocks of materials, supplies and equipment of common usage contained in any central or principal storeroom, stockyard or warehouse of the sanitary district; (k) assume such related activities as may be assigned to him from time to time by the board of trustees; and (m) submit to the board of trustees an annual report describing the activities of his office. The report shall be placed upon the official records of the sanitary district or given comparable public distribution. (Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.18) (from Ch. 42, par. 331.18)

Sec. 11.18. The board of trustees is expressly authorized to establish a revolving fund to enable the director of procurement and materials management to purchase items of common usage in advance of immediate need. The revolving fund shall be reimbursed from appropriations of the using agencies. No officer or employee of a sanitary district organized pursuant to this Act shall be financially interested, directly or indirectly, in any bid, purchase order, lease or contract to which such sanitary district is a party. For purposes of this Section an officer or employee of the sanitary district is deemed to have a direct financial interest in a bid, purchase order, lease or contract with the district, if the officer or employee is employed by the district and is simultaneously employed by a person or corporation that is a party to any bid, purchase order, lease or contract with the sanitary district.

Any officer or employee convicted of a violation of this section shall forfeit his office or employment and in addition shall be guilty of a Class 4 felony. (Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.19) (from Ch. 42, par. 331.19)

Sec. 11.19. No department, office, agency or instrumentality, officer or employee of the sanitary district, shall be empowered to execute any purchase order or contract except as expressly authorized by this Act. (Source: Laws 1963, p. 2498.)

(70 ILCS 2605/11.19a) (from Ch. 42, par. 331.19a)

Sec. 11.19a. Purchases made pursuant to this Act shall be made in compliance with the "Local Government Prompt Payment Act", approved by the Eighty-fourth General Assembly. (Source: P.A. 84-731.)

(70 ILCS 2605/11.20) (from Ch. 42, par. 331.20)

Sec. 11.20. There shall be a board of standardization, composed of the director of procurement and materials management of the sanitary district who shall be chairman, and 4 other members who shall be appointed by the president of the board of trustees of the sanitary district. The members shall be responsible heads of a major office or department of the sanitary district and shall receive no compensation for their services on the board. The board shall meet at least once each 3 calendar months upon notification by the chairman at least 5 days in advance of the date announced for such meeting. Official action of the board shall require the vote of a majority of all members of the board. The chairman shall cause to be prepared a report describing the proceedings of each meeting. The report shall be transmitted to each member and shall be made available to the president and board of trustees of such sanitary district within 5 days subsequent to the date of the meeting and all such reports shall be open to public inspection, excluding Sundays and legal holidays.

The board of standardization shall: (a) classify the requirements of the sanitary district, including the departments, offices and other boards thereof, with respect to supplies, materials and equipment; (b) adopt as standards, the smallest numbers of the various qualities, sizes and varieties of such supplies, materials and equipment as may be consistent with the efficient operation of the sanitary district; and (c) prepare, adopt, promulgate, and from time to time revise, written specifications describing such standards.

Specifications describing in detail the physical, chemical and other characteristics of supplies, material or equipment to be acquired by purchase order or contract shall be prepared by the board of standardization. However, all specifications pertaining to the construction, alteration, rehabilitation or repair of any real property of such sanitary district shall be prepared by the engineering agency engaged in the design of such construction, alteration, rehabilitation or repair, prior to approval by the director of procurement and materials management. The specification shall form a part of the purchase order or contract, and the performance of all such contracts shall be supervised by the engineering agency designated in the contracts.

In the preparation or revision of standard specifications the board of standardization shall solicit the advice, assistance and cooperation of the several requisitioning agencies and shall be empowered to consult such public or non-public laboratory or technical services as may be deemed expedient. After adoption, each standard specification shall,

until rescinded, apply alike in terms and effect to every purchase order or contract for the purchase of any commodity, material, supply or equipment. The specifications shall be made available to the public upon request.
(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.21) (from Ch. 42, par. 331.21)

Sec. 11.21. Official ordinances authorized by this Act shall be adopted by formal action of the board of trustees of the sanitary district and shall be published for the information of the public.
(Source: Laws 1963, p. 2498.)

(70 ILCS 2605/11.22) (from Ch. 42, par. 331.22)

Sec. 11.22. Any purchase order or contract executed in violation of this Act shall be null and void. Public funds which have been expended thereon, may be recovered in the name of the sanitary district in any court of competent jurisdiction.
(Source: Laws 1963, p. 2498.)

(70 ILCS 2605/11.23) (from Ch. 42, par. 331.23)

Sec. 11.23. The comptroller of the sanitary district shall conduct audits of all expenditures incident to all purchase orders and contracts awarded by the director of procurement and materials management. The comptroller shall report the results of such audits to the president and board of trustees.
(Source: P.A. 95-923, eff. 1-1-09.)

(70 ILCS 2605/11.24) (from Ch. 42, par. 331.24)

Sec. 11.24. (a) A person or business entity shall be disqualified from doing business with The Metropolitan Sanitary District of Greater Chicago for a period of 5 years from the date of conviction or entry of a plea or admission of guilt, if that person or business entity:

1. has been convicted of an act of bribery or attempting to bribe an officer or employee of the federal government or of a unit of any state or local government or school district in that officer's or employee's official capacity; or
2. has been convicted of an act of bid-rigging or attempting to rig bids as defined in the Federal Sherman Anti-Trust Act and Clayton Act; or

3. has been convicted of bid-rigging or attempting to rig bids under the laws of the State of Illinois or any other state; or

4. has been convicted of an act of price-fixing or attempting to fix prices as defined by the Federal Sherman Anti-Trust Act and Clayton Act; or

5. has been convicted of price-fixing or attempting to fix prices under the laws of the State of Illinois or any other state; or

6. has been convicted of defrauding or attempting to defraud the Federal government or a unit of any state or local government or school district; or

7. has made an admission of guilt of such conduct as set forth in subsections 1 through 6 above, which admission is a matter of record, whether or not such person or business entity was subject to prosecution for the offense or offenses admitted to; or

8. has entered a plea of nolo contendere to charges of bribery, price-fixing, bid-rigging, or fraud as set forth in subsections 1 through 6 above.

(b) "Business entity" as used in this section means a corporation, partnership, trust, association, unincorporated business or individually owned business.

(c) A business entity shall be disqualified if the following persons are convicted of, have made an admission of guilt, or enter a plea of nolo contendere to a disqualifying act described in paragraph (a), subsections 1 through 6, regardless of whether or not the disqualifying act was committed on behalf or for the benefit of such business entity:

(1) a person owning or controlling, directly or indirectly, 20% or more of its outstanding shares; or

(2) a member of its board of directors; or

(3) an agent, officer or employee of such business entity.

(d) Disqualification Procedure. After bids are received, whether in response to a solicitation for bids or public advertising for bids, if it shall come to the attention of the director of procurement and materials management that a bidder has been convicted, made an admission of guilt, a plea of nolo contendere, or otherwise falls within one or more of the categories set forth in paragraphs (a), (b) or (c) of this Section, the director of procurement and materials management shall notify the bidder by certified mail, return receipt requested, that such bidder is disqualified from doing business with the Sanitary District. The notice shall specify the reasons for disqualification.

(e) Review Board. A review board consisting of 3 individuals shall be appointed by the Executive Director of the Sanitary District. The board shall select a chairman from its own members. A majority of the members shall constitute a quorum and all matters coming before the board shall be determined by a majority. All members of the review board shall serve without compensation, but shall be reimbursed actual expenses.

(f) Review. The director of procurement and materials management's determination of disqualification shall be final

as of the date of the notice of disqualification unless, within 10 calendar days thereafter, the disqualified bidder files with the director of procurement and materials management a notice of appeal. The notice of appeal shall specify the exceptions to the director of procurement and materials management's determination and shall include a request for a hearing, if one is desired. Upon receipt of the notice of appeal, the director of procurement and materials management shall provide a copy to each member of the review board. If the notice does not contain a request for a hearing, the director of procurement and materials management may request one within 5 days after receipt of the notice of appeal. If a hearing is not requested, the review board may, but need not, hold a hearing.

If a hearing is not requested, the review board, unless it decides to hold a hearing, shall review the notice of disqualification, the notice of appeal and any other supporting documents which may be filed by either party. Within 15 days after the notice of appeal is filed, the review board shall either affirm or reverse the director of procurement and materials management's determination of disqualification and shall transmit a copy to each party by certified mail, return receipt requested.

If there is a hearing, the hearing shall commence within 15 days after the filing of the notice of appeal. A notice of hearing shall be transmitted to the director of procurement and materials management and the disqualified bidder not later than 12 calendar days prior to the hearing date, by certified mail, return receipt requested.

Evidence shall be limited to the factual issues involved. Either party may present evidence and persons with relevant information may testify, under oath, before a certified reporter. Strict rules of evidence shall not apply to the proceedings, but the review board shall strive to elicit the facts fully and in credible form. The disqualified bidder may be represented by an attorney.

Within 10 calendar days after the conclusion of the hearing, the review board shall make a finding as to whether or not the reasons given in the director of procurement and materials management's notice of disqualification apply to the bidder, and an appropriate order shall be entered. A copy of the order shall be transmitted to the director of procurement and materials management and the bidder by certified mail, return receipt requested.

(g) All final decisions of the review board shall be subject to review under the Administrative Review Law.

(h) Notwithstanding any other provision of this section to the contrary, the Sanitary District may do business with any person or business entity when it is determined by the director of procurement and materials management to be in the best interest of the Sanitary District, such as, but not limited to contracts for materials or services economically procurable only from a single source.

(Source: P.A. 95-923, eff. 1-1-09.)

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EXHIBIT 3

MWRDGC'S MULTI-PROJECT LABOR AGREEMENT (MPLA)

MULTI-PROJECT LABOR AGREEMENT (COOK COUNTY)

With

CERTIFICATE OF COMPLIANCE

CONTAINS:

- 1) MPLA – EFFECTIVE OCTOBER 6, 2017**
- 2) CERTIFICATE OF COMPLIANCE**

MPLA-CC-01

**GENERAL REQUIREMENTS UNDER THE
MULTI-PROJECT LABOR AGREEMENT**

The following is a brief summary of a Bidder's responsibilities under the MPLA. Please refer to the terms of the MPLA for a full and complete statement of its requirements.

Your firm is required to complete the Certificate of Compliance indicating that your firm intends to comply with the Multi-Project Labor Agreement. The Certificate of Compliance must be signed by an authorized Officer of the firm. This may be submitted with the bid or prior to award of contract. To be eligible for award, your firm must comply with the Multi-Project Labor Agreement and sign the certificate. Failure of the Bidder to comply with the MPLA will result in a rejection of the bid, and possible retention of the bid deposit. Compliance with the MPLA, is as follows:

If the Bidder or any other entity performing work under the contract is not already signatory to a current collective bargaining agreement with a union or labor organization affiliated with the AFL-CIO Building Trades Department and the Chicago and Cook County Building and Construction Trades Council, or their affiliates which have jurisdiction over the work to be performed pursuant to this Contract, (hereafter referred to as a "participating trade group") it must become a member.

Note: The MPLA is not applicable when the performance of work is outside Cook County, Illinois, or if repair and maintenance work on equipment is performed at a Bidder's facility.

Revised October 2017

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO
MULTI-PROJECT LABOR AGREEMENT FOR COOK COUNTY

This Multi-Project Labor Agreement ("Agreement") is entered into by and between the Metropolitan Water Reclamation District of Greater Chicago ("MWRD" or "District"), a public body, as Owner, in its proper capacity, on behalf of itself and each of its contractors and subcontractors of whatever tier ("Contractors") and shall be applicable to Construction Work on Covered Projects, both defined herein, to be performed by the District's Contractors along with each of the undersigned labor organizations signatory to the Chicago and Cook County Building and Construction Trades Council and, as appropriate, the Teamsters Joint Council No. 25, or their affiliates who become signatory hereto (collectively "Union(s)").

This Agreement is entered into in accordance with all applicable local state and federal laws. The District recognizes the public interest in timely construction and labor stability.

WHEREAS, MWRD is responsible for the actual construction, demolition, rehabilitation, deconstruction, and/or renovation work ("Construction Work") of projects overseen by MWRD in the geographical boundaries of Cook County. All of the District's Construction Work within those boundaries ("Covered Projects") will be recognized as covered under the terms of this Agreement regardless of the source of the Funds for the Project. Due to the size, scope, cost, timing, and duration of the multitude of Covered Projects traditionally performed by MWRD, the Parties to this Agreement have determined that it is in their interests to have these Covered Projects completed in the most productive, economical, and orderly manner possible and without labor disruptions of any kind that might interfere with, or delay, any of said Covered Projects; and

WHEREAS, the Parties have determined that it is desirable to eliminate the potential for friction and disruption of these Covered Projects by using their best efforts to ensure that all Construction Work is performed by the Unions that are signatory hereto and which have traditionally performed and have trade and geographic jurisdiction over such work regardless of the source of the Funds for the Project. Experience has proven the value of such cooperation and mutual undertakings; and

WHEREAS, the Parties acknowledge that the District is not to be considered an employer of any employee of any Contractor covered under this Agreement, and the District acknowledges that it has a serious and ongoing concern regarding labor relations associated with its Covered Projects, irrespective of the existence of a collective bargaining relationship with any of the signatory Unions.

NOW THEREFORE, in order to further these goals and objectives and to maintain a spirit of harmony, labor-management cooperation, and stability, the Parties agree as follows:

1. During the term of this Agreement, MWRD shall neither contract, nor permit any other person, firm, company, or entity to contract or subcontract for any Construction Work on any Covered Project under this Agreement, unless such work is performed by a person, firm, or company signatory, or willing to become signatory, to the current applicable area-wide collective bargaining agreement(s) with the appropriate trade/craft Union(s) affiliated with the Chicago & Cook County Building & Construction Trades Council or, as appropriate, the Teamsters' Joint Council No. 25. Copies of all applicable, current collective bargaining agreements constitute Appendix A of this Agreement, attached hereto and made an integral part hereof, and as may be modified from time to time during the term of this Agreement.

September 6, 2017

Said provisions of this Agreement shall be included in all advertised contracts, excluding non-Construction Work, and shall be explicitly included in all contracts or subcontracts of whatsoever tier by all Contractors on Covered Projects.

- a. The Parties agree that the repair of heavy equipment, thermographic inspection, and landscaping shall be defined and/or designated as Construction Work on all Covered Projects.
- b. The Unions acknowledge that some preassembled or prefabricated equipment and material will be used on Covered Projects. To the extent consistent with existing collective bargaining agreements and applicable law, there will be no refusal by the Unions to handle, transport, install, or connect such equipment or materials. Further, equipment and material procured from sources outside of the geographic boundaries of Cook County may be delivered by independent cargo, haulers, rail, ship and/or truck drivers and such delivery will be made without any disruption as the District will request its Contractors to request Union-affiliate employees to make deliveries to the Covered Project sites.
- c. Notwithstanding anything to the contrary herein, the terms of this Agreement shall not apply to work performed at the Contractor's facility for repair and maintenance of equipment or where repair, maintenance, or inspection services are done by highly-skilled technicians trained in servicing equipment, unless otherwise provided by the relevant collective bargaining agreement.
- d. Nothing herein shall prohibit or otherwise affect the District's right to cancel or otherwise terminate a contract.
- e. A pre-construction meeting attended by representatives of the District, the Contractors, and Unions shall be scheduled for a date prior to commencement of a Covered Project. The nature of the project, the May 15, 2017 Covered Construction Work, the work assignments, and any other matters of mutual interest will be discussed. All parties participating in the pre-job conferences shall sign a pre-job-sign-in sheet. During the pre-job conference, or shortly thereafter, and before the commencement of the project, the contractor or subcontractor shall ensure that there has been submitted to the District a letter of good standing for the applicable trades explaining that the contractor or subcontractor is not delinquent with respect to any dues owed to the appropriate labor organization or with respect to any fringe contributions owed to the appropriate fringe benefit fund(s). If a union or fringe benefit fund does not produce a letter of good standing within seven (7) days after a request is made no such letter of good standing shall be required for that particular trade.
- f. The Unions agree to reasonably cooperate with the MWRD and Contractors in order to assist them in achieving the Worker Percentage Participation goals as defined in subsection (1) and (2) below. The Worker Percentage Participation goals are governed by federal requirements regarding federal construction contracts. To the extent these federal worker percentage participation goals are modified in the future, such modifications will automatically apply:

- (1) 19.6% of the total aggregate of construction hours worked by employees of contractors and their subcontractors will be performed by African-American, Hispanic, Native American, Asian-Pacific, and Subcontinent Asian American workers.
- (2) 6.9% of the total aggregate of construction hours worked by employees of the contractors and their subcontractors will be performed by female workers.

September 6, 2017

2. A contractor or subcontractor which is a successful bidder with respect to Covered Projects, but which is not signatory to the applicable area-wide collective bargaining agreements incorporated herein, shall be required to execute such applicable area-wide collective bargaining agreements within seven (7) days of being designated a successful bidder. If such an agreement is not executed within that time period, said contractor or subcontractor will be disqualified. In no event shall a contractor or subcontractor be required to sign any of the applicable agreements constituting Appendix A if the contractor or subcontractor does not employ the trade covered by the applicable Appendix A contract.

3. During the term of this Agreement, no Union signatory hereto nor any of its members, officers, stewards, agents, representatives, nor any employee, shall instigate, authorize, support, sanction, maintain, or participate in any strike walkout, work stoppage, work slowdown, work curtailment, cessation, or interruption of production, or in any picketing of any Covered Project site covered by this Agreement for any reason whatsoever, including, but not limited to, the expiration of any collective bargaining agreement referred to in Appendix A, a dispute between the Parties and any Union or employee, or as a show of support or sympathy for any other Union employee or any other group. In the event of an economic strike or other job action upon the termination of an existing collective bargaining agreement, no adverse job action shall be directed against any Covered Project sites. All provisions of any subsequently negotiated collective bargaining agreement shall be retroactive for all employees working on the Covered Project.

4. Each Union signatory hereto agrees that it will use its best efforts to prevent any of the acts forbidden in Paragraph 4, and that in the event any such act takes place or is engaged in by any employee or group of employees, each Union signatory hereto further agrees that it will use its best efforts (including its full disciplinary power under its Constitution and/or By-Laws) to cause an immediate cessation thereof. Each union also agrees that if any union, individual or group of employees on covered projects engages in any handbilling, picketing, strike, walkout, work stoppage, work slowdown, work curtailment, cessation or interruption, the other unions will consider such picketing or other work action as unauthorized and will refuse to honor any picket line established and the unions further agree to instruct their members to cross such unauthorized lines. Failure of any union or groups of employees to cross such unauthorized picket lines on any covered project shall be a violation of this agreement.

5. Any Contractor signatory or otherwise bound, stipulated to, or required to abide by any provisions of this Agreement may implement reasonable project rules and regulations, and these rules and regulations shall be distributed to all employees on the Covered Project. Provided, however, that such rules and regulations shall not be inconsistent with the terms of this Agreement or any applicable area-wide collective bargaining agreement. Any Contractor shall have the right to discharge or discipline its Union employees who violate the provisions of this Agreement or any Covered Project's rules and regulations. Such discharge or discipline by a Contractor shall be subject to the Grievance/ Arbitration procedure of the applicable area-wide collective bargaining agreement only as to the fact of such employee's violation of this Agreement. If such fact is established, the penalty imposed shall not be subject to review or disturbed. Construction Work at any Covered Project site under this Agreement shall continue without disruption or hindrance of any kind during any Grievance/Arbitration procedure.

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6. The Unions understand and acknowledge that the District's Contractors are responsible to perform Construction Work as required by the District. The Contractors have complete authority to do the following, subject to District approval, if required, and if consistent with the terms of the collective bargaining agreements attached hereto:

- a. Plan, direct, and control the operations of all work;
- b. Hire and lay off employees as the Contractor deems appropriate to meet work requirements;
- c. Determine work methods and procedures;
- d. Determine the need and number of foremen;
- e. Require all employees to observe Contractor and/or District rules and regulations;
- f. Require all employees to work safely and observe all safety regulations prescribed by the Contractor and/or the District; and
- g. Discharge, suspend, or discipline employees for proper cause.
- h. Abide by the rules set forth in each respective Trade Unions' Collectively Bargained Agreement pertaining to apprentice to journeymen ratios.

7. Nothing in the foregoing shall prohibit or restrict any Party from otherwise judicially enforcing any provision of its collective bargaining agreement between any Union and a Contractor with whom it has a collective bargaining relationship.

8. This Agreement shall be incorporated into all advertised contract documents after the Board of Commissioners adopts and ratifies this Agreement.

9. The term of this Agreement shall be five (5) years and shall be automatically extended from year to year unless the District or the Council Issues a written notice to terminate prior to ninety (90) days in advance of any expiration. Any Covered Project commenced during and/or covered by the terms of this Agreement shall continue to be covered by its terms until the final completion and acceptance of the Covered Project by the District.

10. In the event a dispute shall arise between a contractor or subcontractor any signatory union and/or fringe benefit fund as to the obligation and/or payment of fringe benefits provided for under the appropriate Collective Bargaining Agreement, upon notice to the District by the appropriate union signatory hereto of a claim for such benefits, the District shall forward such notification to the surety upon the contract, and to the general contractor.

11. In the event of a jurisdictional dispute by and between any Unions, such Unions shall take all steps necessary to promptly resolve the dispute. In the event of a dispute relating to trade or work jurisdiction, Parties, including Contractors, consent to and agree that a final and binding resolution of the dispute shall be achieved in accordance with the terms of paragraph nine of the Joint Conference Board Standard Agreement between the Chicago & Cook County Building Trades Council and the Construction Employers' Association, attached hereto as Appendix B, and as may be modified from time to time during the term of this Agreement.

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12. This Agreement shall be incorporated into and become a part of the collective bargaining agreements between the Unions signatory hereto and Contractors and their subcontractors. In the event of any inconsistency between this Agreement and any collective bargaining agreement, the terms of this Agreement shall supersede and prevail. In the event of any inconsistency between this Agreement and any collective bargaining agreement, the terms of this Agreement shall supersede and prevail except for all work performed under the NTP Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, all instruction calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control systems Technicians, and the National Agreement of the International Union of Elevator Contractors with the exception of the content and subject matter of Article V, VI, and VII of the AFL-CIO's Building & Construction Trades Department model Project Labor Agreement.

13. The Parties agree that in the implementation and administration of this Agreement, it is vitally necessary to maintain effective and immediate communication so as to minimize the potential of labor relations disputes arising out of this Agreement. To that end, each Party hereto agrees to designate, in writing, a representative to whom problems which arise during the term of this Agreement may be directed. Within forty-eight (48) hours after notice of the existence of any problem, a representative of each Party shall meet to discuss and, where possible, resolve such problems. The representative of the Unions shall be President of the Chicago & Cook County Building & Construction Trades Council or his/her designee. The representative of MWRD shall be the District's Assistant Director of Engineering, Construction Division or his/her designee.

14. The District and the Contractors agree that the applicable substance abuse policy (i.e., drug, alcohol, etc.) on any Covered Project shall be that as contained or otherwise provided for in the relevant area-wide collective bargaining agreements attached as Appendix A to this Agreement. Nothing in the foregoing shall limit the District and/or Contractors from initiating their own substance abuse policy governing other employees performing work on a project not otherwise covered under this Agreement. In the event there is no substance abuse policy in the applicable collective bargaining agreements, the policy adopted by the District and/or Contractor may apply. The District is not responsible for administering any substance abuse policy for non-District employees.

15. The Parties recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The Contractors and Unions agree to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment ("Center"), the Center's Helmets to Hardhats program, and the Veteran's In Piping (V.I.P) program (this only pertains to the United Association Pipefitter's Local 597, Plumbers Local 130, and Sprinkler Fitter's Local 281), to serve as a resource for preliminary orientation, assessment of construction aptitude, and referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities, and other needs as identified by the Parties. The Contractors and Unions also agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on Covered Projects, including apprenticeship and employment opportunities on such projects. To the extent permitted by law, the Parties will give

September 6, 2017

appropriate credit to such veterans for bona fide, provable past experience in the building and construction industry.

16. The Parties agree that Contractors working under the terms of this Agreement shall be required to utilize the maximum number of apprentices on Covered Projects as permitted under the applicable area-wide collective bargaining agreements contained in Appendix A, where feasible and practical.

17. Neither the District, the Contractors, nor the Unions shall discriminate against any employees of a protected class, including but not limited to on the basis of race, creed, color, national origin, age, or sex, in accordance with all applicable state and federal laws and regulations.

18. If any provision or other portion of this Agreement shall be determined by any court of competent jurisdiction to be invalid, illegal, or unenforceable in whole or in part, and such determination shall become final, it shall be deemed to be severed or limited, but only to the extent required to render the remaining provisions and portions of this Agreement enforceable. This Agreement, as amended, shall be enforced so as to give effect to the intention of the Parties insofar as possible.

19. Under this Agreement, any liability of the Parties shall be several and not joint. The District shall not be liable for any violations of this Agreement by any Contractor or Union, and any Contractor or Union shall not be liable for any violations of this Agreement by the District, any other Contractor, or any other Union. In the event any provision of this Agreement is determined to be invalid, illegal, or unenforceable as specified in Paragraph 18, neither the District, nor any Contractor or Union, shall be liable for any action taken or not taken to comply with any court order.

20. The Parties are mutually committed to promoting a safe working environment for all personnel at the job site. It shall be the responsibility of each employer to which this Agreement applies to provide a work environment free of illegal drugs and any concealed weapons, to maintain safe working conditions for its employees, and to comply with all applicable federal, state, and local health and safety laws and regulations.

21. The use or furnishing of alcohol, weapons, or illegal drugs and the conduct of any other illegal activities at the job site is strictly prohibited. The Parties shall take every practical measure consistent with the terms of the applicable area-wide collective bargaining agreement to ensure that the job site is free of weapons, alcohol, and illegal drugs.

22. Each Union representing workers engaged in Construction Work on a Covered Project is bound to this Agreement with full authority to negotiate and sign this Agreement with the District.

23. All Parties represent that they have the full legal authority to enter into this Agreement.

24. This document, with the attached Appendices, constitutes the entire Agreement of the Parties and may not be modified or changed except by subsequent written agreement of the Parties.

September 6, 2017

25. Having been adopted by the Board of Commissioners on August 3, 2017, and ratified and effective as of the last date on the signature page, this agreement supersedes any other Multi-Project Labor Agreement previously entered into by the parties as of the date of ratification.

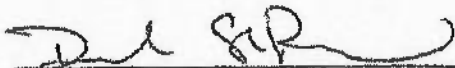
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September 6, 2017

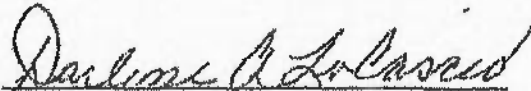
The undersigned, as a Party hereto, hereby agrees to all the terms and conditions of this Agreement.

Dated this 16TH day of OCTOBER, 2017 in Chicago, Cook County, Illinois.

On behalf of the Metropolitan Water Reclamation District of Greater Chicago

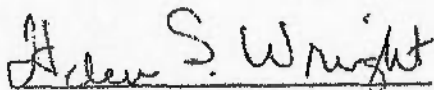


David St. Pierre
Executive Director
Management



Darlene A. LoCascio
Director of Procurement and Materials

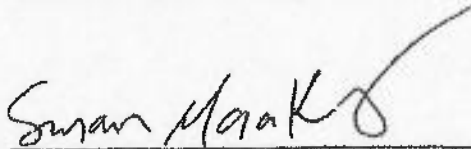
Approved as to Form and Legality



Helen Shields-Wright
Head Assistant Attorney



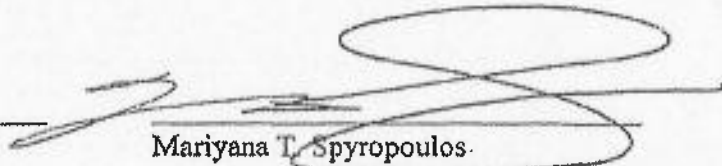
Jacqueline Torres
Director of finance/Clerk



Susan T. Morakalis
Acting General Counsel

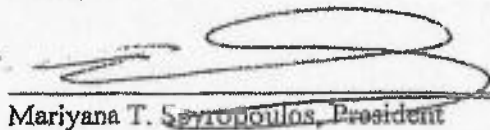


Frank Avila
Chairman of Finance



Mariyana T. Spyropoulos
Chairman, Committee on Labor and
Industrial Relations

Approved



Mariyana T. Spyropoulos, President

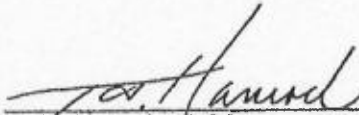
MWRD RA
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 15th day of September, 2017 in Chicago, Cook County, Illinois.

On behalf of: Teamsters Local Union No. 731
Labor Organization

APPROVED:


Its Duly Authorized Officer Terrence J. Hancock, President

MWRD PA

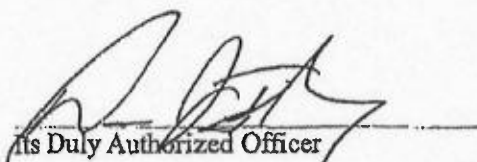
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 13th day of September, 2017 in Chicago, Cook County, Illinois.

On behalf of: Sprinkler Fitters Union Local 281, U.A.
Labor Organization

APPROVED:


His Duly Authorized Officer

Dennis J. Fleming, Business Manager

MWRD PLA

September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of Sept., 2017 in Chicago, Cook County, Illinois.

On behalf of: SMART Local #23
Labor Organization

APPROVED:

Proas
Its Duly Authorized Officer

MWRD RA
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of September, 2017 in Chicago, Cook County, Illinois.

On behalf of: Roufers + Water Proofer's #11
Labor Organization

APPROVED:

Dany Mural
Its Duly Authorized Officer

MWRD PLA
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of Sept., 2017 in Chicago, Cook County, Illinois.

On behalf of: Plumbers Local 130UA
Labor Organization

APPROVED:

James F. Coyne
Its Duty Authorized Officer

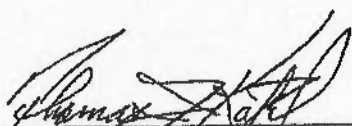
MWRD P.C.A.
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12th day of SEPTEMBER 2017 in Chicago, Cook County, Illinois.

On behalf of: PIPEFITTERS LOCAL 597
Labor Organization

APPROVED:



Its Duly Authorized Officer

MWRD PLA
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12th day of September 2017 in Chicago, Cook County, Illinois.

On behalf of: Painters / Glaziers
Labor Organization

APPROVED:


Its Duly Authorized Officer

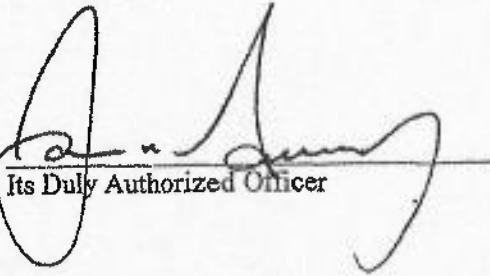
MWRD PLA
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of SEPT, 2017 in Chicago, Cook County, Illinois.

On behalf of: OPERATING ENGINEER ISO
Labor Organization

APPROVED:


Its Duly Authorized Officer

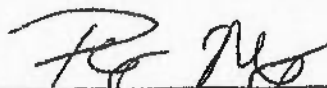
MWRD PLA
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of September, 2017 in Chicago, Cook County, Illinois.

On behalf of: Machinists Local 126
Labor Organization

APPROVED:



Its Duly Authorized Officer

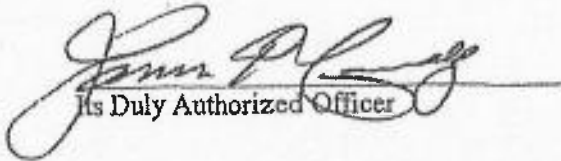
MARD PLA
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of SEPTEMBER, 2017 in Chicago, Cook County, Illinois.

On behalf of: LABORERS' DISTRICT COUNCIL
Labor Organization

APPROVED:


Its Duly Authorized Officer

MURD PLA

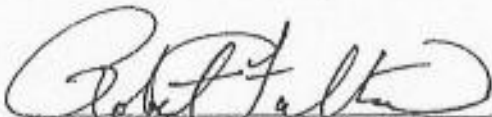
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 20th day of September 2017 in Chicago, Cook County, Illinois.

On behalf of: RIGER LOCAL #136
Labor Organization

APPROVED:


Its Duly Authorized Officer

MURA PLA

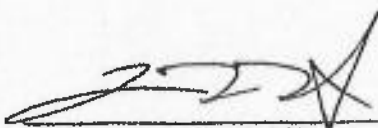
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of SEPT. 2017 in Chicago, Cook County, Illinois.

On behalf of: Team Workers #63
Labor Organization

APPROVED:


Its Duly Authorized Officer

MWRD PLA

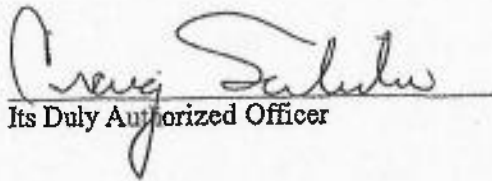
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 25th day of September, 2017 in Chicago, Cook County, Illinois.

On behalf of: IFROW WORKERS #1
Labor Organization

APPROVED:


Its Duly Authorized Officer

MWRD PLA

September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12th day of September 2017 in Chicago, Cook County, Illinois.

On behalf of: Heat & Frost Insulators Local #17
Labor Organization

APPROVED:

Wm. J. McGin
Its Duly Authorized Officer

MWRD PLA
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of September, 2017 in Chicago, Cook County, Illinois.

On behalf of: IUEL Local 2
Labor Organization

APPROVED:


Its Duly Authorized Officer


MWRD PLA
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of Sept, 2017 in Chicago, Cook County, Illinois.

On behalf of: Local 134 IBCU
Labor Organization

APPROVED:



Its Duly Authorized Officer

MWRD PLA

September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of Sept, 2017 in Chicago, Cook County, Illinois.

On behalf of: CHRYST MASON & PLASTRA'S
Labor Organization

APPROVED:



Its Duly Authorized Officer

MWRD PUA

September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of SEPTEMBER 2017 in Chicago, Cook County, Illinois.

On behalf of: CARPENTERS
Labor Organization

APPROVED:

Frank J. Kelly
Its Duly Authorized Officer

MWRD PLA

September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of SEPTEMBER, 2017 in Chicago, Cook County, Illinois.

On behalf of: BRICKLAYERS AND ALLIED CRAFTS
Labor Organization

APPROVED:



Its Duly Authorized Officer

MWRD PLA

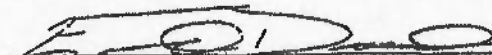
September 6, 2017

The undersigned, as a Party hereto, agrees to all the terms and conditions of this Agreement.

Dated this the 12 day of September, 2017 in Chicago, Cook County, Illinois.

On behalf of: International Brotherhood of Boilermakers Local 007C
Labor Organization

APPROVED:


Its Duly Authorized Officer

September 6, 2017

APPENDIX A

For copies of Collective Bargaining Agreements, please go to the MWRD Website and click on:

Freedom of Information Act (FOIA)/Category of Records

September 6, 2017

APPENDIX B

DocuSign Envelope ID: 5DD9C849-6998-4E39-8A30-1E842D256425

**JOINT CONFERENCE BOARD
STANDARD AGREEMENT
6/1/15 – 5/31/20**

**Construction Employers' Association
And
Chicago & Cook County Building &
Construction Trades Council**

DocuSign Envelope ID: 5DD9C849-6898-4E38-8A30-1E642D256425

**The Standard Agreement
between
The Construction Employers' Association
and
The Chicago & Cook County
Building & Construction Trades Council
Establishing
The Joint Conference Board**

CHRONOLOGY

ADOPTED NOVEMBER 18, 1926
AMENDED AND READOPTED JANUARY 11, 1929
AMENDED AND READOPTED JUNE 24, 1942
READOPTED APRIL 28, 1947
AMENDED AND READOPTED MARCH 19, 1952
READOPTED FEBRUARY 12, 1957
AMENDED AND READOPTED MAY 13, 1958
AMENDED AND READOPTED FEBRUARY 11, 1960
AMENDED AND READOPTED MAY 21, 1963
AMENDED NOVEMBER 16, 1965
AMENDED MARCH 14, 1967
AMENDED AND READOPTED MARCH 4, 1968
AMENDED AND READOPTED NOVEMBER 11, 1971
READOPTED NOVEMBER 20, 1973
READOPTED DECEMBER 12, 1978
READOPTED APRIL 12, 1983
READOPTED MARCH 31, 1988
AMENDED AND READOPTED APRIL 25, 1989
REFORMATTED, AMENDED AND READOPTED JUNE 1, 1994
AMENDED AND READOPTED JUNE 1, 1999
AMENDED APRIL 1, 2003
AMENDED AND READOPTED JUNE 1, 2004
AMENDED AND READOPTED JUNE 1, 2005
AMENDED AND READOPTED JUNE 25, 2008
AMENDED AND READOPTED FEBRUARY 15, 2010
AMENDED AND READOPTED MAY 28, 2015

Expiration Date: MAY 31, 2020

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PREAMBLE

This Agreement is entered into to prevent strikes and lockouts and to facilitate peaceful adjustment of jurisdictional disputes in the building and construction industry and to prevent waste and unnecessary avoidable delays and expense, and for the further purpose of at all times securing for the employer sufficient skilled workers and so far as possible to provide for labor continuous employment, such employment to be in accordance with the conditions and at the wages agreed upon, in the particular trade or craft, that stable conditions may prevail in the construction industry, that costs may be as low as possible consistent with fair wages and conditions and further to establish the necessary procedure by which these ends may be accomplished.

This Standard Agreement shall be considered and shall constitute a part of all agreements between Employers and Labor Unions, members of the Construction Employers' Association, herein call the Association, and the Chicago & Cook County Building & Construction Trades Council, herein called the Council, as containing within its terms the necessary protection of and assuring undisturbed conditions in the industry. In the event of any inconsistency between this Agreement and any collective bargaining agreement, the terms of this Agreement shall supersede and prevail except for all work performed under the NT Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, all instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for instrument and Control Systems Technicians, and the National Agreement of the International Union of Elevator Constructors with the exception of the content and subject matter of Articles V, VI and VII of the AFL-CIO's Building & Construction Trades Department model Project Labor Agreement.

DECLARATION OF PRINCIPLES

The Principles contained herein are fundamental, and no articles or section in this Agreement or in the collective bargaining agreement pertaining to a specific trade or craft shall be construed as being in conflict with these principles. In the event any conflict exists between this Agreement and any collective bargaining agreement subject to the Provisions of this Agreement and the dispute resolution provisions contained hereunder, and pertaining to a specific trade or craft concerning the resolution of jurisdictional disputes, the parties specifically agree that the terms of this Agreement are exclusive and supersede any other provisions or procedures relating to the settlement of jurisdictional disputes contained in such collective bargaining agreement.

- I. There shall be no limitation as to the amount of work a worker shall perform during the work day.
- II. There shall be no restriction on the use of machinery, tools or appliances.
- III. There shall be no restriction on the use of any raw or manufactured material, except prison made.
- IV. No person shall have the right to interfere with workers during working hours.
- V. The use of apprentices shall not be prohibited.
- VI. The foreman shall be the agent of the employer.
- VII. The worker is at liberty to work for whomever he or she sees fit but such worker shall demand and receive the wages agreed upon in the collective bargaining agreement covering the particular trade or craft under any circumstances.
- VIII. The employer is at liberty to employ and discharge for just cause whomsoever the employer sees fit.

ARTICLES OF AGREEMENT

ARTICLE I

Therefore, with the Preamble and Declaration of Principles as part of and fundamental to this Agreement, the parties hereto hereby agree that there shall be no lockout by any employer, or strikes, stoppage, or the abandonment of work either individually or collectively, by concerted or separate action by any union without arbitration of any jurisdictional dispute as hereinafter provided.

ARTICLE II

The parties hereto hereby agree that in the manner herein set forth, they and the parties whom they represent will submit to arbitration all jurisdictional disputes that may arise between them and any misunderstanding as to the meaning or intent of all, or any part, of this Agreement, and they further agree that work will go on undisturbed during such arbitration, and that the decision of the arbitrator shall be final and binding on the parties hereto as provided in Article VI.

ARTICLE III

Paragraph 1. Should a Union affiliated with the Council abandon its work without first submitting any jurisdictional dispute to arbitration as provided herein, or should any employees whom it represents individually or collectively, or by separate or concerted action, leave the work, the employer shall have the right to fill the places of such workers with workers who will agree to work for the employer, and the Union shall not have the right to strike, or abandon the work, because of the employment of such workers.

Paragraph 2. The Union shall have the right to take the employees whom it represents from the work for the purpose of collecting wages and fringe benefits due, but such matter shall immediately be referred to arbitration. Should there be a dispute as to the amount due, the matter shall be first referred to arbitration as herein set forth.

Paragraph 3. The parties recognize the importance of having all work performed in a satisfactory manner by competent craftsmen. Because the unions affiliated with the Council have through apprenticeship and other training programs consistently striven to create an adequate supply of such skilled workers, and because it is desirable that the unions continue to do so, the Association, for itself and for each employer whom it represents agrees, to the extent permitted by law, that it will contract or subcontract any work to be done at the site of the construction, alteration, painting, or repair of a building, structure, or other work, only with or to a contractor who is a party to a collective bargaining agreement with a union affiliated with the Council and, accordingly, is bound by all the terms and provisions of this Standard Agreement.

ARTICLE IV

The parties recognize the importance of having available and furnishing at all times during the life of this Agreement sufficient skilled workers, capable of performing the work of their trade, and to constantly endeavor to improve the ability of such workers and further to have in the making, through apprenticeship training, workers who can enter the trade properly equipped to perform the work, and to the extent possible, the parties agree to do everything within their power to cooperate in carrying out these purposes. Joint apprenticeship committees shall have the right to maintain schools for the training of apprentices registered under the terms of the particular collective bargaining agreement involved and such apprentices shall be considered skilled and qualified journeymen when adjudged competent by a committee composed of the members of the parties to the particular collective bargaining agreement involved. However, this article shall not be construed to disturb present systems wherein the labor organization which is a party to the particular collective bargaining agreement involved compels apprentices to attend trade school.

ARTICLE V

A Joint Conference Board is hereby created by agreement between the Association and the Council, which shall be binding upon the members and affiliates of each, and it is hereby agreed by the parties hereto, together with their members and affiliates, that they will recognize the authority of said Joint Conference Board and that its decisions shall be final and binding upon them as provided in Article VI. The administration of the Joint Conference Board shall be executed by the Secretary of the Board. All normal operating and all extraordinary expenses shall be borne equally.

ARTICLE VI

The Joint Conference Board shall be responsible for the administration of this Agreement. The primary concern of the Joint Conference Board shall be the adjustment of jurisdictional disputes by arbitrators selected by the Board. Decisions rendered by any arbitrator under this Agreement appointed by the Joint Conference Board relating to jurisdictional disputes shall be only for the specific job under consideration and shall become effective immediately and complied with by all parties. In rendering a decision, the Arbitrator shall determine:

- a) First whether a previous Agreement of Record or applicable agreement, including a disclaimer agreement, between the National or International Unions to the dispute governs.
- b) Only if the Arbitrator finds that the dispute is not covered by an appropriate or applicable Agreement of Record or agreement between the National or International Unions to the dispute, he shall then consider the established trade practice in the industry and prevailing practice in the locality. Where there is a

previous Decision of Record governing the case, the Arbitrator shall give equal weight to such Decision of Record, unless the prevailing practice in the locality in the past ten years favors one craft. In that case, the Arbitrator shall base his decision on the prevailing practice in the locality. Except, that if the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages or by the use of vertical agreements, the Arbitrator shall rely on the Decision of Record and established trade practice in the industry rather than the prevailing practice in the locality.

- c) In order to determine the established trade practice in the industry and prevailing practice in the locality, the Arbitrator may rely on applicable agreements between the Local Unions involved in the dispute, prior decisions of the Joint Conference Board for specific jobs, decisions of the National Plan and the National Labor Relations Board or other jurisdictional dispute decisions, along with any other relevant evidence or testimony presented by those participating in the hearing.
- d) Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the well being of the industry, the interests of the consumer or the past practices of the employer shall not be ignored.

Agreements of Record are those agreements between National and International Unions that have been "attested" by the predecessor of the National Plan and approved by the AFL-CIO Building and Construction Trades Department and are contained in the Green Book. Such Agreements of Record are binding on employers stipulated to the Plan for the Settlement or Jurisdictional Disputes in the Construction Industry (the "National Plan"), the National Plan's predecessor joint boards or stipulated to the Joint Conference Board. Agreements of Record are applicable only to the crafts signatory to such agreements. Decisions of Record are decisions by the National Arbitration Panel or its predecessors and recognized under the provisions of the Constitution of the AFL-CIO Building and Construction Trades Department and the National Plan. Decisions of Record are applicable to all crafts.

The Arbitrator shall set forth the basis for his decision and shall explain his findings regarding the applicability of the above criteria. If lower-ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the job in dispute. Such decisions of the Arbitrator shall be final and binding subject only to an appeal, if such an appeal is available under conditions determined by the Building and Construction Trades Department of the American Federation of Labor and Congress of Industrial Organizations under the National Plan or any successor plan for the settlement of jurisdictional disputes.

ARTICLE VII

This is an arbitration agreement and the intent of this agreement is that all unresolved jurisdictional disputes must be arbitrated under the authority of the Joint Conference Board and that the decisions, subject to the right of appeal provided in Article VI, shall be final and binding upon the parties hereto and upon their affiliates and the members of such affiliates, and that there shall be no abandonment of the work during such arbitration or in violation of the arbitration decision. The Joint Conference Board shall administer the neutral arbitration system of this agreement. Any party bound to this Agreement through a collective bargaining agreement with any Local Union affiliated with the Council shall be bound to this Agreement for all jurisdictional disputes that may arise between any Local Unions affiliated with the Council. Employers bound to this Agreement shall require that this Agreement be a part of all agreements with contractors or subcontractors covering work performed by any trade or craft affiliated with the Council. All parties to this Agreement release the Board from any liability arising from its action or inaction and covenant not to sue the Board. Any damages incurred by the Board for any breach of this covenant shall include, but are not limited to, the Board's costs, expenses and attorneys fees incurred as a result of said legal proceedings.

Paragraph 1 - The annual meeting of the Joint Conference Board shall be held in June, unless another date is agreed upon by the parties.

Paragraph 2 - The parties hereto shall designate an equal number of members who shall serve upon the Joint Conference Board. The members of the Board shall annually be certified by the Association and the Council in written communications addressed to the Board by the President and Secretary of the respective organizations. Each year the Joint Conference Board shall select a Chairman from among its members. The Joint Conference Board shall also select from among its members a Vice Chairman. The Board shall also select a Secretary. All members shall serve for one year or until their successors have been selected.

Paragraph 3 - At the annual meeting, the Association and Council shall each name at least five and up to ten impartial arbitrators.

Paragraph 4 - In the event the Chairman or Vice-Chairman is unable to serve by reason of resignation, death or otherwise, a successor may be selected for the remainder of the term by the party which made the original selection. Should a member of the Joint Conference Board be unable to serve, because of resignation, death or any other reason, the successor shall be selected by the Association or Council respectively in which such member holds membership.

Paragraph 5 - Should any member of the Board for any reason be unable to attend any meeting of the Board, the President of his respective organization shall be empowered to name a substitute for each absentee for that meeting.

Paragraph 6 - Meetings of the Board may be called at any time by the Chairman, Secretary or three members of the Board. Seventy-two hours written notice of such meeting must be given to each member of the Board.

Paragraph 7 - Twelve members of the Board, six from each of the parties, present at the executive session, shall be a quorum for the transaction of business. The Chairman, or Vice-Chairman, when presiding, shall not be counted for the purpose of determining a quorum. Whenever the number of members present from each party at the executive session are unequal, the party with the fewer members present shall be entitled to cast a total number of votes equal to the number of the present members of the other party with the additional votes of said party being cast in accordance with the vote of the majority of its members who are present.

Paragraph 8 - If it is brought to the attention of the Chairman that any member (other than the Chairman) is not impartial with respect to a particular matter before the Board, the Chairman may excuse such member from the executive session if the Chairman concludes that such member has a conflict of interest with respect to such matter.

Paragraph 9 - Should a jurisdictional dispute arise between the parties hereto, among or between any members or affiliates of the parties hereto, or among or between any members or affiliates of the parties hereto and some other body of employers or employees, the disposition of such dispute shall be as follows:

- a) The crafts involved shall meet on the jobsite or a mutually agreed location to resolve the jurisdictional dispute.
- b) If the said dispute is not settled it shall be submitted immediately in writing to the Secretary of the Joint Conference Board. Unless agreed to in writing (correspondence, email, etc.) by the trades involved in the dispute, the trades and contractors shall make themselves available to meet within 72 hours at a neutral site with representatives of the Chicago & Cook County Building & Construction Trades Council and the Construction Employers' Association to resolve this jurisdictional issue.
- c) Failure to meet within seventy-two (72) hours of receiving written notice or e-mail to the meetings contemplated in "a" or "b" above will automatically advance the case to the next level of adjudication.
- d) Should this jurisdictional issue be unresolved, the matter shall, within 72 hours not counting Saturday, Sunday and Holidays, hereafter, be referred to an Arbitrator for adjudication if requested in writing by any party. The Arbitrator shall hear the evidence and render a prompt decision within forty-eight (48 hours) of the conclusion of the hearing based on the criteria in Article VI. The arbitrator chosen shall be randomly selected based on availability from the list

submitted in Article VII Paragraph 3. The decision of the Arbitrator shall be subject to appeal only under the terms of Article VI. The written decision shall be final and binding upon all parties to the dispute and may be a short form decision. The fees and costs of the arbitrator shall be divided evenly between the contesting parties except that any party wishing a full opinion and decision beyond the short form decision shall bear the reasonable fees and costs of such full opinion.

- e) Should said dispute not be so referred by either or both of the parties, the Joint Conference Board may, upon its own initiative, or at the request of others interested, take up and decide such dispute, and its decision shall be final and binding upon the parties hereto and upon their members and affiliates as provided for in Article VI.

In either circumstance all of the parties are committed to a case until it is finalized, even if there is an appeal. However, in cases of jurisdictional or other disputes between a union and another union, which is a member of the same International Union, the matter in dispute shall be settled in the manner set forth by their International Constitution, but there shall be no abandonment of the work pending such settlement.

Paragraph 10 - All interested parties shall be entitled to make presentations to the Arbitrator. Any interested party present at the hearing, whether making a presentation or not, by such presence shall be deemed to accept the jurisdiction of the arbitrator and to agree to be bound by its decision and further agrees to be bound by the Standard Agreement, for that case only if not otherwise so bound.

Paragraph 11 - Upon approval of the Arbitrator other parties not directly involved in the dispute may be invited to be present during the presentation and discussion portions of an arbitration hearing. Attorneys shall not be permitted to attend or participate in any portion of a hearing.

Paragraph 12 -- At no time shall any party to a pending dispute unilaterally or independently contact the Arbitrator assigned to hear the case. All inquiries must be submitted to the Secretary of the Joint Conference Board.

Paragraph 13 - The Joint Conference Board may also serve as a board of arbitration in other disputes, including wages, but only when requested to do so by all parties involved in the particular dispute or controversy. It is not the intention of this Agreement that the Joint Conference Board shall take part in such disputes except by mutual consent of all parties involved.

ARTICLE VIII

Paragraph 1 - The duly authorized representatives of members of affiliates of either party hereto, if having in their possession proper credentials, shall be permitted to visit jobs

during working hours, to interview the contractor or the workers, but they shall in no way interfere with the progress of the work.

Paragraph 2 - The handling of tools, machinery and appliances necessary in the performance of the work covered by a particular collective bargaining agreement, shall be done by journeymen covered by such agreement and by helpers and apprentices in that trade, but similar tools, machinery and appliances used by other trades in the performance of their work shall be handled in accordance with the particular collective bargaining agreement of that trade.

Paragraph 3 - In the interest of the public economy and at the discretion of the employer or foreman, all small tasks covered by a particular collective bargaining agreement may be done by workers or laborers of other trades, if mechanics or laborers of this trade are not on the building or job, but same are not to be of longer duration than one-half hour in any one day. The Joint Conference Board may render a decision involving a composite crew.

Paragraph 4 - It is fundamental to the Standard Agreement that all members and affiliates of the parties to this Agreement be stipulated to the Standard Agreement and the Joint Conference Board. All current members of the Chicago and Cook County Building and Construction Trades Council, and their affiliates, by this Agreement are stipulated to the Standard Agreement and Joint Conference Board for the term of the current Standard Agreement. The area labor agreements of the members and affiliates of the parties setting forth language stipulating those parties to the Standard Agreement and Joint Conference Board shall be filed with the Secretary of the Joint Conference Board annually, at the time of the Joint Conference Board appointments. Current trade or craft agreements will prevail as interim agreements in the event labor negotiations are incomplete or in process at the time of the annual meeting.

Paragraph 5 - All members and affiliates of the parties with labor agreements containing language stipulating those parties to the Standard Agreement and Joint Conference Board shall remain stipulated for the term of the current Standard Agreement. Any members or affiliates of the parties who negotiate language stipulating the parties to the Standard Agreement and/or the Joint Conference Board in their area labor agreement shall remain stipulated for the term of the current Standard Agreement. Any Association that incorporates Standard Agreement and/or Joint Conference Board stipulation language into their collective bargaining agreement will automatically have representation on the Joint Conference Board.

Paragraph 6 - Only those crafts with stipulation language in their area labor agreements will be allowed to bring jurisdictional dispute cases to the Joint Conference Board. Those crafts without stipulation language in their area labor agreements will be allowed to participate if a jurisdictional dispute case is brought against their craft and will have the right to appeal any decision, if such an appeal is available, as provided in Article VI of this Agreement.

Paragraph 7 - This agreement applies only to work performed within Cook County, Illinois.

Paragraph 8 - As herein before provided in Article VII, decisions or awards as to jurisdictional claims and decisions determining whether or not said decisions or awards have been violated rendered by the Joint Conference Board shall be final, binding and conclusive on all the parties hereto, on all of their members and affiliates, and on all employers subject only to the right of appeal herein provided for in Article VI.

Paragraph 9 - To further implement the decision of the Joint Conference Board, it is agreed that any party hereto, any of their members or affiliates, and any employer may at any time file a Verified Complaint in writing with the Joint Conference Board alleging a violation of a decision or award previously made. The Board shall thereupon set a hearing, to be held within three days of receipt of the Verified Complaint with respect to the alleged violation, and shall notify all interested parties of the time and place thereof. An Arbitrator selected pursuant to Article VII, Paragraph 9(c) shall conduct a hearing at the time and place specified in its notice. All parties shall be given an opportunity to testify and to present documentary evidence relating to the subject matter of the hearing within forty-eight (48) hours after the conclusion thereof, the Arbitrator shall render a written decision in the matter and shall state whether or not there has been a violation of its prior decision or award. Copies of the decision shall be served, by certified mail or by personal service, upon all parties hereto.

Paragraph 10 - Should the Arbitrator determine that there has been a violation of the Board's prior decision or award, the Arbitrator shall order immediate compliance by the offending party or parties. The Arbitrator may take one or more of the following courses of action in order to enforce compliance with the Board's decision:

- a) The Arbitrator may assess liquidated damages not to exceed \$5,000 for each violation by individual members of, or employees represented by the parties hereto, and may assess liquidated damages not to exceed \$10,000 for each violation by either party hereto, or any of its officers or representatives. If a fine is rendered by the Arbitrator, it should be commensurate with the seriousness of the violation having a relationship to lost hours for the Unions and lost efficiency for the employer. Each of the parties hereto hereby agrees for itself, and its members, to pay to the other party within thirty days any sum, or sums, so assessed because of violations of a decision or award by itself, its officers, or representatives, or its member or members. Should either party to this agreement, or any of its members fail to pay the amount so assessed within thirty days of its assessment, the party or member so failing to pay shall be deprived of all the benefits of this agreement until such time as the matter is adjusted to the satisfaction of the Arbitrator.

- b) It may order cessation of all work by the employers and the employees on the job or project involved.

Paragraph 11 - All Notices under this Agreement shall be in writing and sent by the Administrator of the Joint Conference Board via facsimile or email. For all notifications to affiliates of the Chicago & Cook County Building and Construction Trades Council, the Administrator may rely up the facsimile numbers, addresses and email addresses in the current directory of the Council. For notifications to all contractors and subcontractors, the Administrator may rely on corporate information on the Illinois Secretary of State website or other appropriate databases. Original Notices of all Joint Conference Board decisions will be sent to each of the parties involved via certified mail. The notice provisions shall not include Saturday, Sunday or legal holidays.

Paragraph 12 - The following days shall be recognized as legal holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

Paragraph 13 - The Board shall have no authority to undertake any action to enforce its decision after a hearing beyond informing the affected parties of its decision. Rather, it shall be the responsibility of the prevailing party to seek appropriate enforcement of a decision, including findings, orders or awards of the Board determining non-compliance with a prior award or decision. The prevailing party in any enforcement proceeding shall be entitled to recover its costs and attorneys fees from the non-prevailing party. In the event the Board is made a party to, or is otherwise required to participate in any such enforcement proceeding for whatever reason, the non-prevailing party shall bear all costs, attorneys fees, and any other expenses incurred by the Board in those proceedings.

Paragraph 14 - In establishing the jurisdiction of the Joint Conference Board over all parties to the dispute, the primary responsibility for the judicial determination of the arbitrability of a dispute and the jurisdiction of the Joint Conference Board shall be borne by the party requesting the Board to hear the underlying jurisdictional dispute. If all of the parties to the dispute do not attend the arbitration hearing or otherwise agree in writing that the parties are stipulated to the Joint Conference Board and Standard Agreement, the affected party or parties may proceed at the Joint Conference Board even in the absence of one or more parties to the dispute. In such instances, the issue of jurisdiction is an additional item that must be determined in the first instance by the Arbitrator who shall set forth basis of his determination in his decision. The Joint Conference Board may participate in any proceedings seeking a declaration or determination that the underlying dispute is subject to the jurisdiction and process of the Joint Conference Board. In any such proceedings, the non-prevailing party and/or the party challenging the jurisdiction of the Joint Conference Board shall bear all the costs, expenses and attorneys fees incurred by the Board in establishing its jurisdiction. The provision of Paragraph 13 regarding obtaining attorney fees shall apply.

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Paragraph 15 - It is agreed by the parties hereto that this agreement shall remain in full force and effect until June 1, 2020 unless otherwise amended by agreement of parties.

IN WITNESS WHEREOF, the parties have caused this document to be executed at Chicago, Illinois this 28th day of May, 2015.

CONSTRUCTION EMPLOYERS'
ASSOCIATION

DocuSigned by:
Charles Usher, Sr.
AF477A8FA0084CD

BY Charles M. Usher

CHICAGO & COOK COUNTY
BUILDING & CONSTRUCTION
TRADES COUNCIL

DocuSigned by:
Tom Villanova
A3CD8D86A9D40E

BY Thomas Villanova

Contract No. _____

**CERTIFICATE OF COMPLIANCE
WITH MULTI-PROJECT LABOR AGREEMENT (MPLA)**

I _____ (name of Company) hereby acknowledge that I have read the Metropolitan Water Reclamation District of Greater Chicago's 2017 Multi Project Labor Agreement (MPLA). I certify that my company and all subcontractors are in compliance with the MPLA in that my company and all subcontractors agree to be bound by and operate under a current collective bargaining agreement with a union or labor organization affiliate with the AFL-CIO Building Trades Department and the Chicago and Cook County Building and Construction Trades Council, or their affiliates which have jurisdiction over the work to be performed pursuant to this Contract, (hereinafter referred to as a "participating trade group") for all applicable work.

My company is currently a signatory with the following trade groups:

(e.g. Operating Engineers 150) _____

If bidder is not currently signatory with a participating union or labor organization, complete one of the following:

____ The work to be performed by my company will occur at the company's facility and is exempt from the application of the MPLA. All other work for which the MPLA is applicable will be performed by signatories to the following participating trade groups: _____

(Identify all such participating unions or labor organizations. Attach a separate sheet if necessary).

____ I commit to comply with the MPLA by entering into a collective bargaining agreement with the following participating trade group(s): _____

(Identify all such participating unions or labor organizations. Attach a separate sheet if necessary).

Name of Company

By: _____
Signature of Authorized Officer

Attest: _____
Secretary

Dated: _____

Revised: October 2019

MPLA-CC-49

EXHIBIT 4

AFFIRMATIVE ACTION ORDINANCE, REVISED APPENDIX D

AFFIRMATIVE ACTION ORDINANCE

REVISED APPENDIX D

OF THE

METROPOLITAN WATER RECLAMATION DISTRICT

OF GREATER CHICAGO

December 31, 2022

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AFFIRMATIVE ACTION ORDINANCE
REVISED APPENDIX D
OF THE
METROPOLITAN WATER RECLAMATION DISTRICT
OF GREATER CHICAGO

Section 1. Declaration of Policy

It is the policy of the Metropolitan Water Reclamation District of Greater Chicago ("District") to ensure competitive business opportunities for minority and women-owned business enterprises in the award of and performance on District contracts; to prohibit discrimination on the basis of race, sex, color, disability, age, religion, national origin, sexual orientation, veteran status, or any other legally protected characteristic in the award of or participation on District contracts; and to abolish barriers to full participation on District contracts by all; and

The District, pursuant to its authority under 70 ILCS 2605/11.3, is committed to establishing procedures to implement this policy, as well as state and federal regulations, to assure the utilization of minority and women-owned business enterprises in a manner consistent with constitutional requirements; and

The District is committed to creating equal opportunities for minority and women-owned businesses to participate in the award and performance on District contracts.

Section 2. Findings

Whereas, the Supreme Court of the United States in *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989), enunciated certain standards that are necessary to maintain effective contracting affirmative action programs in compliance with constitutional requirements; and

Whereas, the District is committed to implementing its affirmative action program in conformance with the decision in *Croson* and its progeny; and

Whereas, in furtherance of this commitment, the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago ("Board of Commissioners") directed District employees and its outside consultant in 1989 to conduct an investigation into the scope of any discrimination in the award of and participation on District construction contracts, as well as in the construction industry in Metropolitan Chicago, the extent to which such discrimination or the effects thereof has denied and continues to deny minority and women's business enterprises equal opportunity to participate on District contracts and to recommend the appropriate affirmative action steps to be taken to eliminate any such discrimination and its continuing effects; and

Whereas, on March 15, 1990, the District adopted its Revised Appendix D, Notice of Requirements for Affirmative Action Program to Ensure Minority, Small, and Women's Business Participation ("Appendix D"), which was later amended on June 21, 2001; and

Whereas, in 2003, the United States District Court in *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725 (N.D. Ill. 2003) held that the evidence introduced at trial demonstrated that past and current discriminatory practices continue to place MBE and

WBE businesses at a competitive disadvantage in the award of governmental contracts and such practices have and continue to impede the growth and success of MBEs and WBEs; and

Whereas, a 2004 study of the Metropolitan Chicago Construction Industry by Timothy Bates, Professor at Wayne State University, concluded that the evidence that African American, Hispanic, and women-owned businesses have been, and continue to be disadvantaged in the construction industry is strong, has remained consistent, and that compelling evidence indicates that African American, Hispanic, and women-owned businesses face barriers in the Metropolitan Chicago construction industry greater than those faced by white males; and

Whereas, a 2005 study of the Metropolitan Chicago construction industry by David Blanchflower, Professor of Economics at Dartmouth College, determined that discrimination against Asian-owned businesses existed in the business community in areas of business financing and construction wages and that this, together with evidence of individual discrimination against Asian-owned construction companies, leads to the conclusion that discrimination against Asian-owned businesses continues to exist in the Metropolitan Chicago construction industry; and

Whereas, in 2005, the United States District Court held in *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868 (N.D. Ill. Sept. 8, 2005) that there is strong evidence of the effects of past and current discrimination against MBEs and WBEs in the construction industry in the Chicago area. The trial court's decision was affirmed in *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007); and

Whereas, a 2006 Cook County, Illinois report entitled, "Review of Compelling Evidence of Discrimination Against Minority-and Women-Owned Business Enterprise in the Chicago Area Construction Industry and Recommendations for Narrowly Tailored Remedies for Cook County, Illinois", concluded that there is extensive evidence of discrimination against MBEs and WBEs in the Chicago area construction marketplace, and the participation of MBEs and WBEs in the County's construction Prime Contracts and Subcontracts is below the availability of such businesses; and

Whereas, in 2006, the District commissioned a report on discrimination of and barriers to construction opportunities in the Chicago area market for minority and women-owned businesses and recommendations for District actions to reduce such issues, which found continuing disparities in the Chicago area construction market; and

Whereas, in 2010, Cook County commissioned a new report, entitled "The Status of Minority and Women-Owned Business Enterprises Relevant to Construction Activity In and Around Cook County, Illinois", which found that MBEs and WBEs were not utilized in all industries in proportion to their availability; and

Whereas, in 2010, the United States Department of Justice produced a report to Congress, entitled "Compelling Interest for Race- and Gender-Conscious Federal Contracting Programs: An Update to the May 23, 1996 Review of Barriers to Minority- and Women-Owned Businesses," that updated the original basis for the United States Department of Transportation's DBE program and concluded that discriminatory barriers continue to impede the ability of MBEs and WBEs to compete with other businesses on a fair and equal footing in government contracting markets, including in the construction industry; and

Whereas, in 2012, the District commissioned a report on barriers to construction opportunities in the Chicago area market and recommendations for District efforts to reduce such barriers, which found continuing disparities in the Chicago area construction market; and

Whereas, in 2014, the District commissioned a Disparity Study, conducted by Colette Holt & Associates, on barriers to equal opportunities in the construction industry in the District's geographic and industry market areas and recommendations for District efforts to reduce such barriers, which found continuing disparities in the District's market area; and

Whereas, in 2015, the trial court in *Midwest Fence, Corp. v. U.S. Department of Transportation et al*, 2015 WL 139676 (N.D. Ill. March 24, 2015) held that discrimination continues to impede full and fair opportunities for disadvantaged business enterprises in the Illinois construction industry and this judgment was affirmed in 2016 by the Seventh Circuit Court of Appeals at 840 F.3d. 932; and

Whereas, in 2021, the District again commissioned a Disparity Study, conducted by Colette Holt & Associates, which likewise found that there continues to be barriers to equal opportunities for construction firms owned by minorities and women to compete for District contracts, both as Prime Contractors and Subcontractors; and

Whereas, based upon the 2021 Disparity Study, the District has determined that it has a compelling interest in continuing to implement narrowly tailored remedies to redress discrimination against minority and women-owned businesses in its market such that it will not function as a passive participant in the market failure of discrimination; and

Whereas, the Affirmative Action Program, adopted by the District on July 20, 1978 and amended from time to time, is hereby modified to further continue to ameliorate the effects of racial and gender discrimination in the marketplace; and

Whereas, the remedies adopted herein by the District will not overly burden non-MBE and non-WBE businesses in the award of District contracts; and

Whereas, the Board of Commissioners will periodically review minority and women-owned participation in contracts awarded by the District to ensure that the District continues to have a compelling interest in remedying discrimination and that the measures adopted herein remain narrowly tailored to accomplish that objective;

Now, therefore, the District's Board of Commissioners hereby adopts this Revised Appendix D:

Section 3. Purpose and Intent

The purpose and intent of this Affirmative Action Ordinance Revised Appendix D ("Revised Appendix D") is to mitigate the present effects of discrimination on the basis of race, ethnicity, or sex in opportunities to participate on the District's contracts as either a Prime Contractor or a Subcontractor and to achieve equitable utilization of minority and women-owned business enterprises on District contracts.

Section 4. Coverage

The following provisions, together with relevant forms, will apply and be appended to every Construction Contract awarded by the District where the total approved expenditure is in

excess of one hundred thousand dollars (\$100,000.00), except contracts approved by the Board of Commissioners pursuant to Sections 11.4 and 11.5 of the District's Purchasing Act (70 ILCS 2605).

Section 5. Definitions

The meaning of these terms in this Revised Appendix D are as follows:

- (a) "Administrator" means the District's Affirmative Action Program Administrator.
- (b) "Affiliate" of an individual or entity means an individual or entity that directly or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the individual or entity. In determining affiliation, the District will consider all appropriate factors, including common ownership, common management, and contractual relationships.
- (c) "Annual Aspirational Goals" means the targeted levels established by the District for the annual aggregate participation of MBEs and WBEs on District Construction Contracts.
- (d) "Bidder" means an individual, a business enterprise, including a sole proprietorship, a partnership, a corporation, a not-for-profit corporation, a limited liability company, or any other entity which has submitted a bid on a District contract.
- (e) "Books and Records" include, but are not limited to, payroll records, bank statements, bank reconciliations, accounts payable documents, account receivable documents, ledgers, all financial software, and all employer business tax returns.
- (f) "Calendar Days" in computing any period of time described herein, the day from which the period begins to run will not be counted (*e.g.*, if a notice is issued on a Monday, the countdown of days starts on Tuesday). When the last day of the period is a Saturday or Sunday, the period does not extend to the next day. Only in instances where District offices are closed in observance of a federal holiday, will the period extend to the next day.
- (g) "Construction Contract" means any District contract, agreement, or amendment thereto, providing for a total expenditure in excess of one hundred thousand dollars (\$100,000.00) for the construction, demolition, replacement, major repair or renovation, and maintenance of real property and improvement thereon or sludge hauling, and any other construction related contract which the District deems appropriate to be subject to this Revised Appendix D.
- (h) "Commercially Useful Function" means responsibility for the execution of a distinct element of the work of the contract, which is carried out by performing, managing, and supervising the work involved, or fulfilling responsibilities.
- (i) "Contract Goals" means the numerical percentage goals for MBE or WBE participation to be applied to an eligible District Construction Contract subject to this Revised Appendix D for the participation of MBEs and WBEs based upon the scope of work of the contract, the availability of MBEs and WBEs to meet the goals, and the District's progress towards meeting its annual MBE and WBE goals.
- (j) "Dealer" means a business that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business.

To be a dealer, the business must engage in, as its principal business, and under its own name, the purchase and sale of the products in question. A business that operates as a dealer in bulk items such as steel, cement, gravel, stone, and petroleum products need not keep such products in stock, if it owns or operates distribution equipment. Brokers and packagers do not meet the definition of dealers.

(k) "Director" means the District's Director of Procurement and Materials Management, formerly known as the Purchasing Agent.

(l) "Economically Disadvantaged" means an individual with a Personal Net Worth of less than \$2,000,000.00, indexed annually for the Chicago Metro Area Consumer Price Index, published by the United States Department of Labor, Bureau of Labor Standards, beginning January 2008.

(m) "Executive Director" means the chief administrative officer of the District, formerly known as the General Superintendent.

(n) "Expertise" means demonstrated knowledge, skills, or ability to perform in the field of endeavor in which certification is sought by the business as defined by normal industry practices, including licensure, where required.

(o) "Good Faith Efforts" means honest, fair, and commercially reasonable actions undertaken by a Prime Contractor to meet the MBE or WBE Contract Goal, which by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the Contract Goals.

(p) "Hearing Officer" is an attorney licensed to practice in the State of Illinois and appointed by the Board of Commissioners to conduct hearings regarding a Prime Contractor's or Subcontractor's compliance or non-compliance with this Revised Appendix D.

(q) "Joint Venture" means an association of two or more individuals, or any combination of types of business enterprises and individuals numbering two or more, proposing to function as a single for profit business enterprise, in which each Joint Venture partner contributes property, capital, efforts, skill, and knowledge, and in which the certified business is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the Joint Venture are equal to its ownership interest. Joint Ventures must have an agreement in writing specifying the terms and conditions of the relationships between the partners, their relationship, and detailing their respective responsibilities on the contract.

(r) "Job Order Contract" or "JOC" means a business, fixed price, indefinite quantity contract designed to complete a large number of construction projects quickly.

(s) "Local Business" means a business located within the District's geographic market area as established by the 2021 Disparity Study, namely the counties of Cook, DuPage, Kane, Lake, McHenry, or Will, in the State of Illinois.

(t) "Manufacturer" means a business that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Bidder. Brokers and packagers do not meet the definition of Manufacturer.

(u) "Minority-owned Business Enterprise" or "MBE" means a local small business entity, including a sole proprietorship, partnership, corporation, limited liability company, Joint Venture, or any other business or professional entity, which is at least fifty-one (51) percent owned by one or more Socially and Economically Disadvantaged individuals who are members of one or more minority groups, or, in the case of a publicly held corporation, at least fifty-one (51) percent of the stock of which is owned by one or more members of one or more minority groups, and whose management, policies, major decisions, and daily business operations are controlled by one or more Minority Individuals.

(v) "Minority Individual" means a natural person who is a citizen of the United States or lawful permanent resident of the United States and one of the following:

(i) African American – An individual having origins in any of the Black racial groups of Africa and is regarded as such by the African American community of which the individual claims to be a part.

(ii) Hispanic American – An individual having origins from Mexico, Puerto Rico, Cuba, and South or Central America and is regarded as such by the Hispanic community of which the individual claims to be a part, regardless of race.

(iii) Asian American – An individual having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands or the Northern Marianas, and is regarded as such by the Asian American community of which the individual claims to be a part.

(iv) Native American – An individual having origins in any of the original peoples of North America and who is recognized through tribal certification as a Native American by either a tribe or a tribal organization recognized by the government of the United States of America.

(v) Individual members of other groups whose participation is required under state or federal regulations or by court order.

(vi) Individual members of other groups found by the District to be Socially Disadvantaged by having suffered racial or ethnic prejudice or cultural bias within American society, without regard to individual qualities, resulting in decreased opportunities to compete in the District's marketplace or to do business with the District.

(w) "Personal Net Worth" means the net value of the assets of an individual after total liabilities are deducted. An individual's Personal Net Worth does not include the individual's ownership interest in a business entity seeking to do business with the District or other certified MBE or WBE, provided that the other business is certified by a governmental agency that meets the District's eligibility criteria or the individual's equity in his or her primary place or residence. As to assets held jointly with his or her spouse or recognized civil partner, an individual's Personal Net Worth includes only that individual's share of such assets. An individual's net worth also includes the present value of the individual's interest in any vested pension plans, individual retirement accounts, or other

retirement savings or investment programs, less the tax and interest penalties that would be imposed if the asset were distributed at the present time.

(x) "Prime Contractor" means a contractor that is awarded a District contract and is responsible for the completion of the entire District contract, including purchasing all materials, hiring and paying Subcontractors, and coordinating all the work.

(y) "Program" means the program provisions established by this Revised Appendix D.

(z) "Small Business Enterprise" means a small business as defined by the United States Small Business Administration (SBA), pursuant to the business size standard found in 13 CFR Part 121, that is relevant to the scope of work the business seeks to perform on District contracts. A business is not an eligible SBE in any calendar fiscal year in which its gross receipts, averaged over the business' previous five (5) fiscal years, exceed the size standards of 13 CFR Part 121.

(aa) "Socially Disadvantaged" means a Minority Individual or woman who has been subjected to racial, ethnic, or gender prejudice or cultural bias within American society because of his or her identity as a member of a group and without regard to individual qualities. Social Disadvantage must stem from circumstances beyond the individual's control. A Socially Disadvantaged individual must be a citizen or lawfully admitted permanent resident of the United States.

(bb) "Subcontractor" means a party that enters into a subcontract agreement with a District Prime Contractor to perform work or provide materials on a District project.

(cc) "Tier" refers to the relationship of a Subcontractor to the Prime Contractor. A Subcontractor having a contract with the Prime Contractor, including a material supplier to the Prime Contractor, is considered a "first-tier Subcontractor," while a Subcontractor's Subcontractor is a "second-tier Subcontractor", and so forth. The Subcontractor is subject to the same duties, obligations, and sanctions as the Prime Contractor under this Revised Appendix D.

(dd) "Utilization Plan" means the plan, in the form specified by the District, which must be submitted by a Bidder listing the MBEs and WBEs that the Bidder intends to use in the performance of a contract, the scope of work, and the dollar values or the percentages of the work to be performed.

(ee) "Vendor List" means the District's list of businesses that are certified as minority-owned or women-owned by the City of Chicago, the County of Cook, the State of Illinois, the Women's Business Development Center, or the Chicago Minority Business Development Council, or as a Disadvantaged Business Enterprise by the Illinois Unified Certification Program, or as a Small Disadvantaged Business by the United States Small Business Administration.

(ff) "Women-owned Business Enterprise" or "WBE" means a local small business entity which is at least fifty-one (51) percent owned by one or more Socially and Economically Disadvantaged individuals who are women, or in the case of a publicly held corporation, fifty-one (51) percent of the stock of which is owned by one or more women, and whose management and daily business operations are controlled by one or more women.

Determination of whether a business is at least fifty-one (51) percent owned by a woman or women will be made without regard to community property laws.

Section 6. Non-Discrimination and Affirmative Action Clause

As a prerequisite to selection, a Prime Contractor must agree in its bid proposal for a Construction Contract subject to this Revised Appendix D to the following commitments:

- (a) It will not discriminate on the basis of race, sex, color, disability, age, religion, national origin, sexual orientation, veteran status, or any other legally protected characteristic in the bid solicitation for or purchase of goods in the performance of its contract.
- (b) It will actively solicit bids for the purchase or subcontracting of goods or services from qualified MBEs and WBEs.
- (c) It will undertake Good Faith Efforts in accordance with the criteria established in this Revised Appendix D to ensure that qualified MBEs and WBEs are utilized in the performance of the Construction Contract and share in the total dollar value of the contract in accordance with each of the applicable Contract Goals established by the District for the participation of qualified MBEs and WBEs.
- (d) It will require its Subcontractors at all Tiers to make similar Good Faith Efforts to utilize qualified MBEs and WBEs.
- (e) It will maintain records and furnish to the District all requisite information and reports for monitoring of compliance with this Revised Appendix D.
- (f) It will designate an individual to act as an affirmative action coordinator on its behalf to facilitate the review of all concerns related to the participation of MBEs and WBEs.

Section 7. Race and Gender-Neutral Measures to Ensure Equal Opportunities for All Prime Contractors and Subcontractors

The District will develop and utilize measures to encourage and facilitate the participation of all businesses engaged in District construction contracting activities. These measures will include but are not limited to:

- (a) Unbundling by dividing large dollar value contracts into smaller dollar value contracts to facilitate the participation of MBEs and WBEs as Prime Contractors.
- (b) Arranging solicitation times for the presentations of bids, specifications, and delivery schedules to facilitate the participation of interested Prime Contractors and Subcontractors.
- (c) Providing timely information on contracting procedures, bid preparation, and specific contracting opportunities, including through an electronic system and social media.
- (d) Assisting MBEs and WBEs with training seminars on the technical aspects of preparing a bid for a District contract or otherwise participating on District Contracts.

(e) Assisting businesses in overcoming barriers such as difficulty in obtaining financing and support for business development such as accounting, bid estimation, safety requirements, and quality control.

(f) Prohibiting Prime Contractors from denying a subcontract to a MBE or WBE solely on the basis of that businesses inability to obtain the required performance bond.

(g) Limiting the amount of insurance coverage required by a Prime Contractor for a subcontract to only that which is required for the portion of work to be performed by the Subcontractor.

(h) Holding pre-bid conferences to explain the contract and to encourage Bidders to contact all available businesses about opportunities to perform as Subcontractors. The pre-bid conferences will be a mandatory requirement on all District contracts where this Revised Appendix D is applicable.

(i) Adopting prompt payment procedures, including but not limited to, requiring that Prime Contractors promptly pay Subcontractors in compliance with Section 9 of the Local Government Prompt Payment Act, 50 ILCS 505/9, and investigating complaints or charges of excessive delay in payments.

(j) Reviewing retainage, bonding, and insurance requirements to eliminate unnecessary barriers to contracting with the District.

(k) Collecting information from Prime Contractors on District Construction Contracts which detail the bids received from all Subcontractors and the expenditures to Subcontractors on District Construction Contracts.

(l) Developing a separate SBE program that is race and gender neutral which designates specific small dollar value contracts for bid only by certified SBE businesses.

(m) Maintaining information on all businesses bidding on District contracts as both Prime Contractors and Subcontractors.

(n) At the discretion of the Board of Commissioners, awarding a representative sample of District contracts without Contract Goals to determine MBE and WBE utilization in the absence of Contract Goals.

(o) Referring complaints of discrimination against MBEs and WBEs to the appropriate authority for investigation and resolution.

Section 8. Support and Outreach

To provide optimal support to MBEs and WBEs desiring to participate on District contracts, the Administrator will facilitate support and outreach, which may be in-person and/or virtual as conditions permit, and may include the following:

- (a) Meeting with business organizations to engage in discussions regarding difficulties experienced by their members on District contracts and effective steps to minimize those difficulties.
- (b) Meeting with assist agencies and member businesses interested in working on District contracts to discuss upcoming opportunities.
- (c) Meeting with new vendors to provide information regarding completion of the District's vendor application and bid documents.
- (d) Meeting with Prime Contractors to collect feedback regarding their experiences under this Revised Appendix D.
- (e) Participation in mandatory pre-bid conferences, as applicable.
- (f) Hosting various seminars and support endeavors as the Administrator deems necessary for MBEs and WBEs to provide information on topics of interest, including financing, bonding, insurance, certification, bid estimation, safety requirements, and quality control.

Section 9. District Roles and Responsibilities

The District is responsible for promoting, supporting, and assisting in creating awareness of the Program such that it aides the Administrator in the implementation of the Annual Aspirational Goals, Contract Goals, and objectives of the Program. To reduce barriers to MBEs and WBEs participation on District contracts, all departments requesting bids, proposals, or any other solicitation governed by this Revised Appendix D will:

- (a) Provide notification of anticipated solicitations including the following information: the scope of work, experience required, insurance requirements, budget, schedule, bid specifications, and any other relevant information no later than fourteen (14) calendar days prior to the procurement announcement.
- (b) Evaluate anticipated solicitations to unbundle items or services to permit offers on quantities or scope of work less than the total requirement or the performance of discreet portions of the project, where feasible.
- (c) At least fourteen (14) calendar days before a solicitation will be advertised, forward a copy of the advertisement to the Administrator to ensure appropriate Program language has been included.
- (d) Ensure that all applicable provisions of the Program are included in bid specifications/proposals and contracts.
- (e) Monitor contracts to ensure compliance with the Program and provide notification to the Administrator in instances where problems with compliance arise.
- (f) Assist in the compilation of contract data for MBE and WBE availability and utilization.

(g) Provide the Administrator with a copy of, or independent electronic access to, the necessary information for each contract including, but not limited to, the contract value, pre-bid/pre-proposal sign in sheets, the bid or proposal results, any contract modifications, and an executed copy of the agreement.

(h) Notify the Administrator no later than ten (10) calendar days prior to any key post-award contract meetings or issues that could affect the Prime Contractor's ability to achieve the MBE or WBE commitment, such as contract kickoff meetings, monthly meetings, or meetings to address contract performance issues affecting MBE and WBE commitments.

(i) Require that each Prime Contractor submit to the Administrator, as part of its pay request process, the required Program information in the format required to ensure an accurate accounting of MBE and WBE participation.

(j) Support the Administrator by ensuring that Prime Contractors provide all necessary documents and information to close out the contract that provides a final accounting for MBE and WBE participation on the contract.

(k) Advertise contract opportunities via the District's website, and other avenues in consultation with the Administrator, where appropriate, to maximize MBE and WBE participation.

(l) Develop and advertise forecasts of upcoming procurement opportunities, including on an annual basis.

Section 10. Certification Eligibility

(a) The District is a self-certifying agency. In addition to issuing certifications, the District will accept certifications from the City of Chicago, Cook County, and other governmental agencies approved by the Administrator, issued within the last two (2) years of submittal. The District will verify a business' certification to ensure that the business meets the requirements of this Revised Appendix D. Any business that has been previously certified by the City of Chicago, Cook County, or another Administrator approved governmental agency shall be able to participate in an abbreviated verification process. Details regarding the abbreviated process will be maintained on the District's website.

(b) The verification permitted in Subsection (a) may take place in advance of the bid process or during the bid process. The District will maintain an online list of verified businesses.

(c) Only businesses that meet the criteria for certification as a MBE or WBE may be eligible for credit towards meeting Contract Goals. The business applying for District certification has the burden of production and persuasion by a preponderance of the evidence at all stages of the certification process.

(d) Only a business owned by a Socially and Economically Disadvantaged individual is eligible to participate in the Program.

(i) The business' ownership by a Socially and Economically Disadvantaged individual must be real, substantial, and continuing, going beyond *pro forma* ownership of the business as reflected in ownership documents. The owner must enjoy the customary incidents of ownership and share in the risks and profits commensurate with that ownership interest.

(ii) The contributions of capital or Expertise by the Socially and Economically Disadvantaged owner to acquire the ownership interest must be real and substantial. If Expertise is relied upon as part of a Socially and Economically Disadvantaged owner's contribution to acquire ownership, the Expertise must be of the requisite quality generally recognized in a specialized field, in areas critical to the business' operations, indispensable to the business' potential success, specific to the type of work the business performs, and documented in the business' records. The individual whose Expertise is relied upon must have a commensurate financial investment in the business.

(e) Only a business that is managed and controlled by a Socially and Economically Disadvantaged individual may be certified as a MBE or WBE.

(i) A business must not be subject to any formal or informal restrictions that limit the customary discretion of the Socially and Economically Disadvantaged owner. There can be no restrictions through corporate charter provisions, by-laws, contracts, or any other formal or informal devices that prevent the Socially and Economically Disadvantaged owner, without the cooperation or vote of any non-Socially and Economically Disadvantaged individual, from making any business decision, including making obligations or dispersing of funds.

(ii) The Socially and Economically Disadvantaged owner must possess the power to direct or cause the direction of the management and policies of the business and to make day-to-day as well as long term decisions on management, policy, operations, and work.

(iii) The Socially and Economically Disadvantaged owner may delegate various areas of the management or daily operations of the business to individuals who are not Socially and Economically Disadvantaged. Such delegations of authority must be revocable, and the Socially and Economically Disadvantaged owner must retain the power to hire and fire any such individual. The Socially and Economically Disadvantaged owner must exercise control over the business' operations, work, management, and policy.

(iv) The Socially and Economically Disadvantaged owner must have an overall understanding of managerial and technical competence, experience, and Expertise, directly related to the business' operations and work. The Socially and Economically Disadvantaged owner must have the ability to intelligently and critically evaluate information presented by other participants in the business'

activities and to make independent decisions concerning the business' daily operations, work, management, and policymaking.

(v) If federal, state, or local laws, regulations, statutes, or District ordinance, or other legal regulations require the owner to have a particular license or other credential to own or control the business, then the Socially and Economically Disadvantaged owner must possess the required license or credential. If federal, state, or local laws, regulations, statutes, or District ordinance, or other legal regulations does not require that the Socially and Economically Disadvantaged owner possess the license or credential, and the Socially and Economically Disadvantaged owner lacks such license or credential, this information will be a factor, but is not dispositive, in determining whether the Socially and Economically Disadvantaged owner actually controls the business.

(vi) A Socially and Economically Disadvantaged owner cannot engage in outside employment or other business interests that conflict with the management of the business or prevents them from devoting sufficient time and attention to the affairs of the business, including the management and control of the business' day-to-day operations.

(f) Only an independent business may be certified as a MBE or WBE. An independent business is one whose viability does not depend on its relationship with another business. Recognition of an applicant as a separate entity for tax or corporate purposes is not sufficient to demonstrate that a business is independent. In determining whether an applicant is an independent business, the Administrator will:

(i) Evaluate relationships with non-certified businesses in such areas as personnel, facilities, equipment, financial and/or bonding support, and other resources.

(ii) Consider whether present or recent employer/employee relationships between the Socially and Economically Disadvantaged owner of the applicant for MBE or WBE certification and non-certified businesses or individuals thereby associated compromise the applicant's independence.

(iii) Examine the applicant's relationships with non-certified businesses to determine whether a pattern of exclusive or primary dealings with non-certified businesses compromises the applicant's independence.

(iv) Consider the consistency of relationships between the applicant and non-certified businesses with normal industry practice.

(g) All documentation submitted by an applicant will remain in the custody of the District pursuant to Local Records Act, 50 ILCS 205, whether or not the certification is approved.

(h) If it is determined by the Administrator that an applicant knowingly, willingly, and intentionally submitted false or misleading information during the verification process, the applicant will be referred to the appropriate law enforcement agency for investigation and prosecution, where applicable.

(i) An applicant will be certified only for the specific types of work in which the Socially and Economically Disadvantaged owner for the MBEs and/or WBEs has the ability and Expertise to manage and control the business' operations and work.

(j) An applicant will be certified only in the specific category for which they are applying. A business that is both a MBE and WBE will not automatically be certified as both if the application is submitted only in regards to one category.

(k) The District will certify the eligibility of Joint Ventures involving MBEs and WBEs and non-certified businesses for credit towards a Contract Goal.

(l) A business found to be ineligible may not apply for certification for two (2) years after the effective date of the final decision.

(m) The certification status of all MBEs and WBEs will be reviewed every two (2) years by the Administrator. Failure of a business to seek recertification by filing the necessary documentation with the Administrator as required will result in decertification.

(n) It is the responsibility of the certified business to notify the Administrator of any change in its circumstances affecting its continued eligibility, including change in ownership and licenses held by the business. Failure to do so will result in the business' decertification.

(o) The Administrator will decertify a business that does not continuously meet the eligibility criteria.

(p) Decertification by another agency will create a *prima facie* case for decertification by the District. The challenged business will have the burden of proving by a preponderance of the evidence that its District certification should be maintained.

Section 11. Appeals

A business that has been denied certification or recertification, or that has been decertified by the Administrator may protest the denial or decertification by filing a written appeal with the Executive Director. The appeal must meet the following criteria:

(a) **Timeliness of appeals.** The appeal must be received by the Executive Director within ten (10) calendar days of the date of the letter denying certification, recertification, or decertifying. The appeal must be received no later than 4:30 p.m. central time zone on the tenth (10) calendar day. Any appeal received after this time will not be considered timely and will be automatically denied.

(b) **Form of appeals.** Appeals may be a type-written hardcopy document delivered to the District or may be attached to electronic mail sent directly to the Executive Director no later than 4:30 p.m. If the appeal is a hard-copy document, it must be addressed to the Executive Director and delivered to 100 E. Erie no later than 4:30 p.m.

(c) **Content of appeals.** The appeal must clearly articulate the basis on which it is being made and consist only of a letter clearly explaining why the business believes that the

Administrator's decision should not be upheld. No new documents may be submitted for the Executive Director's consideration. Only documents already in the possession of the Administrator will be considered in the appeal to the Executive Director.

(d) **Decision on appeals.** The Executive Director will carefully review all documents including the written request for appeal and will render a decision within thirty (30) calendar days of receipt of a timely appeal. The Executive Director's decision will be the final decision on the matter and is not subject to appeal or review.

(e) **Denial of appeals.** A business found to be ineligible for certification may not reapply for certification for two (2) years after the date of the final decision issued by the Executive Director.

Section 12. Schedule of Goals for Minority and Women-Owned Business Enterprise Utilization

In fulfillment of this policy to provide MBEs and WBEs full and equitable opportunities to participate on District contracts as both Prime Contractors and Subcontractors, the District will establish Annual Aspirational Goals for MBE and WBE participation, based on the availability of MBEs and WBEs in the District's geographic and procurement market area as established by the 2021 Disparity Study.

Section 13. Contract Goals

(a) The Administrator, based upon the information provided by the User Department, will establish Contract Goals for Construction Contracts based upon the availability of at least three (3) MBEs and three (3) WBEs registered on the District's Vendor List to perform the anticipated scope of work on the entire contract and the District's utilization of MBEs and WBEs to date.

(b) Where a substantial portion of the total Construction Contract cost is for the purchase of equipment, the Administrator may designate goals for only that portion of the contract relating to construction work and related supplies or modify the limitations on the credit for MBE and WBE suppliers.

(c) The Contract Goals will be designated in the contract documents.

(d) All contracts on which goals are placed will have goals that are narrowly tailored to the type of work being performed under the contract.

Section 14. Counting MBE and WBE Participation Towards Contract Goals

(a) A Bidder may achieve the Contract Goals by its status as a MBE or WBE, by entering into a Joint Venture with one or more MBEs and WBEs, by first-tier subcontracting a portion of the contract to one or more MBEs and WBEs, by direct purchase of materials or services from one or more MBEs and WBEs, or by any combination of the above.

(b) If a business is certified as both a MBE and a WBE, the Bidder may count the business' participation either toward the achievement of its MBE or WBE Contract Goal, but not

both. Participation by a business certified as both an MBE and a WBE cannot be split between the MBE and the WBE Contract Goal.

(c) When a MBE or WBE participates on a contract, the District will count only the value of the work actually performed by the MBE or WBE towards the Contract Goal.

(d) A Prime Contractor may count the entire amount of that portion of a contract that is performed by MBEs or WBEs own forces, including the cost of supplies and materials obtained and installed by the MBE or WBE for the work on the contract, and supplies purchased or equipment leased by the MBE or WBE used to directly perform the work on the contract, except supplies and equipment the MBE or WBE purchases or leases from the Prime Contractor or the Prime Contractor's Affiliate.

(e) Where a Bidder or first-tier Subcontractor engages in a Joint Venture to meet the Contract Goal, the Administrator will review the profits and losses, initial capital investment, actual participation of the Joint Venture in the performance of the contract with its own forces and for which it is separately at risk, and other pertinent factors of the Joint Venture, which must be fully disclosed and documented in the Utilization Plan in the same manner as for other types of participation, to determine the degree of MBE or WBE participation that will be credited towards the Contract Goal. The Joint Venture's Utilization Plan must evidence how it will meet the Contract Goal or document the Bidder's Good Faith Efforts to do so. The Administrator has the authority to review all records pertaining to Joint Venture agreements before and after the award of a contract in order to assess compliance with this Revised Appendix D. The MBE or WBE Joint Venture partner must have a history of proven Expertise in performance of a specific area of work and will not be approved for performing only general management of the Joint Venture. The specific work activities for which the MBE or WBE Joint Venture partner will be responsible and the assigned individuals must be clearly designated in the Joint Venture agreement. The Joint Venture must submit to the Administrator quarterly work plans, including scheduling dates of the tasks. The Administrator must approve the quarterly plans for the MBE or WBE Joint Venture partner's participation to be credited towards the Contract Goals.

(f) Only the participation of MBEs or WBEs that will perform as first-tier Subcontractors will be counted towards meeting the Contract Goals.

(g) Only expenditures to a MBE or WBE that is performing a Commercially Useful Function will be counted towards the Contract Goals.

(i) A business is considered to perform a Commercially Useful Function when it is responsible for execution of a distinct element of the work of a contract and carries out its responsibilities by actually performing; managing, and supervising the work involved. The business must pay all costs associated with personnel, materials, and equipment. The business must be formally and directly responsible for the employment, supervision and payment of its workforce, must own and /or lease equipment, and must be responsible for negotiating price, determining quality and quantity and paying for and ordering materials used. The business cannot share employees with the Prime Contractor or its Affiliates. No payments for use of equipment or materials by the business can be made through deductions by the

Prime Contractor. No family members who own related businesses are allowed to lease, loan, or provide equipment, employees, or materials to the business.

(ii) A business does not perform a Commercially Useful Function if its role is limited to that of an extra participant in a transaction through which funds are passed to obtain the appearance of MBE or WBE participation. The Prime Contractor is responsible for ensuring that the business is performing a Commercially Useful Function.

(iii) The District will evaluate the amount of work subcontracted, industry practices, and whether the amount the MBE or WBE is to be paid under the contract is commensurate with the work it is actually performing, along with other relevant factors.

(iv) If a business subcontracts a greater portion of the work of a contract than would be expected based on normal industry practice, it is presumed not to perform a Commercially Useful Function. When a business is presumed not to be performing a Commercially Useful Function, the business may present evidence to the Administrator to rebut this presumption. If no rebuttal is presented, then the presumption will stand.

(h) Credit towards the Contract Goals will be allowed only for those direct services performed or materials supplied by MBEs or WBEs or first-tier Subcontractor MBEs or WBEs. No less than eighty-five (85) percent of their work must be performed with their own forces, through the use of its own management and supervision, employees, and equipment. If industry standards and practices differ, the business must furnish supporting documentation to rebut this presumption to the Administrator.

(i) Prime Contractors are prohibited from allocating MBE and WBE Subcontract work to items identified in a contract as allowances, contingencies, and unit price. Allocation by a Prime Contractor to these categories under the scope of work of a contract will result in the rejection of the Utilization Plan by the Administrator.

(j) Purchase of materials and supplies must be pre-approved if their purchase is related to Contract Goal attainment. The Bidder may count payments to MBE or WBE regular dealers or Manufacturers for Contract Goal attainment for no more than fifty (50) percent of each MBE or WBE goal, unless otherwise approved by the Administrator. If the Bidder exceeds the supplier exception amount allowable as stated in the bid documents, the bid will be viewed as non-responsive.

(k) If a business ceases to be certified during its performance on a contract, the dollar value of work performed under the contract with that particular business after it has ceased to be certified will not be counted.

(l) In determining achievement of Contract Goals, the participation of a MBE or WBE will not be counted until that amount, including retention, has been paid to the MBE or WBE.

Section 15. Utilization Plan Submission

(a) Compliance documents must be submitted as detailed in the bid solicitation. Failure to do so will render the bid non-responsive. The Administrator will review compliance documents for each bid submission to determine whether it meets the requirements herein.

(b) A Bidder must either meet the Contract Goals or establish its Good Faith Efforts to do so as described in this Revised Appendix D and the bid solicitation.

(c) Each Bidder must submit with its bid a completed and signed Utilization Plan that lists for each Subcontractor and supplier proposed to be used to perform the scope of work on the contract: the name; address; telephone number; electronic mail address; six-digit North American Industry Classification System code; a description of the work with contract item number; the dollar amount to be allocated to the business; the contact person of the business; and any other information required in the solicitation documents. Each Bidder's Utilization Plan must commit to MBE or WBE participation equal to or greater than each of the Contract Goals set forth in the bid solicitation, unless the Bidder requests a partial or total waiver of the requirement that it file a Utilization Plan or achieve a particular goal by submitting with the bid a signed Waiver Request in the form specified in the bid solicitation.

(d) Each Bidder must submit with its bid a signed MBE/WBE Subcontractor's Letter of Intent for each business proposed to meet the Contract Goals in the form specified in the bid solicitation, with a copy of each MBE or WBE current Letter of Certification from a state or local government or agency, or documentation demonstrating that the business is a MBE or WBE within the meaning of this Revised Appendix D. In the event of a conflict between the amounts stated on the Utilization Plan and the MBE/WBE Subcontractor's Letter of Intent, the terms stated on the Utilization Plan will control. An original or scanned copy of the MBE/WBE Subcontractor's Letter of Intent will be acceptable.

(e) Where a Bidder has failed to meet the Contract Goals, it must file a Waiver Request documenting its Good Faith Efforts to meet the Contract Goals as provided in the format described in the bid solicitation. Following submittal of a Waiver Request, the Administrator will require the Prime Contractor to file a Contractor Information Form and provide additional documentation of its Good Faith Efforts in attempting to fulfill such goals.

(i) Good Faith Efforts will include, but are not limited to:

(1) Attending the mandatory pre-bid conference conducted by the District to acquaint Prime Contractors with MBEs and WBEs available to provide relevant goods and services and to inform MBEs and WBEs of subcontracting opportunities on a contract.

(2) Reviewing the Vendor List of available MBEs and WBEs maintained by the District, as well as other state and local governments and agencies, prior to the bid opening to identify qualified MBEs and WBEs for solicitation for bids.

(3) Soliciting, not less than fifteen (15) calendar days before the bid opening date, through reasonable and available means (e.g., written notices,

advertisements on social media) MBEs and WBEs that can provide services in the anticipated scopes of subcontracting on the contract.

(4) Providing MBEs and WBEs with convenient and timely opportunities to review and obtain relevant plans, specifications, or terms and conditions of the contract to enable such MBEs and WBEs to prepare an informed response to a Prime Contractor solicitation and following up initial solicitations to answer questions and encourage MBEs and WBEs to submit bids.

(5) Negotiating in good faith with interested MBEs and WBEs that have submitted bids and thoroughly investigated their capabilities. Evidence of such negotiations includes: the names, electronic mail addresses, and telephone numbers of MBEs and WBEs with whom the Bidder negotiated; a description of the information provided to MBEs and WBEs regarding the work selected for subcontracting; and explanations as to why agreements could not be reached with MBEs and/or WBEs to perform the work. The Bidder may not reject MBEs and WBEs as being unqualified without sound reasons. That there may be some additional costs involved in finding and using MBEs and WBEs is not in itself a sufficient reason for a Bidder's failure to meet the Contract Goals, as long as such costs are reasonable.

(6) Selecting those portions of the contract consistent with the available MBEs and WBEs, including where appropriate, breaking out contract work items into economically feasible units to facilitate MBE and WBE participation.

(7) Making efforts to assist interested MBEs and WBEs in obtaining financing or insurance as required by the District for performance on the contract, when applicable.

(8) Using the services and assistance of the District; MBE and WBE assistance groups; local, state, and federal minority or woman business assistance offices; and other organizations to provide assistance in the recruitment and placement of MBEs and WBEs.

(ii) Failure of a Bidder to provide requested information to the Administrator or to cooperate with the Administrator's investigation may be grounds for the rejection of a bid submission or a Waiver Request.

(iii) Upon completion of the investigation, the Administrator will inform the Director of his or her findings.

(iv) Thereafter, the Administrator will determine whether to grant the Waiver Request based on the Bidder's Good Faith Efforts at the time of the bid submission.

(v) Where the Administrator determines that a Bidder has not made Good Faith Efforts, the Director will declare the bid submission non-responsive and reject the bid.

(f) A Prime Contractor's submission of a Utilization Plan that commits to MBE or WBE participation equal to or greater than the Contract Goals does not provide a basis for a higher bid, an increase in contract price, or a later change order.

(g) The requirement to submit a Utilization Plan and MBE/WBE Subcontractor's Letter of Intent applies when the individual project is awarded under a Job Order Contract.

(i) A Prime Contractor awarded a Job Order Contract must submit with each work order issued under such a contract its Utilization Plan that lists the name, address, telephone number, electronic mail address, and contact person for each MBE and WBE to be used on the work order, as well as a description of work to be performed and the dollar amount to be allocated to the MBE or WBE. The Prime Contractor must submit with each work order a MBE/WBE Subcontractor's Letter of Intent from each certified business.

(ii) A Prime Contractor awarded a Job Order Contract will be subject to the compliance monitoring provisions contained in this Revised Appendix D. The Prime Contractor must submit to the Administrator monthly documentation, as specified by the Administrator, demonstrating that the Prime Contractor has attained the Contract Goals for the completed portion of the Job Order Contract or that it has been unable to do so despite its Good Faith Efforts. Good Faith Efforts must be documented as provided in this Revised Appendix D.

Section 16. Bid Submission Compliance Review

(a) The Director, in coordination with the Administrator, will declare a bid submission non-responsive if a Bidder:

(i) Failed to submit with its bid a completed and signed Utilization Plan and signed MBE/WBE Subcontractor's Letter of Intent from each MBE and WBE listed on its Utilization Plan.

(ii) Failed to commit in its Utilization Plan to MBE and WBE participation equal to or greater than the Contract Goals unless the Bidder submitted with its bid a request a total or partial waiver of the Contract Goals.

(b) Where, after consultation with the Administrator, the Director determines that the Utilization Plan submitted by a Bidder is false or fraudulent, the bid will be rejected or, if the determination is made after the contract is awarded, the contract may be forfeited in accordance with the provisions of Article 28 of the General Conditions.

(c) Prior to the award of any contract, the Administrator will review the Utilization Plan, MBE/WBE Subcontractor's Letter of Intent, Letter of Certification, Contractor Information, and Waiver Request Form submitted by the apparent low Bidder and conduct any other investigation the Administrator deems appropriate to determine compliance.

(d) Within thirty (30) calendar days after request, the Prime Contractor must furnish executed copies of all MBE and WBE subcontracts to the Administrator. Subsequently, the Prime Contractor will obtain and submit a copy of all MBE and WBE contracts at all Tiers within five (5) calendar days of a written request.

(e) The Prime Contractor will set timetables for the use of its Subcontractors before ten (10) percent of the work is completed. Timetables may be modified during contract performance with the prior written approval of the Administrator.

(f) If requested by the Administrator, the Prime Contractor must submit a MBE and WBE work plan projecting the work tasks associated with a certified business' commitments prior to the award of the contract. The work plan must provide a description of the work to be subcontracted to MBEs and WBEs and non-certified businesses and the dollar amount, as well as the name of all Tiers of Subcontractors. The work plan will become a part of the Prime Contractor's commitment and the contract record and may not be changed without prior written approval of the Administrator.

Section 17. Mentor-Protégé Program

The mentor-protégé program has been designed to encourage Prime Contractors to actively participate in the development and mentoring of MBE and WBE businesses. To motivate Prime Contractors to participate in the mentor-protégé program, the District will include a three (3) percent Contract Goal credit towards the applicable mentee category on all contracts to which this Revised Appendix D is applied. In addition to providing mentoring opportunities, the mentor-protégé program will also provide increased access to resources which will facilitate improved economic growth and greater contracting opportunities for the MBE or WBE protégé. The following guidelines will apply to the mentor-protégé program:

(a) The mentor/Prime Contractor will indicate that it wishes to participate in the mentor-protégé program in its bid submission for a District contract. This indication will be considered as an application to participate in the mentor-protégé program, and the application will be subject to the review and approval of the Administrator.

(b) The mentor and protégé must have a relationship independent of the District that pre-exists the mentor/Prime Contractor's bid application. The District will not facilitate a relationship between a mentor and a protégé.

(c) To qualify as a mentor, the Prime Contractor must present evidence that it has been operating in the market in which the protégé conducts business for at least five (5) years; is in good financial standing as determined by its federal tax returns or audited financial statements; and has not been debarred, suspended, or had its business license revoked.

(d) To qualify as a protégé, the Subcontractor must be a MBE and WBE as defined in this Revised Appendix D. Additionally, the protégé must have at least one (1) year of work experience in the market in which the mentor conducts business.

(e) A mentor may only have a total of three (3) protégés at any given time, and no more than one (1) protégé per contract. This information must be provided to the Administrator at the time that the bid application is reviewed.

(f) A protégé may only have one (1) mentor at any given time. This information must be provided to the Administrator at the time that the bid application is reviewed.

(g) A business may not serve as a mentor and a protégé at the same time.

(h) The mentor and protégé must be separate and distinct businesses. The mentor cannot possess an ownership interest in the protégé business, nor can the businesses be otherwise affiliated outside of the mentor-protégé relationship, including any familial relationship. The Administrator will review and assess the nature of the relationship to ensure that this requirement is fulfilled.

(i) If the mentor-protégé agreement is terminated during the pendency of the District contract on which the mentor-protégé relationship has been approved, it is the obligation of the mentor/Prime Contractor to notify the Administrator within three (3) calendar days of the termination. Failure to notify the Administrator within this required timeframe may result in the mentor/Prime Contractor being prohibited from participating in the mentor-protégé program on future contracts. In the event of termination, the mentor/Prime Contractor will cease to receive any credit or recognition for work performed by the protégé/Subcontractor from the point the agreement has been terminated, separate from any credit or recognition for which it is otherwise entitled.

(j) In the event of termination of the original mentor-protégé agreement, the mentor will not be permitted to engage with another protégé for the same District contract. Likewise, no substitutions of a protégé will be permitted.

(k) Any application to the mentor-protégé program will be denied if, in the opinion of the Administrator, the mentor-protégé relationship presents no opportunity for professional benefit to the protégé, but instead serves only as vehicle for the mentor to receive Contract Goal credits on a District contract. The Administrator's decision on this matter will be final and is not subject to appeal or review.

(l) Violation of any of the provisions contained in this section will result in the mentor-protégé application being denied, or in the event that information pertaining to a violation is discovered after the application is approved, permission to participate in the mentor-protégé program will be revoked. The Administrator's decision on this matter will be final and is not subject to appeal or review.

Section 18. Contract Performance Compliance

(a) Following the award of a contract, the Administrator will review the Prime Contractor's compliance with its MBE and WBE commitments during the performance of the contract.

(b) The Prime Contractor will be required to submit the Affirmative Action Monthly MBE/WBE Status Report providing the information in the written format specified by the Administrator. Evidence of MBE and WBE Subcontractor participation and payments must be submitted as required to confirm Subcontractors' participation and payment. The Prime Contractor's failure to do so may result in a finding of non-compliance by the Administrator pursuant to Section 20 of this Revised Appendix D. The Administrator reserves the right to require that the Affirmative Action Monthly MBE/WBE Status Report be submitted electronically via the compliance system upon notice.

(c) District contract compliance officers and auditors, or their designees, must have access to the Prime Contractor's and Subcontractor's Books and Records, including certified payroll records, bank statements, employer business tax returns, and all records including

all computer records and books of account to determine Prime Contractor and Subcontractor compliance with Program requirements. The District has the sole discretion to perform audits at any time and without notice to the Prime Contractor or Subcontractor. A Prime Contractor must provide the Administrator with any additional compliance documentation within ten (10) calendar days of receipt of a written request.

(d) If District personnel observe that any Subcontractor other than those listed on the Utilization Plan is performing work or providing materials or equipment for those MBE and WBE Subcontractors listed on the Utilization Plan, the Prime Contractor will be notified in writing of an apparent violation and progress payments may be withheld. The Prime Contractor will have the opportunity to meet with the Administrator prior to a finding of non-compliance.

(e) The Prime Contractor is required to fill out the Supplemental Change Order Form or such other documents as the Administrator may require which details the names of the Subcontractors impacted and provides a description of the work and dollar amount of the change and the amended contract value. The Prime Contractor will submit the Supplemental Change Order Form along with any additional documents as required to the Administrator for approval.

(f) Where a partial or total waiver of the Contract Goals has been granted, the Prime Contractor must continue to make Good Faith Efforts during the performance of the contract to meet the Contract Goals, and the Administrator will provide technical assistance with respect to such efforts. The Administrator will require the Prime Contractor to provide documentation of its continuing Good Faith Efforts in attempting to fulfill the Contract Goals.

(g) The Prime Contractor cannot make any changes to the approved Utilization Plan without the prior written approval of the Administrator. This includes, but is not limited to, instances in which the Prime Contractor seeks to perform work originally designated for a MBE or WBE Subcontractor with its own forces or those of an Affiliate, a non-certified business, or another MBE or WBE. Failure to obtain the prior written approval of the Administrator will constitute a breach of the contract and subject the Prime Contractor to any and all available sanctions. Additionally, the participation of certified businesses that did not receive prior written approval by the Administrator will not be counted towards the Contract Goals.

(i) The Prime Contractor must demonstrate good cause to terminate or reduce the scope of work of the MBE or WBE to the satisfaction of the Administrator. Good cause is limited to the following circumstances:

- (1) The listed MBE or WBE Subcontractor fails or refuses to execute a written contract.
- (2) The listed MBE or WBE Subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness.

(3) The listed MBE or WBE is ineligible to work on public works projects because of suspension or debarment proceedings pursuant to federal, state, or local law.

(4) The Administrator has determined that the listed MBE or WBE Subcontractor is not a responsible contractor.

(5) The listed MBE or WBE Subcontractor voluntarily withdraws from the project and provides the Administrator with prior written notice of its withdrawal before a decision on certification eligibility by the Administrator is rendered.

(6) The listed MBE or WBE Subcontractor is ineligible to receive credit for the type of work required.

(7) The MBE or WBE owner dies or becomes disabled rendering the business unable to complete the work on the contract.

(8) Other good cause as determined in the Administrator's sole discretion.

(ii) Good cause does not include instances where the Prime Contractor seeks to terminate a MBE or WBE so that the Prime Contractor can self-perform the work or substitute another MBE or WBE or non-certified Subcontractor to perform the work.

(iii) The Prime Contractor must give the MBE or WBE notice in writing, with a copy to the Administrator, of its intent to request to terminate or substitute, and the detailed reasons for the request. The Prime Contractor must give the MBE or WBE five (5) business days to respond to the notice and advise the Administrator of the reasons, if any, why the MBE or WBE objects to the proposed termination and why the Administrator should approve the request to terminate. If required in a particular case as a matter of public necessity (e.g., safety), the Administrator may require a response period shorter than five (5) business days.

(iv) If the Prime Contractor proposes to terminate or substitute a MBE or WBE Subcontractor for any reason, the Prime Contractor must make Good Faith Efforts as defined herein to find a substitute MBE or WBE Subcontractor to meet its MBE or WBE contractual commitment. Its Good Faith Efforts must be directed at finding another MBE or WBE to perform or provide at least the same amount of work, material, or service under the contract as the original MBE or WBE to the extent necessary to meet the Contract Goals.

(v) The Prime Contractor must submit a MBE/WBE Subcontractor's Letter of Intent for each proposed new MBE or WBE Subcontractor.

(vi) The Administrator will review the substitution request and decide whether to grant the request based on the Prime Contractor's documented compliance with these provisions.

(h) In the event that a Prime Contractor fails to achieve the level of MBE or WBE participation described in its Utilization Plan as demonstrated by its request for a progress payment, the Administrator will provide written notice to the Prime Contractor regarding the deficiency and progress payments may be withheld until compliance is achieved. If additional instances of non-compliance occur, subsequent progress payments may also be withheld pending compliance. Failure to meet the Contract Goals as stated on the Utilization Plan will be a *prime facie* case of non-compliance.

(i) In the event that a Prime Contractor fails to achieve the level of MBE or WBE participation described in its Utilization Plan as the result of the District's elimination of the work to be performed by a MBE or WBE, the Prime Contractor must notify the Administrator in writing and request an amendment of its Utilization Plan. A letter of release signed by the Subcontractor must be included with the request.

(j) The Contract Goal obligation extends to all contract work covered by change orders. The obligation to make Good Faith Efforts to meet the Contract Goal extends to the entire performance of the contract. When contract work is added, the Prime Contractor must award that work to the MBE or WBE listed in its Utilization Plan, if the original scope of work is to be performed by a MBE or WBE listed in the Utilization Plan. If the original listed MBE or WBE cannot perform the additional work, the Prime Contractor must make Good Faith Efforts to secure MBE or WBE Subcontractors to perform the additional contract work so that the goal percentage committed to in the contract is maintained or the Contract Goal is achieved.

(k) When the scope of Contract work is deducted, the Prime Contractor must make Good Faith Efforts to achieve the Contract Goal percentages committed to in the Contract.

(l) The Prime Contractor must notify the Administrator in writing within ten (10) calendar days of its determination to request an amendment of its Utilization Plan. The Prime Contractor must give the MBE or WBE notice in writing, with a copy to the Administrator, of its intent to request a reduction in the scope of work, and the detailed reasons for the request. The Administrator will review the request for the reduction and decide whether to approve the request based on the Prime Contractor's documented compliance with these provisions.

(m) Where contract change orders are made individually or in the aggregate that increase the total value of the contract by more than ten (10) percent of the original contract value, the Prime Contractor will increase the utilization of all MBEs or WBEs, where feasible, so that the total value of the percentage of work performed by MBEs or WBEs as to increased contract value bears the same relationship to the total value of the contract, as modified by change orders, as the percentage of MBEs or WBEs utilization committed to in the Prime Contractor's original Utilization Plan.

Section 19. Compliance System

All contractors are to comply with Diversity's electronic compliance and monitoring system for reporting purposes. Failure to comply with these requirements may result in a finding

of non-compliance by the Administrator pursuant to Section 20 of this Revised Appendix D. The reporting requirements include, but are not limited to:

- (a) Prime Contractors are required to submit monthly Diversity spend numbers as well as make payments towards invoices submitted by Subcontractors, on a monthly basis.
- (b) Subcontractors are required to submit invoices for their work and to acknowledge payment from Prime Contractors when received.

Section 20. Sanctions for Non-Compliance

(a) Where the Administrator believes that the Prime Contractor or Subcontractor has: committed fraud or made misrepresentations to the District; failed to comply with this Revised Appendix D or its contract; provided false or fraudulent documentation; or failed to comply with its Utilization Plan, the Administrator will notify the Prime Contractor and/or Subcontractor in writing of such determination of non-compliance and withhold up to one hundred (100) percent of the current progress or final payment due to the Prime Contractor. The amount to be withheld will be based upon a determination of the degree to which the Prime Contractor has failed to meet its MBE or WBE contractual commitments and to what extent the Prime Contractor has made Good Faith Efforts to achieve such commitments. The Prime Contractor and/or Subcontractor will have the right to meet with the Administrator within ten (10) calendar days of receipt of the notice. After conference and conciliation, the Administrator will determine whether the Prime Contractor and/or Subcontractor is complying.

(b) If the Administrator determines that the Prime Contractor and/or Subcontractor is not in compliance and the violation cannot be resolved by conference and conciliation, the Administrator will refer the matter to the Executive Director. Upon review of the matter, the Executive Director may return the referral to the Administrator with direction on how to proceed or may direct that the Prime Contractor and/or Subcontractor participate in a Show Cause hearing on a date certain to explain why further sanctions should not be imposed.

(i) The Prime Contractor and/or Subcontractor will have ten (10) calendar days after receipt of the Show Cause notice within which to file a response in writing with the Administrator. A hearing before a duly appointed Hearing Officer will be convened to provide the Prime Contractor and/or Subcontractor an opportunity to be heard with respect to the non-compliance. Within twenty (20) calendar days after the Executive Director's referral, the Hearing Officer will schedule a hearing to be held within twenty (20) calendar days of receipt of the referral. The District will carry the burden of proof as to non-compliance by a preponderance of the evidence. An official record will be kept with the Clerk of the District. All filings by the District or the Prime Contractor and/or Subcontractor should be made with the Clerk of the District, with courtesy copies going to the parties and the Hearing Officer.

(ii) The Hearing Officer will conduct the Show Cause hearing and issue findings of fact, conclusions of law, and recommendations regarding disposition of the hearing.

Procedures and rules governing the Show Cause hearings will be followed as adopted by the Board of Commissioners.

(iii) All Show Cause hearings must be conducted on the record and all testimony must be under oath and transcribed verbatim by a court reporter. All parties will be given the opportunity to present and respond to evidence. The Hearing Officer will conduct a fair hearing and maintain order and will abide by the Judicial Canons of Ethics enacted by the Illinois Supreme Court.

(iv) Within thirty (30) calendar days after the Show Cause hearing, the Hearing Officer will issue in writing to the Executive Director his/her written findings of fact, conclusions of law as to compliance, and recommendations with respect to any appropriate sanctions. The Executive Director will transmit the Hearing Officer's findings, conclusions, and recommendations to the Board of Commissioners which may impose sanctions for a Prime Contractor's and/or Subcontractor's non-compliance with this Revised Appendix D including, but not limited to:

(1) Withholding up to fifty (50) percent of the current progress or final payment due the Prime Contractor until the Administrator determines that the Prime Contractor is in compliance. Following the withholding of up to fifty (50) percent of the current progress payment, up to one hundred (100) percent of further progress payments may be withheld until the Prime Contractor is found to be in compliance. The amount to be withheld will be based upon a determination of the degree to which the Prime Contractor has failed to meet its MBE or WBE contractual commitments and to what extent the Prime Contractor has made Good Faith Efforts to achieve such commitments.

(2) Declaring the Prime Contractor and/or Subcontractor to be non-responsible and disqualify/debar the Prime Contractor and/or Subcontractor from eligibility to bid on District Construction Contracts for a period of not less than one (1) year and not more than three (3) years. A business that is disqualified pursuant to the provisions of this Revised Appendix D will be precluded from participation on any District contract as a Prime Contractor, Subcontractor, and supplier for the period of disqualification. In cases involving the use of false documentation, the making of false statements, fraud or misrepresentation, the disqualification period will be not less than eighteen (18) months and not more than three (3) years for the second violation, and not less than two (2) years and not more than three (3) years for the third violation from the date of disqualification established by the Board of Commissioners' Order.

(3) Rejecting bid submissions by the Prime Contractor for other contracts not yet awarded when it is determined that the Prime Contractor participated in the use of false documentation, the making of false statements, or fraud or misrepresentation.

(4) For any MBE or WBE that has misrepresented its MBE or WBE status and failed to operate as an independent business performing a Commercially Useful Function, declaration by the Director that the MBE or WBE is ineligible to participate as a MBE or WBE in District contracts. A business that has been declared ineligible may not participate as a MBE or WBE for a period of not less than one (1) year and not more than three (3) years.

(5) Forfeiting and deducting from the Prime Contractor's progress or final payments under the contract an amount up to the dollar amount of its MBE or WBE goal commitment that the Prime Contractor failed to meet. The amount to be deducted will be based upon a determination of the extent to which the Prime Contractor made Good Faith Efforts to achieve such commitments at the sole discretion of the Administrator.

(6) Referring the matter to the Office of the Attorney General or Cook County State's Attorney for follow-up action, where applicable.

(c) The District's attorneys' fees and costs may be assessed against the Prime Contractor and/or Subcontractor where the Hearing Officer makes a finding that the Prime Contractor and/or Subcontractor used false documentation, made false statements, or committed fraud or misrepresentation.

(d) Notice of sanctions imposed by the Board of Commissioners for violations of this Revised Appendix D by the Prime Contractor, Subcontractor, or supplier will be spread upon the public record by the District, including but not limited to publication in the Record of Proceedings of the Board of Commissioners, posting on the District's website, publication in any type of media or newspaper publication, and direct notice by letter to governmental entities.

(e) The District may take other action, as appropriate, within the discretion of the Administrator, subject to the approval of the Hearing Officer and the Board of Commissioners.

Section 21. Federal Regulations

The provisions of this Revised Appendix D shall not apply to any contract in which there will be monetary contributions received from a federal agency and the requirements of the federal agency dictate automatic compliance with that agency's affirmative action program. No language contained in this Revised Appendix D shall be interpreted to diminish or supplant the Equal Employment Opportunity Commission requirements.

Section 22. Reporting and Review

The Administrator will provide biannual reports to the Board of Commissioners containing the following information:

(a) The level of MBE or WBE participation achieved during the prior calendar year or other time period on District Construction Contracts subject to this Revised Appendix D; and

- (b) Identification of any difficulties with the enforcement of this Revised Appendix D; and
- (c) Any recommendations with respect to improving the implementation of this Revised Appendix D.

Section 23. Sunset Provision

This Revised Appendix D will expire on December 31, 2027, unless the District finds its remedial purposes have not been fully achieved and that there is a compelling interest in continuing to implement narrowly tailored remedies to redress discrimination against MBEs and WBEs so that the District will not function as a passive participant in a discriminatory marketplace in the District's Chicago construction industry and geographic market area.

Section 24. Repeal of Prior Inconsistent Provisions

All enactments and provisions previously adopted by the Board of Commissioners with regard to affirmative action on Construction Contracts subject to this Revised Appendix D that are inconsistent with the provisions contained in this Revised Appendix D are hereby expressly repealed.

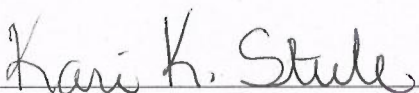
Section 25. Severability

If any clause, sentence, paragraph, section, or part of this Revised Appendix D is held by a court of competent jurisdiction to be invalid, illegal, or unenforceable, that judgment will not affect, impair, or invalidate the remainder of this Revised Appendix D and will be construed as if the clause, sentence, paragraph, section, or part had never been contained in this Revised Appendix D. The remaining language contained in this Revised Appendix D will remain in full force and effect. In lieu of such invalid, illegal, or unenforceable clause, sentence, paragraph, section, or part, there will be automatically added as part of this Revised Appendix D language as similar in its terms to such invalid, illegal, or unenforceable language as may be possible and be valid, legal, and enforceable.

Section 26. Effective Dates


This amendment to Revised Appendix D will be effective and apply to all bids for Construction Contracts advertised after December 31, 2022.

ADOPTED:

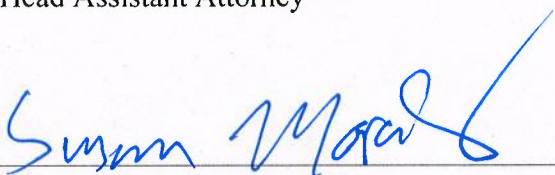


Kari K. Steele, President
Board of Commissioners of the
Metropolitan Water Reclamation
District of Greater Chicago

Approved as to form and legality:



Head Assistant Attorney



General Counsel

Exhibit A
Utilization Plan

ADOPTED:

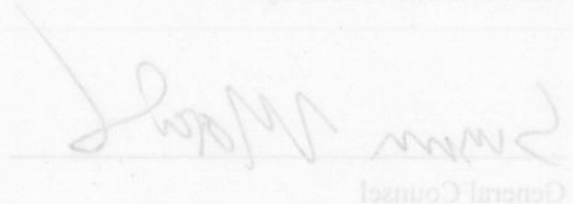


Karl K. Steele, President
Board of Commissioners of the
Metropolitan Water Reclamation
District of Greater Chicago

Approved as to form and legality:



Elva Avery
Head Assistant Attorney



General Counsel

Exhibit B
MBE/WBE Subcontractor's Letter of Intent

Exhibit C

Assist Agencies List

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EXHIBIT 5

VETERAN'S BUSINESS ENTERPRISE CONTRACTING POLICY, APPENDIX V

APPENDIX V

VETERAN-OWNED BUSINESS ENTERPRISE CONTRACTING POLICY REQUIREMENTS

Section 1. Purpose

The purpose of the Veteran-Owned Business Enterprise Contracting Policy (“Policy”) is to increase contracting opportunities with the Metropolitan Water Reclamation District of Greater Chicago (“District”) for veteran-owned and operated small business enterprises.

Section 2. Definitions

- (a) “Contract Goals” means the numerical percentage goals for MBE, WBE, and VBE participation to be applied to an eligible District contract subject to Affirmative Action Ordinance Revised Appendix D of the Metropolitan Water Reclamation District of Greater Chicago and this Appendix V for the participation of MBEs, WBEs, and VBEs based upon the scope of work of the contract and the availability of MBEs, WBEs, and VBEs to meet the goal, and the District’s progress towards meeting its annual MBE and WBE goals.
- (b) “Eligible Veteran” means an individual who has been a member of the armed forces of the United States and served for a total of at least six (6) months, or for the duration of hostilities regardless of the length of engagement, and
 - (i) was discharged on the basis of hardship; or
 - (ii) was released from active duty because of a service-connected disability; or
 - (iii) was discharged under honorable conditions.

Former members of the military with the following type of discharges are excluded from the Policy:

- (i) dishonorably discharge; or
 - (ii) bad conduct discharge; or
 - (iii) general discharge under other-than-honorable conditions.
- (c) “Good Faith Efforts” means honest, fair, and commercially reasonable actions undertaken by a prime contractor or consultant to meet the VBE Contract Goal, which by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the Contract Goals.
- (d) “Local Business” means a business located within the District’s geographic market area as established by the 2021 Disparity Study, namely the counties of Cook , DuPage, Kane, Lake, McHenry, or Will, in the State of Illinois.
- (e) “Minority-owned Business Enterprise” or “MBE” means a local small business entity, including a sole proprietorship, partnership, corporation, limited liability company, joint venture, or any other business or professional entity, which is at least fifty-one (51) percent owned by one or more socially and economically disadvantaged individuals who are members of one or more minority groups, or, in the case of a publicly held corporation, at least fifty-one (51) percent of the stock of which is owned by one or more members of one or more minority groups, and whose management, policies, major decisions, and daily business operations are controlled by one or more minority individuals.

- (f) “Small Business Enterprise” or “SBE” means a small business as defined by the United States Small Business Administration (SBA), pursuant to the business size standard found in 13 CFR Part 121, that is relevant to the scope of work the business seeks to perform on District contracts. A business is not an eligible SBE in any calendar fiscal year in which its gross receipts, averaged over the business’ previous five (5) fiscal years, exceed the size standards of 13 CFR Part 121.
- (g) “Veteran-owned Business Enterprise” or “VBE” means a local small business entity, including a sole proprietorship, partnership, corporation, limited liability company, joint venture or any other business or professional entity, which is at least fifty-one (51) percent owned by one or more eligible veterans, or in the case of a publicly held corporation, at least fifty-one (51) percent of the stock which is owned by one or more eligible veterans, and whose control and management of the business including long-term goals for the company as well as day-to-day operations are controlled by one or more eligible veterans.
- (h) “Women-owned Business Enterprise” or “WBE” means a local small business entity which is at least fifty-one (51) percent owned by one or more socially and economically disadvantaged individuals who are women, or in the case of a publicly held corporation, fifty-one (51) percent of the stock of which is owned by one or more women, and whose management and daily business operations are controlled by one or more women. Determination of whether a business is at least fifty-one (51) percent owned by a woman or women will be made without regard to community property laws.

Section 3. Certification Eligibility

- (a) Only a business owned, managed, and controlled by an Eligible Veteran may be certified as a VBE.
 - (i) Ownership by one or more Eligible Veterans must be direct and unconditional; and
 - (ii) Subsidiaries owned or controlled by one or more Eligible Veterans is not acceptable.
- (b) For the purposes of this policy, there is no distinction between service-disabled and non-service disabled veteran-owned businesses.

Section 4. Contract Goals

- (a) The standard Contract Goal for VBEs is three (3) percent, unless otherwise specified in the language of the contract, specifically the Invitation to Bid. This goal is applicable to contracts awarded by the District where the total approved expenditure is in excess of one hundred thousand dollars (\$100,000.00).
- (b) VBE Contract Goals are separate and distinct from the MBE and WBE Contract Goals. An Eligible Veteran who is also a MBE or WBE may be utilized to fulfill the MBE, WBE, and VBE Contract Goals, as applicable. However, the three (3) percent VBE Contract Goal must be fulfilled in addition to the MBE and WBE Contract Goals set forth.
- (c) If a MBE or WBE is utilized to accomplish the VBE Contract Goal, the VBE commitment amount must be entered as a separate dollar amount on all contract documents.

- (d) VBE Contract Goals will only be applied to a contract when there are at least two (2) qualified VBE contractors or professional services consultants registered on the District's vendor list that are capable of performing the anticipated subcontracting functions of the contract.

*Section 5. **Good Faith Efforts***

A prime contractor must undertake Good Faith Efforts to ensure that qualified VBE businesses are utilized in the performance of the contract and provide maximum opportunities for VBE participation, notwithstanding the fact that the contractor may have the capability to complete the contract without the use of subcontractors.

*Section 6. **VBE Commitment Form Submission***

When completing a Utilization Plan for a contract bid document, a prime contractor must complete the VBE Commitment Form by doing the following:

- (a) Provide the name, contact information, and qualifications for prospective VBE businesses. Delineate the various anticipated categories and disciplines of services to be provided by VBE businesses and provide the dollar amount to be allocated to each business; and
- (b) Summarize commitment to comply with the VBE Contract Goal for the project. Compliance documents must be submitted as detailed in the bid solicitation. The Administrator will review compliance documents for each bid submission to determine whether it meets the requirements herein; and
- (c) Where a prime contractor or consultant is a business owned and controlled by a VBE or where the prime contractor or consultant utilizes a VBE in a joint venture or as a subcontractor, a prime contractor or consultant may count toward the achievement of its VBE Contract Goals the utilization of any VBE that also satisfies the definition of a SBE.

*Section 7. **Effective Date***

This Policy is effective as of December 31, 2022 and applies only to qualifying contracts advertised after the effective date.

Adopted pursuant to an Order of the Board dated November 15, 2018

Revised May 1, 2023

EXHIBIT 6

M/W/SBE UTILIZATION PLAN

REVISED DECEMBER, 2022

**METROPOLITAN WATER RECLAMATION DISTRICT OF
GREATER CHICAGO**

MBE/WBE UTILIZATION PLAN

For Local and Small business entities - Definitions for terms used below can be found in Appendix D: MBE - Section 5(u); WBE - Section 5(ff); SBE - Section 5(z).

NOTE: The Bidder shall submit with the Bid, originals or facsimile copies of all MBE/WBE Subcontractor's Letter of Intent furnished to all MBEs and WBEs. IF A BIDDER FAILS TO INCLUDE signed copies of the MBE/WBE Utilization Plan and all signed MBE/WBE Subcontractor's Letter of Intent with its bid, said bid will be deemed nonresponsive and rejected.

All Bidders must sign the signature page UP-4 of the Utilization Plan, even if a waiver is requested.

Name of Bidder: _____

Contract No.: _____

Affirmative Action Contact & Phone No.: _____

E-Mail Address: _____

Total Bid: _____

**MBE/WBE UTILIZATION PLAN AND ALL SIGNED MBE/WBE
SUBCONTRACTOR'S LETTER OF INTENT MUST BE
COMPLETED, SIGNED AND ACCOMPANY YOUR BID!!!**

MBE UTILIZATION

Name of MBE and contact person: _____
Business Phone Number: _____ Email Address: _____
Address: _____
Description of Work, Services or Supplies to be provided: _____

CONTRACT ITEM NO.: _____
Total Dollar Amount Participation: _____

The MBE/WBE Utilization Plan and the MBE/WBE Subcontractor’s Letter of Intent MUST Accompany the Bid! ! !

MBE UTILIZATION

Name of MBE and contact person: _____
Business Phone Number: _____ Email Address: _____
Address: _____
Description of Work, Services or Supplies to be provided: _____

CONTRACT ITEM NO.: _____
Total Dollar Amount Participation: _____

The MBE/WBE Utilization Plan and the MBE/WBE Subcontractor’s Letter of Intent MUST Accompany the Bid! ! !

MBE UTILIZATION

Name of MBE and contact person: _____
Business Phone Number: _____ Email Address: _____
Address: _____
Description of Work, Services or Supplies to be provided: _____

CONTRACT ITEM NO.: _____
Total Dollar Amount Participation: _____

The MBE/WBE Utilization Plan and the MBE/WBE Subcontractor’s Letter of Intent MUST Accompany the Bid! ! !

(Attach additional sheets as needed)

WBE UTILIZATION

Name of WBE and contact person: _____

Business Phone Number: _____ Email Address: _____

Address: _____

Description of Work, Services or Supplies to be provided: _____

CONTRACT ITEM NO.: _____

Total Dollar Amount Participation: _____

The MBE/WBE Utilization Plan and the MBE/WBE Subcontractor’s Letter of Intent MUST Accompany the Bid! ! !

WBE UTILIZATION

Name of WBE and contact person: _____

Business Phone Number: _____ Email Address: _____

Address: _____

Description of Work, Services or Supplies to be provided: _____

CONTRACT ITEM NO.: _____

Total Dollar Amount Participation: _____

The MBE/WBE Utilization Plan and the MBE/WBE Subcontractor’s Letter of Intent MUST Accompany the Bid! ! !

WBE UTILIZATION

Name of WBE and contact person: _____

Business Phone Number: _____ Email Address: _____

Address: _____

Description of Work, Services or Supplies to be provided: _____

CONTRACT ITEM NO.: _____

Total Dollar Amount Participation: _____

The MBE/WBE Utilization Plan and the MBE/WBE Subcontractor’s Letter of Intent MUST Accompany the Bid! ! !

(Attach additional sheets as needed)

SIGNATURE SECTION

On Behalf of _____ I/We hereby acknowledge that
(name of company)

I/WE have read Revised Appendix D, will comply with the provisions of Revised Appendix D, and intend to use the MBEs and WBEs listed above in the performance of this contract and/or have completed the Waiver Request Form. To the best of my knowledge, information and belief, the facts and representations contained in this Exhibit are true, and no material facts have been omitted.

I do solemnly declare and affirm under penalties of perjury that the contents of the foregoing document are true and correct, and that I am authorized, on behalf of the bidder, to make this affidavit.

Date

Signature of Authorized officer

ATTEST:

Print name and title

Secretary

Phone number

- 1) **The Bidder is required to sign and execute this page, EVEN IF A WAIVER IS BEING REQUESTED.**
- 2) **Failure to do so will result in a nonresponsive bid and rejection of the bid.**
- 3) **If a waiver is requested, the bidder must also complete the following “WAIVER REQUEST FORM.”**

The MBE/ WBE Utilization Plan and the MBE/ WBE Subcontractor's Letter of Intent MUST Accompany the Bid! !!

REVISED DECEMBER, 2022

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WAIVER REQUEST FORM**If a waiver is requested, the Bidder is required to sign and execute this page.**

Contract No.: _____

Name of Bidder: _____

Contact Person and Phone Number: _____

With respect to the contract specified above, the Bidder hereby requests a total or partial waiver of the requirement that, pursuant to Section 15 (a)-(d) of the Affirmative Action Ordinance, Revised Appendix D, it files a MBE/WBE Utilization Plan or achieve a particular goal for MBE/WBE participation in the contract. The reasons for the request are as follows:

On Behalf of _____ I/We hereby acknowledge that
(name of company)

I/WE have read Affirmative Action Ordinance, Revised Appendix D, will comply with the provisions of Affirmative Action Ordinance, Revised Appendix D, and intend to use the MBEs and WBEs listed in the MBE/WBE Utilization Plan in the performance of this contract and have completed the Waiver Request Form. To the best of my knowledge, information and belief, the facts and representations contained in this Waiver Request Form are true, and no material facts have been omitted.

I do solemnly declare and affirm under penalties of perjury that the contents of the foregoing document are true and correct, and that I am authorized, on behalf of the contractor, to make this affidavit.

*Date*_____
Signature of Authorized officer

ATTEST:

*Print name and title*_____
*Secretary*_____
*Phone number***NOTE TO BIDDERS**

All Waiver requests are evaluated carefully by the District. **The evaluation is based on your firm's documented GOOD FAITH EFFORTS.**

The GOOD FAITH EFFORTS MUST be Undertaken PRIOR to your bid submittal to the District.

Good Faith Efforts are identified on pp. D21-D22, Section 15. Utilization Plan Submission (e), (i) (1)-(8).

The MBE/ WBE Utilization Plan and the MBE/ WBE Subcontractor's Letter of Intent MUST Accompany the Bid! !!

REVISED DECEMBER, 2022

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MBE/ WBE SUBCONTRACTOR’S LETTER OF INTENT

To: (Name of Bidder) _____ and the MWRDGC

RE: Contract Name: (Insert Name) _____

Contract Number: (Insert Number) _____

From: (Name of MBE/WBE Firm) _____ MBE: Yes___ No___
WBE: Yes___ No___

The MBE/WBE status of the undersigned is confirmed by the attached letter of Certification. A certification letter must be attached hereto.

The undersigned is prepared to provide the following described services or supply the following described goods in connection with the above named project/contract:

If more space is needed to fully describe the MBE/WBE firms’ proposed scope of work and/or payment schedule, attach additional sheets.

The above described performance is offered for the following total price:

\$ _____
(Written in Figures) (Written in Words)

In the event of a discrepancy between the “Written in Words” price and the “Written in Figures” price, the “Written in Words” price shall govern.”

The undersigned will enter into a formal written agreement for the above work with the Prime Contractor, conditioned upon the execution of a contract by the Prime contractor with the MWRDGC.

(Signature of Owner, President or Authorized Agent of MBE/WBE)

Name/Title (Print)

Date _____ Phone _____

THIS SIGNED DOCUMENT MUST BE SUBMITTED WITH THE BID. FAILURE TO DO SO WILL RESULT IN A NONRESPONSIVE BID AND REJECTION OF THE BID.

All bidders shall submit with the Bid, copies of MBE/WBE Subcontractor’s Letter of Intent in paper form with signatures, which were furnished to each MBE and WBE listed in its MBE/WBE Utilization Plan and must be submitted to the District with its bid as part of its bid packet with either a copy of each MBE and WBE current Letter of Certification from a state or local government or agency or documentation demonstrating that the MBE and WBE is a MBE or WBE within the meaning of this Revised Appendix D. Failure to submit the MBE/WBE Subcontractor’s Letter of Intent signed by each MBE and WBE subcontractor will be viewed as nonresponsive and the bid will be rejected. All MBE/WBE Subcontractor’s Letter of Intent must conform to the MBE/WBE Utilization Plan submitted with the bid. An original or facsimile copy of MBE/WBE Subcontractor’s Letter of Intent will be acceptable.

The MBE/ WBE Utilization Plan and the MBE/ WBE Subcontractor’s Letter of Intent MUST Accompany the Bid! ! !

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EXHIBIT 7
VBE COMMITMENT FORM

VBE COMMITMENT FORM

1. Name of VBE: _____
Identify MBE, WBE Status: _____ Address: _____
City, State, Zip Code: _____
Contact Person: _____ Telephone Number: _____
eMail Address: _____
*Dollar Amount of Participation: \$ _____ Percent of Participation: _____ %
Scope of Work: _____

2. Name of VBE: _____
Identify MBE, WBE Status: _____ Address: _____
City, State Zip Code: _____
Contact Person: _____ Telephone Number: _____
eMail Address: _____
*Dollar Amount of Participation: \$ _____ Percent of Participation: _____ %
Scope of Work: _____

3. Name of VBE: _____
Identify MBE, WBE Status: _____ Address: _____
City, State Zip Code: _____
Contact Person: _____ Telephone Number: _____
eMail Address: _____
*Dollar Amount of Participation: \$ _____ Percent of Participation: _____ %
Scope of Work: _____

4. Name of VBE: _____
Identify MBE, WBE Status: _____ Address: _____
City, State, Zip Code: _____
Contact Person: _____ Telephone Number: _____
eMail Address: _____
*Dollar Amount of Participation: \$ _____ Percent of Participation: _____ %
Scope of Work: _____

* If a MBE or WBE will be utilized to accomplish the VBE Contract Goal, then the VBE commitment amount must be entered as a separate dollar amount. VBE Contract Goals are separate and distinct from the MBE and WBE Contract Goals.

Attach a copy of qualifications for each VBE business.

EXHIBIT 8

AFFIRMATIVE ACTION STATUS REPORT

AFFIDAVIT - AFFIRMATIVE ACTION STATUS REPORT

Notice: This report is required to be submitted at 25%, 50%, 75%, and 100% completion of construction.

Contract Title: _____

Contract Number: _____

Prime Contractor’s Name: _____

Prime’s Contact Name: _____ Estimated Completion Date: _____

Prime’s Contact Phone #: () _____ Status Report No.: 25% - 50% - 75% - 100%
(CIRCLE ONE)

In connection with the above-captioned contract:

For each MBE, WBE, and SBE subcontractor, including third tier contracts awarded by your MBE/WBE/SBE company, describe the work or goods or services provided in relation to this contract (indicate line items, if applicable) performed during the report period.

| MBE, WBE, and SBE Subcontractor | MBE / WBE / SBE | AMOUNT OF CONTRACT | AMOUNT PAID TO DATE |
|--|-----------------|--------------------|---------------------|
| | | | |
| DESCRIPTION OF WORK/SERVICES AND/OR GOODS PROVIDED. BE SPECIFIC. | | | |

| MBE, WBE, and SBE Subcontractor | MBE / WBE / SBE | AMOUNT OF CONTRACT | AMOUNT PAID TO DATE |
|--|-----------------|--------------------|---------------------|
| | | | |
| DESCRIPTION OF WORK/SERVICES AND/OR GOODS PROVIDED. BE SPECIFIC. | | | |

| MBE, WBE, and SBE Subcontractor | MBE / WBE / SBE | AMOUNT OF CONTRACT | AMOUNT PAID TO DATE |
|--|-----------------|--------------------|---------------------|
| | | | |
| DESCRIPTION OF WORK/SERVICES AND/OR GOODS PROVIDED. BE SPECIFIC. | | | |

| MBE, WBE, and SBE Subcontractor | MBE / WBE / SBE | AMOUNT OF CONTRACT | AMOUNT PAID TO DATE |
|--|-----------------|--------------------|---------------------|
| | | | |
| DESCRIPTION OF WORK/SERVICES AND/OR GOODS PROVIDED. BE SPECIFIC. | | | |

| MBE, WBE, and SBE Subcontractor | MBE / WBE / SBE | AMOUNT OF CONTRACT | AMOUNT PAID TO DATE |
|--|-----------------|--------------------|---------------------|
| | | | |
| DESCRIPTION OF WORK/SERVICES AND/OR GOODS PROVIDED. BE SPECIFIC. | | | |

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS DOCUMENT ARE TRUE AND CORRECT, AND THAT I AM AUTHORIZED TO MAKE THIS AFFIDAVIT. I CERTIFY THAT THE ABOVE NAMED FIRMS WERE AWARDED CONTRACT(S), PERFORMED THE WORK WITH THEIR OWN FORCES, AMOUNTS LISTED ARE ACCURATE AND PAYMENTS WERE MADE IN ACCORDANCE WITH CONTRACTUAL OBLIGATIONS. CANCELLED CHECKS AND/OR SUPPORTING INFORMATION WILL BE ON FILE FOR INSPECTION OR AUDIT.

Name of Affiant: _____

Title: _____

Signature: _____
(Signature of Affiant)

Date:_____

State of _____ County (City) of _____

This instrument was SUBSCRIBED and SWORN TO before me on _____

Signature of Notary Public

GEOTECHNICAL REPORTS



August 9, 2024

Mr. John Hilsen, PE
Senior Civil Engineer
Robinson Engineering, Ltd.
17000 South Park Avenue
South Holland, Illinois 60473

Re: Structure Geotechnical Report
Thorn Ditch Drainage and Flood Control Improvements
Greenwood, Woodlawn East, Kimbark and Kenwood Avenues
South Holland, Illinois
GEOCON Project No. 24-G0400

Dear Mr. Hilsen:

Pursuant to our proposal for geotechnical engineering services, we have completed a subsurface exploration and geotechnical analyses for the above referenced project. This electronic copy of the Structure Geotechnical Report includes our findings and recommendations for the proposed project referenced above. Please contact our office if you require hard copies of the report.

GEOCON Professional Services, LLC. (GEOCON) appreciates the opportunity to be of service during this phase of the project. If there are any questions or comments you may have regarding the contents of this report, or if we may be of any further service, please contact us at your convenience.

Sincerely,

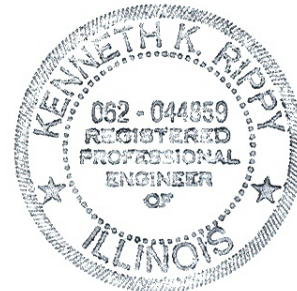
GEOCON Professional Services, LLC.

A handwritten signature in black ink, appearing to read "B. Filafusi".

Brandon Filafusi, EIT
Project Engineer

A handwritten signature in black ink, appearing to read "K. Rippy".

Kenneth K. Rippy, PE
Senior Engineer





STRUCTURE GEOTECHNICAL REPORT

**Thorn Ditch Drainage and Flood Control Improvements
Greenwood, Woodlawn East, Kimbark and Kenwood Avenues
South Holland, Illinois**

**Mr. John Hilsen, PE
Senior Civil Engineer
Robinson Engineering, Ltd.
17000 South Park Avenue
South Holland, Illinois 60473**

**Prepared By:
GEOCON Professional Services, LLC.
22774 Citation Road, Unit A
Frankfort, Illinois 60423**

August 9, 2024

GEOCON Project No. 24-G0400

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APPENDIX I

Boring Location Diagrams
Soil Boring Logs
General Notes
Atterberg Limits Results
Subsurface Profiles

APPENDIX II

GSG Boring Location Diagram
GSG Boring Logs

STRUCTURE GEOTECHNICAL REPORT

Thorn Ditch Drainage and Flood Control Improvements Greenwood, Woodlawn East, Kimbark and Kenwood Avenues South Holland, Illinois

INTRODUCTION

This report presents the results of a subsurface exploration for the proposed drainage and flood control improvements planned for Thorn Ditch, just west of I-94, in South Holland, Illinois. The purpose of this report was to determine and evaluate the subsurface conditions existing at the subject site, and to establish related geotechnical parameters to be utilized for the economical design and construction of the box culverts planned as part of this project.

Authorization to perform this subsurface exploration and analysis was given in the form of a signed proposal and acceptance of GEOCON Proposal Number 23-P1036, dated September 29, 2023.

PREVIOUS BORINGS

An SGR was performed in 2021 by GSG Consultants, Inc. (GSG). GSG performed four borings, one at each culvert location and the borings were extended to a depth of 25 feet. The GSG boring location diagram and boring logs are included in Appendix II and the results of their borings were considered in our evaluation.

PROJECT AND SITE DESCRIPTION

This section of Thorn Ditch is located north of 165th Street, between Cottage Grove Avenue on the west and I-94 on the east. The drainage and flood control improvements planned as part of this project include replacing existing corrugated metal pipe culverts carrying Dobson and Greenwood Avenues, Woodlawn East Avenue, Kimbark Avenue and Kenwood Avenue over Thorn Ditch. Additionally, flood control ponds will be constructed within a portion of Maicach Park and within Pioneer Park. New 8-foot-wide concrete walking paths will be provided around the ponds. The pond located north of Maicach Park will extend north and south of Thorn Ditch, which will require pedestrian bridges on the west side and east side of the pond.

Based on the Robinson Engineering, LTD (REL) plans (working set) dated May 15, 2024, the planned structures are described as follows:

Dobson and Greenwood Avenue Structure

The proposed Dobson and Greenwood Avenue culvert will be a 690-foot concrete box with an interior opening of 7-foot wide by 7-foot high. The upstream invert elevation will be at 586.54 feet, while the downstream invert elevation will be at 586.00 feet with flow from west to east. The new structure will be constructed in the same location as the existing culvert and the final grade above the culvert will be the same as existing grade. The proposed precast culvert will have a precast end section with concrete apron or a cast in place culvert would have 11-foot 6-inch horizontal cantilever wingwalls at each corner.

Woodlawn East Avenue Structure

The proposed Woodlawn East Avenue culvert will be a 178-foot concrete box with an interior opening of 7-foot wide by 7-foot high. The upstream invert elevation will be at 586.00 feet, while the downstream invert elevation will be at 585.85 feet with flow from west to east. The new structure will be constructed in the same location as the existing culvert and the final grade above the culvert will be the same as existing grade. The proposed precast culvert will have a precast end section with concrete apron or a cast in place culvert would have 11-foot 6-inch horizontal cantilever wingwalls at each corner.

Kimbark Avenue Structure

The proposed Kimbark Avenue culvert will be a 91-foot concrete box with an interior opening of 10-foot wide by 7-foot high. The upstream invert elevation will be at 585.85 feet, while the downstream invert elevation will be at 585.75 feet with flow from west to east. The new structure will be constructed in the same location as the existing culvert and the final grade above the culvert will be the same as existing grade. The proposed precast culvert will have a precast end section with concrete apron or a cast in place culvert would have 11-foot 6-inch horizontal cantilever wingwalls at each corner.

Kenwood Avenue Structure

The proposed Kenwood Avenue culvert will be a 102-foot concrete box with an interior opening of 10-foot wide by 7-foot high. The upstream invert elevation will be at 586.36 feet, while the downstream invert elevation will be at 585.76 feet with flow from west to east. The new structure will be constructed in the same location as the existing culvert and the final grade above the culvert will be the same as existing grade. The proposed precast culvert will have a precast end section with concrete apron or a cast in place culvert would have 11-foot 6-inch horizontal cantilever wingwalls at each corner.

It is understood that the proposed culvert design will be in accordance with the 2020 AASHTO *LRFD Bridge Design Specifications* except as modified by the 2017 IDOT *Culvert Manual*.

Floodwater Control Ponds

Thorn Ditch will run through the Maicach Park Pond with a small portion of the pond south of the ditch and the remainder on the north side. The pond will be excavated to a depth of about 6 feet, extending to a bottom elevation of 587 feet and the pond floor will slope up to the west to about El. 588 feet. The pond slopes were designed at 4H:1V for stability and maintenance purposes. The low and high water levels are designed at El. 589 feet and El. 595 feet, respectively, resulting in 7.75 AC-FT of floodwater storage. The excavated soil will be removed from the site.

The Pioneer Park Pond will be located on the south side of Thorn Ditch. The pond will be excavated to a depth of about 8 feet, extending to a bottom elevation of 589 feet and the pond floor will slope up to the northwest to about El. 591 feet. The pond slopes were designed at 4H:1V for stability and maintenance purposes. The low and high water levels are designed at El. 587 feet and El. 593.2 feet, respectively, and the top of the berm separating Thorn Ditch from the pond is designed at El. 593.6 feet, resulting in 3.83 AC-FT of floodwater storage. The excavated soil will be removed from the site.

Pedestrian Bridges

Conceptual design calls for pedestrian bridges to be provided to carry the walking paths planned on the east and west sides of the Maicach Pond over Thorn Ditch. No other information was provided on the REL plans provided for this project. We anticipate the pedestrian bridges will be prefabricated steel truss bridge supported by new bridge abutments located on either side of Thorn Ditch. Provided scour is not a concern, we anticipate the bridge abutments will be supported by spread footings.

SUBSURFACE EXPLORATION

The subsurface exploration was conducted on April 16 through April 19, 2024 and included performance of twenty-one (21) borings at the locations shown on the Boring Location Diagram, included in Appendix I. The borings were advanced to depths ranging from 15 feet below grade at the floodwater control ponds (DB-1 to DB-7), 25 feet below grade at the culverts (CB-1 to CB-10) and auger refusal at the pedestrian bridges (PB-1 to PB-4). Auger refusal on apparent bedrock at the pedestrian bridge locations ranged from 33 feet to 38.6 feet. The boring locations were staked in the field by REL and later surveyed by REL. Table 1 below presents a summary of the borings completed for the project.

Table 1 - Summary of Soil Borings

| Boring No. | Station | Offset (ft) | Ground Surface Elevation (ft) | Depth (ft) | Location |
|------------|----------|-------------|-------------------------------|------------|----------------------------|
| CB-1 | 23+87.01 | 10.6 LT | 595.8 | 25 | Dobson-Greenwood Culvert |
| CB-2 | 24+56.55 | 9.1 RT | 595.3 | 25 | Dobson-Greenwood Culvert |
| CB-3 | 27+17.15 | 10.7 RT | 596.1 | 25 | Dobson-Greenwood Culvert |
| CB-4 | 22+83.75 | 9.3 LT | 596.9 | 25 | Dobson-Greenwood Culvert |
| CB-5 | 33+36.50 | 8.4 RT | 595.0 | 25 | Woodlawn East Ave. Culvert |
| CB-6 | 34+11.09 | 12.9 RT | 595.5 | 25 | Woodlawn East Ave. Culvert |
| CB-7 | 40+27.15 | 11.4 LT | 594.7 | 25 | Kimbark Ave. Culvert |
| CB-8 | 41+00.29 | 10.9 RT | 593.7 | 25 | Kimbark Ave. Culvert |
| CB-9 | 43+36.59 | 12.6 RT | 595.6 | 25 | Kenwood Ave. Culvert |
| CB-10 | 44+00.44 | 10.0 LT | 594.8 | 25 | Kenwood Ave. Culvert |
| DB-1 | 15+50.12 | 119.6 LT | 598.7 | 15 | Maicach Park FWC Pond |
| DB-2 | 16+60.83 | 114.2 LT | 597.2 | 15 | Maicach Park FWC Pond |

| Boring No. | Station | Offset (ft) | Ground Surface Elevation (ft) | Depth (ft) | Location |
|------------|----------|-------------|-------------------------------|------------|------------------------------|
| DB-3 | 17+80.74 | 73.6 LT | 597.2 | 15 | Maicach Park FWC Pond |
| DB-4 | 18+25.23 | 73.8 RT | 596.4 | 15 | Maicach Park FWC Pond |
| DB-5 | 19+14.89 | 70.5 RT | 596.2 | 15 | Maicach Park FWC Pond |
| DB-6 | 38+34.90 | 97.3 RT | 593.2 | 15 | Pioneer Park FWC Pond |
| DB-7 | 39+43.41 | 91.1 RT | 592.9 | 15 | Pioneer Park FWC Pond |
| PB-1 | 18+01.04 | 17.3 LT | 595.2 | 38.6 | W. Ped. Bridge – North Abut. |
| PB-2 | 18+24.11 | 19.3 RT | 594.9 | 37.5 | W. Ped. Bridge – South Abut. |
| PB-3 | 19+60.56 | 18.1 LT | 594.7 | 33.0 | E. Ped Bridge – North Abut. |
| PB-4 | 19+83.04 | 27.0 RT | 582.9 | 34.5 | E. Ped. Bridge – South Abut. |

Drilling and Sampling Procedures

The soil borings were performed with an ATV track-mounted drill rig equipped with a rotary head. Conventional, continuous flight, hollow-stem augers were used to advance the boring with representative samples obtained in the boring employing split-barrel sampling techniques in accordance with ASTM Procedure D-1586. Soil samples were secured at 2.5-foot intervals to the specified boring termination depths, or 30 feet for the pedestrian bridge borings. The sampling intervals were increased to 5-feet below a depth of 30 feet.

The Standard Penetration Test (SPT) is defined as the number of blows required to advance a 2-inch O.D., split-barrel sampler a distance of one foot by a 140-pound hammer falling 30 inches, commonly described as the N-value. These sampler resistances provide a useful indication of the consistency or relative density of most soil deposits and are reported on the boring log presented in Appendix I.

It should be noted that it is difficult to determine the stratigraphy of the upper 2 to 3 feet of the profile from soil borings due to the size of the bore hole, about 6 inches in diameter, and intermittent sample intervals. Further, the split spoon sampler tends to push through softer soils such as fill or topsoil, resulting in little or no sample recovery from these soils. It is recommended that shallow test pits be excavated to better define the exact depth of topsoil or fill if such information is required prior to construction.

Water level observations made during drilling operations are noted on the boring logs.

Laboratory Tests

Additional characteristics of the foundation materials were determined in the laboratory to provide data on which to classify and estimate the engineering properties of the subsurface soil deposits encountered in the boring. All samples were visually classified by the geotechnical engineer according to the Unified Soil Classification System (ASTM D-2488). An explanation of the symbols used in this system is included in Appendix I.

Representative samples were tested in the laboratory to determine the natural moisture content of the soils. All moisture contents are expressed as a percentage of the dry weight of soil. Grain size analyses were performed on selected soil samples in accordance with ASTM D-422. To verify soil classifications, Atterberg limits and Loss in Ignition organic content tests were performed on select samples.

The laboratory testing program selected for this project is intended to assist with determination of soil classification as well as strength and deformation characteristics of the subsurface soil deposits that will be useful in design of excavations. All laboratory testing was performed in general accordance with the respective ASTM Methods, as applicable, and the results are included on the boring log included in Appendix I. Unless notified to the contrary, all samples will be disposed of after one month.

SOIL CONDITIONS

The types of subsurface materials encountered at the test boring locations are described on the Soil Boring Log. The lines delineating the changes in strata on the logs represent an approximate boundary between the various soil classifications. It must be recognized that the soil descriptions are considered representative for the specific test hole location, but that variations may occur between the sampling intervals and at other locations on the site. A summary of the major soil profile components is described in the following paragraphs. A more detailed description and supporting data for the boring location can be found on the individual boring log.

Below the surficial topsoil, three (3) primary soil strata were encountered in the culvert borings CB-1 to CB-10, as summarized below:

Stratum 1: Stratum 1 was encountered at borings CB-6, CB-7, CB-10, DB-2 to DB-5 and PB-1 to PB-4. Stratum 1 consisted of clay fill extending below the topsoil to depths ranging from about 3 to 6 feet below grade. Strength and compressibility of the clay fill varied across the site as evidenced by unconfined compressive strengths ranging from 1.0 to 4.3 tsf and moisture contents ranging from 13.9 to 37.6 percent.

Stratum 2: Stratum 2 comprised the primary soil strata encountered in all borings and consisted of silty clay to lean clay soils generally described as very stiff to hard with unconfined compressive strengths greater than 2.0 tsf and moisture contents in the upper teens to mid-twenty percent. Atterberg limits tests performed on selected samples indicated a liquid limit of 36 percent and plasticity indices ranging from 15 to 18 percent.

Stratum 3: Stratum 3 was encountered at borings CB-1, CB-2, CB-5 to CB-8, CB-10, DB-5 and DB-6 and was generally interbedded within Stratum 2. Stratum 3 consisted of very soft fat or organic clay and was encountered at depths ranging from 3 to 16 feet below grade, which correlates to elevations ranging

from +593.2 to +579.5 feet, and extended to depths ranging from 6 to 21 feet below grade, which correlates to elevations ranging from +590.2 to 573.7 feet. Samples collected from Stratum 3 generally had very low unconfined compressive strengths ranging from 0.25 tsf up to about 1 tsf, and moisture contents ranging from about 40 percent up to 115.4 percent. Organic contents of samples collected from Stratum 3 ranged from 3.6 to 9.0 percent, liquid limits ranged from 46 to 63 percent and plasticity indices ranged from 15 to 35 percent.

Silt to clayey silt outwash seams were also interbedded within Stratum 2, at the locations and depths indicated on the boring logs. Borings PB-1 to PB-4 were extended to auger refusal depths ranging from 33 to 38.6 feet below grade. These borings encountered weathered or very poor-quality limestone bedrock at depths ranging from 32 to 36 feet below grade, which correlates to elevations ranging from +558.9 to +562.7 feet. The limestone bedrock was very dense with N-values exceeding 50 blows per foot and the samples were saturated with groundwater.

Soil Design Parameters

Based on field and laboratory data from the exploration, generalized soil design parameters for use in design at the culvert locations are presented in Table 2, below.

Table 2 - Recommended Soil Parameters

| Elevation (Depth below surface) Ref boring CB-7 | Soil Type | Total Unit Weight (pcf)* | Shear Strength (psf) | | Friction Angle (deg) | | Rankine Active Earth Pr. Coeff, Ka | At- Rest Earth Pr. Coeff, K ₀ | Passive Earth Pr. Coeff., Kp | Soil Modulus, k _s (pci) | Epsilon 50 Strain |
|--|---|-----------------------------------|----------------------------|---------|----------------------------|---------|---|---|--|--|-------------------------|
| | | | Undrained | Drained | Undrained | Drained | | | | | |
| 0 - 3 | <u>Stratum 1</u> Clay Fill | 125 | 2,000 | 100 | 0 | 30 | 0.33 | 0.5 | 3.0 | 500 | 0.007 |
| 3 - 11 | <u>Stratum 2</u> Med Stiff Clay - Qu<2 | 125 | 2,000 | 100 | 0 | 30 | 0.33 | 0.5 | 3.0 | 500 | 0.007 |
| 11 - 21 | <u>Stratum 3</u> Very Soft Fat or Organic Clay | 100 | 300 | 0 | 0 | 28 | 0.36 | 0.53 | 2.77 | 30 | 1.2 |

| Elevation (Depth below surface) Ref boring CB-7 | Soil Type | Total Unit Weight (pcf)* | Shear Strength (psf) | | Friction Angle (deg) | | Rankine Active Earth Pr. Coeff, Ka | At- Rest Earth Pr. Coeff, K ₀ | Passive Earth Pr. Coeff., K _p | Soil Modulus, k _s (pci) | Epsilon 50 Strain |
|--|--|-----------------------------------|----------------------------|---------|----------------------------|---------|---|---|--|--|-------------------------|
| | | | Undrained | Drained | Undrained | Drained | | | | | |
| 21 - 25 | Stratum 2 Very Stiff Clay - Qu>2 | 130 | 4,000 | 200 | 0 | 32 | 0.31 | 0.47 | 3.25 | 1000 | 0.005 |

*Note: Convert to effective unit weight for use in LPILE subtract the unit weight of water below the design groundwater table elevation.

GROUNDWATER CONDITIONS

Groundwater was encountered while drilling in 8 of the 21 borings as summarized in Table 2.

Table 3 - Summary of Borehole Groundwater Observations

| Boring No. | Ground Surface Elevation (ft) | ATD Borehole Groundwater Depth (ft) | ATD Borehole Groundwater Elevation (ft) |
|------------|-------------------------------|-------------------------------------|---|
| CB-1 | 595.8 | None | N/A |
| CB-2 | 595.3 | 8.5 | 586.0 |
| CB-3 | 596.1 | None | N/A |
| CB-4 | 596.9 | None | N/A |
| CB-5 | 595.0 | None | N/A |
| CB-6 | 595.5 | 23.5 | 572.0 |
| CB-7 | 594.7 | None | N/A |
| CB-8 | 593.7 | 21 | 572.7 |
| CB-9 | 595.6 | 13.5 | 582.1 |
| CB-10 | 594.8 | None | N/A |
| DB-1 | 598.7 | None | N/A |

| Boring No. | Ground Surface Elevation (ft) | ATD Borehole Groundwater Depth (ft) | ATD Borehole Groundwater Elevation (ft) |
|------------|-------------------------------|-------------------------------------|---|
| DB-2 | 597.2 | None | N/A |
| DB-3 | 597.2 | None | N/A |
| DB-4 | 596.4 | None | N/A |
| DB-5 | 596.2 | None | N/A |
| DB-6 | 593.2 | None level | N/A |
| DB-7 | 592.9 | None | N/A |
| PB-1 | 595.2 | 38 | 557.2 |
| PB-2 | 594.9 | 16 | 578.9 |
| PB-3 | 594.7 | 11 | 583.7 |
| PB-4 | 582.9 | 13.5 | 592.9 |

The subsurface profile consisted primarily of low permeability clay and silt that in some cases did not indicate the presence of groundwater at the time of drilling. These clay soils are considered saturated or nearly saturated and groundwater infiltration into open excavations should be anticipated during construction. It should be noted that groundwater levels fluctuate over time and are influenced by seasonal precipitation.

ANALYSIS AND RECOMMENDATIONS

In the following sections, we present the results of our analyses and recommendations for the proposed culvert replacement.

Scour Considerations

The design scour elevation should be taken at the bottom of the cutoff wall (IDOT 2023). At the horizontal and L-type wingwalls, the cutoff walls are established 3.0 feet below the culvert invert elevations. To prevent local erosion, we recommend placing stone riprap or a concrete apron at the ends of the culvert. This will also prevent sediments from entering and accumulating in the culvert, minimize long term maintenance, and provide protection to the stream bed at the interface.

Culvert Foundation Treatment and Settlement

Based on our subsurface investigation, the soils at the base of the culvert barrel are expected to be very soft to medium stiff fat clay to silty clay extending to 4.7 to 13.2 feet below culvert base resulting in unacceptable settlements of the new structures. The following options should be considered to mitigate the settlements:

Option 1. Removal and Replacement: This option includes up to 13.5 feet removal of very soft to medium stiff soils from below the culvert base. A summary of undercut depths are tabulated below:

Table 4 - Summary of Anticipated Undercut Depths

| Boring No. | Ground Surface Elevation (ft) | Culvert Invert Elevation (ft) | Suitable Bearing Soil Elevation (ft) | Anticipated Undercut Depth (ft) |
|------------|-------------------------------|-------------------------------|--------------------------------------|---------------------------------|
| CB-1 | 595.8 | 586.5 | 582.3 | 4.5 |
| CB-2 | 595.3 | 586.5 | 581.8 | 5 |
| CB-3 | 596.1 | 586 | 586 | 0 |
| CB-4 | 596.9 | 587.3 | 587.3 | 0 |
| CB-5 | 595.0 | 586 | 577 | 9 |
| CB-6 | 595.5 | 586 | 586 | 0 |
| GSGB3 | 596 | 586 | 572.5 | 13.5 |
| CB-7 | 594.7 | 586.7 | 573.7 | 12.5 |
| CB-8 | 593.7 | 586.9 | 572.7 | 13.5 |
| CB-9 | 595.6 | 586.4 | 586.4 | 0 |
| CB-10 | 594.8 | 585.8 | 573.8 | 12 |

The replacement material could be rockfill capped with 6-inches of CA-7 bedding in accordance with 2017 IDOT Culvert Manual. The removal and replacement should extend 2 feet beyond the edge of the culvert on both sides of the structure. A temporary soil retention system will be required for removal and replacement. Following removal and replacement, the estimated settlements are less than 1 inch and differential settlement is about one-half inch. It should be noted that dewatering can be a significant issue during deep replacement and large shoring systems can be costly.

Option 2. Due to the cost associated with removal and replacement of the unsuitable bearing soil, ground improvement such as aggregate piers and deep foundation alternatives should be considered for support of the structures. Due to vibration concerns with driven piles and equipment constraints with installation of other systems, we recommend using helical piers with pier caps and a Load Transfer Platform. This option includes supporting the new culvert on helical piers with a load transfer platform system. It should be noted that loading information will be required to estimate spacing of the helical piers. For the preliminary estimating purposes, the system may include helical piers installed in a 6 feet by 6 feet rectangular pattern for the entire length of the culvert. The maximum nominal load for a helical pier with a round shaft can be estimated at 73 kips and the corresponding factored resistance available is 40 kips based on the IDOT resistance factor of 0.55 (IDOT 2023). Helical pier lengths will vary due to the presence and thickness of the soft clay layer. The piles should be provided with pile caps and a 24- inch thick load transfer platform should be placed on the top of caps. The load transfer platform should consist of coarse aggregate with IDOT gradation CA-18 and two layers of Tensar BX1200 geogrid or equivalent, placed 6 inches apart above the top of pile caps. After the culverts are placed on this system, we estimate the total, long-term settlement will be less than 1 inch with differential settlement of 0.5 inch or less. This option can be favorable due to the size of equipment required for helical pier installation, minimal excavation and smaller shoring system.

It is important to note that helical piers are considered design build foundation elements where the design is performed by the specialty foundation contractor retained to perform the work. The design build contractor will use their own proprietary design parameters that are applicable to their equipment and installation methods.

In our opinion, both options described above are technically feasible; however, we recommend performing a cost and constructability analysis to choose a preferred option.

Wingwalls

In general, wingwalls types suitable for a cast-in-place culvert include horizontal cantilever and L- type walls. T-type walls and flexible walls such as sheet pile wall and soldier pile and lagging walls could also be considered. Precast or cast-in-place apron wingwalls are typically used with precast culverts.

The horizontal cantilever walls can be considered as they need to be less than 16 feet long (IDOT 2017). Horizontal walls should be designed based on the structural guidelines provided in Sections 4.2 and 4.3 of the IDOT Culvert Manual (IDOT 2017). These wingwalls should be founded at a minimum depth of 3.0 feet below the culvert elevations.

Seismic Site Class

In accordance with the AASHTO LRFD Bridge Design Specifications, 9th Edition, the Seismic Site Class is estimated to be E, the seismic performance zone is 1.0, and the 0.2 and 1.0 accelerations are 0.10g and 0.04g, respectively. Structures in Seismic Performance Zone (SPZ) 1 do not require liquefaction analyses.

Global Stability

Global stability analysis is not typically required when cut and fill slopes are less than 15 feet, which is the case for this project.

Cast-In-Place or Precast Culvert Considerations

Provided the soft clays are removed and replaced in accordance with Option 1, or the structures are supported by helical piers in accordance with Option 2, both cast-in-place and precast culvert options are feasible at the site.

Stage Construction

We understand staged construction will not be required for this project.

Pedestrian Bridge Foundations

Conceptual design calls for pedestrian bridges to be provided to carry the walking paths planned on the east and west sides of the Maicach Pond over Thorn Ditch. No other information was provided on the REL plans provided for this project. We anticipate the pedestrian bridges will be prefabricated steel truss bridge supported by new bridge abutments located on either side of Thorn Ditch.

Borings PB-1 to PB-4 were performed near the pedestrian bridge locations. The borings encountered clay fill in the upper 3 to 6 feet of the profile. The clay fill was described as stiff to very stiff with unconfined compressive strengths ranging from 1.5 to 3.0 tsf and moisture contents ranging from 16.2 to 37.6 percent. A stratum of native brown and/or grey lean clay interbedded with occasional sandy clay or silty clay layers was encountered below the clay fill and the stratum extended to depths ranging from 32 to 36 feet. The clay stratum was described as very stiff to hard with unconfined compressive strengths ranging from 1.2 to 10.0 tsf, with most values greater than 2.0 tsf, and moisture contents ranging from 12.3 to 30.8 percent, with most values near or less than 20 percent. Poor quality limestone bedrock was encountered below the native clay strata and the borings encountered auger refusal on higher quality limestone bedrock at depths ranging from 33.0 to 38.6 feet.

Provided scour is not a concern, we anticipate the bridge abutments will be supported by spread footings extending to the native lean clay stratum described above. Specific recommendations for foundation support for the pedestrian bridges will be provided when further design information is available.

Floodwater Control Ponds

Thorn Ditch will run through the Maicach Park Pond with a small portion of the pond south of the ditch and the remainder on the north side. The pond will be excavated to a depth of about 6 feet, extending to a bottom elevation of 587 feet and the pond floor will slope up to the west to about El. 588 feet. The pond slopes were designed at 4H:1V for stability and maintenance purposes. The low and high water levels are designed at El. 589 feet and El. 595 feet, respectively, resulting in 7.75 AC-FT of floodwater storage. The excavated soil will be removed from the site.

The Pioneer Park Pond will be located on the south side of Thorn Ditch. The pond will be excavated to a depth of about 8 feet, extending to a bottom elevation of 589 feet and the pond floor will slope up to the northwest to about El. 591 feet. The pond slopes were designed at 4H:1V for stability and maintenance purposes. The low and high water levels are designed at El. 587 feet and El. 593.2 feet,

respectively, and the top of the berm separating Thorn Ditch from the pond is designed at El. 593.6 feet, resulting in 3.83 AC-FT of floodwater storage. The excavated soil will be removed from the site.

Borings DB-1 to DB-7 were performed in the pond areas. The borings were terminated at a depth of 15 feet below grade and generally encountered native stiff to hard lean clay. The borings did not encounter groundwater during drilling. At DB-1 to DB-3 an interbedded layer of silt was encountered at a depth of about 6 feet below grade, within the depth of excavation for the ponds. Regardless of whether the borings encountered groundwater during drilling, silt and sand outwash layers are common in this glacial till geology and groundwater is typically encountered in open excavations that encounter these layers. Similar to the culvert borings, soft organic clay was encountered at DB-5 and DB-6. At DB-5 the organic clay was encountered between a depth of 3 to 6 feet below grade. At DB-6 the organic clay was encountered between 3 to 6.5 feet and from 8.5 feet to the termination depth of the boring, 15 feet.

The estimated seasonal high-water table (ESHWT) is the subsurface drainage, or the highest level at which the soil is saturated with water. Saturated soils often have decreased strength and are not suitable for infiltration practices. The detention borings were evaluated for this determination and based on the significant transition from brown to gray soils, the seasonal high groundwater level has been estimated at elevations ranging from about **El. 591 to 593 feet**.

Excavation within the silt and soft/organic clay layers will be difficult due to soft subgrade conditions, the potential for groundwater seepage and sloughing excavation side walls or pond slopes. Dewatering may be required to control groundwater seepage during construction. **Dewatering systems used in these soil types typically consist of either switched, continuously running pumps installed in multiple sumps, or multiple shallow well points connected to a manifold pipe and pneumatic diaphragm pump capable of pumping air or water continuously. An extended duration of pumping is required to dewater fine sand and silt soils and the dewatering should be completed prior to beginning excavation.**

CONSTRUCTION CONSIDERATIONS

Site Preparation

All vegetation, surface topsoil, pavement, and debris should be cleared and stripped where the culvert and culvert wingwalls will be placed.

Excavation, Dewatering, and Utilities

Excavations should be performed in accordance with local, state, and federal regulations. The potential effect of ground movements upon nearby utilities should be considered during construction. Since soft clay soils were encountered in the borings, we recommend considering Temporary Soil Retention System (TSRS). The TSRS can be included as a Pay Item.

The estimated groundwater elevation is at 590 feet, which is about 3 feet above the base elevation of the culverts indicating groundwater control will be required during construction. The EWSE in Thorn Ditch is 587.5 feet. Although the existing ditch flows through the existing CMP and proposed culvert during culvert construction, the groundwater control protected by sheet piles may be required for construction.

Depending upon prevailing weather conditions and the time of the year when culvert and wingwall construction takes place, control runoff and maintenance of existing flows may require temporary water diversion and control. Any water that accumulates in open excavations by seepage or runoff should be immediately removed.

Filling and Backfilling

Fill used as embankment material and for replacement of any unstable or unsuitable soils encountered during construction should be pre-approved by the Engineer. The materials used to backfill around, and to a level at least 1 foot over the top of the culvert box, should be porous granular material conforming to the requirements specified in the IDOT 2020 Supplemental Specifications and Recurring Special Provisions, Granular Backfill for Structures.

Earthwork Operations

The required earthwork can be accomplished with conventional construction equipment. Moisture and traffic will cause deterioration of exposed subgrade soils. Precautions should be taken by the Contractor to prevent water erosion of the exposed subgrade. A compacted subgrade will minimize water runoff erosion.

Earth moving operations should be scheduled to not coincide with excessive cold or wet weather (early spring, late fall or winter). Any soil allowed to freeze or soften due to standing water should be removed. Wet weather can cause problems with subgrade compaction. It is recommended that an experienced geotechnical engineer be retained to inspect the exposed subgrade, monitor earthwork operations, and provide material inspection services during the construction phase of this project.

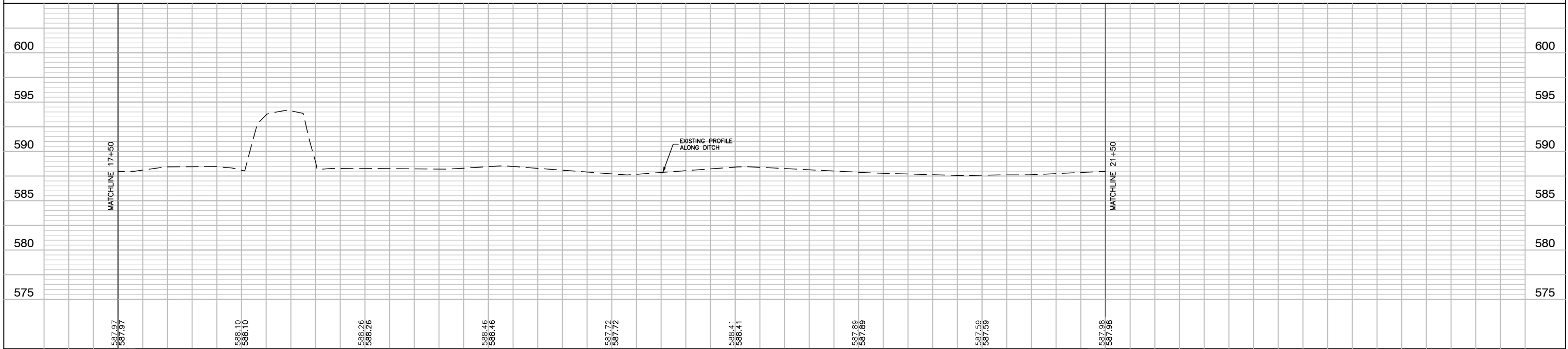
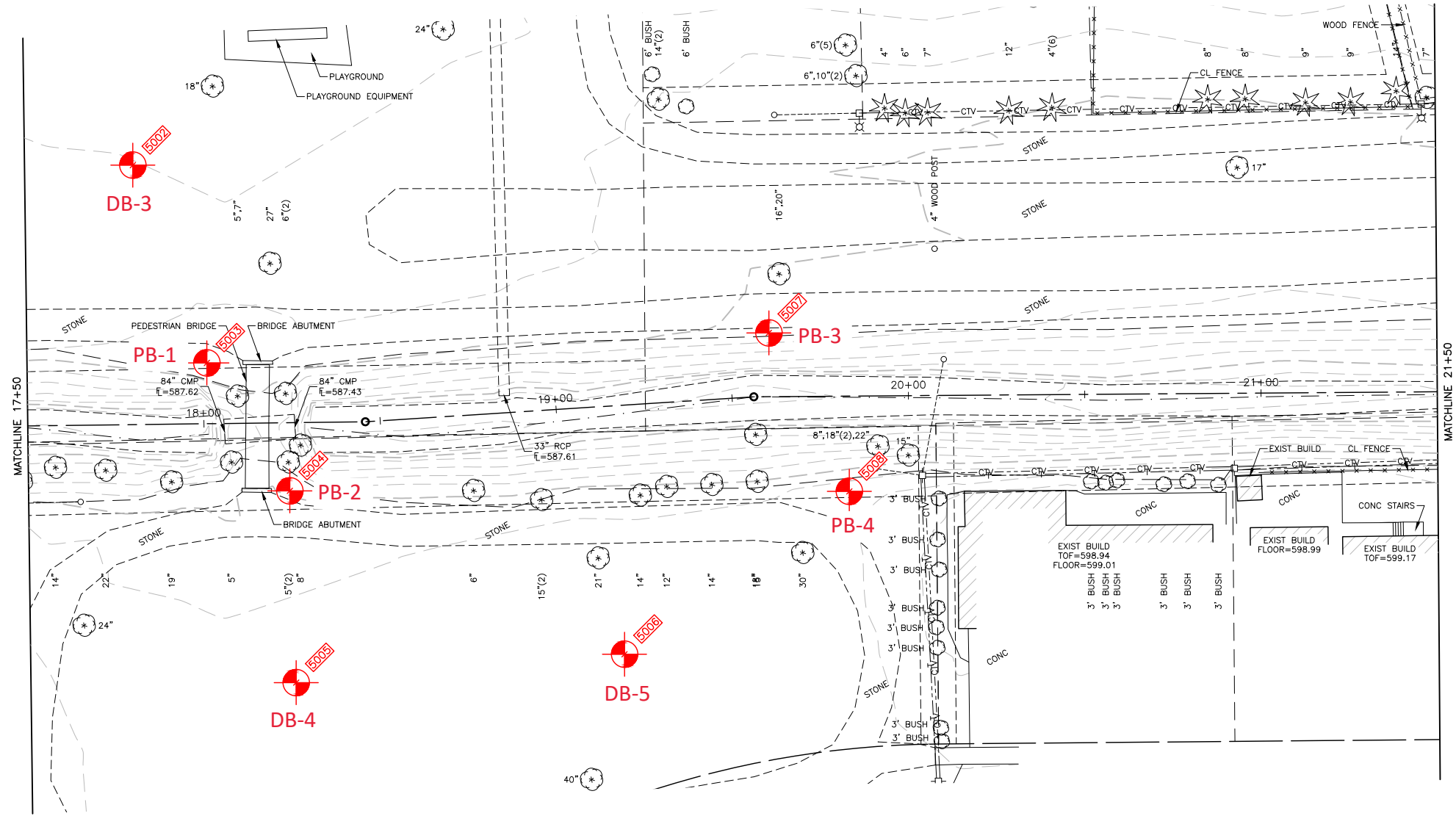
GENERAL COMMENTS

This geotechnical exploration and analysis has been conducted to aid in the evaluation of the subsurface conditions on the subject site. The recommendations presented herein are based on the available soil information obtained and the design information provided. Any changes in the soil conditions encountered during construction, design, or location should be brought to the attention of the soils engineer to determine if modifications in the recommendations are required. The final design plans and specifications should also be reviewed by the Geotechnical Engineer to determine that the recommendations presented herein have been interpreted and implemented as intended. It is recommended that the earthwork and foundation operations be monitored by the Geotechnical Engineer, to test and evaluate the bearing capacities, and the selection, placement and compaction of controlled fills.

This geotechnical study has been conducted in a manner consistent with that level of care ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. The findings, recommendations, and opinions contained herein have been promulgated in accordance with generally accepted practice in the fields of foundation engineering, soils mechanics, and engineering geology. No other representations, expressed or implied, and no warranty or guarantee is included or intended in this report.



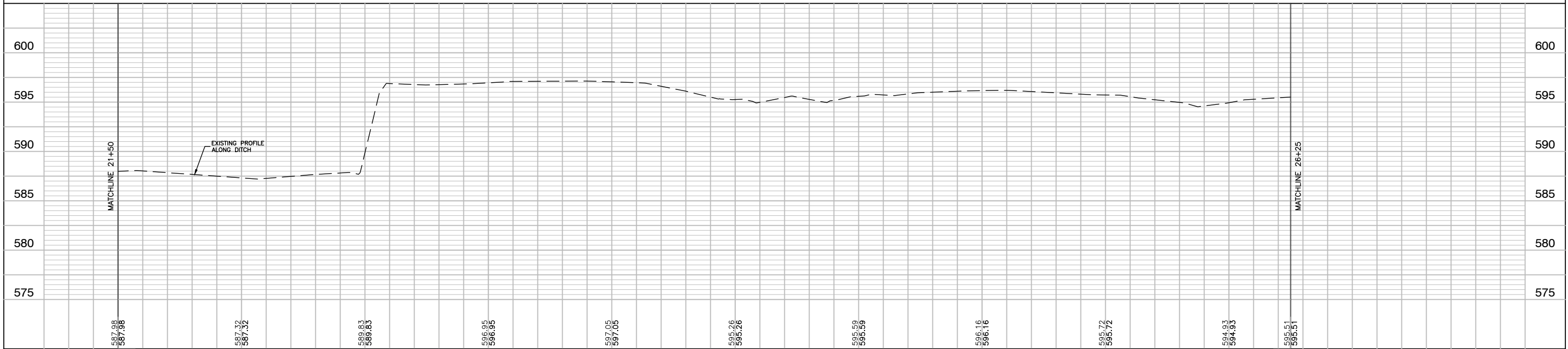
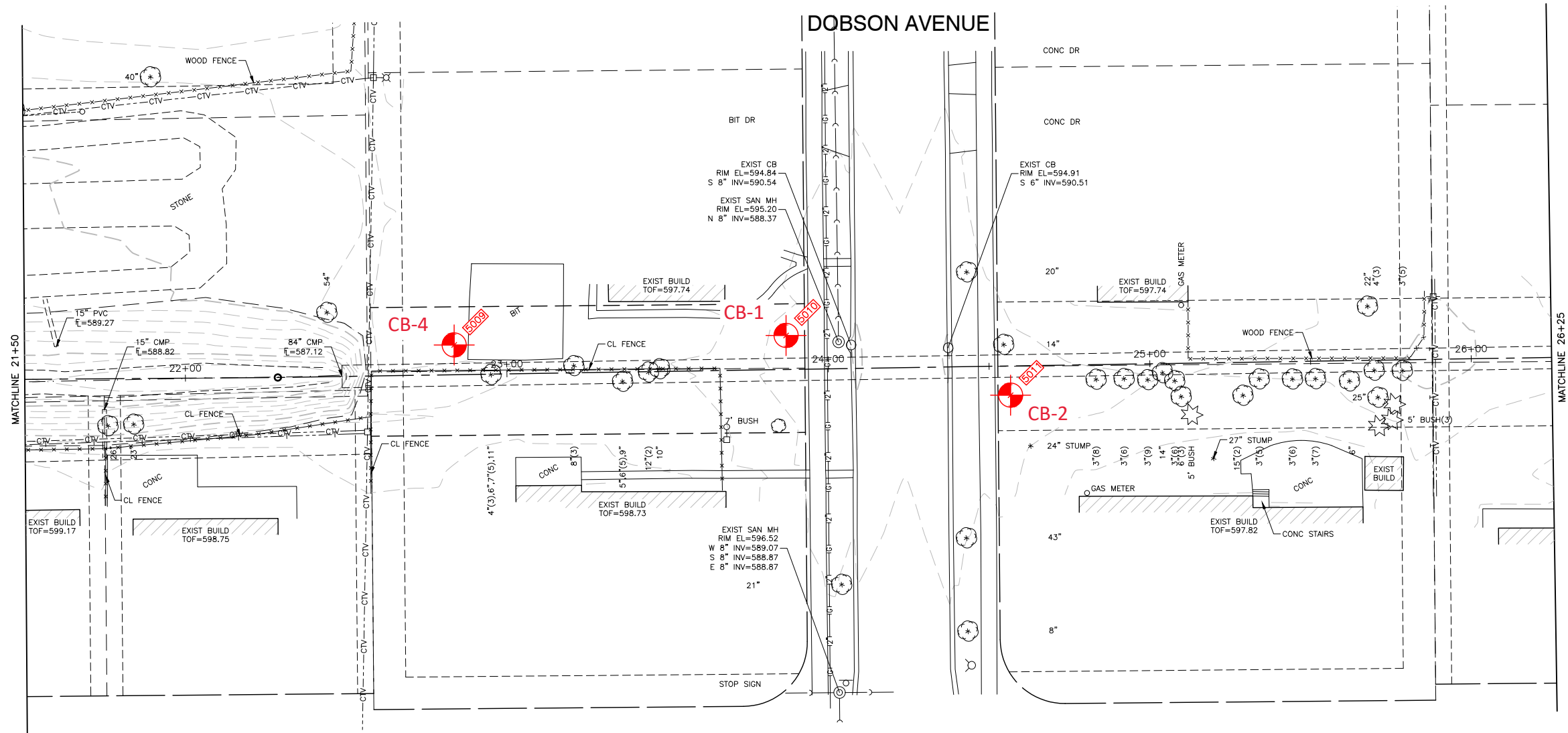
APPENDIX I



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| FILE NAME = 23R0646-BRNG-STKE-01 | | | | CHECKED — AG | | | | REVISED — | | | | | | | |
| | | | | | | | | THORN DITCH PROPOSED IMPROVEMENTS EXISTING CONDITIONS | | | | VILLAGE of SOUTH HOLLAND | | | |
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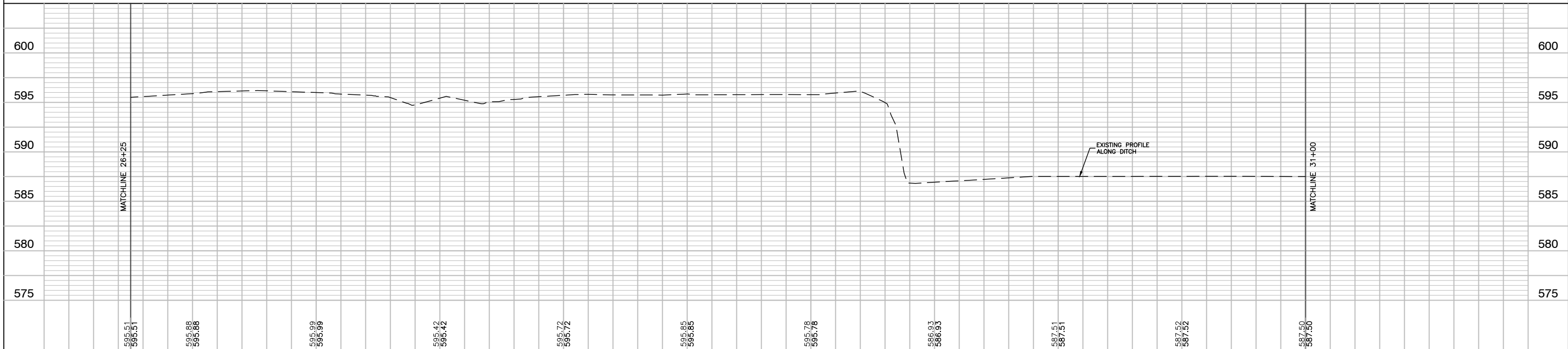
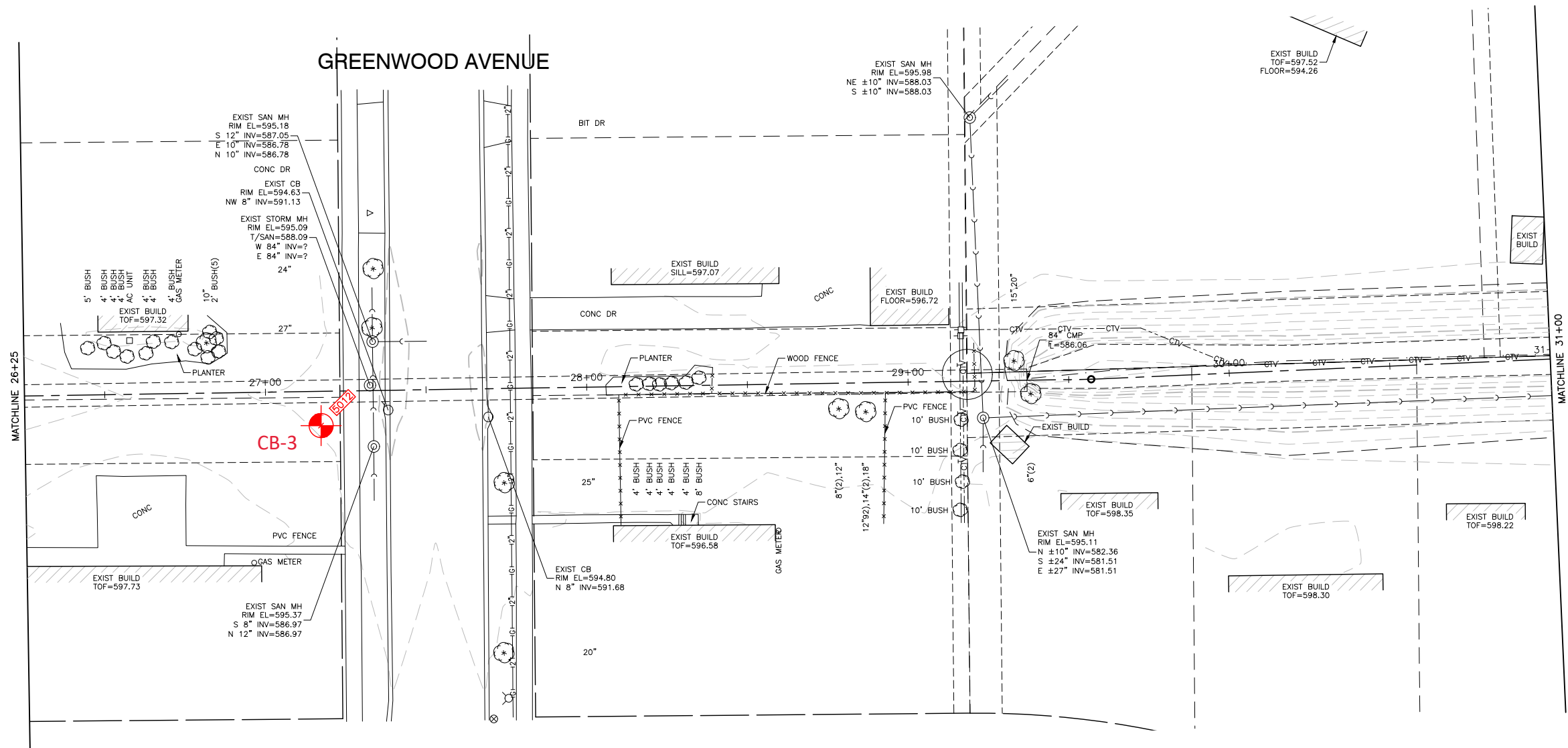
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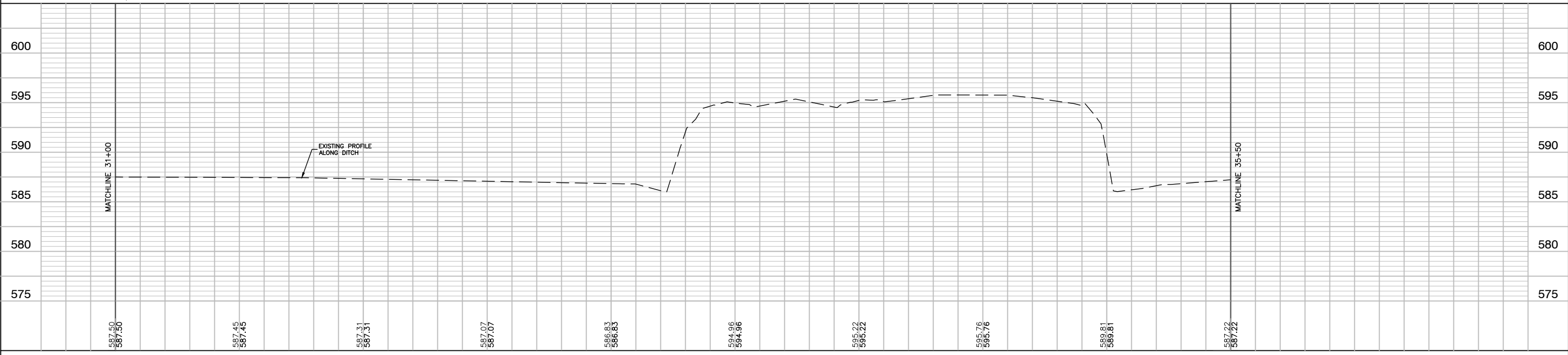
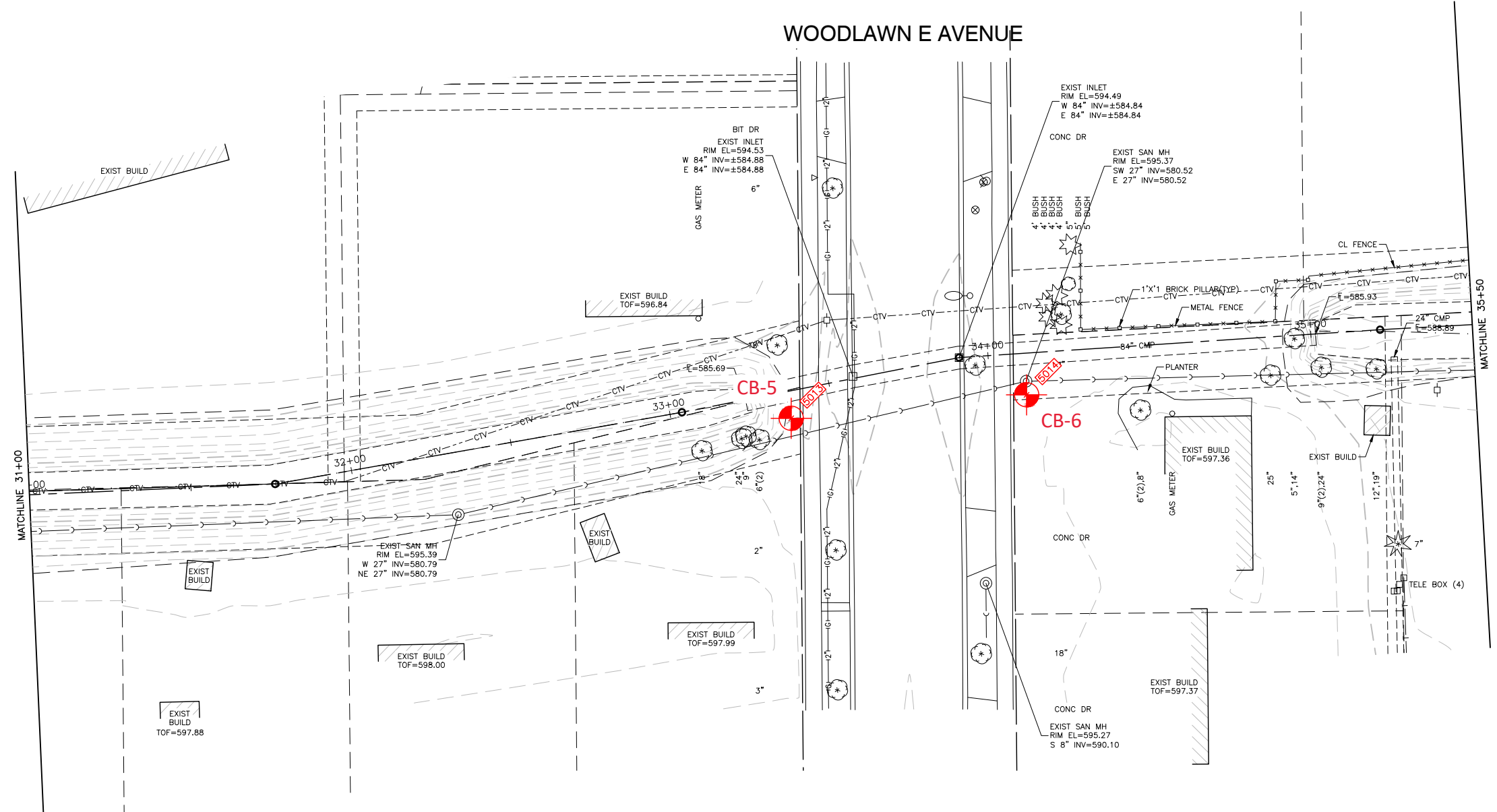
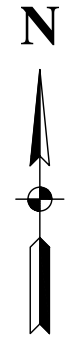
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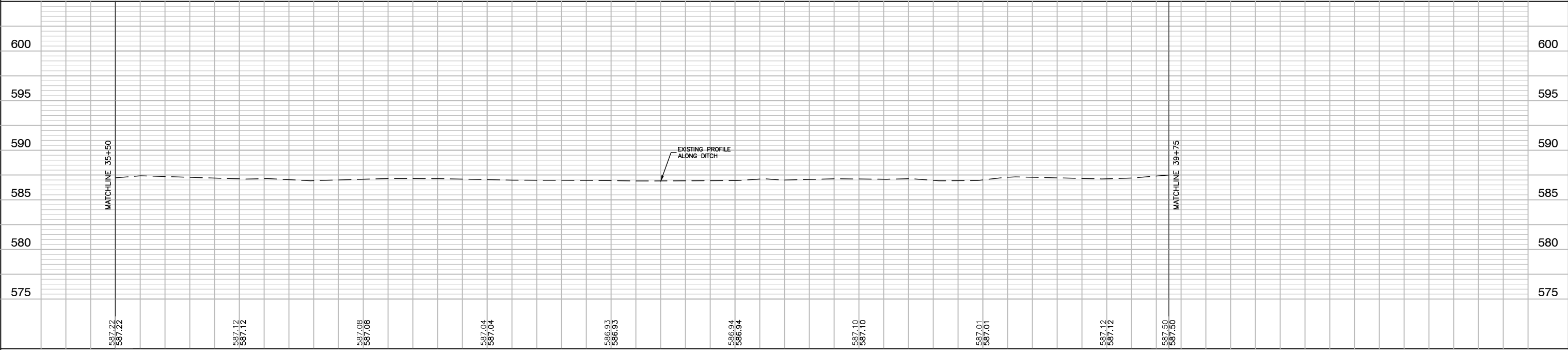
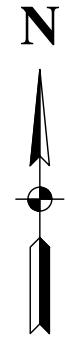
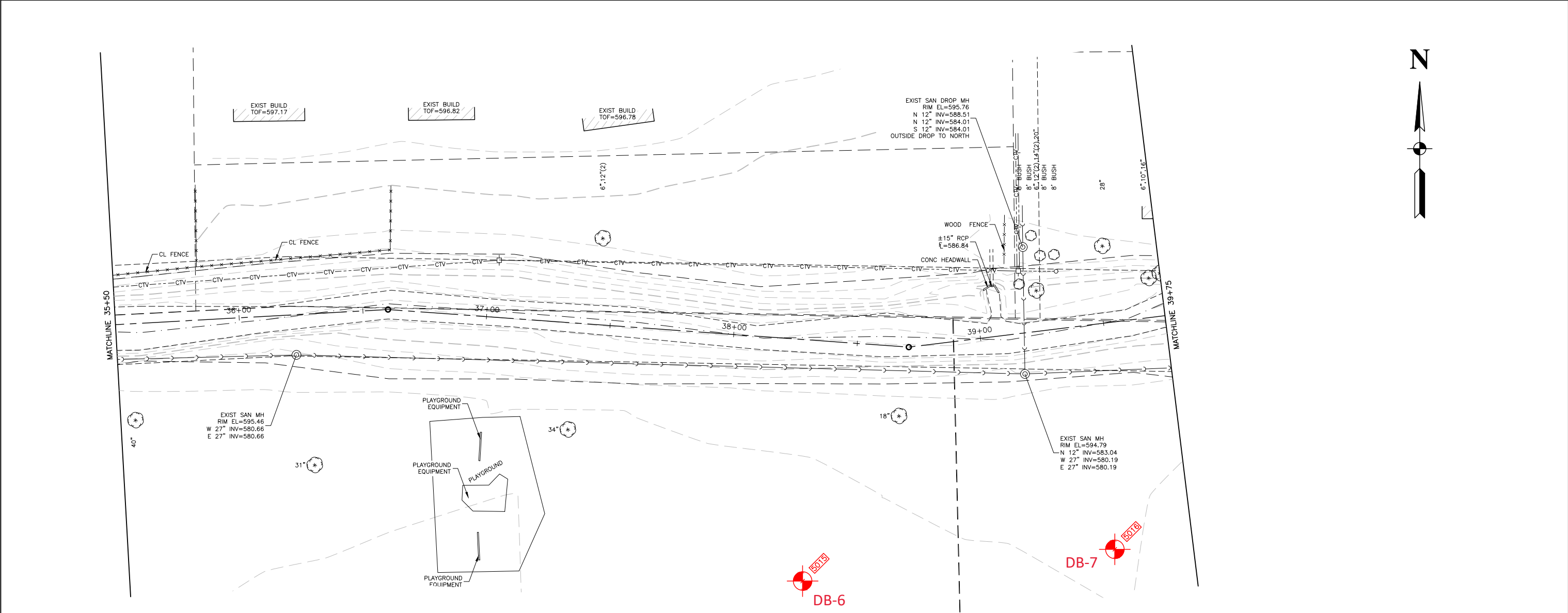


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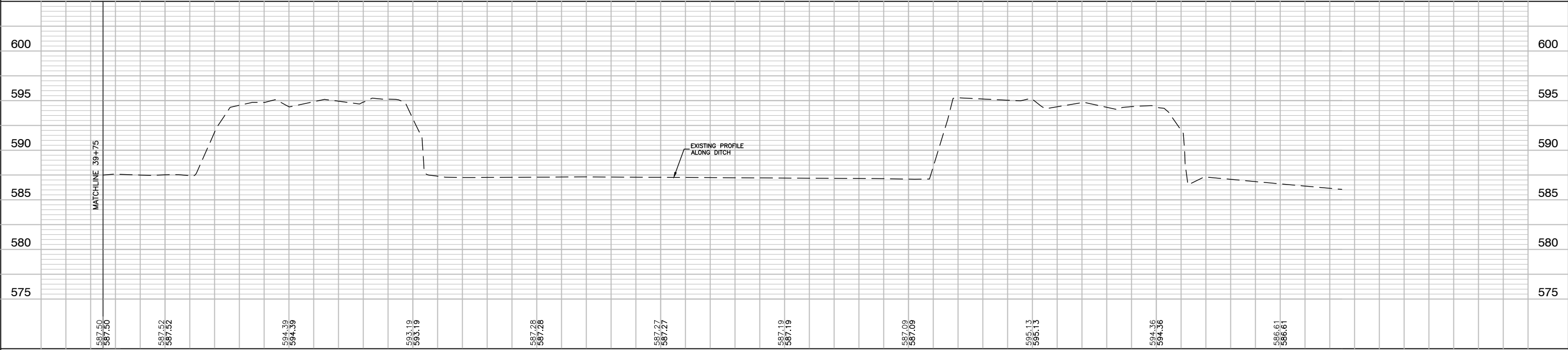
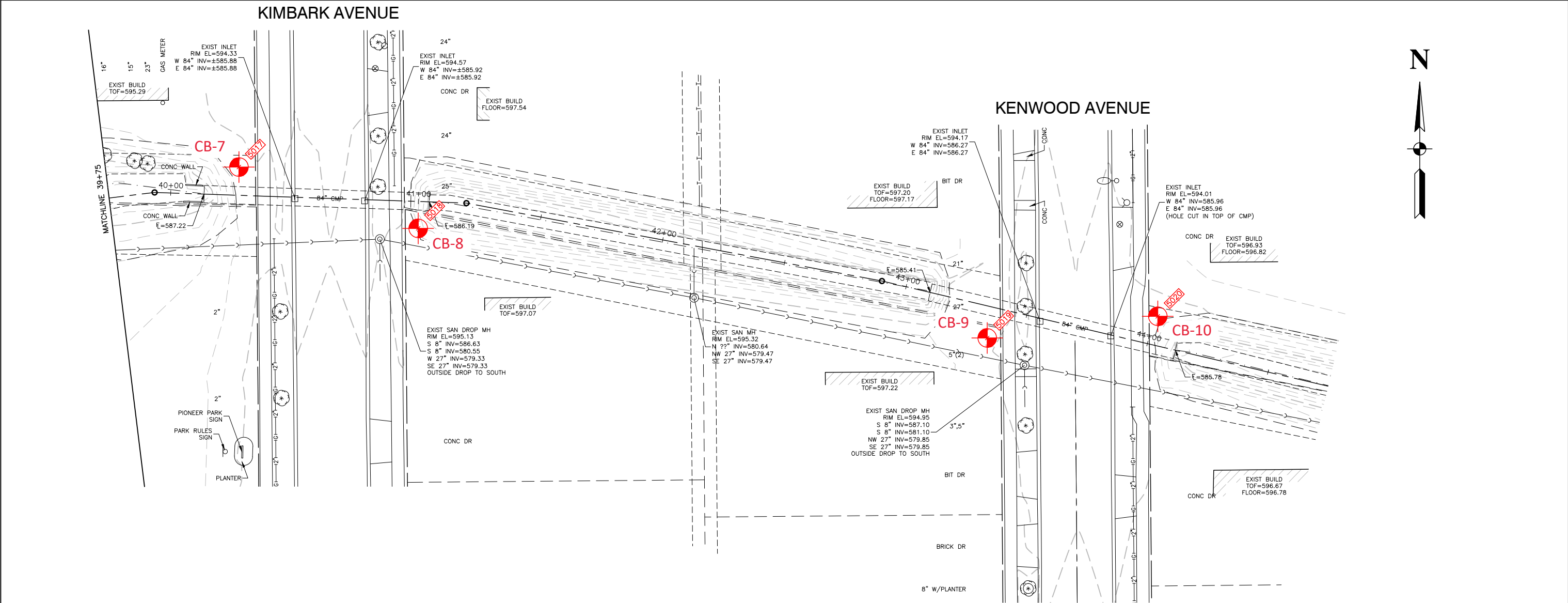
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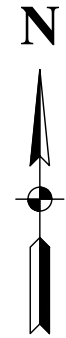
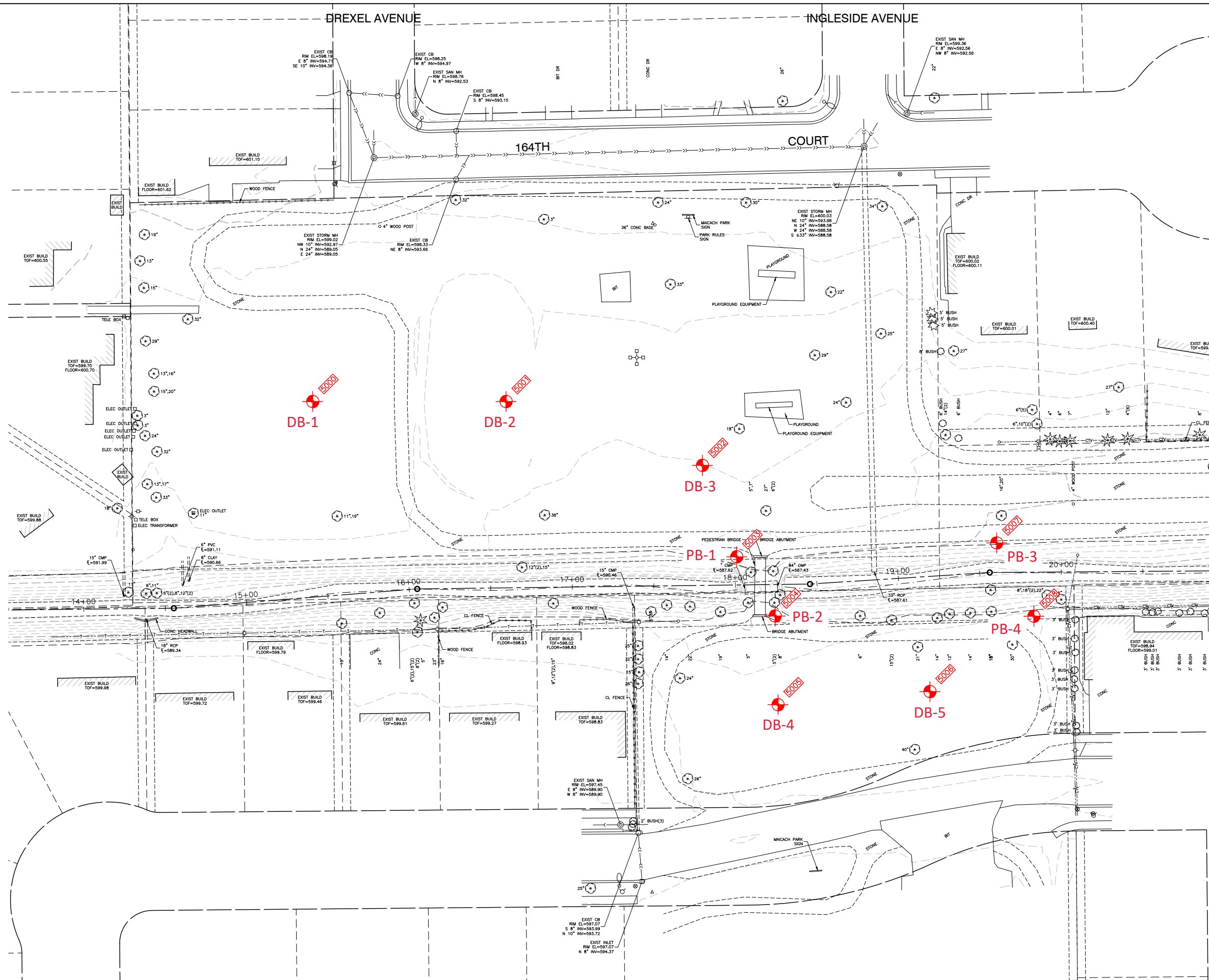
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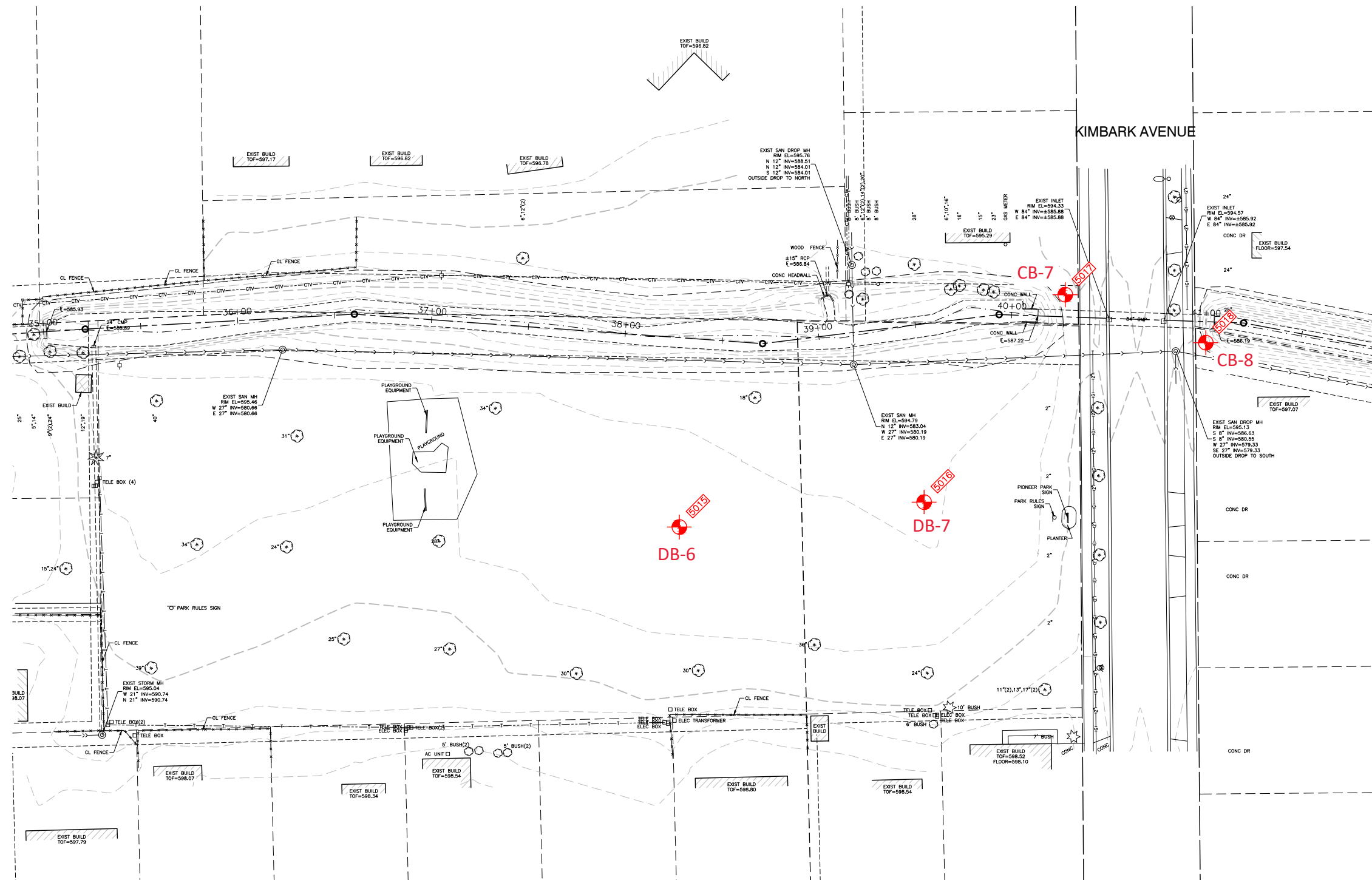
THORN DITCH
PROPOSED IMPROVEMENTS
EXISTING CONDITIONS

VILLAGE
of
SOUTH HOLLAND

SHEET NO.
8 of 15



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THORN DITCH
PROPOSED IMPROVEMENTS
PIONEER PARK DETENTION POND

VILLAGE
of
SOUTH HOLLAND

SHEET NO.
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BORING NO. CB-1

PAGE 1 OF 1

CLIENT Robinson Engineering, Ltd. **PROJECT NAME** Thorn Ditch
PROJECT NUMBER 24-G0400 **PROJECT LOCATION** South Holland, IL
DATE COMPLETED 4/19/24 **LOGGED BY** TW/KE **DRILLING METHOD** 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|--|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 595.5 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | brown and gray SILTY CLAY hard | X SS 1 | 100 | 4-4-5 (9) | 4.5+ | | 18.4 | | | | | |
| | 592.8 | | black, brown, and gray FAT CLAY trace organics stiff to very stiff | X SS 2 | 44 | 2-2-3 (5) | 2.0 | 1.8 | 30.3 | | | | | |
| 5 | | | | X SS 3 | 78 | 2-2-3 (5) | 2.0 | 2.2 | 28.9 | | | | | |
| | | | | X SS 4 | 61 | 2-1-2 (3) | 2.0 | 1.7 | 30.9 | | | 55 | 20 | 35 |
| | 584.8 | | gray ORGANIC LEAN CLAY stiff | X SS 5 | 89 | 2-1-1 (2) | 1.0 | 1.2 | 62.2 | | | | | |
| | 582.3 | | gray LEAN CLAY medium stiff, moist | X SS 6 | 100 | 1-1-2 (3) | 0.5 | 0.7 | 25.2 | | | | | |
| 15 | | | | X SS 7 | 89 | 5-7-10 (17) | 4.5+ | 5.4 | 19.6 | | | | | |
| | 579.8 | | brown and gray LEAN CLAY hard | X SS 8 | 100 | 4-5-6 (11) | 4.5+ | 5.3 | 18.4 | | | | | |
| | 577.3 | | gray LEAN CLAY very stiff to hard | X SS 9 | 100 | 3-4-6 (10) | 3.5 | 3.7 | 18.4 | | | 36 | 18 | 18 |
| 20 | | | | X SS 10 | 100 | 4-6-10 (16) | 4.5+ | 5.3 | 15.8 | | | | | |
| 25 | 570.8 | | | | | | | | | | | | | |

Bottom of borehole at 25.0 feet.

COMPLETION DEPTH 25 ft **GROUND ELEVATION** 595.8 ft
CAVE DEPTH ft **BACKFILL** Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES

STA 23+87.01 Offset 10.6 LT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



BORING NO. CB-2

PAGE 1 OF 1

CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/19/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|---|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 595.0 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | dark brown and brown LEAN CLAY trace topsoil in SS1 very stiff | X SS 1 | 67 | 3-4-6 (10) | 3.25 | | 21.0 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 2 | 56 | 2-3-3 (6) | 3.5 | 3.8 | 20.9 | | | | | |
| 5 | 589.3 | | | | | | | | | | | | | |
| | | | black, brown, and gray FAT CLAY trace organics stiff to very stiff, moist | X SS 3 | 56 | 2-2-3 (5) | 2.5 | 2.6 | 38.5 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 4 | 100 | 1-2-2 (4) | 1.5 | 1.4 | 38.3 | | | | | |
| 10 | 584.3 | | | | | | | | | | | | | |
| | | | dark gray ORGANIC LEAN CLAY stiff | X SS 5 | 100 | 1-1-1 (2) | 1.0 | 1.0 | 64.4 | | | | | |
| | 581.8 | | | | | | | | | | | | | |
| | | | gray LEAN CLAY soft, very, moist | X SS 6 | 44 | 1-1-2 (3) | 0.5 | 0.4 | 26.9 | | | | | |
| 15 | 579.3 | | | | | | | | | | | | | |
| | | | gray LEAN CLAY very stiff to hard | X SS 7 | 100 | 4-7-9 (16) | 4.5+ | 7.4 | 16.8 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 8 | 100 | 3-5-7 (12) | 4.5+ | 5.2 | 19.0 | | | | | |
| 20 | | | | | | | | | | | | | | |
| | | | | X SS 9 | 100 | 3-4-5 (9) | 3.0 | 3.2 | 18.9 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 10 | 100 | 3-5-6 (11) | 3.5 | 3.8 | 18.5 | | | | | |
| 25 | 570.3 | | | | | | | | | | | | | |

Bottom of borehole at 25.0 feet.

COMPLETION DEPTH 25 ft GROUND ELEVATION 595.3 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 8.50 ft / Elev 586.80 ft
▼ AT END OF DRILLING 15.00 ft / Elev 580.30 ft
AFTER DRILLING ---

NOTES

STA 24+56.55 Offset 9.1 RT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



BORING NO. CB-3

PAGE 1 OF 1

CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/19/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|----------------------------|--------------------|------------------|-----------------------|------------------------|--------------------------|----------------------|--------------------|---------------------|------------------|---------------|------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 595.8 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | brown SILTY CLAY | X SS 1 | 56 | 3-5-5 (10) | 3.5 | | 20.7 | | | | | |
| | 593.1 | | very stiff | | | | | | | | | | | |
| | | | brown and gray LEAN CLAY | X SS 2 | 67 | 3-4-5 (9) | 3.0 | 2.8 | 21.4 | | | | | |
| 5 | | | trace roots in SS2 and SS3 | | | | | | | | | | | |
| | | | very stiff to hard | X SS 3 | 100 | 3-2-4 (6) | 2.5 | 2.3 | 24.2 | | | | | |
| | | | | X SS 4 | 100 | 2-3-5 (8) | 3.5 | 3.4 | 26.8 | | | | | |
| 10 | | | | X SS 5 | 100 | 5-5-7 (12) | 4.0 | 3.8 | 23.4 | | | 36 | 21 | 15 |
| | | | | X SS 6 | 100 | 3-6-9 (15) | 4.5+ | 6.0 | 20.7 | | | | | |
| 15 | 580.1 | | gray LEAN CLAY | X SS 7 | 100 | 3-5-8 (13) | 3.5 | 3.4 | 18.9 | | | | | |
| | | | very stiff to hard | X SS 8 | 100 | 4-4-7 (11) | 3.5 | 3.4 | 18.8 | | | | | |
| 20 | | | | X SS 9 | 100 | 4-4-7 (11) | 3.75 | 3.8 | 18.6 | | | | | |
| | | | | X SS 10 | 100 | 4-5-9 (14) | 4.25 | 4.4 | 14.6 | | | | | |
| 25 | 571.1 | | | | | | | | | | | | | |

Bottom of borehole at 25.0 feet.

COMPLETION DEPTH 25 ft GROUND ELEVATION 596.1 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES

STA 27+17.15 Offset 10.7 RT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



BORING NO. CB-4

PAGE 1 OF 1

CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/19/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|--------------------------------|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 596.6 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | dark brown to brown SILTY CLAY | X SS 1 | 67 | 3-4-4 (8) | 2.5 | | 20.6 | | | | | |
| | | | trace topsoil in SS1 | | | | | | | | | | | |
| | | | very stiff | | | | | | | | | | | |
| 5 | | | | X SS 2 | 78 | 3-4-5 (9) | 2.0 | 2.0 | 25.4 | | | | | |
| | 590.9 | | brown CLAYEY SILT | X SS 3 | 100 | 5-5-4 (9) | | | 27.1 | | | | | |
| | | | loose, moist | | | | | | | | | | | |
| | 588.4 | | brown and gray LEAN CLAY | X SS 4 | 100 | 2-3-4 (7) | 3.5 | 3.5 | 24.7 | | | | | |
| 10 | | | very stiff | X SS 5 | 100 | 2-3-4 (7) | 2.5 | 2.2 | 25.4 | | | | | |
| | 583.9 | | gray LEAN CLAY | X SS 6 | 100 | 2-3-3 (6) | 2.0 | 1.9 | 19.4 | | | | | |
| 15 | | | trace silt | X SS 7 | 89 | 3-3-4 (7) | 2.25 | 2.2 | 21.5 | | | | | |
| | | | stiff to hard | X SS 8 | 100 | 2-3-4 (7) | 2.25 | 2.3 | 20.8 | | | | | |
| 20 | | | moist in SS6 | X SS 9 | 100 | 4-4-7 (11) | 3.5 | 3.4 | 19.0 | | | | | |
| | | | | X SS 10 | 100 | 3-6-9 (15) | 4.5+ | 5.4 | 13.0 | | | | | |
| 25 | 571.9 | | | | | | | | | | | | | |

Bottom of borehole at 25.0 feet.

COMPLETION DEPTH 25 ft GROUND ELEVATION 596.9 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES

STA 22+83.75 Offset 9.3 LT

Boring offset approximately 12 ft north due to overhead trees.

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



BORING NO. CB-5

PAGE 1 OF 1

CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/19/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|---|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 594.7 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | brown SILTY CLAY hard | SS 1 | 72 | 4-4-5 (9) | 4.0 | | 18.2 | | | | | |
| | 592.0 | | | | | | | | | | | | | |
| | | | brown and gray LEAN CLAY trace sand stiff | SS 2 | 67 | 2-3-4 (7) | 1.75 | | 27.5 | | | | | |
| 5 | | | | | | | | | | | | | | |
| | 589.0 | | black, dark brown, and gray ORGANIC CLAY medium stiff to stiff | SS 3 | 44 | 2-1-2 (3) | 1.25 | 1.2 | 40.8 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 4 | 83 | 1-2-1 (3) | 0.75 | | 43.3 | | | | | |
| 10 | | | | | | | | | | | | | | |
| | 584.0 | | gray LEAN CLAY medium stiff | SS 5 | 100 | 1-1-1 (2) | 0.75 | 0.6 | 68.4 | | | 46 | 23 | 23 |
| | 582.0 | | | | | | | | | | | | | |
| | | | dark gray and black ORGANIC CLAY very soft to soft | SS 6 | 100 | 1-1-1 (2) | 0.5 | 0.4 | 49.6 | | | | | |
| 15 | | | | | | | | | | | | | | |
| | | | | SS 7 | 83 | WOH-1-1 (2) | 0.25 | | 80.6 | | 9.0 | | | |
| | 577.0 | | | | | | | | | | | | | |
| | | | gray LEAN CLAY very stiff to hard | SS 8 | 100 | 1-2-3 (5) | 3.0 | 3.0 | 22.8 | | | | | |
| 20 | | | | | | | | | | | | | | |
| | | | | SS 9 | 100 | 8-5-9 (14) | 4.5+ | 5.2 | 17.9 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 10 | 100 | 4-5-7 (12) | 4.5+ | 4.6 | 17.8 | | | | | |
| 25 | 570.0 | | | | | | | | | | | | | |

Bottom of borehole at 25.0 feet.

COMPLETION DEPTH 25 ft GROUND ELEVATION 595 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES

STA 33+36.50 Offset 8.4 RT

Boring offset approximately 5 ft east due to overhead power lines.

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



BORING NO. CB-6

PAGE 1 OF 1

CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/19/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|---------------------------------------|--------------------|------------------|-----------------------|------------------------|--------------------------|----------------------|--------------------|---------------------|------------------|---------------|------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 595.2 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | dark brown CLAY (FILL) | X SS 1 | 67 | 3-4-4 (8) | 3.75 | | 20.6 | | | | | |
| | 592.5 | | trace topsoil | | | | | | | | | | | |
| | | | very stiff | | | | | | | | | | | |
| 5 | | | black, brown, and gray LEAN CLAY | X SS 2 | 72 | 3-3-3 (6) | 2.0 | 2.0 | 32.4 | | | | | |
| | | | trace organics | | | | | | | | | | | |
| | | | stiff to very stiff | | | | | | | | | | | |
| | | | | X SS 3 | 56 | 2-2-3 (5) | 2.0 | 2.2 | 26.8 | | | | | |
| 10 | | | | X SS 4 | 33 | 1-2-2 (4) | 1.5 | 1.4 | 28.2 | | | | | |
| | | | slight manure odor in SS4 | | | | | | | | | | | |
| | | | | X SS 5 | 33 | 2-2-3 (5) | 1.0 | 1.1 | 27.1 | | | | | |
| 15 | | | | X SS 6 | 67 | 2-2-3 (5) | 1.0 | 1.0 | 15.9 | | | | | |
| | 579.5 | | dark gray and black ORGANIC LEAN CLAY | X SS 7 | 100 | 2-1-1 (2) | 0.5 | 0.6 | 94.7 | | 5.9 | | | |
| | | | medium stiff | | | | | | | | | | | |
| | 577.0 | | gray LEAN CLAY | X SS 8 | 78 | WOH-2-3 (5) | 1.0 | 1.0 | 27.2 | | | | | |
| 20 | | | stiff to hard | | | | | | | | | | | |
| | | | moist in SS8 and SS9 | X SS 9 | 89 | 2-3-5 (8) | 1.0 | 1.1 | 26.0 | | | | | |
| | | | | | | | | | | | | | | |
| 25 | 570.5 | | | X SS 10 | 100 | 4-5-8 (13) | 4.5+ | 4.8 | 17.6 | | | | | |

Bottom of borehole at 25.0 feet.

COMPLETION DEPTH 25 ft GROUND ELEVATION 595.5 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 23.50 ft / Elev 572.00 ft
▼ AT END OF DRILLING 23.50 ft / Elev 572.00 ft
AFTER DRILLING ---

NOTES

STA 34+11.09 Offset 12.9 RT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THOR



BORING NO. CB-7

PAGE 1 OF 1

CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/18/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|---|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 594.4 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | dark brown CLAY (FILL) trace gravel stiff | X SS 1 | 44 | 3-3-3 (6) | 1.5 | | 19.7 | | | | | |
| | 591.7 | | brown SILTY CLAY stiff | X SS 2 | 61 | 2-3-2 (5) | 1.5 | | 21.0 | | | | | |
| 5 | | | | | | | | | | | | | | |
| | 588.7 | | black LEAN CLAY trace organics very stiff | X SS 3 | 67 | 2-3-5 (8) | 2.0 | 2.1 | 35.0 | | | | | |
| | 586.2 | | | | | | | | | | | | | |
| | | | brown and gray LEAN CLAY stiff | X SS 4 | 83 | 2-1-3 (4) | 1.75 | 1.8 | 30.2 | | | | | |
| 10 | | | | | | | | | | | | | | |
| | 583.7 | | gray FAT CLAY very soft to stiff | X SS 5 | 100 | 1-2-1 (3) | 0.5 | 0.6 | 58.3 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 6 | 100 | 1-1-1 (2) | 0.75 | 0.8 | 66.5 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 7 | 100 | 1-1-1 (2) | 0.25 | 0.3 | 74.0 | | 5.0 | | | |
| | | | with shells in SS7 and SS8 | | | | | | | | | | | |
| | | | | X SS 8 | 100 | 1-1-1 (2) | 1.25 | 1.1 | 70.1 | | | | | |
| | | | | | | | | | | | | | | |
| | | | gray LEAN CLAY stiff to hard | X SS 9 | 100 | 1-2-2 (4) | 1.25 | 1.1 | 27.2 | | | | | |
| | | | moist in SS9 | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 25 | 569.7 | | | X SS 10 | 89 | 3-6-8 (14) | 4.5+ | 6.8 | 18.7 | | | | | |

Bottom of borehole at 25.0 feet.

COMPLETION DEPTH 25 ft GROUND ELEVATION 594.7 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES

STA 40+27.15 Offset 11.4 LT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

CLIENT Robinson Engineering, Ltd. **PROJECT NAME** Thorn Ditch
PROJECT NUMBER 24-G0400 **PROJECT LOCATION** South Holland, IL
DATE COMPLETED 4/18/24 **LOGGED BY** TW/KE **DRILLING METHOD** 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|---|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 593.4 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | brown SILTY CLAY very stiff | X SS 1 | 44 | 3-5-5 (10) | 2.0 | | 17.3 | | | | | |
| | | | | | | | | | | | | | | |
| 5 | | | | X SS 2 | 56 | 3-5-6 (11) | 3.75 | | 17.4 | | | | | |
| | 587.7 | | | | | | | | | | | | | |
| | | | dark brown and gray LEAN CLAY trace sand very stiff | X SS 3 | 56 | 3-3-5 (8) | 3.0 | | 27.3 | | | | | |
| | 585.2 | | | | | | | | | | | | | |
| | | | gray and black LEAN CLAY stiff | X SS 4 | 67 | 2-2-3 (5) | 1.75 | 1.6 | 27.3 | | | | | |
| 10 | | | | | | | | | | | | | | |
| | 582.7 | | | | | | | | | | | | | |
| | | | dark gray FAT CLAY medium stiff, moist | X SS 5 | 100 | 1-1-1 (2) | 0.5 | 0.6 | 51.1 | | | | | |
| | | | | | | | | | | | | | | |
| 15 | | | | X SS 6 | 100 | WOH-1-1 (2) | 0.75 | 0.8 | 67.7 | | 3.6 | | | |
| | 577.7 | | | | | | | | | | | | | |
| | | | black and gray ORGANIC SILT trace shells very loose | X SS 7 | 100 | 1-1-1 (2) | | | 78.8 | | | 63 | 48 | 15 |
| | | | | | | | | | | | | | | |
| | | | | X SS 8 | 100 | WOH-1-1 (2) | | | 74.6 | | 7.3 | | | |
| 20 | | | | | | | | | | | | | | |
| | 572.7 | | | | | | | | | | | | | |
| | | | gray LEAN CLAY very soft to hard | X SS 9 | 100 | WOH-1-2 (3) | <0.25 | | 25.1 | | | | | |
| | | | very moist in SS9 | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 25 | 568.7 | | | X SS 10 | 100 | 3-6-9 (15) | 4.5+ | 6.0 | 20.8 | | | | | |

Bottom of borehole at 25.0 feet.

COMPLETION DEPTH 25 ft **GROUND ELEVATION** 593.7 ft
CAVE DEPTH ft **BACKFILL** Soil Cuttings
GROUND WATER LEVELS:
 ▽ **AT TIME OF DRILLING** 21.00 ft / Elev 572.70 ft
 ▼ **AT END OF DRILLING** 21.00 ft / Elev 572.70 ft
AFTER DRILLING ---

NOTES

STA 41+00.29 Offset 10.9 RT

Boring offset approximately 5 ft west due to overhead trees.

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

 Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



BORING NO. CB-9

PAGE 1 OF 1

CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/18/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|--------------------------------|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 595.2 | | 5" TOPSOIL | | | | | | | | | | | |
| | | | dark brown and black LEAN CLAY | X SS 1 | 67 | 2-2-3 (5) | 4.0 | | 20.0 | | | | | |
| | | | trace gravel and organics | | | | | | | | | | | |
| | | | hard | | | | | | | | | | | |
| 5 | | | | X SS 2 | 78 | 2-3-6 (9) | 4.25 | | 21.8 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 3 | 61 | 3-4-4 (8) | 4.0 | 4.1 | 22.2 | | | | | |
| | 587.1 | | | | | | | | | | | | | |
| | | | brown and gray LEAN CLAY | X SS 4 | 67 | 2-1-3 (4) | 1.5 | | 24.7 | | | | | |
| 10 | | | stiff to hard | | | | | | | | | | | |
| | | | moist and trace roots in SS4 | | | | | | | | | | | |
| | | | | X SS 5 | 83 | 2-2-3 (5) | 2.0 | 2.0 | 25.2 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 6 | 100 | 2-3-5 (8) | 4.0 | 3.7 | 21.8 | | | | | |
| 15 | | | | | | | | | | | | | | |
| | | | | X SS 7 | 89 | 4-3-5 (8) | 4.5 | 4.4 | 21.3 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 8 | 100 | 5-6-10 (16) | 4.5+ | 8.0 | 20.3 | | | | | |
| 20 | | | | | | | | | | | | | | |
| | 574.6 | | gray LEAN CLAY | X SS 9 | 100 | 5-6-9 (15) | 4.5+ | 4.4 | 18.4 | | | | | |
| | | | hard | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 10 | 100 | 3-5-6 (11) | 4.5+ | 4.6 | 18.4 | | | | | |
| 25 | 570.6 | | | | | | | | | | | | | |

Bottom of borehole at 25.0 feet.

COMPLETION DEPTH 25 ft GROUND ELEVATION 595.6 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 13.50 ft / Elev 582.10 ft
▼ AT END OF DRILLING 13.50 ft / Elev 582.10 ft
AFTER DRILLING ---

NOTES

STA 43+36.59 Offset 12.6 RT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



BORING NO. CB-10

PAGE 1 OF 1

CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/18/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|---|--------------------|------------------|-----------------------|------------------------|--------------------------|----------------------|--------------------|---------------------|------------------|---------------|------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 594.5 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | dark brown CLAY (FILL) trace topsoil and gravel stiff | X SS 1 | 61 | 3-3-2 (5) | 1.0 | | 21.5 | | | | | |
| | 591.8 | | | | | | | | | | | | | |
| | | | brown LEAN CLAY stiff | X SS 2 | 56 | 3-3-2 (5) | 2.0 | 1.9 | 20.3 | | | | | |
| 5 | | | | | | | | | | | | | | |
| | 588.8 | | | | | | | | | | | | | |
| | | | black, brown, and gray LEAN CLAY stiff to very stiff | X SS 3 | 100 | 2-2-3 (5) | 2.5 | 2.8 | 31.1 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 10 | | | | X SS 4 | 78 | 2-1-2 (3) | 1.5 | 1.2 | 37.5 | | | | | |
| | | | | | | | | | | | | | | |
| | 583.8 | | | | | | | | | | | | | |
| | | | dark gray FAT CLAY very soft to soft | X SS 5 | 100 | 1-1-1 (2) | 0.25 | 0.3 | 46.8 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 15 | | | | X SS 6 | 100 | 1-1-1 (2) | 0.25 | 0.4 | 62.7 | | | 51 | 28 | 23 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 7 | 100 | WOH-1-1 (2) | 0.25 | 0.4 | 77.1 | | 8.0 | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 20 | | | | X SS 8 | 100 | WOH-1-1 (2) | 0.25 | 0.3 | 75.4 | | | | | |
| | | | | | | | | | | | | | | |
| | 573.8 | | | | | | | | | | | | | |
| | | | gray LEAN CLAY medium stiff to stiff, moist | X SS 9 | 83 | 2-1-1 (2) | 1.0 | 1.0 | 27.3 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 25 | 569.8 | | | X SS 10 | 89 | 2-2-3 (5) | 0.75 | 0.8 | 24.8 | | | | | |

Bottom of borehole at 25.0 feet.

COMPLETION DEPTH 25 ft GROUND ELEVATION 594.8 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES

STA 44+00.44 Offset 10.0 LT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/16/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|---|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 598.2 | | 6" TOPSOIL | | | | | | | | | | | |
| | | | dark brown and gray LEAN CLAY very stiff slight manure odor | SS 1 | 83 | 6-3-3 (6) | 2.75 | 2.8 | 27.5 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 2 | 100 | 4-4-7 (11) | 3.0 | 3.0 | 20.7 | | | | | |
| 5 | | | | | | | | | | | | | | |
| | 592.7 | | brown SILT medium dense, moist | SS 3 | 100 | 3-8-10 (18) | | | 23.3 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 4 | 100 | 8-12-7 (19) | | | 23.2 | | | | | |
| 10 | | | | | | | | | | | | | | |
| | 587.7 | | brown and gray LEAN CLAY hard | SS 5 | 100 | 3-3-5 (8) | 4.0 | 4.2 | 25.1 | | | | | |
| | 585.7 | | | | | | | | | | | | | |
| | | | gray LEAN CLAY very stiff | SS 6 | 100 | 2-2-4 (6) | 2.0 | 2.1 | 25.0 | | | | | |
| 15 | 583.7 | | | | | | | | | | | | | |

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft GROUND ELEVATION 598.7 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES
STA 15+50.12 Offest 119.6 LT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:41 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/16/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|---|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 596.7 | | 6" TOPSOIL | | | | | | | | | | | |
| | | | black and dark brown CLAY (FILL) trace topsoil very stiff | SS 1 | 83 | 3-3-4 (7) | 2.0 | | 27.4 | | | | | |
| | 594.2 | | brown SILTY CLAY very stiff | SS 2 | 89 | 3-3-3 (6) | 3.0 | 2.8 | 22.3 | | | | | |
| 5 | | | | | | | | | | | | | | |
| | 591.2 | | brown SILT medium dense, moist | SS 3 | 100 | 6-7-11 (18) | | | 22.6 | | | | | |
| | 588.7 | | | | | | | | | | | | | |
| | | | brown LEAN CLAY very stiff | SS 4 | 100 | 3-3-4 (7) | 3.0 | 3.2 | 25.5 | | | | | |
| 10 | | | | | | | | | | | | | | |
| | 586.2 | | gray LEAN CLAY very stiff | SS 5 | 100 | 3-3-3 (6) | 2.0 | 2.0 | 24.8 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 6 | 100 | 2-4-6 (10) | 3.5 | 3.5 | 22.1 | | | | | |
| 15 | 582.2 | | | | | | | | | | | | | |

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft GROUND ELEVATION 597.2 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES
STA 16+60.83 Offset 114.2 LT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/16/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|--|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 596.7 | | 6" TOPSOIL | | | | | | | | | | | |
| | | | black and brown SANDY CLAY (FILL) trace gravel stiff | SS 1 | 33 | 2-2-3 (5) | 1.0 | 1.1 | 13.9 | | | | | |
| | 594.2 | | brown LEAN CLAY stiff | SS 2 | 56 | 2-2-4 (6) | 1.25 | 1.3 | 29.1 | | | | | |
| 5 | | | | | | | | | | | | | | |
| | 590.7 | | brown CLAYEY SILT loose | SS 3 | 100 | 5-4-5 (9) | | | 23.1 | | | | | |
| | 588.7 | | brown and gray LEAN CLAY very stiff to hard | SS 4 | 100 | 2-4-6 (10) | 4.5+ | 5.8 | 22.7 | | | | | |
| 10 | | | | | | | | | | | | | | |
| | | | | SS 5 | 100 | 2-3-5 (8) | 3.0 | 3.2 | 25.4 | | | | | |
| | 584.2 | | gray LEAN CLAY very stiff | | | | | | | | | | | |
| | | | | SS 6 | 100 | 3-3-4 (7) | 2.5 | 2.6 | 28.8 | | | | | |
| 15 | 582.2 | | | | | | | | | | | | | |

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft GROUND ELEVATION 597.2 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES
STA 17+80.74 Offset 73.6 LT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/17/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|--|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 595.9 | | 6" TOPSOIL | | | | | | | | | | | |
| | | | black and dark brown CLAY (FILL) trace gravel hard | SS 1 | 72 | 3-4-5 (9) | 4.0 | 4.3 | 20.2 | | | | | |
| | 592.4 | | brown SILTY CLAY very stiff | SS 2 | 78 | 3-4-5 (9) | 2.5 | | 23.5 | | | | | |
| 5 | 590.4 | | brown and gray LEAN CLAY stiff to hard | SS 3 | 100 | 2-2-3 (5) | 2.0 | 1.9 | 23.0 | | | | | |
| | | | | SS 4 | 100 | 3-2-5 (7) | 2.5 | 2.5 | 23.0 | | | | | |
| 10 | | | | SS 5 | 100 | 4-4-6 (10) | 4.5+ | 4.7 | 26.9 | | | | | |
| | 583.4 | | gray LEAN CLAY stiff, moist | SS 6 | 100 | 2-3-6 (9) | 1.5 | 1.8 | 22.5 | | | | | |
| 15 | 581.4 | | | | | | | | | | | | | |

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft GROUND ELEVATION 596.4 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES
STA 18+25.23 Offset 73.8 RT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/17/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|---|--------------------|------------------|-----------------------|------------------------|--------------------------|----------------------|--------------------|---------------------|------------------|---------------|------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 595.7 | | 6" TOPSOIL | | | | | | | | | | | |
| | | | black and dark brown CLAY (FILL) with sand and gravel, trace topsoil very stiff | SS 1 | 44 | 3-3-6 (9) | 2.5 | 2.5 | 22.6 | | | | | |
| | 593.2 | | black ORGANIC LEAN CLAY very stiff | SS 2 | 67 | 4-4-7 (11) | 2.0 | | 39.6 | | 6.0 | | | |
| 5 | | | | | | | | | | | | | | |
| | 590.2 | | brown and gray LEAN CLAY very stiff to hard trace roots in SS3 | SS 3 | 89 | 3-3-4 (7) | 3.0 | 3.5 | 23.7 | | | | | |
| | | | | SS 4 | 100 | 2-2-3 (5) | 2.75 | 2.9 | 22.5 | | | | | |
| 10 | | | | SS 5 | 100 | 2-2-4 (6) | 3.5 | 3.3 | 21.6 | | | | | |
| | | | | SS 6 | 100 | 4-5-7 (12) | 4.5+ | 8.0 | 19.2 | | | | | |
| 15 | 581.2 | | | | | | | | | | | | | |

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft GROUND ELEVATION 596.2 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES
STA 19+14.89 Offset 70.5 RT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/17/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|---|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 592.9 | | 4" TOPSOIL dark brown LEAN CLAY trace organics stiff | SS 1 | 72 | 2-2-2 (4) | 1.5 | 1.4 | 27.3 | | | | | |
| | 590.2 | | black ORGANIC LEAN CLAY stiff | SS 2 | 56 | 1-2-3 (5) | 1.0 | | 41.8 | | | | | |
| 5 | | | | | | | | | | | | | | |
| | 586.7 | | brown and gray LEAN CLAY stiff | SS 3 | 78 | 1-2-3 (5) | 1.75 | 1.7 | 31.6 | | | | | |
| | 584.7 | | | | | | | | | | | | | |
| | | | gray ORGANIC LEAN CLAY soft to medium stiff | SS 4 | 100 | 1-1-1 (2) | 0.5 | 0.8 | 72.9 | | 4.3 | | | |
| 10 | | | | | | | | | | | | | | |
| | | | | SS 5 | 100 | WOH-1-1 (2) | 0.25 | 0.3 | 87.8 | | | | | |
| | 580.2 | | black and dark brown ORGANIC LEAN CLAY very soft | | | | | | | | | | | |
| | | | | SS 6 | 100 | WOH-1-1 (2) | <0.25 | | 115.4 | | 13.2 | | | |
| 15 | 578.2 | | | | | | | | | | | | | |

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft GROUND ELEVATION 593.2 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES
STA 38+34.90 Offset 97.3 RT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/17/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|--|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 592.6 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | black and gray LEAN CLAY trace organics very stiff | SS 1 | 72 | 2-2-4 (6) | 2.5 | 2.5 | 24.8 | | | | | |
| | 589.9 | | | | | | | | | | | | | |
| | | | brown and gray LEAN CLAY very stiff to hard | SS 2 | 89 | 2-4-5 (9) | 4.0 | 4.0 | 26.5 | | | | | |
| 5 | | | | | | | | | | | | | | |
| | | | trace organics at 6 ft | SS 3 | 94 | 3-5-5 (10) | 4.5+ | 4.8 | 23.0 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | |
| | 581.9 | | gray LEAN CLAY very stiff | SS 5 | 100 | 2-4-5 (9) | 2.5 | 2.7 | 20.1 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 15 | 577.9 | | | SS 6 | 100 | 3-3-6 (9) | 3.5 | 3.6 | 18.8 | | | | | |

Bottom of borehole at 15.0 feet.

COMPLETION DEPTH 15 ft GROUND ELEVATION 592.9 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- Dry upon completion
AFTER DRILLING ---

NOTES
STA 39+43.41 Offset 91.1 RT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/16/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|--|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 594.7 | | 6" TOPSOIL | | | | | | | | | | | |
| | | | black and dark brown CLAY (FILL) trace gravel very stiff | SS 1 | 89 | 3-3-4 (7) | 3.0 | | 18.1 | | | | | |
| | 592.2 | | | | | | | | | | | | | |
| | | | brown and gray LEAN CLAY trace silt very stiff | SS 2 | 100 | 2-4-5 (9) | 2.0 | 2.2 | 21.5 | | | | | |
| 5 | | | | | | | | | | | | | | |
| | | | | SS 3 | 100 | 3-5-6 (11) | 2.25 | 2.4 | 23.8 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 4 | 100 | 3-3-4 (7) | 3.75 | 3.7 | 26.8 | | | | | |
| 10 | | | | | | | | | | | | | | |
| | 584.2 | | gray LEAN CLAY stiff to hard | SS 5 | 100 | 3-3-5 (8) | 2.25 | 2.4 | 27.7 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 6 | 100 | 4-5-10 (15) | 3.5 | 3.4 | 19.9 | | | | | |
| 15 | | | moist in SS6 | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 7 | 100 | 2-3-4 (7) | 1.25 | 1.4 | 19.8 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 8 | 100 | 2-6-4 (10) | 2.5 | 2.5 | 20.1 | | | | | |
| 20 | | | | | | | | | | | | | | |

COMPLETION DEPTH 38.58 ft GROUND ELEVATION 595.2 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 38.00 ft / Elev 557.20 ft
▼ AT END OF DRILLING 38.00 ft / Elev 557.20 ft
AFTER DRILLING ---

NOTES
STA 18+01.04 Offset 17.3 LT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/16/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|---|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 20 | | | gray LEAN CLAY stiff to hard (continued) | SS 9 | 100 | 4-3-7 (10) | 3.0 | 3.1 | 18.8 | | | | | |
| | | | | SS 10 | 100 | 7-9-13 (22) | 4.5+ | 8.5 | 14.4 | | | | | |
| 25 | | | | SS 11 | 100 | 6-9-15 (24) | 4.5+ | 10.0 | 13.5 | | | | | |
| | | | | SS 12 | 100 | 6-8-12 (20) | 4.5+ | 9.6 | 13.6 | | | | | |
| | | | | | | | | | | | | | | |
| | 562.2 | | GRAVEL or POSSIBLE WEATHERED LIMESTONE very dense, wet poor recovery | SS 13 | 100 | 50/1" | | | 5.6 | | | | | |
| 35 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | 556.6 | | | SS 14 | 100 | 50/1" | | | 12.3 | | | | | |
| | | | Refusal at 38.6 feet. Bottom of borehole at 38.6 feet. | | | | | | | | | | | |

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/17/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|---|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 594.6 | | 4" TOPSOIL | | | | | | | | | | | |
| | | | black and dark brown CLAY (FILL) trace gravel stiff | SS 1 | 44 | 2-2-2 (4) | 1.5 | | 16.2 | | | | | |
| | 590.9 | | | | | | | | | | | | | |
| | | | dark brown SANDY CLAY trace gravel very stiff | SS 2 | 44 | 2-2-3 (5) | 2.0 | | 30.8 | | | | | |
| | 588.9 | | | | | | | | | | | | | |
| | | | brown and gray LEAN CLAY very stiff | SS 3 | 78 | 2-2-3 (5) | 2.0 | 2.2 | 27.9 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 4 | 89 | 2-2-2 (4) | 2.0 | 2.0 | 23.9 | | | | | |
| 10 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 5 | 94 | 2-3-3 (6) | 2.25 | 2.2 | 25.8 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 6 | 100 | 3-3-4 (7) | 2.0 | 2.0 | 21.4 | | | | | |
| 15 | | | | | | | | | | | | | | |
| | 578.9 | | gray LEAN CLAY very stiff to hard | SS 7 | 100 | 4-4-5 (9) | 2.25 | 2.4 | 19.9 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 8 | 100 | 2-4-5 (9) | 2.25 | 2.4 | 20.5 | | | | | |
| 20 | | | | | | | | | | | | | | |

COMPLETION DEPTH 37.5 ft GROUND ELEVATION 594.9 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 16.00 ft / Elev 578.90 ft
▼ AT END OF DRILLING 16.00 ft / Elev 578.90 ft
AFTER DRILLING ---

NOTES
STA 18+24.11 Offset 19.3 RT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THOR



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/17/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|--|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 20 | | | gray LEAN CLAY very stiff to hard (continued) | SS 9 | 100 | 5-6-8 (14) | 4.5+ | 5.1 | 16.2 | | | | | |
| | | | | SS 10 | 100 | 5-8-10 (18) | 4.0 | 4.4 | 17.7 | | | | | |
| 25 | | | | SS 11 | 100 | 5-9-16 (25) | 4.5+ | 7.8 | 14.7 | | | | | |
| | | | | SS 12 | 100 | 4-11-16 (27) | 4.5+ | 6.6 | 15.6 | | | | | |
| 30 | | | | | | | | | | | | | | |
| | 561.9 | | gray SANDY CLAY with gravel stiff, wet | SS 13 | 40 | 50/5" | 1.0 | | 17.5 | | | | | |
| 35 | | | | | | | | | | | | | | |
| | 558.9 | | POSSIBLE WEATHERED LIMESTONE | | | | | | | | | | | |
| | 557.4 | | | | | | | | | | | | | |

Refusal at 37.5 feet.
Bottom of borehole at 37.5 feet.

Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THOR



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/16/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|--|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 594.2 | | 6" TOPSOIL | | | | | | | | | | | |
| | | | black to dark gray CLAY (FILL) very stiff | SS 1 | 72 | 3-2-3 (5) | 3.0 | | 31.1 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 2 | 100 | 2-2-2 (4) | 2.0 | 2.1 | 37.6 | | | | | |
| 5 | | | | | | | | | | | | | | |
| | 588.7 | | brown and gray LEAN CLAY very stiff | SS 3 | 89 | 2-2-3 (5) | 2.0 | 2.0 | 29.8 | | | | | |
| | 586.7 | | dark gray LEAN CLAY trace organics stiff | SS 4 | 100 | 1-1-2 (3) | 1.0 | 1.2 | 26.3 | | | | | |
| 10 | | | | | | | | | | | | | | |
| | 583.7 | | brown and gray LEAN CLAY very stiff to hard | SS 5 | 89 | 2-2-4 (6) | 3.0 | 2.9 | 24.5 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 6 | 89 | 3-4-6 (10) | 4.5+ | 5.3 | 20.6 | | | | | |
| 15 | | | | | | | | | | | | | | |
| | 578.7 | | gray LEAN CLAY very stiff to hard | SS 7 | 89 | 4-4-6 (10) | 3.5 | 3.4 | 20.4 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 8 | 100 | 3-3-5 (8) | 2.5 | 2.6 | 20.4 | | | | | |
| 20 | | | | | | | | | | | | | | |

COMPLETION DEPTH 33 ft GROUND ELEVATION 594.7 ft
CAVE DEPTH ft BACKFILL Soil Cuttings
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 11.00 ft / Elev 583.70 ft
▼ AT END OF DRILLING 18.00 ft / Elev 576.70 ft
AFTER DRILLING ---

NOTES
STA 19+60.56 Offset 18.1 LT

Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction.

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GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/16/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|--|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 20 | | | gray LEAN CLAY very stiff to hard (continued) | X SS 9 | 100 | 3-4-9 (13) | 4.0 | 4.4 | 17.0 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 10 | 100 | 3-7-9 (16) | 4.5+ | 5.4 | 16.7 | | | | | |
| 25 | | | | | | | | | | | | | | |
| | | | | X SS 11 | 100 | 7-10-15 (25) | 4.5+ | 8.0 | 15.3 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | X SS 12 | 100 | 6-9-14 (23) | 4.5+ | 7.3 | 14.3 | | | | | |
| 30 | | | | | | | | | | | | | | |
| | 562.7 | | POSSIBLE WEATHERED LIMESTONE | | | | | | | | | | | |
| | 561.7 | | | | | | | | | | | | | |

Refusal at 33.0 feet.
Bottom of borehole at 33.0 feet.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/17/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|-------------|---|--------------------|------------------|-----------------------|------------------------|--------------------------|----------------------|--------------------|---------------------|------------------|---------------|------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 0 | | | | | | | | | | | | | | |
| | 596.2 | | 3" TOPSOIL | | | | | | | | | | | |
| | | | black and brown CLAY (FILL) trace gravel and roots very stiff to hard | SS 1 | 67 | 2-3-4 (7) | 2.5 | | 18.3 | | | | | |
| | | | | | | | | | | | | | | |
| | 591.9 | | | SS 2 | 89 | 3-4-6 (10) | 4.5 | | 24.1 | | | | | |
| 5 | | | brown and gray LEAN CLAY stiff to hard | | | | | | | | | | | |
| | | | | SS 3 | 89 | 2-3-5 (8) | 3.75 | 3.8 | 26.1 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 4 | 89 | 2-2-2 (4) | 1.5 | 1.6 | 24.5 | | | | | |
| 10 | | | | | | | | | | | | | | |
| | | | | SS 5 | 100 | 2-2-3 (5) | 2.75 | 2.8 | 24.4 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 6 | 100 | 3-4-6 (10) | 4.0 | 4.1 | 24.2 | | | | | |
| 15 | | | | | | | | | | | | | | |
| | | | | SS 7 | 100 | 3-5-6 (11) | 4.0 | 4.3 | 23.0 | | | | | |
| | 578.4 | | | | | | | | | | | | | |
| | | | gray LEAN CLAY stiff to hard | | | | | | | | | | | |
| | | | | SS 8 | 100 | 3-4-5 (9) | 1.75 | 1.8 | 21.4 | | | | | |
| 20 | | | | | | | | | | | | | | |

| | |
|---|---|
| COMPLETION DEPTH 34.5 ft GROUND ELEVATION 596.4 ft | NOTES STA 19+83.04 Offset 27.0 RT Boring offset approximately 5 ft west due to overhead trees. Groundwater levels were recorded during drilling and may not represent the groundwater conditions at the time of construction. |
| CAVE DEPTH ft BACKFILL Soil Cuttings | |
| GROUND WATER LEVELS: ▽ AT TIME OF DRILLING 13.50 ft / Elev 582.90 ft ▼ AT END OF DRILLING 13.50 ft / Elev 582.90 ft AFTER DRILLING --- | |
| Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes. | |

GPS STANDARD GEOTECH LOG - OZ STD DATA TEMPLATE.GDT - 6/18/24 10:42 - K:\GEOTECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, ILL\LAB\24-G0400 THORI



CLIENT Robinson Engineering, Ltd. PROJECT NAME Thorn Ditch
PROJECT NUMBER 24-G0400 PROJECT LOCATION South Holland, IL
DATE COMPLETED 4/17/24 LOGGED BY TW/KE DRILLING METHOD 3.25 in. HSA

| DEPTH (ft) | ELEVATION (ft.) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS | | |
|---------------|-----------------|----------------|---|-----------------------|---------------------|-----------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------|---------------------|
| | | | | | | | | | | | | LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX |
| 20 | | | gray LEAN CLAY stiff to hard (continued) | | | | | | | | | | | |
| | | | moist in SS9 | SS 9 | 100 | 3-5-5 (10) | 2.0 | 1.9 | 20.2 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | SS 10 | 100 | 4-6-9 (15) | 4.5+ | 5.4 | 16.4 | | | | | |
| 25 | | | | | | | | | | | | | | |
| | 570.4 | | | | | | | | | | | | | |
| | | | gray SILTY CLAY with sand very stiff | SS 11 | 100 | 4-11-17 (28) | 3.5 | | 12.3 | | | | | |
| | 568.4 | | | | | | | | | | | | | |
| | | | gray LEAN CLAY hard | SS 12 | 100 | 4-9-11 (20) | 4.5+ | 9.6 | 14.0 | | | | | |
| 30 | | | | | | | | | | | | | | |
| | 563.4 | | | | | | | | | | | | | |
| | | | gray SANDY SILT trace gravel very dense | SS 13 | 100 | 50/5" | | | 7.3 | | | | | |
| | 561.9 | | | | | | | | | | | | | |

Refusal at 34.5 feet.
Bottom of borehole at 34.5 feet.

Lines of Demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

GPS GEO GENERAL NOTES - OZ STD DATA TEMPLATE.GDT - 5/24/24 11:22 - K:\GEO\TECHNICAL\2024\24-G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, IL\LAB\24-G0400 THORN DIT

















GENERAL NOTES

| | | | |
|----------------|----------------------------|------------------|-------------------|
| CLIENT | Robinson Engineering, Ltd. | PROJECT NAME | Thorn Ditch |
| PROJECT NUMBER | 24-G0400 | PROJECT LOCATION | South Holland, IL |

SAMPLE IDENTIFICATION

Visual soil classifications are made in general accordance with the United Soil Classification System (USCS) on the basis of textural and particle size categorization, and various soil behavior characteristics. Visual classifications should be substantiated by appropriate laboratory testing when a more exact soil identification is required to satisfy specific project applications criteria.

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D-2487-98)

| MATERIAL TYPES | CRITERIA FOR ASSIGNING SOIL GROUP NAMES | | | GROUP SYMBOL | SOIL GROUP NAMES & LEGEND | |
|--|--|---|---|--------------|---------------------------|---|
| COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE | GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE | CLEAN GRAVELS <5% FINES | $C_u \geq 4$ AND $1 \leq C_c \leq 3$ | GW | WELL-GRADED GRAVEL |  |
| | | | $C_u \geq 4$ AND/OR $1 \geq C_c \geq 3$ | GP | POORLY-GRADED GRAVEL |  |
| | | GRAVELS WITH FINES >12% FINES | FINES CLASSIFY AS ML OR CL | GM | SILTY GRAVEL |  |
| | | | FINES CLASSIFY AS CL OR CH | GC | CLAYEY GRAVEL |  |
| | SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE | CLEAN SANDS <5% FINES | $C_u \geq 6$ AND $1 \leq C_c \leq 3$ | SW | WELL-GRADED SAND |  |
| | | | $C_u \geq 6$ AND/OR $1 \geq C_c \geq 3$ | SP | POORLY-GRADED SAND |  |
| | | SANDS AND FINES >12% FINES | FINES CLASSIFY AS ML OR MH | SM | SILTY SAND |  |
| | | | FINES CLASSIFY AS CL OR CH | SC | CLAYEY SAND |  |
| FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE | SILTS AND CLAYS LIQUID LIMIT<50 | INORGANIC | PI>7 AND PLOTS>"A" LINE | CL | LEAN CLAY |  |
| | | | PI>4 AND PLOTS<"A" LINE | ML | SILT |  |
| | | ORGANIC | LL (oven dried)/LL (not dried)<0.75 | OL | ORGANIC CLAY OR SILT |  |
| | SILTS AND CLAYS LIQUID LIMIT>50 | INORGANIC | PI PLOTS >"A" LINE | CH | FAT CLAY |  |
| | | | PI PLOTS <"A" LINE | MH | ELASTIC SILT |  |
| | | ORGANIC | LL (oven dried)/LL (not dried)<0.75 | OH | ORGANIC CLAY OR SILT |  |
| HIGHLY ORGANIC SOILS | | PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR | | PT | PEAT | |

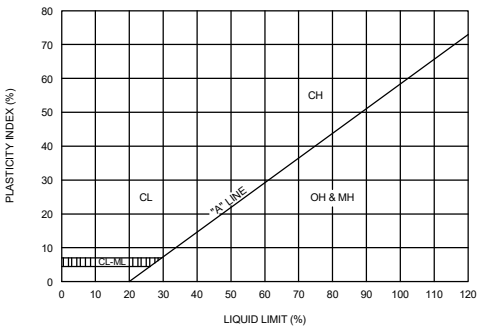
PROJECT LITHOLOGIC SYMBOLS (USCS)

| | | |
|-------------------------------------|------------------------------|--|
| CH: USCS High Plasticity Clay | CL: USCS Low Plasticity Clay | CL-ML: USCS Low Plasticity Silty Clay |
| CLS: USCS Low Plasticity Sandy Clay | FILL: Fill (made ground) | LIMESTONE: Limestone |
| ML: USCS Silt | MLS: USCS Sandy Silt | OL: USCS Low Plasticity Organic silt or clay |
| TOPSOIL: Topsoil | | |

PROJECT SAMPLE TYPES

| | |
|--|------------------|
| | Split Spoon (SS) |
|--|------------------|

PLASTICITY CHART



SOIL RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

| NON-COHESIVE SOILS | | COHESIVE SOILS | | |
|--------------------|----------|----------------|----------|----------------------------|
| RELATIVE DENSITY | N-VALUE* | CONSISTENCY | N-VALUE* | COMPRESSIVE STRENGTH (TSF) |
| VERY LOOSE | 0 - 4 | VERY SOFT | 0 - 2 | 0 - 0.25 |
| LOOSE | 4 - 10 | SOFT | 2 - 5 | 0.25 - 0.50 |
| MEDIUM DENSE | 10 - 30 | MEDIUM STIFF | 5 - 10 | 0.50 - 1.0 |
| DENSE | 30 - 50 | STIFF | 10 - 14 | 1.0 - 2.0 |
| VERY DENSE | OVER 50 | VERY STIFF | 14 - 32 | 2.0 - 4.0 |
| | | HARD | OVER 32 | OVER 4.0 |

* N-VALUE: NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

ABBREVIATIONS

| | | | |
|------|---------------------------------|-----|-----------------------------|
| SS | - SPLIT-SPOON SAMPLE | LL | - LIQUID LIMIT (%) |
| ST | - SHELBY TUBE SAMPLE | PL | - PLASTIC LIMIT (%) |
| AU | - AUGER SAMPLE | PI | - PLASTIC INDEX (%) |
| MC | - MOISTURE CONTENT (%) | NP | - NON PLASTIC |
| -200 | - PERCENT PASSING NO. 200 SIEVE | DD | - DRY DENSITY (PCF) |
| Qp | - POCKET PENETROMETER (TSF) | DCP | - DYNAMIC CONE PENETROMETER |
| Qu | - UNCONFINED STRENGTH (TSF) | IBV | - IMMEDIATE BEARING VALUE |



ATTERBERG LIMITS RESULTS

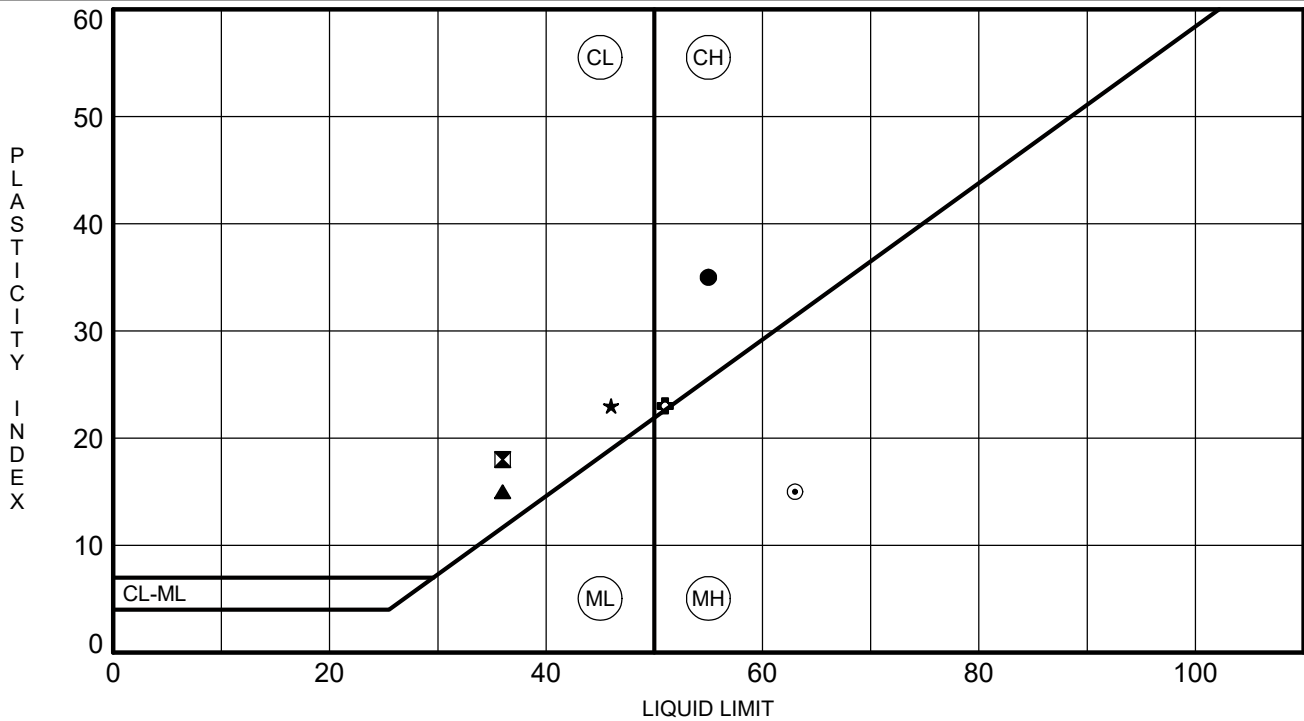
PRINT DATE 6/6/2024

CLIENT Robinson Engineering, Ltd.

PROJECT NAME Thorn Ditch

PROJECT NUMBER 24-G0400

PROJECT LOCATION South Holland, IL

[illegible]

SOIL WATER QP QU - B SIZE - OZ STD DATA TEMPLATE.GDT - 8/8/24 08:09 - K:\GEO\GEO\G0400\G0400 GEO REL SGR CULVERT REPLACEMENTS, PEDESTRIAN BRIDGES AND DETENTION, THORN DITCH, SOUTH HOLLAND, IL\LAB\24-G0400 THORN DITCH



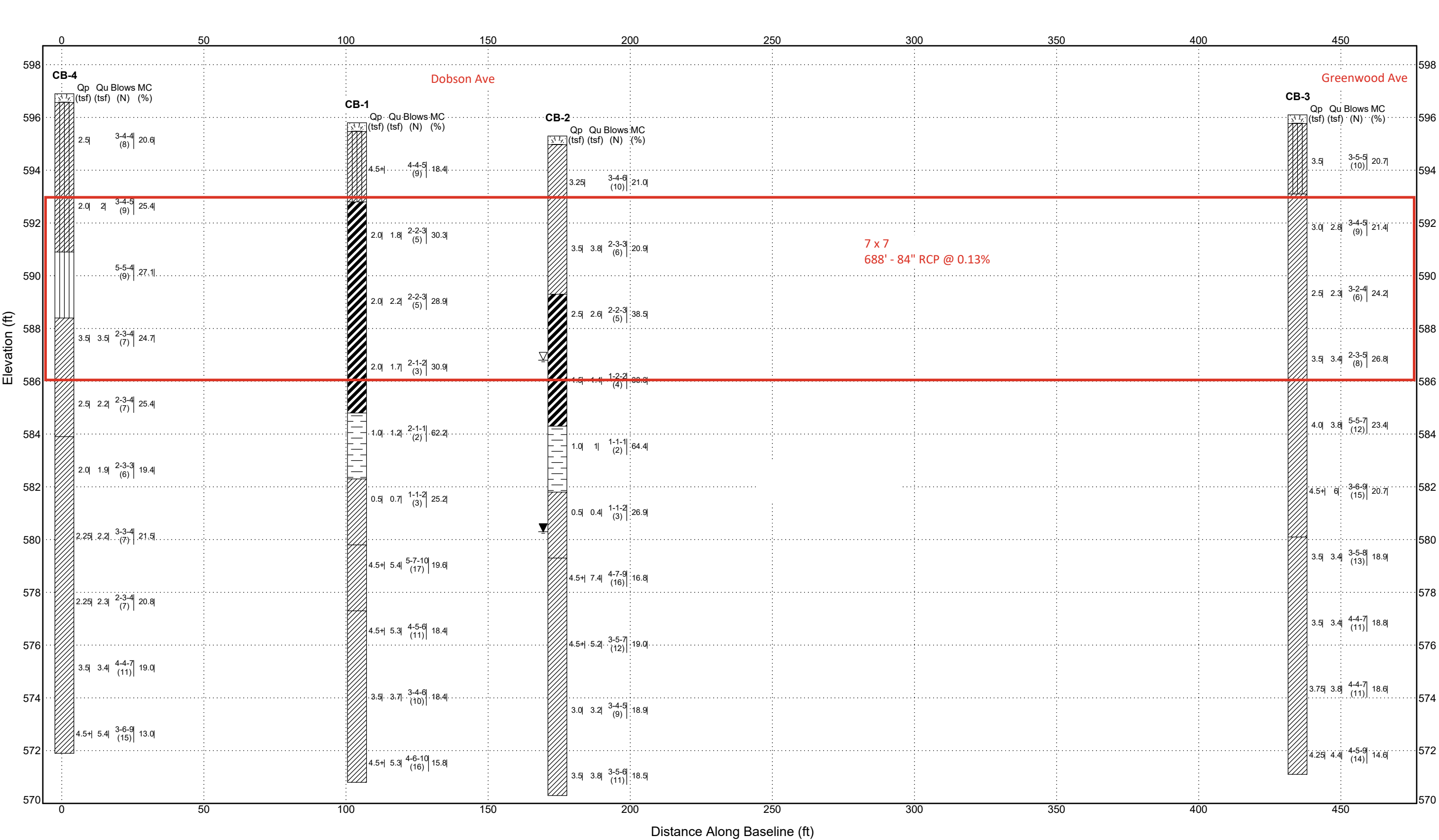
CLIENT Robinson Engineering, Ltd.
PROJECT NUMBER 24-G0400

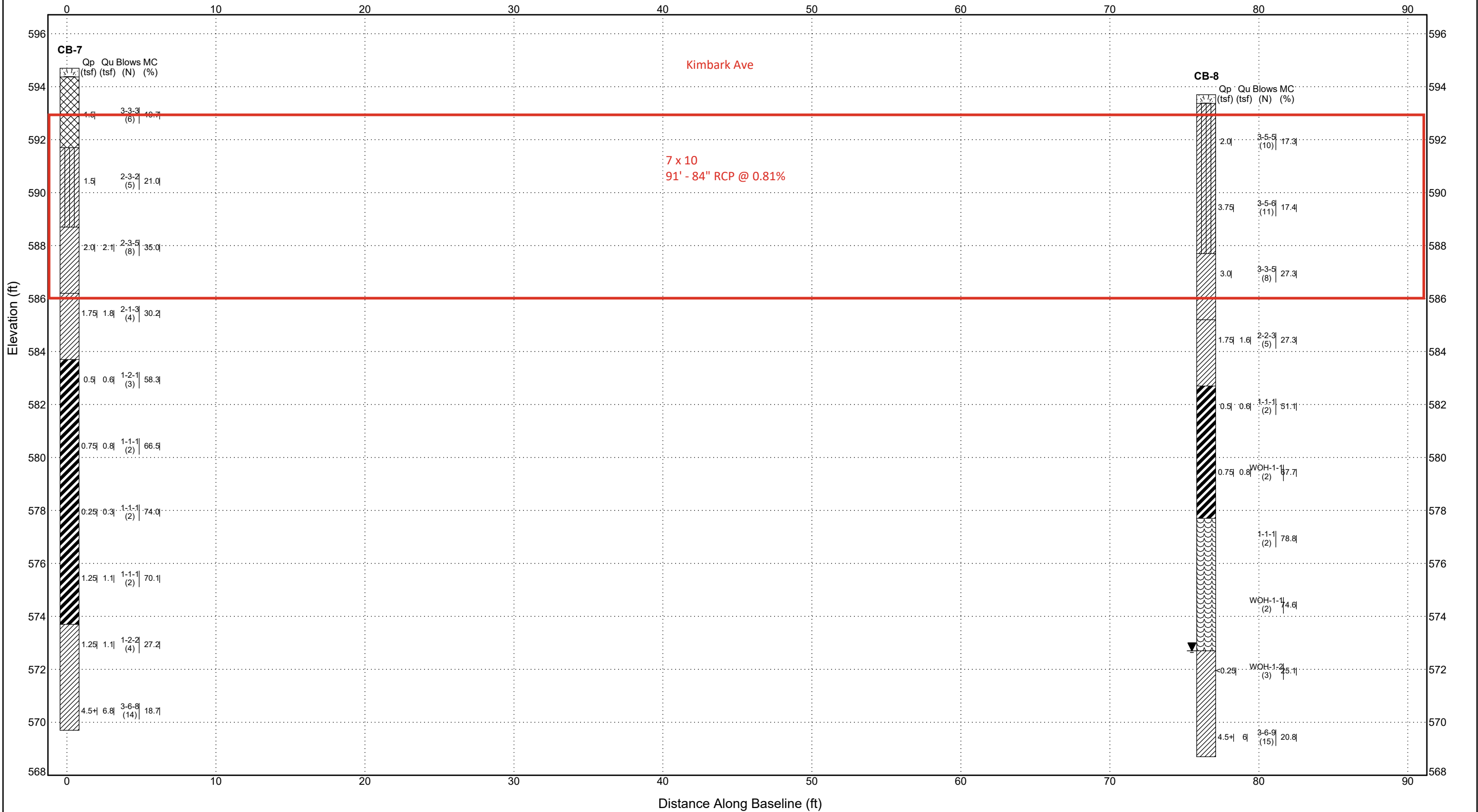
Thorn Ditch - Dobson Ave & Greenwood Ave Culverts

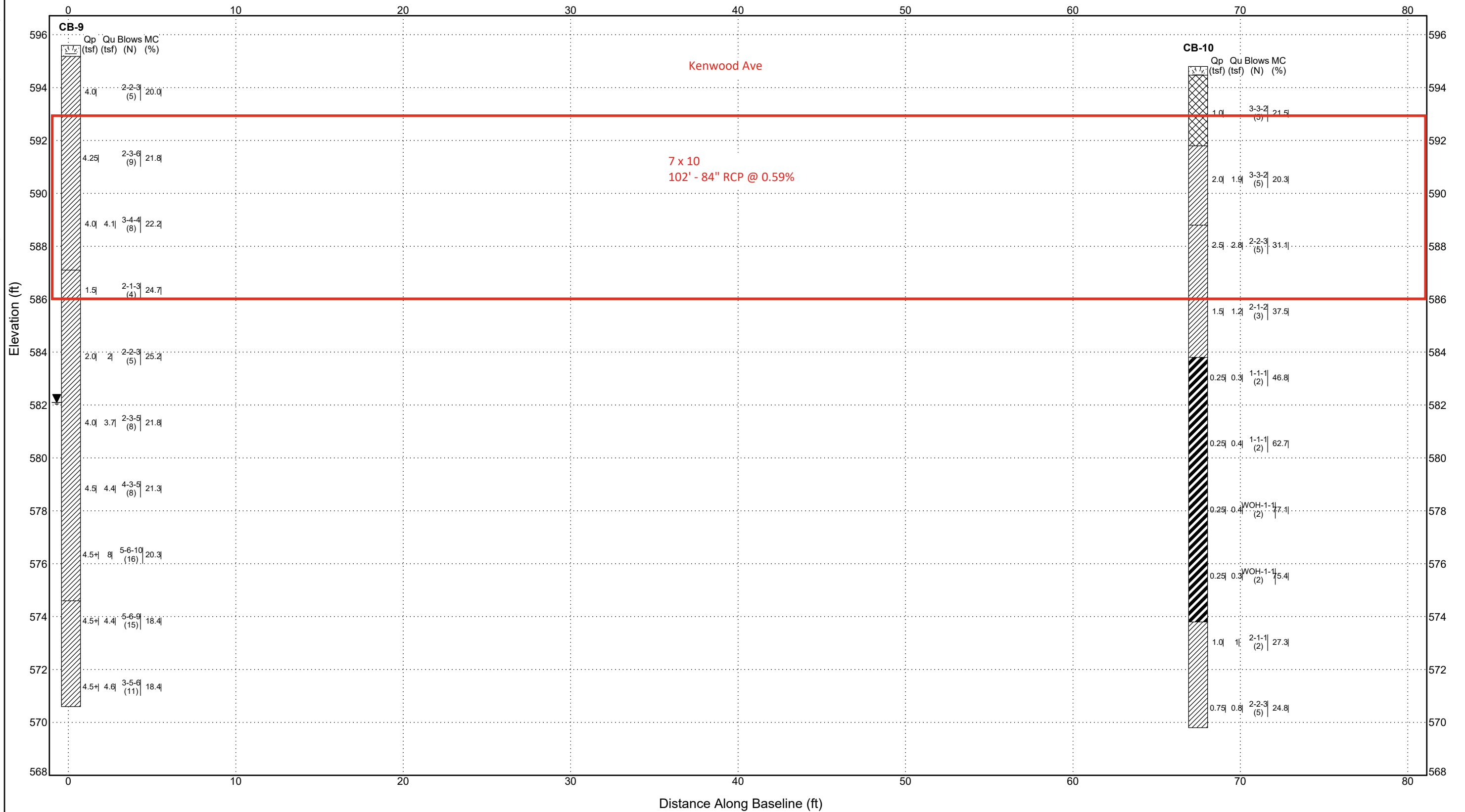
PROJECT NAME Thorn Ditch
PROJECT LOCATION South Holland, IL

SUBSURFACE DIAGRAM

- Topsoil
- USCS Low Plasticity Organic silt or clay
- USCS Low Plasticity Silty Clay
- USCS Low Plasticity Clay
- USCS High Plasticity Clay
- USCS Silt









APPENDIX II





GSG Consultants, Inc.
623 Cooper CT
Schaumburg, IL
Telephone: 6309942600

BORING NUMBER B-1

PAGE 1 OF 2

CLIENT ESI Consultants, Ltd.

PROJECT NAME Thorn Creek

PROJECT NUMBER 20-2056

PROJECT LOCATION South Holland, IL

DATE STARTED 1/22/21 COMPLETED 1/22/21

GROUND ELEVATION 595.84 ft HOLE SIZE 3 1/4"

DRILLING CONTRACTOR GSG Drilling

GROUND WATER LEVELS:

DRILLING METHOD HSA

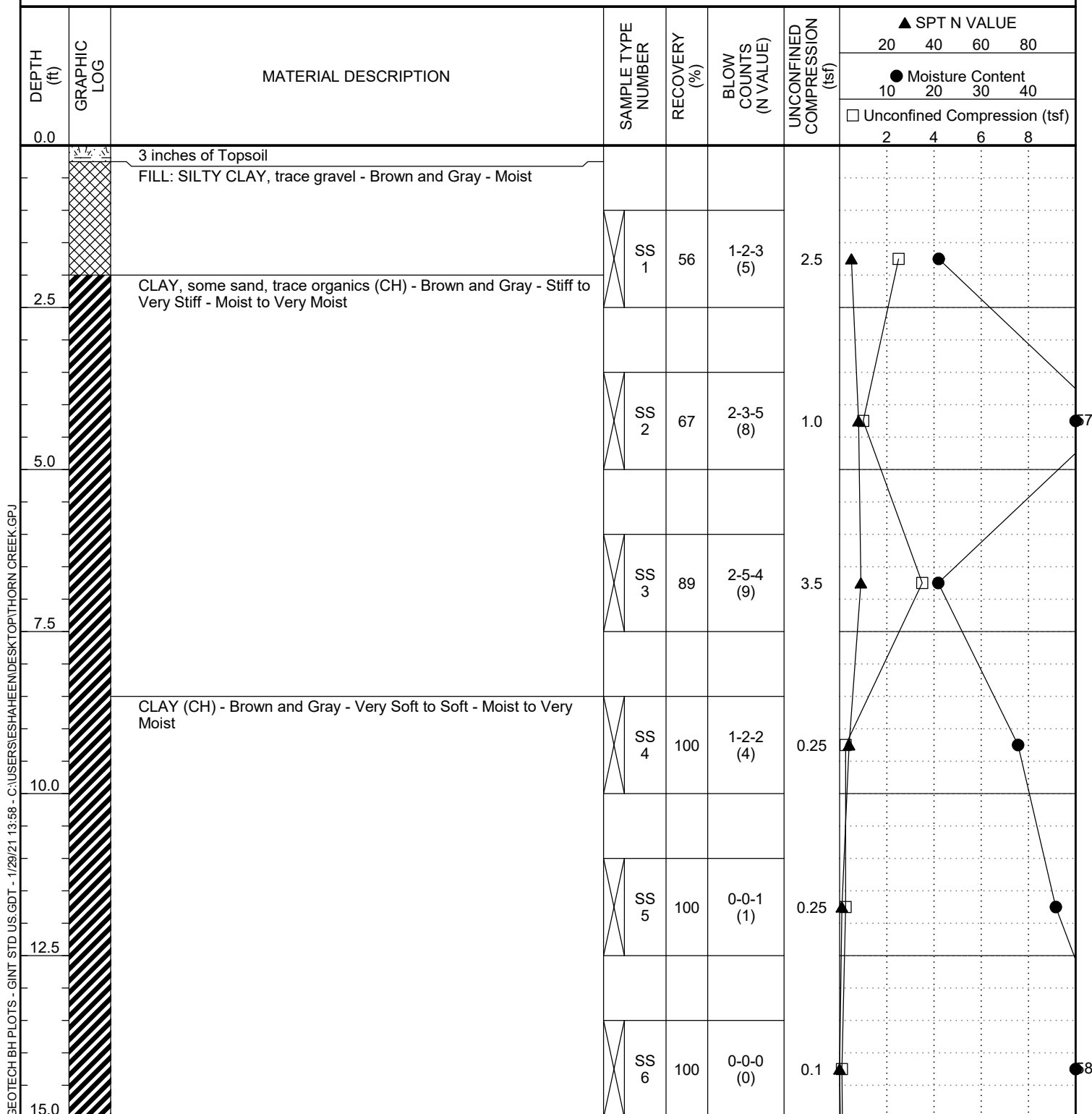
AT TIME OF DRILLING --- None

LOGGED BY MH CHECKED BY ES

AT END OF DRILLING --- None

NOTES

AFTER DRILLING --- None



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Schaumburg, IL
Telephone: 6309942600

BORING NUMBER B-1

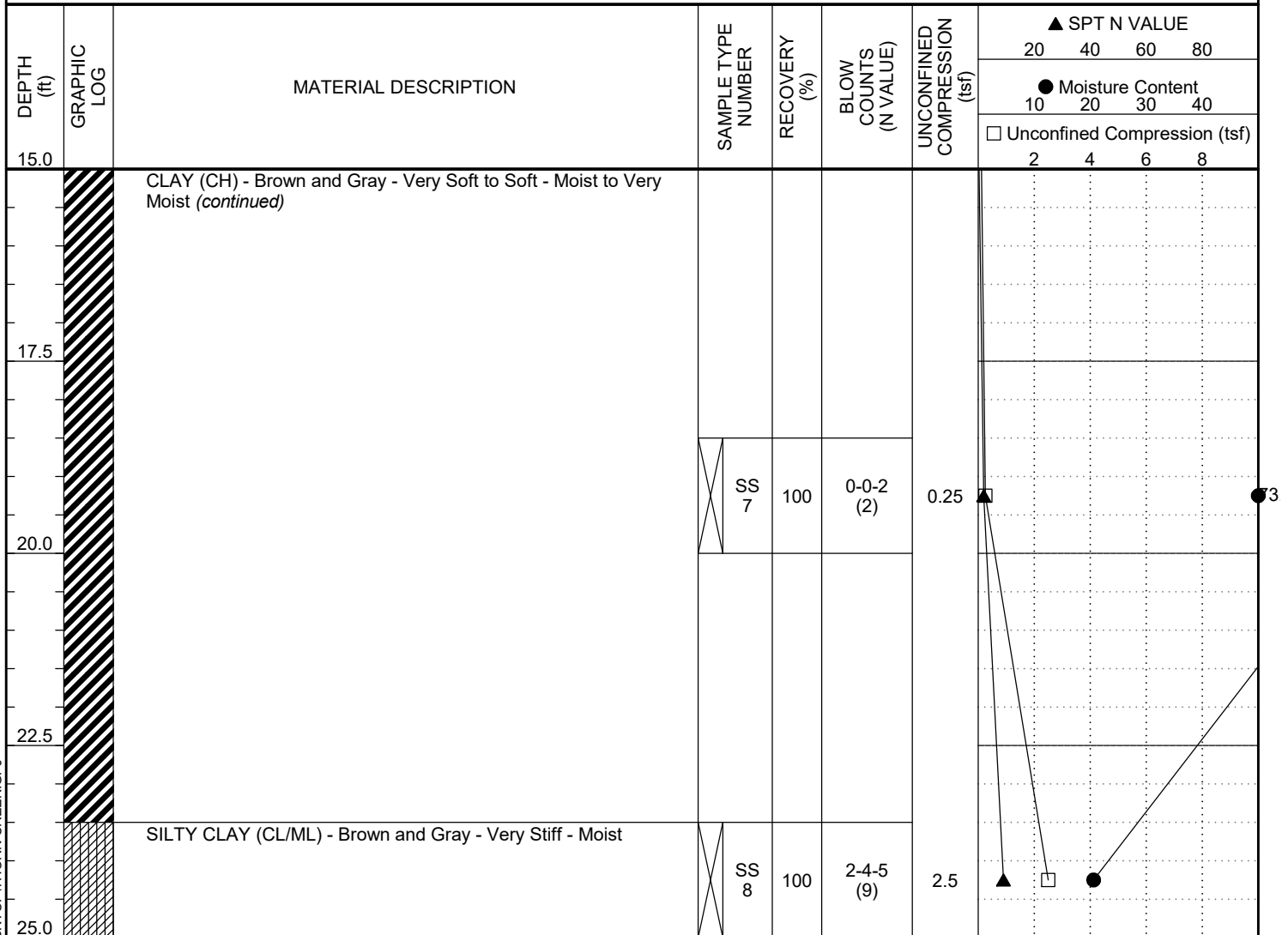
PAGE 2 OF 2

CLIENT ESI Consultants, Ltd.

PROJECT NAME Thorn Creek

PROJECT NUMBER 20-2056

PROJECT LOCATION South Holland, IL



Bottom of borehole at 25.0 feet.



GSG Consultants, Inc.
623 Cooper CT
Schaumburg, IL
Telephone: 6309942600

BORING NUMBER B-2

PAGE 1 OF 2

CLIENT ESI Consultants, Ltd.

PROJECT NAME Thorn Creek

PROJECT NUMBER 20-2056

PROJECT LOCATION South Holland, IL

DATE STARTED 1/21/21 COMPLETED 1/21/21

GROUND ELEVATION 594.23 ft HOLE SIZE 3 1/4"

DRILLING CONTRACTOR GSG Drilling

GROUND WATER LEVELS:

DRILLING METHOD HSA

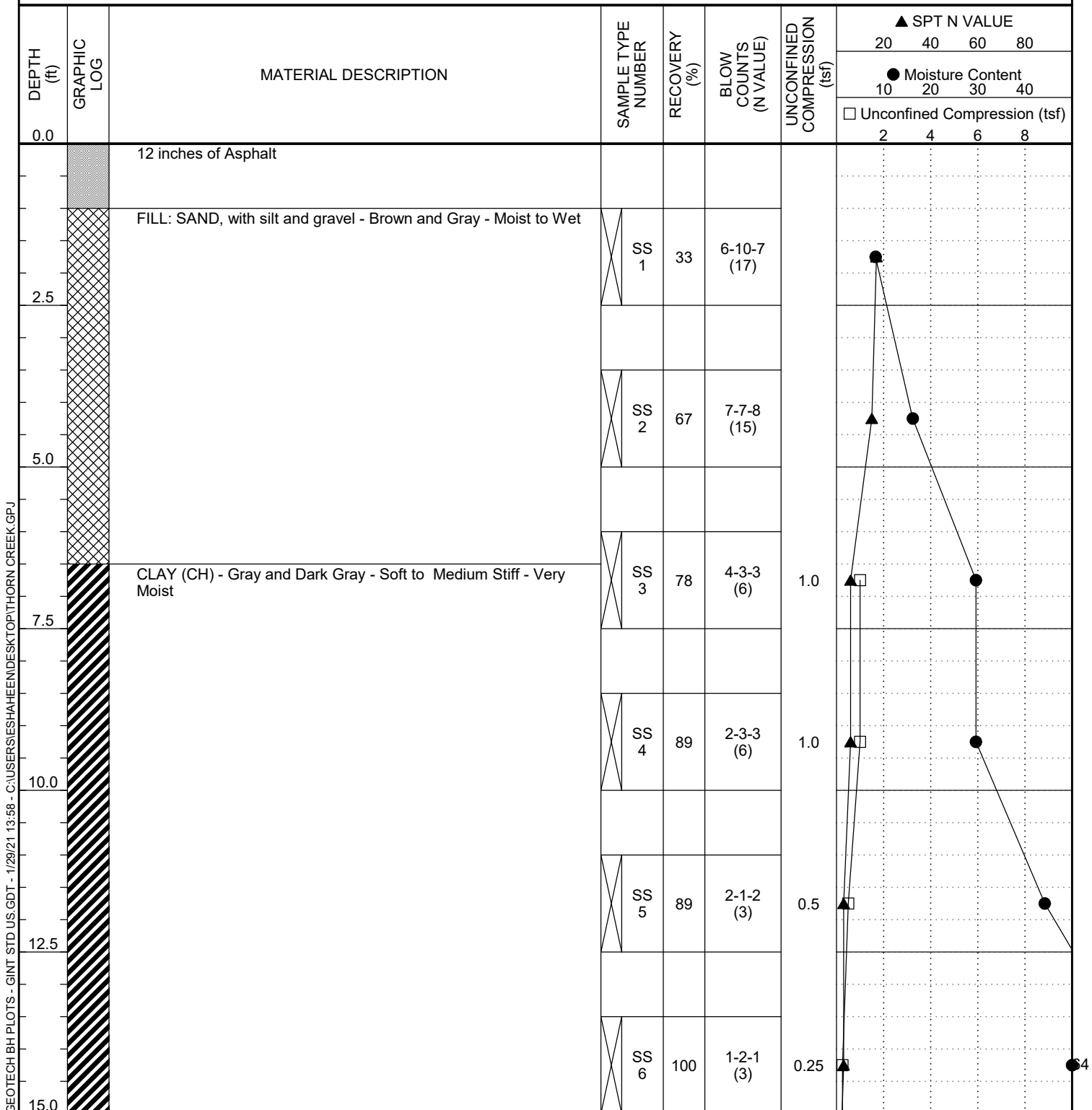
AT TIME OF DRILLING --- None

LOGGED BY MH CHECKED BY ES

AT END OF DRILLING --- None

NOTES

AFTER DRILLING --- None



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GSG Consultants, Inc.
623 Cooper CT
Schaumburg, IL
Telephone: 6309942600

BORING NUMBER B-2

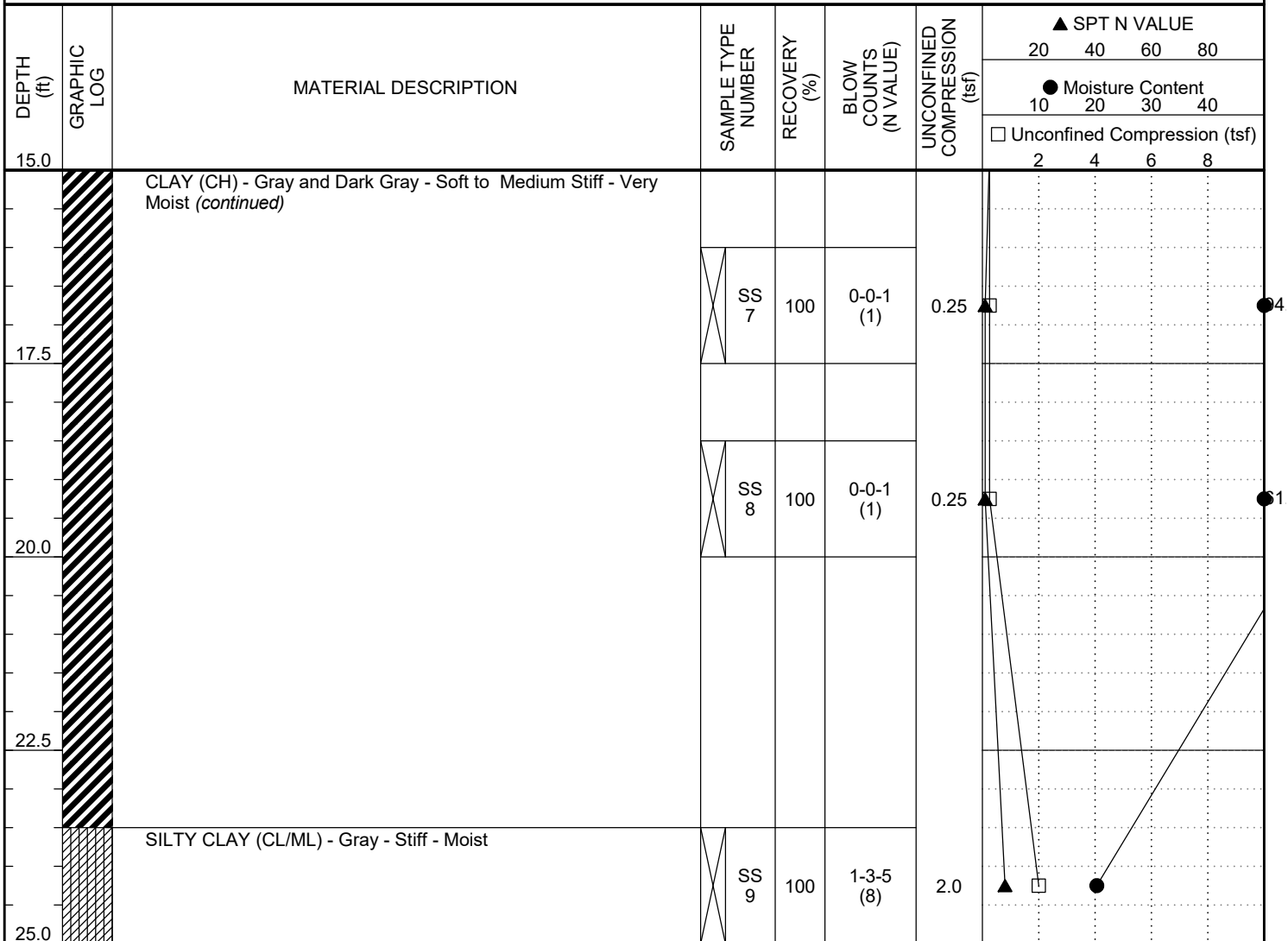
PAGE 2 OF 2

CLIENT ESI Consultants, Ltd.

PROJECT NAME Thorn Creek

PROJECT NUMBER 20-2056

PROJECT LOCATION South Holland, IL



Bottom of borehole at 25.0 feet.



GSG Consultants, Inc.
623 Cooper CT
Schaumburg, IL
Telephone: 6309942600

BORING NUMBER B-3

PAGE 1 OF 2

CLIENT ESI Consultants, Ltd.

PROJECT NAME Thorn Creek

PROJECT NUMBER 20-2056

PROJECT LOCATION South Holland, IL

DATE STARTED 1/22/21 COMPLETED 1/22/21

GROUND ELEVATION 595.66 ft HOLE SIZE 3 1/4"

DRILLING CONTRACTOR GSG Drilling

GROUND WATER LEVELS:

DRILLING METHOD HSA

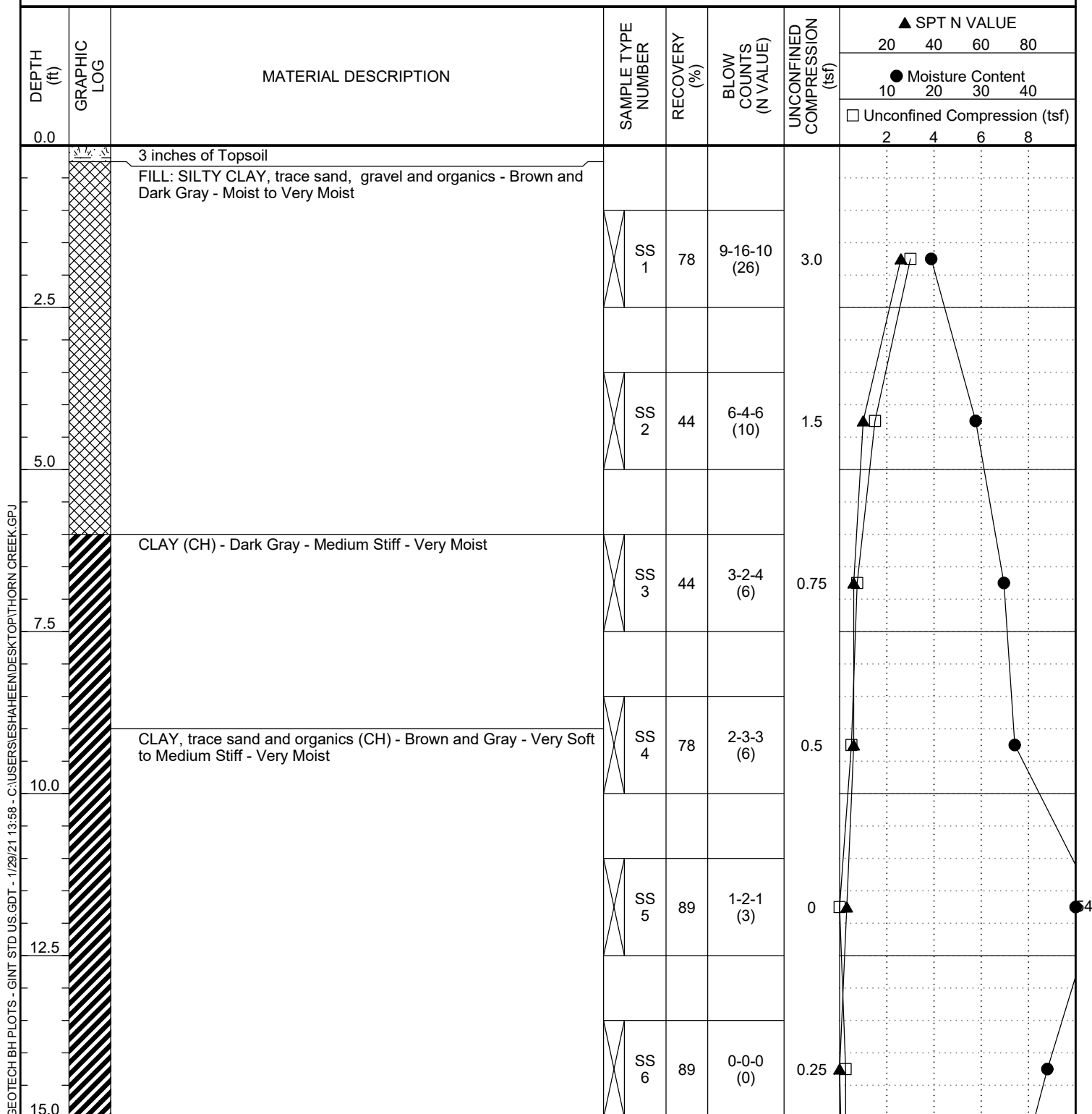
AT TIME OF DRILLING --- None

LOGGED BY MH CHECKED BY ES

AT END OF DRILLING --- None

NOTES

AFTER DRILLING --- None



(Continued Next Page)



GSG Consultants, Inc.
623 Cooper CT
Schaumburg, IL
Telephone: 6309942600

BORING NUMBER B-3

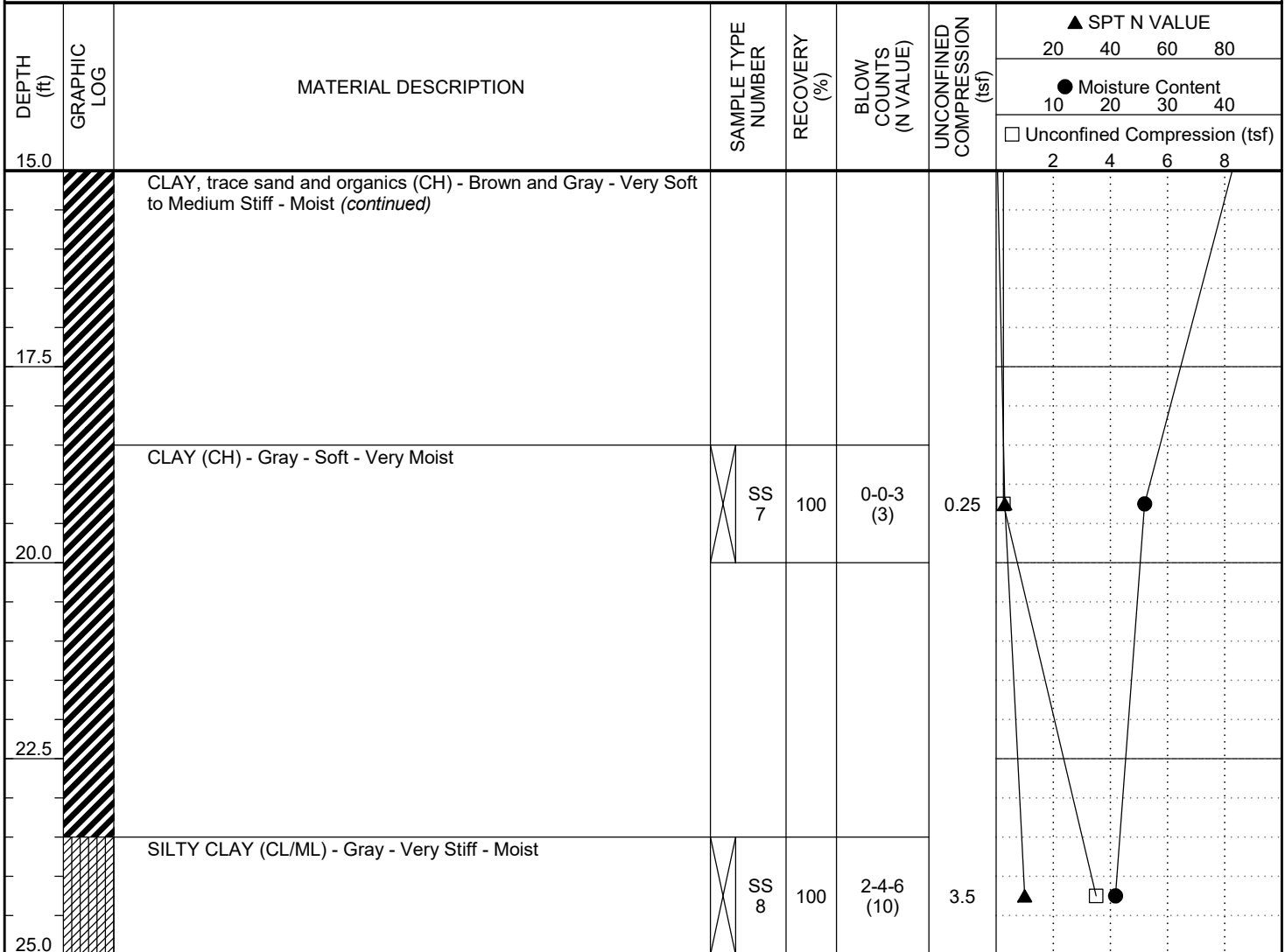
PAGE 2 OF 2

CLIENT ESI Consultants, Ltd.

PROJECT NAME Thorn Creek

PROJECT NUMBER 20-2056

PROJECT LOCATION South Holland, IL



GEOTECH BH PLOTS - GINT STD US.GDT - 1/29/21 13:58 - C:\USERS\ESHAHEEN\DESKTOP\THORN CREEK.GPJ



GSG Consultants, Inc.
623 Cooper CT
Schaumburg, IL
Telephone: 6309942600

BORING NUMBER B-4

PAGE 1 OF 2

CLIENT ESI Consultants, Ltd.

PROJECT NAME Thorn Creek

PROJECT NUMBER 20-2056

PROJECT LOCATION South Holland, IL

DATE STARTED 1/22/21 COMPLETED 1/22/21

GROUND ELEVATION 595.48 ft HOLE SIZE 3 1/4"

DRILLING CONTRACTOR GSG Drilling

GROUND WATER LEVELS:

DRILLING METHOD HSA

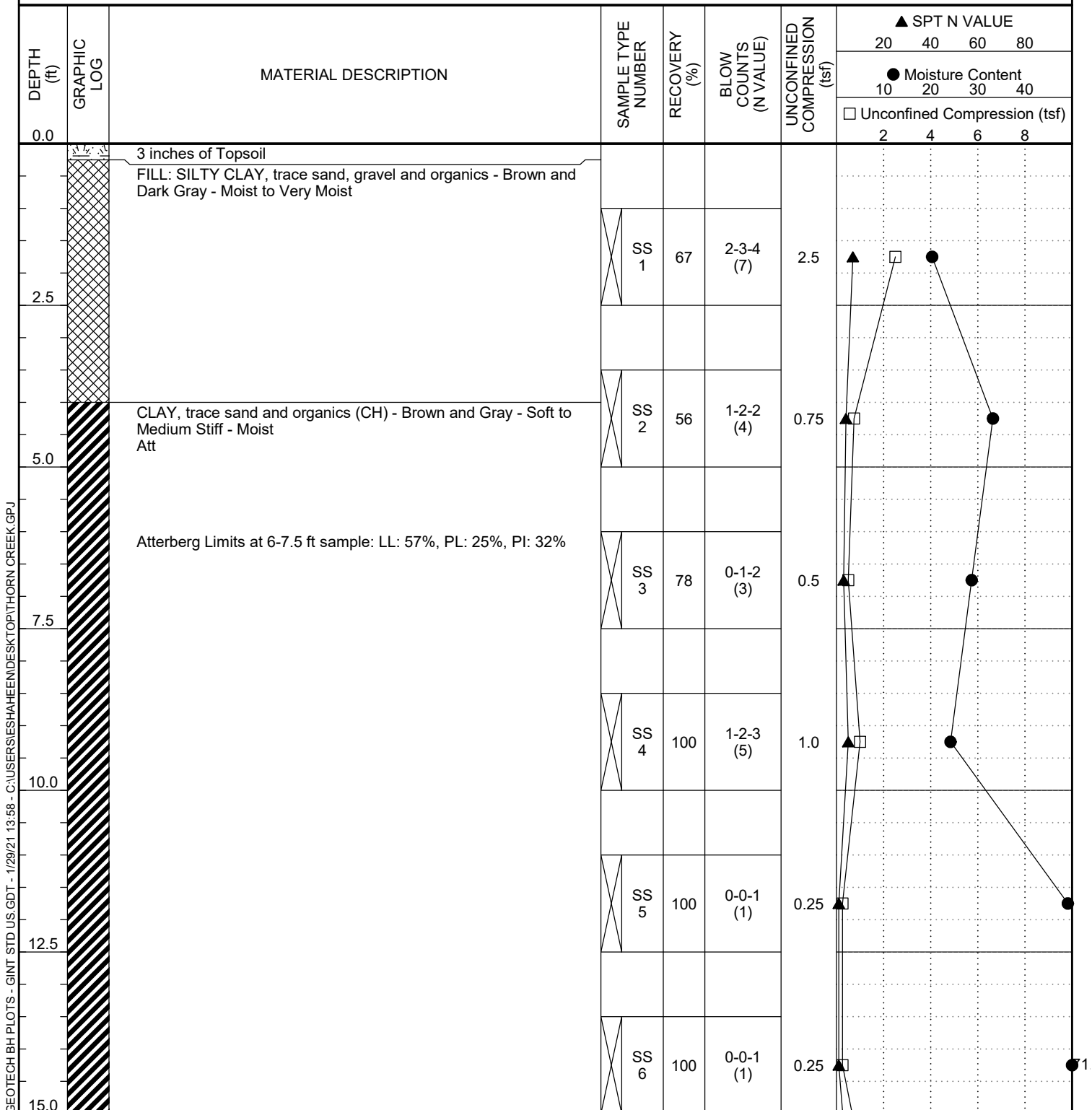
AT TIME OF DRILLING --- None

LOGGED BY MH CHECKED BY ES

AT END OF DRILLING --- None

NOTES

AFTER DRILLING --- None



(Continued Next Page)



GSG Consultants, Inc.
623 Cooper CT
Schaumburg, IL
Telephone: 6309942600

BORING NUMBER B-4

PAGE 2 OF 2

CLIENT ESI Consultants, Ltd.

PROJECT NAME Thorn Creek

PROJECT NUMBER 20-2056

PROJECT LOCATION South Holland, IL

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY (%) | BLOW COUNTS (N VALUE) | UNCONFINED COMPRESSION (tsf) | ▲ SPT N VALUE | | | |
|---------------|----------------|---|-----------------------|-----------------|-----------------------------|------------------------------------|--------------------------------|----|----|----|
| | | | | | | | 20 | 40 | 60 | 80 |
| | | | | | | | ● Moisture Content | | | |
| | | | | | | | 10 | 20 | 30 | 40 |
| 15.0 | | | | | | | □ Unconfined Compression (tsf) | | | |
| | | | | | | | 2 | 4 | 6 | 8 |
| 17.5 | | CLAY, trace sand and organics (CH) - Brown and Gray - Soft to Medium Stiff - Moist Att (continued) | | | | | | | | |
| 20.0 | | SILTY CLAY, trace sand (CL/ML) - Brown and Gray - Very Stiff - Moist | SS 7 | 100 | 3-5-7 (12) | 3.0 | | | | |

Bottom of borehole at 20.0 feet.

MWRD & COOK COUNTY SUBRECIPIENT AGREEMENT

ORIGINAL

**SUBRECIPIENT AGREEMENT
AMERICAN RESCUE PLAN ACT – STATE AND LOCAL FISCAL RECOVERY FUNDS
(ASSISTANCE LISTING NUMBER 21.019)**

This Subrecipient Agreement (“Agreement”) is made and entered into as of the ____ day of 8/24/2023 | 1:27 PM CDT, 2023, by and between the County of Cook, a body politic and corporate of the State of Illinois (“County”), acting by and through its Bureau of Administration Department of Transportation and Highways (DOTH), and Metropolitan Water Reclamation District (MWRD), a Government Agency, (“MWRD”(collectively referred to as “the Parties” and individually as a “Party”) to establish an agreed upon protocol for the administration and management of the American Rescue Plan Act (ARPA) (Assistance Listing Number 21.019) – Stormwater Management Project Implementation Program subaward project described below. The County and MWRD are organized and existing by virtue of the Constitution and/or laws of the State of Illinois.

RECITALS

WHEREAS, on March 13, 2020, the President of the United States (the “President”) issued a Proclamation, declaring a National Public Health Emergency, as a result of the Coronavirus (“COVID-19”) pandemic (the “Pandemic”); and

WHEREAS, on March 11, 2021, the President signed into law the American Rescue Plan Act, 2021, Section 9901, Coronavirus State and Local Fiscal Recovery Funds; and

WHEREAS, Section 9901 of Subtitle M of the Act established the Coronavirus State and Local Fiscal Recovery Funds Program (“SLFRF” or “Program”) aimed at providing support to State, territorial, local, and Tribal governments in responding to the economic and public health impacts of COVID-19 and in their efforts to contain impacts on their communities, residents, and businesses; and

WHEREAS, the Act authorizes the U.S. Department of Treasury (“Treasury”) to grant ARPA funds to eligible entities to address the negative health and economic impacts of the Pandemic on communities nationwide; and

WHEREAS, the County qualifies as an eligible unit of local government under the Act, and Treasury has granted \$1,000,372,385 in funds to the County (“ARPA Funds”); and

WHEREAS, the County has allocated ARPA Funds for the purpose of administering and implementing stormwater mitigation programs; and

WHEREAS, ARPA will further the mission of the County and serve the broader objective of protecting the health, safety, and welfare of the County by promoting completion of an increased number of stormwater management projects in underserved areas prone to flooding, ensuring a nexus to the negative health and economic impacts of Covid-19, and

WHEREAS, Treasury limits the obligation of ARPA funds to December 31, 2024, and expenditure of the Funds for eligible expenses to December 31, 2026, therefore the Parties recognize that time is of the essence; and

WHEREAS, the County achieves its mission through strategic collaborations and partnerships with states, local governments, community organizations, and others; and

WHEREAS, Subrecipient is an established governmental agency, which has extensive experience and expertise in supporting and implementing successful stormwater mitigation projects; and

WHEREAS, the County desires to award this grant to Subrecipient for the administration and management of stormwater management projects of the Program in Cook County as described herein; and

WHEREAS, MWRD is able and willing to assist the County in the administration and management of the Program; and

WHEREAS, on June 15, 2023, MWRD's Board of Commissioners authorized MWRD to enter into this Agreement with the County for the purposes described herein; and

WHEREAS, on July 20, 2023, the Cook County Board of Commissioners authorized the County, through the DOTH, to enter into this Agreement with Subrecipient for the purposes described herein.

NOW THEREFORE, in consideration of the covenants and mutual agreements herein contained and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. INCORPORATION OF RECITALS

The recitals set forth above, together with the information contained in the Exhibits attached hereto, constitute an integral part of this Agreement and are incorporated herein by this reference.

2. ELIGIBILITY FOR THE PROGRAM

Subrecipient hereby certifies that it has the authority and approval from its governing body or officials to execute this Agreement and receive Program Funds for eligible uses specified under this Agreement. The MWRD shall act as a subrecipient and, on behalf of the County, make Program Funds available to designated program participants within Cook County. Fund usage must fall into one of the following statutory categories:

- To respond to the COVID-19 public health emergency or its negative economic impacts;
- To respond to workers performing essential work during the COVID-19 public health emergency by providing premium pay to eligible workers of the recipient that are performing such essential work, or by providing grants to eligible employers that have eligible workers who perform essential work;
- For the provision of government services, to the extent of the reduction in revenue of such recipient due to the COVID-19 public health emergency, relative to revenues collected in the most recent full fiscal year of the recipient prior to the emergency; or
- To make necessary investments in water, sewer, or broadband infrastructure.

3. GENERAL PROVISIONS

- 3.1. TERM. This Agreement shall become effective as of the date on which it is fully executed by both Parties and will continue in full force and effect, until [December 31, 2026], subject to earlier termination in accordance with its terms.
- 3.2. OBLIGATIONS OF THE PARTIES. MWRD agrees to administer the program on behalf of the County, as described herein and in the Scope of Services (the "Services"), set forth on Exhibit A, attached hereto and incorporated herein. The County agrees to provide up to Eighteen Million Dollars (\$18,000,000.00) in Program Funds to be made available to carry out the purposes of the Program. Payments will be made to the Subrecipient for eligible uses of the Program Funds,

hereunder, according to the criteria for the use of such funds and the schedule specified in Exhibit A. Invoice submission for Program Funds shall be in accordance with the provisions provided in Exhibit C under monitoring and fiscal reporting. Subrecipient understands any award of funds pursuant to this agreement must adhere to official federal guidance issued on what constitute a necessary expenditure and that the Subrecipient has reviewed the guidance established by U.S. Department of the Treasury. Any funds expended by the Subrecipient or its subcontractor(s) in any manner that does not adhere to official federal guidance will be returned by Subrecipient to Cook County.

- 3.3. REPRESENTATIVES. Each Party to this agreement shall designate one staff representative, who shall be the primary point of contact for that Party

Metropolitan Water Reclamation District:

Catherine A. O'Connor

Director of Engineering

Metropolitan Water Reclamation District of Greater Chicago

OConnorC@mwr.org

Cook County:

Jennifer 'Sis' Killen, P.E., PTOE

Superintendent

Jennifer.killen@cookcountyil.gov

- 3.4. FINANCIAL MANAGEMENT AND INTERNAL CONTROLS. Subrecipient agrees to adhere to appropriate accounting principles and procedures, utilize adequate internal controls, and maintain necessary source documentation for all eligible expenses. Subrecipient and any of the subawards issued by the Subrecipient must comply with Uniform Guidance and establish and maintain effective internal controls that provide reasonable assurance that Subrecipient is administering Program Funds in compliance with Federal statutes and regulations, and the terms and conditions of the Program. These internal controls should be in compliance with guidance in "Standards for Internal Control in the Federal Government" issued by the Comptroller General of the United States or the "Internal Control Integrated Framework", issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management should consider the potential for fraud when identifying, analyzing, and responding to risks. Subrecipient's accounting system for recording expenditures must be established and maintained in accordance with generally accepted accounting principles.

- 3.5. DUPLICATION OF BENEFITS. Subrecipient shall not carry out any of the activities under this Agreement in a manner that results in a prohibited duplication of benefits as defined by Section 312 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5155) (the "Stafford Act"), as amended by Section 1210 of the Disaster Recovery Reform Act of 2018 (division D of Public Law 115-254; 132 Stat. 3442), which amended section 312 of the Stafford Act. If Subrecipient receives duplicate benefits from another source, Subrecipient must refund the benefits provided by Cook County to Cook County. In order to mitigate against a duplication of benefits, the subrecipient will only apply costs that meet the following general criteria in order to be allowable under Federal awards:

- Not be included as a cost or used to meet cost sharing or matching requirements of any other federally-financed program in either the current or a prior period
- Are not paid by the Federal Government under another Federal award, except where the Federal statute authorizing a program specifically provides that Federal funds made available for such program can be applied to matching or cost sharing requirements of other Federal programs
- Are not included as contributions for any other Federal award

- 3.6. DOCUMENTATION AND RECORDKEEPING. As required by 2 C.F.R. 200.331(a)(5), Cook County, or any duly authorized representative of Cook County, shall have the right of access to any records, documents, financial statements, papers, or other records of Subrecipient that are pertinent to this Agreement, in order to comply with any audits pertaining to funds allocated to Subrecipient under this Agreement. The right of access also includes timely and reasonable access to Subrecipient's personnel for the purpose of interview and discussion related to such documents. The right of access is not limited to the required retention period but lasts as long as the records are retained by Subrecipient. The Subrecipient shall ensure the same access to documents from its subawards in accordance with 2 C.F.R. 200.331(a)(5).
- 3.7. MAINTENANCE AND INSPECTION OF RECORDS. Subrecipient and their sub awardees shall retain sufficient records including, without limitation, financial records, documents, statistical records, and all other records (collectively, "Records") pertinent to this Agreement to show compliance with the terms of this Agreement. Records shall be subject to the right of access, upon prior reasonable notice, by any duly authorized representative of the County or Treasury for the purposes of inspection, copying and auditing. The right of access also includes the County's timely and reasonable access to Subrecipient's personnel for the purpose of interview and discussion related to Records. The right of access is not limited to the required retention period but lasts as long as Records are retained by Subrecipient.
- 3.8. RECORD RETENTION. The Records shall be maintained by Subrecipient and any sub awardees for a period of five (5) years after the later of the following: (a) final payment is made using Program Funds; (b) completion of all close-out procedures respecting the Program, as determined by the County in its sole discretion; or (c) resolution of all litigation, claims, negotiations, audits, or other actions in relation to the Program. Record Retention under the Program is subject to the terms of the Treasury Memorandum.
- 3.9. CLOSE-OUT. Subrecipient's and the County's obligations under this Agreement shall not end until all Program close-out requirements are completed, as determined by the County in its sole discretion. Activities during the close-out period shall include but are not limited to making final payments, disposing of Program Funds, and determining the custodianship of records. Notwithstanding the foregoing, the terms of this Agreement shall remain in effect during any period that Subrecipient has control over any Program Funding.

4. MONITORING AND REPORTING

- 4.1. Subrecipient agrees to provide the County access to all necessary data and documentation gathered for purposes of monitoring Program compliance. Subrecipient shall provide the County with information and dates, in sufficient detail, that indicate the use of the funds for the Program and the impact and outcome of the services provided as specified in this Agreement. Failure to submit proper documentation including, but not limited to, documentation verifying eligible expenses may result in termination of this Agreement and recoupment of funds provided to Subrecipient.
- 4.2. Subrecipient shall provide to the County reports, on a periodic basis as defined by the County. Such reports shall summarize Subrecipient's receipts and expenditures of the funds provided to Subrecipient under this Agreement as detailed in Exhibit C and specify the Program Metrics and Performance Goals outlined in Exhibit B, attached hereto and incorporated herein. In addition, Subrecipient will furnish to the County, with reasonable promptness, such interim reports or such additional information in connection with the Services, as the County may periodically request. Reporting under the Program is subject to the reporting requirements of subsection (d) of section

603 the Act and Treasury's Compliance and Reporting Guidance, set forth in **Exhibit B**, attached hereto and incorporated herein. Subrecipient shall ensure that any sub award agreement includes metric reporting and monitoring of the sub awardee by the Subrecipient.

5. TERMINATION

- 5.1. TERMINATION WITHOUT CAUSE. This Agreement may be terminated by either Party without cause or for convenience at any time by providing at least thirty (30) days written notice to the other Party.
- 5.2. COUNTY'S TERMINATION FOR CAUSE. The failure of Subrecipient to observe and perform the terms, covenants, promises, and agreements on its part to be observed and performed under this Agreement constitutes an "Event of Default" after the passage of any applicable notice and cure period. Subrecipient will have thirty (30) days from the date written notice of default is delivered or mailed to Subrecipient in which to cure the default provided, however, that if an Event of Default is not reasonably capable of being cured within thirty (30) days, Subrecipient shall have such additional time as is reasonably necessary, as determined by the County, so long as Subrecipient has commenced to cure within thirty (30) days and is proceeding diligently to effect a cure. If Subrecipient fails to cure such Event of Default within the applicable cure period, the County may terminate this Agreement for cause, in whole or in part, by giving written notice to Subrecipient of such termination and specifying the effective date thereof. In the event of such termination for cause, Subrecipient shall be compensated for that portion of the Services performed which have been fully and adequately completed and accepted by the County through the effective date of termination. In such case, the County shall have the right to take whatever steps it deems necessary to complete the Program and correct Subrecipient's deficiencies and charge the cost thereof to Subrecipient, which shall be liable for the full cost of the County's corrective action, including reasonable overhead and attorneys' fees. Subrecipient shall include a termination for cause provision in any sub award agreements.
- 5.3. FORCE MAJEURE. In the event that either Party is unable to perform any of its obligations under this Agreement because of natural disaster, actions or decrees of governmental bodies or communications failure not the fault of the affected party (referred to as a "Force Majeure Event"), the Party which has been so affected agrees to give immediate notice to the other Party and agrees to do everything possible to resume performance. Upon receipt of such notice, this Agreement shall be suspended immediately. If the period of nonperformance exceeds ten (10) days from the receipt of notice of the Force Majeure Event, the Party whose ability to perform has not been so affected may terminate this Agreement immediately by giving written notice to the other Party.
- 5.4. FUNDING AVAILABILITY//NON-APPROPRIATION. Funding for this Agreement is subject to availability of funds from the United States Government and appropriation by the County. In the event that no Program Funds or insufficient Program Funds are appropriated and budgeted for payments to be made under this Agreement, then the County shall promptly notify Subrecipient of such occurrence, and this Agreement shall terminate on the earlier of the last day of the month for which sufficient appropriation was made or when the funds appropriated for payment under this Agreement are exhausted.
- 5.5. DELIVERY OF INFORMATION. Subrecipient shall deliver to the County copies of all completed or partially completed information, programs, software (including source code), documentation or data (collectively, the "Documents") developed, created or invented in connection with the

Services under this Agreement within fifteen (15) days after this Agreement is terminated or completed. The Subrecipient shall be entitled to receive just and equitable compensation for any authorized work which has been satisfactorily completed as of the termination date. Any advanced funds not yet spent for authorized work by Subrecipient shall be promptly returned to the County within fifteen (15) days of termination.

6. NOTICES

All notices shall be delivered in writing and shall be communicated by electronic mail, U.S First Class Mail, fax or overnight courier to the Parties hereto at the addresses set forth below or at such other address as either Party may designate by written notice to the other:

To Subrecipient:

Catherine A. O'Connor
Director of Engineering
Metropolitan Water Reclamation District of Greater Chicago
100 E. Erie Street
Chicago, IL 60611

To Cook County:

Jennifer "Sis" Killen, P.E., PTOE
Superintendent
County of Cook, Illinois
69 W. Washington Street, 24th Floor
Chicago, IL 60602

Either Party may designate a different address by giving the other Party ten (10) days written notice.

7. INDEMNIFICATION

7.1. SUBRECIPIENT SHALL INDEMNIFY, DEFEND, AND HOLD HARMLESS THE COUNTY ITS OFFICERS, DIRECTORS, AGENTS, EMPLOYEES, SUCCESSORS AND ASSIGNS ("INDEMNIFIED COUNTY PARTIES") FROM AND AGAINST ALL CLAIMS AND LIABILITY DUE TO THE ACTIVITIES OF SUBRECIPIENT OR ANOTHER ENTITY OVER WHICH SUBRECIPIENT EXERCISES CONTROL, PERFORMED UNDER THIS AGREEMENT AND WHICH RESULT FROM ANY NEGLIGENT ACT, ERROR, OR OMISSION; INTENTIONAL TORT; INTELLECTUAL PROPERTY INFRINGEMENT; OR FAILURE TO PAY A SUBCONTRACTOR; COMMITTED BY SUBRECIPIENT OR ANOTHER ENTITY OVER WHICH SUBRECIPIENT EXERCISES CONTROL.

7.2. SUBRECIPIENT SHALL ALSO INDEMNIFY, DEFEND, AND HOLD HARMLESS THE COUNTY AND INDEMNIFIED COUNTY PARTIES FROM AND AGAINST ANY AND ALL EXPENSES, INCLUDING REASONABLE ATTORNEYS' FEES WHICH MIGHT BE INCURRED BY THE COUNTY, IN LITIGATION OR OTHERWISE RESISTING SAID CLAIMS OR LIABILITIES WHICH MIGHT BE IMPOSED ON THE COUNTY AS THE RESULT OF SUCH ACTIVITIES BY SUBRECIPIENT OR ANOTHER ENTITY OVER WHICH SUBRECIPIENT EXERCISES CONTROL.

8. GOVERNING LAW AND VENUES

This Agreement shall be governed by and construed under the laws of the State of Illinois. Whenever possible, each provision of this Agreement shall be interpreted in such a manner as to be effective and valid under applicable law. Any claim, suit, action, or proceeding brought in connection with this Agreement shall be in the Circuit Court of Cook County and each party hereby irrevocably consents to the personal and subject matter jurisdiction of such court and waives any claim that such court does not constitute a convenient and appropriate venue for such claims, suits, actions or proceedings.

9. SEVERABILITY

In the event that any provision or clause of this Agreement conflicts with applicable law, such conflict shall not affect other provisions which can be given effect without the conflicting provision. To this end the provisions of this Agreement are declared to be severable.

10. COMPLIANCE WITH LAWS (Subrecipient shall ensure that the following provisions are applied to any sub awardee of the Subrecipient in any applicable sub award or contract,)

10.1. COMPLIANCE WITH STATE AND LOCAL REQUIREMENTS. Subrecipient acknowledges that this Agreement is governed under Illinois law and that the Subrecipient shall comply with all applicable state and local orders, laws, regulations, rules, policies and certifications governing any activities undertaken during the performance of this Agreement, including but not limited to any compliance with prevailing wage laws. Any Subrecipient that is a not-for-profit organization must be registered with the Illinois Secretary of State to transact business in Illinois.

10.2. COMPLIANCE WITH FEDERAL REQUIREMENTS. Subrecipient understands that the funds disbursed under this award may only be used in compliance with section 603(c) of the Social security Act. The Agreement further requires compliance with certain provisions of Title 2 CFR Part 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Subrecipient agrees to comply with all applicable provisions of Title 2 CFR Part 200 and all other applicable Federal laws, regulations, executive orders, Treasury policies, procedures, and directives, as well as state and local laws, regulations, and policies governing the funds provided under this Agreement. Note that subrecipients should refer to the Uniform Guidance for the most current information on applicable federal regulations referenced in this agreement. Subrecipient further agrees to utilize funds available under this Agreement to supplement rather than supplant funds otherwise available. With respect to any conflict between such federal requirements and the terms of this Agreement and/or the provisions of state law and except as otherwise required under Federal law or regulation, the more stringent requirement shall control.

Subcontracts, if any, shall contain a provision making them subject to all of the provisions stipulated in this Agreement, including but not limited to 2 CFR 200.303, 2 CFR 200.331-333, 2 CFR Part 200, Subpart E, and 2 CFR Part 200 Subpart F.

During the performance of this Agreement, Subrecipient shall comply with all applicable federal laws and regulations including, but not limited to the following:

10.2.1. COST PRINCIPLES

Subrecipients should follow allowable cost guidance detailed in the federal regulations in 2 CFR Part 200, Subpart E. Subrecipients are responsible for effective management and administration of funds. Subrecipients should have strong internal controls and effective financial monitoring in place in order to ensure compliance with the allowable costs. Allowable cost federal regulations which apply to ARPA include, but are not limited to:

- Program funds may be used for a “reasonably proportionate” share of the costs required for federal single audits performed in accordance with the Uniform Guidance, 2 CFR Part 200, Subpart F.
- Administrative costs - both direct and indirect - associated with program implementation are permitted. Pursuant to the SLFRF Award Terms and Conditions, recipients are permitted to charge both direct and indirect costs to their SLFRF award as administrative costs as long as they are accorded consistent treatment per 2 CFR 200.403 See Uniform Guidance, 2 CFR 200.412-200.414 for additional details.
- Per 2 CFR 200.303(a), the subrecipient must establish and maintain effective internal control over the award that provides reasonable assurance that the subrecipient is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the Federal award. These internal controls should be in compliance with guidance in “Standards for Internal Control in the Federal Government” issued by the Comptroller General of the United States or the “Internal Control Integrated Framework”, issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).
- The subrecipient management policies must consider the types of fraud that can occur within the entity to provide a basis for identifying fraud risks. Types of fraud, as defined by COSO, are as follows:
 - Fraudulent financial reporting - Intentional misstatements or omissions of amounts or disclosures in financial statements to deceive financial statement users. This could include intentional alteration of accounting records, misrepresentation of transactions, or intentional misapplication of accounting principles.
 - Misappropriation of assets - Theft of an entity’s assets. This could include theft of property, embezzlement of receipts, or fraudulent payments.
 - Corruption - Bribery and other illegal act

In addition to fraud, the subrecipient must consider other forms of misconduct that can occur, such as waste and abuse. Waste is the act of using or expending resources carelessly, extravagantly, or to no purpose. Abuse involves behavior that is deficient or improper when compared with behavior that a prudent person would consider reasonable and necessary operational practice given the facts and circumstances. This includes the misuse of authority or position for personal gain or for the benefit of another. Waste and abuse do not necessarily involve fraud or illegal acts.

10.2.2. CASH MANAGEMENT

SLFRF payments made to Subrecipient are not subject to the requirements of the Cash Management Improvement Act and Treasury’s implementing regulations at 31 CFR part 205 or 2 CFR 200.305(b)(8)-(9). Recipients can place funds in interest-bearing accounts, do not need to remit

interest to Treasury, and are not limited to using that interest for eligible uses under the Program award.

10.2.3. AUDIT REQUIREMENTS

Subrecipient will be subject to a single audit pursuant to 2 CFR 200.501(a) if Subrecipient expends \$750,000 or more in Federal awards during their fiscal year.

If subject to the single audit, the Subrecipient must:

- Procure or otherwise arrange for the audit required by this part in accordance with 2 CFR 200.509, and ensure it is properly performed and submitted when due in accordance with 2 CFR 200.512.
- Prepare appropriate financial statements, including the schedule of expenditures of Federal awards in accordance with 2 CFR 200.510.
- Promptly follow up and take corrective action on audit findings, including preparation of a summary schedule of prior audit findings and a corrective action plan in accordance with 2 CFR 200.511(b) and (c), respectively.
- Provide the auditor with access to personnel, accounts, books, records, supporting documentation, and other information as needed for the auditor to perform the audit required by this part.

10.2.4. EQUIPMENT AND REAL PROPERTY MANAGEMENT

Any purchase of equipment or real property with SLFRF funds must be consistent with the Uniform Guidance at 2 CFR Part 200, Subpart D. Equipment and real property acquired under this program must be used for the originally authorized purpose. Consistent with 2 CFR 200.311 and 2 CFR 200.313, any equipment or real property acquired using SLFRF funds shall vest in the non-Federal entity. Any acquisition and maintenance of equipment or real property must also be in compliance with relevant laws and regulations.

10.2.5. MANDATORY DISCLOSURES

In accordance with 2 CFR 200.113, the non-Federal entity or applicant for a Federal award must disclose, in a timely manner, in writing to the County all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award. Non-Federal entities that have received a Federal award including the term and condition outlined in appendix XII to this part are required to report certain civil, criminal, or administrative proceedings to SAM (currently FAPIIS). Failure to make required disclosures can result in any of the remedies described in 2 CFR 200.339.

10.2.6. NON-DISCRIMINATION

Statutes and regulations prohibiting discrimination applicable to this award include, without limitation, the following: (a) Title VI of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d et seq.) and Treasury's implementing regulations at 31 C.F.R. Part 22, which prohibit discrimination on the basis of race, color, or national origin under programs or activities receiving federal financial assistance; (b) The Fair Housing Act, Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§ 3601 et seq.), which prohibits discrimination in housing on the basis of race, color, religion, national origin, sex, familial status, or disability; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability under any

program or activity receiving federal financial assistance; (d) The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101 et seq.), and Treasury's implementing regulations at 31 C.F.R. Part 23, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance; and (e) Title II of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. §§ 12101 et seq.), which prohibits discrimination on the basis of disability under programs, activities, and services provided or made available by state and local governments or instrumentalities or agencies thereto.

Projects funded with SLRFR should advance shared interests and promote equitable delivery of government benefits and opportunities to underserved communities, as outlined in Executive Order 13985, On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government.

10.2.7. EQUAL EMPLOYMENT OPPORTUNITY

During the performance of the Development Agreement, Subrecipient will be required to comply with Executive Order 11246, "Equal Employment Opportunity," as amended by EO 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

10.2.8. COPELAND ANTI-KICKBACK ACT

Subrecipient shall comply with 18 U.S.C. §874, 40 U.S.C. §3145, and the requirements of 29 CFR Part 3 as may be applicable, which are incorporated by reference into this contract.

10.2.9. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT.

(a) Overtime requirements: No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(b) Violation; liability for unpaid wages; liquidated damages: In the event of any violation of the clause set forth in paragraph 10.2.9(a) of this section, the Subrecipient, its contractor(s) or any subcontractor(s) responsible therefor shall be liable for the unpaid wages. In addition, any Subrecipient, and its subcontractor(s) shall be liable to the United States, for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth herein.

(c) Withholding for unpaid wages and liquidated damages: The County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Subrecipient or its subcontractor(s) under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Selected Respondent(s), contractor(s) or subcontractor(s) for unpaid wages and liquidated damages as provided herein.

(d) Subcontracts: The Subrecipients or its subcontractor(s) shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of 29 CFR 5.5, and also a clause requiring the

subcontractors to include these clauses in any lower tier subcontracts. The Subrecipient shall be responsible for compliance by any contractor or subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of 29 CFR §5.5. 6) Clean Air Act and Federal Water Pollution Control Act. The Subrecipient agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §7401 et seq.

10.2.10. DEBARMENT & SUSPENSION

This award is a covered transaction for purposes of 2 CFR Part 180 and 2 CFR Part 3000. As such, the Subrecipient is required to verify that none of its subrecipients or subcontractors (defined at 2 CFR §180.995) or its affiliates (defined at 2 CFR §180.905) are excluded (defined at 2 CFR §180.940) or disqualified (defined at 2 CFR §180.935). Subrecipient must comply with 2 CFR Part 180, subpart C and 2 CFR Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This certification is a material representation of fact relied upon by the County. If it is later determined that the Subrecipient did not comply with 2 CFR Part 180, subpart C and 2 CFR Part 3000, subpart C, in addition to remedies available to the County, the federal government may pursue available remedies, including but not limited to, suspension and/or debarment. The Subrecipient agrees to comply with the requirements of 2 CFR Part 180, subpart C and 2 CFR Part 3000, subpart C, throughout the period of any contract that may arise from this Agreement.

10.2.11. BYRD ANTI-LOBBYING AMENDMENT.

Subrecipient certifies that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other award covered by 31 U.S.C. §1352. Subrecipients shall also disclose any lobbying with non-federal funds that takes place in connection with obtaining any federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certifications to the awarding agency. If the Agreement exceeds \$100,000, the Subrecipient must certify compliance with the Byrd Anti-Lobbying Amendment. See, **Exhibit F**, Certification Regarding Lobbying.

10.2.12. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR ACTS.

Subrecipient and any subcontractors must comply with 31 U.S.C. Chapter 38, Administrative Remedies for False Claims and Statements, which shall apply to the activities and actions of Subrecipient and subcontractors pertaining to any matter resulting from a contract.

10.2.13. CONFLICTS OF INTEREST.

Subrecipient must disclose in writing to Treasury or the pass through entity, as appropriate, any potential conflict of interest affecting the awarded funds in accordance with 2 C.F.R. § 200.112.

10.2.14. TRANSPARENCY ACT.

Reporting Subaward and Executive Compensation Information in compliance with 2 CFR Part 170.

10.2.15. PUBLICATIONS.

Any publication produced with funds from this award must also display the following language:
 “This project is being supported, in whole or in part, by federal award number Assistance Listing Number (ALN – formerly known as the CFDA) 21.027 awarded to Cook County by the U.S. Department of the Treasury

10.2.16. INCREASING SEAT BELT USE IN THE UNITED STATES.

Pursuant to Executive Order 13043, 62 FR 19217 (Apr. 18, 1997), Subrecipient is encouraged to adopt and enforce on-the-job seat belt policies and programs for your employees when operating company-owned, rented or personally owned vehicles.

10.2.17. REDUCING TEXT MESSAGING WHILE DRIVING.

Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Subrecipient is encouraged to adopt and enforce policies that ban text messaging while driving and establish workplace safety policies to decrease accidents caused by distracted drivers.

10.2.18. UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITIONS ACT.

Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (42 U.S.C. §§ 4601-4655) and implementing regulating apply to this Agreement, where applicable.

10.2.19. DISCLAIMER

The United States expressly disclaims any and all responsibility or liability to Subrecipient or third persons for the actions of Subrecipient or third persons resulting in death, bodily injury, property damages, or any other losses resulting in any way from the performance of the federal award or any other losses resulting in any way from the performance of the federal award

or any contract, or subcontract under this award. By accepting this Agreement from the County, the Subrecipient does not in any way establish an agency relationship between the United States and Subrecipient.

10.2.20. CODE OF CONDUCT 2 CFR 200.318(c)(1).

The non-Federal entity (Subrecipient) must maintain written standards of conduct covering conflicts of interest and governing the actions of its employees engaged in the selection, award and administration of contracts. No employee, officer, or agent may participate in the selection, award, or administration of a contract supported by a Federal award if he or she has a real or apparent conflict of interest. Such a conflict of interest would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from a firm considered for a contract. The officers, employees, and agents of the non-Federal entity may neither solicit nor accept gratuities, favors, or anything of monetary

value from contractors or parties to subcontracts or subawards. However, non-Federal entities may set standards for situations in which the financial interest is not substantial, or the gift is an unsolicited item of nominal value. The standards of conduct must provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the non-Federal entity. If the non-Federal entity has a parent, affiliate, or subsidiary organization that is not a State, local government, or Indian tribe, the non-Federal entity must also maintain written standards of conduct covering organizational conflicts of interest. Organizational conflicts of interest means that because of relationships with a parent company, affiliate, or subsidiary organization, the non-Federal entity is unable or appears to be unable to be impartial in conducting a procurement action involving a related organization.

11. PROCUREMENT STANDARDS (Subrecipients shall ensure that the following provisions are applied to any sub awardee of the Subrecipient in any applicable sub award or contract,)

Subrecipients are responsible for ensuring any procurement of goods or services using Program Funds is consistent with the procurement standards set forth in the Uniform Guidance at 2 CFR 200.317 through 2 CFR 200.327, as applicable. Subrecipient must have documented procurement procedures, consistent with State, local, and tribal laws and regulations and the standards of the federal Uniform Guidance, for the acquisition of property or services required under a Federal award or subaward.

METHODS OF PROCUREMENT

When the value of the procurement for property or services under a Federal award does not exceed the simplified acquisition threshold (SAT), as defined in 2 CFR 200.1, or a lower threshold established by Subrecipient, formal procurement methods are not required. The non-Federal entity may use informal procurement methods to expedite the completion of its transactions and minimize the associated administrative burden and cost. The informal methods used for procurement of property or services at or below the SAT include:

Informal Procurement Methods

- Micro-purchases - The acquisition of supplies or services, the aggregate dollar amount of which does not exceed the micro-purchase threshold as defined in 2 CFR 200.1.
- Small Purchases - The acquisition of property or services, the aggregate dollar amount of which is higher than the micro-purchase threshold but does not exceed the simplified acquisition threshold. If small purchase procedures are used, price or rate quotations must be obtained from an adequate number of qualified sources as determined appropriate by the non-Federal entity.

Formal Procurement Methods

When the value of the procurement for property or services under a Federal financial assistance award exceeds the SAT, or a lower threshold established by Subrecipient, formal procurement methods are required. Formal procurement methods require following documented procedures. Formal procurement methods also require public advertising unless a non-competitive procurement can be used in accordance with 2 CFR 200.319.

The following formal methods of procurement are used for procurement of property or services above the simplified acquisition threshold or a value below the simplified acquisition threshold the non-Federal entity determines to be appropriate:

- Sealed Bids - A procurement method in which bids are publicly solicited and a firm fixed-price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. The sealed bids method is the preferred method for procuring construction, if the appropriate conditions are present (see 2 CFR 200.320(b)(1)(i)).
- Proposals - A procurement method in which either a fixed price or cost-reimbursement type contract is awarded. Proposals are generally used when conditions are not appropriate for the use of sealed bids.

Competition

The Uniform Guidance requires all procurement transactions for property or services to be conducted in a manner providing full and open competition, consistent with standards outlined in 2 CFR 200.320. Non-competitive procurements are allowed only in circumstances where at least one of the following conditions is true:

- The acquisition of property or services, the aggregate dollar amount of which does not exceed the micro-purchase threshold (see 2 CFR 200.320(a)(1) for more detail);
- The item is available only from a single source;
- The public exigency or emergency for the requirement will not permit a delay resulting from publicizing a competitive solicitation;
- The Federal awarding agency or pass-through entity expressly authorizes a noncompetitive procurement in response to a written request from the Subrecipient; or
- After solicitation of a number of sources, competition is determined inadequate.

Subrecipient is required to have an infrastructure for competitive bidding and contractor oversight, including maintaining written standards of conduct and prohibitions on dealing with suspended or debarred parties.

12. PERSONALLY IDENTIFIABLE INFORMATION

Subrecipient and any of the Subrecipient's sub awardees must comply with 2 CFR 200.303(e) and take reasonable measures to safeguard protected personally identifiable information, as defined in 2 CFR 200.82, and other information the County designates as sensitive or consistent with applicable Federal, state, and local laws regarding privacy and obligations of confidentiality including but not limited to compliance with the Illinois Personal Information Protection Act and other data privacy laws. See Exhibit E for additional guidelines and requirements regarding data privacy.

13. WORKERS' COMPENSATION

Subrecipient shall provide Workers' Compensation Insurance coverage for all of its employees involved in the performance of this Agreement

14. AMENDMENTS

This Agreement may be amended at any time only by a written instrument signed by both Parties. Such amendments shall not invalidate this Agreement, nor relieve or release either Party from its obligations

under this Agreement. Cook County may, in its discretion, amend this Agreement to conform with Federal, state or local governmental guidelines, policies and available funding amounts. If such amendments result in a change in the funding, the scope of services, or schedule of the activities to be undertaken as part of this Agreement, such modifications will be incorporated only by written amendment signed by both Parties.

15. INSURANCE

Subrecipient shall provide and maintain, at Subrecipient's own expense, during the term of this Agreement and any time period following expiration if Subrecipient is required to return and perform any of the Services or Additional Services under this Agreement, sufficient insurance coverage to protect any funds provided to Subrecipient under this Agreement from loss due to theft, fraud and/or undue physical damage. Subrecipients that are self-insured shall maintain excess coverage over and above its self-insured retention limits.

16. CONFLICT OF INTEREST

Subrecipient warrants and represents to the County that it does not have nor shall it knowingly acquire any interest that would conflict in any manner with the performance of its obligations under this Agreement. Furthermore, Subrecipient warrants that no company or person, other than a bona fide employee, has been employed to solicit or secure this Agreement with the County, and that Subrecipient has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this Agreement. For breach or violation of this provision, the County shall have the right to terminate this Agreement without liability.

17. COUNTERPARTS

This Agreement may be executed in counterparts, each of which shall be deemed an original.

18. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement between the Parties and cannot be modified or amended except by mutual written agreement of both Parties.

19. SEPARATE ENTITIES

It is understood and agreed that nothing contained herein is intended or should be construed as in any way affecting the status of the Parties as separate, independent and distinct entities under Illinois or any other law. It is further understood and agreed that nothing herein is intended or should be construed as in any way creating or establishing the relationship of co-partners or joint ventures between the Parties hereto, or as constituting the Parties as representatives of each other for any purpose.

20. NON-LIABILITY OF PUBLIC OFFICIALS

No official, employee or agent of the County shall be charged personally by the Subrecipient or by an assignee or subcontractor with any liability or expenses of defense or be held personally liable under any term or provision of this Amendment, because of such County's execution of this Amendment or enforcement of the provisions herein.

21. INTERPRETATION

Any headings of this Agreement are for convenience of reference only and do not define or limit the provisions thereof. Words of any gender shall be deemed and construed to include correlative words of the other genders. Words importing the singular number shall include the plural number and vice versa, unless the context shall otherwise indicate. All references to any person or entity shall be deemed to include any person or entity succeeding to the rights duties, and obligations of such persons or entities in accordance with the terms and conditions of this Agreement.

22. WAIVER

Whenever, under this Agreement, a Party, by a proper authority, waives another Party's performance in any respect or waives a requirement or condition of another Party's performance, the waiver so granted, whether express or implied, shall only apply to the particular instance and shall not be deemed a waiver forever or for subsequent instances of the performance, requirement or condition. No such waiver shall be construed as a modification of this Agreement regardless of the number of times a party may have waived the performance, requirement or condition.

23. EXHIBITS

All Exhibits to this Agreement are incorporated as if set out fully. In the event of any inconsistencies or conflict between the language of this Agreement and the Exhibits, the language of the Exhibits shall control, but only to the extent of the conflict or inconsistency.

This Agreement contains the following attachments:

Exhibit A – Scope of Work/Technical Specifications

Exhibit B – Program Reporting Requirements

Exhibit C – Monitoring and Fiscal Reporting

Exhibit D – Request for Advance of Grant Funds

Exhibit E – Data Privacy Guidelines and Requirements

Exhibit F – Certification Regarding Lobbying

24. SIGNATURE AUTHORITY

A duly authorized agent for the Subrecipient is required to sign this Agreement on behalf of the Subrecipient. If this Agreement is signed by a designee, a duly authenticated delegation of authority evidencing the signer's authority to execute the agreement for and on behalf of the Subrecipient must be attached to the Agreement for review by Cook County.

(Remainder of Page Intentionally Left Blank)

IN WITNESS WHEREOF, the Parties hereto have caused their duly authorized representatives to execute this Agreement on the dates hereafter set forth.

COUNTY OF COOK:



Toni Preckwinkle
President
Cook County Board of Commissioners

APPROVED
BY THE BOARD OF COOK COUNTY COMMISSIONERS

JUL 20 2023

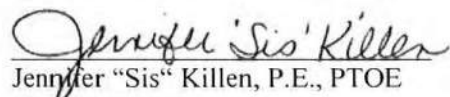
This _____ day of _____ A.D. _____

ATTEST:


County Clerk

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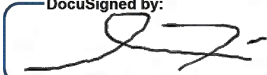


Jennifer "Sis" Killen, P.E., PTOE
Superintendent
County of Cook
Department of Transportation and Highways

APPROVED AS TO FORM:
Kimberly M. Foxx, State's Attorney

By:  July 3, 2023
Assistant State's Attorney

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

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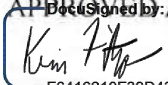

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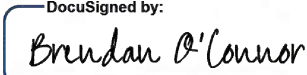
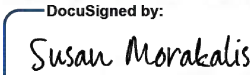
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General Counsel
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EXHIBIT A

SCOPE OF WORK

A. PROGRAM DESCRIPTION AND OBJECTIVES

Background

Flood mitigation has been a significant focus for regional planning organizations in Cook County, but there continues to be barriers to the development and implementation of proposed projects. The causes and potential solutions for flooding are not always obvious. A lack of municipal expertise and capacity with respect to project identification, securing funding, and awarding and administering engineering and construction contracts can impede project progress. The ongoing maintenance and operational needs of stormwater infrastructure, coupled with the multijurisdictional nature of flooding issues also presents a hurdle for some municipalities. Climate change will only exacerbate flooding problems across the County as the intensity and frequency of large storm events increases. This is especially true in communities with historic disinvestment, which were disproportionately impacted by COVID19. MWRD was granted authority over stormwater management in Cook County however, its local stormwater partnership program is focused primarily on providing funding assistance to local governments, not staff assistance or contracting.

Approach:

This program seeks to provide additional funding to MWRD to expand the scope of its existing stormwater management program to include overall responsibility for project implementation. Expanding the MWRD initiative with County funds will build resiliency to climate events within more Cook County communities through a collaborative identification and implementation of flood mitigation projects. MWRD will also engage in agreements with municipalities to carry out these projects.

Types of Assistance:

Types of assistance will include financial assistance for implementing stormwater management projects from Cook County to MWRD. MWRD will provide engineering, capital improvement, and financial assistance to local governments.

Major Entities Involved

Cook County Staff will work together with MWRD to identify respective projects. Selected projects will be led by MWRD or local governments.

B. ROLES AND RESPONSIBILITIES

The Bureau of Administration by the direction of the DOTH will provide the program guidelines and funding to MWRD to administer the implementation of stormwater management projects.

MWRD Staff

The MWRD's Engineering Department will provide project management, administration, and coordination with local partner agencies of projects identified to be overseen by MWRD.

As the award subrecipient, MWRD staff will:

- Manage and implement selected projects
 - Including studies, design engineering, and construction of projects
- Engage with local governments for selected projects
- Collect and provide data/metrics needed for upward reporting
- Updating reporting metrics on required timeline
- Meet with Cook County staff to ensure progress and compliance with ARPA guidelines
 - Including submission of required reports
- Reviewing and processing invoices, and submitting reimbursement requests

Cook County Staff

As the award recipient, the DOTH staff will include:

Program Lead and other Cook County Staff:

- Help with selection of projects
- Data reporting for certain denoted metrics
- Monitoring and oversight of subrecipient/program
- Submit reporting to Treasury
- Processing reimbursement requests
- Budget funds for program
- Regular check ins with the subrecipient to ensure progress and compliance

C. ADMINISTRATOR

As a subrecipient, the MWRD is responsible for program administration, distributing subawards, data collection, monitoring, and reporting in accordance to ARPA and Cook County guidelines. The Party will utilize funds to administer professional services and construction contracts to implement projects, and in other cases, the Party will provide sub-awards to local governments who are capable of and qualified to implement stormwater management projects.

D. PROGRAM ADMINISTRATION AND PROCESS OVERVIEW

The program intends to compile a list of stormwater projects and select those that aim to promote most equitable outcomes.

Eligibility Criteria:

Eligible projects for this program were carefully selected by the Working Group after a screening process from existing inventories of known drainage problems and/or potential projects.

Factors considered include, but are not limited to:

- Road and/or structure flooding
- Local capacity constraints: high or very high need communities (CMAP Cohort 3 or 4)
- Clear/documented problem (i.e., what are we trying to solve and what's causing it)
- Conceivable solution
- Project complexity
- Design difficulties
- Cost effectiveness – number of residents directly benefitting/project cost
- Number of jurisdictions benefitting from project

Intake/Evaluation Process:

- Projects were selected by The Working Group, composed of staff from DOTH and MWRD, from a candidate list of 123 entries. The 123 entries were taken from existing inventories of known drainage problems and/or potential projects including MWRD local stormwater partnership program applications, the Cook County Hazard Mitigation Plan, and input from DOTH.
- The Working Group evaluated projects within buckets based on phase requested and CMAP cohorts. This allowed projects to be compared against peer projects.
- The Working Group identified 26 projects that aligned well with program goals and appeared to have clear problem statements for which there were likely feasible, implementable solutions given the funding and schedule constraints of the program.
- For 16 of the projects, the Working Group felt the community may not have the capacity to lead the project, and therefore would need MWRD to lead the project.

Selected Projects and Award Amounts:

Section H of this Exhibit lists the selected projects and award amounts anticipated under this Agreement. As the projects develop, feasibility and needed funding levels can change and some revisions to the programmed projects may be expected. Should modifications to selected projects (including the removal or addition of projects) or award amounts be required, the MWRD must seek the written approval of DOTH to proceed.

E. WORKPLAN

1. Program Outline (March 2022 – February 2023)
 - a. This initial phase will involve County and MWRD staff developing the framework for the program and selecting projects
2. Engaging with Local Governments (March 2023 – August 2023)
 - a. MWRD to engage with local governments/project owners to determine who will lead projects.
 - b. MWRD will draft intergovernmental agreements with local governments.

3. Projects Implementation by MWRD or Local Governments (September 2023 – November 2026*)
 - a. Planning studies will be performed
 - b. Preliminary engineering will be performed
 - c. Design engineering will be performed
 - d. Construction projects will be bid and constructed
4. Administration and compliance monitoring (March 2022 – November 2026)
 - a. Program administration and compliance monitoring will be performed by County and MWRD staff throughout the life of the program.

*All funds must be obligated by December 2024.

F. BUDGET

Issuance of Funding and Payment terms:

Cook County will provide MWRD with payments totaling up to \$18,000,000 of ARPA funds for services rendered through Fiscal Year 2026. Reimbursements for work already performed within the period of performance of this contract will be processed upon execution of this agreement. Further details on annual payments, including regarding the process to receive advance funds, can be found in Exhibit D of this Agreement.

The approved budget for NT875 (Stormwater Management Project Implementation Program) can be found below. Given the subrecipient's utilization of subawardees, this budget is liable to change based on evolution of needs and demand from the different subawardees.

| 2022 | 2023 | 2024 | 2025 | 2026 |
|------|----------------|----------------|----------------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| \$0 | \$4,185,000.00 | \$5,625,000.00 | \$6,930,000.00 | \$1,260,000.00 |

| Expenses | Total |
|---------------------------------------|---------------------|
| Contractual Services | \$4,500,000 |
| Supplies and Material | \$0 |
| Maintenance | \$0 |
| Rental and Lease | \$0 |
| Capital Improvements and Construction | \$13,500,000 |
| Other | \$0 |
| Subgrantee Indirect Costs | \$0 |
| Total Subgrantee Costs | \$18,000,000 |

G. MARKETING AND COMMUNICATION

Subrecipient must acknowledge Cook County when describing projects or programs funded in whole or in part with Cook County funds. Subrecipient and any additional recipients shall promote the Program to participants within Cook County. Flyer, advertisement, press release, and other templates will be approved by the County before publication; the Subrecipient may draw from that approved language for additional communications as needed. The rights and obligations of Subrecipient to design and market the Program are not exclusive, and Cook County may advertise and promote the Program, at its sole cost, as it deems necessary or desirable. Cook County achieves its mission through partnerships with states, local governments, community organizations, and others. Communicating the role of Cook County support increases public understanding of how we work with community partners to achieve our mission to lead and promote equitable economic growth and community development. As such, we require Subrecipients to track and report on marketing and outreach activities. Reporting should include types of engagement and tactics used to share information about the programs.

Any publication produced with funds from this award must also display the following language:
 “This project is being supported, in whole or in part, by federal award number ALN 21.027 awarded to Cook County by the U.S. Department of the Treasury.

H. SELECTED PROJECTS AND AWARD AMOUNTS*

* Any revisions to the selected projects and/or award amounts require written approval of DOTH.

| Project Name | Location | Project Phase | Amount |
|--|---|----------------------------|---------------|
| Northeast Dixmoor Stormwater Projects | Village of Dixmoor | Feasibility/Planning Study | \$100,000 |
| Dolton Flood Mitigation | Village of Dolton, between 154th Street and 158th Street, Clyde Avenue to the east and Greenwood Avenue on west | Preliminary Engineering | \$300,000 |
| Lyons and McCook Levee Improvements | Villages of Forest View, Lyons, and McCook | Construction | \$1,000,000 |
| Flood Control Projects on Prairie Creek | Unincorporated Maine Township; City of Park Ridge | Construction | \$1,500,000 |
| 157 th Street and Spring Creek Flood Mitigation | Orland Township Road District (Unincorporated Cook County) | Preliminary Engineering | \$150,000 |
| Flood Mitigation in the 5500 Block of South Wolf Road | Unincorporated Lyons Township | Construction | \$500,000 |
| Schiller Park Drainage Improvements | Village of Schiller Park, southwest of intersection of Irving Park Road and Des Plaines River Road | Construction | \$500,000 |

| | | | |
|---|--|-------------------|-------------|
| Northfield Township/Citation Lake Project | Unincorporated Northfield Township, Pleasant Street to the north, Western Avenue to the west, Highland Avenue to the east and Techny Road to the south | Construction | \$1,500,000 |
| 147 th Street and Wood Street Area Flooding | City of Harvey | Construction | \$1,500,000 |
| Thorn Ditch Flood Mitigation Project | Village of South Holland, between Cottage Grove Avenue and Dan Ryan Expressway | Construction | \$1,500,000 |
| Flood Control on Calumet-Sag Tributary C | Villages of Crestwood and Midlothian; Unincorporated Bremen Township | Construction | \$1,500,000 |
| Southeast Cook County Stormwater Storage and Open-Space Recreational Improvement | Village of Glenwood; Unincorporated Bloom Township | Preliminary Study | \$750,000 |
| Local Stormwater Improvements in LaGrange Highlands Area | Lyons Township (Unincorporated Cook County) – La Grange Highlands Area | Construction | \$1,000,000 |
| 71 st Street Ditch Area Flood Mitigation | Village of Bedford Park | Construction | \$1,250,000 |
| Voluntary Flood-Prone Property Buyouts and Stormwater Storage in Non-Floodplain Areas | Cook County, locations to be determined | Construction | \$2,000,000 |
| Melvina Ditch Reservoir Flood Mitigation Enhancements | Villages of Burbank and Oak Lawn | Construction | \$1,000,000 |

EXHIBIT B**PROGRAM REPORTING REQUIREMENTS**

Subrecipients shall include applicable program reporting requirements in any sub award agreement

A. U.S. TREASURY REPORTING REQUIREMENTS

ARPA fund recipients are required to track specific performance indicators and programmatic data in order to comply with Program award reporting requirements, including a quarterly "Project and Expenditure" report, and an annual "Recovery Plan Performance Report." MWRD permits the County and auditors to have access to its records and financial statements as necessary for meeting federal requirements. Funding expenditure records must also be kept for five years after all funds have been expended or returned to Treasury.

Each SLFRF project must be aligned to a single Treasury Expenditure Category, as identified by Cook County, and will require specific reporting data based on that category.

| Type | Metric | Collect ion Timefr ame | Data Type | Data Owner | Additional Context |
|-------------------------------|--|---------------------------------|--------------|------------------|--|
| Treasu ry- require d | Describe the approach, goals, and type of project. Given the broad eligible uses of funds and the specific needs of the jurisdiction, please also explain how the funds would support the communities, populations, or individuals in your jurisdiction. | Annua l | Text | DOTH | No action required |
| Treasu ry- require d | Funding used for planning and design in community areas specified in the proposal | Quarte rly | Numer ic | Subrec ipient | Can indicate "0" if no expenditures are made for that quarter |
| Treasu ry- require d | Funding used for equipment and equipment installation in community areas specified in the proposal | Quarte rly | Numer ic | Subrec ipient | Can indicate "0" since not applicable |
| Treasu ry- require d | Funding used for community outreach in community areas specified in the proposal | Quarte rly | Numer ic | Subrec ipient | Can indicate "0" since not applicable |
| Treasu ry- require d | Projected/actual construction start date (month/year) | Quarte rly | Text | Subrec ipient | Collect per project and as reporting tool is flushed out, a determination will need to be made on if |

| | | | | | |
|-------------------|---|-----------|---------|--------------|---|
| | | | | | reporting will be aggregated or per project |
| Treasury-required | Projected/actual initiation of operations date (month/year) | Quarterly | Text | Subrecipient | Collect per project and as reporting tool is flushed out, a determination will need to be made on if reporting will be aggregated or per project. Can use projected construction completion date. |
| Treasury-required | Location | Quarterly | Text | Subrecipient | Can indicate "0" if no progress is made for that quarter. |
| Treasury-required | Technology to be deployed | Quarterly | Text | Subrecipient | Can indicate "0" since not applicable |
| Treasury-required | National Pollutant Discharge Elimination System (NPDES) Permit Number | Quarterly | Numeric | Subrecipient | Can indicate "0" if no progress is made for that quarter. Otherwise, provide MS4 NPDES number for projects where applicable. |
| Treasury-required | Public Water System (PWS) ID number | Quarterly | Numeric | Subrecipient | Can indicate "0" since not applicable |
| Treasury-required | Median Household Income of service area | Quarterly | Numeric | Subrecipient | Use most recent Median Household Income for Cook County (https://data.census.gov/cedsci/table?t=Income%20and%20Poverty&g=0500000US17031&y=2020) |

| | | | | | |
|--------------------|--|-----------|---------|--------------|---|
| Treasury-require d | Lowest Quintile Income of the service area | Quarterly | Numeric | Subrecipient | Use most recent Lowest Quintile Income for Cook County (https://data.census.gov/cedsci/table?q=B19081%3A%20MEAN%20HOUSEHOLD%20INCOME%20OF%20QUINTILES&t=Income%20and%20Poverty&g=0500000US17031&y=2020&tid=ACSDT5Y2020.B19081) |
| Treasury-require d | Describe workforce practices on any infrastructure projects being pursued (EC 5). How are projects using strong labor standards to promote effective and efficient delivery of high-quality infrastructure projects while also supporting the economic recovery through strong employment opportunities for workers? For example, report whether any of the following practices are being utilized: project labor agreements, community benefits agreements, prevailing wage requirements, and local hiring. | Annual | Text | Subrecipient | Subrecipient (MWRD) contracts include MPLAs and prevailing wage requirements. This should be stated in the reporting. |
| Treasury-require d | Labor Continuity: # of employees of contractors and sub-contractors working on the project | Annual | Numeric | Subrecipient | This applies to both professional services and construction contracts and will be reported in the aggregate but should be tracked by project. Note this should include existing Cook County DOT consultants assisting with program management, if any. |

| | | | | | |
|--------------------|---|--------|---------|--------------|--|
| Treasury-require d | Labor Continuity: # of employees on the project hired directly and hired through a third party | Annual | Numeric | Subrecipient | Can indicate "0" since not applicable. |
| Treasury-require d | Labor Continuity: Wages and benefits of workers on the project by classification and whether those wages are at rates less than those prevailing | Annual | Text | Subrecipient | Applies to construction contracts only, not professional services. To be reported in the aggregate, but should tracked by project. |
| | | | | | General note: Depending upon the reporting tool, instead of "0" for metrics that are not applicable or where no progress has been made during the reporting period, this may instead be represented by "Not applicable" or something similar |

B. PERFORMANCE METRICS

To determine whether the Party is meeting performance expectations, the County has set and will monitor performance goals, indicators, targets, and baseline data. The MWRD is responsible for tracking their progress against these metrics and providing regular updates to the County on their status.

| Type | Metric | Collection Timeframe | Data Type | Data Owner | Additional Context |
|------------------|---|----------------------|-----------|--------------|---|
| Program-specific | # of projects designed | Monthly | Numeric | Subrecipient | Can indicate "0" if no progress is made for that month. |
| Program-specific | # of projects constructed | Monthly | Numeric | Subrecipient | Can indicate "0" if no progress is made for that month. |
| Program-specific | # of completed stormwater management projects in underserved areas prone to flooding | Monthly | Numeric | Subrecipient | "Underserved areas" are CMAP cohorts 3 & 4. Can indicate "0" if no progress is made for that month. |
| Program-specific | # of vendors with offices in Cook County providing goods or services and corresponding dollar amounts | Monthly | Numeric | Subrecipient | To be reported in the aggregate, but should be tracked by project. Can indicate "0" if no progress is made for that month. |
| Program-specific | # of residents impacted by projects | Annual | Numeric | Subrecipient | Numbers should be reported based on construction projects completed in the reporting year. "# of residents impacted by projects" to be estimated using geographic area. Number of residents impacted could consider impassable roadways. Can indicate "0" if no progress is made for that year. |
| | | | | | General note: Depending upon the reporting tool, instead of "0" for metrics that are not |

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| | | | | | applicable or where no progress has been made during the reporting period, this may instead be represented by "Not applicable" or something similar |
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EXHIBIT C

MONITORING AND FISCAL REPORTING

Subrecipients shall include applicable monitoring and fiscal reporting requirements in any sub award agreement

Given the nature of the ARPA Program and the imperative to get assistance to County residents who are in need, significant monitoring and compliance controls have been built into the front-end management of the program to ensure financial integrity and accuracy. Embedded monitoring and compliance measures include but are not limited to:

- Establishing performance metrics and standardizing administrative reporting
- Establishing a clear program governance
- Managing and overseeing program cash flow
- Regular review and monitoring of expenditures to ensure compliance with Treasury parameters

In order to help ensure that Treasury Guidance and DOTH policy are being followed, DOTH will receive regular reporting from MWRD (See Exhibit B for details). In addition, reviews of the Program will be performed, and regular contact with MWRD will be maintained to both maximize the Program's coordination and adhere to federal guidelines.

The federal Uniform Guidance, 2 CFR 200.332(d), requires that pass-through entities "monitor the activities of the subrecipient as necessary to ensure that the subaward is used for authorized purposes, in compliance with federal statutes, regulations, and the terms and conditions of the subaward; and that subaward performance goals are achieved." As a direct recipient of federal funds for State and Local Fiscal Recovery, and as a pass-through entity providing federal funding to Subrecipients delivering the program, DOTH, as authorized by Cook County, is responsible for monitoring its subrecipients and their use of federal funds in a manner that conforms to ARPA spending rules.

- RESPONSIBILITY

DOTH or their designee will be responsible for arranging monitoring and compliance activities for the Stormwater Management Project Implementation Program. The Bureau of Administration will also conduct a formal review to satisfy County requirements and ensure compliance is being maintained.

- FREQUENCY

Monitoring the MWRD and their activities shall be conducted at the discretion of DOTH. At a minimum, DOTH will perform periodic compliance monitoring reviews of MWRD's activities. DOTH' designated representative can choose to perform sporadic monitoring if they deem it necessary, and can use the meetings for financial, programmatic or compliance review purposes. Irrespective of DOTH' official monitoring review, DOTH will supplement the basic monitoring activities with the quarterly reporting requirements from MWRD.

- OBJECTIVE AND SCOPE

DOTH will monitor the activities of MWRD as necessary to ensure that the subaward is used for authorized purposes, in compliance with Federal statutes, regulations, and the terms and conditions of the subaward; and that subaward performance goals are achieved. Pursuant to 2 CFR 200.332(d), the scope of monitoring of a subrecipient must include, but is not limited to:

1. Reviewing financial and performance reports
2. Following-up and ensuring that the subrecipient takes timely and appropriate action on all deficiencies pertaining to the Federal award provided to the MWRD from DOTH detected through audits, on-site reviews, and written confirmation from MWRD, highlighting the status of actions planned or taken to address Single Audit findings related to the particular subaward.
3. Issuing a management decision for applicable audit findings pertaining only to the Federal award provided to the MWRD from DOTH as required by 2 CFR 200.521.
4. Resolving audit findings specifically related to the subaward. DOTH is not responsible for resolving crosscutting findings. If MWRD has a current Single Audit report posted in the Federal Audit Clearinghouse and has not otherwise been excluded from receipt of Federal funding (e.g., has been debarred or suspended), the pass-through entity may rely on the subrecipient's cognizant audit agency or cognizant oversight agency to perform audit follow-up and make management decisions related to cross-cutting findings in accordance with section § 200.513(a)(3)(vii). Such reliance does not eliminate the responsibility of the pass-through entity to issue subawards that conform to agency and award-specific requirements, to manage risk through ongoing subaward monitoring, and to monitor the status of the findings that are specifically related to the subaward.

- METHODS

Cook County may employ, but is not limited to, the following monitoring tools:

Examples:

- *Evaluate the continued viability of project components and offer assistance and/or workout plans when necessary and feasible*
- *Provide MWRD with training and technical assistance on program-related matters*
- *Perform on-site reviews of the MWRD's program operations;*
- *Review administrative and financial management procedures, internal controls, and make recommendations where needed;*
- *Evaluate the accounting applications including, general ledgers, cash receipts/revenue, cash disbursements/expenses, payroll, financial reporting and property and equipment*

- REMEDIES FOR NONCOMPLIANCE

In the course of monitoring, if Cook County determines that MWRD is noncompliant with the federal statutes, regulations, or the terms and conditions of the federal award, or with DOTH policies, DOTH may attempt to resolve issues of non-compliance by taking one or more of the following actions:

1. Recommending corrective actions,
2. Asking MWRD to provide a "Corrective Action Plan" (CAP),
3. Providing technical assistance, or
4. Modifying the agreement to include requiring prior approval for certain activities, more frequent communication, or requiring new or additional reporting from MWRD.

If Cook County determines that noncompliance cannot be remedied through these means, the County may take one or more of the following actions, subject to the applicable notice and cure periods stipulated in the Agreement:

- Temporarily withholding payments pending correction of the deficiency, or

- Requiring Subrecipient to reimburse costs deemed ineligible by DOTH.

If DOTH suspects instances of fraud or misconduct, or determines that the Subrecipient is unable or unwilling to undertake the corrective actions recommended (subject to Defaults, Remedies, Termination and other legal and equitable rights of the County stipulated in the Intergovernmental Agreements) DOTH may take one or more of the following actions, in consultation with Treasury, which may be dependent on the type of deficiency and the seriousness of the deficiency:

1. Disallow all or part of the cost of the activity or action not in compliance,
2. Wholly or partly suspend or terminate the federal funding,
3. Terminate administrative arrangement with Subrecipient, or
4. Take other remedies that may be legally available.

If DOTH deems the non-compliance event to be severe, they reserve the right to escalate a response to the County's Inspector General or the Office of Human Rights. Allegations of monetary or non-monetary offenses must receive a response within 30 days of the finding(s). Material damages resulting from a breach of contract are immediately recoverable by DOTH.

- **EXPENSE TRACKING**

As a Subrecipient, MWRD will adhere to Cook County's grant policies with respect to the tracking of program expenditures and the transfer of funds. Cook County reserves the right to update and modify the process by which funds are delivered based on the subrecipient's risk profile and demonstrated ability to meet the program's goals, objectives, reporting, and compliance requirements.

Program funds are anticipated to be distributed to subrecipients on a reimbursement basis. The County, at its discretion, may elect to provide a Subrecipient with a portion of their funding as an advance in some cases.

A Subrecipient seeking reimbursement for non-payroll expenses incurred within the administration of the Stormwater Management Project Implementation Program should share the following items at the end of each month with DOTH for each expense item. If a subrecipient has received funding in advance, the Subrecipient shall share this information within one month of the expenditure.

Table I. - Expense Documentation Requirements

| Documentation | Purpose | Example (s) |
|----------------------------|---------------------------------|------------------------------|
| Original Invoice | Proof of purchase | Expense receipt, invoice |
| Date of Invoice | Incurred during eligible period | Invoice, proof of payment |
| Expense Description | Eligibility review | Invoice, written description |

| | | |
|-------------------------|-----------------------------|--|
| Vendor | Source of purchase | Invoice, proof of payment |
| Expense Amount | Total request reimbursement | Total listed on invoice |
| Proof of Payment | Proof of payment by entity | Bank statement, check statement, general ledger, copy of check |
| Budget Category | Administrative | Administrative |

In addition to an Excel summary of the expenses, all physical copies of monthly invoices should be incorporated into a single PDF document and all corresponding copies of their proof of payment should be incorporated in a separate PDF document. Subrecipients should highlight each expense they are seeking reimbursement for in an easily identifiable manner on the invoice and the proof of payment, respectively (i.e., highlights).

DOTH has the discretion to evaluate expenses and reject those that were incurred outside the eligible period, are not an eligible administrative expense, or that are not clearly connected to the execution of the Stormwater Management Project Implementation Program. Additionally, failure to provide the requisite expense documentation listed in the table above each month (or reasonable alternatives) may inhibit the Subrecipient from receiving reimbursement or may delay reimbursement.

Expenses that prompt a Subrecipient unexpectedly to exceed its projected budget will require an additional written explanation for why the expenses were necessary, how they were related to administering the Stormwater Management Project Implementation Program, and why they were not included in the original budget. DOTH will decide whether to reimburse such an expense.

- PAYROLL TIMEKEEPING

For Payroll reimbursement, MWRD is responsible for tracking employees' working hours dedicated to the Stormwater Management Project Implementation Program. MWRD will track the hours applied directly to the program and share their payroll reimbursement requests on a monthly basis. The required documentation for each employee is specified below:

- Employee name
- Employee title
- Hourly rate
- Number of hours worked, and
- Overview/Description of program activities

In addition to a document noting the items listed above, a formal payroll report from a Subrecipient's payroll system must be produced that covers the month duration for which the Subrecipient is seeking reimbursement.

Hours not directed to the Stormwater Management Project Implementation Program should not be included in the reimbursement request. DOTH shall seek repayment for any erroneous reimbursements.

- INVOICE SUBMISSION

The MWRD must provide the following information to seek reimbursement for program costs (See the Appendix, Attachment A for Templates):

- Reimbursement Summary Form,
- Reimbursement Certification,
- Personnel Costs Form,
- Other Costs Form, and
- Invoices, receipts, proof of payment, and/or payroll registers.

These expenses (payroll and non-payroll) will be measured against each projected budget and evaluated for eligibility. Any errors will be annotated and returned to MWRD for correction prior to reimbursement.


Attachment A

Required documents from subrecipients for expense reimbursement

Sample Reimbursement Summary Form:

CC ESR.01.2022

Expense Summary Report



The following form captures the Subrecipient's prior period's expense incurrence details (evidence rooted in Subrecipient's Risk Assessment). This form must be submitted within 30 days of the month being reported here (unless otherwise communicated). The inputs in Budget Category should align with the budgetary categories agreed upon between the County and the Subrecipient. This report does not absolve the Subrecipient from the requirement to maintain backup documentation (backlog documentation for a period of 3 years and the Treasury Memorandum's record retention requirements. Upon County request, the Subrecipient agrees to share the backup documentation during the grant and the five subsequent years.

| Subrecipient Information | | | | |
|-----------------------------------|--|-----------------------|--|--|
| Project Title: | | | | |
| Subrecipient Name: | | Subrecipient Address: | | |
| Unique Entity ID (formally DUNS): | | Agreement Term: | | |
| Incurrence Period Covered: | | Date Submitted: | | |

| Budgetary Category | Approved Budget* | Activity Balance** | Expended Amount~ | Residual Balance |
|------------------------------|------------------|--------------------|------------------|------------------|
| Capital Improvements & Cons: | | | | |
| Select | | | | |
| Select | | | | |
| Select | | | | |
| Select | | | | |
| Select | | | | |
| Select | | | | |
| Select | | | | |
| Totals: | | | | |

Attach additional sheets as necessary.

*Total Fiscal Year Budget. This should remain the same on all subsequent submissions for that fiscal year (unless a budgetary change is agreed upon).

**Amount of funds the entity had remaining from their approved budget before this report. If this is 1st submission, Activity Balance should equal Approved Budget.

~Expended Amount should only be expenditures of this incurrence period covered (not total expenditures to-date). Residual Balance will be Activity Balance minus the Expended Amount.

| Advancement Drawdown Details (If Applicable) | |
|---|--|
| Total Advanced Funds Provided To-Date: | |
| Total Expenditures Reported To-Date (Inclusive of expenditures in this report): | |
| Total Outstanding Advance To-Date (Advance Provided minus Expenditures Reported): | |

| Subrecipient Certification | |
|---|-------|
| I certify that the information contained herein is accurate and complete, that funds were only used in furtherance of this project and in compliance with approved budget, and that all other supplementary forms have been provided to the County. I also certify that any additional documentation will be provided in the event of a County request. | |
| Chief Financial Officer (or equivalent) Name: | Date: |
| Chief Financial Officer Signature: | |

| County Program Lead Approvals | | | |
|---|----------------------------------|--------------|--|
| Enter Program ID: | Enter Subrecipient's risk level: | Select | |
| Subrecipient Submitted all prior required docs: | | Select | |
| County Department Name: | County Department #: | | |
| Program Lead Name: | Program Lead Signature: | Date Signed: | |
| Dept. Fiscal Lead: | Dept. Fiscal Lead: | Date Signed: | |

*The following form must be submitted as a package along with the Payroll Report and the Itemized Invoice Report. *

Sample Personnel Costs Form:

EXHIBIT D

Request for Advance of Grant Funds

The following form affords organizations in need of an advance of funds to request them from the County to perform program activities. The information should be provided by the subrecipient and shared with the County Program Lead. The information below is required before an advance of funds can be initiated.

Sample Advance Form:

| Advancement Request Form | | | |
|--|---------|---|----------------------|
| CC ARF 01.2022 | | | |
| <p style="font-size: x-small;">This form allows organizations in need to request an advance from the County. The information requested under blue header sections must be provided. This completed form is required before an advance can be made. Subrecipients must retain and protect the backup documentation (invoices and proof of payment) incurred against this advance for a period of five (5) years beginning at the conclusion of the Grant's closure, consistent with County policy for required audits and the Treasury Memorandum's record retention requirements. Upon County request, the Subrecipient agrees to share the backup documentation during the grant and the five subsequent years.</p> | | | |
| Subrecipient Information | | | |
| Project Title: | | | |
| Subrecipient Name: | | Unique Entity ID*: | |
| Subrecipient Address: | | Agreement Term: | |
| *Permanently assigns the entity's ID/ID number. The advance may be made within 9 months of the end of Agreement Term. | | | |
| Amount Requested | | | |
| Amount Requested: | | | |
| Basis of Need Explanation | | | |
| | | | |
| Subrecipient Certification | | | |
| <p>I hereby certify this request is being made with full intent to expend funds consistent with ARPA and County compliance and eligibility standards, and the approved budget. I certify the funds will only be used for costs applicable to the program herein. I certify I have the authority to submit this request on behalf of the organization I represent. I understand providing false information will subject my organization or municipality to termination from the above referenced program(s) and that there may be additional penalties including, but not limited to, referral to the appropriate law enforcement agencies for filing of criminal charges. 18 U.S.C. § 1001 makes it a felony to knowingly, and willfully, make materially false statement on a matter within the jurisdiction of any Federal agency. I understand knowingly and willfully making a materially false statement or concealing a material fact could subject me to a fine or imprisonment of up to 5 years, or both. I certify I have read Cook County's Policy on Advances, and I understand and accept the risks and responsibilities associated with this advance. Any misuse of funds could result in the termination of the Subrecipient Agreement and will require the organization to refund the County those amounts. Any advanced funds not yet spent by Subrecipient shall be promptly returned to the County within fifteen (15) days of termination.</p> | | | |
| Subrecipient Signature | | | |
| Chief Financial Officer (or equivalent) Name: | | | Date: |
| Chief Financial Officer Signature: | | | |
| For Use by County Departments Only | | | |
| Enter Program ID: | | Enter Subrecipient's risk level: | Select |
| Enter Subrecipient's Fiscal Year (FY) allocation: | | % of FY allocation this request represents: | |
| Is amount requested within allowable parameters? | Select | What is the Subrecipient's Supplier Number? | |
| What number advance is this request? | | Date of last advance: | |
| Aggregate amount of all prior advances: | | Did Subrecipient signatory attend fiscal trainings? | Select |
| Subrecipient complied with expense sharing requirements and enclosures prior to this request? | | | Select |
| County Department Name: | | | County Department #: |
| Program Lead Name: | | Program Lead Signature: | Date Signed: |
| Dept. Fiscal Lead Name: | | Dept. Fiscal Lead Signature: | Date Signed: |
| For Use by Department of Budget and Management Only | | | |
| Budget Director Name: | | | Date Signed: |
| <input type="checkbox"/> Approve | Reason: | | |
| <input type="checkbox"/> Deny | | | |

EXHIBIT E

Data Privacy Guidelines and Requirements

Subrecipients shall include data privacy guidelines and requirements in any sub award agreement.

Unauthorized access, use, or disclosure of personally identifiable information ("PII") can seriously harm both individuals, by contributing to identity theft, blackmail, or embarrassment, and the organization, by reducing public trust in the organization or creating legal liability. PII includes any information that reveals or may reveal an individual's identity such as: name, social security number, date and place of birth, mother's maiden name, biometric records, or any other information linked or linkable to an individual, such as medical, educational, financial, and employment information or as otherwise defined in the Illinois Personal Information Privacy Act. The business practices of Cook County and its County Agencies as well as subrecipients must conform to with the necessary data privacy requirements, standards, and operational controls to ensure conformity with legal and regulatory requirements, county ordinances, and business requirements, including:

- Illinois Personal Information Protection Act (815 ILCS 530/)
- Illinois Biometric Information Privacy Act (740 ILCS 14/)
- CJIS—Criminal Justice Information Services Security Policy v5.7
- HIPAA—Health Insurance Portability and Accountability Act (164.308 Administrative Safeguards, 164.312 Technical Safeguards)
- NIST Special Publication 800-53r4 Security and Privacy Controls for Federal Information Systems and Organizations
- NIST Special Publication 800-122 Guide to Protecting the Confidentiality of Personally Identifiable Information
- NIST Special Publication 800-88, Revision 1: Guidelines for Media Sanitization
- 2 CFR § 200.303 - Internal controls.

Subrecipient shall develop and maintain standard operating procedures that meet the following criteria:

- Identify all PII residing within their organization or under the control of their organization through a third party to ensure all PII is protected.
- Document, review, and ensure that there are security measures implemented and maintained to protect data from unauthorized access, acquisition, destruction, use, modification, or disclosure.
- Implement measures to comply with breach notification requirements outlined in the Illinois Personal Information Protection Act.

A. Fair Information Practices

Privacy is much broader than just protecting the confidentiality of PII. The protection of PII and the overall privacy of information are concerns both for individuals whose personal information is at stake and for organizations that may be liable or have its reputation damaged should such PII be inappropriately accessed, used, or disclosed. To establish a comprehensive privacy program that addresses the range of privacy issues that Cook County may face, Subrecipient should take steps to establish policies and procedures that address all fair information practices.

- *Collection Limitation*—There should be limits to the collection of personal data by the Subrecipient and any such data should be obtained by lawful and fair means and, where appropriate, with the knowledge or consent of the data subject.
- *Data Quality*—Personal data should be relevant to the purposes for which they are to be used, and, to the extent necessary for those purposes, should be accurate, complete, and kept up to date.
- *Purpose Specification*—The purposes for which personal data are collected by the Subrecipient should be specified not later than at the time of data collection and the subsequent use limited to the fulfillment of those purposes or such others as are not incompatible with those purposes and as are specified on each occasion of change of purpose.
- *Use Limitation*—Personal data should not be disclosed, made available, or otherwise used for purposes other than those specified, except with the consent of the data subject or by the authority of law.
- *Security Safeguards*—Personal data should be protected by the Subrecipient through use of reasonable security safeguards against such risks as loss or unauthorized access, destruction, use, modification, or disclosure of data.
- *Openness*—The Subrecipient shall have a general policy of openness about developments, practices, and policies with respect to personal data. Means should be readily available of establishing the existence and nature of personal data, and the main purposes of their use, as well as the identity and usual residence of the data controller.
- *Individual Participation*—An individual should have the right: (a) to obtain from a data controller, or otherwise, confirmation of whether or not the data controller has data relating to him or her; (b) to have communicated to him or her, data relating to him or her within a reasonable time; at a charge, if any, that is not excessive; in a reasonable manner; and in a form that is readily intelligible to him or her; (c) to be given reasons if a request made under subparagraphs (a) and (b) is denied, and to be able to challenge such denial; and (d) to challenge data relating to him or her and, if the challenge is successful, to have the data erased, rectified, completed, or amended.
- *Accountability*—The Subrecipient shall utilize or name a data controller who will be accountable for complying with measures which give effect to the principles stated above.

B. Accounting of Disclosures

1. The Subrecipient shall keep an accurate accounting of disclosures of information held in each system of records under its control, including:
 - a. Date, nature, and purpose of each disclosure of a record; and
 - b. Name and address of the person or agency to which the disclosure was made.
2. Subrecipient shall retain the accounting of disclosures for the life of the record and thereafter according to the Agreement record retention requirements; and

3. Subrecipient shall make the accounting of disclosures available to the person named in the record upon request.

C. Consent

1. Subrecipient shall provide means, where feasible and appropriate, for individuals to authorize the collection, use, maintaining, and sharing of PII prior to its collection; and
2. Subrecipient shall appropriate means for individuals to understand the consequences of decisions to approve or decline the authorization of the collection, use, dissemination, and retention of PII; and
3. Subrecipient shall obtain consent, where feasible and appropriate, from individuals prior to any new uses or disclosure of previously collected PII; and
4. Subrecipient shall ensure that individuals are aware of and, where feasible, consent to all uses of PII not initially described in the organization's public notice posted on its website or in its policies that was in effect at the time the organization collected the PII.

D. Privacy Notice

1. Subrecipient shall provide effective notice to the public and to individuals regarding:
 - a. Its activities that impact privacy, including its collection, use, sharing, safeguarding, maintenance, and disposal of personally identifiable information (PII); and
 - b. Authority for collecting PII; and
 - c. The choices, if any, individuals may have regarding how the organization uses PII and the consequences of exercising or not exercising those choices; and
 - d. The ability to access and have PII amended or corrected if necessary.
2. The Subrecipient shall describe:
 - a. The PII collected and the purpose(s) for which it collects that information; and
 - b. How the Subrecipient uses PII internally; and
 - c. Whether the County Agency shares PII with external entities, the categories of those entities, and the purposes for such sharing; and
 - d. Whether individuals have the ability to consent to specific uses or sharing of PII and how to exercise any such consent; and
 - e. How individuals may obtain access to PII; and how the PII will be protected.
3. The Subrecipient shall revise its public notices to reflect changes in practice or policy that affect PII or changes in its activities that impact privacy, before or as soon as practicable after the change.

E. Internal Use

The Subrecipient shall only use PII internally and only for purpose(s) authorized by the Illinois Personal Information Protection Act and the organization's public notices regarding data privacy.

F. Information Sharing with Third Parties

1. The Subrecipient may share PII externally, only for the authorized purposes identified in the Illinois Personal Information Protection Act and/or similar requirement compatible with those purposes and specifically enumerate the purposes for which the PII may be used; and
2. The Subrecipient shall monitor, audit, and train its staff on what, if any, PII is authorized to be shared with third parties and on the consequences of unauthorized use or sharing of PII; and
3. The Subrecipient shall evaluate any proposed new instances of PII to be shared with third parties to assess whether sharing is authorized and whether additional public notice concerning data privacy on its website or in its policies is required.

EXHIBIT F

CERTIFICATION REGARDING LOBBYING

(This form is required for Subrecipient/Sub award funding of more than \$100,000)

The undersigned certifies, to the best of their knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Subrecipient certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Ch. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if

any

DocuSigned by:



Date: 8/24/2023 | 1:27 PM CDT

B3D559FFBD4C4EE...

Signature of Subrecipient's authorized official

Catherine A. O'Connor

Director of Engineering

I, KAREN A. YARBROUGH, County Clerk of Cook County, in the State of Illinois, aforesaid and keeper of the records and files of said Cook County, do hereby certify that The Board of Commissioners of the County of Cook, at their regular meeting held on _____, 2023, passed the following Resolution:

**23-R-
RESOLUTION**

Sponsored by

THE HONORABLE TONI PRECKWINKLE

PRESIDENT OF THE COOK COUNTY BOARD OF COMMISSIONERS

RESOLVED, by the members of the Board of Commissioners of Cook County, Illinois, on behalf of the County of Cook, to authorize and direct its President to execute by original signature or authorized signature stamp, two (2) copies of a Subrecipient Agreement with Metropolitan Water Reclamation District (MWRD), wherein MWRD will be the lead agency for administration, implementation and management of American Rescue Plan Act Program (ARPA) Stormwater Management Program in Cook County; that the County will reimburse MWRD for its share of administration, implementation and management costs for the program, up to, but not to exceed \$18,000,000.00 in total; and, the Department of Transportation and Highways is authorized and directed to return two (2) certified copies of this Resolution to MWRD for further processing.

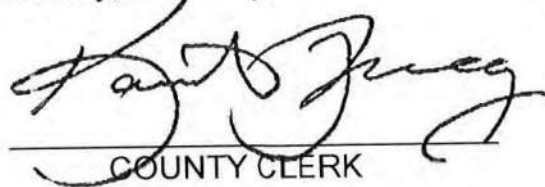
All of which appears from the record and files of my office.

**APPROVED
BY THE BOARD OF COOK COUNTY COMMISSIONERS**

**JUL 20 2023
(SEAL)**

COM _____

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the SEAL of said County at my office in the City of Chicago, in said County, this _____ day of _____ A.D. 2023.


COUNTY CLERK

NATIVE PLANTING SUMMARY AND MANAGEMENT & MONITORING PLAN



PROJECT SITE:

**Thorn Ditch Flood Mitigation Project
South Holland, Cook County, Illinois**

PREPARED FOR:

Village of South Holland
155 W. 162nd Street
South Holland, Illinois 60473

PREPARED BY:

V3 Companies
7325 Janes Avenue
Woodridge, Illinois 60517
630.724.9200

November 15, 2024

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INTRODUCTION

This Native Planting Summary and Management & Monitoring Plan (MMP) has been prepared on behalf of the Village of South Holland for the proposed compensatory storage facilities along Thorn Ditch associated with the proposed Thorn Ditch Flood Mitigation Project. The project area is located north of East 166th Street, south of East 163rd Place, east of Cottage Grove Avenue, and west of Van Dam Road, in South Holland, Cook County, Illinois (Section 23, T36N, R14E; 41.596°N, -87.5944°W; Calumet City Quadrangle).

The proposed naturalized plantings are shown on the Native Planting Plan (Plan) provided in Appendix I. As the Plan indicates, three compensatory storage facilities are proposed. Two of the facilities are located in Maicach Park to the north and south of Thorn Ditch and one facility in the Pioneer Park on the south side of Thorn Ditch. The naturalized areas will be established with native wetland vegetation that is tolerant of large hydrologic fluctuations in the bottom and prairie vegetation on the slopes.

The purpose of establishing native vegetation in these comp storage facilities is to provide an aesthetically pleasing and environmentally beneficial alternative to riprap and turf grass stormwater areas. Native vegetation aids in sediment and toxicant retention/removal, and provides cover for wildlife. Besides providing cover and a food source for wildlife, prairie vegetation greatly reduces or eliminates the need for irrigation, aeration, fertilization, and use of many of chemicals (i.e. herbicides, fungicides, etc.) typically required by maintained turf grass. Prairie vegetation also provides better soil stabilization than turf grass (i.e., bluegrass, etc.) due to extensive root systems, many reaching depths of ten feet below the soil surface. These extensive root systems allow prairie vegetation to withstand drought and nutrient deficiencies in the soil. The extensive root systems also allow rainwater to percolate into the soil, aiding in groundwater recharge, instead of direct runoff typical of conventional basin designs.

CONSTRUCTION AND REVEGETATION

This section of the plan details construction and revegetation of the naturalized facilities.

CONSTRUCTION, SOILS AND TOPDRESSING SPECIFICATIONS

Grading and excavation of the facilities shall be completed in accordance with the engineering plans in order to achieve the requisite storage volumes.

The following specifications shall be followed to minimize impacts to the facilities and provide a suitable medium for vegetation establishment:

1. All areas to be planted or seeded with native vegetation shall be over-excavated a minimum of 1 foot below final grade to allow for the placement of topdress material, unless a one-foot thick topsoil layer is present following excavation to proposed final grade.
2. Topdress material for the proposed naturalized vegetation areas can originate from on-site. These soils are adequate to promote native vegetation establishment. If additional topdress material is



needed, the topdress material shall contain an organic matter content of 3% or more and a clay content of 27% or less. The northern basin in Maicach park has an underdrain running through the sedge meadow zone. Soils associated with the underdrain may differ. The underdrain shall be installed per the engineering plans.

3. Wheel-based vehicles (scrapers, endloaders, etc.) shall not be used for topdressing work. Only low ground pressure wide-track equipment (quadtrack tractor, wide track dozer, backhoe, or approved by Engineer) shall haul, move and spread topdress material.
4. Following the 1-foot of topdress placement, the surface shall be thoroughly disked using a small farm type disc (not a large construction disc) and/or Harley rake for all native seeding areas. Topdress material shall not be handled or the surface disked when wet.
5. No wheeled traffic shall occur in the naturalized seeding areas after the final disking is complete, with the exception of a small farm type tractor if used for seeding.
6. All construction activities in the naturalized areas must be done under dry conditions.

PRE-SEEDING AND PLANTING WEED CONTROL

If any areas identified on the Plan are not disturbed as a result of grading or lie fallow long enough following final grading to allow non-native/invasive species to germinate a pre seeding/plug planting weed control event shall take place using a non-selective aquatic safe herbicide. All herbicide shall be applied according to manufacturer's specifications to ensure that the treatment is successful. All treated areas shall allow 14 days to pass after treatment to allow the chemicals to work and break down prior to seeding or planting.

SEEDING SPECIFICATIONS

1. The seeding contractor shall furnish, transport, and install the native seed mixes as specified for the respective areas shown on the Plan.
2. Seeding activities of the permanent matrices shall be performed after the seed bed has been properly prepared, as applicable, between November 1 after the first frost and ending when snow cover exceeds 2-inches in depth or areas are covered with ice and June 15th of the following year.
3. If construction activities are finished outside the permanent seeding window, the area can be stabilized with a temporary cover crop or permanent seeded with a supplemental seeding during the prescribed window the following year if needed to achieve standards.
4. Seed shall be surface sown with a broadcast seeder and lightly raked in or with a native drop seeder.
5. All seed sources shall be within a 200-mile radius of the project site and be true to name and variety.
6. Seeding shall only occur in areas that will receive erosion blanket installation within 48 hours (see section below).



WETLAND PLANTING SPECIFICATIONS

1. The planting contractor shall furnish, transport and install all container grown plants for all planting zones as specified on Plan.
2. Herbaceous planting activities shall be performed no earlier than May 15th and no later than July 15th under favorable conditions (i.e., proper hydrology). Planting outside this window may be feasible, however additional measures may need to be implemented to ensure successful establishment of the plant plugs.
3. All plugs shall be container grown in open bottom pots with the following minimum dimensions: 2 3/8 inches square by 3-inches deep or a minimum root area of 11 cubic inches. At time of planting, all plant plugs shall have minimum shoot heights of 14-inches and well-developed root systems that hold planting soil together when removed from the container. Soil saturation shall be maintained for all container plants until installation.
4. Plant material shall not be provided as dormant (i.e., sprouted tubers, sprouted rhizomes or bare root) unless specified in the plans.

PLANTING ZONES

Selection of the plant species in the comp storage facilities are based on their suitability to the anticipated soil and hydrologic conditions following construction. The facilities in Maicach Park do not have control structures altering hydrology and are directly connected to Thorn Ditch. While Thorn Ditch itself does not have a United States Geological Survey stream gauge the Little Calumet River to the north of the project and to which Thorn Ditch drains to has a gauge (Appendix III). The gauge identifies the flashiness of the system in that after a given precipitation event the river returns back to its median level in around three days. The facility in Pioneer Park has a control structure releasing water from the facility, but is effected by the tailwater condition of Thorn Ditch which it released to. After a precipitation event it is anticipated that the water will return to the normal water level in two to three days.

As the Engineering Plans indicates the northern comp storage facility in Maicach Park has an underdrain system running below the sedge meadow planting zone to promote ground water infiltration to provide additional water quality benefits before being discharged. The sedge meadow zone and associated underdrain are above the normal water elevation and is anticipated to have shallow inundation during periods of frequent precipitation in the wetter spring and fall months and saturated soil conditions during the summer months when frequency is less allowing greater time for groundwater infiltration to the underdrains.

A variety of native wetland plant plugs and seed tolerant of large hydraulic fluctuations shall be installed in the facility bottoms. Plug installations shall be conducted only under suitable hydrologic conditions. If suitable hydrologic conditions are not established during the plant/seed installation window, plant/seed installation may be postponed until the subsequent growing season when appropriate hydrology is established. Depending on nursery stock, water levels may need to be manipulated during installation and the establishment window to ensure that at least twenty-five percent of each plant is above the



water line. A broad-spectrum low profile mesic prairie seed mix comprised of native grasses, sedges and forbs shall be installed on the slopes of the facilities. See Appendix II for the seed and plug mixes. These mixes are described below.

Mesic Prairie Seed Mix (1.05 acres). A broad-spectrum low profile native seed mix, a mix that contains native grasses, sedges and forbs, shall be installed on the slopes of the three comp storage facilities as identified on the Plan. Following seeding activities, erosion control blanket shall be installed to stabilize the seed prior to cover crop germination and establishment of the permanent plant species. Blanket shall be secured with staples according to the manufacture's specifications.

Sedge Meadow Seed & Plug Mix (1.00 acres). A broad-spectrum native seed mix, a mix that contains native grasses, sedges, rushes and forbs, shall be installed in the bottom of the comp storage facilities. Each facility is anticipated to experience shallow inundation following a precipitation event following the hydrology of Thorn Ditch which is a tributary of the Little Calumet River. Under normal conditions the sedge meadow zone is anticipated to have saturated soil conditions and draw down to a dry bottom facility through the underdrain in dryer months with less precipitation. The species selected for this area can tolerate the large fluctuations in hydrology. Following seeding activities, erosion control blanket shall be installed to stabilize the seed prior to cover crop germination and establishment of the permanent plant species. Blanket shall be secured with staples according to the manufacture's specifications. Following seeding and erosion control blanket supplemental plugs shall be installed in this zone to help with establishment as hydrology is largely dictated by Thorn Ditch.

Deep Emergent Plug Mix (0.33 acres). The emergent plug mix shall be installed in the areas shown on the Plan. The emergent zone is designed on a gradient from zero to three feet below the normal water level and will likely be inundated throughout the growing season. The Native Seed and Plug Mixes identified in Appendix II calls out species tolerant of deeper emergent environments with and asterisk. Those species shall be installed closer to the open water zones while those without an asterisk shall be installed closer to the sedge meadow zone. A total of 5,000 emergent plant plugs shall be installed per acre within this zone under suitable hydrologic conditions.

EROSION CONTROL BLANKET INSTALLATION SPECIFICATIONS

All erosion control measures shall be installed by the contractor in accordance with the approved Erosion and Sediment Control Plan. Erosion control blanket shall be installed over all native seeding areas within 48 hours and/or prior to forecasted rain, so no seeded area remains unprotected. Therefore, the area seeded shall be based on whatever can be blanketed within 48 hours. Installation of all erosion control materials shall be in accordance with the manufacturer's specifications



PREDATOR CONTROL

A predator control system may need be installed to help achieve the site goals and performance standards by discouraging herbivores such as but not limited to geese, ducks and muskrats from consuming and uprooting newly planted native plugs. It is the responsibility of the Landscape Contractor to monitor the site and implement predator control measures if herbivores are identified prior, during or after plant installation. If herbivores are identified the following measures are recommended.

1. The materials shall include: 1-inch X 1-inch X 4-foot wood stakes with one end pointed, chicken wire fencing fabric or wire hardware cloth with mesh openings not to exceed 2-inches, 6-inch wire landscape staples, masons string and UV rated zip ties.
2. All areas receiving native plant plugs shall be protected by predator control fence. The fence, consisting of three-foot-high chicken wire fence mounted securely on 1-inch X 1-inch X 4-foot wood stakes in such a manner that one foot of wood stake with pointed end will extend below the fence fabric. The wood stakes will be no greater than 6 feet apart and installed approximately one foot deep into the soil so that the bottom of the fence fabric rests firmly on the soil surface. This fence shall be installed in conjunction with site seeding and native plug installation.
3. Fencing shall be installed above the NWL of all areas receiving plugs to make a protective perimeter. Wooden stakes shall be installed within the basin bottoms in a manner to allow masons twine to be strung across the top of the planted surface to deter geese and ducks from landing in the newly planted areas.
4. The contractor shall install in a manner to not impede flow in and out of the facilities and shall be cleaned if needed to prevent buildup of vegetation or trash.
5. It is the responsibility of the contractor to remove the predator control fencing once the vegetation is established or the performance standards are met/sign off is achieved.

IRRIGATION

It is the responsibility of the contractor to monitor the site during and after the sedge meadow and emergent plant plugs are installed. Due to the unpredictable nature of weather and the direct connection to Thorn Ditch the contractor shall monitor site hydrology and implement an irrigation schedule if necessary to ensure proper hydrology during the first growing season to ensure the plants establish. Additionally, if water levels are too high during or after plant installation pumps may need to be implemented to draw down the water levels temporarily to ensure the success of the plant plugs.



MANAGEMENT & MONITORING PLAN

This MMP for the Thorn Ditch Flood Mitigation Project establishes a means by which the comp storage facilities may be evaluated relative to pre-established goals and performance standards.

The duration of the monitoring program is three years, beginning with the completion of grading and planting. The three-year management and monitoring program will be the responsibility of the Village of South Holland.

STORMWATER BASIN AND BMP MANAGEMENT

Proper management is critical for successful establishment of the proposed plant communities. Irrigation, periodic mowing, selective herbicide application and prescribed burning are commonly used as management techniques for natural plant communities.

The invasive species that require control include, but are not limited to, the following species provided in Table 1.

| Table 1: Non-Native and Invasive Species |
|--|
| American Silver-Berry (<i>Elaeagnus commutata</i>) |
| Asian Bittersweet (<i>Celastrus orbiculatus</i>) |
| Garden Bird's-Foot-Trefoil (<i>Lotus corniculatus</i>) |
| Black Locust (<i>Robinia pseudoacacia</i>) |
| Bull Thistle (<i>Cirsium vulgare</i>) |
| Lesser Burdock (<i>Arctium minus</i>) |
| Canadian Goldenrod (<i>Solidago canadensis</i>) |
| Canadian Thistle (<i>Cirsium arvense</i>) |
| Cat-Tail (<i>Typha</i> spp.) |
| Chinese Yam (<i>Discorea oppositifolia</i>) |
| Common Reed (<i>Phragmites australis</i>) |
| Crack Willow (<i>Salix fragilis</i>) |
| Creeping-Jenny (<i>Lysimachia nummularia</i>) |
| Crownvetch (<i>Securigera varia</i>) |
| Curly Pondweed (<i>Potamogeton crispus</i>) |
| Dames Rocket (<i>Hesperis matronalis</i>) |
| Eurasian-Buttercup (<i>Ficaria verna</i>) |
| Eurasian Water-Milfoil (<i>Myriophyllum spicatum</i>) |
| European Barberry (<i>Berberis vulgaris</i>) |
| European Buckthorn (<i>Rhamnus cathartica</i>) |
| Garlic-Mustard (<i>Alliaria petiolata</i>) |
| Giant Hogweed (<i>Heracleum mantegazzianum</i>) |



| |
|---|
| Glossy False Buckthorn (<i>Frangula alnus</i>) |
| Greater Flowering-Rush (<i>Butomus umbellatus</i>) |
| Japanese Barberry (<i>Berberis thunbergii</i>) |
| Japanese Bristle Grass (<i>Setaria faberi</i>) |
| Japanese Honeysuckle (<i>Lonicera japonica</i>) |
| Japanese Hop (<i>Humulus japonica</i>) |
| Japanese-Knotweed (<i>Reynoutria japonica</i>) |
| Japanese Stilt Grass (<i>Microstegium vimineum</i>) |
| Jetbead (<i>Rhodotypos scandens</i>) |
| Leafy Spurge (<i>Euphorbia esula</i>) |
| Littleleaf Linden (<i>Tilia cordata</i>) |
| Morrow's Honeysuckle (<i>Lonicera morrowii</i>) |
| Nodding Plumeless-Thistle (<i>Carduus nutans</i>) |
| Privet (<i>Ligustrum</i> spp.) |
| Purple Loosestrife (<i>Lythrum salicaria</i>) |
| Ragweed (<i>Ambrosia</i> spp.) |
| Rambler Rose (<i>Rosa multiflora</i>) |
| Red/White Clover (<i>Trifolium</i> spp.) |
| Reed Canary Grass (<i>Phalaris arundinacea</i>) |
| Russian Olive (<i>Elaeagnus angustifolia</i>) |
| Sandbar Willow (<i>Salix interior</i>) |
| Seaside Goldenrod (<i>Solidago sempevirens</i>) |
| Showy Fly-Honeysuckle (<i>Lonicera x bella</i>) |
| Spotted knapweed (<i>Centaurea stoebe</i> subsp. <i>micranthos</i>) |
| Tall Goldenrod (<i>Solidago altissima</i>) |
| Teasel (<i>Dipsacus</i> spp.) |
| Twinsisters (<i>Lonicera tatarica</i>) |
| Watercress (<i>Nasturtium officinale</i>) |
| Wild Parsnip (<i>Pastinaca sativa</i>) |
| Yellow Sweet-Clover (<i>Melilotus officinalis</i>) |

First and Second Year Mowing. During the first two growing seasons after seeding, mowing or selective weed whipping the vegetation on the mesic prairie slopes and sedge meadow (under dry conditions, and after plant plug roots are established) shall occur as needed to maintain a plant height of no greater than 18 to 20 inches. To accomplish this, high-mowing the vegetation to a height of 6 to 9 inches several times during the growing season will be needed. Mowing will aid new plant growth as to allow more sunlight to reach young seedlings. Mowing will aid in the control of annual weeds, which can undermine seeding efforts.



Herbicide Application. Management of the vegetation in all native areas should include selective application of herbicide to control aggressive plant species, such as, but not limited to, reed canary grass (*Phalaris arundinacea*), cattails (*Typha spp*), purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), thistles (*Cirsium spp.*), teasel (*Dipsacus spp.*), and sweet clover (*Melilotus spp.*). These species, including others, can displace desirable species, thereby reducing floristic diversity in the naturalized areas. Controlling these species will be required to achieve the performance standards for the project.

Natural regeneration of cattails, common reed and reed canary grass in the comp storage facilities will likely occur following construction. A pre-planting control shall be conducted if any of these species or other weeds are present. Hand pulling cattails can be conducted when the cattails are small enough to ensure that the entire root is removed. Off-site disposal of cattails will be required. Larger cattails will require herbicide applications. Cattail and common reed coverage shall be no greater than 5% in aggregate prior to plant installation. Aggressive control of these species will be required after planting and throughout the management period to ensure native plant establishment. After planting, the hand-wick/bar-wick application method to control these species will likely be required.

A determination regarding the type of herbicide to be used should be made when it is known which nuisance species are present on the site. Depending on the target weed species, a selective herbicide may be available. The choice of herbicide and timing of herbicide application shall be made by a trained, licensed professional based on the target weed species and conditions. Care should be taken to monitor site weather conditions to limit herbicide drift, overspray, and ensure it is rainfast.

It is recommended that a minimum of four annual weed control application events are conducted throughout the three-year period. Below is a general guideline on the suggested schedule and target species for the application periods:

- Application Period One (early spring – April/May): problematic species such as, but not limited to, reed canary grass, red/white clover, cool season adventive grasses.
- Application Period Two (late spring to early summer – May/June): problematic species such as, but not limited to, teasel, white/yellow sweet clover, thistle.
- Application Period Three (mid to late summer – July/August): problematic species such as, but not limited to, tall goldenrod, hairy aster, ragweed, cattails, purple loosestrife.
- Application Period Four (late summer and fall – September/October): problematic species such as, but not limited to, reed canary grass, thistle, common reed, red/white clover, cool season grasses.

Prescribed Burning. One prescribed burn may be conducted in the naturalized area during the three-year period. If deemed safe by the contractor and owner, the prescribed burn should be scheduled in the spring or fall of the third full growing season. Prescribed burning can reduce exotic weed species that may establish from seeds or rootstock material in the topsoil that is in situ or placed in these areas.



Additionally, burning encourages the growth of native plant species from the established mixes and inhibits the growth of certain non-native vegetation.

Long-Term Mowing in Lieu of Prescribed Burning. If burning is deemed unsafe, end of growing season mowing can be conducted instead. Mowing the vegetation at the end of the growing season around November would be conducted annually after the vegetation has established (after year 2). This end of growing season mowing will partially replace some of the benefits provided by fire, in an area where prescribed burning is not feasible, mowing will be to a height of 6-9 inches. The mowing will only occur under dry or frozen ground conditions, so that soil disturbance from wheel ruts is avoided.

PERFORMANCE STANDARDS

Performance standards are established for proposed projects involving naturalized areas so that the relative success may be evaluated. If the performance standards are not achieved by the end of the three-year management and monitoring program, the permittee is responsible for correction of any deficiencies through further management activities, which may include replanting.

1. Within 3 months of seed installation (or three months into the growing season if dormant seeded), at least 90% of the seeded areas (mesic prairie and sedge meadow), as measured by aerial coverage, shall be vegetated. A minimum 90% vegetative coverage shall be achieved in the second year and maintained throughout, and at the end of the three-year period for this area.
2. At the end of the second growing season, relative coverage of non-native species in the mesic prairie and sedge meadow area cannot exceed 50%. As such, relative coverage of natives shall be 50% or greater at the end of the second growing season. At the end of the third growing season, relative coverage of non-native species in the mesic prairie and sedge meadow area cannot exceed 20%. As such, relative coverage of natives shall be 80% or greater at the end of the third growing season.
3. At the end of the third growing season, the top three most dominant species based on relative coverage in the naturalized area shall not be non-native. These species shall include, but not be limited to, the following: reed canary grass (*Phalaris arundinacea*); common reed (*Phragmites australis*); field thistle (*Cirsium arvense*); buckthorn (*Rhamnus spp.*); cattails (*Typha spp.*); teasel (*Dipsacus spp.*); purple loosestrife (*Lythrum salicaria*); clover (*Trifolium spp.*); and sweet clover (*Melilotus spp.*).
4. At the end of the third growing season the emergent planting zone shall achieve 50% or greater native relative cover.



MONITORING

Vegetation Monitoring. Annual vegetation monitoring in the naturalized areas shall be conducted during the three-year period beginning immediately following seeding/planting. Vegetative transects/quadrats shall be added following seeding and plant installation in a manner that represents the site and different plant communities. The vegetation monitoring inspections shall be conducted twice per year (May/June and August/September).

Annual Monitoring Report. An annual monitoring report shall be submitted to the Metropolitan Water Reclamation District of Greater Chicago and U.S. Army Corps of Engineers Chicago District by January 31 of each year during the three-year period or until performance standards are met and signoff is achieved.

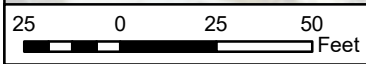
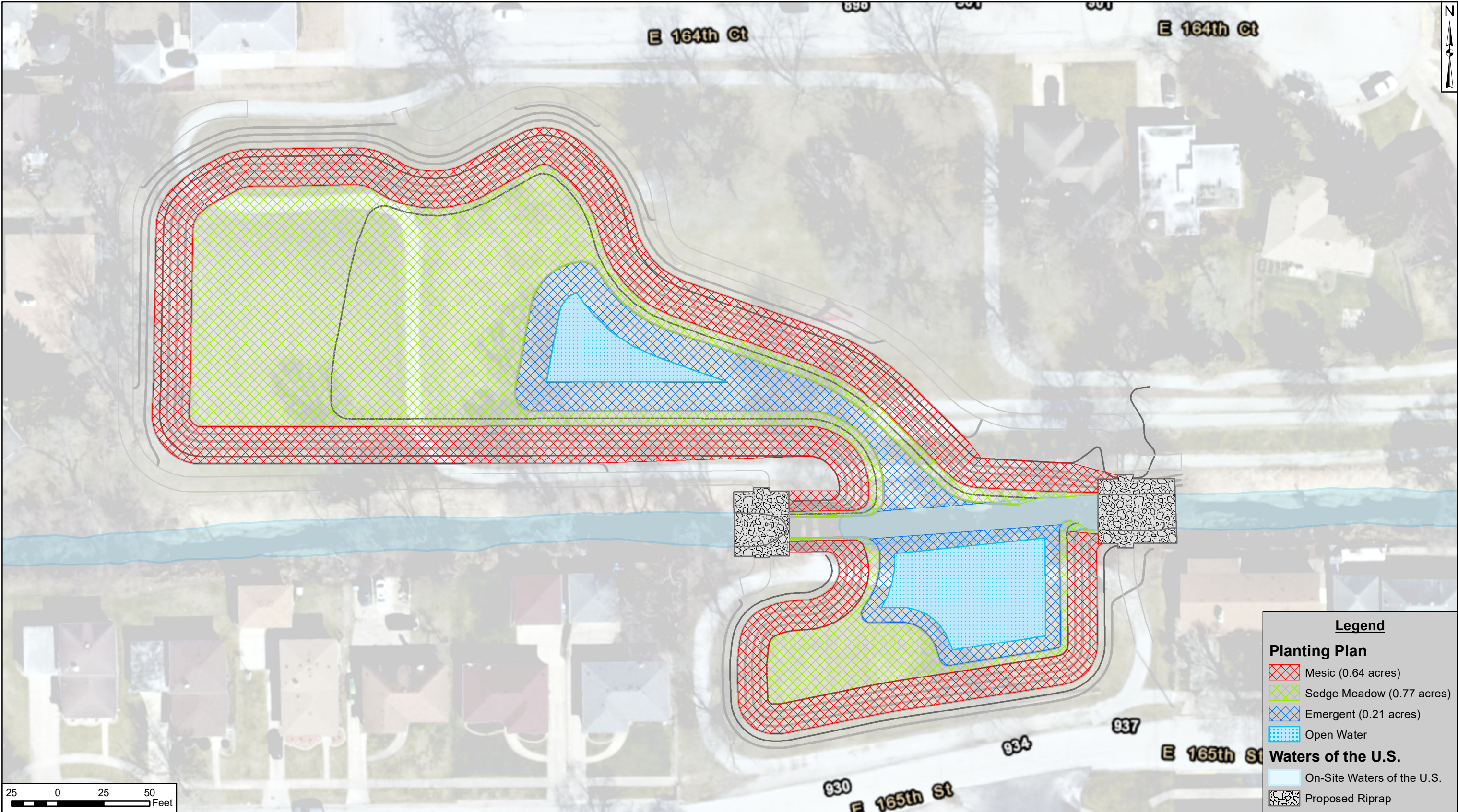
The annual report must include a review of site progression towards meeting the performance standards and propose any necessary remedial actions. More specifically, the monitoring report must contain the following information, which will be based on data collected during the monitoring inspections.

1. A summary of management activities conducted during the year.
2. Representative photographs depicting general site conditions.
3. Provide the top three dominant species and relative vegetative coverage as needed to evaluate the performance standards.
4. Evaluate the status of the areas relative to the performance standards.
5. Recommend management activities for the following year to address any issues related to site success.



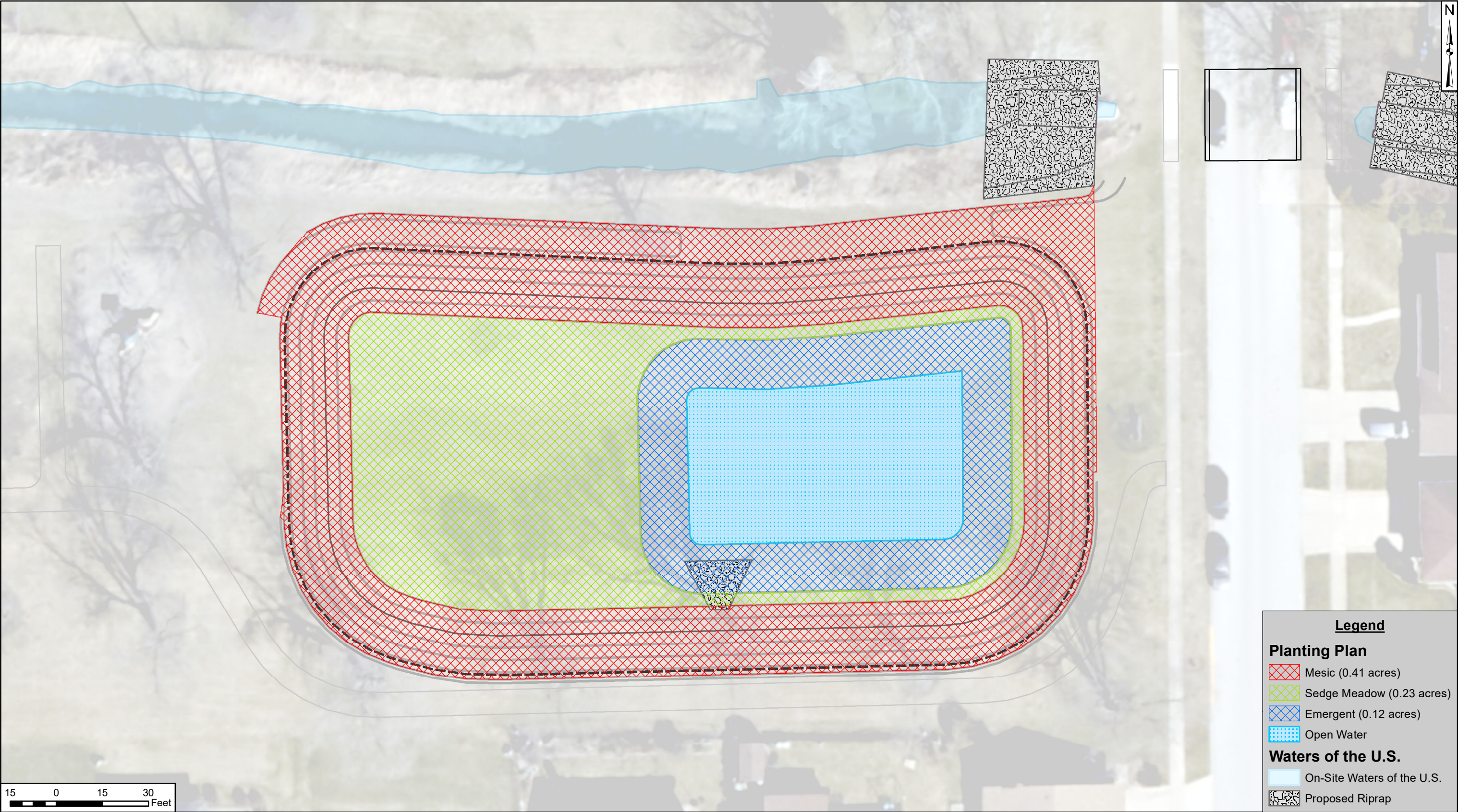
APPENDIX I


NATIVE PLANTING PLAN



| Legend | |
|--------------------|----------------------------|
| Planting Plan | |
| | Mesic (0.64 acres) |
| | Sedge Meadow (0.77 acres) |
| | Emergent (0.21 acres) |
| | Open Water |
| Waters of the U.S. | |
| | On-Site Waters of the U.S. |
| | Proposed Riprap |

| | | | | | |
|---|-------------------------|--|---|---|--------------------------|
|  7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com | PROJECT NO.: 240276 | CLIENT: Robinson Engineering, Ltd. 10045 West Lincoln Highway Frankfort, Illinois 60423 | SITE: Village of South Holland Thorn Ditch Flood Mitigation Project South Holland, Cook County, Illinois | TITLE: NATIVE PLANTING PLAN | FIGURE: C1 |
| | CREATED BY: DJJ | | | | |
| | DATE: 11/14/2024 | BASE LAYER: Cook County Aerial Imagery (2023) | | | |
| | SCALE: See Scale Bar | | | | |
| Visio, Vertere, Virtute... "The Vision To Transform With Excellence" | | | | | |



| | | | | | |
|--|-------------------------|--|---|---|--------------------------|
|  <div>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</div> <div>Visio, Vertere, Virtute... "The Vision To Transform With Excellence"</div> | PROJECT NO.: 240276 | CLIENT: Robinson Engineering, Ltd. 10045 West Lincoln Highway Frankfort, Illinois 60423 | SITE: Village of South Holland Thorn Ditch Flood Mitigation Project South Holland, Cook County, Illinois | TITLE: NATIVE PLANTING PLAN | FIGURE: C2 |
| | CREATED BY: DJJ | | | | |
| | DATE: 11/14/2024 | | | | |
| | SCALE: See Scale Bar | | | | |

APPENDIX II

NATIVE SEED AND PLUG MIXES

| MESIC PRAIRIE SEED MIX (1.05 acres) | | | |
|-------------------------------------|---------------------------------|------------------------------|-----------------------|
| Type | Species | Common Name | Seeding Rate (lbs/ac) |
| Forbs | <i>Asclepias tuberosa</i> | Butterfly Weed | 0.31250 |
| | <i>Aster laevis</i> | Smooth Blue Aster | 0.06250 |
| | <i>Aster novae-angliae</i> | New England Aster | 0.06250 |
| | <i>Astragalus canadensis</i> | Canadian Milk Vetch | 0.25000 |
| | <i>Baptisia leucantha</i> | White Wild Indigo | 0.50000 |
| | <i>Cassia fasciculata</i> | Partridge Pea | 0.25000 |
| | <i>Coreopsis lanceolata</i> | Sand Coreopsis | 0.12500 |
| | <i>Coreopsis palmata</i> | Prairie Coreopsis | 0.12500 |
| | <i>Dalea candidum</i> | White Prairie Clover | 0.06300 |
| | <i>Dalea purpureum</i> | Purple Prairie Clover | 0.12500 |
| | <i>Desmodium illinoense</i> | Illinois Tick-Trefoil | 0.25000 |
| | <i>Echinacea pallida</i> | Pale Purple Coneflower | 0.25000 |
| | <i>Echinacea purpurea</i> | Broad-leaved Pur. Coneflower | 0.31250 |
| | <i>Eryngium yuccifolium</i> | Rattlesnake Master | 0.18750 |
| | <i>Euthamia graminifolia</i> | Grass-Leaved Goldenrod | 0.03125 |
| | <i>Lespedeza capitata</i> | Round-Headed Bush Clover | 0.18750 |
| | <i>Monarda fistulosa</i> | Wild Bergamot | 0.12500 |
| | <i>Parthenium integrifolium</i> | Wild Quinine | 0.18750 |
| | <i>Penstemon digitalis</i> | Foxglove Beard Tongue | 0.12500 |
| | <i>Potentilla arguta</i> | Prairie Cinquifol | 0.03125 |
| | <i>Pycnanthemum virginianum</i> | Mountain Mint | 0.06250 |
| | <i>Ratibida pinnata</i> | Yellow Coneflower | 0.25000 |
| | <i>Rudbeckia hirta</i> | Black-eyed Susan | 0.25000 |
| | <i>Rudbeckia subtomentosa</i> | Sweet Black-eyed Susan | 0.06250 |
| | <i>Tradescantia ohiensis</i> | Ohio Spiderwort | 0.18750 |
| | <i>Verbena stricta</i> | Hoary Vervain | 0.06250 |
| | <i>Zizia aurea</i> | Golden Alexanders | 0.25000 |
| | | sub total | 4.68800 |
| Grasses & Sedges | <i>Andropogon gerardii</i> | Big Bluestem | 0.500 |
| | <i>Bouteloua curtipendula</i> | Side-oats Grama | 6.000 |
| | <i>Carex bicknellii</i> | Bicknells Sedge | 0.125 |
| | <i>Carex brevior</i> | Shorter Sedge | 0.125 |
| | <i>Carex molesta</i> | Field Oval Sedge | 0.125 |
| | <i>Carex vulpinoidea</i> | Fox Sedge | 0.250 |
| | <i>Elymus canadensis</i> | Canada Wild Rye | 3.000 |
| | <i>Elymus virginicus</i> | Virginia Wild Rye | 2.000 |
| | <i>Panicum virgatum</i> | Switch Grass | 1.000 |
| | <i>Schizachyrium scoparius</i> | Little Bluestem | 3.000 |
| | | sub total | 16.125 |
| | | Total Permanent Species: | 20.813 |
| Cover | <i>Avena sativa</i> | Seed Oats | 32.000 |

| SEDGE MEADOW SEED & PLUG MIX (1.00 acres) | | | | |
|---|---------------------------------------|--------------------------|-----------------------|---------------|
| Type | Scientific Name | Common Name | Seeding Rate (lbs/ac) | Plug Quantity |
| Forbs | <i>Asclepias incarnata</i> | Marsh Milkweed | 0.350000 | 108 |
| | <i>Boltonia asteriodes recognita</i> | False Aster | 0.062500 | |
| | <i>Coreopsis tripteris</i> | Tall Coreopsis | 0.250000 | |
| | <i>Eupatorium perfoliatum</i> | Common Boneset | 0.031250 | |
| | <i>Euthania graminifolia</i> | Grass-leaved Goldenrod | 0.031250 | |
| | <i>Eutrochium maculatum</i> | Spotted Joe-Pye Weed | 0.062500 | |
| | <i>Helenium autumnale</i> | Sneezeweed | 0.062500 | 108 |
| | <i>Iris virginica shrevei</i> | Blue Flag Iris | 1.000000 | 108 |
| | <i>Lobelia cardinalis</i> | Cardinal Flower | 0.015625 | 108 |
| | <i>Lobelia siphilitica</i> | Great Blue Lobelia | 0.015625 | 108 |
| | <i>Lycopus americanus</i> | Water Horehound | 0.062500 | |
| | <i>Mentha arvensis</i> | Wild Mint | 0.062500 | |
| | <i>Mimulus ringens</i> | Monkey Flower | 0.015625 | |
| | <i>Penstemon digitalis</i> | Foxglove Beard Tongue | 0.062500 | |
| | <i>Penthorum sedoides</i> | Ditch Stonecrop | 0.015625 | |
| | <i>Physostegia virginiana</i> | Obedient Plant | 0.250000 | 108 |
| | <i>Pycnanthemum virginianum</i> | Common Mountain Mint | 0.031250 | |
| | <i>Symphotrichum lanceolatum</i> | Panicked Aster | 0.031250 | |
| | <i>Symphotrichum novae-angliae</i> | New England Aster | 0.031250 | |
| | <i>Thalictrum dasycarpum</i> | Purple Meadow Rue | 0.187500 | |
| | <i>Verbena hastata</i> | Blue Vervain | 0.062500 | 108 |
| | <i>Vernonia fasciculata</i> | Iron Weed | 0.125000 | |
| | <i>Zizia aurea</i> | Golden Alexanders | 0.500000 | |
| | | sub total | 3.318750 | 756 |
| Grasses, Sedges and Rushes | <i>Andropogon gerardii</i> | Big Bluestem | 0.250000 | |
| | <i>Calamagrostis canadensis</i> | Blue Joint Grass | 0.062500 | |
| | <i>Carex cristatella</i> | Crested Oval Sedge | 0.062500 | |
| | <i>Carex frankii</i> | Bristly Cattail Sedge | 0.250000 | 144 |
| | <i>Carex hystericina</i> | Porcupine Sedge | 0.125000 | 144 |
| | <i>Carex molesta</i> | Troublesome Sedge | 0.125000 | |
| | <i>Carex scoparia</i> | Lance Fruited Oval Sedge | 0.062500 | |
| | <i>Carex stipata</i> | Common Fox Sedge | 0.125000 | 144 |
| | <i>Carex stricta</i> | Common Tussock Sedge | 0.062500 | 144 |
| | <i>Carex tribuloides</i> | Awl-Fruited Sedge | 0.062500 | |
| | <i>Carex vulpinoidea</i> | Brown Fox Sedge | 0.062500 | |
| | <i>Eleocharis erythropoda</i> | Red-Rooted Spike Rush | 0.062500 | |
| | <i>Elymus riparius</i> | Riverbank Wild Rye | 1.000000 | |
| | <i>Elymus virginicus</i> | Virginia Wild Rye | 3.000000 | |
| | <i>Glyceria striata</i> | Fowl Mana Grass | 0.062500 | |
| | <i>Juncus dudleyi</i> | Dudley's Rush | 0.015625 | |
| | <i>Juncus torreyi</i> | Torrey's Rush | 0.015625 | |
| | <i>Leersia oryzoides</i> | Rice Cut Grass | 0.250000 | |
| | <i>Panicum virgatum</i> | Switch Grass | 0.500000 | 180 |
| | <i>Schoenoplectus tabernaemontani</i> | Great Bulrush | 0.125000 | 144 |
| | <i>Scirpus atrovirens</i> | Dark Green Bulrush | 0.031250 | 180 |
| | <i>Scirpus cyperinus</i> | Wool Grass | 0.015625 | 180 |
| | <i>Scirpus pendulus</i> | Red Bulrush | 0.062500 | |
| | <i>Spartina pectinata</i> | Prairie Cord Grass | 0.500000 | |
| | | sub total | 6.890625 | 1260 |
| | | Total Permanent Species: | 10.209375 | 2016 |
| Cove | <i>Avena sativa</i> | Seed Oats | 32.000 | |

| SHALLOW EMERGENT PLUG MIX (0.33 acres) (5,000 plugs per acre) | | |
|--|-------------------|--------------|
| Species | Common Name | Quantity |
| <i>Acorus americanus</i> | Sweet Flag | 144 |
| <i>Iris virginica shrevei</i> | Blue Flag | 144 |
| <i>Juncus effusus</i> | Soft Rush | 144 |
| <i>Pontederia cordata</i> | Pickerelweed* | 144 |
| <i>Sagittaria latifolia</i> | Common Arrowhead | 180 |
| <i>Schoenoplectus fluviatilis</i> | River Bulrush* | 180 |
| <i>Scirpus acutus</i> | Hardstem bulrush* | 180 |
| <i>Scirpus pungens</i> | Chairmaker's Rush | 180 |
| <i>Scirpus validus creber</i> | Great Bulrush* | 180 |
| <i>Sparganium eurycarpum</i> | Bur Reed* | 180 |
| Total: | | 1,656 |
| * Identifies species tolerant of deeper water environments | | |

APPENDIX III

HYDROLOGY

☐ 7 days ☐ 30 days ☒ 1 year

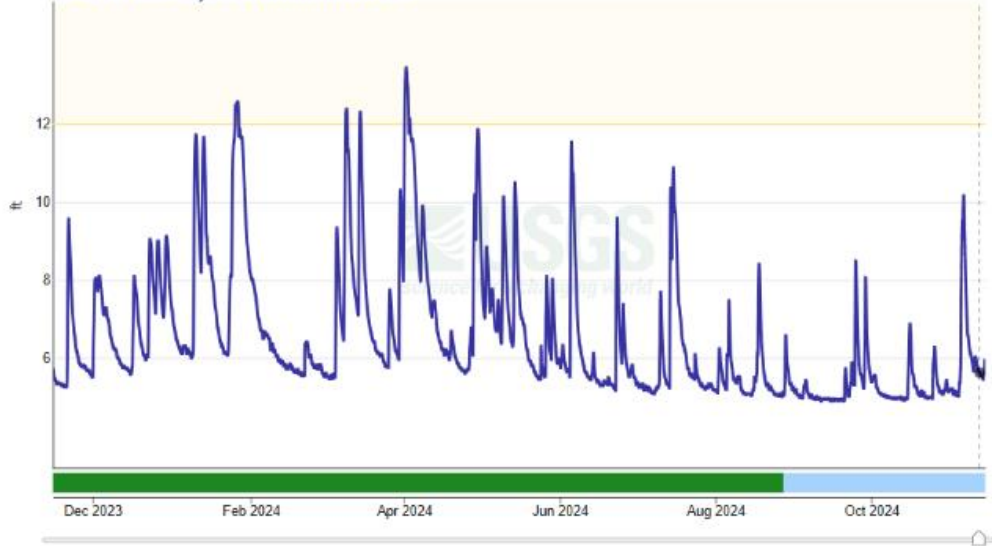
Scale **Linear** Log

Little Calumet River at South Holland, IL - 05536290

November 15, 2023 - November 14, 2024

Gage height, feet

5.62 ft - Nov 12, 2024 08:00:00 AM CST



PLAN SHEETS
