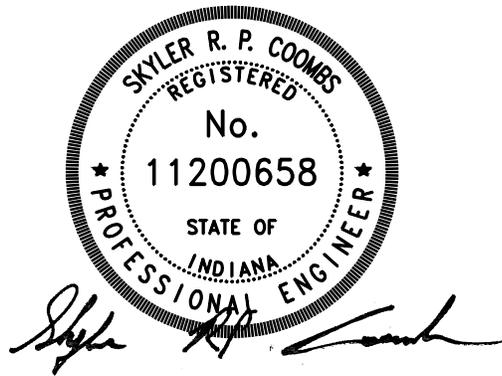


BIDDING, CONTRACT DOCUMENTS, AND
SPECIFICATIONS FOR

**NOBLE COUNTY BRIDGE NO. 33 REPLACEMENT PROJECT CARRYING
TRAFFIC ON COUNTY ROAD 150 EAST OVER CROFT DITCH**

NOBLE COUNTY INDIANA

March 6, 2025



Prepared by

Kurdziel Barker Engineering, Inc.
PO Box 44127
Indianapolis, IN 46244

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**NOBLE COUNTY BRIDGE NO. 33 REPLACEMENT PROJECT CARRYING
TRAFFIC ON COUNTY ROAD 150 EAST OVER CROFT DITCH**

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NOBLE COUNTY COMMISSIONERS

GARY D. LEATHERMAN	PRESIDENT
ANITA F. HESS	VICE-PRESIDENT
GARY TIMMERMAN	MEMBER
ZACHARY S. SMITH	HIGHWAY ENGINEER
MICHELLE MAWHORTER	AUDITOR

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ADVERTISEMENT TO BID
NOBLE COUNTY BRIDGE NO. 33
NOBLE COUNTY, INDIANA

Sealed bids are to be received in the Auditor's Office by 2:30 pm local time on April 25, 2025. Mail or deliver to the Noble County Auditor, 109 N. York St., Albion, IN 46701. Bids will be opened during the Commissioner's meeting in the Commissioner's Room at the Noble County Annex, 109 N. York St., Albion, Indiana 46701 on Monday, April 28, 2025 at 9:00 am EST. Any bids received later than the above time will be returned unopened.

DESCRIPTION OF WORK: Work for which proposals are to be received includes the replacement of Bridge No. 33 carrying North County Road 150 East over Croft Ditch. The work will consist of replacing the existing structure with a single-span, spread, composite, prestressed concrete box beam bridge. Along with the bridge work, approximately 170 feet of approach roadway construction is included in the immediate vicinity of the bridge.

BID DOCUMENTS: Plans and Specifications may be obtained from the Highway Department office located at 1118 E. Main Street, Albion, IN 46701 or from the county website at: <https://www.in.gov/counties/noble/offices/highway-department/>

Bidders shall assure that they have obtained complete sets of drawings and Contract Documents and shall assume the risk of any errors or omissions in the bids prepared in reliance on incomplete set of Contract Documents.

Bids shall be properly and completely executed on Bid Forms and in the order as identified and contained in the Contract Documents obtainable from the offices as stated above. Each bid shall be accompanied by a completely filled out Form No. 96 (latest revision) and acceptable Bid Security. Any bid not accompanied by the above-required items shall be deemed to be non-responsive bid.

No Bidder may withdraw his proposal within a period of 60 days following the date set for the receiving of bids. The Owner reserves the right to retain any and all bids for a period of not more than 60 days and said bid shall remain in full force and effect during said time. The Owner further reserves the right to waive informalities and to award the Contract to any Bidder all to the advantage of Noble County or to reject any and all bids.

BID SECURITY: Each bid shall be accompanied by an acceptable certified check made payable to the Noble County Board of Commissioners or an acceptable bid bond in the amount equal to 10% of the total bid price executed by an incorporated surety company in good standing and qualified to do business in the State of Indiana and whose name appears on the current Treasury Department Circular 570.

BONDS: A Performance Bond and Payment Bond each in the amount of 100% of the Contract price will be required from the Contractor to whom the work is awarded.

INDIANA REQUIREMENTS: Standard Questionnaire Form 96 (latest revision), completely filled out and signed, including attachment of Contractor's Financial Statement as stipulated in Section III.

COUNTY REQUIREMENTS: A prevailing wage scale will not be required for this project.

PRE-BID CONFERENCE: No pre-bid conference is scheduled for the project.

**FOR THE BOARD OF COMMISSIONERS
NOBLE COUNTY, INDIANA**

By: _____

Zachary S. Smith, P.E.
Noble County Engineer

INSTRUCTIONS TO BIDDERS

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NOTICE TO BIDDERS

Noble County Board of Commissioners
Noble County Bridge 33 Replacement

Notice is hereby given that sealed BIDS have been requested for the Noble County Bridge 33 Replacement Project. The bids will be opened and publicly read aloud at **9:00am EST, April 28, 2025 by the Noble County Board of Commissioners**, hereafter, referred to as OWNER. Bids must be received in hand or delivered to **Noble County Auditor, 109 N. York Street, Albion, IN 46701** prior to **2:30pm EST, April 25, 2025**. Bids received after this time will be returned unopened. Each Bid must be enclosed in a sealed envelope bearing the division title and the name and address of Bidder.

The Contract Documents, consisting of Notice to Bidders, Bid Form, Suggested Form of Agreement, General Conditions, Supplementary Conditions, Technical Special Provisions, Reports & Permits may be examined at the following location(s):

Noble County Highway Department
118 E. Main Street
Albion, IN 46701

Or

<https://www.in.gov/counties/noble/offices/highway-department/>

Each bidder is responsible for inspecting the Project site and for being thoroughly familiar with Contract Documents and Specifications. The failure or omission of any Bidder to do so shall in no way relieve any Bidder from any obligation with respect to the bid.

The work to be performed and the bid to be submitted shall include sufficient and proper sums for the construction, waste management, and disposal, labor, materials, permits, licenses, insurance, and all incidentals to and required for this construction project. All bids must be submitted on the bid forms as identified in the Contract Documents and Specifications.

Each proposal must be enclosed in a sealed envelope, bearing the title of the project, bid opening date and the name and address of the bidder firmly affixed. The Bid documents to be thus submitted by each bidder shall consist of all of the documents identified and provided under Bid Package Information. The bidder shall affix identifying tabs to the following sheets of each proposal:

- Bidder's Itemized Proposal & Declarations
- Bid Bond
- Standard Questionnaire & Financial Statement

Each individual proposal shall be accompanied by a certified check or acceptable Bidder's Bond, made payable to the Noble County Board of Commissioners, in a sum of not less than ten percent (10%) of the total amount of the proposal, which check or bond will be held by said Board of Commissioners as evidence that the bidder will, if awarded a contract, enter into the same with the OWNER upon notification from them to do so within ten days of said notification. Failure to execute the contract and to furnish a performance bond to the OWNER will be cause for forfeiture of the amount of money represented by the certified check, or bidder's bond, as liquidated damages. The OWNER at their discretion reserves the right

to waive any and all informalities in the bidding. All bids submitted shall be valid for 90 days from the opening of the bids. A conditional or qualified bid will not be accepted.

The OWNER reserves the right to ask for clarification for any bid submitted and reserves the right to reject any and all bids at their discretion. The specifications herein state the minimum requirements of the OWNER. It shall be the Bidder's responsibility to carefully examine each item of the specification. Any bid not in substantial compliance with these specifications will be rejected. It will be the responsibility of the Bidder to conform to the requirements unless deviations have been specifically cited by the Bidder and acceptance made on the basis of the exception. Contractor receiving award shall furnish an approved Performance Bond and Labor and Material Payment Bond in an amount at least equal to 100% of the contract amount and must be in full force and effect throughout the term of the construction project plus a period of twelve (12) months from the date of substantial completion. Bonds shall be furnished following notice of contract award.

Bids shall be properly and completely executed on bid forms included in the Specifications. Bids shall include all information requested by Indiana Form 96 included with the Specifications. Under Section III of Form 96, the Bidders shall submit a financial statement. The Owner may make such investigations as deemed necessary to determine the ability of the Bidder to perform the work and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserved the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Agreement and to complete the work contemplated herein.

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary 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.

Kurdziel Barker Engineering, Inc.
PO Box 44127
Indianapolis, IN 46244

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 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.

2.04 *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 10 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 five 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.
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.04 Indiana Iran Investment Certification and Indiana Legal Employment Certification: Indiana code 36-1-12-23 requires that all State Agencies and Political Subdivisions request Certification from its Contractors that the Contractor is not engaged in investment activities in, or with Iran. Indiana Code 22-5-1.7-11.1 requires that all State Agencies and Political Subdivisions request verification from its Contractors that its Contractor's employees are legally eligible to work in the United States. As such, the Contractor shall execute the "Indiana Iran Investment Certification" and the "Indiana Legal Employment Certification" included at the end of the Supplementary Conditions section of these specifications prior to the Notice of Award being issued.
- 3.05 Indiana Code 4-13-18 requires Contractors and Sub-Contractors having a contract estimated to be more than \$150,000 to have a written plan for a program to test the Contractor's Employees for drugs. By submission of a bid, the Contractor represents that: 1) That the Contractor has implemented an employee drug testing program described in the Contractor's plan and agrees to; 2) Cancellation of the Contract by the Owner if the Contractor; (a) fails to implement its employee drug testing program during the term of the contract; (b) fails to provide information regarding implementation of the Contractor's Employee testing program at the request of the Agency or Owner; or (c) provides the agency false information regarding the Contractor's Employee drug testing program. By submission of a bid Contractor represents that Contractor meets Indiana Code 4-13-18.
- 3.06 Indiana Code 5-16-13-12 requires a contractor that employs 10 or more employees to have a training program applicable to the tasks to be performed in the normal course of the employee's employment with the contractor. This program may be an apprenticeship program, a program offered by Ivy Tech Community College of Indiana, a program offered by Vincennes University, a program established by or for the contractor, a program offered by an entity sponsored by the

United States Department of Labor, Bureau of Apprenticeship and Training, a program that results in the award of an industry recognized portable certification, a program approved by the United States Department of Transportation Federal Highway Administration, or a program approved by the Indiana Department of Transportation. The statute also requires that any contractor or sub-contractor that employs 50 or more journeymen must participate in an apprenticeship or training program that meets the standards established by United States Department of Labor Bureau Apprenticeship and Training, the Indiana Department of Labor, the United States Department of Transportation Federal Highway Administration, or the Indiana Department of Administration. By submission of a bid, Contractor represents that Contractor has in place training programs that meet Indiana Code 5-16-13-12. 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 No pre-bid conference is scheduled for this project.

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 Supplementary 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 Supplementary 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 Supplementary 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 Data Report*: The Bidding Documents contain a Geotechnical Data Report (GDR).
 - a. As set forth in the Supplementary Conditions, the GDR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations. The GDR is a Contract Document.
 - b. The Conditions in the GDR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the GDR. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GDR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are described.
 - c. Nothing in the GDR 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 Supplementary Conditions, the GDR is a Contract Document containing data prepared by or for the Owner.
- 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.
- C. *Adequacy of Data*: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

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, if any. Maps to the Site will be available at the pre-Bid conference.
- C. Bidders visiting the Site are required to arrange their own transportation to the Site.
- D. Bidder must conduct the required Site visit during normal working hours.
- E. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- F. 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.
- G. 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.
- H. 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 Conditions.

5.06 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary 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. Email Daniel Kurdziel & Skyler Coombs at dkurdziel@kbengr.com & scoombs@kbengr.com.
- 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 10 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.
- 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 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.
- 10.02 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 See General Conditions Article 7 and Supplementary Conditions.

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 *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.

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 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.
- 15.02 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 shall be forfeited as determined by the Owner depending upon the circumstances. 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. 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.
- 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 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 Indiana 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 SC-7.10 of the Supplementary Conditions for additional information.

ARTICLE 22—WAGE SCALES

22.01 Each prospective Bidder shall comply with wage provisions pursuant to federal Fair Labor Standards Act (FLSA) and the Indiana Minimum Wage Law.

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BID PACKAGE INFORMATION

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CONTRACTOR'S BID FOR PUBLIC WORK - FORM 96

State Form 52414 (R2 / 2-13) / Form 96 (Revised 2013)

Prescribed by State Board of Accounts

PART I

(To be completed for all bids. Please type or print)

Date (month, day, year): _____

1. Governmental Unit (Owner): _____

2. County : _____

3. Bidder (Firm): _____

Address: _____

City/State/ZIPcode: _____

4. Telephone Number: _____

5. Agent of Bidder (if applicable): _____

Pursuant to notices given, the undersigned offers to furnish labor and/or material necessary to complete the public works project of _____

(Governmental Unit) in accordance with plans and specifications prepared by _____

_____ and dated _____ for the sum of

_____ \$ _____

The undersigned further agrees to furnish a bond or certified check with this bid for an amount specified in the notice of the letting. If alternative bids apply, the undersigned submits a proposal for each in accordance with the notice. Any addendums attached will be specifically referenced at the applicable page.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit basis, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS

(If applicable)

I, the undersigned bidder or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel products on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ACCEPTANCE

The above bid is accepted this _____ day of _____, _____, subject to the following conditions: _____

Contracting Authority Members:

PART II

(For projects of \$150,000 or more – IC 36-1-12-4)

Governmental Unit: _____

Bidder (Firm) _____

Date (month, day, year): _____

These statements to be submitted under oath by each bidder with and as a part of his bid. Attach additional pages for each section as needed.

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Table with 4 columns: Contract Amount, Class of Work, Completion Date, Name and Address of Owner. Contains 4 empty rows.

2. What public works projects are now in process of construction by your organization?

Table with 4 columns: Contract Amount, Class of Work, Expected Completion Date, Name and Address of Owner. Contains 4 empty rows.

3. Have you ever failed to complete any work awarded to you? _____ If so, where and why?

4. List references from private firms for which you have performed work.

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed work. *(Examples could include a narrative of when you could begin work, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)*

2. Please list the names and addresses of all subcontractors *(i.e. persons or firms outside your own firm who have performed part of the work)* that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

3. If you intend to sublet any portion of the work, state the name and address of each subcontractor, equipment to be used by the subcontractor, and whether you will require a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

4. What equipment do you have available to use for the proposed project? Any equipment to be used by subcontractors may also be required to be listed by the governmental unit.

5. Have you entered into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which would corroborate the prices listed.

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of bidder's financial statement is mandatory. Any bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the contract must be specific enough in detail so that said governing body can make a proper determination of the bidder's capability for completing the project if awarded.

BID FORM FOR CONSTRUCTION CONTRACT

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

ARTICLE 1—OWNER AND BIDDER

- 1.01 This Bid is submitted to: Noble County Board of Commissioners
- 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. Required Bidder Qualification Statement with supporting data; and
 - C. Indiana Form No. 96 (latest revision) which includes list of Proposed Subcontractors, list of Proposed References, Non-Collusion Affidavit, and Financial Statement.

ARTICLE 3—BASIS OF BID

- 3.01 *Unit Price Bids*
- A. Bidder will perform the following Work at the indicated unit prices:

Item No.	INDOT Specification	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1	105	CONSTRUCTION ENGINEERING	LS	1		
2	110	MOBILIZATION AND DEMOBILIZATION	LS	1		
3	201	CLEARING RIGHT OF WAY	LS	1		
4	202	PRESENT STRUCTURE, REMOVE	LS	1		
5	203	EXCAVATION, COMMON	CYS	105		
6	206	EXCAVATION, FOUNDATION, UNCLASSIFIED	CYS	140		
7	207	SUBGRADE TREATMENT, TYPE IC	SYS	495		
8	211	AGGREGATE FOR END BENT BACKFILL	CYS	62		
9	211	STRUCTURE BACKFILL, TYPE 2	CYS	38		
10	214	GEOTEXTILE FOR PAVEMENT TYPE 2B	SYS	559		
11	302	SUBBASE FOR PCCP	CYS	16		
12	303	COMPACTED AGGREGATE NO. 53	TON	9		
13	306	MILLING, TRANSITION	SYS	56		

Item No.	INDOT Specification	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
14	401	QC/QA-HMA, 3, 70, SURFACE, 9.5 mm	TON	41		
15	401	QC/QA-HMA, 3, 70, INTERMEDIATE, 19.0 mm	TON	58		
16	401	QC/QA-HMA, 3, 70, BASE, 25.0 mm	TON	136		
17	401	JOINT ADHESIVE, SURFACE	LFT	516		
18	401	JOINT ADHESIVE, INTERMEDIATE	LFT	516		
19	401	LIQUID ASPHALT SEALANT	LFT	516		
20	406	ASPHALT FOR TACK COAT	SYS	863		
21	601	GUARDRAIL, REMOVE	LFT	360		
22	601	GUARDRAIL, TRANSITION, TGS-1	EACH	4		
23	601	HAND DIG GUARDRAIL POST HOLES	EACH	8		
24	601	GUARDRAIL MGS W-BEAM, 6 FT 3 IN. SPACING	LFT	119		
25	601	GUARDRAIL, END TREATMENT, OS	EACH	4		
26	609	REINFORCED CONCRETE BRIDGE APPROACH, 12 IN., E5	SYS	68		
27	616	RIPRAP, REVETMENT	TON	84		
28	616	GEOTEXTILE FOR RIPRAP TYPE 1A	SYS	152		
29	701	DYNAMIC PILE LOAD TEST	EACH	1		
30	701	PILE, STEEL PIPE, 0.375 IN., 14 IN.	LFT	619		
31	701	TEST PILE, DYNAMIC, PRODUCTION	LFT	63		
32	701	TEST PILE, DYNAMIC, RESTRIKE	EACH	1		
33	701	CONICAL PILE TIP, 14 IN.	EACH	12		
34	702	CONCRETE, C, SUBSTRUCTURE	CYS	71		
35	703	REINFORCING BARS, EPOXY COATED	LBS	21,280		
36	703	THREADED TIE BAR ASSEMBLY, EPOXY COATED	EACH	30		
37	704	CONCRETE, C, SUPERSTRUCTURE, E5	CYS	46.2		
38	706	RAILING, STEEL TS-1	LFT	84		
39	707	STRUCTURAL MEMBER, CONCRETE, BOX BEAM, 21 IN. X 36 IN.	LFT	176		
40	709	SURFACE SEAL	LS	1		
41	715	PIPE, END BENT DRAIN, 6 IN.	LFT	140		
42	718	GEOTEXTILE FOR UNDERDRAIN, TYPE 2A	SYS	106		
43	726	BEARING ASSEMBLY ELASTOMERIC	EACH	8		
44	801	ROAD CLOSURE SIGN ASSEMBLY	EACH	4		
45	801	CONSTRUCTION SIGN, A	EACH	2		
46	801	MAINTAINING TRAFFIC	LS	1		
47	801	BARRICADE, III-A	LFT	48		
48	801	BARRICADE, III-B	LFT	24		
49	802	SIGN, GROUND MOUNTED, RESET	EACH	1		

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.

3.02 *Total Bid Price (Unit Prices)*

Total Bid Price (Total of all Unit Price Bids)	\$
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ARTICLE 4—TIME OF COMPLETION

4.01 Bidder agrees that the Work will be substantially complete within 120 calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 135 calendar days after the date when the Contract Times commence to run.

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:

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.
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 Supplementary 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 Supplementary 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 Supplementary 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) _____

BID BOND (PENAL SUM FORM)

Bidder Name: Address <i>(principal place of business)</i> :	Surety Name: Address <i>(principal place of business)</i> :
Owner Name: Noble County Board of Commissioners Address <i>(principal place of business)</i> : 109 N York Street Albion, IN 46701	Bid Project <i>(name and location)</i> : Noble County Bridge 33 Replacement Bid Due Date: April 25, 2025
Bond Penal Sum: Date of Bond:	
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.	
Bidder	Surety
_____ <i>(Full formal name of Bidder)</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: _____
<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>	

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.

CHECKLIST FOR BIDDERS

This list is intended to assist in the preparation of the bid documents. It does not relieve the bidder of any responsibility regarding the examination, completion, and execution of the bid documents.

BID

_____ Sign Bid and have notarized

ITEMIZED BID

_____ Insert unit prices

_____ Compute amount for each bid item

_____ Compute total bid (show dollar amount and in words)

_____ Company Name

_____ Sign Itemized Bid and date

CONTRACT

_____ Contractor's name and address

_____ Date of Contractor's bid

_____ Sign Contract (for second party) and have notarized

ACKNOWLEDGEMENT OF ADDENDA

_____ Insert addendum number and acknowledge with signature and date for all addenda issued.

FORM 96 (2013)

_____ Complete and attach to Bid

FINANCIAL STATEMENT

_____ Complete and attach to Bid

BID BOND

_____ Complete and attach to Bid

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AWARD PACKAGE INFORMATION

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AWARD PACKAGE INFORMATION

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NOTICE OF AWARD

Date of Issuance:

Owner: Noble County Board of Commissioners Owner's Project No.:
Engineer: Kurdziel Barker Engineering, Inc. Engineer's Project No.: 2401
Project: Noble County Bridge 33 Replacement

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:

Noble County Bridge 33 Replacement

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.

_____ 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 _____ 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: Noble County Board of Commissioners

By (signature): _____

Name (printed): _____

Title: _____

Copy: Engineer

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

This Agreement is by and between Noble County Board of Commissioners (“Owner”) and _____ (“Contractor”).

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary 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 work will consist of replacing the existing structure with a single-span, spread, composite, prestressed concrete box beam bridge. Along with the bridge work, approximately 170 feet of approach roadway construction is included in the immediate vicinity of the bridge.

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Construction of the full replacement of Bridge No. 33 carrying North County Road 150 East over Croft Ditch.

ARTICLE 3—ENGINEER

3.01 The project has been designed by Kurdziel Barker Engineering, Inc. Zachary S. Smith, P.E., or duly authorized representative, shall act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

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: Days

A. The Work will be substantially complete within 120 days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 135 days after the date when the Contract Times commence to run.

4.03 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 \$500 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 \$500 for each day that expires after such time until the Work is completed and ready for final payment.
 3. 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.

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:

- A. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item).

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

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 15th and/or 30th day 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. 10 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
 - b. 50 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 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 0% 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. Supplementary Conditions.

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 20 sheets with each sheet bearing the following general title: Bridge 33 Replacement.
 7. Addenda.
 8. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid.
 - b. Documentation submitted by Contractor prior to Notice of Award.
 - c. Attachments to Supplementary Conditions.
 9. 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. Written Amendments.
- 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 Supplementary 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 Supplementary 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 Supplementary 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 Supplementary 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:

Noble County Board of Commissioners

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name:

(typed or printed)

Title:

(typed or printed)

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

Designated Representative:

Name:

(typed or printed)

Title:

(typed or printed)

Address:

Phone:

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.)

Contractor:

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name:

(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)

Title:

(typed or printed)

Address for giving notices:

Designated Representative:

Name:

(typed or printed)

Title:

(typed or printed)

Address:

Phone:

Email:

License No.:

(where applicable)

State:

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E-VERIFY AFFIDAVIT

_____, to comply with the requirements of Indiana Code 22-5-1.7-11, affirms under
(Contractor)

the penalties of perjury that it does not knowingly employ an unauthorized alien.

The Contractor shall enroll in and verify the work eligibility status of all its newly hired employees through the Verify program as defined in IC 22-5-1.7-3. The Contractor is not required to participate should the E-Verify program cease to exist. Additionally, the Contractor is not required to participate if the Contractor is self-employed and does not employ any employees.

The Contractor shall not knowingly employ or contract with an unauthorized alien. The Contractor shall not retain an employee or contract with a person that the Contractor subsequently learns is an unauthorized alien.

The Contractor shall require its subconsultants, who perform work under this Contract, to certify to the Contractor that the subconsultant does not knowingly employ or contract with an unauthorized alien and that the subconsultant has enrolled and is participating in the E-Verify program. The Contractor agrees to maintain this certification throughout the duration of the term of a contract with a sub-consultant.

Dated: _____

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Address: _____

STATE OF _____)

)SS:

COUNTY OF _____)

Before me, a Notary Public in and for said County and State, personally appeared

_____ as of _____,
(Name) (Title) (Company)

who acknowledged the execution of the foregoing instrument, and who, having been duly sworn, stated that any representations therein contained are true.

WITNESS my hand and Notarial Seal this _____ day of _____ 20_____.

My Commission Expires: _____ Signature: _____

_____ Printed: _____

County of Residence: _____

NOTARY PUBLIC

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HAZARDOUS MATERIALS STATEMENT

Per an agreement between _____ (Contractor) and Noble County in which the Contractor has agreed to perform certain work on County property for an agreed fee or rate, the Contractor acknowledges that the County uses and/or produces various substances which may be classified as hazardous substances under OSHA's Hazard Communication Standard. The Contractor recognizes this use of hazardous substances by the County and acknowledges notification that a chemical inventory and the accompanying Material Safety Data Sheets are on file in each department within Noble County government.

It is the Contractor's responsibility to inform his employees of the described hazardous substances and protective measures suggested by the County. It is the Contractor's further sole responsibility to ensure that Contractor's employees observe protective measures during the performance of their duties, which are at least as stringent as the protective measures suggested by the County.

The Contractor agrees that, in the event that he shall be required to bring any hazardous substances onto County property during the performance of its job, he shall notify the Noble County Engineering Department in advance and suggest to the County the appropriate protective measures to be observed by County employees.

Noble County specifically reserves the right to interrupt or terminate the Contractor's work if the Contractor should fail in whole or in part to comply with these terms and the Contractor shall be prohibited from renewing such work in progress until all applicable safety and health procedures are implemented.

Agreed this _____ day of _____, 20____

CONTRACTOR

NOBLE COUNTY COMMISSIONERS

Signature

Gary D. Leatherman, President

Printed Name

Anita F. Hess, Vice-President

Company Name

Gary Timmerman, Commissioner

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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: Noble County Commissioners</p> <p>Mailing address (<i>principal place of business</i>): 109 N. York Street Albion, Indiana 46701</p>	<p>Contract</p> <p>Description (<i>name and location</i>): Noble County Bridge 33 Replacement</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 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: _____ <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 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

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: Noble County Commissioners</p> <p>Mailing address (<i>principal place of business</i>): 109 N. York Steet Albion, Indiana 46701</p>	<p>Contract</p> <p>Description (<i>name and location</i>): Noble County Bridge 33 Replacement</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

NOTICE TO PROCEED

Owner: Noble County Board of Commissioners Owner's Project No.: _____
Engineer: Kurziel Barker Engineering, Inc. Engineer's Project No.: 2401
Contractor: _____ Contractor's Project No.: _____
Project: Noble County Bridge 33 Replacement
Contract Name: _____
Effective Date of Contract: _____

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on _____ 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 number of days to achieve Substantial Completion is 120 from the date stated above for the commencement of the Contract Times, resulting in a date for Substantial Completion of _____; and the number of days to achieve readiness for final payment is 135 from the commencement date of the Contract Times, resulting in a date for readiness for final payment of _____.

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

Owner: **Noble County Board of Commissioners**
By (*signature*): _____
Name (*printed*): _____
Title: _____
Date Issued: _____
Copy: Engineer

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C-700 GENERAL CONDITIONS

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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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.
 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.
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.
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 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.

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 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 four printed copies of the Contract (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 send, 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.

- 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.
- 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. *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, 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*: 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*: 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.
- 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, all 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. *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.

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.

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) is not objectionable to Owner.
- 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.
- 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.
 - 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.
- B. 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 to which Contractor 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.

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, 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.
- 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.

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.

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.

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.

11.03 *Work Change Directives*

- A. 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.

- 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.
- 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.

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.
 - 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.

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 *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 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. 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. 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.

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.

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*

- 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

- I. 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.
- 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.
- 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.

SUPPLEMENTARY CONDITIONS

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

No suggested Supplementary Conditions in this Article.

ARTICLE 2—PRELIMINARY MATTERS

No suggested Supplementary Conditions in this Article.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

No suggested Supplementary Conditions in this Article.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

SC-4.01 Delete Paragraph 4.01 in its entirety and insert the following in its place:

A. The Contract Times will commence to run as stated on the executed Notice to Proceed.

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

5.02 *Use of Site and Other Areas*

SC-5.02 Add the following new paragraphs immediately after Paragraph 5.02.D:

E. Property Release

1. Releases are required from property owners where Contractor for any reason worked outside the permanent or temporary right-of-way in conjunction with the project. It is not the intent that a property release be secured from every abutting property owner.

2. The property release document shall identify the project and be signed by the property owner. The property release shall be generally written as follows:

“We (or I), the undersigned property owners (owner) of land along _____, adjacent to the above noted project constructed by _____, hereby state that our (my) property has been left in a satisfactory condition and we (I) release the Contractor from any claim for use or damage to said property.”

5.03 *Subsurface and Physical Conditions*

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

- E. In the preparation of the Drawings and Specifications, engineer relied upon the following reports of explorations and tests of subsurface conditions at the Site: Report of Geotechnical engineering Exploration Bridge No. 33 Replacement North County Road 150 East Noble County, Indiana 24-0101-04G Dated October 31, 2024. Copies of this report are included with the Bidding Documents. A copy of the soil borings has been placed on the plans. Contractor is not entitled to rely upon information and data utilized by the Engineer in the preparation of the Drawings and Specifications.

5.06 *Hazardous Environmental Conditions*

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Date of Report	Technical Data
		No Such Report

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
		No Such Drawings

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

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).

6.03 *Contractor’s Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Workers' Compensation and Employer's Liability*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Employer's Liability	
Each accident	\$100,000
Each employee	\$100,000
Policy limit	\$500,000

- F. *Commercial General Liability—Claims Covered*: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
 2. damages insured by reasonably available personal injury liability coverage, and
 3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content*: Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.

6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of “insured contract” (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.
 5. Any exclusion for the insured’s vicarious liability, strict liability, or statutory liability (other than worker’s compensation).
 6. Any limitation or exclusion based on the nature of Contractor’s work.
 7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.
- I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$2,000,000
Products—Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$1,000,000
Bodily Injury and Property Damage—Each Occurrence	\$1,000,000

- J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$50,000
Each Accident	\$100,000

Automobile Liability	Policy limits of not less than:
Property Damage	
Each Accident	\$50,000

- K. *Contractor's Professional Liability Insurance:* If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

Contractor's Professional Liability	Policy limits of not less than:
Each Claim	\$1,000,000
Annual Aggregate	\$1,000,000

- O. *Railroad Protective Liability Insurance:* Prior to commencing any Work within 50 feet of railroad-owned and controlled property, Contractor shall (1) endorse its commercial general liability policy with ISO CG 24 17, removing the contractual liability exclusion for work within 50 feet of a railroad, (2) purchase and maintain railroad protective liability insurance meeting the following requirements, (3) furnish a copy of the endorsement to Owner, and (4) submit a copy of the railroad protective policy and other railroad-required documentation to the railroad, and notify Owner of such submittal.

Railroad Protective Liability Insurance	Policy limits of not less than:
Each Claim	\$2,000,000
Aggregate	\$6,000,000

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.07 Concerning Subcontractors and Suppliers

- SC-7.07.A Add the following language at the end of Paragraph 7.07.A:

The Contractor shall not award work to Subcontractor(s) in excess of fifty (50%) percent of the Contract Price, without prior written approval of the Owner.

- SC-7.07.B Add the following language at the end of Paragraph 7.07.B:

Each Bidder shall identify all subcontractors and suppliers on the List of Subcontractors. The List of Subcontractors shall be provided within 24 hours of the Bid opening.

7.09 *Permits*

SC-7.09 Delete Paragraph 7.09.A in its entirety and insert the following in its place:

- A. Owner will apply for and pay for all federal and state construction permits. Contractor shall pay for all local permits, licenses, and fees for the prosecution of the Work which are applicable. Owner will pay all charges of utility owners for connections to the Work, and Owner will pay all charges of such utility owners for capital costs related thereto, such as plant investment fees.

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

- B. Owner is exempt from payment of sales and compensating use taxes of the State of Indiana 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 Contractor, or to supplies or materials not incorporated into the Work.

7.11 *Laws and Regulations*

SC-7.11 Add a new paragraph immediately after Paragraph 7.11.C:

- D. Any Contractor on municipal, Township, County, or State Work in the State of Indiana, whose official address and/or place of business is outside the State of Indiana, must register with the Indiana State Department of Revenue and make arrangements for payment of State Gross or Adjusted Gross Income Tax. Satisfactory evidence of the registration must be submitted to the Owner prior to approval of any progress payment.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

SC-8.01 Add the following new paragraph immediately after Paragraph 8.01.F:

- G. Should Contractor cause damage to the work or property of any separate contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any separate contractor against Contractor, Owner, Engineer, Engineer's Consultants, or the construction coordinator, Contractor shall promptly attempt to settle with such separate contractor by agreement, or to otherwise resolve the dispute by arbitration or at law.
- H. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, Engineer's Consultants, the construction coordinator and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against Owner, Engineer, Engineer's

Consultants, or the construction coordinator to the extent said claim is based on or arises out of Contractor's performance of the Work. Should a separate contractor cause damage to the Work or property of Contractor or should the performance of work by any separate contractor at the Site give rise to any other Claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, Engineer's Consultants, or the construction coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer, Engineer's Consultants or the construction coordinator on account of any such damage or Claim.

- I. If Contractor is delayed at any time in performing or furnishing Work by an act or neglect of a separate contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Time attributable thereto, Contractor may make a Claim for an extension of times in accordance with Article 11. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, Engineer, Engineer's Consultants, and construction coordinator for any delay, disruption, interference, or hindrance caused by any separate contractor. This paragraph does not prevent recovery from Owner, Engineer, Engineer's Consultant, or construction coordinator for activities that are their respective responsibilities.

ARTICLE 9—OWNER'S RESPONSIBILITIES

No suggested Supplementary Conditions in this Article.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.03 Resident Project Representative

SC-10.03 Add the following new subparagraph immediately after Paragraph 10.03.A:

1. On this Project, by agreement with the Owner, the Engineer will not furnish a Resident Project Representative to represent Engineer at the Site or assist Engineer in observing the progress and quality of the Work.

ARTICLE 11—CHANGES TO THE CONTRACT

No suggested Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No suggested Supplementary Conditions in this Article.

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

13.01 Cost of the Work

SC-13.01 Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

The equipment rental rate book that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work provisions of this Contract is the most current edition of Rental Rate Blue Book for Construction Equipment.

SC-13.01 Supplement Paragraph 13.01.C.2 by adding the following definition of small tools and hand tools:

- a. For purposes of this paragraph, “small tools and hand tools” means any tool or equipment whose current price if it were purchased new at retail would be less than \$500.

13.02 Unit Price Work

SC-13.02 Delete Paragraph 13.02.E in its entirety and insert the following in its place:

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 10 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 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. 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. Adjusted unit prices will apply to all units of that item.

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

No suggested Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 Progress Payments

SC-15.01 Delete Paragraph 15.01.C.1 in its entirety and insert the following in its place:

1. Thirty days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of paragraph 15.01.E) become due, and when due will be paid by Owner to Contractor.

15.04 *Partial Use Occupancy*

SC-15.04 Add the following new paragraph immediately after paragraph 15.04.A.4:

5. Owner may at any time request Contractor in writing to permit Owner to take over operation of any part of the Work although it is not substantially complete. A copy of such request will be sent to Engineer, and within a reasonable time thereafter Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If Contractor does not object in writing to Owner and Engineer that such part of the Work is not ready for separate operation by Owner, Engineer will finalize the list of items to be completed or corrected and will deliver such lists to Owner and Contractor together with a written recommendation as to the division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, utilities, insurance, warranties, and guarantees for that part of the Work which will become binding upon Owner and Contractor at the time when Owner takes over such operation (unless they shall have otherwise agreed in writing and so informed Engineer). During such operation and prior to Substantial Completion of such part of the Work, Owner shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No suggested Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

No suggested Supplementary Conditions in this Article.

ARTICLE 18—MISCELLANEOUS

No suggested Supplementary Conditions in this Article.

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GEOTECHNICAL REPORT

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REPORT OF GEOTECHNICAL ENGINEERING EXPLORATION

**BRIDGE NO. 33 REPLACEMENT
NORTH COUNTY ROAD 150 EAST
NOBLE COUNTY, INDIANA
24-0101-04G**

PREPARED FOR:

**KURDZIEL BARKER ENGINEERING
P.O. BOX 44127
INDIANAPOLIS, INDIANA 46244**

**Patriot Engineering and Environmental, Inc.
6150 East 75th Street
Indianapolis, Indiana 46250**

October 31, 2024



October 31, 2024

Mr. Daniel Kurdziel
Kurdziel Barker Engineering
P.O. Box 44127
Indianapolis, Indiana 46244

Re: Report of Geotechnical Engineering Investigation
Bridge No. 33 Replacement
North County Road 150 East
Noble County, Indiana
Patriot Project No.: 24-0101-04G

Dear Daniel:

Attached is the report of our subsurface investigation for the above referenced project. This report includes detailed and graphic logs of two (2) soil borings along the above referenced alignment. Additionally, the report includes the results of laboratory tests performed on samples obtained from the alignment.

We appreciate the opportunity to have performed this geotechnical engineering investigation. If you have any questions regarding this report or if we may be of any additional assistance, please do not hesitate to contact our office.

Respectfully submitted,
Patriot Engineering and Environmental, Inc.



Ben Lauletta, P.E.
Senior Project Engineer



Richard L. Johnson, P.E.
Senior Project Engineer



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REPORT OF GEOTECHNICAL ENGINEERING INVESTIGATION

**Bridge No. 33 Replacement
North County Road 150 East
Noble County, Indiana
Patriot Project No.: 24-0101-04G**

1.0 INTRODUCTION

1.1 General

The proposed project includes the replacement of bridge No. 33 in Noble County, Indiana. The results of the geotechnical engineering exploration for the project are presented in this report. This investigation was carried out in accordance with the Indiana Department of Transportation (INDOT) standard procedures.

1.2 Purpose and Scope

The purpose of this investigation is to determine the general near surface and subsurface conditions along the referenced alignment and to provide recommendation to aid in the design and construction of the referenced structure. This was achieved by drilling two (2) soil borings and by conducting laboratory tests on samples taken from the borings.

2.0 PROJECT INFORMATION

The proposed project involves the replacement of the existing Bridge No. 33 carrying North county Road 150 East over Croft ditch in Noble County, Indiana. We understand that the bridge will be a single span structure supported by abutment on driven piles. We also understand that the bottom of the abutments will be at elevation 924.96.

3.0 INVESTIGATIONAL PROCEDURES

3.1 Field Work

A total of two (2) soil borings were drilled, sampled, and tested along the referenced alignment on June 20, 2024 at the approximate locations shown on the Boring Location Maps (Figure No. 3) in Appendix "A". All borings were performed in accordance with INDOT Exhibit "C" (Requirements for Geotechnical Investigation and Pavement Investigation) Section D-4-B. The borings were advanced using 3¼ inch inside diameter hollow-stem augers. Soil samples were recovered in the undisturbed material below the bottom of the augers using the standard drive sample technique in accordance with AASHTO T206.

A 2-inch outside diameter by 1³/₈ inch inside diameter split-spoon sampler was driven a total of 18 inches with the number of blows of a 140-pound hammer falling 30 inches recorded for each 6 inches of penetration. The sum of blows for the final 12 inches of penetration is the Standard Penetration Test result commonly referred to as the N-value (or blow-count). Split-spoon samples were recovered at continuous intervals, beginning directly below the pavement surface. Additionally, undisturbed "Shelby tube" samples were also obtained in cohesive soils of interest.

Water levels were monitored at each borehole location during drilling, immediately after the borings were completed. Upon completion of our field activities, the boreholes were backfilled with auger cuttings and bentonite chips.

Upon completion of the boring program, all of the samples retrieved in this sampling program were returned to *Patriot's* soil testing laboratory where they were visually examined and placed in groups of like material. A laboratory-generated log of each boring has been prepared based upon the driller's field log, laboratory test results, and visual classification. Test boring logs and a field classification system key are included in Appendix "A" of this report. Indicated on each log is the boring location, the primary strata encountered, and the depth of each stratum change, the depth of sampling, Standard Penetration Test results, groundwater conditions, and selected laboratory test data. The laboratory logs were prepared for each boring giving the appropriate sample data and the textural description and classification.

3.2 Laboratory Testing

Representative samples recovered in the borings were selected for testing in the laboratory to evaluate their physical properties and engineering characteristics. Laboratory analysis included:

- Natural Moisture Content Analysis (AASHTO T265)
- Grain Size Distribution Analysis (AASHTO T88)
- Atterberg Limits Analysis (AASHTO T89 and T90)
- pH Determination Analysis (AASHTO T289)
- Sulfates Determination Analysis (AASHTO T290)

The results of all laboratory tests are summarized in Section 4.4 "*Subsurface Conditions*", as well as in Appendix "C". Soil descriptions on the boring logs are in accordance with the AASHTO system and the Indiana Department of Transportation (INDOT) Standard Specifications (ISS) textural classification, e.g., Clay Loam (A-6).

4.0 ALIGNMENT AND SUBSURFACE CONDITIONS

4.1 Alignment Conditions

The project site is located east of Albion, Indiana. The bridge spans north/south over Croft Ditch. The ground surface elevations at the soil boring locations varied from 929 to 930 feet based on data from Google Earth.

4.2 Regional & General Alignment Geology

The project alignment is situated in the St. Joseph River Basin. The alignment is located in the lower center of the basin in the Steuben Morainal Lake Area Physiographic Unit. The project alignment is in an area that is typically covered by glacial deposits including sand and gravel and glacial till. The bedrock deposits along the project alignment generally consist of Devonian and Mississippian shale.

4.3 Subsurface Conditions

Our interpretation of the subsurface conditions is based upon two (2) soil borings performed at the approximate stations and offsets indicated on the boring logs and shown on the Boring Location Map (Figure No. 3) in Appendix "A". All depths discussed below refer to depths below the existing ground surface.

The soil borings were drilled in areas covered with asphalt pavement that varied in thickness from 4 to 5 inches.

The project area is generally underlain by slightly moist to saturated, loose to very dense, Sandy Loam (A-2-4) or Sand And Gravel (A-1-b) that was encountered to the termination of the soil borings at 90 feet below the existing ground surface. Standard Penetration Test (SPT) "N-values" (blow counts) in these soils varied from 10 to more than 50 blows per foot (bpf).

Layers of soft to very stiff Sandy Loam (A-4) or Clay Loam (A-6) were encountered at depth ranging from 1 to 53.5 feet below the existing ground surface. The natural moisture content of these soils varied from 6 to 34 percent (%) Standard Penetration Test (SPT) "N-values" (blow counts) in these soils varied from 8 to 26 blows per foot (bpf).

4.4 Groundwater Conditions

The term groundwater pertains to any water that percolates through the soil found along the alignments. This includes any overland flow that permeates through a given depth of soil, perched water, and water that occurs below the "water table", a zone that remains saturated and water-bearing year-round. A summary of the groundwater conditions encountered during our field activities are provided in the paragraphs below, as well as a summary sheet located in Appendix "B".

Groundwater was observed in the soil borings during drilling at a depth of 13.5 feet below the existing ground surface. Groundwater was encountered after drilling was completed in the soil borings at depths ranging from 42 to 48 feet below the existing ground surface. The remaining borings were dry at the completion of drilling.

It should be recognized that fluctuations in the groundwater level should be expected over time due to variations in rainfall and other environmental or physical factors. ***The true static groundwater level can only be determined through observations made in cased holes over a long period of time, the installation of which was beyond the scope of this investigation.***

5.0 DESIGN RECOMMENDATIONS

5.1 Basis

Our recommendations are based on data presented in this report, which include soil borings, laboratory testing and our experience with similar projects. Subsurface variations that may not be indicated by a dispersive exploratory boring program can exist on any site. If such variations or unexpected conditions are encountered during construction, or if the project information is incorrect or changed, we should be informed immediately since the validity of our recommendations may be affected.

5.2 Bridge Design Considerations

We understand that the bridge will be a single span structure supported by abutment on driven piles. We also understand that the bottom of the abutments will be at elevation 924.96.

We understand that two (2) pile arrangement options are being considered; abutments supported by 4 piles or 6 piles; pile load tables for both options are presented below. We recommend that the associated bridge abutments be founded on a deep foundation system consisting of 45 kips per square inch (ksi) yield stress 14-inch diameter pipe piles. The axial capacity of the proposed piles were analyzed utilizing *APILE Version 2015*.

A summary of our pile recommendations and calculations for both the end-bents are provided in the tables below; though refer to Appendix "D" for detailed calculations of our "*Bridge Pile Load Evaluations*".

Table No. 1: Bridge Foundation Pile Load Table (PP 14") 4 Piles

ITEM	END-BENT NO. 1 (TB-2)	END-BENT NO. 2 (TB-1)
PILE SIZE AND TYPE	PP 14"	PP 14"
PILE WALL THICKNESS (in)	0.375	0.375
Factored Design Load, Q_f (kips)	272	272
FACTORED DESIGN SOIL RESISTANCE PER PILE $R_{R(max)}$ (kips)	272	272
RESISTANCE FACTOR ϕ_{dyn}	0.56	0.56
DOWN-DRAG LOAD DD (kips)	-	-
NOMINAL SOIL RESISTANCE $R_{n(max)}$ (kips)	485	485
DOWNDRAG FRICTION $R_{s,dd}$ (kips)	-	-
SCOUR ZONE FRICTION $R_{s,scour}$ (kips)	-	-
RELAXATION IN SHALE R_{relax} (kips)	-	-
MAXIMUM NOMINAL DRIVING RESISTANCE $R_{ndr(max)}$ (kips)	485	485
ESTIMATED PILE LENGTH TO REACH CAPACITY (feet)	74 +/-	74 +/-
PILE TIP ELEVATION (feet)	851 +/-	851 +/-
METHOD OF TESTING	INDOT Standard Specification 701.05(b)	

- (1) For friction piles, the geotechnical resistance factors for pile analysis shown in Figure 408-1A of Indiana Design Manual (IDM) Section 408 shall be reduced by 20% if the number of piles in a pile group are four (4) or less.
- (2) INDOT recommends that the driving resistance be limited to 426 based on readily available pile hammers. Therefore if this option is selected the contractor should select the appropriately sized pile hammer.

Table No. 2: Bridge Foundation Pile Load Table (PP 14") 6 Piles

ITEM	END-BENT NO. 1 (TB-2)	END-BENT NO. 2 (TB-1)
PILE SIZE AND TYPE	PP 14"	PP 14"
PILE WALL THICKNESS (in)	0.375	0.375
Factored Design Load, Q_f (kips)	191	191
FACTORED DESIGN SOIL RESISTANCE PER PILE $R_{R(max)}$ (kips)	191	191
RESISTANCE FACTOR ϕ_{dyn}	0.70	0.70
DOWN-DRAG LOAD DD (kips)	-	-
NOMINAL SOIL RESISTANCE $R_{n(max)}$ (kips)	273	273
DOWNDRAG FRICTION $R_{s,dd}$ (kips)	-	-
SCOUR ZONE FRICTION $R_{s,scour}$ (kips)	-	-
RELAXATION IN SHALE R_{relax} (kips)	-	-
MAXIMUM NOMINAL DRIVING RESISTANCE $R_{ndr(max)}$ (kips)	273	273
ESTIMATED PILE LENGTH TO REACH CAPACITY (feet BGS)	54 +/-	48 +/-
PILE TIP ELEVATION (feet)	871 +/-	877 +/-
METHOD OF TESTING	INDOT Standard Specification 701.05(b)	

The tables below provide soil parameters for the determination of lateral resistance of the proposed bridge piles. These soil parameters have been based on the soil conditions encountered in the soil borings and the recommendations of Reese, *et al.* presented in the documentation for the computer program "LPile".

Table No. 3: Foundation Pile Lateral Load Determination Parameters TB-1

SOIL TYPE (DEPTH) ⁽²⁾	UNIT WEIGHT, γ (pcf)	SOIL MODULUS, k (pci)	UNDRAINED SHEAR STRENGTH, S_u (psf)	FRICITION ANGLE, Φ (DEGREE)	ϵ_{50}
SANDY LOAM (A-4) (0-3 ft.)	130	NEGLECT			
STIFF SANDY LOAM (A-4) (3-6 ft.)	125	500	2,000	N/A	0.007
SOFT CLAY LOAM (A-6) (6-10 ft.)	125	30	450	N/A	0.02
MEDIUM DENSE SANDY LOAM (A-2-4) (10-13.5 ft.)	125	90	N/A	32	N/A
MEDIUM DENSE SAND AND GRAVEL (A-1-B) (13.5-18.5 ft.)	125	60	N/A	32	N/A
STIFF SANDY LOAM (A-4) (18.5-48.5 ft.)	125	500	2,000	N/A	0.007
MEDIUM DENSE SANDY LOAM (A-2-4) (48.5-53.5 ft.)	125	60	N/A	32	N/A
DENSE SANDY LOAM (A-2-4) (53.5-58.5 ft.)	130	125	N/A	34	N/A
MEDIUM DENSE SANDY LOAM (A-2-4) (58.5-78.5 ft.)	125	60	N/A	32	N/A
DENSE SANDY LOAM (A-2-4) (78.5-90 ft.)	130	125	N/A	34	N/A

Table No. 4: Foundation Pile Lateral Load Determination Parameters TB-2

SOIL TYPE (DEPTH) ⁽²⁾	UNIT WEIGHT, γ (pcf)	SOIL MODULUS, k (pci)	UNDRAINED SHEAR STRENGTH, S_u (psf)	FRICITION ANGLE, Φ (DEGREE)	ϵ_{50}
SANDY LOAM (A-4) (0-3 ft.)	120	NEGLECT			
MEDIUM DENSE SANDY LOAM (A-2-4) (3-8.5 ft.)	125	90	N/A	32	N/A
LOOSE SANDY LOAM (A-2-4) (8.5-13.5 ft.)	120	25	N/A	30	N/A
MEDIUM DENSE SAND AND GRAVEL (A-1-B) (13.5-18.5 ft.)	125	60	N/A	32	N/A
STIFF SANDY LOAM (A-4) (18.5-53.5 ft.)	125	500	2,000	N/A	0.007
LOOSE SANDY LOAM (A-2-4) (53.5-58.5 ft.)	120	20	N/A	30	N/A

MEDIUM DENSE SANDY LOAM (A-2-4) (58.5-63.5 ft.)	125	60	N/A	32	N/A
MEDIUM DENSE SAND AND GRAVEL (A-1-B) (63.5-68.5 ft.)	125	60	N/A	32	N/A
MEDIUM DENSE SANDY LOAM (A-2-4) (68.5-78.5 ft.)	125	60	N/A	32	N/A
VERY DENSE SANDY LOAM (A-2-4) (78.5-90 ft.)	130	125	N/A	36	N/A

5.3 Seismic Design Considerations

For structural design purposes for the proposed bridges, we recommend a Site Classification of “C” be utilized based on the subsurface conditions observed in our boring profiles in conjunction with the procedures outlined in Section 3.10.3.1 of the “AASHTO LRFD Bridge Design Specifications, 6th Edition (2012)”.

Furthermore, along with using a Site Classification of “C”, we recommend the use of the spectral response acceleration coefficients as follows:

$$\begin{aligned}
 PGAm &= 0.079 \text{ g} \\
 S_s &= 0.160 \text{ g} \\
 S_1 &= 0.068 \text{ g} \\
 S_{D5} &= 0.110 \text{ g} \\
 S_{D1} &= 0.063 \text{ g}
 \end{aligned}$$

In regards to the seismic zone in which the proposed bridges are located, based on AASHTO Table 3.10.6-1 the proposed bridges will be located in Seismic Zone No. 1, as the design spectral response acceleration coefficient S_{D1} is less than 0.15g. Refer to Appendix “E” for a detailed summary of the “*Seismic Design Evaluation*”. Other earthquake resistant design parameters should be applied consistent with the minimum requirements of American Association of State Highway and Transportation Officials (AASHTO).

6.0 CONSTRUCTION CONSIDERATIONS

6.1 Site Preparation

All areas that will support foundations or newly placed structural fill must be properly prepared. All loose surficial soil or “topsoil” and other unsuitable materials must be removed. Unsuitable materials include: frozen soil, relatively soft material, relatively wet soils, deleterious material, or soils that exhibit a high organic content. ***Additionally, any trees, underbrush, and associated root-mass must also be completely removed within the proposed structure areas prior to construction.***

Prior to the placement of new structural fill if any, the exposed subgrade must be evaluated by a geotechnical representative, which will include proofrolling of the subgrade. Proofrolling should consist of repeated passes of a loaded, pneumatic-tired

vehicle such as a tandem-axle dump-truck or scraper. The proofrolling operations should be observed by a geotechnical representative, and the proofrolling vehicle should be loaded as directed by a geotechnical representative. Any area found to rut, pump, or deflect excessively should be compacted in-place or, if necessary, undercut and replaced with structural fill, compacted as specified in Section 6.3 “*Structural Fill and Fill Placement Control*”.

Care must be exercised during grading and fill placement operations. ***The combination of heavy construction equipment traffic and excess surface moisture can cause pumping and deterioration of the near surface soils. The severity of this potential problem depends to a great extent on the weather conditions prevailing during construction.*** The contractor must exercise discretion when selecting equipment sizes and also make a concerted effort to control construction traffic and surface water while the subgrade soils are exposed.

We recommend that heavy construction equipment (i.e. dump trucks, scrapers, etc.) be rerouted away from the building and pavement areas. If such problems do arise, the operations in the affected area should be halted and a geotechnical representative should be contacted to evaluate the condition.

6.2 Foundation Excavations

Upon completion of the foundation excavations and prior to the placement of reinforcing steel, a geotechnical representative should check the exposed subgrade to confirm that a bearing surface of adequate strength has been reached. Any localized soft soil zones encountered at the bearing elevations should be further excavated until adequate support soils are encountered. The cavity should be backfilled with structural fill as defined below, or the footing can be poured at the excavated depth. Structural fill used as backfill beneath footings should be limited to lean concrete, well-graded sand and gravel, or crushed stone placed and compacted in accordance with Section 6.3 “*Structural Fill and Fill Placement Control*”.

If it is necessary to support mat foundations on structural fill, the fill pad must extend laterally a minimum distance beyond the edge of the footing. The minimum structural pad width would correspond with a point at which an imaginary line extending downward from the outside edge of the footing at a 1H:2V (horizontal: vertical) slope intersects the surface of the natural soils. For example, if the depth to the bottom of excavation is 4 feet below the bottom of the foundation, the excavation would need to extend laterally beyond the edge of the footing at least 2 feet, as shown in Illustration “A” found at the conclusion of this report. Excavation slopes should be maintained within all requirements set-forth by the Occupational Safety and Health Standards (OSHA), but specifically Section 1926 Subpart “P” – “*Excavations*”. We recommend that any surcharge fill or heavy equipment be kept at least 5 feet away from the edge of the excavation.

6.3 Bridge Construction

It should be recognized that while the estimated pile lengths and tip elevations presented above may be used for estimating purposes, it should be recognized that the actual pile driving depths are expected to vary. The piles shall be driven to the elevation necessary to obtain the nominal driving resistance, R_{ndr} . We recommend that at least one (1) Pile Driving Analyzer (PDA) test be performed at one (1) end-bent and at the interior pier (as applicable) location during pile driving operations to confirm the geotechnical capacity of the selected driven pile foundation system. Restriking of the test piles should not be completed any time prior to 24-hours following the initial driving of the piles.

We recommend that the minimum pile spacing (center to center) should be three (3) times the pile width. Based on the soil types encountered and the recommended pile spacing, a pile group efficiency of 100 percent (%) should be used for axially loaded piles. We estimate that the total single pile tip settlement should not exceed $\frac{1}{2}$ inch and that differential settlement should not exceed $\frac{1}{4}$ inch. It should be noted that a detailed pile group settlement analysis has not been performed since the pile group configuration, pile type, spacing, etc., have not been finalized.

6.4 Groundwater Considerations

Groundwater was observed in the soil borings drilling at depths of 13.5 to 48 feet below the existing ground surface. Groundwater inflow into shallow excavations **above** the groundwater table is expected to be adequately controlled by conventional methods such as gravity drainage and/or pumping from sumps. More significant inflow can be expected in deeper excavations **below** the groundwater table requiring more aggressive dewatering techniques, such as well or wellpoint systems. The type of dewatering method necessary for this project can only be adequately determined during construction. It should be noted that dewatering methods shall be proposed by the Contractor and approved by the Engineer.

7.0 LIMITATIONS OF INVESTIGATION

The recommendations provided herein were developed from the information obtained in the test borings, which depict subsurface conditions only at specific locations. Subsurface conditions at other locations may differ from those occurring at the specific drill sites. The nature and extent of variations between borings may not become evident until the time of construction. If variations become evident, it will be necessary to re-evaluate the recommendations of this report after performing on-site observations during construction and noting the characteristics of any variation.

Our professional services have been performed, findings obtained, and recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties either

expressed or implied. This company is not responsible for the independent conclusions, opinions or recommendations made by others based on the field and laboratory data presented in this report. The scope of our services did not include any environmental assessment or investigation for the presence or absence of wetlands, hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in this report or on the test borings logs regarding vegetation types, odors or staining of soils, or other unusual conditions observed are strictly for the information of our client and the owner.

APPENDIX A

**County Location Map
(Figure No. 1)**

**Alignment Vicinity Map
(Figure No. 2)**

**Boring Location Maps
(Figure No. 3)**

Boring Log Key

Boring Logs

State of Indiana



Figure 1

County Location Map



Patriot Engineering & Environmental, Inc.

Project: Bridge No. 33 Replacement
North County Road 150 East
Noble County, Indiana

Drawn By: T. Humphreys

Project Number: 24-0101-04

Approved: B. Lauletta

Date: September 11, 2024

DWG: 24-0101-04_geo

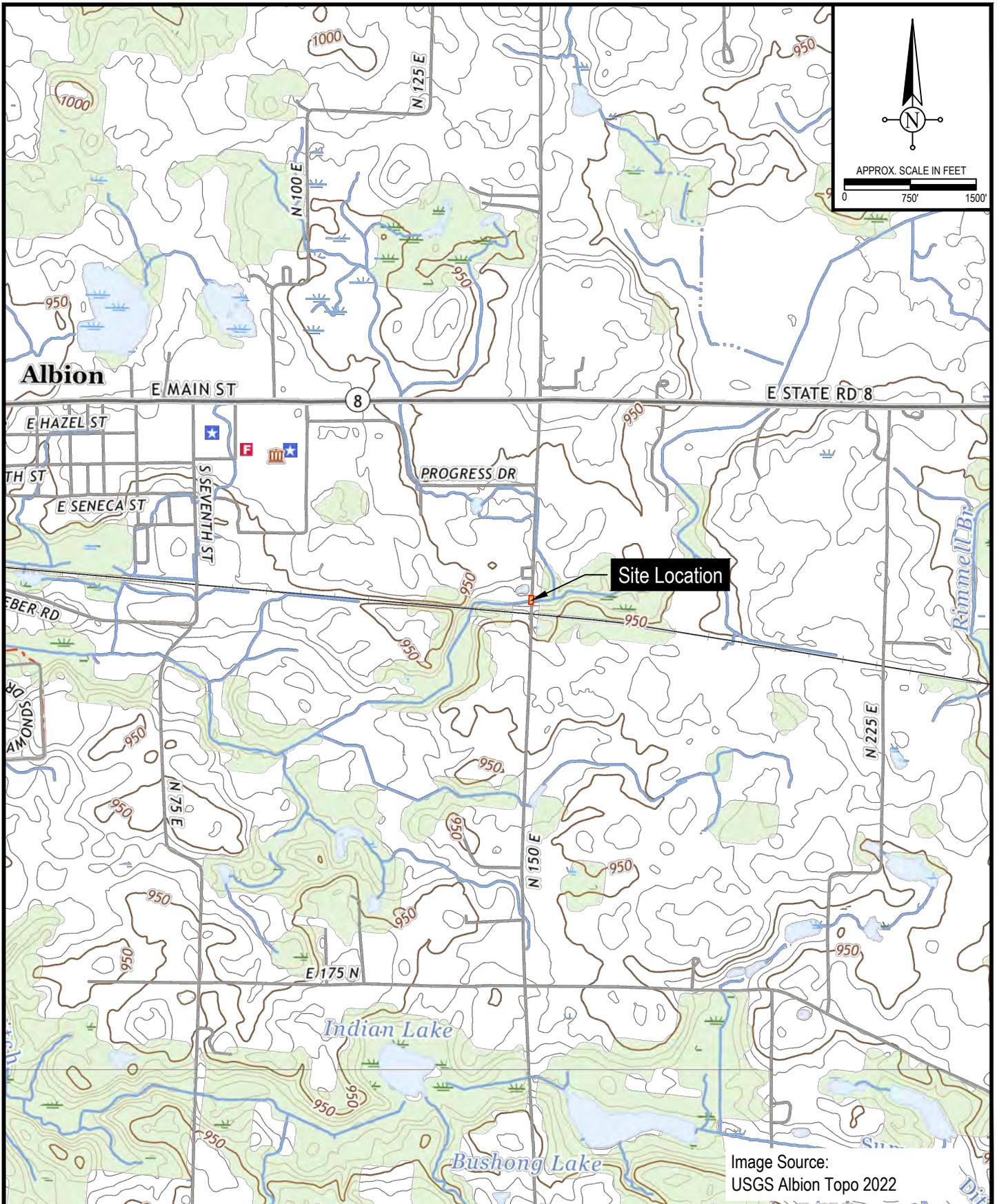


Image Source:
USGS Albion Topo 2022

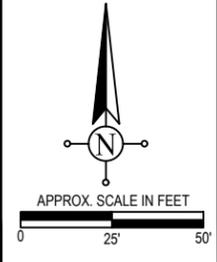


Patriot Engineering &
Environmental, Inc.

Project: Bridge No. 33 Replacement
North County Road 150 East
Noble County, Indiana

Project Number: 24-0101-04	Drawn By: T. Humphreys
Date: September 11, 2024	Approved: B. Lauletta
	DWG: 24-0101-04_geo

Figure 2
Site Vicinity Map



● TB-1

● TB-2

North County Road 150 East

LEGEND

● PATRIOT Road Core/Boring
RB-1 Core/Boring ID

NOTES:

1. Boring locations were staked by PATRIOT. All locations are shown as approximate.
2. All locations were determined in the field with references to existing landmarks.
3. Image Source: Bing Maps
4. Scale as shown.

Project: Bridge No. 33 Replacement
North County Road 150 East
Noble County, Indiana

Project Number: 24-0101-04	Drawn By: T. Humphreys
Date: September 11, 2024	Approved: B. Lauletta
	DWG: 24-0101-04_geo



Figure 3
Core/Boring Location Map

BORING LOG KEY

AASHTO FIELD CLASSIFICATION SYSTEM FOR SOIL EXPLORATION

NON COHESIVE SOILS (Silt, Sand, Gravel and Combinations)

Density		Grain Size Terminology		
Very Loose	5 blows/ft. or less	<u>Soil Fraction</u>	<u>Particle Size</u>	<u>US Standard Sieve Size</u>
Loose	6 to 10 blows/ft.	Boulders	Larger than 75mm	Larger than 75mm
Medium Dense	11 to 30 blows/ft.	Gravel:	2.00mm to 75mm	#10 to 75mm
Dense	31 to 50 blows/ft.	Sand: Coarse	0.42mm to 2.00mm	#40 to #10
Very Dense	51 blows/ft. or more	Fine	0.075mm to 0.42mm	#200 to #40
		Silt	0.002mm to 0.075mm	Smaller than #200
		Clay	Smaller than 0.002mm	Smaller than #200
		Colloids	Smaller than 0.001mm	Smaller than #200

RELATIVE PROPORTIONS FOR SOILS

<u>Descriptive Term</u>	<u>Percent</u>
Trace	1 - 10
Little	11 - 20
Some	21 - 35
And	36 - 50

COHESIVE SOILS

(Clay, Silt and Combinations)

Consistency		Field Identification	Unconfined Compressive Strength (tons/sq. ft.)
Very soft	3 blows/ft. or less	Thumb will penetrate soil more than 1 inch	Less than 0.25
Soft	4 to 5 blows/ft.	Thumb will penetrate soil about 1 inch	0.25 - 0.5
Medium Stiff	6 to 10 blows/ft.	Thumb will penetrate soil about ½ inch	0.5 - 1.0
Stiff	11 to 15 blows/ft.	Thumb will indent soil about ¼ inch	1.0 - 2.0
Very Stiff	16 to 30 blows/ft.	Readily indented by thumbnail	2.0 - 4.0
Hard	31 blows/ft. or more	Indented with difficulty by thumbnail	Over 4.0

Classification on logs are made by visual inspection.

Standard Penetration Test - Driving a 2.0" O.D., 1^{3/8}" I.D., sampler a distance of 1.0 foot into undisturbed soil with a 140 pound hammer free falling a distance of 30.0 inches. It is customary for **Patriot** to drive the spoon 6.0 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the spoon and making the tests are recorded for each 6.0 inches of penetration on the drill log (Example - 6/8/9). The standard penetration test results can be obtained by adding the last two figures (i.e. 8 + 9 = 17 blows/ft.).

Strata Changes - In the column "Soil Descriptions" on the drill log the horizontal lines represent strata changes. A solid line (——) represents an actually observed change, a dashed line (- - - -) represents an estimated change.

Groundwater observations were made at the times indicated. Porosity of soil strata, weather conditions, site topography, etc., may cause changes in the water levels indicated on the logs.

Groundwater symbols: ▽-observed groundwater elevation, encountered during drilling; ▮-observed groundwater elevation upon completion of boring; ▼-observed groundwater elevation, 24 hours after completion of boring.



BORING LOG

BORING NO.: **TB-001**
 SHEET 1 OF 3
 LATITUDE : 41.389712
 LONGITUDE : 85.396025
 DATUM : _____
 DATE STARTED : 06-20-24
 DATE COMPLETED : 06-20-24

ROUTE # : Bridge No. 33 COUNTY : Noble
 PROJECT TYPE : Bridge Replacement
 LOCATION : Albion, Indiana
 DES NO. : _____ PROJECT NO.: 24-0101-04G

ELEVATION : 929.0 BORING METHOD : HSA HAMMER : Auto
 STATION : _____ RIG TYPE : Truck DRILLER/INSP : M. Walker
 OFFSET : _____ LOCATION : _____ TEMPERATURE : 95 °F
 LINE : _____ RP LOCATION : _____ WEATHER : Sunny
 DEPTH : 90.0 ft

GROUNDWATER: Encountered at 13.5 ft At completion 42.0 ft NA After 24 hours Caved in at 60.0 ft

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	% RECOVERY	MOISTURE CONTENT	UNCONF. COMP., ksf	ATTERBERG LIMITS			REMARKS
								LL	PL	PI	
928.6		Asphalt (5") Visual. ----- 0.4									
	5	Sandy Loam, A-4 , Brown, Slightly Moist, Stiff To Very Stiff, Tets Number 242.	SS 1	8 12 13	56	5.5					
			SS 2	9 8 4	78	11.0					
923.0		Clay Loam, A-6(8) , Brown, Very Moist, Soft, Test Number 241. ----- 6.0	ST 1		79	34.4	1.01	30	13	17	6.0, Sample No. St-1: Shelby Tube Pushed From 6 To 8.5 Feet. Wet Unit Weight = 130.9 Pcf
			SS 3	4 8 11	100	17.5					
	10	Sandy Loam, A-2-4 , Brown, Slightly Moist, Medium Dense, Test Number 243. ----- 10.0									
			SS 4	6 7 7	100	25.8					
914.8		Sand and Gravel, A-1-b , Gray, Saturated, Medium Dense, Test Number 244. ----- 14.3									
	15		SS 5	5 6 7	89	9.1					
			SS 6	10 9 12	94	10.5					
910.5		Sandy Loam, A-4(0) , Gray, Slightly Moist, Stiff To Very Stiff, Test Number 242. ----- 18.5									
	20		SS 7	10 9 13	100	11.1					
			SS 8	9 12 15	67	12.8					
	25										
	30										
	35										

Continued on next page

INDOT BORING LOG 0101-04G.GPJ IN_DOT1.GDT 10/30/24



BORING LOG

BORING NO.: **TB-001**
 SHEET: 2 OF 3
 LATITUDE: 41.389712
 LONGITUDE: 85.396025
 DATUM:

ROUTE # Bridge No. 33 COUNTY : Noble

PROJECT TYPE : Bridge Replacement

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	% RECOVERY	MOISTURE CONTENT	UNCONF. COMP., ksf	ATTERBERG LIMITS			REMARKS
								LL	PL	PI	
	40	Sandy Loam, A-4(0), Gray, Slightly Moist, Stiff To Very Stiff, Test Number 242.	SS 9	9							
	45		SS 10	12 16 13	89	10.3		17	10	7	
880.5	50		SS 11	12 12 13	94						
	55	Sandy Loam, A-2-4, Gray, Saturated, Medium Dense To Dense, Test Number 243.	SS 12	12 16 15	100						
	60		SS 13	10 10 15	89						60.0, Borehole Backfilled Per The Aquifer Protection Guidelines
	65		SS 14	9 11 17	100						
	70	SS 15	7 7 12	100							
	75	Sandy Loam, A-2-4, Gray, Saturated, Medium Dense To Dense, Test Number 243.	SS 16	8 9 15	94						
	80		SS 17	16 19 12	89						

INDOT BORING LOG 0101-04G.GPJ IN_DOT1.GDT 10/30/24

Continued on next page



BORING LOG

BORING NO.: **TB-001**
 SHEET 3 OF 3
 LATITUDE : 41.389712
 LONGITUDE : 85.396025
 DATUM :

ROUTE # Bridge No. 33 COUNTY : Noble

PROJECT TYPE : Bridge Replacement

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	% RECOVERY	MOISTURE CONTENT	UNCONF. COMP., ksf	ATTERBERG LIMITS			REMARKS							
								LL	PL	PI								
839.0	85	Sandy Loam, A-2-4, Gray, Saturated, Medium Dense To Dense, Test Number 243.	SS 18	15	100													
				15														
				11														
	90		Bottom of Boring at 90.0 ft	SS 19								21	100					
												16						
												17						
	95																	
	100																	
	105																	
	110																	
	115																	
	120																	
	125																	



BORING LOG

BORING NO.: **TB-002**
 SHEET: 1 OF 3
 LATITUDE: 41.389581
 LONGITUDE: 85.396035
 DATUM: _____
 DATE STARTED: 06-19-24
 DATE COMPLETED: 06-19-24

ROUTE # : Bridge No. 33 COUNTY : Noble
 PROJECT TYPE : Bridge Replacement
 LOCATION : Albion, Indiana
 DES NO. : _____ PROJECT NO.: 24-0101-04G

ELEVATION : 930.0 BORING METHOD : HSA HAMMER : Auto
 STATION : _____ RIG TYPE : Truck DRILLER/INSP : M. Walker
 OFFSET : _____ LOCATION : _____ TEMPERATURE : 90 °F
 LINE : _____ RP LOCATION : _____ WEATHER : Sunny
 DEPTH : 90.0 ft

GROUNDWATER: Encountered at 13.5 ft At completion 48.0 ft NA After 24 hours Caved in at 78.0 ft

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	% RECOVERY	MOISTURE CONTENT	UNCONF. COMP., ksf	ATTERBERG LIMITS			REMARKS
								LL	PL	PI	
929.7		Asphalt (4") Visual.									
927.0	5	Sandy Loam, A-4, Brown, Slightly Moist, Medium Stiff, Test Number 242.	SS 1	4	100	11.1					3.0, Sample No. St-1: Shelby Tube Pushed From 3.0 To 5.5 Feet. Sample No. St-1: Non-Plastic 6.0, Sample No. 2: Two Attempts Were Made To Obtain A Splitspoon Sample
	10	Sandy Loam, A-2-4(0), Brown, Slightly Moist, Loose To Medium Dense, Test Number 243.	ST 1	4	96	12.7					
	15		SS 2	6	0						
	20		SS 3	8	33	14.8					
	25		SS 4	10	28						
	30		SS 5	12	78	10.2					
	35		ST 2	11	63	9.5					
	35		SS 6	7	100	7.5					
		Sand and Gravel, A-1-b, Brown, Saturated, Medium Dense, Test Number 244.									
916.5	15		SS 4	10	28						
911.5	20		SS 5	9	78	10.2					
	25		ST 2	11	63	9.5				21.0, Sample No. St-2: Shelby Tube Pushed From 21.0 To 23.5 Feet	
	30		SS 6	7	100	7.5					
	35		SS 7	11	100	9.9					
		Sandy Loam, A-4, Gray, Slightly Moist, Stiff To Very Stiff, Test Number 242.									
			SS 8	8	100	9.6					

INDOT BORING LOG 0101-04G.GPJ IN_DOT1.GDT 10/30/24

Continued on next page



BORING LOG

BORING NO.: **TB-002**
 SHEET: 2 OF 3
 LATITUDE: 41.389581
 LONGITUDE: 85.396035
 DATUM:

ROUTE # Bridge No. 33 COUNTY : Noble

PROJECT TYPE : Bridge Replacement

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	% RECOVERY	MOISTURE CONTENT	UNCONF. COMP., ksf	ATTERBERG LIMITS			REMARKS
								LL	PL	PI	
40	8	Sandy Loam, A-4, Gray, Slightly Moist, Stiff To Very Stiff, Test Number 242.	SS 9	8	94	12.3					
	9			9							
	10			10							
45	7	Sandy Loam, A-4, Gray, Slightly Moist, Stiff To Very Stiff, Test Number 242.	SS 10	7	100	9.3					
	7			7							
	8			8							
50	6	Sandy Loam, A-4, Gray, Slightly Moist, Stiff To Very Stiff, Test Number 242.	SS 11	6	72	10.8					
	7			7							
	7			7							
876.5	5	Sandy Loam, A-2-4, Brown, Saturated, Loose To Medium Dense, Test Number 243.	SS 12	5	100	10.1					
	5			5							
	5			5							
60	12	Sandy Loam, A-2-4, Brown, Saturated, Loose To Medium Dense, Test Number 243.	SS 13	12	78	9.4					60.0, 4 Feet Of Heaving Sands Encountered At 60 Feet.
	14			14							
	17			17							
866.5	18	Sand and Gravel, A-1-b, Brown, Saturated, Medium Dense, Test Number 244.	SS 14	18	67						63.5, Sample No. 14: Non-Plastic
	9			9							
	10			10							
861.5	5	Sandy Loam, A-2-4, Brown, Saturated, Medium Dense, Test Number 243.	SS 15	5	56	8.7					
	8			8							
	9			9							
75	10	Sandy Loam, A-2-4, Brown, Saturated, Medium Dense, Test Number 243.	SS 16	10	22	10.2					
	12			12							
	13			13							
851.5	28	Sandy Loam, A-2-4, Brown, Saturated, Very Dense, Test Number 243.	SS 17	28	100	11.0					78.0, Borehole Backfilled Per The Aquifer Protection Guidelines
	32			32							
	37			37							

INDOT BORING LOG 0101-04G.GPJ IN_DOT1.GDT 10/30/24

Continued on next page



BORING LOG

BORING NO.: **TB-002**
 SHEET: 3 OF 3
 LATITUDE: 41.389581
 LONGITUDE: 85.396035
 DATUM:

ROUTE # Bridge No. 33 COUNTY : Noble

PROJECT TYPE : Bridge Replacement

STRATUM ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	% RECOVERY	MOISTURE CONTENT	UNCONF. COMP., ksf	ATTERBERG LIMITS			REMARKS
								LL	PL	PI	
846.5	83.5	Sandy Loam, A-2-4, Gray, Saturated, Very Dense, Test Number 243.	SS 18	31	100	9.2					
				39							
				44							
840.0	90.0		SS 19	21	89	9.5					
				25							
				30							
		Bottom of Boring at 90.0 ft									
95											
100											
105											
110											
115											
120											
125											

APPENDIX B

Boring Location Summary Tables

Groundwater Summary Tables

BORING LOCATION SUMMARY TABLES

Geotechnical Engineering Exploration
Bridge No. 33 Replacement
North County Road 150 East
Noble County, Indiana
Patriot Project No.: 24-0101-04G

BORING NUMBER	BORING DEPTH	LATITUDE	LONGITUDE
TB-1	90'	41.389712	-85.396025
TB-2	90'	41.389581	-85.396035

GROUNDWATER SUMMARY TABLES

Geotechnical Engineering Exploration
Bridge No. 33 Replacement
North County Road 150 East
Noble County, Indiana
Patriot Project No.: 24-0101-04G

BORING NUMBER	GROUNDWATER DURING DRILLING	GROUNDWATER UPON COMPLETION
	DEPTH (FEET)	DEPTH (FEET)
TB-1	13.5	42.0
TB-2	13.5	48.0

APPENDIX C

Summary of Classification Test Data

Particle Size Distribution Test Reports

Atterberg Limits Test Report

Summary of Special Tests

Unconfined Compressive Strength Test Result

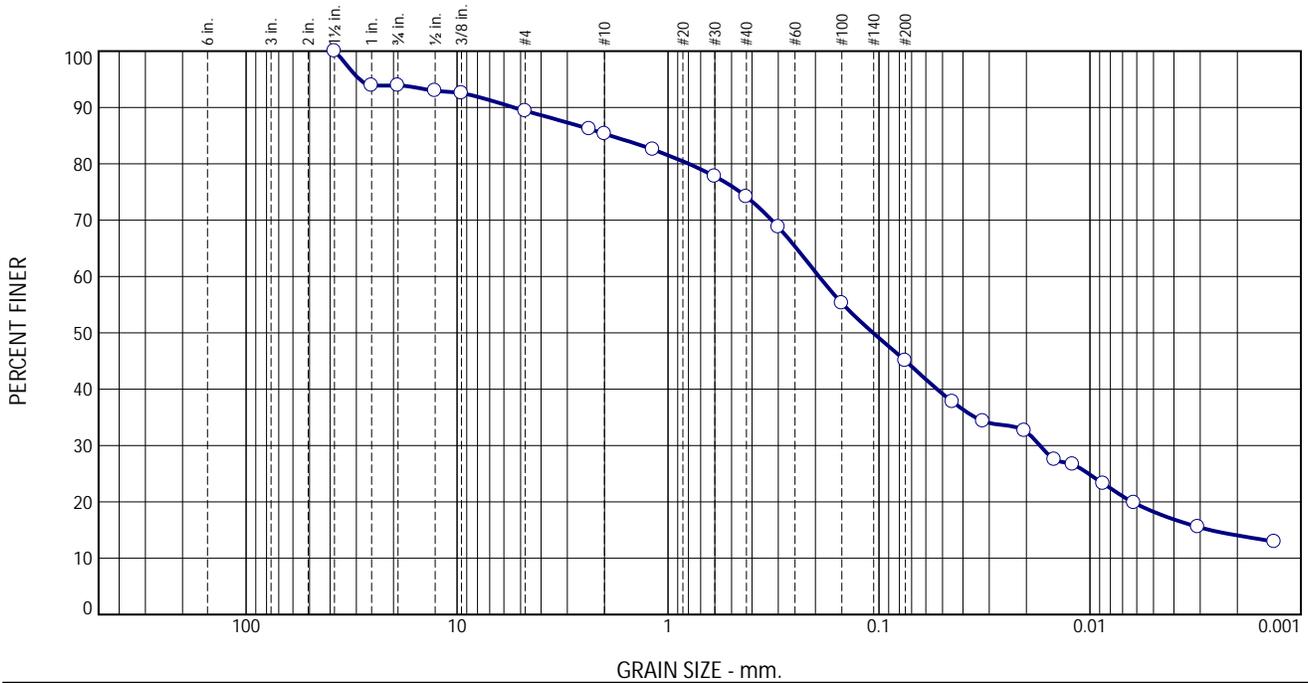


SUMMARY OF CLASSIFICATION TESTS DATA

Project Name: <u>Noble County Bridge No. 33 Replacement</u>	INDOT Designation Number: _____
Structure No.: <u>33</u> County: <u>Noble</u>	District: _____
Patriot Proj. No.: <u>24-0101-04G</u> Client: <u>INDOT</u>	Client Address: _____

Test Number	Boring Number	Sample Number	Sample Depth (Feet)	Classification		% Passing			% Gravel	% Sand	% Silt	% Clay	% Colloids	Sulfates (ppm)	pH	LL	PL	PI
				Textural	AASHTO	#10	#40	#200										
241	TB-001	ST-1	6.0-8.5	CLAY LOAM	A-6(8)	91.3	85.3	66.1	8.7	25.2	38.9	27.2	21.5	ND	7.0	30	13	17
242	TB-001	SS-9	38.5-40.0	SANDY LOAM	A-4(0)	85.3	74.2	45.0	14.7	40.3	31.0	14.0	12.0	ND	7.0	17	10	7
243	TB-002	ST-1	3.0-5.5	SANDY LOAM	A-2-4(0)	94.8	79.9	34.3	5.2	60.5	24.8	9.5	8.0	13	8.7	NP		
244	TB-002	SS-14	63.5-65.0	SAND & GRAVEL	A-1-b	55.8	24.7	7.8	44.2	48.0	5.4	2.4	1.0	240	8.2	NP		

Particle Size Distribution Report



% +3"	% Gravel	% Sand		% Fines	
		Coarse	Fine	Silt	Clay
0.0	14.7	11.1	29.2	31.0	14.0

Test Results (AASHTO T 27 and T 88)			
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
1.5"	100.0		
1"	93.9		
3/4"	93.9		
1/2"	92.9		
3/8"	92.5		
#4	89.4		
#8	86.2		
#10	85.3		
#16	82.5		
#30	77.8		
#40	74.2		
#50	68.8		
#100	55.3		
#200	45.0		
0.0448 mm.	37.7		
0.0321 mm.	34.3		
0.0204 mm.	32.6		
0.0147 mm.	27.5		
0.0121 mm.	26.6		
0.0086 mm.	23.2		
0.0062 mm.	19.8		
0.0031 mm.	15.6		
0.0013 mm.	12.9		

(no specification provided)

Material Description
Gray SANDY LOAM A-4(0)

Atterberg (ASTM D4318)
PL= 10 LL= 17 PI= 7

Sieve Test (AASHTO T 27)

Test Date: 07/11/2024 Technician: B. Allee

Test Notes

Coefficients
D₉₀= 5.3818 D₈₅= 1.8800
D₆₀= 0.1924 D₅₀= 0.1066
D₃₀= 0.0173 D₁₅= 0.0027
D₁₀=
C_u= C_c=

Hydrometer Test (AASHTO T 88)

Test Date: 07/09/2024 Technician: E. Bergel

Test Notes
Test Number 242
pH - 7.0

USCS (ASTM D2487)
SC-SM

Date Sampled: 06/20/2024

Date Received: 06/20/2024

Checked By: S. Lauletta

Title: Lab Supervisor

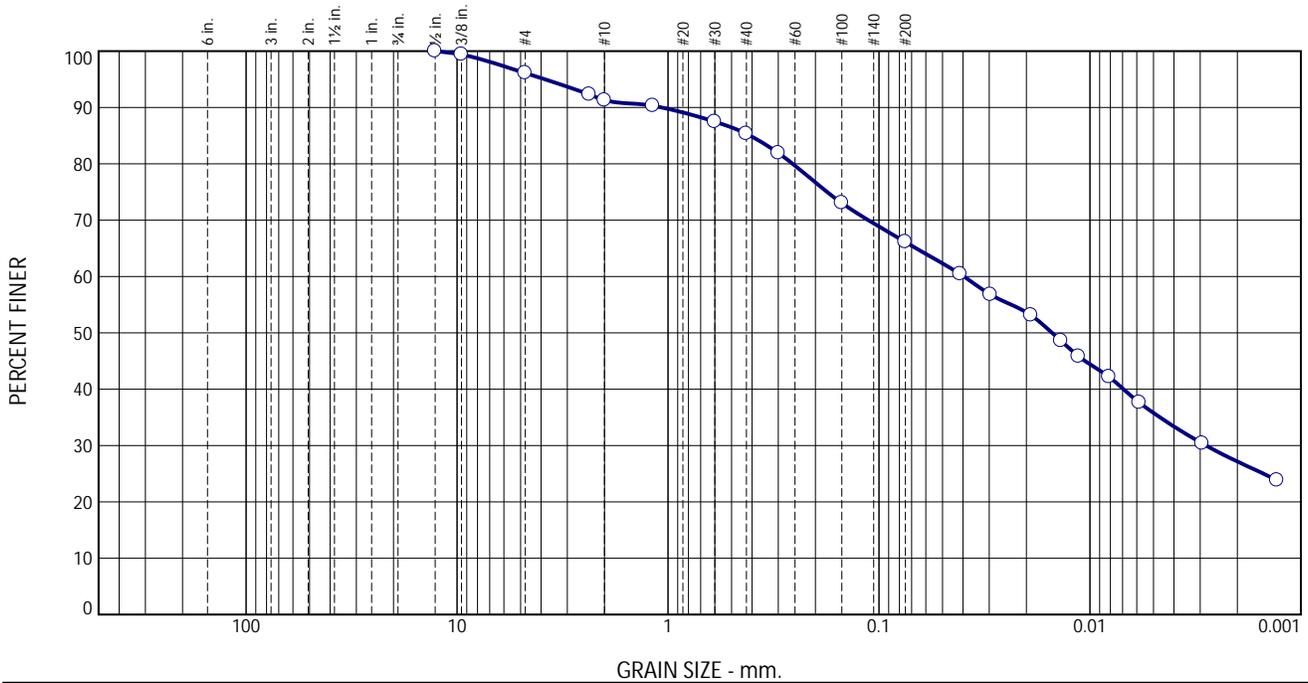
Source of Sample: TB-001 Depth: 38.5-40.0 feet
Sample Number: SS-9

**PATRIOT ENGINEERING
AND ENVIRONMENTAL, INC.**
Indianapolis, Indiana

Client: INDOT Office of Geotechnical Services
Project: Noble County Bridge No. 33 Replacement

Project No: 24-0101-04G

Particle Size Distribution Report



% +3"	% Gravel	% Sand		% Fines	
		Coarse	Fine	Silt	Clay
0.0	8.7	6.0	19.2	38.9	27.2

Test Results (AASHTO T 27 and T 88)			
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
1/2"	100.0		
3/8"	99.4		
#4	96.1		
#8	92.3		
#10	91.3		
#16	90.3		
#30	87.5		
#40	85.3		
#50	81.9		
#100	73.0		
#200	66.1		
0.0412 mm.	60.4		
0.0296 mm.	56.8		
0.0190 mm.	53.1		
0.0137 mm.	48.6		
0.0113 mm.	45.8		
0.0081 mm.	42.2		
0.0058 mm.	37.6		
0.0029 mm.	30.4		
0.0013 mm.	23.8		

(no specification provided)

Material Description
Brown CLAY LOAM A-6(8)

Atterberg (ASTM D4318)
PL= 13 LL= 30 PI= 17

Sieve Test (AASHTO T 27)

Test Date: 07/11/2024 Technician: B. Allee

Test Notes

Coefficients
D₉₀= 1.0734 D₈₅= 0.4088
D₆₀= 0.0396 D₅₀= 0.0151
D₃₀= 0.0028 D₁₅=
D₁₀=
C_u= C_c=

Hydrometer Test (AASHTO T 88)

Test Date: 07/09/2024 Technician: E. Bergel

Test Notes
Test Number 241
pH - 7.0

USCS (ASTM D2487)

CL

Date Sampled: 06/20/2024

Date Received: 06/20/2024

Checked By: S. Lauletta

Title: Lab Supervisor

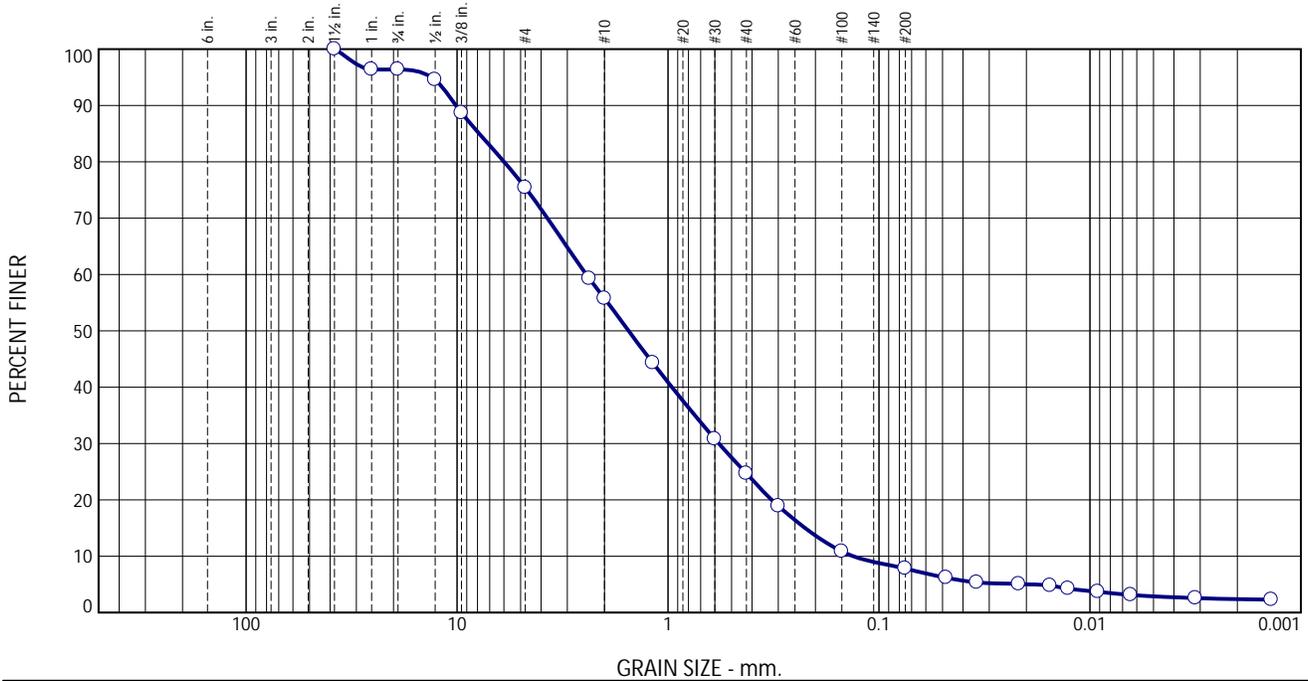
Source of Sample: TB-001 Depth: 6.0-8.5 feet
Sample Number: ST-1

**PATRIOT ENGINEERING
AND ENVIRONMENTAL, INC.**
Indianapolis, Indiana

Client: INDOT Office of Geotechnical Services
Project: Noble County Bridge No. 33 Replacement

Project No: 24-0101-04G

Particle Size Distribution Report



% +3"	% Gravel	% Sand		% Fines	
		Coarse	Fine	Silt	Clay
0.0	44.2	31.1	16.9	5.4	2.4

Test Results (AASHTO T 27 and T 88)			
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
1.5"	100.0		
1"	96.4		
3/4"	96.4		
1/2"	94.6		
3/8"	88.7		
#4	75.4		
#8	59.3		
#10	55.8		
#16	44.3		
#30	30.8		
#40	24.7		
#50	18.9		
#100	10.8		
#200	7.8		
0.0481 mm.	6.2		
0.0343 mm.	5.3		
0.0218 mm.	5.1		
0.0154 mm.	4.8		
0.0127 mm.	4.2		
0.0092 mm.	3.7		
0.0064 mm.	3.1		
0.0032 mm.	2.6		
0.0014 mm.	2.3		

(no specification provided)

Material Description
Brown SAND & GRAVEL A-1-b

Atterberg (ASTM D4318)
PL= NP LL= NP PI= NP

Sieve Test (AASHTO T 27)

Test Date: 07/11/2024 Technician: B. Allee

Test Notes

Coefficients
D₉₀= 10.1360 D₈₅= 7.8521
D₆₀= 2.4396 D₅₀= 1.5374
D₃₀= 0.5744 D₁₅= 0.2239
D₁₀= 0.1326
C_u= 18.39 C_c= 1.02

Hydrometer Test (AASHTO T 88)

Test Date: 07/09/2024 Technician: E. Bergel

Test Notes
Test Number 244
pH - 8.2

USCS (ASTM D2487)
SW-SM

Date Sampled: 06/19/2024

Date Received: 06/19/2024

Checked By: S. Lauletta

Title: Lab Supervisor

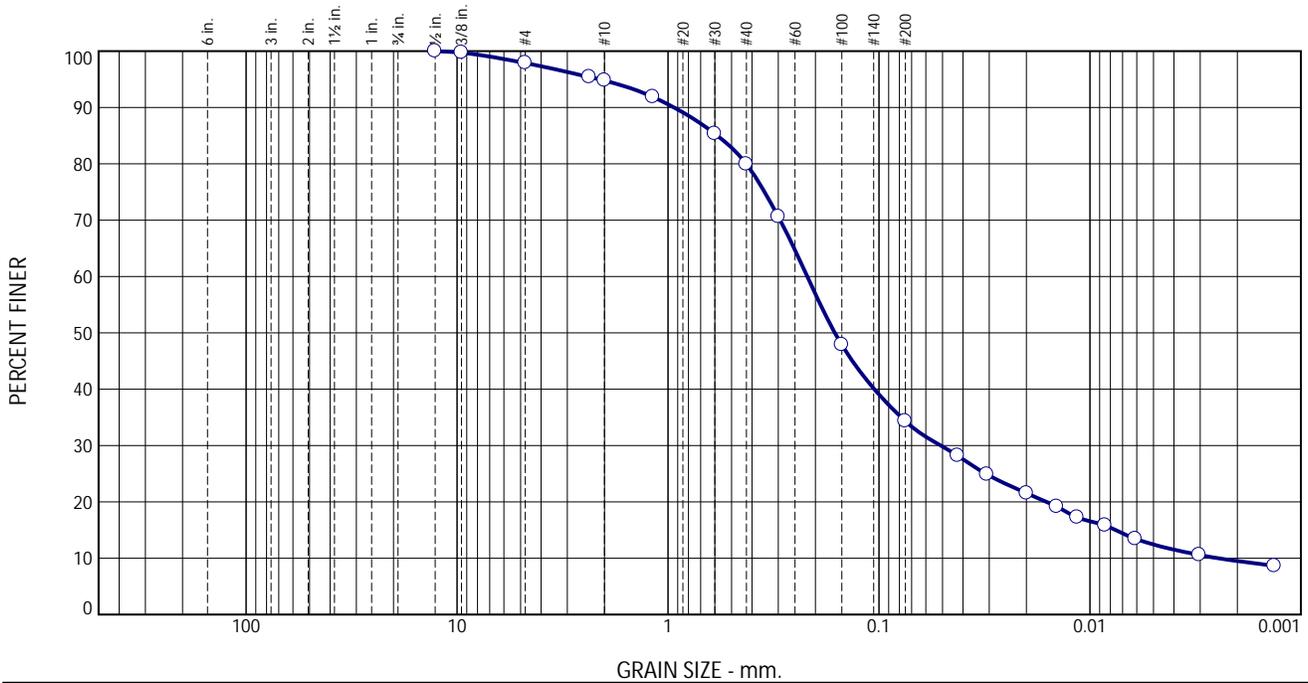
Source of Sample: TB-002 Depth: 63.5-65.0 feet
Sample Number: SS-14

**PATRIOT ENGINEERING
AND ENVIRONMENTAL, INC.**
Indianapolis, Indiana

Client: INDOT Office of Geotechnical Services
Project: Noble County Bridge No. 33 Replacement

Project No: 24-0101-04G

Particle Size Distribution Report



% +3"	% Gravel	% Sand		% Fines	
		Coarse	Fine	Silt	Clay
0.0	5.2	14.9	45.6	24.8	9.5

Test Results (AASHTO T 27 and T 88)			
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
1/2"	100.0		
3/8"	99.7		
#4	97.9		
#8	95.4		
#10	94.8		
#16	91.9		
#30	85.3		
#40	79.9		
#50	70.6		
#100	47.9		
#200	34.3		
0.0424 mm.	28.2		
0.0308 mm.	24.9		
0.0200 mm.	21.5		
0.0144 mm.	19.1		
0.0115 mm.	17.2		
0.0085 mm.	15.8		
0.0061 mm.	13.4		
0.0030 mm.	10.6		
0.0013 mm.	8.6		

(no specification provided)

Material Description
Brown SANDY LOAM A-2-4(0)

Atterberg (ASTM D4318)
PL= NP LL= NP PI= NP

Sieve Test (AASHTO T 27)

Test Date: 07/11/2024 Technician: B. Allee

Test Notes

Coefficients
D₉₀= 0.9373 D₈₅= 0.5843
D₆₀= 0.2188 D₅₀= 0.1620
D₃₀= 0.0511 D₁₅= 0.0076
D₁₀= 0.0025
C_u= 88.17 C_c= 4.80

Hydrometer Test (AASHTO T 88)

Test Date: 07/09/2024 Technician: E. Bergel

Test Notes
Test Number 243
pH - 8.7

USCS (ASTM D2487)
SM

Date Sampled: 06/19/2024

Date Received: 06/20/2024

Checked By: S. Lauletta

Title: Lab Supervisor

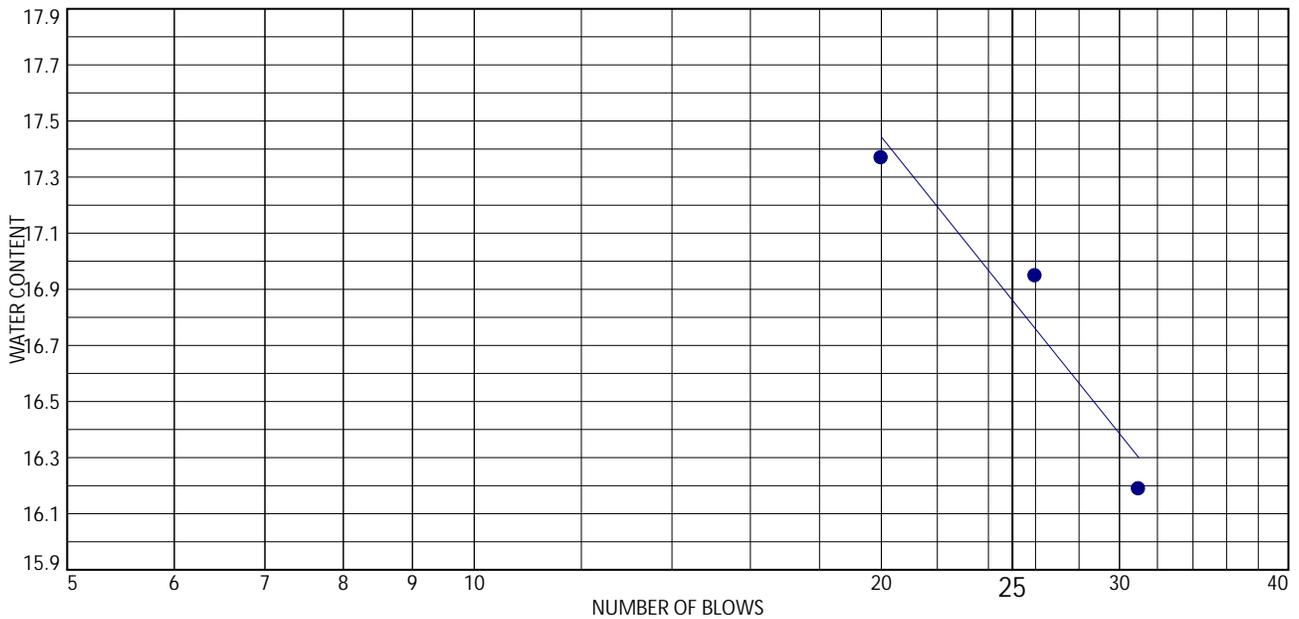
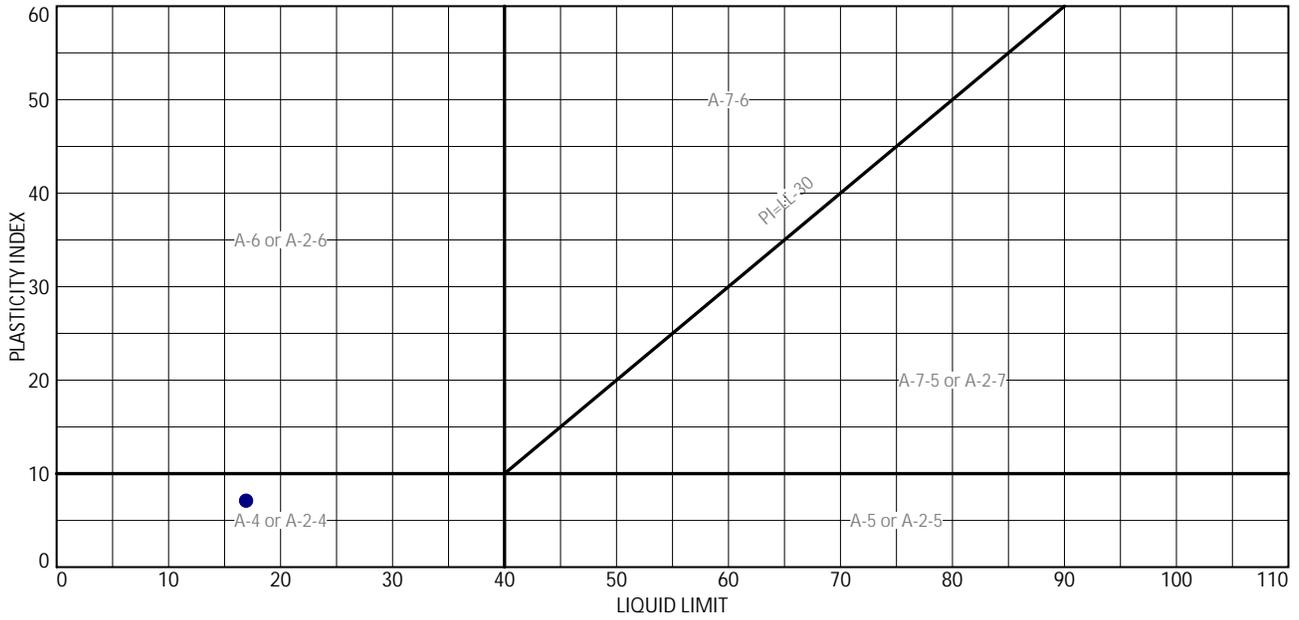
Source of Sample: TB-002 Depth: 3.0-5.5 feet
Sample Number: ST-1

**PATRIOT ENGINEERING
AND ENVIRONMENTAL, INC.**
Indianapolis, Indiana

Client: INDOT Office of Geotechnical Services
Project: Noble County Bridge No. 33 Replacement

Project No: 24-0101-04G

LIQUID AND PLASTIC LIMITS TEST REPORT

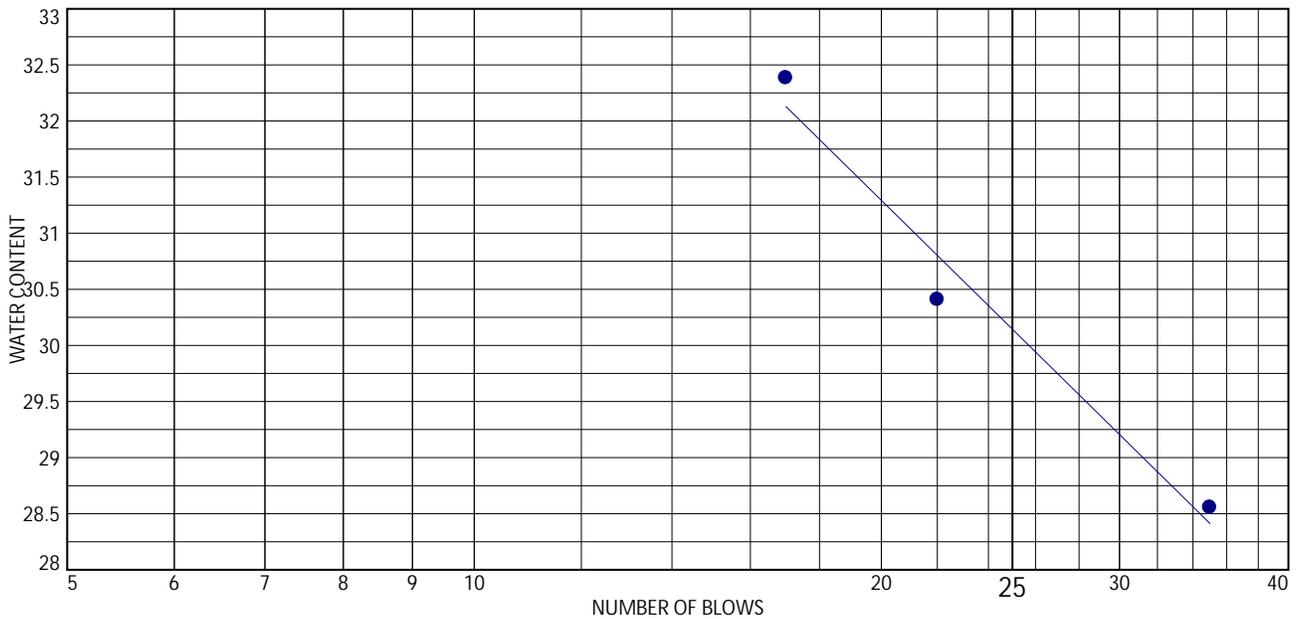
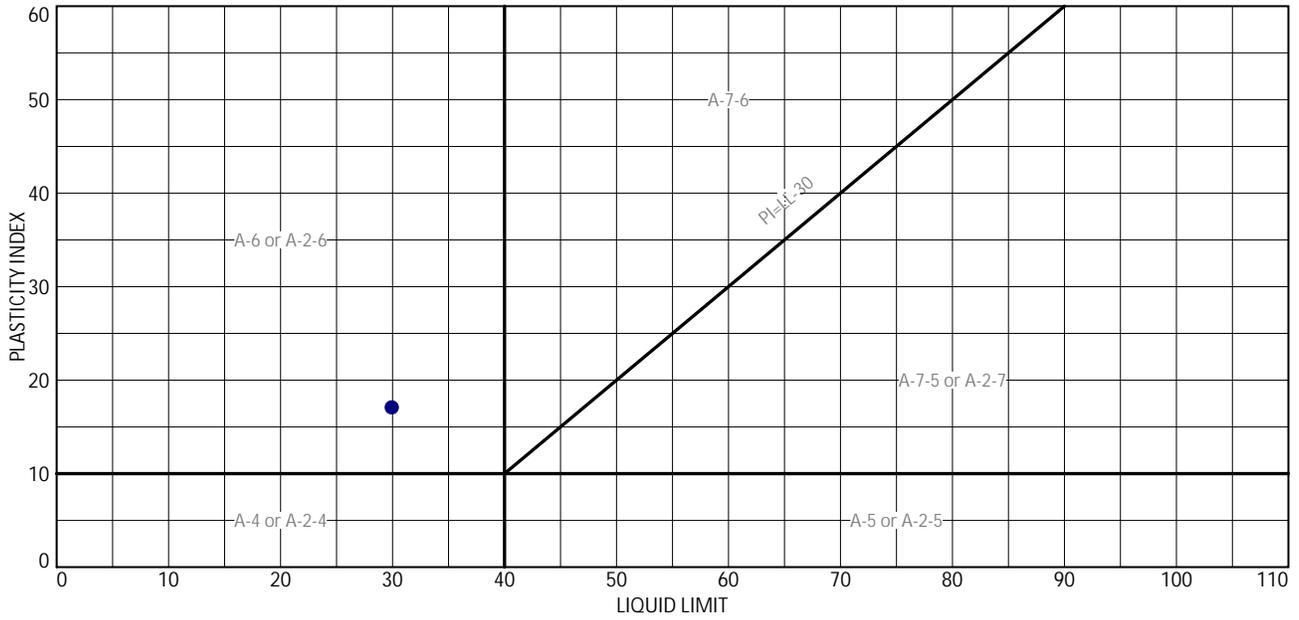


MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	AASHTO
● Gray SANDY LOAM A-4(0)	17	10	7	74.2	45.0	A-4(0)

Project No. 24-0101-04G Client: INDOT Office of Geotechnical Services Project: Noble County Bridge No. 33 Replacement Source of Sample: TB-001 Depth: 38.5-40.0 feet Sample Number: SS-9	Remarks: ● Test Number 242 pH - 7.0
PATRIOT ENGINEERING AND ENVIRONMENTAL, INC. Indianapolis, Indiana	

Tested By: B. Allee Checked By: S. Lauletta

LIQUID AND PLASTIC LIMITS TEST REPORT



MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	AASHTO
● Brown CLAY LOAM A-6(8)	30	13	17	85.3	66.1	A-6(8)

Project No. 24-0101-04G Client: INDOT Office of Geotechnical Services
 Project: Noble County Bridge No. 33 Replacement
 Source of Sample: TB-001 Depth: 6.0-8.5 feet
 Sample Number: ST-1
PATRIOT ENGINEERING AND ENVIRONMENTAL, INC.
 Indianapolis, Indiana

Remarks:
 ● Test Number 241
 pH - 7.0

Tested By: C. Moreno Checked By: S. Lauletta



PATRIOT ENGINEERING
and Environmental, Inc.
Indianapolis, Indiana 46250

SUMMARY OF SPECIAL TESTS

Project Name: <u>Noble County Bridge No. 33 Replacement</u>	INDOT Designation Number: _____
Structure No.: <u>33</u>	County: <u>Noble</u>
Patriot Proj. No.: <u>24-0101-04G</u>	Client: <u>INDOT</u>
District: _____	
Client Address: _____	

Boring Number	Sample Number	Depth (Feet)		% Moisture Content	pH	% Organic Content	% Calcium Carbonate	Unit Weight (pcf)		Unconfined Compressive Strength (Soil/Rock) Qu (ksf)
		Start	End					Wet	Dry	
TB-001	SS-1	1.0	2.5	5.5						
	SS-2	3.5	5.0	11.0						
	ST-1	6.0	8.5	34.4	7.0			130.7	97.3	1.01
	SS-3	8.5	10.0	17.5						
	SS-4	13.5	15.0	25.8						
	SS-5	18.5	20.0	9.1						
	SS-6	23.5	25.0	10.5						
	SS-7	28.5	30.0	11.1						
	SS-8	33.5	35.0	12.8						
	SS-9	38.5	40.0	10.3	7.0					
	SS-10	43.5	45.0	8.9						
	SS-11	48.5	50.0							
	SS-12	53.5	55.0							
	SS-13	58.5	60.0							
	SS-14	63.5	65.0							
	SS-15	68.5	70.0							
	SS-16	73.5	75.0							
	SS-17	78.5	80.0							
	SS-18	83.5	85.0							
SS-19	88.5	90.0								
TB-002	SS-1	1.0	2.5	11.1						
	ST-1	3.0	5.5	12.7	8.7					
	SS-2	6.0	7.5							
	SS-3	8.5	10.0	14.8						
	SS-4	13.5	15.0							
	SS-5	18.5	20.0	10.2						
	ST-2	21.0	23.5	9.5						
	SS-6	23.5	25.0	7.5						
	SS-7	28.5	30.0	9.9						
	SS-8	33.5	35.0	9.6						
SS-9	38.5	40.0	12.3							
SS-10	43.5	45.0	9.3							



PATRIOT ENGINEERING
and Environmental, Inc.
Indianapolis, Indiana 46250

SUMMARY OF SPECIAL TESTS

Project Name: <u>Noble County Bridge No. 33 Replacement</u>	INDOT Designation Number: _____
Structure No.: <u>33</u>	County: <u>Noble</u>
Patriot Proj. No.: <u>24-0101-04G</u>	Client: <u>INDOT</u>
	District: _____
	Client Address: _____

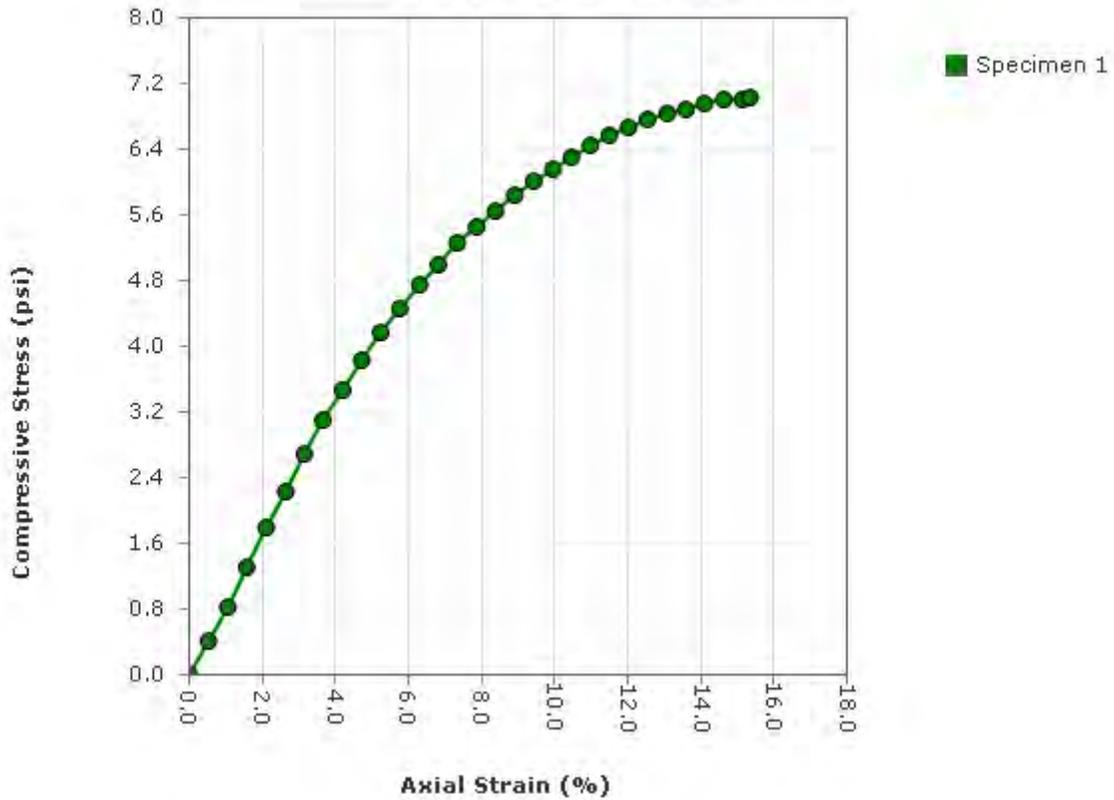
Boring Number	Sample Number	Depth (Feet)		% Moisture Content	pH	% Organic Content	% Calcium Carbonate	Unit Weight (pcf)		Unconfined Compressive Strength (Soil/Rock) Qu (ksf)
		Start	End					Wet	Dry	
TB-002	SS-11	48.5	50.0	10.8						
	SS-12	53.5	55.0	10.1						
	SS-13	58.5	60.0	9.4						
	SS-14	63.5	65.0		8.2					
	SS-15	68.5	70.0	8.7						
	SS-16	73.5	75.0	10.2						
	SS-17	78.5	80.0	11.0						
	SS-18	83.5	85.0	9.2						
	SS-19	88.5	90.0	9.5						



Unconfined Compression Test

AASHTO T208

Stress-Strain Graph



Project: Noble County Bridge No. 33 Replacement
 Project Number: 24-0101-04G
 Received Date: 6/20/2024
 Sampling Date: 6/20/2024
 Sample Number: ST-1
 Sample Depth: 6.0-8.5 ft
 Boring Number: TB-001
 Location:
 Client Name: INDOT Office of Geotechnical Services
 Remarks:

Project Name: Noble County Bridge No. 33 Replacement Project Number: 24-0101-04G

Test Date: 6/26/2024

Checked By: _____ Date: _____

Report Created: 7/16/2024



Unconfined Compression Test

AASHTO T208

	Specimen Number							
Before Test	1	2	3	4	5	6	7	8
Moisture Content (%):	34.4							
Wet Density (pcf)	130.9							
Dry Density (pcf)	97.4							
Saturation (%):	100.0							
Void Ratio:	0.711							
Height (in)	5.7278							
Diameter (in)	2.8548							
Strain Limit @ 15% (in)	0.9							
Height To Diameter Ratio:	2.01							
Test Data	1	2	3	4	5	6	7	8
Failure Angle (°):								
Strain Rate (in/min)	0.06							
Strain Rate (%/min):	1.05							
Unconfined Compressive Strength (psi)	7.0							
Undrained Shear Strength (psi)	3.5							
Strain at Failure (%)	15.1							

Specific Gravity:	2.67	Plastic Limit:	13	Liquid Limit:	30
Type:	Shelby Tube	Soil Classification:	A-6(8)		

Project:	Noble County Bridge No. 33 Replacement
Project Number:	24-0101-04G
Sampling Date:	6/20/2024
Sample Number:	ST-1
Sample Depth:	6.0-8.5 ft
Boring Number:	TB-001
Location:	
Client Name:	INDOT Office of Geotechnical Services
Remarks:	

Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Specimen 6	Specimen 7	Specimen 8
Failure Sketch							

Project Name: Noble County Bridge No. 33 Replacement Project Number: 24-0101-04G

Test Date: 6/26/2024

Checked By: _____ Date: _____

Report Created: 7/16/2024



Unconfined Compression Test

AASHTO T208

LIMS Code: [TO COME FROM LIMS]

Specimen 1

Other Associated Tests:

Sampling Method:	Intact	Material Moisture:	Trimmings	Source Moisture:	Before Shear
Molding Date:	6/26/2024	Test Date:	6/26/2024		
Large Particle:	NO	Sensitivity:	0		
Technician:	E. Bergel	Test Time:	6/26/2024		
Specimen Description:	Brown CLAY LOAM A-6(8)				
Test Remarks:					

Project Name: Noble County Bridge No. 33 Replacement Project Number: 24-0101-04G

Test Date: 6/26/2024

Checked By: _____ Date: _____

Report Created: 7/16/2024

Unconfined Compression Test - Specimen 1

AASHTO T208

LIMS Specimen Code: [TO COME FROM LIMS]

Index	Elapsed Time (hh:mm:ss)	Load (Lbf)	Displacement (in)	Corrected Load (Lbf)	Corrected Displacement (in)	Axial Strain (%)	Cross Sectional Area (in ²)	Stress (psi)	Compressive Stress (psi)
0	00:00:00	1.000746	0.0058	0.0	0.0000	0.0	0.000	0.0	0.0
1	00:00:30	3.73612	0.0356	2.7	0.0298	0.5	6.434	0.4	0.4
2	00:01:00	6.483524	0.0660	5.5	0.0602	1.1	6.469	0.9	0.8
3	00:01:30	9.555761	0.0955	8.6	0.0897	1.6	6.503	1.3	1.3
4	00:02:00	12.65425	0.1261	11.7	0.1203	2.1	6.538	1.8	1.8
5	00:02:30	15.74289	0.1568	14.7	0.1510	2.6	6.574	2.3	2.2
6	00:03:00	18.70576	0.1861	17.7	0.1803	3.1	6.609	2.8	2.7
7	00:03:30	21.55816	0.2152	20.6	0.2094	3.7	6.644	3.2	3.1
8	00:04:00	24.21697	0.2461	23.2	0.2403	4.2	6.681	3.6	3.5
9	00:04:30	26.73798	0.2757	25.7	0.2699	4.7	6.718	4.0	3.8
10	00:05:00	29.1693	0.3057	28.2	0.2999	5.2	6.755	4.4	4.2
11	00:05:30	31.3786	0.3356	30.4	0.3298	5.8	6.792	4.7	4.5
12	00:06:00	33.38227	0.3667	32.4	0.3609	6.3	6.832	5.1	4.7
13	00:06:30	35.31487	0.3961	34.3	0.3903	6.8	6.869	5.4	5.0
14	00:07:00	37.2737	0.4258	36.3	0.4200	7.3	6.908	5.7	5.3
15	00:07:30	38.94489	0.4560	37.9	0.4502	7.9	6.947	5.9	5.5
16	00:08:00	40.54062	0.4856	39.5	0.4798	8.4	6.986	6.2	5.7
17	00:08:30	42.06525	0.5159	41.1	0.5101	8.9	7.027	6.4	5.8
18	00:09:00	43.47614	0.5456	42.5	0.5398	9.4	7.067	6.6	6.0
19	00:09:30	44.81813	0.5758	43.8	0.5700	10.0	7.108	6.8	6.2
20	00:10:00	46.1109	0.6048	45.1	0.5990	10.5	7.149	7.0	6.3
21	00:10:30	47.40366	0.6345	46.4	0.6287	11.0	7.190	7.2	6.5
22	00:11:00	48.50394	0.6642	47.5	0.6584	11.5	7.232	7.4	6.6
23	00:11:30	49.55499	0.6942	48.6	0.6884	12.0	7.275	7.6	6.7
24	00:12:00	50.58308	0.7242	49.6	0.7184	12.5	7.319	7.7	6.8
25	00:12:30	51.3279	0.7550	50.3	0.7492	13.1	7.364	7.9	6.8
26	00:13:00	52.0071	0.7842	51.0	0.7784	13.6	7.408	8.0	6.9
27	00:13:30	52.77269	0.8132	51.8	0.8074	14.1	7.451	8.1	6.9
28	00:14:00	53.52298	0.8436	52.5	0.8378	14.6	7.498	8.2	7.0
29	00:14:30	53.85766	0.8728	52.9	0.8670	15.1	7.543	8.3	7.0
30	00:14:42	54.11687	0.8850	53.1	0.8792	15.3	7.562	8.3	7.0

Project Name: Noble County Bridge No. 33 Replacement Project Number: 24-0101-04G

Test Date: 6/26/2024

Technician: E. Bergel

Checked By: _____ Date: _____

Report Created: 7/16/2024

APPENDIX D

Bridge Pile Load Evaluations

14 in. Pipe Pile Bent No. 1

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APILE for Windows, Version 2015.7.7

Serial Number : 227886287

A Program for Analyzing the Axial Capacity
and Short-term Settlement of Driven Piles
under Axial Loading.
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This program is licensed to :

Patriot Engineering
Indianapolis, Indiana / USA

Path to file locations : C:\Users\blauletta\Patriot Engineering\GEO -
Documents\2024\04 - Fort Wayne\24-0101-04G (Noble County Bridge 33
Replacement)\Report\Appendix\Analysis\
Name of input data file : TB-2 14in PP Bent 1.ap7d
Name of output file : TB-2 14in PP Bent 1.ap7o
Name of plot output file : TB-2 14in PP Bent 1.ap7p

Time and Date of Analysis

Date: October 28, 2024 Time: 14:22:36

1

* INPUT INFORMATION *

Noble County Bridge No. 33

DESIGNER : Ben Lauletta, P.E.

JOB NUMBER : 24-0101-04G

TB-2 14in PP Bent 1.ap7o

METHOD FOR UNIT LOAD TRANSFERS :

- FHWA (Federal Highway Administration)
Unfactored Unit Side Friction and Unit Side Resistance are used.

COMPUTATION METHOD(S) FOR PILE CAPACITY :

- FHWA (Federal Highway Administration)

TYPE OF LOADING :

- COMPRESSION

PILE TYPE :

Steel pipe pile or non-tapered portion of monotube pile
- Close-Ended Pile

DATA FOR AXIAL STIFFNESS :

- MODULUS OF ELASTICITY = 0.290E+08 PSI
- CROSS SECTION AREA = 16.05 IN²

CIRCULAR PILE PROPERTIES :

- OUTSIDE DIAMETER, OD = 14.00 IN.
- INTERNAL DIAMETER, ID = 13.25 IN.
- TOTAL PILE LENGTH, TL = 90.00 FT.
- PILE STICKUP LENGTH, PSL = 0.00 FT.
- ZERO FRICTION LENGTH, ZFL = 0.00 FT.
- INCREMENT OF PILE LENGTH
USED IN COMPUTATION = 1.00 FT.
- LENGTH OF ENHANCED
END SECTION = 90.00 FT.
- INTERNAL DIAMETER OF
ENHANCED END SECTION = 13.25 IN.

PLUGGED/UNPLUGGED CONDITIONS :

Internal Pile Plug Calculated by Program

TB-2 14in PP Bent 1.ap7o

SOIL INFORMATIONS :

DEPTH FT.	SOIL TYPE	LATERAL EARTH PRESSURE	EFFECTIVE UNIT WEIGHT LB/CF	FRICITION ANGLE DEGREES	BEARING CAPACITY FACTOR
0.00	CLAY	0.00	120.00	0.00	0.00
3.00	CLAY	0.00	120.00	0.00	0.00
3.00	SAND	0.00	125.00	32.00	0.00
8.50	SAND	0.00	125.00	32.00	0.00
8.50	SAND	0.00	120.00	30.00	0.00
13.50	SAND	0.00	120.00	30.00	0.00
13.50	SAND	0.00	63.00	32.00	0.00
18.50	SAND	0.00	63.00	32.00	0.00
18.50	CLAY	0.00	63.00	0.00	0.00
53.50	CLAY	0.00	63.00	0.00	0.00
53.50	SAND	0.00	63.00	30.00	0.00
58.50	SAND	0.00	63.00	30.00	0.00
58.50	SAND	0.00	63.00	32.00	0.00
78.50	SAND	0.00	63.00	32.00	0.00
78.50	SAND	0.00	68.00	36.00	0.00
95.00	SAND	0.00	68.00	36.00	0.00

MAXIMUM UNIT FRICITION KSF	MAXIMUM UNIT BEARING KSF	UNDISTURB SHEAR STRENGTH KSF	REMOLDED SHEAR STRENGTH KSF	BLOW COUNT	UNIT SKIN FRICITION KSF	UNIT END BEARING KSF
0.10E+08*	0.10E+08*	0.75	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.75	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	2.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	2.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00

TB-2 14in PP Bent 1.ap7o

* MAXIMUM UNIT FRICTION AND/OR MAXIMUM UNIT BEARING WERE SET TO BE 0.10E+08 BECAUSE THE USER DOES NOT PLAN TO LIMIT THE COMPUTED DATA.

DEPTH FT.	LRFD FACTOR ON UNIT FRICTION	LRFD FACTOR ON UNIT BEARING
0.00	1.000	1.000
3.00	1.000	1.000
3.00	1.000	1.000
8.50	1.000	1.000
8.50	1.000	1.000
13.50	1.000	1.000
13.50	1.000	1.000
18.50	1.000	1.000
18.50	1.000	1.000
53.50	1.000	1.000
53.50	1.000	1.000
58.50	1.000	1.000
58.50	1.000	1.000
78.50	1.000	1.000
78.50	1.000	1.000
95.00	1.000	1.000

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 * COMPUTATION RESULT *

 * FED. HWY. METHOD *

PILE PENETRATION FT.	TOTAL SKIN FRICTION KIP	END BEARING KIP	ULTIMATE CAPACITY KIP
0.00	0.0	3.6	3.6
1.00	0.0	3.6	3.6
2.00	0.6	8.0	8.7
3.00	1.9	9.9	11.8

TB-2 14in PP Bent 1.ap7o

4.00	2.9	12.8	15.7
5.00	3.8	16.5	20.2
6.00	4.8	19.9	24.7
7.00	6.1	23.2	29.3
8.00	7.5	23.0	30.5
9.00	9.1	20.6	29.8
10.00	10.8	17.3	28.1
11.00	12.4	14.2	26.6
12.00	14.1	14.2	28.4
13.00	16.0	18.7	34.8
14.00	18.1	24.8	42.8
15.00	20.5	30.8	51.3
16.00	23.4	35.3	58.6
17.00	26.3	35.3	61.6
18.00	29.3	31.8	61.1
19.00	32.4	27.3	59.7
20.00	36.9	22.7	59.5
21.00	42.6	19.2	61.8
22.00	48.3	19.2	67.5
23.00	54.0	19.2	73.3
24.00	59.7	19.2	79.0
25.00	65.5	19.2	84.7
26.00	71.2	19.2	90.4
27.00	76.9	19.2	96.1
28.00	82.6	19.2	101.9
29.00	88.3	19.2	107.6
30.00	94.1	19.2	113.3
31.00	99.8	19.2	119.0
32.00	105.5	19.2	124.7
33.00	111.2	19.2	130.5
34.00	116.9	19.2	136.2
35.00	122.7	19.2	141.9
36.00	128.4	19.2	147.6
37.00	134.1	19.2	153.3
38.00	139.8	19.2	159.1
39.00	145.5	19.2	164.8
40.00	151.2	19.2	170.5
41.00	157.0	19.2	176.2
42.00	162.7	19.2	181.9
43.00	168.4	19.2	187.7
44.00	174.1	19.2	193.4
45.00	179.8	19.2	199.1
46.00	185.6	19.2	204.8
47.00	191.3	19.2	210.5
48.00	197.0	19.2	216.3
49.00	202.7	19.2	222.0
50.00	208.4	19.2	227.7
51.00	214.2	19.2	233.4

TB-2 14in PP Bent 1.ap7o

52.00	219.9	19.2	239.1
53.00	225.2	18.2	243.4
54.00	230.4	16.7	247.1
55.00	235.7	15.3	251.0
56.00	241.1	14.2	255.3
57.00	246.5	14.2	260.8
58.00	252.1	18.7	270.8
59.00	257.7	24.8	282.5
60.00	264.1	30.8	294.9
61.00	271.4	35.3	306.7
62.00	278.7	35.3	314.0
63.00	286.2	35.3	321.5
64.00	293.7	35.3	329.0
65.00	301.4	35.3	336.7
66.00	309.1	35.3	344.4
67.00	317.0	35.3	352.2
68.00	324.9	35.3	360.2
69.00	333.0	35.3	368.2
70.00	341.1	35.3	376.4
71.00	349.3	35.3	384.6
72.00	357.7	35.3	393.0
73.00	366.1	35.3	401.4
74.00	374.6	35.3	409.9
75.00	383.3	35.3	418.6
76.00	392.0	35.3	427.3
77.00	400.8	35.3	436.1
78.00	409.8	62.4	472.2
79.00	418.8	98.7	517.5
80.00	430.4	134.9	565.3
81.00	444.5	162.1	606.6
82.00	458.8	162.1	620.9
83.00	473.3	162.1	635.4
84.00	488.0	162.1	650.0
85.00	502.8	162.1	664.9
86.00	517.8	162.1	679.8
87.00	532.9	162.1	695.0
88.00	548.2	162.1	710.3
89.00	563.7	162.1	725.7
90.00	579.3	162.1	741.4

NOTES:

- AN ASTERISK IS PLACED IN THE END-BEARING COLUMN IF THE TIP RESISTANCE IS CONTROLLED BY THE FRICTION OF SOIL PLUG INSIDE AN OPEN-ENDED PIPE PILE.

TB-2 14in PP Bent 1.ap7o

 * COMPUTE LOAD-DISTRIBUTION AND LOAD-SETTLEMENT *
 * CURVES FOR AXIAL LOADING *

T-Z CURVE NO.	NO. OF POINTS	DEPTH TO CURVE FT.	LOAD TRANSFER PSI	PILE MOVEMENT IN.
1	10	0.0000E+00	0.0000E+00	0.0000E+00
			0.3582E+00	0.2240E-01
			0.5970E+00	0.4340E-01
			0.8955E+00	0.7980E-01
			0.1075E+01	0.1120E+00
			0.1194E+01	0.1400E+00
			0.1075E+01	0.2800E+00
			0.1075E+01	0.4200E+00
			0.1075E+01	0.7000E+00
			0.1075E+01	0.2800E+01
2	10	0.1525E+01	0.0000E+00	0.0000E+00
			0.7164E+00	0.2240E-01
			0.1194E+01	0.4340E-01
			0.1791E+01	0.7980E-01
			0.2149E+01	0.1120E+00
			0.2388E+01	0.1400E+00
			0.2149E+01	0.2800E+00
			0.2149E+01	0.4200E+00
			0.2149E+01	0.7000E+00
			0.2149E+01	0.2800E+01
3	10	0.2958E+01	0.0000E+00	0.0000E+00
			0.6451E+00	0.2240E-01
			0.1075E+01	0.4340E-01
			0.1613E+01	0.7980E-01
			0.1935E+01	0.1120E+00
			0.2150E+01	0.1400E+00
			0.1935E+01	0.2800E+00
			0.1935E+01	0.4200E+00
			0.1935E+01	0.7000E+00
			0.1935E+01	0.2800E+01
4	10	0.3000E+01	0.0000E+00	0.0000E+00
			0.1767E+00	0.1000E-01
			0.3534E+00	0.2000E-01
			0.7068E+00	0.4000E-01
			0.1060E+01	0.6000E-01

TB-2 14in PP Bent 1.ap7o

			0.1414E+01	0.8000E-01
			0.1590E+01	0.9000E-01
			0.1767E+01	0.1000E+00
			0.1767E+01	0.5000E+00
			0.1767E+01	0.2000E+01
5	10	0.5775E+01		
			0.0000E+00	0.0000E+00
			0.2177E+00	0.1000E-01
			0.4355E+00	0.2000E-01
			0.8709E+00	0.4000E-01
			0.1306E+01	0.6000E-01
			0.1742E+01	0.8000E-01
			0.1960E+01	0.9000E-01
			0.2177E+01	0.1000E+00
			0.2177E+01	0.5000E+00
			0.2177E+01	0.2000E+01
6	10	0.8458E+01		
			0.0000E+00	0.0000E+00
			0.3099E+00	0.1000E-01
			0.6197E+00	0.2000E-01
			0.1239E+01	0.4000E-01
			0.1859E+01	0.6000E-01
			0.2479E+01	0.8000E-01
			0.2789E+01	0.9000E-01
			0.3099E+01	0.1000E+00
			0.3099E+01	0.5000E+00
			0.3099E+01	0.2000E+01
7	10	0.8500E+01		
			0.0000E+00	0.0000E+00
			0.3099E+00	0.1000E-01
			0.6197E+00	0.2000E-01
			0.1239E+01	0.4000E-01
			0.1859E+01	0.6000E-01
			0.2479E+01	0.8000E-01
			0.2789E+01	0.9000E-01
			0.3099E+01	0.1000E+00
			0.3099E+01	0.5000E+00
			0.3099E+01	0.2000E+01
8	10	0.1103E+02		
			0.0000E+00	0.0000E+00
			0.3466E+00	0.1000E-01
			0.6933E+00	0.2000E-01
			0.1387E+01	0.4000E-01
			0.2080E+01	0.6000E-01
			0.2773E+01	0.8000E-01
			0.3120E+01	0.9000E-01
			0.3466E+01	0.1000E+00
			0.3466E+01	0.5000E+00

TB-2 14in PP Bent 1.ap7o

9	10	0.1346E+02	0.3466E+01	0.2000E+01
			0.0000E+00	0.0000E+00
			0.4266E+00	0.1000E-01
			0.8533E+00	0.2000E-01
			0.1707E+01	0.4000E-01
			0.2560E+01	0.6000E-01
			0.3413E+01	0.8000E-01
			0.3840E+01	0.9000E-01
			0.4266E+01	0.1000E+00
			0.4266E+01	0.5000E+00
			0.4266E+01	0.2000E+01
10	10	0.1350E+02	0.0000E+00	0.0000E+00
			0.4266E+00	0.1000E-01
			0.8533E+00	0.2000E-01
			0.1707E+01	0.4000E-01
			0.2560E+01	0.6000E-01
			0.3413E+01	0.8000E-01
			0.3840E+01	0.9000E-01
			0.4266E+01	0.1000E+00
			0.4266E+01	0.5000E+00
			0.4266E+01	0.2000E+01
11	10	0.1603E+02	0.0000E+00	0.0000E+00
			0.5625E+00	0.1000E-01
			0.1125E+01	0.2000E-01
			0.2250E+01	0.4000E-01
			0.3375E+01	0.6000E-01
			0.4500E+01	0.8000E-01
			0.5063E+01	0.9000E-01
			0.5625E+01	0.1000E+00
			0.5625E+01	0.5000E+00
			0.5625E+01	0.2000E+01
12	10	0.1846E+02	0.0000E+00	0.0000E+00
			0.7162E+00	0.1000E-01
			0.1432E+01	0.2000E-01
			0.2865E+01	0.4000E-01
			0.4297E+01	0.6000E-01
			0.5729E+01	0.8000E-01
			0.6445E+01	0.9000E-01
			0.7162E+01	0.1000E+00
			0.7162E+01	0.5000E+00
			0.7162E+01	0.2000E+01
13	10	0.1850E+02	0.0000E+00	0.0000E+00
			0.2148E+01	0.2240E-01

TB-2 14in PP Bent 1.ap7o

			0.3581E+01	0.4340E-01
			0.5371E+01	0.7980E-01
			0.6445E+01	0.1120E+00
			0.7162E+01	0.1400E+00
			0.6445E+01	0.2800E+00
			0.6445E+01	0.4200E+00
			0.6445E+01	0.7000E+00
			0.6445E+01	0.2800E+01
14	10	0.3603E+02	0.0000E+00	0.0000E+00
			0.3251E+01	0.2240E-01
			0.5419E+01	0.4340E-01
			0.8128E+01	0.7980E-01
			0.9754E+01	0.1120E+00
			0.1084E+02	0.1400E+00
			0.9754E+01	0.2800E+00
			0.9754E+01	0.4200E+00
			0.9754E+01	0.7000E+00
			0.9754E+01	0.2800E+01
15	10	0.5346E+02	0.0000E+00	0.0000E+00
			0.2973E+01	0.2240E-01
			0.4954E+01	0.4340E-01
			0.7432E+01	0.7980E-01
			0.8918E+01	0.1120E+00
			0.9909E+01	0.1400E+00
			0.8918E+01	0.2800E+00
			0.8918E+01	0.4200E+00
			0.8918E+01	0.7000E+00
			0.8918E+01	0.2800E+01
16	10	0.5350E+02	0.0000E+00	0.0000E+00
			0.9909E+00	0.1000E-01
			0.1982E+01	0.2000E-01
			0.3963E+01	0.4000E-01
			0.5945E+01	0.6000E-01
			0.7927E+01	0.8000E-01
			0.8918E+01	0.9000E-01
			0.9909E+01	0.1000E+00
			0.9909E+01	0.5000E+00
			0.9909E+01	0.2000E+01
17	10	0.5603E+02	0.0000E+00	0.0000E+00
			0.1042E+01	0.1000E-01
			0.2084E+01	0.2000E-01
			0.4168E+01	0.4000E-01
			0.6252E+01	0.6000E-01
			0.8336E+01	0.8000E-01

TB-2 14in PP Bent 1.ap7o

			0.9378E+01	0.9000E-01
			0.1042E+02	0.1000E+00
			0.1042E+02	0.5000E+00
			0.1042E+02	0.2000E+01
18	10	0.5846E+02		
			0.0000E+00	0.0000E+00
			0.1141E+01	0.1000E-01
			0.2283E+01	0.2000E-01
			0.4565E+01	0.4000E-01
			0.6848E+01	0.6000E-01
			0.9131E+01	0.8000E-01
			0.1027E+02	0.9000E-01
			0.1141E+02	0.1000E+00
			0.1141E+02	0.5000E+00
			0.1141E+02	0.2000E+01
19	10	0.5850E+02		
			0.0000E+00	0.0000E+00
			0.1141E+01	0.1000E-01
			0.2283E+01	0.2000E-01
			0.4565E+01	0.4000E-01
			0.6848E+01	0.6000E-01
			0.9131E+01	0.8000E-01
			0.1027E+02	0.9000E-01
			0.1141E+02	0.1000E+00
			0.1141E+02	0.5000E+00
			0.1141E+02	0.2000E+01
20	10	0.6853E+02		
			0.0000E+00	0.0000E+00
			0.1533E+01	0.1000E-01
			0.3066E+01	0.2000E-01
			0.6132E+01	0.4000E-01
			0.9198E+01	0.6000E-01
			0.1226E+02	0.8000E-01
			0.1380E+02	0.9000E-01
			0.1533E+02	0.1000E+00
			0.1533E+02	0.5000E+00
			0.1533E+02	0.2000E+01
21	10	0.7846E+02		
			0.0000E+00	0.0000E+00
			0.1952E+01	0.1000E-01
			0.3904E+01	0.2000E-01
			0.7807E+01	0.4000E-01
			0.1171E+02	0.6000E-01
			0.1561E+02	0.8000E-01
			0.1757E+02	0.9000E-01
			0.1952E+02	0.1000E+00
			0.1952E+02	0.5000E+00
			0.1952E+02	0.2000E+01

		TB-2 14in PP Bent 1.ap7o		
22	10	0.7850E+02	0.0000E+00	0.0000E+00
			0.1952E+01	0.1000E-01
			0.3904E+01	0.2000E-01
			0.7807E+01	0.4000E-01
			0.1171E+02	0.6000E-01
			0.1561E+02	0.8000E-01
			0.1757E+02	0.9000E-01
			0.1952E+02	0.1000E+00
			0.1952E+02	0.5000E+00
			0.1952E+02	0.2000E+01
23	10	0.8678E+02	0.0000E+00	0.0000E+00
			0.2883E+01	0.1000E-01
			0.5767E+01	0.2000E-01
			0.1153E+02	0.4000E-01
			0.1730E+02	0.6000E-01
			0.2307E+02	0.8000E-01
			0.2595E+02	0.9000E-01
			0.2883E+02	0.1000E+00
			0.2883E+02	0.5000E+00
			0.2883E+02	0.2000E+01
24	10	0.9496E+02	0.0000E+00	0.0000E+00
			0.2961E+01	0.1000E-01
			0.5921E+01	0.2000E-01
			0.1184E+02	0.4000E-01
			0.1776E+02	0.6000E-01
			0.2369E+02	0.8000E-01
			0.2665E+02	0.9000E-01
			0.2961E+02	0.1000E+00
			0.2961E+02	0.5000E+00
			0.2961E+02	0.2000E+01

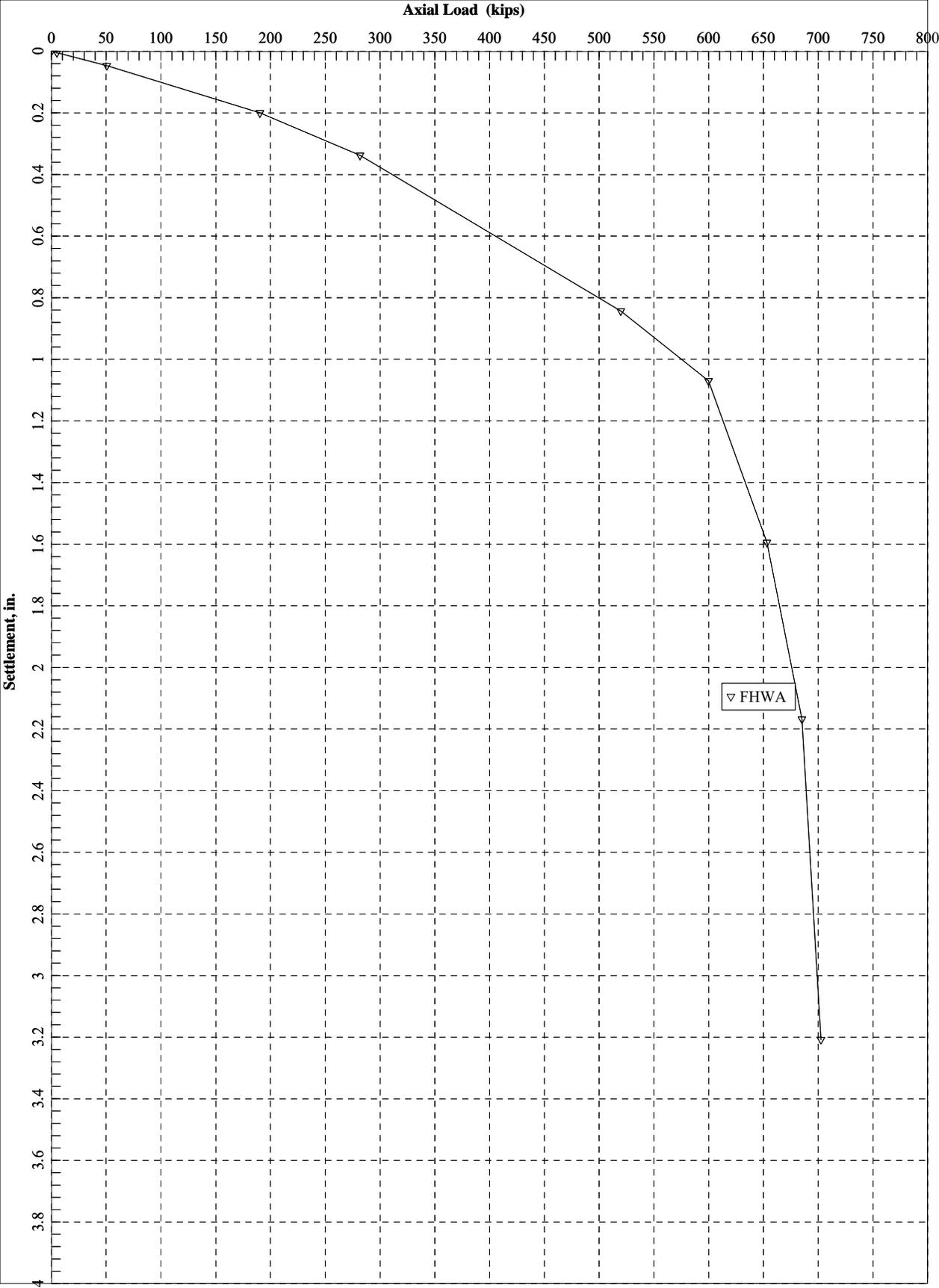
TIP LOAD KIP	TIP MOVEMENT IN.
0.0000E+00	0.0000E+00
0.1013E+02	0.7000E-02
0.2026E+02	0.1400E-01
0.4052E+02	0.2800E-01
0.8103E+02	0.1820E+00
0.1215E+03	0.5880E+00
0.1459E+03	0.1022E+01
0.1621E+03	0.1400E+01
0.1621E+03	0.2100E+01

0.1621E+03

TB-2 14in PP Bent 1.ap7o
0.2800E+01

LOAD VERSUS SETTLEMENT CURVE

TOP LOAD KIP	TOP MOVEMENT IN.	TIP LOAD KIP	TIP MOVEMENT IN.
0.4970E+01	0.4593E-02	0.1447E+00	0.1000E-03
0.5058E+02	0.4670E-01	0.1447E+01	0.1000E-02
0.1903E+03	0.2000E+00	0.7235E+01	0.5000E-02
0.2816E+03	0.3377E+00	0.1447E+02	0.1000E-01
0.5198E+03	0.8431E+00	0.4630E+02	0.5000E-01
0.5999E+03	0.1070E+01	0.5946E+02	0.1000E+00
0.6532E+03	0.1594E+01	0.1128E+03	0.5000E+00
0.6851E+03	0.2168E+01	0.1446E+03	0.1000E+01
0.7025E+03	0.3208E+01	0.1621E+03	0.2000E+01



14 in. Pipe Pile Bent No. 2

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APILE for Windows, Version 2015.7.7

Serial Number : 227886287

A Program for Analyzing the Axial Capacity
and Short-term Settlement of Driven Piles
under Axial Loading.
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This program is licensed to :

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Indianapolis, Indiana / USA

Path to file locations : C:\Users\blauletta\Patriot Engineering\GEO -
Documents\2024\04 - Fort Wayne\24-0101-04G (Noble County Bridge 33
Replacement)\Report\Appendix\Analysis\
Name of input data file : TB-1 14in PP Bent 2.ap7d
Name of output file : TB-1 14in PP Bent 2.ap7o
Name of plot output file : TB-1 14in PP Bent 2.ap7p

Time and Date of Analysis

Date: October 28, 2024 Time: 14:06:18

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* INPUT INFORMATION *

Noble County Bridge No. 33

DESIGNER : Ben Lauletta, P.E.

JOB NUMBER : 24-0101-04G

TB-1 14in PP Bent 2.ap7o

METHOD FOR UNIT LOAD TRANSFERS :

- FHWA (Federal Highway Administration)
Unfactored Unit Side Friction and Unit Side Resistance are used.

COMPUTATION METHOD(S) FOR PILE CAPACITY :

- FHWA (Federal Highway Administration)

TYPE OF LOADING :

- COMPRESSION

PILE TYPE :

Steel pipe pile or non-tapered portion of monotube pile
- Close-Ended Pile

DATA FOR AXIAL STIFFNESS :

- MODULUS OF ELASTICITY = 0.290E+08 PSI
- CROSS SECTION AREA = 16.05 IN²

CIRCULAR PILE PROPERTIES :

- OUTSIDE DIAMETER, OD = 14.00 IN.
- INTERNAL DIAMETER, ID = 13.25 IN.
- TOTAL PILE LENGTH, TL = 90.00 FT.
- PILE STICKUP LENGTH, PSL = 0.00 FT.
- ZERO FRICTION LENGTH, ZFL = 0.00 FT.
- INCREMENT OF PILE LENGTH
USED IN COMPUTATION = 1.00 FT.
- LENGTH OF ENHANCED
END SECTION = 90.00 FT.
- INTERNAL DIAMETER OF
ENHANCED END SECTION = 13.25 IN.

PLUGGED/UNPLUGGED CONDITIONS :

Internal Pile Plug Calculated by Program

TB-1 14in PP Bent 2.ap7o

SOIL INFORMATIONS :

DEPTH FT.	SOIL TYPE	LATERAL EARTH PRESSURE	EFFECTIVE UNIT WEIGHT LB/CF	FRICITION ANGLE DEGREES	BEARING CAPACITY FACTOR
0.00	CLAY	0.00	130.00	0.00	0.00
6.00	CLAY	0.00	130.00	0.00	0.00
6.00	CLAY	0.00	130.00	0.00	0.00
10.00	CLAY	0.00	130.00	0.00	0.00
10.00	SAND	0.00	125.00	32.00	0.00
13.50	SAND	0.00	125.00	32.00	0.00
13.50	SAND	0.00	63.00	32.00	0.00
18.50	SAND	0.00	63.00	32.00	0.00
18.50	CLAY	0.00	68.00	0.00	0.00
48.50	CLAY	0.00	68.00	0.00	0.00
48.50	SAND	0.00	68.00	32.00	0.00
78.50	SAND	0.00	68.00	32.00	0.00
78.50	SAND	0.00	68.00	34.00	0.00
95.00	SAND	0.00	68.00	34.00	0.00

MAXIMUM UNIT FRICITION KSF	MAXIMUM UNIT BEARING KSF	UNDISTURB SHEAR STRENGTH KSF	REMOLDED SHEAR STRENGTH KSF	BLOW COUNT	UNIT SKIN FRICITION KSF	UNIT END BEARING KSF
0.10E+08*	0.10E+08*	2.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	2.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.45	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.45	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	2.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	2.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00
0.10E+08*	0.10E+08*	0.00	0.00	0.00	0.00	0.00

* MAXIMUM UNIT FRICTION AND/OR MAXIMUM UNIT BEARING WERE SET TO BE 0.10E+08 BECAUSE THE USER DOES NOT PLAN TO LIMIT THE COMPUTED DATA.

TB-1 14in PP Bent 2.ap7o

DEPTH FT.	LRFD FACTOR ON UNIT FRICTION	LRFD FACTOR ON UNIT BEARING
0.00	1.000	1.000
6.00	1.000	1.000
6.00	1.000	1.000
10.00	1.000	1.000
10.00	1.000	1.000
13.50	1.000	1.000
13.50	1.000	1.000
18.50	1.000	1.000
18.50	1.000	1.000
48.50	1.000	1.000
48.50	1.000	1.000
78.50	1.000	1.000
78.50	1.000	1.000
95.00	1.000	1.000

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 * COMPUTATION RESULT *

 * FED. HWY. METHOD *

PILE PENETRATION FT.	TOTAL SKIN FRICTION KIP	END BEARING KIP	ULTIMATE CAPACITY KIP
0.00	0.0	9.6	9.6
1.00	0.0	9.6	9.6
2.00	2.5	19.2	21.8
3.00	7.6	19.2	26.8
4.00	12.6	19.2	31.9
5.00	17.7	16.0	33.7
6.00	22.7	11.8	34.5
7.00	26.0	7.5	33.6
8.00	27.7	4.3	32.0
9.00	29.3	10.9	40.2

TB-1 14in PP Bent 2.ap7o

10.00	30.9	19.8	50.7
11.00	32.8	28.6	61.5
12.00	35.2	35.3	70.4
13.00	37.7	35.3	73.0
14.00	40.4	35.3	75.7
15.00	43.3	35.3	78.6
16.00	46.2	35.3	81.5
17.00	49.3	35.3	84.6
18.00	52.5	31.8	84.3
19.00	55.7	27.3	83.0
20.00	60.1	22.7	82.8
21.00	65.7	19.2	84.9
22.00	71.2	19.2	90.5
23.00	76.8	19.2	96.0
24.00	82.3	19.2	101.6
25.00	87.9	19.2	107.1
26.00	93.4	19.2	112.7
27.00	99.0	19.2	118.2
28.00	104.5	19.2	123.8
29.00	110.1	19.2	129.3
30.00	115.6	19.2	134.9
31.00	121.2	19.2	140.4
32.00	126.7	19.2	146.0
33.00	132.3	19.2	151.5
34.00	137.8	19.2	157.1
35.00	143.4	19.2	162.6
36.00	148.9	19.2	168.2
37.00	154.5	19.2	173.7
38.00	160.0	19.2	179.3
39.00	165.6	19.2	184.8
40.00	171.1	19.2	190.4
41.00	176.7	19.2	195.9
42.00	182.2	19.2	201.5
43.00	187.8	19.2	207.0
44.00	193.3	19.2	212.6
45.00	198.9	19.2	218.1
46.00	204.4	19.2	223.7
47.00	210.0	19.2	229.2
48.00	215.3	22.7	237.9
49.00	220.2	27.3	247.5
50.00	226.0	31.8	257.9
51.00	232.7	35.3	268.0
52.00	239.5	35.3	274.7
53.00	246.3	35.3	281.6
54.00	253.3	35.3	288.6
55.00	260.4	35.3	295.7
56.00	267.6	35.3	302.8
57.00	274.9	35.3	310.1

TB-1 14in PP Bent 2.ap7o

58.00	282.3	35.3	317.5
59.00	289.8	35.3	325.0
60.00	297.4	35.3	332.7
61.00	305.1	35.3	340.4
62.00	312.9	35.3	348.2
63.00	320.9	35.3	356.1
64.00	328.9	35.3	364.2
65.00	337.0	35.3	372.3
66.00	345.3	35.3	380.6
67.00	353.6	35.3	388.9
68.00	362.1	35.3	397.4
69.00	370.7	35.3	406.0
70.00	379.4	35.3	414.6
71.00	388.1	35.3	423.4
72.00	397.0	35.3	432.3
73.00	406.0	35.3	441.3
74.00	415.1	35.3	450.4
75.00	424.3	35.3	459.6
76.00	433.6	35.3	468.9
77.00	443.1	35.3	478.3
78.00	452.6	44.6	497.1
79.00	462.2	56.9	519.2
80.00	473.0	69.3	542.3
81.00	484.9	78.6	563.5
82.00	497.0	78.6	575.6
83.00	509.2	78.6	587.8
84.00	521.5	78.6	600.1
85.00	534.0	78.6	612.6
86.00	546.6	78.6	625.2
87.00	559.3	78.6	637.9
88.00	572.1	78.6	650.7
89.00	585.1	78.6	663.7
90.00	598.2	78.6	676.8

NOTES:

- AN ASTERISK IS PLACED IN THE END-BEARING COLUMN IF THE TIP RESISTANCE IS CONTROLLED BY THE FRICTION OF SOIL PLUG INSIDE AN OPEN-ENDED PIPE PILE.

 * COMPUTE LOAD-DISTRIBUTION AND LOAD-SETTLEMENT *
 * CURVES FOR AXIAL LOADING *

TB-1 14in PP Bent 2.ap7o				
T-Z CURVE NO.	NO. OF POINTS	DEPTH TO CURVE FT.	LOAD TRANSFER PSI	PILE MOVEMENT IN.
1	10	0.0000E+00	0.0000E+00	0.0000E+00
			0.1433E+01	0.2240E-01
			0.2389E+01	0.4340E-01
			0.3583E+01	0.7980E-01
			0.4300E+01	0.1120E+00
			0.4778E+01	0.1400E+00
			0.4300E+01	0.2800E+00
			0.4300E+01	0.4200E+00
			0.4300E+01	0.7000E+00
			0.4300E+01	0.2800E+01
2	10	0.3025E+01	0.0000E+00	0.0000E+00
			0.2867E+01	0.2240E-01
			0.4778E+01	0.4340E-01
			0.7167E+01	0.7980E-01
			0.8600E+01	0.1120E+00
			0.9556E+01	0.1400E+00
			0.8600E+01	0.2800E+00
			0.8600E+01	0.4200E+00
			0.8600E+01	0.7000E+00
			0.8600E+01	0.2800E+01
3	10	0.5958E+01	0.0000E+00	0.0000E+00
			0.2385E+01	0.2240E-01
			0.3975E+01	0.4340E-01
			0.5963E+01	0.7980E-01
			0.7156E+01	0.1120E+00
			0.7951E+01	0.1400E+00
			0.7156E+01	0.2800E+00
			0.7156E+01	0.4200E+00
			0.7156E+01	0.7000E+00
			0.7156E+01	0.2800E+01
4	10	0.6000E+01	0.0000E+00	0.0000E+00
			0.1412E+01	0.2240E-01
			0.2353E+01	0.4340E-01
			0.3529E+01	0.7980E-01
			0.4235E+01	0.1120E+00
			0.4706E+01	0.1400E+00
			0.4235E+01	0.2800E+00
			0.4235E+01	0.4200E+00
			0.4235E+01	0.7000E+00
			0.4235E+01	0.2800E+01
5	10	0.8025E+01	0.0000E+00	0.0000E+00
			0.1412E+01	0.2240E-01
			0.2353E+01	0.4340E-01
			0.3529E+01	0.7980E-01
			0.4235E+01	0.1120E+00
			0.4706E+01	0.1400E+00
			0.4235E+01	0.2800E+00
			0.4235E+01	0.4200E+00
			0.4235E+01	0.7000E+00
			0.4235E+01	0.2800E+01

TB-1 14in PP Bent 2.ap7o

			0.0000E+00	0.0000E+00
			0.9242E+00	0.2240E-01
			0.1540E+01	0.4340E-01
			0.2311E+01	0.7980E-01
			0.2773E+01	0.1120E+00
			0.3081E+01	0.1400E+00
			0.2773E+01	0.2800E+00
			0.2773E+01	0.4200E+00
			0.2773E+01	0.7000E+00
			0.2773E+01	0.2800E+01
6	10	0.9958E+01		
			0.0000E+00	0.0000E+00
			0.1010E+01	0.2240E-01
			0.1683E+01	0.4340E-01
			0.2525E+01	0.7980E-01
			0.3030E+01	0.1120E+00
			0.3367E+01	0.1400E+00
			0.3030E+01	0.2800E+00
			0.3030E+01	0.4200E+00
			0.3030E+01	0.7000E+00
			0.3030E+01	0.2800E+01
7	10	0.1000E+02		
			0.0000E+00	0.0000E+00
			0.4029E+00	0.1000E-01
			0.8058E+00	0.2000E-01
			0.1612E+01	0.4000E-01
			0.2418E+01	0.6000E-01
			0.3223E+01	0.8000E-01
			0.3626E+01	0.9000E-01
			0.4029E+01	0.1000E+00
			0.4029E+01	0.5000E+00
			0.4029E+01	0.2000E+01
8	10	0.1178E+02		
			0.0000E+00	0.0000E+00
			0.4592E+00	0.1000E-01
			0.9183E+00	0.2000E-01
			0.1837E+01	0.4000E-01
			0.2755E+01	0.6000E-01
			0.3673E+01	0.8000E-01
			0.4132E+01	0.9000E-01
			0.4592E+01	0.1000E+00
			0.4592E+01	0.5000E+00
			0.4592E+01	0.2000E+01
9	10	0.1346E+02		
			0.0000E+00	0.0000E+00
			0.5286E+00	0.1000E-01
			0.1057E+01	0.2000E-01
			0.2114E+01	0.4000E-01

TB-1 14in PP Bent 2.ap7o

			0.3172E+01	0.6000E-01
			0.4229E+01	0.8000E-01
			0.4758E+01	0.9000E-01
			0.5286E+01	0.1000E+00
			0.5286E+01	0.5000E+00
			0.5286E+01	0.2000E+01
10	10	0.1350E+02		
			0.0000E+00	0.0000E+00
			0.5286E+00	0.1000E-01
			0.1057E+01	0.2000E-01
			0.2114E+01	0.4000E-01
			0.3172E+01	0.6000E-01
			0.4229E+01	0.8000E-01
			0.4758E+01	0.9000E-01
			0.5286E+01	0.1000E+00
			0.5286E+01	0.5000E+00
			0.5286E+01	0.2000E+01
11	10	0.1603E+02		
			0.0000E+00	0.0000E+00
			0.5892E+00	0.1000E-01
			0.1178E+01	0.2000E-01
			0.2357E+01	0.4000E-01
			0.3535E+01	0.6000E-01
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			0.5892E+01	0.2000E+01
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			0.5825E+01	0.8000E-01
			0.6553E+01	0.9000E-01
			0.7281E+01	0.1000E+00
			0.7281E+01	0.5000E+00
			0.7281E+01	0.2000E+01
13	10	0.1850E+02		
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			0.7281E+01	0.1400E+00
			0.6553E+01	0.2800E+00
			0.6553E+01	0.4200E+00

TB-1 14in PP Bent 2.ap7o

			0.6553E+01	0.7000E+00
			0.6553E+01	0.2800E+01
14	10	0.3353E+02	0.0000E+00	0.0000E+00
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			0.5258E+01	0.4340E-01
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			0.1021E+02	0.1400E+00
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			0.9190E+01	0.4200E+00
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16	10	0.4850E+02	0.0000E+00	0.0000E+00
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18	10	0.7846E+02	0.0000E+00	0.0000E+00

TB-1 14in PP Bent 2.ap7o

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			0.2483E+02	0.2000E+01

TIP LOAD
KIP

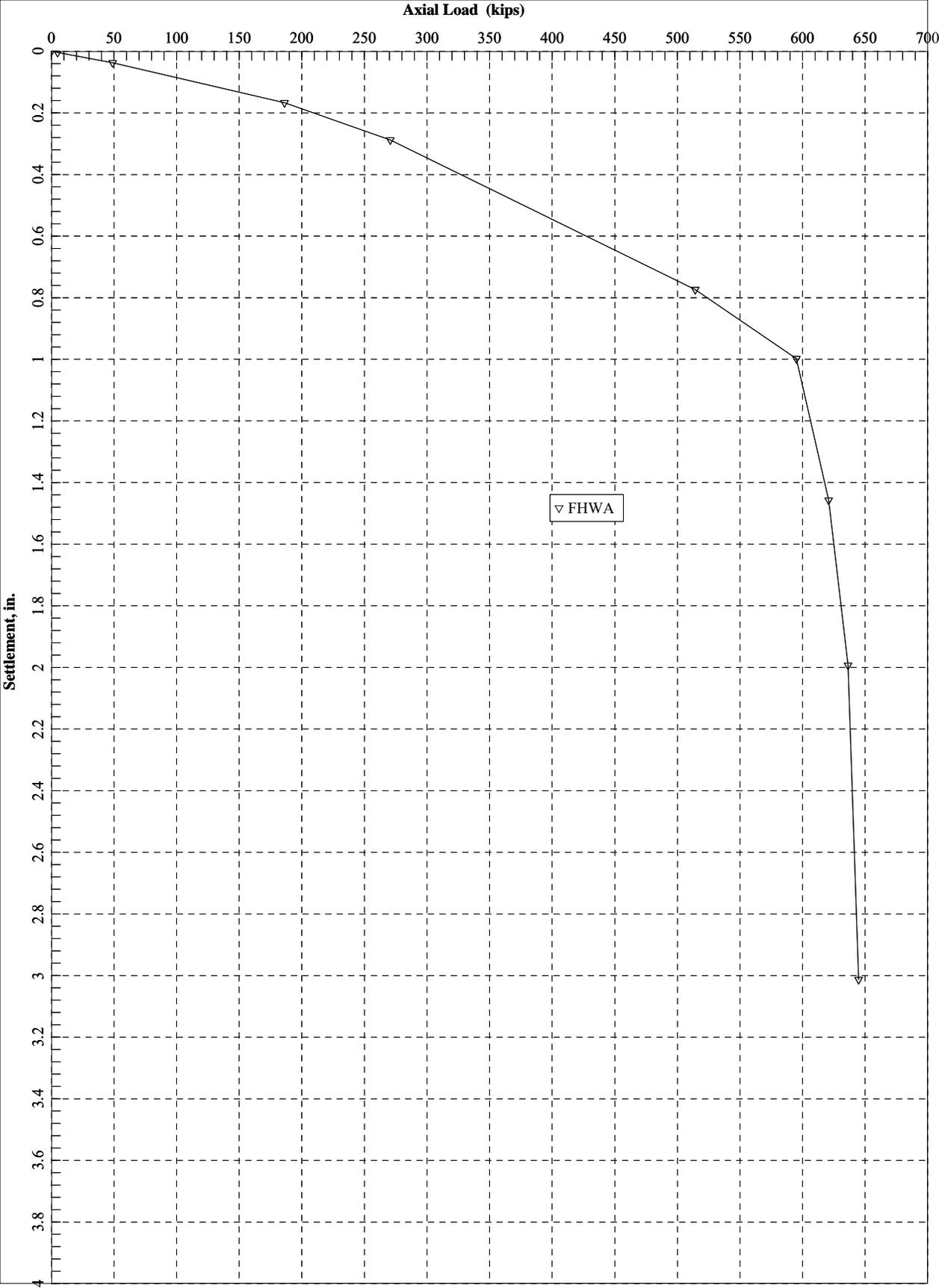
TIP MOVEMENT
IN.

TB-1 14in PP Bent 2.ap7o

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0.7859E+02	0.1400E+01
0.7859E+02	0.2100E+01
0.7859E+02	0.2800E+01

LOAD VERSUS SETTLEMENT CURVE

TOP LOAD KIP	TOP MOVEMENT IN.	TIP LOAD KIP	TIP MOVEMENT IN.
0.4909E+01	0.3695E-02	0.7017E-01	0.1000E-03
0.4895E+02	0.3738E-01	0.7017E+00	0.1000E-02
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0.2707E+03	0.2877E+00	0.7017E+01	0.1000E-01
0.5143E+03	0.7735E+00	0.2246E+02	0.5000E-01
0.5950E+03	0.9975E+00	0.2883E+02	0.1000E+00
0.6209E+03	0.1457E+01	0.5469E+02	0.5000E+00
0.6363E+03	0.1993E+01	0.7014E+02	0.1000E+01
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APPENDIX E

Seismic Design Evaluation

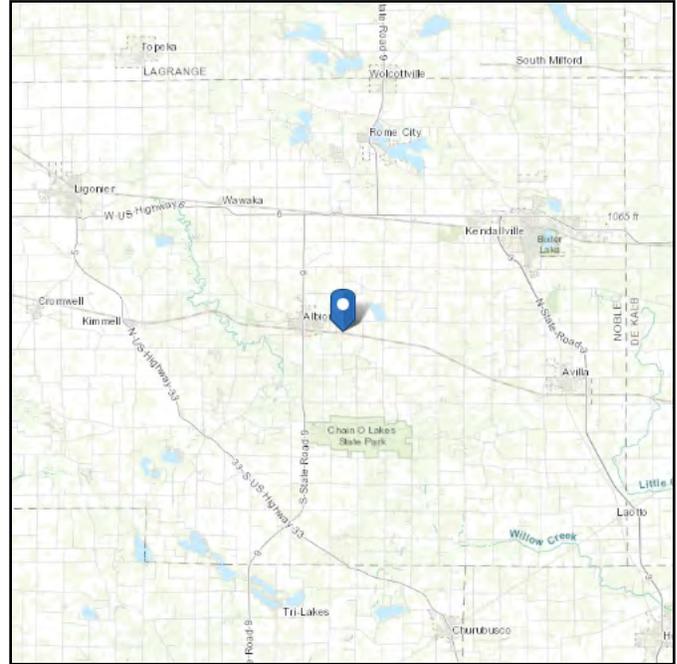
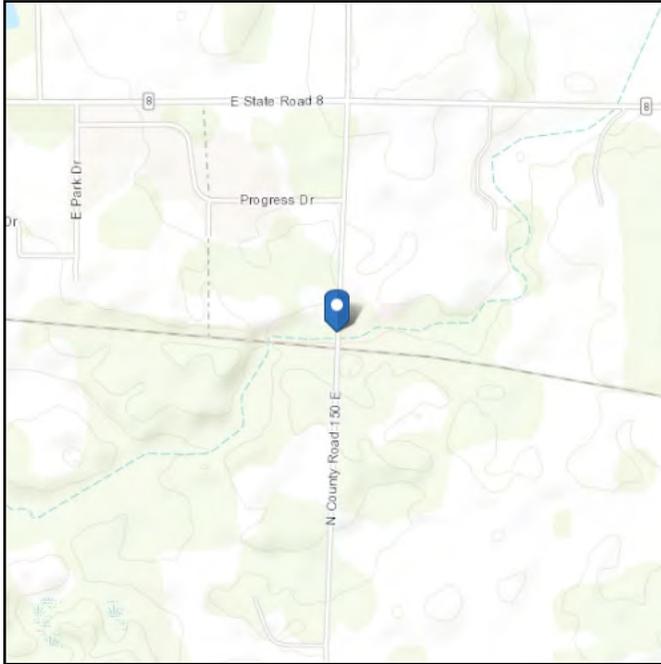


ASCE Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-22
Risk Category: II
Soil Class: C - Very Dense
Soil and Soft Rock

Latitude: 41.389712
Longitude: -85.396025
Elevation: 932.1353239425026 ft
(NAVD 88)

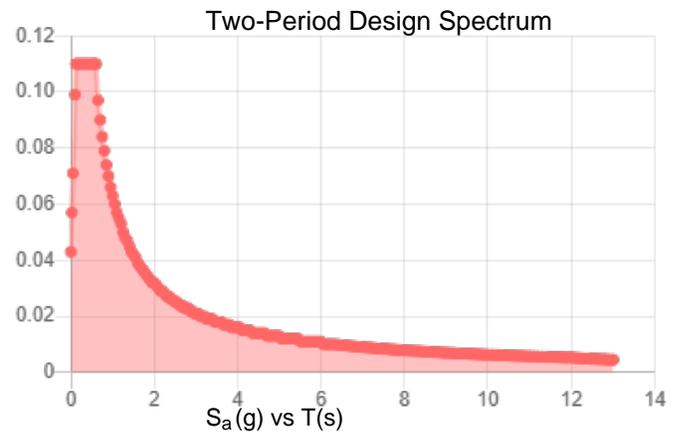
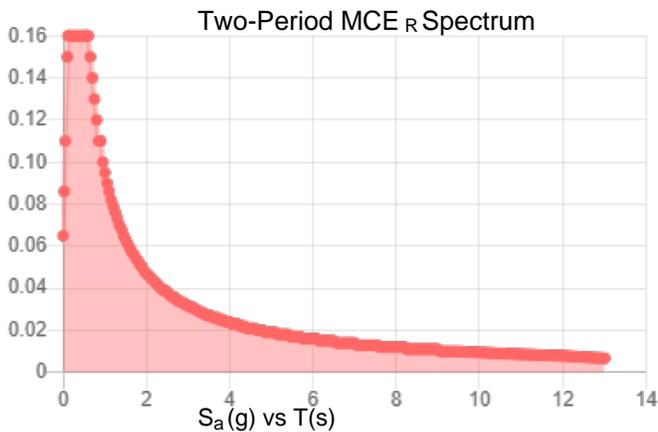
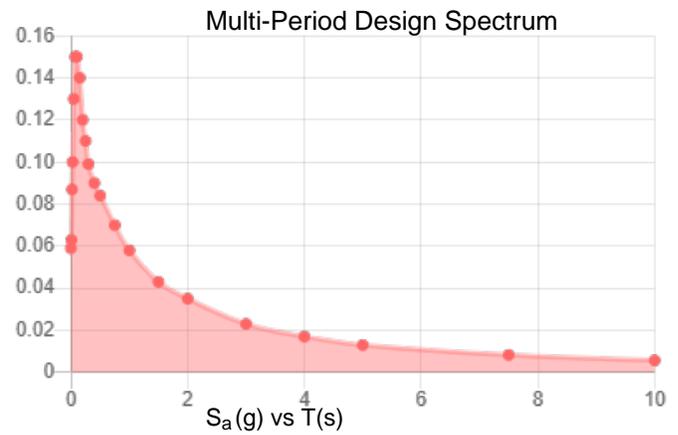
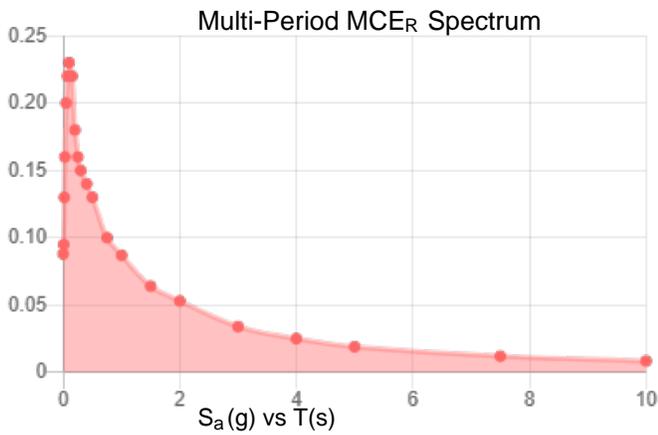


Site Soil Class: C - Very Dense Soil and Soft Rock

Results:

PGA _M :	0.079	T _L :	12
S _{MS} :	0.16	S _s :	0.16
S _{M1} :	0.095	S ₁ :	0.068
S _{DS} :	0.11	V _{S30} :	530
S _{D1} :	0.063		

Seismic Design Category: A



MCE_R Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Design Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.



Data Accessed: Mon Oct 28 2024

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-22 and ASCE/SEI 7-22 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-22 Ch. 21 are available from USGS.

The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE Hazard Tool.

SPECIAL PROVISIONS

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SP01 - REFERENCE STANDARDS

The 2024 Edition of the Indiana Department of Transportation Standard Specifications apply to this Contract. Where the words "Standard Specifications" are used, they shall be construed to mean the 2024 Edition of the Indiana Department of Transportation Standard Specifications. The following Special Provisions are supplemental and in addition to the General Conditions and the Standard Specifications. These Special Provisions shall govern over the Standard Specifications in case of conflict between them.

Wherever the term "Owner" appears in these documents, it shall be construed to refer to the Noble County Board of Commissioners.

Wherever the term "Department" appears in these documents, it shall be construed to refer to the Owner.

SP02 - COUNTY ROAD MAINTENANCE DURING CONSTRUCTION

The Noble County Roads, which the Contractor utilizes for the hauling of any construction materials (excavation, subbase, bituminous materials, concrete, structural members, reinforcing steel, etc.) or construction equipment, shall be coordinated with the Noble County Surveyor and the inspecting Engineer. The Contractor shall provide a map or sketch showing the County Roads that will be used during the construction of this project so that they can be monitored during construction.

SP03 - ROAD CLOSURE NOTIFICATION

At least seven days prior to the initial closure of County Road 150 East, the Contractor shall notify the local authorities such as the sheriff, ambulance, and local school corporation of such closure. Assistance in obtaining contact information of these local authorities may be obtained through the Noble County Highway Department.

SP04 - COOPERATION WITH UTILITY COMPANIES

Existing utilities located near the project area can be found on Page 2 of the Contract Plans. It is the responsibility of the Contractor to coordinate with the utilities and determine impacts.

The Contractor shall cooperate with all utility companies whose facilities are located within the project areas. Coordination with the utility companies or their contractors shall be maintained to expedite safe and orderly modifications to utility facilities as may be required by construction of this project. The contractor shall contact all utilities and invite them to the preconstruction conference.

There will be no direct compensation for coordination with utility companies. The costs of coordination shall be included in the cost of the other pay items.

SP05 - TEMPORARY DE-ENERGIZATION

The Contractor shall coordinate with Noble County R.E.M.C. and Wabash Valley Power Association in the timing of de-energization of the lower distribution lines as necessary for pile driving and/or beam setting. The Contractor shall provide a minimum notice of 14 days. The three transmission lines shall remain active during construction. Pile driving equipment and beam setting operations shall accommodate the transmission lines remaining active throughout construction.

SP06 - CONSTRUCTION ENGINEERING

The Contractor shall provide construction engineering services, which shall include layout; re-establishing the survey points and survey centerlines; re-referencing the necessary control points; running a level circuit to check or re-establish plan bench marks; setting stakes for right-of-way, slopes, subbase, storm sewers, paving, subgrade, and any other stakes required for control line and grades; and setting vertical control elevations.

The Contractor shall furnish all stakes, templates, straightedges, and other devices necessary for checking, marking, and maintaining points, lines, and grades.

Field notes shall be kept in standard field notebooks in a clear, orderly, and neat manner consistent with standard engineering and surveying practices. The field books shall become the property of the Owner upon completion of the work. The field books may be inspected by the Owner at any time.

The Owner will make all measurements and surveys that involve the determination of final pay quantities. He may check the accuracy of the construction engineering as necessary, but will assume no responsibility for the accuracy of engineering layout or the final result of construction accuracy. He will specify the interval of stakes for the various phases of construction. The staking by the Contractor shall be done in accordance with standard procedures.

All specialty testing (i.e. concrete testing, density testing etc.) shall be performed by the Contractor through a third party. There will be no direct compensation for specialty testing. The cost shall be included in the other pay items. The Owner will review the third party's results and include them in the final construction record.

The supervision of the Contractor's construction engineering personnel shall be the responsibility of the Contractor and any errors resulting from the operations of such personnel shall be corrected at the expense of the Contractor and at no additional cost to the Owner.

Construction engineering, as specified herein, shall be paid for on a lump sum basis and shall include furnishing all necessary personnel, equipment, and supplies to accomplish the work.

SP07 - EROSION CONTROL

The Contractor shall schedule and conduct his operations to minimize erosion of soils and to prevent silting and muddying of streams, irrigation systems, and impoundments (lakes, reservoirs, etc.). Construction of drainage facilities and performance of other Contract work, which will contribute to the control of erosion and sedimentation, shall be carried on in conjunction with earthwork operations or as soon thereafter as practicable. The area of bare soil exposed at any one time by construction operations shall be kept to a minimum.

Prior to suspension of construction operations for appreciable lengths of time, the Contractor shall shape the earthwork in a manner that will permit storm runoff with a minimum of erosion. Temporary erosion and sediment control measures such as berms, dikes, slope drains, or sedimentation basins deemed necessary shall be provided and maintained until permanent drainage facilities and erosion control features are completed and operative. Unless otherwise provided for in the Contract, temporary erosion control measures will not be paid for directly. The costs for temporary erosion control shall be included in the cost of the other pay items.

In order to avoid as much pollution of streams as possible, the practices and controls set out below shall be followed:

1. When borrow material is obtained from other than commercially operated sources, erosion of the borrow site shall be so controlled, both during and after completion of the work, that erosion will be minimized and sediment will not enter streams or other bodies of water. Waste or disposal areas and construction roads shall be located and constructed in a manner that will keep sediment from entering streams.
2. Fording of live streams will not be permitted. Mechanized equipment shall not be operated in live streams.
3. When work areas or gravel pits are located in or adjacent to live streams, such areas shall be separated from the main stream by a dike or other barrier to keep sediment from entering a flowing stream. Care shall be taken during the construction and removal of such barriers to minimize the muddying of a stream.
4. All waterways shall be cleared as soon as practicable of falsework, piling, debris, or other obstructions placed during construction operations and not a part of the finished work.
5. Water from aggregate washing or other operations containing sediment shall be treated by filtration, a settling basin, or other means sufficient to reduce the sediment content to no more than that of a stream into which it is discharged.
6. Pollutants such as fuels, lubricants, bitumens, raw sewage, and other harmful materials shall not be discharged into or near rivers, streams, and impoundments or into natural or manmade channels leading thereto. Wash water or waste from concrete mixing and placement operations shall not be allowed to enter live streams.
7. All applicable regulations of fish and wildlife agencies and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the Contract.

SP08 - DEBRIS AND SALVAGED MATERIALS

On completion of this work, all excess material, together with all excess dirt or debris, must be promptly and carefully removed by the Contractor. All damage to adjacent property must be promptly and carefully repaired by the Contractor and left in a condition satisfactory to the abutting property owners. All salvaged material shall be the property of the Contractor unless otherwise herein specified.

SP09 - PROTECTION OF PAVEMENT

The Contractor shall take all necessary precautionary measures and perform the work in such a manner as to adequately protect and safeguard the existing pavement or pavement surface to remain in place from any damage due to such operations. The Contractor's attention is also called to the fact that the operation of crawler type construction equipment on these portions of the surface to remain in place will not be permitted and the operation of over-weight or oversize equipment in those areas shall be governed by state and local laws and regulations. Any damaged portion of surface or pavement and surface removed in excess of that required for the construction as shown on the plans, shall be satisfactorily replaced or repaired by the Contractor at no additional cost to the Owner. The Contractor's attention is specifically directed to Articles 107.14 and 107.17 regarding his responsibility under this contract.

The as-built drawings shall show the horizontal and vertical locations of each underground utility facilities uncovered during construction. The as-built drawings shall be certified in writing that the drawings are true and accurate.

The cost of this work shall not be paid for directly, but the cost thereof shall be included in the cost of other items.

SP10 - CLEARING RIGHT OF WAY

The initial payment for clearing right-of-way will be limited to 2 percent of the original total bid. If the contract lump sum price for clearing right-of-way is greater than 2 percent of the original bid, the amount over 2 percent will not be paid until the contract has been completed and accepted.

The location of the construction limits as shown on the plans is approximate. Some additional areas may need to be cleared, as specified by the Engineer, for construction access or the removal of dead or overhanging trees and brush. Clearing right-of-way may also include areas outside the construction limits for utility relocation.

SP11 - RAILING, STEEL TS-1

The Contractor shall follow INDOT recurring special provisions (RSP) 706-B-140d for the standard detail of the Railing, Steel TS-1.

SP12 - HMA PAVEMENT

HMA pavement shall be in accordance with Section 400 of the Standard Specifications. The HMA surface course shall not be placed until all new pavement areas within the project limits, including mainline, approaches, and areas of incidental construction, have been completed and are ready, in the opinion of the Owner, for the HMA surface course. The additional cost of coordinating the placement of the surface shall be included in the unit cost for the respective HMA surface course.

All joints for placement of full depth asphalt shall be saw-cut the full depth of the existing course. A clean saw-cut edge shall be established at the time of reconstruction of the joints. Joints shall be straight edge while hot and corrective work undertaken as necessary to ensure smooth riding joints. The cost for saw-cuts shall be included in the cost of the HMA pavement pay items. Tack coat will be required on exposed edges.

Sampling and Testing shall be performed by the Contractor through a third party. There will be no direct compensation for sampling and testing. The cost shall be included in the other pay items. The Owner will review the third party's results and include them in the final construction record.

Original weight tickets shall be provided to the Owner for each day on which asphalt is placed. However, the Owner reserves the right to require certified scales be used to measure the above noted Pay Items at no additional cost to the Contract.

HMA Pavement will be measured in accordance with 401.21 and paid for in accordance with 401.22 of the Standard Specifications.

SP13 - E5 CONCRETE

Concrete mix designs for the bridge floor and reinforced concrete bridge approach slabs shall incorporate E5 Internal Cure and/or E5 Liquid Fly Ash. Concrete in other locations may incorporate E5 Internal Cure and/or E5 Liquid Fly Ash. Mix design, batching, placement, and curing shall be in accordance with INDOT Construction Memorandum 24-03 Application #1 Mix Option 2 for the bridge floor and Application #3 for the reinforced concrete bridge approach slabs. The cost of furnishing, mixing and applying the admixture shall be included in the cost of Concrete.

PERMITS

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CERTIFICATE OF APPROVAL

Application #: FW-32852-0

This Certificate of Approval is a Permit for Construction under the authority of the Indiana Flood Control Act, IC 14-28-1 with 312 IAC 10 and IC 14-29-1 with 312 IAC 6 as administered by the Department of Natural Resources.

Approval Issued To: Noble County Highway Department, Zack Smith, 1118 East Main Street, Albion, IN 46701

Approval Issued By:

Mail Date: 1/17/2025

Grant Eyster, Division of Water

Permit Effective Date: 02/04/2025

Permit Expiration Date: 01/17/2027

Pursuant to IC 4-21.5-3-5(f), this Permit becomes Effective eighteen (18) days from the Mail Date to provide a stay period for a Petition for Administrative Review with the Indiana Natural Resources Commission, Division of Hearings. Initiating construction authorized in this Permit prior to the Permit Effective Date constitutes a violation. This Permit is only valid until the Permit Expiration Date.

This Permit may be renewed one (1) time if a written request is received at the DNR, Division of Water, prior to the Permit Expiration Date.

PROJECT INFORMATION:

Waterbody: Croft Ditch

County: Noble

Project Description Narrative: The existing concrete beam bridge carrying County Road 150 East over Croft Ditch (Noble County Bridge #33) will be replaced with a new structure on essentially the same alignment to improve traffic flow. The new structure will be a 1-span prestressed concrete box beam bridge with span length of 43.0'. The structure will have an out-to-out length of 46.0' and a clear roadway width of 28'. The spill through abutments will have 2:1 side slopes armored with revetment riprap. An aggregate wildlife passage will be constructed along the southern bank with a clearance of roughly 6' and width of 1.5'. The abutments will be square (no skew) to the alignment of the streamflow. The new approach roads will be elevated a maximum of 2.1' above the existing approaches. The existing structure will be completely removed. The project is locally funded.

Project Location: At the North County Road 150 East stream crossing near Albion

PERMIT CONDITIONS:

This Certificate of Approval is valid only if the construction project is in compliance with all Conditions in this Permit.

DNR PROJECT SPECIFIC PERMIT CONDITIONS

- 1) Revegetate all bare and disturbed areas that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only. A native herbaceous seed mixture must include at least 5 species of grasses and sedges and 5 species of wildflowers.
- 2) Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
- 3) Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
- 4) Do not cut any trees suitable for Indiana Bat or Northern Long-eared Bat roosting (3 inches or greater diameter-at-breast height, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
- 5) Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
- 6) Do not use broken concrete as riprap.
- 7) Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap.
- 8) Minimize the movement of resuspended bottom sediment from the immediate project area.
- 9) Do not deposit or allow construction/demolition materials or debris to fall or otherwise enter the waterway. Any incidental fallen material or debris in the waterway must be removed within 24 hours using best management practices, particularly lifting material out of the waterway and not dragging it across the streambed whenever possible.
- 10) Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the waterbody or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
- 11) Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.
- 12) Except for the material used as backfill as shown on the plans submitted for the permit application, place all excavated material landward of the floodway*.
- 13) All work must conform with the existing bank at the upstream and downstream limits of the project site.
- 14) Do not leave felled trees, brush, or other debris in the floodway*.
- 15) All riprap placed for bank stabilization must conform to the bank.
- 16) Upon completion of the project, remove all construction debris from the floodway*.
- 17) Size and/or anchor the riprap to resist displacement by current or wave action.
- 18) Issuance of this Certificate of Approval does not constitute approval of any temporary causeways, coffer dams, runarounds, access bridges or borrow areas associated with the proposed construction. A separate written approval must be obtained from the DNR, Division of Water for these types of projects prior to beginning any work within the floodway*.
- 19) Keep the bridge waterway opening free of debris and sediment at all times.
- 20) * Note: For regulatory purposes, the floodway is defined on the attached Floodway Map.

DNR PROJECT GENERAL PERMIT CONDITIONS

- 1) Any modifications or additional construction beyond what was shown on plans received at the Division of Water shall require an additional review and approval from the Department of Natural Resources.
- 2) This Permit must be posted and maintained at the project site until the project is completed.
- 3) This Permit shall not be assigned or transferred without the prior written approval of the Department of Natural Resources.
- 4) If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (IC 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days.
- 5) This Permit may be revoked by the Department of Natural Resources for violation of any condition or applicable statute or rule.
- 6) The Department of Natural Resources shall have the right to enter upon the site of the permitted activity for the purpose of inspecting the work authorized under this Permit.

RIGHT TO ADMINISTRATIVE REVIEW:

A party may appeal this Department of Natural Resources Action through the administrative review procedures found in the Administrative Orders and Procedures Act, IC 4-21.5, and the rules promulgated thereunder 312 IAC 3-1. If an appeal is filed, the final agency determination will be made by the Natural Resources Commission following a legal proceeding conducted before an Administrative Law Judge. The Department of Natural Resources will be represented by legal counsel at all stages of administrative review.

In order to obtain an administrative review, a written petition must be filed with the Division of Hearings within 18 days of the Mail Date of the Action. The petition must contain specific reasons for the appeal and indicate the portion or portions of the project to which the appeal pertains. The petition must be addressed to the Division of Hearings, Indiana Government Center North, Room N103, 100 North Senate Avenue, Indianapolis, Indiana 46204

SERVICE LIST:

Applicant(s):

Noble County Highway Department, Zack Smith, 1118 East Main Street, Albion, IN 46701

Agent(s):

Kurdziel Barker Engineering Inc, Daniel J Kurdziel, PO Box 44127, Indianapolis, IN 46244

Adjacent Landowners and Interested Parties:

Indiana Department of Natural Resources, Division of Law Enforcement District 2 Headquarters 1353 South Governors Drive, Columbia City, IN 46725

Noble County SWCD, Stacey McGinnis, 100 East Park, Albion, IN 46701

Noble County Drainage Board, County Surveyor, 2090 North State Road 9, Suite B, Albion, IN 46701

US Army Corps of Engineers, Detroit District, Michiana Branch 2422 Viridian Drive, Suite 200, South Bend, IN 46628

CSX Transportation Inc, 500 Water Street, Suite J910, Jacksonville, FL 32202

Noble County, Mike Klopfenstein, 109 North York Street, Albion, IN 46701

Rick Rawles, 3236 North 150 East, Albion, IN 46701

Demaree Family Revocable Trust, 1946 East State Road 6, Albion, IN 46701

BFR Holding LLC, 10050 Bent Creek Boulevard, Fort Wayne, IN 46825

Darren and Kelly Fry, 2421 North 150 East, Albion, IN 46701

Jack and Julianna Grawcock, 2087 North 150 East, Albion, IN 46701

Fred and Sharon Rawles, 2615 North 150 East, Albion, IN 46701

Noble County Rural Electric Membership Corporation, PO Box 137, Albion, IN 46701

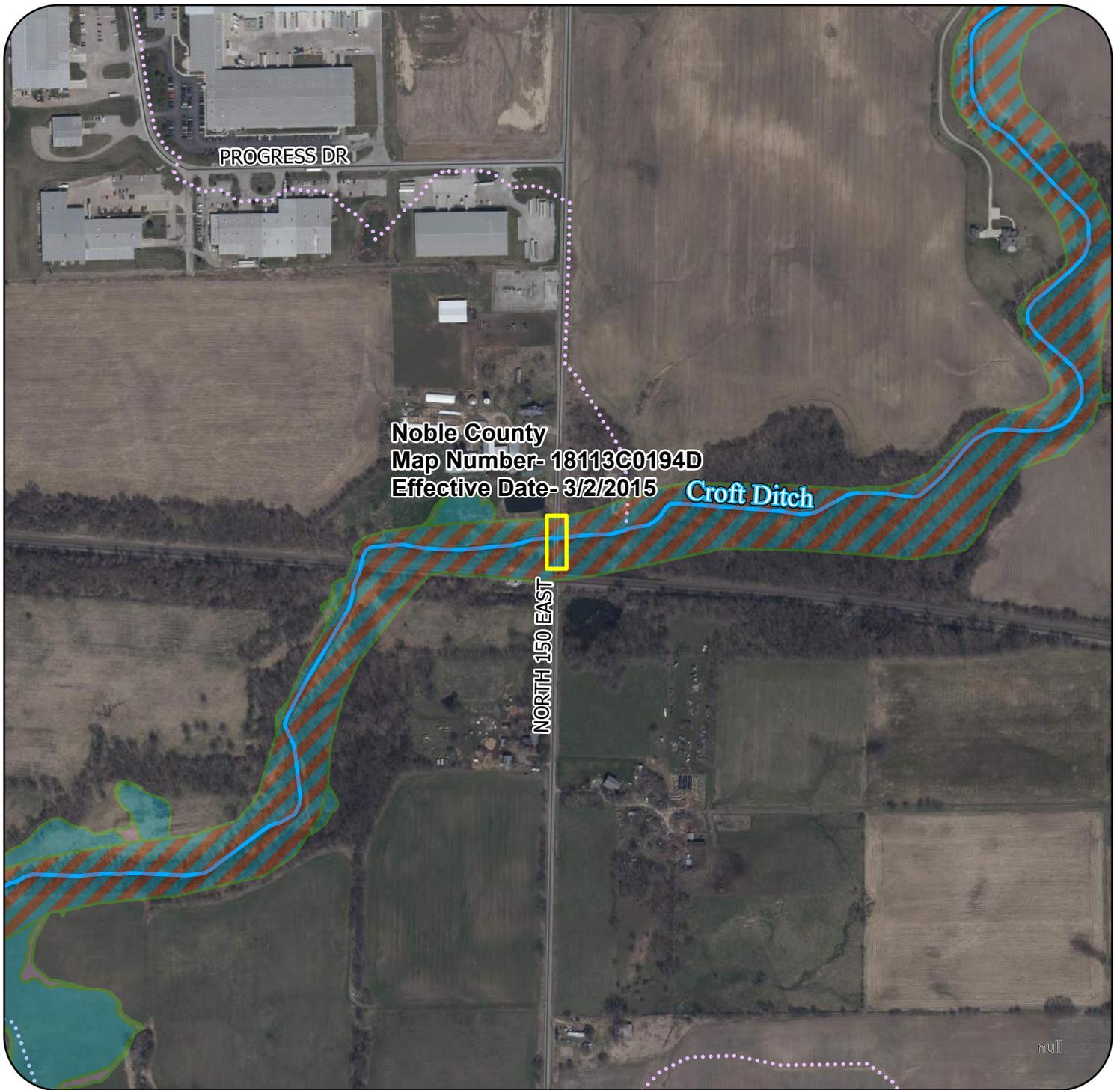
Jason Schott, 1520 East 175 North, Fort Wayne, IN 46825

Store Master Funding XVI LLC, 14638 Apple Drive, Fruitport, MI 49415

ADDITIONAL PERMITTING AGENCIES:

This is not a waiver of any local ordinance or other state or federal law and does not relieve the permittee of any liability for the effects which the project may have upon the safety of the life or property of others.

This does not relieve the permittee of the responsibility of obtaining permits, approvals, easements, etc. under other regulatory programs administered by, but not limited to, the U.S. Army Corps of Engineers, County Drainage Board, Indiana Department of Environmental Management and local, city, or county floodplain management, planning or zoning commissions.



The Special Flood Hazard Area was derived from the digital representation of FEMA Preliminary Flood Insurance Rate Maps (FIRM). While this map is provided for information, the FIRMs as published by FEMA are the authoritative documents for the National Flood Insurance Program.



Legend

-  FEMA Zone AE Floodway; FEMA Administrative Floodway
-  FEMA Zone AE
-  Additional Floodplain Area; DNR .2 Percent Flood Hazard
-  Not Mapped

Copies of those maps can be found at <http://msc.fema.gov>



Map Source: Preliminary FIRM
(Not for Flood Insurance purposes)

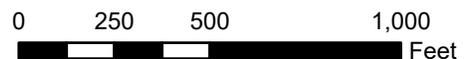
File Number: FW-32852

Note

This map does not reflect changes or amendments which may have been made subsequent to the effective date



MAP SCALE: 1" = 500'





DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT, MICHIANA SECTION
2422 VIRIDIAN DRIVE SUITE #200
SOUTH BEND, INDIANA 46628-3561

August 26, 2024

Regulatory Branch
File No. LRE-2024-00429-157-Q24

Zack Smith
Noble County
1118 East Main Street
Albion, Indiana 46701

Dear Mr. Smith,

We have reviewed the application that was submitted recently on your behalf by Mr. Daniel Kurdziel of Kurdziel Barker Engineering, Inc., for the proposed Noble County Bridge 33 Replacement project located near Albion, Indiana (Latitude 41.389597 and Longitude -85.396008, Noble County). Per your description of the project, we understand the project involves the replacement of Noble County Bridge 33 carrying County Road North 150 East over Croft Ditch.

The discharge of dredged and/or fill material into waters of the United States, including adjacent wetlands, must be authorized by the Department of the Army. The authority of the Corps of Engineers to regulate the discharge of dredged and/or fill material into waters of the United States including adjacent wetlands, is contained in Section 404 of the Clean Water Act and regulations promulgated pursuant to that Act. Please be advised that filling and grading work, mechanized landclearing, the sidelaying of excavated material, and some forms of piling installation constitute or otherwise involve discharges of dredged and/or fill material under the Corps' regulatory authority.

We have determined that a Department of the Army (DA) permit is not required for the work indicated on the enclosed plans, as the work does not involve the discharge of dredged and/or fill material into waters of the United States and/or adjacent wetlands. Any construction activities other than those shown on the plans you provided, or which occur outside your specified work area, may render this review invalid. To fully document your proposed activity, we have made your application and copies of the enclosed plans a part of our permanent records.

If you anticipate discharging any dredged or fill material into a water of the United States including adjacent wetlands and/or you anticipate any construction or other work waterward of the Ordinary High Water Mark of a Navigable Water of the U.S., you will need to apply for and receive authorization from the Corps prior to starting such work. The necessary permit application can be found on our website at <https://www.lrd.usace.army.mil/Wetlands-Permits/Article/3647635/regulatory-program-indiana/>. Plan view and cross-sectional view drawings, in 8½" x 11" format, should

accompany the application. Drawings and a narrative on the form should specifically identify and describe all the structures, work, and discharges which we regulate as described above, including temporary or construction measures.

Please note that this letter does not address nor include any consideration for geographic jurisdiction on aquatic resources and shall not be interpreted as such. Should you have any questions, please contact me at the above address, by E-Mail at Scott.C.Girardi@usace.army.mil, or by telephone at (574) 232-1952 ext. 21968. In all communications, please refer to File Number LRE-2024-00429-157-Q24.

We are interested in your thoughts and opinions concerning your experience with the Detroit District, Corps of Engineers Regulatory Program. If you are interested in letting us know how we are doing, you can complete an electronic Customer Service Survey from our web site at <https://regulatory.ops.usace.army.mil/customer-service-survey/>. Alternatively, you may contact us and request a paper copy of the survey that you may complete and return to us by mail or fax. Thank you for taking the time to complete the survey, we appreciate your feedback.

Sincerely,



Scott C. Girardi
Regulatory Project Manager
Michiana Section

Copy Furnished

Kurdzial Barker Engineering, Inc., Kurdzial, w/encl.
IDEM, Office of Water Quality, Kozelichki, w/encl.
IDNR, Division of Water, Smithers, w/encl.

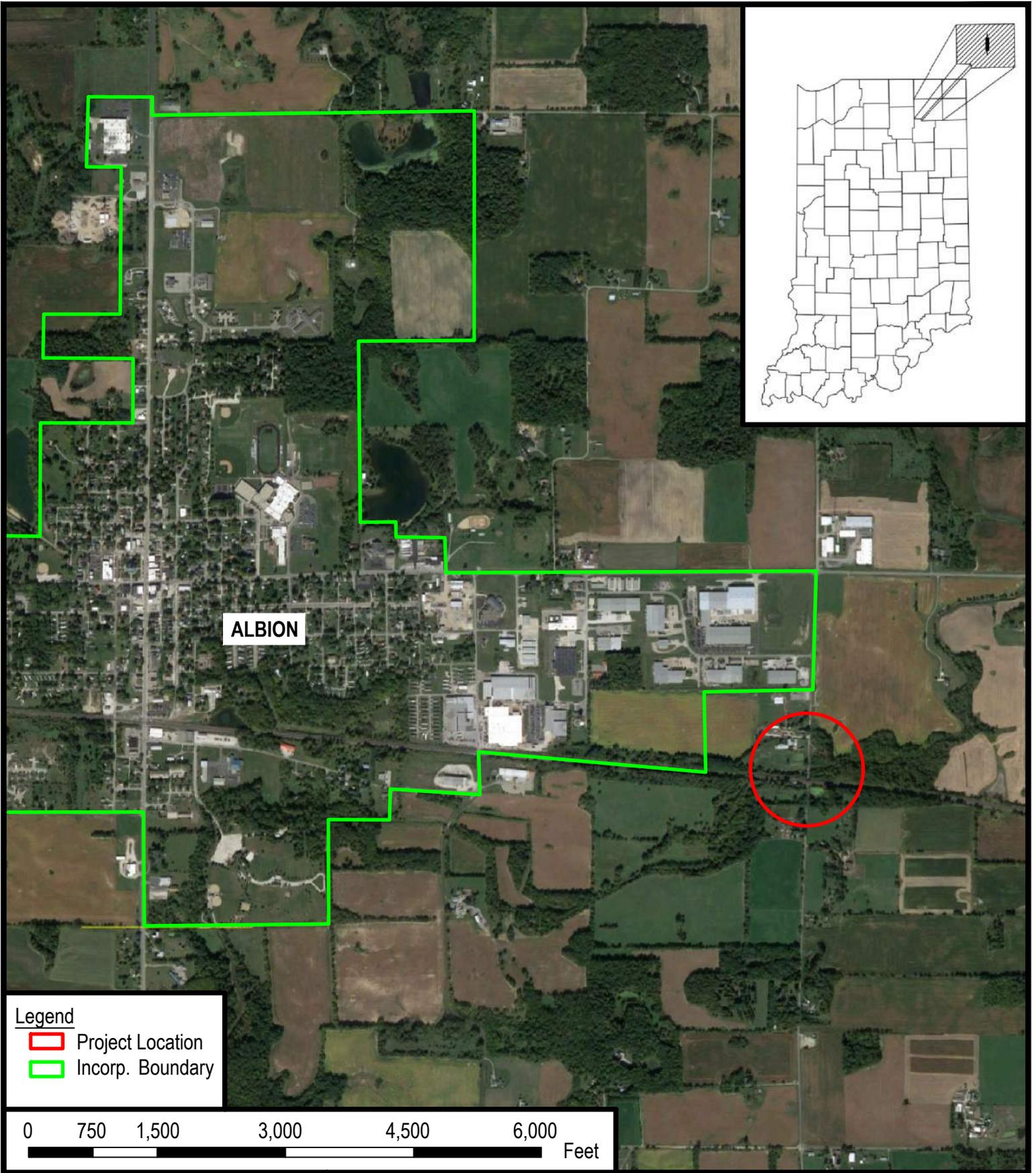


Figure 2 - Vicinity Map

Agent:

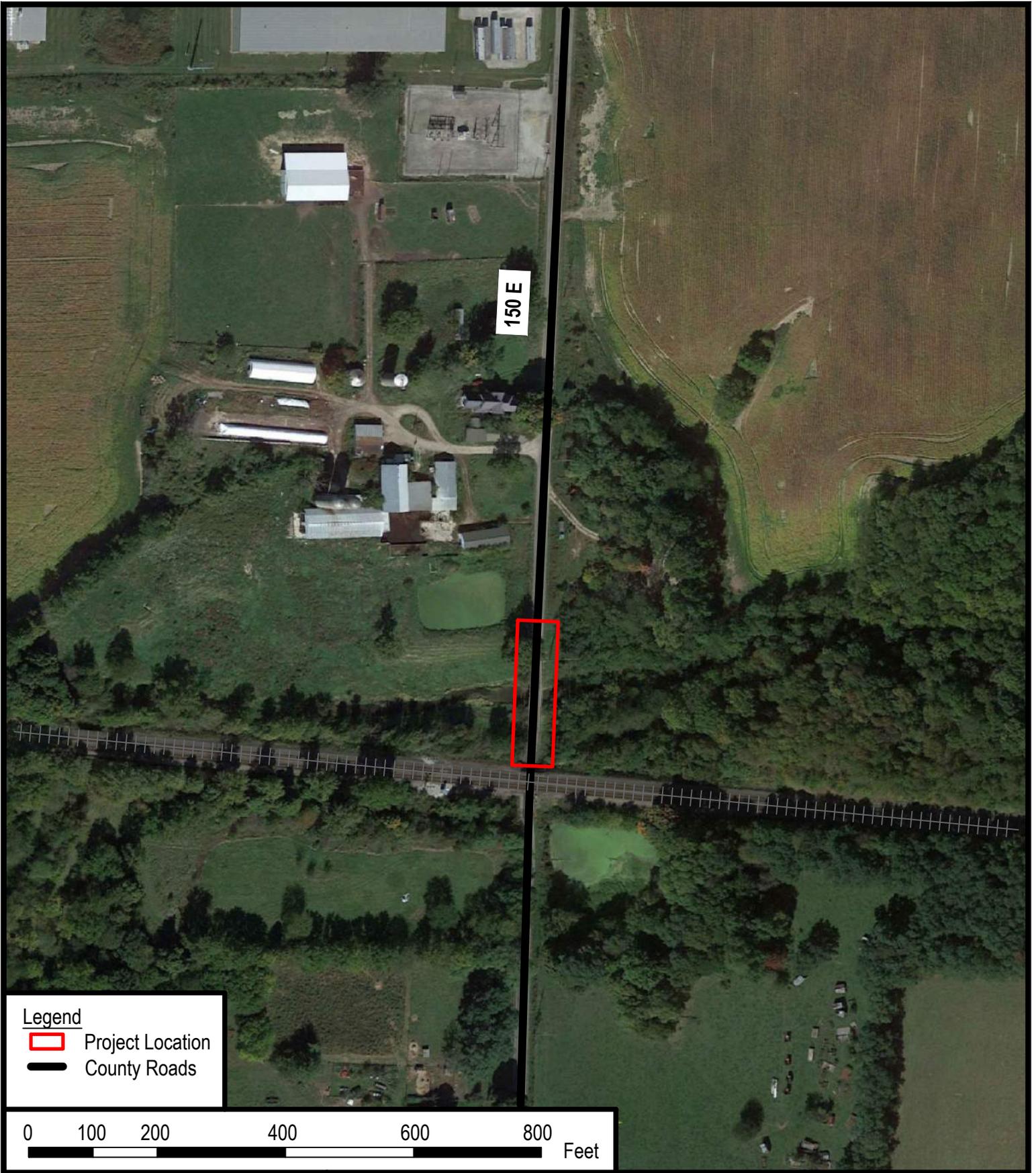


Applicant:
 Zack Smith, PE
 Noble County Engineer
 1118 E. Main St.
 Albion, IN 46701



Noble County Bridge #33
 Township: Jefferson
 County: Noble
 State: Indiana

7/23/2024



Agent:



Figure 1 - Location Map

Applicant:
Zack Smith, PE
Noble County Engineer
1118 E. Main St.
Albion, IN 46701



Noble County Bridge #33
Township: Jefferson
County: Noble
State: Indiana

7/23/2024

NO.	DATE	REVISIONS	BY	CHECKED

Section 20
Township 24 North, Range 10 East
Jefferson Township,
Noble County, Indiana

Noble County, Indiana

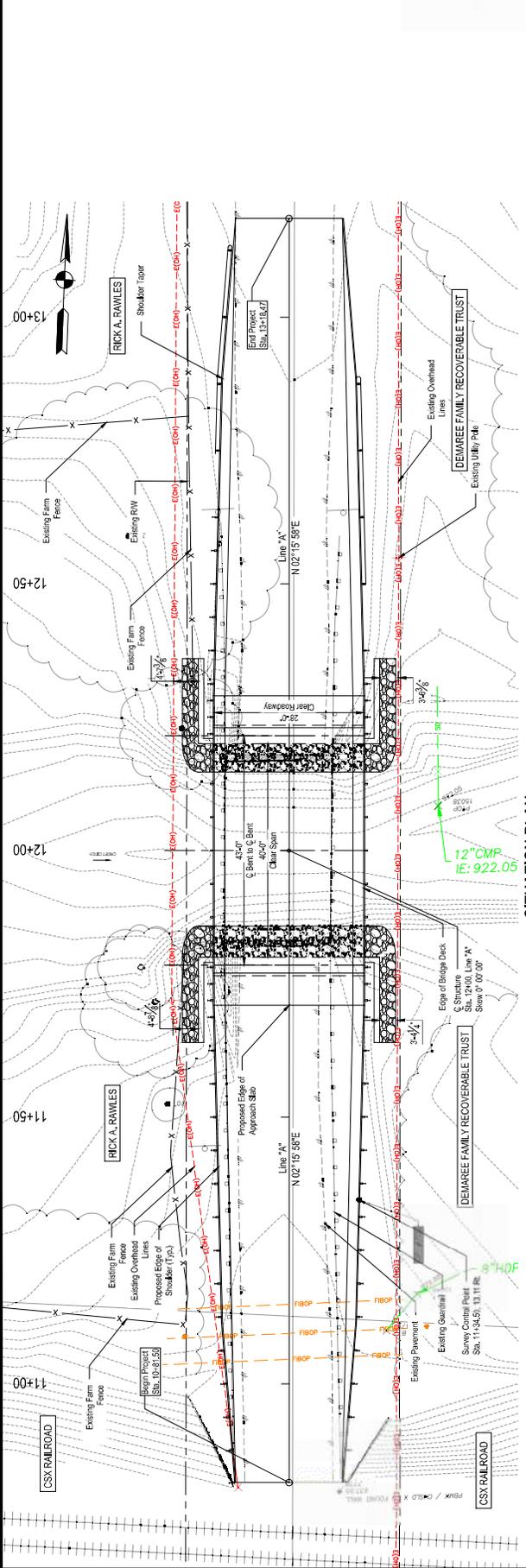


Layout

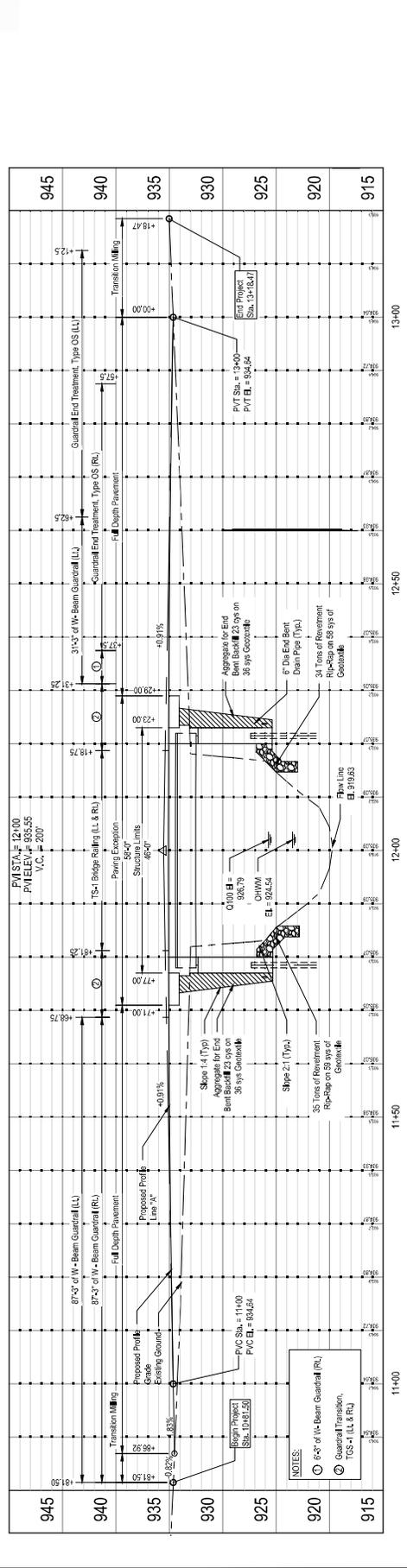
Noble County

PROJECT NUMBER: 2501
DATE: 07/20/24
DESIGNED BY: JAC
CHECKED BY: JAC
DRAWN BY: JAC
SCALE: AS SHOWN
REVISED:

Bridge 33
Replacement
SHEET 2 OF 4



SITUATION PLAN
SCALE: 1" = 100' CONTOUR INTERVAL = 1 FT.



PROFILE ON PROPOSED C TRAIL
SCALE: HORIZ. 1" = 10'-0" VERT. 1" = 5'-0"

COMPOSITE PRESTRESSED CONCRETE SPREAD BOX BEAMS
SINGLE SPAN @ 43'-0"
28'-0" CLEAR ROADWAY
CR 150E OVER CROFT DITCH
NOBLE COUNTY, INDIANA

