

**SPECIFICATIONS FOR
Phase V Distribution System Expansion**

**for
Henderson Water District
Macoupin and Montgomery County, Illinois**

PRESIDENT

Larry Steward

BOARD MEMBERS

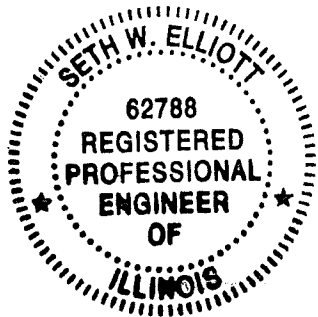
Scott Peterson – Vice President

Paul Beeler-Treasurer

Brandy Drew-Secretary

Keith Harms- Trustee

Tim Walter- Operator



Seth W. Elliott

Seth W. Elliott
Illinois Professional Engineer
No. 62788
Expires: November 30, 2025

Date: June, 2024
File: 01000-412



HENEGHAN AND ASSOCIATES, P.C.
ENGINEERS-SURVEYORS
1004 STATE HIGHWAY 16
JERSEYVILLE, ILLINOIS 62052-2826
(618) 498-6418 FAX (618) 498-6410

Professional Design Firm Registration No. 184-002692
Expires April 30, 2025

Intentionally Blank

Table of Contents

Advertisement For Bids	EJCDC No. C-111 (2018 Edition)
Instructions to Bidders	EJCDC No. C-200 (2018 Edition)
Bid Form	EJCDC No. C-410 (2018 Edition)
Bid Bond	EJCDC No. C-430 (2018 Edition)
Statement of Contractor’s Qualifications	EJCDC No. C-451 (2018 Edition)
Certification for Contracts, Grants, and Loans	<u>RD Instruction 1940-Q, Exhibit A-1</u>
Compliance Statement	<u>Form RD 400-6</u>
Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions	<u>RD AD 1048</u>
Notice of Award	EJCDC No. C-510 (2018 Edition)
Agreement Between Owner and Contractor(s)	EJCDC No. C-521 (2018 Edition)
Certificate of Owner’s Attorney and Agency Concurrence	<u>RUS Bulletin 1780-26, Exhibit I</u>
Performance Bond	EJCDC No. C-610 (2018 Edition)
Payment Bond	EJCDC No. C-615 (2018 Edition)
Notice to Proceed	EJCDC No. C-550 (2018 Edition)
General Conditions	EJCDC No. C-710 (2018 Edition)
Prevailing Rate of Hourly Wages (when required)	Supplied by Illinois Department of Labor
Construction Contractors Affirmative Action Goals (%) for Minority and Women Participation	<u>Illinois Instruction 1780, Guide 12</u>
USDA Rural Development Construction Sign	<u>Illinois Instruction 1780, Guide 10</u>
Application for Payment	EJCDC No. C-620 (2018 Edition)
Domestic Preference De Minimis List	RUS Bulletin 1780-26, Exhibit A, Attachment 2
Manufacturer’s Certification for AIS	RUS Bulletin 1780-26, Exhibit A, Attachment 4
General (Prime) Contractor’s Certification for AIS	RUS Bulletin 1780-26, Exhibit A, Attachment 3
Certificate of Substantial Completion	EJCDC No. C-625 (2018 Edition)
Notice of Acceptability of Work	EJCDC No. C626 (2018 Edition)
Work Change Directive	EJCDC No. C-940 (2018 Edition)
Change Order	EJCDC No. C-941 (2018 Edition)
Field Order	EJCDC No. C-942 (2018 Edition)
Illinois Department of Agriculture – Construction Standards	SP-1 to SP-12

* Forms and RUS Bulletins may be found at <http://www.usda.gov/rus/water/ees/englib/index.htm>

* Illinois Engineering Documents may be found at <http://www.rurdev.usda.gov/il/eng.htm>

Table of Contents Continued

Technical Specifications

Section 10 – General Information	10-1 thru 10-5
Section 11 – General Requirements	11-1 thru 11-9
Section 21 – Concrete	21-1 thru 21-7
Section 31 – Surface Replacement & Site Work	31-1 thru 31-18
Section 41 – Installation of Water Main & Appurtenances	41-1 thru 41-7
Section 42 – Installation of Sewer Main & Appurtenances	42-1 thru 42-7
Section 51 – Water Main, Fittings, & Appurtenances	51-1 thru 51-15
Section 52 – Sewer Piping & Appurtenances	52-1 thru 52-7
Section 54 – Boring Water Main and Services	54-1 thru 54-9
Section 63 – Below-Ground Master Meter Vault	63-1 thru 63-5
Section 82 – Electrical	82-1 thru 82-4
Section 84 – SCADA System	84-1 thru 84-27
Roadway Crossing Permits	
IEPA Construction Permit	

ADVERTISEMENT FOR BIDS
Henderson Water District
Jerseyville, IL

General Notice

Henderson Water District is requesting Bids for the construction of the following Project: **Phase V Distribution System Expansion** . Bids for the construction of the Project will be received at the Henderson Water District located at 1004 State Highway 16, Jerseyville, IL, 62052, until June 20, 2024 at 2:00 PM local time. At that time the Bids received will be publicly opened and read.

The Project includes the following Work: The project consists of constructing approximately 48 miles of 4” and 6” water main and related appurtenances. The Project has an expected duration of **365** days.

Obtaining the Bidding Documents

Information and Bidding Documents for the Project can be found at the following designated website: <https://haengr.com/bid-documents/> Bidding Documents may be downloaded from the designated website. Prospective Bidders are urged to register with the designated website as a plan holder, even if Bidding Documents are obtained from a plan room or source other than the designated website in either electronic or paper format. The designated website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Project. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

The Issuing Office for the Bidding Documents is: Heneghan and Associates, P.C. 1004 State Highway 16, Jerseyville, IL 62052, contact Seth Elliott – 618-498-6418 – swelliott@heneghanassoc.com. Prospective Bidders may obtain or examine the Bidding Documents at the Issuing Office on Monday through Friday between the hours of 8:00 AM and 4:30 PM and may obtain copies of the Bidding Documents from the Issuing Office as described below. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including addenda, if any, obtained from sources other than the Issuing Office.

Bidding Documents may be purchased from the Issuing Office during the hours indicated above. Cost does not include shipping charges. Upon Issuing Office’s receipt of payment, printed Bidding Documents will be sent via UPS delivery service. The shipping charge amount will be \$10.00. Bidding Documents are available for purchase in the following formats:

Format	Cost
Bidding Documents (including Full-Size Drawings)	100
Bidding Documents (including Half-Size Drawings)	80
Electronic download of Bidding Documents from https://haengr.com/bid-documents/	Free
Addition to the Plan Holders List	\$10.00

Pre-bid Conference

A pre-bid conference for the Project will be held on June 4, 2024 at 10:00 AM at 1004 State Highway 16, Jerseyville, IL, 62052. Attendance at the pre-bid conference is encouraged but not required.

Instructions to Bidders.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

Domestic Preference

This project is subject to the Build America, Buy America Act (BABAA) requirements under Title IX of the Infrastructure Investment and Jobs Act (IIJA), Pub. L. 117-58, §§ 70901-70953. Absent an approved waiver, all iron, steel, manufactured products, and construction materials used in this project must be produced in the United States.

**The following waivers apply to this Contract:
BABAA De Minimis, Small Grants, and Minor Components**

This Advertisement is issued by:

Owner: Henderson Water District
By: Larry Steward
Title: Chairman
Date: 05/16/2024

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1— Defined Terms.....	1
Article 2— Bidding Documents.....	1
Article 3— Qualifications of Bidders.....	2
Article 4— Pre-Bid Conference.....	3
Article 5— Site and Other Areas; Existing Site Conditions; Examination of Site; Owner’s Safety Program; Other Work at the Site.....	3
Article 6— Bidder’s Representations and Certifications.....	6
Article 7— Interpretations and Addenda.....	6
Article 8— Bid Security.....	6
Article 9— Contract Times.....	7
Article 10— Substitute and “Or Equal” Items.....	7
Article 11— Subcontractors, Suppliers, and Others.....	8
Article 12— Preparation of Bid.....	9
Article 13— Basis of Bid.....	10
Article 14— Submittal of Bid.....	12
Article 15— Modification and Withdrawal of Bid.....	12
Article 16— Opening of Bids.....	13
Article 17— Bids to Remain Subject to Acceptance.....	13
Article 18— Evaluation of Bids and Award of Contract.....	13
Article 19— Bonds and Insurance.....	14
Article 20— Signing of Agreement.....	14
Article 21— Sales and Use Taxes.....	15
Article 22— Contracts to Be Assigned.....	15

ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary General Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.
 - B. **Domestic Preference – The Build America, Buy America Act (BABAA) requirements under Title IX of the Infrastructure Investment and Jobs Act (IIJA), Pub. L. 117-58, §§ 70901-70953.**

ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner recommends that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.
- 2.04 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.
- 2.05 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are encouraged to register as plan holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.
- 2.06 *Electronic Documents*
- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic

Documents in the manner specified.

1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader Version 9.0 or later. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.
- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within **two** days of Owner's request, Bidder must submit the following information:
 - A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
 - B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.
 - C. Bidder's state or other contractor license number, if applicable.
 - D. Subcontractor and Supplier qualification information.
 - E. Other required information regarding qualifications.
- 3.02 ~~Prospective Bidders must submit required information regarding their qualifications by [insert deadline for prequalification submittals]. Owner will review the submitted information to determine which contractors are qualified to bid on the Work. Owner will issue an Addendum listing those contractors that Owner has determined to be qualified to construct the project. Bids will only be accepted from listed contractors. The information that each prospective Bidder must submit to seek prequalification includes the following:~~
 - A. ~~Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.~~
 - B. ~~A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.~~
 - C. ~~Prospective Bidder's state or other contractor license number, if applicable.~~

- D. ~~Subcontractor and Supplier qualification information.~~
- E. ~~Other required information regarding qualifications.~~

Deleted

- 3.03 Bidder is to submit the following information with its Bid to demonstrate Bidder's qualifications to perform the Work:
- A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
 - B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.
 - C. Bidder's state or other contractor license number, if applicable.
 - D. Subcontractor and Supplier qualification information.
 - E. Other required information regarding qualifications.
- 3.04 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.05 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4—PRE-BID CONFERENCE

- 4.01 A non-mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference; however, attendance at this conference is not required to submit a Bid.
- 4.02 Information presented at the pre-Bid conference does not alter the Contract Documents. Owner will issue Addenda to make any changes to the Contract Documents that result from discussions at the pre-Bid conference. Information presented, and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an Addendum.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

- 5.01 *Site and Other Areas*
- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.
- 5.02 *Existing Site Conditions*
- A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The SupplementaryGeneral Conditions identify the following regarding existing conditions at or adjacent to the Site:
 - a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.
 - b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.
 - c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the SupplementaryGeneral Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
3. If the SupplementaryGeneral Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
4. *Geotechnical Baseline Report/Geotechnical Data Report*: The Bidding Documents contain a Geotechnical Baseline Report (GBR) and Geotechnical Data Report (GDR).
 - a. As set forth in the SupplementaryGeneral Conditions, the GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations (“Baseline Conditions”). The GBR is a Contract Document.
 - b. The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.
 - c. Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.
 - d. As set forth in the SupplementaryGeneral Conditions, the GDR is a Contract Document containing data prepared by or for the Owner in support of the GBR.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Other Site-related Documents*

- A. No other Site-related documents are available.

5.04 *Site Visit and Testing by Bidders*

- A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.
- B. A Site visit is scheduled following the pre-bid conference. Maps to the Site will be available at the pre-Bid conference.
- C. ~~A Site visit is scheduled for [designate, date, time and location]. Maps to the Site will be made available upon request.~~
- D. Bidders visiting the Site are required to arrange their own transportation to the Site.
- E. All access to the Site other than during a regularly scheduled Site visit must be coordinated through the ~~following Owner or Engineer, contact for visiting the Site: [provide contact information].~~ Bidder must conduct the required Site visit during normal working hours.
- F. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- G. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.
- H. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- I. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the ~~Supplementary~~General Conditions.

5.06 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary General Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder’s examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.
- B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
 - A. **Seth Elliott, P.E., Project Manager**
1004 State Highway 16, Jerseyville, IL, 62052
618-498-6418
- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **five** percent of Bidder’s maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General

Conditions. Such Bid bond will be issued in the form included in the Bidding Documents. **Bid security must be at least 5% of the Bidder's maximum Bid price.**

- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.
- 9.02 ~~Bidder must set forth in the Bid the time by which Bidder must achieve Substantial Completion, subject to the restrictions established in Paragraph 13.07 of these Instructions. The Owner will take Bidder's time commitment regarding Substantial Completion into consideration during the evaluation of Bids, and it will be necessary for the apparent Successful Bidder to satisfy Owner that it will be able to achieve Substantial Completion within the time such Bidder has designated in the Bid. [If applicable include the following: Bidder must also set forth in the Bid its commitments regarding the achievement of Milestones and readiness for final payment.] The Successful Bidder's time commitments will be entered into the Agreement or incorporated in the Agreement by reference to the specific terms of the Bid.~~

Deleted

- 9.03 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

- 10.01 ~~The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or equal" item of~~

~~material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.~~

Deleted

- 10.02 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those “or-equal” or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an “or-equal” or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer within 10 days of the issuance of the Advertisement for Bids or invitation to Bidders. Each such request must comply with the requirements of Paragraphs 7.05 and 7.06 of the General Conditions, and the review of the request will be governed by the principles in those paragraphs. **Each such request shall include the Manufacturer’s Certification for Compliance with Domestic Preference requirements. Refer to the suggested Manufacturer’s Certification provided in these construction Contract Documents.** The burden of proof of the merit of the proposed item is upon Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all registered Bidders. Bidders cannot rely upon approvals made in any other manner. **Substitutes and “or-equal” materials and equipment may be proposed by Contractor in accordance with Paragraphs 7.05 and 7.06 of the General Conditions after the Effective Date of the Contract. Each such request shall include Manufacturer’s Certification letter to document compliance with Domestic Preference requirements. Refer to Manufacturer’s Certification Letter provided in these Contract Documents.**
- 10.03 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 ~~A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.~~

Deleted

- 11.02 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work within five days after Bid opening:
- A. ~~**[List key categories of the Work. Depending on the Project this might include electrical, fire protection, major equipment items].N/A**~~
- 11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent

Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

11.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

11.05 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in ~~SC~~ General Condition 7.07A.

ARTICLE 12—PREPARATION OF BID

12.01 The Bid Form is included with the Bidding Documents.

- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.

12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.

12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.

12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.

12.06 A Bid by an individual must show the Bidder's name and official address.

12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.

- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

- 13.01 ~~Lump-Sum(NOT APPLICABLE)~~
A.—~~Bidders must submit a Bid on a lump-sum basis as set forth in the Bid Form.~~
- 13.02 ~~Base-Bid with Alternates(NOT APPLICABLE)~~
A.—~~Bidders must submit a Bid on a lump-sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.~~
B.—~~In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form.~~
- 13.03 ~~Sectional Bids(NOT APPLICABLE)~~
A.—~~Bidders may submit a Bid on any individual section or any combination of sections, as set forth in the Bid Form.~~
B.—~~Submission of a Bid on any section signifies Bidder's willingness to enter into a Contract for that section alone at the price offered.~~
C.—~~If Bidder submits Bids on individual sections and a Bid based on a combination of those sections, such combined Bid need not be the sum of the Bids on the individual sections.~~
D.—~~Bidders offering a Bid on one or more sections must be capable of completing the Work covered by those sections within the time period stated in the Agreement.~~
- 13.04 ~~Cost-Plus-Fee Bids~~
A. ~~Bidders must submit a Bid on the Contractor's fee, which must be in addition to compensation for Cost of the Work. Such fee must be either (1) a fixed fee, (2) percentages of specified categories of costs, or (3) a percentage applicable to the Cost of the Work as a whole, as set forth in the Bid Form.~~

- B. ~~If the Contractor's fee, as set forth in the Bid Form, is to be based on percentages of categories of cost, or on a percentage applicable to the Cost of the Work as a whole, then Bidders must enter a maximum amount limiting the total fee if required by the Bid Form to do so.~~
- C. ~~Bidders must submit a Bid on the Guaranteed Maximum Price, setting a maximum amount on the compensable Cost of the Work plus Contractor's fee, if required by the Bid Form to do so.~~

Deleted

13.05 *Unit Price*

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- D. Bidders must submit a Bid for each alternate described in the bidding documents and as provided in the Bid Form. The price for each alternate will be the amount added to, deleted from, or replacement of from the unit price bid work as described on the bid form.
- E. In the comparison of Bids, alternates will be decided based on the OWNER's discretion.

13.06 *Allowances*

- A. For cash allowances the Bid price must include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

13.07 ~~*Price Plus Time Bids*~~

- A. ~~The Owner will consider the time of Substantial Completion commitment made by the Bidder in the comparison of Bids.~~
- B. ~~Bidder must designate the number of days required to achieve Substantial Completion of the Work and enter that number in the Bid Form as the total number of calendar days to substantially complete the Work.~~
- C. ~~The total number of calendar days for Substantial Completion designated by Bidder must be less than or equal to a maximum of [number], but not less than the minimum of [number]. If Bidder purports to designate a time for Substantial Completion that is less than the allowed minimum, or greater than the allowed maximum, Owner will reject the Bid as nonresponsive.~~

- D. ~~The Agreement as executed will contain the Substantial Completion time designated in Successful Bidder's Bid, and the Contractor will be assessed liquidated damages at the rate stated in the Agreement for failure to attain Substantial Completion within that time.~~
- E. ~~Bidder must also designate the time in which it will achieve Milestones, and achieve readiness for final payment. Such time commitments must be consistent with the "Time of Substantial Completion" to which Bidder commits. The Agreement as executed will contain, as binding Contract Times, Successful Bidder's time commitments regarding Milestones, as applicable, and readiness for final payment.~~

Deleted

ARTICLE 14—SUBMITTAL OF BID

- 14.01 The Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.
- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.
- 14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.

18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.

18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.

18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

18.05 *Evaluation of Bids*

- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner will announce to all bidders a “Base Bid plus alternates” budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.
- C. For determination of the apparent low Bidder(s) when sectional bids are submitted, Bids will be compared on the basis of the aggregate of the Bids for separate sections and the Bids for combined sections that result in the lowest total amount for all of the Work.
- D. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

- E. ~~For the determination of the apparent low Bidder when cost plus fee bids are submitted, Bids will be compared on the basis of the Guaranteed Maximum Price set forth by Bidder on the Bid Form.~~

Deleted

- F. ~~Bid prices will be compared after adjusting for differences in time of Substantial Completion (total number of calendar days to substantially complete the Work) designated by Bidders. The adjusting amount will be determined at the rate set forth in the Agreement for liquidated damages for failing to achieve Substantial Completion, or such other amount that Owner has designated in the Bid Form.~~

~~1. The method for calculating the lowest bid for comparison will be the summation of the Bid price shown in the Bid Form plus the product of the Bidder-specified time of Substantial Completion in calendar days times the rate for liquidated damages [or other Owner-designated daily rate] in dollars per day.~~

~~2. This procedure is only used to determine the lowest bid for comparison and contractor selection purposes. The Contract Price for compensation and payment purposes remains the Bid price shown in the Bid Form.~~

Deleted

- 18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

- 19.01 Article 6 of the General Conditions, as may be modified by the ~~Supplementary~~General Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.
- 19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—SALES AND USE TAXES

21.01 Owner is exempt from **Illinois** state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes must not be included in the Bid. Refer to Paragraph 7.10 of the **SupplementaryGeneral** Conditions for additional information.

ARTICLE 22—CONTRACTS TO BE ASSIGNED

22.01 Not Applicable.

ARTICLE 23 – FEDERAL REQUIREMENTS

23.01 If the contract price is in excess of \$100,000, provisions of the Contract Work Hours and Safety Standards Act at 29 CFR 5.5(b) apply.

23.02 Federal requirements at Article 19 of the **SupplementaryGeneral** Conditions apply to this Contract.

BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders and the General Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

Larry Steward, Chairman

Henderson Water District

1004 State Highway 16, Jerseyville, IL, 62052

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. List of Proposed Subcontractors;
- C. List of Proposed Suppliers;
- D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
- E. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
- F. Required Bidder Qualification Statement Sections, Article 1, 2, 3, 8.01, 8.03, 8.04 with supporting data; ~~and~~
- G. **If Bid amount exceeds \$10,000, signed Compliance Statement (RD 400-6). Refer to specific equal opportunity requirements set forth in the General Conditions of the Construction Contract (EJCDC C-800);**
- H. **If Bid amount exceeds \$25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions (AD-1048);**
- I. **If Bid amount exceeds \$100,000, signed RD Instruction 1940-Q Exhibit A-1, Certification for Contracts, Grants, and Loans.**

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

3.01 *Unit Price Bids*

A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1	4" PVC Pipe, CL 200, SDR 21	L.F.	190705		\$
2	4" Restrained Joint PVC Pipe, CL 200	LF	740		\$
3	4" RJ PVC Pipe, CL 200,-Bores (Pipe Only)	LF	1610		\$
4	4" RJ PVC Pipe, CL 200,-Within Casing Pipe	LF	560		\$
5	Bore 4" PVC Pipe (Bore Only)	LF	1215		\$
6	4" Ductile Iron, CL 350 with Nitrile Gaskets Within Casing Pipe	LF	1200		\$
7	6" PVC Pipe, CL 200, SDR 21	L.F.	50590		\$
8	6" Restrained Joint PVC Pipe, CL 200	LF	220		\$
9	6" RJ PVC Pipe, CL 200,-Bores (Pipe Only)	LF	200		\$
10	6" RJ PVC Pipe, CL 200,-Within Casing Pipe	LF	520		\$
11	Bore 6" PVC Pipe (Bore Only)	LF	150		\$
12	6" Ductile Iron, CL 350 with Nitrile Gaskets Within Casing Pipe	LF	120		\$
13	8" RJ PVC Casing , CL 200,-Pipeline Crossing	LF	1000		\$
14	8" RJ PVC Casing , CL 200,-Bores (Pipe Only)	LF	500		\$
15	Bore 8" PVC Pipe (Bore Only)	LF	450		\$
16	12" RJ PVC Casing , CL 200,-Pipeline Crossing	LF	100		\$
17	12" RJ PVC Casing , CL 200,-Bores (Pipe Only)	LF	420		\$
18	Bore 12" PVC Pipe (Bore Only)	LF	395		\$
19	8" PVC Pipe CL160 Septic Encasement	LF	100		\$
20	12" PVC Pipe CL160 Septic Encasement	LF	100		\$
21	Connect to Existing Blind Flange	EACH	1		\$
22	3" x 3" Tapping Sleeve with 3" Gate Valve with Box	Each	1		\$
23	4" x 4" Tapping Sleeve with 4" Gate Valve with Box	Each	6		\$
24	6" x 4" Tapping Sleeve with 4" Gate Valve with Box	Each	1		\$
25	6" x 6" Tapping Sleeve with 6" Gate Valve with Box	Each	4		\$
26	8" x 4" Tapping Sleeve with 4" Gate Valve with Box	Each	1		\$
27	8" x 6" Tapping Sleeve with 6" Gate Valve with Box	Each	2		

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
28	2-1/4" Flushing Hydrant with Gate Valve with Box	Each	28		\$
29	4" Gate Valve with Box	Each	37		\$
30	6" Gate Valve with Box	Each	10		\$
31	8" Gate Valve with Box	Each	2		\$
32	Creek Crossing Meter and Valve Set - 4"	Each	2		\$
33	Creek Crossing Meter and Valve Set - 6"	EACH	1		\$
34	5/8" x 3/4" Service Connection w/Pressure Regulator	Each	94		\$
35	1" P.E. Service Line	L.F.	3360		\$
36	Boring Service Line	L.F.	2050		\$
37	Replace Meter and MXU	EACH	402		\$
38	Auto Flusher	EACH	5		\$
39	Combination Air Release Valve	Each	3		\$
40	Compacted Rock Backfill	CU YD	50		\$
41	Drainage Ditch Crossing - Set Up	Each	16		\$
42	Sample Station	Each	3		\$
43	4" Line Stop	EACH	2		\$
44	8" Line Stop	Each	2		\$
45	Cut in 4" Tee	EACH	1		\$
46	Cut in 8" X 4" Tee	EACH	1		\$
47	Bacteriological Sampling	Each	49		\$
48	Unsuitable Backfill Material	L.F.	200		\$
49	Rock Excavation	Cu Yd	200		\$
50	Field Drain Repair	Each	150		\$
51	Master Meter (Vault and Appurtenances)	LS	1		\$
52	Telemetry Upgrade	LS	1		\$
53	NPDES, Erosion Control, and Inspection.	LS	1		\$
54	Mobilization	LS	1		\$

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
55	Bond and Insurance	LS	1		\$
56	Dir. Bore 140 L.F. 4" RJ CL200 DB-5-7-1	LS	1		\$
57	Dir. Bore 100 L.F. 4" RJ CL200 DB-5-7-2	LS	1		\$
58	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-7-3	LS	1		\$
59	Dir. Bore 220 L.F. 4" RJ CL200 DB-5-8-1	LS	1		\$
60	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-8-2	LS	1		\$
61	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-8-3	LS	1		\$
62	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-8-4	LS	1		\$
63	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-8-5	LS	1		\$
64	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-8-6	LS	1		\$
65	Dir. Bore 100 L.F. 4" RJ CL200 DB-5-8-7	LS	1		\$
66	Dir. Bore 120 L.F. 4" RJ CL200 DB-5-8-8	LS	1		\$
67	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-9-1	LS	1		\$
68	Dir. Bore 160 L.F. 4" RJ CL200 DB-5-9-2	LS	1		\$
69	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-9-3	LS	1		\$
70	Dir. Bore 60 L.F. 4" RJ CL200 DB-5-9-4	LS	1		\$
71	Dir. Bore 120 L.F. 4" RJ CL200 DB-5-10-1	LS	1		\$
72	Dir. Bore 100 L.F. 4" RJ CL200 DB-5-11-1	LS	1		\$
73	Dir. Bore 200 L.F. 4" RJ CL200 DB-5-11-2	LS	1		\$
74	Dir. Bore 140 L.F. 4" RJ CL200 DB-5-11-3	LS	1		\$
75	Dir. Bore 140 L.F. 4" RJ CL200 DB-5-11-4	LS	1		\$
76	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-11-5	LS	1		\$
77	Dir. Bore 260 L.F. 4" RJ CL200 DB-5-12-1	LS	1		\$
78	Dir. Bore 120 L.F. 4" RJ CL200 DB-5-12-2	LS	1		\$
79	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-13-1	LS	1		\$
80	Dir. Bore 100 L.F. 6" RJ CL200 DB-5-14-1	LS	1		\$
81	Dir. Bore 60 L.F. 6" RJ CL200 DB-5-14-2	LS	1		\$

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
82	Dir. Bore 60 L.F. 6" RJ CL200 DB-5-14-3	LS	1		\$
83	Dir. Bore 120 L.F. 6" RJ CL200 DB-5-14-4	LS	1		\$
84	Dir. Bore 240 L.F. 4" RJ CL200 DB-5-14-5	LS	1		\$
85	Dir. Bore 80 L.F. 6" RJ CL200 DB-5-16-1	LS	1		\$
86	Dir. Bore 260 L.F. 6" RJ CL200 DB-5-16-2	LS	1		\$
87	Dir. Bore 100 L.F. 4" RJ CL200 DB-5-19-1	LS	1		\$
88	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-20-1	LS	1		\$
89	Dir. Bore 80 L.F. 4" RJ CL200 DB-5-20-2	LS	1		\$
90	Dir. Bore 100 L.F. 4" RJ CL200 DW-5-20-1	LS	1		\$
91	Dir. Bore 100 L.F. 4" RJ CL200 DB-5-21-1	LS	1		\$
92	Dir. Bore 80 L.F. 6" RJ CL200 DB-5-24-1	LS	1		\$
93	Dir. Bore 100 L.F. 4" RJ CL200 DB-5-27-1	LS	1		\$
94	Dir. Bore 100 L.F. 4" RJ CL200 DB-5-29-1	LS	1		\$
95	Dir. Bore 60 L.F. 4" RJ CL200 DB-5-32-1	LS	1		\$
96	Dir. Bore 60 L.F. 4" RJ CL200 DB-5-32-2	LS	1		\$
Total of All Unit Price Bid Items					\$

Dollars

(In Words)

B. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 4—TIME OF COMPLETION

- 4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER’S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

- A. Bidder hereby acknowledges receipt of the following Addenda: **[Add rows as needed. Bidder is to complete table.]**

Addendum Number	Addendum Date

ARTICLE 6—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder’s Representations*

- A. In submitting this Bid, Bidder represents the following:
 1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work, **including all Domestic Preference requirements.**
 4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the General Conditions, with respect to the Technical Data in such reports and drawings.

5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the General Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the General Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at

artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

- c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
- d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

Address for giving notices:

Bidder's Contact:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Phone: _____

Email: _____

Address: _____

Bidder's Contractor License No.: (if applicable) _____

Intentionally Blank

BID BOND (PENAL SUM FORM)

<p>Bidder</p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>	<p>Surety</p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>
<p>Owner</p> <p>Name: Henderson Water District</p> <p>Address (<i>principal place of business</i>): 1004 State Highway 16, Jerseyville, IL, 62052</p>	<p>Bid</p> <p>Project (<i>name and location</i>): Phase V Distribution System Expansion: The project consists of constructing approximately 48 miles of 4" and 6" water main and related appurtenances.</p> <p>Bid Due Date: {DATE BID}</p>
<p>Bond</p> <p>Penal Sum: _____</p> <p>Date of Bond: _____</p>	
<p>Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.</p>	
<p>Bidder</p> <p style="text-align: center;">_____</p> <p style="text-align: center;"><i>(Full formal name of Bidder)</i></p>	<p>Surety</p> <p style="text-align: center;">_____</p> <p style="text-align: center;"><i>(Full formal name of Surety) (corporate seal)</i></p>
<p>By: _____</p> <p style="text-align: center;"><i>(Signature)</i></p>	<p>By: _____</p> <p style="text-align: center;"><i>(Signature) (Attach Power of Attorney)</i></p>
<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>	<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p>Attest: _____</p> <p style="text-align: center;"><i>(Signature)</i></p>	<p>Attest: _____</p> <p style="text-align: center;"><i>(Signature)</i></p>
<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>	<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p><i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i></p>	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

QUALIFICATIONS STATEMENT

ARTICLE 1—GENERAL INFORMATION

1.01 Provide contact information for the Business:

Legal Name of Business:			
Corporate Office			
Name:		Phone number:	
Title:		Email address:	
Business address of corporate office:			
Local Office			
Name:		Phone number:	
Title:		Email address:	
Business address of local office:			

1.02 Provide information on the Business’s organizational structure:

Form of Business:	<input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation		
<input type="checkbox"/> Limited Liability Company <input type="checkbox"/> Joint Venture comprised of the following companies:			
1.			
2.			
3.			
Provide a separate Qualification Statement for each Joint Venturer.			
Date Business was formed:		State in which Business was formed:	
Is this Business authorized to operate in the Project location? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Pending			

1.03 Identify all businesses that own Business in whole or in part (25% or greater), or that are wholly or partly (25% or greater) owned by Business:

Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	
Address:			
Name of business:		Affiliation:	
Address:			

1.04 Provide information regarding the Business’s officers, partners, and limits of authority.

Name:		Title:	
Authorized to sign contracts:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Limit of Authority:	\$
Name:		Title:	
Authorized to sign contracts:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Limit of Authority:	\$
Name:		Title:	
Authorized to sign contracts:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Limit of Authority:	\$
Name:		Title:	

ARTICLE 2—LICENSING

2.01 Provide information regarding licensure for Business:

Name of License:			
Licensing Agency:			
License No:		Expiration Date:	
Name of License:			
Licensing Agency:			
License No:		Expiration Date:	

ARTICLE 3—DIVERSE BUSINESS CERTIFICATIONS

3.01 Provide information regarding Business’s Diverse Business Certification, if any. Provide evidence of current certification.

Certification	Certifying Agency	Certification Date
<input type="checkbox"/> Disadvantaged Business Enterprise		
<input type="checkbox"/> Minority Business Enterprise		
<input type="checkbox"/> Woman-Owned Business Enterprise		
<input type="checkbox"/> Small Business Enterprise		
<input type="checkbox"/> Disabled Business Enterprise		
<input type="checkbox"/> Veteran-Owned Business Enterprise		
<input type="checkbox"/> Service-Disabled Veteran-Owned Business		
<input type="checkbox"/> HUBZone Business (Historically Underutilized) Business		
<input type="checkbox"/> Other		
<input type="checkbox"/> None		

ARTICLE 4—SAFETY

4.01 Provide information regarding Business’s safety organization and safety performance.

Name of Business’s Safety Officer:		
Safety Certifications		
Certification Name	Issuing Agency	Expiration

4.02 Provide Worker’s Compensation Insurance Experience Modification Rate (EMR), Total Recordable Frequency Rate (TRFR) for incidents, and Total Number of Recorded Manhours (MH) for the last 3 years and the EMR, TRFR, and MH history for the last 3 years of any proposed Subcontractor(s) that will provide Work valued at 10% or more of the Contract Price. Provide documentation of the EMR history for Business and Subcontractor(s).

Year									
Company	EMR	TRFR	MH	EMR	TRFR	MH	EMR	TRFR	MH

ARTICLE 5—FINANCIAL

5.01 Provide information regarding the Business’s financial stability. Provide the most recent audited financial statement, and if such audited financial statement is not current, also provide the most current financial statement.

Financial Institution:		
Business address:		
Date of Business’s most recent financial statement:		<input type="checkbox"/> Attached
Date of Business’s most recent audited financial statement:		<input type="checkbox"/> Attached
Financial indicators from the most recent financial statement		
Contractor’s Current Ratio (Current Assets ÷ Current Liabilities)		
Contractor’s Quick Ratio ((Cash and Cash Equivalents + Accounts Receivable + Short Term Investments) ÷ Current Liabilities)		

ARTICLE 6—SURETY INFORMATION

6.01 Provide information regarding the surety company that will issue required bonds on behalf of the Business, including but not limited to performance and payment bonds.

Surety Name:			
Surety is a corporation organized and existing under the laws of the state of:			
Is surety authorized to provide surety bonds in the Project location?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Is surety listed in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” published in Department Circular 570 (as amended) by the Bureau of the Fiscal Service, U.S. Department of the Treasury? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

ARTICLE 7—INSURANCE

7.01 Provide information regarding Business’s insurance company(s), including but not limited to its Commercial General Liability carrier. Provide information for each provider.

Name of insurance provider, and type of policy (CLE, auto, etc.):			
Insurance Provider		Type of Policy (Coverage Provided)	
Are providers licensed or authorized to issue policies in the Project location?			<input type="checkbox"/> Yes <input type="checkbox"/> No
Does provider have an A.M. Best Rating of A-VII or better?			<input type="checkbox"/> Yes <input type="checkbox"/> No
Mailing Address (principal place of business):			
Physical Address (principal place of business):			
Phone (main):		Phone (claims):	

ARTICLE 8—CONSTRUCTION EXPERIENCE

8.01 Provide information that will identify the overall size and capacity of the Business.

Average number of current full-time employees:	
Estimate of revenue for the current year:	
Estimate of revenue for the previous year:	

8.02 Provide information regarding the Business’s previous contracting experience.

Years of experience with projects like the proposed project:		
As a general contractor:		As a joint venturer:
Has Business, or a predecessor in interest, or an affiliate identified in Paragraph 1.03:		
Been disqualified as a bidder by any local, state, or federal agency within the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Been barred from contracting by any local, state, or federal agency within the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Been released from a bid in the past 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Defaulted on a project or failed to complete any contract awarded to it? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Refused to construct or refused to provide materials defined in the contract documents or in a change order? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Been a party to any currently pending litigation or arbitration? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Provide full details in a separate attachment if the response to any of these questions is Yes.		

8.03 List all projects currently under contract in Schedule A and provide indicated information.

8.04 List a minimum of three and a maximum of six projects completed in the last 5 years in Schedule B and provide indicated information to demonstrate the Business’s experience with projects similar in type and cost of construction.

8.05 In Schedule C, provide information on key individuals whom Business intends to assign to the Project. Provide resumes for those individuals included in Schedule C. Key individuals include the Project Manager, Project Superintendent, Quality Manager, and Safety Manager. Resumes may be provided for Business’s key leaders as well.

ARTICLE 9—REQUIRED ATTACHMENTS

9.01 Provide the following information with the Statement of Qualifications:

- A. If Business is a Joint Venture, separate Qualifications Statements for each Joint Venturer, as required in Paragraph 1.02.
- B. Diverse Business Certifications if required by Paragraph 3.01.
- C. Certification of Business’s safety performance if required by Paragraph 4.02.
- D. Financial statements as required by Paragraph 5.01.

- E. Attachments providing additional information as required by Paragraph 8.02.
- F. Schedule A (Current Projects) as required by Paragraph 8.03.
- G. Schedule B (Previous Experience with Similar Projects) as required by Paragraph 8.04.
- H. Schedule C (Key Individuals) and resumes for the key individuals listed, as required by Paragraph 8.05.
- I. Additional items as pertinent.

This Statement of Qualifications is offered by:

Business: _____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(date signed)

(If Business is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address for giving notices:

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address: _____

Phone: _____

Email: _____

Schedule A—Current Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Schedule B—Previous Experience with Similar Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Schedule B—Previous Experience with Similar Projects

Name of Organization					
Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Project Owner			Project Name		
General Description of Project					
Project Cost			Date Project		
Key Project Personnel	Project Manager	Project Superintendent	Safety Manager	Quality Control Manager	
Name					
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/Position	Organization	Telephone	Email
Owner					
Designer					
Construction Manager					

Schedule C—Key Individuals

Project Manager			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	
Project Superintendent			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

Safety Manager			
Name of individual			
Years of experience as project manager			
Years of experience with this organization			
Number of similar projects as project manager			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	
Quality Control Manager			
Name of individual			
Years of experience as project superintendent			
Years of experience with this organization			
Number of similar projects as project superintendent			
Number of similar projects in other positions			
Current Project Assignments			
Name of assignment		Percent of time used for this project	Estimated project completion date
Reference Contact Information (listing names indicates approval to contact named individuals as a reference)			
Name		Name	
Title/Position		Title/Position	
Organization		Organization	
Telephone		Telephone	
Email		Email	
Project		Project	
Candidate's role on project		Candidate's role on project	

CERTIFICATION FOR CONTRACTS, GRANTS, AND LOANS

The undersigned certifies, to the best of his or her 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 or Federal loan, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant or loan.

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 or loan, the undersigned shall complete and submit Standard Form - LLL, "Disclosure of Lobbying Activities," 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 contracts, subcontracts, and subgrants under grants and loans) 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.

(name)

(date)

(title)

oOo

Intentionally Blank

COMPLIANCE STATEMENT

This statement relates to a proposed contract with _____

(Name of borrower or grantee)

who expects to finance the contract with assistance from either the Rural Housing Service (RHS), Rural Business-Cooperative Service (RBS), or the Rural Utilities Service (RUS) or their successor agencies, United States Department of Agriculture (whether by a loan, grant, loan insurance, guarantee, or other form of financial assistance). I am the undersigned bidder or prospective contractor, I represent that:

1. I have have not, participated in a previous contract or subcontract subject to Executive Order 11246 (regarding equal employment opportunity) or a preceding similar Executive Order.
2. If I have participated in such a contract or subcontract, I have, have not, filed all compliance reports that have been required to file in connection with the contract or subcontract.
 If the proposed contract is for \$50,000 or more: or if the proposed nonconstruction contract is for \$50,000 or more and I have 50 or more employees, I also represent that:
3. I have, have not previously had contracts subject to the written affirmative action programs requirements of the Secretary of Labor.
4. If I have participated in such a contract or subcontract, I have, have not developed and placed on file at each establishment affirmative action programs as required by the rules and regulations of the Secretary of Labor.

I understand that if I have failed to file any compliance reports that have been required of me, I am not eligible and will not be eligible to have my bid considered or to enter into the proposed contract unless and until I make an arrangement regarding such reports that is satisfactory to either the RHS, RBS or RUS, or to the office where the reports are required to be filed.

I also certify that I do not maintain or provide for my employees any segregated facilities at any of my establishments, and that I do not permit my employees to perform their services at any location, under my control, where segregated facilities are maintained. I certify further that I will not maintain or provide for my employees any segregated facilities at any of my establishments, and that I will not permit my employees to perform their services at any location, under my control, where segregated facilities are maintained. I agree that a breach of this certification is a violation of the Equal Opportunity clause in my contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and wash rooms, restaurants and other eating areas time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. I further agree that (except where I have obtained identical certifications for proposed subcontractors for specific time periods) I will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that I will retain such certifications in my files; and that I will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays the valid OMB control number. The valid OMB control number for this information collection is 0575-0018. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Intentionally Blank

**NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR
CERTIFICATIONS OF NON-SEGREGATED FACILITIES**

A certification of Nonsegregated Facilities, as required by the May 9, 1967, order (32F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$ 10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Date _____

(Signature of Bidder or Prospective Contractor)

Address (including Zip Code)

Intentionally Blank



**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion AD-1048
Lower Tier Covered Transactions**

The following statement is made in accordance with the Privacy Act of 1974 (5 U.S.C. § 552a, as amended). This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, and 2 C.F.R. §§ 180.300, 180.335, Participants' responsibilities. The regulations were amended and published on August 31, 2005, in 70 Fed. Reg. 51865-51880. Copies of the regulations may be obtained by contacting the Department of Agriculture agency offering the proposed covered transaction.

According to the Paperwork Reduction Act of 1995 an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0505-0027. The time required to complete this information collection is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The provisions of appropriate criminal and civil fraud privacy, and other statutes may be applicable to the information provided.

(Read instructions on page two before completing certification.)

- A. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency;
- B. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

ORGANIZATION NAME	PR/AWARD NUMBER OR PROJECT NAME
NAME(S) AND TITLE(S) OF AUTHORIZED REPRESENTATIVE(S)	
SIGNATURE(S)	DATE

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotope, American Sign Language, etc.) should contact the responsible agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint \(https://www.ascr.usda.gov/filing-program-discrimination-complaint-usda-customer\)](https://www.ascr.usda.gov/filing-program-discrimination-complaint-usda-customer) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442.

Instructions for Certification

- (1) By signing and submitting this form, the prospective lower tier participant is providing the certification set out on page 1 in accordance with these instructions.
- (2) The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.
- (3) The prospective lower tier participant shall provide immediate written notice to the person(s) to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (4) The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549, at 2 C.F.R. Parts 180 and 417. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
- (5) The prospective lower tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- (6) The prospective lower tier participant further agrees by submitting this form that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- (7) A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the System for Award Management (SAM) database.
- (8) Nothing contained in the foregoing shall be construed to require establishment of a system of records to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (9) Except for transactions authorized under paragraph (5) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

NOTICE OF AWARD

Date of Issuance:

Owner: Henderson Water District

Owner's Project No.:

Engineer: Heneghan and Associates, P.C.

Engineer's Project No.: 01000-412

Project: Phase V Distribution System Expansion

Contract Name:

Bidder:

Bidder's Address:

You are notified that Owner has accepted your Bid dated _____ for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

Phase V Distribution System Expansion: The project consists of constructing approximately 48 miles of 4" and 6" water main and related appurtenances.

The Contract Price of the awarded Contract is \$_____. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

Five (5) unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner five (5) counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **Henderson Water District**

By (signature): _____

Name (printed): _____

Title: _____

Copy: Engineer

Intentionally Blank

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between Henderson Water District
("Owner") and _____
("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the General Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: The project consists of constructing approximately 48 miles of 4" and 6" water main and related appurtenances.

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Phase V Distribution System Expansion

ARTICLE 3—ENGINEER

3.01 The Owner has retained Heneghan and Associates, P.C. ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by "Engineer".

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. The Work will be substantially complete on or before **October 31, 2025**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **May 21, 2026**.

4.03 *Milestones*

A. Parts of the Work must be substantially completed on or before the following Milestone(s):

1. Milestone 1 **Install, connect, disinfect, sample and make the master meter and water main along West County Line Road operational as intended within 120 days after notice to proceed.**

4.04 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
1. *Substantial Completion:* Contractor shall pay Owner \$800.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
 2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$800.00 for each day that expires after such time until the Work is completed and ready for final payment.
 3. *Milestones:* Contractor shall pay Owner \$800.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved, or until the time specified for Substantial Completion is reached, at which time the rate indicated in Paragraph 4.05.A.1 will apply, rather than the Milestone rate.
 4. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.
- C. ~~*Bonus:* Contractor and Owner further recognize the Owner will realize financial and other benefits if the Work is completed prior to the time specified for Substantial Completion. Accordingly, Owner and Contractor agree that as a bonus for early completion, Owner shall pay Contractor \$[number] for each day prior to the time specified above for Substantial Completion (as duly adjusted pursuant to the Contract) that the Work is substantially complete. The maximum value of the bonus will be limited to \$[number].~~

Deleted

4.06 *Special Damages*

- A. Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.

- B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.
- C. The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

Unit Price Work					
Item No.	Description	Unit	Estimated Quantity	Unit Price	Extended Price
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)					\$

- A. For all Work, at the prices stated in Contractor’s Bid, attached hereto as an exhibit.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on the basis of Contractor’s Applications for Payment on or about the **last Wednesday** of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

- 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments

previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

a. ~~[number]~~90 percent of the value of the Work completed (with the balance being retainage).

1) ~~If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and~~

Deleted

b. ~~[number]~~90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion **of the entire construction to be provided under the construction Contract Documents**, Owner shall pay an amount sufficient to increase total payments to Contractor to **95** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

A. All amounts not paid when due will bear interest at the rate of **maximum legal rate** percent per annum.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of all of the following:

1. This Agreement.
2. Bonds:
 - a. Performance bond (together with power of attorney).
 - b. Payment bond (together with power of attorney).
3. General Conditions.
4. General

5. Specifications as listed in the table of contents of the project manual (copy of list attached).
 6. Drawings (not attached but incorporated by reference) consisting of **40** sheets with each sheet bearing the following general title: **Phase V Water Distribution System Expansion**.
 7. Drawings listed on the attached sheet index.
 8. Addenda (numbers **[number]** to **[number]**, inclusive).
 9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (Pages __ to __, inclusive)
 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
 - e. Warranty Bond, if any.
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 Contractor's Representations

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
 2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the General Conditions, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the General Conditions, with respect to Technical Data in such reports and drawings.
6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the General Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:
 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the General Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

Owner:

Contractor:

(typed or printed name of organization)

(typed or printed name of organization)

By: _____
(individual's signature)

By: _____
(individual's signature)

Date: _____
(date signed)

Date: _____
(date signed)

Name: _____
(typed or printed)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Title: _____
(typed or printed)

(If [Type of Entity] is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____
(individual's signature)

Attest: _____
(individual's signature)

Title: _____
(typed or printed)

Title: _____
(typed or printed)

Address for giving notices:

Address for giving notices:

Designated Representative:

Designated Representative:

Name: _____
(typed or printed)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

Address:

Phone: _____

Phone: _____

Email: _____

Email: _____

(If [Type of Entity] is a corporation, attach evidence of authority to sign. If [Type of Entity] is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

License No.: _____
(where applicable)

State: _____

PERFORMANCE BOND

<p>Contractor</p> <p>Name: _____</p> <p>Address <i>(principal place of business)</i>: _____</p>	<p>Surety</p> <p>Name: _____</p> <p>Address <i>(principal place of business)</i>: _____</p>
<p>Owner</p> <p>Name: Henderson Water District</p> <p>Mailing address <i>(principal place of business)</i>: 1004 State Highway 16, Jerseyville, IL, 62052</p>	<p>Contract</p> <p>Description <i>(name and location)</i>: Phase V Distribution System Expansion: The project consists of constructing approximately 48 miles of 4" and 6" water main and related appurtenances.</p> <p>Contract Price: _____</p> <p>Effective Date of Contract: _____</p>
<p>Bond</p> <p>Bond Amount: _____</p> <p>Date of Bond: _____ <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
_____ <i>(Full formal name of Contractor)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
- 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1. After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2. Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
14. Definitions
 - 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: None.

Intentionally Blank



PAYMENT BOND

<p>Contractor</p> <p>Name:</p> <p>Address <i>(principal place of business)</i>:</p>	<p>Surety</p> <p>Name:</p> <p>Address <i>(principal place of business)</i>:</p>
<p>Owner</p> <p>Name: Henderson Water District</p> <p>Mailing address <i>(principal place of business)</i>:</p> <p>1004 State Highway 16, Jerseyville, IL, 62052</p>	<p>Contract</p> <p>Description <i>(name and location)</i>:</p> <p>Phase V Distribution System Expansion: The project consists of constructing approximately 48 miles of 4" and 6" water main and related appurtenances.</p> <p>Contract Price:</p> <p>Effective Date of Contract:</p>
<p>Bond</p> <p>Bond Amount:</p> <p>Date of Bond:</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form:</p> <p><input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____	By: _____
<i>(Signature)</i>	<i>(Signature)(Attach Power of Attorney)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____	Attest: _____
<i>(Signature)</i>	<i>(Signature)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page

on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;
 - 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
 - 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of

the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: None.

Intentionally Blank

CERTIFICATE OF OWNER'S ATTORNEY AND AGENCY CONCURRENCE

CERTIFICATE OF OWNER'S ATTORNEY

PROJECT NAME:

CONTRACTOR NAME AND CONTRACT NUMBER:

I, the undersigned, _____, the duly authorized and acting legal representative of _____, do hereby certify as follows: I have examined the attached Contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements is adequate and has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions, and provisions thereof.

Name

Date

AGENCY CONCURRENCE

As lender or insurer of funds to defray the costs of this Contract, and without liability for any payments thereunder, the Agency hereby concurs in the form, content, and execution of this Agreement.

Agency Representative

Date

Name

Intentionally Blank

NOTICE TO PROCEED

Owner: Henderson Water District Owner's Project No.: _____
Engineer: Heneghan and Associates, PC Engineer's Project No.: 01000-412
Contractor: _____ Contractor's Project No.: _____
Project: Phase V Water Distribution System Expansion
Contract Name: _____
Effective Date of Contract: _____

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on _____, 20__ pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is **October 31, 2025**, and the date by which readiness for final payment must be achieved is **May 21, 2026**.

Before starting any Work at the Site, Contractor must comply with the following: N/A

Owner: Henderson Water District
By (signature): _____
Name (printed): _____
Title: _____
Date Issued: _____
Copy: Engineer

Intentionally Blank

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1—Definitions and Terminology.....	1
1.01 <i>Defined Terms</i>	1
1.02 <i>Terminology</i>	7
Article 2—Preliminary Matters.....	8
2.01 <i>Delivery of Performance and Payment Bonds; Evidence of Insurance</i>	8
2.02 <i>Copies of Documents</i>	8
2.03 <i>Before Starting Construction</i>	9
2.04 <i>Preconstruction Conference; Designation of Authorized Representatives</i>	9
2.05 <i>Acceptance of Schedules</i>	9
2.06 <i>Electronic Transmittals</i>	10
Article 3—Contract Documents: Intent, Requirements, Reuse.....	10
3.01 <i>Intent</i>	10
3.02 <i>Reference Standards</i>	11
3.03 <i>Reporting and Resolving Discrepancies</i>	11
3.04 <i>Requirements of the Contract Documents</i>	12
3.05 <i>Reuse of Documents</i>	12
Article 4—Commencement and Progress of the Work	13
4.01 <i>Commencement of Contract Times; Notice to Proceed</i>	13
4.02 <i>Starting the Work</i>	13
4.03 <i>Reference Points</i>	13
4.04 <i>Progress Schedule</i>	13
4.05 <i>Delays in Contractor’s Progress</i>	13
Article 5—Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions	16
5.01 <i>Availability of Lands</i>	16
5.02 <i>Use of Site and Other Areas</i>	16
5.03 <i>Subsurface and Physical Conditions</i>	17
5.04 <i>Differing Subsurface or Physical Conditions</i>	18

5.05	<i>Underground Facilities</i>	20
5.06	<i>Hazardous Environmental Conditions at Site</i>	22
Article 6—Bonds and Insurance		24
6.01	<i>Performance, Payment, and Other Bonds</i>	24
6.02	<i>Insurance—General Provisions</i>	25
6.03	<i>Contractor’s Insurance</i>	26
6.04	<i>Builder’s Risk and Other Property Insurance</i>	29
6.06	<i>Receipt and Application of Property Insurance Proceeds</i>	31
Article 7—Contractor’s Responsibilities		31
7.01	<i>Contractor’s Means and Methods of Construction</i>	31
7.02	<i>Supervision and Superintendence</i>	32
7.03	<i>Labor; Working Hours</i>	32
7.04	<i>Services, Materials, and Equipment</i>	32
7.05	<i>“Or Equals”</i>	33
7.06	<i>Substitutes</i>	34
7.07	<i>Concerning Subcontractors and Suppliers</i>	35
7.08	<i>Patent Fees and Royalties</i>	37
7.09	<i>Permits</i>	37
7.10	<i>Taxes</i>	37
7.11	<i>Laws and Regulations</i>	38
7.12	<i>Record Documents</i>	38
7.13	<i>Safety and Protection</i>	38
7.14	<i>Hazard Communication Programs</i>	40
7.15	<i>Emergencies</i>	40
7.16	<i>Submittals</i>	40
7.17	<i>Contractor’s General Warranty and Guarantee</i>	43
7.18	<i>Indemnification</i>	44
7.19	<i>Delegation of Professional Design Services</i>	44
Article 8—Other Work at the Site		45
8.01	<i>Other Work</i>	45
8.02	<i>Coordination</i>	46
8.03	<i>Legal Relationships</i>	46
Article 9—Owner’s Responsibilities		47

9.01	<i>Communications to Contractor</i>	47
9.02	<i>Replacement of Engineer</i>	47
9.03	<i>Furnish Data</i>	47
9.04	<i>Pay When Due</i>	48
9.05	<i>Lands and Easements; Reports, Tests, and Drawings</i>	48
9.06	<i>Insurance</i>	48
9.07	<i>Change Orders</i>	48
9.08	<i>Inspections, Tests, and Approvals</i>	48
9.09	<i>Limitations on Owner’s Responsibilities</i>	48
9.10	<i>Undisclosed Hazardous Environmental Condition</i>	48
9.11	<i>Evidence of Financial Arrangements</i>	48
9.12	<i>Safety Programs</i>	48
Article 10	— <i>Engineer’s Status During Construction</i>	49
10.01	<i>Owner’s Representative</i>	49
10.02	<i>Visits to Site</i>	49
10.03	<i>Resident Project Representative</i>	49
10.04	<i>Engineer’s Authority</i>	51
10.05	<i>Determinations for Unit Price Work</i>	51
10.06	<i>Decisions on Requirements of Contract Documents and Acceptability of Work</i>	51
10.07	<i>Limitations on Engineer’s Authority and Responsibilities</i>	51
10.08	<i>Compliance with Safety Program</i>	52
Article 11	— <i>Changes to the Contract</i>	52
11.01	<i>Amending and Supplementing the Contract</i>	52
11.02	<i>Change Orders</i>	52
11.03	<i>Work Change Directives</i>	53
11.04	<i>Field Orders</i>	53
11.05	<i>Owner-Authorized Changes in the Work</i>	53
11.06	<i>Unauthorized Changes in the Work</i>	54
11.07	<i>Change of Contract Price</i>	54
11.08	<i>Change of Contract Times</i>	55
11.09	<i>Change Proposals</i>	56
11.10	<i>Notification to Surety</i>	57
Article 12	— <i>Claims</i>	57

12.01	<i>Claims</i>	57
Article 13—	Cost of the Work; Allowances; Unit Price Work	58
13.01	<i>Cost of the Work</i>	58
13.02	<i>Allowances</i>	62
13.03	<i>Unit Price Work</i>	62
Article 14—	Tests and Inspections; Correction, Removal, or Acceptance of Defective Work	63
14.01	<i>Access to Work</i>	63
14.02	<i>Tests, Inspections, and Approvals</i>	63
14.03	<i>Defective Work</i>	64
14.04	<i>Acceptance of Defective Work</i>	65
14.05	<i>Uncovering Work</i>	65
14.06	<i>Owner May Stop the Work</i>	66
14.07	<i>Owner May Correct Defective Work</i>	66
Article 15—	Payments to Contractor; Set-Offs; Completion; Correction Period	66
15.01	<i>Progress Payments</i>	66
15.02	<i>Contractor’s Warranty of Title</i>	70
15.03	<i>Substantial Completion</i>	70
15.04	<i>Partial Use or Occupancy</i>	71
15.05	<i>Final Inspection</i>	72
15.06	<i>Final Payment</i>	72
15.07	<i>Waiver of Claims</i>	73
15.08	<i>Correction Period</i>	73
Article 16—	Suspension of Work and Termination	74
16.01	<i>Owner May Suspend Work</i>	74
16.02	<i>Owner May Terminate for Cause</i>	75
16.03	<i>Owner May Terminate for Convenience</i>	76
16.04	<i>Contractor May Stop Work or Terminate</i>	76
Article 17—	Final Resolution of Disputes	77
17.01	<i>Methods and Procedures</i>	77
Article 18—	Miscellaneous	77
18.01	<i>Giving Notice</i>	77
18.02	<i>Computation of Times</i>	77
18.03	<i>Cumulative Remedies</i>	77

18.04	<i>Limitation of Damages</i>	78
18.05	<i>No Waiver</i>	78
18.06	<i>Survival of Obligations</i>	78
18.07	<i>Controlling Law</i>	78
18.08	<i>Assignment of Contract</i>	78
18.09	<i>Successors and Assigns</i>	78
18.10	<i>Headings</i>	78
18.11	<i>Tribal Sovereignty</i>	78
ARTICLE 19 – FEDERAL REQUIREMENTS		79
19.01	<i>Agency Not a Party</i>	79
19.02	<i>Contract Approval</i>	79
19.03	<i>Conflict of Interest</i>	79
19.04	<i>Gratuities</i>	79
19.05	<i>Small, Minority and Women’s Businesses</i>	79
19.08	<i>Equal Employment Opportunity</i>	80
19.09	<i>Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)</i>	80
19.10	<i>Environmental Requirements</i>	81
19.11	<i>Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708)</i>	82
19.11	<i>Debarment and Suspension (Executive Orders 12549 and 12689)</i>	83
19.14	<i>Domestic Preference</i>	83
19.15	<i>Definitions</i>	83
ARTICLE 20 – STATE OF ILLINOIS REQUIREMENTS.....		86
20.01	<i>State Prevailing Wage Rate Requirements</i>	86
20.01	<i>Employment of Illinois Workers on Public Works</i>	86
20.02	<i>Substance Abuse Prevention on Public Works Projects Act</i>	86

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract. [The Change Order form to be used on this Project is EJCDC C-941. Agency approval is required before Change Orders are effective.](#)
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract

- Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions,

including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract. [For the purposes of Rural Development, this term is synonymous with the term “applicant” as defined in 7 CFR 1780.7 \(a\) \(1\), \(2\) and \(3\) and is an entity receiving financial assistance from the federal programs.](#)
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor’s plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the

Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—~~The part of the Contract that amends or supplements these General Conditions.~~ N/A
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in these Standard General Conditions~~the Supplementary Conditions~~, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an

addition, deletion, or revision in the Work. [A Work Change Directive cannot change Contract Price or Contract Times without a subsequent Change Order. The Work Change Directive form to be used on this Project is EJCDC C-940 \(2018\). Agency approval is required before a Work Change Directive is issued.](#)

51. Agency—The Project is financed in whole or in part by USDA Rural Utilities Service pursuant to the Consolidated Farm and Rural Development Act (7 USC Section 1921 et seq.). The Rural Utilities Service programs are administered through the USDA Rural Development offices; therefore, the Agency for these documents is USDA Rural Development.

52. Domestic Preference Definitions

- a. ***Build America, Buy America Act (BABAA)*** - Requirements mandated by Title IX of the Infrastructure Investment and Jobs Act (IIJA), Pub. L. 117-58, §§ 70901-70953-58 mandating domestic preference that all iron and steel, manufactured products, and construction materials are produced in the United States.
- b. ***Construction Materials*** - Those articles, materials, or supplies — other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives— that are or consist primarily of: non-ferrous metals, plastic and polymer-based products, glass, lumber or drywall.
- c. ***Contractor's Certification*** - Documentation submitted by the Contractor upon ***Substantial Completion*** of the Contract that all iron and steel, manufactured products, and construction materials are produced in the United States.
- d. ***De Minimis*** - Materials and products that represent a small portion of an infrastructure project, ***specifically*** no more than 5% of the project costs up to a maximum of \$1,000,000.
- e. ***Domestic Preference*** - The Build America, Buy America Act (BABAA) requirements under Title IX of the Infrastructure Investment and Jobs Act (IIJA), Pub. L. 117-58, §§ 70901-70953.
- f. ***Engineer's Certification*** - Documentation submitted by the Engineer that Drawings, Specifications, and Bidding Documents comply with Domestic Preference requirements.
- g. ***Manufactured Product*** - Items assembled out of components, or otherwise made or processed from raw materials into finished products. Manufactured products must be manufactured (assembled) in the United States, and the cost of components that were mined, produced, or manufactured in the United States must be greater than 55 percent of the total cost of all components of the product.
- h. ***Manufacturer's Certification*** - Documentation provided by the Manufacturer stating that Domestic Preference requirements have been satisfied for all provided items. If items are purchased via a Supplier, distributor, vendor, etc. from the Manufacturer directly, then the Supplier, distributor, vendor, etc. will be responsible for obtaining and providing these certifications to the parties purchasing the products.

- i. **Minor Components** - Components within an iron and/or steel product otherwise compliant with the Domestic Preference requirements. This waiver, typically used by Manufacturers, allows use of non-domestically produced miscellaneous Minor Components comprising up to five percent of the total material cost of an otherwise domestically produced iron and steel product. However, unless a separate waiver for a product has been approved, all other iron and steel components in said product must still meet the Domestic Preference requirements. This waiver does not exempt the whole product from the Domestic Preference requirements only Minor Components within said product and the iron or steel components of the product must be produced domestically.
- j. **Primarily Iron or Steel** - A product is made of greater than 50 percent iron or Steel on a materials cost basis.

53. Abnormal Weather Conditions—Conditions of extreme or unusual weather for a given region, elevation, or season as determined by Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered Abnormal Weather Conditions.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day*: The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*: The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the ~~Standard General Conditions Supplementary Conditions~~ expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor **five** copies of the Contract Documents (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 Commencement of Contract Times; Notice to Proceed

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. ~~In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.~~

4.02 Starting the Work

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 Reference Points

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 Progress Schedule

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 Delays in Contractor's Progress

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. Abnormal weather conditions;
 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 4. Acts of war or terrorism.

5. Weather-Related Delays

- a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered abnormal weather conditions. Requests for time extensions due to abnormal weather conditions will be submitted to the Engineer within five days of the end of the abnormal weather condition event. It is the responsibility of the Contractor to provide the information listed in 4.05.C.5.b.
- b. The existence of abnormal weather conditions will be determined on a month-by-month basis in accordance with the following:
- 1) Every workday on which one or more of the following conditions exist will be considered a "bad weather day":
 - i) Total precipitation (as rain equivalent) occurring between 7:00 p.m. on the preceding day (regardless of whether such preceding day is a workday) through 7:00 p.m. on the workday in question equals or exceeds {1" Non-Rural, 0.5" Rural} of precipitation (as rain equivalent, based on the snow/rain conversion indicated in the table entitled Foreseeable Bad Weather Days; such table is hereby incorporated in this 4.05.C by reference.
 - ii) Ambient outdoor air temperature at 12:00 p.m. is equal to or less than the following low temperature threshold: 15 degrees Fahrenheit; or, at 4:00 p.m.

the ambient outdoor temperature is equal to or greater than the following high temperature threshold: 104 degrees Fahrenheit.

2) Determination of actual bad weather days during performance of the Work will be based on the weather records measured and recorded by Apple Weather monitoring station at Carlinville 3.4 SW, IL US.

3) Contractor shall anticipate the number of foreseeable bad weather days per month indicated in the table in Exhibit B —Foreseeable Bad Weather Days.

4) In each month, every bad weather day exceeding the number of foreseeable bad weather days established in the table in Exhibit B—Foreseeable Bad Weather Days will be considered as “abnormal weather conditions.” The existence of abnormal weather conditions will not relieve Contractor of the obligation to demonstrate and document that delays caused by abnormal weather are specific to the planned work activities or that such activities thus delayed were on Contractor’s then-current Progress Schedule’s critical path for the Project.

D. Contractor’s entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor’s entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;
2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
4. The number of days’ increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
6. Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and

subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. No Reports of explorations or tests of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to the Owner.

~~A.—*Reports and Drawings:* The Supplementary Conditions identify:~~

- ~~1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;~~
- ~~2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and~~
- ~~3. Technical Data contained in such reports and drawings.~~

~~B.—*Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.~~

~~C.—*Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.~~

~~D.—*Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their~~

~~officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:~~

- ~~1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;~~
- ~~2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;~~
- ~~3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or~~
- ~~4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.~~

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
2. is of such a nature as to require a change in the Drawings or Specifications;
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating

whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

- D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the **Supplementary Conditions** **General Conditions**, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;
 3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

- E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* ~~No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner. The Supplementary Conditions identify:~~
- ~~1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;~~
 - ~~2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and~~
 - ~~3. Technical Data contained in such reports and drawings.~~
- B. *Reliance by Contractor on Technical Data Authorized:* ~~Not Used Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:~~
- ~~1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;~~
 - ~~2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or~~
 - ~~3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.~~
- C. ~~Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.~~
- D. ~~Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.~~
- E. ~~If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely~~

- ~~obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.~~
- ~~F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.~~
- ~~G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.~~
- ~~H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.~~
- ~~I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~
- ~~J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to~~

~~indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~

~~K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.~~

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, ~~the Supplementary Conditions~~, or other provisions of the Contract.

1. *Required Performance Bond Form: The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 edition).*

2. *Required Payment Bond Form: The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition).*

B. Contractor shall also furnish such other bonds (if any) as are required by ~~the Supplementary Conditions~~ or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article ~~and in the Supplementary Conditions.~~
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. ~~Unless a different standard is indicated in the Supplementary Conditions,~~ aAll companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, ~~unless expressly allowed in the Supplementary Conditions.~~
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.
- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party’s full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party’s obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner’s option, may purchase and maintain Owner’s own liability insurance. Owner’s liability policies, if any, operate separately and independently from policies required to be provided

by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities ~~identified in the Supplementary Conditions~~ as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.
- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

- B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:
1. include at least the specific coverages required;
 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 5. include all necessary endorsements to support the stated requirements.
- C. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	Statutory
Federal, if applicable (e.g., Longshoreman's):	Statutory
Jones Act coverage, if applicable:	
Bodily injury by accident, each accident	\$ <u>1,000,000</u>
Bodily injury by disease, aggregate	\$ <u>1,000,000</u>
Employer's Liability:	
Bodily injury, each accident	\$ <u>100,000</u>
Bodily injury by disease, each employee	\$ <u>100,000</u>
Bodily injury/disease aggregate	\$ <u>500,000</u>
Foreign voluntary worker compensation	Statutory

2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate	\$ <u>2,000,000</u>
-------------------	---------------------

Products - Completed Operations Aggregate \$ 1,000,000

Personal and Advertising Injury \$ 1,000,000

Each Occurrence (Bodily Injury and Property Damage) \$ 1,000,000

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Bodily Injury:

Each person \$ 1,000,000

Each accident \$ 1,000,000

Property Damage:

Each accident \$ 1,000,000

4. Excess or Umbrella Liability:

Per Occurrence \$ 5,000,000

General Aggregate \$ 5,000,000

5. Contractor's Pollution Liability:

Each Occurrence \$ 1,000,000

General Aggregate \$ 1,000,000

If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

6. Additional Insureds: Owner and Engineer

7. Contractor's Professional Liability:

Each Claim \$ N/A

Annual Aggregate \$ N/A

8. *Waiver of Subrogation – Henderson Water District and Heneghan and Associates, P.C. shall be additional insured on a direct primary basis on the Waiver of Subrogation.*

- D. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds ~~in the Supplementary Conditions~~;
 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);
 4. not seek contribution from insurance maintained by the additional insured; and
 5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: ~~Unless otherwise provided in the Supplementary Conditions~~, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided ~~in the Supplementary Conditions~~ or required by Laws and Regulations). ~~The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.~~
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

- E. *Insurance of Other Property; Additional Insurance:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized ~~by the Supplementary Conditions~~), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.
1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to

Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities ~~identified in the Supplementary Conditions~~ as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.
- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

D. Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments under Article 15.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

D. All Products must meet Domestic Preference requirements.

E. For projects utilizing a *De Minimis* waiver, Contractor shall maintain an itemized list of non-domestically produced components and ensure that the cost is less than 5% of total project cost for the project up to a maximum of \$1,000,000.

7.05 “Or Equals”

A. *Contractor’s Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. ~~Unless the specification or description contains or is followed by words reading that no like, equivalent, or “or equal” item is permitted,~~ Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an “or equal” item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

- 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
- 3) has a proven record of performance and availability of responsive service; ~~and~~
- 4) ~~[Deleted] is not objectionable to Owner.~~
- 5) Must be compatible with existing components and equipment.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
- 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor’s Expense:* Contractor shall provide all data in support of any proposed “or equal” item at Contractor’s expense. Contractor shall include a Manufacturer’s Certification or waiver for compliance with Domestic Preference requirements and supporting data, as applicable. Refer to Sample Language for Manufacturer’s Certification provided in these Contract Documents.

C. *Engineer’s Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each “or-equal” request. Engineer may require Contractor to furnish additional data about the proposed “or-equal” item. Engineer will be the sole judge of acceptability. No “or-equal” item will be ordered, furnished, installed, or utilized until Engineer’s review is complete

and Engineer determines that the proposed item is an “or-equal,” which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

- D. *Effect of Engineer’s Determination:* Neither approval nor denial of an “or-equal” request will result in any change in Contract Price. The Engineer’s denial of an “or-equal” request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an “or-equal” item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor’s Request; Governing Criteria:* Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, ~~as supplemented by the Specifications~~, and as Engineer may decide is appropriate under the circumstances.
 - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; ~~and~~
 - 3) be suited to the same use as the item specified; ~~and~~
 - 4) comply with Domestic Preference requirements by providing Manufacturer’s Certification or waiver, as applicable. Refer to Sample Language for Manufacturers’ Certification provided in these Contract Documents.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract

with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

c. will identify:

1) all variations of the proposed substitute item from the item specified; and

2) available engineering, sales, maintenance, repair, and replacement services.

d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 Concerning Subcontractors and Suppliers

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance

with the Contract Documents. **The total amount of work subcontracted by the Contractor shall not exceed fifty percent of the Contract price without prior approval from the Owner, Engineer and Agency.**

- B. ~~[Deleted] Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.~~
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. ~~Owner also may require Contractor to retain specific replacements; provided, however, that~~ **Owner may not require a replacement that has a reasonable objection.** If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

B. Owner is exempt from payment of sales and compensating use taxes of the State of Illinois and of cities and counties thereof on all materials to be incorporated into the Work.

1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.
2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by the Contractor, or to supplies or materials not incorporated into the Work.

7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, Manufacturers' Certifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. ~~Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.~~
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 Hazard Communication Programs

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 Emergencies

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 Submittals

A. Shop Drawing and Sample Requirements

1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal, [Including Manufacturer's Certification, or waiver for any item in the submittal subject to Domestic Preference requirements. Refer to the Sample Language for Manufacturers' Certification provided in these Contract Documents.](#)
2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.
3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

- B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.
 5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

9. Engineer's review and approval of Shop Drawing or Sample shall include review of Manufacturers' Certifications and any waivers in order to document compliance with Domestic Preference requirements, as applicable.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.
 - d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
1. Observations by Engineer;
 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. Use or occupancy of the Work or any part thereof by Owner;
 5. Any review and approval of a Shop Drawing or Sample submittal;
 6. The issuance of a notice of acceptability by Engineer;
 7. The end of the correction period established in Paragraph 15.08;
 8. Any inspection, test, or approval by others; or
 9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

F. Contractor shall certify upon Substantial Completion that all Work and Materials has complied with Domestic Preference requirements. Contractor shall provide Certification to Owner and Engineer. Refer to Sample Language for Contractor's Certification provided in these Contract Documents.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or

other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or

alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be ~~set forth in the Supplementary Conditions or~~ provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. ~~Unless otherwise provided in the Supplementary Conditions,~~ Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that

is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

- 9.04 *Pay When Due*
- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.
- 9.05 *Lands and Easements; Reports, Tests, and Drawings*
- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.
- 9.06 *Insurance*
- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.
- 9.07 *Change Orders*
- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.
- 9.08 *Inspections, Tests, and Approvals*
- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.
- 9.09 *Limitations on Owner's Responsibilities*
- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- 9.10 *Undisclosed Hazardous Environmental Condition*
- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.
- 9.11 *Evidence of Financial Arrangements*
- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).
- 9.12 *Safety Programs*
- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided ~~in the Supplementary Conditions~~, and limitations on the responsibilities thereof will be as provided ~~in the Supplementary Conditions and~~ in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided ~~in the Supplementary Conditions~~
- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
 - 1. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.

2. Safety Compliance: Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.

3. Liaison

- a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
- b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
- c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.

4. Review of Work; Defective Work

- a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
- b. Observe whether any Work in place appears to be defective.
- c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

5. Inspections and Tests

- a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
- b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.

6. Payment Requests: Review Applications for Payment with Contractor.

7. Completion

- a. Participate in Engineer's visits regarding Substantial Completion.
- b. Assist in the preparation of a punch list of items to be completed or corrected.
- c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
- d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will not:

- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
- 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
- 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Authorize Owner to occupy the Project in whole or in part.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.
- E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09,

concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

C. The Engineer or Owner shall contact the Agency for concurrence on each Change Order prior to issuance. All Contract Change Orders must be concurred on (signed) by Agency before they are effective.

11.03 *Work Change Directives*

A.

- 1. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

2. The Engineer or Owner shall contact the Agency for concurrence on each Work Change Directive prior to issuance. Once authorized by Owner, a copy of each Work Change Directive shall be provided by Engineer to the Agency.

B. If Owner has issued a Work Change Directive and:

- 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
- 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving

the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents. For Owner-authorized changes in the Work, the Contractor will provide the Manufacturer's Certification, or waiver, for materials subject to Domestic Preference requirements except when sole-source is specified, in which case the Engineer will provide the Manufacturer's Certification, or waiver.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 - 1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 - 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 - 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
 - 1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.
- C. The Contractor shall be responsible for the cost of any additional expenses occurred by the Owner as a result of the time extension, including but not limited to Engineering Services, Resident Project Representative, Owner's Representative, Legal, Administrative, any other costs incurred, etc.

11.09 Change Proposals

A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. Include supporting data (name of manufacturer, city and state where the product was manufactured, description of product, signature of authorized manufacturer's representative) in the Manufacturer's Certification Letter, as applicable.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.
 - c. For change orders involving materials subject to Domestic Preference requirements, Contractor shall include a Manufacturer's Certification or waiver, as applicable. Refer to the Sample Language for Manufacturer's Certification provided in these Contract Documents.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
- 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
- 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 6. Expenses incurred in preparing and advancing Claims.
- 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
- 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:* Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. ~~[Deleted] Owner's Contingency Allowance: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.~~
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. ~~the extended price of a particular item of Unit Price Work amounts to 5 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the quantity of such item indicated in the Agreement; and the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and~~
 - b. ~~Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.~~
2. ~~If there is no corresponding adjustment with respect to any other item of Work; and the adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.~~
3. ~~If Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may submit a Change Proposal, or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner may make a Claim, seeking an adjustment in the Contract Price. Adjusted unit prices will apply to all units of that item.~~

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred

in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

- E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.
- G. Installation of Materials that are non-compliant with Domestic Preference requirements shall be considered defective work. Contractor should ensure that Engineer has an approved Manufacturer's Certification, or waiver, prior to any domestic preference compliant item being delivered to the project site.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction

(including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on

the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement. **No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.**
5. **The Application for Payment form to be used on this Project is EJCDC C-620. The Agency must approve all Applications for Payment before payment is made.**
6. **By submitting an Application for Payment, based in whole or in part on furnishing equipment or materials, Contractor certifies that such equipment and materials are compliant with Domestic Preference requirements. Manufacturer's Certification for material(s) satisfy these requirements. Refer to the Sample Language for Manufacturer's Certification provided in these Contract Documents.**

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's

review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
- a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;

- c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
- d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
- e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 15.01.E will become due ten (10) days after transfer of corresponding funds to the Owner's bank account, and the Owner will make payment to the Contractor.

~~1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.~~

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

- j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than ~~7 days after~~ the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment. Contractor shall also submit the Contractor's Certification of Compliance certifying that to the best of the Contractor's knowledge and belief all Iron and Steel products, Manufactured Products, and Construction Materials proposed in the Shop Drawings, Change Orders, and Partial Payment Estimates, and those installed for the Project, comply with Domestic Preference requirements.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
 1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, shall be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other

indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special

guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
 2. correct such defective Work;
 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer.

Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may

thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if

repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

18.11 *Tribal Sovereignty*

- A. **No provision of this Agreement will be construed by any of the signatories as abridging or debilitating any sovereign powers of the {insert name of Tribe} Tribe; affecting the trust-beneficiary relationship between the Secretary of the Interior, Tribe, and Indian landowner(s); or interfering with the government-to-government relationship between the United States and the Tribe.**

ARTICLE 19 – FEDERAL REQUIREMENTS

19.01 Agency Not a Party

- A. This Contract is expected to be funded in part with funds provided by Agency. Neither Agency, nor any of its departments, entities, or employees is a party to this Contract.

19.02 Contract Approval

- A. Owner and Contractor will furnish Owner's attorney such evidence as required so that Owner's attorney can complete and execute the "Certificate of Owner's Attorney" before Owner submits the executed Contract Documents to Agency for approval. Refer to Certificate of Owner's Attorney and Agency Concurrence provided in these Contract Documents.
- B. Agency concurrence is required on both the Bid and the Contract before the Contract is effective.

19.03 Conflict of Interest

- A. Contractor may not knowingly contract with a Supplier or Manufacturer if the individual or entity who prepared the Drawings and Specifications has a corporate or financial affiliation with the Supplier or Manufacturer. Owner's officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest or other interest in or a tangible personal benefit from the Contractor. Owner's officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.

19.04 Gratuities

- A. If Owner finds after a notice and hearing that Contractor, or any of Contractor's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of Owner or Agency in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.
- B. In the event this Contract is terminated as provided in paragraph 19.04.A, Owner may pursue the same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary damages in an amount (as determined by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.

19.05 Small, Minority and Women's Businesses

- A. If Contractor intends to let any subcontracts for a portion of the work, Contractor will take all necessary affirmative steps to assure that minority businesses, women's business

enterprises, and labor surplus area firms are used when possible. Affirmative steps will include:

1. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
2. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
3. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
4. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
5. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

19.06 Anti-Kickback

A. Contractor shall comply with the Copeland Anti-Kickback Act (40 USC 3145) as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States"). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. Owner shall report all suspected or reported violations to Agency.

19.07 Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended

A. Contractor to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

19.08 Equal Employment Opportunity

A. The Contract is considered a federally assisted construction contract. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

19.09 Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)

A. Contractors that apply or bid for an award exceeding \$100,000 must file the required certification (RD Instruction 1940-Q Exhibit A-1). The Contractor certifies to the Owner and

every subcontractor certifies to the Contractor 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 the Contract if it is covered by 31 U.S.C. 1352. The Contractor and every subcontractor must 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 Owner. Necessary certification and disclosure forms shall be provided by Owner.

19.10 Environmental Requirements

A. When constructing a Project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental conditions:

1. Wetlands – When disposing of excess, spoil, or other Construction Materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.

2. Floodplains – When disposing of excess, spoil, or other Construction Materials on public or private property, Contractor shall not fill in or otherwise convert 100-year floodplain areas (Standard Flood Hazard Area) delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, e.g., alluvial soils on NRCS Soil Survey Maps.

3. Historic Preservation - Applicants shall ensure that Contractors maintain a copy of the following inadvertent discovery plan onsite for review:

a. If during the course of any ground disturbance related to any Project, any post review discovery, including but not limited to, any artifacts, foundations, or other indications of past human occupation of the area are uncovered, shall be protected by complying with 36 CFR § 800.13(b)(3) and (c) and shall include the following:

i. All Work, including vehicular traffic, shall immediately stop within a 50 ft. radius around the area of discovery. The Contractor shall ensure barriers are established to protect the area of discovery and notify the Engineer to contact the appropriate RD personnel. The Engineer shall engage a Secretary of the Interior (SOI) qualified professional archeologist to quickly assess the nature and scope of the discovery; implement interim measures to protect the discovery from looting and vandalism; and establish broader barriers if further historic and/or precontact properties, can reasonably be expected to occur.

ii. The RD personnel shall notify the appropriate RD environmental staff member, the Federal Preservation Officer (FPO), and State Historic Preservation Office (SHPO) immediately. Indian tribe(s) or Native Hawaiian Organization (NHOs) that have an interest in the area of discovery shall be contacted immediately. The SHPO may require additional tribes or NHOs who may have an interest in the area of discovery also be contacted. The notification shall include an assessment of the discovery provided by the SOI qualified professional archeologist.

iii. When the discovery contains burial sites or human remains, the Contractor shall immediately notify the appropriate RD personnel who will contact the

RD environmental staff member, FPO, and the SHPO. The relevant law enforcement authorities shall be immediately contacted by onsite personnel to reduce delay times, in accordance with tribal, state, or local laws including 36 CFR Part 800.13; 43 CFR Part 10, Subpart B; and the Advisory Council on Historic Preservation's Policy Statement Regarding treatment of Burial Sites, Human Remains, or Funerary Objects (February 23, 2007).

- iv. When the discovery contains burial sites or human remains, all construction activities, including vehicular traffic shall stop within a 100 ft. radius of the discovery and barriers shall be established. The evaluation of human remains shall be conducted at the site of discovery by a SOI qualified professional. Remains that have been removed from their primary context and where that context may be in question may be retained in a secure location, pending further decisions on treatment and disposition. RD may expand this radius based on the SOI professional's assessment of the discovery and establish broader barriers if further subsurface burial sites, or human remains can reasonably be expected to occur. RD, in consultation with the SHPO and interested tribes or NHOs, shall develop a plan for the treatment of native human remains.
- v. Work may continue in other areas of the undertaking where no historic properties, burial sites, or human remains are present. If the inadvertent discovery appears to be a consequence of illegal activity such as looting, the onsite personnel shall contact the appropriate legal authorities immediately if the landowner has not already done so.
- vi. Work may not resume in the area of the discovery until a notice to proceed has been issued by RD. RD shall not issue the notice to proceed until it has determined that the appropriate local protocols and consulting parties have been consulted.
- vii. Inadvertent discoveries on federal and tribal land shall follow the processes required by the federal or tribal entity.

1-4. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service

5. Mitigation Measures – The following environmental mitigation measures are required on this Project: [Insert mitigation measures from the Letter of Conditions here].

19.11 Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708)

A. Where applicable, for contracts awarded by the Owner in excess of \$100,000 that involve the employment of mechanics or laborers, the Contractor will comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, the Contractor will compute the wages of every mechanic and

laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic will be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

19.11 Debarment and Suspension (Executive Orders 12549 and 12689)

A. A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

19.11 Procurement of recovered materials

A. The Contractor will comply with 2 CFR Part 200.322, "Procurement of recovered materials."

19.14 Domestic Preference

A. Build America, Buy America Act (BABAA). All Iron and Steel Products, Manufactured Products, and Construction Materials used in this project must comply with the Build America, Buy America Act (BABAA) requirements mandated by Title IX of the Infrastructure Investment and Jobs Act (IIJA), Pub. L. 117-58, §§ 70901-70953. Aggregates such as stone, sand, or gravel do not apply to BABAA.

B. The following waivers apply to the Contract:

1. BABAA De Minimis, Small Grants and Minor Components
2. [add project specific waivers as applicable].

19.15 Definitions

A. "Assistance recipient" is the entity that receives funding assistance from programs required to comply with Section 746 Division A Title VII of the Consolidated Appropriations Act of 2017 (Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference. This term includes owner and/or applicant.

B. "Coating" means a covering that is applied to the surface of an object. If a coating is applied to the external surface of a domestic iron or steel component, and the application takes place outside of the United States, said product would be considered a compliant product under the AIS requirements. Any coating processes that are applied to the external surface of iron and steel components that would otherwise be AIS compliant would not disqualify the product from meeting the AIS requirements regardless of where the coating processes occur, provided that final assembly of the product occurs in the United States. This exemption only applies to coatings on the external surface of iron and steel components. It does not apply to coatings or linings on internal surfaces of iron and steel products, such as the lining of lined

pipes. All manufacturing processes for lined pipes, including the application of pipe lining, must occur in the United States for the product to be compliant with AIS requirements.

A.C. “Construction materials” see Section 1.01.A.52.b. of the General Conditions. are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not including mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered “structural steel”.

Note: Mechanical and electrical components, equipment and systems are not considered construction materials. See definition of mechanical and electrical equipment.

D. “Consulting engineer” is an individual or entity with which the owner has contracted to perform engineering/architectural services for water and waste projects funded by the programs subject to AIS requirements).

E. “De Minimis” see Section 1.01.A.52.d of the General Conditions.

F. “General contractor” is the individual or entity with which the applicant has contracted (or is expected to) to perform construction services (or for water and waste projects funded by the programs subject to AIS requirements). This includes bidders, contractors that have received an award from the applicant and any party having a direct contractual relationship with the owner/applicant. A general contractor is often referred to as the prime contractor.

G. “Iron and steel products” are defined as the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials. Only items on the above list made primarily of iron or steel, permanently incorporated into the project must be produced in the United States. For example, trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

H. “Manufacturers” meaning a supplier, fabricator, distributor, materialman, or vendor is an entity with which the applicant, general contractor or with any subcontractor has contracted to furnish materials or equipment to be incorporated in the project by the applicant, contractor, or a subcontractor.

I. “Manufacturing processes” are processes such as melting, refining, forming, rolling, drawing, finishing, and fabricating. Further, if a domestic iron and steel product is taken out of the United States for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone and iron and steel scrap are not covered by the AIS requirement, and the material(s), if any, being applied as a coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-US sources. For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin. Raw materials, such as iron ore, limestone, scrap iron, and scrap steel, can come from non-U.S. sources.

J. “Mechanical equipment” is typically that which has motorized parts and/or is powered by a motor. “Electrical equipment” is typically any machine powered by electricity and includes components that are part of the electrical distribution system. AIS does apply to mechanical equipment.

K. “Minor components” see Section 1.01.A.52.i. of the General Conditions.

- L. “Municipal castings” are cast iron or steel infrastructure products that are melted and cast. They typically provide access, protection, or housing for components incorporated into utility owned drinking water, storm water, wastewater, and solid waste infrastructure.
- M. “National Office” refers to the office responsible for the oversight and administration of the program nationally. The National Office sets policy, develops program regulations, and provides training and technical assistance to help the state offices administer the program. The National Office is located in Washington, D.C.
- N. “Owner” is the individual or entity with which the general contractor has contracted regarding the work, and which has agreed to pay the general contractor for the performance of the work, pursuant to the terms of the contract for water and waste projects funded by the programs subject to AIS requirements. For the purpose of this Bulletin, this term is synonymous with the term “applicant” as defined in 7 CFR 1780.7 (a) (1), (2) and (3) and is an entity receiving financial assistance from the programs subject to the AIS requirements.
- O. “Pass through Entities” is an entity that provides a subaward to a loan and/or grant recipient to carry out part of a Federal program. Examples are grantees utilizing the Revolving Loan Program and Household Water Well Program and Alaska Native Tribal Health Consortium (ANTHC) or the State of Alaska from the RAVG Program.
- P. “Produced in the United States” means that the production in the United States of the iron or steel products used in the project requires that all manufacturing processes must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives.
- Q. “Project” is the total undertaking to be accomplished for the applicant by consulting engineers, general contractors, and others, including the planning, study, design, construction, testing, commissioning, and start-up, and of which the work to be performed under the contract is a part. A project includes all activity that an applicant is undertaking to be financed in whole or part by programs subject to AIS requirements. The intentional splitting of projects into separate and smaller contracts or obligations to avoid AIS requirements is prohibited.
- R. “Reinforced Precast Concrete” may not consist of at least 50 percent iron or steel, but the reinforcing bar and wire must be produced in the United States and meet the same standards as for any other iron or steel product.
- Additionally, the casting of the concrete product must take place in the United States. The cement and other raw materials used in concrete production are not required to be of domestic origin. If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the United States.
- S. “Steel” means an alloy that includes at least 50 percent iron, between 0.02 and 2 percent carbon, and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel, and other specialty steels.
- T. “Structural steel” is rolled flanged shapes, having at least one dimension of their cross-section three inches or greater, which are used in the construction of bridges, buildings, ships, railroad

rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I-beams, channels, angles, tees, and zebs. Other shapes include but are not limited to, H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

U. "Ultimate recipient" is a loan or grant recipient receiving funds from a pass-through entity. Examples include: (1) a loan recipient from the Revolving Loan Fund; (2) a loan recipient from the Household Water Well Program; and (3) a grant recipient from ANTHC or the State of Alaska from the RAVG Program.

V. "United States" means each of the several states, the District of Columbia, and each Federally Recognized Indian Tribe.

ARTICLE 20 – STATE OF ILLINOIS REQUIREMENTS

20.01 State Prevailing Wage Rate Requirements

A. The Contractor shall be required to pay a minimum of the State Prevailing Wage Rates for the project area, in accordance with Illinois State Law.

20.01 Employment of Illinois Workers on Public Works

A. If at the time this contract is executed, or if during the term of this contract, there is excessive unemployment in Illinois as defined in the employment of Illinois Workers on Public Works Act, 30ILCS 570-0.01 et seq., as two consecutive months of unemployment exceeding 5%, the Contractor agrees to employ Illinois Laborers. An Illinois Laborer is defined as any person who has resided in Illinois for at least thirty (30) days and intends to become or remain an Illinois resident.

20.02 Substance Abuse Prevention on Public Works Projects Act

A. The Contractor shall be required to comply with the Substance Abuse Prevention on Public Works Projects Act (Public Act 095-0635; HB 1855). As such, the Contractor may be required to sign the Owner's Substance Abuse Prevention Program Certification.

Exhibit B

<u>Month</u>	<u>Number of Foreseeable Bad Weather Days in Month Based on Precipitation as Rain Equivalent (inches) (1)</u>	<u>Ambient Outdoor Air Temperature (degrees F)</u>	
		<u>Number of Foreseeable Bad Weather Days in Month Based on Low Temperature (at 11:00 a.m.)</u>	<u>Number of Foreseeable Bad Weather Days in Month Based on High Temperature (at 3:00 p.m.)</u>
<u>January</u>	<u>1</u>	<u>2</u>	<u>0</u>
<u>February</u>	<u>0</u>	<u>2</u>	<u>0</u>
<u>March</u>	<u>1</u>	<u>0</u>	<u>0</u>
<u>April</u>	<u>1</u>	<u>0</u>	<u>0</u>
<u>May</u>	<u>2</u>	<u>0</u>	<u>0</u>
<u>June</u>	<u>2</u>	<u>0</u>	<u>0</u>
<u>July</u>	<u>2</u>	<u>0</u>	<u>2</u>
<u>August</u>	<u>2</u>	<u>0</u>	<u>3</u>
<u>September</u>	<u>1</u>	<u>0</u>	<u>1</u>
<u>October</u>	<u>1</u>	<u>0</u>	<u>0</u>
<u>November</u>	<u>1</u>	<u>0</u>	<u>0</u>
<u>December</u>	<u>0</u>	<u>1</u>	<u>0</u>

Notes:
1. Two inches of sleet equal one inch of rain. Five inches of wet, heavy snow equal one inch of rain. Fifteen inches of "dry" powder snow equals one inch of rain.

Wage Rates

Intentionally Blank

Macoupin County Prevailing Wage Rates posted on 4/15/2024

Trade Title	Rg	Type	C	Base	Foreman	Overtime					Pension	Vac	Trng	Other Ins	Add OT 1.5x owed	Add OT 2.0x owed
						M-F	Sa	Su	Hol	H/W						
ASBESTOS ABT-GEN	All	ALL		33.09	34.09	1.5	1.5	2.0	2.0	7.75	21.54	0.00	0.80		14.65	29.29
ASBESTOS ABT-MEC	All	BLD		34.30	35.30	1.5	1.5	2.0	2.0	10.20	6.80	0.00	0.50	0.00	0.00	0.00
BOILERMAKER	All	BLD		42.50	46.00	1.5	1.5	2.0	2.0	7.07	27.21	0.00	1.06		0.00	0.00
BRICK MASON	N	BLD		34.81	36.90	1.5	1.5	2.0	2.0	9.60	13.39	0.00	1.01	0.00	0.00	0.00
BRICK MASON	S	BLD		36.74	38.94	1.5	1.5	2.0	2.0	9.05	15.68	0.00	0.91	0.00	0.00	0.00
CARPENTER	All	BLD		35.15	37.40	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.79	0.00	15.48	30.95
CARPENTER	All	HWY		37.82	39.57	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.76	0.00	0.00	0.00
CEMENT MASON	All	ALL		38.00	39.00	1.5	1.5	2.0	2.0	11.00	16.80	0.00	0.50	0.00	14.15	28.30
CERAMIC TILE FINISHER	All	BLD		34.27		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00
ELECTRIC PWR EQMT OP	N	ALL		52.63	62.45	1.5	1.5	2.0	2.0	8.58	14.74	0.00	0.79	0.00	0.00	0.00
ELECTRIC PWR EQMT OP	SE	ALL		52.84	63.69	1.5	1.5	2.0	2.0	6.95	14.79	0.00	0.53		11.14	22.27
ELECTRIC PWR EQMT OP	SW	ALL		52.57	52.57	1.5	1.5	2.0	2.0	7.25	14.72	0.00	0.53	3.50	0.00	0.00
ELECTRIC PWR GRNDMAN	N	ALL		35.76	62.45	1.5	1.5	2.0	2.0	8.07	10.01	0.00	0.54	0.00	0.00	0.00
ELECTRIC PWR GRNDMAN	SE	ALL		39.45	63.69	1.5	1.5	2.0	2.0	5.19	11.04	0.00	0.39		8.33	16.62
ELECTRIC PWR GRNDMAN	SW	ALL		34.63	34.63	1.5	1.5	2.0	2.0	7.25	9.70	0.00	0.35	3.50	0.00	0.00
ELECTRIC PWR LINEMAN	N	ALL		58.58	62.45	1.5	1.5	2.0	2.0	8.76	16.40	0.00	0.88	0.00	0.00	0.00
ELECTRIC PWR LINEMAN	SE	ALL		60.74	63.69	1.5	1.5	2.0	2.0	7.99	17.02	0.00	0.61		12.81	25.62
ELECTRIC PWR LINEMAN	SW	ALL		61.41	64.87	1.5	1.5	2.0	2.0	7.25	17.19	0.00	0.61	3.50	0.00	0.00
ELECTRIC PWR TRK DRV	N	ALL		37.53	62.45	1.5	1.5	2.0	2.0	8.13	10.51	0.00	0.57	0.00	0.00	0.00
ELECTRIC PWR TRK DRV	SE	ALL		43.13	63.69	1.5	1.5	2.0	2.0	5.67	12.08	0.00	0.43		9.10	18.18
ELECTRIC PWR TRK DRV	SW	ALL		39.23	39.23	1.5	1.5	2.0	2.0	7.25	10.99	0.00	0.39	3.50	0.00	0.00
ELECTRICIAN	N	BLD		39.74	42.24	1.5	1.5	2.0	2.0	9.15	12.09	0.00	0.70	0.00	0.99	1.99
ELECTRICIAN	SE	ALL		47.44	50.29	1.5	1.5	2.0	2.0	8.79	14.49	0.00	1.31	3.10	13.83	27.69
ELECTRICIAN	SW	ALL		49.79	53.54	1.5	1.5	2.0	2.0	11.25	14.55	0.00	0.25	1.25	0.87	1.74
ELECTRONIC SYSTEM TECH	N	BLD		35.78	38.78	1.5	1.5	2.0	2.0	8.35	11.72	0.00	0.40	0.00	0.54	1.07
ELECTRONIC SYSTEM TECH	SE	BLD		38.42	41.42	1.5	1.5	2.0	2.0	4.00	11.16	0.00	0.40	1.50	0.58	1.15
ELECTRONIC SYSTEM TECH	SW	BLD		35.80	38.80	1.5	1.5	2.0	2.0	11.25	8.80	0.00	0.40	0.00	0.54	1.07

Macoupin County Prevailing Wage Rates posted on 4/15/2024

ELEVATOR CONSTRUCTOR	All	BLD		57.69	64.90	2.0	2.0	2.0	2.0	16.07	20.56	4.61	0.70		0.00	0.00
GLAZIER	N	BLD		38.60	40.60	1.5	1.5	2.0	2.0	7.85	13.77	0.00	0.68	0.00	0.00	0.00
GLAZIER	S	BLD		38.60	40.60	1.5	1.5	2.0	2.0	7.85	13.77	0.00	0.68	0.00	0.00	0.00
HEAT/FROST INSULATOR	All	BLD		41.73	42.73	1.5	1.5	2.0	2.0	11.74	13.50	0.00	1.05		0.00	0.00
IRON WORKER	N	BLD		35.20	37.20	1.5	1.5	2.0	2.0	10.55	18.50	0.00	1.00		0.00	0.00
IRON WORKER	N	HWY		36.84	38.59	1.5	1.5	2.0	2.0	10.55	20.09	0.00	1.00		0.00	0.00
IRON WORKER	S	ALL		40.40	42.40	1.5	1.5	2.0	2.0	10.55	19.05	0.00	0.58	0.00	15.09	30.18
LABORER	All	ALL		32.59	33.59	1.5	1.5	2.0	2.0	7.75	21.54	0.00	0.80		14.65	29.29
LATHER	All	BLD		35.15	37.40	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.79	0.00	15.48	30.95
MACHINIST	All	BLD		55.74	59.74	1.5	1.5	2.0	2.0	9.93	8.95	1.85	1.47		0.00	0.00
MARBLE FINISHER	All	BLD		34.27		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00
MARBLE MASON	All	BLD		35.83		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00
MILLWRIGHT	All	BLD		35.58	37.83	1.5	1.5	2.0	2.0	9.45	21.54	0.00	0.79	0.00	15.50	30.99
MILLWRIGHT	All	HWY		40.10	41.85	1.5	1.5	2.0	2.0	9.45	22.34	0.00	0.76	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	1	43.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	2	42.82	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	3	38.34	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	4	44.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	5	45.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	6	46.50	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	7	46.80	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	8	47.10	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	9	47.75	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	10	48.25	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	11	45.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	12	46.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	13	43.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	14	38.40	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	1	42.45	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	2	41.32	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85

Macoupin County Prevailing Wage Rates posted on 4/15/2024

OPERATING ENGINEER	All	HWY	3	36.84	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	4	43.45	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	5	44.45	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	6	45.00	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	7	45.30	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	8	45.60	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	9	46.25	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	10	46.75	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	11	44.45	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	12	45.45	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	13	36.90	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
PAINTER	All	BLD		32.87	34.37	1.5	1.5	2.0	2.0	7.85	14.25	0.00	0.70	0.00	0.00	0.00
PAINTER	All	HWY		34.07	35.57	1.5	1.5	2.0	2.0	7.85	14.25	0.00	0.70	0.00	0.00	0.00
PAINTER OVER 30 FT.	All	BLD		33.87	35.37	1.5	1.5	2.0	2.0	7.85	14.25	0.00	0.70	0.00	0.00	0.00
PAINTER PWR EQMT	All	BLD		33.87	35.37	1.5	1.5	2.0	2.0	7.85	14.25	0.00	0.70	0.00	0.00	0.00
PAINTER PWR EQMT	All	HWY		35.07	36.57	1.5	1.5	2.0	2.0	7.85	14.25	0.00	0.70	0.00	0.00	0.00
PILEDRIIVER	All	BLD		36.15	38.40	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.79	0.00	15.48	30.95
PILEDRIIVER	All	HWY		38.82	40.57	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.76	0.00	0.00	0.00
PIPEFITTER	N	BLD		43.73	47.73	1.5	1.5	2.0	2.0	9.45	13.86	0.00	1.33	0.00	0.00	0.00
PIPEFITTER	S	BLD		50.11	55.12	1.5	1.5	2.0	2.0	5.55	10.90	0.00	0.90	0.00	0.00	0.00
PLASTERER	All	BLD		36.50	38.00	1.5	1.5	2.0	2.0	11.00	12.00	0.00	0.75	0.00	11.88	23.75
PLUMBER	N	BLD		43.73	47.73	1.5	1.5	2.0	2.0	9.45	13.86	0.00	1.33	0.00	0.00	0.00
PLUMBER	S	BLD		50.11	55.12	1.5	1.5	2.0	2.0	5.55	10.90	0.00	0.90	0.00	0.00	0.00
ROOFER	All	BLD		34.11	37.21	1.5	1.5	2.0	2.0	10.40	13.31	0.00	0.56	0.00	0.00	0.00
SHEETMETAL WORKER	All	ALL		39.53	41.03	1.5	1.5	2.0	2.0	11.05	9.81	2.37	0.71	1.88	0.00	0.00
SPRINKLER FITTER	All	BLD		48.38	52.38	2.0	2.0	2.0	2.0	10.90	15.45	0.00	1.15		0.00	0.00
STONE MASON	All	BLD		34.81	36.90	1.5	1.5	2.0	2.0	9.60	13.39	0.00	1.01	0.00	0.00	0.00
TERRAZZO FINISHER	All	BLD		34.27		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00
TERRAZZO MASON	All	BLD		35.83		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00
TILE MASON	All	BLD		35.83		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00

Macoupin County Prevailing Wage Rates posted on 4/15/2024

TRUCK DRIVER	All	ALL	1	42.25	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	2	42.83	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	3	43.15	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	4	43.50	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	5	44.61	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	1	33.80	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	2	34.26	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	3	34.52	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	4	34.80	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	5	35.69	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TUCK POINTER	N	BLD		34.81	36.90	1.5	1.5	2.0	2.0	9.60	13.39	0.00	1.01	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

Other Ins Employer hourly cost for any other type(s) of insurance provided for benefit of worker.

Explanations MACOUPIN COUNTY

BRICKLAYERS (SOUTH) - Approximately the Southern 1/3 of the county including Hornsby (approx.).

CARPENTERS & PILEDRIVERS (NORTH) - North of Route 108.

ELECTRICIAN (NORTH) - Townships of Scottsville, North Palmyra, North Otter, Virden, Girard, Barr, South Palmyra, South Otter and Nilwood.

ELECTRICIAN (SOUTHWEST) – Township of Brighton.

Macoupin County Prevailing Wage Rates posted on 4/15/2024

ELECTRICIAN (SOUTHEAST) – The entirety of Macoupin County except for the portions defined as the North region and Southwest region.

ELECTRONIC SYSTEMS TECHNICIAN (NORTH) – Townships of Scottsville, North Palmyra, North Otter, Virden, Girard, Barr, South Palmyra, South Otter and Nilwood.

ELECTRONIC SYSTEMS TECHNICIAN (SOUTHWEST) – Township of Brighton.

ELECTRONIC SYSTEMS TECHNICIAN (SOUTHEAST) – The entirety of Macoupin County except for the portions defined as the North region and Southwest region.

ELECTRIC POWER LINEMAN (NORTH) – The portion of Macoupin County North of Bird, Carlinville, Shaws Point, and Western Mount Townships.

ELECTRIC POWER LINEMAN (SOUTHWEST) – Township of Brighton.

ELECTRIC POWER LINEMAN (SOUTHEAST) – The entirety of Macoupin County except for the portions defined as the North region and Southwest region.

ELECTRIC POWER EQUIPMENT OPERATOR (NORTH) – The portion of Macoupin County North of Bird, Carlinville, Shaws Point, and Western Mount Townships.

ELECTRIC POWER EQUIPMENT OPERATOR (SOUTHWEST) – Township of Brighton.

ELECTRIC POWER EQUIPMENT OPERATOR (SOUTHEAST) – The entirety of Macoupin County except for the portions defined as the North region and Southwest region.

ELECTRIC POWER GROUNDMAN (NORTH) – The portion of Macoupin County North of Bird, Carlinville, Shaws Point, and Western Mount Townships.

ELECTRIC POWER GROUNDMAN (SOUTHWEST) – Township of Brighton.

ELECTRIC POWER GROUNDMAN (SOUTHEAST) – The entirety of Macoupin County except for the portions defined as the North region and Southwest region.

ELECTRIC POWER TRUCK DRIVER (NORTH) – The portion of Macoupin County North of Bird, Carlinville, Shaws Point, and Western Mount Townships.

ELECTRIC POWER TRUCK DRIVER (SOUTHWEST) – Township of Brighton.

ELECTRIC POWER TRUCK DRIVER (SOUTHEAST) – The entirety of Macoupin County except for the portions defined as the North region and Southwest region.

GLAZIER (SOUTH) - South of Highway 108.

Macoupin County Prevailing Wage Rates posted on 4/15/2024

IRONWORKERS (SOUTH) - That part of the county South of a diagonal line between Rockbridge (Greene County) and Litchfield (Montgomery County).

PLUMBERS AND PIPEFITTERS (NORTH) - That part of the county North of Route 108.

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.

Oil and chip resealing (O&C) means the application of road oils and liquid asphalt to coat an existing road surface, followed by application of aggregate chips or gravel to coated surface, and subsequent rolling of material to seal the surface.

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 AND MARBLE FINISHER

The handling, at the building site, of all sand, cement, tile, marble or stone and all other materials that may be used and installed by [a] tile layer or marble mason. In addition, the grouting, cleaning, sealing, and mixing on the job site, and all other work as required in assisting the setter. The term "Ceramic" is used for naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

ELECTRONIC SYSTEMS TECHNICIAN

Installation, service and maintenance of low-voltage systems which utilizes the transmission and/or transference of voice, sound, vision, or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background/foreground music, intercom and telephone interconnect, field programming, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school, intercom and sound burglar alarms and low voltage master clock systems.

Excluded from this classification are energy management systems, life safety systems, supervisory controls and data acquisition systems not intrinsic with the above listed systems, fire alarm systems, nurse call systems and raceways exceeding fifteen feet in length.

Macoupin County Prevailing Wage Rates posted on 4/15/2024

OPERATING ENGINEER - BUILDING

GROUP I

Cranes, Draglines, Shovels, Skimmer Scoops, Clamshells or Derrick Boats, Pile Drivers, Crane-Type Backhoes, Asphalt Plant Operators, Concrete Plant Operators, Dredges, Asphalt Spreading Machines, Screws on Asphalt Spreading Machines, All Locomotives, Cable Ways or Tower Machines, Hoists, Hydraulic Backhoes, Ditching Machines, or Backfiller, Cherrypickers, overhead Cranes, Roller, Steam or Gas, Concrete Pavers, Excavator Concrete Breakers, Concrete Pumps, Bulk Cement Plants, Cement Pumps, Derrick-Type Drills, Boat Operators, Motor Graders or Pushcats, Scoops or Tournapulls, Bulldozers, Endloaders or Fork Lifts, Power Blade or Elevating Graders, Winch Cats, Boom or Winch Trucks or Boom Tractors, Pipe Wrapping or Painting Machines, Asphalt Plant Engineer, Journeyman Lubricating Engineer, Drills (other than derrick type), Mud Jacks, or Well Drilling Machines, Boring Machines or Track Jacks, Mixers, Conveyors (two), Air Compressors (two) Water Pumps, regardless of size (two), Welding Machines (two), Siphons or Jets (two), Winch Head or Apparatuses (two), Light Plants (two), Waterblasters (two), all Tractors, regardless of size (straight tractor only), Fireman on Stationary Boilers, Automatic Elevators, Form Grading Machines, Finishing Machines, Power Sub-Grader or Ribbon Machines, Longitudinal Floats, Distributor Operators on Trucks, Winch Heads or Apparatuses (one), Mobil Track air and heaters (two to five), Heavy Equipment Greaser, Relief Operator, Assistant Master Mechanic and Heavy Duty Mechanic, Autonomous and semi-autonomous equipment, concrete saws of all types and sizes with their attachments, gob-hoppers, excavators all sizes, the repair, greasing, and fueling of all diesel hammers, the operation, set-up and cleaning of bidwells, concrete placement booms, the alterations, repair of all barges, water blasters of all sizes and their clutches, mobile lifts, hydraulic jacks where used for hoisting, diesel or gas powered flashing signs used for traffic control, micro pavers, log skidders, iceolators used on and off of pipeline, condor cranes, drill rigs of all sizes, bow boats, survey boats, ross carriers, bob-cats and all their attachments, skid steer loaders and all their attachments, creter crane, direct drive electric motors the bolting and unbolting the adjusting and shimming, (dewatering jobs, whirley crane, conveyor belts) etc., batch plants (all sizes), roto mills, conveyors systems of any size and any configuration, hydroseeders and straw-blowers all sizes, operation, repair, service of all vibratory hammers, all power pacs and their controls regardless of location, curtains or brush burning machines, stump cutter machines, grout machines regardless of size, Nail Launchers when mounted on a machine or self-propelled, con-cover machines, Goldhofer and similar S.P.M.T. (self-propelled modular transporters) heavy transport units and all Operators (except those listed below).

GROUP II

Assistant Operators

GROUP III

Air Compressors (one), Water Pumps, regardless of size (one), Water-blasters (one), Welding Machine (one), Mixers (one bag), Conveyor (one), Siphon or Jet (one), Light Plant (one), Heater (one), Immobile Track Air (one), and Self-Propelled Walk Behind Rollers.

GROUP IV

CCO-17 ton and below

GROUP V

CCO-17.5 to 35 Ton and Boom to 50'

Macoupin County Prevailing Wage Rates posted on 4/15/2024

GROUP VI

CCO-35.5 to 75 Ton and Boom to 100'

GROUP VII

CCO-75.5 to 125 Ton and Boom to 125'

GROUP VIII

CCO- 125.5 to 200 Ton and Boom to 100'

GROUP IX

CCO-200.5 to 300 Ton and Boom to 100'

GROUP X

CCO-300.5 to 450 Ton and Boom to 150'

GROUP XI

Master Mechanic

GROUP XII

Operator Foreman, Licensed Boat Pilot

GROUP XIII

Track type hydraulic hoes & crawler gradealls prep time.

GROUP XIV

Fireman on Whirlies and Heavy Equipment Oilers, Truck Cranes, Dredges, Monigans, Large Cranes - (Over 65-ton rated capacity)
Concrete Plant Oiler, Blacktop Plant oiler and Creter Crane Oiler (when required), barge tenders, oilers on drill rigs used for caisson or for pile driving and Oiler.

OPERATING ENGINEERS – Highway

GROUP I

Cranes, Draglines, Shovels, Skimmer Scoops, Clamshells or Derrick Boats, Pile Drivers, Crane-Type Backhoes, Asphalt Plant Operators, Concrete Plant Operators, Dredges, Asphalt Spreading Machines, Screws on Asphalt Spreading Machines, All Locomotives, Cable Ways or Tower Machines, Hoists, Hydraulic Backhoes, Ditching Machines, or Backfiller, Cherrypickers, overhead Cranes, Roller, Steam or Gas, Concrete Pavers, Excavator Concrete Breakers, Concrete Pumps, Bulk Cement Plants, Cement Pumps, Derrick-Type Drills, Boat Operators, Motor Graders or Pushcats, Scoops or Tournapulls, Bulldozers, Endloaders or Fork Lifts, Power Blade or Elevating Graders, Winch Cats, Boom or Winch Trucks or Boom Tractors, Pipe Wrapping or Painting Machines, Asphalt Plant Engineer, Journeyman Lubricating Engineer, Drills (other than derrick type), Mud Jacks, or Well Drilling Machines, Boring Machines or Track Jacks, Mixers, Conveyors (two), Air Compressors (two) Water Pumps, regardless of size (two),

Macoupin County Prevailing Wage Rates posted on 4/15/2024

Welding Machines (two), Siphons or Jets (two), Winch Head or Apparatuses (two), Light Plants (two), Waterblasters (two), all Tractors, regardless of size (straight tractor only), Fireman on Stationary Boilers, Automatic Elevators, Form Grading Machines, Finishing Machines, Power Sub-Grader or Ribbon Machines, Longitudinal Floats, Distributor Operators on Trucks, Winch Heads or Apparatuses (one), Mobil Track air and heaters (two to five), Heavy Equipment Greaser, Relief Operator, Assistant Master Mechanic and Heavy Duty Mechanic, concrete saws of all types and sizes with their attachments, gob-hoppers, excavators all sizes, the repair, greasing, and fueling of all diesel hammers, the operation, set-up and cleaning of bidwells, concrete placement booms, the alterations, repair of all barges, water blasters of all sizes and their clutches, mobile lifts, hydraulic jacks where used for hoisting, diesel or gas powered flashing signs used for traffic control, micro pavers, log skidders, iceolators used on and off of pipeline, condor cranes, drill rigs of all sizes, bow boats, survey boats, ross carriers, bob-cats and all their attachments, skid steer loaders and all their attachments, creter crane, direct drive electric motors the bolting and unbolting the adjusting and shimming, (dewatering jobs, whirley crane, conveyor belts) etc., batch plants (all sizes), roto mills, conveyors systems of any size and any configuration, hydroseeders and straw-blowers all sizes, operation, repair, service of all vibratory hammers, all power pacs and their controls regardless of location, curtains or brush burning machines, stump cutter machines, grout machines regardless of size, Nail launchers when mounted on a machine or self-propelled, con-cover machines, Goldhofer and similar S.P.M.T. (self-propelled modular transporters) heavy transport units and all Operators (except those listed below).

GROUP II

Assistant Operators

GROUP III

Air Compressors (one), Water Pumps, regardless of size (one), Water-blasters (one), Welding Machine (one), Mixers (one bag), Conveyor (one), Siphon or Jet (one), Light Plant (one), Heater (one), Immobile Track Air (one), and Self-Propelled Walk Behind Rollers.

GROUP IV

CCO-17 ton and below

GROUP V

CCO-17.5 to 35 Ton and Boom to 50'

GROUP VI

CCO- 35.5 to 75 Ton and Boom to 100'

GROUP VII

CCO- 75.5 to 125 Ton and Boom to 75'

GROUP VIII

CCO- 125.5 to 200 Ton and Boom to 100'

GROUP IX

CCO- 200.5 to 300 Ton and Boom to 100'

GROUP X

Macoupin County Prevailing Wage Rates posted on 4/15/2024

CCO- 300.5 to 450 Ton and Boom to 150'

GROUP XI

Master Mechanic, Working Foreman/Mechanic.

GROUP XII

Operator Foreman, licensed boat pilot.

GROUP XIII

Fireman on Whirlies and Heavy Equipment Oilers, Truck Cranes, Dredges, Monigans, Large Cranes - (Over 65-ton rated capacity) Concrete Plant Oiler, Blacktop Plant Oiler and Creter Crane Oiler (when required), barge tenders, oilers on drill rigs used for caisson or for pile driving, and Oiler.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION Class 1. Drivers on 2 axle trucks hauling less than 9 ton. Air compressor and welding machines and brooms, including those pulled by separate units, truck driver helpers, warehouse employees, mechanic helpers, greasers and tiremen, pickup trucks when hauling materials, tools, or workers to and from and on-the-job site, and fork lifts up to 6,000 lb. capacity.

Class 2. Two or three axle trucks hauling more than 9 ton but hauling less than 16 ton. A-frame winch trucks, hydrolift trucks, vactor trucks or similar equipment when used for transportation purposes. Fork lifts over 6,000 lb. capacity, winch trucks, four axle combination units, and ticket writers.

Class 3. Two, three or four axle trucks hauling 16 ton or more. Drivers on water pulls, articulated dump trucks, mechanics and working forepersons, and dispatchers. Five axle or more combination units.

Class 4. Low Boy and Oil Distributors.

Class 5. Drivers who require special protective clothing while employed on hazardous waste work.

TRUCK DRIVER - OIL AND CHIP RESEALING ONLY.

This shall encompass laborers, workers and mechanics who drive contractor or subcontractor owned, leased, or hired pickup, dump, service, or oil distributor trucks. The work includes transporting materials and equipment (including but not limited to, oils, aggregate supplies, parts, machinery and tools) to or from the job site; distributing oil or liquid asphalt and aggregate; stock piling material when in connection with the actual oil and chip contract. The Truck Driver (Oil & Chip Resealing) wage classification does not include supplier delivered materials.

TERRAZZO FINISHER

The handling of all materials used for Mosaic and Terrazzo work including preparing, mixing by hand, by mixing machine or transporting of pre-mixed materials and distributing with shovel, rake, hoe, or pail, all kinds of concrete foundations necessary for Mosaic and Terrazzo work, all cement terrazzo, magnesite terrazzo, Do-O-Tex terrazzo, epoxy matrix ter-razzo, exposed aggregate, rustic or rough washed for exterior or interior of buildings placed either by machine or by hand, and any other kind of

Macoupin County Prevailing Wage Rates posted on 4/15/2024

mixture of plastics composed of chips or granules when mixed with cement, rubber, neoprene, vinyl, magnesium chloride or any other resinous or chemical substances used for seamless flooring systems, and all other building materials, all similar materials and all precast terrazzo work on jobs, all scratch coat used for Mosaic and Terrazzo work and sub-bed, tar paper and wire mesh (2x2 etc.) or lath. The rubbing, grinding, cleaning and finishing of same either by hand or by machine or by terrazzo resurfacing equipment on new or existing floors. When necessary finishers shall be allowed to assist the mechanics to spread sand bed, lay tarpaper and wire mesh (2x2 etc.) or lath. The finishing of cement floors where additional aggregate of stone is added by spreading or sprinkling on top of the finished base, and troweled or rolled into the finish and then the surface is ground by grinding machines.

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.

Intentionally Blank

Montgomery County Prevailing Wage Rates posted on 4/15/2024

Trade Title	Rg	Type	C	Base	Foreman	Overtime					Pension	Vac	Trng	Other Ins	Add OT 1.5x owed	Add OT 2.0x owed
						M-F	Sa	Su	Hol	H/W						
ASBESTOS ABT-GEN	All	ALL		31.36	32.36	1.5	1.5	2.0	2.0	7.75	23.27	0.00	0.80		15.51	31.02
ASBESTOS ABT-MEC	All	BLD		34.30	35.30	1.5	1.5	2.0	2.0	10.20	6.80	0.00	0.50	0.00	0.00	0.00
BOILERMAKER	All	BLD		42.50	46.00	1.5	1.5	2.0	2.0	7.07	27.21	0.00	1.06		0.00	0.00
BRICK MASON	All	BLD		36.74	38.94	1.5	1.5	2.0	2.0	9.05	15.68	0.00	0.91	0.00	0.00	0.00
CARPENTER	All	BLD		35.15	37.40	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.79	0.00	15.48	30.95
CARPENTER	All	HWY		37.82	39.57	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.76	0.00	0.00	0.00
CEMENT MASON	All	ALL		38.00	39.00	1.5	1.5	2.0	2.0	11.00	16.80	0.00	0.50	0.00	14.15	28.30
CERAMIC TILE FINISHER	All	BLD		28.08		1.5	1.5	2.0	2.0	9.05	7.69	1.00	0.85	0.00	0.00	0.00
ELECTRIC PWR EQMT OP	NE	ALL		52.63	62.45	1.5	1.5	2.0	2.0	8.58	14.74	0.00	0.79	0.00	0.00	0.00
ELECTRIC PWR EQMT OP	SW	ALL		52.84	63.69	1.5	1.5	2.0	2.0	6.95	14.79	0.00	0.53		11.14	22.27
ELECTRIC PWR GRNDMAN	NE	ALL		35.76	62.45	1.5	1.5	2.0	2.0	8.07	10.01	0.00	0.54	0.00	0.00	0.00
ELECTRIC PWR GRNDMAN	SW	ALL		39.45	63.69	1.5	1.5	2.0	2.0	5.19	11.04	0.00	0.39		8.33	16.62
ELECTRIC PWR LINEMAN	NE	ALL		58.58	62.45	1.5	1.5	2.0	2.0	8.76	16.40	0.00	0.88	0.00	0.00	0.00
ELECTRIC PWR LINEMAN	SW	ALL		60.74	63.69	1.5	1.5	2.0	2.0	7.99	17.02	0.00	0.61		12.81	25.62
ELECTRIC PWR TRK DRV	NE	ALL		37.53	62.45	1.5	1.5	2.0	2.0	8.13	10.51	0.00	0.57	0.00	0.00	0.00
ELECTRIC PWR TRK DRV	SW	ALL		43.13	63.67	1.5	1.5	2.0	2.0	5.67	12.08	0.00	0.43		9.10	18.18
ELECTRICIAN	E	BLD		43.30	47.63	1.5	1.5	2.0	2.0	8.66	12.30	0.00	0.65	0.00	0.98	1.95
ELECTRICIAN	NW	BLD		39.74	42.24	1.5	1.5	2.0	2.0	9.15	12.09	0.00	0.70	0.00	0.99	1.99
ELECTRICIAN	SW	ALL		47.44	50.29	1.5	1.5	2.0	2.0	8.79	14.49	0.00	1.31	3.10	13.83	27.69
ELECTRONIC SYSTEM TECH	E	BLD		37.50	40.50	1.5	1.5	2.0	2.0	9.10	9.25	0.00	0.40		0.57	1.13
ELECTRONIC SYSTEM TECH	NW	BLD		35.78	38.78	1.5	1.5	2.0	2.0	8.35	11.72	0.00	0.40	0.00	0.54	1.07
ELECTRONIC SYSTEM TECH	SW	BLD		38.42	41.42	1.5	1.5	2.0	2.0	4.00	11.16	0.00	0.40	1.50	0.58	1.15
ELEVATOR CONSTRUCTOR	All	BLD		57.69	64.90	2.0	2.0	2.0	2.0	16.07	20.56	4.61	0.70		0.00	0.00
GLAZIER	All	BLD		38.60	40.60	1.5	1.5	2.0	2.0	7.85	13.77	0.00	0.68	0.00	0.00	0.00
HEAT/FROST INSULATOR	All	BLD		41.73	42.73	1.5	1.5	2.0	2.0	11.74	13.50	0.00	1.05		0.00	0.00
IRON WORKER	N	BLD		35.20	37.20	1.5	1.5	2.0	2.0	10.55	18.50	0.00	1.00		0.00	0.00
IRON WORKER	N	HWY		36.84	38.59	1.5	1.5	2.0	2.0	10.55	20.09	0.00	1.00		0.00	0.00

Montgomery County Prevailing Wage Rates posted on 4/15/2024

IRON WORKER	S	ALL		40.40	42.40	1.5	1.5	2.0	2.0	10.55	19.05	0.00	0.48	0.00	15.09	30.18
LABORER	All	ALL		30.86	31.86	1.5	1.5	2.0	2.0	7.75	23.27	0.00	0.80		15.51	31.02
LATHER	All	BLD		35.15	37.40	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.79	0.00	15.48	30.95
MACHINIST	All	BLD		55.74	59.74	1.5	1.5	2.0	2.0	9.93	8.95	1.85	1.47		0.00	0.00
MARBLE FINISHER	All	BLD		28.08		1.5	1.5	2.0	2.0	9.05	7.69	1.00	0.85	0.00	0.00	0.00
MILLWRIGHT	All	BLD		35.58	37.83	1.5	1.5	2.0	2.0	9.45	21.54	0.00	0.79	0.00	15.50	30.99
MILLWRIGHT	All	HWY		40.10	41.85	1.5	1.5	2.0	2.0	9.45	22.34	0.00	0.76	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	1	43.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	2	42.82	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	3	38.34	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	4	44.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	5	45.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	6	46.50	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	7	46.80	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	8	47.10	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	9	47.75	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	10	48.25	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	11	45.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	12	46.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	13	43.95	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	BLD	14	38.40	46.95	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	1	42.45	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	2	41.32	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	3	36.84	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	4	43.45	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	5	44.45	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	6	45.00	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	7	45.30	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	8	45.60	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	9	46.25	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85

Montgomery County Prevailing Wage Rates posted on 4/15/2024

OPERATING ENGINEER	All	HWY	10	46.75	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	11	44.45	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	12	45.45	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
OPERATING ENGINEER	All	HWY	13	36.90	45.45	1.5	1.5	2.0	2.0	14.45	19.75	0.00	1.65		17.93	35.85
PAINTER	All	BLD		32.87	34.37	1.5	1.5	2.0	2.0	7.85	14.25	0.00	0.70	0.00	0.00	0.00
PAINTER	All	HWY		34.07	35.57	1.5	1.5	2.0	2.0	7.85	14.25	0.00	0.70	0.00	0.00	0.00
PAINTER OVER 30 FT.	All	BLD		33.87	35.37	1.5	1.5	2.0	2.0	7.85	14.25	0.00	0.70	0.00	0.00	0.00
PAINTER PWR EQMT	All	BLD		33.87	35.37	1.5	1.5	2.0	2.0	7.85	14.25	0.00	0.70	0.00	0.00	0.00
PAINTER PWR EQMT	All	HWY		35.07	36.57	1.5	1.5	2.0	2.0	7.85	14.25	0.00	0.70	0.00	0.00	0.00
PILEDRIIVER	All	BLD		36.15	38.40	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.79	0.00	15.48	30.95
PILEDRIIVER	All	HWY		38.82	40.57	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.76	0.00	0.00	0.00
PIPEFITTER	NE	BLD		43.73	47.73	1.5	1.5	2.0	2.0	9.45	13.86	0.00	1.33	0.00	0.00	0.00
PIPEFITTER	SW	BLD		50.11	55.12	1.5	1.5	2.0	2.0	5.55	10.90	0.00	0.90	0.00	0.00	0.00
PLASTERER	All	BLD		36.50	38.00	1.5	1.5	2.0	2.0	11.00	12.00	0.00	0.75	0.00	11.88	23.75
PLUMBER	NE	BLD		43.73	47.73	1.5	1.5	2.0	2.0	9.45	13.86	0.00	1.33	0.00	0.00	0.00
PLUMBER	SW	BLD		50.11	55.12	1.5	1.5	2.0	2.0	5.55	10.90	0.00	0.90	0.00	0.00	0.00
ROOFER	All	BLD		34.11	37.21	1.5	1.5	2.0	2.0	10.40	13.31	0.00	0.56	0.00	0.00	0.00
SHEETMETAL WORKER	All	ALL		39.53	41.03	1.5	1.5	2.0	2.0	11.05	9.81	2.37	0.71	1.88	0.00	0.00
SPRINKLER FITTER	All	BLD		47.09	50.09	1.5	1.5	2.0	2.0	11.45	14.92	0.00	0.52		0.00	0.00
TERRAZZO FINISHER	All	BLD		28.08		1.5	1.5	2.0	2.0	9.05	7.69	1.00	0.85	0.00	0.00	0.00
TERRAZZO MASON	All	BLD		33.62		1.5	1.5	2.0	2.0	9.05	9.25	1.00	0.94	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	1	42.25	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	2	42.83	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	3	43.15	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	4	43.50	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	5	44.61	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	1	33.80	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	2	34.26	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	3	34.52	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	4	34.80	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00

Montgomery County Prevailing Wage Rates posted on 4/15/2024

TRUCK DRIVER	All	O&C	5	35.69	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	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

Other Ins Employer hourly cost for any other type(s) of insurance provided for benefit of worker.

Explanations MONTGOMERY COUNTY

CARPENTERS AND PILEDRIVERS (NORTH) - The area north of Route 108, running east to Route 55, then north to Routes 48/127, east following Route 48 from Raymond to Harvel.

ELECTRICIANS (EAST) - Townships of Audubon, East Fork, Fillmore, Irving, Nikomis, Roundtree, South Fillmore and Witt.

ELECTRICIANS (NW) - Townships of Bois D'Arc, Pitman, and Harvel (Northern projection).

ELECTRICIANS (SW) - Townships of Zanesville, Raymond, North and South Litchfield, Butler Grove, Hillsboro, Walshville and Grishman.

ELECTRONIC SYSTEMS TECHNICIAN (EAST) – The entirety of Montgomery County except for the portions defined as the Southwest and Northwest regions.

ELECTRONIC SYSTEMS TECHNICIAN (NORTHWEST) – Townships of Bois D'Arc, Pitman, and Harvel.

ELECTRONIC SYSTEMS TECHNICIAN (SOUTHWEST) – Townships of Zanesville, Raymond, North and South Litchfield, Butler Grove, Hillsboro, Walshville and Grisham.

ELECTRIC POWER LINEMAN, GROUNDMAN, EQUIPMENT OPERATOR, TRUCK DRIVER (NE) - Entire county except Butler Grove, Grisham, Hillsboro, North and South Litchfield, Raymond, Walshville, and Zanesville Townships.

IRONWORKERS (NORTH) - That part of the county north of a diagonal line through Taylor Springs and Chapman.

Montgomery County Prevailing Wage Rates posted on 4/15/2024

PLUMBERS & PIPEFITTERS (SW) - That part of the county South and West of Route 127.

ELECTRONIC SYSTEMS TECHNICIAN (WEST) - Townships of Zanesville, Raymond, North Litchfield, Butler Grove, South Litchfield, Hillsboro, Walshville and Grisham.

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.

Oil and chip resealing (O&C) means the application of road oils and liquid asphalt to coat an existing road surface, followed by application of aggregate chips or gravel to coated surface, and subsequent rolling of material to seal the surface.

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 AND MARBLE FINISHER

The handling, at the building site, of all sand, cement, tile, marble or stone and all other materials that may be used and installed by [a] tile layer or marble mason. In addition, the grouting, cleaning, sealing, and mixing on the job site, and all other work as required in assisting the setter. The term "Ceramic" is used for naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

ELECTRONIC SYSTEMS ELECTRICIAN

Installation, service and maintenance of low-voltage systems which utilizes the transmission and/or transference of voice, sound, vision, or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background/foreground music, intercom and telephone interconnect, field programming, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school, intercom and sound burglar alarms and low voltage master clock systems.

Excluded from this classification are energy management systems, life safety systems, supervisory controls and data acquisition systems not intrinsic with the above listed systems, fire alarm systems, nurse call systems and raceways exceeding fifteen feet in length.

Montgomery County Prevailing Wage Rates posted on 4/15/2024

OPERATING ENGINEER - BUILDING

GROUP I

Cranes, Draglines, Shovels, Skimmer Scoops, Clamshells or Derrick Boats, Pile Drivers, Crane-Type Backhoes, Asphalt Plant Operators, Concrete Plant Operators, Dredges, Asphalt Spreading Machines, Screws on Asphalt Spreading Machines, All Locomotives, Cable Ways or Tower Machines, Hoists, Hydraulic Backhoes, Ditching Machines, or Backfiller, Cherrypickers, overhead Cranes, Roller, Steam or Gas, Concrete Pavers, Excavator Concrete Breakers, Concrete Pumps, Bulk Cement Plants, Cement Pumps, Derrick-Type Drills, Boat Operators, Motor Graders or Pushcats, Scoops or Tournapulls, Bulldozers, Endloaders or Fork Lifts, Power Blade or Elevating Graders, Winch Cats, Boom or Winch Trucks or Boom Tractors, Pipe Wrapping or Painting Machines, Asphalt Plant Engineer, Journeyman Lubricating Engineer, Drills (other than derrick type), Mud Jacks, or Well Drilling Machines, Boring Machines or Track Jacks, Mixers, Conveyors (two), Air Compressors (two) Water Pumps, regardless of size (two), Welding Machines (two), Siphons or Jets (two), Winch Head or Apparatuses (two), Light Plants (two), Waterblasters (two), all Tractors, regardless of size (straight tractor only), Fireman on Stationary Boilers, Automatic Elevators, Form Grading Machines, Finishing Machines, Power Sub-Grader or Ribbon Machines, Longitudinal Floats, Distributor Operators on Trucks, Winch Heads or Apparatuses (one), Mobil Track air and heaters (two to five), Heavy Equipment Greaser, Relief Operator, Assistant Master Mechanic and Heavy Duty Mechanic, Autonomous and semi-autonomous equipment, concrete saws of all types and sizes with their attachments, gob-hoppers, excavators all sizes, the repair, greasing, and fueling of all diesel hammers, the operation, set-up and cleaning of bidwells, concrete placement booms, the alterations, repair of all barges, water blasters of all sizes and their clutches, mobile lifts, hydraulic jacks where used for hoisting, diesel or gas powered flashing signs used for traffic control, micro pavers, log skidders, iceolators used on and off of pipeline, condor cranes, drill rigs of all sizes, bow boats, survey boats, ross carriers, bob-cats and all their attachments, skid steer loaders and all their attachments, creter crane, direct drive electric motors the bolting and unbolting the adjusting and shimming, (dewatering jobs, whirley crane, conveyor belts) etc., batch plants (all sizes), roto mills, conveyors systems of any size and any configuration, hydroseeders and straw-blowers all sizes, operation, repair, service of all vibratory hammers, all power pacs and their controls regardless of location, curtains or brush burning machines, stump cutter machines, grout machines regardless of size, Nail Launchers when mounted on a machine or self-propelled, con-cover machines, Goldhofer and similar S.P.M.T. (self-propelled modular transporters) heavy transport units and all Operators (except those listed below).

GROUP II

Assistant Operators

GROUP III

Air Compressors (one), Water Pumps, regardless of size (one), Water-blasters (one), Welding Machine (one), Mixers (one bag), Conveyor (one), Siphon or Jet (one), Light Plant (one), Heater (one), Immobile Track Air (one), and Self-Propelled Walk Behind Rollers.

GROUP IV

CCO-17 ton and below

GROUP V

CCO-17.5 to 35 Ton and Boom to 50'

Montgomery County Prevailing Wage Rates posted on 4/15/2024

GROUP VI

CCO-35.5 to 75 Ton and Boom to 100'

GROUP VII

CCO-75.5 to 125 Ton and Boom to 125'

GROUP VIII

CCO- 125.5 to 200 Ton and Boom to 100'

GROUP IX

CCO-200.5 to 300 Ton and Boom to 100'

GROUP X

CCO-300.5 to 450 Ton and Boom to 150'

GROUP XI

Master Mechanic

GROUP XII

Operator Foreman, Licensed Boat Pilot

GROUP XIII

Track type hydraulic hoes & crawler gradealls prep time.

GROUP XIV

Fireman on Whirlies and Heavy Equipment Oilers, Truck Cranes, Dredges, Monigans, Large Cranes - (Over 65-ton rated capacity)
Concrete Plant Oiler, Blacktop Plant oiler and Creter Crane Oiler (when required), barge tenders, oilers on drill rigs used for caisson or for pile driving and Oiler.

OPERATING ENGINEERS – Highway

GROUP I

Cranes, Draglines, Shovels, Skimmer Scoops, Clamshells or Derrick Boats, Pile Drivers, Crane-Type Backhoes, Asphalt Plant Operators, Concrete Plant Operators, Dredges, Asphalt Spreading Machines, Screws on Asphalt Spreading Machines, All Locomotives, Cable Ways or Tower Machines, Hoists, Hydraulic Backhoes, Ditching Machines, or Backfiller, Cherrypickers, overhead Cranes, Roller, Steam or Gas, Concrete Pavers, Excavator Concrete Breakers, Concrete Pumps, Bulk Cement Plants, Cement Pumps, Derrick-Type Drills, Boat Operators, Motor Graders or Pushcats, Scoops or Tournapulls, Bulldozers, Endloaders or Fork Lifts, Power Blade or Elevating Graders, Winch Cats, Boom or Winch Trucks or Boom Tractors, Pipe Wrapping or Painting Machines, Asphalt Plant Engineer, Journeyman Lubricating Engineer, Drills (other than derrick type), Mud Jacks, or Well Drilling Machines, Boring Machines or Track Jacks, Mixers, Conveyors (two), Air Compressors (two) Water Pumps, regardless of size (two),

Montgomery County Prevailing Wage Rates posted on 4/15/2024

Welding Machines (two), Siphons or Jets (two), Winch Head or Apparatuses (two), Light Plants (two), Waterblasters (two), all Tractors, regardless of size (straight tractor only), Fireman on Stationary Boilers, Automatic Elevators, Form Grading Machines, Finishing Machines, Power Sub-Grader or Ribbon Machines, Longitudinal Floats, Distributor Operators on Trucks, Winch Heads or Apparatuses (one), Mobil Track air and heaters (two to five), Heavy Equipment Greaser, Relief Operator, Assistant Master Mechanic and Heavy Duty Mechanic, concrete saws of all types and sizes with their attachments, gob-hoppers, excavators all sizes, the repair, greasing, and fueling of all diesel hammers, the operation, set-up and cleaning of bidwells, concrete placement booms, the alterations, repair of all barges, water blasters of all sizes and their clutches, mobile lifts, hydraulic jacks where used for hoisting, diesel or gas powered flashing signs used for traffic control, micro pavers, log skidders, iceolators used on and off of pipeline, condor cranes, drill rigs of all sizes, bow boats, survey boats, ross carriers, bob-cats and all their attachments, skid steer loaders and all their attachments, creter crane, direct drive electric motors the bolting and unbolting the adjusting and shimming, (dewatering jobs, whirley crane, conveyor belts) etc., batch plants (all sizes), roto mills, conveyors systems of any size and any configuration, hydroseeders and straw-blowers all sizes, operation, repair, service of all vibratory hammers, all power pacs and their controls regardless of location, curtains or brush burning machines, stump cutter machines, grout machines regardless of size, Nail launchers when mounted on a machine or self-propelled, con-cover machines, Goldhofer and similar S.P.M.T. (self-propelled modular transporters) heavy transport units and all Operators (except those listed below).

GROUP II

Assistant Operators

GROUP III

Air Compressors (one), Water Pumps, regardless of size (one), Water-blasters (one), Welding Machine (one), Mixers (one bag), Conveyor (one), Siphon or Jet (one), Light Plant (one), Heater (one), Immobile Track Air (one), and Self-Propelled Walk Behind Rollers.

GROUP IV

CCO-17 ton and below

GROUP V

CCO-17.5 to 35 Ton and Boom to 50'

GROUP VI

CCO- 35.5 to 75 Ton and Boom to 100'

GROUP VII

CCO- 75.5 to 125 Ton and Boom to 75'

GROUP VIII

CCO- 125.5 to 200 Ton and Boom to 100'

GROUP IX

CCO- 200.5 to 300 Ton and Boom to 100'

GROUP X

Montgomery County Prevailing Wage Rates posted on 4/15/2024

CCO- 300.5 to 450 Ton and Boom to 150'

GROUP XI

Master Mechanic, Working Foreman/Mechanic.

GROUP XII

Operator Foreman, licensed boat pilot.

GROUP XIII

Fireman on Whirlies and Heavy Equipment Oilers, Truck Cranes, Dredges, Monigans, Large Cranes - (Over 65-ton rated capacity) Concrete Plant Oiler, Blacktop Plant Oiler and Creter Crane Oiler (when required), barge tenders, oilers on drill rigs used for caisson or for pile driving, and Oiler.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION Class 1. Drivers on 2 axle trucks hauling less than 9 ton. Air compressor and welding machines and brooms, including those pulled by separate units, truck driver helpers, warehouse employees, mechanic helpers, greasers and tiremen, pickup trucks when hauling materials, tools, or workers to and from and on-the-job site, and fork lifts up to 6,000 lb. capacity.

Class 2. Two or three axle trucks hauling more than 9 ton but hauling less than 16 ton. A-frame winch trucks, hydrolift trucks, vactor trucks or similar equipment when used for transportation purposes. Fork lifts over 6,000 lb. capacity, winch trucks, four axle combination units, and ticket writers.

Class 3. Two, three or four axle trucks hauling 16 ton or more. Drivers on water pulls, articulated dump trucks, mechanics and working forepersons, and dispatchers. Five axle or more combination units.

Class 4. Low Boy and Oil Distributors.

Class 5. Drivers who require special protective clothing while employed on hazardous waste work.

TRUCK DRIVER - OIL AND CHIP RESEALING ONLY.

This shall encompass laborers, workers and mechanics who drive contractor or subcontractor owned, leased, or hired pickup, dump, service, or oil distributor trucks. The work includes transporting materials and equipment (including but not limited to, oils, aggregate supplies, parts, machinery and tools) to or from the job site; distributing oil or liquid asphalt and aggregate; stock piling material when in connection with the actual oil and chip contract. The Truck Driver (Oil & Chip Resealing) wage classification does not include supplier delivered materials.

TERRAZZO FINISHER

The handling of all materials used for Mosaic and Terrazzo work including preparing, mixing by hand, by mixing machine or transporting of pre-mixed materials and distributing with shovel, rake, hoe, or pail, all kinds of concrete foundations necessary for Mosaic and Terrazzo work, all cement terrazzo, magnesite terrazzo, Do-O-Tex terrazzo, epoxy matrix ter-razzo, exposed aggregate, rustic or rough washed for exterior or interior of buildings placed either by machine or by hand, and any other kind of

Montgomery County Prevailing Wage Rates posted on 4/15/2024

mixture of plastics composed of chips or granules when mixed with cement, rubber, neoprene, vinyl, magnesium chloride or any other resinous or chemical substances used for seamless flooring systems, and all other building materials, all similar materials and all precast terrazzo work on jobs, all scratch coat used for Mosaic and Terrazzo work and sub-bed, tar paper and wire mesh (2x2 etc.) or lath. The rubbing, grinding, cleaning and finishing of same either by hand or by machine or by terrazzo resurfacing equipment on new or existing floors. When necessary finishers shall be allowed to assist the mechanics to spread sand bed, lay tarpaper and wire mesh (2x2 etc.) or lath. The finishing of cement floors where additional aggregate of stone is added by spreading or sprinkling on top of the finished base, and troweled or rolled into the finish and then the surface is ground by grinding machines.

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.

**CONSTRUCTION CONTRACTORS
AFFIRMATIVE ACTION REQUIREMENTS
GOALS (%) FOR MINORITY AND WOMEN PARTICIPATION
As Published in the Friday, October 3, 1980 Federal Register**

Goals for Participation of Women (Entire State) 6.9

Goals for Minority Participation:

Adams	3.1	Edgar	4.8	Johnson	11.4	Menard	4.5	Shelby	4.0
Alexander	11.4	Edwards	3.5	Kane	19.6	Mercer	3.4	Stark	3.3
Bond	11.4	Effingham	11.4	Kankakee	9.1	Monroe	14.7	St. Clair	14.7
Boone	6.3	Fayette	11.4	Kendall	18.4	Montgomery	11.4	Stephenson	4.6
Brown	3.1	Ford	4.8	Knox	3.3	Morgan	4.0	Tazewell	4.4
Bureau	18.4	Franklin	11.4	Lake	19.6	Moultrie	4.0	Union	11.4
Calhoun	11.4	Fulton	3.3	LaSalle	18.4	Ogle	4.6	Vermilion	4.8
Carroll	3.4	Gallatin	3.5	Lawrence	3.5	Peoria	4.4	Wabash	3.5
Cass	4.0	Greene	11.4	Lee	4.6	Perry	11.4	Warren	3.3
Champaign	7.8	Grundy	18.4	Livingston	18.4	Piatt	4.8	Washington	11.4
Clark	2.5	Hamilton	3.5	Logan	4.0	Pike	3.1	Wayne	11.4
Clay	11.4	Hancock	3.4	Macon	7.6	Pope	5.2	White	3.5
Clinton	14.7	Hardin	5.2	Macoupin	11.4	Pulaski	11.4	Whiteside	3.4
Coles	4.8	Henderson	3.4	Madison	14.7	Putnam	18.4	Will	20.9
Cook	19.6	Henry	4.6	Marion	11.4	Randolph	11.4	Williamson	11.4
Crawford	2.5	Iroquois	18.4	Marshall	3.3	Richland	11.4	Winnebago	6.3
Cumberland	4.8	Jackson	11.4	Mason	3.3	Rock Island	4.6	Woodford	4.4
DeKalb	18.4	Jasper	11.4	Massac	5.2	Saline	3.5		
DeWitt	4.0	Jefferson	11.4	McDonough	3.3	Sangamon	4.5		
Douglas	4.8	Jersey	11.4	McHenry	19.6	Schuyler	3.3		
DuPage	19.6	JoDaviess	0.5	McLean	2.5	Scott	4.0		

(10-22-97) PN 152

o O o

Intentionally Blank

USDA Rural Development Construction Sign

In accordance with attached Exhibit A, the Contractor on Section(s) _____, _____ of the project shall each erect (one) (two) sign(s) at a prominent location(s) on the project when construction begins.

An electric version of this .pdf document may be found at: www.rurdev.usda.gov/IL_engineering.html. This document may be edited by project engineers to include specific project information.

USDA Rural Development will not approve plans and specifications until the sign detail is included in the appropriate contracts.

If funding from other Federal or a State Agency is being provided and a project sign is required by that funding source, the Community Programs Director may modify the standard project sign as determined appropriate. Sign details may also be modified to show multiple contractors, but typically only Prime Contractors should be shown.

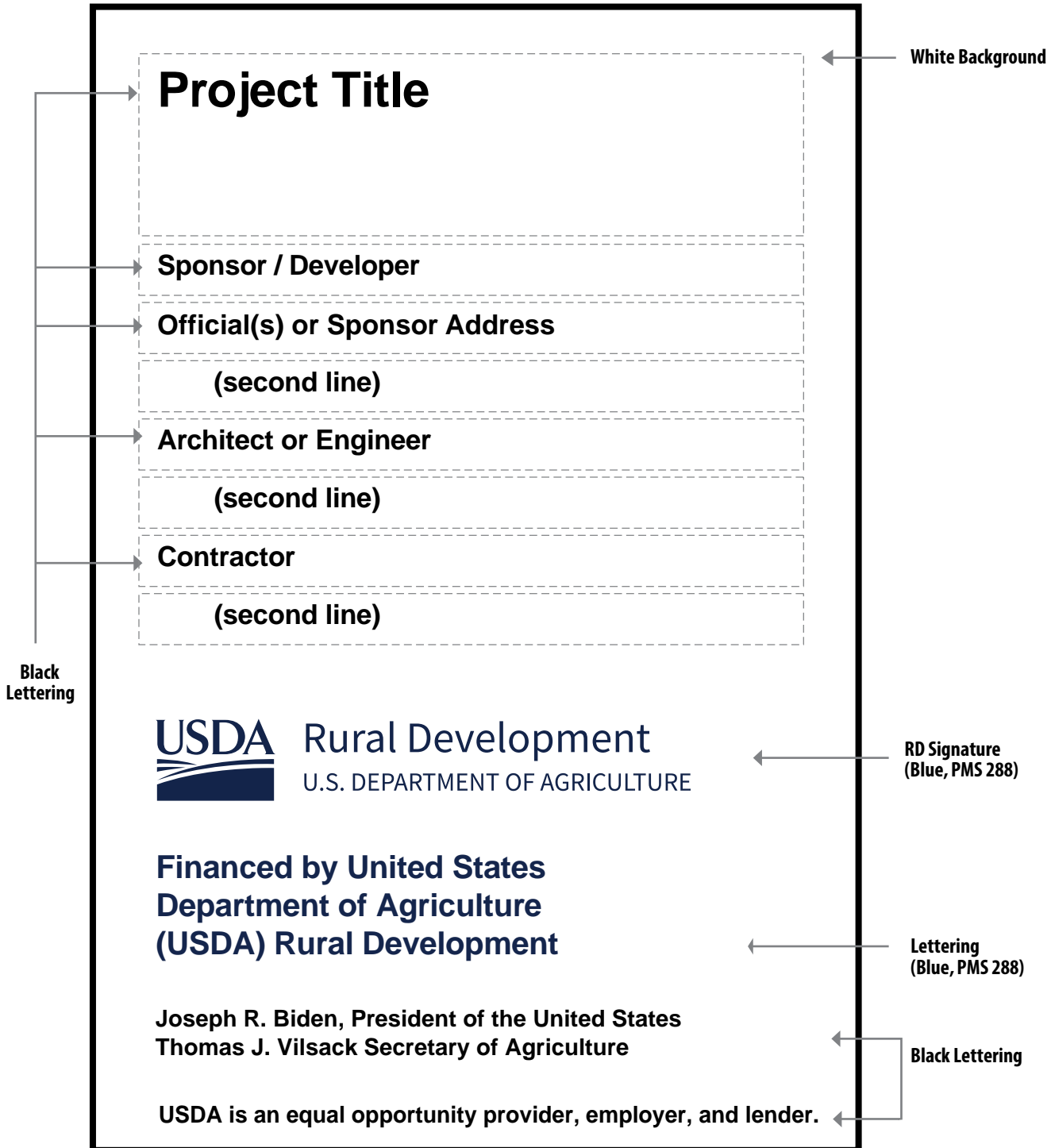
The contractor will remove the temporary construction sign(s) when all construction has been completed.

o O o

Intentionally Blank

TEMPORARY CONSTRUCTION SIGN FOR RURAL DEVELOPMENT PROJECTS

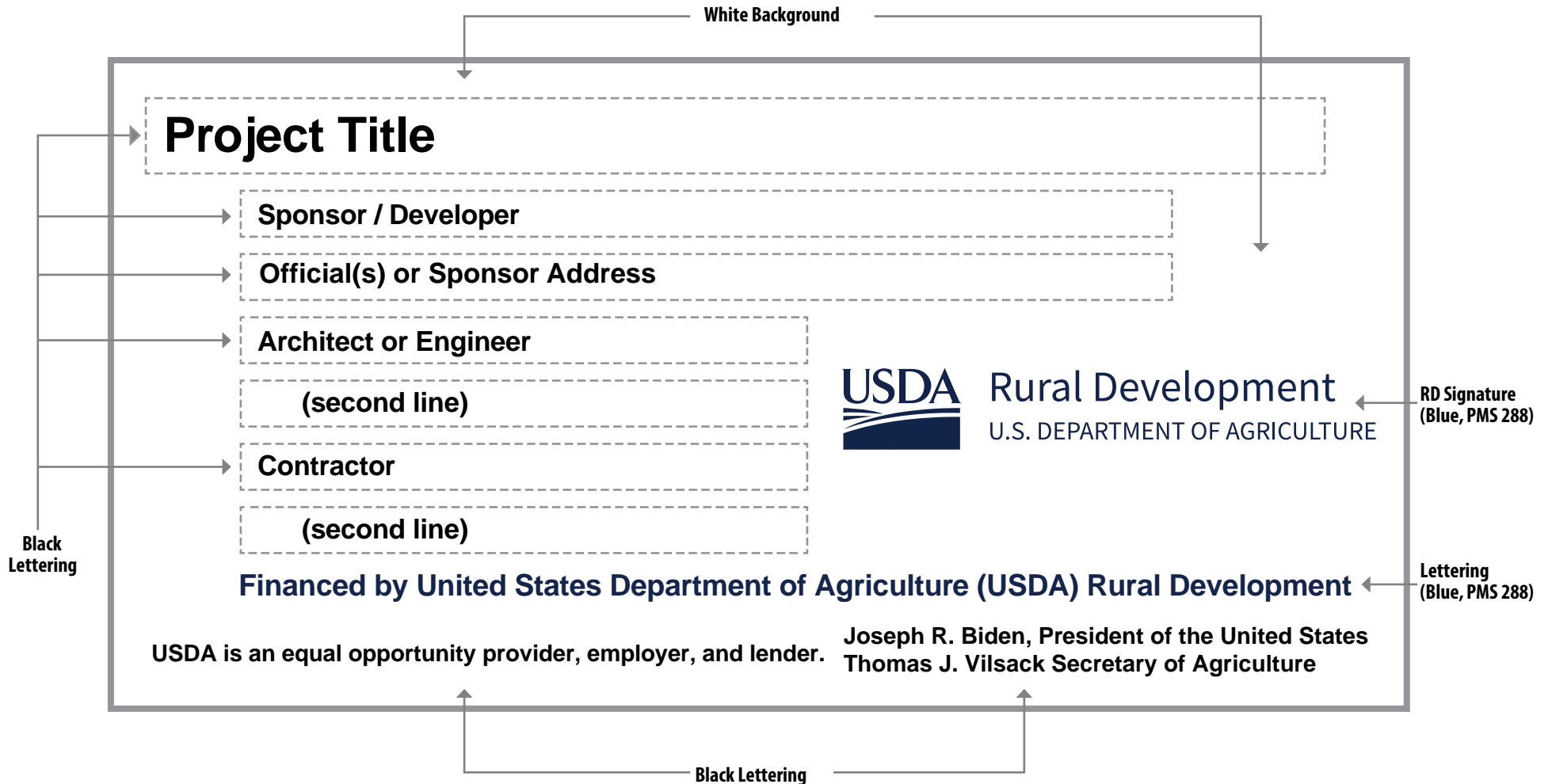
Recommended Fonts: Helvetica or Arial



SIGN DIMENSIONS : 1200 mm x 1800 mm x 19 mm (approx. 4' x 6' x 3/4")
PLYWOOD PANEL (APA RATED A-B GRADE-EXTERIOR)

TEMPORARY CONSTRUCTION SIGN FOR RURAL DEVELOPMENT PROJECTS

Recommended Fonts: Helvetica or Arial



SIGN DIMENSIONS : 1200 mm x 2400 mm x 19 mm (approx. 4' x 8' x 3/4")
PLYWOOD PANEL (APA RATED A-B GRADE-EXTERIOR)

DOMESTIC PREFERENCE *DE MINIMIS* LIST FORMAT

Notes to User: This exhibit is an example format for Contractors to use in maintaining a list of items to document the use of the De Minimis waiver of the Domestic Preference requirements. This list or similar is required to be filled out throughout the construction Contract as needed. The State Engineer may periodically ask to review this information. At the Contract completion, this list, along with all Manufacturers' certifications, are to be given to the Engineer for delivery to the Owner. This list is applicable for projects governed by BABAA. USDA-RD State Office can provide guidance if AIS applies to the project instead.

DE MINIMIS COSTING WORKSHEET

Project Name: _____

Contract Name/# (if more than one) _____

Contractor (Company Name): _____

Representative: _____

Date: _____

Total Project Costs : _____ \$

Allowable Total *De Minimis* Costs (5% of project costs) _____ \$

Total Cost of all *De Minimis* Items _____ \$

Remaining Amount Allowed for Future *De Minimis* Items _____ \$

No.	Detailed Description and Manufacturer or Local Source of <i>De Minimis</i> Material	Quantity	Cost Per Item	Total Item Cost
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

SAMPLE LANGUAGE FOR MANUFACTURER'S CERTIFICATION OF COMPLIANCE

Date:

Company Name:

Company Address:

Subject: Domestic Preference Requirement Certification for {*Owner's Name* and *Project Name (City, State)*} Certification for Project (X), Owner's Name, and Contract Number
Sample text:

I hereby certify that the following product(s) and / or material(s) shipped or provided for the subject project are in full compliance with the Build America, Buy America Act (BABAA) requirements under Title IX of the Infrastructure Investment and Jobs Act (IIJA), Pub. L. 117-58, §§ 70901-70953.

[List common name of items, products and/or materials]

EXAMPLES OF MUNICIPAL CASTINGS (*includes but not limited to*):

Access Hatches;
Ballast Screen;
Benches (Iron or Steel);
Bollards;
Cast Bases;
Cast Iron Hinged Hatches, Square and Rectangular;
Cast Iron Riser Rings;
Catch Basin Inlet;
Cleanout/Monument Boxes;
Construction Covers and Frames;
Curb and Corner Guards;
Curb Openings;
Detectable Warning Plates;
Downspout Shoes (Boot, Inlet);
Drainage Grates, Frames and Curb Inlets;
Inlets;
Junction Boxes;
Lampposts;
Manhole Covers, Rings and Frames, Risers;
Meter Boxes;
Service Boxes;
Steel Hinged Hatches, Square and Rectangular;
Steel Riser Rings;
Trash receptacles;
Tree Grates;
Tree Guards;
Trench Grates; and
Valve Boxes, Covers and Risers.

EXAMPLES OF CONSTRUCTION MATERIALS (*includes but not limited to*):

Wire rod, bar, angles
Concrete reinforcing bar, wire, wire cloth
Wire rope and cables
Tubing
Framing
Joists
Trusses
Fasteners (i.e., nuts and bolts)
Welding rods
Decking
Grating
Railings
Stairs
Access ramps
Fire escapes
Ladders
Wall panels
Dome structures
Roofing
Ductwork
Surface drains
Cable hanging systems
Manhole steps
Fencing and fence tubing
Guardrails
Doors
Stationary screens

EXAMPLES OF NON-CONSTRUCTION MATERIALS – *(includes but not limited to):*
(NOTE: *includes appurtenances necessary for their intended use and operation and are not subject to AIS*)

Pumps

Motors

Gear reducers

Drives (including variable frequency drives (VFDs))

Electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators)

Mixers

Gates (e.g. sluice and slide gates)

Motorized screens (such as traveling screens)

Blowers/aeration equipment

Compressors

Meters (flow and water meters)

Sensors

Controls and switches

Supervisory control Data acquisition (SCADA)

Membrane bioreactor systems

Membrane filtration systems (includes RO package plants)

Filters

Clarifier arms and clarifier mechanisms

Rakes

Grinders

Disinfection systems

Presses (including belt presses)

Conveyors

Cranes

HVAC (excluding ductwork)

Water heaters

Heat exchangers

Generators

Cabinetry and housings (such as electrical boxes/enclosures)

Lighting fixtures

Electrical conduit

Emergency life systems

Metal office furniture

Shelving

Laboratory equipment

Analytical instrumentation

Dewatering equipment.

Intentionally Blank

SAMPLE LANGUAGE FOR CONTRACTOR'S
CERTIFICATION OF COMPLIANCE

GENERAL (PRIME) CONTRACTOR'S CERTIFICATION OF COMPLIANCE WITH PROVISIONS OF THE AMERICAN IRON AND STEEL REQUIREMENTS OF SECTION 746 OF TITLE VII OF THE CONSOLIDATED APPROPRIATIONS ACT OF 2017 (DIVISION A - AGRICULTURE, RURAL DEVELOPMENT, FOOD AND DRUG ADMINISTRATION, AND RELATED AGENCIES APPROPRIATIONS ACT, 2017) AND SUBSEQUENT STATUTES MANDATING DOMESTIC PREFERENCE

Project Name
Owner / Applicant
Contract Number

I hereby certify, that to the best of my knowledge and belief, all Iron and Steel products, Manufactured Products, and Construction Materials installed for this project by my company and by any and all subcontractors and Manufacturers my company has contracted with for this project comply with the Build America, Buy America Act (BABAA) requirements under Title IX of the Infrastructure Investment and Jobs Act (IIJA), Pub. L. 117-58, §§ 70901-70953 or are the subject of a waiver approved by the Secretary of Agriculture or designee.

Intentionally Blank

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: Henderson Water District Owner's Project No.:
Engineer: Heneghan and Associates, pc Engineer's Project No.: 01000-412
Contractor: Contractor's Project No.:
Project: Phase V Distribution System Expansion
Contract Name:

This Preliminary Final Certificate of Substantial Completion applies to:

All Work The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: [Enter date, as determined by Engineer]

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: None As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: None As follows:

[List amendments to Contractor's Responsibilities]

The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By (signature): _____

Name (printed): _____

Title: _____

Intentionally Blank

NOTICE OF ACCEPTABILITY OF WORK

Owner: Henderson Water District
Engineer: Heneghan and Associates, PC
Contractor:
Project: Phase V Distribution System Expansion
Contract Name:
Notice Date: Effective Date of the Construction Contract:
Owner's Project No.:
Engineer's Project No.: 01000-412
Contractor's Project No.:

The Engineer hereby gives notice to the Owner and Contractor that Engineer recommends final payment to Contractor, and that the Work furnished and performed by Contractor under the Construction Contract is acceptable, expressly subject to the provisions of the Construction Contract's Contract Documents ("Contract Documents") and of the Agreement between Owner and Engineer for Professional Services dated [date of professional services agreement] ("Owner-Engineer Agreement"). This Notice of Acceptability of Work (Notice) is made expressly subject to the following terms and conditions to which all who receive and rely on said Notice agree:

1. This Notice has been prepared with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice has been prepared to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's Work) under the Owner-Engineer Agreement, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Owner-Engineer Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents, or to otherwise comply with the Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

Engineer

By (signature): _____

Name (printed): _____

Title: _____

Intentionally Blank

WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]

Owner: Henderson Water District
Engineer: Heneghan and Associates, PC
Contractor:
Project: Phase V Distribution System Expansion
Contract Name:
Date Issued: Effective Date of Work Change Directive:
Owner's Project No.:
Engineer's Project No.: 01000-412
Contractor's Project No.:

Contractor is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work]

Attachments:

[List documents related to the change to the Work]

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work]

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

Non-agreement on pricing of proposed change. Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: \$ _____ **[increase] [decrease] [not yet estimated].**
Contract Time: _____ days **[increase] [decrease] [not yet estimated].**

Basis of estimated change in Contract Price:

Lump Sum Unit Price Cost of the Work Other

Recommended by Engineer

Authorized by Owner

By:

Title:

Date:

Intentionally Blank

Intentionally Blank

FIELD ORDER NO.: [Number of Field Order]

Owner: Henderson Water District
Engineer: Heneghan and Associates, PC
Contractor:
Project: Phase V Distribution System Expansion
Contract Name:
Date Issued: Effective Date of Field Order:
Owner's Project No.:
Engineer's Project No.: 01000-412
Contractor's Project No.:

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

Issued by Engineer

By: _____

Title: _____

Date: _____

Intentionally Blank

WATER AND SEWER LINE CONSTRUCTION STANDARDS AND POLICIES

Established by the
ILLINOIS DEPARTMENT OF AGRICULTURE

The following standards and policies will serve to minimize the negative agricultural impacts that may result due to water and sewer line construction.

The standards and policies only apply to construction activities occurring partially or wholly on privately owned agricultural land. They do not apply to construction activities occurring on highway or railroad right-of-way, or on publicly owned land. The only exceptions are the construction standards relating to the repair of drainage tile (Item No. 3). The tile line construction standards shall be implemented regardless of where drainage tile is encountered.

Conditions

The mitigative actions specified in the construction standards and policies will be implemented in accordance with the conditions listed below:

- A. All mitigative actions are subject to change by landowners, provided such changes are acceptable to the Project Sponsor.
- B. The Project Sponsor may negotiate with landowners to carry out the mitigative actions that landowners wish to perform themselves. The landowners will receive the area commercial rate for their labor and machinery costs.
- C. All mitigative actions, unless otherwise specified, will be implemented within 45 days of completion of water or sewer line facilities on any affected property, weather and landowner permitting. Temporary repairs will be made by the Project Sponsor during the construction process as needed to minimize the risk of additional property damage that may result from an extended construction time period.
- D. All mitigative actions will extend to associated future construction, maintenance, and repairs.
- E. The Project Sponsor will provide a copy of the Water and Sewer Line Construction Standards and Policies to all owners of agricultural land that will be impacted by water and/or sewer line construction, and will do so at the time of easement contract negotiations.

Definitions

- | | |
|-------------------|---|
| Project Sponsor | - Entity proposing the construction of water or sewer lines and their related appurtenances. |
| Agricultural land | - Land used for cropland, pastureland, managed woodlands, truck gardens, orchards, nurseries, and other related agricultural enterprises dependent upon soil integrity. |
| Cropland | - Land used for growing row crops, small grains, or hay; includes land which was formerly used as cropland, but is currently in a government set-aside or conservation reserve program. |

- Water or Sewer Line - Includes water transmission and distribution lines, sewer trunk lines, sewer gravity flow lines, interceptors, or force mains and any related appurtenances.
- Landowner - Person(s) responsible for making decisions regarding the restoration of the land adversely impacted by a water or sewer line.
- Prime Farmland - Agricultural land comprised of soils that are defined by the USDA Natural Resources Conservation Service as being "Prime" soils (generally considered the most productive soils with the least input of nutrients and management).
- Right-of-Way - Includes the permanent and temporary easements that the Project Sponsor acquires for the purpose of constructing water or sewer lines across privately owned land.

WATER AND SEWER LINE CONSTRUCTION STANDARDS AND POLICIES

1. Water and Sewer Line Depth

- A. All water and sewer lines which are placed in trenches 24 inches in width or less will be buried with a minimum of 42 inches (**60 inches are suggested by the Illinois Department of Agriculture**) of top cover where they cross cropland.
- B. All water and sewer lines that are placed in trenches greater than 24 inches in width will be buried with 60 inches of topcover where they cross cropland.
- C. In terrain where bedrock prevents the placement of any water or sewer lines at the depths specified in 1.A. or 1.B. above, the water or sewer lines will be buried as deep as is practicable and feasible.

2. Topsoil Replacement

The following standards apply only when water and sewer lines are buried in trenches that are greater than 24 inches wide.

- A. The actual depth of the topsoil, will first be stripped from the area to be excavated for a water or sewer line trench, all bore pits, and other areas of excavation.
- B. All subsoil material that is removed from the trench will be placed in a second stockpile that is separate from the topsoil stockpile.
- C. In backfilling the trench and other excavated areas, the stockpiled subsoil material will be placed back into the trench first. The topsoil will be replaced last so that it remains the top layer of soil.
- D. The topsoil and subsoil must be replaced within the trench and other excavated area so that after settling occurs, the land's original contour (with an allowance for settling) will be achieved.

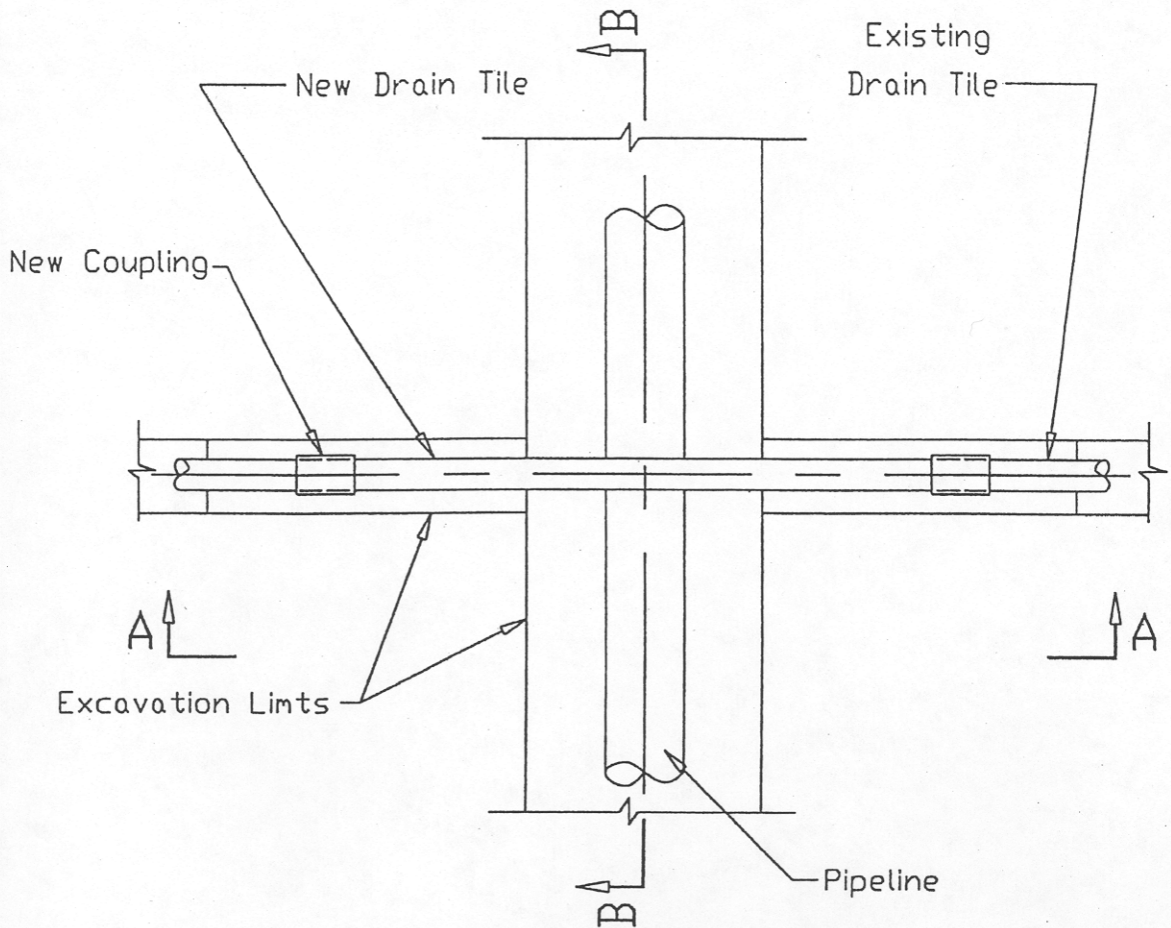
- E. The subsoil displaced by the water or sewer line must be hauled off the landowner's premises or disposed of on the landowner's premises at a location that is acceptable to the landowner.

3. Repair Of Damaged Tile Lines

If underground drainage tile is damaged by water or sewer line construction, it must be repaired in a manner that assures the tile line's proper operation at the point of repair. The following standards and policies shall apply to the tile line repairs.

- A. The Project Sponsor will endeavor to locate all tile lines prior to water or sewer line construction so repairs can be made if necessary. The Project Sponsor will contact affected landowners/tenants for their knowledge of tile line locations prior to any water or sewer line construction. All identified tile lines will be flagged to alert construction crews to the possible need for tile line repairs.
- B. All tile lines shall be repaired with materials of the same or better quality as that which was damaged.
- C. All damaged tile lines shall be immediately and temporarily repaired until such time that permanent repairs can be made.
- D. Where tile lines are severed by water or sewer line trenches, non-compactable support must be added around the repaired tile lines in accordance with the attached detail drawings.
 - 1. Within the trench, maximum rock size shall be 1 1/2 inch river gravel or 1 inch crushed stone for backfill under all tile lines.
 - 2. There must be a minimum of one foot of separation between a tile line and the water or sewer line whether the line passes over or under the tile line.
 - 3. In no instance will the grade of a tile line be changed.
- E. Heavy construction equipment working within a water or sewer line right-of-way may crush shallow drainage tile. All tile lines intersecting the water or sewer line trench will be probed laterally for their entire length within the water or sewer line right-of-way to check for damaged tile. Probing must occur immediately prior to the permanent repair of any severed tile lines. If tile lines are found to be damaged, they must be repaired so they operate as well after construction as before construction began, and in a manner that is acceptable to the landowner.
- F. All permanent tile line repairs must be made within 14 days of the date the damage occurred, weather and landowner permitting. If the landowner elects to make his/her own tile repairs, such damage payments will be negotiated with the Project Sponsor and must also be made within 14 days of the date of the completed repair work.
- G. The Project Sponsor will remain liable for a period of three (3) years following the completion of the water or sewer lines to ensure that all tile line repairs do not fail. The Project Sponsor will not be responsible for tile line repairs that the Project Sponsor pays the landowner to perform.

FIELD TILE REPAIR



EXCAVATION PLAN

NOTES:

1. Coarse aggregate shall be gravel, crushed gravel, pit run gravel or crushed stone and shall conform to the requirements of IDOT Standard Specification for Road and Bridge Construction Article 1004.01 and CA-18 gradation.
2. Geotextile may be woven or non-woven and shall conform to the requirements of Class 1 in the attached table 1 or 2. In addition, when pipeline trench depth exceeds 10 feet, puncture strength (ASTM D 483) shall be 150 lbs or greater.
3. New tile should be equal to or better than existing tile. Dual Wall polyethylene tubing conforming to ASHTO M-252 or M-294 may be used where existing tile is rigid conduit (clay or concrete).

AUTOCAD2000

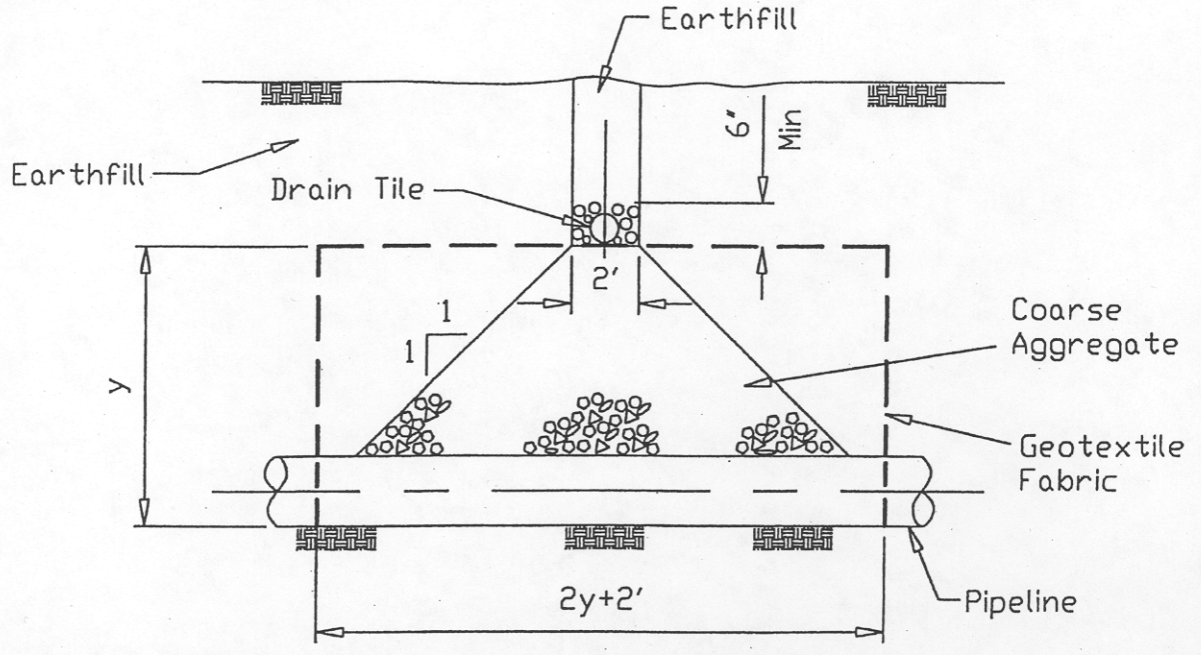
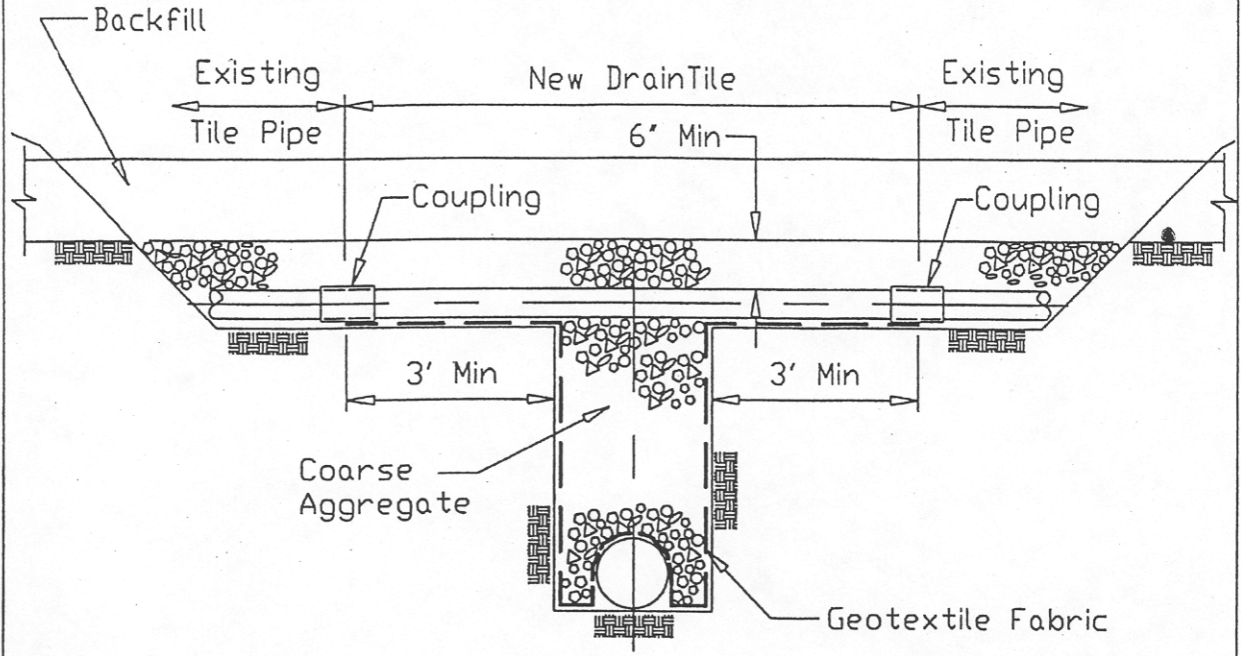
REFERENCE			
Project	_____		
Designed	_____	Date	_____
Checked	_____	Date	_____
Approved	_____	Date	_____



NATURAL RESOURCES
CONSERVATION SERVICE
ILLINOIS

STANDARD DWG. NO.
IL-ENG-150A
SHEET 1 OF 2
DATE: 12/98

FIELD TILE REPAIR



AUTOCAD2000

REFERENCE	Project	_____
	Designed	_____ Date _____
	Checked	_____ Date _____
	Approved	_____ Date _____



NATURAL RESOURCES
CONSERVATION SERVICE
ILLINOIS

STANDARD DWG. NO.
IL-ENG-150B
SHEET 2 OF 2
DATE: 12/98

Material Specification 592—Geotextile

1. Scope

This specification covers the quality of geotextiles.

2. General requirements

Fibers (threads and yarns) used in the manufacture of geotextile shall consist of synthetic polymers composed of a minimum of 85 percent by weight polypropylenes, polyesters, polyamides, polyethylene, polyolefins, or polyvinylidene-chlorides. They shall be formed into a stable network of filaments or yarns retaining dimensional stability relative to each other. The geo-textile shall be free of defects and conform to the physical requirements in tables 592–1 and 592–2. The geotextile shall be free of any chemical treatment or coating that significantly reduces its porosity. Fibers shall contain stabilizers and/or inhibitors to enhance resistance to ultraviolet light.

Thread used for factory or field sewing shall be of contrasting color to the fabric and made of high strength polypropylene, polyester, or polyamide thread. Thread shall be as resistant to ultraviolet light as the geotextile being sewn.

3. Classification

Geotextiles shall be classified based on the method used to place the threads or yarns forming the fabric. The geotextiles will be grouped into woven and nonwoven types.

Woven—Fabrics formed by the uniform and regular interweaving of the threads or yarns in two directions. Woven fabrics shall be manufactured from monofilament yarn formed into a uniform pattern with distinct and measurable openings, retaining their position relative to each other. The edges of fabric shall be selvaged or otherwise finished to prevent the outer yarn from unraveling.

Nonwoven—Fabrics formed by a random placement of threads in a mat and bonded by heat-bonding, resin-bonding, or needle punching. Nonwoven fabrics shall be manufactured from individual fibers formed into a random pattern with distinct, but variable small openings, retaining their position

relative to each other when bonded by needle punching, heat, or resin bonding. The use of nonwovens other than the needle punched geotextiles is somewhat restricted (see note 3 of table 592–2).

4. Sampling and testing

The geotextile shall meet the specified requirements (table 592–1 or 592–2) for the product style shown on the label. Product properties as listed in the latest edition of the "Specifiers Guide," Geotechnical Fabrics Report, (Industrial Fabrics Association International, 1801 County Road BW, Roseville, MN 55113-4061) and that represent minimum average roll values, are acceptable documentation that the product style meets the requirements of these specifications.

For products that do not appear in the above directory or do not have minimum average roll values listed, typical test data from the identified production run of the geotextile will be required for each of the specified tests (tables 592–1 or 592–2) as covered under clause AGAR 452.236-76.

5. Shipping and storage

The geotextile shall be shipped/transported in rolls wrapped with a cover for protection from moisture, dust, dirt, debris, and ultraviolet light. The cover shall be maintained undisturbed to the maximum extend possible before placement.

Each roll of geotextile shall be labeled or tagged to clearly identify the brand, class, and the individual production run in accordance with ASTM D 4873.

Table 592–1 Requirements for woven geotextiles

Property	Test method	Class I	Class II & III	Class IV
Tensile strength (pounds) ^{1/}	ASTMD 4632 grab test	200 minimum in any principal direction	120 minimum in any principal direction	180 minimum in any principal direction
Elongation at failure (percent) ^{1/}	ASTMD 4632 grab test	<50	<50	<50
Puncture (pounds) ^{1/}	ASTMD 4833	90 minimum	60 minimum	60 minimum
Ultraviolet light (% residual tensile strength)	ASTMD 4355 150-hr exposure	70 minimum	70 minimum	70 minimum
Apparent opening size (AOS)	ASTMD 4751	As specified, but no smaller than 0.212 mm (#70) ^{2/}	As specified, but no smaller than 0.212 mm (#70) ^{2/}	As specified, but no smaller than 0.212 mm (#70) ^{2/}
Percent open area (percent)	CWO-02215-86	4.0 minimum	4.0 minimum	1.0 minimum
Permittivity sec ⁻¹	ASTMD 4491	0.10 minimum	0.10 minimum	0.10 minimum

1/ Minimum average roll value (weakest principal direction).

2/ U.S. standard sieve size.

Note: CWO is a USACE reference.

Table 592–2 Requirements for nonwoven geotextiles

Property	Test method	Class I	Class II	Class III	Class IV ^{3/}
Tensile strength (lb) ^{1/}	ASTMD 4632 grab test	180 minimum	120 minimum	90 minimum	115 minimum
Elongation at failure (%) ^{1/}	ASTMD 4632	≥ 50	≥ 50	≥ 50	≥ 50
Puncture (pounds)	ASTMD 4833	80 minimum	60 minimum	40 minimum	40 minimum
Ultraviolet light (% residual tensile strength)	ASTMD 4355 150-hr exposure	70 minimum	70 minimum	70 minimum	70 minimum
Apparent opening size (AOS)	ASTMD 4751	As specified max. #40 ^{2/}	As specified max. #40 ^{2/}	As specified max. #40 ^{2/}	As specified max. #40 ^{2/}
Permittivity sec ⁻¹	ASTMD 4491	0.70 minimum	0.70 minimum	0.70 minimum	0.10 minimum

1/ Minimum average roll value (weakest principal direction).

2/ U.S. standard sieve size.

3/ Heat-bonded or resin-bonded geotextile may be used for classes III and IV. They are particularly well suited to class IV. Needle-punched geotextiles are required for all other classes.

4. Rock Removal

- A. The top 42 inches of a water or sewer line trench will not be backfilled with soil containing rocks that are larger than 3 inches in any dimension.
- B. If trenching, blasting, or boring operations are required through rocky terrain, suitable precautions will be taken to eliminate the potential for rocks to become interspersed with the soil material that is placed back in the trench.
- C. Rocks and/or soil containing rocks that are larger than 3 inches in any dimension must be hauled off the landowner's premises or disposed of on the landowner's premises at a location that is mutually acceptable to the landowner and the Project Sponsor.

5. Removal Of Construction Debris

All construction-related debris and material will be removed from the landowner's property. (Note: Such material to be removed would include litter generated by the construction crews.)

6. Compaction, Rutting, Fertilization, Liming

- A. When water and sewer lines are buried in trenches that are **greater than 24 inches in width**:
 - 1. Compaction will be alleviated on the trench and any adjacent work areas that are traversed by construction equipment. Cropland will be ripped at least 18 inches deep and pasture and woodland will be ripped or chiseled at least 12 inches deep.
 - 2. Any other areas of the right-of-way which are traversed by construction equipment and related vehicles will be ripped or chiseled at least 12 inches deep.
 - 3. At least 3 passes will be made over all lands to be ripped and/or chiseled.
 - 4. All cropland that has been disturbed by construction activities will be limed and fertilized where necessary in order to benefit the current and/or next year's agricultural production or vegetative cover to control soil erosion.
- B. When water and sewer lines are buried in trenches **less than 24 inches wide**, all right-of-way that has been traversed by construction equipment and related vehicles will be chiseled at least 12 inches deep with at least 3 passes being made.
- C. All ripping and chiseling will be done at a time when the soils are dry enough for normal tillage operations to occur on undisturbed cropland adjacent to the areas to be tilled.

7. Land Leveling

- A. The Project Sponsor will remain liable, for a period of two (2) years following the completion of a water or sewer line, to restore any right-of-way to its original elevation and contour should uneven settling occur or surface drainage problems develop due to inaccurate land leveling immediately following a water or sewer line's construction.
- B. The Project Sponsor will provide the landowners with a telephone number and address that may be used to alert the Project Sponsor of the need to perform additional land leveling services.

8. Prevention Of Soil Erosion

- A. The Project Sponsor will work with landowners to prevent excessive erosion on lands disturbed by construction. Reasonable methods will be implemented to control erosion. This is not a requirement, however, if the land across which a water or sewer line is constructed is bare cropland that the landowner intends to leave bare until the next crop is planted.
- B. If the landowner and Project Sponsor cannot agree upon a reasonable method to control erosion on the landowner's right-of-way, the Project Sponsor will follow the recommendations of the appropriate county Soil and Water Conservation District if the landowner so requests.

9. Repair Of Damaged Soil Conservation Practices

All soil conservation practices (such as terraces, grassed waterways, filter strips, concrete structures, dams, etc.) that are damaged by water or sewer line construction will be restored to at least their pre-construction condition.

10. Damages To Private Property

- A. With the exception of tile line repairs, the Project Sponsor will repair, replace, or pay to repair or replace damaged private property within 45 days, weather and landowner permitting, after a water or sewer line has been constructed across any affected property.
- B. Similar relief for damages will be extended by the Project Sponsor for any construction-related damages that occur off of the established water or sewer line right-of-way.
- C. The Project Sponsor will remain liable to correct damages to private property beyond the initial construction of a water or sewer line, to those damages incurred by future construction, operation, maintenance, and repairs.

11. Clearing Of Trees And Brush From The Easement

- A. If trees are to be removed from the right-of-way, the Project Sponsor will consult with the landowner to see if there are trees of commercial or other value to the landowner.
- B. If there are trees of commercial or other value to the landowner, the Project Sponsor will allow the landowner the right to retain ownership of the trees with the disposition of the trees to be negotiated prior to the commencement of land clearing.
- C. The Project Sponsor will follow the landowner's desires which are consistent with any applicable laws or ordinances regarding the disposal of trees, brush, and stumps of no value to the landowner by burning, burial, etc., or complete removal from any affected property.

12. Interference With Irrigation Systems

- A. If a water or sewer line intersects an operational (or soon to be operational) spray irrigation system, the Project Sponsor will establish with the landowner an acceptable amount of time the irrigation system may be out of service.

- B. If an irrigation system interruption results in crop damages, either on the water or sewer line right-of-way or off the right-of-way, the landowner will be compensated for all such crop damages.
- C. If it is feasible and mutually acceptable to the Project Sponsor and the landowner, temporary measures will be implemented to allow an irrigation system to continue to operate across land on which a water or sewer line is also being constructed.

13. Ingress And Egress Routes

Prior to any water or sewer line construction, the Project Sponsor and the landowner will reach a mutually acceptable agreement on the route that will be utilized for entering and leaving the water or sewer line right-of-way should access to the right-of-way not be practical or feasible from adjacent segments of the water or sewer line right-of-way or from public highway or railroad right-of-way.

14. Temporary Roads

- A. The location of temporary roads to be used for construction purposes will be negotiated with the landowner.
- B. If temporary roads must be constructed, they will be designed to not impede surface drainage soil erosion on or near the temporary roads will be minimized.
- C. Upon abandonment, temporary roads may be left intact through mutual agreement of the landowner and the Project Sponsor.
- D. If the temporary roads are to be removed, the right-of-way upon which the temporary roads are constructed will be returned to their previous use and restored to the same or better condition as existed prior to their construction.

15. Weed Control

- A. On any right-of-way over which the Project Sponsor has jurisdiction as to the surface use of such land (well heads, pump or lift stations, valve sites, etc.), the Project Sponsor will provide for weed control in a manner that does not allow for the spread of weeds onto adjacent lands used as cropland.
- B. The Project Sponsor will remain liable for the costs incurred by owners of land adjacent to surface facilities when the landowners must control weeds on their land which have spread from land accommodating water or sewer line surface facilities.

16. Pumping Of Water From Open Trenches

- A. In the event it becomes necessary to pump water from open trenches, the Project Sponsor will pump the water in a manner that will avoid damaging adjacent agricultural land. Such damages include, but are not limited, inundation of crops for more than 24 hours and the deposition of sediment and gravel in fields, pastures, ditches, and any water bodies or water courses.
- B. If it is impossible to avoid water-related damages as described in 16.A. above, the Project Sponsor will compensate the landowners for the damages or will correct the

damages so as to restore the agricultural land, water courses, etc. to their pre-existing condition.

- C. All pumping of water shall comply with existing drainage laws, local ordinances relating to such activities, and provisions of the Clean Water Act.

17. Aboveground Facilities

Aboveground facilities shall be located so they will not be a hindrance to ongoing agricultural activities occurring on the lands adjacent to the facilities. First priority shall be made to locating aboveground facilities on right-of-way that is not used as cropland. If this is not feasible, such facilities shall be located so as to incur the least hindrance to the adjacent cropping operations (i.e., located in field corners or areas where at least one side is not used for cropping purposes).

18. Advance Notice Of Access To Private Property

- A. The Project Sponsor will provide the landowner or tenant with a minimum of 24 hours prior notice before accessing his/her property for the purpose of constructing a water or sewer line.
- B. Prior notice shall first consist of a personal contact or a telephone contact, whereby the landowner or tenant is informed of the Project Sponsor's intent to access the land. If the landowner or tenant cannot be reached in person or by telephone, the Project Sponsor will mail or hand deliver to the landowner or tenant's home a dated, written notice of the Project Sponsor's intent. The landowner or tenant need not acknowledge receipt of the written notice before the Project Sponsor can enter the landowner's property.

19. Reporting Of Inferior Agricultural Impact Mitigation Work

Prior to the installation of any water or sewer line, the landowners will be provided with a number they can call to alert the Project Sponsor should landowners observe inferior work relating to the agricultural impact mitigation work which is performed on their property.

20. Indemnification

For any water or sewer line installation, the Project Sponsor will indemnify all landowners, their heirs, successors, legal representatives, and assigns from and against all claims, injuries, suits, damages, costs, losses, and expenses including legal fees resulting from or arising out of the construction, maintenance, removal, repair, use or existence of a water or sewer line, whether heretofore or hereafter constructed, including damage to a water or sewer line or any of its appurtenances and the leaking of its contents, except where claims, injury, suits, damages, costs, losses, and expenses are caused by the negligence or intentional acts of the landowners, their heirs, successors, legal representatives, and assigns.

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____)

County of _____) ss.

_____, being first duly sworn, deposes and says that:

1. He is _____ of _____ the Bidder that has submitted the attached Bid;
2. He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the **City of Carlinville** (Local Public Agency) or any person interested in the proposed Contract; and
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this affiant.

(Signed)

(Name & Title)

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

(Notary Public)

My Commission Expires: _____

Intentionally Blank

Technical Specifications

Intentionally Blank

General Information

Table of Contents

Section 10

10.01. ABBREVIATIONS..... 10.1

10.02. AWWA SPECIFICATIONS TITLES 10.2

10.03. REQUIRED SUBMITTALS 10.2

 10.03.01 Water Main 10.3

 10.03.02 Elevated Tank 10.6

 10.03.03 Booster Pump Station..... 10.6

 10.03.04 Ground Storage Tank..... 10.6

 10.03.05 Water Treatment Plant 10.6

 10.03.06 Pressure Reducing Station 10.6

Intentionally Blank

General Information

Section 10

10.01. ABBREVIATIONS

ADD	Addition	INF	Inflow
AI	Area Inlet	INV	Invert
ANSI	American National Standards Institute	IPS	Iron Pipe Size
ASA	American Standards Association	LA	Lane
ASTM	American Society for Testing and Materials	LF	Lineal Foot
ATG	Adjust to Grade	MAX	Maximum
AVE	Avenue	MH	Manhole
AWWA	American Water Works Association	MJ	Mechanical Joint
BC	Back of Curb	MIN	Minimum
BM	Benchmark	MIP	Male Iron Pipe
BK	Book	N/F	Now and Former
BLVD	Boulevard	NO	Number
BLDG	Building	PG	Page
BPS	Booster Pump Station	PVMT	Pavement
CB	County Highway Bore	POC	Point of Commencement
CL	Centerline	POB	Point of Beginning
CJ	Construction Joint	PC	Point of Curvature (Roads)
CONC	Concrete	PC	Pressure Class (Water and Sewer)
CMP	Corrugated Metal Pipe	PE	Polyethylene
CF	Cubic Foot	PI	Point of Intersection
CY	Cubic Yard	PT	Point of Tangent
CI	Curb Inlet (Roads)	PVC	Polyvinyl Chloride
CI	Cast Iron (Water and Sewer)	PE	Private Entrance (Roads)
CIOD	Cast Iron Outside Diameter	PE	Polyethylene Pipe
CTS	Copper Tube Size	PL	Property Line
DR	Drive	PS	Pipe Stiffness
DI	Ductile Iron	RR	Railroad
ESMT	Easement	RCP	Reinforced Concrete Pipe
EJ	Expansion Joint	ROW	Right of Way
FT	Feet	RPR	Resident Project Representative
FES	Flared End Section	SAN	Sanitary
FB	Flat Bottom	SB	State Highway Bore
FL	Flow Line	SDR	Standard Dimension Ratio
FIP	Female Iron Pipe	SF	Square Feet
GI	Grated Inlet	SY	Square Yard
GST	Ground Storage Tank	STA	Station
HDPE	High-Density Polyethylene Pipe	SWPPP	Storm Water Pollution Prevention Plan
IDOT	Illinois Department of Transportation	TB	Township Road Bore
IHPA	Illinois Historic Preservation Agency	TBM	Temporary Bench Mark
IN	Inches	TYP	Typical

TOC	Top of Curve	TSM	Temporary Seed and Mulch
TOA	Top of Asphalt	UFR	Uni-Flange Restraint
TBR	To Be Removed	VCP	Vitreous Clay Pipe
TBR&R	To Be Removed and Replaced		

10.02. AWWA SPECIFICATIONS TITLES

- C-104-ANSI A21.4-Standard for Cement-Mortar Lining
- C-105-ANSI A21.5-Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems
- C-110-ANSI A21.10-Standard for Ductile-Iron and Gray-Iron Fittings
- C-111-ANSI A21.11-Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
- C-115-ANSI A21.15-Standard for Flanged Ductile Iron Pipe with Threaded Flanges
- C-150-ANSI A21.50-Standard for Thickness Design for Ductile-Iron Pipe
- C-151-ANSI A21.51-Standard for Ductile-Iron Pipe, Centrifugally Cast
- C-153-ANSI A21.53-Standard for Ductile-Iron Compact Fittings for Water Service
- C-502-Standard for Dry-Barrel Fire Hydrants
- C-509-Standard for Resilient –Seated Gate Valves for Water Supply Service
- C-515-Standard for Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service
- C-550-Protective Epoxy Interior Coating for Valves and Hydrants
- C-606-Standard for Grooved and Shouldered Joints

10.03. DEFINED INFORMATION

OWNER – Henderson Water District

Selected Granular Backfill – CA-6 or equal

Standard Specifications for Water and Sewer Main Construction in Illinois ("Standard Water and Sewer Specifications")

State of Illinois Standard Specifications for Road and Bridge Construction ("IDOT Standard Specification")

10.04. REQUIRED SUBMITTALS

On Submittals, please mark the product model number and the options and/or sizes you will be using. Also, please mark all standards required in the specifications. If the specifications are not marked up, preferably by highlighter, then they will be returned as rejected. Please provide a copy of all standards that a material references for our review and concurrence. The minimum number of submittals is 4, one for the CONTRACTOR and 3 to remain with the ENGINEER. The ENGINEER will not make copies of the submittals to return to the CONTRACTOR.

**10.04.01 Water
Main**

WATER MAIN		Manufacturer	Model No.	Equal Accepted	Section	Submittal Required
1	Anchor Coupling	---	---	---	51.09.15	YES
2	Casing	---	---	---		YES
3	Casing Spacers				51.09.17	
	a Water main 6-inch or smaller	CCI Pipeline Systems or equal	---	YES		YES
	b Water main larger than 6-inch	Cascade Waterworks Mfg. Co, BWM Co. or equal	---	YES		YES
4	Combination Air Release Valve				51.09.07	
	a 1"	APCO Valve and Primer Combination, Val-Matic or equal	143C or 201C *	NO **		YES
	b 2"	APCO Valve and Primer Combination, Val-Matic or equal	145C or 202C *	NO **		YES
5	Copper Tracer Wire				51.09.10	
	a Bores	Copperhead Industries, Inc.	1245EHS	NO **		YES
	b Trenching	Copperhead Industries, Inc.	1430HS	NO **		YES
	c Connectors	Copperhead Industries, Inc.	3WB-01	NO **		YES
6	End Seals	Taper Not Allowed			51.09.16	YES
7	Fittings				51.07	
	a Ductile Iron - Compact Fittings	Tyler/Union OR US	---	NO **		YES
	b Ductile Iron - Flanged Fittings	Tyler/Union OR US	---	NO **		YES
	c RJ-PVC Expansion Coupling	---	---	---		YES
	d HDPE Fittings	---	---	---		YES
8	Gate Valves				51.09.04	
	a 3 inch to 12 inch	Mueller OR Equal M&H	Mueller A-2360-20	NO**		YES
	b 14 inch and up	Mueller OR Equal M&H	Mueller A-2361-20	NO**		YES
9	Hydrants				01.09.02	
	a 2 1/4" Flushing Hydrant	Mueller	A-411	NO**		YES
	b 4 1/2" Flushing Hydrant	Mueller OR equal Kennedy OR Clow Medalian	Mueller A-420, Super Centurion 250	YES		YES
	c 5 1/4" Fire Hydrant	Mueller	A-420, Super Centurion 250	NO**		YES
10	Pipe					
	a HDPE	---	---	---	51.06	YES
	b PVC	---	---	---	51.03	YES

	c	Restrained Joint PVC	---	---	---	51.04	YES
	d	Ductile Iron	---	---	---	51.05	YES
	e	Restrained Joint Ductile Iron	Griffin or equal	Snap-Lok	YES	51.05.C	YES
	f	Ductile Iron River Crossing Pipe	Griffin or equal	River Crossing Pipe	YES	51.05.E	YES
	g	Copper Service Line	---	---	---	51.09.01	YES
	h	PE Service Line	---	---	---	51.09.01	YES
11		Pipe Restraining				51.09.14	
	a	Ductile Iron	Ford/Uni-Flange or equal (MegaLug is not an equal)	Series 1500	YES		YES
	b	PVC	Ford/Uni-Flange or equal	Series 1400	YES		YES
12		Saddle	Mueller or equal	---	NO **	51.09.20	
13		Sampling Station	Kupferle Foundry or equal	Eclipse No. 88	YES	51.09.09	YES
14		Stainless Steel	Smith OR Blair OR Ford	---	YES	51.09.12	YES
15		Tracer Wire Access					
	a	Marker	Rhino	TVPT90BB2	YES	51.09.11	YES
	b	Label	Rhino	GD-1332K	YES		
16		Valve Box	Tyler OR Sigma (equal in weight)	Tyler 6850	NO **	51.09.05	YES
17		Valve Box Marker					
	a	Marker	Rhino	TVPA72BB	YES	51.09.06	YES
	b	Label		GD-5194K	YES	51.09.06	YES
18		Meter Equipment					
	a	Corporation Stop - 1"	Mueller OR Ford	---	NO **	51.09.19	YES
	b	Corporation Stop - 1 1/2" & 2"	Ford	---	NO **	51.09.19	YES
	c	2" Gate Valve for Service Line	American Flow Control	---	NO **	51.10.02	YES
	d	Meter Register	See 21 Below	---	NO **		YES
	e	Pressure Regulator	Watts	5M3-Z6	NO **	51.09.22	YES
19		Meter Skin/Insulation	Municipal and Contractor Ceiling Products		YES	51.09.07	YES
20		Butterfly	DeZurik or Henry Pratt Co. ++	---	YES	51.09.03	YES
21		Meter				51.09.21	
	a	5/8 x 3/4 inch meter	Neptune (Schlumberger) Model T-10 displacement type meter, measuring 5/8" x 3/4",		NO **		YES
	b	1 inch meter	laying length of 10-3/4". The one inch (1"		NO **		YES
	c	1 1/2 inch meter	Meter), laying length of 13". The meter end		NO **		YES
	d	2 inch meter	The meter end connections shall be flanged.		NO **		YES

	e	5/8 x 3/4 inch meter w/ regulator	Neptune (Schlumberger) Model T-10 displacement type meter, measuring 5/8" x 3/4".		NO **		YES
	f	1 inch meter w/ regulator	Neptune (Schlumberger) Model T-10 (1" Meter). The one inch (1") meters shall be provided with Neptune (Schlumberger) Model T-10 (1-1/2" Meter). The meter end connections shall be Neptune (Schlumberger) Model T-10 (2" Meter). The meter end connections shall be flanged.		NO **		YES
	g	1 1/2 inch meter w/ regulator			NO **		YES
	h	2 inch meter w/ regulator			NO **		YES
	i	Radio-Read and Touch-Read Capabilities		---	---	NO **	
22		Meter Yoke					
	a	5/8 x 3/4 inch & 1 inch meters	Ford	VBHH9221W44-44B	NO **	51.09.23	YES
	b	5/8 x 3/4 inch & 1 inch meters w/ regulator	Ford	TVBHH9221W44-44B	NO **	51.09.23	YES
	c	1 1/2 inch meters with and without regulator	Ford	VBHH76-21B-44-77-G Custom Setter with Bypass	NO **	51.09.23	YES
	d	2 inch meters with and without regulators	Ford	VBFF77-21B-44-77-G Custom Setter with Bypass	NO **	51.09.23	YES
23		Meter Box		All Tough Core Plus (Depth x ID)			
	a	5/8 x 3/4 inch meter	Midwest Meter, Inc.	30" x 21"	NO **	51.09.24	YES
	b	1 inch meter	Midwest Meter, Inc.	30" x 24"	NO **	51.09.24	YES
	c	1 1/2 inch meter	Midwest Meter, Inc.	36" x 30"	NO **	51.09.24	YES
	d	2 inch meter	Midwest Meter, Inc.	36" x 36"	NO **	51.09.24	YES
	e	5/8 x 3/4 inch meter w/ regulator	Midwest Meter, Inc.	30" x 21"	NO **	51.09.24	YES
	f	1 inch meter w/ regulator	Midwest Meter, Inc.	30" x 24"	NO **	51.09.24	YES
	g	1 1/2 inch meter w/ regulator	Midwest Meter, Inc.	36" x 30"	NO **	51.09.24	YES
	h	2 inch meter w/ regulator	Midwest Meter, Inc.	36" x 36"	NO **	51.09.24	YES
24		Meter Lid					
	a	5/8 x 3/4 inch meter	Ford Type C, # C4-T W/ No Ext Ring		NO **	51.09.25	YES
	b	1 inch meter	Ford Type C, # C4-T W/ Ext Ring No. 2		NO **	51.09.25	YES
	c	1 1/2 inch meter	Ford Type C, # C4-T W/ Ext Ring No. 4		NO **	51.09.25	YES

	g	1 1/2 inch meter w/ regulator	Ford Type C, # C4-T W/ Ext Ring No. 4	NO **	51.09.25	YES
	h	2 inch meter w/ regulator	Ford Type C, # C4-T W/ Ext Ring No. 5	NO **	51.09.25	YES
25		Bio Penetrant	Clearitas 101	NO**	41.08.B	YES
26		Auto Flusher				
	a	Kupferle	#9794 A/B	YES**	51.09.26	YES

* Respectively

** no like, equivalent, or "or-equal" item or substitution permitted.

*** A.R.I. is located in Kfar charuv, 12932 Israel

++Milliken valves will not be allowed.

10.04.02 Elevated Tank

Intentionally Blank

10.04.03 Booster Pump Station

Intentionally Blank

10.04.04 Ground Storage Tank

Intentionally Blank

10.04.05 Water Treatment Plant

Intentionally Blank

10.04.06 Pressure Reducing Station

Intentionally Blank

10.04.07 Sewer Main

Intentionally Blank

10.04.08 Master Meter Vault

	Item	Manufacturer	Model No.	Equal Accepted	Section	Submittal Required
1	Master Meter	Badger		NO **		YES
2	Reader	Badger		NO **		YES
3	Pressure Sustaining Valv		CLA VAL 50-90	NO **		YES
4	Check Valve	Dezurik-APCO	CRF, 10, 100, F1, DI, NBR, PI*HOD	NO **		YES
5	Gate Valve	AFC	Series 2500 (Flange)	NO **		YES
6	DI Pipe			YES		YES
7	Gauges	Ashcroft	1279ASL	YES		YES

General Requirements

Table of Contents

Section 11

11.01.	SCOPE OF WORK.....	11-1
11.02.	STRUCTURES AND UTILITIES ENCOUNTERED	11-1
11.03.	WATER LINE DAMAGE.....	11-3
11.04.	PAYMENT FOR WATER USED.....	11-3
11.05.	STANDARD SPECIFICATIONS	11-3
11.06.	RIGHTS-OF-WAY AND EASEMENTS.....	11-3
11.07.	EQUIPMENT AND PRODUCTS	11-5
11.08.	MANUFACTURER’S REPRESENTATIVE.....	11-6
11.09.	SOIL BORING DATA	11-6
11.10.	CLEANING UP	11-6
11.11.	LOCATION OF THE WORK	11-7
11.12.	COORDINATION WITH LOCAL ROADWAY OFFICIALS	11-7
11.13.	COORDINATION WITH LOCAL ELECTRICAL AND TELEPHONE UTILITIES	11-8
11.14.	CONSTRUCTION SEQUENCE.....	11-8
11.15.	CONTRACT RESPONSIBILITY	11-8
11.16.	COORDINATION WITH ARCHAEOLOGICAL CONSULTANT	11-8
11.17.	COORDINATION WITH RAILROAD COMPANIES	11-8
11.18.	COORDINATION WITH RESIDENT PROJECT REPRESENTATIVE	11-9
11.19.	JULIE LOCATES	11-9
11.20.	ROAD RESTORATION.....	11-9
11.21.	NPDES PERMIT COMPLIANCE	11-9
11.22.	CONTRACTOR REPRESENTATION AT MONTHLY BOARD MEETINGS	11-10
11.23.	OWNER’S STOP-WORK AUTHORITY	11-10
11.24.	MAILBOX RELOCATION	11-10
11.25.	TRAFFIC CONTROL	11-10
11.26.	ACCESS ROAD	11-11

Intentionally Blank

General Requirements

Section 11

11.01. SCOPE OF WORK

The work, as proposed, includes the furnishing of all labor, materials, equipment, transportation and performing of all operations required to construct improvements for the OWNER, all as shown on the Drawings and/or as herein specified. In case of conflict between the Drawings and project specifications, the CONTRACTOR shall notify the ENGINEER prior to bidding, to clarify the discrepancy and obtain a decision on which document governs. If the CONTRACTOR or any of his subcontractors fail to notify the ENGINEER prior to bidding, then the CONTRACTOR shall provide and install the intended material or equipment at no additional cost to the contract price.

It shall be the responsibility of the CONTRACTOR to furnish and install complete and working systems to perform the intended purposes as required by the Drawings and these specifications. The CONTRACTOR shall be responsible for all details which may be necessary to properly install, adjust, and place into operation the complete installation, including the location of all water main installation, and shall include the costs of all such details in the bid. It will be the OWNER'S responsibility to stake the public road right-of-way.

The CONTRACTOR shall guarantee that the material furnished shall be properly installed and shall perform the duty for which it is intended. CONTRACTOR shall guarantee all materials, workmanship, and completed installation to be first class in every particular and shall, at his own expense, furnish and replace any part or parts that may prove defective in material, equipment, or workmanship within one year from the date of substantial completion, in accordance with the General of this Contract.

This work shall be governed by an IEPA permit for construction. This permit shall be obtained for the CONTRACTOR by the OWNER before any construction operations begin. The OWNER will also obtain the necessary easements, NPDES Permits, highway permits, and railroad permits to construct the improvements. The CONTRACTOR shall familiarize himself with all requirements as to traffic control, flagmen, maintenance of trench, advance warning signs, etc., as required by state and local highway departments and railroad companies.

The CONTRACTOR is responsible for conforming with the requirements of all applicable health and safety regulations and precautions as required by local, state and federal regulatory agencies including, but not limited to OSHA and IDOL. In accordance with the requirements of the OSHA regulations for construction, the CONTRACTOR shall provide and require the use of personal protective and lifesaving equipment for all persons working in or about the project.

11.02. STRUCTURES AND UTILITIES ENCOUNTERED

Various underground and surface structures may or may not be shown on the Drawings. The location and dimensions of such structures, where given, do not purport to be absolutely correct. The structures are plotted on the Drawings for the information of the CONTRACTOR, but information so given is not to be construed as a representation that such structures will be found or encountered as plotted. Other structures may also be encountered which are not shown on the Drawings.

The CONTRACTOR shall maintain in operating condition all utilities encountered in this work. Any existing utilities damaged as a result of this construction shall be repaired to the satisfaction of the owner of the utility at the CONTRACTOR's expense, whether or not said utilities are shown on the Drawings. Existing utilities may be relocated with the approval of the owner of the utility. This relocation shall be at the CONTRACTOR's expense, done according to the requirements of the utility owner and shall be sufficient to clear the proposed improvement.

Before beginning work in an area, the CONTRACTOR shall contact JULIE at 800-892-0123 and any other non-JULIE member companies maintaining utilities, pipelines, transmission lines, and any other potential obstacles in the project area and request their assistance in field locating their utilities in that area. The CONTRACTOR, however, shall be solely responsible for the location of utilities. The utilities shown are for informational purposes only and the OWNER and the ENGINEER do not imply that the information is complete.

The CONTRACTOR shall be entirely responsible for all injuries to water pipes, electric conduits, existing drains or sewers, field tiles, sump pump drain lines, poles carrying currents, telephone or telegraph lines, railroad bridges and tracks, streets, pavements, sidewalks, curbs, fences, culverts, buildings, trees larger than 6 inches in diameter, or other structures of any kind met with during the prosecution of the work, whether on public or private property.

All such structures or utilities which are damaged or removed to allow construction shall be restored to a condition at least equivalent to that which existed at the commencement of the work unless additional written arrangements are made satisfactory to the owner of said property (copy to owner). The CONTRACTOR shall care for and maintain all such structures or utilities encountered, and where service by them is interrupted, he shall provide and maintain temporary service until repair is complete and full service is restored. Repair of and restoration of service from essential structures or utilities shall be prompt; in these cases, if repair is unnecessarily delayed or unsatisfactory in the judgment of the OWNER, the OWNER may have the repairs made and may deduct the cost thereof from payments due the CONTRACTOR. All costs associated with structures or utilities encountered, including removal, replacement, repair, temporary service, or complications to proposed work shall be incidental to the project and shall be performed without any increase in the Contract Price.

Any field drainage tiles, drainage ditches, gutter drains, sump discharges, or storm sewers interfered with by the construction of the improvement shall be rerouted around the improvement in such a way as to maintain the drainage of areas upstream and downstream of the improvements; any such work shall be approved by the OWNER and shall be done by the CONTRACTOR without any increase in the Contract Price. Agriculture field terraces shall only be bored, and will be paid for at the CONTRACTOR'S unit bid price for BORING WATER MAINS of the appropriate diameter. In the event a terrace is "accidentally" cut, either with a hoe or trencher, the terrace must be reshaped, compacted, and protected from erosion within 72 hours after the terrace is cut. All work associated with a terrace that is "accidentally" cut shall be performed by the CONTRACTOR without any increase in the Contract Price.

Existing trees and shrubs within easements and rights-of-way shall be protected from damage, and when such trees or shrubs are in the way of construction, the ENGINEER may instruct the CONTRACTOR to prune branches interfering with the work, or remove and dispose of trees or shrubs, or transplant trees or shrubs out of the way of the construction and the Contract Price shall not be increased for the performance of such work.

The CONTRACTOR shall be liable for damage to trees and shrubs which were to have been protected as directed by the OWNER, unless such damages are determined by the OWNER to have been unavoidable, and moneys due the CONTRACTOR may be withheld to cover such damages.

11.03. WATER LINE DAMAGE

In addition to the discussion under Structures and Utilities Encountered, the following shall apply: If existing or proposed water lines or service lines are damaged or leak due to the CONTRACTOR's construction procedures, emergency temporary repairs shall be made immediately. The CONTRACTOR shall permanently repair the water lines or service lines within 24 hours of receiving verbal notice from the OWNER. If the CONTRACTOR does not perform the repairs within the required time period, the OWNER may perform the repair and bill the CONTRACTOR for actual costs for administration, labor, equipment and materials related to such repairs including, but not limited to administration, labor, equipment, and material.

This criteria shall be in force seven days per week, including holidays and shall extend through the construction period and the one year guarantee period.

The CONTRACTOR shall discuss the location of all existing water service lines, well lines, etc., with the local property owners, perform test digs, etc., to satisfy himself as to the location of these lines prior to bidding and/or construction, as damage and repair work to these lines are incidental to the contract.

11.04. PAYMENT FOR WATER USED

Payment for water used by the CONTRACTOR for boring operations and to flush, test, chlorinate, and place in service the water lines and service connections shall be billed to the CONTRACTOR by the OWNER at \$12.00 per thousand gallons used. Unless the amount used for these items is actually metered, the OWNER will assume the quantity used to be [10] times the entire pipeline volume. Losses of water due to water line breaks or leaks, accidental or otherwise, during construction and the warranty period shall be estimated and billed to the CONTRACTOR at the same stated rate.

11.05. STANDARD SPECIFICATIONS

The Standard Water and Sewer Main Specifications referenced in these specifications refer to the current edition of the Standard Specifications for Water and Sewer Main Construction in Illinois (Standard Water and Sewer Specifications). In case of conflict with the Standard Water and Sewer Specifications, these Technical Provisions shall govern.

11.06. RIGHTS-OF-WAY AND EASEMENTS

The OWNER has secured the necessary public right-of-way permits and/or as many private easements as possible, for the construction of the work. These documents are on file with the ENGINEER and should be reviewed by all bidders prior to the bid date. All bidders are responsible for including in their bid, all costs associated with or caused by any easements involved in the project. The CONTRACTOR (successful bidder) shall be furnished copies of these documents prior to construction so that he may contain his construction activities to the permissible areas listed in each easement. The CONTRACTOR shall also be furnished copies of any additional private easements obtained between

the bid date and the start of construction. Note that any reference to percentage of signed private easements is the number of easements signed divided by the number required for the project; and not a reference to a percentage in footage or mileage of water main to be installed on private easement. In addition, some easements that are signed may not allow installation on 100 percent of the particular property (i.e., you may have to go to the road right-of-way to avoid trees, or abide by some other restriction).

Some property owners have restrictive clauses in their easement regarding trees and shrubbery, fences, private utilities, width of easement, forcing construction in road right-of-way, etc.. The CONTRACTOR shall comply with these restrictive clauses. It is entirely the CONTRACTOR'S responsibility to be aware of all restrictions and easements, and no increase in the contract price shall be allowed for any construction methods, landowner notifications, etc., necessary to comply with the restrictions. Note that the restricted easements are indicated on the plan sheets with an "®". The CONTRACTOR shall refer to the individual easements for details regarding the restriction(s). The easements will be available for CONTRACTOR review at Heneghan and Associates, P.C., 1004 State Highway 16, Jerseyville, IL, 6203 and at the pre-bid meeting.

In general, the CONTRACTOR shall prepare bids as if all private easements obtained will be utilized, even in heavily wooded areas, etc. The CONTRACTOR must clear trees and immediately after clearing properly dispose of the brush off-site unless he can make some other arrangement with the landowner. Any other arrangements agreed to by the CONTRACTOR and the landowner must be made in writing and a copy of the written agreement, signed by the CONTRACTOR and landowner, given to the ENGINEER.

Prior to bid date, a certain percentage of property easements may not be obtained. Some or all of these easements may be obtained between the bid date and start of construction (some or all of which may contain restrictions), and the CONTRACTOR is responsible in his bid for any expenses incurred as a result of these properties and should bid accordingly for this possibility.

Highway crossings may be involved in this project, and where necessary, the OWNER has secured all the necessary permits for the various crossings. Also, a portion of this project may be constructed on Illinois Department of Transportation (IDOT) rights-of-way, as indicated on the Permit. All crossings required under existing state highways will be made by boring the water main. The minimum depth of watermain installation on IDOT rights-of-way is indicated on permit. Also, the water main shall be installed on the backslope of the ditch unless allowed by the ENGINEER and IDOT. The CONTRACTOR shall familiarize himself with and abide by all requirements as to traffic flow, flagmen, maintenance of trench, advance warning signs, etc., as required. The CONTRACTOR shall familiarize himself with and abide by all requirements as to traffic flow, flagmen, maintenance of trench, advance warning signs, etc., as required. The CONTRACTOR shall execute and maintain in force, all bonds as required by IDOT or other county or township entities.

The CONTRACTOR shall perform the work in accordance with the provisions of the various county, township, and state permits.

The CONTRACTOR's attention is called to the fact that the water main construction will involve, in most cases, private easements (property) and that all improvements such as drainage ditches, plantings, culverts, active utilities, signs, outbuildings, field tiles, and any other miscellaneous, privately and/or publicly owned, property shall be restored to a condition equal to or better than their existing state of repair. Should it become necessary that the CONTRACTOR relocate/remove any obstruction encountered throughout construction he should consult with the ENGINEER's Resident Project Representative (RPR) before proceeding.

Should it become necessary that the CONTRACTOR proceed across/over property supporting a growing cash crop (example: corn, legumes, soybeans, and wheat), he should so advise the ENGINEER's RPR, whereby the RPR shall note/record and make an assessment of the affected area (crop damage). When the CONTRACTOR follows the above instructions relative to reporting areas of crop damage, and adheres to other instructions by the ENGINEER's RPR and also uses good judgment, it is, therefore, the intent that the OWNER shall reimburse the property owner/renter an equitable amount for damage done by the CONTRACTOR to growing cash crops. Should, in the judgment of the ENGINEER and OWNER it be determined that the CONTRACTOR occupied an area greater than necessary for his particular operation relative to crop damage and other construction efforts, the CONTRACTOR shall be held liable for the cost applicable to the excess area/damage caused by him. The CONTRACTOR shall apply lime and fertilizer to disturbed crop areas in accordance with Section 21 of the Standard Water and Sewer Specifications. The same procedure, as for growing cash crops, shall be adhered to by the CONTRACTOR when it comes to ornamental trees, shrubs, flowers, fences, waterways, lawns, gardens, etc., relative to the need to affect, relocate, construct nearby, or transplant such items during the CONTRACTOR's operations. The CONTRACTOR shall be responsible and liable for all damages and claims caused by his operations to shrubs, trees, flowers, lawns, fences, gardens, orchards, nursery stock, etc., unless directed by the ENGINEER with the exceptions of growing cash crops (i.e., legumes, corn, soybeans, wheat). No additional compensation will be allowed for the above beyond the contract unit prices for the specified items of work listed in the Bid Schedule.

11.07. EQUIPMENT AND PRODUCTS

Whenever equipment is identified on the drawings or in the specifications by reference to manufacturer's name and/or trade names and is accompanied by an "or equal" statement, it is intended merely to establish a standard, and any equipment of other manufacturers which will perform adequately the services imposed by the general design will be considered equally acceptable provided, in the opinion of the ENGINEER, the function, material, and service is equal.

Whenever equipment is identified on the drawings or in the specifications by reference to a specific manufacturer's name and/or trade names and IS NOT accompanied by an "or equal" statement, then only the referenced product may be used in the project. This is to maintain uniformity for certain items in OWNER's system.

The ENGINEER reserves the right to require a statement from the manufacturer of any products or equipment that the specific products or equipment have been inspected and tested and conform with the specifications.

For the purposes of standardization, all of the equipment for a single system shall be furnished by a single manufacturer except as noted or approved by the ENGINEER (i.e., all flushing hydrants shall be the same type and from the same manufacturer). Fabricated assemblies shall be shipped in the largest convenient section permitted by carrier regulations, and adequately match marked by proper assembly.

The CONTRACTOR shall be responsible for supplying spare equipment parts as provided in these specifications and providing for the proper storage of same so that they are kept in operable condition.

The CONTRACTOR shall furnish for review complete equipment shop drawings in accordance with the General Conditions before installing any equipment. Drawings shall be provided by the equipment manufacturer and shall show all dimensions and details for correct installation of the equipment.

11.08. MANUFACTURER'S REPRESENTATIVE

The CONTRACTOR should arrange for all equipment manufacturers to provide a factory trained, qualified service ENGINEER to oversee or inspect the complete equipment installation to assure that it is installed in accordance with the manufacturer's recommendations, make adjustments necessary to place the system in trouble-free operation, oversee initial start-up of the equipment and instruct the operating personnel in the correct care and operation of the equipment furnished. This shall not alleviate the CONTRACTOR'S responsibility for a complete working system. Such a service shall be a part of the Contract Price and no additional compensation shall be allowed.

11.09. SOIL BORING DATA

Intentionally Blank

11.10. CLEANING UP

During construction, the CONTRACTOR shall clean up as the work proceeds. The premises, easements, and rights-of-way shall be kept free of accumulations of waste materials and earth, rubbish, and other debris resulting from the work, except as stated in section 11.06. Disposal of waste above and, including but not limited to, scrap pipe, material packaging, (boxes, plastic wrappers, banding, boards) lunch bags, to go containers, beverage containers, etc. TRASH shall not be in the trench. The CONTRACTOR shall backfill all trenches by the end of each working day before leaving the site, especially along road right-of-way areas, livestock grazing areas, driveways and field entrances, and residential yard areas.

If in the judgment of the OWNER the CONTRACTOR fails to keep the sites clean as described hereinabove, the OWNER may halt the construction and/or construction payments until the sites have been cleaned up to the satisfaction of the OWNER. All trees and brush removed in establishing an area for water main installation shall be removed and properly disposed of off-site unless the CONTRACTOR can make some other arrangement with the landowner. Such agreements shall be made in writing, signed by both the CONTRACTOR and the landowner, and a copy of the signed agreement shall be given to the ENGINEER. The brush disposal shall be continuous with the land clearing operations. The CONTRACTOR has five (5) working days from notification from the OWNER and/or ENGINEER that the brush disposal is unsatisfactory to remedy the situation.

If after this period of time the brush removal is still not satisfactory, the OWNER has the right to hire an outside agency to dispose of the brush in a timely manner and then costs shall be withheld from the final clean-up/seeding retainage funds.

The CONTRACTOR shall remediate any safety issue within 24-hours after notification from the ENGINEER or OWNER.

The CONTRACTOR shall repair field tiles/drains within 48-hours of notification from the ENGINEER or OWNER.

The CONTRACTOR shall remove and dispose of, or properly store all waste, brush, debris, material, rejected materials, etc. within 5-business days of written notification from the ENGINEER or OWNER.

If after the period of time as listed for above items, the issue at hand is still not remedied to the satisfaction of the OWNER, the OWNER has the right to hire an outside agency to remediate the issue

in a timely manner and then costs shall be withheld from the final clean-up/seeding retainage funds or as a setoff.

If in the judgment of the OWNER the CONTRACTOR fails to keep the sites clean and safe as described hereinabove, the OWNER may halt the construction and/or construction payments until the sites have been cleaned up to the satisfaction of the OWNER

Final clean-up, grading, and permanent seeding shall be performed in accordance with the dates specified in Section 31.06.B.

At the completion of the project, the CONTRACTOR will remove all waste materials, rubbish and debris from and about the premises as well as all tools, scaffolding and surplus materials, and will leave the site clean and ready for occupancy by the OWNER. **Pipe banding and other construction debris may not be left on top of or buried in the trench.** The CONTRACTOR shall be liable for any damage caused to farms, yards, livestock, pets, equipment, etc. due to construction debris left in, on or around the project. The CONTRACTOR will restore to their original conditions those portions of the site not designated for alteration by the Contract Documents.

Open burning of debris will not be permitted unless specifically authorized in writing by the OWNER, and then only following state, municipal or other local codes, ordinances, rules or regulations.

Payment for clean-up will be incidental to the unit price of water main installation. To ensure that Final Clean-up/Seeding progresses in a timely manner, the OWNER shall withhold a sum equal to twelve (12) percent of the installed cost of all water main, excluding directional bores, until all final Clean-Up/Seeding work is satisfactory. This Clean-Up retainage is in addition to the standard overall project retainage and shall be used to hire a local Contractor to complete any unsatisfactory work. Final Payment of the clean-up retainage will only be approved when the OWNER is satisfied with Final Clean-up/Seeding work.

11.11. LOCATION OF THE WORK

In areas where the preferred location of the water main is not staked, the water main shall be located as close to property lines as possible. Where constructed on public highway rights-of-way, the water main shall be laid, if possible, on the back slope of the ditch. Where constructed on private easement, the water main shall be laid, if possible, immediately adjacent to the road right-of-way, yet confining construction activity to the private easement.

If necessary, the CONTRACTOR may be required to bench the back slope of the public right-of-way to maximize the distance between the location of the water main and the edge of the highway. This and any other additional work required for proper location of the water main shall be considered incidental to the project and shall be performed without any increase in the Contract Price.

Pipeline alignment and appurtenance locations shall be verified with the on-site project representative prior to the start of each day's construction. IDOT/County/Township supervisors shall pre-approve valve and hydrant locations when installed on their respective right-of-ways.

11.12. COORDINATION WITH LOCAL ROADWAY OFFICIALS

It shall be the CONTRACTOR's responsibility to contact the local township roadway commissioners, IDOT, and county highway engineer and/or Village or City Personnel to coordinate the installation of water mains, water main boring operations, etc., on public easement under their jurisdiction. It shall be

the CONTRACTOR's responsibility to be aware of specific roadway permits for other site-specific conditions. The CONTRACTOR shall include in his bid all costs associated with special roadway repair requirements, traffic flow requirements, construction scheduling requirements, etc.

11.13. COORDINATION WITH LOCAL ELECTRICAL AND TELEPHONE UTILITIES

The CONTRACTOR shall contact the local electric and telephone utilities prior to bidding and shall include in his bid price all costs associated with providing complete electrical and telephone/telemetry service(s) from the utilities for the project improvement. The CONTRACTOR shall be solely and entirely responsible for coordination of all electrical and telephone/telemetry work with the local utilities, sub-contractors, etc., and for providing all necessary materials and equipment required to produce complete and properly functioning systems. The CONTRACTOR shall also be responsible for all necessary temporary service(s), and removal of same. The CONTRACTOR shall bear all costs for the items described above, as well as all installation charges and monthly usage bills up to the time that the system(s) can be fully utilized by the OWNER. All work performed shall be in accordance with the standards of the National Electric Code, National Electric Safety Code, and all local codes.

11.14. CONSTRUCTION SEQUENCE

CONTRACTOR shall install, connect, disinfect, sample and make the master meter and water main along West County Line Road operational as intended within 120 days after notice to proceed.

11.15. CONTRACT RESPONSIBILITY

Intentionally Blank

11.16. COORDINATION WITH ARCHAEOLOGICAL CONSULTANT

Based on the Phase I archaeological investigation reports for this project, no sites along the proposed water main route have been recommended for monitoring during construction. However, should any unknown significant finds be encountered during construction, it shall be the OWNER/ ENGINEER's responsibility to contact the archaeological consultant upon notification from the CONTRACTOR, where appropriate, to provide the required monitoring, and to pay for such services. In addition, the CONTRACTOR shall include in his bid all costs associated with time delays, remobilization, etc., due to potential work stoppages associated with site avoidances or further archaeological site investigations. No additional costs will be allowed for remobilization or delays on the water main construction due to archaeological issues.

11.17. COORDINATION WITH RAILROAD COMPANIES

The OWNER has secured any necessary railroad crossing permits necessary for construction of the work. These documents are on file with the ENGINEER and may be reviewed by all bidders prior to the bid date. The CONTRACTOR shall coordinate work with the railroad companies and include in his bid all costs associated with CONTRACTOR "Right-of Entry" fees, bonds, insurance, flagmen,

scheduling requirements, nearby fiber optic construction requirements, etc. No additional costs will be allowed.

11.18. COORDINATION WITH RESIDENT PROJECT REPRESENTATIVE

The CONTRACTOR shall notify the Resident Project Representative or ENGINEER of the proposed work schedule prior to each day. Any work accomplished without the Resident Project Representative being present due to improper notification, shall be re-done, re-exposed, etc., to the satisfaction of the Resident Project Representative, and shall be incidental to the CONTRACT price.

11.19. JULIE LOCATES

It shall be the CONTRACTOR'S responsibility to locate any water main or service line installed as part of this project, prior to Substantial Completion. Any costs associated with these JULIE locates shall be included in the bid.

11.20. ROAD RESTORATION

Restoration of open cut oiled and chipped roadways shall be performed according to the respective road permits and as set forth in this specification.

Roadways shall be open cut only with written permission of the local Village or City roadway roadway supervisor, Township Road Commissioner, IDOT, and/or the County Highway Engineer.

Any water main installed by open cutting the roadway with a backhoe, or equal (i.e., by a method other than trenching), shall first require the existing surface to be neatly saw-cut prior to removing any surface materials. The maximum width for open cutting any roadway shall be 2 feet. All open cut roadways shall be backfilled by the CONTRACTOR with SELECT GRANULAR BACKFILL (CA-6 or equal) for the full depth and width of the trench, up to the original grade level for a temporary gravel surface. The CONTRACTOR shall also maintain trench settlement after the initial open cut crossing is performed for the duration of the warranty period, or until the City, County, and/or township resurfaces the road, whichever is first. SELECT GRANULAR BACKFILL for water main road crossings shall be paid to the CONTRACTOR at the Contract unit price per lineal foot for "Compacted Rock Backfill", measured in place. The prices shall include all equipment, labor, materials, traffic safety control, placement and compaction of granular backfill, surface treatment, and all other miscellaneous work as necessary. Final road surfacing shall be performed by the local Village or City roadway supervisor, the Township Road Commissioners, and/or the County Highway Engineer.

11.21. NPDES PERMIT COMPLIANCE

See Sections 31 and 34 of these specifications.

The CONTRACTOR shall obtain an NPDES General Permit for Construction Activities. The CONTRACTOR is responsible for all aspects of the permit process from the Notice of Intent to Construct, through Notice of Termination, including the weekly and rainfall inspections as necessary per the permit and according to section 34 of these specifications. The CONTRACTOR will be responsible for implementation and maintenance of all erosion control measures necessary for his/her

respective contract. An initial SWPPP is attached to these specifications for the CONTRACTOR's use. However, it will be the CONTRACTOR's responsibility to maintain the SWPPP as necessary to stay in compliance with the General Permit for Construction. The SWPPP shall serve only as a guide to follow for erosion control measures. The SWPPP is intended to be a dynamic document and, as such, will likely be modified throughout the construction process and will vary with construction methods used. In addition to the erosion control measures shown on the Drawings and the requirements of the NPDES Permit and the SWPPP, the CONTRACTOR shall exercise all precautions and take whatever measures 11-10 necessary to prevent soil erosion. Prior to bidding, the CONTRACTOR shall notify the OWNER and ENGINEER of any changes in the SWPPP that will be required due to planned construction methods. The CONTRACTOR shall include all costs for acquiring the NPDES General Permit for Construction Activities, the weekly/rainfall inspection work. Maintaining the SWPPP, and installation and Maintenance of all erosion control BMPS. In the lump sum bid item for "NPDES Permit/Erosion Control Inspection" on the bid form.

11.22. CONTRACTOR REPRESENTATION AT MONTHLY BOARD MEETINGS

The CONTRACTOR shall have a representative present only upon request at the monthly meeting of the Henderson Water District to answer questions presented by the Board during construction and continuing through the completion of all final cleanup operations. Costs for attendance at meetings shall be incidental to the contract price.

11.23. OWNER'S STOP-WORK AUTHORITY

See General Conditions.

11.24. MAILBOX RELOCATION

Intentionally Blank

11.25. TRAFFIC CONTROL

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. No open or unfilled trenches will be left unattended or overnight.

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 CONTRACTOR shall notify all appropriate first responders and school districts/bus garage of all road closures.

11.26. ACCESS ROAD

Intentionally Blank

Intentionally Blank

Concrete

Table of Contents

Section 21

21.01.	SCOPE OF WORK.....	21-1
21.02.	CONCRETE AGGREGATES.....	21-1
21.03.	WATER.....	21-1
21.04.	REINFORCEMENT (METAL).....	21-1
21.05.	MATERIAL STORAGE.....	21-1
21.06.	CONCRETE QUALITY.....	21-1
21.07.	STRENGTH OF CONCRETE.....	21-2
21.08.	CONCRETE PROPORTIONS AND CONSISTENCY.....	21-2
21.09.	TESTS ON CONCRETE.....	21-3
21.10.	PREPARATION OF EQUIPMENT AND PLACE OF DEPOSIT.....	21-4
21.11.	MIXING OF CONCRETE.....	21-4
21.12.	CONVEYING.....	21-4
21.13.	DEPOSITING.....	21-4
21.14.	CURING.....	21-5
21.15.	COLD WEATHER REQUIREMENTS.....	21-5
21.16.	FORMS.....	21-5
21.17.	REMOVAL OF FORMS.....	21-5
21.18.	CLEANING AND BENDING REINFORCEMENT.....	21-6
21.19.	PLACING REINFORCEMENT.....	21-6
21.20.	SPLICES (REINFORCEMENT).....	21-6
21.21.	CONCRETE PROTECTION OF REINFORCEMENT.....	21-6
21.22.	CONSTRUCTION JOINTS.....	21-6
21.23.	CLEAN-UP OF FINAL SURFACES.....	21-7

Intentionally Blank

Concrete

Section 21

21.01. SCOPE OF WORK

Portland cement shall comply with the Standard Specification for Portland Cement, ASTM C150, or Standard Specification for Air-Entraining Portland Cement, ASTM C175 and shall be Type I or IA.

21.02. CONCRETE AGGREGATES

Concrete aggregates shall conform to specifications for Concrete Aggregates, ASTM C33, except that aggregates failing to meet these specifications but which have been shown by special test or actual service to produce concrete of the required quality, may be used under paragraph 21.08 of this section where authorized by the ENGINEER.

21.03. WATER

Water used in mixing concrete shall be clean and free from deleterious amounts of acids, alkalis, or organic materials.

21.04. REINFORCEMENT (METAL)

Reinforcing bars shall conform to the requirements of tentative specifications for minimum requirements for the Deformations of Deformed Steel Bars for Concrete Reinforcement, ASTM- A-615/615M, and of tentative specifications for Billet-Steel Bars for Concrete Reinforcement, ASTM-A-615/615M, or tentative specifications for Rail-Steel Bars for Concrete Reinforcement, ASTM-A-616, or tentative specification for Axle-Steel Bars for Concrete Reinforcement, ASTM-A-617/617M.

Welded wire fabric or cold-drawn wire for concrete reinforcement shall conform to the requirements of standard specifications for Cold-Drawn Steel Wire for Concrete Reinforcement, ASTM-A, or standard specifications for Welded Steel Wire Fabric for Concrete Reinforcement, ASTM-A-185.

21.05. MATERIAL STORAGE

Cement, aggregates and reinforcement shall be stored at the batch plant or work site in such a manner as to prevent deterioration or intrusion of foreign matter. Any material which has deteriorated or which has been damaged shall not be used for concrete.

21.06. CONCRETE QUALITY

The allowable stresses for design are based on the specified minimum 28 day compressive strength of the concrete or on the specified minimum compressive strength at the earlier age at which the concrete may be expected to receive its full load. The strength of concrete, at specified ages for

which all parts of the structure were designed, are shown on the drawings. Where not specified in the drawings, minimum 28 day compressive strength of the concrete shall be 3500 psi.

21.07. STRENGTH OF CONCRETE

The determination of the proportions of cement, aggregate and water to attain the required strength, shall be made by one of the following methods.

Method I: When no preliminary tests of the materials to be used are made, the water content per sack of cement shall not exceed the values in the following table. Method II shall be employed when artificial aggregates or admixtures are used.

Assumed Strength of Concrete Mixtures

Water Content in U.S. Gals. per Sack of Cement	Assumed Compressive Strength at 28-day psi
7-3/4	2500
6-3/4	3000
6	3500
5-1/2	3750

NOTE: In interpreting this table, surface water contained in the aggregate must be included as part of the mixing water in computing the water content.

Method II: Proportions of the materials and water content, other than those shown in the above table, may be used provided that the strength quality of the concrete proposed for use, shall be established by tests, which shall be made in advance of the beginning of operations, using the consistencies suitable for the work and in accordance with Standard Method of Making Concrete Compression and Flexure Test Specimens in the Laboratory, ASTM-C-192, and with Standard Method of Test for Compressive Strength of Molded Concrete Cylinders, ASTM-C-39.

A curve representing the relation between the water content and the average 28 day compressive strength, or earlier strength at which the concrete is to receive its full working load shall be established for a range or earlier strength at which the concrete is to receive its full working load shall be established for range of values including all the compressive strengths called for on the drawings. The curve shall be established by at least 3 points, each point representing average values from at least 4 test specimens. Amount of water used in the concrete, as determined for a curve, shall correspond to a strength which is 15 percent greater than that called for on the drawings. No substitutions shall be made in the materials used on the work without additional tests in accordance, herewith, to show that the quality of the concrete is satisfactory.

21.08. CONCRETE PROPORTIONS AND CONSISTENCY

The proportions of aggregate to cement for any concrete shall be such as to produce a mixture which will work readily into the corners and angles of the forms and around reinforcement with the methods of placing employed on the work but without permitting the material to segregate or excess free water to collect on the surface.

The combined aggregates shall be of such composition of size that when separated on the No. 4 sieve (fine aggregate) shall not be less than 30 percent or more than 50 percent of the total unless otherwise required by the ENGINEER.

The method of measuring concrete materials shall be such that the proper proportions can be accurately controlled and easily checked at anytime during the work. The received measurement shall be width rather than volume. Measurements of materials for ready-mixed concrete shall conform to the Tentative Specifications for Ready-Mixed Concrete, ASTM-C.

21.09. TESTS ON CONCRETE

The CONTRACTOR shall employ and furnish an independent, qualified, testing agency, suitable to the ENGINEER and OWNER, for the purposes of all required testing of materials, certification of proper concrete placement during pour and work accomplished. All test results shall be reported to the ENGINEER and the CONTRACTOR on the same day the tests are made.

Technicians representing the testing agency shall inspect the materials and manufacture of concrete and shall report their findings to the ENGINEER and the CONTRACTOR. When it appears that the material furnished or work performed by the CONTRACTOR fails to fulfill specification requirements, the technician shall direct the attention of the ENGINEER and the CONTRACTOR to such failure.

The technician shall not act as foreman or perform other duties for the CONTRACTOR. Work will be checked as it progresses, but failure to detect any defective work or materials shall not in any way prevent later rejection when such defect is discovered, nor shall it obligate the ENGINEER for final acceptance. Technicians are not authorized to revoke, alter, relax, enlarge, or release any requirement of the specifications nor to approve or accept any portion of the work.

During the progress of the work compression test specimens shall be made and cured in accordance with Standard Method of Making and Curing concrete Compression and Flexure Test Specimens in the Field, ASTM-C-31.

Not less than 3 specimens shall be made for each test, nor less than 1 test for each day's pour or for each 50 cubic yards of concrete of each class. Specimens shall be cured under laboratory conditions except that when, in the opinion of the ENGINEER, there is a possibility of the surrounding air temperature falling below 40 degrees F the ENGINEER may require additional specimens to be cured under job conditions.

Specimens shall be tested in accordance with Standard Methods of Tests for Compressive Strength of Molded Concrete Cylinders, ASTM-C-39.

The standard age of test shall be 7 days and 28 days.

If the average strength of the laboratory control cylinders for any portion of the structure falls below the compressive strengths called for on the drawings, the ENGINEER shall have the right to require conditions of temperature and moisture necessary to secure the required strength and may require tests in accordance with Standard Method of Securing, Preparing and Testing Specimens of Hardened Concrete for Compressive and Flexural Strengths, ASTM-C-42 or order load tests to be made on the portions of structure so affected.

21.10. PREPARATION OF EQUIPMENT AND PLACE OF DEPOSIT

Before placing concrete, all equipment for mixing and transporting the concrete shall be cleaned, all debris or ice shall be removed from the places to be occupied by the concrete. Forms shall be thoroughly wetted (except in freezing weather) or oiled and masonry filler units that will be in contact with concrete shall be well drenched (except in freezing weather) and the reinforcement shall be thoroughly cleaned of ice or other coatings.

21.11. MIXING OF CONCRETE

The concrete shall be mixed until there is a uniform distribution of the materials and shall be discharged completely before the mixer is recharged.

For job mix concrete, the mixer shall be rotated at a speed recommended by the manufacturer and mixing shall be continued for at least 1 minute after all materials are in the mixer.

Ready-mixed concrete shall be mixed and delivered in accordance with the requirements set forth in Tentative Specifications for Ready-Mixed Concrete, ASTM-C-94.

21.12. CONVEYING

Concrete shall be conveyed from the mixer to the place of final deposit by methods which will prevent the separation or loss of the materials.

Equipment for chuting, pumping and pneumatically conveying concrete shall be of such size and design as to insure a practically continuous flow of concrete at the delivery end without separation of the materials.

21.13. DEPOSITING

Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to re-handling or flowing. The concreting shall be carried on at such a rate that the concrete is at all times plastic and flows readily into the space between the bars. No concrete that has partially hardened or been contaminated by foreign material shall be deposited on the work, or shall re-tempered concrete be used.

When concreting is once started, it shall be carried on as a continuous operation until the placing of the panel or level. When construction joints are necessary, they shall be made in accordance with paragraph 21.22, this section.

All concrete shall be thoroughly compacted by suitable means during the operation of placing. Whenever practical the concrete shall be compacted with an internal mechanical vibrator of such construction that 4,500 cycles per minute shall be transmitted to the concrete. The CONTRACTOR shall have, on the job site, a sufficient number of vibrators to insure that compaction can be started immediately after the concrete has been deposited in the forms.

The concrete shall be thoroughly worked around the reinforcement and embedded fixtures and into the corners of the forms.

Where conditions make compacting difficult or where the reinforcement is congested, batches of mortar containing the same proportions of cement to sand; as used in the concrete, shall first be deposited in the forms.

21.14. CURING

Provisions shall be made for maintaining concrete in a moist condition for at least 5 days after the placement of the concrete. Curing may be obtained by any one of the approved "Methods of Curing" subject to approval of the ENGINEER.

No structures, structural members, or other appurtenances shall be placed upon any foundation concrete for a minimum of 7 days after the foundation pour is completed, and the 7 day cylinder test results have been reported to the ENGINEER.

21.15. COLD WEATHER REQUIREMENTS

Adequate equipment shall be provided for heating the concrete materials and protecting the concrete during freezing or near-freezing weather. No frozen materials containing ice shall be used.

All concrete material and all reinforcement, forms, fillers, and ground with which the concrete is to come in contact shall be free from frost. Whenever the temperature of the surrounding air is below 40 degrees F all concrete placed in the forms shall have a temperature of between 50 degrees F and 70 degrees F, and adequate means shall be provided for maintaining a temperature of not less than 70 degrees F for 3 days or 50 degrees F for 5 days. The housing, covering or other protection used in connection with the curing shall remain in place and intact at least 24 hours after the artificial heating is discontinued. Salt or other chemicals shall not be used to prevent freezing. If the temperature of the surrounding air is less than 50 degrees F, the CONTRACTOR shall use a temperature recording device to record the temperature to prove the temperature was not less than 70 degrees F for 3 days or 50 degrees F for 5 days and provide a means to visually check the air temperature under the insulating blanket. The method for cold weather pouring and curing shall be approved by the ENGINEER and OWNER prior to concrete placement.

21.16. FORMS

Forms shall conform to the shape, lines and dimensions of the members, as shown on the drawings, and shall be substantial and sufficiently tight to prevent leakage of mortar. Any mortar that is leaked between and/or around forms or permanent surfaces shall be mechanically smoothed.

Forms shall be properly braced or tied together so as to maintain position and shape.

21.17. REMOVAL OF FORMS

Forms shall be removed in such a manner as to insure the complete safety of the structure. In no case shall the supporting forms or shoring be removed until the members have acquired sufficient strength to support safely their weight and the load thereon. In addition, forms shall remain in place a minimum of 24 hours after the end of the concrete pour.

21.18. CLEANING AND BENDING REINFORCEMENT

Metal reinforcement, at the time concrete is placed, shall be free from all rust, scale or other coatings that will destroy or reduce the bond.

Bends for stirrups and ties shall be made around a pin having a diameter not less than 2 times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than 6 times the minimum thickness of the bar, except that for bars larger than 1 inch, the pin shall be not less than 8 times the minimum thickness of the bar. All bars shall be bent cold.

21.19. PLACING REINFORCEMENT

Metal reinforcement shall be accurately placed in accordance with the plans and shall be adequately secured in position by concrete or metal chairs and spacers.

21.20. SPLICES (REINFORCEMENT)

In general, splices in area of critical stress shall be avoided. Splices shall provide sufficient lap to transfer the stress between bars by bond and shear.

21.21. CONCRETE PROTECTION OF REINFORCEMENT

The reinforcement shall be protected by the thickness of concrete as shown on the drawings. Where not otherwise shown, the thickness of concrete over the reinforcement shall be as follows:

- A. Where concrete is deposited against the ground without the use of forms, not less than 3 inches.
- B. Where concrete is exposed to the weather, or exposed to the ground, but placed in forms, not less than 2 inches for bars more than 5/8 inches in diameter and 1-1/2 inches for bars 5/8 inches or less in diameter.
- C. In slabs and walls not exposed to the ground or to the weather, not less than 3/4 inch.
- D. In beams, girders and columns not exposed to the ground or to the weather, not less than one and 1-1/2 inches. In all cases the thickness of concrete over the reinforcement shall be in accordance with ACI 318, or its latest revision. Exposed reinforcement bars intended for future use shall be protected from corrosion by concrete or other adequate coverings.

21.22. CONSTRUCTION JOINTS

Joints not indicated on the drawings shall be so made and located as to not impair the strength of the structure. Where a joint is to be made, the surface of the concrete shall be thoroughly cleaned. In addition, vertical joints shall be thoroughly wetted and coated with a neat cement grout immediately before placing new concrete.

When deemed appropriate by the ENGINEER, the CONTRACTOR will dowel construction joints. The ENGINEER will specify the size, location, and placement.

21.23. CLEAN-UP OF FINAL SURFACES

The surface of the concrete shall be free of spalling and holes. The CONTRACTOR shall be responsible for filling in the holes with a method and materials approved by the ENGINEER and OWNER. Any mortar that leaks through or around a form shall be mechanically removed to provide a smooth surface matching the surround concrete surface.

Intentionally Blank

SURFACE REPLACEMENT AND SITE WORK

Table of Contents

Section 31

31.01.	SCOPE OF WORK.....	31-1
31.02.	RIGHT-OF-WAY CLEARING.....	31-2
31.03.	EARTHWORK.....	31-2
31.04.	PAVING AND SURFACING.....	31-6
31.05.	SITE IMPROVEMENTS.....	31-7
31.06.	LANDSCAPING.....	31-7
31.07.	FENCING.....	31-10
31.08.	DEMOLITION, SALVAGE, AND ABONDONMENT.....	31-10
31.09.	EROSION CONTROLS.....	31-11
31.10.	ROCK EXCAVATION.....	31-11
31.11.	UNSUITABLE BACKFILL MATERIAL.....	31-15

Intentionally Blank

SURFACE REPLACEMENT AND SITE WORK

Section 31

31.01. SCOPE OF WORK

Surface restoration shall be as specified in Section 21 of the Standard Water and Sewer Specifications. All surfaces shall be restored to at least the original condition prior to construction. All lawn, pasture, and timber areas that are disturbed shall be final graded, fertilized, and seeded as specified (Section 31.06.B Permanent Seeding), and shall be incidental to the total contract price. A rubber-tired bobcat or similar utility tractor shall be utilized for both initial and final grading work in residential yard areas to minimize property damage; backhoes, dozers, etc., will not be allowed in yards.

Temporary seeding will be paid as specified in Section 31.09.A.6. Clean-Up for all service lines is incidental to the Contract Price.

Payment for clean-up will be incidental to the unit price of water main installation. To ensure that Final Clean-up/Seeding progresses in a timely manner, the OWNER shall withhold a sum equal to 12 percent of the installed cost of all water main, until all final Clean-Up/Seeding work is satisfactory. This Clean-Up retainage is in addition to the standard overall project retainage and shall be used to hire a local contractor to complete any unsatisfactory work. Final Payment of the clean-up retainage will only be approved when the OWNER is satisfied with Final Clean-up/Seeding work.

Materials used for repair of driveway surfaces shall be incidental to the unit price of water main installation.

Backfill for all gravel driveways, gravel parking lots, and gravel field entrances (unless otherwise shown on the Plans) shall be made for the full depth and width of the trench with material specified for SELECT GRANULAR BACKFILL (CA-6 or equal). Only SELECT GRANULAR BACKFILL shall be allowed in the trench. This work shall be incidental to the unit price of water main installation.

In cases where water mains are crossing open areas where early settlement is not critical, backfill, from the centerline of the pipe to the surface, shall be made by any acceptable method which will not dislodge or damage the pipe or cause bridging action in the trench. Only select excavated materials free from clods or stones (larger than 3 inches) shall be used in backfilling up to 12 inches above the top of the pipe. Excess material shall be neatly rounded over the top of the trench to allow settlement of the trench. In final clean-up operations, the CONTRACTOR shall reshape the surface to level out any uneven settlement that has occurred. This shall be the case unless otherwise shown on the plans or as directed by the ENGINEER.

Due to the location of much of the work around private property and within public thoroughfares, the CONTRACTOR's attention is called to the General Conditions of these specifications. It is imperative that the project sites be promptly maintained in a reasonably clean condition and that it not present any hazard or prolonged inconvenience to individual property owners or the public in general.

Temporary seeding may be required in any lawn, pasture, and/or timber area susceptible to soil erosion.

Due to the location of much of the work around private property and within public thoroughfares, the CONTRACTOR's attention is called to the General Conditions of these specifications. It is imperative that the project sites be promptly maintained in a reasonably clean condition and that it not present any hazard or prolonged inconvenience to individual property owners or the public in general.

All areas trenched/disturbed between May 1 and December 31 shall be cleaned up, final graded, and permanent seeded by May 21 of the following year. All areas trenched/disturbed between January 1 and April 30 shall be cleaned up, final graded, and permanent seeded by September 30 of the same year. Failure to meet these guidelines will result in Liquidated Damages being assessed against the CONTRACTOR, at the established daily rate.

During construction the CONTRACTOR shall clean up as the work proceeds. The premises shall be kept free of accumulations of waste materials and earth, rubbish and other debris resulting from the work. If in the judgement of the OWNER the CONTRACTOR fails to keep the site clean as described hereinabove, the OWNER may halt the construction and/or construction payments until the site has been cleaned up to the satisfaction of the OWNER.

At the completion of the project, the CONTRACTOR will remove all waste materials, rubbish and debris from and about the premises as well as all tools, and surplus materials, and will leave the site clean and ready for occupancy by the OWNER. The CONTRACTOR will restore to their original conditions those portions of the site not designated for alteration by the Contract Documents.

Open burning of debris will not be permitted unless specifically authorized in writing by the OWNER, and then only following state, municipal or other local codes, ordinances, rules or regulations.

The CONTRACTOR shall be responsible for obtaining all material storage locations and where not stored on OWNER's property, for providing the OWNER with a signed copy of a lease agreement naming landowner as Owner and CONTRACTOR as Tenant, for any vandalism (graffiti, etc.), damage, or contamination (due to crop spraying or otherwise) that may occur and for clean-up at said sites; all incidental to the Contract price.

At the completion of all final clean-up operations, the CONTRACTOR shall place a marking flag at every gate valve, air release valve, and meter pit, for ease of identification for the OWNER, meter reader, and system operator. This work shall be incidental to the contract price.

31.02. RIGHT-OF-WAY CLEARING

All necessary work involved in the clearing of the water line R.O.W. of trees, stumps, fences, brush, and other miscellaneous and various items of work as needed or as called for on the Drawings, or directed by the ENGINEER, shall be performed by the CONTRACTOR in a satisfactory manner and no additional compensation will be allowed over and above the unit bid price per lineal foot for water main installed of the various diameters, materials, and class as specified. All trees, stumps, fences, brush, and other miscellaneous material removed during Right-of-Way clearing shall be properly disposed of off-site unless an agreement can be worked out between the property owner and CONTRACTOR. All arrangements made between the CONTRACTOR and landowner shall be done so in writing, signed by both the CONTRACTOR and the property owner, and a signed copy of the written arrangement shall be given to the ENGINEER. Disposal operations shall be continuous with the clearing work.

31.03. EARTHWORK

A. Site Excavation

1. General - Excavation shall be done to the lines and slopes shown on the Drawings. Unstable or unsuitable materials shall be removed and replaced with approved material if, in the opinion of

the ENGINEER, it would be a detriment to the excavation. The CONTRACTOR will be allowed a negotiated compensation for removal and replacement of unsuitable existing earth materials below natural topsoil. The quantity for this work shall be as determined by the ENGINEER; in determining the pay quantity for this work, natural topsoil shall be considered as 12 inches thick and no additional compensation will be allowed for removal of topsoil. Unstable or unsuitable material shall be disposed of by the CONTRACTOR.

2. Topsoil Excavation - The CONTRACTOR shall remove topsoil and soil with a high organic content from the area of immediate construction and shall stockpile it on the site for use in finish grading in accordance with Section 31.03.F
3. Borrow Excavation - Any soil in addition to that excavated at the site required to complete fill area shall be furnished by the CONTRACTOR at his own expense. Borrow excavation shall not be placed in fills until the material is approved by the ENGINEER. See Section 31.03.B, Earth Fill.
4. Waste - Any excess excavated material shall be removed from the site by the CONTRACTOR, or if permitted by the ENGINEER, wasted on the site. Areas of wasted soil shall be compacted in accordance with Section 31.03.B.4 and finish graded in accordance with Section 31.03.F.
5. Dewatering - The CONTRACTOR shall have on hand at the site at all times, the necessary pumps, hoses, and other accessories necessary for keeping the excavations dewatered.

If well pointing or the installation of temporary drains are required to complete the work, they shall be provided by the CONTRACTOR.

No additional compensation shall be made to the CONTRACTOR for any dewatering techniques, equipment or labor.

B. Earth Fill

Intentionally Blank

C. Backfill

1. General - This work shall consist of the construction of fills by the placement and compaction of select materials where located on the Drawings or specified herein with material previously excavated from the site or its equivalent.
2. Backfill Material - Except for specific fill materials (e.g., filter media fill), backfill materials shall be material previously excavated from the site, or equivalent material, which can be compacted to the specified densities. Soft or organic soils will not be acceptable material for backfill. All backfill material shall be free from lumps, clods, stones greater than the specified size, or frozen material. All material shall be from an approved source.

Coarse aggregate specified in the following paragraphs shall consist of tough, durable particles, reasonably free from objectionable material. Fine aggregate shall be reasonably free from an excess of soft and unsound particles and other objectionable matter.

All material used, regardless of the source of supply, shall meet the gradation limits specified. The gradation of material from any one source shall be reasonably parallel to the gradation specified and shall not be subject to the extreme percentages of gradation represented by the tolerance limits for the various sieve sizes.

Prior to ordering any select backfill materials, the CONTRACTOR shall furnish the ENGINEER written verification from an independent testing laboratory stating the material to be used is in compliance with these Specifications.

3. Drainage Granular Backfill - This shall be gravel, crushed gravel, pit run gravel, or crushed stone and shall conform to the following gradation requirements:

Sieve Size	Percent Passing
3/4"	100
1/2"	97±3
3/8"	80±10
No. 4	35±15
No. 16	3±3

4. Structural Granular Backfill

Intentionally Blank

5. Type II

Intentionally Blank

6. Compaction

Intentionally Blank

D. Structural Excavation and Backfill

1. Structural Excavation - All footing shall be founded on firm undisturbed soil, and a 6 inch minimum thickness of structural granular backfill shall be placed under all concrete bottom slabs of structures. Excavations shall be carried deep enough to permit the minimum thickness of granular material to be placed or until firm undisturbed soils are encountered, whichever requires greatest depth. For requirements for granular material, see Section 31.03.C.

In no case shall any footings be founded above those elevations shown on the Drawings. If soft or unsuitable soil is encountered at elevations where footings are to be founded, the ENGINEER may direct the CONTRACTOR to remove the unstable materials and bring the excavation to grade with fill concrete or structural granular backfill (see Section 31.03.C). Additional compensation will be made to the CONTRACTOR for such removal and replacement work as described in Section 31.03.A.1.

Excavations carried below depths shown on the Drawings shall be brought to grade by the CONTRACTOR with fill concrete or structural granular backfill. No additional compensation will be allowed for excavations carried below depth shown on the Drawings unless such excavations are ENGINEER approved "Removal and Replacement of Existing Unsuitable Soils" which will be compensated for in accordance with Section 31.03.A.1.

The excavation will be large enough to allow for installation and removal of forms. Side forms will not be require for footings or edges of base slabs below grade, provided the soil is stable and square corners and straight and plumb sides are maintained until concrete is placed and approval of the ENGINEER is obtained. All other excavation shall allow for placement and removal of forms and inspection.

Special care shall be taken not to disturb the bottom of excavations where the soil is to provide bearing for slabs, footing, etc. If the presence of subsurface water or other conditions, which may decrease the bearing strength of the foundation material, prevail then soil adequate to protect the foundation material shall not be excavated until just before reinforcing steel and concrete are to be placed. The bottom of all excavations shall be inspected and approved by the ENGINEER before the placement of any granular material, reinforcing steel, or concrete.

2. Shoring - The CONTRACTOR shall furnish, install and remove all shoring, bracing, sheet piling or other required work necessary to retain banks of excavation, prevent cave-in of adjacent ground, and support and prevent displacement of adjacent structures of piping.

All shoring shall be maintained in good condition and removed when no longer required. The CONTRACTOR shall make good any injury or damage resulting from failure of the shoring system or from not observing these requirements.

3. Dewatering - 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 excavation in a manner that will keep the excavation dry and foundation bearing areas undisturbed until the structure is complete and all backfill has been placed. No extra compensation for dewatering or drainage necessary to meet this specification will be allowed.

Sumps, if used, shall be located outside of load bearing areas and at such distance that the bearing surfaces will not be damaged. Water containing silt in suspension shall not be pumped into any sewer lines or discharged to state waters.

4. Structural Backfill - No backfilling shall begin without the approval of the ENGINEER. Unless otherwise shown on the Drawings or specified herein, backfill shall be structural granular backfill except for structures on or in earthen dikes, then backfill shall be Class A compacted, select excavated earthen materials.

All form work, rubbish, bracing, and sheeting shall be removed from the excavation before any backfill is placed. The placement of backfill around structures or walls shall be done simultaneously on opposite sides in even lifts. No backfill shall be placed behind any wall until the entire main structure of which that wall is a part is complete and until all concrete in the main structure has reached its specified 28 day strength, unless approved otherwise in writing by the ENGINEER. Small flow channels and other such appurtenances will not be considered as being part of the main structure. Sloping sides of the excavation which would be liable to cause wedging action shall be stepped or serrated. Under no circumstances shall backfill be placed in water.

Around all structures where adjacent finished grade is to be exposed to the weather, backfill shall be carried to 2 feet 6 inches below finished grade. A 2 foot layer of clayey soil approved by the ENGINEER shall be placed over the full area of the excavated space outside the structure, compacted, and pitched to drain water away from the structure. The area shall then be finish graded in accordance with Section 207 of the Illinois Standard Specifications for Road and Bridge Construction, unless amended herein.

E. Roadway Grading

The grading of roadways or drives on the site shall be done in accordance with Article 202.04 (for excavation) or Section 207 (for embankment) of the Illinois Standard Specifications for Road and Bridge Construction, and shall be built to the lines and grades shown on the Drawings. No payment will be made for overhaul of any material to or from any source.

F. Finish Grading

The CONTRACTOR shall grade all areas to the finish grade elevation shown on the Drawings, or as directed by the ENGINEER. If the existing surface has become hardened or crusted, it shall be disced or raked so it will blend with the topsoil.

The CONTRACTOR shall place a 6 inch layer of topsoil on all areas to be seeded. The top 3 inches of topsoil shall be worked to break it up into particles no larger than 2 inches. The surface shall then be alternately raked and rolled until the soil is friable and the grades are smooth and continuous.

G. Soil Treatment

Soil treatment shall be applied to all areas beneath concrete floor slabs on grade or fill and along the interior and exterior sides of all foundation walls and grade beams as follows: 2 gallons per 5 lineal feet each side, inside and outside perimeter walls, 2 gallons per square foot three feet each side all construction joints and around all conduit, plumbing, duct work, etc., perforating floor slabs and 1 gallon per 10 square feet of remainder of building. Soil treatment shall be applied after finished sub-grade and prior to the installation of rock fill and vapor barrier. Solutions shall be only water-based emulsion, uniform composition, synthetic dye to permit visual identification of treated soil, of the generic chemical aldrin. Chemicals used in the Soil Treatment Work shall not be in conflict with the latest local, state or federal regulation.

31.04. PAVING AND SURFACING

A. General

Construction of all paved surfaces shall be in accordance with the State of Illinois Standard Specifications for Road and Bridge Construction. In case of conflict with the Standard Specifications, these Specifications shall govern.

B. Roads, Drives and Parking Areas

1. General - Base courses and surface courses shall be constructed to the lines, grades and dimensions shown on the Drawings.
2. Base Course - The base course shall be aggregate base course, Type B, of the thickness shown on the Drawings, and shall be constructed in accordance with The Standard Specifications.
3. Aggregate Surface Course - Aggregate surface course shall be of the type and thickness shown on the Drawings, and shall be constructed in accordance with the Standard Specifications.
4. Bituminous Surface Treatment - Bituminous surface treatment shall be Class A-1, A-2, or A-3 as shown on the Drawings, and shall be constructed in accordance with the Standard Specifications.
5. Bituminous Concrete - Bituminous concrete binder and surface courses shall be Class I, and shall be constructed in accordance with the Standard Specifications.
6. Concrete Pavement - Concrete for concrete pavement shall be proportioned and mixed as specified in Section 21 of these Specifications. Concrete pavement shall be constructed in accordance with the Standard Specifications.
7. Soil Stabilization Fabric - The CONTRACTOR shall furnish and install on the earth subgrade where shown on the Drawings, a nylon, polypropylene non-woven fabric to stabilize the ground surface beneath the base course aggregate as specified in Section 31.04.C.

C. Walks and Steps

Concrete for walks and steps shall be proportioned and mixed as specified in Section 21 of these Specifications. Concrete walks and steps shall be constructed in accordance with the Standard Specifications and the details shown on the Drawings.

Unless otherwise shown on the Drawings, concrete walks shall be 4 feet wide. Walks shall be 4 inches thick, except those at driveways which shall be 6 inches thick. Walks shown on slopes 10:1 or steeper shall be constructed with steps conforming the slope. The steps shall have a 6 inch riser and a 12 inch minimum tread.

31.05. SITE IMPROVEMENTS

Intentionally Blank

31.06. LANDSCAPING

A. General

The CONTRACTOR shall be responsible for the repair of any damage to structures or equipment resulting from landscaping operations, and shall remove excess soil and other debris from the site before final acceptance of the project.

The CONTRACTOR is responsible for keeping all plants in good growing condition until final acceptance of the project, including watering as necessary for seed germination and continued plant growth. Non-potable water may be used.

Plants that die before final acceptance must be replaced. The cost of replacement plants shall be borne by the CONTRACTOR except for replacement for loss from vandalism or physical damage by animals, fire, etc., or losses due to "Acts of God".

B. Permanent Seeding

The work shall consist of furnishing all labor, equipment, and materials for seeding a permanent grass mixture on all road ditches, structure sites, yards, permanent pasture, and all CRP acreage within the work area limits which are disturbed during completion of work. The surfaces of earthen embankments shall also be seeded when necessary. Permanent seeding will only be performed during the following periods:

- Fall: August 1 - September 30
- Spring: March 1 - May 21

All areas trenched between May 1 and December 31 shall be permanent seeded by May 21 of the following year. All areas trenched between January 1 and April 30 shall be permanent seeded by September 30 of the same year. Failure to meet these guidelines will result in Liquidated Damages being assessed against the CONTRACTOR, at the established daily rate.

1. Fertilizer - Immediately prior to seeding preparation, fertilizer shall be placed over the areas to be seeded. The fertilizer shall be a complete commercial fertilizer of organic base containing, in available form by weight, 6% Nitrogen, 12% Phosphorous, and 12% Potash. It shall be free flowing and suitable for application with approved equipment, delivered to the site in bags or other convenient containers, each fully labeled with the following:

- a. Name and address of manufacturer.
- b. Name brand or trademark.
- c. Number of net pounds of ready mixed materials in the package.
- d. Chemical composition of analysis.
- e. Producer's guarantee of composition.

Fertilizer shall be evenly distributed with an approved mechanical spreader at a rate of 500 pounds per acre.

If a heavy or long rain (as judged by the ENGINEER) should fall on the plant site after fertilizer has been applied but before the seedbed has been prepared, the CONTRACTOR shall re-fertilize those areas affected, at no additional compensation.

2. Seedbed Preparation - All gullies and washes shall be filled to conform to the desired shape and the entire area to be seeded shall be reasonably smooth before actual seedbed preparation is begun. Stones larger than 4 inches in diameter, sticks, stumps, and other debris will be removed. At this point, the required fertilizer shall be applied uniformly. Immediately after application of the fertilizer, the area to be seeded shall be finely pulverized to a minimum depth of 3 inches either by spading and raking or by plowing, discing, harrowing, or other methods approved by the ENGINEER. The CONTRACTOR shall suspend operations when the soil is too wet, too dry, frozen or otherwise unillable. Seeded areas shall not be compacted through their use for such purposes as access roads or parking areas after seedbed preparation is completed. If rain should pack the seedbed prior to seeding, it shall be prepared again at no additional compensation.
3. Seed - Seeding shall be done immediately after seedbed preparation. The seed shall be applied at a uniform rate over the entire area. Grass seed shall be fresh, clean, and new crop seed composed of the following varieties mixed in the proportion by weight as shown, and testing the minimum percentages of purity and germination indicated. All seed used shall be labeled in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Act in effect at the time of the installation of the work involved under seeding operations. All seed shall be furnished in sealed standard containers. Seed may be mixed by dealer or by an approved method on the site. Weed seed shall not exceed .35% by weight of the total amount supplied. If seed is mixed on the site, dealer's guaranteed analysis for each variety must be furnished. Individual varieties must be delivered in separate unopened original containers should the CONTRACTOR desire to mix the seed on the site.

The mixture of grass seed used for seeding areas flatter than 3:1 slopes shall consist of the following proportions by weight per acre:

Name	Lbs	PercentPercent	
	Per Acre	Purity	Germination
Turf Type			
Fescue	75	98	85
Perennial			
Ryegrass	20	98	90

Areas with slopes 3:1 or steeper shall have an additional seeding of the following kind and quantity of seed:

Name	Lbs	Percent	
	per acre	Purity	Germination
Perennial Ryegrass	30	98	90

The mixture of grass seed used for seeding the inside area of the earthen water retaining structures shall consist of the following proportions by weight per acre:

Name	Lbs	Percent	
	per acre	Purity	Germination
Reed Canary Grass	15	98	90
Tall Fescue	15	98	90

4. Seeding Materials - No seed shall be sown during high winds or when the ground is not in proper condition for seeding (as judged by the ENGINEER). The ENGINEER shall examine and approve any equipment to be used. Prior to starting work, seeders shall be calibrated and adjusted to sow seeds at the proper seeding rate. The ENGINEER shall be notified 48 hours prior to beginning the seeding operations so the trial seeding runs can be made to insure the proper seeder calibration.

Within 12 hours after seeding, the area shall be rolled at right angles to the runoff with an approved type roller or cultipacker to compact the seedbed and place the seed in contact with the soil.

5. Mulching - Immediately after rolling of the seedbed, mulch shall be applied to all the earthen embankments, road ditches, drainage swales and any slopes of 3:1 or steeper. Mulching will not be required on the remaining areas of the site. Mulch shall be straw of wheat, rye, oats, or other approved stalks and shall be air dried. Hay will not be permitted. Mulch shall be hand or machine applied in a loose enough layers to permit air to circulate but compact enough to reduce erosion. If baled mulch is used, care shall be taken that the material is in a loosened condition and contains no lumps or knots of compacted material.
6. Watering - Immediately after the seeding operation is complete, the CONTRACTOR shall maintain a daily sprinkling schedule of several hours until such time as the seed commences to grow. Sprinklers approved by the ENGINEER will be used. Dosing with open ended or nozzled hoses will not be permitted.
7. Reseeding and Maintenance - Seeding operations shall be repeated until a satisfactory uniform stand of grass is secured. Damage resulting from erosion, gulleys, washouts, or other causes shall be repaired by filling with topsoil, tamping, refertilizing and reseeding by the CONTRACTOR at no additional compensation. The CONTRACTOR shall mow and maintain all seeded areas until final acceptance of the project.

8. Crop Reduction Plan (CRP) Seeding - The CONTRACTOR shall contact the local SCS office and receive approval of grass seed and fertilizer mixtures prior to placing any seed or fertilizer on any CRP land.

C. Planting

1. General - Planting shall be as specified in the Illinois Standard Specifications for Road and Bridge Construction except as amended herein. In case of conflict with the Standard Specifications, these Specifications shall govern.

Ball rooted plants are designated BR, and balled and burlapped plants B&B. When plants of the kinds or sizes specified are not available within a reasonable distance, substitutions may be made upon request by the CONTRACTOR, if approved by the OWNER or the ENGINEER. Plants larger than specified in the plant list may be used if approved by the ENGINEER, but the contract unit price may not be increased. If larger plants are approved, the spread of roots or ball of earth shall be increased in proportion to the size of the plant.

2. Fertilizing - Fertilizing shall conform to the Illinois Standard Specifications for Road and Bridge Construction, and shall contain 6% Nitrogen, 12% Phosphorous, and 12% Potash by weight.
3. Planting Materials - Materials used for planting trees shall be as follows:
 - a. Bracing - materials used for staking, bracing, or guying shall conform to the Illinois Standard Specifications for Road and Bridge Construction except as amended herein. Buying and staking trees shall be done as directed by the ENGINEER.
 - b. Hose - Hose, if used, shall be two-ply fiber-bearing garden hose, not less than 1/2 inch inside diameter.
 - c. Wrapping Material - Wrapping material shall be first quality, heavy waterproof crepe paper manufactured for tree wrapping.
 - d. Mulch - Mulch shall be wood chips or ground bark.
4. Pruning - Each tree and shrub shall be pruned in accordance with AAN Standards of the Illinois Standard Specifications for Road and Bridge Construction.
5. Maintenance - Plant care shall be in accordance with the Illinois Standard Specifications for Road and Bridge Construction and as specified herein. The CONTRACTOR shall be responsible for maintenance of each plant immediately after planting until final acceptance of the project.

31.07. FENCING

Fences are not to be cut. In the event fences are damaged, the CONTRACTOR shall repair or replace damaged fence to better or equal to existing conditions with no increase to contract price.

31.08. DEMOLITION, SALVAGE, AND ABONDONMENT

Intentionally Blank

31.09. EROSION CONTROLS

An NPDES General Permit Number ILR10 for Construction Site Activities shall govern the erosion protection practices of this work. The CONTRACTOR will submit to the Illinois Environmental Protection Agency a Notice of Intent (NOI) for the General Permit to Discharge Storm Water from Construction Site Activities. The CONTRACTOR shall be responsible for implementation and maintenance of all erosion control measures necessary. Also see section 34.

In addition to the erosion control measures shown on the Drawings, the requirements of the NPDES Permit and the SWPPP, the CONTRACTOR shall exercise all precautions and take whatever measures necessary to prevent soil erosion. Earthwork operations shall be planned so that the exposure of bare soil is minimized, both as to extent and duration. The CONTRACTOR will be responsible for installing and maintaining the erosion control measures as specified on the Drawings and as necessitated by field conditions and construction methods. Erosion control measures shall generally adhere to the SWPPP and this Section. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control. Additionally, maintenance of the erosion control measures, as required by the NPDES permit and outlined in the SWPPP will be incidental to the total Contract Price. If, in the judgment of the OWNER or ENGINEER, the CONTRACTOR disturbs more land than is necessary for the associated work, they shall install erosion control measures in that area in accordance with the SWPPP at no additional cost to the OWNER.

If, in the opinion of the OWNER or ENGINEER, excessive soil erosion is occurring due to construction methods or other factors that are controllable by the CONTRACTOR, the CONTRACTOR shall immediately remedy the problem under the ENGINEER'S direction. Remedial measures may include, but not be limited to the following: installation of pre-manufactured ditch checks, installation of drainage ditch checks, silt retention fences, construction of temporary sediment ponds, reseeded, intermediate mulching, regrading, and removal of earth stockpiles. In such instances, all remedial measures required to prevent soil erosion and the associated maintenance of such measures shall be incidental to the total Contract Price. Any and all fees, additional inspection costs, and fines received by the OWNER regarding NPDES noncompliance for this project will be passed to the CONTRACTOR and is incidental to the Contract Price.

A. TRENCH STABILIZATION

When slopes exhibit excessive erosion, and as directed by the ENGINEER or OWNER or as shown on the Drawings, and described in the SWPPP, erosion checks shall be installed at necessary intervals to prevent ditch washout.

Erosion checks shall be of the following types and payment will be as indicated:

1. RIP RAP BERM

Intentionally Blank

2. DIRT BERMS (a shallow dam of dirt 18" H X 24" W X 15' L)

Dirt berms shall be placed at a 35-degree angle to the trench flow line to divert water from eroding the trench line and associated backfill. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control.

3. MULCH, straw, or some other material approved by the ENGINEER.

Mulch shall be spread on disturbed surface to provide protection for uncompacted earth and shall be incidental to Temporary Seeding and Mulch and Permanent Seeding.

4. PRE-MANUFACTURED DITCH CHECKS

GEORIDGE

Shall be installed perpendicular to the trench or ditch as per the manufacturer's recommendations, including the toed in erosion control blanket (erosion control blanket used here shall be incidental to the bid price for ditch checks); straw wattles can be used in lieu of the pre-manufactured check dams (see Straw Wattles below). A sufficient number of check dams or wattles shall be supplied to serve as a sediment control for the entire width of the trench or ditch. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control.

URETHANE FOAM GEOTEXTILES (Triangular Silt Dike)

Where indicated on the plans a Triangular Silt Dike shall be installed (toed in and stapled) per manufactures recommendations. Where indicated on the plans or as needed a triangular silt dike shall be placed adjacent to the terminus of the disturbed portion of a ditch. This type of placement is intended to act as a sediment basin. The silt dike shall extend to the top of the side slopes or 6" above the lowest point of the dike. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control.

5. SILT FENCE

Shall be installed as per the NRCS specifications and shall be placed across the trench or ditch perpendicular to the slope as necessary to prevent the loss of sediment. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control.

6. STRAW WATTLES

Straw wattles (rolled erosion control products) shall be trenched in and staked per manufacturers recommendations. Where straw wattles are used as ditch checks they shall be spaced so the low point of the wattles is equal to the toe of the upstream wattle. The wattle shall extend up the side slope a minimum of 6" above the low point of the wattle. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control.

7. TEMPORARY SEEDING

Temporary seeding of the trench lines may be used to control erosion provided the temporary seeding activity corresponds with effective seeding/germination time periods. Where temporary seeding is shown on the Drawings either with other erosion control measures or as a standalone measure, the CONTRACTOR shall visit each site as necessary to determine the amount of material and labor required. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control.

8. INLET PROTECTION

Culverts and storm sewer inlets must have sediment control in place before disturbing land surfaces UPSTREAM. Inlet protection shall be either straw wattles or silt fence style as appropriate for sediment control for the specific field condition. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control.

B. SLOPE STABILIZATION

Where slope stabilization cannot be maintained due to steepness of the grade and/or physical limitations encountered (flowing water at ditch crossing), erosion controls shall be installed as directed by the ENGINEER and/or as shown on the Drawings and described in the SWPPP:

1. RIP RAP,

Intentionally Blank

2. EROSION CONTROL BLANKET

Intentionally Blank

3. SILT FENCE

Silt Fence shall be installed as per the NRCS specifications and shall be placed along slopes as necessary to prevent loss of sediment. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control.

4. TEMPORARY SEEDING

Temporary seeding of the trench lines may be used to control erosion provided the temporary seeding activity corresponds with effective seeding/germination time periods. Where temporary seeding is required due to slopes in pastures and timbers. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control.

5. MULCH,

Mulch, straw, or some other material approved by the ENGINEER shall be spread on disturbed surface to provide protection for uncompacted earth and shall be incidental to Temporary Seeding and Mulch and Permanent Seeding.

C. PERIMETER PROTECTION

Where required by the site and/or construction practices, and as shown on the Drawings and described in the SWPPP, perimeter protection measures shall be implemented to prevent the migration of sediment off site.

1. SILT FENCE

Silt fence shall be installed as per the NRCS specifications and shall be placed along slopes or the perimeter of the property as necessary to prevent loss of sediment. All Costs shall be included in the CONTRACTOR'S bid price for Erosion Control.

2. TEMPORARY SEDIMENT BASINS

Intentionally Blank

Additional erosion control practices may be used with prior approval from the ENGINEER and OWNER. Maintenance of all erosion control structures must be in accordance with the NPDES permit and the SWPPP (See Section 11.21 and Section 34).

31.10. ROCK EXCAVATION

Rock excavation includes removal and disposal of rock material encountered that cannot be removed by conventional methods. Rock material includes boulders 1/2 Cu. Yd. or more in volume, and rock in beds, ledges, unstratified masses, and conglomerate deposits. When excavation of the rock material requires systematic use of pneumatic or hydraulic tools or a rock trencher, rock excavation shall be allowed under guidelines of this section of Specifications and Section 20-2.05 of the Standard Specifications, and paid for at the rate specified in the Bid Schedule. Shale, boulders (less than 1/2 Cu.Yd. in size), sandstone, gravel, and similar rocky material that can be removed by conventional methods **WILL NOT** be considered as rock excavation nor allowed for payment. Where blasts are made, the excavation shall be covered with brush, timber, or matting to prevent danger to life and property, and the CONTRACTOR shall secure a special permit from the local governmental authorities for blasting when required. Care shall be taken not to damage adjacent structures, property, or site improvements; or weaken the bearing capacity of rock subgrade when using explosives. Before starting work in areas where rock excavation will be required, the existing condition of adjoining properties shall be verified. Photographs shall be taken to record any existing settlement or cracking of structures, pavements, and other improvements. A list of such damages shall be prepared, verified by dated videos and signed by the CONTRACTOR and others conducting the investigation.

For water main excavations for PVC pipe up to 12 inches in diameter, rock shall be excavated to a width of at least 18 inches more than the inside diameter for PVC pipe, for the entire depth of the excavation. Rock excavation for pipe will be at least 6 inches below the bottom of the pipe and at least 3 inches below the bottom of the bell of a joint. For water main excavations for PVC pipe 14 inches in diameter and greater, rock shall be excavated to a width of at least 24 inches more than the inside diameter for PVC pipe, for the entire depth of the excavation. Rock excavation for pipe will be at least 9 inches below the bottom of the pipe and at least 6 inches below the bottom of the bell of a joint. Before the pipe is laid, the base of the excavation shall be replaced with a cushion of SELECT GRANULAR BACKFILL. All irregularities of the rock are to be filled with compacted granular backfill as well. In addition, "soft" rock (i.e., rock not allowed for payment as rock excavation, but that can be removed by conventional methods) shall be properly bedded with a cushion of SELECT GRANULAR BACKFILL, to avoid rough edges or other irregularities from damaging the water pipe.

The CONTRACTOR, on encountering rock via the trenching/open cut method, shall sufficiently uncover various spot locations to assure the overall extent of rock in that particular location. The CONTRACTOR, on encountering rock via the directional boring method, shall sufficiently prove the overall extent of rock in that particular location by either accurate records of the pressure at the bore head or uncovering spot locations as directed by the ENGINEER/OWNER. In either case he shall immediately notify the ENGINEER/OWNER, who either (1) will approve rock excavation in that area as necessary, or (2) will provide the CONTRACTOR with an alternate water line routing which could produce a location that eliminates the necessity of all/part of the rock excavation.

The CONTRACTOR must understand that if it is the ENGINEER'S/OWNER'S decision to relocate the water main to avoid the encountered rock, a reasonable time lapse to obtain alternate routing would be necessary. All direct costs involved in re-routing of the water line to a different location to avoid rock excavation will be borne by the OWNER.

It shall be the CONTRACTOR's responsibility to dispose of all excavated rock off site, to clean up debris, and to provide earthen or granular backfill to replace that rock material removed. This work is included in the unit price for Rock Excavation. The CONTRACTOR has five working days from original excavation to remove the rock off site. If after this period of time the rock is not removed from

the site, the OWNER has the right to hire an outside agency to remove the rock in a timely manner and these costs shall be withheld from the final Clean-Up/Seeding retainage funds.

Rock excavation by the trenching/open cut method shall be paid for at the contract unit price per cubic yard determined by measuring the average length, width, and depth of the area of rock removal. However, the OWNER will pay for no more than 18 inches plus the I.D. of the water main for trench width and 48 inches plus the ID of the water main for trench depth, for water main up to 12 inches; or 24 inches plus the I.D. of the water main for trench width and 60 inches plus the I.D. of the water main for trench depth for water main 14 inches in diameter and greater; whether in rock or in a combination of rock and earth. In addition, only Rock Excavation as defined above will be included in the measurement for a particular vertical and/or horizontal profile (i.e., soil or soil/rock material overlying, intermixed with, or underlying solid rock will not be included), even if a rock trencher is utilized for the area of removal in question.

Rock Excavation by the directional boring method shall be paid for at the contract unit price per cubic yard determined by measuring/estimating the average volume (diameter of rock cutter & estimated length of rock) of the rock removal. However, the OWNER will pay for no more than 1.3 times the diameter of the pipe. In addition, only Rock Excavation as defined above will be included in the measurement for a particular vertical and/or horizontal profile (i.e., soil or soil/rock material overlying, intermixed with, or underlying solid rock will not be included), even if a rock cutter is utilized for the area of removal in question. Once the quantity for rock excavation for a particular area has been measured in the field and submitted by the CONTRACTOR and approved for payment by the OWNER, the CONTRACTOR waives any and all rights to request a change in the quantity in the future.

31.11. UNSUITABLE BACKFILL MATERIAL

All backfill material up to a height of 16 inches above the pipe shall be free from rocks greater than 3 inches in diameter and 5 inches in length, frozen material, clubs, stumps, debris, etc.

Where there is a deficiency of suitable backfill material due to a rejection of part or all of the excavated material as unsatisfactory for backfill purposes, the CONTRACTOR shall furnish satisfactory backfill material wasted from trench excavation in other locations or from other sources furnished by the CONTRACTOR.

Where creek gravel, shelf rock, boulders, etc., removed by conventional methods, are encountered in the pipe installation process, all loose rock shall be removed from the bottom of the trench before the pipe is laid. The pipe shall be bedded in 6 inches of suitable backfill material. The initial backfill up to a depth of 16 inches above the pipe shall consist of suitable backfill.

The CONTRACTOR shall be responsible for disposal (hauling away) of any/all unsuitable backfill material that may not be utilized on the job site. The CONTRACTOR has 5 working days from original excavation to remove the unsuitable backfill material off site. If after this period of time the unsuitable backfill material is not removed from the site, the OWNER has the right to hire an outside agency to remove the unsuitable backfill material in a timely manner and these costs shall be withheld from the final Clean-Up/Seeding retainage funds.

Backfill furnished and work performed (including disposal operations) under these circumstances shall be paid for at the contract unit price per linear foot for "Unsuitable Backfill Material", as determined by measurement in the field.

Intentionally Blank

CONTRACTOR Compliance with Storm Water Pollution Prevention Plan
(SWPPP)

Table of Contents

Section 34

34.01.	SCOPE OF WORK.....	34-1
34.02.	BACKGROUND AND PURPOSE	34-1
34.03.	CONTRACTOR REVIEW AND ACKNOWLEDGEMENT OF SWPPP: RESPONSIBLE SITE INSPECTOR	34-1
34.04.	UNAUTHORIZED DISCHARGES	34-2
34.05.	REQUIREMENT TO MONITOR	34-2
34.06.	SYSTEM MAINTENANCE AND CORRECTIVE ACTIONS.....	34-3
34.07.	RECORD MAINTENANCE AND AVAILABILITY	34-3
34.08.	METHOD OF MEASUREMENT	34-3
34.09.	BASIS OF PAYMENT	34-3

Intentionally Blank

CONTRACTOR Compliance with Storm Water Pollution Prevention Plan (SWPPP)

Section 34

34.01. SCOPE OF WORK

The procedures contained herein specify the requirements that the CONTRACTOR and all major subcontractors involved in land disturbing activities must follow to ensure that the Storm Water Pollution Prevention Plan (SWPPP) prepared for this project is adhered to.

The CONTRACTOR shall obtain an NPDES General Permit for Construction Activities. The CONTRACTOR is responsible for all aspects of the permit process from the Notice of Intent to Construct, through Notice of Termination, including the weekly and rainfall inspections as necessary per the permit and according to section 34 of these specifications.

34.02. BACKGROUND AND PURPOSE

As required by a Storm Water General Permit, a Storm Water Pollution Prevention Plan (SWPPP) has been prepared for this project. The SWPPP is intended to control water-borne and liquid pollutant discharges by some combination of interception, filtration and containment. The SWPPP requires that all major grading activities and associated pollution prevention measures to be documented inspected and maintained throughout the construction phase of the project until final stabilization is achieved.

34.03. CONTRACTOR REVIEW AND ACKNOWLEDGEMENT OF SWPPP: RESPONSIBLE SITE INSPECTOR

The CONTRACTOR and any subcontractor involved in earthwork shall:

1. Review the Stormwater Pollution Prevention Plan.
2. Sign the CONTRACTOR's Acknowledgement Form.
3. Indicate, in the SWPPP, the names of all key subcontractors involved in earthwork/land disturbing activities.
4. Ensure that all key site personnel involved in earthwork operations understand the requirements of the SWPPP.
5. Return a copy of the signed form to the OWNER's representative prior to construction commencement.
6. Maintain a copy of the Registration Statement, Stormwater General Permit and Stormwater Pollution Prevention Plan on site at all times.
7. Provide a Responsible Site Inspector for compliance with the SWPPP who shall: 1) be familiar with the site and the nature of the major construction activities, 2) be qualified to evaluate both overall system performance and individual component performance, and 3) meet any specific requirements for training imposed by the OWNER. The CONTRACTOR's Responsible Site Inspector is authorized to recommend and implement modifications to the SWPPP as required to ensure the effectiveness of pollution prevention measures, provided, however that all such changes shall be approved by the OWNER before implementation.

34.04. UNAUTHORIZED DISCHARGES

The CONTRACTOR will ensure that no discharges other than those from stormwater leave the site.

The CONTRACTOR will notify the OWNER of any discharges of other than stormwater in accordance with the procedures contained in the General Permit. Such discharges shall include but not be limited to oils, greases and other petroleum products, hazardous substances, or hazardous substances of any type.

34.05. REQUIREMENT TO MONITOR

- A. Required Recording. A record of the following dates shall be maintained in the SWPPP:
1. Commencement and Completion of all Major Grading Activities. The commencement date for grading activities and the dates of all major grading activities shall be recorded by the CONTRACTOR. A copy of the approved erosion and sediment control plan shall be annotated at the beginning and end of each major grading activity. Addenda, sketches, new section and/or revised drawings may be added to the approved E&S Plan.
 2. Inspections. The dates of all inspections and corrective actions shall be noted in the SWPPP.
 3. Temporary Cessation of Activities. When construction activities temporarily or permanently cease on a portion of the site the dates shall be noted.
 4. Stabilization. When permanent or temporary stabilization of exposed earth areas occur the dates shall be noted.
- B. Inspections. Between the time the SWPPP is implemented and final stabilization of the site occurs, the following inspections shall be conducted by the general CONTRACTOR's designated representative:
1. At least once every seven (7) days.
 2. Within 24 hours of a rainfall event of (0.5") one-half inch or greater as measured by the nearest national Weather Service measuring station.
- C. Inspection Items. The following items shall be inspected during the events noted above:
1. Locations where vehicles enter, and exit must be inspected for evidence of off-site sediment tracking.
 2. Sediment barriers must be inspected for effectiveness.
 3. All disturbed areas and areas used for storing materials (including excess earth) that are exposed to rainfall for evidence of, or potential for, pollutants entering the drainage system. Seeded, sodded or otherwise newly vegetated areas will be inspected to confirm that a healthy stand of vegetation has been achieved for erosion control purposes.
 4. All discharge points to determine whether erosion control measures are effective in preventing significant impacts to receiving waters.

34.06. SYSTEM MAINTENANCE AND CORRECTIVE ACTIONS

System maintenance and corrective actions for all deficiencies noted must be undertaken within 48 hours of completion of the required inspections. Any modifications necessary to increase the effectiveness of the SWPPP shall be made within seven (7) days of discovery of the need for increased effectiveness provided such modifications shall be approved by the OWNER.

34.07. RECORD MAINTENANCE AND AVAILABILITY

- A. Availability of SWPPP. The CONTRACTOR shall maintain the SWPPP on the construction site at **ALL** times. The SWPPP shall be made available to any representatives of the Illinois Environmental Protection Agency or any representative of the OWNER including OWNER's designated RPR, upon request.
- B. Notification of Final Stabilization. Upon completion of the final stabilization of the construction site, CONTRACTOR shall file a Notice of Termination for the project, at the completion of the project.
- C. Disposition of Completed SWPPP. The completed SWPPP shall be returned to the OWNER upon completion of the project.
- D. Verification of Compliance. The CONTRACTOR shall submit inspection records from the SWPPP for the invoice period with each invoice for the project submitted to the OWNER. OWNER reserves the right to withhold payment if records including SWPPP inspections are not acceptable or not provided with each invoice.

34.08. METHOD OF MEASUREMENT

Full compliance of the SWPPP

34.09. BASIS OF PAYMENT

BMP measurement and the basis of payment for BMP installation are outlined in Sec 31 of these specifications.

All costs for SWPPP coordination, NPDES General Permit for Construction Activities acquisition, maintenance, shall be included in the CONTRACTOR'S bid price for "NPDES Permit, Erosion Control and Inspection.

Intentionally Blank

INSTALLATION OF WATER MAIN AND APPURTENANCES

Table of Contents

Section 41

41.01.	SCOPE OF WORK.....	41-0
41.02.	CONSTRUCTION METHODS	41-0
41.03.	EXCAVATION (TRENCH METHOD).....	41-0
41.04.	BACKFILLING (TRENCH METHOD)	41-0
41.05.	DRAINAGE DITCH / CREEK CROSSINGS	41-1
41.06.	WATER MAINS AND WATER SERVICE LINES NEAR SEWERS	41-2
41.07.	PRESSURE TESTING OF WATER MAIN AND EQUIPMENT.....	41-3
41.08.	DISINFECTION OF WATER MAIN AND EQUIPMENT.....	41-4
41.09.	THRUST BLOCKS	41-6
41.10.	DEWATERING.....	41-6
41.11.	ADJUSTING UTILITIES.....	41-7
41.12.	REMOVING FIRE/FLUSHING HYDRANTS	41-7
41.13.	CUTTING-IN TEES, VALVES, AND CAPS.....	41-7
41.14.	INSTALLING OFFSET FIRE/FLUSHING HYDRANTS WITH GATE VALVE.....	41-7
41.15.	WATER MAIN CONNECTION TO STRUCTURES	41-8
41.16.	DRAIN TILE REPAIR	41-8
41.17.	OPEN-CUT STEEL CASING	41-8
41.18.	OPEN-CUT PVC CASING	41-8

Intentionally Blank

INSTALLATION OF WATER MAIN AND APPURTENANCES

Section 41

41.01. SCOPE OF WORK

The work to be performed under this section shall include all materials, labor, equipment, and all other facilities necessary for the installation of the water mains by the trench method and for the installation of appurtenances as shown on the drawings and/or herein specified.

41.02. CONSTRUCTION METHODS

Construction methods recommended in the current edition of the Standard Specifications for Water and Sewer Main Construction in Illinois, as far as applicable, shall be followed. In case of conflict with the Standard Water and Sewer Specifications, these Technical Provisions shall govern. Installation methods shall also conform to the manufacturer's recommendations for the type of pipe being installed, unless specified differently in this Section. All construction and installation shall also comply with the most recent version of the Illinois State Plumbing Code.

[For installation criteria specific to the material type of water main to be utilized, refer to Section 51 "Water Main, Fittings, and Appurtenances" of these Specifications.]

[For installation criteria regarding the boring or boring and jacking of water mains and service lines, refer to Section 54]of these Specifications.

41.03. EXCAVATION (TRENCH METHOD)

The trench shall be excavated so that the water main will have a minimum of 42 inches of cover, unless indicated on the plans, a road, or railroad permit requires a greater depth. Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unsuitable soil, all such unsuitable soil under the pipe and for the width of the trench shall be removed and replaced with well compacted SELECT GRANULAR BACKFILL, hereafter referred to as "bedding."

The cost of furnishing and placing bedding for the purpose as described above, will be considered as incidental work and no additional compensation will be allowed.

41.04. BACKFILLING (TRENCH METHOD)

Where water mains are crossing open areas where early settlement is not critical, backfill shall be made by any acceptable method which will not dislodge or damage the pipe or cause bridging action in the trench. Excavated material or material from other sources furnished by the CONTRACTOR free from clods (larger than 3 inches) or rock/stones shall be used in backfilling up to 12 inches above the top of the pipe (initial backfill). Excess material shall be neatly rounded over the top of the trench as directed by the ENGINEER to allow for settlement of the trench. In final cleanup operations, the CONTRACTOR shall reshape the surface to level out any uneven settlement that has occurred.

For backfilling under rigid and non-rigid surfaces, including sidewalks, streets, roadways, gravel driveways, and gravel field entrances, initial backfill shall be with the material described above. The initial backfill material shall be worked around and beneath the water pipe and properly compacted in suitable quantities until the pipe is completely covered and stabilized, before the final backfill is permitted. The final backfill shall be SELECT GRANULAR BACKFILL (CA-6 or equal) deposited for the remaining depth of the trench/excavation and compacted to the satisfaction of the ENGINEER.

Backfilling shall not be done in freezing weather without the permission of the ENGINEER, and it shall not be made with frozen materials. No backfill shall be made where the materials already in the trench are frozen.

Backfilling operations at fittings, gate valves, and hydrant locations shall not occur until all materials and work have been viewed by the OWNER, ENGINEER, or the Resident Project Representative.

No wood shall be allowed in the trench to shim or block out the water main, control the bend of a pipe, or discarded in the trench.

Compacted Rock Backfill - Where water main installation is performed within 2 feet of the edge of roadway surfaces (excluding driveways unless called out on plans), initial and final backfill in the trench shall be as specified in the above paragraph, but the top 6 inches of the trench shall be filled with compacted earth backfill. If the trench is under the roadway, then the initial and final backfill in the trench shall be as specified in the above paragraph. This work will be paid for at the contract unit price per cubic yard for Compacted Rock Backfill measured in place. The price shall include all excavation, equipment, labor, materials, traffic safety control, placement and compaction of granular backfill, placement and compaction of earth backfill, loading and disposing of unsuitable material or earth, and other miscellaneous work as necessary.

41.05. DRAINAGE DITCH / CREEK CROSSINGS

Where water mains cross drainage ditches or creeks, the main shall be installed within the easement under the drainage ditch bed or creek bed avoiding obstructions such as culverts, concrete wingwalls, paved ditches, etc. Where restrained-joint (RJ) PVC pipe for drainage ditch or creek crossings is NOT specified, the CONTRACTOR shall excavate across all drainage ditches or creeks called for in the plans to a sufficient depth to still maintain a minimum of sixty inches (60") of cover between the top of the pipe and the bed of the drainage ditch or streambed of the creek. The PVC pipe shall then be laid in the trench and weighted down with sufficient numbers of sandbags filled with sand to keep the pipe from springing (or floating) upward. The trench shall then be backfilled per the specification. This method of drainage ditch or creek crossing work shall be incidental to the contract price.

Where restrained-joint (RJ) PVC pipe for drainage ditch or creek crossings IS specified on the plans, the CONTRACTOR shall install the pipe according to Section 51 of these Specifications. A minimum of sixty (60) lineal feet of RJ PVC pipe with expansion couplings at both ends (see also Section 51 of these Specifications) shall be required at each drainage ditch crossing. If field conditions warrant it, the length of RJ PVC pipe may be increased with ENGINEER approval. This method of drainage ditch crossing work shall be paid in a twofold manner according to the appropriate bid item. First, the amount of RJ PVC pipe required for the drainage ditch crossing, as measured in the field, shall be paid per lineal foot. Second, a lump sum fee reflecting set up time, mobilization, etc., shall be paid for each drainage ditch crossing requiring RJ PVC pipe.

Where indicated on the Drawings for the larger creeks, the CONTRACTOR shall install a meter and valve set to allow any leaks under the creek to be metered, as required by the “10-State Standards”. The CONTRACTOR’s bid price for installing the creek crossing meter and valve set of the specified size shall include 2 saddles, 1 residential service meter and pit, other associated connection details as shown on the Drawings, and other appurtenances necessary for complete connection; pressure testing and disinfection as appropriate; and all other associated tasks.

Where a directional bore is specified on the Drawings, all RJ PVC pipe, tracer wire, set-up time, mobilization, etc. shall be incidental to the lump sum cost of the specific bore.

41.06. WATER MAINS AND WATER SERVICE LINES NEAR SEWERS

Per 35 Illinois Administrative Code, 653.119, water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections, and drains, as follows:

A. Horizontal Separation

1. Water mains shall be laid 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 laid closer than ten feet to a sewer line when:
 - a. Local conditions prevent a lateral separation of 10 feet;
 - b. The water main invert is at least 18 inches above the crown of the sewer; and
 - c. The water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
3. Both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, asbestos-cement pressure pipe, prestressed concrete pipe, or PVC pipe meeting the requirements of 35 Illinois Administrative Code, 653.111 when it is impossible to meet 41.06.1 or 41.06.2 above. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling.

B. Vertical Separation

1. A water main shall be laid so that its invert is 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 10 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 slip-on or mechanical joint cast or ductile iron pipe, asbestos-cement pressure pipe, prestressed concrete pipe, or PVC pipe meeting the requirements of 35 Illinois Administrative Code, 653.111 when:
 - a. It is impossible to obtain the [proper vertical separation as described in 41.06.B.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.
4. Construction shall extend on each side of the crossing until the normal distance from the water main to the sewer or drain line is at least 10 feet.

C. 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 41.06.A and 41.06.B above.
2. Water pipe described in 41.06.A and 41.06.B above shall be used for sewer service lines when minimum horizontal and vertical separation cannot be maintained.

D. Special Conditions

Alternate solutions shall be presented to the Illinois Environmental Protection Agency when extreme topographical, geological, or existing structural conditions make strict compliance with 41.06.A or 41.06.B above technically and economically impractical. Alternate solutions will be approved provided watertight construction structurally equivalent to approved water main material is proposed.

- E. Water mains shall be separated from septic tanks, disposal fields, and seepage beds by a minimum of 25 feet. Separation from sewage lagoons shall be 57 feet.
- F. Water mains and water service lines shall be protected against entrance of hydrocarbons through diffusion through any material used in construction of the line.

41.07. PRESSURE TESTING OF WATER MAIN AND EQUIPMENT

All tests and testing equipment, including a pressure gauge with maximum graduations of 5 psi and approved by the RPR, shall be provided by the CONTRACTOR at no cost to the OWNER. Prior to performance of the test all air shall be expelled from the pipeline to the satisfaction of the ENGINEER. This may be accomplished by means of hydrants or other means. If required, taps shall be made at high points where air relief valves are not called for on the drawings. Such taps shall be plugged after testing is complete. Pressure test and leakage test procedures should comply with the Standard Water and Sewer Specifications, Section 41-2.14, except for the following “A key criterion for the pressure test is that the measured water pressure within the main(after reaching the required test pressure) should not vary by more than 5 psi during the duration of the test.” shall be replaced with the following: “A key criterion for the pressure test is that the measured water pressure within the main(after reaching the required test pressure) should not vary from starting pressure during the duration of the test.”. The leakage test is not an acceptable formal test for passing a water main, only the pressure test is allowable.

Pressure 50% in excess of working pressure, as measured at the point of lowest elevation, shall be applied for not less than 1 hour, and all pipe, fittings, valves, hydrants, and joints shall be carefully examined for defects. Leaking joints shall be remade and then retested.

The CONTRACTOR shall have the full test pressure applied to the water main segment, and verify that the water main segment is holding pressure, prior to notifying the resident project representative

to observe the formal 1 hour pressure test. Pressure test observation requests after 3:30 P.M. will be performed the next working day.

In the event air is admitted to the pipeline after being expelled for the hydrostatic tests, such air shall be removed prior to completion of the system and acceptance by the OWNER. The air may be removed by the methods described in above. In no case shall the system be placed in operation prior to the removal of the air.

41.08. DISINFECTION OF WATER MAIN AND EQUIPMENT

A. Preliminary Flushing -

Per Section 41 of the Standard Water and Sewer Specifications, disinfection of all water mains shall be carried out in accordance with AWWA C651. The main shall be flushed as thoroughly as possible with the water pressure and outlets available. The CONTRACTOR shall remove all of the internals of any hydrant during initial flushing of the water main, in order to prevent rocks, dirt, etc., from damaging the working parts of the hydrants. Flushing shall be done after the pressure test has been made. Even with utilizing these flushing procedures, care should be used in laying the pipe to keep heavier solids and foreign material out of the pipe. All flushing operations shall be coordinated with the OWNER's licensed operator and may be regulated by the OWNERS licensed operator to prevent water loss/pressure to their customers. The CONTRACTOR may not be able to flush multiple hydrants simultaneously and should bid this portion of the work accordingly.

In addition, 2 "pigs" shall be flushed through each segment of water main to aid in the removal of any solids, air, and foreign material. The pigs shall be marked for easy identification and inserted at the point of connection for each line segment, and an additional two pigs shall be inserted at each branch of the main line (i.e., all new water main installed shall be pigged). Retrieval of the pigs and discharge of the water from the initial flushing operation shall be located a minimum of 20 feet away from the water main trench and in such a location that ensures all of the flushed water travels away from the water main. The discharge end of the pipe shall be a minimum of 18 inches above the ground before and during flushing. The pigs shall not be reused. Used pigs shall be provided to the Owner. The CONTRACTOR shall devise a labeling plan and a diagram for the routing of the pigs and submit the plan to the OWNER's Operator/ENGINEER for review/approval before the installation of any water main. All pigs shall be inserted and retrieved in the presence of the Resident Project Representative. All work associated with "Pigging" shall be included in the bid price per lineal foot for PVC water main and no additional compensation will be allowed.

During flushing operations, the CONTRACTOR shall use fire hose(s) to direct the flush water to the nearest natural drainage ditch or waterway. Dissipaters, splash blocks, and/or other appropriate measures shall be incorporated in the flushing procedure to prevent excessive soil erosion as required by the NPDES permit for construction site activities (See Section 11.21). The CONTRACTOR will not be permitted to flush without the use of fire hose and shall bid this portion of the work accordingly.

B. Bio-Penetrant Application

Concurrent with filling and chlorinating the new mains, the CONTRACTOR shall add the bio-penetrant as specified in Section 10.04.a.25. The bio-penetrant shall be used per manufacturer's

recommendation. At a rate of 1 gallon of chemical as shipped to 1,000 gallons of water. The bio-penetrant shall be NSF 60 approved.

The point of application for the bio-penetrant shall be the beginning of the pipeline extension, or any valve section of it, and through a corporation stop inserted in the top of the newly laid pipe.

Water from the existing distribution system or other source of supply shall be controlled so as to flow slowly into the newly laid pipeline during the application of the bio-penetrant. Once the new mains have been filled, the treated water shall remain in the pipeline for 24 hours prior to flushing. After this time, all treated water shall be thoroughly flushed from the newly laid pipeline at its extremities until the replacement water throughout its length is proved comparable in quality to the water served the public from the existing water supply.

All bio-penetrant application work shall be performed in the presence of the Resident Project Representative. All bio-penetrant application work shall be included in the unit bid price for bacteriological sampling.

C. Requirements of Chlorination –

Before being placed in service, all new mains or extensions to existing mains, shall be chlorinated, so that a chlorine residual of not less than 25 ppm remains in the water after 24 hours of standing in the pipe.

D. Point of Application –

The preferred point of application of the chlorinating agent is at the beginning of the pipeline extension, or any valve section of it, and through a corporation stop inserted in the top of the newly laid pipe.

E. Rate of Application –

Water from the existing distribution system or other source of supply, shall be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the newly laid pipe shall meet the requirements listed in Section 41.08.C above. This may be expected with an application of 50 ppm, although some conditions may require more.

F. Preventing Reverse Flow –

Valves shall be manipulated so that the strong chlorine solution in the line being treated will not flow back into the line supplying the water.

G. Disinfection of Valves and Hydrants –

In the process of disinfecting newly laid pipe, all valves, or other appurtenances, shall be operated while the pipeline is filled with the chlorinating agent.

H. Disinfection of Booster Pumps, Pressure Reducing Valves, etc. –

In the process of disinfecting newly laid pipe, all booster pumps, pressure reducing valves, or other equipment or appurtenances, shall be operated while the pipeline is filled with the chlorinating agent.

I. Final Flushing and Testing –

Following disinfection, all treated water shall be thoroughly flushed from the newly laid pipeline at its extremities until the replacement water throughout its length shall, upon test, be proved

comparable in quality to the water served the public from the existing water supply system. All flushing operations shall be coordinated with the OWNER's licensed operator and may be regulated by the OWNERS licensed operator to prevent water loss/pressure to their customers.

After flushing, water samples collected on 2 separate days, at least 48 hours apart, from the treated piping systems at the designated testing points (indicated on the Sampling Plan included with the plan sheets), shall show satisfactory bacteriological results. The OWNER shall be present to witness the collection of all samples. Continuous flushing between the two samples shall not be allowed. Bacteriological analysis must be performed by a laboratory approved by the Illinois Environmental Protection Agency. The CONTRACTOR shall perform all testing and provide all bacteriological analysis results to the ENGINEER.

Once the CONTRACTOR has successfully obtained the 2 required new construction bacteriological samples, the OWNER, at their discretion and within 48 hours, will collect routine bacteriological samples from the same sample point for analysis. If the OWNER's test fails, then the CONTRACTOR shall repeat the new construction sample testing process for that specific location until both the CONTRACTOR's and the OWNER's samples pass. Any re-testing work by the CONTRACTOR shall be incidental to the Contract price.

All disinfection work and bacteriological sampling work shall be performed in the presence of the Resident Project Representative. Payment for bacteriological sampling will be made to the CONTRACTOR based on his line item bid price for each sample location. The CONTRACTOR's bid price for each sampling location shall include all necessary materials and labor to obtain 2 consecutive passing samples as described above.

41.09. THRUST BLOCKS

All bends of 11-1/4 degrees or greater, and all tees, plugs, reducers, fire hydrants, and flushing hydrants shall be thrust protected to prevent movement of the lines under pressure. Blocking shall be Portland Cement Concrete poured in accordance with Section 41.-2.09 of the Standard Water and Sewer Specifications, or precast, solid blocking for small diameter pipe where the undisturbed soil is extremely firm and stable. Thrust blocking shall extend from the fitting to the undisturbed soil. Pipe and fitting joints shall remain accessible for repairs. Where unstable soil conditions exist, all deflections in the pipe from a straight line shall be provided thrust blocking in accordance with the manufacturer's recommendations. Concrete for reaction or thrust blocks shall have a 28 day compressive strength of not less than 3,000 psi. No wooden wedges, treated or otherwise, shall be allowed for shims for the blocking in any circumstance. PVC pipe may not be used in lieu of concrete blocks. Where a fitting is used to make a vertical bend, the fitting shall be anchored to a thrust block braced against undisturbed soil. The thrust block should have enough resistance to withstand upward thrusts at fitting.

41.10. DEWATERING

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 trenches or excavation. All trenches or excavation shall be kept dry until construction is complete. No foreign water shall be allowed to enter any pipe which has been laid. No water shall be allowed to stand over concrete until the concrete has set for at least 24 hours. This refers to thrust blocks, anchorages, foundations, etc..

If well pointing or the installation of temporary drains are required to complete the work, they shall be provided by the CONTRACTOR.

No additional compensation shall be made to the CONTRACTOR for any dewatering techniques, equipment or labor.

41.11. ADJUSTING UTILITIES

All utilities, including wiring, light standards, signal lights, sewers, private water lines, buried telephone cable, underground gas lines, etc., affecting the construction of the proposed improvement shall be adjusted at the CONTRACTOR's expense. It shall be the CONTRACTOR's responsibility to determine the exact location of all utilities. All adjustments shall be done as specified by the OWNER of the utility. If the CONTRACTOR damages any utility not requiring adjustment, he shall replace or repair it as required by the OWNER and no additional compensation will be allowed. No attempt has been made on the drawings to show all utilities or their exact locations. (See Section 11.02 of these specifications.)

41.12. REMOVING FIRE/FLUSHING HYDRANTS

Where indicated on the drawings or requested by the OWNER or ENGINEER, existing fire/flushing hydrants shall be removed where an existing water main is to be extended/connected. The CONTRACTOR shall remove and dispose of the existing fire/flush hydrant, unless it is to be salvaged and the contractor shall leave it in a convenient location for pick up by the water system's operator. This work shall be incidental to the Contract Price.

41.13. CUTTING-IN TEES, VALVES, AND CAPS

Where indicated on the drawings or requested by the OWNER or ENGINEER, tees, gate valves and/or caps of the appropriate size shall be cut-in to the existing water main. The CONTRACTOR's bid price for "Connections/Caps with Line Stops" shall include locating the existing water main (and other appropriate utilities); shutting off the flow of water at nearby valves or with line stops as necessary, and as indicated on the Drawings; installation at the new location complete with all necessary appurtenances; pressure testing and disinfection as appropriate; and all other associated tasks. CONTRACTOR shall coordinate the schedule of each line stop with the OWNER/ENGINEER.

41.14. INSTALLING OFFSET FIRE/FLUSHING HYDRANTS WITH GATE VALVE

Where indicated on the Drawings or requested by the OWNER or ENGINEER, fire/flushing hydrants shall be installed "offset" from the main line. As shown in detail on the Drawings, a tee or cross with anchor coupling, gate valve, and blind flange shall be utilized at the end of the water main "run" and/or second "branch" unless continuing with water main. From the branch, the CONTRACTOR shall install an anchor coupling(s), with lengths as shown on the general fitting detail in the plans, gate valve, and hydrant. In general, the offset is requested in areas likely to be extended in the future, for ease of construction, or in areas for future ease of maintenance. The CONTRACTOR'S bid price for installing offset fire/flushing hydrants shall include the tee, blind

flange, gate valve(s), anchor couplings, and fire/flushing hydrant (with locking mechanism when specified or indicated on drawings); complete with blocking, gravel, all necessary reducers and/or enlargers, and other appurtenances necessary for complete connection; pressure testing and disinfection as appropriate; and all other associated tasks.

41.15. WATER MAIN CONNECTION TO STRUCTURES

The CONTRACTOR specified shall furnish all labor, materials, fittings, tools, and equipment necessary for the complete installation of the necessary piping, valves, and appurtenances to physically connect the proposed water main to the proposed or existing structure (elevated tank, ground storage tank, booster pump station, master meter, etc.), as shown on the Drawings.

41.16. DRAIN TILE REPAIR

The bid item for “Drain Tile Repair”, will be paid to the CONTRACTOR only when a tile is not located or is improperly located, and the CONTRACTOR then damages and properly fixes the tile. If a tile is located to within 18 inches on either side of the mark (as for JULIE locates) and the CONTRACTOR damages the tile, then the CONTRACTOR shall fix the tile and no payment will be allowed under this bid item. In addition, no payment will be allowed for CONTRACTOR down time to hand dig or otherwise search for a marked field tile, whether accurately located or not.

The bid price for “Drain Tile Repair” shall include all necessary gravel backfill/support as shown on the Drawings and as defined in IDOA’s requirements, included in the General Conditions of these project specifications.

Extra precaution shall be taken to fix all field tiles. The CONTRACTOR shall document all tiles that were fixed, this shall include pictures of inside of tile before it is fixed, to show original condition of tile, (i.e., clean, half full, full of dirt, etc.) and an after picture showing repair. The CONTRACTOR shall document the exact location of the repair, so it can be located in the future.

41.17. WELL WATER LINE AND ELECTRICAL REPAIR

Intentionally Blank

41.18. OPEN-CUT STEEL CASING

Intentionally Blank

41.19. OPEN-CUT PVC CASING

Where called for on the Drawings, the water main shall be installed in PVC casing (see Section 51.02 for material requirements) of the size shown on the Construction Drawings. The limits of the PVC casing areas shall be staked by the OWNER as described previously in this section. As there are currently no known structures or other limiting factors in these areas, the PVC casing may be installed in an open trench. Backfill for Open-Cut PVC Casing Pipe shall be as specified in Section 41.04 and will be incidental to the unit price of the PVC casing pipe installation and no additional

compensation will be allowed. Measurement in lineal feet shall be made along the centerline of the PVC casing as installed.

The Water main installed through the casing pipe shall be RJ PVC pipe as specified in Section 51 of these specifications and sized as shown on the Drawings. Payment for the RJ PVC installed in the casing shall be based on the unit price of the bid schedule line item "RJ PVC within Casing Pipe" for the appropriate size and pressure classification of RJ pipe utilized. Casing spacers shall be used for the full length of the casing. The ends of the casing shall be sealed with a pull on non-tapered end seal. All RJ pipe placed in PVC casing pipe shall utilize casing spacers as specified in Section 51.07.13. Payment for the restrained joint pipe through the casing shall be as specified in Section 54.09.

WATER MAIN, FITTINGS, AND APPURTANENCES

Table of Contents

Section 51

51.01.	SCOPE OF WORK.....	1
51.02.	GENERAL INFORMATION	1
51.03.	WATER MAIN PIPE – PVC SLIP JOINT	2
51.04.	WATER MAIN PIPE – RESTRAINED JOINT PVC	2
51.05.	WATER MAIN PIPE – DUCTILE IRON PIPE.....	3
51.06.	HDPE PIPE.....	4
51.07.	WATER MAIN FITTING	4
51.08.	WATER MAIN PIPE LAYING	4
51.09.	WATER MAIN APPURTENANCES	7
51.09.01	SERVICE LINE.....	7
51.09.02	HYDRANT.....	7
51.09.03	BUTTERFLY VALVES.....	8
51.09.04	GATE VALVES	8
51.09.05	VALVE BOXES.....	9
51.09.06	VALVE BOX MARKERS	9
51.09.07	COMBINATION AIR RELEASE VALVE.....	9
51.09.08	PLUGS AND CAPS	10
51.09.09	SAMPLE STATIONS	10
51.09.10	COPPER TRACER WIRE	10
51.09.11	TRACER WIRE ACCESS POINTS	11
51.09.12	TAPPING SLEEVE.....	11
51.09.13	LMI SERVICE LINE	11
51.09.14	DUCTILE IRON RESTRAINT GLANDS.....	11
51.09.15	ANCHOR COUPLING	12
51.09.16	SEPTIC ENCASEMENT MATERIAL.....	12
51.09.17	CASING SPACERS	12
51.09.18	WATER SERVICE CONNECTION.....	13
51.09.19	CORPORATION STOPS	13
51.09.20	SERVICE CLAMP/SADDLE	14
51.09.21	METER.....	14

51.09.22	REGULATOR	14
51.09.23	METER YOKE ASSEMBLY.....	14
51.09.24	METER BOX	15
51.09.25	METER COVER	15
51.09.26	AUTO FLUSHER.....	15

WATER MAIN, FITTING, AND APPURTANENCES

Section 51

51.01. SCOPE OF WORK

The CONTRACTOR shall furnish all equipment, material, labor, standard fittings, skills, special fittings, couplings, etc., for the satisfactory installation of waterline.

The CONTRACTOR shall bid a lineal foot price for the various different sizes, diameters and pressure ratings as indicated on the bidding proposal. All ductile iron fittings, couplings, adaptors, lubricants, gaskets, restrainers, and similar items shall be included in the bid price per lineal foot for water main and no additional compensation will be allowed for these items.

51.02. GENERAL INFORMATION

- A. All pipe shall meet the specifications of the National Sanitation Foundation (NSF). The pipe manufacturer shall furnish certification in sufficient copies that the pipe supplied is in compliance with all requirements as specified herein.
- B. Any bend in the water main greater than 11-degrees will require a mechanical joint, ductile iron elbow fitting with restrainers. 6-inch PVC shall not be deflected for major change in direction. CONTRACTOR shall not "sweep" corners on 6-inch or larger PVC. MJ DI fittings with restraints shall be used. Fitting and associated work shall be incidental.
- C. Samples of pipe, physical and chemical data sheets, shall be submitted to the ENGINEER, upon request, for approval and his approval shall be obtained before pipe is purchased.
- D. The pipe shall be homogeneous throughout and free from cracks, holes, foreign inclusions or other defects. The pipe shall be as uniform as commercially practical in color.
- E. Pipe must be delivered to the job site by means which will adequately support it and not subject it to undue stresses. In particular, the load shall be so supported that the bottom rows of pipe are not damaged by crushing. Pipe shall be unloaded carefully and strung or stored as close to the final point of placement as is practical. Pipe strung for installation in the field may not be placed more than 3 days in advance on the installation process. Any rejected pipe shall be removed by the CONTRACTOR within 5 days after written notification from the ENGINEER.
- F. Pipe shall be protected from truck exhaust during transportation.
- G. Pipe shall be protected from crop spraying while stored on-site, or strung for installation, prior to installation.
- H. The workmanship, pipe dimensions, and tolerances, outside diameters, wall thickness, eccentricity, sustained pressures, burst pressures, flattening, extrusion quality, marking and all other requirements of the Commercial Standards, CS 256-63.
- I. At all times when work is not in progress, all open ends of pipe and fittings shall be securely closed with metal plugs or caps so that no trench water, earth, animal, or other substances may enter the pipe or fittings.

- J. Ductile iron pipe shall not be pushed through bore holes at highway and railroad crossings. The CONTRACTOR may install ductile iron pipe inside of steel casing that has been bored and jacked provided:
1. That the highway or railroad to be crossed amends the permit to allow ductile iron pipe as the carrier.
 2. The CONTRACTOR, at his own expense, provides the increased casing pipe size required.

51.03. WATER MAIN PIPE – PVC SLIP JOINT

- A. This section of the specifications covers rigid polyvinyl chloride pipe, hereinafter called PVC pipe.
1. The water main shall be Polyvinyl Chloride (PVC) pipe and push-on gasketed joints, in accordance with Section 40 of the Standard Water and Sewer Specifications.
 2. ASTM Specification D 1784 shall be conformed with in all respects.
- B. PVC Pipe (3 to 12 inch)
1. SDR-DR-PR PVC Pipe: SDR (Standard Dimension Ratio) –DR (Dimension Ratio)- PR (Pressure Rated) PVC pipe shall be Type I, grade 1 or 2, with a hydrostatic design stress of 2,000 psi for water at 73.4°F, designated as PVC 1120 or PVC 1220.
 2. PVC pipe with SDR ratings of 13.5, 17, 21, and 26 are to be used or as indicated on the bidding schedule and shall conform to the latest revision of ASTM Specification D2241. PVC pipe with DR ratings of 14, 18, and 25 shall conform to the latest revision of AWWA C900. PVC pipe with PR (Pressure Rating) shall conform to the latest revision of AWWA C905
 3. Miscellaneous lengths of pipe can also be supplied plain end and joints made with the use of a double gasket coupling. These couplings shall be provided with pipe stops and have a pressure rating of 200 psi working pressure.
- C. PVC Pipe (14 to 48 inch)
- Intentionally Blank

51.04. WATER MAIN PIPE – RESTRAINED JOINT PVC

- A. This section of the specifications covers rigid restrained-joint polyvinyl chloride pipe, hereinafter called RJ pipe.
1. The CONTRACTOR must use PVC RJ pipe for drainage ditch crossings, road crossings, and creek crossings as well as all directional bores (including water main inside of steel or PVC casing pipe), as shown on the contract drawings.
 2. The RJ pipe shall be furnished with twin gasket couplings, nylon splines, rubber rings and lubricant. The rubber rings shall be shipped in place in the coupling.
 3. For 3 inch to 12 inch RJ pipe, the transition from RJ pipe to PVC or ductile iron pipe shall be made by the use of a manufacturer supplied expansion coupling. This coupling shall be

restrained-joint by IPS. Only the installation of full sticks of RJ pipe with factory grooves shall be permitted.

4. For 14 inch and larger, the CONTRACTOR shall use either the manufacture’s expansion joint or a 24 inch ductile iron sleeve, with the end towards the RJ connected with a UFR joint restraint, and the other end with a UFA. The UFR and UFA shall be manufactured per Section 10 Technical Specifications.

51.05. WATER MAIN PIPE – DUCTILE IRON PIPE

All ductile iron pipe shall be manufactured in accordance with all requirements of AWWA Standard C-151. Standard laying length is either 18 feet or 20 feet. All pipe shall meet the following thickness requirements:

Pipe Size (Nominal I.D.)	Minimum Thickness	Thickness Class	Pressure Class
3 inch	0.25 inch	51	
4 inch	0.26 inch	51	
6 inch	0.25 inch	50	
8 inch	0.27 inch	50	
12 inch	0.28 inch		350
16 inch	0.34 inch		350

The inside of the pipe shall be cement lined in accordance with AWWA Specification C-104, ANSI A 21.4, with a bituminous seal coat. All exterior surfaces of ductile iron pipe shall have a bituminous coating of either coaltar or asphalt base at least one mil thick.

Where/if the water main crosses an existing petroleum pipeline, slip-joint ductile iron pipe with hydrocarbon resistant gaskets shall be used for a length as required to obtain at least 25 feet clear distance from the water main to the petroleum pipeline or as shown on plans or required by permit whichever is greater.

Pipe joints shall be manufactured in accordance with the following specifications:

- A. Mechanical joint pipe shall be furnished with applicable gaskets, glands, and bolts. Bolts shall be of Cor Blue or an equivalent ASTM A 242 material. Joint shall be in accordance with AWWA Standard C 110 and C 111.
- B. Slip-joint pipe shall be furnished with gaskets and lubricant and be in accordance with AWWA Standard C 111.
- C. Restrained-Joint pipe joint shall be furnished with gaskets, restraining ring, and lubricant, and be in accordance with AWWA Standard C 153 and C 111 per Section 10.02.
- D. River Crossing Pipe shall be ductile iron manufactured in accordance with the requirements of ANSI/AWWA C151/A21.51. Push-on joints for such pipe shall meet the requirements of ANSI/AWWA C111/A21.11, allow deflection of up to 15°, and be per Section 10.02. Pipe thicknesses shall be equal to manufacturer’s standard.

Unless cased or bored, polyethylene encasement shall be used on all ductile iron pipes and the polyethylene encasement shall conform to ANSI/AWWA C 105/A21.5 Standards. Polyethylene material will deteriorate rapidly when exposed to direct sunlight. Store all polyethylene encasement

out of the sunlight. If during the installation period it is anticipated that the polyethylene encasement will be exposed to sunlight for more than two weeks (ie. Open trench) Type C (black) polyethylene material must be used.

51.06. HDPE PIPE

Intentionally Blank

51.07. WATER MAIN FITTING

All ductile iron fittings shall conform to AWWA C 153, AWWA C 110, and AWWA C 111, 2 inch to 48 inch, for 250 psi water pressure plus water hammer. All fittings except plugs and sleeves shall be cement lined to conform to AWWA C 104 with a bituminous seal coat. Sleeves and plugs shall be bituminous seal coated. Application gaskets, standard transition gasket (SMJ gasket) for IPS PVC, mechanical joint restraining glands, and bolts shall be furnished. All bolts shall be Cor Blue or an equivalent ASTM A 242 material. Sleeves and plugs shall be bituminous seal coated.

- A. Fittings include hydrants, gate valves, tees, elbows, crosses, reducers, caps, plugs, and wyes.
- B. **All fittings associated with PVC or DI water main installation shall be ductile iron. All ductile iron fittings shall be mechanical-joint and utilize mechanical-joint restraining glands where anchor couplings are not required.**
- C. Pressure rating of fittings shall be equal to or greater than the specified pipe.
- D. Fittings shall be per Section 10.03.01.7.
- E. Backfill operations at fittings, gate valves, and hydrant locations shall not occur until all materials and work have been viewed by the OWNER or RPR.
- F. PVC Expansion Couplings shall be allowed when transitioning from PVC to RJ PVC Pipe. The expansion couplings shall be provided by the manufacturer and be RJ on one end and slip joint on the other. The fitting shall be of the same material as the pipe, and in no case shall have thinner walls than that of the pipe furnished. The fitting for gasketed joint, RJ PVC pipe shall be molded in one (1) piece.

Ductile Iron Expansion Couplings shall be a ductile iron sleeve with a restrained-joint fitting on one side and slip-joint fitting on the other side.

- G. Fittings for use with HDPE

Intentionally Blank

51.08. WATER MAIN PIPE LAYING

- A. General: Only competent persons at laying water main pipe shall be employed on this phase of the work, and complete suitable equipment necessary for the execution of same is required. Any incompetency observed by the OWNER must be removed at his request, and where improper

equipment or lack of same appears to be impairing the quality or speed of the work, such adjustments in same shall be made to the OWNER's satisfaction.

The pipe, fittings, and valves shall be placed in the trench with care. Under no circumstances shall pipe or other materials be dropped or dumped into the trench. The pipe shall not be dragged in a manner which would cause scratching on the surface of the pipe and will be considered cause for rejection. Pipe shall be installed in accordance with the manufacturer's recommendations, and with the Standard Specifications for Water and Sewer Main Construction in Illinois.

A full length of pipe shall be used where slip-joint pipe connects to a fitting or appurtenance. Where a full length of pipe cannot be utilized for any reason, a UFR Series 1350 joint restraint, for PVC or equal for DI, manufactured by The Ford Meter Box Company, Inc, shall be used at the first joint from the fitting such that the length of restrained pipe is greater than or equal to 20 feet.

All joints that result in a change of direction shall be restrained with a solid concrete thrust block in such a fashion so that the weight and thrust is transferred to the undisturbed soils of the trench. These solid thrust blocks shall be made of concrete and placed so that adequate bearing surface against undisturbed soil is provided.

- B. Pipe Cleaning During Laying Operation: If dirt or dust has been introduced into the length of pipe, a thorough cleaning of the pipe shall be done just before the joint of pipe is installed. At this time a visual check shall be made by placing the pipe in an inclined position to assure that all foreign matter and dirt is removed from the inside of the pipe. The pipe shall be kept clean during and after laying. At the termination of pipe laying, the open end of the pipeline shall be closed off by a suitable cover until laying operations are resumed.
- C. Inspection of Material During Construction: Any materials not meeting the specifications, or obviously faulty material, shall be rejected by the ENGINEER and removed from the job site by the CONTRACTOR. When ordered by the ENGINEER, joints may be cut from the pipeline for inspection. All ductile iron installation, whether pipe or fittings, shall be reviewed by the Resident Project Representative before the trench is backfilled. Failure to allow for this observation shall result in the exposing of the pipe for review, and shall be incidental to the contract price.
- D. Fluid Tight Joints: All dirt, debris, and moisture shall be removed from the surfaces to be jointed. Make sure the gasket is not twisted or turned to prevent proper sealing in the groove. Apply the lubricant to the gasket surface and to the spigot end of the pipe. The joint is made by one quick easy motion making sure the guide mark has reached the end of the fitting. For restrained-joint pipe, the contractor should then inserting the nylon spline through the spline hole in the assembled joint which engages with the spline groove in the pipe end.
- E. Breaks in Pipe or Joints: All breaks in pipe and/or joints shall be repaired to the satisfaction of the ENGINEER and at the expense of the CONTRACTOR. The defective pipe or fittings shall be removed and replaced. Repair clamps will not be permitted.
- F. Cutting Pipe: Cutting of RJ pipe shall not be allowed; only the installation of full length pipe shall be allowed. The only exception to this is when restrained-joint pipe is connecting to a fitting. In this case the restrained-joint pipe may be cut to the necessary length and appropriate UFR used on the restrained-joint at the fitting.

G. Bed and Cover: Each section of pipe in the trench shall rest upon the pipe bed for the full length of its barrel. The bottom of the trench shall be free from rocks, clods, or other sharp-edged objects. The subgrade upon which the pipe is placed shall consist of material suitable for supporting the pipe without excessive settlement or stress development.

If the pipe is to be laid in a trench having a rock bottom, bedding shall be as specified in Section 31.10.

Initial and final backfill shall be as specified in Section 41.04.

Service lines and laterals must be assembled so that no strain is placed on the pipe during or after backfill operation. After laying of the pipe is completed, it shall be center loaded with backfill to prevent arching and whipping under pressure. Center loading should be done carefully so that joints will be completely exposed for examination during testing, unless conditions warrant complete backfill before testing.

H. Preliminary Pressure Testing: At the ENGINEER's option during the general construction period the following pressure testing procedure shall be followed:

After the PVC pipe is assembled trench side or in the trench, a test of not less than 50% above the system's anticipated working pressure shall be applied with either air or water. After two consecutive tests have been performed without any failure, the CONTRACTOR at his option and with the ENGINEER's approval may discontinue testing until the system is completed. A hydrostatic test shall then be run as outlined in Section 41.07.

If there is a change of laying conditions, technique or personnel after the testing has been discontinued the CONTRACTOR should, and at the ENGINEER's request will, test additional sections to provide assurance that this change is satisfactory.

I. Measurement and Payment: Payment for all work described in this section shall be included in the CONTRACTOR's bid price for the respective sizes of lines, pressure class, and material type, as shown in the Bid Schedule. Measurement in lineal feet shall be made along the centerline of the trench through all valves and fittings.

J. Service Connections: All service connections shall be made by means of tees, tapped couplings, service clamps and other fittings approved by the ENGINEER. The water main shall not be tapped for the installation of service connections until flushing and "pigging" of the main has been completed as specified in Section 41.08. The use of solvent weld plastic saddles will not be permitted. Whenever corporation stops are placed in plastic lines after conducting hydrostatic tests, a visual inspection of the saddle and corporation stop shall be made to ensure the system is free of leaks.

K. Polyethylene encasement shall be used to wrap the ductile iron pipe prior to installation. See section 51.03 for specifications on the polyethylene encasement.

L. The CONTRACTOR'S attention is brought to the fact that HDPE pipe has a high coefficient for thermal expansion and contraction. Care shall be taken when connecting pipe at all bores and all fittings.

51.09. WATER MAIN APPURTENANCES

51.09.01 SERVICE LINE

Polyethylene service pipe and tubing shall be rated for use with water at 73.4°F at a maximum working pressure of 200 psi. The Standard Dimension Ratio (SDR) shall be 9 for CTS tubing sizes. The average outside diameter, minimum wall thickness and respective tolerances for any cross-section shall be as specified in ASTM D 2737. Pipe and fittings shall be rated at the same pressure class, or greater, as the water main at the connection point. Service lines shall not be tapped to the water main until flushing and pigging of the main has been completed. All compression fittings **must** use a stainless-steel insert. The service line shall be one continuous piece (no splices) from the corp stop to the service meter.

Service line will be paid per lineal feet from the water main to the service meter.

Only compression fittings with stainless steel inserts shall be used. **No flaring** of polyethylene pipe will be allowed.

The CONTRACTOR shall install a 5 feet HDPE extension piece beyond the meter box to which the customer can connect his/her service line without digging into the meter box, as shown on the drawings. The extension shall be plugged to keep out debris. This shall be included in the bid price for each service connection.

51.09.02 HYDRANT

The hydrant shall have male connections with National Standard hose coupling threads. The opening of all hydrants shall be counterclockwise. An arrow shall be cast or stamped on the top indicating the direction to open. The operating nut shall be National Standard pentagon. The main valve opening shall be designed so that removal of all working parts can be accomplished without excavating. Furthermore, the main valve assembly, drain ring, and drain ring housing shall be connected to the shoe by drain ring housing bolts, allowing easy maintenance, repair, or replacement of the entire barrel assembly without water shut-off. CONTRACTOR shall provide all necessary reducers and/or enlargers for complete connection, and shall be included in the bid price for flushing/fire hydrants.

Hydrants shall be set at such elevations that the connecting pipe will not have less cover than the main water main. Blocking shall be as described on the drawings. Not less than 7 cubic feet of clean gravel shall be placed around the base of the hydrant to insure drainage. A woven, nylon, polypropylene fabric shall be placed over the gravel to prevent infiltration of soil into the drainage field. The backfill around the hydrant shall be thoroughly compacted to the grade line. Hydrants shall have the interior cleaned of all foreign matter before installation. Stuffing boxes shall be tightened and the hydrant shall be inspected in working condition. The CONTRACTOR shall remove all of the internals of the hydrant during initial flushing of the water main, in order to prevent rocks, dirt, etc., from damaging the working parts of the hydrants. All hydrants shall be set plumb and one hose connection shall face the road, or to the satisfaction of the OWNER or ENGINEER. Hydrants shall be painted with 1 primer coat of red paint and 2 red finish coats.

The hydrant must employ a compression type main valve which closes with pressure. The operating nut is to be made of bronze or cast iron. The operating threads and thrust collar shall be sealed from the waterway by one or more "O" rings and shall be lubricated from a sealed, self-contained lubricant reservoir. Upper and lower stems shall be jointed with a cast iron coupling with stainless steel pins.

There shall be a minimum of 2 drain ports. These drains shall be of bronze. The drain valves shall be rubber or leather faced and shall work automatically with the main valve and permit draining of the barrel with the main valve closed. Springs must be bronze or stainless steel if springs are utilized in drain valve assembly.

The hydrant seat must be bronze with a machined seating surface. The main valve assembly shall be seated in a subseat of all bronze material so as to provide bronze to bronze engagement of the valve seat ring and to provide a drainage channel of non-ferrous material. This bushing must be locked in place mechanically to prevent rotation or accidental removal.

Where a hydrant is installed adjacent to a road bore or ditch crossing the depth of bury required may be greater than that listed below. In these instances, the CONTRACTOR shall provide the appropriate depth of bury at no additional cost to the OWNER. CONTRACTOR shall provide hydrants with flange for rotating body without excavation.

1. 2-1/4 inch Flushing Hydrants

Flushing hydrants shall be a post type suitable for 48 inch bury as per Section 10.03.01.9.a. The hydrant shall be designed for 150 lbs. working pressure and 300 lbs. hydrostatic test pressure. The hydrant must employ a compression type main valve which closes with pressure. The operating nut is to be made of bronze or cast iron. The hydrant shall have a 2-1/4 inch barrel, a single, 2-1/2 inch hose nozzle with National Standard thread and a 3 inch ring/fluid tight inlet connection, to adapt to any size PVC water main. The hydrant shall be joined to the water main by a mechanical joint shoe sized to match the water main and a Large End Mechanical Joint Reducer when necessary.

2. 4-1/2 inch Flushing Hydrants

4-1/2 inch flushing hydrants shall have a base connection as required for the type and size of pipe used in the water main construction. The hydrant shall be designed for 200 lbs. working pressure and 400 lbs. hydrostatic test pressure. Hydrants shall be of the dry barrel type, with breakable body traffic model, conforming to AWWA C502, and shall have a valve opening at least 4-1/2 inches in diameter. The flush hydrant shall be designed for a minimum of 42 inch bury. The hydrant shall have two 2-1/2 inch hose connections. The main valve opening shall not be less than 4-1/2 inches.

The safety flange shall be set approximately 4 inches above ground level. All 4-1/2 flush hydrants shall be per Section 10.03.01.9.b. with 4 or 6 inch mechanical joint base shoe matching the main size.

3. Fire Hydrants

Intentionally Blank

51.09.03 BUTTERFLY VALVES

Intentionally Blank

51.09.04 GATE VALVES

Gate valves shall be designed for a minimum water working pressure of 250 psi. Valves shall be resilient wedge, non-rising stem type, and shall be used with the type of pipe and joint to be installed. Gate valves shall have a clear waterway equal to the full nominal diameter of the valve and shall be opened by turning counterclockwise. The operating nut shall have an arrow, cast in

the metal, indicating the direction of opening. Each valve shall have the maker's initials, and pressure ratings cast on the body. Prior to shipment from the factory, each valve shall be tested by hydraulic pressure equal to twice the water working pressure.

[2 inch-12 inch gate valves shall conform to AWWA Standards C509 & C550 and shall be per Section 10.03.01.8.a] with 'O' ring seals [14 inch-36 inch gate valves shall conform to AWWA Standards C550, & C515 and shall be per Section 10.03.01.8.b] with 'O' ring seals and a 90° bevel gear actuator.

Gate valves shall have mechanical joints. No “push-on” joints will be allowed. All bolts for the bonnet shall be stainless steel. All bolts for the retainer glands shall be Cor Blue or an equivalent ASTM A 242 material. The valve, below the operating nut, shall be wrapped in 4 mil plastic. The plastic wrap shall cover the bonnet, the mechanical joint glands, bolts, and valve body, totally encompassing all metal listed above and taped in place to secure plastic wrap stays intact.

51.09.05 VALVE BOXES

Valve boxes shall be ductile iron. Boxes shall be of the extension type with screw adjustment and flared base. The minimum thickness of metal shall be 3/16 inch. The word “WATER” shall be cast in the cover. Boxes shall be installed over each gate valve. The boxes shall be of such a length that will permit adjustment in length, without full extension, to the depth of cover required over the pipe at the valve location. The CONTRACTOR shall supply extension stems, as necessary, where the water main is installed deeper than normal due to utilities, convenience, etc. This work shall be incidental to the Contract.

Valves and valve boxes shall be installed at locations determined by the OWNER or his representative. Valves not set at that location shall be relocated by the CONTRACTOR at no cost to the OWNER. Valves shall be set plumb. Valve boxes shall be centered on the valve. Earth fill shall be carefully tamped around each valve box to a distance of 4 feet on all sides of the box or to the undisturbed trench face if less than 4 feet. Valves shall not be located in tillable fields or areas where agricultural practices pose the possibility of damaging the valves and/or valve boxes. Gate valve boxes shall be per Section 10.03.01.16.

Approval of location must be given by Township Supervisors when valve boxes are located on public R.O.W.

All valve boxes for valves 4 inch to 12 inch shall be installed upon the valve with the use of a Gate Valve Adaptor as manufactured by Adaptor Inc., or equal, to stabilize the valve box, and shall be incidental to the contract price. All valve boxes for valves 14 inch to 24 inch shall be centered over the operating nut and installed upon a level surface of rock, compacted around the bevel gear and operating nut, to stabilize the valve box. The compacted rock shall be incidental to the Contract. Substantial completion will not be issued to the CONTRACTOR until it has been verified by the OWNER that all gate valves can be accessed and operated with a standard valve wrench.

51.09.06 VALVE BOX MARKERS

Valve markers shall be per Section 10.03.01.17.a and b. The station shall be two sided with identification stickers located on both sides containing OWNER’s official name and telephone number. Color to be selected by OWNER. These markers shall be placed either one per valve or one per cluster of valves.

51.09.07 COMBINATION AIR RELEASE VALVE

Combination air release valves shall be installed at high points in the supply main when directed by the ENGINEER. Valves for water mains 8 inch diameter or less shall have 1 inch inlet and outlet. Valves for water mains larger than 8 inch diameter shall have 2 inch inlet and outlet. All combination valves shall be so designed as to permit the release of a large quantity of air during the filling of the pipeline and also permit a large quantity of air to reenter the pipeline to break the vacuum and eliminate any danger of collapse should the liquid suddenly leave the pipeline. The combination pressure unit operates independently and releases small accumulations of air which may collect while the line is in operation and working under pressure. Valves shall have cast iron bodies and be furnished with national pipe threads. Floats and trim shall be of a non-corrosive metal, standard with the manufacturer. Seats shall be of a material which will provide cushion for the float sufficient to receive float shock upon closing.

All 1 inch valves shall be per Section 10.03.01.4.a. Connections shall be made to the pipeline by the use of a 1 inch corporation stop. Combination air valves shall be installed in a standard 30 inch meter well with lid. Fittings shall be used for the 1 inch copper vent line piping, bending will not be allowed. A #22 mesh stainless steel screen shall be secured over the open end of the 1 inch copper vent line piping.

All 2 inch valves shall be per Section 10.03.01.4.b. Connections shall be made to the pipeline by the use of a 2 inch corporation stop. Combination air valves shall be installed in a standard 30 inch meter well with lid. Fittings shall be used for the 2 inch copper vent line piping, bending will not be allowed. A #22 mesh stainless steel screen shall be secured over the open end of the 2 inch copper vent line piping.

Combination air release valves shall be paid for at the contract unit price for each installed as specified. This price shall include all excavation, materials, dewatering, meter well, backfill, 4 inch x 4 inch treated post (for protection of copper vent line) with the top cut at a 45° angle, installation of a Valve Marker next to wood post, a meter skin insulator per Section 10.03.01.19, over the top of the air release valve, painting vent pipe if requested by OWNER, and other miscellaneous work as necessary.

51.09.08 PLUGS AND CAPS

Standard plugs shall be inserted into the bells of all dead-end pipes, tees, or crosses. Spigot ends shall be capped.

51.09.09 SAMPLE STATIONS

Sampling stations shall be 3-1/2 foot bury, with a 3/4 inch FIP inlet, and a 3/4 inch unthreaded nozzle. All stations shall be enclosed in a lockable, nonremovable, aluminum-cast housing. When opened, the station shall require no key for operation; the water will flow in an all brass waterway. All working parts will also be of brass and be removable from above ground with no digging. Exterior piping shall be galvanized steel. A copper vent tube will enable each station to be pumped free of standing water to prevent freezing and to minimize bacteria growth. Sampling stations shall be per Section 10.03.01.13. A ball valve/curb stop and valve box shall be included for isolation of the sampling station, as detailed on the Drawings, and shall be incidental to the bid price for the sampling station

51.09.10 COPPER TRACER WIRE

Copper tracer wire shall be installed with all PVC raw and finished water main, and service lines (up to the service meter). The wire shall be copper-clad steel wire coated with HDPE and shall be connected to all valves and brought up into each valve box (on the exterior of the box, and

doubled-over under the cover on the interior), and shall be connected to all hydrants and service meter pits, creating a continuous wire throughout all water main and appurtenances. All splices of tracer wire shall utilize direct bury splice kits per Section 10.03.01.5.c. During installation of the connector, the CONTRACTOR shall tie the tracer wire into a knot and leave approximately 4 inches to be inserted into the connector per manufacture's specifications. The CONTRACTOR shall install tracer wire per Section 10.03.01.5.a. for water main installed by trenching and per Section 10.03.01.5.b. for water main installed by directional boring. The Contractor shall include in his bid price for water main installation all costs associated with tracer wire installation.

Substantial completion will not be issued to the CONTRACTOR until it has been verified by the OWNER that all tracer wire is continuous and can be field located with the OWNER's locating equipment.

51.09.11 TRACER WIRE ACCESS POINTS

Tracer wire access points shall be installed at select gate valves and at locations between gate valves as shown on the Plan Sheets. Access points will consist of a test station which shall be a durable and flexible by design. The station shall be two sided with decals located on both sides with the complete name of the OWNER and their phone number. Each station shall have internal terminals. [The signs shall be blue in color and the decal shall be white background with blue lettering per Section 10.03.01.15.b. The station shall be per Section 10.03.01.15.a.]The costs associated with this work shall be paid for at the contract unit bid price for Tracer Wire Access Points.

51.09.12 TAPPING SLEEVE

Tapping sleeves shall be all stainless steel per ASTM A-240, type 304 with the exception of the flange, which may be epoxy-coated ductile iron per ASTM 536. The sleeves shall be corrosion resistant, lightweight, and provide a full circumferential seal. A stainless steel test plug shall also be provided as part of the sleeve for pressure testing prior to tapping the pipe. Bolts shall be 18-8 stainless fusion bonded bolts, and nuts shall be 304 stainless fluoropolymer coated to prevent galling. Tapping sleeves shall be per Section 10.03.01.14. The CONTRACTOR's bid price for installing a tapping sleeve and gate valve shall include the sleeve and the valve of the size specified, as well as all necessary tasks for a complete connection.

51.09.13 LMI SERVICE LINE

Intentionally Blank

51.09.14 DUCTILE IRON RESTRAINT GLANDS

Restraint for PVC and ductile iron pipe joined with standardized mechanical joint fittings shall be incorporated in the design of the follower gland and the PVC pipe restraining glands shall provide full circle contact and support of the pipe wall. Restraint shall be accomplished by a series of ring segments mechanically retained inside the gland housing and designed to grip the pipe wall in an even and uniform manner. Restraining ring segments shall be actuated by bolts featuring twist off heads. All components of the restrainer, including the restraint segments shall be of high strength ductile iron, ASTM A536, Grade 65-45-12. T-bolts and nuts shall be Cor-Blue or an equivalent ASTM A242 material of high strength, low alloy meeting (AWWA C111). Restraining devices shall be UL Listed/FM Approved on AWWA C-900 PVC pipe and shall be certified by an independent testing facility as meeting or exceeding ASTM F1674-96 Standard Test Method for Joint Restraint Devices for PVC Pipe. Restraining devices shall be per Section 10.03.01.11.a. with standard transition gaskets (SMJ) for PVC IPS pipe and for Ductile Iron pipe

shall be per Section 10.03.01.11.b. Joint restraints shall be used at all fittings, gate valves, and hydrants, not requiring an anchor coupling, and shall be incidental to the contract price. Restraints shall be rated at a minimum of 200 psi.

51.09.15 ANCHOR COUPLING

Restraint of ductile iron pipe shall be used between gate valves and hydrants and between tees or other fittings and gate valves shall be accomplished utilizing anchor couplings. Anchor couplings shall be designed to conform to the following provisions;

- DI Pipe Barrel: ANSI/AWWA C151/A21.51 Class 53
- Groove Depth: AWWA C606 Table 1
- DI Retaining Ring: ANSI/AWWA C151/A21.51
- DI Swivel Follower: ANSI/AWWA C110/A21.10 Compatible.

Wall thickness beneath the groove shall exceed the minimum referenced in ANSI/AWWA C150/A21.50 Table 50.13 "Thickness for Internal Pressure", for 350 psi rating plus a surge allowance of 100 psi. The pipe shall be furnished with a bituminous exterior coating per ANSI/AWWA C151/A21.51 and cement mortar lined and seal coated per ANSI/AWWA C104/A21.4.

51.09.16 SEPTIC ENCASUREMENT MATERIAL

Where called for on the Drawings, the water main shall be installed in PVC casing (see Section 51.03 or 51.04 for material requirements) of the size shown on the Construction Drawings. The length of septic encasement of a said size shall be determined using the Standard Specifications for Water & Sewer Main Construction in Illinois for the different arrangements of the sewer line being crossed. As there are currently no known structures or other limiting factors in these areas, the septic encasement may be installed in an open trench. Backfill for septic encasement shall be specified in Section 41.04 and will be incidental to the unit price of the septic encasement installation and no additional compensation will be allowed. Measurement in lineal feet shall be made along with centerline of the septic encasement as installed. The PVC shall be RJ pipe when the length is greater than 40 feet. Casing spacers shall be used inside casing pipe. The ends of the casing shall be sealed with either pull on end seals (not tapered) or a method approved by the OWNER. Payment for septic encasement shall include the PVC septic encasement, casing spacers, and end seals and will be paid per the bid schedule item for septic encasement of said size. Payment for the RJ PVC carrier pipe shall be paid based on the unit price on the bid schedule for restrained-joint PVC within casing of said size. The payment length of the restrained joint PVC pipe shall be the next length greater than the length of the casing pipe that will allow for the use of full 20 feet sections of restrained-joint PVC pipe. The cost of expansion coupling, casing spacers, and end seals shall be incidental. Payment for the PVC carrier pipe shall be paid based on the unit price on the bid schedule for PVC of said size and pressure classification.

51.09.17 CASING SPACERS

Casing spacers for water main 6 inch and smaller shall be a polyethylene casing spacer which is injection molded from high density polyethylene as per Section 10.03.01.3.a . The compressive strength shall be greater than 3,100 psi and tensile strength shall be greater than 3,100 psi. During installation, either lock washers or lock nuts shall be used when bolting the spacers together.

The casing spacers for water main larger than 6 inches shall be bolt on style with a shell made of two sections of T-304 stainless steel or some other non-corrosive metal. All nuts and bolts are to be 18-8 stainless steel or equivalent non-corrosive material. The runners shall be made of ultra-high molecular weight polymer with high abrasion resistance and a low coefficient of friction. Casing spacers shall be per Section 10.03.01.3.b. During installation, either lock washers or lock nuts shall be used when bolting the spacers together.

Casing spacers shall be installed on 6-foot centers or 3 to a pipe segment and shall be incidental to the contract.

51.09.18 WATER SERVICE CONNECTION

Service connections shall be placed where indicated on the drawings. In general, the meter shall be placed on private property with the exact lateral location on each individual property to be directed by the OWNER. The vertical placement of the meter (height of lid above-ground) shall flush with final surface. Each connection shall consist of the following: corporation stop, service clamp, meter, pressure regulator (if required), meter yoke assembly with stop valve, meter box and meter box cover. The meter pit and corporation stop excavations shall not be backfilled until all materials, fittings, and work have been viewed by the OWNER or the RPR.

The CONTRACTOR shall bid a lump sum for all of the above named items, complete in place, except for the service pipe. The installation shall be the specified size throughout as indicated on the bidding proposal. The service pipe shall be paid for separately on the basis of the material, size, and number of feet installed. No payment will be allowed for the bid item "service connection" until the OWNER has approved the horizontal and vertical placement of the meter box, as installed.

Where an existing service connection is to be relocated, the CONTRACTOR shall install a new service as specified above, disconnect the existing service piping from both sides of the existing meter box assembly, connect the new service connection to the main and to the existing service line on the customer side of the meter box and remove the existing service connection as specified below and in Section 31.08. The service pipe necessary to reconnect the existing service to the new meter box assembly shall be included in the CONTRACTOR'S unit bid price for "Service Connection Relocation" of the specified size throughout and no additional costs will be allowed.

Where an existing service connection is to be removed, the CONTRACTOR shall disconnect the existing service piping from both sides of the existing meter box and remove the existing service connection. The void left by the meter box shall be backfilled with SELECT GRANULAR BACKFILL up to 6 inches below existing grade. The top 6 inches shall be filled with compacted earth backfill. Backfilling operations and all other costs associated with the work shall be included in the CONTRACTOR'S unit bid price for "Service Connection Removal" and no additional compensation will be allowed.

The CONTRACTOR's bid price for "Replace Meter" shall include all work, equipment, materials, and labor to replace meters and MXU at existing meter locations. Work shall include but may not be limited to providing the meter and restoring service to the customer from the existing water main.

51.09.19 CORPORATION STOPS

For pressure regulating and non-pressure regulating service connections measuring 5/8" x 3/4" and 1", a corporation stop size of 1 inch shall be used. The ball valve shall be brass, shall be per

Section 10.03.01.18.a., taper thread by Conductive Compression Connection for CTS tubing, and shall be of ball valve design for use with a compression fitting and stainless steel insert. No flaring of polyethylene pipe will be allowed.

For pressure regulating and non-pressure regulating service connections measuring 1-1/2" and 2" a corporation stop size of 2 inch shall be used. The ball valve shall be brass, shall be per Section 10.03.01.18.b, taper thread by Packed Joint outlet for PVC pipe, and shall be of ball valve design. A 2 inch gate valve (per Section 10.03.01.18.c. MJ) with a valve box shall be installed near the corporation stop.

51.09.20 SERVICE CLAMP/SADDLE

Service clamps shall be bronze, strap-type as required for the size of corporation stop as specified, and shall be per Section 10.03.01.12 and as approved by the ENGINEER. The use of solvent weld plastic saddles will not be permitted. The service clamps shall be located on the pipe such that the tap location is between 8 and 10 o'clock or between 2 and 4 o'clock as seen on the cross section of the pipe unless physical elements of the trench warrant otherwise and the deviation is approved by the ENGINEER. Whenever possible, corporation stops shall be placed in plastic lines before conducting hydrostatic tests.

51.09.21 METER

The meter shall conform to the latest revision of AWWA C700 Standard for Cold Water Meters - Displacement Type. They shall be provided with straight reading registers, Touch-Read capabilities, or dual Touch-Read and Radio-Read capabilities, as specified in the bid schedule, indicating gallons. The Touch-Read and Radio-Read Meter Reading Systems shall comply with all design, performance, and material requirements of the appropriate AWWA Standard, as most recently revised. Flanged connections will be made with stainless steel, zinc-coated bolts only. Refer to Table 10.03.01.21.a-h. for meter specifications.

The meters with dual read capabilities (Radio-Read and Touch-Read) shall consist of a meter onto which a dual port touchcoupler Meter Transceiver Unit (MXU) is attached. Single port meters require a single port touchcoupler MXU, per Section 10.03.01.21.i.

The MXU shall be closed and installed in the retainer of the meter lid and the TouchPad installed in a 1 7/8" hole drilled (by the CONTRACTOR) in the edge of the meter lid. All costs associated with providing fully functioning dual-read meters shall be included in the appropriate bid item. See also the detail provided on the Contract Drawings.

51.09.22 REGULATOR

The pressure regulator shall be a 3/4 inch outlet pressure regulator factory set at 50 psi. A field adjustment range of 25 to 75 psi, shall be provided. Inlet pressure shall be rated at a minimum of 250 psi. The regulator shall be complete with an integral strainer and constructed of stainless steel and bronze only. The regulators shall be constructed of stainless steel, zinc-coated bolts and/or screws only. The unit shall be per Section 10.03.01.21.h.

51.09.23 METER YOKE ASSEMBLY

The meter yoke assembly shall be of all copper and bronze/brass construction and be equipped with all necessary spacer tubes and spuds. The assembly shall incorporate a dual check valve and shall be such that a compression fitting is used. The meter yoke shall have a copper riser which elevates the meter above the service line per meter and coppersetter as specified below. A

ball angle meter valve shall be installed which has a lock wing that can be padlocked in the closed position. A double check backflow preventer shall be located on top.

The meter swivel nut for both the angle stop valve and the discharge elbow shall be equipped with a saddle and saddle nuts to assist in meter and gasket installation. Meter settings will be similar to the typical detail drawing for a 5/8" x 3/4" service connection.

The CONTRACTOR shall install a No. 4 re-bar and tie wire, or equal, with each yoke and meter, or other approved means for providing lateral support to the assembly. After the installation of the rebar, a piece of one inch polyethylene service line shall cover the rebar remaining above grade to prevent contact of two unlike metals. This shall be included in the bid price for each service connection.

[The meter yoke per Section 10.03.01.22 shall be manufactured to fit the particular meter and pressure regulator furnished per Sections 10.03.01.20 and 10.03.01.18.e. For service connections 1-1/2 inch and 2 inch the CONTRACTOR shall fabricate a copper and brass meter yoke which includes a brass angle stop valve with lock wing, with end connections matching those of the meter and fits inside the meter box per Section 10.03.01.21 per respective size and with or without a regulator.]

51.09.24 METER BOX

The CONTRACTOR shall furnish and install a meter box as shown on the drawings and as approved by the ENGINEER. [The meter box shall be PVC profiled-wall, as per Specification 10.03.01.23.]The meter box shall be supported on a minimum of 4 bricks.

51.09.25 METER COVER

The meter box cover shall be a per Section 10.03.01.24. Lids shall overlap the frame and be lockable. The lids shall have a recess suitable for an electronic meter reading antenna. The lid shall be cast iron with hole cut to fit electronic reading antenna. Refer to Section 10.03.01.24 for specific requirements pertaining to services of different sizes.

51.09.26 AUTO FLUSHER

The CONTRACTOR shall furnish and install auto flushers and discharge piping per section 10.04.01.

Intentionally Blank

BORING WATER MAINS AND SERVICES

Table of Contents

Section 54

54.01.	SCOPE OF WORK.....	54-1
54.02.	TRAFFIC AND SAFETY	54-1
54.03.	CONSTRUCTION DETAILS	54-1
54.04.	BASIS OF PAYMENT	54-2
54.05.	BORING WATER MAIN/CASING/SERVICE LINE (PAID PER LINEAR FOOT)	54-2
54.06.	BORE AND JACK CASING PIPE	54-4
54.07.	DIRECTIONAL BORING WATER MAIN, CASING, SERVICE LINE (PAID LUMP SUM)	54-4

Intentionally Blank

BORING WATER MAINS AND SERVICES

Section 54

54.01. SCOPE OF WORK

The CONTRACTOR shall furnish all equipment, machinery, labor and materials necessary to perform all operations in connection with the conventional boring and pulling or directional boring of water mains and service lines of the required diameter and type of material at locations that may be designated at time of construction. Permits required by the State, County, and Township Highway Departments, railroads, and waterway authorities will be acquired by the OWNER.

The CONTRACTOR shall be responsible for notification of appropriate officials as required by Highway and Railroad permits.

Private driveways constructed of concrete, asphalt, or oil and chip shall also be bored, utilizing the same methods, procedures, and method of payment as for boring under roadways. Since individual property owners may have improved their driveways after the construction drawings were assembled and prior to pipeline construction, the drawings do not necessarily depict all locations where boring of driveways will be required.

The CONTRACTOR is responsible for any charges by the railroad(s) for flagmen, foremen, engineering observers, and others; and by IDOT and others during the course of the work; and shall include such costs in his bid price.

54.02. TRAFFIC AND SAFETY

The contractor shall use all safety procedures, equipment, and planning necessary to perform the conventional bores or directional bores for installation of the water mains and service lines. The boring procedure is to avoid disturbance of the travel surface and shall not cause any inconvenience to the traveling public. At all locations where traffic must be maintained, the operations shall be carried on without encroachment upon the traveled way by either the excavation, by the storage of materials or equipment, or by the use of construction equipment. Open cut excavation will not be allowed within the specified distance from the edge of the traveled surface. All stipulations of the highway and/or railroad departments shall be adhered to along with the approval of the OWNER.

54.03. CONSTRUCTION DETAILS

The CONTRACTOR is reminded that his work must remain within the construction easement, as specified on each individual easement. Any construction activity outside the easements provided is solely at the CONTRACTOR's risk, responsibility, and liability. Including cost associated with the removal and reinstalling of said water main(s), services, and appurtenances on to private easement or right-of-way which ever may occur.

All sheeting, bracing, shoring, and other materials necessary for the complete installation of the main lines and service lines under roadways and driveways shall be of sufficient strength and construction to handle the loads that are to be imposed upon them.

The alignment and elevation of the forward end of the boring shall be checked and if it does not meet the requirements of the permit, the auger will be pulled and a new boring made at no additional cost to the OWNER.

The CONTRACTOR shall fill over excavation of bore and recovery pits at entrance and exit of water main through bore hole with compacted sand or CA-6 to the bottom of the water main giving a sound foundation for the water main preventing the water main from shearing as the backfill settles. Payment for the sand or CA-6 shall be considered incidental to the contract price for bores.

54.04. BASIS OF PAYMENT

All work associated with conventional borings including the use of bentonite, polymers, soups, or a combination there of will be paid for at the contract unit price per lineal foot of the diameter and material as specified on the plans, and as detailed in the following sections. The prices shall include all excavation, boring, equipment, labor, materials, dewatering, traffic safety control, placement and compaction of granular backfill, and other miscellaneous work as necessary. Note that an approximate bore length has been indicated on the plans for each particular bore; however, the actual payment length will be determined in the field, per the specifications in the following sections.

No payment will be allowed for additional bore lengths for the CONTRACTOR's convenience, due to utilities or otherwise, beyond that described in the following sections.

54.05. BORING WATER MAIN/CASING/SERVICE LINE (PAID PER LINEAR FOOT)

A. Materials

Where indicated on the plans the CONTRACTOR shall provide directional boring for passage under roadways and driveways. Material will be as specified on the plans.

If RJ PVC is called for, then the pipe inside the bore shall be restrained-joint PVC (CL 200 or CL 250 less than or equal to 12 inch diameter; PR 165 or PR 235 greater than 12 inch diameter), with expansion couplings at both ends (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If RJ PVC CASING is called for, then the pipe inside the bore shall be restrained-joint PVC (CL 200 or CL 250 less than or equal to 12 inch diameter; PR 165 or PR 235 greater than 12 inch diameter), with expansion couplings at both ends (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If HDPE is called for, then the pipe inside the bore shall be HDPE DR 9 (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If HDPE CASING is called for, then the pipe inside the bore shall be HDPE DR 11 (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If STEEL CASING is called for, then pipe inside the bore shall be as directed on the plans (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If RJ DI is called for, then the pipe inside the bore shall be restrained-joint DI CL 250, with expansion couplings at both ends (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If RJ DI CASING is called for, then the pipe inside the bore shall be restrained-joint DI CL 250, with expansion couplings at both ends (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

B. Payment

Payment will be paid in two to three parts for each bore under this section. The parts are as follows:

1. Bore Only
2. Pipe in Bore (whether casing or water main)
3. Pipe in Casing (only if casing was installed in item 2 above)

Bore Only Payment

The bore in this work will be paid for at the contract unit price per lineal foot for “Bore XX” Water Main (Bore only)” or “Bore XX” Casing (Bore Only)” of the diameter as specified on the plans, measured in place, up to a maximum length beyond the edge of the roadway or driveway surface, as follows:

- State Highways ROW to ROW
- County Highways 15 feet
- Township Roadways 5 feet
- Driveways 2 feet

Although the payment lengths may be less than these specified distances, depending on field conditions and actual boring lengths, no payment for borings will be allowed beyond these specified distances.

Pipe in Bore (whether casing or water main)

Payment for the pipe in this work will be paid for at the contract unit price per lineal foot for “XX” *MATERIAL, CLASS* – Bores (Pipe Only)” or “XX” *MATERIAL, CLASS* Casing – Bores (Pipe Only)” of the diameter and material as specified on the plans, measured in place installed inside the bore. The payment length of the water main or casing shall be equal to the pay length determined for each bore and then rounded up to the next multiple of 20 lineal feet of pipe, measured in lineal footage, when the main extends in a straight line in at least one direction. If the CONTRACTOR elects to use additional restrained-joint pipe, the difference will be paid at the “normal” pipe price being installed adjacent to the bore. .

Any cracking or damage caused by the boring operation to the traveled surfaces (regardless of the soil and/or rock type encountered) shall be repaired or replaced, at the CONTRACTOR’s expense, as required by the OWNER.

Pipe in Casing (only if casing was installed in item 2 above)

Payment for the pipe in this work will be paid for at the contract unit price per lineal foot for “XX” *MATERIAL, CLASS* within Casing Pipe” of the diameter and material as specified on the plans, be 20 lineal feet longer than the casing pipe. If the CONTRACTOR elects to use additional restrained-joint pipe, the difference will be paid at the “normal” pipe price being installed adjacent to the bore. The cost of expansion couplings shall be incidental.

54.06. BORE AND JACK CASING PIPE

Intentionally Blank

54.07. DIRECTIONAL BORING WATER MAIN, CASING, SERVICE LINE (PAID LUMP SUM)

A. General

Where indicated on the plans and in the Bidding Schedule, the CONTRACTOR shall provide directional boring of water mains of the diameter as specified, for passage under roadways, driveways, waterways, and/or thru private property. Only water main/service line or casing pipe shall be furnished or placed under this item of work, not both casing and water main/service line.

If RJ PVC is called for, then the pipe inside the bore shall be restrained-joint PVC (CL 200 or CL 250 less than or equal to 12 inch diameter; PR 165 or PR 235 greater than 12 inch diameter), with expansion couplings at both ends (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If RJ PVC CASING is called for, then the pipe inside the bore shall be restrained-joint PVC (CL 200 or CL 250 less than or equal to 12 inch diameter; PR 165 or PR 235 greater than 12 inch diameter), with expansion couplings at both ends (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If HDPE is called for, then the pipe inside the bore shall be HDPE DR 9 (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If HDPE CASING is called for, then the pipe inside the bore shall be HDPE DR 11 (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If STEEL CASING is called for, then pipe inside the bore shall be as directed on the plans (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If RJ DI is called for, then the pipe inside the bore shall be restrained-joint DI CL 250, with expansion couplings at both ends (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

If RJ DI CASING is called for, then the pipe inside the bore shall be restrained-joint DI CL 250, with expansion couplings at both ends (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

B. Payment

Payment for the pipe in this work will be paid for at a lump sum foot for “XX” *MATERIAL, CLASS – Bores (Pipe Only)*” This work shall be paid for at the lump sum contract prices for each specific directional bore of the diameters and locations as specified on the plans. The length of the bore indicated on the plans is an estimated length for IEPA purposes only, and also constitutes the minimum length that will be allowed physically for the directional bore. The CONTRACTOR shall determine an actual length for each bore based on his particular construction methods during the bidding preparation process.

The lump sum bid price for each specific bore shall include all necessary items for a complete directional bore crossing, including mobilization and setup, directional bore operations, any and all RJ PVC (CL 200 or CL 250 ≤ 12 inches in diameter; PR 165 or PR 235 > 12 inches in diameter) pipe, 18 inch expansion couplings at both ends, tracer wire, etc.. The CONTRACTOR will not receive any additional payment for the PVC water main that is to be placed in the bore hole under the roadway, driveway, waterway or thru private property over and above the lump sum bid price. If the CONTRACTOR optionally directional bores any main line area for his convenience, no payment will be allowed under the bid item DIRECTIONAL BORING WATER MAINS. However, he shall be paid based on the unit price of the type of pipe that was originally specified to be installed in that area.

C. Specified Distance from the Edge of the Pavement

Open cut excavation will not be allowed within the specified distance from the edge of the traveled surface. All stipulations of the various highway departments shall be adhered to along with the approval of the OWNER. The following minimum distances will be maintained from the edges of the following various roadway or driveway surfaces for all directional bores (water mains and service lines) unless limited by field condition:

- State HighwaysROW to ROW
- County Highways 15 feet
- Township Roadways 10 feet
- Driveways 5 feet

D. Specified Distance for Waterways

Since waterway surfaces and streambed/streambank profiles occur in such a variety of configurations, and since CONTRACTOR's may employ a number of methods for directional boring depending on pipe installation angle, convenience, etc., it is not possible to come up with a single rule for specified directional bore distances. An estimated directional bore length has been indicated on the plans for IEPA purposes for each particular directional bore, and also constitutes the minimum length that will be allowed physically for the directional bore. However, the The payment conditions listed in Section 54.08.B shall apply. In all cases, open cut excavations for bore pits shall remain at least 20 feet from top of stream banks.

E. Procedures

The CONTRACTOR shall use water, bentonite, polymer, or bentonite/polymer mixture for the mud mixture needed for the directional boring procedure and shall include the costs of these items in his unit bid price. The CONTRACTOR shall use the mixture required by the type of soil encountered.

The CONTRACTOR shall use the backreamer needed to satisfy the conditions of the directional bore and the type of soil encountered. Spiral or coned backreamers are designed to push foreign objects such as rocks and tree roots out of the way or off to the side of the directional bore path. The surface area of the cone shaped backreamers is large so this will create a lot of drag. The wing cutter, which allows the mixed material to flow through, provides the best result in mixing.

For 8 inch diameter or smaller pipe, a reamer larger than 1.5 times the diameter of the pipe should not be used without the permission of the ENGINEER. For 10 inch diameter or larger pipe, a reamer of 1.3 times the diameter of the pipe or smaller is required, unless given permission by the ENGINEER.

It is recommended that the pipe follow immediately behind the backreamer or expander because the directional bore hole will start to close up instantly after the backreamer or expander is pulled through. This allows limited time, depending on the soil condition, to push the pipe in the hole. When trying to push the pipe in the closing hole, the pipe could bend. When this occurs the pipe will be under a considerable amount of tension and compression and could result in the shattering of the pipe. The pipe under the roadway could also be damaged from this compression stress on the pipe.

F. Damaged Pavement

There are several factors that affect the disfiguration of the ground surface of a directional bore. The depth of the directional bore under the surface is critical. The increase in depth of the directional bore will decrease the chance of the pavement bulging. Hydra-lock is another factor that could cause surface damage.

Hydra-lock is created during pull back, when not enough mud is pumped into the hole or poor mud mixture is used. During hydra-lock, fluid that is being pumped out of the backreamer is completely contained within the hole, rather than flowing out of the inlet and/or outlet hole. Without an escape route, the fluid being pumped into the hole becomes pressurized, acting like a hydraulic cylinder - the pressure prevents the pipe from moving until the fluid finds an escape route. This may cause cracking or disfiguration at the surface to release the pressure. Any cracking or damage caused by the directional boring operation to the traveled surfaces (regardless of the soil and/or rock type encountered) shall be repaired or replaced, at the CONTRACTOR's expense, as required by the OWNER, the ENGINEER, or the property owner.

G. Surface and Utility Impairments

All utilities, including wiring, light standards, signal lights, sewers, private water service lines, buried telephone cable, underground gas lines, field tiles, etc., affecting the construction of the proposed improvement shall be adjusted at the CONTRACTOR's expense. It shall be the CONTRACTOR's responsibility to determine the exact location of all utilities. All adjustments shall be done as specified by the OWNER of the utility. If the CONTRACTOR damages any utility not requiring adjustment, he shall replace or repair it as required by the OWNER or by the ENGINEER and no additional compensation will be allowed. No attempt has been made on the drawings to show all utilities or their exact locations.

Below-Ground Master Meter Vault

Table of Contents

Section 63

63.01.	SCOPE OF WORK.....	63-1
63.02.	METER VAULT	63-1
63.03.	INTERIOR COMPONENTS.....	63-1
63.04.	PRESSURE TESTING	63-4
63.05.	DISINFECTION	63-4
63.06.	START-UP	63-4
63.07.	WARRANTY	63-4

Intentionally Blank

Below-Ground Master Meter Vault

Section 63

63.01. SCOPE OF WORK

The CONTRACTOR shall furnish and install 1 below-ground master meter vault with all the necessary internal and external piping, fittings, and other necessary appurtenances, as shown on the Drawings and as specified herein. This vault will serve as a permanent connection.

Refer to Section 11 of the Specifications regarding equipment, shop drawings, operation and maintenance manuals, start-up, and coordination criteria.

The equipment furnished shall be designed, constructed, and installed in accordance with current practices and methods and shall operate satisfactorily when installed as shown on the Drawings and operated according to manufacturer's recommendations. The CONTRACTOR shall verify all dimensions and quantities shown on the Drawings for proper fit and function prior to bidding, ordering materials, and constructing the building or station components. Any discrepancies in fit or function shall be brought to the attention of the ENGINEER prior to bid, construction, or installation. In case of conflict between the Drawings and project specifications, the CONTRACTOR shall notify the ENGINEER prior to bidding, to clarify the discrepancy and obtain a decision on which document governs. If the CONTRACTOR or any of his Subcontractors fail to notify the ENGINEER prior to bidding regarding either of the above items, then the CONTRACTOR shall provide and install the intended material or equipment at no additional cost to the Contract price.

63.02. METER VAULT

The pre-cast concrete meter vault shall be dimensioned as shown on the drawings. The vault shall be cast with all necessary knockouts to accept the water main, sump discharge line, etc. The vault shall be set, plumbed and leveled prior to installing the through-wall piping. The floor of the vault shall be sloped to drain to the sump pit. After all the piping has been installed and prior to backfilling against the vault, all penetrations shall be sealed on both sides of the vault wall with an appropriate water tight sealant. The sealant shall be allowed to set for at least the manufacturer's recommended minimum set time prior to backfilling. Care shall be taken during backfilling to ensure that neither the seal nor the water main is damaged.

The vault shall have a flat slab top with a 48 inch x 30 inch aluminum watertight access lid cast in place. The lid shall be lockable for use of a pad lock.

63.03. INTERIOR COMPONENTS

A. General

The below ground master meter vault system shall consist of various piping, fittings, and other appurtenances as shown on the Drawings and as specified herein, to provide a complete and working system.

B. Piping

All interior piping and fittings shall be ductile iron, Class 53, flanged, per AWWA C-104, C-110, C-153, and C-115, unless otherwise shown on the Drawings. Threaded pipe may be used on connections for piping smaller than 2 inch. All exterior piping to at least 5 feet beyond the vault perimeter shall be mechanical joint ductile iron pipe. The piping sizes shall be as shown on the Drawings.

Although they may not be specifically shown on the Drawings or called for elsewhere in the Specifications, the CONTRACTOR shall include in his bid price the cost of all fittings, piping supports, and miscellaneous appurtenances needed to provide a secure, workable pipe and valve system. Equipment piping shall be supported by concrete pedestals, piers, adjustable pipe supports, thrust restraints, hangers, and tie rods as necessary to insure a stable installation. Adjustable pipe supports or piers shall be arranged to relieve attached equipment of all strain due to the weight of the pipe, fittings, valves, and the contents of the pipe. Pipe supports shall provide lateral or transverse support as well. Pipe supports shall be stanchion saddle type. Hangers shall be adjustable wrought clevis or adjustable wrought ring style. The CONTRACTOR shall provide a pipe support plan to the ENGINEER for approval prior to construction.

Miscellaneous elbows, reducers, and other fittings not specifically shown on the Drawings, but required for proper fit and function, are incidental to the Contract.

C. Service Connections on Internal Piping

All plumbed devices within the vault eventually requiring service, such as meters, control valves, and like equipment, shall be easily removed from the piping by the presence of appropriately placed and sufficient quantity of adaptors and couplings. The piping shall include, a Uni-Flange or a flanged coupling adapter (FCA). All Uni-Flanges and/or flanged coupling adapters (FCA) shall include a minimum of 2 control joint rods with gusset plates.

D. Combination Pressure Gauges

Combination pressure gauges shall be glycerine filled with a built-in pressure snubber and have 6 inch minimum diameter faces and be turret style, black phenolic case with clear glass face. The movement shall be rotary, of 400 Series stainless steel with teflon coated pinion gear and segment. The gauge shall be bottom connected and accept a ¼ inch NPT female thread. Combination pressure gauge range and scale graduations shall be in psi and feet of water as follows:

INLET PRESSURE - 0 to 160 psi, 10 psi figure intervals, with graduating marks every 1 psi (0-370 feet).

OUTLET PRESSURE - 0 to 160 psi, 10 psi figure intervals, with graduating marks every 1 psi (0-370 feet).

All gauges will be wall mounted off the pipeline and be flexible connected to their respective sensing point. The gauge trim tubing shall be complete with both isolating and vent valves and the tubing shall be so arranged as to easily vent air and facilitate gauge removal. Gauges mounted directly to the pipeline or at the sensing point will not be accepted.

MANUFACTURER - Ashcroft Model 1279ASL or equal.

E. Sample Tap

A right angle outlet, smooth nose, brass sample tap shall be affixed to the manual vent ball valve on both the Arenzville Rural Water Cooperative and the Village of Virginia sides of the master meter.

F. Hose Bib

Hose Bibs shall be single hose bib, Woodford freezeless wall hydrant, Model 67 Series, or equal with non-removable base faucet vacuum breaker, 3/4" male hose thread, satin chrome finish on brass casting, 3/4" hose outlet, loose key tee handle valve, wall plate and wall clamp, for wall thickness as required.

G. Master Meter & Strainer

The below-ground vault shall include a 3 inch, compound master meter with a 3 inch flanged bronze strainer, as shown on the Drawings. Compound meter to be provided by telemetry provider and installed by CONTRACTOR. The Meter Reading System shall be Radio-Read. The meter shall be flanged with integral test ports and comply with ANSI and AWWA C702 standards. They shall be provided with Radio-Read capabilities, as specified in the bid schedule. The meter shall be a Badger Recordall Compound Meter, or equivalent, with a flow totalizer measuring in gallons. The meter shall comply with all design, performance, and material requirements of the appropriate AWWA Standard, as most recently revised. Flanged connections will be made with stainless steel, zinc-coated bolts only.

H. Gate Valves

Gate valves shall be designed for a minimum water working pressure of 250 psi. Valves shall be resilient wedge, non-rising stem type, and shall be used with the type of pipe and joint to be installed. Gate valves shall have a clear waterway equal to the full nominal diameter of the valve and shall be opened by turning counterclockwise. The operating nut shall have an arrow, cast in the metal, indicating the direction of opening. Each valve shall have the maker's initials, and pressure ratings cast on the body. Prior to shipment from the factory, each valve shall be tested by hydraulic pressure equal to twice the water working pressure.

Gate valves shall conform to AWWA Standards C509 & C550 and be Mueller A-2360, with 'O' ring seals, or equal.

Gate valves shall have mechanical joints. No "push-on" joints will be allowed. All bolts for the bonnet shall be stainless steel, or approved equal. All bolts for the retainer glands shall be corten. All gate valves installed inside of vault shall be equipped with hand wheel operators.

I. Check Valves

Check valves shall be of the weight and lever, single disc, swing type as manufactured by American Darling, Meuller, or equal. Check valves shall be of the horizontal or vertical type, as shown on the Drawings.

J. Protective Coatings

The CONTRACTOR shall paint all piping, valves, and fittings.

The CONTRACTOR and painting subcontractor shall meet with the ENGINEER and OWNER to discuss surface preparation requirements, and the protective coating schedule. Any items that do not require surface preparation shall be adequately protected. Similarly items not to be painted shall be adequately protected during both the blast and protective coating process. The CONTRACTOR will be responsible for removing paint from items not to be painted and for repairing/replacing all items not to be blasted. The CONTRACTOR shall also take adequate time to remove, mask, or otherwise protect items to be painted a different color prior to painting operations. All walls shall be painted prior to conduits being installed and the CONTRACTOR shall be responsible for touch-

up of ALL protective coatings nicked or otherwise damaged, regardless of whether said coating were provided by the CONTRACTOR or material manufacturer.

The protective coating for all exposed piping, fittings, valves, etc., shall take place immediately after proper preparation of SSPC-SP6 Commercial Blast Cleaning, on all sides of the pipe, bolts, fittings, flanges, flange adapters, etc. Prime coat shall be Tnemec Series 1, followed by Tnemec Series N69, or equal, consisting of a two-component, high solids, amide-cured epoxy system formulated for high build application having excellent chemical and corrosion resistant properties. The protective coating shall provide in 2 applications a minimum total dry mil thickness of 8.0 mils. The OWNER shall select the color scheme, which may consist of different colors for the piping, valves, pipe supports, grates, hand wheels, etc.

63.04. PRESSURE TESTING

When the station plumbing is completed, the pressure piping within the vault (including valves, control valves, fittings, and connections, as make up the entire system) shall be hydrostatically tested at a pressure of 1.5 times the working pressure or a pressure equal to the lowest test pressure rating of the equipment within the tested system, whichever is the greater pressure. The test pressure shall be applied for a minimum of 120 minutes, during which time all joints, connections, flanges, and seams shall be checked for leaking. Any deficiencies found shall be repaired and the system shall be retested. The results of this testing shall be witnessed by the OWNER and the ENGINEER.

63.05. DISINFECTION

The disinfection of the station facilities shall be in accordance with the American Water Works Standards C652 and C653. Disinfection procedure Method 3 of AWWA C652 is not recommended. The CONTRACTOR shall be responsible for disinfecting the facilities and obtaining Illinois Environmental Protection Agency (IEPA) bacteriologic samples clearance. A minimum of 2 consecutive samples collected from the finished project at least 48 hours apart shall be analyzed and approved by IEPA before placing the station into service.

63.06. START-UP

Intentionally Blank

63.07. WARRANTY

The warranty is the responsibility of the CONTRACTOR and shall cover, at a minimum:

- A. A period of 1 year commencing upon station acceptance (i.e., issuance of Substantial Completion for the entire project) by the OWNER and ENGINEER.
- B. The 1 year period shall be in effect regardless of any component manufacturer's warranty for equipment and components within the station.
- C. The warranty shall cover all equipment, components and systems provided in or with the station.

D. The warranty shall provide for replacement and/or repair of faulty or defective components by the CONTRACTOR at no cost to the OWNER during the warranty period.

Any and all other warranty criteria listed in other Sections of the Project Specifications shall also apply. Maintenance beyond the 1 year basic warranty period shall be addressed by the meter supplier in a timely manner.

Intentionally Blank

Electrical

Table of Contents

Section 82

82.01.	SCOPE OF WORK.....	82-1
82.02.	CODES AND FEES	82-1
82.03.	TESTS	82-2
82.04.	CONDUIT.....	82-2
82.05.	WIRE AND CABLE.....	82-3
82.06.	WIRE CONNECTIONS AND DEVICES.....	82-3
82.07.	LIGHTING	82-3
82.08.	GENERATOR AND TRANSFER SWITCH	82-4
82.09.	PULLING CABLE - LUBRICANT	82-4
82.01.	COORDINATION WITH LOCAL ELECTRICAL AND TELEPHONE UTILITIES	82-4

Intentionally Blank

Electrical

Section 82

82.01. SCOPE OF WORK

Work Included: Furnish all equipment, machinery, labor, materials, apparatus and services necessary to complete the electrical and control system as shown on the drawings and as described in these specifications. Also included is all work, services, testing, adjusting, retesting and readjusting as required in order to place into approved satisfactory operation all of the systems shown on the Drawings, called for in the specifications, as directed by the ENGINEER, and as required by the job conditions.

The CONTRACTOR shall make a complete review of the Drawings and Specifications and bring to the attention of the ENGINEER prior to bidding any Work that he feels should be included.

The CONTRACTOR shall provide Record Drawings ("As-Built" Drawings) of schematics of all control panels and major electrical components, and shall include the costs for such in his Bid Price.

82.02. CODES AND FEES

All electrical work shall conform to the National Electric Code of the National Board of Fire Underwriters as a minimum standard of quality and performance, as well as the National Electric Safety Code and all local codes.

All electrical materials shall bear the National Board of Fire Underwriters label whenever standards have been set and label service is regularly furnished by that agency.

All material shall be installed in accordance with manufacturer's directions. If Drawings or Specifications are contrary to manufacturer's directions, CONTRACTOR will bring this to the attention of the ENGINEER for final decision as to method of installation.

The CONTRACTOR shall obtain and pay for all permits required for the execution of the Work under this Contract. All tests and inspections required by the authorities having jurisdiction will be made by the CONTRACTOR at his expense. The CONTRACTOR shall deliver certificates of all such permits and inspections to the ENGINEER.

Equipment Grounding - Each electrical equipment item in the vault shall be properly grounded per Section 250 of the National Electrical Code. Items to be grounded include, but are not limited to, pump motor frames, control panel, transformer, receptacles, lights, light switches, exhaust fans, and pressure switches. All ground wires from installed equipment shall be in conduit and shall lead back to the control panel to a copper ground buss specific for grounding purposes and so labeled. The ground buss shall be complete with a lug large enough to accept the installing electrician's bare copper earth ground wire. The bus shall serve as a bond between the earth ground and the equipment ground wires. In addition, site electric service grounding shall be done according to local electric utility requirements.

82.03. TESTS

The complete electrical system will be tested after completion of the Work and reports of the test will be given to the ENGINEER.

Tests will include:

- A. Tests for shorts.
- B. Tests for open circuits.
- C. Voltage test at point furthest from electric service to determine that there is no excessive drop in potential.
- D. Test the insulation resistance of the system to ground with a Meggar.

The CONTRACTOR shall correct any abnormal condition found in the electrical system at his expense.

82.04. CONDUIT

Conduit shall be sized to the N.E.C. Requirements for conduit fill, but in no case be less than ½" in diameter. The conduit shall also bear the Underwriters Laboratories inspection label.

Rigid conduit, sized by the Electric Controls/Telemetry Manufacturers to adequately accept the inbound service conductors, and/or telemetry or telephone cables, shall be installed from the main power or control panel through the floor and/or wall and terminate interior to the vault.

All wiring within the building and outside of the control panel or panels shall be run in Schedule 40 PVC conduit properly supported at a 36-inch maximum spacing, except for the watertight flexible conduit and fittings properly used to connect pump drivers, fan motors, solenoid valves, limit switches, etc., where flexible connections are best utilized. The sump pump(s) was furnished by the original manufacturer with a UL approved rubber cord and plug, may all be plugged into their associated receptacles.

Unless otherwise noted, conduit shall be Schedule 40 PVC conduit adequately sized by the Electric Controls/Telemetry Manufacturers to handle the type, number and size of equipment conductors to be carried - in compliance with Article 347 of the National Electrical Code (NEC) and NEMA TC-2, Federal WC-1094A and UL-651 Underwriters Laboratories Specifications.

In chemical feed rooms conduit shall be rigid, heavy wall, Schedule 40 PVC with solvent weld moisture-proof connections adequately sized to handle the type, number and size of equipment conductors to be carried, in compliance with Article 347 of the National Electrical Code and NEMA TC-2, Federal WC-1094A and UL-651 Underwriters Laboratory Specifications.

Flexible Connections - Where flexible conduit connections are necessary, the conduit used shall be liquid-tight, flexible, totally nonmetallic, corrosion resistant, nonconductive, U.L. listed conduit sized to handle the type, number and size of equipment conductors to be carried - in compliance with Article 351 of the National Electrical Code.

Metallic conduit shall have insulated bushings.

All conduit will be swabbed until all moisture and grit are removed before pulling wire.

Double locknuts shall be used at termination of rigid steel conduit at all knockout openings.

All exposed conduit shall run parallel to walls.

82.05. WIRE AND CABLE

Minimum size wire is to be #12 except internal 120 volt control wire can be #14. All sizes to be A.W.G.

All low voltage control wire (50 volt or less) shall be solid copper.

All operating voltage wire (120 volt or greater) shall be 600 volt, THWN unless otherwise stated on the plans. #10 and smaller wire shall be solid, #8 and larger shall be stranded.

All wire is to be 98% conductivity copper.

Motor circuit conductors shall be sized by the Electric Controls/Telemetry Manufacturers for load. All branch circuit conductors supplying a single motor of one (1) horsepower or more shall have an ampacity of not less than 125 percent of the motor full load current rating, dual rated type THHN/THWN, as set forth in Article 310 and 430-B of the National Electrical Code, Schedule 310-13 for flame retardant, heat resistant thermoplastic, copper conductors in a nylon or equivalent outer covering.

Control and accessory wiring shall be sized by the Electric Controls/Telemetry Manufacturers for load, type MTW/AWM (Machine tool wire/appliance wiring material) as set forth in Article 310 and 670 of the National Electrical Code, Schedule 310-13 and NFPA Standard 79 for flame retardant, moisture, heat and oil resistant thermoplastic, copper conductors in compliance with NMTBA and as listed by Underwriters' Laboratories (AWM), except where accessories are furnished with a manufacturer supplied UL approved rubber cord and plug.

Power supply wiring and wiring for controls shall be designed for separate conduit runs, or otherwise be physically separated as necessary to avoid any potential electrical interference problems with the two types of wiring. It shall be the Electric Controls/Telemetry Manufacturers' responsibility, at no increase in the Contract price, to resolve any interference problems of this type.

82.06. WIRE CONNECTIONS AND DEVICES

All fixture and branch circuit wiring joints, in junction and outlet boxes, shall be made with U.L. approved connectors and listed for 600 volts, (1,000 volts when enclosed in fixture or sign), as a pressure cable approved connector. Connector body shall consist of a cone-shaped coil spring insert, insulated with a Phenolic shell which shall be knurled for easy grip and capable of use with a wrench supplied by the manufacturer or with an electrician's pliers.

Connectors shall be Ideal Industries #78B, #76B, or #74B for branch circuit wiring.

Duplex, ground fault circuit interrupter type receptacles shall be furnished with at least one (1) receptacle adjacent to main control panel, as shown on the Drawings. Exterior waterproof receptacles shall be provided as well, as shown on the Drawings. All receptacle locations shall be coordinated with and pre-approved by the OWNER. Receptacles shall be 20A, GFCI rated Hubbel, or equal.

82.07. LIGHTING

Intentionally Blank

82.08. GENERATOR AND TRANSFER SWITCH

Intentionally Blank

82.09. PULLING CABLE – LUBRICANT

When necessary to use a lubricant for pulling wires, lubricant must be listed by Underwriters' Laboratories, Inc., and must be of such consistency that it will dry completely when exposed to air. Lubricant must leave no obstruction or tackiness that will prevent pulling out old wires or pulling in new wires or additional wires, and after drying must leave a film of lubricating wax which will promote easy movement of the wires. No soap flakes, vegetable oils, or ordinary lubricating oil or grease will be permitted in the conduit. Lubricant shall be Ideal "Yellow-77" or equal.

82.01. COORDINATION WITH LOCAL ELECTRICAL AND TELEPHONE UTILITIES

As described in Section 14.12, the Electric Controls/Telemetry Manufacturer shall coordinate work with the local electric and telephone utilities, sub-contractors, etc., for providing any necessary electric and telephone services, both temporary and long-term. Before ordering materials and equipment, the Electric Controls/Telemetry Manufacturer shall determine from the local utility: who is intended to provide the necessary services for the proposed improvements, that the service is available, that the service will be supplied, who is responsible for setting power poles and meter bases, etc.. If any changes should be required or any services are unavailable, the Electric Controls/Telemetry Manufacturer shall immediately notify the ENGINEER.

The Electric Controls/Telemetry Manufacturer shall further determine what service and material is being provided by the local electric and/or telephone utility and what material must be provided by the Electric Controls/Telemetry Manufacturer, and shall include all such costs in his bid, in order to produce a complete and properly functioning system. The Electric Controls/Telemetry Manufacturer shall determine what cost, if any, will be required for providing the service requested, shall pay all such costs, and shall include all such costs in his bid. The Electric Controls/Telemetry Manufacturer shall secure all necessary temporary power and/or telephone for construction of the project (for all trades, subcontractors, etc.), shall pay all such costs, and shall include all such costs in his bid. No additional payments will be allowed.

Supervisory Control And Data Acquisition (SCADA) System

84.1 GENERAL

84.1.1 DESCRIPTION OF WORK

- A. The Contractor shall provide and install all hardware, software, labor, materials, and equipment required to provide a complete control system interfaced with the existing Otter Lake Supervisory Control and Data Acquisition (SCADA) system near Girard, IL, in strict accordance with the requirements of these plans and specifications. It shall be the contractor's responsibility to supply a system that is compatible with existing equipment, and new equipment supplied by others as part of this contract.

- B. Equipment and Services Summary
 - 1. Contractor shall provide the following equipment/services as required:
 - (1) Lot SCADA control panels, computer, equipment per site as listed below, for the following sites.
 - a. Allen Road Booster Pump Station
 - b. Coops Mound Tank
 - c. Litchfield 16th Avenue Meter Vault
 - d. Litchfield County Line Meter Vault

 - (1) Lot engineering services for programming, startup, training, operation manuals.

 - (1) Lot installation of SCADA equipment.

 - 2. Owner Shall Provide
 - (1) Lot access and easements for all sites as required.

 - (1) Lot pressure sensing taps and piping for all sensing points in the system.

 - (1) Furniture/phone-internet service/static IP address.

84.1.2 QUALITY ASSURANCE

- A. Bid Requirements
 - 1. The following information shall be included with the bid documents. Failure to do so may result in disqualification of bid.
 - a. Systems Integrator's company name
 - b. SCADA unit manufacturer/company name
 - c. SCADA computer Human-Machine Interface (HMI) software manufacturer/company name.

- B. Equipment Qualifications
 - 1. If alternate equipment to this specification is proposed, the contractor shall be responsible for any additional design, labor, and material costs associated with revisions to provide a functional system. No additional compensation shall be allowed to accommodate this requirement.

 - 2. The control panel components used shall be in accordance with Underwriters Laboratories.

3. All SCADA system hardware and software shall be fully compatible with the Otter Lake SCADA units and Otter Lake central SCADA computer HMI, without the use of gateways/conversion units, and utilize the same radio frequency, so information from Henderson Water District (HWD) is monitored on the Otter Lake SCADA system. Otter Lake currently utilizes a radio-based SCADA units, and SCADA computer HMI software.

C. Systems Integrator/Control Panel Manufacturer's Qualifications

1. It is the intent of these specifications that all motor control and control components be supplied by a single supplier. Controls shall not be assembled on site. Systems Integrator/control panel manufacturer shall be a UL-508A and UL-698A certified control panel manufacturing facility and shall be regularly engaged in the manufacture of controls for the municipal water/wastewater industry. Panels should be built largely to UL standards, but do not need to bear a UL label. To assure compatibility, the systems integrator shall be the same systems integrator who provided the Otter Lake SCADA system, or pre-approved equal. The system specified herein shall be the product of a manufacturer having at least ten (10) years of experience in the construction of such control equipment.
2. The systems integrator/control panel manufacturer of this equipment shall be one recognized and established in the design and production of Supervisory Control and Data Acquisition (SCADA) Systems and control panel fabrication, such as specified under this section. The manufacturer shall maintain regular production facilities at their place of business. Those facilities shall be open for inspection by a representative of the owner at any time during fabrication and testing.
3. The SCADA system shall be the responsibility of a single manufacturer/supplier, hereafter designated as the Systems Integrator. All aspects of the system including fabrication, programming, equipment installation, start-up, and training shall be by one entity. Sub-letting of work shall not be accepted. The Systems Integrator shall provide a fully complete system operating in a satisfactory manner.
4. All SCADA unit programming and system start-up shall be performed by the Systems Integrator. The Systems Integrator shall be an authorized Value Added Reseller (VAR) of the SCADA equipment being provided, proof of which shall be submitted with the bid documents, if requested by the engineer/owner.
5. All SCADA computer programming and system start-up shall be performed by the Systems Integrator. The Systems Integrator shall be an authorized Systems Integrator familiar with the HMI software being provided.
6. The Systems Integrator shall have offices located within 100 miles of the end user's office to facilitate timely system support. The Systems Integrator shall employ at least two (2) full time field service technicians, and two (2) full time programming technicians.

D. Pre-Approval for Systems Integrator

1. Prospective systems integrators wishing to have their products/services be listed as approved on this project must provide a pre-bid submittal as detailed in the following paragraphs, and make it available to the design engineer no less than fourteen (14) days prior to the time of bidding. Approvals requested after the appointed time will not be considered. A list of approved equipment, material or suppliers will be forthcoming from the engineer five (5) days before bids are taken.
2. Two copies of pre-bid submittals shall be provided in bound form, or a single copy in PDF format, as directed by the engineer/owner.
3. Any deviations from the specifications shall be specifically listed and addressed. Should any product require a re-design from these plans and specifications, the Contractor shall be

responsible for those costs. Those costs shall include but not be limited to any additional design, labor, and material costs associated with revisions to provide a functional system. No additional compensation shall be allowed to accommodate this requirement.

4. For equipment meeting these specifications (SCADA System and SCADA Unit) in their entirety, submittal shall contain specifications of the SCADA unit equipment and HMI software, with catalog cuts. The following items must be submitted as part of the overall submittal package.
 - i. Company name and address of the provider.
 - ii. Written evidence that the product conforms in all respects to the specified requirements.
 - iii. A product performance/cut sheet for the proposed SCADA unit, and SCADA HMI software.
 - iv. Installation list of only like equipment at 10 separate locations. The installation list shall be complete with the date of installation, the name and telephone number of the equipment operator and/or the name and telephone number of the design engineer.

5. For equipment deviating from these specifications (SCADA System and SCADA Unit), in their entirety, catalog cut sheets will not be considered sufficient in themselves and the engineer will not be responsible for seeking further data from the manufacturer, or for otherwise researching the product. Full-size drawings of the proposed SCADA unit equipment with catalog cuts shall be provided with specifications, and methods of operation, all to be of sufficient detail to allow an assessment of the suitability of the equipment and the impact of the equipment on other equipment. Failure to provide complete data will be cause for rejection of the product/services. The submission shall include any impacts that could be expected from the product and shall also indicate any product that would require any additional license or royalty, the actual fees, and a note that these fees would be handled by the Contractor. The following items must be submitted as part of the overall submittal package.
 - i. Company name and address of the provider.
 - ii. Electrical drawings and operation manual for the system.
 - iii. A product performance sheet for each proposed component in the system including SCADA unit, SCADA HMI software, relays, circuit breakers, enclosures, etc.
 - iv. Written evidence that such product conforms in all respects to the specified requirements and that it has been used successfully elsewhere under similar conditions. Any deviations from the specifications shall be specifically listed and addressed.
 - v. Installation list of only like equipment at 10 separate locations. The installation list shall be complete with the date of installation, the name and telephone number of the equipment operator and/or the name and telephone number of the design engineer.

E. Submittal Process

1. Complete submittals shall be provided to the Engineer/Owner for review and approval prior to purchasing of equipment or equipment fabrication.
2. Submittal documentation shall include the following:
 - a. Drawings
A master wiring diagram for the control panel(s) shall be submitted for Engineer's review and approval before beginning construction. This diagram shall be drawn in standard ladder logic format. All ladder rungs shall be numbered in the left hand margin, and all

relay contacts referenced to these numbers in the right hand margin. Each electrical node in the control schematic shall have a different wire number. A bill of materials and a layout drawing of the enclosure door/inner door/inner bracket components shall appear on this drawing with a listing of nameplates pertaining to the components. Submittal drawings may be on 11" x 17" paper.

b. Product Data

Included in the submittal package shall be data sheets of all equipment used in the control panel, as listed in the bill of materials.

c. Operation Manual

Operation manuals are required only for PLC/SCADA units that are utilized to operate equipment (pumps/VFD's/valves, etc.). A complete description of system operation shall be submitted to the Engineer/Owner for review and approval prior to beginning programming. The manual shall include a system overview and proceed to a detailed description of each software module to be programmed.

The description shall include, but is not limited to, descriptions of the following:

- i. SCADA communications
- ii. PLC logic description
- iii. SCADA HMI basic screen description and color definition

3. Submittal Meeting

- a. Systems Integrator shall include (1) day in the price to meet with the owner/engineer to review the submittal documentation and discuss specific requirements for the project, and determine customer-specific requirements for PLC operation and HMI screens. This meeting shall take place at the project site, the owner's/consulting engineer's office, or an agreed upon location. No additional compensation shall be allowed for this requirement.

4. Approval Process

- a. Upon receipt of the submittal documents, the Engineer/Owner shall review the submittal documentation and mark as follows
 - i. Approved - No Exceptions Taken
 - ii. Approved As Noted
 - iii. Amend and Resubmit
 - iv. Rejected - Resubmit
- b. If the submittal data is marked anything but Approved – No Exceptions Taken, the Contractor shall take the appropriate corrective action, and resubmit corrected or new replacement documentation as indicated to the Engineer/Owner. If subsequent resubmittals are required after the first resubmittal, the Contractor may be billed by and pay directly to the Engineer the cost of the Engineer's time to review such corrected, replacement, or new submittal documentation at rates between \$50/hour and \$150/hour, as agreed upon at the beginning of the project.

F. As-Built Documentation

1. Complete as-built documentation shall be provided to the Engineer/Owner upon project completion, as outlined in this section:
2. Drawings
 - a. Final As-Built drawings shall be on full-size 17" x 22" or 24" x 36" paper, as required. Five (5) sets shall be provided. An additional full-size as-built drawing shall be placed in the control panel.

- b. A waterproof reduced copy of the master "as built" wiring diagram shall be laminated in clear plastic and permanently fastened to the inside of the panel door.
 - 3. Operation Manual
 - a. Operation manuals only required as indicated in above "Submittal Process" description.
 - b. Prior to final acceptance by the Owner, the Systems Integrator shall provide two (2) operation manuals. Included in the documentation package shall be a detailed description of operation, modified from the submittal version.
 - c. The manual shall incorporate all wiring diagrams and system operation description. Any changes or adjustments made during installation and start-up shall be included. The manual shall include, but is not limited to, the following sections with tabs placed at the beginning of the corresponding sections:
 - i. System Operation (updated from submittal version)
 - ii. Complete set of drawings and bills of materials for control panels supplied
 - iii. System equipment/instrumentation major component manuals (CD copy inserted in operation manual)
 - iv. System component program (PLC program - CD copy inserted in operation manual)
- G. Start-up
 - 1. Provide on-site start-up of supplied equipment.
 - 2. The Systems Integrator shall include in the price sixteen (16) hours of additional on-site programming time for changes or additions requested by the Engineer or Owner during system start-up.
- H. Training
 - 1. An on-site training program shall be provided to employees as selected by the Owner, as pertains to supplied equipment. The objective of the training is to provide a common working knowledge concerning the operation of the system. Training shall be broken into sections as follows:
 - a. Include one (1) four-hour training session provided at the completion of start-up.
 - b. Include one (1) four-hour training session provided 30 days after the initial training.
- I. Warranty
 - 1. System warranty shall be for a period of 1 year commencing upon successful completion of startup. Individual items having separate warranty conditions are as listed in that component's specification.
 - 2. Systems Integrator shall not be responsible for contingent liabilities due to any component failure before, during, or after the manufacturer warranty period. Warranty includes parts and labor for all equipment/software/services provided against defects in material and workmanship. Warranty excludes surge/transient damage.

84.2 CONTROL SYSTEM OPERATION/EQUIPMENT PER SITE

84.2.1 SUMMARY

- A. Provide and install all necessary components and programming to monitor and control equipment per the following:

84.2.2 GENERAL

A. Operation

1. Tank levels/system pressures/equipment status are sensed at SCADA remote terminal unit (RTU's) and transmitted to the central SCADA field interface unit (FIU). Hand-Off-Auto pump/valve control and high/low/on/off setpoints may be set via Human-Machine Interface (HMI) and transmitted to the SCADA RTU's. Remote equipment is then controlled by the SCADA RTU's.
2. Primarily, operators view all data, operate equipment, and change all setpoints at the central SCADA computer. Setpoints are transmitted by the central Field Interface Unit (FIU) to be located at the Allen Road Booster Pump Station, and stored in respective SCADA Remote Terminal Units (RTU's) throughout the system. Communications status and RTU power status is monitored for each site.
3. A first level of control redundancy is inherent, as the SCADA RTU's remain operational without the use of the central SCADA FIU. Failure of the central SCADA unit or SCADA computer shall not affect communication between remote sites. SCADA RTU's are programmed to communicate with each other where a well or booster pump station, for example, is to fill a remote tank. Levels sensed at remote tank sites are transmitted to remote pump sites to run respective pumps/operate valves(see operation section per site below). A second level of control redundancy is programmed where a discharge or system pressure is monitored at an RTU, providing a local pressure demand for the pump if applicable (as specified per site).

B. Status and Alarms

The following shall be programmed/displayed in the HMI where applicable to display equipment/process being controlled/monitored, and as indicated by specific site description. Additional monitored points connected to inputs/outputs shall be programmed and displayed as indicated in each specific site description below.

1. RTU Generated Status

- a. RTU CPU power-up
- b. RTU AC power fail
- c. RTU communication fail with FIU
- d. RTU communication fail with another RTU
- e. Intrusion alarm (when enabled at the FIU, based upon intrusion status)
- f. Process demand (Tank/pressure/lead/lag1, etc.)
- g. Pump/equipment demand (output from the PLC for equipment to operate)
- h. Local pump operation (pump running, but not demanded by SCADA system)
- i. Pump fail to run (pump demanded by SCADA system, but run indication not received)
- j. Elapsed time meter (timed from run indication input per piece of equipment monitored)
- k. Pump alternation position (out of auto service/lead/lag1 etc.)

84.2.3 ALLEN ROAD BOOSTER PUMP STATION/CENTRAL SITE FIU (FIELD INTERFACE UNIT)

A. Summary

This site shall have a new SCADA unit provided and installed in place of the existing PLC in the existing SCADA enclosure. The antenna would be mounted to the existing antenna mount/pole utilizing existing coaxial cable. All other equipment, including level/pressure/flow

transmitters, are assumed existing and would be reused, or may be procured separately for additional cost as indicated below.

B. Operation

1. Field Interface Unit

The field RTU's gather information at their sites and transmit this information to a central FIU located at this site. The SCADA unit shall serve as a Field Interface Unit (FIU), gathering information from the field RTU's. The FIU shall accommodate communications for 31 smart freshwater remote sites and 96 remote wastewater sites without requiring expansion of the SCADA FIU.

2. Computer Central

a. The central computer shall be a desktop computer. This computer shall function as a SCADA node, with SCADA HMI software installed and programmed on this computer. This computer shall serve as the primary HMI for the SCADA system, and shall communicate with the FIU to update screens, control field devices and log alarms. HMI software shall be compatible with that on the Otter Lake SCADA computer.

b. A main screen shall be supplied as a hydraulic system overview with each remote site indicated as an "icon" on an area map, which flashes when an alarm at that site is occurring. "Clicking" on the icon shall present a site-specific graphical screen that displays level, status, and alarm information for that site. A general alarm screen shall also be programmed, indicating all unacknowledged alarms in the system at that time. Historical trending of tank levels, pressures, flows, flow totalization, and pump run indication shall be programmed and archived on the computer.

3. Alarm Dialer

a. Alarm dialer software/modem installed on the SCADA computer shall alert operators to certain alarms via phone. A list of alarms which result in dial-out shall be provided for selection and approval by the Owner during the start-up stage of the project. Personnel shall be able to access the alarm dialer via dial-up phone line, obtain alarm status of selected alarms, and acknowledge alarms.

b. A 50 tag system shall be provided.

c. Alarm dialer software and modem shall be provided and configured by the SI.

d. Owner responsible for required analog phone line connection/service to SCADA computer OR cellular SIM card/activation/cellular provider fees for alarm dialer.

4. Remote Computer Access

a. Remote SCADA computer operation shall be accomplished with a notebook computer or other remote device (all provided by the owner, if remote access is desired) via internet access. Software shall be remote access software (such as VNC).

b. Static IP address on the SCADA computer for remote access shall be provided by the Owner (through their internet service provider).

c. Dial-up or internet connection/service shall be provided and set up by the Owner on all computers.

5. RTU

a. The SCADA unit would provide primary control and alternation of the local booster pumps, based upon pumping up the remote Coops Road Tank. Booster pumps would be able to be automatically demanded based on local discharge pressure, both from the SCADA unit as well as a backup pressure controller, low suction pressure/GST level or high level in Coops Road Elevated Tank would shut off the booster pumps.

- b. This RTU would monitor the existing altitude valve, as well as various pressures/levels/weights connected to it.
- c. Each flow signal would be totalized at the ACE RTU. Each flow signal input to the RTU would have two totalization values displayed and trended in the SCADA computer (previous day, previous month). Totalization would be trended on the SCADA computer.

C. Equipment/Services Summary

(1) SCADA Computer/Accessories/Software

Includes:

- A) Desktop Computer: Computer with keyboard, mouse, (2) ethernet ports, Windows 11 Professional (64 bit) operating system
- B) Monitor: 20" – 24" LCD
- C) External hard drive and software for computer backup capabilities.
- D) UPS (Uninterruptible Power Supply)
- E) HMI Software: 300 tag count Development software, with Modbus communications driver (for SCADA computer to communicate with FIU)
- F) Historian Software: (iFIX Historian 100 tag count software, for trending of various tags/information in a chart (value vs time) format
- G) Alarm Dialer Software/Modem: 50 tag count software and analog or cellular modem for SCADA computer
- H) Remote Access Software: Tight VNC or Internet explorer for SCADA computer (which can access website such as LogMeIn – internet service/website provided by Owner)
- I) Engineering Services: Design, software installation, SCADA/PLC operation manual, SCADA Unit/SCADA Computer programming, functional testing at SI office, startup, training, for equipment provided by SI for this site

Designation:

- A) SCADA Computer

Notes:

- A) Owner to provide static IP/network address/router/internet service/VPN/website access or devices such as phone/tablet/computer to facilitate remote SCADA computer interface via remote connection software.
- B) Owner to provide required analog phone line connection/service to SCADA computer OR cellular SIM card/activation/cellular provider fees for alarm dialer.

(1) SCADA Control Panel Modification

Incoming Power: 15 A, 120 VAC, 1-Phase, 2 wire

Panel to Monitor: I/O as listed below

Panel to Control:

- A) (2) booster pumps via contact closure output to remote existing relays

Enclosure:

- A) New subpanel to be installed in existing enclosure.

Includes:

- A) 120 vac power filter to power SCADA unit
- B) LED display/controller for discharge pressure display and selector switch for backup pump control.

- C) SCADA UNIT FIU/RTU/PLC (with VHF radio and coaxial surge suppressor) connected to SCADA monitored/controlled points.
- D) Coaxial connectors, VHF antenna (for installation on existing utility pole). Existing coaxial cable to be reused in place.
- E) Frequency coordination with FCC for VHF frequency license (Otter Lake license to be modified/added on to).
- F) Engineering services for panel design, testing, SCADA Unit/SCADA Computer programming, on-site SCADA panel modifications, startup, training, operation manual for equipment provided by SI for this site.

Designation:

- A) Allen Road BPS SCADA Panel

Notes:

- A) Price does not include antenna mount/mast/support structure/clamps (existing to be reused in place).

RTU Input/Output Connections

Digital Inputs

1. Intrusion (existing switch on each of 3 building doors)
2. Surge Suppression Device Fault (future, or from existing surge suppressor, if it exists)
3. Phase Fault (existing phase monitor)
4. Control Panel Power Fail (existing contact)
5. Process Control selector switch in Local Meter Only (new switch provided and installed on existing SCADA panel by SI)
6. Valve position indication (new limit switch provided and installed by electrical contractor)
7. Booster Pump Low suction pressure indication (from existing switch)
8. Booster Pump run indication (per pump #1, #2 – existing contacts)
9. Booster Pump High discharge pressure fault indication (from existing switch)
10. Building high temperature – Booster Room (new thermostat provided on side of existing SCADA panel by SI)
11. Building low temperature – Booster Room (new thermostat provided on side of existing SCADA panel by SI)
12. Building low temperature – Chemical Feed Rooms (2) (new thermostat provided by SI and installed in chemical feed rooms, with new wires run in existing intrusion switch conduits)
13. Water in station (existing float switch)
14. Chemical Feed Pump Run Indication (per each of 3 pumps: CL2, ammonia, claritos - existing contacts, or owner to provide new)

Analog Inputs

1. South Otter Lake Inlet Pressure (existing transmitter)
2. South Otter Lake GST Inlet Flow (existing transmitter)
3. Ground Storage Tank level (existing transmitter)
4. Booster Pump Discharge pressure (existing transmitter)
5. Chemical feed scale weight (per each of 3 scales: CL2, ammonia, claritos - new scale/transmitter per each)
6. Booster Pump flow (existing transmitter)
7. Chlorine Residual (future - transmitter not provided as part of this project)

Digital Outputs

1. Booster Pump demand (per pump #1, #2)
2. Chemical Feed Demand (per each of 3 chemical feed pumps)

Analog Outputs

1. None

D. Installation

1. Install equipment provided in accordance with manufacturer's instructions and installation manuals and details shown on the plan sheets. Connect Field wiring as per approved wiring diagram and NEC
2. Installation to include the following, at a minimum
 - a. Installation/conduit/wire of all equipment.
 - b. Provide bucket truck/access to top of utility pole and install antenna/coaxial cable on top of pole and connect to SCADA panel.
 - c. Provide and install new limit switch on altitude valve (contact opens when valve fully closed).
 - d. Install thermostats in chemical feed rooms, and provide conduit/wire to SCADA panel.
 - e. Install chemical feed scales/equipment.

84.2.4 COOPS MOUND TANK

A. Summary

This site would have a new SCADA unit provided and installed in place of the existing PLC in the existing SCADA enclosure. The antenna would be mounted to the existing antenna mount/pole utilizing existing coaxial cable. All other equipment, including level/pressure/flow transmitters, are assumed existing and would be reused, or may be procured separately for additional cost as indicated below.

B. Operation

This RTU would provide monitoring of the tank level and tank fill valve. This RTU would transmit tank level and all status to the Allen Road BPS central SCADA unit. Setpoints for this site would be entered at the Allen Road BPS RTU HMI.

C. Equipment/Services Summary

(1) SCADA Control Panel Modification

Incoming Power: 15 A, 120 VAC, 1-Phase, 2 wire

Panel to Monitor: I/O as listed below

Enclosure: Utilize existing enclosure in place. SI to provide and install new subpanel in the existing enclosure w/ equipment below mounted/wired on it.

Includes:

- A) GFI duplex receptacle, and condensation heater
- B) 120 vac power filter
- C) LED display for tank level display mounted on existing inner door of enclosure.
- D) SCADA UNIT RTU/PLC (with VHF radio and coaxial surge suppressor) connected to SCADA monitored/controlled points. (SCADA Equipment to be installed in existing enclosure)
- E) Coaxial connectors, VHF antenna (for installation on existing conduit). Existing coaxial cable to be reused in place.
- F) Frequency coordination with FCC for VHF frequency license (Otter Lake license to be modified/added on to).
- G) Engineering services for panel design, testing, SCADA Unit/SCADA Computer programming, startup, training, operation manual for equipment provided by SI for this site.

Designation:

- Notes:
- A) SCADA Panel
 - A) Price does not include antenna mount/mast/support structure/clamps (existing to be reused in place).

RTU Input/Output Connections

Digital Inputs

- 1. Valve position indication (existing limit switch)

Analog Inputs

- 1. Elevated Tank level (existing transmitter)

Digital Outputs

- 1. None

Analog Outputs

- 1. None

D. Installation

- 1. Install equipment provided in accordance with manufacturer's instructions and installation manuals and details shown on the plan sheets. Connect Field wiring as per approved wiring diagram and NEC

E. Electrical Installation to Include

- 1. Installation/conduit/wire of all equipment.
- 2. Provide bucket truck/access to top of antenna pole and install antenna/coaxial cable on top of pole and connect to SCADA panel.

84.2.5 LITCHFIELD 16th AVE METER VAULT

A. Summary

This site shall have a new SCADA unit provided and installed on an electrical rack on top of the ground (not in the vault). The antenna would be mounted to the existing HWD-owned utility pole in place of the existing antenna, utilizing new coaxial cable. All other equipment, including level/pressure/flow transmitters, are assumed existing and would be reused, unless otherwise indicated below.

Existing electric utility power from the utility pole enters the valve vault and powers equipment in the vault. As the vault has flooded and submerged loadcenters, control panels and electrical equipment, power shall be re-routed to be from the utility pole to the new SCADA panel which will then provide power to the few items in the vault.

B. Operation

This site is fed from the Litchfield water system. This RTU shall monitor inlet and outlet pressure, as well as flow. This RTU would transmit tank level and all status to the Allen Road BPS central SCADA unit. Setpoints for this site would be entered at the Allen Road BPS RTU HMI.

C. Equipment/Services Summary

(1) Control Panel

Incoming Power: ~100 A, 240/120 VAC, 1-Phase, 3 wire

Panel to Monitor: I/O as listed below

Panel to Control:

- A) (1) Station valve via open/close contact closure demand to (existing) remote electric actuator
- Enclosure: NEMA 4X wall-mount enclosure
- Constructed of 304 stainless steel (brushed #4 finish)
 - With painted steel subpanel(s)
 - With painted steel inner door
 - Approximate dimensions: 30" H x 30" W x 12" D
- Includes:
- A) Main incoming power distribution block
 - B) Circuit breaker short circuit protection (1-pole, 15 amp) for each of the following:
 - i. Light/exhaust fan/dehumidifier
 - ii. Sump pump
 - iii. Valve actuator
 - iv. Receptacle
 - v. Spare
 - C) GFI duplex receptacle mounted through enclosure inner door and condensation heater
 - D) 120 vac power filter to power SCADA unit
 - E) SCADA UNIT RTU/PLC (with VHF radio and coaxial surge suppressor) connected to SCADA monitored/controlled points
 - F) Coaxial cable, coaxial connectors, VHF antenna (for installation on existing HWD utility pole (by electrical contractor)
 - G) Frequency coordination with FCC for UHF or VHF frequency license
 - H) Process display for inlet/outlet pressure indication
 - I) Valve Open-Close-Auto switch and open/close pilot lights mounted through control panel inner door
 - J) Engineering Services: Panel design, SCADA/PLC operation manual, SCADA Unit/SCADA Computer programming, functional testing at SI facility, startup, training, for equipment provided by SI for this site
- Designation:
- A) Litchfield 16th Ave Meter Vault SCADA Panel

RTU Input/Output Connections

Discrete Inputs

1. SCADA Panel Intrusion (new switch in SCADA panel, new switch for vault)
2. Valve Panel Selector Switch in Auto
3. Valve Open Position Indication (from limit switch on valve actuator)
4. Valve Actuator Fault (from contact on valve actuator, if exists)
5. Water in Valve Vault (new float provided by SI)

Analog Inputs

1. Litchfield Pressure (new submersible transmitter)
2. Henderson Pressure (new submersible transmitter)
3. Station flow (transmitter provided, installed, started up by HWD)

Discrete Outputs

1. Valve Open Demand (to existing valve)

Analog Outputs

1. None

(2) Submersible Pressure Transmitter

Includes:

- A) Transmitter w/ 60' cable

Designation:

- A) Litchfield Pressure
- B) Henderson Water District Pressure

Notes:

- A) HWD to provide water tap w/ corp stop for connection of pressure transmitters.

D. Installation

1. Install equipment provided in accordance with manufacturer's instructions and installation manuals and details shown on the plan sheets. Connect Field wiring as per approved wiring diagram and NEC
2. Electrical Installation to Include
 - a. Installation/conduit/wire of all equipment.
 - b. Provide bucket truck/access to top of utility pole and install antenna/coaxial cable on top of pole and connect to SCADA panel.
 - c. Provide and install new limit switch on valve (contact opens when valve fully closed).
 - d. Provide and install electrical rack (galvanized strut construction) for SCADA panel.
 - e. Install SCADA panel on electrical rack.
 - f. Remove electric utility power wiring from existing booster pump station, and connect to new SCADA panel. Provide/install conduit wire to power equipment in vault:
 - i. Exhaust fan
 - ii. Sump pump
 - iii. Light
 - iv. Valve actuator
 - v. Spare
 - g. Remove existing electrical equipment in vault:
 - i. Phase convertor
 - ii. Lighting panel
 - iii. Pump control panel
 - iv. Telemetry panel
 - v. Exhaust fan
 - h. Provide and install new electrical equipment in vault:
 - i. Exhaust fan
 - ii. Light switch
 - iii. Dehumidifier
 - iv. Receptacle(s) (GFI)
 - i. Install/wire submersible pressure transmitters in vault, and provide conduit/wire to SCADA panel (twisted/shielded wire 14 AWG).
 - j. Install entry/intrusion switch on vault door. Provide/install conduit/wire to SCADA panel.
 - k. Install float for water in vault indication. Provide/install conduit/wire to SCADA panel.
 - l. Provide/install conduit/wire from flow meter (in separate vault) to SCADA panel.
 - m. Provide and install junction box as required to be installed in vault near top of vault, to consolidate wiring and conduits to SCADA panel.

84.2.6 LITCHFIELD COUNTY LINE METER VAULT

A. Summary

This site shall have a new SCADA unit provided and installed on an electrical rack on top of the ground (not in the vault). The antenna would be mounted to a 20 ft high conduit installed on the back of the electrical rack, new coaxial cable.

Electric utility power shall be coordinated by the electrical contractor with the local electric utility. Electric power shall be wired from the utility pole to the SCADA panel to the vault.

B. Operation

This site is fed from the Litchfield water system. This RTU shall monitor inlet and outlet pressure, as well as flow. This RTU would transmit tank level and all status to the Allen Road BPS central SCADA unit. Setpoints for this site would be entered at the Allen Road BPS RTU HMI.

C. Equipment/Services Summary

(1) Control Panel

Incoming Power: ~100 A, 240/120 VAC, 1-Phase, 3 wire

Panel to Monitor: I/O as listed below

Panel to Control:

- A) (1) Station valve via open/close contact closure demand to (existing) remote electric actuator

Enclosure: NEMA 4X wall-mount enclosure

- Constructed of 304 stainless steel (brushed #4 finish)
- With painted steel subpanel(s)
- With painted steel inner door
- Approximate dimensions: 30" H x 30" W x 12" D

Includes:

- A) Main incoming power distribution block
- B) Circuit breaker short circuit protection (1-pole, 15 amp) for each of the following (unless this is already provided in the vault):
 - i. Light/exhaust fan/dehumidifier
 - ii. Sump pump
 - iii. Valve actuator
 - iv. Receptacle
 - v. Spare
- C) GFI duplex receptacle mounted through enclosure inner door and condensation heater
- D) 120 vac power filter to power SCADA unit
- E) SCADA UNIT RTU/PLC (with VHF radio and coaxial surge suppressor) connected to SCADA monitored/controlled points
- F) Coaxial cable, coaxial connectors, VHF antenna (for installation on existing HWD utility pole (by electrical contractor)
- G) Frequency coordination with FCC for UHF or VHF frequency license
- H) Process display for inlet/outlet pressure indication
- I) Valve Open-Close-Auto switch and open/close pilot lights mounted through control panel inner door
- J) Engineering Services: Panel design, SCADA/PLC operation manual, SCADA Unit/SCADA Computer programming, functional testing at SI facility, startup, training, for equipment provided by SI for this site

Designation:

A) Litchfield County Line Meter Vault SCADA Panel

RTU Input/Output Connections

Discrete Inputs

1. SCADA Panel Intrusion (new switch in SCADA panel, new switch for vault)
2. Valve Panel Selector Switch in Auto
3. Valve Open Position Indication (from limit switch on valve actuator)
4. Valve Actuator Fault (from contact on valve actuator, if exists)
5. Water in Valve Vault (new float provided by SI)

Analog Inputs

1. Litchfield Pressure (new submersible transmitter)
2. Henderson Pressure (new submersible transmitter)
3. Station flow (new flow tube/transmitter provided and started up by SI, flow tube installed by general contractor, flow transmitter installed by electrical contractor)

Discrete Outputs

1. Valve Open Demand (to existing valve)

Analog Outputs

1. None

(2) Submersible Pressure Transmitter

Includes:

- A) Transmitter w/ 60' cable

Designation:

- A) Litchfield Pressure
B) Henderson Water District Pressure

Notes:

- A) HWD to provide water tap w/ corp stop for connection of pressure transmitters.

D. Installation

1. Install equipment provided in accordance with manufacturer's instructions and installation manuals and details shown on the plan sheets. Connect Field wiring as per approved wiring diagram and NEC
2. Installation to include the following, at a minimum
 - a. Installation/conduit/wire of all equipment.
 - b. Provide bucket truck/access (if required) to top of antenna pole/conduit, and install antenna/coaxial cable on top of pole and connect to SCADA panel.
 - c. Provide and install electrical rack (galvanized strut construction) for SCADA panel and incoming utility electrical equipment.
 - d. Provide and install utility meterbase/disconnect at utility pole or on back of electrical rack.
 - e. Install SCADA panel and antenna pole/conduit (1.25" heavywall) on electrical rack.
 - f. Install entry/intrusion switch on vault door. Provide/install conduit/wire to SCADA panel.
 - g. Install float for water in vault indication. Provide/install conduit/wire to SCADA panel.
 - h. Provide/install conduit/wire from flow meter (may be in separate vault) to SCADA panel.

- i. Provide and install junction box as required to be installed in vault near top of vault, to consolidate wiring and conduits to SCADA panel.
- j. Install flow tube and flow transmitter, with conduit/wire to SCADA panel.

84.3 EQUIPMENT, PRODUCTS AND SERVICES

84.3.1 CONTROL PANELS

- A. Fabrication
 1. All control switches and indicator lights shall be mounted on or through the enclosure door or inner door.
 2. All panel wiring and equipment layout shall be performed per NEMA and JIC specifications. NEC gutter spacing shall be observed.
 3. A minimum of 6" additional DIN rail shall be provided for future mounting expansion.
- B. Enclosure
 1. Enclosure shall be NEMA 12 basic construction.
 2. Outdoor Enclosures: Enclosure shall be modified with a dripshield to have a NEMA 3R rating (a standard NEMA 3R enclosure shall not be acceptable. Enclosure shall be constructed of 12 gauge 304 stainless steel with a #4 finish. All hardware on exterior of enclosure shall be stainless steel.
 3. Enclosure shall have a separate subpanel. Subpanel shall be 12 gauge mild steel primed and painted white.
 4. Exterior door shall be held shut with padlockable, 3-point door latch mechanism, Austin #48-565SSX, or approved equal. Padlock (if required) is to be provided by the owner. Exterior door shall be gasketed to provide a weathertight seal to the enclosure. All doors shall be mounted to the enclosure with continuous hinges.
 5. Outdoor Enclosures: Enclosure shall have swing-out inner door. Inner door shall be held shut with latch, Emka wingknob #1000-U78 and cam #1000-50, or equal. Inner door shall be 12 gauge mild steel primed and painted white.
- C. Power Distribution Block
 1. Provide a main power distribution block sized for incoming power to the panel, and other power distribution blocks as required. Each pole of the block shall be supplied with a clear cover for operator protection.
 2. Power distribution block shall be Ferraz Shawmut 63000, 67000, or 69000 series, Mersen, or approved equal, as required.
- D. Circuit Breakers
 1. Branch circuit breakers shall be located in the power distribution section of the control panel and provide short circuit protection for the loads they protect: Combination circuit breaker and overload mechanism shall not be allowed. Circuit breakers for motors and other loads shall have a minimum rating of 10,000 AIC (230 vac circuit breakers) or 14,000 AIC (480 vac circuit breakers).

2. Provide individual properly sized, 1 or 2-pole thermal-magnetic circuit breaker for the following as applicable:
 - a. Panel receptacle/condensation heater.
 - b. Control circuit (5 Amp max.)
 - c. 120 vac power filter/Telemetry Unit
 - d. Other 1-phase loads as described above, per site
- E. Terminal Blocks
1. Numbered terminal blocks shall be supplied for all field terminations. Current capacity of terminal strips shall be equal to the load served. Terminal blocks shall be suitable for minimum 12 AWG wire at not less than 300 volts.
 2. Terminal blocks for control interface shall be Entrelec model 115116.07, or approved equal.
- F. Receptacle
1. Provide a 15-amp G.F.I. duplex receptacle connected to a separate circuit breaker, as described elsewhere, and mounted on the control panel subpanel or inner door.
- G. Condensation Heater
1. Provide a 100 watt, 120 vac silicone rubber self-adhesive condensation heater mounted on a flange with integral 40 degree thermostat.
 2. Heater shall be Watlow #020100C1-EV11B, or approved equal.
- H. Power Conditioning
1. Control systems utilizing microprocessor technology shall have power conditioning for incoming power to these pieces of equipment. The following equipment, at a minimum, shall be protected by this surge suppressor (where applicable):
 - a. Level display/process controller
 - b. Telemetry Unit
 2. The power conditioning equipment shall be Islatrol model #IC+-10*, Amber Industries model AI-10*A-CM (* = Amp rating), or approved equivalent.
- I. 24 VDC Power Supply
1. Provide 24 VDC power supply to power 4-20 mA current signal equipment and other equipment as required in control panel. Unit shall be rated at 1.5 A DC output, minimum if provided as an isolated unit. An integral low current 24 VDC power supply (integral to battery-backed SCADA unit) may be used to power pressure transmitters in lieu of the stand-alone unit.
- J. LED Display/Process Controller
1. Provide a 4.5 digit industrial-grade micro-processor based digital process controller with an integral 24 VDC power supply to accept a 4-20 mA input from a process transmitter. All programming and calibration shall be accomplished through a front-mounted keypad. Display shall be .56" high LED'S. Front panel shall be NEMA 4X rated.
 2. Meter shall be Precision Digital Series #PD6000, or approved equal.
 3. A meter shall be provided for the following values:
 - a. Pressure (as indicated per site above)
- K. Signal Line Protector

1. Signal line protectors shall be provided for each 4-20 mA instrumentation loop entering the enclosure (for outdoor enclosures) or entering the building (for indoor enclosures).
- L. Relays
1. Relays shall be general purpose plug-in relays with standard mounting configurations. The relays shall have the number of poles as shown on the drawings with neon indicating lamp and test button integral to each relay. Relay contact ratings shall be minimum 5 amps.
- M. Selector Switches
1. Selector switches shall be 30 mm oil tight type with lever operators and 10 amp contacts. Knob operators shall not be accepted. Contact blocks shall be provided as required and shall be rated for a nominal voltage of 500 vac and 10 amps.
 2. Provide selector switches for the functions described above per site.
- N. Pilot Lights
1. Pilot lights shall be push-to-test, oil-tight industrial units utilizing 120 volt power with LED bulbs (unless otherwise specified). Lenses shall be colored as shown on the drawings.
 2. Provide pilot lights for the functions described above per site.
- O. Alarm Thermostat
1. Provide an adjustable thermostat to provide alarm annunciation of low/high temperature to the SCADA system.
 2. A thermostat shall be provided describe above per site.
 - a. Building High/Low Temperature
- P. Entry Switch
1. Where panels are mounted outside, an entry switch shall be mounted in the panel, which shall close a contact wired to the telemetry unit when the exterior door of the enclosure is not closed.
 2. As detailed per site above, where panels are located in buildings or above vaults, an entry switch shall be provided for installation at each door of the building or vault, which shall close a contact when the exterior door of the building/vault is not closed.
 3. A common intrusion alarm point on the SCADA unit shall be connected to indicate all intrusion alarms.
- Q. Ground Buss/Lugs
1. Provide a ground lug sized for incoming power ground near the power distribution block. Provide a ground lug sized for pump ground near pump power wire terminations. Provide a ground buss for control equipment grounding, minimum 6 termination points.
- R. Corrosion Inhibitor
1. Provide a corrosion inhibitor mounted inside the control panel.
 2. Corrosion inhibitor shall be Hoffman #A-HCI-5E, or approved equal.
- S. Wiring
1. Panel interior power distribution wiring shall be rated for 600VAC, 90° C and be sized in

accordance with NEC for the prevailing circuit protection, minimum No. 12 AWG THHN.

2. Panel interior control wiring shall be minimum #16 gauge SIS or MTW type stranded wire for internal control panel circuits, rated for 600VAC, 90° C. Wires connected to a PLC or other device that has terminals which do not accommodate 16 gauge wire may be smaller (20 AWG), providing they have properly sized overcurrent protection
 3. All control wires shall be numbered at each termination corresponding to the master wiring diagram with clip-sleeve or heat-shrink type wire markers. Wrap-on or adhesive wire markers shall not be allowed.
 4. Wire Insulation Color
 - a. Panel interior power distribution conductors supplying 120 vac and above on the line side of a disconnecting switch shall have black insulation for the ungrounded conductor.
 - b. Panel interior control wiring (120 vac and below) wiring (except for neutrals) shall have red insulation. 120 vac neutral wiring shall have white insulation. 50 vac or less wiring shall have yellow insulation. 12/24 vdc wiring shall have blue insulation. Intrinsically safe wiring shall have purple insulation.
- T. Labels/Nameplates
1. All components shall be identified according to wiring diagram.
 2. Provide adhesive backed printed labels for all internal devices such as contactors, circuit breakers, and relays. Labels shall be adhered to the subpanel. No labels shall be adhered to wire cover.
 3. Provide engraved phenolic nameplates, with black letters on white background, for door-mounted devices such as selector switches, push-buttons, circuit breaker toggles, and pilot lights. Nameplates shall be secured firmly to the panel.

84.3.2 TELEMETRY EQUIPMENT

The following equipment shall be supplied in the control panel, unless otherwise indicated.

- A. Telemetry Unit
1. Each site as indicated above shall have a SCADA RTU conforming to these specifications and the Otter Lake existing system. All hardware components for the RTU shall be supplied, installed, and programmed as an integral component of the control panel. The Otter Lake SCADA system operates on 154.47125 MHz frequency communicating with an existing Motorola MOSCAD/ACE Central Station Transceiver for remote monitoring.
 2. The PLC shall support the establishment of a sophisticated data communication network for SCADA applications utilizing a variety of radio or line communication links, including radio (conventional VHF and UHF), direct FM radio, trunked radio and microwave (analog and digital), line links (private or leased lines), Public Service Telephone Network (PSTN) via dial-up modems and fiber optics. The CPU must be a true multi-port device and be able to communicate simultaneously with hierarchies above it (multiple central stations), with hierarchies parallel to it (RTU to RTU) and hierarchies below it (master/slave RTUs).
 3. If required for proper communication, one or more RTU's shall be programmed to serve as a repeater station, allowing communication between RTU's and the central FIU. Additional hardware shall not be required to meet this requirement.
 4. Telemetry Unit Hardware

- (1) SCADA RTU with 20 watt conventional radio
 - (1) Mixed I/O Card (4 AI, 16 DI, 4 DO)
 - (*) Other I/O cards as required to meet this specification
 - (1) 6.5 AH battery
5. Telemetry Unit Spare Parts
- a. Power supply
 - b. CPU
 - c. Radio
 - d. (1) I/O card of each type provided
- B. Coaxial Surge Protector
- 1. A coaxial surge protector shall be supplied and installed in the control panel for coaxial cable connection to the radio.
 - 2. Coaxial surge protector shall be Polyphasor # IS-B50LN-C2-ME.
- C. Status Connections
- 1. Status connections shall be as indicated per site in the Control System Operation section above.

The following equipment shall be supplied loose for installation by the contractor, unless otherwise indicated:

- A. Coaxial Cable Connectors
- 1. Coaxial cable connectors shall be supplied as required appropriate for the coaxial cable used. Quantity shall be as required for the site. Weatherproof N-Connectors shall be used.
 - 2. The following shall apply:
 - a. For LMR-400 or RG213U coaxial cable: Coaxial cable connectors shall be as manufactured by RF Industries #RFN-1002-1S (male), #RFN-1024-1 (female), Andrew 400APNM-C (male) or 400APNF-C (female) or approved equal as recommended by radio manufacturer, quantity as required.
- B. Coaxial Cable
- 1. Coaxial cable appropriate for the radio frequency shall be supplied. Quantity shall be as required for the site.
 - 2. The following shall apply:
 - a. Lengths under approximately 100': Coaxial cable shall be type LMR-400 or RG213U, Belden #8267, or approved equal, as recommended by radio manufacturer.
- C. Coaxial Cable Sealant
- 1. Each coaxial cable connection exposed to weather shall be sealed and taped with a weather resistant electrical tape and wrap.
 - 2. Wrap shall be as manufactured by 3M Company #8425-7 and #8426-9 (or as required for coaxial cable size).
- D. Antenna
- 1. A radio antenna with N-connection shall be supplied at each site, utilizing antenna types as appropriate for the site at which the antenna is located. Antenna shall be capable of being mounted to a 1.5" to 2.5" in diameter mast. Acceptable types are omni-directional and yagi.

2. Antenna shall be as manufactured by Decibel, Comtelco, or approved equal, as recommended by radio manufacturer.

84.3.3 TELEMETRY SERVICES

- A. Software Programming/Start-up Services
 1. All ACE/PLC/SCADA computer programming and start-up services shall be completed such that the ACE in the control panel communicates all information as specified to the central ACE, and that the information is displayed in the computer central and other SCADA network computers.
 2. All SCADA unit programming and system start-up shall be performed by an authorized Value Added Reseller (VAR) familiar with the Otter Lake SCADA system. The SCADA "site" shall be programmed in the HWD and Otter Lake SCADA computer network by an authorized Systems Integrator familiar with the HWD and Otter Lake SCADA computer HMI software. The SI shall have offices located within 100 miles of the HWD office to facilitate timely system support.
- B. Radio Frequency License Coordination
 1. A licensed VHF frequency (identical to Otter Lake), with each site listed on the license, is required.
 2. It shall be the responsibility of the Systems Integrator to obtain/update the radio frequency license(s) necessary for the installation and successful operation of the SCADA system/site.

84.3.4 TELEMETRY EQUIPMENT INSTALLATION

The following equipment shall be supplied and installed by the contractor, unless otherwise indicated:

- A. Antenna
 1. Antennas shall be mounted at a height above ground that is consistent with FCC rules and regulations and provides adequate signal strength for proper operation.
 2. The antenna azimuth shall be in the direction of the central SCADA unit or nearest satellite receiver +/- 15 degrees.
 3. The antenna shall be mounted to a support pole/tower and shall be a minimum of 15 feet above ground. Height shall be as required for reliable signal reception at all times.
- B. Antenna Support/Tower
 1. The pole must be installed so that it is vertical +/- 1 degree.
 2. The top of the pole shall be sealed against water penetration or have cable pass through a weatherhead.
 3. Each antenna mount shall be grounded to a 3/4" x 10' ground rod driven 1' below grade adjacent to base. Grounding rod length shall follow national electric code requirements.
 4. Antenna poles shall be installed to the rear of the control panel as indicated on the control panel drawings.
 5. If elevation of antenna is less than 20 ft. above the station, building, or nearest available structure: Heavywall conduit firmly secured by at least two points along the length of the pole

may be used. Conduit shall be galvanized steel or aluminum rigid heavy wall conduit and shall be supplied and installed by the electrical contractor. Pole shall be mounted to electrical rack, strut on back of enclosure, building, or tank/tank leg.

- a. For building installation, pole shall be secured at the base of the building and to the building eave. Antenna should be mounted approximately 10' above top of building.

C. Coaxial Cable

1. The coaxial cable is to be run in one continuous length with no splices. The coax shall be terminated at the antenna connector on one end and a lightning/coaxial surge arrester on the other end.
2. Each coaxial cable connection exposed to weather shall be sealed and taped with a weather resistant electrical tape and coaxial cable sealant/wrap (as described above).

84.4 INSTRUMENTATION

84.4.1 EQUIPMENT

The following shall be supplied loose for installation at the project site:

A. Alarm Thermostat (Corrosive Environment)

1. Provide an adjustable thermostat to provide alarm annunciation of low temperature to the SCADA system
2. Thermostat to use a liquid-filled sensing element and capillary tube.
3. Thermostat to be installed in the booster room.
4. Sensing bulb to be installed in the chemical feed room.
5. Thermostat shall be Johnson Controls model A19ABC-24, TPI Corporation #L08Y-0, or approved equal.
6. A thermostat shall be provided for the following:
 - a. Allen Road BPS Chemical Feed CL2 Room Low Temperature

A. Float Switch

1. Provide float switch(es) as required, for installation by the contractor.
2. Float switches shall be the direct acting single pole switch type encapsulated by an air filled chemical resistant polypropylene casing with a built in or external weight and a suitable electrical cable capable of suspending the switch.
3. A float shall be provided for functions as detailed above for the following functions:
 - a. Water in Vault

B. Submersible Pressure Transmitter

1. Pressure transmitter shall be submersible type utilizing hydrostatic pressure to measure level via piezoresistive silicon sensor technology.

2. Transmitter shall include vent tube for barometric pressure compensation, and lightning surge protection.
3. Materials of construction shall be a body of 316 SS and a polyethylene cable.
4. Transmitter output shall be 4 to 20 mA, and accuracy shall be $\pm 0.25\%$ TEB (Total Error Band) for Valueline and Levelrat and $\pm 1\%$ TEB for Levelgage. Transmitter shall operate on 11 to 28 VDC power source.
5. Transmitter shall operate over the temperature range of -40 to 120°F and shall have a pressure limit of 1.5 times the operating range.
6. The transmitter shall be suitable for continuous submergence and operation and shall be installed in accordance with manufacturer's instructions.
7. Transmitter shall be provided with surge suppressor built-in the unit.
8. Warranty:
 - a. Transmitter shall have 2-year parts warranty (from date of shipment from factory) covering defects in material and workmanship.
 - b. Transmitter shall carry lifetime parts warranty against damage from voltage surges
9. Installation:
 - a. For installation where the transducer is installed connected to a pipe, unit shall be threaded to a corp stop or similar NPT device. Transmitter shall have 1/4" -18 NPT male connection.
10. A pressure transmitter shall be provided for each of the following processes:
 - a. Inlet and outlet pressure as described above per site.

C. Flow Meter

1. Provide a flow meter with instantaneous flow indication for installation by the contractor. The meter shall meet or exceed the most recent revision of AWWA Standard C702 and be available in a lead-free bronze alloy. The meter shall comply with the lead-free provisions of the Safe Drinking Water Act, be certified to NSF/ANSI/CAN Standards 61 and 372 (Trade Designation: LL-NS) ,and carry the NSF-61 mark on the housing. All components of the lead-free bronze alloy meter (housing, measuring element, seals, and so on) shall comprise the certified system. The compound meter shall combine two metering technologies in one package. A positive displacement chamber shall measure low flow, while a turbine chamber shall record high flow.
2. Provide a permanently sealed, electronic LCD absolute encoder/transmitter that produces an industry standard ASCII encoded output as well as an analog 4-20 mA DC output signal with a dual output wire design . Encoder shall be designed for use with all current Badger Meter Recordall® Disc, Turbo Series, Compound Series, Combo Series and Fire Service meters and assemblies . The encoders shall provide connectivity with Badger Meter ORION AMR/AMI endpoints and other AMR/AMI technology solutions approved by Badger Meter.
3. Flow transmitter/encoder shall include the following:
 - a. Analog output: 4 – 20 ma signal indicative of instantaneous flow.
 - b. Radio read (conforming to the City of Litchfield, IL)
4. Equipment shall be as manufactured by Badger:
 - a. Flow tube: Recordall® Compound Series
 - b. Encoder: Badger HR-E LCD 4-20

5. Provide equipment for the following flows:
 - a. Litchfield County Line Valve Vault Station Flow (3", or as indicated on plan sheets)

D. Chemical Feed Weight Scale

1. A non-corroding, low platform profile, solid PVC top plate digital weight scale with remote digital weight indicator shall be provided in the chemical room. The scale shall have temperature stable, solid-state operation by strain gauge transducer. All hardware is to be stainless steel. The scale shall have a mounted indicator with a 4-1/2 digit LED display with 4-20mA output capable of being interfaced with a remote located monitoring and recording stem. Accuracy shall be 1/2 of 1%. The indicator shall be housed in a NEMA 4X enclosure. The indicator shall be wall mounted next to the pressure gauge subpanel in the pump room. The indicator shall be linked by cable to the control panel. The cables connecting the scale to the indicator and the indicator to the control panel shall be routed in appropriate sized PVC conduit and be of sufficient length to accommodate this configuration. The indicator shall have a range of 0-1000 lbs. with Tare weights being programmable. The platform shall be a minimum of 25" in diameter.
2. Scale shall be a Model 4021 as manufactured by Scaleton Industries Ltd., or equal
3. Provide equipment for the following:
 - a. Allen Road Booster Pump Station: CL2
 - b. Allen Road Booster Pump Station: Ammonia
 - c. Allen Road Booster Pump Station: Claritos

84.5 ELECTRICAL RACK

84.5.1 GENERAL

- A. An electrical equipment rack, as described above, per site, shall be provided and installed by the electrical contractor.
- B. Submittal documentation shall include a drawing indicating main equipment/conduit on the electrical rack.

84.5.2 EQUIPMENT – CONTROL PANEL ELECTRICAL RACK

- A. The following shall be provided and installed on the electrical rack with conduit and wire connecting the components:
 1. Meterbase/Utility service entrance disconnect w/ fuses, coordinated with local electric utility, as required per site above
 2. SCADA Control panel

84.5.3 CONSTRUCTION

- A. The equipment rack and horizontal members shall be constructed of hot-dipped galvanized steel strut material.
- B. All above ground conduit shall be hot-dipped galvanized heavywall conduit, sized per the NEC, minimum 3/4" diameter.
- C. All underground conduit shall be Schedule 40 PVC.

- D. All wiring between components on the electrical rack shall be rated for the load served, and shall be not less than 12 AWG stranded type THHN/THWN, except instrumentation control wiring. Instrumentation wiring shall be minimum 14 AWG stranded type THHN/THWN for discrete signal control wiring, and minimum 16 AWG stranded type twisted/shielded pair for analog signal wiring. All wiring shall be color coded by wire insulation, or colored tape on each end of the wire.

84.6 INSTALLATION

84.6.1 GENERAL

- A. Equipment shall be installed per manufacturer's instructions and control panel drawings. Complete installation of equipment listed above, including but not limited to: computer, communication cables, SCADA/control panels, enclosures, instrumentation, antennas, antenna support masts.
- B. Holes should only be punched in bottom of enclosures for conduit entry, etc., where applicable, so as to prevent water from entering enclosure. Where bottom entry is not possible, conduit installation shall be made water-tight by threaded openings and/or gasketed hubs.
- C. All equipment shall be stored be protected against damage at all times. Equipment shall be stored in a clean, dry environment with temperature and humidity within the range as specified by the controller manufacturer.
- D. Installer's Qualifications
 - 1. The electrical contractor shall be bonded, and insured.
- E. Electrical Rack
 - 1. Where required, the electrical rack shall be mounted such that the top of equipment is approximately 6' above grade. It shall be mounted to concrete footings, or on schedule 40 steel posts or strut embedded in concrete.
- F. Panel Power
 - 1. Panels shall be powered from 230/120 vac 1-phase as required, and grounded properly.
- G. Discrete Signals
 - 1. Discrete signal transmission between instruments shall be completed with no smaller than 14 AWG THHN wire.
- H. Analog Signals
 - 1. Analog signal transmission between instruments shall be 4-20 mA operating at 24 VDC. Ground measurement loops at source OR enclosure, as indicated on drawings. No smaller than 16 AWG twisted/shielded stranded cable shall be used for all analog signal wiring. Larger size may be required for longer runs.
 - 2. Cable for 4 – 20 mA shall be Belden 8720 (pair) or 8618 (3-conductor) unless otherwise indicated by equipment manufacturer.
- I. Wire Termination
 - 1. Prior to start-up, all wires shall be properly terminated in control panel at terminal blocks, and at equipment external to the control panel, as indicated in the drawings, unless otherwise specified by the Owner.
- J. Clean-up

1. Upon completion, project site shall be cleaned up and left free of all “junk” electrical equipment (wire, conduit, strut, etc.). Enclosure shall be wiped free of any mud or other debris. Work area shall be left in a professional manner, presentable to the owner.

IEPA Permit

Intentionally Blank

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue, East; Post Office Box 19276; Springfield, IL 62794-9276

Division of Public Water Supplies

Telephone 217/782-1724

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: HENDERSON PWD (IL1350010)

Permit Issued to:

Henderson PWD

222 East Nicholas Street, Apartment B

Carlinville, Illinois 62626

PERMIT NUMBER: 0571-FY2024

DATE ISSUED: April 9, 2024

PERMIT TYPE: Water Main Extension

The issuance of this permit is based on plans and specifications prepared by the engineers/architects indicated, and are identified as follows. This permit is issued for the construction and/or installation of the public water supply improvements described in this document, in accordance with the provisions of the Environmental Protection Act, Title IV, Sections 14 through 17, and Title X, Sections 39 and 40, and is subject to the conditions printed on the last page of this permit and the ADDITIONAL CONDITIONS listed below.

FIRM: Heneghan and Associates, P.C.

NUMBER OF PLAN SHEETS: 38

TITLE OF PLANS: "Phase V Water Distribution System Expansion"

APPLICATION RECEIVED DATE: December 11, 2023

PROPOSED IMPROVEMENTS:

*** The installation of approximately 203,967 feet of 4-inch and 59,025 feet of 6-inch diameter water main at various unincorporated areas within eastern Macoupin County and western Montgomery County. ***

ADDITIONAL CONDITIONS:

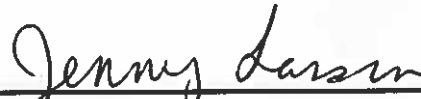
1. All water mains shall be satisfactorily disinfected prior to use pursuant to Ill. Adm. Code, Title 35, Subtitle F, Section 602.310. Two consecutive sets of samples collected at least 24 hours apart must show the absence of coliform bacteria. The samples must be collected as per the approved sampling plan. An operating permit must be obtained before the project is placed in service. The application for operating permit and supporting documents can either be mailed to this office or emailed to EPA.PWSPermits@illinois.gov. Use of the email address is preferred.
2. When the owner or operator of a community water supply replaces a water main, the community water supply shall identify all lead service lines connected to the water main and shall comply with the requirements of Section 17.12 of the Act, 415 ILCS 5/17.12 for lead service line replacement. Galvanized service line must also be replaced if the galvanized service line is or was connected downstream to the lead piping. A statement must be submitted with the Application for Operating Permit indicating either that no full or partial lead service lines were identified or that Section 17.12 of the Act was complied with for this project.

3. When replacing water mains with lead service lines or partial lead service lines connected to them, the owner or operator of the community water supply shall provide the owner or operator of each potentially affected building that is serviced by the affected lead service lines or partial lead service lines, as well as the occupants of those buildings, with an individual written notice. The lead informational notice shall be provided at least 14 days prior to permitted water main work. The notification provided by the community water supply must satisfy the requirements of Section 17.12(jj) of the Act, 415 ILCS 5/17.12(jj). A copy of the notice used must be submitted to the Agency with the Application for Operating Permit.

4. The permit approval is for the Application and 29 plan sheets received on December 11, 2023, 9 plan sheets received on March 8, 2024, Schedule B received on March 20, 2024, and additional information received on March 7, 15, 20, & 21, 2024.

JML: GTG

cc: Heneghan and Associates, P.C.
Springfield Regional Office
IDPH/DEH Plumbing & Water Quality Program



Jenny Larsen, P.E.
Working Supervisor, Permit Section – Unit B
Division of Public Water Supplies

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The Illinois Environmental Protection Agency Act (415 ILCS 5/39) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

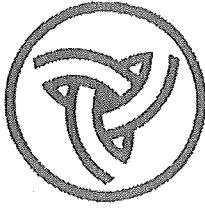
These standard conditions shall apply to all permits which the Agency issues for construction or development projects which require permits under the Division of Water Pollution Control, Air Pollution Control, Public Water Supplies and Land Pollution Control. Special conditions may also be imposed by the separate divisions in addition to these standard conditions.

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year after this date of issuance unless construction or development on this project has started on or prior to that date.
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentation of credentials:
 - a. to enter at reasonable times the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit.
 - b. to have access to and copy at reasonable times any records required be kept under the terms and conditions of this permit.
 - c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit.
 - d. to obtain and remove at reasonable times samples of any discharge or emission of pollutants.
 - e. to enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
 - a. shall not be considered as in any manner affecting the title of the permits upon which the permitted facilities are to be located;
 - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
 - c. does not release the permittee from compliance with the other applicable statues and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;
 - d. does not take into consideration or attest to the structural stability of any units or parts of the project;
 - e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability directly or indirectly for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. These standard conditions shall prevail unless modified by special conditions.
7. The Agency may file a complaint with Board of modification, suspension or revocation of a permit:
 - a. upon discovery that the permit application misrepresentation or false statements or that all relevant facts were not disclosed; or
 - b. upon finding that any standard or special conditions have been violated; or
 - c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

Intentionally Blank

Road Permit

Intentionally Blank



Illinois Department of Transportation

Office of Highways Project Implementation / Region 4 / District 6
3215 Executive Park Drive / Springfield, Illinois 62703

March 26, 2024

RE: Permit 6-36057

Larry Steward
Henderson Water District
1004 IL – 16
Jerseyville, IL 62052

Dear Ms. Steward:

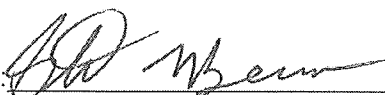
Enclosed are 3 copies of Individual Utility Permit Bond for District Serial No. 6-36057, for an open cut 4,113 lineal feet of 6" PVC water line along 3 locations on ILL 108 between the county line and ILL 111 in Macoupin County, IL. The Department will require the bonds before approval of this permit can be issued.

All copies of the Individual Utility Permit Bond are to be returned to this office for approval on the part of the Department, after which two fully approved copies will be returned.

If you should have any questions, please feel free to contact Kim Tribbet at (217) 782-7745.

Sincerely,

Jeffrey P. Myers, P.E.
Region Four Engineer

By: 
Steve V. Beran, P.E., S.E.
District 6 Operations Engineer

SVB/KT/kdh
Enclosure



Bond No. _____

We _____, _____
(Mailing Address)

as Permittee, and _____, as Surety, do hereby guarantee performance
of the work described in the Illinois Department of Transportation Utility Permit number 6-36057 which
grants permission and authority to perform that work upon or adjacent to _____

Route IL 108 in Macoupin County in accordance with the terms
and description in the permit and sketch and with Part 530 of Title 92 of the Illinois Administrative Code, Accommodation of
Utilities on Right-of-Way of the Illinois State Highway System.

If the Permittee performs the work in accordance with the terms and conditions of and description in the permit and sketch
and with Part 530 of Title 92 of the Illinois Administrative Code, Accommodation of Utilities on Right-of-Way of the Illinois
State Highway System, no claim or demand will be made against this bond's monetary obligation. Otherwise, the Surety is
liable to the Department for all expenses incurred in any action in which it prevails against the Permittee or Surety.

Surety's monetary responsibility under this bond is limited to \$ 10,000.00 and shall also be the responsibility
of its successors and assigns for five years.

Surety shall provide written notice to the Illinois Secretary of Transportation at least 30 days prior to the inability (due to
dissolution or otherwise) of Surety to fulfill its commitments under this bond. Permittee and Surety have a joint and severable
responsibility to replace Surety within the 30 day period with another Surety acceptable to the department.

By our signatures below, we commit ourselves to the terms and the conditions of this bond:

Signature of Agent for Surety

Name of Surety (Print or Type)

Mailing Address

City State Zip

() _____
Telephone Number Date

Signature of Agent for Permittee

Name of Permittee (Print or Type)

Mailing Address

City State Zip

() _____
Telephone Number Date



IDOT Public Improvement Yes No

IDOT Permit No.

6-36056

Utility Reference No.

Permit 5

Name of Applicant

E-mail

I (We)

Henderson Water District

Mailing Address

City

State

Zip Code

1004 IL - 16

Jerseyville

IL

62052

hereinafter termed the Permittee, request permission and authority to occupy, and to do certain work herein described on, the right-of-way of the State highway known as Route 4 FAP 662, Section (V,T)-R Sec 2, T-9N, R-7W, in Macoupin County.

IDOT Stationing

Begin 250+21

End 260+00

The work is described in detail below and/or on the attached sketch or plans.

Open cut 979 lineal feet of 6" PVC water line.

This permit covers the operation and presence of specified equipment, material or facility on the right-of-way that may be related to the authorized work. A copy of this permit must be present when crews or equipment occupy highway right-of way. Failure to comply may result in the cessation of all construction.

This permit is subject to conditions and restrictions of Part 530 of Title 92 of the Illinois Administrative Code, Accommodation of Utilities on Right-of-Way of the Illinois State Highway System. The removal, relocation or modification of facilities permitted to occupy the right-of-way is governed by Section 9-113 of the Illinois Highway Code, as amended by Public Act 92-0470. The Permittee agrees to comply with the requirements of these laws and with all terms and conditions established by this permit. This permit is subject to revocation by the Department on violation of the terms and conditions governing its use.

THIS PERMIT IS NOT IN EFFECT UNTIL SIGNED BY PETITIONER AND APPROVED BY DISTRICT ENGINEER.

KTT

JWA

MJH

Permittee Signature & Date

Larry Steward

Name of Permittee or Agent (Print or Type)

Larry Steward

Mailing Address

1004 IL - 16

City

State

Zip Code

Jerseyville

IL

62052

The work authorized by this permit shall be completed by _____ or within 180 calendar days (180 days max.) after the date of approval by the Department, otherwise the permit will be considered null and void.

Public Improvement Projects only: The anticipated letting date is _____ The permit allowing occupancy and work on state right-of-way is approved. The Utility Coordination Council established by the Department in the area covered by this permit is the district in which the permit was issued.

Regional Engineer or Designee Signature & Date

Deby A. Mery 3-25-24
SVB

This permit is subject to the conditions and restrictions established in accordance with the Illinois Highway Code and Part 530 of Title 92 of the Illinois Administrative Code including but not limited to the following:

- (1) The applicant represents all parties in interest and shall furnish material, do all work, pay all costs and shall in a reasonable length of time restore the damaged portions of the highway to a condition similar or equal to that existing before the commencement of the described work, including any landscape restoration necessary. (See Section 530.250 of Title 92).
- (2) The proposed work shall be located and constructed to the satisfaction of the Regional Engineer or his duly authorized representative. No revisions or additions shall be made to the proposed work on the right-of-way without the written permission of the Regional Engineer or his duly authorized representative (See Section 530.200 of Title 92). In certain circumstances the Department may require that the construction plans and/or the as-built documents be sealed by an Illinois Registered Professional Engineer. Typical of such projects would be petroleum or gas pipelines.
- (3) The applicant shall at all times conduct the work in such a manner as to minimize hazards to vehicular and pedestrian traffic. All signs, barricades, flaggers, etc., required for traffic control shall be furnished by the applicant. (See Section 530.240 of Title 92).
- (4) The applicant must ascertain the presence of Highway Authority Agreements established in accordance with 35 Ill. Admin. Code Section 742.1020 in the path of its proposed installation and take precautions to protect its workers, human health and the environment in those areas. (See Section 530.240 of Title 92). Where contamination is encountered through excavation in the ROW, it should be managed offsite and IDOT's generator number for the appropriate county may be used.
- (5) The applicant shall not trim, cut or in any way disturb any trees or shrubbery along the highway without the approval of the Regional Engineer or his duly authorized representative. (See Section 530.600 of Title 92).
- (6) The facilities authorized to occupy the right-of-way by this permit are subject to removal, relocation or modification by the permittee at no expense to the State on notice given by the Department in accordance with Section 9-113 of the Illinois Highway Code, as amended. Participation by the permittee in the UTILITY Coordination Council identified on page one of this permit is required as a condition of this permit. Permittee shall cooperate with the Department with the scheduling of any removal, relocation or modification deemed necessary for highway or highway safety purposes, and, if Utility Coordination Council participation is required by this permit, with the activities of the council identified on the first page of this permit. (See Section 9-113 of the Illinois Highway Code.) Use of and compliance with current IDOT Traffic Control Standards will be required.
- (7) If the applicant and the District cannot agree either on whether the permit should be issued or on what conditions would be appropriate, the applicant may, within 30 days of the issuance of written notice of the District's position, appeal the District's determination to the Chief of the Department's Central Bureau of Operations. (See Section 530.900 of Title 92).
- (8) The permittee agrees to fully comply with the following legal obligations in advance of entering and while upon any Right-of-way within the Illinois State Highway System.
 - a) Only a permit issued by the Department under this Part will satisfy the "written consent" requirement of Section 9-113 of the Illinois Highway Code (the Code).
 - b) A permit from the Department grants a license only to undertake certain activities in accordance with this Part on a State right-of-way, and does not create a property right or grant authority to the permittee to impinge on the rights of others who may have an interest in the right-of-way. Such others might include an owner of an underlying fee simple interest if the right-of-way is owned as an easement or dedication of right of way, an owner of an easement, or another permittee.
 - c) It shall be the responsibility of the permittee to ascertain the presence and location of existing above-ground or underground facilities on the highway right-of-way to be occupied by their proposed facilities. The Department will make its permit records available to a permittee for the purpose of identifying possible facilities. When notified of an excavation or when requested by the Department, a permittee shall locate, physically mark, and indicate the depth of its underground facilities within 48 hours excluding weekends and holidays.
 - d) The permittee shall avoid conflicts with any existing underground or above-ground facilities on or near the highway right-of-way. Both the Department and J.U.L.I.E. are to be contacted for assistance during the application process.
 - e) The permittee shall comply with all other applicable laws relating to the placement of utility lines.
 - f) The issuance of a utility permit by the Department does not excuse the permittee from complying with any existing statutes, local regulations or requirements of other Department (e.g., oversize and overweight vehicles) or the requirements of other State agencies including, but not limited to, the following:
 Illinois Commerce Commission, Illinois Department of Agriculture
 Illinois Department of Natural Resources, Illinois Department of Mines and Minerals
 Illinois Environmental Protection Agency, Illinois Historic Preservation Agency
 - g) Rights of abutting and underlying property owners are protected by common law and Sections 9-113 and 9-127 of the Code. The permittee will address these rights prior to initiating activities on State right-of-way. The Department will not be a party in any negotiations between the utility and abutting property owners.
 - h) In no case shall the permit give or be construed to give an entity any easement, leasehold or other property interest of any kind in, upon, under, above or along the State highway right-of-way.
 - i) Each person responsible for a utility, in place on the effective date of this Part, on a State highway right-of-way shall notify the Department in writing, if that facility does not comply with this Part. The Department shall treat such a notice as a request for a variance under Section 530.130. Until informed that a variance will not be granted, a person responsible for a pre-existing utility will not be in violation of this Part. The failure to provide such notice constitutes a violation of this Part and of the utility accommodation permit (if any) and would justify the imposition of the sanctions set forth in Section 530.810.

Work to be coordinated with Department Reps:

Department Rep 1	Phone
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
Department Rep 2	Phone
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
Utility Contact Person/E-mail	Phone
Kenny Woelfel/kewoelfel@heneghanassoc.com	(618) 556-3088

Work to be done by:

Contractor

Daytime Phone	Emergency Phone
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>

Traffic control operation:

Number of lane closures	Time of closures
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>

DISTRICT SERIAL NO. 6-36056

The work location is along ILL 4 south of Carlinville, IL.

This is your authority to locate, construct and maintain a water main on the above-described highway.

LANE CLOSURES SHALL NOT BE PERMITTED.

Any deviation of alignment for the proposed work requires permission from the District Permit Office. Upon completion of the project, the petitioner shall submit a set of as-built plans. Please contact Kim Tribbet at 217-782-7745 or Joe Angeji at 217-782-7744 for alignment changes.

No overhead flood light fixtures, advertising signs, or signs of any kind, shall be placed on/or overhang the state right-of-way.

Open trench backfill shall be thoroughly compacted and all excess earth shall be removed from the right-of-way. Progressive settlement of the backfill shall be filled immediately by the petitioner.

Traffic on the highway shall be protected by the use of signs barricades, lights and flagmen as may be required during progress of the work in accordance with the current State of Illinois Manual of Uniform Traffic Control Devices for Highway Construction and Maintenance Operations and the attached Traffic Control Standard(s) & Traffic Control Details.

This permit is issued only with the express understanding that the petitioner has obtained the proper authority for the said installation from the Environmental Protection Agency in accordance with the Environmental Protection Act; and /or the Department of Public Health and any applicable local water or sanitary sewer department.

The centerline of all poles, anchors, fixtures, and appurtenances shall be located not more than one foot from the highway right-of-way line except as shown on the attached sketch.

Layout and construction shall be as shown on the attached sketch which is a part of this permit.

This permit shall not be in force until it has been approved in writing by the District Six Bureau of Operations of the Illinois Department of Transportation.

All street or highway pavement openings made to allow access to an underground service shall be backfilled with a granular backfill thoroughly tamped.

The crossing under the pavement shall be pushed or bored and open excavation shall be no closer than 10 feet to either pavement edge or at least 36 inches below the flow line of the original or existing cross section of the roadway whichever is lower.

The disturbed area shall be seeded with the specified mixture at the following ratio: Three pounds of Kentucky Bluegrass or Kentucky 31 or Alta Fescue, two pounds of Perennial Ryegrass. The rate of application shall be five pounds per 1000 square feet. All flat areas shall be mulched with straw. Areas with slopes of 3:1 and greater shall be covered with an erosion control fabric. The area shall be continuously reseeded until a sound turf is established.

This work shall be completed within 180 days of the date that the permit is approved by the District Engineer.

When the depth at the wall of the excavation nearest the pavement exceeds or is planned to exceed the horizontal distance from the wall to the nearest edge of the pavement, the wall must be supported in accordance with the Standard Specifications for Road and Bridge Construction. If soil conditions are such the wall will not support itself, the above method shall be used for the completion of the excavation.

Following completion of the construction on the highway right-of-way, all broken concrete or any other waste dirt or materials shall be removed from the highway and the remaining grassed areas prepared for seeding.

At all times during construction, the permittee shall be responsible for maintaining the highway surface in a safe and sightly manner. Any mud or debris which might be tracked or spilled onto the highway surface shall be immediately removed.

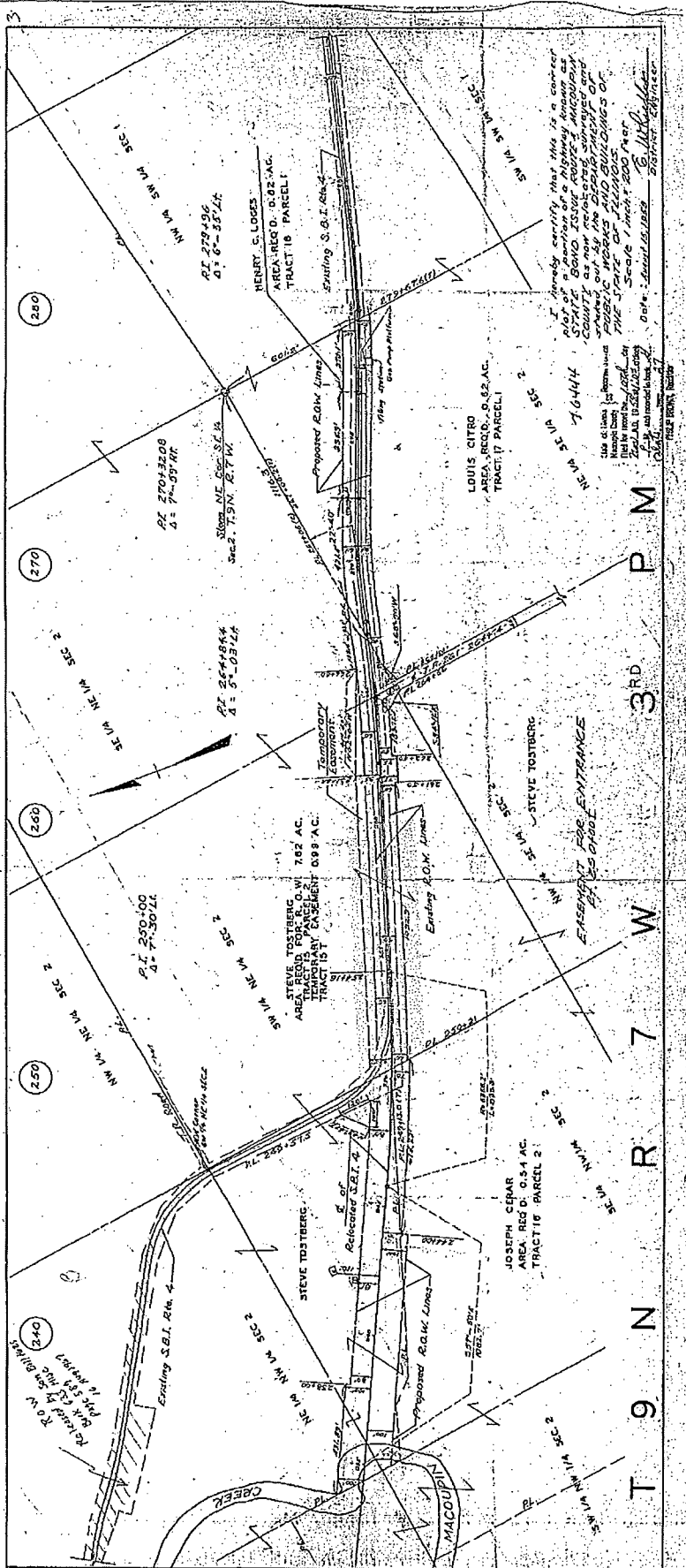
Before digging on state right-of-way, call toll free 800-892-0123 to the "Joint Utility Locating and Information for Excavators." They will advise you if there are any utilities in the area.

All construction methods and materials shall comply with the applicable provisions of the State of Illinois "Standard Specifications for Road and Bridge Construction" current edition.

WET BORING OR JETTING WILL NOT BE PERMITTED UNDER THE ROADWAY STRUCTURE OF STATE HIGHWAYS.

IDOT MAY ONLY HAVE PRESCRIPTIVE RIGHTS TO THE RIGHT OF WAY. IT IS THE UTILITY'S RESPONSIBILITY TO DETERMINE WHO OWNS THE PROPERTY AND TO OBTAIN PERMISSION FROM THE PROPERTY OWNER.

S.B.I. ROUTE 4 SECTION (V.T.)-R



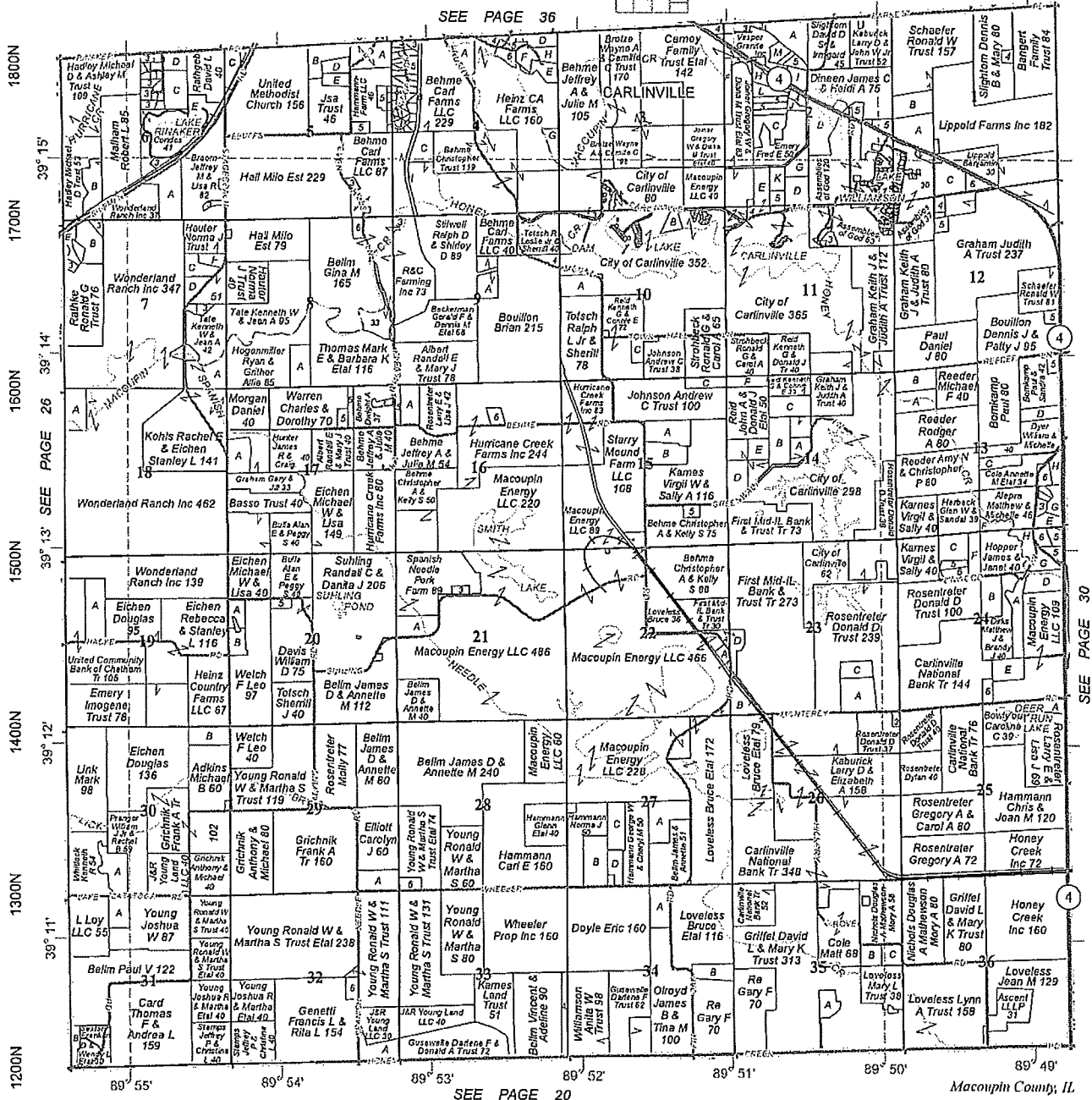
I hereby certify that this is a correct plat of the STATE BOND ISSUE ROUTE 4 THROUGH MACOUPIN COUNTY as now re-lotting, widening and straightening the OLD BUILDINGS OF THE STATE OF ILLINOIS. Scale 1 inch = 200 feet. Date: April 15, 1929. E. W. Hoffman, District Engineer.

Use of lines for BOUNDARY lines is hereby certified as correct. Date: April 15, 1929. E. W. Hoffman, District Engineer.

BRUSHY MOUND

Refer to page 66 for keyed parcels
T.9N.-R.7W.

SEE PAGE 36



© 2023 Rockford Map Publs., Inc.

1200E 1300E 1400E 1500E 1600E 1700E 1800E



IDOT Public Improvement Yes No

IDOT Permit No. 6-36060

Utility Reference No. Permit 3

Name of Applicant: Henderson Water District; E-mail: [blank]

Mailing Address: 1004 IL - 16; City: Jerseyville; State: IL; Zip Code: 62052

hereinafter termed the Permittee, request permission and authority to occupy, and to do certain work herein described on, the right-of-way of the State highway known as Highway 108 FAP 769, Section 111 (110)RS-6, (111)RS-5 in Macoupin County.

IDOT Stationing: Begin 401+67 End 455+57

The work is described in detail below and/or on the attached sketch or plans.

Open cut 5,390 lineal feet of 6" PVC water line.

This permit covers the operation and presence of specified equipment, material or facility on the right-of-way that may be related to the authorized work. A copy of this permit must be present when crews or equipment occupy highway right-of way. Failure to comply may result in the cessation of all construction.

This permit is subject to conditions and restrictions of Part 530 of Title 92 of the Illinois Administrative Code, Accommodation of Utilities on Right-of-Way of the Illinois State Highway System. The removal, relocation or modification of facilities permitted to occupy the right-of-way is governed by Section 9-113 of the Illinois Highway Code, as amended by Public Act 92-0470. The Permittee agrees to comply with the requirements of these laws and with all terms and conditions established by this permit. This permit is subject to revocation by the Department on violation of the terms and conditions governing its use.

THIS PERMIT IS NOT IN EFFECT UNTIL SIGNED BY PETITIONER AND APPROVED BY DISTRICT ENGINEER.

KTT JWA

MJH

Permittee Signature & Date

[Signature of Larry Stewart]

Name of Permittee or Agent (Print or Type)

Larry Stewart

Mailing Address

1004 IL - 16

City State Zip Code

Jerseyville IL 62052

The work authorized by this permit shall be completed by [blank] or within 180 calendar days (180 days max.) after the date of approval by the Department, otherwise the permit will be considered null and void.

Public Improvement Projects only: The anticipated letting date is [blank]. The permit allowing occupancy and work on state right-of-way is approved. The Utility Coordination Council established by the Department in the area covered by this permit is the district in which the permit was issued.

Regional Engineer or Designee Signature & Date

[Signature of Andy P. May] 3-25-24

This permit is subject to the conditions and restrictions established in accordance with the Illinois Highway Code and Part 530 of Title 92 of the Illinois Administrative Code including but not limited to the following:

- (1) The applicant represents all parties in interest and shall furnish material, do all work, pay all costs and shall in a reasonable length of time restore the damaged portions of the highway to a condition similar or equal to that existing before the commencement of the described work, including any landscape restoration necessary. (See Section 530.250 of Title 92).
- (2) The proposed work shall be located and constructed to the satisfaction of the Regional Engineer or his duly authorized representative. No revisions or additions shall be made to the proposed work on the right-of-way without the written permission of the Regional Engineer or his duly authorized representative (See Section 530.200 of Title 92). In certain circumstances the Department may require that the construction plans and/or the as-built documents be sealed by an Illinois Registered Professional Engineer. Typical of such projects would be petroleum or gas pipelines.
- (3) The applicant shall at all times conduct the work in such a manner as to minimize hazards to vehicular and pedestrian traffic. All signs, barricades, flaggers, etc., required for traffic control shall be furnished by the applicant. (See Section 530.240 of Title 92).
- (4) The applicant must ascertain the presence of Highway Authority Agreements established in accordance with 35 Ill. Admin. Code Section 742.1020 in the path of its proposed installation and take precautions to protect its workers, human health and the environment in those areas. (See Section 530.240 of Title 92). Where contamination is encountered through excavation in the ROW, it should be managed offsite and IDOT's generator number for the appropriate county may be used.
- (5) The applicant shall not trim, cut or in any way disturb any trees or shrubbery along the highway without the approval of the Regional Engineer or his duly authorized representative. (See Section 530.600 of Title 92).
- (6) The facilities authorized to occupy the right-of-way by this permit are subject to removal, relocation or modification by the permittee at no expense to the State on notice given by the Department in accordance with Section 9-113 of the Illinois Highway Code, as amended. Participation by the permittee in the UTILITY Coordination Council identified on page one of this permit is required as a condition of this permit. Permittee shall cooperate with the Department with the scheduling of any removal, relocation or modification deemed necessary for highway or highway safety purposes, and, if Utility Coordination Council participation is required by this permit, with the activities of the council identified on the first page of this permit. (See Section 9-113 of the Illinois Highway Code.) Use of and compliance with current IDOT Traffic Control Standards will be required.
- (7) If the applicant and the District cannot agree either on whether the permit should be issued or on what conditions would be appropriate, the applicant may, within 30 days of the issuance of written notice of the District's position, appeal the District's determination to the Chief of the Department's Central Bureau of Operations. (See Section 530.900 of Title 92).
- (8) The permittee agrees to fully comply with the following legal obligations in advance of entering and while upon any Right-of-way within the Illinois State Highway System.
 - a) Only a permit issued by the Department under this Part will satisfy the "written consent" requirement of Section 9-113 of the Illinois Highway Code (the Code).
 - b) A permit from the Department grants a license only to undertake certain activities in accordance with this Part on a State right-of-way, and does not create a property right or grant authority to the permittee to impinge on the rights of others who may have an interest in the right-of-way. Such others might include an owner of an underlying fee simple interest if the right-of-way is owned as an easement or dedication of right of way, an owner of an easement, or another permittee.
 - c) It shall be the responsibility of the permittee to ascertain the presence and location of existing above-ground or underground facilities on the highway right-of-way to be occupied by their proposed facilities. The Department will make its permit records available to a permittee for the purpose of identifying possible facilities. When notified of an excavation or when requested by the Department, a permittee shall locate, physically mark, and indicate the depth of its underground facilities within 48 hours excluding weekends and holidays.
 - d) The permittee shall avoid conflicts with any existing underground or above-ground facilities on or near the highway right-of-way. Both the Department and J.U.L.I.E. are to be contacted for assistance during the application process.
 - e) The permittee shall comply with all other applicable laws relating to the placement of utility lines.
 - f) The issuance of a utility permit by the Department does not excuse the permittee from complying with any existing statutes, local regulations or requirements of other Department (e.g., oversize and overweight vehicles) or the requirements of other State agencies including, but not limited to, the following:
 Illinois Commerce Commission, Illinois Department of Agriculture
 Illinois Department of Natural Resources, Illinois Department of Mines and Minerals
 Illinois Environmental Protection Agency, Illinois Historic Preservation Agency
 - g) Rights of abutting and underlying property owners are protected by common law and Sections 9-113 and 9-127 of the Code. The permittee will address these rights prior to initiating activities on State right-of-way. The Department will not be a party in any negotiations between the utility and abutting property owners.
 - h) In no case shall the permit give or be construed to give an entity any easement, leasehold or other property interest of any kind in, upon, under, above or along the State highway right-of-way.
 - i) Each person responsible for a utility, in place on the effective date of this Part, on a State highway right-of-way shall notify the Department in writing, if that facility does not comply with this Part. The Department shall treat such a notice as a request for a variance under Section 530.130. Until informed that a variance will not be granted, a person responsible for a pre-existing utility will not be in violation of this Part. The failure to provide such notice constitutes a violation of this Part and of the utility accommodation permit (if any) and would justify the imposition of the sanctions set forth in Section 530.810.

Work to be coordinated with Department Reps:

Department Rep 1	Phone
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
Department Rep 2	Phone
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
Utility Contact Person/E-mail	Phone
Kenny Woelfel, kewoelfel@heneghanassoc.com	618-498-6418

Work to be done by:

Contractor

Daytime Phone	Emergency Phone
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>

Traffic control operation:

Number of lane closures	Time of closures
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>

DISTRICT SERIAL NO. 6-36060

The work location is along ILL 108 from Atwater Rd. to west of W. County Rd.

This is your authority to locate, construct and maintain a water main on the above-described highway.

LANE CLOSURES SHALL NOT BE PERMITTED.

Any deviation of alignment for the proposed work requires permission from the District Permit Office. Upon completion of the project, the petitioner shall submit a set of as-built plans. Please contact Kim Tribbet at 217-782-7745 or Joe Angeli at 217-782-7744 for alignment changes.

No overhead flood light fixtures, advertising signs, or signs of any kind, shall be placed on/or overhang the state right-of-way.

Open trench backfill shall be thoroughly compacted and all excess earth shall be removed from the right-of-way. Progressive settlement of the backfill shall be filled immediately by the petitioner.

Traffic on the highway shall be protected by the use of signs barricades, lights and flagmen as may be required during progress of the work in accordance with the current State of Illinois Manual of Uniform Traffic Control Devices for Highway Construction and Maintenance Operations and the attached Traffic Control Standard(s) & Traffic Control Details.

This permit is issued only with the express understanding that the petitioner has obtained the proper authority for the said installation from the Environmental Protection Agency in accordance with the Environmental Protection Act; and /or the Department of Public Health and any applicable local water or sanitary sewer department.

The centerline of all poles, anchors, fixtures, and appurtenances shall be located not more than one foot from the highway right-of-way line except as shown on the attached sketch.

Layout and construction shall be as shown on the attached sketch which is a part of this permit.

This permit shall not be in force until it has been approved in writing by the District Six Bureau of Operations of the Illinois Department of Transportation.

All street or highway pavement openings made to allow access to an underground service shall be backfilled with a granular backfill thoroughly tamped.

The crossing under the pavement shall be pushed or bored and open excavation shall be no closer than 10 feet to either pavement edge or at least 36 inches below the flow line of the original or existing cross section of the roadway whichever is lower.

The disturbed area shall be seeded with the specified mixture at the following ratio: Three pounds of Kentucky Bluegrass or Kentucky 31 or Alta Fescue, two pounds of Perennial Ryegrass. The rate of application shall be five pounds per 1000 square feet. All flat areas shall be mulched with straw. Areas with slopes of 3:1 and greater shall be covered with an erosion control fabric. The area shall be continuously reseeded until a sound turf is established.

This work shall be completed within 180 days of the date that the permit is approved by the District Engineer.

When the depth at the wall of the excavation nearest the pavement exceeds or is planned to exceed the horizontal distance from the wall to the nearest edge of the pavement, the wall must be supported in accordance with the Standard Specifications for Road and Bridge Construction. If soil conditions are such the wall will not support itself, the above method shall be used for the completion of the excavation.

Following completion of the construction on the highway right-of-way, all broken concrete or any other waste dirt or materials shall be removed from the highway and the remaining grassed areas prepared for seeding.

At all times during construction, the permittee shall be responsible for maintaining the highway surface in a safe and sightly manner. Any mud or debris which might be tracked or spilled onto the highway surface shall be immediately removed.

Before digging on state right-of-way, call toll free 800-892-0123 to the "Joint Utility Locating and Information for Excavators." They will advise you if there are any utilities in the area.

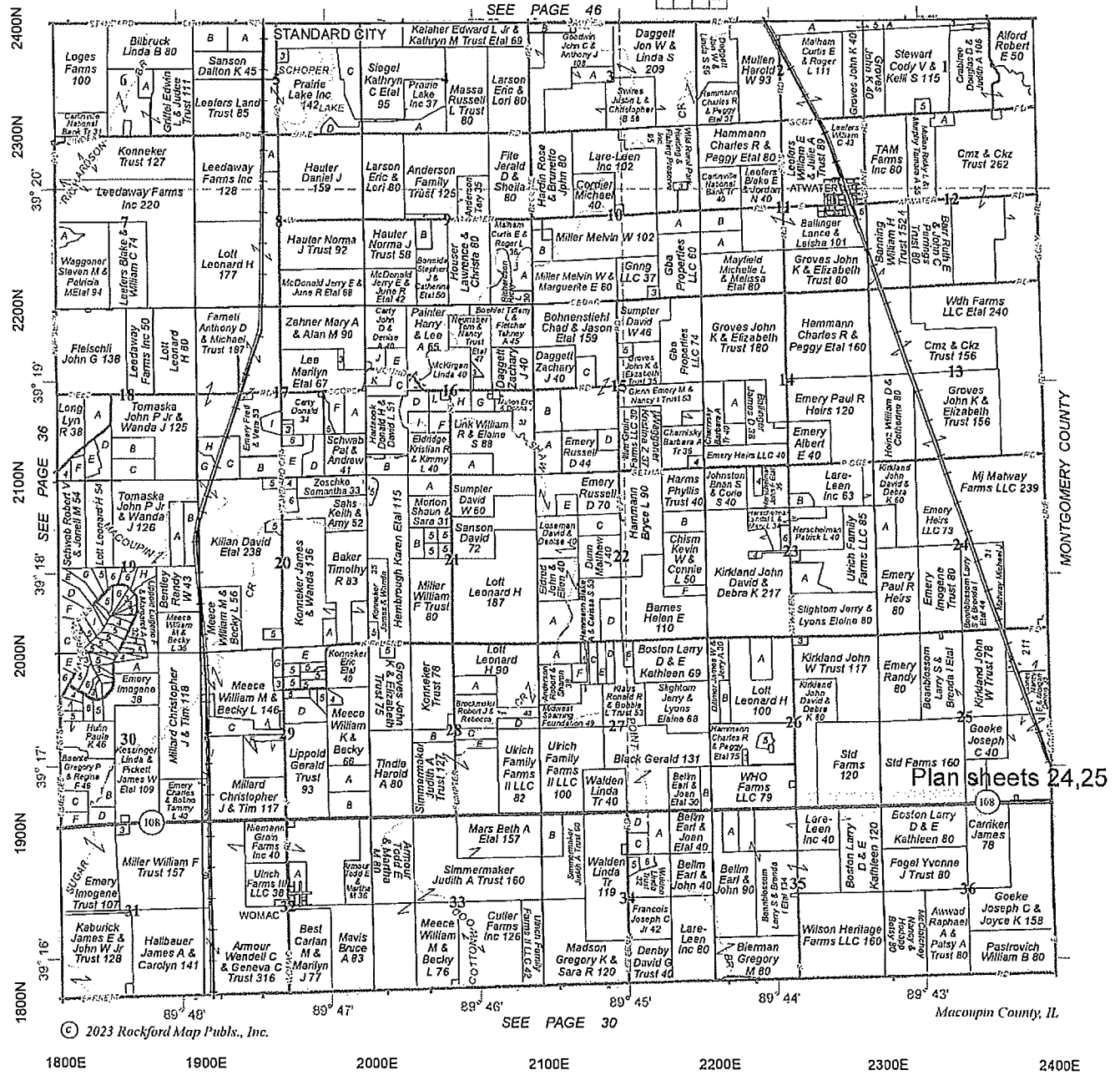
All construction methods and materials shall comply with the applicable provisions of the State of Illinois "Standard Specifications for Road and Bridge Construction" current edition.

WET BORING OR JETTING WILL NOT BE PERMITTED UNDER THE ROADWAY STRUCTURE OF STATE HIGHWAYS.

IDOT MAY ONLY HAVE PRESCRIPTIVE RIGHTS TO THE RIGHT OF WAY. IT IS THE UTILITY'S RESPONSIBILITY TO DETERMINE WHO OWNS THE PROPERTY AND TO OBTAIN PERMISSION FROM THE PROPERTY OWNER.

SHAW'S POINT

Refer to page 68 for keyed parcels
T.10N.-R.6W.





Utility Permit

IDOT Public Improvement Yes No

IDOT Permit No. 6-36061

Utility Reference No. Permit 2

Name of Applicant: Henderson Water District; E-mail: [blank]

Mailing Address: 1004 IL - 16; City: Jerseyville; State: IL; Zip Code: 62052

hereinafter termed the Permittee, request permission and authority to occupy, and to do certain work herein described on, the right-of-way of the State highway known as Route 108 FAP 769, Section 111 (110)RS-6,(111)RS-5 in Montgomery County.

IDOT Stationing Begin 482+78 End 595+00

The work is described in detail below and/or on the attached sketch or plans.

Open cut 11,222 lineal feet of 6" PVC water line.

This permit covers the operation and presence of specified equipment, material or facility on the right-of-way that may be related to the authorized work. A copy of this permit must be present when crews or equipment occupy highway right-of-way. Failure to comply may result in the cessation of all construction.

This permit is subject to conditions and restrictions of Part 530 of Title 92 of the Illinois Administrative Code, Accommodation of Utilities on Right-of-Way of the Illinois State Highway System. The removal, relocation or modification of facilities permitted to occupy the right-of-way is governed by Section 9-113 of the Illinois Highway Code, as amended by Public Act 92-0470. The Permittee agrees to comply with the requirements of these laws and with all terms and conditions established by this permit. This permit is subject to revocation by the Department on violation of the terms and conditions governing its use.

THIS PERMIT IS NOT IN EFFECT UNTIL SIGNED BY PETITIONER AND APPROVED BY DISTRICT ENGINEER.

KTT JWA SAM MJH

Permittee Signature & Date: [Signature of Larry Steward]

Name of Permittee or Agent (Print or Type): Larry Steward

Mailing Address: 1004 IL - 16

City: Jerseyville; State: IL; Zip Code: 62052

The work authorized by this permit shall be completed by [blank] or within 180 calendar days (180 days max.) after the date of approval by the Department, otherwise the permit will be considered null and void.

Public Improvement Projects only: The anticipated letting date is [blank]. The permit allowing occupancy and work on state right-of-way is approved. The Utility Coordination Council established by the Department in the area covered by this permit is the district in which the permit was issued.

Regional Engineer or Designee Signature & Date: [Signature of Jerry P. M... 3-26-24]

This permit is subject to the conditions and restrictions established in accordance with the Illinois Highway Code and Part 530 of Title 92 of the Illinois Administrative Code including but not limited to the following:

- (1) The applicant represents all parties in interest and shall furnish material, do all work, pay all costs and shall in a reasonable length of time restore the damaged portions of the highway to a condition similar or equal to that existing before the commencement of the described work, including any landscape restoration necessary. (See Section 530.250 of Title 92).
- (2) The proposed work shall be located and constructed to the satisfaction of the Regional Engineer or his duly authorized representative. No revisions or additions shall be made to the proposed work on the right-of-way without the written permission of the Regional Engineer or his duly authorized representative (See Section 530.200 of Title 92). In certain circumstances the Department may require that the construction plans and/or the as-built documents be sealed by an Illinois Registered Professional Engineer. Typical of such projects would be petroleum or gas pipelines.
- (3) The applicant shall at all times conduct the work in such a manner as to minimize hazards to vehicular and pedestrian traffic. All signs, barricades, flaggers, etc., required for traffic control shall be furnished by the applicant. (See Section 530.240 of Title 92).
- (4) The applicant must ascertain the presence of Highway Authority Agreements established in accordance with 35 Ill. Admin. Code Section 742.1020 in the path of its proposed installation and take precautions to protect its workers, human health and the environment in those areas. (See Section 530.240 of Title 92). Where contamination is encountered through excavation in the ROW, it should be managed offsite and IDOT's generator number for the appropriate county may be used.
- (5) The applicant shall not trim, cut or in any way disturb any trees or shrubbery along the highway without the approval of the Regional Engineer or his duly authorized representative. (See Section 530.600 of Title 92).
- (6) The facilities authorized to occupy the right-of-way by this permit are subject to removal, relocation or modification by the permittee at no expense to the State on notice given by the Department in accordance with Section 9-113 of the Illinois Highway Code, as amended. Participation by the permittee in the UTILITY Coordination Council identified on page one of this permit is required as a condition of this permit. Permittee shall cooperate with the Department with the scheduling of any removal, relocation or modification deemed necessary for highway or highway safety purposes, and, if Utility Coordination Council participation is required by this permit, with the activities of the council identified on the first page of this permit. (See Section 9-113 of the Illinois Highway Code.) Use of and compliance with current IDOT Traffic Control Standards will be required.
- (7) If the applicant and the District cannot agree either on whether the permit should be issued or on what conditions would be appropriate, the applicant may, within 30 days of the issuance of written notice of the District's position, appeal the District's determination to the Chief of the Department's Central Bureau of Operations. (See Section 530.900 of Title 92).
- (8) The permittee agrees to fully comply with the following legal obligations in advance of entering and while upon any Right-of-way within the Illinois State Highway System.
 - a) Only a permit issued by the Department under this Part will satisfy the "written consent" requirement of Section 9-113 of the Illinois Highway Code (the Code).
 - b) A permit from the Department grants a license only to undertake certain activities in accordance with this Part on a State right-of-way, and does not create a property right or grant authority to the permittee to impinge on the rights of others who may have an interest in the right-of-way. Such others might include an owner of an underlying fee simple interest if the right-of-way is owned as an easement or dedication of right of way, an owner of an easement, or another permittee.
 - c) It shall be the responsibility of the permittee to ascertain the presence and location of existing above-ground or underground facilities on the highway right-of-way to be occupied by their proposed facilities. The Department will make its permit records available to a permittee for the purpose of identifying possible facilities. When notified of an excavation or when requested by the Department, a permittee shall locate, physically mark, and indicate the depth of its underground facilities within 48 hours excluding weekends and holidays.
 - d) The permittee shall avoid conflicts with any existing underground or above-ground facilities on or near the highway right-of-way. Both the Department and J.U.L.I.E. are to be contacted for assistance during the application process.
 - e) The permittee shall comply with all other applicable laws relating to the placement of utility lines.
 - f) The issuance of a utility permit by the Department does not excuse the permittee from complying with any existing statutes, local regulations or requirements of other Department (e.g., oversize and overweight vehicles) or the requirements of other State agencies including, but not limited to, the following:
 Illinois Commerce Commission, Illinois Department of Agriculture
 Illinois Department of Natural Resources, Illinois Department of Mines and Minerals
 Illinois Environmental Protection Agency, Illinois Historic Preservation Agency
 - g) Rights of abutting and underlying property owners are protected by common law and Sections 9-113 and 9-127 of the Code. The permittee will address these rights prior to initiating activities on State right-of-way. The Department will not be a party in any negotiations between the utility and abutting property owners.
 - h) In no case shall the permit give or be construed to give an entity any easement, leasehold or other property interest of any kind in, upon, under, above or along the State highway right-of-way.
 - i) Each person responsible for a utility, in place on the effective date of this Part, on a State highway right-of-way shall notify the Department in writing, if that facility does not comply with this Part. The Department shall treat such a notice as a request for a variance under Section 530.130. Until informed that a variance will not be granted, a person responsible for a pre-existing utility will not be in violation of this Part. The failure to provide such notice constitutes a violation of this Part and of the utility accommodation permit (if any) and would justify the imposition of the sanctions set forth in Section 530.810.

Work to be coordinated with Department Reps:

Department Rep 1	Phone
<input type="text"/>	<input type="text"/>
Department Rep 2	Phone
<input type="text"/>	<input type="text"/>
Utility Contact Person/E-mail	Phone
Kenny Woelfel/kewoelfel@heneghanassoc.com	(618) 556-3088

Work to be done by:

Contractor

Daytime Phone	Emergency Phone
<input type="text"/>	<input type="text"/>

Traffic control operation:

Number of lane closures	Time of closures
<input type="text"/>	<input type="text"/>

DISTRICT SERIAL NO. 6-36061

The work location is along ILL. 108 from the railroad tracks towards the east

This is your authority to locate, construct and maintain a water main on the above-described highway.

LANE CLOSURES SHALL NOT BE PERMITTED.

Any deviation of alignment for the proposed work requires permission from the District Permit Office. Upon completion of the project, the petitioner shall submit a set of as-built plans. Please contact Kim Tribbet at 217-782-7745 or Joe Angeli at 217-782-7744 for alignment changes.

No overhead flood light fixtures, advertising signs, or signs of any kind, shall be placed on/or overhang the state right-of-way.

Open trench backfill shall be thoroughly compacted and all excess earth shall be removed from the right-of-way. Progressive settlement of the backfill shall be filled immediately by the petitioner.

Traffic on the highway shall be protected by the use of signs barricades, lights and flagmen as may be required during progress of the work in accordance with the current State of Illinois Manual of Uniform Traffic Control Devices for Highway Construction and Maintenance Operations and the attached Traffic Control Standard(s) & Traffic Control Details.

This permit is issued only with the express understanding that the petitioner has obtained the proper authority for the said installation from the Environmental Protection Agency in accordance with the Environmental Protection Act; and /or the Department of Public Health and any applicable local water or sanitary sewer department.

The centerline of all poles, anchors, fixtures, and appurtenances shall be located not more than one foot from the highway right-of-way line except as shown on the attached sketch.

Layout and construction shall be as shown on the attached sketch which is a part of this permit.

This permit shall not be in force until it has been approved in writing by the District Six Bureau of Operations of the Illinois Department of Transportation.

All street or highway pavement openings made to allow access to an underground service shall be backfilled with a granular backfill thoroughly tamped.

The crossing under the pavement shall be pushed or bored and open excavation shall be no closer than 10 feet to either pavement edge or at least 36 inches below the flow line of the original or existing cross section of the roadway whichever is lower.

The disturbed area shall be seeded with the specified mixture at the following ratio: Three pounds of Kentucky Bluegrass or Kentucky 31 or Alta Fescue, two pounds of Perennial Ryegrass. The rate of application shall be five pounds per 1000 square feet. All flat areas shall be mulched with straw. Areas with slopes of 3:1 and greater shall be covered with an erosion control fabric. The area shall be continuously reseeded until a sound turf is established.

This work shall be completed within 180 days of the date that the permit is approved by the District Engineer.

When the depth at the wall of the excavation nearest the pavement exceeds or is planned to exceed the horizontal distance from the wall to the nearest edge of the pavement, the wall must be supported in accordance with the Standard Specifications for Road and Bridge Construction. If soil conditions are such the wall will not support itself, the above method shall be used for the completion of the excavation.

Following completion of the construction on the highway right-of-way, all broken concrete or any other waste dirt or materials shall be removed from the highway and the remaining grassed areas prepared for seeding.

At all times during construction, the permittee shall be responsible for maintaining the highway surface in a safe and sightly manner. Any mud or debris which might be tracked or spilled onto the highway surface shall be immediately removed.

Before digging on state right-of-way, call toll free 800-892-0123 to the "Joint Utility Locating and Information for Excavators." They will advise you if there are any utilities in the area.

All construction methods and materials shall comply with the applicable provisions of the State of Illinois "Standard Specifications for Road and Bridge Construction" current edition.

WET BORING OR JETTING WILL NOT BE PERMITTED UNDER THE ROADWAY STRUCTURE OF STATE HIGHWAYS.

IDOT MAY ONLY HAVE PRESCRIPTIVE RIGHTS TO THE RIGHT OF WAY. IT IS THE UTILITY'S RESPONSIBILITY TO DETERMINE WHO OWNS THE PROPERTY AND TO OBTAIN PERMISSION FROM THE PROPERTY OWNER.

Art. 107.06 Legal Regulations and Responsibility To Public

in the price bid for the work. It shall be the duty of the Contractor, if so demanded by the Department, to furnish said Department with a copy of the legal agreement with the patentee or owner, and if such copy is not furnished when demanded, then the Department may, if it so elects, withhold any and all payments to said Contractor until said legal agreement is furnished. If a suitable legal agreement with the patentee or owner is not made as required herein, the Contractor and surety shall indemnify and save harmless the Department from any and all claims for infringement by reason of the use of any such patented design, device, material, or process, or any trademark or copyright in connection with the work agreed to be performed under the contract, and shall indemnify the Department for any cost, expense, and damages which it may be obliged to pay by reason of any such infringement at any time during the prosecution or after the completion of the work.

107.06 Restoration of Surfaces Opened by Permit. Any individual, firm, partnership or corporation wishing to make an opening in the surface must secure a permit from the Department, and the Contractor shall not allow any person to make an opening unless a duly authorized permit from the Department is presented. Upon the presentation of a duly authorized permit, the Contractor shall allow parties bearing such permits to make openings in the surface. The Contractor shall, if ordered by the Engineer in writing, make, in a manner approved by the Engineer, all necessary repairs to such openings, and such necessary work ordered by the Engineer will be paid for as extra work as provided in Article 109.04.

107.07 Federal Aid Provision. When the United States Government pays all or any portion of the cost of a project, the Federal laws and the rules and regulations made pursuant to such laws must be observed by the Contractor, and the work shall be subject to the inspection of the appropriate Federal agency.

Such inspection shall in no sense make the Federal Government a party to this contract and will in no way interfere with the rights of either party hereunder.

107.08 Sanitary Provisions. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of the Contractor's employees and Department representatives as may be necessary to comply with the requirements of the State and Local Boards of Health, or of other authorities having jurisdiction.

107.09 Public Convenience and Safety. The Contractor shall notify the Engineer at least three days in advance of the starting of any construction work which might in any way inconvenience or endanger traffic, so arrangements may be made, if necessary, for closing the road and providing suitable detours. The Contractor shall at all times conduct the work in such a manner as to ensure the least obstruction to vehicular and pedestrian traffic. The convenience of the general public and residents along the highway shall be provided for in an adequate and satisfactory manner. When directed by the Engineer, the Contractor shall provide and maintain an acceptable surface aggregate for temporary roads and approaches for access to driveways, houses, buildings, or other property abutting the highway or street being improved. The cost incurred by the Contractor for providing temporary roads will be paid for as extra work as provided in Article 104.02.

The Engineer may require the Contractor to finish a section on which work is in progress before work is started on any additional sections if the opening of such section is essential to public convenience.

No broken pavement, open holes, trenches, barricades, cones, or drums will remain on or adjacent to the traveled way and all lanes shall be opened to traffic during any legal holiday period, except where major bridge construction and/or other roadway reconstruction (excluding patching and resurfacing) requiring overnight lane closures would make it impractical. The legal holidays will include:

- | | |
|------------------|------------------|
| New Year's Day | Labor Day |
| Easter | Thanksgiving Day |
| Memorial Day | Christmas Day |
| Independence Day | |

The length of the holiday period shall vary as follows, depending on the day of the week the legal holiday falls on or is observed.

Day of Holiday	Length of Holiday Period
Sunday	3 p.m. Friday – 11:59 p.m. Monday
Monday	3 p.m. Friday – 11:59 p.m. Monday
Tuesday	3 p.m. Friday – 11:59 p.m. Tuesday
Wednesday	3 p.m. Tuesday – 11:59 p.m. Wednesday
Thursday	3 p.m. Wednesday – 11:59 p.m. Sunday
Friday	3 p.m. Thursday – 11:59 p.m. Sunday
Saturday	3 p.m. Thursday – 11:59 p.m. Sunday

On weekends, excluding holidays, roadways with Average Daily Traffic of 25,000 or greater, all lanes shall be open to traffic from 3:00 P.M. Friday to midnight Sunday except where structure construction or major rehabilitation makes it impractical.

When work is performed on structures over pedestrians or any type of traffic, the Contractor shall protect the pedestrians and/or traffic from falling objects and materials.

The following vertical and horizontal restrictions shall pertain to roads as defined in the Illinois Highway Code, Article 2, Division 1, Section 2-101 when construction is being performed with the road open to traffic.

In the event that any construction work will create a horizontal or vertical clearance restriction or will cause a reduction in the existing vertical or horizontal clearance on the highway under construction, the Contractor shall notify the Engineer (in writing) one week in advance of performing the work involved.

Notification of horizontal clearance changes shall include those in which the existing lane width is reduced. Notification of vertical clearance changes shall include all vertical changes regardless of the height involved. Notifications shall include both permanent and temporary changes.

PERMIT 6-36060

Traffic Control for this permit shall be governed by Section 530.240 of the "Accommodation of Utilities on Right-of-way of the Illinois State Highway System", the Standard Specifications for Road and Bridge Construction adopted January 1, 2022, the latest Supplemental Specifications and Recurring Special Provisions, and the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", Traffic Control Standards contained in the permit, and any additional reference to Traffic Control contained in the permit.

Special attention is called to Articles 701.04 and 704.01 of the Standard Specifications for Road and Bridge Construction. These articles address the following.

701.04 Flaggers and Flagger Certification

Whenever flaggers are used to close traffic lanes, they shall be certified by an agency approved by the Department.

Flaggers shall have the appropriate spacing with proper communications as per the attached Traffic Control Standards and Standard Specification.

701.13 Flaggers

"The flagger shall be stationed to the satisfaction of the Engineer and be equipped with a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute Specification ANSI/ISEA 107-2004 for Conspicuity Class 2 garments and approved flagger traffic control signs conforming to Standard 701901.

Nighttime Flagging. The Flagger station shall be lit by additional overhead lighting other than streetlights. The flagger shall be equipped with a fluorescent orange or fluorescent orange and fluorescent yellow/green garment meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 3 garments.

PERSONAL PROTECTIVE EQUIPMENT (PPE) Effective: November 1, 2008

All personnel on foot, excluding flaggers, within the highway right-of-way shall wear a fluorescent orange, fluorescent yellow/green, or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of ANSI/ISEA 107-2004 for Conspicuity Class 2 garments. Other types of garments may be substituted for the vest as long as the garments have manufacturer's tags identifying them as meeting the ANSI Class 2 requirement.

701.15 Channeling Devices

Channeling devices shall be spaced as per the attached Traffic Control Standards and Standard Specifications.

Devices shall be clean and have the proper sheeting.

Cones will not be used for nighttime traffic channelization unless they have the proper reflectivity. No lane closures without flagger protection.

Flashing lights are to be used for hazardous conditions. Steady burning lights are to be used for traffic guidance.

REFLECTIVE SHEETING ON CHANNELIZING DEVICES (BDE)

Effective: April 1, 2007

Revised: November 1, 2008

Revise the seventh paragraph of Article 1106.02 of the Standard Specifications to read:

“At the time of manufacturing, the retroreflective prismatic sheeting used on channelizing devices shall meet or exceed the initial minimum coefficient of retroreflection as specified in the following table. Measurements shall be conducted according to ASTM E 810, without averaging. Sheeting used on cones, drums and flexible delineators shall be reboundable as tested according to ASTM D 4956. Prestriped sheeting for rigid substrates on barricades shall be white and orange. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll. The color shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration, and to the daytime and nighttime color requirements of ASTM D 4956.

Initial Minimum Coefficient of Retroreflection candelas/foot candle/sq ft (candelas/lux/sq m) of material				
Observation Angle (deg.)	Entrance Angle (deg.)	White	Orange	Fluorescent Orange
0.2	-4	365	160	150
0.2	+30	175	80	70
0.5	-4	245	100	95
0.5	+30	100	50	40”

Revise the first sentence of the first paragraph of Article 1106.02(c) of the Standard Specifications to read:

“Barricades and vertical panels shall have alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass.”

Revise the third sentence of the first paragraph of Article 1106.02(d) of the Standard Specifications to read:

" The bottom panels shall be 8 x 24 in. (200 x 600 mm) with alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass."

FLAGGERS AT SIDE ROADS AND ENTRANCES (BDE)

Effective: April 1, 2009

Revise the second paragraph of Article 701.13(a) of the Standard Specifications to read:

"The Engineer will determine when a side road or entrance shall be closed to traffic. A flagger will be required at each side road or entrance remaining open to traffic within the operation where two-way traffic is maintained on one lane of pavement. The flagger shall be positioned as shown on the plans or as directed by the Engineer."

Revise the first and second paragraph of Article 701.20(i) of the Standard Specifications to read:

"Signs, barricades, or other traffic control devices required by the Engineer over and above those specified will be paid for according to Article 109.04. All flaggers required at side roads and entrances remaining open to traffic including those that are shown on the Highway Standards and/or additional barricades required by the Engineer to close side roads and entrances will be paid for according to Article 109.04."

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: January 1, 2003

Revised: April 2, 2004

Add the following to Article 702.01 of the Standard Specifications:

"All devices and combinations of devices shall meet the requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 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, flexible delineators and plastic drums with no attachments. Category 1 devices shall be crash tested and accepted or may be self-certified by the manufacturer.

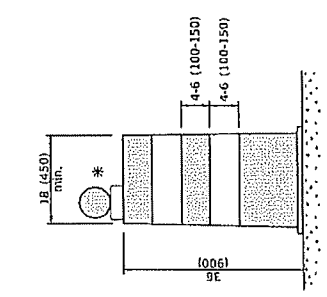
Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include drums and vertical panels with lights, barricades and portable sign supports. Category 2 devices shall be crash tested and accepted for Test Level 3.

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 shall be crash tested and accepted for either Test Level 3 or the test level specified.

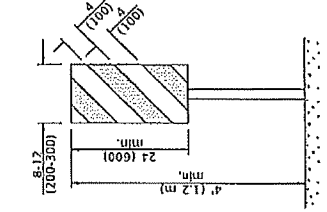
Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals and area lighting supports. Currently, there is no implementation date set for this category and it is exempt from the NCHRP 350 compliance requirement.

The Contractor shall provide a manufacturer's self-certification letter for each Category 1 device and an FHWA acceptance letter for each Category 2 and Category 3 device used on the contract. The letters shall state the device meets the NCHRP 350 requirements for its respective category and test level, and shall include a detail drawing of the device."

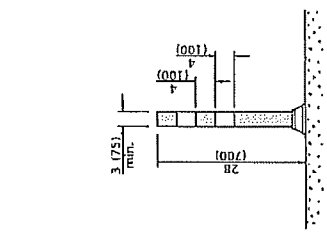
See <http://www.dot.il.gov/desenv/hwyspecs.html> for the highway standards, special provisions, and specifications.



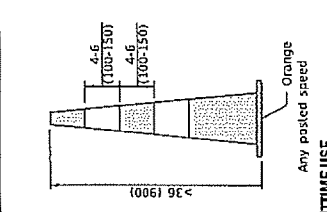
DRUM



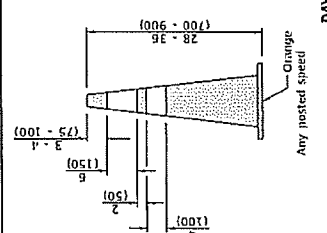
**VERTICAL PANEL
POST MOUNTED**



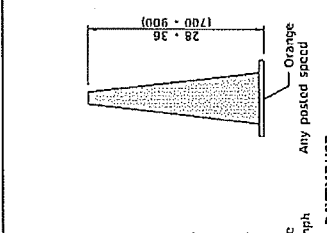
TUBULAR MARKER



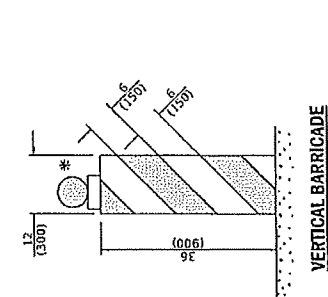
DAY OR NIGHTTIME USE
Orange
Any posted speed



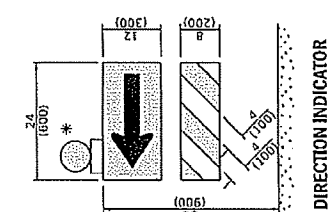
DAYTIME USE
Orange
Any posted speed



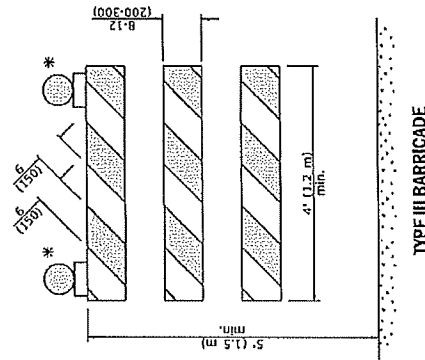
DAYTIME USE
Orange
Posted speed < 45 mph



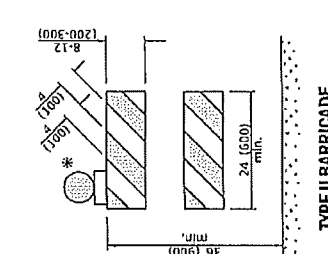
VERTICAL BARRICADE



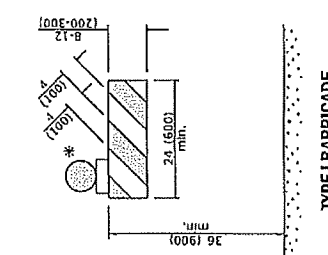
**DIRECTION INDICATOR
BARRICADE**



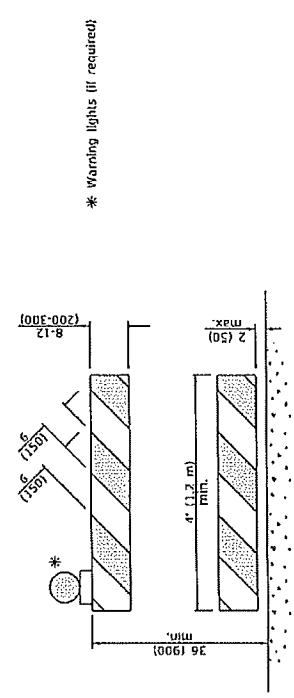
TYPE III BARRICADE



TYPE II BARRICADE



TYPE I BARRICADE



CHANNELIZING BARRICADE

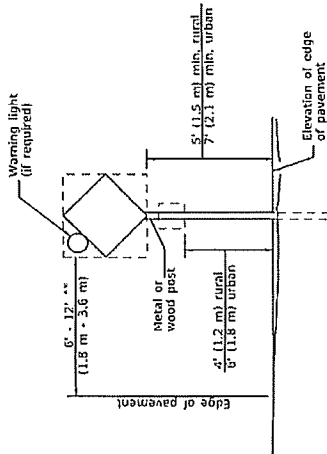
* Warning lights (if required)

GENERAL NOTES

All heights shown shall be measured above the pavement surface.
All dimensions are in inches (millimeters) unless otherwise shown.

TRAFFIC CONTROL DEVICES	
DATE	REVISIONS
1-1-19	Revised cone usage and reflect cones >36" (900 mm) height.
1-1-18	Revised END WORK ZONE SPEED LIMIT sign from orange to white background.
(Sheet 1 of 3)	
STANDARD 701901-08	

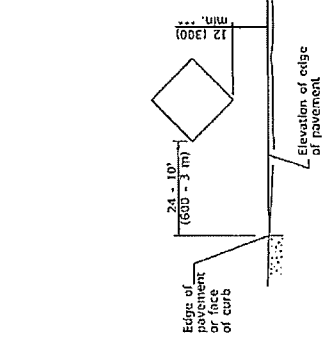
Illinois Department of Transportation
 Approved: [Signature] 3/19
 ENGINEER OF SAFETY, ROAD AND TOLLING
 APPROVED: [Signature] 3/19
 CHIEF OF HIGHWAY AND ENVIRONMENT



5' (1.5 m) min. embedment

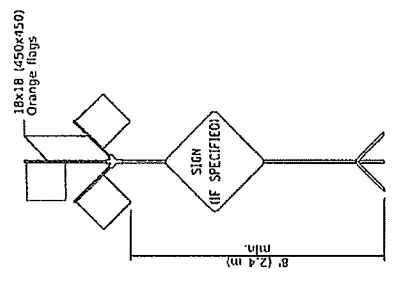
POST MOUNTED SIGNS

When curb or paved shoulder are present this dimension shall be 24' (600) to the edge of the paved shoulder.



SIGNS ON TEMPORARY SUPPORTS

When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen completely above the devices.



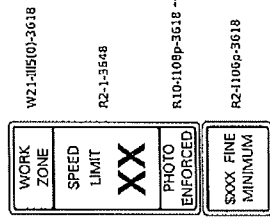
HIGH LEVEL WARNING DEVICE

ROAD CONSTRUCTION NEXT X MILES
G20-1104(0)-6036

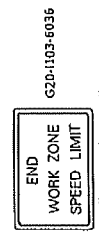
END CONSTRUCTION
G20-1105(0)-6024

This signing is required for all projects 2 miles (3200 m) or more in length.
ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.
END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).
Dual sign displays shall be utilized on multi-lane highways.

WORK LIMIT SIGNING



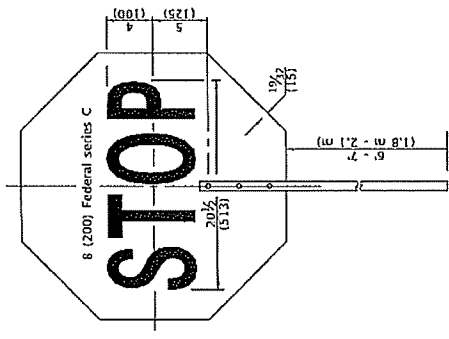
Sign assembly as shown on Standards or as allowed by District Operations.



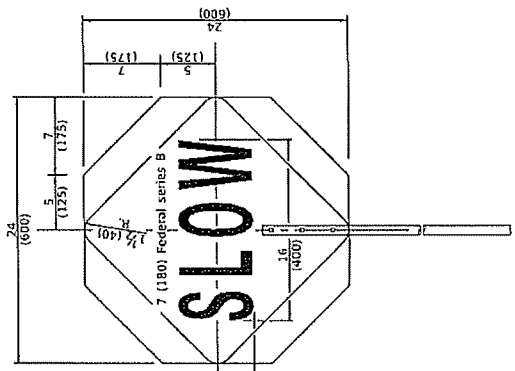
This sign shall be used when the above sign assembly is used.

HIGHWAY CONSTRUCTION SPEED ZONE SIGNS

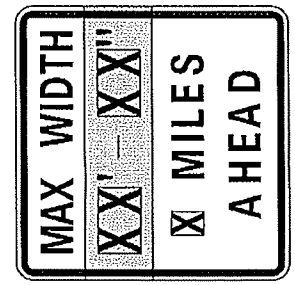
R10-1108p shall only be used along roadways under the jurisdiction of the State.



FRONT SIDE



REVERSE SIDE



W12-1103-4848

WIDTH RESTRICTION SIGN

XX-XX' width and X miles are variable.

TRAFFIC CONTROL DEVICES
STANDARD 701901-08
(Sheet 2 of 3)

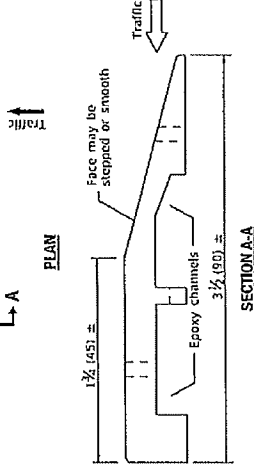
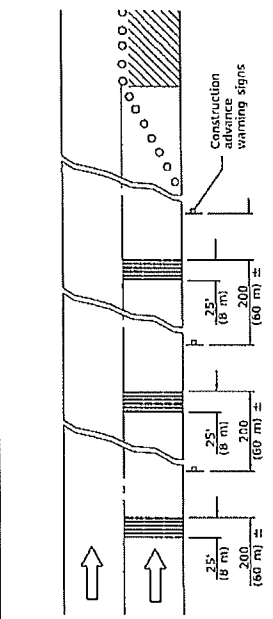
FLAGGER TRAFFIC CONTROL SIGN

Illinois Department of Transportation

APPROVED: [Signature] 2019
ENGINEER OF SAFETY TRAFFIC AND ENGINEERING

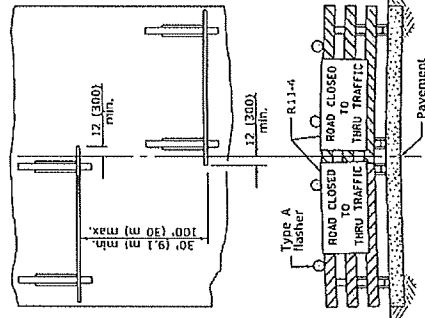
APPROVED: [Signature] 2019
ENGINEER OF DESIGN AND ENVIRONMENT

11-11 CONS

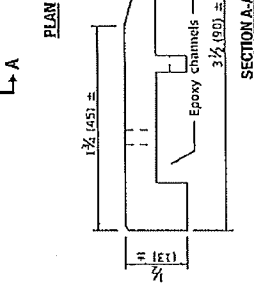
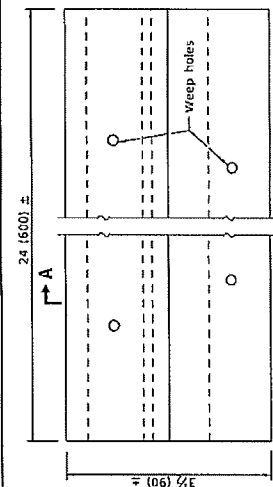


TYPICAL INSTALLATION

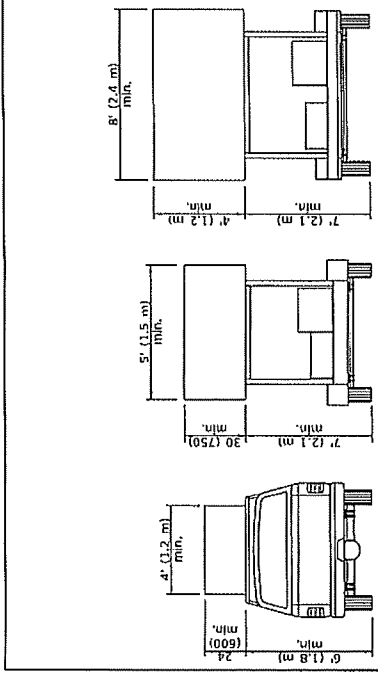
TEMPORARY RUMBLE STRIPS



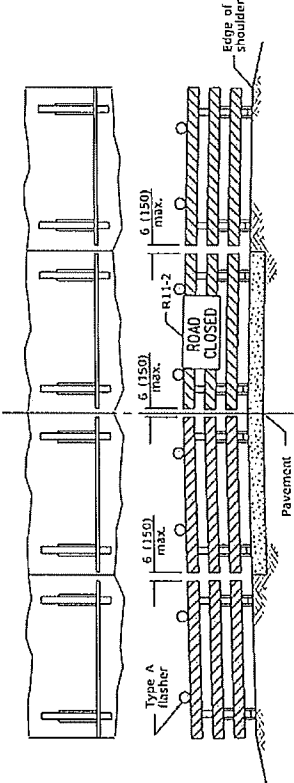
ROAD CLOSED TO THRU TRAFFIC
ReflectORIZED striping shall appear on both sides of the barricades. If a Type III barricade is used, the sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.



SECTION A-A



ARROW BOARDS



ROAD CLOSED TO ALL TRAFFIC
ReflectORIZED striping may be omitted on the back side of the barricades. If a Type III barricade with a sign panel is used, the sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.

TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD

Illinois Department of Transportation
APPROVED January 1, 2019
APPROVED January 1, 2019
APPROVED January 1, 2019
ENGINEER IN SAFETY AND ENGINEERING
ENGINEER IN SAFETY AND ENGINEERING
ENGINEER IN SAFETY AND ENGINEERING
OFFICE OF DESIGN AND ENVIRONMENT

TRAFFIC CONTROL DEVICES

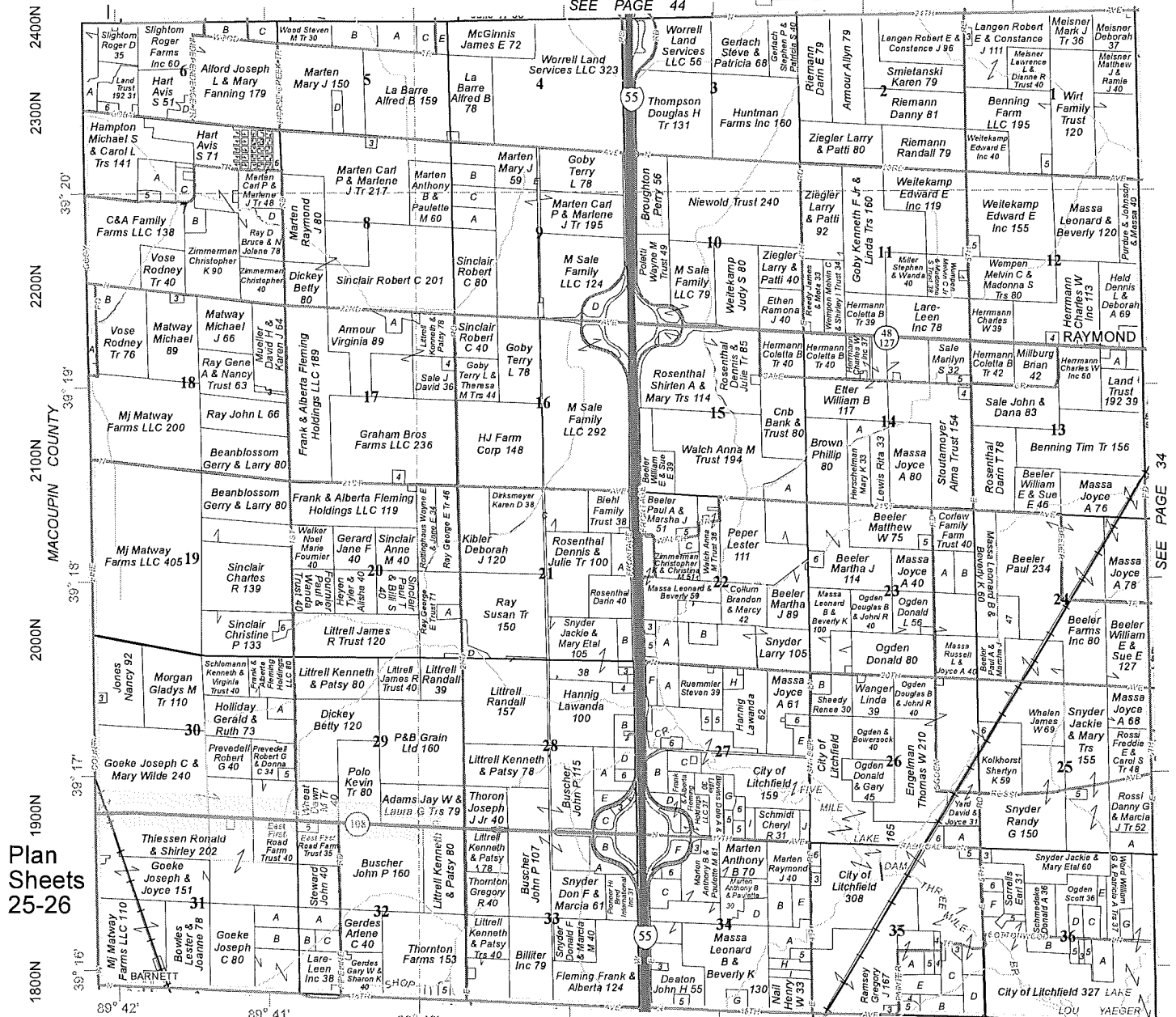
STANDARD 701901-08
(Sheet 3 of 3)

Refer to page 61 for keyed parcels

ZANESVILLE

T.10N.-R.5W.

SEE PAGE 44



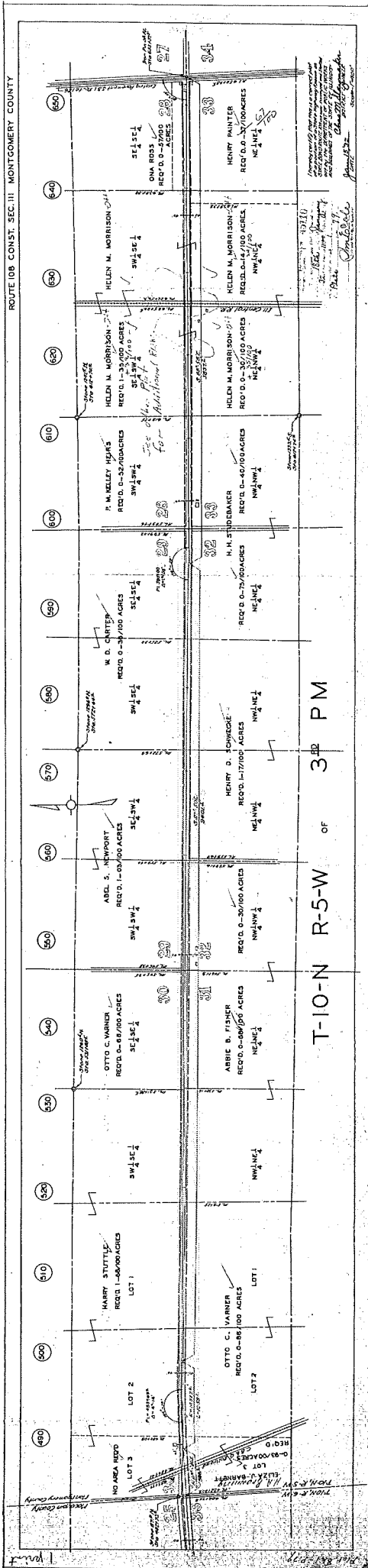
SEE PAGE 34

Plan Sheets 25-26

© 2022 Rockford Map Publs., Inc.

SEE PAGE 24

000E 100E 200E 300E 400E 500E 600E Montgomery County, IL



T-10-N R-5-W of 3rd PM

640
 630
 620
 610
 600
 590
 580
 570
 560
 550
 540
 530
 520
 510
 500
 490
 480

34
 33
 32
 31
 30
 29
 28
 27

HENRY PAINTER
 REG'D. 0-27/100 ACRES
 NW 1/4

HELEN M. MORRISON
 REG'D. 0-17/100 ACRES
 NW 1/4

HELEN M. MORRISON
 REG'D. 0-17/100 ACRES
 NW 1/4

HELEN M. MORRISON
 REG'D. 0-32/100 ACRES
 NW 1/4

HELEN M. MORRISON
 REG'D. 0-32/100 ACRES
 NW 1/4

P. M. KELLY HEIRS
 REG'D. 0-32/100 ACRES
 SW 1/4

P. M. KELLY HEIRS
 REG'D. 0-48/100 ACRES
 NW 1/4

M. D. CARTER
 REG'D. 0-32/100 ACRES
 SW 1/4

M. D. CARTER
 REG'D. 0-32/100 ACRES
 SW 1/4

ABEL S. NEWPORT
 REG'D. 0-32/100 ACRES
 SW 1/4

ABEL S. NEWPORT
 REG'D. 0-32/100 ACRES
 SW 1/4

OTTO C. VARNER
 REG'D. 0-32/100 ACRES
 SW 1/4

OTTO C. VARNER
 REG'D. 0-32/100 ACRES
 SW 1/4

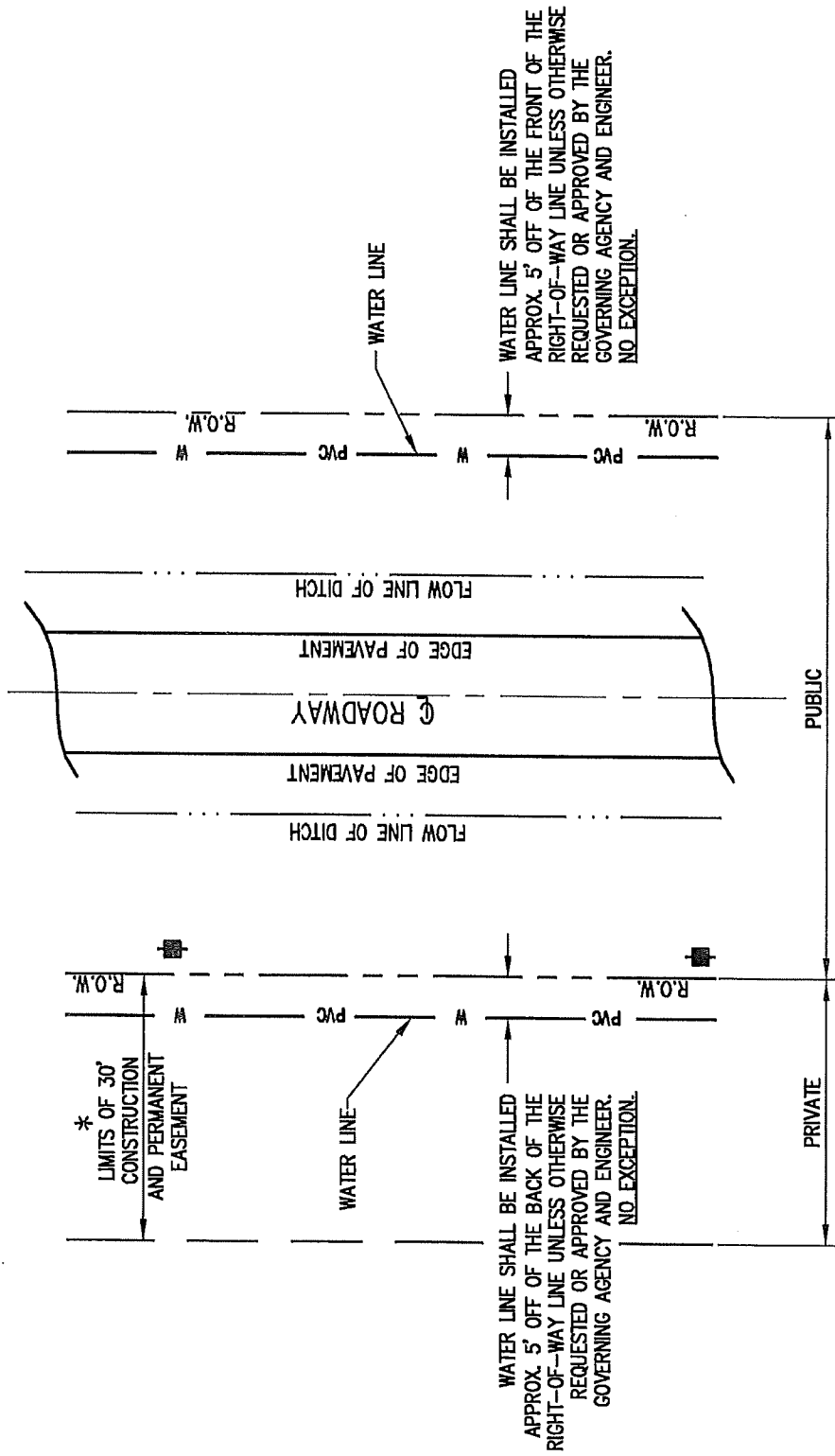
HARRY STITTLE
 REG'D. 0-32/100 ACRES
 LOT 1

HARRY STITTLE
 REG'D. 0-32/100 ACRES
 LOT 2

OTTO C. VARNER
 REG'D. 0-32/100 ACRES
 LOT 1

OTTO C. VARNER
 REG'D. 0-32/100 ACRES
 LOT 2

NO. 108 RD.
 REG'D. 0-32/100 ACRES
 LOT 1
 LOT 2
 LOT 3



* UNLESS OTHERWISE SPELLED OUT BY INDIVIDUAL EASEMENT.

INSTALLATION OF WATER LINE PRIVATE EASEMENT AND STATE, COUNTY, OR TOWNSHIP EASEMENT

SCALE: NONE

**TOWNSHIP PERMIT
COUNTY OF MACOUPIN**

Permission and authority are hereby granted by Barr Township, hereinafter called the TOWNSHIP, to Henderson Water District, hereinafter called the PETITIONER, to locate, construct, operate, maintain, repair, renew and remove a buried waterline with necessary appurtenances, hereinafter called FACILITY. The FACILITY shall include the following: Boring water mains and water service lines under various Township highways (see chart for currently known locations)

List of Crossings

- Crossing 1- Hettick Rd at Clark Rd. - **TB-5-10-1** - Sec# 36/36, T.11N. - R9W. (See plan sht 10)
Crossing 2 - Hettick Rd - **TB-5-10-2** - Sec# 36, T.11N. - R.9W. (See plan sht 10)
Crossing 3 - Peppermill Ln at Hettick Rd - **TB-5-10-3** - Sec# 36, T.11N. - R.9W. - (See plan sht 10)

Longitudinal water main installation along township Right-of-Way in various locations. The location is as described below: N/A

Any additions or modifications to the above locations will be discussed with the TOWNSHIP prior to construction:

This permission and authority is subject to the following conditions:

1. The PETITIONER shall furnish all materials and labor, do all work, and pay all costs relative to the construction, operation and maintenance of said FACILITY and shall, in a reasonable length of time as determined by the Township Road Commissioner, restore said highway to a condition similar and equal to that existing before the commencement of the work described including any necessary seeding or sodding.
2. The PETITIONER shall assume all risks and liabilities of kind or nature occurring from, either during construction of said FACILITY or resulting therefrom or from the operation and maintenance of said FACILITY and shall indemnify, protect and save harmless Township and Township Road Commissioner from all claims to have arisen out of the construction, operation and maintenance of the water line done by the PETITIONER, their agents, employees, contractors or subcontractors, pursuant to this permit.
3. The PETITIONER shall conduct the work so as not to interfere with or obstruct traffic more than deemed necessary by the Township Road Commissioner and shall at all times keep said highway open to traffic and assume all responsibility for the handling and protection of the traffic and be responsible for all accidents or damages of whatsoever nature may result from the construction, operation and maintenance of said FACILITY. The PETITIONER shall direct all traffic within the immediate vicinity of operations, place adequate barricades where necessary and provide sufficient signs and lights so long as such precautions are deemed advisable or necessary by the Township Road Commissioner. Flagmen are to be provided when equipment, materials or other hazards of the operation encroach upon the traveled surface of the Township Highway.
4. The PETITIONER shall notify the TOWNSHIP at least 24 hours in advance of any contemplated excavation within the confines of said FACILITY, so that the TOWNSHIP may furnish inspection, if it deems such inspection necessary. Contact Bill Mundy, Barr Township Road Commissioner at 618-741-8915

5. The PETITIONER shall be responsible to the TOWNSHIP for any damages said highway may suffer as a result of the construction, operation and maintenance of said FACILITY whether or not said TOWNSHIP furnished inspection. The fact that the TOWNSHIP may furnish inspection does not in any manner relieve the PETITIONER from any damages to said highway. After the work is completed, the PETITIONER shall keep the site of the work in proper repair and in a condition satisfactory to the Township Road Commissioner so long as the Township Road Commissioner is of the opinion that damages are in evidence due to the operation, construction and maintenance of said FACILITY. PETITIONER shall be responsible to maintain the highway to original condition after construction is completed for one year.
6. The PETITIONER shall assume all liability for interference in any manner with other utilities, in, along, under, or upon said highway during the work pursuant to the permit.
7. The PETITIONER shall adjust or relocate said FACILITY at no expense to the TOWNSHIP, if any future highway construction along the Township Highway should so require.
8. The PETITIONER shall obtain a permit from the TOWNSHIP whenever maintenance of the installed FACILITY requires digging, trenching, or other hazardous procedures on the Township Highway right-of-way.
9. This permit is effective insofar as the TOWNSHIP has jurisdiction and does not presume to release said PETITIONER from compliance with any statutes or policies of the State of Illinois or any other agency objecting to the construction, operation and maintenance of said FACILITY, or to any sanitary code of any other governmental agency.
10. The PETITIONER and its successors or assigns shall retain responsibility and liability of any kind or nature caused by the existence and operation of said FACILITY until such time as the use of said FACILITY is terminated. Should use of said FACILITY be permanently terminated, the PETITIONER shall remove the FACILITY at no cost to the TOWNSHIP.
11. The PETITIONER shall not hold the TOWNSHIP liable for any damages to said FACILITY resulting from normal highway maintenance operations.
12. If after construction, it is discovered that said FACILITY was not properly constructed, the PETITIONER shall, in a reasonable length of time as determined by the Township Road Commissioner, reconstruct the FACILITY to conform to the plans, specifications and terms of this permit. The PETITIONER shall be liable for all costs associated with said reconstruction.
13. The PETITIONER shall employ a competent contractor to perform said work. The PETITIONER shall require its contractor to maintain Workmen's Compensation Insurance and regular Contractor's Public Liability and Property Damage Liability Insurance including automobile coverage and a certificate of said insurance shall be filed with the Township Office before work commences. The contractor is to have a copy of this permit on site at all times.
14. All road crossings shall be bored unless otherwise noted. All materials used shall meet with the approval of the Township Road Commissioner, prior to construction.
15. Minimum depth shall be forty two inches (42") below existing ground elevations and forty eight inches (48") in locations crossing ditch flow lines.

It is understood that the work authorized by this permit shall be completed within six hundred (600) days after the date this permit is approved, otherwise the permit becomes null and void.

Authorization is hereby granted by the Township, to the Township Clerk, to transmit two certified copies of this permit to Larry Steward, Chairman of the Henderson Water District, 1004 State Highway 16, Jerseyville, IL 62052.

ISSUED BY: *Bill Mung*

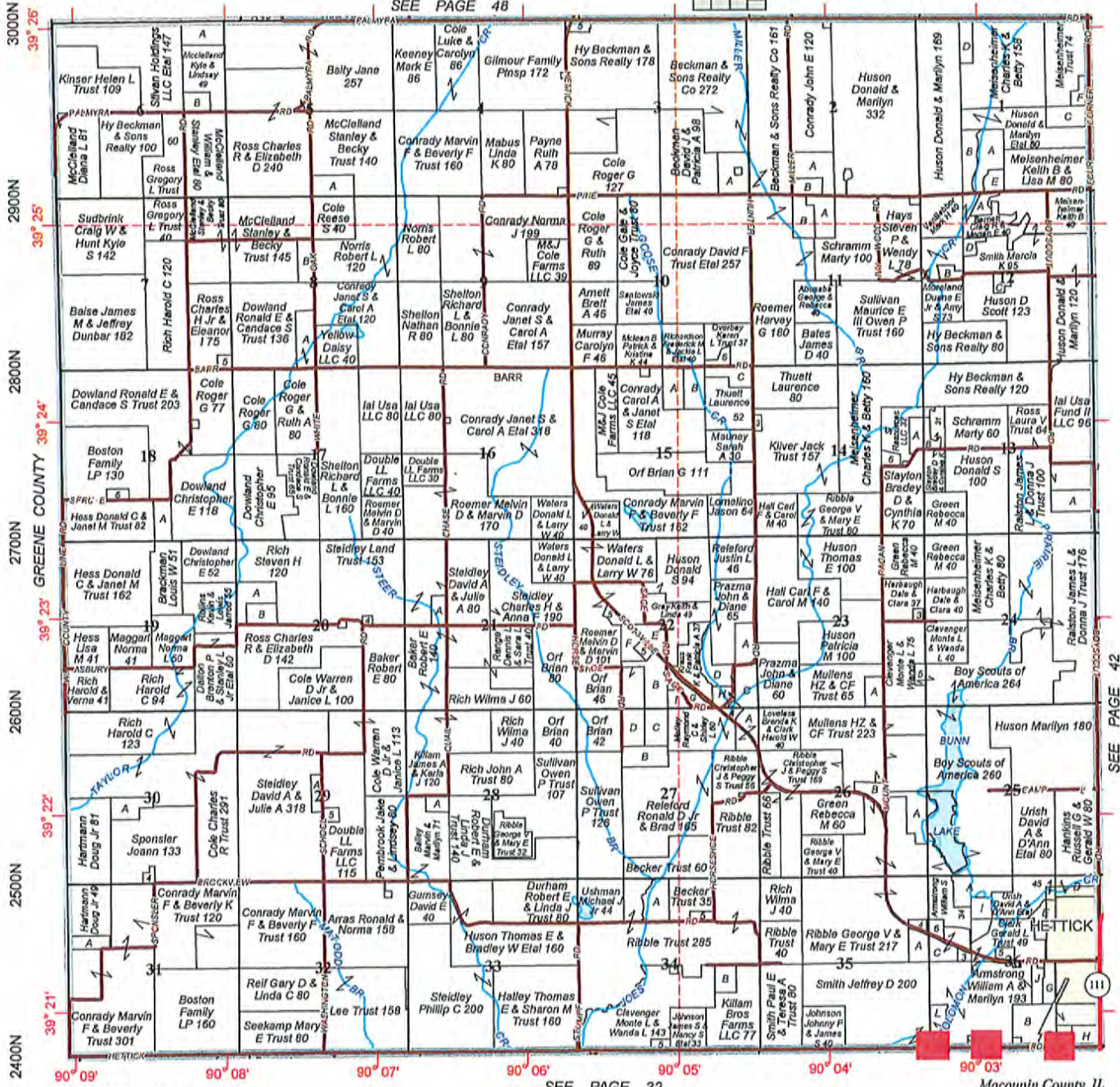
This permit is hereby accepted and its provisions agreed to this _____ day of _____, 2023.

By: *Larry Steward*
Chairman; Henderson Water District

BARR

Refer to page 68 for keyed parcels
T.11N.-R.9W.

SEE PAGE 48



© 2023 Rockford Map Publs., Inc.

SEE PAGE 32

Macoupin County, IL

000E

100E

200E

300E

400E

500E

600E

SONNEBORN BROS.

General Trucking
Lime & Fertilizer Spreading

"Providing Great Service Since 1959"

P.O. Box 71
Hettick, Illinois 62649

618-778-5252
800-241-7681

Plat Book Reseller Program

Visit RockfordMap.com to get started today!



**TOWNSHIP PERMIT
COUNTY OF MACOUPIN**

Permission and authority are hereby granted by Honey Point Township, hereinafter called the TOWNSHIP, to Henderson Water District, hereinafter called the PETITIONER, to locate, construct, operate, maintain, repair, renew and remove a buried waterline with necessary appurtenances, hereinafter called FACILITY. The FACILITY shall include the following: Boring water mains and water service lines under various Township highways (see chart for currently known locations)

List of Crossings

Crossing 1- Woodland Rd - Section #15, T.9N.-R.6W. (See page 31) TB-5-31-1
Install 40' of 4" diameter PVC pipe.

Longitudinal water main installation along township Right-of-Way in various locations. The location is as described below: N/A

Any additions or modifications to the above locations will be discussed with the TOWNSHIP prior to construction:

This permission and authority is subject to the following conditions:

1. The PETITIONER shall furnish all materials and labor, do all work, and pay all costs relative to the construction, operation and maintenance of said FACILITY and shall, in a reasonable length of time as determined by the Township Road Commissioner, restore said highway to a condition similar and equal to that existing before the commencement of the work described including any necessary seeding or sodding.
2. The PETITIONER shall assume all risks and liabilities of kind or nature occurring from, either during construction of said FACILITY or resulting therefrom or from the operation and maintenance of said FACILITY and shall indemnify, protect and save harmless Township and Township Road Commissioner from all claims to have arisen out of the construction, operation and maintenance of the water line done by the PETITIONER, their agents, employees, contractors or subcontractors, pursuant to this permit.
3. The PETITIONER shall conduct the work so as not to interfere with or obstruct traffic more than deemed necessary by the Township Road Commissioner and shall at all times keep said highway open to traffic and assume all responsibility for the handling and protection of the traffic and be responsible for all accidents or damages of whatsoever nature may result from the construction, operation and maintenance of said FACILITY. The PETITIONER shall direct all traffic within the immediate vicinity of operations, place adequate barricades where necessary and provide sufficient signs and lights so long as such precautions are deemed advisable or necessary by the Township Road Commissioner. Flagmen are to be provided when equipment, materials or other hazards of the operation encroach upon the traveled surface of the Township Highway.
4. The PETITIONER shall notify the TOWNSHIP at least 24 hours in advance of any contemplated excavation within the confines of said FACILITY, so that the TOWNSHIP may furnish inspection, if it deems such inspection necessary. Contact Travis Millburt, Honey Point Township Road Commissioner at 217-710-2405.

5. The PETITIONER shall be responsible to the TOWNSHIP for any damages said highway may suffer as a result of the construction, operation and maintenance of said FACILITY whether or not said TOWNSHIP furnished inspection. The fact that the TOWNSHIP may furnish inspection does not in any manner relieve the PETITIONER from any damages to said highway. After the work is completed, the PETITIONER shall keep the site of the work in proper repair and in a condition satisfactory to the Township Road Commissioner so long as the Township Road Commissioner is of the opinion that damages are in evidence due to the operation, construction and maintenance of said FACILITY. PETITIONER shall be responsible to maintain the highway to original condition after construction is completed for one year.
6. The PETITIONER shall assume all liability for interference in any manner with other utilities, in, along, under, or upon said highway during the work pursuant to the permit.
7. The PETITIONER shall adjust or relocate said FACILITY at no expense to the TOWNSHIP, if any future highway construction along the Township Highway should so require.
8. The PETITIONER shall obtain a permit from the TOWNSHIP whenever maintenance of the installed FACILITY requires digging, trenching, or other hazardous procedures on the Township Highway right-of-way.
9. This permit is effective insofar as the TOWNSHIP has jurisdiction and does not presume to release said PETITIONER from compliance with any statutes or policies of the State of Illinois or any other agency objecting to the construction, operation and maintenance of said FACILITY, or to any sanitary code of any other governmental agency.
10. The PETITIONER and its successors or assigns shall retain responsibility and liability of any kind or nature caused by the existence and operation of said FACILITY until such time as the use of said FACILITY is terminated. Should use of said FACILITY be permanently terminated, the PETITIONER shall remove the FACILITY at no cost to the TOWNSHIP.
11. The PETITIONER shall not hold the TOWNSHIP liable for any damages to said FACILITY resulting from normal highway maintenance operations.
12. If after construction, it is discovered that said FACILITY was not properly constructed, the PETITIONER shall, in a reasonable length of time as determined by the Township Road Commissioner, reconstruct the FACILITY to conform to the plans, specifications and terms of this permit. The PETITIONER shall be liable for all costs associated with said reconstruction.
13. The PETITIONER shall employ a competent contractor to perform said work. The PETITIONER shall require its contractor to maintain Workmen's Compensation Insurance and regular Contractor's Public Liability and Property Damage Liability Insurance including automobile coverage and a certificate of said insurance shall be filed with the Township Office before work commences. The contractor is to have a copy of this permit on site at all times.
14. All road crossings shall be bored unless otherwise noted. All materials used shall meet with the approval of the Township Road Commissioner, prior to construction.
15. Minimum depth shall be forty two inches (42") below existing ground elevations and forty eight inches (48") in locations crossing ditch flow lines.

It is understood that the work authorized by this permit shall be completed within six hundred (600) days after the date this permit is approved, otherwise the permit becomes null and void.

Authorization is hereby granted by the Township, to the Township Clerk, to transmit two certified copies of this permit to Larry Steward, Chairman of the Henderson Water District, 1004 State Highway 16, Jerseyville, IL 62052.

ISSUED BY: Travis Miller
Township Road Commissioner, Honey Point Township

This permit is hereby accepted and its provisions agreed to this By: 23 day of January, ~~2023~~ ²⁰²⁴.

Larry Steward
Chairman; Henderson Water District

MACOUPIN COUNTY HIGHWAY DEPARTMENT
THOMAS A. REINHART COUNTY ENGINEER

HIGHWAY PERMIT

Permission and authority are hereby granted by the Macoupin County Highway Department, hereinafter called the COUNTY to Henderson Water District hereinafter called the PETITIONER, to construct, operate, maintain, and remove 4" and 6" water main with necessary appurtenance, hereinafter call FACILITY.

The locations are as described below:

Macoupin County Permit 1 at Hagaman and Bethel Rd – **See plan sheet 8**
Macoupin County Permit 2 at Hettick Rd and Dairy Ln – **See plan sheet 11**
Macoupin County Permit 3 crossing Standard City Blacktop – **See plan sheet 18**
Macoupin County Permit 4 crossing Cross Creek Rd – **See plan sheet 30** Macoupin
County Permits 5 & 6 crossing Hagaman Rd – **See plan sheet 15**

Where longitudinal installations are required, the FACILITY shall be installed within four (4) feet of the right-of-way line, except at those locations where the County Engineer has preapproved deviations.

This permission and authority is subject to the following conditions:

1. The PETITIONER shall furnish all materials and labor, do all work, and pay all costs relative to the construction, operation and maintenance of said FACILITY and shall, in a reasonable length of time as determined by the County Engineer of Macoupin County, restore said highway to a condition similar and equal to that existing before the commencement of the work described including any necessary seeding or sodding.
2. The PETITIONER shall assume all risks and liabilities of kind or nature occurring from construction of said FACILITY or resulting there from or from the operation and maintenance of said FACILITY and shall indemnify, protect and save harmless County and County Engineer from all claims to have arisen out of the construction, operation and maintenance of the fiber optic cable done by the PETITIONER, their agents, employees, contractors or subcontractors, pursuant to this permit.
3. The PETITIONER shall conduct the work so as not to interfere with or obstruct traffic more than deemed necessary by the County Engineer and shall at all times keep said highway open to traffic and assume all responsibility for the handling and protection of the traffic and be responsible for all accidents or damages of whatsoever nature may result from the construction, operation

and maintenance of said FACILITY. The PETITIONER shall direct all traffic within the immediate vicinity of operations, place adequate barricades where necessary and provide sufficient signs and lights so long as such precautions are deemed advisable or necessary by the County Engineer. Flagmen are to be provided when equipment, materials or other hazards of the operation encroach upon the traveled surface of the County Highway.

4. The PETITIONER shall notify the COUNTY at least 24 hours in advance of any contemplated excavation within the confines of said FACILITY, so that the COUNTY may furnish inspection, if it deems such inspection necessary. Contact Tom Reinhart at (217) 854-6416.
5. The PETITIONER shall be responsible to the COUNTY for any damages said highway may suffer as a result of the construction, operation and maintenance of said FACILITY whether or not said COUNTY furnished inspection. The fact that the COUNTY may furnish inspection does not in any manner relieve the PETITIONER from any damages to said highway. After the work is completed, the PETITIONER shall keep the site of the work in proper repair and in a condition satisfactory to the County Engineer so long as the County Engineer is of the opinion that damages are in evidence due to the operation, construction and maintenance of said FACILITY. PETITIONER shall be responsible to maintain the highway to original condition for one year after construction is completed. As a guarantee the PETITIONER shall deposit a single bond in the amount of \$5,000 with the County Engineer made payable to the County Treasurer with the understanding that should the PETITIONER'S maintenance over the period of one year not be satisfactory to the County Engineer, the said Engineer may spend all or part of said bond to effectuate repairs.
6. The PETITIONER shall assume all liability for interference in any manner with other utilities, in, along, under, or upon said highway during the work pursuant to the permit.
7. The PETITIONER shall adjust or relocate said FACILITY at no expense to the COUNTY, if any future highway construction along the County Highway should so require.
8. The PETITIONER shall obtain a permit from the COUNTY whenever maintenance of the installed FACILITY requires digging, trenching, or other hazardous procedures on the County Highway right-of-way.
9. This permit is effective insofar as the COUNTY has jurisdiction and does not presume to release said PETITIONER from compliance with any statutes or policies of the State of Illinois or any other agency objecting to construction, operation, and maintenance of said FACILITY, or to any sanitary code of any other governmental agency.

10. The PETITIONER and its successors or assigns shall retain responsibility and liability of any kind or nature caused by the existence and operation of said FACILITY until such time as the use of said FACILITY is terminated. Should use of said FACILITY be permanently terminated, the PETITIONER shall remove the FACILITY at no cost to the COUNTY.
11. The PETITIONER shall not hold the COUNTY liable for any damages to said FACILITY resulting from normal highway maintenance operations.
12. If after construction, it is discovered that said FACILITY was not properly constructed, the PETITIONER shall, in a reasonable length of time as determined by the County Engineer, reconstruct the FACILITY to conform to the plans, specifications and terms of this permit. The PETITIONER shall be liable for all costs associated with said reconstruction.
13. The PETITIONER shall employ a competent contractor to perform said work. The PETITIONER shall require its contractor to maintain Workmen's Compensation Insurance and regular Contractors' Public Liability and Property Damage Liability Insurance including automobile coverage and a certificate of said insurance shall be filed with the County Engineer's Office before work commences. The contractor is to have a copy of this permit on site as all times.
14. All road crossings shall be bored and encased unless otherwise noted, and all materials used shall meet with the approval of the County Engineer, prior to construction.
15. Minimum depth shall be forty-two inches (42") below existing ground elevations and fifty-four inches (54") in locations crossing ditch flow lines.

It is understood that the work authorized by this permit shall be completed within 540 days after the date this permit is approved; otherwise the permit becomes null and void.

This permit is hereby accepted and its provisions agreed to this 5th day of January 2024. T.R.

By: Larry Steward

ISSUED BY: Thomas Reinhart
Thomas A. Reinhart, County Engineer
Macoupin County Highway Department

54.01. DIRECTIONAL BORING - CASING PIPE

A. General

Where indicated on the plans and in the Bidding Schedule, the CONTRACTOR shall provide directional boring of casing pipe of the diameter and type as specified, for passage under roadways, driveways, waterways, and/or thru private property. No water main shall be furnished or placed under this item of work. All casing pipe for directional bores shall be as shown in the plans. The void between the water main and the casing pipe shall be sealed at both ends by a method approved by the OWNER.

Certain installation practices are necessary to protect the water main that is required to go through the casing pipe. These practices are necessary to prevent the pipe from resting on the joints and provide for retrieval if repairs are necessary in the future. Prior to inserting the water main in the casing, casing spacers of the bolt on style shall be installed on 6 foot centers or 3 to a pipe segment. Casing spacers shall be as specified in Section 51.09.17 and Section 10.03.01.3.]

RJ PVC (CL 200 or CL 250 less than or equal to 12 inch diameter; PR 165 or PR 235 greater than 12 inch diameter), pipe shall be used inside of the casing pipe, with expansion couplings at both ends exterior to the casing (see also Section 51 of these Specifications).

B. Payment

This work shall be paid for at the lump sum contract prices for each specific directional bore of the diameters and locations as specified on the plans. The length of the bore indicated on the plans is an estimated length only, and also constitutes the minimum length that will be allowed physically for the directional bore. The CONTRACTOR shall determine an actual length for each bore based on his particular construction methods during the bidding preparation process.

The lump sum bid price for each specific bore shall include all necessary items for a complete directional bore, including mobilization and setup, directional bore operations, any and all RJ PVC (CL 200 or CL 250 \leq 12 inch diameter; PR 165 or PR 235 $>$ 12 inch diameter) casing pipe, tracer wire, etc.

When steel casing pipe is used under township or county roads, the ENGINEER may allow the CONTRACTOR to choose which method of boring to be used. If the CONTRACTOR decides to use the directional bore method over the bore and jack method, then payment will be based on the lineal foot unit bid price for "Bore Steel Casing" and this cost shall include all necessary items for a complete directional bore, including mobilization and setup, directional bore operations, any and all casing pipe, tracer wire, expansion couplings, casing spacers and end seals etc. The payment length shall be the length listed on the plan sheet for the bore.

Payment for the RJ PVC installed in the casing shall be based on the unit price of the bid schedule line item, "Restrained-Joint PVC within casing pipe", for the appropriate size and pressure classification of RJ PVC pipe utilized. The payment length of the RJ PVC pipe shall be the next length greater than the length of the casing pipe that will allow for the use

of full 20 feet sections of RJ PVC pipe (as shown on the Drawings). The cost of expansion couplings, casing spacers and end seals shall be incidental.

C. Procedures

The CONTRACTOR shall use water, bentonite, polymer, or bentonite/polymer mixture for the mud mixture needed for the directional boring procedure and shall include the costs of these items in his unit bid price. The CONTRACTOR shall use the mixture required by the type of soil encountered.

The CONTRACTOR shall use the backreamer needed to satisfy the conditions of the directional bore and the type of soil encountered. Spiral or coned backreamers are designed to push foreign objects such as rocks and tree roots out of the way or off to the side of the directional bore path. The surface area of the cone shaped backreamers is large so this will create a lot of drag. The wing cutter, which allows the mixed material to flow through, provides the best result in mixing.

For 8 inch diameter or smaller pipe, a reamer larger than 1.5 times the diameter of the pipe should not be used without the permission of the ENGINEER. For 10 inch diameter or larger pipe, a reamer of 1.3 times the diameter of the pipe or smaller is required, unless given permission by the ENGINEER.

It is recommended that the pipe follow immediately behind the backreamer or expander because the directional bore hole will start to close up instantly after the backreamer or expander is pulled through. This allows limited time, depending on the soil condition, to push the pipe in the hole. When trying to push the pipe in the closing hole, the pipe could bend. When this occurs, the pipe will be under a considerable amount of tension and compression and could result in the shattering of the pipe. The pipe under the roadway could also be damaged from this compression stress on the pipe.

D. Damaged Pavement

There are several factors that affect the disfiguration of the ground surface of a directional bore. The depth of the directional bore under the surface is critical. The increase in depth of the directional bore will decrease the chance of the pavement bulging. Hydra-lock is another factor that could cause surface damage.

Hydra-lock is created during pull back, when not enough mud is pumped into the hole or poor mud mixture is used. During hydra-lock, fluid that is being pumped out of the backreamer is completely contained within the hole, rather than flowing out of the inlet and/or outlet hole. Without an escape route, the fluid being pumped into the hole becomes pressurized, acting like a hydraulic cylinder - the pressure prevents the pipe from moving until the fluid finds an escape route. This may cause cracking or disfiguration at the surface to release the pressure. Any cracking or damage caused by the directional boring operation to the traveled surfaces (regardless of the soil and/or rock type encountered) shall be repaired or replaced, at the CONTRACTOR's expense, as required by the OWNER, the ENGINEER, or the property owner.

E. Surface and Utility Impairments

All utilities, including wiring, light standards, signal lights, sewers, private water service lines, buried telephone cable, underground gas lines, field tiles, etc., affecting the

construction of the proposed improvement shall be adjusted at the CONTRACTOR's expense. It shall be the CONTRACTOR's responsibility to determine the exact location of all utilities. All adjustments shall be done as specified by the OWNER of the utility. If the CONTRACTOR damages any utility not requiring adjustment, he shall replace or repair it as required by the OWNER or by the ENGINEER and no additional compensation will be allowed. No attempt has been made on the drawings to show all utilities or their exact locations.

**TOWNSHIP PERMIT
COUNTY OF MACOUPIN**

Permission and authority are hereby granted by Nilwood Township, hereinafter called the TOWNSHIP, to Henderson Water District, hereinafter called the PETITIONER, to locate, construct, operate, maintain, repair, renew and remove a buried waterline with necessary appurtenances, hereinafter called FACILITY. The FACILITY shall include the following: Boring water mains and water service lines under various Township highways (see chart for currently known locations)

List of Crossings

TB-5-19-1- Wylder Rd. Section # 8 & 17 T.11.N -R.6W. - See sheet plan 19
TB-5-19-2- Wylder Rd. Section # 8 & 17 T.11.N -R.6W. -See sheet plan 19
TB-5-20-6- Benstead Rd. Section # 16 T.11.N -R.6W.-See sheet plan 20
TB- 5-20-5- Benstead Rd. Section # 16 T.11.N -R.6W.-See sheet plan 20
TB- 5-20-4- Benstead Rd. Section # 5 T.11.N -R.6W.-See sheet plan 20
TB- 5-20-2- Benstead Rd. Section # 9 & 4 T.11.N -R.6W.-See sheet plan 20
TB- 5-20-3- Green Ridge Rd. Section # 9 & 4 T.11.N -R.6W.-See sheet plan 20

Longitudinal water main installation along township Right-of-Way in various locations. The location is as described below: N/A

Any additions or modifications to the above locations will be discussed with the TOWNSHIP prior to construction:

This permission and authority is subject to the following conditions:

1. The PETITIONER shall furnish all materials and labor, do all work, and pay all costs relative to the construction, operation and maintenance of said FACILITY and shall, in a reasonable length of time as determined by the Township Road Commissioner, restore said highway to a condition similar and equal to that existing before the commencement of the work described including any necessary seeding or sodding.
2. The PETITIONER shall assume all risks and liabilities of kind or nature occurring from, either during construction of said FACILITY or resulting therefrom or from the operation and maintenance of said FACILITY and shall indemnify, protect and save harmless Township and Township Road Commissioner from all claims to have arisen out of the construction, operation and maintenance of the water line done by the PETITIONER, their agents, employees, contractors or subcontractors, pursuant to this permit.
3. The PETITIONER shall conduct the work so as not to interfere with or obstruct traffic more than deemed necessary by the Township Road Commissioner and shall at all times keep said highway open to traffic and assume all responsibility for the handling and protection of the traffic and be responsible for all accidents or damages of whatsoever nature may result from the construction, operation and maintenance of said FACILITY. The PETITIONER shall direct all traffic within the immediate vicinity of operations, place adequate barricades where necessary and provide sufficient signs and lights so long as such precautions are deemed advisable or necessary by the Township Road Commissioner. Flagmen are to be provided when equipment, materials or other hazards of the operation encroach upon the traveled surface of the Township Highway.

4. The PETITIONER shall notify the TOWNSHIP at least 24 hours in advance of any contemplated excavation within the confines of said FACILITY, so that the TOWNSHIP may furnish inspection, if it deems such inspection necessary. Contact Jim Klaus, Nilwood Township Road Commissioner at 217-825-7574.
5. The PETITIONER shall be responsible to the TOWNSHIP for any damages said highway may suffer as a result of the construction, operation and maintenance of said FACILITY whether or not said TOWNSHIP furnished inspection. The fact that the TOWNSHIP may furnish inspection does not in any manner relieve the PETITIONER from any damages to said highway. After the work is completed, the PETITIONER shall keep the site of the work in proper repair and in a condition satisfactory to the Township Road Commissioner so long as the Township Road Commissioner is of the opinion that damages are in evidence due to the operation, construction and maintenance of said FACILITY. PETITIONER shall be responsible to maintain the highway to original condition after construction is completed for one year.
6. The PETITIONER shall assume all liability for interference in any manner with other utilities, in, along, under, or upon said highway during the work pursuant to the permit.
7. The PETITIONER shall adjust or relocate said FACILITY at no expense to the TOWNSHIP, if any future highway construction along the Township Highway should so require.
8. The PETITIONER shall obtain a permit from the TOWNSHIP whenever maintenance of the installed FACILITY requires digging, trenching, or other hazardous procedures on the Township Highway right-of-way.
9. This permit is effective insofar as the TOWNSHIP has jurisdiction and does not presume to release said PETITIONER from compliance with any statutes or policies of the State of Illinois or any other agency objecting to the construction, operation and maintenance of said FACILITY, or to any sanitary code of any other governmental agency.
10. The PETITIONER and its successors or assigns shall retain responsibility and liability of any kind or nature caused by the existence and operation of said FACILITY until such time as the use of said FACILITY is terminated. Should use of said FACILITY be permanently terminated, the PETITIONER shall remove the FACILITY at no cost to the TOWNSHIP.
11. The PETITIONER shall not hold the TOWNSHIP liable for any damages to said FACILITY resulting from normal highway maintenance operations.
12. If after construction, it is discovered that said FACILITY was not properly constructed, the PETITIONER shall, in a reasonable length of time as determined by the Township Road Commissioner, reconstruct the FACILITY to conform to the plans, specifications and terms of this permit. The PETITIONER shall be liable for all costs associated with said reconstruction.
13. The PETITIONER shall employ a competent contractor to perform said work. The PETITIONER shall require its contractor to maintain Workmen's Compensation Insurance and regular Contractor's Public Liability and Property Damage Liability Insurance including automobile coverage and a certificate of said insurance shall be filed with the Township Office before work commences. The contractor is to have a copy of this permit on site at all times.
14. All road crossings shall be bored unless otherwise noted. All materials used shall meet with the approval of the Township Road Commissioner, prior to construction.

15. Minimum depth shall be forty two inches (42") below existing ground elevations and forty eight inches (48") in locations crossing ditch flow lines.

It is understood that the work authorized by this permit shall be completed within six hundred (600) days after the date this permit is approved, otherwise the permit becomes null and void.

Authorization is hereby granted by the Township, to the Township Clerk, to transmit two certified copies of this permit to Larry Steward, Chairman of the Henderson Water District, 1004 State Highway 16, Jerseyville, IL 62052.

ISSUED BY: James R. Klaus Jr.

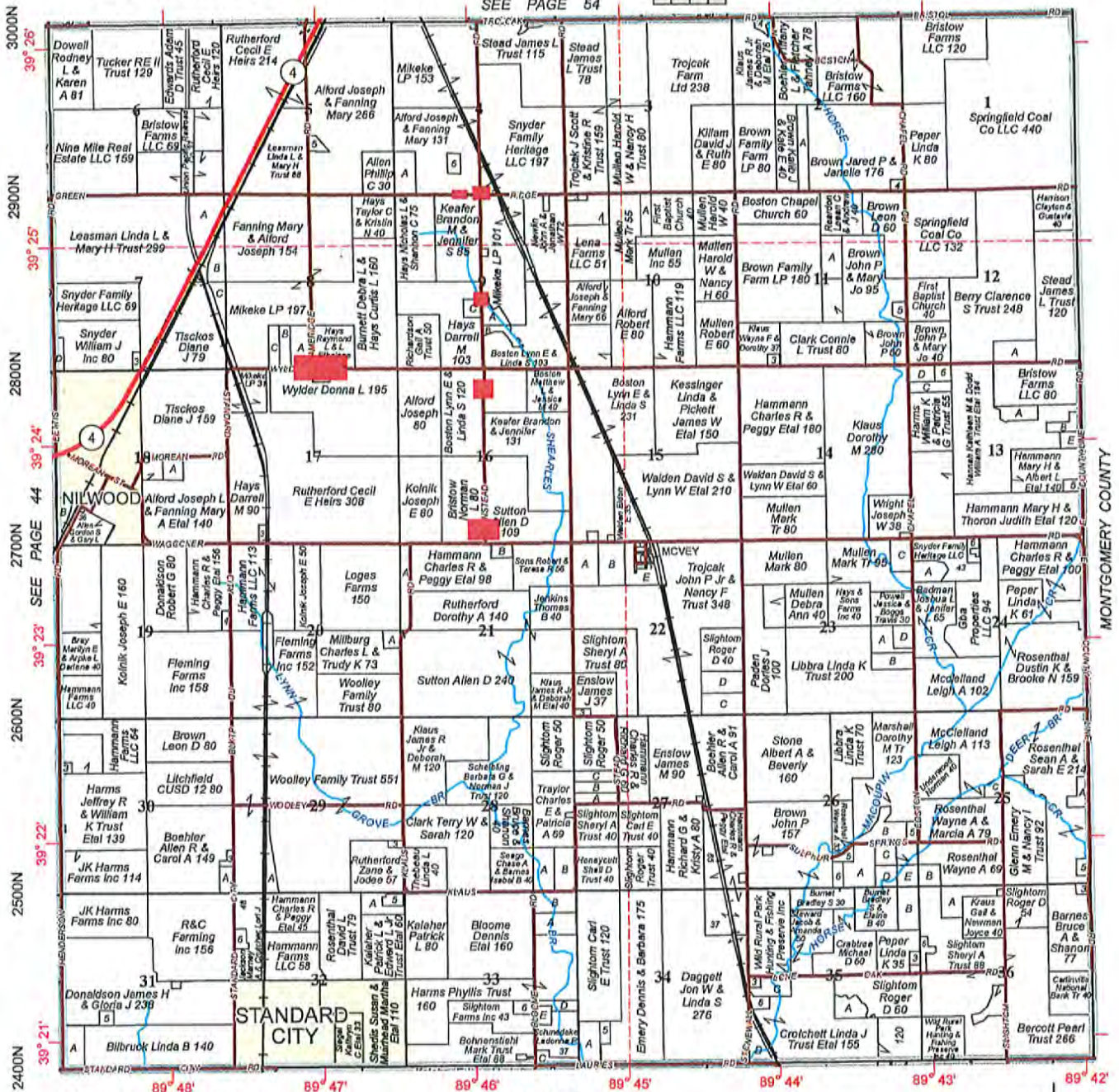
This permit is hereby accepted and its provisions agreed to this 1st day of January, 2023.

By: Larry Steward
Chairman; Henderson Water District

NILWOOD

Refer to page 69 for keyed parcels
T.11N.-R.6W.

SEE PAGE 54



© 2023 Rockford Map Publs., Inc.

SEE PAGE 38

Macoupin County, IL

1800E 1900E 2000E 2100E 2200E 2300E 2400E

TOWNSHIP ROAD PERMIT

Henderson Water District

(District/Company)

Dan Peters, Township Road Commissioner

North Litchfield, Township

4406 N 17th Avenue Litchfield, Illinois 62056

Permission is hereby requested to perform the following:
to construct, operate, and maintain buried water main(s) at the following location(s):
Longitudinal right-of-way.

Crossing Installation

TB-5-33-1-Crossing E Second Rd on the East side of Shoop Ln. Section # 16-17 T.9N. -R.5W See Plan Sheet 33
TB-5-34-1-Crossing Niehaus and County Line Rd. Section # 30-31 T.9N.-R5W See Plan Sheet 34

Any additions or modifications to the above locations will be discussed with the TOWNSHIP prior to construction:

Subject to the following conditions and restrictions:

1. Readjustments due to road rehabilitation shall be at the expense of

Henderson Water District

(District/Company)

2. In the case of buried pipe, the pipe shall be placed as shown on the attached sketch and/or plan sheets. Surfaces damaged during excavating shall be restored to at least the original condition as prior to construction.
3. The Henderson Water District shall notify the Township Road Commissioner prior to construction or repairs along the water lines.
4. The Henderson Water District shall notify the Township Road Commissioner of all changes in water main routing.
5. The Township Road Commissioner reserves the right to approve or disapprove construction under adverse conditions.
6. Any open cut or damaged pavement areas shall be initially backfilled with gravel per the current specification for open cutting roads. The Township will then be responsible for final resurfacing of the roadway and will be reimbursed as follows:
 - a) \$75.00 per road crossing
 - b) \$2.00 per foot for longitudinal repair

- 7. Any other conditions or restrictions defined on attached pages to this permit.
- 8. We request that permission be granted to perform this work and so indicated by dating and signing this form below. If, for some reason, there is reasonable objection to our proposed construction, please contact Larry Steward, President of Henderson Water District Board @ (217) 556-1383 as soon as possible so that he/she may consider action necessary to resolve the objection.

Work is to be started approximately _____ Summer 2024 _____
(Month/Year)

Henderson Water District
(District/Company)
Larry Steward
(signature)

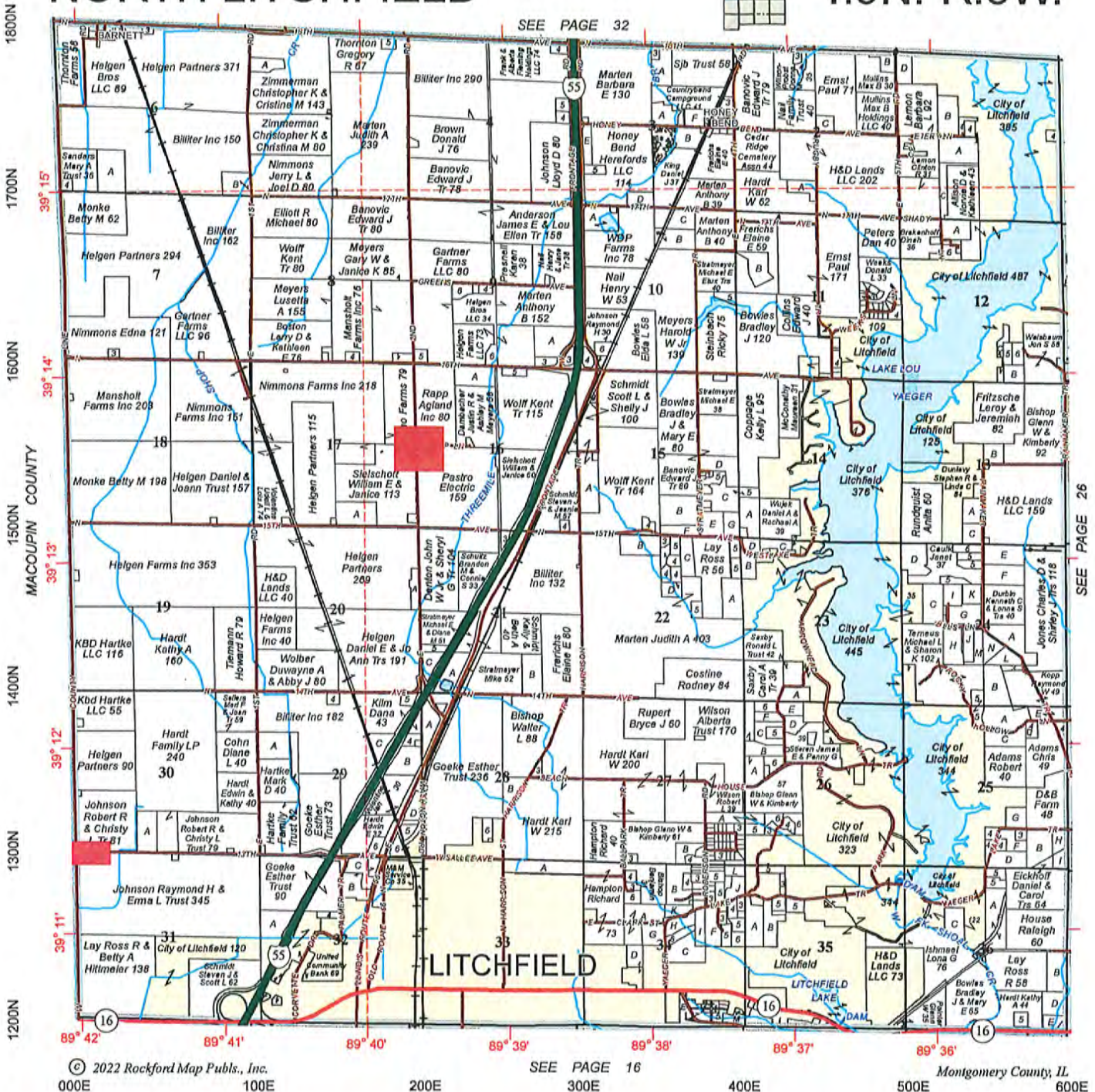
Board President
(Title)

Permission given this 12th day of January

TOWNSHIP ROAD COMMISSIONER
[Signature]
(Signature)

NORTH LITCHFIELD

Refer to page 59 for keyed parcels
T.9N.-R.5W.



Want to see your ad here? Become a Rockford Map Advertiser.

We Offer **Targeted Outreach, Consistent Visibility** and **County-Specific Direct Marketing** to reach landowners in regions where you do business.

Visit RockfordMap.com Today!

**TOWNSHIP PERMIT
COUNTY OF MACOUPIN**

Permission and authority are hereby granted by Shaw's Point Township, hereinafter called the TOWNSHIP, to Henderson Water District, hereinafter called the PETITIONER, to locate, construct, operate, maintain, repair, renew and remove a buried waterline with necessary appurtenances, hereinafter called FACILITY. The FACILITY shall include the following: Boring water mains and water service lines under various Township highways (see chart for currently known locations)

List of Crossings

Crossing 1- Bethel Ridge Rd & Oak Rd. - **TB-5-23-1** - Sec# 15/22, T.10N - R.6W (See plan sht 23)

Crossing 2 - Crossing County Line Rd on N side of 108 - **TB-5-25-1** - Sec# 25, T.10N - R.6W (See plan sht 25)

Longitudinal water main installation along township Right-of-Way in various locations.
The location is as described below: N/A

Any additions or modifications to the above locations will be discussed with the TOWNSHIP prior to construction:

This permission and authority is subject to the following conditions:

1. The PETITIONER shall furnish all materials and labor, do all work, and pay all costs relative to the construction, operation and maintenance of said FACILITY and shall, in a reasonable length of time as determined by the Township Road Commissioner, restore said highway to a condition similar and equal to that existing before the commencement of the work described including any necessary seeding or sodding.
2. The PETITIONER shall assume all risks and liabilities of kind or nature occurring from, either during construction of said FACILITY or resulting therefrom or from the operation and maintenance of said FACILITY and shall indemnify, protect and save harmless Township and Township Road Commissioner from all claims to have arisen out of the construction, operation and maintenance of the water line done by the PETITIONER, their agents, employees, contractors or subcontractors, pursuant to this permit.
3. The PETITIONER shall conduct the work so as not to interfere with or obstruct traffic more than deemed necessary by the Township Road Commissioner and shall at all times keep said highway open to traffic and assume all responsibility for the handling and protection of the traffic and be responsible for all accidents or damages of whatsoever nature may result from the construction, operation and maintenance of said FACILITY. The PETITIONER shall direct all traffic within the immediate vicinity of operations, place adequate barricades where necessary and provide sufficient signs and lights so long as such precautions are deemed advisable or necessary by the Township Road Commissioner. Flagmen are to be provided when equipment, materials or other hazards of the operation encroach upon the traveled surface of the Township Highway.
4. The PETITIONER shall notify the TOWNSHIP at least 24 hours in advance of any contemplated excavation within the confines of said FACILITY, so that the TOWNSHIP may furnish inspection, if it deems such inspection necessary. Contact Mike Featherstone, Shaws Point Township Road Commissioner at 217-556-4687

5. The PETITIONER shall be responsible to the TOWNSHIP for any damages said highway may suffer as a result of the construction, operation and maintenance of said FACILITY whether or not said TOWNSHIP furnished inspection. The fact that the TOWNSHIP may furnish inspection does not in any manner relieve the PETITIONER from any damages to said highway. After the work is completed, the PETITIONER shall keep the site of the work in proper repair and in a condition satisfactory to the Township Road Commissioner so long as the Township Road Commissioner is of the opinion that damages are in evidence due to the operation, construction and maintenance of said FACILITY. PETITIONER shall be responsible to maintain the highway to original condition after construction is completed for one year.
6. The PETITIONER shall assume all liability for interference in any manner with other utilities, in, along, under, or upon said highway during the work pursuant to the permit.
7. The PETITIONER shall adjust or relocate said FACILITY at no expense to the TOWNSHIP, if any future highway construction along the Township Highway should so require.
8. The PETITIONER shall obtain a permit from the TOWNSHIP whenever maintenance of the installed FACILITY requires digging, trenching, or other hazardous procedures on the Township Highway right-of-way.
9. This permit is effective insofar as the TOWNSHIP has jurisdiction and does not presume to release said PETITIONER from compliance with any statutes or policies of the State of Illinois or any other agency objecting to the construction, operation and maintenance of said FACILITY, or to any sanitary code of any other governmental agency.
10. The PETITIONER and its successors or assigns shall retain responsibility and liability of any kind or nature caused by the existence and operation of said FACILITY until such time as the use of said FACILITY is terminated. Should use of said FACILITY be permanently terminated, the PETITIONER shall remove the FACILITY at no cost to the TOWNSHIP.
11. The PETITIONER shall not hold the TOWNSHIP liable for any damages to said FACILITY resulting from normal highway maintenance operations.
12. If after construction, it is discovered that said FACILITY was not properly constructed, the PETITIONER shall, in a reasonable length of time as determined by the Township Road Commissioner, reconstruct the FACILITY to conform to the plans, specifications and terms of this permit. The PETITIONER shall be liable for all costs associated with said reconstruction.
13. The PETITIONER shall employ a competent contractor to perform said work. The PETITIONER shall require its contractor to maintain Workmen's Compensation Insurance and regular Contractor's Public Liability and Property Damage Liability Insurance including automobile coverage and a certificate of said insurance shall be filed with the Township Office before work commences. The contractor is to have a copy of this permit on site at all times.
14. All road crossings shall be bored unless otherwise noted. All materials used shall meet with the approval of the Township Road Commissioner, prior to construction.
15. Minimum depth shall be forty two inches (42") below existing ground elevations and forty eight inches (48") in locations crossing ditch flow lines.

It is understood that the work authorized by this permit shall be completed within six hundred (600) days after the date this permit is approved, otherwise the permit becomes null and void.

Authorization is hereby granted by the Township, to the Township Clerk, to transmit two certified copies of this permit to Larry Steward, Chairman of the Henderson Water District, 1004 State Highway 16, Jerseyville, IL 62052.

ISSUED BY: Michael C. Leatherston

This permit is hereby accepted and its provisions agreed to this 1st day of January, 2023.

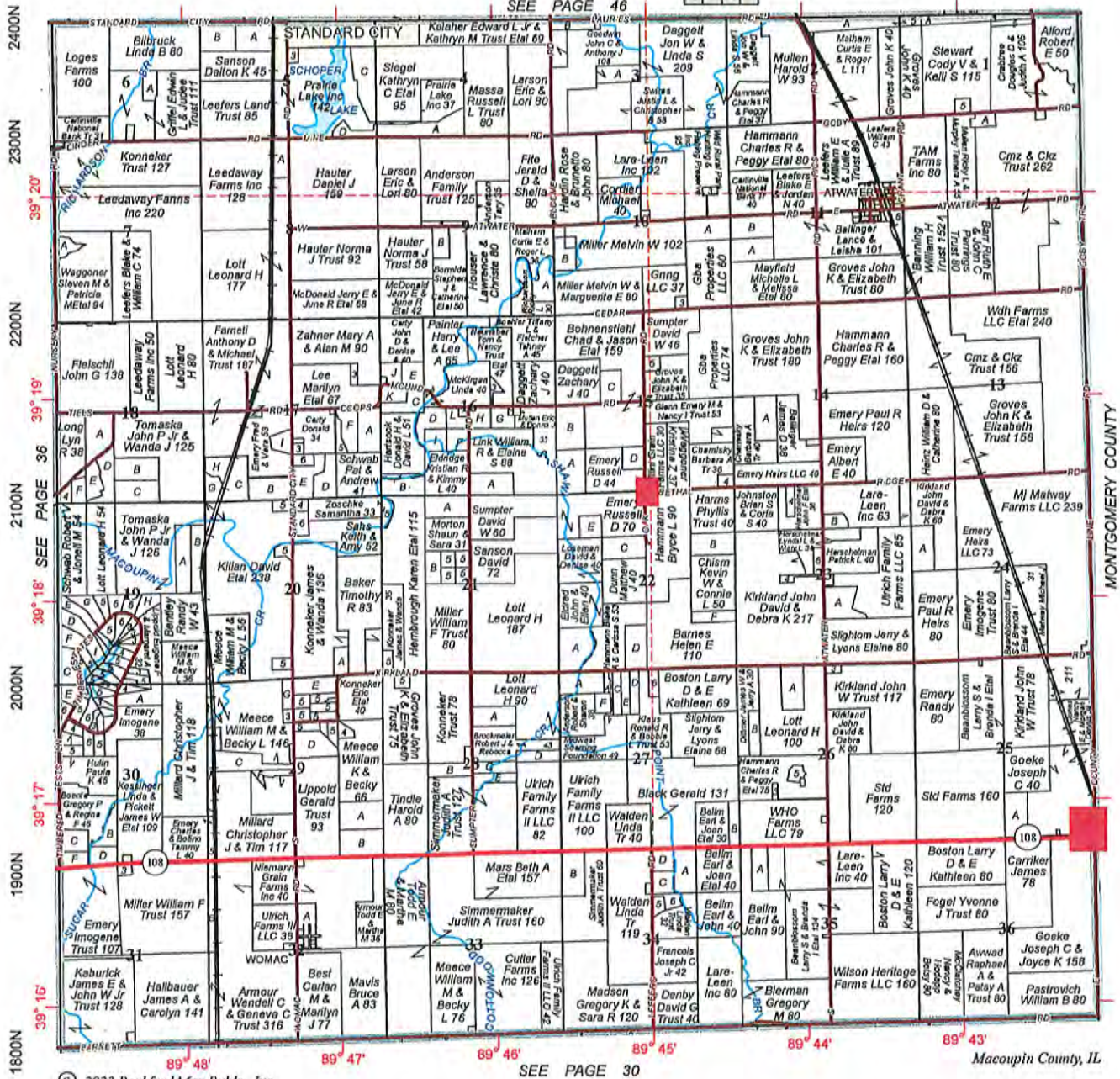
By: Larry Steward
Chairman, Henderson Water District

SHAWS POINT

Refer to page 68 for keyed parcels
T.10N.-R.6W.



SEE PAGE 46



© 2023 Rockford Map Publs., Inc.

SEE PAGE 30

1800E 1900E 2000E 2100E 2200E 2300E 2400E

**TOWNSHIP PERMIT
COUNTY OF MACOUPIN**

Permission and authority are hereby granted by South Otter Township, hereinafter called the TOWNSHIP, to Henderson Water District, hereinafter called the PETITIONER, to locate, construct, operate, maintain, repair, renew and remove a buried waterline with necessary appurtenances, hereinafter called FACILITY. The FACILITY shall include the following: Boring water mains and water service lines under various Township highways (see chart for currently known locations)

List of Crossings

TB-5-17-1- Banberry Rd. Section # 32 T.11N. -R.7W. **See sheet plan 17**
TB-5-17-2- Lange Rd. at Banberry Rd. Section #32 T.11N. -R7W. **See sheet plan 17**
TB-5-17-3- Lange Rd. Section #32 T.11N. -R7W. **See sheet plan 17**

Longitudinal water main installation along township Right-of-Way in various locations. The location is as described below: N/A

Any additions or modifications to the above locations will be discussed with the TOWNSHIP prior to construction:

This permission and authority is subject to the following conditions:

1. The PETITIONER shall furnish all materials and labor, do all work, and pay all costs relative to the construction, operation and maintenance of said FACILITY and shall, in a reasonable length of time as determined by the Township Road Commissioner, restore said highway to a condition similar and equal to that existing before the commencement of the work described including any necessary seeding or sodding.
2. The PETITIONER shall assume all risks and liabilities of kind or nature occurring from, either during construction of said FACILITY or resulting therefrom or from the operation and maintenance of said FACILITY and shall indemnify, protect and save harmless Township and Township Road Commissioner from all claims to have arisen out of the construction, operation and maintenance of the water line done by the PETITIONER, their agents, employees, contractors or subcontractors, pursuant to this permit.
3. The PETITIONER shall conduct the work so as not to interfere with or obstruct traffic more than deemed necessary by the Township Road Commissioner and shall at all times keep said highway open to traffic and assume all responsibility for the handling and protection of the traffic and be responsible for all accidents or damages of whatsoever nature may result from the construction, operation and maintenance of said FACILITY. The PETITIONER shall direct all traffic within the immediate vicinity of operations, place adequate barricades where necessary and provide sufficient signs and lights so long as such precautions are deemed advisable or necessary by the Township Road Commissioner. Flagmen are to be provided when equipment, materials or other hazards of the operation encroach upon the traveled surface of the Township Highway.
4. The PETITIONER shall notify the TOWNSHIP at least 24 hours in advance of any contemplated excavation within the confines of said FACILITY, so that the TOWNSHIP may furnish inspection, if it deems such inspection necessary. Contact Mark Murphy, South Otter Township Road Commissioner at 618-415-7874.

5. The PETITIONER shall be responsible to the TOWNSHIP for any damages said highway may suffer as a result of the construction, operation and maintenance of said FACILITY whether or not said TOWNSHIP furnished inspection. The fact that the TOWNSHIP may furnish inspection does not in any manner relieve the PETITIONER from any damages to said highway. After the work is completed, the PETITIONER shall keep the site of the work in proper repair and in a condition satisfactory to the Township Road Commissioner so long as the Township Road Commissioner is of the opinion that damages are in evidence due to the operation, construction and maintenance of said FACILITY. PETITIONER shall be responsible to maintain the highway to original condition after construction is completed for one year.
6. The PETITIONER shall assume all liability for interference in any manner with other utilities, in, along, under, or upon said highway during the work pursuant to the permit.
7. The PETITIONER shall adjust or relocate said FACILITY at no expense to the TOWNSHIP, if any future highway construction along the Township Highway should so require.
8. The PETITIONER shall obtain a permit from the TOWNSHIP whenever maintenance of the installed FACILITY requires digging, trenching, or other hazardous procedures on the Township Highway right-of-way.
9. This permit is effective insofar as the TOWNSHIP has jurisdiction and does not presume to release said PETITIONER from compliance with any statutes or policies of the State of Illinois or any other agency objecting to the construction, operation and maintenance of said FACILITY, or to any sanitary code of any other governmental agency.
10. The PETITIONER and its successors or assigns shall retain responsibility and liability of any kind or nature caused by the existence and operation of said FACILITY until such time as the use of said FACILITY is terminated. Should use of said FACILITY be permanently terminated, the PETITIONER shall remove the FACILITY at no cost to the TOWNSHIP.
11. The PETITIONER shall not hold the TOWNSHIP liable for any damages to said FACILITY resulting from normal highway maintenance operations.
12. If after construction, it is discovered that said FACILITY was not properly constructed, the PETITIONER shall, in a reasonable length of time as determined by the Township Road Commissioner, reconstruct the FACILITY to conform to the plans, specifications and terms of this permit. The PETITIONER shall be liable for all costs associated with said reconstruction.
13. The PETITIONER shall employ a competent contractor to perform said work. The PETITIONER shall require its contractor to maintain Workmen's Compensation Insurance and regular Contractor's Public Liability and Property Damage Liability Insurance including automobile coverage and a certificate of said insurance shall be filed with the Township Office before work commences. The contractor is to have a copy of this permit on site at all times.
14. All road crossings shall be bored unless otherwise noted. All materials used shall meet with the approval of the Township Road Commissioner, prior to construction.
15. Minimum depth shall be forty two inches (42") below existing ground elevations and forty eight inches (48") in locations crossing ditch flow lines.

It is understood that the work authorized by this permit shall be completed within six hundred (600) days after the date this permit is approved, otherwise the permit becomes null and void.

Authorization is hereby granted by the Township, to the Township Clerk, to transmit two certified copies of this permit to Larry Steward Chairman of the Henderson Water District, 1004 State Highway 16, Jerseyville, IL 62052.

South Otter Road Commission

ISSUED BY: *Mark Murphy*

This permit is hereby accepted and its provisions agreed to this 15 day of January 2023.

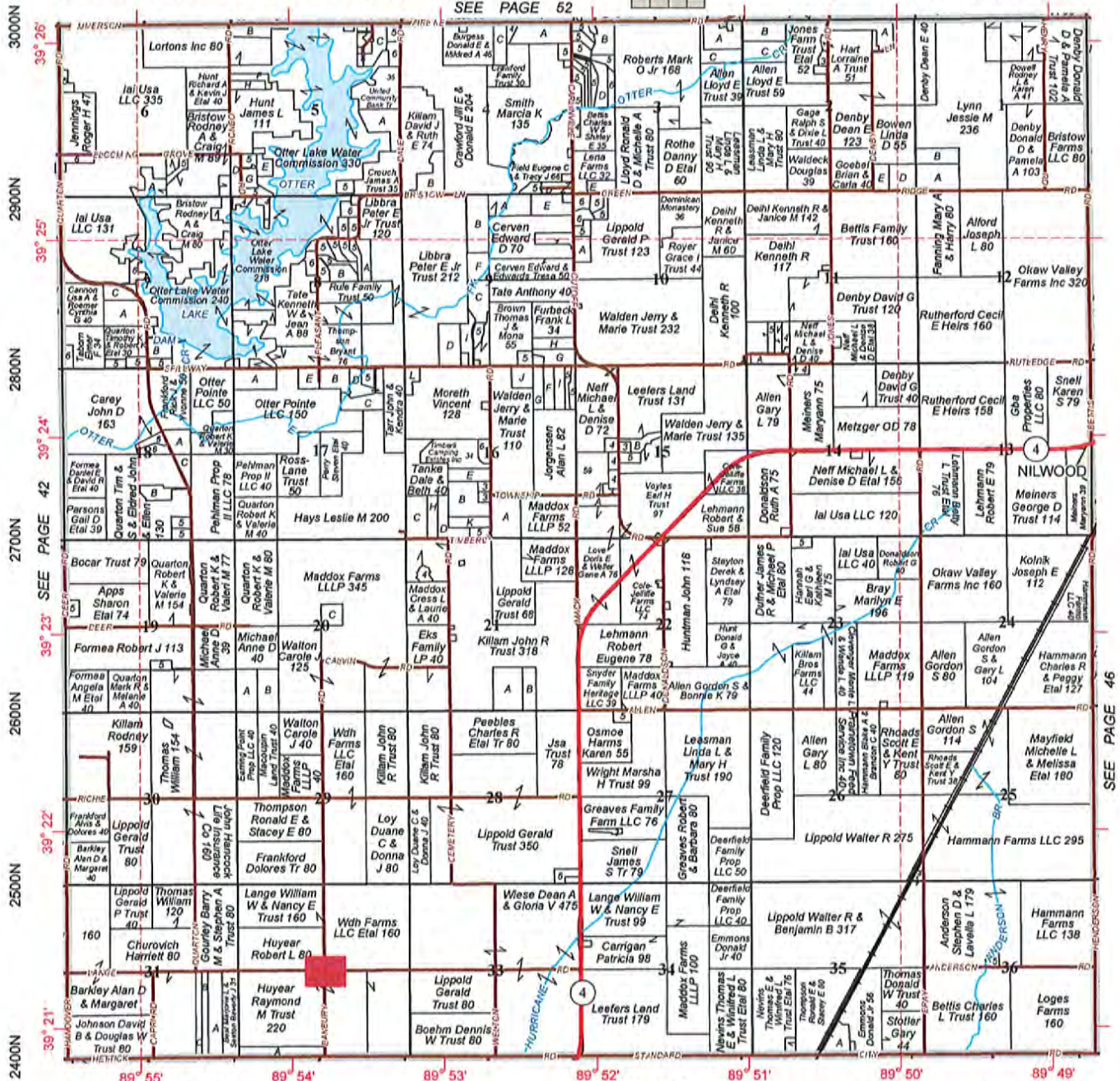
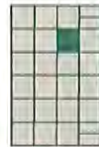
By: *Larry Steward*
Chairman; Henderson Water District

SOUTH OTTER

T.11N.-R.7W.

Refer to page 69 for keyed parcels

SEE PAGE 52



© 2023 Rockford Map Pubs., Inc.

SEE PAGE 36

Macoupin County, IL

1200E 1300E 1400E 1500E 1600E 1700E 1800E

TOWNSHIP ROAD PERMIT

Henderson Water District

(District/Company)

Dennis Rosenthal, Township Road Commissioner

Zanesville, Township

3244 State Rt. 48, Raymond, Illinois 62560

Permission is hereby requested to perform the following:

To construct, operate, and maintain buried water main(s) at the following location(s): Longitudinal right-of-way.

Crossing Installation

TB-5-25-2 - Crossing County Line Rd. Sec# 19, T.10N -R.5W- See plan sheet 25

TB-5-27-4 - Crossing Sale Cir., Sec# 15, T.10N -R.5W- See plan sheet 27

TB-5-27-3 - Crossing Sale Cir., Sec# 14, T.10N -R.5W- See plan sheet 27

TB-5-27-2 - Crossing N 21st St., Sec# 14-23, T.10N-R.5W - See plan sheet 27

TB-5-27-1 - Crossing Sale Cir., Sec# 13, T.10N -R.5W- See plan sheet 27

TB-5-28-2 - Crossing N 23rd Ave., Sec# 2, T.10N -R.5W- See plan sheet 28

TB-5-28-1 - Crossing N 23rd Ave., Sec# 2, T.10N -R.5W- See plan sheet 28

TB-5-29-1 - Crossing E 5th Rd., Sec# 2, T.10N -R.5W- See plan sheet 29

Any additions or modifications to the above locations will be discussed with the TOWNSHIP prior to construction:

Subject to the following conditions and restrictions:

1. Readjustments due to road rehabilitation shall be at the expense of Henderson Water District.
(District/Company)
2. In the case of buried pipe, the pipe shall be placed as shown on the attached sketch and/or plan sheets. Surfaces damaged during excavating shall be restored to at least the original condition as prior to construction.
3. The Henderson Water District shall notify the Township Road Commissioner prior to construction or repairs along the water lines.
4. The Henderson Water District shall notify the Township Road Commissioner of all changes in water main routing.
5. The Township Road Commissioner reserves the right to approve or disapprove construction under adverse conditions.
6. Any open cut or damaged pavement areas shall be initially backfilled with gravel per the current specification for open cutting roads. The Township will then be responsible for final resurfacing of the roadway and will be reimbursed as follows:
 - a) \$75.00 per road crossing
 - b) \$2.00 per foot for longitudinal repair

7. Any other conditions or restrictions defined on attached pages to this permit.
8. We request that permission be granted to perform this work and so indicated by dating and signing this form below. If, for some reason, there is reasonable objection to our proposed construction, please contact Larry Steward, Chairman of Henderson Water District Board @ (217) 556-1383 as soon as possible so that he/she may consider action necessary to resolve the objection.

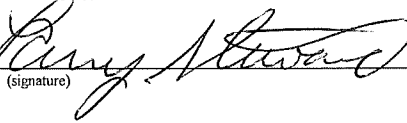
Work is to be started approximately

Summer 2024

(Month/Year)

Henderson Water District

(District/Company)



(signature)

Board Chairman

(Title)

Permission given this

12th

day of

JANUARY 2024

TOWNSHIP ROAD COMMISSIONER



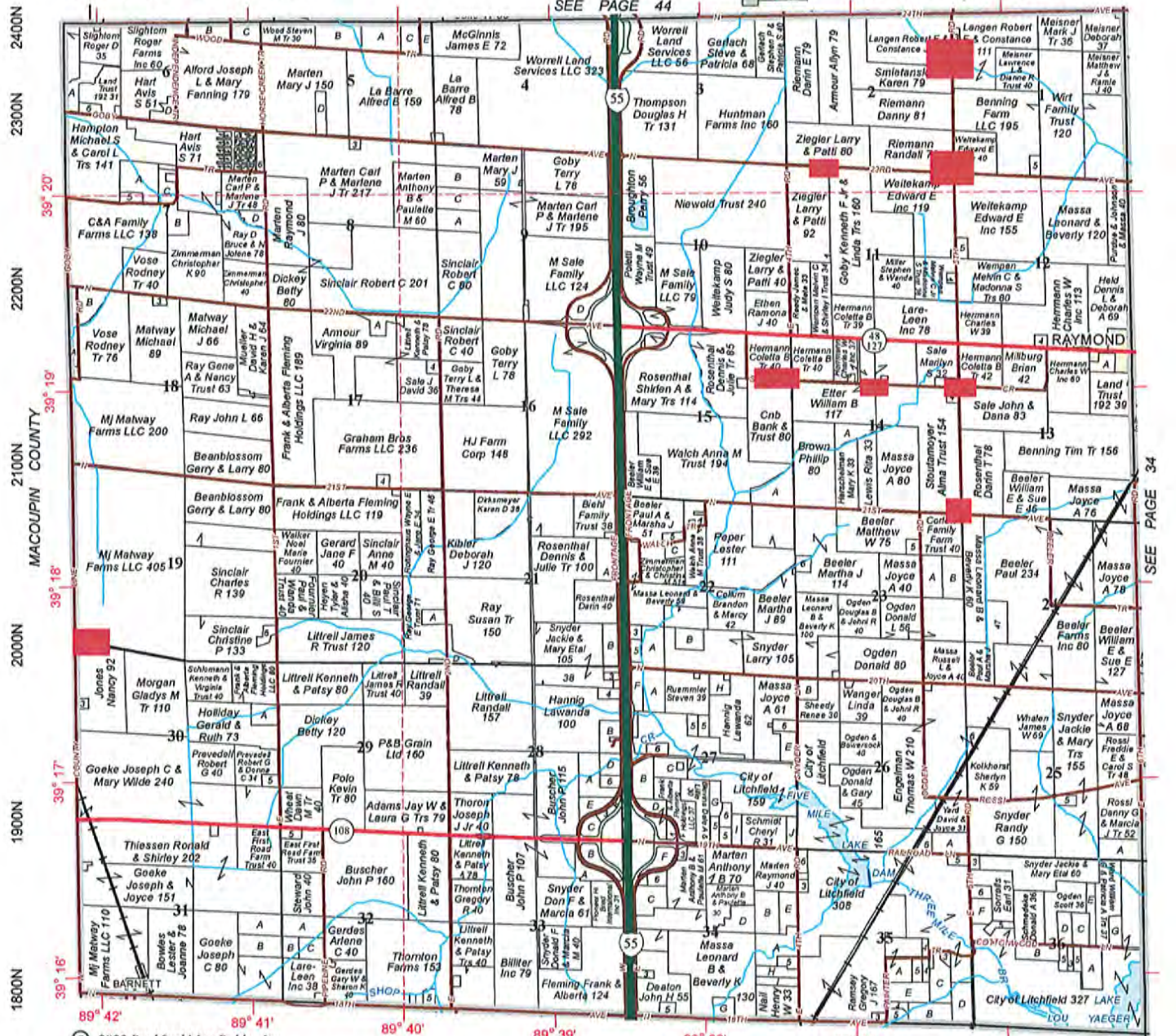
(Signature)

ZANESVILLE

T.10N.-R.5W.

Refer to page 61 for keyed parcels

SEE PAGE 44



© 2022 Rockford Map Publs., Inc.

SEE PAGE 24

Montgomery County, IL

000E 100E 200E 300E 400E 500E 600E

Intentionally Blank

NPDES Permit

Intentionally Blank

NPDES Permit No. ILR10

General NPDES Permit No. ILR10

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
www.epa.state.il.us

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

General NPDES Permit
For
Storm Water Discharges From Construction Site Activities

Expiration Date: August 31, 2028

Issue Date: September 13, 2023

Effective Date: September 22, 2023

In compliance with the provisions of the Illinois Environmental Protection Act, the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter I), and the Clean Water Act, and the regulations thereunder the following discharges are authorized by this permit in accordance with the conditions and attachments herein.



Darin E. LeCrone, P.E.
Manager, Permit Section
Division of Water Pollution Control

Part I. COVERAGE UNDER THIS PERMIT

A. **Permit Area.** The permit covers all areas of the State of Illinois with discharges to any Waters of the United States.

B. **Eligibility.**

1. This permit shall authorize all discharges of storm water associated with industrial activity from a construction site that will result in the disturbance of one or more acres total land area or a construction site less than one acre of total land that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb one or more acres total land area. This permit may authorize discharges from other construction site activities that have been designated by the Agency as having the potential to adversely affect the water quality of Waters of the United States. Where discharges from construction sites were initially covered under the previous version of the ILR10, the Notice of Intent and Storm Water Pollution Prevention Plan must be updated/revised as necessary to ensure compliance with the provisions of this reissued ILR10 permit.
2. This permit may only authorize a storm water discharge associated with industrial activity from a construction site that is mixed with a storm water discharge from an industrial source other than construction, where:
 - a. the industrial source other than construction is located on the same site as the construction activity;
 - b. storm water discharges associated with industrial activity from the areas of the site where construction activities are occurring are in compliance with the terms of this permit; and
 - c. storm water discharges associated with industrial activity from the areas of the site where industrial activities other than construction are occurring (including storm water discharges from dedicated asphalt plants and dedicated concrete plants) are covered by a different NPDES general permit or an individual permit authorizing such discharges.
3. **Limitations on Coverage.** The following storm water discharges from construction sites are not authorized by this permit:
 - a. storm water discharges associated with industrial activities that originate from the site after construction activities have been completed and the site has undergone final stabilization;
 - b. discharges that are mixed with sources of non-storm water other than discharges identified in Part III.A (Prohibition on Non-Storm Water Discharges) of this permit and in compliance with paragraph IV.D.5 (Non-Storm Water Discharges) of this permit;

NPDES Permit No. ILR10

- c. storm water discharges associated with industrial activity that are subject to an existing NPDES individual or general permit or which are issued a permit in accordance with Part VI.N (Requiring an Individual Permit or an Alternative General Permit) of this permit. Such discharges may be authorized under this permit after an existing permit expires provided the existing permit did not establish numeric limitations for such discharges;
- d. storm water discharges from construction sites that the Agency has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard;
- e. storm water discharges that the Agency, at its discretion, determines are not appropriately authorized or controlled by this general permit; and
- f. storm water discharges to any receiving water specified under 35 Ill. Adm. Code 302.105(d) (6).

C. Authorization.

- 1. In order for storm water discharges from construction sites to be authorized to discharge under this general permit a discharger must submit a Notice of Intent (NOI) in accordance with the requirements of Part II below.
- 2. Where a new contractor is selected after the submittal of an NOI under Part II below, or where site ownership is transferred, the Notice of Intent (NOI) must be modified by the owner in accordance with Part II within 30 days of commencement of work of the new contractor.
- 3. Unless notified by the Agency to the contrary, dischargers who submit an NOI and a stormwater pollution prevention plan (SWPPP) in accordance with the requirements of this permit are authorized to discharge storm water from construction sites under the terms and conditions of this permit in 30 days after the date the NOI and SWPPP are received by the Agency.
- 4. The Agency may deny coverage under this permit and require submittal of an application for an individual NPDES permit based on a review of the NOI or other information.

Part II. NOTICE OF INTENT REQUIREMENTS

A. Deadlines for Notification.

- 1. To receive authorization under this general permit, a discharger must submit a completed Notice of Intent (NOI) in accordance with Part VI.G (Signatory Requirements) and the requirements of this Part in sufficient time to allow a 30 day review period after the receipt of the NOI by the Agency and prior to the start of construction. In compliance with the Federal Electronic Reporting Rule, the Agency has transitioned all General Storm Water Permits for Construction Site Activities to the Central Data Exchange (CDX) system. NOIs shall be submitted electronically at <https://cdx.epa.gov>. More information, including registration information for the CDX system, can be obtained on the IEPA website, <https://epa.illinois.gov/topics/forms/water-permits/storm-water/construction.html>.
- 2. Where discharges associated with construction activities were initially covered under the previous version of ILR10 and are continuing, a new NOI and updated/revised Storm Water Pollution Prevention Plan must be submitted within 180 days of the effective date of this reissued permit, as necessary to ensure compliance with the provisions of the reissued ILR10. Updating of the SWPPP is not required if construction activities are completed and a Notice of Termination is submitted within 180 days of the effective date of this permit.
- 3. A discharger may submit an NOI in accordance with the requirements of this Part after the start of construction. In such instances, the Agency may bring an enforcement action for any discharges of storm water associated with industrial activity from a construction site that have occurred on or after the start of construction.

B. **Failure to Notify.** Dischargers who fail to notify the Agency of their intent to be covered, and discharge storm water associated with construction site activity to Waters of the United States without an NPDES permit are in violation of the Environmental Protection Act and Clean Water Act.

C. **Contents of Notice of Intent.** The Notice of Intent shall be signed in accordance with Part VI.G (Signatory Requirements) of this permit by all of the entities identified in paragraph 2 below and shall include the following information as prompted by the CDX system:

- 1. The mailing address, and location of the construction site for which the notification is submitted. Where a mailing address for the site is not available, the location can be described in terms of the latitude and longitude of the approximate center of the facility to the nearest 15 seconds, or the nearest quarter section (if the section, township and range is provided) that the construction site is located in;
- 2. The owner's name, address, telephone number, and status as Federal, State, private, public or other entity;
- 3. The name, address and telephone number of the general contractor(s) that have been identified at the time of the NOI submittal;
- 4. The name of the receiving water(s), or if the discharge is through a municipal separate storm sewer, the name of the municipal operator of the storm sewer and the ultimate receiving water(s), the latitude and longitude of the discharge point, and any known impairments and completed TMDLs for the receiving water;
- 5. The number of any NPDES permits for any discharge (including non-storm water discharges) from the site that is currently authorized by an NPDES permit;
- 6. A description of the project, detailing the complete scope of the project, estimated timetable for major activities, an estimate of the number of acres of the site on which soil will be disturbed, an indication of whether or not the installation of stormwater controls will require subsurface earth disturbance, an indication of whether or not the pre-development land was used for agriculture, and an indication of whether or not the project will include demolition of structures built or renovated before January 1, 1980;
- 7. For projects that have complied with State law on historic preservation and endangered species prior to submittal of the NOI, through coordination with the Illinois Historic Preservation Agency and the Illinois Department of Natural Resources or through fulfillment of the terms of interagency

NPDES Permit No. ILR10

agreements with those agencies, the NOI shall indicate that such compliance has occurred.

8. An indication of whether or not polymers, flocculants, cationic treatment chemicals, or other treatment chemicals will be used at the construction site;
9. An electronic copy of the storm water pollution prevention plan that has been prepared for the site in accordance with Part IV of this permit.
10. The notice of intent shall be modified using the CDX system for any substantial modifications to the project such as: address changes, new contractors, area coverage, additional discharges to Waters of the United States, or other substantial modifications. The notice of intent shall be modified within 30 days of the modification to the project.

D. Where to Submit.

Construction activities which discharge storm water that requires a NPDES permit submit an NOI to the Agency. The applicable fee shall also be submitted. NOIs must be signed in accordance with Part VI.G (Signatory Requirements) of this permit. The NOI and SWPPP must be submitted to the Agency electronically using the CDX system with digital signature at the following website address: <https://cdx.epa.gov>. Registration specific to the permittee is required in order to file electronically.

Submit the appropriate fee with the permit ID number assigned during completion of the NOI to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control, Mail Code #15
Attention: Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

- E. **Additional Notification.** Construction activities that are operating under approved local sediment and erosion plans, land disturbance permits, grading plans, or storm water management plans, in addition to filing copies of the Notice of Intent in accordance with Part D above, shall also submit signed copies of the Notice of Intent to the local agency approving such plans in accordance with the deadlines in Part A above. See Part IV.D.2.d (Approved State or Local Plans). A copy of the NOI shall be sent to the entity holding an active General NPDES Permit No. ILR40 if the permittee is located in an area covered by an active ILR40 permit.
- F. **Notice of Termination.** Where a site has completed final stabilization and all storm water discharges from construction activities that are authorized by this permit are eliminated, the permittee must submit a completed Notice of Termination (NOT) that is signed in accordance with Part VI.G (Signatory Requirements) of this permit. All Notices of Termination are to be submitted to the Agency electronically using the CDX system with digital signatures, at the web address listed in Part II.D.

Part III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, AND OTHER NON-NUMERIC LIMITATIONS

A. Prohibition on Non-Storm Water Discharges.

1. Except as provided in Part I paragraph B.2 and paragraphs 2, 3 or 4 below, all discharges covered by this permit shall be comprised entirely of storm water.
2.
 - a. Except as provided in paragraph b below, discharges of materials other than storm water must be in compliance with a NPDES permit (other than this permit) issued for the discharge.
 - b. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharges is in compliance with Part IV.D.5 (Non-Storm Water Discharges): discharges from fire fighting activities; fire hydrant flushings; waters used to wash vehicles where detergents are not used; waters used to control dust; potable water sources including uncontaminated waterline flushings; landscape irrigation drainages; routine external building washdown which does not use detergents; pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; uncontaminated air conditioning condensate; uncontaminated spring water; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.
3. The following non-storm water discharges are prohibited by this permit: concrete and wastewater from washout of concrete (unless managed by an appropriate control), wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, soaps, solvents, or detergents, toxic or hazardous substances from a spill or other release, or any other pollutant that could cause or tend to cause water pollution.
4. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are allowable if managed by appropriate controls.
 - a. Dewatering discharges shall be routed through a sediment control (e.g., sediment trap or basin, pumped water filter bag) designed to minimize discharges with visual turbidity;
 - b. The discharge shall not include visible floating solids or foam;
 - c. The discharge must not cause the formation of a visible sheen on the water surface, or visible oily deposits on the bottom or shoreline of the receiving water. An oil-water separator or suitable filtration device shall be used to treat oil, grease, or other similar products if dewatering water is found to or expected to contain these materials;
 - d. To the extent feasible, use well-vegetated (e.g., grassy or wooded), upland areas of the site to infiltrate dewatering water before discharge. You are prohibited from using receiving waters as part of the treatment area;
 - e. To minimize dewatering-related erosion and related sediment discharges, use stable, erosion-resistant surfaces (e.g., well-vegetated

NPDES Permit No. ILR10

grassy areas, clean filter stone, geotextile underlayment) to discharge from dewatering controls. Do not place dewatering controls, such as pumped water filter bags, on steep slopes (15% or greater in grade);

- f. Backwash water (water used to backwash/clean any filters used as part of stormwater treatment) must be properly treated or hauled off-site for disposal; and
- g. Dewatering treatment devices shall be properly maintained.

B. Discharges into Receiving Waters with an Approved Total Maximum Daily Load (TMDL):

Discharges to waters for which there is a TMDL allocation for sediment or a parameter that addresses sediment (such as total suspended solids, turbidity, or siltation) are not eligible for coverage under this permit unless the owner/operator develops and certifies a SWPPP that is consistent with wasteload allocations in the approved TMDL. To be eligible for coverage under this general permit, operators must incorporate into their SWPPP any conditions and/or Best Management Practices applicable to their discharges necessary for consistency with the TMDL within any timeframes established in the TMDL. If a specific numeric waste load allocation has been established that would apply to the project's discharges, the operator must incorporate that allocation into its SWPPP and implement necessary steps to meet that allocation.

Please refer to the Agency website at: <https://epa.illinois.gov/topics/water-quality/watershed-management/tmdls/reports.html>

- C. In the absence of information demonstrating otherwise, it is expected that compliance with the conditions in this permit will result in stormwater discharges being controlled as necessary to meet applicable water quality standards. If at any time you become aware, that discharges are not being controlled as necessary to meet applicable water quality standards, you must take corrective action as required in Part IV.D.5 of this Permit. Discharges covered by this permit, alone or in combination with other sources, shall not cause or contribute to a violation of any applicable water quality standard.

Part IV. STORM WATER POLLUTION PREVENTION PLANS

A storm water pollution prevention plan shall be developed for each construction site covered by this permit. Storm water pollution prevention plans shall be prepared in accordance with good engineering practices. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction site activity from the facility. In addition, the plan shall describe and ensure the implementation of best management practices which will be used to reduce the pollutants in storm water discharges associated with construction site activity and to assure compliance with the terms and conditions of this permit. The permittee must implement the provisions of the storm water pollution prevention plan required under this part as a condition of this permit.

A. Deadlines for Plan Preparation and Compliance.

The plan shall:

- 1. Be completed prior to the start of the construction activities to be covered under this permit and submitted electronically to the Agency at the time the Notice of Intent is submitted; and
- 2. Provide for compliance with the terms and schedules of the plan beginning with the initiation of construction activities.

B. Signature, Plan Review and Notification.

- 1. The plan shall be signed in accordance with Part VI.G (Signatory Requirements), and be retained at the construction site which generates the storm water discharge in accordance with Part VI.E (Duty to Provide Information) of this permit. If an on-site location is unavailable to keep the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance of the construction site.
- 2. Prior to commencement of construction, the permittee shall provide the plan to the Agency.
- 3. The permittee shall make plans available upon request from this Agency or a local agency approving sediment and erosion plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system. A list of permitted municipal separate storm sewer systems is available at: <https://epa.illinois.gov/topics/forms/water-permits/storm-water/urbanized-area-list.htm>
- 4. The Agency may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this Part. Such notification shall identify those provisions of the permit which are not being met by the plan, and identify which provisions of the plan require modifications in order to meet the minimum requirements of this part. Within 7 days from receipt of notification from the Agency, the permittee shall make the required changes to the plan and shall submit to the Agency a written certification that the requested changes have been made. Failure to comply shall terminate authorization under this permit.
- 5. A copy of the letter of notification of coverage along with the General NPDES Permit for Storm Water Discharges from Construction Site Activities or other indication that storm water discharges from the site are covered under an NPDES permit shall be posted at the site in a prominent place for public viewing (such as alongside a building permit).
- 6. All storm water pollution prevention plans and all completed inspection forms/reports required under this permit are considered reports that shall be available to the public within 30 days upon request. If a storm water pollution prevention plan or inspection form/report cannot be provided, the permittee shall respond to the request within 30 days with a statement that explains why the document cannot be provided. However, the permittee may claim any portion of a storm water pollution prevention plan as confidential in accordance with 40 CFR Part 2.

- C. **Keeping Plans Current.** The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to Waters of the United States and which has not otherwise been addressed in the plan or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under paragraph D.2 below, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction site activity. In addition, the plan shall be amended to identify any new contractor and/or subcontractor that will implement a measure

NPDES Permit No. ILR10

of the storm water pollution prevention plan. Amendments to the plan may be reviewed by the Agency in the same manner as Part IV.B above. The SWPPP and site map must be modified within 7 days for any changes to construction plans, stormwater controls or other activities at the site that are no longer accurately reflected in the SWPPP. Any revisions of the documents for the storm water pollution prevention plan shall be kept on site at all times.

D. Contents of Plan. The storm water pollution prevention plan shall include the following items:

1. **Site Description.** Each plan shall provide a description of the following:
 - a. A description of the nature of the construction activity or demolition work;
 - b. A description of the intended sequence of major activities which disturb soils for major portions of the site (e.g. clearing, grubbing, excavation, grading, on-site or off-site stockpiling of soils, on-site or off-site storage of materials);
 - c. An estimate of the total area of the site and the total area of the site that is expected to be disturbed by clearing, grubbing, excavation, grading, on-site or off-site stockpiling of soils and storage of materials, or other activities;
 - d. An estimate of the runoff coefficient of the site after construction activities are completed and existing data describing the soil or the quality of any discharge from the site;
 - e. A site map indicating drainage patterns and approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking, areas of soil disturbance, the location of major structural and nonstructural controls identified in the plan, the location of areas where stabilization practices are expected to occur, locations of on-site or off-site soil stockpiling or material storage, surface waters (including wetlands), and locations where storm water is discharged to a surface water or MS4. For sites discharging to an MS4, a separate map identifying the location of the construction site and the location where the MS4 discharges to surface water must also be included; and
 - f. The name of the receiving water(s) and the ultimate receiving water(s), and areal extent of wetland acreage at the site.
2. **Controls.** Each plan shall include a description of appropriate controls that will be implemented at the construction site and any off-site stockpile or storage area unless already authorized by a separate NPDES permit. The plan shall include details or drawings that show proper installation of controls and BMPs. The Illinois Urban Manual <https://illinoisurbanmanual.org/> or other similar documents shall be used for developing the appropriate management practices, controls or revisions of the plan. The plan will clearly describe for each major activity identified in paragraph D.1 above, appropriate controls and the timing during the construction process that the controls will be implemented. For example, perimeter controls for one portion of the site will be installed after the clearing and grubbing necessary for installation of the measure, but before the clearing and grubbing for the remaining portions of the site. Perimeter controls will be actively maintained and/or repaired until final stabilization of those portions of the site upward of the perimeter control. Temporary perimeter controls will be removed after final stabilization. The description of controls shall address as appropriate the following minimum components:
 - a. **Erosion and Sediment Controls.** The permittee shall design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:
 - (i) Control storm water volume and velocity within the site to minimize soil erosion;
 - (ii) Control storm water discharges, including both peak flowrates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
 - (iii) Minimize the amount of soil exposed during construction activity through the use of project phasing or other appropriate techniques;
 - (iv) Minimize the disturbance of steep slopes;
 - (v) Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site. Install sediment controls along any perimeter areas of the site that are downslope from any exposed soil or other disturbed areas, with both ends of the perimeter control installed upslope (e.g., at 45 degrees) to prevent stormwater from circumventing the edge of the perimeter control. After a storm event, if there is evidence of stormwater circumventing or undercutting the perimeter control, extend controls and/or repair undercut areas to fix the problem;
 - (vi) Provide and maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infiltration would be inadvisable due to the underlying geology (e.g. karst topography) and ground water contamination concerns, or infeasible due to site conditions;
 - (vii) Minimize soil compaction and, unless infeasible, preserve topsoil;
 - (viii) Minimize sediment track-out. Where sediment has been tracked-out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any Water of the U.S., or to any stormwater conveyance or storm drain inlet, or constructed or natural site drainage features, unless the feature is connected to a sediment basin, sediment trap, or similarly effective control; and,
 - (ix) Minimize dust. On areas of exposed soils, minimize the generation of dust through the appropriate application of water or other dust suppression techniques.
 - b. **Stabilization Practices.** The storm water pollution prevention plan shall include a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved where practicable and that disturbed portions of the site are stabilized. Stabilization practices may include: temporarily seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, staged or staggered development, and other appropriate measures. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated, shall be included in the plan. Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization of disturbed areas must be initiated within 1 working

NPDES Permit No. ILR10

day of permanent or temporary cessation of earth disturbing activities and shall be completed as soon as possible but not later than 14 days from the initiation of stabilization work in an area. Exceptions to these time frames are specified as provided in paragraphs (i) and (ii) below:

- (i) Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
 - (ii) On areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method can be used. Temporary stabilization techniques and materials shall be described in the SWPPP.
 - (iii) Stabilization is not required for exit points at linear utility construction sites that are used only episodically and for very short durations over the life of the project, provided other exit point controls are implemented to minimize sediment track-out.
- c. **Structural Practices.** A description of structural practices utilized to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural practices should be placed on upland soils to the degree practicable. The installation of these devices may be subject to Section 404 of the CWA.
- (i) The following design requirements apply to sediment basins if such structural practices will be installed to reduce sediment concentrations in storm water discharges:
 - a. When discharging from the sediment basin, utilize outlet structures that withdraw water from the surface in order to minimize the discharge.
 - b. Minimize erosion of the sediment basin using stabilization controls (e.g., erosion control blankets), at the inlet and outlet using erosion controls and velocity dissipation devices:
 - c. Sediment basins shall be designed to facilitate maintenance, including sediment removal from the basins, as necessary.
 - (ii) The following requirements apply to protecting storm drain inlets:
 - a. Install inlet protection measures that minimize sediment from discharges prior to entry into any storm drain inlet that carries stormwater flow from your site to a water of the U.S., provided you have authority to access the storm drain inlet; and
 - b. Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.
 - c. Where inlet protection measures are not required because the storm drain inlets to which your site discharges are conveyed to a sediment basin, sediment trap, or similarly effective control, include a short description of the control that receives the stormwater flow from the site.
- d. **Use of Treatment Chemicals.** Identify the use of all polymer flocculants or treatment chemicals at the site. Dosage of treatment chemicals shall be identified along with any information from any Material Safety Data Sheet. Describe the location of all storage areas for chemicals. Include any information from the manufacturer's specifications. Treatment chemicals must be stored in areas where they will not be exposed to precipitation. The SWPPP must describe procedures for use of treatment chemicals and staff responsible for use/application of treatment chemicals must be trained on the established procedures.
- e. **Best Management Practices for Impaired Waters.** For any site which discharges directly to an impaired water identified on the Agency's website for 303(d) listing for suspended solids, turbidity, or siltation the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event. If required by federal regulations or the Illinois Urban Manual, the storm water pollution prevention plan shall adhere to a more restrictive design criteria. Please refer to the Agency's website at: <https://epa.illinois.gov/topics/water-quality/watershed-management/tmdls/303d-list.html>
- f. **Pollution Prevention.** The permittee shall design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:
- (i) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
 - (ii) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to storm water. Minimization to exposure is not required for any products or materials where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or when exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use);
 - (iii) Minimize the exposure of fuel, oil, hydraulic fluids, other petroleum products, and other chemicals by storing in covered areas or containment areas. Any chemical container with a storage of 55 gallons or more must be stored a minimum of 50 feet from receiving waters, constructed or natural site drainage features, and storm drain inlets. If infeasible due to site constraints, store containers as far away as the site permits and document in your SWPPP the specific reasons why the 50-foot setback is infeasible and how the containers will be stored; and
 - (iv) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- g. **Other Controls.**
- (i) **Waste Disposal.** No solid materials, including building materials, shall be discharged to Waters of the United States, except as authorized by a Section 404 permit.
 - (ii) The plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.
 - (iii) For construction sites that receive concrete or asphalt from off-site locations, the plan must identify and include appropriate controls and measures to reduce or eliminate discharges from these activities.
 - (iv) The plan shall include spill response procedures and provisions for reporting if there are releases in excess of reportable quantities.
 - (v) The plan shall ensure that regulated hazardous or toxic waste must be stored and disposed in accordance with any applicable State

NPDES Permit No. ILR10

and Federal regulations.

- h. **Best Management Practices for Post-Construction Storm Water Management.** Describe the measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA. This permit only addresses the installation of storm water management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Permittees are responsible for only the installation and maintenance of storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with industrial activity have been eliminated from the site.

- (i) While not mandatory, it is advisable that the permittee consider including in its storm water pollution prevention plan and design and construction plans methods of post-construction storm water management to retain the greatest amount of post-development storm water run-off practicable, given the site and project constraints. Such practices may include but are not limited to: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). Technical information on many post-construction storm water management practices is included in the Illinois Urban Manual (2017).

The storm water pollution prevention plan shall include an explanation of the technical basis used to select the practices to control pollution where post-construction flows will exceed predevelopment levels.

- (ii) Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).
- (iii) Unless otherwise specified in the Illinois Urban Manual (2017), the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event.

i. **Approved State or Local Plans.**

- (i) The management practices, controls and other provisions contained in the storm water pollution prevention plan must be at least as protective as the requirements contained in the Illinois Urban Manual, (2017). Construction activities which discharge storm water must include in their storm water pollution prevention plan procedures and requirements specified in applicable sediment and erosion control plans or storm water management plans approved by local officials. Requirements specified in sediment and erosion control plans or site permits or storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit. The plans shall include all requirements of this permit and include more stringent standards required by any local approval. This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit that is issued for the construction site.
- (ii) Dischargers seeking alternative permit requirements are not authorized by this permit and shall submit an individual permit application in accordance with 40 CFR 122.26 at the address indicated in Part II.D (Where to Submit) of this permit, along with a description of why requirements in approved local plans or permits should not be applicable as a condition of an NPDES permit.

j. **Natural Buffers.** For any stormwater discharges from construction activities within 50 feet of a Waters of the United States, except for activities for water-dependent structures authorized by a Section 404 permit, the permittee shall:

- (i) Provide a 50-foot undisturbed natural buffer between the construction activity and the Waters of the United States; or
 (ii) Provide additional erosion and sediment controls within that area.

3. **Maintenance.**

- a. The plan shall include a description of procedures to maintain in good and effective operating conditions, all erosion and sediment control measures and other Best Management Practices, including vegetation and other protective measures identified in the Storm Water Pollution Prevention Plan.
- b. Where a basin has been installed to control sediment during construction activities, the Permittees shall keep the basin(s) in effective operating condition and remove accumulated sediment as necessary. Sediment shall be removed in accordance with the Illinois Urban Manual (2017) or more frequently. Maintenance of any sediment basin shall include a post construction clean out of accumulated sediment if the basin is to remain in place.
- c. Other erosion and sediment control structures shall be maintained and cleaned as necessary to keep structure(s) in effective operating condition, including removal of excess sediment as necessary.

4. **Inspections.** Qualified personnel (provided by the permittee) shall inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm or by the end of the following business or work day that is 0.50 inches or greater. Qualified personnel means a person knowledgeable in the principles and practices of erosion and sediment controls measures, such as a licensed Professional Engineer (P.E.), a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Erosion Sediment and Storm Water Inspector (CESSWI), a Certified Stormwater Inspector (CSI), a person that has successfully completed the Federal CGP Inspector Training offered by USEPA, or other knowledgeable person who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activities. Areas inaccessible during inspections due to flooding or other unsafe conditions shall be inspected within 72 hours of becoming accessible.

NPDES Permit No. ILR10

- a. Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions (when ground and/or air temperatures are at or below 32 degrees Fahrenheit). Weekly inspections will recommence when construction activities are conducted, or if there is a 0.50 inches or greater rain event, or a discharge due to snowmelt occurs.
- b. Disturbed areas, areas used for storage of materials that are exposed to precipitation and all areas where stormwater typically flows within the site shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. All locations where stabilization measures have been implemented shall be observed to ensure that they are still stabilized. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.
- c. For sites discharging dewatering water, you must conduct an inspection during the discharge, once per day on which the discharge occurs and record the following in a report within 24 hours of completing the inspection:
 - (i) The inspection date;
 - (ii) Names and titles of personnel performing the inspection;
 - (iii) Approximate times that the dewatering discharge began and ended on the day of inspection;
 - (iv) Estimates of the rate (in gallons per day) of discharge on the day of inspection;
 - (v) Whether or not any of the following indications of pollutant discharge were observed at the point of discharge: a sediment plume, suspended solids, unusual color, presence of odor, decreased clarity, or presence of foam; and/or a visible sheen on the water surface or visible oily deposits on the bottom or shoreline of the receiving water.
- d. Based on the results of the inspection, the description of potential pollutant sources identified in the storm water pollution prevention plan in accordance with Part IV.D.1 (Site Description) of this permit and the pollution prevention control measures identified in the plan in accordance with Part IV.D.2 (Controls) of this permit shall be revised as appropriate as soon as practicable after such inspection to minimize the potential for such discharges. Such modifications shall provide for timely implementation of any changes to the plan and pollution prevention control measures within 7 calendar days following the inspection.
- e. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph b above shall be made and retained as part of the storm water pollution prevention plan for at least three years from the date that the permit coverage expires or is terminated. All inspection reports shall be retained at the construction site. The report shall be signed in accordance with Part VI.G (Signatory Requirements) of this permit. Any flooding or other unsafe conditions that delay inspections shall be documented in the inspection report.
- f. The permittee shall notify the appropriate Agency Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax (see Attachment A) within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit. The permittee shall complete and submit within 5 days an "Incidence of Noncompliance" (ION) report for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit. Submission shall be on forms provided by the Agency and include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. Corrective actions must be undertaken immediately to address the identified non-compliance issue(s).
- g. All reports of noncompliance shall be signed by a responsible authority as defined in Part VI.G (Signatory Requirements).
- h. After the initial contact has been made with the appropriate Agency Field Operations Section Office, all reports of noncompliance shall be mailed to the Agency at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

5. Corrective Actions. You must take corrective action to address any of the following conditions identified at your site:

- a. A stormwater control needs repair or replacement; or
- b. A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly; or
- c. Your discharges are causing an exceedance of applicable water quality standards; or
- d. A prohibited discharge has occurred.

Corrective Actions shall be completed as soon as possible and documented within 7 days in an Inspection Report or report of noncompliance. If it is infeasible to complete the installation or repair within seven (7) calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7-day timeframe and document your schedule for installing the stormwater control(s) and making it operational as soon as feasible after the 7-day timeframe.

In the event that maintenance is required for the same stormwater control at the same location three or more times, the control shall be repaired in a manner that prevents continued failure to the extent feasible, and you must document the condition and how it was repaired in your records. Alternatively, you must document in your records why the specific recurrence of this same issue should continue to be addressed as a routine maintenance fix.

NPDES Permit No. ILR10

6. **Non-Storm Water Discharges.** Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2 of this permit that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.
- E. **Additional requirements for storm water discharges from industrial activities other than construction, including dedicated asphalt plants, and dedicated concrete plants.** This permit may only authorize any storm water discharge associated with industrial activity from a construction site that is mixed with a storm water discharge from an industrial source other than construction, where:
1. The industrial source other than construction is located on the same site as the construction activity;
 2. Storm water discharges associated with industrial activity from the areas of the site where construction activities are occurring are in compliance with the terms of this permit; and
 3. Storm water discharges associated with industrial activity from the areas of the site where industrial activity other than construction are occurring (including storm water discharges from dedicated asphalt plants [other than asphalt emulsion facilities] and dedicated concrete plants) are in compliance with the terms, including applicable NOI or application requirements, of a different NPDES general permit or individual permit authorizing such discharges.
- F. **Contractors.**
1. The storm water pollution prevention plan must clearly identify for each measure identified in the plan, the contractor(s) or subcontractor(s) that will implement the measure. All contractors and subcontractors identified in the plan must sign a copy of the certification statement in paragraph 2 below in accordance with Part VI.G (Signatory Requirements) of this permit. All certifications must be included in the storm water pollution prevention plan except for owners that are acting as contractors.
 2. **Certification Statement.** All contractors and subcontractors identified in a storm water pollution prevention plan in accordance with paragraph 1 above shall sign a copy of the following certification statement before conducting any professional service at the site identified in the storm water pollution prevention plan:

"I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."

The certification must include the name and title of the person providing the signature in accordance with Part VI.G of this permit: the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made.

Part V. RETENTION OF RECORDS

- A. The permittee shall retain copies of storm water pollution prevention plans and all reports and notices required by this permit, records of all data used to complete the Notice of Intent to be covered by this permit and the Agency Notice of Permit Coverage letter for a period of at least three years from the date that the permit coverage expires or is terminated. This period may be extended by request of the Agency at any time.
- B. The permittee shall retain a copy of the storm water pollution prevention plan and any revisions to said plan required by this permit at the construction site from the date of project initiation to the date of final stabilization. Any manuals or other documents referenced in the SWPPP shall also be retained at the construction site.

Part VI. STANDARD PERMIT CONDITIONS

- A. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Illinois Environmental Protection Act and the CWA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Failure to obtain coverage under this permit or an individual permit for storm water releases associated with construction activities is a violation of the Illinois Environmental Protection Act and the CWA.
- B. **Continuation of the Expired General Permit.** This permit expires five years from the date of issuance. An expired general permit continues in force and effect until a new general permit or an individual permit is issued. Only those construction activities authorized to discharge under the expiring general permit are covered by the continued permit.
- C. **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- E. **Duty to Provide Information.** The permittee shall furnish within a reasonable time to the Agency or local agency approving sediment and erosion control plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system, any information which is requested to determine compliance with this permit. Upon request, the permittee shall also furnish to the Agency or local agency approving sediment and erosion control plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system, copies of all records required to be kept by this permit.
- F. **Other Information.** When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the Agency, he or she shall promptly submit such facts or information.
- G. **Signatory Requirements.** All Notices of Intent, storm water pollution prevention plans, reports, certifications or information either submitted to the

NPDES Permit No. ILR10

Agency or the operator of a large or medium municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed.

1. All Notices of Intent shall be signed as follows:

- a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (2) any person authorized to sign documents that has been assigned or delegated said authority in accordance with corporate procedures;
- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. All reports required by the permit and other information requested by the Agency shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described above and submitted to the Agency.
- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).
- c. **Changes to Authorization.** If an authorization under Part I.C (Authorization) is no longer accurate because a different individual or position has responsibility for the overall operation of the construction site, a new authorization satisfying the requirements of Part I.C must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.
- d. **Certification.** Any person signing documents under this Part shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- H. **Penalties for Falsification of Reports.** Section 309(c)(4) of the Clean Water Act provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both. Section 44(j)(4) and (5) of the Environmental Protection Act provides that any person who knowingly makes any false statement, representation, or certification in an application form, or form pertaining to a NPDES permit commits a Class A misdemeanor, and in addition to any other penalties provided by law is subject to a fine not to exceed \$10,000 for each day of violation.
- I. **Penalties for Falsification of Monitoring Systems.** The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by fines and imprisonment described in Section 309 of the CWA. The Environmental Protection Act provides that any person who knowingly renders inaccurate any monitoring device or record required in connection with any NPDES permit or with any discharge which is subject to the provisions of subsection (f) of Section 12 of the Act commits a Class A misdemeanor, and in addition to any other penalties provided by law is subject to a fine not to exceed \$10,000 for each day of violation.
- J. **Oil and Hazardous Substance Liability.** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the CWA.
- K. **Property Rights.** The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
- L. **Severability.** The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.
- M. **Transfers.** This permit is not transferable to any person except after notice to the Agency. The Agency may require the discharger to apply for and obtain an individual NPDES permit as stated in Part I.C (Authorization).
- N. **Requiring an Individual Permit or an Alternative General Permit.**

NPDES Permit No. ILR10

1. The Agency may require any person authorized by this permit to apply for and/or obtain either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition the Agency to take action under this paragraph. Where the Agency requires a discharger authorized to discharge under this permit to apply for an individual NPDES permit, the Agency shall notify the discharger in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that on the effective date of the individual NPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Applications shall be submitted to the Agency indicated in Part II.D (Where to Submit) of this permit. The Agency may grant additional time to submit the application upon request of the applicant. If a discharger fails to submit in a timely manner an individual NPDES permit application as required by the Agency under this paragraph, then the applicability of this permit to the individual NPDES permittee is automatically terminated at the end of the day specified by the Agency for application submittal. The Agency may require an individual NPDES permit based on:

- a. information received which indicates the receiving water may be of particular biological significance pursuant to 35 Ill. Adm. Code 302.105(d)(6);
- b. whether the receiving waters are impaired waters for suspended solids, turbidity or siltation as identified by the Agency's 303(d) listing;
- c. size of construction site, proximity of site to the receiving stream, etc.

The Agency may also require monitoring of any storm water discharge from any site to determine whether an individual permit is required.

2. Any discharger authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request, to the Agency at the address indicated in Part II.D (Where to Submit) of this permit. The request may be granted by issuance of any individual permit or an alternative general permit if the reasons cited by the permittee are adequate to support the request.

3. When an individual NPDES permit is issued to a discharger otherwise subject to this permit, or the discharger is authorized to discharge under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to a discharger otherwise subject to this permit or the discharger is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee remains in effect, unless otherwise specified by the Agency.

O. **State/Environmental Laws.** No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

P. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all construction activities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

Q. **Inspection and Entry.** The permittee shall allow the IEPA, or an authorized representative upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated construction activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

R. **Permit Actions.** This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

S. **Bypasses and Upsets.** The provisions of 40 CFR Section 122.41(m) & (n) are applicable and are hereby incorporated by reference.

Part VII. REOPENER CLAUSE

A. If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with industrial activity covered by this permit, the discharger may be required to obtain an individual permit or an alternative general permit in accordance with Part I.C (Authorization) of this permit or the permit may be modified to include different limitations and/or requirements.

B. Permit modification or revocation will be conducted according to provisions of 35 Ill. Adm. Code, Subtitle C, Chapter I and the provisions of 40 CFR 122.62, 122.63, 122.64 and 124.5 and any other applicable public participation procedures.

C. The Agency will reopen and modify this permit under the following circumstances:

1. the U.S. EPA amends its regulations concerning public participation;

NPDES Permit No. ILR10

2. a court of competent jurisdiction binding in the State of Illinois or the 7th Circuit Court of Appeals issues an order necessitating a modification of public participation for general permits; or
3. to incorporate federally required modifications to the substantive requirements of this permit.

Part VIII. DEFINITIONS

"Agency" means the Illinois Environmental Protection Agency.

"Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

"Commencement of Construction or Demolition Activities" The initial disturbance of soils associated with clearing, grading, or excavating activities or other construction or demolition activities.

"Common Plan of Development or Sale" A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one common plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot.

"Construction Activities" Earth disturbing activities, such as clearing, grading and excavation of land. For purposes of this permit, construction activities also means construction site, construction site activities, or site. Construction activities also include any demolition activities at a site.

"Construction Site" or "Site" The land or water area where construction activities will occur and where stormwater controls will be installed and maintained. The construction site includes construction support activities, which may be located at a different part of the property from where the primary construction activity will take place, or on a different piece of property altogether.

"Construction Support Activity" A construction-related activity that specifically supports the construction activity and involves earth disturbance or pollutant-generating activities of its own, and can include activities associated with concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, and borrow areas.

"Contractor" means a person or firm that undertakes a contract to provide materials or labor to perform a service or do a job related to construction of the project authorized by this permit,

"CWA" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. (96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.).

"Dedicated portable asphalt plant" A portable asphalt plant that is located on or contiguous to a construction site and that provides asphalt only to the construction site that the plant is located on or adjacent to. The term dedicated portable asphalt plant does not include facilities that are subject to the asphalt emulsion effluent limitation guideline at 40 CFR 443.

"Dedicated portable concrete plant" A portable concrete plant that is located on or contiguous to a construction site and that provides concrete only to the construction site that the plant is located on or adjacent to.

"Dedicated sand or gravel operation" An operation that produces sand and/or gravel for a single construction project.

"Director" means the Director of the Illinois Environmental Protection Agency or an authorized representative.

"Final Stabilization" means that all soil disturbing activities at the site have been completed, and either of the two following conditions are met:

- (i) A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
- (ii) Equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

For individual lots in residential construction, final stabilization means that either:

- (i) The homebuilder has completed final stabilization as specified above, or
- (ii) The homebuilder has established temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, final stabilization.

"Impairment" is the status of a surface water in which an applicable water quality standard is not being attained for a particular pollutant.

"Large and Medium municipal separate storm sewer system" means all municipal separate storm sewers that are either:

- (i) Located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and G of 40 CFR Part 122); or
- (ii) Located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (these counties are listed in Appendices H and I of 40 CFR Part 122); or
- (iii) Owned or operated by a municipality other than those described in paragraph (i) or (ii) and that are designated by the Director as part of the large or medium municipal separate storm sewer system.

NPDES Permit No. ILR10

"NOI" means notice of intent to be covered by this permit (see Part II of this permit.)

"NOT" means notice of termination of coverage by this permit (See Part II of this permit.)

"Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

"Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff.

"Storm Water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

"Storm Water Control" means any best management practice or other method (including narrative effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

"Total Maximum Daily Loads (TMDLs)" The calculation of the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will meet and continue to meet water quality standards for that particular pollutant. A TMDL determines a pollutant reduction target and allocates load reductions necessary to the source(s) of the pollutant.

"Turbidity" means a condition of water quality characterized by the presence of suspended solids and/or organic material.

"Waters" mean all accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon the State of Illinois, except that sewers and treatment works are not included except as specially mentioned; provided, that nothing herein contained shall authorize the use of natural or otherwise protected waters as sewers or treatment works except that in-stream aeration under Agency permit is allowable.

"Work day" for the purpose of this permit, a work day is any calendar day on which construction activities will take place.

Attachment A

Division of Water Pollution Control
Regions by County

Des Plaines Region (FOS 2) Manager 847/294-4000

Boone Kane Ogle	Cook Kankakee Stephenson	DeKalb Kendall Will	DuPage Lake Winnebago	Grundy Lee	Jo Daviess McHenry
-----------------------	--------------------------------	---------------------------	-----------------------------	---------------	-----------------------

Peoria Region (FOS 3) Manager 309/671-3022

Bureau Knox Putnam Woodford	Carroll LaSalle Rock Island	Fulton Marshall Stark	Hancock McDonough Tazewell	Henderson Mercer Warren	Henry Peoria Whiteside
--------------------------------------	-----------------------------------	-----------------------------	----------------------------------	-------------------------------	------------------------------

Champaign Region (FOS 4) Manager 217/278-5800

Champaign Douglas Livingston Vermilion	Clark Edgar Macon	Coles Effingham McLean	Crawford Ford Moultrie	Cumberland Iroquois Piatt	DeWitt Jasper Shelby
---	-------------------------	------------------------------	------------------------------	---------------------------------	----------------------------

Springfield Region (FOS 5) Manager 217/557-8761

Adams Jersey Morgan	Brown Logan Pike	Calhoun Macoupin Sangamon	Cass Mason Schuyler	Christian Menard Scott	Green Montgomery
---------------------------	------------------------	---------------------------------	---------------------------	------------------------------	---------------------

Collinsville Region (FOS 6) Manager 618/346-5120

Bond Randolph	Clinton St. Clair	Fayette Washington	Madison	Marion	Monroe
------------------	----------------------	-----------------------	---------	--------	--------

Marion Region (FOS 7) Manager 618/993-7200

Alexander Hardin Perry Wabash	Clay Jackson Pope Wayne	Edwards Jefferson Pulaski White	Franklin Johnson Richland Williamson	Gallatin Lawrence Saline	Hamilton Massac Union
--	----------------------------------	--	---	--------------------------------	-----------------------------

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24-Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

Flow Proportional Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

- (1) **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.
- (2) **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.
- (3) **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (4) **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- (5) **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.
- (6) **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- (7) **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.
- (8) **Duty to provide information.** The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

(9) **Inspection and entry.** The permittee shall allow an authorized representative of the Agency or USEPA (including an authorized contractor acting as a representative of the Agency or USEPA), upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) **Monitoring and records.**

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. Records related to the permittee's sewage sludge use and disposal activities shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Agency or USEPA at any time.
- (c) Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
- (d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) **Signatory requirement.** All applications, reports or information submitted to the Agency shall be signed and certified.

(a) **Application.** All permit applications shall be signed as follows:

- (1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;
- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

(b) **Reports.** All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a); and

(2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and

(3) The written authorization is submitted to the Agency.

(c) **Changes of Authorization.** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d) **Certification.** Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(12) **Reporting requirements.**

(a) **Planned changes.** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility.

Notice is required when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR 122.29 (b); or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements pursuant to 40 CFR 122.42 (a)(1).

(3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

(b) **Anticipated noncompliance.** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) **Transfers.** This permit is not transferable to any person except after notice to the Agency.

(d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(e) **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

- (3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(f) **Twenty-four hour reporting.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:

- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit.
- (2) Any upset which exceeds any effluent limitation in the permit.
- (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.

(g) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).

(h) **Other information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

(13) **Bypass.**

(a) Definitions.

- (1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
- (2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).

(c) Notice.

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (12)(f) (24-hour notice).

(c) **Formation of bypass.**

(1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass, unless:

- (i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- (iii) The permittee submitted notices as required under paragraph (13)(c).

(2) The Agency may approve an anticipated bypass, after considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).

(14) **Upset.**

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated; and
- (3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).
- (4) The permittee complied with any remedial measures required under paragraph (4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(15) **Transfer of permits.** Permits may be transferred by modification or automatic transfer as described below:

(a) Transfers by modification. Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

(b) Automatic transfers. As an alternative to transfers under paragraph (a), any NPDES permit may be automatically transferred to a new permittee if:

- (1) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;
 - (2) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage and liability between the existing and new permittees; and
 - (3) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.
- (16) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:
 - (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - (1) One hundred micrograms per liter (100 ug/l);
 - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or
 - (4) The level established by the Agency in this permit.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.
 - (17) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:
 - (a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
 - (b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - (c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
 - (18) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:
 - (a) User charges pursuant to Section 204 (b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;
 - (b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and
 - (c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.
 - (19) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.
- (20) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.
 - (21) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.
 - (22) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed \$25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Additional penalties for violating these sections of the Clean Water Act are identified in 40 CFR 122.41 (a)(2) and (3).
 - (23) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.
 - (24) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.
 - (25) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.
 - (26) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.
 - (27) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board or any court with jurisdiction.
 - (28) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.
- (Rev. 7-9-2010 bah)

NPDES SWPPP

Intentionally Blank

NPDES PERMIT NO. ILR10 SWPPP
For
Henderson Water District
Phase V Water Distribution System Expansion

Location: Within Macoupin County portions of: Barr Township T.11N.-R.9W. Sections 36; Honey Point Township T.9N.-R.6W. Section 15; Shaw's Point Township T.10N.-R.6W. Sections 15, 22, 25; South Otter Township T.11N.-R.7W. Sections 32; Nilwood Township T.11N.-R.6W. Sections 4,5,8,9,16,17; Western Mound Township T.10N.-R.9W. Sections 2,3,4,8,9,10,11,13,15,17,24. Within Montgomery County portions of: North Litchfield Township T.9N.-R.5W. Sections 16,30,31; Zanesville Township T.10N-R.5W. Sections 2, 13, 14, 15, 19.

Owner: Henderson Water District
1004 State Highway 16
Jerseyville IL, 62052

Project Description:

The "Henderson Water District Phase V Water Distribution System Expansion" project is taking place to serve additional areas of the water district. As a part of the "Phase V" project, approximately 253,440 lineal feet of 4-inch and 6-inch PVC water main will be installed. Most of the proposed water main will be trenched and/or bored, creating minimal disturbance.

It is estimated that 117 acres of lawns, pasture, timber, and tillable farmland will be disturbed due to the installation of the proposed water main. Installation of the water main will not alter the existing drainage patterns. Therefore, erosion control structures will be installed only where existing topographic conditions necessitate their use. Depending on weather conditions the trench will be temporarily and/or permanently seeded within the time frame set forth under the general permit. After final stabilization, the runoff coefficient for the site will be the same as it was prior to construction.

Receiving Streams:

There are numerous unnamed ditches and tributaries that carry storm water from the site to larger creeks. The named creeks that ultimately receive storm waters from the site include Joe's Creek, Solomon Creek, Lick Creek, Bear Creek, Kent Branch, Hurricane Creek, Spanish Needle Creek, Sugar Creek, Macoupin Creek, Shearles Branch, Shaw Point Branch, Shop Creek, West Fork Shoal Creek, Otter Creek-Hodges Creek. Due to the type of construction, intermingling of off-site stormwater is inevitable. Such intermingling, however, will be of little consequence due to the narrow width of disturbance.

Sequence of Major Activities and Appropriate Controls Implemented:

It is anticipated that the primary erosion controls implemented will be directional boring, rip-rap berms, dirt berms and temporary/permanent seeding. However, any viable trench stabilization, slope stabilization or perimeter protection measure may be utilized in lieu of those described below.

1. Install the water main by using either the trenching or boring method.
 - A. Utilize directional boring techniques at ditch and creek crossings in highly erodible areas to eliminate soil disturbance
 - B. Install rip-rap berms or alternative ditch checks perpendicular to the trench as

- shown on the plans and/or where terrain dictates their use to prevent soil erosion in the trench.
- C. Install dirt berms on hillsides through wooded areas as shown on the Drawings and described in the Specifications.
 - D. Temporarily seed and mulch any trenched areas where soil erosion could occur, except for those areas located in farm fields, within 7 days of original excavation if not to be disturbed within 14 days.
- 2 Flush and test the water main in accordance with IEPA regulations. (Note: Water main flushing is a non-storm water discharge that will occur during construction.)
 - A. Flush water will be directed, through the use of hose(s), away from highly erodible soils and dissipated to prevent soil erosion. A sufficient length of hose will be used to prevent flush water from discharging onto unstabilized or otherwise highly erodible soils.
 - 3 Install service connections by excavating and tapping the new water main, trenching or boring the new service line as required, and setting the meter box and internal components.
 - A. Each excavation for service connections will be backfilled immediately and seeded (either temporarily or permanently) within 7 days if not to be disturbed within 14 days of original excavation.
 - 4 After all above construction activities have been completed, any temporary erosion control measures utilized will be removed (except that temporary seeding and mulch may be worked into the soil) and the entire construction site will be graded and permanently seeded and mulched.

Compliance with Federal, State, County, and Local Regulations:

In addition to meeting the requirements of this general permit, construction activities related to the "Henderson Water District Phase V Water Distribution System Expansion" shall comply with any and all Federal, State, County and Local regulations regarding storm water pollution prevention.

Maintenance Procedures:

1. Dirt Berms
 - A. It is anticipated that dirt berms will require minimal maintenance as they are in place primarily to divert the runoff water away from the trench line. However, it may be necessary to reconstruct dirt berms or add additional dirt berms on a given hillside. It will also be necessary to temporarily seed and mulch dirt berms to prevent erosion of the berm itself.
2. Temporary and Permanent Seeding:
 - A. Reseed and re-mulch any areas where initial seeding efforts did not work.
 - B. Any time it is necessary to redistribute the sediment collected against the erosion control structures it will likely also be necessary to reseed and re-mulch the same area.
3. Silt Fence:

- A. Sediment collected against the silt fence shall be removed and redistributed any time the sediment exceeds 25% of the silt fence height.
 - B. Silt fence shall be inspected for depth of sediment, tears, to ensure fabric is securely attached to fence posts, and to see that the fence posts are firmly in the ground.
4. Inlet Protection:
- A. Inlet and pipe protection shall be placed as indicated on the plans or at every storm sewer inlet/crossroad culvert entrance. All inlet and pipe protection shall be maintained by removing sediment collected and restoring to original condition. Sediment collected against the BMP shall be removed and redistributed any time the sediment exceeds 25% of the BMP's effective height.
5. Ditch Checks:
- A. Ditch checks shall be placed in the ditches as indicated on the plans or at every 1.5 foot fall/rise in ditch grade. Straw bales, hay bales, and perimeter erosion barrier/silt fence will not be permitted for temporary or permanent ditch checks. Ditch checks shall be composed of aggregate, silt panels, rolled excelsior, urethane foam/geotextile (silt wedges), earth median. Ditch checks will be maintained by removing silt build up when sediment collected against the BMP shall be removed and redistributed any time the sediment exceeds 25% of the BMP's effective height.

Construction Materials and Site Access:

All materials for construction such as PVC water main, DI fittings, concrete blocks, etc., and their related containers shall be neatly stored, and wastes generated from these materials shall be properly disposed of. To the extent possible, the construction materials shall be stored at one general location in a neat and orderly fashion. This does not, however, prohibit the contractor from laying out pipe, fittings, and/or related appurtenances ahead of the excavation (as per the specifications). Any waste material generated from construction related work shall be placed in dedicated containers or otherwise properly disposed of at the end of each day.

To the extent possible, there shall be a single entrance/exit access point to the material storage site and to any other single site where the contractor will be working for an extended period (> 2 weeks). This access point shall consist of an all-weather surface to limit the movement of sediment off site.

Inspections:

A qualified individual (as defined by the IEPA) shall observe all disturbed areas of the construction site at least once every seven (7) days and within 24-hours of a rainfall event that is 0.5 inches or greater or an equivalent snowfall. The observer shall review the usefulness of each erosion and sediment control measure implemented, shall indicate on the report and notify the contractor of any maintenance required, and shall also note any areas that appear to require additional measures to prevent erosion of disturbed soils. Any apparent revisions to the SWPPP shall be made to the plan and implemented within seven (7) calendar days following the observation. Similarly, maintenance of existing measures shall be continuous throughout the project and shall, in no instance be left unattended for more than seven (7) days after notification. Each site observation shall be finalized by writing a report summarizing the scope of the observation, name(s) and qualifications of the observer(s), date, major observations, and actions taken as a result of the findings. A copy of each report shall be attached to, and become part of, the SWPPP.

When the ground is frozen and/or between rainfall events of 0.5 inches or greater, no site visit will be required. An inspection report, however, will still be completed at least once every seven days indicating the conditions that eliminated the need for a site visit.

Certification

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Heneghan and Associates

Contractor Certification continued:

Sub-Contractor(s)

Signature Date

Title

Company Name

Company Address

Company Phone

Sub-Contractor(s)

Signature Date

Title

Company Name

Company Address

Company Phone

STORMWATER CONSTRUCTION SITE INSPECTION REPORT

GENERAL INFORMATION

Project Name:

Location:

Date of Inspection:

Start/End Time:

Inspector's Name:

Inspector's Title:

Inspector's Contact Information:

Describe present phase of construction:

Type of Inspection:

Regular Pre-storm event During storm event Post-storm event

WEATHER INFORMATION

Has there been a storm event since the last inspection? Yes No

If yes, provide:

Storm Start Date & Time:

Storm Duration (hrs):

Approximate Amount of Precipitation (in):

Weather at time of this inspection?

Clear Cloudy Rain Sleet Fog Snowing High Winds

Other:

Temperature:

Have any discharges occurred since the last inspection? Yes No

If yes, describe:

Are there any discharges at the time of inspection? Yes No

If yes, describe:

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Inspector

Printed Name and Title

Date

OVERALL SITE ISSUES

Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.

BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1. All inactive slopes and disturbed areas have been stabilized.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2. Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3. Are all sanitary waste receptacles placed in secondary containment and free of leaks?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4. Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5. Are discharge points and receiving waters free of any sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6. Are storm drain inlets properly protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7. Is the construction exit preventing sediment from being tracked into the street?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8. Is trash/litter from work areas collected and placed in covered dumpsters?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9. Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10. Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11. Are materials that are potential stormwater contaminants stored inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12. Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
13. (Other)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	