SPECIFICATIONS and CONTRACT DOCUMENTS
For

Mounts Park Stream Restoration Project

HAMILTON TOWNSHIP
HAMILTON TOWNSHIP, OHIO

HAMILTON TOWNSHIP TRUSTEES
Joseph Rozzi
Mark Sousa
Darryl Cordrey

Date: November 28, 2022

TOWNSHIP ADMINISTRATOR

Steve Pegram

HAMILTON TOWNSHIP
7780 South State Route 48
Hamilton Township, Ohio 45039
(513) 683-8520

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SECTION A

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ADVERTISEMENT FOR BIDS

Separate sealed bids for the **Mounts Park Stream Restoration Project** within Hamilton Township will be received by **Hamilton Township, 7780 South State Route 48, Hamilton Township, Ohio 45039**, until **12:00 PM** Local Time on **December 27, 2022** and then at said office publicly read aloud.

Mounts Park Stream Restoration Project

Work under this Project is generally defined as the construction of approximately 434 feet of new stream channel, the abandonment of approximately 1,680 feet of existing stream channel, The capping of an old landfill exposed in the existing stream channel, installation of a flume at the outfall of the lake, and construction of an approximate 1.3-acre wetland on the northern edge of the lake. All quantities presented in this specification are estimates and shall be confirmed by the Contractor prior to submittal of their bid. The Owner expects to proceed with the Project immediately after satisfactory acceptance and award of the construction bid and execution of the contract, with completion of all work within 180 calendar days from the date of the Notice to Proceed.

The information for Bidders, Form of Bid, Form of Contract, Plans, and Specifications including Forms of Bid Bond, Performance-Payment Bond, and other Contractor Documents may be examined at the following Location:

Hamilton Township
7780 South State Route 48
Hamilton Township, Ohio 45039
(513) 683-8520

A Mandatory Pre-Bid Meeting will be held at Mounts Park, 4851 Stubbs Mills Rd, Morrow, OH 45152, at 1:00 PM Local Time on Monday, December 19, 2022.

Copies of the Plans and Specifications, etc., may be obtained during normal business hours at Hamilton Township Administrator's Office, 7780 South State Route 48, Hamilton Township, Ohio 45039, phone number (513) 683-8520. All questions related to this project shall be provided **in writing through email** to the following:

Richard Ordeman, CP, Owner's Representative
Ordesign Environmental Services, LLC
Rick@OrdesignEnv.com

Each Bidder must submit their bid in **TRIPLICATE**, one (1) original and two (2) copies with each copy stamped "COPY". Each bidder must deposit with his bid, security in the amount of 100% of the bid if in the form of a Bid Bond or in the amount of not less than ten (10%) percent of the bid if in the form of a certified check, cashier's check, or letter of credit, for and subject to the conditions provided in the Information for Bidders and pursuant with Ohio Revised Code Section 153.54.

Attention of Bidders is particularly called to the requirements as to safety regulations, conditions of employment to be observed and minimum wage rates to be paid under the Contract. All bids must comply with Hamilton Township's General Instructions to Bidders in addition to the requirements set forth in the Specifications Documents referenced herein in order to be considered. Letters of credit and bid bonds must be filed with original signatures. Facsimile and electronic copies of the letter of credit, bid bond and Power of Attorney of the Surety will be deemed non-responsive.

No Bidder may withdraw his bid for a period of sixty (60) days after the actual date of the opening thereof.

Contract award shall be made to the lowest and best bidder, and award will be subject to applicable funding agency approval.

Hamilton Township reserves the right to reject any and all bids, to waive any informalities in the bidding procedure, to accept any bid which it deems to be for the best interest of the Park District, to hold such bids for a period of up to sixty (60) days before taking action to award a contract, and conduct necessary investigations to determine bidder responsibility. These rights are reserved up until the time the contract is signed by Hamilton Township.

This notice is also posted on the contracting authority's site at the following URL link: https://www.hamilton-township.org. In order to view the legal notice, click on the link News located at the top of the Hamilton Township Website.

Hamilton Township Trustees:
Joseph Rozzi
Mark Sousa
Darryl Cordrey

ATTEST:

Steve Pegram, Township Administrator

18154994v2

GENERAL INSTRUCTIONS TO BIDDERS
FOR PUBLIC IMPROVEMENTS
HAMILTON TOWNSHIP, OHIO

Item Bid: Mounts Park Stream Restoration Project

Bid Opening Date: December 27, 2022 at 12:00 PM .

All bids submitted for consideration by Hamilton Township must comply with these instructions in order to be considered. These instructions set forth minimum requirements as terms and conditions of the public improvement. Therefore, if any time frames, bid bond or other surety requirements set forth herein are in conflict with stated requirements in the specifications, the specification requirements shall prevail.

1. Bids shall be submitted in a sealed envelope marked accordingly with item(s) bid on and name of bidder and delivered in compliance with the Legal Notice. Any improperly marked bid will not be considered.

2. The total estimated construction cost for the base bid work for which bids are currently being solicited is: $299,300.00.

3. Each Bidder shall have a competent person carefully and diligently review each part of the Contract Documents, including the Divisions of the Specifications and parts of the Drawings that are not directly applicable to the Work on which the Bidder is submitting its bid. By submitting its bid, each Bidder represents and agrees, based upon its careful and diligent review of the Contract Documents, that it is not aware of any conflicts, inconsistencies, errors, or omissions in the Contract Documents for which it has not notified the Design Professional in writing at least ten (10) days prior to the bid opening. If there are any such conflicts, inconsistencies, errors, or omissions in the Contract Documents, the Bidder (i) will provide the labor, equipment, or materials of the better quality or greater quantity of Work and/or (ii) will comply with the more stringent requirements. The Bidder will not be entitled to any Change Order, additional compensation, or additional time on account of such conditions for any conflicts, inconsistencies, errors, or omissions that would have been discovered by such careful and diligent review, unless it has given prior written notice to the Design Professional.

4. Each Bidder shall have a competent person carefully and diligently inspect and examine the entire site and the surrounding area, including all parts of the site applicable to the Work for which it is submitting its bid, including location, condition, and layout of the site and the location of utilities, and carefully correlate the results of the inspection with the requirements of the Contract Documents. The Bidder's bid shall include all costs attributable to site and surrounding area conditions that would have been discovered by such careful and diligent inspection and examination of the site and the surrounding area, and the Bidder shall not be entitled to any Change Order, additional compensation, or additional time on account of such conditions.

5. The Bidder may rely upon the general accuracy of any technical data identified in the Owner-Contractor Agreement (e.g., any soils exploration reports, soil boring logs, site survey, or abatement reports) in preparing its bid, but such technical data are not part of the Contract Documents. Except for the limited reliance described in the preceding sentence, Bidder may not, if awarded a contract for the Work, rely upon or make any Claim against the Owner or Design

Professional, or any of their agents or employees, with respect to any of the following:

a. the completeness of such reports and drawings for Bidder's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by the successful Bidder and safety precautions and programs incident thereto; or

b. any interpretation by the successful Bidder of or conclusion drawn from any technical data or any such other data, interpretations, opinions, or information. For example, all interpolations and extrapolations of data performed by the Bidder to estimate locations or quantities of subsurface strata are independent factual assumptions, which Owner does not warrant.

6. All bids must comply with the specifications attached hereto. Alternative bids may be considered only if clearly marked as such with an explanation as to how the item is sufficient to meet required needs.

7. All quantities presented in this specification are estimates. Actual quantities should be determined by the Contractor and included in the bid.

8. All prices, quantities, etc. as bid must be firm for a period of sixty (60) days from the date of the bid opening.

9. Each person bidding for a contract for the construction, demolition, alteration, repair, or reconstruction of any public improvement is required to file with his bid a bid guaranty in the form of either (1) a bond for the full amount of the bid or (2) a certified check, cashier's check, or letter of credit pursuant to Chapter 1305 of the Revised Code in an amount equal to ten percent of the bid pursuant to Section 153.54 of the Ohio Revised Code. The successful bidder at the time he enters into the contract shall be required to file a performance bond in the full amount of the contract pursuant to Section 153.54 (C) of the Ohio Revised Code. Letters of credit and bid bonds must be filed with original signatures. Facsimile and electronic copies of the letter of credit, bid bond and Power of Attorney of the Surety will be deemed non-responsive.

10. When analyzing the bids submitted, superior design, technology, workmanship, materials, size of component parts, operating cost, warranty, service facility etc. will be considered in addition to price. It is Hamilton Township's intent to accept the bid for which a thorough analysis of the bids submitted proves to be the most suitable for the intended use.

11. Unless otherwise specified, all material shall be new and of the best grade in its particular line and all articles shall be complete and in first class condition. All work shall be done in the best and most skilled manner, exactly as specified or detailed, and shall be subject to the approval of Hamilton Township Officials. When required in the specifications, bidders shall make available for inspection a sample or similar model of the bid item prior to the award of the bid.

12. Reference to a particular trade name, manufacturer's catalog or model number is made for descriptive purposes to guide the bidder in interpreting the requirements of the Park District. They should not be construed as excluding proposals on other types of materials, equipment, and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless a departure or substitution is clearly noted and described in the bid proposal.

13. All bidders are required to submit the following affidavits with their bid proposal and the successful bidder will be required to enter into a written contract with Hamilton Township within ten (10) days of the notification of award thereof:

    a. Non-Collusion Affidavit
    b. Affidavit Affirming Compliance with 9.24 & 5719.042 ORC

    These affidavits and specifications heretofore referenced shall be incorporated into and become a part of the contract document.

14. Every effort shall be made by the bidder awarded the contract to deliver items by or before the time designated in the contract. Any delinquency in such delivery without satisfactory written explanation directed to Hamilton Township may result in cancellation of the contract and substitution of other goods. The defaulting bidder shall be liable for any increased costs or expenses incurred as a result of such default.

15. In case of default by the bidder or contractor, Hamilton Township may procure the articles or service from other sources without further advertising and shall hold the bidder or contractor responsible for any excess costs occasioned thereby, including any reasonable expenses incurred in procuring the articles or services.

16. Hamilton Township is exempt from payment of Federal Excise Tax, Transportation Tax, and Ohio State Tax. Prices shall not include these taxes.

17. Hamilton Township reserves the right to reject any and all bids, to waive any informalities in the bidding procedure, to accept any bid which it deems to be for the best interest of the Park District and to hold such bids for a period of sixty (60) days before taking action to award a contract. These rights are reserved up until the time the contract is signed by Hamilton Township. Award is subject to funding agency approval.

18. Hamilton Township further reserves the right to conduct such investigations and meetings as it deems necessary after receipt of bids to assist in the evaluation of any bid and to establish the responsibility, qualifications, and financial ability of the bidders, proposed sub- contractors, and other persons and organizations to do the work in accordance with the contract documents to Hamilton Township's satisfaction within the prescribed time limits.

19. Contractor hereby agrees to indemnify and hold Hamilton Township harmless from any claims, demands or losses of any type or nature to any person, bidder or corporation arising in any manner from the contractor's performance or failure to perform the work required under this contract and shall pay any judgment or liability obtained or growing out of said claims, liabilities, or judgments, including reasonable attorney's fees and costs.

20. All materials and exhibits submitted in the bid response shall become the property of Hamilton Township and will not be returned to the bidder. All bids received constitute public information as a matter of statutory law and will be made available for public inspection and copying upon request by members of the public pursuant to the requirements of Section 149.43 of the Ohio Revised Code. Any portion of the bid that the bidder requires to be treated as confidential in nature must be marked to that effect and provided that the information falls within an appropriate

exemption enumerated under Section 149.43 of the Ohio Revised Code, that portion will not be considered public record. **A blanket indication of confidentiality or privilege will not be accepted and unless specific materials that fall within the appropriate statutory exemption are identified, the entire bid response will be treated as public record.**

21. By submitting its bid, the Bidder agrees that the Owner's determination of which bidder is the lowest and best bidder shall be final and conclusive, and that if the Bidder or any person on its behalf challenges such determination in any legal proceeding, whether or not proven, the Bidder will indemnify and hold the Owner and its employees and agents harmless from any claims included or related to such legal proceeding, whether or not proven, and from legal fees and expenses incurred by the Owner, its employees, or agents that arise out of or are related to such challenge.

INFORMATION AND INSTRUCTIONS FOR BIDDERS

1. Receipt and Opening of Bids

Hamilton Township, (herein called the "Owner"), invites bids on the forms attached hereto, all blanks of which must be appropriately filled in.

Bids will be received by the Owner at the office of Hamilton Township until **12:00 PM** local time on **December 27, 2022** and then at said office publicly opened and read aloud. The envelopes containing the bids in **TRIPLICATE** (one (1) original and two (2) copies with each copy stamped "COPY") must be sealed, bearing on the outside of the envelope the name of the Bidder, address, and the name of the Project: **Mounts Park Stream Restoration Project.**

The sealed envelopes shall be addressed to Hamilton Township at 7780 South State Route 48, Hamilton Township, Ohio 45039. If forwarded by mail, the sealed envelope containing the bid shall be enclosed in a separate envelope addressed as specified above.

The Owner in its sole discretion may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid for a period of sixty (60) days after the actual date of the opening thereof.

2. The Bidder shall take the following precautions in preparing its bid:

2.1 Sign the bid and check to ensure all blank spaces have been filled in with the requested information and that the specified accompanying documents have been included in a sealed opaque envelope and addressed as required.

2.2 When the Bid Form provides for quoting either an addition or deduction for an Alternate item, indicate whether the sum named is an addition or deduction. If it is not indicated, it will be conclusively presumed that the amount is a deduction.

2.3 When the Bid Form provides for quoting a unit price, the Bidder should quote the unit price as set forth in the Contract Documents.

2.4 When applicable, make sure that the Bid Guaranty is properly executed and signed by:

- The Bidder
- The Surety or Sureties

2.5 Make sure that the amount of the Bid Guaranty (if the Bid Guaranty is in the form of a certified check, letter of credit, or cashier's check) is for a specific sum in an amount as instructed in Paragraph 8 below. If the Bid Guaranty is in the form of the Bid Guaranty and Contract Bond, the amount may be left blank; if an amount is inserted, it must equal the total of the base bid plus the amount of all add alternates included in the bid. If inserted, then the failure to state an amount equal to the total of the base bid and all add alternates shall make the bid non-responsive if the Owner selects alternates not included in the amount.

2.6 Make sure that the appropriate bid package and scope of work is inserted in the correct space on the Bid Guaranty and Contract Bond Form. Failure to include work covered by the bid submitted may make the bid non-responsive.

3. **Preparation of Bid**

Each bid must be submitted on the prescribed Bid Proposal form on pages A-13, A-14, A-15, and A-16. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures. The total amount of the bid shall also be transcribed to the Bid Proposal Recap Form on page A-12. If a discrepancy or inconsistency is discovered between the Bid Proposal Recap Form on page A-12 and the original bid form on pages A-13, A-14, A-15, and A-16, the original bid form on pages A-13, A-14, A-15, and A-16 shall govern. The wording on the Bid Form pages A-13, A-14, A-15, and A-16 shall be used without change, alteration, or addition. Any change in the wording or omission of specified accompanying documents may cause the bid to be rejected. If there is an inconsistency or conflict in the bid amount, the lowest amount shall control, whether expressed in numbers or words.

Bidders shall note receipt of Addenda on the Bid Form. If the Bidder fails to acknowledge receipt of each Addendum, the Bid may be deemed non-responsive, unless the Bid amount clearly and unambiguously reflects receipt of the Addendum, or the Addendum involves only a matter of form and does not materially affect the price, quantity or quality of the Work to be performed

4. **Pre-Bid Meeting**

A Mandatory Pre-Bid Meeting will be held at the Mounts Park, 4851 Stubbs Mills Rd, Morrow, OH 45152 at 1:00 PM Local Time on Monday December 19, 2022. All prospective bidders are strongly encouraged to attend. The Owner shall not be held liable if a bidder is unable to attend due to technical or other issues or obstructions.

5. **Subcontract**

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the Owner and/or his Representative. The bidder awarded the contract shall execute the Subcontract Form developed by the Ohio Department of Administrative Services with each Subcontractor in accordance with Section 153:1-3-02 of the Ohio Administrative Code. The Subcontract Form shall incorporate these General Instructions/Specifications into the Subcontract as if fully written therein.

6. **Method of Bidding**

The Owner invites the following bid:

Mounts Park Stream Restoration Project

7. **Qualifications of Bidder**

The Owner may make such investigations as he deems 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 reserves 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 contract and to complete the work contemplated therein. Conditional bids will not be accepted.

8. **Bonds and Guarantees**

8.1 Bid Guaranty: Bidder shall furnish a Bid Guaranty, in the form prescribed in Sections 153.54, 153.57, and 153.571 of the Ohio Revised Code, in the form of either: (1) a bond for the full amount of the Base Bid plus the amount of all Add Alternates included in the Bidder's bid, in the form of the Bid Guaranty and Contract Bond included in the Contract Documents; or (2) a certified check, cashier's check, or irrevocable letter of credit in a form satisfactory to the Owner in an amount equal to 10% of the bid. Bid amount shall be the total of all sums bid, including all add alternatives, but excluding all deduct alternatives. NOTE: AIA or EJCDC Bid Bond forms are not acceptable.

8.2 Contract Bond: The successful Bidder, who, as a Bid Guaranty, submits a certified check, cashier's check, or irrevocable letter of credit in an amount equal to 10% of the bid, shall furnish a Contract Bond in the form Contract Bond included in the Contract Documents in an amount equal to 100% of the Contract Sum. NOTE: AIA or EJCDC Bond forms are not acceptable.

8.3 The bond must be issued by a surety company authorized by the Ohio Department of Insurance to transact business in the State of Ohio and acceptable to the Owner. The bond must be issued by a surety capable of demonstrating a record of competent underwriting, efficient management, adequate reserves, and sound investments. These criteria will be deemed to be met if the surety currently has an A.M. Best Company Policyholders Rating of "A-" or better and has or exceeds the Best Financial Size Category of Class VI. Other sureties may be acceptable to the Owner, in its sole discretion.

8.4 All bonds shall be signed by an authorized agent of an acceptable surety and by the Bidder.

8.5 Surety bonds shall be supported by credentials showing the Power of Attorney of the agent, a certificate showing the legal right of the Surety Company to do business in the State of Ohio, and a financial statement of the Surety.

8.6 The Bid Guaranty, as applicable, shall be in the name of or payable to the order of the Owner.

8.7 The name and address of the Surety and the name and address of the Surety's Agent should be typed or printed on each bond.

9. **Liquidated Damages for Failure to Enter into Contract**
The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within ten (10) days after he has received notice of the acceptance of his bid, shall forfeit the bid bond or security as provided in Chapter 153 of the Ohio Revised Code.

10. **Time of Completion**
Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete this Contract within 180 consecutive calendar days thereafter.

11. **Conditions of Work**
Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible the contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of, or interference with, the work of any other contractor; the Owner or his representatives, or services to private property.

12. **Addenda and Interpretations**
No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally. Every request for such interpretation should be in writing addressed to Richard D. Ordeman, Owner's Representative, via email at Rick@OrdesignEnv.com or by mail to Mr. Ordeman's attention at Ordesign Environmental Services, LLC, 15 West 4th Street, Suite 400, Dayton, Ohio 45402, and to be given consideration must be received on or before December 22, 2022 (five days prior to the date fixed for the opening of bid)s. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be emailed, mailed by certified mail, and/or by facsimile with return receipt request to all prospective bidders and/or return facsimile (at the respective address and/or facsimile number furnished for such purposes), not later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

13. **Power of Attorney**
Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

14. **Laws and Regulations**
The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

15. **Obligation of Bidder**
At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect of his bid.

16. **Non-Collusion Affidavit**
The bidder shall execute the Non-Collusion Affidavit included in the specifications and submit with the bid proposal in **TRIPLICATE** (one (1) original and two (2) copies with each copy stamped "COPY").

17. **Affidavit in Compliance With ORC Sections 9.24 & 5719.042**
The Bidder shall execute an Affidavit affirming compliance with Sections 9.24 & 5719.042 of the Ohio Revised Code. Such Affidavit requires a statement with respect to the personal property taxes on the general tax list of personal property of Hamilton Township, Ohio. Affidavit form to be executed is included in the specifications and must be submitted with bid in **TRIPLICATE** (one (1) original and two (2) copies with each copy stamped "COPY").

18. **Corporate and Out-of-County Bidders**
All successful bidders who are corporate bodies shall furnish, at the time of execution for the contract, a resolution of the directors of the corporation, bearing the seal of the corporation, evidencing authority of the officer signing the contract to do so; likewise, agents of bonding companies shall furnish power of attorney, bearing seal of the company, evidencing such agents' authority to execute the particular type of bond to be furnished. A copy of these proofs shall be attached to each copy of the contract.

Particular attention is called to the statutory requirements of the State of Ohio relative to licensing of corporations organized under the laws of any other state.

Any out-of-county bidder must give a correct address in his proposal, and if awarded the contract, must maintain a local headquarters where he can be reached readily.

19. **Workers' Compensation**
The Contractor shall furnish three (3) copies of official certificate, receipt, or other satisfactory evidence showing that he has paid the Ohio State Industrial Insurance Premium required under the Ohio State Workers' Compensation Act and shall be at all times during the life of the contract covered herein, keep such insurance in full force and effect.

Workers' compensation insurance must be provided for every person employed on the project whether or not the insurance is required by the Ohio Law.

20. **Non-Discrimination Provisions**
The Contractor to whom the contract is awarded shall comply fully with the provisions of Section 153.59 and Section 153.60, Ohio Revised Code, relative to non-discrimination.

21. **Contract Execution**
The party to whom the contract is awarded will be required to execute the agreement and obtain the performance bond and payment bond within ten (10) calendar days from the date when Notice of Award is delivered to the Bidder. The Notice of Award shall be accompanied by the necessary Agreement and bond forms. In case of failure of the Bidder to execute the Agreement, the Owner may at his option consider the Bidder in default, in which case the Bid Bond accompanying the proposal shall become the property of the Owner.

22. **Affidavit as to Personal Property Taxes.** Each successful Bidder shall submit, prior to the time of the entry into the Contract, an affidavit in the form required by Section 5719.042, Ohio

Revised Code, regarding the status of the Bidder's personal property taxes. A copy of the affidavit form is included with the Contract Documents.

23. **Qualifications Statement.** Each Bidder will submit with its bid a completed Contractor Qualifications Statement, which is included with the Contract Documents, and thereafter provide the Design Professional promptly with such additional information as the Design Professional may request regarding the Bidder's qualifications. A Bidder shall submit any requested additional information within 24 hours of the date on the request.

24. The failure to submit requested information on a timely basis may result in the determination that the Bidder has not submitted the lowest and best bid.

25. By submitting its bid, the Bidder agrees that the Owner's determination of which bidder is the lowest and best bidder shall be final and conclusive, and that if the Bidder or any person on its behalf challenges such determination in any legal proceeding, whether or not proven, the Bidder will indemnify and hold the Owner and its employees and agents harmless from any claims included or related to such legal proceeding, whether or not proven, and from legal fees and expenses incurred by the Owner, its employees, or agents that arise out of or are related to such challenge.

26. **Commencement of Work**
The Contractor shall not commence work under this contract until he has obtained all insurance required and such insurance has been approved by Hamilton Township, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all similar insurance required for coverage of subcontractor has been so obtained and approved.

27. **Prevailing Wage Schedule**
The Contractor shall post at conspicuous points on the site of the project a schedule showing all determined minimum wage rates and all authorized deductions, from unpaid wages actually earned. Updates to the wage rate schedule issued for this contract will be forwarded to the Contractor for posting and distribution to subcontractors.

28. **Right to Withhold Payment**
Hamilton Township reserves the right to withhold a sufficient amount from any payment due to the Contractor to cover (a) payments that may be past due and payable for just claims for labor or materials furnished in and about the performance of the work on the project under this contract: (b) for defective work not remedied, and (c) for failure of the Contractor to make proper payments to his subcontractor.

29. **Qualifications of Bidder**
Owner may conduct such investigation as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents. Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction. In addition to a Bidder being responsive, the Bidder must be determined to be responsible. Responsibility will be determined by examining the experience of the Bidder, his financial condition, his conduct and performance on previous contracts, his facilities, his management skills, and his ability to execute the contract properly.

BID PROPOSAL PACKAGE

The bid proposal for ***Mounts Park Stream Restoration Project*** *must be completed and submitted on the required forms as listed under* ***"Bid Proposal Package".***

All Bid forms listed below *must* *be submitted in* ***TRIPLICATE (one (1) original and two (2) copies).*** All copies must be stamped **"COPY"**.

1) BID PROPOSAL:
Six (6) pages supplied by Hamilton Township including: Bid Proposal Recap Form and Bid Proposal.

2) BID SECURITY OR GUARANTY (separately for each contract bid):
   A. Bid Guaranty and Contract Bond: (two (2) pages supplied by Hamilton Township), and effectively dated Power of Attorney (supplied by Bidder).

   B. Surety Certificate: (to be supplied by Bidder).

   C. Bid Guaranty: (one (1) page supplied by Hamilton Township and certified check, cashier's check, or letter of credit (supplied by Bidder), in lieu of Bid Bond and Surety Certificate).

3) NON-COLLUSION AFFIDAVIT:
One (1) page supplied by Hamilton Township.

4) AFFIDAVIT AFFIRMING COMPLIANCE WITH SECTIONS 9.24 & 5719.042 OF THE OHIO REVISED CODE (PERSONAL PROPERTY TAXES):
One (1) page supplied by Hamilton Township.

5) EXPERIENCE STATEMENT:
One (1) page supplied by Hamilton Township.

6) SUBSTITUTION SHEET:
One (1) page supplied by Hamilton Township.

7) LIST OF SUBCONTRACTORS:
One (1) page supplied by Hamilton Township.

8) COMPLETED CONTRACTOR QUALIFICATIONS STATEMENT
Eleven (11) pages supplied by Hamilton Township.

BID PROPOSAL RECAP FORM

Mounts Park Stream Restoration Project

Bidder Information:

Bidder Name:_____

Address:_____

_____

_____

Addenda Receipt Acknowledgement:

Addenda:_____ Date Received:_____

Addenda:_____ Date Received:_____

Addenda:_____ Date Received:_____

Bid Security:

(Check & Complete the Appropriate Section)

1. __ **Bid Guaranty & Contract Bond**

   Surety Company:_____

   Address:_____

   _____

   _____

2. __ **Bid Guaranty - Check, Letter Of Credit**

Amount $_____

Contract(s) Bid:

Mounts Park Stream Restoration Project: Bid Amount: $_____

All Information provided on this form is believed to be accurate and consistent with the information provided on pages A-13 through A-16 of these specifications. The information provided is for the convenience of Hamilton Township and will be read aloud at the bid opening. This form and all information contained herein is **NOT** intended to take the place of any information contained in the Bid Proposal Package as described on page A-11. Should any inconsistent information be provided, the information on pages A-13 through A-16 shall govern and any discrepancy hereon shall not be cause for rejection of bid.

_____

Bidder

_____

Title

_____

Date

18154994v2

BID PROPOSAL

Place:_____

Date:_____

Proposal of _____,
(Insert Bidder's Name)

(hereinafter called *"Bidder"*) A _____
(Insert either Corporation, a partnership, or an individual)

organized and existing under the laws of the State of _____

doing business as_____.
(Insert Business or Company Name)

TO: Hamilton Township, (hereinafter called *"Owner"*)

Gentlemen:

The Bidder, in compliance with your advertisement for bids for the installation of:

Mounts Park Stream Restoration Project

having examined the plans and specifications with related documents and the site of the proposed work and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete Mounts Park Stream Restoration Project within 180 consecutive calendar days thereafter.

Bidder hereby acknowledges receipt of the following addenda:

Mounts Park Stream Restoration Project

Addendum No._____Date_____
Addendum No._____Date_____
Addendum No._____Date_____

	SCHEDULE OF VALUES – MOUNTS PARK STREAM RESTORATION PROJECT							
ITEM No.		DESCRIPTION	UNIT	# OF UNITS (U)	MATERIAL COSTS (M)	LABOR COSTS (L)	UNIT COST (M+L)	TOTAL COST U x (M+L)
1		Performance & Payment Bond	LS	1				
2		Mobilization/GC	LS	1				
3		Survey Topo and Staking	LS	1				
4		Erosion Control BMP's	LS	1				
5		Clearing & Grubbing	LS	1				
6		Topsoil Strip & Respread	CY	1,000				
7		Excavation	CY	1,700				
8		Stream Channel Excavation	LF	434				
9		In-Stream Grade Control Strucutures	Each	8				
10		Embankment of Onsite Soil	CY	1,700				
11		Import/Place Embankment	CY	4,000				
12		Erosion Control Matting along Stream	SY	1,000				
13		Flume Installation	LS	1				
14		Seeding/Planting Allowance	LS	1				

Note: The unit cost is the sum of the material costs and labor costs. The total cost is the unit cost multiplied by the number of units.

Summation of Bid Items

Total Project Bid in Figures: $ _____

Total Project Bid in Words: $ _____

Amount of Bid to be shown in both figures and words. In case of discrepancy, the amount tabulated from the unit prices shall govern.

Bidder agrees to complete Mounts Park Stream Restoration Project described in the specifications and shown on the plans for the unit price amounts as submitted herewith.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract attached within ten (10) days and deliver a Surety Bond or Bonds as required by the General Conditions.

(The bid must be signed by the proprietor if the bidder is a sole proprietorship, partner if the bidder is a partnership, or president or vice-president if the bidder is a corporation. If bid is signed by any other individual, the bidder must provide written documentation that the individual signing the bid has the authority to do so on behalf of the bidder.)

Respectfully submitted;

(Seal - if bid is by
a corporation)

_____
(Bidder)

By:_____

_____
(Title)

_____
(Address)

_____

BID GUARANTY AND CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

(Here insert full name or legal title of Contractor)

as Principal and

(Here insert full name or legal title of Surety)

as Surety, are hereby held and firmly bound unto **Hamilton Township** hereinafter called the Obligee, in the penal sum of the dollar amount of the bid submitted by the Principal to the Obligee on _____ (Date) to undertake the project known as:

Mounts Park Stream Restoration Project

The penal sum referred to herein shall be the dollar amount of the Principal's Bid to the Obligee, incorporating any additive or deductive alternate proposals made by the Principal on the date referred to above to the Obligee, which are accepted by the Obligee. In no case shall the penal sum exceed the amount of

_____ dollars ($_____). (If the above line is left blank, the penal sum will be the full amount of the Principal's Bid, including alternates. Alternatively, if completed, the amount stated must not be less than the full amount of Bid, including alternates, in dollars and cents. A percentage is not acceptable.)

For the payment of the penal sum well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above-named Principal has submitted a bond on the above referred project;

NOW, THEREFORE, if the Obligee accepts the bid of the Principal and the Principal fails to enter into a proper contract in accordance with the plans, details, specifications, contract documents, and bills of material; and in the event the Principal pays to the Obligee the difference not to exceed ten percent of the penalty hereto between the amount specified in the bid and such larger amount for which the Obligee may in good faith contract with the next lower bidder to perform the work covered by the bid; or in event the Obligee does not award the contract to the next lower bidder and resubmits the project for bidding, the Principal will pay the Obligee the difference, not to exceed ten percent of the penalty hereof between the amount specified in the bid, or the costs, in connection with the resubmission, of printing new contract documents, required advertising and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect.

If the Obligee accepts the bid of the Principal and the Principal, within ten days after the awarding of the contract, enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein; and if the said Principal shall well and faithfully perform each and every condition of such contract; and indemnify the Obligee against all damage suffered by failure to perform such contract according to the provisions thereof and in accordance with the plans, details, specifications, and bills of material therefore; and shall pay all lawful claims of subcontractors, materialman, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall be for benefit of any materialman or laborer having just claim, as well as for the Obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunto shall in no event exceed the penal amount of this obligation as herein stated.

The said Surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of said contract or in or to the plans and specifications therefore shall in any way affect the obligations of said Surety on this bond, and it does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

SIGNED AND SEALED this_____day of_____, 20___.

Principal: _____

By: _____

Title: _____

Address: _____

Surety: _____

Witness: _____

Attorney-in-Fact: _____

Surety Company Address: _____

Surety Agent's Name and Address: _____

BID GUARANTY - CHECK, LETTER OF CREDIT

When a Certified Check, Cashier's Check or Letter of Credit is deposited in lieu of a Bid Guaranty Bond, fill out the following:

The undersigned "Bidder" does hereby deposit with the "Owner" a (Certified Check/Cashier's Check/Letter of Credit) drawn on the _____, whose address is _____, in the sum of _____

($_____) dollars

(not less than 10% of bid) to guaranty that if the bid submitted is accepted, the Bidder shall execute and deliver to the Owner a Contract and Performance Bond in accordance with the Bid Documents.

Bidder:_____

By:_____

Title:_____

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

STATE OF _____

SS:

COUNTY OF _____

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

1) He is _____ of _____
(Owner, Partner, Officer, Representative or Agent) (Company)
the Bidder that has submitted the attached Bid:

2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid:

3) Such Bid is genuine and is not a collusive or sham Bid:

4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this Affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm, or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder or to fix any overhead, profit or cost element of the Bid price or Bid price of any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Hamilton Township or any person interested in the proposed Contract: and

5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this Affiant.

Signature:_____

Title:_____

Subscribed and sworn before me this _____ day of _____, 20_____

Notary Public:_____

Printed Name of Notary:_____

My Commission expires:_____

AFFIDAVIT IN COMPLIANCE WITH SECTIONS 9.24 AND 5719.042 OF THE OHIO REVISED CODE

STATE OF _____

SS:

COUNTY OF _____

Personally appeared before me the undersigned, a bidder in a competitive bidding

for_____
(Name of Firm)

for a _____ contract let by Hamilton Township, who, being
(Type of Product or Service)

duly cautioned and sworn, makes the following statement with respect to the personal property taxes on the general tax list of personal property of Hamilton Township, Ohio:

1. That the undersigned at the time of making this bid on the aforementioned contract was not charged with any delinquent personal property taxes on the general tax list of personal property of Warren County.

2. That this statement is made in compliance with Section 5719.042 to be incorporated into the contract between the parties as provided in that Section of the Ohio Revised Code.

3. That pursuant to Section 9.24 of the Ohio Revised Code, if the project for which this bid is submitted has been identified as being funded in whole or in part with funds from the State of Ohio, the affiant further certifies that the bidder, if an individual, or if a corporation, any principal owning more than 10% equitable interest in the corporation, does not have a finding for recovery issued by the Auditor of State which remains unresolved as defined in Section 9.24 ORC.

Signature:_____

Title:_____

Subscribed and sworn before me this _____ day of _____, 20_____

Notary Public:_____

Printed Name of Notary:_____

My Commission expires:_____

EXPERIENCE STATEMENT

The Bidder is required to state in detail, in the space provided below, what work of a character similar to that included in the proposed contract he has done, to give reference and such other detailed information as will enable the Owner to judge of his responsibility, experience, skill, and financial standing. Among other things, this statement shall include the following: evidence to the effect that the Bidder maintains a permanent place of business; has adequate construction facilities and equipment available for the work under the proposed contract; evidence to the effect that the bidder has a suitable financial status to meet obligations incidental to the work; evidence to the effect that the Bidder has appropriate technical experience and has in his employ a sufficient number of skilled and trained workmen to carry to completion, within the contract time, the work to be done under this contract.

SUBSTITUTION SHEET

All Bids must be based on the "Standards" specified. Bidder is to list here any "Substitutions" for which consideration is desired, showing the addition or reduction in price to be made, for each, if the substitution is accepted, or stating "No Change in Price," if none is proposed.

BRAND OR MAKE SPECIFIED	PROPOSED SUBSTITUTION	ADD	DEDUCT	NO CHANGE

It is understood and agreed that the proposal submitted is based on furnishing "Standards" as specified and entitles the Owner to require that such named materials and methods be incorporated in the work, except as Substitutions, if they are accepted, based on the quotations entered above, are subsequently made a part of the written contract.

Signed:_____

Title:_____

LIST OF SUBCONTRACTORS

PROJECT: Mounts Park Stream Restoration Project

Hamilton Township

To: _____

_____

List Subcontractors and others proposed to be employed on the above Project as required by the bidding documents. (To be filled out by the Contractor and returned to the Owner). The bidder awarded the contract shall execute the Subcontract Form with each Subcontractor in accordance with Section 153:1-3-02 of the Ohio Administrative Code.

Work	Firm	Address	Phone	Representative

State of Ohio Subcontract Form

State of Ohio Standard Requirements
for Public Facility Construction

This Agreement is made as of the date set forth below between the Contractor and the Subcontractor in connection with the Project.

Project Number:	
Project Name:	**Mounts Park Stream Restoration Project**
Site Address:	4851 Stubbs Mills Road Morrow, Ohio 45152
Contractor:	**«insert name»**
Contractor's Principal Contact:	«insert name»
Address:	«insert street address» «insert city, state zip code»
Subcontractor:	**«insert name»**
Subcontractor's Principal Contact:	«insert name»
Address:	«insert street address» «insert city, state zip code»
Public Authority:	**Hamilton Township**
Project Manager:	Steve Pegram
Address:	7780 South State Route 48 Hamilton Township, Ohio 45039

ARTICLE 1 – NATURE OF SUBCONTRACT

1.1 The Subcontractor shall perform the entire Subcontract Work as specified in Exhibit [_____] and described in the Contract Documents for the Project:

ARTICLE 2 – COMPENSATION

2.1 The Contractor agrees to pay for the performance of this Subcontract, subject to additions and deductions as provided in the Contract Documents, the Subcontract Sum of [Insert Subcontract Sum], comprised of the following:

[Insert Subcontract Sum Component] .....$ [Insert Amounts]
[Insert Subcontract Sum Component] .....$ [Insert Amounts]
[Insert Subcontract Sum Component] .....$ [Insert Amounts]
[Insert Subcontract Sum Component] .....$ [Insert Amounts]

ARTICLE 3 – TIME OF PERFORMANCE

3.1 Time is of the essence. The Subcontractor shall diligently prosecute and complete all Subcontract Work in accordance with the construction progress schedule agreed between the parties.

ARTICLE 4 – CONTRACT DOCUMENTS

4.1 To the extent that the contract between the Public Authority and the Contractor applies to the Subcontract Work:

4.1.1 The Contractor and the Subcontractor agree to be mutually bound by the terms of the Contract Documents;

4.1.2 The Contractor assumes toward the Subcontractor the rights, remedies, obligations, and responsibilities that the Public Authority has and assumes toward the Contractor;

4.1.3 The Subcontractor assumes toward the Contractor the rights, remedies, obligations, and responsibilities that the Contractor assumes toward the Public Authority; and

4.1.4 The Subcontractor agrees to perform its portion of the Work in accordance with the Contract Documents.

4.2 The Subcontract and any modifications, amendments, or alterations thereto shall be governed, construed, and enforced by and under the laws of the State of Ohio.

4.3 If any term or provision of the Subcontract, or the application thereof to any Person or circumstance, is finally determined, to be invalid or unenforceable by a court of competent jurisdiction, the remainder of the Subcontract or the application of such term or provision to other Persons or circumstances, shall not be affected thereby, and each term and provision of the Subcontract shall be valid and enforced to the fullest extent permitted by law.

4.4 The Subcontract shall be binding on the Contractor and Subcontractor, their successors, and assigns, in respect to all respective covenants and obligations contained in the Contract Documents, but the Subcontractor may not assign the Subcontract without the prior written consent of the Contractor and the Public Authority.

ARTICLE 5 – EFFECTIVENESS

5.1 The Subcontract shall become binding and effective upon execution by the Contactor.

5.2 This Subcontract has been executed in several counterparts, each of which shall constitute a complete original Subcontract, which may be introduced in evidence or used for any other purpose without production of any other counterparts.

5.3 Any signatory may deliver a copy of its counterpart signature page to this Subcontract via fax or e-mail. Each signatory shall be entitled to rely upon a signature of any other signatory delivered in such manner as if such signature were an original.

ARTICLE 6 – REPRESENTATIONS

6.1 Contingent Assignment. The Contractor's contingent assignment of this Subcontract to the Public Authority, as provided in the Contract, is effective after termination of the Contractor by the Public Authority and the Public Authority's acceptance of the assignment in writing to the Subcontractor. The Subcontractor consents to the assignment and shall be bound at the same price and terms as in the Subcontract to the Public Authority. Unless the Public Authority takes assignment of the Subcontract, the Subcontractor will not have any contractual rights against the Public Authority.

6.2 Intended Third-Party Beneficiary. The Public Authority is an intended third-party beneficiary of the Subcontract, entitled to enforce any rights thereunder for its benefit.

6.3 Insurance. The Subcontractor shall maintain insurance in accordance with the Contract Documents. Exhibit [N] sets forth the minimum limits of liability for the insurance required in the Contract Documents.

6.4 Right to Audit. The Subcontractor agrees that the Public Authority or any agents designated by the Public Authority have access to and the right to audit and the right to copy at the Public Authority's cost all of the Subcontractor's books, records, contracts, correspondence, instructions, drawings, receipts, vouchers, purchase orders, and memoranda relating to the Work for a period of not less than 3 years following completion of the Work consistent with Section 149.43 of the Revised Code with regard to the Public Authority's obligation to maintain confidentiality of trade secrets.

6.5 Indemnity. To the fullest extent permitted by law, the Subcontractor shall indemnify, defend, and hold harmless the Public Authority, the Contractor, their consultants and employees from all claims and expenses for bodily injury and property damage other than to the Work itself that may arise from the performance of the Subcontract Work, including reasonable attorneys' fees, costs and expenses, but only to the extent caused by the negligent acts or omissions of the Subcontractor or a person or entity for whom the Subcontractor may be liable. This Subcontract does not require a Subcontractor to waive its immunity under the Workers Compensation laws of Ohio from claims brought against the Subcontractor by the Subcontractor's employees.

6.6 Prompt Pay. The Contractor shall at a minimum make payments to the Subcontractor in accordance with Applicable Law, including Section 4113.61 of the Revised Code. Progress payments to the Subcontractor for satisfactory performance of Subcontract Work shall be made no later than 10 days after receipt by the Contractor of payment from the Public Authority for Subcontract Work.

6.7 Retainage. Subcontractor retainage shall be at a rate equal to the percentage retained from the Contractor's payment by the Public Authority for the Subcontract Work, unless a lesser percentage is otherwise specified.

6.8 Warranty. The Subcontractor fully warrants, for the benefit of the Public Authority, that all materials and equipment shall be new unless otherwise specified, of good quality, in conformance with the Contract Documents and free from defective workmanship or materials.

6.9 Non-Waiver of Lien Rights or Payment of Bond Rights. This Subcontract shall not prohibit a Subcontractor from exercising its rights under Chapter 1311 of the Revised Code or under any Contractor -provided payment bond.

6.10 Non-Discrimination. The Subcontractor agrees to fully comply with Applicable Law regarding equal opportunity, including Section 153.59 of the Revised Code and, to the extent applicable, all Executive Orders issued by the Governor of the State of Ohio.

6.11 Dispute Resolution. The Supplemental conditions to this Subcontract shall provide for a dispute resolution process comparable to the Contract's dispute resolution process in terms of timing, notice, substantiation, and informal dispute resolution efforts. This dispute resolution process provided in the supplemental conditions shall result in prompt access to the ultimate dispute resolution mechanism selected by the parties.

6.12 In the event that any supplemental conditions or other Subcontract terms conflict with the State of Oho Subcontract Form, the State of Ohio Subcontract Form takes precedence, and this Subcontract shall be read and enforced to include the provisions of the State of Ohio Subcontract Form.

6.13 The following exhibits are attached to and are a part of the Subcontract:

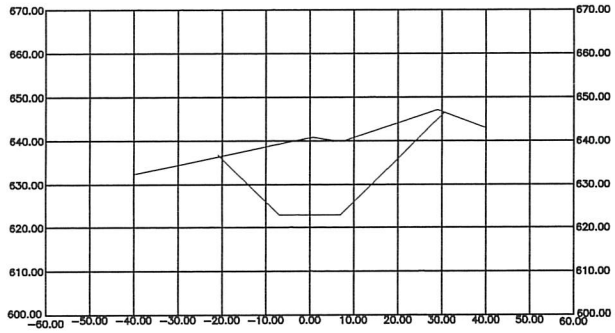
6.13.1 Exhibit A: Construction Drawings – Mounts Park Stream Restoration Project, Sheets 1-4

SIGNATURES

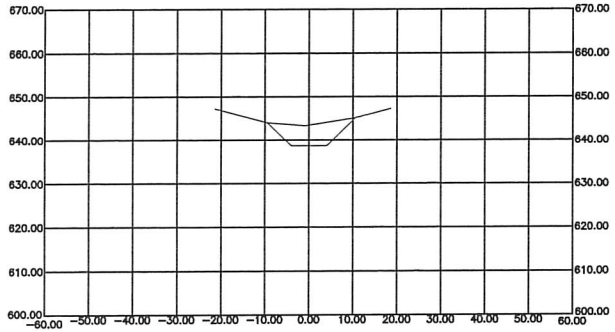
IN WITNESS WHEREOF, the parties have executed this Subcontract Form.

«INSERT SUBCONTRACTOR'S NAME»	«INSERT CONTRACTOR'S NAME»
_____	_____
Signature	*Signature*
_____	_____
Printed Name	*Printed Name*
_____	_____
Title	*Title*
	_____
	Date

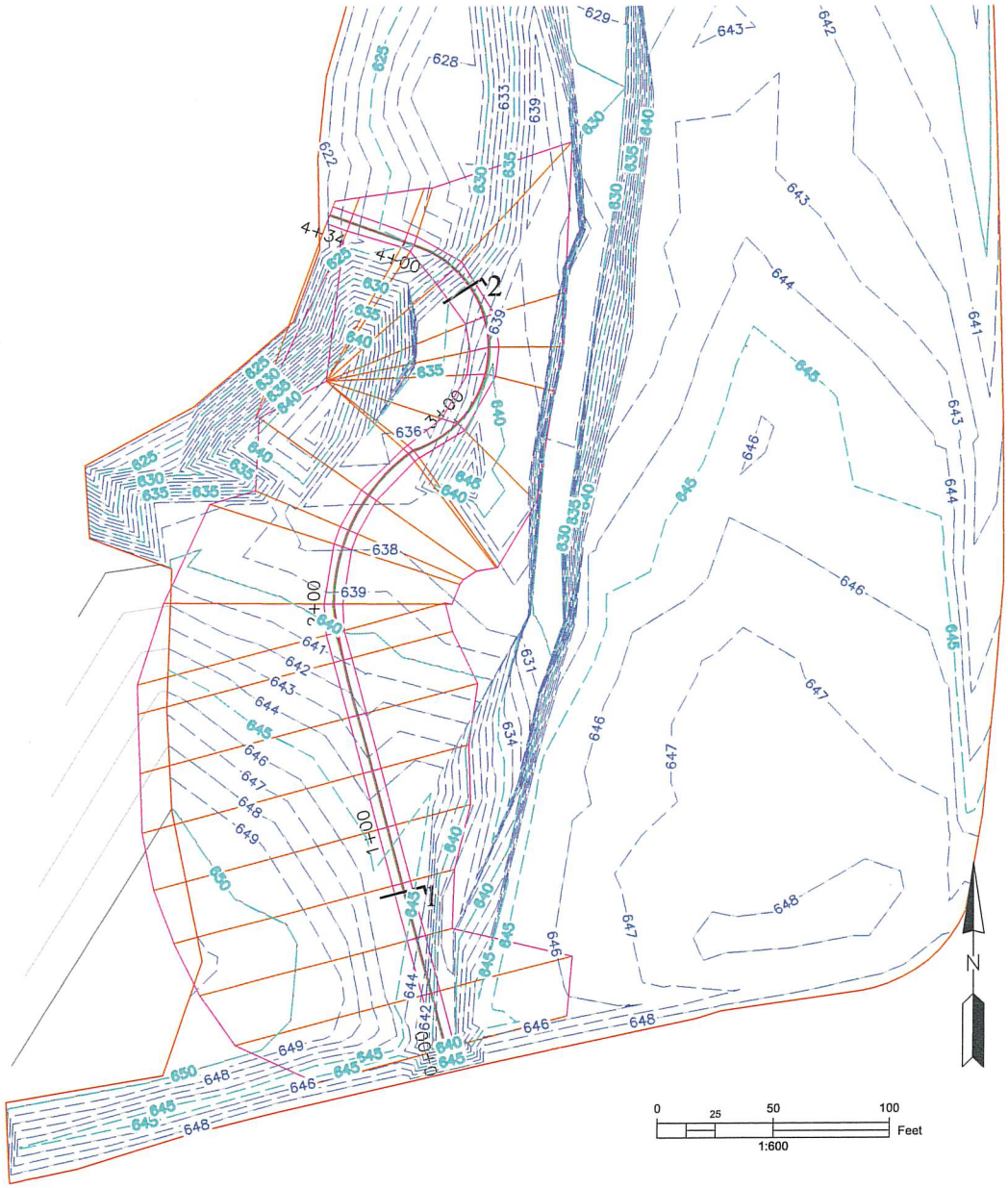
END OF DOCUMENT



New Channel Cross Section 2



New Channel Cross Section 1



NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	CK. BY

SHEET TITLE: NEW PROPOSED CHANNEL

PROJECT TITLE: MOUNTS PARK

CLIENT: MOUNTS PARK
4851 STUBBS MILL ROAD
HAMILTON TWP., OHIO 45152

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
3206 REDING ROAD, SUITE 200
CINCINNATI, OHIO 45202
PH: 513-421-5353

PROJ. NO. 27210.1 | DWN. BY: ADF | Q/A RVW BY: WA
PROJ. MGR: AD | CHK. BY: AD | DSN. BY: AD

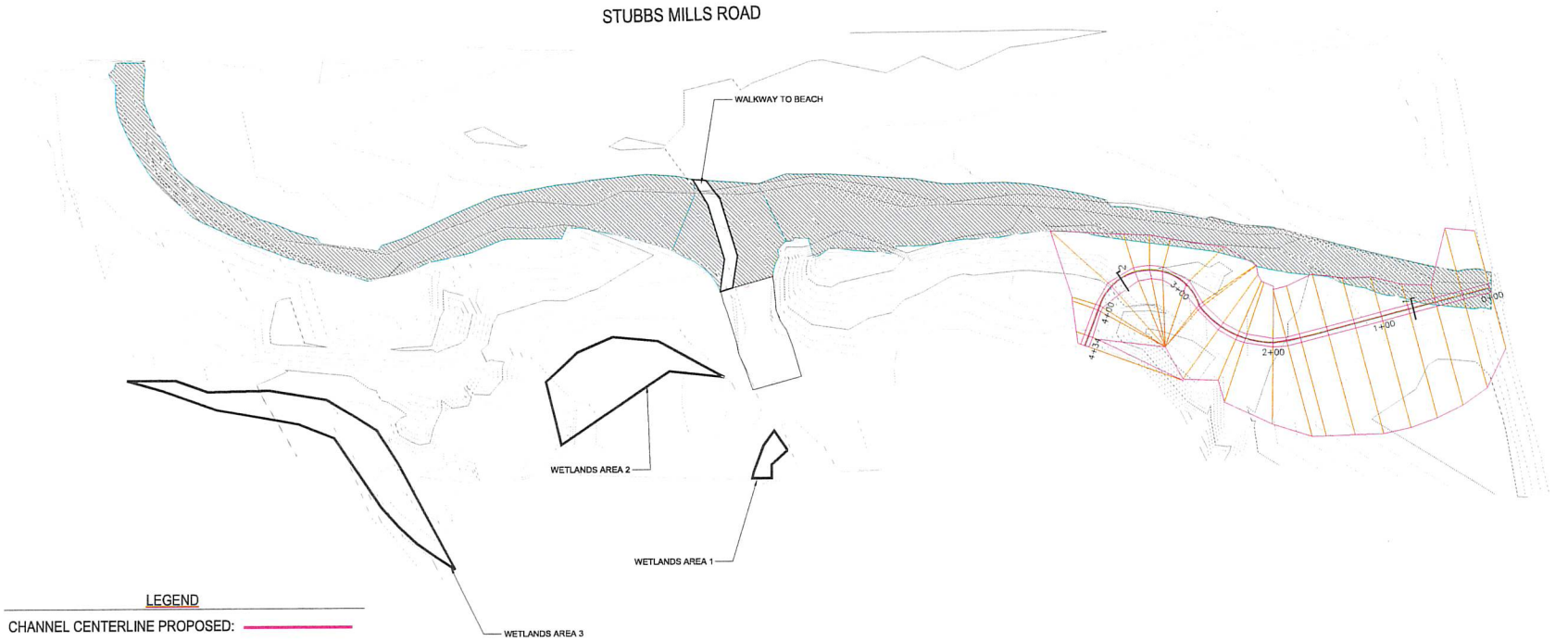
CADD FILE: DRAWING, EXHIBIT-ADF.DWG

DATE: 2/25/22

SCALE: 1:50

DRAWING NO. S1 ####

C:\Users\4572adf\Desktop\My Projects\Mounts Park\CHANNEL EXHIBIT-ADF.dwg Feb 25, 2022 - 3:14pm Layout Name: 11x17 By: 4572adf



LEGEND

CHANNEL CENTERLINE PROPOSED:

TOTAL VOLUME(FILL) OF EXISTING CHANNEL
5,700 Cu. Yd. (Approximate)

NOT FOR CONSTRUCTION

REV.	DATE	DESCRIPTION	CK. BY

SHEET TITLE: EXISTING CHANNEL FILL

PROJECT TITLE: MOUNTS PARK

CLIENT: MOUNTS PARK
4851 STUBBS MILL ROAD
HAMILTON TWP., OHIO 45152

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
7500 GREAT OAKS ROAD, SUITE 200
CINCINNATI, OHIO 45202
PH: 513-421-3353

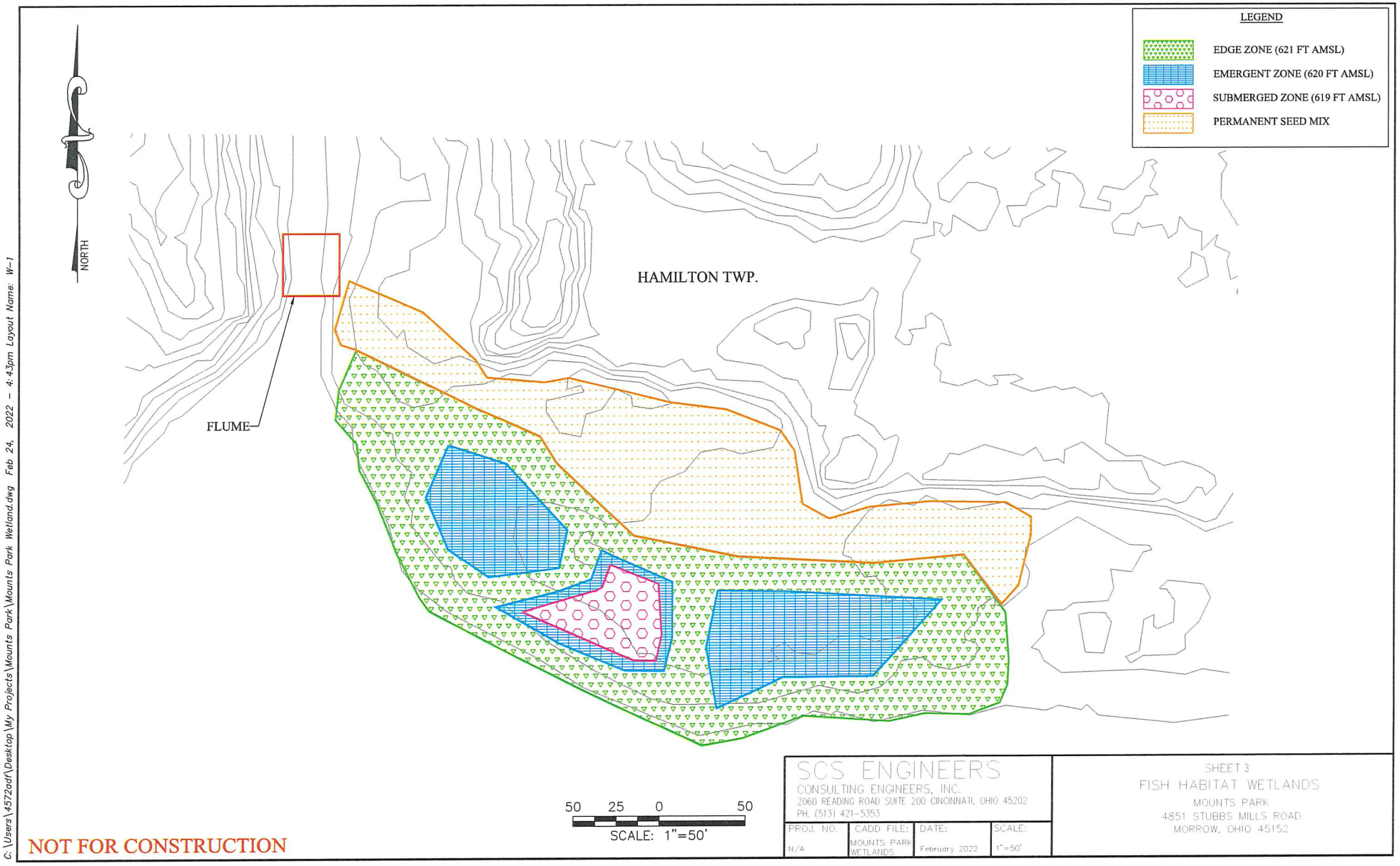
PROJ. NO.
DWN. BY: ADF
CHK. BY: AD
DATE REV. BY: DA
PROJ. MGR: AD

CADD FILE:

DATE: 2/24/22

SCALE: 1:50

DRAWING NO. S2 of



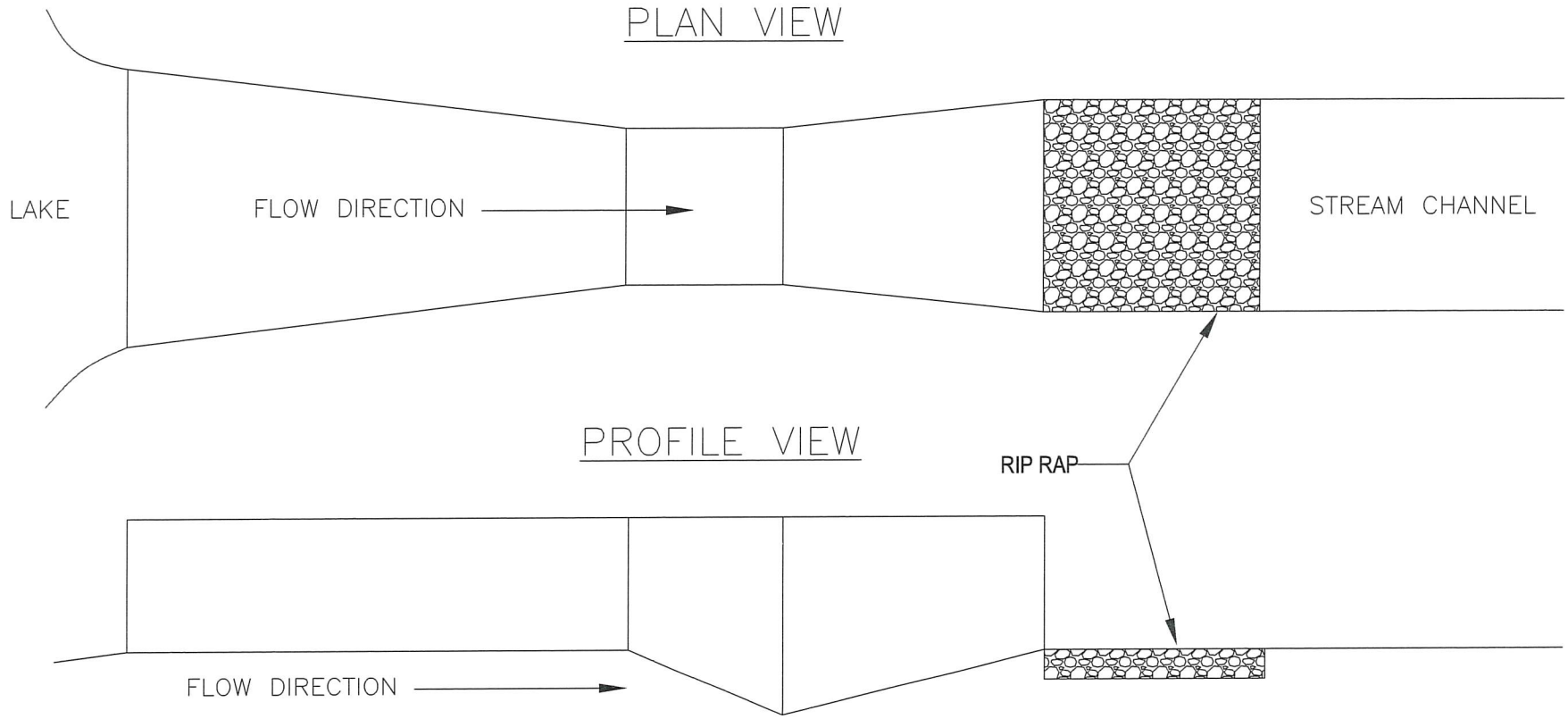
NOT FOR CONSTRUCTION

SCS ENGINEERS
CONSULTING ENGINEERS, INC.
2060 READING ROAD SUITE 200 CINCINNATI, OHIO 45202
PH. (513) 421-5353

PROJ. NO.	CADD FILE:	DATE:	SCALE:
N/A	MOUNTS PARK WETLANDS	February 2022	1"=50'

SHEET 3
FISH HABITAT WETLANDS
MOUNTS PARK
4851 STUBBS MILLS ROAD
MORROW, OHIO 45152

C:\Users\4572adf\Desktop\My Projects\Mounts Park\Mounts Park Wetland.dwg Feb 24, 2022 - 4:43pm Layout Name: W-1



NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	CK. BY

SHEET TITLE: MOUNTS PARK FLUME

PROJECT TITLE: MOUNTS PARK

CLIENT: MOUNTS PARK
4851 STUBBS MILL ROAD
HAMILTON TWP., OHIO 45152

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
2966 READING ROAD SUITE 200
CINCINNATI, OHIO 45202
PH: 513-421-5353

PROJ. NO. PR01 | DWN. BY: ADF | Q/A RVW BY: DA
DSN. BY: AD | CHK. BY: AD | PROJ. MGR: AD

CADD FILE: MOUNTS PARK FLUME.DWG

DATE: 2/24/22

SCALE: N/A

DRAWING NO. 4 of 4

CONTRACT

THIS AGREEMENT, made this the _____ day of _____, 20__, by and between Hamilton Township, hereinafter called the "Owner"

and _____, (strike out inapplicable terms)
(name of contractor)
doing business as_____
(a) an individual (b) a partnership, (c) a corporation,
organized under the laws of the _____,
(City, town, or village where main office is organized)

County of _____, and State of _____, hereinafter called "Contractor."
(county) (state)

Witnesseth: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Owner, the Contractor hereby agrees with the Owner to commence and complete the construction described as follow:

Mounts Park Stream Restoration Project hereinafter called the PROJECT,

for the sum of _____

_____ Dollars
($_____) and all extra work in connection therewith, under the terms as stated in the General Conditions, Supplemental General Conditions, and Work and Material Specifications of the Contract, and at his (it's or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions, Supplemental General Conditions and Special Conditions of the Contract, the Information and Instructions to Bidders, the plans which include all maps, plats, blueprints, and other drawings and printed or written explanatory matter thereof, the specifications and contract documents therefore as prepared by Hamilton Township all of which are made a part of this Contract.

The Contractor hereby agrees to commence work under this contract on or before a date to be specified in a written "Notice to Proceed" of the Owner and to substantially complete the Project within 120 consecutive calendar days thereafter.

The Owner agrees to pay the Contractor in current funds for the performance of the Project, subject to additions and deductions, as provided in the General Conditions of the Project, and to make payments on account thereof as provided in Paragraph 25, "Payments to Contractor," in Section B of the Standard General Conditions.

IN WITNESS WHEREOF, the parties execute this contract in three (3) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

Attest:

_____

Hamilton Township Trustees
Hamilton Township, Ohio
(Owner)

(Seal)

_____
(Clerk)

By _____
Joseph Rozzi

By _____
Mark Sousa

_____
(Witness)

By _____
Darryl Cordrey

_____
(Contractor)

(Seal)

_____
(Secretary/Witness)

By_____

Title_____

_____
(Witness)

_____
(Address)

_____

Strike out inapplicable terms. Clerk of the Owner should attest. If Contractor is corporation, Secretary should attest. Give proper title of each person executing contract.

PERFORMANCE-PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we_____
(correct name of contractor)

a_____
(a corporation, a partnership, or an individual d.b.a.)

hereinafter called "Principal" and _____
(correct name of surety)

hereinafter called "Surety," are held and firmly bound _____
(correct name of Owner)

hereinafter called "Owner" in the penal sum of_____

Dollars ($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of_____, 20____,
(leave blank, to be filled in when executed)

a copy of which is hereto attached and made a part hereof for the construction of:

Mounts Park Stream Restoration Project

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original terms thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, and shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or the work or these specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed, each counterpart of which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST

_____
Principal

_____
(Principal) Secretary
(Seal)

By _____(1)

_____

_____
Address

_____
Witness as to Principal

_____
Address

ATTEST:

_____
Surety

_____
(Surety)Secretary
(Seal)

Surety Address _____

_____

_____
Witness as to Surety

Surety Agent Address_____

_____

_____
Address

NOTE: (1) If Contractor is Partnership, all partners should execute bond

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list and be authorized to transact business in Ohio.

PROSECUTING ATTORNEY'S CERTIFICATE

I hereby certify that I have examined the contract and bond attached between Hamilton Township, and

_____, Contractor, and find same to be in accordance with

the provisions of law and hereby approve said contract and bond as to form.

_____
Law Director
Hamilton Township, Ohio

_____, 2023.

CERTIFICATE OF SUBSTANTIAL COMPLETION AND GUARANTY

The_____
(Name of Company)
hereinafter referred to as "Contractor" having heretofore entered into a contract with **Hamilton Township** dated _____ for the Improvement, Repair, and/or Construction of:

Mounts Park Stream Restoration Project

and in accordance with the terms of said contract do hereby guaranty that all labor, materials, and equipment furnished and work performed by the Contractor and/or his subcontractors under said contract, EXCLUDING restoration and site improvements, is in conformity with such plans and specifications and authorized alterations thereto and that such Improvement, Repair, and/or Construction installed pursuant to said contract is free from imperfect workmanship and materials, and the Contractor agrees to repair at the Contract's sole cost and expense all of the work covered under said contract and change orders which may prove to be defective for a period of one (1) year from the date hereof. Furthermore, the Contractor agrees to repair at the Contractor's cost, any work which may be affected or disturbed in making the repairs herein contemplated.

The Contractor does further warrant that he knows of no claim for or possible claim for damages or injuries relative to the above work, labor, and material as against himself, his laborers, and employees or his subcontractors, their laborers, and employees except: _____

_____
(if none, write none)

It is understood and agreed that **Hamilton Township,** shall be the sole judge of any imperfections, and the within repairs done under their supervision.

We concur that the one (1) year warranty or performance period for all labor, material, and equipment (EXCLUDING restoration and site improvements) should begin as of:

Guaranty Period Begins:

_____

IN WITNESS WHEREOF, the parties execute this Certificate of Substantial Completion in one (1) counterpart, of which shall be deemed an original, in the year and day first above mentioned.

_____
(Contractor)

_____
(Secretary/Witness)

By _____
Title _____
Date _____

_____
(Witness)

Hamilton Township
By _____
Title _____
Date _____

CERTIFICATE OF FINAL COMPLETION AND GUARANTY

The _____
(Name of Company)
hereinafter referred to as "Contractor" having heretofore entered into a contract with **Hamilton Township,** dated _____ for the Improvement, Repair, and/or Construction of:

Mounts Park Stream Restoration Project

and in accordance with the terms of said contract do hereby guaranty that all labor, materials, and equipment furnished and work performed by the Contractor and/or his subcontractors under said contract, INCLUDING restoration and all site improvements, is in conformity with such plans and specifications and authorized alterations thereto and that such Improvement, Repair, and/or Construction installed pursuant to said contract is free from imperfect workmanship and materials, and the Contractor agrees to repair at the Contract's sole cost and expense all of the work covered under said contract and change orders which may prove to be defective for a period of one (1) year from the date hereof. Furthermore, the Contractor agrees to repair at the Contractor's cost, any work which may be affected or disturbed in making the repairs herein contemplated.

The Contractor does further warrant that he knows of no claim for or possible claim for damages or injuries relative to the above work, labor, and material as against himself, his laborers, and employees or his subcontractors, their laborers, and employees except: _____

_____
(if none, write none)

It is understood and agreed that **Hamilton Township,** shall be the sole judge of any imperfections, and the within repairs done under their supervision.

We concur that the one (1) year warranty or performance period for all material and equipment (INCLUDING restoration and site improvements) should begin as of:

Guaranty Period Begins:

_____

WITNESS WHEREOF, the parties execute this Certificate of Final Completion in one (1) counterpart, of which shall be deemed an original, in the year and day first above mentioned.

_____
(Contractor)

_____
(Secretary/Witness)

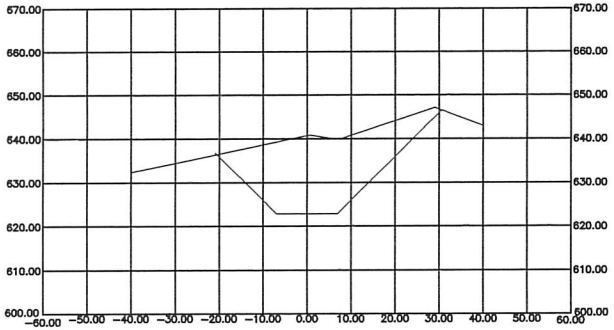
By _____
Title _____
Date _____

_____
(Witness)

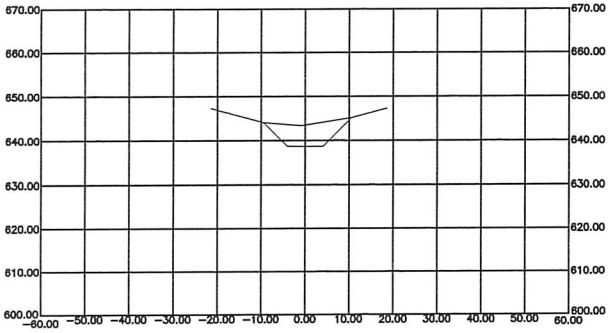
Hamilton Township
By _____
Title _____
Date _____

PROJECT SCHEDULE

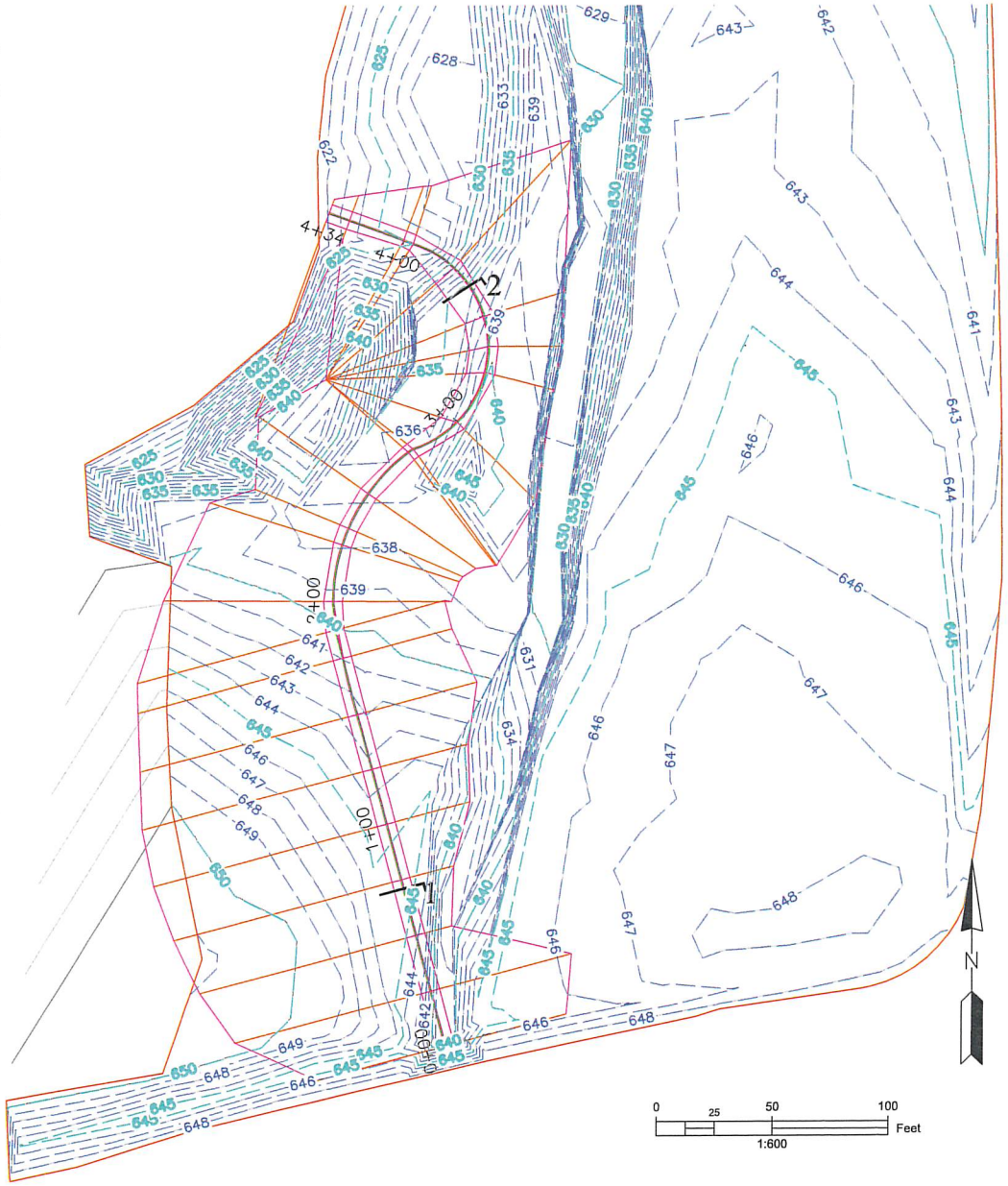
Calendar Date:	Activity:
November 28, 2022	First Advertisement
December 19, 2022 @ 1:00 PM	Pre-Bid Meeting
December 22, 2022 @ 4:30 PM	Last Day to Submit Questions
December 27, 2022 @ 12:00 PM	Bid Due Date and Public Opening
January 4, 2023	Award Date
TBD	Notice to Proceed
TBD	Pre-Construction Meeting
TBD	Final Completion



New Channel Cross Section 2



New Channel Cross Section 1



NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	CK. BY

SHEET TITLE: NEW PROPOSED CHANNEL

PROJECT TITLE: MOUNTS PARK

CLIENT: MOUNTS PARK
4851 STUBBS MILL ROAD
HAMILTON TWP., OHIO 45152

SCS ENGINEERS
STEARNS, CONRAD & SCHMIDT
CONSULTING ENGINEERS, INC
2060 READING ROAD SUITE 300
CINCINNATI, OHIO 45202
PH: 513-421-5353

DWG. BY: ADF
DSG. BY: AD
PROJ. MGR: AD
PROJ. NO.
DSG. BY: AD

CADD FILE: Channel1_Exhibit-ADF.dwg

DATE: 2/25/22

SCALE: 1:50

DRAWING NO. S1 ####

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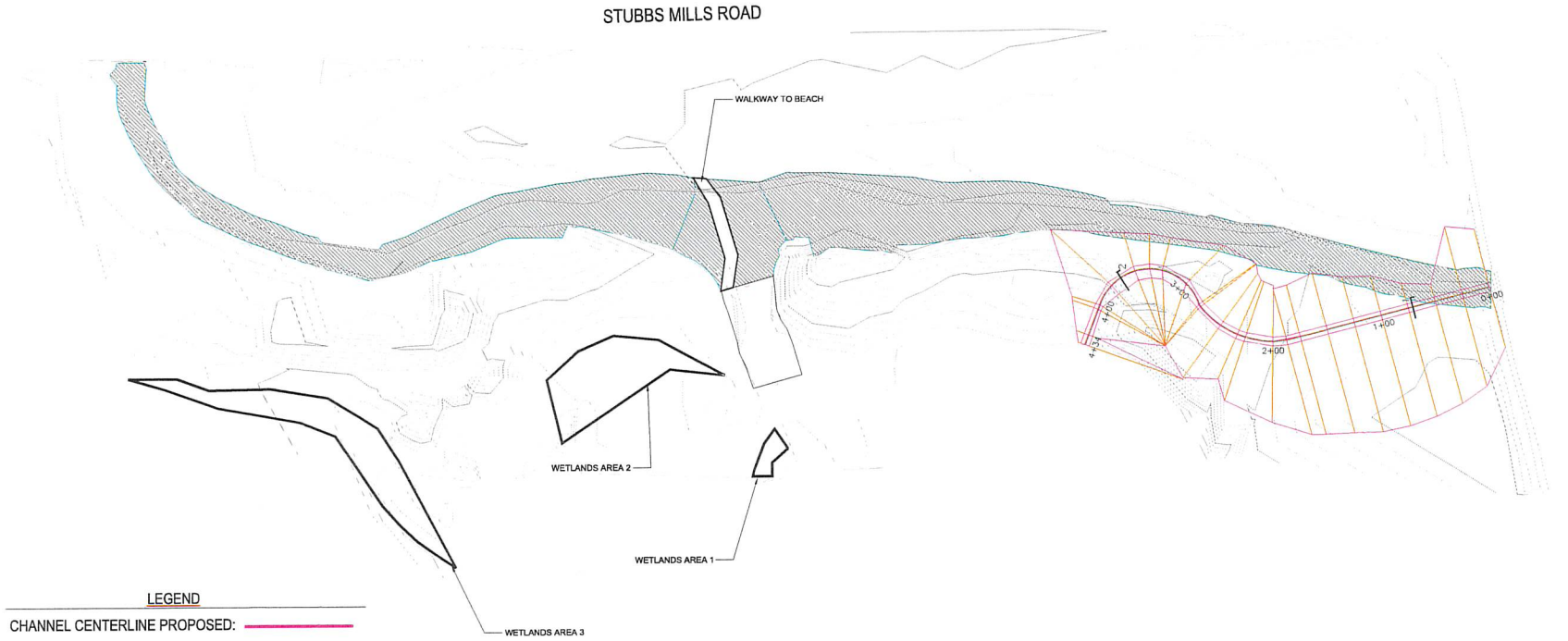


LEGEND

CHANNEL CENTERLINE PROPOSED:

TOTAL VOLUME(FILL) OF EXISTING CHANNEL
5,700 Cu. Yd. (Approximate)

NOT FOR CONSTRUCTION

REV.	DATE	DESCRIPTION	CK BY
△			
△			
△			
△			
△			

SHEET TITLE: EXISTING CHANNEL FILL

PROJECT TITLE: MOUNTS PARK

CLIENT: MOUNTS PARK
4851 STUBBS MILL ROAD
HAMILTON TWP., OHIO 45152

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
2366 READING ROAD SUITE 200
CINCINNATI, OHIO 45202
PH: 513-421-3353

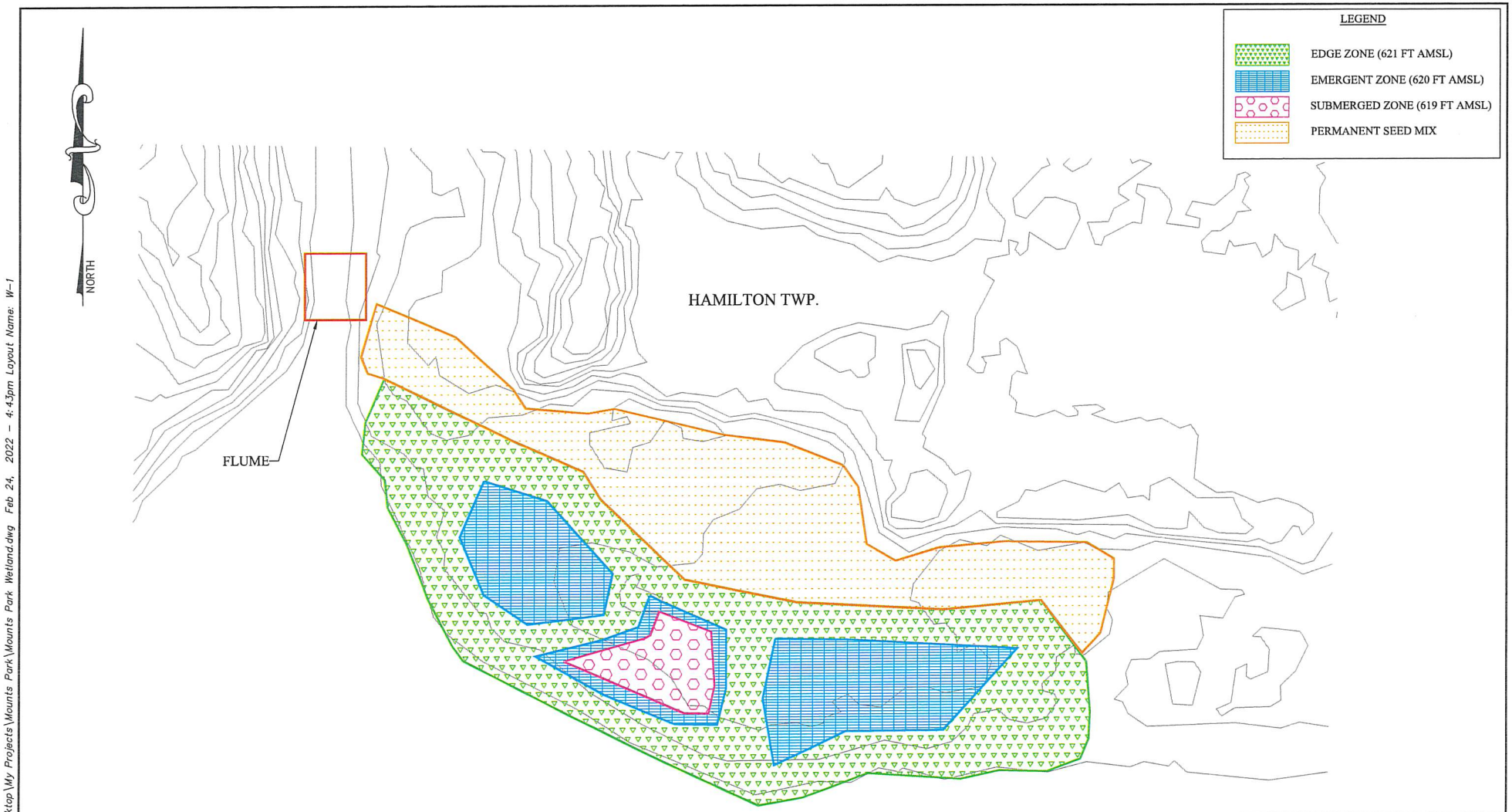
PROJ. NO.
DWN BY: ADF
CHK BY: AD
QA/CK BY: CA
PROJ. MGR: AD

CADD FILE:

DATE: 2/24/22

SCALE: 1:50

DRAWING NO. S2 of



NOT FOR CONSTRUCTION

SCS ENGINEERS
CONSULTING ENGINEERS, INC.
2060 READING ROAD SUITE 200 CINCINNATI, OHIO 45202
PH. (513) 421-5353

PROJ. NO.	CADD FILE:	DATE:	SCALE:
N/A	MOUNTS PARK WETLANDS	February 2022	1"=50'

SHEET 3
FISH HABITAT WETLANDS
MOUNTS PARK
4851 STUBBS MILLS ROAD
MORROW, OHIO 45152

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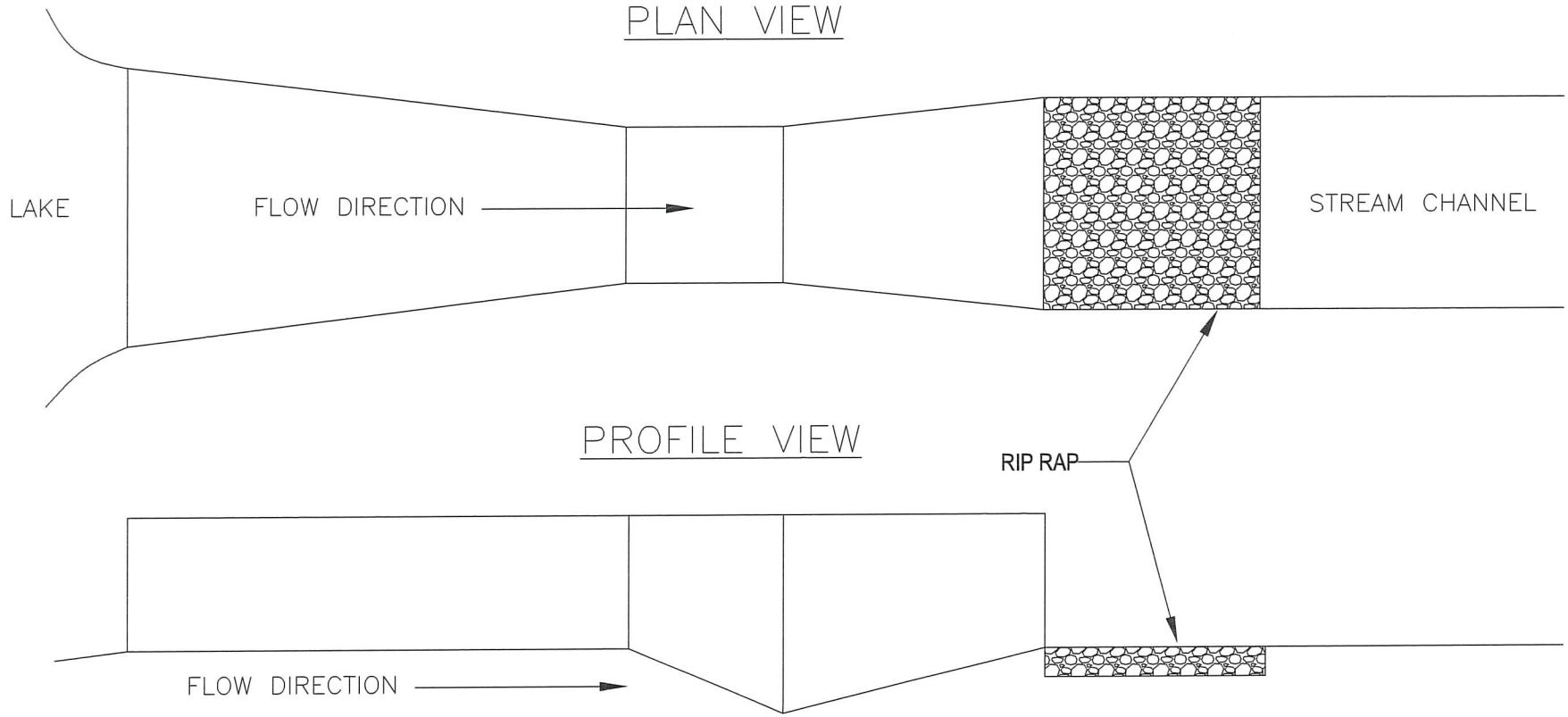

NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	CK BY

SHEET TITLE: MOUNTS PARK FLUME

PROJECT TITLE: MOUNTS PARK

CLIENT: MOUNTS PARK
4851 STUBBS MILL ROAD
HAMILTON TWP., OHIO 45152

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
2060 READING ROAD SUITE 200
CINCINNATI, OHIO 45202
PH: 513-421-5353

PROJ. NO. 27210 | DWN. BY: ADF | Q/A RVW BY: DA
CHK. BY: AD | PROJ. MGR: AD

CADD FILE: MOUNTS PARK FLUME.DWG

DATE: 2/24/22

SCALE: N/A

DRAWING NO. 4 of 4

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SECTION B

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

INDEX

STANDARD GENERAL CONDITIONS

INDEX
(Continued)

GENERAL CONDITIONS

1. CONTRACT AND CONTRACT DOCUMENTS

The Plans, Specifications, and Addenda, enumerated in these Standard General Conditions, Supplemental General Conditions, and Work and Material Specifications shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth.

2. DEFINITIONS

The following terms as used in this contract are respectively defined as follows:

(a) *"Owner"*: Hamilton Township: A person, firm, agency, commission, or political subdivision empowered by law to contract for the planning and construction of the project.

(b) *"Owner's Representative"*: Consulting Firm under contract with the Owner to provide construction administration services: The project representative designated by the Owner to plan and direct the work set forth by the Contract between the Owner and Contractor.

(c) *"Contractor"*: A person, firm, or corporation with whom the Contract is made by the Owner.

(d) *"Subcontractor"*: A person, firm, or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreement with, the Contractor.

3. SHOP OR SETTING DRAWINGS:

The Contractor shall submit promptly to the Owner's Representative a minimum of four (4) copies of each shop or setting drawings. After review and examination of such drawings by the Owner's Representative and the return thereof, the Contractor shall make such corrections to the drawings and shall resubmit to the Owner's Representative four (4) corrected copies. The Owner's Representative will return to the Contractor one (1) approved copy of the shop or setting drawings. If requested by the Owner's Representative, the Contractor must furnish additional copies. Regardless of corrections made in or approval given to such drawings by the Owner's Representative, the Contractor will nevertheless be responsible for the accuracy of such drawings and for their conformity to the Plans and Specifications. As-Built shop or setting drawings shall be forwarded by the Contractor to the Owner's Representative within thirty (30) days of completion of the project. The As-Built drawings (2 sets will be required) shall be submitted electronically in PDF format, and in CAD format if created in Auto CAD.

4. MATERIALS, SERVICES, AND FACILITIES:

(a) It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature, whatsoever necessary to execute, complete, and deliver the work within the specified time.

(b) Any work necessary to be performed after regular working hours, on Saturdays, Sundays, or Legal Holidays, shall be performed without additional expense to the Owner.

(c) Hamilton Township recognizes the following as Legal Holidays: New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

5. TEMPORARY FACILITIES:

(a) Sanitary Provisions:
The Contractor shall furnish sanitary facilities for all employees engaged in work at the site. Said sanitary facilities shall meet the requirements and approval of the Owner's Representative and the Warren County Health District having jurisdiction. The said facilities shall be located so as to be easily accessible to all employees at the site and said facilities are to be installed when the first work is begun on the project.

(b) Temporary Electric Service:
Temporary electric power required for the execution of all work shall be furnished by the Contractor.

6. CONTRACTOR'S TITLE TO MATERIALS:

No materials or supplies for the work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims or encumbrances.

7. INSPECTION AND TESTING OF MATERIALS:

(a) All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The Laboratory or inspection agency shall be selected by the Owner. The Contractor will pay for all laboratory inspection service direct, and not as part of the Contract.

(b) Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and

testing to establish conformance with specifications and suitability for uses intended. The Contractor will pay for all inspection and testing as directed by the Owner in conformance with said Specifications.

8. "OR EQUAL" CLAUSE:

Whenever a material or article required is specified or as shown on the plans by using the name of the proprietary product or of a particular manufacturer or vendor, any material or article which will perform adequately the duties imposed by the general design will be considered equal and satisfactory provided the material or article so proposed is of equal substance and function in the Owner's Representative's opinion. It shall not be purchased or installed without Owner's Representative's written approval.

9. PATENTS:

(a) The Contractor shall hold and save the Owner and its officers, agents, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in performance of the contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents.

(b) License or Royalty Fees: License and/or Royalty Fees for the use of a process which is authorized by the Owner of the project must be reasonable, and paid to the holder of the patent, or his authorized licensee, direct by the Owner and not by or through the Contractor.

(c) If the Contractor uses any design, device, or materials covered by letters, patent, or copyright: he shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device, or material. It is mutually agreed and understood, that, without exception, the contract prices shall include all royalties or costs arising from the use of such design, device, or materials, in any way involved in the work. The Contractor and/or his Sureties shall indemnify and save harmless the Owner of the project from any and all claims from infringement by reason of the use of such patented or copyrighted design, device, or materials or any trademark or copyright in connection with work agreed to be performed under this contract, and shall indemnify the Owner for any cost, expense, or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

10. CONSTRUCTION STAKING AND SURVEYING:

The Contractor shall provide all construction staking required for the layout of project as specified in the Work and Material Section of these Specifications.

The Contractor shall provide survey data of the exposed areas of the landfill on the site. These will include horizontal and lateral data points prior to placement

of the cap material and following placement and compaction of the cap material. The survey data will confirm and document that a minimum of two (2) feet of cap material is in place over the currently exposed waste.

11. CONTRACTOR'S OBLIGATIONS AND RESPONSIBILITIES:

The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities, and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with the provisions of this contract and said specifications and in accordance with the plans and drawings covered by this contract and any and all supplemental plans and drawings, and in accordance with the directions of the Owner's Representative as given from time to time during the progress of the work. He shall furnish, erect, maintain, and remove such construction plant and such temporary works as may be required. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Owner's Representative. The Contractor shall provide and maintain for the duration of the work as required all sheeting, bracing, temporary ladders, and similar temporary construction, in compliance with State and local laws, as may be necessary for the performance of his work.

The Contractor shall be responsible to maintain and record all changes of all work on the drawings, specifications, change orders, field orders, and shop drawings that are to be kept as the record set. This record set shall be turned over to the Owner's Representative upon completion and acceptance of the project.

12. WEATHER CONDITIONS:

In the event of temporary suspension of work, or during inclement weather, or whenever the Owner's Representative shall direct, the Contractor will, and will cause his subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Owner's Representative, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his subcontractors so to protect their work, such materials shall be removed and replaced at the expense of the Contractor.

13. PROTECTION OF WORK AND PROPERTY - EMERGENCY:

The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this contract. He shall at all times safely guard and protect his own work, and that of adjacent property, from damage. The Contractor shall replace or make good any such damage, loss, or injury unless such be caused directly by errors contained in the contract or by the Owner, or his duly authorized representatives.

In case of any emergency which threatens loss or injury of property, and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Owner's Representative in a diligent manner. He shall notify the Owner's Representative immediately thereafter.

Where the Contractor has not taken action but has notified the Owner's Representative of an emergency threatening injury to persons or damage to the work or any adjoining property, he shall act as instructed or authorized by the Owner's Representative.

The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Paragraph 18 of this section.

14. INSPECTION AND TESTING:

The Owner's Representative and any other participating or approving agency of government shall be permitted to inspect all work, materials, and equipment.

The Contractor shall furnish at his expense and as required by the Owner's Representative, additional expertise (as needed) to perform all testing procedures.

15. REPORTS, RECORDS, AND DATA:

The Contractor shall submit to the Owner's Representative such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records, and other data as the Owner's Representative may request concerning work performed or to be performed under this contract.

16. SUPERINTENDENCE BY CONTRACTOR:

At the site of the work the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Owner's Representative and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll.

17. CHANGES IN WORK:

No changes in the work covered by the approved contract documents shall be made without having prior written approval of the Owner. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of the following methods.

(a) Unit bid prices previously approved.

(b) An agreed lump sum.

(c) The actual cost of :

1. Labor, including foreman;
2. Materials entering permanently into the work;
3. The ownership or rental cost of construction plant and equipment during the time of use on the extra work;
4. Power and consumable supplies for the operation of power equipment;
5. Insurance;
6. Social Security and old age and unemployment contributions.

To the cost under (c) there shall be added a fixed fee to be agreed upon but not to exceed fifteen percent (15%) of the estimated cost of the work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit, and any other general expenses.

The Contractor is entitled to a fixed fee not to exceed five percent (5%) to be added to the change order work under (c) performed by a subcontractor. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit, and any other general expenses.

18. EXTRAS:

Without invalidating the contract, the Owner may order extra work or make changes by altering, adding, or deducting from the work, the contract sum being adjusted accordingly, and the consent of the Surety being first obtained where necessary or desirable. All the work of the kind bid upon shall be paid for at the price stipulated in the proposal, and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the Owner or Owner's Representative, acting officially for the Owner, and the price is stated in such order.

19. TIME FOR COMPLETION AND LIQUIDATED DAMAGES:

If the Contractor shall neglect, fail, or refuse to substantially complete the work within the time herein specified, or if any proper extension thereof granted by the Owner, then the Contractor does hereby agree as a part consideration for the awarding of this contract, to pay the Owner the amount specified in the Contract, not as penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work.

Since time is an ESSENTIAL ELEMENT of this Contract, there shall be assessed against the Contractor, and the Contractor agrees to pay $300 per day. This amount is considered liquidated damages and not as penalty. This amount shall be assessed for each and every calendar day, after the Date for Substantial Completion.

To the above-mentioned amount there shall be added the inspection cost, $320.00 per day, incurred by said delay in completion of the Contract. This provision is in no way to be construed as a penalty.

The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:

(a) To any preference, priority, or allocation order issued by the Government;

(b) To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; and

(c) To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsection (a) and (b) of this article;

Provided, further, that the Contractor shall, within ten (10) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the Contract, notify the Owner, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

20. CORRECTION OF WORK:

All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of constructions shall be at times and places subject to the inspection of the Owner's Representative who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used. Should they fail to meet their approval they shall be forthwith reconstructed, made good, replaced, and/or corrected, as the case may be, by the Contractor at his own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the Owner's Representative, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Owner's Representative shall be equitable.

21. SUBSURFACE CONDITIONS FOUND DIFFERENT:

Should the Contractor encounter subsurface and/or latent conditions at the site materially differing from those shown on the plans or indicated in the specifications, he shall immediately give notice to the Owner's Representative of such conditions before they are disturbed. The Owner's Representative will thereupon promptly investigate the conditions, and if the Owner's Representative finds that they are materially differing from those shown on the Plans or indicated in the Specifications, the Owner's Representative will at once make such changes in the Plans and/or Specifications as are found necessary, any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in Paragraph 18 of this section.

22. RIGHT OF THE OWNER TO TERMINATE CONTRACT:

In the event that any of the provisions of this contract are violated by the Contractor, or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the contract, such notices to contain the reasons for such intention to terminate the contract, and unless within ten (10) days after the serving of such notice upon the Contractor such violation or delay shall cease and satisfactory arrangement of correction be made, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Surety and the Contractor, and the Surety shall have the right to take over and perform the contract; provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion by contract or by force account for the account and at the expense of the Contractor; and the Contractor and his Surety shall be liable to the Owner for any excess cost occasioned the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

The Owner may terminate the Contract for the Owner's convenience at any time. The Contractor will be compensated for added expense not including anticipated profits for termination of the Contract for the convenience of the Owner. This section is subject to the provisions of 5525.14, ORC.

23. CONSTRUCTION SCHEDULE:

Immediately after execution and delivery of the contract, and before the first partial payment is made, the Contractor shall deliver to the Owner an estimated construction progress schedule in form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule.

24. PERIODIC ESTIMATES FOR PARTIAL PAYMENT:

The Contractor shall also furnish on forms to be provided by the Owner's Representative, or form approved by the Owner's Representative, a complete breakdown of the contract price and periodic itemized estimates of work done for the purpose of making partial payments. The original completed form must be submitted for approval by the Owner's Representative before first partial payment is requested.

25. PAYMENTS TO CONTRACTOR:

(a) The Owner shall make a Progress payment to the Contractor, on the basis of a duly certified and approved estimate of the work performed during the preceding calendar month under this Contract, no later than 30 days from receipt of a mathematically correct estimate. The contractor shall submit to the owner the percentage of completed work based upon the work breakdown in the Schedule of Values. To insure the proper performance of this contract, the OWNER shall retain eight percent (8%) of the amount of each estimate until final completion and acceptance of all work covered by the Contract; Provided that the Owner at any time after 50% of the work has been completed, if it finds that satisfactory progress is being made, may make any of the remaining Progress Payments in full: Provided, further, that on completion and acceptance of each separate building, public work, or other divisions of the Contract, on which the price is stated separately in the Contract, payment may be made in full, including retained percentages thereon, less authorized deductions. Monies held for retainage on labor and material will remain in Hamilton Township's Capital Improvement Account until the time of completion of fifty percent (50%) of the Contract. At this time, the retainage will be deposited, in accordance with Section 153.63 of the Ohio Revised Code, in a joint escrow account with the Owner and Contractor required to co-sign any withdrawals. The joint escrow account will be established in a bank or building and loan association in the state that will be selected by mutual agreement between the Contractor and the Owner.

(b) In preparing estimates, the material delivered on the site and preparatory work done may be taken into consideration. All documentation such as material invoices, payroll records, signed affidavits, etc. must be submitted with estimates.

(c) All material and work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged work, or as waiver of the right of the Owner to require the fulfillment of all of the terms of the contract.

(d) Prior to first payment, owner requires project schedule for construction

and expected draw-down schedule.

(e) Owner's Right to Withhold Certain Amounts and Make Application Thereof: The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, materialmen, and furnisher of machinery and parts, thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If the Contractor fails so to do, then the Owner may, after having served written notice on the said Contractor, either pay unpaid bills, of which the Owner has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his Surety. In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor and any payment so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payment made in good faith.

26. PRE-FINAL PAYMENT:

Upon receipt of written notice that the work is completed and acceptable under the contract documents and the contract is fully performed and ready for final inspection by Owner, the Contractor shall submit a pre-final periodic estimate along with the following:

(NOTE: The final periodic estimate includes only retainage withheld in accordance with Paragraph 25 of this section.)

(1) Final Affidavit of Prime or Subcontractor:
This original affidavit shall list all subcontractors and material suppliers and demonstrate that all bills for services, materials, equipment, and other indebtedness, including all payroll of the Prime Contractor, connected with the work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied or set out the amounts owed. In order to establish full payment to Subcontractors and material suppliers, Final Waivers of Lien and/or Material-Means Certificates must be attached for each Subcontractor and/or material supplier utilized under this contract. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify him against any such lien.

(2) Certificate of Substantial Completion and Guaranty:
Previously signed and executed by the Contractor and Owner's Representative(s).

(3) Certificate of Final Completion and Guaranty:
To be signed and executed by the Contractor and Owner's Representative(s).

(4) Prevailing Wage Affidavit:
Also required of all subcontractors.

27. FINAL PAYMENT:

Upon receipt of written notice that the work is completed and acceptable under the contract documents and the contract is fully performed and final inspection completed and approved by Owner's Representative, the Contractor shall submit a final periodic estimate, which shall include the retainage withheld in accordance with Paragraph 25 of this section, along with the following:

(1) Consent of Surety To Final Payment: To be provided by Surety.

28. ACCEPTANCE OF FINAL PAYMENT AS RELEASE:

The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and others relating to or arising out of this work. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligations under this contract or the Performance and Payment Bond.

29. PAYMENTS BY CONTRACTOR:

The Contractor shall pay (a) for all transportation and utility services not later than 15 days after receiving payment from Owner, following that in which services are rendered, (b) all Subcontractors, materials, tools, and other expendable equipment shall be paid to the extent of 90% of the cost thereof, not later than 15 days after receiving payments from Owner, and the balance following 30 days after the completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used, and (c) to each of his subcontractors, final payment shall be paid before required for final release of final payment.

30. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE:

The Contractor shall not commence work under this contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been so obtained and approved.

(a) Workers' Compensation Insurance: The Contractor shall procure and shall maintain during the life of this contract Workers' Compensation Insurance as required by applicable State or territorial law for all of his employees to be engaged in work at the site of the project under this contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Workers' Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workers' Compensation Insurance. In case any class of employees engaged in hazardous work on the project under this contract is not protected under the Workers' Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected.

(b) Contractor's Public Liability and Property Damage Insurance: The Contractor shall procure and shall maintain during the life of this contract Contractor's Public Liability Insurance, Vehicle Liability, and Contractor's Property Damage Insurance. The Contractor's Public Liability Insurance and Vehicle Liability Insurance shall be in an amount not less than $500,000 for Bodily Injury, including accidental death, to any one person, and subject to the same limit for each person in an amount not less than $1,000,000 on account of any one occurrence and $1,000,000 aggregate and $500,000 each occurrence for Vehicle Liability.

(c) Subcontractor's Public Liability and Property Damage Insurance: The Contractor shall either:

1. Require each of his subcontractors to procure and maintain during the life of his subcontract Subcontractor's Public Liability Insurance, Vehicle Liability, and Subcontractor's Property Damage Insurance. The Subcontractor's Public Liability Insurance and Vehicle Liability Insurance shall be in an amount not less than $500,000 for Bodily Injury, including accidental death, to any one person, and subject to the same limit for each person in an amount not less than $1,000,000 on account of any one occurrence and $1,000,000 aggregate and $500,000 each occurrence for Vehicle Liability.
2. Insure the activities of the subcontractors in his policy, specified in subparagraph (b) hereof.

(d) Contractor's Risk Insurance: Each contractor shall maintain insurance to protect himself and/or the Board from loss incurred by fire, lightning, extended coverage hazards, vandalism, theft, explosion, and malicious mischief in the full amount of the contract and such insurance shall cover all labor and materials connected with the work, including materials delivered to the site but not yet installed.

(e) Scope of Insurance and Special Hazards: The insurance required under subparagraphs (b) hereof shall provide adequate protection for the Contractor and his subcontractors, respectively, against damage claims which may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him and, also against any of the special hazards which may be encountered in the performance of his contract.

Explosives are not permitted on the job site without first obtaining written permission from the Owner. If such permission is granted, Contractor shall obtain all insurance and permits required to protect Contractor for damage which may be caused by blasting. Notification shall be made to all area property owners by the Contractor not later than 48 hours prior to the detonation of explosives as permitted by the Owner.

(f) Proof of Carriage of Insurance: The Contractor shall furnish the Owner with Certificates showing the type, amount, class of operations covered, effective dates and dates of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered, except after thirty (30) days written notice has been received by the Owner." Such certificates shall be supplied with the submittal of the Contract Documents following Bid Award.

31. CONTRACT SECURITY:

The Contractor shall furnish a performance and payment bond in an amount equal to one hundred percent (100%) of the contract price as security for the faithful performance of this contract, as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract.

32. ADDITIONAL OR SUBSTITUTE BOND:

If at any time the Owner for justifiable cause, shall be or become dissatisfied with any surety or sureties then upon the Performance and Payment Bond, the Contractor shall within five (5) days after notice from the Owner so to do, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond to the Owner.

33. ASSIGNMENTS:

The Contractor shall not assign the whole or any part of this contract or any monies due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any monies due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the systematic Contractor shall be subject to prior claims of all persons, firms, and corporations for services rendered or materials supplied for the performance of the work called for in this contract.

34. MUTUAL RESPONSIBILITY OF CONTRACTORS:

If, through acts of neglect on the part of the Contractor, any other contractor or any subcontractor shall suffer loss or damage on the work, the Contractor agrees to settle with such other contractor or subcontractor by agreement or arbitration if such other contractor or subcontractor will so settle. If such other contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

35. SEPARATE CONTRACTS:

The Contractor shall coordinate his operations with those of other contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractor, including his subcontractors, shall keep informed of the progress and the detail work of other contractors and shall notify the Owner's Representative immediately of lack of progress or defective workmanship on the part of other Contractors. Failure of a contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.

36. SUBCONTRACTING:

(a) The Contractor may utilize the service of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

(b) The Contractor shall not award any work to any subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require and shall execute the Subcontract Form with each Subcontractor in accordance with Section 153:1-3-02 of the Ohio Administrative Code.

(c) The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

(d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by terms of the General Conditions and other contract documents in total as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the contract documents.

(e) All changes in work performed by a subcontractor are subject to Paragraph 17 of the General Conditions.

(f) Nothing contained in this contract shall create any contractual relation between any subcontractor and the Owner.

37. HAMILTON TOWNSHIP'S AUTHORITY:

Hamilton Township shall give all orders and directions contemplated under this contract and specifications relative to the execution of the work. Hamilton Township shall determine the amount, quality, acceptability, and fitness of the several kinds of work and materials which are to be paid for under this contract and shall decide all questions which may arise in relation to said work and the construction thereof. Hamilton Township's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any questions shall arise between the parties hereto relative to said contract or specifications, the determination or decision of Hamilton Township shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this contract affected in any manner or to any extent by such question.

Hamilton Township shall decide the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work which may arise between the Contractor under this contract and other contractors performing work for the Owner shall be adjusted and determined by Hamilton Township.

38. USE OF PREMISES AND REMOVAL OF DEBRIS:

The Contractor expressly undertakes at his own expense:

(a) to take every precaution against injuries to persons or damage to property;

(b) to store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other contractors;

(c) to place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work;

(d) to clean up daily all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly, and workmanlike appearance;

(e) before final payment to remove all surplus material, false-work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat, orderly condition;

(f) to effect all cutting, fittings, or patching of his work required to make the same to conform to the plans and specifications and, except with the consent of the Owner's Representative, not to cut or otherwise alter the work of any other contractor.

39. MATERIALS:

All materials that are to be incorporated into the finished project shall be new materials unless otherwise noted on the plans or stated in the material specifications, or pursuant to a written change order from the Owner.

Any items required including labor, equipment, and/or materials but not shown as a separate pay item in the proposal shall be furnished and installed as incidental to the Contract, except as noted in the Specifications.

40. QUANTITIES OF ESTIMATE:

Wherever the estimated quantities of work to be done and materials to be furnished under this contract are shown in any of the documents including the proposal, they are given for use in comparing bids. Periodic pay quantities will be calculated based on the measured field dimensions and shall not exceed the quantities as specified on the plans unless otherwise specified herein or approved in the field by the Owner's Representative due to specific field conditions. Any additional materials required to construct the proposed improvements as specified and shown on the Plans will be paid at the unit price bid for this contract. All claims for extra cost shall conform to Paragraph 18 of this section and will be the result of a change in the scope of the contract as directed and approved by the Owner and/or Owner's Representative. The Owner especially

reserves, except as herein otherwise specifically limited, to increase or diminish quantities through a change in the scope of the work as may be deemed reasonably necessary or desirable to complete the work contemplated by this contract, and such increase or diminution shall in no way violate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

41. CONSTRUCTION RIGHTS-OF-WAY:

The Owner shall furnish all land and rights-of-way necessary for the carrying out of this contract and the completion of the work herein contemplated and will use due diligence in acquiring said land and rights-of-way as speedily as possible. But it is possible that all lands and rights-of-way may not be obtained as herein contemplated before construction begins, in which event the Contractor shall begin his work upon such land and rights-of-way as the Owner may have previously acquired and no claim for damages whatsoever will be allowed by reason of the delay in obtaining the remaining lands and rights-of-way. Should the Owner be prevented or enjoined from proceeding with the work, or from authorizing its prosecution, either before or after the commencement, by reason of any litigation, or by reason of its inability to procure any lands or right-of-way for the said work, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay, or to withdraw from the contract except by consent of the Owner; but time for completion of the work will be extended to such time as the Owner determines will compensate for the time lost by such delay, such determination to be set forth in writing.

It is the Owner's intent that sufficient working room be available for the Contractor's use in construction of the project. This construction Right-of-Way appears on the plans and the Owner shall procure and pay all costs. However, should the Contractor require additional work area due to his methods and means, it shall be his responsibility to acquire temporary construction area as he deems necessary at no additional cost to the Owner. Temporary construction easement copies shall be required by the Owner before allowing Contractor to exceed the construction Right-of-Way.

42. AGREEMENTS WITH PROPERTY OWNERS:

The Owner strongly discourages the Contractor from entering into any agreements either oral or written with any property owners in or around the project area concerning storage of materials and/or equipment, release of excess backfill, or other issues. However, should the Contractor choose to enter into such an agreement, it must be in written form and a written copy of this agreement signed by all parties involved and addressing all provisions and terms of the agreement, must be submitted in writing to the Owner's Representative prior to any action taken as per the terms of the agreement.

In no way is the Owner to be held responsible or liable for any agreements either oral or written between the Contractor and any other parties.

43. PERMITS FOR WORK ON OR ALONG STATE, COUNTY, TOWNSHIP, AND VILLAGE ROADS:

All permits from the Ohio Department of Transportation and the Warren County Engineer required for work on, across, or along State or County Highways shall be obtained by the Owner. The Contractor shall be solely responsible to obtain all permits for all work along Township and Village roads required to complete all work or extra work under this contract or instructed by the Owner. The Contractor has the duty of complete and full compliance with all said permits.

44. RESTORATION OF PAVEMENT:

All pavement and/or roadway surface disturbed by the Contractor, other than restoration over trenches as provided by these specifications, shall be restored by the Contractor at his expense and in conformance with the regulations of the governing authority of said roadways. In the absence of such regulations, the restoration shall be in accordance with instructions by the Owner's Representative with the objective of restoring the paving or roadway surface to the original condition of same.

45. STORM CULVERTS:

All driveway or roadway storm culvert pipe shown on the plans or not shown on the plans that runs parallel to the proposed facilities and need to be removed due to excavation shall be replaced at the original line and grade unless otherwise provided by these specifications as a separate bid item. If the pipe is damaged or broken by the Contractor, it shall be replaced with a new storm culvert pipe as directed by the Owner's Representative at the Contractor's expense.

46. MAINTENANCE OF TRAFFIC:

The Contractor shall, unless permission is received from the Owner to do otherwise, maintain at all times vehicular and pedestrian traffic during the progress of the work. At no time, except as hereinabove mentioned, during the work shall the Contractor block any road, street, or throughway more than one-half (1/2) mile. If at any time one way traffic is maintained, the Contractor shall furnish two (2) flagmen. When open cutting any road or areas requiring public access like parks, cemeteries, and businesses; the Contractor shall use steel plates to accommodate vehicles over open trenches and/or maintain one lane open to traffic at all times.

47. SAFETY BARRICADES AND LIGHTS:

The Contractor shall furnish, erect, and maintain all safety barricades, fences, red lights, flares, and watchmen necessary to properly protect all persons, animals, and property against injury or damages which result as a consequence of this work. In addition, all trenches should be closed or covered at the end of each workday.

All work shall be in accordance with the State of Ohio, ODOT 614 and 615 Specifications and related specifications and the "Ohio Manual of Uniform Traffic Control Devices for Streets and Highways" (hereinafter referred to as the OMUTCD). The OMUTCD shall be used when any and all unforeseen and anticipated traffic control problems arise.

48. SUBSTANTIAL COMPLETION AND GENERAL GUARANTY:

Neither the final certificate of payment nor any provision in the Contract Documents nor partial or entire occupancy of the premises by the Owner shall constitute substantial completion or an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to express warranties or responsibility for faulty materials or workmanship.

The Contractor shall remedy any defects in the work, material, and equipment and pay for any damage to work, materials, and equipment resulting there from, which shall appear within a period of one (1) year from the date of substantial completion and acceptance of the work, as designated on the Certificate of Substantial Completion and Guaranty of these specifications signed and executed by the Contractor and the Owner's Representative(s) unless a longer period is specified.

If at any time during the guaranty period a defect is observed, the Contractor shall be given written notice of said defect with reasonable promptness by the Owner. The Contractor hereby agrees to begin work on correction of the said defect within one (1) week from the posting of said notice. If the work is not commenced within the one (1) week period, the Owner may take any steps necessary to correct the defect himself.

In which case, the Contractor agrees to reimburse the Owner of the actual cost incurred as a result of his failure to perform. The actual cost shall include the cost of the work and any loss due to the delay in repairing the defect.

49. FINAL COMPLETION AND GENERAL GUARANTY:

Neither the final certificate of payment nor any provision in the Contract Documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to express warranties or responsibility for faulty materials or workmanship.

The Contractor shall remedy any defects in restoration and site improvements and pay for any damages resulting there from, which shall appear within a period of one (1) year from the date of final completion and acceptance of the work, as designated on the Contractor's Certificate of Final Completion and Guaranty of these specifications signed and executed by the Contractor and the Owner's Representative(s) unless a longer period is specified.

If at any time during the guaranty period a defect is observed, the Contractor shall be given written notice of said defect with reasonable promptness by the Owner. The Contractor hereby agrees to begin work on correction of the said defect within one (1) week from the posting of said notice. If the work is not commenced within the one (1) week period, the Owner may take any steps necessary to correct the defect himself.

In which case, the Contractor agrees to reimburse the Owner of the actual cost incurred as a result of his failure to perform. The actual cost shall include the cost of the work and any loss due to the delay in repairing the defect.

50. CONFLICTING CONDITIONS:

In the event of conflict, the governing order of contract shall be as delineated below; however, the special provision does not relieve the Contractor from his responsibilities as described in the General Conditions.

Governing Order

1. Permits from Other Agencies and as may be required by Law
2. Approved Change Orders
3. Contract Agreement
4. Addenda
5. Contractor's Bid (Bid Form)
6. Supplementary General Conditions
7. General Conditions
8. Technical Specifications
9. Referenced Standard Specifications (ASCE, ASTM, AWWA, ODOT, etc.)
10. Drawings

Within the Contract Drawings the order of precedence is as follows:

1. Figures govern over scaled dimensions
2. Detailed drawings govern over general drawings
3. Addenda / Change Order drawings govern over any other drawings
4. Contract Drawings govern over standard drawings and shop drawings
5. CCWRD Standard Drawings govern over approved shop or setting drawings

51. NOTICE AND SERVICE THEREOF:

Any notice to any Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted, by certified or registered mail, to the said Contractor at his last given address, or delivered in person to said Contractor or his authorized representative on the work.

52. REQUIRED PROVISIONS DEEMED INSERTED:

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

53. PROTECTION OF LIVES AND HEALTH:

In order to protect the lives and health of his employees under the contract, the Contractor shall comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the contract.

In addition, the Contractor shall comply with all requirements of Occupational Safety and Health Agency (OSHA), all applicable safety regulations of the United States Environmental Protection Agency (USEPA), and the State of Ohio.

The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods; and for any damage which may result from their failure or their improper construction, maintenance, or operation.

54. EXISTING UTILITIES AND STRUCTURES:

The existence, location, and condition of utilities and structures, both above and below ground and within and out of the publicly designated right-of-way, shall be investigated and verified in the field by the Contractor before starting work. Excavation in the vicinity of such utilities and structures, both within and out of the publicly designated right-of-way, shall be done carefully and by hand if necessary. The Contractor shall protect all such utilities and structures, both marked and unmarked and within and out of the publicly designated right-of-way and be held responsible for damage to same. It shall be the responsibility of the Contractor to isolate, brace, support, sheet, etc. and protect the existing utilities from moving either horizontally or vertically. If such movement does occur due to the Contractor's operations, he shall repair the utility to the satisfaction of the utility owner at the Contractor's expense.

The Contractor shall give written notice to all owners of adjacent utilities, fixtures, and/or property, of his impending operations, but in no way shall such notice relieve the Contractor of his liability for damages to said utilities, fixtures, and/or property.

The Contractor shall contact the appropriate utility company at least 48 hours in advance of excavation on the vicinity of said utility. Field location shall be made by the utility or its authorized agency before any work is performed by the Contractor.

If at any time during work under this contract, an existing utility is damaged in any way, the Contractor shall immediately contact the appropriate governing entity and the Owner's Representative.

The Contractor shall take the proper steps necessary to insure the health, welfare, and safety of the public.

55. WAGE RATES:

See schedule attached to, or immediately following Page A-30.

The Contractor shall submit to the Owner's Representative, prior to submittal of the first estimate for partial payment, the applicable pages of the aforementioned wage rate schedule highlighting those classifications the Contractor intends to use on the project for the convenience of the Owner's Representative.

(a) If the project is financed wholly or in part by U.S. Government funds, there shall be paid each laborer or mechanic of the Contractor or subcontractor engaged in work on the project, not less than the hourly wage rate established by the U.S. Secretary of Labor regardless of any contractual relationship which may be alleged to exist between the Contractor or any subcontractor and such laborers and mechanics.

(b) Any wage determination required by State law are listed immediately following Page A-29; and in the case of any difference between them and the determinations of the U.S. Secretary of Labor as to the minimum rates fixed for any trade or occupation, the higher rate shall be the applicable minimum for such trade or occupation.

(c) If, after the award of the contract, it becomes necessary to employ any person in a trade or occupation not classified in the wage determination, such person shall be paid at not less than such rate as shall be determined by the officials mentioned above. Such approved minimum rate shall be retroactive to the time of the initial employment of such person in such trade or occupation. The Contractor shall notify the Owner of his intention to employ person(s) in trades or occupations not classified in sufficient time for the owner to obtain approved rates for such trades or occupation.

(d) The specified wage rates are minimum rates only, and the Owner will not consider any claims for additional compensation made by the Contractor because of payment by the Contractor of any wage rate in excess of the applicable rate contained in this contract. All disputes in regard to the payment of wages in excess of those specified in this contract shall be adjusted by the Contractor.

(e) Except as may be otherwise required by law, all claims and disputes pertaining to the classification of labor employed on the project under this contract shall be decided by the Owner's governing body or other duly designated official.

56. APPRENTICES:

Apprentices shall be permitted to work only under a bonafide apprenticeship program registered with a State Apprenticeship Council which is recognized by the Federal Committee on Apprenticeship, U.S. Department of Labor; or, if no such Council exists in a State, under a program registered with the Bureau of Apprenticeship, U.S. Department of Labor.

57. WORK PERIOD OTHER THAN NORMAL WORK WEEK:

Any work to be performed at any time, other than during the normal work week, which requires the presence of an inspector, shall not be performed without the knowledge and consent of the Owner's Representative, except in the case of emergency. In such instances, the Owner's Representative shall be informed of such work as soon as is reasonably possible. A normal work week is defined as Monday through Friday and exclusive of Government Holidays.

58. OVERTIME COMPENSATION:

This contract is subject to the applicable provisions of the Contract Work Hours Standards Act, Public Law 87-581, 87th Congress.

(a) Overtime Requirements:
No contractor or subcontractor contracting for any part of the contract work shall require or permit any laborer or mechanic to be employed on such work in excess of forty (40) hours in any work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half (1/12) times his basic rate of pay for all hours worked in excess of eight (8) hours in any calendar day or in excess of forty (40) hours in such work week, as the case may be.

(b) Violations; Liability for Unpaid Wages; Liquidated Damages:
In the event of any violation of the clause set forth in paragraph (a), the Contractor and any subcontractor responsible therefore shall be liable to any affected employee for his unpaid wages. In addition, such contractor or subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause (a), in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of forty hours in a work week without payment of the overtime wages required by the clause (a).

(c) Withholding for Unpaid Wages and Liquidated Damages:
The Owner may withhold, or cause to be withheld, from any moneys payable on account for work performed by the Contractor or subcontractor, the full amount of wages required by the contract and such sums as may administratively be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for liquidated damages as provided in clause (b).

(d) Insertion of Clauses in Subcontracts:
The Contractor agrees to insert the foregoing clauses (a), (b), and (c) this clause (d), and the following three paragraphs in all subcontracts.

Employees Covered:
Except as otherwise expressly provided in the Act, the provisions of the Act shall apply to all laborers and mechanics, including watchmen and guards, employed by any contractor or subcontractor in the performance of any part of the work contemplated by any such contract, and for purposes of this act, laborers and mechanics shall include workmen performing services in connection with dredging or rock excavation in any river or harbor of the United States or of any territory or of the District of Columbia, but shall not include any employee as a seaman.

Regulations:
The Regulation issued by the U.S. Department of Labor with respect to the Act shall apply to this contract.

Penalty:
Any contractor or subcontractor whose duty it shall be to employ, direct, or control any laborer or mechanic employed in the performance of any work contemplated by this contract who shall intentionally violate any provision of this Act, shall be deemed guilty of a misdemeanor, and for each and every such offense shall, upon conviction, be punished by a fine of not to exceed $1,000 or by imprisonment for not more than six months, or by both such fine and imprisonment, in the discretion of the court having jurisdiction thereof.

59. POSTING MINIMUM WAGE RATES:

The Contractor shall post at appropriate conspicuous points at the site of the project a schedule showing all determined minimum wage rates for the various classes of laborers and mechanics to be engaged in work on the project under this contract and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

60. PAYMENT OF EMPLOYEES:

The Contractor and each of his subcontractors shall pay each of his employees engaged in work on the project under this contract in full (less deductions made mandatory by law) in cash and not less often than once each week less legally required deductions and also deductions made pursuant to the regulations prescribed under the so-called "Anti-Kickback Statute." Provided, that when circumstances render payment in cash infeasible or impracticable, payment by check may be effected upon consideration that funds are made available in a local bank and checks may be cashed without charge, trade requirements, or inconvenience to the worker.

61. "ANTI-KICKBACK STATUTE" AND REGULATIONS:

The Contractor and each of his subcontractors shall comply with the statutes, and with regulations issued pursuant thereto, of the State of Ohio and any other participating governmental body.

62. WAGE UNDERPAYMENT AND ADJUSTMENTS:

The Contractor agrees that, in case of underpayment of wages to any worker on the project under this contract by the Contractor or any subcontractor, the Owner shall withhold from the Contractor out of payments due, and amount sufficient to pay such worker the difference between the wages required to be paid under this

contract and the wages actually paid such worker for the total number of hours worked and that the Owner may disburse such amount so withheld by it for and on account of the Contractor to the employee to whom such amount is due. The Contractor further agrees that the amount to be withheld pursuant to this paragraph may be in addition to the percentages to be retained by the Owner pursuant to other provisions of this contract.

63. CONTRACTOR'S AND SUBCONTRACTOR'S PAYROLL:

The Contractor and each of his subcontractors shall prepare his payrolls and maintain adequate records to provide proof, if required, of compliance with applicable laws.

64. NO DISCRIMINATION IN EMPLOYMENT:

In connection with the performance of work under this contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, religion, color, or national origin. The aforesaid provision shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The Contractor agrees to post hereafter in conspicuous places, available for employees and applicants for employment, notices setting forth the provisions of this no discrimination clause.

The Contractor further agrees to insert the foregoing provision in all subcontracts for standard commercial supplies or raw materials.

65. OTHER PROHIBITED INTERESTS:

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept, approve, or to take part in negotiating, making accepting, or approving any architectural, engineering, inspection, construction, or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, architect, attorney, engineer, or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner of exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

66. EMPLOYMENT OF LOCAL LABOR:

The Contractor and each of his subcontractors shall, insofar as practicable, give preference in the hiring of workers for the project, to qualified local labor.

67. EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION

Contractor shall comply with all permitting and measures for erosion and sediment control in accordance with the Warren County Soil & Water Conservation District and in accordance with the Plans and Work and Material Specifications and of these contract documents and all applicable regulations of the State of Ohio Environmental Protection Agency, the Warren County Building Inspections Department, the Office of the Warren County Engineer, and any other governmental agency. The Contractor shall maintain all erosion and sediment control measures throughout the execution of this contract and to the satisfaction of the Owner's Representative.

68. EMPLOYEES:

The CONTRACTOR shall employ only competent and skillful workmen to do the work. Incompetent, careless, or disorderly workmen or foreman will not be permitted on the work and any such workmen or foremen will be discharged immediately by the CONTRACTOR upon the complaint of the Warren County Soil & Water Conservation District and shall not be re-employed on the contract without the Warren County Soil & Water Conservation District 's consent.

69. CONSTRUCTION VIDEO AND STILL PHOTOGRAPHY:

Prior to mobilization of any equipment or commencement of construction, the Contractor shall prepare a preconstruction video and still photography performed regularly during the course of the work.

The purpose of the video inspection is to provide a reliable basis for restoring surface features affected by the work. Video inspection shall cover the entire project area to facilitate restoration to original condition with as little controversy as possible. Video inspection shall be performed no more than (2) two weeks prior to construction in the area and shall include audio descriptions of the features of the project. The preconstruction video shall be delivered in color audio-video MPEG file format and saved on CDs or DVDs for submittal.

The purpose of the still photography is to provide a permanent photographic record of the progress of the work. The Contractor shall provide preconstruction still photos as well as monthly construction still photos, showing the major components of the work, with label on front identifying the project, location and orientation of view, and date. In addition, the photos will be saved on CDs or DVDs and submitted in JPEG format.

Insufficient video and photo documentation may result in the Contractor's Liability for all disputes concerning property restoration or damage.

70. PROTECTION OF SURVEYING MONUMENTATION:

The Contractor shall protect any and all property corner monumentation, both those shown on the Plans, and other monumentation encountered during construction. If the Contractor determines that certain monumentation will be disturbed, he shall hire the services of a Registered Surveyor, licensed to practice in the State of Ohio, to perform the necessary work to be able to reconstruct the location of the monumentation at the present location. All work described above shall not be a separate pay item but shall be paid for incidental to all project items.

SECTION C
SUPPLEMENTAL GENERAL CONDITIONS
OF THE CONSTRUCTION CONTRACT

1. EARTH DISTURBING PERMIT (EDP)

The Contractor shall be responsible for obtaining an Earth Disturbing Permit (EDP) from the Warren County Soil & Water Conservation District. The permit must be obtained, and erosion and sediment control measures must be in place prior to any earth moving.

SECTION D
TECHNICAL SPECIFICATIONS

SECTION 01 01 00

SPECIAL CONDITIONS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Special conditions to the project

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 01 14 00 – Control of Work

1.03 CONTRACTOR QUALIFICATIONS

A. The Contractor, including the Project Manager onsite, shall have appropriate technical experience on similar projects. This includes restoration experience within the past three (3) years, including but not limited to mass earthwork, installation of wood and rock structures, and successful vegetation establishment.

B. The Contractor shall maintain a permanent place of business; have adequate construction facilities and equipment available for the work under the proposed contract; a suitable financial status to meet obligations incidental to the work and have in their employ a sufficient number of skilled and trained workers to carry to completion, within the contract time, the work to be done under this contract.

C. The Contractor and/or subcontractors shall meet the installer qualifications in Section 32 92 19 "Seed and Mulch" (if used).

1.04 TIME OF COMPLETION AND LIQUIDATED DAMAGES

A. The Contractor hereby agrees to commence work under this contract on or before a date to be specified in the Notice to Proceed and to substantially complete the Work by August 30, 2022. Final Completion shall be achieved by September 31, 2022. The Contractor further agrees to pay as liquidated damages as provided in Article 21 of the General Conditions.

B. Delays and extensions of time shall be per Article 21 of the General Conditions.

1.05 TEMPORARY FACILITIES AND CONTROLS

A. Temporary facilities shall conform to Article 6 the General Conditions.

B. The location of the field office shall be located in an already cleared area, agreed upon at the pre-construction meeting.

C. A project sign shall be required during construction. See Article 7 the General Conditions for additional requirements.

D. Temporary access to the site shall be the existing gravel drive, per the Drawings.

E. Material storage locations shall be located in proposed disturbed areas. Additional locations may be approved by the Owner or Owner's Representative.

F. See Section 01 14 00 "Control of Work" for proper trash disposal and project cleaning guidance.

1.06 WORK SCHEDULE

A. Work shall only take place during typical work hours on weekdays (Monday through Friday, 7AM to 5PM).

1.07 PROGRESS MEETINGS

A. A preconstruction conference will be held prior to construction commencement at a time to be agreed upon by the Owner, Owner's Representative, and Contractor.

B. Construction progress meetings shall be held on the job site at a minimum of once per month.

C. The Contractor shall prepare and distribute the agenda and sign-in sheet in advance and will conduct the meeting.

D. Hamilton Township shall prepare and distribute minutes following the meeting.

E. The Contractor shall be prepared to discuss the following: description of major categories of work accomplished and anticipated work in the next 30 days, status of required inspections and testing, summary of significant projects, coordination status, and safety and accident issues.

~~PART 2 - PRODUCTS~~

~~2.01 PROJECT SIGN~~

~~A. Project sign shall be per Article 7 the General Conditions.~~

PART 3 - EXECUTION

3.01 PROJECT PHASING

A. The project will be completed in a phased manner.

B. The project will proceed in the following order:

1. Construct the proposed new stream channel from the existing stream channel to the southeast corner of Mounts Park Lake (Figure 1).
2. Plant specified vegetation along new stream channel and throughout buffer zone as designated in Ohio EPA 401 Permit for project.
3. Divert the stream flow into the new stream channel.
4. Collect loose trash, waste, and debris in the abandoned stream channel and on exposed portions of the delta where the stream enters the lake. Dispose of collected waste at a licensed municipal solid disposal facility.
5. Use imported soil meeting the soil requirements presented in OAC 3745-27-10(C) and 3745-27-09(F) (1976), install a minimum 2-foot-thick cap over exposed portions of the old landfill within the abandoned stream channel.
6. Using excavated material from the new stream channel creation and previously stock-piled fill material, begin backfilling the abandoned stream channel.
7. Install the flume at the outfall point of Mounts Park Lake (Figure 4).
8. Using excavated material from the flume installation, continue backfilling the abandoned stream channel.
9. Construct the proposed wetland on the northern bank of Mounts Park Lake (Figure 3).
10. Plant wetland vegetation and monitor to confirm it is established.
11. Plant wetland buffer vegetation as designated in Ohio EPA 401 Permit for project.
12. Using excavated material from the wetland creation, continue backfilling the abandoned stream channel.
13. Install pathway (Walkway to Beach) through/over backfilled stream to alluvial plane at outfall of abandoned stream channel (Figure 2)
14. Develop access trail/road to flume and wetland from main parking lot (Figure 4).

END OF SECTION 01 01 00

SECTION 01 11 00

SUMMARY OF PROJECT

PART 1–GENERAL

1.01 SECTION INCLUDES

A. Project – Work covered by all Contract Documents

B. Contract Milestones and other General Provisions

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 01 14 00 – Control of Work

1.03 PROJECT – WORK COVERED BY ALL CONTRACT DOCUMENTS

A. Work of the Project includes creation of a new stream channel connecting the current channel to Mounts Park Lake, capping of an old landfill exposed in the existing stream channel, Backfilling of the existing stream channel once flow is diverted to the new stream channel, installation of an outfall flume on Mounts Park Lake, and creation of a wetland along the north side of Mounts Park Lake, construction of an access trail/road to the wetland and the flume from the main parking lot, and all site restoration. The Work shall be performed for the Owner in accordance with the Contract Documents. The Work includes, but is not limited to, clearing and grubbing; excavation; soil, rock, and wood placement; planting; flume and appurtenance installation; trail/road construction; and site restoration.

1.04 GENERAL CONSTRUCTION

A. The work to be performed under this section shall include all necessary demolition, the furnishing of all materials, equipment, and tools; and performing all necessary labor and supervision, for the complete construction of the General Construction Work and all other work appurtenant thereto, as described in Divisions 1 through 32 of these Specifications except as called for under other parts of the Work described herein.

1.05 SEQUENCE OF WORK

A. Before starting any work, the Contractor shall attend a Pre-Construction Meeting with the Owner and Owner's Representative. The Contractor will be notified of the date and the time of the meeting and shall submit a construction schedule.

B. A sequence of work will be negotiated during the Pre-Construction Meeting.

1.06 CONTRACTOR'S USE OF SITE

A. The Contractor shall locate field offices, store materials and equipment, and confine his construction activities to areas as directed by the Owner's Representative. The Contractor

shall also comply with all applicable provisions in Section 01 14 00 "Control of Work".

1.07 CONSTRUCTION PROCEDURE

A. It shall be the Contractor's responsibility during the construction of the Project to work equipment around poles, trees, or other obstructions which permit the passage of the bucket and boom but prevent passage of other portions of the equipment and, if necessary, to excavate from both sides of the poles, trees, or other obstruction, and to remove materials by hand labor, tunneling, or by other means, all at no additional cost to the Owner.

1.08 REQUESTS FOR SUPPLEMENTARY INFORMATION

A. It shall be the responsibility of the Contractor to make timely requests of the Owner's Representative for any additional information not already in the Contractor's possession and which should be furnished by the Owner's Representative under the terms of the Contract Documents, and which will be required in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay.

B. Each request shall be in writing and list the various items and the latest day by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after contract award and shall be as complete as possible at that time. The Contractor shall, if required, furnish promptly any assistance and information the Owner's Representative may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in work, or to the work of others, arising from failure to comply with the provisions of this section.

1.09 PERMITS

A. The Contractor shall be responsible to obtain and incur the cost of all required permits unless otherwise noted, including but not limited to, Ohio EPA NOI.

B. The Contractor shall not commence construction until the following permit(s) are on file (obtained by the Owner):

1. Warren County Soil & Water Conservation District Earth Disturbing Permit (EDP).
2. Checking for any other Warren County or Hamilton Township permits required.

C. The Contractor shall not commence construction below the Ordinary High-Water Mark until the following permits are on file (already obtained by the Owner):

1. US Army Corps of Owner's Representatives 404 Permit, and
2. Ohio EPA 401 Water Quality Certification.

D. Although the Owner may obtain and incur the cost of a permit, the Contractor shall comply with provisions of all permits and make any necessary submittals as detailed in Section 01 14 00 "Control of Work".

E. All Contractors and Subcontractors of any tier shall comply with all applicable standards, orders, regulations and permits, including but not limited to the Clean Water Act of 1970 (42 U.S.C. 1857, et seq.), the Federal Water Pollution Control Act (33 U.S.C. 1251, et seq.) as amended, Permits to Install, and NPDES 401 and 404 Permit requirements.

PART 2–PRODUCTS

NOT USED

PART 3–EXECUTION

NOT USED

END OF SECTION 01 11 00

SECTION 01 14 00

CONTROL OF WORK

PART 1–GENERAL

1.01 SECTION INCLUDES

A. Scope

B. Use of Premises

C. Easements and Site Access

D. Construction Layout

E. Protection of Trees

F. Open Excavations

G. Maintenance of Traffic

H. Care and Protection of Property

I. Protection of Existing Structures and Utilities

J. Water for Construction Purposes

K. Dust Control

L. Pollution Control

M. Maintenance of Flow

N. Equipment Staging and Material Storage

O. Cooperation within this Contract

P. Cleanup and Disposal of Excess Material

Q. Noise Control

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 01 01 00 – Special Conditions

C. Section 31 10 00 – Site Preparation

D. Section 32 31 13 – Chain link fences and gates

E. Section 33 05 07 – Jacking and Boring

1.03 SCOPE

A. The Contractor shall furnish labor and equipment which will be efficient, appropriate, and large enough to secure a satisfactory quality of work and a rate of progress which will ensure the completion of the work within the Time for Completion required by the Contract Documents. If at any time such labor and equipment appears to be inefficient, inappropriate, or insufficient for securing the quality of work required or for producing the rate of progress aforesaid, the Owner's Representative may order the Contractor to increase the efficiency or change the character and the Contractor shall conform to such order at no cost to the Owner. Failure of the Owner's Representative to give such order shall in no way relieve the Contractor of his obligations to secure the quality of the work and rate of progress required by the Contract Documents.

1.04 USE OF PREMISES

A. The Contractor shall not trespass upon or in any way disturb property outside the street right of way or outside the limits of construction, without first obtaining written permission from the property owner to do so. A copy of such written permission shall be furnished to the Owner's Representative prior to any trespass or disturbance.

B. If the Contractor finds it necessary to obtain additional working area, it shall be the Contractor's responsibility for its acquisition. All requirements listed under the "Use of Premises" shall apply if additional area is obtained.

C. The Contractor shall, at no additional cost to the Owner, restore such property to the full satisfaction of the property owner, and shall obtain from the property owner a written release stating that restoration has been satisfactorily made. A copy of the written release shall be furnished to the Owner's Representative.

D. The Contractor shall not waste any excess earth, stone, or other excavated material on any property without first obtaining written permission from the owner of the property. Along with written approval from the property owner, the Contractor shall apply, pay, and obtain all required permits, including cut and fill permits, and secure the approval of the Owner's Representative. One copy of the property owner's written permission stating that the work has been completed satisfactorily, and one copy of any necessary permits shall be furnished to the Owner's Representative. Materials deposited off-site without the required approvals may be ordered removed and properly disposed of without additional compensation.

E. All items within the construction limits shall be removed, or removed and replaced, or restored as required by the Contract Documents, including the Drawings and Specifications, and as directed by the Owner's Representative.

1.05 EASEMENTS AND SITE ACCESS

A. No temporary easements have been acquired for this Project.

B. Site access is shown on the Drawings. Any temporary stockpiling and storage outside of the

disturbance limits must be proposed by the Contractor and approved by the Owner. The Contractor shall coordinate with Owner's Representative prior to utilizing these areas.

1.06 CONSTRUCTION LAYOUT

A. The Contractor shall ensure a correct layout of the Work including locating and marking the construction limits and confirming existing elevations of utilities, structures, etc., as needed. The Owner/Owner's Representative/Warren County GIS Department will not provide any survey layout work. An electronic file will be provided to the Contractor for the horizontal and vertical layout.

B. The Contractor is responsible for having the finished Work conform to the lines, grades, elevations, and dimensions shown on the Drawings. Any inspection or checking of the Contractor's layout by the Owner's Representative and the acceptance of all or any part of it does not relieve the Contractor of the responsibility to secure the proper dimensions, grades, and elevations of the Work.

C. The Contactor shall be responsible for verifying the surface and the provided quantities.

D. Deviations from design line and grade, and small errors in quantity computations can be expected to occur but should be regarded as a departure from what is desired, and no extensive deviations or pattern of deviations should be allowed. The goal of construction must be to meet the lines and grades specified.

E. The Contractor shall be solely responsible for all locations, dimensions, and levels. No data other than written orders of the Owner's Representative shall justify departure from the dimensions and levels required by the Drawings. Tolerances shall be as follows:

1. For earthwork areas outside the wetland, allowable tolerance is 0.3 ft ±.

2. For earthwork areas within the wetland, allowable tolerance is 0.1 ft ±. No adverse slopes are allowed.

3. For flume entrance/exit, allowable tolerance is 0.06 ft ±. No adverse slopes are allowed. See Section 33 05 07 "Jacking and Boring" for additional details on tolerances for this method.

4. Soil wasting areas may deviate from the tolerances provided but must maintain stable slopes, drainage patterns, heights, etc.

5. See Section 32 31 13 "Chain link fences and gates" for applicable fence tolerances.

F. Control points for the project have not been provided. It is the responsibility of the Contractor to establish control points for their use using a qualified professional.

G. The Contractor shall protect all existing/established controls. Replace damaged controls at no additional cost.

H. Layout of work shall follow Paragraph 1.05 of Section 31 10 00 "Site Preparation".

1.07 PROTECTION OF TREES

A. The Contractor shall take precautions to avoid any unnecessary damage to trees. Branches which overhang the construction limits, and which interfere with the operation of equipment shall be tied back to avoid damage, if possible. Where injury to branches is unavoidable, the branches shall be sawed off neatly at the trunk or main branch and the cut area shall be painted with approved tree paint immediately. Any trees damaged beyond saving shall be identified by the Contractor for discussions with the Owner's Representative regarding tree removal alternatives. In the case of trees damaged on private property during the project, the Contractor shall make restitution to the property owner.

B. When possible, preserve trees. This includes trees within the disturbance limit that are located where final grades do not depart more than six (6) inches from existing grades and where denoted on Drawings.

1.08 OPEN EXCAVATIONS

A. The Contractor shall adequately safeguard all open excavations by providing temporary barricades, caution signs, lights, and other means to prevent accidents to persons and damage to property. Provide suitable and safe bridges and other crossings for accommodating travel by workers. Remove bridges provided for access during construction when no longer required. The length or size of excavation will be controlled by the particular surrounding conditions but shall always be confined to the limits prescribed by the Owner's Representative or the authority having jurisdiction of any rights-of-way being occupied by the construction. Any limits prescribed by the Owner's Representative shall not take away the Contractor's responsibility to meet safety requirements.

B. The Contractor shall take precautions to prevent injury to the public/workers due to open trenches. Provide adequate light at all trenches, excavated material, equipment, or other obstacles which could be dangerous to the public/workers at night.

1.09 MAINTENANCE OF TRAFFIC

A. The Contractor shall perform the required work with the least inconvenience and maximum safety of the Contractor and the traveling public.

B. The Contractor shall be responsible for maintaining "local" traffic at all times and for notifying the proper authorities regarding the closing of roads/access drives.

1. The Contractor shall be required on an interim and/or permanent basis to furnish, erect, maintain, and subsequently remove all lights, signs, barricades, and all other traffic control devices necessary for the safety and maintenance of traffic. This also includes all advance warning signage, regulatory signs, informational signs, detour signs and directional signs.

Keep all equipment clean and in proper working order.

2. This shall include obtaining any necessary permits.

3. The Manual on Uniform Traffic Control Devised by the Federal Highway Administration shall be followed as appropriate.

C. The cost of all traffic control devices, including replacing existing striping damaged due to construction, shall be incidental to the project.

1.10 CARE AND PROTECTION OF PROPERTY

A. The Contractor will be responsible for the preservation of all public and private property and use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, restore such property to a condition similar or equal to that existing before the damage was done, or make good on the damage in other manners acceptable to the Owner's Representative.

B. Where the Contractor contemplates removal of small structures such as mailboxes, signposts, fencing, guardrails, and culverts that interfere with Contractor's operations, the Contractor shall obtain approval of property owner and the Owner's Representative. Move mailboxes to temporary locations accessible to postal service. Replace items removed in their original location and a condition equal to or better than original. This shall be considered as part of the work and replacement shall be done immediately after the related operation(s) are completed. The costs for the removal, relocation, and replacement shall be included with the price bid for various contract items.

1.11 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. The Contractor shall assume full responsibility for the protection of all buildings, structures, and utilities, public or private, including poles, signs, services to buildings, utilities, gas pipes, water pipes, hydrants, sewers, drains and electric and telephone cables, whether or not they are shown on the Drawings. Carefully support and protect all such structures and utilities from injury of any kind. Immediately repair any damage resulting from the construction operations at no additional cost to the Owner.

B. The Contractor shall bear full responsibility for obtaining all locations of underground structures and utilities (including existing water services, drain lines and sewers). Maintain services to buildings and pay costs or charges resulting from damage thereto.

C. The Contractor shall notify the Ohio Utilities Protection Service (OUPS) at least 48 hours prior to start of excavating in any public way and also notify in writing all non-participating utility companies in writing at least forty-eight (48) hours (excluding Saturdays, Sundays, and legal holidays) before excavating.

D. Refer to Section 31 23 00 "Excavation, Fill, and Grading" for disposition of utilities.

1.12 DUST CONTROL

A. The Contractor shall take reasonable measures to prevent dust. Earth surfaces subject to dusting shall be kept moist with water only. When practical, dusty materials in piles or in transit shall be covered to prevent blowing dust.

B. Buildings or operating facilities which may be affected adversely by dust shall be adequately protected from dust. Existing or new machinery, motors, instrument panels, or similar equipment shall be protected by suitable dust screens. Proper ventilation shall be included with dust screens.

1.13 POLLUTION CONTROL

A. The Contractor shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris, and other substances resulting from construction activities. No sanitary wastes shall be permitted to enter any drain or watercourse other than sanitary sewers. No sediment, debris, or other substance shall be permitted to enter sanitary sewers, and reasonable measures shall be taken to prevent such materials from entering any drain or watercourse.

1.14 MAINTENANCE OF FLOW

A. The Contractor shall become familiar with the flow behavior of the existing stream channel and the Little Miami River in the project area (see USGS Monitoring location 03245500 for real-time flow data) and stay attuned to the threat of rain events to make efforts to avoid work during periods that could suspend unreasonable amounts of fine sediment. The Contractor shall sequence the work and/or employ temporary flow diversion strategies (e.g., pump arounds, bypass channels, berms, etc.) to conduct the majority of construction activities outside of flowing water or in low flow conditions and make every effort to minimize the suspension of unreasonable amounts of fine sediment into the flow. If temporary flow diversions are employed, they must not result in flooding of adjacent properties. The Contractor should stabilize the active work zone and withdraw equipment and employees if flood conditions are present or are likely to develop.

B. Should temporary flow diversion strategies be employed by the Contractor, the Contractor shall be responsible for the condition of any pipe or conduit used for drainage purposes, and all such pipe or conduit shall be left clean and free of sediment.

C. Temporary flow diversion measures shall be constructed such that they do not result in flooding of upstream properties.

D. The cost of this work shall be incidental to the project.

1.15 EQUIPMENT STAGING AND MATERIAL STORAGE

A. Equipment staging and material storage outside of the proposed disturbance limits shall utilize locations agreed upon by the Owner/Owner's Representative and situated in such a way as to

minimize disturbance.

B. The Contractor is responsible for the protection and restoration of all surfaces and existing vegetation in areas that are used for access, staging, or otherwise used during construction.

C. Equipment shall be kept out of active flow to minimize sediment discharges.

D. The Contractor shall frequently remove materials no longer required on the project site, such as excess materials, temporary structures, and equipment so that the site shall, at all times, present a neat and orderly appearance.

1.16 COOPERATION WITHIN THIS CONTRACT

A. All firms or persons authorized to perform any work under the Contract Documents shall cooperate with Contractors and Subcontractors or trades and assist in incorporating the work of other trades where necessary or required.

B. Cutting and patching, drilling, and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Owner's Representative.

1.17 CLEANUP AND DISPOSAL OF EXCESS MATERIAL

A. During the course of the Work, the Contractor shall keep the site of operations as clean and neat as possible. Dispose of all residues resulting from the construction Work and, at the conclusion of the Work, remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures, and any other refuse remaining from the construction operations and leave the entire site of the work in a neat and orderly condition.

B. In order to prevent environmental pollution arising from the construction activities related to the performance of the Work under the Contract Documents, the Contractor and Subcontractors shall comply with all applicable Federal, State, and local laws and regulations concerning waste material disposal, as well as the specific requirements stated in this Section and in other related Sections.

C. Disposal of excess excavated material in wetlands, stream corridors other than the on-site portion being abandoned, and plains is strictly prohibited even if the permission of the property owner is obtained. Any violation of this restriction by the Contractor or any person employed by him will be brought to the immediate attention of the responsible regulatory agencies, with a request that appropriate action be taken against the offending parties. The Contractor will be required to remove the fill and restore the area impacted at no increase in the Contract Sum.

D. The Owner/Owner's Representative reserves the right to instruct specific cleanup, relocation of equipment, or disposal of material at any time, and at no additional cost to the Owner.

1.18 NOISE CONTROL

A. The Contractor shall take reasonable measures to prevent unnecessary noise. Such measures shall be appropriate for the normal ambient sound levels in the area during working hours. All construction machinery and vehicles shall be equipped with practical sound-muffling devices and operated in a manner to cause the least noise consistent with efficient performance of the Work.

B. The Contractor shall provide acoustical barriers effective in reducing noise so noise emanating from tools or equipment will not exceed legal noise levels.

C. During construction activities on or adjacent to occupied buildings, and when appropriate, Contractor shall erect screens or barriers effective in reducing noise in the building and shall conduct operations to avoid unnecessary noise which might interfere with the activities of building occupants.

D. See Paragraph 1.06 of Section 01 01 00 "Special Conditions" for allowable working hours.

PART 2–PRODUCTS

NOT USED

PART 3–EXECUTION

NOT USED

END OF SECTION 01 14 00

SECTION 01 71 33

RESTORATION OF IMPROVEMENTS

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Structures and Facilities

B. Roads, Streets, and Other Paved Surfaces

C. Stream Bed

D. Cultivated Areas and Other Surface Improvements

1.02 RELATED SECTIONS

A. Section 01 14 00 – Control of Work

B. Section 32 92 19 – Seed and Mulch

1.03 STRUCTURES AND FACILITIES

A. The Contractor shall take all precautions necessary to protect the integrity and usefulness of all existing facilities. The Contractor may, with the approval of the Owner's Representative, remove such existing structures, including but not limited to, curbs, gutters, conduits, pipelines, vaults, manholes, cables and conduits and poles as may be necessary for the performance of the Work and shall re-build the structures thus removed in as good a condition as found in accordance with the regulatory requirements and the Contract Documents. The Contractor shall also repair existing structures which may be damaged as a result of the Work under the Contract Documents as nearly as possible to the original condition, to the satisfaction of the Owner's Representative.

B. The Contractor is liable for all fines, legal fees, etc. that are placed on the Owner as a result of sewer discharges to any stream in the project area from a crushed or otherwise damaged sewer crossing that is inadequately protected, per Section 01 14 00 "Control of Work".

1.04 ROADS, STREETS, AND OTHER PAVED SURFACES

A. Unless otherwise specified, roads and streets in which the surface is removed, broken, or damaged during the Work under the Contract Documents, shall be resurfaced and brought to the original grade and section. Roadways used by the Contractor shall be cleaned and repaired. Before resurfacing material is placed, edges of pavements shall be trimmed back far enough to provide clean, solid, vertical faces, and shall be free of loose material. All paved surfaces shall be cut with a pavement saw. Rough cuts are not allowed. Repair work shall conform to the provisions of the Governing Agency, applicable specifications in Part 3 of this Section and as directed by the Owner's Representative.

B. The cost of all roadway, street, and other paved surface restoration shall be incidental to the project.

1.05 STREAM BED

A. Where the stream bed has been disturbed outside the work area as a result of the Work and/or construction activities, existing bed material shall be replaced and/or adjusted to match the pre-disturbance grades and contours.

1.06 CULTIVATED AREAS AND OTHER SURFACE IMPROVEMENTS

A. Cultivated or planted areas and other surface improvements which are damaged by actions of the Contractor shall be restored as nearly as possible to their original condition.

B. The cost of all surface improvement restoration outside those shown on the Drawings shall be incidental to the project.

PART 2–PRODUCTS

NOT USED

PART 3–EXECUTION

3.01 INSTALLATION

A. All restoration shall be completed in strict accordance with the appropriate items of the Specifications, as directed by the Owner's Representative. All disturbed areas shall be restored as nearly as practical to the condition they were prior to construction within thirty (30) days. All drainage ditches disturbed by the Contractor's Work shall be restored, reshaped, and graded to drain properly. Sod, erosion control mats, or other methods shall be used by the Contractor to ensure that drainage ditches are restored to the pre-construction condition as much as practical.

B. Pavement restoration shall be in accordance with the provisions of the Governing Agency responsible for the particular road, as directed by the Owner's Representative.

C. The Contractor shall restore unpaved areas by seeding and mulching. Commercial fertilizer shall be used and shall have a chemical analysis of 10-20-10. The fertilizer shall be delivered to the Project Site in manufacturer's containers, unopened. The container, or an attached tag, shall have printed upon it the manufacturer's name and the chemical analysis of the contents.

D. All maintained yards shall be restored with shredded topsoil and fertilizer prior to seeding and mulching. The Contractor shall remove all stones 1-inch and greater in any dimension.

Shredded topsoil shall be placed in loose lifts that construct a 4-inch compacted depth. Grass seed shall be similar to existing or per the Lawn Seed Mix in Section 32 92 19 "Seed and Mulch" unless otherwise approved by the Owner/Owner's Representative. Mulch mats or other methods shall be employed to ensure that slopes are properly restored, with any staples or nails removed once the grass has sufficiently rooted to stabilize the slope.

E. When restoration is performed in the summer months of June, July, and August the Contractor shall utilize temporary mulching and seeding. Temporary mulching shall then be removed as necessary, with final seeding and mulching performed September 1 through September 15.

F. The cost of all restoration of streets, drives, walks, sod, curbs, etc., shall be included in the various items of the Contract Documents. When restoring walks, curb ramps shall be constructed at intersections where the existing walk has been disturbed. Contact the jurisdictional agency for curb ramp requirements.

END OF SECTION 01 71 33

SECTION 01 77 19

SUBSTANTIAL AND FINAL COMPLETION

PART 1–GENERAL

1.01 SECTION INCLUDES

A. Scope

B. Final Completion

1.02 SCOPE

A. Specific to this Project, Substantial Completion shall occur when all excavation, grading, landfill capping, soil and rock placement, flume and appurtenance installation, wetland construction, planting associated with this Contract, and trail/road construction have been completed.

B. The Contractor shall also have reasonable access to make corrections during the two (2) year Correction Period in accordance with Paragraph 22 of the General Conditions included in the Contract Documents.

1.03 FINAL COMPLETION

A. The Project shall be complete when all Work, including plantings and punch list items and all documents and permits and licenses, if any, are complete and submitted to the OWNER. These may include, but are not limited to: Certificate of Occupancy, Letters of Approval and/or applicable permits from various regulatory agencies, inspection certificates, and any other items as required by Laws and Regulations.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 01 77 19

SECTION 02 41 00

DEMOLITION

PART 1–GENERAL

1.01 SECTION INCLUDES

A. This section includes removal of existing fence, when indicated on the Drawings and when not shown on the Drawings but within the disturbed area. Also included is the removal, relocation, or re-routing of any existing piping, valves, conduit, equipment, and appurtenances which are not specifically shown on the Drawings or specifications, but which are found to interfere with the installation of any Work included in this project.

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 01 14 00 – Control of Work

1.03 REGULATORY REQUIREMENTS

A. Notify affected utility companies per Section 01 14 00 "Control of Work" and Owner before starting work and comply with their requirements.

PART 2–PRODUCTS

NOT USED

PART 3–EXECUTION

3.01 DEMOLITION OR REMOVAL

A. The Contractor shall perform demolition of existing fence where shown on the Drawings and where not shown on the Drawings but within the disturbance limits. Then, the Contractor shall dispose of fencing properly.

B. The cost for fence removal and disposal shall be incidental to the project.

C. Cease operations immediately if adjacent structures appear to be in danger. Notify Owner's Representative. Do not resume operations until directed.

END OF SECTION 02 41 00

SECTION 03 30 00

CAST IN PLACE CONCRETE

PART 1–GENERAL

1.01 SUMMARY

A. The work in this section specifies cast-in-place concrete which consists of furnishing all material, mixing, and transporting equipment, and performing all labor for the proportioning, mixing, transporting, placing, consolidating, finishing, and curing of concrete in the structure.

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 31 23 00 – Excavation, Trenching and Backfill

C. Section 31 25 00 – Erosion and Sediment Control

1.03 REFERENCE STANDARDS

A. ASTM refers to American Society for Testing Materials (ASTM) specifications.

B. Standard Specifications: Unless otherwise indicated, Standard Specifications shall refer to the Ohio Department of Transportation Construction and Materials Specifications (CMS), 2019 edition, including all issued supplemental specifications.

1.04 COORDINATION

A. Review installation procedures under other Sections and coordinate the installation of items that must be installed in the concrete.

B. Notify other contractors in advance of the placing of concrete to provide the other contractors with sufficient time for furnishing of items included in their contracts that must be installed in the concrete.

1.05 QUALITY ASSURANCE

A. To demonstrate conformance with the specified requirements for cast-in-place concrete, the Contractor shall provide the services of an independent testing laboratory which complies with the requirements of ASTM E329. The testing laboratory shall sample and test concrete materials as specified in paragraphs 2.01 and 2.02 of this specification. Costs of testing laboratory services shall be borne by the Contractor.

B. Reference Standards: Comply with the applicable provisions and recommendations of the latest editions of the following, except as otherwise shown or specified:

1. ACI 301, Specifications for Structural Concrete for Building (includes ASTM Standards referred to herein except ASTM A 36).

2. ACI 347, Recommended Practice for Concrete Formwork.

3. ACI 304, Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete.

4. ACI 315, Manual of Standard Practice for Detailing Reinforced Concrete Structures.

5. ACI 305, Recommended Practice for Hot Weather Concreting.

6. ACI 306, Recommended Practice for Cold Weather Concreting.

7. ASTM A 36/A 36M, Carbon Structural Steel.

8. Concrete Reinforcing Steel Institute, Manual of Standard Practice, include ASTM Standards referred herein.

1.06 SUBMITTALS

A. Samples: Submit samples of materials as specified and as may be requested by Owner's Representative, including names, sources, and descriptions.

B. Shop Drawings: Submit for approval the following:

1. Copies of manufacturer's specifications with application and installation instructions for proprietary materials and items, including admixtures and bonding agents.

2. Drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315, Chapters 1 thru 8. For walls, show elevations to a minimum scale of 1/4 inch to 1 foot. Show bar schedules, stirrup spacing, diagrams of bent bars, arrangements, and assemblies, as required for the fabrication and placement of concrete reinforcement.

3. List of concrete materials and concrete mix designs proposed for use. Include the results of all tests performed to qualify the materials and to establish the mix designs in accordance with ACI 301, 3.9. Submit written report to Owner's Representative for each proposed concrete mix at least 30 days prior to start of Work. Do not begin concrete production until mixes have been reviewed and are acceptable to Owner's Representative. Mix designs may be adjusted when material characteristics, job conditions, weather, test results or other circumstances warrant. Do not use revised concrete mixes until submitted to and accepted by Owner's Representative.

1.07 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver concrete reinforcement materials to the site bundled, tagged, and marked. Use metal tags indicating bar size, lengths, and other information corresponding to markings shown on placement diagrams.

B. All materials used for concrete must be kept clean and free from all foreign matter during transportation and handling and kept separate until measured and placed in the mixer. Bins or platforms having hard clean surfaces shall be provided for storage. Suitable means shall be taken during hauling, piling, and handling to ensure that segregation of the coarse and fine aggregate particles does not occur, and the grading is not affected.

PART 2–PRODUCTS

2.01 GENERAL

A. Unless otherwise stated in the Construction Documents, all concrete shall be Class QC-1 as specified in the Standard Specifications.

2.02 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150/C 150M, Type I.

B. Aggregates: ASTM C 33/C 33M.

1. Fine Aggregate: Clean, sharp, natural sand free from loam, clay, lumps, or other deleterious substances. Dune sand, bank run sand and manufactured sand are not acceptable.

2. Coarse Aggregate: Clean, uncoated, processed aggregate containing no clay, mud, loam, or foreign matter, as follows:

   a. Crushed stone, processed from natural rock or stone.

   b. Washed gravel, either natural or crushed. Use of slag and pit or bank run gravel is not permitted.

C. Coarse Aggregate Size: Size to be ASTM C 33/C 33M, Nos. 57 or 67, unless permitted otherwise by Owner's Representative.

D. Water: Clean, drinkable.

E. Air-Entraining Admixture: ASTM C 260/C 260M.

F. Water-Reducing Admixture: ASTM C 494/C 494M. Only use admixtures which have been tested and accepted in mix designs.

2.03 MATERIALS

A. Provide form materials with sufficient stability to withstand pressure of placed concrete without bow or deflection.

B. Exposed Concrete Surfaces: Acceptable panel-type to provide continuous, straight, smooth, as-cast surfaces. Use largest practical sizes to minimize form joints.

C. Unexposed Concrete Surfaces: Suitable material to suit project conditions.

D. Provide 3/4-inch chamfer at all exposed corners.

2.04 REINFORCING MATERIALS

A. Reinforcing Bars: ASTM A 615 / A 615M, Grade 60.

B. Welded Wire Fabric: ASTM A 185 / A 185M.

C. Steel Wire: ASTM A1064 / A1064M

D. Supports for Reinforcement: Provide bolsters, chairs, spacers, and other devices for spacing, supporting and fastening reinforcement in place.

1. Use wire bar type supports complying with Concrete Reinforcing Steel Institute (CRSI) recommendations, except as specified below. Do not use wood, clay brick, or other unacceptable materials.

2. For slabs on grade, use solid concrete brick supports.

3. For all concrete surfaces, where legs of supports are in contact with forms, provide supports complying with CRSI, Manual of Standard Practice as follows:

a. Either hot-dip galvanized, plastic protected or stainless-steel legs.

4. Over waterproof membranes, use precast concrete chairs.

2.05 RELATED MATERIALS

A. Waterstops:

1. Flat dumbbell or centerbulb type, size to suit joints, of Polyvinyl Chloride.

b. Manufacturer: Provide waterstops of one of the following:

1) W.R. Meadows, Incorporated.

2) W.R. Grace and Company.

3) Or approved equal.

2. Carbon steel complying with ASTM A 36/A 36M.

B. Concrete Curing Materials:

1. Absorptive Cover: Burlap cloth made from jute or kenaf, weighing approximately 10 ounces per square yard and complying with AASHTO M 182, Class 3.

2. Moisture-Retaining Cover: One of the following, complying with ASTM C 171.

   a. Waterproof Paper:

      1) Regular or white consisting of two sheets of kraft paper cemented together.

      2) Paper shall be light in color, shall be free from visible defects, and shall have a uniform appearance.

      3) White paper shall have a white surface on at least one side.

   b. Polyethylene Film:

      1) Film shall consist of a single sheet of polyethylene with a minimum thickness of 4 mils.

      2) Film shall be free of visible defects and shall have a uniform appearance.

      3) Clear or white opaque type is acceptable.

   c. White Burlap-Polyethylene Sheet:

      1) Sheet shall consist of burlap not less than 10 ounces per linear yard, 40 inches wide, impregnated on one side with white opaque polyethylene 4 mils minimum thickness.

      2) The polyethylene material shall be securely bonded to the burlap so that there will be separation of the materials during handling or curing of the concrete.

3. Curing Compound: Curing compound shall not be used unless approved by the Owner's Representative, and if allowed, shall comply with ASTM C 309 Type 1 (water retention requirements):

   a. Product and Manufacturer: Provide one of the following:

      1) Aqua-Cure VOX by The Euclid Chemical Company.

      2) Sealtight 1100 by W.R. Meadows, Incorporated.

      3) Or approved equal.

   b. Provide fugitive dye when requested by Owner's Representative.

C. Epoxy Bonding Agent:

1. Two-component epoxy resin bonding agent.

2. Product and Manufacturer: Provide one of the following:

   a. Sikadur 32 Hi-Mod by Sika Chemical Corporation.

b. Dural by Euclid Chemical Company

c. Or approved equal.

D. Joint Fillers:

1. Provide preformed expansion joint filler in conformance with the following:

a. Cork: ASTM D 1752.

b. Asphalt Impregnated Fiberboard: ODOT Item 705.03.

c. Elastomeric: ODOT Item 705.11.

d. Or approved equal.

2.GROUT

A. Non-shrink, Nonmetallic Grout:

1. Premixed non-staining cementitious grout requiring only the addition of water at the job site.

2. Product and Manufacturer: Provide one of the following:

a. Euco N-S by the Euclid Chemical Company.

b. Masterflo 713 by Master Builders Company.

c. Five Star by Five Star Products.

d. Or approved equal.

B. Ordinary Cement-Sand Grout:

1. Except where otherwise specified use 1 part cement to 3 parts sand complying with the following:

a. Cement: ASTM C 150/C 150M, Type I.

b. Sand: ASTM C 33/C 33M.

PART 3–EXECUTION

3.01 INSPECTION

A. The Contractor and his or her installer shall examine the substrate and the conditions under which Work is to be performed and notify Owner's Representative of unsatisfactory conditions. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to Owner's Representative.

3.02 FORMWORK

A. Formwork: Construction so that concrete members and structures are correct size, shape, alignment, elevation, and position, complying with ACI 347.

B. Provide openings in formwork to accommodate Work of other trades and to facilitate cleaning and inspection. Accurately place and securely support items built into forms.

C. Clean and adjust forms prior to concrete placement. Apply form release agents or wet forms, as required. Retighten forms during and after concrete placement if required to eliminate mortar leaks.

3.03 REINFORCEMENT, JOINTS, AND EMBEDDED ITEMS

A. Comply with the applicable recommendations of specified codes and standards, and CRSI Manual of Standard Practice for details and methods of reinforcement placement and supports.

B. Clean reinforcement to remove loose rust and mill scale, earth, ice, and other materials which reduce or destroy bond with concrete.

C. Position, support, and secure reinforcement against displacement during formwork construction or concrete placement. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, solid concrete brick, and hangers as required.

1. Place reinforcement to obtain the minimum concrete coverages as shown below:

Location	**Minimum Cover**
Concrete cast against earth	3 inches
Concrete exposed to earth or liquid	2 inches
All other concrete	1-1/2 inches

2. Arrange, space, and securely tie bars and bar supports together with 16 gage wire to hold reinforcement accurately in position during concrete placement operations. Set with ties so that twisted ends are directed away from exposed concrete surfaces.

3. Reinforcing steel shall not be secured to forms with wire, nails, or other ferrous metal. Metal supports subject to corrosion shall not touch formed or exposed concrete surfaces.

D. Provide sufficient numbers of supports of strength required to carry reinforcement. Do not place reinforcing bars more than 2 inches beyond the last leg of any continuous bar support. Do not use supports as bases for runways for concrete conveying equipment and similar construction loads

E. Splices:

1. Provide standard reinforcement splices by lapping ends, placing bars in contact, and tying tightly with wire. Comply with requirements shown for minimum lap of spliced bars.

F. Install welded wire fabric in as long lengths as practical, lapping at least one mesh.

G. Concrete shall not be placed until the reinforcing steel is inspected and permission for placing concrete is granted by Owner's Representative. All concrete placed in violation of this provision will be rejected.

H. Joints: Provide construction, isolation, and control joints as indicated or required. Locate construction joints so as to not impair the strength and appearance of the structure. Place isolation and control joints in slabs on ground to stabilize differential settlement and random cracking. Additional construction joints shall be located as follows:

1. In walls locate joints at a spacing of 40 feet maximum.
2. In foundation slabs and slabs on grade locate joints at a spacing of approximately 40 feet.
3. In mats and structural slabs and beams, at a spacing of approximately 40 feet. Locate joints in compliance with ACI 301, Chapter 6.

I. Installation of Embedded Items: Set and build into the Work anchorage devices and embedded items required for other Work that is attached to or supported by cast-in-place concrete. Use setting diagrams, templates and instructions provided under other Sections and other contracts for locating and setting. Refer also to Paragraph 1.04 Coordination, above.

3.04 CONCRETE AND PLACEMENT

A. Proportioning and Design of Mix for concrete shall be per ODOT Class QC-1, as specified in the Standard Specifications.

B. Job-Site Mixing: Use drum type batch machine mixer, mixing not less than 1-1/2 minutes for one cubic yard or smaller capacity. Increase mixing time at least 15 seconds for each additional cubic yard or fraction thereof.

C. Ready-Mixed Concrete: ASTM C 94/C 94M.

D. Concrete Placement: Comply with ACI 304, placing concrete in a continuous operation within planned joints or sections. Do not begin placement until work of other trades affecting concrete is completed.

E. Consolidate placed concrete using mechanical vibrating equipment with hand rodding and tamping, so that concrete is worked around reinforcement and other embedded items and into all parts of forms.

F. Protect concrete from physical damage or reduced strength due to weather extremes during mixing, placement, and curing.

1. In cold weather comply with ACI 306.
2. In hot weather comply with ACI 305.

3.05 QUALITY OF CONCRETE WORK

A. Make all concrete solid, compact and smooth, and free of laitance, cracks, and cold joints.

B. All concrete for liquid retaining structures, and all concrete in contact with earth, water, or exposed directly to the elements shall be watertight.

C. Cut out and properly replace to the extent ordered by Owner's Representative, or repair to the satisfaction of Owner's Representative, surfaces which contain cracks or voids, are unduly rough, or are in any way defective. Patches or plastering will not be acceptable.

D. Repair, removal, and replacement of defective concrete as ordered by Owner's Representative shall be at no additional cost to Owner.

3.06 CONCRETE CURING AND PROTECTION

A. General:

1. Protect freshly placed concrete from premature drying and excessive cold or hot temperature and maintain without drying at a relatively constant temperature for the period of time necessary for hydration of the cement and proper hardening of the concrete.

2. Start initial curing after placing and finishing concrete as soon as free moisture has disappeared from the concrete surface. Keep continuously moist for not less than 7 days.

B. Curing Methods:

1. Perform curing of concrete by moist curing, absorptive cover, by moisture-retaining cover curing, or by curing compound. Use curing compound only in cold weather and only when permitted by Owner's Representative.

   a. For curing, use water that is free of impurities which could etch or discolor exposed, natural concrete surfaces.

2. Provide moisture curing by any of the following methods:

   b. Keeping the surface of the concrete continuously wet by covering with water.

   c. Continuous water-fog spray.

   d. Covering the concrete surface with the specified absorptive cover, thoroughly saturating the cover with water, and keeping the absorptive cover continuously wet with sprinklers or porous hoses. Place absorptive cover so as to provide coverage of the concrete surfaces and edges, with a 4-inch lap over adjacent absorptive covers.

3. Provide moisture-retaining cover curing as follows:

   a. Cover the concrete surfaces with the specified moisture-retaining cover for curing concrete, placed in the widest practical width with sides and ends lapped at least 3

inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during the curing period using cover material and waterproof tape.

4. Provide liquid curing compound as follows:

   a. Apply the specified curing compound to all concrete surfaces when permitted by Owner's Representative. Slabs to receive chemical resistant heavy duty concrete topping shall not be cured with liquid curing compound but shall be moisture cured. The compounds shall be applied immediately after final finishing in a continuous operation by power spray equipment in accordance with the manufacturer's directions. Recoat areas which are subjected to heavy rainfall within 3 hours after initial application. Maintain the continuity of the coating and repair damage to the coat during the entire curing period. For concrete surfaces which will be in contact with potable water, the manufacturer shall certify that the curing compound used is EPA approved.

C. Curing Formed Surfaces:

1. Cure formed concrete surfaces, including the undersides of girders, beams, supported slabs and other similar surfaces by moist curing with the forms in place for the full curing period or until forms are removed. If forms are removed, continue curing by methods specified above, as applicable.

D. Curing Unformed Surfaces:

1. Cure unformed surfaces, such as slabs, floor topping, and other flat surfaces by using the appropriate method specified above.

E. Temperature of Concrete During Curing:

1. When the atmospheric temperature is 40°F and below, maintain the concrete temperature between 50°F and 70°F continuously throughout the curing period. When necessary, make arrangement before concrete placing for heating, covering, insulation or housing as required to maintain the specified temperature and moisture conditions continuously for the concrete curing period. Provide cold weather protection complying with the requirements of ACI 306.

2. When the atmospheric temperature is 80°F and above, or during other climatic conditions which will cause too rapid drying of the concrete, make arrangements before the start of concrete placing for the installation of wind breaks or shading, and for fog spraying, wet sprinkling, or moisture-retaining covering. Protect the concrete continuously for the concrete curing period. Provide hot weather protection complying with the requirements of ACI 305, unless otherwise specified.

3. Maintain concrete temperature as uniformly as possible and protect from rapid atmospheric temperature changes. Avoid temperature changes in concrete which exceed 5°F in any one hour and 50°F in any 24-hour period.

F. Protection from Mechanical Injury:

1. During the curing period, protect concrete from damaging mechanical disturbances including load stresses, heavy shock, excessive vibration, and from damage caused by rain or flowing water. Protect all finished concrete surfaces from damage by subsequent construction operations.

3.07 FINISHES

A. Finish:

1. After placing concrete slabs, do not work the surface further until ready for floating. Begin floating when the surface water has disappeared or when the concrete has stiffened sufficiently. Check and level the surface plane to a tolerance not exceeding 1/4 inch in 10 feet when tested with a 10-foot straightedge placed on the surface at not less than 2 different angles. Cut down high spots and fill all low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat the surface to a uniform, smooth, granular texture.

2. After floating, begin final troweling when the surface produces a ringing sound as the trowel is moved over the surface.

3. Consolidate the concrete surface by the final hand troweling operation. Finish shall be free of trowel marks, uniform in texture and appearance, and with a surface plane tolerance not exceeding 1/8 inch in 10 feet when tested with a 10-foot straight edge. Grind smooth surface defects which would telegraph through applied floor covering system.

4. Use trowel finish for the following:

   a. All slabs unless otherwise shown or specified.

5. Apply non-slip broom finish to exterior concrete walkways, driveways and elsewhere.

3.08 GROUT PLACEMENT

A. General:

1. Place grout as shown and in accordance with manufacturer's instructions. If manufacturer's instructions conflict with the Specifications do not proceed until Owner's Representative provides clarification.

2. Drypacking will not be permitted.

3. Manufacturers of proprietary products shall make available upon 72 hours notification the services of qualified, full-time employee to aid in assuring proper use of the product under job conditions.
4. Placing grout shall conform to the temperature and weather limitations described in Paragraph 3.04 above.

END OF SECTION 03 30 00

SECTION 31 10 00

SITE PREPARATION

PART 1–GENERAL

1.01 SUMMARY

A. The work in this section consists of furnishing all labor, materials, and equipment necessary to perform removal of trees, shrubs, and other plant life and strip and stockpile topsoil within the work areas as indicated on the Construction Drawings.

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 01 14 00 – Control of Work

C. Section 01 71 33 – Restoration of Improvements

D. Section 31 23 00 – Excavation, Fill, and Grading

E. Section 35 40 00 – Rock

1.03 REFERENCE STANDARDS

A. OAC refers to Ohio Administrative Code.

B. ORC refers to Ohio Revised Code.

1.04 PROTECTION

A. The Contractor shall protect trees, plant growth, and features designated to remain as final landscaping.

B. Protection for all landscaping, existing structures, and utilities shall conform to Section 01 14 00 "Control of Work".

C. The Contractor shall employ barricades and lanterns, erect and maintain temporary fences and guardrails and other provisions necessary to the safe and expeditious progress of the work and to safeguard against any damage to life and/or property.

1.05 LAYOUT OF WORK

A. Drawings indicate existing grades and finished grades required for construction. Existing grades shown are believed to be within accepted tolerance of error but are not absolute. Contractor shall satisfy themselves as to existing contours and elevations. The Contractor shall complete all excavating, filling, and grading indicated by solid line contours and spot elevations on the Contract Drawings.

B. The construction layout shall conform to paragraph 1.06 of Section 01 14 00 "Control of Work".

PART 2–PRODUCTS

2.01 CONSTRUCTION AND TREE PROTECTION FENCING

A. Material shall be high density, polyethylene; 4 ft. high; color - orange or approved equal.

2.02 PAVEMENT AND INFRASTRUCTURE PROTECTION

A. Existing pavement (trail, driveways, roadways, parking lots, sidewalks, curbs, etc.) shall be protected from construction equipment using appropriate material for the loading and tread type.

B. Infrastructure shall be protected from construction equipment using appropriate material for the loading and tread type.

C. See Section 01 71 33 "Restoration of Improvements" for additional information on infrastructure protection.

2.03 TOPSOIL

A. Topsoil shall be as specified in paragraph 2.02 of Section 31 23 00 "Excavation, Fill, and Grading."

PART 3–EXECUTION

3.01 SITE PREPARATION

A. Trees at the edge of proposed contours and outside the grading limits shall have disturbance limited to the extent practical. Any properties, cultural sites, wetlands, and other sensitive areas shall be protected. The Contractor shall not encroach into any area designated to be preserved. **If any cultural sites, areas of concern, or evidence of threatened or endangered species are encountered, the Contractor shall stop work in the area and notify the Owner's Representative immediately.**

1. Specific archeological/cultural sites have not been identified in the project site. However, the project site is located within the footprint of the former Stubbs Earthworks Archaeological Site. Therefore, the potential for encountering cultural sites does exist.

B. The Contractor shall remove and relocate as required any existing signs which fall into his work area. The Contractor shall coordinate with governing authority for sign relocations.

C. The Contractor assumes sole responsibility for "in-kind" replacement of anything damaged within the protected areas, restoring these areas to equal or better conditions. It is the recommendation of the Owner's Representative that the Contractor document pre-construction conditions on

all properties with photographic evidence.

3.02 CONSTRUCTION AND TREE PROTECTION FENCING

A. Install fencing prior to commencing clearing operations as necessary. Do not store vehicles, equipment, or materials within this protected area. Repair or replace vegetation and trees to remain that are damaged during construction as directed by the Owner's Representative at no additional cost. Provide staking to support fencing.

B. Attaching to or using vegetation to support fence shall not be permitted.

C. The Contractor shall meet all requirements of Section 01 14 00 "Control of Work."

3.03 PAVEMENT PROTECTION

A. Material to protect asphalt and concrete surfaces shall be placed prior to any construction equipment unloading or use on the site. The Contractor shall replace all damaged surfaces.

3.04 CLEARING AND GRUBBING

A. The Contractor shall remove woody vegetation only when necessary and approved by the Owner's Representative. The Contractor shall be responsible for sorting, use, and distribution.

B. The Contractor shall clear and grub woody material within the grading areas as shown on the Drawings. The Contractor shall use a stump grinder or similar implement to remove existing stumps on areas with traversable slopes (gradients less than 2:1), as directed by the Owner's Representative. The depth of grubbing below ground surface shall be sufficient to meet the Construction Drawings and relevant specifications, including but not limited to, finished grades, details, structures, and vegetation success.

C. The Contractor shall take precautions to save trees larger than 3 inches diameter at breast height (DBH) in proximity of the grading limits when possible. For trees within the grading limits, the Contractor shall remove and discard the tree and root system to conform to the proposed grade.

D. The Contractor shall clear trees larger than 3 inches DBH only between the dates of October 1 and March 31.

E. It is the Contractor's responsibility to harvest and stockpile for re-use branches, trunks, rootwads, brush, and other woody material in sufficient quantities to comply with the Drawings (e.g., Log Vanes, Anchored Brush, and Brush Piles). Excess woody material shall be collected and disposed of in appropriate collections areas, identified and approved by the Owner's Representative. There should be no haul-in or haul-off of woody material. If the management of woody material is performed in a way that requires haul-in/haul-off of woody material, it shall be performed by the Contractor at no additional cost to the Owner.

F. Burning of cleared vegetation is prohibited.

3.05 TOPSOIL STRIPPED AND STOCKPILED

A. The Contractor shall harvest and stockpile for re-use enough topsoil to ensure that all planted surfaces have a minimum of 1 inch of topsoil.

B. Topsoil that is temporarily stockpiled on site shall be protected from erosion.

END OF SECTION 31 10 00

SECTION 31 23 00

EXCAVATION, FILL, AND GRADING

PART 1–GENERAL

1.01 SUMMARY

A. The work in this section consists of furnishing all labor, materials, and equipment necessary to perform excavation, storage, and finished grading within the work areas as indicated on the Drawings.

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 01 14 00 – Control of Work

C. Section 31 10 00 – Site Preparation

1.03 REFERENCE STANDARDS

A. ASTM refers to American Society for Testing Materials (ASTM) specifications.

B. OAC refers to Ohio Administrative Code.

C. ORC refers to Ohio Revised Code.

D. Standard Specifications: Unless otherwise indicated, Standard Specifications shall refer to the Ohio Department of Transportation Construction and Materials Specifications (CMS), 2019 edition, including all issued supplemental specifications.

E. OSHA refers to the Occupational Safety and Health Administration (OSHA)

1.04 REQUIREMENTS FOR REGULATORY AGENCIES

A. The Contractor shall fully comply with all applicable laws, ordinances, safety requirements, codes and regulations of federal, state, and local governing bodies having jurisdiction.

B. The Contractor shall obtain from the appropriate agencies and authorities, the dewatering and stormwater discharge permits required to remove and dispose of groundwater, surface water, and any other water used in Contractor's operations. The permits shall be obtained prior to start of construction.

1.05 PROTECTION

A. Protection of on-site and adjacent properties and utilities shall be as specified in paragraph 1.04 of Section 31 10 00 "Site Preparation."

1.06 DISPOSITION OF UTILITIES

A. Rules and regulations governing the respective utilities shall be observed in executing all work under this section. Notify all utilities existing in the area of this operation to verify locations,

prior to beginning as required by ORC Sec. 3781.28.(A). Contact OUPS 48 hours in advance of any excavations.

B. Active utilities shall be adequately protected from damage and removed or relocated only as indicated or specified, or in accordance with written instruction from the Owner's Representatives. Report in writing the location of such active utilities.

C. Inactive and abandoned utilities encountered in excavating and grading operations shall be removed, plugged, or capped as directed. Report in writing the location of such abandoned utilities.

1.07 EXISTING SITE CONDITIONS

A. The Contractor shall remain aware of the weather throughout the watershed that may contribute to flows that the Contractor may not otherwise be aware of.

B. The Contractor shall take all necessary precautions to identify archaeological/cultural sites that may be present on the project site.

C. An active little league baseball complex is located adjacent to the northwest of the project site. Caution should be maintained when equipment is traversing through this region of the project site.

D. An active fire station is located adjacent to the southwest edge of the project site. Road closures in the vicinity of the fire station, or blockage of the access drive to and from the fire station will not be permitted.

E. The current stream flows beneath Stubbs Mill Road to the east of the site. Warren County Roadway Department is responsible for blocking the flow of the stream beneath the Stubbs Mill Road bridge.

1.08 CLASSIFICATION OF EXCAVATION

A. The Contract includes all trenching and finished grading necessary to complete the project on an "Unclassified Basis" and includes (without limitation thereto) the excavation and removal of all soil, shale, rock, boulders, fill, construction rubble, subsurface structures, foundations, etc., and every kind of subsurface condition encountered in contract area.

1.09 TESTING AND GEOTECHNICAL SERVICES

A. No geotechnical investigations were performed by the Owner prior to construction. The Contractor is responsible for geotechnical information as necessary.

B. Testing, as requested by the Owner, will be performed by the Contractor's independent laboratory to determine conformance with the specifications. Submit laboratory qualifications for review and approval. This testing shall be performed at no additional cost to the Owner. In addition, during critical times of construction, the Contractor shall provide on-site independent geotechnical Owner's Representative services to observe and test installations.

1.10 SUBMITTALS

A. Inspection and test reports of materials and installations.

1. Sieve analysis of landfill cap material.
2. Compaction testing of abandoned stream channel backfill.
3. Slump test of concrete used to set flume.
4. Stress test of concrete used to set flume.

1.11 TOLERANCES

A. Refer to Section 01 14 00 "Control of Work" for tolerances for related Work.

PART 2–PRODUCTS

2.01 HARVESTED BED MATERIAL

A. Suitable material may include soil, sediment, and stones excavated and/or relocated from the active project areas.

B. Unsuitable Material: Material that fails to meet requirements for suitable materials; or contains any of the following:

1. Cleared and grubbed vegetative matter.
2. Excavated bituminous pavement, construction debris, rubbish, or refuse.
3. Hazardous materials

2.02 TOPSOIL

A. Topsoil material shall contain loose friable loam, free of heavy clay, refuse, stumps and large roots, rocks over two (2) inches in diameter, brush, weeds and weed seeds, or other material which would be detrimental to the proper development of vegetative growth.

B. Any topsoil provided from off-site supplies shall be a silt loam soil with a pH of 5.5 to 7.0. Organic content shall be no less than 1% and no more than 12% by weight as determined by loss through ignition. The mechanical analysis shall be:

U.S. Standard Sieve Size	Percent Finer by Weight
¾"	100%
No. 4	90-100%
No. 200	0-10%

C. The clay content of the material passing the No. 200 sieve shall not be greater than 60% or as determined by the hydrometer test.

D. Tests will be performed by the Contractor's independent laboratory on topsoil stockpile and off-site supplies, as requested by Owner.

2.03 LANDFILL CAPPING MATERIAL

A. Use imported soil meeting the soil requirements presented in OAC 3745-27-09(F)(4) (1976).

B. Provide documentation from source of material confirming the composition and consistency of the soil PRIOR to importing any soil.

2.04 ABANDONED STREAM CHANNEL BACKFILLING MATERIAL

A. Backfilling material for the abandoned stream bed shall consist of soil and rock excavated from other on-site work areas and stockpiled fill material previously stockpiled by the Owner.

B. Woody or vegetative mater generated by the clearing and grubbing of the site or from other sources is not acceptable backfill material.

2.05 EQUIPMENT

A. Compaction equipment shall be capable of consistently achieving the specified compaction requirements.

PART 3–EXECUTION

3.01 TOPSOIL STRIPPED AND STOCKPILED

A. The Contractor shall meet the requirements in Paragraph 3.05 of Section 31 10 00 "Site Preparation."

3.02 EXAMINATION AND PREPARATION

A. Verify that systems for dewatering/flow manipulation are in place before commencing with excavation to reduce suspended sediment.

B. Immediately notify the Owner's Representative if unexpected subsurface facilities or suspected hazardous materials are encountered during excavation. Discontinue affected work in area until notified to resume work.

C. Underpin adjacent structures that could be damaged by excavation work.

3.03 PROTECTION OF IN-PLACE CONDITIONS

A. Support and protect from damage – existing pipes, poles, wires, fences, curbs, property line markers, and other features or structures which must be preserved in place to avoid being temporarily or permanently relocated.

B. Discontinue digging by machinery when excavation approaches pipes, conduits, dams, or other underground structures. Continue excavation by use of hand tools. Include such manual excavation in work to be done when incidental to normal excavation and under items involving normal excavation.

3.04 EXCAVATION

A. Excavation shall be performed so as to permit segregation and selection of materials of different character in accordance with their suitability. Existing foundations, slabs, construction rubble, abandoned utilities, etc. discovered during excavations shall be removed within 2 feet of finished grades. Unsuitable materials, as determined by the Owner's Representative, will be disposed of as specified in paragraph 1.17 of Section 01 14 00 "Control of Work".

B. The Contractor shall stop excavation and/or grading activities if landfilled waste (i.e., buried trash) is found. The Contractor shall contact the Owner and Owner's Representative, who will work to revise the design to exclude landfill excavations. Discovery of landfilled material will not delay the project deadline.

C. The Contractor shall stop excavation and/or grading activities if non-rippable (i.e., resistant) bedrock is found. The Contractor shall contact the Owner and Owner's Representative, who will work to revise the design to exclude bedrock excavations. Discovery of bedrock material will not delay the project deadline. Shale that is encountered during grading is not considered non-rippable (i.e., resistant) bedrock.

D. All excavations shall be maintained in good condition during construction so as not to impair the attainment of the final slopes and grades called for on the Construction Drawings, and all necessary precautions shall be taken to prevent movement of cut slopes in all excavation areas.

E. Prior to commencing excavation, the Contractor shall install water control/maintenance of flow measures as necessary per Section 01 14 00 "Control of Work".

F. Construction shall be suspended during periods of rainfall which produces runoff that could leave the site/contaminate nearby waterways. Construction activities should be managed to minimize work during ponded water conditions or if residual soil moisture contributes significantly to the potential for clumping or other forms of compaction.

G. Keep excavations free from impounded water.

H. Topsoil shall be stripped and temporarily stockpiled, per Section 31 10 00 "Site Preparation".

I. Temporarily stockpile soil, sediment, rocks, and boulders on site in a manner to minimize erosion.

J. Excavations that are not shored and deeper than 4 feet (1.2 m) shall have banks laid back to a minimum stable slope matching the angle of repose of the excavated material.

K. Workers shall have an adequate means of exit from excavations that are 4 feet (1.2 m) or greater in depth. The means of exit shall not require more than 25 feet (7.5 m) of lateral travel.

L. Excavated material must in part remain onsite. See Drawings for requirements of excavated material to remain onsite. Soil left onsite shall be stabilized and seeded. The on-site soil wasting area is large enough to accommodate all excavated material not otherwise used on site or reserved for use by the Owner; however, the Contractor does have the option to haul off a portion of the

excavated material at no additional cost to Owner. Excavated material hauled offsite may be disposed of properly or reused by the Contractor at their discretion. The Contractor shall provide the Owner's Representative documentation identifying the end use of the excavated material hauled off site.

M. The Contractor shall comply with all safety standards for trenching and excavation operations, including but not limited to OSHA 29 CFR Part 1926, Subpart P.

3.05 PROTECTION

A. Formulate excavation, backfilling, and filling schedule and procedures to eliminate possibility of undermining or disturbing foundations of partially and completed structures, pipelines and embankments or existing structures and pipelines.

B. Disturb as minimal an area as practical when completing the Work.

3.06 CAPPING THE LANDFILL

A. Prior to the filling of the abandoned stream channel, silty or clayey loam soil meeting the requirements of OAC 3745-27-09(F) shall be placed over and above the exposed waste.

B. The soil will be compacted to 100 percent (%) of the Proctor for the soil. The contractor will provide soil testing to confirm the compaction level.

C. The final elevation and thickness of the capping soil will be a minimum of 2 feet thick. Thicknesses greater than 2 feet are acceptable but the cost of additional soil and the placement of additional soil will be the responsibility of the Contractor.

D. The final grade of the fill will allow stormwater to drain off the landfilled area, and not allow stormwater to pond on top of the landfilled area.

3.07 FILLING OF THE ABANDONED STREAM CHANNEL

A. Fill to lines and grades necessary to provide finish grades.

B. Excess cut from the site may be placed in designated location shown on the Construction Drawings with a maximum slope of 3H:1V. The Contractor shall take care to avoid over-compaction of the top three inches.

C. Use a placement method that does not disturb or damage other work or existing features.

D. Fill shall be placed and compacted in equal, approximately 6-inch lifts. The Contractor shall take care to avoid over-compaction of the top three inches.

E. The abandoned stream channel will be filled to the elevations and slopes shown on the Drawings (Figure 2).

3.08 GRADING

A. The Contractor shall grade to elevations and locations shown on the Drawings. Final grades and surfaces shall be smooth, even, and free from clods and stones, weeds, brush, and other debris.

B. The Contractor shall grade the backfilled stream and landfilled area of the project site to eliminate areas where stormwater may pond over the landfill.

C. The Contractor shall take steps to avoid over-compaction to the extent practical in wetland area.

D. The construction activities shall be conducted to minimize the extent of disturbed soils exposed at any one time and the length of soil exposure to the extent practical. The Contractor shall seed, mulch, and/or blanket areas as soon as possible after achieving final grades.

3.09 RESTORATION

A. Restore public and private property, structures, and infrastructure promptly. Begin restoration work within 24 hours of when damage occurred.

B. Existing surfaces, features, or utilities that are to remain but are damaged during construction shall be repaired or replaced to at least the condition in which they were found immediately before work began, unless noted otherwise.

C. Damaged Trees to Remain: Cut all damaged branches, limbs, and roots smoothly and neatly without splitting or crushing. Neatly trim, cut the injured portions and cover with an application of grafting wax or tree healing paint.

D. Cultivated Vegetation: Includes, but is not limited to, hedges, shrubs, and plants. Vegetation that is damaged shall be replaced with equal kind and of at least the quality before work began.

END OF SECTION 31 23 00

SECTION 31 25 00

EROSION AND SEDIMENT CONTROL

PART 1–GENERAL

1.01 SUMMARY

A. The work to be performed under this section consists of furnishing all labor, materials, and equipment necessary to stabilize the site with erosion and sediment control devices.

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 32 92 19 – Seed & Mulch

C. Section 31 37 16 – Rock

1.03 REQUIREMENTS FOR REGULATORY AGENCIES

A. The Contractor shall fully comply with all federal, state, and local requirements, laws, and regulations.

1.04 REFERENCE STANDARDS

A. Ohio EPA Storm Water Pollution Prevention Plan checklist for construction activities.

B. Conservation Practice Standards in the Standard Specifications shall refer to Ohio Department of Natural Resources, Division of Soil and Water Conservation, Rainwater and Land Development, current edition.

C. Standard Specifications: Unless otherwise indicated, Standard Specifications shall refer to the Ohio Department of Transportation Construction and Materials Specifications (CMS), 2019 edition, including all issued supplemental specifications.

1.05 SUBMITTALS

A. Samples and product data sheets of specified materials in Part 2 – Products.

1.06 QUALITY CONTROL

A. Construct and maintain erosion sediment control measures in accordance with the Conservation Practice Standards.

B. Check facilities weekly and after any 0.5-inch or larger rainfall event. Make needed repairs within 24 hours.

PART 2–PRODUCTS

2.01 STRAW MAT

A. Mat products shall be in conformance with criteria specified in Conservation Practice Standard Chapter 7, Soil Stabilization.

B. The Contractor shall furnish a straw mat with biodegradable netting and a minimum design shear stress of 2.0 lbs/ft^2.

C. Staples shall be used for fastening. Sizing shall be per manufacturer's recommendation.

D. A 300 mm by 300 mm sample of a product proposed for erosion mat may be required to verify that it is prequalified. When a sample is required, it shall be accompanied by the manufacturer's literature for the proposed product.

2.02 COIR FABRIC

A. The Contractor shall furnish a coir fabric mat that is biodegradable with a minimum design shear stress of 4.0 lbs/ft^2, such as Rolanka BioD-Mat 70 or equivalent.

B. Wood stakes shall be used for fastening coir fabric with minimum dimensions of 18 inches long and 1.25 inches by 1.25 inches, or per manufacturer's recommendation.

C. In addition to wood stakes, excess rock from other construction activities (ODOT D or larger) shall be used to assist with anchoring.

2.03 SILT FENCE

A. Material shall be composed of strong rot-proof polymeric fibers formed into a Type C sediment fence with woven or non-woven fabric, as specified in Section 712.09 of the Standard Specifications.

B. Furnish wrapping on each roll of fabric to protect the fabric from ultraviolet radiation and from abrasion during shipping and handling. Keep geotextile dry until installed.

C. Products that meet the erosion prevention and sediment control goals of temporary silt fence may alternatively be used, such as straw bales or mulch berms, as approved by the Owner's Representative.

2.04 CONSTRUCTION ENTRANCE

A. Construction entrances shall conform to Conservation Practice Standards Chapter 7, Section 7.4-Construction Entrance, or as otherwise shown in the Drawings.

B. Materials shall be per Section 31 37 16 "Rock".

2.05 MULCHING

A. Mulching shall be as specified in Section 32 92 19 "Seed & Mulch".

2.06 GEOTEXTILE FABRIC

A. Geotextile fabric shall be non-woven.

B. Geotextile fabric shall be Mirafi 140N. Comparable product may be approved by the Owner's Representative.

2.07 CONCRETE BLOCK MAT

A. Concrete block mat shall be Flexamat Standard (manufactured by Motz Enterprises, Inc.). Comparable product may be approved by the Owner's Representative.

B. Provide fastening or anchoring as recommended by the manufacturer for the site conditions.

PART 3–EXECUTION

3.01 COIR FABRIC AND STRAW MAT

A. Coir fabric/straw mat shall be installed in accordance with manufacturer's recommendations and detail in the Drawings.

B. Stakes shall be installed at a minimum rate of 1 per every 3 feet at the top and toe of each bank of the stream and lake, with a minimum rate of 1 per every 6 feet at the midpoint of each bank.

C. In addition to wood stakes, excess rock from other construction activities (ODOT D or larger) shall be used along the toe of bank and all seams to assist with anchoring.

D. It is the Contractor's responsibility to use enough rock, wood stakes, or equivalent to ensure that the fabric does not become dislodged by large floods (which can be common in this stream/floodplain). Fabric that becomes dislodged (and the associated seed, mulch, soil, etc.) must be replaced by the Contractor to conform with the Drawings at no additional cost to Owner.

3.02 SILT FENCE

A. Silt fence shall be constructed in conformance with the criteria specified in Conservation Practice Standards Chapter 6, Section 6.3 Silt Fence.

B. Stakes for silt fencing shall be installed one every three (3) feet. Leave no gaps between.

C. Remove sediment from fencing if deposits reach half the fence height.

D. Maintain until lawn is established.

3.03 CONSTRUCTION ENTRANCES

A. Stone tracking pads shall be installed where new accessways to the site are created. These new access locations shall be approved by the Client prior to installation.

B. Maintenance of tracking pad shall be in accordance with the criteria in Conservation Practice Standards Chapter 7, Section 7.4-Construction Entrances.

C. Rock shall be a minimum 6-inch-thick layer of stone, placed over the entire length and width of the construction entrance, as shown in the Drawings.

D. Surface water must be prevented from passing through construction entrances. Flows shall be diverted away from construction entrances and conveyed under and around them such as with culverts.

E. When erodible materials accumulate on the surface of the construction entrance, additional stone shall be furnished, as needed to prevent tracking, at no additional cost to Owner.

F. Any sediment tracked onto a road shall be removed before the end of each day. Flushing sediment shall not be allowed.

3.04 MULCHING

A. Straw mulch shall be applied per Section 32 92 19 "Seed & Mulch" and the Construction Drawings.

3.05 GEOTEXTILE FABRIC

A. Geotextile fabric shall be installed in accordance with manufacturer's recommendations.

B. The Contractor shall protect the fabric from exposure to the sun until installation. Fabric shall be covered with stone or soil immediately upon placement.

3.06 CONCRETE BLOCK MAT

A. Prior to installation, prepare the subgrade. Subgrade shall be smooth and free of all rocks, stones, sticks, roots, and other protrusions or debris that would result in an individual concrete block being raised more than ¾ inch above the adjoining blocks.

B. Seed the area in advance of mat installation. See Section 32 92 19 "Seed and Mulch".

C. Concrete block mat shall be installed in accordance with manufacturer's recommendations.

D. Provide a minimum 18-in. deep concrete mat embedment toe trench at all edges exposed to concentrated flows. Recess exterior edges subject to sheet flow a minimum of 6 inches.

E. Install fastening or anchoring as recommended by the manufacturer.

END OF SECTION 31 25 00

SECTION 31 37 16

ROCK

PART 1–GENERAL

1.01 SUMMARY

A. The work in this section consists of furnishing and placing all media for the structures and temporary construction entrance.

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 31 23 00 – Excavation, Fill, and Grading

C. Section 31 25 00 – Erosion and Sediment Control

1.03 REFERENCE STANDARDS

A. ASTM refers to American Society for Testing Materials (ASTM) specifications.

B. Standard Specifications: Unless otherwise indicated, Standard Specifications shall refer to the Ohio Department of Transportation (ODOT) Construction and Materials Specifications (CMS), 2019 edition, including all issued supplemental specifications.

PART 2–PRODUCTS

2.01 ROCK

A. Rock shall be clean/washed and consistent with the sizing categories in the Construction Drawings per the sizing categories in the Standard Specifications.

B. All rock shall be composed of durable limestone or dolomite.

C. Particles shall meet soundness requirements of Section 703.19 from the Standard Specifications.

2.02 TEMPORARY CONSTRUCTION ENTRANCE ROCK

A. Stone for the temporary construction entrance shall be No. 2 stone per ASTM D448.

PART 3–EXECUTION

3.01 TEMPORARY CONSTRUCTION ENTRANCE ROCK

A. See Section 31 25 00 "Erosion and Sediment Control" for installation of temporary construction entrance(s).

END OF SECTION 31 37 16

SECTION 32 92 19

SEED AND MULCH

PART 1–GENERAL

1.01 SUMMARY

A. The work to be performed under this section consists of furnishing all labor, materials, and equipment necessary to seed and mulch project areas and other incidental items related to the work described herein. Work provided in this section includes furnishing, handling, storing seed mixes, preparing the seedbed, planting selected seed mixes, and mulching seeded areas.

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 31 10 00 – Site Preparation

C. Section 31 25 00 – Erosion and Sediment Control

1.03 REQUIREMENTS FOR REGULATORY AGENCIES

A. The Contractor shall fully comply with all federal and state plant inspection requirements, fertilizer laws and other applicable laws and regulations.

1.04 REFERENCE STANDARDS

A. Scientific and common names for seeds are generally in conformity with approved names published by the American Joint Committee of Horticulture Nomenclature.

B. Standard Specifications: Unless otherwise indicated, Standard Specifications shall refer to the Ohio Department of Transportation (ODOT) Construction and Materials Specifications (CMS), 2019 edition, including all issued supplemental specifications.

1.05 SUBMITTALS

A. Certification of Native Seed: From seed vendor for each seed mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

B. Delivery slips as verification of materials delivered.

C. Qualification Data: For landscape installer qualifications, see paragraph 1.06 of this section.

D. Planting Schedule: Indicating anticipated planting dates for each type of planting.

E. Maintenance Instructions and Schedule: Recommended procedures to be established by the Contractor for maintenance of seeded areas during the maintenance period. Submit before expiration of required maintenance periods.

F. Product data sheets of specified materials in Part 2 – Products.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: The submitting bidders shall be, and have been, actively and directly engaged in native seed and mulch installation for a period of three (3) or more years. Provide proof of three (3) or more successful native seed and mulch installations.

B. Installer's Field Supervision: Require installer to maintain an experienced full-time supervisor on the project site when seeding is in progress.

PART 2–PRODUCTS

2.01 NATIVE SEED MIXES

A. Native seed mixes shall be by a preapproved supplier:

1. Cardno Native Plant Nursey – 128 Sunset Drive, Walkerton, IN 46574; (574) 586-2412)

2. Ernst Conservation Seeds – 9006 Mercer Pike, Meadville, PA 16335; (800) 873-3321

3. Ohio Prairie Nursery – 11961 Alpha Road, Hiram, OH 44234; (330) 569-3380

4. Roundstone Native Seed Company – 9764 Raider Hollow Road, Upton, KY 42784 (888) 531-2353

5. Spence Restoration Nursery, Inc. – P.O. Box 546, 2220 E. Fuson Road, Muncie, IN 47308; (765) 286-7154

B. Different seed suppliers than that specified may be used, per Owner's Representative's approval.

C. Different seed mixtures than that specified may be placed, per Owner's Representative's approval.

D. All seed shall be clean and free of pods, husks, and weed seeds, with an approved pure live seed (PLS) rating, available from the supplier. Pure live seed is a measure of viable seed stated as a percentage. It is the product of total germination times purity. (Example: 96% Germination x 93% Purity = 89% PLS).

E. Rate as per supplier's recommendation. All native seed must be pure live seed of wild ecotype. No hybrids, cultivars, or selections may be included. Locally adapted seed is preferred due to its adaptation to local soil and climate. These requirements do not apply to the temporary seed

mix. Seed mixes must be delivered in original sealed, labeled, and undamaged containers.

F. Bulking agents, used to assist with broadcasting and even distribution of the seed, shall consist of sand, vermiculite, or perlite. Any substitutions will require prior written approval from the Owner's Representative.

2.02 LAWN SEED MIX

A. Existing lawn areas outside the areas of native seed zones damaged by construction activities shall be replaced with a lawn seed mix specified by the Owner, unless otherwise directed by the Owner.

2.03 MULCH

A. Material shall be straw as specified in Section 659.14 from the Standard Specifications and used only to deter the growth of weeds.

B. Binder shall be chemical mulch binder consisting of a polymer synthetic resin, polypectate or other material which gives similar properties as asphalt emulsion in tacking mulch.

2.04 FERTILIZER

A. Fertilizers shall be composite commercial type and shall bear manufacturer's guaranteed statement of analysis. A minimum of 35% of the total nitrogen content shall be guaranteed to be water insoluble nitrogen.

Fertilizer Type	Nitrogen	Phosphorus	Potash
Type 1 Basic Fertilizer	12	12	12
Type 2 Slow-Release Fertilizer	31	3	10

B. The rate of application to be used shall be based on results of laboratory tests conducted by the Contractor after final grading is completed.

2.05 TEMPORARY SEED MIX

A. The temporary seed mix for the wetland, reservoir, and soil wasting areas shall be per the Drawings, or comparable product as approved by Owner.

B. The temporary seed mix for the berm area shall be ReGreen by Rainier Seeds, or comparable product as approved by Owner.

C. Seed must be delivered in original sealed, labeled, and undamaged containers.

PART 3–EXECUTION

3.01 SHIPPING AND STORAGE

A. Seed shall be kept in its original container with an intact and legible label listing the species, composition, and weight. Seed shall be stored in a secure location, protected from damage by rodents or insects. Seed shall be kept away from moisture, heat, and direct sunlight, until planted.

3.02 SEEDBED PREPARATION

A. The planting surface shall be prepared prior to seeding. Rocks, stumps, branches, trash, and debris greater than 2 inches in size shall be removed. The soil surface shall be scarified and broken down into a fine-particle seedbed to a depth of 3 inches.

B. Topsoil shall be spread per paragraph 3.05 in Section 31 00 00 "Site Preparation".

3.03 NATIVE SEED AND MULCH

A. Install seed in accordance with Seed Supplier's instructions.

B. Seed installation can be completed by one of the following methods: Hand-Broadcasting, Broadcast Spreader, or Seed Drill. Additional methods may be utilized, as approved by the Owner's Representative or Owner.

1. Hand-Broadcasting
   a. The seed may be hand-broadcast, using a bulking agent. Place two parts bulking agent with one-part seed in a clean, dry bucket. Thoroughly mix sand and seed. Hand-broadcast sand/seed mixture across the seeding area. Apply half the sand/seed mixture over the entire area. Apply the second half over the same area utilizing the same procedure. This method will prevent using all seed before the entire area is covered.
   b. After seeding, the seed shall be raked into the soil surface to an average depth of 0.25 inches. The seedbed shall be rolled with a weighted roller to ensure good soil to seed contact. Raking and rolling operations should be carried out perpendicular to the slope. Seeded areas shall be promptly covered with straw mulch.

2. Seed Drill - If using seed drill, ensure the drill is properly calibrated to sow the specified amount of seed over the specified area. Ensure complete coverage of the specified area. Calibrate drill at 1/3 seeding rate and make three passes at 40 degrees from the previous to lessen row effect.
   a. Seeds should be placed 1/4 to 1/2-inch deep to maintain good moisture during germination.

b. Do not mix fine easily flowing seed with fluffy seeds in drill.

C. Seeding operations shall not occur if the ground is wet or muddy. If adult human footprints placed in the seedbed average more than ½-inch deep, then the seedbed must be cultipacked or rolled to create a firmer surface.

D. Install straw mulch over seeded areas per Drawings. Straw mulch seeded areas at the rate of 2 tons per acre from March 15 to October 30 and a rate of 3 tons per acre from October 31 to March 14. Take precautions to stabilize the mulch using chemical binder mulch as recommended by the manufacturer. Mulch within 48 hours of seeding. Hydro mulch shall be applied at the manufacturer's recommended rate.

E. For areas to be protected with erosion control mat, install matting per Section 31 25 00 "Erosion and Sediment Control" and the Construction Drawings.

F. The Contractor shall water all seeded areas within 24 hours of installation. The Contractor shall continue to maintain all seeded areas until final acceptance. Any damage caused to seeded areas during execution of this work shall be repaired by, and at the expense of, the Contractor.

G. Areas disturbed outside the limits of work shall be seeded at the Contractor's own expense with a seed mix similar to existing.

3.04 MAINTENANCE OF SEEDED AREAS

A. The Contractor shall maintain all seeded areas until final acceptance. Any damage caused to seeded areas during execution of this work shall be repaired by, and at the expense of, the Contractor. Maintain seeded areas by watering and replanting as necessary to establish a uniformly dense stand of specified herbaceous cover, and until accepted. The Contractor shall provide water for maintenance activities.

B. Scattered bare spots, smaller than one square foot will be allowed up to five (5%) percent of the seeded areas.

C. Any areas failing to establish a stand shall be reseeded, re-fertilized and re-mulched as directed by the Owner or Owner's Representative at no additional cost to the Owner. Reseeding shall conform in all respects to these specifications.

D. The Contractor shall repair any damage to the work areas resulting from erosion and/or equipment. No additional payment shall be allowed for erosion and/or equipment maintenance. The Contractor shall repair damage, including regrading, reseeding, etc. as necessary, before significant damage occurs.

E. Type 2 Fertilizer shall be applied as specified in paragraph 2.04 of this Section.

3.05 WARRANTY, GUARANTEE, AND REPLACEMENT

A. All work in this section shall be guaranteed against any and all defects in installation and

materials appearing within a period of two (2) years after final completion and acceptance of the work by the Owner's Representative. Scattered bare spots will be allowed in up to five percent (5%) of the seeded areas. Areas in excess of 5% of all planted area shall be replaced by the Contractor prior to the end of the warranty period without additional expense to the Owner.

B. All replacements shall be seed mix(es) of the same kind as specified in the plant list presented in Tables 32 93 19-A and 32 93 19-B. They shall be furnished and planted as specified under planting; and cost shall be borne by the Contractor.

C. Final acceptance of this contract shall take place after replacement operation is satisfactorily completed and all seed is in a healthy growing condition.

END OF SECTION 32 92 19

SECTION 32 93 19

EXTERIOR PLANTS

PART 1–GENERAL

1.01 SUMMARY

A. The work to be performed under this section consists of furnishing all labor, materials, and equipment necessary to seed and mulch project areas and other incidental items related to the work described herein. Work provided in this section includes furnishing, handling, storing seed mixes, preparing the seedbed, planting selected seed mixes, and mulching seeded areas.

1.02 RELATED SECTIONS AND DIVISIONS

A. Applicable provisions of Division 1 shall govern work in this section.

B. Section 31 10 00 – Site Preparation

C. Section 31 25 00 – Erosion and Sediment Control

1.03 REQUIREMENTS FOR REGULATORY AGENCIES

A. The Contractor shall fully comply with all federal and state plant inspection requirements, fertilizer laws and other applicable laws and regulations.

1.04 REFERENCE STANDARDS

A. Scientific and common names for seeds are generally in conformity with approved names published by the American Joint Committee of Horticulture Nomenclature.

B. Standard Specifications: Unless otherwise indicated, Standard Specifications shall refer to the Ohio Department of Transportation (ODOT) Construction and Materials Specifications (CMS), 2019 edition, including all issued supplemental specifications.

1.05 SUBMITTALS

A. Certification of Native Seed: From seed vendor for each seed mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

B. Delivery slips as verification of materials delivered.

C. Qualification Data: For landscape installer qualifications, see paragraph 1.06 of this section.

D. Planting Schedule: Indicating anticipated planting dates for each type of planting.

E. Maintenance Instructions and Schedule: Recommended procedures to be established by the Contractor for maintenance of seeded areas during the maintenance period. Submit before

expiration of required maintenance periods.

F. Product data sheets of specified materials in Part 2 – Products.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: The submitting bidders shall be, and have been, actively and directly engaged in native seed and mulch installation for a period of three (3) or more years. Provide proof of three (3) or more successful native seed and mulch installations.

B. Installer's Field Supervision: Require installer to maintain an experienced full-time supervisor on the project site when seeding is in progress.

1.07 NURSERY CERTIFICATION

A. Indicate on nursery letterhead the name of plants in accordance with the LHBH, including botanical common names, quality, and size.

B. Inspection certificate.

C. Mycorrhizal fungi inoculum for plant material treated

1.08 STATE LANDSCAPE CONTRACTOR'S LICENSE

Construction company must hold a landscape contractors license in Ohio and have a minimum of five years landscape construction experience. Submit copy of license and three references for similar work completed in the last five years.

1.09 PLANT MATERIAL PHOTOGRAPHS

Contractor must submit nursery photographs, for Client approval prior to ordering, for each tree larger than 600 mm 24-inch box / 50 mm 2-inch caliper size.

1.10 EROSION ASSESSMENT

Assess potential effects of soil management practices on soil loss in accordance with ASTM D6629. Assess erodibility of soil with dominant soil structure less than 70 to 80 mm 2.8 to 3.1 inches in accordance with ASTM D5852.

1.11 PRE-INSTALLATION MEETING

Convene a pre-installation meeting a minimum of one week prior to commencing work of this section. Require attendance of parties directly affecting work of this section. Review conditions of operations, procedures, and coordination with related work. Agenda must include the following:

A. Tour, inspect, and discuss conditions of planting materials.

B. Review planting schedule and maintenance.

C. Review required inspections.

D. Review environmental procedures.

1.2 DELIVERY, STORAGE, AND HANDLING

1.21 DELIVERY

A. Branched Plant Delivery

Deliver with branches tied and exposed branches covered with material which allows air circulation. Prevent damage to branches, trunks, root systems, and root balls and desiccation of leaves.

B. Soil Amendment Delivery

Deliver to the site in original, unopened containers bearing manufacturer's chemical analysis, name, trade name, or trademark, and indication of conformance to state and federal laws. Instead of containers, [fertilizer,] [gypsum,] [sulfur,] [iron,] [and] [lime] may be furnished in bulk with a certificate indicating the above information. Store in dry locations away from contaminates.

C. Plant Labels

Deliver plants with durable waterproof labels in weather-resistant ink. Provide labels stating the correct botanical and common plant name and variety as applicable and size as specified in the list of required plants. Attach to plants, bundles, and containers of plants. Groups of plants may be labeled by tagging one plant. Labels must be legible for a minimum of 60 days after delivery to the planting site.

1.22 STORAGE

A. Plant Storage and Protection

Store and protect plants not planted on the day of arrival at the site as follows:

a. Shade and protect plants in outside storage areas from the wind and direct sunlight until planted.

b. Heel-in bare root plants.

c. Protect balled and burlapped plants from freezing or drying out by covering the balls or roots with moist burlap, sawdust, wood chips, shredded bark, peat moss, or other approved material.

d. Provide covering which allows air circulation.

e. Keep plants in a moist condition until planted by watering with a fine mist spray.

f. Do not store plant material directly on concrete or bituminous surfaces.

B. Fertilizer, Gypsum, pH Adjusters and Mulch Storage

Store in dry locations away from contaminants.

C. Topsoil

Prior to stockpiling topsoil, eradicate on site undesirable growing vegetation. Clear and grub existing vegetation three to four weeks prior to stockpiling existing topsoil.

D. Root Control Barrier and Weed Control Fabric

Store materials on site in enclosures or under protective covering in dry location. Store under cover out of direct sunlight. Do not store materials directly on ground.

1.23 HANDLING

Do not drop or dump plants from vehicles. Avoid damaging plants being moved from nursery or storage area to planting site. Handle plants carefully to avoid damaging or breaking the earth ball or root structure. Do not handle plants by the trunk or stem. Puddle bare-root plants after removal from the heeling-in bed to protect roots from drying out. Remove damaged plants from the site and replace with same species and variety.

1.24 TIME LIMITATION

Except for container-grown plant material, the time limitation from digging to installing plant material must be a maximum of 90 days. The time limitation between installing the plant material and placing the mulch must be a maximum of 24 hours.

1.3 TIME RESTRICTIONS AND PLANTING CONDITIONS

Coordinate installation of planting materials during optimal planting seasons for each type of plant material required.

Do not plant when ground is frozen, snow covered, muddy, or when air temperature exceeds 32 degrees Celsius or 90 degrees Fahrenheit.

1.4 GUARANTEE

This guarantee is premised on a fall planting season from approximately October 1 to December 15 and a spring planting season from the time ground can be worked to May 15.

All plants must be guaranteed for one (1) year beginning on the date of inspection by the Contractor to commence the plant establishment period, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by the Client or by weather conditions unusual for the warranty period Transplanted plants require no guarantee.

At end of warranty period, replace planting materials that die or have 25 percent or more of their branches that die during the construction operations or the guarantee period.

PART 2 PRODUCTS

2.1 PLANTS

A. Regulations and Varieties

Existing trees and shrubs to remain must be protected and a planting plan be arranged around them. Furnish nursery stock in accordance with ANSI/ANLA Z60.1, except as otherwise specified or indicated. Each plant or group of planting must have a "key" number indicated on the nursery certifications of the plant schedule. Furnish plants as designated in the tables below. Plants of the same specified size must be of uniform size and character of growth. Plants must be chosen with their mature size and growth habit in mind to avoid over-planting and conflict with other plants, structures, or

underground utility lines. All plants must comply with all Federal and State Laws requiring inspection for plant diseases and infestation.

B. Shape and Condition

Well-branched, well-formed, sound, vigorous, healthy planting stock free from disease, sunscald, windburn, abrasion, and harmful insects or insect eggs and having a healthy, normal, and undamaged root system.

a. Deciduous Trees and Shrubs

Symmetrically developed and of uniform habit of growth, with straight boles or stems, and free from objectionable disfigurements.

b. Evergreen Trees and Shrubs

Well-developed symmetrical tops with typical spread of branches for each particular species or variety.

c. Ground Covers and Vines

Number and length of runners and clump sizes indicated, and of the proper age for the grade of plants indicated, furnished in removable containers, integral containers, or formed homogeneous soil section.

C. Plant Size

Minimum sizes measured after pruning and with branches in normal position, must conform to measurements indicated, based on the average width or height of the plant for the species as specified in ANSI/ANLA Z60.1. Plants larger in size than specified may be provided with approval of the Owner's Representative. When larger plants are provided, increase the ball of earth, or spread of roots in accordance with ANSI/ANLA Z60.1.

D. Root Ball Size

All box-grown, field potted, field boxed, collected, plantation grown, bare root, balled and burlapped, container grown, processed-balled, and in-ground fabric bag-grown root balls must conform to ANSI/ANLA Z60.1. All wrappings and ties must be biodegradable. Root growth in container grown plants must be sufficient to hold earth intact when removed from containers. Root bound plants will not be accepted.

E. Growth of Trunk and Crown

a. Deciduous Trees

A height to caliper relationship must be provided in accordance with ANSI/ANLA Z60.1. Height of branching must bear a relationship to the size and species of tree specified and with the crown in good balance with the trunk. The trees must not be "poled", or the leader removed.

1. Single stem: The trunk must be reasonably straight and symmetrical with crown and have a persistent main leader.

2. Multi-stem: All countable stems, in aggregate, must average the size specified.

To be considered a stem, there must be no division of the trunk which branches more than 150 mm 6 inches from ground level.

b. Deciduous Shrubs

Deciduous shrubs must have the height and number of primary stems recommended by ANSI/ANLA Z60.1. Acceptable plant material must be well shaped, with sufficient well-spaced side branches, and recognized by the trade as typical for the species grown in the region of the project.

c. Coniferous Evergreen Plant Material

Coniferous Evergreen plant material must have the height-to-spread ratio recommended by ANSI/ANLA Z60.1. The coniferous evergreen trees must not be "poled", or the leader removed. Acceptable plant material must be exceptionally heavy, well-shaped and trimmed to form a symmetrical and tightly knit plant. The form of growth desired must be as indicated.

d. Broadleaf Evergreen Plant Material

Broadleaf evergreen plant material must have the height-to-spread ratio recommended by ANSI/ANLA Z60.1. Acceptable plant material must be well shaped and recognized by the trade as typical for the variety grown in the region of the project.

e. Ground Cover and Vine Plant Material

Ground cover and vine plant material must have the minimum number of runners and length of runner recommended by ANSI/ANLA Z60.1. Plant material must have heavy, well developed, and balanced crown with vigorous, well developed root system and must be furnished in containers.

TABLE 32 93 19-A
STREAM RELOCATION AREA RIPARIAN/UPLAND BUFFER PLANTS

Tree Species	Quantity to Plant	Stock Size
Acer negundo	25/per acre/ spaced evenly every 8-10 feet	1 Gallon
Carya ovata	25/per acre/ spaced evenly every 8-10 feet	5 Gallon
Acer rubrum	25/per acre/ spaced evenly every 8-10 feet	1 Gallon
Carya laciniosa	25/per acre/ spaced evenly every 8-10 feet	5 Gallon
Quercus stellata	25/per acre/ spaced evenly every 8-10 feet	1 Gallon
Amelanchier canadensis	25/per acre/ spaced evenly every 8-10 feet	5 Gallon
Carpinus caroliniana	25/per acre/ spaced evenly every 8-10 feet	5 Gallon
Platanus occidentalis	25/per acre/ spaced evenly every 8-10 feet	1 Gallon
Total	**200 Trees**	

TABLE 32 93 19-B
LAKE ENRICHMENT EMERGENT WETLAND PLANTS

Species Common Name	Scientific Name	Root Stock
Common Arrowhead	*Sagittaria latifolia*	Standing water areas 25/per acre/ spaced evenly every 5 feet
Water Pennywort	*Hydrocotyle umbellata*	Standing water areas 25/per acre/ spaced evenly every 5 feet
Water Parsnip	*Sium suave*	Fringe outside standing water areas 15/per acre/ spaced evenly every 5 feet
Winterberry	*Ilex verticillata*	Fringe outside standing water areas one gallon stock 25/per acre/ spaced evenly every 5 feet
Water Arum	*Calla palustris*	Standing water areas 30/per acre/ spaced evenly every 5 feet
Arrow Arum	*Peltandra virginica*	Standing water areas 30/per acre/ spaced evenly every 5 feet
Butterflyweed	*Asclepias tuberosa (including 1 variety)*	Fringe outside standing water areas 25/per acre/ spaced evenly every 5 feet
Great Indian Plantain	*Arnoglossum reniforme*	Fringe outside standing water areas 25/per acre/ spaced evenly every 5 feet
Broad Leafed Purple Cone Flower	*Echinacea purpurea*	Fringe outside standing water areas Seed stock 16 oz. per acre
Common Buttonbush	*Cephalanthus occidentalis*	Standing Water One gallon stock 25/per acre/ spaced evenly every 5 feet
Northern Spicebush	*Lindera benzion*	Standing Water One gallon stock 25/per acre/ spaced evenly every 5 feet
Milkweed	*Asclepias syriaca*	Fringe outside standing water areas Seed stock 16 oz. per acre
Swamp Milkweed	*Asclepias incarnata*	Fringe outside standing water areas Seed stock 16 oz. per acre
Downey Willow Herb	*Epilobium strictum*	Fringe outside standing water Seed stock 16 oz. per acre
Timothy	*Phleum pratense*	Broadcast seed
Big Bluestem	*Andropogon gerardii*	Broadcast seed
Barnyard Grass	*Echinochloa crusgalli*	Broadcast seed
Sweet Vernal Grass	*Anthoxanthum odoratum*	Broadcast seed